Energy Research and Development Division
FINAL PROJECT REPORT

# MT SURVEY FOR RESOURCE ASSESSMENT AND ENVIRONMENTAL MITIGATION AT THE GLASS MOUNTAIN KGRA

## APPENDICES V

Prepared for: California Energy Commission – Geothermal Resources Development Account
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**Geothermal Resources Development Account**

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# PREFACE

The California Legislature created the Geothermal Resources Development Account (GRDA) and the Geothermal Program in 1980. Funding comes from revenues paid to the United States government by geothermal developers for leases on federal land in California. Under the Geothermal Program, the California Energy Commission has assisted numerous eligible private entities and local jurisdictions in geothermal research, development, demonstration, commercialization, planning, mitigations, and environmental enhancement projects related to geothermal energy. The purpose of the program is to enhance and promote geothermal development in California. For more information on the Geothermal Program, please visit the California Energy Commission's Web site at. http://www.energy.ca.gov/geothermal/index.html

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*MT Survey for Resource Assessment and Environmental Mitigation in the Glass Mountain KGRA* is the final report for the Geothermal Reserouces Development Account contract number GEO-02-007 conducted by GSY-USA, Inc. The information from this project contributes to Energy Research and Development Division's Renewable Program.

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# ABSTRACT

The objectives of this project were to use non-invasive methods to indirectly image the permeable geothermal reservoir geometry and mitigate the drilling costs and environmental impact of future geothermal development at Glass Mountain Known Geothermal Resource Area. This was done by more efficiently focusing exploration wells on the most promising target zones. Significant advances were achieved in three dimensional magnetotelluric imaging, allowing three dimensional imaging to be given greater weight than two dimensional imaging in interpreting the data. Magnetotellurics is a geophysical investigation technique that images the earth's subsurface by measuring natural variations of electric and magnetic fields at the surface. Magnetotelluric resistivity patterns were correlated with detailed data on subsurface temperatures, downhole resistivity logging, patterns of rock alteration zones and water entry zones from wells along geologic cross-sections. This confirmed that reservoir interpretation based on correlating magnetotelluric resistivity with temperature sensitive clay alteration was feasible. The magnetotelluric resistivity maps and cross-sections extended these correlations to undrilled areas, revealing the likely geometry of the geothermal system.

Conceptual models based on the resistivity images indicated that major northeast trending structures and the Medicine Lake Volcano rim structure form permeable zones and reservoir boundaries in the Glass Mountain Known Geothermal Resource Area. Several areas that appear to host a relatively shallow permeable reservoir were identified. The magnetotelluric interpretation also indicated that a significant part of the Medicine Lake Volcano was unlikely to host a developable geothermal resource. Depending on the resource development strategy and supporting studies, follow-up magnetotelluric surveys could be justified. The conceptual resource model derived from this study's integrated interpretation illustrates well-targeting strategies that can be reviewed with respect to engineering and environmental issues. By more efficiently directing well targeting, magnetotelluric resistivity imaging can reduce dry hole costs, as well as focus planning efforts and mitigate the environmental impacts of resource development.

**Keywords:** electromagnetic survey, geothermal exploration, geophysics resistivity, magnetotellurics, petrography, Medicine Lake, Glass Mountain Known Geothermal Resource Area

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# TABLE OF CONTENTS

**ACKNOWLEDGEMENTS** ..... **i**

**PREFACE** ..... **ii**

**ABSTRACT** ..... **iv**

**TABLE OF CONTENTS** ..... **v**

**APPENDIX V: Shasta Region MT. Vol 1 to 4** ..... **V-1**

# APPENDIX V:
# Shasta Region MT. Vol 1 to 4

# Attachment XXI

## CEC-500-2007-XXX-ATXXI

## Shasta Region MT. Vol 1 to 4

This document is an attachment to a report funded by the California Energy Commission's Geothermal Resource Development Account (GRDA) Program. The GRDA Program did not fund this document, but the authors of the GRDA funded report have attached it as a supporting document.

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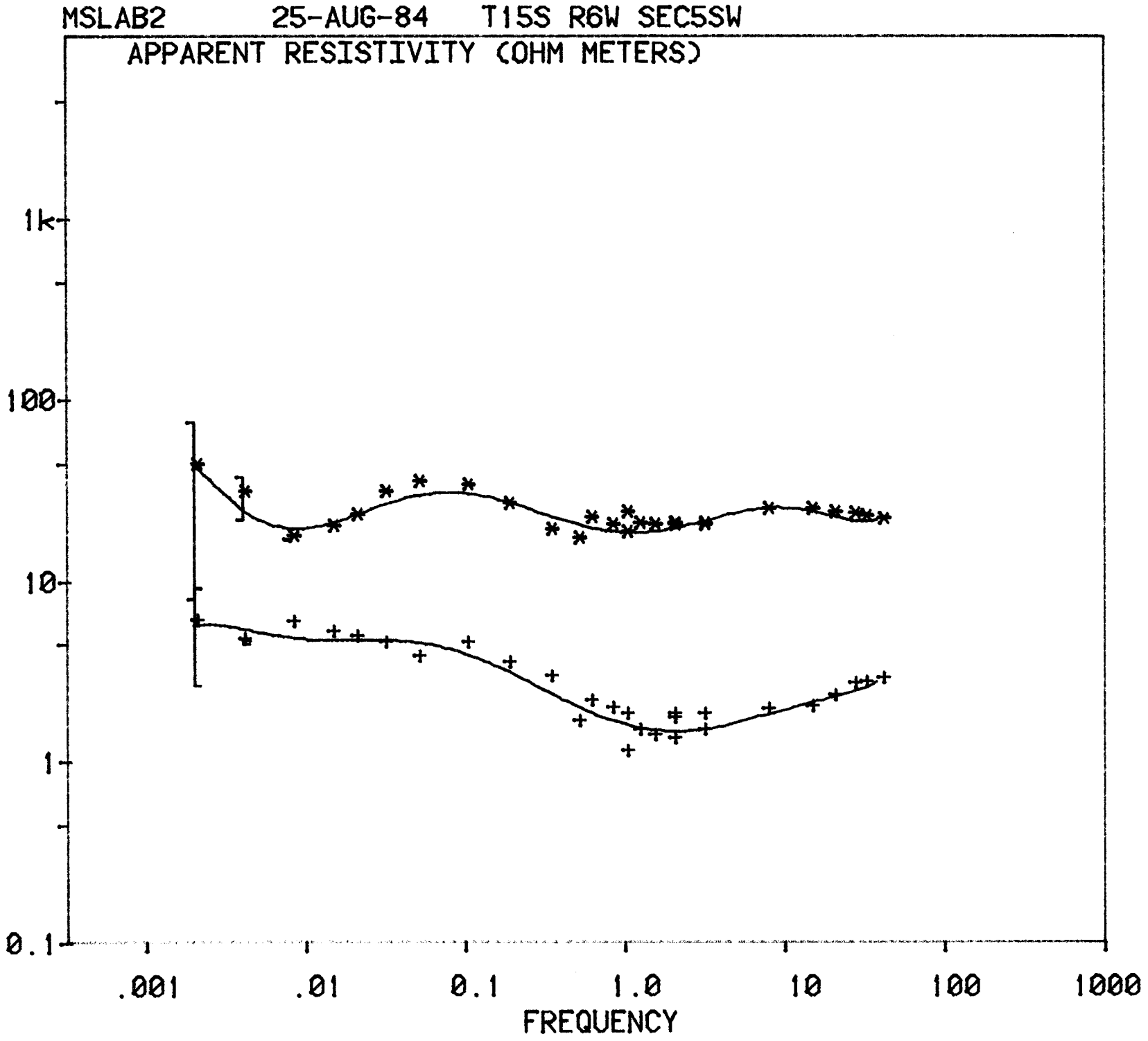
MSLAB2 25-AUG-84 T15S R6W SEC5SW
APPARENT RESISTIVITY (OHM METERS)
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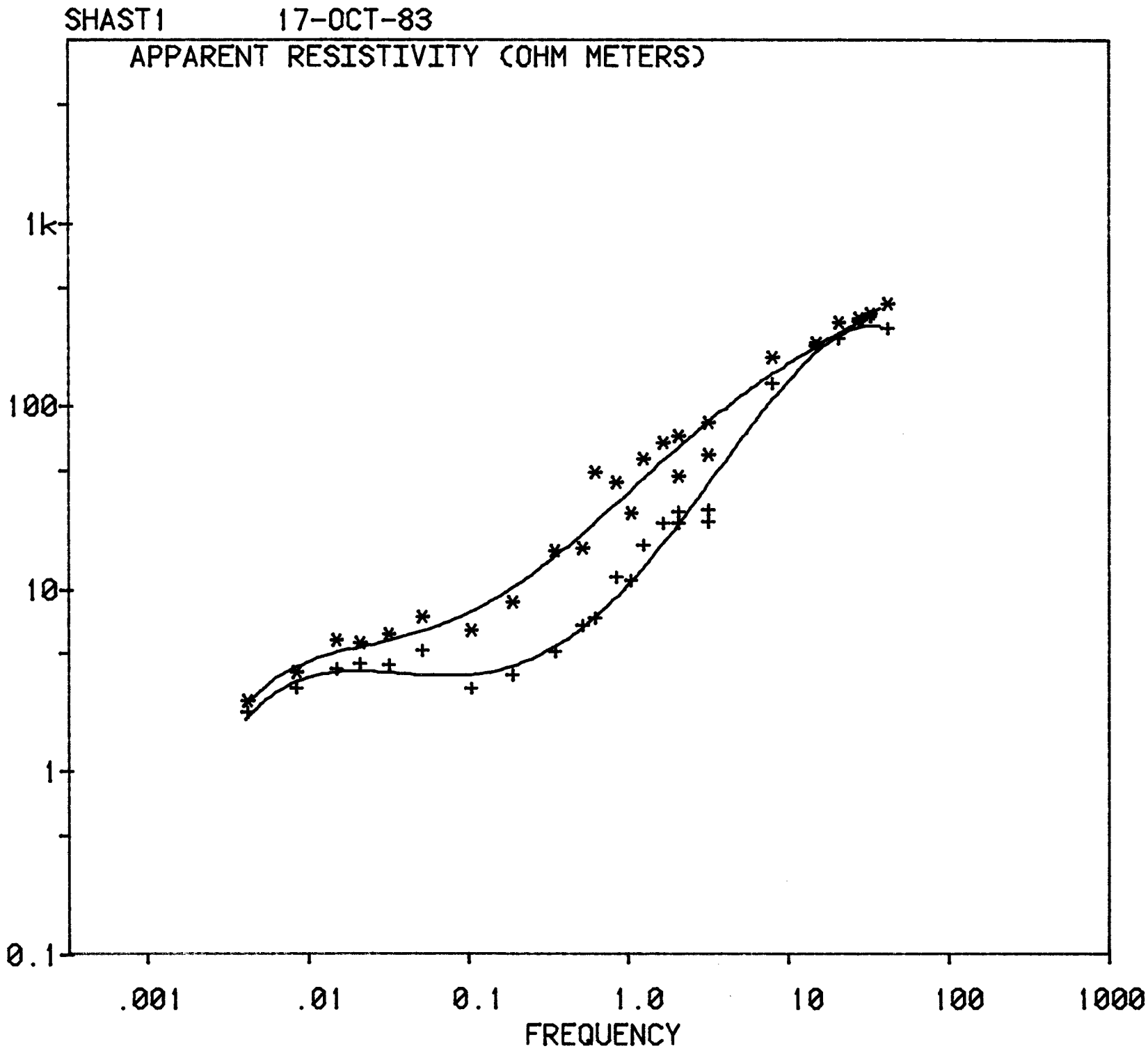
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAST1 17-OCT-83
APPARENT RESISTIVITY (OHM METERS)
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1
0.1
.001
.01
0.1
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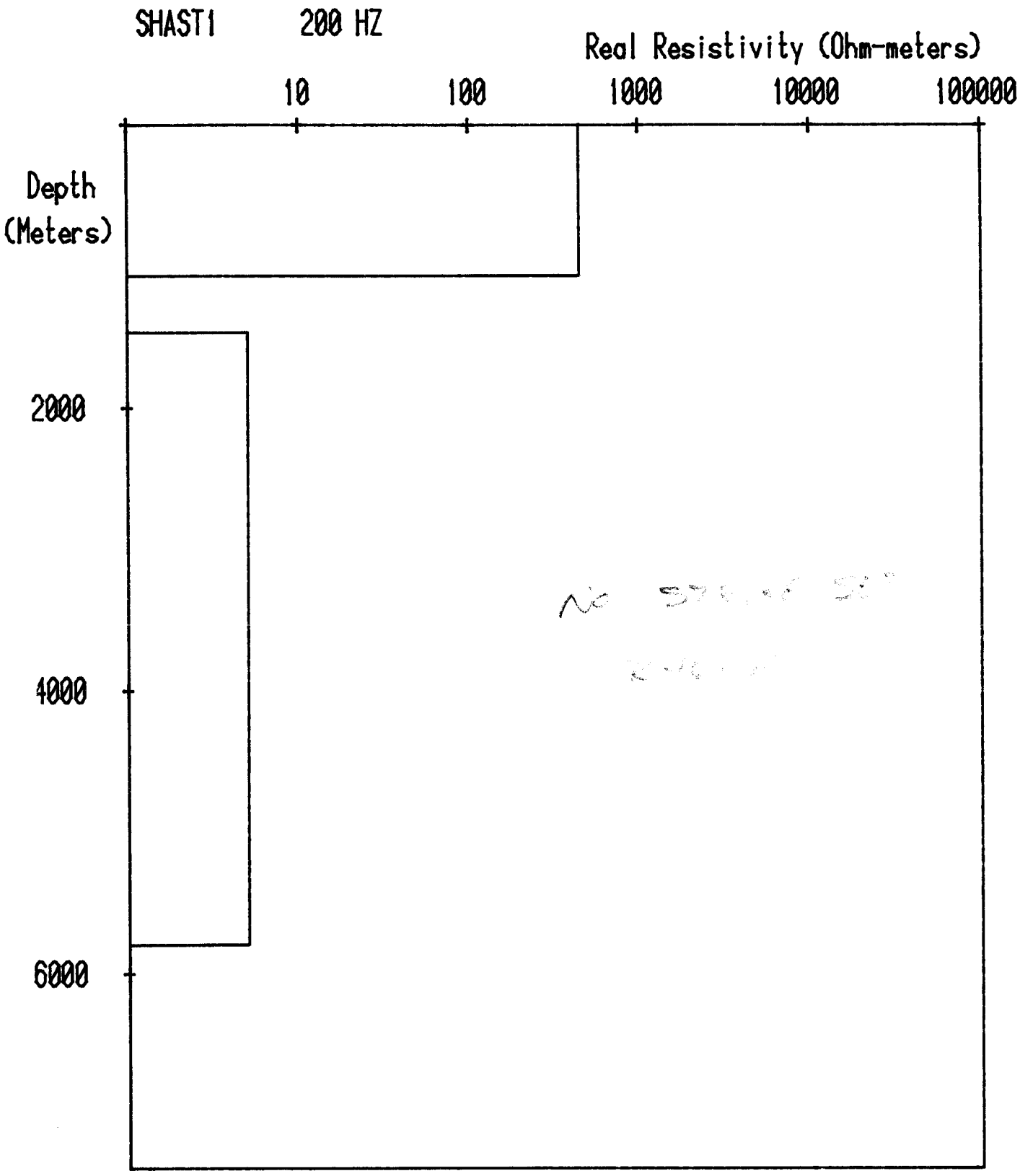
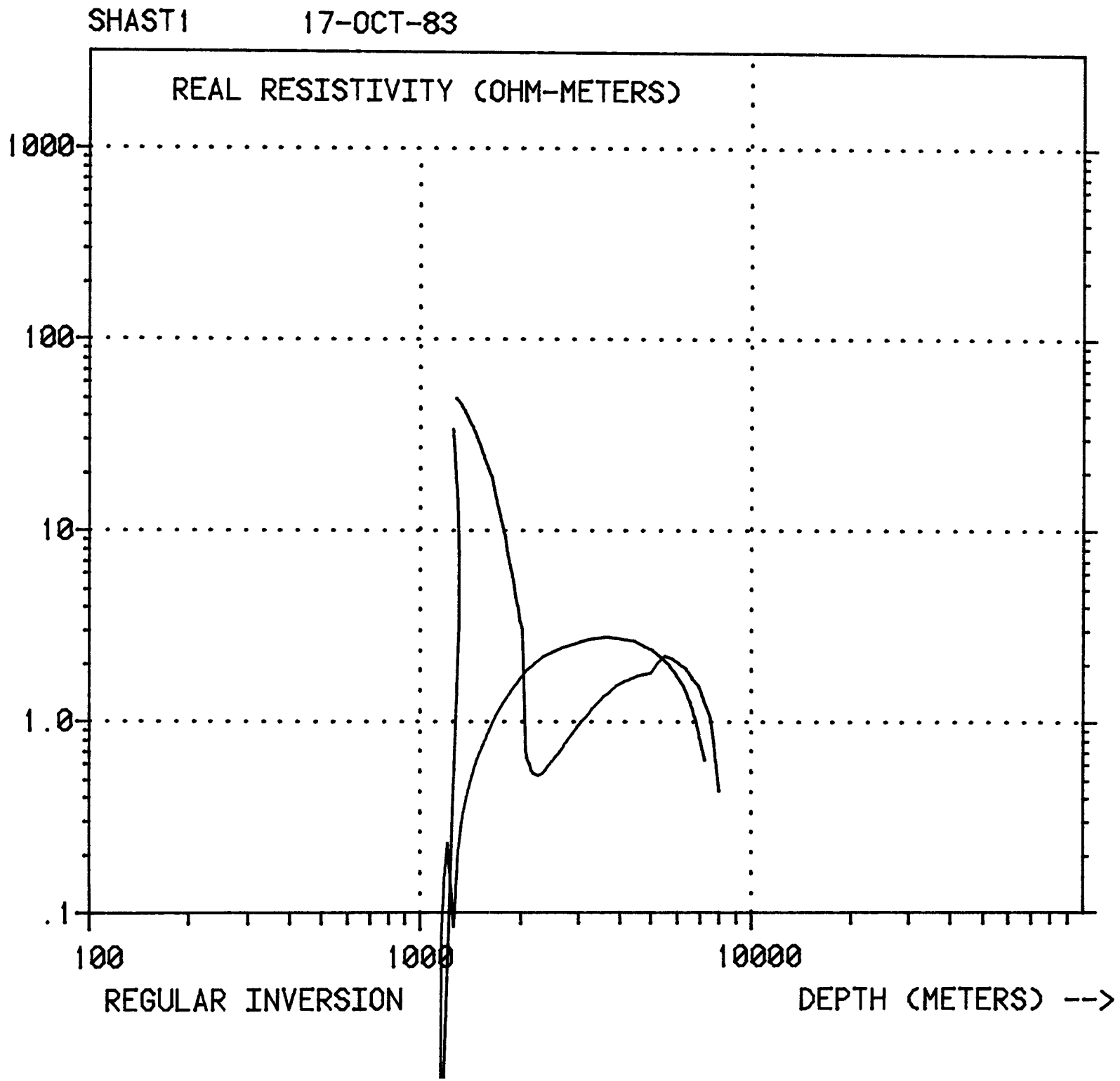
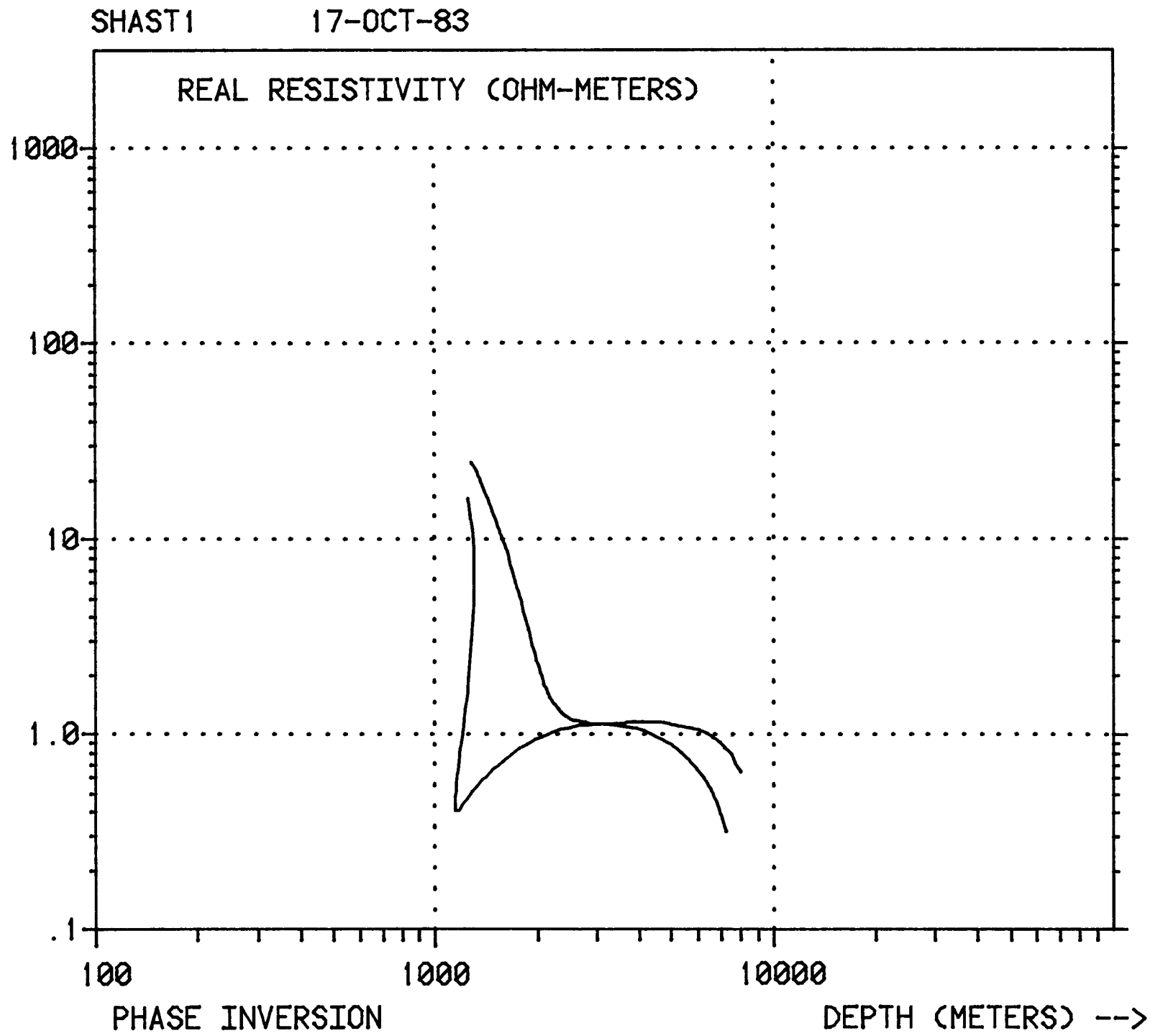
10
100
1000
FREQUENCY




| | | | | |
|---|---|---|---|---|
| Resistivity | 448.05 | 0.55 | 5.05 | 0.74 |
| Thickness | | 1062.85 | 394.99 | 4345.63 |
| Depth | 0.00 | 1062.85 | 1457.84 | 5803.48 |


SHAST1 17-OCT-83
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST1 17-OCT-83
REAL RESISTIVITY (OHM-METERS)
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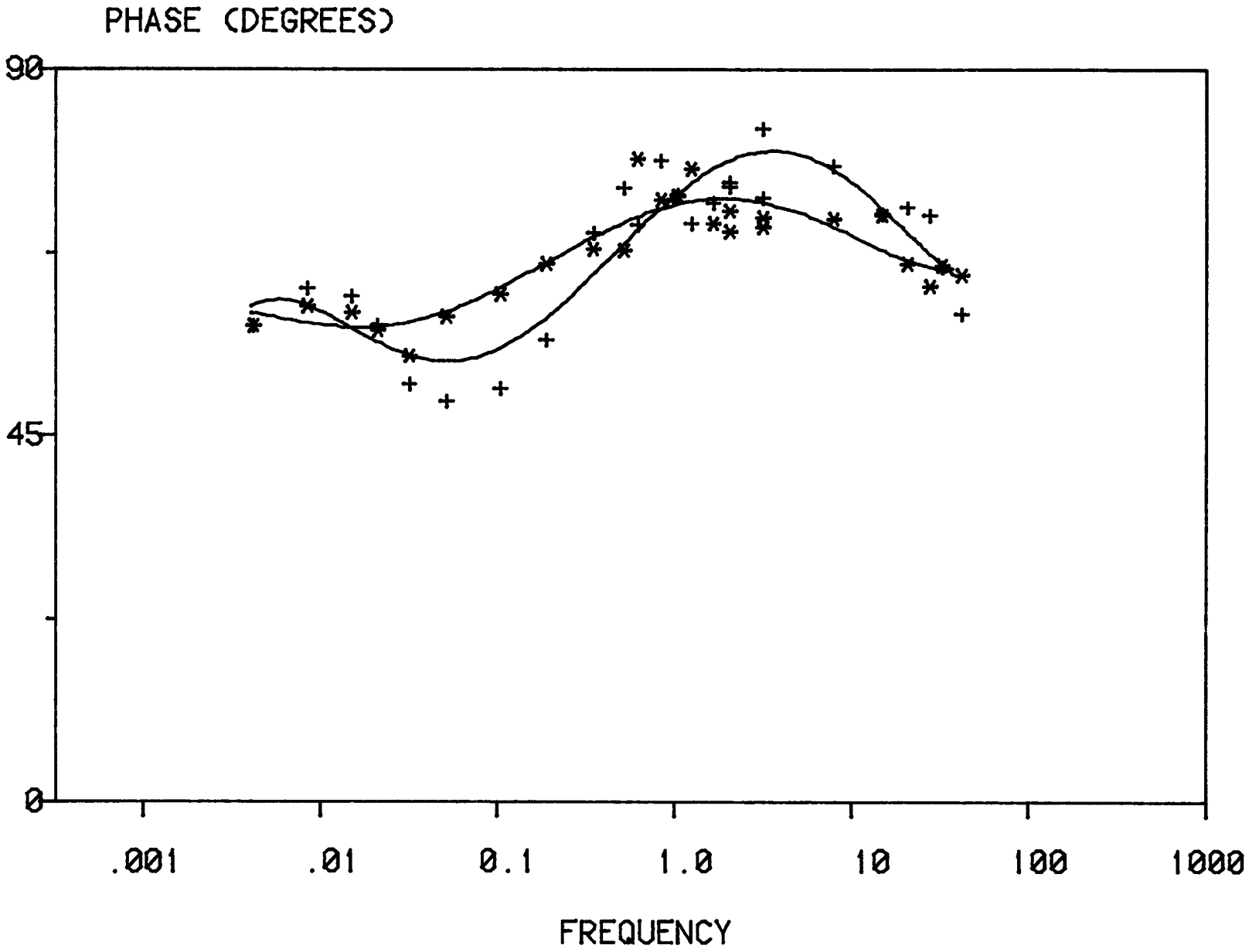
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAST1 17-OCT-83



THE SITE IS: SHAST1 200 HZ 17-OCT-83

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 1.54 | 2.61 | 1 | 690.94 | 2122.25 |
| 0.0020 | 1.78 | 2.73 | 2 | 210.54 | 540.04 |
| 0.0040 | 1.98 | 2.29 | 3 | 85.47 | 63.92 |
| 0.0080 | 2.67 | 3.28 | 4 | 25.46 | 8.63 |
| 0.0143 | 3.40 | 4.89 | 5 | 7.71 | 2.78 |
| 0.0200 | 3.69 | 4.76 | 6 | 4.73 | 3.85 |
| 0.0303 | 3.59 | 5.31 | 7 | 2.93 | 1.19 |
| 0.0500 | 4.32 | 6.60 | 8 | 0.21 | 0.72 |
| 0.1000 | 2.71 | 5.60 | 9 | 1.49 | 4.42 |
| 0.1818 | 3.16 | 7.96 | 10 | 0.25 | 0.62 |
| 0.3333 | 4.25 | 14.98 | 11 | 0.05 | 0.15 |
| 0.5000 | 5.86 | 15.49 | 12 | 0.04 | 0.10 |
| 0.5988 | 6.49 | 40.39 | 13 | 0.03 | 0.18 |
| 0.8000 | 10.76 | 35.70 | 14 | 0.03 | 0.10 |
| 1.0000 | 10.45 | 24.18 | 15 | 0.01 | 0.01 |
| 1.0000 | 22.96 | 57.35 | 16 | 0.16 | 0.38 |
| 1.2048 | 16.24 | 47.69 | 17 | 0.01 | 0.07 |
| 1.6129 | 21.27 | 58.40 | 18 | 0.01 | 0.02 |
| 2.0000 | 24.71 | 64.31 | 19 | 0.01 | 0.03 |
| 2.0000 | 21.22 | 38.26 | 20 | 0.00 | 0.01 |
| 2.0000 | 62.65 | 67.25 | 21 | 0.02 | 0.06 |
| 3.0303 | 21.50 | 50.45 | 22 | 0.00 | 0.01 |
| 3.0303 | 25.16 | 75.19 | 23 | 0.00 | 0.02 |
| 7.6923 | 123.74 | 170.46 | 24 | 0.01 | 0.03 |
| 14.2857 | 199.93 | 204.17 | 25 | 0.01 | 0.01 |
| 20.0000 | 215.75 | 267.06 | 26 | 0.00 | 0.00 |
| 26.3158 | 270.27 | 282.59 | 27 | 0.00 | 0.00 |
| 31.2500 | 286.95 | 295.55 | 28 | 0.00 | 0.00 |
| 40.0000 | 248.89 | 335.26 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAST1 200 HZ 17-OCT-83
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.285E+01 | 0.165E+01 | 39. | 58. | 55. | 0.9966 | 0.9819 | 0.0814 | 0.24 |
| H | SEC | 0.237E+01 | 0.144E+01 | 41. | 57. | 54. | 0.9967 | 0.9832 | 52.30 | 0.19 |
| E | 500.0 | 0.315E+01 | 0.232E+01 | 70. | 53. | 160. | 0.9830 | 0.9338 | 0.1011 | 0.22 |
| H | SEC | 0.232E+01 | 0.123E+01 | 67. | 55. | 2. | 0.9851 | 0.9473 | 45.80 | 0.17 |
| E | 250.0 | 0.245E+01 | 0.224E+01 | 55. | 62. | 100. | 0.9875 | 0.9306 | 0.0802 | 0.15 |
| H | SEC | 0.213E+01 | 0.172E+01 | 62. | 56. | 13. | 0.9878 | 0.9329 | 41.80 | 0.12 |
| E | 125.0 | 0.346E+01 | 0.313E+01 | 60. | 64. | 65. | 0.9960 | 0.9224 | 0.0602 | 0.13 |
| H | SEC | 0.310E+01 | 0.221E+01 | 63. | 62. | 22. | 0.9961 | 0.9271 | 54.50 | 0.10 |
| E | 70.0 | 0.552E+01 | 0.383E+01 | 60. | 63. | 71. | 0.9959 | 0.8916 | 0.0838 | 0.06 |
| H | SEC | 0.425E+01 | 0.297E+01 | 61. | 62. | 31. | 0.9960 | 0.8939 | 52.70 | 0.06 |
| E | 50.0 | 0.491E+01 | 0.409E+01 | 57. | 60. | 58. | 0.9969 | 0.9391 | 0.1199 | 0.05 |
| H | SEC | 0.461E+01 | 0.329E+01 | 59. | 57. | 20. | 0.9969 | 0.9396 | 48.90 | 0.05 |
| E | 33.0 | 0.544E+01 | 0.378E+01 | 55. | 52. | 22. | 0.9930 | 0.9737 | 0.1673 | 0.05 |
| H | SEC | 0.517E+01 | 0.339E+01 | 55. | 52. | 17. | 0.9930 | 0.9740 | 39.80 | 0.07 |
| E | 20.0 | 0.750E+01 | 0.537E+01 | 59. | 50. | 174. | 0.9663 | 0.9348 | 0.1900 | 0.02 |
| H | SEC | 0.569E+01 | 0.327E+01 | 61. | 49. | 15. | 0.9712 | 0.9452 | 44.40 | 0.04 |

AVERAGE # 8
SHAST1 200 HZ 17-OCT-83
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.572E+01 | 0.279E+01 | 63. | 51. | 14. | 0.9914 | 0.9831 | 0.1164 | 0.05 |
| H | SEC | 0.548E+01 | 0.262E+01 | 63. | 51. | 13. | 0.9914 | 0.9831 | 39.90 | 0.05 |
| E | 5.5 | 0.928E+01 | 0.357E+01 | 66. | 57. | 12. | 0.9186 | 0.9393 | 0.1157 | 0.01 |
| H | SEC | 0.664E+01 | 0.275E+01 | 66. | 57. | 13. | 0.9187 | 0.9393 | 20.80 | 0.02 |
| E | 3.0 | 0.185E+02 | 0.492E+01 | 69. | 70. | 8. | 0.8973 | 0.9233 | 0.2478 | 0.04 |
| H | SEC | 0.115E+02 | 0.358E+01 | 68. | 71. | 6. | 0.8986 | 0.9239 | 106.00 | 0.07 |
| E | 2.0 | 0.178E+02 | 0.705E+01 | 68. | 75. | 10. | 0.9211 | 0.9044 | 0.1866 | 0.05 |
| H | SEC | 0.132E+02 | 0.467E+01 | 68. | 76. | 11. | 0.9217 | 0.9049 | 144.30 | 0.08 |
| E | 1.7 | 0.459E+02 | 0.680E+01 | 80. | 71. | 2. | 0.9376 | 0.9834 | 0.0991 | 0.05 |
| H | SEC | 0.349E+02 | 0.617E+01 | 79. | 71. | 5. | 0.9391 | 0.9838 | 142.20 | 0.06 |
| E | 1.2 | 0.383E+02 | 0.114E+02 | 74. | 79. | 8. | 0.9630 | 0.9683 | 0.2081 | 0.04 |
| H | SEC | 0.331E+02 | 0.101E+02 | 74. | 79. | 8. | 0.9631 | 0.9684 | 150.10 | 0.05 |
| E | 1.0 | 0.290E+02 | 0.119E+02 | 74. | 75. | 7. | 0.9237 | 0.9397 | 0.2953 | 0.03 |
| H | HZ | 0.194E+02 | 0.899E+01 | 75. | 75. | 178. | 0.9263 | 0.9413 | 154.80 | 0.03 |

AVERAGE # 8
SHAST1 200 HZ 17-OCT-83
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.836E+02 | 0.270E+02 | 69. | 85. | 93. | 0.8163 | 0.7747 | 0.5908 | 0.41 |
| H | HZ | 0.311E+02 | 0.190E+02 | 65. | 87. | 76. | 0.8261 | 0.7771 | 84.90 | 0.35 |
| E | 1.2 | 0.520E+02 | 0.188E+02 | 78. | 71. | 0. | 0.9498 | 0.9247 | 0.2174 | 0.10 |
| H | HZ | 0.434E+02 | 0.137E+02 | 78. | 71. | 2. | 0.9501 | 0.9248 | 158.90 | 0.09 |
| E | 1.6 | 0.652E+02 | 0.262E+02 | 71. | 74. | 169. | 0.9400 | 0.8806 | 0.2515 | 0.11 |
| H | HZ | 0.516E+02 | 0.164E+02 | 72. | 74. | 180. | 0.9437 | 0.8833 | 167.10 | 0.05 |
| E | 2.0 | 0.702E+02 | 0.304E+02 | 70. | 76. | 2. | 0.9453 | 0.8970 | 0.3277 | 0.07 |
| H | HZ | 0.584E+02 | 0.191E+02 | 71. | 75. | 7. | 0.9472 | 0.8988 | -4.30 | 0.02 |
| E | 2.0 | 0.427E+02 | 0.261E+02 | 73. | 76. | 9. | 0.9328 | 0.8906 | 0.2219 | 0.07 |
| H | HZ | 0.339E+02 | 0.163E+02 | 73. | 77. | 11. | 0.9337 | 0.8907 | 170.20 | 0.05 |
| E | 2.0 | 0.769E+02 | 0.724E+02 | 82. | 60. | 86. | 0.9256 | 0.9023 | 0.1819 | 0.20 |
| H | HZ | 0.576E+02 | 0.529E+02 | 64. | 80. | 175. | 0.9289 | 0.9041 | 173.10 | 0.11 |

AVERAGE # 8
SHAST1 200 HZ 17-OCT-83
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.590E+02 | 0.291E+02 | 72. | 83. | 9. | 0.9386 | 0.8709 | 0.2671 | 0.06 |
| H | HZ | 0.419E+02 | 0.139E+02 | 73. | 83. | 169. | 0.9468 | 0.8887 | 166.00 | 0.05 |
| E | 3.0 | 0.812E+02 | 0.280E+02 | 71. | 75. | 7. | 0.9579 | 0.9491 | 0.2940 | 0.04 |
| H | HZ | 0.692E+02 | 0.223E+02 | 71. | 74. | 8. | 0.9582 | 0.9495 | 173.90 | 0.04 |
| E | 7.7 | 0.176E+03 | 0.128E+03 | 72. | 78. | 19. | 0.9880 | 0.9846 | 0.2955 | 0.03 |
| H | HZ | 0.165E+03 | 0.119E+03 | 72. | 79. | 17. | 0.9881 | 0.9847 | 14.10 | 0.03 |
| E | 14.3 | 0.217E+03 | 0.213E+03 | 68. | 77. | 6. | 0.9742 | 0.9771 | 0.2979 | 0.05 |
| H | HZ | 0.192E+03 | 0.187E+03 | 77. | 68. | 95. | 0.9744 | 0.9773 | 19.70 | 0.05 |
| E | 20.0 | 0.291E+03 | 0.233E+03 | 66. | 73. | 13. | 0.9624 | 0.9610 | 0.2963 | 0.01 |
| H | HZ | 0.243E+03 | 0.198E+03 | 66. | 73. | 10. | 0.9625 | 0.9611 | 16.50 | 0.01 |
| E | 26.3 | 0.310E+03 | 0.300E+03 | 63. | 72. | 13. | 0.9626 | 0.9512 | 0.3266 | 0.03 |
| H | HZ | 0.255E+03 | 0.241E+03 | 64. | 72. | 13. | 0.9627 | 0.9516 | 21.80 | 0.02 |
| E | 31.2 | 0.335E+03 | 0.319E+03 | 70. | 62. | 100. | 0.9651 | 0.9453 | 0.4385 | 0.04 |
| H | HZ | 0.256E+03 | 0.255E+03 | 62. | 70. | 13. | 0.9653 | 0.9468 | 41.90 | 0.03 |
| E | 40.0 | 0.387E+03 | 0.337E+03 | 67. | 58. | 93. | 0.9437 | 0.9181 | 0.6483 | 0.04 |
| H | HZ | 0.284E+03 | 0.161E+03 | 63. | 62. | 138. | 0.9464 | 0.9264 | 74.30 | 0.07 |

ERROR ANALYSIS

R-SQUARED = 0.998

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 22 | 190272.340 | 8648.743 | 0.273 |
| MODEL | 6 | 189880.531 | 31646.755 | 527574.074 |
| RESID | 16 | 0.960 | 0.060 | |

STANDARD ERROR = 0.245

DTEST FOR MEANS = -0.000

NOISE TO SIGNAL RATIO = 0.138 PERCENT

SHAST1 200 HZ 17-OCT-83

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 250.000 | 1.978 | 2.169 | -0.191 | -9.220 |
| 2 | 125.000 | 2.671 | 2.761 | -0.090 | -3.313 |
| 3 | 70.000 | 3.401 | 3.225 | 0.176 | 5.299 |
| 4 | 50.000 | 3.689 | 3.392 | 0.297 | 8.386 |
| 5 | 33.000 | 3.586 | 3.431 | 0.154 | 4.402 |
| 6 | 20.000 | 4.322 | 3.280 | 1.042 | 27.410 |
| 7 | 10.000 | 2.706 | 3.149 | -0.443 | -15.136 |
| 8 | 5.500 | 3.162 | 3.607 | -0.445 | -13.145 |
| 9 | 3.000 | 4.247 | 5.006 | -0.760 | -16.420 |
| 10 | 2.000 | 5.861 | 6.709 | -0.848 | -13.496 |
| 11 | 1.670 | 6.489 | 7.741 | -1.252 | -17.600 |
| 12 | 1.250 | 10.757 | 9.861 | 0.895 | 8.682 |
| 13 | 1.000 | 10.454 | 11.976 | -1.522 | -13.570 |
| 14 | 0.830 | 16.239 | 14.134 | 2.104 | 13.856 |
| 15 | 0.620 | 21.267 | 18.395 | 2.872 | 14.482 |
| 16 | 0.500 | 21.218 | 22.374 | -1.157 | -5.308 |
| 17 | 0.330 | 21.497 | 32.682 | -11.185 | -41.289 |
| 18 | 0.330 | 25.163 | 32.682 | -7.519 | -25.995 |
| 19 | 0.130 | 123.737 | 76.526 | 47.211 | 47.149 |
| 20 | 0.070 | 199.935 | 135.338 | 64.597 | 38.534 |
| 21 | 0.050 | 215.748 | 183.778 | 31.970 | 16.004 |
| 22 | 0.038 | 270.272 | 234.271 | 36.001 | 14.271 |
| 23 | 0.032 | 286.951 | 271.278 | 15.673 | 5.615 |

MEAN PERCENT ERROR = 20.2354
MAXIMUM PERCENT ERROR = 47.1486
MAX. ERROR OCCURED AT OBSERVATION 19

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 448.0541 | | 0.0000 |
| | | 1062.8562 | |
| 2 | 0.5559 | | 1062.8562 |
| | | 394.9926 | |
| 3 | 5.0589 | | 1457.8488 |
| | | 4345.6397 | |
| 4 | 0.7415 | | 5803.4885 |

MEAN PERCENT VARIATION IS 20.4277

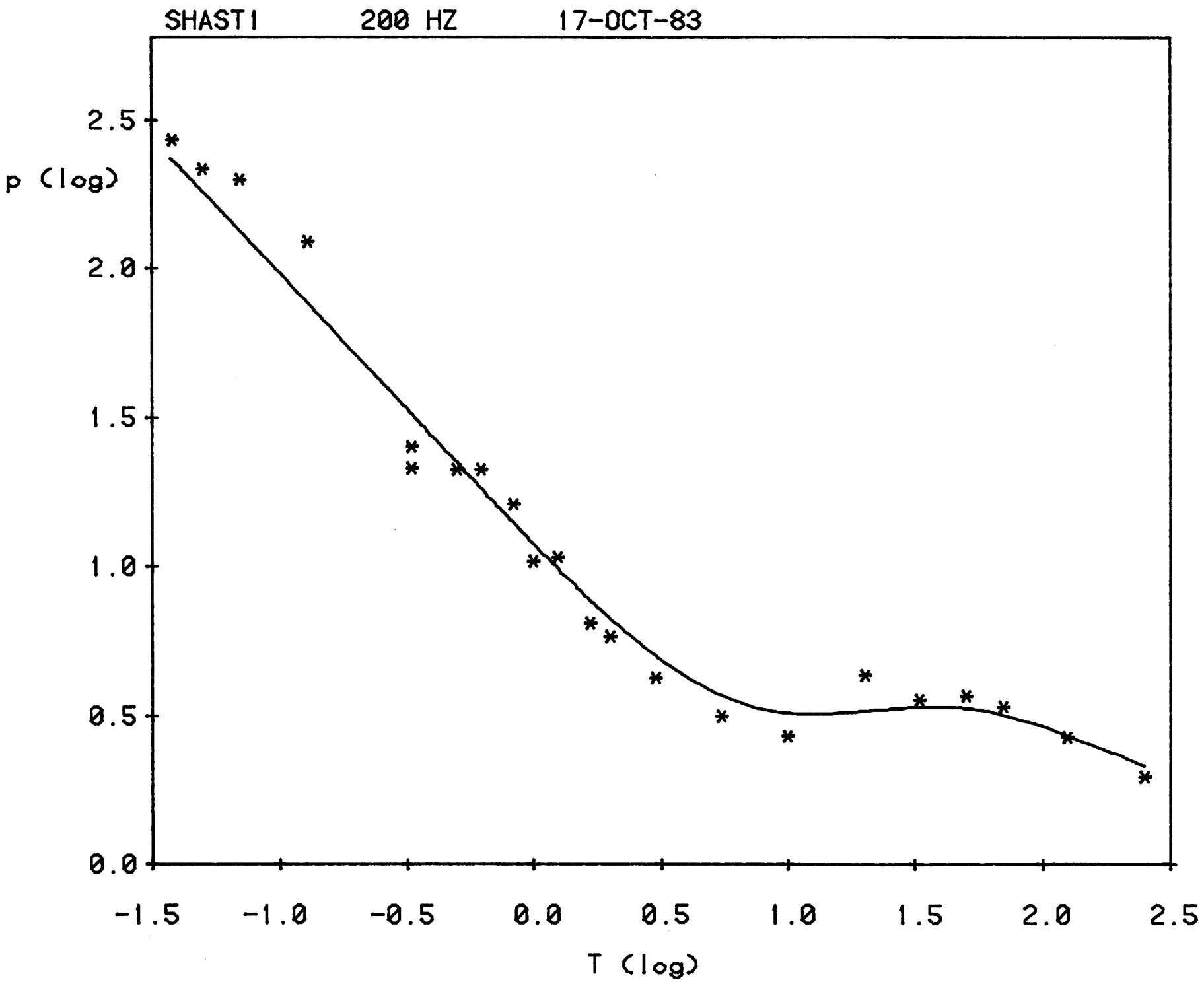
SHAST1 200 HZ 17-OCT-83

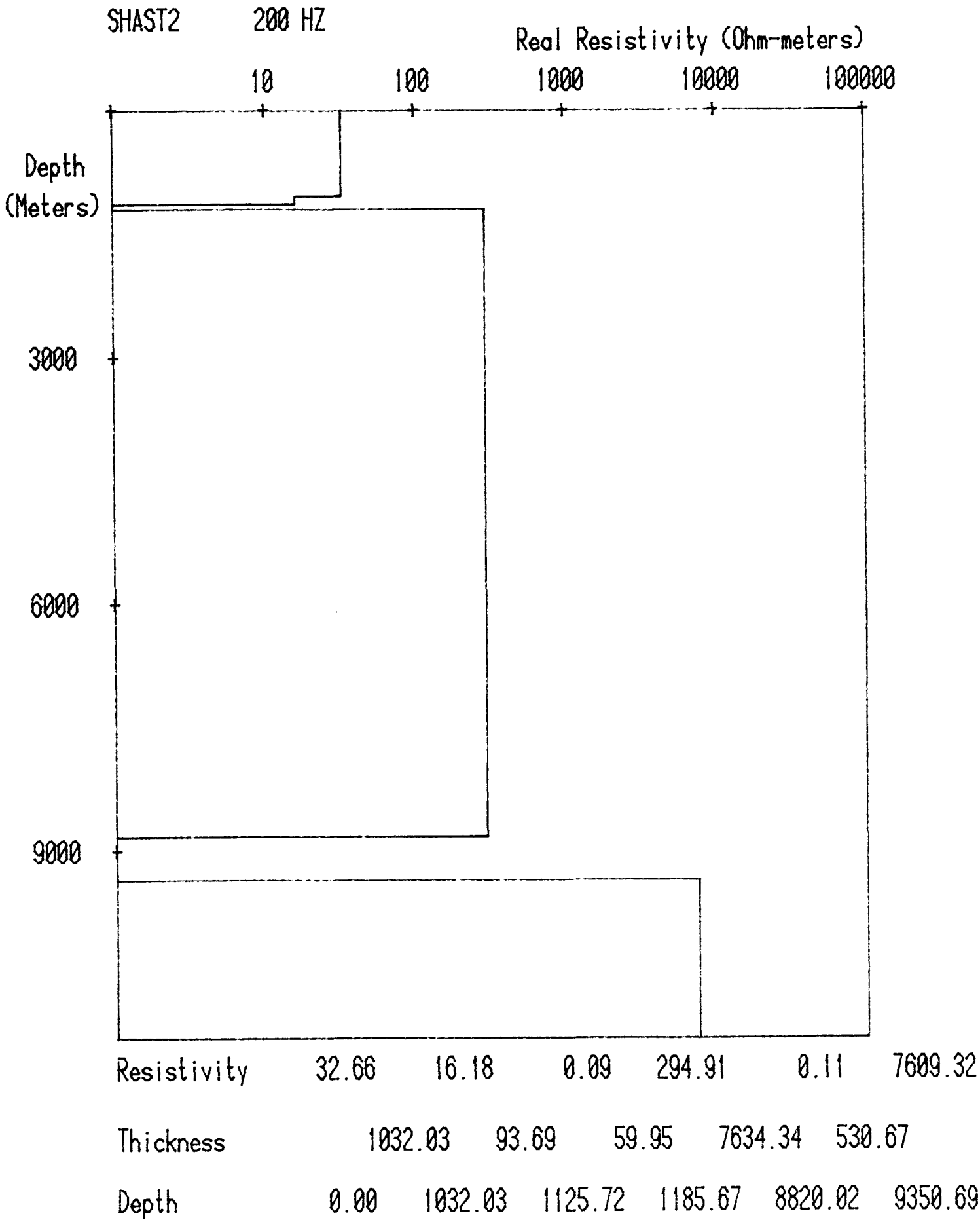
THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 23
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

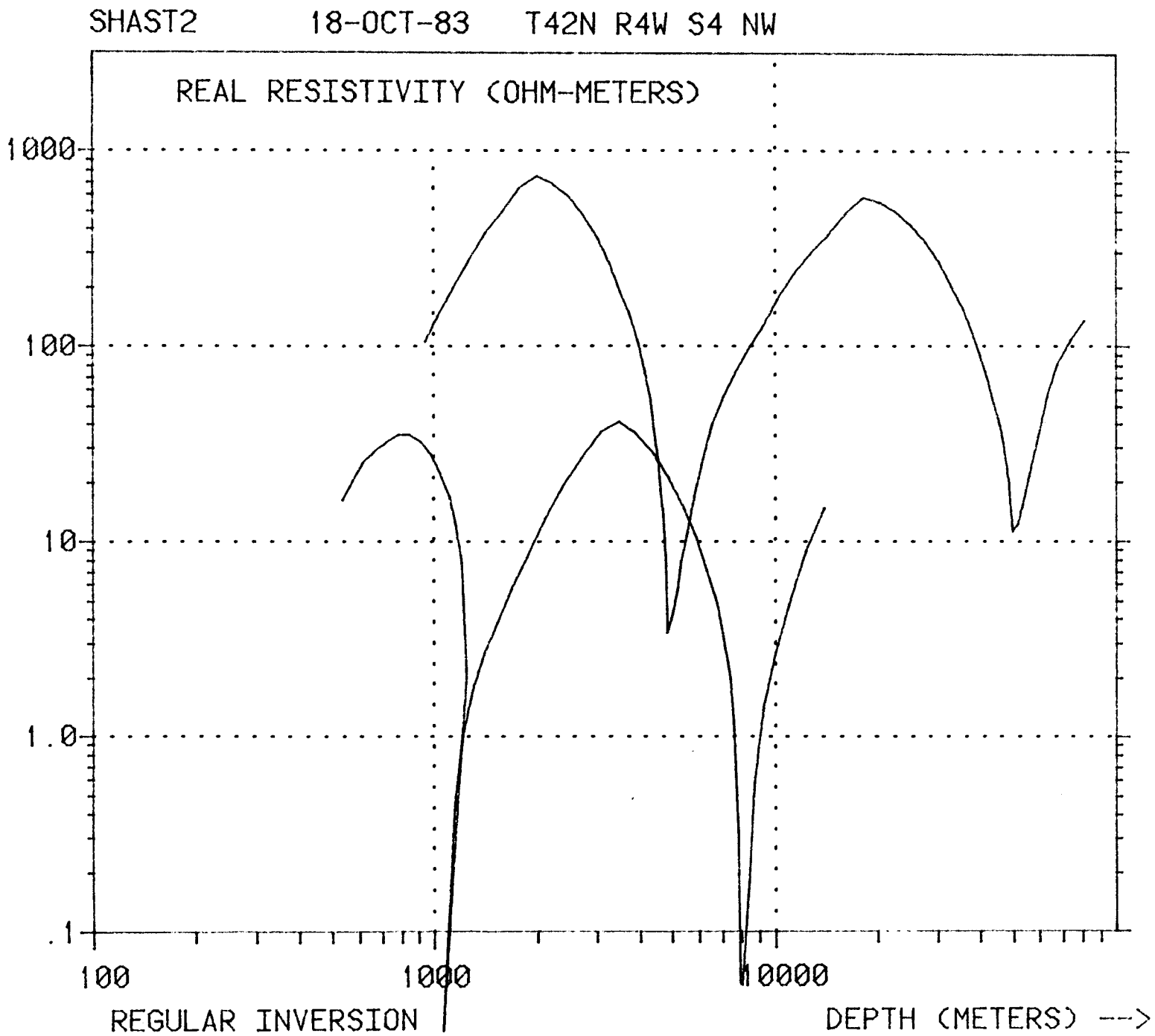
THE INITIAL MODEL IS

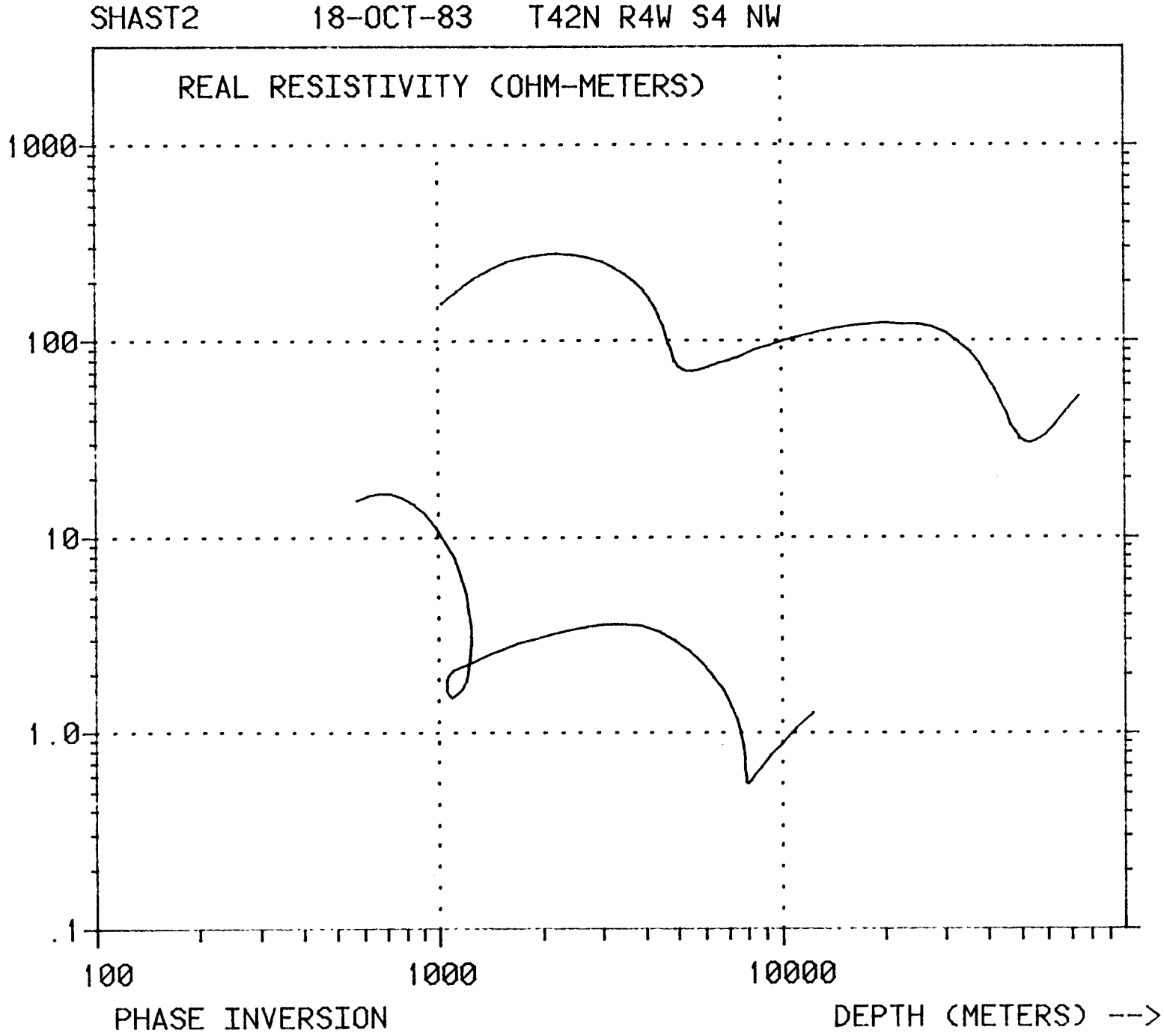
| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 50.0000 | | 0.0000 |
| | | 1000.0000 | |
| 2 | 1.0000 | | 1000.0000 |
| | | 700.0000 | |
| 3 | 2.0000 | | 1700.0000 |
| | | 6000.0000 | |
| 4 | 1.0000 | | 7700.0000 |

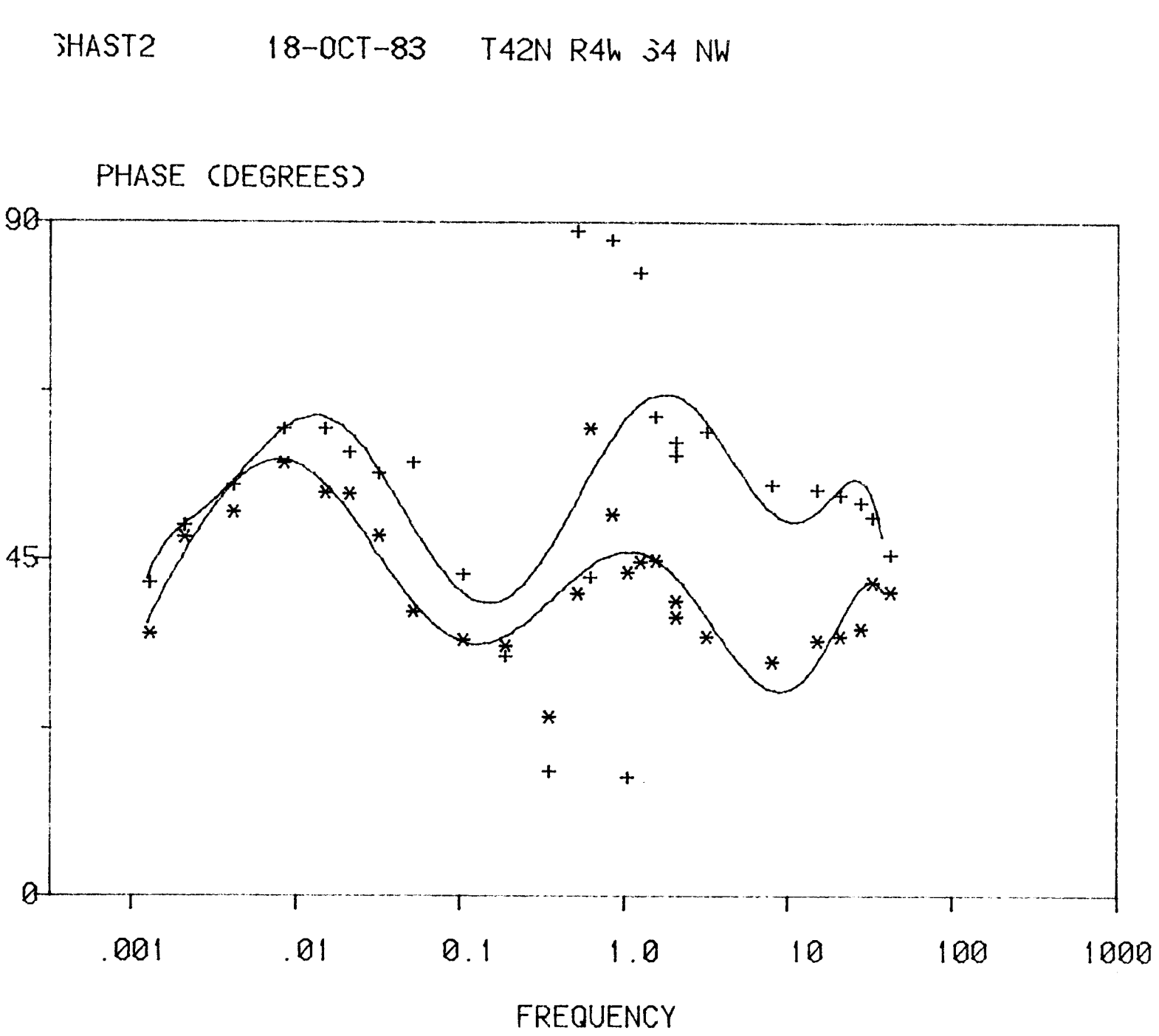
FREQUENCY RANGE ( 0.0040 , 31.2500 )


SHAST1 200 HZ 17-OCT-83
p (log)
2.5
2.0
1.5
1.0
0.5
0.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAST2
200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
Depth
(Meters)
3000
6000
9000
Resistivity 32.66 16.18 0.09 294.91 0.11 7609.32
Thickness 1032.03 93.69 59.95 7634.34 530.67
Depth 0.00 1032.03 1125.72 1185.67 8820.02 9350.69


SHAST2 18-OCT-83 T42N R4W S4 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST2 18-OCT-83 T42N R4W S4 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->


CHAST2 18-OCT-83 T42N R4W 34 NW
PHASE (DEGREES)
90
45
0
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3749E+03 | | 0.0000E+00 |
| | | 0.1573E+04 | |
| 2 | 0.1768E+02 | | 0.1573E+04 |
| | | 0.2723E+04 | |
| 3 | 0.5672E+03 | | 0.4295E+04 |
| | | 0.3414E+05 | |
| 4 | 0.4011E+02 | | 0.3844E+05 |

MEAN PERCENT VARIATION IS 0.8570E+01

SHAS20 200 HZ 14-JUL-84 T42N R3W S16 NW

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 23
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 1000.0000 | | 0.0000 |
| | | 2000.0000 | |
| 2 | 3.0000 | | 2000.0000 |
| | | 2000.0000 | |
| 3 | 200.0000 | | 4000.0000 |
| | | 40000.0000 | |
| 4 | 1.0000 | | 44000.0000 |

FREQUENCY RANGE ( 0.0020 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3536E+03 | | 0.0000E+00 |
| | | 0.1696E+04 | |
| 2 | 0.1822E+02 | | 0.1696E+04 |
| | | 0.3087E+04 | |
| 3 | 0.1815E+05 | | 0.4783E+04 |
| | | 0.3142E+05 | |
| 4 | 0.3624E+02 | | 0.3620E+05 |

MEAN PERCENT VARIATION IS 0.9500E+01

THE SITE IS: SHAST2 200 HZ 18-OCT-83 T42N R4W S4 NW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | | MEAN OF RHOMIN | RHOMAX | PERIOD # | STDEV OF RHOM | RHOMAX |
|---|---|---|---|---|---|---|
| 0.0012 | : | 4.08 | 119.86 | 1 | 300.92 | 758.93 |
| 0.0020 | : | 2.87 | 104.34 | 2 | 241.19 | 1076.75 |
| 0.0040 | : | 3.42 | 117.79 | 3 | 63.24 | 355.26 |
| 0.0080 | : | 3.95 | 149.00 | 4 | 12.18 | 85.18 |
| 0.0143 | : | 5.43 | 182.32 | 5 | 7.93 | 41.38 |
| 0.0200 | : | 6.97 | 161.98 | 6 | 5.34 | 20.77 |
| 0.0303 | : | 7.85 | 179.77 | 7 | 4.34 | 19.85 |
| 0.0500 | : | 8.57 | 187.91 | 8 | 0.61 | 3.95 |
| 0.1000 | : | 4.52 | 84.59 | 9 | 0.71 | 3.34 |
| 0.1818 | : | 2.79 | 73.23 | 10 | 0.15 | 0.67 |
| 0.3333 | : | 2.08 | 55.08 | 11 | 0.03 | 0.21 |
| 0.5000 | : | 1.72 | 87.36 | 12 | 0.03 | 0.18 |
| 0.5988 | : | 10.37 | 172.16 | 13 | 0.04 | 0.13 |
| 0.8000 | : | 17.01 | 183.33 | 14 | 0.04 | 0.05 |
| 1.0000 | : | 0.94 | 112.36 | 15 | 0.01 | 0.05 |
| 1.0000 | : | 5.80 | 45.42 | 16 | 0.00 | 0.00 |
| 1.2048 | : | 12.86 | 236.95 | 17 | 0.03 | 0.06 |
| 1.4925 | : | 17.17 | 251.82 | 18 | 0.02 | 0.05 |
| 2.0000 | : | 20.60 | 238.81 | 19 | 0.01 | 0.03 |
| 2.0000 | : | 1.37 | 116.10 | 20 | 0.00 | 0.02 |
| 2.0000 | : | 29.07 | 249.06 | 21 | 0.10 | 0.22 |
| 3.0303 | : | 1.46 | 105.24 | 22 | 0.00 | 0.01 |
| 3.0303 | : | 29.83 | 210.32 | 23 | 0.01 | 0.01 |
| 7.6923 | : | 37.05 | 152.45 | 24 | 0.11 | 0.12 |
| 14.2857 | : | 35.58 | 116.46 | 25 | 0.00 | 0.00 |
| 20.0000 | : | 33.85 | 94.33 | 26 | 0.00 | 0.00 |
| 26.3158 | : | 39.84 | 90.47 | 27 | 0.00 | 0.00 |
| 31.2500 | : | 35.63 | 117.56 | 28 | 0.00 | 0.00 |
| 40.0000 | : | 28.85 | 83.46 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAST2 200 HZ 18-OCT-83 T42N R4W S4 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.116E+03 | 0.473E+01 | 33. | 44. | 143. | 0.9943 | 0.9906 | 0.2767 | 0.34 |
| H | SEC | 0.123E+03 | 0.342E+01 | 38. | 40. | 143. | 0.9949 | 0.9917 | 82.40 | 0.32 |
| E | 500.0 | 0.106E+03 | 0.299E+01 | 48. | 50. | 143. | 0.9910 | 0.9877 | 0.1081 | 0.25 |
| H | SEC | 0.103E+03 | 0.276E+01 | 48. | 50. | 143. | 0.9911 | 0.9878 | 136.80 | 0.25 |
| E | 250.0 | 0.119E+03 | 0.360E+01 | 52. | 55. | 143. | 0.9914 | 0.9838 | 0.1129 | 0.16 |
| H | SEC | 0.117E+03 | 0.323E+01 | 52. | 55. | 143. | 0.9917 | 0.9842 | 19.50 | 0.16 |
| E | 125.0 | 0.162E+03 | 0.408E+01 | 57. | 64. | 143. | 0.9812 | 0.9773 | 0.1827 | 0.06 |
| H | SEC | 0.136E+03 | 0.382E+01 | 59. | 62. | 143. | 0.9827 | 0.9790 | 11.70 | 0.11 |
| E | 70.0 | 0.192E+03 | 0.544E+01 | 54. | 64. | 143. | 0.9890 | 0.9912 | 0.2490 | 0.05 |
| H | SEC | 0.173E+03 | 0.542E+01 | 55. | 62. | 143. | 0.9893 | 0.9915 | 9.20 | 0.05 |
| E | 50.0 | 0.164E+03 | 0.700E+01 | 54. | 60. | 143. | 0.9969 | 0.9971 | 0.3329 | 0.04 |
| H | SEC | 0.160E+03 | 0.694E+01 | 54. | 59. | 143. | 0.9969 | 0.9972 | 19.10 | 0.05 |
| E | 33.0 | 0.180E+03 | 0.796E+01 | 48. | 57. | 143. | 0.9992 | 0.9989 | 0.3731 | 0.04 |
| H | SEC | 0.180E+03 | 0.773E+01 | 48. | 57. | 143. | 0.9992 | 0.9989 | 18.40 | 0.04 |
| E | 20.0 | 0.195E+03 | 0.892E+01 | 38. | 59. | 143. | 0.9952 | 0.9876 | 0.5118 | 0.08 |
| H | SEC | 0.180E+03 | 0.821E+01 | 39. | 58. | 143. | 0.9954 | 0.9881 | 9.70 | 0.05 |

AVERAGE #  8
SMAST2  200 HZ  18-OCT-83  T42N R4W S4 NM
NSAMP = 1024  SI = 0.0050  T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.890E+02 | 0.484E+01 | 34. | 43. | 143. | 0.9748 | 0.9805 | 0.5800 | 0.10 |
| H | SEC | 0.802E+02 | 0.420E+01 | 35. | 43. | 143. | 0.9750 | 0.9806 | 10.10 | 0.12 |
| E | 5.5 | 0.851E+02 | 0.337E+01 | 34. | 33. | 143. | 0.9264 | 0.9075 | 0.6823 | 0.24 |
| H | SEC | 0.614E+02 | 0.221E+01 | 34. | 32. | 143. | 0.9271 | 0.9090 | 10.40 | 0.21 |
| E | 3.0 | 0.778E+02 | 0.278E+01 | 26. | 19. | 143. | 0.8387 | 0.7743 | 0.7214 | 0.17 |
| H | SEC | 0.324E+02 | 0.138E+01 | 23. | 15. | 143. | 0.8492 | 0.7857 | 12.00 | 0.12 |
| E | 2.0 | 0.126E+03 | 0.175E+01 | 41. | 89. | 130. | 0.8434 | 0.7862 | 0.7464 | 0.27 |
| H | SEC | 0.488E+02 | 0.169E+01 | 40. | 90. | 130. | 0.8587 | 0.7914 | 14.30 | 0.22 |
| E | 1.7 | 0.192E+03 | 0.162E+02 | 60. | 1. | 130. | 0.9189 | 0.9354 | 0.3899 | 0.16 |
| H | SEC | 0.152E+03 | 0.459E+01 | 66. | 85. | 130. | 0.9500 | 0.9606 | 32.70 | 0.50 |
| E | 1.2 | 0.197E+03 | 0.282E+02 | 53. | 88. | 130. | 0.9435 | 0.9383 | 0.4883 | 0.46 |
| H | SEC | 0.170E+03 | 0.581E+01 | 50. | 88. | 130. | 0.9487 | 0.9459 | 9.70 | 0.30 |
| E | 1.0 | 0.145E+03 | 0.137E+01 | 41. | 76. | 130. | 0.8685 | 0.8509 | 0.8082 | 0.41 |
| H | HZ | 0.799E+02 | 0.501E+00 | 41. | 65. | 130. | 0.8686 | 0.8553 | 16.30 | 0.41 |

AVERAGE # 8
SRAST2 200 HZ 18-OCT-83 T42N R4W S4 NW
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.613E+02 | 0.749E+01 | 83. | 3. | 130. | 0.0000 | 0.0000 | 1.1390 | 7.84 |
| H | HZ | 0.296E+02 | 0.412E+01 | 4. | 29. | 130. | 0.0000 | 0.0000 | 0.00 | 1.16 |
| E | 1.2 | 0.248E+03 | 0.205E+02 | 44. | 83. | 130. | 0.9692 | 0.9599 | 0.4729 | 0.33 |
| H | HZ | 0.226E+03 | 0.521E+01 | 46. | 84. | 130. | 0.9697 | 0.9646 | 18.20 | 0.24 |
| E | 1.5 | 0.259E+03 | 0.274E+02 | 44. | 64. | 130. | 0.9768 | 0.9630 | 0.4398 | 0.19 |
| H | HZ | 0.244E+03 | 0.697E+01 | 47. | 64. | 130. | 0.9788 | 0.9718 | 31.70 | 0.10 |
| E | 2.0 | 0.248E+03 | 0.307E+02 | 39. | 61. | 130. | 0.9786 | 0.9715 | 0.3549 | 0.18 |
| H | HZ | 0.230E+03 | 0.106E+02 | 40. | 61. | 130. | 0.9790 | 0.9747 | 11.00 | 0.08 |
| E | 2.0 | 0.139E+03 | 0.259E+01 | 36. | 2. | 130. | 0.8824 | 0.9041 | 0.6282 | 0.40 |
| H | HZ | 0.931E+02 | 0.146E+00 | 36. | 58. | 130. | 0.8948 | 0.9051 | 11.40 | 0.48 |
| E | 2.0 | 0.262E+03 | 0.395E+02 | 38. | 59. | 130. | 0.9714 | 0.9745 | 0.3986 | 0.06 |
| H | HZ | 0.236E+03 | 0.186E+02 | 38. | 59. | 130. | 0.9725 | 0.9748 | 5.90 | 0.07 |

AVERAGE #  8
SHAST2  200 HZ  18-OCT-83  T42N R4W S4 NW
NSAMP = 1024  SI = 0.0050  T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.125E+03 | 0.286E+01 | 32. | 3. | 130. | 0.8772 | 0.9020 | 0.6196 | 0.41 |
| H | HZ | 0.852E+02 | 0.651E-01 | 33. | 53. | 130. | 0.8959 | 0.9058 | 9.60 | 0.49 |
| E | 3.0 | 0.220E+03 | 0.393E+02 | 35. | 62. | 130. | 0.9766 | 0.9797 | 0.3443 | 0.18 |
| H | HZ | 0.200E+03 | 0.204E+02 | 35. | 63. | 130. | 0.9778 | 0.9802 | 1.40 | 0.18 |
| E | 7.7 | 0.157E+03 | 0.453E+02 | 32. | 55. | 130. | 0.9813 | 0.9821 | 0.2437 | 0.15 |
| H | HZ | 0.148E+03 | 0.288E+02 | 31. | 55. | 130. | 0.9822 | 0.9829 | 27.70 | 0.13 |
| E | 14.3 | 0.123E+03 | 0.474E+02 | 34. | 55. | 130. | 0.9581 | 0.9690 | 0.2913 | 0.11 |
| H | HZ | 0.110E+03 | 0.237E+02 | 34. | 55. | 130. | 0.9616 | 0.9701 | 43.20 | 0.12 |
| E | 20.0 | 0.101E+03 | 0.457E+02 | 35. | 54. | 130. | 0.9569 | 0.9547 | 0.3113 | 0.17 |
| H | HZ | 0.877E+02 | 0.220E+02 | 35. | 54. | 130. | 0.9585 | 0.9568 | 38.60 | 0.16 |
| E | 26.3 | 0.102E+03 | 0.499E+02 | 36. | 53. | 130. | 0.9414 | 0.9592 | 0.3028 | 0.13 |
| H | HZ | 0.792E+02 | 0.298E+02 | 36. | 53. | 130. | 0.9452 | 0.9602 | 65.10 | 0.24 |
| E | 31.2 | 0.144E+03 | 0.544E+02 | 42. | 51. | 130. | 0.8848 | 0.9080 | 1.3003 | 0.03 |
| H | HZ | 0.911E+02 | 0.169E+02 | 42. | 51. | 130. | 0.8919 | 0.9082 | 105.50 | 0.09 |
| E | 40.0 | 0.880E+02 | 0.492E+02 | 41. | 47. | 130. | 0.9505 | 0.9309 | 0.8064 | 0.05 |
| H | HZ | 0.790E+02 | 0.848E+01 | 41. | 45. | 130. | 0.9580 | 0.9485 | 101.00 | 0.10 |

SEAST2 200 HZ 18-OCT-83 T42N R4W S4 NW

THE NUMBER OF LAYERS = 6
THE NUMBER OF FREQUENCIES TAKEN = 26
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 10.0000 | | 0.0000 |
| | | 650.0000 | |
| 2 | 35.0000 | | 650.0000 |
| | | 600.0000 | |
| 3 | 1.0000 | | 1250.0000 |
| | | 50.0000 | |
| 4 | 45.0000 | | 1300.0000 |
| | | 7000.0000 | |
| 5 | 1.0000 | | 8300.0000 |
| | | 300.0000 | |
| 6 | 50.0000 | | 8600.0000 |

FREQUENCY RANGE ( 0.0013 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3267E+02 | | 0.0000E+00 |
| | | 0.1032E+04 | |
| 2 | 0.1619E+02 | | 0.1032E+04 |
| | | 0.9369E+02 | |
| 3 | 0.9768E-01 | | 0.1126E+04 |
| | | 0.5995E+02 | |
| 4 | 0.2949E+03 | | 0.1186E+04 |
| | | 0.7634E+04 | |
| 5 | 0.1100E+00 | | 0.8820E+04 |
| | | 0.5307E+03 | |
| 6 | 0.7609E+04 | | 0.9351E+04 |

MEAN PERCENT VARIATION IS 0.3530E+02

ERROR ANALYSIS

R-SQUARED = 0.985E+00

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 25 | 0.447E+04 | 0.179E+03 | 0.406E+00 |
| MODEL | 10 | 0.440E+04 | 0.440E+03 | 0.204E+04 |
| RESID | 15 | 0.324E+01 | 0.216E+00 | |

STANDARD ERROR = 0.465E+00

DTEST FOR MEANS = 0.215E-04

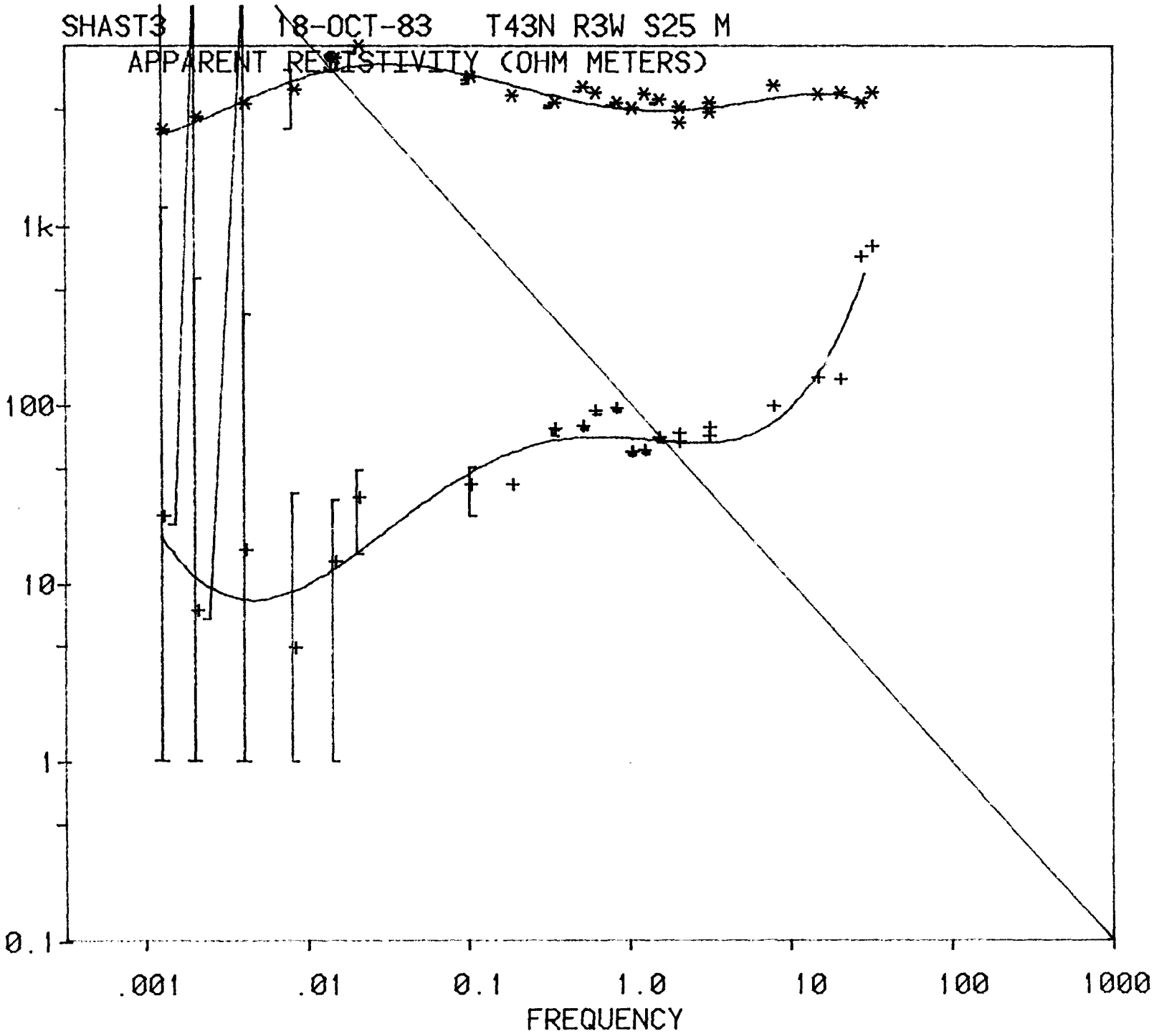
NOISE TO SIGNAL RATIO = 0.222E+01 PERCENT

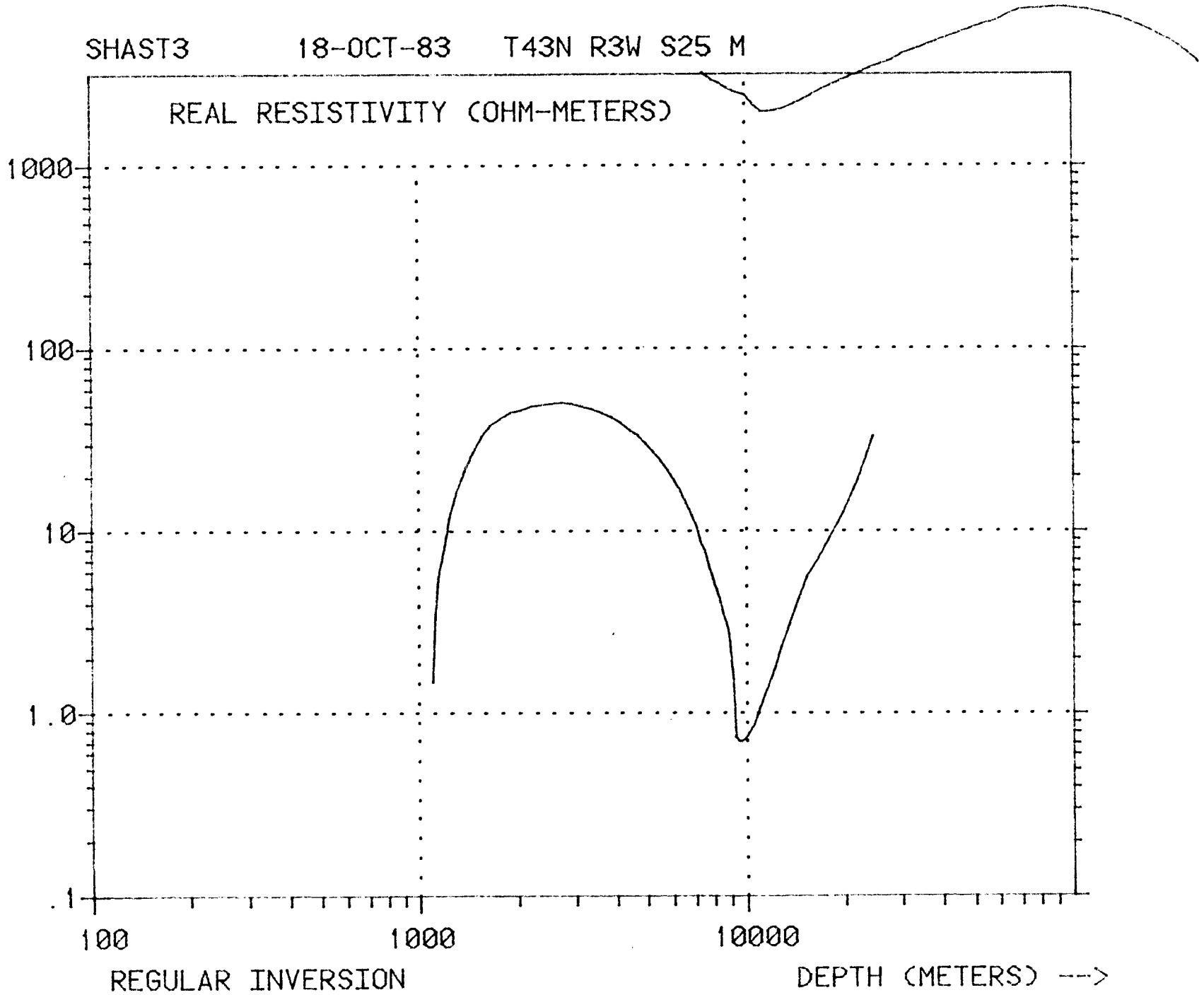
SHAST2 200 HZ 18-OCT-83 T42N R4W S4 NW

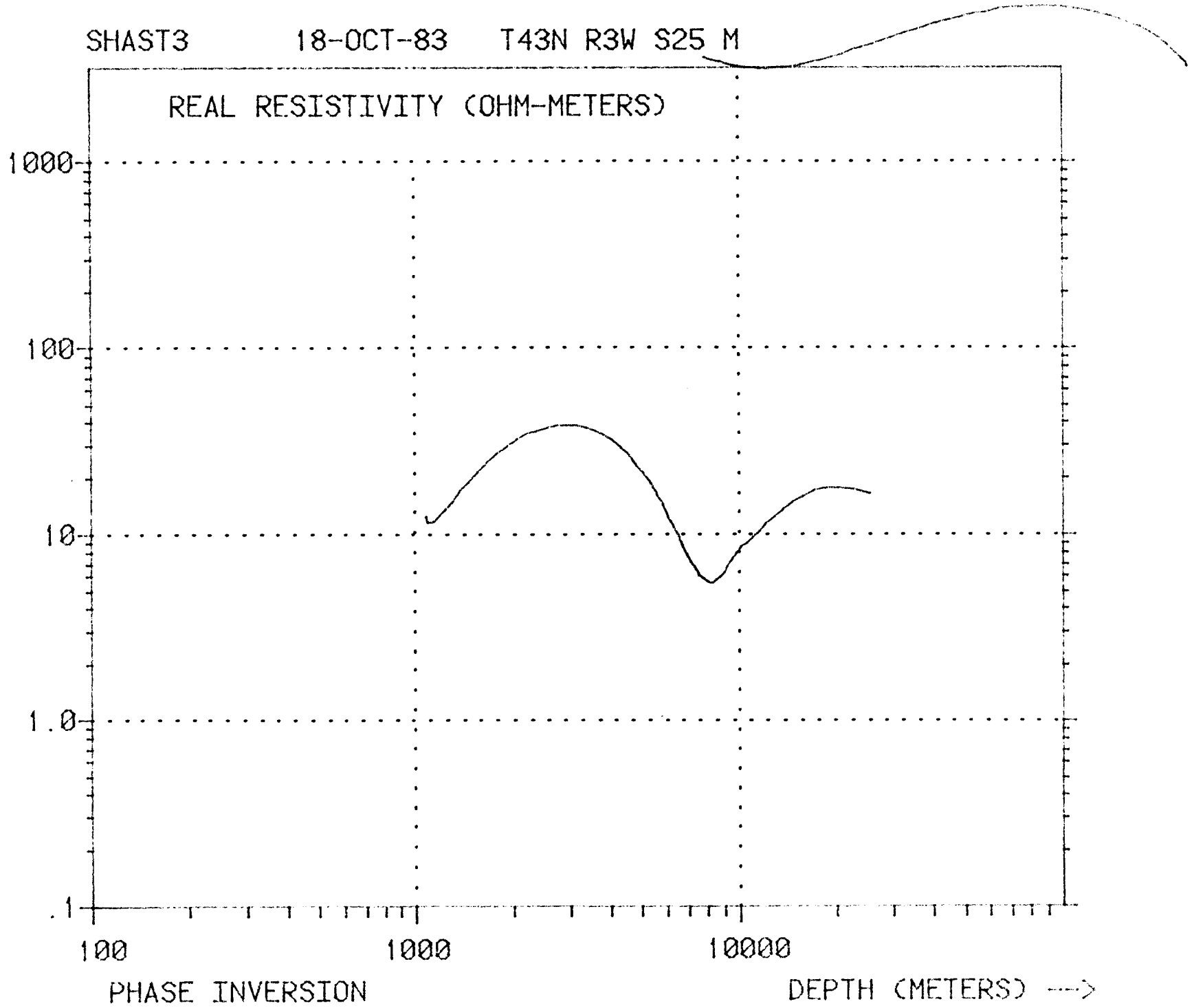
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 800.000 | 4.000 | 3.912 | 0.088 | 2.226 |
| 2 | 500.000 | 3.000 | 3.061 | -0.061 | -2.005 |
| 3 | 250.000 | 3.000 | 2.982 | 0.018 | 0.586 |
| 4 | 125.000 | 4.000 | 4.170 | -0.170 | -4.150 |
| 5 | 70.000 | 5.000 | 5.881 | -0.881 | -16.192 |
| 6 | 50.000 | 7.000 | 6.756 | 0.244 | 3.552 |
| 7 | 33.000 | 8.000 | 7.108 | 0.892 | 11.809 |
| 8 | 20.000 | 9.000 | 6.263 | 2.737 | 35.872 |
| 9 | 10.000 | 5.000 | 4.470 | 0.530 | 11.200 |
| 10 | 5.500 | 3.000 | 3.781 | -0.781 | -23.046 |
| 11 | 3.000 | 2.000 | 4.334 | -2.334 | -73.688 |
| 12 | 2.000 | 2.000 | 5.555 | -3.555 | -94.115 |
| 13 | 1.670 | 10.000 | 6.371 | 3.629 | 44.330 |
| 14 | 1.250 | 17.000 | 8.111 | 8.889 | 70.800 |
| 15 | 1.000 | 6.000 | 9.877 | -3.877 | -48.835 |
| 16 | 0.830 | 13.000 | 11.684 | 1.316 | 10.660 |
| 17 | 0.670 | 17.000 | 14.186 | 2.814 | 18.050 |
| 18 | 0.500 | 21.000 | 18.406 | 2.594 | 13.164 |
| 19 | 0.500 | 29.000 | 18.406 | 10.594 | 44.693 |
| 20 | 0.330 | 30.000 | 25.915 | 4.085 | 14.611 |
| 21 | 0.130 | 37.000 | 40.919 | -3.919 | -10.058 |
| 22 | 0.070 | 36.000 | 39.287 | -3.287 | -8.733 |
| 23 | 0.050 | 34.000 | 36.176 | -2.176 | -6.202 |
| 24 | 0.038 | 40.000 | 34.069 | 5.931 | 16.016 |
| 25 | 0.032 | 36.000 | 33.177 | 2.823 | 8.162 |
| 26 | 0.025 | 29.000 | 32.493 | -3.493 | -11.360 |

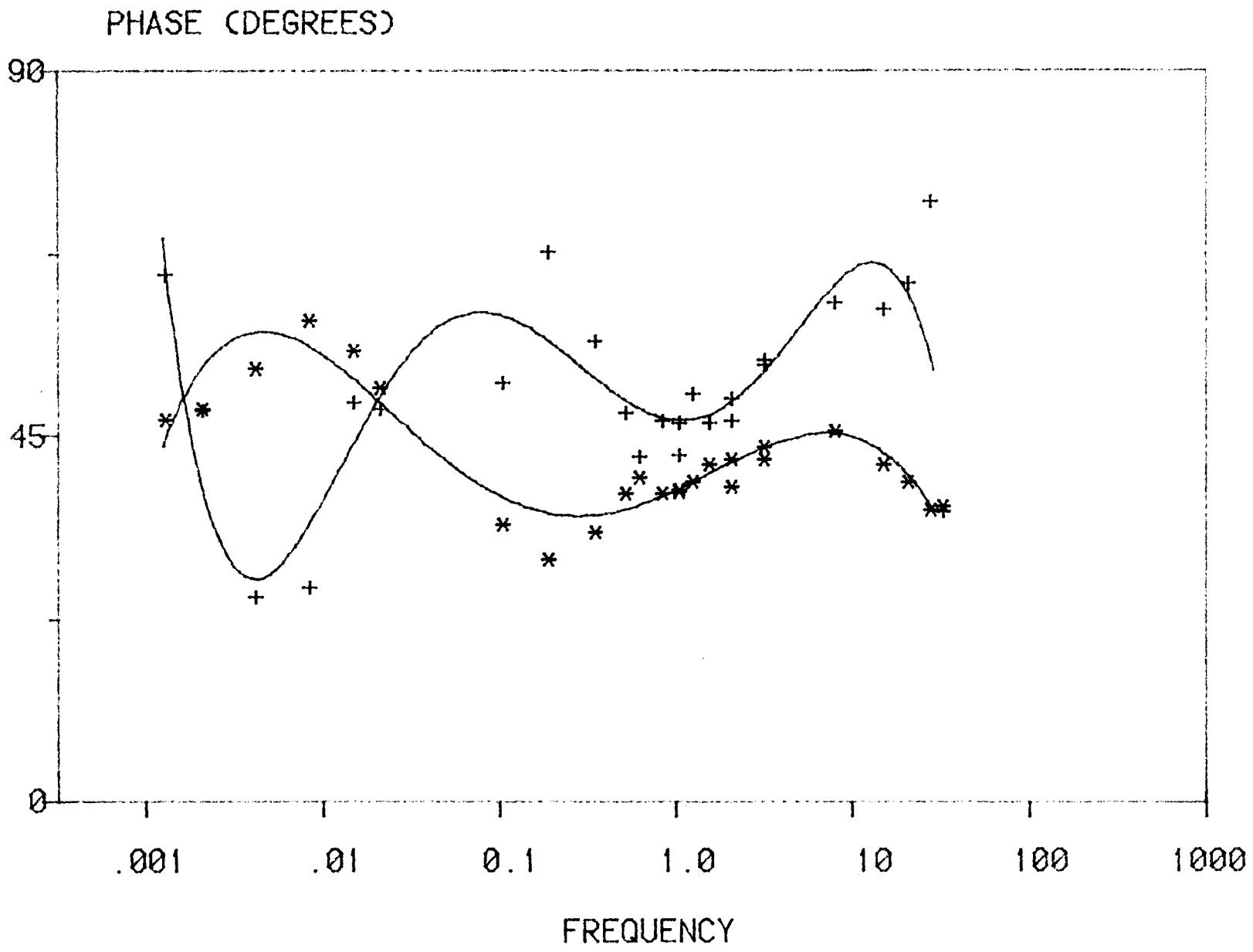
MAXIMUM PERCENT ERROR = 94.1152
MAX. ERROR OCCURED AT OBSERVATION 12


SHAST3 18-OCT-83 T43N R3W S25 M
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAST3 18-OCT-83 T43N R3W S25 M
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST3 18-OCT-83 T43N R3W S25 M
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) --->

SHAST3 18-OCT-83 T43N R3W S25 M



THE SITE IS: SHAST3 200 HZ 18-OCT-83 T43N R3W S25 N

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMIN | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 22.37 | 3220.18 | 1 | 1207.28******* | |
| 0.0020 | 6.64 | 3786.02 | 2 | 499.84******* | |
| 0.0040 | 14.41 | 4474.01 | 3 | 302.76******* | |
| 0.0090 | 5.08 | 5328.37 | 4 | 27.29 | 1981.04 |
| 0.0143 | 12.62 | 8035.51 | 5 | 16.26 | 767.08 |
| 0.0200 | 28.36 | 9421.88 | 6 | 14.03 | 486.59 |
| 0.0303 | 114.53 | 9654.94 | 7 | 10.22 | 166.07 |
| 0.0500 | 0.00 | 0.00 | 8 | 0.00 | 0.00 |
| 0.1000 | 33.84 | 6252.51 | 9 | 2.29 | 66.67 |
| 0.1818 | 33.45 | 4965.04 | 10 | 0.86 | 16.42 |
| 0.3333 | 68.45 | 4512.50 | 11 | 0.44 | 6.00 |
| 0.5000 | 71.20 | 5542.28 | 12 | 0.70 | 12.14 |
| 0.5988 | 86.28 | 5178.00 | 13 | 0.37 | 4.09 |
| 0.8000 | 90.27 | 4544.81 | 14 | 0.20 | 5.86 |
| 1.0000 | 51.22 | 4213.03 | 15 | 0.13 | 4.12 |
| 1.0000 | 51.34 | 4190.03 | 16 | 1.06 | 30.26 |
| 1.2048 | 52.44 | 5107.91 | 17 | 0.08 | 2.56 |
| 1.4925 | 61.43 | 4743.64 | 18 | 0.07 | 1.91 |
| 2.0000 | 65.11 | 4302.69 | 19 | 0.03 | 1.50 |
| 2.0000 | 57.79 | 3533.01 | 20 | 0.02 | 0.57 |
| 2.0000 | 85.22 | 2977.90 | 21 | 0.08 | 2.39 |
| 3.0303 | 62.75 | 4016.92 | 22 | 0.00 | 0.32 |
| 3.0303 | 70.27 | 4519.07 | 23 | 0.01 | 0.80 |
| 7.6923 | 91.77 | 5625.91 | 24 | 0.02 | 0.86 |
| 14.2857 | 132.72 | 5030.49 | 25 | 0.01 | 0.30 |
| 20.0000 | 131.14 | 5158.50 | 26 | 0.01 | 0.22 |
| 26.3158 | 625.90 | 4527.89 | 27 | 0.00 | 0.16 |
| 31.2500 | 713.07 | 5193.01 | 28 | 0.02 | 0.15 |
| 40.0000 | 183.26 | 4508.31 | 29 | 0.00 | 0.03 |

AVERAGE #  8
SEASTS  200 HZ  18-OCT-83  T43N R3W S25 N
NSAMP = 1024  SI = 0.0050  T0 = 5.1200

| | FREQ OR PERIOD | MTO MAX VALUE ( OHM-M ) | MTO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PHDBEX | PHDBEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.325E+04 | 0.225E+02 | 47. | 62. | 60. | 0.9966 | 0.9962 | 0.1184 | 1.06 |
| H | SEC | 0.319E+04 | 0.223E+02 | 47. | 63. | 60. | 0.9966 | 0.9962 | 89.30 | 1.06 |
| E | 500.0 | 0.382E+04 | 0.468E+01 | 49. | 54. | 60. | 0.9875 | 0.9957 | 0.1498 | 0.91 |
| H | SEC | 0.375E+04 | 0.859E+01 | 49. | 51. | 60. | 0.9881 | 0.9957 | 111.80 | 0.92 |
| E | 250.0 | 0.451E+04 | 0.137E+02 | 54. | 26. | 60. | 0.9959 | 0.9958 | 0.0871 | 0.86 |
| H | SEC | 0.444E+04 | 0.152E+02 | 54. | 28. | 60. | 0.9959 | 0.9958 | 146.60 | 0.87 |
| E | 125.0 | 0.536E+04 | 0.384E+01 | 60. | 34. | 60. | 0.9921 | 0.9972 | 0.1551 | 0.72 |
| H | SEC | 0.530E+04 | 0.431E+01 | 60. | 18. | 60. | 0.9932 | 0.9974 | 138.60 | 0.76 |
| E | 70.0 | 0.808E+04 | 0.164E+02 | 56. | 20. | 60. | 0.9956 | 0.9988 | 0.2008 | 0.68 |
| H | SEC | 0.800E+04 | 0.881E+01 | 56. | 79. | 60. | 0.9965 | 0.9988 | 136.50 | 0.71 |
| E | 50.0 | 0.954E+04 | 0.394E+02 | 51. | 15. | 60. | 0.9906 | 0.9975 | 0.2364 | 0.67 |
| H | SEC | 0.930E+04 | 0.173E+02 | 52. | 83. | 60. | 0.9934 | 0.9979 | 149.10 | 0.72 |
| E | 33.0 | 0.990E+04 | 0.207E+03 | 46. | 73. | 60. | 0.9039 | 0.9861 | 0.2972 | 0.57 |
| H | SEC | 0.941E+04 | 0.223E+02 | 46. | 46. | 60. | 0.9444 | 0.9894 | 147.80 | 0.66 |
| E | 20.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |

AVERAGE #  8
SMASTS  200 HZ  18-OCT-83  T43N R3W S25 N
NSAMP = 1024  SI = 0.0050  TO = 5.1200

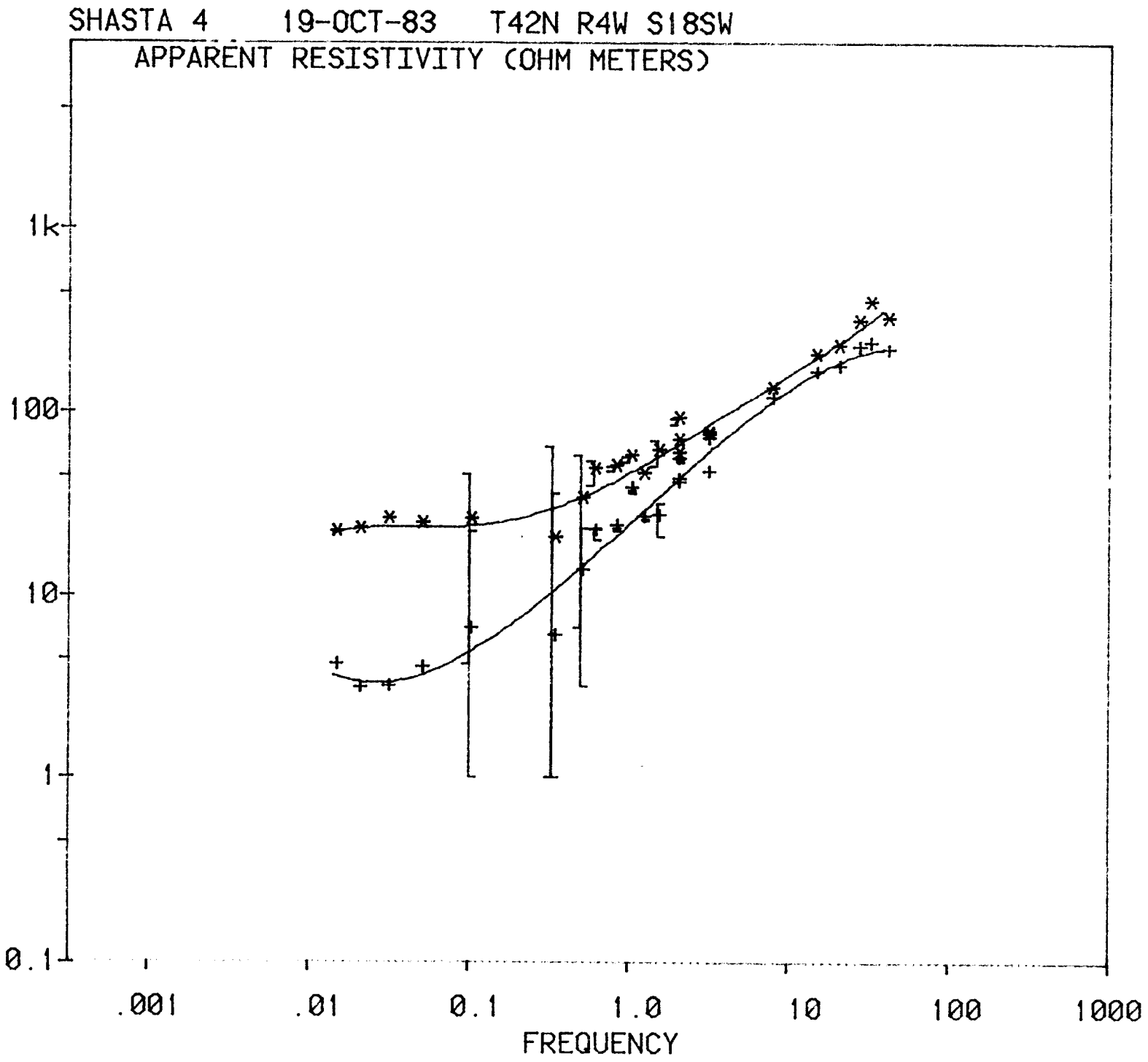
| | FREQ OR PERIOD | MTO MAX VALUE ( OHM-M ) | MTO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PEDDER | PEDDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.656E+04 | 0.371E+02 | 34. | 2. | 60. | 0.9756 | 0.9781 | 0.4359 | 0.62 |
| H | SEC | 0.594E+04 | 0.306E+02 | 34. | 15. | 60. | 0.9761 | 0.9784 | 135.40 | 0.65 |
| E | 5.5 | 0.567E+04 | 0.483E+02 | 31. | 57. | 70. | 0.9434 | 0.9447 | 0.4182 | 0.45 |
| H | SEC | 0.426E+04 | 0.186E+02 | 30. | 67. | 70. | 0.9457 | 0.9467 | 141.50 | 0.51 |
| E | 3.0 | 0.528E+04 | 0.877E+02 | 34. | 53. | 70. | 0.8868 | 0.9240 | 0.5314 | 0.40 |
| H | SEC | 0.374E+04 | 0.492E+02 | 33. | 61. | 70. | 0.8899 | 0.9253 | 133.90 | 0.43 |
| E | 2.0 | 0.563E+04 | 0.758E+02 | 38. | 48. | 70. | 0.9858 | 0.9924 | 0.4675 | 0.44 |
| H | SEC | 0.546E+04 | 0.666E+02 | 38. | 48. | 70. | 0.9859 | 0.9924 | 121.00 | 0.44 |
| E | 1.7 | 0.523E+04 | 0.101E+03 | 40. | 43. | 70. | 0.9571 | 0.9947 | 0.4549 | 0.42 |
| H | SEC | 0.512E+04 | 0.717E+02 | 40. | 42. | 70. | 0.9586 | 0.9947 | 121.00 | 0.43 |
| E | 1.2 | 0.464E+04 | 0.102E+03 | 38. | 48. | 70. | 0.9679 | 0.9910 | 0.5570 | 0.43 |
| H | SEC | 0.445E+04 | 0.784E+02 | 38. | 47. | 70. | 0.9688 | 0.9910 | 115.00 | 0.44 |
| E | 1.0 | 0.435E+04 | 0.549E+02 | 38. | 47. | 70. | 0.9864 | 0.9867 | 0.4352 | 0.46 |
| H | HZ | 0.408E+04 | 0.475E+02 | 38. | 47. | 70. | 0.9866 | 0.9868 | 109.20 | 0.47 |

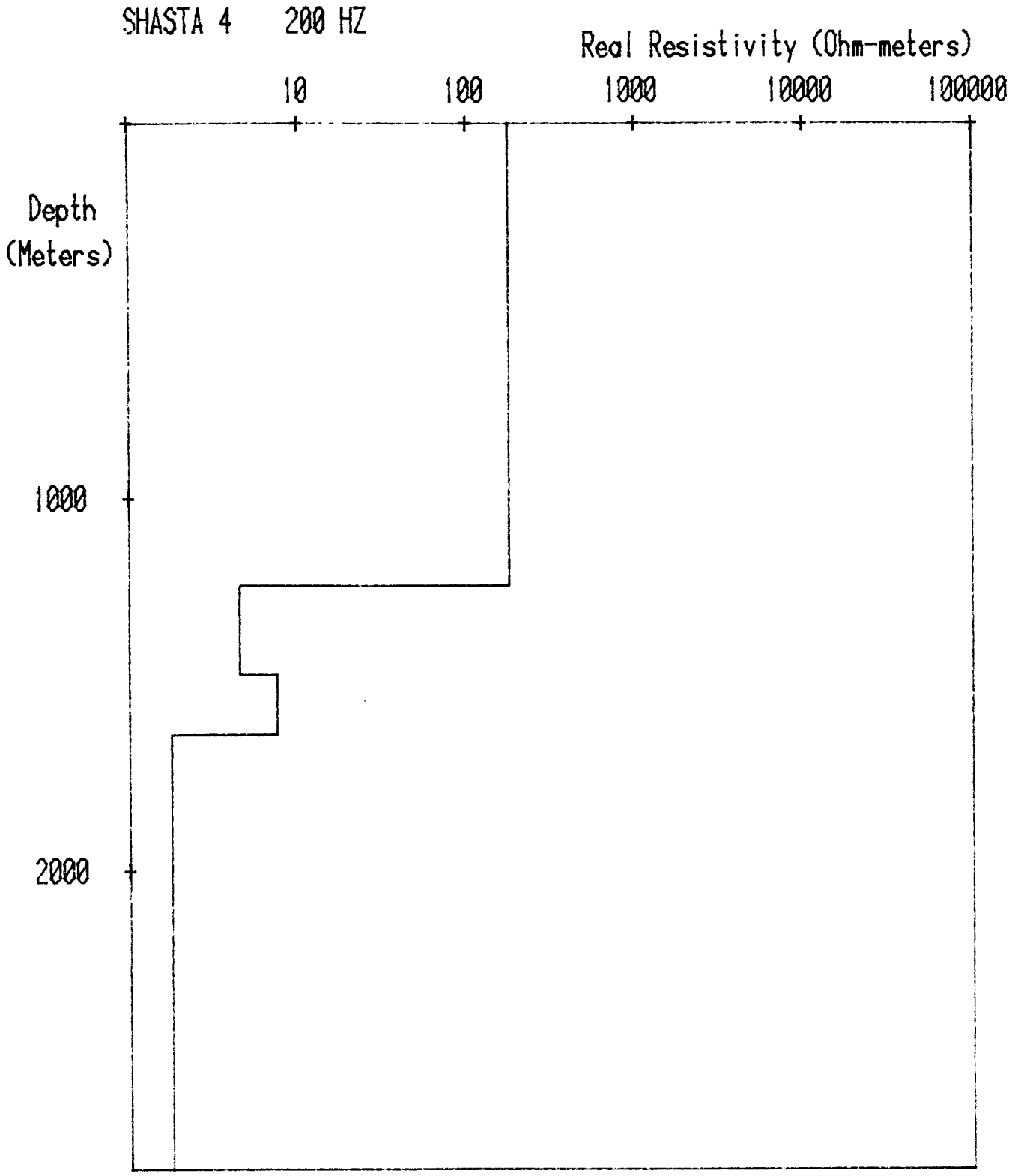
AVERAGE #  8
SHAST3  200 HZ  18-OCT-83  T43N R3W S25 H
NSAMP = 1024  SI = 0.0050  TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PHEDEX | PHEDEX | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.424E+04 | 0.525E+02 | 39. | 43. | 70. | 0.9944 | 0.9946 | 0.4560 | 0.47 |
| H | HZ | 0.414E+04 | 0.501E+02 | 39. | 43. | 70. | 0.9944 | 0.9946 | 112.30 | 0.47 |
| E | 1.2 | 0.527E+04 | 0.569E+02 | 40. | 50. | 70. | 0.9641 | 0.9889 | 0.5070 | 0.49 |
| H | HZ | 0.495E+04 | 0.479E+02 | 39. | 51. | 70. | 0.9644 | 0.9890 | 104.40 | 0.48 |
| E | 1.5 | 0.491E+04 | 0.664E+02 | 42. | 47. | 70. | 0.9663 | 0.9862 | 0.4734 | 0.49 |
| H | HZ | 0.458E+04 | 0.565E+02 | 42. | 47. | 70. | 0.9666 | 0.9862 | 104.70 | 0.49 |
| E | 2.0 | 0.452E+04 | 0.700E+02 | 42. | 51. | 70. | 0.9693 | 0.9785 | 0.4102 | 0.49 |
| H | HZ | 0.409E+04 | 0.602E+02 | 42. | 49. | 70. | 0.9696 | 0.9787 | 101.60 | 0.49 |
| E | 2.0 | 0.440E+04 | 0.646E+02 | 39. | 50. | 70. | 0.9191 | 0.8908 | 0.3788 | 0.48 |
| H | HZ | 0.267E+04 | 0.510E+02 | 39. | 45. | 70. | 0.9202 | 0.8926 | 96.70 | 0.47 |
| E | 2.0 | 0.355E+04 | 0.104E+03 | 32. | 52. | 70. | 0.9408 | 0.9097 | 0.5657 | 0.45 |
| H | HZ | 0.241E+04 | 0.666E+02 | 32. | 47. | 70. | 0.9420 | 0.9128 | 108.40 | 0.47 |

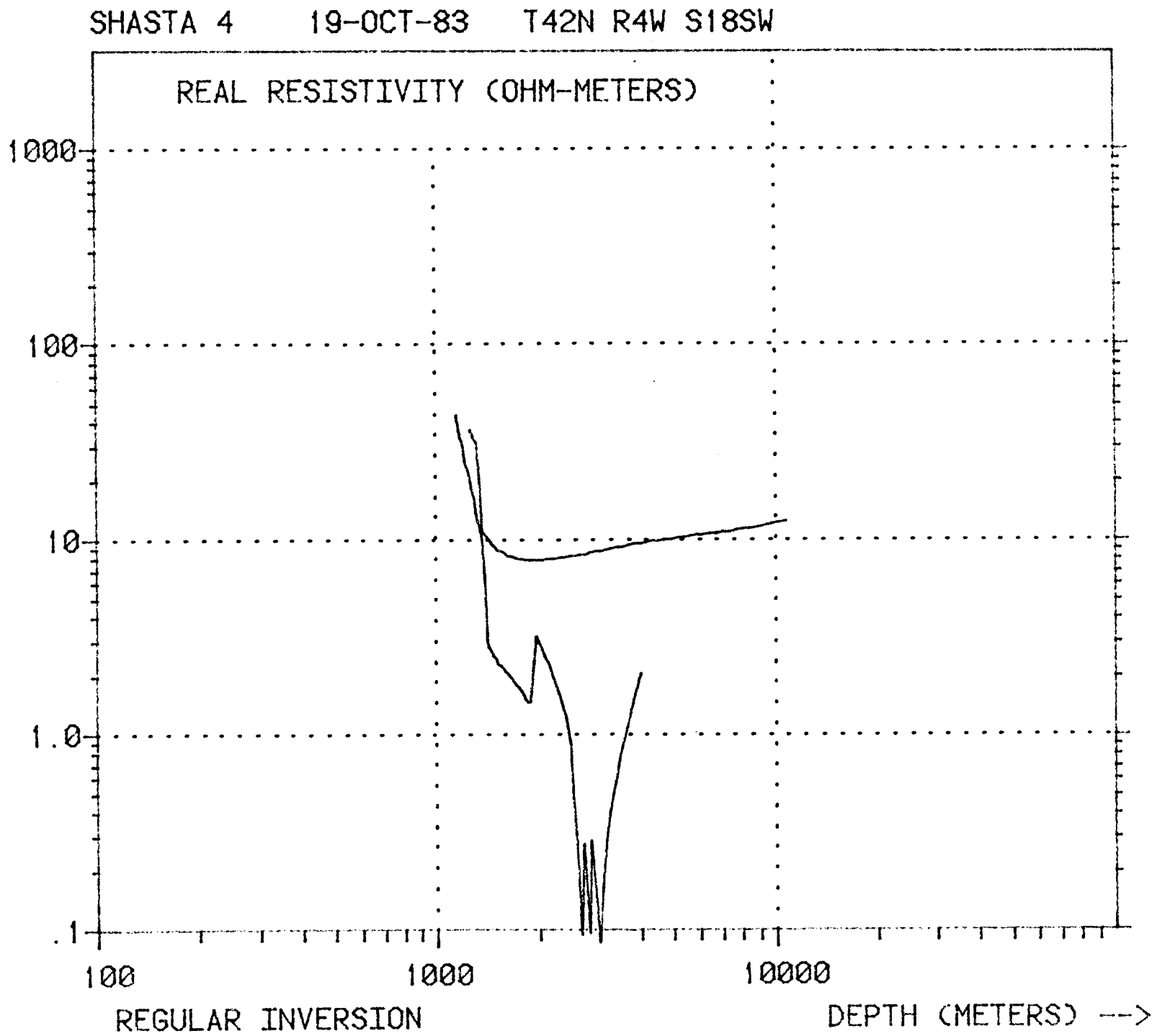
AVERAGE # 8
SHAST3 200 HZ 18-OCT-83 T43N R3W S25 N
NSAMP = 1024 SI = 0.0050 TO = 5.1200

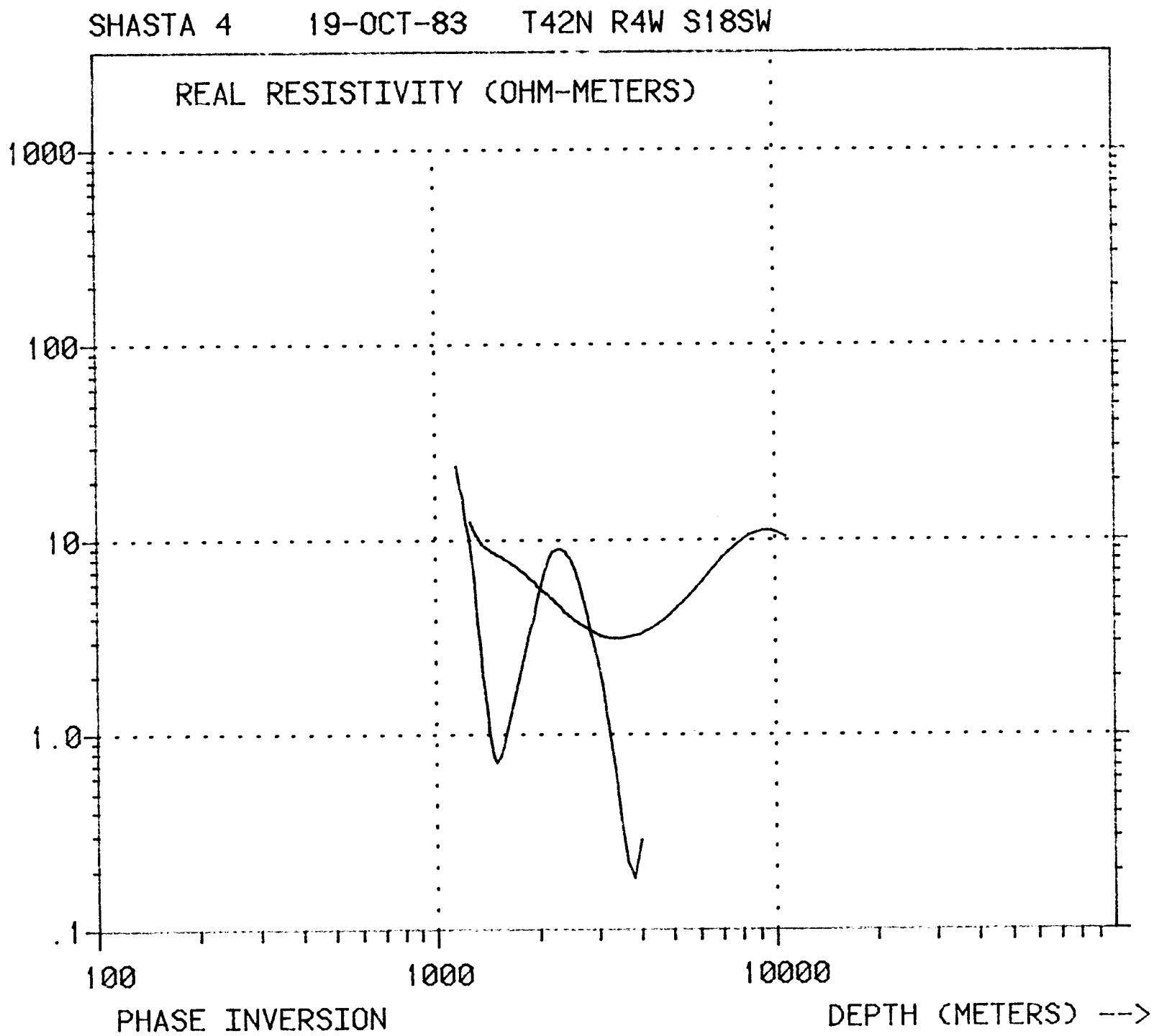
| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.476E+04 | 0.639E+02 | 42. | 55. | 70. | 0.9523 | 0.9188 | 0.3734 | 0.49 |
| H | HZ | 0.327E+04 | 0.616E+02 | 42. | 56. | 70. | 0.9530 | 0.9200 | 98.40 | 0.48 |
| E | 3.0 | 0.471E+04 | 0.737E+02 | 44. | 55. | 70. | 0.9733 | 0.9820 | 0.3662 | 0.46 |
| H | HZ | 0.433E+04 | 0.668E+02 | 44. | 54. | 70. | 0.9734 | 0.9820 | 102.50 | 0.45 |
| E | 7.7 | 0.603E+04 | 0.970E+02 | 46. | 62. | 75. | 0.9688 | 0.9651 | 0.3228 | 0.41 |
| H | HZ | 0.522E+04 | 0.866E+02 | 46. | 60. | 75. | 0.9689 | 0.9652 | 108.40 | 0.41 |
| E | 14.3 | 0.587E+04 | 0.136E+03 | 41. | 62. | 75. | 0.9376 | 0.9330 | 0.5251 | 0.38 |
| H | HZ | 0.419E+04 | 0.129E+03 | 42. | 60. | 75. | 0.9397 | 0.9351 | 110.70 | 0.32 |
| E | 20.0 | 0.587E+04 | 0.147E+03 | 39. | 65. | 75. | 0.9222 | 0.9360 | 0.4857 | 0.39 |
| H | HZ | 0.445E+04 | 0.115E+03 | 40. | 63. | 75. | 0.9225 | 0.9365 | 114.10 | 0.36 |
| E | 26.3 | 0.530E+04 | 0.104E+04 | 39. | 67. | 75. | 0.6902 | 0.8560 | 0.4818 | 0.19 |
| H | HZ | 0.376E+04 | 0.208E+03 | 34. | 81. | 75. | 0.7024 | 0.8798 | 107.20 | 0.41 |
| E | 31.2 | 0.609E+04 | 0.109E+04 | 41. | 71. | 75. | 0.7263 | 0.8208 | 0.5124 | 0.16 |
| H | HZ | 0.429E+04 | 0.339E+03 | 32. | 1. | 75. | 0.7564 | 0.8608 | 118.10 | 0.45 |
| E | 40.0 | 0.545E+04 | 0.206E+03 | 33. | 62. | 75. | 0.9085 | 0.9189 | 0.7434 | 0.37 |
| H | HZ | 0.357E+04 | 0.160E+03 | 33. | 60. | 75. | 0.9123 | 0.9222 | 111.60 | 0.32 |


SHASTA 4 19-OCT-83 T42N R4W S18SW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

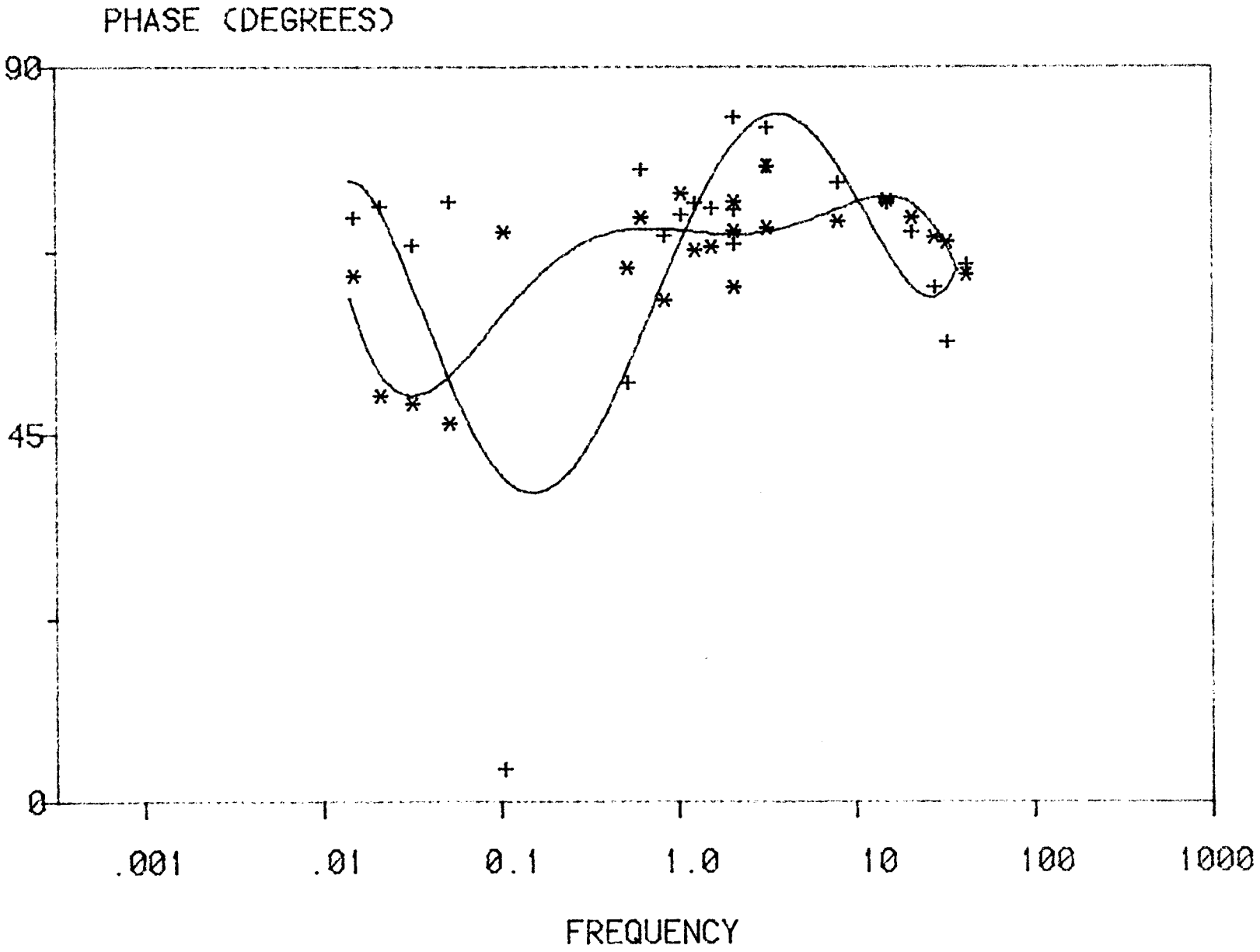



| | | | | |
|---|---|---|---|---|
| Resistivity | 178.70 | 4.50 | 7.48 | 1.77 |
| Thickness | | 1236.63 | 238.67 | 160.49 |
| Depth | 0.00 | 1236.63 | 1475.30 | 1635.80 |


SHASTA 4 19-OCT-83 T42N R4W S18SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHASTA 4 19-OCT-83 T42N R4W S18SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHASTA 4  19-OCT-83  T42N R4W S18SW



THE SITE IS: SHASTA 4  200 HZ  19-OCT-83  T42N R4W S18SW

MEANS OF MERGED AVERAGE NUMBER:  8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.00 | 0.00 | 1 | 0.00 | 0.00 |
| 0.0020 | 0.00 | 0.00 | 2 | 0.00 | 0.00 |
| 0.0040 | 0.00 | 0.00 | 3 | 0.00 | 0.00 |
| 0.0080 | 0.00 | 0.00 | 4 | 0.00 | 0.00 |
| 0.0143 | 3.94 | 21.05 | 5 | 15.75 | 20.49 |
| 0.0200 | 2.95 | 21.82 | 6 | 29.48 | 44.15 |
| 0.0303 | 3.02 | 24.55 | 7 | 9.88 | 25.24 |
| 0.0500 | 3.84 | 23.52 | 8 | 1.56 | 6.89 |
| 0.1000 | 6.22 | 24.60 | 9 | 0.38 | 1.28 |
| 0.1818 | 12.64 | 23.07 | 10 | 0.51 | 2.10 |
| 0.3333 | 5.71 | 19.49 | 11 | 0.30 | 0.07 |
| 0.5000 | 13.06 | 31.81 | 12 | 5.35 | 9.27 |
| 0.5988 | 21.11 | 45.95 | 13 | 0.04 | 0.08 |
| 0.8000 | 22.30 | 47.78 | 14 | 0.06 | 0.03 |
| 1.0000 | 11.91 | 34.52 | 15 | 0.88 | 2.59 |
| 1.0000 | 36.10 | 53.60 | 16 | 0.07 | 0.04 |
| 1.2048 | 25.20 | 43.30 | 17 | 0.03 | 0.11 |
| 1.4925 | 25.72 | 58.71 | 18 | 0.03 | 0.10 |
| 2.0000 | 38.67 | 65.63 | 19 | 0.03 | 0.04 |
| 2.0000 | 40.50 | 56.33 | 20 | 0.01 | 0.01 |
| 2.0000 | 52.47 | 86.73 | 21 | 0.04 | 0.11 |
| 3.0303 | 44.03 | 72.92 | 22 | 0.00 | 0.01 |
| 3.0303 | 67.33 | 70.61 | 23 | 0.03 | 0.01 |
| 7.6923 | 113.31 | 127.26 | 24 | 0.02 | 0.01 |
| 14.2857 | 157.51 | 196.40 | 25 | 0.01 | 0.01 |
| 20.0000 | 168.15 | 218.02 | 26 | 0.00 | 0.00 |
| 26.3158 | 214.87 | 296.57 | 27 | 0.01 | 0.02 |
| 31.2500 | 227.23 | 374.61 | 28 | 0.01 | 0.04 |
| 40.0000 | 206.03 | 305.79 | 29 | 0.00 | 0.01 |

AVERAGE #  8
SHASTA 4  200 HZ  19-OCT-83  T42N R4W S18SW
NSAMP = 1024  SI = 0.0050  T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PLEDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.000E+00 | | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 500.0 | 0.000E+00 | | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 250.0 | 0.000E+00 | | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 125.0 | 0.000E+00 | | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 70.0 | 0.287E+02 | | 0.547E+01 | 67. | 71. | 78. | 0.8655 | 0.9202 | 0.3753 | 0.23 |
| H | SEC | 0.134E+02 | | 0.242E+01 | 62. | 73. | 79. | 0.9017 | 0.9420 | 161.50 | 0.23 |
| E | 50.0 | 0.227E+02 | | 0.301E+01 | 50. | 74. | 64. | 0.9763 | 0.9914 | 0.2636 | 0.21 |
| H | SEC | 0.210E+02 | | 0.289E+01 | 50. | 73. | 66. | 0.9764 | 0.9915 | 142.60 | 0.19 |
| E | 33.0 | 0.254E+02 | | 0.307E+01 | 49. | 69. | 64. | 0.9810 | 0.9924 | 0.2669 | 0.25 |
| H | SEC | 0.237E+02 | | 0.296E+01 | 49. | 69. | 65. | 0.9811 | 0.9924 | 141.20 | 0.24 |
| E | 20.0 | 0.261E+02 | | 0.415E+01 | 47. | 74. | 62. | 0.9429 | 0.9591 | 0.4284 | 0.28 |
| H | SEC | 0.210E+02 | | 0.353E+01 | 47. | 74. | 63. | 0.9432 | 0.9594 | 141.90 | 0.27 |

AVERAGE # 8

SHASTA 4 200 HZ 19-OCT-83 T42N R4W S18SW

NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.395E+02 | 0.859E+01 | 72. | 9. | 56. | 0.8812 | 0.9084 | 0.2003 | 0.45 |
| H | SEC | 0.973E+01 | 0.385E+01 | 69. | 0. | 61. | 0.9291 | 0.9443 | 172.90 | 0.50 |
| E | 5.5 | 0.375E+02 | 0.169E+02 | 50. | 84. | 127. | 0.4886 | 0.6924 | 1.2178 | 2.00 |
| H | SEC | 0.865E+01 | 0.834E+01 | 28. | 85. | 49. | 0.5980 | 0.8387 | 102.60 | 3.48 |
| E | 3.0 | 0.242E+02 | 0.825E+01 | 50. | 43. | 104. | 0.7956 | 0.8735 | 0.4157 | 0.20 |
| H | SEC | 0.148E+02 | 0.317E+01 | 44. | 48. | 82. | 0.8100 | 0.8881 | 136.90 | 0.13 |
| E | 2.0 | 0.328E+02 | 0.215E+02 | 58. | 62. | 80. | 0.8457 | 0.8319 | 0.0249 | 0.10 |
| H | SEC | 0.308E+02 | 0.460E+01 | 73. | 41. | 57. | 0.9104 | 0.8997 | 2.60 | 0.31 |
| E | 1.7 | 0.512E+02 | 0.274E+02 | 72. | 78. | 91. | 0.8598 | 0.9412 | 0.3204 | 0.04 |
| H | SEC | 0.407E+02 | 0.148E+02 | 72. | 78. | 87. | 0.8599 | 0.9416 | 37.80 | 0.06 |
| E | 1.2 | 0.583E+02 | 0.288E+02 | 62. | 70. | 110. | 0.8381 | 0.8853 | 0.2162 | 0.07 |
| H | SEC | 0.373E+02 | 0.158E+02 | 62. | 70. | 95. | 0.8383 | 0.8888 | 20.60 | 0.01 |
| E | 1.0 | 0.445E+02 | 0.208E+02 | 66. | 28. | 133. | 0.7181 | 0.8314 | 0.6505 | 0.20 |
| H | HZ | 0.245E+02 | 0.302E+01 | 65. | 25. | 128. | 0.7607 | 0.8462 | 105.10 | 0.28 |

AVERAGE # 8
SHASTA 4 200 HZ 19-OCT-83 T42N R4W S18SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.627E+02 | 0.509E+02 | 83. | 63. | 159. | 0.7931 | 0.8930 | 0.2051 | 0.20 |
| H | HZ | 0.445E+02 | 0.213E+02 | 67. | 82. | 81. | 0.7942 | 0.9014 | 16.00 | 0.03 |
| E | 1.2 | 0.486E+02 | 0.291E+02 | 68. | 74. | 121. | 0.9327 | 0.9461 | 0.1773 | 0.19 |
| H | HZ | 0.380E+02 | 0.213E+02 | 68. | 73. | 118. | 0.9333 | 0.9464 | 52.30 | 0.17 |
| E | 1.5 | 0.682E+02 | 0.313E+02 | 69. | 72. | 102. | 0.9296 | 0.9187 | 0.6461 | 0.17 |
| H | HZ | 0.492E+02 | 0.201E+02 | 68. | 74. | 113. | 0.9304 | 0.9201 | 107.20 | 0.19 |
| E | 2.0 | 0.724E+02 | 0.503E+02 | 73. | 85. | 86. | 0.8873 | 0.9503 | 0.1462 | 0.10 |
| H | HZ | 0.588E+02 | 0.270E+02 | 75. | 83. | 100. | 0.8922 | 0.9509 | 4.00 | 0.10 |
| E | 2.0 | 0.651E+02 | 0.515E+02 | 63. | 73. | 77. | 0.8777 | 0.9082 | 0.2234 | 0.05 |
| H | HZ | 0.476E+02 | 0.295E+02 | 63. | 73. | 74. | 0.8777 | 0.9087 | 5.20 | 0.04 |
| E | 2.0 | 0.122E+03 | 0.582E+02 | 80. | 58. | 149. | 0.8379 | 0.8885 | 0.1498 | 0.24 |
| H | HZ | 0.517E+02 | 0.468E+02 | 61. | 80. | 61. | 0.8459 | 0.8976 | 141.80 | 0.13 |

AVERAGE #  8
SHASTA 4  200 HZ  19-OCT-83  T42N R4W S18SW
NSAMP = 1024  SI = 0.0050  TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.862E+02 | 0.585E+02 | 70. | 84. | 89. | 0.8539 | 0.9033 | 0.6115 | 0.04 |
| H | HZ | 0.597E+02 | 0.296E+02 | 71. | 82. | 88. | 0.8548 | 0.9041 | 169.60 | 0.05 |
| E | 3.0 | 0.811E+02 | 0.775E+02 | 89. | 68. | 15. | 0.9218 | 0.9380 | 0.3471 | 0.05 |
| H | HZ | 0.601E+02 | 0.572E+02 | 68. | 89. | 105. | 0.9221 | 0.9380 | 131.90 | 0.04 |
| E | 7.7 | 0.132E+03 | 0.117E+03 | 71. | 76. | 88. | 0.9877 | 0.9874 | 0.2396 | 0.03 |
| H | HZ | 0.123E+03 | 0.109E+03 | 72. | 76. | 94. | 0.9878 | 0.9874 | 93.40 | 0.03 |
| E | 14.3 | 0.206E+03 | 0.169E+03 | 74. | 74. | 85. | 0.9663 | 0.9792 | 0.4029 | 0.02 |
| H | HZ | 0.187E+03 | 0.146E+03 | 74. | 74. | 93. | 0.9665 | 0.9793 | 98.50 | 0.02 |
| E | 20.0 | 0.236E+03 | 0.186E+03 | 72. | 70. | 79. | 0.9503 | 0.9622 | 0.5711 | 0.01 |
| H | HZ | 0.200E+03 | 0.150E+03 | 72. | 70. | 86. | 0.9505 | 0.9622 | 105.70 | 0.01 |
| E | 26.3 | 0.376E+03 | 0.236E+03 | 65. | 67. | 131. | 0.8807 | 0.8946 | 0.7541 | 0.12 |
| H | HZ | 0.217E+03 | 0.194E+03 | 74. | 59. | 75. | 0.8858 | 0.9007 | 92.40 | 0.13 |
| E | 31.2 | 0.525E+03 | 0.244E+03 | 56. | 69. | 148. | 0.8095 | 0.8569 | 1.1558 | 0.23 |
| H | HZ | 0.225E+03 | 0.210E+03 | 82. | 45. | 74. | 0.8260 | 0.8768 | 119.00 | 0.33 |
| E | 40.0 | 0.348E+03 | 0.264E+03 | 66. | 65. | 84. | 0.9241 | 0.9339 | 0.9324 | 0.03 |
| H | HZ | 0.264E+03 | 0.148E+03 | 64. | 67. | 119. | 0.9295 | 0.9381 | 117.60 | 0.09 |

SHASTA 4  200 HZ  19-OCT-83  T42N R4W S18SW

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 22
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 170.0000 | | 0.0000 |
| | | 1300.0000 | |
| 2 | 7.0000 | | 1300.0000 |
| | | 1000.0000 | |
| 3 | 15.0000 | | 2300.0000 |
| | | 2200.0000 | |
| 4 | 2.0000 | | 4500.0000 |

FREQUENCY RANGE ( 0.0143 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 178.7008 | | 0.0000 |
| | | 1236.6337 | |
| 2 | 4.5074 | | 1236.6337 |
| | | 238.6767 | |
| 3 | 7.4833 | | 1475.3104 |
| | | 160.4903 | |
| 4 | 1.7786 | | 1635.8007 |

MEAN PERCENT VARIATION IS 16.4229

ERROR ANALYSIS

R-SQUARED = 1.000

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 21 | 120989.273 | 5761.394 | 0.286 |
| MODEL | 6 | 120951.019 | 20158.503 | 509597.703 |
| RESID | 15 | 0.593 | 0.040 | |

STANDARD ERROR = 0.199

DTEST FOR MEANS = -0.000

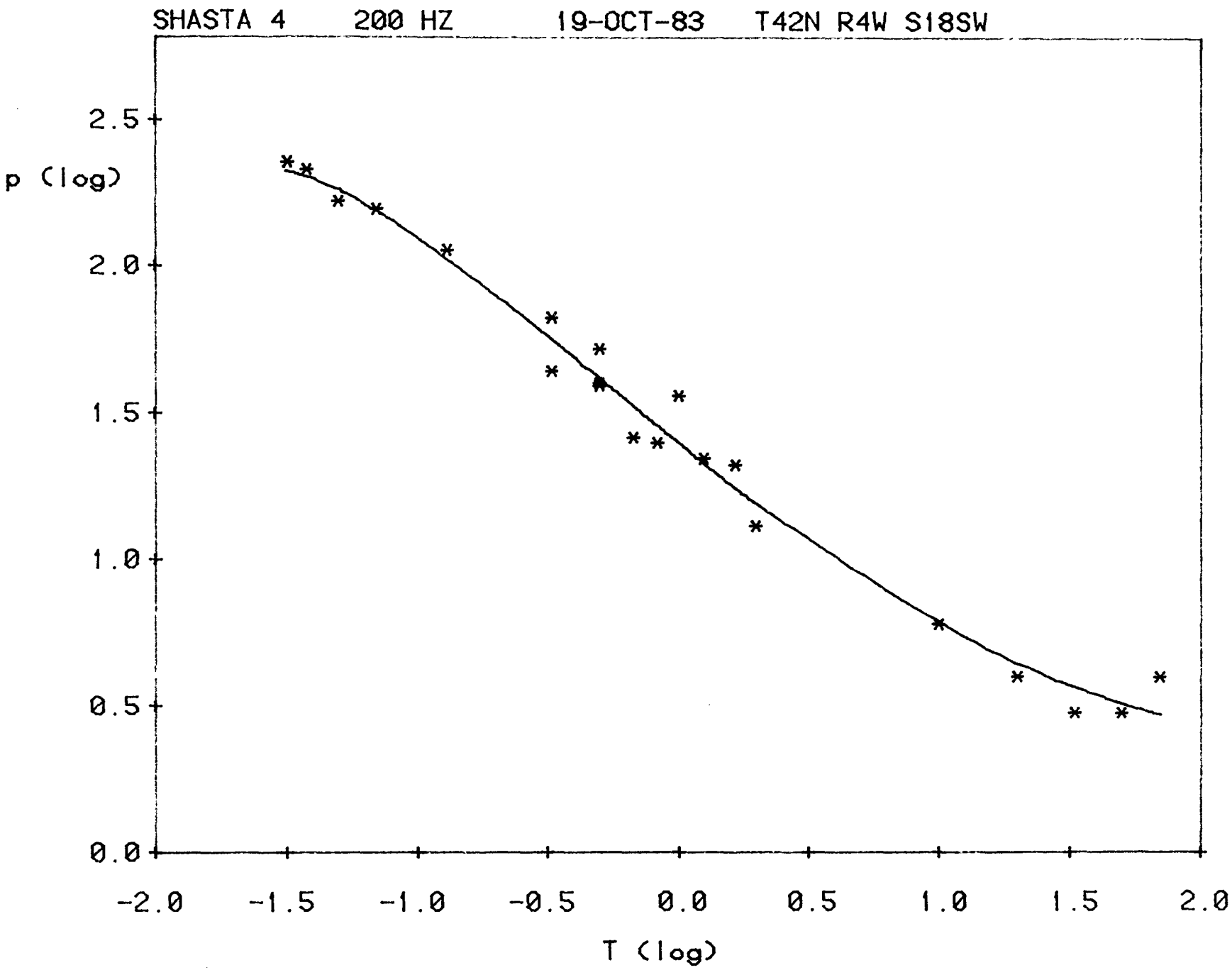
NOISE TO SIGNAL RATIO = 0.140 PERCENT

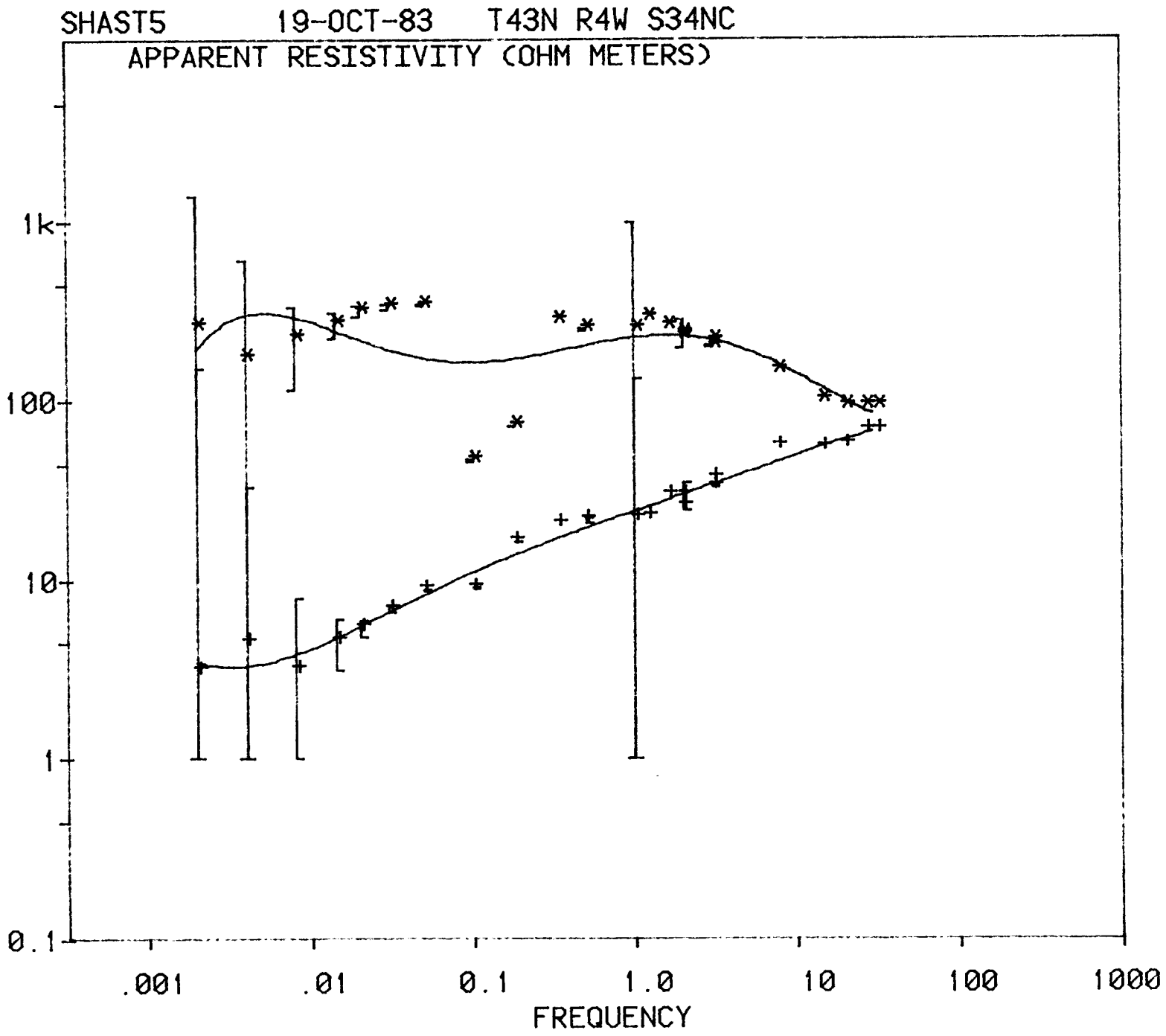
SHASTA 4 200 HZ 19-OCT-83 T42N R4W S18SW

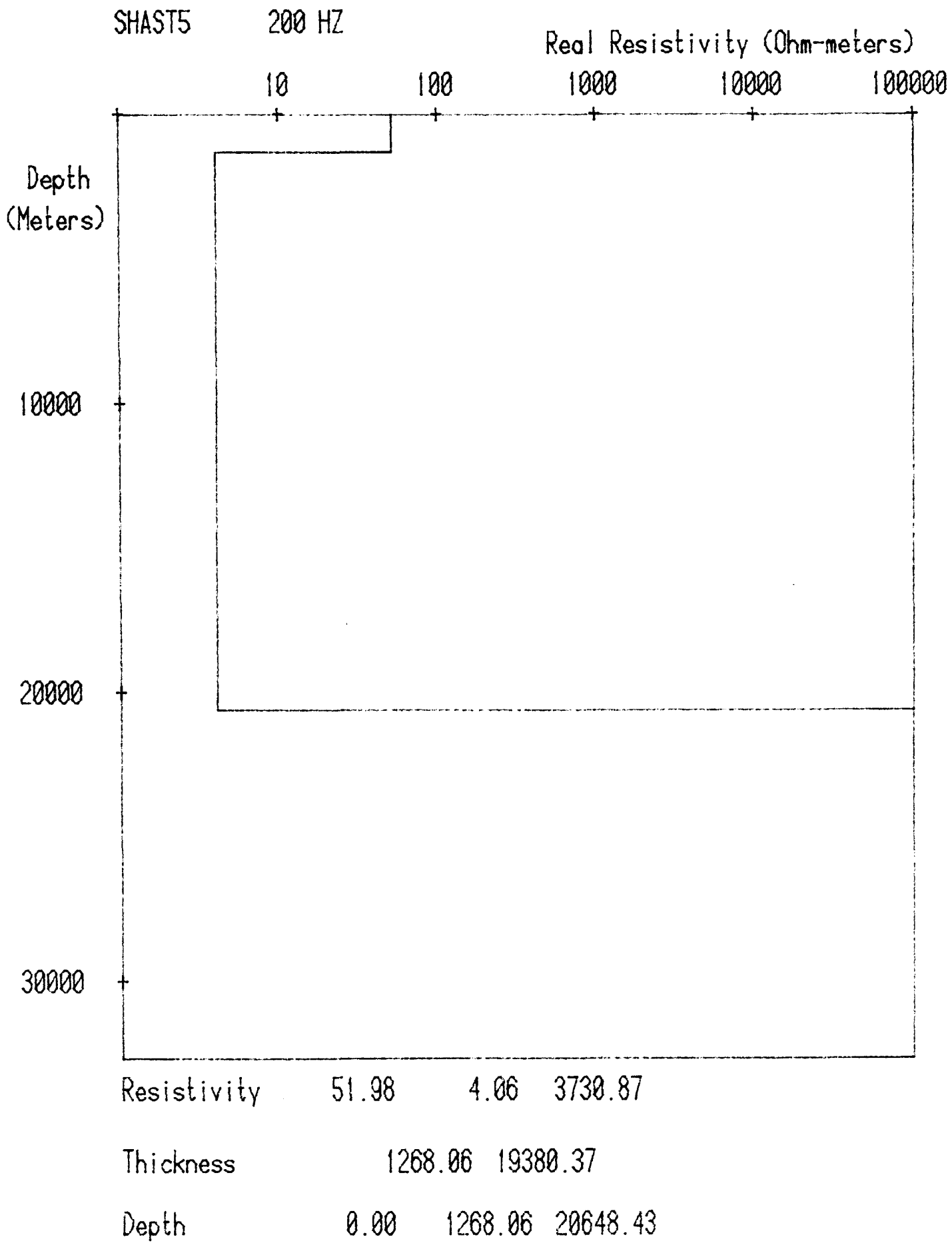
ERROR STRUCTURE OF FITTED MODEL

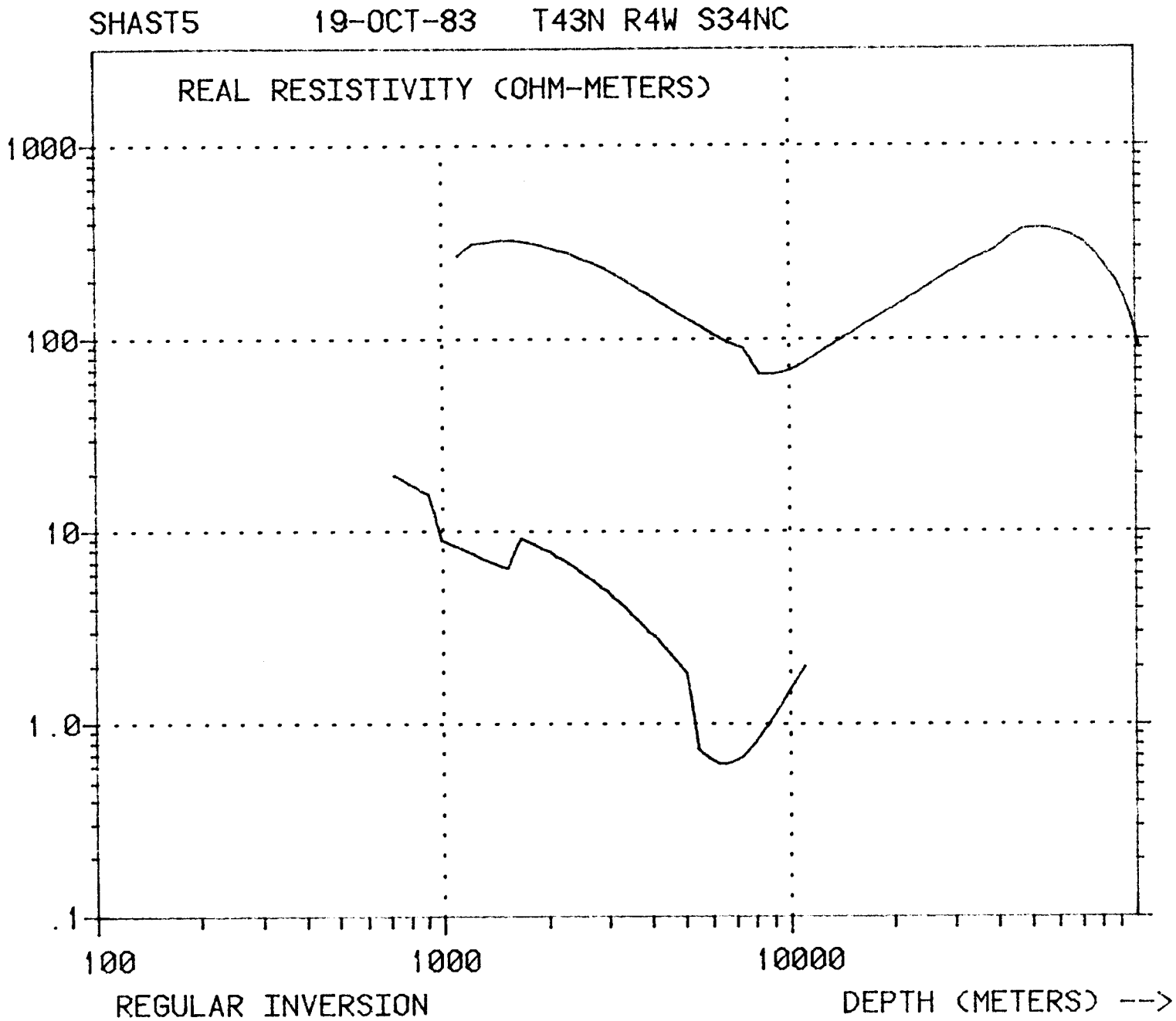
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 70.000 | 4.000 | 2.971 | 1.029 | 29.536 |
| 2 | 50.000 | 3.000 | 3.242 | -0.242 | -7.746 |
| 3 | 33.000 | 3.000 | 3.676 | -0.676 | -20.247 |
| 4 | 20.000 | 4.000 | 4.401 | -0.401 | -9.552 |
| 5 | 10.000 | 6.000 | 5.970 | 0.030 | 0.502 |
| 6 | 2.000 | 13.000 | 15.408 | -2.408 | -16.950 |
| 7 | 1.670 | 21.000 | 17.432 | 3.568 | 18.566 |
| 8 | 1.250 | 22.000 | 21.364 | 0.636 | 2.933 |
| 9 | 1.000 | 36.000 | 25.073 | 10.927 | 35.785 |
| 10 | 0.830 | 25.000 | 28.706 | -3.706 | -13.801 |
| 11 | 0.670 | 26.000 | 33.577 | -7.577 | -25.437 |
| 12 | 0.500 | 39.000 | 41.631 | -2.631 | -6.526 |
| 13 | 0.500 | 40.000 | 41.631 | -1.631 | -3.996 |
| 14 | 0.500 | 52.000 | 41.631 | 10.369 | 22.149 |
| 15 | 0.330 | 44.000 | 56.375 | -12.375 | -24.658 |
| 16 | 0.330 | 67.000 | 56.375 | 10.625 | 17.224 |
| 17 | 0.130 | 113.000 | 107.649 | 5.351 | 4.850 |
| 18 | 0.070 | 158.000 | 157.025 | 0.975 | 0.619 |
| 19 | 0.050 | 168.000 | 185.046 | -17.046 | -9.657 |
| 20 | 0.038 | 215.000 | 203.784 | 11.216 | 5.356 |
| 21 | 0.032 | 227.000 | 211.816 | 15.184 | 6.921 |
| 22 | 0.025 | 206.000 | 216.922 | -10.922 | -5.165 |

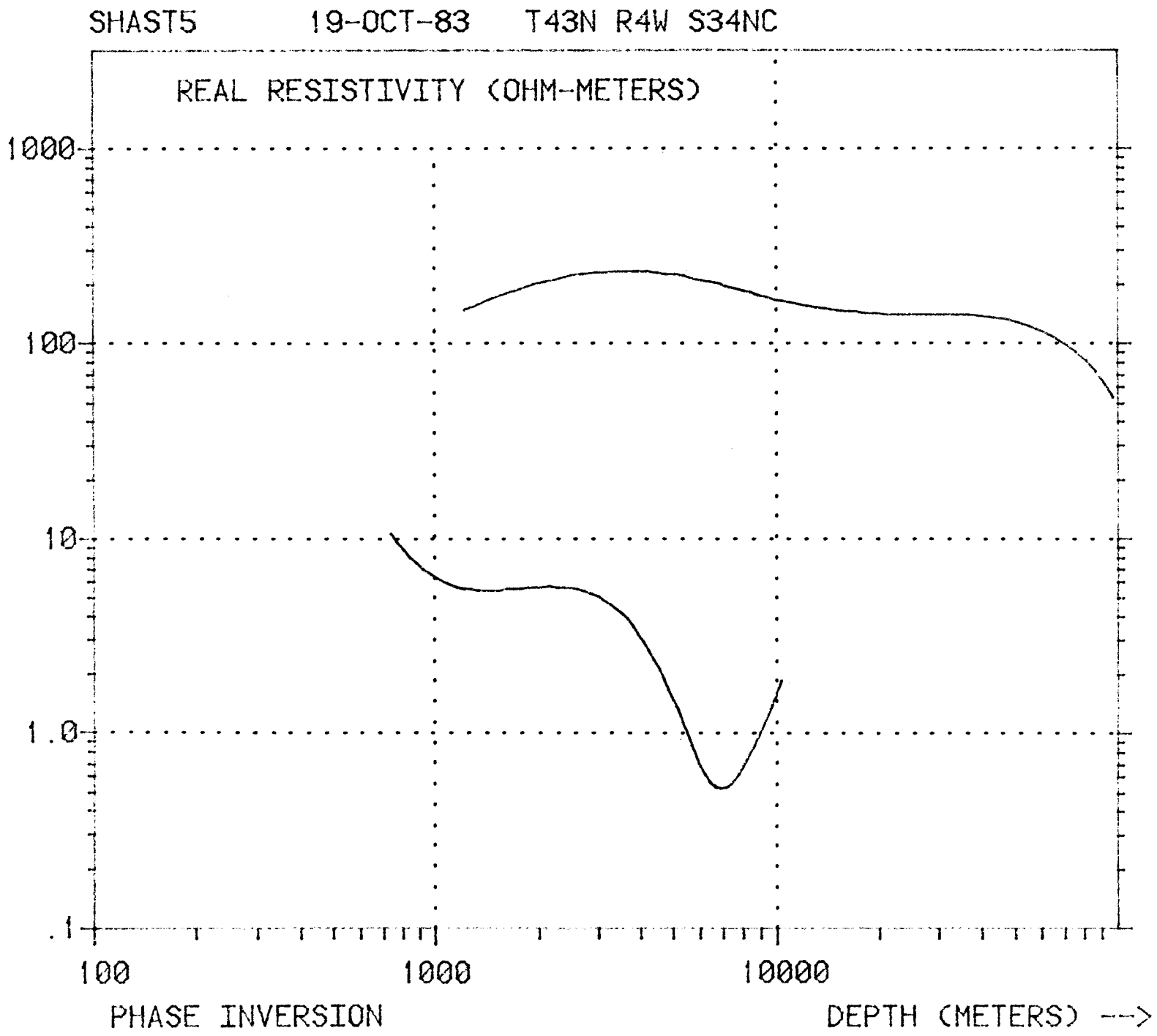
MEAN PERCENT ERROR = 16.3526
MAXIMUM PERCENT ERROR = 35.7846
MAX. ERROR OCCURED AT OBSERVATION 9


SHASTA 4 200 HZ 19-OCT-83 T42N R4W S18SW
p (log)
2.5
2.0
1.5
1.0
0.5
0.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
T (log)

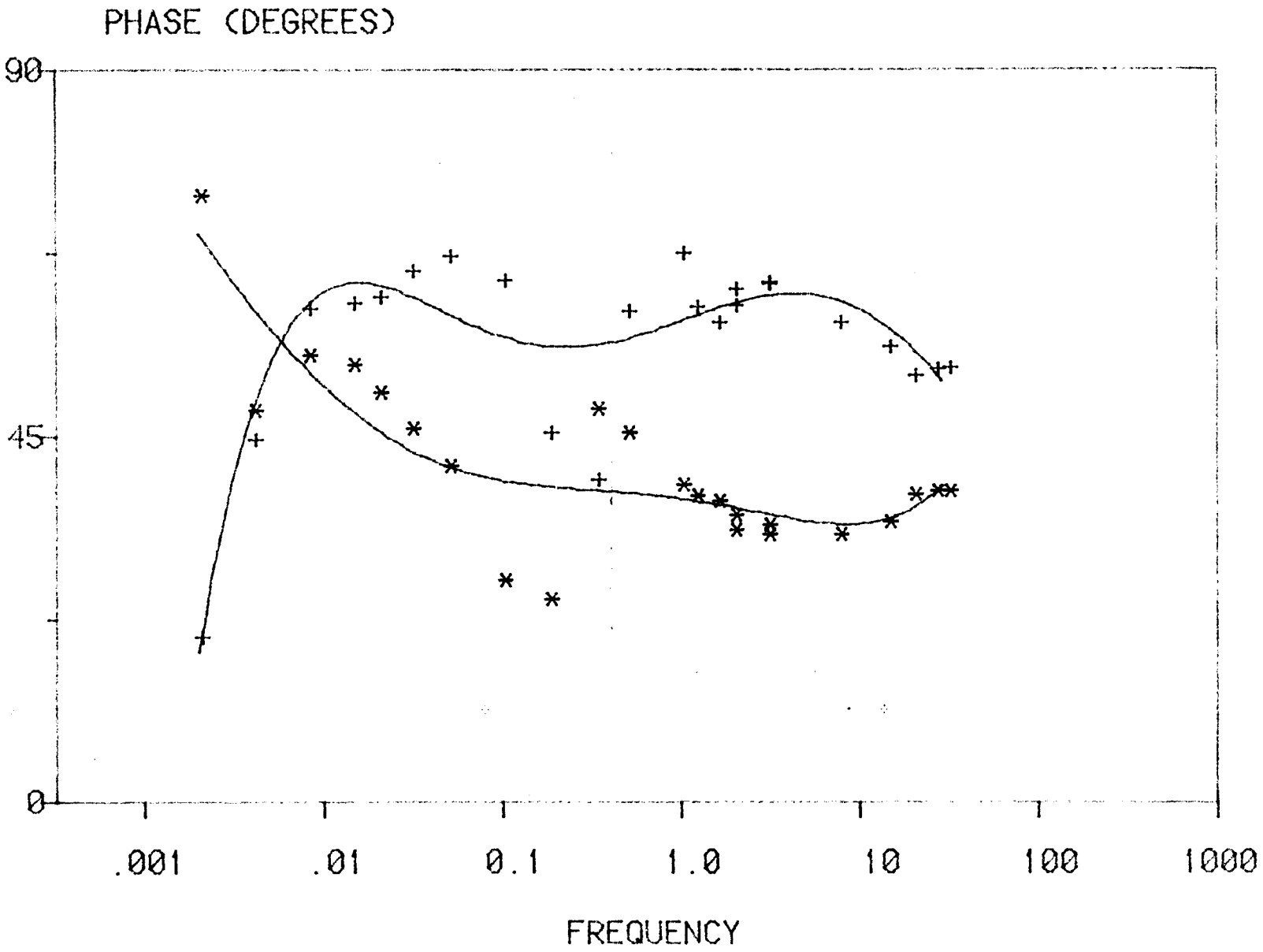

SHAST5 19-OCT-83 T43N R4W S34NC
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAST5 200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
Depth
(Meters)
10000
20000
30000
Resistivity 51.98 4.06 3730.87
Thickness 1268.06 19380.37
Depth 0.00 1268.06 20648.43


SHAST5 19-OCT-83 T43N R4W S34NC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST5 19-OCT-83 T43N R4W S34NC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAST5 19-OCT-83 T43N R4W S34NC



THE SITE IS: SLAST5 200 HZ 19-OCT-83 T43N R4W S34NC

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | -7.64 | 235.08 | 1 | 143.28 | 1090.67 |
| 0.0020 | 3.07 | 251.72 | 2 | 27.62 | 419.74 |
| 0.0040 | 4.44 | 167.86 | 3 | 4.64 | 104.49 |
| 0.0080 | 3.09 | 216.19 | 4 | 1.38 | 41.58 |
| 0.0143 | 4.47 | 259.43 | 5 | 0.57 | 23.46 |
| 0.0200 | 5.24 | 306.58 | 6 | 0.27 | 13.13 |
| 0.0303 | 6.74 | 323.84 | 7 | 0.08 | 2.89 |
| 0.0500 | 8.60 | 331.16 | 8 | 0.02 | 0.61 |
| 0.1000 | 8.87 | 45.51 | 9 | 0.06 | 0.20 |
| 0.1818 | 16.08 | 71.20 | 10 | 0.03 | 0.10- |
| 0.3333 | 19.99 | 269.49 | 11 | 0.82 | 4.28 |
| 0.5000 | 21.19 | 241.67 | 12 | 107.40 | 708.42 |
| 0.5988 | 4.70 | 671.08 | 13 | 0.00 | 0.25 |
| 0.8000 | -97.70 | 903.13 | 14 | 0.02 | 0.08 |
| 1.0000 | 21.58 | 242.13 | 15 | 5.06 | 40.83 |
| 1.0000 | 2.81 | 401.84 | 16 | 0.00 | 0.15 |
| 1.2048 | 22.06 | 282.39 | 17 | 0.19 | 1.17 |
| 1.6129 | 29.01 | 251.23 | 18 | 0.01 | 0.06 |
| 2.0000 | 29.24 | 231.09 | 19 | 0.00 | 0.01 |
| 2.0000 | 25.17 | 220.10 | 20 | 0.00 | 0.03 |
| 2.0000 | 39.08 | 361.25 | 21 | 0.01 | 0.03 |
| 3.0303 | 32.41 | 195.21 | 22 | 0.00 | 0.00 |
| 3.0303 | 36.09 | 209.20 | 23 | 0.00 | 0.02 |
| 7.6923 | 53.97 | 141.57 | 24 | 0.00 | 0.01 |
| 14.2857 | 52.86 | 97.46 | 25 | 0.00 | 0.00 |
| 20.0000 | 55.37 | 90.53 | 26 | 0.00 | 0.00 |
| 26.3158 | 66.51 | 89.48 | 27 | 0.00 | 0.00 |
| 31.2500 | 65.88 | 90.87 | 28 | 0.00 | 0.00 |
| 40.0000 | 0.02 | 0.38 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.248E+03 | 0.806E+01 | 68. | 44. | 167. | 0.9839 | 0.9696 | 0.0510 | 0.33 |
| H | SEC | 0.222E+03 | 0.722E+01 | 68. | 44. | 167. | 0.9847 | 0.9704 | 156.00 | 0.33 |
| E | 500.0 | 0.287E+03 | 0.319E+01 | 74. | 26. | 167. | 0.9546 | 0.9854 | 0.0642 | 0.34 |
| H | SEC | 0.216E+03 | 0.294E+01 | 73. | 25. | 167. | 0.9581 | 0.9864 | 46.50 | 0.35 |
| E | 250.0 | 0.165E+03 | 0.526E+01 | 49. | 42. | 167. | 0.9921 | 0.9906 | 0.0935 | 0.25 |
| H | SEC | 0.171E+03 | 0.361E+01 | 48. | 43. | 167. | 0.9930 | 0.9918 | 166.90 | 0.24 |
| E | 125.0 | 0.224E+03 | 0.331E+01 | 55. | 61. | 167. | 0.9860 | 0.9921 | 0.1370 | 0.18 |
| H | SEC | 0.209E+03 | 0.286E+01 | 55. | 61. | 167. | 0.9865 | 0.9922 | 171.50 | 0.17 |
| E | 70.0 | 0.262E+03 | 0.454E+01 | 54. | 62. | 167. | 0.9966 | 0.9984 | 0.1890 | 0.15 |
| H | SEC | 0.257E+03 | 0.440E+01 | 54. | 62. | 167. | 0.9966 | 0.9984 | -2.00 | 0.15 |
| E | 50.0 | 0.309E+03 | 0.538E+01 | 51. | 62. | 167. | 0.9961 | 0.9969 | 0.2391 | 0.15 |
| H | SEC | 0.304E+03 | 0.511E+01 | 51. | 62. | 167. | 0.9962 | 0.9969 | 173.80 | 0.15 |
| E | 33.0 | 0.335E+03 | 0.735E+01 | 46. | 65. | 167. | 0.9833 | 0.9853 | 0.3259 | 0.15 |
| H | SEC | 0.312E+03 | 0.613E+01 | 46. | 66. | 167. | 0.9836 | 0.9855 | 174.40 | 0.14 |
| E | 20.0 | 0.373E+03 | 0.111E+02 | 42. | 66. | 167. | 0.9580 | 0.9529 | 0.4395 | 0.12 |
| H | SEC | 0.290E+03 | 0.611E+01 | 42. | 69. | 167. | 0.9614 | 0.9575 | -3.30 | 0.16 |

AVERAGE # 8
SMASTS 200 HZ 19-OCT-83 T43N R4W S34NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.566E+02 | 0.103E+02 | 37. | 50. | 167. | 0.8896 | 0.9027 | 1.2449 | 0.55 |
| H | SEC | 0.344E+02 | 0.743E+01 | 27. | 47. | 167. | 0.9005 | 0.9130 | 102.00 | 0.66 |
| E | 5.5 | 0.685E+02 | 0.308E+02 | 40. | 11. | 160. | 0.9085 | 0.8423 | 0.5586 | 0.83 |
| H | SEC | 0.739E+02 | 0.138E+01 | 35. | 83. | 160. | 0.9262 | 0.9081 | 16.90 | 0.72 |
| E | 3.0 | 0.332E+03 | 0.346E+02 | 45. | 46. | 160. | 0.8966 | 0.9004 | 0.4431 | 0.38 |
| H | SEC | 0.207E+03 | 0.537E+01 | 50. | 50. | 160. | 0.9333 | 0.9351 | 18.10 | 0.11 |
| E | 2.0 | 0.289E+03 | 0.365E+02 | 44. | 62. | 160. | 0.9158 | 0.8866 | 0.6327 | 0.18 |
| H | SEC | 0.194E+03 | 0.586E+01 | 47. | 61. | 160. | 0.9217 | 0.9075 | 13.20 | 0.03 |
| E | 1.7 | 0.720E+03 | 0.469E+01 | 61. | 62. | 160. | 0.9654 | 0.9683 | 0.5806 | 0.29 |
| H | SEC | 0.622E+03 | 0.470E+01 | 61. | 62. | 160. | 0.9655 | 0.9685 | 129.80 | 0.29 |
| E | 1.2 | 0.954E+03 | 0.129E+03 | 34. | 59. | 160. | 0.9726 | 0.9730 | 0.3001 | 0.04 |
| H | SEC | 0.853E+03 | 0.669E+02 | 35. | 59. | 160. | 0.9781 | 0.9784 | 172.70 | 0.06 |
| E | 1.0 | 0.285E+03 | 0.353E+02 | 39. | 67. | 160. | 0.9254 | 0.9182 | 0.4711 | 0.08 |
| H | HZ | 0.199E+03 | 0.790E+01 | 39. | 69. | 160. | 0.9302 | 0.9264 | 55.40 | 0.16 |

AVERAGE # 8
MASTS 200 HZ 19-OCT-83 T43N R4W S34NC
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.431E+03 | 0.281E+01 | 58. | 59. | 160. | 0.9654 | 0.9683 | 0.5806 | 0.29 |
| H | HZ | 0.373E+03 | 0.281E+01 | 58. | 59. | 160. | 0.9655 | 0.9685 | 129.80 | 0.29 |
| E | 1.2 | 0.305E+03 | 0.295E+02 | 38. | 60. | 160. | 0.9700 | 0.9728 | 0.4416 | 0.08 |
| H | HZ | 0.260E+03 | 0.146E+02 | 39. | 59. | 160. | 0.9716 | 0.9736 | 113.00 | 0.03 |
| E | 1.6 | 0.266E+03 | 0.378E+02 | 37. | 60. | 160. | 0.9735 | 0.9728 | 0.3914 | 0.02 |
| H | HZ | 0.237E+03 | 0.202E+02 | 38. | 58. | 160. | 0.9744 | 0.9739 | 99.30 | 0.08 |
| E | 2.0 | 0.247E+03 | 0.361E+02 | 35. | 61. | 160. | 0.9693 | 0.9677 | 0.3906 | 0.01 |
| H | HZ | 0.215E+03 | 0.223E+02 | 36. | 61. | 160. | 0.9697 | 0.9684 | 96.10 | 0.04 |
| E | 2.0 | 0.241E+03 | 0.402E+02 | 34. | 62. | 160. | 0.9545 | 0.8926 | 0.4399 | 0.04 |
| H | HZ | 0.199E+03 | 0.102E+02 | 33. | 64. | 160. | 0.9555 | 0.9172 | 91.50 | 0.11 |
| E | 2.0 | 0.381E+03 | 0.514E+02 | 31. | 56. | 160. | 0.9726 | 0.9730 | 0.3001 | 0.04 |
| H | HZ | 0.341E+03 | 0.267E+02 | 31. | 55. | 160. | 0.9781 | 0.9784 | 172.70 | 0.06 |

AVERAGE #  8

SMASTS  200 HZ  19-OCT-83  T43N R4W S34NC

NSAMP = 1024  SI = 0.0050  TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDMX | PREDMY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.230E+03 | 0.490E+02 | 33. | 64. | 153. | 0.9139 | 0.8638 | 0.5080 | 0.06 |
| H | HZ | 0.161E+03 | 0.158E+02 | 34. | 63. | 153. | 0.9155 | 0.8816 | 120.60 | 0.04 |
| E | 3.0 | 0.236E+03 | 0.440E+02 | 34. | 64. | 153. | 0.9409 | 0.9304 | 0.7976 | 0.11 |
| H | HZ | 0.183E+03 | 0.281E+02 | 35. | 64. | 153. | 0.9412 | 0.9316 | 136.10 | 0.07 |
| E | 7.7 | 0.147E+03 | 0.603E+02 | 33. | 59. | 153. | 0.9804 | 0.9845 | 0.2404 | 0.05 |
| H | HZ | 0.136E+03 | 0.477E+02 | 33. | 59. | 153. | 0.9812 | 0.9849 | 33.00 | 0.06 |
| E | 14.3 | 0.110E+03 | 0.688E+02 | 34. | 56. | 153. | 0.9404 | 0.9499 | 0.3173 | 0.04 |
| H | HZ | 0.846E+02 | 0.369E+02 | 34. | 56. | 153. | 0.9478 | 0.9552 | 28.20 | 0.06 |
| E | 20.0 | 0.107E+03 | 0.699E+02 | 38. | 53. | 153. | 0.9214 | 0.9351 | 0.3589 | 0.03 |
| H | HZ | 0.742E+02 | 0.409E+02 | 38. | 52. | 153. | 0.9255 | 0.9371 | 44.00 | 0.05 |
| E | 26.3 | 0.100E+03 | 0.798E+02 | 38. | 53. | 153. | 0.9452 | 0.9495 | 0.3634 | 0.07 |
| H | HZ | 0.789E+02 | 0.532E+02 | 38. | 54. | 153. | 0.9464 | 0.9503 | 61.90 | 0.05 |
| E | 31.2 | 0.101E+03 | 0.817E+02 | 39. | 53. | 153. | 0.9432 | 0.9451 | 0.4255 | 0.09 |
| H | HZ | 0.808E+02 | 0.501E+02 | 38. | 54. | 153. | 0.9449 | 0.9466 | 41.50 | 0.08 |
| E | 40.0 | 0.423E+00 | 0.208E-01 | 55. | 69. | 153. | 0.9580 | 0.9529 | 0.4395 | 0.12 |
| H | HZ | 0.332E+00 | 0.114E-01 | 56. | 67. | 153. | 0.9614 | 0.9575 | -3.30 | 0.16 |

THE NUMBER OF LAYERS = 3
THE NUMBER OF FREQUENCIES TAKEN = 24
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 30.0000 | | 0.0000 |
| | | 4000.0000 | |
| 2 | 1.0000 | | 4000.0000 |
| | | 4000.0000 | |
| 3 | 7.0000 | | 8000.0000 |

FREQUENCY RANGE ( 0.0020 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 51.9880 | | 0.0000 |
| | | 1268.0623 | |
| 2 | 4.0625 | | 1268.0623 |
| | | 19380.3778 | |
| 3 | 863730.9208 | | 20648.4402 |

MEAN PERCENT VARIATION IS 23.7520

ERROR ANALYSIS

R-SQUARED = 0.998

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 23 | 10455.261 | 454.577 | 0.174 |
| MODEL | 4 | 10434.956 | 2608.739 | 36607.840 |
| RESID | 19 | 1.354 | 0.071 | |

STANDARD ERROR = 0.267

DTEST FOR MEANS = -0.000

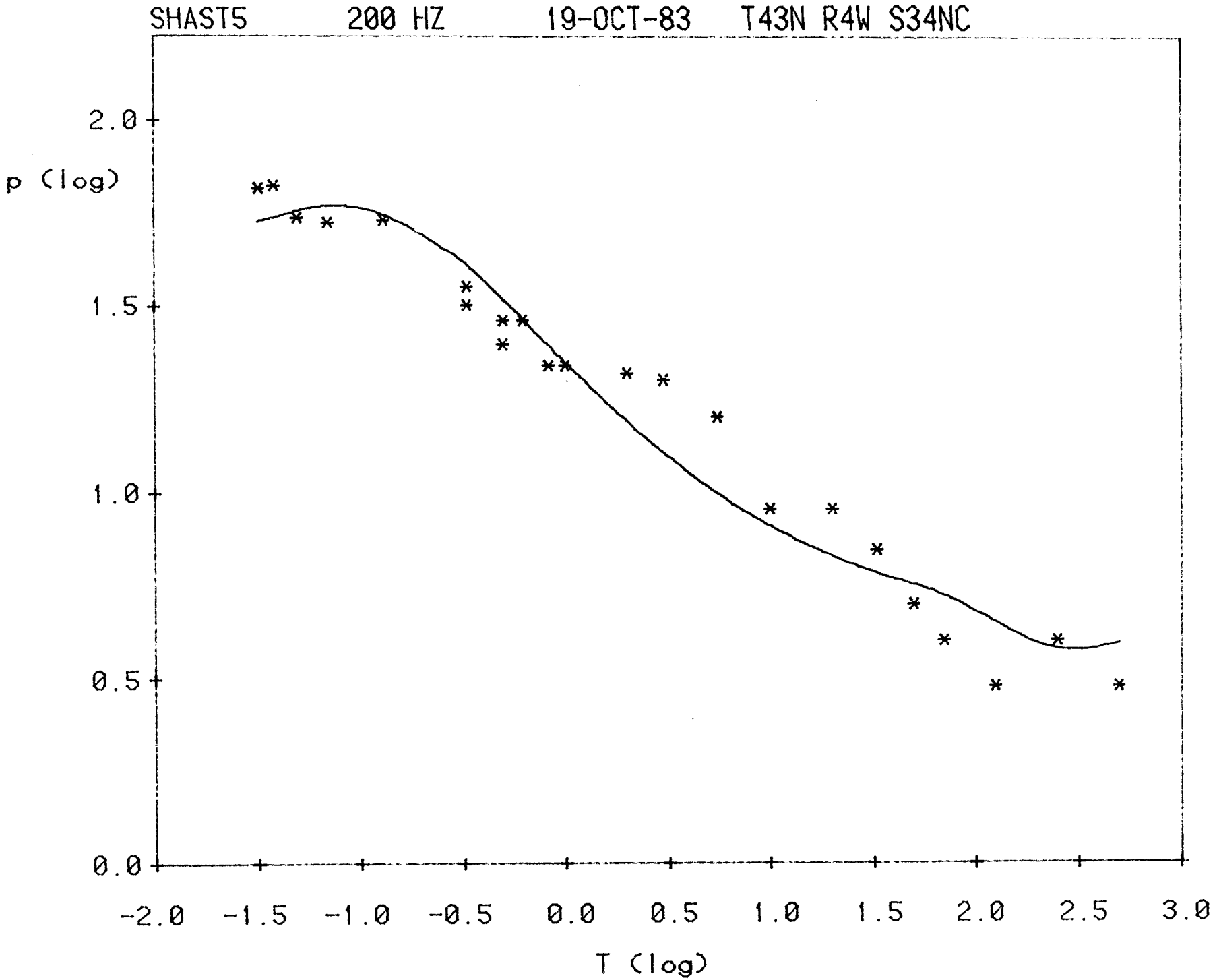
NOISE TO SIGNAL RATIO = 0.523 PERCENT

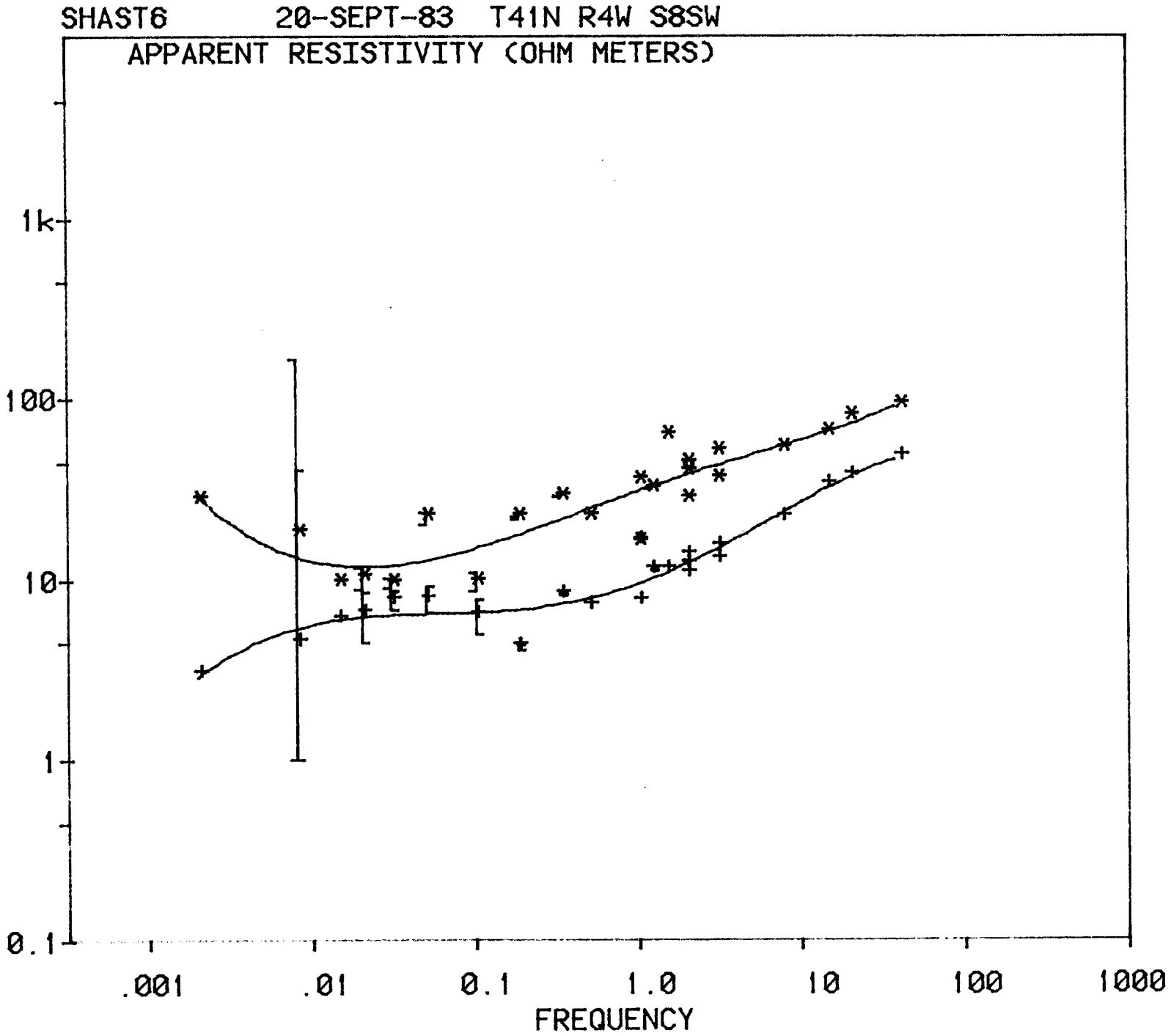
SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC

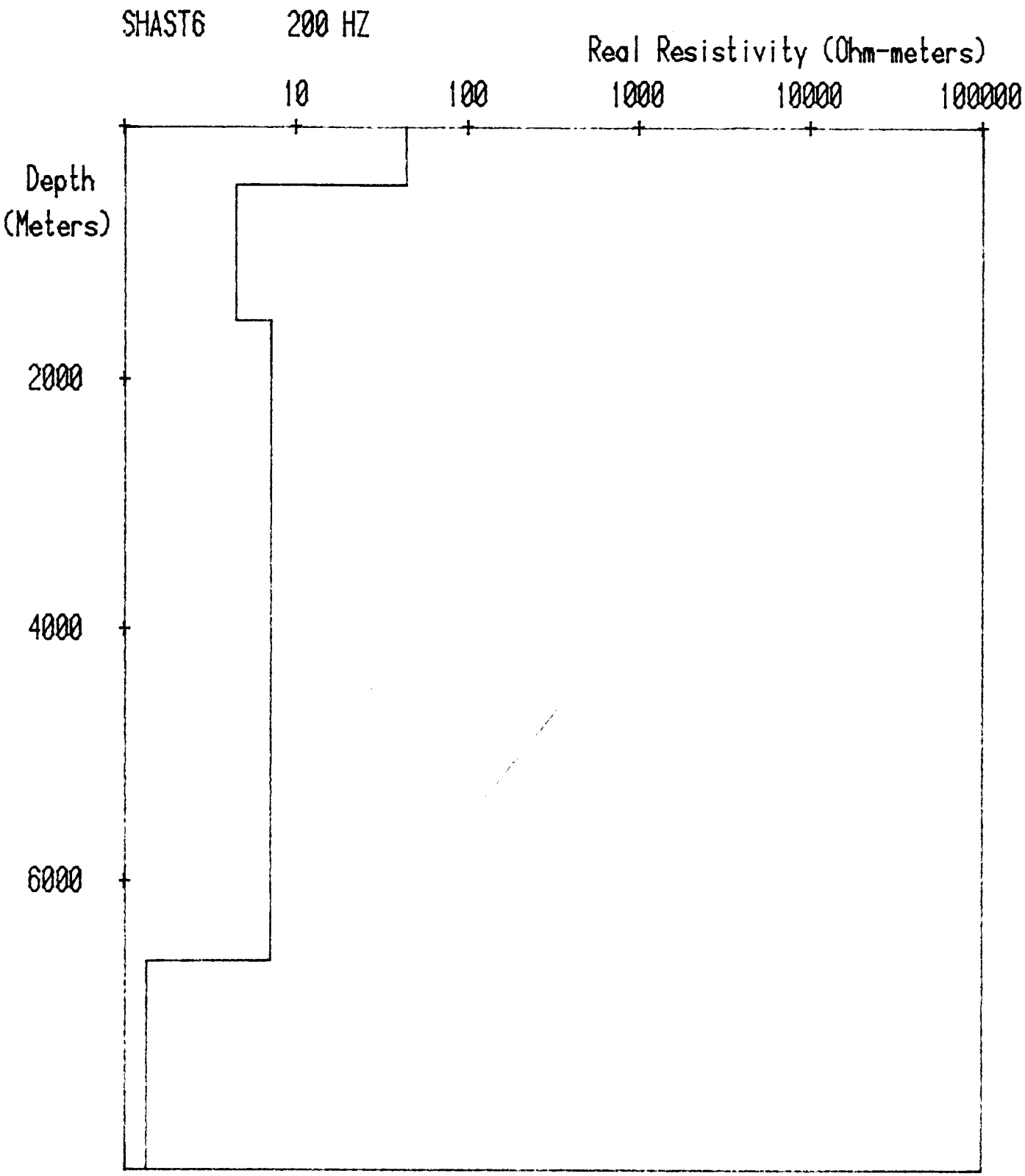
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 500.000 | 3.000 | 3.929 | -0.929 | -26.827 |
| 2 | 250.000 | 4.000 | 3.615 | 0.385 | 10.114 |
| 3 | 125.000 | 3.000 | 4.480 | -1.480 | -39.574 |
| 4 | 70.000 | 4.000 | 5.333 | -1.333 | -28.558 |
| 5 | 50.000 | 5.000 | 5.661 | -0.661 | -12.405 |
| 6 | 33.000 | 7.000 | 6.032 | 0.968 | 14.857 |
| 7 | 20.000 | 9.000 | 6.675 | 2.325 | 29.663 |
| 8 | 10.000 | 9.000 | 8.053 | 0.947 | 11.108 |
| 9 | 5.500 | 16.000 | 9.893 | 6.107 | 47.167 |
| 10 | 3.000 | 20.000 | 12.751 | 7.249 | 44.269 |
| 11 | 2.000 | 21.000 | 15.486 | 5.514 | 30.227 |
| 12 | 1.000 | 22.000 | 22.416 | -0.416 | -1.872 |
| 13 | 0.830 | 22.000 | 24.896 | -2.896 | -12.352 |
| 14 | 0.620 | 29.000 | 29.387 | -0.387 | -1.327 |
| 15 | 0.500 | 29.000 | 33.179 | -4.179 | -13.442 |
| 16 | 0.500 | 25.000 | 33.179 | -8.179 | -28.117 |
| 17 | 0.330 | 32.000 | 41.467 | -9.467 | -25.772 |
| 18 | 0.330 | 36.000 | 41.467 | -5.467 | -14.114 |
| 19 | 0.130 | 54.000 | 58.374 | -4.374 | -7.785 |
| 20 | 0.070 | 53.000 | 59.850 | -6.850 | -12.141 |
| 21 | 0.050 | 55.000 | 57.394 | -2.394 | -4.259 |
| 22 | 0.038 | 67.000 | 55.005 | 11.995 | 19.662 |
| 23 | 0.032 | 66.000 | 53.714 | 12.286 | 20.526 |
| 24 | 0.025 | 0.000 | 52.396 | 0.000 | 0.000 |

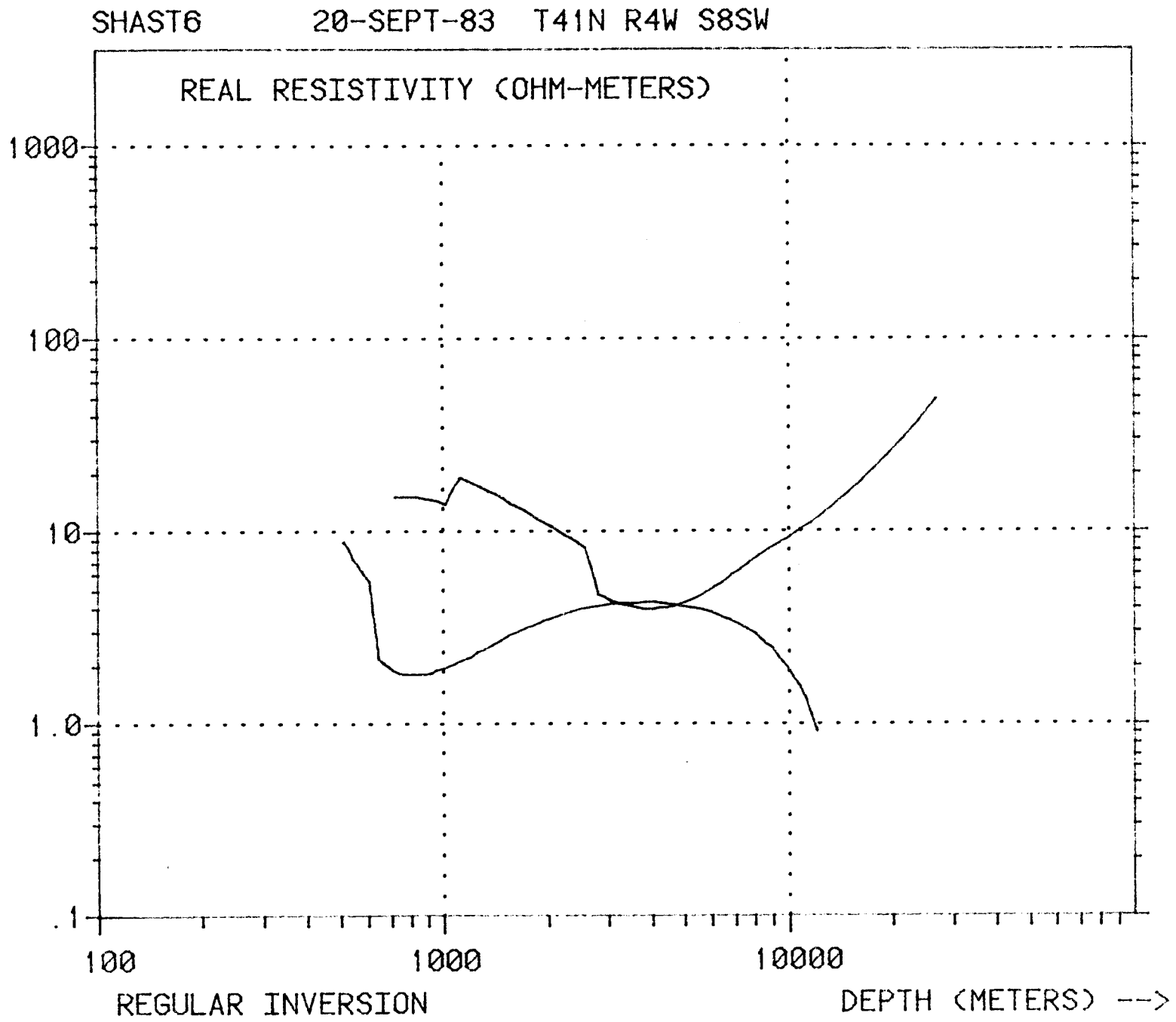
MEAN PERCENT ERROR = 23.0301
(ABSOLUTE PERCENT ERROR = 47.1673
MAX. ERROR OCCURED AT OBSERVATION 9

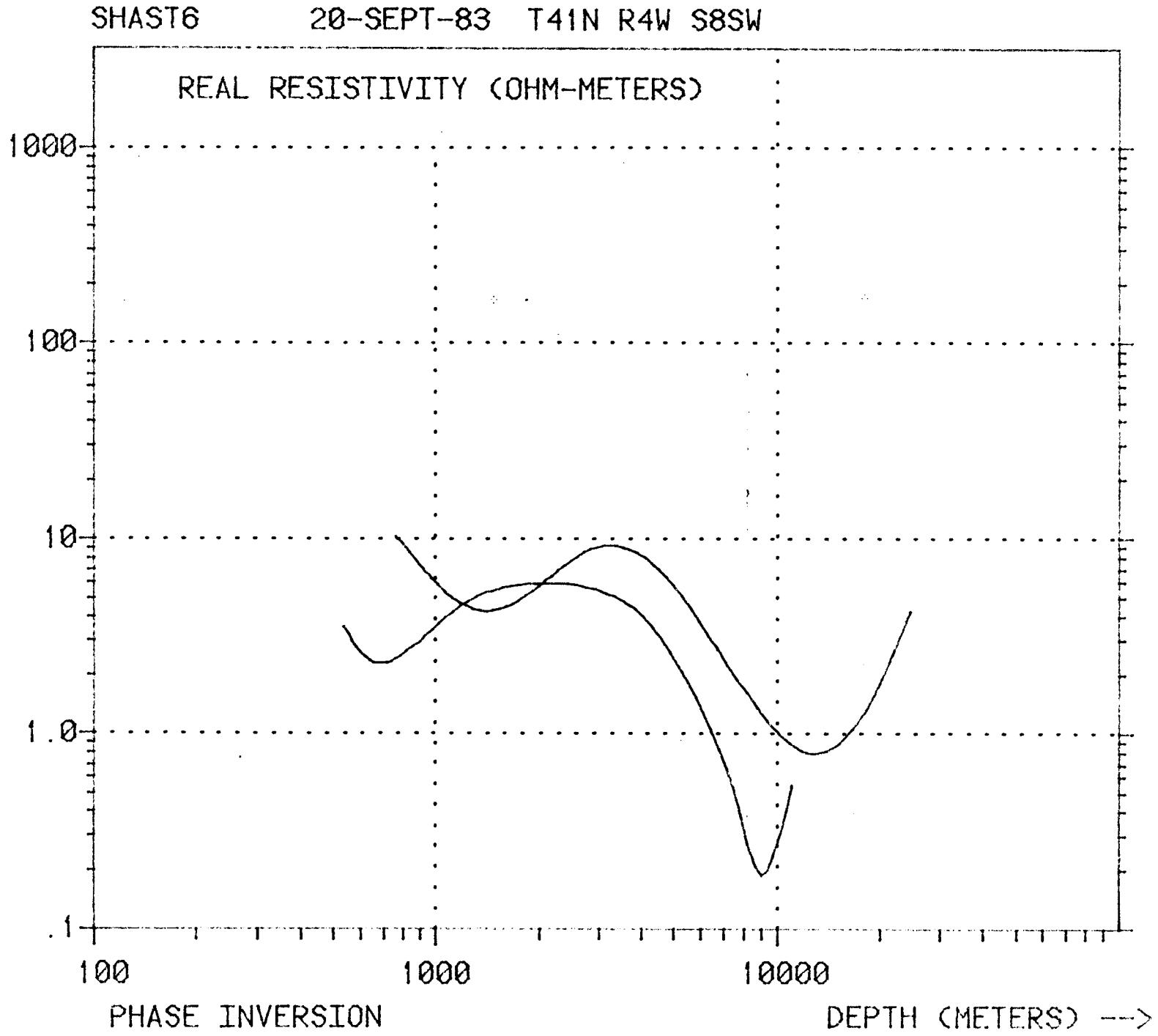

SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC
p (log)
2.0
1.5
1.0
0.5
0.0
-2.0 -1.5 -1.0 -0.5 0.0 0.5 1.0 1.5 2.0 2.5 3.0
T (log)


SHAST6 20-SEPT-83 T41N R4W S8SW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

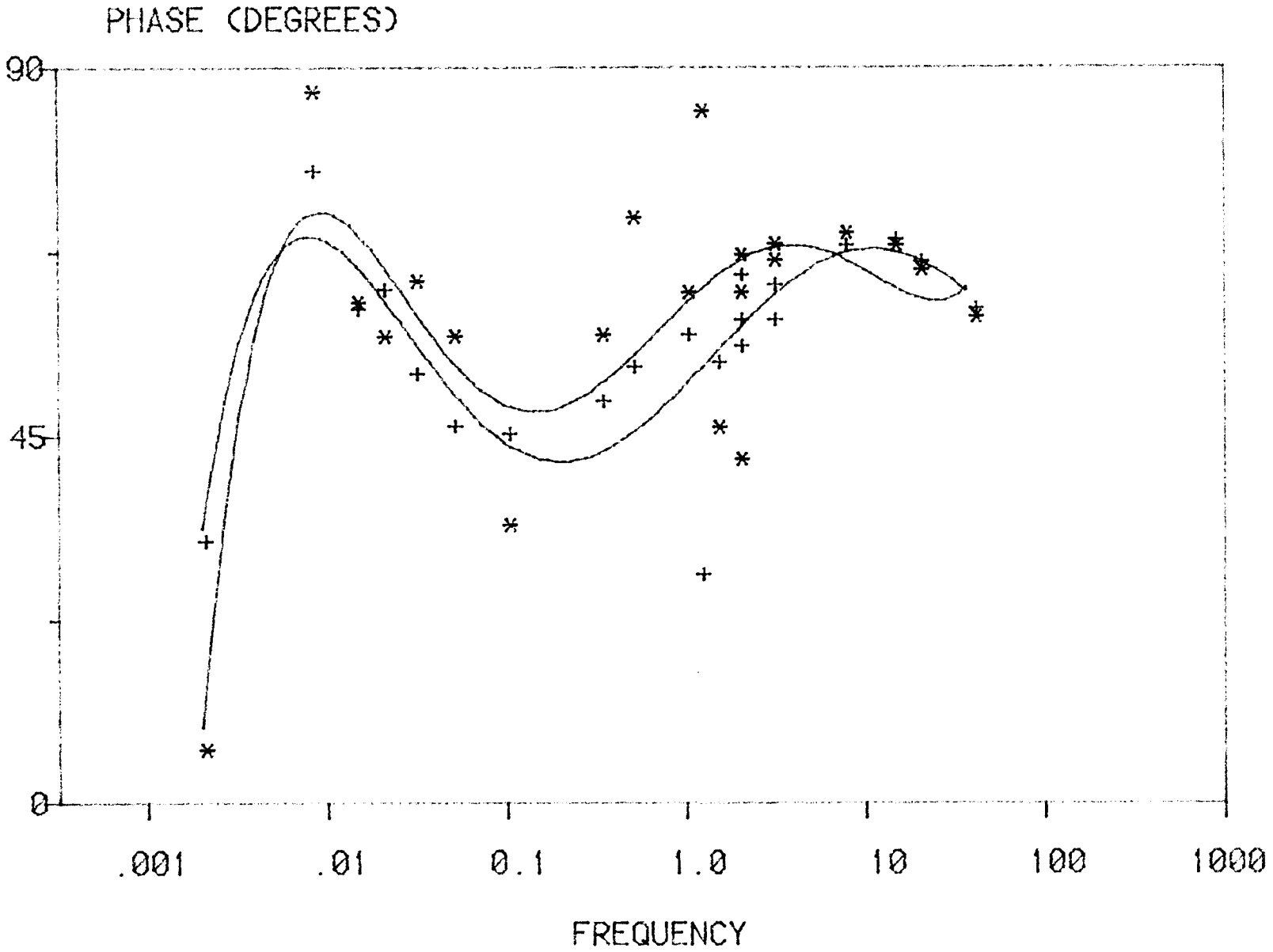



| | | | | |
|---|---|---|---|---|
| Resistivity | 44.14 | 4.43 | 7.12 | 1.34 |
| Thickness | | 454.21 | 1090.68 | 5098.67 |
| Depth | 0.00 | 454.21 | 1544.89 | 6643.57 |


SHAST6 20-SEPT-83 T41N R4W S8SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST6 20-SEPT-83 T41N R4W S8SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAST6 20-SEPT--83 T41N R4W S8SW



THE SITE IS: SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW

MEANS OF HEROLD AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.00 | 0.00 | 1 | 0.00 | 0.00 |
| 0.0020 | 2.94 | 27.20 | 2 | 35.41 | 144.70 |
| 0.0040 | 0.00 | 0.00 | 3 | 0.00 | 0.00 |
| 0.0080 | 4.37 | 17.73 | 4 | 1.94 | 1.40 |
| 0.0143 | 5.94 | 9.31 | 5 | 0.88 | 0.59 |
| 0.0200 | 6.31 | 10.00 | 6 | 1.24 | 1.77 |
| 0.0303 | 7.53 | 9.33 | 7 | 1.36 | 1.11 |
| 0.0500 | 7.64 | 21.60 | 8 | 0.17 | 0.45 |
| 0.1000 | 6.23 | 9.57 | 9 | 0.04 | 0.11 |
| 0.1818 | 4.17 | 21.67 | 10 | 0.01 | 0.01 |
| 0.3333 | 8.09 | 28.21 | 11 | 0.01 | 0.01 |
| 0.5000 | 6.99 | 21.56 | 12 | 0.00 | 0.00 |
| 0.5988 | 12.66 | 61.07 | 13 | 0.04 | 0.08 |
| 0.8000 | 4.58 | 68.00 | 14 | 0.01 | 0.07 |
| 1.0000 | 7.36 | 15.60 | 15 | 0.00 | 0.00 |
| 1.0000 | 15.83 | 34.21 | 16 | 0.00 | 0.02 |
| 1.2048 | 11.03 | 30.95 | 17 | 0.01 | 0.02 |
| 1.4925 | 11.10 | 60.54 | 18 | 0.01 | 0.01 |
| 2.0000 | 13.31 | 27.16 | 19 | 0.00 | 0.00 |
| 2.0000 | 11.87 | 38.44 | 20 | 0.00 | 0.00 |
| 2.0000 | 10.40 | 42.89 | 21 | 0.00 | 0.00 |
| 3.0303 | 14.80 | 49.54 | 22 | 0.00 | 0.00 |
| 3.0303 | 12.44 | 35.12 | 23 | 0.00 | 0.00 |
| 7.6923 | 21.42 | 51.41 | 24 | 0.00 | 0.00 |
| 14.2857 | 32.31 | 63.09 | 25 | 0.00 | 0.00 |
| 20.0000 | 36.24 | 76.07 | 26 | 0.00 | 0.00 |
| 26.3158 | 0.00 | 0.00 | 27 | 0.00 | 0.00 |
| 31.2500 | 0.00 | 0.00 | 28 | 0.00 | 0.00 |
| 40.0000 | 45.83 | 88.86 | 29 | 0.00 | 0.00 |

AVERAGE #  3
SEAST6  200 HZ  20-SEPT-83  T41N R4W S6SW
NOMP = 1024  ST = 0.0050  TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE | RHO MIN (OHM-M) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 300.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 500.0 | 0.422E+02 | 0.294E+01 | 6. | 29. | 30. | 0.8573 | 0.8867 | 0.1615 | 0.22 |
| H | SEC | 0.122E+02 | 0.295E+01 | 8. | 36. | 26. | 0.9011 | 0.9264 | 15.90 | 0.18 |
| E | 250.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 125.0 | 0.267E+02 | 0.548E+01 | 86. | 82. | 60. | 0.8222 | 0.8208 | 0.1983 | 0.28 |
| H | SEC | 0.874E+01 | 0.326E+01 | 89. | 73. | 68. | 0.8501 | 0.8488 | 32.90 | 0.19 |
| E | 70.0 | 0.125E+02 | 0.616E+01 | 65. | 57. | 28. | 0.8646 | 0.9587 | 0.2164 | 0.18 |
| H | SEC | 0.613E+01 | 0.572E+01 | 59. | 64. | 121. | 0.8743 | 0.9640 | 64.80 | 0.07 |
| E | 50.0 | 0.116E+02 | 0.617E+01 | 59. | 62. | 35. | 0.9601 | 0.9844 | 0.3057 | 0.19 |
| H | SEC | 0.842E+01 | 0.644E+01 | 56. | 64. | 55. | 0.9622 | 0.9855 | 65.10 | 0.16 |
| E | 33.0 | 0.999E+01 | 0.762E+01 | 64. | 53. | 8. | 0.9895 | 0.9955 | 0.3851 | 0.18 |
| H | SEC | 0.866E+01 | 0.744E+01 | 64. | 53. | 3. | 0.9901 | 0.9957 | 61.50 | 0.16 |
| E | 20.0 | 0.326E+02 | 0.774E+01 | 57. | 47. | 34. | 0.9299 | 0.9243 | 0.4175 | 0.23 |
| H | SEC | 0.106E+02 | 0.754E+01 | 58. | 46. | 20. | 0.9538 | 0.9497 | 61.10 | 0.20 |

AVERAGE #  8
SHACT6  200 HZ  20-SEPT-83  T41N R4W S8SW
NSAMP = 1024  ST = 0.0050  TO = 5.1200

| | FREQ OR PERIOD | MIO MAX VALUE | MIO MIN (OHM-M) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.113E+02 | 0.743E+01 | 35. | 47. | 14. | 0.9440 | 0.9443 | 0.5653 | 0.34 |
| H | SEC | 0.789E+01 | 0.504E+01 | 34. | 44. | 21. | 0.9476 | 0.9480 | 68.00 | 0.28 |
| E | 5.5 | 0.288E+02 | 0.635E+01 | 55. | 50. | 72. | 0.8233 | 0.8807 | 0.3351 | 0.34 |
| H | SEC | 0.145E+02 | 0.199E+01 | 58. | 57. | 84. | 0.8415 | 0.8870 | 65.40 | 0.46 |
| E | 3.0 | 0.457E+02 | 0.849E+01 | 60. | 48. | 34. | 0.9185 | 0.8590 | 0.2201 | 0.69 |
| H | SEC | 0.107E+02 | 0.768E+01 | 55. | 51. | 28. | 0.9413 | 0.8986 | 67.30 | 0.74 |
| E | 2.0 | 0.354E+02 | 0.848E+01 | 70. | 54. | 36. | 0.9010 | 0.8549 | 0.2320 | 0.16 |
| H | SEC | 0.768E+01 | 0.549E+01 | 74. | 53. | 18. | 0.9242 | 0.8967 | 68.00 | 0.20 |
| E | 1.7 | 0.782E+02 | 0.115E+02 | 35. | 58. | 29. | 0.9225 | 0.9620 | 0.1054 | 0.61 |
| H | SEC | 0.440E+02 | 0.138E+02 | 33. | 52. | 25. | 0.9334 | 0.9699 | 53.50 | 0.73 |
| E | 1.2 | 0.891E+02 | 0.502E+01 | 80. | 69. | 29. | 0.9407 | 0.9016 | 0.2803 | 0.28 |
| H | SEC | 0.469E+02 | 0.414E+01 | 83. | 70. | 27. | 0.9577 | 0.9238 | 105.90 | 0.12 |
| E | 1.0 | 0.175E+02 | 0.791E+01 | 63. | 58. | 10. | 0.9544 | 0.9628 | 0.2449 | 0.14 |
| H | HZ | 0.137E+02 | 0.680E+01 | 63. | 57. | 6. | 0.9553 | 0.9634 | 82.60 | 0.13 |

AVERAGE #  8
SEAST6  200 HZ  20-SEPT-83  T41N R4W S8SW
NSAMP = 1024  SI = 0.0050  TO = 5.1200

| | FREQ OR PERIOD | MIO MAX VALUE | MIO MIN (OHM-M) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PHIDEX | PHIDEX | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.430E+02 | 0.170E+02 | 59. | 32. | 175. | 0.9029 | 0.9438 | 0.2176 | 0.22 |
| H | HZ | 0.254E+02 | 0.146E+02 | 62. | 31. | 166. | 0.9054 | 0.9445 | 49.20 | 0.23 |
| E | 1.2 | 0.378E+02 | 0.171E+02 | 84. | 33. | 39. | 0.9565 | 0.8379 | 0.1267 | 0.35 |
| H | HZ | 0.241E+02 | 0.496E+01 | 86. | 23. | 9. | 0.9708 | 0.8745 | -3.80 | 0.44 |
| E | 1.5 | 0.933E+02 | 0.145E+02 | 43. | 59. | 40. | 0.9122 | 0.7926 | 0.1697 | 0.13 |
| H | HZ | 0.278E+02 | 0.766E+01 | 50. | 50. | 1. | 0.9382 | 0.8488 | 58.00 | 0.21 |
| E | 2.0 | 0.354E+02 | 0.140E+02 | 43. | 55. | 32. | 0.8922 | 0.9345 | 0.6278 | 0.17 |
| H | HZ | 0.189E+02 | 0.127E+02 | 42. | 57. | 35. | 0.9022 | 0.9445 | 101.90 | 0.10 |
| E | 2.0 | 0.543E+02 | 0.141E+02 | 62. | 60. | 24. | 0.8752 | 0.8761 | 0.8004 | 0.12 |
| H | HZ | 0.226E+02 | 0.966E+01 | 64. | 59. | 10. | 0.8895 | 0.8904 | 112.80 | 0.11 |
| E | 2.0 | 0.574E+02 | 0.118E+02 | 67. | 65. | 10. | 0.8481 | 0.9303 | 0.6651 | 0.07 |
| H | HZ | 0.284E+02 | 0.902E+01 | 67. | 65. | 9. | 0.8500 | 0.9313 | 67.80 | 0.08 |

AVERAGE # 8
SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN VALUE ( OHM-M ) | PHI MAX (DEGREES) | PHI MIN (DEGREES) | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.740E+02 | 0.176E+02 | 66. | 64. | 25. | 0.8632 | 0.8694 | 1.2189 | 0.16 |
| H | HZ | 0.250E+02 | 0.120E+02 | 68. | 64. | 2. | 0.8884 | 0.8935 | 98.90 | 0.11 |
| E | 3.0 | 0.465E+02 | 0.132E+02 | 69. | 59. | 20. | 0.8524 | 0.9459 | 0.6263 | 0.04 |
| H | HZ | 0.238E+02 | 0.117E+02 | 69. | 59. | 19. | 0.8543 | 0.9509 | 114.50 | 0.04 |
| E | 7.7 | 0.600E+02 | 0.243E+02 | 70. | 69. | 7. | 0.9436 | 0.9444 | 0.4743 | 0.13 |
| H | HZ | 0.428E+02 | 0.185E+02 | 70. | 68. | 178. | 0.9460 | 0.9468 | 134.40 | 0.11 |
| E | 14.3 | 0.695E+02 | 0.338E+02 | 68. | 69. | 4. | 0.9510 | 0.9765 | 0.4017 | 0.13 |
| H | HZ | 0.567E+02 | 0.308E+02 | 68. | 69. | 4. | 0.9511 | 0.9765 | 130.50 | 0.14 |
| E | 20.0 | 0.880E+02 | 0.391E+02 | 66. | 67. | 5. | 0.9275 | 0.9614 | 0.5097 | 0.13 |
| H | HZ | 0.641E+02 | 0.334E+02 | 66. | 67. | 5. | 0.9277 | 0.9614 | 134.20 | 0.14 |
| E | 26.3 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 31.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 40.0 | 0.110E+03 | 0.543E+02 | 59. | 62. | 11. | 0.8934 | 0.8987 | 0.6291 | 0.14 |
| H | HZ | 0.680E+02 | 0.373E+02 | 60. | 60. | 175. | 0.8965 | 0.9018 | 147.30 | 0.12 |

ERROR ANALYSIS

R-SQUARED = 0.996

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 24 | 3204.174 | 133.507 | 0.251 |
| MODEL | 6 | 3190.003 | 531.667 | 11982.603 |
| RESID | 18 | 0.799 | 0.044 | |

STANDARD ERROR = 0.211

DTEST FOR MEANS = 0.000

NOISE TO SIGNAL RATIO = 0.914 PERCENT

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 23
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | M(I) | DEPTH |
|---|---|---|---|
| 1 | 20.0000 | | 0.0000 |
| | | 600.0000 | |
| 2 | 2.0000 | | 600.0000 |
| | | 800.0000 | |
| 3 | 6.0000 | | 1400.0000 |
| | | 5000.0000 | |
| 4 | 1.0000 | | 6400.0000 |

FREQUENCY RANGE ( 0.0020 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 44.1490 | | 0.0000 |
| | | 454.2149 | |
| 2 | 4.4389 | | 454.2149 |
| | | 1090.6828 | |
| 3 | 7.1227 | | 1544.8977 |
| | | 5098.6788 | |
| 4 | 1.3475 | | 6643.5765 |

MEAN PERCENT VARIATION IS 11.0434

ERROR ANALYSIS

R-SQUARED = 0.998

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 22 | 3139.429 | 142.701 | 0.273 |
| MODEL | 6 | 3134.205 | 522.368 | 29796.196 |
| RESID | 16 | 0.281 | 0.018 | |

STANDARD ERROR = 0.132

BTEST FOR MEANS = 0.000

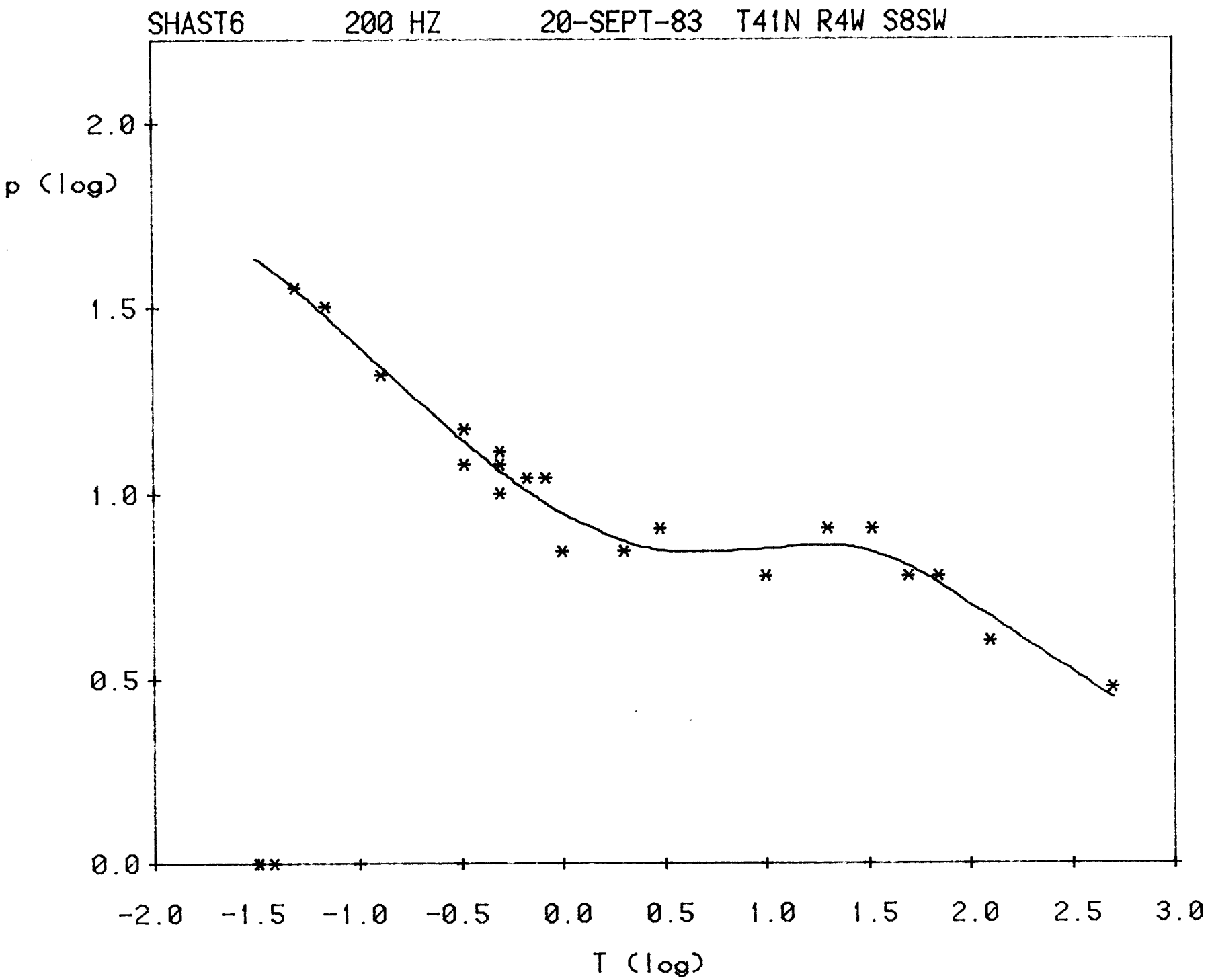
NOISE TO SIGNAL RATIO = 0.579 PERCENT

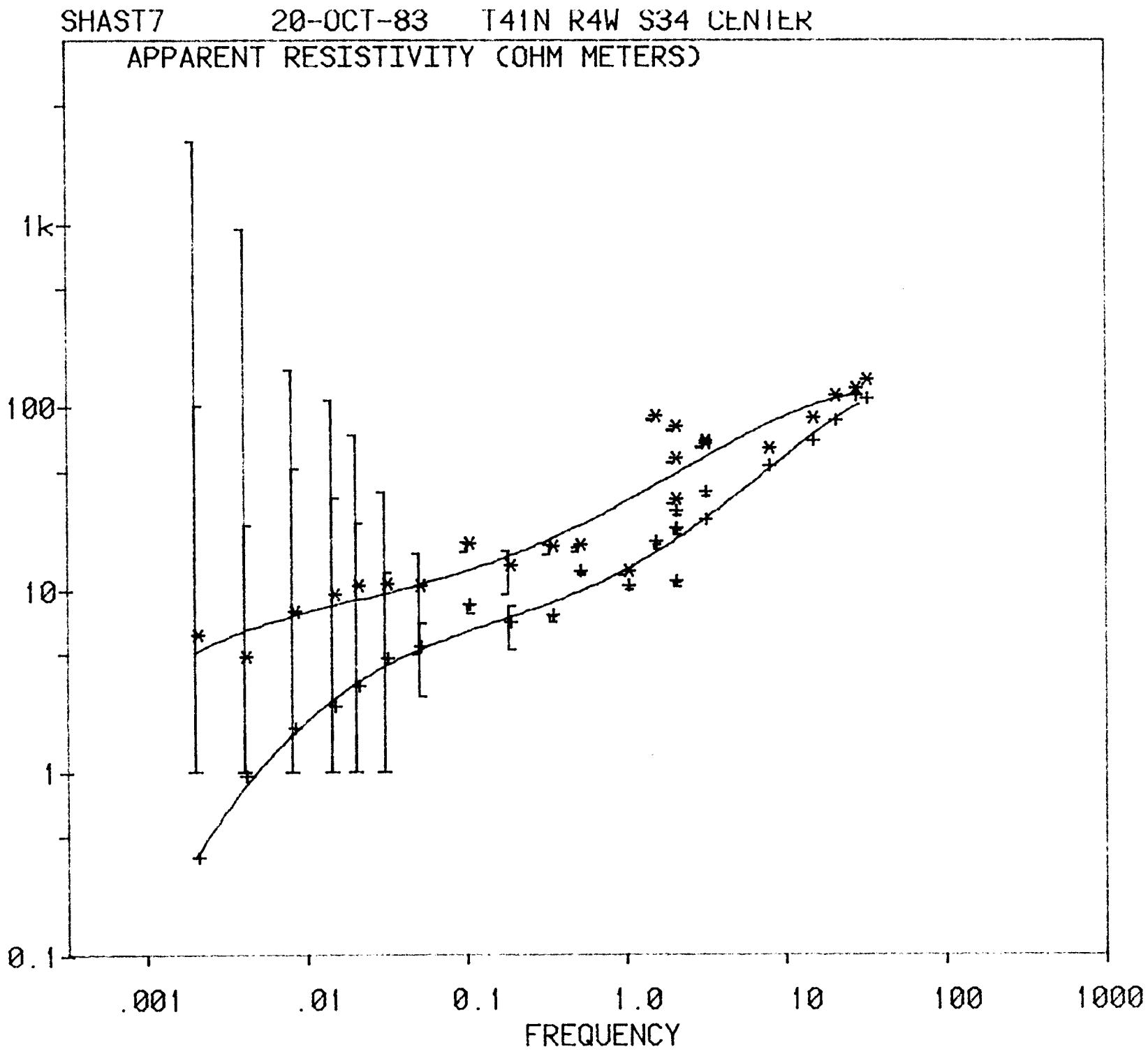
SHAST6 200 HZ 20-SEPT-83 T41N R4W SSSW

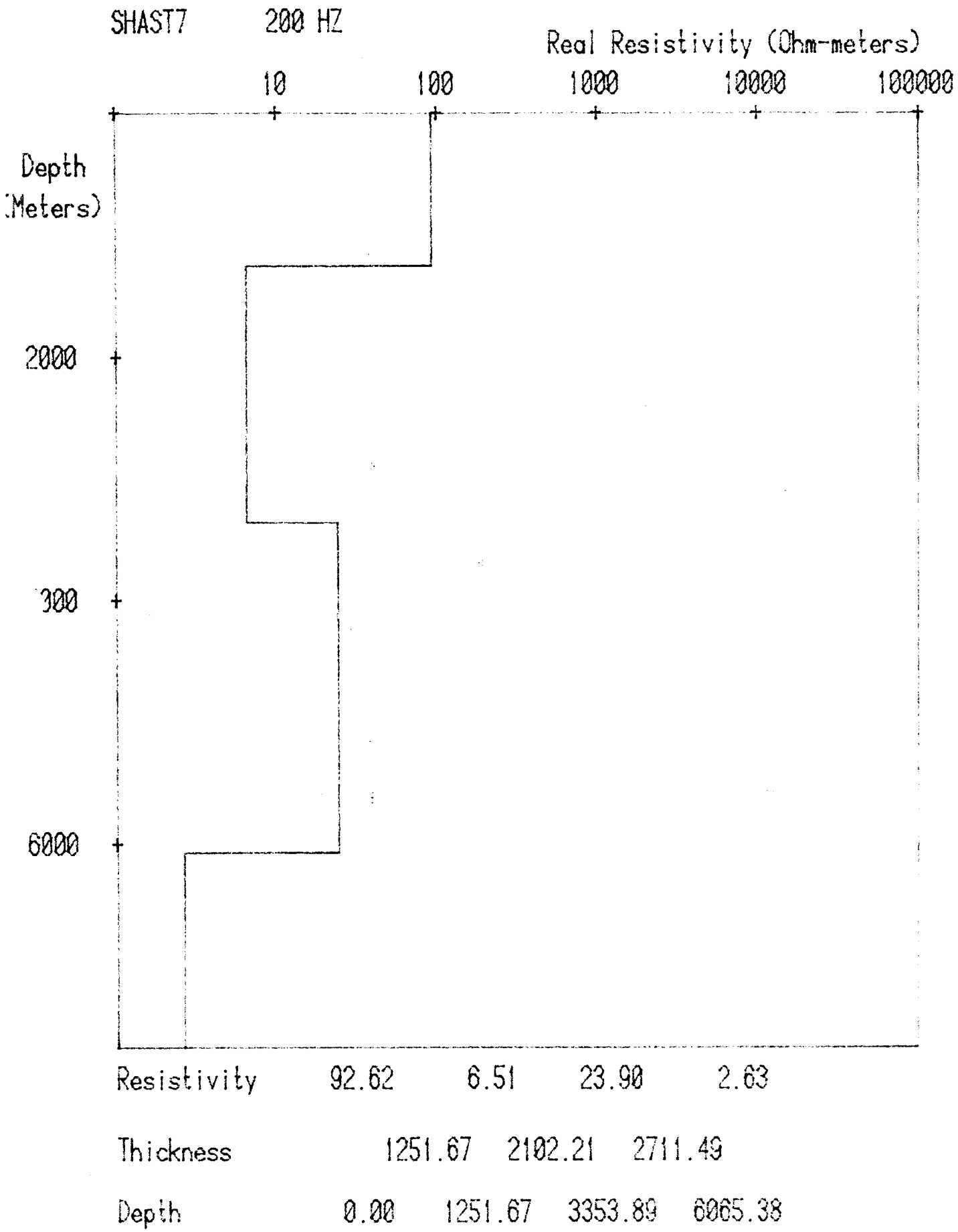
ERROR STRUCTURE OF FITTED MODEL

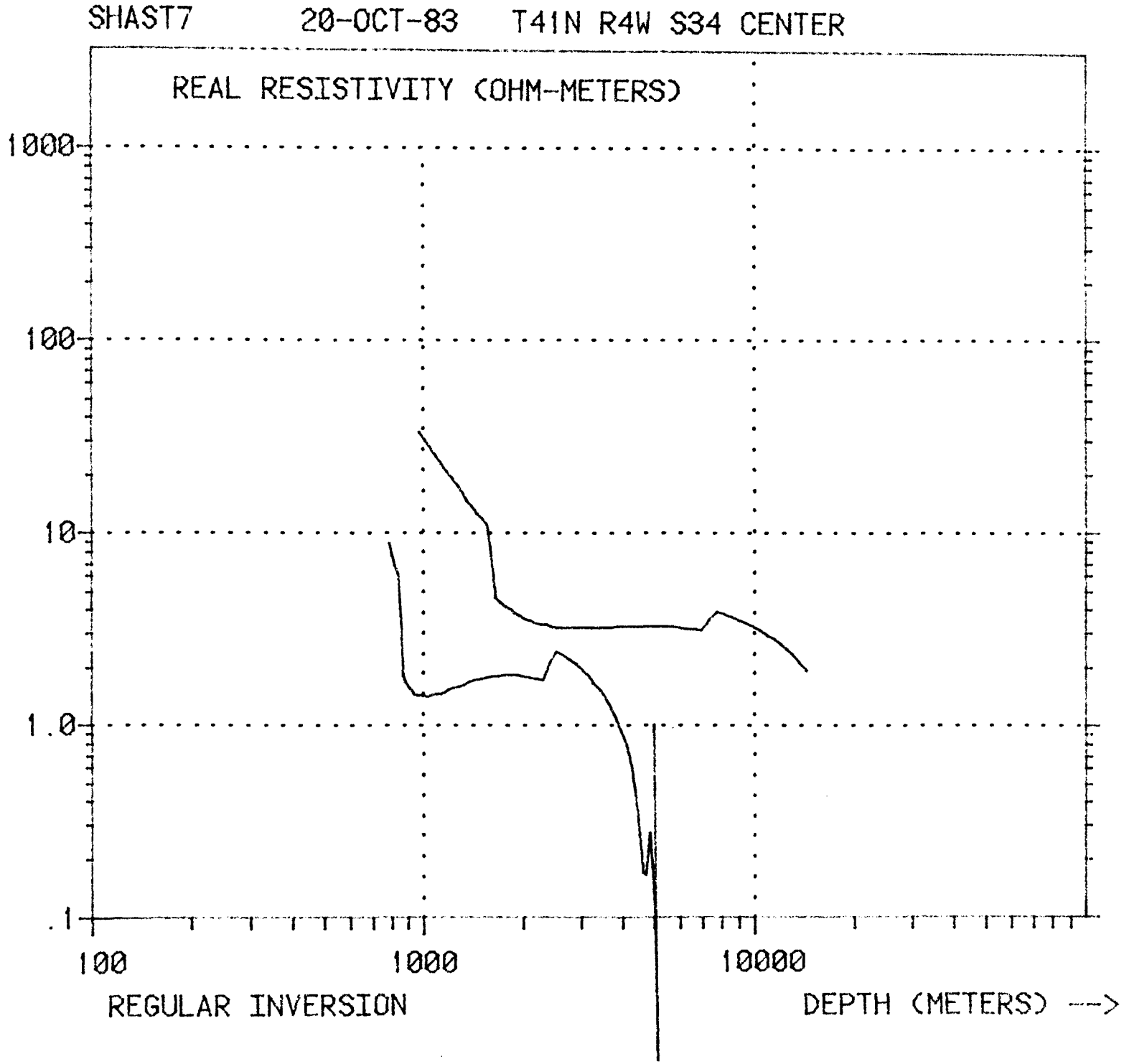
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 500.000 | 3.000 | 2.816 | 0.184 | 6.314 |
| 2 | 125.000 | 4.000 | 4.646 | -0.646 | -14.941 |
| 3 | 70.000 | 6.000 | 5.762 | 0.238 | 4.041 |
| 4 | 50.000 | 6.000 | 6.407 | -0.407 | -6.566 |
| 5 | 33.000 | 8.000 | 7.043 | 0.957 | 12.720 |
| 6 | 20.000 | 8.000 | 7.354 | 0.646 | 8.410 |
| 7 | 10.000 | 6.000 | 7.007 | -1.007 | -15.487 |
| 8 | 3.000 | 8.000 | 6.920 | 1.080 | 14.480 |
| 9 | 2.000 | 7.000 | 7.383 | -0.383 | -5.321 |
| 10 | 1.000 | 7.000 | 8.830 | -1.830 | -23.122 |
| 11 | 0.830 | 11.000 | 9.410 | 1.590 | 15.576 |
| 12 | 0.670 | 11.000 | 10.198 | 0.802 | 7.562 |
| 13 | 0.500 | 13.000 | 11.503 | 1.497 | 12.216 |
| 14 | 0.500 | 12.000 | 11.503 | 0.497 | 4.227 |
| 15 | 0.500 | 10.000 | 11.503 | -1.503 | -13.982 |
| 16 | 0.330 | 15.000 | 13.858 | 1.142 | 7.912 |
| 17 | 0.330 | 12.000 | 13.858 | -1.858 | -14.373 |
| 18 | 0.130 | 21.000 | 21.952 | -0.952 | -4.435 |
| 19 | 0.070 | 32.000 | 30.310 | 1.690 | 5.425 |
| 20 | 0.050 | 36.000 | 35.776 | 0.224 | 0.624 |
| 21 | 0.038 | 0.000 | 40.375 | 0.000 | 0.000 |
| 22 | 0.032 | 0.000 | 43.127 | 0.000 | 0.000 |
| 23 | 0.025 | 46.000 | 46.605 | -0.605 | -1.308 |

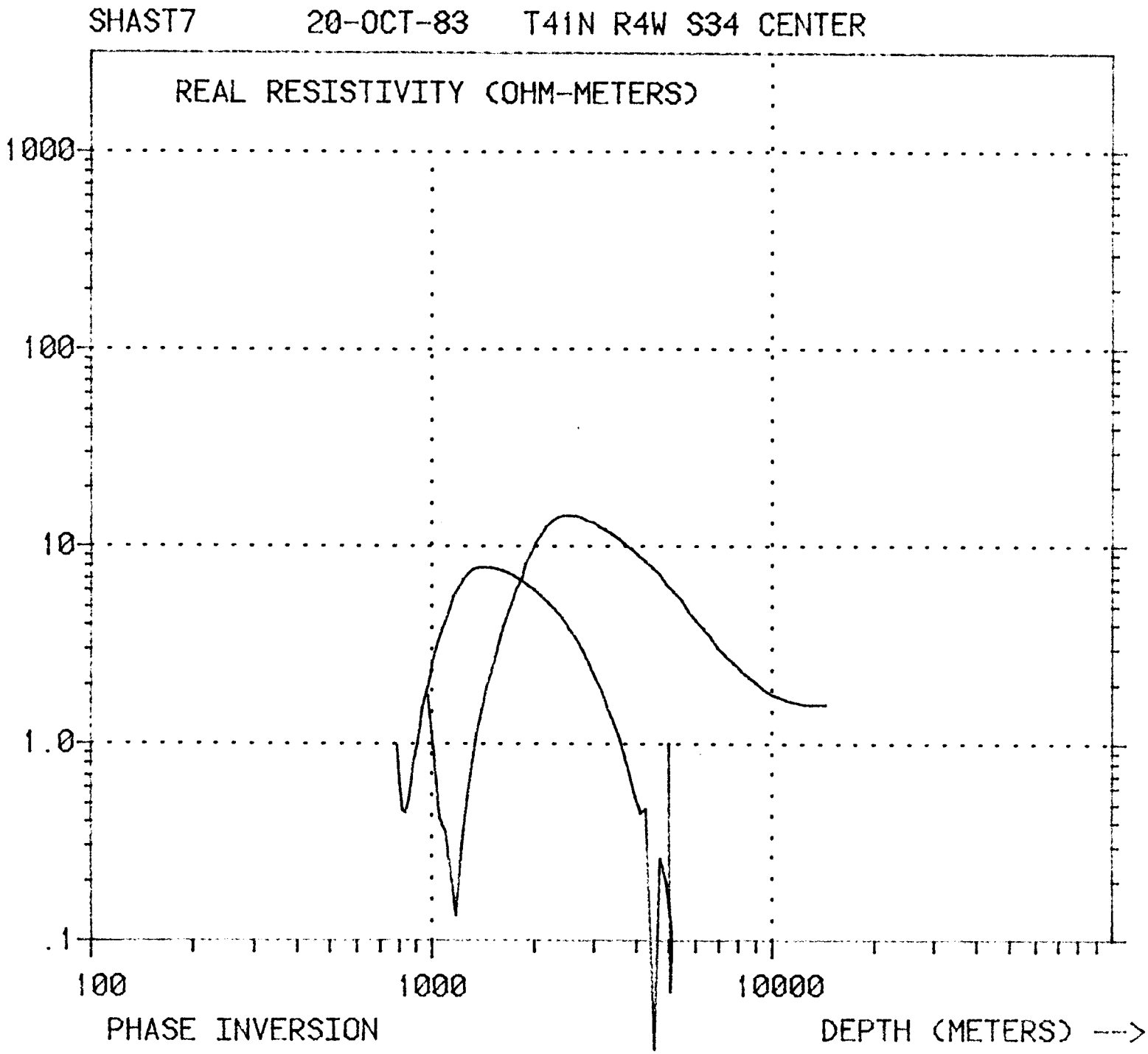
MEAN PERCENT ERROR = 10.5518
MAXIMUM PERCENT ERROR = 23.1216
MAX. ERROR OCCURRED AT OBSERVATION 10


SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW
2.0
1.5
1.0
0.5
0.0
p (log)
-2.0 -1.5 -1.0 -0.5 0.0 0.5 1.0 1.5 2.0 2.5 3.0
T (log)

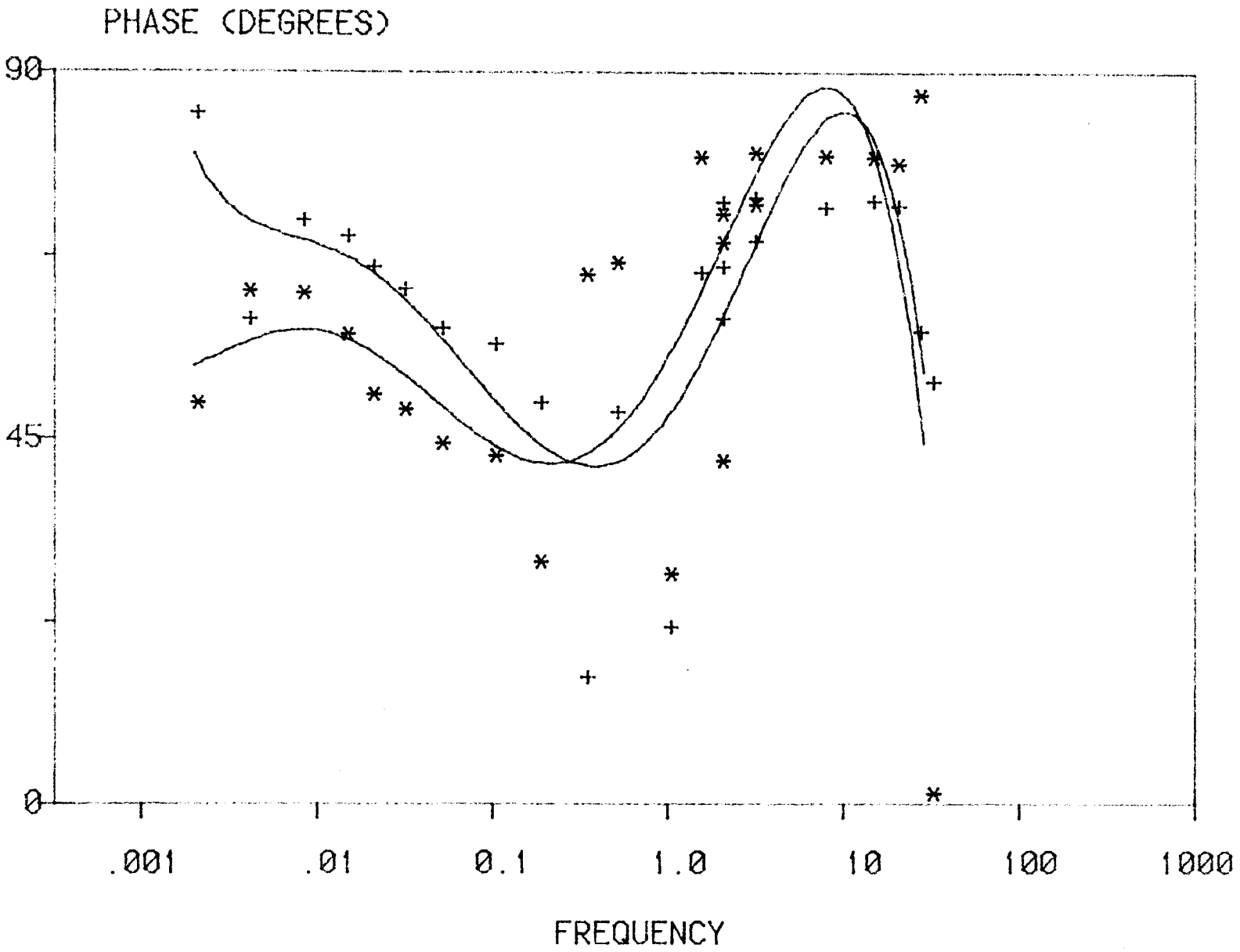

SHAST7 20-OCT-83 T41N R4W S34 CENTER
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAST7
200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
Depth
(Meters)
2000
300
6000
Resistivity 92.62 6.51 23.90 2.63
Thickness 1251.67 2102.21 2711.49
Depth 0.00 1251.67 3353.89 6065.38


SHAST7 20-OCT-83 T41N R4W S34 CENTER
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST7 20-OCT-83 T41N R4W S34 CENTER
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) --->

SHAST7 20-OCT-83 T41N R4W S34 CENTER



THE SITE IS: SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.07 | 6.77 | 1 | 98.75 | 2748.86 |
| 0.0020 | 0.32 | 5.30 | 2 | 21.15 | 910.12 |
| 0.0040 | 0.89 | 4.06 | 3 | 42.83 | 148.09 |
| 0.0080 | 1.63 | 7.08 | 4 | 28.88 | 96.32 |
| 0.0143 | 2.16 | 8.86 | 5 | 20.07 | 58.16 |
| 0.0200 | 2.80 | 9.83 | 6 | 8.34 | 23.14 |
| 0.0303 | 3.94 | 10.03 | 7 | 1.95 | 5.54 |
| 0.0500 | 4.54 | 9.94 | 8 | 0.47 | 1.09 |
| 0.1000 | 7.74 | 16.78 | 9 | 1.68 | 3.37 |
| 0.1818 | 6.29 | 12.70 | 10 | 0.22 | 1.02 |
| 0.3333 | 6.82 | 16.19 | 11 | 0.24 | 0.48 |
| 0.5000 | 11.94 | 16.35 | 12 | 0.06 | 0.08 |
| 0.5988 | 8.33 | 46.73 | 13 | 0.46 | 0.59 |
| 0.8000 | 18.66 | 58.97 | 14 | 0.49 | 0.37 |
| 1.0000 | 2.16 | 28.09 | 15 | 0.08 | 0.12 |
| 1.0000 | 9.83 | 11.79 | 16 | 0.33 | 0.15 |
| 1.2048 | 13.85 | 751.31 | 17 | 0.10 | 0.20 |
| 1.4925 | 16.95 | 82.80 | 18 | 0.02 | 0.05 |
| 2.0000 | 20.17 | 72.97 | 19 | 0.04 | 0.04 |
| 2.0000 | 24.89 | 48.29 | 20 | 0.01 | 0.01 |
| 2.0000 | 10.43 | 28.93 | 21 | 0.03 | 0.01 |
| 3.0303 | 31.64 | 58.53 | 22 | 0.00 | 0.00 |
| 3.0303 | 22.28 | 60.43 | 23 | 0.00 | 0.02 |
| 7.6923 | 44.39 | 54.65 | 24 | 0.01 | 0.01 |
| 14.2857 | 60.29 | 80.44 | 25 | 0.00 | 0.01 |
| 20.0000 | 78.41 | 106.60 | 26 | 0.00 | 0.00 |
| 26.3158 | 107.01 | 116.83 | 27 | 0.01 | 0.02 |
| 31.2500 | 102.69 | 131.12 | 28 | 0.01 | 0.03 |
| 40.0000 | 0.01 | 0.01 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.768E+01 | 0.589E-01 | 55. | 61. | 25. | 0.9482 | 0.9272 | 0.1618 | 0.99 |
| H | SEC | 0.586E+01 | 0.762E-01 | 54. | 0. | 22. | 0.9504 | 0.9277 | 32.00 | 0.88 |
| E | 500.0 | 0.566E+01 | 0.359E+00 | 49. | 86. | 27. | 0.9910 | 0.9969 | 0.1238 | 0.57 |
| H | SEC | 0.493E+01 | 0.287E+00 | 50. | 84. | 30. | 0.9918 | 0.9970 | 27.50 | 0.57 |
| E | 250.0 | 0.428E+01 | 0.975E+00 | 63. | 60. | 33. | 0.9680 | 0.9712 | 0.1335 | 0.24 |
| H | SEC | 0.383E+01 | 0.811E+00 | 64. | 60. | 34. | 0.9681 | 0.9713 | 34.70 | 0.24 |
| E | 125.0 | 0.730E+01 | 0.165E+01 | 63. | 72. | 28. | 0.9879 | 0.9949 | 0.1140 | 0.17 |
| H | SEC | 0.687E+01 | 0.161E+01 | 63. | 72. | 29. | 0.9880 | 0.9949 | 53.70 | 0.16 |
| E | 70.0 | 0.903E+01 | 0.216E+01 | 58. | 70. | 31. | 0.9924 | 0.9974 | 0.1802 | 0.15 |
| H | SEC | 0.869E+01 | 0.215E+01 | 58. | 70. | 31. | 0.9924 | 0.9974 | 62.80 | 0.15 |
| E | 50.0 | 0.103E+02 | 0.280E+01 | 51. | 66. | 30. | 0.9788 | 0.9948 | 0.2195 | 0.15 |
| H | SEC | 0.936E+01 | 0.280E+01 | 51. | 66. | 31. | 0.9789 | 0.9949 | 63.30 | 0.14 |
| E | 33.0 | 0.108E+02 | 0.396E+01 | 49. | 63. | 27. | 0.9686 | 0.9879 | 0.2827 | 0.12 |
| H | SEC | 0.927E+01 | 0.391E+01 | 49. | 64. | 30. | 0.9689 | 0.9882 | 59.50 | 0.10 |
| E | 20.0 | 0.110E+02 | 0.469E+01 | 45. | 59. | 22. | 0.9554 | 0.9801 | 0.3109 | 0.09 |
| H | SEC | 0.888E+01 | 0.440E+01 | 45. | 59. | 26. | 0.9560 | 0.9803 | 57.20 | 0.06 |

AVERAGE # 8
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.188E+02 | 0.881E+01 | 42. | 58. | 34. | 0.9336 | 0.9921 | 0.2177 | 0.15 |
| H | SEC | 0.148E+02 | 0.667E+01 | 44. | 56. | 49. | 0.9412 | 0.9927 | 52.30 | 0.12 |
| E | 5.5 | 0.180E+02 | 0.658E+01 | 29. | 50. | 32. | 0.8703 | 0.9287 | 0.2754 | 0.13 |
| H | SEC | 0.738E+01 | 0.601E+01 | 32. | 50. | 19. | 0.8872 | 0.9402 | 55.00 | 0.24 |
| E | 3.0 | 0.182E+02 | 0.862E+01 | 65. | 16. | 102. | 0.8581 | 0.9529 | 0.2467 | 0.31 |
| H | SEC | 0.142E+02 | 0.501E+01 | 66. | 16. | 98. | 0.8618 | 0.9531 | 91.70 | 0.22 |
| E | 2.0 | 0.183E+02 | 0.169E+02 | 66. | 49. | 109. | 0.8356 | 0.9034 | 0.2559 | 0.03 |
| H | SEC | 0.144E+02 | 0.697E+01 | 67. | 48. | 108. | 0.8481 | 0.9148 | 59.10 | 0.07 |
| E | 1.7 | 0.413E+02 | 0.149E-01 | 79. | 38. | 89. | 0.8583 | 0.9715 | 0.0374 | 0.43 |
| H | SEC | 0.521E+02 | 0.166E+02 | 70. | 65. | 64. | 0.0000 | 0.9474 | 59.70 | 0.14 |
| E | 1.2 | 0.102E+03 | 0.370E+02 | 78. | 54. | 26. | 0.0000 | 0.9334 | 0.0934 | 1.04 |
| H | SEC | 0.155E+02 | 0.295E+00 | 62. | 12. | 117. | 0.5315 | 0.8933 | 168.50 | 0.42 |
| E | 1.0 | 0.289E+02 | 0.273E+01 | 70. | 14. | 99. | 0.8798 | 0.9816 | 0.2331 | 0.06 |
| H | HZ | 0.272E+02 | 0.159E+01 | 70. | 14. | 98. | 0.8810 | 0.9824 | 104.60 | 0.05 |

AVERAGE # 8
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.184E+02 | 0.150E+02 | 15. | 32. | 33. | 0.6835 | 0.8330 | 0.1888 | 0.87 |
| H | HZ | 0.519E+01 | 0.463E+01 | 42. | 12. | 124. | 0.6839 | 0.8392 | 74.10 | 0.74 |
| E | 1.2 | 0.147E+04 | 0.254E+02 | 2. | 70. | 58. | 0.4067 | 0.4281 | 0.1075 | 0.28 |
| H | HZ | 0.357E+02 | 0.230E+01 | 59. | 2. | 107. | 0.7833 | 0.8017 | 64.20 | 0.19 |
| E | 1.5 | 0.117E+03 | 0.205E+02 | 79. | 66. | 68. | 0.8709 | 0.8887 | 0.1530 | 0.12 |
| H | HZ | 0.486E+02 | 0.134E+02 | 81. | 65. | 83. | 0.8943 | 0.9093 | 62.50 | 0.05 |
| E | 2.0 | 0.993E+02 | 0.233E+02 | 70. | 63. | 65. | 0.8723 | 0.8983 | 0.1771 | 0.16 |
| H | HZ | 0.466E+02 | 0.170E+02 | 76. | 57. | 85. | 0.8853 | 0.9092 | 36.60 | 0.13 |
| E | 2.0 | 0.636E+02 | 0.311E+02 | 66. | 70. | 72. | 0.8994 | 0.8618 | 0.6534 | 0.09 |
| H | HZ | 0.330E+02 | 0.187E+02 | 73. | 63. | 114. | 0.9125 | 0.8780 | 62.60 | 0.09 |
| E | 2.0 | 0.411E+02 | 0.141E+02 | 0. | 72. | 63. | 0.9097 | 0.9068 | 0.3981 | 0.20 |
| H | HZ | 0.167E+02 | 0.676E+01 | 85. | 77. | 101. | 0.9402 | 0.9383 | 148.20 | 0.22 |

AVERAGE # 8
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.709E+02 | 0.401E+02 | 73. | 71. | 71. | 0.8790 | 0.9222 | 0.8833 | 0.09 |
| H | HZ | 0.462E+02 | 0.232E+02 | 75. | 68. | 100. | 0.8901 | 0.9300 | 43.00 | 0.06 |
| E | 3.0 | 0.813E+02 | 0.265E+02 | 80. | 76. | 67. | 0.8893 | 0.8640 | 0.2981 | 0.07 |
| H | HZ | 0.396E+02 | 0.181E+02 | 81. | 74. | 75. | 0.8935 | 0.8691 | 55.00 | 0.05 |
| E | 7.7 | 0.561E+02 | 0.487E+02 | 81. | 73. | 112. | 0.9692 | 0.9806 | 0.4022 | 0.03 |
| H | HZ | 0.532E+02 | 0.401E+02 | 80. | 74. | 102. | 0.9696 | 0.9808 | 40.00 | 0.02 |
| E | 14.3 | 0.856E+02 | 0.686E+02 | 80. | 74. | 113. | 0.9413 | 0.9694 | 2.2296 | 0.02 |
| H | HZ | 0.753E+02 | 0.520E+02 | 80. | 75. | 107. | 0.9419 | 0.9695 | 104.20 | 0.03 |
| E | 20.0 | 0.117E+03 | 0.930E+02 | 79. | 74. | 107. | 0.9216 | 0.9531 | 5.5074 | 0.01 |
| H | HZ | 0.961E+02 | 0.638E+02 | 79. | 74. | 103. | 0.9226 | 0.9532 | 94.70 | 0.03 |
| E | 26.3 | 0.135E+03 | 0.125E+03 | 88. | 58. | 150. | 0.9268 | 0.9158 | 1.0357 | 0.25 |
| H | HZ | 0.990E+02 | 0.891E+02 | 87. | 59. | 150. | 0.9273 | 0.9161 | 124.30 | 0.21 |
| E | 31.2 | 0.157E+03 | 0.125E+03 | 2. | 52. | 154. | 0.9138 | 0.8789 | 0.7430 | 0.35 |
| H | HZ | 0.105E+03 | 0.808E+02 | 2. | 52. | 155. | 0.9145 | 0.8790 | 136.00 | 0.34 |
| E | 40.0 | 0.137E-01 | 0.587E-02 | 57. | 71. | 22. | 0.9554 | 0.9801 | 0.3109 | 0.09 |
| H | HZ | 0.111E-01 | 0.549E-02 | 57. | 71. | 26. | 0.9560 | 0.9803 | 57.20 | 0.06 |

SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 22
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 60.0000 | | 0.0000 |
| | | 1200.0000 | |
| 2 | 3.0000 | | 1200.0000 |
| | | 2000.0000 | |
| 3 | 5.0000 | | 3200.0000 |
| | | 6000.0000 | |
| 4 | 2.0000 | | 9200.0000 |

FREQUENCY RANGE ( 0.0020 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.9262E+02 | | 0.0000E+00 |
| | | 0.1252E+04 | |
| 2 | 0.6516E+01 | | 0.1252E+04 |
| | | 0.2102E+04 | |
| 3 | 0.2390E+02 | | 0.3354E+04 |
| | | 0.2711E+04 | |
| 4 | 0.2635E+01 | | 0.6065E+04 |

MEAN PERCENT VARIATION IS 0.2265E+02

ERROR ANALYSIS

R-SQUARED = 0.997E+00

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 21 | 0.355E+05 | 0.169E+04 | 0.286E+00 |
| MODEL | 6 | 0.354E+05 | 0.589E+04 | 0.783E+05 |
| RESID | 15 | 0.113E+01 | 0.752E-01 | |

STANDARD ERROR = 0.274E+00

DTEST FOR MEANS = 0.229E-06

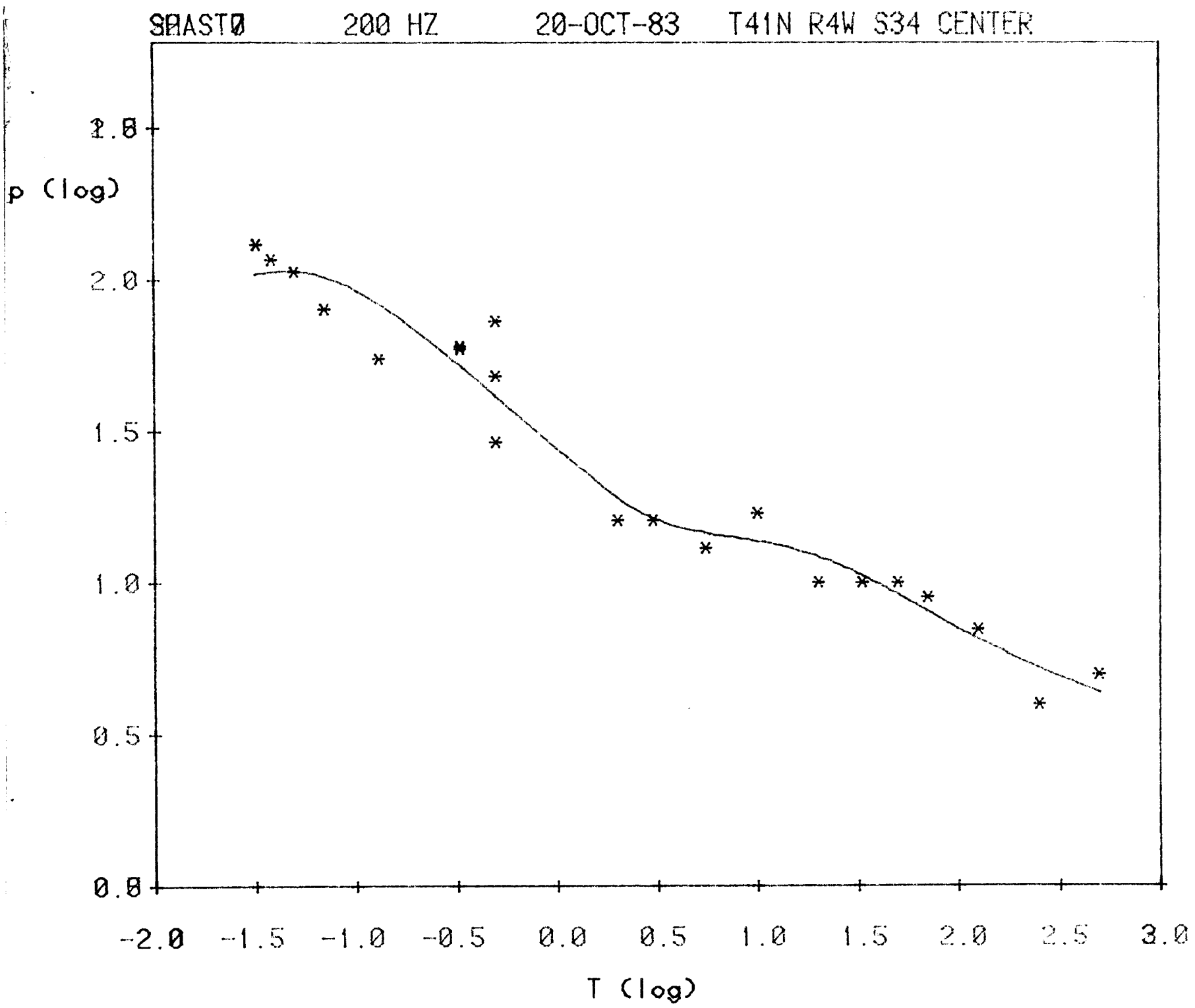
NOISE TO SIGNAL RATIO = 0.357E+00 PERCENT

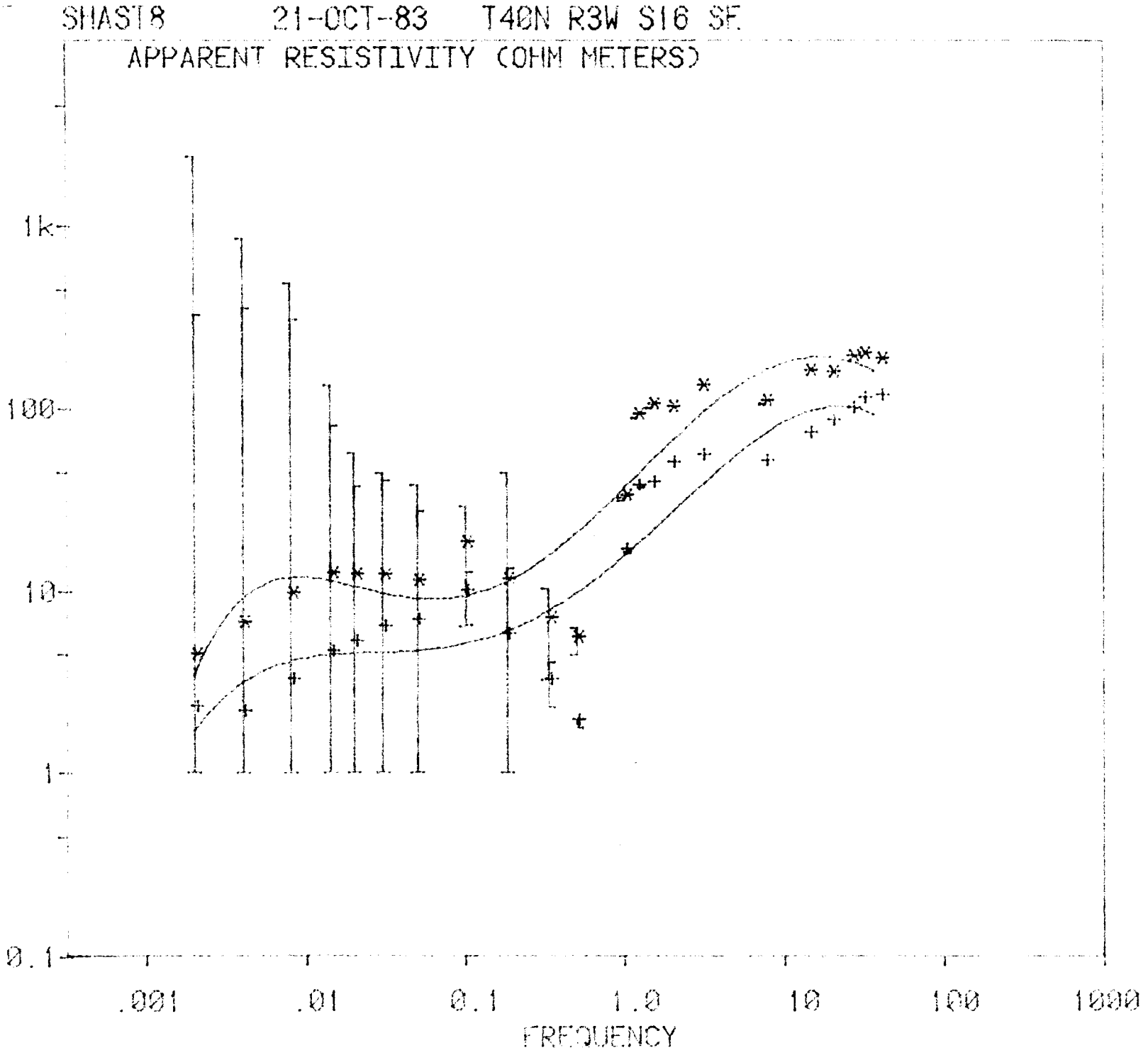
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER

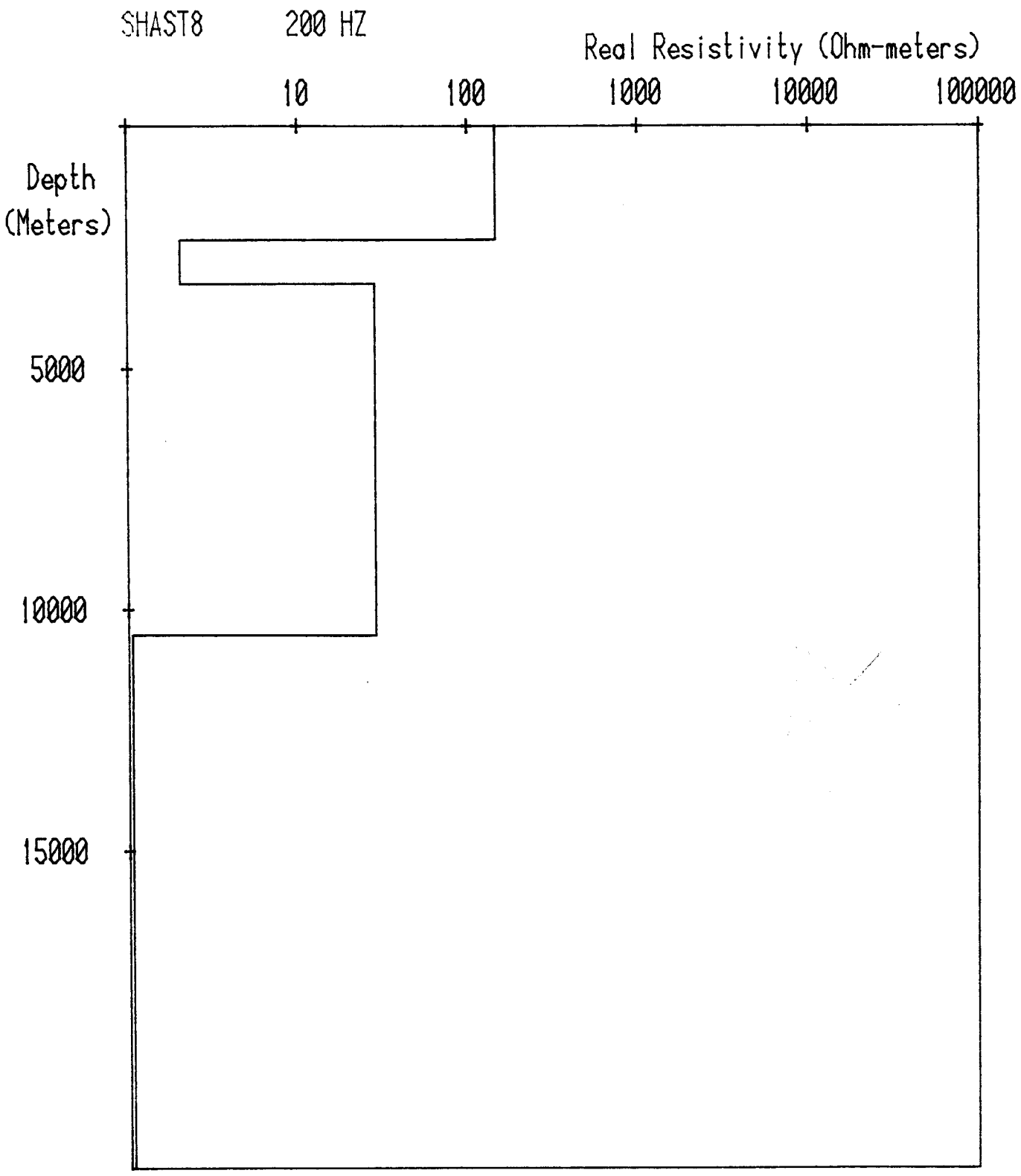
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 500.000 | 5.000 | 4.371 | 0.629 | 13.418 |
| 2 | 250.000 | 4.000 | 5.241 | -1.241 | -26.850 |
| 3 | 125.000 | 7.000 | 6.554 | 0.446 | 6.580 |
| 4 | 70.000 | 9.000 | 8.096 | 0.904 | 10.576 |
| 5 | 50.000 | 10.000 | 9.179 | 0.821 | 8.561 |
| 6 | 33.000 | 10.000 | 10.640 | -0.640 | -6.204 |
| 7 | 20.000 | 10.000 | 12.341 | -2.341 | -20.956 |
| 8 | 10.000 | 17.000 | 13.866 | 3.134 | 20.304 |
| 9 | 5.500 | 13.000 | 14.479 | -1.479 | -10.764 |
| 10 | 3.000 | 16.000 | 16.088 | -0.088 | -0.546 |
| 11 | 2.000 | 16.000 | 18.750 | -2.750 | -15.827 |
| 12 | 0.500 | 73.000 | 41.127 | 31.873 | 55.855 |
| 13 | 0.500 | 48.000 | 41.127 | 6.873 | 15.423 |
| 14 | 0.500 | 29.000 | 41.127 | -12.127 | -34.586 |
| 15 | 0.330 | 59.000 | 52.356 | 6.644 | 11.933 |
| 16 | 0.330 | 60.000 | 52.356 | 7.644 | 13.607 |
| 17 | 0.130 | 55.000 | 85.975 | -30.975 | -43.944 |
| 18 | 0.070 | 80.000 | 104.674 | -24.674 | -26.721 |
| 19 | 0.050 | 107.000 | 108.171 | -1.171 | -1.089 |
| 20 | 0.038 | 117.000 | 107.037 | 9.963 | 8.894 |
| 21 | 0.032 | 131.000 | 104.974 | 26.026 | 22.058 |
| 22 | 0.025 | 0.000 | 101.116 | 0.000 | 0.000 |

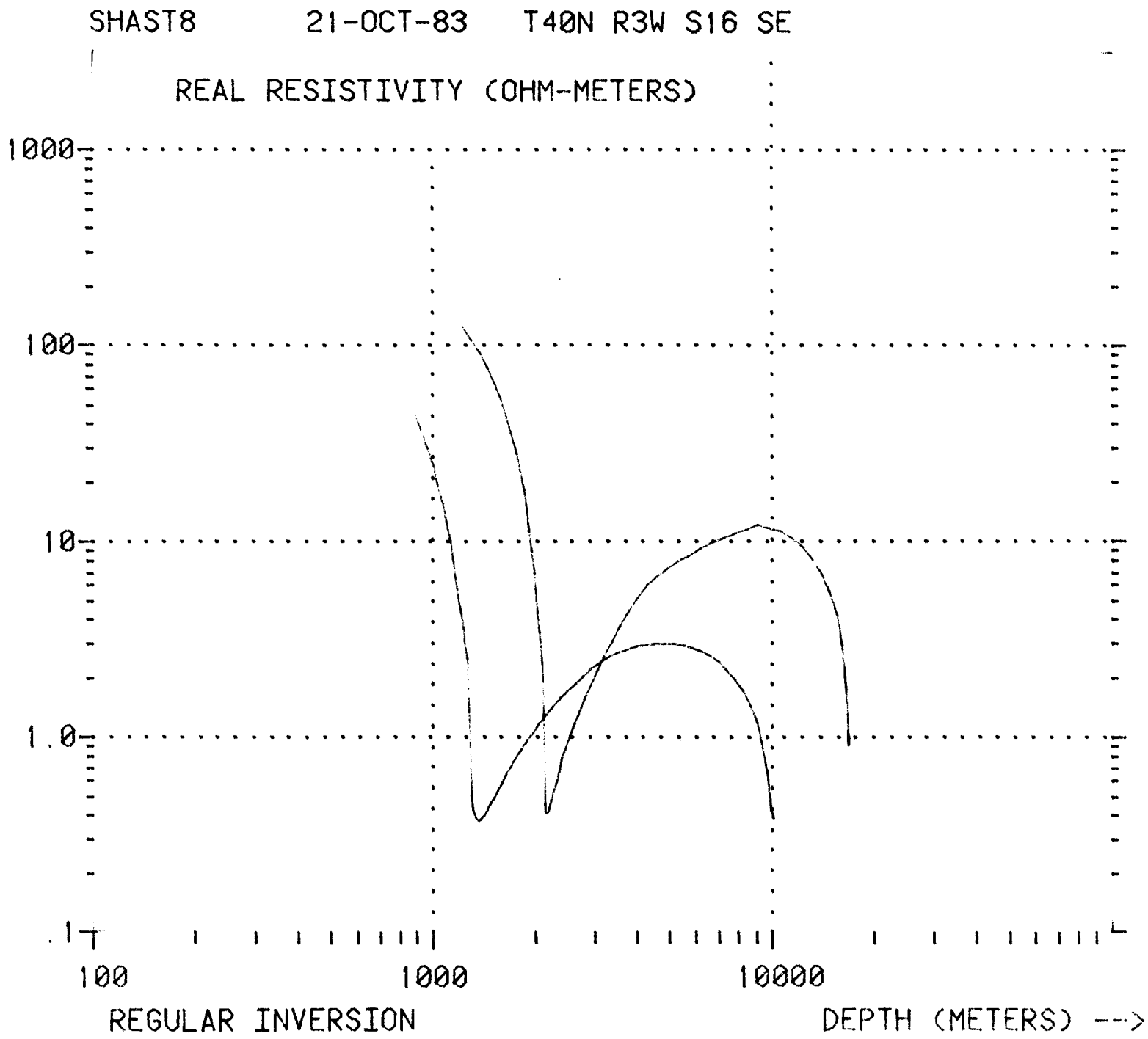
MEAN PERCENT ERROR = 21.8478
MAXIMUM PERCENT ERROR = 55.8553
MAX. ERROR OCCURED AT OBSERVATION 12

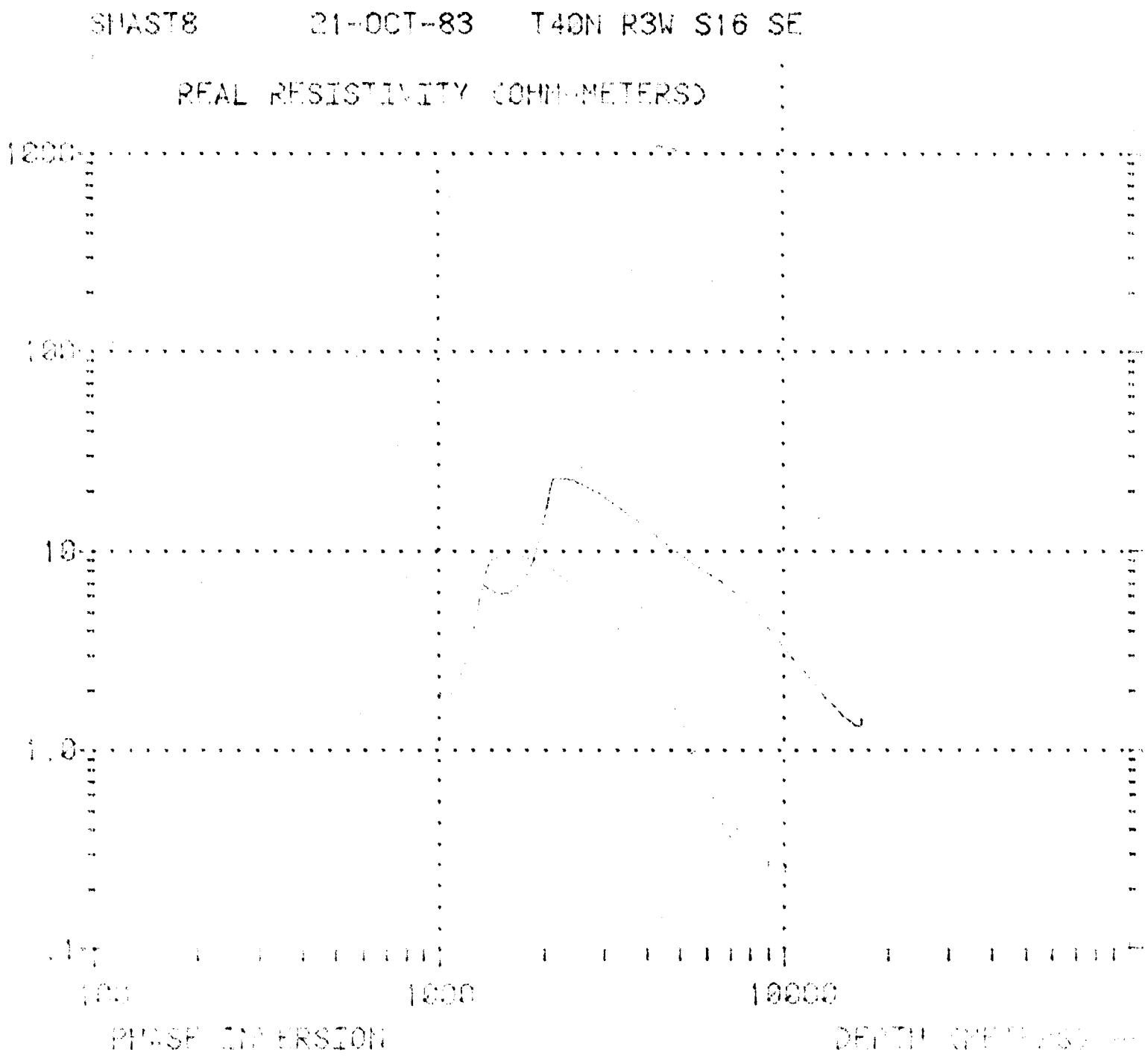

SHAST0 200 HZ 20-OCT-83 T41N R4W S34 CENTER
2.8
p (log)
2.0
1.5
1.0
0.5
0.0
-2.0 -1.5 -1.0 -0.5 0.0 0.5 1.0 1.5 2.0 2.5 3.0
T (log)


SHAST8 21-OCT-83 T40N R3W S16 SE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

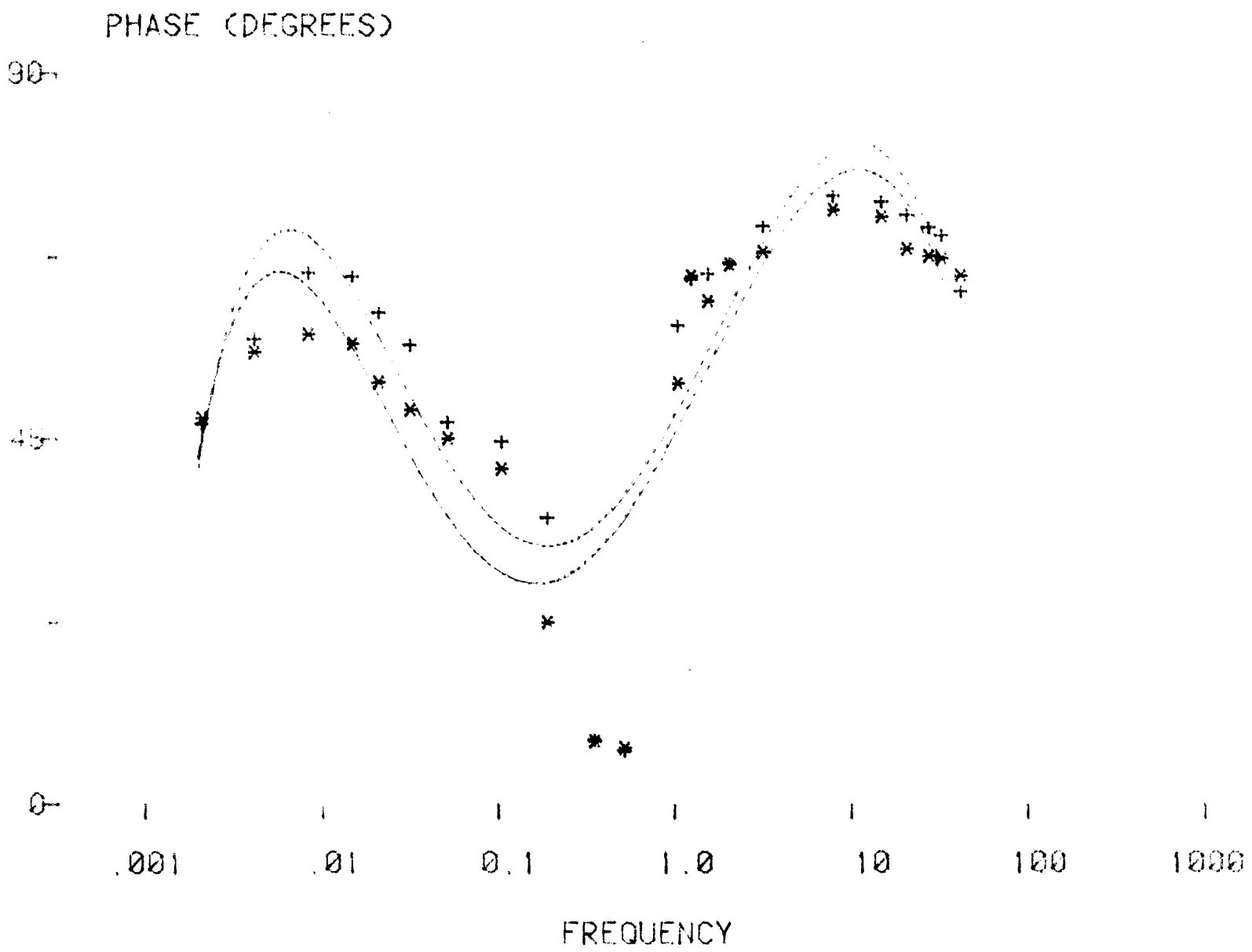



| | | | | |
|---|---|---|---|---|
| Resistivity | 144.95 | 2.05 | 28.48 | 1.05 |
| Thickness | | 2331.00 | 927.71 | 7259.47 |
| Depth | 0.00 | 2331.00 | 3258.72 | 10518.19 |


SHAST8 21-OCT-83 T40N R3W S16 SE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST8 21-OCT-83 T40N R3W S16 SE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
1000
10000

SHAST8 21-OCT-83 T40N R3W S16 SE



THE SITE IS: SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | RHOMAX | PERIOD # | STDEV OF RHOM | RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.25 | 5.52 | 1 | 317.23 | 282.42 |
| 0.0020 | 2.20 | 4.25 | 2 | 344.33 | 814.06 |
| 0.0040 | 2.07 | 6.37 | 3 | 296.36 | 466.29 |
| 0.0080 | 3.13 | 9.24 | 4 | 74.29 | 120.95 |
| 0.0143 | 4.43 | 11.83 | 5 | 31.38 | 43.82 |
| 0.0200 | 4.98 | 11.64 | 6 | 33.69 | 31.45 |
| 0.0303 | 6.02 | 11.66 | 7 | 20.20 | 26.41 |
| 0.0500 | 6.54 | 10.75 | 8 | 2.96 | 10.98 |
| 0.1000 | 9.43 | 17.27 | 9 | 7.68 | 31.82 |
| 0.1818 | 5.53 | 11.07 | 10 | 0.86 | 3.48 |
| 0.3333 | 3.12 | 6.68 | 11 | 0.10 | 0.93 |
| 0.5000 | 1.85 | 5.28 | 12 | 0.12 | 0.56 |
| 0.5988 | 52.91 | 81.34 | 13 | 0.15 | 0.31 |
| 0.8000 | 31.75 | 86.74 | 14 | 0.05 | 0.40 |
| 1.0000 | 1.66 | 5.36 | 15 | 0.05 | 0.13 |
| 1.0000 | 15.95 | 31.24 | 16 | 0.02 | 0.17 |
| 1.2048 | 35.82 | 86.77 | 17 | 0.02 | 0.24 |
| 1.4925 | 36.83 | 98.17 | 18 | 0.03 | 0.24 |
| 2.0000 | 47.18 | 95.95 | 19 | 0.04 | 0.14 |
| 2.0000 | 1.08 | 16.54 | 20 | 0.04 | 0.10 |
| 2.0000 | 17.16 | 41.38 | 21 | 0.02 | 0.14 |
| 3.0303 | 0.67 | 22.17 | 22 | 0.04 | 0.11 |
| 3.0303 | 51.99 | 124.57 | 23 | 0.01 | 0.05 |
| 7.6923 | 48.55 | 103.30 | 24 | 0.04 | 0.14 |
| 14.2857 | 69.18 | 151.11 | 25 | 0.02 | 0.07 |
| 20.0000 | 81.30 | 148.98 | 26 | 0.01 | 0.03 |
| 26.3158 | 92.97 | 182.28 | 27 | 0.01 | 0.03 |
| 31.2500 | 105.64 | 187.03 | 28 | 0.00 | 0.01 |
| 40.0000 | 110.56 | 173.02 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.669E+01 | 0.378E+00 | 41. | 46. | 37. | 0.9611 | 0.9975 | 0.4641 | 0.64 |
| H | SEC | 0.435E+01 | 0.123E+00 | 40. | 66. | 50. | 0.9788 | 0.9976 | 66.30 | 0.71 |
| E | 500.0 | 0.443E+01 | 0.269E+01 | 48. | 46. | 30. | 0.9625 | 0.9796 | 0.2391 | 0.08 |
| H | SEC | 0.408E+01 | 0.171E+01 | 48. | 48. | 40. | 0.9682 | 0.9829 | 45.10 | 0.15 |
| E | 250.0 | 0.654E+01 | 0.214E+01 | 56. | 58. | 37. | 0.9849 | 0.9941 | 0.1089 | 0.07 |
| H | SEC | 0.619E+01 | 0.200E+01 | 56. | 58. | 39. | 0.9851 | 0.9941 | 41.70 | 0.07 |
| E | 125.0 | 0.956E+01 | 0.324E+01 | 58. | 66. | 36. | 0.9815 | 0.9937 | 0.1385 | 0.07 |
| H | SEC | 0.891E+01 | 0.302E+01 | 58. | 65. | 39. | 0.9819 | 0.9938 | 48.40 | 0.05 |
| E | 70.0 | 0.123E+02 | 0.454E+01 | 57. | 65. | 38. | 0.9828 | 0.9964 | 0.2038 | 0.08 |
| H | SEC | 0.114E+02 | 0.431E+01 | 57. | 65. | 41. | 0.9831 | 0.9965 | 47.20 | 0.08 |
| E | 50.0 | 0.120E+02 | 0.507E+01 | 52. | 61. | 42. | 0.9826 | 0.9982 | 0.2279 | 0.10 |
| H | SEC | 0.113E+02 | 0.488E+01 | 52. | 61. | 44. | 0.9827 | 0.9982 | 39.00 | 0.10 |
| E | 33.0 | 0.119E+02 | 0.606E+01 | 49. | 57. | 45. | 0.9902 | 0.9979 | 0.3260 | 0.13 |
| H | SEC | 0.114E+02 | 0.597E+01 | 49. | 57. | 46. | 0.9902 | 0.9979 | 35.80 | 0.12 |
| E | 20.0 | 0.109E+02 | 0.659E+01 | 45. | 47. | 52. | 0.9940 | 0.9975 | 0.3732 | 0.12 |
| H | SEC | 0.106E+02 | 0.650E+01 | 45. | 47. | 53. | 0.9940 | 0.9975 | 36.50 | 0.13 |

AVERAGE # 8
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.182E+02 | 0.977E+01 | 41. | 45. | 58. | 0.9791 | 0.9746 | 0.3632 | 0.22 |
| H | SEC | 0.164E+02 | 0.909E+01 | 42. | 45. | 58. | 0.9792 | 0.9746 | 31.80 | 0.22 |
| E | 5.5 | 0.126E+02 | 0.634E+01 | 23. | 36. | 66. | 0.9227 | 0.9363 | 0.4544 | 0.17 |
| H | SEC | 0.956E+01 | 0.471E+01 | 23. | 36. | 67. | 0.9228 | 0.9365 | 27.80 | 0.16 |
| E | 3.0 | 0.747E+01 | 0.380E+01 | 7. | 9. | 72. | 0.9375 | 0.9398 | 0.4772 | 0.20 |
| H | SEC | 0.589E+01 | 0.244E+01 | 8. | 8. | 62. | 0.9394 | 0.9414 | 33.40 | 0.22 |
| E | 2.0 | 0.593E+01 | 0.253E+01 | 9. | 6. | 75. | 0.9507 | 0.9341 | 0.4725 | 0.15 |
| H | SEC | 0.462E+01 | 0.117E+01 | 6. | 8. | 56. | 0.9596 | 0.9470 | 41.20 | 0.17 |
| E | 1.7 | 0.116E+03 | 0.758E+02 | 59. | 66. | 19. | 0.7942 | 0.8319 | 0.1574 | 0.22 |
| H | SEC | 0.469E+02 | 0.300E+02 | 65. | 60. | 62. | 0.7965 | 0.8325 | 12.60 | 0.28 |
| E | 1.2 | 0.118E+03 | 0.378E+02 | 63. | 56. | 40. | 0.8811 | 0.9095 | 0.1563 | 0.22 |
| H | SEC | 0.558E+02 | 0.257E+02 | 63. | 56. | 47. | 0.8860 | 0.9112 | 23.10 | 0.24 |
| E | 1.0 | 0.854E+01 | 0.225E+01 | 24. | 89. | 120. | 0.8064 | 0.8029 | 0.5426 | 0.11 |
| H | HZ | 0.218E+01 | 0.107E+01 | 0. | 24. | 52. | 0.8646 | 0.8619 | 39.20 | 0.20 |

AVERAGE # 8
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.347E+02 | 0.182E+02 | 51. | 60. | 24. | 0.9164 | 0.9708 | 0.1357 | 0.10 |
| H | HZ | 0.278E+02 | 0.137E+02 | 53. | 59. | 39. | 0.9169 | 0.9713 | 22.00 | 0.16 |
| E | 1.2 | 0.105E+03 | 0.390E+02 | 65. | 65. | 34. | 0.9402 | 0.9465 | 0.1577 | 0.17 |
| H | HZ | 0.690E+02 | 0.326E+02 | 65. | 65. | 33. | 0.9414 | 0.9472 | 41.10 | 0.16 |
| E | 1.5 | 0.114E+03 | 0.405E+02 | 62. | 65. | 31. | 0.9364 | 0.9554 | 0.1550 | 0.15 |
| H | HZ | 0.828E+02 | 0.332E+02 | 62. | 66. | 34. | 0.9370 | 0.9554 | 29.40 | 0.17 |
| E | 2.0 | 0.111E+03 | 0.517E+02 | 67. | 66. | 25. | 0.9339 | 0.9577 | 0.1503 | 0.17 |
| H | HZ | 0.807E+02 | 0.427E+02 | 66. | 68. | 32. | 0.9346 | 0.9577 | 29.90 | 0.20 |
| E | 2.0 | 0.268E+02 | 0.129E+01 | 57. | 85. | 115. | 0.8035 | 0.7760 | 0.6902 | 0.12 |
| H | HZ | 0.631E+01 | 0.873E+00 | 56. | 85. | 113. | 0.8359 | 0.8091 | 38.50 | 0.12 |
| E | 2.0 | 0.471E+02 | 0.180E+02 | 66. | 68. | 44. | 0.9615 | 0.9634 | 0.1406 | 0.20 |
| H | HZ | 0.356E+02 | 0.163E+02 | 66. | 68. | 45. | 0.9622 | 0.9640 | 29.40 | 0.19 |

AVERAGE # 8
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.249E+02 | 0.830E+00 | 75. | 78. | 114. | 0.8966 | 0.9289 | 0.1311 | 0.25 |
| H | HZ | 0.194E+02 | 0.507E+00 | 75. | 77. | 114. | 0.8979 | 0.9299 | 162.50 | 0.24 |
| E | 3.0 | 0.149E+03 | 0.583E+02 | 68. | 71. | 24. | 0.9289 | 0.9400 | 0.1558 | 0.09 |
| H | HZ | 0.999E+02 | 0.457E+02 | 68. | 72. | 24. | 0.9295 | 0.9401 | 28.30 | 0.10 |
| E | 7.7 | 0.105E+03 | 0.494E+02 | 73. | 75. | 44. | 0.9932 | 0.9919 | 0.1229 | 0.13 |
| H | HZ | 0.102E+03 | 0.477E+02 | 73. | 75. | 44. | 0.9932 | 0.9919 | 31.10 | 0.13 |
| E | 14.3 | 0.157E+03 | 0.721E+02 | 73. | 75. | 51. | 0.9776 | 0.9831 | 0.1500 | 0.12 |
| H | HZ | 0.145E+03 | 0.662E+02 | 73. | 74. | 52. | 0.9776 | 0.9831 | 28.50 | 0.12 |
| E | 20.0 | 0.167E+03 | 0.872E+02 | 69. | 73. | 47. | 0.9560 | 0.9558 | 0.2304 | 0.09 |
| H | HZ | 0.131E+03 | 0.753E+02 | 69. | 73. | 47. | 0.9562 | 0.9560 | 42.30 | 0.08 |
| E | 26.3 | 0.204E+03 | 0.101E+03 | 68. | 71. | 52. | 0.9508 | 0.9526 | 0.2049 | 0.10 |
| H | HZ | 0.160E+03 | 0.849E+02 | 68. | 71. | 53. | 0.9509 | 0.9527 | 40.30 | 0.10 |
| E | 31.2 | 0.222E+03 | 0.115E+03 | 68. | 70. | 55. | 0.9426 | 0.9388 | 0.2644 | 0.09 |
| H | HZ | 0.152E+03 | 0.966E+02 | 67. | 70. | 58. | 0.9438 | 0.9401 | 54.60 | 0.08 |
| E | 40.0 | 0.224E+03 | 0.119E+03 | 62. | 67. | 58. | 0.9238 | 0.9096 | 0.5418 | 0.08 |
| H | HZ | 0.122E+03 | 0.102E+03 | 68. | 60. | 106. | 0.9279 | 0.9144 | 29.20 | 0.06 |

SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 19
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 200.0000 | | 0.0000 |
| | | 2000.0000 | |
| 2 | 0.4000 | | 2000.0000 |
| | | 1200.0000 | |
| 3 | 10.0000 | | 3200.0000 |
| | | 14000.0000 | |
| 4 | 0.5000 | | 17200.0000 |

FREQUENCY RANGE ( 0.0020 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 144.9513 | | 0.0000 |
| | | 2331.0083 | |
| 2 | 2.0556 | | 2331.0083 |
| | | 927.7159 | |
| 3 | 28.4869 | | 3258.7242 |
| | | 7259.4762 | |
| 4 | 1.0503 | | 10518.2004 |

MEAN PERCENT VARIATION IS 24.4990

ERROR ANALYSIS

R-SQUARED = 0.998

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 18 | 86015.789 | 4778.655 | 0.334 |
| MODEL | 6 | 85864.480 | 14310.747 | 150588.777 |
| RESID | 12 | 1.140 | 0.095 | |

STANDARD ERROR = 0.308

DTEST FOR MEANS = -0.000

NOISE TO SIGNAL RATIO = 0.258 PERCENT

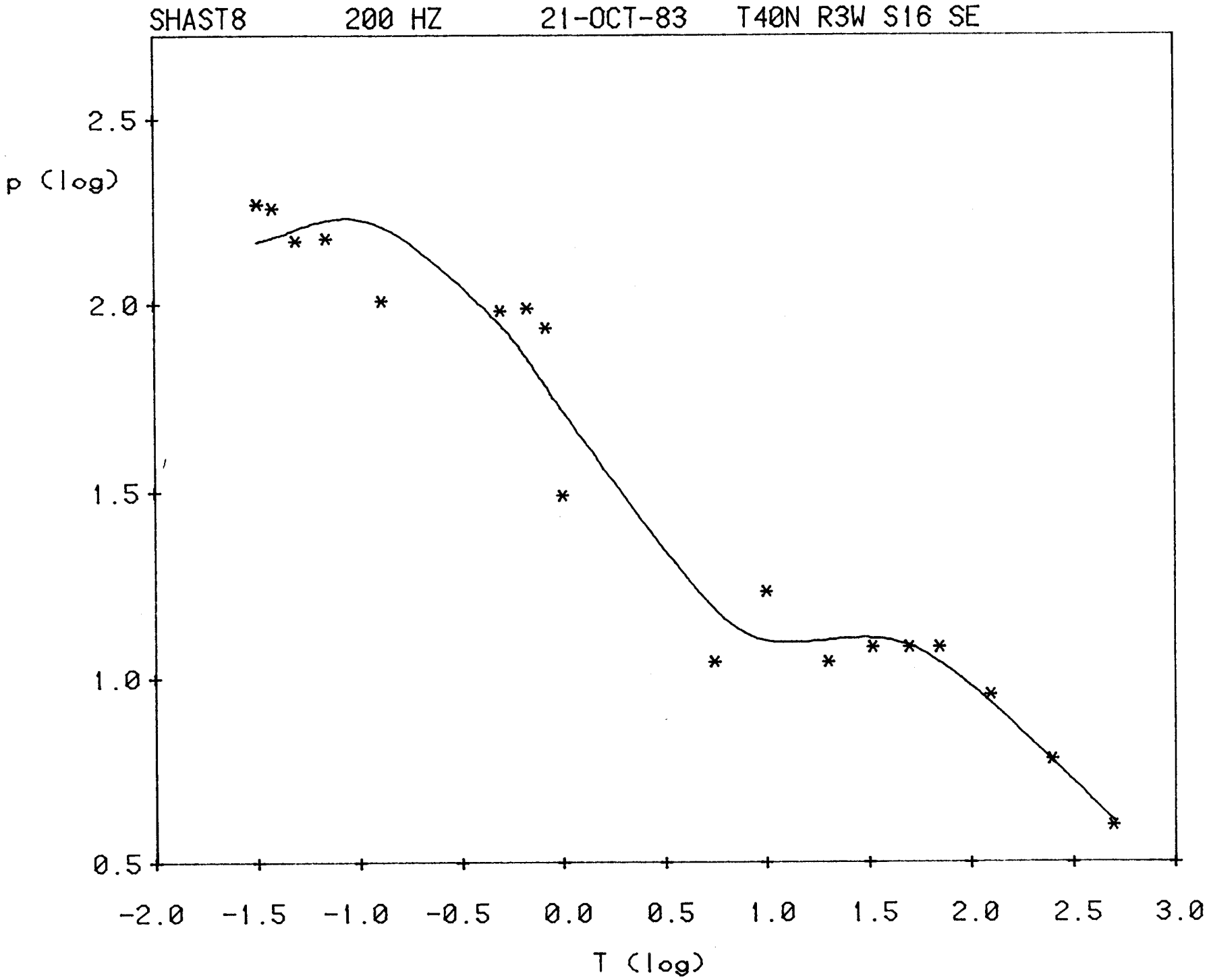
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE

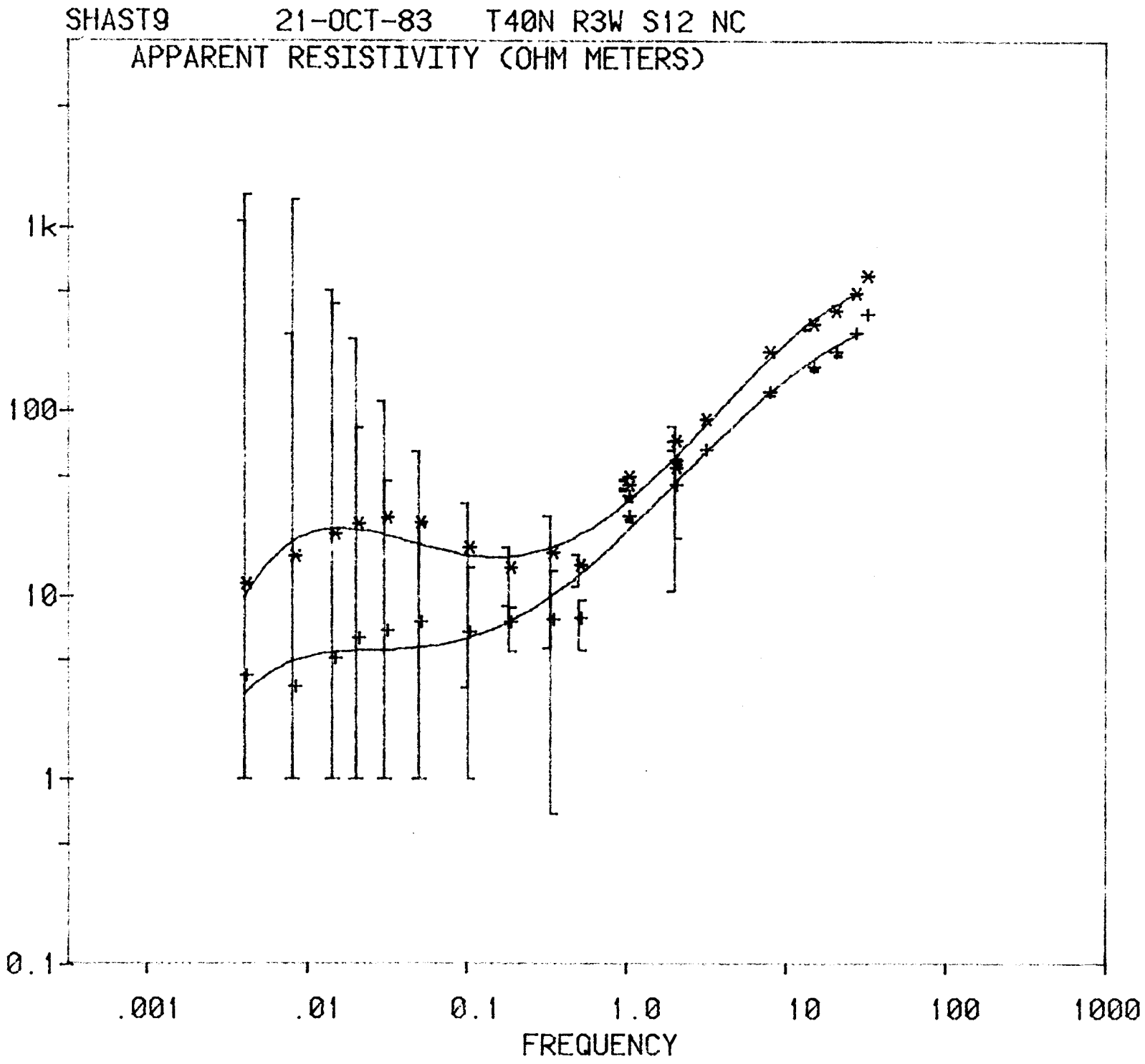
ERROR STRUCTURE OF FITTED MODEL

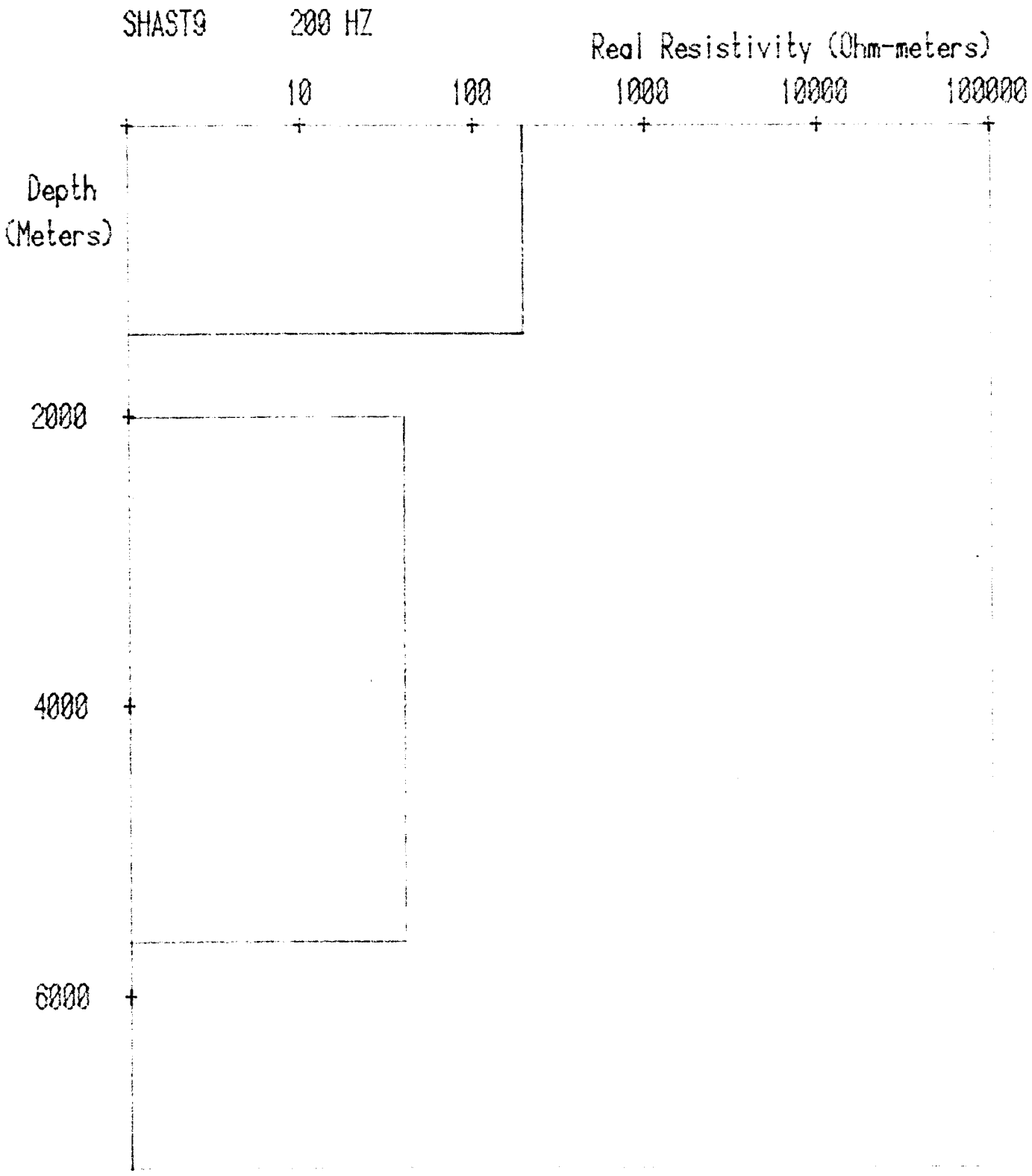
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 500.000 | 4.000 | 4.135 | -0.135 | -3.312 |
| 2 | 250.000 | 6.000 | 5.959 | 0.041 | 0.682 |
| 3 | 125.000 | 9.000 | 8.630 | 0.370 | 4.202 |
| 4 | 70.000 | 12.000 | 11.158 | 0.842 | 7.270 |
| 5 | 50.000 | 12.000 | 12.318 | -0.318 | -2.611 |
| 6 | 33.000 | 12.000 | 12.976 | -0.976 | -7.818 |
| 7 | 20.000 | 11.000 | 12.622 | -1.622 | -13.731 |
| 8 | 10.000 | 17.000 | 12.117 | 4.883 | 33.543 |
| 9 | 5.500 | 11.000 | 14.231 | -3.231 | -25.612 |
| 10 | 1.000 | 31.000 | 51.802 | -20.802 | -50.245 |
| 11 | 0.830 | 87.000 | 60.609 | 26.391 | 35.759 |
| 12 | 0.670 | 98.000 | 72.263 | 25.737 | 30.232 |
| 13 | 0.500 | 96.000 | 90.782 | 5.218 | 5.588 |
| 14 | 0.130 | 103.000 | 176.657 | -73.657 | -52.677 |
| 15 | 0.070 | 151.000 | 171.346 | -20.346 | -12.624 |
| 16 | 0.050 | 149.000 | 159.623 | -10.623 | -6.884 |
| 17 | 0.038 | 182.000 | 151.190 | 30.810 | 18.494 |
| 18 | 0.032 | 187.000 | 147.446 | 39.554 | 23.653 |
| 19 | 0.025 | 173.000 | 144.414 | 28.586 | 18.012 |

MEAN PERCENT ERROR = 24.1701
MAXIMUM PERCENT ERROR = 52.6767
MAX. ERROR OCCURED AT OBSERVATION 14

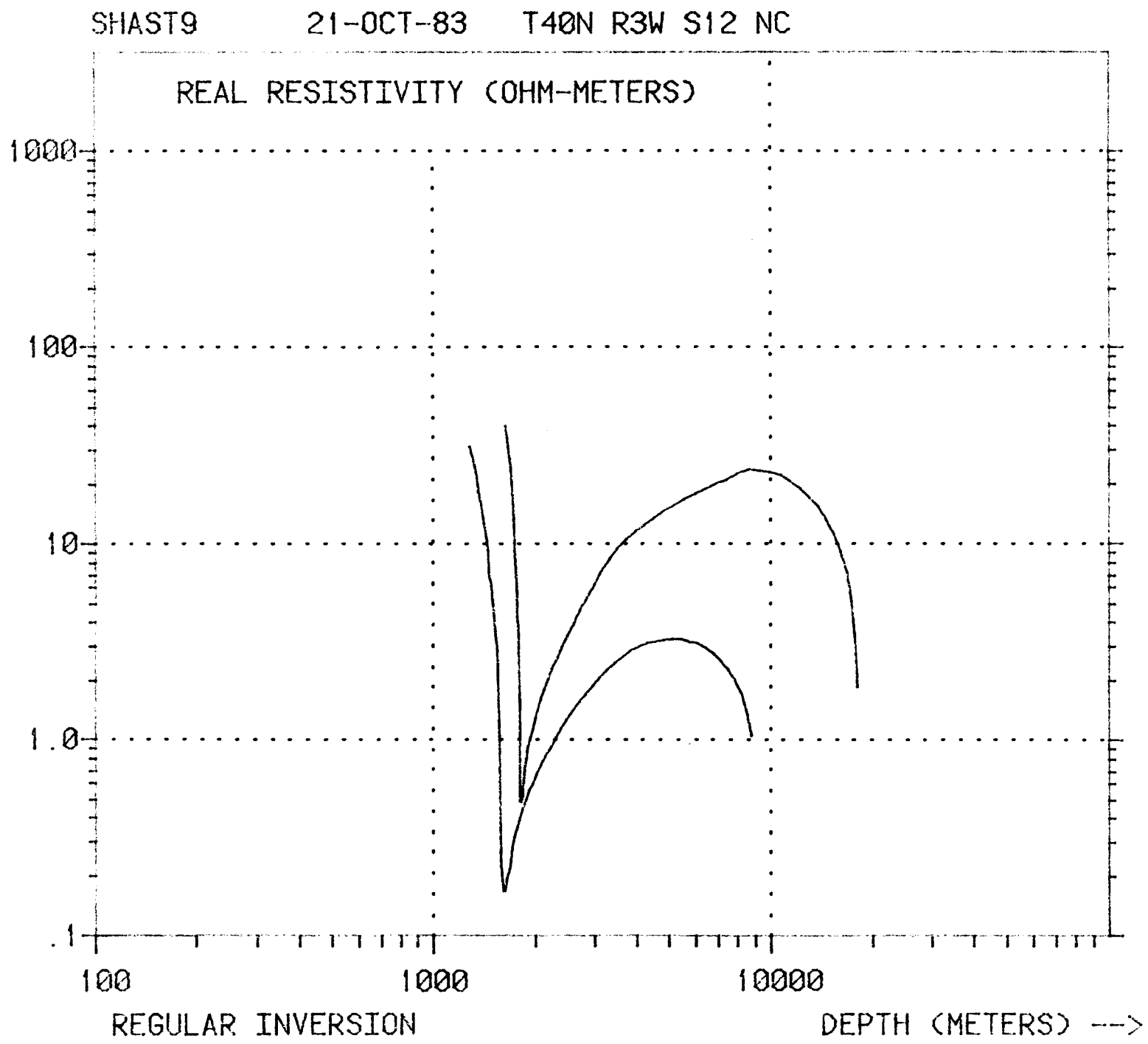
~~(LAYER THICKNESS ANALYSIS FOLLOWS)~~

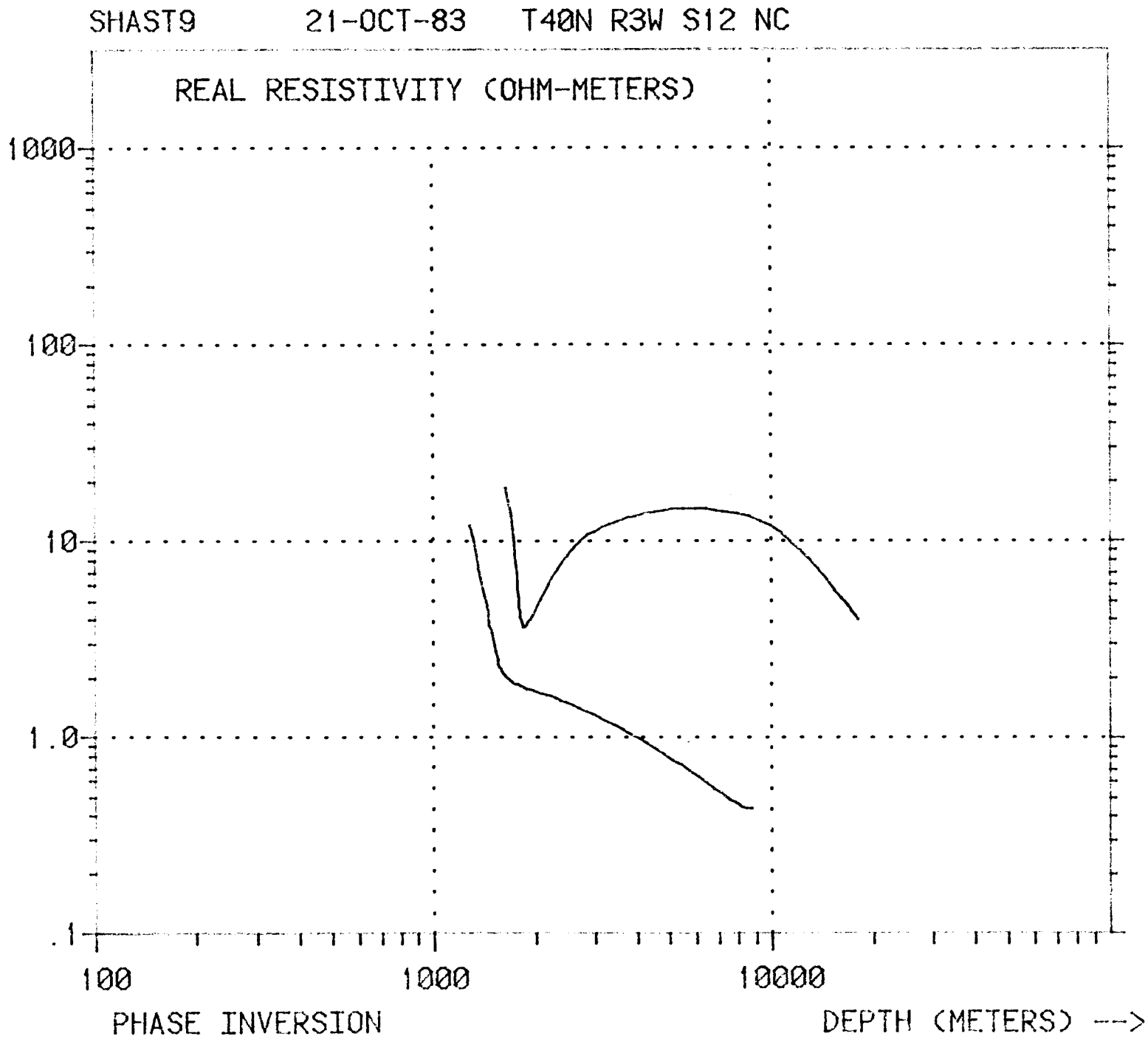

SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
p (log)
2.5
2.0
1.5
1.0
0.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
T (log)


SHAST9 21-OCT-83 T40N R3W S12 NC
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

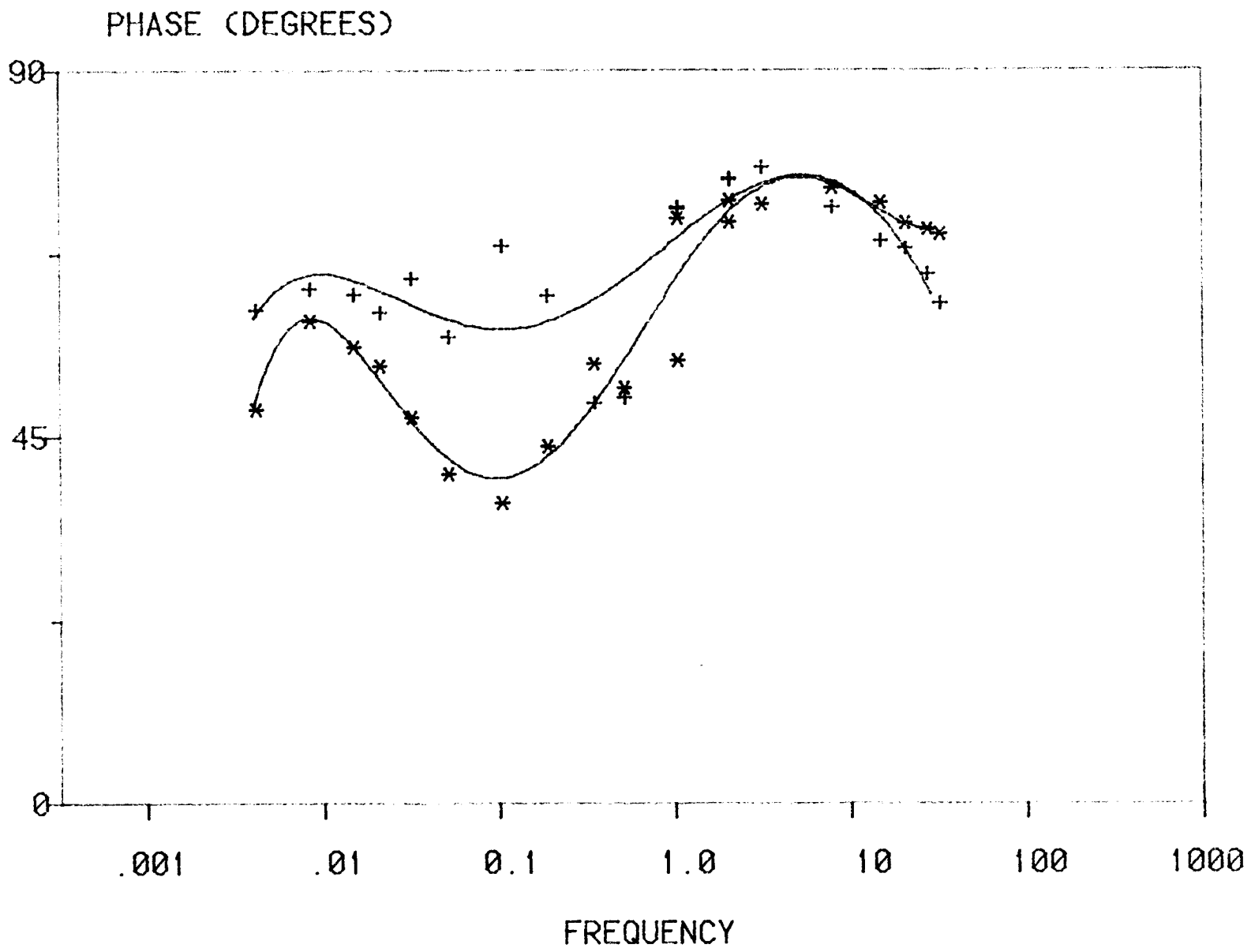



| | | | | |
|---|---|---|---|---|
| Resistivity | 193.68 | 0.91 | 39.37 | 0.80 |
| Thickness | | 1437.86 | 565.02 | 3624.65 |
| Depth | 0.00 | 1437.86 | 2002.88 | 5627.54 |


SHAST9 21-OCT-83 T40N R3W S12 NC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST9 21-OCT-83 T40N R3W S12 NC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAST9 21-OCT-83 T40N R3W S12 NC



THE SITE IS: SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 4.05 | 6.95 | 1 | 1459.99 | 1027.21 |
| 0.0020 | 6.97 | 9.02 | 2 | 1359.79 | 241.32 |
| 0.0040 | 3.42 | 10.81 | 3 | 370.19 | 421.99 |
| 0.0080 | 3.00 | 15.39 | 4 | 73.60 | 220.40 |
| 0.0143 | 4.28 | 20.14 | 5 | 34.70 | 84.78 |
| 0.0200 | 5.54 | 22.95 | 6 | 17.06 | 35.40 |
| 0.0303 | 6.06 | 24.74 | 7 | 7.96 | 13.96 |
| 0.0500 | 6.74 | 23.33 | 8 | 1.75 | 4.71 |
| 0.1000 | 5.92 | 17.07 | 9 | 6.35 | 10.70 |
| 0.1818 | 6.66 | 13.31 | 10 | 2.15 | 2.61 |
| 0.3333 | 7.00 | 15.73 | 11 | 0.56 | 0.56 |
| 0.5000 | 7.15 | 13.65 | 12 | 0.25 | 0.51 |
| 0.5988 | 45.49 | 826.90 | 13 | 0.16 | 3.08 |
| 0.8000 | 0.00 | 0.00 | 14 | 17.06 | 35.40 |
| 1.0000 | 32.19 | 36.69 | 15 | 0.03 | 0.09 |
| 1.0000 | 24.94 | 41.36 | 16 | 0.32 | 0.06 |
| 1.2048 | 0.00 | 0.00 | 17 | 2.15 | 2.61 |
| 1.4925 | 0.00 | 0.00 | 18 | 0.56 | 0.56 |
| 2.0000 | 81.31 | 34.06 | 19 | 0.09 | 0.03 |
| 2.0000 | 49.81 | 63.53 | 20 | 0.01 | 0.01 |
| 2.0000 | 37.13 | 45.67 | 21 | 0.05 | 0.05 |
| 3.0303 | 56.64 | 83.59 | 22 | 0.00 | 0.00 |
| 3.0303 | 0.00 | 0.00 | 23 | 2.15 | 2.61 |
| 7.6923 | 118.93 | 194.79 | 24 | 0.02 | 0.02 |
| 14.2857 | 162.13 | 273.86 | 25 | 0.01 | 0.00 |
| 20.0000 | 195.22 | 323.54 | 26 | 0.01 | 0.00 |
| 26.3158 | 246.91 | 404.84 | 27 | 0.00 | 0.01 |
| 31.2500 | 313.23 | 503.78 | 28 | 0.00 | 0.01 |
| 40.0000 | 219.96 | 418.21 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.695E+01 | 0.431E+01 | 46. | 43. | 101. | 0.9828 | 0.9986 | 0.1186 | 0.24 |
| H | SEC | 0.695E+01 | 0.379E+01 | 45. | 43. | 101. | 0.9832 | 0.9986 | 32.30 | 0.25 |
| E | 500.0 | 0.898E+01 | 0.839E+01 | 46. | 47. | 101. | 0.9178 | 0.9963 | 0.1262 | 0.19 |
| H | SEC | 0.906E+01 | 0.555E+01 | 45. | 48. | 101. | 0.9207 | 0.9966 | 6.80 | 0.17 |
| E | 250.0 | 0.109E+02 | 0.351E+01 | 49. | 61. | 101. | 0.9900 | 0.9944 | 0.1195 | 0.39 |
| H | SEC | 0.107E+02 | 0.334E+01 | 49. | 61. | 101. | 0.9900 | 0.9945 | 26.10 | 0.39 |
| E | 125.0 | 0.156E+02 | 0.310E+01 | 60. | 64. | 101. | 0.9850 | 0.9932 | 0.1249 | 0.47 |
| H | SEC | 0.152E+02 | 0.290E+01 | 60. | 63. | 101. | 0.9851 | 0.9932 | 37.30 | 0.48 |
| E | 70.0 | 0.203E+02 | 0.443E+01 | 57. | 62. | 101. | 0.9874 | 0.9968 | 0.1597 | 0.43 |
| H | SEC | 0.200E+02 | 0.412E+01 | 56. | 63. | 101. | 0.9875 | 0.9968 | 35.10 | 0.44 |
| E | 50.0 | 0.231E+02 | 0.580E+01 | 54. | 61. | 101. | 0.9851 | 0.9965 | 0.2293 | 0.39 |
| H | SEC | 0.227E+02 | 0.527E+01 | 54. | 60. | 101. | 0.9854 | 0.9965 | 33.60 | 0.39 |
| E | 33.0 | 0.251E+02 | 0.686E+01 | 47. | 65. | 101. | 0.9632 | 0.9961 | 0.2864 | 0.35 |
| H | SEC | 0.244E+02 | 0.525E+01 | 48. | 64. | 101. | 0.9649 | 0.9963 | 36.60 | 0.36 |
| E | 20.0 | 0.249E+02 | 0.836E+01 | 40. | 58. | 101. | 0.9393 | 0.9856 | 0.3000 | 0.35 |
| H | SEC | 0.218E+02 | 0.512E+01 | 41. | 57. | 101. | 0.9482 | 0.9879 | 28.20 | 0.33 |

AVERAGE # 8
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.178E+02 | 0.636E+01 | 37. | 69. | 101. | 0.9716 | 0.9825 | 0.2374 | 0.32 |
| H | SEC | 0.163E+02 | 0.547E+01 | 37. | 69. | 101. | 0.9718 | 0.9825 | 27.80 | 0.30 |
| E | 5.5 | 0.149E+02 | 0.752E+01 | 44. | 62. | 101. | 0.9386 | 0.9424 | 0.2418 | 0.22 |
| H | SEC | 0.117E+02 | 0.581E+01 | 44. | 63. | 101. | 0.9399 | 0.9435 | 20.00 | 0.25 |
| E | 3.0 | 0.189E+02 | 0.108E+02 | 54. | 48. | 101. | 0.7727 | 0.8896 | 0.2287 | 0.12 |
| H | SEC | 0.125E+02 | 0.320E+01 | 55. | 51. | 101. | 0.7900 | 0.8967 | 22.30 | 0.20 |
| E | 2.0 | 0.192E+02 | 0.118E+02 | 51. | 49. | 101. | 0.7104 | 0.7978 | 0.2371 | 0.21 |
| H | SEC | 0.815E+01 | 0.247E+01 | 52. | 52. | 101. | 0.7251 | 0.8028 | 12.30 | 0.29 |
| E | 1.7 | 0.844E+03 | 0.652E+02 | 55. | 15. | 23. | 0.9333 | 0.9031 | 0.2061 | 0.62 |
| H | SEC | 0.809E+03 | 0.257E+02 | 55. | 24. | 23. | 0.9569 | 0.9334 | 77.30 | 0.59 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.0 | 0.504E+02 | 0.365E+02 | 72. | 74. | 23. | 0.9037 | 0.9180 | 0.3086 | 0.07 |
| H | HZ | 0.230E+02 | 0.279E+02 | 72. | 73. | 23. | 0.9142 | 0.9261 | 151.80 | 0.09 |

AVERAGE # 8
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.558E+02 | 0.259E+02 | 56. | 72. | 23. | 0.9058 | 0.9630 | 0.1268 | 0.18 |
| H | HZ | 0.269E+02 | 0.240E+02 | 53. | 75. | 23. | 0.9158 | 0.9637 | 2.30 | 0.18 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.400E+02 | 0.994E+02 | 73. | 79. | 90. | 0.9102 | 0.9418 | 0.2406 | 0.11 |
| H | HZ | 0.281E+02 | 0.632E+02 | 78. | 77. | 90. | 0.9182 | 0.9485 | 134.30 | 0.10 |
| E | 2.0 | 0.824E+02 | 0.622E+02 | 74. | 77. | 90. | 0.8798 | 0.8654 | 0.5179 | 0.02 |
| H | HZ | 0.446E+02 | 0.374E+02 | 74. | 77. | 90. | 0.8798 | 0.8656 | -1.50 | 0.04 |
| E | 2.0 | 0.545E+02 | 0.460E+02 | 72. | 77. | 90. | 0.9151 | 0.9284 | 0.2957 | 0.06 |
| H | HZ | 0.369E+02 | 0.282E+02 | 71. | 77. | 90. | 0.9184 | 0.9301 | 142.00 | 0.10 |

AVERAGE # 8
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.990E+02 | 0.735E+02 | 75. | 77. | 90. | 0.8853 | 0.9215 | 0.5899 | 0.04 |
| H | HZ | 0.682E+02 | 0.398E+02 | 73. | 80. | 90. | 0.8898 | 0.9229 | 61.70 | 0.06 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 7.7 | 0.203E+03 | 0.126E+03 | 76. | 74. | 90. | 0.9772 | 0.9811 | 0.5365 | 0.05 |
| H | HZ | 0.186E+03 | 0.112E+03 | 76. | 73. | 90. | 0.9773 | 0.9811 | 116.70 | 0.05 |
| E | 14.3 | 0.284E+03 | 0.174E+03 | 74. | 69. | 90. | 0.9700 | 0.9824 | 0.4832 | 0.03 |
| H | HZ | 0.263E+03 | 0.151E+03 | 74. | 69. | 90. | 0.9702 | 0.9824 | 129.50 | 0.03 |
| E | 20.0 | 0.347E+03 | 0.209E+03 | 71. | 68. | 90. | 0.9662 | 0.9659 | 0.5803 | 0.03 |
| H | HZ | 0.300E+03 | 0.181E+03 | 71. | 68. | 90. | 0.9662 | 0.9660 | 130.30 | 0.03 |
| E | 26.3 | 0.456E+03 | 0.287E+03 | 71. | 65. | 90. | 0.9239 | 0.9383 | 0.4076 | 0.06 |
| H | HZ | 0.354E+03 | 0.207E+03 | 70. | 66. | 90. | 0.9264 | 0.9408 | 130.80 | 0.03 |
| E | 31.2 | 0.569E+03 | 0.374E+03 | 71. | 61. | 90. | 0.9183 | 0.9447 | 0.4775 | 0.08 |
| H | HZ | 0.439E+03 | 0.253E+03 | 69. | 62. | 90. | 0.9230 | 0.9487 | 138.10 | 0.05 |
| E | 40.0 | 0.473E+03 | 0.252E+03 | 63. | 62. | 90. | 0.9491 | 0.9524 | 0.8373 | 0.04 |
| H | HZ | 0.364E+03 | 0.188E+03 | 62. | 63. | 90. | 0.9503 | 0.9534 | 152.60 | 0.03 |

SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 22
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 50.0000 | | 0.0000 |
| | | 1050.0000 | |
| 2 | 0.2000 | | 1050.0000 |
| | | 1000.0000 | |
| 3 | 3.0000 | | 2050.0000 |
| | | 7000.0000 | |
| 4 | 0.5000 | | 9050.0000 |

FREQUENCY RANGE ( 0.0040 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 193.6808 | | 0.0000 |
| | | 1437.8631 | |
| 2 | 0.9174 | | 1437.8631 |
| | | 565.0250 | |
| 3 | 39.3784 | | 2002.8881 |
| | | 3624.6588 | |
| 4 | 0.8070 | | 5627.5470 |

MEAN PERCENT VARIATION IS 19.2449

ERROR ANALYSIS

R-SQUARED = 1.000

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 21 | 199948.439 | 9521.354 | 0.286 |
| MODEL | 6 | 199890.189 | 33315.032613308.384 | |
| RESID | 15 | 0.815 | 0.054 | |

STANDARD ERROR = 0.233

DTEST FOR MEANS = -0.000

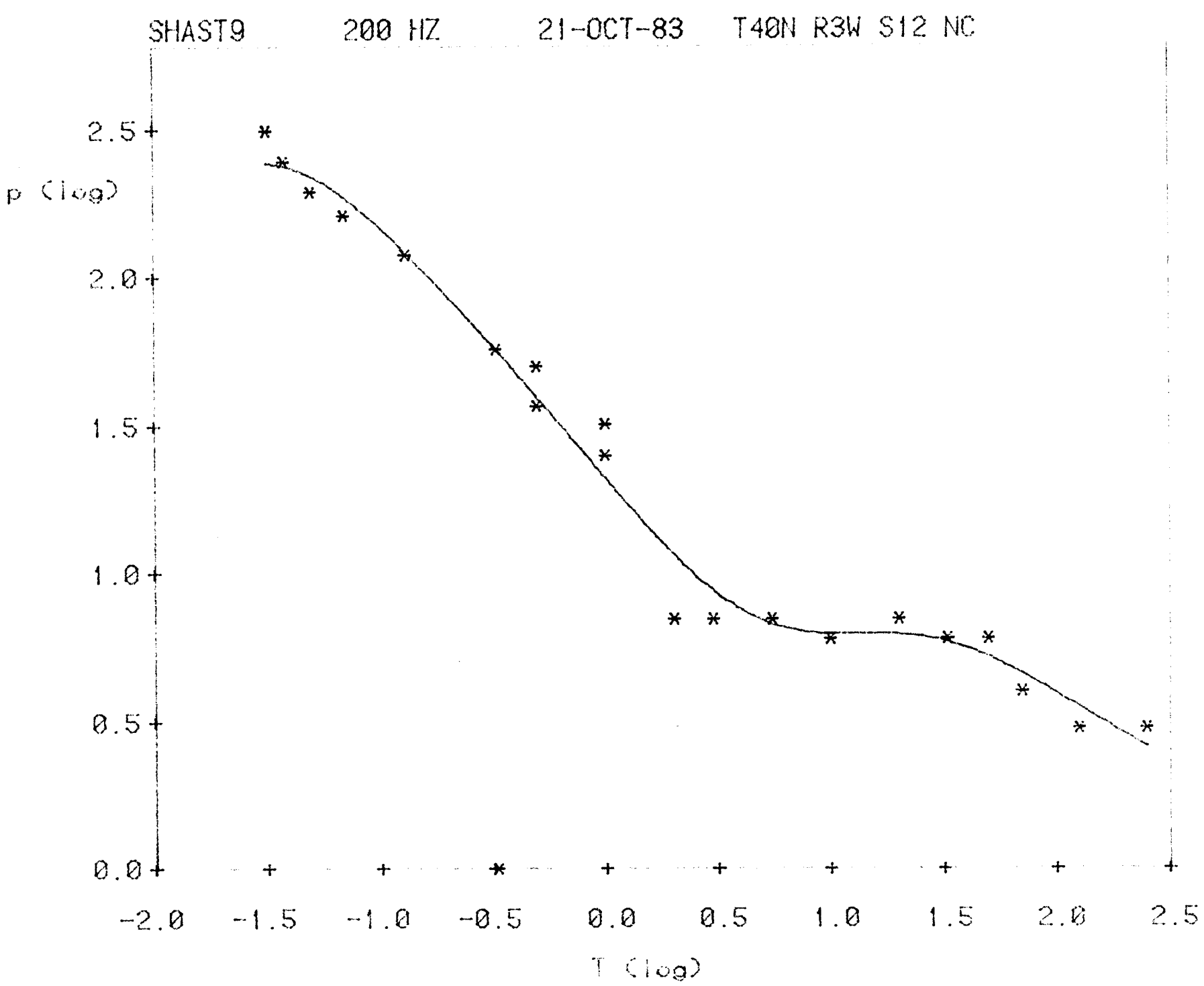
NOISE TO SIGNAL RATIO = 0.128 PERCENT

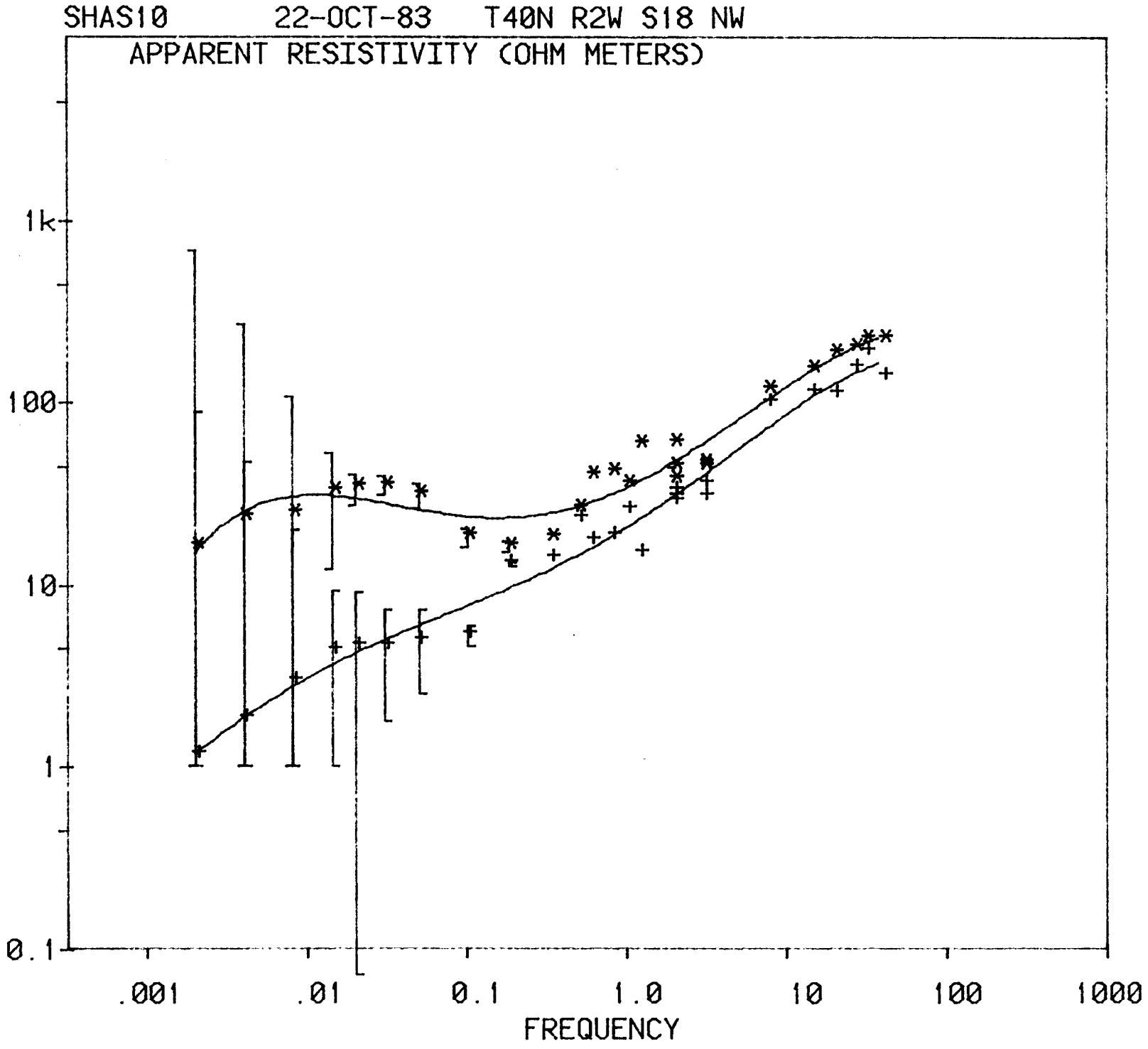
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC

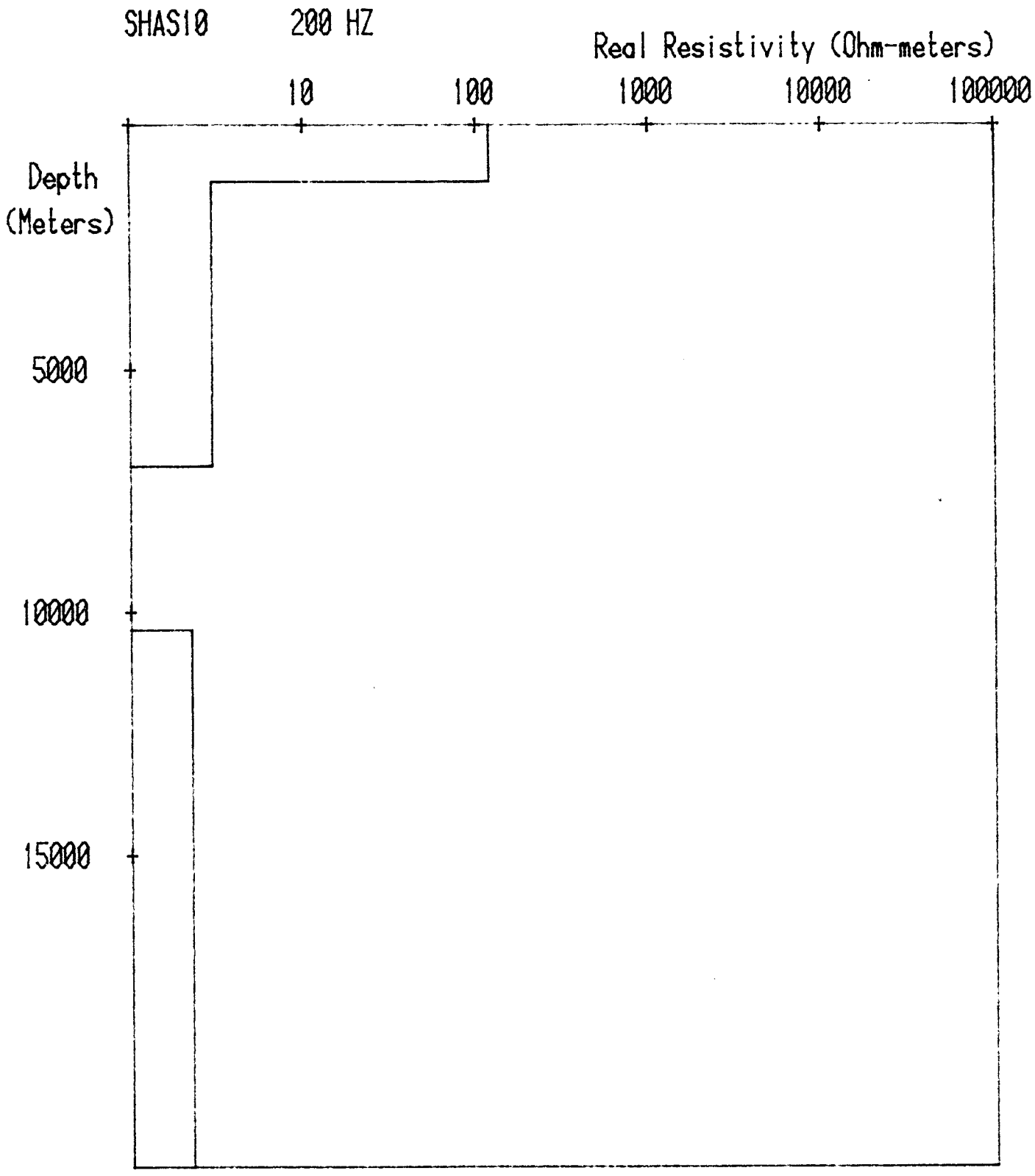
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 250.000 | 3.000 | 2.602 | 0.398 | 14.211 |
| 2 | 125.000 | 3.000 | 3.566 | -0.566 | -17.247 |
| 3 | 70.000 | 4.000 | 4.626 | -0.626 | -14.523 |
| 4 | 50.000 | 6.000 | 5.273 | 0.727 | 12.896 |
| 5 | 33.000 | 6.000 | 5.945 | 0.055 | 0.913 |
| 6 | 20.000 | 7.000 | 6.325 | 0.675 | 10.127 |
| 7 | 10.000 | 6.000 | 6.187 | -0.187 | -3.076 |
| 8 | 5.500 | 7.000 | 6.526 | 0.474 | 7.006 |
| 9 | 3.000 | 7.000 | 8.572 | -1.572 | -20.187 |
| 10 | 2.000 | 7.000 | 11.490 | -4.490 | -48.565 |
| 11 | 1.000 | 32.000 | 20.997 | 11.003 | 41.522 |
| 12 | 1.000 | 25.000 | 20.997 | 4.003 | 17.404 |
| 13 | 0.500 | 50.000 | 39.522 | 10.478 | 23.408 |
| 14 | 0.500 | 37.000 | 39.522 | -2.522 | -6.593 |
| 15 | 0.330 | 57.000 | 57.136 | -0.136 | -0.238 |
| 16 | 0.330 | 0.000 | 57.136 | 0.000 | 0.000 |
| 17 | 0.130 | 119.000 | 124.672 | -5.672 | -4.656 |
| 18 | 0.070 | 162.000 | 191.069 | -29.069 | -16.467 |
| 19 | 0.050 | 195.000 | 223.495 | -28.495 | -13.618 |
| 20 | 0.038 | 247.000 | 240.086 | 6.914 | 2.839 |
| 21 | 0.032 | 313.000 | 244.231 | 68.769 | 24.682 |
| 22 | 0.025 | 220.000 | 241.839 | -21.839 | -9.458 |

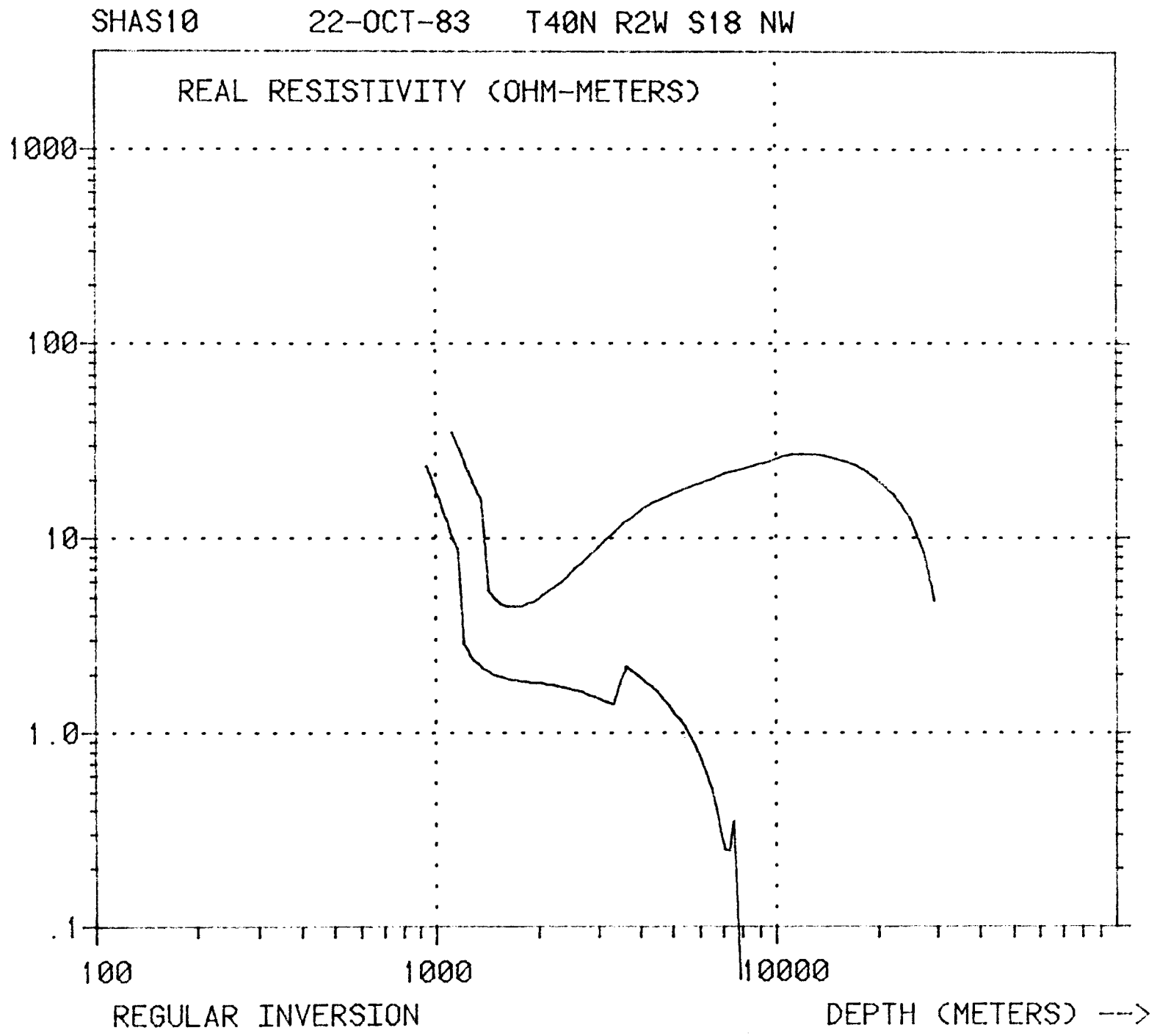
MEAN PERCENT ERROR = 18.6190
MAXIMUM PERCENT ERROR = 48.5651
MAX. ERROR OCCURED AT OBSERVATION 10

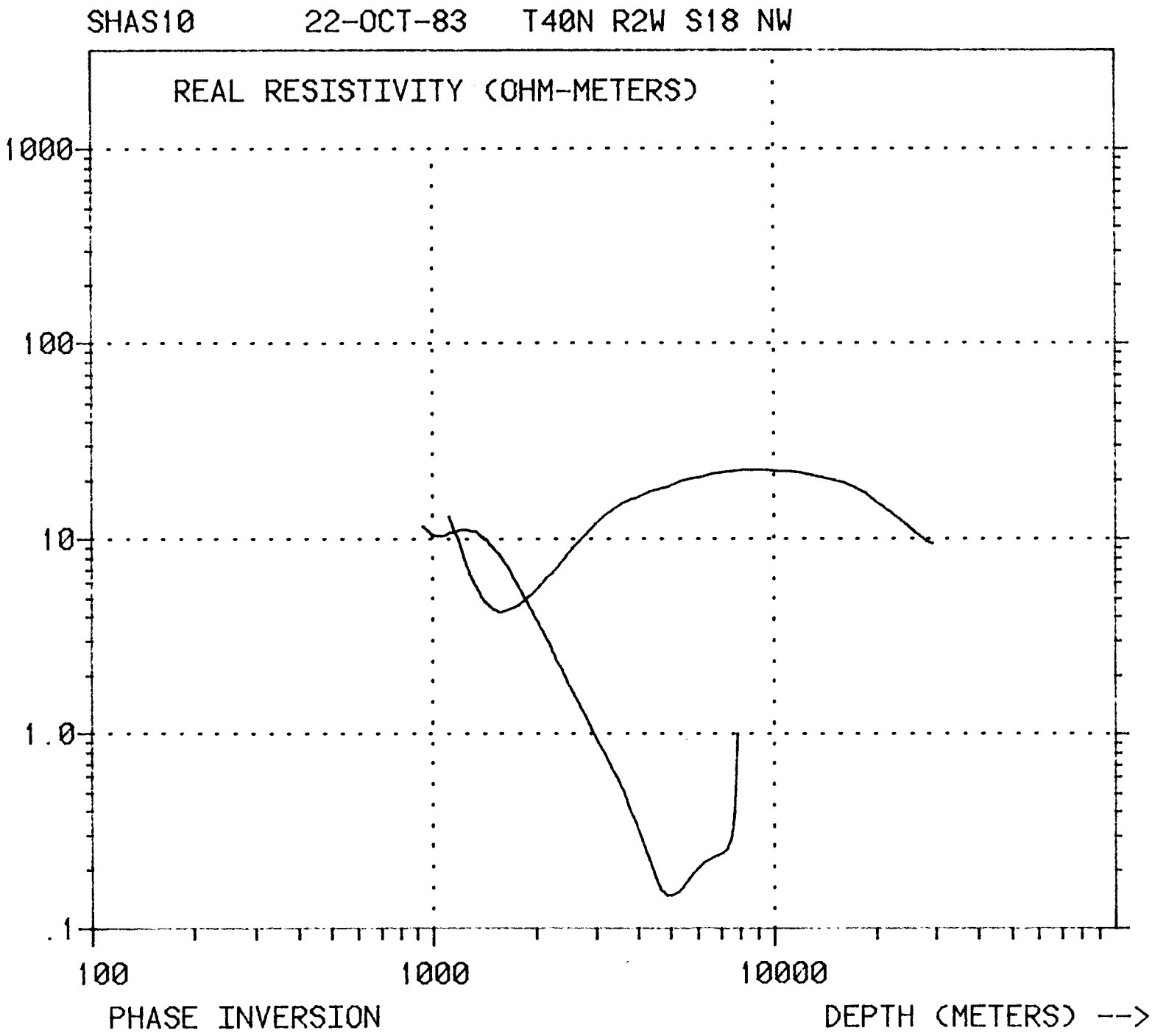

SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
p (log)
2.5
2.0
1.5
1.0
0.5
0.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS10 22-OCT-83 T40N R2W S18 NW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

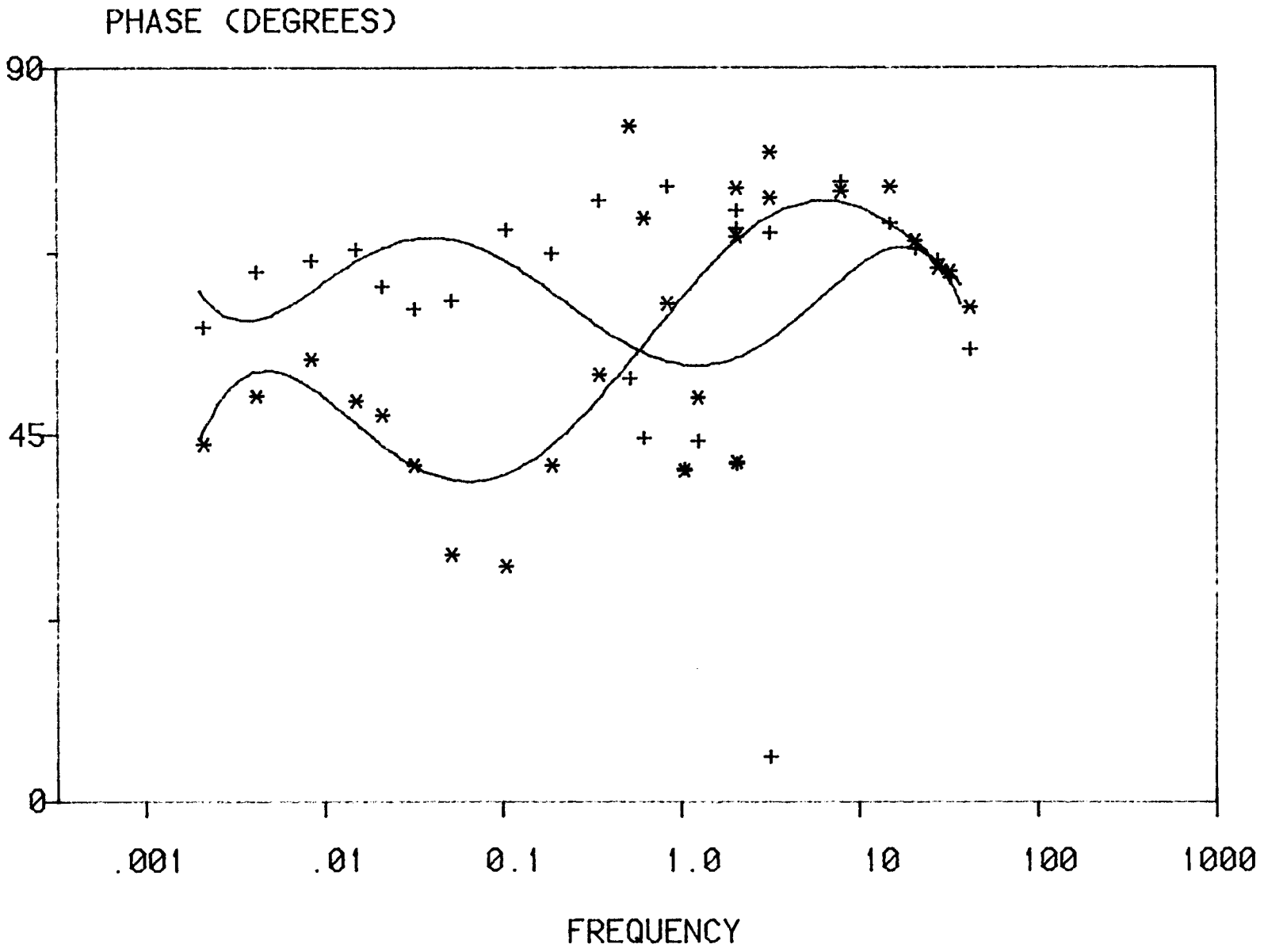



| | | | | |
|---|---|---|---|---|
| Resistivity | 120.35 | 2.96 | 0.14 | 2.23 |
| Thickness | | 1130.36 | 5836.83 | 3404.03 |
| Depth | 0.00 | 1130.36 | 6967.20 | 10371.23 |


SHAS10 22-OCT-83 T40N R2W S18 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS10 22-OCT-83 T40N R2W S18 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS10 22-OCT-83 T40N R2W S18 NW



THE SITE IS: SLAS10 200 HZ 22-OCT-83 T401 H2V S18 NW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMIN | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 1.53 | 27.57 | 1 | 85.85 | 651.01 |
| 0.0020 | 1.15 | 15.84 | 2 | 44.76 | 242.62 |
| 0.0040 | 1.80 | 22.85 | 3 | 16.87 | 80.88 |
| 0.0080 | 2.89 | 24.25 | 4 | 4.87 | 19.79 |
| 0.0143 | 4.25 | 31.74 | 5 | 4.45 | 6.27 |
| 0.0200 | 4.52 | 33.34 | 6 | 2.69 | 3.96 |
| 0.0303 | 4.45 | 34.40 | 7 | 2.34 | 4.78 |
| 0.0500 | 4.81 | 30.64 | 8 | 0.63 | 2.09 |
| 0.1000 | 5.21 | 17.95 | 9 | 0.36 | 1.16 |
| 0.1818 | 12.70 | 15.99 | 10 | 0.01 | 0.02 |
| 0.3333 | 13.75 | 17.56 | 11 | 0.01 | 0.02 |
| 0.5000 | 22.64 | 25.73 | 12 | 0.00 | 0.01 |
| 0.5988 | 16.99 | 38.63 | 13 | 0.02 | 0.06 |
| 0.8000 | 17.97 | 40.40 | 14 | 0.01 | 0.07 |
| 1.0000 | 25.25 | 34.70 | 15 | 0.01 | 0.01 |
| 1.0000 | 16.56 | 143.31 | 16 | 0.01 | 0.12 |
| 1.2048 | 14.38 | 56.89 | 17 | 0.01 | 0.02 |
| 1.4925 | 9.77 | 34.01 | 18 | 0.02 | 0.01 |
| 2.0000 | 28.15 | 43.46 | 19 | 0.00 | 0.01 |
| 2.0000 | 29.68 | 36.55 | 20 | 0.00 | 0.00 |
| 2.0000 | 31.96 | 58.29 | 21 | 0.00 | 0.00 |
| 3.0303 | 29.40 | 43.27 | 22 | 0.00 | 0.00 |
| 3.0303 | 34.89 | 45.25 | 23 | 0.00 | 0.00 |
| 7.6923 | 96.84 | 115.49 | 24 | 0.00 | 0.01 |
| 14.2857 | 111.05 | 149.18 | 25 | 0.01 | 0.00 |
| 20.0000 | 108.76 | 180.77 | 26 | 0.00 | 0.00 |
| 26.3158 | 150.41 | 193.84 | 27 | 0.03 | 0.04 |
| 31.2500 | 183.61 | 215.47 | 28 | 0.00 | 0.00 |
| 40.0000 | 135.62 | 219.17 | 29 | 0.00 | 0.00 |

AVERAGE #  8
SMA810  200 HZ  22-OCT-83  T40N L2W S18 IN
NSAMP = 1024  S1 = 0.0050  T0 = 5.1200

| FILE OR PERIOD | RHO MAX VALUE ( | RHO MIN CHN-H ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|
| E 800.0 | 0.307E+02 | 0.161E+01 | 58. | 79. | 132. | 0.9456 | 0.9803 | 0.1522 | 0.67 |
| H SEC | 0.244E+02 | 0.145E+01 | 56. | 0. | 129. | 0.9480 | 0.9824 | 6.30 | 0.56 |
| E 500.0 | 0.162E+02 | 0.123E+01 | 44. | 60. | 117. | 0.9723 | 0.9952 | 0.1832 | 0.36 |
| H SEC | 0.155E+02 | 0.106E+01 | 44. | 58. | 116. | 0.9730 | 0.9953 | 55.50 | 0.35 |
| E 250.0 | 0.229E+02 | 0.229E+01 | 50. | 65. | 121. | 0.9525 | 0.9932 | 0.0980 | 0.34 |
| H SEC | 0.228E+02 | 0.131E+01 | 50. | 66. | 120. | 0.9567 | 0.9935 | 20.40 | 0.40 |
| E 125.0 | 0.250E+02 | 0.312E+01 | 55. | 67. | 116. | 0.9648 | 0.9902 | 0.1100 | 0.28 |
| H SEC | 0.235E+02 | 0.266E+01 | 55. | 67. | 115. | 0.9652 | 0.9902 | 18.90 | 0.27 |
| E 70.0 | 0.326E+02 | 0.490E+01 | 49. | 68. | 114. | 0.9387 | 0.9984 | 0.1551 | 0.26 |
| H SEC | 0.309E+02 | 0.360E+01 | 50. | 68. | 111. | 0.9414 | 0.9984 | 26.70 | 0.25 |
| E 50.0 | 0.337E+02 | 0.486E+01 | 48. | 64. | 109. | 0.9845 | 0.9979 | 0.2016 | 0.20 |
| H SEC | 0.330E+02 | 0.418E+01 | 48. | 64. | 108. | 0.9851 | 0.9979 | 33.80 | 0.19 |
| E 33.0 | 0.344E+02 | 0.455E+01 | 42. | 61. | 108. | 0.9988 | 0.9994 | 0.3050 | 0.17 |
| H SEC | 0.344E+02 | 0.436E+01 | 42. | 61. | 108. | 0.9988 | 0.9994 | 37.00 | 0.17 |
| E 20.0 | 0.308E+02 | 0.488E+01 | 31. | 62. | 108. | 0.9969 | 0.9978 | 0.2480 | 0.18 |
| H SEC | 0.305E+02 | 0.473E+01 | 31. | 62. | 108. | 0.9969 | 0.9978 | 28.50 | 0.19 |

AVERAGE # 8

SHAS10 200 HZ 22-OCT-83 T40N R2W S18 NM

NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.183E+02 | 0.549E+01 | 29. | 70. | 107. | 0.9924 | 0.9940 | 0.2284 | 0.15 |
| H | SEC | 0.176E+02 | 0.493E+01 | 29. | 71. | 108. | 0.9926 | 0.9941 | 24.10 | 0.14 |
| E | 5.5 | 0.181E+02 | 0.159E+02 | 42. | 68. | 107. | 0.8833 | 0.9384 | 0.2067 | 0.14 |
| H | SEC | 0.139E+02 | 0.949E+01 | 41. | 68. | 107. | 0.8840 | 0.9384 | 15.40 | 0.15 |
| E | 3.0 | 0.220E+02 | 0.182E+02 | 52. | 74. | 116. | 0.8882 | 0.8675 | 0.1768 | 0.16 |
| H | SEC | 0.131E+02 | 0.932E+01 | 53. | 74. | 117. | 0.8888 | 0.8695 | 14.40 | 0.13 |
| E | 2.0 | 0.321E+02 | 0.293E+02 | 85. | 52. | 175. | 0.8741 | 0.8565 | 0.2695 | 0.29 |
| H | SEC | 0.193E+02 | 0.160E+02 | 81. | 53. | 177. | 0.8787 | 0.8602 | 48.90 | 0.20 |
| E | 1.7 | 0.331E+02 | 0.287E+02 | 73. | 73. | 135. | 0.9601 | 0.9933 | 0.7082 | 0.71 |
| H | SEC | 0.441E+02 | 0.523E+01 | 71. | 17. | 148. | 0.9747 | 0.9960 | 132.00 | 1.23 |
| E | 1.2 | 0.435E+02 | 0.215E+02 | 63. | 77. | 146. | 0.9827 | 0.9921 | 0.7080 | 1.00 |
| H | SEC | 0.373E+02 | 0.144E+02 | 60. | 75. | 145. | 0.9860 | 0.9937 | 123.00 | 0.93 |
| E | 1.0 | 0.468E+02 | 0.328E+02 | 17. | 65. | 10. | 0.8157 | 0.8970 | 0.2086 | 0.24 |
| H | HZ | 0.226E+02 | 0.177E+02 | 65. | 18. | 96. | 0.8205 | 0.8991 | 22.60 | 0.26 |

AVERAGE # 8
SHAS10 200 HZ 22-OCT-83 T40N R2W S18 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.202E+03 | 0.171E+02 | 63. | 74. | 165. | 0.9180 | 0.9925 | 0.8351 | 0.97 |
| H | HZ | 0.843E+02 | 0.160E+02 | 47. | 64. | 157. | 0.9633 | 0.9968 | 117.00 | 1.19 |
| E | 1.2 | 0.749E+02 | 0.191E+02 | 48. | 4. | 68. | 0.9185 | 0.9339 | 0.1398 | 0.48 |
| H | HZ | 0.389E+02 | 0.965E+01 | 52. | 85. | 79. | 0.9311 | 0.9423 | 55.70 | 0.33 |
| E | 1.5 | 0.350E+02 | 0.178E+02 | 66. | 86. | 83. | 0.8027 | 0.9741 | 0.5616 | 0.26 |
| H | HZ | 0.330E+02 | 0.176E+01 | 66. | 9. | 89. | 0.8706 | 0.9752 | 108.60 | 0.51 |
| E | 2.0 | 0.514E+02 | 0.333E+02 | 71. | 70. | 43. | 0.9064 | 0.9580 | 0.2380 | 0.15 |
| H | HZ | 0.356E+02 | 0.230E+02 | 69. | 72. | 72. | 0.9107 | 0.9582 | 139.80 | 0.17 |
| E | 2.0 | 0.444E+02 | 0.391E+02 | 11. | 73. | 13. | 0.8821 | 0.9150 | 0.2486 | 0.25 |
| H | HZ | 0.287E+02 | 0.202E+02 | 73. | 11. | 99. | 0.8891 | 0.9186 | 173.30 | 0.26 |
| E | 2.0 | 0.777E+02 | 0.346E+02 | 75. | 74. | 42. | 0.9254 | 0.9337 | 0.3436 | 0.22 |
| H | HZ | 0.388E+02 | 0.293E+02 | 76. | 72. | 43. | 0.9298 | 0.9368 | 142.20 | 0.16 |

AVERAGE #  8
SHASTO  200 HZ  22-OCT-83  T40N R2W S18 NW
NSAMP = 1024  SI = 0.0050  TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.495E+02 | 0.391E+02 | 75. | 6. | 97. | 0.8968 | 0.9330 | 0.4012 | 0.24 |
| H | HZ | 0.371E+02 | 0.197E+02 | 74. | 6. | 99. | 0.9037 | 0.9357 | 171.70 | 0.25 |
| E | 3.0 | 0.536E+02 | 0.525E+02 | 85. | 66. | 166. | 0.9151 | 0.9490 | 0.1855 | 0.18 |
| H | HZ | 0.369E+02 | 0.173E+02 | 75. | 74. | 124. | 0.9337 | 0.9555 | 57.30 | 0.09 |
| E | 7.7 | 0.122E+03 | 0.100E+03 | 75. | 77. | 56. | 0.9828 | 0.9845 | 0.3206 | 0.13 |
| H | HZ | 0.108E+03 | 0.933E+02 | 75. | 76. | 63. | 0.9830 | 0.9847 | 118.60 | 0.12 |
| E | 14.3 | 0.172E+03 | 0.137E+03 | 76. | 71. | 103. | 0.8910 | 0.9212 | 0.3722 | 0.13 |
| H | HZ | 0.126E+03 | 0.848E+02 | 76. | 71. | 104. | 0.8913 | 0.9214 | 160.70 | 0.13 |
| E | 20.0 | 0.208E+03 | 0.148E+03 | 70. | 67. | 76. | 0.8479 | 0.9319 | 0.4383 | 0.15 |
| H | HZ | 0.154E+03 | 0.691E+02 | 68. | 69. | 90. | 0.8533 | 0.9330 | 174.90 | 0.17 |
| E | 26.3 | 0.226E+03 | 0.176E+03 | 66. | 67. | 64. | 0.9157 | 0.9277 | 0.4550 | 0.14 |
| H | HZ | 0.161E+03 | 0.125E+03 | 66. | 67. | 77. | 0.9160 | 0.9278 | 157.70 | 0.14 |
| E | 31.2 | 0.252E+03 | 0.197E+03 | 65. | 65. | 70. | 0.9648 | 0.9239 | 0.4185 | 0.14 |
| H | HZ | 0.178E+03 | 0.170E+03 | 66. | 64. | 124. | 0.9650 | 0.9253 | 137.80 | 0.11 |
| E | 40.0 | 0.275E+03 | 0.157E+03 | 62. | 55. | 83. | 0.9526 | 0.8773 | 0.5188 | 0.17 |
| H | HZ | 0.163E+03 | 0.114E+03 | 60. | 57. | 114. | 0.9537 | 0.8843 | 149.10 | 0.12 |

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 26
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 10.0000 | | 0.0000 |
| | | 1000.0000 | |
| 2 | 10.0000 | | 1000.0000 |
| | | 2000.0000 | |
| 3 | 0.2000 | | 3000.0000 |
| | | 4000.0000 | |
| 4 | 2.0000 | | 7000.0000 |

FREQUENCY RANGE ( 0.0020 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 120.3511 | | 0.0000 |
| | | 1130.3655 | |
| 2 | 2.9601 | | 1130.3655 |
| | | 5836.8370 | |
| 3 | 0.1424 | | 6967.2025 |
| | | 3404.0387 | |
| 4 | 2.2397 | | 10371.2412 |

MEAN PERCENT VARIATION IS 23.8625

ERROR ANALYSIS

R-SQUARED = 0.999

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 25 | 69653.846 | 2786.154 | 0.240 |
| MODEL | 6 | 69601.355 | 11600.226 | 148872.154 |
| RESID | 19 | 1.480 | 0.078 | |

STANDARD ERROR = 0.279

DTEST FOR MEANS = -0.000

NOISE TO SIGNAL RATIO = 0.259 PERCENT

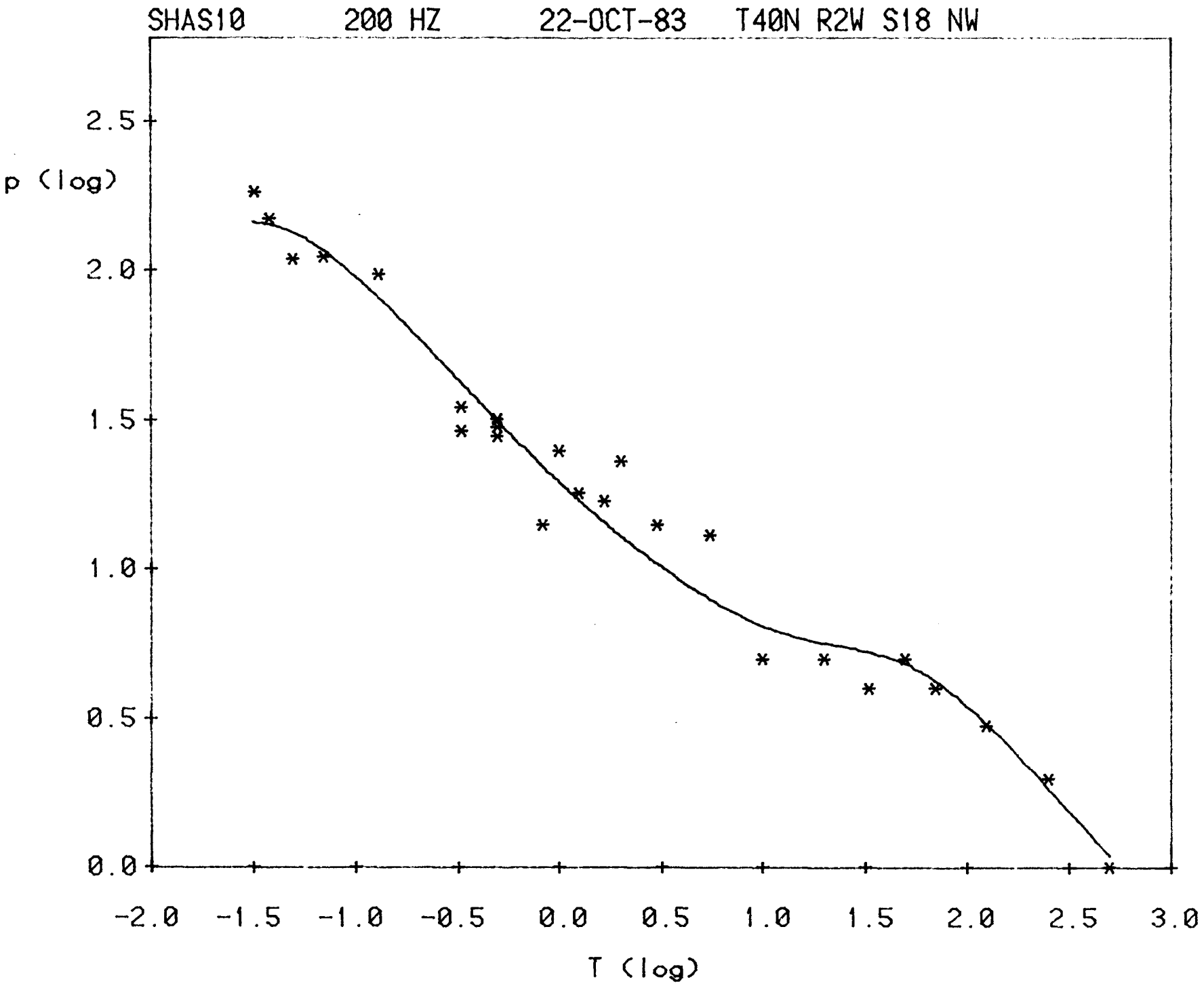
SHAS10 200 HZ 22-OCT-83 T40N R2W S18 NW

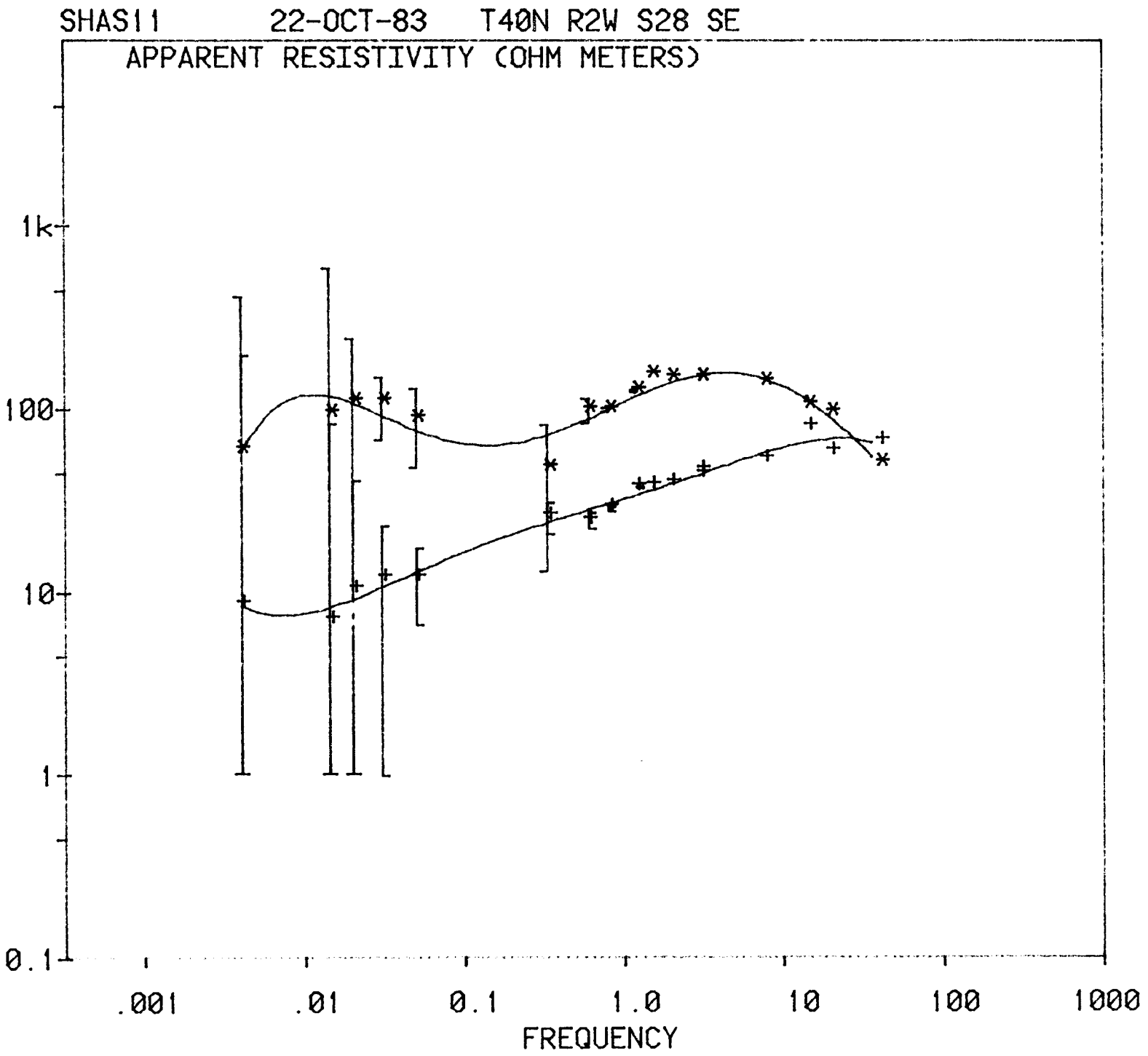
ERROR STRUCTURE OF FITTED MODEL

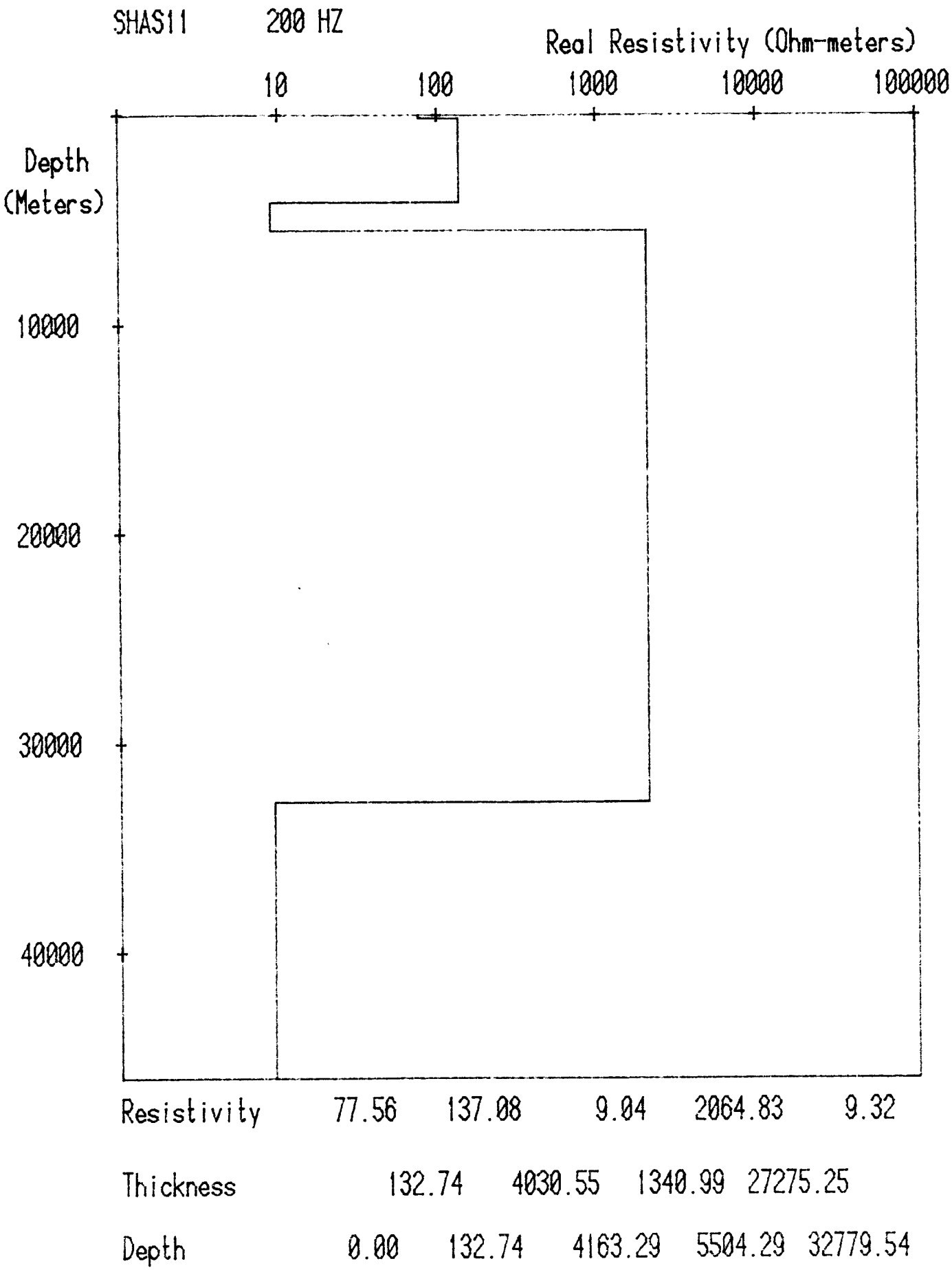
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 500.000 | 1.000 | 1.101 | -0.101 | -9.578 |
| 2 | 250.000 | 2.000 | 1.871 | 0.129 | 6.639 |
| 3 | 125.000 | 3.000 | 3.111 | -0.111 | -3.620 |
| 4 | 70.000 | 4.000 | 4.292 | -0.292 | -7.050 |
| 5 | 50.000 | 5.000 | 4.872 | 0.128 | 2.595 |
| 6 | 33.000 | 4.000 | 5.348 | -1.348 | -28.841 |
| 7 | 20.000 | 5.000 | 5.628 | -0.628 | -11.816 |
| 8 | 10.000 | 5.000 | 6.312 | -1.312 | -23.203 |
| 9 | 5.500 | 13.000 | 7.849 | 5.151 | 49.418 |
| 10 | 3.000 | 14.000 | 10.430 | 3.570 | 29.224 |
| 11 | 2.000 | 23.000 | 12.935 | 10.065 | 56.018 |
| 12 | 1.670 | 17.000 | 14.335 | 2.665 | 17.007 |
| 13 | 1.250 | 18.000 | 17.059 | 0.941 | 5.371 |
| 14 | 1.000 | 25.000 | 19.639 | 5.361 | 24.021 |
| 15 | 0.830 | 14.000 | 22.183 | -8.183 | -45.232 |
| 16 | 0.500 | 28.000 | 31.416 | -3.416 | -11.498 |
| 17 | 0.500 | 30.000 | 31.416 | -1.416 | -4.611 |
| 18 | 0.500 | 32.000 | 31.416 | 0.584 | 1.842 |
| 19 | 0.330 | 29.000 | 42.342 | -13.342 | -37.404 |
| 20 | 0.330 | 35.000 | 42.342 | -7.342 | -18.986 |
| 21 | 0.130 | 97.000 | 82.406 | 14.594 | 16.269 |
| 22 | 0.070 | 111.000 | 118.671 | -7.671 | -6.680 |
| 23 | 0.050 | 109.000 | 135.528 | -26.528 | -21.697 |
| 24 | 0.038 | 150.000 | 143.993 | 6.007 | 4.087 |
| 25 | 0.032 | 184.000 | 146.121 | 37.879 | 22.949 |
| 26 | 0.025 | 136.000 | 144.995 | -8.995 | -6.403 |

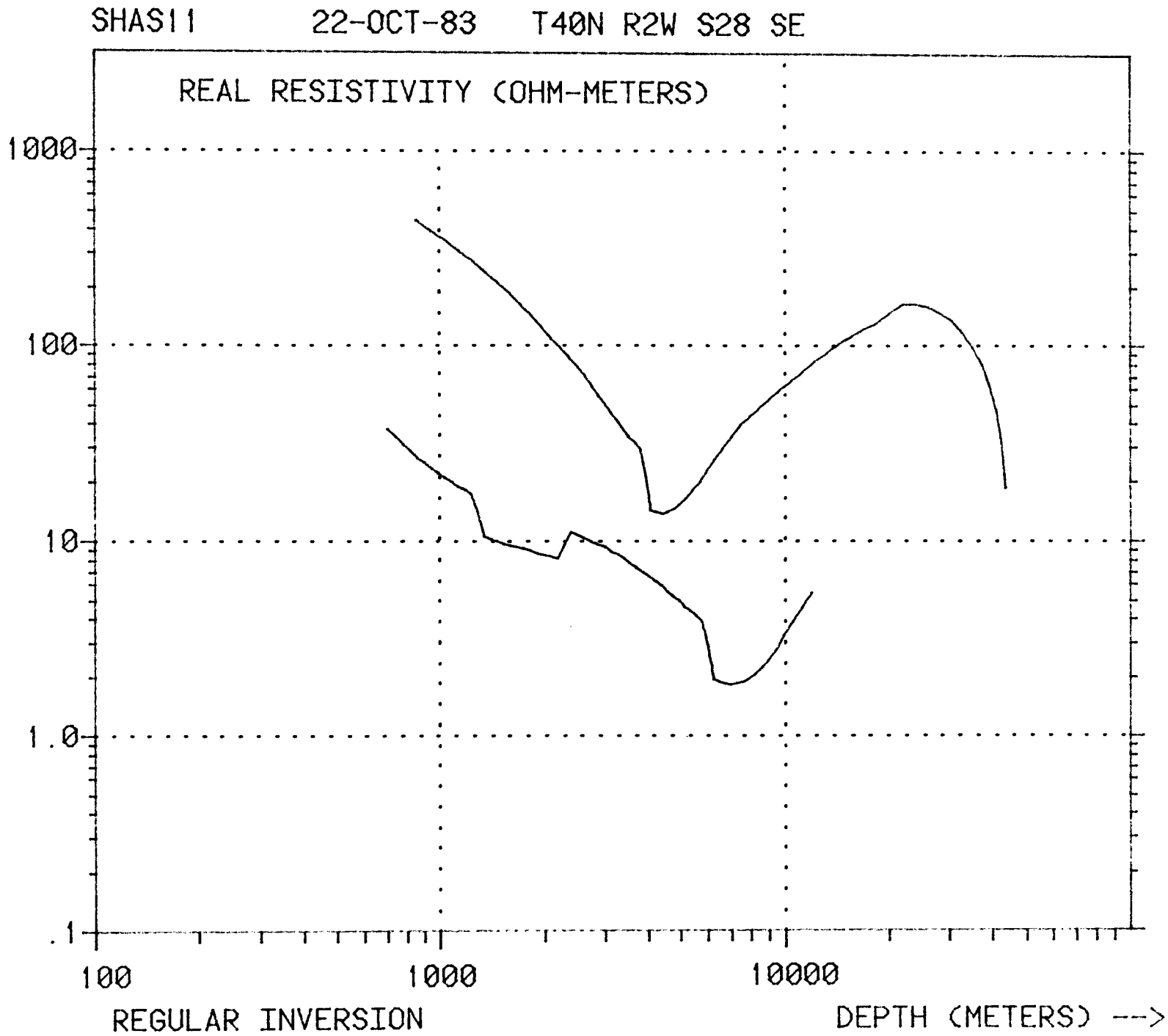
MEAN PERCENT ERROR = 23.5296

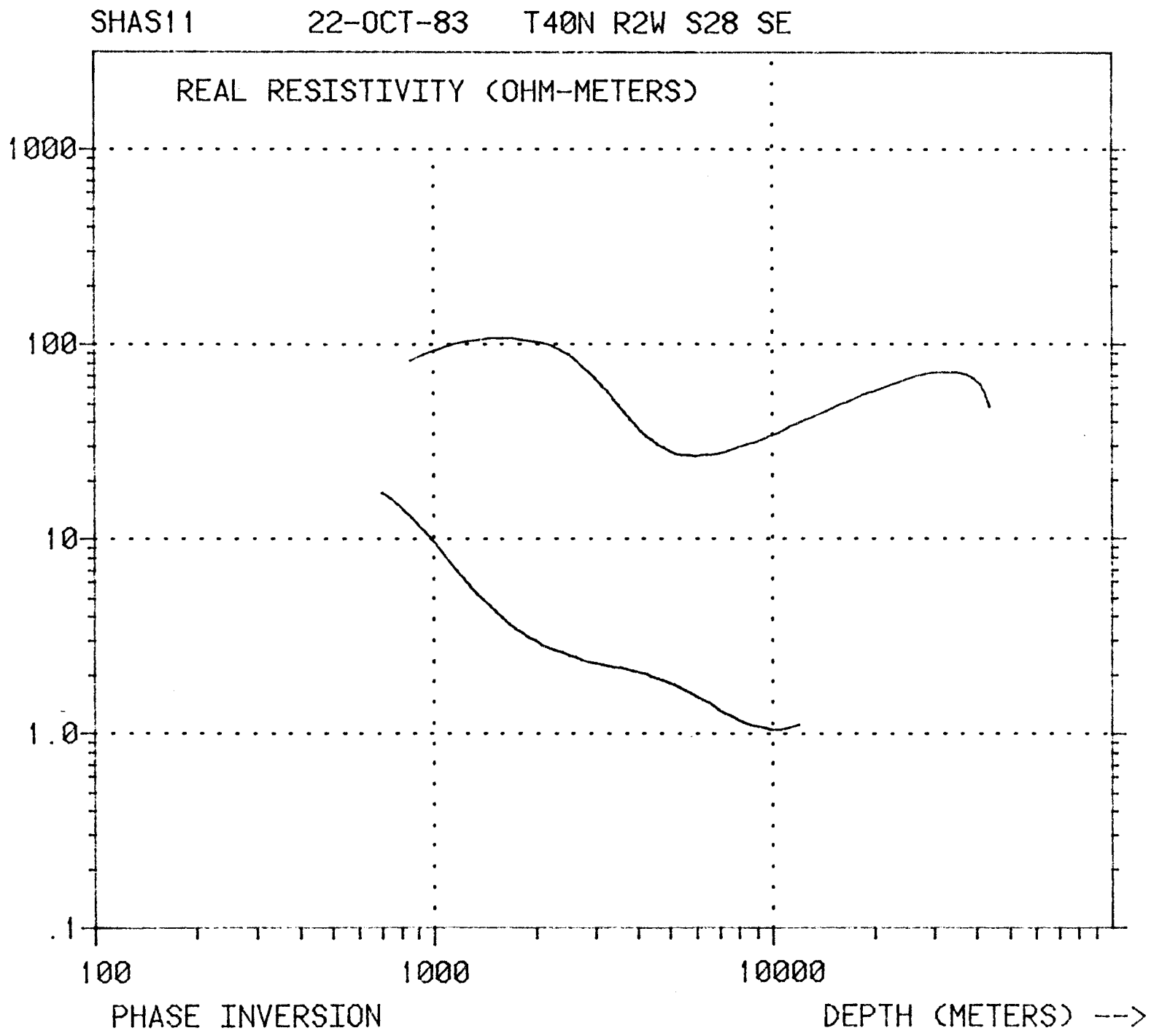
MAXIMUM PERCENT ERROR = 56.0194


SHAS10 200 HZ 22-OCT-83 T40N R2W S18 NW
p (log)
2.5
2.0
1.5
1.0
0.5
0.0
-2.0 -1.5 -1.0 -0.5 0.0 0.5 1.0 1.5 2.0 2.5 3.0
T (log)

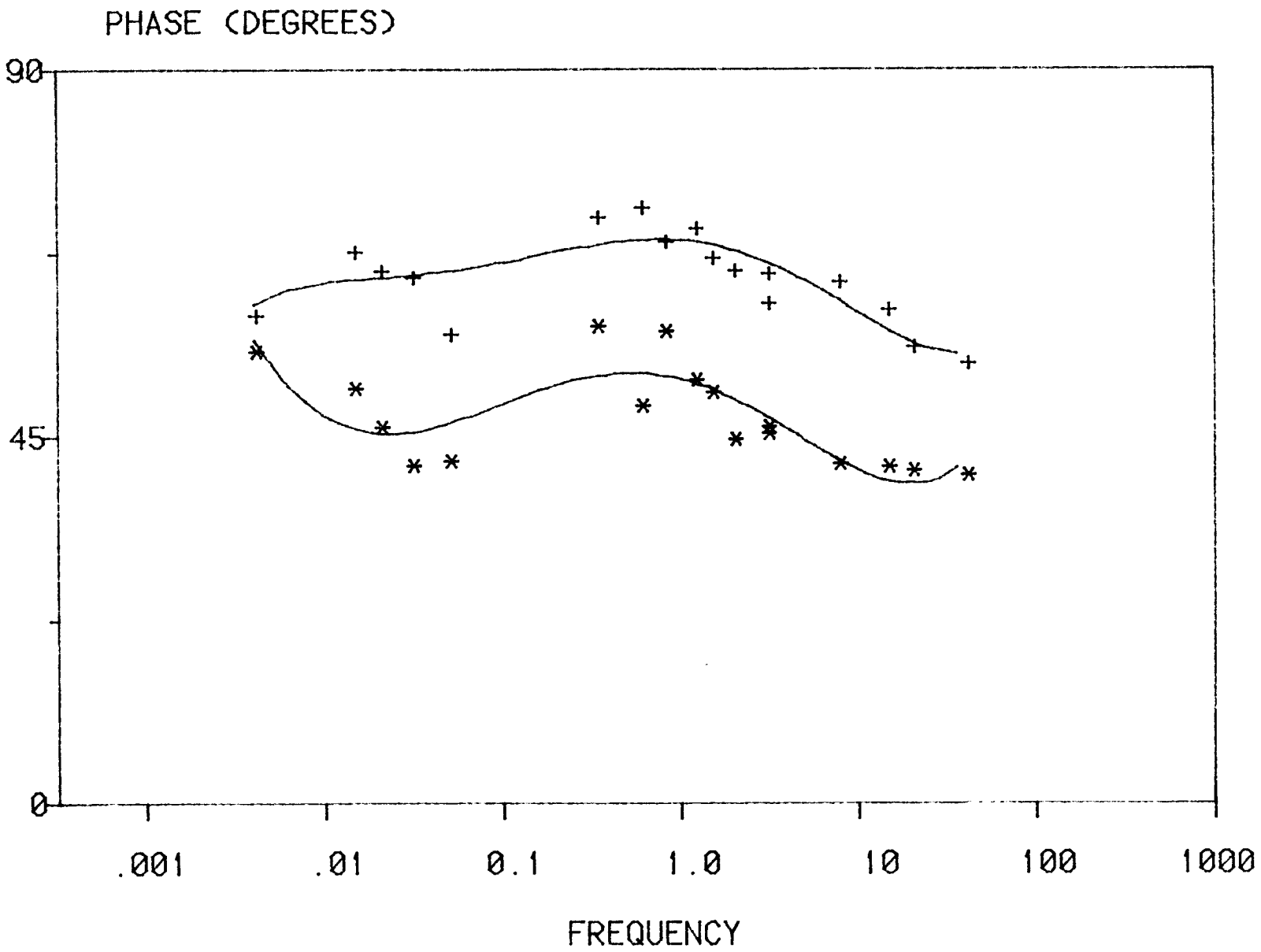

SHAS11 22-OCT-83 T40N R2W S28 SE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAS11
200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
Depth
(Meters)
10000
20000
30000
40000
Resistivity 77.56 137.08 9.04 2064.83 9.32
Thickness 132.74 4030.55 1340.99 27275.25
Depth 0.00 132.74 4163.29 5504.29 32779.54


SHAS11 22-OCT-83 T40N R2W S28 SE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS11 22-OCT-83 T40N R2W S28 SE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS11 22-OCT-83 T40N R2W S28 SE



THE SITE IS: SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 11.83 | 20.19 | 1 | 183.04 | 345.44 |
| 0.0020 | 12.20 | 75.98 | 2 | 73.71 | 477.82 |
| 0.0040 | 8.37 | 58.42 | 3 | 29.25 | 132.84 |
| 0.0080 | 24.86 | 84.38 | 4 | 10.69 | 39.63 |
| 0.0143 | 6.79 | 91.72 | 5 | 5.28 | 38.74 |
| 0.0200 | 10.07 | 105.99 | 6 | 4.87 | 33.54 |
| 0.0303 | 11.66 | 105.65 | 7 | 2.36 | 14.35 |
| 0.0500 | 11.72 | 85.35 | 8 | 0.78 | 2.54 |
| 0.1000 | 1.74 | 16.88 | 9 | 0.13 | 1.03 |
| 0.1818 | 6.62 | 27.89 | 10 | 0.01 | 0.26 |
| 0.3333 | 24.97 | 46.12 | 11 | 0.00 | 0.00 |
| 0.5000 | 52.57 | 146.12 | 12 | 0.03 | 0.03 |
| 0.5988 | 23.83 | 95.09 | 13 | 0.03 | 0.06 |
| 0.8000 | 27.82 | 95.06 | 14 | 0.03 | 0.03 |
| 1.0000 | 9.79 | 2.28 | 15 | 0.00 | 0.00 |
| 1.0000 | 10.55 | 66.39 | 16 | 0.01 | 0.03 |
| 1.2048 | 36.43 | 122.10 | 17 | 0.02 | 0.02 |
| 1.4925 | 36.64 | 147.97 | 18 | 0.01 | 0.01 |
| 2.0000 | 37.97 | 143.82 | 19 | 0.01 | 0.01 |
| 2.0000 | 29.77 | 140.01 | 20 | 0.00 | 0.00 |
| 2.0000 | 52.71 | 154.42 | 21 | 0.01 | 0.01 |
| 3.0303 | 45.01 | 143.04 | 22 | 0.00 | 0.00 |
| 3.0303 | 42.40 | 141.56 | 23 | 0.00 | 0.01 |
| 7.6923 | 51.45 | 134.49 | 24 | 0.01 | 0.01 |
| 14.2857 | 76.37 | 101.06 | 25 | 0.00 | 0.00 |
| 20.0000 | 56.58 | 91.71 | 26 | 0.00 | 0.00 |
| 26.3158 | 56.77 | 211.39 | 27 | 0.00 | 0.00 |
| 31.2500 | 54.81 | 229.40 | 28 | 0.00 | 0.00 |
| 40.0000 | 63.72 | 48.44 | 29 | 0.00 | 0.00 |

AVERAGE # 8

SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE

NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.206E+02 | 0.142E+02 | 9. | 43. | 25. | 0.9603 | 0.9199 | 0.1419 | 1.54 |
| H | SEC | 0.198E+02 | 0.941E+01 | 89. | 43. | 25. | 0.9631 | 0.9223 | 67.60 | 1.50 |
| E | 500.0 | 0.763E+02 | 0.165E+02 | 45. | 1. | 25. | 0.9949 | 0.9687 | 0.1144 | 0.27 |
| H | SEC | 0.756E+02 | 0.792E+01 | 47. | 1. | 25. | 0.9955 | 0.9764 | 59.20 | 0.29 |
| E | 250.0 | 0.559E+02 | 0.132E+02 | 52. | 64. | 25. | 0.9867 | 0.8898 | 0.1103 | 0.19 |
| H | SEC | 0.609E+02 | 0.351E+01 | 60. | 57. | 25. | 0.9896 | 0.9276 | 47.50 | 0.10 |
| E | 125.0 | 0.815E+02 | 0.471E+02 | 45. | 67. | 25. | 0.9827 | 0.7265 | 0.1239 | 0.35 |
| H | SEC | 0.872E+02 | 0.259E+01 | 57. | 60. | 25. | 0.9906 | 0.8873 | 35.50 | 0.10 |
| E | 70.0 | 0.926E+02 | 0.882E+01 | 51. | 67. | 25. | 0.9955 | 0.9538 | 0.1872 | 0.07 |
| H | SEC | 0.909E+02 | 0.476E+01 | 51. | 68. | 25. | 0.9960 | 0.9628 | 34.80 | 0.02 |
| E | 50.0 | 0.110E+03 | 0.142E+02 | 48. | 64. | 25. | 0.9963 | 0.9559 | 0.2107 | 0.10 |
| H | SEC | 0.102E+03 | 0.595E+01 | 45. | 67. | 25. | 0.9966 | 0.9687 | 33.60 | 0.05 |
| E | 33.0 | 0.110E+03 | 0.147E+02 | 43. | 63. | 25. | 0.9942 | 0.9390 | 0.2927 | 0.08 |
| H | SEC | 0.101E+03 | 0.863E+01 | 40. | 66. | 25. | 0.9945 | 0.9483 | 25.80 | 0.04 |
| E | 20.0 | 0.887E+02 | 0.141E+02 | 41. | 59. | 25. | 0.9791 | 0.9262 | 0.3573 | 0.02 |
| H | SEC | 0.820E+02 | 0.934E+01 | 43. | 57. | 25. | 0.9796 | 0.9296 | 26.10 | 0.05 |

AVERAGE # 8
SEAS11 200 HZ 22-OCT-83 T40N R2W S28 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.260E+02 | 0.193E+01 | 40. | 56. | 25. | 0.7421 | 0.8157 | 0.3346 | 0.26 |
| H | SEC | 0.773E+01 | 0.155E+01 | 37. | 62. | 25. | 0.7483 | 0.8376 | 22.40 | 0.19 |
| E | 5.5 | 0.325E+02 | 0.102E+02 | 39. | 1. | 25. | 0.9345 | 0.8061 | 0.2462 | 0.43 |
| H | SEC | 0.233E+02 | 0.308E+01 | 40. | 4. | 25. | 0.9423 | 0.8250 | 36.30 | 0.45 |
| E | 3.0 | 0.621E+02 | 0.358E+02 | 64. | 68. | 25. | 0.8321 | 0.8522 | 0.2335 | 0.16 |
| H | SEC | 0.301E+02 | 0.141E+02 | 54. | 76. | 25. | 0.8482 | 0.8641 | 19.60 | 0.17 |
| E | 2.0 | 0.201E+03 | 0.828E+02 | 67. | 63. | 32. | 0.8087 | 0.8184 | 0.3209 | 0.03 |
| H | SEC | 0.912E+02 | 0.224E+02 | 66. | 68. | 32. | 0.8263 | 0.8326 | 39.60 | 0.19 |
| E | 1.7 | 0.108E+03 | 0.275E+02 | 51. | 72. | 32. | 0.9423 | 0.9082 | 0.1191 | 0.13 |
| H | SEC | 0.821E+02 | 0.201E+02 | 48. | 75. | 32. | 0.9444 | 0.9108 | -0.50 | 0.20 |
| E | 1.2 | 0.102E+03 | 0.320E+02 | 58. | 69. | 32. | 0.9549 | 0.9442 | 0.1147 | 0.07 |
| H | SEC | 0.877E+02 | 0.236E+02 | 58. | 69. | 32. | 0.9549 | 0.9445 | 152.40 | 0.05 |
| E | 1.0 | 0.339E+01 | 0.123E+02 | 70. | 65. | 32. | 0.7830 | 0.8036 | 0.1675 | 0.72 |
| H | HZ | 0.116E+01 | 0.726E+01 | 70. | 65. | 32. | 0.7874 | 0.8118 | 69.00 | 0.66 |

AVERAGE #  8

SMAS11  200 HZ  22-OCT-83  T40N R2W S28 SE

NSAMP = 1024  SI = 0.0050  TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.840E+02 | 0.139E+02 | 57. | 68. | 32. | 0.9146 | 0.8219 | 0.1043 | 0.07 |
| H | HZ | 0.488E+02 | 0.718E+01 | 63. | 62. | 32. | 0.9167 | 0.8259 | 69.50 | 0.11 |
| E | 1.2 | 0.139E+03 | 0.395E+02 | 52. | 71. | 32. | 0.9302 | 0.9627 | 0.1360 | 0.10 |
| H | HZ | 0.105E+03 | 0.334E+02 | 53. | 70. | 32. | 0.9304 | 0.9629 | 151.50 | 0.09 |
| E | 1.5 | 0.182E+03 | 0.388E+02 | 51. | 67. | 32. | 0.8976 | 0.9538 | 0.1897 | 0.03 |
| H | HZ | 0.114E+03 | 0.345E+02 | 51. | 67. | 32. | 0.8982 | 0.9555 | 147.80 | 0.02 |
| E | 2.0 | 0.164E+03 | 0.396E+02 | 45. | 66. | 32. | 0.9436 | 0.9561 | 0.2737 | 0.02 |
| H | HZ | 0.124E+03 | 0.363E+02 | 45. | 66. | 32. | 0.9443 | 0.9571 | 140.40 | 0.03 |
| E | 2.0 | 0.188E+03 | 0.428E+02 | 56. | 63. | 32. | 0.8406 | 0.7982 | 0.1969 | 0.08 |
| H | HZ | 0.918E+02 | 0.168E+02 | 52. | 69. | 32. | 0.8460 | 0.8035 | 154.60 | 0.14 |
| E | 2.0 | 0.199E+03 | 0.571E+02 | 56. | 62. | 32. | 0.8807 | 0.9195 | 0.1574 | 0.09 |
| H | HZ | 0.110E+03 | 0.484E+02 | 55. | 64. | 32. | 0.8841 | 0.9250 | 124.70 | 0.04 |

AVERAGE # 8

SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE

NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.211E+03 | 0.540E+02 | 43. | 56. | 32. | 0.7618 | 0.9448 | 0.3372 | 0.77 |
| H | HZ | 0.755E+02 | 0.360E+02 | 48. | 74. | 32. | 0.8315 | 0.9577 | 132.00 | 1.97 |
| E | 3.0 | 0.161E+03 | 0.445E+02 | 47. | 61. | 32. | 0.9500 | 0.9484 | 0.3892 | 0.02 |
| H | HZ | 0.122E+03 | 0.403E+02 | 46. | 62. | 32. | 0.9512 | 0.9496 | 130.00 | 0.01 |
| E | 7.7 | 0.146E+03 | 0.578E+02 | 42. | 64. | 32. | 0.9524 | 0.9486 | 0.1080 | 0.02 |
| H | HZ | 0.123E+03 | 0.451E+02 | 42. | 64. | 32. | 0.9525 | 0.9487 | 69.10 | 0.02 |
| E | 14.3 | 0.114E+03 | 0.830E+02 | 42. | 61. | 32. | 0.9486 | 0.9557 | 0.1159 | 0.05 |
| H | HZ | 0.883E+02 | 0.697E+02 | 42. | 61. | 32. | 0.9488 | 0.9558 | 46.90 | 0.05 |
| E | 20.0 | 0.103E+03 | 0.641E+02 | 41. | 56. | 32. | 0.9365 | 0.9377 | 0.1103 | 0.04 |
| H | HZ | 0.807E+02 | 0.491E+02 | 41. | 56. | 32. | 0.9366 | 0.9377 | 59.90 | 0.05 |
| E | 26.3 | 0.362E+03 | 0.674E+02 | 43. | 58. | 32. | 0.8185 | 0.8181 | 0.1214 | 0.13 |
| H | HZ | 0.605E+02 | 0.462E+02 | 43. | 57. | 32. | 0.8602 | 0.8599 | 61.90 | 0.09 |
| E | 31.2 | 0.379E+03 | 0.650E+02 | 48. | 58. | 32. | 0.8141 | 0.7849 | 0.1329 | 0.06 |
| H | HZ | 0.801E+02 | 0.446E+02 | 47. | 58. | 32. | 0.8564 | 0.8306 | 59.70 | 0.04 |
| E | 40.0 | 0.633E+02 | 0.729E+02 | 40. | 54. | 32. | 0.9248 | 0.9228 | 0.1476 | 0.12 |
| H | HZ | 0.336E+02 | 0.545E+02 | 41. | 54. | 32. | 0.9261 | 0.9245 | 63.10 | 0.11 |

SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE

THE NUMBER OF LAYERS = 5
THE NUMBER OF FREQUENCIES TAKEN = 20
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 50.0000 | | 0.0000 |
| | | 700.0000 | |
| 2 | 100.0000 | | 700.0000 |
| | | 2600.0000 | |
| 3 | 25.0000 | | 3300.0000 |
| | | 7200.0000 | |
| 4 | 70.0000 | | 10500.0000 |
| | | 35000.0000 | |
| 5 | 20.0000 | | 45500.0000 |

FREQUENCY RANGE ( 0.0040 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 77.5627 | | 0.0000 |
| | | 132.7440 | |
| 2 | 137.0876 | | 132.7440 |
| | | 4030.5546 | |
| 3 | 9.0432 | | 4163.2986 |
| | | 1340.9941 | |
| 4 | 2064.8364 | | 5504.2927 |
| | | 27275.2578 | |
| 5 | 9.3272 | | 32779.5506 |

MEAN PERCENT VARIATION IS 29.6105

ERROR ANALYSIS

R-SQUARED = 0.990

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 19 | 43070.950 | 2266.892 | 0.425 |
| MODEL | 8 | 42646.644 | 5330.831 | 33440.029 |
| RESID | 11 | 1.754 | 0.159 | |

STANDARD ERROR = 0.399

DTEST FOR MEANS = 0.000

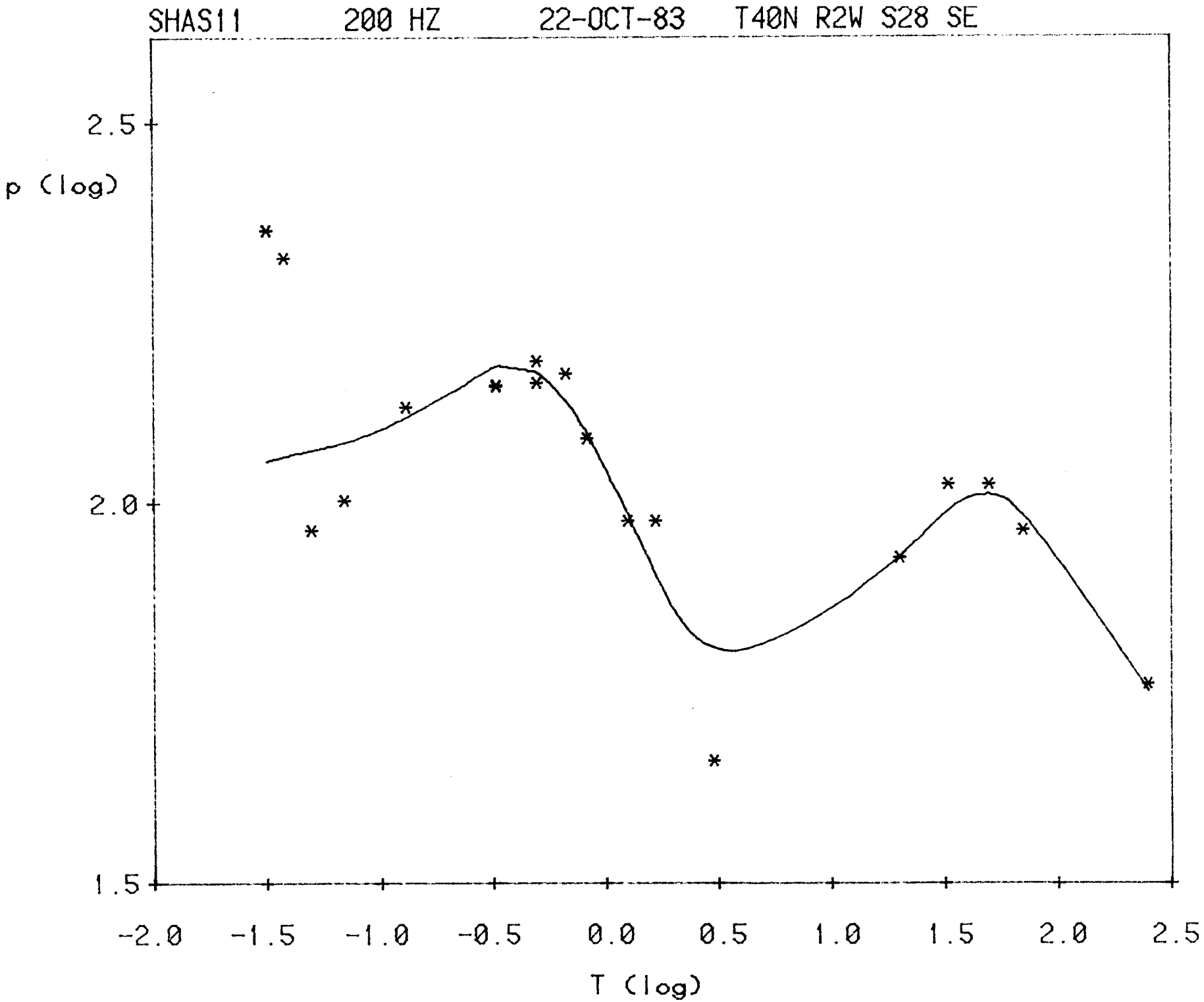
NOISE TO SIGNAL RATIO = 0.547 PERCENT

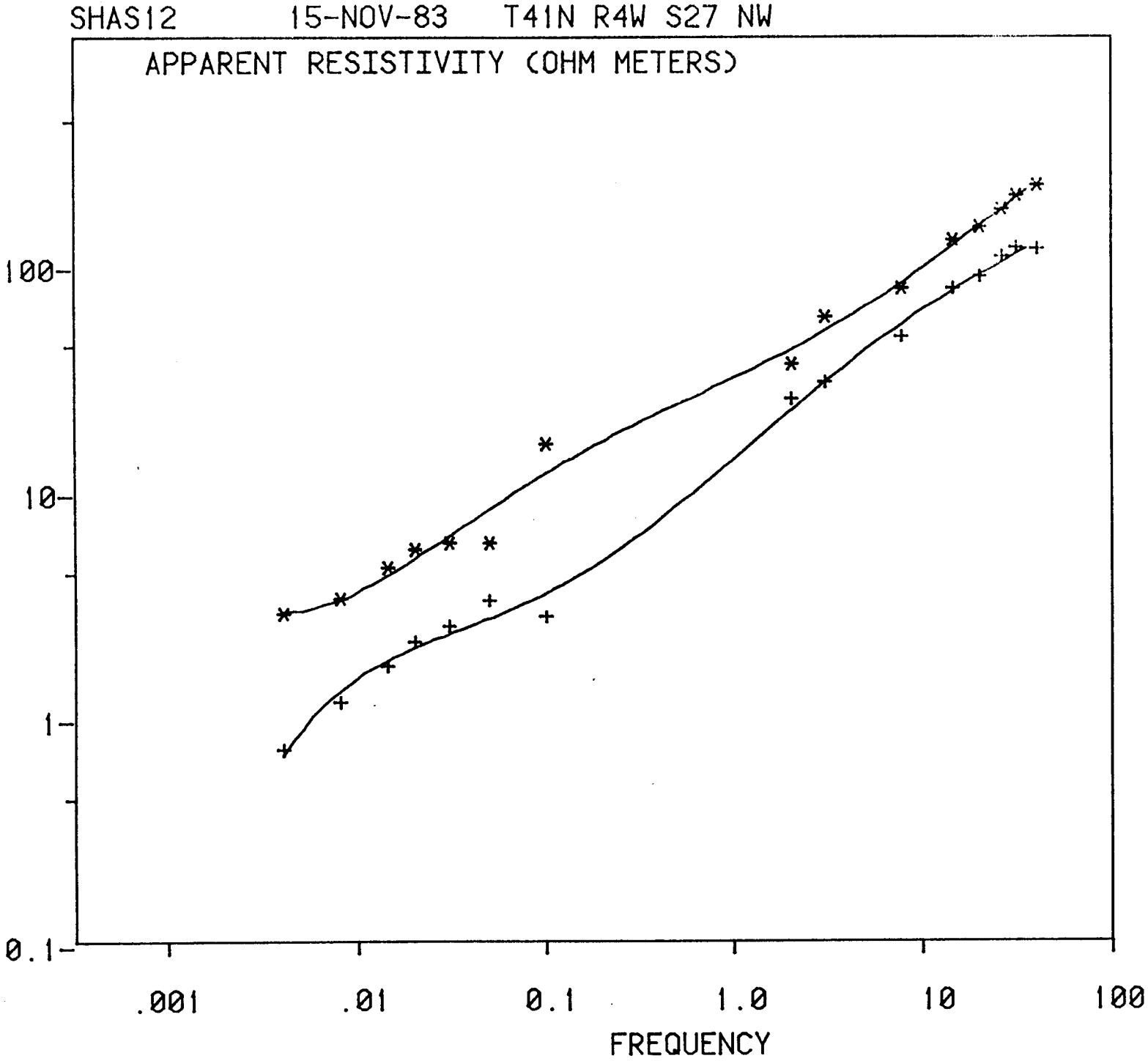
SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE

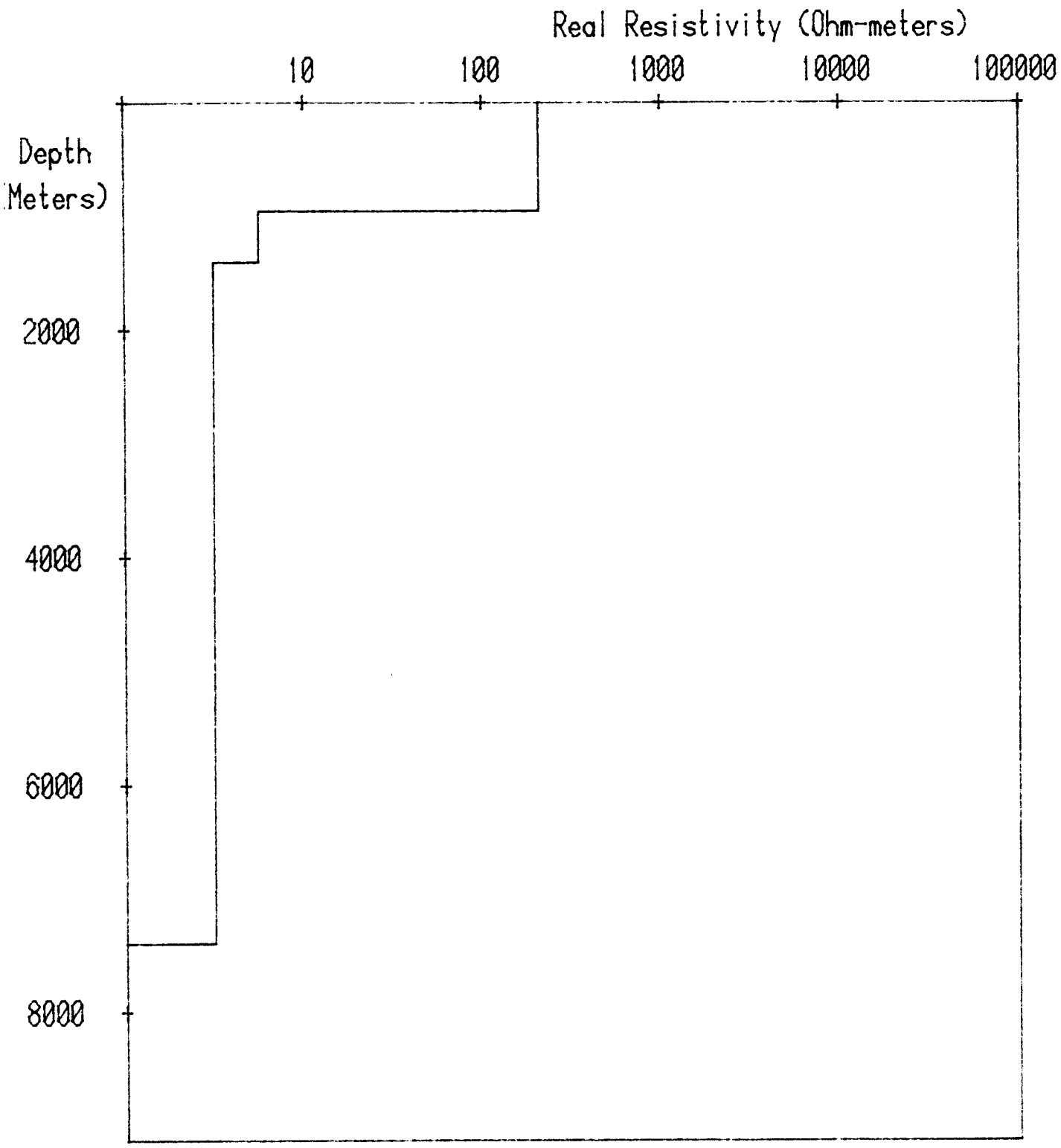
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 250.000 | 58.000 | 56.841 | 1.159 | 2.019 |
| 2 | 70.000 | 92.000 | 99.709 | -7.709 | -8.042 |
| 3 | 50.000 | 106.000 | 104.306 | 1.694 | 1.611 |
| 4 | 33.000 | 106.000 | 99.891 | 6.109 | 5.934 |
| 5 | 20.000 | 85.000 | 83.072 | 1.928 | 2.294 |
| 6 | 3.000 | 46.000 | 56.881 | -10.881 | -21.153 |
| 7 | 1.670 | 95.000 | 80.089 | 14.911 | 17.033 |
| 8 | 1.250 | 95.000 | 97.288 | -2.288 | -2.380 |
| 9 | 0.830 | 122.000 | 124.402 | -2.402 | -1.950 |
| 10 | 0.670 | 148.000 | 137.120 | 10.880 | 7.632 |
| 11 | 0.500 | 144.000 | 149.129 | -5.129 | -3.499 |
| 12 | 0.500 | 154.000 | 149.129 | 4.871 | 3.214 |
| 13 | 0.330 | 143.000 | 151.882 | -8.882 | -6.024 |
| 14 | 0.330 | 142.000 | 151.882 | -9.882 | -6.725 |
| 15 | 0.130 | 134.000 | 128.483 | 5.517 | 4.204 |
| 16 | 0.070 | 101.000 | 119.753 | -18.753 | -16.990 |
| 17 | 0.050 | 92.000 | 117.411 | -25.411 | -24.269 |
| 18 | 0.038 | 211.000 | 115.330 | 95.670 | 58.634 |
| 19 | 0.032 | 229.000 | 113.773 | 115.227 | 67.232 |
| 20 | 0.025 | 48.000 | 111.243 | -63.243 | -79.430 |

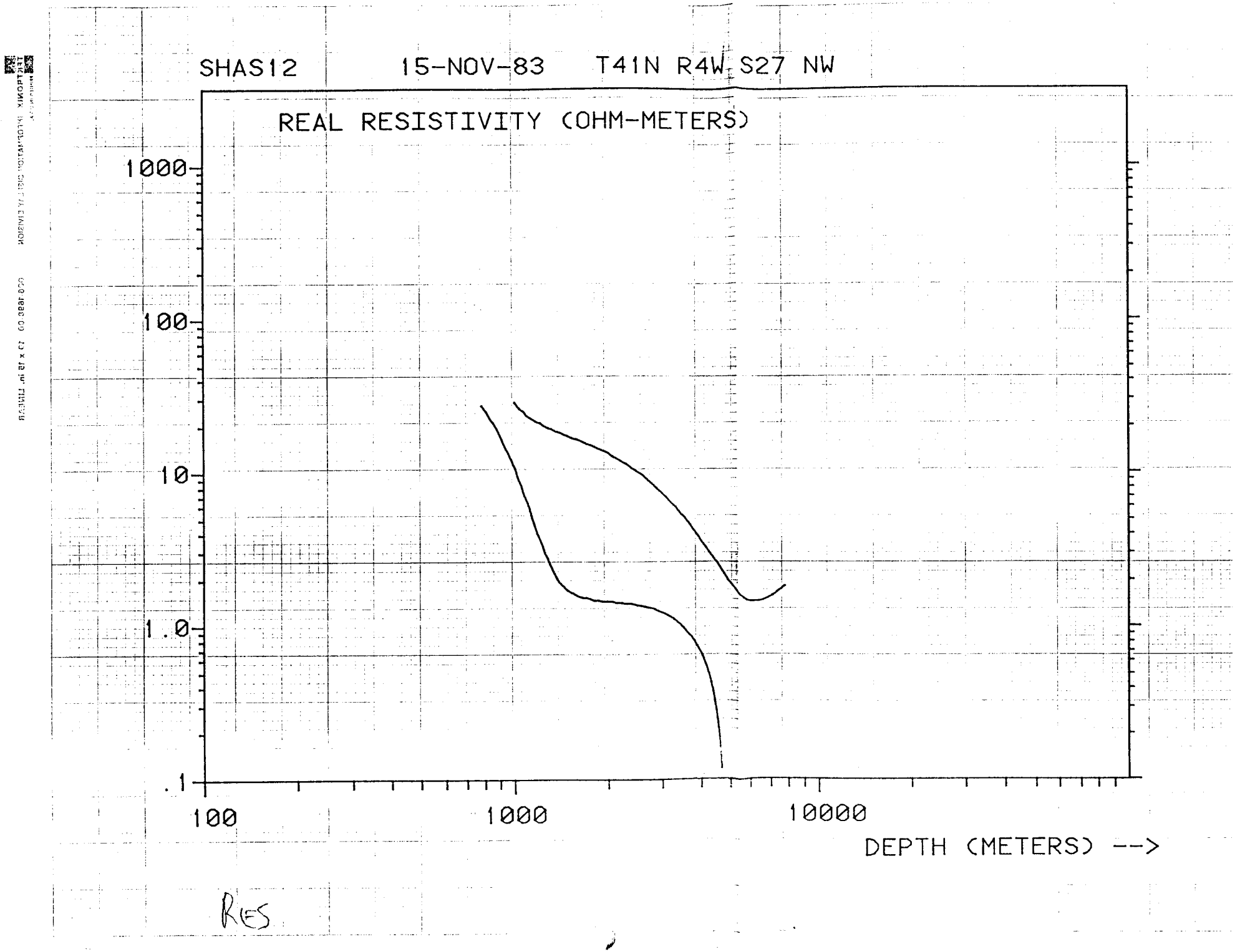
MEAN PERCENT ERROR = 28.4712
MAXIMUM PERCENT ERROR = 79.4299
MAX. ERROR OCCURED AT OBSERVATION 20


SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE
2.5
2.0
1.5
p (log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)

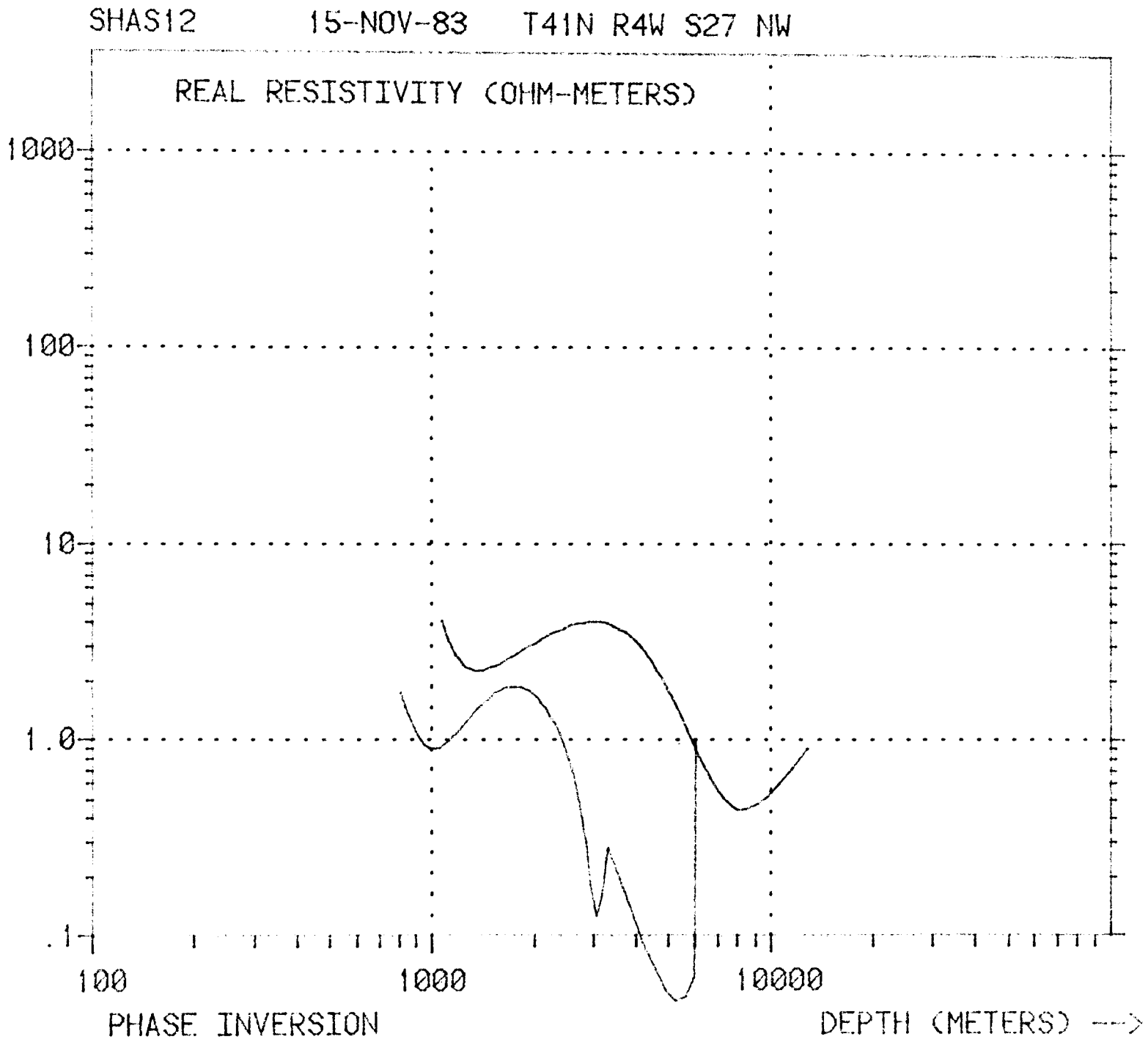

SHAS12 15-NOV-83 T41N R4W S27 NW
APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.001
.01
0.1
1.0
10
100
FREQUENCY



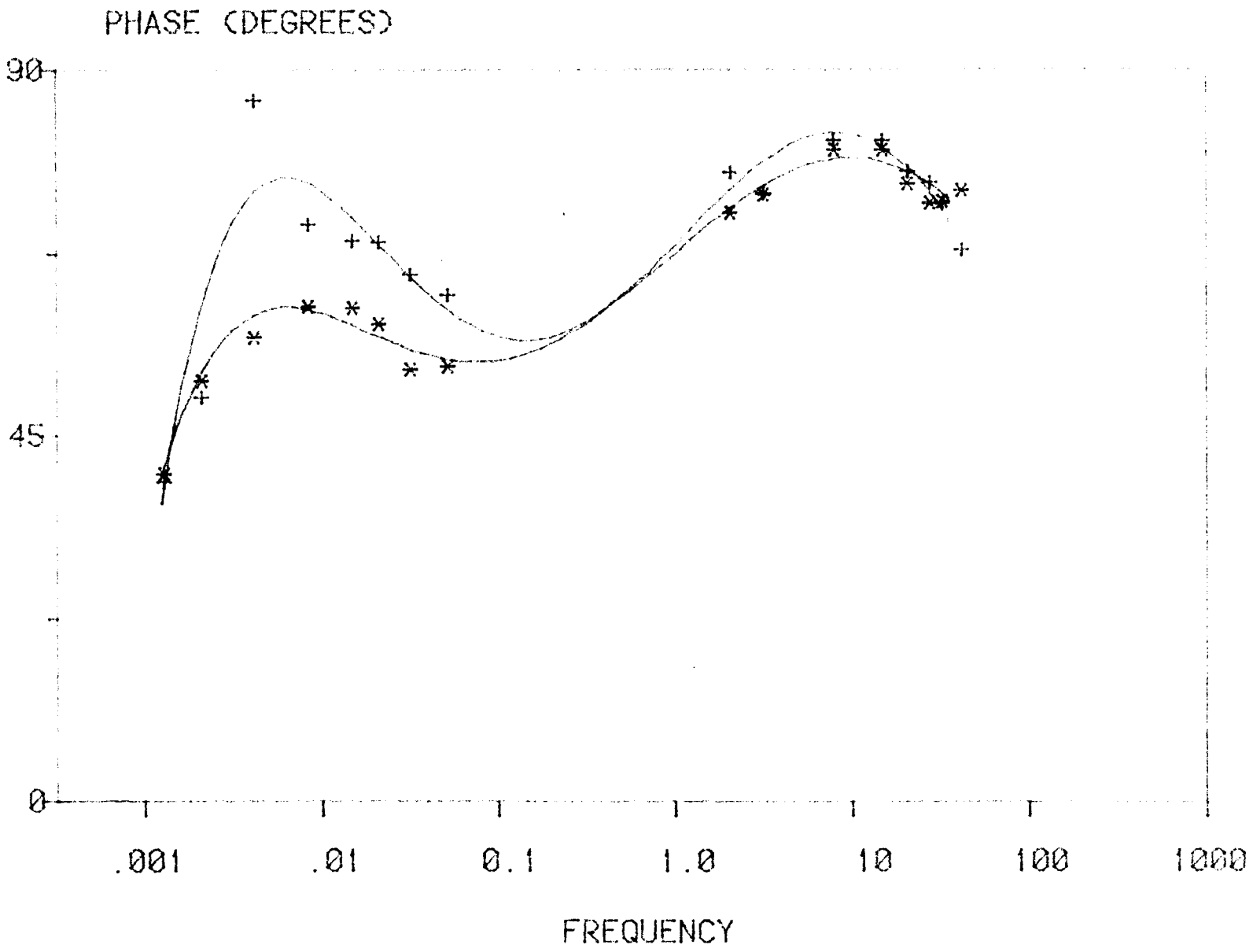

| | | | | |
|---|---|---|---|---|
| Resistivity | 209.96 | 5.63 | 3.13 | 0.00 |
| Thickness | | 953.74 | 442.05 | 5993.74 |
| Depth | 0.00 | 953.74 | 1395.80 | 7389.54 |


SHAS12 15-NOV-83 T41N R4W S27 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
DEPTH (METERS) -->

RES


SHAS12 15-NOV-83 T41N R4W S27 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS12 15-NOV-83 T41N R4W S27 NW



THE SITE IS: SEAS12 200 HZ 15-NOV-83 T41N R4W S27 NW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.22 | 6.03 | 1 | 70.10 | 791.61 |
| 0.0020 | 1.26 | 2.94 | 2 | 27.97 | 322.22 |
| 0.0040 | 0.71 | 2.83 | 3 | 24.21 | 136.15 |
| 0.0080 | 1.16 | 3.30 | 4 | 3.65 | 35.88 |
| 0.0143 | 1.68 | 4.55 | 5 | 3.24 | 11.59 |
| 0.0200 | 2.12 | 5.54 | 6 | 1.42 | 7.36 |
| 0.0303 | 2.53 | 5.86 | 7 | 1.03 | 5.11 |
| 0.0500 | 3.31 | 5.87 | 8 | 0.61 | 4.25 |
| 0.1000 | 13.30 | 1.27 | 9 | 0.05 | 0.05 |
| 0.1818 | 0.00 | 0.00 | 10 | 27.97 | 322.22 |
| 0.3333 | 0.00 | 0.00 | 11 | 24.21 | 136.15 |
| 0.5000 | 0.00 | 0.00 | 12 | 3.65 | 35.88 |
| 0.5988 | 0.00 | 0.00 | 13 | 3.24 | 11.59 |
| 0.8000 | 0.00 | 0.00 | 14 | 1.42 | 7.36 |
| 1.0000 | 0.00 | 0.00 | 15 | 1.03 | 5.11 |
| 1.0000 | 0.00 | 0.00 | 16 | 0.05 | 0.05 |
| 1.2048 | 0.00 | 0.00 | 17 | 27.97 | 322.22 |
| 1.4925 | 0.00 | 0.00 | 18 | 24.21 | 136.15 |
| 2.0000 | 0.00 | 0.00 | 19 | 3.65 | 35.88 |
| 2.0000 | 29.03 | 31.92 | 20 | 0.00 | 0.00 |
| 2.0000 | 0.00 | 0.00 | 21 | 1.42 | 7.36 |
| 3.0303 | 46.63 | 39.79 | 22 | 0.00 | 0.00 |
| 3.0303 | 0.00 | 0.00 | 23 | 27.97 | 322.22 |
| 7.6923 | 47.30 | 77.08 | 24 | 0.00 | 0.00 |
| 14.2857 | 77.69 | 125.91 | 25 | 0.00 | 0.00 |
| 20.0000 | 87.68 | 145.52 | 26 | 0.00 | 0.00 |
| 26.3158 | 106.27 | 173.07 | 27 | 0.00 | 0.00 |
| 31.2500 | 118.68 | 200.64 | 28 | 0.00 | 0.00 |
| 40.0000 | 118.56 | 218.68 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SMAS12 200 HZ 15-NOV-83 T41N R4W S27 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGR | PHI MIN EES) | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.730E+01 | 0.352E+00 | 43. | 4. | 61. | 0.8034 | 0.9036 | 0.2067 | 0.91 |
| H | SEC | 0.476E+01 | 0.788E-01 | 45. | 18. | 61. | 0.8177 | 0.9061 | 141.10 | 0.87 |
| E | 500.0 | 0.352E+01 | 0.148E+01 | 50. | 49. | 61. | 0.9396 | 0.8909 | 0.1759 | 0.78 |
| H | SEC | 0.236E+01 | 0.104E+01 | 55. | 51. | 61. | 0.9434 | 0.8937 | 49.60 | 0.82 |
| E | 250.0 | 0.290E+01 | 0.855E+00 | 58. | 85. | 61. | 0.9670 | 0.9773 | 0.1230 | 0.31 |
| H | SEC | 0.275E+01 | 0.567E+00 | 58. | 85. | 61. | 0.9698 | 0.9790 | 32.00 | 0.32 |
| E | 125.0 | 0.340E+01 | 0.129E+01 | 61. | 71. | 61. | 0.9742 | 0.9758 | 0.1441 | 0.19 |
| H | SEC | 0.320E+01 | 0.104E+01 | 61. | 72. | 61. | 0.9749 | 0.9764 | 65.70 | 0.21 |
| E | 70.0 | 0.465E+01 | 0.185E+01 | 61. | 69. | 61. | 0.9844 | 0.9843 | 0.1877 | 0.14 |
| H | SEC | 0.445E+01 | 0.151E+01 | 61. | 70. | 61. | 0.9849 | 0.9848 | 70.30 | 0.16 |
| E | 50.0 | 0.561E+01 | 0.234E+01 | 59. | 69. | 61. | 0.9866 | 0.9898 | 0.2318 | 0.16 |
| H | SEC | 0.546E+01 | 0.190E+01 | 59. | 69. | 61. | 0.9872 | 0.9902 | 67.70 | 0.17 |
| E | 33.0 | 0.595E+01 | 0.264E+01 | 53. | 65. | 61. | 0.9881 | 0.9911 | 0.2613 | 0.13 |
| H | SEC | 0.578E+01 | 0.243E+01 | 53. | 65. | 61. | 0.9882 | 0.9912 | 65.10 | 0.14 |
| E | 20.0 | 0.592E+01 | 0.334E+01 | 54. | 63. | 61. | 0.9979 | 0.9962 | 0.3500 | 0.14 |
| H | SEC | 0.581E+01 | 0.328E+01 | 54. | 63. | 61. | 0.9979 | 0.9962 | 57.60 | 0.13 |

AVERAGE # 8
SHAS12 200 HZ 15-NOV-83 T41N R4W S27 NW
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

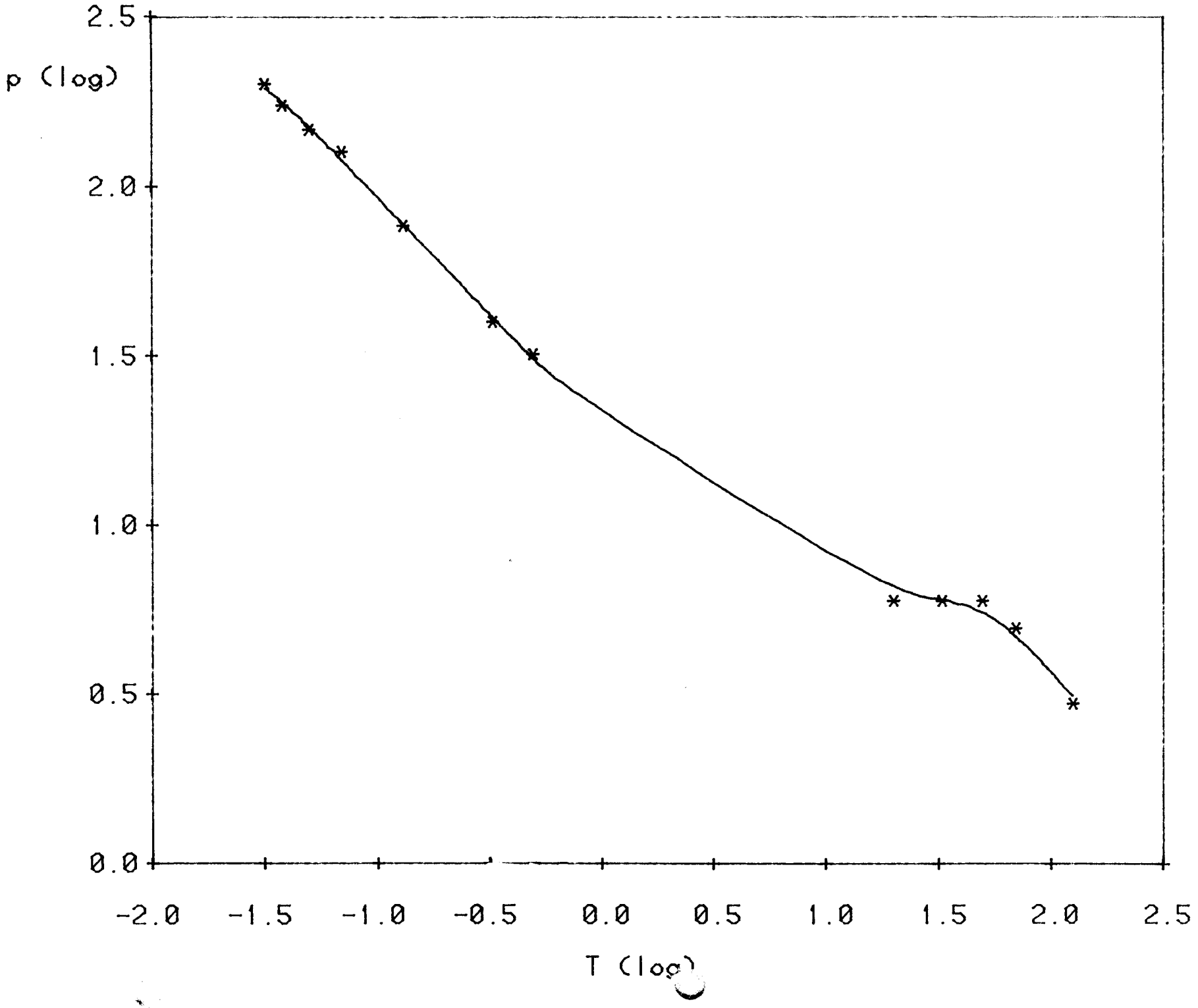
| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.127E+01 | 0.138E+02 | 14. | 9. | 61. | 0.9953 | 0.9934 | 0.1986 | 0.35 |
| H | SEC | 0.127E+01 | 0.128E+02 | 12. | 9. | 61. | 0.9954 | 0.9936 | 41.90 | 0.33 |
| E | 5.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.7 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |

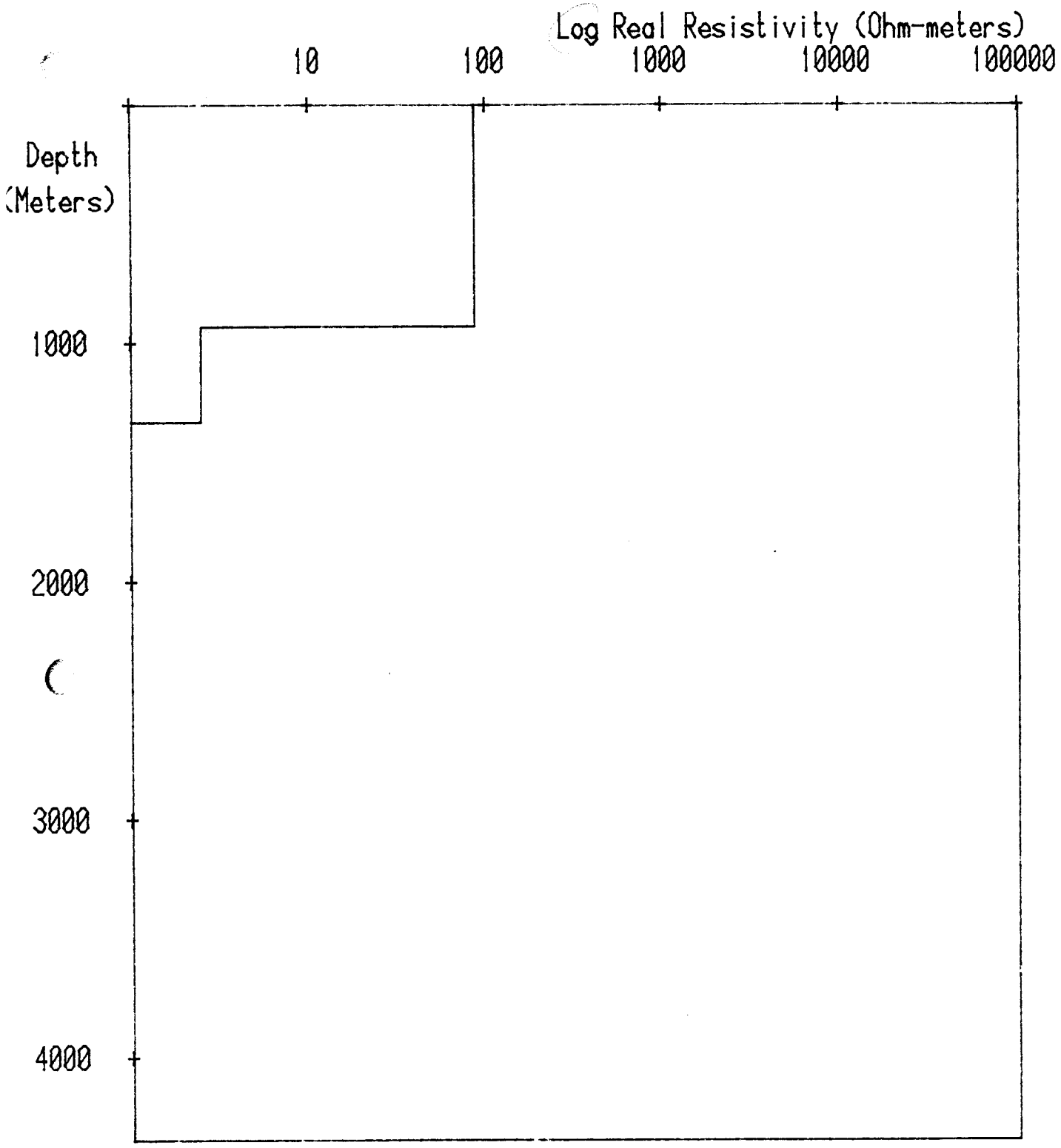
AVERAGE #  8
SHAS12  200 HZ  15-NOV-83  T41N R4W S27 NW
NSAMP = 1024  SI = 0.0050  TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.392E+02 | 0.439E+02 | 73. | 77. | 61. | 0.8013 | 0.8182 | 0.3525 | 0.10 |
| H | HZ | 0.247E+02 | 0.142E+02 | 71. | 80. | 61. | 0.8218 | 0.8394 | 82.20 | 0.08 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |

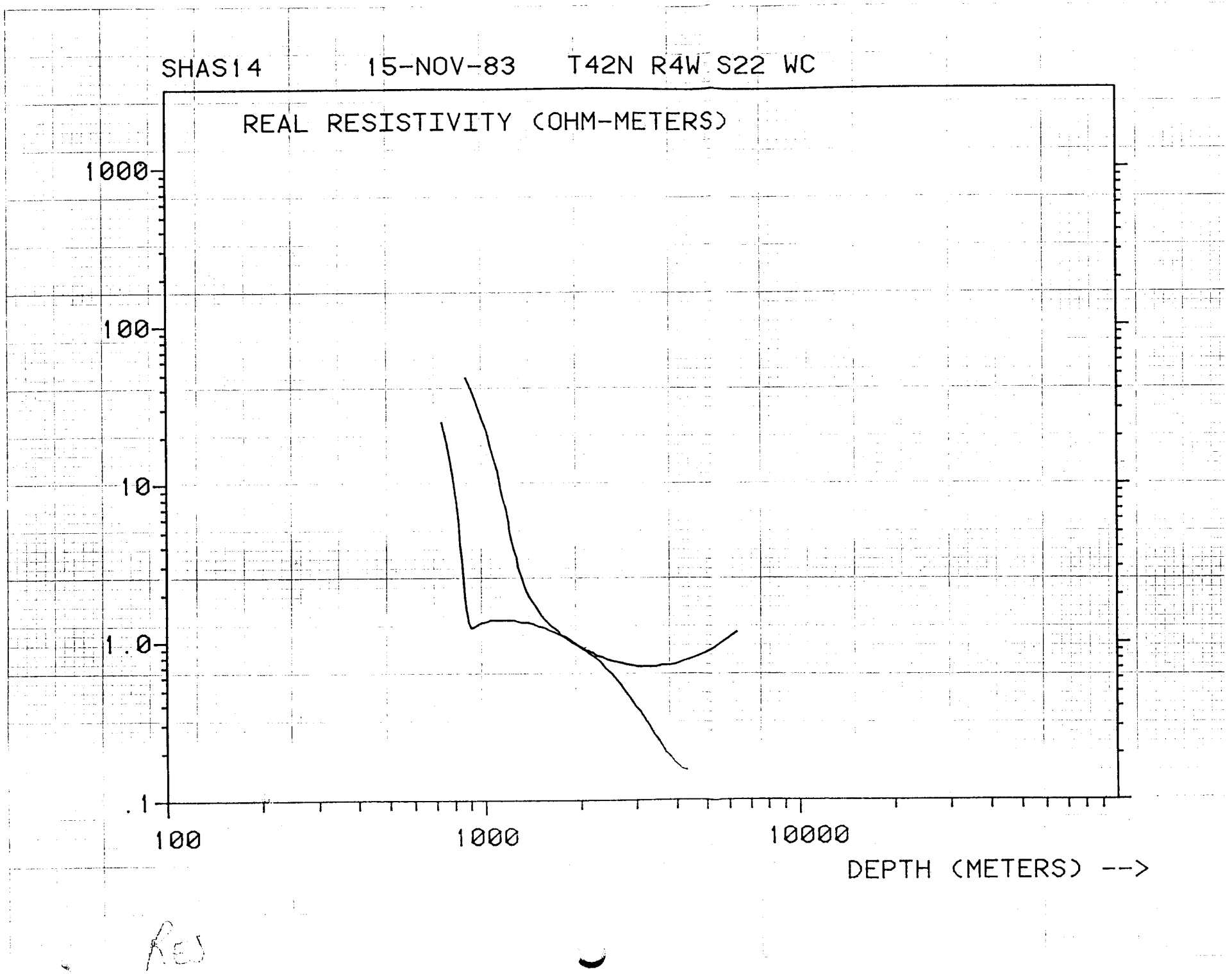
AVERAGE # 8
SHAS12 200 HZ 15-NOV-83 T41N R4W S27 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

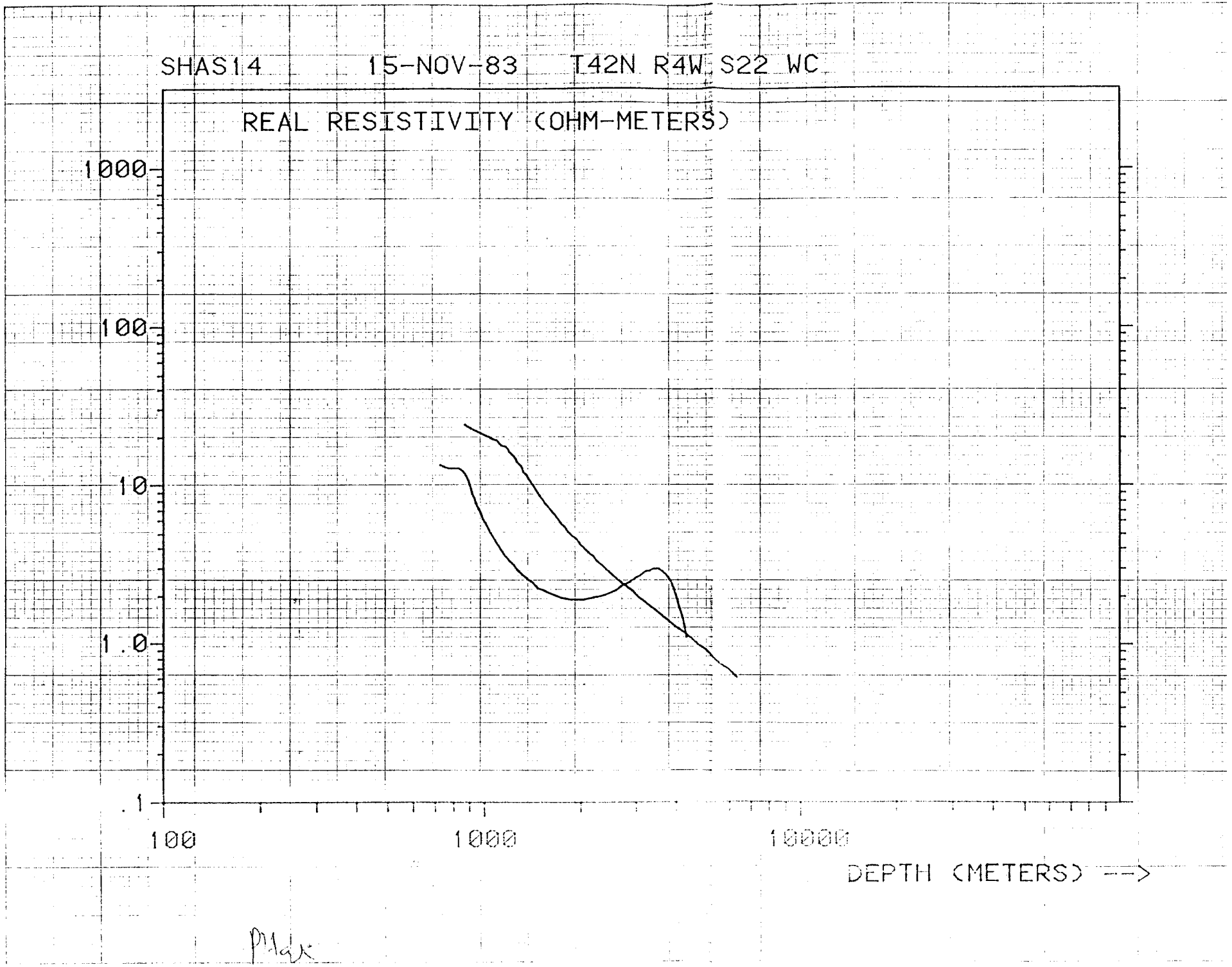
| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.477E+02 | 0.756E+02 | 78. | 73. | 61. | 0.7585 | 0.7932 | 0.4756 | 0.15 |
| H | HZ | 0.319E+02 | 0.176E+02 | 73. | 77. | 61. | 0.7937 | 0.8313 | 60.20 | 0.06 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 7.7 | 0.821E+02 | 0.514E+02 | 80. | 82. | 74. | 0.9628 | 0.9808 | 0.1900 | 0.05 |
| H | HZ | 0.720E+02 | 0.432E+02 | 81. | 81. | 74. | 0.9638 | 0.9811 | 52.70 | 0.05 |
| E | 14.3 | 0.132E+03 | 0.842E+02 | 80. | 82. | 74. | 0.9583 | 0.9771 | 0.4065 | 0.05 |
| H | HZ | 0.120E+03 | 0.712E+02 | 80. | 82. | 74. | 0.9583 | 0.9771 | 66.80 | 0.04 |
| E | 20.0 | 0.159E+03 | 0.102E+03 | 76. | 78. | 74. | 0.9259 | 0.9530 | 0.7657 | 0.04 |
| H | HZ | 0.132E+03 | 0.739E+02 | 76. | 78. | 74. | 0.9261 | 0.9531 | 157.90 | 0.04 |
| E | 26.3 | 0.192E+03 | 0.121E+03 | 74. | 77. | 74. | 0.9276 | 0.9521 | 0.5641 | 0.06 |
| H | HZ | 0.154E+03 | 0.918E+02 | 74. | 77. | 74. | 0.9279 | 0.9523 | 54.50 | 0.05 |
| E | 31.2 | 0.229E+03 | 0.132E+03 | 74. | 74. | 74. | 0.9347 | 0.9460 | 0.5931 | 0.06 |
| H | HZ | 0.172E+03 | 0.105E+03 | 74. | 74. | 74. | 0.9357 | 0.9468 | 68.00 | 0.04 |
| E | 40.0 | 0.257E+03 | 0.155E+03 | 76. | 68. | 74. | 0.8445 | 0.9358 | 0.8992 | 0.08 |
| H | HZ | 0.180E+03 | 0.826E+02 | 76. | 68. | 74. | 0.8481 | 0.9364 | 48.60 | 0.08 |


p (log)
2.5
2.0
1.5
1.0
0.5
0.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)

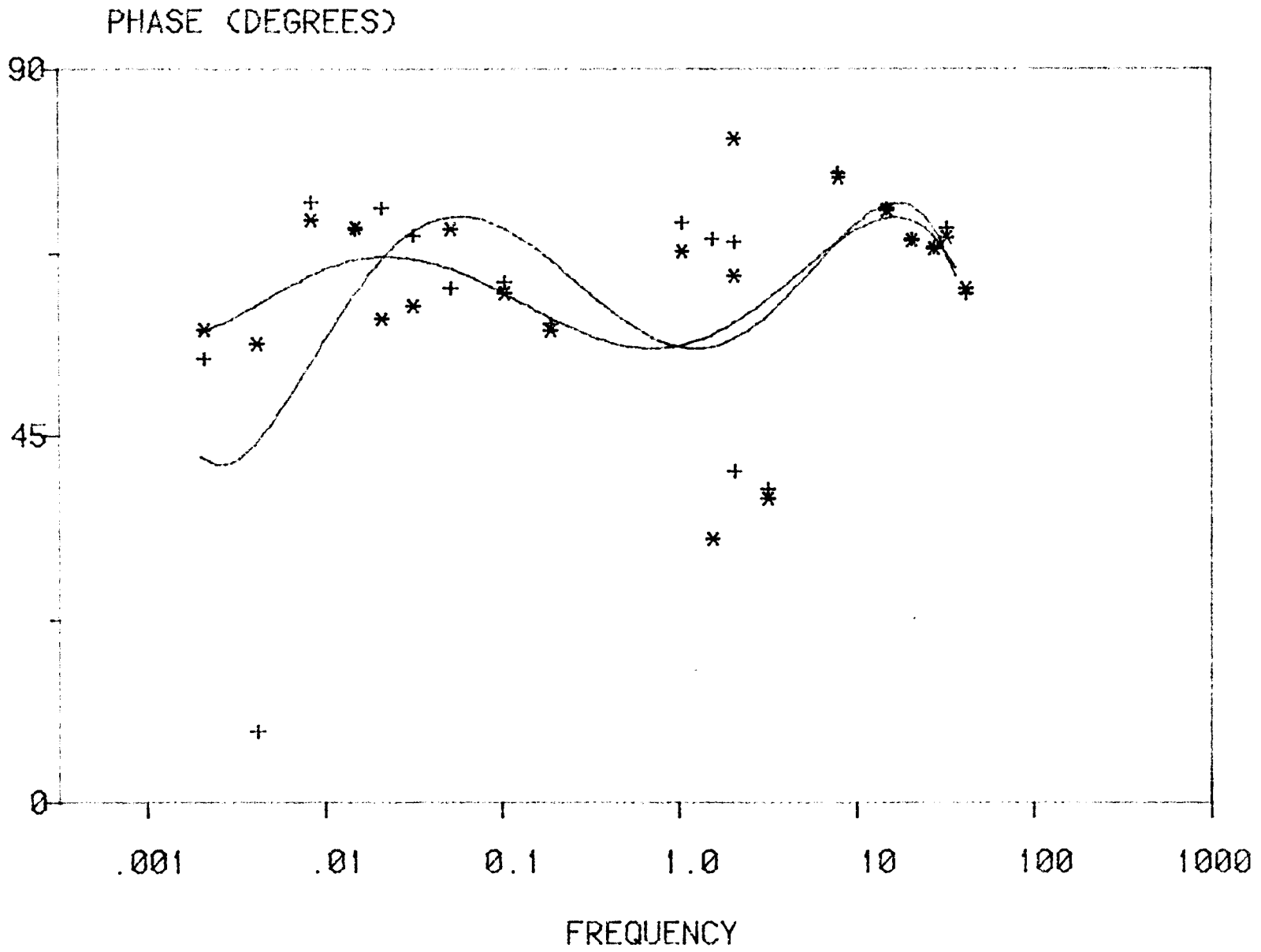



| | | | | |
|---|---|---|---|---|
| Resistivity | 87.05 | 02.48 | 00.72 | 00.03 |
| Thickness | | 930.61 | 400.79 | 2203.31 |
| Depth | 00.00 | 930.61 | 1331.40 | 3534.72 |


SHAS14 15-NOV-83 T42N R4W S22 WC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
DEPTH (METERS) -->


SHAS14 15-NOV-83 T42N R4W S22 WC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
DEPTH (METERS) -->

SHAS14 15-NOV-83 T42N R4W S22 WC



ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 22 | 0.366E+06 | 0.166E+05 | 0.273E+00 |
| MODEL | 6 | 0.366E+06 | 0.609E+05 | 0.470E+07 |
| RESID | 16 | 0.208E+00 | 0.130E-01 | |

STANDARD ERROR = 0.114E+00

DTEST FOR MEANS =-0.705E-07

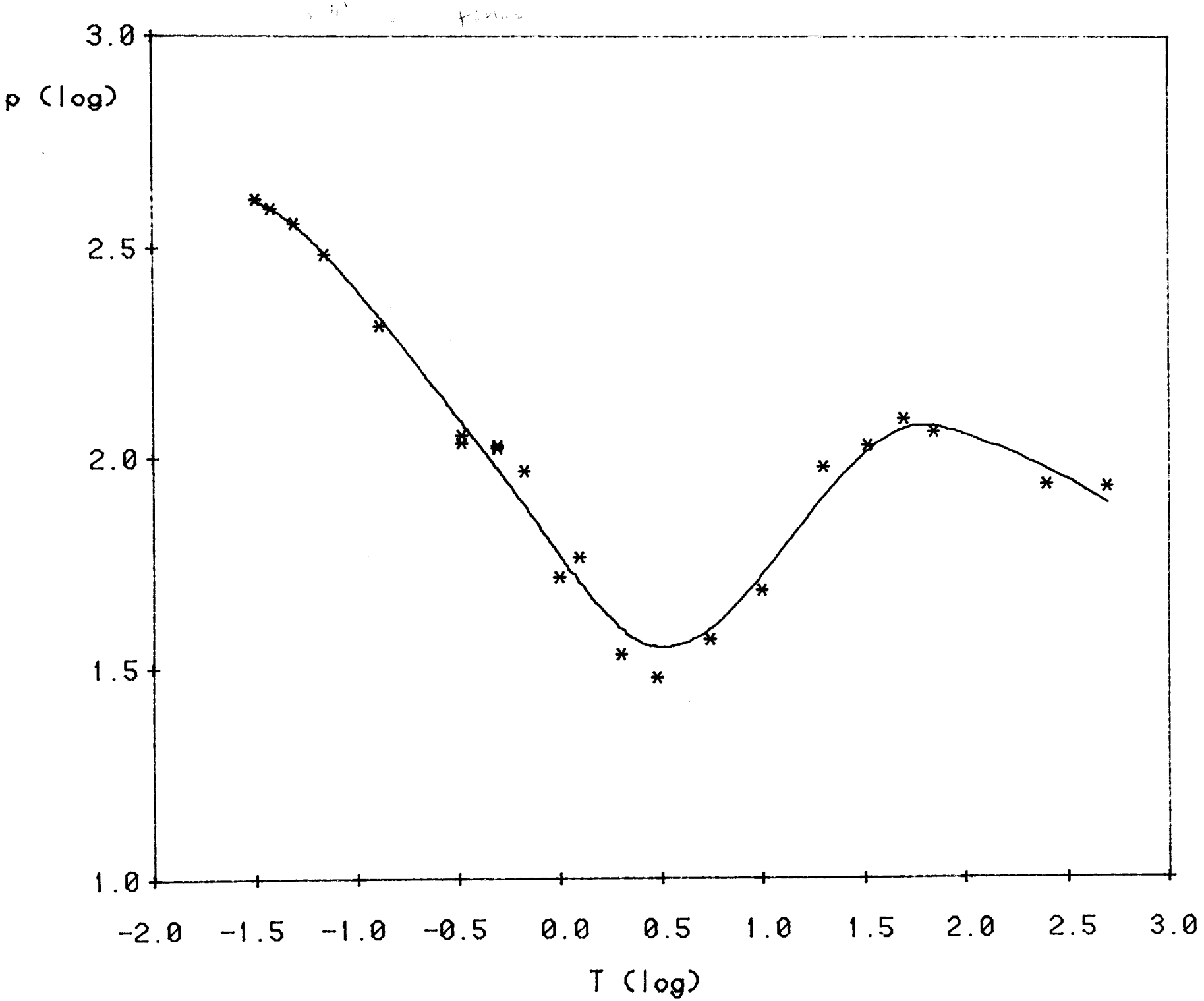
NOISE TO SIGNAL RATIO = 0.461E-01 PERCENT

SHAS20 200 HZ 14-JUL-84 T42N R3W S16 NW

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 500.000 | 85.000 | 77.769 | 7.231 | 8.885 |
| 2 | 250.000 | 86.000 | 95.971 | -9.971 | -10.959 |
| 3 | 70.000 | 115.000 | 122.494 | -7.494 | -6.311 |
| 4 | 50.000 | 124.000 | 118.679 | 5.321 | 4.385 |
| 5 | 33.000 | 107.000 | 105.112 | 1.888 | 1.780 |
| 6 | 20.000 | 95.000 | 81.420 | 13.580 | 15.395 |
| 7 | 10.000 | 48.000 | 51.770 | -3.770 | -7.557 |
| 8 | 5.500 | 37.000 | 37.342 | -0.342 | -0.920 |
| 9 | 3.000 | 30.000 | 34.218 | -4.218 | -13.137 |
| 10 | 2.000 | 34.000 | 38.551 | -4.551 | -12.547 |
| 11 | 1.250 | 58.000 | 50.408 | 7.592 | 14.007 |
| 12 | 1.000 | 52.000 | 58.679 | -6.679 | -12.069 |
| 13 | 0.670 | 93.000 | 77.448 | 15.552 | 18.248 |
| 14 | 0.500 | 105.000 | 93.884 | 11.116 | 11.178 |
| 15 | 0.500 | 107.000 | 93.884 | 13.116 | 13.058 |
| 16 | 0.330 | 108.000 | 121.299 | -13.299 | -11.599 |
| 17 | 0.330 | 113.000 | 121.299 | -8.299 | -7.084 |
| 18 | 0.130 | 206.000 | 216.152 | -10.152 | -4.810 |
| 19 | 0.070 | 304.000 | 308.643 | -4.643 | -1.516 |
| 20 | 0.050 | 360.000 | 359.331 | 0.669 | 0.186 |
| 21 | 0.038 | 390.000 | 392.812 | -2.812 | -0.718 |
| 22 | 0.032 | 410.000 | 407.471 | 2.529 | 0.619 |
| 23 | 0.025 | 424.000 | 417.952 | 6.048 | 1.437 |

MEAN PERCENT ERROR = 9.5078
MAXIMUM PERCENT ERROR = 18.2480


3.0
p (log)
2.5
2.0
1.5
1.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
T (log)

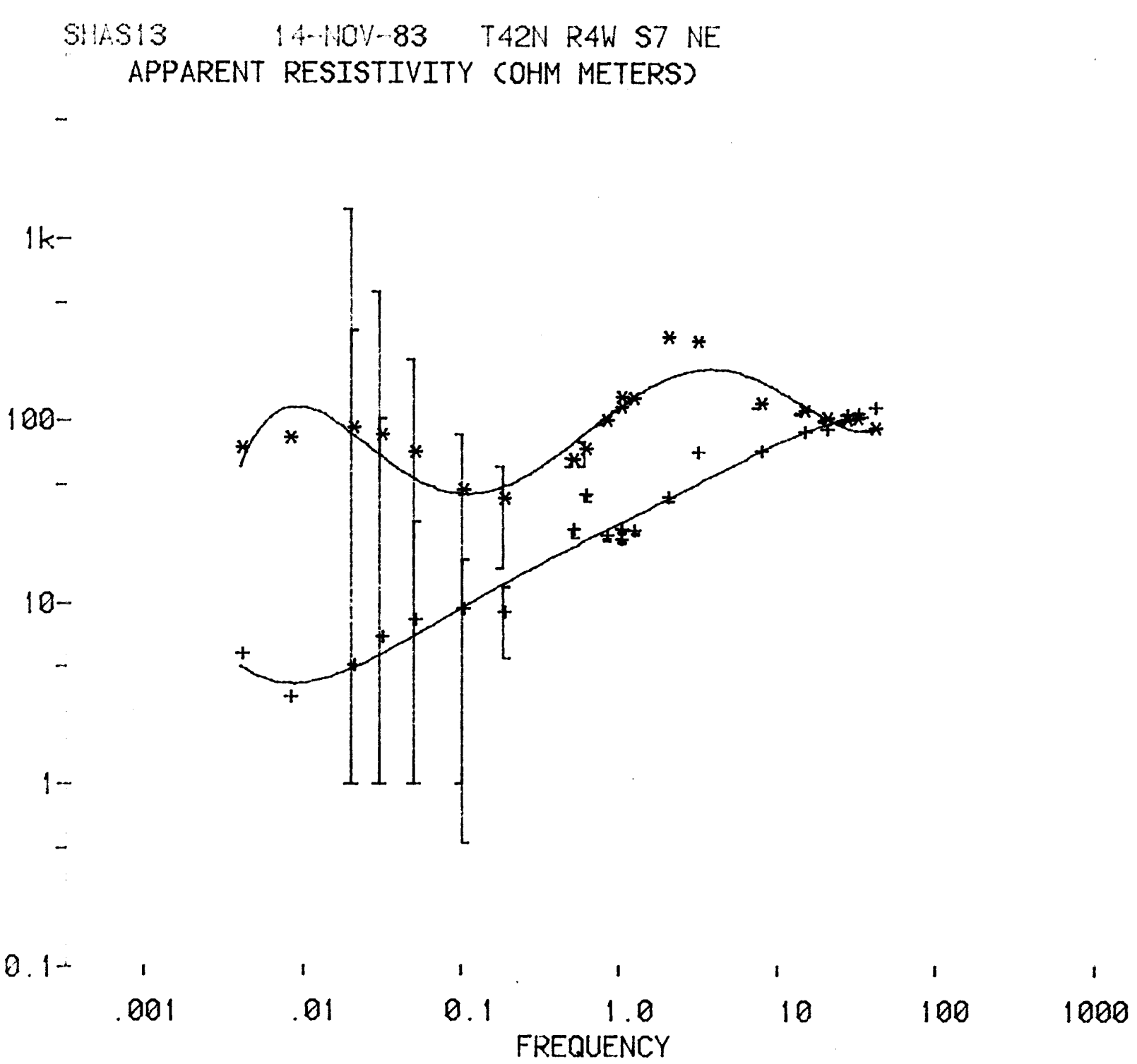
SHAS20 200 HZ 14-JUL-84 T42N R3W S16 NW

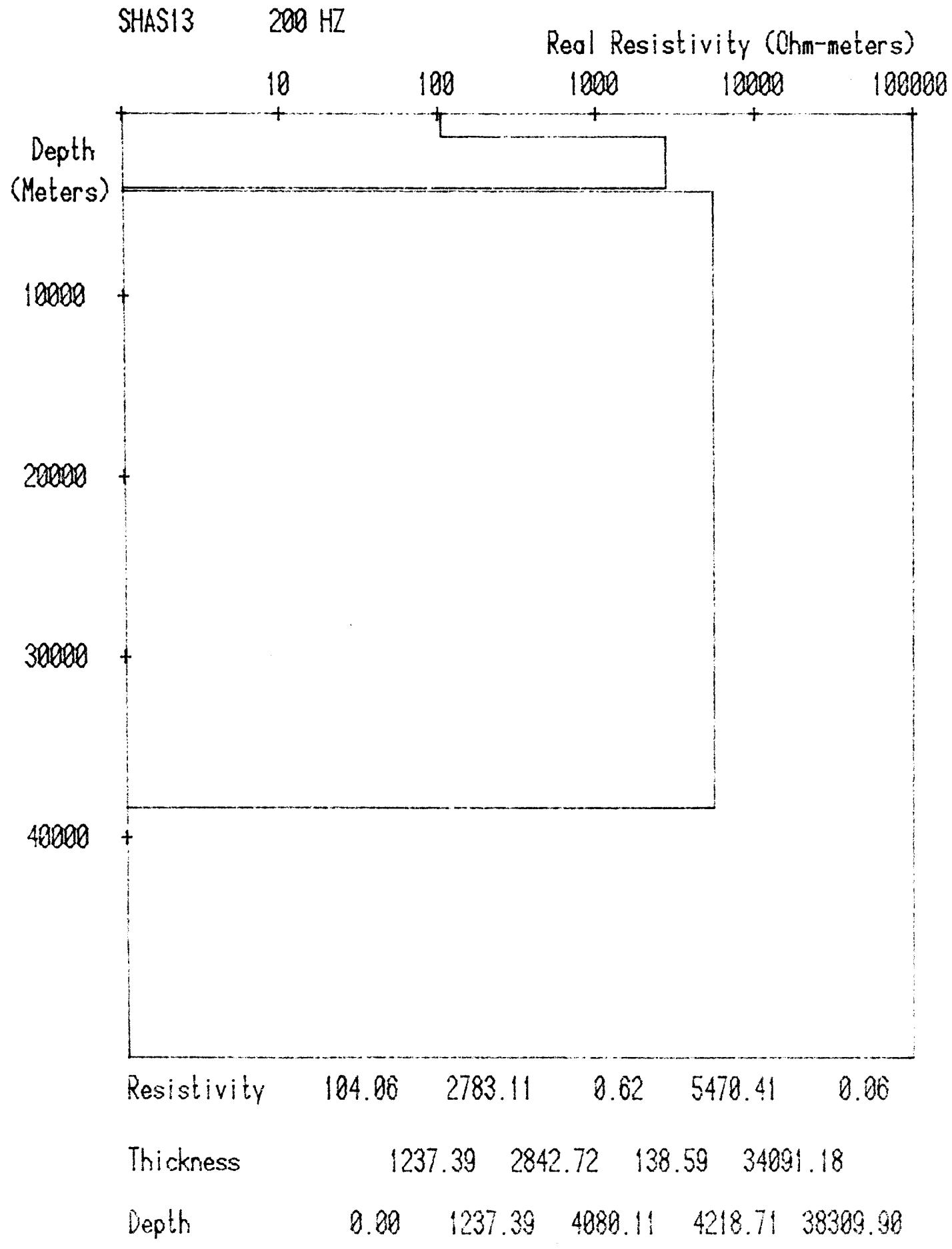
THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 21
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

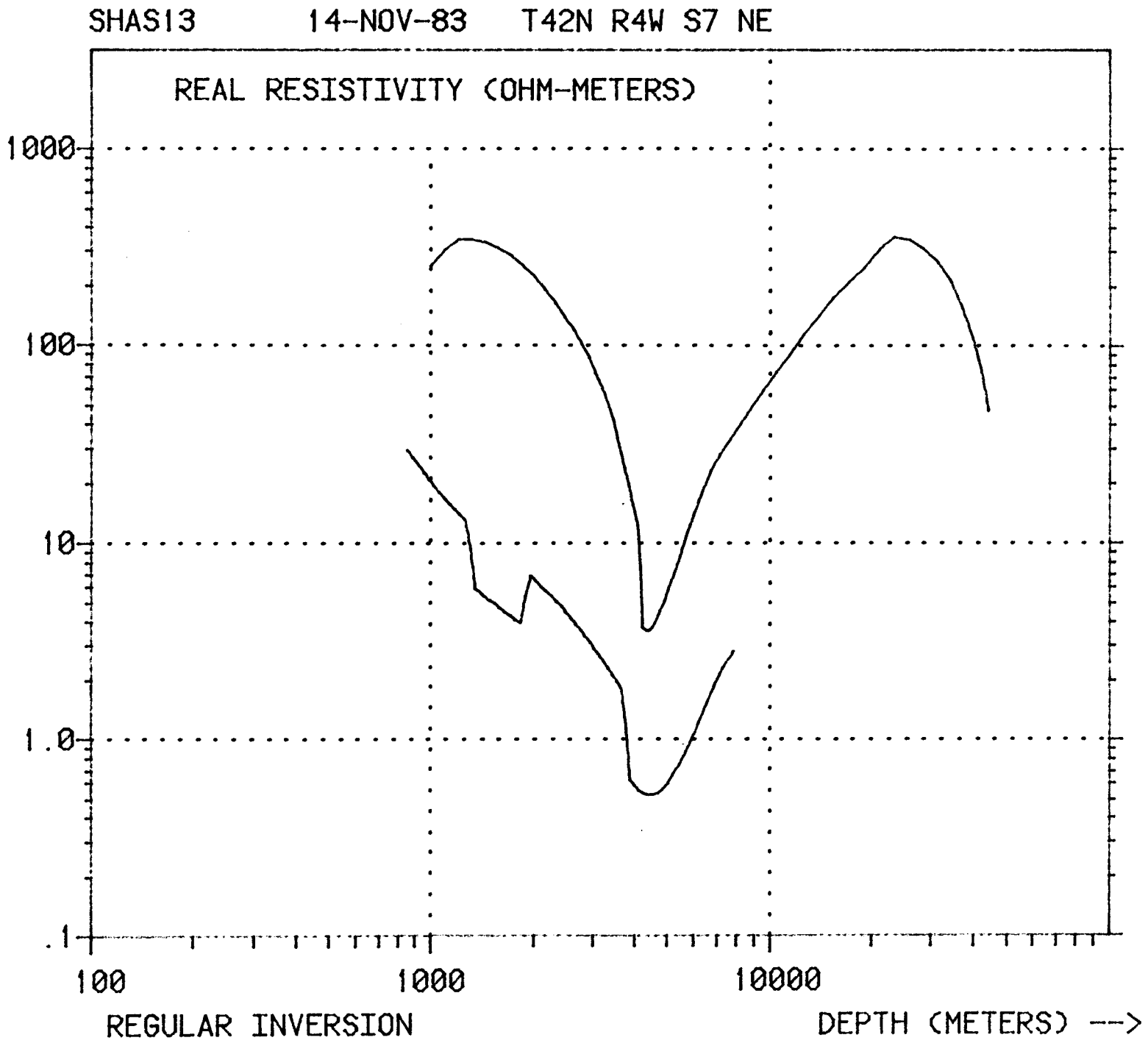
THE INITIAL MODEL IS

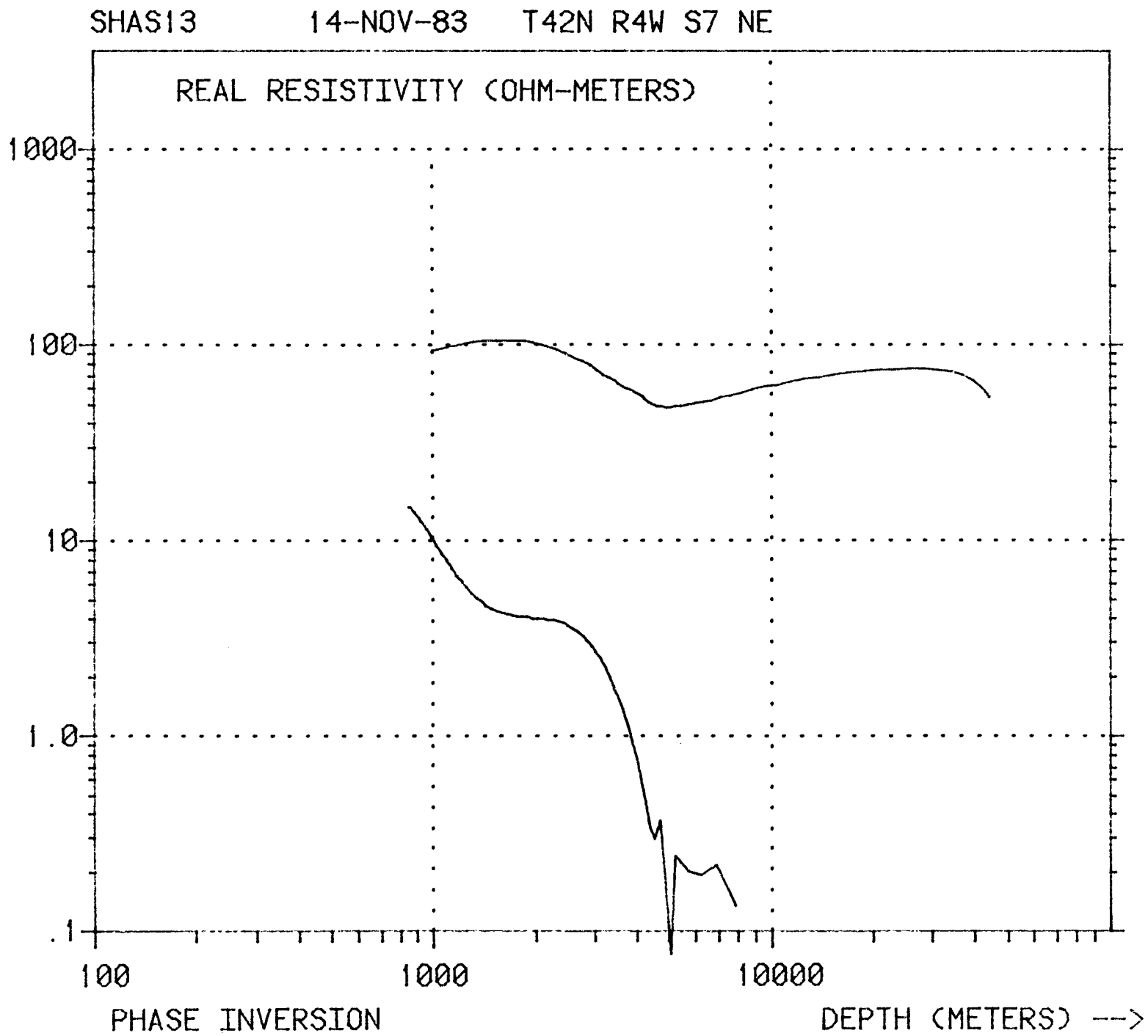
| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.8000E+03 | | 0.0000E+00 |
| | | 0.2000E+04 | |
| 2 | 0.3000E+01 | | 0.2000E+04 |
| | | 0.1000E+04 | |
| 3 | 0.2000E+03 | | 0.3000E+04 |
| | | 0.4000E+05 | |
| 4 | 0.2000E+01 | | 0.4300E+05 |

FREQUENCY RANGE ( 0.2000E-02 , 0.4000E+02 )

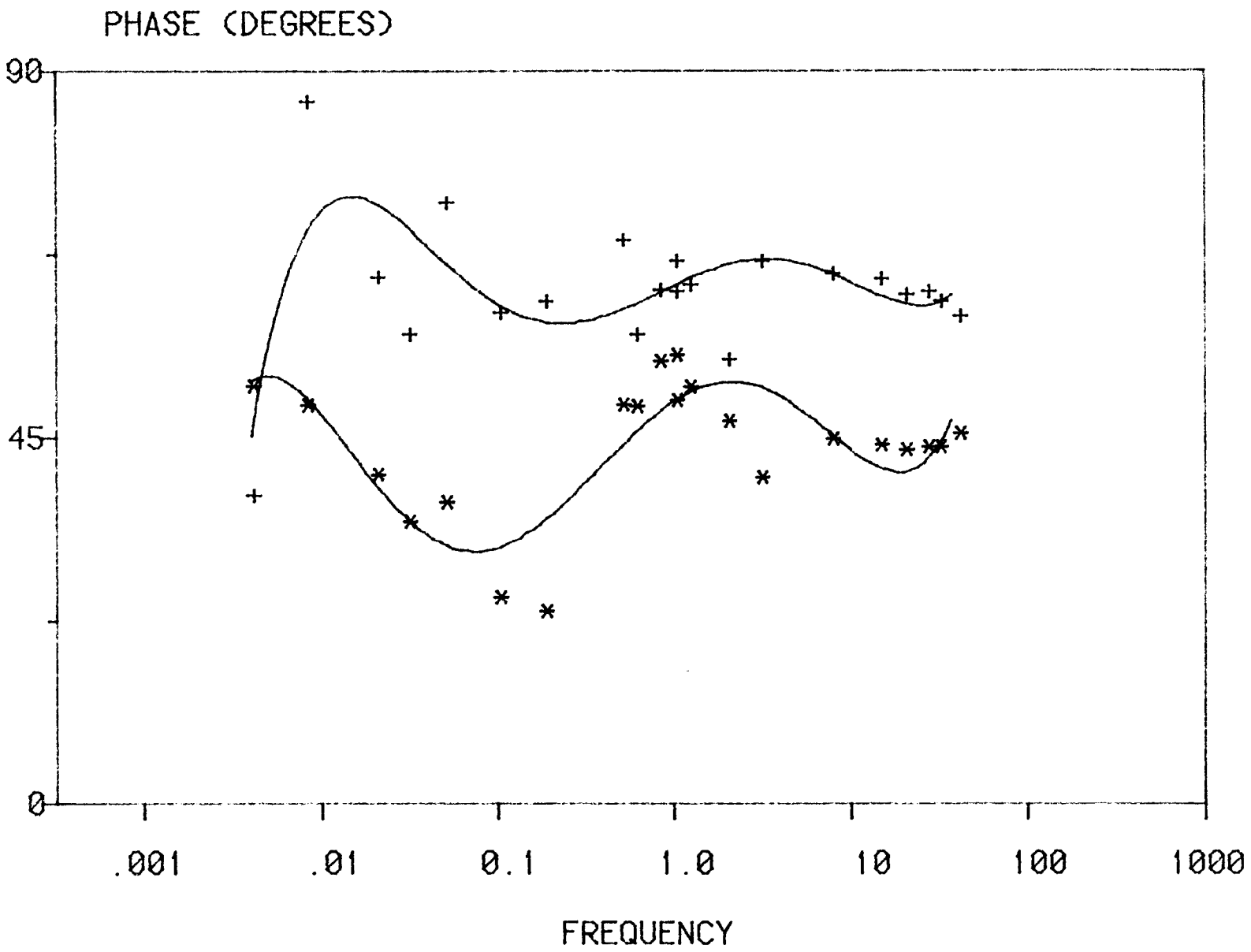

SHAS13 14-NOV-83 T42N R4W S7 NE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAS13
200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
Depth
(Meters)
10000
20000
30000
40000
Resistivity 104.06 2783.11 0.62 5470.41 0.06
Thickness 1237.39 2842.72 138.59 34091.18
Depth 0.00 1237.39 4080.11 4218.71 38309.90


SHAS13 14-NOV-83 T42N R4W S7 NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS13 14-NOV-83 T42N R4W S7 NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS13 14-NOV-83 T42N R4W S7 NE



THE SITE IS: GRAS13 200 HZ 14-NOV-83 T42N R4W S7 NE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF MINMIN | MEAN OF MINMAX | PERIOD # | STDEV OF MINMIN | STDEV OF MINMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.00 | 0.00 | 1 | 0.00 | 0.00 |
| 0.0020 | 0.00 | 0.00 | 2 | 0.00 | 0.00 |
| 0.0040 | 4.92 | 66.37 | 3 | 302.80 | 1333.82 |
| 0.0080 | 2.82 | 74.81 | 4 | 94.22 | 424.79 |
| 0.0143 | 4.41 | 91.75 | 5 | 19.62 | 149.20 |
| 0.0200 | 4.29 | 86.00 | 6 | 8.25 | 43.15 |
| 0.0303 | 6.08 | 77.80 | 7 | 3.54 | 20.01 |
| 0.0500 | 7.63 | 62.92 | 8 | 1.37 | 3.15 |
| 0.1000 | 8.72 | 39.05 | 9 | 1.38 | 10.15 |
| 0.1818 | 8.44 | 35.15 | 10 | 0.14 | 0.53 |
| 0.3333 | 27.82 | 472.98 | 11 | 0.23 | 0.05 |
| 0.5000 | 23.58 | 57.54 | 12 | 0.10 | 0.27 |
| 0.5988 | 36.67 | 64.54 | 13 | 0.15 | 0.27 |
| 0.8000 | 21.88 | 94.18 | 14 | 0.11 | 0.33 |
| 1.0000 | 23.80 | 125.15 | 15 | 0.03 | 0.14 |
| 1.0000 | 20.99 | 109.49 | 16 | 0.09 | 0.46 |
| 1.2048 | 23.27 | 123.47 | 17 | 0.08 | 0.28 |
| 1.4925 | 33.55 | 313.88 | 18 | 0.03 | 0.47 |
| 2.0000 | 36.67 | 305.07 | 19 | 0.02 | 0.32 |
| 2.0000 | 35.34 | 269.48 | 20 | 0.00 | 0.07 |
| 2.0000 | 34.96 | 175.45 | 21 | 0.02 | 0.26 |
| 3.0303 | 62.66 | 256.62 | 22 | 0.01 | 0.01 |
| 3.0303 | 37.67 | 280.30 | 23 | 0.00 | 0.15 |
| 7.6923 | 64.22 | 115.98 | 24 | 0.04 | 0.08 |
| 14.2857 | 80.98 | 107.00 | 25 | 0.00 | 0.03 |
| 20.0000 | 83.97 | 97.70 | 26 | 0.00 | 0.02 |
| 26.3158 | 100.96 | 96.01 | 27 | 0.00 | 0.01 |
| 31.2500 | 102.41 | 97.97 | 28 | 0.00 | 0.01 |
| 40.0000 | 110.43 | 86.19 | 29 | 0.00 | 0.00 |

AVERAGE #  8
STA813  200 HZ  14-NOV-83  T42N R4W S7 NE
NSAMP = 1024  ST = 0.0050  TO = 5.1200

| | FREQ OR PERIOD | MAG MAX VALUE | MAG MIN ( OHM-M ) | PHI MAX | PHI MIN (DEGREES) | STRIKE MIN (E OF N) | COHERENCY | COHERENCY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 500.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 250.0 | 0.686E+02 | 0.685E+01 | 52. | 32. | 169. | 0.9918 | 0.8167 | 0.1066 | 0.71 |
| H | SEC | 0.642E+02 | 0.299E+01 | 52. | 44. | 169. | 0.9939 | 0.8217 | 22.80 | 0.75 |
| E | 125.0 | 0.764E+02 | 0.299E+01 | 49. | 86. | 169. | 0.9918 | 0.9767 | 0.1585 | 0.65 |
| H | SEC | 0.732E+02 | 0.266E+01 | 49. | 87. | 169. | 0.9920 | 0.9768 | 17.10 | 0.65 |
| E | 70.0 | 0.938E+02 | 0.539E+01 | 45. | 73. | 169. | 0.9936 | 0.9193 | 0.2156 | 0.57 |
| H | SEC | 0.897E+02 | 0.344E+01 | 45. | 76. | 169. | 0.9940 | 0.9198 | 15.90 | 0.60 |
| E | 50.0 | 0.911E+02 | 0.558E+01 | 41. | 64. | 169. | 0.9877 | 0.8907 | 0.2698 | 0.59 |
| H | SEC | 0.809E+02 | 0.299E+01 | 41. | 66. | 169. | 0.9894 | 0.8963 | 17.00 | 0.61 |
| E | 33.0 | 0.843E+02 | 0.822E+01 | 35. | 57. | 169. | 0.9902 | 0.8955 | 0.3096 | 0.57 |
| H | SEC | 0.713E+02 | 0.395E+01 | 35. | 59. | 169. | 0.9918 | 0.9086 | 16.80 | 0.60 |
| E | 20.0 | 0.751E+02 | 0.114E+02 | 39. | 69. | 169. | 0.9838 | 0.8681 | 0.3492 | 0.55 |
| H | SEC | 0.507E+02 | 0.389E+01 | 36. | 79. | 169. | 0.9897 | 0.9161 | 13.90 | 0.60 |

AVERAGE #  8
SEAS13  200 MS  14-NOV-83  T42N R4W S7 NE
NSAMP = 1024  SI = 0.0050  T0 = 5.1200

| | FREQ OR PERIOD | MAX VALUE | MIN ( ORTH-H ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PSIDEX | PHIDEX | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.423E+02 | 0.104E+02 | 24. | 59. | 169. | 0.9892 | 0.9561 | 0.4048 | 0.54 |
| H | SEC | 0.358E+02 | 0.708E+01 | 27. | 62. | 169. | 0.9897 | 0.9608 | 14.30 | 0.58 |
| E | 5.5 | 0.407E+02 | 0.117E+02 | 25. | 60. | 169. | 0.9391 | 0.8598 | 0.4795 | 0.45 |
| H | SEC | 0.296E+02 | 0.521E+01 | 23. | 64. | 169. | 0.9410 | 0.8701 | 22.30 | 0.48 |
| E | 3.0 | 0.937E+03 | 0.544E+02 | 22. | 52. | 169. | 0.0608 | 0.7676 | 1.6019 | 0.18 |
| H | SEC | 0.865E+01 | 0.121E+01 | 33. | 79. | 169. | 0.0000 | 0.0000 | 130.30 | 1.47 |
| E | 2.0 | 0.775E+02 | 0.309E+02 | 48. | 68. | 169. | 0.9329 | 0.9321 | 0.5184 | 0.38 |
| H | SEC | 0.376E+02 | 0.162E+02 | 50. | 72. | 169. | 0.9417 | 0.9411 | 14.00 | 0.47 |
| E | 1.7 | 0.758E+02 | 0.593E+02 | 53. | 54. | 169. | 0.9204 | 0.7952 | 0.6131 | 0.44 |
| H | SEC | 0.533E+02 | 0.140E+02 | 45. | 62. | 169. | 0.9266 | 0.8275 | 18.70 | 0.51 |
| E | 1.2 | 0.119E+03 | 0.247E+02 | 57. | 61. | 5. | 0.9339 | 0.9261 | 0.4909 | 0.37 |
| H | SEC | 0.690E+02 | 0.190E+02 | 52. | 65. | 5. | 0.9389 | 0.9320 | 1.30 | 0.38 |
| E | 1.0 | 0.152E+03 | 0.258E+02 | 56. | 63. | 5. | 0.9719 | 0.9655 | 0.5161 | 0.29 |
| H | HZ | 0.978E+02 | 0.218E+02 | 55. | 63. | 5. | 0.9789 | 0.9733 | 8.70 | 0.33 |

AVERAGE #  8
SEAS13  200 MI  14-NOV-83  T42E L4W 87 NS
NSAMP = 1024  SI = 0.0050  TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | POLMAX | POLMIN | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.132E+03 | 0.235E+02 | 51. | 67. | 5. | 0.9714 | 0.9622 | 0.4269 | 0.28 |
| H | MZ | 0.873E+02 | 0.185E+02 | 49. | 68. | 5. | 0.9741 | 0.9664 | 17.10 | 0.29 |
| E | 1.2 | 0.168E+03 | 0.258E+02 | 52. | 64. | 5. | 0.9251 | 0.9520 | 0.4706 | 0.28 |
| H | MZ | 0.788E+02 | 0.207E+02 | 51. | 64. | 5. | 0.9375 | 0.9595 | 4.20 | 0.34 |
| E | 1.5 | 0.466E+03 | 0.382E+02 | 52. | 54. | 15. | 0.8581 | 0.8551 | 0.7698 | 0.28 |
| H | MZ | 0.162E+03 | 0.289E+02 | 50. | 57. | 15. | 0.8872 | 0.8843 | 162.80 | 0.28 |
| E | 2.0 | 0.417E+03 | 0.398E+02 | 51. | 56. | 15. | 0.8817 | 0.8890 | 0.7712 | 0.25 |
| H | MZ | 0.193E+03 | 0.335E+02 | 49. | 59. | 15. | 0.8957 | 0.9031 | 165.50 | 0.26 |
| E | 2.0 | 0.350E+03 | 0.395E+02 | 48. | 54. | 15. | 0.9269 | 0.9009 | 0.8507 | 0.19 |
| H | MZ | 0.189E+03 | 0.312E+02 | 47. | 56. | 15. | 0.9550 | 0.9101 | 166.40 | 0.24 |
| E | 2.0 | 0.214E+03 | 0.398E+02 | 48. | 59. | 15. | 0.9496 | 0.9079 | 0.5573 | 0.23 |
| H | MZ | 0.137E+03 | 0.301E+02 | 45. | 61. | 15. | 0.9535 | 0.9149 | 1.60 | 0.23 |

AVERAGE # 8
STACK 200 PT 14-NOV-83 T42N R4W S7 ML
NSAMP = 1024 DT = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PERMEN | PERPEN | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.319E+03 | 0.365E+02 | 50. | 61. | 15. | 1.0166 | 0.9964 | 0.7323 | 0.19 |
| H | HZ | 0.194E+03 | 0.888E+02 | 31. | 73. | 15. | 1.1152 | 1.0969 | -1.20 | 0.14 |
| E | 3.0 | 0.372E+03 | 0.409E+02 | 43. | 57. | 15. | 0.8870 | 0.9003 | 0.7727 | 0.24 |
| H | HZ | 0.188E+03 | 0.344E+02 | 42. | 59. | 15. | 0.8966 | 0.9102 | 160.90 | 0.26 |
| E | 7.7 | 0.120E+03 | 0.653E+02 | 45. | 65. | 15. | 0.9848 | 0.9910 | 0.2708 | 0.19 |
| H | HZ | 0.112E+03 | 0.632E+02 | 45. | 65. | 15. | 0.9848 | 0.9910 | 23.60 | 0.19 |
| E | 14.3 | 0.112E+03 | 0.837E+02 | 44. | 65. | 15. | 0.9758 | 0.9857 | 0.2420 | 0.11 |
| H | HZ | 0.102E+03 | 0.783E+02 | 44. | 65. | 15. | 0.9758 | 0.9857 | 27.10 | 0.11 |
| E | 20.0 | 0.110E+03 | 0.913E+02 | 44. | 63. | 15. | 0.9337 | 0.9667 | 0.3153 | 0.11 |
| H | HZ | 0.858E+02 | 0.766E+02 | 44. | 63. | 15. | 0.9343 | 0.9667 | 28.00 | 0.12 |
| E | 26.3 | 0.116E+03 | 0.109E+03 | 44. | 63. | 15. | 0.8931 | 0.9607 | 0.3785 | 0.08 |
| H | HZ | 0.756E+02 | 0.925E+02 | 44. | 63. | 15. | 0.8937 | 0.9609 | 28.00 | 0.08 |
| E | 31.2 | 0.126E+03 | 0.108E+03 | 44. | 62. | 15. | 0.8582 | 0.9679 | 0.3652 | 0.07 |
| H | HZ | 0.699E+02 | 0.965E+02 | 44. | 62. | 15. | 0.8583 | 0.9688 | 26.70 | 0.07 |
| E | 40.0 | 0.103E+03 | 0.124E+03 | 46. | 60. | 15. | 0.9212 | 0.9333 | 0.7177 | 0.10 |
| H | HZ | 0.697E+02 | 0.965E+02 | 46. | 60. | 15. | 0.9223 | 0.9341 | 26.10 | 0.10 |

SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE

THE NUMBER OF LAYERS = 5
THE NUMBER OF FREQUENCIES TAKEN = 20
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 80.0000 | | 0.0000 |
| | | 800.0000 | |
| 2 | 200.0000 | | 800.0000 |
| | | 1700.0000 | |
| 3 | 4.0000 | | 2500.0000 |
| | | 4500.0000 | |
| 4 | 200.0000 | | 7000.0000 |
| | | 20000.0000 | |
| 5 | 100.0000 | | 27000.0000 |

FREQUENCY RANGE ( 0.0080 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1041E+03 | | 0.0000E+00 |
| | | 0.1237E+04 | |
| 2 | 0.2783E+04 | | 0.1237E+04 |
| | | 0.2843E+04 | |
| 3 | 0.6293E+00 | | 0.4080E+04 |
| | | 0.1386E+03 | |
| 4 | 0.5470E+04 | | 0.4219E+04 |
| | | 0.3409E+05 | |
| 5 | 0.6452E-01 | | 0.3831E+05 |

MEAN PERCENT VARIATION IS 0.1226E+02

ERROR ANALYSIS

R-SQUARED = 0.997E+00

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 19 | 0.749E+05 | 0.394E+04 | 0.422E+00 |
| MODEL | 8 | 0.747E+05 | 0.934E+04 | 0.342E+06 |
| RESID | 11 | 0.301E+00 | 0.273E-01 | |

STANDARD ERROR = 0.165E+00

DTEST FOR MEANS =-0.116E-04

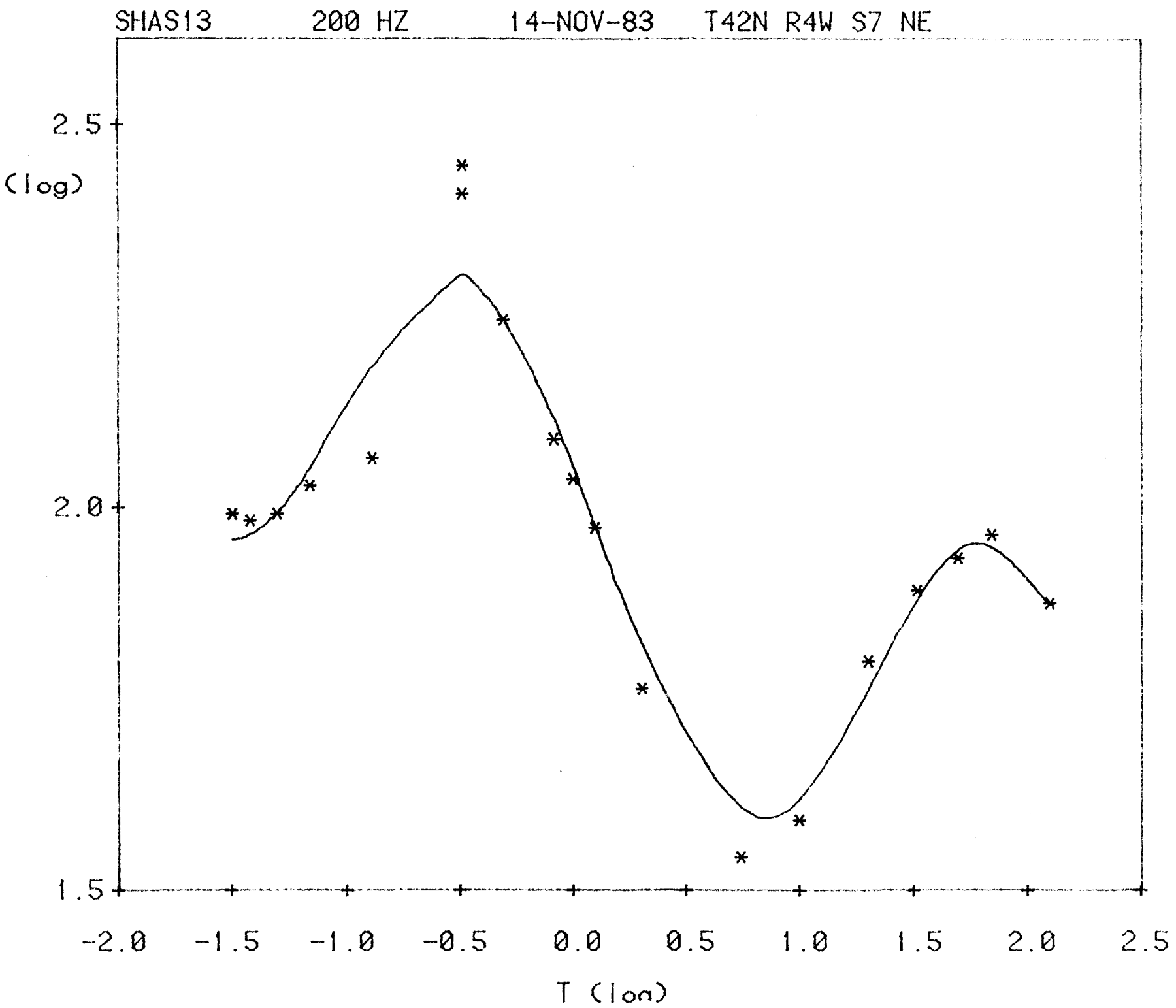
NOISE TO SIGNAL RATIO = 0.171E+00 PERCENT

SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 125.000 | 75.000 | 74.814 | 0.186 | 0.248 |
| 2 | 70.000 | 92.000 | 91.549 | 0.451 | 0.492 |
| 3 | 50.000 | 86.000 | 89.843 | -3.843 | -4.371 |
| 4 | 33.000 | 78.000 | 77.212 | 0.788 | 1.015 |
| 5 | 20.000 | 63.000 | 57.629 | 5.371 | 8.904 |
| 6 | 10.000 | 39.000 | 39.798 | -0.798 | -2.025 |
| 7 | 5.500 | 35.000 | 37.419 | -2.419 | -6.680 |
| 8 | 2.000 | 58.000 | 64.724 | -6.724 | -10.958 |
| 9 | 1.250 | 94.000 | 94.897 | -0.897 | -0.950 |
| 10 | 1.000 | 109.000 | 113.651 | -4.651 | -4.178 |
| 11 | 0.830 | 123.000 | 131.102 | -8.102 | -6.377 |
| 12 | 0.500 | 175.000 | 179.450 | -4.450 | -2.511 |
| 13 | 0.330 | 257.000 | 202.818 | 54.182 | 23.567 |
| 14 | 0.330 | 280.000 | 202.818 | 77.182 | 31.971 |
| 15 | 0.130 | 116.000 | 157.318 | -41.318 | -30.234 |
| 16 | 0.070 | 107.000 | 111.547 | -4.547 | -4.161 |
| 17 | 0.050 | 98.000 | 97.216 | 0.784 | 0.804 |
| 18 | 0.038 | 96.000 | 91.634 | 4.366 | 4.654 |
| 19 | 0.032 | 98.000 | 90.638 | 7.362 | 7.805 |
| 20 | 0.025 | 86.000 | 91.921 | -5.921 | -6.655 |

MEAN PERCENT ERROR = 12.2118
MAXIMUM PERCENT ERROR = 31.9715
MAX. ERROR OCCURED AT OBSERVATION 14


SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE
2.5
(log)
2.0
1.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)

THE SITE IS: SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMN | MEAN OF RHOMX | PERIOD # |
|---|---|---|---|
| ~~0.0012~~ | ~~0.29~~ | ~~1.25~~ | ~~1~~ |
| 0.0020 | 0.52 | 1.40 | 2 |
| 0.0040 | 0.27 | 0.76 | 3 |
| 0.0080 | 0.89 | 1.03 | 4 |
| 0.0143 | 1.36 | 1.43 | 5 |
| 0.0200 | 1.63 | 1.89 | 6 |
| 0.0303 | 1.82 | 2.29 | 7 |
| 0.0500 | 1.78 | 2.96 | 8 |
| 0.1000 | 2.18 | 2.60 | 9 |
| 0.1818 | 2.04 | 2.61 | 10 |
| 0.3333 | 1.25 | 3.49 | 11 |
| 0.5000 | 1.06 | 9.44 | 12 |
| 0.5988 | 9.04 | 11.08 | 13 |
| 0.8000 | 1.20 | 9.64 | 14 |
| 1.0000 | 1.39 | 9.27 | 15 |
| 1.0000 | 8.60 | 16.44 | 16 |
| 1.2048 | 4.42 | 40.80 | 17 |
| 1.4925 | 12.78 | 32.02 | 18 |
| 2.0000 | 13.35 | 27.92 | 19 |
| 2.0000 | 2.80 | 29.39 | 20 |
| 2.0000 | 13.46 | 32.75 | 21 |
| 3.0303 | 1.45 | 20.30 | 22 |
| 3.0303 | 18.37 | 24.04 | 23 |
| 7.6923 | 42.57 | 61.16 | 24 |
| 14.2857 | 56.79 | 86.64 | 25 |
| 20.0000 | 62.42 | 94.91 | 26 |
| 26.3158 | 76.66 | 102.60 | 27 |
| 31.2500 | 72.27 | 115.57 | 28 |
| 40.0000 | 76.58 | 94.60 | 29 |

AVERAGE # 8
SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.447E+00 | 0.133E+01 | 40. | 68. | 95. | 0.9135 | 0.8693 | 0.1285 | 0.06 |
| H | SEC | 0.266E+00 | 0.849E+00 | 38. | 67. | 95. | 0.9290 | 0.8831 | 50.30 | 0.03 |
| E | 500.0 | 0.153E+01 | 0.868E+00 | 56. | 57. | 95. | 0.8480 | 0.9031 | 0.1250 | 0.41 |
| H | SEC | 0.899E+00 | 0.411E+00 | 57. | 60. | 95. | 0.8649 | 0.9197 | 42.10 | 0.27 |
| E | 250.0 | 0.789E+00 | 0.320E+00 | 58. | 6. | 95. | 0.9658 | 0.9723 | 0.0849 | 0.17 |
| H | SEC | 0.661E+00 | 0.252E+00 | 55. | 10. | 95. | 0.9687 | 0.9744 | 38.20 | 0.28 |
| E | 125.0 | 0.109E+01 | 0.113E+01 | 68. | 78. | 95. | 0.9146 | 0.9513 | 0.1029 | 0.07 |
| H | SEC | 0.883E+00 | 0.749E+00 | 66. | 80. | 95. | 0.9197 | 0.9551 | 74.40 | 0.11 |
| E | 70.0 | 0.149E+01 | 0.157E+01 | 63. | 79. | 95. | 0.9614 | 0.9439 | 0.1340 | 0.07 |
| H | SEC | 0.119E+01 | 0.132E+01 | 63. | 79. | 95. | 0.9622 | 0.9447 | 74.20 | 0.08 |
| E | 50.0 | 0.193E+01 | 0.180E+01 | 60. | 73. | 95. | 0.9719 | 0.9823 | 0.1503 | 0.04 |
| H | SEC | 0.176E+01 | 0.156E+01 | 60. | 73. | 95. | 0.9725 | 0.9827 | 69.30 | 0.05 |
| E | 33.0 | 0.226E+01 | 0.219E+01 | 61. | 69. | 95. | 0.9685 | 0.9754 | 0.1963 | 0.01 |
| H | SEC | 0.195E+01 | 0.178E+01 | 61. | 70. | 95. | 0.9699 | 0.9764 | 62.30 | 0.06 |
| E | 20.0 | 0.320E+01 | 0.185E+01 | 71. | 63. | 30. | 0.9719 | 0.9881 | 0.2119 | 0.11 |
| H | SEC | 0.267E+01 | 0.175E+01 | 71. | 63. | 30. | 0.9727 | 0.9882 | 61.90 | 0.12 |

AVERAGE # 8
SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.273E+01 | 0.225E+01 | 63. | 64. | 30. | 0.9765 | 0.9799 | 0.2188 | 0.05 |
| H | SEC | 0.248E+01 | 0.212E+01 | 63. | 64. | 30. | 0.9766 | 0.9799 | 57.40 | 0.04 |
| E | 5.5 | 0.345E+01 | 0.238E+01 | 52. | 66. | 30. | 0.8711 | 0.8722 | 0.1660 | 0.11 |
| H | SEC | 0.168E+01 | 0.179E+01 | 53. | 64. | 30. | 0.8776 | 0.8787 | 45.00 | 0.08 |
| E | 3.0 | 0.163E+01 | 0.482E+01 | 22. | 58. | 30. | 0.8284 | 0.8379 | 0.9846 | 0.17 |
| H | SEC | 0.749E+00 | 0.215E+01 | 24. | 57. | 30. | 0.8305 | 0.8396 | 52.00 | 0.17 |
| E | 2.0 | 0.167E+01 | 0.183E+02 | 90. | 81. | 30. | 0.7671 | 0.5249 | 0.5070 | 0.50 |
| H | SEC | 0.473E+00 | 0.532E+00 | 22. | 70. | 30. | 0.8358 | 0.6833 | 53.00 | 0.26 |
| E | 1.7 | 0.156E+02 | 0.160E+02 | 11. | 80. | 50. | 0.6208 | 0.6096 | 0.3809 | 0.47 |
| H | SEC | 0.493E+01 | 0.180E+01 | 18. | 7. | 50. | 0.7059 | 0.6964 | 43.30 | 0.64 |
| E | 1.2 | 0.142E+02 | 0.219E+01 | 9. | 76. | 50. | 0.8721 | 0.5903 | 0.3343 | 0.30 |
| H | SEC | 0.448E+01 | 0.415E+00 | 0. | 77. | 50. | 0.8758 | 0.6100 | 33.60 | 0.27 |
| E | 1.0 | 0.265E+01 | 0.145E+02 | 89. | 59. | 50. | 0.7395 | 0.4762 | 0.4644 | 0.61 |
| H | HZ | 0.440E+00 | 0.103E+01 | 2. | 58. | 50. | 0.7489 | 0.4909 | 34.50 | 0.26 |

AVERAGE # 8
SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.229E+02 | 0.966E+01 | 70. | 68. | 50. | 0.8954 | 0.8843 | 0.1300 | 0.05 |
| H | HZ | 0.959E+01 | 0.783E+01 | 71. | 68. | 50. | 0.9075 | 0.8974 | 3.00 | 0.12 |
| E | 1.2 | 0.650E+02 | 0.787E+01 | 59. | 72. | 50. | 0.6282 | 0.7399 | 0.5403 | 0.29 |
| H | HZ | 0.140E+02 | 0.175E+01 | 60. | 71. | 50. | 0.6295 | 0.7458 | 73.20 | 0.29 |
| E | 1.5 | 0.361E+02 | 0.195E+02 | 0. | 29. | 50. | 0.7424 | 0.8325 | 0.2578 | 0.37 |
| H | HZ | 0.109E+02 | 0.817E+01 | 88. | 25. | 50. | 0.7467 | 0.8373 | 39.70 | 0.35 |
| E | 2.0 | 0.358E+02 | 0.176E+02 | 80. | 0. | 50. | 0.8156 | 0.9206 | 0.0932 | 0.14 |
| H | HZ | 0.182E+02 | 0.938E+01 | 79. | 89. | 50. | 0.8218 | 0.9206 | 49.50 | 0.17 |
| E | 2.0 | 0.406E+01 | 0.370E+02 | 6. | 87. | 50. | 0.6480 | 0.5042 | 0.1008 | 0.91 |
| H | HZ | 0.210E+00 | 0.942E+01 | 6. | 82. | 50. | 0.7258 | 0.5430 | 105.70 | 0.48 |
| E | 2.0 | 0.434E+02 | 0.163E+02 | 65. | 69. | 50. | 0.9020 | 0.8541 | 0.3429 | 0.06 |
| H | HZ | 0.201E+02 | 0.120E+02 | 65. | 69. | 50. | 0.9067 | 0.8604 | 11.90 | 0.08 |

AVERAGE # 8
SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.283E+01 | 0.237E+02 | 6. | 81. | 50. | 0.5898 | 0.6507 | 0.0975 | 0.14 |
| H | HZ | 0.192E+00 | 0.166E+02 | 85. | 80. | 50. | 0.6812 | 0.7626 | 108.80 | 0.31 |
| E | 3.0 | 0.299E+02 | 0.186E+02 | 76. | 2. | 50. | 0.8934 | 0.9792 | 0.0886 | 0.21 |
| H | HZ | 0.196E+02 | 0.130E+02 | 75. | 1. | 50. | 0.9030 | 0.9793 | 46.50 | 0.26 |
| E | 7.7 | 0.641E+02 | 0.445E+02 | 77. | 78. | 50. | 0.9704 | 0.9853 | 0.1775 | 0.04 |
| H | HZ | 0.580E+02 | 0.408E+02 | 77. | 78. | 50. | 0.9705 | 0.9853 | -2.50 | 0.04 |
| E | 14.3 | 0.920E+02 | 0.640E+02 | 73. | 73. | 50. | 0.9482 | 0.9708 | 0.3369 | 0.02 |
| H | HZ | 0.810E+02 | 0.498E+02 | 73. | 73. | 50. | 0.9489 | 0.9709 | 147.90 | 0.02 |
| E | 20.0 | 0.104E+03 | 0.764E+02 | 69. | 70. | 50. | 0.9139 | 0.9569 | 0.4688 | 0.02 |
| H | HZ | 0.848E+02 | 0.492E+02 | 69. | 70. | 50. | 0.9165 | 0.9571 | 121.70 | 0.00 |
| E | 26.3 | 0.129E+03 | 0.932E+02 | 71. | 66. | 50. | 0.8914 | 0.8699 | 2.6958 | 0.07 |
| H | HZ | 0.753E+02 | 0.604E+02 | 69. | 67. | 50. | 0.8967 | 0.8748 | 57.60 | 0.07 |
| E | 31.2 | 0.153E+03 | 0.103E+03 | 78. | 62. | 50. | 0.8533 | 0.7442 | 0.6485 | 0.13 |
| H | HZ | 0.570E+02 | 0.580E+02 | 75. | 64. | 50. | 0.8792 | 0.7587 | 12.70 | 0.15 |
| E | 40.0 | 0.130E+03 | 0.102E+03 | 63. | 63. | 50. | 0.8356 | 0.8197 | 0.9564 | 0.00 |
| H | HZ | 0.584E+02 | 0.511E+02 | 63. | 63. | 50. | 0.8362 | 0.8203 | 9.10 | 0.03 |

SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 19
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.5000E+02 | | 0.0000E+00 |
| | | 0.1000E+04 | |
| 2 | 0.5000E+00 | | 0.1000E+04 |
| | | 0.1000E+03 | |
| 3 | 0.5000E+01 | | 0.1100E+04 |
| | | 0.3000E+04 | |
| 4 | 0.5000E+01 | | 0.4100E+04 |

FREQUENCY RANGE ( 0.8000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.8705E+02 | | 0.0000E+00 |
| | | 0.9306E+03 | |
| 2 | 0.2486E+01 | | 0.9306E+03 |
| | | 0.4008E+03 | |
| 3 | 0.7228E+00 | | 0.1331E+04 |
| | | 0.2203E+04 | |
| 4 | 0.3268E-01 | | 0.3535E+04 |

MEAN PERCENT VARIATION IS 0.2084E+02

ERROR ANALYSIS

R-SQUARED = 0.999E+00

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 18 | 0.300E+05 | 0.166E+04 | 0.334E+00 |
| MODEL | 6 | 0.299E+05 | 0.499E+04 | 0.725E+05 |
| RESID | 12 | 0.825E+00 | 0.687E-01 | |

STANDARD ERROR = 0.262E+00

DTEST FOR MEANS = 0.672E-05

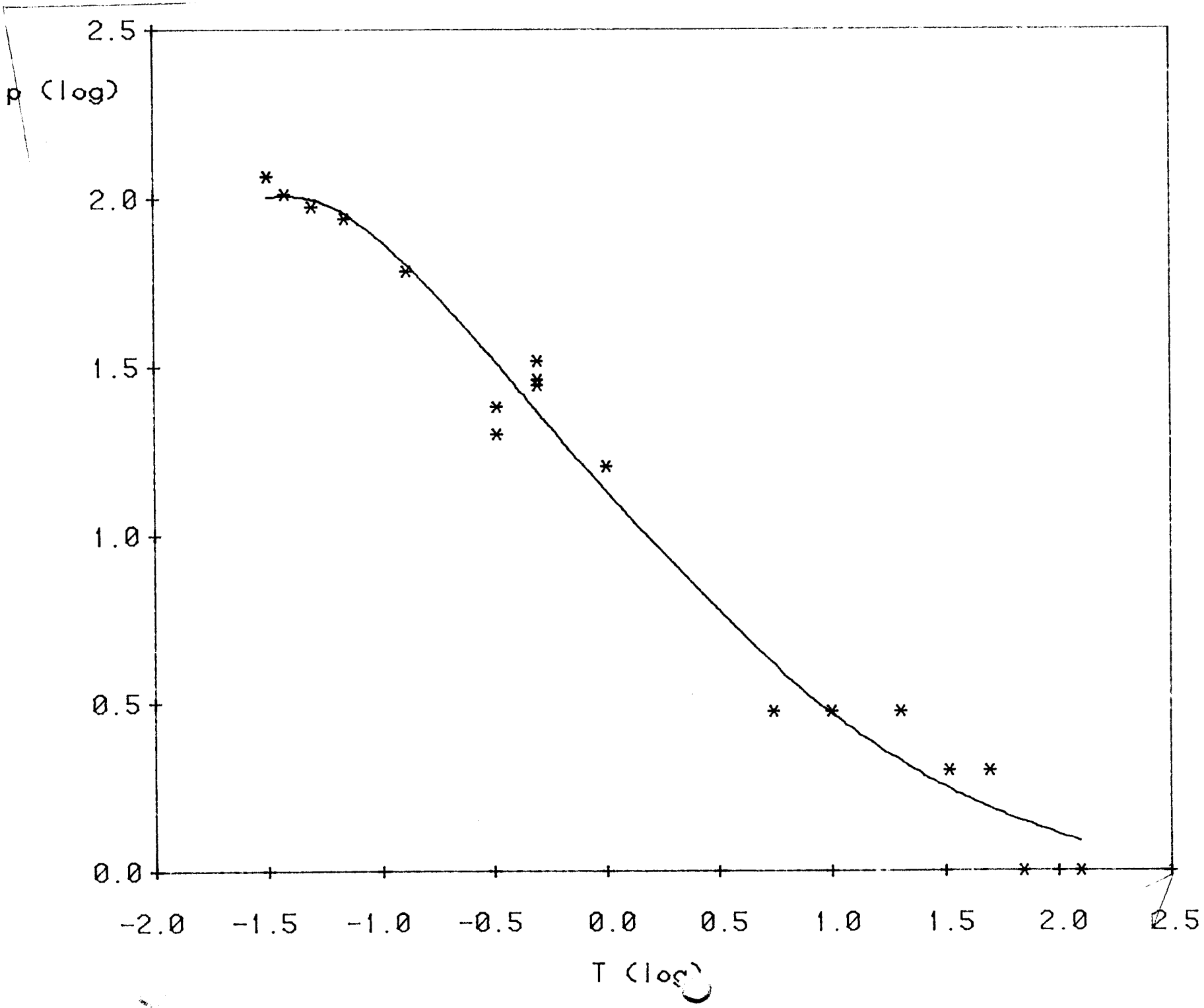
NOISE TO SIGNAL RATIO = 0.371E+00 PERCENT

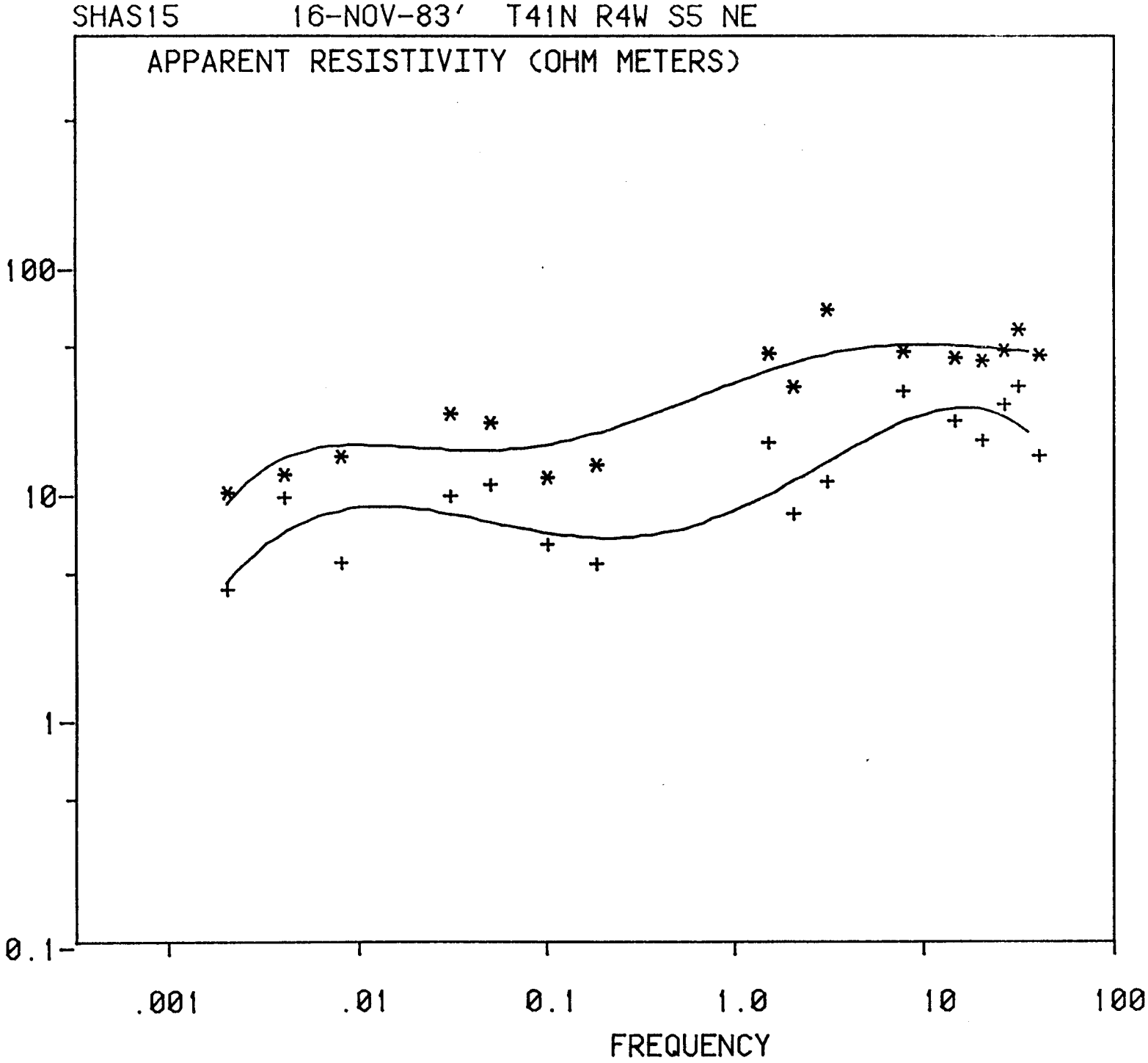
SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC

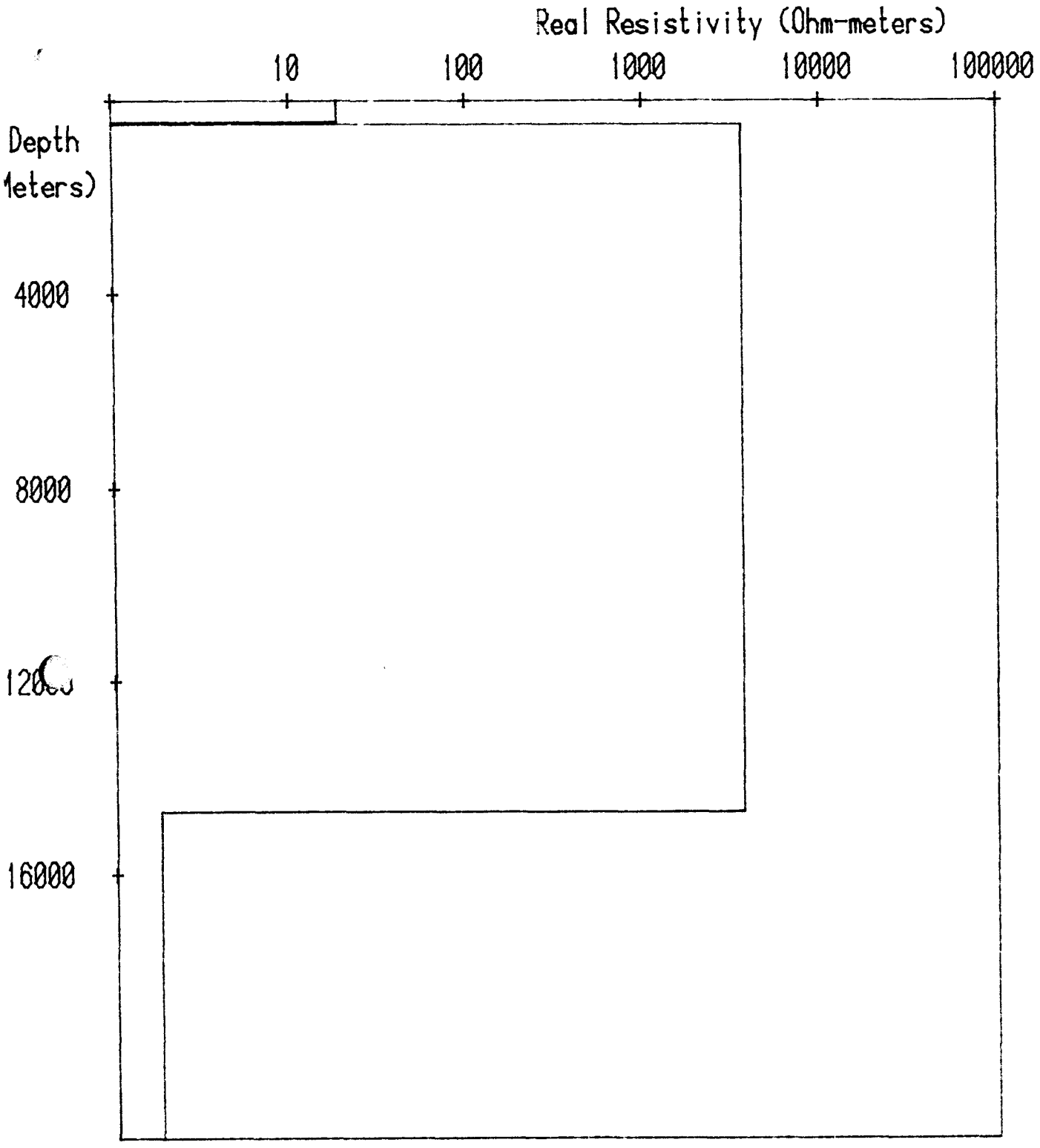
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.125E+03 | 0.100E+01 | 0.883E+00 | 0.117E+00 | 0.124E+02 |
| 2 | 0.700E+02 | 0.100E+01 | 0.133E+01 | -0.331E+00 | -0.284E+02 |
| 3 | 0.500E+02 | 0.200E+01 | 0.164E+01 | 0.357E+00 | 0.196E+02 |
| 4 | 0.330E+02 | 0.200E+01 | 0.204E+01 | -0.385E-01 | -0.191E+01 |
| 5 | 0.200E+02 | 0.300E+01 | 0.248E+01 | 0.521E+00 | 0.190E+02 |
| 6 | 0.100E+02 | 0.300E+01 | 0.320E+01 | -0.197E+00 | -0.636E+01 |
| 7 | 0.550E+01 | 0.300E+01 | 0.439E+01 | -0.139E+01 | -0.376E+02 |
| 8 | 0.100E+01 | 0.160E+02 | 0.142E+02 | 0.176E+01 | 0.116E+02 |
| 9 | 0.500E+00 | 0.280E+02 | 0.234E+02 | 0.459E+01 | 0.178E+02 |
| 10 | 0.500E+00 | 0.290E+02 | 0.234E+02 | 0.559E+01 | 0.213E+02 |
| 11 | 0.500E+00 | 0.330E+02 | 0.234E+02 | 0.959E+01 | 0.340E+02 |
| 12 | 0.330E+00 | 0.200E+02 | 0.313E+02 | -0.113E+02 | -0.440E+02 |
| 13 | 0.330E+00 | 0.240E+02 | 0.313E+02 | -0.727E+01 | -0.263E+02 |
| 14 | 0.130E+00 | 0.610E+02 | 0.581E+02 | 0.294E+01 | 0.493E+01 |
| 15 | 0.700E-01 | 0.870E+02 | 0.831E+02 | 0.392E+01 | 0.461E+01 |
| 16 | 0.500E-01 | 0.950E+02 | 0.957E+02 | -0.672E+00 | -0.705E+00 |
| 17 | 0.380E-01 | 0.103E+03 | 0.103E+03 | 0.354E+00 | 0.345E+00 |
| 18 | 0.320E-01 | 0.116E+03 | 0.105E+03 | 0.112E+02 | 0.101E+02 |
| 19 | 0.250E-01 | 0.950E+02 | 0.105E+03 | -0.992E+01 | -0.992E+01 |

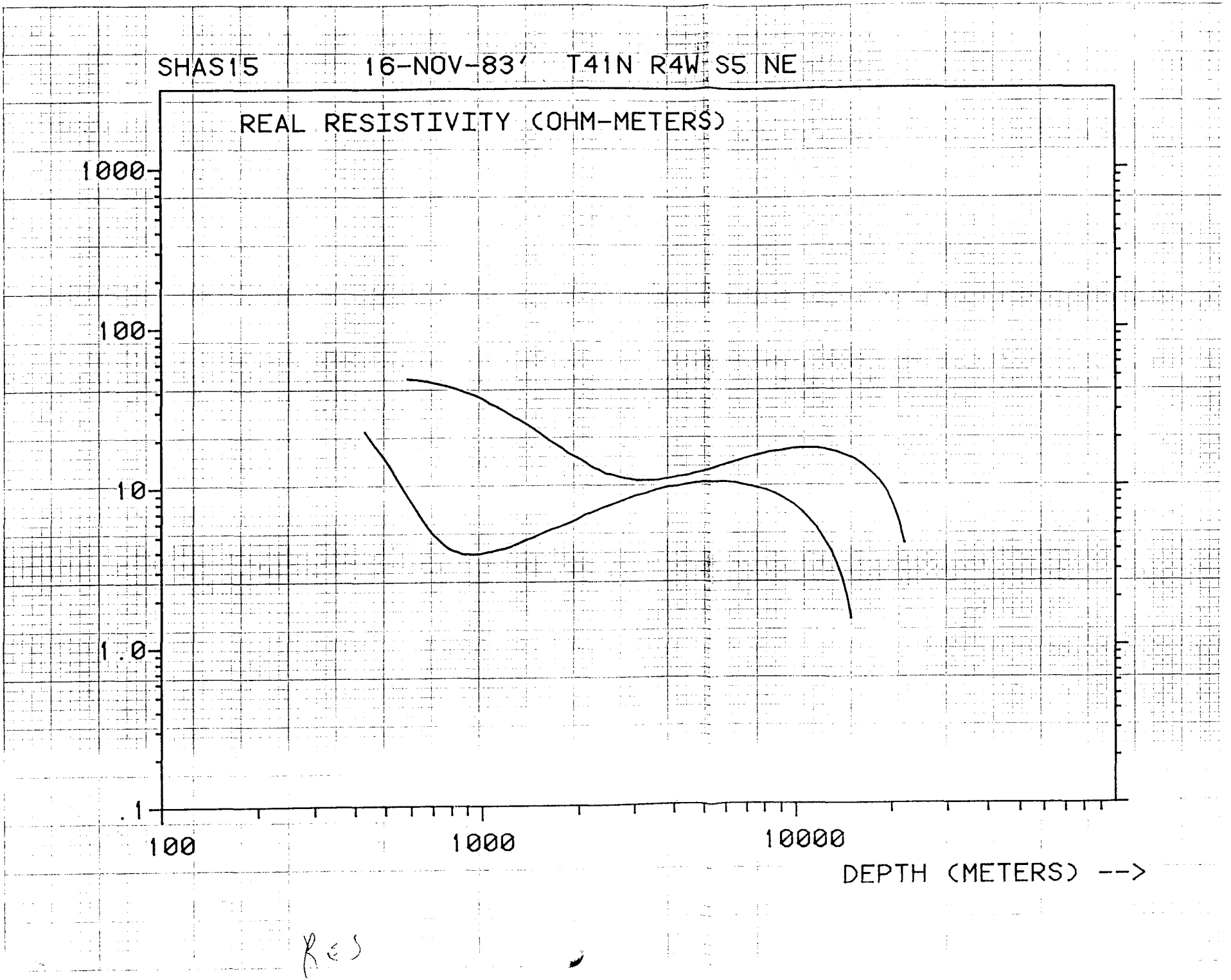
MEAN PERCENT ERROR = 0.2067E+02
MAXIMUM PERCENT ERROR = 0.4396E+02
MAX. ERROR OCCURED AT OBSERVATION 12


2.5
p (log)
2.0
1.5
1.0
0.5
0.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)

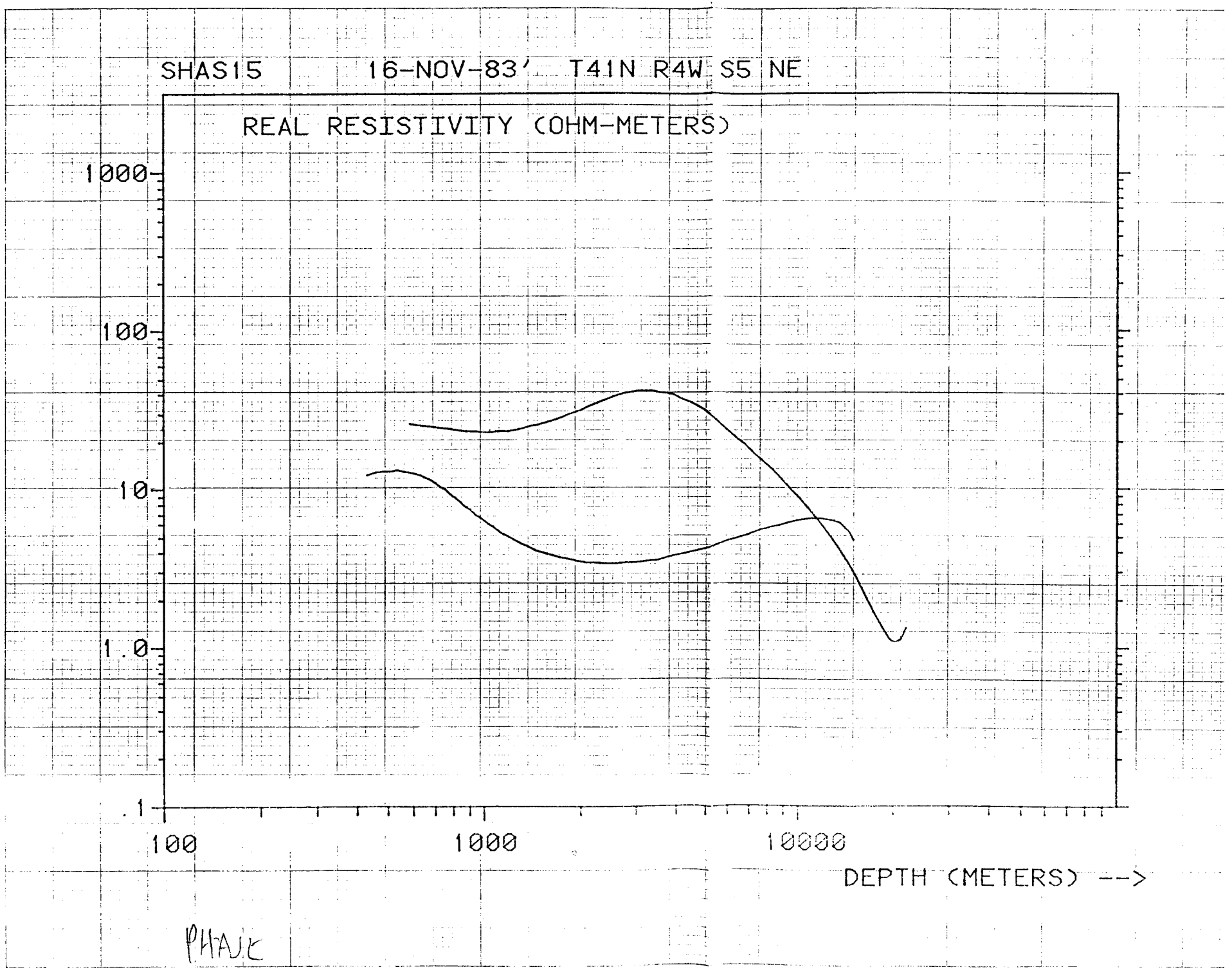

SHAS15 16-NOV-83' T41N R4W S5 NE
APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.001
.01
0.1
1.0
10
100
FREQUENCY




| | | | | |
|---|---|---|---|---|
| Resistivity | 18.91 | 0.03 | 3668.33 | 1.79 |
| Thickness | 439.98 | 13.30 | 14256.90 | |
| Depth | 0.00 | 439.98 | 453.29 | 14710.19 |

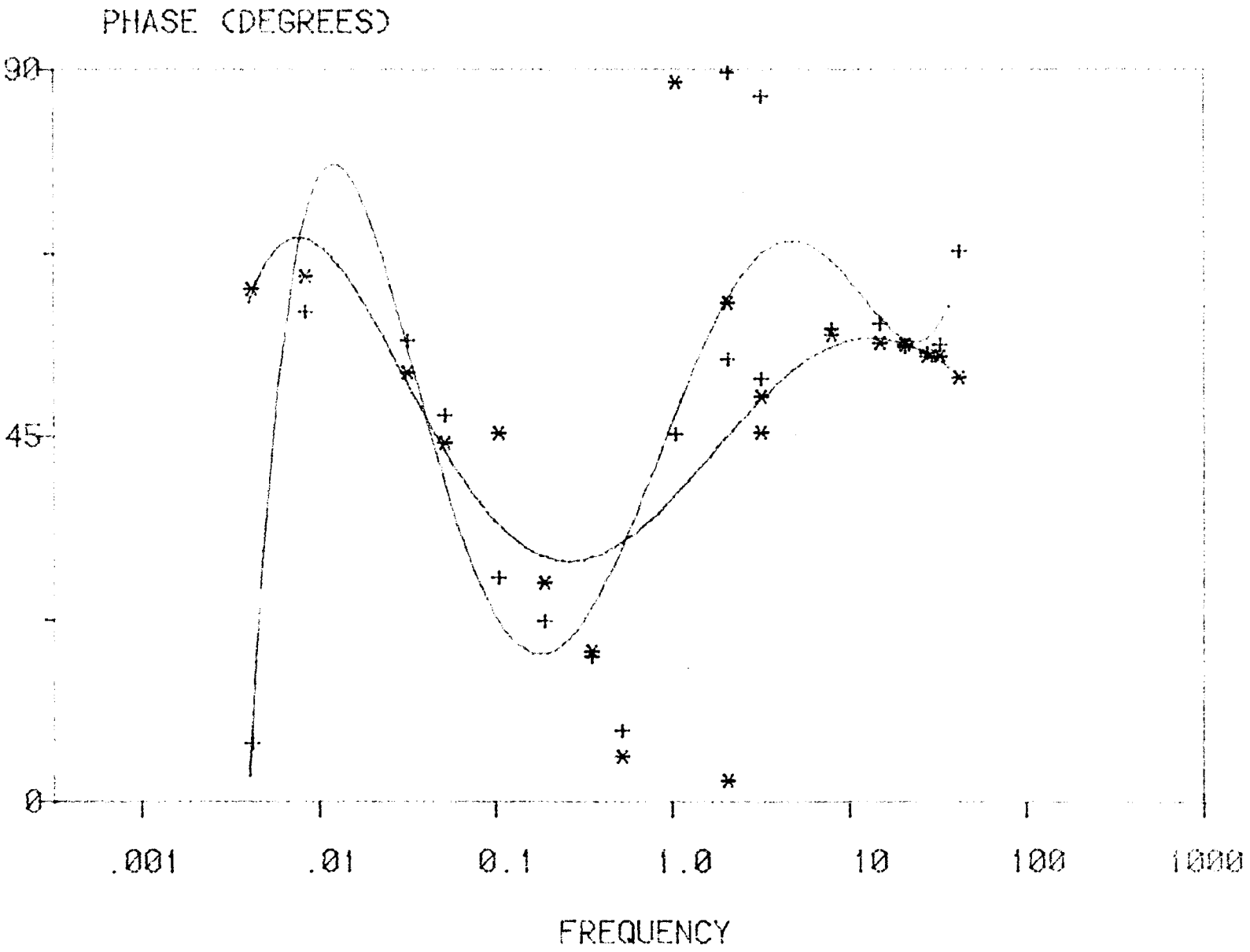

SHAS15 16-NOV-83 T41N R4W S5 NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
DEPTH (METERS) -->

Res


SHAS15 16-NOV-83' T41N R4W S5 NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
DEPTH (METERS) -->

PHASE

SHAS15 16-NOV-83 T41N R4W S5 NE



THE SITE IS: SMAS15 200 HZ 16-NOV-83' T41N R4W S5 NE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 18.62 | 10.18 | 1 | 822.98 | 371.76 |
| 0.0020 | 9.13 | 4.19 | 2 | 621.39 | 153.94 |
| 0.0040 | 9.31 | 11.60 | 3 | 20.55 | 24.84 |
| 0.0080 | 11.89 | 6.61 | 4 | 39.61 | 15.03 |
| 0.0143 | 0.00 | 0.00 | 5 | 0.00 | 0.00 |
| 0.0200 | 0.00 | 0.00 | 6 | 0.00 | 0.00 |
| 0.0303 | 16.11 | 14.84 | 7 | 7.24 | 1.16 |
| 0.0500 | 15.28 | 14.71 | 8 | 4.12 | 0.53 |
| 0.1000 | 5.84 | 11.11 | 9 | 1.07 | 0.18 |
| 0.1818 | 9.56 | 7.63 | 10 | 0.60 | 0.21 |
| 0.3333 | 2.77 | 3.79 | 11 | 0.04 | 0.03 |
| 0.5000 | 1.49 | 2.83 | 12 | 0.02 | 0.01 |
| 0.5988 | 36.33 | 37.12 | 13 | 0.33 | 0.22 |
| 0.8000 | 24.33 | 43.92 | 14 | 0.11 | 0.28 |
| 1.0000 | 0.90 | 1.61 | 15 | 0.00 | 0.00 |
| 1.0000 | 123.62 | 15.44 | 16 | 0.05 | 0.04 |
| 1.2048 | 0.00 | 0.00 | 17 | 0.60 | 0.21 |
| 1.4925 | 24.95 | 30.60 | 18 | 0.02 | 0.02 |
| 2.0000 | 7.92 | 28.34 | 19 | 0.01 | 0.02 |
| 2.0000 | 0.85 | 1.32 | 20 | 0.00 | 0.00 |
| 2.0000 | 0.00 | 0.00 | 21 | 0.11 | 0.28 |
| 3.0303 | 1.11 | 0.87 | 22 | 0.00 | 0.00 |
| 3.0303 | 46.05 | 24.06 | 23 | 0.01 | 0.00 |
| 7.6923 | 30.07 | 37.94 | 24 | 0.01 | 0.00 |
| 14.2857 | 20.43 | 37.91 | 25 | 0.00 | 0.00 |
| 20.0000 | 16.34 | 36.91 | 26 | 0.00 | 0.00 |
| 26.3158 | 25.31 | 39.42 | 27 | 0.00 | 0.00 |
| 31.2500 | 39.25 | 39.62 | 28 | 0.00 | 0.00 |
| 40.0000 | 14.58 | 37.68 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS15 200 HZ 16-NOV-83' T41N R4W S5 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.137E+02 | 0.288E+02 | 37. | 67. | 120. | 0.7318 | 0.6675 | 0.2139 | 0.36 |
| H | SEC | 0.670E+01 | 0.845E+01 | 44. | 74. | 120. | 0.7771 | 0.6762 | 53.10 | 0.33 |
| E | 500.0 | 0.311E+01 | 0.148E+02 | 49. | 76. | 120. | 0.8863 | 0.8984 | 0.0657 | 0.71 |
| H | SEC | 0.528E+01 | 0.348E+01 | 39. | 78. | 120. | 0.9234 | 0.9325 | 33.30 | 0.52 |
| E | 250.0 | 0.134E+02 | 0.124E+02 | 64. | 7. | 120. | 0.9308 | 0.9686 | 0.0858 | 0.33 |
| H | SEC | 0.978E+01 | 0.627E+01 | 62. | 7. | 120. | 0.9476 | 0.9773 | 21.00 | 0.16 |
| E | 125.0 | 0.686E+01 | 0.195E+02 | 61. | 65. | 120. | 0.7767 | 0.7026 | 0.1173 | 0.38 |
| H | SEC | 0.635E+01 | 0.431E+01 | 61. | 66. | 120. | 0.8313 | 0.7217 | 85.10 | 0.48 |
| E | 70.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 50.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 33.0 | 0.144E+02 | 0.274E+02 | 60. | 55. | 120. | 0.7611 | 0.7874 | 0.2564 | 0.37 |
| H | SEC | 0.153E+02 | 0.477E+01 | 52. | 55. | 120. | 0.8352 | 0.8627 | 57.70 | 0.30 |
| E | 20.0 | 0.139E+02 | 0.236E+02 | 52. | 41. | 120. | 0.9248 | 0.9638 | 0.3000 | 0.39 |
| H | SEC | 0.155E+02 | 0.693E+01 | 50. | 41. | 120. | 0.9529 | 0.9788 | 50.40 | 0.28 |

AVERAGE # 8
SMAS15 200 HZ 16-NOV-83' T41N R4W S5 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.110E+02 | 0.716E+01 | 45. | 30. | 120. | 0.9698 | 0.9830 | 0.3109 | 0.29 |
| H | SEC | 0.112E+02 | 0.451E+01 | 43. | 30. | 120. | 0.9736 | 0.9849 | 56.10 | 0.24 |
| E | 5.5 | 0.858E+01 | 0.159E+02 | 33. | 17. | 120. | 0.8222 | 0.9494 | 0.2912 | 0.16 |
| H | SEC | 0.668E+01 | 0.320E+01 | 34. | 17. | 120. | 0.8690 | 0.9548 | 48.30 | 0.23 |
| E | 3.0 | 0.389E+01 | 0.394E+01 | 10. | 28. | 120. | 0.9280 | 0.9600 | 0.2672 | 0.16 |
| H | SEC | 0.369E+01 | 0.160E+01 | 9. | 28. | 120. | 0.9456 | 0.9696 | 62.00 | 0.16 |
| E | 2.0 | 0.317E+01 | 0.196E+01 | 6. | 9. | 140. | 0.9124 | 0.9226 | 0.2921 | 0.15 |
| H | SEC | 0.250E+01 | 0.102E+01 | 6. | 9. | 140. | 0.9177 | 0.9268 | 58.30 | 0.12 |
| E | 1.7 | 0.374E+02 | 0.415E+02 | 64. | 71. | 140. | 0.9677 | 0.9850 | 0.4434 | 0.89 |
| H | SEC | 0.369E+02 | 0.311E+02 | 62. | 70. | 140. | 0.9698 | 0.9864 | 102.60 | 0.80 |
| E | 1.2 | 0.687E+02 | 0.332E+02 | 58. | 66. | 140. | 0.7470 | 0.8606 | 0.5702 | 1.00 |
| H | SEC | 0.192E+02 | 0.155E+02 | 58. | 69. | 140. | 0.7506 | 0.9709 | 96.40 | 1.06 |
| E | 1.0 | 0.182E+01 | 0.138E+01 | 90. | 89. | 140. | 0.8768 | 0.8723 | 0.2892 | 0.12 |
| H | HZ | 0.140E+01 | 0.424E+00 | 90. | 89. | 140. | 0.8932 | 0.8895 | 58.10 | 0.05 |

AVERAGE # 8

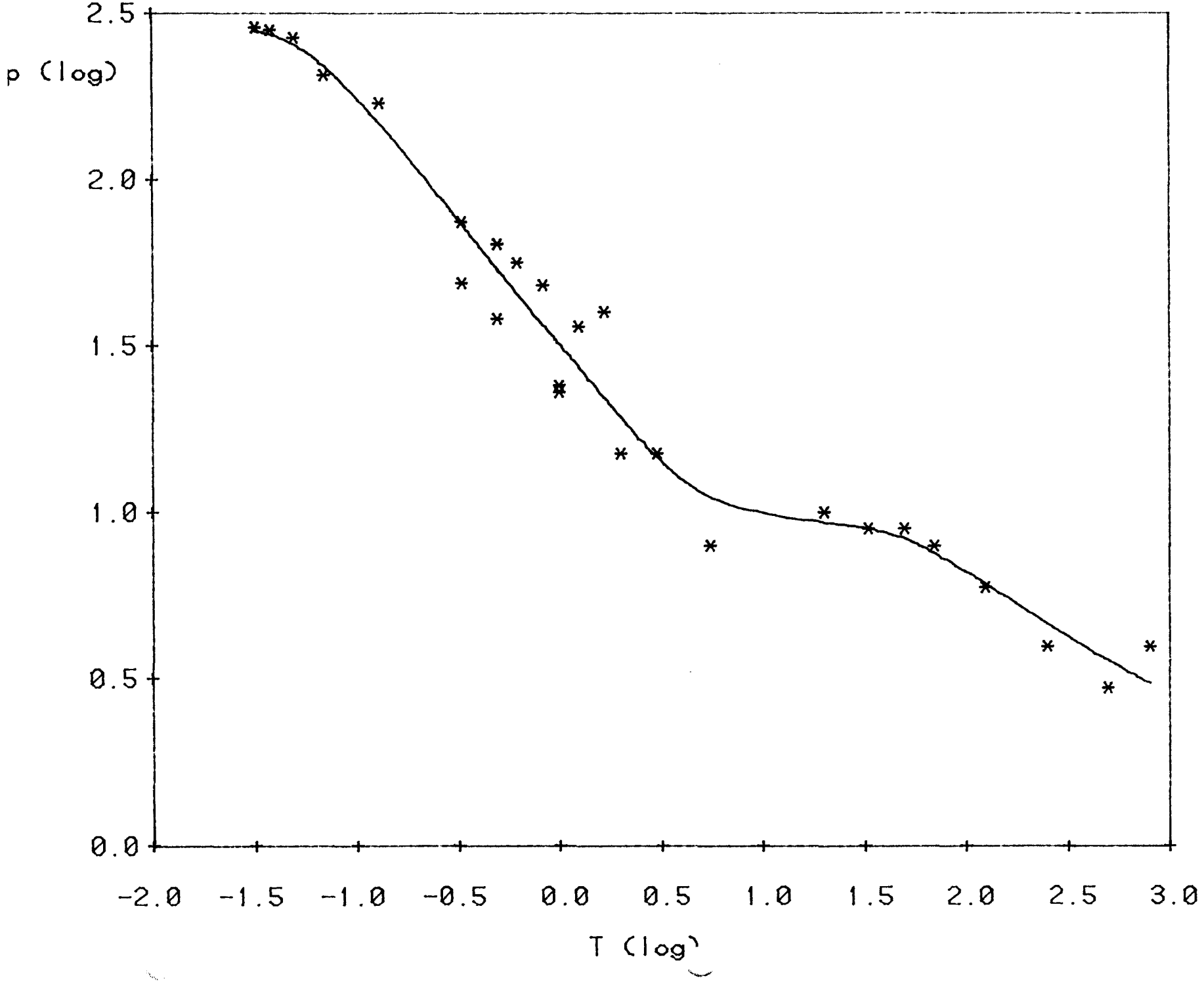
SHAS15 200 HZ 16-NOV-83' T41N R4W S5 NE

NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.167E+02 | 0.240E+03 | 55. | 79. | 140. | 0.6315 | 0.4689 | 0.3489 | 0.32 |
| H | HZ | 0.142E+02 | 0.689E+01 | 50. | 81. | 140. | 0.8492 | 0.6854 | 151.20 | 0.47 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.5 | 0.315E+02 | 0.476E+02 | 64. | 40. | 140. | 0.8704 | 0.7243 | 0.3738 | 0.26 |
| H | HZ | 0.297E+02 | 0.227E+01 | 63. | 44. | 140. | 0.9459 | 0.8739 | 111.90 | 0.36 |
| E | 2.0 | 0.292E+02 | 0.112E+02 | 60. | 56. | 140. | 0.9743 | 0.9620 | 0.3660 | 0.13 |
| H | HZ | 0.275E+02 | 0.460E+01 | 63. | 54. | 140. | 0.9807 | 0.9726 | 126.80 | 0.22 |
| E | 2.0 | 0.193E+01 | 0.136E+01 | 1. | 2. | 140. | 0.7220 | 0.8011 | 0.3066 | 0.13 |
| H | HZ | 0.715E+00 | 0.345E+00 | 3. | 0. | 140. | 0.7337 | 0.8066 | 59.10 | 0.12 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |

AVERAGE # 8
SHAS15 200 HZ 16-NOV-83 ' T41N R4W S5 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.121E+01 | 0.195E+01 | 86. | 4. | 120. | 0.6952 | 0.7997 | 0.2473 | 0.04 |
| H | HZ | 0.540E+00 | 0.273E+00 | 85. | 4. | 120. | 0.7261 | 0.8093 | 51.30 | 0.03 |
| E | 3.0 | 0.201E+02 | 0.865E+02 | 51. | 50. | 120. | 0.8675 | 0.8418 | 0.6130 | 0.50 |
| H | HZ | 0.280E+02 | 0.556E+01 | 52. | 50. | 120. | 0.9325 | 0.9216 | 122.80 | 0.03 |
| E | 7.7 | 0.387E+02 | 0.431E+02 | 57. | 60. | 120. | 0.9386 | 0.9564 | 0.5279 | 0.20 |
| H | HZ | 0.372E+02 | 0.170E+02 | 55. | 60. | 120. | 0.9534 | 0.9667 | 134.60 | 0.16 |
| E | 14.3 | 0.424E+02 | 0.324E+02 | 56. | 60. | 120. | 0.8534 | 0.9016 | 0.5346 | 0.22 |
| H | HZ | 0.334E+02 | 0.841E+01 | 56. | 60. | 120. | 0.8796 | 0.9157 | 167.10 | 0.21 |
| E | 20.0 | 0.454E+02 | 0.267E+02 | 56. | 56. | 120. | 0.8035 | 0.8398 | 0.4455 | 0.17 |
| H | HZ | 0.284E+02 | 0.597E+01 | 57. | 56. | 120. | 0.8263 | 0.8551 | 169.40 | 0.13 |
| E | 26.3 | 0.461E+02 | 0.403E+02 | 56. | 55. | 120. | 0.8313 | 0.8594 | 0.5420 | 0.22 |
| H | HZ | 0.328E+02 | 0.103E+02 | 55. | 55. | 120. | 0.8540 | 0.8766 | -2.20 | 0.16 |
| E | 31.2 | 0.440E+02 | 0.624E+02 | 56. | 55. | 120. | 0.8400 | 0.8318 | 0.6796 | 0.26 |
| H | HZ | 0.353E+02 | 0.161E+02 | 56. | 55. | 120. | 0.8674 | 0.8603 | 172.20 | 0.14 |
| E | 40.0 | 0.571E+02 | 0.270E+02 | 55. | 64. | 120. | 0.6980 | 0.6914 | 0.6113 | 0.05 |
| H | HZ | 0.183E+02 | 0.216E+01 | 55. | 60. | 120. | 0.7291 | 0.7251 | 165.90 | 0.11 |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2.0
1.5
1.0
0.5
0.0
-2.0
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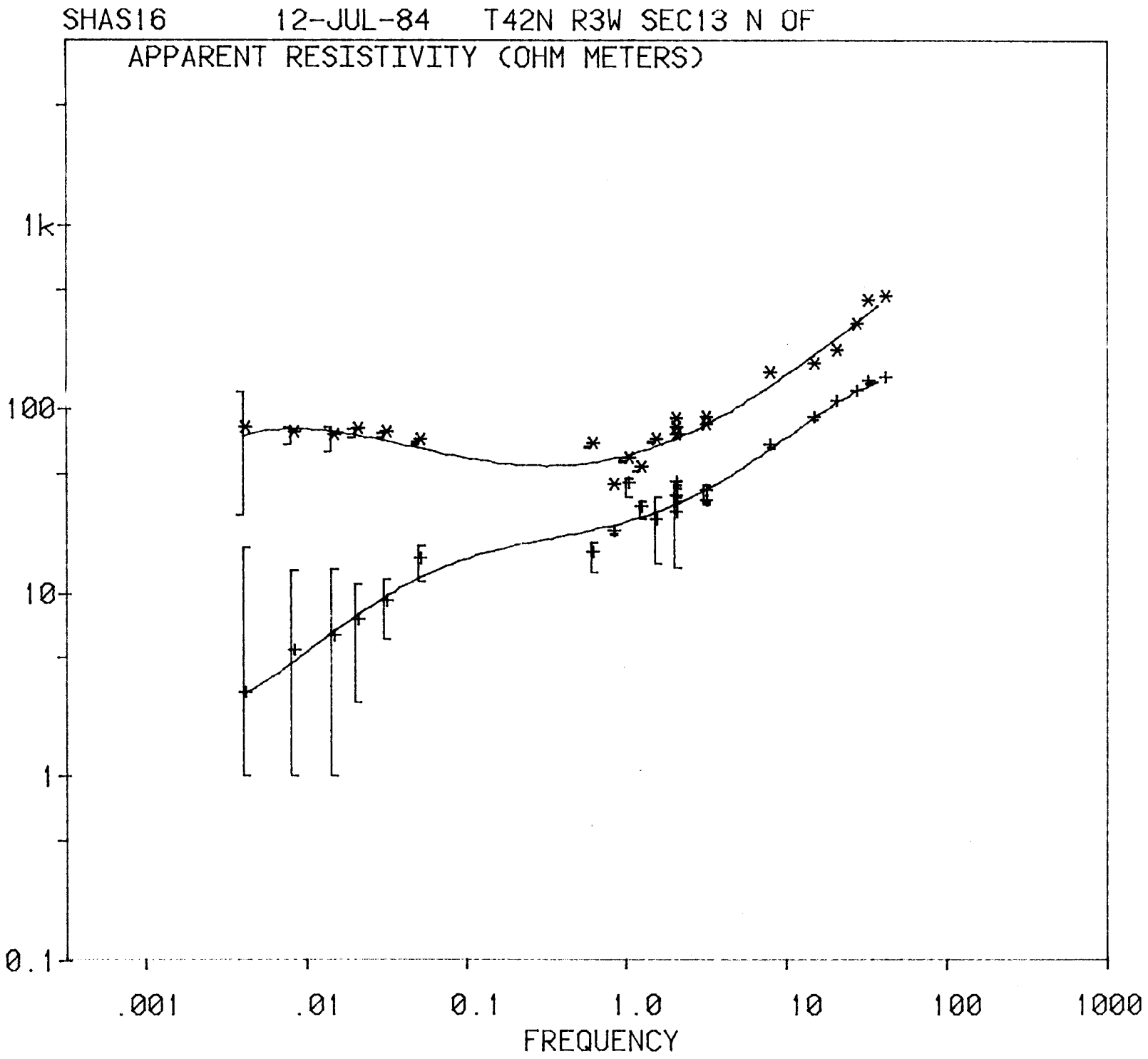
1.0
1.5
2.0
2.5
3.0
T (log)


SHAS16 12-JUL-84 T42N R3W SEC13 N OF
APPARENT RESISTIVITY (OHM METERS)
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100
10
1
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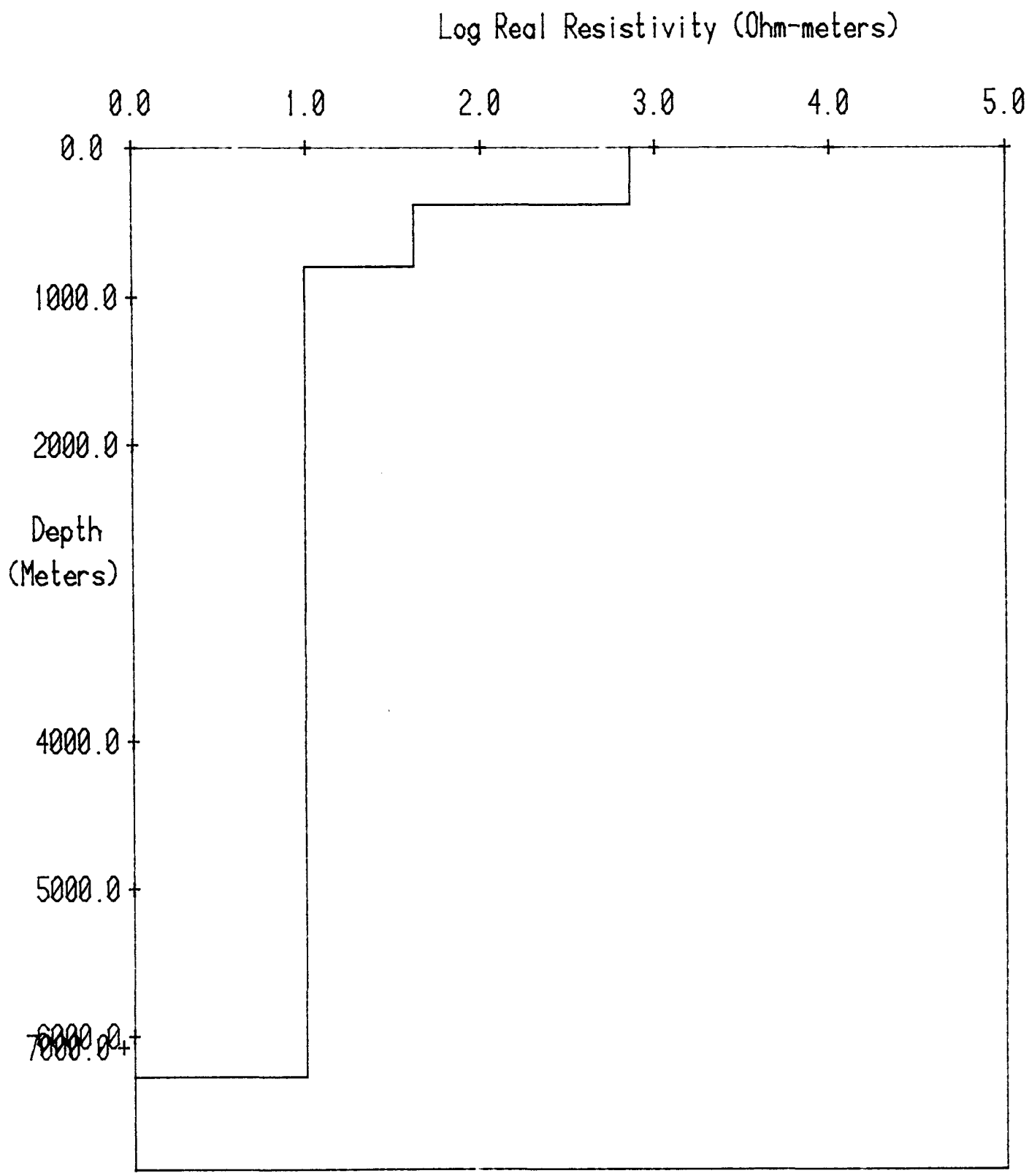
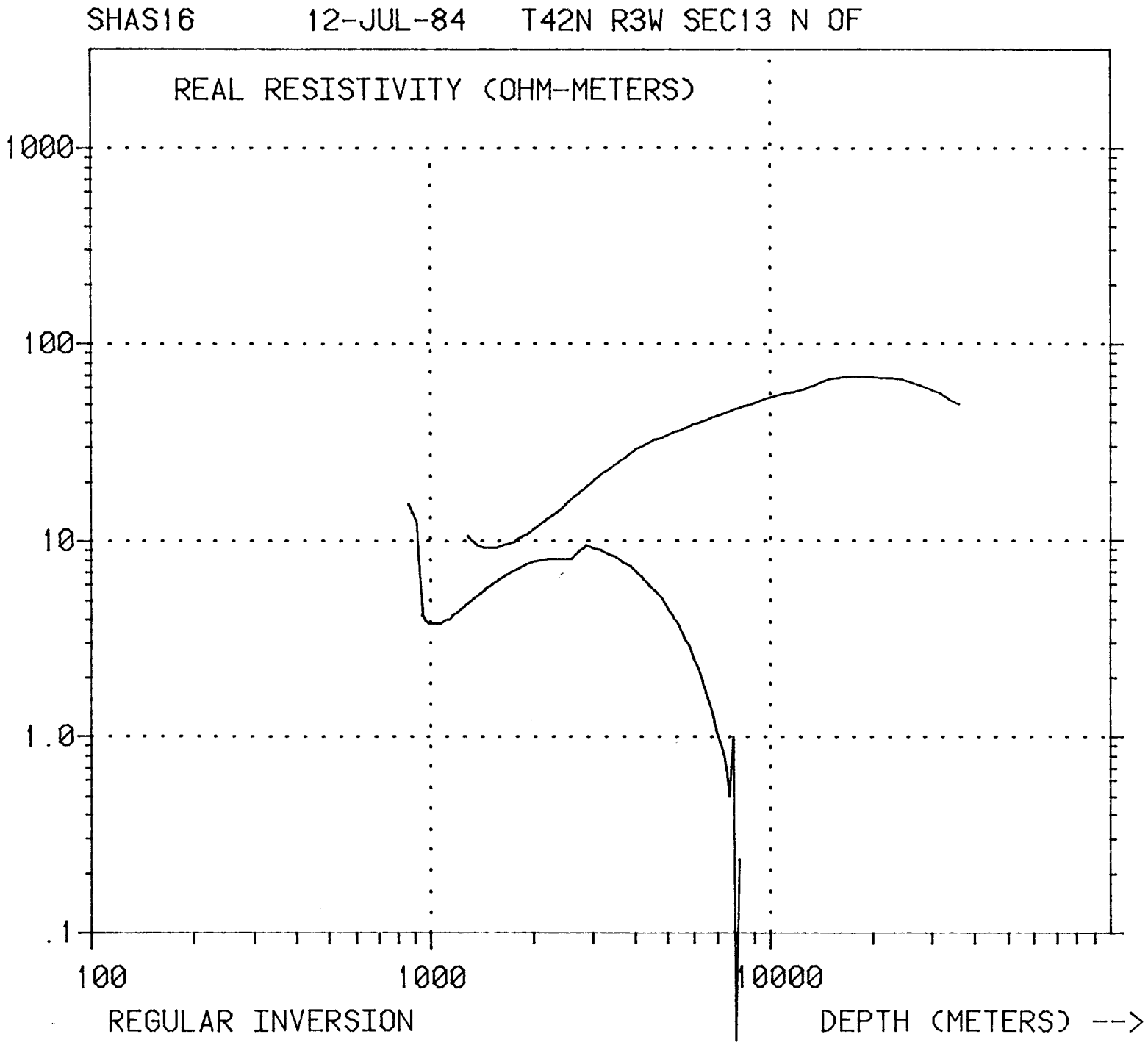
.01
0.1
1.0
10
100
1000
FREQUENCY




| | | | | |
|---|---|---|---|---|
| Resistivity | 0726.42 | 0041.54 | 0009.79 | 0000.77 |
| Thickness | | 0376.57 | 0424.77 | 5475.01 |
| Depth | 0000.00 | 0376.57 | 0801.34 | 6276.36 |


SHAS16 12-JUL-84 T42N R3W SEC13 N OF
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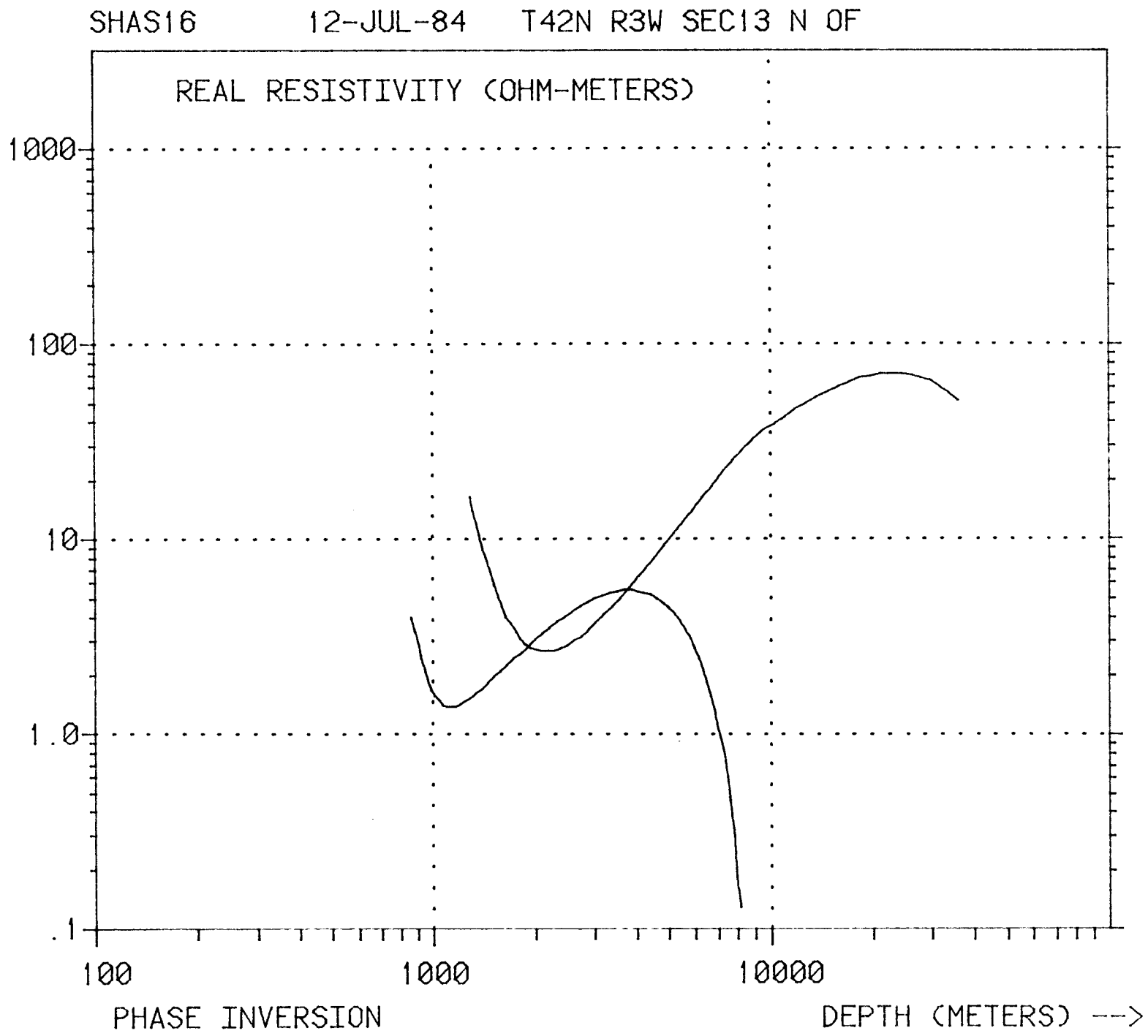
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->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REAL RESISTIVITY (OHM-METERS)
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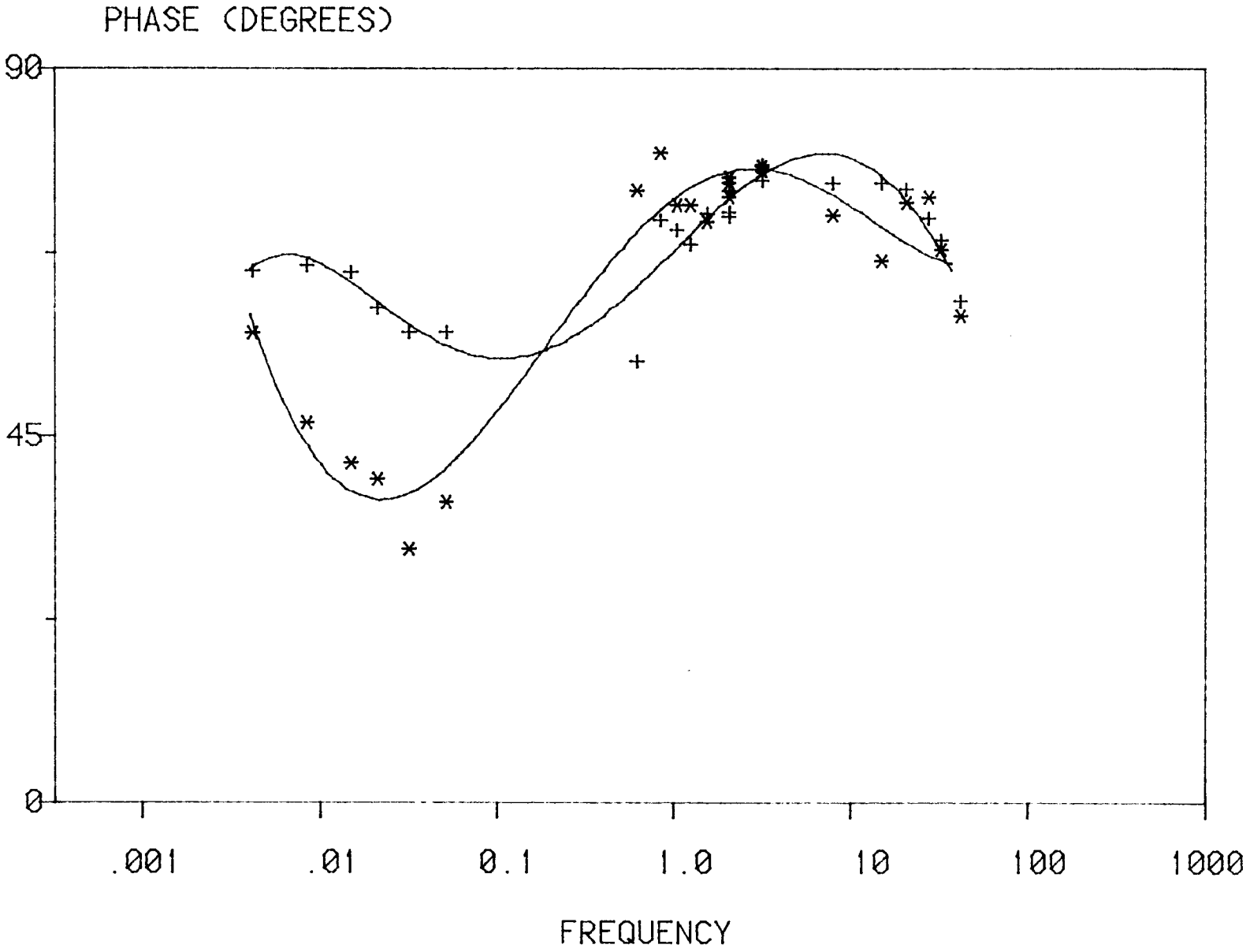
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS16 12-JUL-84 T42N R3W SEC13 N OF



THE SITE IS: SHAS16 200 HZ 12-JUL-84 T42N R3W SEC13 N OF

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 2.50 | 64.02 | 1 | 14.69 | 47.61 |
| 0.0020 | 1.93 | 50.01 | 2 | 8.31 | 7.60 |
| 0.0040 | 2.71 | 73.65 | 3 | 7.68 | 10.78 |
| 0.0080 | 4.56 | 69.99 | 4 | 4.19 | 4.39 |
| 0.0143 | 5.51 | 67.51 | 5 | 3.08 | 1.72 |
| 0.0200 | 6.68 | 72.50 | 6 | 3.17 | 1.45 |
| 0.0303 | 8.51 | 70.44 | 7 | 2.79 | 0.42 |
| 0.0500 | 14.60 | 63.71 | 8 | 0.23 | 0.08 |
| 0.1000 | 49.96 | 229.16 | 9 | 4.40 | 0.45 |
| 0.1818 | 182.99 | 159.23 | 10 | 2.89 | 0.12 |
| 0.3333 | 1341.00 | 3483.32 | 11 | 8.91 | 0.27 |
| 0.5000 | 2427.41 | 4760.63 | 12 | 11.86 | 0.18 |
| 0.5988 | 15.51 | 60.26 | 13 | 1.48 | 0.05 |
| 0.8000 | 20.17 | 36.00 | 14 | 0.94 | 0.02 |
| 1.0000 | 36.60 | 50.61 | 15 | 0.18 | 0.00 |
| 1.0000 | 268.67 | 255.91 | 16 | 3.74 | 0.12 |
| 1.2048 | 27.39 | 44.63 | 17 | 0.33 | 0.01 |
| 1.4925 | 23.11 | 64.24 | 18 | 0.27 | 0.01 |
| 2.0000 | 25.36 | 82.97 | 19 | 0.20 | 0.01 |
| 2.0000 | 37.74 | 67.68 | 20 | 0.07 | 0.00 |
| 2.0000 | 31.46 | 73.59 | 21 | 0.48 | 0.01 |
| 3.0303 | 29.74 | 76.92 | 22 | 0.03 | 0.00 |
| 3.0303 | 33.53 | 83.42 | 23 | 0.07 | 0.00 |
| 7.6923 | 59.81 | 148.01 | 24 | 0.35 | 0.00 |
| 14.2857 | 84.65 | 166.42 | 25 | 0.34 | 0.00 |
| 20.0000 | 103.34 | 195.83 | 26 | 0.10 | 0.00 |
| 26.3158 | 117.04 | 270.65 | 27 | 0.14 | 0.00 |
| 31.2500 | 133.17 | 360.69 | 28 | 0.08 | 0.00 |
| 40.0000 | 136.54 | 382.28 | 29 | 0.03 | 0.00 |

AVERAGE # 8
SHAS16 200 HZ 12-JUL-84 T42N R3W SEC13 N OF
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.592E+02 | 0.281E+01 | 41. | 45. | 30. | 0.0923 | 0.4775 | 1.1113 | 0.17 |
| H | SEC | 0.683E+02 | 0.229E+01 | 35. | 52. | 30. | 0.2252 | 0.2931 | 79.30 | 0.20 |
| E | 500.0 | 0.520E+02 | 0.252E+01 | 52. | 40. | 30. | 0.1558 | 0.8268 | 0.5628 | 0.06 |
| H | SEC | 0.478E+02 | 0.137E+01 | 43. | 57. | 30. | 0.0485 | 0.2402 | 78.90 | 0.25 |
| E | 250.0 | 0.830E+02 | 0.313E+01 | 57. | 64. | 30. | 0.1917 | 0.1864 | 0.2387 | 0.08 |
| H | SEC | 0.641E+02 | 0.234E+01 | 59. | 67. | 30. | 0.4564 | 0.4806 | 90.30 | 0.12 |
| E | 125.0 | 0.699E+02 | 0.508E+01 | 49. | 67. | 30. | 0.2282 | 0.2209 | 0.1572 | 0.09 |
| H | SEC | 0.706E+02 | 0.396E+01 | 44. | 67. | 30. | 0.3633 | 0.2565 | 99.00 | 0.05 |
| E | 70.0 | 0.686E+02 | 0.569E+01 | 41. | 65. | 30. | 0.1073 | 0.0945 | 0.1646 | 0.08 |
| H | SEC | 0.667E+02 | 0.532E+01 | 42. | 66. | 30. | 0.1803 | 0.1342 | 158.20 | 0.09 |
| E | 50.0 | 0.761E+02 | 0.697E+01 | 40. | 62. | 30. | 0.2148 | 0.1188 | 0.0696 | 0.11 |
| H | SEC | 0.686E+02 | 0.651E+01 | 40. | 60. | 30. | 0.2289 | 0.1316 | 43.80 | 0.09 |
| E | 33.0 | 0.771E+02 | 0.895E+01 | 33. | 57. | 30. | 0.2414 | 0.1809 | 0.0593 | 0.09 |
| H | SEC | 0.637E+02 | 0.815E+01 | 30. | 60. | 30. | 0.0000 | 0.1346 | 10.90 | 0.10 |
| E | 20.0 | 0.916E+02 | 0.185E+02 | 33. | 54. | 30. | 0.4038 | 0.0411 | 0.0964 | 0.17 |
| H | SEC | 0.345E+02 | 0.115E+02 | 41. | 63. | 30. | 0.1929 | 0.0639 | 0.00 | 0.15 |

AVERAGE # 8
SHAS16 200 HZ 12-JUL-84 T42N R3W SEC13 N OF
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.413E+03 | 0.814E+02 | 5. | 65. | 40. | 0.7588 | 0.4727 | 0.0816 | 0.61 |
| H | SEC | 0.455E+02 | 0.185E+02 | 24. | 55. | 40. | 0.4313 | 0.5975 | 54.90 | 0.87 |
| E | 5.5 | 0.185E+03 | 0.344E+03 | 41. | 2. | 40. | 0.3268 | 0.6721 | 0.0308 | 0.36 |
| H | SEC | 0.134E+03 | 0.219E+02 | 44. | 48. | 40. | 0.2337 | 0.6079 | 156.90 | 0.71 |
| E | 3.0 | 0.352E+04 | 0.144E+04 | 86. | 0. | 40. | 1.0645 | 1.1619 | 0.0641 | 0.01 |
| H | SEC | 0.345E+04 | 0.124E+04 | 84. | 1. | 40. | 0.5414 | 0.7538 | 0.00 | 0.02 |
| E | 2.0 | 0.545E+04 | 0.258E+04 | 78. | 85. | 40. | 1.5067 | 1.7309 | 0.0297 | 0.02 |
| H | SEC | 0.407E+04 | 0.228E+04 | 73. | 87. | 40. | 1.2710 | 1.5510 | 0.00 | 0.04 |
| E | 1.7 | 0.646E+02 | 0.233E+02 | 74. | 55. | 40. | 0.4187 | 0.2490 | 0.0055 | 0.06 |
| H | SEC | 0.559E+02 | 0.768E+01 | 76. | 54. | 40. | 0.0000 | 0.1513 | 43.90 | 0.15 |
| E | 1.2 | 0.410E+02 | 0.319E+02 | 77. | 73. | 40. | 0.7242 | 0.2246 | 0.0054 | 0.09 |
| H | SEC | 0.310E+02 | 0.849E+01 | 83. | 70. | 40. | 0.7115 | 0.2285 | 105.00 | 0.12 |
| E | 1.0 | 0.808E+02 | 0.560E+02 | 76. | 72. | 40. | 0.6974 | 0.2086 | 0.0034 | 0.11 |
| H | HZ | 0.204E+02 | 0.172E+02 | 71. | 69. | 40. | 0.4405 | 0.1198 | 156.90 | 0.15 |

AVERAGE # 8
SHAS16 200 HZ 12-JUL-84 T42N R3W SEC13 N OF
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.462E+03 | 0.498E+03 | 55. | 83. | 40. | 1.5641 | 0.0000 | 0.0184 | 0.31 |
| H | HZ | 0.502E+02 | 0.396E+02 | 5. | 69. | 40. | 1.1751 | 1.5715 | 88.80 | 0.56 |
| E | 1.2 | 0.509E+02 | 0.400E+02 | 71. | 71. | 50. | 0.7152 | 0.3193 | 0.0061 | 0.04 |
| H | HZ | 0.319E+02 | 0.198E+02 | 74. | 70. | 50. | 0.3275 | 0.1530 | 128.60 | 0.05 |
| E | 1.5 | 0.692E+02 | 0.271E+02 | 71. | 73. | 50. | 0.6670 | 0.1468 | 0.0054 | 0.03 |
| H | HZ | 0.575E+02 | 0.203E+02 | 71. | 74. | 50. | 0.4999 | 0.0913 | 88.70 | 0.06 |
| E | 2.0 | 0.937E+02 | 0.305E+02 | 75. | 72. | 50. | 0.0000 | 0.1355 | 0.0064 | 0.05 |
| H | HZ | 0.724E+02 | 0.201E+02 | 78. | 74. | 50. | 0.6398 | 0.1640 | 165.20 | 0.04 |
| E | 2.0 | 0.857E+02 | 0.606E+02 | 76. | 73. | 50. | 0.1251 | 0.1200 | 0.0110 | 0.07 |
| H | HZ | 0.437E+02 | 0.194E+02 | 77. | 78. | 50. | 0.2635 | 0.0614 | 8.20 | 0.06 |
| E | 2.0 | 0.778E+02 | 0.461E+02 | 75. | 71. | 50. | 0.6182 | 0.3235 | 0.0072 | 0.09 |
| H | HZ | 0.631E+02 | 0.206E+02 | 77. | 69. | 50. | 0.4165 | 0.4122 | 134.10 | 0.07 |

AVERAGE # 8
SHAS16 200 HZ 12-JUL-84 T42N R3W SEC13 N OF
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.860E+02 | 0.418E+02 | 77. | 76. | 50. | 0.1333 | 0.0294 | 0.0094 | 0.03 |
| H | HZ | 0.604E+02 | 0.225E+02 | 80. | 81. | 50. | 0.1911 | 0.0794 | 11.30 | 0.04 |
| E | 3.0 | 0.874E+02 | 0.397E+02 | 77. | 77. | 50. | 0.2637 | 0.0737 | 0.0077 | 0.02 |
| H | HZ | 0.729E+02 | 0.316E+02 | 78. | 77. | 50. | 0.0667 | 0.1390 | 0.00 | 0.05 |
| E | 7.7 | 0.149E+03 | 0.645E+02 | 74. | 76. | 50. | 0.8931 | 0.7769 | 0.0641 | 0.01 |
| H | HZ | 0.147E+03 | 0.551E+02 | 71. | 77. | 50. | 0.7686 | 0.7129 | 0.00 | 0.02 |
| E | 14.3 | 0.189E+03 | 0.914E+02 | 69. | 75. | 50. | 1.7623 | 1.9008 | 0.0297 | 0.02 |
| H | HZ | 0.144E+03 | 0.779E+02 | 64. | 77. | 50. | 0.0000 | 0.3711 | 0.00 | 0.04 |
| E | 20.0 | 0.244E+03 | 0.113E+03 | 71. | 74. | 50. | 0.7895 | 1.5399 | 0.0173 | 0.01 |
| H | HZ | 0.148E+03 | 0.935E+02 | 77. | 77. | 50. | 1.5020 | 0.0000 | 0.00 | 0.03 |
| E | 26.3 | 0.308E+03 | 0.134E+03 | 69. | 71. | 50. | 2.3605 | 2.9896 | 0.0272 | 0.00 |
| H | HZ | 0.233E+03 | 0.100E+03 | 80. | 73. | 50. | 2.2197 | 2.6306 | 0.00 | 0.02 |
| E | 31.2 | 0.346E+03 | 0.149E+03 | 66. | 69. | 50. | 0.5394 | 2.2948 | 0.0593 | 0.01 |
| H | HZ | 0.376E+03 | 0.117E+03 | 71. | 69. | 50. | 2.1597 | 0.5141 | 162.10 | 0.02 |
| E | 40.0 | 0.379E+03 | 0.171E+03 | 62. | 65. | 50. | 0.6779 | 1.2989 | 0.1669 | 0.02 |
| H | HZ | 0.385E+03 | 0.102E+03 | 58. | 58. | 50. | 0.3598 | 3.0784 | 100.50 | 0.14 |

SHAS16 200 HZ 12-JUL-84 T42N R3W SEC13 N OF

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 21
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1000E+04 | | 0.0000E+00 |
| | | 0.1000E+04 | |
| 2 | 0.4000E+01 | | 0.1000E+04 |
| | | 0.1000E+04 | |
| 3 | 0.9000E+01 | | 0.2000E+04 |
| | | 0.8000E+04 | |
| 4 | 0.5000E+00 | | 0.1000E+05 |

FREQUENCY RANGE ( 0.4000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.6707E+03 | | 0.0000E+00 |
| | | 0.3004E+03 | |
| 2 | 0.6507E+02 | | 0.3004E+03 |
| | | 0.4672E+03 | |
| 3 | 0.9924E+01 | | 0.7676E+03 |
| | | 0.5491E+04 | |
| 4 | 0.7838E+00 | | 0.6259E+04 |

MEAN PERCENT VARIATION IS 0.1102E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 20 | 0.384E+05 | 0.192E+04 | 0.300E+00 |
| MODEL | 6 | 0.383E+05 | 0.639E+04 | 0.351E+06 |
| RESID | 14 | 0.255E+00 | 0.182E-01 | |

STANDARD ERROR = 0.135E+00

DTEST FOR MEANS =-0.181E-05

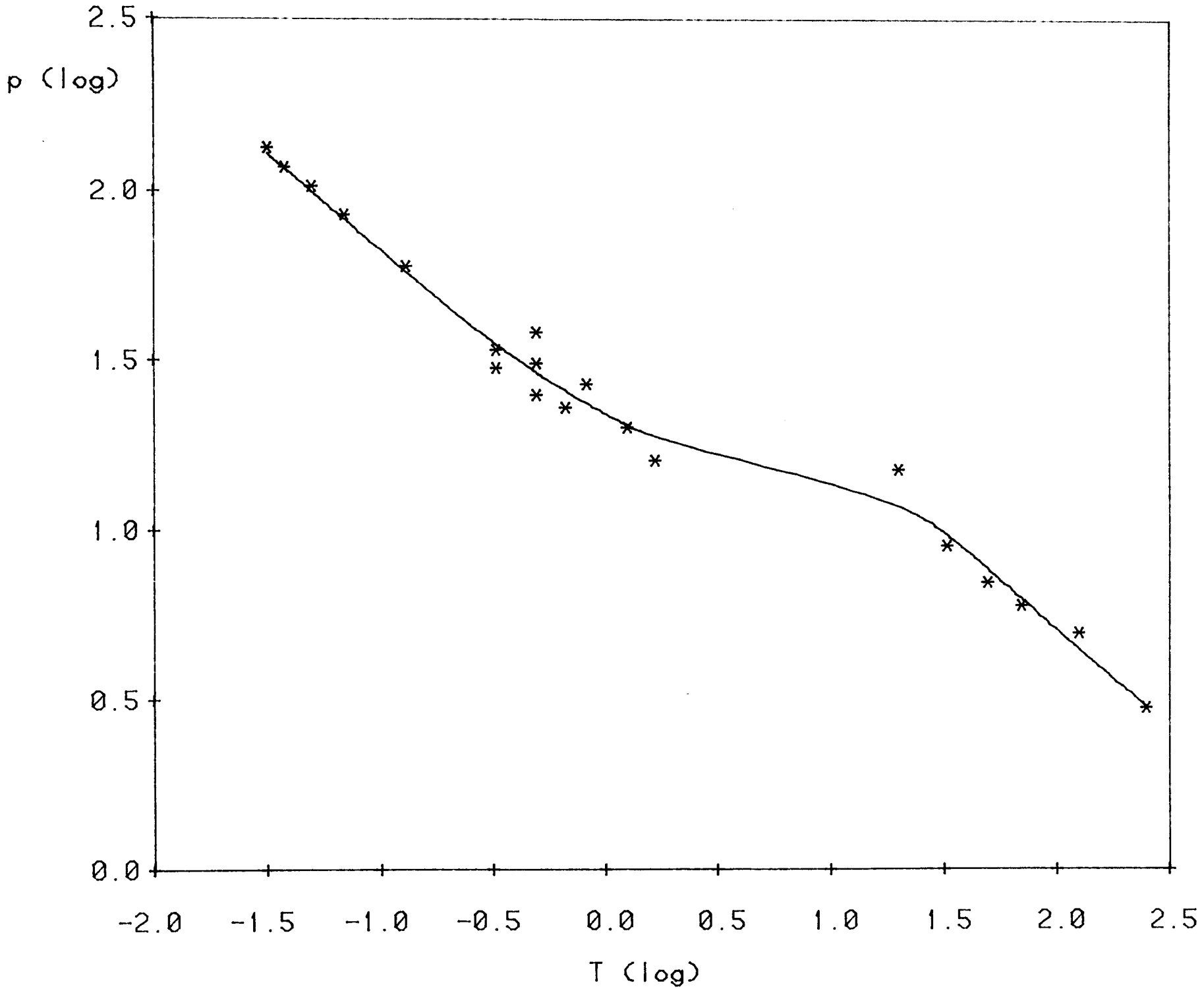
NOISE TO SIGNAL RATIO = 0.169E+00 PERCENT

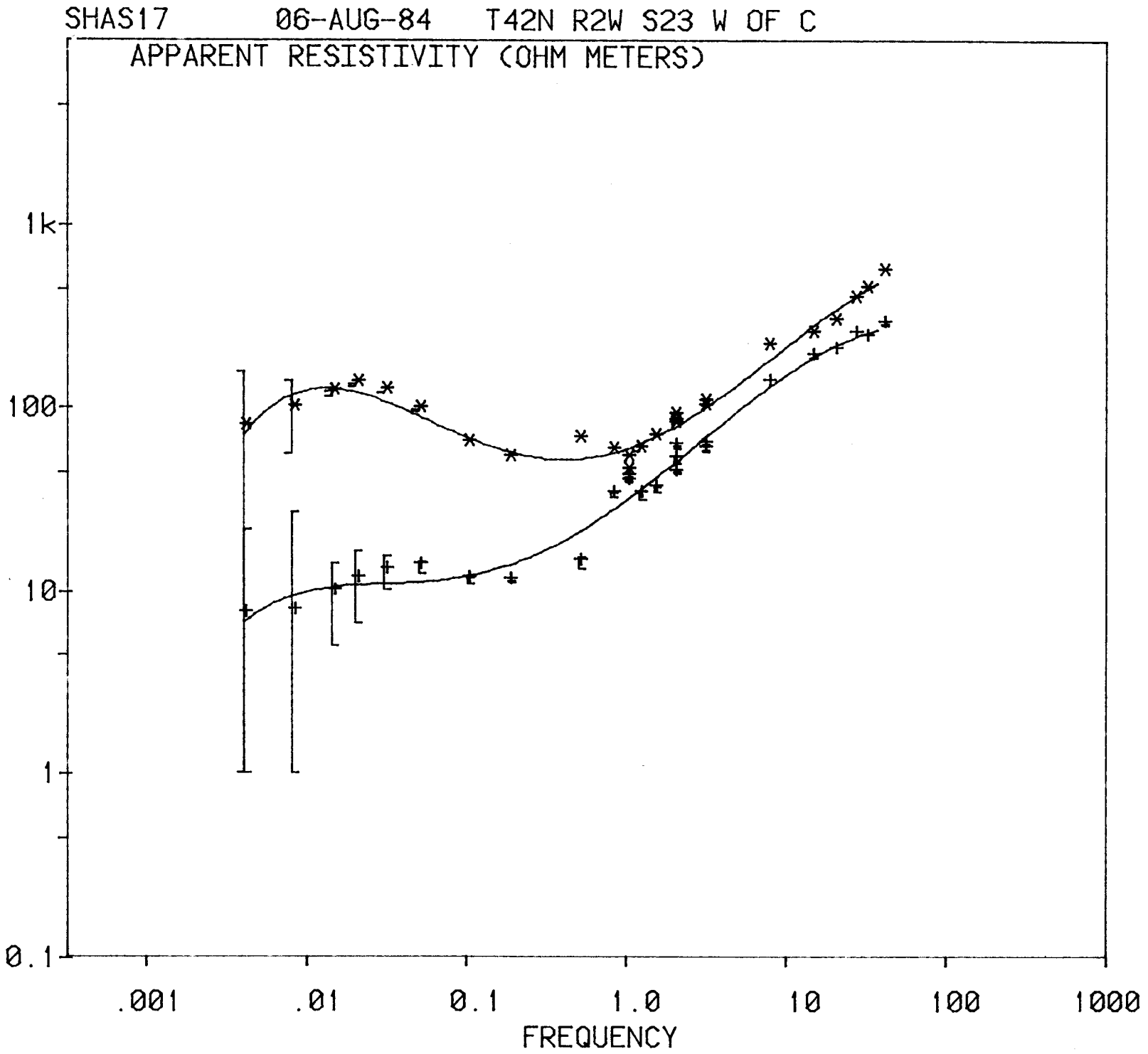
SHAS16 200 HZ 12-JUL-84 T42N R3W SEC13 N OF

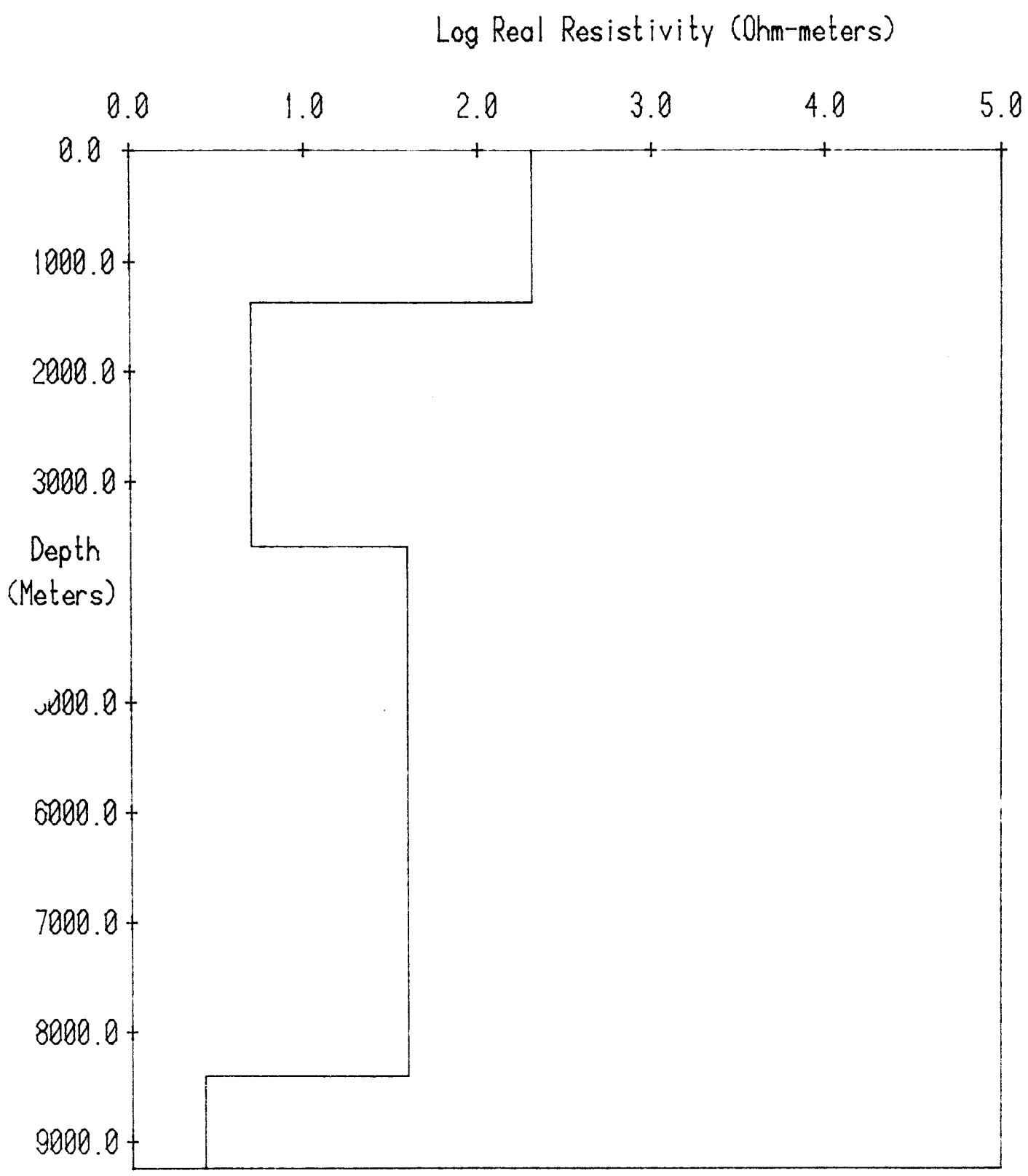
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.250E+03 | 0.300E+01 | 0.304E+01 | -0.433E-01 | -0.143E+01 |
| 2 | 0.125E+03 | 0.500E+01 | 0.446E+01 | 0.543E+00 | 0.115E+02 |
| 3 | 0.700E+02 | 0.600E+01 | 0.629E+01 | -0.294E+00 | -0.478E+01 |
| 4 | 0.500E+02 | 0.700E+01 | 0.770E+01 | -0.697E+00 | -0.948E+01 |
| 5 | 0.330E+02 | 0.900E+01 | 0.974E+01 | -0.744E+00 | -0.794E+01 |
| 6 | 0.200E+02 | 0.150E+02 | 0.124E+02 | 0.262E+01 | 0.192E+02 |
| 7 | 0.167E+01 | 0.160E+02 | 0.186E+02 | -0.256E+01 | -0.148E+02 |
| 8 | 0.125E+01 | 0.200E+02 | 0.204E+02 | -0.371E+00 | -0.184E+01 |
| 9 | 0.830E+00 | 0.270E+02 | 0.236E+02 | 0.341E+01 | 0.135E+02 |
| 10 | 0.670E+00 | 0.230E+02 | 0.256E+02 | -0.264E+01 | -0.109E+02 |
| 11 | 0.500E+00 | 0.250E+02 | 0.290E+02 | -0.399E+01 | -0.148E+02 |
| 12 | 0.500E+00 | 0.380E+02 | 0.290E+02 | 0.901E+01 | 0.269E+02 |
| 13 | 0.500E+00 | 0.310E+02 | 0.290E+02 | 0.201E+01 | 0.670E+01 |
| 14 | 0.330E+00 | 0.300E+02 | 0.351E+02 | -0.514E+01 | -0.158E+02 |
| 15 | 0.330E+00 | 0.340E+02 | 0.351E+02 | -0.114E+01 | -0.330E+01 |
| 16 | 0.130E+00 | 0.600E+02 | 0.577E+02 | 0.234E+01 | 0.398E+01 |
| 17 | 0.700E-01 | 0.850E+02 | 0.825E+02 | 0.254E+01 | 0.304E+01 |
| 18 | 0.500E-01 | 0.103E+03 | 0.100E+03 | 0.287E+01 | 0.283E+01 |
| 19 | 0.380E-01 | 0.117E+03 | 0.117E+03 | 0.185E+00 | 0.158E+00 |
| 20 | 0.320E-01 | 0.133E+03 | 0.128E+03 | 0.472E+01 | 0.361E+01 |
| 21 | 0.250E-01 | 0.137E+03 | 0.146E+03 | -0.907E+01 | -0.641E+01 |

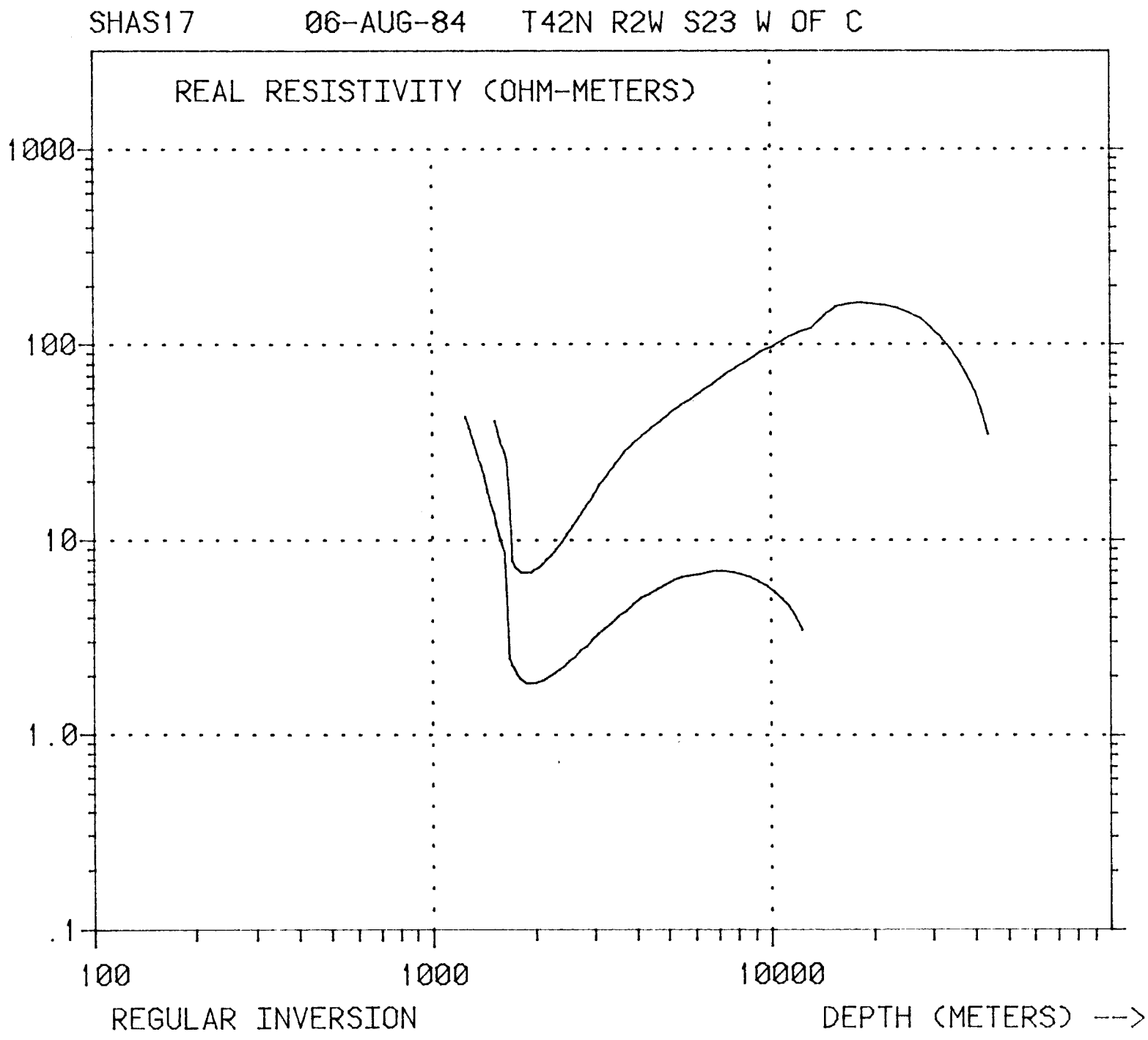
MEAN PERCENT ERROR = 0.1101E+02
MAXIMUM PERCENT ERROR = 0.2689E+02
MAX. ERROR OCCURED AT OBSERVATION 12

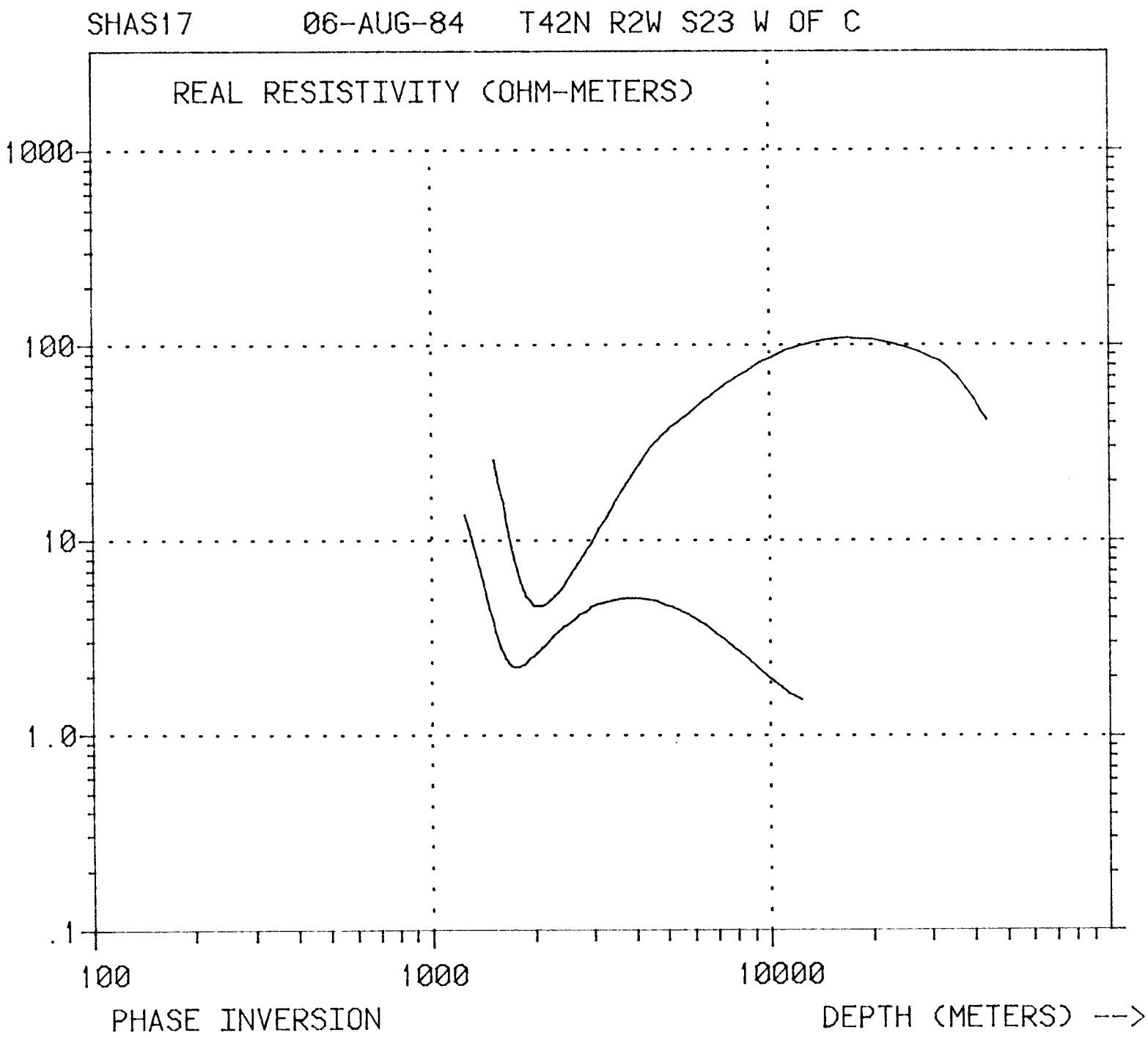

p (log)
2.5
2.0
1.5
1.0
0.5
0.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS17 06-AUG-84 T42N R2W S23 W OF C
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

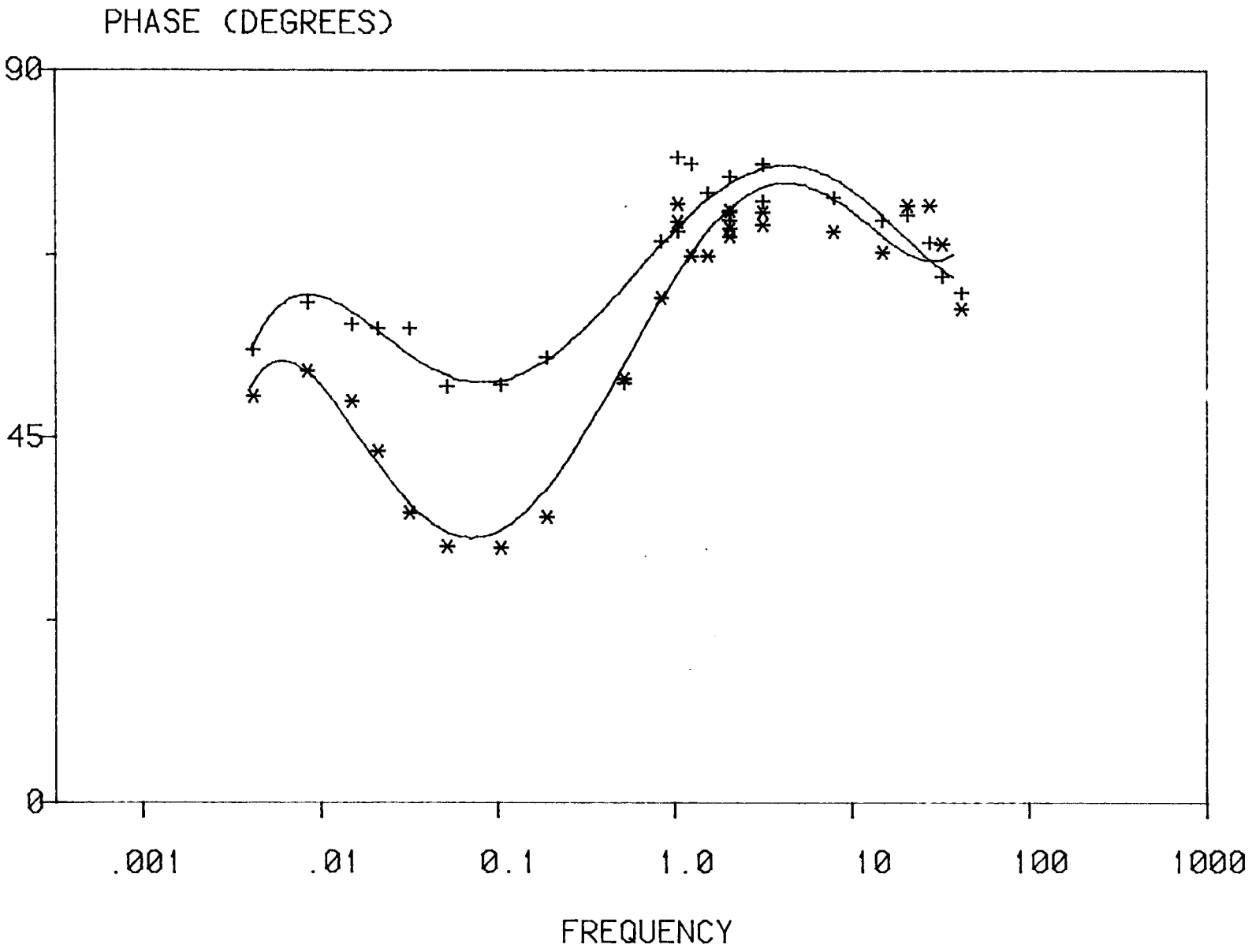



| | | | | |
|---|---|---|---|---|
| Resistivity | 0205.85 | 0004.91 | 0039.01 | 0002.67 |
| Thickness | | 1381.13 | 2217.37 | 4800.62 |
| Depth | 0000.00 | 1381.13 | 3598.50 | 8399.13 |


SHAS17 06-AUG-84 T42N R2W S23 W OF C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS17 06-AUG-84 T42N R2W S23 W OF C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS17 06-AUG-84 T42N R2W S23 W OF C



THE SITE IS: SHAS17 200 HZ 06-AUG-84 T42N R2W S23 W OF C

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 8.18 | 61.13 | 1 | 14.00 | 79.35 |
| 0.0020 | 4.78 | 70.38 | 2 | 19.07 | 40.70 |
| 0.0040 | 7.27 | 74.80 | 3 | 4.52 | 4.36 |
| 0.0080 | 7.51 | 95.33 | 4 | 4.75 | 1.96 |
| 0.0143 | 9.44 | 116.50 | 5 | 2.67 | 0.62 |
| 0.0200 | 11.27 | 130.02 | 6 | 0.95 | 0.31 |
| 0.0303 | 12.61 | 118.25 | 7 | 0.31 | 0.07 |
| 0.0500 | 13.26 | 93.86 | 8 | 0.04 | 0.00 |
| 0.1000 | 11.16 | 61.13 | 9 | 1.05 | 0.12 |
| 0.1818 | 11.04 | 51.21 | 10 | 0.89 | 0.06 |
| 0.3333 | 8.42 | 42.99 | 11 | 0.39 | 0.02 |
| 0.5000 | 13.95 | 64.99 | 12 | 0.28 | 0.02 |
| 0.5988 | 35.37 | 85.60 | 13 | 1.95 | 0.22 |
| 0.8000 | 32.67 | 56.50 | 14 | 1.24 | 0.06 |
| 1.0000 | 38.06 | 50.91 | 15 | 0.11 | 0.00 |
| 1.0000 | 40.37 | 43.58 | 16 | 2.08 | 0.04 |
| 1.2048 | 32.35 | 56.89 | 17 | 0.95 | 0.03 |
| 1.4925 | 34.85 | 65.98 | 18 | 0.72 | 0.02 |
| 2.0000 | 42.89 | 80.68 | 19 | 0.62 | 0.01 |
| 2.0000 | 50.41 | 86.63 | 20 | 0.13 | 0.00 |
| 2.0000 | 58.90 | 78.48 | 21 | 0.92 | 0.01 |
| 3.0303 | 60.88 | 102.22 | 22 | 0.10 | 0.00 |
| 3.0303 | 56.63 | 96.47 | 23 | 0.36 | 0.01 |
| 7.6923 | 132.54 | 209.53 | 24 | 0.45 | 0.00 |
| 14.2857 | 184.12 | 241.80 | 25 | 0.92 | 0.00 |
| 20.0000 | 199.22 | 286.14 | 26 | 0.29 | 0.00 |
| 26.3158 | 243.72 | 374.23 | 27 | 0.09 | 0.00 |
| 31.2500 | 235.75 | 426.49 | 28 | 0.12 | 0.00 |
| 40.0000 | 277.11 | 528.46 | 29 | 0.01 | 0.00 |

AVERAGE # 8
SHAS17 200 HZ 06-AUG-84 T42N R2W S23 W OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.654E+02 | 0.101E+02 | 49. | 50. | 50. | 0.0963 | 0.1534 | 0.1524 | 0.29 |
| H | SEC | 0.569E+02 | 0.630E+01 | 49. | 50. | 50. | 0.2354 | 0.0000 | 80.10 | 0.30 |
| E | 500.0 | 0.744E+02 | 0.591E+01 | 50. | 47. | 50. | 0.1417 | 0.1703 | 0.1141 | 0.16 |
| H | SEC | 0.663E+02 | 0.365E+01 | 49. | 47. | 50. | 0.1536 | 0.0000 | 72.20 | 0.12 |
| E | 250.0 | 0.777E+02 | 0.870E+01 | 50. | 56. | 50. | 0.0673 | 0.0475 | 0.1459 | 0.14 |
| H | SEC | 0.719E+02 | 0.584E+01 | 50. | 56. | 50. | 0.0401 | 0.1012 | 8.60 | 0.13 |
| E | 125.0 | 0.962E+02 | 0.787E+01 | 53. | 62. | 50. | 0.0508 | 0.1358 | 0.0967 | 0.07 |
| H | SEC | 0.944E+02 | 0.715E+01 | 54. | 62. | 50. | 0.0778 | 0.0878 | -0.90 | 0.07 |
| E | 70.0 | 0.117E+03 | 0.977E+01 | 50. | 59. | 50. | 0.0578 | 0.2659 | 0.1359 | 0.09 |
| H | SEC | 0.116E+03 | 0.911E+01 | 50. | 59. | 50. | 0.0843 | 0.1716 | 164.00 | 0.10 |
| E | 50.0 | 0.130E+03 | 0.117E+02 | 43. | 59. | 50. | 0.1171 | 0.1839 | 0.1732 | 0.07 |
| H | SEC | 0.130E+03 | 0.108E+02 | 44. | 59. | 50. | 0.0763 | 0.0730 | 165.70 | 0.08 |
| E | 33.0 | 0.120E+03 | 0.134E+02 | 36. | 59. | 50. | 0.0157 | 0.0576 | 0.3272 | 0.02 |
| H | SEC | 0.117E+03 | 0.118E+02 | 36. | 59. | 50. | 0.0499 | 0.0476 | 171.10 | 0.03 |
| E | 20.0 | 0.957E+02 | 0.142E+02 | 32. | 52. | 60. | 0.0036 | 0.0175 | 0.2529 | 0.03 |
| H | SEC | 0.920E+02 | 0.124E+02 | 32. | 51. | 60. | 0.0119 | 0.0160 | 0.00 | 0.04 |

AVERAGE # 8
SHAS17 200 HZ 06-AUG-84 T42N R2W S23 W OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.733E+02 | 0.115E+02 | 28. | 54. | 60. | 0.2593 | 0.1402 | 0.1120 | 0.05 |
| H | SEC | 0.490E+02 | 0.108E+02 | 35. | 50. | 60. | 0.2848 | 0.0653 | 0.00 | 0.05 |
| E | 5.5 | 0.562E+02 | 0.148E+02 | 37. | 67. | 60. | 0.2173 | 0.1164 | 0.2026 | 0.12 |
| H | SEC | 0.462E+02 | 0.727E+01 | 34. | 43. | 60. | 0.1997 | 0.0968 | 0.00 | 0.08 |
| E | 3.0 | 0.536E+02 | 0.116E+02 | 38. | 86. | 60. | 0.1785 | 0.0825 | 0.0955 | 0.13 |
| H | SEC | 0.324E+02 | 0.526E+01 | 44. | 6. | 60. | 0.2676 | 0.0965 | 0.00 | 0.13 |
| E | 2.0 | 0.825E+02 | 0.181E+02 | 49. | 49. | 60. | 0.0983 | 0.0779 | 0.1880 | 0.14 |
| H | SEC | 0.475E+02 | 0.977E+01 | 56. | 54. | 60. | 0.4065 | 0.0612 | 0.00 | 0.09 |
| E | 1.7 | 0.101E+03 | 0.413E+02 | 33. | 55. | 60. | 2.0216 | 0.9696 | 0.0012 | 0.17 |
| H | SEC | 0.701E+02 | 0.294E+02 | 28. | 52. | 60. | 0.0000 | 0.8800 | 0.00 | 0.32 |
| E | 1.2 | 0.687E+02 | 0.366E+02 | 62. | 68. | 60. | 1.6949 | 0.3696 | 0.0033 | 0.02 |
| H | SEC | 0.443E+02 | 0.287E+02 | 63. | 70. | 60. | 1.5168 | 0.3785 | 0.00 | 0.00 |
| E | 1.0 | 0.609E+02 | 0.438E+02 | 70. | 79. | 60. | 0.6598 | 0.1410 | 0.0304 | 0.03 |
| H | HZ | 0.410E+02 | 0.324E+02 | 74. | 80. | 60. | 0.4428 | 0.0798 | 0.00 | 0.04 |

AVERAGE # 8
SHAS17 200 HZ 06-AUG-84 T42N R2W S23 W OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.622E+02 | 0.436E+02 | 73. | 71. | 60. | 0.2983 | 0.3626 | 0.0050 | 0.31 |
| H | HZ | 0.250E+02 | 0.371E+02 | 75. | 70. | 60. | 0.5734 | 0.3823 | 77.90 | 0.38 |
| E | 1.2 | 0.655E+02 | 0.365E+02 | 68. | 78. | 60. | 1.4081 | 0.3462 | 0.0040 | 0.06 |
| H | HZ | 0.482E+02 | 0.282E+02 | 67. | 80. | 60. | 1.2661 | 0.2916 | 0.00 | 0.02 |
| E | 1.5 | 0.733E+02 | 0.388E+02 | 67. | 74. | 60. | 1.1144 | 0.2609 | 0.0053 | 0.06 |
| H | HZ | 0.586E+02 | 0.309E+02 | 68. | 76. | 60. | 0.8025 | 0.1797 | 0.00 | 0.03 |
| E | 2.0 | 0.851E+02 | 0.465E+02 | 70. | 72. | 60. | 0.3271 | 0.0864 | 0.0050 | 0.08 |
| H | HZ | 0.762E+02 | 0.393E+02 | 70. | 74. | 60. | 0.9171 | 0.2546 | 0.00 | 0.05 |
| E | 2.0 | 0.974E+02 | 0.556E+02 | 70. | 77. | 60. | 0.3889 | 0.1234 | 0.0205 | 0.05 |
| H | HZ | 0.759E+02 | 0.452E+02 | 71. | 78. | 60. | 0.3320 | 0.1382 | 0.00 | 0.06 |
| E | 2.0 | 0.856E+02 | 0.678E+02 | 75. | 71. | 75. | 1.0068 | 0.1399 | 0.0100 | 0.16 |
| H | HZ | 0.713E+02 | 0.500E+02 | 71. | 72. | 75. | 0.7037 | 0.1948 | 64.60 | 0.16 |

AVERAGE # 8
SHAS17 200 HZ 06-AUG-84 T42N R2W S23 W OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.112E+03 | 0.698E+02 | 72. | 78. | 75. | 0.1898 | 0.0439 | 0.0106 | 0.08 |
| H | HZ | 0.921E+02 | 0.520E+02 | 74. | 80. | 75. | 0.4059 | 0.0882 | 83.90 | 0.09 |
| E | 3.0 | 0.102E+03 | 0.620E+02 | 71. | 74. | 75. | 0.2588 | 0.0978 | 0.0045 | 0.04 |
| H | HZ | 0.905E+02 | 0.512E+02 | 71. | 74. | 75. | 0.8665 | 0.2861 | 39.30 | 0.03 |
| E | 7.7 | 0.213E+03 | 0.138E+03 | 71. | 74. | 75. | 1.4082 | 0.4206 | 0.0038 | 0.03 |
| H | HZ | 0.206E+03 | 0.127E+03 | 70. | 75. | 75. | 1.0887 | 0.4856 | 25.90 | 0.02 |
| E | 14.3 | 0.258E+03 | 0.193E+03 | 69. | 71. | 75. | 0.0000 | 1.3359 | 0.0061 | 0.06 |
| H | HZ | 0.226E+03 | 0.176E+03 | 67. | 72. | 75. | 0.0000 | 2.2815 | 53.20 | 0.07 |
| E | 20.0 | 0.333E+03 | 0.226E+03 | 72. | 71. | 75. | 0.0000 | 3.1473 | 0.0065 | 0.06 |
| H | HZ | 0.239E+03 | 0.173E+03 | 76. | 74. | 75. | 0.0000 | 1.5287 | 47.50 | 0.08 |
| E | 26.3 | 0.422E+03 | 0.269E+03 | 70. | 68. | 75. | 2.2641 | 3.2136 | 0.0058 | 0.04 |
| H | HZ | 0.327E+03 | 0.218E+03 | 77. | 70. | 75. | 3.0991 | 0.0000 | 52.60 | 0.05 |
| E | 31.2 | 0.459E+03 | 0.268E+03 | 67. | 65. | 75. | 0.6292 | 1.4910 | 0.0129 | 0.03 |
| H | HZ | 0.394E+03 | 0.203E+03 | 71. | 65. | 75. | 2.2207 | 2.3636 | 0.00 | 0.06 |
| E | 40.0 | 0.514E+03 | 0.304E+03 | 60. | 63. | 75. | 0.8713 | 1.4349 | 0.0625 | 0.03 |
| H | HZ | 0.543E+03 | 0.250E+03 | 62. | 63. | 75. | 0.8285 | 0.6238 | 0.00 | 0.01 |

SHAS17 200 HZ 06-AUG-84 T42N R2W S23 W OF C

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 25
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2500E+03 | | 0.0000E+00 |
| | | 0.2000E+04 | |
| 2 | 0.1000E+01 | | 0.2000E+04 |
| | | 0.2000E+04 | |
| 3 | 0.7000E+01 | | 0.4000E+04 |
| | | 0.1000E+05 | |
| 4 | 0.1000E+01 | | 0.1400E+05 |

FREQUENCY RANGE ( 0.4000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2059E+03 | | 0.0000E+00 |
| | | 0.1381E+04 | |
| 2 | 0.4911E+01 | | 0.1381E+04 |
| | | 0.2217E+04 | |
| 3 | 0.3902E+02 | | 0.3599E+04 |
| | | 0.4801E+04 | |
| 4 | 0.2675E+01 | | 0.8399E+04 |

MEAN PERCENT VARIATION IS 0.1327E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 24 | 0.173E+06 | 0.722E+04 | 0.250E+00 |
| MODEL | 6 | 0.173E+06 | 0.289E+05 | 0.118E+07 |
| RESID | 18 | 0.440E+00 | 0.245E-01 | |

STANDARD ERROR = 0.156E+00

DTEST FOR MEANS =-0.615E-05

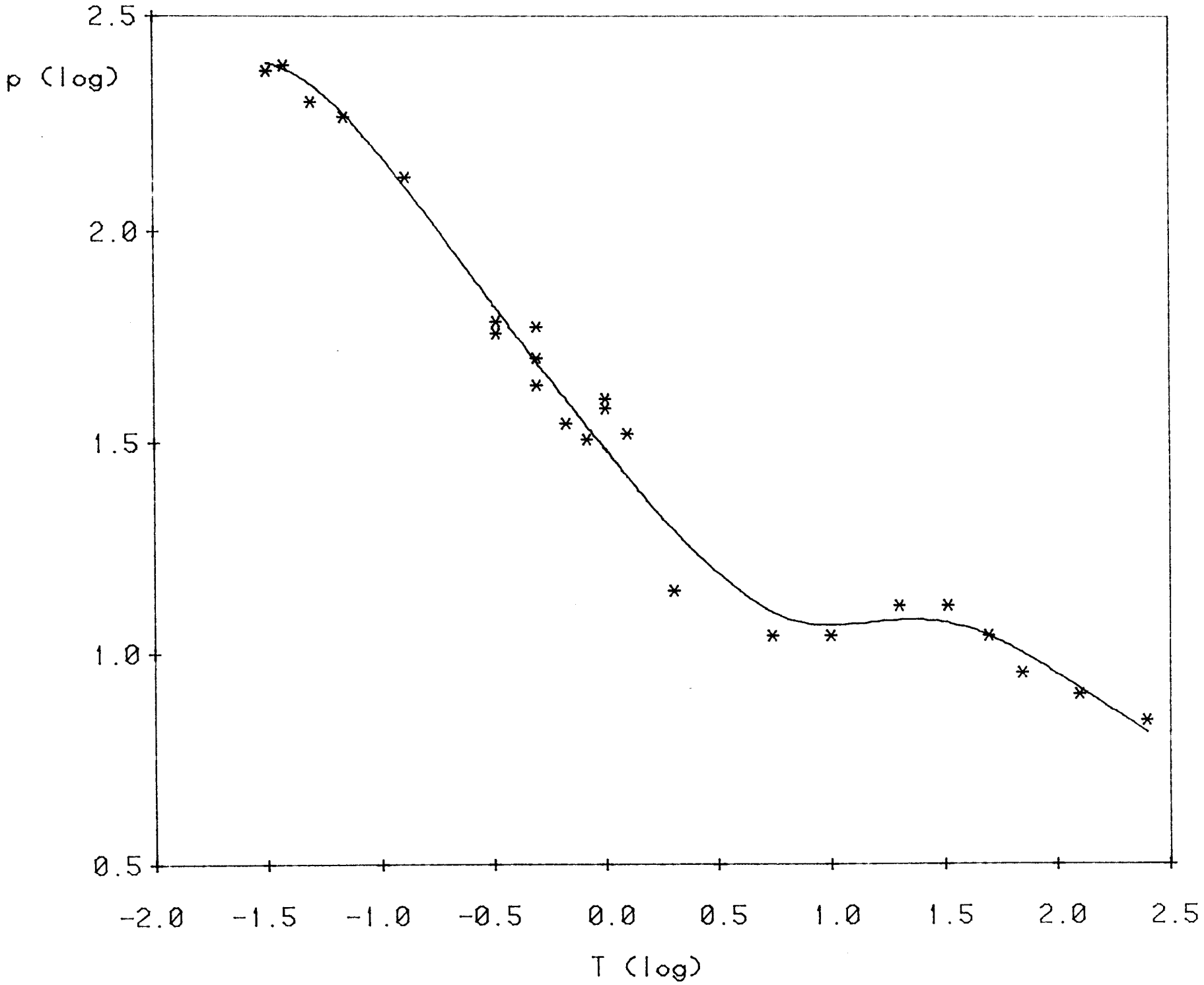
NOISE TO SIGNAL RATIO = 0.921E-01 PERCENT

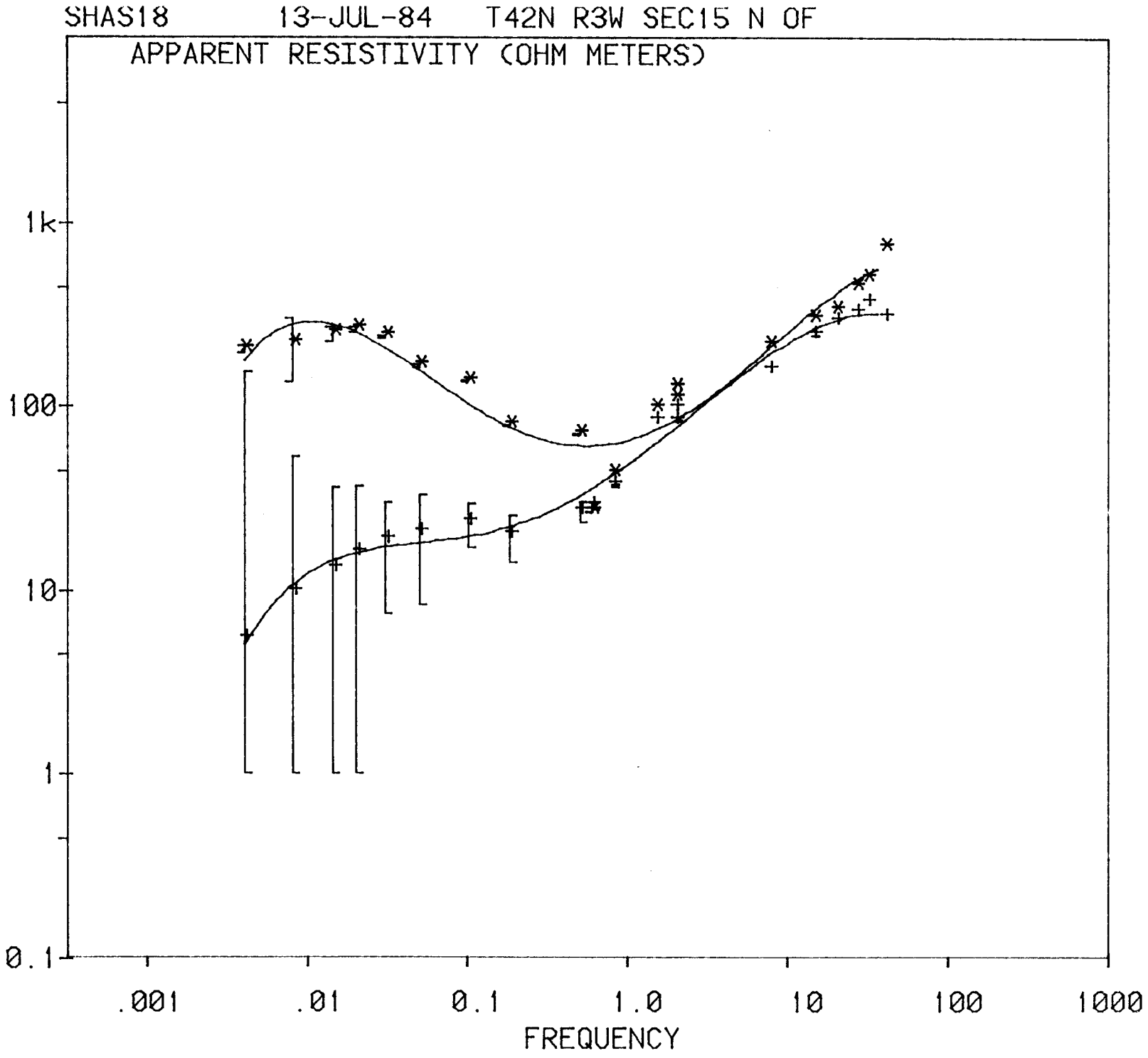
SHAS17 200 HZ 06-AUG-84 T42N R2W S23 W OF C

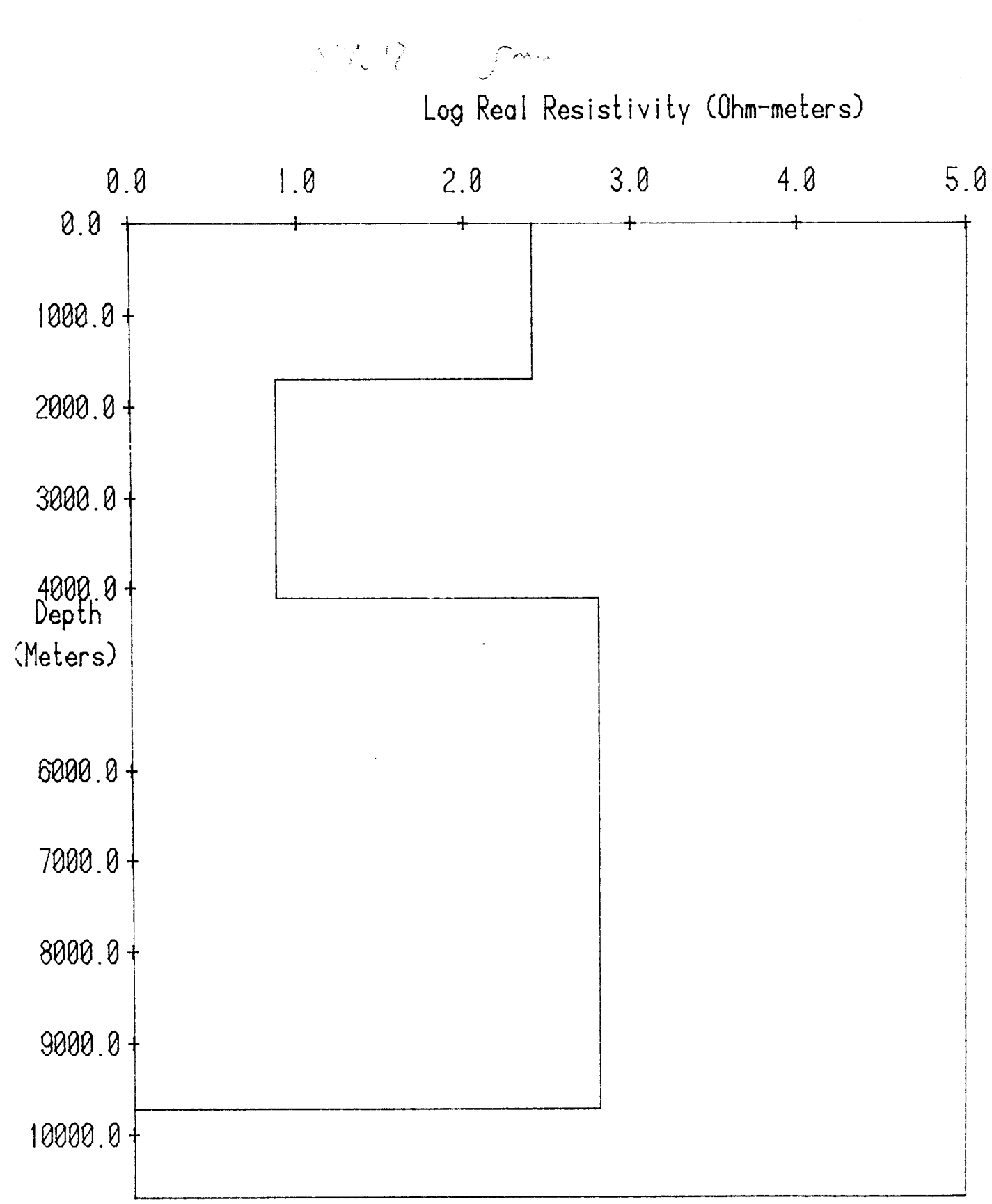
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.250E+03 | 0.700E+01 | 0.654E+01 | 0.458E+00 | 0.677E+01 |
| 2 | 0.125E+03 | 0.800E+01 | 0.835E+01 | -0.345E+00 | -0.423E+01 |
| 3 | 0.700E+02 | 0.900E+01 | 0.101E+02 | -0.113E+01 | -0.118E+02 |
| 4 | 0.500E+02 | 0.110E+02 | 0.111E+02 | -0.916E-01 | -0.830E+00 |
| 5 | 0.330E+02 | 0.130E+02 | 0.119E+02 | 0.107E+01 | 0.858E+01 |
| 6 | 0.200E+02 | 0.130E+02 | 0.121E+02 | 0.870E+00 | 0.692E+01 |
| 7 | 0.100E+02 | 0.110E+02 | 0.115E+02 | -0.489E+00 | -0.435E+01 |
| 8 | 0.550E+01 | 0.110E+02 | 0.119E+02 | -0.895E+00 | -0.782E+01 |
| 9 | 0.200E+01 | 0.140E+02 | 0.192E+02 | -0.515E+01 | -0.311E+02 |
| 10 | 0.125E+01 | 0.330E+02 | 0.262E+02 | 0.679E+01 | 0.229E+02 |
| 11 | 0.100E+01 | 0.380E+02 | 0.304E+02 | 0.755E+01 | 0.221E+02 |
| 12 | 0.100E+01 | 0.400E+02 | 0.304E+02 | 0.955E+01 | 0.271E+02 |
| 13 | 0.830E+00 | 0.320E+02 | 0.345E+02 | -0.248E+01 | -0.746E+01 |
| 14 | 0.670E+00 | 0.350E+02 | 0.398E+02 | -0.480E+01 | -0.128E+02 |
| 15 | 0.500E+00 | 0.430E+02 | 0.486E+02 | -0.561E+01 | -0.122E+02 |
| 16 | 0.500E+00 | 0.500E+02 | 0.486E+02 | 0.139E+01 | 0.282E+01 |
| 17 | 0.500E+00 | 0.590E+02 | 0.486E+02 | 0.104E+02 | 0.193E+02 |
| 18 | 0.330E+00 | 0.610E+02 | 0.653E+02 | -0.429E+01 | -0.679E+01 |
| 19 | 0.330E+00 | 0.570E+02 | 0.653E+02 | -0.829E+01 | -0.136E+02 |
| 20 | 0.130E+00 | 0.133E+03 | 0.128E+03 | 0.481E+01 | 0.368E+01 |
| 21 | 0.700E-01 | 0.184E+03 | 0.189E+03 | -0.535E+01 | -0.287E+01 |
| 22 | 0.500E-01 | 0.199E+03 | 0.221E+03 | -0.224E+02 | -0.106E+02 |
| 23 | 0.380E-01 | 0.244E+03 | 0.241E+03 | 0.344E+01 | 0.142E+01 |
| 24 | 0.320E-01 | 0.236E+03 | 0.248E+03 | -0.116E+02 | -0.481E+01 |
| 25 | 0.250E-01 | 0.277E+03 | 0.250E+03 | 0.267E+02 | 0.101E+02 |

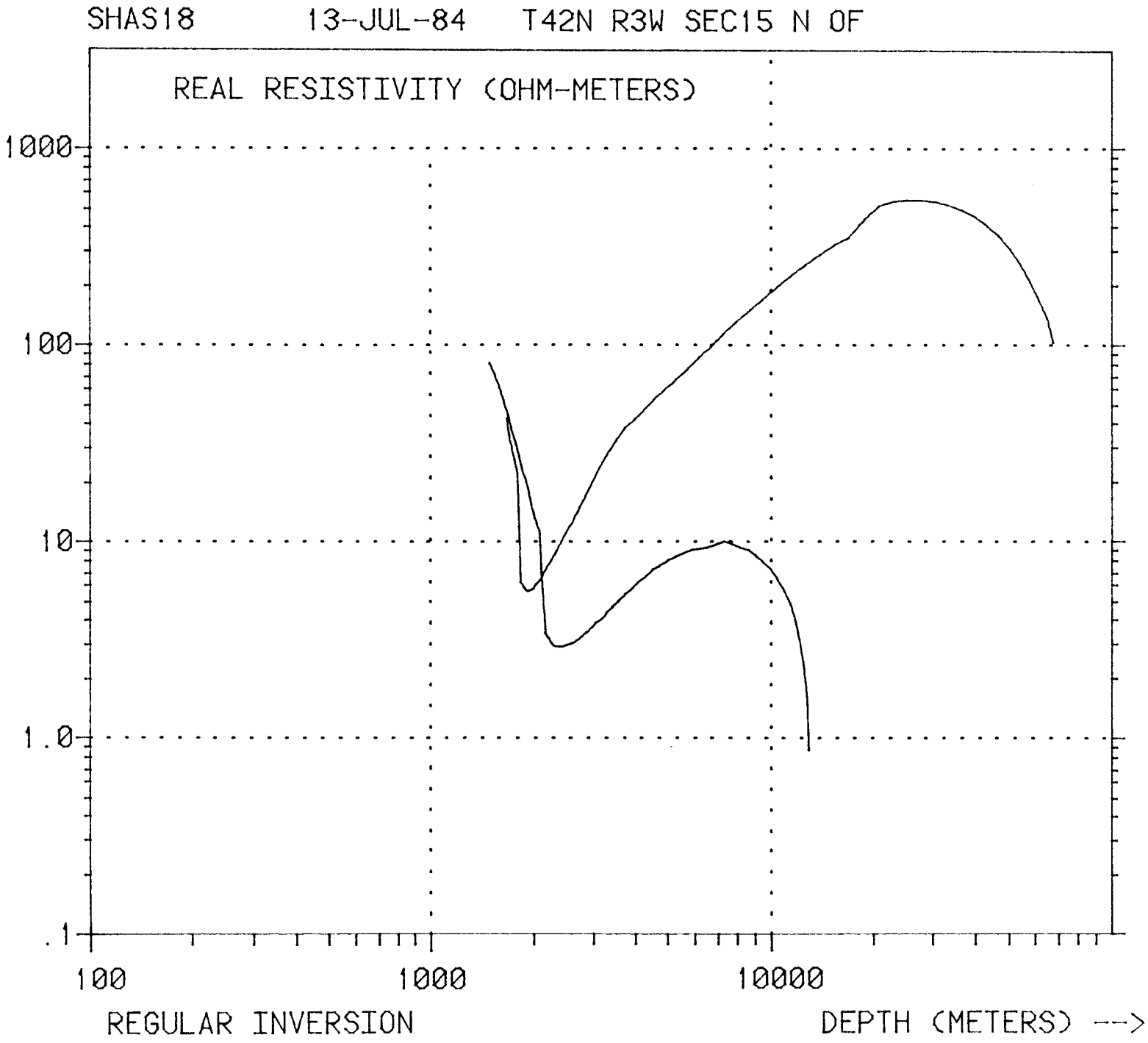
MEAN PERCENT ERROR = 0.1323E+02
MAXIMUM PERCENT ERROR = 0.3109E+02

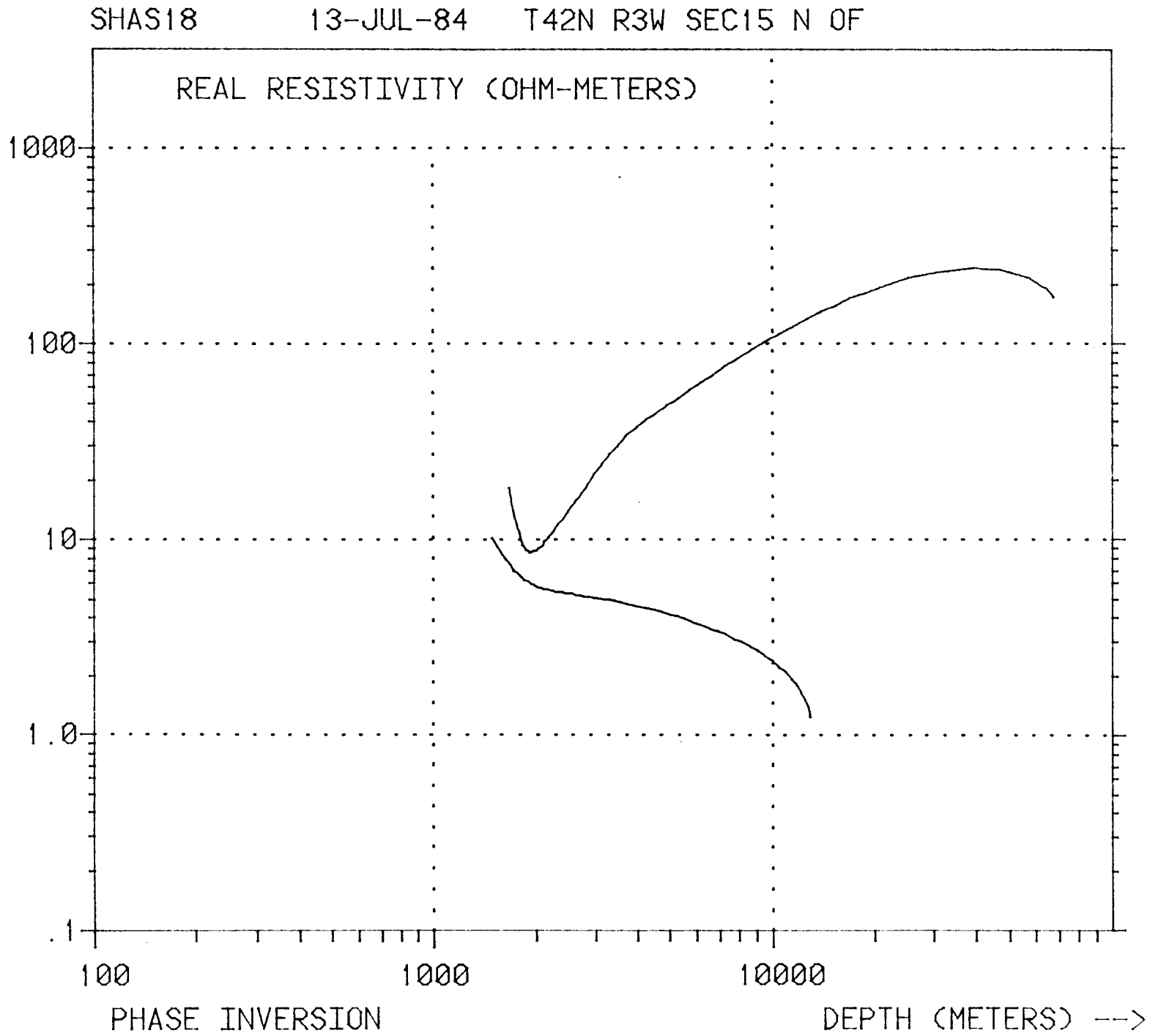

p (log)
2.5
2.0
1.5
1.0
0.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS18 13-JUL-84 T42N R3W SEC15 N OF
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

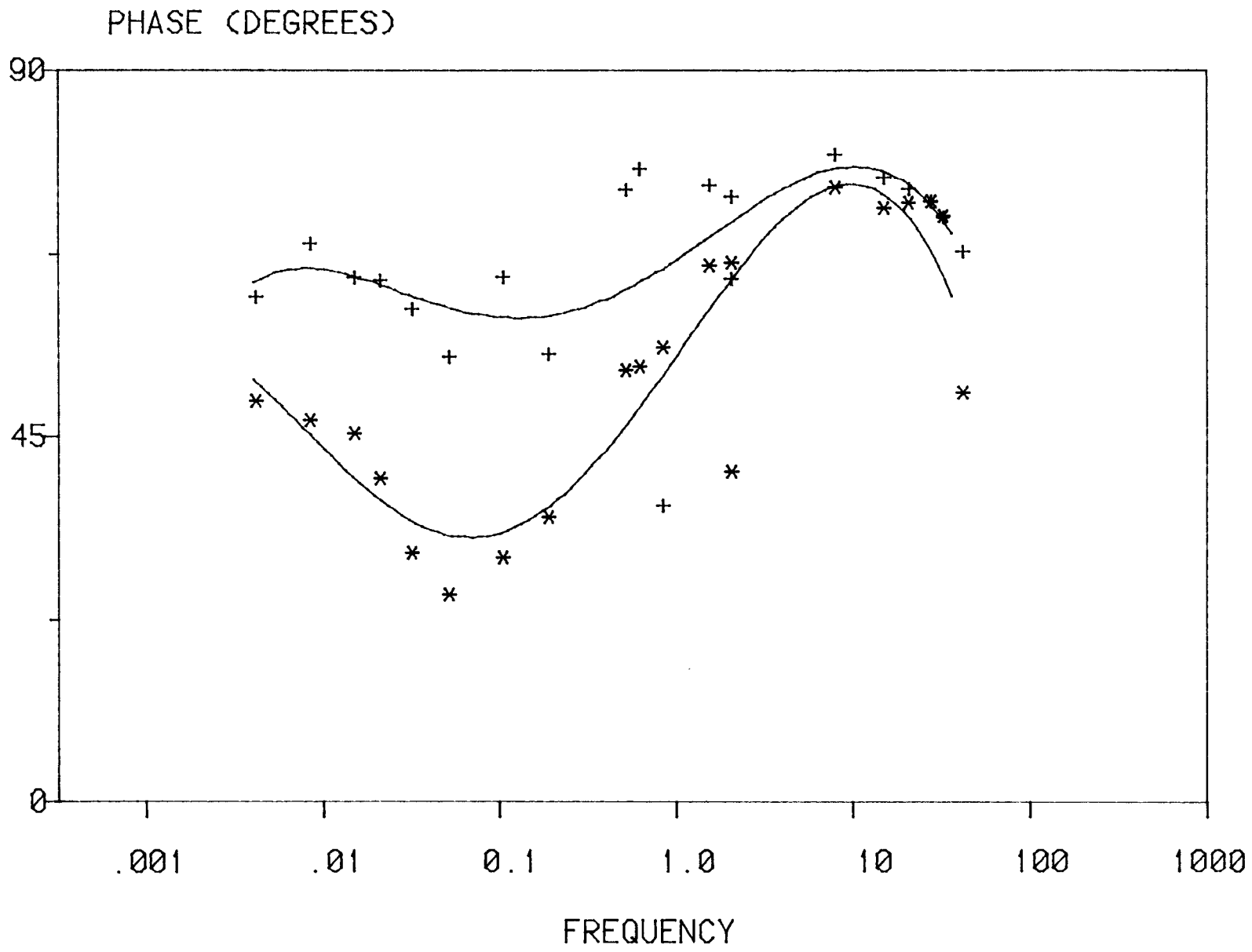



| | | | | |
|---|---|---|---|---|
| Resistivity | 0256.15 | 0007.46 | 0636.09 | 0000.68 |
| Thickness | | 1712.17 | 2400.43 | 5618.05 |
| Depth | 0000.00 | 1712.17 | 4112.61 | 9730.66 |


SHAS18 13-JUL-84 T42N R3W SEC15 N OF
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS18 13-JUL-84 T42N R3W SEC15 N OF
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS18 13-JUL-84 T42N R3W SEC15 N OF



THE SITE IS: SHAS18 200 HZ 13-JUL-84 T42N R3W SEC15 N OF

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 18.72 | 62.58 | 1 | 144.43 | 8.53 |
| 0.0020 | 9.46 | 162.77 | 2 | 42.65 | 80.24 |
| 0.0040 | 5.32 | 199.15 | 3 | 22.75 | 22.78 |
| 0.0080 | 9.45 | 212.84 | 4 | 20.56 | 9.66 |
| 0.0143 | 12.72 | 241.26 | 5 | 11.11 | 4.11 |
| 0.0200 | 15.55 | 254.74 | 6 | 12.07 | 3.60 |
| 0.0303 | 18.42 | 232.66 | 7 | 6.21 | 1.57 |
| 0.0500 | 20.24 | 162.07 | 8 | 5.53 | 0.91 |
| 0.1000 | 22.79 | 132.52 | 9 | 3.38 | 0.23 |
| 0.1818 | 19.51 | 76.91 | 10 | 1.30 | 0.08 |
| 0.3333 | 51.86 | 93.05 | 11 | 0.51 | 0.02 |
| 0.5000 | 26.10 | 68.76 | 12 | 0.03 | 0.01 |
| 0.5988 | 28.12 | 26.00 | 13 | 0.29 | 0.00 |
| 0.8000 | 36.12 | 41.52 | 14 | 0.11 | 0.00 |
| 1.0000 | 128.88 | 205.18 | 15 | 0.21 | 0.00 |
| 1.0000 | 62.61 | 336.58 | 16 | 0.83 | 0.06 |
| 1.2048 | 39.63 | 69.90 | 17 | 0.12 | 0.00 |
| 1.4925 | 81.57 | 96.04 | 18 | 0.04 | 0.00 |
| 2.0000 | 81.17 | 108.36 | 19 | 0.08 | 0.00 |
| 2.0000 | 200.72 | 225.49 | 20 | 0.14 | 0.00 |
| 2.0000 | 95.09 | 122.55 | 21 | 0.57 | 0.01 |
| 3.0303 | 340.90 | 646.26 | 22 | 0.06 | 0.00 |
| 3.0303 | 79.62 | 110.78 | 23 | 0.09 | 0.00 |
| 7.6923 | 154.44 | 207.93 | 24 | 0.06 | 0.00 |
| 14.2857 | 236.11 | 293.71 | 25 | 0.02 | 0.00 |
| 20.0000 | 283.21 | 326.80 | 26 | 0.04 | 0.00 |
| 26.3158 | 312.89 | 436.93 | 27 | 0.02 | 0.00 |
| 31.2500 | 353.97 | 483.24 | 28 | 0.02 | 0.00 |
| 40.0000 | 295.67 | 710.62 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS18 200 HZ 13-JUL-84 T42N R3W SEC15 N OF
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.685E+02 | 0.184E+02 | 69. | 61. | 40. | 0.1876 | 2.0751 | 1.1748 | 0.19 |
| H | SEC | 0.567E+02 | 0.190E+02 | 69. | 64. | 40. | 0.2912 | 1.2451 | 137.00 | 0.23 |
| E | 500.0 | 0.164E+03 | 0.110E+02 | 48. | 51. | 40. | 1.0127 | 3.0743 | 2.0880 | 0.25 |
| H | SEC | 0.162E+03 | 0.791E+01 | 48. | 51. | 40. | 0.8566 | 2.5469 | 43.20 | 0.27 |
| E | 250.0 | 0.195E+03 | 0.646E+01 | 50. | 62. | 40. | 0.1235 | 1.2224 | 3.2211 | 0.22 |
| H | SEC | 0.203E+03 | 0.417E+01 | 50. | 63. | 40. | 0.1317 | 0.6680 | 125.00 | 0.26 |
| E | 125.0 | 0.216E+03 | 0.101E+02 | 46. | 69. | 40. | 0.2027 | 0.7129 | 2.7420 | 0.19 |
| H | SEC | 0.209E+03 | 0.883E+01 | 49. | 70. | 40. | 0.1899 | 0.7301 | 128.10 | 0.18 |
| E | 70.0 | 0.239E+03 | 0.127E+02 | 46. | 65. | 40. | 0.1834 | 0.6508 | 0.4737 | 0.12 |
| H | SEC | 0.244E+03 | 0.127E+02 | 46. | 65. | 40. | 0.1022 | 0.5401 | 34.40 | 0.13 |
| E | 50.0 | 0.262E+03 | 0.159E+02 | 40. | 65. | 40. | 0.2635 | 1.0938 | 0.2967 | 0.14 |
| H | SEC | 0.247E+03 | 0.152E+02 | 41. | 64. | 40. | 0.2142 | 0.6240 | 31.10 | 0.12 |
| E | 33.0 | 0.237E+03 | 0.183E+02 | 31. | 61. | 40. | 0.1853 | 0.4247 | 0.3152 | 0.11 |
| H | SEC | 0.228E+03 | 0.185E+02 | 31. | 61. | 40. | 0.1751 | 0.2323 | 46.50 | 0.09 |
| E | 20.0 | 0.164E+03 | 0.201E+02 | 26. | 55. | 40. | 0.1653 | 0.3495 | 0.1989 | 0.05 |
| H | SEC | 0.160E+03 | 0.203E+02 | 26. | 55. | 40. | 0.1728 | 0.2164 | 41.20 | 0.05 |

AVERAGE # 8
SHAS18 200 HZ 13-JUL-84 T42N R3W SEC15 N OF
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.133E+03 | 0.222E+02 | 31. | 65. | 40. | 0.1289 | 0.3873 | 0.2633 | 0.14 |
| H | SEC | 0.132E+03 | 0.234E+02 | 30. | 65. | 40. | 0.0526 | 0.2687 | 47.50 | 0.13 |
| E | 5.5 | 0.832E+02 | 0.214E+02 | 33. | 56. | 40. | 0.4285 | 0.3024 | 0.1549 | 0.11 |
| H | SEC | 0.706E+02 | 0.176E+02 | 38. | 55. | 40. | 0.0971 | 0.1522 | 49.60 | 0.03 |
| E | 3.0 | 0.120E+03 | 0.451E+02 | 46. | 65. | 40. | 0.3100 | 0.0591 | 0.1234 | 0.24 |
| H | SEC | 0.659E+02 | 0.586E+02 | 7. | 89. | 40. | 0.2589 | 0.1996 | 31.50 | 0.56 |
| E | 2.0 | 0.102E+03 | 0.328E+02 | 35. | 72. | 40. | 0.1527 | 0.0523 | 0.1256 | 0.21 |
| H | SEC | 0.358E+02 | 0.194E+02 | 72. | 80. | 40. | 0.1859 | 0.0651 | 137.10 | 0.15 |
| E | 1.7 | 0.332E+02 | 0.435E+02 | 54. | 73. | 40. | 0.4382 | 0.0868 | 0.0157 | 0.26 |
| H | SEC | 0.188E+02 | 0.127E+02 | 54. | 83. | 40. | 0.1913 | 0.0659 | 42.50 | 0.37 |
| E | 1.2 | 0.471E+02 | 0.432E+02 | 55. | 69. | 40. | 0.2028 | 0.0831 | 0.0159 | 0.11 |
| H | SEC | 0.359E+02 | 0.291E+02 | 57. | 4. | 40. | 0.1014 | 0.0624 | 155.00 | 0.05 |
| E | 1.0 | 0.371E+03 | 0.193E+03 | 16. | 64. | 40. | 0.1641 | 0.1971 | 0.1241 | 0.37 |
| H | HZ | 0.395E+02 | 0.648E+02 | 69. | 10. | 40. | 0.3569 | 0.0942 | 47.40 | 0.08 |

AVERAGE # 8
SHAS18 200 HZ 13-JUL-84 T42N R3W SEC15 N OF
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.362E+03 | 0.574E+02 | 50. | 1. | 40. | 0.6878 | 0.2450 | 0.0035 | 0.34 |
| H | HZ | 0.311E+03 | 0.678E+02 | 46. | 88. | 40. | 0.8067 | 0.4159 | 101.90 | 0.25 |
| E | 1.2 | 0.600E+02 | 0.383E+02 | 84. | 82. | 40. | 0.1162 | 0.0827 | 0.0101 | 0.44 |
| H | HZ | 0.799E+02 | 0.410E+02 | 81. | 9. | 40. | 0.1164 | 0.0750 | 37.60 | 0.17 |
| E | 1.5 | 0.127E+03 | 0.995E+02 | 65. | 78. | 40. | 0.4097 | 0.0730 | 0.0492 | 0.09 |
| H | HZ | 0.654E+02 | 0.636E+02 | 68. | 75. | 40. | 0.2327 | 0.1126 | 0.00 | 0.10 |
| E | 2.0 | 0.129E+03 | 0.860E+02 | 68. | 73. | 40. | 0.4873 | 0.0868 | 0.1088 | 0.03 |
| H | HZ | 0.880E+02 | 0.763E+02 | 66. | 77. | 40. | 0.2685 | 0.1959 | 56.50 | 0.07 |
| E | 2.0 | 0.321E+03 | 0.180E+03 | 41. | 75. | 40. | 0.2768 | 0.1967 | 0.1830 | 0.28 |
| H | HZ | 0.130E+03 | 0.222E+03 | 16. | 24. | 40. | 0.3833 | 0.1591 | 40.70 | 0.11 |
| E | 2.0 | 0.174E+03 | 0.105E+03 | 46. | 69. | 40. | 0.7385 | 0.3440 | 0.0216 | 0.22 |
| H | HZ | 0.713E+02 | 0.850E+02 | 36. | 61. | 40. | 0.2701 | 0.4293 | 140.30 | 0.26 |

AVERAGE # 8
SHAS18 200 HZ 13-JUL-84 T42N R3W SEC15 N OF
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.799E+03 | 0.229E+03 | 26. | 70. | 40. | 0.0566 | 0.1507 | 0.1555 | 0.23 |
| H | HZ | 0.493E+03 | 0.453E+03 | 88. | 16. | 40. | 0.2909 | 0.1171 | 41.40 | 0.03 |
| E | 3.0 | 0.121E+03 | 0.898E+02 | 76. | 81. | 40. | 0.7482 | 0.0830 | 0.1096 | 0.03 |
| H | HZ | 0.100E+03 | 0.695E+02 | 76. | 3. | 40. | 0.3449 | 0.1175 | 59.80 | 0.09 |
| E | 7.7 | 0.212E+03 | 0.159E+03 | 76. | 79. | 40. | 0.4440 | 0.5585 | 0.0086 | 0.08 |
| H | HZ | 0.204E+03 | 0.150E+03 | 76. | 81. | 40. | 0.7353 | 0.3716 | 127.40 | 0.09 |
| E | 14.3 | 0.302E+03 | 0.244E+03 | 74. | 77. | 40. | 0.4598 | 1.2158 | 0.0108 | 0.05 |
| H | HZ | 0.285E+03 | 0.228E+03 | 73. | 78. | 40. | 0.6775 | 0.8232 | 130.90 | 0.06 |
| E | 20.0 | 0.374E+03 | 0.307E+03 | 72. | 75. | 40. | 1.6881 | 2.6513 | 0.0183 | 0.05 |
| H | HZ | 0.280E+03 | 0.260E+03 | 76. | 77. | 40. | 0.0000 | 2.0079 | 120.10 | 0.01 |
| E | 26.3 | 0.549E+03 | 0.352E+03 | 73. | 73. | 40. | 0.7332 | 2.0777 | 0.0273 | 0.10 |
| H | HZ | 0.325E+03 | 0.274E+03 | 76. | 75. | 40. | 1.3848 | 0.0000 | 52.10 | 0.07 |
| E | 31.2 | 0.611E+03 | 0.388E+03 | 71. | 72. | 40. | 0.4661 | 2.2793 | 0.0390 | 0.11 |
| H | HZ | 0.356E+03 | 0.320E+03 | 74. | 73. | 40. | 0.6645 | 0.0000 | 53.70 | 0.08 |
| E | 40.0 | 0.486E+03 | 0.430E+03 | 67. | 70. | 40. | 1.2881 | 0.0000 | 0.0434 | 0.10 |
| H | HZ | 0.935E+03 | 0.161E+03 | 34. | 66. | 40. | 0.0000 | 0.0000 | 52.90 | 1.42 |

SHAS18 200 HZ 13-JUL-84 T42N R3W SEC15 N OF

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 21
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3000E+03 | | 0.0000E+00 |
| | | 0.2000E+04 | |
| 2 | 0.2000E+01 | | 0.2000E+04 |
| | | 0.1000E+04 | |
| 3 | 0.1000E+02 | | 0.3000E+04 |
| | | 0.8000E+04 | |
| 4 | 0.8000E+00 | | 0.1100E+05 |

FREQUENCY RANGE ( 0.4000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2562E+03 | | 0.0000E+00 |
| | | 0.1712E+04 | |
| 2 | 0.7460E+01 | | 0.1712E+04 |
| | | 0.2400E+04 | |
| 3 | 0.6361E+03 | | 0.4113E+04 |
| | | 0.5618E+04 | |
| 4 | 0.6893E+00 | | 0.9731E+04 |

MEAN PERCENT VARIATION IS 0.1253E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 20 | 0.276E+06 | 0.138E+05 | 0.300E+00 |
| MODEL | 6 | 0.276E+06 | 0.460E+05 | 0.195E+07 |
| RESID | 14 | 0.330E+00 | 0.235E-01 | |

STANDARD ERROR = 0.153E+00

DTEST FOR MEANS = 0.942E-06

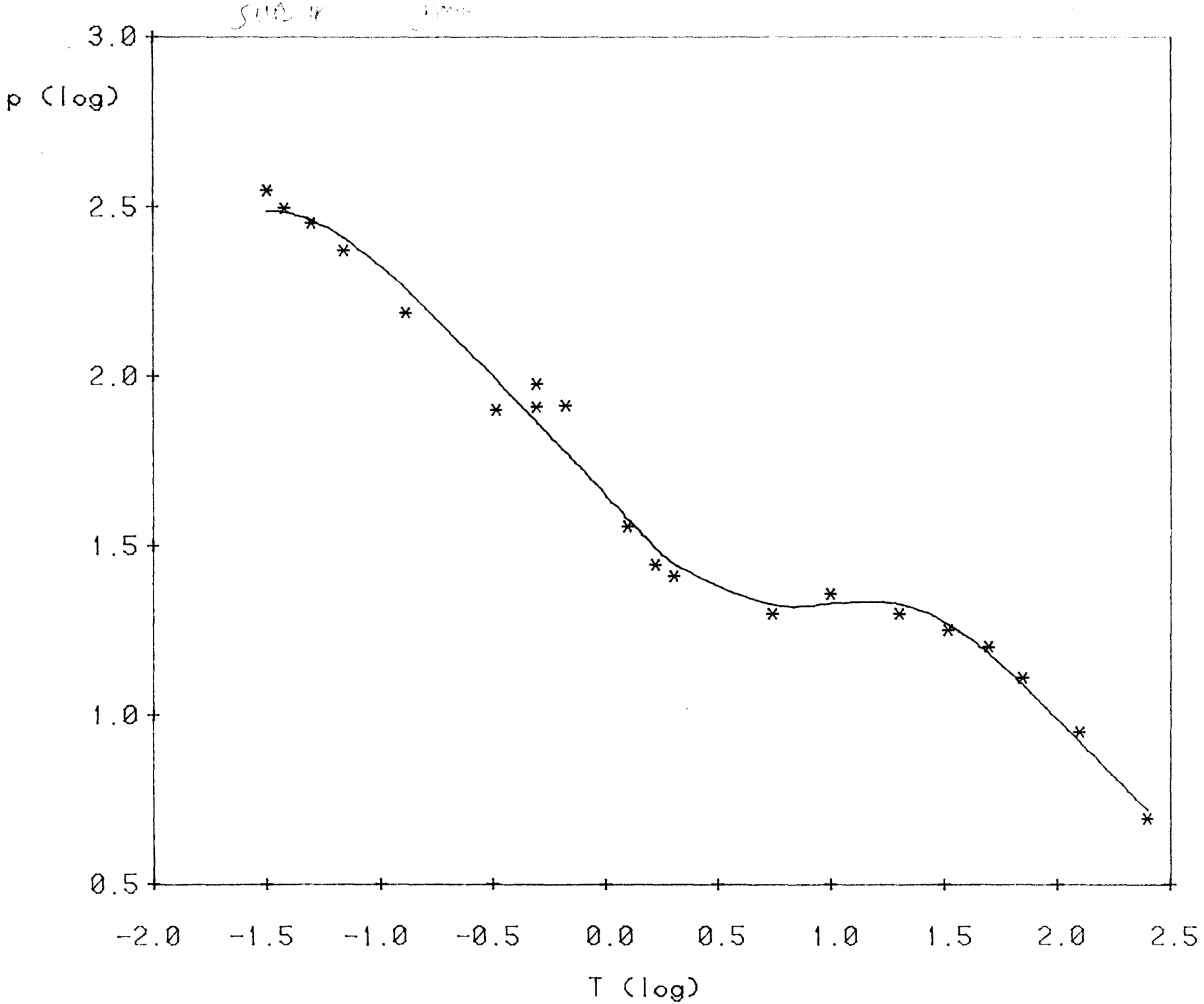
NOISE TO SIGNAL RATIO = 0.715E-01 PERCENT

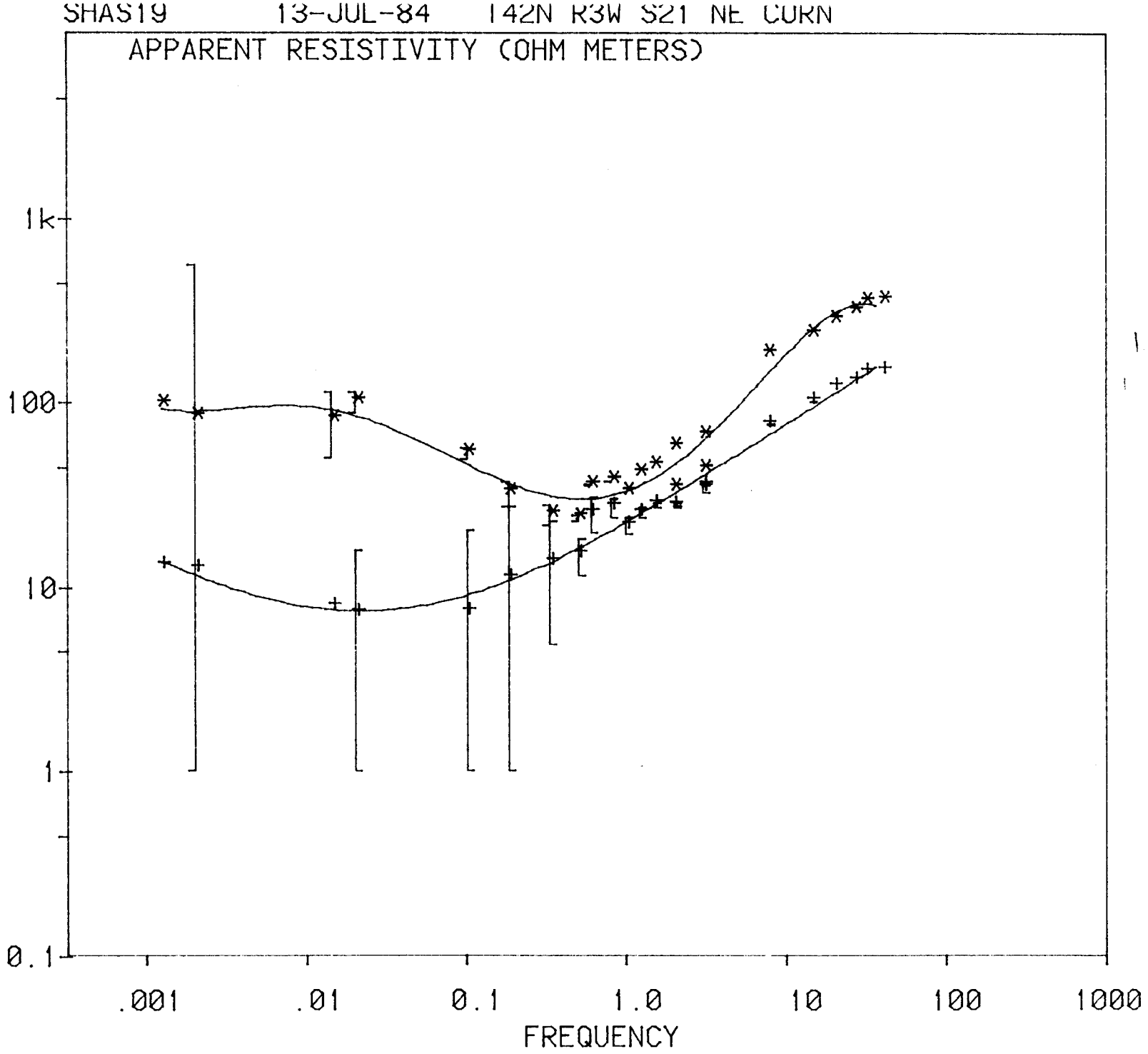
SHAS18 200 HZ 13-JUL-84 T42N R3W SEC15 N OF

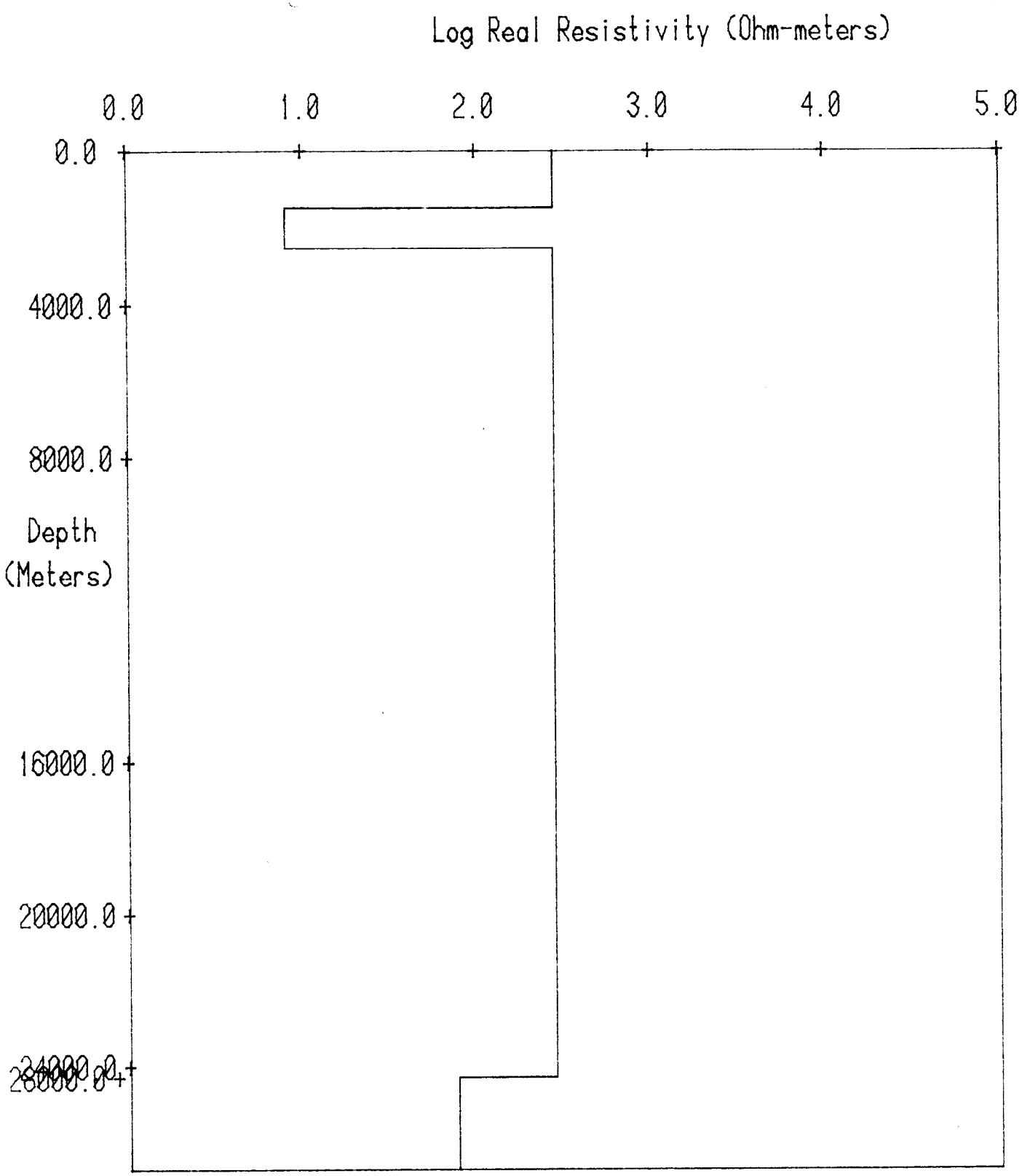
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.250E+03 | 0.500E+01 | 0.530E+01 | -0.300E+00 | -0.582E+01 |
| 2 | 0.125E+03 | 0.900E+01 | 0.847E+01 | 0.533E+00 | 0.610E+01 |
| 3 | 0.700E+02 | 0.130E+02 | 0.125E+02 | 0.476E+00 | 0.373E+01 |
| 4 | 0.500E+02 | 0.160E+02 | 0.154E+02 | 0.581E+00 | 0.370E+01 |
| 5 | 0.330E+02 | 0.180E+02 | 0.191E+02 | -0.105E+01 | -0.567E+01 |
| 6 | 0.200E+02 | 0.200E+02 | 0.221E+02 | -0.205E+01 | -0.976E+01 |
| 7 | 0.100E+02 | 0.230E+02 | 0.217E+02 | 0.135E+01 | 0.604E+01 |
| 8 | 0.550E+01 | 0.200E+02 | 0.202E+02 | -0.214E+00 | -0.106E+01 |
| 9 | 0.200E+01 | 0.260E+02 | 0.278E+02 | -0.184E+01 | -0.685E+01 |
| 10 | 0.167E+01 | 0.280E+02 | 0.313E+02 | -0.328E+01 | -0.111E+02 |
| 11 | 0.125E+01 | 0.360E+02 | 0.383E+02 | -0.231E+01 | -0.622E+01 |
| 12 | 0.670E+00 | 0.820E+02 | 0.599E+02 | 0.221E+02 | 0.312E+02 |
| 13 | 0.500E+00 | 0.810E+02 | 0.733E+02 | 0.766E+01 | 0.993E+01 |
| 14 | 0.500E+00 | 0.950E+02 | 0.733E+02 | 0.217E+02 | 0.257E+02 |
| 15 | 0.330E+00 | 0.800E+02 | 0.978E+02 | -0.178E+02 | -0.200E+02 |
| 16 | 0.130E+00 | 0.154E+03 | 0.186E+03 | -0.319E+02 | -0.188E+02 |
| 17 | 0.700E-01 | 0.236E+03 | 0.261E+03 | -0.253E+02 | -0.102E+02 |
| 18 | 0.500E-01 | 0.283E+03 | 0.293E+03 | -0.105E+02 | -0.363E+01 |
| 19 | 0.380E-01 | 0.313E+03 | 0.307E+03 | 0.550E+01 | 0.177E+01 |
| 20 | 0.320E-01 | 0.354E+03 | 0.310E+03 | 0.444E+02 | 0.134E+02 |
| 21 | 0.250E-01 | 0.296E+03 | 0.305E+03 | -0.860E+01 | -0.286E+01 |

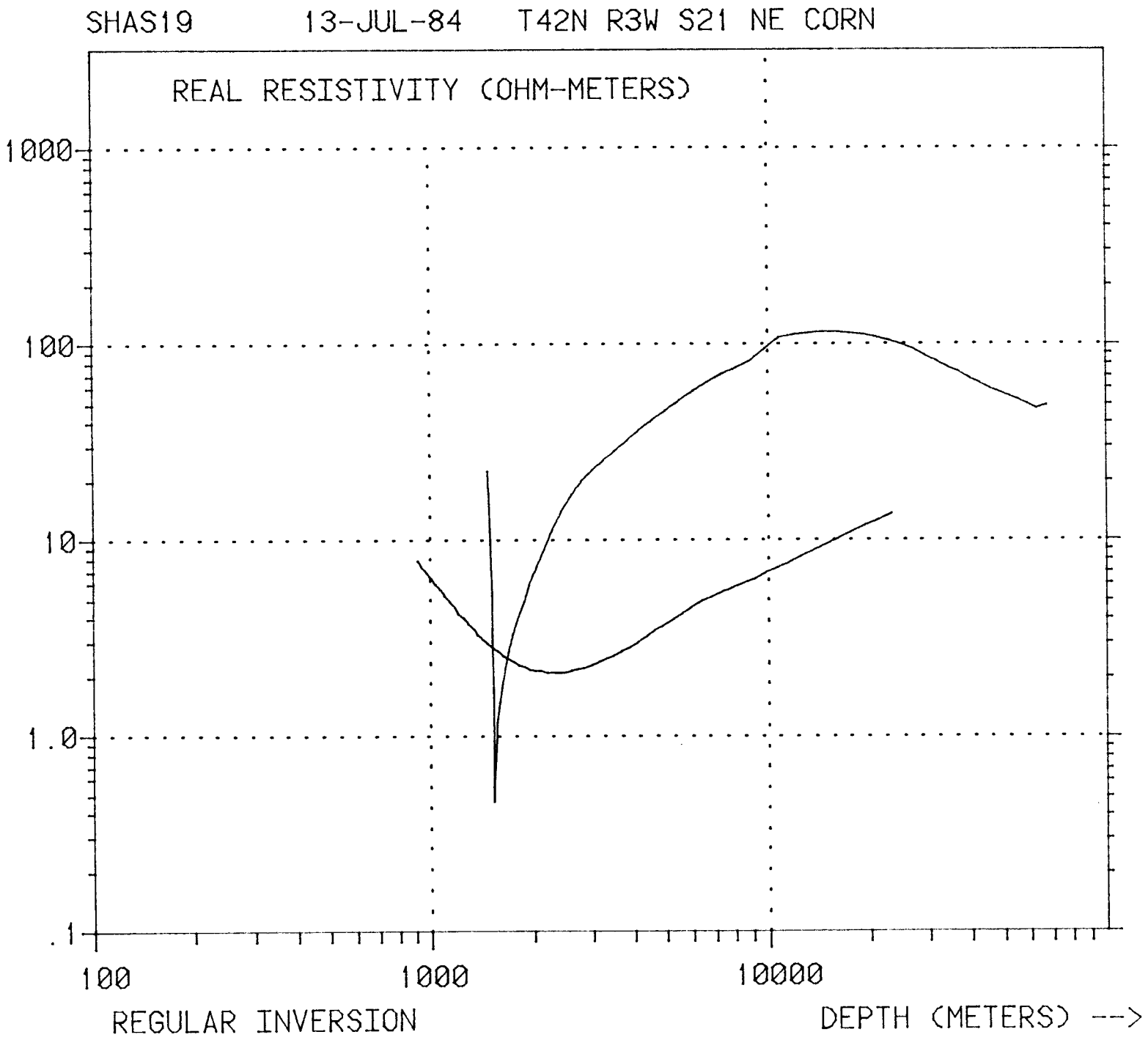
MEAN PERCENT ERROR = 0.1249E+02
MAXIMUM PERCENT ERROR = 0.3117E+02
MAX. ERROR OCCURED AT OBSERVATION 12

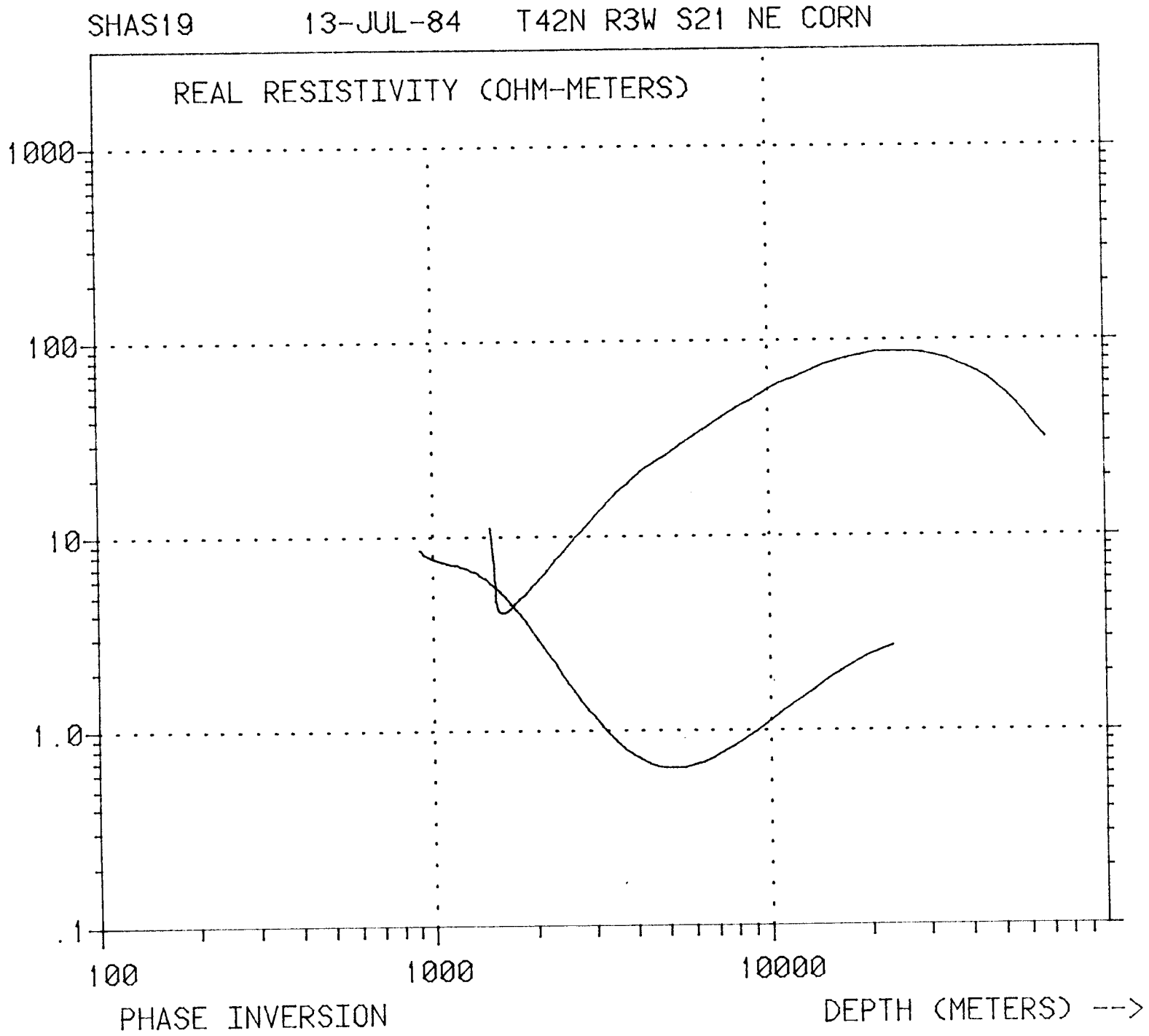

3.0
2.5
2.0
1.5
1.0
0.5
p (log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS19 13-JUL-84 142N R3W S21 NE CORN
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

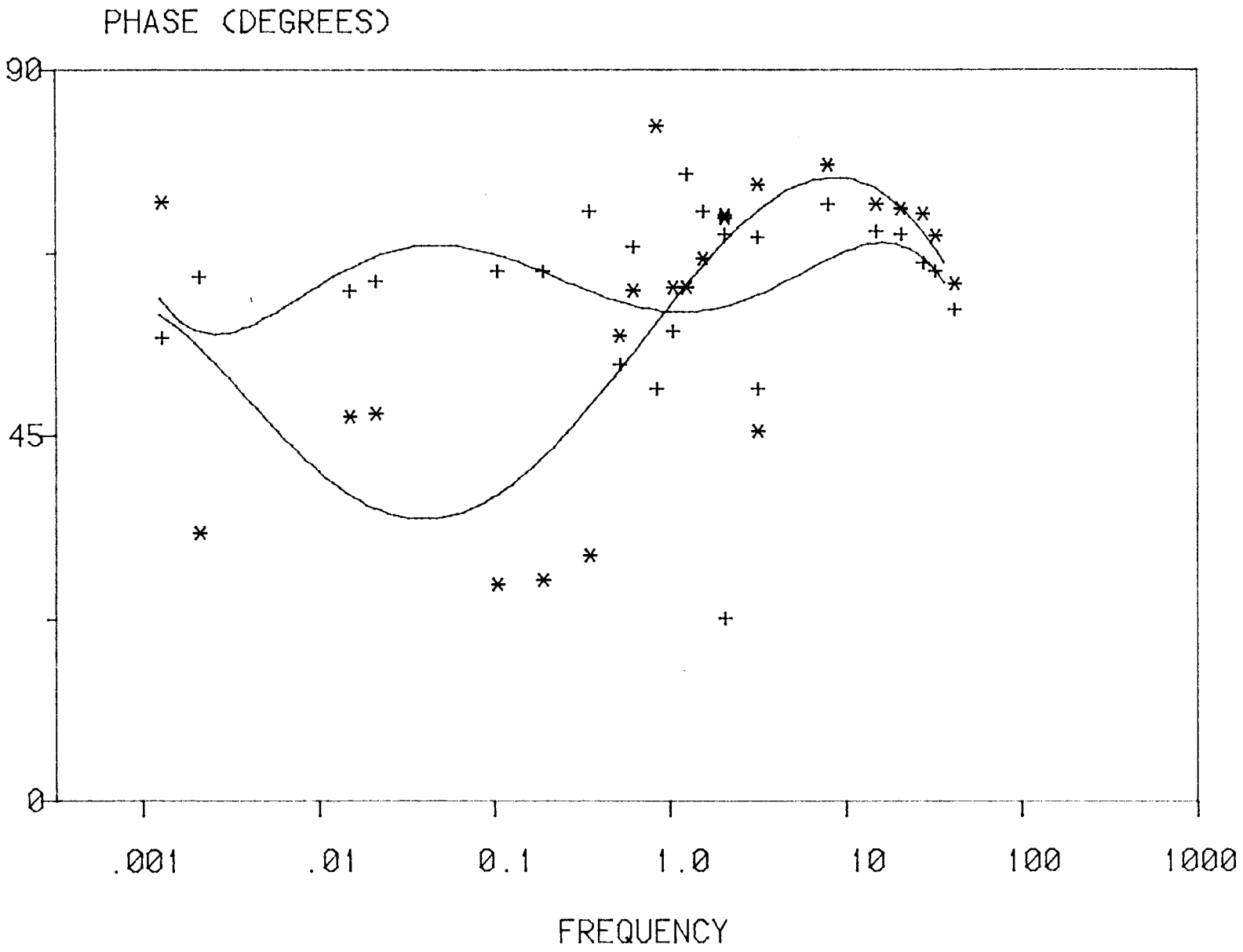



| | | | | |
|---|---|---|---|---|
| Resistivity | 0285.83 | 0008.09 | 0283.00 | 0076.85 |
| Thickness | | 1478.72 | 1065.36 | 21730.61 |
| Depth | 0000.00 | 1478.72 | 2544.08 | 24274.69 |


SHAS19 13-JUL-84 T42N R3W S21 NE CORN
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS19 13-JUL-84 T42N R3W S21 NE CORN
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS19 13-JUL-84 T42N R3W S21 NE CORN



THE SITE IS: SHAS19 200 HZ 13-JUL-84 T42N R3W S21 NE CORN

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 12.75 | 95.33 | 1 | 0.00 | 0.00 |
| 0.0020 | 12.38 | 80.54 | 2 | 0.00 | 465.21 |
| 0.0040 | 8.17 | 144.42 | 3 | 0.00 | 31.11 |
| 0.0080 | 4.72 | 71.08 | 4 | 8.45 | 12.40 |
| 0.0143 | 7.70 | 80.06 | 5 | 12.82 | 3.70 |
| 0.0200 | 7.11 | 98.62 | 6 | 16.09 | 4.81 |
| 0.0303 | 7.48 | 107.08 | 7 | 8.76 | 3.12 |
| 0.0500 | 11.14 | 120.30 | 8 | 3.26 | 0.85 |
| 0.1000 | 7.25 | 51.87 | 9 | 5.33 | 0.53 |
| 0.1818 | 10.95 | 31.90 | 10 | 3.05 | 0.12 |
| 0.3333 | 13.56 | 24.12 | 11 | 2.03 | 0.04 |
| 0.5000 | 14.68 | 23.12 | 12 | 1.44 | 0.01 |
| 0.5988 | 24.75 | 35.02 | 13 | 0.74 | 0.00 |
| 0.8000 | 26.41 | 36.80 | 14 | 0.77 | 0.01 |
| 1.0000 | 21.04 | 31.72 | 15 | 0.11 | 0.01 |
| 1.0000 | 57.39 | 76.32 | 16 | 1.80 | 0.07 |
| 1.2048 | 24.71 | 40.43 | 17 | 0.23 | 0.00 |
| 1.4925 | 27.26 | 44.10 | 18 | 0.27 | 0.00 |
| 2.0000 | 27.02 | 55.93 | 19 | 0.28 | 0.00 |
| 2.0000 | 26.93 | 33.57 | 20 | 0.08 | 0.00 |
| 2.0000 | 33.63 | 104.91 | 21 | 0.10 | 0.02 |
| 3.0303 | 33.43 | 42.92 | 22 | 0.01 | 0.00 |
| 3.0303 | 34.62 | 65.36 | 23 | 0.14 | 0.00 |
| 7.6923 | 73.92 | 179.52 | 24 | 0.60 | 0.00 |
| 14.2857 | 98.34 | 228.42 | 25 | 0.45 | 0.00 |
| 20.0000 | 118.70 | 274.33 | 26 | 0.18 | 0.00 |
| 26.3158 | 127.65 | 307.40 | 27 | 0.00 | 0.00 |
| 31.2500 | 142.14 | 340.80 | 28 | 0.00 | 0.00 |
| 40.0000 | 145.39 | 347.67 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS19 200 HZ 13-JUL-84 T42N R3W S21 NE CORN
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.967E+02 | 0.522E+01 | 67. | 80. | 42. | 0.0000 | 0.0000 | 0.3178 | 1.19 |
| H | SEC | 0.940E+02 | 0.203E+02 | 81. | 35. | 34. | 0.0000 | 0.0000 | 91.00 | 1.89 |
| E | 500.0 | 0.112E+03 | 0.105E+02 | 64. | 70. | 46. | 1.4755 | 0.0000 | 0.3228 | 1.14 |
| H | SEC | 0.492E+02 | 0.142E+02 | 3. | 60. | 34. | 1.0737 | 0.0000 | 99.20 | 2.84 |
| E | 250.0 | 0.180E+03 | 0.116E+02 | 40. | 87. | 66. | 1.0344 | 0.0000 | 0.4236 | 0.51 |
| H | SEC | 0.108E+03 | 0.476E+01 | 12. | 7. | 94. | 1.2514 | 0.0000 | 91.90 | 0.36 |
| E | 125.0 | 0.892E+02 | 0.632E+01 | 55. | 74. | 62. | 0.5911 | 0.0000 | 0.0891 | 0.40 |
| H | SEC | 0.530E+02 | 0.311E+01 | 56. | 54. | 57. | 0.4565 | 2.4159 | 76.50 | 0.45 |
| E | 70.0 | 0.899E+02 | 0.871E+01 | 48. | 63. | 68. | 0.3073 | 2.7465 | 0.0753 | 0.24 |
| H | SEC | 0.702E+02 | 0.669E+01 | 48. | 64. | 66. | 0.3713 | 1.6714 | 57.10 | 0.28 |
| E | 50.0 | 0.113E+03 | 0.755E+01 | 49. | 63. | 71. | 0.4031 | 2.4017 | 0.0695 | 0.20 |
| H | SEC | 0.846E+02 | 0.666E+01 | 47. | 65. | 67. | 0.4968 | 1.9869 | 68.70 | 0.24 |
| E | 33.0 | 0.125E+03 | 0.791E+01 | 36. | 56. | 69. | 0.4573 | 1.1652 | 0.0571 | 0.25 |
| H | SEC | 0.890E+02 | 0.706E+01 | 37. | 60. | 67. | 0.4889 | 1.5237 | 32.70 | 0.27 |
| E | 20.0 | 0.165E+03 | 0.146E+02 | 27. | 51. | 61. | 0.4519 | 0.5470 | 0.0377 | 0.33 |
| H | SEC | 0.753E+02 | 0.769E+01 | 34. | 53. | 69. | 0.4552 | 1.0065 | 150.50 | 0.26 |

AVERAGE # 8
SHAS19 200 HZ 13-JUL-84 T42N R3W S21 NE CORN
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.518E+02 | 0.750E+01 | 26. | 64. | 72. | 0.3455 | 1.6355 | 0.0468 | 0.23 |
| H | SEC | 0.519E+02 | 0.701E+01 | 29. | 68. | 72. | 0.4454 | 1.5069 | 119.80 | 0.25 |
| E | 5.5 | 0.313E+02 | 0.136E+02 | 26. | 66. | 70. | 0.2563 | 0.7137 | 0.0201 | 0.20 |
| H | SEC | 0.325E+02 | 0.826E+01 | 30. | 65. | 76. | 0.5142 | 0.7944 | 113.70 | 0.20 |
| E | 3.0 | 0.231E+02 | 0.173E+02 | 29. | 70. | 74. | 0.4253 | 1.4031 | 0.0126 | 0.14 |
| H | SEC | 0.251E+02 | 0.984E+01 | 32. | 76. | 74. | 0.2404 | 0.9835 | 94.70 | 0.20 |
| E | 2.0 | 0.243E+02 | 0.202E+02 | 71. | 33. | 165. | 0.4489 | 0.9151 | 0.0265 | 0.09 |
| H | SEC | 0.220E+02 | 0.914E+01 | 44. | 75. | 81. | 0.3168 | 1.5301 | 91.70 | 0.09 |
| E | 1.7 | 0.413E+02 | 0.234E+02 | 76. | 49. | 146. | 0.2017 | 0.2108 | 0.0165 | 0.08 |
| H | SEC | 0.288E+02 | 0.261E+02 | 51. | 88. | 73. | 0.0000 | 0.1748 | 166.50 | 0.13 |
| E | 1.2 | 0.422E+02 | 0.264E+02 | 79. | 52. | 153. | 0.1871 | 0.3222 | 0.0074 | 0.07 |
| H | SEC | 0.314E+02 | 0.264E+02 | 88. | 50. | 161. | 0.9126 | 0.6201 | 40.10 | 0.11 |
| E | 1.0 | 0.444E+02 | 0.261E+02 | 80. | 30. | 161. | 0.7083 | 0.4453 | 0.4788 | 0.18 |
| H | HZ | 0.190E+02 | 0.160E+02 | 48. | 87. | 77. | 0.0000 | 0.3890 | 38.20 | 0.14 |

AVERAGE # 8
SHAS19 200 HZ 13-JUL-84 T42N R3W S21 NE CORN
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.770E+02 | 0.589E+02 | 6. | 84. | 61. | 0.1817 | 0.2753 | 0.0128 | 3.28 |
| H | HZ | 0.756E+02 | 0.559E+02 | 9. | 86. | 62. | 0.4332 | 0.0000 | 165.40 | 2.97 |
| E | 1.2 | 0.408E+02 | 0.278E+02 | 64. | 75. | 94. | 0.5148 | 0.1678 | 0.0078 | 0.05 |
| H | HZ | 0.401E+02 | 0.216E+02 | 64. | 80. | 94. | 0.0000 | 0.1403 | 30.30 | 0.05 |
| E | 1.5 | 0.478E+02 | 0.305E+02 | 68. | 71. | 112. | 0.8226 | 0.3557 | 0.0086 | 0.06 |
| H | HZ | 0.404E+02 | 0.240E+02 | 66. | 75. | 90. | 0.9245 | 0.6540 | 141.10 | 0.08 |
| E | 2.0 | 0.612E+02 | 0.316E+02 | 73. | 67. | 115. | 0.2993 | 0.5678 | 0.0088 | 0.07 |
| H | HZ | 0.507E+02 | 0.225E+02 | 71. | 73. | 100. | 0.6670 | 0.4244 | 0.00 | 0.10 |
| E | 2.0 | 0.446E+02 | 0.345E+02 | 83. | 46. | 160. | 0.3454 | 0.3002 | 0.0924 | 0.14 |
| H | HZ | 0.226E+02 | 0.193E+02 | 62. | 0. | 71. | 0.2860 | 0.3367 | 55.80 | 0.12 |
| E | 2.0 | 0.142E+03 | 0.410E+02 | 71. | 81. | 83. | 0.8599 | 0.6048 | 0.0129 | 0.14 |
| H | HZ | 0.673E+02 | 0.262E+02 | 78. | 72. | 72. | 1.1912 | 0.5148 | 0.00 | 0.21 |

AVERAGE # 8

SHAS19 200 HZ 13-JUL-84 T42N R3W S21 NE CORN

NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.552E+02 | 0.401E+02 | 89. | 38. | 162. | 0.4676 | 0.2791 | 0.0876 | 0.26 |
| H | HZ | 0.306E+02 | 0.267E+02 | 3. | 65. | 158. | 0.5125 | 0.1717 | 0.00 | 0.15 |
| E | 3.0 | 0.701E+02 | 0.380E+02 | 75. | 69. | 119. | 0.5863 | 0.6641 | 0.0068 | 0.05 |
| H | HZ | 0.606E+02 | 0.312E+02 | 78. | 70. | 111. | 0.2218 | 0.2120 | 0.00 | 0.05 |
| E | 7.7 | 0.191E+03 | 0.820E+02 | 78. | 74. | 110. | 1.7522 | 1.9240 | 0.0025 | 0.09 |
| H | HZ | 0.168E+03 | 0.658E+02 | 79. | 74. | 104. | 1.4226 | 0.0000 | 111.10 | 0.12 |
| E | 14.3 | 0.238E+03 | 0.107E+03 | 74. | 70. | 108. | 1.1268 | 2.6644 | 0.0029 | 0.07 |
| H | HZ | 0.219E+03 | 0.897E+02 | 74. | 71. | 108. | 1.4165 | 2.5251 | 126.20 | 0.08 |
| E | 20.0 | 0.298E+03 | 0.130E+03 | 72. | 69. | 105. | 1.2097 | 2.5693 | 0.0039 | 0.08 |
| H | HZ | 0.250E+03 | 0.107E+03 | 75. | 71. | 106. | 0.8518 | 0.0000 | 131.70 | 0.07 |
| E | 26.3 | 0.347E+03 | 0.150E+03 | 71. | 66. | 108. | 0.0000 | 0.0000 | 0.0088 | 0.08 |
| H | HZ | 0.268E+03 | 0.106E+03 | 75. | 68. | 107. | 0.0000 | 0.0000 | 133.20 | 0.10 |
| E | 31.2 | 0.372E+03 | 0.157E+03 | 69. | 64. | 111. | 3.1948 | 0.0000 | 0.0215 | 0.07 |
| H | HZ | 0.309E+03 | 0.127E+03 | 70. | 67. | 108. | 0.0000 | 0.0000 | 147.70 | 0.08 |
| E | 40.0 | 0.404E+03 | 0.165E+03 | 64. | 61. | 110. | 1.2435 | 0.0000 | 0.1102 | 0.07 |
| H | HZ | 0.292E+03 | 0.126E+03 | 64. | 61. | 116. | 0.8536 | 0.0000 | 142.60 | 0.09 |

SHAS19 200 HZ 13-JUL-84 T42N R3W S21 NE CORN

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 21
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2000E+03 | | 0.0000E+00 |
| | | 0.1500E+04 | |
| 2 | 0.6000E+00 | | 0.1500E+04 |
| | | 0.1000E+04 | |
| 3 | 0.1000E+03 | | 0.2500E+04 |
| | | 0.1300E+05 | |
| 4 | 0.2000E+02 | | 0.1550E+05 |

FREQUENCY RANGE ( 0.1250E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2858E+03 | | 0.0000E+00 |
| | | 0.1479E+04 | |
| 2 | 0.8091E+01 | | 0.1479E+04 |
| | | 0.1065E+04 | |
| 3 | 0.2830E+03 | | 0.2544E+04 |
| | | 0.2173E+05 | |
| 4 | 0.7685E+02 | | 0.2427E+05 |

MEAN PERCENT VARIATION IS 0.1092E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 20 | 0.251E+06 | 0.126E+05 | 0.300E+00 |
| MODEL | 6 | 0.251E+06 | 0.418E+05 | 0.234E+07 |
| RESID | 14 | 0.250E+00 | 0.179E-01 | |

STANDARD ERROR = 0.134E+00

DTEST FOR MEANS =-0.650E-05

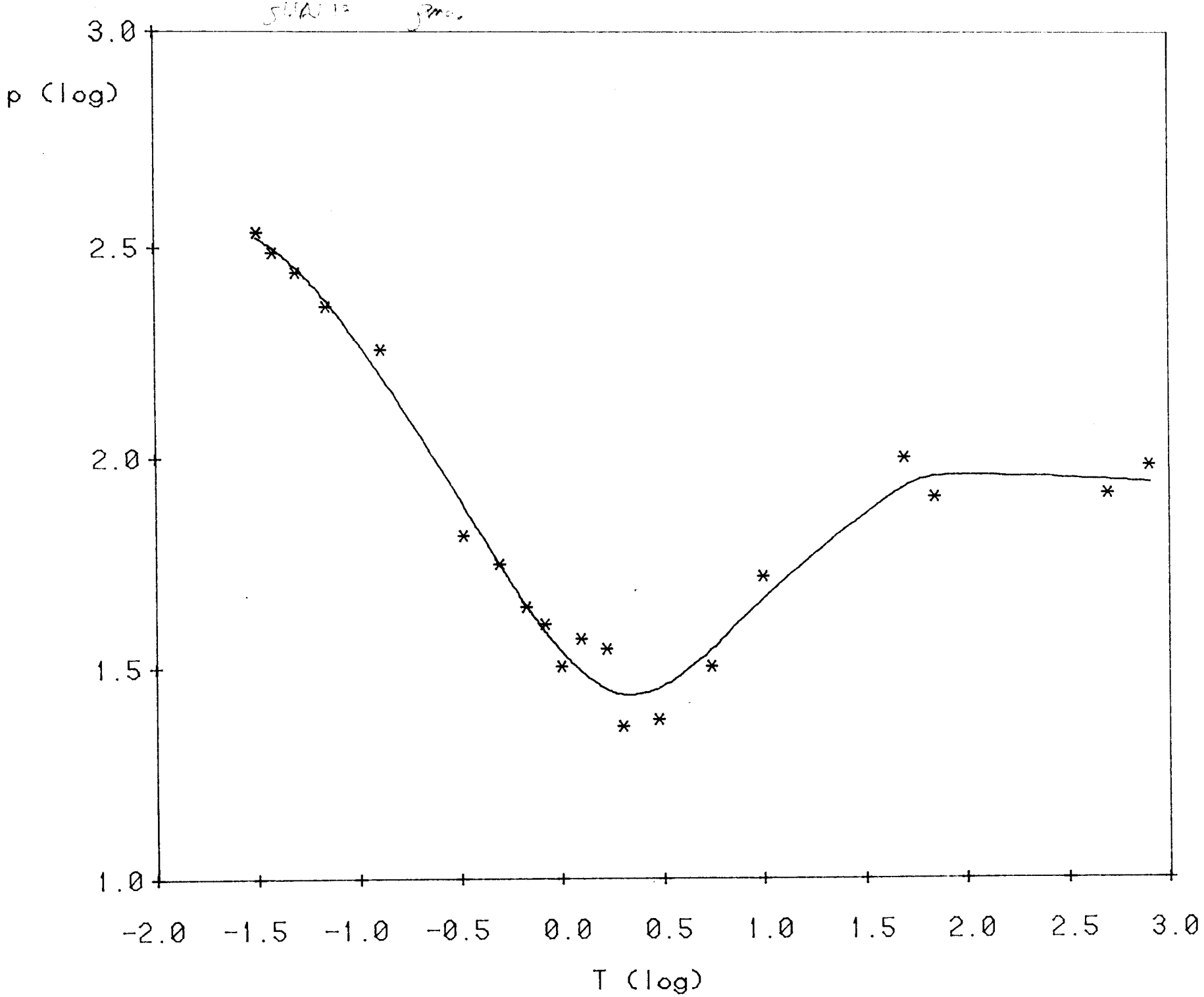
NOISE TO SIGNAL RATIO = 0.654E-01 PERCENT

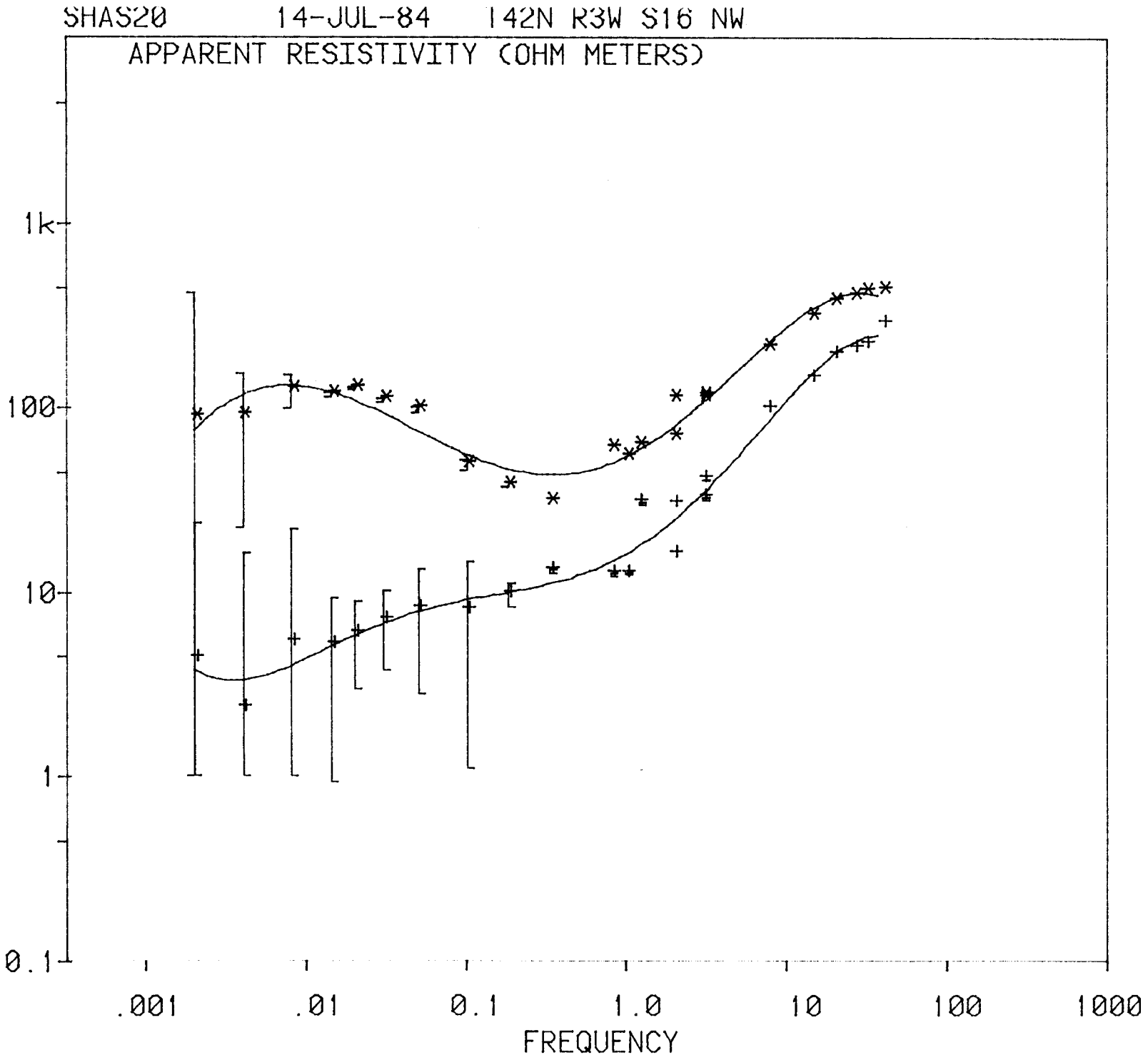
SHAS19 200 HZ 13-JUL-84 T42N R3W S21 NE CORN

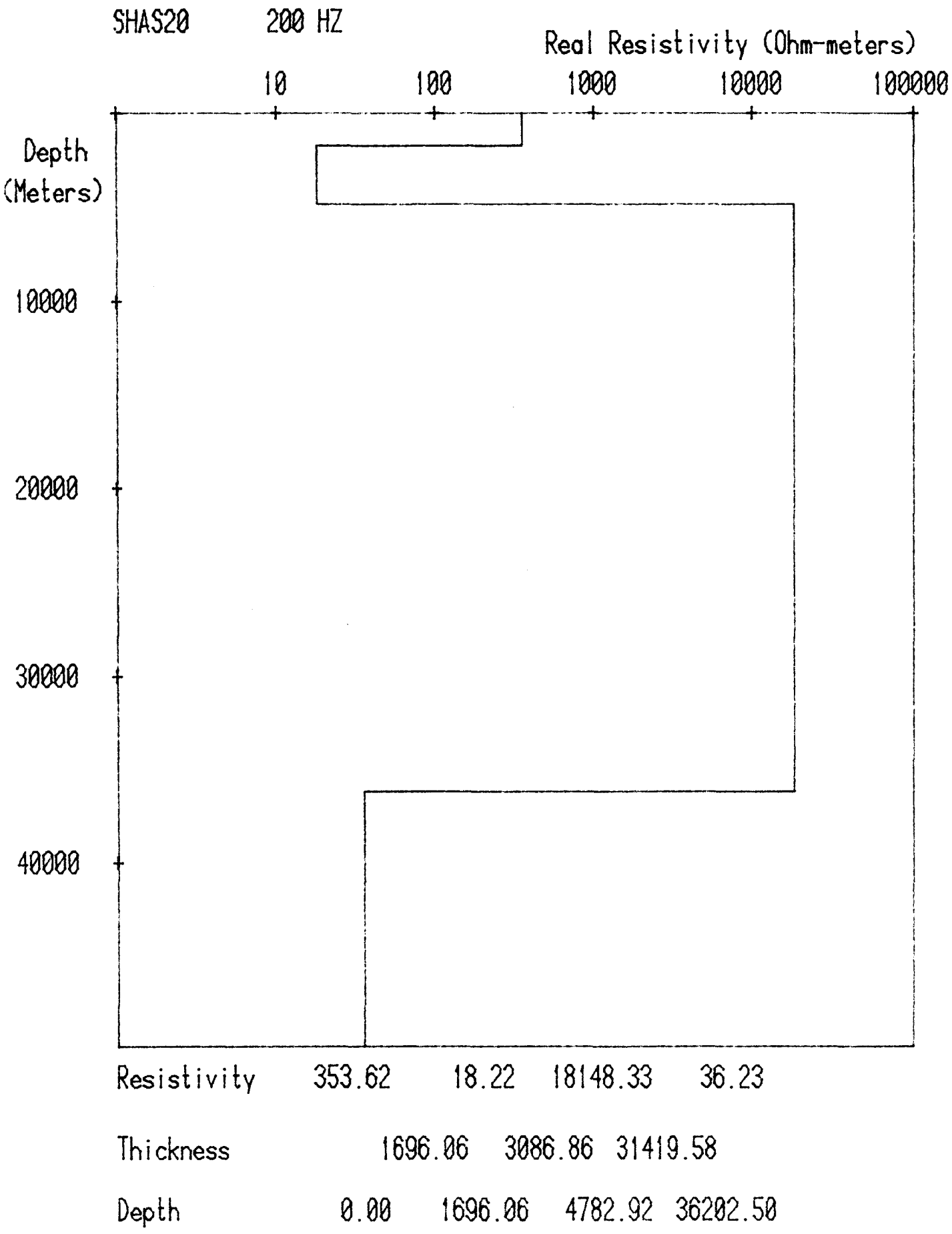
ERROR STRUCTURE OF FITTED MODEL

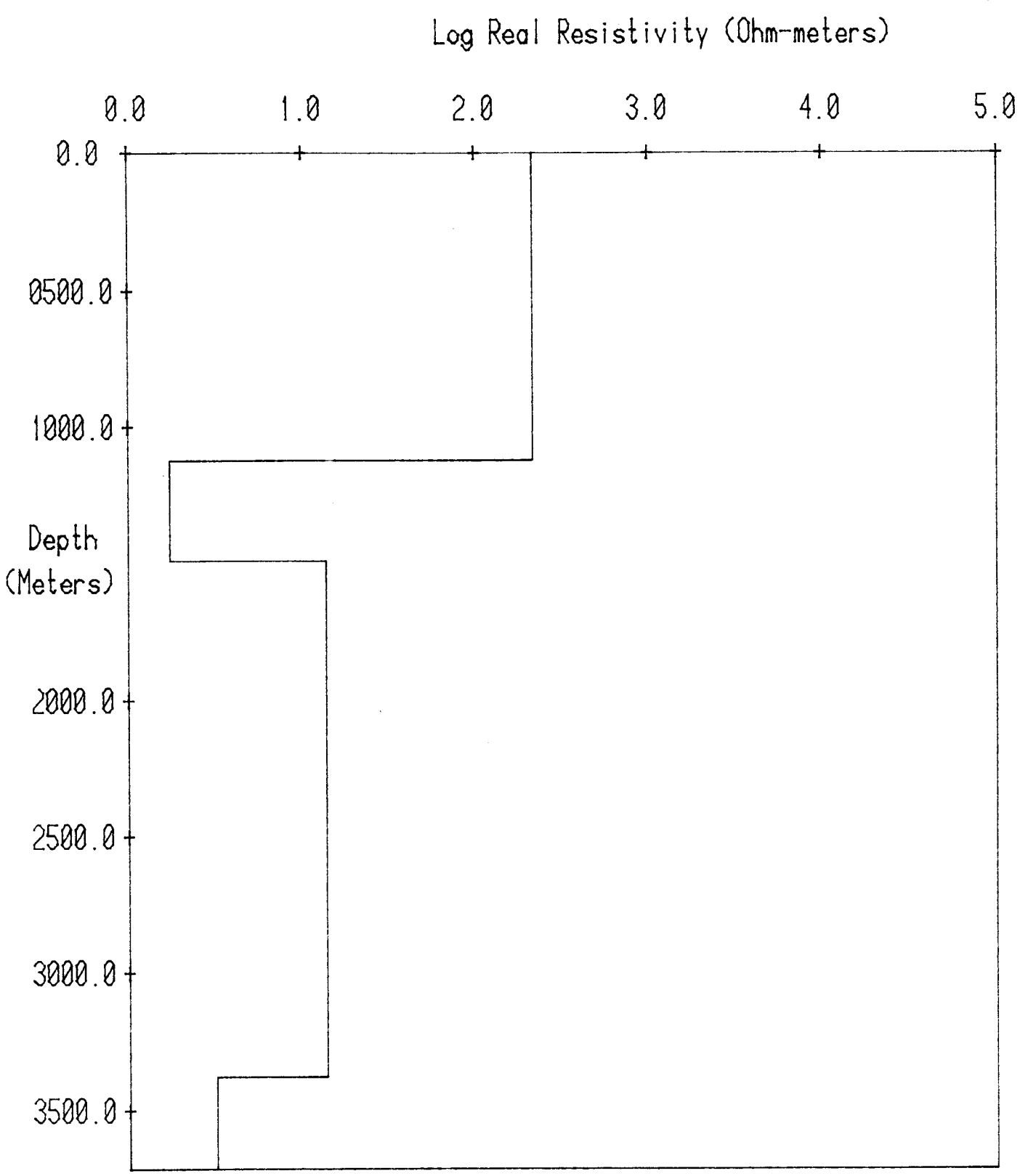
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.800E+03 | 0.950E+02 | 0.863E+02 | 0.873E+01 | 0.963E+01 |
| 2 | 0.500E+03 | 0.810E+02 | 0.883E+02 | -0.734E+01 | -0.867E+01 |
| 3 | 0.700E+02 | 0.800E+02 | 0.910E+02 | -0.110E+02 | -0.129E+02 |
| 4 | 0.500E+02 | 0.990E+02 | 0.872E+02 | 0.118E+02 | 0.126E+02 |
| 5 | 0.100E+02 | 0.520E+02 | 0.470E+02 | 0.501E+01 | 0.101E+02 |
| 6 | 0.550E+01 | 0.320E+02 | 0.341E+02 | -0.213E+01 | -0.646E+01 |
| 7 | 0.300E+01 | 0.240E+02 | 0.276E+02 | -0.360E+01 | -0.139E+02 |
| 8 | 0.200E+01 | 0.230E+02 | 0.272E+02 | -0.416E+01 | -0.166E+02 |
| 9 | 0.167E+01 | 0.350E+02 | 0.280E+02 | 0.698E+01 | 0.221E+02 |
| 10 | 0.125E+01 | 0.370E+02 | 0.309E+02 | 0.612E+01 | 0.180E+02 |
| 11 | 0.100E+01 | 0.320E+02 | 0.344E+02 | -0.245E+01 | -0.737E+01 |
| 12 | 0.830E+00 | 0.400E+02 | 0.385E+02 | 0.152E+01 | 0.388E+01 |
| 13 | 0.670E+00 | 0.440E+02 | 0.445E+02 | -0.458E+00 | -0.104E+01 |
| 14 | 0.500E+00 | 0.560E+02 | 0.553E+02 | 0.668E+00 | 0.120E+01 |
| 15 | 0.330E+00 | 0.650E+02 | 0.772E+02 | -0.122E+02 | -0.171E+02 |
| 16 | 0.130E+00 | 0.180E+03 | 0.158E+03 | 0.216E+02 | 0.127E+02 |
| 17 | 0.700E-01 | 0.228E+03 | 0.237E+03 | -0.901E+01 | -0.387E+01 |
| 18 | 0.500E-01 | 0.274E+03 | 0.283E+03 | -0.905E+01 | -0.325E+01 |
| 19 | 0.380E-01 | 0.307E+03 | 0.316E+03 | -0.870E+01 | -0.279E+01 |
| 20 | 0.320E-01 | 0.341E+03 | 0.331E+03 | 0.988E+01 | 0.294E+01 |
| 21 | 0.250E-01 | 0.348E+03 | 0.344E+03 | 0.409E+01 | 0.118E+01 |

MEAN PERCENT ERROR = 0.1092E+02
MAXIMUM PERCENT ERROR = 0.2214E+02
MAX. ERROR OCCURED AT OBSERVATION 9

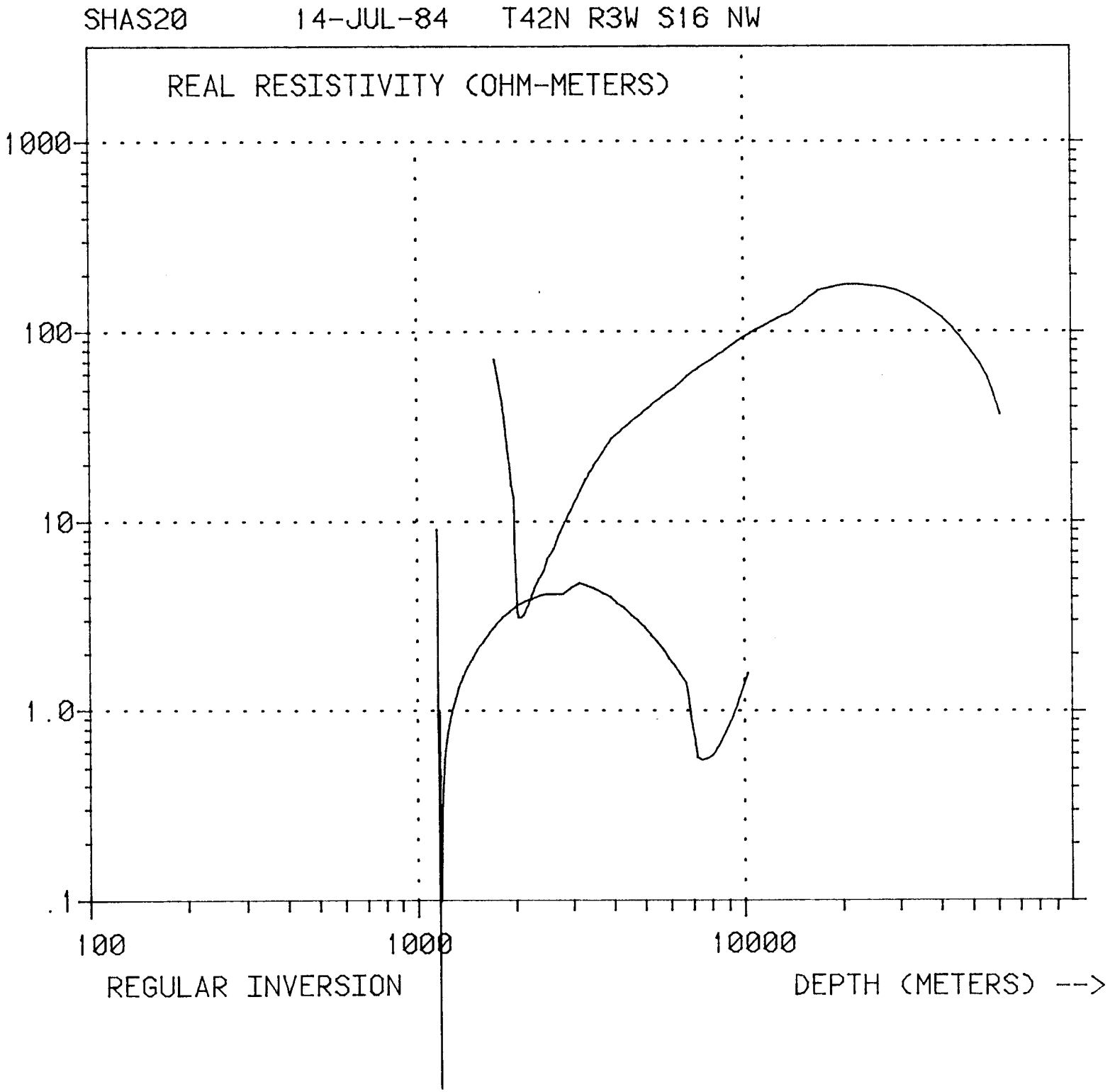

3.0
2.5
2.0
1.5
1.0
p (log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
T (log)

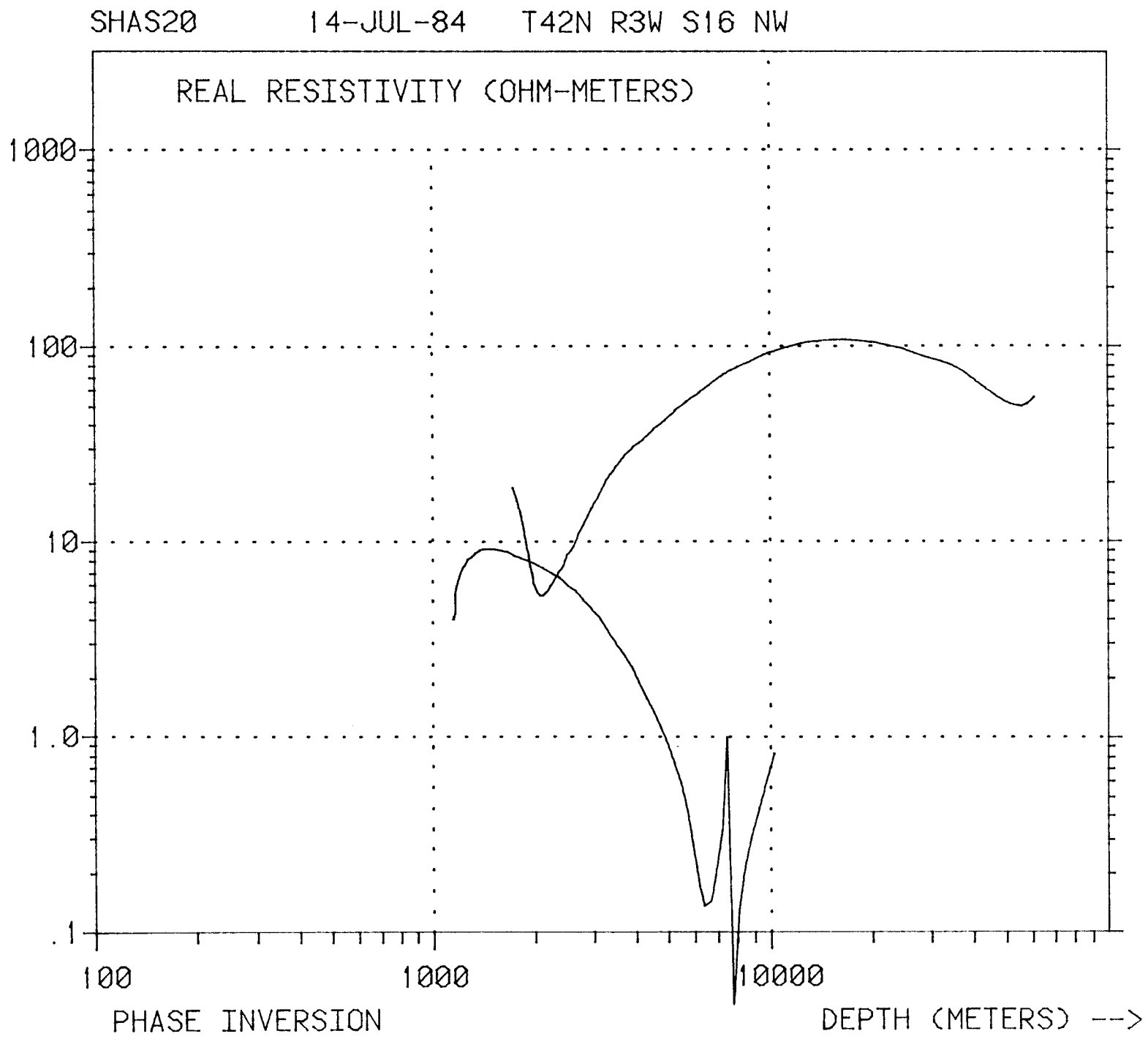

SHAS20 14-JUL-84 142N R3W S16 NW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAS20
200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
Depth
(Meters)
10000
20000
30000
40000
Resistivity 353.62 18.22 18148.33 36.23
Thickness 1696.06 3086.86 31419.58
Depth 0.00 1696.06 4782.92 36202.50

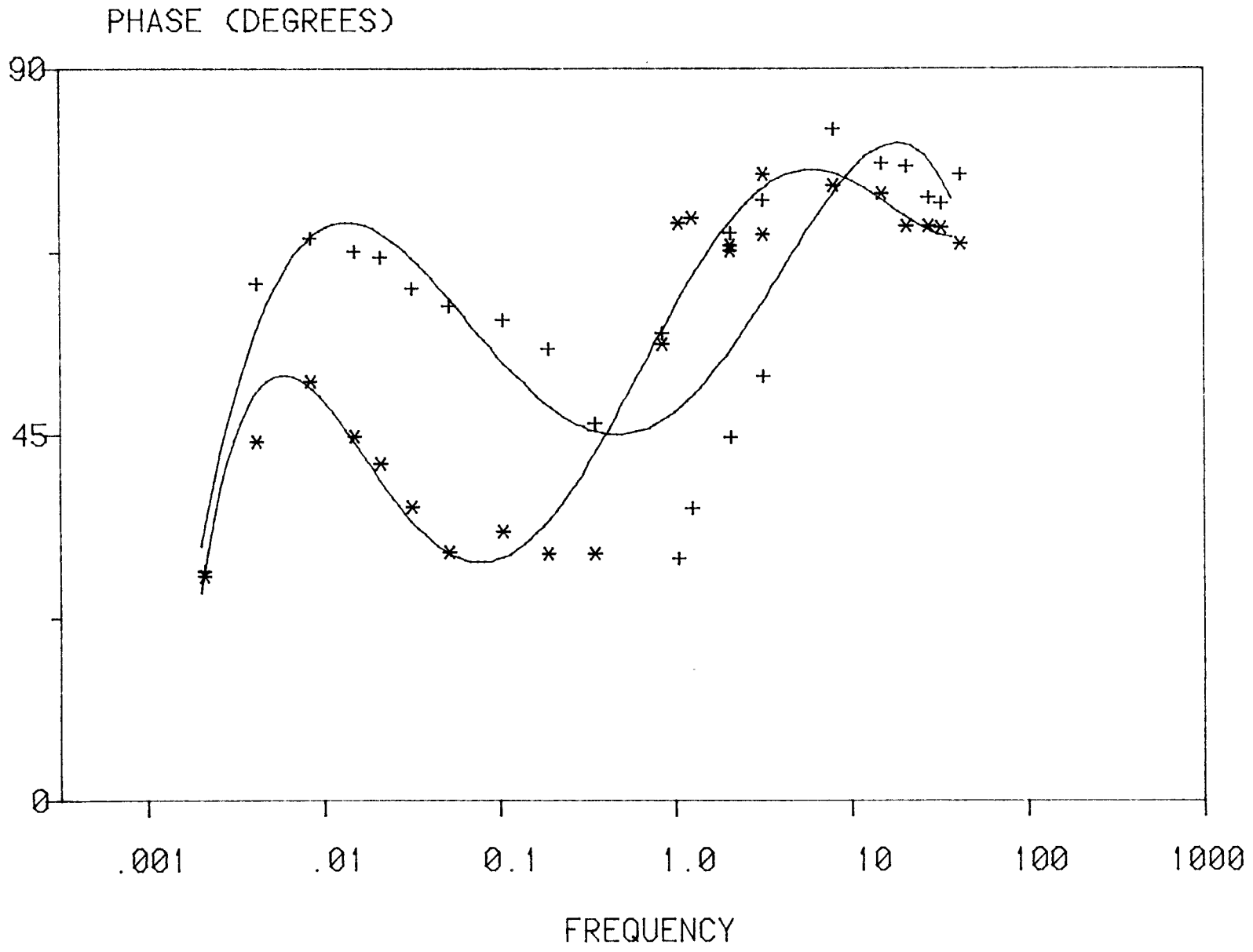



| | | | | |
|---|---|---|---|---|
| Resistivity | 0214.85 | 0001.75 | 0013.89 | 0003.18 |
| Thickness | | 1122.71 | 0368.88 | 1889.05 |
| Depth | 0000.00 | 1122.71 | 1491.59 | 3380.64 |


SHAS20 14-JUL-84 T42N R3W S16 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS20 14-JUL-84 T42N R3W S16 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS20 14-JUL-84 T42N R3W S16 NW



THE SITE IS: SHAS20 200 HZ 14-JUL-84 T42N R3W S16 NW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 3.36 | 418.22 | 1 | 18.76 | 321.59 |
| 0.0020 | 4.24 | 85.43 | 2 | 13.67 | 64.59 |
| 0.0040 | 2.27 | 86.43 | 3 | 16.58 | 24.81 |
| 0.0080 | 5.15 | 121.56 | 4 | 4.12 | 3.71 |
| 0.0143 | 5.04 | 115.47 | 5 | 2.93 | 2.80 |
| 0.0200 | 5.83 | 124.36 | 6 | 3.18 | 3.30 |
| 0.0303 | 6.89 | 107.35 | 7 | 5.16 | 3.30 |
| 0.0500 | 7.93 | 94.77 | 8 | 6.67 | 2.77 |
| 0.1000 | 7.77 | 47.79 | 9 | 1.39 | 0.14 |
| 0.1818 | 9.52 | 36.68 | 10 | 0.30 | 0.02 |
| 0.3333 | 12.83 | 30.32 | 11 | 0.16 | 0.00 |
| 0.5000 | 19.77 | 33.67 | 12 | 0.12 | 0.00 |
| 0.5988 | 93.23 | 61.79 | 13 | 0.67 | 0.01 |
| 0.8000 | 12.18 | 58.22 | 14 | 0.01 | 0.01 |
| 1.0000 | 12.33 | 52.45 | 15 | 0.02 | 0.00 |
| 1.0000 | 26.38 | 90.69 | 16 | 0.47 | 0.01 |
| 1.2048 | 29.54 | 59.83 | 17 | 0.11 | 0.01 |
| 1.4925 | 29.72 | 93.50 | 18 | 0.11 | 0.00 |
| 2.0000 | 36.31 | 104.84 | 19 | 0.04 | 0.00 |
| 2.0000 | 29.13 | 67.86 | 20 | 0.01 | 0.00 |
| 2.0000 | 15.64 | 107.48 | 21 | 0.08 | 0.02 |
| 3.0303 | 31.16 | 107.58 | 22 | 0.00 | 0.00 |
| 3.0303 | 39.60 | 113.29 | 23 | 0.01 | 0.00 |
| 7.6923 | 95.73 | 206.23 | 24 | 0.04 | 0.00 |
| 14.2857 | 140.76 | 303.94 | 25 | 0.02 | 0.00 |
| 20.0000 | 188.15 | 359.70 | 26 | 0.03 | 0.00 |
| 26.3158 | 201.27 | 389.84 | 27 | 0.02 | 0.00 |
| 31.2500 | 211.87 | 410.30 | 28 | 0.00 | 0.00 |
| 40.0000 | 276.79 | 423.93 | 29 | 0.02 | 0.00 |

1, 15, 17, 20

AVERAGE # 8
SHAS20 200 HZ 14-JUL-84 T42N R3W S16 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.372E+03 | 0.324E+01 | 2. | 4. | 30. | 0.2863 | 0.6720 | 0.9406 | 0.37 |
| H | SEC | 0.465E+03 | 0.347E+01 | 88. | 84. | 30. | 0.3076 | 0.7526 | 66.00 | 0.39 |
| E | 500.0 | 0.728E+02 | 0.243E+01 | 23. | 15. | 30. | 1.4494 | 0.8417 | 0.9678 | 0.26 |
| H | SEC | 0.981E+02 | 0.606E+01 | 33. | 42. | 30. | 0.1405 | 0.7520 | 7.40 | 0.90 |
| E | 250.0 | 0.927E+02 | 0.287E+01 | 47. | 66. | 30. | 0.5184 | 0.5273 | 0.2483 | 0.24 |
| H | SEC | 0.802E+02 | 0.166E+01 | 42. | 62. | 30. | 0.7006 | 0.8263 | 30.10 | 0.29 |
| E | 125.0 | 0.124E+03 | 0.532E+01 | 52. | 59. | 30. | 0.2269 | 0.3046 | 0.3707 | 0.07 |
| H | SEC | 0.120E+03 | 0.499E+01 | 52. | 80. | 30. | 0.0652 | 0.1784 | 53.90 | 0.10 |
| E | 70.0 | 0.124E+03 | 0.525E+01 | 45. | 69. | 30. | 0.1295 | 0.1260 | 0.2889 | 0.16 |
| H | SEC | 0.107E+03 | 0.482E+01 | 46. | 67. | 30. | 0.2383 | 0.0000 | 123.90 | 0.18 |
| E | 50.0 | 0.125E+03 | 0.600E+01 | 42. | 68. | 30. | 0.3522 | 0.1150 | 0.1752 | 0.17 |
| H | SEC | 0.124E+03 | 0.567E+01 | 42. | 67. | 30. | 0.2462 | 0.0000 | 44.60 | 0.19 |
| E | 33.0 | 0.113E+03 | 0.687E+01 | 36. | 63. | 30. | 0.3531 | 0.1181 | 0.0734 | 0.19 |
| H | SEC | 0.102E+03 | 0.692E+01 | 36. | 64. | 30. | 0.3848 | 0.1093 | 41.00 | 0.19 |
| E | 20.0 | 0.941E+02 | 0.884E+01 | 32. | 60. | 30. | 0.0000 | 0.3827 | 0.0653 | 0.15 |
| H | SEC | 0.954E+02 | 0.701E+01 | 30. | 63. | 30. | 0.8279 | 0.1026 | 8.00 | 0.24 |

AVERAGE # 8
SHAS20 200 HZ 14-JUL-84 T42N R3W S16 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.484E+02 | 0.822E+01 | 32. | 60. | 30. | 0.3284 | 0.1746 | 0.0766 | 0.24 |
| H | SEC | 0.472E+02 | 0.732E+01 | 34. | 59. | 30. | 0.1966 | 0.0643 | 46.80 | 0.22 |
| E | 5.5 | 0.368E+02 | 0.947E+01 | 29. | 54. | 30. | 0.0617 | 0.0706 | 0.0598 | 0.18 |
| H | SEC | 0.365E+02 | 0.956E+01 | 32. | 58. | 30. | 0.0850 | 0.0411 | 39.20 | 0.13 |
| E | 3.0 | 0.350E+02 | 0.163E+02 | 28. | 44. | 30. | 0.1127 | 0.0619 | 0.1662 | 0.23 |
| H | SEC | 0.257E+02 | 0.935E+01 | 34. | 50. | 30. | 0.1340 | 0.0626 | 126.20 | 0.29 |
| E | 2.0 | 0.448E+02 | 0.262E+02 | 37. | 67. | 30. | 0.1059 | 0.0709 | 0.1568 | 0.23 |
| H | SEC | 0.226E+02 | 0.133E+02 | 30. | 70. | 30. | 0.0417 | 0.0279 | 45.90 | 0.28 |
| E | 1.7 | 0.740E+02 | 0.120E+03 | 31. | 35. | 30. | 0.2652 | 0.3077 | 0.0279 | 0.14 |
| H | SEC | 0.496E+02 | 0.669E+02 | 5. | 9. | 30. | 0.1725 | 0.4444 | 45.50 | 0.56 |
| E | 1.2 | 0.545E+02 | 0.405E+01 | 57. | 58. | 30. | 0.2271 | 0.0483 | 0.0399 | 0.26 |
| H | SEC | 0.620E+02 | 0.203E+02 | 56. | 58. | 30. | 0.1095 | 0.0000 | 39.30 | 0.36 |
| E | 1.0 | 0.632E+02 | 0.148E+02 | 68. | 16. | 170. | 0.1511 | 0.0292 | 0.1544 | 0.18 |
| H | HZ | 0.417E+02 | 0.982E+01 | 75. | 44. | 170. | 0.1513 | 0.0352 | 36.70 | 0.23 |

AVERAGE # 8
SHAS20 200 HZ 14-JUL-84 T42N R3W S16 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.113E+03 | 0.330E+02 | 66. | 65. | 170. | 0.4057 | 0.2542 | 0.0190 | 0.17 |
| H | HZ | 0.682E+02 | 0.197E+02 | 90. | 74. | 170. | 0.0000 | 0.2691 | 58.70 | 0.22 |
| E | 1.2 | 0.671E+02 | 0.426E+02 | 71. | 71. | 170. | 0.2858 | 0.2248 | 1.1562 | 0.06 |
| H | HZ | 0.525E+02 | 0.165E+02 | 73. | 1. | 170. | 0.2024 | 0.2043 | 41.10 | 0.19 |
| E | 1.5 | 0.106E+03 | 0.380E+02 | 74. | 72. | 170. | 0.2110 | 0.1172 | 0.8279 | 0.09 |
| H | HZ | 0.811E+02 | 0.215E+02 | 78. | 76. | 170. | 0.4355 | 0.1794 | 122.70 | 0.13 |
| E | 2.0 | 0.122E+03 | 0.457E+02 | 75. | 69. | 170. | 0.6166 | 0.1730 | 0.6100 | 0.05 |
| H | HZ | 0.874E+02 | 0.270E+02 | 74. | 72. | 170. | 0.5190 | 0.0592 | 133.20 | 0.05 |
| E | 2.0 | 0.784E+02 | 0.394E+02 | 66. | 34. | 170. | 0.0000 | 0.0380 | 0.0951 | 0.14 |
| H | HZ | 0.573E+02 | 0.188E+02 | 70. | 55. | 170. | 0.0000 | 0.0556 | -1.60 | 0.09 |
| E | 2.0 | 0.113E+03 | 0.267E+02 | 66. | 73. | 170. | 1.4463 | 0.2559 | 0.0428 | 0.10 |
| H | HZ | 0.102E+03 | 0.455E+01 | 71. | 67. | 170. | 0.4924 | 0.2614 | 60.50 | 0.25 |

AVERAGE # 8
SHAS20 200 HZ 14-JUL-84 T42N R3W S16 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.129E+03 | 0.444E+02 | 67. | 43. | 170. | 0.1192 | 0.0686 | 0.0649 | 0.15 |
| H | HZ | 0.864E+02 | 0.180E+02 | 72. | 62. | 170. | 0.0906 | 0.0524 | 130.40 | 0.08 |
| E | 3.0 | 0.127E+03 | 0.469E+02 | 78. | 73. | 170. | 0.5341 | 0.0657 | 0.6597 | 0.05 |
| H | HZ | 0.100E+03 | 0.323E+02 | 77. | 75. | 170. | 0.0000 | 0.0827 | 131.50 | 0.06 |
| E | 7.7 | 0.216E+03 | 0.100E+03 | 76. | 81. | 170. | 1.3913 | 1.2870 | 0.0374 | 0.06 |
| H | HZ | 0.196E+03 | 0.913E+02 | 76. | 84. | 170. | 0.0000 | 0.6884 | 119.80 | 0.04 |
| E | 14.3 | 0.309E+03 | 0.145E+03 | 74. | 77. | 170. | 0.3877 | 0.6066 | 0.0264 | 0.09 |
| H | HZ | 0.299E+03 | 0.137E+03 | 75. | 80. | 170. | 0.0000 | 0.9560 | 119.50 | 0.09 |
| E | 20.0 | 0.376E+03 | 0.201E+03 | 71. | 76. | 170. | 1.9351 | 0.9086 | 0.0450 | 0.08 |
| H | HZ | 0.343E+03 | 0.176E+03 | 71. | 80. | 170. | 1.2057 | 0.8527 | 124.80 | 0.11 |
| E | 26.3 | 0.426E+03 | 0.227E+03 | 70. | 75. | 170. | 1.3507 | 2.2609 | 0.0647 | 0.08 |
| H | HZ | 0.354E+03 | 0.176E+03 | 72. | 75. | 170. | 1.1976 | 1.6450 | 50.80 | 0.10 |
| E | 31.2 | 0.446E+03 | 0.243E+03 | 69. | 73. | 170. | 0.9414 | 1.0755 | 0.0926 | 0.06 |
| H | HZ | 0.375E+03 | 0.181E+03 | 72. | 74. | 170. | 1.0452 | 1.2265 | 50.20 | 0.06 |
| E | 40.0 | 0.481E+03 | 0.291E+03 | 64. | 72. | 170. | 1.0202 | 1.1410 | 0.1686 | 0.06 |
| H | HZ | 0.367E+03 | 0.262E+03 | 74. | 82. | 170. | 0.6269 | 0.5534 | 56.50 | 0.18 |

SHAS20 200 HZ 14-JUL-84 T42N R3W S16 NW

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 21
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2000E+03 | | 0.0000E+00 |
| | | 0.1000E+04 | |
| 2 | 0.8000E+00 | | 0.1000E+04 |
| | | 0.1000E+04 | |
| 3 | 0.5000E+01 | | 0.2000E+04 |
| | | 0.8000E+04 | |
| 4 | 0.8000E+00 | | 0.1000E+05 |

FREQUENCY RANGE ( 0.2000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2149E+03 | | 0.0000E+00 |
| | | 0.1123E+04 | |
| 2 | 0.1751E+01 | | 0.1123E+04 |
| | | 0.3689E+03 | |
| 3 | 0.1390E+02 | | 0.1492E+04 |
| | | 0.1889E+04 | |
| 4 | 0.3187E+01 | | 0.3381E+04 |

MEAN PERCENT VARIATION IS 0.1558E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 20 | 0.147E+06 | 0.734E+04 | 0.300E+00 |
| MODEL | 6 | 0.147E+06 | 0.245E+05 | 0.672E+06 |
| RESID | 14 | 0.510E+00 | 0.364E-01 | |

STANDARD ERROR = 0.191E+00

DTEST FOR MEANS =-0.204E-05

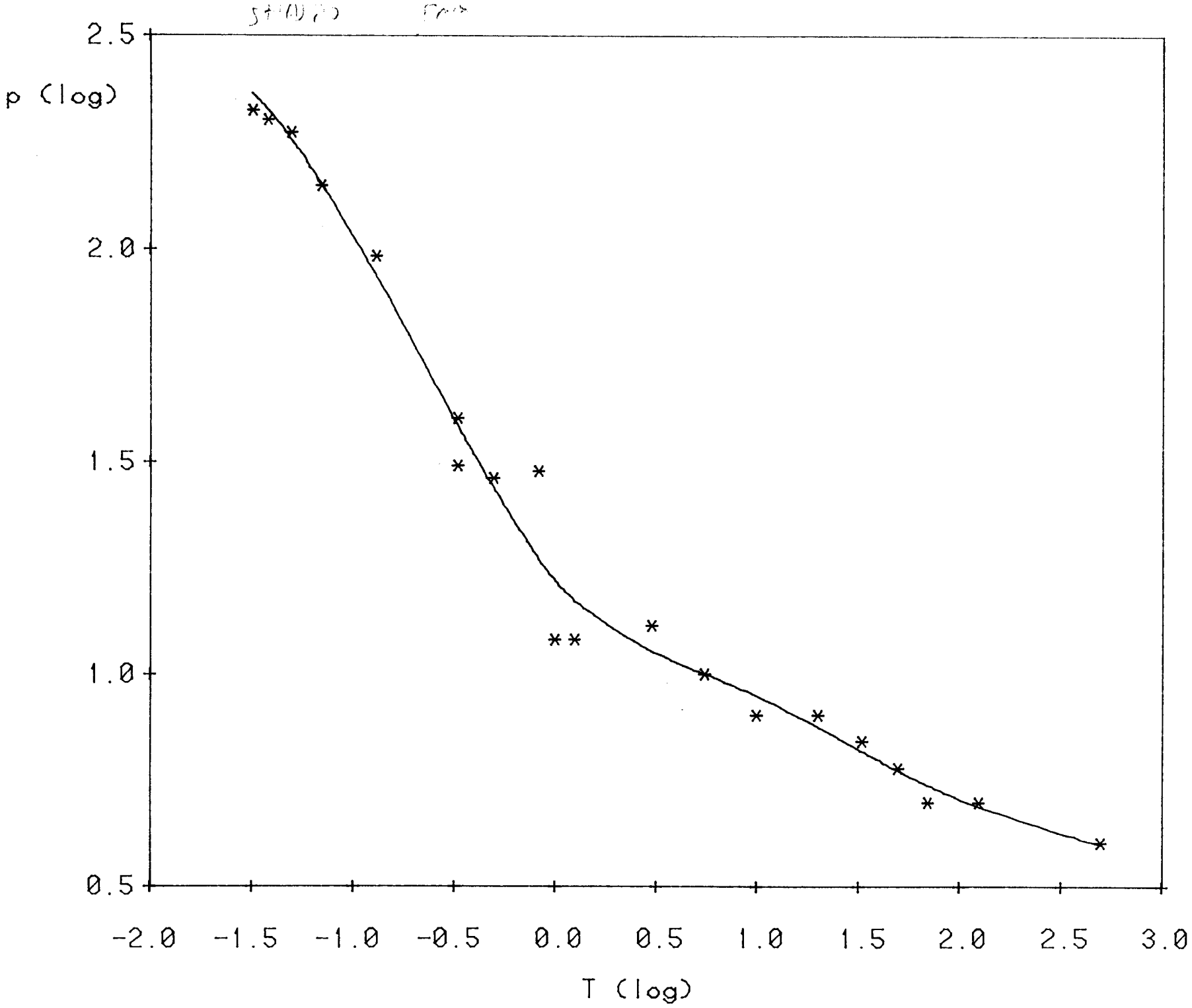
NOISE TO SIGNAL RATIO = 0.122E+00 PERCENT

SHAS20 200 HZ 14-JUL-84 T42N R3W S16 NW

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.500E+03 | 0.400E+01 | 0.397E+01 | 0.258E-01 | 0.646E+00 |
| 2 | 0.125E+03 | 0.500E+01 | 0.486E+01 | 0.137E+00 | 0.278E+01 |
| 3 | 0.700E+02 | 0.500E+01 | 0.549E+01 | -0.487E+00 | -0.930E+01 |
| 4 | 0.500E+02 | 0.600E+01 | 0.594E+01 | 0.567E-01 | 0.950E+00 |
| 5 | 0.330E+02 | 0.700E+01 | 0.661E+01 | 0.390E+00 | 0.574E+01 |
| 6 | 0.200E+02 | 0.800E+01 | 0.755E+01 | 0.447E+00 | 0.575E+01 |
| 7 | 0.100E+02 | 0.800E+01 | 0.897E+01 | -0.972E+00 | -0.115E+02 |
| 8 | 0.550E+01 | 0.100E+02 | 0.101E+02 | -0.715E-01 | -0.712E+00 |
| 9 | 0.300E+01 | 0.130E+02 | 0.111E+02 | 0.188E+01 | 0.155E+02 |
| 10 | 0.125E+01 | 0.120E+02 | 0.147E+02 | -0.268E+01 | -0.201E+02 |
| 11 | 0.100E+01 | 0.120E+02 | 0.166E+02 | -0.456E+01 | -0.319E+02 |
| 12 | 0.830E+00 | 0.300E+02 | 0.186E+02 | 0.114E+02 | 0.468E+02 |
| 13 | 0.500E+00 | 0.290E+02 | 0.271E+02 | 0.186E+01 | 0.662E+01 |
| 14 | 0.330E+00 | 0.310E+02 | 0.385E+02 | -0.748E+01 | -0.215E+02 |
| 15 | 0.330E+00 | 0.400E+02 | 0.385E+02 | 0.152E+01 | 0.386E+01 |
| 16 | 0.130E+00 | 0.960E+02 | 0.867E+02 | 0.932E+01 | 0.102E+02 |
| 17 | 0.700E-01 | 0.141E+03 | 0.143E+03 | -0.203E+01 | -0.143E+01 |
| 18 | 0.500E-01 | 0.188E+03 | 0.181E+03 | 0.667E+01 | 0.361E+01 |
| 19 | 0.380E-01 | 0.201E+03 | 0.214E+03 | -0.125E+02 | -0.605E+01 |
| 20 | 0.320E-01 | 0.212E+03 | 0.232E+03 | -0.202E+02 | -0.909E+01 |
| 21 | 0.250E-01 | 0.277E+03 | 0.254E+03 | 0.232E+02 | 0.873E+01 |

MEAN PERCENT ERROR = 0.1544E+02
MAXIMUM PERCENT ERROR = 0.4682E+02
MAX. ERROR OCCURED AT OBSERVATION 12


p (log)
2.5
2.0
1.5
1.0
0.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
T (log)

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 20 | 0.355E+06 | 0.178E+05 | 0.300E+00 |
| MODEL | 6 | 0.355E+06 | 0.592E+05 | 0.537E+07 |
| RESID | 14 | 0.154E+00 | 0.110E-01 | |

STANDARD ERROR = 0.105E+00

DTEST FOR MEANS =-0.374E-06

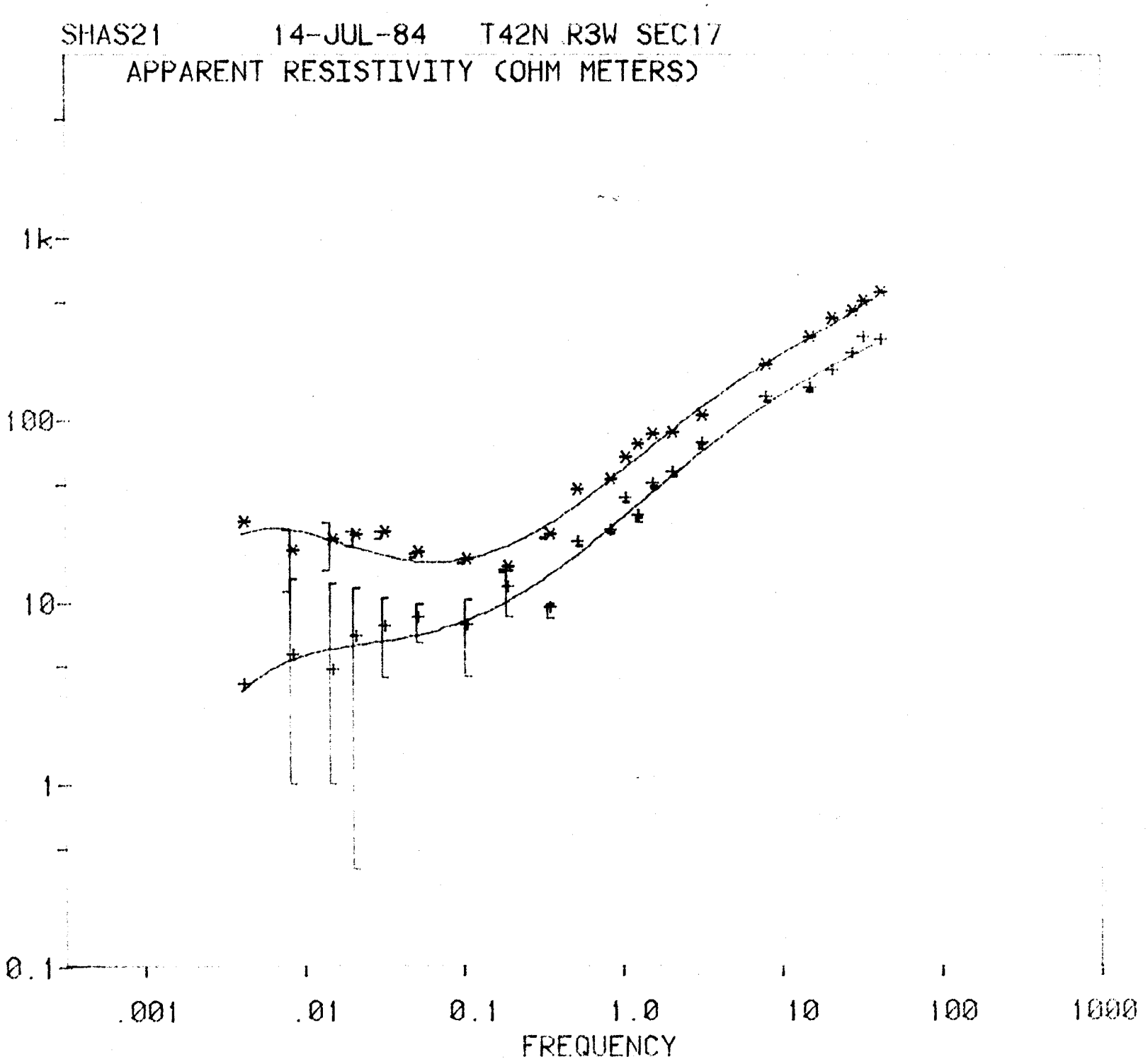
NOISE TO SIGNAL RATIO = 0.431E-01 PERCENT

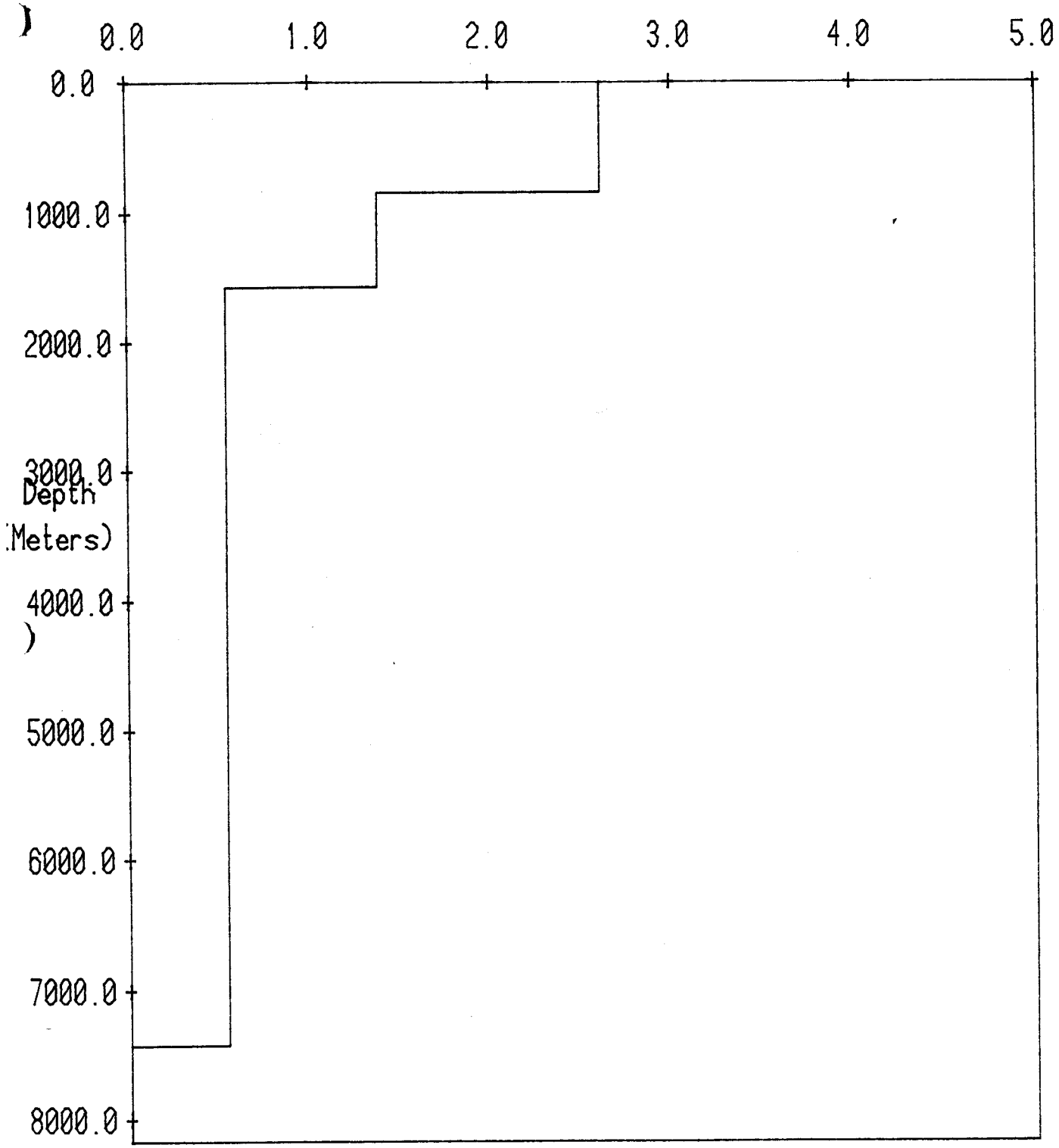
SHAS20 200 HZ 14-JUL-84 T42N R3W S16 NW

ERROR STRUCTURE OF FITTED MODEL

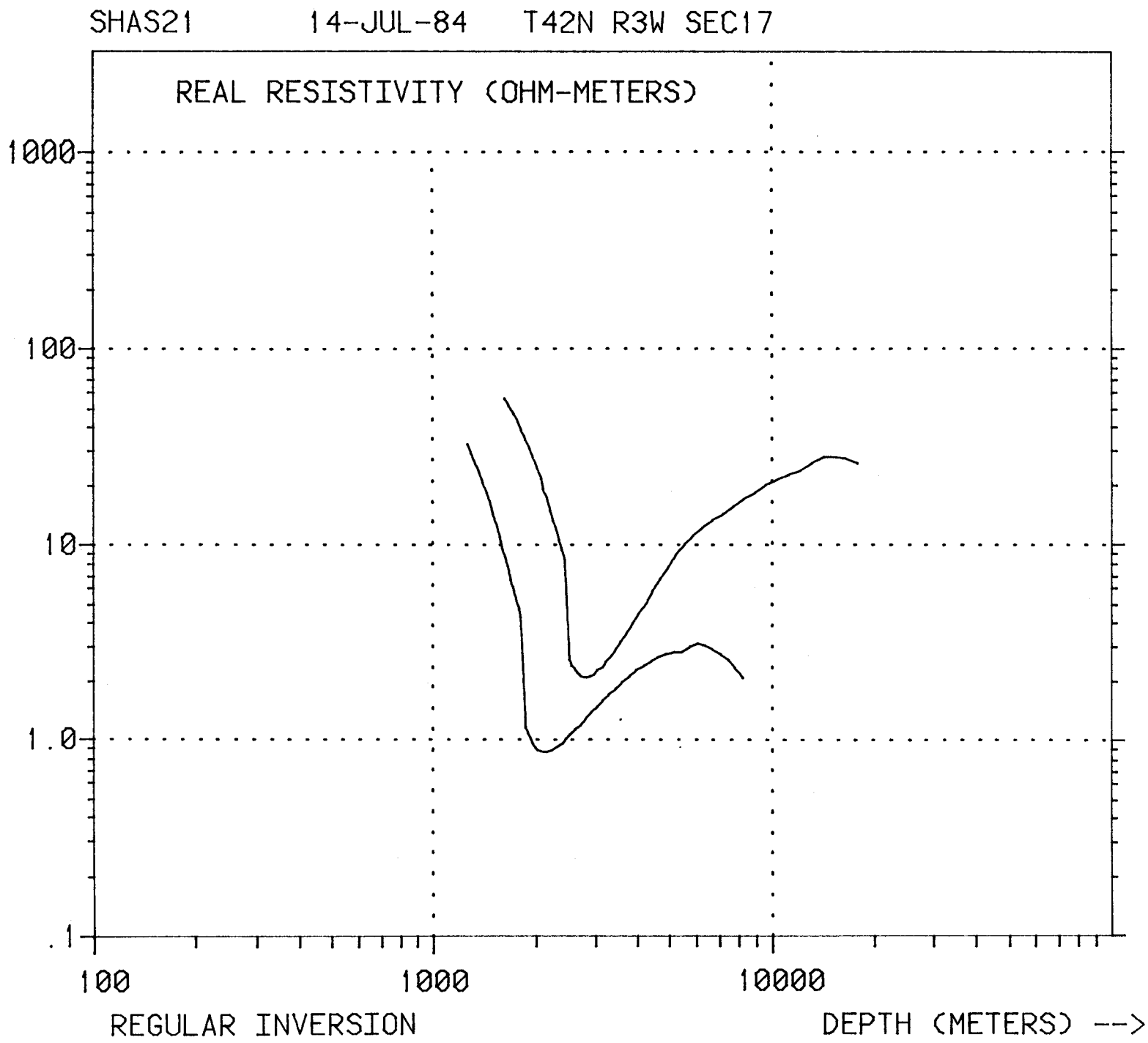
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.500E+03 | 0.850E+02 | 0.840E+02 | 0.987E+00 | 0.117E+01 |
| 2 | 0.125E+03 | 0.122E+03 | 0.120E+03 | 0.172E+01 | 0.142E+01 |
| 3 | 0.700E+02 | 0.115E+03 | 0.126E+03 | -0.110E+02 | -0.912E+01 |
| 4 | 0.500E+02 | 0.124E+03 | 0.121E+03 | 0.283E+01 | 0.231E+01 |
| 5 | 0.330E+02 | 0.107E+03 | 0.107E+03 | 0.380E+00 | 0.356E+00 |
| 6 | 0.200E+02 | 0.950E+02 | 0.822E+02 | 0.128E+02 | 0.144E+02 |
| 7 | 0.100E+02 | 0.480E+02 | 0.519E+02 | -0.392E+01 | -0.785E+01 |
| 8 | 0.550E+01 | 0.370E+02 | 0.368E+02 | 0.173E+00 | 0.468E+00 |
| 9 | 0.300E+01 | 0.300E+02 | 0.327E+02 | -0.267E+01 | -0.852E+01 |
| 10 | 0.125E+01 | 0.580E+02 | 0.461E+02 | 0.119E+02 | 0.228E+02 |
| 11 | 0.100E+01 | 0.520E+02 | 0.534E+02 | -0.140E+01 | -0.266E+01 |
| 12 | 0.830E+00 | 0.600E+02 | 0.606E+02 | -0.638E+00 | -0.106E+01 |
| 13 | 0.500E+00 | 0.680E+02 | 0.851E+02 | -0.171E+02 | -0.224E+02 |
| 14 | 0.330E+00 | 0.108E+03 | 0.110E+03 | -0.232E+01 | -0.212E+01 |
| 15 | 0.330E+00 | 0.113E+03 | 0.110E+03 | 0.268E+01 | 0.240E+01 |
| 16 | 0.130E+00 | 0.206E+03 | 0.198E+03 | 0.800E+01 | 0.396E+01 |
| 17 | 0.700E-01 | 0.304E+03 | 0.290E+03 | 0.137E+02 | 0.462E+01 |
| 18 | 0.500E-01 | 0.360E+03 | 0.347E+03 | 0.129E+02 | 0.365E+01 |
| 19 | 0.380E-01 | 0.390E+03 | 0.390E+03 | -0.411E+00 | -0.105E+00 |
| 20 | 0.320E-01 | 0.410E+03 | 0.413E+03 | -0.323E+01 | -0.785E+00 |
| 21 | 0.250E-01 | 0.424E+03 | 0.437E+03 | -0.127E+02 | -0.295E+01 |

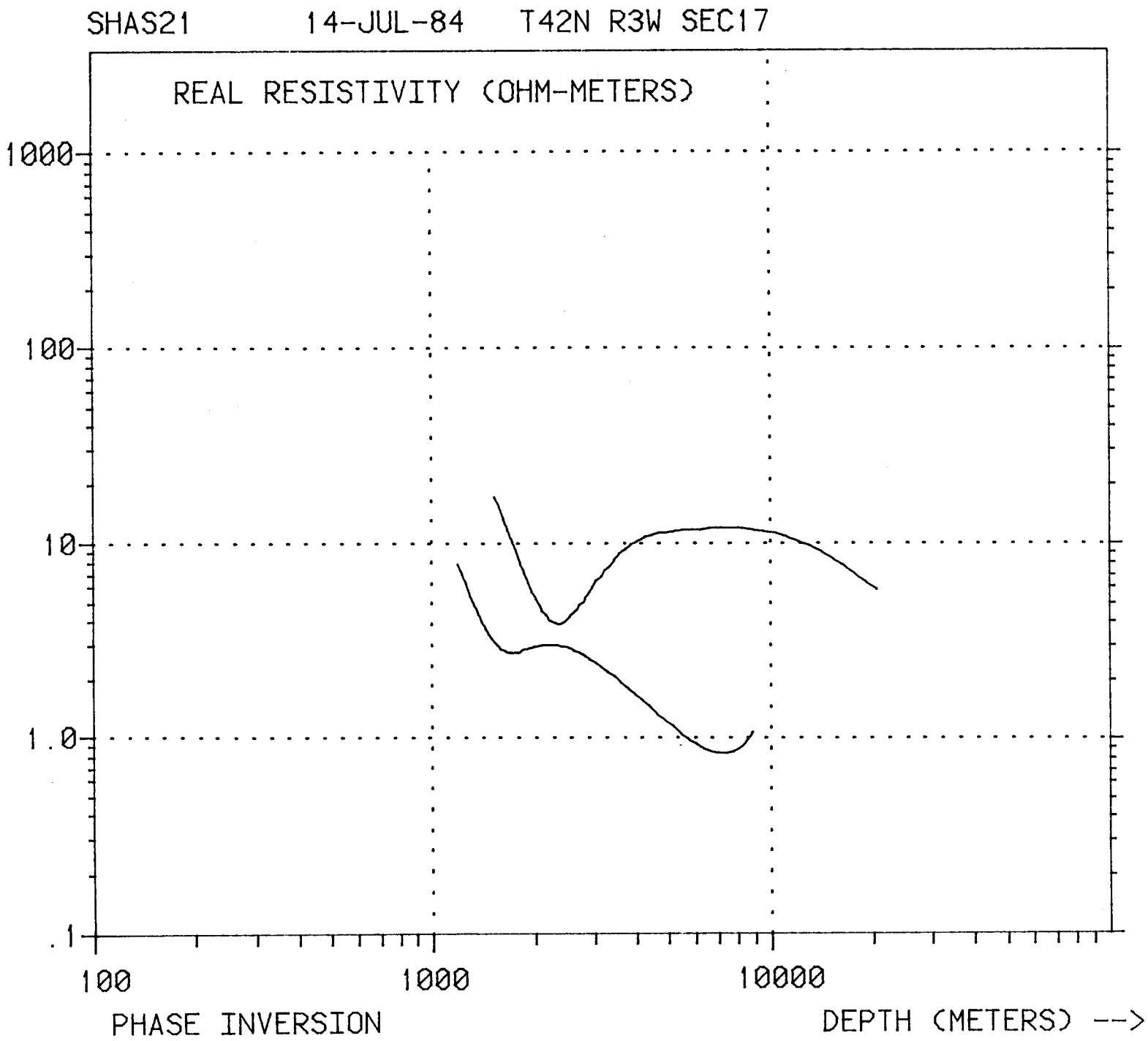
MEAN PERCENT ERROR = 0.8567E+01
MAXIMUM PERCENT ERROR = 0.2279E+02
MAX. ERROR OCCURED AT OBSERVATION 10


SHAS21 14-JUL-84 T42N R3W SEC17
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

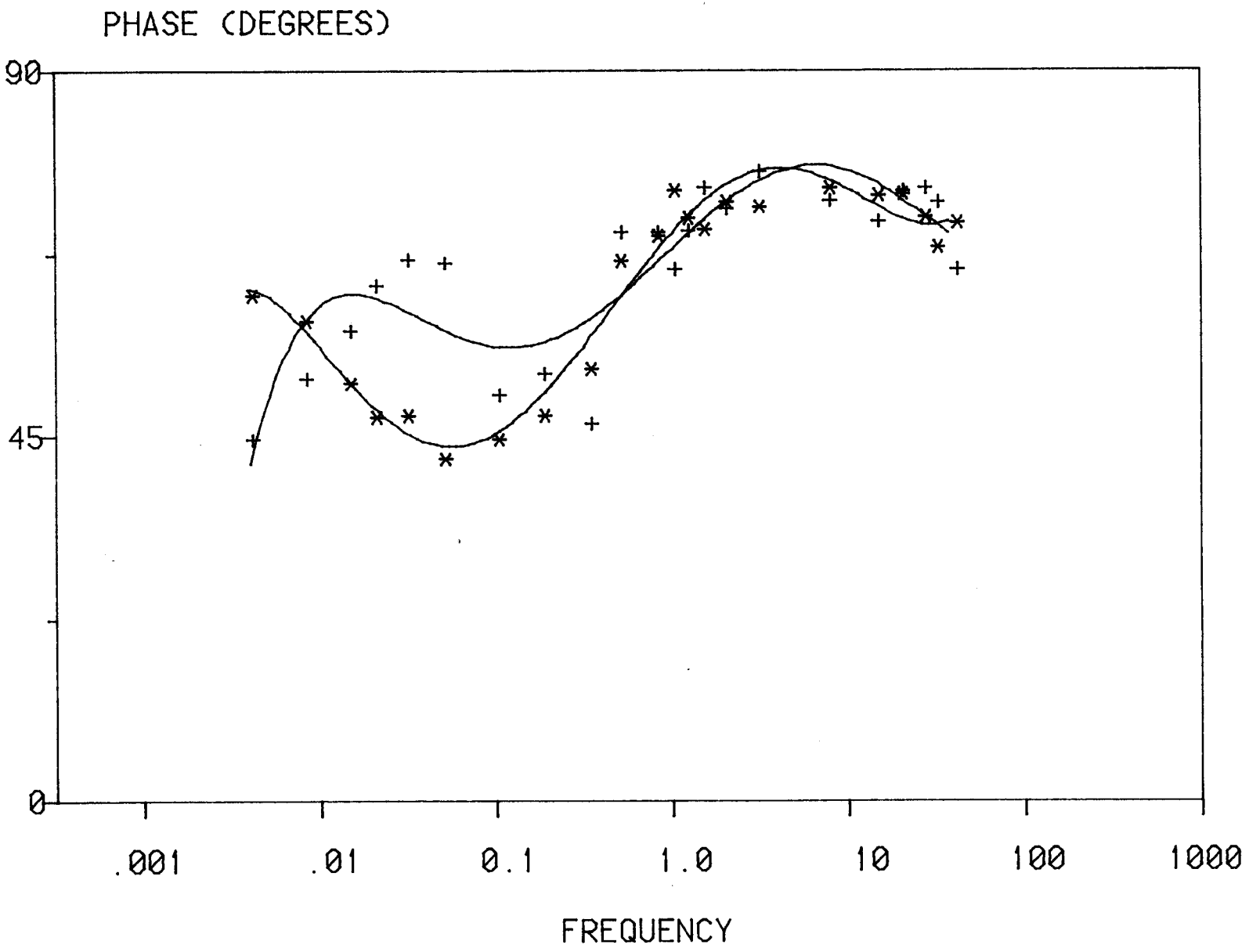



| | | | | |
|---|---|---|---|---|
| Resistivity | 0409.82 | 0024.04 | 0003.50 | 0000.94 |
| Thickness | | 0844.40 | 0730.99 | 5856.90 |
| Depth | 0000.00 | 0844.40 | 1575.39 | 7432.30 |


SHAS21 14-JUL-84 T42N R3W SEC17
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS21 14-JUL-84 T42N R3W SEC17
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS21 14-JUL-84 T42N R3W SEC17



THE SITE IS: SHAS21 200 HZ 14-JUL-84 T42N R3W SEC17

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.00 | 0.00 | 1 | 0.00 | 0.00 |
| 0.0020 | 2.66 | 9.53 | 2 | 8.30 | 6.65 |
| 0.0040 | 3.33 | 26.11 | 3 | 8.45 | 5.94 |
| 0.0080 | 4.81 | 17.89 | 4 | 5.74 | 2.00 |
| 0.0143 | 4.05 | 20.73 | 5 | 3.26 | 0.99 |
| 0.0200 | 6.08 | 22.14 | 6 | 1.89 | 0.48 |
| 0.0303 | 7.03 | 22.87 | 7 | 3.20 | 0.21 |
| 0.0500 | 7.81 | 17.67 | 8 | 3.29 | 0.16 |
| 0.1000 | 7.04 | 16.18 | 9 | 0.84 | 0.09 |
| 0.1818 | 11.49 | 14.69 | 10 | 0.15 | 0.02 |
| 0.3333 | 8.84 | 22.12 | 11 | 0.12 | 0.00 |
| 0.5000 | 20.03 | 38.59 | 12 | 0.09 | 0.01 |
| 0.5988 | 21.61 | 80.76 | 13 | 0.78 | 0.02 |
| 0.8000 | 23.50 | 44.60 | 14 | 0.99 | 0.00 |
| 1.0000 | 34.87 | 58.53 | 15 | 0.12 | 0.00 |
| 1.0000 | 75.09 | 120.01 | 16 | 2.46 | 0.07 |
| 1.2048 | 27.82 | 68.61 | 17 | 0.86 | 0.00 |
| 1.4925 | 41.65 | 77.63 | 18 | 0.95 | 0.01 |
| 2.0000 | 56.12 | 87.43 | 19 | 0.30 | 0.01 |
| 2.0000 | 48.12 | 78.93 | 20 | 0.02 | 0.00 |
| 2.0000 | 55.48 | 128.81 | 21 | 0.24 | 0.01 |
| 3.0303 | 69.99 | 99.84 | 22 | 0.03 | 0.00 |
| 3.0303 | 51.53 | 95.85 | 23 | 0.07 | 0.00 |
| 7.6923 | 124.48 | 188.07 | 24 | 0.19 | 0.00 |
| 14.2857 | 139.81 | 265.11 | 25 | 0.41 | 0.00 |
| 20.0000 | 175.23 | 336.59 | 26 | 0.22 | 0.00 |
| 26.3158 | 217.81 | 366.95 | 27 | 0.09 | 0.00 |
| 31.2500 | 264.19 | 420.37 | 28 | 0.00 | 0.00 |
| 40.0000 | 255.92 | 472.43 | 29 | 0.01 | 0.00 |

AVERAGE # 8
SHAS21 200 HZ 14-JUL-84 T42N R3W SEC17
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 500.0 | 0.110E+02 | 0.432E+01 | 51. | 1. | 41. | 0.1454 | 0.7129 | 4.7210 | 0.34 |
| H | SEC | 0.802E+01 | 0.998E+00 | 57. | 79. | 49. | 0.2028 | 0.0000 | 72.20 | 0.35 |
| E | 250.0 | 0.411E+02 | 0.583E+01 | 72. | 57. | 171. | 0.4355 | 1.0009 | 0.8402 | 0.14 |
| H | SEC | 0.112E+02 | 0.837E+00 | 54. | 33. | 38. | 0.4487 | 0.4507 | 66.00 | 0.15 |
| E | 125.0 | 0.223E+02 | 0.907E+01 | 59. | 53. | 4. | 0.3389 | 0.7736 | 1.3903 | 0.16 |
| H | SEC | 0.134E+02 | 0.558E+00 | 60. | 52. | 42. | 0.1271 | 0.1367 | 121.20 | 0.20 |
| E | 70.0 | 0.210E+02 | 0.528E+01 | 52. | 57. | 35. | 0.1606 | 0.2397 | 0.6997 | 0.03 |
| H | SEC | 0.204E+02 | 0.281E+01 | 52. | 60. | 38. | 0.1278 | 0.0893 | 114.50 | 0.06 |
| E | 50.0 | 0.227E+02 | 0.762E+01 | 48. | 63. | 33. | 0.1171 | 0.1022 | 0.2876 | 0.00 |
| H | SEC | 0.216E+02 | 0.455E+01 | 47. | 65. | 40. | 0.1574 | 0.0866 | 135.30 | 0.08 |
| E | 33.0 | 0.266E+02 | 0.931E+01 | 50. | 63. | 19. | 0.0501 | 0.4335 | 0.1642 | 0.14 |
| H | SEC | 0.191E+02 | 0.474E+01 | 46. | 71. | 44. | 0.2327 | 0.1572 | 109.00 | 0.09 |
| E | 20.0 | 0.182E+02 | 0.862E+01 | 43. | 66. | 35. | 0.1177 | 0.2129 | 0.0824 | 0.09 |
| H | SEC | 0.172E+02 | 0.700E+01 | 42. | 68. | 41. | 0.2037 | 0.1378 | 106.00 | 0.07 |

AVERAGE # 8
SHAS21 200 HZ 14-JUL-84 T42N R3W SEC17
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.159E+02 | 0.738E+01 | 45. | 52. | 45. | 0.1790 | 0.0892 | 0.0657 | 0.03 |
| H | SEC | 0.164E+02 | 0.670E+01 | 45. | 49. | 47. | 0.1118 | 0.0819 | 42.90 | 0.02 |
| E | 5.5 | 0.193E+02 | 0.147E+02 | 62. | 35. | 142. | 0.1137 | 0.1443 | 0.0316 | 0.09 |
| H | SEC | 0.101E+02 | 0.832E+01 | 34. | 71. | 51. | 0.1886 | 0.0971 | 128.70 | 0.21 |
| E | 3.0 | 0.270E+02 | 0.104E+02 | 54. | 45. | 37. | 0.1264 | 0.1290 | 0.0691 | 0.07 |
| H | SEC | 0.172E+02 | 0.729E+01 | 54. | 49. | 13. | 0.1082 | 0.0806 | 119.90 | 0.13 |
| E | 2.0 | 0.440E+02 | 0.259E+02 | 61. | 71. | 5. | 0.0764 | 0.1978 | 0.0143 | 0.04 |
| H | SEC | 0.332E+02 | 0.141E+02 | 73. | 70. | 175. | 0.1743 | 0.1308 | 123.90 | 0.19 |
| E | 1.7 | 0.944E+02 | 0.244E+02 | 61. | 72. | 11. | 0.6616 | 0.5064 | 0.0090 | 0.05 |
| H | SEC | 0.671E+02 | 0.188E+02 | 12. | 75. | 10. | 0.5356 | 0.3470 | 151.40 | 0.26 |
| E | 1.2 | 0.434E+02 | 0.263E+02 | 70. | 71. | 13. | 0.2389 | 0.7905 | 0.0074 | 0.06 |
| H | SEC | 0.458E+02 | 0.207E+02 | 70. | 70. | 25. | 0.0000 | 0.5033 | 115.60 | 0.07 |
| E | 1.0 | 0.711E+02 | 0.480E+02 | 70. | 65. | 169. | 0.4445 | 0.2525 | 0.0694 | 0.10 |
| H | HZ | 0.460E+02 | 0.218E+02 | 81. | 67. | 174. | 0.3717 | 0.1713 | 53.30 | 0.17 |

AVERAGE # 8
SHAS21 200 HZ 14-JUL-84 T42N R3W SEC17
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.150E+03 | 0.128E+03 | 61. | 29. | 158. | 1.2298 | 2.5021 | 0.3732 | 0.54 |
| H | HZ | 0.904E+02 | 0.221E+02 | 69. | 37. | 165. | 0.6885 | 0.0000 | 53.00 | 0.60 |
| E | 1.2 | 0.670E+02 | 0.330E+02 | 73. | 69. | 2. | 0.0000 | 0.4925 | 0.0092 | 0.11 |
| H | HZ | 0.702E+02 | 0.226E+02 | 71. | 72. | 9. | 0.5102 | 0.6296 | 121.20 | 0.14 |
| E | 1.5 | 0.778E+02 | 0.548E+02 | 72. | 72. | 12. | 0.8052 | 0.6975 | 0.0103 | 0.06 |
| H | HZ | 0.775E+02 | 0.285E+02 | 70. | 80. | 10. | 0.8282 | 1.0340 | 128.60 | 0.17 |
| E | 2.0 | 0.946E+02 | 0.636E+02 | 68. | 74. | 3. | 2.2969 | 0.2409 | 0.0433 | 0.06 |
| H | HZ | 0.803E+02 | 0.486E+02 | 68. | 84. | 178. | 0.0000 | 0.4274 | 58.00 | 0.20 |
| E | 2.0 | 0.976E+02 | 0.594E+02 | 74. | 73. | 178. | 0.2226 | 0.0827 | 0.0441 | 0.04 |
| H | HZ | 0.603E+02 | 0.368E+02 | 75. | 74. | 1. | 0.3745 | 0.1381 | 49.40 | 0.06 |
| E | 2.0 | 0.158E+03 | 0.765E+02 | 74. | 72. | 7. | 0.2543 | 0.2149 | 0.1660 | 0.18 |
| H | HZ | 0.994E+02 | 0.344E+02 | 74. | 74. | 4. | 0.7616 | 0.3131 | 49.80 | 0.09 |

AVERAGE # 8
SHAS21 200 HZ 14-JUL-84 T42N R3W SEC17
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.113E+03 | 0.920E+02 | 71. | 79. | 161. | 0.1711 | 0.1737 | 0.1191 | 0.11 |
| H | HZ | 0.862E+02 | 0.480E+02 | 77. | 77. | 5. | 0.1421 | 0.0991 | 44.50 | 0.11 |
| E | 3.0 | 0.101E+03 | 0.607E+02 | 71. | 78. | 173. | 0.5616 | 0.2684 | 0.0429 | 0.11 |
| H | HZ | 0.906E+02 | 0.424E+02 | 70. | 0. | 166. | 0.2562 | 0.3405 | 61.50 | 0.19 |
| E | 7.7 | 0.195E+03 | 0.128E+03 | 74. | 76. | 12. | 1.1850 | 0.5032 | 0.0251 | 0.03 |
| H | HZ | 0.181E+03 | 0.121E+03 | 78. | 72. | 27. | 0.8977 | 0.6896 | 128.30 | 0.03 |
| E | 14.3 | 0.294E+03 | 0.151E+03 | 74. | 73. | 24. | 1.7895 | 1.7550 | 0.0113 | 0.05 |
| H | HZ | 0.236E+03 | 0.129E+03 | 76. | 71. | 31. | 1.2648 | 2.0342 | 115.90 | 0.05 |
| E | 20.0 | 0.369E+03 | 0.200E+03 | 74. | 75. | 26. | 2.0682 | 3.1962 | 0.0101 | 0.03 |
| H | HZ | 0.304E+03 | 0.151E+03 | 76. | 77. | 28. | 1.1741 | 0.0000 | 118.50 | 0.04 |
| E | 26.3 | 0.427E+03 | 0.258E+03 | 71. | 73. | 22. | 1.5292 | 0.0000 | 0.0155 | 0.03 |
| H | HZ | 0.307E+03 | 0.178E+03 | 74. | 79. | 25. | 1.6588 | 2.8348 | 116.00 | 0.03 |
| E | 31.2 | 0.478E+03 | 0.302E+03 | 68. | 73. | 15. | 1.8570 | 0.0000 | 0.0226 | 0.04 |
| H | HZ | 0.363E+03 | 0.227E+03 | 69. | 76. | 24. | 1.1739 | 0.0000 | 130.80 | 0.04 |
| E | 40.0 | 0.489E+03 | 0.293E+03 | 68. | 66. | 38. | 0.6306 | 2.6566 | 0.1963 | 0.03 |
| H | HZ | 0.456E+03 | 0.219E+03 | 75. | 66. | 49. | 0.6518 | 2.0013 | 55.30 | 0.15 |

SHAS21 200 HZ 14-JUL-84 T42N R3W SEC17

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 22
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1500E+03 | | 0.0000E+00 |
| | | 0.1100E+04 | |
| 2 | 0.1000E+01 | | 0.1100E+04 |
| | | 0.2000E+04 | |
| 3 | 0.5000E+01 | | 0.3100E+04 |
| | | 0.8000E+04 | |
| 4 | 0.1000E+01 | | 0.1110E+05 |

FREQUENCY RANGE ( 0.4000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.4098E+03 | | 0.0000E+00 |
| | | 0.8444E+03 | |
| 2 | 0.2404E+02 | | 0.8444E+03 |
| | | 0.7310E+03 | |
| 3 | 0.3507E+01 | | 0.1575E+04 |
| | | 0.5857E+04 | |
| 4 | 0.9440E+00 | | 0.7432E+04 |

MEAN PERCENT VARIATION IS 0.1238E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 21 | 0.155E+06 | 0.737E+04 | 0.286E+00 |
| MODEL | 6 | 0.155E+06 | 0.258E+05 | 0.115E+07 |
| RESID | 15 | 0.337E+00 | 0.225E-01 | |

STANDARD ERROR = 0.150E+00

DTEST FOR MEANS =-0.403E-05

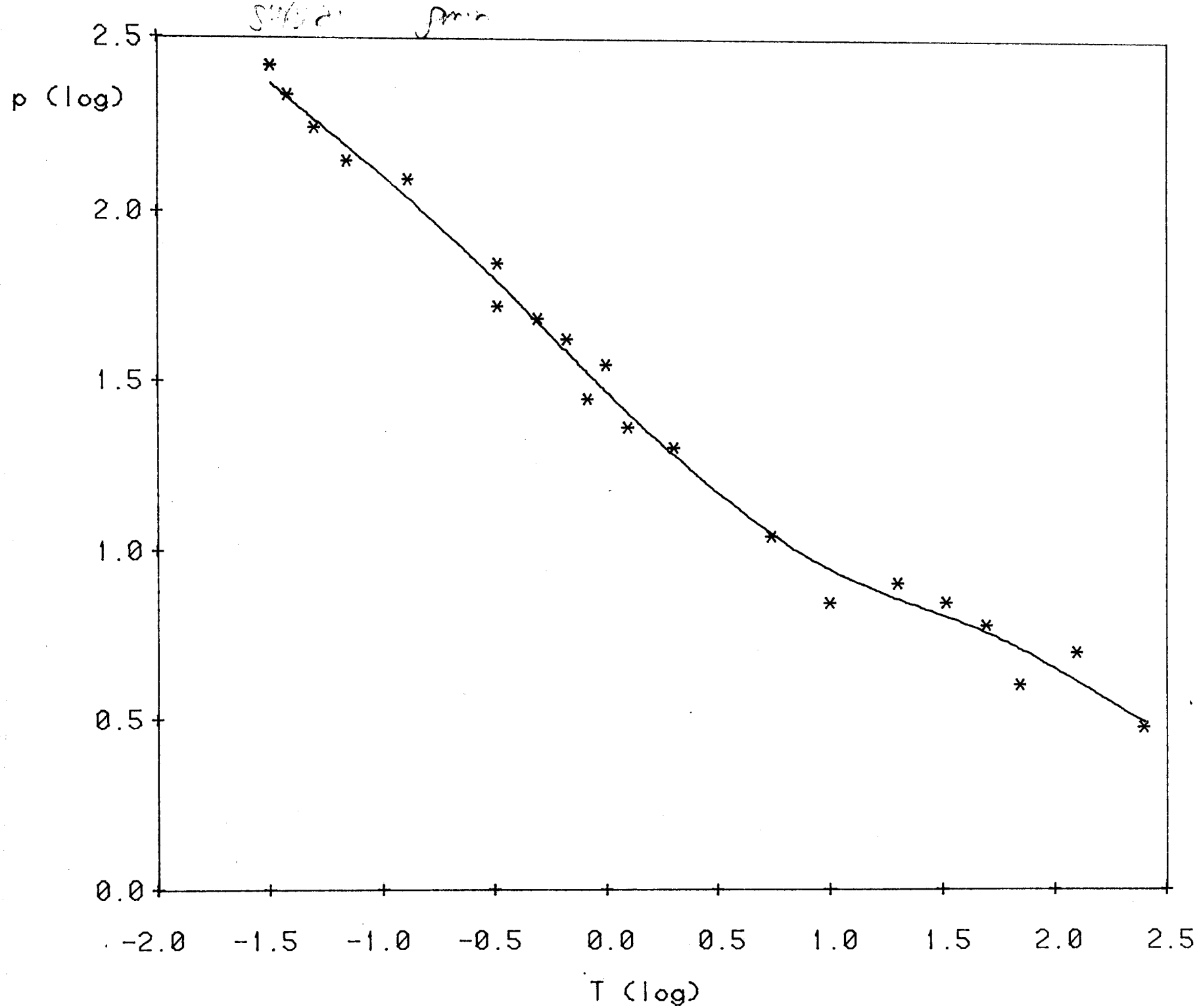
NOISE TO SIGNAL RATIO = 0.934E-01 PERCENT

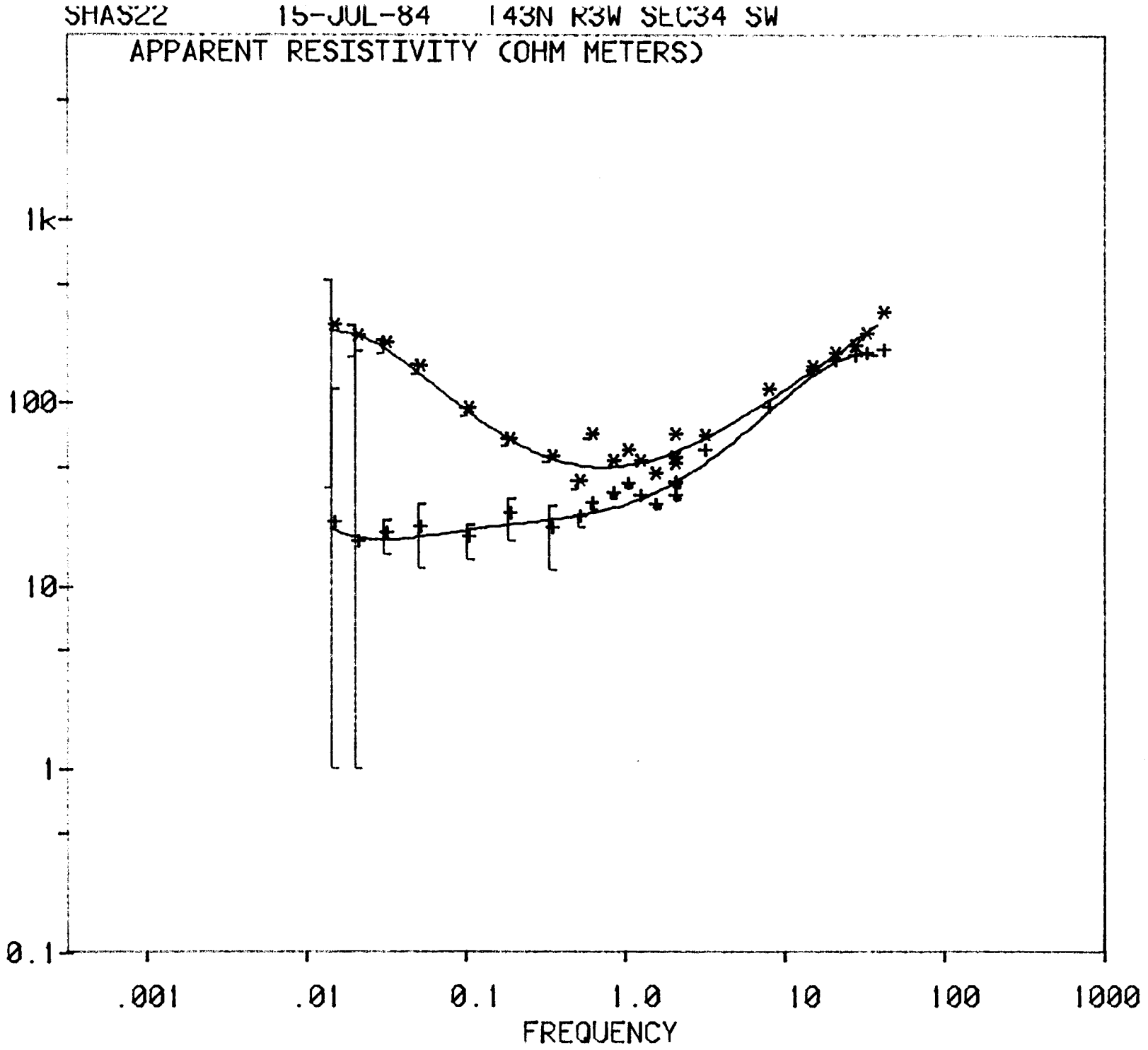
SHAS21 200 HZ 14-JUL-84 T42N R3W SEC17

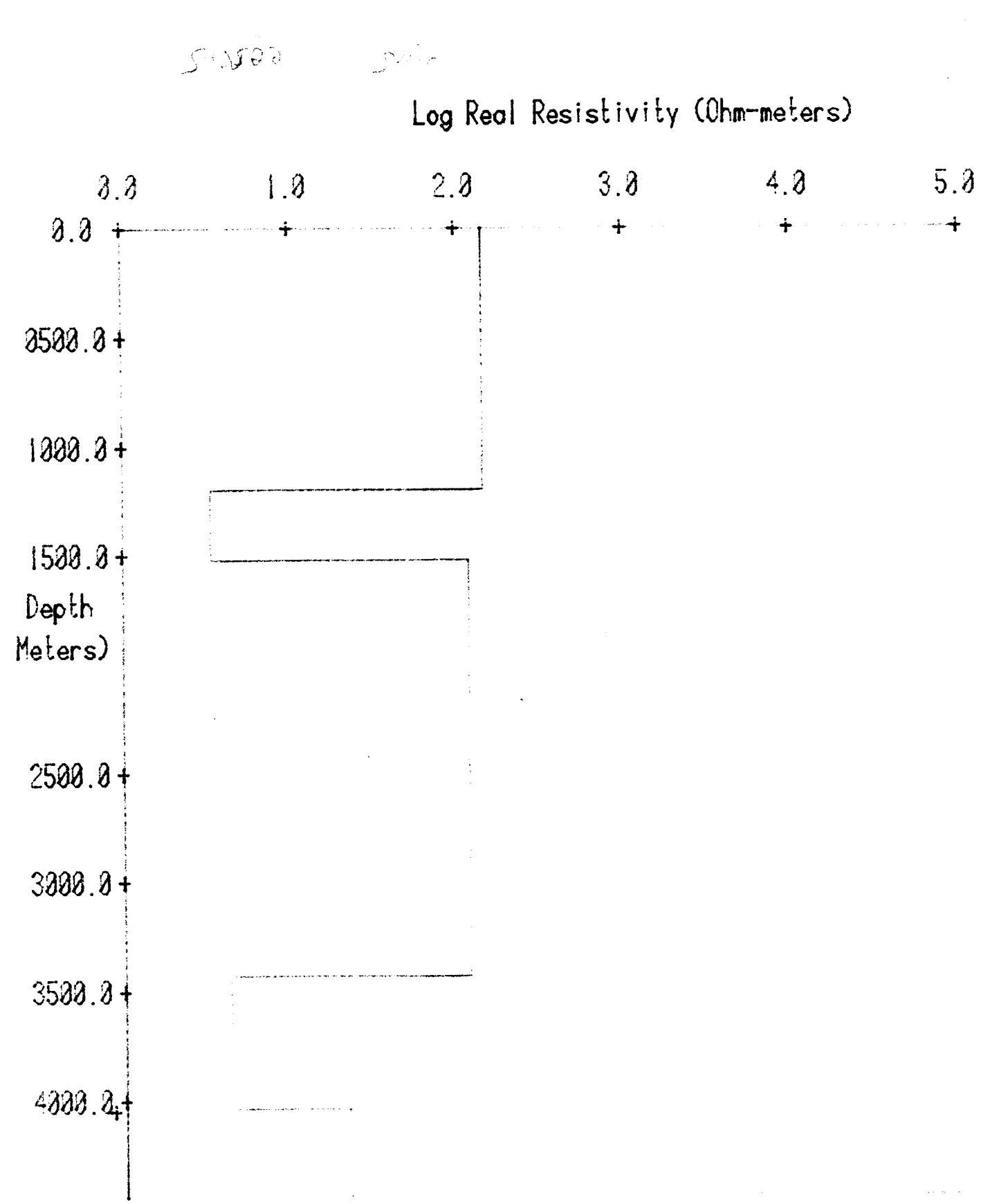
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.250E+03 | 0.300E+01 | 0.310E+01 | -0.104E+00 | -0.340E+01 |
| 2 | 0.125E+03 | 0.500E+01 | 0.413E+01 | 0.870E+00 | 0.191E+02 |
| 3 | 0.700E+02 | 0.400E+01 | 0.515E+01 | -0.115E+01 | -0.251E+02 |
| 4 | 0.500E+02 | 0.600E+01 | 0.573E+01 | 0.267E+00 | 0.454E+01 |
| 5 | 0.330E+02 | 0.700E+01 | 0.639E+01 | 0.607E+00 | 0.906E+01 |
| 6 | 0.200E+02 | 0.800E+01 | 0.714E+01 | 0.863E+00 | 0.114E+02 |
| 7 | 0.100E+02 | 0.700E+01 | 0.863E+01 | -0.163E+01 | -0.208E+02 |
| 8 | 0.550E+01 | 0.110E+02 | 0.110E+02 | -0.435E-01 | -0.394E+00 |
| 9 | 0.200E+01 | 0.200E+02 | 0.190E+02 | 0.101E+01 | 0.520E+01 |
| 10 | 0.125E+01 | 0.230E+02 | 0.254E+02 | -0.238E+01 | -0.985E+01 |
| 11 | 0.100E+01 | 0.350E+02 | 0.293E+02 | 0.566E+01 | 0.176E+02 |
| 12 | 0.830E+00 | 0.280E+02 | 0.332E+02 | -0.519E+01 | -0.170E+02 |
| 13 | 0.670E+00 | 0.420E+02 | 0.383E+02 | 0.366E+01 | 0.911E+01 |
| 14 | 0.500E+00 | 0.480E+02 | 0.468E+02 | 0.121E+01 | 0.255E+01 |
| 15 | 0.330E+00 | 0.700E+02 | 0.620E+02 | 0.797E+01 | 0.121E+02 |
| 16 | 0.330E+00 | 0.520E+02 | 0.620E+02 | -0.100E+02 | -0.176E+02 |
| 17 | 0.130E+00 | 0.124E+03 | 0.111E+03 | 0.128E+02 | 0.109E+02 |
| 18 | 0.700E-01 | 0.140E+03 | 0.155E+03 | -0.147E+02 | -0.999E+01 |
| 19 | 0.500E-01 | 0.175E+03 | 0.184E+03 | -0.918E+01 | -0.511E+01 |
| 20 | 0.380E-01 | 0.218E+03 | 0.214E+03 | 0.449E+01 | 0.208E+01 |
| 21 | 0.320E-01 | 0.264E+03 | 0.235E+03 | 0.290E+02 | 0.116E+02 |
| 22 | 0.250E-01 | 0.256E+03 | 0.271E+03 | -0.146E+02 | -0.554E+01 |

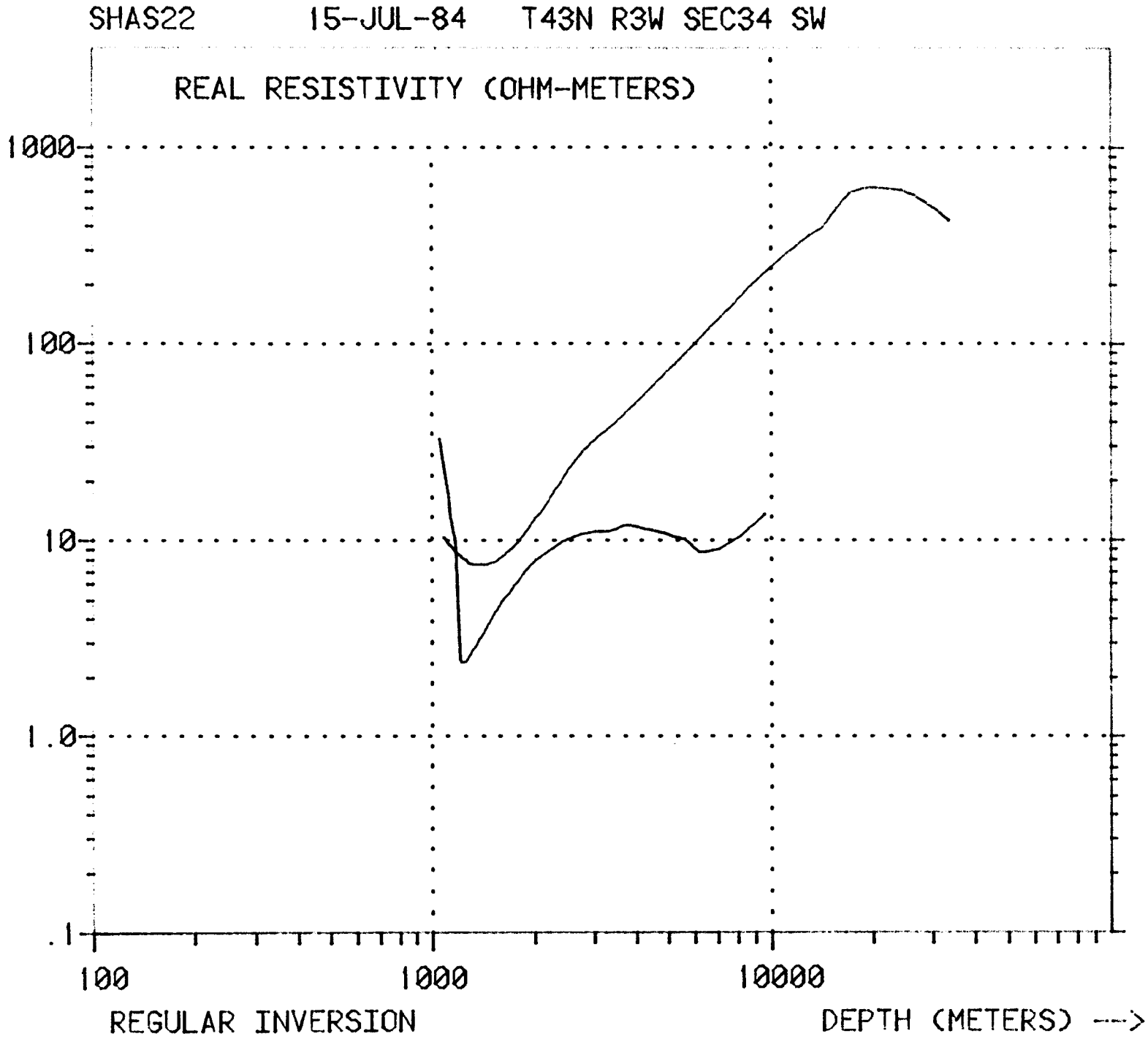
MEAN PERCENT ERROR = 0.1237E+02
MAXIMUM PERCENT ERROR = 0.2508E+02
MAX. ERROR OCCURED AT OBSERVATION 3

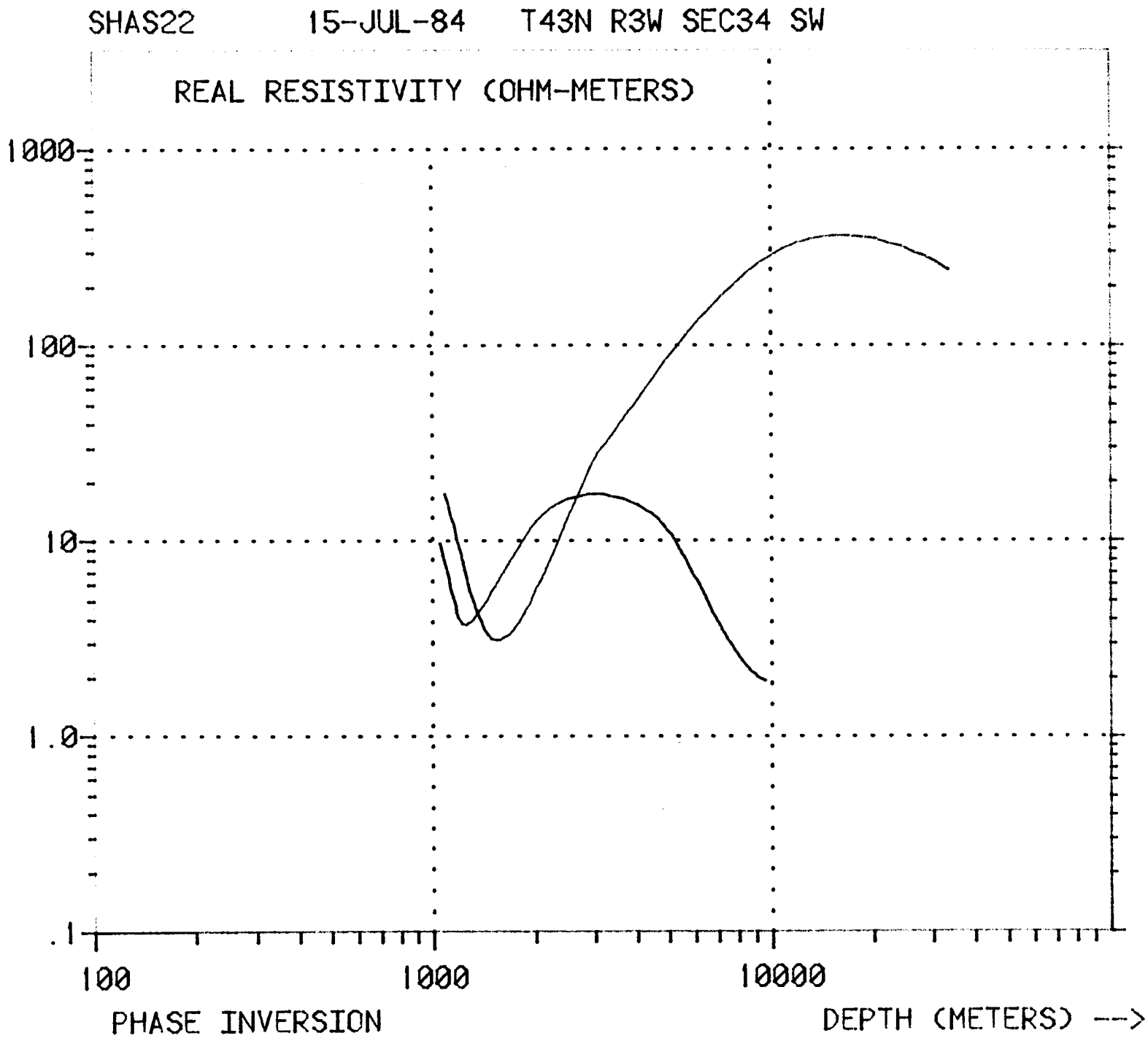

p (log)
2.5
2.0
1.5
1.0
0.5
0.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS22 15-JUL-84 143N R3W SEC34 SW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

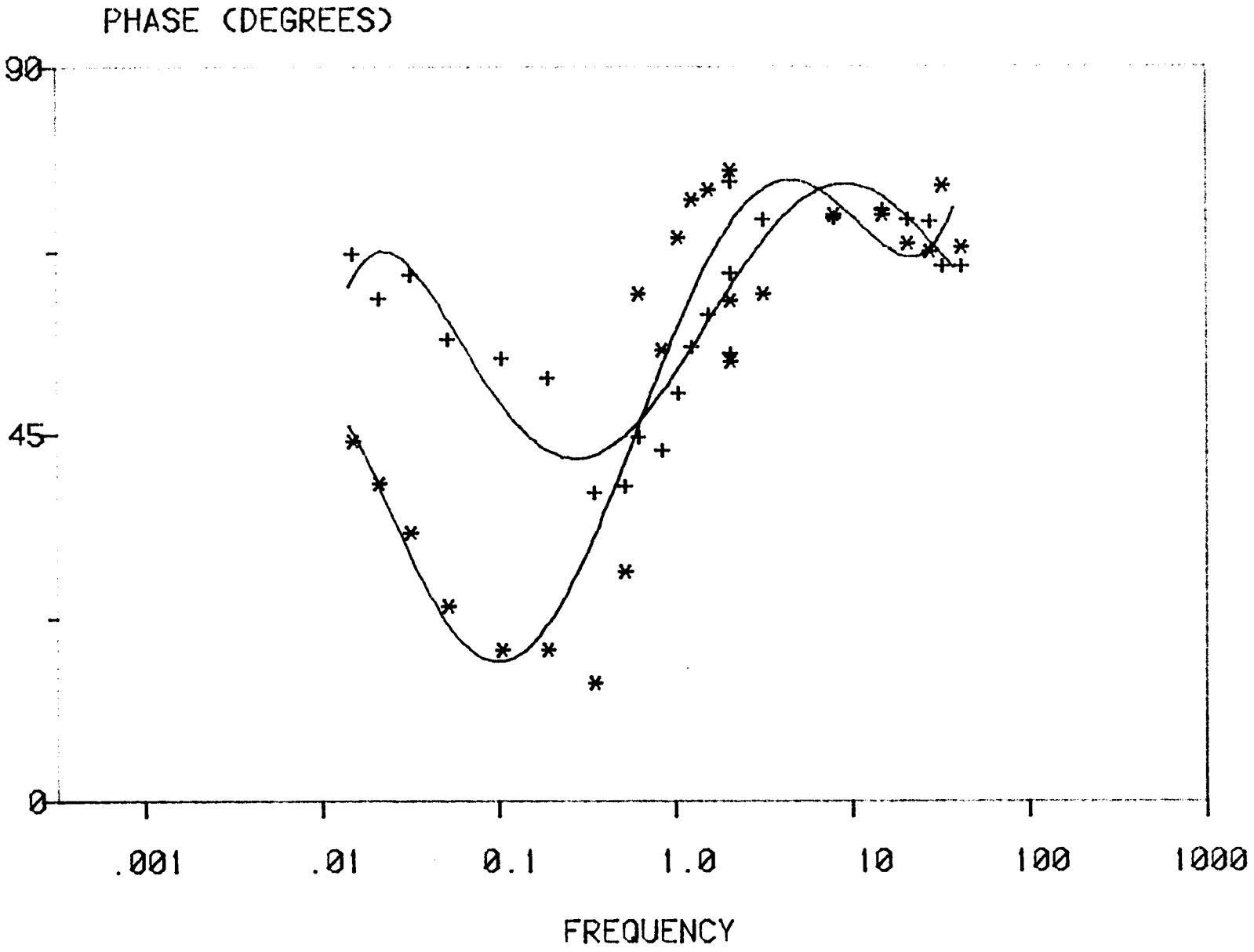



| | | | | | |
|---|---|---|---|---|---|
| Resistivity | 0145.25 | 0003.40 | 0119.39 | 0004.31 | 0022.00 |
| Thickness | | 1134.33 | 0326.03 | 1309.13 | 0612.70 |
| Depth | 0000.00 | 1134.33 | 1528.36 | 3429.50 | 4042.20 |


SHAS22 15-JUL-84 T43N R3W SEC34 SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) --->


SHAS22 15-JUL-84 T43N R3W SEC34 SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS22 15-JUL-84 T43N R3W SEC34 SW



THE SITE IS: SHAS22 200 HZ 15-JUL-84 T43N R3W SEC34 SW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | RHOMAX | PERIOD # | STDEV OF RHOM | RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | ******* | ******* | 1 | 94.65 | 212.83 |
| 0.0020 | ******* | ******* | 2 | 171.06 | 43.83 |
| 0.0040 | 6.56 | 417.78 | 3 | 3.89 | 17.28 |
| 0.0080 | 7.95 | 164.29 | 4 | 7.67 | 9.38 |
| 0.0143 | 20.91 | 246.06 | 5 | 3.71 | 4.34 |
| 0.0200 | 16.40 | 217.80 | 6 | 5.89 | 2.35 |
| 0.0303 | 18.43 | 197.05 | 7 | 7.38 | 1.72 |
| 0.0500 | 19.91 | 149.12 | 8 | 1.80 | 1.73 |
| 0.1000 | 17.46 | 86.51 | 9 | 1.29 | 0.21 |
| 0.1818 | 23.27 | 59.56 | 10 | 0.30 | 0.01 |
| 0.3333 | 19.41 | 47.92 | 11 | 0.08 | 0.00 |
| 0.5000 | 22.31 | 34.76 | 12 | 0.03 | 0.00 |
| 0.5988 | 26.47 | 62.65 | 13 | 0.27 | 0.01 |
| 0.8000 | 29.98 | 45.03 | 14 | 0.18 | 0.01 |
| 1.0000 | 19.24 | 34.19 | 15 | 0.02 | 0.00 |
| 1.0000 | 33.73 | 51.47 | 16 | 0.11 | 0.01 |
| 1.2048 | 29.18 | 45.14 | 17 | 0.11 | 0.00 |
| 1.4925 | 26.13 | 38.45 | 18 | 0.09 | 0.00 |
| 2.0000 | 29.13 | 43.62 | 19 | 0.01 | 0.00 |
| 2.0000 | 34.52 | 62.83 | 20 | 0.02 | 0.00 |
| 2.0000 | 33.78 | 47.00 | 21 | 0.20 | 0.00 |
| 3.0303 | 51.12 | 62.02 | 22 | 0.01 | 0.00 |
| 3.0303 | 37.17 | 48.20 | 23 | 0.02 | 0.00 |
| 7.6923 | 87.98 | 111.33 | 24 | 0.08 | 0.00 |
| 14.2857 | 139.99 | 148.63 | 25 | 0.09 | 0.00 |
| 20.0000 | 158.82 | 172.97 | 26 | 0.06 | 0.00 |
| 26.3158 | 168.12 | 191.82 | 27 | 0.03 | 0.00 |
| 31.2500 | 174.66 | 222.63 | 28 | 0.01 | 0.00 |
| 40.0000 | 180.05 | 293.95 | 29 | 0.01 | 0.00 |

AVERAGE # 8
SHAS22 200 HZ 15-JUL-84 T43N R3W SEC34 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREE | PHI MIN S) | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.459E+05 | 0.408E+05 | 59. | 23. | 102. | 0.2837 | 0.3199 | 0.0091 | 0.20 |
| H | SEC | 0.364E+05 | 0.132E+05 | 64. | 61. | 48. | 0.1568 | 0.1475 | 51.70 | 0.34 |
| E | 500.0 | 0.524E+05 | 0.442E+05 | 48. | 64. | 60. | 0.0772 | 0.2046 | 0.0337 | 0.13 |
| H | SEC | 0.416E+05 | 0.233E+05 | 45. | 51. | 98. | 0.1745 | 0.0956 | 132.40 | 0.21 |
| E | 250.0 | 0.170E+03 | 0.760E+01 | 49. | 63. | 23. | 1.0945 | 0.1288 | 10.4001 | 0.14 |
| H | SEC | 0.666E+03 | 0.551E+01 | 9. | 56. | 178. | 0.0000 | 0.0000 | 168.60 | 0.51 |
| E | 125.0 | 0.180E+03 | 0.109E+02 | 52. | 64. | 27. | 1.1356 | 0.4747 | 5.4090 | 0.07 |
| H | SEC | 0.148E+03 | 0.499E+01 | 49. | 88. | 30. | 0.2522 | 0.4047 | 150.70 | 0.25 |
| E | 70.0 | 0.236E+03 | 0.197E+02 | 45. | 61. | 24. | 0.8130 | 0.4763 | 14.0487 | 0.06 |
| H | SEC | 0.256E+03 | 0.221E+02 | 44. | 74. | 19. | 0.3770 | 0.2671 | 34.70 | 0.17 |
| E | 50.0 | 0.225E+03 | 0.178E+02 | 39. | 64. | 26. | 0.6268 | 0.3463 | 3.6614 | 0.07 |
| H | SEC | 0.211E+03 | 0.150E+02 | 40. | 60. | 30. | 0.1164 | 0.2957 | 125.40 | 0.12 |
| E | 33.0 | 0.200E+03 | 0.186E+02 | 34. | 65. | 27. | 0.0771 | 0.1301 | 2.6306 | 0.09 |
| H | SEC | 0.194E+03 | 0.182E+02 | 33. | 65. | 28. | 0.2610 | 0.1370 | 127.70 | 0.10 |
| E | 20.0 | 0.151E+03 | 0.195E+02 | 25. | 57. | 27. | 0.2270 | 0.0597 | 2.3130 | 0.07 |
| H | SEC | 0.147E+03 | 0.203E+02 | 24. | 57. | 28. | 0.2205 | 0.0482 | 24.30 | 0.07 |

AVERAGE # 8
SEAS22 200 HZ 15-JUL-84 T43N R3W SEC34 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.871E+02 | 0.172E+02 | 19. | 55. | 32. | 0.2404 | 0.0731 | 0.0879 | 0.09 |
| H | SEC | 0.859E+02 | 0.177E+02 | 19. | 54. | 32. | 0.2077 | 0.1458 | 36.00 | 0.09 |
| E | 5.5 | 0.615E+02 | 0.210E+02 | 19. | 48. | 34. | 0.1199 | 0.0388 | 0.0671 | 0.20 |
| H | SEC | 0.576E+02 | 0.256E+02 | 18. | 57. | 42. | 0.0612 | 0.0216 | 33.40 | 0.28 |
| E | 3.0 | 0.473E+02 | 0.183E+02 | 9. | 36. | 25. | 0.0827 | 0.1062 | 0.0766 | 0.15 |
| H | SEC | 0.485E+02 | 0.205E+02 | 20. | 41. | 29. | 0.0558 | 0.1356 | 37.90 | 0.06 |
| E | 2.0 | 0.405E+02 | 0.264E+02 | 16. | 42. | 26. | 0.1891 | 0.0331 | 0.0386 | 0.04 |
| H | SEC | 0.291E+02 | 0.182E+02 | 41. | 36. | 67. | 0.0457 | 0.0209 | 147.30 | 0.14 |
| E | 1.7 | 0.408E+02 | 0.367E+02 | 62. | 44. | 113. | 0.1044 | 0.0563 | 0.0230 | 0.21 |
| H | SEC | 0.845E+02 | 0.162E+02 | 63. | 46. | 102. | 0.1401 | 0.0998 | 145.10 | 0.42 |
| E | 1.2 | 0.421E+02 | 0.357E+02 | 37. | 62. | 31. | 0.2394 | 0.0742 | 0.0156 | 0.11 |
| H | SEC | 0.479E+02 | 0.242E+02 | 75. | 25. | 97. | 0.2188 | 0.1222 | 139.10 | 0.37 |
| E | 1.0 | 0.403E+02 | 0.203E+02 | 44. | 30. | 169. | 0.2531 | 0.0496 | 0.0573 | 0.06 |
| H | HZ | 0.280E+02 | 0.181E+02 | 55. | 47. | 138. | 0.0806 | 0.0223 | 38.50 | 0.15 |

AVERAGE # 8
SHAS22 200 HZ 15-JUL-84 T43N R3W SEC34 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGR | PHI MIN EES) | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.574E+02 | 0.509E+02 | 67. | 31. | 102. | 0.3036 | 0.1353 | 0.0282 | 0.20 |
| H | HZ | 0.455E+02 | 0.165E+02 | 72. | 70. | 48. | 0.4062 | 0.2481 | 145.90 | 0.34 |
| E | 1.2 | 0.466E+02 | 0.330E+02 | 78. | 55. | 140. | 0.1586 | 0.1550 | 0.0059 | 0.11 |
| H | HZ | 0.437E+02 | 0.254E+02 | 70. | 57. | 113. | 0.2181 | 0.1000 | 0.00 | 0.07 |
| E | 1.5 | 0.431E+02 | 0.352E+02 | 77. | 58. | 137. | 0.1042 | 0.1478 | 0.0072 | 0.14 |
| H | HZ | 0.337E+02 | 0.171E+02 | 73. | 62. | 106. | 0.1879 | 0.0450 | 18.70 | 0.10 |
| E | 2.0 | 0.477E+02 | 0.458E+02 | 76. | 68. | 143. | 0.2740 | 0.1137 | 0.0097 | 0.10 |
| H | HZ | 0.395E+02 | 0.124E+02 | 80. | 84. | 95. | 0.1894 | 0.0723 | 141.30 | 0.11 |
| E | 2.0 | 0.656E+02 | 0.396E+02 | 63. | 44. | 153. | 0.1861 | 0.0462 | 0.0842 | 0.11 |
| H | HZ | 0.600E+02 | 0.295E+02 | 61. | 66. | 150. | 0.1250 | 0.0305 | 46.90 | 0.20 |
| E | 2.0 | 0.524E+02 | 0.442E+02 | 56. | 72. | 60. | 0.1014 | 0.2661 | 0.0502 | 0.13 |
| H | HZ | 0.416E+02 | 0.233E+02 | 53. | 59. | 98. | 0.4051 | 0.1430 | 0.00 | 0.21 |

AVERAGE # 8
SHAS22 200 HZ 15-JUL-84 T43N R3W SEC34 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.658E+02 | 0.657E+02 | 53. | 69. | 36. | 0.0269 | 0.0547 | 0.0353 | 0.07 |
| H | HZ | 0.583E+02 | 0.365E+02 | 72. | 75. | 128. | 0.0600 | 0.0352 | 129.70 | 0.05 |
| E | 3.0 | 0.646E+02 | 0.455E+02 | 73. | 76. | 35. | 0.0922 | 0.1369 | 0.0042 | 0.07 |
| H | HZ | 0.318E+02 | 0.288E+02 | 84. | 75. | 76. | 0.1760 | 0.1265 | 130.60 | 0.03 |
| E | 7.7 | 0.111E+03 | 0.978E+02 | 74. | 72. | 109. | 0.6799 | 0.6760 | 0.0084 | 0.04 |
| H | HZ | 0.112E+03 | 0.782E+02 | 71. | 72. | 99. | 0.6475 | 0.5601 | 135.20 | 0.05 |
| E | 14.3 | 0.154E+03 | 0.142E+03 | 73. | 71. | 102. | 1.1410 | 1.1215 | 0.0158 | 0.05 |
| H | HZ | 0.144E+03 | 0.138E+03 | 71. | 75. | 114. | 0.5202 | 0.4819 | 131.00 | 0.09 |
| E | 20.0 | 0.185E+03 | 0.165E+03 | 72. | 69. | 111. | 1.4416 | 2.8348 | 0.0276 | 0.05 |
| H | HZ | 0.161E+03 | 0.153E+03 | 65. | 75. | 147. | 0.5867 | 0.0000 | 51.30 | 0.10 |
| E | 26.3 | 0.214E+03 | 0.190E+03 | 72. | 68. | 108. | 0.2730 | 1.9234 | 0.0250 | 0.05 |
| H | HZ | 0.170E+03 | 0.146E+03 | 64. | 75. | 12. | 0.0000 | 1.3082 | 48.00 | 0.12 |
| E | 31.2 | 0.245E+03 | 0.204E+03 | 71. | 68. | 88. | 0.5185 | 0.0000 | 0.0366 | 0.05 |
| H | HZ | 0.201E+03 | 0.145E+03 | 80. | 64. | 95. | 0.2608 | 1.1499 | 26.40 | 0.08 |
| E | 40.0 | 0.272E+03 | 0.223E+03 | 68. | 66. | 98. | 0.2982 | 1.6915 | 0.1075 | 0.05 |
| H | HZ | 0.316E+03 | 0.137E+03 | 68. | 65. | 104. | 0.3083 | 1.5311 | 120.40 | 0.05 |

SHAS22 200 HZ 15-JUL-84 T43N R3W SEC34 SW

THE NUMBER OF LAYERS = 5
THE NUMBER OF FREQUENCIES TAKEN = 23
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1000E+03 | | 0.0000E+00 |
| | | 0.1000E+04 | |
| 2 | 0.2000E+01 | | 0.1000E+04 |
| | | 0.1500E+04 | |
| 3 | 0.1200E+02 | | 0.2500E+04 |
| | | 0.4000E+04 | |
| 4 | 0.8000E+01 | | 0.6500E+04 |
| | | 0.2000E+04 | |
| 5 | 0.2000E+02 | | 0.8500E+04 |

FREQUENCY RANGE ( 0.1429E-01 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1453E+03 | | 0.0000E+00 |
| | | 0.1194E+04 | |
| 2 | 0.3403E+01 | | 0.1194E+04 |
| | | 0.3260E+03 | |
| 3 | 0.1200E+03 | | 0.1520E+04 |
| | | 0.1909E+04 | |
| 4 | 0.4318E+01 | | 0.3430E+04 |
| | | 0.6127E+03 | |
| 5 | 0.2201E+02 | | 0.4042E+04 |

MEAN PERCENT VARIATION IS 0.1046E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 22 | 0.766E+05 | 0.348E+04 | 0.364E+00 |
| MODEL | 8 | 0.766E+05 | 0.957E+04 | 0.533E+06 |
| RESID | 14 | 0.251E+00 | 0.180E-01 | |

STANDARD ERROR = 0.134E+00

DTEST FOR MEANS = 0.195E-04

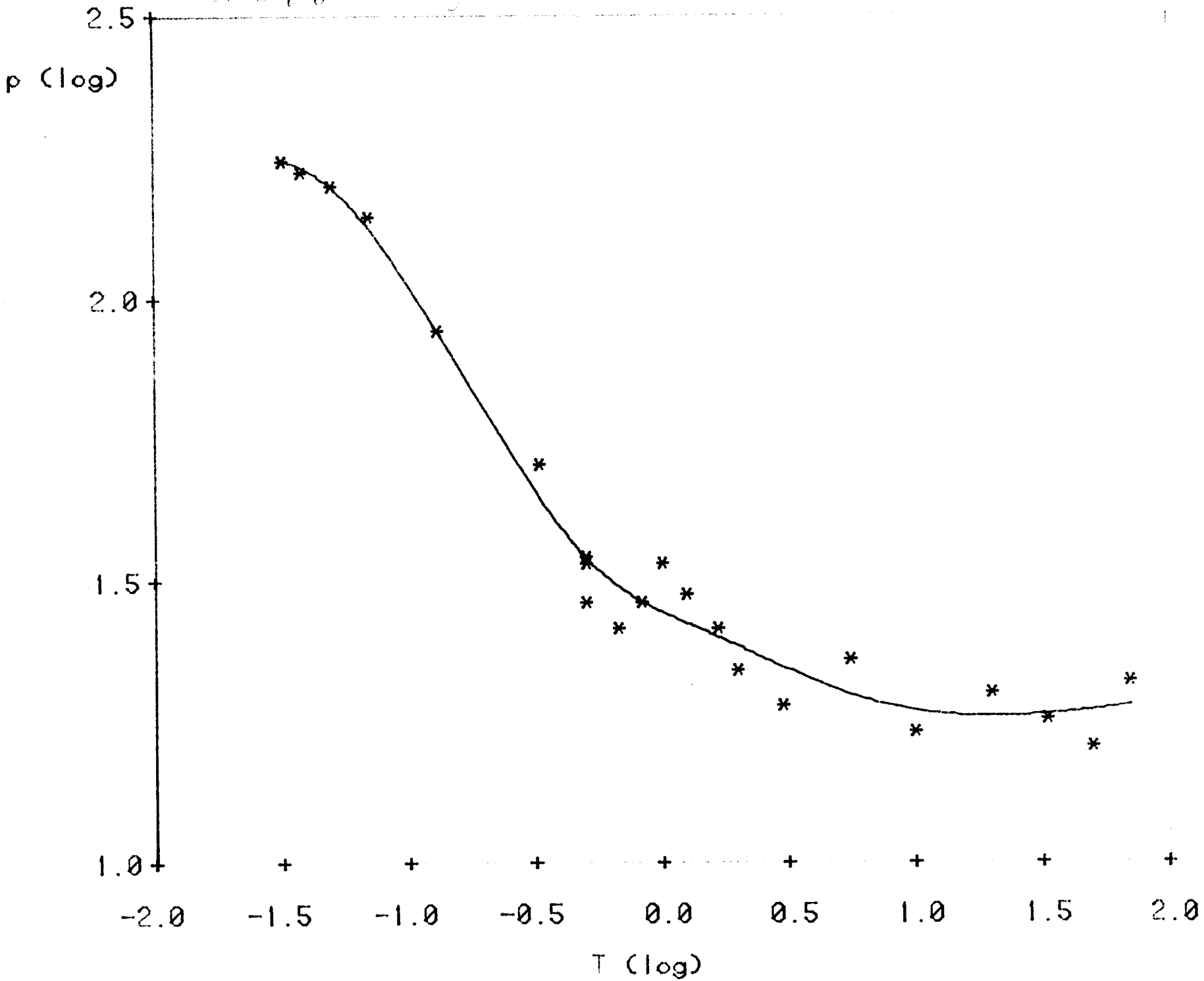
NOISE TO SIGNAL RATIO = 0.137E+00 PERCENT

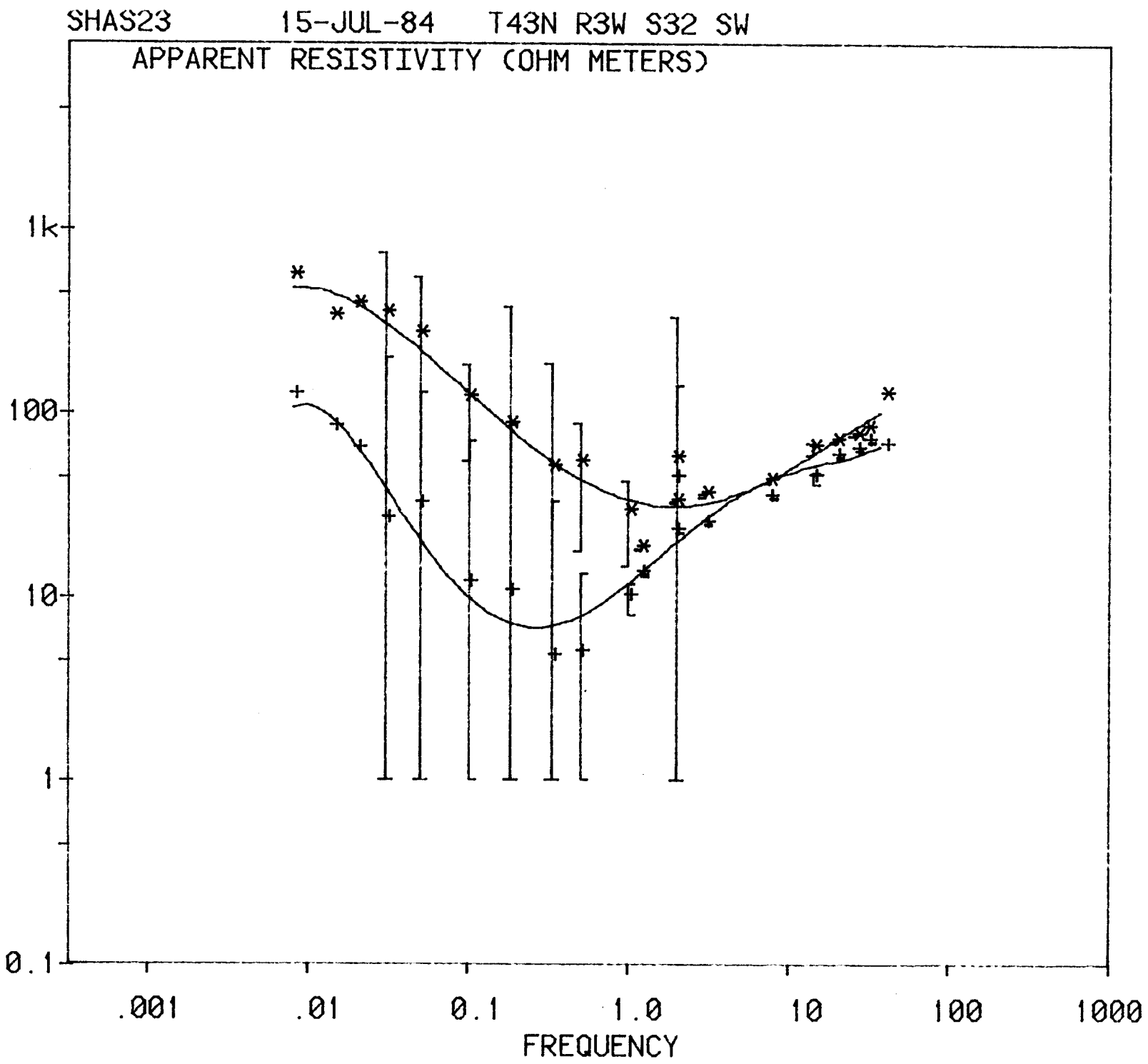
SHAS22 200 HZ 15-JUL-84 T43N R3W SEC34 SW

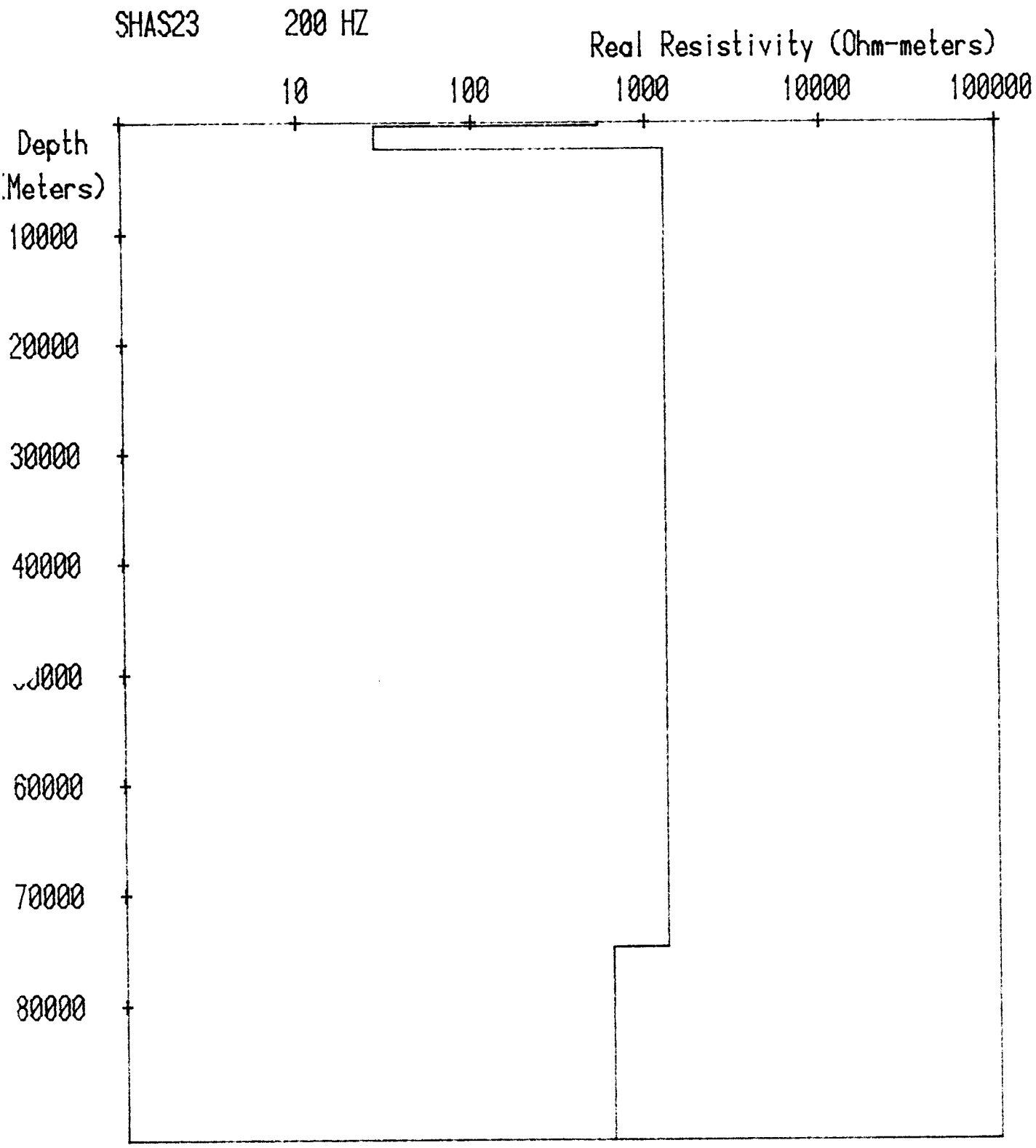
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.700E+02 | 0.210E+02 | 0.190E+02 | 0.202E+01 | 0.101E+02 |
| 2 | 0.500E+02 | 0.160E+02 | 0.187E+02 | -0.265E+01 | -0.153E+02 |
| 3 | 0.330E+02 | 0.180E+02 | 0.183E+02 | -0.304E+00 | -0.167E+01 |
| 4 | 0.200E+02 | 0.200E+02 | 0.181E+02 | 0.193E+01 | 0.101E+02 |
| 5 | 0.100E+02 | 0.170E+02 | 0.184E+02 | -0.143E+01 | -0.808E+01 |
| 6 | 0.550E+01 | 0.230E+02 | 0.198E+02 | 0.322E+01 | 0.151E+02 |
| 7 | 0.300E+01 | 0.190E+02 | 0.223E+02 | -0.326E+01 | -0.158E+02 |
| 8 | 0.200E+01 | 0.220E+02 | 0.243E+02 | -0.227E+01 | -0.983E+01 |
| 9 | 0.167E+01 | 0.260E+02 | 0.252E+02 | 0.824E+00 | 0.322E+01 |
| 10 | 0.125E+01 | 0.300E+02 | 0.266E+02 | 0.337E+01 | 0.119E+02 |
| 11 | 0.100E+01 | 0.340E+02 | 0.278E+02 | 0.616E+01 | 0.199E+02 |
| 12 | 0.830E+00 | 0.290E+02 | 0.291E+02 | -0.681E-01 | -0.234E+00 |
| 13 | 0.670E+00 | 0.260E+02 | 0.309E+02 | -0.491E+01 | -0.173E+02 |
| 14 | 0.500E+00 | 0.290E+02 | 0.347E+02 | -0.566E+01 | -0.178E+02 |
| 15 | 0.500E+00 | 0.350E+02 | 0.347E+02 | 0.342E+00 | 0.982E+00 |
| 16 | 0.500E+00 | 0.340E+02 | 0.347E+02 | -0.658E+00 | -0.192E+01 |
| 17 | 0.330E+00 | 0.510E+02 | 0.437E+02 | 0.730E+01 | 0.154E+02 |
| 18 | 0.130E+00 | 0.880E+02 | 0.885E+02 | -0.505E+00 | -0.572E+00 |
| 19 | 0.700E-01 | 0.140E+03 | 0.136E+03 | 0.374E+01 | 0.270E+01 |
| 20 | 0.500E-01 | 0.159E+03 | 0.160E+03 | -0.862E+00 | -0.541E+00 |
| 21 | 0.380E-01 | 0.168E+03 | 0.172E+03 | -0.448E+01 | -0.263E+01 |
| 22 | 0.320E-01 | 0.175E+03 | 0.176E+03 | -0.132E+01 | -0.752E+00 |
| 23 | 0.250E-01 | 0.180E+03 | 0.176E+03 | 0.355E+01 | 0.199E+01 |

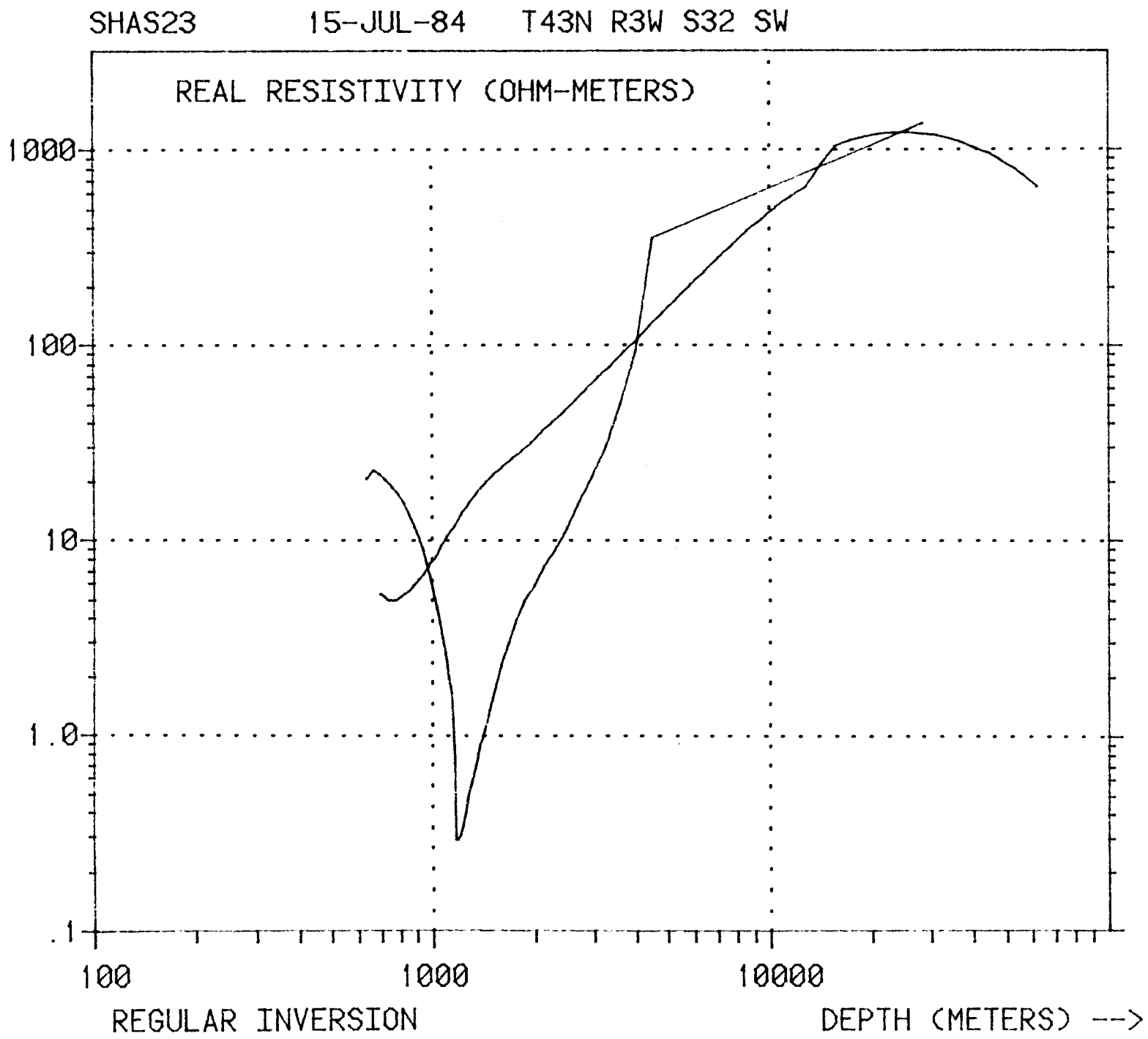
MEAN PERCENT ERROR = 0.1046E+02
MAXIMUM PERCENT ERROR = 0.1991E+02
MAX. ERROR OCCURED AT OBSERVATION 11

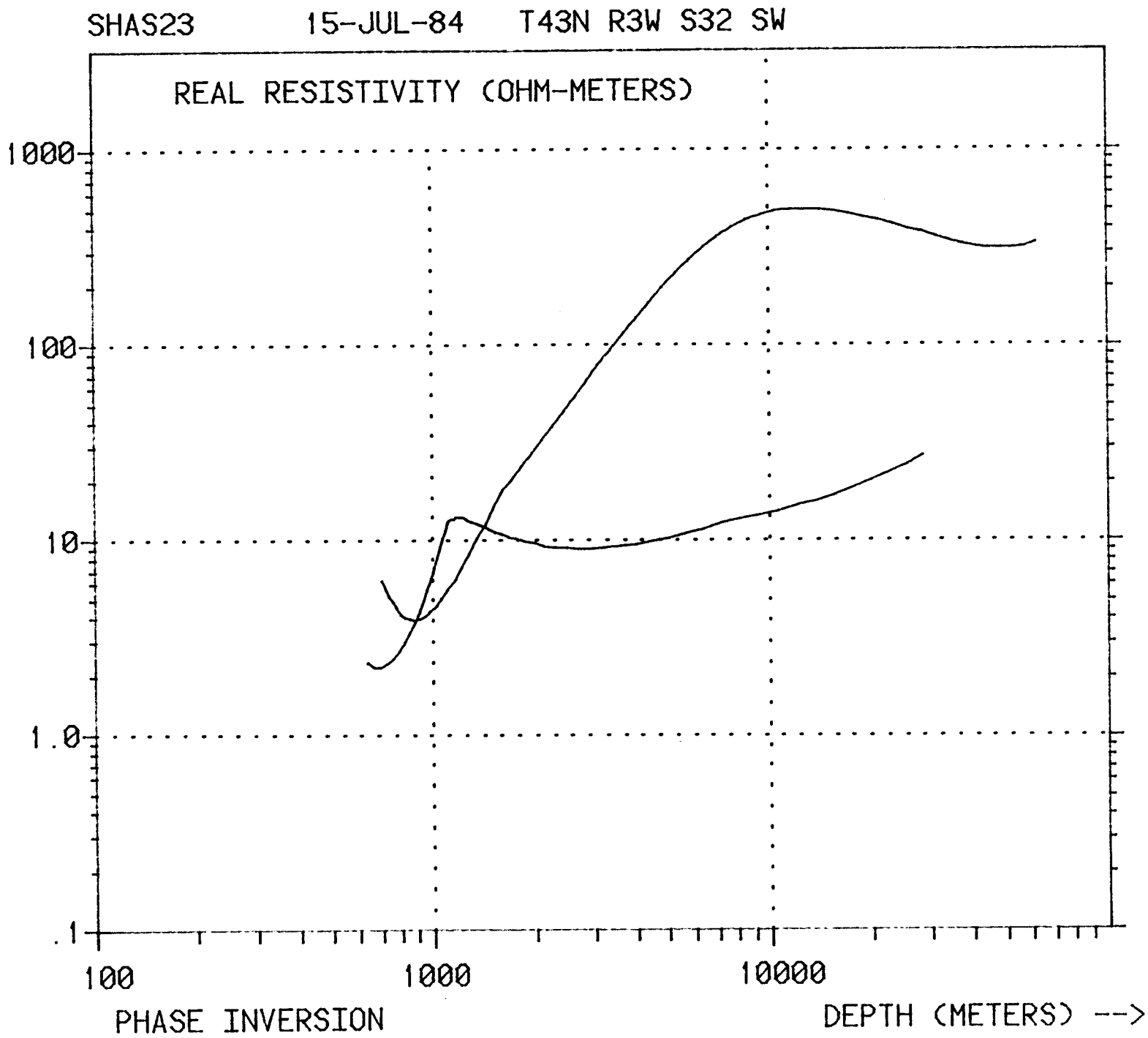

2.5
p (log)
2.0
1.5
1.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
T (log)


SHAS23 15-JUL-84 T43N R3W S32 SW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

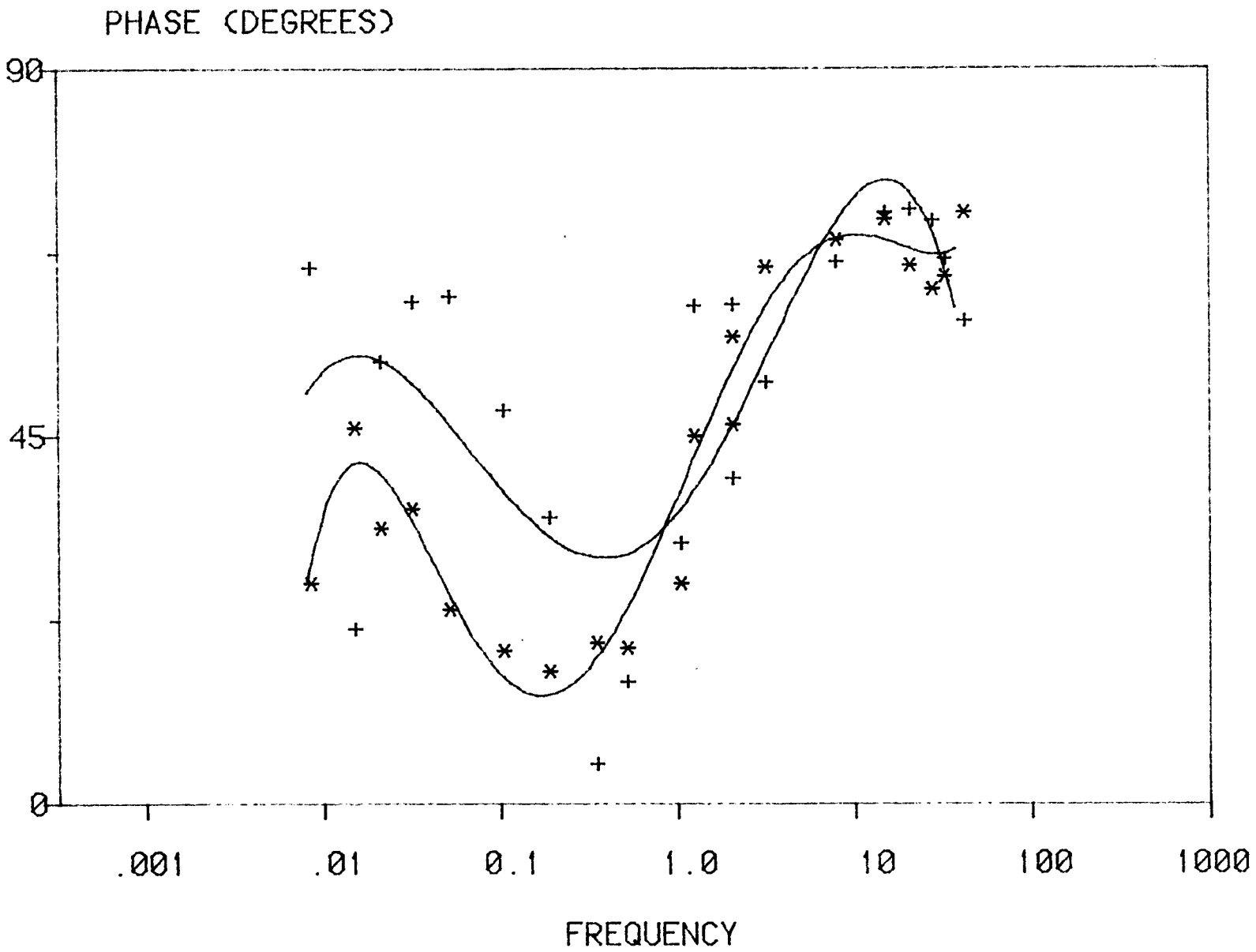



| | | | | |
|---|---|---|---|---|
| Resistivity | 540.50 | 27.53 | 1272.35 | 613.65 |
| Thickness | | 321.76 | 2091.31 | 72437.85 |
| Depth | 0.00 | 321.76 | 2413.08 | 74850.93 |


SHAS23 15-JUL-84 T43N R3W S32 SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS23 15-JUL-84 T43N R3W S32 SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS23 15-JUL-84 T43N R3W S32 SW



THE SITE IS: SHAS23 200 HZ 15-JUL-84 T43N R3W S32 SW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMIN | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.00 | 0.00 | 1 | 0.00 | 0.00 |
| 0.0020 | 0.00 | 0.00 | 2 | 0.00 | 0.00 |
| 0.0040 | 0.00 | 0.00 | 3 | 0.00 | 0.00 |
| 0.0080 | 117.94 | 534.06 | 4 | 168.41 | 392.24 |
| 0.0143 | 79.92 | 317.24 | 5 | 94.54 | 272.07 |
| 0.0200 | 59.93 | 369.19 | 6 | 56.28 | 62.53 |
| 0.0303 | 25.54 | 333.77 | 7 | 72.54 | 286.30 |
| 0.0500 | 30.85 | 255.04 | 8 | 27.63 | 130.71 |
| 0.1000 | 11.40 | 115.56 | 9 | 3.33 | 33.95 |
| 0.1818 | 10.25 | 82.48 | 10 | 1.85 | 13.48 |
| 0.3333 | 4.60 | 48.52 | 11 | 0.15 | 0.25 |
| 0.5000 | 4.86 | 51.30 | 12 | 0.12 | 0.42 |
| 0.5988 | 0.00 | 0.00 | 13 | 94.54 | 272.07 |
| 0.8000 | 19.46 | 33.80 | 14 | 0.26 | 0.62 |
| 1.0000 | 9.69 | 27.80 | 15 | 0.11 | 0.10 |
| 1.0000 | 44.54 | 114.75 | 16 | 3.43 | 4.79 |
| 1.2048 | 12.89 | 17.85 | 17 | 0.78 | 0.34 |
| 1.4925 | 25.91 | 39.43 | 18 | 0.15 | 0.26 |
| 2.0000 | 21.89 | 31.99 | 19 | 0.27 | 0.10 |
| 2.0000 | 15.05 | 21.89 | 20 | 0.03 | 0.04 |
| 2.0000 | 42.35 | 54.30 | 21 | 4.42 | 10.26 |
| 3.0303 | 11.52 | 32.64 | 22 | 0.01 | 0.04 |
| 3.0303 | 24.22 | 34.86 | 23 | 0.09 | 0.06 |
| 7.6923 | 33.64 | 41.05 | 24 | 0.29 | 0.12 |
| 14.2857 | 43.42 | 62.18 | 25 | 0.36 | 0.18 |
| 20.0000 | 55.96 | 67.85 | 26 | 0.13 | 0.09 |
| 26.3158 | 60.84 | 73.09 | 27 | 0.07 | 0.05 |
| 31.2500 | 67.81 | 79.44 | 28 | 0.02 | 0.02 |
| 40.0000 | 64.21 | 121.01 | 29 | 0.02 | 0.02 |

AVERAGE # 8
SEAS23 200 HZ 15-JUL-84 T43N R3W S32 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 500.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 250.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 125.0 | 0.821E+03 | 0.174E+03 | 1. | 59. | 146. | 0.0339 | 0.0531 | 0.2450 | 0.22 |
| H | SEC | 0.247E+03 | 0.622E+02 | 54. | 73. | 40. | 0.0031 | 0.0186 | 56.90 | 0.17 |
| E | 70.0 | 0.318E+03 | 0.136E+03 | 47. | 14. | 37. | 0.0143 | 0.0193 | 0.2377 | 0.27 |
| H | SEC | 0.317E+03 | 0.237E+02 | 46. | 30. | 38. | 0.0077 | 0.0098 | 120.80 | 0.28 |
| E | 50.0 | 0.398E+03 | 0.875E+02 | 33. | 53. | 13. | 0.0112 | 0.0156 | 0.2326 | 0.15 |
| H | SEC | 0.340E+03 | 0.323E+02 | 35. | 56. | 24. | 0.0000 | 0.0089 | 56.70 | 0.13 |
| E | 33.0 | 0.398E+03 | 0.466E+02 | 37. | 61. | 17. | 0.0163 | 0.0258 | 0.1054 | 0.23 |
| H | SEC | 0.269E+03 | 0.446E+01 | 35. | 62. | 39. | 0.0204 | 0.0146 | 114.30 | 0.16 |
| E | 20.0 | 0.275E+03 | 0.506E+02 | 23. | 64. | 23. | 0.0213 | 0.0058 | 0.0540 | 0.14 |
| H | SEC | 0.235E+03 | 0.111E+02 | 26. | 61. | 37. | 0.0132 | 0.0090 | 134.30 | 0.12 |

AVERAGE #  3
SLAS23  200 HZ  15-JUL-84  T43N R3W S32 SW
NSAMP =  1024  SI =  0.0050  T0 =  5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.118E+03 | 0.114E+02 | 19. | 49. | 35. | 0.0025 | 0.0018 | 0.1023 | 0.11 |
| H | SEC | 0.113E+03 | 0.114E+02 | 19. | 48. | 36. | 0.0053 | 0.0050 | 143.70 | 0.14 |
| E | 5.5 | 0.832E+02 | 0.997E+01 | 17. | 33. | 37. | 0.0091 | 0.0029 | 0.0909 | 0.14 |
| H | SEC | 0.817E+02 | 0.105E+02 | 16. | 37. | 42. | 0.0142 | 0.0033 | 22.50 | 0.29 |
| E | 3.0 | 0.621E+02 | 0.519E+01 | 21. | 6. | 31. | 0.0006 | 0.0007 | 0.0730 | 0.17 |
| H | SEC | 0.349E+02 | 0.402E+01 | 20. | 4. | 30. | 0.0016 | 0.0011 | 62.50 | 0.18 |
| E | 2.0 | 0.625E+02 | 0.562E+01 | 17. | 13. | 38. | 0.0005 | 0.0008 | 0.0647 | 0.08 |
| H | SEC | 0.401E+02 | 0.409E+01 | 22. | 18. | 34. | 0.0016 | 0.0004 | 52.00 | 0.14 |
| E | 1.7 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.2 | 0.421E+02 | 0.191E+02 | 31. | 46. | 114. | 0.0072 | 0.0041 | 0.0702 | 0.16 |
| H | SEC | 0.255E+02 | 0.198E+02 | 47. | 43. | 7. | 0.0000 | 0.0019 | 127.40 | 0.15 |
| E | 1.0 | 0.310E+02 | 0.119E+02 | 21. | 24. | 30. | 0.0037 | 0.0012 | 0.0578 | 0.08 |
| H | HZ | 0.246E+02 | 0.752E+01 | 34. | 40. | 27. | 0.0035 | 0.0007 | 50.60 | 0.12 |

AVERAGE # 8
SHAS23 200 HZ 15-JUL-84 T43N R3W S32 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.135E+03 | 0.632E+02 | 56. | 10. | 10. | 0.0080 | 0.0069 | 0.0736 | 0.34 |
| H | HZ | 0.943E+02 | 0.259E+02 | 58. | 89. | 11. | 0.0062 | 0.0060 | 53.70 | 0.26 |
| E | 1.2 | 0.204E+02 | 0.201E+02 | 45. | 62. | 69. | 0.0109 | 0.0023 | 0.0413 | 0.23 |
| H | HZ | 0.153E+02 | 0.569E+01 | 46. | 61. | 44. | 0.0066 | 0.0021 | 53.60 | 0.31 |
| E | 1.5 | 0.384E+02 | 0.282E+02 | 47. | 63. | 12. | 0.0053 | 0.0012 | 0.0693 | 0.17 |
| H | HZ | 0.404E+02 | 0.236E+02 | 49. | 62. | 16. | 0.0018 | 0.0017 | 38.50 | 0.10 |
| E | 2.0 | 0.323E+02 | 0.245E+02 | 55. | 70. | 166. | 0.0108 | 0.0015 | 0.0834 | 0.03 |
| H | HZ | 0.317E+02 | 0.193E+02 | 59. | 53. | 138. | 0.0015 | 0.0025 | 24.20 | 0.09 |
| E | 2.0 | 0.255E+02 | 0.203E+02 | 29. | 38. | 48. | 0.0019 | 0.0005 | 0.0414 | 0.09 |
| H | HZ | 0.183E+02 | 0.983E+01 | 40. | 54. | 24. | 0.0029 | 0.0004 | 45.20 | 0.12 |
| E | 2.0 | 0.752E+02 | 0.535E+02 | 33. | 58. | 53. | 0.0486 | 0.0074 | 0.0179 | 0.02 |
| H | HZ | 0.335E+02 | 0.311E+02 | 61. | 22. | 138. | 0.0369 | 0.0111 | 138.90 | 0.12 |

AVERAGE # 8
SHAS23 200 HZ 15-JUL-84 T43N R3W S32 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.396E+02 | 0.149E+02 | 42. | 22. | 67. | 0.0011 | 0.0013 | 0.0374 | 0.18 |
| H | HZ | 0.257E+02 | 0.810E+01 | 51. | 47. | 58. | 0.0008 | 0.0008 | 49.00 | 0.16 |
| E | 3.0 | 0.387E+02 | 0.271E+02 | 66. | 48. | 111. | 0.0025 | 0.0018 | 0.0353 | 0.04 |
| H | HZ | 0.310E+02 | 0.213E+02 | 65. | 56. | 112. | 0.0036 | 0.0014 | 48.40 | 0.09 |
| E | 7.7 | 0.439E+02 | 0.392E+02 | 69. | 65. | 139. | 0.0137 | 0.0075 | 0.0125 | 0.02 |
| H | HZ | 0.382E+02 | 0.281E+02 | 70. | 68. | 159. | 0.0097 | 0.0126 | 117.70 | 0.06 |
| E | 14.3 | 0.632E+02 | 0.529E+02 | 70. | 76. | 156. | 0.0075 | 0.0138 | 0.0254 | 0.04 |
| H | HZ | 0.612E+02 | 0.339E+02 | 74. | 69. | 128. | 0.0115 | 0.0164 | 118.60 | 0.03 |
| E | 20.0 | 0.700E+02 | 0.645E+02 | 64. | 72. | 166. | 0.0108 | 0.0162 | 0.0372 | 0.04 |
| H | HZ | 0.657E+02 | 0.474E+02 | 68. | 75. | 153. | 0.0119 | 0.0325 | 117.20 | 0.02 |
| E | 26.3 | 0.768E+02 | 0.756E+02 | 62. | 71. | 171. | 0.0102 | 0.0317 | 0.0431 | 0.04 |
| H | HZ | 0.694E+02 | 0.461E+02 | 64. | 73. | 158. | 0.0068 | 0.0427 | 57.00 | 0.03 |
| E | 31.2 | 0.858E+02 | 0.811E+02 | 70. | 61. | 81. | 0.0046 | 0.0303 | 0.0674 | 0.04 |
| H | HZ | 0.731E+02 | 0.545E+02 | 59. | 73. | 164. | 0.0069 | 0.0124 | 52.40 | 0.05 |
| E | 40.0 | 0.105E+03 | 0.811E+02 | 67. | 59. | 87. | 0.0039 | 0.0686 | 0.0565 | 0.04 |
| H | HZ | 0.137E+03 | 0.474E+02 | 78. | 60. | 68. | 0.0032 | 0.0205 | 128.90 | 0.35 |

SHAS23 200 HZ 15-JUL-84 T43N RSV 832 SW

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 20
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 60.0000 | | 0.0000 |
| | | 700.0000 | |
| 2 | 2.0000 | | 700.0000 |
| | | 500.0000 | |
| 3 | 500.0000 | | 1200.0000 |
| | | 30000.0000 | |
| 4 | 100.0000 | | 31200.0000 |

FREQUENCY RANGE ( 0.0080 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | R(I) | DEPTH |
|---|---|---|---|
| 1 | 0.5433E+03 | | 0.0000E+00 |
| | | 0.3220E+03 | |
| 2 | 0.2749E+02 | | 0.3220E+03 |
| | | 0.2079E+04 | |
| 3 | 0.1216E+04 | | 0.2401E+04 |
| | | 0.8383E+05 | |
| 4 | 0.5158E+03 | | 0.8623E+05 |

MEAN PERCENT VARIATION IS 0.1364E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 19 | 0.395E+06 | 0.208E+05 | 0.316E+00 |
| MODEL | 6 | 0.395E+06 | 0.658E+05 | 0.230E+07 |
| RESID | 13 | 0.372E+00 | 0.286E-01 | |

STANDARD ERROR = 0.169E+00

DTEST FOR MEANS =-0.112E-05

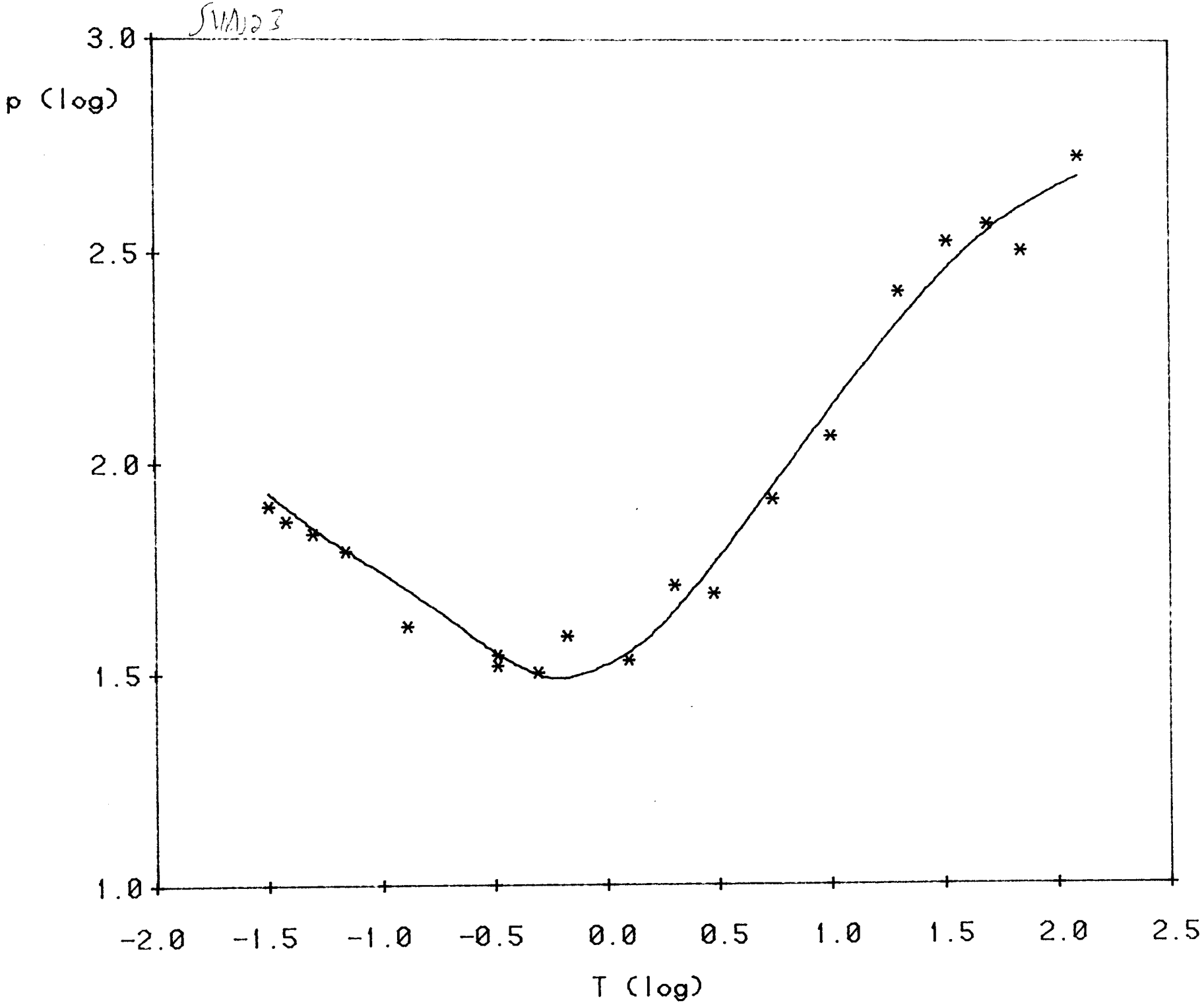
NOISE TO SIGNAL RATIO = 0.659E-01 PERCENT

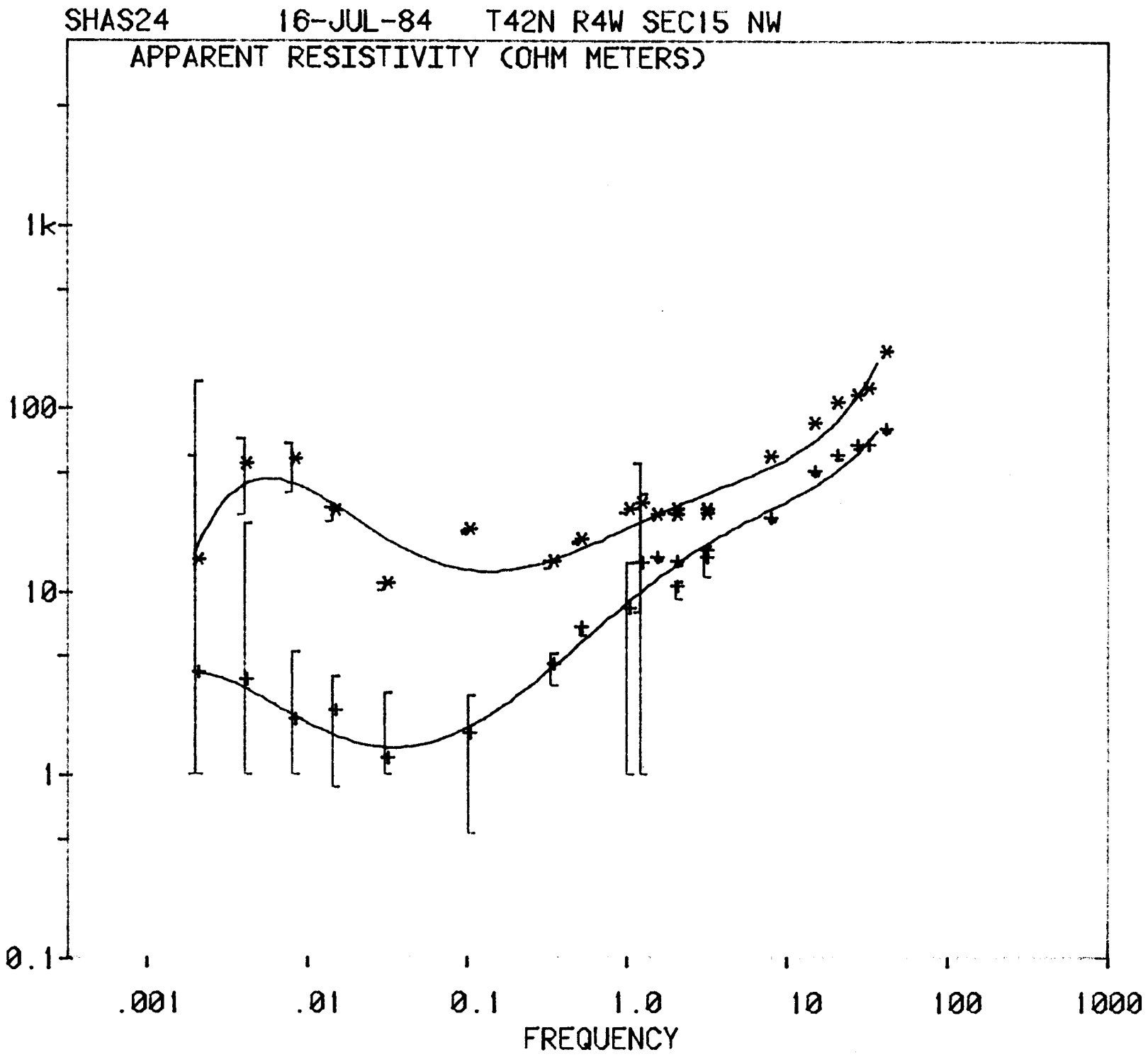
SHAS23 200 HZ 15-JUL-84 T43N R3W S32 SW

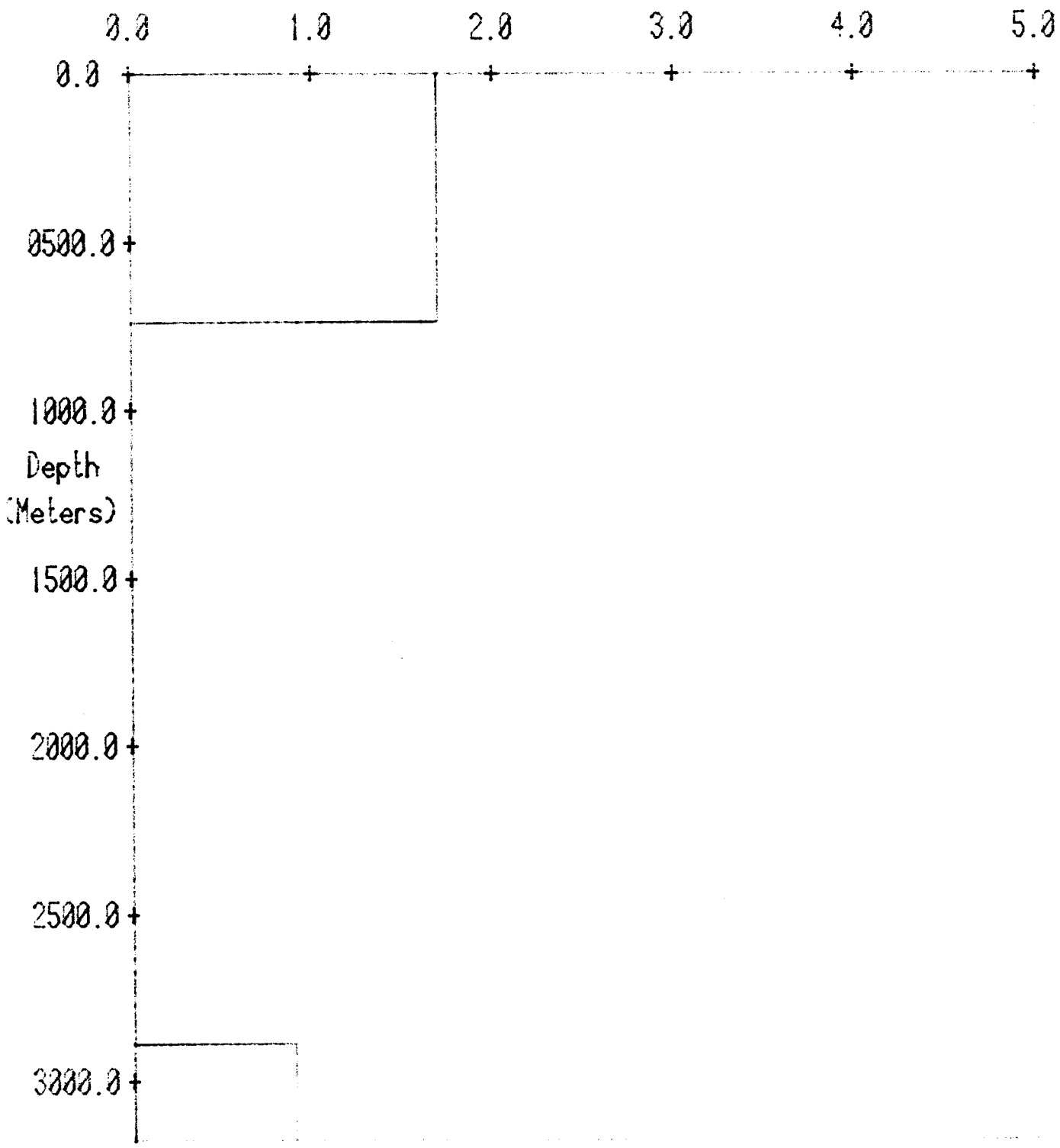
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 125.000 | 534.000 | 477.589 | 56.411 | 11.153 |
| 2 | 70.000 | 317.000 | 406.282 | -89.282 | -24.688 |
| 3 | 50.000 | 369.000 | 356.913 | 12.087 | 3.330 |
| 4 | 33.000 | 334.000 | 292.509 | 41.491 | 13.245 |
| 5 | 20.000 | 255.000 | 218.175 | 36.825 | 15.565 |
| 6 | 10.000 | 116.000 | 135.619 | -19.619 | -15.595 |
| 7 | 5.500 | 82.000 | 87.606 | -5.606 | -6.611 |
| 8 | 3.000 | 49.000 | 56.927 | -7.927 | -14.966 |
| 9 | 2.000 | 51.000 | 43.863 | 7.137 | 15.047 |
| 10 | 1.250 | 34.000 | 34.541 | -0.541 | -1.579 |
| 11 | 0.670 | 39.000 | 30.316 | 8.684 | 25.038 |
| 12 | 0.500 | 32.000 | 31.191 | 0.809 | 2.560 |
| 13 | 0.330 | 33.000 | 35.190 | -2.190 | -6.422 |
| 14 | 0.330 | 35.000 | 35.190 | -0.190 | -0.540 |
| 15 | 0.130 | 41.000 | 50.654 | -9.654 | -21.067 |
| 16 | 0.070 | 62.000 | 62.056 | -0.056 | -0.090 |
| 17 | 0.050 | 68.000 | 70.179 | -2.179 | -3.154 |
| 18 | 0.038 | 73.000 | 78.646 | -5.646 | -7.446 |
| 19 | 0.032 | 79.000 | 84.943 | -5.943 | -7.250 |
| 20 | 0.025 | 121.000 | 95.534 | 25.466 | 23.522 |

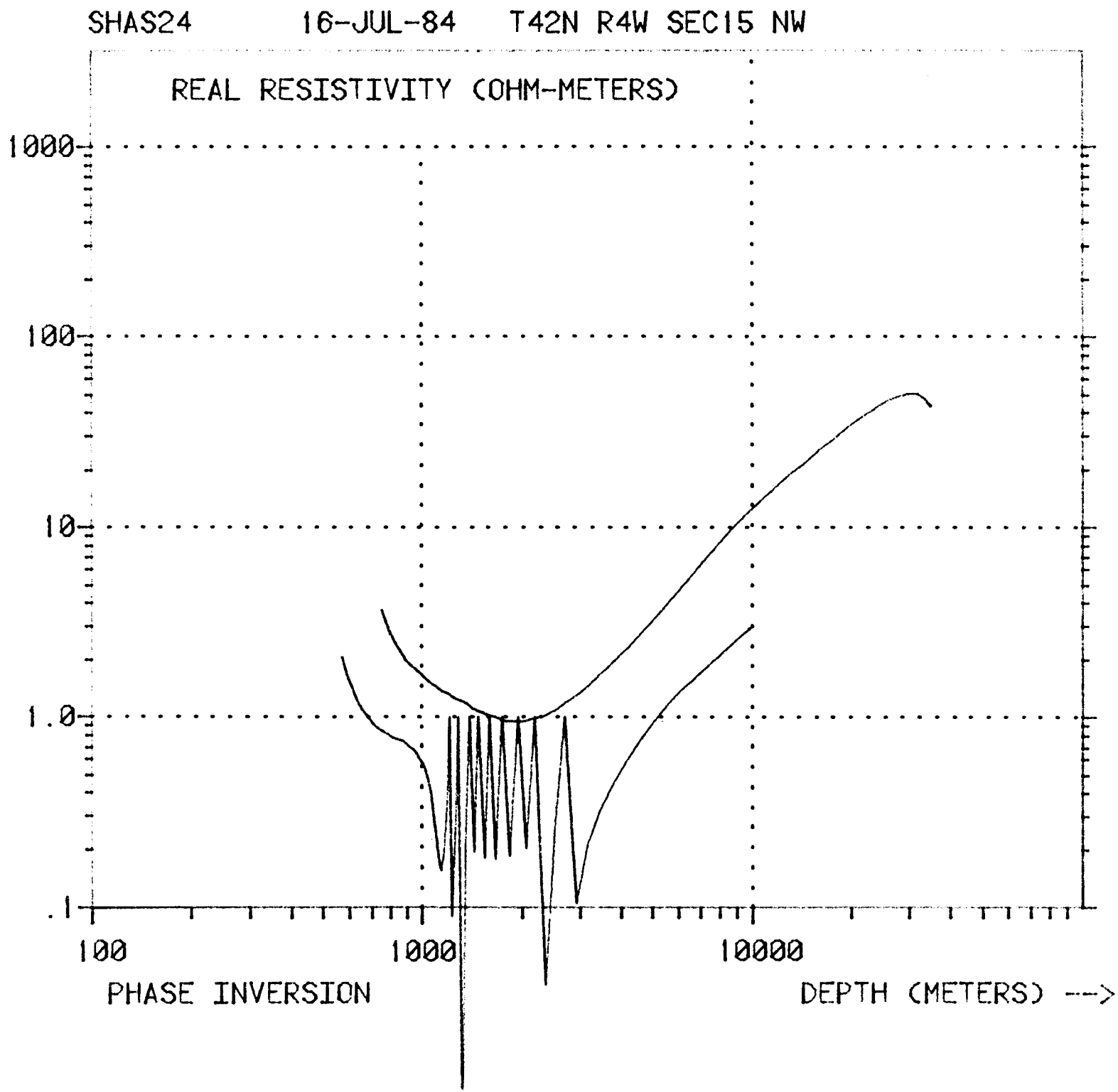
MEAN PERCENT ERROR = 13.6145
MAXIMUM PERCENT ERROR = 25.0578
MAX. ERROR OCCURRED AT OBSERVATION 11


SVM23
3.0
2.5
2.0
1.5
1.0
p (log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)

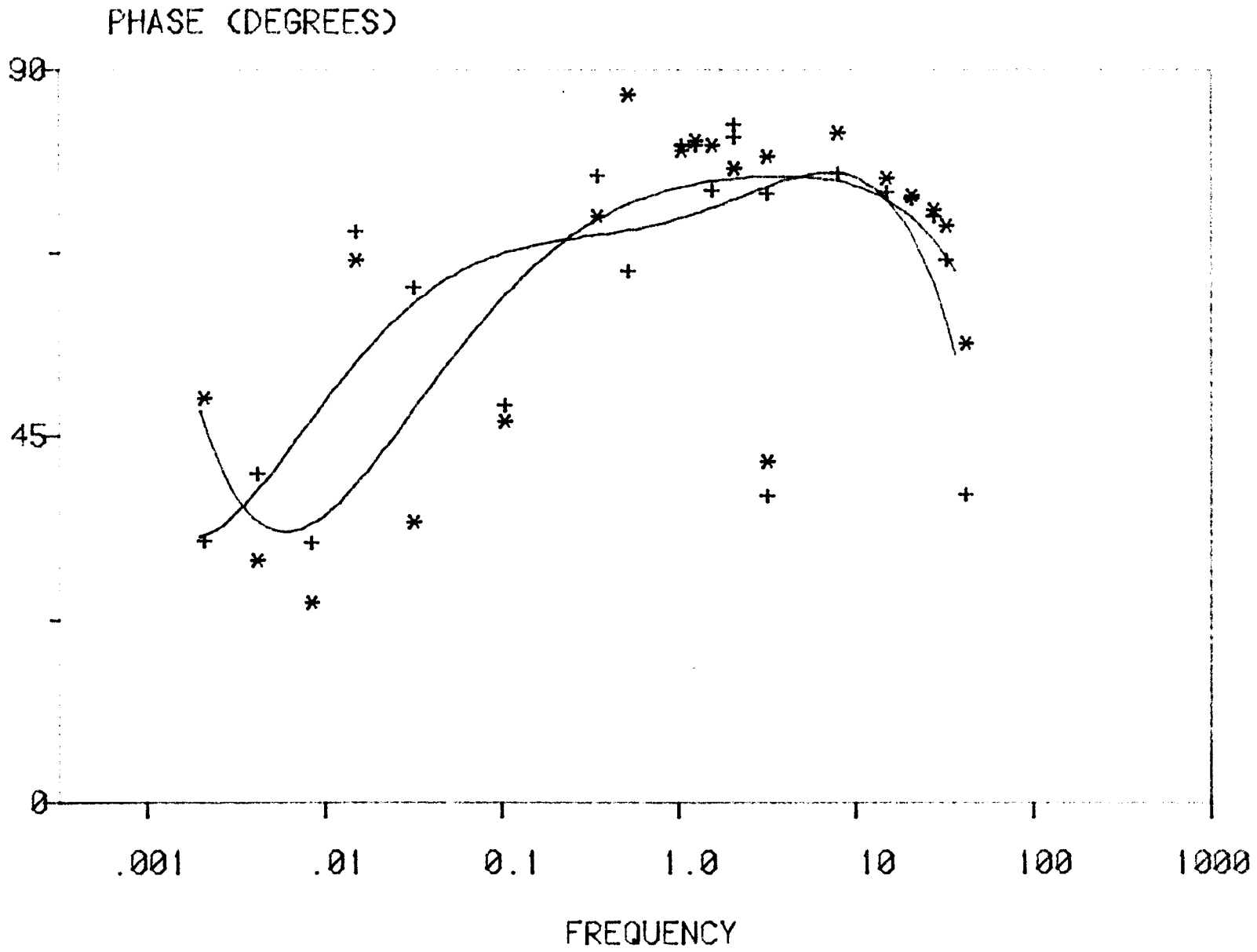

SHAS24 16-JUL-84 T42N R4W SEC15 NW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY




| | | | |
|---|---|---|---|
| Resistivity | 0049.15 | 0000.96 | 0007.92 |
| Thickness | | 0737.25 | 2150.69 |
| Depth | 0000.00 | 0737.25 | 2887.95 |


SHAS24 16-JUL-84 T42N R4W SEC15 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS24 16-JUL-84 T42N R4W SEC15 NW



THE SITE IS: SHAS24 200 HZ 16-JUL-84 T42N R4W SEC15 NW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|---|
| 0.0012 | : | 3.04 | 20.06 | 1 | 133.39 | 40.07 |
| 0.0020 | : | 3.43 | 14.06 | 2 | 20.16 | 20.79 |
| 0.0040 | : | 3.12 | 46.63 | 3 | 2.79 | 14.98 |
| 0.0080 | : | 1.88 | 48.91 | 4 | 1.29 | 2.42 |
| 0.0143 | : | 2.13 | 26.18 | 5 | 1.61 | 0.43 |
| 0.0200 | : | 2.01 | 6.77 | 6 | 1.10 | 0.39 |
| 0.0303 | : | 1.16 | 10.51 | 7 | 0.75 | 0.65 |
| 0.0500 | : | 1.22 | 4.32 | 8 | 0.31 | 0.16 |
| 0.1000 | : | 1.57 | 20.65 | 9 | 6.56 | 0.19 |
| 0.1818 | : | 0.00 | 0.00 | 10 | 20.16 | 20.79 |
| 0.3333 | : | 3.81 | 13.76 | 11 | 0.16 | 0.02 |
| 0.5000 | : | 6.02 | 17.99 | 12 | 0.12 | 0.02 |
| 0.5988 | : | 11.48 | 51.62 | 13 | 1.09 | 0.10 |
| 0.8000 | : | 24.43 | 29.43 | 14 | 2.73 | 0.04 |
| 1.0000 | : | 7.56 | 26.40 | 15 | 0.02 | 0.02 |
| 1.0000 | : | 2.97 | 61.33 | 16 | 0.37 | 0.01 |
| 1.2048 | : | 13.55 | 28.43 | 17 | 0.40 | 0.00 |
| 1.4925 | : | 14.57 | 24.50 | 18 | 0.34 | 0.01 |
| 2.0000 | : | 13.80 | 24.73 | 19 | 0.24 | 0.02 |
| 2.0000 | : | 10.08 | 26.27 | 20 | 0.04 | 0.01 |
| 2.0000 | : | 10.96 | 53.01 | 21 | 0.33 | 0.02 |
| 3.0303 | : | 14.44 | 25.21 | 22 | 0.04 | 0.00 |
| 3.0303 | : | 15.74 | 26.46 | 23 | 0.15 | 0.00 |
| 7.6923 | : | 23.88 | 51.54 | 24 | 0.19 | 0.00 |
| 14.2857 | : | 42.68 | 77.40 | 25 | 0.14 | 0.00 |
| 20.0000 | : | 51.92 | 100.11 | 26 | 0.07 | 0.00 |
| 26.3158 | : | 58.97 | 109.72 | 27 | 0.05 | 0.00 |
| 31.2500 | : | 59.05 | 120.59 | 28 | 0.03 | 0.00 |
| 40.0000 | : | 72.60 | 191.45 | 29 | 0.01 | 0.00 |

AVERAGE # 8
SHAS24 200 HZ 16-JUL-84 T42N R4W SEC15 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.340E+02 | 0.475E+01 | 46. | 89. | 159. | 1.3529 | 0.4187 | 8.0362 | 0.93 |
| H | SEC | 0.611E+01 | 0.132E+01 | 86. | 84. | 172. | 0.6963 | 0.4695 | 0.00 | 1.37 |
| E | 500.0 | 0.257E+02 | 0.471E+01 | 85. | 46. | 166. | 0.6711 | 0.3371 | 2.1039 | 1.29 |
| H | SEC | 0.242E+01 | 0.214E+01 | 14. | 20. | 179. | 0.6066 | 0.2770 | 0.00 | **** |
| E | 250.0 | 0.897E+02 | 0.424E+01 | 37. | 78. | 179. | 0.1858 | 0.3250 | 0.8394 | 0.67 |
| H | SEC | 0.353E+01 | 0.200E+01 | 24. | 4. | 140. | 0.2468 | 0.3853 | 121.30 | 0.93 |
| E | 125.0 | 0.971E+02 | 0.309E+01 | 14. | 61. | 165. | 0.4908 | 0.2376 | 0.3361 | 0.44 |
| H | SEC | 0.759E+00 | 0.676E+00 | 35. | 3. | 103. | 0.0000 | 0.1548 | 0.00 | 0.49 |
| E | 70.0 | 0.513E+02 | 0.402E+01 | 63. | 74. | 178. | 0.3483 | 0.2118 | 0.2585 | 0.23 |
| H | SEC | 0.109E+01 | 0.236E+00 | 70. | 67. | 77. | 0.1950 | 0.2188 | 0.00 | 0.24 |
| E | 50.0 | 0.123E+02 | 0.342E+01 | 77. | 56. | 16. | 0.3520 | 0.1300 | 0.1222 | 0.44 |
| H | SEC | 0.125E+01 | 0.593E+00 | 66. | 65. | 59. | 0.5124 | 0.2078 | 0.00 | 0.11 |
| E | 33.0 | 0.194E+02 | 0.198E+01 | 1. | 56. | 21. | 0.2981 | 0.1439 | 0.0856 | 0.31 |
| H | SEC | 0.160E+01 | 0.336E+00 | 69. | 71. | 72. | 0.3597 | 0.2486 | 0.00 | 0.48 |
| E | 20.0 | 0.700E+01 | 0.173E+01 | 10. | 63. | 8. | 0.2286 | 0.0420 | 0.0547 | 0.38 |
| H | SEC | 0.163E+01 | 0.716E+00 | 66. | 80. | 73. | 0.2037 | 0.0720 | 0.00 | 0.42 |

AVERAGE # 8
SHAS24 200 HZ 16-JUL-84 T42N R4W SEC15 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.270E+02 | 0.243E+01 | 26. | 80. | 37. | 0.5731 | 0.5483 | 0.0279 | 0.81 |
| H | SEC | 0.143E+02 | 0.718E+00 | 68. | 18. | 12. | 0.6009 | 0.3862 | 0.00 | 0.46 |
| E | 5.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 3.0 | 0.250E+02 | 0.515E+01 | 70. | 76. | 20. | 0.7041 | 0.0600 | 0.0142 | 0.81 |
| H | SEC | 0.251E+01 | 0.247E+01 | 75. | 78. | 5. | 0.0000 | 0.0634 | 0.00 | 0.46 |
| E | 2.0 | 0.330E+02 | 0.991E+01 | 84. | 76. | 23. | 0.5087 | 0.0667 | 0.0344 | 0.82 |
| H | SEC | 0.298E+01 | 0.212E+01 | 90. | 55. | 134. | 0.3055 | 0.0190 | 0.00 | 0.23 |
| E | 1.7 | 0.425E+02 | 0.101E+02 | 53. | 82. | 175. | 0.2885 | 0.3481 | 0.0063 | 0.18 |
| H | SEC | 0.608E+02 | 0.128E+02 | 39. | 86. | 155. | 0.3675 | 0.3296 | 73.60 | 0.65 |
| E | 1.2 | 0.468E+02 | 0.434E+02 | 11. | 51. | 48. | 0.7562 | 0.6690 | 0.0022 | 0.39 |
| H | SEC | 0.121E+02 | 0.550E+01 | 83. | 64. | 57. | 0.4032 | 0.9073 | 0.00 | 0.33 |
| E | 1.0 | 0.413E+02 | 0.111E+02 | 77. | 81. | 21. | 0.4825 | 0.0505 | 0.0044 | 0.26 |
| H | HZ | 0.115E+02 | 0.399E+01 | 84. | 81. | 49. | 0.2083 | 0.0777 | 0.00 | 0.30 |

AVERAGE # 8
SHAS24 200 HZ 16-JUL-84 T42N R4W SEC15 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.783E+02 | 0.215E+01 | 66. | 22. | 111. | 0.0529 | 0.7437 | 0.0091 | 0.57 |
| H | HZ | 0.444E+02 | 0.380E+01 | 67. | 15. | 109. | 0.0211 | 0.2366 | 48.30 | 0.46 |
| E | 1.2 | 0.399E+02 | 0.188E+02 | 80. | 79. | 178. | 0.0000 | 0.1949 | 0.0020 | 0.21 |
| H | HZ | 0.170E+02 | 0.829E+01 | 84. | 83. | 157. | 0.3311 | 0.4213 | 0.00 | 0.03 |
| E | 1.5 | 0.367E+02 | 0.185E+02 | 75. | 82. | 170. | 0.6309 | 0.3866 | 0.0017 | 0.17 |
| H | HZ | 0.123E+02 | 0.107E+02 | 87. | 69. | 42. | 0.6682 | 0.2472 | 1.30 | 0.23 |
| E | 2.0 | 0.306E+02 | 0.201E+02 | 77. | 78. | 14. | 0.4477 | 0.2959 | 0.0017 | 0.25 |
| H | HZ | 0.189E+02 | 0.745E+01 | 80. | 86. | 55. | 1.4825 | 0.1978 | 18.70 | 0.34 |
| E | 2.0 | 0.343E+02 | 0.142E+02 | 81. | 78. | 30. | 0.3585 | 0.0643 | 0.0051 | 0.29 |
| H | HZ | 0.182E+02 | 0.599E+01 | 76. | 89. | 52. | 0.3082 | 0.0789 | 0.00 | 0.31 |
| E | 2.0 | 0.679E+02 | 0.210E+02 | 76. | 79. | 35. | 0.4662 | 0.3392 | 0.8922 | 0.47 |
| H | HZ | 0.381E+02 | 0.935E+00 | 82. | 61. | 44. | 0.6053 | 0.8481 | 92.70 | 0.96 |

AVERAGE # 8
SHAS24 200 HZ 16-JUL-84 T42N R4W SEC15 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.342E+02 | 0.207E+02 | 2. | 75. | 16. | 0.1151 | 0.0889 | 0.0091 | 0.28 |
| H | HZ | 0.162E+02 | 0.822E+01 | 82. | 1. | 62. | 0.1560 | 0.0866 | 141.20 | 0.32 |
| E | 3.0 | 0.288E+02 | 0.196E+02 | 79. | 77. | 35. | 0.6228 | 0.3345 | 0.0031 | 0.26 |
| H | HZ | 0.241E+02 | 0.118E+02 | 81. | 73. | 43. | 0.4579 | 0.1394 | 63.50 | 0.32 |
| E | 7.7 | 0.561E+02 | 0.265E+02 | 81. | 78. | 50. | 0.4190 | 0.4211 | 0.0807 | 0.33 |
| H | HZ | 0.470E+02 | 0.213E+02 | 84. | 77. | 46. | 0.5102 | 0.9120 | 11.20 | 0.36 |
| E | 14.3 | 0.834E+02 | 0.461E+02 | 77. | 75. | 55. | 0.7362 | 0.6248 | 0.0498 | 0.27 |
| H | HZ | 0.714E+02 | 0.392E+02 | 77. | 75. | 43. | 0.6823 | 0.7997 | 128.50 | 0.29 |
| E | 20.0 | 0.112E+03 | 0.562E+02 | 74. | 72. | 54. | 1.3853 | 0.9791 | 0.1639 | 0.28 |
| H | HZ | 0.878E+02 | 0.476E+02 | 75. | 77. | 44. | 1.2326 | 0.6018 | 83.80 | 0.26 |
| E | 26.3 | 0.125E+03 | 0.664E+02 | 71. | 72. | 56. | 0.4052 | 1.4710 | 0.1497 | 0.27 |
| H | HZ | 0.942E+02 | 0.516E+02 | 75. | 72. | 49. | 0.6167 | 1.5050 | 112.00 | 0.27 |
| E | 31.2 | 0.137E+03 | 0.697E+02 | 70. | 69. | 59. | 0.8728 | 0.0000 | 0.1078 | 0.26 |
| H | HZ | 0.104E+03 | 0.484E+02 | 72. | 64. | 47. | 1.0392 | 2.0631 | 0.00 | 0.33 |
| E | 40.0 | 0.165E+03 | 0.715E+02 | 70. | 63. | 63. | 0.2668 | 2.3207 | 0.0766 | 0.30 |
| H | HZ | 0.218E+03 | 0.737E+02 | 43. | 14. | 49. | 0.0562 | 1.7148 | 0.00 | 0.72 |

SHAS24 200 HZ 16-JUL-84 T42N R4W SEC15 NW

THE NUMBER OF LAYERS = 3
THE NUMBER OF FREQUENCIES TAKEN = 21
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3000E+02 | | 0.0000E+00 |
| | | 0.1000E+04 | |
| 2 | 0.8000E+00 | | 0.1000E+04 |
| | | 0.4000E+04 | |
| 3 | 0.5000E+01 | | 0.5000E+04 |

FREQUENCY RANGE ( 0.2000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.4916E+02 | | 0.0000E+00 |
| | | 0.7373E+03 | |
| 2 | 0.9610E+00 | | 0.7373E+03 |
| | | 0.2151E+04 | |
| 3 | 0.7924E+01 | | 0.2888E+04 |

MEAN PERCENT VARIATION IS 0.2111E+02

ERROR ANALYSIS

R-SQUARED = 0.999E+00

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 20 | 0.102E+05 | 0.509E+03 | 0.200E+00 |
| MODEL | 4 | 0.102E+05 | 0.254E+04 | 0.435E+05 |
| RESID | 16 | 0.935E+00 | 0.585E-01 | |

STANDARD ERROR = 0.242E+00

DTEST FOR MEANS =-0.154E-05

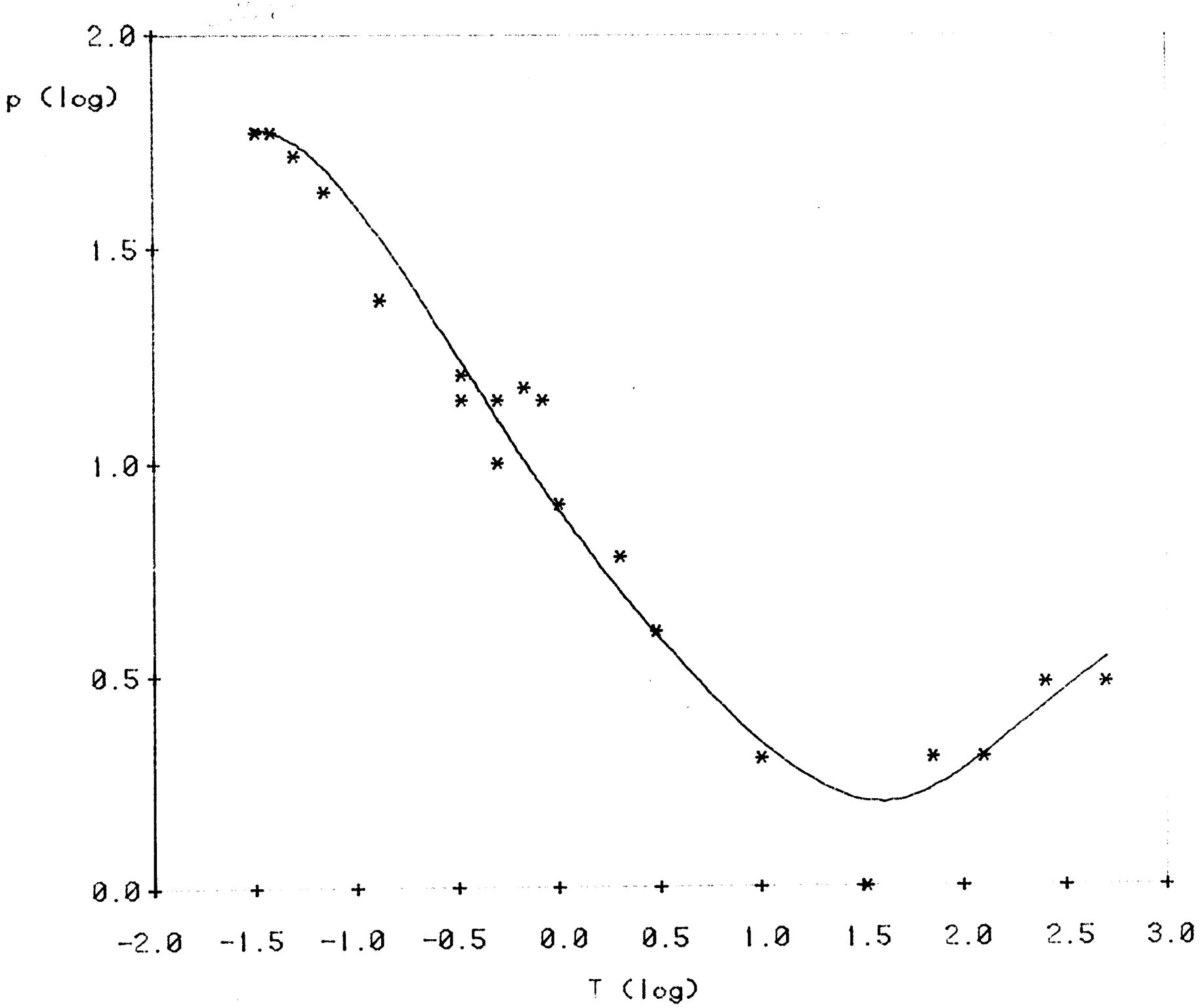
NOISE TO SIGNAL RATIO = 0.480E+00 PERCENT

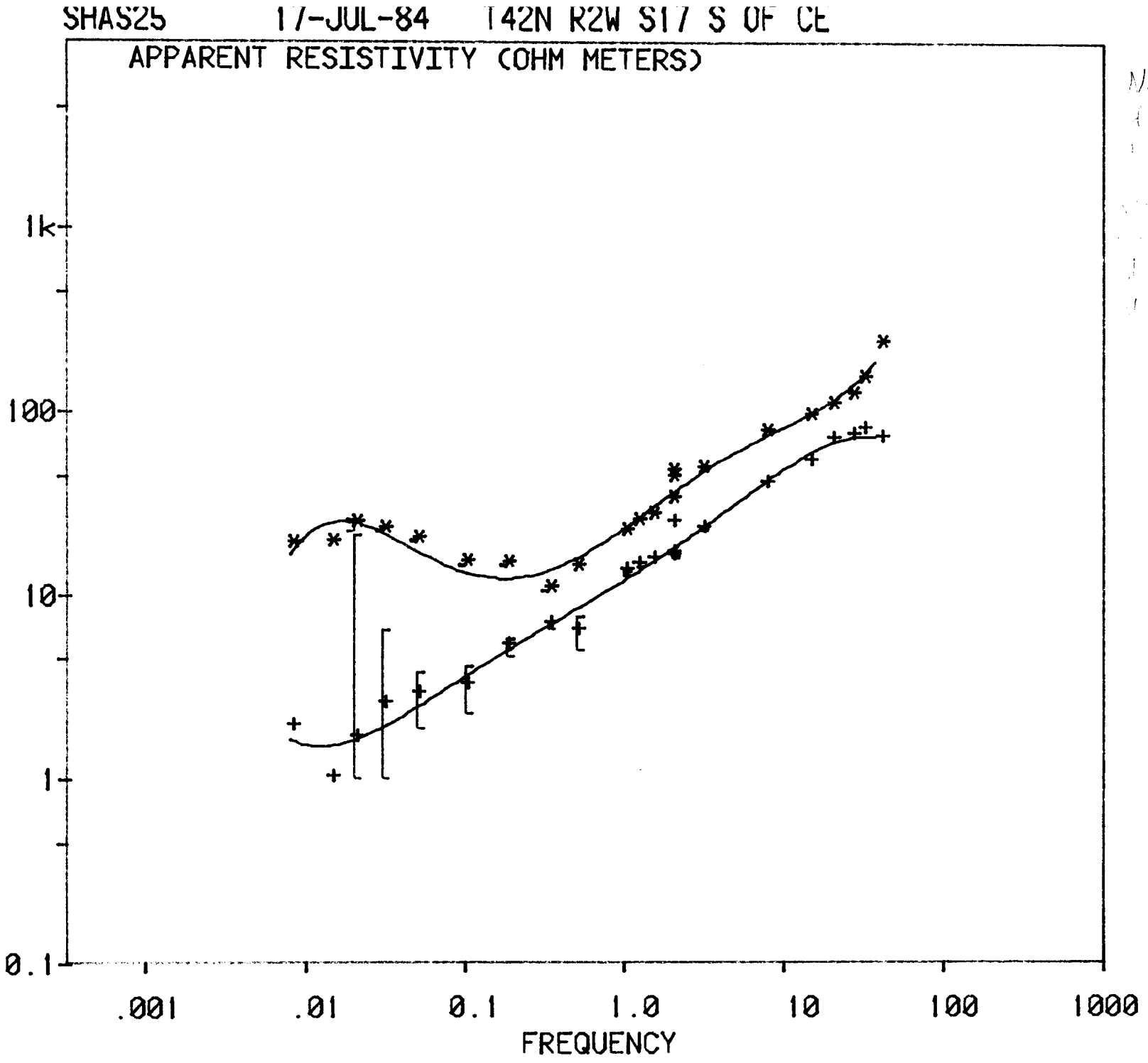
SHAS24 200 HZ 16-JUL-84 T42N R4W SEC15 NW

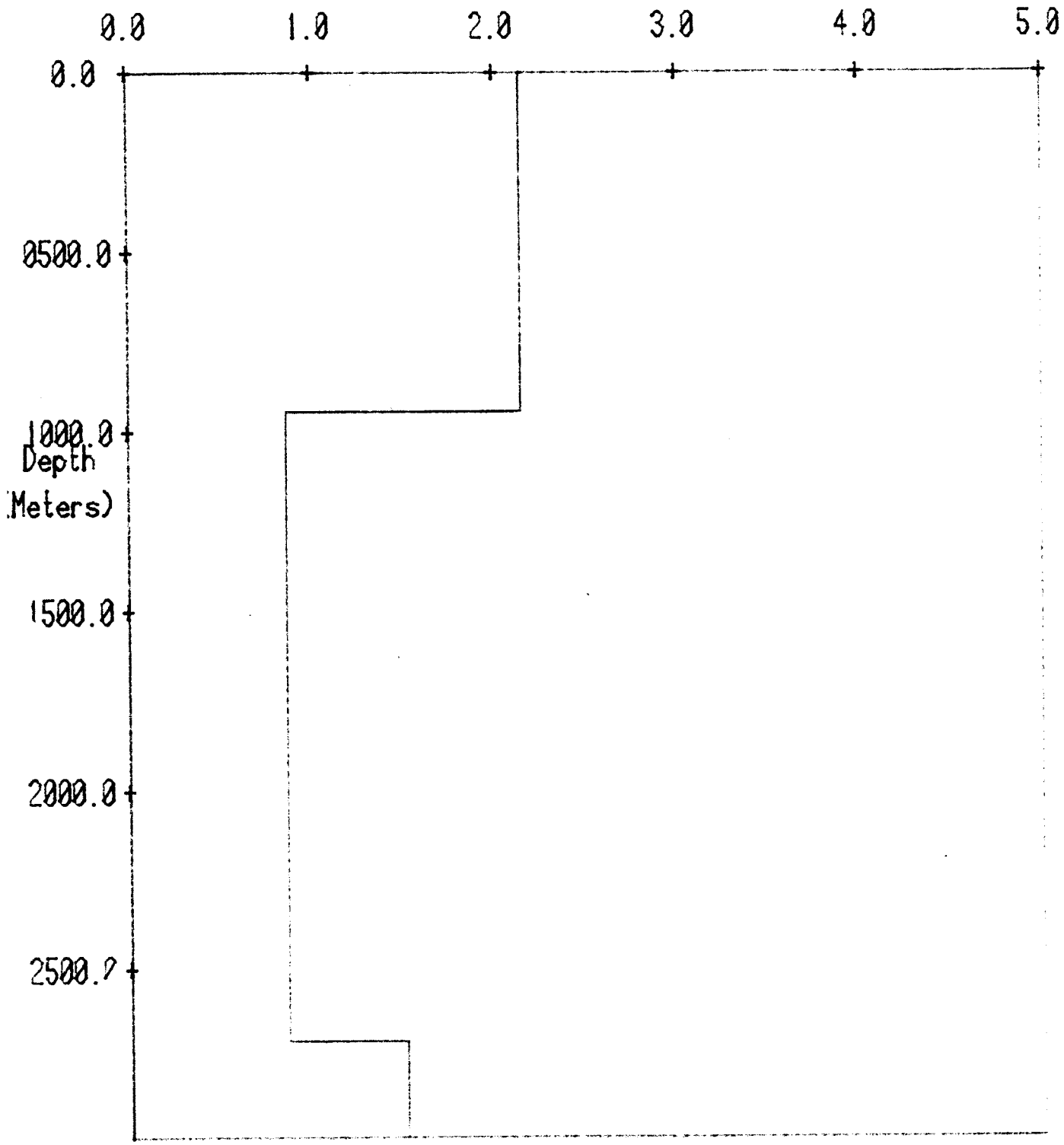
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.500E+03 | 0.300E+01 | 0.343E+01 | -0.434E+00 | -0.135E+02 |
| 2 | 0.250E+03 | 0.300E+01 | 0.266E+01 | 0.340E+00 | 0.120E+02 |
| 3 | 0.125E+03 | 0.200E+01 | 0.203E+01 | -0.264E-01 | -0.131E+01 |
| 4 | 0.700E+02 | 0.200E+01 | 0.166E+01 | 0.338E+00 | 0.185E+02 |
| 5 | 0.330E+02 | 0.100E+01 | 0.148E+01 | -0.484E+00 | -0.389E+02 |
| 6 | 0.100E+02 | 0.200E+01 | 0.209E+01 | -0.896E-01 | -0.438E+01 |
| 7 | 0.300E+01 | 0.400E+01 | 0.395E+01 | 0.537E-01 | 0.135E+01 |
| 8 | 0.200E+01 | 0.600E+01 | 0.496E+01 | 0.104E+01 | 0.189E+02 |
| 9 | 0.100E+01 | 0.800E+01 | 0.772E+01 | 0.278E+00 | 0.353E+01 |
| 10 | 0.830E+00 | 0.140E+02 | 0.878E+01 | 0.522E+01 | 0.458E+02 |
| 11 | 0.670E+00 | 0.150E+02 | 0.102E+02 | 0.478E+01 | 0.379E+02 |
| 12 | 0.500E+00 | 0.140E+02 | 0.126E+02 | 0.136E+01 | 0.102E+02 |
| 13 | 0.500E+00 | 0.100E+02 | 0.126E+02 | -0.264E+01 | -0.233E+02 |
| 14 | 0.330E+00 | 0.140E+02 | 0.172E+02 | -0.324E+01 | -0.207E+02 |
| 15 | 0.330E+00 | 0.160E+02 | 0.172E+02 | -0.124E+01 | -0.745E+01 |
| 16 | 0.130E+00 | 0.240E+02 | 0.342E+02 | -0.102E+02 | -0.350E+02 |
| 17 | 0.700E-01 | 0.430E+02 | 0.494E+02 | -0.641E+01 | -0.139E+02 |
| 18 | 0.500E-01 | 0.520E+02 | 0.563E+02 | -0.427E+01 | -0.788E+01 |
| 19 | 0.380E-01 | 0.590E+02 | 0.595E+02 | -0.495E+00 | -0.835E+00 |
| 20 | 0.320E-01 | 0.590E+02 | 0.601E+02 | -0.115E+01 | -0.193E+01 |
| 21 | 0.250E-01 | 0.730E+02 | 0.594E+02 | 0.136E+02 | 0.206E+02 |

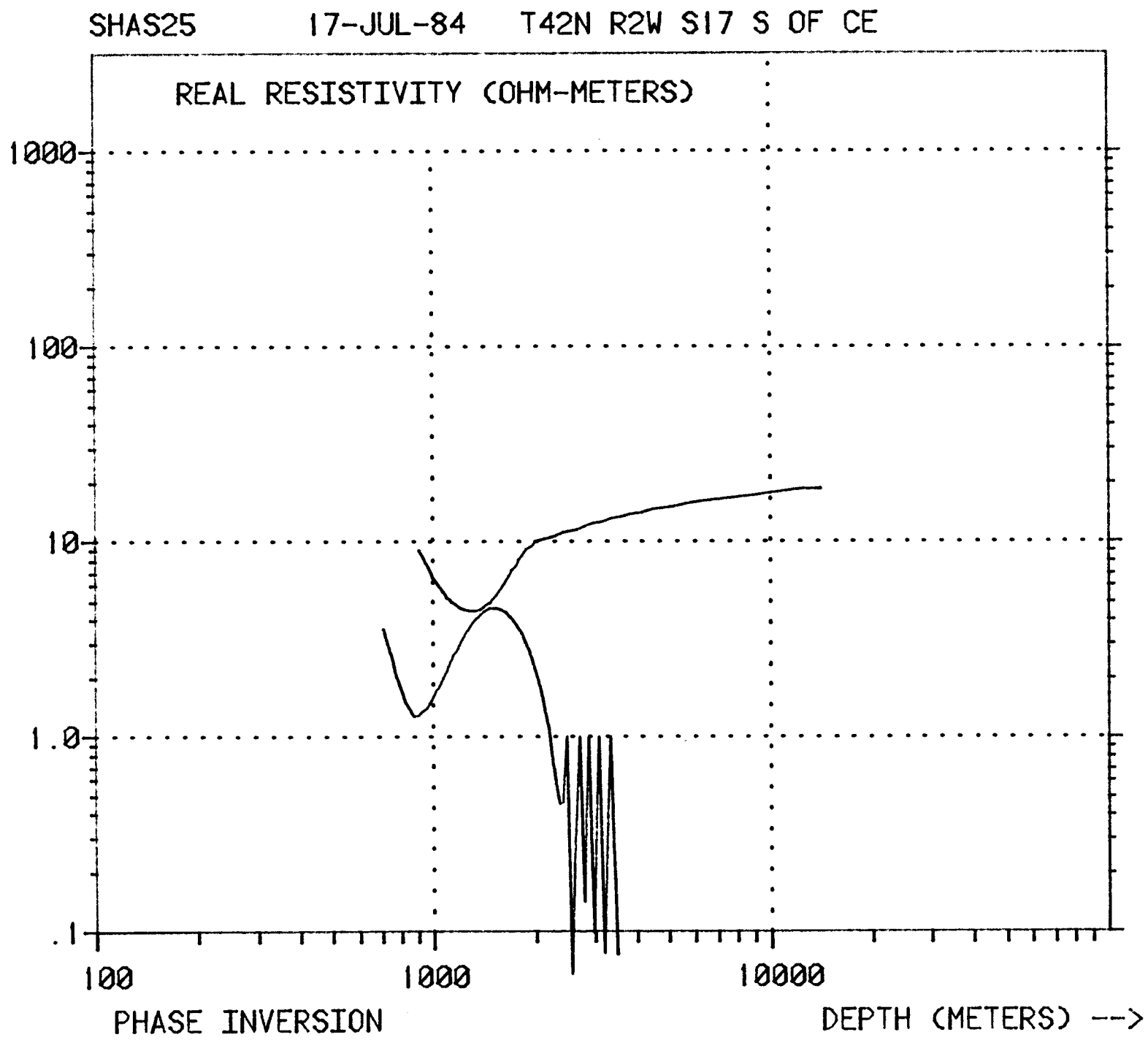
MEAN PERCENT ERROR = 0.2091E+02
MAXIMUM PERCENT ERROR = 0.4582E+02
MAX. ERROR OCCURED AT OBSERVATION 10


2.0
p (log)
1.5
1.0
0.5
0.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
T (log)

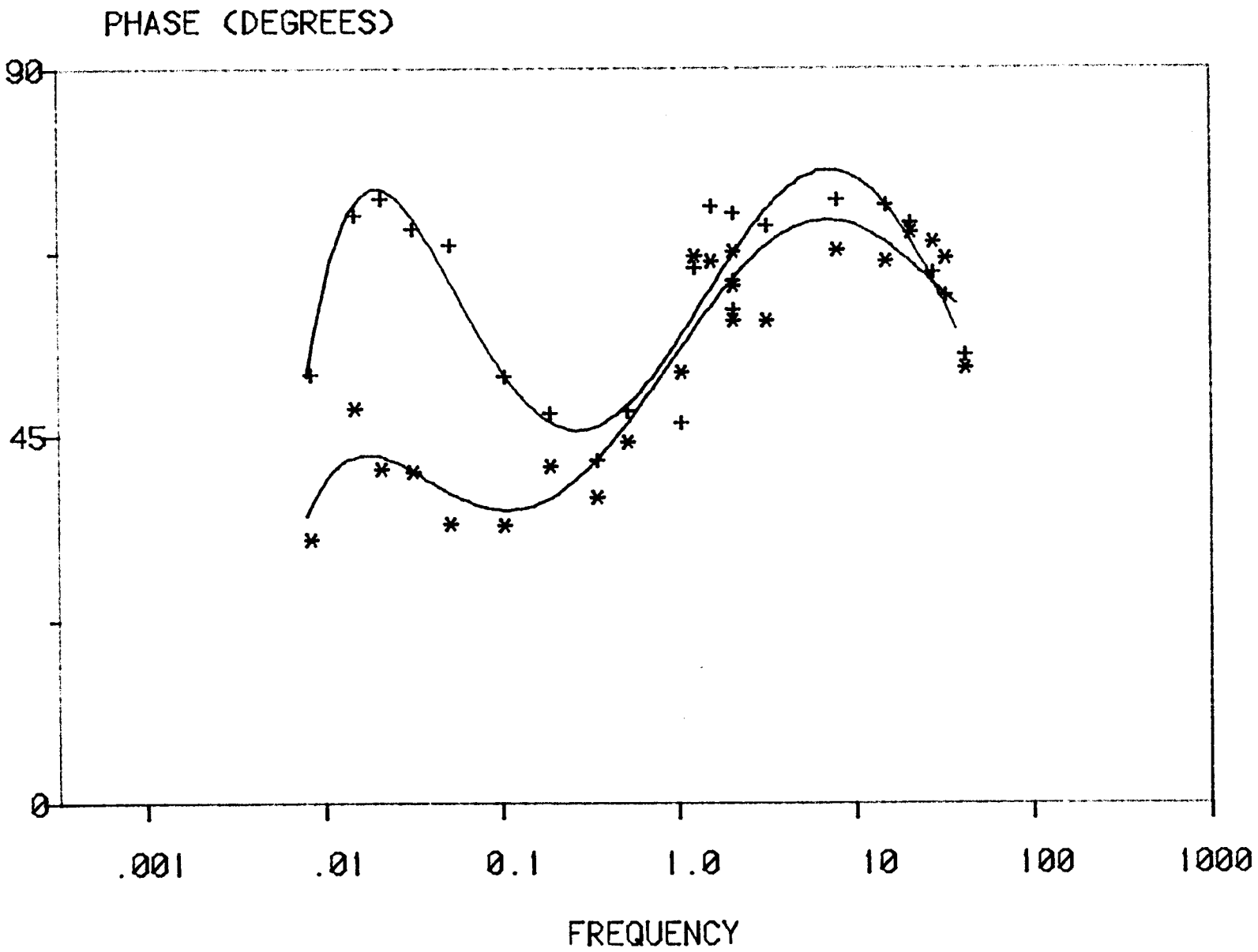

SHAS25 17-JUL-84 T42N R2W S17 S OF CE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY




| | | | |
|---|---|---|---|
| Resistivity | 0141.58 | 0007.31 | 0032.58 |
| Thickness | | 0945.04 | 1755.04 |
| Depth | 0000.00 | 0945.04 | 2700.08 |


SHAS25 17-JUL-84 T42N R2W S17 S OF CE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS25 17-JUL-84 T42N R2W S17 S OF CE



THE SITE IS: SHAS25 200 HZ 17-JUL-84 T42N R2W S17 S OF CE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.00 | 0.00 | 1 | 0.00 | 0.00 |
| 0.0020 | 0.00 | 0.00 | 2 | 0.00 | 0.00 |
| 0.0040 | 3.39 | 8.60 | 3 | 19.25 | 1.85 |
| 0.0080 | 1.88 | 18.53 | 4 | 3.86 | 0.25 |
| 0.0143 | 0.98 | 18.75 | 5 | 0.93 | 0.20 |
| 0.0200 | 1.62 | 23.70 | 6 | 0.88 | 0.11 |
| 0.0303 | 2.46 | 22.22 | 7 | 0.54 | 0.07 |
| 0.0500 | 2.80 | 19.38 | 8 | 0.34 | 0.04 |
| 0.1000 | 3.11 | 14.36 | 9 | 1.31 | 0.03 |
| 0.1818 | 5.12 | 14.32 | 10 | 0.35 | 0.01 |
| 0.3333 | 6.74 | 10.42 | 11 | 0.08 | 0.00 |
| 0.5000 | 6.16 | 13.65 | 12 | 0.03 | 0.00 |
| 0.5988 | 22.28 | 22.59 | 13 | 0.14 | 0.00 |
| 0.8000 | 25.56 | 23.53 | 14 | 0.07 | 0.00 |
| 1.0000 | 12.90 | 21.19 | 15 | 0.03 | 0.00 |
| 1.0000 | 18.22 | 46.87 | 16 | 0.11 | 0.01 |
| 1.2048 | 13.93 | 24.39 | 17 | 0.05 | 0.00 |
| 1.4925 | 15.11 | 26.09 | 18 | 0.04 | 0.00 |
| 2.0000 | 15.52 | 31.63 | 19 | 0.03 | 0.00 |
| 2.0000 | 16.03 | 42.00 | 20 | 0.01 | 0.00 |
| 2.0000 | 23.88 | 45.08 | 21 | 0.05 | 0.00 |
| 3.0303 | 22.26 | 46.97 | 22 | 0.01 | 0.00 |
| 3.0303 | 17.28 | 36.36 | 23 | 0.01 | 0.00 |
| 7.6923 | 39.02 | 74.50 | 24 | 0.05 | 0.00 |
| 14.2857 | 51.51 | 90.95 | 25 | 0.10 | 0.00 |
| 20.0000 | 67.60 | 104.85 | 26 | 0.09 | 0.00 |
| 26.3158 | 70.91 | 118.20 | 27 | 0.03 | 0.00 |
| 31.2500 | 76.25 | 144.57 | 28 | 0.01 | 0.00 |
| 40.0000 | 68.09 | 226.07 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS25 200 HZ 17-JUL-84 T42N R2W S17 S OF CE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 500.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 250.0 | 0.393E+01 | 0.670E+01 | 6. | 24. | 115. | 0.3960 | 0.0000 | 0.6494 | 4.96 |
| H | SEC | 0.133E+02 | 0.900E-01 | 45. | 63. | 115. | 0.1813 | 0.7456 | 45.20 | 0.46 |
| E | 125.0 | 0.210E+02 | 0.305E+01 | 30. | 56. | 115. | 0.0389 | 0.1769 | 1.5312 | 0.22 |
| H | SEC | 0.161E+02 | 0.706E+00 | 35. | 50. | 115. | 0.0714 | 0.2153 | 66.10 | 0.06 |
| E | 70.0 | 0.227E+02 | 0.112E+01 | 49. | 70. | 115. | 0.0515 | 0.3169 | 0.8559 | 0.43 |
| H | SEC | 0.148E+02 | 0.831E+00 | 48. | 75. | 115. | 0.0434 | 0.1921 | 44.70 | 0.30 |
| E | 50.0 | 0.281E+02 | 0.201E+01 | 44. | 70. | 115. | 0.0265 | 0.2493 | 1.1451 | 0.32 |
| H | SEC | 0.193E+02 | 0.123E+01 | 39. | 79. | 115. | 0.0521 | 0.1010 | 83.80 | 0.40 |
| E | 33.0 | 0.225E+02 | 0.255E+01 | 41. | 71. | 115. | 0.0400 | 0.1066 | 0.3102 | 0.09 |
| H | SEC | 0.219E+02 | 0.237E+01 | 41. | 71. | 115. | 0.0517 | 0.0410 | 78.20 | 0.10 |
| E | 20.0 | 0.200E+02 | 0.313E+01 | 34. | 69. | 115. | 0.1512 | 0.3732 | 0.3412 | 0.08 |
| H | SEC | 0.188E+02 | 0.246E+01 | 36. | 69. | 115. | 0.1089 | 0.2465 | 0.00 | 0.15 |

AVERAGE # 8
SHAS25 200 HZ 17-JUL-84 T42N R2W S17 S OF CE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.143E+02 | 0.327E+01 | 34. | 51. | 115. | 0.0960 | 0.1890 | 0.0565 | 0.07 |
| H | SEC | 0.145E+02 | 0.294E+01 | 35. | 54. | 115. | 0.1076 | 0.1897 | 113.10 | 0.09 |
| E | 5.5 | 0.132E+02 | 0.557E+01 | 38. | 43. | 115. | 0.0957 | 0.1916 | 0.0330 | 0.14 |
| H | SEC | 0.154E+02 | 0.467E+01 | 45. | 53. | 115. | 0.0878 | 0.1812 | 123.10 | 0.16 |
| E | 3.0 | 0.110E+02 | 0.910E+01 | 33. | 41. | 115. | 0.0291 | 0.0742 | 0.0331 | 0.25 |
| H | SEC | 0.986E+01 | 0.439E+01 | 43. | 44. | 115. | 0.0528 | 0.0676 | 123.20 | 0.26 |
| E | 2.0 | 0.116E+02 | 0.849E+01 | 38. | 40. | 115. | 0.0126 | 0.0314 | 0.0376 | 0.20 |
| H | SEC | 0.157E+02 | 0.384E+01 | 51. | 57. | 115. | 0.0453 | 0.0777 | 125.10 | 0.17 |
| E | 1.7 | 0.272E+02 | 0.237E+02 | 67. | 83. | 115. | 0.0433 | 0.1403 | 0.0252 | 0.06 |
| H | SEC | 0.179E+02 | 0.208E+02 | 65. | 86. | 115. | 0.0375 | 0.1422 | 114.70 | 0.17 |
| E | 1.2 | 0.254E+02 | 0.305E+02 | 65. | 78. | 115. | 0.0779 | 0.0471 | 0.0210 | 0.11 |
| H | SEC | 0.216E+02 | 0.206E+02 | 68. | 79. | 115. | 0.1572 | 0.1428 | 116.40 | 0.13 |
| E | 1.0 | 0.193E+02 | 0.205E+02 | 44. | 35. | 115. | 0.0272 | 0.0537 | 0.0265 | 0.28 |
| H | HZ | 0.231E+02 | 0.528E+01 | 62. | 59. | 115. | 0.0743 | 0.0656 | 128.10 | 0.19 |

AVERAGE # 8
SHAS25 200 HZ 17-JUL-84 T42N R2W S17 S OF CE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.612E+02 | 0.236E+02 | 57. | 51. | 115. | 0.3680 | 0.4453 | 0.0168 | 0.30 |
| H | HZ | 0.325E+02 | 0.128E+02 | 66. | 45. | 115. | 0.4327 | 0.4844 | 121.50 | 0.30 |
| E | 1.2 | 0.253E+02 | 0.167E+02 | 65. | 71. | 115. | 0.0644 | 0.1808 | 0.0181 | 0.04 |
| H | HZ | 0.235E+02 | 0.112E+02 | 69. | 61. | 115. | 0.0573 | 0.1117 | 114.20 | 0.13 |
| E | 1.5 | 0.267E+02 | 0.174E+02 | 65. | 72. | 115. | 0.0245 | 0.0566 | 0.1193 | 0.02 |
| H | HZ | 0.255E+02 | 0.128E+02 | 68. | 75. | 115. | 0.0674 | 0.1185 | 51.50 | 0.04 |
| E | 2.0 | 0.321E+02 | 0.188E+02 | 67. | 70. | 115. | 0.0947 | 0.1799 | 0.1006 | 0.05 |
| H | HZ | 0.311E+02 | 0.122E+02 | 69. | 75. | 115. | 0.1266 | 0.0812 | 52.90 | 0.17 |
| E | 2.0 | 0.354E+02 | 0.214E+02 | 53. | 59. | 115. | 0.0349 | 0.1070 | 0.0266 | 0.09 |
| H | HZ | 0.486E+02 | 0.106E+02 | 66. | 63. | 115. | 0.0247 | 0.1025 | 121.20 | 0.29 |
| E | 2.0 | 0.466E+02 | 0.256E+02 | 63. | 68. | 115. | 0.1530 | 0.1808 | 0.1094 | 0.09 |
| H | HZ | 0.436E+02 | 0.221E+02 | 64. | 61. | 115. | 0.1344 | 0.0489 | 65.40 | 0.02 |

AVERAGE # 8
SHAS25 200 HZ 17-JUL-84 T42N R2W S17 S OF CE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.404E+02 | 0.360E+02 | 55. | 61. | 115. | 0.0366 | 0.0859 | 0.1606 | 0.08 |
| H | HZ | 0.535E+02 | 0.853E+01 | 64. | 81. | 115. | 0.0503 | 0.0477 | 56.20 | 0.29 |
| E | 3.0 | 0.375E+02 | 0.227E+02 | 68. | 76. | 115. | 0.0695 | 0.0590 | 0.0371 | 0.11 |
| H | HZ | 0.353E+02 | 0.119E+02 | 68. | 78. | 115. | 0.0593 | 0.0462 | 55.80 | 0.28 |
| E | 7.7 | 0.740E+02 | 0.422E+02 | 69. | 74. | 115. | 0.2129 | 0.5317 | 0.0039 | 0.06 |
| H | HZ | 0.750E+02 | 0.358E+02 | 67. | 75. | 115. | 0.2185 | 0.3185 | 120.60 | 0.11 |
| E | 14.3 | 0.976E+02 | 0.599E+02 | 68. | 70. | 115. | 0.6717 | 0.2296 | 0.1145 | 0.02 |
| H | HZ | 0.843E+02 | 0.432E+02 | 65. | 77. | 115. | 0.3213 | 0.6087 | 115.40 | 0.08 |
| E | 20.0 | 0.118E+03 | 0.723E+02 | 69. | 68. | 115. | 0.4827 | 1.1789 | 0.0423 | 0.02 |
| H | HZ | 0.914E+02 | 0.629E+02 | 72. | 75. | 115. | 0.4325 | 1.2961 | 121.70 | 0.03 |
| E | 26.3 | 0.136E+03 | 0.801E+02 | 67. | 67. | 115. | 0.4500 | 1.6073 | 0.0149 | 0.04 |
| H | HZ | 0.999E+02 | 0.617E+02 | 71. | 64. | 115. | 0.4441 | 2.3010 | 120.90 | 0.11 |
| E | 31.2 | 0.152E+03 | 0.880E+02 | 66. | 68. | 115. | 0.2061 | 2.0096 | 0.0169 | 0.04 |
| H | HZ | 0.138E+03 | 0.645E+02 | 69. | 58. | 115. | 0.3821 | 1.1375 | 124.10 | 0.14 |
| E | 40.0 | 0.150E+03 | 0.884E+02 | 59. | 61. | 115. | 0.1459 | 0.0000 | 0.2496 | 0.03 |
| H | HZ | 0.302E+03 | 0.478E+02 | 48. | 50. | 115. | 0.3355 | 0.0000 | 99.40 | 2.73 |

SHAS25 200 HZ 17-JUL-84 T42N R2W S17 S OF CE

THE NUMBER OF LAYERS = 3
THE NUMBER OF FREQUENCIES TAKEN = 22
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3000E+02 | | 0.0000E+00 |
| | | 0.1100E+04 | |
| 2 | 0.3000E+01 | | 0.1100E+04 |
| | | 0.1000E+04 | |
| 3 | 0.1800E+02 | | 0.2100E+04 |

FREQUENCY RANGE ( 0.8000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1405E+03 | | 0.0000E+00 |
| | | 0.9513E+03 | |
| 2 | 0.7202E+01 | | 0.9513E+03 |
| | | 0.1699E+04 | |
| 3 | 0.3222E+02 | | 0.2650E+04 |

MEAN PERCENT VARIATION IS 0.1776E+02

ERROR ANALYSIS

R-SQUARED = 0.999E+00

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 21 | 0.622E+05 | 0.296E+04 | 0.191E+00 |
| MODEL | 4 | 0.621E+05 | 0.155E+05 | 0.380E+06 |
| RESID | 17 | 0.694E+00 | 0.408E-01 | |

STANDARD ERROR = 0.202E+00

DTEST FOR MEANS =-0.273E-05

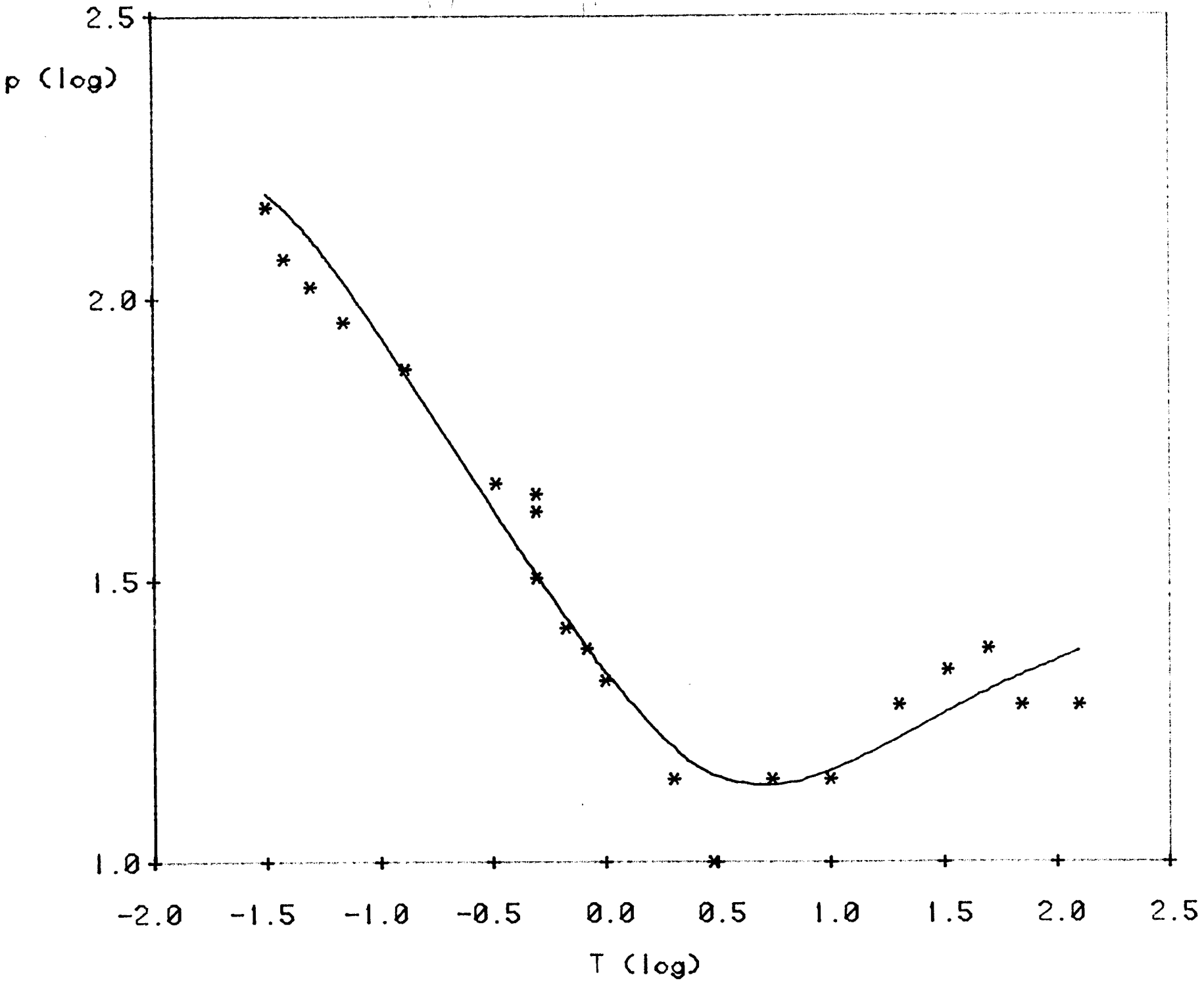
NOISE TO SIGNAL RATIO = 0.162E+00 PERCENT

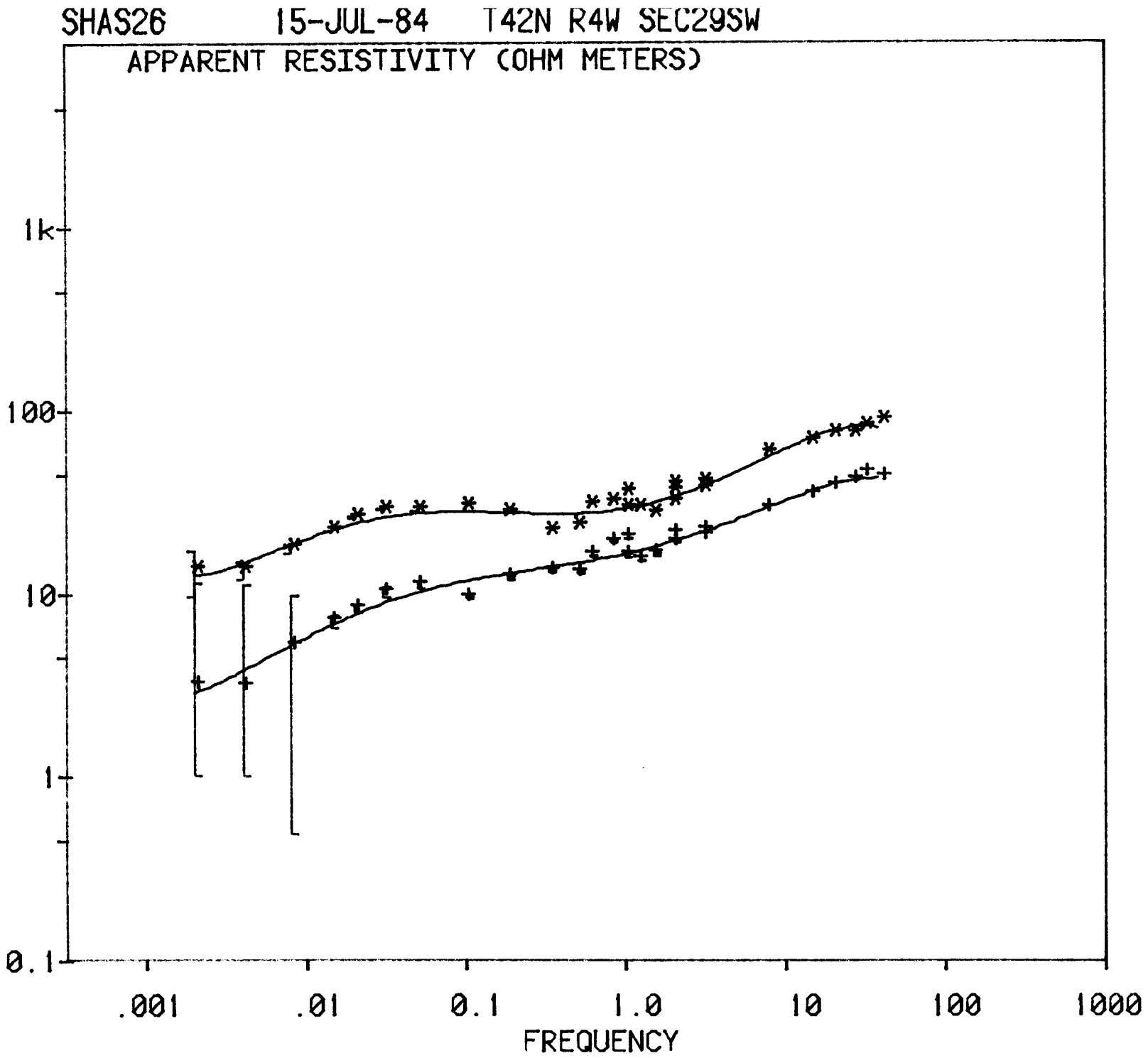
SHAS25 200 HZ 17-JUL-84 T42N R2W S17 S OF CE

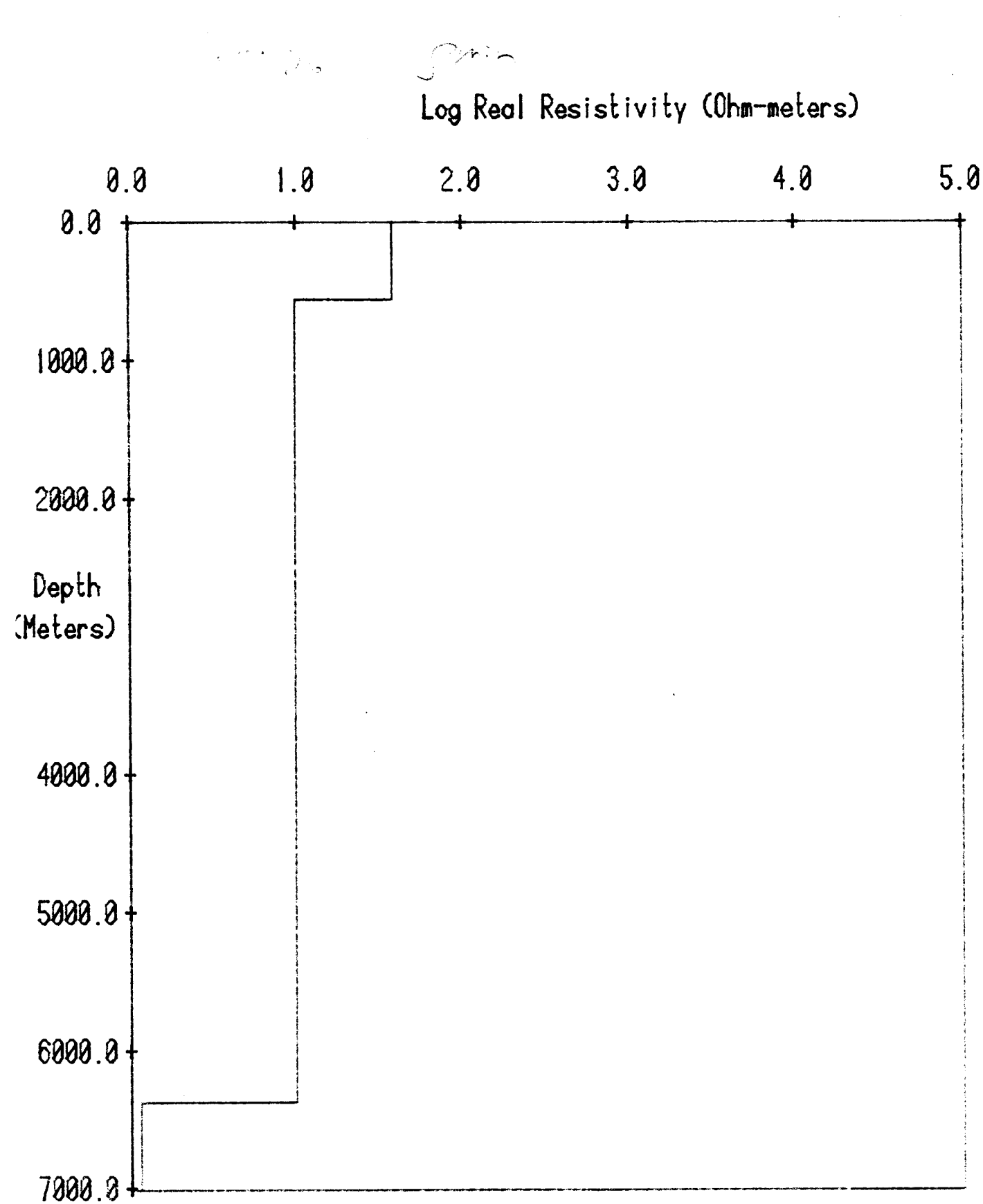
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.125E+03 | 0.190E+02 | 0.237E+02 | -0.470E+01 | -0.220E+02 |
| 2 | 0.700E+02 | 0.190E+02 | 0.216E+02 | -0.256E+01 | -0.126E+02 |
| 3 | 0.500E+02 | 0.240E+02 | 0.202E+02 | 0.378E+01 | 0.171E+02 |
| 4 | 0.330E+02 | 0.220E+02 | 0.185E+02 | 0.346E+01 | 0.171E+02 |
| 5 | 0.200E+02 | 0.190E+02 | 0.166E+02 | 0.241E+01 | 0.135E+02 |
| 6 | 0.100E+02 | 0.140E+02 | 0.144E+02 | -0.406E+00 | -0.286E+01 |
| 7 | 0.550E+01 | 0.140E+02 | 0.135E+02 | 0.506E+00 | 0.368E+01 |
| 8 | 0.300E+01 | 0.100E+02 | 0.141E+02 | -0.411E+01 | -0.341E+02 |
| 9 | 0.200E+01 | 0.140E+02 | 0.158E+02 | -0.176E+01 | -0.119E+02 |
| 10 | 0.100E+01 | 0.210E+02 | 0.217E+02 | -0.694E+00 | -0.325E+01 |
| 11 | 0.830E+00 | 0.240E+02 | 0.241E+02 | -0.713E-01 | -0.296E+00 |
| 12 | 0.670E+00 | 0.260E+02 | 0.272E+02 | -0.125E+01 | -0.469E+01 |
| 13 | 0.500E+00 | 0.320E+02 | 0.324E+02 | -0.390E+00 | -0.121E+01 |
| 14 | 0.500E+00 | 0.420E+02 | 0.324E+02 | 0.961E+01 | 0.258E+02 |
| 15 | 0.500E+00 | 0.450E+02 | 0.324E+02 | 0.126E+02 | 0.326E+02 |
| 16 | 0.330E+00 | 0.470E+02 | 0.415E+02 | 0.551E+01 | 0.125E+02 |
| 17 | 0.130E+00 | 0.750E+02 | 0.738E+02 | 0.119E+01 | 0.159E+01 |
| 18 | 0.700E-01 | 0.910E+02 | 0.108E+03 | -0.167E+02 | -0.168E+02 |
| 19 | 0.500E-01 | 0.105E+03 | 0.129E+03 | -0.237E+02 | -0.203E+02 |
| 20 | 0.380E-01 | 0.118E+03 | 0.145E+03 | -0.270E+02 | -0.205E+02 |
| 21 | 0.320E-01 | 0.145E+03 | 0.154E+03 | -0.870E+01 | -0.582E+01 |
| 22 | 0.250E-01 | 0.226E+03 | 0.163E+03 | 0.631E+02 | 0.324E+02 |

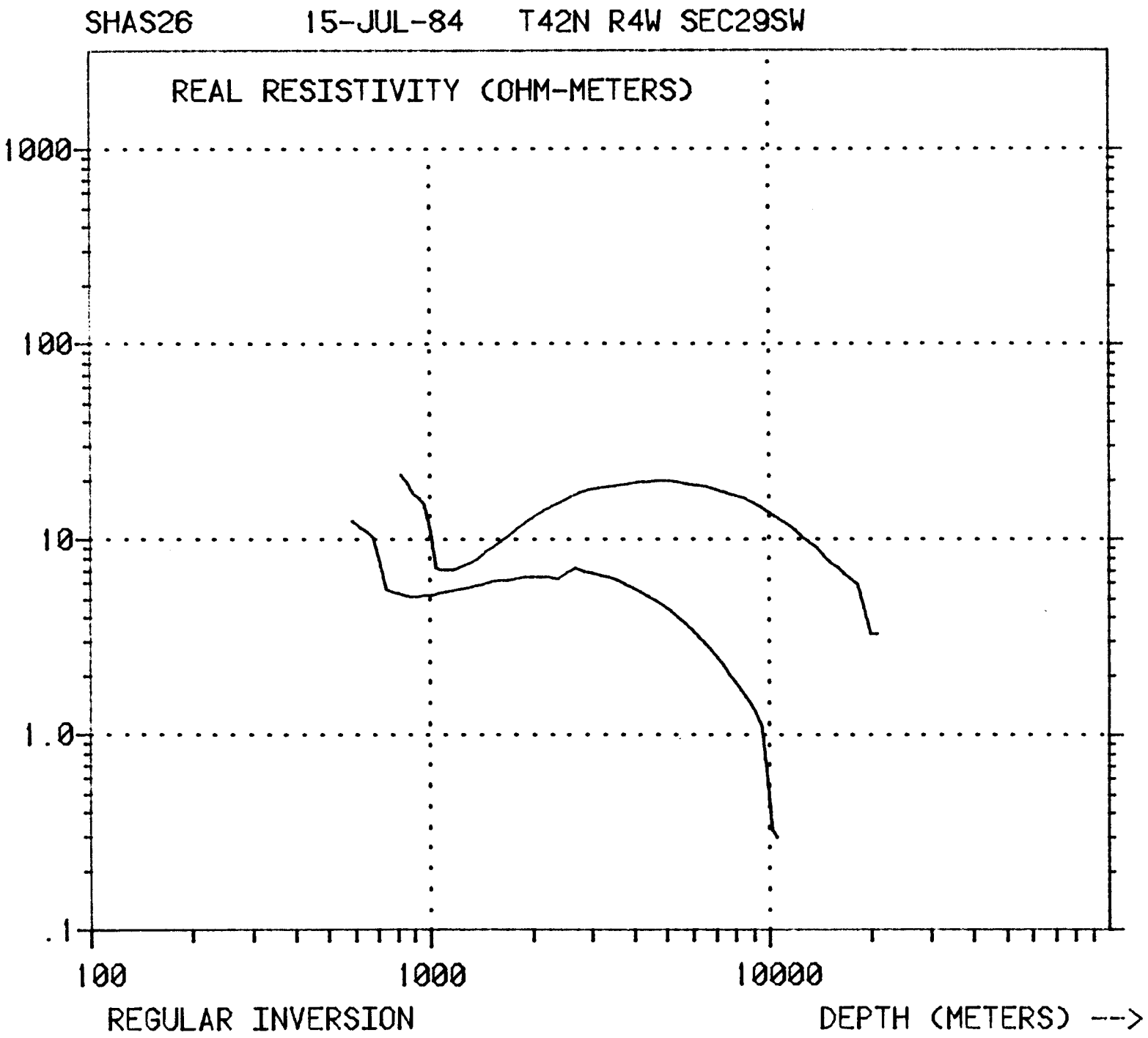
MEAN PERCENT ERROR = 0.1768E+02
MAXIMUM PERCENT ERROR = 0.3411E+02
MAX. ERROR OCCURED AT OBSERVATION 8

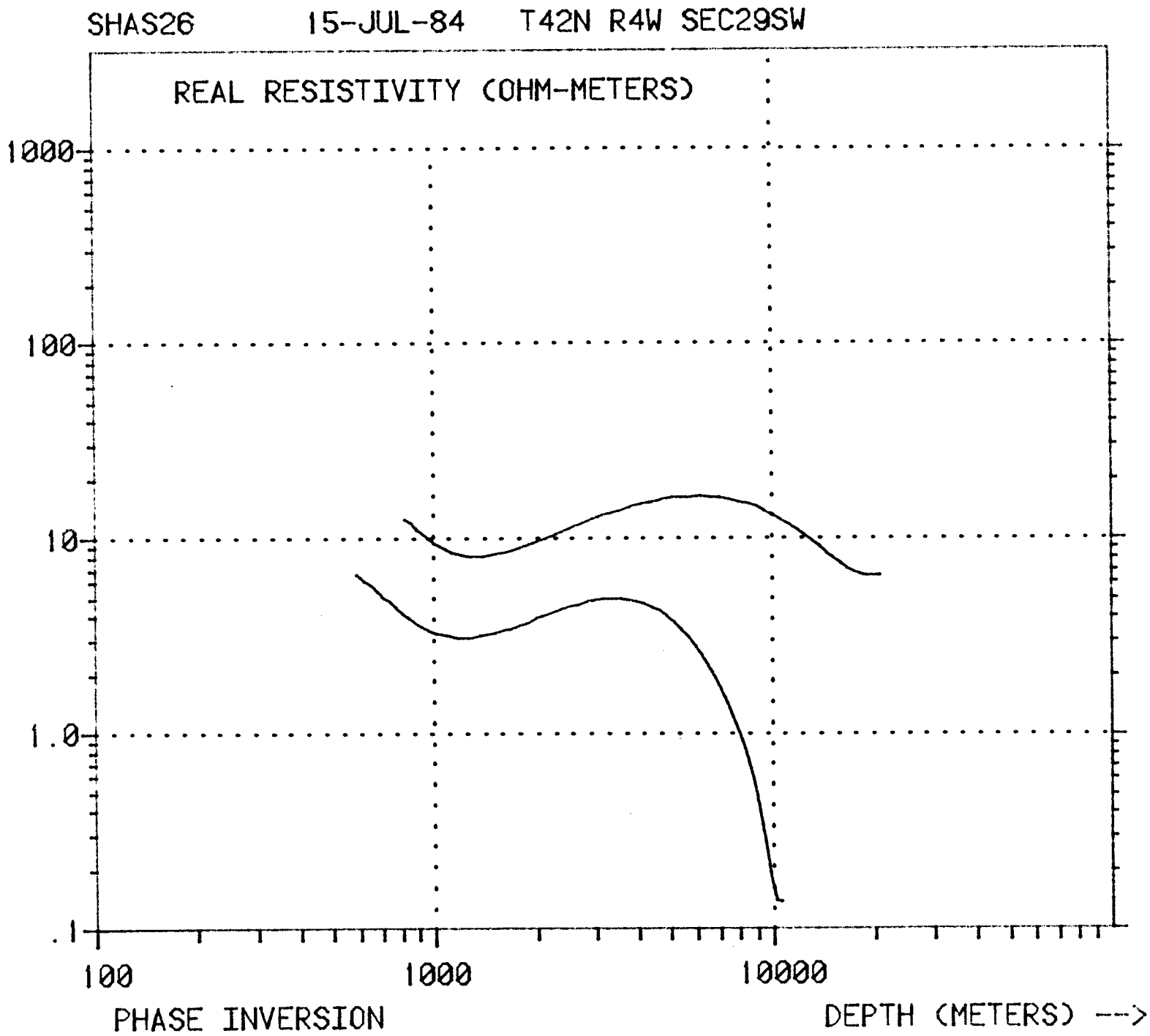

2.5
p (log)
2.0
1.5
1.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS26 15-JUL-84 T42N R4W SEC29SW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

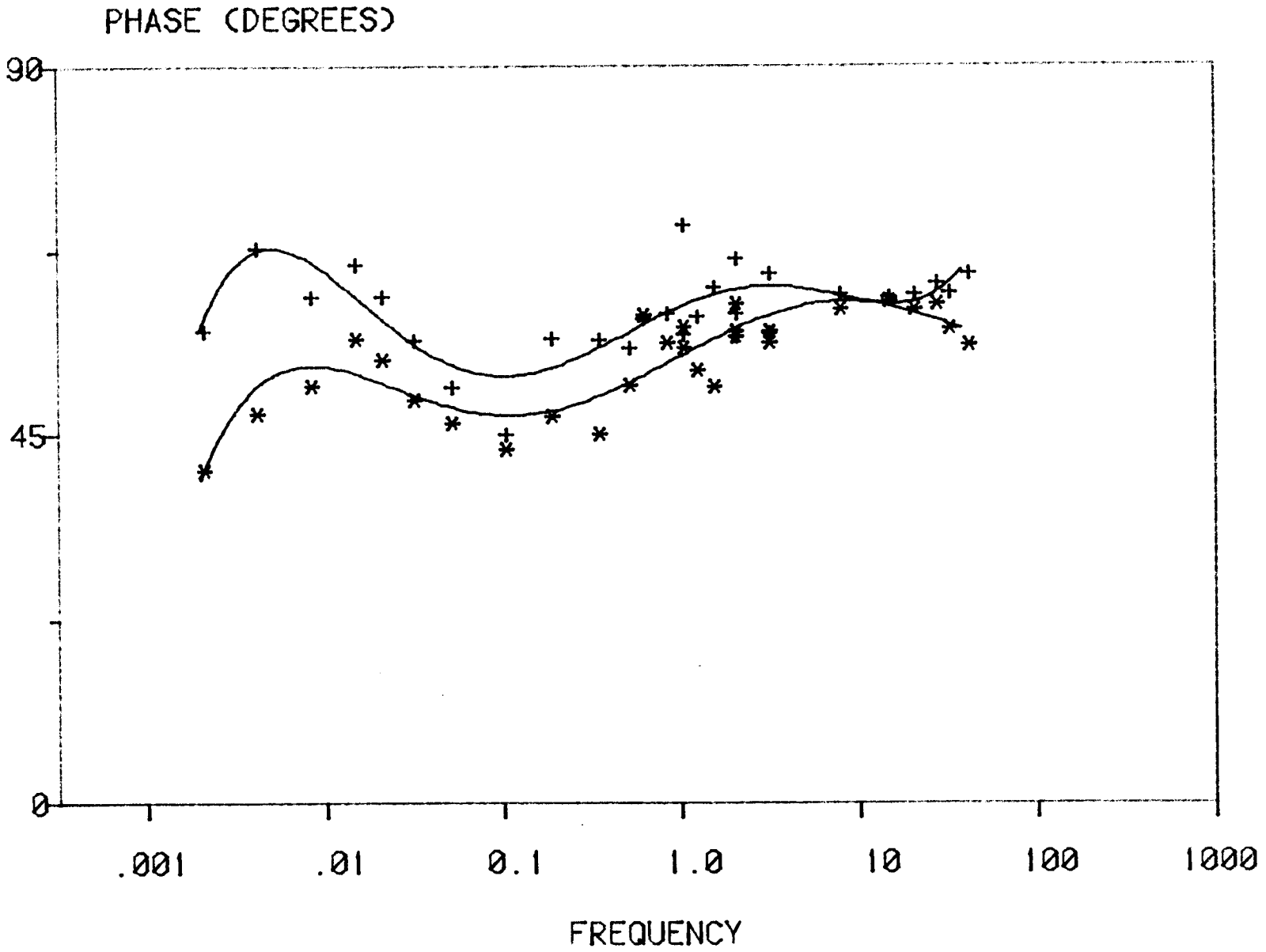



| | | | |
|---|---|---|---|
| Resistivity | 0038.52 | 0009.90 | 0001.14 |
| Thickness | | 0559.80 | 5821.52 |
| Depth | 0000.00 | 0559.80 | 6381.32 |


SHAS26 15-JUL-84 T42N R4W SEC29SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS26 15-JUL-84 T42N R4W SEC29SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS26 15-JUL-84 T42N R4W SEC29SW



THE SITE IS: SHAS26 200 HZ 15-JUL-84 T42N R4W SEC29SW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 5.38 | 18.86 | 1 | 8.11 | 3.70 |
| 0.0020 | 3.11 | 13.10 | 2 | 7.96 | 1.37 |
| 0.0040 | 3.05 | 13.19 | 3 | 4.61 | 0.99 |
| 0.0080 | 5.09 | 17.27 | 4 | 0.49 | 0.17 |
| 0.0143 | 6.94 | 21.56 | 5 | 0.35 | 0.18 |
| 0.0200 | 8.24 | 25.49 | 6 | 0.60 | 0.11 |
| 0.0303 | 10.07 | 28.23 | 7 | 0.49 | 0.07 |
| 0.0500 | 11.05 | 27.92 | 8 | 0.11 | 0.02 |
| 0.1000 | 9.32 | 28.80 | 9 | 0.17 | 0.01 |
| 0.1818 | 12.04 | 26.90 | 10 | 0.12 | 0.00 |
| 0.3333 | 13.03 | 21.20 | 11 | 0.08 | 0.00 |
| 0.5000 | 12.80 | 22.96 | 12 | 0.05 | 0.00 |
| 0.5988 | 15.83 | 29.81 | 13 | 0.25 | 0.01 |
| 0.8000 | 18.70 | 30.40 | 14 | 0.55 | 0.00 |
| 1.0000 | 15.96 | 28.47 | 15 | 0.05 | 0.00 |
| 1.0000 | 19.70 | 34.84 | 16 | 0.04 | 0.01 |
| 1.2048 | 15.03 | 28.48 | 17 | 0.29 | 0.00 |
| 1.4925 | 16.02 | 26.28 | 18 | 0.13 | 0.00 |
| 2.0000 | 18.80 | 30.46 | 19 | 0.04 | 0.00 |
| 2.0000 | 20.98 | 35.63 | 20 | 0.03 | 0.00 |
| 2.0000 | 21.05 | 38.38 | 21 | 0.03 | 0.00 |
| 3.0303 | 21.58 | 39.36 | 22 | 0.02 | 0.00 |
| 3.0303 | 19.98 | 36.18 | 23 | 0.03 | 0.00 |
| 7.6923 | 28.53 | 57.10 | 24 | 0.06 | 0.00 |
| 14.2857 | 33.49 | 65.99 | 25 | 0.03 | 0.00 |
| 20.0000 | 37.48 | 72.79 | 26 | 0.02 | 0.00 |
| 26.3158 | 40.64 | 72.97 | 27 | 0.01 | 0.00 |
| 31.2500 | 44.54 | 80.12 | 28 | 0.01 | 0.00 |
| 40.0000 | 41.90 | 85.37 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS26 200 HZ 15-JUL-84 T42N R4W SEC29SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.180E+02 | 0.443E+01 | 44. | 40. | 128. | 0.0411 | 0.1002 | 3.2943 | 0.36 |
| H | SEC | 0.197E+02 | 0.633E+01 | 53. | 47. | 128. | 0.2785 | 0.6964 | 8.90 | 0.39 |
| E | 500.0 | 0.142E+02 | 0.313E+01 | 41. | 57. | 128. | 0.0545 | 0.1467 | 0.9307 | 0.20 |
| H | SEC | 0.120E+02 | 0.308E+01 | 40. | 60. | 128. | 0.0700 | 0.1016 | 157.30 | 0.16 |
| E | 250.0 | 0.148E+02 | 0.406E+01 | 47. | 62. | 128. | 0.0467 | 0.8936 | 0.2653 | 0.05 |
| H | SEC | 0.116E+02 | 0.205E+01 | 49. | 74. | 128. | 0.1351 | 0.3940 | 89.40 | 0.14 |
| E | 125.0 | 0.169E+02 | 0.573E+01 | 52. | 64. | 128. | 0.0256 | 0.0743 | 0.6054 | 0.07 |
| H | SEC | 0.176E+02 | 0.444E+01 | 51. | 60. | 128. | 0.0418 | 0.0208 | 134.60 | 0.10 |
| E | 70.0 | 0.217E+02 | 0.722E+01 | 57. | 66. | 128. | 0.0495 | 0.0537 | 0.3212 | 0.14 |
| H | SEC | 0.214E+02 | 0.667E+01 | 57. | 66. | 128. | 0.0489 | 0.0148 | 146.50 | 0.12 |
| E | 50.0 | 0.258E+02 | 0.846E+01 | 55. | 62. | 128. | 0.0257 | 0.1094 | 0.2575 | 0.12 |
| H | SEC | 0.252E+02 | 0.802E+01 | 55. | 62. | 128. | 0.0301 | 0.0592 | 147.10 | 0.13 |
| E | 33.0 | 0.287E+02 | 0.102E+02 | 49. | 57. | 128. | 0.0315 | 0.1038 | 0.2167 | 0.10 |
| H | SEC | 0.278E+02 | 0.992E+01 | 50. | 57. | 128. | 0.0705 | 0.0584 | 138.50 | 0.11 |
| E | 20.0 | 0.280E+02 | 0.111E+02 | 46. | 51. | 128. | 0.0419 | 0.0162 | 0.1641 | 0.09 |
| H | SEC | 0.278E+02 | 0.110E+02 | 47. | 51. | 128. | 0.0135 | 0.0108 | 139.00 | 0.11 |

AVERAGE # 8
SHAS26 200 HZ 15-JUL-84 T42N R4W SEC29SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.281E+02 | 0.118E+02 | 39. | 43. | 128. | 0.0588 | 0.0658 | 0.0850 | 0.19 |
| H | SEC | 0.295E+02 | 0.687E+01 | 49. | 48. | 128. | 0.0512 | 0.0669 | 141.40 | 0.11 |
| E | 5.5 | 0.270E+02 | 0.142E+02 | 45. | 55. | 128. | 0.0978 | 0.0322 | 0.0388 | 0.11 |
| H | SEC | 0.268E+02 | 0.988E+01 | 50. | 58. | 128. | 0.0830 | 0.0527 | 134.90 | 0.13 |
| E | 3.0 | 0.221E+02 | 0.159E+02 | 45. | 57. | 128. | 0.0307 | 0.0421 | 0.0195 | 0.13 |
| H | SEC | 0.203E+02 | 0.102E+02 | 46. | 56. | 128. | 0.0292 | 0.0493 | 142.20 | 0.08 |
| E | 2.0 | 0.235E+02 | 0.147E+02 | 50. | 55. | 128. | 0.0467 | 0.0682 | 0.0156 | 0.06 |
| H | SEC | 0.224E+02 | 0.109E+02 | 52. | 57. | 128. | 0.0323 | 0.0733 | 124.80 | 0.04 |
| E | 1.7 | 0.335E+02 | 0.203E+02 | 57. | 59. | 128. | 0.2135 | 0.0975 | 0.0062 | 0.22 |
| H | SEC | 0.261E+02 | 0.113E+02 | 63. | 60. | 128. | 0.1881 | 0.1292 | 138.10 | 0.25 |
| E | 1.2 | 0.305E+02 | 0.208E+02 | 56. | 58. | 128. | 0.1682 | 0.3029 | 0.0037 | 0.17 |
| H | SEC | 0.303E+02 | 0.166E+02 | 57. | 62. | 128. | 0.3126 | 0.4270 | 151.00 | 0.16 |
| E | 1.0 | 0.288E+02 | 0.170E+02 | 56. | 57. | 140. | 0.0678 | 0.0357 | 0.0060 | 0.04 |
| H | HZ | 0.275E+02 | 0.155E+02 | 57. | 57. | 140. | 0.0843 | 0.0457 | 123.30 | 0.05 |

AVERAGE # 8
SHAS26 200 HZ 15-JUL-84 T42N R4W SEC29SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.351E+02 | 0.214E+02 | 59. | 61. | 140. | 0.2185 | 0.1580 | 0.0459 | 0.05 |
| H | HZ | 0.346E+02 | 0.180E+02 | 58. | 81. | 140. | 0.2809 | 0.3566 | 36.50 | 0.18 |
| E | 1.2 | 0.291E+02 | 0.167E+02 | 54. | 60. | 140. | 0.2172 | 0.3703 | 0.0037 | 0.06 |
| H | HZ | 0.279E+02 | 0.134E+02 | 53. | 59. | 140. | 0.2236 | 0.2806 | 170.10 | 0.05 |
| E | 1.5 | 0.269E+02 | 0.191E+02 | 52. | 62. | 140. | 0.1750 | 0.1396 | 0.0038 | 0.08 |
| H | HZ | 0.257E+02 | 0.130E+02 | 51. | 64. | 140. | 0.1794 | 0.2549 | 169.30 | 0.09 |
| E | 2.0 | 0.330E+02 | 0.234E+02 | 58. | 66. | 140. | 0.2649 | 0.0168 | 0.0049 | 0.05 |
| H | HZ | 0.279E+02 | 0.141E+02 | 58. | 67. | 140. | 0.1751 | 0.0827 | 0.00 | 0.02 |
| E | 2.0 | 0.364E+02 | 0.227E+02 | 56. | 57. | 140. | 0.1038 | 0.0791 | 0.0322 | 0.06 |
| H | HZ | 0.349E+02 | 0.193E+02 | 58. | 57. | 140. | 0.0606 | 0.1319 | 42.00 | 0.05 |
| E | 2.0 | 0.421E+02 | 0.234E+02 | 59. | 59. | 140. | 0.3816 | 0.0407 | 0.0057 | 0.03 |
| H | HZ | 0.346E+02 | 0.187E+02 | 63. | 61. | 140. | 0.0000 | 0.1320 | 150.40 | 0.05 |

AVERAGE # 8
SHAS26 200 HZ 15-JUL-84 T42N R4W SEC29SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.411E+02 | 0.238E+02 | 56. | 58. | 140. | 0.0370 | 0.0921 | 0.0148 | 0.04 |
| H | HZ | 0.376E+02 | 0.193E+02 | 57. | 57. | 140. | 0.0633 | 0.0790 | 43.90 | 0.09 |
| E | 3.0 | 0.382E+02 | 0.245E+02 | 56. | 63. | 140. | 0.1288 | 0.0737 | 0.0185 | 0.04 |
| H | HZ | 0.342E+02 | 0.155E+02 | 60. | 67. | 140. | 0.0588 | 0.0952 | 50.00 | 0.06 |
| E | 7.7 | 0.584E+02 | 0.304E+02 | 60. | 62. | 140. | 0.1496 | 0.1838 | 0.0044 | 0.02 |
| H | HZ | 0.558E+02 | 0.267E+02 | 61. | 63. | 140. | 0.2285 | 0.3311 | 130.40 | 0.02 |
| E | 14.3 | 0.693E+02 | 0.355E+02 | 60. | 61. | 140. | 0.4294 | 0.6677 | 0.0085 | 0.03 |
| H | HZ | 0.627E+02 | 0.314E+02 | 63. | 62. | 140. | 0.6184 | 0.4977 | 129.80 | 0.06 |
| E | 20.0 | 0.784E+02 | 0.408E+02 | 60. | 62. | 140. | 0.1359 | 0.4905 | 0.0092 | 0.02 |
| H | HZ | 0.672E+02 | 0.342E+02 | 62. | 63. | 140. | 0.5068 | 0.5972 | 128.80 | 0.04 |
| E | 26.3 | 0.823E+02 | 0.472E+02 | 59. | 63. | 140. | 0.3766 | 0.5861 | 0.0113 | 0.02 |
| H | HZ | 0.636E+02 | 0.340E+02 | 63. | 65. | 140. | 0.2777 | 1.1863 | 128.10 | 0.06 |
| E | 31.2 | 0.863E+02 | 0.485E+02 | 58. | 61. | 140. | 0.2501 | 0.6663 | 0.0230 | 0.04 |
| H | HZ | 0.739E+02 | 0.406E+02 | 58. | 64. | 140. | 0.2004 | 0.7462 | 131.30 | 0.05 |
| E | 40.0 | 0.878E+02 | 0.496E+02 | 56. | 56. | 140. | 0.1459 | 0.4944 | 0.1241 | 0.03 |
| H | HZ | 0.830E+02 | 0.342E+02 | 57. | 74. | 140. | 0.0722 | 0.5138 | 25.90 | 0.09 |

SHAS26 200 HZ 15-JUL-84 T42N R4W SEC29SW

THE NUMBER OF LAYERS = 3
THE NUMBER OF FREQUENCIES TAKEN = 26
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2500E+02 | | 0.0000E+00 |
| | | 0.9000E+03 | |
| 2 | 0.8000E+01 | | 0.9000E+03 |
| | | 0.9100E+04 | |
| 3 | 0.5000E+00 | | 0.1000E+05 |

FREQUENCY RANGE ( 0.2000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3853E+02 | | 0.0000E+00 |
| | | 0.5598E+03 | |
| 2 | 0.9908E+01 | | 0.5598E+03 |
| | | 0.5822E+04 | |
| 3 | 0.1145E+01 | | 0.6381E+04 |

MEAN PERCENT VARIATION IS 0.9332E+01

ERROR ANALYSIS

R-SQUARED = 0.998E+00

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 25 | 0.360E+04 | 0.144E+03 | 0.160E+00 |
| MODEL | 4 | 0.359E+04 | 0.898E+03 | 0.833E+05 |
| RESID | 21 | 0.226E+00 | 0.108E-01 | |

STANDARD ERROR = 0.104E+00

DTEST FOR MEANS =-0.171E-05

NOISE TO SIGNAL RATIO = 0.346E+00 PERCENT

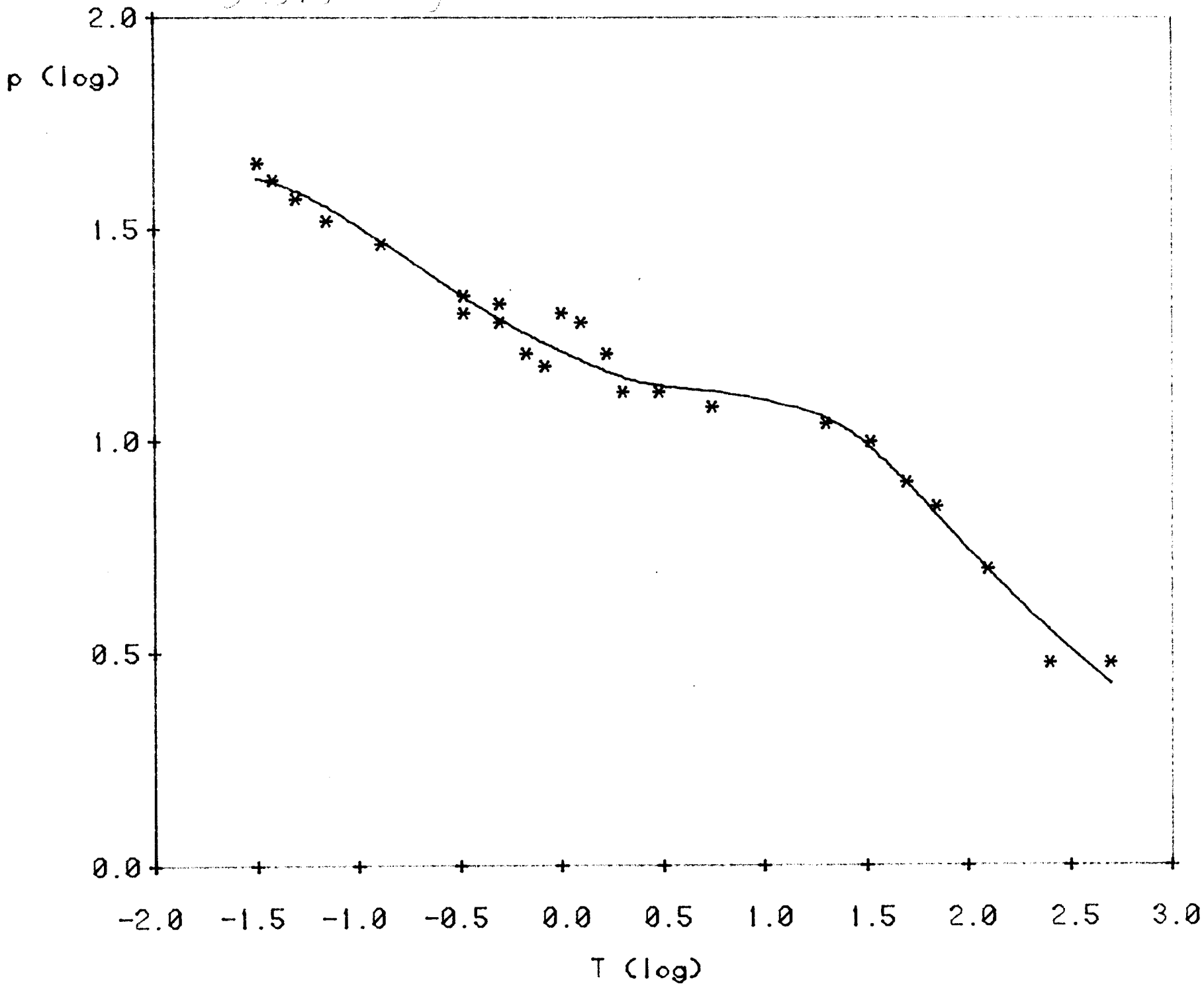
SHAS26 200 HZ 15-JUL-84 T42N R4W SEC29SW

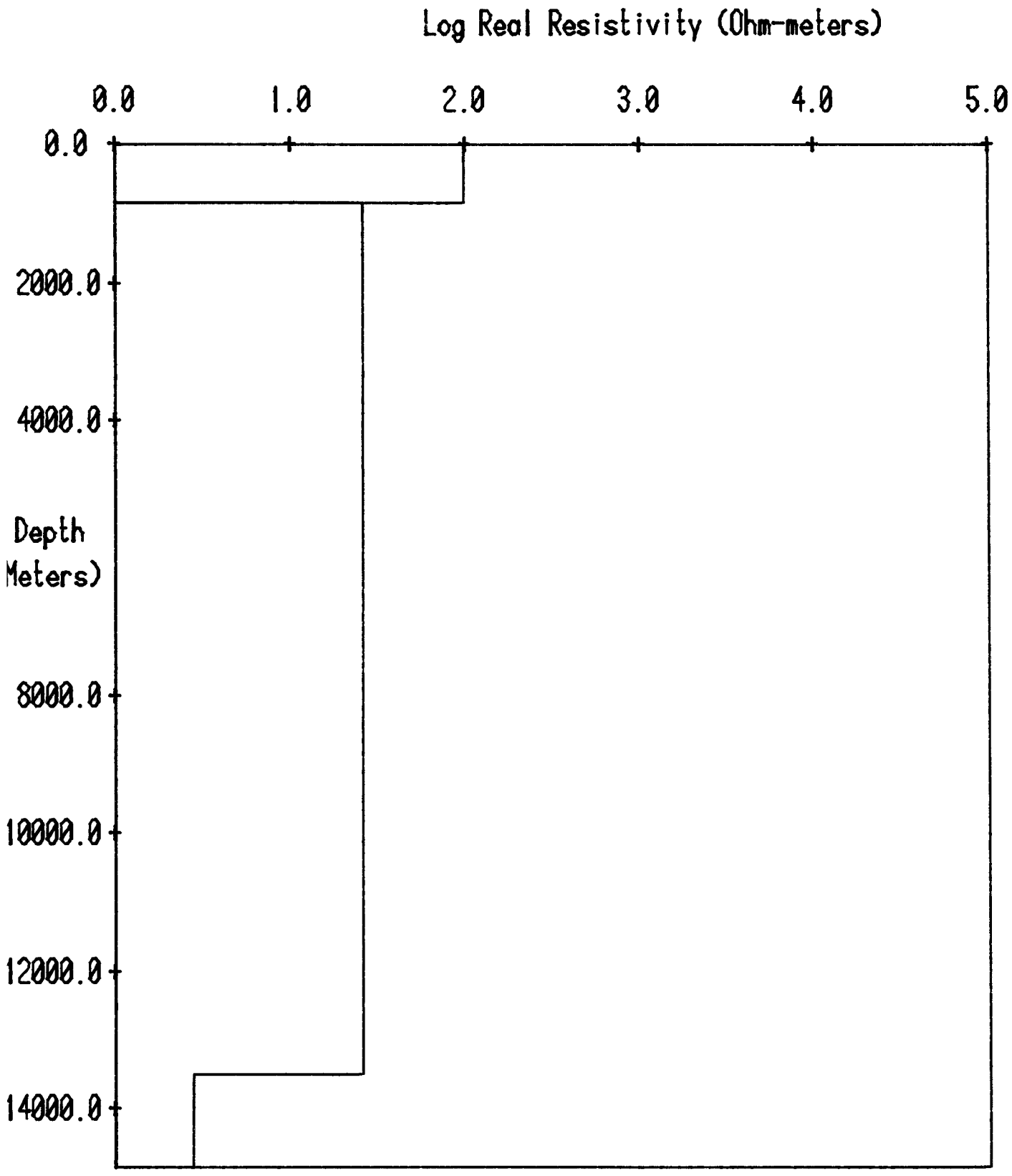
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.500E+03 | 0.300E+01 | 0.270E+01 | 0.304E+00 | 0.107E+02 |
| 2 | 0.250E+03 | 0.300E+01 | 0.357E+01 | -0.571E+00 | -0.174E+02 |
| 3 | 0.125E+03 | 0.500E+01 | 0.497E+01 | 0.256E-01 | 0.513E+00 |
| 4 | 0.700E+02 | 0.700E+01 | 0.672E+01 | 0.285E+00 | 0.415E+01 |
| 5 | 0.500E+02 | 0.800E+01 | 0.799E+01 | 0.150E-01 | 0.187E+00 |
| 6 | 0.330E+02 | 0.100E+02 | 0.974E+01 | 0.263E+00 | 0.267E+01 |
| 7 | 0.200E+02 | 0.110E+02 | 0.118E+02 | -0.770E+00 | -0.676E+01 |
| 8 | 0.550E+01 | 0.120E+02 | 0.133E+02 | -0.126E+01 | -0.994E+01 |
| 9 | 0.300E+01 | 0.130E+02 | 0.134E+02 | -0.390E+00 | -0.296E+01 |
| 10 | 0.200E+01 | 0.130E+02 | 0.141E+02 | -0.111E+01 | -0.819E+01 |
| 11 | 0.167E+01 | 0.160E+02 | 0.146E+02 | 0.142E+01 | 0.930E+01 |
| 12 | 0.125E+01 | 0.190E+02 | 0.155E+02 | 0.353E+01 | 0.205E+02 |
| 13 | 0.100E+01 | 0.200E+02 | 0.162E+02 | 0.376E+01 | 0.207E+02 |
| 14 | 0.830E+00 | 0.150E+02 | 0.170E+02 | -0.196E+01 | -0.123E+02 |
| 15 | 0.670E+00 | 0.160E+02 | 0.179E+02 | -0.188E+01 | -0.111E+02 |
| 16 | 0.500E+00 | 0.190E+02 | 0.193E+02 | -0.339E+00 | -0.177E+01 |
| 17 | 0.500E+00 | 0.210E+02 | 0.193E+02 | 0.166E+01 | 0.824E+01 |
| 18 | 0.500E+00 | 0.210E+02 | 0.193E+02 | 0.166E+01 | 0.824E+01 |
| 19 | 0.330E+00 | 0.220E+02 | 0.219E+02 | 0.139E+00 | 0.635E+00 |
| 20 | 0.330E+00 | 0.200E+02 | 0.219E+02 | -0.186E+01 | -0.889E+01 |
| 21 | 0.130E+00 | 0.290E+02 | 0.297E+02 | -0.656E+00 | -0.224E+01 |
| 22 | 0.700E-01 | 0.330E+02 | 0.359E+02 | -0.285E+01 | -0.829E+01 |
| 23 | 0.500E-01 | 0.370E+02 | 0.389E+02 | -0.185E+01 | -0.488E+01 |
| 24 | 0.380E-01 | 0.410E+02 | 0.407E+02 | 0.299E+00 | 0.732E+00 |
| 25 | 0.320E-01 | 0.450E+02 | 0.415E+02 | 0.352E+01 | 0.814E+01 |
| 26 | 0.250E-01 | 0.420E+02 | 0.420E+02 | -0.233E-01 | -0.554E-01 |

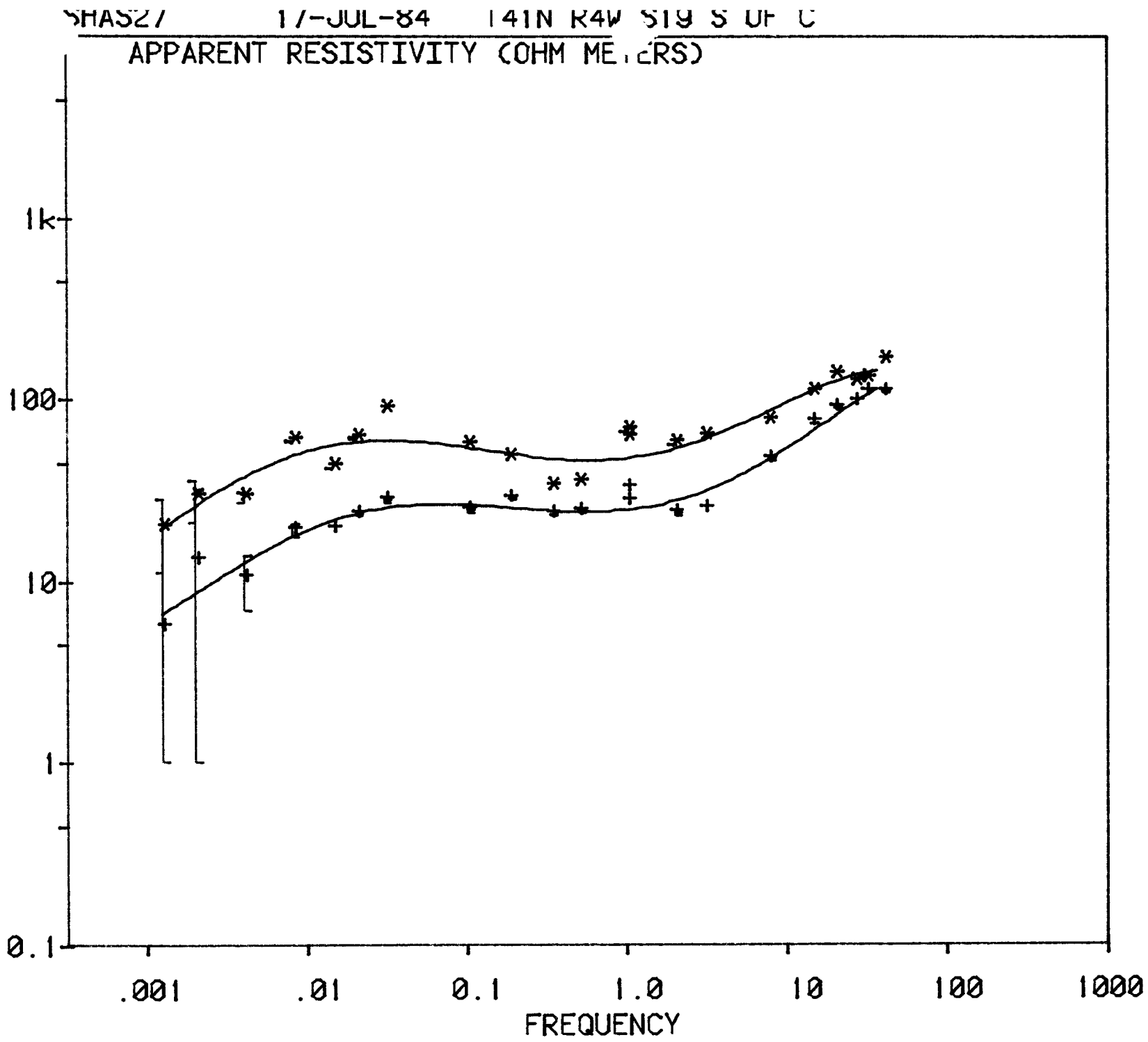
MEAN PERCENT ERROR = [illegible]

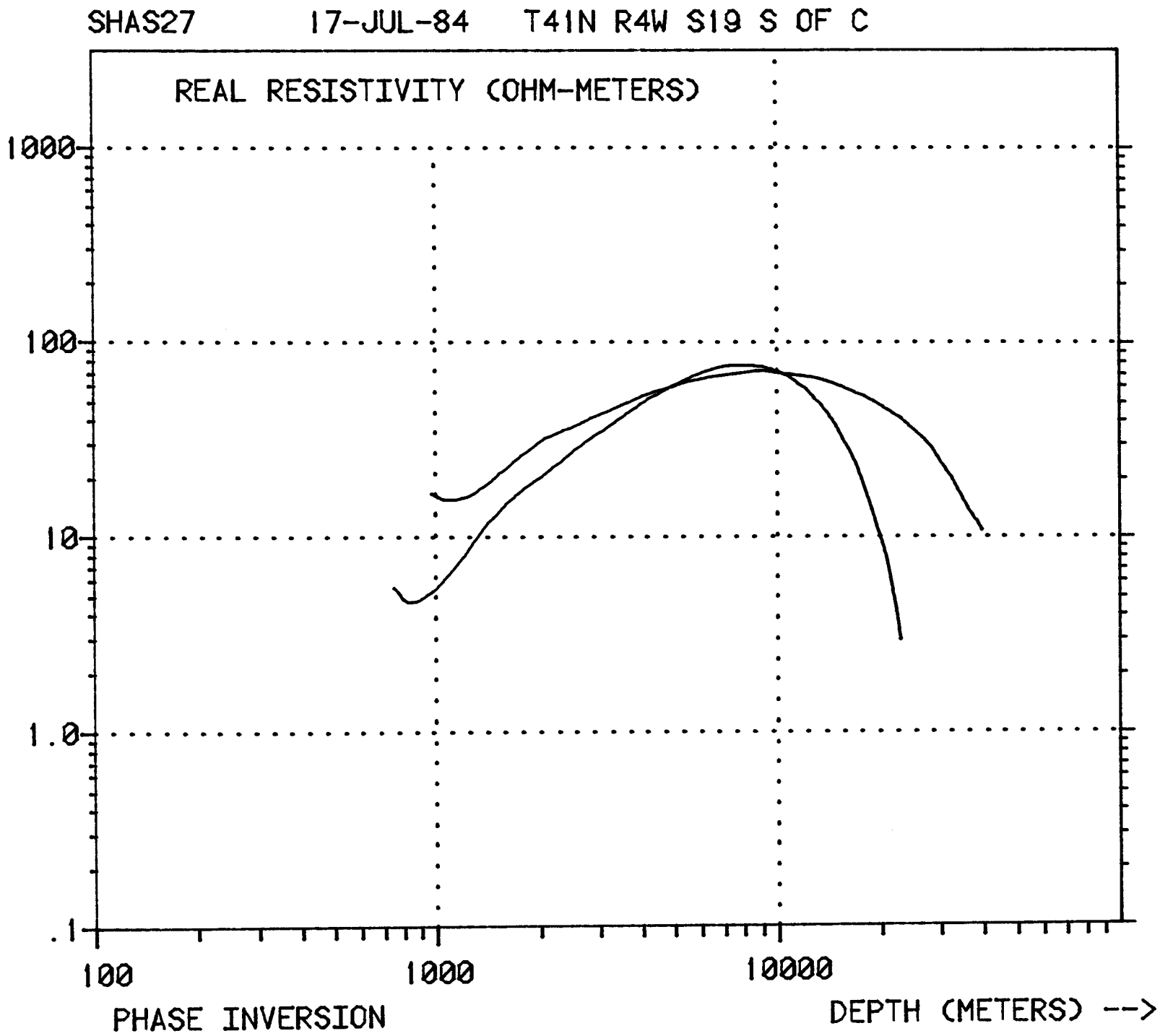
```
MAXIMUM PERCENT ERROR = 0.2072E+02
MAX. ERROR OCCURED AT OBSERVATION  13
```

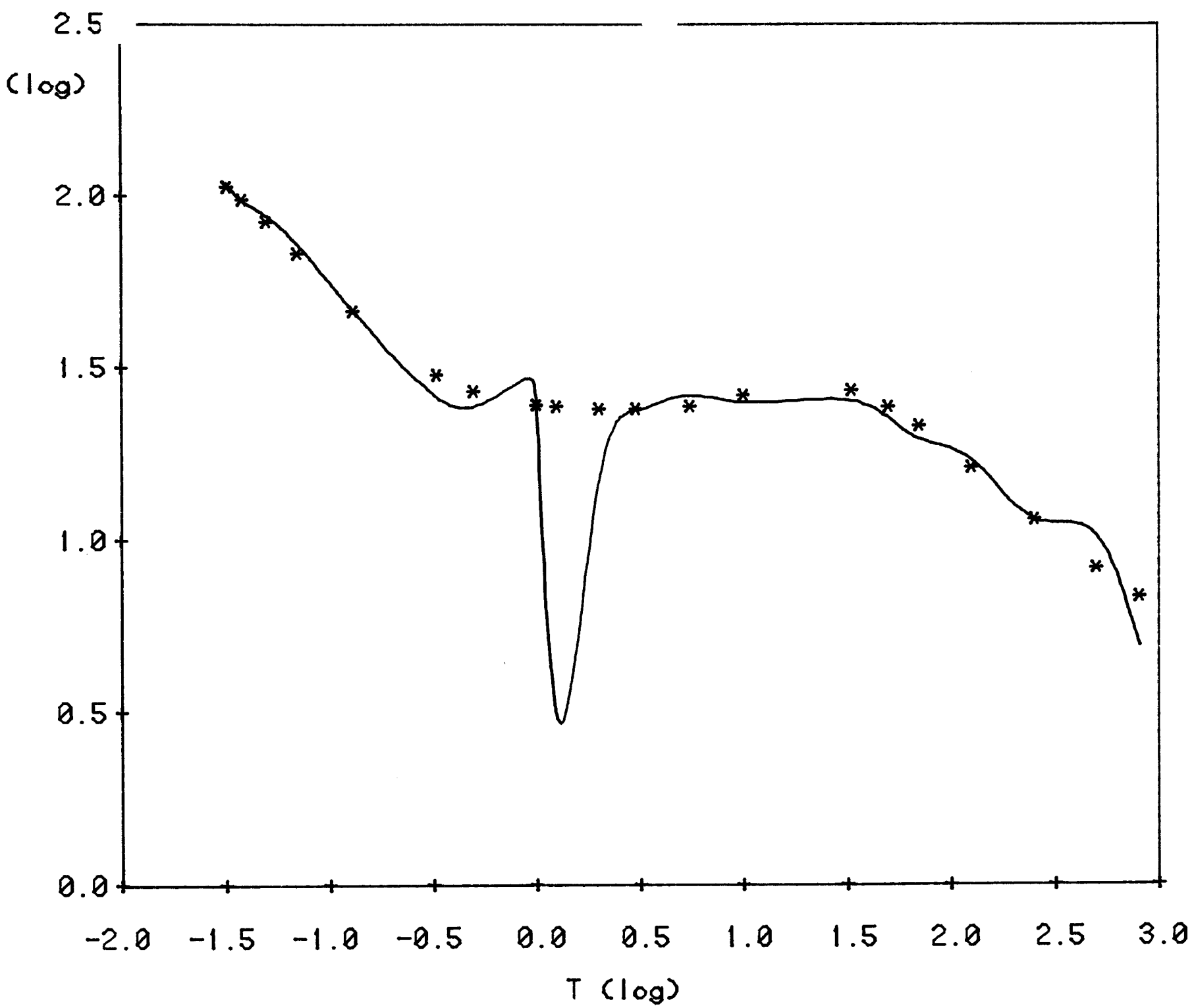

2.0
1.5
1.0
0.5
0.0
p (log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
T (log)




| | | | | |
|---|---|---|---|---|
| Resistivity | 0099.50 | 0000.53 | 0025.82 | 0002.79 |
| Thickness | | 0831.94 | 0017.70 | 12659.58 |
| Depth | 0000.00 | 0831.94 | 0849.64 | 13509.22 |


APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAS27 17-JUL-84 T41N R4W S19 S OF C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->


2.5
(log)
2.0
1.5
1.0
0.5
0.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
T (log)

THE SITE IS: SHAS27 200 HZ 17-JUL-84 T41N R4W S19 S OF C

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 5.46 | 19.49 | 1 | 14.92 | 8.56 |
| 0.0020 | 12.68 | 28.26 | 2 | 18.82 | 7.36 |
| 0.0040 | 10.22 | 28.73 | 3 | 3.46 | 1.70 |
| 0.0080 | 18.74 | 58.38 | 4 | 1.54 | 0.38 |
| 0.0143 | 18.91 | 41.58 | 5 | 0.03 | 0.16 |
| 0.0200 | 23.04 | 60.53 | 6 | 0.34 | 0.18 |
| 0.0303 | 27.48 | 87.59 | 7 | 0.58 | 0.10 |
| 0.0500 | 11.79 | 165.86 | 8 | 0.29 | 0.05 |
| 0.1000 | 24.08 | 54.98 | 9 | 0.29 | 0.07 |
| 0.1818 | 28.14 | 46.62 | 10 | 0.20 | 0.01 |
| 0.3333 | 22.86 | 32.41 | 11 | 0.23 | 0.01 |
| 0.5000 | 23.69 | 34.34 | 12 | 0.06 | 0.00 |
| 0.5988 | 0.00 | 0.00 | 13 | 0.03 | 0.16 |
| 0.8000 | 0.00 | 0.00 | 14 | 0.34 | 0.18 |
| 1.0000 | 26.80 | 59.94 | 15 | 0.05 | 0.00 |
| 1.0000 | 31.54 | 65.94 | 16 | 0.66 | 0.03 |
| 1.2048 | 0.00 | 0.00 | 17 | 0.20 | 0.01 |
| 1.4925 | 0.00 | 0.00 | 18 | 0.23 | 0.01 |
| 2.0000 | 0.00 | 0.00 | 19 | 0.06 | 0.00 |
| 2.0000 | 23.31 | 55.91 | 20 | 0.06 | 0.00 |
| 2.0000 | 55.98 | 163.53 | 21 | 0.51 | 0.01 |
| 3.0303 | 24.72 | 60.94 | 22 | 0.02 | 0.00 |
| 3.0303 | 0.00 | 0.00 | 23 | 0.20 | 0.01 |
| 7.6923 | 46.28 | 74.59 | 24 | 0.09 | 0.00 |
| 14.2857 | 73.75 | 108.60 | 25 | 0.01 | 0.00 |
| 20.0000 | 89.08 | 135.93 | 26 | 0.03 | 0.00 |
| 26.3158 | 96.24 | 124.28 | 27 | 0.02 | 0.00 |
| 31.2500 | 109.14 | 128.65 | 28 | 0.00 | 0.00 |
| 40.0000 | 109.01 | 163.59 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS27 200 HZ 17-JUL-84 T41N R4W S19 S OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.164E+02 | 0.989E+01 | 42. | 66. | 79. | 0.2414 | 0.4836 | 1.9279 | 0.49 |
| H | SEC | 0.226E+02 | 0.103E+01 | 26. | 72. | 65. | 0.3701 | 0.2859 | 160.40 | 0.34 |
| E | 500.0 | 0.268E+02 | 0.113E+02 | 75. | 47. | 28. | 0.2322 | 0.0000 | 1.4825 | 0.58 |
| H | SEC | 0.297E+02 | 0.140E+02 | 72. | 80. | 32. | 0.2737 | 1.0004 | 174.90 | 0.75 |
| E | 250.0 | 0.356E+02 | 0.124E+02 | 64. | 56. | 56. | 0.2714 | 0.2966 | 0.9120 | 0.35 |
| H | SEC | 0.218E+02 | 0.803E+01 | 68. | 53. | 62. | 0.1820 | 0.1651 | 135.10 | 0.53 |
| E | 125.0 | 0.699E+02 | 0.257E+02 | 88. | 3. | 34. | 0.1740 | 0.1624 | 0.6650 | 0.36 |
| H | SEC | 0.468E+02 | 0.118E+02 | 8. | 4. | 16. | 0.0668 | 0.3234 | 36.00 | 0.51 |
| E | 70.0 | 0.461E+02 | 0.252E+02 | 13. | 28. | 46. | 0.0835 | 0.1071 | 0.4566 | 0.37 |
| H | SEC | 0.371E+02 | 0.126E+02 | 10. | 19. | 55. | 0.0955 | 0.0616 | 40.00 | 0.26 |
| E | 50.0 | 0.686E+02 | 0.245E+02 | 26. | 30. | 30. | 0.1549 | 0.5417 | 0.2642 | 0.40 |
| H | SEC | 0.525E+02 | 0.215E+02 | 23. | 27. | 45. | 0.1321 | 0.2867 | 41.60 | 0.29 |
| E | 33.0 | 0.104E+03 | 0.243E+02 | 38. | 54. | 40. | 0.0797 | 0.2496 | 0.4080 | 0.41 |
| H | SEC | 0.715E+02 | 0.307E+02 | 51. | 47. | 43. | 0.0321 | 0.1269 | 35.80 | 0.42 |
| E | 20.0 | 0.223E+03 | 0.137E+02 | 83. | 6. | 38. | 0.0698 | 0.2356 | 0.2384 | 0.59 |
| H | SEC | 0.109E+03 | 0.983E+01 | 68. | 61. | 30. | 0.0000 | 0.1602 | 60.00 | 0.27 |

AVERAGE # 8
SHAS27 200 HZ 17-JUL-84 T41N R4W S19 S OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.573E+02 | 0.275E+02 | 86. | 2. | 72. | 0.1658 | 0.1917 | 0.1022 | 0.15 |
| H | SEC | 0.526E+02 | 0.206E+02 | 81. | 1. | 69. | 0.1745 | 0.0703 | 133.40 | 0.21 |
| E | 5.5 | 0.540E+02 | 0.306E+02 | 10. | 17. | 67. | 0.0605 | 0.0954 | 0.0679 | 0.17 |
| H | SEC | 0.392E+02 | 0.257E+02 | 15. | 21. | 50. | 0.1362 | 0.1032 | 123.80 | 0.19 |
| E | 3.0 | 0.325E+02 | 0.241E+02 | 26. | 33. | 82. | 0.1641 | 0.0881 | 0.0232 | 0.21 |
| H | SEC | 0.323E+02 | 0.216E+02 | 29. | 33. | 89. | 0.0755 | 0.0000 | 131.50 | 0.24 |
| E | 2.0 | 0.416E+02 | 0.247E+02 | 33. | 43. | 50. | 0.0573 | 0.0294 | 0.0145 | 0.06 |
| H | SEC | 0.271E+02 | 0.227E+02 | 52. | 39. | 95. | 0.1936 | 0.1098 | 137.60 | 0.14 |
| E | 1.7 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.0 | 0.674E+02 | 0.278E+02 | 41. | 47. | 71. | 0.1497 | 0.0317 | 0.0086 | 0.15 |
| H | HZ | 0.525E+02 | 0.258E+02 | 55. | 51. | 61. | 0.1845 | 0.1050 | 137.90 | 0.13 |

AVERAGE # 8
SHAS27 200 HZ 17-JUL-84 T41N R4W S19 S OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.868E+02 | 0.365E+02 | 19. | 37. | 12. | 0.4700 | 0.1506 | 0.0074 | 0.28 |
| H | HZ | 0.451E+02 | 0.266E+02 | 32. | 33. | 13. | 0.4634 | 0.1331 | 142.80 | 0.66 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.589E+02 | 0.285E+02 | 49. | 53. | 65. | 0.2487 | 0.0200 | 0.0049 | 0.10 |
| H | HZ | 0.529E+02 | 0.181E+02 | 44. | 62. | 32. | 0.1932 | 0.1214 | 150.50 | 0.19 |
| E | 2.0 | 0.122E+03 | 0.369E+02 | 34. | 80. | 23. | 0.2162 | 0.1123 | 0.0137 | 0.36 |
| H | HZ | 0.205E+03 | 0.751E+02 | 81. | 67. | 44. | 1.6671 | 0.4049 | 50.10 | 0.43 |

AVERAGE # 8
SHAS27 200 HZ 17-JUL-84 T41N R4W S19 S OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.669E+02 | 0.313E+02 | 49. | 57. | 59. | 0.0692 | 0.0358 | 0.0051 | 0.09 |
| H | HZ | 0.550E+02 | 0.181E+02 | 49. | 57. | 35. | 0.1283 | 0.0489 | 148.80 | 0.14 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 7.7 | 0.842E+02 | 0.560E+02 | 65. | 68. | 65. | 0.6188 | 0.6324 | 0.0049 | 0.08 |
| H | HZ | 0.650E+02 | 0.365E+02 | 66. | 69. | 61. | 0.5764 | 0.6713 | 152.50 | 0.11 |
| E | 14.3 | 0.123E+03 | 0.824E+02 | 65. | 70. | 60. | 0.7118 | 0.6290 | 0.0073 | 0.07 |
| H | HZ | 0.938E+02 | 0.651E+02 | 71. | 70. | 74. | 0.0000 | 0.8906 | 132.40 | 0.05 |
| E | 20.0 | 0.142E+03 | 0.103E+03 | 67. | 69. | 62. | 0.5578 | 0.4938 | 0.0130 | 0.05 |
| H | HZ | 0.130E+03 | 0.747E+02 | 69. | 69. | 67. | 0.3796 | 0.5792 | 136.30 | 0.01 |
| E | 26.3 | 0.135E+03 | 0.117E+03 | 60. | 68. | 52. | 0.5972 | 1.2676 | 0.0212 | 0.04 |
| H | HZ | 0.114E+03 | 0.754E+02 | 61. | 74. | 74. | 0.9803 | 1.4191 | 140.30 | 0.02 |
| E | 31.2 | 0.132E+03 | 0.130E+03 | 68. | 53. | 128. | 0.4101 | 1.0015 | 0.0417 | 0.04 |
| H | HZ | 0.126E+03 | 0.886E+02 | 58. | 75. | 75. | 0.5174 | 0.9997 | 121.20 | 0.11 |
| E | 40.0 | 0.176E+03 | 0.126E+03 | 59. | 66. | 78. | 0.3050 | 0.3102 | 0.0608 | 0.10 |
| H | HZ | 0.152E+03 | 0.918E+02 | 53. | 68. | 68. | 0.4654 | 0.3106 | 139.50 | 0.15 |

SHAS27 200 HZ 17-JUL-84 T41N R4W S19 S OF C

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 22
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1000E+03 | | 0.0000E+00 |
| | | 0.8000E+03 | |
| 2 | 0.8000E+01 | | 0.8000E+03 |
| | | 0.5000E+03 | |
| 3 | 0.3000E+02 | | 0.1300E+04 |
| | | 0.1000E+05 | |
| 4 | 0.6000E+01 | | 0.1130E+05 |

FREQUENCY RANGE ( 0.1250E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.9951E+02 | | 0.0000E+00 |
| | | 0.8319E+03 | |
| 2 | 0.5380E+00 | | 0.8319E+03 |
| | | 0.1770E+02 | |
| 3 | 0.2582E+02 | | 0.8496E+03 |
| | | 0.1266E+05 | |
| 4 | 0.2797E+01 | | 0.1351E+05 |

MEAN PERCENT VARIATION IS 0.1609E+02

ERROR ANALYSIS

R-SQUARED = 0.999E+00

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 21 | 0.248E+05 | 0.118E+04 | 0.286E+00 |
| MODEL | 6 | 0.248E+05 | 0.413E+04 | 0.109E+06 |
| RESID | 15 | 0.570E+00 | 0.380E-01 | |

STANDARD ERROR = 0.195E+00

DTEST FOR MEANS = 0.561E-04

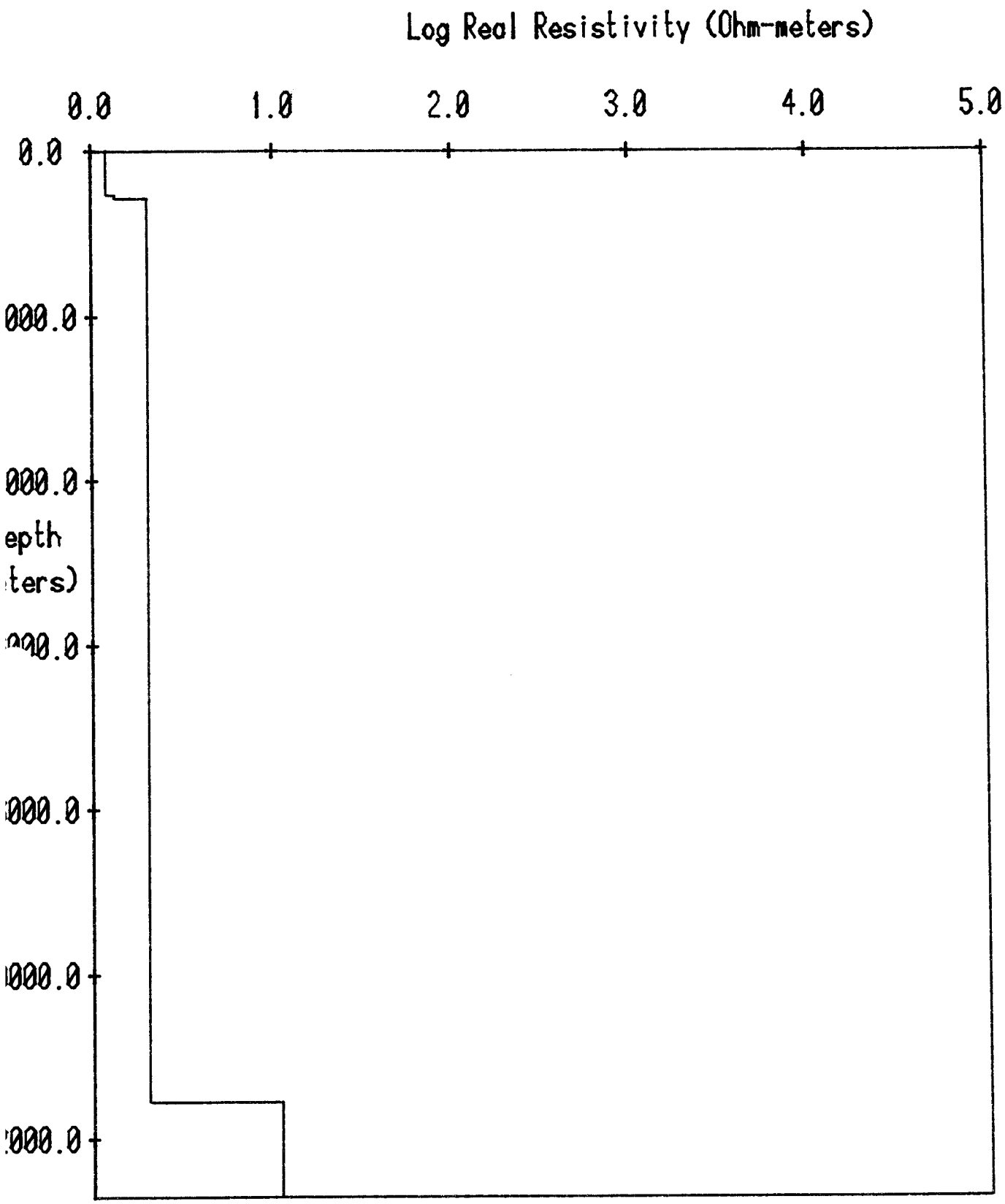
NOISE TO SIGNAL RATIO = 0.303E+00 PERCENT

SHAS27 200 HZ 17-JUL-84 T41N R4W S19 S OF C

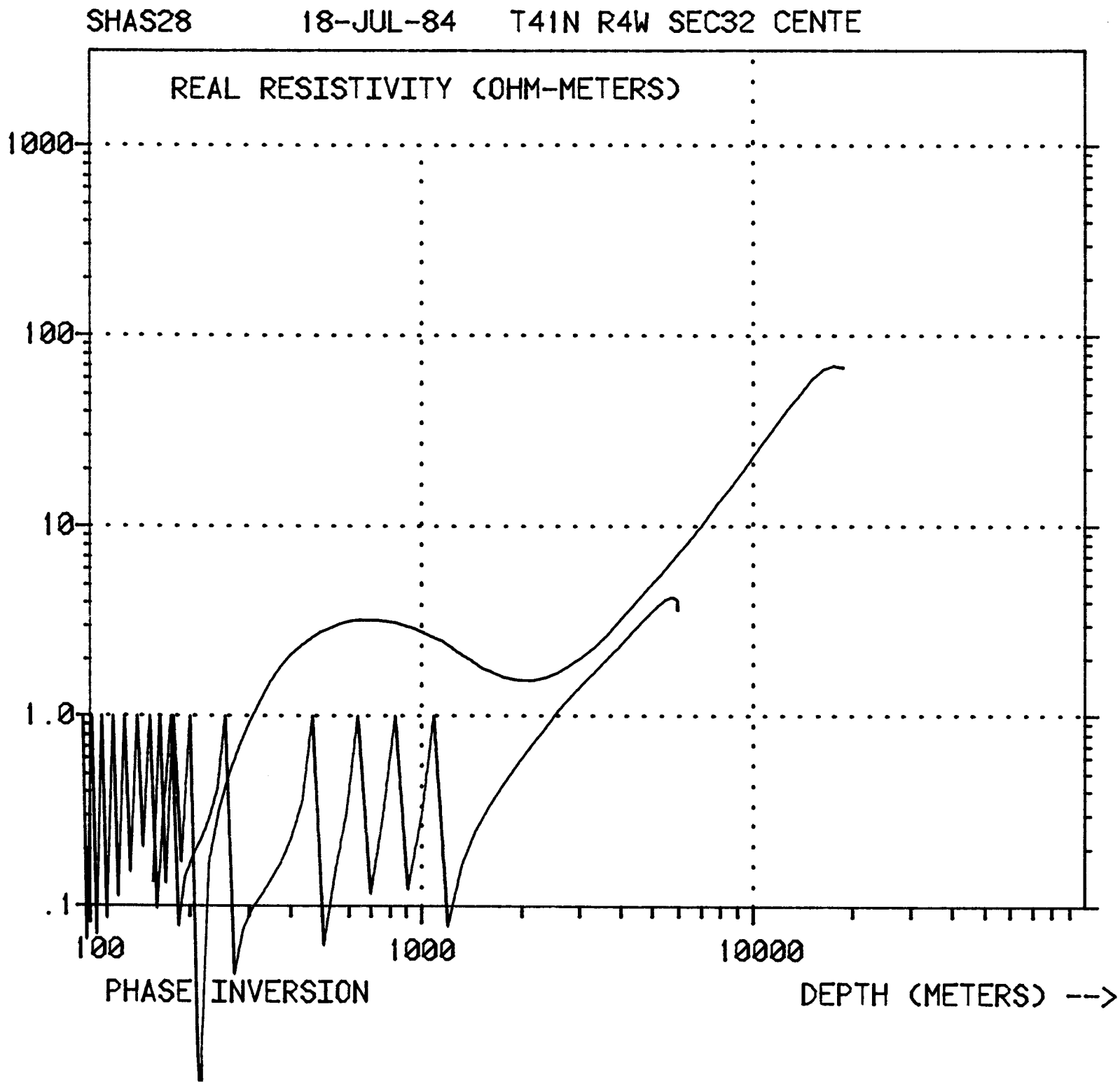
ERROR STRUCTURE OF FITTED MODEL

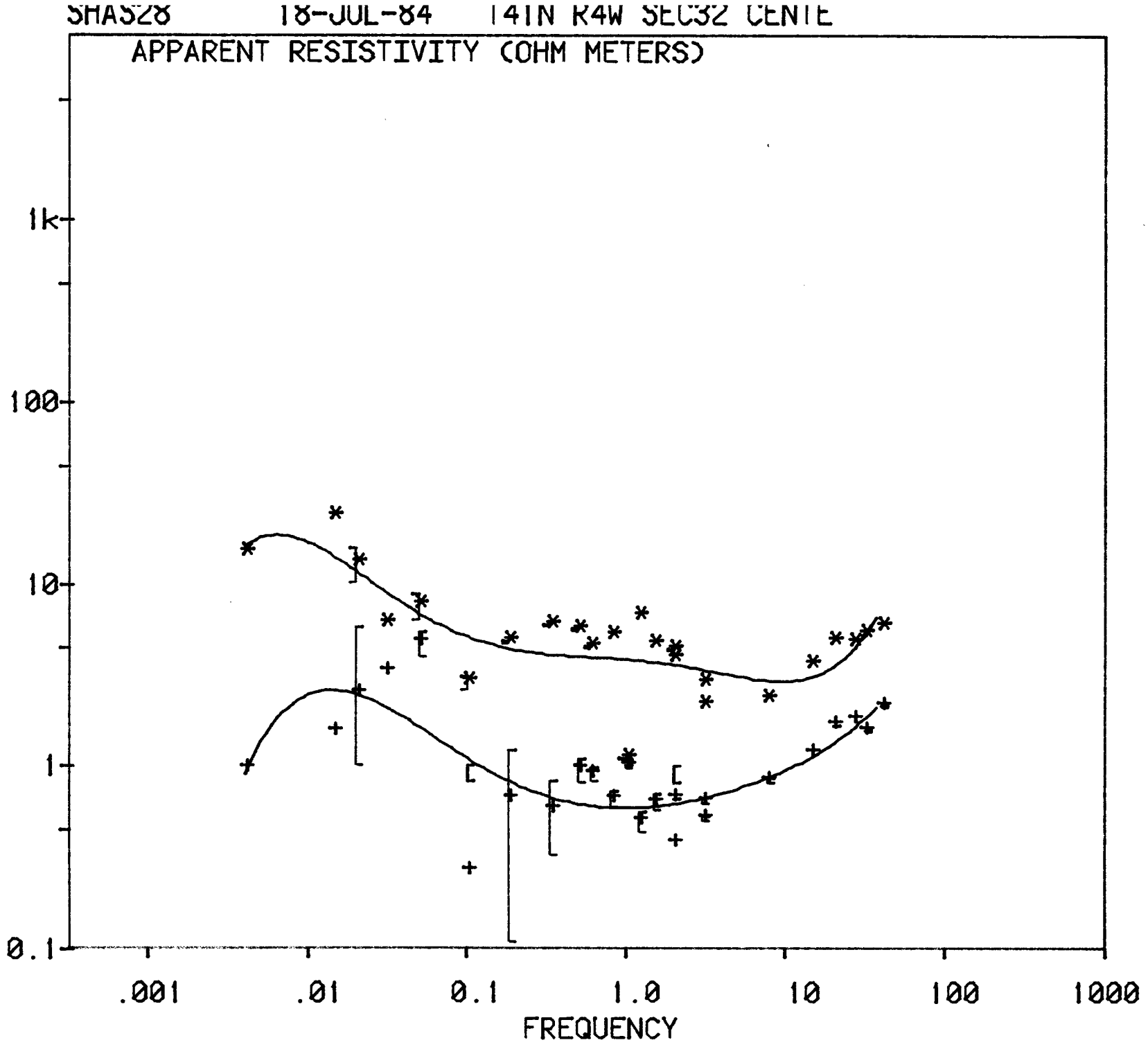
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.800E+03 | 0.500E+01 | 0.691E+01 | -0.191E+01 | -0.320E+02 |
| 2 | 0.500E+03 | 0.130E+02 | 0.836E+01 | 0.464E+01 | 0.435E+02 |
| 3 | 0.250E+03 | 0.100E+02 | 0.115E+02 | -0.153E+01 | -0.142E+02 |
| 4 | 0.125E+03 | 0.190E+02 | 0.163E+02 | 0.266E+01 | 0.151E+02 |
| 5 | 0.700E+02 | 0.190E+02 | 0.215E+02 | -0.251E+01 | -0.124E+02 |
| 6 | 0.500E+02 | 0.230E+02 | 0.245E+02 | -0.152E+01 | -0.641E+01 |
| 7 | 0.330E+02 | 0.270E+02 | 0.274E+02 | -0.412E+00 | -0.151E+01 |
| 8 | 0.100E+02 | 0.240E+02 | 0.263E+02 | -0.234E+01 | -0.929E+01 |
| 9 | 0.550E+01 | 0.280E+02 | 0.244E+02 | 0.357E+01 | 0.136E+02 |
| 10 | 0.300E+01 | 0.230E+02 | 0.240E+02 | -0.103E+01 | -0.438E+01 |
| 11 | 0.200E+01 | 0.240E+02 | 0.241E+02 | -0.121E+00 | -0.503E+00 |
| 12 | 0.125E+01 | 0.000E+00 | 0.244E+02 | 0.000E+00 | 0.000E+00 |
| 13 | 0.100E+01 | 0.270E+02 | 0.248E+02 | 0.224E+01 | 0.865E+01 |
| 14 | 0.100E+01 | 0.320E+02 | 0.248E+02 | 0.724E+01 | 0.255E+02 |
| 15 | 0.500E+00 | 0.230E+02 | 0.272E+02 | -0.420E+01 | -0.167E+02 |
| 16 | 0.330E+00 | 0.250E+02 | 0.303E+02 | -0.534E+01 | -0.193E+02 |
| 17 | 0.130E+00 | 0.460E+02 | 0.465E+02 | -0.482E+00 | -0.104E+01 |
| 18 | 0.700E-01 | 0.740E+02 | 0.683E+02 | 0.566E+01 | 0.795E+01 |
| 19 | 0.500E-01 | 0.890E+02 | 0.842E+02 | 0.478E+01 | 0.552E+01 |
| 20 | 0.380E-01 | 0.960E+02 | 0.979E+02 | -0.185E+01 | -0.191E+01 |
| 21 | 0.320E-01 | 0.109E+03 | 0.106E+03 | 0.322E+01 | 0.300E+01 |
| 22 | 0.250E-01 | 0.109E+03 | 0.115E+03 | -0.585E+01 | -0.523E+01 |

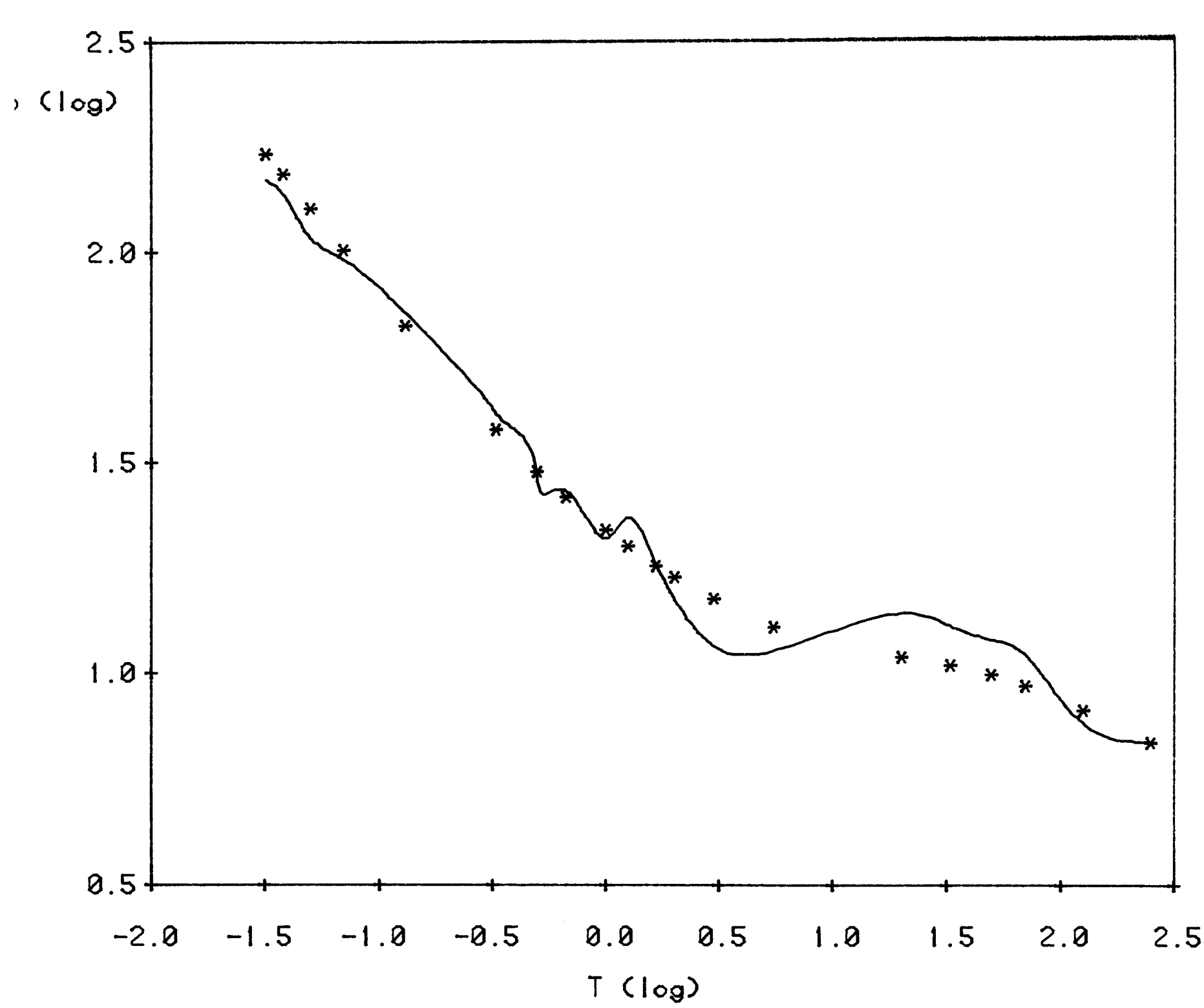
MEAN PERCENT ERROR = 0.1561E+02
MAXIMUM PERCENT ERROR = 0.4348E+02
MAX. ERROR OCCURED AT OBSERVATION 2




| | | | | |
|---|---|---|---|---|
| Resistivity | 0001.22 | 0001.35 | 0002.07 | 0011.24 |
| Thickness | | 0528.04 | 0037.79 | 10985.05 |
| Depth | 0000.00 | 0528.04 | 0565.83 | 11550.88 |


SHAS28 18-JUL-84 T41N R4W SEC32 CENTE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->


SHA528 18-JUL-84 141N R4W SEC32 CENTE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


2.5
(log)
2.0
1.5
1.0
0.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)

THE SITE IS: SHAS28 200 HZ 18-JUL-84 T41N R4W SEC32 CENTE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.00 | 0.00 | 1 | 0.00 | 0.00 |
| 0.0020 | 0.00 | 0.00 | 2 | 0.00 | 0.00 |
| 0.0040 | 0.95 | 14.42 | 3 | 3.24 | 2.69 |
| 0.0080 | 0.00 | 0.00 | 4 | 0.00 | 0.00 |
| 0.0143 | 1.50 | 23.06 | 5 | 0.71 | 1.24 |
| 0.0200 | 2.45 | 12.70 | 6 | 0.55 | 0.22 |
| 0.0303 | 3.25 | 5.89 | 7 | 0.54 | 0.09 |
| 0.0500 | 4.65 | 7.45 | 8 | 0.25 | 0.03 |
| 0.1000 | 0.26 | 2.82 | 9 | 0.14 | 0.05 |
| 0.1818 | 0.65 | 4.73 | 10 | 0.07 | 0.04 |
| 0.3333 | 0.57 | 5.80 | 11 | 0.07 | 0.01 |
| 0.5000 | 0.94 | 5.53 | 12 | 0.01 | 0.00 |
| 0.5988 | 0.88 | 4.44 | 13 | 0.06 | 0.00 |
| 0.8000 | 0.65 | 5.13 | 14 | 0.06 | 0.01 |
| 1.0000 | 0.98 | 1.08 | 15 | 0.00 | 0.00 |
| 1.0000 | 4.32 | 38.59 | 16 | 0.42 | 0.01 |
| 1.2048 | 0.49 | 6.45 | 17 | 0.01 | 0.00 |
| 1.4925 | 0.63 | 4.55 | 18 | 0.02 | 0.00 |
| 2.0000 | 0.65 | 3.84 | 19 | 0.02 | 0.00 |
| 2.0000 | 0.37 | 4.27 | 20 | 0.00 | 0.00 |
| 2.0000 | 0.59 | 21.57 | 21 | 0.01 | 0.00 |
| 3.0303 | 0.51 | 2.14 | 22 | 0.00 | 0.00 |
| 3.0303 | 0.64 | 2.81 | 23 | 0.01 | 0.00 |
| 7.6923 | 0.82 | 2.26 | 24 | 0.01 | 0.00 |
| 14.2857 | 1.17 | 3.57 | 25 | 0.00 | 0.00 |
| 20.0000 | 1.63 | 4.77 | 26 | 0.00 | 0.00 |
| 26.3158 | 1.77 | 4.63 | 27 | 0.00 | 0.00 |
| 31.2500 | 1.53 | 5.24 | 28 | 0.00 | 0.00 |
| 40.0000 | 2.09 | 5.72 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS28 200 HZ 18-JUL-84 T41N R4W SEC32 CENTE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 500.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 250.0 | 0.142E+02 | 0.705E+00 | 22. | 47. | 16. | 0.3773 | 0.3046 | 2.4724 | 0.69 |
| H | SEC | 0.147E+02 | 0.119E+01 | 40. | 37. | 16. | 0.0000 | 0.5980 | 105.00 | 0.70 |
| E | 125.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 70.0 | 0.339E+02 | 0.109E+01 | 3. | 15. | 22. | 0.3473 | 0.2446 | 0.7943 | 0.58 |
| H | SEC | 0.122E+02 | 0.190E+01 | 90. | 14. | 30. | 0.9307 | 0.2226 | 60.50 | 0.43 |
| E | 50.0 | 0.182E+02 | 0.234E+01 | 11. | 32. | 29. | 0.0818 | 0.0819 | 0.4470 | 0.41 |
| H | SEC | 0.715E+01 | 0.256E+01 | 6. | 31. | 38. | 0.0642 | 0.0776 | 52.50 | 0.32 |
| E | 33.0 | 0.699E+01 | 0.352E+01 | 32. | 49. | 36. | 0.0968 | 0.0673 | 0.3338 | 0.36 |
| H | SEC | 0.478E+01 | 0.299E+01 | 30. | 50. | 46. | 0.0888 | 0.0589 | 42.00 | 0.34 |
| E | 20.0 | 0.885E+01 | 0.484E+01 | 53. | 69. | 41. | 0.0281 | 0.0373 | 0.3342 | 0.34 |
| H | SEC | 0.605E+01 | 0.446E+01 | 50. | 71. | 46. | 0.0517 | 0.0497 | 180.00 | 0.34 |

AVERAGE # 8
SHAS28 200 HZ 18-JUL-84 T41N R4W SEC32 CENTE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE | RHO MIN ( OHM-M ) | PHI MAX | PHI MIN (DEGREES) | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.434E+01 | 0.180E+00 | 74. | 82. | 42. | 0.0678 | 0.1124 | 0.3606 | 0.78 |
| H | SEC | 0.130E+01 | 0.337E+00 | 88. | 77. | 85. | 0.3364 | 0.0831 | 180.00 | 0.38 |
| E | 5.5 | 0.824E+01 | 0.291E+00 | 2. | 51. | 40. | 0.4894 | 0.0953 | 0.0921 | 0.62 |
| H | SEC | 0.122E+01 | 0.100E+01 | 78. | 34. | 41. | 0.2097 | 0.0304 | 180.00 | 0.35 |
| E | 3.0 | 0.847E+01 | 0.681E+00 | 28. | 1. | 168. | 0.0986 | 0.0613 | 0.0917 | 0.48 |
| H | SEC | 0.312E+01 | 0.453E+00 | 62. | 46. | 136. | 0.0384 | 0.0606 | 180.00 | 0.96 |
| E | 2.0 | 0.598E+01 | 0.939E+00 | 30. | 49. | 51. | 0.0168 | 0.0212 | 0.4729 | 0.20 |
| H | SEC | 0.508E+01 | 0.939E+00 | 69. | 5. | 66. | 0.0357 | 0.0148 | 180.00 | 1.42 |
| E | 1.7 | 0.744E+01 | 0.933E+00 | 34. | 55. | 55. | 0.0000 | 0.0274 | 0.0093 | 0.32 |
| H | SEC | 0.144E+01 | 0.835E+00 | 47. | 17. | 108. | 0.0000 | 0.0130 | 180.00 | 0.08 |
| E | 1.2 | 0.822E+01 | 0.860E+00 | 27. | 61. | 48. | 0.0860 | 0.0438 | 0.0063 | 0.45 |
| H | SEC | 0.205E+01 | 0.440E+00 | 41. | 25. | 81. | 0.0604 | 0.0205 | 180.00 | 0.36 |
| E | 1.0 | 0.143E+01 | 0.129E+01 | 4. | 54. | 51. | 0.0090 | 0.0086 | 0.0017 | 0.33 |
| H | HZ | 0.727E+00 | 0.666E+00 | 74. | 77. | 46. | 0.0135 | 0.0037 | 114.10 | 1.00 |

AVERAGE # 8
SHAS28 200 HZ 18-JUL-84 T41N R4W SEC32 CENTE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.584E+02 | 0.253E+01 | 1. | 27. | 63. | 0.2495 | 0.2437 | 0.0242 | 0.07 |
| H | HZ | 0.187E+02 | 0.611E+01 | 72. | 36. | 75. | 0.1768 | 0.1626 | 180.00 | 0.85 |
| E | 1.2 | 0.959E+01 | 0.501E+00 | 37. | 47. | 59. | 0.0836 | 0.0590 | 0.0092 | 0.50 |
| H | HZ | 0.331E+01 | 0.484E+00 | 40. | 63. | 65. | 0.0547 | 0.0378 | 180.00 | 0.44 |
| E | 1.5 | 0.710E+01 | 0.727E+00 | 47. | 43. | 62. | 0.0998 | 0.0554 | 0.0079 | 0.36 |
| H | HZ | 0.200E+01 | 0.525E+00 | 34. | 71. | 64. | 0.0211 | 0.0312 | 180.00 | 0.54 |
| E | 2.0 | 0.587E+01 | 0.939E+00 | 53. | 50. | 63. | 0.0918 | 0.0508 | 0.0056 | 0.30 |
| H | HZ | 0.180E+01 | 0.367E+00 | 58. | 35. | 110. | 0.0408 | 0.0372 | 180.00 | 0.06 |
| E | 2.0 | 0.774E+01 | 0.549E+00 | 12. | 55. | 61. | 0.0078 | 0.0112 | 0.0297 | 0.51 |
| H | HZ | 0.811E+00 | 0.192E+00 | 57. | 17. | 132. | 0.0195 | 0.0194 | 180.00 | 0.28 |
| E | 2.0 | 0.214E+02 | 0.105E+01 | 50. | 45. | 50. | 0.0617 | 0.1083 | 0.0264 | 0.31 |
| H | HZ | 0.218E+02 | 0.117E+00 | 25. | 8. | 44. | 0.0385 | 0.0701 | 52.60 | 0.74 |

AVERAGE # 8
SHAS28 200 HZ 18-JUL-84 T41N R4W SEC32 CENTE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.320E+01 | 0.907E+00 | 21. | 58. | 61. | 0.0161 | 0.0132 | 0.1923 | 0.36 |
| H | HZ | 0.107E+01 | 0.118E+00 | 66. | 46. | 122. | 0.0126 | 0.0097 | 167.60 | 0.16 |
| E | 3.0 | 0.408E+01 | 0.102E+01 | 61. | 54. | 63. | 0.0460 | 0.0412 | 0.0061 | 0.25 |
| H | HZ | 0.154E+01 | 0.251E+00 | 62. | 48. | 109. | 0.0354 | 0.0223 | 180.00 | 0.14 |
| E | 7.7 | 0.251E+01 | 0.998E+00 | 67. | 64. | 96. | 0.0741 | 0.0764 | 0.0115 | 0.08 |
| H | HZ | 0.201E+01 | 0.648E+00 | 69. | 71. | 111. | 0.0689 | 0.0438 | 52.50 | 0.02 |
| E | 14.3 | 0.371E+01 | 0.115E+01 | 73. | 71. | 104. | 0.0941 | 0.0417 | 0.0588 | 0.09 |
| H | HZ | 0.342E+01 | 0.119E+01 | 75. | 79. | 104. | 0.0214 | 0.0379 | 42.50 | 0.07 |
| E | 20.0 | 0.595E+01 | 0.199E+01 | 72. | 66. | 130. | 0.2600 | 0.0990 | 0.1299 | 0.10 |
| H | HZ | 0.359E+01 | 0.127E+01 | 71. | 73. | 91. | 0.1236 | 0.1287 | 164.40 | 0.08 |
| E | 26.3 | 0.535E+01 | 0.212E+01 | 68. | 63. | 109. | 0.1206 | 0.0911 | 0.0548 | 0.02 |
| H | HZ | 0.391E+01 | 0.143E+01 | 68. | 58. | 102. | 0.0817 | 0.0958 | 139.90 | 0.06 |
| E | 31.2 | 0.579E+01 | 0.206E+01 | 66. | 58. | 103. | 0.0356 | 0.0389 | 0.1757 | 0.05 |
| H | HZ | 0.469E+01 | 0.101E+01 | 67. | 55. | 109. | 0.0463 | 0.0377 | 180.00 | 0.04 |
| E | 40.0 | 0.724E+01 | 0.264E+01 | 67. | 58. | 127. | 0.0865 | 0.1991 | 0.8882 | 0.08 |
| H | HZ | 0.420E+01 | 0.155E+01 | 36. | 82. | 91. | 0.1412 | 0.1830 | 76.00 | 2.06 |

THE SITE IS: SHAS28 200 HZ 18-JUL-84 T41N R4W SEC32 CENTE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.00 | 0.00 | 1 | 0.00 | 0.00 |
| 0.0020 | 0.00 | 0.00 | 2 | 0.00 | 0.00 |
| 0.0040 | 0.95 | 14.42 | 3 | 3.24 | 2.69 |
| 0.0080 | 0.00 | 0.00 | 4 | 0.00 | 0.00 |
| 0.0143 | 1.50 | 23.06 | 5 | 0.71 | 1.24 |
| 0.0200 | 2.45 | 12.70 | 6 | 0.55 | 0.22 |
| 0.0303 | 3.25 | 5.89 | 7 | 0.54 | 0.09 |
| 0.0500 | 4.65 | 7.45 | 8 | 0.25 | 0.03 |
| 0.1000 | 0.26 | 2.82 | 9 | 0.14 | 0.05 |
| 0.1818 | 0.65 | 4.73 | 10 | 0.07 | 0.04 |
| 0.3333 | 0.57 | 5.80 | 11 | 0.07 | 0.01 |
| 0.5000 | 0.94 | 5.53 | 12 | 0.01 | 0.00 |
| 0.5988 | 0.88 | 4.44 | 13 | 0.06 | 0.00 |
| 0.8000 | 0.65 | 5.13 | 14 | 0.06 | 0.01 |
| 1.0000 | 0.98 | 1.08 | 15 | 0.00 | 0.00 |
| 1.0000 | 4.32 | 38.59 | 16 | 0.42 | 0.01 |
| 1.2048 | 0.49 | 6.45 | 17 | 0.01 | 0.00 |
| 1.4925 | 0.63 | 4.55 | 18 | 0.02 | 0.00 |
| 2.0000 | 0.65 | 3.84 | 19 | 0.02 | 0.00 |
| 2.0000 | 0.37 | 4.27 | 20 | 0.00 | 0.00 |
| 2.0000 | 0.59 | 21.57 | 21 | 0.01 | 0.00 |
| 3.0303 | 0.51 | 2.14 | 22 | 0.00 | 0.00 |
| 3.0303 | 0.64 | 2.81 | 23 | 0.01 | 0.00 |
| 7.6923 | 0.82 | 2.26 | 24 | 0.01 | 0.00 |
| 14.2857 | 1.17 | 3.57 | 25 | 0.00 | 0.00 |
| 20.0000 | 1.63 | 4.77 | 26 | 0.00 | 0.00 |
| 26.3158 | 1.77 | 4.63 | 27 | 0.00 | 0.00 |
| 31.2500 | 1.53 | 5.24 | 28 | 0.00 | 0.00 |
| 40.0000 | 2.09 | 5.72 | 29 | 0.00 | 0.00 |

SHAS28 200 HZ 18-JUL-84 T41N R4W SEC32 CENTE

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 24
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1500E+01 | | 0.0000E+00 |
| | | 0.5000E+03 | |
| 2 | 0.5000E+00 | | 0.5000E+03 |
| | | 0.5000E+03 | |
| 3 | 0.1000E+01 | | 0.1000E+04 |
| | | 0.1000E+05 | |
| 4 | 0.1000E+02 | | 0.1100E+05 |

FREQUENCY RANGE ( 0.4000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1226E+01 | | 0.0000E+00 |
| | | 0.5280E+03 | |
| 2 | 0.1353E+01 | | 0.5280E+03 |
| | | 0.3779E+02 | |
| 3 | 0.2072E+01 | | 0.5658E+03 |
| | | 0.1099E+05 | |
| 4 | 0.1125E+02 | | 0.1155E+05 |

MEAN PERCENT VARIATION IS 0.4203E+02

ERROR ANALYSIS

R-SQUARED = 0.549E+00

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 23 | 0.290E+02 | 0.126E+01 | 0.475E+00 |
| MODEL | 6 | 0.159E+02 | 0.265E+01 | 0.106E+02 |
| RESID | 17 | 0.424E+01 | 0.249E+00 | |

STANDARD ERROR = 0.499E+00

DTEST FOR MEANS =-0.374E-02

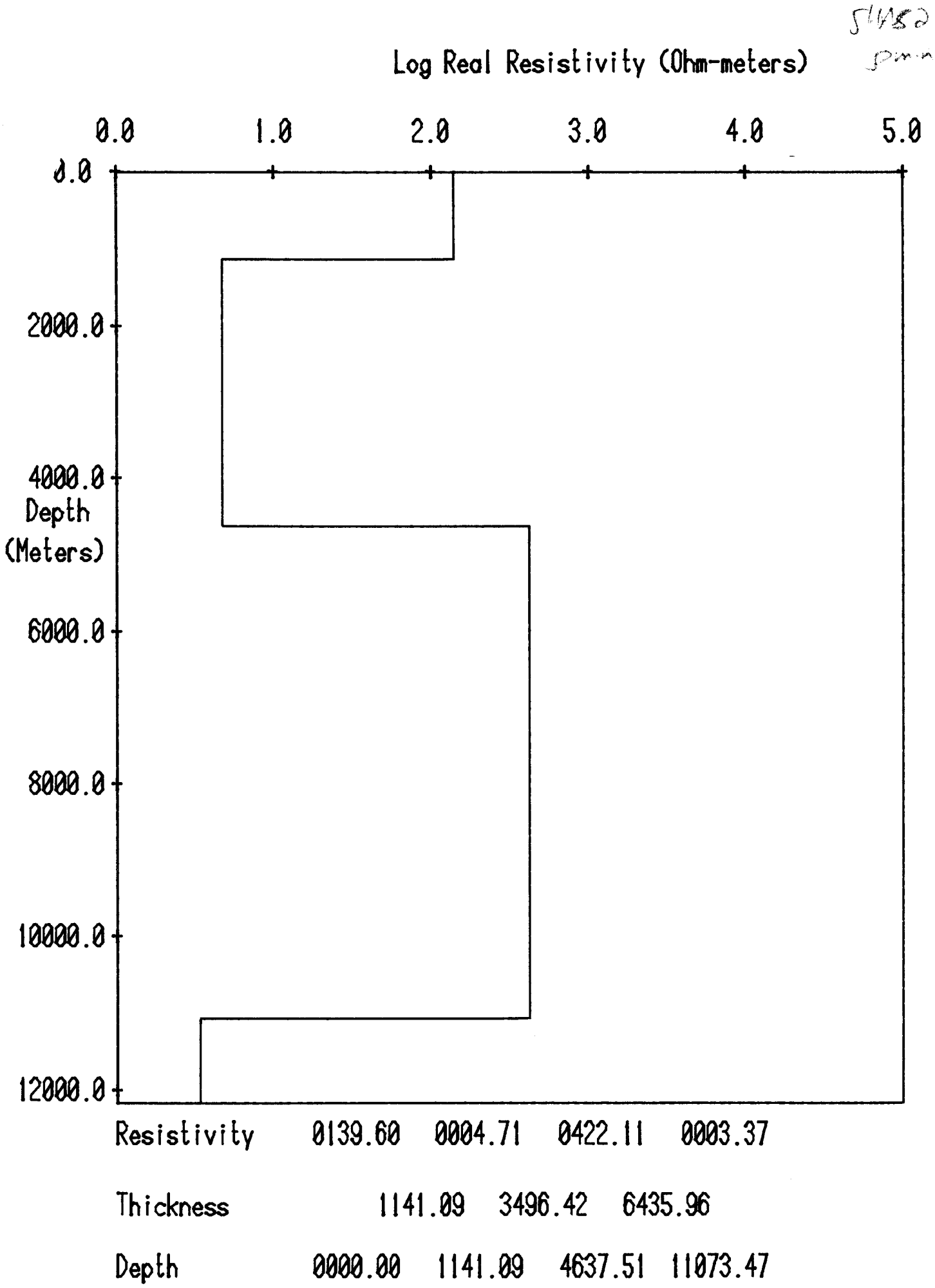
NOISE TO SIGNAL RATIO = 0.307E+02 PERCENT

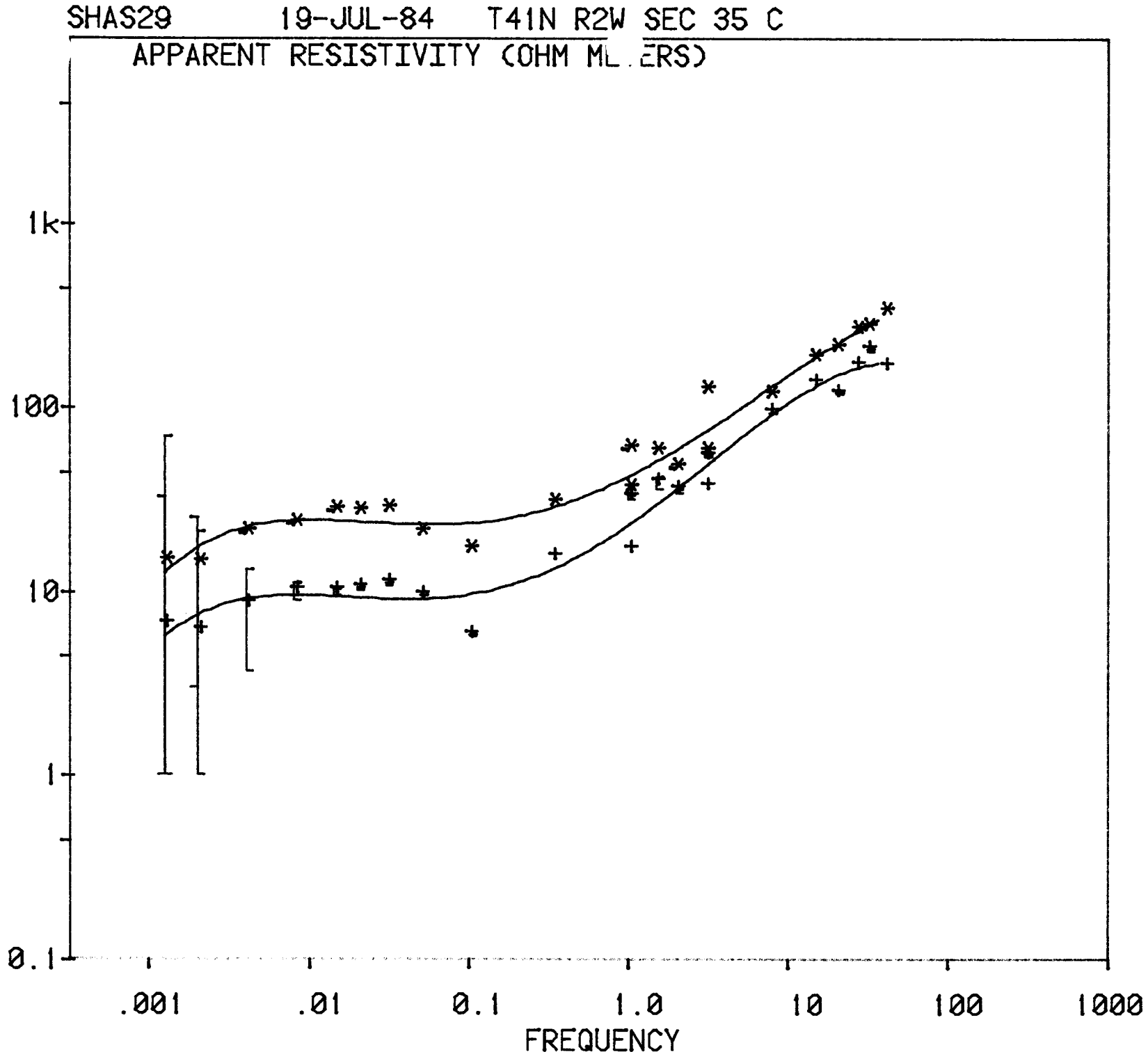
SHAS28 200 HZ 18-JUL-84 T41N R4W SEC32 CENTE

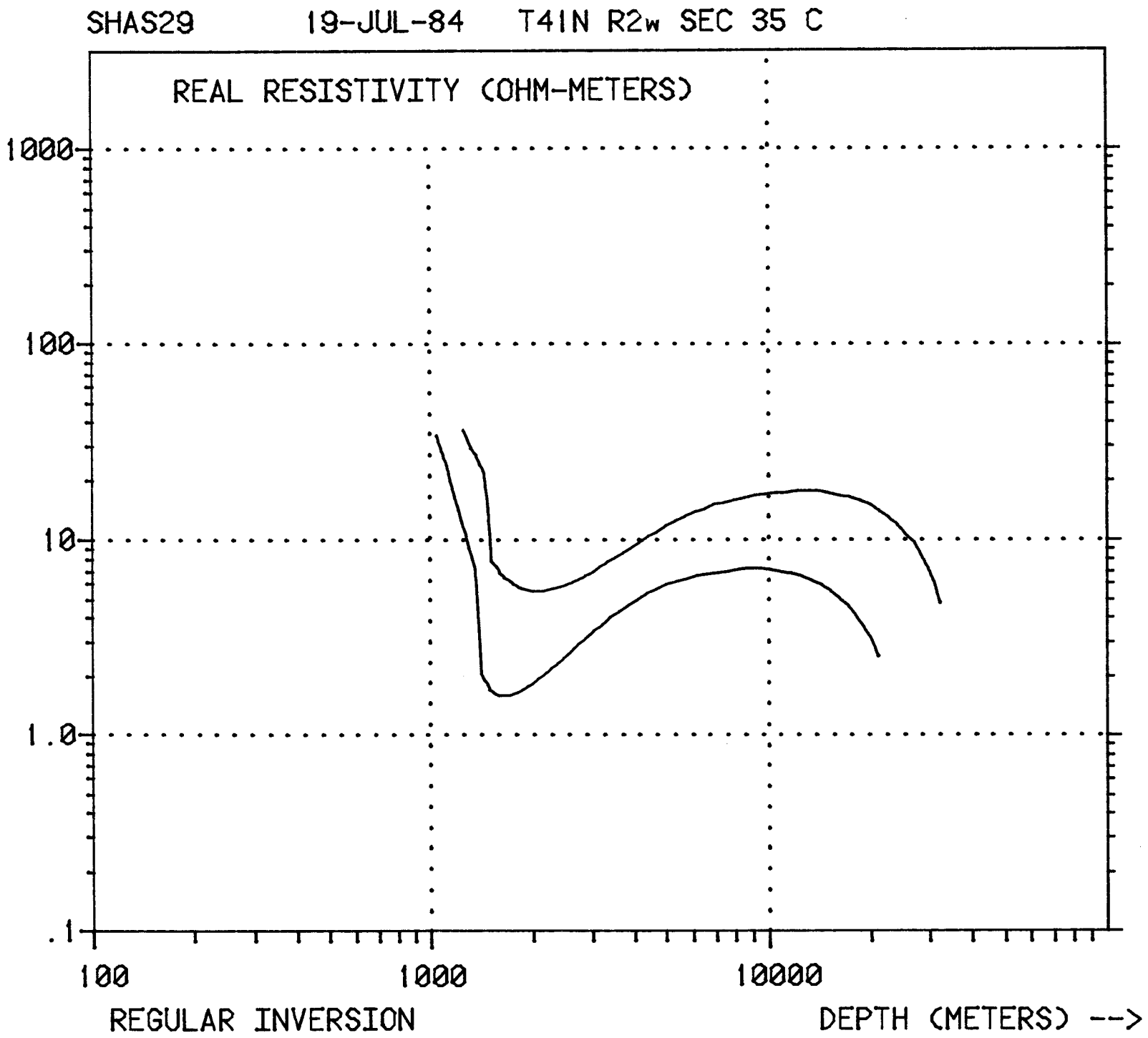
ERROR STRUCTURE OF FITTED MODEL

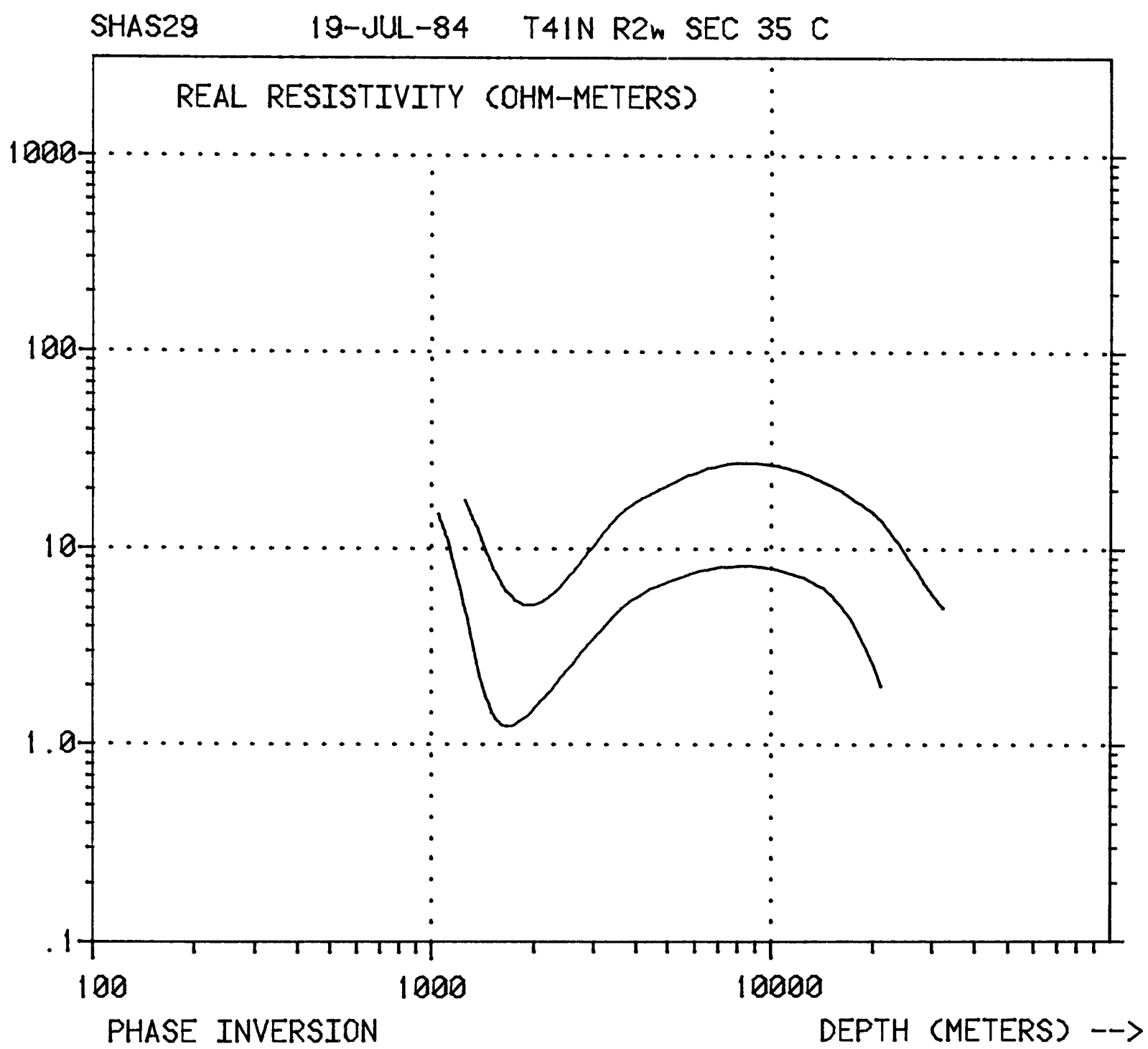
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.250E+03 | 0.100E+01 | 0.176E+01 | -0.765E+00 | -0.553E+02 |
| 2 | 0.700E+02 | 0.100E+01 | 0.178E+01 | -0.785E+00 | -0.564E+02 |
| 3 | 0.500E+02 | 0.200E+01 | 0.179E+01 | 0.214E+00 | 0.113E+02 |
| 4 | 0.330E+02 | 0.300E+01 | 0.174E+01 | 0.126E+01 | 0.530E+02 |
| 5 | 0.200E+02 | 0.500E+01 | 0.166E+01 | 0.334E+01 | 0.100E+03 |
| 6 | 0.100E+02 | 0.000E+00 | 0.153E+01 | 0.000E+00 | 0.000E+00 |
| 7 | 0.550E+01 | 0.100E+01 | 0.142E+01 | -0.419E+00 | -0.347E+02 |
| 8 | 0.300E+01 | 0.100E+01 | 0.131E+01 | -0.310E+00 | -0.269E+02 |
| 9 | 0.200E+01 | 0.100E+01 | 0.125E+01 | -0.251E+00 | -0.223E+02 |
| 10 | 0.167E+01 | 0.100E+01 | 0.123E+01 | -0.229E+00 | -0.206E+02 |
| 11 | 0.125E+01 | 0.100E+01 | 0.120E+01 | -0.203E+00 | -0.185E+02 |
| 12 | 0.100E+01 | 0.100E+01 | 0.119E+01 | -0.191E+00 | -0.174E+02 |
| 13 | 0.830E+00 | 0.000E+00 | 0.119E+01 | 0.000E+00 | 0.000E+00 |
| 14 | 0.670E+00 | 0.100E+01 | 0.118E+01 | -0.184E+00 | -0.169E+02 |
| 15 | 0.500E+00 | 0.100E+01 | 0.119E+01 | -0.191E+00 | -0.174E+02 |
| 16 | 0.500E+00 | 0.000E+00 | 0.119E+01 | 0.000E+00 | 0.000E+00 |
| 17 | 0.330E+00 | 0.100E+01 | 0.121E+01 | -0.208E+00 | -0.188E+02 |
| 18 | 0.330E+00 | 0.100E+01 | 0.121E+01 | -0.208E+00 | -0.188E+02 |
| 19 | 0.130E+00 | 0.100E+01 | 0.123E+01 | -0.228E+00 | -0.205E+02 |
| 20 | 0.700E-01 | 0.100E+01 | 0.123E+01 | -0.226E+00 | -0.203E+02 |
| 21 | 0.500E-01 | 0.200E+01 | 0.123E+01 | 0.774E+00 | 0.480E+02 |
| 22 | 0.380E-01 | 0.200E+01 | 0.123E+01 | 0.774E+00 | 0.480E+02 |
| 23 | 0.320E-01 | 0.200E+01 | 0.123E+01 | 0.774E+00 | 0.480E+02 |
| 24 | 0.250E-01 | 0.200E+01 | 0.123E+01 | 0.774E+00 | 0.480E+02 |

MEAN PERCENT ERROR = 0.3770E+02
MAXIMUM PERCENT ERROR = 0.1004E+03
MAX. ERROR OCCURED AT OBSERVATION 5


Log Real Resistivity (Ohm-meters)
0.0
1.0
2.0
3.0
4.0
5.0
0.0
2000.0
4000.0
Depth
(Meters)
6000.0
8000.0
10000.0
12000.0
Resistivity 0139.60 0004.71 0422.11 0003.37
Thickness 1141.09 3496.42 6435.96
Depth 0000.00 1141.09 4637.51 11073.47


SHAS29 19-JUL-84 T41N R2W SEC 35 C
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAS29 19-JUL-84 T41N R2w SEC 35 C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS29 19-JUL-84 T41N R2w SEC 35 C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

THE SITE IS: SHAS29 200 LZ 19-JUL-84 T41N R2W SEC 35 C

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMIN | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 6.50 | 14.14 | 1 | 61.53 | 17.97 |
| 0.0020 | 6.05 | 14.03 | 2 | 14.81 | 11.04 |
| 0.0040 | 8.31 | 20.59 | 3 | 4.63 | 0.36 |
| 0.0080 | 9.93 | 22.99 | 4 | 1.09 | 0.27 |
| 0.0143 | 9.82 | 27.16 | 5 | 0.36 | 0.11 |
| 0.0200 | 10.19 | 26.65 | 6 | 0.26 | 0.05 |
| 0.0303 | 10.78 | 27.42 | 7 | 0.21 | 0.01 |
| 0.0500 | 9.41 | 20.62 | 8 | 0.04 | 0.00 |
| 0.1000 | 5.73 | 16.52 | 9 | 0.02 | 0.00 |
| 0.1818 | 2.36 | 21.40 | 10 | 0.01 | 0.00 |
| 0.3333 | 15.16 | 29.43 | 11 | 0.00 | 0.00 |
| 0.5000 | 0.00 | 0.00 | 12 | 1.09 | 0.27 |
| 0.5988 | 115.08 | 216.55 | 13 | 2.77 | 0.00 |
| 0.8000 | 35.58 | 390.35 | 14 | 0.89 | 0.29 |
| 1.0000 | 16.58 | 35.41 | 15 | 0.00 | 0.00 |
| 1.0000 | 31.89 | 58.52 | 16 | 0.47 | 0.00 |
| 1.2048 | 43.09 | 137.70 | 17 | 0.77 | 0.04 |
| 1.4925 | 37.90 | 55.77 | 18 | 0.13 | 0.00 |
| 2.0000 | 48.34 | 102.40 | 19 | 0.75 | 0.03 |
| 2.0000 | 34.63 | 46.25 | 20 | 0.00 | 0.00 |
| 2.0000 | 143.42 | 201.72 | 21 | 3.43 | 0.05 |
| 3.0303 | 36.14 | 56.16 | 22 | 0.00 | 0.00 |
| 3.0303 | 53.05 | 121.23 | 23 | 0.22 | 0.01 |
| 7.6923 | 91.50 | 114.03 | 24 | 0.02 | 0.00 |
| 14.2857 | 132.46 | 182.49 | 25 | 0.01 | 0.00 |
| 20.0000 | 116.79 | 206.51 | 26 | 0.00 | 0.00 |
| 26.3158 | 165.49 | 254.63 | 27 | 0.00 | 0.00 |
| 31.2500 | 201.36 | 263.82 | 28 | 0.00 | 0.00 |
| 40.0000 | 161.09 | 323.19 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS29 200 HZ 19-JUL-84 T41N R2W SEC 35 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.154E+02 | 0.816E+01 | 50. | 63. | 103. | 0.1849 | 0.1103 | 0.1300 | 0.21 |
| H | SEC | 0.129E+02 | 0.485E+01 | 48. | 62. | 94. | 0.2358 | 0.1194 | 47.80 | 0.22 |
| E | 500.0 | 0.153E+02 | 0.702E+01 | 50. | 58. | 99. | 0.2541 | 0.1299 | 0.1154 | 0.12 |
| H | SEC | 0.127E+02 | 0.508E+01 | 51. | 56. | 88. | 0.4145 | 0.0996 | 48.40 | 0.17 |
| E | 250.0 | 0.240E+02 | 0.964E+01 | 67. | 61. | 112. | 0.0832 | 0.1903 | 0.1041 | 0.04 |
| H | SEC | 0.172E+02 | 0.698E+01 | 67. | 61. | 94. | 0.1548 | 0.0632 | 42.80 | 0.07 |
| E | 125.0 | 0.250E+02 | 0.123E+02 | 87. | 78. | 107. | 0.1631 | 0.1036 | 0.0974 | 0.10 |
| H | SEC | 0.209E+02 | 0.754E+01 | 83. | 82. | 87. | 0.0658 | 0.0000 | 32.80 | 0.14 |
| E | 70.0 | 0.284E+02 | 0.102E+02 | 1. | 1. | 91. | 0.0772 | 0.0253 | 0.0742 | 0.13 |
| H | SEC | 0.259E+02 | 0.939E+01 | 1. | 1. | 87. | 0.0442 | 0.0296 | 168.40 | 0.13 |
| E | 50.0 | 0.273E+02 | 0.106E+02 | 8. | 13. | 88. | 0.0347 | 0.0197 | 0.0844 | 0.14 |
| H | SEC | 0.260E+02 | 0.981E+01 | 9. | 13. | 85. | 0.0393 | 0.0402 | 12.50 | 0.15 |
| E | 33.0 | 0.281E+02 | 0.112E+02 | 21. | 31. | 92. | 0.0247 | 0.0378 | 0.0789 | 0.14 |
| H | SEC | 0.267E+02 | 0.104E+02 | 21. | 30. | 90. | 0.0297 | 0.0391 | 7.80 | 0.15 |
| E | 20.0 | 0.216E+02 | 0.103E+02 | 46. | 60. | 93. | 0.0070 | 0.0252 | 0.0721 | 0.15 |
| H | SEC | 0.196E+02 | 0.848E+01 | 47. | 59. | 89. | 0.0181 | 0.0259 | 165.70 | 0.17 |

AVERAGE # 8
SHAS29 200 HZ 19-JUL-84 T41N R2W SEC 35 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.211E+02 | 0.728E+01 | 82. | 84. | 117. | 0.0065 | 0.0159 | 0.2769 | 0.16 |
| H | SEC | 0.119E+02 | 0.417E+01 | 83. | 84. | 112. | 0.0459 | 0.0255 | 133.50 | 0.16 |
| E | 5.5 | 0.258E+02 | 0.349E+01 | 31. | 18. | 117. | 0.0106 | 0.0131 | 0.9363 | 0.18 |
| H | SEC | 0.170E+02 | 0.123E+01 | 30. | 17. | 112. | 0.0159 | 0.0050 | 176.70 | 0.24 |
| E | 3.0 | 0.373E+02 | 0.203E+02 | 32. | 56. | 125. | 0.0061 | 0.0277 | 1.5466 | 0.18 |
| H | SEC | 0.216E+02 | 0.100E+02 | 33. | 55. | 120. | 0.0091 | 0.0268 | 136.70 | 0.05 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.7 | 0.400E+03 | 0.199E+03 | 54. | 1. | 123. | 0.0000 | 3.1460 | 0.0289 | 0.33 |
| H | SEC | 0.331E+02 | 0.312E+02 | 57. | 1. | 176. | 0.0000 | 1.4420 | 96.30 | 2.20 |
| E | 1.2 | 0.568E+03 | 0.623E+02 | 82. | 87. | 57. | 2.8257 | 3.1622 | 0.0065 | 0.20 |
| H | SEC | 0.213E+03 | 0.884E+01 | 29. | 34. | 52. | 0.0000 | 0.0000 | 106.90 | 1.46 |
| E | 1.0 | 0.430E+02 | 0.222E+02 | 61. | 77. | 130. | 0.0174 | 0.0540 | 1.8695 | 0.09 |
| H | HZ | 0.278E+02 | 0.110E+02 | 62. | 77. | 124. | 0.0189 | 0.0152 | 17.60 | 0.02 |

AVERAGE # 8
SHAS29 200 HZ 19-JUL-84 T41N R2W SEC 35 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.761E+02 | 0.412E+02 | 65. | 66. | 5. | 0.5036 | 0.4739 | 3.0376 | 0.50 |
| H | HZ | 0.409E+02 | 0.225E+02 | 63. | 49. | 104. | 1.6729 | 1.4105 | 69.30 | 0.54 |
| E | 1.2 | 0.125E+03 | 0.592E+02 | 24. | 65. | 16. | 1.7826 | 1.9686 | 0.0310 | 0.08 |
| H | HZ | 0.151E+03 | 0.270E+02 | 89. | 47. | 14. | 0.0000 | 0.0000 | 94.50 | 0.77 |
| E | 1.5 | 0.674E+02 | 0.502E+02 | 70. | 68. | 166. | 0.5927 | 0.7945 | 0.0698 | 0.06 |
| H | HZ | 0.442E+02 | 0.256E+02 | 64. | 88. | 75. | 0.0000 | 0.0000 | 163.90 | 0.34 |
| E | 2.0 | 0.894E+02 | 0.585E+02 | 4. | 71. | 17. | 2.5865 | 1.7117 | 0.0815 | 0.08 |
| H | HZ | 0.115E+03 | 0.382E+02 | 57. | 65. | 16. | 1.6858 | 1.7030 | 72.60 | 0.24 |
| E | 2.0 | 0.544E+02 | 0.411E+02 | 67. | 77. | 135. | 0.0242 | 0.0440 | 1.2158 | 0.05 |
| H | HZ | 0.381E+02 | 0.281E+02 | 66. | 77. | 129. | 0.0113 | 0.0400 | 108.30 | 0.05 |
| E | 2.0 | 0.193E+03 | 0.171E+03 | 51. | 39. | 166. | 1.1440 | 0.9442 | 0.0522 | 1.05 |
| H | HZ | 0.210E+03 | 0.116E+03 | 48. | 23. | 83. | 0.0000 | 2.1650 | 1.60 | 3.63 |

AVERAGE # 8
SHAS29 200 HZ 19-JUL-84 T41N R2W SEC 35 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.649E+02 | 0.408E+02 | 67. | 83. | 131. | 0.0063 | 0.0336 | 0.4148 | 0.06 |
| H | HZ | 0.474E+02 | 0.315E+02 | 67. | 83. | 126. | 0.0158 | 0.0171 | 94.70 | 0.07 |
| E | 3.0 | 0.660E+02 | 0.656E+02 | 89. | 72. | 24. | 0.4842 | 1.3034 | 0.1302 | 0.07 |
| H | HZ | 0.176E+03 | 0.404E+02 | 53. | 62. | 19. | 2.1924 | 1.2795 | 71.10 | 0.48 |
| E | 7.7 | 0.118E+03 | 0.909E+02 | 74. | 75. | 113. | 0.3251 | 1.0181 | 0.0510 | 0.07 |
| H | HZ | 0.110E+03 | 0.921E+02 | 74. | 72. | 99. | 1.7399 | 0.0000 | 140.20 | 0.08 |
| E | 14.3 | 0.177E+03 | 0.132E+03 | 74. | 71. | 110. | 0.5077 | 1.5929 | 0.0348 | 0.05 |
| H | HZ | 0.188E+03 | 0.133E+03 | 69. | 75. | 148. | 0.0000 | 0.0000 | 105.50 | 0.03 |
| E | 20.0 | 0.208E+03 | 0.162E+03 | 71. | 71. | 125. | 1.3505 | 0.0000 | 0.0502 | 0.03 |
| H | HZ | 0.205E+03 | 0.712E+02 | 76. | 53. | 133. | 0.0000 | 0.0000 | 111.00 | 0.20 |
| E | 26.3 | 0.270E+03 | 0.183E+03 | 70. | 68. | 102. | 1.4804 | 0.0000 | 0.0470 | 0.07 |
| H | HZ | 0.239E+03 | 0.148E+03 | 71. | 67. | 79. | 0.0000 | 0.0000 | 124.90 | 0.16 |
| E | 31.2 | 0.285E+03 | 0.199E+03 | 68. | 64. | 105. | 0.0000 | 1.8152 | 0.7706 | 0.05 |
| H | HZ | 0.242E+03 | 0.203E+03 | 68. | 73. | 75. | 0.0000 | 0.0000 | 108.20 | 0.11 |
| E | 40.0 | 0.338E+03 | 0.212E+03 | 62. | 62. | 101. | 0.1963 | 2.0208 | 0.4895 | 0.08 |
| H | HZ | 0.309E+03 | 0.111E+03 | 72. | 46. | 139. | 1.2527 | 0.0000 | 110.60 | 0.31 |

SHAS29 200 HZ 19-JUL-84 T41N R2W SEC 35 C

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 22
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2000E+03 | | 0.0000E+00 |
| | | 0.1000E+04 | |
| 2 | 0.2000E+01 | | 0.1000E+04 |
| | | 0.2000E+04 | |
| 3 | 0.9000E+01 | | 0.3000E+04 |
| | | 0.1200E+05 | |
| 4 | 0.1000E+01 | | 0.1500E+05 |

FREQUENCY RANGE ( 0.1250E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1396E+03 | | 0.0000E+00 |
| | | 0.1141E+04 | |
| 2 | 0.4715E+01 | | 0.1141E+04 |
| | | 0.3496E+04 | |
| 3 | 0.4221E+03 | | 0.4638E+04 |
| | | 0.6436E+04 | |
| 4 | 0.3378E+01 | | 0.1107E+05 |

MEAN PERCENT VARIATION IS 0.1676E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 21 | 0.798E+05 | 0.380E+04 | 0.286E+00 |
| MODEL | 6 | 0.798E+05 | 0.133E+05 | 0.323E+06 |
| RESID | 15 | 0.618E+00 | 0.412E-01 | |

STANDARD ERROR = 0.203E+00

DTEST FOR MEANS =-0.120E-03

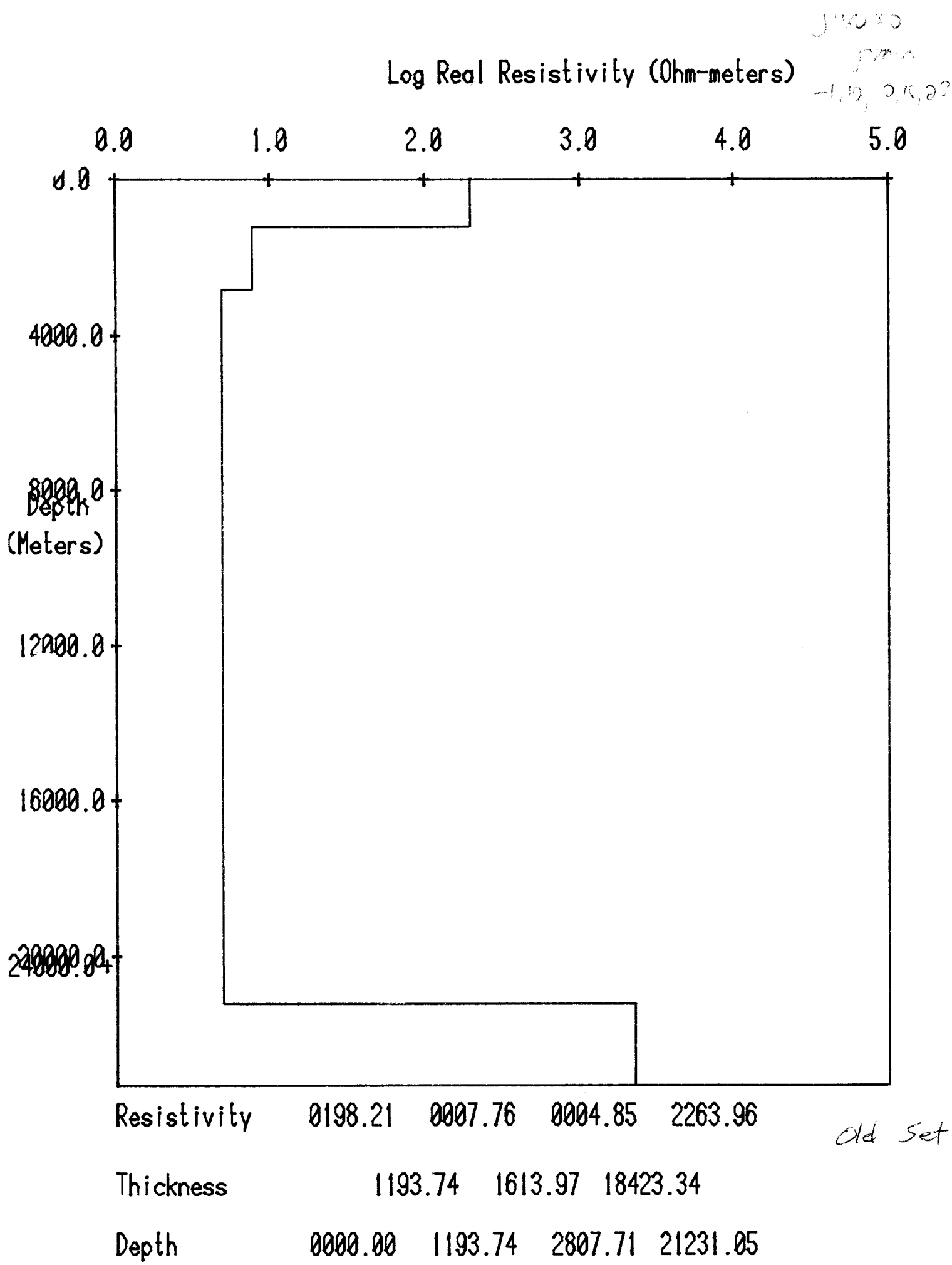
NOISE TO SIGNAL RATIO = 0.176E+00 PERCENT

SHAS29 200 HZ 19-JUL-84 T41N R2W SEC 35 C

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.800E+03 | 0.700E+01 | 0.607E+01 | 0.934E+00 | 0.143E+02 |
| 2 | 0.500E+03 | 0.600E+01 | 0.684E+01 | -0.843E+00 | -0.131E+02 |
| 3 | 0.250E+03 | 0.800E+01 | 0.827E+01 | -0.270E+00 | -0.332E+01 |
| 4 | 0.125E+03 | 0.100E+02 | 0.972E+01 | 0.279E+00 | 0.282E+01 |
| 5 | 0.700E+02 | 0.100E+02 | 0.103E+02 | -0.314E+00 | -0.309E+01 |
| 6 | 0.500E+02 | 0.100E+02 | 0.102E+02 | -0.157E+00 | -0.155E+01 |
| 7 | 0.330E+02 | 0.110E+02 | 0.948E+01 | 0.152E+01 | 0.148E+02 |
| 8 | 0.200E+02 | 0.900E+01 | 0.843E+01 | 0.569E+00 | 0.652E+01 |
| 9 | 0.100E+02 | 0.600E+01 | 0.795E+01 | -0.195E+01 | -0.280E+02 |
| 10 | 0.300E+01 | 0.150E+02 | 0.129E+02 | 0.208E+01 | 0.149E+02 |
| 11 | 0.100E+01 | 0.170E+02 | 0.234E+02 | -0.637E+01 | -0.316E+02 |
| 12 | 0.100E+01 | 0.320E+02 | 0.234E+02 | 0.863E+01 | 0.312E+02 |
| 13 | 0.670E+00 | 0.380E+02 | 0.297E+02 | 0.829E+01 | 0.245E+02 |
| 14 | 0.500E+00 | 0.350E+02 | 0.358E+02 | -0.850E+00 | -0.240E+01 |
| 15 | 0.330E+00 | 0.360E+02 | 0.474E+02 | -0.114E+02 | -0.273E+02 |
| 16 | 0.330E+00 | 0.530E+02 | 0.474E+02 | 0.564E+01 | 0.112E+02 |
| 17 | 0.130E+00 | 0.920E+02 | 0.896E+02 | 0.244E+01 | 0.268E+01 |
| 18 | 0.700E-01 | 0.132E+03 | 0.129E+03 | 0.256E+01 | 0.196E+01 |
| 19 | 0.500E-01 | 0.117E+03 | 0.150E+03 | -0.329E+02 | -0.246E+02 |
| 20 | 0.380E-01 | 0.165E+03 | 0.162E+03 | 0.310E+01 | 0.190E+01 |
| 21 | 0.320E-01 | 0.201E+03 | 0.166E+03 | 0.347E+02 | 0.189E+02 |
| 22 | 0.250E-01 | 0.161E+03 | 0.168E+03 | -0.678E+01 | -0.412E+01 |

MEAN PERCENT ERROR = 0.169E+02
MAXIMUM PERCENT ERROR = 0.3155E+02
MAX. ERROR OCCURED AT OBSERVATION 11




| | | | | |
|---|---|---|---|---|
| Resistivity | 0198.21 | 0007.76 | 0004.85 | 2263.96 |
| Thickness | | 1193.74 | 1613.97 | 18423.34 |
| Depth | 0000.00 | 1193.74 | 2807.71 | 21231.05 |

Old Set

THE SITE IS: SHAS30 200 HZ 20-JUL-84 T41N R2W SEC31 NE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 4.54 | 13.29 | 1 | 14.35 | 18.29 |
| 0.0020 | 4.61 | 8.73 | 2 | 7.74 | 0.34 |
| 0.0040 | 4.91 | 11.61 | 3 | 1.55 | 0.74 |
| 0.0080 | 5.23 | 18.60 | 4 | 0.51 | 0.62 |
| 0.0143 | 7.10 | 20.28 | 5 | 0.71 | 0.29 |
| 0.0200 | 7.80 | 24.51 | 6 | 0.47 | 0.29 |
| 0.0303 | 8.79 | 27.83 | 7 | 0.42 | 0.12 |
| 0.0500 | 10.99 | 25.92 | 8 | 0.20 | 0.03 |
| 0.1000 | 8.03 | 21.50 | 9 | 1.42 | 0.13 |
| 0.1818 | 6.58 | 71.45 | 10 | 0.23 | 0.05 |
| 0.3333 | 20.53 | 45.78 | 11 | 0.23 | 0.03 |
| 0.5000 | 4.94 | 38.45 | 12 | 0.08 | 0.01 |
| 0.5988 | 30.20 | 60.86 | 13 | 0.42 | 0.04 |
| 0.8000 | 24.82 | 36.43 | 14 | 0.28 | 0.08 |
| 1.0000 | 25.15 | 67.40 | 15 | 0.05 | 0.00 |
| 1.0000 | 129.43 | 676.27 | 16 | 0.00 | 0.85 |
| 1.2048 | 38.04 | 50.24 | 17 | 1.52 | 0.04 |
| 1.4925 | 40.10 | 67.48 | 18 | 0.64 | 0.01 |
| 2.0000 | 34.15 | 62.40 | 19 | 0.83 | 0.02 |
| 2.0000 | 57.45 | 66.48 | 20 | 0.04 | 0.00 |
| 2.0000 | 34.96 | 65.70 | 21 | 0.14 | 0.00 |
| 3.0303 | 87.02 | 137.37 | 22 | 0.07 | 0.00 |
| 3.0303 | 31.20 | 73.85 | 23 | 0.51 | 0.02 |
| 7.6923 | 100.26 | 187.00 | 24 | 0.02 | 0.00 |
| 14.2857 | 170.49 | 266.48 | 25 | 0.04 | 0.00 |
| 20.0000 | 156.80 | 682.27 | 26 | 0.00 | 0.00 |
| 26.3158 | 239.69 | 409.46 | 27 | 0.01 | 0.00 |
| 31.2500 | 204.02 | 347.83 | 28 | 0.00 | 0.00 |
| 40.0000 | 254.13 | 603.28 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS30 200 HZ 20-JUL-84 T41N R2W SEC31 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.104E+03 | 0.772E+02 | 66. | 80. | 67. | 0.1639 | 0.2553 | 0.0068 | 0.13 |
| H | HZ | 0.170E+03 | 0.968E+02 | 3. | 77. | 80. | 0.0000 | 1.5790 | 52.50 | 1.34 |
| E | 3.0 | 0.842E+02 | 0.412E+02 | 84. | 88. | 67. | 1.8218 | 1.3347 | 0.0000 | 0.18 |
| H | HZ | 0.635E+02 | 0.212E+02 | 79. | 8. | 80. | 0.0000 | 0.0000 | 117.70 | 0.38 |
| E | 7.7 | 0.193E+03 | 0.136E+03 | 75. | 78. | 30. | 0.1895 | 2.3089 | 0.0001 | 0.08 |
| H | HZ | 0.181E+03 | 0.647E+02 | 87. | 60. | 61. | 0.0000 | 0.0000 | 98.30 | 0.36 |
| E | 14.3 | 0.263E+03 | 0.199E+03 | 74. | 73. | 33. | 1.5189 | 2.6241 | 0.0002 | 0.06 |
| H | HZ | 0.270E+03 | 0.142E+03 | 72. | 52. | 85. | 0.0000 | 0.0000 | 109.80 | 0.25 |
| E | 20.0 | 0.332E+03 | 0.254E+03 | 72. | 71. | 35. | 0.9283 | 0.0000 | 0.0005 | 0.06 |
| H | HZ | 0.103E+04 | 0.600E+02 | 51. | 64. | 175. | 0.0000 | 0.0000 | 103.60 | 0.54 |
| E | 26.3 | 0.387E+03 | 0.278E+03 | 70. | 68. | 33. | 1.1747 | 2.3347 | 0.0019 | 0.08 |
| H | HZ | 0.432E+03 | 0.201E+03 | 56. | 71. | 35. | 0.0000 | 0.0000 | 91.30 | 0.16 |
| E | 31.2 | 0.414E+03 | 0.303E+03 | 69. | 66. | 37. | 0.8968 | 0.0000 | 0.0022 | 0.08 |
| H | HZ | 0.281E+03 | 0.105E+03 | 61. | 49. | 134. | 0.0000 | 0.0000 | 116.20 | 0.22 |
| E | 40.0 | 0.487E+03 | 0.334E+03 | 64. | 64. | 36. | 0.3770 | 0.0000 | 0.0121 | 0.07 |
| H | HZ | 0.720E+03 | 0.175E+03 | 72. | 88. | 166. | 0.0000 | 0.0000 | 118.70 | 0.30 |

AVERAGE # 8
SHAS30 200 HZ 20-JUL-84 T41N R2W SEC31 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

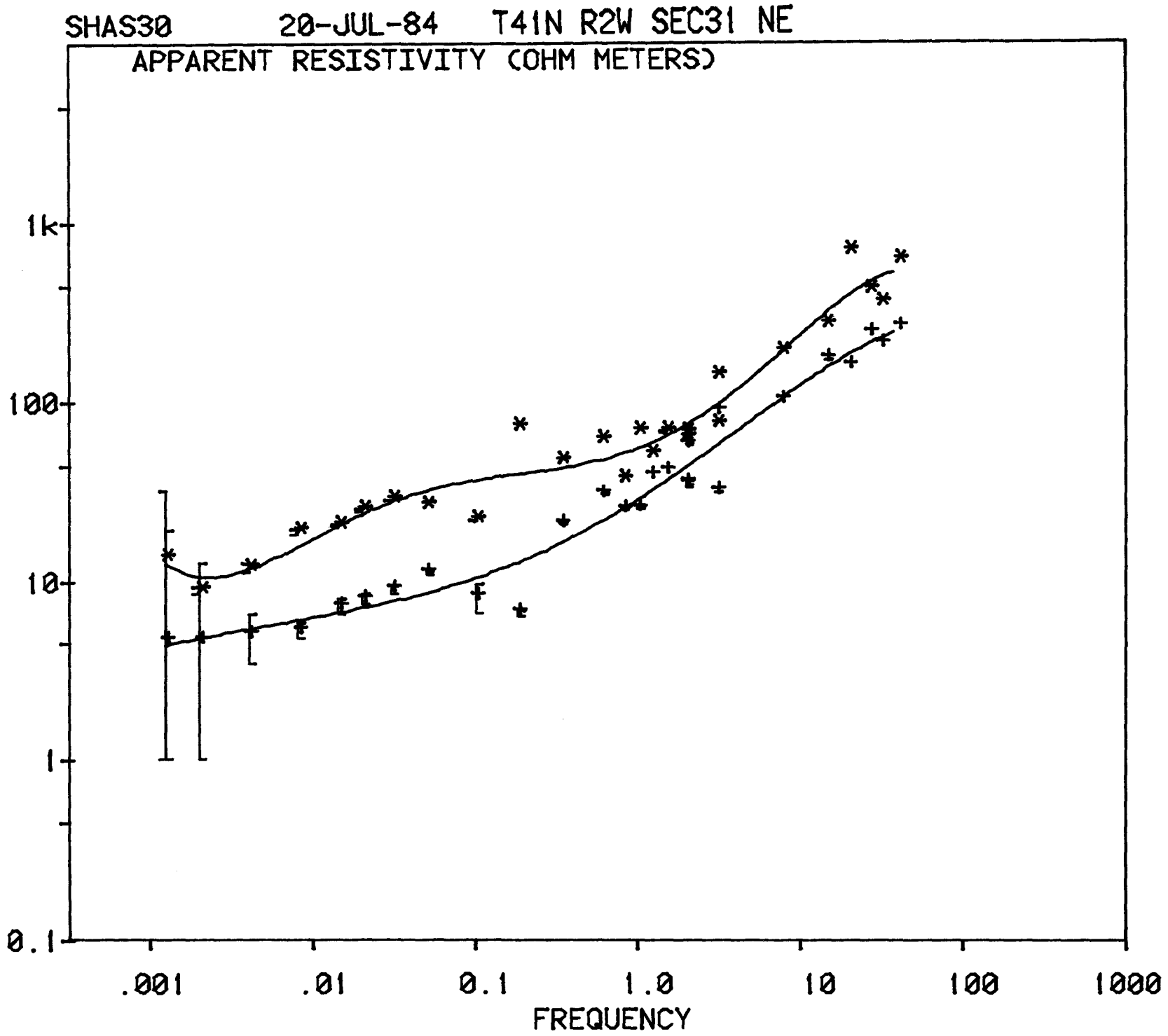
| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.684E+03 | 0.285E+02 | 83. | 10. | 67. | 0.7556 | 0.0000 | 0.0000 | 0.46 |
| H | HZ | 0.669E+03 | 0.230E+03 | 33. | 29. | 62. | 2.0512 | 0.0000 | 118.40 | 3.52 |
| E | 1.2 | 0.612E+02 | 0.458E+02 | 7. | 70. | 172. | 2.1793 | 0.5666 | 0.0001 | 0.04 |
| H | HZ | 0.393E+02 | 0.303E+02 | 58. | 39. | 85. | 0.0000 | 2.4225 | 58.10 | 0.56 |
| E | 1.5 | 0.938E+02 | 0.451E+02 | 74. | 2. | 65. | 0.9792 | 0.5528 | 0.0000 | 0.16 |
| H | HZ | 0.412E+02 | 0.351E+02 | 68. | 27. | 86. | 0.0000 | 0.7836 | 97.20 | 0.36 |
| E | 2.0 | 0.804E+02 | 0.373E+02 | 76. | 89. | 59. | 2.2642 | 1.1198 | 0.0000 | 0.11 |
| H | HZ | 0.445E+02 | 0.310E+02 | 66. | 15. | 83. | 0.0000 | 2.5863 | 132.80 | 0.31 |
| E | 2.0 | 0.782E+02 | 0.626E+02 | 80. | 59. | 5. | 0.2552 | 0.1621 | 0.0005 | 0.10 |
| H | HZ | 0.548E+02 | 0.523E+02 | 54. | 3. | 73. | 0.8821 | 0.6477 | 128.10 | 0.35 |
| E | 2.0 | 0.802E+02 | 0.595E+02 | 77. | 73. | 59. | 0.7514 | 1.3996 | 0.0000 | 0.10 |
| H | HZ | 0.512E+02 | 0.104E+02 | 73. | 69. | 122. | 0.0000 | 0.0000 | 115.20 | 0.20 |

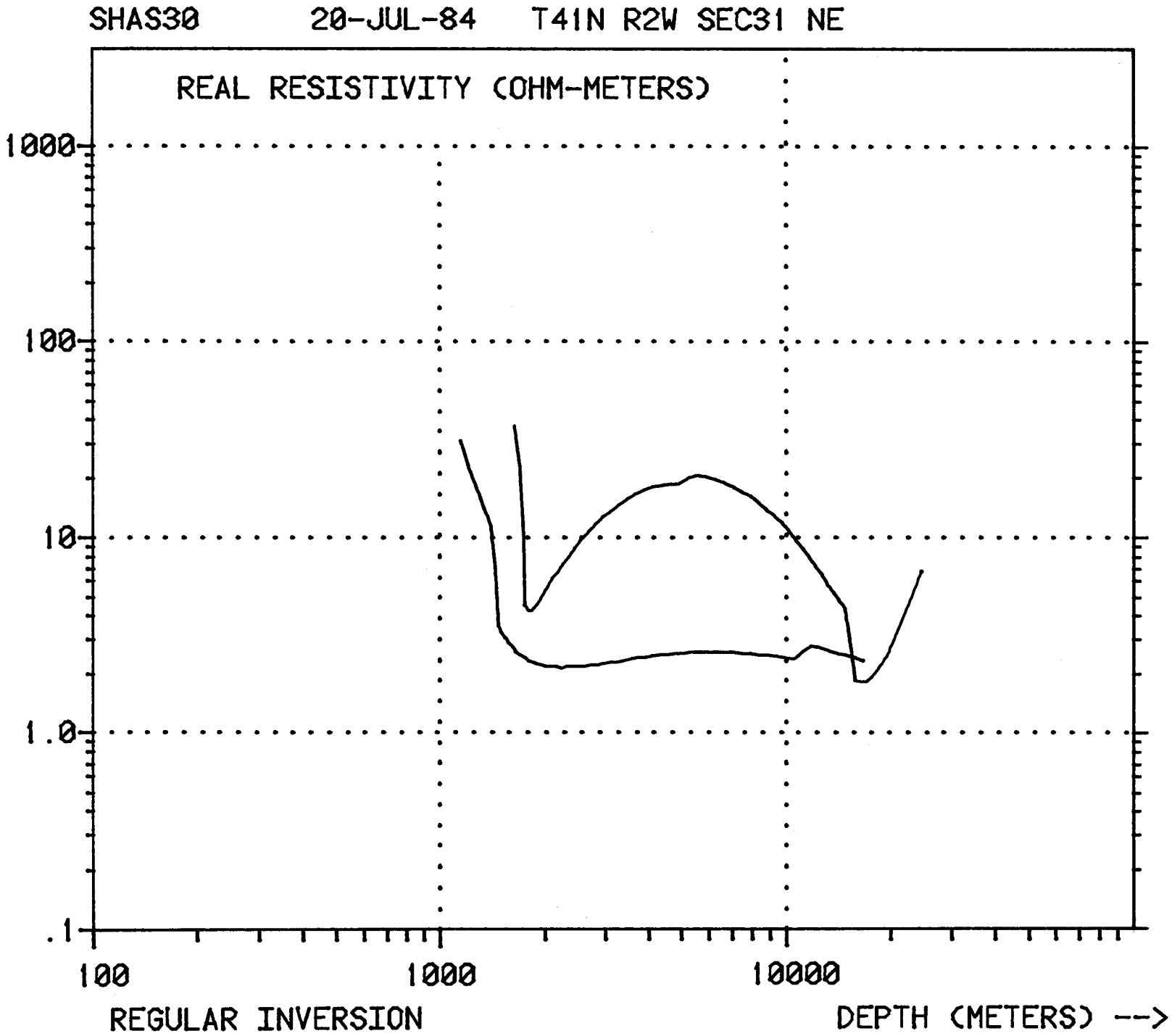
AVERAGE # 8
SHAS30 200 HZ 20-JUL-84 T41N R2W SEC31 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.190E+02 | 0.111E+02 | 71. | 71. | 167. | 0.2733 | 0.7482 | 0.0002 | 0.04 |
| H | SEC | 0.240E+02 | 0.502E+01 | 63. | 73. | 75. | 0.8531 | 0.9006 | 103.50 | 2.48 |
| E | 5.5 | 0.910E+02 | 0.737E+01 | 45. | 65. | 165. | 0.2724 | 0.1156 | 0.0001 | 0.39 |
| H | SEC | 0.519E+02 | 0.579E+01 | 62. | 47. | 84. | 1.7390 | 0.5541 | 122.00 | 0.85 |
| E | 3.0 | 0.519E+02 | 0.137E+02 | 56. | 58. | 70. | 0.2085 | 0.0473 | 0.0006 | 0.24 |
| H | SEC | 0.396E+02 | 0.273E+02 | 37. | 57. | 60. | 0.4968 | 0.3448 | 149.80 | 0.67 |
| E | 2.0 | 0.485E+02 | 0.675E+01 | 17. | 40. | 152. | 0.0591 | 0.0000 | 0.0002 | 1.34 |
| H | SEC | 0.284E+02 | 0.313E+01 | 45. | 50. | 156. | 0.0611 | 0.1065 | 154.60 | 1.05 |
| E | 1.7 | 0.719E+02 | 0.383E+02 | 69. | 87. | 47. | 0.2069 | 0.8570 | 0.0001 | 0.08 |
| H | SEC | 0.498E+02 | 0.221E+02 | 68. | 17. | 59. | 1.0602 | 0.6220 | 104.50 | 0.27 |
| E | 1.2 | 0.330E+02 | 0.307E+02 | 70. | 83. | 54. | 1.1727 | 1.0843 | 0.0001 | 0.07 |
| H | SEC | 0.399E+02 | 0.189E+02 | 66. | 15. | 60. | 3.1898 | 3.1912 | 104.00 | 0.38 |
| E | 1.0 | 0.775E+02 | 0.392E+02 | 68. | 76. | 71. | 0.2632 | 0.2376 | 0.0031 | 0.19 |
| H | HZ | 0.573E+02 | 0.111E+02 | 86. | 18. | 165. | 0.4520 | 0.3674 | 63.70 | 0.43 |

AVERAGE # 8
SHAS30 200 HZ 20-JUL-84 T41N R2W SEC31 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.152E+02 | 0.378E+01 | 30. | 62. | 127. | 0.2257 | 0.7571 | 0.0232 | 0.21 |
| H | SEC | 0.114E+02 | 0.531E+01 | 3. | 84. | 132. | 0.8907 | 2.0008 | 95.20 | 0.74 |
| E | 500.0 | 0.873E+01 | 0.517E+01 | 58. | 66. | 138. | 0.0917 | 0.9662 | 0.0396 | 0.13 |
| H | SEC | 0.873E+01 | 0.405E+01 | 69. | 64. | 157. | 0.1947 | 1.7087 | 89.30 | 0.07 |
| E | 250.0 | 0.119E+02 | 0.549E+01 | 61. | 71. | 131. | 0.0626 | 0.1554 | 0.0141 | 0.07 |
| H | SEC | 0.113E+02 | 0.433E+01 | 55. | 86. | 133. | 0.0772 | 0.2591 | 108.40 | 0.21 |
| E | 125.0 | 0.167E+02 | 0.611E+01 | 78. | 84. | 136. | 0.0647 | 0.1007 | 0.0098 | 0.11 |
| H | SEC | 0.205E+02 | 0.435E+01 | 84. | 80. | 131. | 0.2587 | 0.3701 | 180.00 | 0.26 |
| E | 70.0 | 0.202E+02 | 0.755E+01 | 90. | 7. | 133. | 0.0219 | 0.1359 | 0.0034 | 0.11 |
| H | SEC | 0.204E+02 | 0.666E+01 | 88. | 12. | 136. | 0.2759 | 0.2876 | 108.70 | 0.18 |
| E | 50.0 | 0.238E+02 | 0.840E+01 | 9. | 17. | 133. | 0.0685 | 0.0537 | 0.0096 | 0.12 |
| H | SEC | 0.252E+02 | 0.720E+01 | 9. | 20. | 140. | 0.4798 | 0.4706 | 115.30 | 0.20 |
| E | 33.0 | 0.258E+02 | 0.984E+01 | 22. | 42. | 130. | 0.0491 | 0.1381 | 0.0378 | 0.12 |
| H | SEC | 0.298E+02 | 0.773E+01 | 21. | 40. | 134. | 0.3761 | 0.4531 | 70.20 | 0.19 |
| E | 20.0 | 0.252E+02 | 0.115E+02 | 58. | 57. | 82. | 0.0392 | 0.0598 | 0.0177 | 0.25 |
| H | SEC | 0.266E+02 | 0.105E+02 | 65. | 47. | 65. | 0.0536 | 0.1310 | 94.10 | 0.34 |


SHAS30 20-JUL-84 T41N R2W SEC31 NE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAS30 20-JUL-84 T41N R2W SEC31 NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->

ERROR ANALYSIS

)

R-SQUARED = 0.999E+00

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 23 | 0.143E+06 | 0.623E+04 | 0.261E+00 |
| MODEL | 6 | 0.143E+06 | 0.239E+05 | 0.528E+06 |
| RESID | 17 | 0.768E+00 | 0.452E-01 | |

STANDARD ERROR = 0.213E+00

DTEST FOR MEANS = 0.874E-05

NOISE TO SIGNAL RATIO = 0.138E+00 PERCENT

SHAS30 200 HZ 20-JUL-84 T41N R2W SEC31 NE

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.500E+03 | 0.500E+01 | 0.530E+01 | -0.296E+00 | -0.575E+01 |
| 2 | 0.250E+03 | 0.500E+01 | 0.464E+01 | 0.359E+00 | 0.744E+01 |
| 3 | 0.125E+03 | 0.500E+01 | 0.561E+01 | -0.610E+00 | -0.115E+02 |
| 4 | 0.700E+02 | 0.700E+01 | 0.691E+01 | 0.866E-01 | 0.125E+01 |
| 5 | 0.500E+02 | 0.800E+01 | 0.755E+01 | 0.453E+00 | 0.583E+01 |
| 6 | 0.330E+02 | 0.900E+01 | 0.824E+01 | 0.756E+00 | 0.877E+01 |
| 7 | 0.200E+02 | 0.110E+02 | 0.933E+01 | 0.167E+01 | 0.165E+02 |
| 8 | 0.100E+02 | 0.800E+01 | 0.116E+02 | -0.360E+01 | -0.368E+02 |
| 9 | 0.300E+01 | 0.210E+02 | 0.186E+02 | 0.239E+01 | 0.120E+02 |
| 10 | 0.167E+01 | 0.300E+02 | 0.242E+02 | 0.581E+01 | 0.214E+02 |
| 11 | 0.125E+01 | 0.250E+02 | 0.278E+02 | -0.275E+01 | -0.104E+02 |
| 12 | 0.100E+01 | 0.250E+02 | 0.310E+02 | -0.599E+01 | -0.214E+02 |
| 13 | 0.830E+00 | 0.380E+02 | 0.341E+02 | 0.389E+01 | 0.108E+02 |
| 14 | 0.670E+00 | 0.400E+02 | 0.383E+02 | 0.172E+01 | 0.441E+01 |
| 15 | 0.500E+00 | 0.340E+02 | 0.452E+02 | -0.112E+02 | -0.283E+02 |
| 16 | 0.500E+00 | 0.570E+02 | 0.452E+02 | 0.118E+02 | 0.230E+02 |
| 17 | 0.500E+00 | 0.350E+02 | 0.452E+02 | -0.102E+02 | -0.255E+02 |
| 18 | 0.330E+00 | 0.870E+02 | 0.584E+02 | 0.286E+02 | 0.393E+02 |
| 19 | 0.130E+00 | 0.100E+03 | 0.109E+03 | -0.854E+01 | -0.819E+01 |
| 20 | 0.700E-01 | 0.170E+03 | 0.160E+03 | 0.979E+01 | 0.593E+01 |
| 21 | 0.500E-01 | 0.157E+03 | 0.191E+03 | -0.340E+02 | -0.195E+02 |
| 22 | 0.380E-01 | 0.240E+03 | 0.213E+03 | 0.266E+02 | 0.117E+02 |
| 23 | 0.320E-01 | 0.204E+03 | 0.224E+03 | -0.204E+02 | -0.953E+01 |
| 24 | 0.250E-01 | 0.254E+03 | 0.235E+03 | 0.195E+02 | 0.797E+01 |

MEAN PERCENT ERROR = 0.1778E+02
MAXIMUM PERCENT ERROR = 0.3933E+02

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1982E+03 | | 0.0000E+00 |
| | | 0.1194E+04 | |
| 2 | 0.7768E+01 | | 0.1194E+04 |
| | | 0.1614E+04 | |
| 3 | 0.4854E+01 | | 0.2808E+04 |
| | | 0.1842E+05 | |
| 4 | 0.2264E+04 | | 0.2123E+05 |

MEAN PERCENT VARIATION IS 0.1789E+02

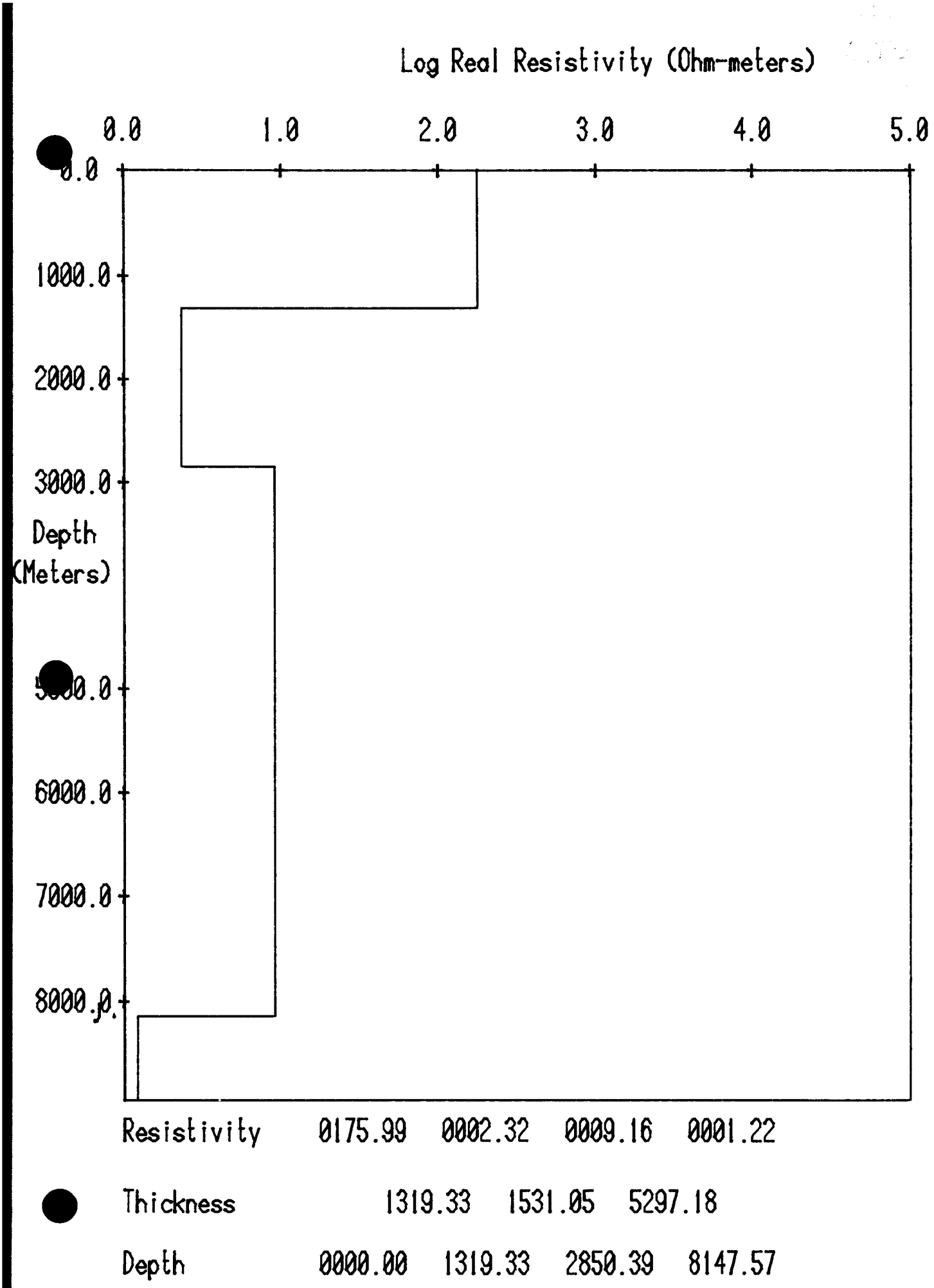
SHAS30 200 HZ 20-JUL-84 T41N R2W SEC31 NE

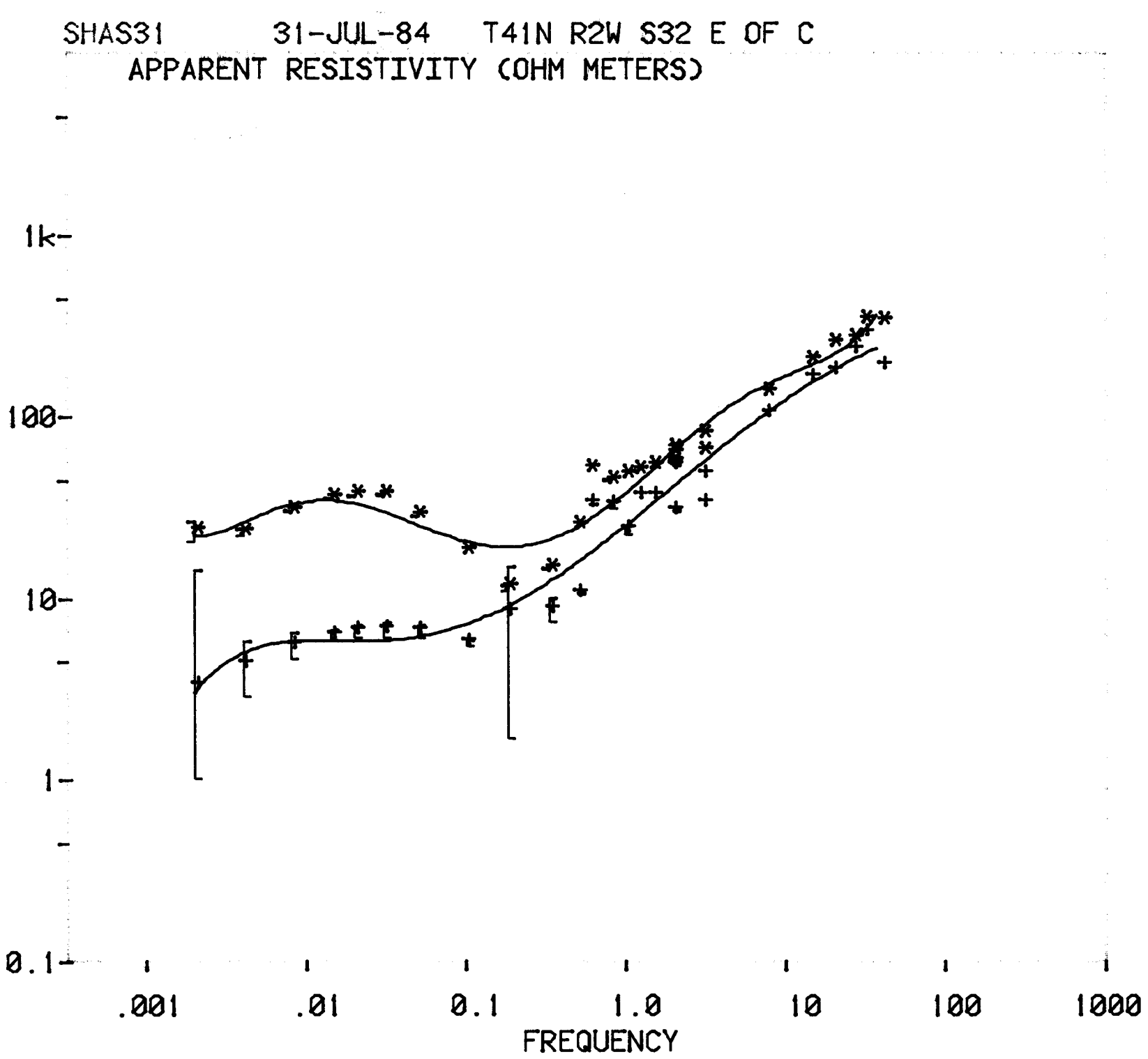
THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 24
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3220E+03 | | 0.0000E+00 |
| | | 0.7220E+03 | |
| 2 | 0.1550E+02 | | 0.7220E+03 |
| | | 0.1892E+04 | |
| 3 | 0.5700E+01 | | 0.2614E+04 |
| | | 0.1247E+05 | |
| 4 | 0.2600E+00 | | 0.1508E+05 |

FREQUENCY RANGE ( 0.2000E-02 , 0.4000E+02 )


Log Real Resistivity (Ohm-meters)
0.0
1.0
2.0
3.0
4.0
5.0
0.0
1000.0
2000.0
3000.0
Depth
(Meters)
5000.0
6000.0
7000.0
8000.0
Resistivity 0175.99 0002.32 0009.16 0001.22
Thickness 1319.33 1531.05 5297.18
Depth 0000.00 1319.33 2850.39 8147.57

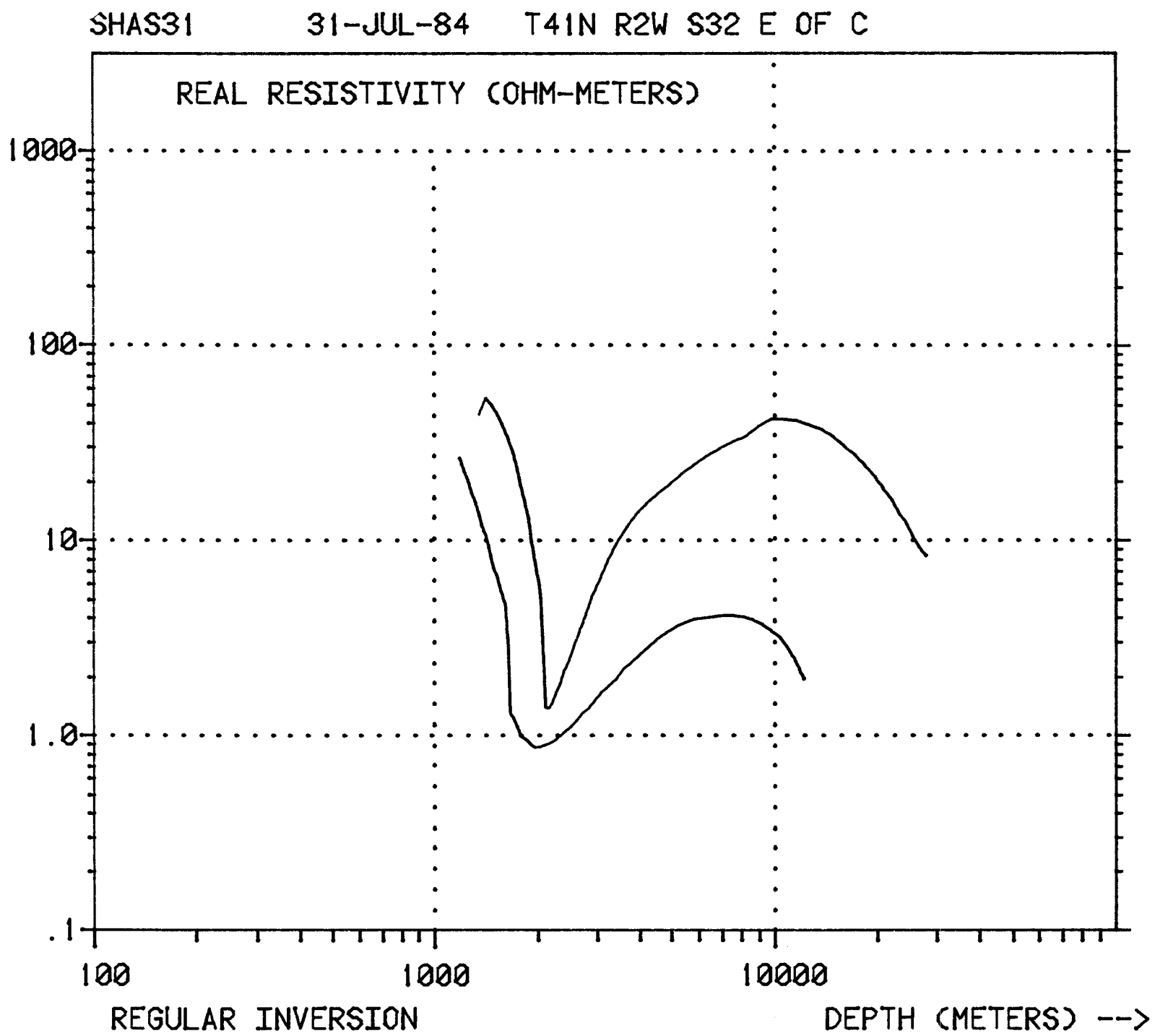

SHAS31 31-JUL-84 T41N R2W S32 E OF C
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

SHAS32 200 HZ 01-AUG-84 T41N R2W S21 NE

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 28
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 1

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2000E+01 | | 0.0000E+00 |
| | | 0.1000E+04 | |
| 2 | 0.2000E+01 | | 0.1000E+04 |
| | | 0.1500E+03 | |
| 3 | 0.2000E+01 | | 0.1150E |


SHAS31 31-JUL-84 T41N R2W S32 E OF C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->

THE SITE IS: SHAS31 200 HZ 31-JUL-84 T41N R2W S32 E OF C

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | RHOMAX | PERIOD # | STDEV OF RHOM | RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 4.62 | 20.83 | 1 | 10.58 | 2.88 |
| 0.0020 | 3.22 | 22.92 | 2 | 1.45 | 0.96 |
| 0.0040 | 4.26 | 22.54 | 3 | 0.91 | 0.12 |
| 0.0080 | 5.42 | 29.76 | 4 | 0.41 | 0.15 |
| 0.0143 | 6.15 | 34.72 | 5 | 0.48 | 0.31 |
| 0.0200 | 6.43 | 35.96 | 6 | 0.56 | 0.45 |
| 0.0303 | 6.59 | 36.21 | 7 | 0.50 | 0.18 |
| 0.0500 | 6.48 | 27.84 | 8 | 0.23 | 0.01 |
| 0.1000 | 5.57 | 17.63 | 9 | 6.56 | 0.47 |
| 0.1818 | 8.21 | 11.18 | 10 | 1.23 | 0.08 |
| 0.3333 | 8.50 | 14.29 | 11 | 0.15 | 0.00 |
| 0.5000 | 10.48 | 24.67 | 12 | 0.20 | 0.01 |
| 0.5988 | 32.31 | 50.60 | 13 | 1.36 | 0.12 |
| 0.8000 | 31.89 | 43.65 | 14 | 1.22 | 0.07 |
| 1.0000 | 13.51 | 23.98 | 15 | 0.04 | 0.00 |
| 1.0000 | 23.32 | 46.34 | 16 | 0.01 | 0.00 |
| 1.2048 | 35.74 | 48.97 | 17 | 0.18 | 0.01 |
| 1.4925 | 35.35 | 52.13 | 18 | 0.42 | 0.02 |
| 2.0000 | 52.87 | 61.49 | 19 | 0.10 | 0.00 |
| 2.0000 | 29.64 | 54.60 | 20 | 0.02 | 0.00 |
| 2.0000 | 52.25 | 64.80 | 21 | 0.05 | 0.00 |
| 3.0303 | 32.54 | 62.22 | 22 | 0.01 | 0.00 |
| 3.0303 | 46.35 | 78.29 | 23 | 0.08 | 0.00 |
| 7.6923 | 100.85 | 132.49 | 24 | 0.10 | 0.00 |
| 14.2857 | 158.00 | 199.68 | 25 | 0.00 | 0.00 |
| 20.0000 | 175.18 | 246.49 | 26 | 0.00 | 0.00 |
| 26.3158 | 225.97 | 260.32 | 27 | 0.00 | 0.00 |
| 31.2500 | 279.72 | 331.30 | 28 | 0.01 | 0.00 |
| 40.0000 | 184.60 | 327.79 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS31 200 HZ 31-JUL-84 T41N R2W S32 E OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.219E+02 | 0.405E+01 | 48. | 51. | 131. | 0.0520 | 0.6604 | 3.2787 | 0.11 |
| H | SEC | 0.197E+02 | 0.520E+01 | 53. | 50. | 129. | 0.0633 | 0.1664 | 32.10 | 0.15 |
| E | 500.0 | 0.222E+02 | 0.349E+01 | 52. | 53. | 135. | 0.0739 | 0.5064 | 7.7121 | 0.19 |
| H | SEC | 0.236E+02 | 0.296E+01 | 50. | 55. | 136. | 0.0479 | 0.2167 | 41.90 | 0.22 |
| E | 250.0 | 0.234E+02 | 0.444E+01 | 64. | 74. | 135. | 0.0316 | 0.4016 | 2.7806 | 0.10 |
| H | SEC | 0.217E+02 | 0.407E+01 | 63. | 86. | 141. | 0.0000 | 0.3678 | 43.00 | 0.06 |
| E | 125.0 | 0.302E+02 | 0.585E+01 | 76. | 80. | 132. | 0.0316 | 0.1175 | 0.7979 | 0.10 |
| H | SEC | 0.293E+02 | 0.498E+01 | 74. | 83. | 133. | 0.0363 | 0.0967 | 19.50 | 0.15 |
| E | 70.0 | 0.354E+02 | 0.645E+01 | 88. | 6. | 130. | 0.1551 | 0.0835 | 0.2584 | 0.12 |
| H | SEC | 0.340E+02 | 0.586E+01 | 88. | 7. | 131. | 0.0914 | 0.0653 | 26.80 | 0.13 |
| E | 50.0 | 0.367E+02 | 0.660E+01 | 7. | 18. | 130. | 0.1221 | 0.0542 | 0.0928 | 0.11 |
| H | SEC | 0.352E+02 | 0.626E+01 | 8. | 18. | 130. | 0.1466 | 0.0000 | 172.50 | 0.11 |
| E | 33.0 | 0.360E+02 | 0.676E+01 | 21. | 34. | 128. | 0.1601 | 0.0633 | 0.1188 | 0.09 |
| H | SEC | 0.364E+02 | 0.642E+01 | 20. | 34. | 128. | 0.0430 | 0.0484 | 171.30 | 0.09 |
| E | 20.0 | 0.279E+02 | 0.709E+01 | 43. | 62. | 129. | 0.0381 | 0.1078 | 0.2544 | 0.05 |
| H | SEC | 0.277E+02 | 0.587E+01 | 44. | 64. | 128. | 0.0307 | 0.0486 | 50.00 | 0.06 |

AVERAGE # 8
SHAS31 200 HZ 31-JUL-84 T41N R2W S32 E OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.173E+02 | 0.561E+01 | 75. | 13. | 126. | 0.2504 | 0.1124 | 0.0083 | 0.04 |
| H | SEC | 0.179E+02 | 0.553E+01 | 76. | 13. | 126. | 0.2289 | 0.1384 | 180.00 | 0.03 |
| E | 5.5 | 0.113E+02 | 0.868E+01 | 5. | 38. | 123. | 0.2420 | 0.1020 | 0.0096 | 0.11 |
| H | SEC | 0.110E+02 | 0.775E+01 | 8. | 37. | 122. | 0.1774 | 0.0528 | 180.00 | 0.12 |
| E | 3.0 | 0.165E+02 | 0.952E+01 | 38. | 13. | 32. | 0.2350 | 0.0977 | 0.0116 | 0.11 |
| H | SEC | 0.121E+02 | 0.749E+01 | 46. | 35. | 10. | 0.2158 | 0.1534 | 180.00 | 0.05 |
| E | 2.0 | 0.329E+02 | 0.845E+01 | 48. | 4. | 36. | 0.0759 | 0.1229 | 0.0279 | 0.33 |
| H | SEC | 0.164E+02 | 0.125E+02 | 61. | 33. | 25. | 0.1159 | 0.1095 | 180.00 | 0.17 |
| E | 1.7 | 0.634E+02 | 0.335E+02 | 68. | 37. | 147. | 0.8593 | 0.3451 | 0.0033 | 0.21 |
| H | SEC | 0.378E+02 | 0.311E+02 | 72. | 32. | 143. | 0.4635 | 0.3761 | 131.00 | 0.24 |
| E | 1.2 | 0.546E+02 | 0.452E+02 | 77. | 54. | 146. | 0.5873 | 0.3323 | 0.0033 | 0.18 |
| H | SEC | 0.327E+02 | 0.186E+02 | 81. | 49. | 151. | 0.9081 | 0.3716 | 116.50 | 0.23 |
| E | 1.0 | 0.325E+02 | 0.137E+02 | 70. | 13. | 33. | 0.1667 | 0.0947 | 0.0401 | 0.31 |
| H | HZ | 0.155E+02 | 0.134E+02 | 50. | 67. | 118. | 0.0865 | 0.0899 | 180.00 | 0.06 |

AVERAGE # 8
SHAS31 200 HZ 31-JUL-84 T41N R2W S32 E OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.366E+02 | 0.299E+02 | 46. | 35. | 169. | 0.0000 | 0.0911 | 0.0302 | 0.57 |
| H | HZ | 0.561E+02 | 0.167E+02 | 24. | 35. | 172. | 0.0000 | 0.1979 | 41.00 | 0.53 |
| E | 1.2 | 0.607E+02 | 0.408E+02 | 74. | 69. | 65. | 0.4170 | 0.1007 | 0.0021 | 0.15 |
| H | HZ | 0.372E+02 | 0.307E+02 | 64. | 81. | 169. | 0.2978 | 0.2702 | 180.00 | 0.11 |
| E | 1.5 | 0.631E+02 | 0.463E+02 | 73. | 74. | 177. | 1.0911 | 0.4922 | 0.0029 | 0.06 |
| H | HZ | 0.412E+02 | 0.244E+02 | 74. | 73. | 177. | 0.6854 | 0.3619 | 31.50 | 0.17 |
| E | 2.0 | 0.712E+02 | 0.690E+02 | 79. | 71. | 7. | 0.5385 | 0.2952 | 0.0035 | 0.06 |
| H | HZ | 0.518E+02 | 0.367E+02 | 80. | 73. | 154. | 0.5037 | 0.2034 | 106.60 | 0.12 |
| E | 2.0 | 0.691E+02 | 0.385E+02 | 68. | 34. | 27. | 0.1119 | 0.0524 | 0.0603 | 0.09 |
| H | HZ | 0.401E+02 | 0.208E+02 | 74. | 59. | 1. | 0.1660 | 0.0491 | 17.80 | 0.11 |
| E | 2.0 | 0.776E+02 | 0.529E+02 | 74. | 73. | 153. | 0.5428 | 0.4897 | 0.0148 | 0.01 |
| H | HZ | 0.520E+02 | 0.516E+02 | 89. | 54. | 23. | 0.3525 | 0.8872 | 56.50 | 0.30 |

AVERAGE # 8
SHAS31 200 HZ 31-JUL-84 T41N R2W S32 E OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.704E+02 | 0.463E+02 | 69. | 39. | 22. | 0.0833 | 0.1543 | 0.0310 | 0.05 |
| H | HZ | 0.540E+02 | 0.188E+02 | 71. | 65. | 174. | 0.0822 | 0.0648 | 148.20 | 0.14 |
| E | 3.0 | 0.858E+02 | 0.531E+02 | 77. | 72. | 126. | 0.3333 | 0.2138 | 0.0036 | 0.02 |
| H | HZ | 0.708E+02 | 0.396E+02 | 81. | 68. | 129. | 0.3354 | 0.1060 | 153.50 | 0.04 |
| E | 7.7 | 0.157E+03 | 0.107E+03 | 75. | 76. | 128. | 0.2344 | 0.0000 | 0.0290 | 0.01 |
| H | HZ | 0.108E+03 | 0.948E+02 | 90. | 69. | 148. | 1.0116 | 2.7794 | 92.20 | 0.21 |
| E | 14.3 | 0.220E+03 | 0.148E+03 | 73. | 73. | 128. | 0.1020 | 1.5681 | 0.1240 | 0.01 |
| H | HZ | 0.180E+03 | 0.168E+03 | 7. | 70. | 40. | 0.0731 | 2.1384 | 126.80 | 0.10 |
| E | 20.0 | 0.270E+03 | 0.189E+03 | 71. | 71. | 130. | 0.0360 | 2.1039 | 0.3645 | 0.01 |
| H | HZ | 0.223E+03 | 0.161E+03 | 67. | 78. | 146. | 0.0870 | 1.0181 | 4.50 | 0.07 |
| E | 26.3 | 0.309E+03 | 0.261E+03 | 70. | 69. | 101. | 0.6325 | 0.0000 | 0.7292 | 0.02 |
| H | HZ | 0.212E+03 | 0.191E+03 | 18. | 77. | 24. | 1.0229 | 0.0000 | 105.70 | 0.26 |
| E | 31.2 | 0.370E+03 | 0.331E+03 | 73. | 66. | 60. | 0.3316 | 3.2013 | 0.5174 | 0.04 |
| H | HZ | 0.293E+03 | 0.229E+03 | 55. | 5. | 180. | 0.2624 | 0.0000 | 180.00 | 0.37 |
| E | 40.0 | 0.373E+03 | 0.257E+03 | 62. | 61. | 123. | 0.3004 | 0.7487 | 1.1918 | 0.03 |
| H | HZ | 0.282E+03 | 0.112E+03 | 64. | 52. | 160. | 0.1190 | 2.5179 | 180.00 | 0.20 |

SHAS31 200 HZ 31-JUL-84 T41N R2W S32 E OF C

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 25
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2000E+03 | | 0.0000E+00 |
| | | 0.1500E+04 | |
| 2 | 0.1000E+01 | | 0.1500E+04 |
| | | 0.1500E+04 | |
| 3 | 0.6000E+01 | | 0.3000E+04 |
| | | 0.1000E+05 | |
| 4 | 0.1000E+01 | | 0.1300E+05 |

FREQUENCY RANGE ( 0.2000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1760E+03 | | 0.0000E+00 |
| | | 0.1319E+04 | |
| 2 | 0.2322E+01 | | 0.1319E+04 |
| | | 0.1531E+04 | |
| 3 | 0.9163E+01 | | 0.2850E+04 |
| | | 0.5297E+04 | |
| 4 | 0.1221E+01 | | 0.8148E+04 |

MEAN PERCENT VARIATION IS 0.2121E+02

ERROR ANALYSIS

R-SQUARED = 0.999E+00

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 24 | 0.150E+06 | 0.626E+04 | 0.250E+00 |
| MODEL | 6 | 0.150E+06 | 0.250E+05 | 0.401E+06 |
| RESID | 18 | 0.112E+01 | 0.625E-01 | |

STANDARD ERROR = 0.250E+00

DTEST FOR MEANS =-0.709E-06

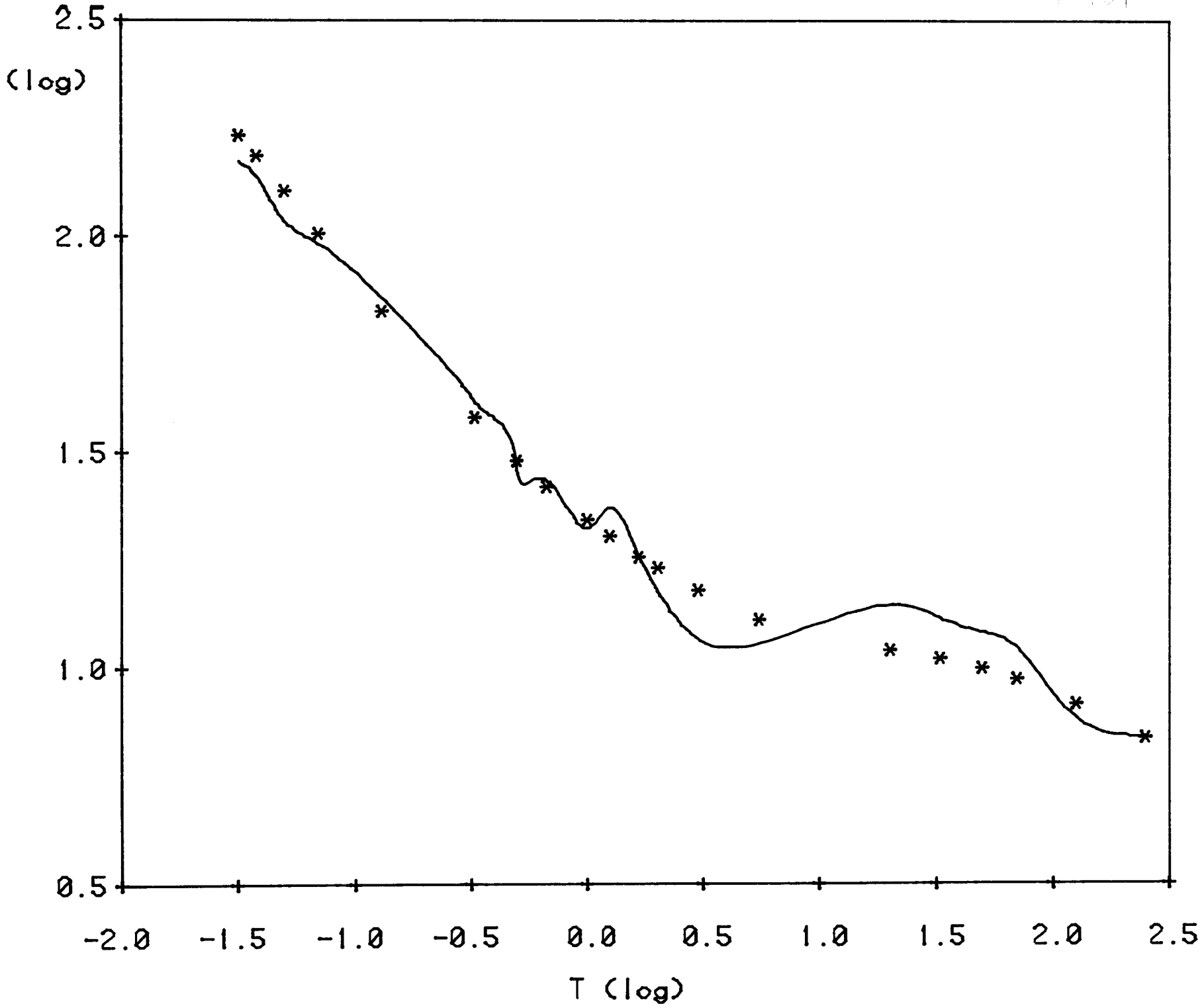
NOISE TO SIGNAL RATIO = 0.158E+00 PERCENT

SHAS31 200 HZ 31-JUL-84 T41N R2W S32 E OF C

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.500E+03 | 0.300E+01 | 0.304E+01 | -0.408E-01 | -0.135E+01 |
| 2 | 0.250E+03 | 0.400E+01 | 0.393E+01 | 0.721E-01 | 0.182E+01 |
| 3 | 0.125E+03 | 0.500E+01 | 0.505E+01 | -0.477E-01 | -0.950E+00 |
| 4 | 0.700E+02 | 0.600E+01 | 0.590E+01 | 0.969E-01 | 0.163E+01 |
| 5 | 0.500E+02 | 0.600E+01 | 0.620E+01 | -0.199E+00 | -0.327E+01 |
| 6 | 0.200E+02 | 0.600E+01 | 0.608E+01 | -0.785E-01 | -0.130E+01 |
| 7 | 0.100E+02 | 0.600E+01 | 0.618E+01 | -0.180E+00 | -0.295E+01 |
| 8 | 0.550E+01 | 0.800E+01 | 0.751E+01 | 0.491E+00 | 0.633E+01 |
| 9 | 0.300E+01 | 0.900E+01 | 0.106E+02 | -0.164E+01 | -0.167E+02 |
| 10 | 0.200E+01 | 0.100E+02 | 0.140E+02 | -0.402E+01 | -0.335E+02 |
| 11 | 0.125E+01 | 0.320E+02 | 0.196E+02 | 0.124E+02 | 0.478E+02 |
| 12 | 0.100E+01 | 0.230E+02 | 0.231E+02 | -0.129E+00 | -0.558E+00 |
| 13 | 0.830E+00 | 0.360E+02 | 0.265E+02 | 0.946E+01 | 0.303E+02 |
| 14 | 0.670E+00 | 0.350E+02 | 0.311E+02 | 0.386E+01 | 0.117E+02 |
| 15 | 0.500E+00 | 0.530E+02 | 0.389E+02 | 0.141E+02 | 0.307E+02 |
| 16 | 0.500E+00 | 0.300E+02 | 0.389E+02 | -0.890E+01 | -0.258E+02 |
| 17 | 0.500E+00 | 0.520E+02 | 0.389E+02 | 0.131E+02 | 0.288E+02 |
| 18 | 0.330E+00 | 0.330E+02 | 0.538E+02 | -0.208E+02 | -0.479E+02 |
| 19 | 0.330E+00 | 0.460E+02 | 0.538E+02 | -0.778E+01 | -0.156E+02 |
| 20 | 0.130E+00 | 0.101E+03 | 0.111E+03 | -0.997E+01 | -0.941E+01 |
| 21 | 0.700E-01 | 0.158E+03 | 0.167E+03 | -0.887E+01 | -0.546E+01 |
| 22 | 0.500E-01 | 0.175E+03 | 0.195E+03 | -0.203E+02 | -0.110E+02 |
| 23 | 0.380E-01 | 0.226E+03 | 0.211E+03 | 0.147E+02 | 0.672E+01 |
| 24 | 0.320E-01 | 0.280E+03 | 0.216E+03 | 0.635E+02 | 0.256E+02 |
| 25 | 0.250E-01 | 0.185E+03 | 0.217E+03 | -0.318E+02 | -0.158E+02 |

MEAN PERCENT ERROR = 0.2098E+02
MAXIMUM PERCENT ERROR = 0.4790E+02


2.5
(log)
2.0
1.5
1.0
0.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)

SHAS32 200 HZ 01-AUG-84 T41N R2W S21 NE

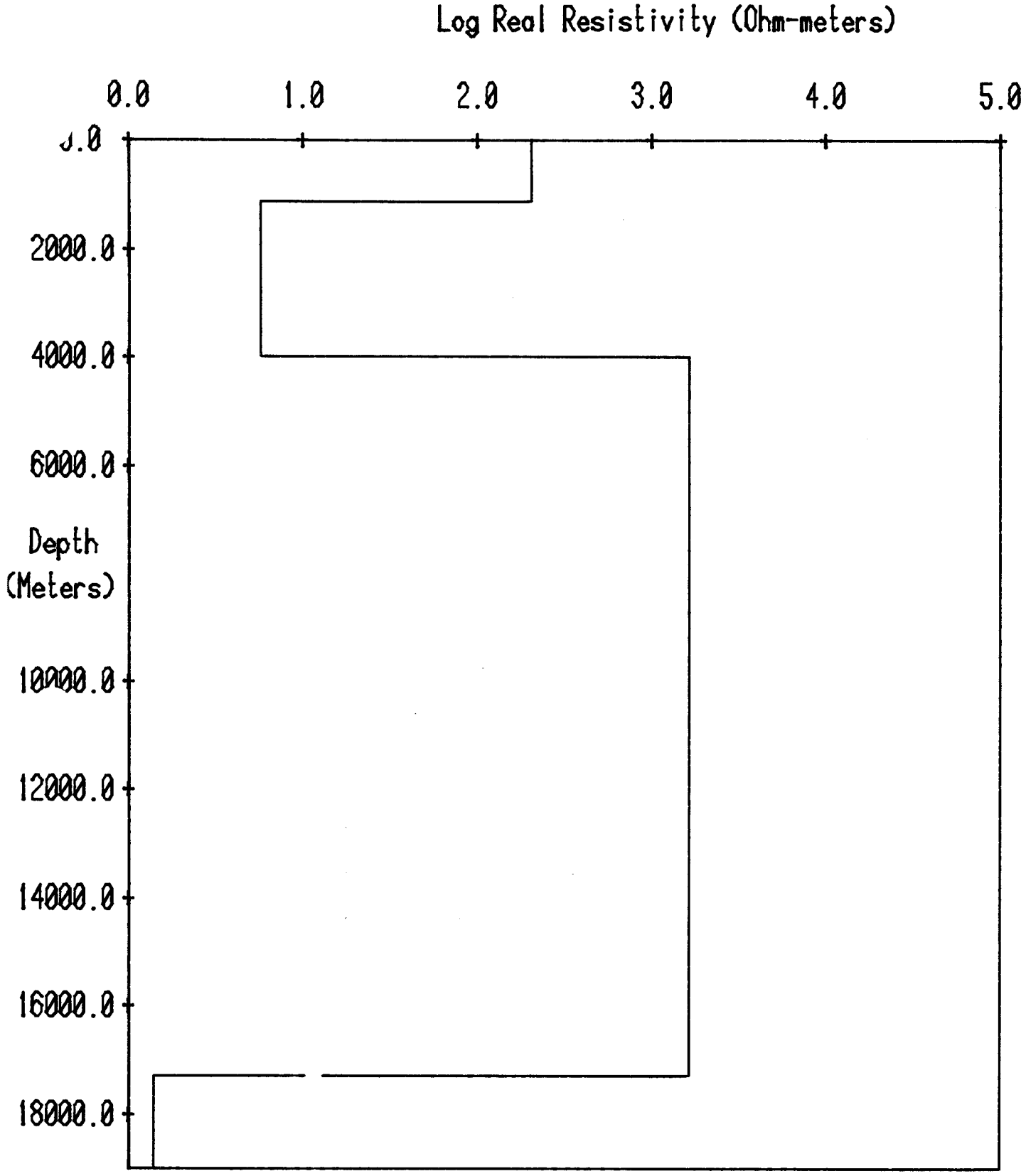
THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 28
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 1

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.0000E+00 | | 0.0000E+00 |
| | | 0.4000E+03 | |
| 2 | 0.3000E+01 | | 0.4000E+03 |
| | | 0.3000E+01 | |
| 3 | 0.0000E+00 | | 0.4030E+03 |
| | | 0.1000E+02 | |
| 4 | 0.4000E+01 | | 0.4130E+03 |

FREQUENCY RANGE ( 0.1250E-02 , 0.4000E+02 )

SHA-32




| | | | | |
|---|---|---|---|---|
| Resistivity | 0205.29 | 0005.73 | 1640.36 | 0001.39 |
| Thickness | | 1113.70 | 2888.18 | 13282.26 |
| Depth | 0000.00 | 1113.70 | 4001.88 | 17284.15 |

ERROR ANALYSIS

R-SQUARED = 0.100E+01

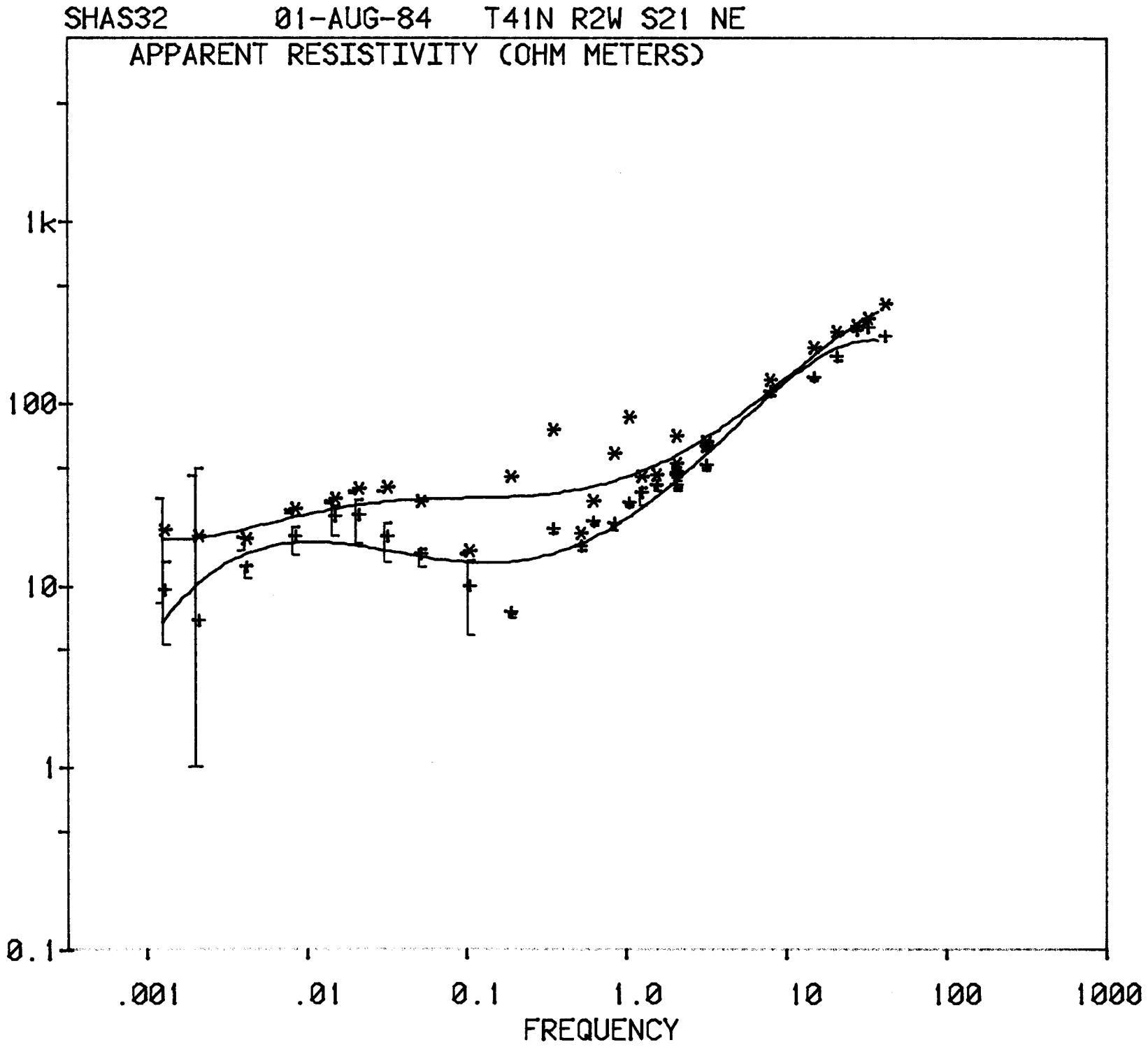
ANALYSIS OF VARIANCE

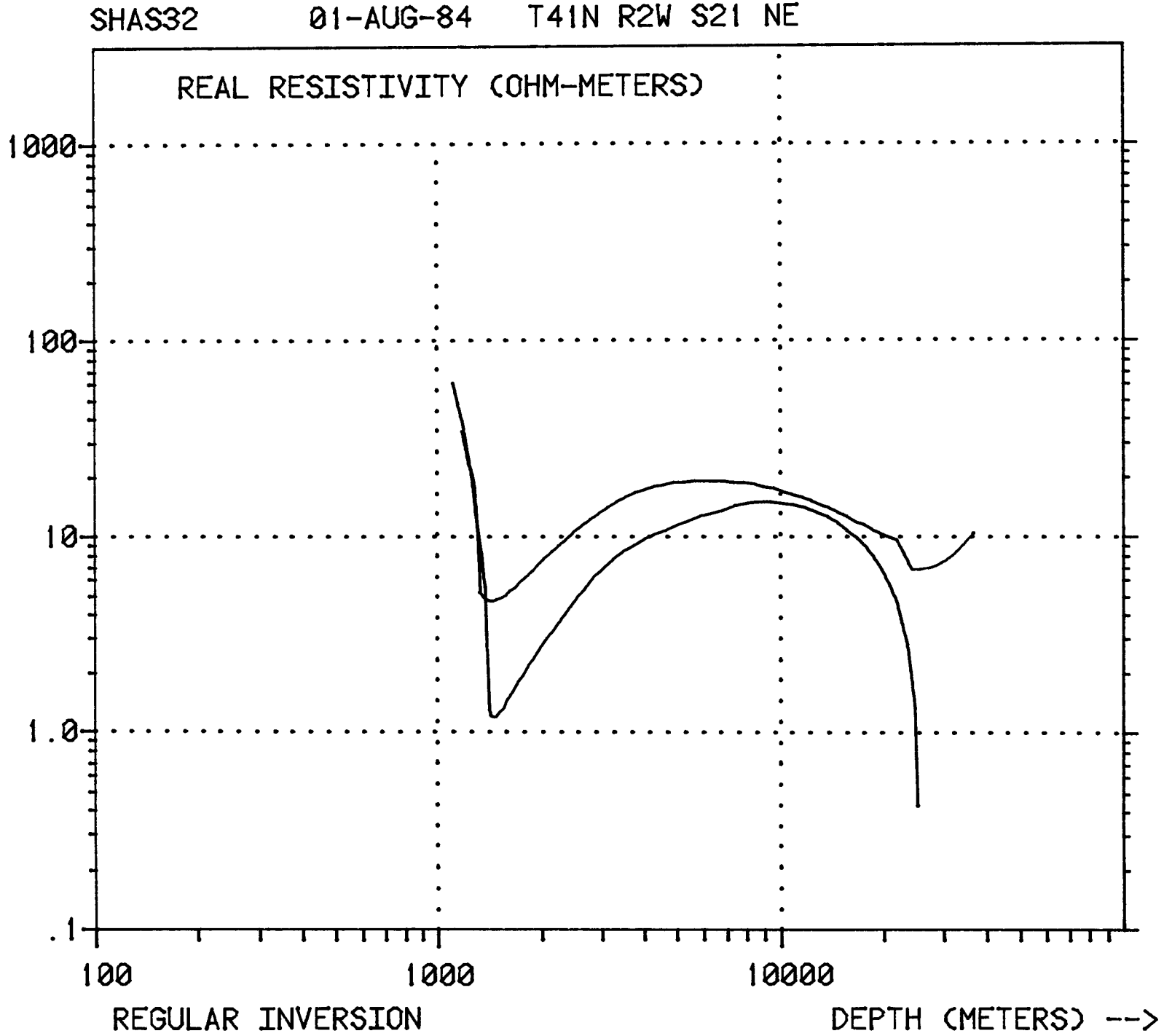
| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 47 | 0.864E+05 | 0.184E+04 | 0.170E+00 |
| MODEL | 8 | 0.866E+05 | 0.108E+05 | 0.895E+05 |
| RESID | 39 | 0.471E+01 | 0.121E+00 | |

STANDARD ERROR = 0.348E+00

DTEST FOR MEANS =-0.166E-02

NOISE TO SIGNAL RATIO = 0.334E+00 PERCENT


SHAS32 01-AUG-84 T41N R2W S21 NE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAS32 01-AUG-84 T41N R2W S21 NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->

THE SITE IS: SHAS32 200 HZ 01-AUG-84 T41N R2W S21 NE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | RHOMAX | PERIOD # | STDEV OF RHOM | RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 8.87 | 18.55 | 1 | 4.28 | 10.71 |
| 0.0020 | 6.05 | 17.36 | 2 | 36.86 | 21.96 |
| 0.0040 | 11.75 | 16.65 | 3 | 1.03 | 1.32 |
| 0.0080 | 17.42 | 24.81 | 4 | 3.02 | 0.47 |
| 0.0143 | 22.54 | 28.03 | 5 | 4.31 | 0.12 |
| 0.0200 | 22.86 | 31.93 | 6 | 6.03 | 0.13 |
| 0.0303 | 17.40 | 32.19 | 7 | 4.24 | 0.10 |
| 0.0500 | 14.05 | 27.09 | 8 | 1.50 | 0.05 |
| 0.1000 | 9.33 | 14.55 | 9 | 4.10 | 0.09 |
| 0.1818 | 6.77 | 37.15 | 10 | 0.17 | 0.05 |
| 0.3333 | 18.92 | 66.23 | 11 | 0.12 | 0.07 |
| 0.5000 | 15.28 | 18.00 | 12 | 0.08 | 0.01 |
| 0.5988 | 20.85 | 27.05 | 13 | 0.19 | 0.03 |
| 0.8000 | 20.36 | 49.54 | 14 | 0.63 | 0.02 |
| 1.0000 | 11.32 | 33.17 | 15 | 0.09 | 0.00 |
| 1.0000 | 26.66 | 78.42 | 16 | 3.18 | 0.03 |
| 1.2048 | 29.98 | 36.71 | 17 | 1.31 | 0.01 |
| 1.4925 | 33.29 | 37.44 | 18 | 0.86 | 0.01 |
| 2.0000 | 37.54 | 43.25 | 19 | 0.52 | 0.00 |
| 2.0000 | 32.87 | 39.20 | 20 | 0.02 | 0.00 |
| 2.0000 | 38.29 | 61.26 | 21 | 0.88 | 0.01 |
| 3.0303 | 42.40 | 54.28 | 22 | 0.03 | 0.00 |
| 3.0303 | 54.09 | 57.04 | 23 | 0.30 | 0.00 |
| 7.6923 | 108.24 | 124.51 | 24 | 0.88 | 0.00 |
| 14.2857 | 130.82 | 187.21 | 25 | 0.52 | 0.00 |
| 20.0000 | 168.09 | 229.38 | 26 | 0.48 | 0.00 |
| 26.3158 | 232.78 | 249.26 | 27 | 0.12 | 0.00 |
| 31.2500 | 242.36 | 270.59 | 28 | 0.05 | 0.00 |
| 40.0000 | 217.76 | 326.94 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS32 200 HZ 01-AUG-84 T41N R2W S21 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.262E+02 | 0.868E+01 | 56. | 46. | 64. | 0.2550 | 0.2128 | 2.7279 | 0.05 |
| H | SEC | 0.109E+02 | 0.907E+01 | 20. | 55. | 34. | 0.4723 | 1.7124 | 180.00 | 0.33 |
| E | 500.0 | 0.152E+02 | 0.768E+01 | 44. | 74. | 117. | 0.2469 | 1.2104 | 4.3174 | 0.20 |
| H | SEC | 0.195E+02 | 0.443E+01 | 41. | 7. | 119. | 0.2991 | 1.1809 | 180.00 | 0.46 |
| E | 250.0 | 0.168E+02 | 0.130E+02 | 64. | 63. | 95. | 0.1371 | 0.8837 | 0.8692 | 0.02 |
| H | SEC | 0.165E+02 | 0.105E+02 | 63. | 65. | 115. | 0.2072 | 0.8024 | 180.00 | 0.09 |
| E | 125.0 | 0.271E+02 | 0.192E+02 | 87. | 75. | 61. | 0.0601 | 0.5323 | 1.8921 | 0.11 |
| H | SEC | 0.226E+02 | 0.157E+02 | 78. | 89. | 126. | 0.0685 | 0.4010 | 180.00 | 0.15 |
| E | 70.0 | 0.290E+02 | 0.244E+02 | 1. | 86. | 101. | 0.0428 | 0.1377 | 1.9078 | 0.08 |
| H | SEC | 0.271E+02 | 0.207E+02 | 2. | 86. | 114. | 0.2031 | 0.5816 | 180.00 | 0.05 |
| E | 50.0 | 0.329E+02 | 0.245E+02 | 10. | 6. | 99. | 0.2768 | 0.2636 | 0.6031 | 0.09 |
| H | SEC | 0.310E+02 | 0.212E+02 | 12. | 4. | 113. | 0.1110 | 0.8048 | 180.00 | 0.05 |
| E | 33.0 | 0.328E+02 | 0.180E+02 | 23. | 20. | 104. | 0.1347 | 0.5158 | 0.7132 | 0.04 |
| H | SEC | 0.315E+02 | 0.168E+02 | 24. | 19. | 109. | 0.1033 | 0.2813 | 180.00 | 0.03 |
| E | 20.0 | 0.275E+02 | 0.143E+02 | 44. | 51. | 104. | 0.0688 | 0.1318 | 0.4047 | 0.10 |
| H | SEC | 0.267E+02 | 0.138E+02 | 44. | 50. | 106. | 0.0250 | 0.0672 | 132.20 | 0.09 |

AVERAGE # 8
SHAS32 200 HZ 01-AUG-84 T41N R2W S21 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.161E+02 | 0.954E+01 | 75. | 77. | 110. | 0.1969 | 0.2838 | 0.0381 | 0.06 |
| H | SEC | 0.130E+02 | 0.913E+01 | 71. | 80. | 114. | 0.4110 | 0.9053 | 88.50 | 0.10 |
| E | 5.5 | 0.521E+02 | 0.787E+01 | 4. | 87. | 100. | 0.0527 | 0.1969 | 0.0762 | 0.16 |
| H | SEC | 0.222E+02 | 0.567E+01 | 88. | 59. | 51. | 0.1798 | 0.1680 | 62.00 | 0.59 |
| E | 3.0 | 0.757E+02 | 0.332E+02 | 33. | 74. | 87. | 1.3852 | 0.2793 | 0.0309 | 0.30 |
| H | SEC | 0.568E+02 | 0.461E+01 | 71. | 15. | 17. | 0.6956 | 0.0000 | 160.00 | 0.68 |
| E | 2.0 | 0.217E+02 | 0.215E+02 | 10. | 37. | 53. | 0.0942 | 0.1245 | 0.1497 | 0.27 |
| H | SEC | 0.143E+02 | 0.902E+01 | 61. | 24. | 130. | 0.0834 | 0.0547 | 71.50 | 0.38 |
| E | 1.7 | 0.288E+02 | 0.258E+02 | 45. | 66. | 39. | 0.3941 | 0.1663 | 0.0104 | 0.16 |
| H | SEC | 0.253E+02 | 0.159E+02 | 50. | 62. | 41. | 0.3638 | 0.3268 | 72.10 | 0.14 |
| E | 1.2 | 0.652E+02 | 0.230E+02 | 56. | 52. | 100. | 1.1917 | 0.4704 | 0.0092 | 0.05 |
| H | SEC | 0.338E+02 | 0.178E+02 | 52. | 50. | 105. | 0.7650 | 0.4489 | 180.00 | 0.02 |
| E | 1.0 | 0.440E+02 | 0.152E+02 | 64. | 1. | 127. | 0.0000 | 0.0658 | 0.0724 | 0.39 |
| H | HZ | 0.223E+02 | 0.744E+01 | 66. | 42. | 125. | 0.0955 | 0.1332 | 63.00 | 0.20 |

AVERAGE # 8
SHAS32 200 HZ 01-AUG-84 T41N R2W S21 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.699E+02 | 0.351E+02 | 82. | 83. | 150. | 0.0929 | 0.9425 | 0.0540 | 0.17 |
| H | HZ | 0.869E+02 | 0.182E+02 | 11. | 80. | 179. | 0.7289 | 0.5615 | 77.70 | 0.17 |
| E | 1.2 | 0.432E+02 | 0.346E+02 | 67. | 74. | 118. | 0.4818 | 0.6482 | 0.0028 | 0.13 |
| H | HZ | 0.302E+02 | 0.254E+02 | 68. | 72. | 164. | 0.6538 | 0.2576 | 169.20 | 0.14 |
| E | 1.5 | 0.415E+02 | 0.361E+02 | 68. | 72. | 104. | 0.3445 | 0.3757 | 0.0035 | 0.14 |
| H | HZ | 0.334E+02 | 0.305E+02 | 73. | 69. | 24. | 0.2416 | 0.3455 | 6.10 | 0.15 |
| E | 2.0 | 0.483E+02 | 0.393E+02 | 69. | 73. | 96. | 1.0254 | 0.3117 | 0.0086 | 0.10 |
| H | HZ | 0.382E+02 | 0.358E+02 | 71. | 74. | 99. | 0.1666 | 0.5404 | 24.50 | 0.10 |
| E | 2.0 | 0.433E+02 | 0.388E+02 | 70. | 35. | 130. | 0.0780 | 0.0794 | 0.0158 | 0.16 |
| H | HZ | 0.351E+02 | 0.270E+02 | 66. | 77. | 58. | 0.0828 | 0.0881 | 50.10 | 0.12 |
| E | 2.0 | 0.676E+02 | 0.426E+02 | 68. | 77. | 146. | 0.2258 | 0.4049 | 0.0088 | 0.08 |
| H | HZ | 0.549E+02 | 0.340E+02 | 68. | 78. | 148. | 0.5275 | 0.8934 | 180.00 | 0.10 |

AVERAGE # 8
SHAS32 200 HZ 01-AUG-84 T41N R2W S21 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.635E+02 | 0.599E+02 | 75. | 39. | 135. | 0.1780 | 0.0645 | 0.0180 | 0.18 |
| H | HZ | 0.451E+02 | 0.249E+02 | 80. | 71. | 135. | 0.0560 | 0.0848 | 180.00 | 0.07 |
| E | 3.0 | 0.614E+02 | 0.565E+02 | 74. | 75. | 109. | 0.3960 | 0.2425 | 0.0059 | 0.10 |
| H | HZ | 0.527E+02 | 0.517E+02 | 75. | 76. | 115. | 0.5233 | 0.4645 | 180.00 | 0.10 |
| E | 7.7 | 0.127E+03 | 0.115E+03 | 76. | 72. | 111. | 0.7080 | 2.6085 | 0.0115 | 0.07 |
| H | HZ | 0.122E+03 | 0.101E+03 | 76. | 69. | 118. | 0.0000 | 1.7303 | 180.00 | 0.05 |
| E | 14.3 | 0.195E+03 | 0.145E+03 | 75. | 72. | 121. | 1.4167 | 0.0000 | 0.0253 | 0.06 |
| H | HZ | 0.180E+03 | 0.117E+03 | 75. | 74. | 129. | 0.8711 | 2.6622 | 180.00 | 0.04 |
| E | 20.0 | 0.247E+03 | 0.195E+03 | 70. | 74. | 140. | 1.2161 | 2.6926 | 0.0374 | 0.06 |
| H | HZ | 0.212E+03 | 0.142E+03 | 73. | 82. | 133. | 1.3085 | 2.8032 | 180.00 | 0.04 |
| E | 26.3 | 0.274E+03 | 0.247E+03 | 68. | 71. | 134. | 0.8584 | 2.3812 | 0.0140 | 0.07 |
| H | HZ | 0.225E+03 | 0.219E+03 | 76. | 70. | 52. | 0.3015 | 0.0000 | 180.00 | 0.08 |
| E | 31.2 | 0.298E+03 | 0.251E+03 | 66. | 66. | 114. | 0.9415 | 0.0000 | 0.0242 | 0.07 |
| H | HZ | 0.244E+03 | 0.233E+03 | 65. | 67. | 8. | 0.0000 | 2.2023 | 50.10 | 0.08 |
| E | 40.0 | 0.350E+03 | 0.270E+03 | 62. | 61. | 122. | 0.5617 | 0.0000 | 0.1082 | 0.06 |
| H | HZ | 0.304E+03 | 0.165E+03 | 66. | 45. | 160. | 0.2462 | 0.0000 | 82.30 | 0.10 |

SHAS32 200 HZ 01-AUG-84 T41N R2W S21 NE

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 28
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2000E+03 | | 0.0000E+00 |
| | | 0.1500E+04 | |
| 2 | 0.2000E+01 | | 0.1500E+04 |
| | | 0.1500E+04 | |
| 3 | 0.9000E+01 | | 0.3000E+04 |
| | | 0.1000E+05 | |
| 4 | 0.5000E+01 | | 0.1300E+05 |

FREQUENCY RANGE ( 0.1250E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2053E+03 | | 0.0000E+00 |
| | | 0.1114E+04 | |
| 2 | 0.5734E+01 | | 0.1114E+04 |
| | | 0.2888E+04 | |
| 3 | 0.1640E+04 | | 0.4002E+04 |
| | | 0.1328E+05 | |
| 4 | 0.1395E+01 | | 0.1728E+05 |

MEAN PERCENT VARIATION IS 0.1605E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 27 | 0.140E+06 | 0.519E+04 | 0.222E+00 |
| MODEL | 6 | 0.140E+06 | 0.234E+05 | 0.681E+06 |
| RESID | 21 | 0.721E+00 | 0.343E-01 | |

STANDARD ERROR = 0.185E+00

DTEST FOR MEANS = 0.509E-07

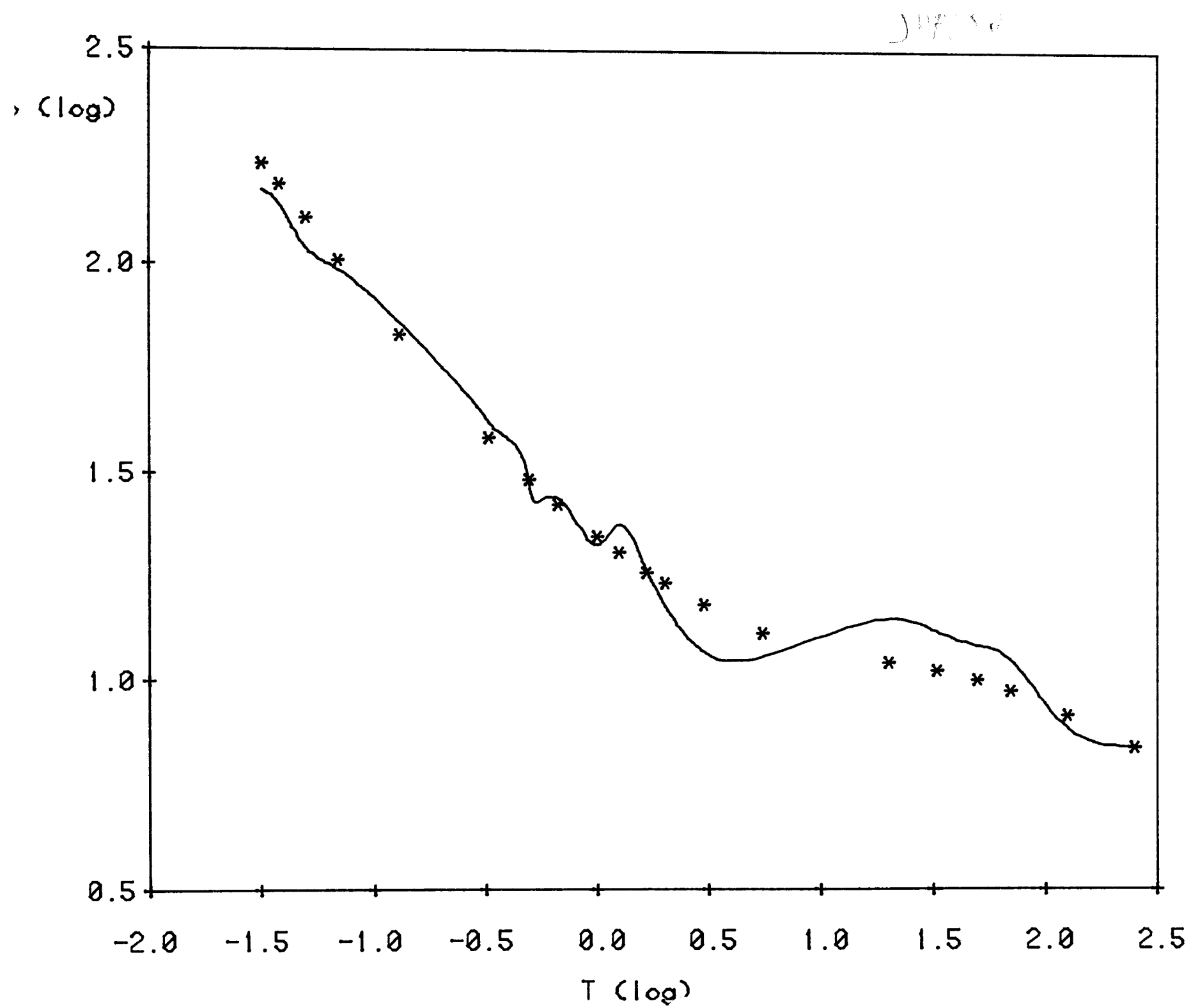
NOISE TO SIGNAL RATIO = 0.121E+00 PERCENT

SHAS32 200 HZ 01-AUG-84 T41N R2W S21 NE

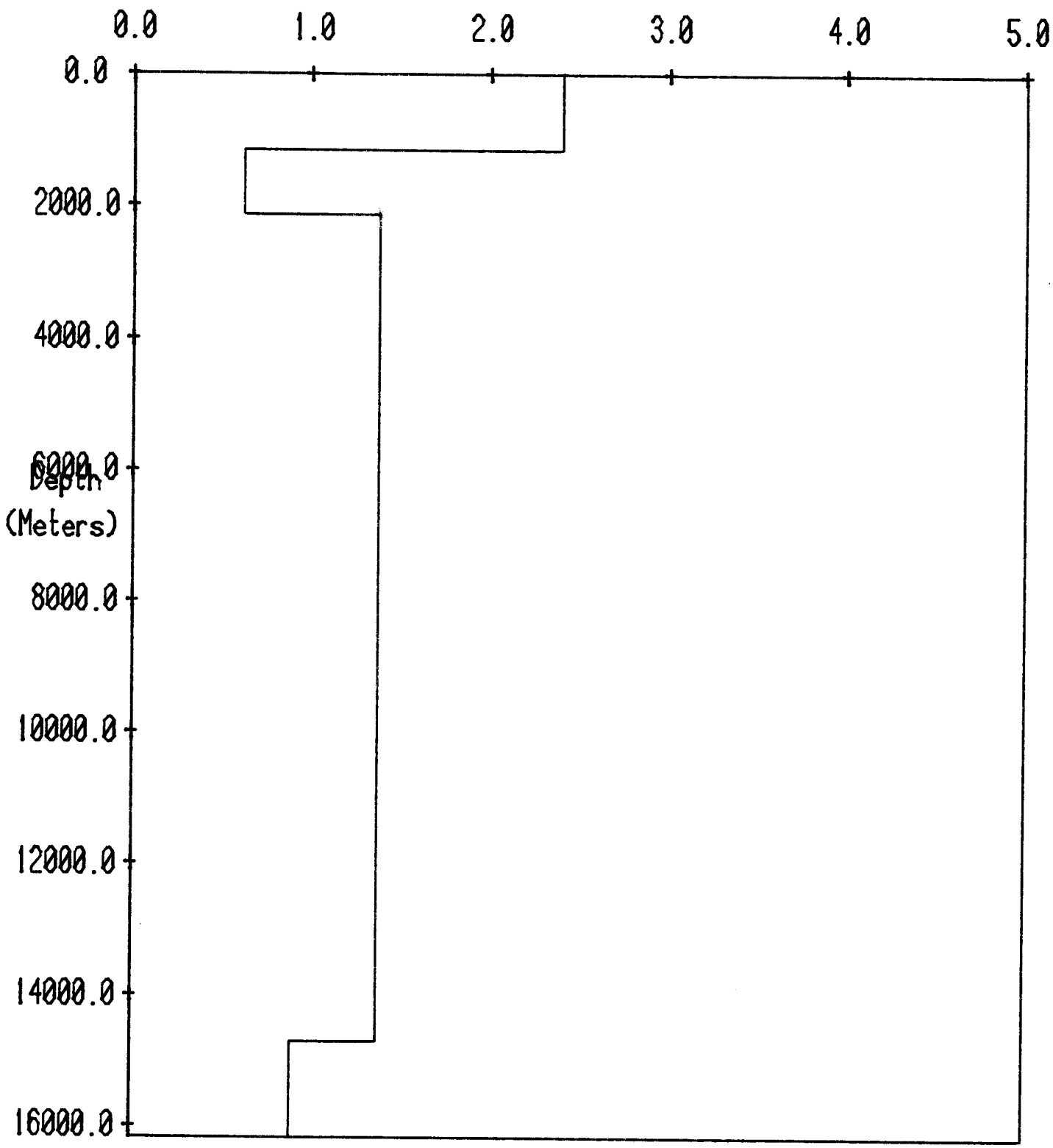
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.800E+03 | 0.900E+01 | 0.656E+01 | 0.244E+01 | 0.314E+02 |
| 2 | 0.500E+03 | 0.600E+01 | 0.856E+01 | -0.256E+01 | -0.352E+02 |
| 3 | 0.250E+03 | 0.120E+02 | 0.128E+02 | -0.778E+00 | -0.628E+01 |
| 4 | 0.125E+03 | 0.170E+02 | 0.179E+02 | -0.863E+00 | -0.495E+01 |
| 5 | 0.700E+02 | 0.230E+02 | 0.203E+02 | 0.273E+01 | 0.126E+02 |
| 6 | 0.500E+02 | 0.230E+02 | 0.198E+02 | 0.324E+01 | 0.151E+02 |
| 7 | 0.330E+02 | 0.170E+02 | 0.174E+02 | -0.357E+00 | -0.208E+01 |
| 8 | 0.200E+02 | 0.140E+02 | 0.136E+02 | 0.437E+00 | 0.317E+01 |
| 9 | 0.100E+02 | 0.900E+01 | 0.101E+02 | -0.107E+01 | -0.112E+02 |
| 10 | 0.550E+01 | 0.700E+01 | 0.998E+01 | -0.298E+01 | -0.351E+02 |
| 11 | 0.300E+01 | 0.190E+02 | 0.130E+02 | 0.603E+01 | 0.377E+02 |
| 12 | 0.200E+01 | 0.150E+02 | 0.166E+02 | -0.161E+01 | -0.102E+02 |
| 13 | 0.167E+01 | 0.210E+02 | 0.186E+02 | 0.242E+01 | 0.122E+02 |
| 14 | 0.125E+01 | 0.200E+02 | 0.221E+02 | -0.209E+01 | -0.995E+01 |
| 15 | 0.100E+01 | 0.270E+02 | 0.251E+02 | 0.189E+01 | 0.724E+01 |
| 16 | 0.830E+00 | 0.300E+02 | 0.279E+02 | 0.208E+01 | 0.718E+01 |
| 17 | 0.670E+00 | 0.330E+02 | 0.316E+02 | 0.138E+01 | 0.427E+01 |
| 18 | 0.500E+00 | 0.380E+02 | 0.378E+02 | 0.180E+00 | 0.476E+00 |
| 19 | 0.500E+00 | 0.330E+02 | 0.378E+02 | -0.482E+01 | -0.136E+02 |
| 20 | 0.500E+00 | 0.380E+02 | 0.378E+02 | 0.180E+00 | 0.476E+00 |
| 21 | 0.330E+00 | 0.420E+02 | 0.497E+02 | -0.771E+01 | -0.168E+02 |
| 22 | 0.330E+00 | 0.540E+02 | 0.497E+02 | 0.429E+01 | 0.827E+01 |
| 23 | 0.130E+00 | 0.108E+03 | 0.958E+02 | 0.122E+02 | 0.119E+02 |
| 24 | 0.700E-01 | 0.131E+03 | 0.147E+03 | -0.158E+02 | -0.114E+02 |
| 25 | 0.500E-01 | 0.168E+03 | 0.180E+03 | -0.121E+02 | -0.694E+01 |
| 26 | 0.380E-01 | 0.233E+03 | 0.207E+03 | 0.261E+02 | 0.119E+02 |
| 27 | 0.320E-01 | 0.242E+03 | 0.222E+03 | 0.201E+02 | 0.868E+01 |
| 28 | 0.250E-01 | 0.218E+03 | 0.238E+03 | -0.205E+02 | -0.898E+01 |

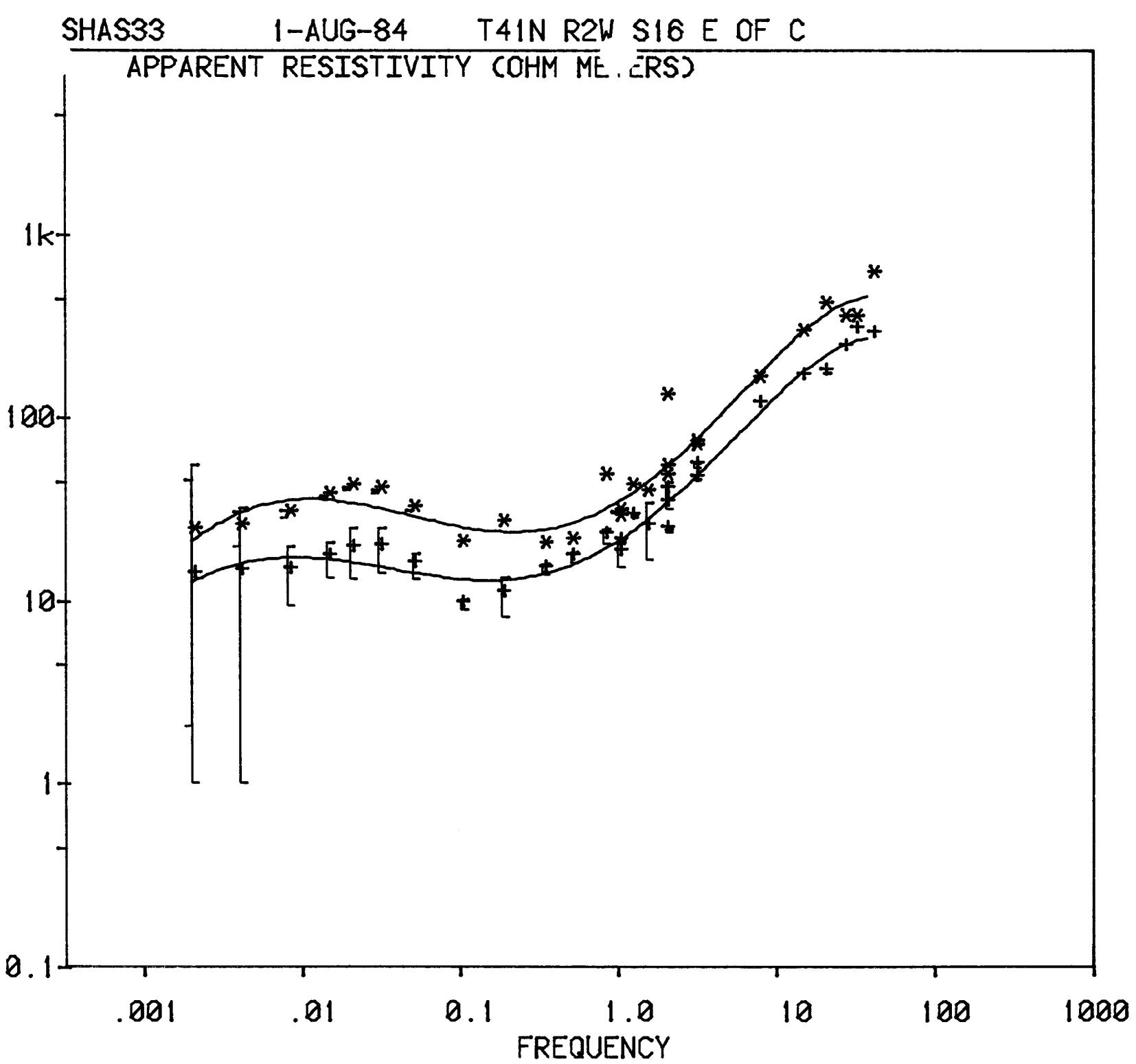
MEAN PERCENT ERROR = 0.1594E+02
MAXIMUM PERCENT ERROR = 0.3774E+02
MAX. ERROR OCCURED AT OBSERVATION 11

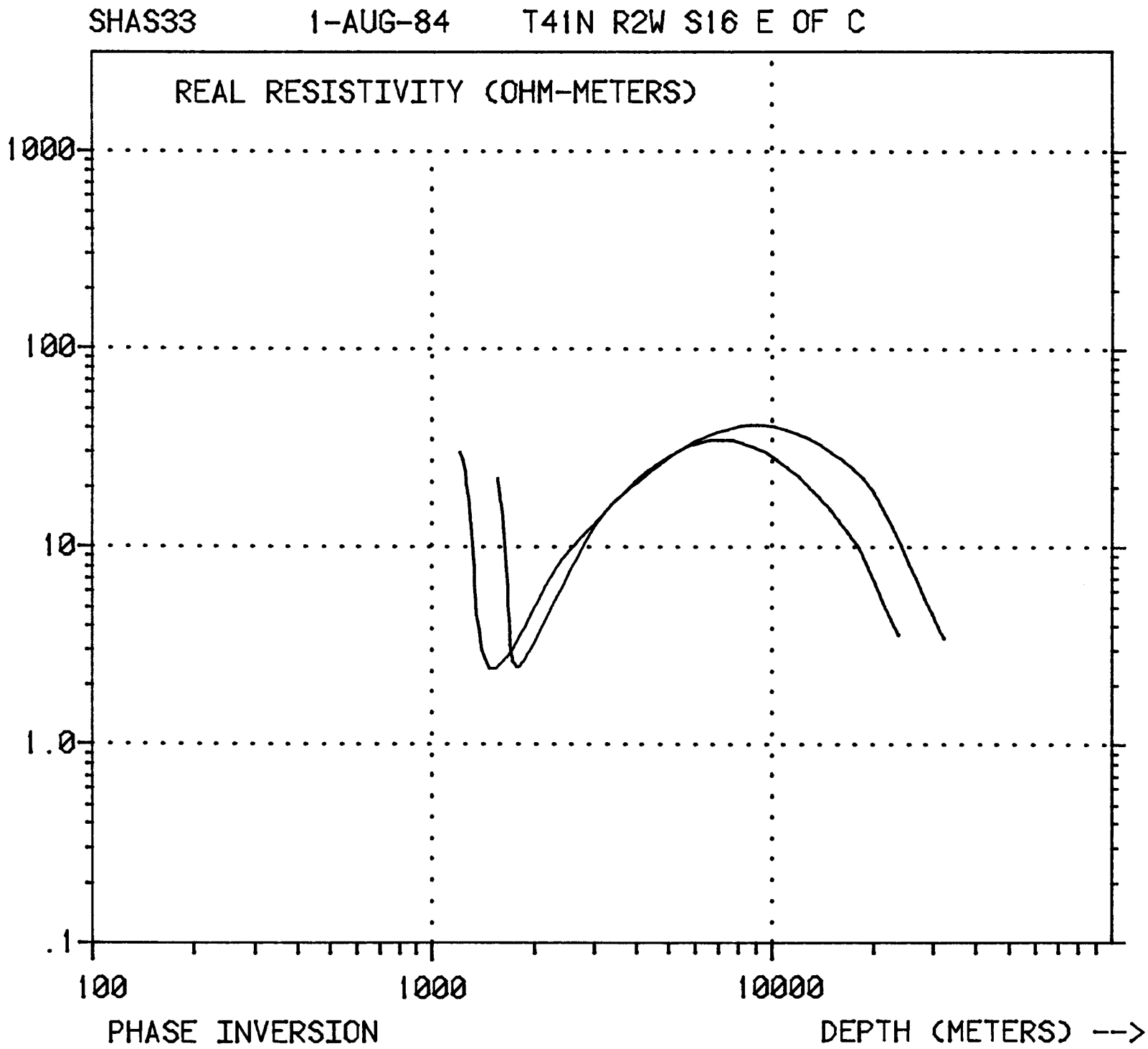

2.5
2.0
1.5
1.0
0.5
(log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)

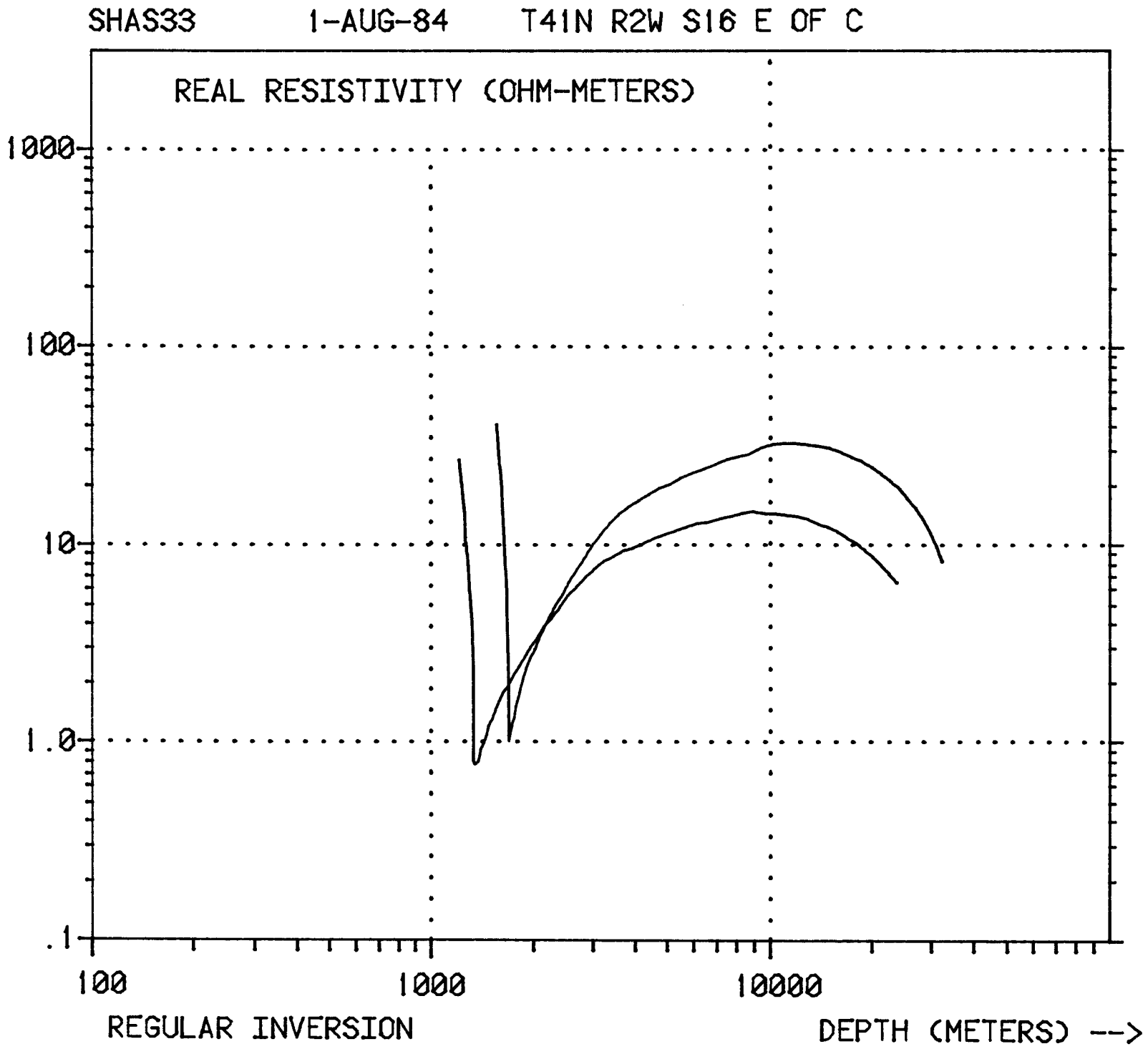
SHAS33




| | | | | |
|---|---|---|---|---|
| Resistivity | 0257.11 | 0004.14 | 0023.86 | 0007.92 |
| Thickness | | 1135.30 | 0990.40 | 12585.44 |
| Depth | 0000.00 | 1135.30 | 2125.70 | 14711.15 |


SHAS33 1-AUG-84 T41N R2W S16 E OF C
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAS33 1-AUG-84 T41N R2W S16 E OF C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->


SHAS33 1-AUG-84 T41N R2W S16 E OF C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->

THE SITE IS: SHAS33 200 HZ 1-AUG-84 T41N R2W S16 E OF C

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 13.16 | 17.32 | 1 | 40.65 | 21.19 |
| 0.0020 | 13.52 | 23.22 | 2 | 17.63 | 5.33 |
| 0.0040 | 13.98 | 24.73 | 3 | 5.01 | 1.37 |
| 0.0080 | 14.25 | 29.06 | 4 | 3.53 | 0.24 |
| 0.0143 | 16.76 | 36.10 | 5 | 5.81 | 0.85 |
| 0.0200 | 18.81 | 40.21 | 6 | 5.35 | 0.67 |
| 0.0303 | 19.20 | 38.70 | 7 | 2.34 | 0.17 |
| 0.0500 | 15.18 | 30.60 | 8 | 0.61 | 0.02 |
| 0.1000 | 9.41 | 19.84 | 9 | 2.60 | 0.05 |
| 0.1818 | 10.63 | 25.40 | 10 | 0.91 | 0.02 |
| 0.3333 | 14.54 | 19.24 | 11 | 0.97 | 0.02 |
| 0.5000 | 16.82 | 20.52 | 12 | 2.01 | 0.01 |
| 0.5988 | 32.64 | 57.46 | 13 | 0.41 | 0.09 |
| 0.8000 | 21.86 | 45.82 | 14 | 2.69 | 0.05 |
| 1.0000 | 20.45 | 29.72 | 15 | 0.45 | 0.01 |
| 1.0000 | 17.61 | 27.36 | 16 | 8.44 | 0.06 |
| 1.2048 | 28.20 | 40.04 | 17 | 3.82 | 0.01 |
| 1.4925 | 24.79 | 37.76 | 18 | 1.79 | 0.01 |
| 2.0000 | 39.16 | 46.07 | 19 | 0.48 | 0.00 |
| 2.0000 | 32.94 | 51.29 | 20 | 0.18 | 0.00 |
| 2.0000 | 23.77 | 125.12 | 21 | 1.14 | 0.04 |
| 3.0303 | 44.65 | 66.41 | 22 | 0.11 | 0.00 |
| 3.0303 | 53.37 | 70.22 | 23 | 0.15 | 0.00 |
| 7.6923 | 115.42 | 155.33 | 24 | 1.15 | 0.01 |
| 14.2857 | 163.50 | 283.27 | 25 | 0.00 | 0.00 |
| 20.0000 | 170.48 | 399.07 | 26 | 0.00 | 0.01 |
| 26.3158 | 233.61 | 334.68 | 27 | 0.00 | 0.00 |
| 31.2500 | 289.73 | 339.93 | 28 | 0.00 | 0.00 |
| 40.0000 | 273.41 | 582.36 | 29 | 0.01 | 0.00 |

AVERAGE # 8
SHAS33 200 HZ 1-AUG-84 T41N R2W S16 E OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.182E+02 | 0.142E+02 | 48. | 53. | 69. | 0.7745 | 0.3866 | 0.4057 | 0.12 |
| H | SEC | 0.164E+02 | 0.121E+02 | 58. | 53. | 31. | 0.8292 | 1.2964 | 136.30 | 0.09 |
| E | 500.0 | 0.241E+02 | 0.138E+02 | 57. | 55. | 59. | 0.2755 | 0.1478 | 0.5820 | 0.05 |
| H | SEC | 0.223E+02 | 0.133E+02 | 62. | 51. | 45. | 0.5041 | 1.0943 | 10.80 | 0.01 |
| E | 250.0 | 0.269E+02 | 0.145E+02 | 64. | 64. | 66. | 0.1992 | 0.2769 | 0.1815 | 0.12 |
| H | SEC | 0.226E+02 | 0.134E+02 | 62. | 66. | 59. | 0.1104 | 0.1511 | 168.60 | 0.07 |
| E | 125.0 | 0.293E+02 | 0.153E+02 | 79. | 75. | 73. | 0.1593 | 0.2437 | 0.0814 | 0.07 |
| H | SEC | 0.288E+02 | 0.132E+02 | 79. | 73. | 84. | 0.0000 | 0.0228 | 152.20 | 0.13 |
| E | 70.0 | 0.365E+02 | 0.169E+02 | 89. | 0. | 83. | 0.2507 | 0.0425 | 0.0310 | 0.12 |
| H | SEC | 0.357E+02 | 0.167E+02 | 0. | 0. | 84. | 0.3044 | 0.1390 | 151.90 | 0.11 |
| E | 50.0 | 0.406E+02 | 0.190E+02 | 8. | 9. | 84. | 0.2349 | 0.0350 | 0.0252 | 0.11 |
| H | SEC | 0.399E+02 | 0.187E+02 | 8. | 9. | 85. | 0.4333 | 0.1352 | 157.60 | 0.11 |
| E | 33.0 | 0.398E+02 | 0.194E+02 | 22. | 25. | 85. | 0.2616 | 0.0814 | 0.0157 | 0.11 |
| H | SEC | 0.376E+02 | 0.190E+02 | 21. | 25. | 86. | 0.1185 | 0.1569 | 146.80 | 0.11 |
| E | 20.0 | 0.315E+02 | 0.159E+02 | 44. | 53. | 86. | 0.0870 | 0.0284 | 0.0093 | 0.08 |
| H | SEC | 0.297E+02 | 0.144E+02 | 44. | 51. | 92. | 0.1403 | 0.1129 | 132.70 | 0.07 |

AVERAGE # 8
SHAS33 200 HZ 1-AUG-84 T41N R2W S16 E OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.212E+02 | 0.994E+01 | 67. | 2. | 80. | 0.0811 | 0.3148 | 0.0063 | 0.10 |
| H | SEC | 0.185E+02 | 0.889E+01 | 67. | 0. | 82. | 0.3736 | 0.9403 | 109.20 | 0.07 |
| E | 5.5 | 0.303E+02 | 0.147E+02 | 32. | 74. | 167. | 0.2740 | 0.5072 | 0.0106 | 0.11 |
| H | SEC | 0.205E+02 | 0.658E+01 | 9. | 42. | 93. | 0.1567 | 0.5565 | 103.90 | 0.19 |
| E | 3.0 | 0.185E+02 | 0.168E+02 | 34. | 50. | 95. | 0.0525 | 0.1929 | 0.0077 | 0.05 |
| H | SEC | 0.200E+02 | 0.123E+02 | 43. | 49. | 119. | 0.3113 | 0.2948 | 113.00 | 0.07 |
| E | 2.0 | 0.207E+02 | 0.180E+02 | 60. | 47. | 165. | 0.3819 | 0.3617 | 0.0036 | 0.08 |
| H | SEC | 0.203E+02 | 0.157E+02 | 59. | 54. | 146. | 0.1727 | 0.9299 | 100.70 | 0.02 |
| E | 1.7 | 0.734E+02 | 0.402E+02 | 68. | 70. | 155. | 1.8440 | 0.2932 | 0.0030 | 0.10 |
| H | SEC | 0.416E+02 | 0.251E+02 | 67. | 69. | 152. | 1.3877 | 0.1419 | 133.80 | 0.07 |
| E | 1.2 | 0.573E+02 | 0.243E+02 | 66. | 64. | 165. | 1.1366 | 0.3959 | 0.0042 | 0.02 |
| H | SEC | 0.343E+02 | 0.194E+02 | 64. | 65. | 142. | 1.0928 | 0.7059 | 63.60 | 0.02 |
| E | 1.0 | 0.334E+02 | 0.224E+02 | 68. | 58. | 178. | 0.2265 | 0.1612 | 0.0041 | 0.05 |
| H | HZ | 0.261E+02 | 0.185E+02 | 60. | 75. | 130. | 0.1758 | 0.2436 | 58.10 | 0.13 |

AVERAGE # 8
SHAS33 200 HZ 1-AUG-84 T41N R2W S16 E OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.281E+02 | 0.184E+02 | 64. | 60. | 132. | 1.0108 | 1.4711 | 0.0015 | 0.01 |
| H | HZ | 0.266E+02 | 0.168E+02 | 60. | 64. | 131. | 0.7763 | 1.9529 | 61.70 | 0.06 |
| E | 1.2 | 0.445E+02 | 0.294E+02 | 70. | 67. | 168. | 0.4613 | 1.0802 | 0.0020 | 0.06 |
| H | HZ | 0.356E+02 | 0.270E+02 | 71. | 66. | 168. | 1.5072 | 0.8428 | 105.00 | 0.08 |
| E | 1.5 | 0.409E+02 | 0.260E+02 | 74. | 68. | 166. | 0.4377 | 0.6016 | 0.0014 | 0.04 |
| H | HZ | 0.346E+02 | 0.236E+02 | 74. | 67. | 163. | 1.7502 | 0.4799 | 111.40 | 0.04 |
| E | 2.0 | 0.483E+02 | 0.469E+02 | 79. | 74. | 8. | 0.1713 | 0.1895 | 0.0011 | 0.05 |
| H | HZ | 0.439E+02 | 0.314E+02 | 77. | 76. | 164. | 0.7178 | 0.5356 | 129.70 | 0.07 |
| E | 2.0 | 0.547E+02 | 0.422E+02 | 75. | 67. | 170. | 0.4066 | 0.0894 | 0.0011 | 0.05 |
| H | HZ | 0.479E+02 | 0.237E+02 | 75. | 80. | 162. | 0.4335 | 0.2849 | 126.90 | 0.08 |
| E | 2.0 | 0.147E+03 | 0.314E+02 | 76. | 66. | 169. | 2.9924 | 0.9216 | 0.0010 | 0.04 |
| H | HZ | 0.103E+03 | 0.161E+02 | 81. | 62. | 171. | 2.4921 | 0.5910 | 115.20 | 0.10 |

AVERAGE # 8
SHAS33 200 HZ 1-AUG-84 T41N R2W S16 E OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.708E+02 | 0.559E+02 | 77. | 75. | 160. | 0.2014 | 0.2096 | 0.0012 | 0.07 |
| H | HZ | 0.621E+02 | 0.334E+02 | 76. | 79. | 169. | 0.2885 | 0.1369 | 127.60 | 0.09 |
| E | 3.0 | 0.738E+02 | 0.727E+02 | 80. | 72. | 15. | 0.5291 | 0.2729 | 0.0014 | 0.04 |
| H | HZ | 0.666E+02 | 0.340E+02 | 77. | 75. | 2. | 0.1878 | 0.3927 | 140.60 | 0.12 |
| E | 7.7 | 0.152E+03 | 0.123E+03 | 79. | 77. | 129. | 0.0000 | 1.9982 | 0.0037 | 0.05 |
| H | HZ | 0.158E+03 | 0.108E+03 | 70. | 1. | 6. | 2.4609 | 1.7310 | 134.60 | 0.21 |
| E | 14.3 | 0.265E+03 | 0.195E+03 | 77. | 73. | 112. | 0.0000 | 0.0000 | 0.0038 | 0.03 |
| H | HZ | 0.301E+03 | 0.132E+03 | 85. | 62. | 113. | 0.0000 | 0.0000 | 122.50 | 0.23 |
| E | 20.0 | 0.358E+03 | 0.229E+03 | 71. | 71. | 126. | 1.7753 | 0.0000 | 0.0036 | 0.03 |
| H | HZ | 0.440E+03 | 0.112E+03 | 73. | 80. | 122. | 1.5251 | 0.0000 | 148.50 | 0.27 |
| E | 26.3 | 0.360E+03 | 0.267E+03 | 67. | 70. | 125. | 3.0002 | 0.0000 | 0.0271 | 0.01 |
| H | HZ | 0.309E+03 | 0.201E+03 | 62. | 84. | 116. | 2.3763 | 0.0000 | 50.40 | 0.18 |
| E | 31.2 | 0.392E+03 | 0.302E+03 | 66. | 69. | 128. | 0.8080 | 0.0000 | 0.0036 | 0.01 |
| H | HZ | 0.288E+03 | 0.277E+03 | 59. | 82. | 125. | 2.3631 | 0.0000 | 102.30 | 0.24 |
| E | 40.0 | 0.512E+03 | 0.278E+03 | 72. | 66. | 152. | 0.4091 | 2.4148 | 0.0231 | 0.08 |
| H | HZ | 0.653E+03 | 0.269E+03 | 74. | 54. | 23. | 0.3790 | 0.5439 | 95.30 | 0.40 |

SHAS33 200 HZ 1-AUG-84 T41N R2W S16 E OF C

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 27
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1500E+03 | | 0.0000E+00 |
| | | 0.1200E+04 | |
| 2 | 0.3000E+02 | | 0.1200E+04 |
| | | 0.1500E+04 | |
| 3 | 0.2500E+02 | | 0.2700E+04 |
| | | 0.1700E+05 | |
| 4 | 0.1000E+01 | | 0.1970E+05 |

FREQUENCY RANGE ( 0.2000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2571E+03 | | 0.0000E+00 |
| | | 0.1135E+04 | |
| 2 | 0.4148E+01 | | 0.1135E+04 |
| | | 0.9904E+03 | |
| 3 | 0.2387E+02 | | 0.2126E+04 |
| | | 0.1259E+05 | |
| 4 | 0.7925E+01 | | 0.1471E+05 |

MEAN PERCENT VARIATION IS 0.1450E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 26 | 0.186E+06 | 0.716E+04 | 0.231E+00 |
| MODEL | 6 | 0.186E+06 | 0.310E+05 | 0.109E+07 |
| RESID | 20 | 0.568E+00 | 0.284E-01 | |

STANDARD ERROR = 0.168E+00

DTEST FOR MEANS = 0.180E-05

NOISE TO SIGNAL RATIO = 0.956E-01 PERCENT

SHAS33 200 HZ 1-AUG-84 T41N R2W S16 E OF C

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.500E+03 | 0.140E+02 | 0.128E+02 | 0.124E+01 | 0.925E+01 |
| 2 | 0.250E+03 | 0.140E+02 | 0.146E+02 | -0.570E+00 | -0.399E+01 |
| 3 | 0.125E+03 | 0.140E+02 | 0.164E+02 | -0.237E+01 | -0.156E+02 |
| 4 | 0.700E+02 | 0.170E+02 | 0.172E+02 | -0.166E+00 | -0.972E+00 |
| 5 | 0.500E+02 | 0.190E+02 | 0.170E+02 | 0.197E+01 | 0.109E+02 |
| 6 | 0.330E+02 | 0.190E+02 | 0.162E+02 | 0.281E+01 | 0.159E+02 |
| 7 | 0.200E+02 | 0.150E+02 | 0.145E+02 | 0.470E+00 | 0.318E+01 |
| 8 | 0.100E+02 | 0.900E+01 | 0.124E+02 | -0.341E+01 | -0.319E+02 |
| 9 | 0.550E+01 | 0.110E+02 | 0.118E+02 | -0.775E+00 | -0.681E+01 |
| 10 | 0.300E+01 | 0.150E+02 | 0.127E+02 | 0.234E+01 | 0.169E+02 |
| 11 | 0.200E+01 | 0.170E+02 | 0.145E+02 | 0.255E+01 | 0.162E+02 |
| 12 | 0.125E+01 | 0.220E+02 | 0.183E+02 | 0.367E+01 | 0.182E+02 |
| 13 | 0.100E+01 | 0.200E+02 | 0.211E+02 | -0.107E+01 | -0.522E+01 |
| 14 | 0.100E+01 | 0.180E+02 | 0.211E+02 | -0.307E+01 | -0.157E+02 |
| 15 | 0.830E+00 | 0.280E+02 | 0.239E+02 | 0.409E+01 | 0.158E+02 |
| 16 | 0.670E+00 | 0.250E+02 | 0.279E+02 | -0.288E+01 | -0.109E+02 |
| 17 | 0.500E+00 | 0.390E+02 | 0.347E+02 | 0.427E+01 | 0.116E+02 |
| 18 | 0.500E+00 | 0.330E+02 | 0.347E+02 | -0.173E+01 | -0.512E+01 |
| 19 | 0.500E+00 | 0.240E+02 | 0.347E+02 | -0.107E+02 | -0.365E+02 |
| 20 | 0.330E+00 | 0.450E+02 | 0.479E+02 | -0.286E+01 | -0.616E+01 |
| 21 | 0.330E+00 | 0.530E+02 | 0.479E+02 | 0.514E+01 | 0.102E+02 |
| 22 | 0.130E+00 | 0.115E+03 | 0.981E+02 | 0.169E+02 | 0.158E+02 |
| 23 | 0.700E-01 | 0.163E+03 | 0.157E+03 | 0.627E+01 | 0.393E+01 |
| 24 | 0.500E-01 | 0.170E+03 | 0.198E+03 | -0.283E+02 | -0.154E+02 |
| 25 | 0.380E-01 | 0.234E+03 | 0.235E+03 | -0.972E+00 | -0.414E+00 |
| 26 | 0.320E-01 | 0.290E+03 | 0.257E+03 | 0.326E+02 | 0.119E+02 |
| 27 | 0.250E-01 | 0.273E+03 | 0.286E+03 | -0.130E+02 | -0.466E+01 |

MEAN PERCENT ERROR = 0.1444E+02
MAXIMUM PERCENT ERROR = 0.3655E+02
MAX. ERROR OCCURED AT OBSERVATION 19

(LAYER THICKNESS ANALYSIS FOLLOWS)

PARAMETER SENSITIVITY ANALYSIS

SHAS33 200 HZ 1-AUG-84 T41N R2W S16 E OF C

NORMALIZED SINGULAR VALUES OF JACOBIAN

0.100E+01 0.447E+00 0.187E+00 0.157E+00 0.959E-01 0.462E-01 0.334E-01

THE NUMBER OF EFFECTIVE PARAMETERS IS 7.000

SCALE FACTOR (SIGMA(1)) IS 0.1085639E+01

DAMPING FACTORS ( 0.100 PERSENT LEVEL)

0.100E+01 0.100E+01 0.100E+01 0.100E+01 0.100E+01 0.100E+01 0.100E+01

PARAMETER SPACE EIGENVECTORS (V MATRIX)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 9.322 | 27.842 | 4.404 | ****** | -3.912 | -0.494 | 4.522 |
| 2 | 11.068 | 25.109 | -0.045 | -0.233 | 0.136 | 0.343 | -0.145 |
| 3 | 14.831 | 38.884 | 0.005 | 0.026 | 0.563 | 0.365 | 0.345 |
| 4 | 16.838 | 0.096 | -0.071 | 0.374 | -0.826 | 0.288 | -0.259 |
| 5 | 21.818 | 3.490 | ****** | -5.268 | -0.845 | 6.245 | 4.136 |
| 6 | 20.052 | -0.395 | -2.710 | -0.105 | -0.271 | 0.290 | 1.149 |
| 7 | 18.158 | -0.001 | -0.000 | 0.308 | 0.252 | 0.551 | 0.497 |

AMPED ERROR MULTIPLIERS FOR TRANSFORMED PARAMETERS

0.921E+00 0.206E+01 0.493E+01 0.588E+01 0.961E+01 0.199E+02 0.276E+02

DAMPING FACTORS FOR ORIGINAL PARAMETERS

0.319E+02 0.274E+02 0.416E+02 0.169E+02 0.273E+02 0.203E+02 0.182E+02

DAMPED ERROR MULTIPLIERS FOR ORIGINAL PARAMETERS

0.319E+03 0.757E+02 0.116E+03 0.391E+02 0.370E+03 0.734E+02 0.457E+02

CRAMER-RAO MULTIPLES FOR ORIGINAL PARAMETERS

0.156E+03 0.534E+02 0.824E+02 0.198E+02 0.185E+03 0.396E+02 0.244E+02

'ERROR BOUNDS' USING MULTIPLIERS FROM STATS

SHAS33 200 HZ 1-AUG-84 T41N R2W S16 E OF C

LAYER RESISTIVITIES

0.1000 PERCENT ERROR LEVEL

| I | RO(I) | BOUND(1) | BOUND(2) | DAMPING |
|---|---|---|---|---|
| 1 | 257.1127 | 186.8949 | 353.7117 | -30.9099 |
| 2 | 4.1479 | 3.8454 | 4.4741 | -26.4441 |
| 3 | 23.8674 | 21.2480 | 26.8097 | -40.6233 |
| 4 | 7.9246 | 7.6208 | 8.2406 | -15.8670 |

LAYER THICKNESSES

0.1000 PERCENT ERROR LEVEL

| I | H(I), | BOUND(1) | BOUND(2) | DAMPING |
|---|---|---|---|---|
| 1 | 1135.3044 | 784.1863 | 1643.6350 | -26.3203 |
| 2 | 990.4058 | 920.3598 | 1065.7827 | -19.2751 |
| 3 | 12585.4457 | 12023.6565 | 13173.4838 | -17.1771 |

(LAYER DEPTH (TO BASE) ANALYSIS FOLLOWS,

PARAMETER SENSITIVITY ANALYSIS

SHAS33 200 HZ 1-AUG-84 T41N R2W S16 E OF C

NORMALIZED SINGULAR VALUES OF JACOBIAN

0.100E+01 0.519E+00 0.180E+00 0.153E+00 0.886E-01 0.562E-01 0.345E-01

THE NUMBER OF EFFECTIVE PARAMETERS IS 7.000

SCALE FACTOR (SIGMA(1)) IS 0.119614 9E+01

DAMPING FACTORS ( 0.100 PERSENT LEVEL)

0.100E+01 0.100E+01 0.100E+01 0.100E+01 0.100E+01 0.100E+01 0.100E+01

PARAMETER SPACE EIGENVECTORS (V MATRIX)

1 0.322-0.158 1.420-6.086-2.378 0.062 3.199
2 0.068 0.109 0.590 1.721 0.943 0.630-1.359

```
  3  -0.169-0.116-0.040-0.106 0.645 0.254 0.391
  4  -0.162 0.076-0.099 0.235-0.814 0.268-0.437
  5  -0.182-0.333-9.197-3.965-0.030 5.465 2.878
  6   0.052-1.572-4.418-1.044-0.632 1.615 2.147
  7   0.158-0.003-0.003 0.329 0.158 0.505 0.297

AMPED ERROR MULTIPLIERS FOR TRANSFORMED PARAMETERS

 0.836E+00 0.161E+01 0.464E+01 0.545E+01 0.944E+01 0.149E+02 0.242E+02

 DAMPING FACTORS FOR ORIGINAL PARAMETERS

 0.742E+01 0.254E+01 0.829E+00 0.101E+01 0.118E+02 0.554E+01 0.708E+00

 DAMPED ERROR MULTIPLIERS FOR ORIGINAL PARAMETERS

 0.141E+03 0.636E+02 0.204E+02 0.243E+02 0.216E+03 0.111E+03 0.181E+02

 CRAMER-RAO MULTIPLES FOR ORIGINAL PARAMETERS

 0.876E+02 0.367E+02 0.119E+02 0.138E+02 0.117E+03 0.615E+02 0.107E+02
```

'ERROR BOUNDS' USING MULTIPLIERS FROM STATS

SHAS33 200 HZ 1-AUG-84 T41N R2W S16 E OF C

LAYER RESISTIVITIES

0.1000 PERCENT ERROR LEVEL

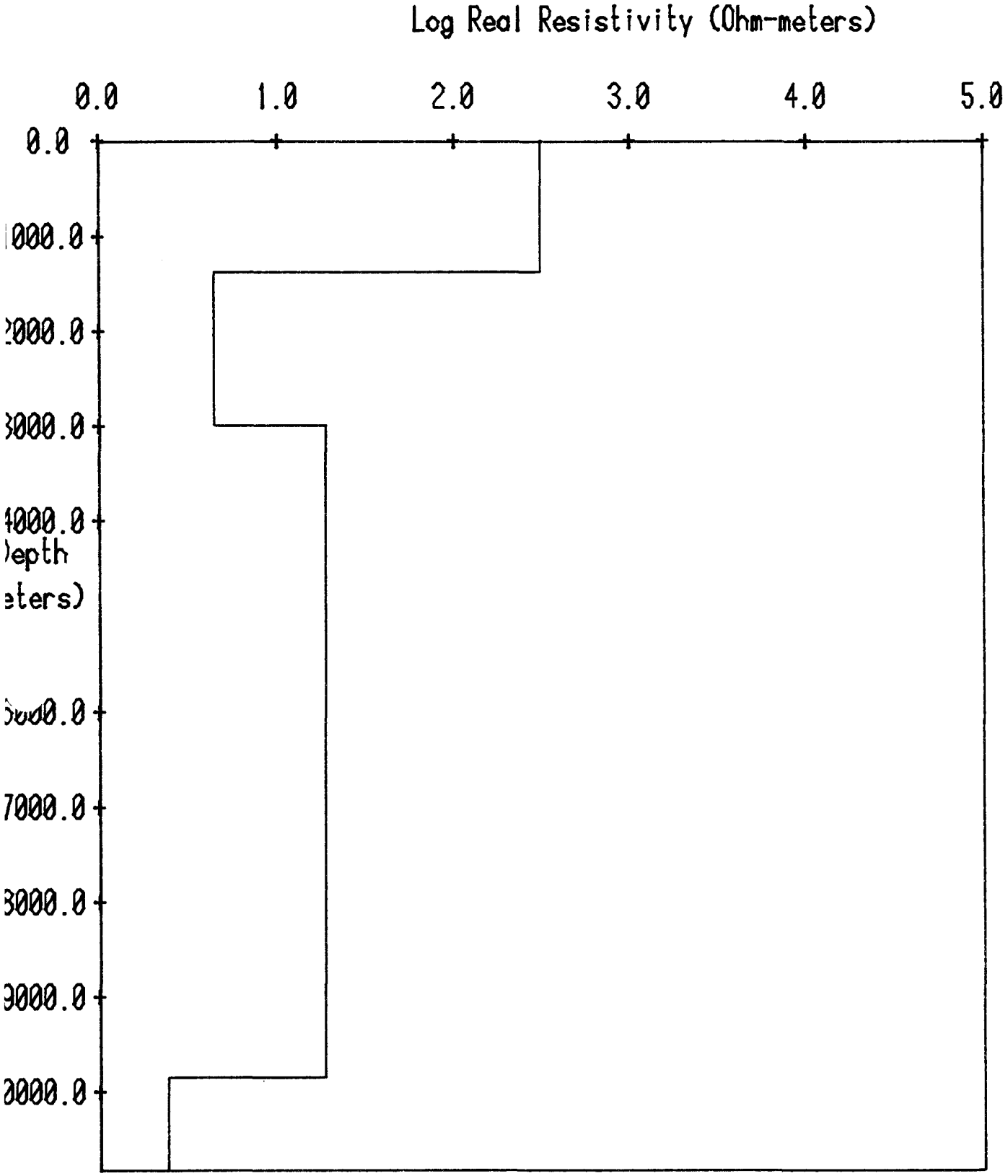
| I | RO(I) | BOUND(1) | BOUND(2) | DAMPING |
|---|---|---|---|---|
| 1 | 257.1127 | 223.2461 | 296.1168 | -6.4216 |
| 2 | 4.1479 | 3.8923 | 4.4202 | -1.5416 |
| 3 | 23.8674 | 23.3847 | 24.3601 | 0.1705 |
| 4 | 7.9246 | 7.7346 | 8.1194 | -0.0111 |

LAYER DEPTHS (TO BASE)

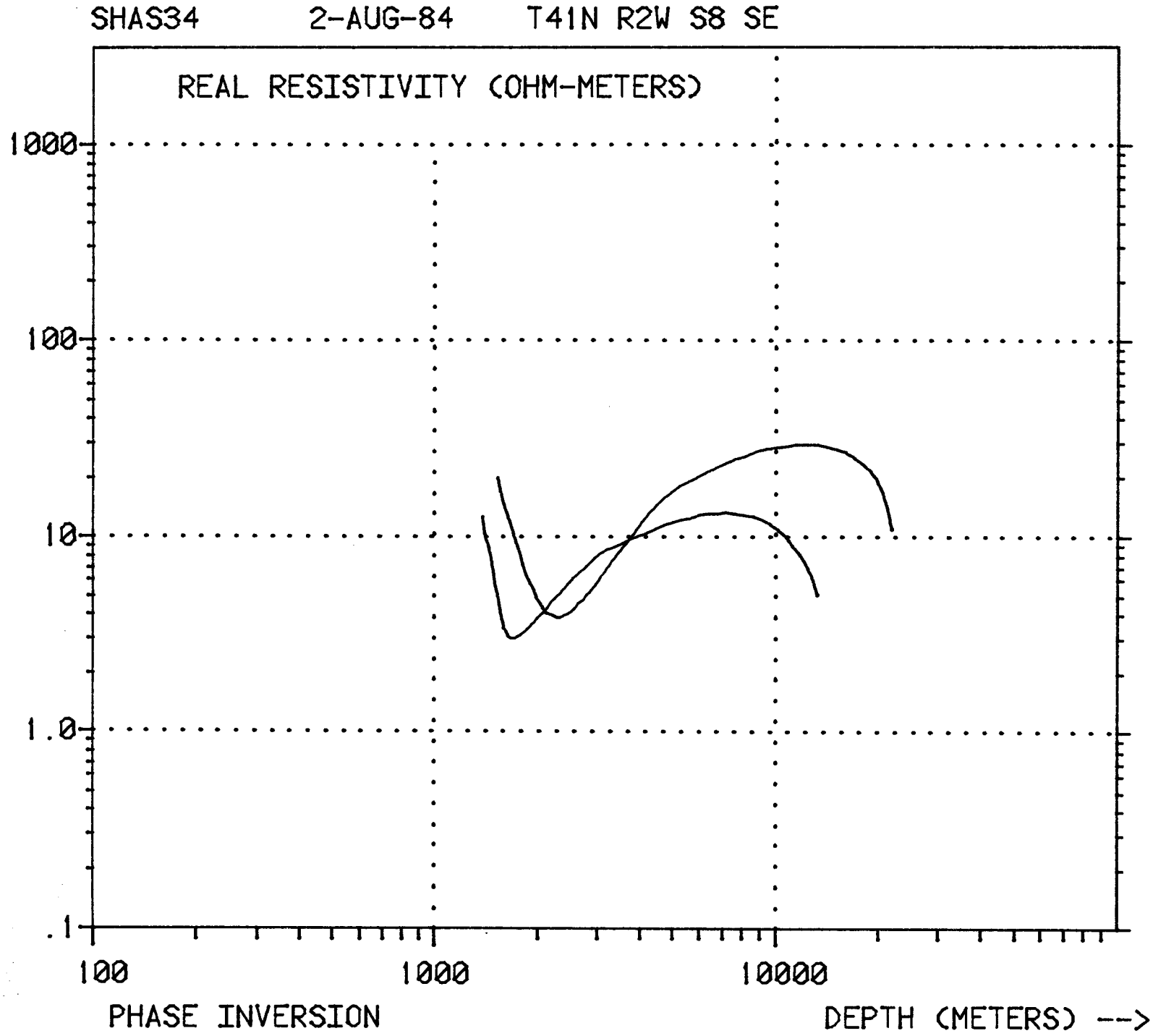
0.1000 PERCENT ERROR LEVEL

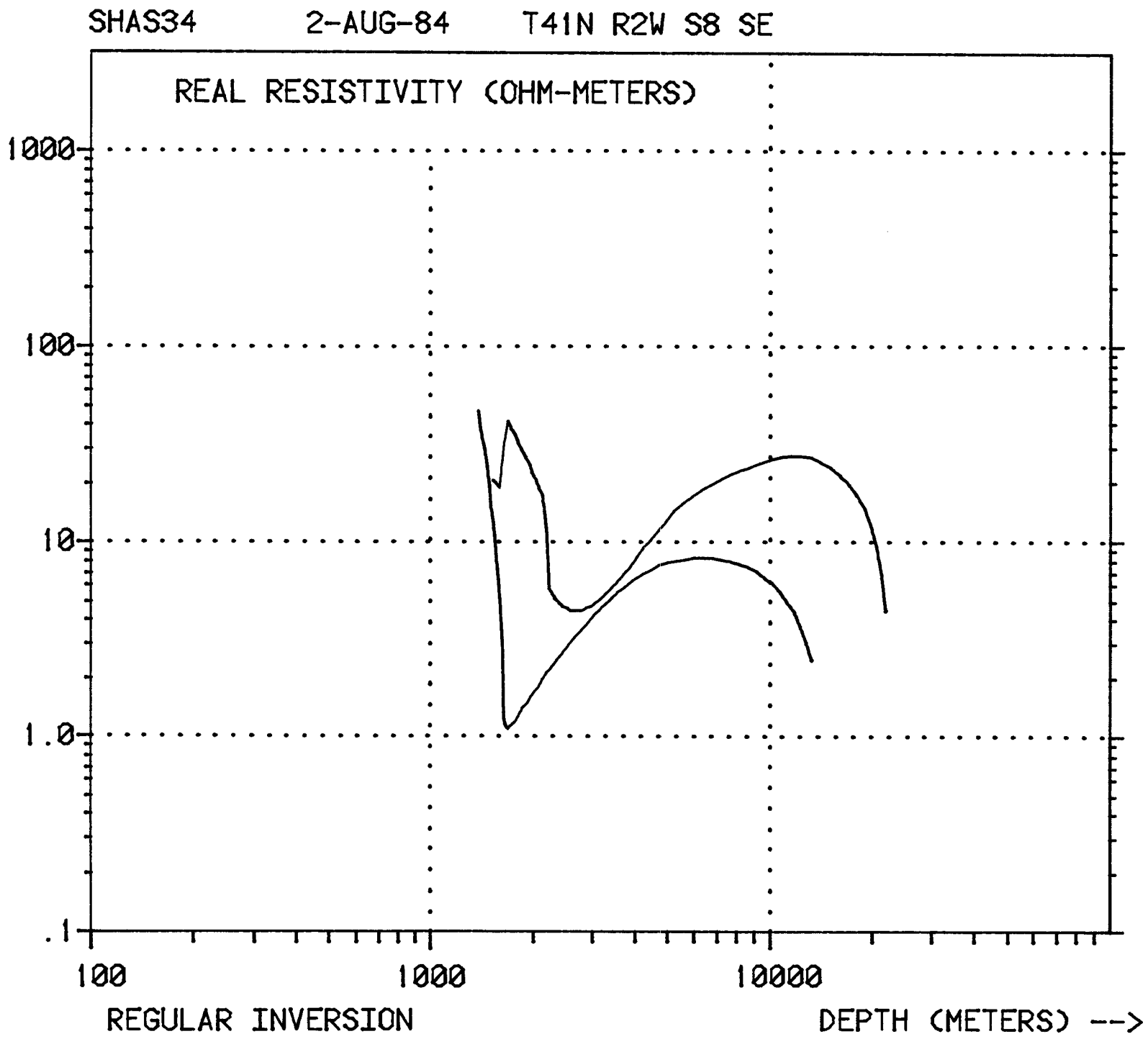
| I | Z(I), | BOUND(1) | BOUND(2) | DAMPING |
|---|---|---|---|---|
| 1 | 1135.3044 | 914.4128 | 1409.5560 | -10.7728 |
| 2 | 2125.7102 | 1902.7128 | 2374.8428 | -4.5405 |
| 3 | 14711.1559 | 14446.6354 | 14980.5198 | 0.2922 |

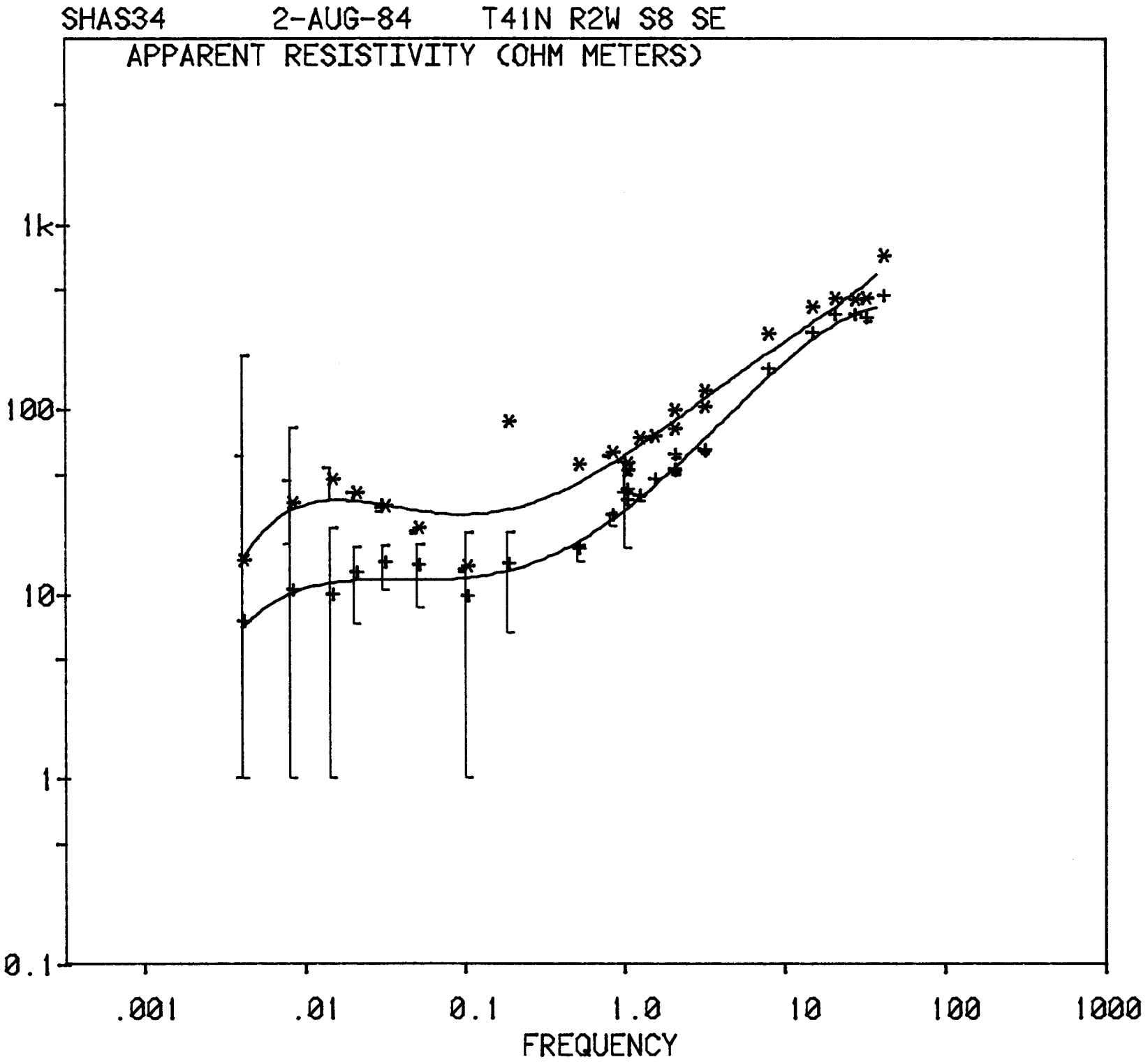
SHAS34




| | | | | |
|---|---|---|---|---|
| Resistivity | 0312.01 | 0004.44 | 0018.81 | 0002.44 |
| Thickness | | 1361.24 | 1638.38 | 6857.79 |
| Depth | 0000.00 | 1361.24 | 2999.62 | 9857.41 |


SHAS34 2-AUG-84 T41N R2W S8 SE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->


SHAS34 2-AUG-84 T41N R2W S8 SE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS34 2-AUG-84 T41N R2W S8 SE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

THE SITE IS: SHAS34 200 HZ 2-AUG-84 T41N R2W S8 SE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| ~~0.0012~~ | ~~910.63~~ | ~~1112.47~~ | ~~1~~ | ~~184.07~~ | ~~40.45~~ |
| ~~0.0020~~ | ~~6.37~~ | ~~25.13~~ | ~~2~~ | ~~67.81~~ | ~~10.96~~ |
| 0.0040 | 6.69 | 14.09 | 3 | 12.93 | 8.14 |
| 0.0080 | 9.91 | 29.11 | 4 | 5.48 | 1.66 |
| 0.0143 | 9.39 | 38.95 | 5 | 3.72 | 0.84 |
| 0.0200 | 12.26 | 32.90 | 6 | 5.02 | 0.24 |
| 0.0303 | 14.09 | 27.95 | 7 | 11.85 | 0.21 |
| 0.0500 | 13.35 | 21.14 | 8 | 7.49 | 0.03 |
| 0.1000 | 9.20 | 13.13 | 9 | 1.71 | 0.04 |
| 0.1818 | 13.62 | 79.25 | 10 | 2.07 | 0.33 |
| ~~0.3333~~ | ~~0.00~~ | ~~0.00~~ | ~~11~~ | ~~12.93~~ | ~~8.14~~ |
| 0.5000 | 16.33 | 46.33 | 12 | 0.16 | 0.00 |
| ~~0.5988~~ | ~~19.93~~ | ~~91.12~~ | ~~13~~ | ~~0.71~~ | ~~0.03~~ |
| 0.8000 | 24.91 | 54.08 | 14 | 0.09 | 0.01 |
| 1.0000 | 30.35 | 43.09 | 15 | 0.16 | 0.00 |
| 1.0000 | 34.31 | 47.54 | 16 | 0.66 | 0.01 |
| 1.2048 | 32.03 | 64.91 | 17 | 0.26 | 0.01 |
| 1.4925 | 38.60 | 66.63 | 18 | 0.04 | 0.01 |
| 2.0000 | 43.12 | 72.96 | 19 | 0.20 | 0.02 |
| 2.0000 | 44.53 | 73.01 | 20 | 0.08 | 0.00 |
| 2.0000 | 52.88 | 91.17 | 21 | 0.17 | 0.01 |
| 3.0303 | 54.65 | 94.94 | 22 | 0.05 | 0.00 |
| 3.0303 | 56.25 | 116.88 | 23 | 0.46 | 0.03 |
| 7.6923 | 153.36 | 237.13 | 24 | 0.76 | 0.01 |
| 14.2857 | 243.30 | 329.46 | 25 | 0.41 | 0.00 |
| 20.0000 | 300.18 | 371.92 | 26 | 0.35 | 0.00 |
| 26.3158 | 300.71 | 363.02 | 27 | 0.10 | 0.00 |
| 31.2500 | 289.27 | 369.28 | 28 | 0.10 | 0.00 |
| 40.0000 | 385.04 | 633.95 | 29 | 0.03 | 0.00 |

AVERAGE # 8
SHAS34 200 HZ 2-AUG-84 T41N R2W S8 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.120E+04 | 0.954E+03 | 71. | 3. | 46. | 0.3367 | 0.1400 | 0.0073 | 0.12 |
| H | SEC | 0.102E+04 | 0.867E+03 | 75. | 2. | 55. | 0.5670 | 0.1116 | 119.80 | 0.19 |
| E | 500.0 | 0.402E+02 | 0.900E+01 | 63. | 50. | 19. | 0.3267 | 1.0589 | 0.2080 | 0.13 |
| H | SEC | 0.101E+02 | 0.375E+01 | 49. | 25. | 94. | 0.4859 | 0.3289 | 119.40 | 0.20 |
| E | 250.0 | 0.200E+02 | 0.919E+01 | 68. | 64. | 40. | 0.2574 | 0.3644 | 0.1420 | 0.20 |
| H | SEC | 0.815E+01 | 0.419E+01 | 58. | 47. | 107. | 0.3974 | 0.3973 | 52.40 | 0.73 |
| E | 125.0 | 0.338E+02 | 0.134E+02 | 68. | 73. | 34. | 0.1424 | 0.5520 | 0.0945 | 0.15 |
| H | SEC | 0.245E+02 | 0.640E+01 | 12. | 80. | 24. | 0.2306 | 0.1936 | 38.00 | 0.32 |
| E | 70.0 | 0.354E+02 | 0.174E+02 | 89. | 9. | 39. | 0.0600 | 0.7005 | 0.1579 | 0.12 |
| H | SEC | 0.425E+02 | 0.140E+01 | 77. | 27. | 50. | 0.1966 | 0.2895 | 90.00 | 0.38 |
| E | 50.0 | 0.341E+02 | 0.132E+02 | 8. | 18. | 47. | 0.0520 | 0.1152 | 0.0225 | 0.11 |
| H | SEC | 0.317E+02 | 0.113E+02 | 10. | 17. | 53. | 0.1861 | 0.1591 | 114.80 | 0.12 |
| E | 33.0 | 0.282E+02 | 0.142E+02 | 20. | 34. | 46. | 0.1402 | 0.1341 | 0.0229 | 0.11 |
| H | SEC | 0.277E+02 | 0.140E+02 | 20. | 34. | 47. | 0.2513 | 0.1857 | 118.30 | 0.11 |
| E | 20.0 | 0.218E+02 | 0.135E+02 | 44. | 57. | 51. | 0.0707 | 0.0769 | 0.0276 | 0.12 |
| H | SEC | 0.205E+02 | 0.132E+02 | 44. | 57. | 52. | 0.5126 | 0.2776 | 113.60 | 0.12 |

AVERAGE # 8
SHAS34 200 HZ 2-AUG-84 T41N R2W S8 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

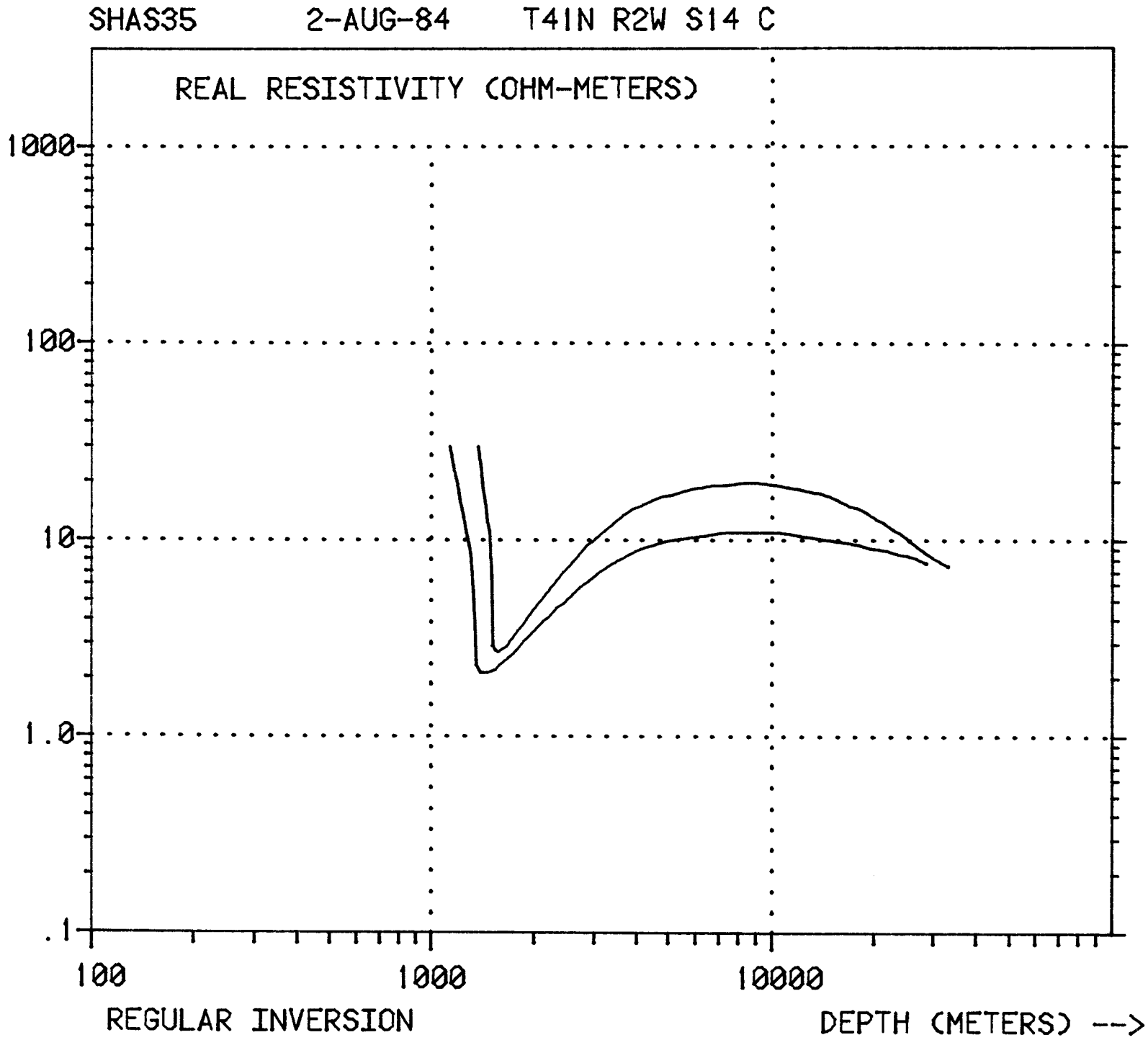
| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.158E+02 | 0.111E+02 | 70. | 86. | 49. | 0.1128 | 0.2191 | 0.0088 | 0.12 |
| H | SEC | 0.104E+02 | 0.733E+01 | 74. | 1. | 79. | 0.7258 | 0.1149 | 117.20 | 0.17 |
| E | 5.5 | 0.694E+02 | 0.186E+02 | 14. | 84. | 17. | 1.5387 | 0.2691 | 0.0242 | 6.36 |
| H | SEC | 0.891E+02 | 0.865E+01 | 27. | 20. | 22. | 1.8820 | 0.2707 | 114.30 | 2.01 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.509E+02 | 0.208E+02 | 57. | 29. | 13. | 0.6179 | 0.2451 | 0.0178 | 0.11 |
| H | SEC | 0.417E+02 | 0.119E+02 | 67. | 46. | 4. | 0.3321 | 0.3225 | 111.70 | 0.01 |
| E | 1.7 | 0.104E+03 | 0.214E+02 | 79. | 59. | 20. | 0.5275 | 0.1227 | 0.0910 | 0.04 |
| H | SEC | 0.787E+02 | 0.184E+02 | 80. | 60. | 18. | 0.0000 | 0.2102 | 114.40 | 0.03 |
| E | 1.2 | 0.598E+02 | 0.284E+02 | 85. | 70. | 15. | 0.1304 | 0.0912 | 0.0778 | 0.15 |
| H | SEC | 0.484E+02 | 0.214E+02 | 87. | 68. | 17. | 0.1991 | 0.1399 | 119.60 | 0.11 |
| E | 1.0 | 0.543E+02 | 0.409E+02 | 72. | 60. | 22. | 0.2543 | 0.2942 | 0.0049 | 0.03 |
| H | HZ | 0.318E+02 | 0.198E+02 | 77. | 75. | 0. | 0.3566 | 0.2655 | 117.20 | 0.04 |

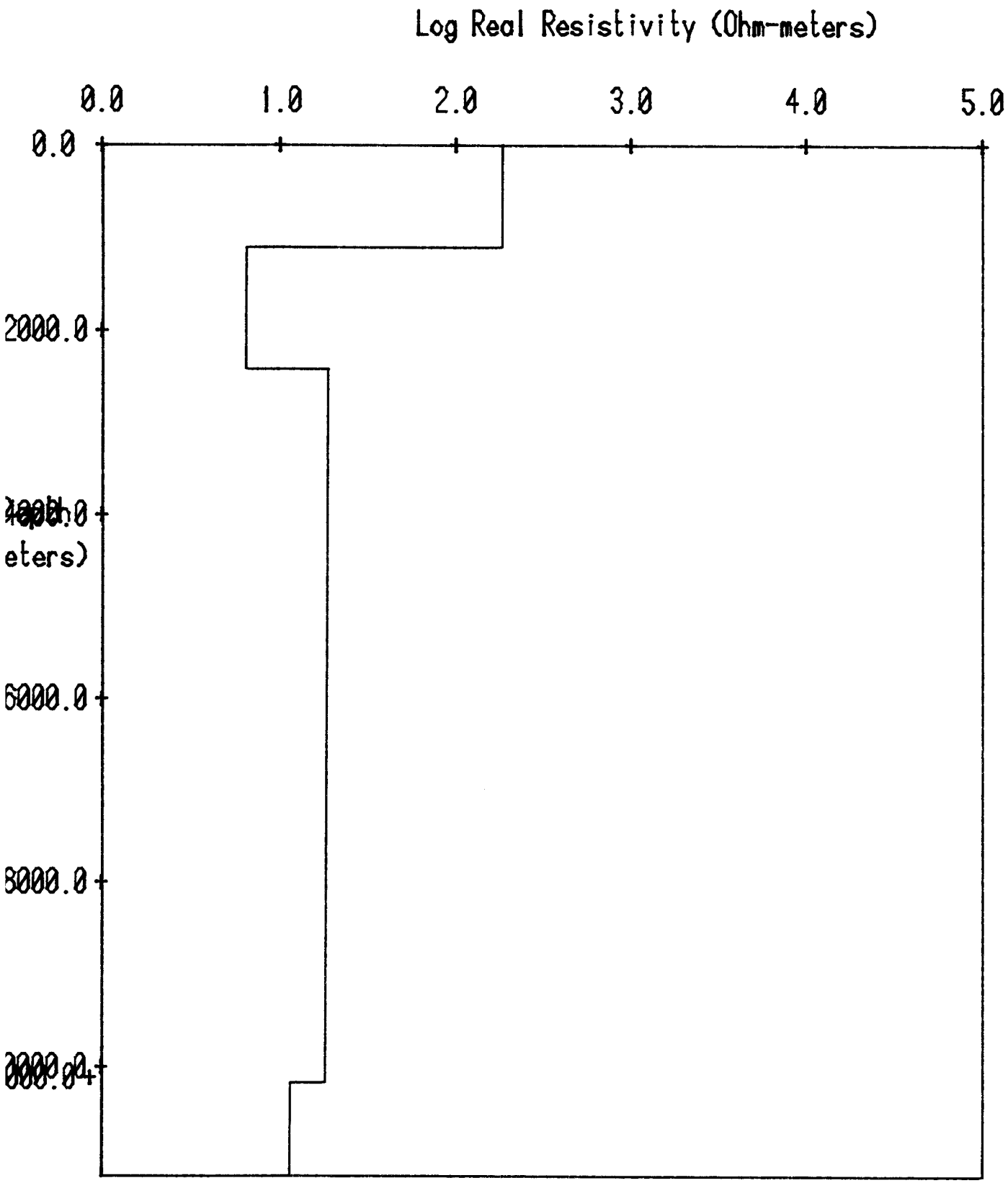
AVERAGE # 8
SHAS34 200 HZ 2-AUG-84 T41N R2W S8 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.599E+02 | 0.469E+02 | 46. | 63. | 40. | 0.3019 | 0.2947 | 0.0140 | 0.11 |
| H | HZ | 0.352E+02 | 0.217E+02 | 57. | 67. | 72. | 0.5690 | 0.4095 | 52.60 | 0.16 |
| E | 1.2 | 0.678E+02 | 0.360E+02 | 75. | 66. | 18. | 0.2887 | 0.3759 | 0.1572 | 0.07 |
| H | HZ | 0.620E+02 | 0.281E+02 | 75. | 68. | 19. | 0.3447 | 0.2954 | 102.10 | 0.08 |
| E | 1.5 | 0.682E+02 | 0.417E+02 | 76. | 69. | 14. | 0.5558 | 0.1575 | 0.1520 | 0.05 |
| H | HZ | 0.651E+02 | 0.355E+02 | 77. | 71. | 17. | 0.5868 | 0.1643 | 109.40 | 0.08 |
| E | 2.0 | 0.793E+02 | 0.464E+02 | 74. | 74. | 17. | 1.6603 | 1.2378 | 0.6060 | 0.06 |
| H | HZ | 0.667E+02 | 0.399E+02 | 74. | 74. | 7. | 1.2667 | 0.9205 | 57.60 | 0.04 |
| E | 2.0 | 0.847E+02 | 0.557E+02 | 78. | 73. | 21. | 0.3647 | 0.4089 | 0.0024 | 0.06 |
| H | HZ | 0.613E+02 | 0.334E+02 | 82. | 80. | 10. | 0.4584 | 0.1818 | 117.80 | 0.08 |
| E | 2.0 | 0.993E+02 | 0.544E+02 | 72. | 73. | 23. | 0.8202 | 0.3658 | 0.0037 | 0.07 |
| H | HZ | 0.830E+02 | 0.514E+02 | 69. | 74. | 18. | 0.6591 | 0.2651 | 167.10 | 0.11 |

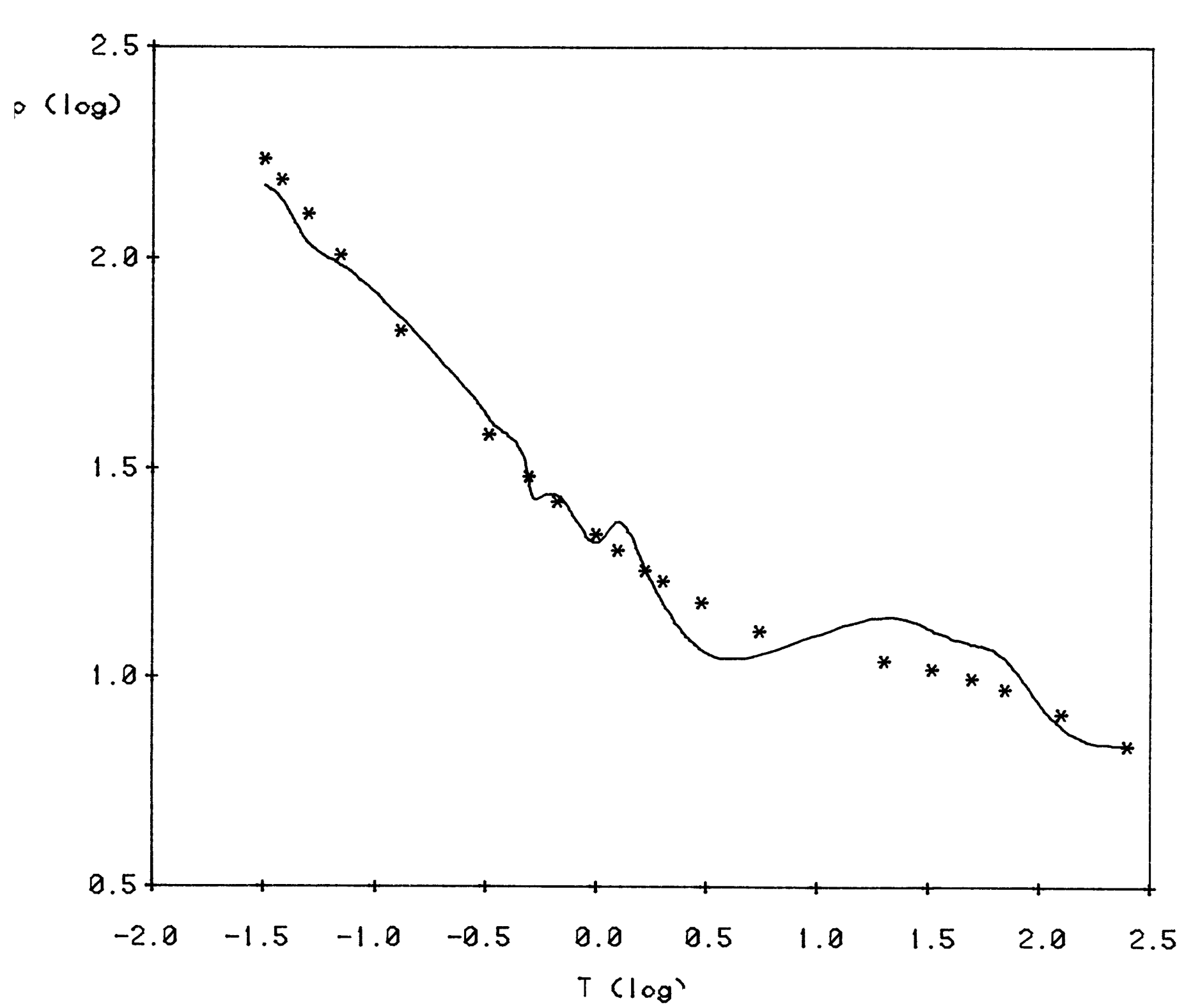
AVERAGE # 8
SHAS34 200 HZ 2-AUG-84 T41N R2W S8 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

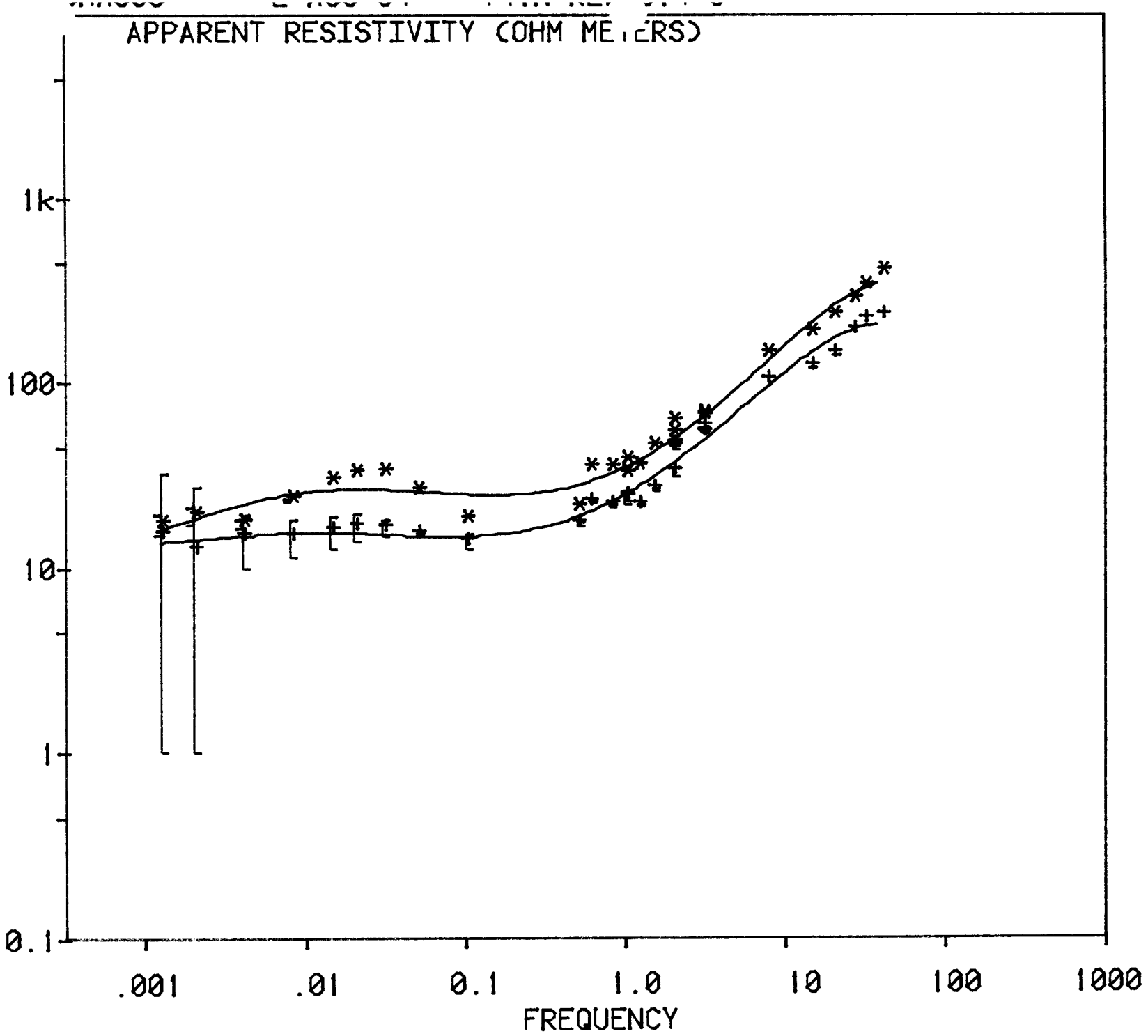
| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.111E+03 | 0.676E+02 | 80. | 74. | 17. | 0.0330 | 0.1991 | 0.0014 | 0.06 |
| H | HZ | 0.787E+02 | 0.417E+02 | 81. | 80. | 8. | 0.2944 | 0.1317 | 117.10 | 0.09 |
| E | 3.0 | 0.126E+03 | 0.623E+02 | 74. | 77. | 18. | 1.1963 | 1.5629 | 0.1296 | 0.07 |
| H | HZ | 0.108E+03 | 0.502E+02 | 73. | 76. | 14. | 2.4810 | 1.1433 | 4.80 | 0.10 |
| E | 7.7 | 0.239E+03 | 0.156E+03 | 76. | 80. | 18. | 1.8770 | 1.5303 | 0.0011 | 0.05 |
| H | HZ | 0.236E+03 | 0.150E+03 | 76. | 81. | 16. | 1.5382 | 1.3991 | 156.90 | 0.07 |
| E | 14.3 | 0.349E+03 | 0.249E+03 | 74. | 76. | 26. | 3.0104 | 2.5609 | 0.0025 | 0.03 |
| H | HZ | 0.310E+03 | 0.237E+03 | 74. | 77. | 27. | 3.0105 | 0.0000 | 119.00 | 0.05 |
| E | 20.0 | 0.405E+03 | 0.321E+03 | 72. | 73. | 24. | 0.0000 | 0.0000 | 0.0021 | 0.03 |
| H | HZ | 0.339E+03 | 0.279E+03 | 76. | 75. | 41. | 0.0000 | 2.7864 | 126.30 | 0.05 |
| E | 26.3 | 0.410E+03 | 0.348E+03 | 71. | 69. | 177. | 3.0946 | 1.5676 | 0.0033 | 0.04 |
| H | HZ | 0.316E+03 | 0.253E+03 | 73. | 65. | 161. | 0.0000 | 0.0000 | 121.60 | 0.08 |
| E | 31.2 | 0.408E+03 | 0.349E+03 | 69. | 69. | 169. | 0.0000 | 2.2864 | 0.0093 | 0.04 |
| H | HZ | 0.330E+03 | 0.229E+03 | 68. | 69. | 152. | 0.9516 | 3.0238 | 121.60 | 0.08 |
| E | 40.0 | 0.583E+03 | 0.421E+03 | 64. | 68. | 21. | 0.6904 | 1.9648 | 0.0411 | 0.02 |
| H | HZ | 0.684E+03 | 0.349E+03 | 70. | 67. | 26. | 0.3060 | 1.6477 | 114.00 | 0.01 |


SHAS35 2-AUG-84 T41N R2W S14 C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->




| | | | | |
|---|---|---|---|---|
| Resistivity | 0187.74 | 0006.47 | 0018.87 | 0011.94 |
| Thickness | | 1108.05 | 1315.62 | 7749.45 |
| Depth | 0000.00 | 1108.05 | 2423.68 | 10173.13 |


2.5
ρ (log)
2.0
1.5
1.0
0.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

THE SITE IS: SHAS35 200 HZ 2-AUG-84 T41N R2W S14 C

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 14.74 | 16.86 | 1 | 16.92 | 2.14 |
| 0.0020 | 12.34 | 18.60 | 2 | 14.45 | 2.02 |
| 0.0040 | 14.35 | 16.99 | 3 | 4.57 | 1.03 |
| 0.0080 | 14.56 | 22.79 | 4 | 3.33 | 0.42 |
| 0.0143 | 15.50 | 28.97 | 5 | 3.02 | 0.05 |
| 0.0200 | 16.49 | 32.04 | 6 | 2.96 | 0.02 |
| 0.0303 | 16.27 | 32.61 | 7 | 1.69 | 0.05 |
| 0.0500 | 14.96 | 25.70 | 8 | 0.36 | 0.01 |
| 0.1000 | 13.61 | 17.89 | 9 | 1.24 | 0.04 |
| 0.1818 | 11.10 | 13.21 | 10 | 0.53 | 0.02 |
| 0.3333 | 10.96 | 15.25 | 11 | 0.24 | 0.01 |
| 0.5000 | 17.09 | 20.93 | 12 | 0.34 | 0.01 |
| 0.5988 | 22.60 | 34.41 | 13 | 1.56 | 0.02 |
| 0.8000 | 21.48 | 34.21 | 14 | 1.87 | 0.03 |
| 1.0000 | 24.31 | 31.68 | 15 | 0.18 | 0.01 |
| 1.0000 | 23.67 | 37.40 | 16 | 0.50 | 0.02 |
| 1.2048 | 21.63 | 35.13 | 17 | 1.78 | 0.02 |
| 1.4925 | 26.57 | 44.95 | 18 | 0.89 | 0.01 |
| 2.0000 | 32.97 | 53.59 | 19 | 0.84 | 0.02 |
| 2.0000 | 45.28 | 46.44 | 20 | 0.18 | 0.00 |
| 2.0000 | 46.14 | 62.01 | 21 | 0.90 | 0.01 |
| 3.0303 | 58.11 | 66.19 | 22 | 0.11 | 0.00 |
| 3.0303 | 54.28 | 67.50 | 23 | 0.29 | 0.00 |
| 7.6923 | 104.01 | 146.06 | 24 | 0.43 | 0.00 |
| 14.2857 | 122.79 | 186.60 | 25 | 0.37 | 0.00 |
| 20.0000 | 145.09 | 233.47 | 26 | 0.08 | 0.00 |
| 26.3158 | 196.00 | 285.77 | 27 | 0.09 | 0.00 |
| 31.2500 | 220.51 | 338.91 | 28 | 0.06 | 0.00 |
| 40.0000 | 233.94 | 408.01 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS35 200 HZ 2-AUG-84 T41N R2W S14 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.736E+02 | 0.619E+02 | 66. | 72. | 90. | 0.0644 | 0.1305 | 0.0041 | 1.88 |
| H | HZ | 0.588E+02 | 0.543E+02 | 74. | 70. | 178. | 0.1344 | 0.1479 | 72.30 | 6.93 |
| E | 3.0 | 0.711E+02 | 0.573E+02 | 71. | 71. | 91. | 0.5554 | 0.2477 | 0.0027 | 1.51 |
| H | HZ | 0.639E+02 | 0.512E+02 | 73. | 71. | 90. | 0.3861 | 0.2004 | 65.80 | 2.85 |
| E | 7.7 | 0.151E+03 | 0.106E+03 | 73. | 72. | 91. | 2.1042 | 0.5169 | 0.0080 | 0.97 |
| H | HZ | 0.141E+03 | 0.102E+03 | 72. | 71. | 91. | 1.5886 | 0.4598 | 40.90 | 1.66 |
| E | 14.3 | 0.201E+03 | 0.138E+03 | 72. | 68. | 91. | 0.0000 | 1.4445 | 0.0117 | 0.73 |
| H | HZ | 0.172E+03 | 0.108E+03 | 69. | 62. | 90. | 0.0000 | 0.7978 | 33.50 | 1.22 |
| E | 20.0 | 0.266E+03 | 0.174E+03 | 73. | 72. | 90. | 0.0000 | 0.0000 | 0.0179 | 0.16 |
| H | HZ | 0.201E+03 | 0.116E+03 | 76. | 76. | 91. | 0.0000 | 1.0505 | 26.50 | 0.74 |
| E | 26.3 | 0.333E+03 | 0.221E+03 | 71. | 71. | 91. | 2.7696 | 2.0234 | 0.0154 | 0.55 |
| H | HZ | 0.239E+03 | 0.171E+03 | 79. | 78. | 91. | 1.7969 | 1.1644 | 22.80 | 1.00 |
| E | 31.2 | 0.373E+03 | 0.241E+03 | 69. | 67. | 91. | 2.0998 | 2.1943 | 0.0141 | 0.61 |
| H | HZ | 0.305E+03 | 0.200E+03 | 75. | 72. | 90. | 1.7802 | 1.5165 | 180.00 | 0.70 |
| E | 40.0 | 0.425E+03 | 0.248E+03 | 65. | 64. | 91. | 0.4515 | 1.1532 | 0.0524 | 0.35 |
| H | HZ | 0.391E+03 | 0.220E+03 | 65. | 63. | 90. | 0.6149 | 0.8323 | 180.00 | 0.55 |

AVERAGE # 8
SHAS35 200 HZ 2-AUG-84 T41N R2W S14 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.403E+02 | 0.249E+02 | 63. | 69. | 90. | 0.5434 | 0.1482 | 0.0021 | 0.50 |
| H | HZ | 0.345E+02 | 0.224E+02 | 63. | 70. | 89. | 0.3010 | 0.3246 | 75.50 | 0.81 |
| E | 1.2 | 0.384E+02 | 0.220E+02 | 66. | 68. | 90. | 0.1675 | 0.3559 | 0.0024 | 0.83 |
| H | HZ | 0.318E+02 | 0.212E+02 | 66. | 68. | 91. | 0.4626 | 0.3446 | 159.70 | 1.00 |
| E | 1.5 | 0.491E+02 | 0.266E+02 | 65. | 70. | 90. | 0.2205 | 0.1837 | 0.0019 | 0.74 |
| H | HZ | 0.408E+02 | 0.265E+02 | 69. | 71. | 91. | 0.6328 | 0.1964 | 163.00 | 1.03 |
| E | 2.0 | 0.553E+02 | 0.368E+02 | 70. | 74. | 91. | 1.1066 | 0.4279 | 0.0018 | 1.44 |
| H | HZ | 0.519E+02 | 0.291E+02 | 71. | 80. | 88. | 1.3917 | 0.1948 | 10.50 | 2.15 |
| E | 2.0 | 0.517E+02 | 0.503E+02 | 66. | 72. | 90. | 0.0766 | 0.0514 | 0.0019 | 2.34 |
| H | HZ | 0.412E+02 | 0.402E+02 | 71. | 76. | 90. | 0.2435 | 0.1449 | 180.00 | 4.24 |
| E | 2.0 | 0.663E+02 | 0.486E+02 | 70. | 70. | 91. | 0.7676 | 0.2293 | 0.0016 | 0.99 |
| H | HZ | 0.577E+02 | 0.437E+02 | 71. | 72. | 90. | 1.3296 | 0.6264 | 87.50 | 1.60 |

AVERAGE # 8
SHAS35 200 HZ 2-AUG-84 T41N R2W S14 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.197E+02 | 0.151E+02 | 67. | 4. | 93. | 0.2574 | 0.1927 | 0.0070 | 0.79 |
| H | SEC | 0.161E+02 | 0.121E+02 | 73. | 74. | 95. | 0.2651 | 0.3426 | 91.20 | 0.92 |
| E | 5.5 | 0.146E+02 | 0.129E+02 | 0. | 25. | 91. | 0.1436 | 0.2498 | 0.0112 | 1.17 |
| H | SEC | 0.118E+02 | 0.932E+01 | 24. | 23. | 95. | 0.1284 | 0.3759 | 180.00 | 4.89 |
| E | 3.0 | 0.163E+02 | 0.129E+02 | 23. | 48. | 88. | 0.2363 | 0.1215 | 0.0052 | 1.96 |
| H | SEC | 0.142E+02 | 0.906E+01 | 45. | 48. | 89. | 0.0921 | 0.1680 | 180.00 | 2.64 |
| E | 2.0 | 0.214E+02 | 0.175E+02 | 52. | 50. | 93. | 0.3101 | 0.0904 | 0.0014 | 5.19 |
| H | SEC | 0.205E+02 | 0.167E+02 | 60. | 60. | 90. | 0.1168 | 0.0463 | 180.00 | 3.30 |
| E | 1.7 | 0.389E+02 | 0.241E+02 | 61. | 65. | 90. | 1.1346 | 0.2419 | 0.0014 | 0.66 |
| H | SEC | 0.299E+02 | 0.211E+02 | 63. | 67. | 90. | 0.1824 | 0.2438 | 133.10 | 0.82 |
| E | 1.2 | 0.373E+02 | 0.219E+02 | 66. | 66. | 90. | 0.0862 | 0.2512 | 0.0010 | 0.70 |
| H | SEC | 0.311E+02 | 0.210E+02 | 64. | 67. | 91. | 0.6057 | 0.3067 | 109.80 | 0.72 |
| E | 1.0 | 0.350E+02 | 0.274E+02 | 58. | 69. | 89. | 0.2902 | 0.0888 | 0.0017 | 1.45 |
| H | HZ | 0.284E+02 | 0.212E+02 | 67. | 73. | 89. | 0.3318 | 0.0792 | 180.00 | 1.86 |

AVERAGE # 8
SHAS35 200 HZ 2-AUG-84 T41N R2W S14 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.174E+02 | 0.148E+02 | 44. | 47. | 0. | 0.0857 | 0.2841 | 0.6065 | 4.12 |
| H | SEC | 0.163E+02 | 0.147E+02 | 46. | 47. | 1. | 0.0966 | 0.1816 | 90.60 | 6.73 |
| E | 500.0 | 0.202E+02 | 0.121E+02 | 52. | 59. | 95. | 0.0563 | 0.1450 | 0.5502 | 0.76 |
| H | SEC | 0.170E+02 | 0.126E+02 | 57. | 53. | 94. | 0.2420 | 0.6235 | 50.40 | 0.96 |
| E | 250.0 | 0.170E+02 | 0.158E+02 | 64. | 61. | 93. | 0.2185 | 0.2058 | 0.1712 | 2.34 |
| H | SEC | 0.170E+02 | 0.129E+02 | 67. | 59. | 94. | 0.2773 | 0.1560 | 21.80 | 1.02 |
| E | 125.0 | 0.249E+02 | 0.154E+02 | 76. | 76. | 95. | 0.1035 | 0.1512 | 0.1059 | 0.95 |
| H | SEC | 0.207E+02 | 0.137E+02 | 76. | 78. | 96. | 0.0997 | 0.1301 | 30.80 | 0.93 |
| E | 70.0 | 0.301E+02 | 0.158E+02 | 1. | 88. | 94. | 0.1240 | 0.0703 | 0.0227 | 0.76 |
| H | SEC | 0.278E+02 | 0.152E+02 | 1. | 89. | 94. | 0.2859 | 0.1606 | 118.60 | 0.79 |
| E | 50.0 | 0.325E+02 | 0.169E+02 | 10. | 7. | 93. | 0.1538 | 0.1380 | 0.0234 | 0.75 |
| H | SEC | 0.316E+02 | 0.161E+02 | 10. | 8. | 93. | 0.2148 | 0.0816 | 152.90 | 0.68 |
| E | 33.0 | 0.333E+02 | 0.168E+02 | 24. | 24. | 92. | 0.1681 | 0.0612 | 0.0214 | 0.67 |
| H | SEC | 0.320E+02 | 0.158E+02 | 24. | 25. | 92. | 0.1290 | 0.0713 | 137.70 | 0.57 |
| E | 20.0 | 0.265E+02 | 0.168E+02 | 47. | 48. | 91. | 0.0492 | 0.0505 | 0.0133 | 0.96 |
| H | SEC | 0.249E+02 | 0.131E+02 | 46. | 49. | 92. | 0.0590 | 0.0760 | 6.60 | 0.52 |

SHAS35 200 HZ 2-AUG-84 T41N R2W S14 C

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 27
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3000E+03 | | 0.0000E+00 |
| | | 0.1200E+04 | |
| 2 | 0.3000E+01 | | 0.1200E+04 |
| | | 0.1000E+04 | |
| 3 | 0.1000E+02 | | 0.2200E+04 |
| | | 0.1000E+05 | |
| 4 | 0.8000E+01 | | 0.1220E+05 |

FREQUENCY RANGE ( 0.1250E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1877E+03 | | 0.0000E+00 |
| | | 0.1108E+04 | |
| 2 | 0.6478E+01 | | 0.1108E+04 |
| | | 0.1316E+04 | |
| 3 | 0.1888E+02 | | 0.2424E+04 |
| | | 0.7749E+04 | |
| 4 | 0.1195E+02 | | 0.1017E+05 |

MEAN PERCENT VARIATION IS 0.1097E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 26 | 0.117E+06 | 0.451E+04 | 0.231E+00 |
| MODEL | 6 | 0.117E+06 | 0.195E+05 | 0.120E+07 |
| RESID | 20 | 0.325E+00 | 0.163E-01 | |

STANDARD ERROR = 0.128E+00

DTEST FOR MEANS =-0.425E-07

NOISE TO SIGNAL RATIO = 0.912E-01 PERCENT

SHAS35 200 HZ 2-AUG-84 T41N R2W S14 C

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.800E+03 | 0.150E+02 | 0.133E+02 | 0.170E+01 | 0.120E+02 |
| 2 | 0.500E+03 | 0.120E+02 | 0.136E+02 | -0.164E+01 | -0.128E+02 |
| 3 | 0.250E+03 | 0.140E+02 | 0.142E+02 | -0.234E+00 | -0.166E+01 |
| 4 | 0.125E+03 | 0.150E+02 | 0.149E+02 | 0.104E+00 | 0.694E+00 |
| 5 | 0.700E+02 | 0.150E+02 | 0.154E+02 | -0.360E+00 | -0.237E+01 |
| 6 | 0.500E+02 | 0.160E+02 | 0.155E+02 | 0.490E+00 | 0.311E+01 |
| 7 | 0.330E+02 | 0.160E+02 | 0.155E+02 | 0.498E+00 | 0.316E+01 |
| 8 | 0.200E+02 | 0.150E+02 | 0.152E+02 | -0.177E+00 | -0.117E+01 |
| 9 | 0.100E+02 | 0.140E+02 | 0.145E+02 | -0.468E+00 | -0.329E+01 |
| 10 | 0.200E+01 | 0.170E+02 | 0.177E+02 | -0.725E+00 | -0.417E+01 |
| 11 | 0.167E+01 | 0.230E+02 | 0.190E+02 | 0.396E+01 | 0.188E+02 |
| 12 | 0.125E+01 | 0.210E+02 | 0.218E+02 | -0.817E+00 | -0.381E+01 |
| 13 | 0.100E+01 | 0.240E+02 | 0.246E+02 | -0.604E+00 | -0.248E+01 |
| 14 | 0.100E+01 | 0.240E+02 | 0.246E+02 | -0.604E+00 | -0.248E+01 |
| 15 | 0.830E+00 | 0.220E+02 | 0.274E+02 | -0.544E+01 | -0.220E+02 |
| 16 | 0.670E+00 | 0.270E+02 | 0.313E+02 | -0.434E+01 | -0.149E+02 |
| 17 | 0.500E+00 | 0.330E+02 | 0.379E+02 | -0.494E+01 | -0.139E+02 |
| 18 | 0.500E+00 | 0.450E+02 | 0.379E+02 | 0.706E+01 | 0.170E+02 |
| 19 | 0.500E+00 | 0.460E+02 | 0.379E+02 | 0.806E+01 | 0.192E+02 |
| 20 | 0.330E+00 | 0.580E+02 | 0.502E+02 | 0.776E+01 | 0.143E+02 |
| 21 | 0.330E+00 | 0.540E+02 | 0.502E+02 | 0.376E+01 | 0.722E+01 |
| 22 | 0.130E+00 | 0.104E+03 | 0.951E+02 | 0.892E+01 | 0.896E+01 |
| 23 | 0.700E-01 | 0.123E+03 | 0.143E+03 | -0.196E+02 | -0.148E+02 |
| 24 | 0.500E-01 | 0.145E+03 | 0.172E+03 | -0.275E+02 | -0.173E+02 |
| 25 | 0.380E-01 | 0.196E+03 | 0.195E+03 | 0.532E+00 | 0.272E+00 |
| 26 | 0.320E-01 | 0.221E+03 | 0.208E+03 | 0.134E+02 | 0.623E+01 |
| 27 | 0.250E-01 | 0.234E+03 | 0.220E+03 | 0.138E+02 | 0.609E+01 |

MEAN PERCENT ERROR = 0.1097E+02
MAXIMUM PERCENT ERROR = 0.2200E+02
MAX. ERROR OCCURED AT OBSERVATION 15

(LAYER THICKNESS ANALYSIS FOLLOWS)

PARAMETER SENSITIVITY ANALYSIS

SHAS35 200 HZ 2-AUG-84 T41N R2W S14 C

NORMALIZED SINGULAR VALUES OF JACOBIAN

0.100E+01 0.390E+00 0.262E+00 0.206E+00 0.114E+00 0.484E-01 0.182E-01

THE NUMBER OF EFFECTIVE PARAMETERS IS 7.000

SCALE FACTOR (SIGMA(1)) IS 0.9413371E+00

DAMPING FACTORS ( 0.100 PERSENT LEVEL)

0.100E+01 0.100E+01 0.100E+01 0.100E+01 0.100E+01 0.100E+01 0.100E+01

PARAMETER SPACE EIGENVECTORS (V MATRIX)

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 15.012 | 22.221 | 4.926 | -8.978 | -2.956 | 1.201 | 2.761 |
| 2 | 14.033 | 27.149 | -0.008 | -0.378 | -0.144 | 0.236 | 0.049 |
| 3 | 17.042 | 33.140 | 0.008 | 0.061 | 0.090 | 0.191 | -0.122 |
| 4 | 22.811 | 0.149 | -0.220 | 0.867 | -0.309 | 0.260 | -0.116 |
| 5 | 21.038 | 4.230 | ****** | -3.725 | 1.390 | 4.069 | 4.533 |
| 6 | 24.025 | -0.363 | -2.127 | -0.042 | 0.512 | -0.403 | 0.852 |
| 7 | 24.025 | 0.008 | 0.126 | 0.249 | 0.859 | 0.376 | 0.205 |

AMPED ERROR MULTIPLIERS FOR TRANSFORMED PARAMETERS

0.106E+01 0.273E+01 0.405E+01 0.516E+01 0.936E+01 0.219E+02 0.583E+02

DAMPING FACTORS FOR ORIGINAL PARAMETERS

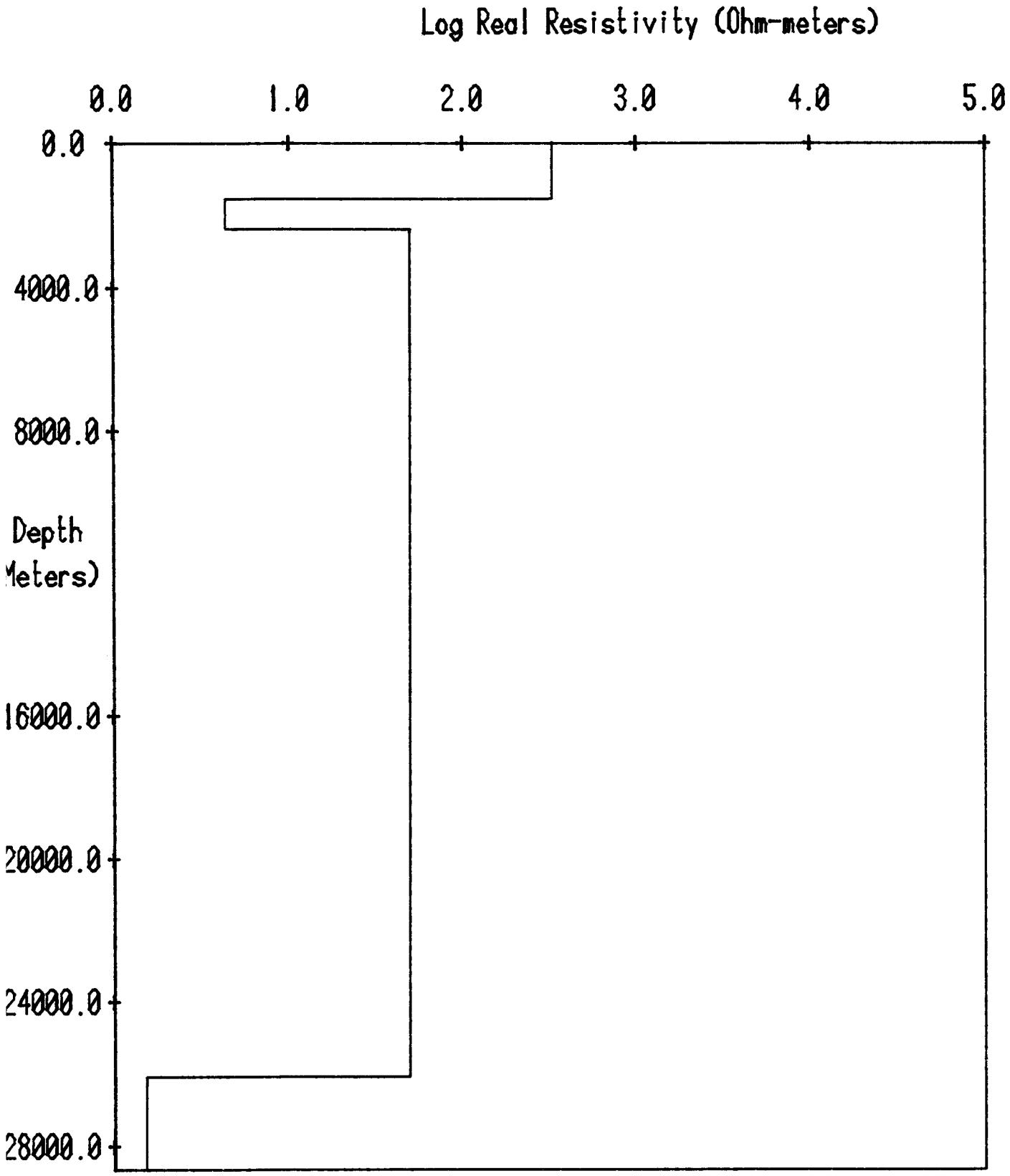
0.290E+02 0.306E+02 0.373E+02 0.228E+02 0.256E+02 0.241E+02 0.240E+02

DAMPED ERROR MULTIPLIERS FOR ORIGINAL PARAMETERS

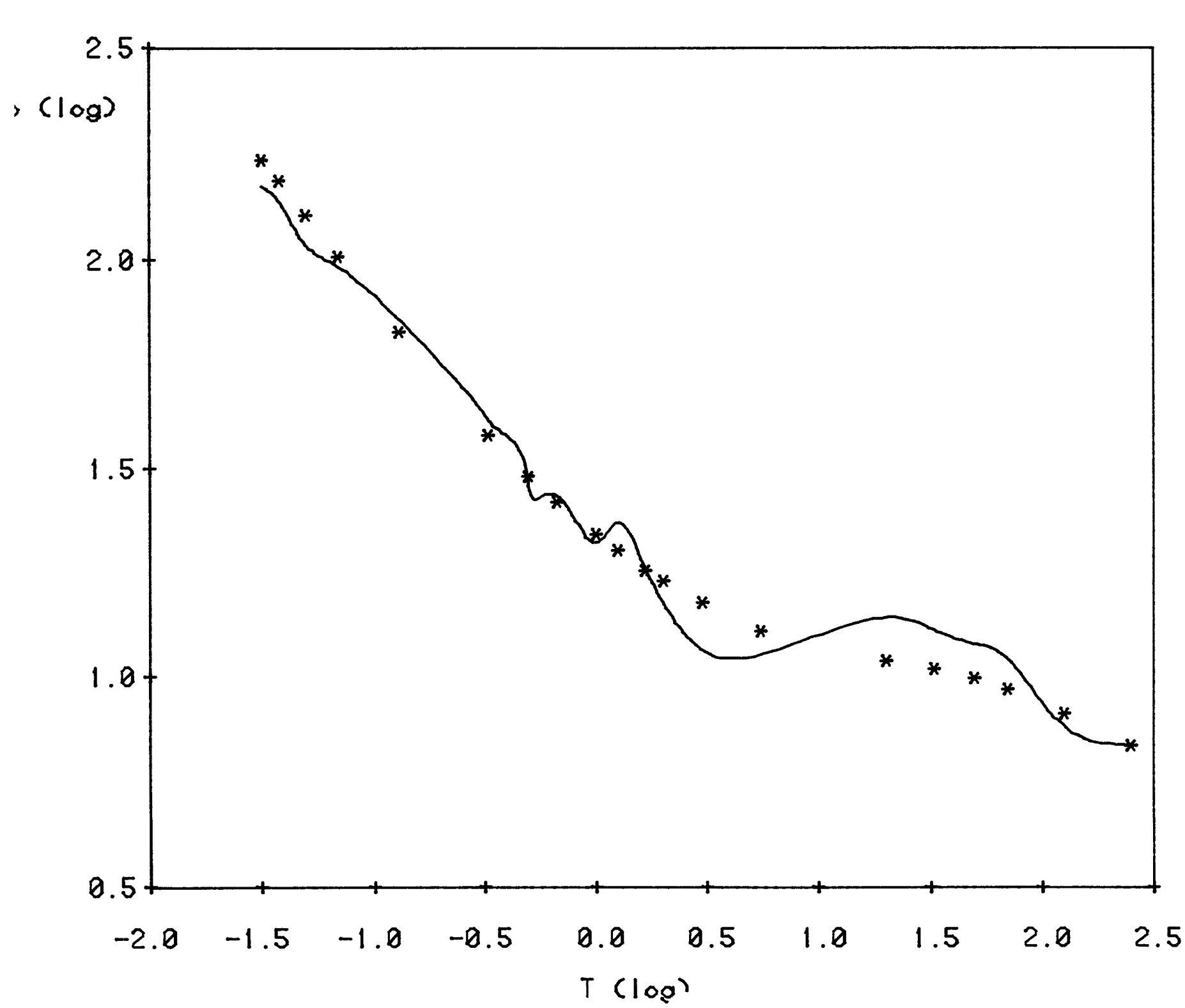
0.358E+03 0.100E+03 0.121E+03 0.454E+02 0.468E+03 0.987E+02 0.556E+02

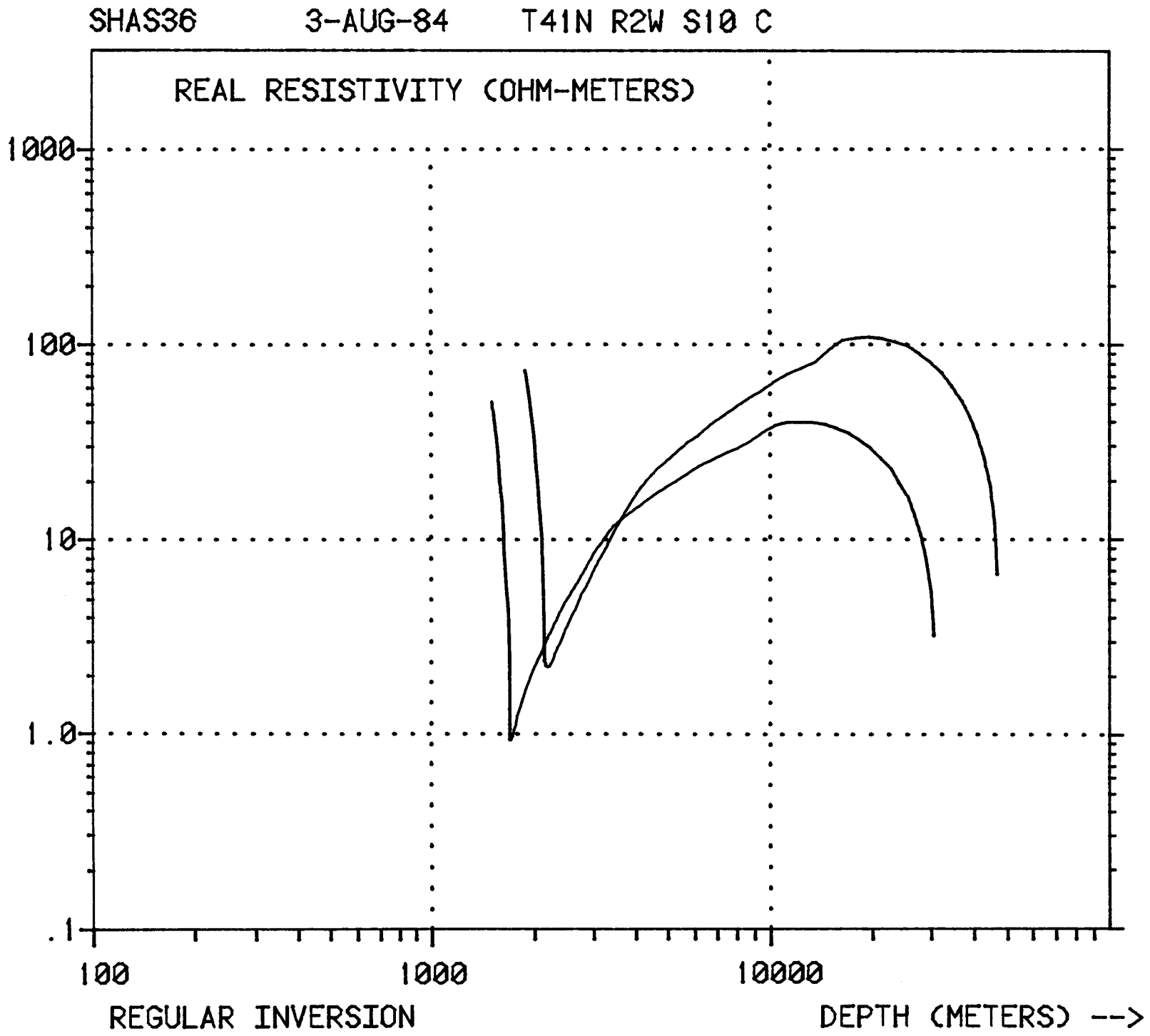
CRAMER-RAO MULTIPLES FOR ORIGINAL PARAMETERS

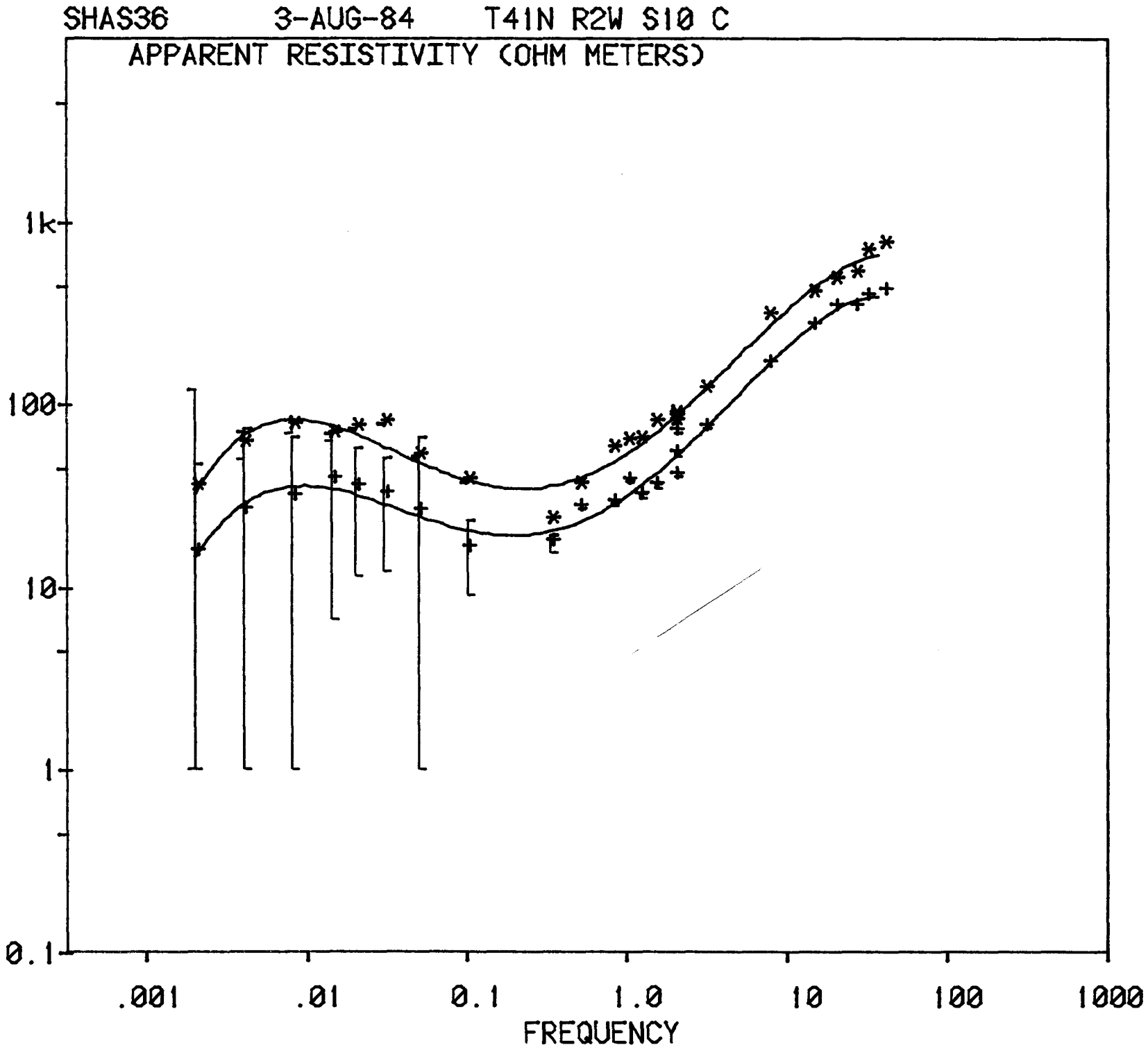
0.184E+03 0.758E+02 0.925E+02 0.264E+02 0.285E+03 0.574E+02 0.305E+02




| | | | | |
|---|---|---|---|---|
| Resistivity | 0331.44 | 0004.45 | 0049.91 | 0001.53 |
| Thickness | | 1508.11 | 0879.75 | 23691.03 |
| Depth | 0000.00 | 1508.11 | 2387.87 | 26078.90 |


2.5
2.0
1.5
1.0
0.5
(log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS36 3-AUG-84 T41N R2W S10 C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS36 3-AUG-84 T41N R2W S10 C
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

THE SITE IS: SHAS36 200 HZ 3-AUG-84 T41N R2W S10 C

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 18.10 | 132.06 | 1 | 31.47 | 83.97 |
| 0.0020 | 15.10 | 34.24 | 2 | 47.00 | 10.36 |
| 0.0040 | 25.73 | 59.37 | 3 | 35.16 | 5.69 |
| 0.0080 | 29.91 | 74.36 | 4 | 31.20 | 3.14 |
| 0.0143 | 37.81 | 65.65 | 5 | 22.83 | 0.52 |
| 0.0200 | 34.10 | 71.94 | 6 | 19.25 | 0.62 |
| 0.0303 | 31.17 | 77.08 | 7 | 39.77 | 0.49 |
| 0.0500 | 25.13 | 50.69 | 8 | 7.02 | 0.16 |
| 0.1000 | 15.95 | 36.50 | 9 | 1.92 | 0.02 |
| 0.1818 | 21.77 | 34.13 | 10 | 0.22 | 0.00 |
| 0.3333 | 17.21 | 22.47 | 11 | 0.50 | 0.00 |
| 0.5000 | 26.36 | 35.09 | 12 | 0.28 | 0.01 |
| 0.5988 | 64.62 | 99.08 | 13 | 0.73 | 0.08 |
| 0.8000 | 27.98 | 55.23 | 14 | 0.71 | 0.02 |
| 1.0000 | 36.88 | 60.04 | 15 | 0.30 | 0.01 |
| 1.0000 | 42.20 | 125.82 | 16 | 1.35 | 0.07 |
| 1.2048 | 30.77 | 62.00 | 17 | 0.43 | 0.02 |
| 1.4925 | 35.00 | 76.94 | 18 | 0.37 | 0.02 |
| 2.0000 | 39.45 | 78.70 | 19 | 0.29 | 0.01 |
| 2.0000 | 52.50 | 86.07 | 20 | 0.14 | 0.00 |
| 2.0000 | 68.23 | 82.55 | 21 | 0.27 | 0.01 |
| 3.0303 | 72.28 | 116.06 | 22 | 0.02 | 0.00 |
| 3.0303 | 53.04 | 92.18 | 23 | 0.07 | 0.01 |
| 7.6923 | 160.86 | 295.32 | 24 | 0.37 | 0.01 |
| 14.2857 | 261.49 | 390.80 | 25 | 0.47 | 0.00 |
| 20.0000 | 331.49 | 460.80 | 26 | 0.41 | 0.00 |
| 26.3158 | 331.96 | 503.11 | 27 | 0.15 | 0.00 |
| 31.2500 | 377.59 | 659.79 | 28 | 0.07 | 0.00 |
| 40.0000 | 402.41 | 733.46 | 29 | 0.02 | 0.00 |

AVERAGE # 8
SHAS36 200 HZ 3-AUG-84 T41N R2W S10 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.179E+03 | 0.184E+02 | 51. | 51. | 168. | 0.4633 | 1.2361 | 1.6590 | 0.30 |
| H | SEC | 0.855E+02 | 0.177E+02 | 2. | 70. | 152. | 0.4623 | 1.4750 | 80.20 | 0.60 |
| E | 500.0 | 0.366E+02 | 0.177E+02 | 62. | 25. | 62. | 0.3671 | 1.3890 | 0.3247 | 0.04 |
| H | SEC | 0.319E+02 | 0.125E+02 | 68. | 36. | 68. | 0.3729 | 1.8529 | 180.00 | 0.11 |
| E | 250.0 | 0.739E+02 | 0.392E+02 | 69. | 59. | 173. | 0.1654 | 0.9740 | 0.1156 | 0.21 |
| H | SEC | 0.448E+02 | 0.123E+02 | 65. | 82. | 48. | 0.7848 | 1.7600 | 180.00 | 0.03 |
| E | 125.0 | 0.921E+02 | 0.520E+02 | 83. | 74. | 136. | 0.3015 | 0.7452 | 0.0401 | 0.24 |
| H | SEC | 0.566E+02 | 0.782E+01 | 76. | 79. | 60. | 0.9881 | 0.7739 | 180.00 | 0.12 |
| E | 70.0 | 0.634E+02 | 0.543E+02 | 5. | 84. | 104. | 0.2381 | 0.9138 | 0.0393 | 0.19 |
| H | SEC | 0.679E+02 | 0.214E+02 | 89. | 88. | 63. | 0.4350 | 0.6723 | 180.00 | 0.12 |
| E | 50.0 | 0.708E+02 | 0.452E+02 | 5. | 15. | 51. | 0.2320 | 0.5181 | 0.0343 | 0.13 |
| H | SEC | 0.731E+02 | 0.230E+02 | 5. | 18. | 57. | 0.3144 | 0.9236 | 180.00 | 0.07 |
| E | 33.0 | 0.771E+02 | 0.386E+02 | 20. | 30. | 43. | 0.0638 | 1.6272 | 0.0241 | 0.10 |
| H | SEC | 0.771E+02 | 0.237E+02 | 20. | 33. | 54. | 0.2784 | 1.1528 | 180.00 | 0.03 |
| E | 20.0 | 0.493E+02 | 0.299E+02 | 44. | 51. | 56. | 0.3252 | 0.2302 | 0.0307 | 0.17 |
| H | SEC | 0.521E+02 | 0.203E+02 | 44. | 51. | 64. | 0.4018 | 0.1984 | 170.50 | 0.10 |

AVERAGE # 8
SHAS36 200 HZ 3-AUG-84 T41N R2W S10 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.336E+02 | 0.202E+02 | 64. | 86. | 80. | 0.1150 | 0.3546 | 0.0594 | 0.30 |
| H | SEC | 0.394E+02 | 0.117E+02 | 59. | 79. | 70. | 0.1006 | 0.2135 | 112.70 | 0.12 |
| E | 5.5 | 0.372E+02 | 0.276E+02 | 42. | 87. | 161. | 0.0352 | 0.0847 | 0.0929 | 0.05 |
| H | SEC | 0.311E+02 | 0.160E+02 | 85. | 71. | 55. | 0.0120 | 0.0522 | 119.90 | 0.36 |
| E | 3.0 | 0.241E+02 | 0.211E+02 | 62. | 5. | 165. | 0.0895 | 0.1437 | 0.0526 | 0.23 |
| H | SEC | 0.208E+02 | 0.133E+02 | 31. | 61. | 77. | 0.0000 | 0.2168 | 115.70 | 0.09 |
| E | 2.0 | 0.360E+02 | 0.323E+02 | 59. | 23. | 171. | 0.2353 | 0.1744 | 0.0218 | 0.22 |
| H | SEC | 0.341E+02 | 0.205E+02 | 54. | 68. | 63. | 0.2511 | 0.1787 | 107.20 | 0.04 |
| E | 1.7 | 0.140E+03 | 0.106E+03 | 61. | 44. | 49. | 0.7745 | 0.5197 | 0.0248 | 0.30 |
| H | SEC | 0.581E+02 | 0.237E+02 | 64. | 33. | 46. | 0.0000 | 0.2192 | 36.10 | 0.46 |
| E | 1.2 | 0.687E+02 | 0.379E+02 | 73. | 77. | 60. | 0.3853 | 0.2551 | 0.0115 | 0.10 |
| H | SEC | 0.418E+02 | 0.180E+02 | 66. | 78. | 46. | 0.6358 | 0.2316 | 136.70 | 0.08 |
| E | 1.0 | 0.677E+02 | 0.456E+02 | 64. | 62. | 43. | 0.4879 | 0.2248 | 0.0053 | 0.03 |
| H | HZ | 0.523E+02 | 0.281E+02 | 69. | 68. | 55. | 0.4225 | 0.1704 | 119.70 | 0.04 |

AVERAGE # 8
SHAS36 200 HZ 3-AUG-84 T41N R2W S10 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.109E+03 | 0.496E+02 | 5. | 58. | 26. | 1.2566 | 0.2254 | 0.0183 | 0.16 |
| H | HZ | 0.143E+03 | 0.348E+02 | 84. | 51. | 31. | 1.4580 | 0.1236 | 86.80 | 0.18 |
| E | 1.2 | 0.745E+02 | 0.409E+02 | 71. | 78. | 58. | 0.9234 | 0.3290 | 0.0197 | 0.08 |
| H | HZ | 0.495E+02 | 0.206E+02 | 75. | 76. | 64. | 0.7918 | 0.4236 | 14.30 | 0.09 |
| E | 1.5 | 0.104E+03 | 0.531E+02 | 69. | 80. | 71. | 1.1265 | 0.8189 | 0.0333 | 0.09 |
| H | HZ | 0.501E+02 | 0.169E+02 | 68. | 73. | 57. | 0.7233 | 0.6966 | 76.00 | 0.15 |
| E | 2.0 | 0.969E+02 | 0.538E+02 | 77. | 77. | 77. | 0.5608 | 0.3029 | 0.0210 | 0.05 |
| H | HZ | 0.605E+02 | 0.251E+02 | 77. | 79. | 64. | 0.6768 | 0.5368 | 28.80 | 0.07 |
| E | 2.0 | 0.949E+02 | 0.648E+02 | 65. | 72. | 74. | 0.3459 | 0.1793 | 0.0048 | 0.01 |
| H | HZ | 0.773E+02 | 0.402E+02 | 72. | 75. | 55. | 0.3493 | 0.4055 | 144.50 | 0.07 |
| E | 2.0 | 0.844E+02 | 0.816E+02 | 71. | 86. | 73. | 0.0000 | 0.0825 | 0.0089 | 0.13 |
| H | HZ | 0.807E+02 | 0.548E+02 | 73. | 87. | 81. | 1.2055 | 0.1896 | 19.60 | 0.15 |

AVERAGE # 8
SHAS36 200 HZ 3-AUG-84 T41N R2W S10 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.120E+03 | 0.854E+02 | 77. | 71. | 39. | 0.1985 | 0.1057 | 0.0089 | 0.03 |
| H | HZ | 0.112E+03 | 0.592E+02 | 79. | 78. | 57. | 0.0000 | 0.0929 | 169.50 | 0.07 |
| E | 3.0 | 0.110E+03 | 0.723E+02 | 82. | 77. | 60. | 2.0962 | 0.2473 | 0.0217 | 0.08 |
| H | HZ | 0.746E+02 | 0.338E+02 | 86. | 82. | 57. | 1.0298 | 0.4200 | 180.00 | 0.17 |
| E | 7.7 | 0.295E+03 | 0.163E+03 | 75. | 78. | 57. | 1.1981 | 1.1018 | 0.0203 | 0.05 |
| H | HZ | 0.296E+03 | 0.159E+03 | 75. | 80. | 57. | 1.1800 | 0.3811 | 180.00 | 0.06 |
| E | 14.3 | 0.407E+03 | 0.273E+03 | 74. | 75. | 47. | 1.6053 | 1.5494 | 0.0337 | 0.03 |
| H | HZ | 0.374E+03 | 0.250E+03 | 74. | 76. | 48. | 1.8394 | 1.7206 | 180.00 | 0.04 |
| E | 20.0 | 0.487E+03 | 0.366E+03 | 70. | 73. | 40. | 0.0000 | 0.0000 | 0.0149 | 0.02 |
| H | HZ | 0.434E+03 | 0.297E+03 | 72. | 76. | 24. | 0.0000 | 1.3148 | 180.00 | 0.07 |
| E | 26.3 | 0.578E+03 | 0.370E+03 | 70. | 69. | 60. | 1.3031 | 3.2366 | 0.0552 | 0.01 |
| H | HZ | 0.429E+03 | 0.294E+03 | 76. | 69. | 64. | 1.9645 | 1.5417 | 180.00 | 0.08 |
| E | 31.2 | 0.696E+03 | 0.424E+03 | 69. | 69. | 53. | 1.5871 | 2.8298 | 0.0149 | 0.03 |
| H | HZ | 0.624E+03 | 0.331E+03 | 77. | 69. | 54. | 1.2550 | 1.5534 | 108.00 | 0.07 |
| E | 40.0 | 0.744E+03 | 0.448E+03 | 67. | 65. | 57. | 0.5657 | 1.6170 | 0.0302 | 0.02 |
| H | HZ | 0.723E+03 | 0.356E+03 | 72. | 66. | 52. | 1.4587 | 2.5098 | 137.80 | 0.06 |

SHAS36 200 HZ 3-AUG-84 T41N R2W S10 C

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 24
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.8000E+03 | | 0.0000E+00 |
| | | 0.1500E+04 | |
| 2 | 0.2000E+01 | | 0.1500E+04 |
| | | 0.5000E+03 | |
| 3 | 0.1500E+02 | | 0.2000E+04 |
| | | 0.1000E+05 | |
| 4 | 0.7000E+01 | | 0.1200E+05 |

FREQUENCY RANGE ( 0.2000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3314E+03 | | 0.0000E+00 |
| | | 0.1508E+04 | |
| 2 | 0.4452E+01 | | 0.1508E+04 |
| | | 0.8798E+03 | |
| 3 | 0.4991E+02 | | 0.2388E+04 |
| | | 0.2369E+05 | |
| 4 | 0.1535E+01 | | 0.2608E+05 |

MEAN PERCENT VARIATION IS 0.1223E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 23 | 0.387E+06 | 0.168E+05 | 0.261E+00 |
| MODEL | 6 | 0.387E+06 | 0.644E+05 | 0.305E+07 |
| RESID | 17 | 0.359E+00 | 0.211E-01 | |

STANDARD ERROR = 0.145E+00

DTEST FOR MEANS = 0.302E-05

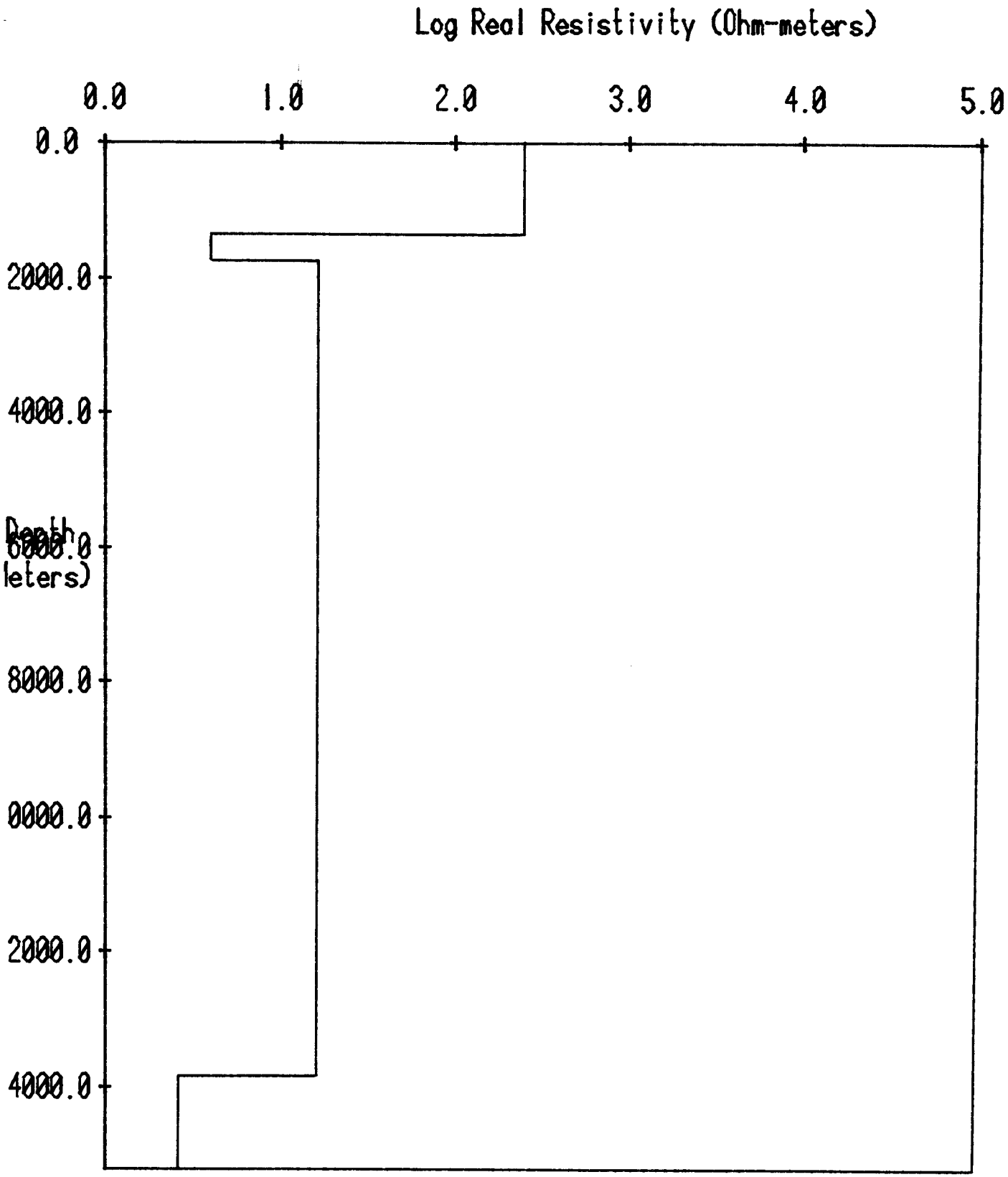
NOISE TO SIGNAL RATIO = 0.573E-01 PERCENT

SHAS36 200 HZ 3-AUG-84 T41N R2W S10 C

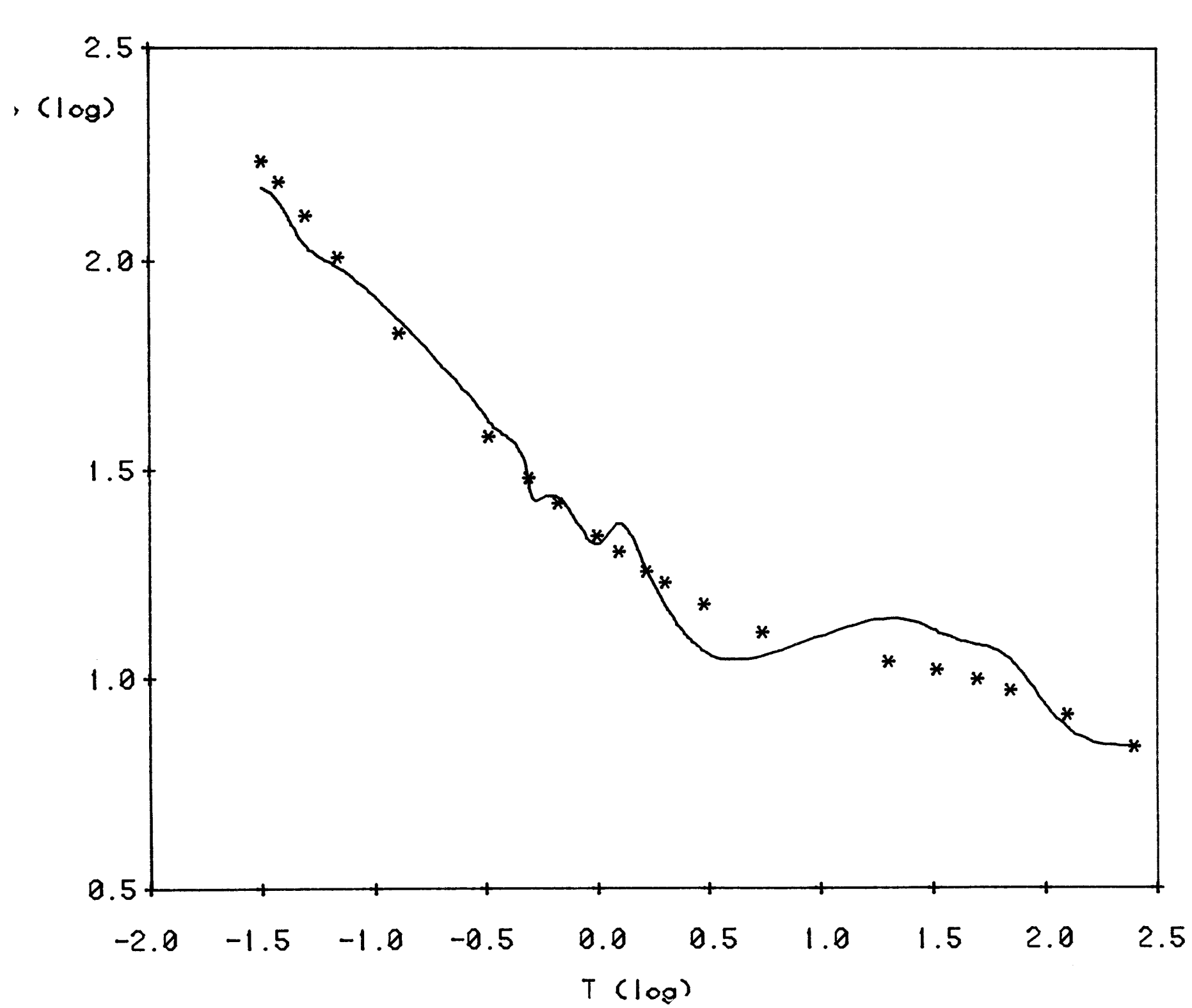
ERROR STRUCTURE OF FITTED MODEL

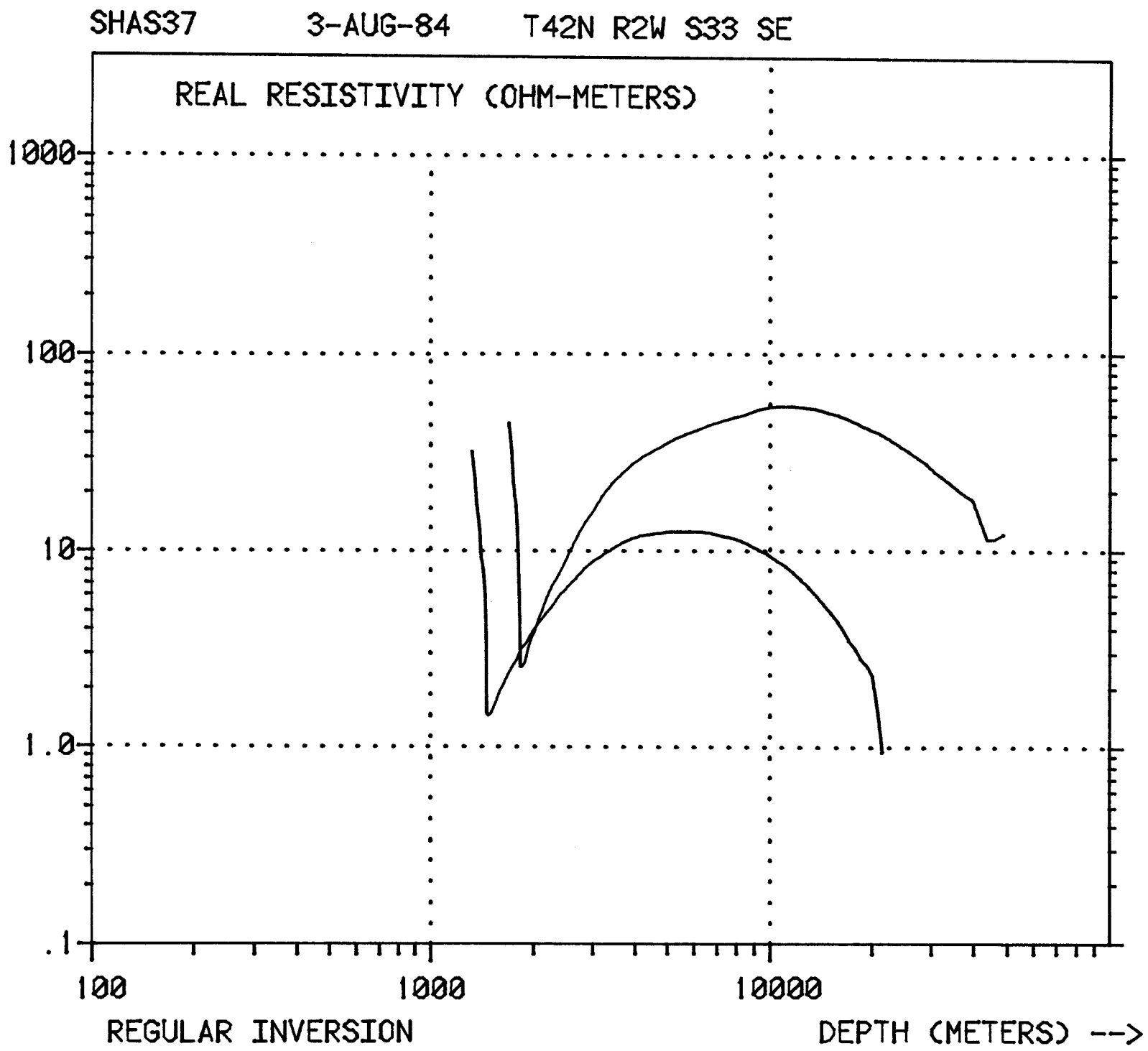
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.500E+03 | 0.150E+02 | 0.154E+02 | -0.404E+00 | -0.266E+01 |
| 2 | 0.250E+03 | 0.260E+02 | 0.238E+02 | 0.224E+01 | 0.900E+01 |
| 3 | 0.125E+03 | 0.300E+02 | 0.330E+02 | -0.301E+01 | -0.955E+01 |
| 4 | 0.700E+02 | 0.380E+02 | 0.361E+02 | 0.192E+01 | 0.518E+01 |
| 5 | 0.500E+02 | 0.340E+02 | 0.344E+02 | -0.392E+00 | -0.115E+01 |
| 6 | 0.330E+02 | 0.310E+02 | 0.299E+02 | 0.113E+01 | 0.371E+01 |
| 7 | 0.200E+02 | 0.250E+02 | 0.239E+02 | 0.105E+01 | 0.430E+01 |
| 8 | 0.100E+02 | 0.160E+02 | 0.188E+02 | -0.284E+01 | -0.163E+02 |
| 9 | 0.300E+01 | 0.170E+02 | 0.181E+02 | -0.112E+01 | -0.638E+01 |
| 10 | 0.200E+01 | 0.260E+02 | 0.206E+02 | 0.536E+01 | 0.230E+02 |
| 11 | 0.125E+01 | 0.280E+02 | 0.265E+02 | 0.150E+01 | 0.551E+01 |
| 12 | 0.100E+01 | 0.370E+02 | 0.308E+02 | 0.625E+01 | 0.184E+02 |
| 13 | 0.830E+00 | 0.310E+02 | 0.352E+02 | -0.422E+01 | -0.127E+02 |
| 14 | 0.670E+00 | 0.350E+02 | 0.416E+02 | -0.656E+01 | -0.171E+02 |
| 15 | 0.500E+00 | 0.390E+02 | 0.527E+02 | -0.137E+02 | -0.299E+02 |
| 16 | 0.500E+00 | 0.520E+02 | 0.527E+02 | -0.692E+00 | -0.132E+01 |
| 17 | 0.500E+00 | 0.680E+02 | 0.527E+02 | 0.153E+02 | 0.254E+02 |
| 18 | 0.330E+00 | 0.720E+02 | 0.745E+02 | -0.255E+01 | -0.348E+01 |
| 19 | 0.130E+00 | 0.161E+03 | 0.159E+03 | 0.215E+01 | 0.134E+01 |
| 20 | 0.700E-01 | 0.261E+03 | 0.250E+03 | 0.105E+02 | 0.412E+01 |
| 21 | 0.500E-01 | 0.331E+03 | 0.309E+03 | 0.218E+02 | 0.681E+01 |
| 22 | 0.380E-01 | 0.332E+03 | 0.355E+03 | -0.226E+02 | -0.657E+01 |
| 23 | 0.320E-01 | 0.378E+03 | 0.378E+03 | -0.227E+00 | -0.600E-01 |
| 24 | 0.250E-01 | 0.402E+03 | 0.402E+03 | 0.392E+00 | 0.975E-01 |

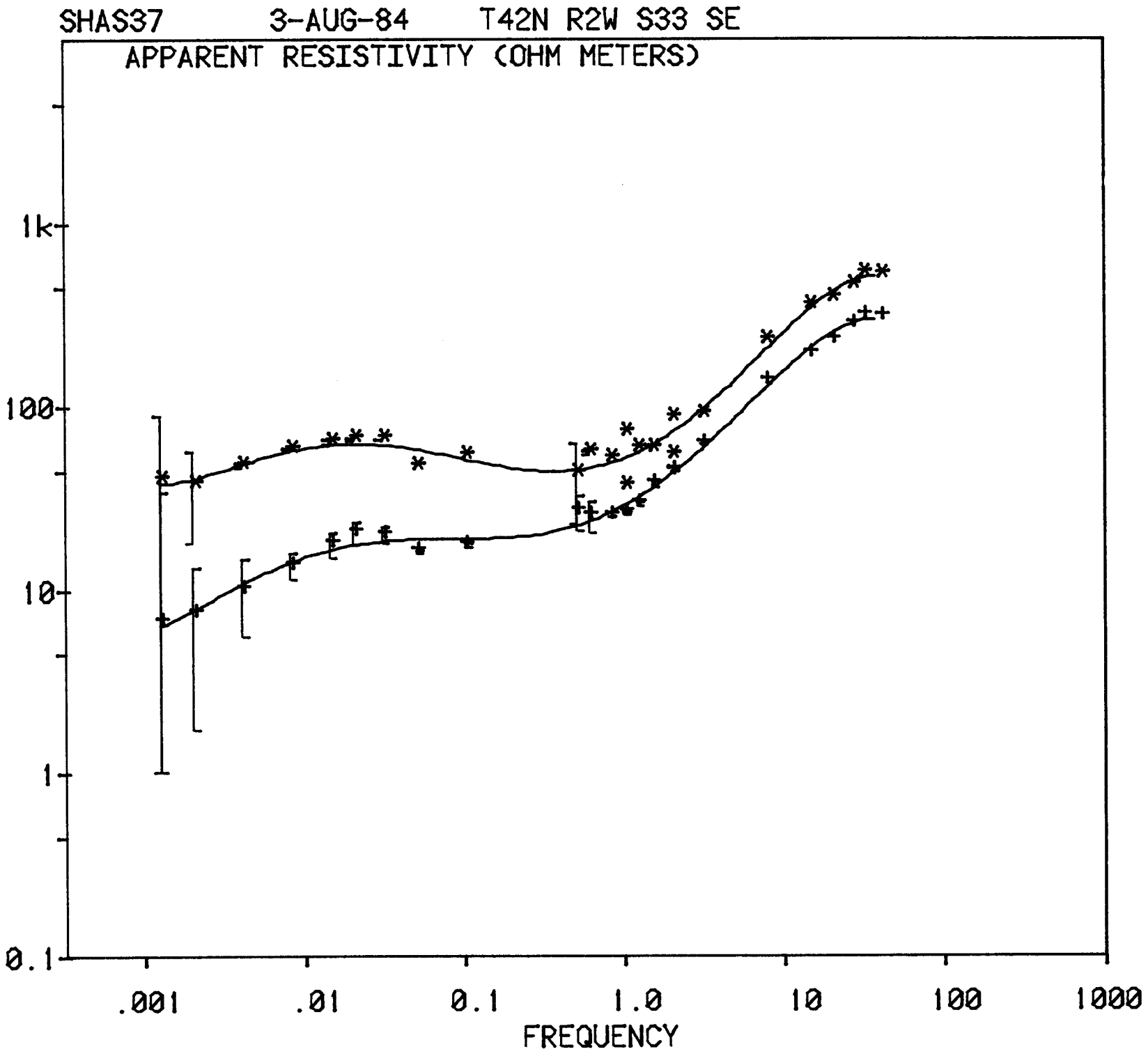
MEAN PERCENT ERROR = 0.1220E+02
MAXIMUM PERCENT ERROR = 0.2987E+02
MAX. ERROR OCCURED AT OBSERVATION 15




| | | | | |
|---|---|---|---|---|
| Resistivity | 0249.46 | 0004.01 | 0016.27 | 0002.61 |
| Thickness | | 1330.70 | 0397.11 | 12117.68 |
| Depth | 0000.00 | 1330.70 | 1727.82 | 13845.50 |


2.5
(log)
2.0
1.5
1.0
0.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS37 3-AUG-84 T42N R2W S33 SE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS37 3-AUG-84 T42N R2W S33 SE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

THE SITE IS: SHAS37 200 HZ 3-AUG-84 T42N R2W S33 SE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 6.57 | 38.62 | 1 | 26.70 | 47.55 |
| 0.0020 | 7.33 | 37.00 | 2 | 5.64 | 19.23 |
| 0.0040 | 9.92 | 46.84 | 3 | 4.49 | 1.45 |
| 0.0080 | 13.27 | 57.35 | 4 | 2.12 | 0.64 |
| 0.0143 | 17.34 | 62.92 | 5 | 2.62 | 1.72 |
| 0.0200 | 20.00 | 64.46 | 6 | 2.81 | 1.00 |
| 0.0303 | 19.47 | 64.43 | 7 | 1.94 | 0.18 |
| 0.0500 | 15.73 | 45.79 | 8 | 0.21 | 0.04 |
| 0.1000 | 17.14 | 51.94 | 9 | 0.60 | 0.07 |
| 0.1818 | 0.00 | 0.00 | 10 | 5.64 | 19.23 |
| 0.3333 | 0.00 | 0.00 | 11 | 4.49 | 1.45 |
| 0.5000 | 25.97 | 41.73 | 12 | 0.18 | 0.01 |
| 0.5988 | 24.67 | 54.20 | 13 | 0.26 | 0.05 |
| 0.8000 | 24.54 | 50.29 | 14 | 0.11 | 0.02 |
| 1.0000 | 25.43 | 35.60 | 15 | 0.60 | 0.02 |
| 1.0000 | 25.69 | 70.13 | 16 | 1.33 | 0.07 |
| 1.2048 | 28.69 | 57.26 | 17 | 0.23 | 0.01 |
| 1.4925 | 36.61 | 57.64 | 18 | 0.01 | 0.01 |
| 2.0000 | 43.18 | 52.59 | 19 | 0.52 | 0.01 |
| 2.0000 | 36.96 | 61.67 | 20 | 0.05 | 0.00 |
| 2.0000 | 43.00 | 83.78 | 21 | 0.12 | 0.02 |
| 3.0303 | 60.34 | 87.52 | 22 | 0.01 | 0.00 |
| 3.0303 | 38.70 | 61.20 | 23 | 0.54 | 0.00 |
| 7.6923 | 131.84 | 221.67 | 24 | 0.20 | 0.00 |
| 14.2857 | 188.69 | 345.08 | 25 | 0.37 | 0.00 |
| 20.0000 | 223.10 | 377.58 | 26 | 0.28 | 0.00 |
| 26.3158 | 268.39 | 447.11 | 27 | 0.11 | 0.00 |
| 31.2500 | 304.41 | 517.34 | 28 | 0.05 | 0.00 |
| 40.0000 | 298.71 | 500.88 | 29 | 0.01 | 0.00 |

AVERAGE # 8
SHAS37 200 HZ 3-AUG-84 T42N R2W S33 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.358E+02 | 0.751E+01 | 58. | 21. | 34. | 0.6828 | 1.1167 | 0.5382 | 0.23 |
| H | SEC | 0.414E+02 | 0.562E+01 | 61. | 8. | 25. | 0.0617 | 0.1048 | 50.10 | 0.33 |
| E | 500.0 | 0.390E+02 | 0.696E+01 | 55. | 52. | 30. | 0.3710 | 0.1885 | 0.3930 | 0.07 |
| H | SEC | 0.350E+02 | 0.770E+01 | 56. | 48. | 25. | 0.4115 | 0.2368 | 3.10 | 0.13 |
| E | 250.0 | 0.479E+02 | 0.923E+01 | 62. | 62. | 37. | 0.1171 | 0.1611 | 0.2041 | 0.01 |
| H | SEC | 0.457E+02 | 0.106E+02 | 62. | 59. | 36. | 0.0000 | 0.1869 | 44.50 | 0.03 |
| E | 125.0 | 0.565E+02 | 0.141E+02 | 72. | 81. | 43. | 0.1964 | 0.1022 | 0.0500 | 0.10 |
| H | SEC | 0.582E+02 | 0.124E+02 | 76. | 77. | 52. | 0.0399 | 0.0445 | 161.60 | 0.18 |
| E | 70.0 | 0.654E+02 | 0.178E+02 | 87. | 6. | 43. | 0.3123 | 0.0770 | 0.0799 | 0.06 |
| H | SEC | 0.604E+02 | 0.169E+02 | 86. | 8. | 41. | 0.2147 | 0.0971 | 10.80 | 0.03 |
| E | 50.0 | 0.652E+02 | 0.207E+02 | 6. | 16. | 38. | 0.2630 | 0.2112 | 0.0795 | 0.03 |
| H | SEC | 0.637E+02 | 0.193E+02 | 6. | 15. | 38. | 0.1698 | 0.1203 | 34.50 | 0.04 |
| E | 33.0 | 0.657E+02 | 0.208E+02 | 17. | 32. | 47. | 0.1240 | 0.1449 | 0.0862 | 0.06 |
| H | SEC | 0.632E+02 | 0.181E+02 | 18. | 32. | 48. | 0.0376 | 0.0562 | 49.30 | 0.08 |
| E | 20.0 | 0.465E+02 | 0.162E+02 | 43. | 52. | 46. | 0.0111 | 0.0236 | 0.1156 | 0.10 |
| H | SEC | 0.451E+02 | 0.153E+02 | 43. | 50. | 43. | 0.0387 | 0.0139 | 45.80 | 0.15 |

AVERAGE # 8
SHAS37 200 HZ 3-AUG-84 T42N R2W S33 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.374E+02 | 0.200E+02 | 68. | 68. | 95. | 0.0000 | 0.2028 | 0.0426 | 0.07 |
| H | SEC | 0.665E+02 | 0.143E+02 | 71. | 69. | 104. | 0.1605 | 0.1446 | 48.50 | 0.15 |
| E | 5.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.513E+02 | 0.330E+02 | 58. | 56. | 171. | 0.2658 | 0.1436 | 0.0041 | 0.06 |
| H | SEC | 0.322E+02 | 0.190E+02 | 57. | 62. | 83. | 0.2665 | 0.1647 | 58.00 | 0.05 |
| E | 1.7 | 0.745E+02 | 0.349E+02 | 65. | 72. | 51. | 0.6272 | 0.1681 | 0.0030 | 0.15 |
| H | SEC | 0.339E+02 | 0.144E+02 | 64. | 73. | 56. | 0.3677 | 0.2257 | 47.60 | 0.22 |
| E | 1.2 | 0.622E+02 | 0.280E+02 | 75. | 70. | 59. | 0.2788 | 0.1270 | 0.0016 | 0.11 |
| H | SEC | 0.383E+02 | 0.211E+02 | 76. | 70. | 55. | 0.4587 | 0.0976 | 130.80 | 0.11 |
| E | 1.0 | 0.360E+02 | 0.258E+02 | 63. | 71. | 71. | 0.2224 | 0.1377 | 0.0015 | 0.06 |
| H | HZ | 0.352E+02 | 0.251E+02 | 63. | 71. | 71. | 0.4927 | 0.3107 | 50.40 | 0.07 |

AVERAGE # 8
SHAS37 200 HZ 3-AUG-84 T42N R2W S33 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.850E+02 | 0.276E+02 | 63. | 72. | 56. | 0.5275 | 0.1991 | 0.0011 | 0.10 |
| H | HZ | 0.552E+02 | 0.237E+02 | 62. | 73. | 62. | 1.4230 | 0.2592 | 118.00 | 0.13 |
| E | 1.2 | 0.681E+02 | 0.325E+02 | 77. | 75. | 67. | 0.0000 | 0.2004 | 0.0035 | 0.09 |
| H | HZ | 0.464E+02 | 0.249E+02 | 76. | 75. | 67. | 0.8618 | 0.2481 | 44.60 | 0.10 |
| E | 1.5 | 0.714E+02 | 0.436E+02 | 76. | 76. | 65. | 1.0062 | 0.2359 | 0.0040 | 0.09 |
| H | HZ | 0.438E+02 | 0.296E+02 | 76. | 73. | 48. | 1.9649 | 0.2217 | 46.50 | 0.10 |
| E | 2.0 | 0.691E+02 | 0.581E+02 | 18. | 80. | 38. | 0.3412 | 0.1741 | 0.0019 | 0.07 |
| H | HZ | 0.361E+02 | 0.283E+02 | 79. | 29. | 124. | 0.4104 | 0.1847 | 42.60 | 0.03 |
| E | 2.0 | 0.684E+02 | 0.447E+02 | 72. | 73. | 40. | 0.3414 | 0.0943 | 0.0053 | 0.12 |
| H | HZ | 0.550E+02 | 0.292E+02 | 78. | 70. | 11. | 0.0000 | 0.0657 | 49.40 | 0.25 |
| E | 2.0 | 0.925E+02 | 0.505E+02 | 71. | 73. | 63. | 1.3768 | 0.3505 | 0.0036 | 0.14 |
| H | HZ | 0.750E+02 | 0.355E+02 | 70. | 74. | 63. | 0.5225 | 0.2031 | 128.30 | 0.13 |

AVERAGE # 8
SHAS37 200 HZ 3-AUG-84 T42N R2W S33 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.106E+03 | 0.685E+02 | 74. | 74. | 54. | 0.1397 | 0.0594 | 0.0069 | 0.12 |
| H | HZ | 0.690E+02 | 0.522E+02 | 77. | 76. | 25. | 0.1891 | 0.0418 | 134.50 | 0.15 |
| E | 3.0 | 0.743E+02 | 0.505E+02 | 76. | 16. | 131. | 0.4714 | 0.2977 | 0.0014 | 0.12 |
| H | HZ | 0.481E+02 | 0.269E+02 | 77. | 22. | 131. | 0.6416 | 0.2829 | 43.10 | 0.11 |
| E | 7.7 | 0.236E+03 | 0.137E+03 | 79. | 78. | 57. | 0.2782 | 1.2764 | 0.0077 | 0.10 |
| H | HZ | 0.207E+03 | 0.127E+03 | 79. | 78. | 57. | 1.0862 | 1.3660 | 129.40 | 0.11 |
| E | 14.3 | 0.355E+03 | 0.201E+03 | 77. | 74. | 74. | 1.9862 | 1.4402 | 0.0097 | 0.04 |
| H | HZ | 0.335E+03 | 0.177E+03 | 80. | 74. | 78. | 1.3706 | 2.9234 | 47.60 | 0.03 |
| E | 20.0 | 0.410E+03 | 0.255E+03 | 72. | 74. | 72. | 0.0000 | 2.2686 | 0.0225 | 0.02 |
| H | HZ | 0.345E+03 | 0.191E+03 | 75. | 78. | 84. | 1.8679 | 0.0000 | 50.40 | 0.06 |
| E | 26.3 | 0.516E+03 | 0.304E+03 | 69. | 72. | 59. | 1.8513 | 3.0394 | 0.0296 | 0.05 |
| H | HZ | 0.379E+03 | 0.233E+03 | 71. | 74. | 67. | 3.1643 | 0.0000 | 50.00 | 0.08 |
| E | 31.2 | 0.594E+03 | 0.339E+03 | 68. | 69. | 55. | 1.3215 | 2.1728 | 0.1059 | 0.06 |
| H | HZ | 0.440E+03 | 0.269E+03 | 66. | 70. | 55. | 1.9795 | 0.0000 | 49.60 | 0.10 |
| E | 40.0 | 0.575E+03 | 0.320E+03 | 61. | 65. | 68. | 0.5241 | 1.7265 | 0.0837 | 0.07 |
| H | HZ | 0.426E+03 | 0.278E+03 | 63. | 70. | 35. | 0.7825 | 0.0000 | 132.30 | 0.03 |

SHAS37 200 HZ 3-AUG-84 T42N R2W S33 SE

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 25
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3000E+03 | | 0.0000E+00 |
| | | 0.1500E+04 | |
| 2 | 0.2000E+01 | | 0.1500E+04 |
| | | 0.5000E+03 | |
| 3 | 0.8000E+01 | | 0.2000E+04 |
| | | 0.1000E+05 | |
| 4 | 0.5000E+01 | | 0.1200E+05 |

FREQUENCY RANGE ( 0.1250E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2495E+03 | | 0.0000E+00 |
| | | 0.1331E+04 | |
| 2 | 0.4019E+01 | | 0.1331E+04 |
| | | 0.3971E+03 | |
| 3 | 0.1627E+02 | | 0.1728E+04 |
| | | 0.1212E+05 | |
| 4 | 0.2614E+01 | | 0.1385E+05 |

MEAN PERCENT VARIATION IS 0.7448E+01

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 24 | 0.230E+06 | 0.958E+04 | 0.250E+00 |
| MODEL | 6 | 0.230E+06 | 0.383E+05 | 0.497E+07 |
| RESID | 18 | 0.139E+00 | 0.770E-02 | |

STANDARD ERROR = 0.878E-01

DTEST FOR MEANS = 0.157E-04

NOISE TO SIGNAL RATIO = 0.448E-01 PERCENT

SHAS37 200 HZ 3-AUG-84 T42N R2W S33 SE

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.800E+03 | 0.700E+01 | 0.637E+01 | 0.629E+00 | 0.940E+01 |
| 2 | 0.500E+03 | 0.700E+01 | 0.764E+01 | -0.637E+00 | -0.871E+01 |
| 3 | 0.250E+03 | 0.100E+02 | 0.103E+02 | -0.257E+00 | -0.254E+01 |
| 4 | 0.125E+03 | 0.130E+02 | 0.138E+02 | -0.751E+00 | -0.562E+01 |
| 5 | 0.700E+02 | 0.170E+02 | 0.167E+02 | 0.310E+00 | 0.184E+01 |
| 6 | 0.500E+02 | 0.200E+02 | 0.179E+02 | 0.211E+01 | 0.111E+02 |
| 7 | 0.330E+02 | 0.190E+02 | 0.185E+02 | 0.518E+00 | 0.277E+01 |
| 8 | 0.200E+02 | 0.160E+02 | 0.180E+02 | -0.203E+01 | -0.119E+02 |
| 9 | 0.100E+02 | 0.170E+02 | 0.172E+02 | -0.223E+00 | -0.130E+01 |
| 10 | 0.200E+01 | 0.260E+02 | 0.217E+02 | 0.425E+01 | 0.178E+02 |
| 11 | 0.167E+01 | 0.250E+02 | 0.230E+02 | 0.195E+01 | 0.814E+01 |
| 12 | 0.125E+01 | 0.250E+02 | 0.258E+02 | -0.772E+00 | -0.304E+01 |
| 13 | 0.100E+01 | 0.250E+02 | 0.286E+02 | -0.356E+01 | -0.133E+02 |
| 14 | 0.100E+01 | 0.260E+02 | 0.286E+02 | -0.256E+01 | -0.937E+01 |
| 15 | 0.830E+00 | 0.290E+02 | 0.315E+02 | -0.245E+01 | -0.812E+01 |
| 16 | 0.670E+00 | 0.370E+02 | 0.356E+02 | 0.142E+01 | 0.393E+01 |
| 17 | 0.500E+00 | 0.430E+02 | 0.429E+02 | 0.818E-01 | 0.190E+00 |
| 18 | 0.500E+00 | 0.430E+02 | 0.429E+02 | 0.818E-01 | 0.190E+00 |
| 19 | 0.330E+00 | 0.600E+02 | 0.579E+02 | 0.215E+01 | 0.364E+01 |
| 20 | 0.130E+00 | 0.132E+03 | 0.121E+03 | 0.106E+02 | 0.838E+01 |
| 21 | 0.700E-01 | 0.189E+03 | 0.193E+03 | -0.425E+01 | -0.222E+01 |
| 22 | 0.500E-01 | 0.223E+03 | 0.238E+03 | -0.147E+02 | -0.637E+01 |
| 23 | 0.380E-01 | 0.268E+03 | 0.271E+03 | -0.258E+01 | -0.958E+00 |
| 24 | 0.320E-01 | 0.304E+03 | 0.287E+03 | 0.169E+02 | 0.572E+01 |
| 25 | 0.250E-01 | 0.299E+03 | 0.303E+03 | -0.360E+01 | -0.120E+01 |

MEAN PERCENT ERROR = 0.7439E+01
MAXIMUM PERCENT ERROR = 0.1781E+02

MAX. ERROR OCCURED AT OBSERVATION 10

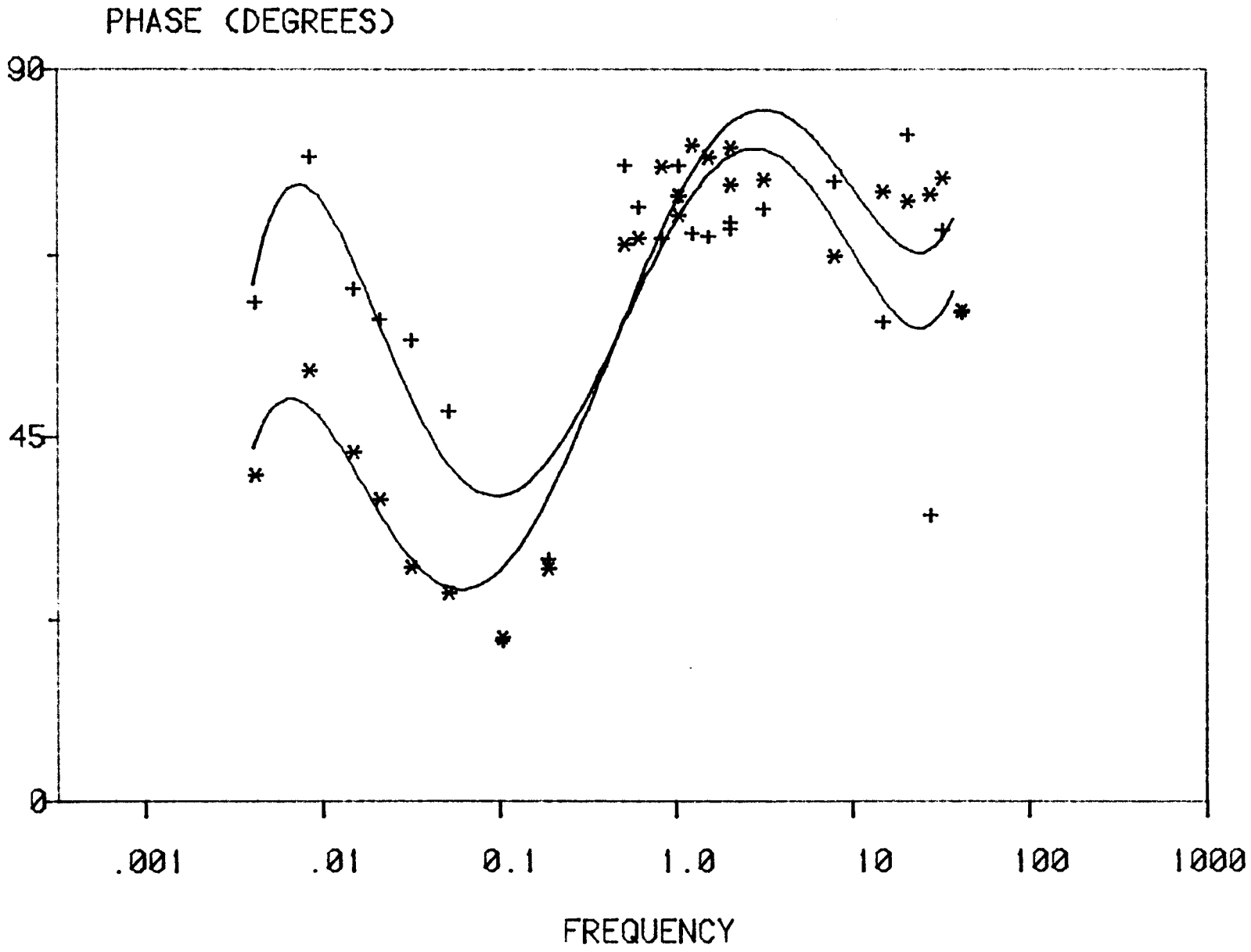
SHAS37 200 HZ 3-AUG-84 T42N R2W S33 SE

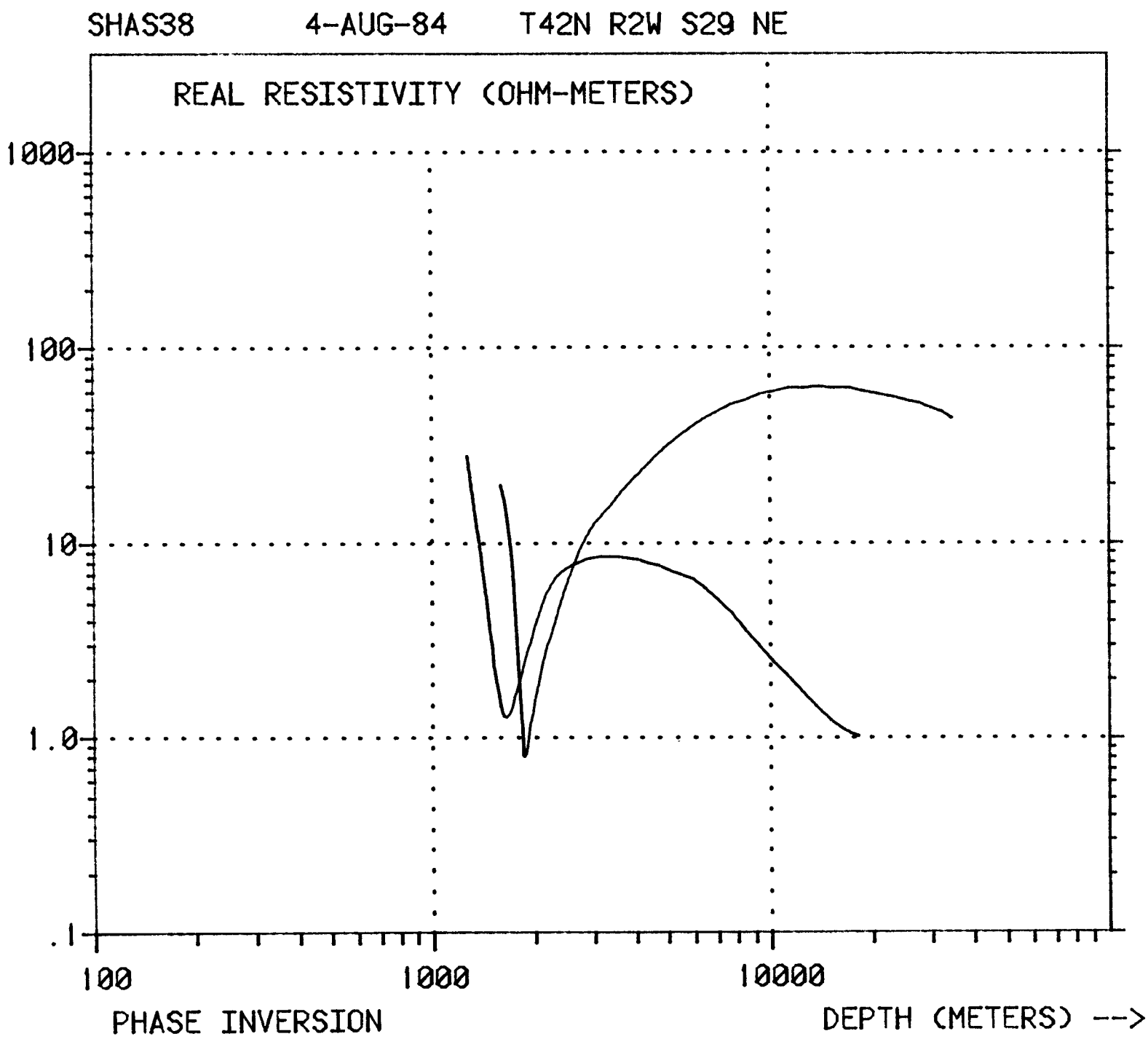
ERROR STRUCTURE OF FITTED MODEL

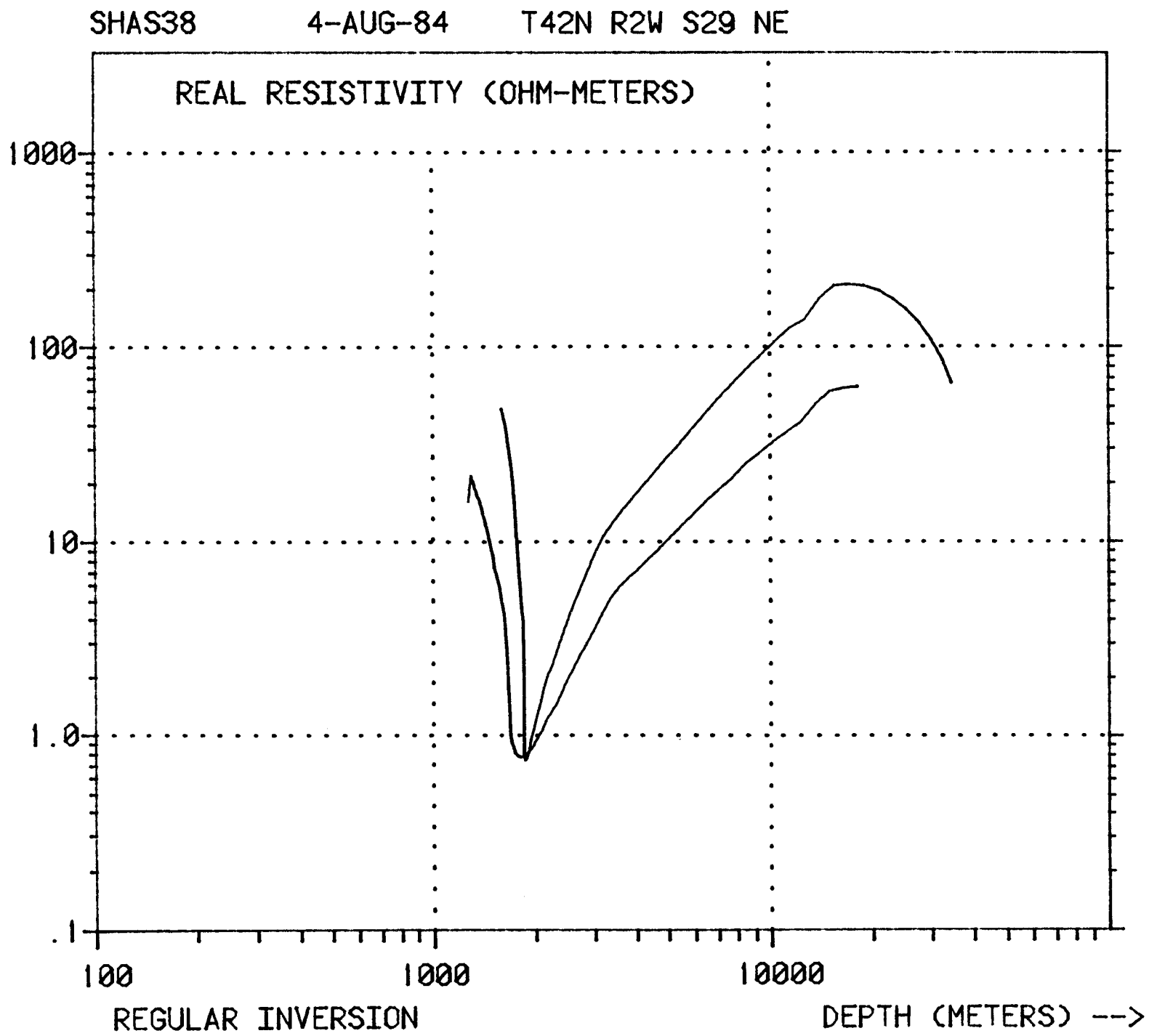
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.800E+03 | 0.700E+01 | 0.637E+01 | 0.629E+00 | 0.940E+01 |
| 2 | 0.500E+03 | 0.700E+01 | 0.764E+01 | -0.637E+00 | -0.871E+01 |
| 3 | 0.250E+03 | 0.100E+02 | 0.103E+02 | -0.257E+00 | -0.254E+01 |
| 4 | 0.125E+03 | 0.130E+02 | 0.138E+02 | -0.751E+00 | -0.562E+01 |
| 5 | 0.700E+02 | 0.170E+02 | 0.167E+02 | 0.310E+00 | 0.184E+01 |
| 6 | 0.500E+02 | 0.200E+02 | 0.179E+02 | 0.211E+01 | 0.111E+02 |
| 7 | 0.330E+02 | 0.190E+02 | 0.185E+02 | 0.518E+00 | 0.277E+01 |
| 8 | 0.200E+02 | 0.160E+02 | 0.180E+02 | -0.203E+01 | -0.119E+02 |
| 9 | 0.100E+02 | 0.170E+02 | 0.172E+02 | -0.223E+00 | -0.130E+01 |
| 10 | 0.200E+01 | 0.260E+02 | 0.217E+02 | 0.425E+01 | 0.178E+02 |
| 11 | 0.167E+01 | 0.250E+02 | 0.230E+02 | 0.195E+01 | 0.814E+01 |
| 12 | 0.125E+01 | 0.250E+02 | 0.258E+02 | -0.772E+00 | -0.304E+01 |
| 13 | 0.100E+01 | 0.250E+02 | 0.286E+02 | -0.356E+01 | -0.133E+02 |
| 14 | 0.100E+01 | 0.260E+02 | 0.286E+02 | -0.256E+01 | -0.937E+01 |
| 15 | 0.830E+00 | 0.290E+02 | 0.315E+02 | -0.245E+01 | -0.812E+01 |
| 16 | 0.670E+00 | 0.370E+02 | 0.356E+02 | 0.142E+01 | 0.393E+01 |
| 17 | 0.500E+00 | 0.430E+02 | 0.429E+02 | 0.818E-01 | 0.190E+00 |
| 18 | 0.500E+00 | 0.430E+02 | 0.429E+02 | 0.818E-01 | 0.190E+00 |
| 19 | 0.330E+00 | 0.600E+02 | 0.579E+02 | 0.215E+01 | 0.364E+01 |
| 20 | 0.130E+00 | 0.132E+03 | 0.121E+03 | 0.106E+02 | 0.838E+01 |
| 21 | 0.700E-01 | 0.189E+03 | 0.193E+03 | -0.425E+01 | -0.222E+01 |
| 22 | 0.500E-01 | 0.223E+03 | 0.238E+03 | -0.147E+02 | -0.637E+01 |
| 23 | 0.380E-01 | 0.268E+03 | 0.271E+03 | -0.258E+01 | -0.958E+00 |
| 24 | 0.320E-01 | 0.304E+03 | 0.287E+03 | 0.169E+02 | 0.572E+01 |
| 25 | 0.250E-01 | 0.299E+03 | 0.303E+03 | -0.360E+01 | -0.120E+01 |

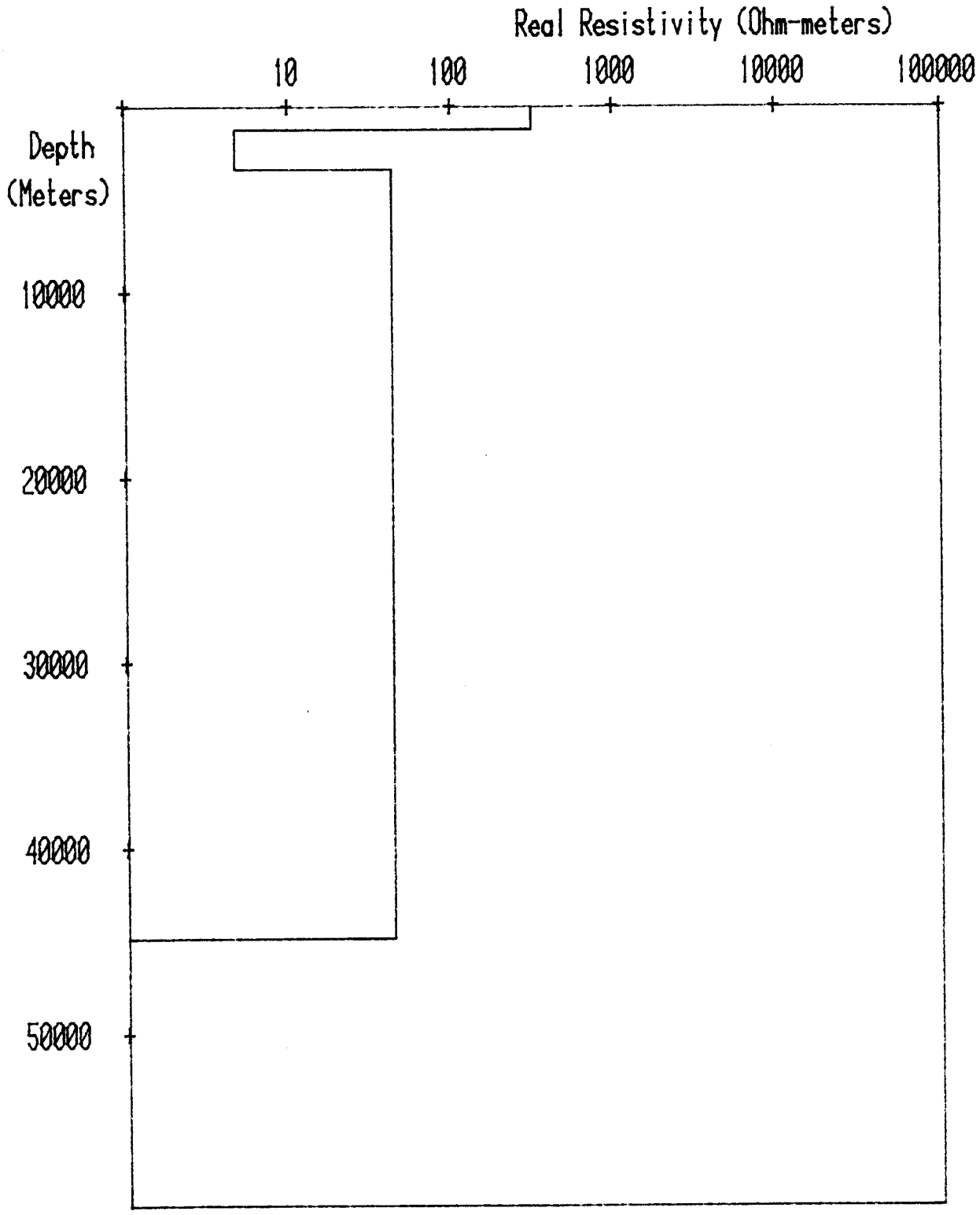
MEAN PERCENT ERROR = 0.7459E+01
MAXIMUM PERCENT ERROR = 0.1781E+02
MAX. ERROR OCCURED AT OBSERVATION 10

SHAS38 4-AUG-84 T42N R2W S29 NE

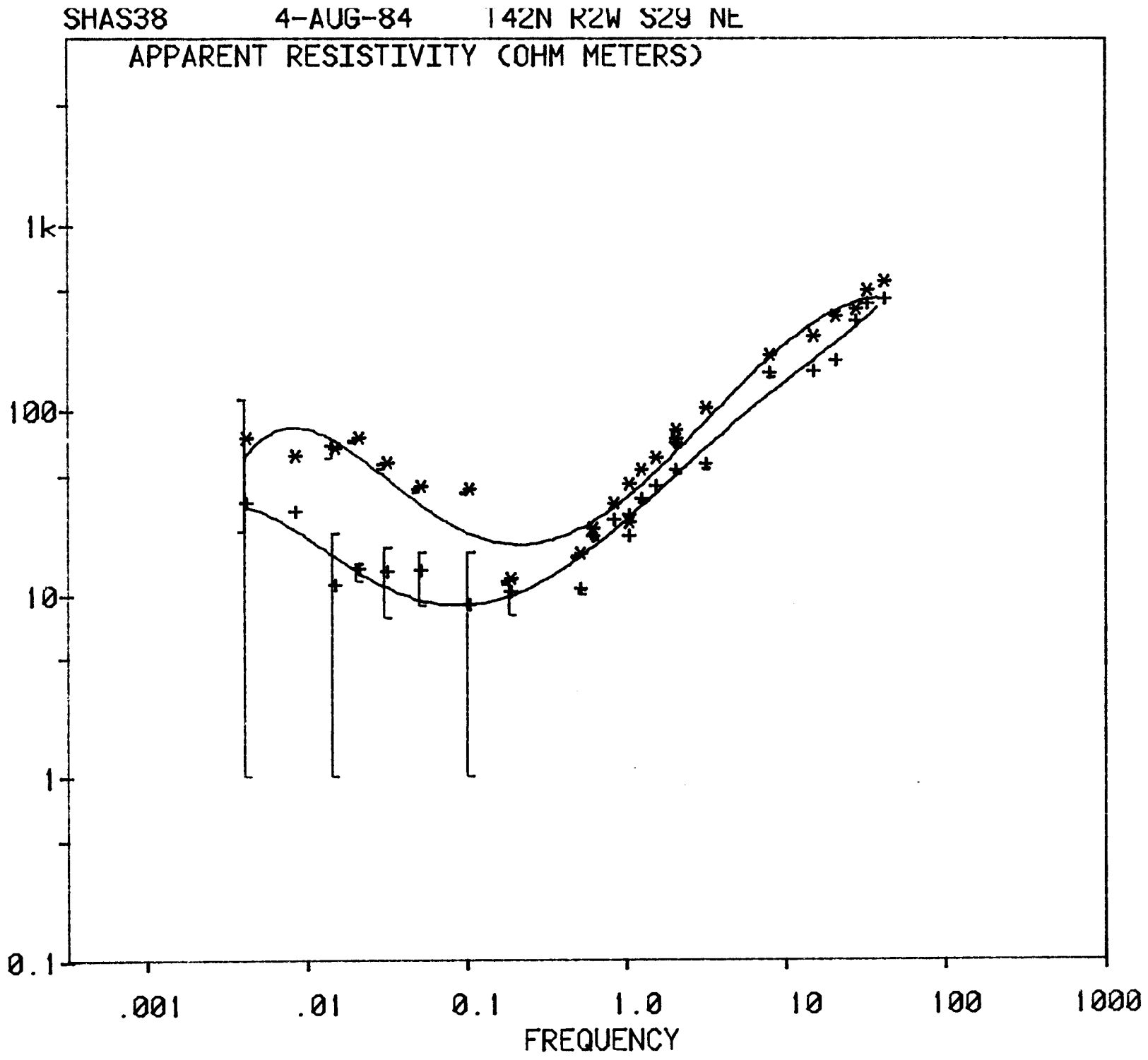



SHAS38 4-AUG-84 T42N R2W S29 NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->


SHAS38 4-AUG-84 T42N R2W S29 NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->




| | | | | |
|---|---|---|---|---|
| Resistivity | 321.08 | 4.74 | 43.88 | 0.00 |
| Thickness | | 1220.43 | 2109.48 | 41517.54 |
| Depth | 0.00 | 1220.43 | 3329.92 | 44847.47 |


SHAS38 4-AUG-84 142N R2W S29 NE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

THE SITE IS: SHAS38 200 HZ 4-AUG-84 T42N R2W S29 NE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 8.49 | 62.89 | 1 | 39.92 | 45.07 |
| 0.0020 | 0.00 | 0.00 | 2 | 0.00 | 0.00 |
| 0.0040 | 29.67 | 66.58 | 3 | 10.80 | 4.83 |
| 0.0080 | 26.53 | 53.05 | 4 | 1.42 | 0.75 |
| 0.0143 | 10.54 | 58.16 | 5 | 5.08 | 1.66 |
| 0.0200 | 12.98 | 66.41 | 6 | 4.13 | 0.67 |
| 0.0303 | 12.41 | 48.75 | 7 | 8.59 | 0.53 |
| 0.0500 | 12.65 | 36.11 | 8 | 2.07 | 0.16 |
| 0.1000 | 8.17 | 35.08 | 9 | 0.32 | 0.15 |
| 0.1818 | 9.63 | 11.41 | 10 | 0.21 | 0.01 |
| 0.3333 | 13.87 | 16.30 | 11 | 0.02 | 0.00 |
| 0.5000 | 10.11 | 15.58 | 12 | 0.02 | 0.00 |
| 0.5988 | 19.52 | 21.31 | 13 | 0.33 | 0.01 |
| 0.8000 | 23.56 | 29.25 | 14 | 0.31 | 0.01 |
| 1.0000 | 19.27 | 22.72 | 15 | 0.01 | 0.00 |
| 1.0000 | 24.87 | 36.64 | 16 | 0.39 | 0.02 |
| 1.2048 | 30.85 | 43.87 | 17 | 0.51 | 0.01 |
| 1.4925 | 36.18 | 50.94 | 18 | 0.50 | 0.00 |
| 2.0000 | 44.48 | 64.77 | 19 | 0.45 | 0.00 |
| 2.0000 | 27.68 | 33.24 | 20 | 0.02 | 0.00 |
| 2.0000 | 61.37 | 71.98 | 21 | 0.21 | 0.01 |
| 3.0303 | 33.56 | 42.72 | 22 | 0.01 | 0.00 |
| 3.0303 | 47.15 | 96.21 | 23 | 0.31 | 0.01 |
| 7.6923 | 146.88 | 184.30 | 24 | 0.37 | 0.00 |
| 14.2857 | 150.57 | 232.44 | 25 | 0.53 | 0.00 |
| 20.0000 | 172.46 | 295.19 | 26 | 0.27 | 0.00 |
| 26.3158 | 279.71 | 323.26 | 27 | 0.25 | 0.00 |
| 31.2500 | 351.24 | 409.62 | 28 | 0.02 | 0.00 |
| 40.0000 | 366.89 | 460.86 | 29 | 0.02 | 0.00 |

AVERAGE # 8
SHAS38 200 HZ 4-AUG-84 T42N R2W S29 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGR | PHI MIN EES) | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.603E+02 | 0.828E+01 | 81. | 26. | 5. | 0.2426 | 0.1146 | 0.5546 | 0.49 |
| H | SEC | 0.655E+02 | 0.870E+01 | 90. | 19. | 5. | 0.2325 | 0.1665 | -3.30 | 0.61 |
| E | 500.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 250.0 | 0.531E+02 | 0.172E+02 | 51. | 45. | 20. | 0.3751 | 0.1104 | 0.1351 | 0.18 |
| H | SEC | 0.800E+02 | 0.422E+02 | 31. | 79. | 14. | 0.5967 | 0.2088 | 12.20 | 0.46 |
| E | 125.0 | 0.587E+02 | 0.227E+02 | 53. | 71. | 24. | 0.0816 | 0.0666 | 0.0756 | 0.15 |
| H | SEC | 0.474E+02 | 0.303E+02 | 54. | 88. | 40. | 0.1010 | 0.0353 | 137.50 | 0.25 |
| E | 70.0 | 0.597E+02 | 0.116E+02 | 43. | 63. | 30. | 0.3230 | 0.1288 | 0.0461 | 0.11 |
| H | SEC | 0.566E+02 | 0.953E+01 | 43. | 64. | 31. | 0.1889 | 0.2061 | 5.90 | 0.13 |
| E | 50.0 | 0.703E+02 | 0.145E+02 | 37. | 59. | 30. | 0.0662 | 0.1150 | 3.7303 | 0.10 |
| H | SEC | 0.625E+02 | 0.114E+02 | 38. | 60. | 32. | 0.1465 | 0.1270 | 138.50 | 0.10 |
| E | 33.0 | 0.524E+02 | 0.136E+02 | 29. | 57. | 30. | 0.1077 | 0.1023 | 2.6002 | 0.07 |
| H | SEC | 0.451E+02 | 0.112E+02 | 29. | 57. | 35. | 0.4328 | 0.3305 | 119.30 | 0.03 |
| E | 20.0 | 0.376E+02 | 0.131E+02 | 27. | 49. | 36. | 0.2012 | 0.0864 | 0.8754 | 0.10 |
| H | SEC | 0.347E+02 | 0.122E+02 | 26. | 48. | 38. | 0.2133 | 0.1036 | 140.20 | 0.08 |

AVERAGE # 8
SHAS38 200 HZ 4-AUG-84 T42N R2W S29 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.593E+02 | 0.886E+01 | 6. | 31. | 5. | 0.7621 | 0.0723 | 0.2823 | 0.27 |
| H | SEC | 0.108E+02 | 0.747E+01 | 35. | 9. | 78. | 0.6409 | 0.0240 | 146.30 | 0.26 |
| E | 5.5 | 0.160E+02 | 0.139E+02 | 26. | 22. | 9. | 0.0561 | 0.0402 | 0.2548 | 4.49 |
| H | SEC | 0.684E+01 | 0.537E+01 | 32. | 38. | 100. | 0.0744 | 0.0489 | 124.40 | 3.16 |
| E | 3.0 | 0.199E+02 | 0.171E+02 | 50. | 65. | 90. | 0.1397 | 0.0278 | 0.0200 | 0.43 |
| H | SEC | 0.127E+02 | 0.106E+02 | 46. | 68. | 90. | 0.1069 | 0.0330 | 157.60 | 0.30 |
| E | 2.0 | 0.205E+02 | 0.120E+02 | 66. | 79. | 85. | 0.0745 | 0.0127 | 0.0145 | 0.86 |
| H | SEC | 0.106E+02 | 0.818E+01 | 72. | 78. | 85. | 0.0424 | 0.0188 | 144.10 | 1.97 |
| E | 1.7 | 0.246E+02 | 0.212E+02 | 76. | 64. | 118. | 0.3379 | 0.0621 | 0.0020 | 0.07 |
| H | SEC | 0.180E+02 | 0.178E+02 | 64. | 83. | 43. | 0.1876 | 0.0163 | 44.40 | 0.11 |
| E | 1.2 | 0.353E+02 | 0.241E+02 | 75. | 70. | 137. | 0.3414 | 0.1514 | 0.0022 | 0.03 |
| H | SEC | 0.232E+02 | 0.230E+02 | 81. | 70. | 150. | 0.1628 | 0.0687 | 49.80 | 0.01 |
| E | 1.0 | 0.290E+02 | 0.232E+02 | 66. | 74. | 0. | 0.1021 | 0.0540 | 0.0728 | 1.55 |
| H | HZ | 0.165E+02 | 0.153E+02 | 79. | 76. | 0. | 0.0000 | 0.0427 | 54.60 | 2.84 |

AVERAGE # 8
SHAS38 200 HZ 4-AUG-84 T42N R2W S29 NE
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.407E+02 | 0.316E+02 | 76. | 77. | 53. | 0.4483 | 0.1206 | 0.0013 | 0.06 |
| H | HZ | 0.326E+02 | 0.182E+02 | 74. | 80. | 34. | 0.9383 | 0.1936 | 144.30 | 0.07 |
| E | 1.2 | 0.446E+02 | 0.324E+02 | 80. | 70. | 139. | 0.4323 | 0.0810 | 0.0019 | 0.02 |
| H | HZ | 0.431E+02 | 0.293E+02 | 82. | 70. | 136. | 0.1985 | 0.0643 | 48.30 | 0.05 |
| E | 1.5 | 0.499E+02 | 0.385E+02 | 79. | 70. | 136. | 0.2645 | 0.1645 | 0.0024 | 0.03 |
| H | HZ | 0.519E+02 | 0.339E+02 | 81. | 70. | 130. | 0.0000 | 0.0427 | 48.30 | 0.04 |
| E | 2.0 | 0.633E+02 | 0.459E+02 | 75. | 70. | 141. | 0.6263 | 0.1033 | 0.0016 | 0.04 |
| H | HZ | 0.662E+02 | 0.431E+02 | 78. | 71. | 145. | 0.1921 | 0.1452 | 51.40 | 0.07 |
| E | 2.0 | 0.364E+02 | 0.303E+02 | 73. | 73. | 0. | 0.1547 | 0.0351 | 0.0508 | 1.48 |
| H | HZ | 0.301E+02 | 0.251E+02 | 78. | 75. | 1. | 0.0884 | 0.0844 | 55.90 | 1.44 |
| E | 2.0 | 0.883E+02 | 0.674E+02 | 81. | 72. | 127. | 1.4627 | 0.3190 | 0.0024 | 0.01 |
| H | HZ | 0.557E+02 | 0.553E+02 | 81. | 71. | 144. | 1.3246 | 0.3469 | 47.10 | 0.04 |

AVERAGE # 8
SEAS38 200 HZ 4-AUG-84 T42N R2W S29 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.448E+02 | 0.367E+02 | 73. | 72. | 1. | 0.0493 | 0.0268 | 0.3602 | 1.28 |
| H | HZ | 0.406E+02 | 0.304E+02 | 75. | 74. | 2. | 0.0803 | 0.0722 | 55.70 | 1.49 |
| E | 3.0 | 0.915E+02 | 0.521E+02 | 76. | 73. | 148. | 0.9954 | 0.2128 | 0.0016 | 0.02 |
| H | HZ | 0.101E+03 | 0.422E+02 | 78. | 74. | 145. | 0.6227 | 0.0659 | 52.60 | 0.02 |
| E | 7.7 | 0.177E+03 | 0.153E+03 | 70. | 76. | 153. | 2.4247 | 1.1029 | 0.0020 | 0.02 |
| H | HZ | 0.191E+03 | 0.141E+03 | 65. | 77. | 145. | 2.2985 | 0.6923 | 133.90 | 0.02 |
| E | 14.3 | 0.246E+03 | 0.187E+03 | 75. | 68. | 37. | 0.0000 | 1.2855 | 0.0039 | 0.04 |
| H | HZ | 0.219E+03 | 0.115E+03 | 77. | 51. | 47. | 2.4768 | 1.5129 | 118.70 | 0.04 |
| E | 20.0 | 0.320E+03 | 0.234E+03 | 73. | 77. | 41. | 0.0000 | 1.2456 | 0.0066 | 0.05 |
| H | HZ | 0.271E+03 | 0.111E+03 | 76. | 88. | 42. | 3.1019 | 1.4190 | 134.70 | 0.10 |
| E | 26.3 | 0.376E+03 | 0.339E+03 | 76. | 71. | 140. | 0.0000 | 3.2673 | 0.0094 | 0.02 |
| H | HZ | 0.271E+03 | 0.220E+03 | 74. | 0. | 46. | 0.0000 | 2.8484 | 134.40 | 0.04 |
| E | 31.2 | 0.461E+03 | 0.394E+03 | 73. | 70. | 148. | 1.8593 | 0.0000 | 0.0178 | 0.02 |
| H | HZ | 0.358E+03 | 0.308E+03 | 81. | 71. | 140. | 1.7475 | 1.8770 | 135.00 | 0.04 |
| E | 40.0 | 0.463E+03 | 0.387E+03 | 65. | 61. | 43. | 0.5563 | 1.2197 | 0.0829 | 0.04 |
| H | HZ | 0.459E+03 | 0.347E+03 | 56. | 60. | 75. | 0.8475 | 1.6037 | 148.70 | 0.10 |

SHAS38 200 HZ 4-AUG-84 T42N R2W S29 NE

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 22
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2500E+03 | | 0.0000E+00 |
| | | 0.1100E+04 | |
| 2 | 0.8000E+00 | | 0.1100E+04 |
| | | 0.1500E+04 | |
| 3 | 0.5000E+01 | | 0.2600E+04 |
| | | 0.1100E+05 | |
| 4 | 0.1000E+01 | | 0.1360E+05 |

FREQUENCY RANGE ( 0.4000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3211E+03 | | 0.0000E+00 |
| | | 0.1220E+04 | |
| 2 | 0.4740E+01 | | 0.1220E+04 |
| | | 0.2109E+04 | |
| 3 | 0.4389E+02 | | 0.3330E+04 |
| | | 0.4152E+05 | |
| 4 | 0.4286E-02 | | 0.4485E+05 |

MEAN PERCENT VARIATION IS 0.1666E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 21 | 0.263E+06 | 0.125E+05 | 0.286E+00 |
| MODEL | 6 | 0.263E+06 | 0.438E+05 | 0.108E+07 |
| RESID | 15 | 0.610E+00 | 0.407E-01 | |

STANDARD ERROR = 0.202E+00

DTEST FOR MEANS =-0.398E-06

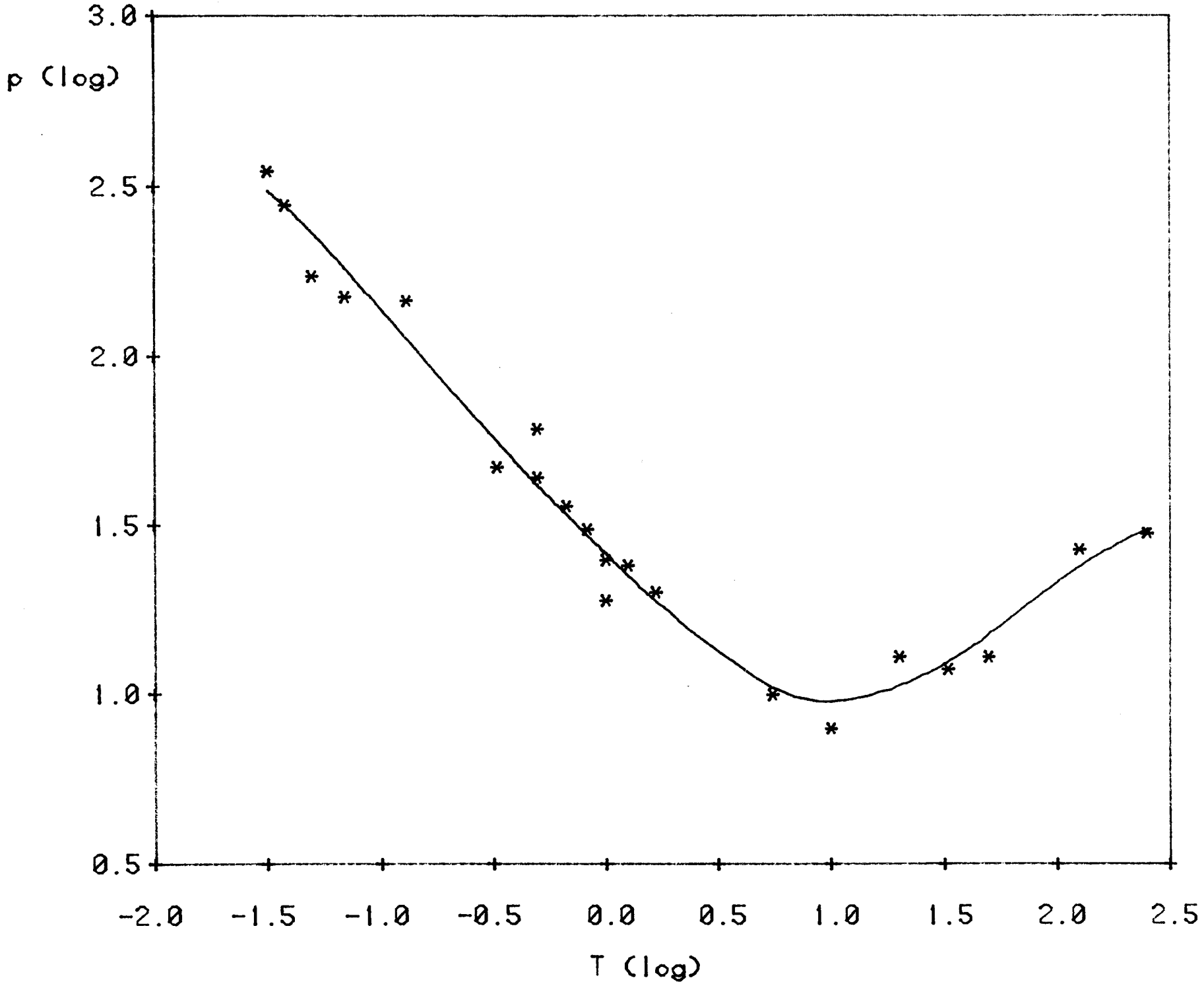
NOISE TO SIGNAL RATIO = 0.964E-01 PERCENT

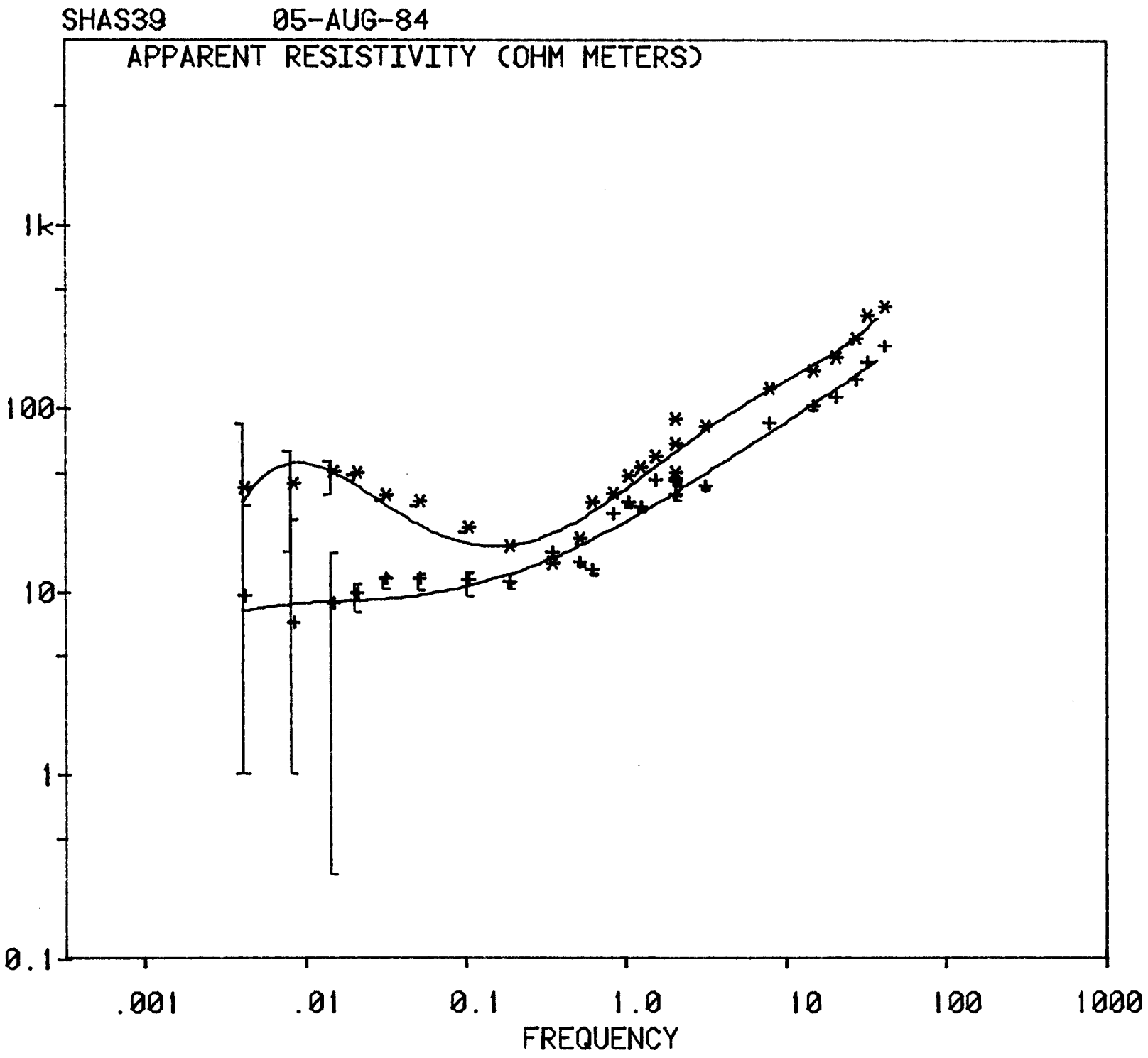
SHAS38 200 HZ 4-AUG-84 T42N R2W S29 NE

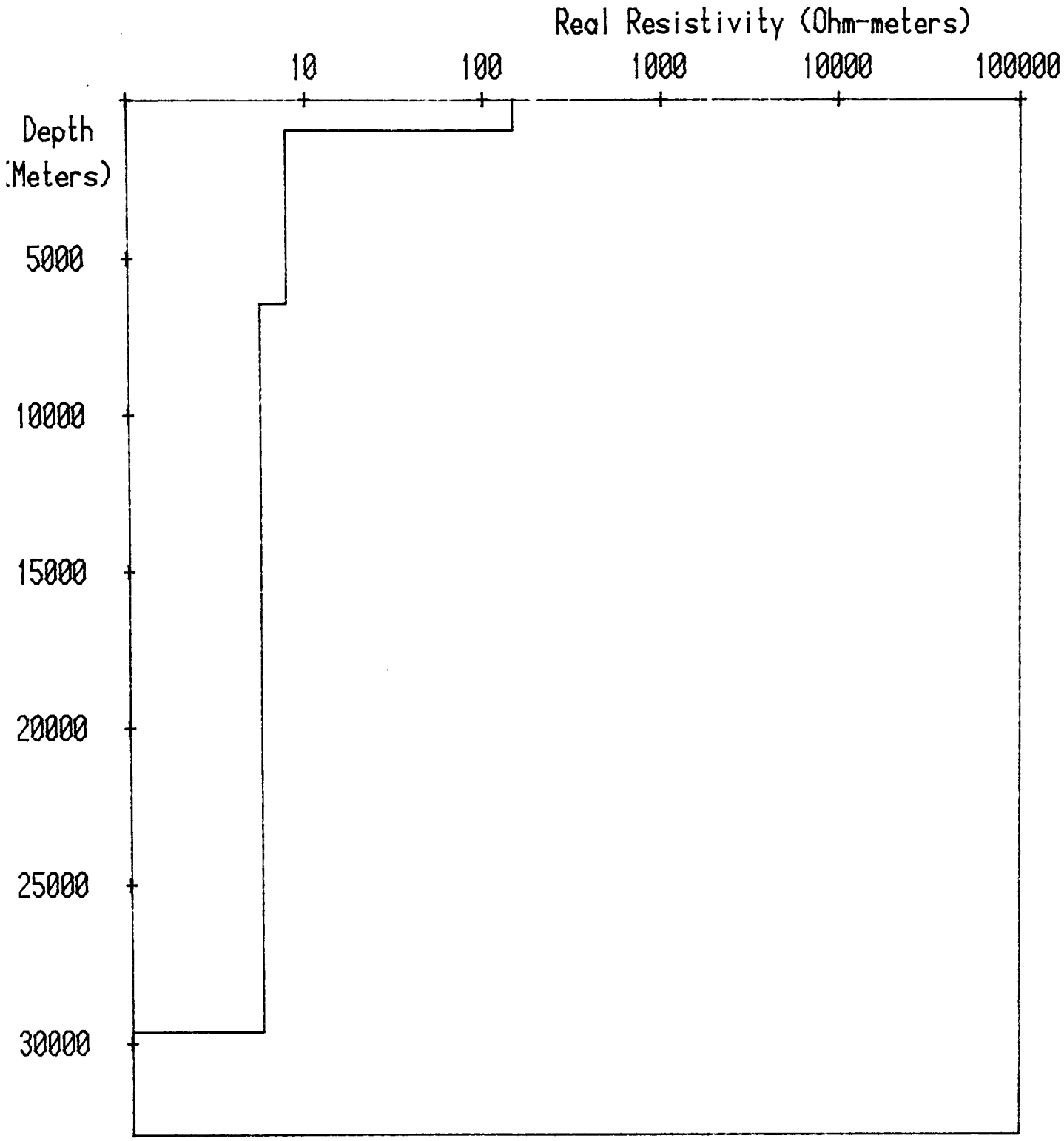
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.250E+03 | 0.300E+02 | 0.307E+02 | -0.673E+00 | -0.222E+01 |
| 2 | 0.125E+03 | 0.270E+02 | 0.250E+02 | 0.205E+01 | 0.789E+01 |
| 3 | 0.500E+02 | 0.130E+02 | 0.148E+02 | -0.184E+01 | -0.132E+02 |
| 4 | 0.330E+02 | 0.120E+02 | 0.124E+02 | -0.358E+00 | -0.294E+01 |
| 5 | 0.200E+02 | 0.130E+02 | 0.105E+02 | 0.246E+01 | 0.209E+02 |
| 6 | 0.100E+02 | 0.800E+01 | 0.939E+01 | -0.139E+01 | -0.160E+02 |
| 7 | 0.550E+01 | 0.100E+02 | 0.101E+02 | -0.944E-01 | -0.939E+00 |
| 8 | 0.167E+01 | 0.200E+02 | 0.186E+02 | 0.138E+01 | 0.714E+01 |
| 9 | 0.125E+01 | 0.240E+02 | 0.225E+02 | 0.146E+01 | 0.626E+01 |
| 10 | 0.100E+01 | 0.190E+02 | 0.261E+02 | -0.714E+01 | -0.316E+02 |
| 11 | 0.100E+01 | 0.250E+02 | 0.261E+02 | -0.114E+01 | -0.447E+01 |
| 12 | 0.830E+00 | 0.310E+02 | 0.296E+02 | 0.142E+01 | 0.468E+01 |
| 13 | 0.670E+00 | 0.360E+02 | 0.341E+02 | 0.188E+01 | 0.537E+01 |
| 14 | 0.500E+00 | 0.440E+02 | 0.416E+02 | 0.238E+01 | 0.556E+01 |
| 15 | 0.500E+00 | 0.610E+02 | 0.416E+02 | 0.194E+02 | 0.378E+02 |
| 16 | 0.330E+00 | 0.470E+02 | 0.559E+02 | -0.895E+01 | -0.174E+02 |
| 17 | 0.130E+00 | 0.147E+03 | 0.114E+03 | 0.329E+02 | 0.252E+02 |
| 18 | 0.700E-01 | 0.151E+03 | 0.184E+03 | -0.328E+02 | -0.196E+02 |
| 19 | 0.500E-01 | 0.172E+03 | 0.234E+03 | -0.623E+02 | -0.307E+02 |
| 20 | 0.380E-01 | 0.280E+03 | 0.280E+03 | -0.459E-01 | -0.164E-01 |
| 21 | 0.320E-01 | 0.351E+03 | 0.309E+03 | 0.421E+02 | 0.128E+02 |
| 22 | 0.250E-01 | 0.367E+03 | 0.347E+03 | 0.199E+02 | 0.557E+01 |

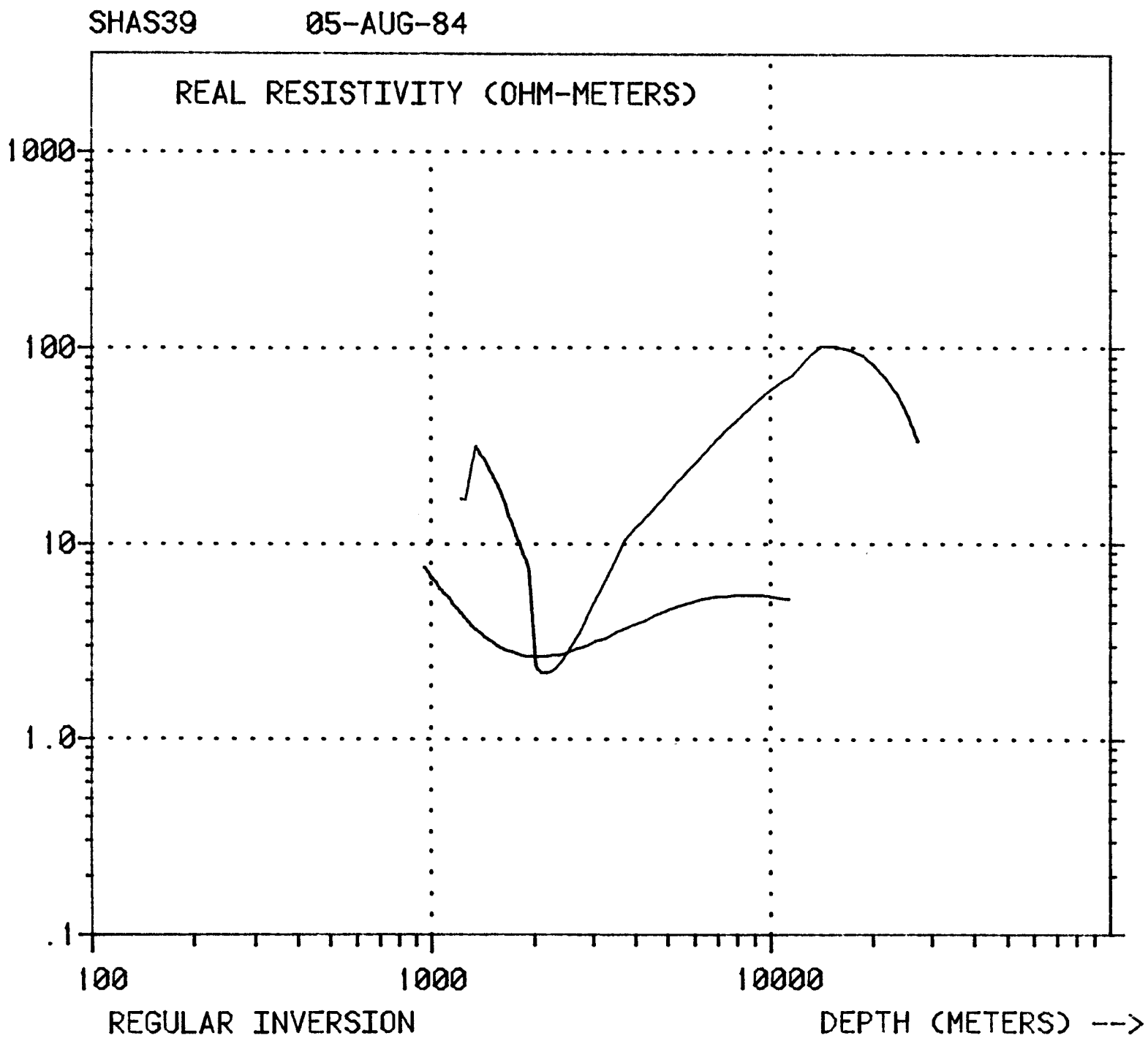
MEAN PERCENT ERROR = 0.1657E+02
MAXIMUM PERCENT ERROR = 0.3777E+02
MAX. ERROR OCCURED AT OBSERVATION 15

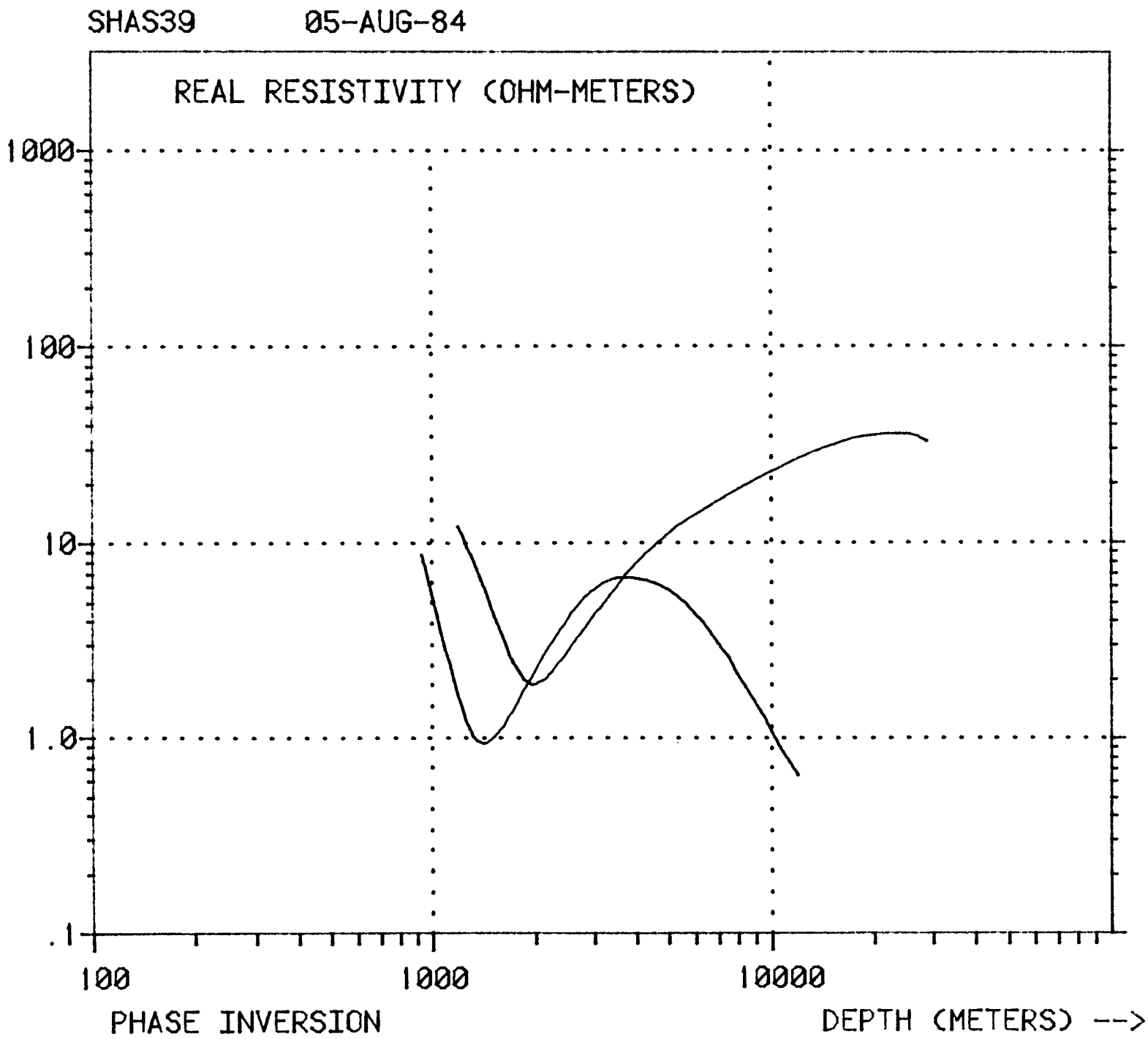

3.0
2.5
2.0
1.5
1.0
0.5
p (log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS39 05-AUG-84
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

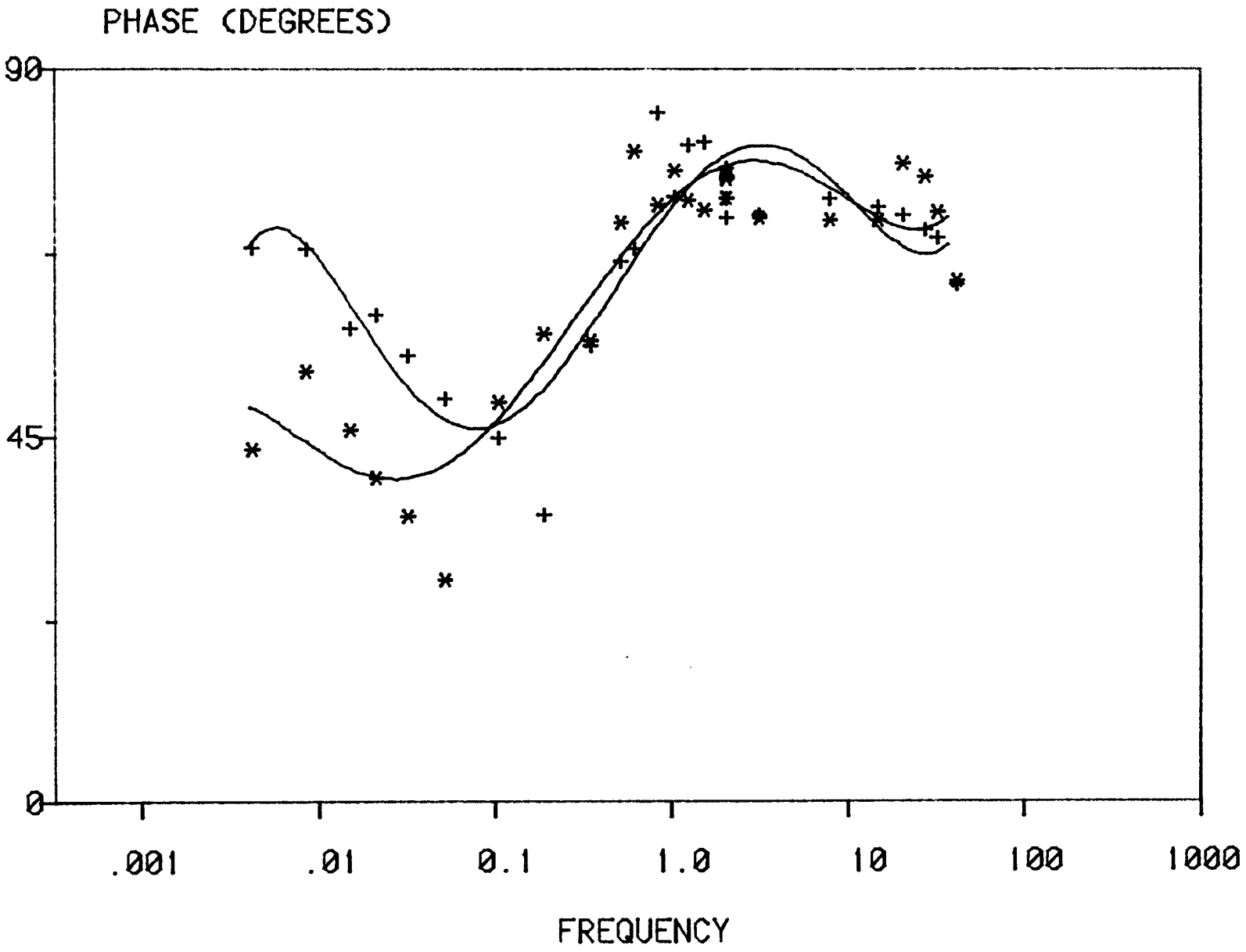



| | | | | |
|---|---|---|---|---|
| Resistivity | 147.87 | 7.74 | 5.47 | 0.88 |
| Thickness | | 939.12 | 5509.23 | 23237.32 |
| Depth | 0.00 | 939.12 | 6448.36 | 29685.68 |


SHAS39 05-AUG-84
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS39
05-AUG-84
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS39 05-AUG-84



THE SITE IS: SHAS39 200 HZ 05-AUG-84

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 14.44 | 40.61 | 1 | 20.08 | 46.84 |
| 0.0020 | 8.72 | 6.16 | 2 | 17.81 | 20.22 |
| 0.0040 | 8.78 | 34.12 | 3 | 7.73 | 8.63 |
| 0.0080 | 6.34 | 36.19 | 4 | 1.55 | 1.46 |
| 0.0143 | 8.01 | 41.68 | 5 | 0.77 | 0.35 |
| 0.0200 | 9.17 | 41.04 | 6 | 1.12 | 0.12 |
| 0.0303 | 10.94 | 30.98 | 7 | 1.62 | 0.06 |
| 0.0500 | 11.07 | 28.78 | 8 | 0.32 | 0.01 |
| 0.1000 | 10.90 | 20.90 | 9 | 0.12 | 0.02 |
| 0.1818 | 10.57 | 16.56 | 10 | 0.08 | 0.02 |
| 0.3333 | 15.16 | 13.15 | 11 | 0.10 | 0.00 |
| 0.5000 | 13.57 | 17.98 | 12 | 0.03 | 0.00 |
| 0.5988 | 12.19 | 28.42 | 13 | 0.41 | 0.01 |
| 0.8000 | 24.67 | 31.79 | 14 | 0.56 | 0.03 |
| 1.0000 | 19.48 | 30.43 | 15 | 0.03 | 0.00 |
| 1.0000 | 28.46 | 39.44 | 16 | 0.40 | 0.00 |
| 1.2048 | 26.99 | 44.23 | 17 | 0.67 | 0.03 |
| 1.4925 | 37.31 | 50.57 | 18 | 1.58 | 0.00 |
| 2.0000 | 36.76 | 58.83 | 19 | 0.42 | 0.02 |
| 2.0000 | 31.32 | 41.22 | 20 | 0.02 | 0.00 |
| 2.0000 | 37.95 | 81.15 | 21 | 0.46 | 0.01 |
| 3.0303 | 42.45 | 52.40 | 22 | 0.01 | 0.00 |
| 3.0303 | 35.11 | 74.25 | 23 | 0.15 | 0.00 |
| 7.6923 | 76.97 | 118.60 | 24 | 0.27 | 0.00 |
| 14.2857 | 94.67 | 147.64 | 25 | 0.17 | 0.00 |
| 20.0000 | 107.29 | 174.96 | 26 | 0.25 | 0.00 |
| 26.3158 | 133.14 | 221.26 | 27 | 0.04 | 0.00 |
| 31.2500 | 165.87 | 294.29 | 28 | 0.01 | 0.00 |
| 40.0000 | 200.20 | 329.25 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS39 200 HZ 05-AUG-84
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.379E+02 | 0.122E+02 | 36. | 32. | 40. | 0.2501 | 0.7978 | 0.8196 | 0.08 |
| H | SEC | 0.433E+02 | 0.166E+02 | 6. | 12. | 40. | 0.0000 | 0.5380 | 54.70 | 0.92 |
| E | 500.0 | 0.795E+01 | 0.784E+01 | 25. | 57. | 40. | 0.1488 | 0.0981 | 0.0441 | 0.60 |
| H | SEC | 0.438E+01 | 0.960E+01 | 54. | 47. | 40. | 0.1402 | 0.2156 | 122.40 | 1.38 |
| E | 250.0 | 0.293E+02 | 0.105E+02 | 57. | 63. | 40. | 0.2168 | 0.0919 | 0.1107 | 0.17 |
| H | SEC | 0.389E+02 | 0.705E+01 | 31. | 74. | 40. | 0.2724 | 0.2183 | 113.60 | 0.48 |
| E | 125.0 | 0.392E+02 | 0.697E+01 | 52. | 69. | 40. | 0.0703 | 0.0425 | 0.1458 | 0.03 |
| H | SEC | 0.332E+02 | 0.571E+01 | 55. | 68. | 40. | 0.1020 | 0.0493 | 36.70 | 0.07 |
| E | 70.0 | 0.425E+02 | 0.827E+01 | 45. | 58. | 40. | 0.0534 | 0.0334 | 0.1133 | 0.08 |
| H | SEC | 0.408E+02 | 0.776E+01 | 47. | 59. | 40. | 0.0296 | 0.0000 | 6.80 | 0.08 |
| E | 50.0 | 0.411E+02 | 0.948E+01 | 41. | 60. | 40. | 0.0355 | 0.0109 | 0.0786 | 0.10 |
| H | SEC | 0.409E+02 | 0.887E+01 | 39. | 60. | 40. | 0.0435 | 0.0415 | 127.80 | 0.08 |
| E | 33.0 | 0.320E+02 | 0.112E+02 | 34. | 56. | 40. | 0.0331 | 0.0825 | 0.0440 | 0.09 |
| H | SEC | 0.300E+02 | 0.107E+02 | 37. | 55. | 40. | 0.1093 | 0.0741 | 121.20 | 0.10 |
| E | 20.0 | 0.315E+02 | 0.117E+02 | 27. | 50. | 40. | 0.0261 | 0.0364 | 0.0345 | 0.09 |
| H | SEC | 0.260E+02 | 0.104E+02 | 29. | 50. | 40. | 0.0580 | 0.0475 | 128.70 | 0.07 |

AVERAGE # 8
SHAS39 200 HZ 05-AUG-84
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.244E+02 | 0.139E+02 | 50. | 45. | 83. | 0.1782 | 0.0263 | 0.0133 | 0.17 |
| H | SEC | 0.174E+02 | 0.789E+01 | 49. | 45. | 83. | 0.1053 | 0.0423 | 154.00 | 0.24 |
| E | 5.5 | 0.197E+02 | 0.144E+02 | 56. | 33. | 83. | 0.1177 | 0.0408 | 0.0050 | 0.16 |
| H | SEC | 0.134E+02 | 0.672E+01 | 59. | 38. | 83. | 0.1746 | 0.0204 | 153.10 | 0.16 |
| E | 3.0 | 0.150E+02 | 0.223E+02 | 56. | 56. | 83. | 0.2810 | 0.0403 | 0.0023 | 0.12 |
| H | SEC | 0.113E+02 | 0.801E+01 | 58. | 57. | 83. | 0.2969 | 0.0613 | 164.90 | 0.07 |
| E | 2.0 | 0.220E+02 | 0.173E+02 | 72. | 65. | 83. | 0.2397 | 0.0356 | 0.0016 | 0.01 |
| H | SEC | 0.139E+02 | 0.979E+01 | 71. | 69. | 83. | 0.3039 | 0.0221 | 152.60 | 0.01 |
| E | 1.7 | 0.310E+02 | 0.146E+02 | 79. | 67. | 83. | 0.4674 | 0.0750 | 0.0073 | 0.07 |
| H | SEC | 0.258E+02 | 0.980E+01 | 82. | 70. | 83. | 0.4568 | 0.1965 | 13.60 | 0.06 |
| E | 1.2 | 0.351E+02 | 0.328E+02 | 73. | 86. | 83. | 0.0000 | 0.1925 | 0.0507 | 0.11 |
| H | SEC | 0.285E+02 | 0.165E+02 | 74. | 84. | 83. | 1.0319 | 0.1249 | 25.40 | 0.10 |
| E | 1.0 | 0.341E+02 | 0.220E+02 | 78. | 71. | 83. | 0.3053 | 0.0492 | 0.0011 | 0.02 |
| H | HZ | 0.267E+02 | 0.170E+02 | 79. | 72. | 83. | 0.3549 | 0.0523 | 6.20 | 0.01 |

AVERAGE # 8
SHAS39 200 HZ 05-AUG-84
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.480E+02 | 0.365E+02 | 79. | 74. | 83. | 0.0000 | 0.1611 | 0.0036 | 0.07 |
| H | HZ | 0.309E+02 | 0.204E+02 | 77. | 76. | 83. | 1.0778 | 0.0667 | 89.40 | 0.06 |
| E | 1.2 | 0.514E+02 | 0.333E+02 | 72. | 80. | 83. | 1.0695 | 0.2660 | 0.0159 | 0.05 |
| H | HZ | 0.370E+02 | 0.207E+02 | 77. | 82. | 83. | 2.5629 | 0.6228 | 23.10 | 0.04 |
| E | 1.5 | 0.565E+02 | 0.446E+02 | 72. | 81. | 83. | 0.0000 | 0.9600 | 0.0058 | 0.07 |
| H | HZ | 0.447E+02 | 0.301E+02 | 74. | 82. | 83. | 0.0000 | 0.6789 | 23.60 | 0.06 |
| E | 2.0 | 0.606E+02 | 0.410E+02 | 74. | 78. | 83. | 0.0000 | 0.2221 | 0.0052 | 0.06 |
| H | HZ | 0.571E+02 | 0.325E+02 | 75. | 79. | 83. | 2.3798 | 0.2900 | 25.30 | 0.04 |
| E | 2.0 | 0.435E+02 | 0.346E+02 | 77. | 74. | 83. | 0.1193 | 0.0469 | 0.0014 | 0.04 |
| H | HZ | 0.390E+02 | 0.281E+02 | 77. | 75. | 83. | 0.2654 | 0.1089 | 25.40 | 0.03 |
| E | 2.0 | 0.954E+02 | 0.436E+02 | 77. | 70. | 83. | 1.1645 | 0.4159 | 0.0025 | 0.16 |
| H | HZ | 0.669E+02 | 0.323E+02 | 78. | 74. | 83. | 0.7539 | 0.5781 | 63.00 | 0.04 |

AVERAGE # 8
SHAS39 200 HZ 05-AUG-84
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.537E+02 | 0.470E+02 | 74. | 75. | 83. | 0.1694 | 0.0631 | 0.0021 | 0.06 |
| H | HZ | 0.511E+02 | 0.379E+02 | 73. | 75. | 83. | 0.2772 | 0.1014 | 27.00 | 0.05 |
| E | 3.0 | 0.740E+02 | 0.384E+02 | 72. | 72. | 83. | 0.0650 | 0.0687 | 0.0068 | 0.04 |
| H | HZ | 0.745E+02 | 0.318E+02 | 72. | 73. | 83. | 0.0000 | 0.0930 | 0.00 | 0.01 |
| E | 7.7 | 0.121E+03 | 0.793E+02 | 73. | 75. | 83. | 0.0000 | 0.7818 | 0.0018 | 0.01 |
| H | HZ | 0.116E+03 | 0.746E+02 | 71. | 74. | 83. | 2.6092 | 0.3725 | 0.00 | 0.01 |
| E | 14.3 | 0.164E+03 | 0.104E+03 | 73. | 73. | 83. | 2.4744 | 0.3856 | 0.0199 | 0.01 |
| H | HZ | 0.131E+03 | 0.849E+02 | 71. | 74. | 83. | 1.8974 | 0.9330 | 0.00 | 0.04 |
| E | 20.0 | 0.210E+03 | 0.124E+03 | 75. | 70. | 83. | 0.0000 | 2.6047 | 0.0488 | 0.03 |
| H | HZ | 0.140E+03 | 0.910E+02 | 83. | 75. | 83. | 2.3520 | 0.9896 | 0.00 | 0.03 |
| E | 26.3 | 0.261E+03 | 0.152E+03 | 72. | 69. | 83. | 2.4455 | 2.4403 | 0.0280 | 0.01 |
| H | HZ | 0.182E+03 | 0.114E+03 | 83. | 73. | 83. | 1.8684 | 1.8536 | 0.00 | 0.05 |
| E | 31.2 | 0.309E+03 | 0.186E+03 | 70. | 68. | 83. | 1.1105 | 2.6534 | 0.0233 | 0.00 |
| H | HZ | 0.280E+03 | 0.146E+03 | 76. | 71. | 83. | 0.9244 | 1.8157 | 45.00 | 0.03 |
| E | 40.0 | 0.331E+03 | 0.208E+03 | 65. | 63. | 83. | 0.0475 | 1.3370 | 0.0890 | 0.01 |
| H | HZ | 0.328E+03 | 0.193E+03 | 64. | 65. | 83. | 0.5164 | 0.3451 | 36.80 | 0.03 |

SHAS39 200 HZ 05-AUG-84

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 24
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1000E+03 | | 0.0000E+00 |
| | | 0.1000E+04 | |
| 2 | 0.1000E+01 | | 0.1000E+04 |
| | | 0.2000E+04 | |
| 3 | 0.8000E+00 | | 0.3000E+04 |
| | | 0.1000E+05 | |
| 4 | 0.1000E+01 | | 0.1300E+05 |

FREQUENCY RANGE ( 0.4000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1479E+03 | | 0.0000E+00 |
| | | 0.9391E+03 | |
| 2 | 0.7743E+01 | | 0.9391E+03 |
| | | 0.5509E+04 | |
| 3 | 0.5479E+01 | | 0.6448E+04 |
| | | 0.2324E+05 | |
| 4 | 0.8813E+00 | | 0.2969E+05 |

MEAN PERCENT VARIATION IS 0.1458E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 23 | 0.671E+05 | 0.292E+04 | 0.261E+00 |
| MODEL | 6 | 0.671E+05 | 0.112E+05 | 0.373E+06 |
| RESID | 17 | 0.510E+00 | 0.300E-01 | |

STANDARD ERROR = 0.173E+00

DTEST FOR MEANS = 0.143E-04

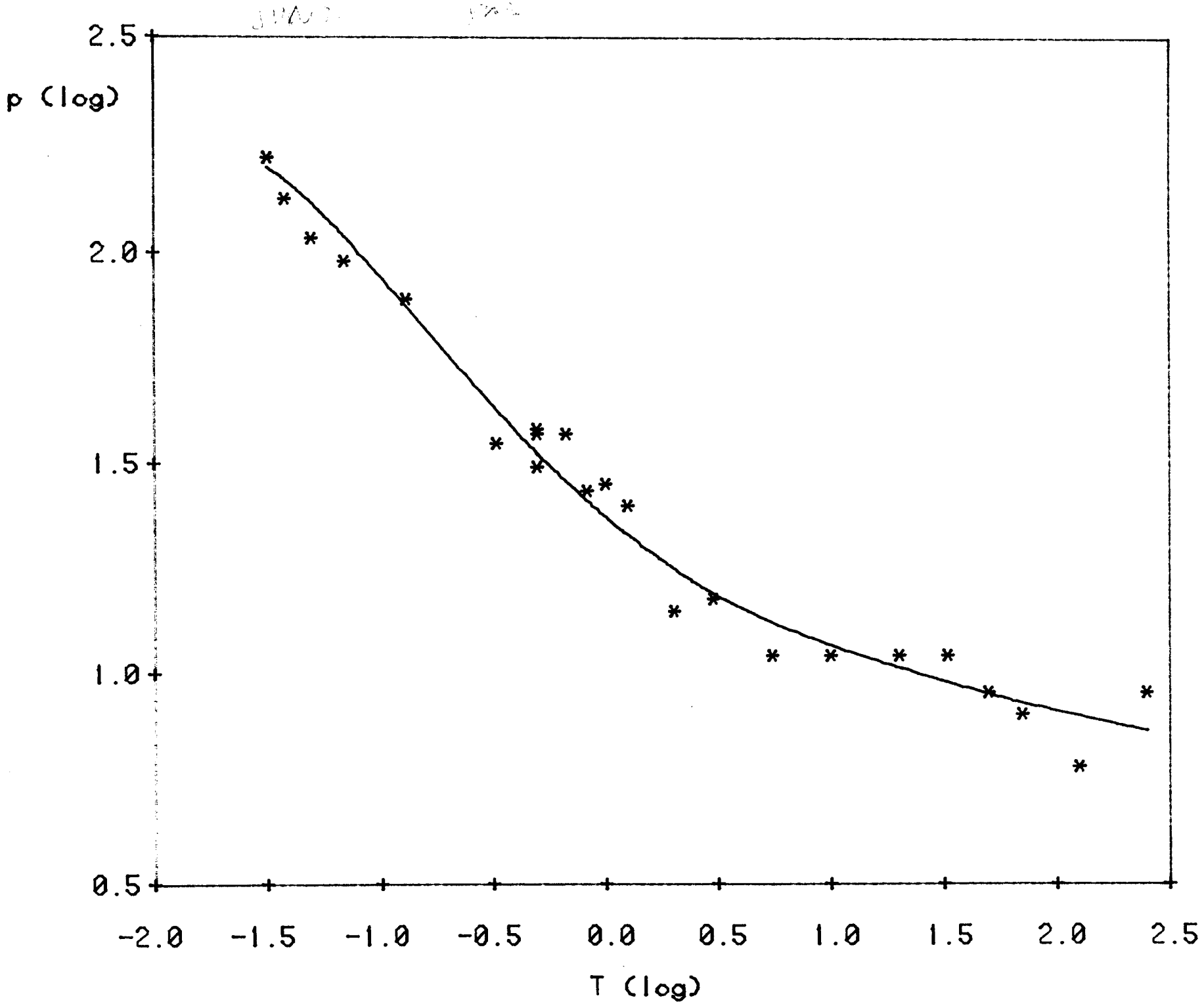
NOISE TO SIGNAL RATIO = 0.164E+00 PERCENT

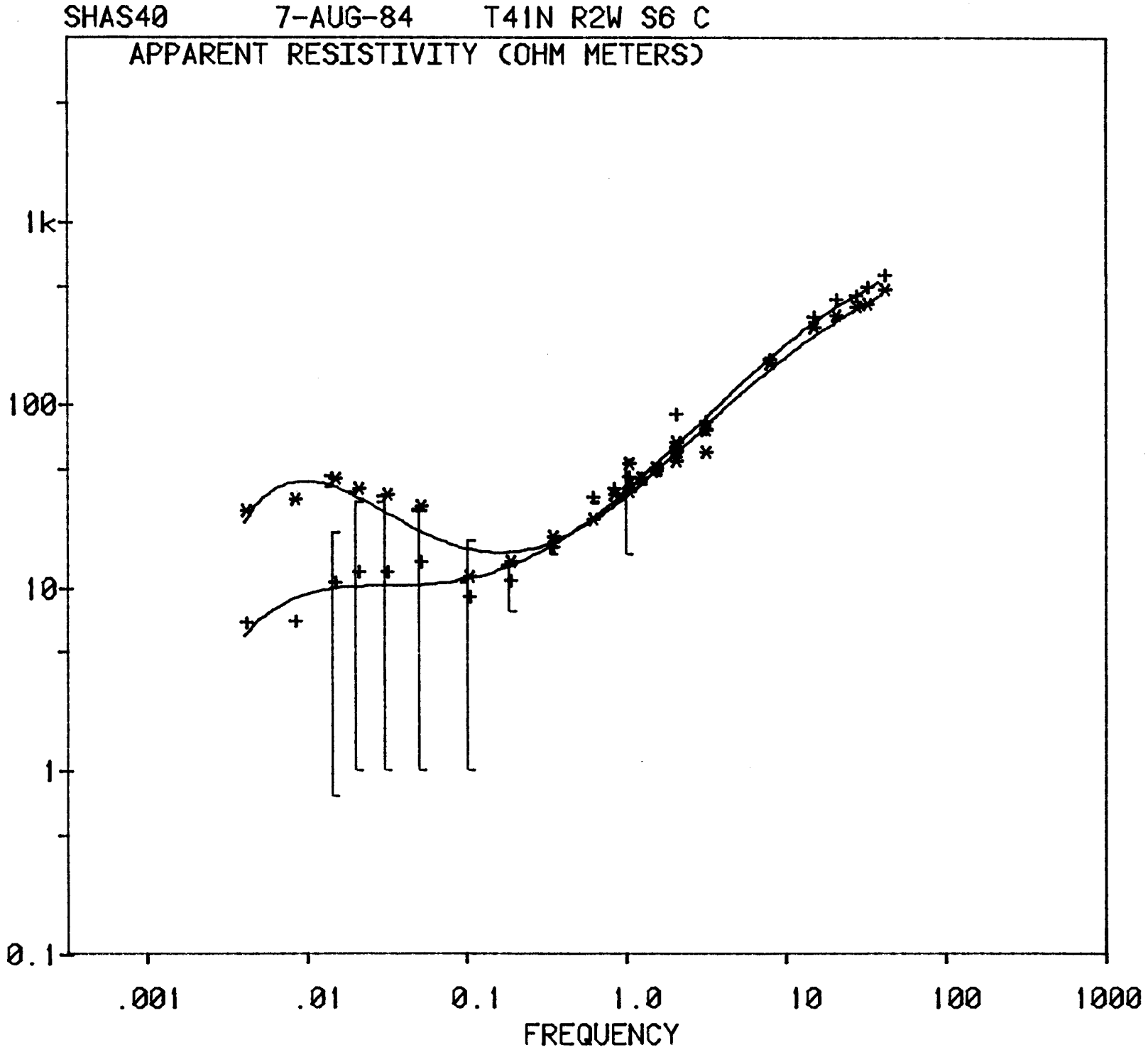
SHAS39 200 HZ 05-AUG-84

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.250E+03 | 0.900E+01 | 0.766E+01 | 0.134E+01 | 0.160E+02 |
| 2 | 0.125E+03 | 0.600E+01 | 0.780E+01 | -0.180E+01 | -0.261E+02 |
| 3 | 0.700E+02 | 0.800E+01 | 0.840E+01 | -0.405E+00 | -0.493E+01 |
| 4 | 0.500E+02 | 0.900E+01 | 0.891E+01 | 0.897E-01 | 0.100E+01 |
| 5 | 0.330E+02 | 0.110E+02 | 0.958E+01 | 0.142E+01 | 0.138E+02 |
| 6 | 0.200E+02 | 0.110E+02 | 0.104E+02 | 0.579E+00 | 0.540E+01 |
| 7 | 0.100E+02 | 0.110E+02 | 0.117E+02 | -0.709E+00 | -0.625E+01 |
| 8 | 0.550E+01 | 0.110E+02 | 0.132E+02 | -0.216E+01 | -0.179E+02 |
| 9 | 0.300E+01 | 0.150E+02 | 0.154E+02 | -0.444E+00 | -0.292E+01 |
| 10 | 0.200E+01 | 0.140E+02 | 0.177E+02 | -0.370E+01 | -0.234E+02 |
| 11 | 0.125E+01 | 0.250E+02 | 0.213E+02 | 0.368E+01 | 0.159E+02 |
| 12 | 0.100E+01 | 0.280E+02 | 0.235E+02 | 0.448E+01 | 0.174E+02 |
| 13 | 0.830E+00 | 0.270E+02 | 0.256E+02 | 0.135E+01 | 0.513E+01 |
| 14 | 0.670E+00 | 0.370E+02 | 0.285E+02 | 0.850E+01 | 0.260E+02 |
| 15 | 0.500E+00 | 0.370E+02 | 0.332E+02 | 0.378E+01 | 0.108E+02 |
| 16 | 0.500E+00 | 0.310E+02 | 0.332E+02 | -0.222E+01 | -0.691E+01 |
| 17 | 0.500E+00 | 0.380E+02 | 0.332E+02 | 0.478E+01 | 0.134E+02 |
| 18 | 0.330E+00 | 0.350E+02 | 0.420E+02 | -0.699E+01 | -0.182E+02 |
| 19 | 0.130E+00 | 0.770E+02 | 0.746E+02 | 0.243E+01 | 0.320E+01 |
| 20 | 0.700E-01 | 0.950E+02 | 0.109E+03 | -0.140E+02 | -0.137E+02 |
| 21 | 0.500E-01 | 0.107E+03 | 0.131E+03 | -0.238E+02 | -0.200E+02 |
| 22 | 0.380E-01 | 0.133E+03 | 0.148E+03 | -0.151E+02 | -0.108E+02 |
| 23 | 0.320E-01 | 0.166E+03 | 0.158E+03 | 0.830E+01 | 0.513E+01 |
| 24 | 0.250E-01 | 0.200E+03 | 0.168E+03 | 0.317E+02 | 0.172E+02 |

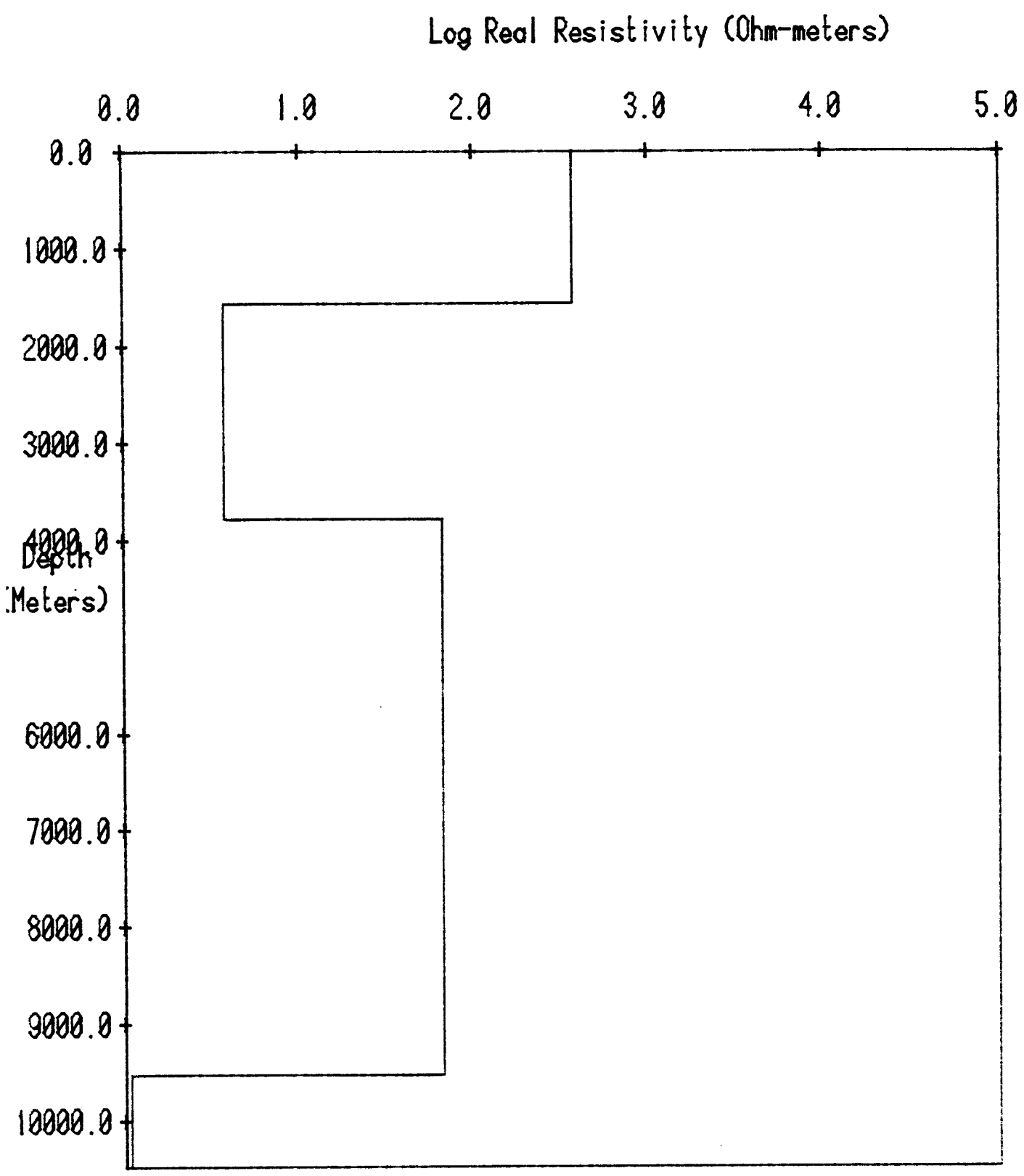
MEAN PERCENT ERROR = 0.1455E+02
MAXIMUM PERCENT ERROR = 0.2610E+02
MAX. ERROR OCCURED AT OBSERVATION 2


p (log)
2.5
2.0
1.5
1.0
0.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)

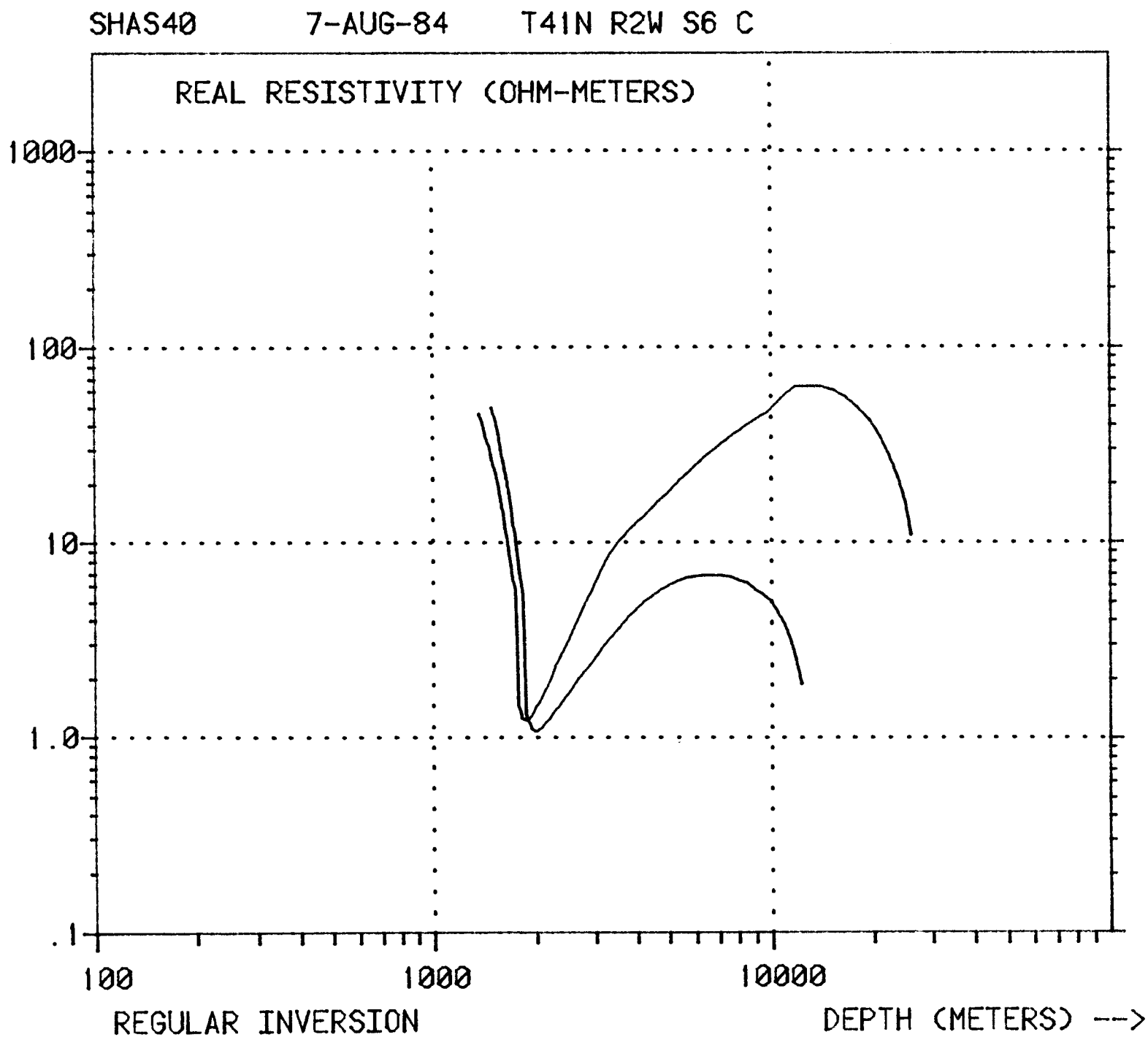

SHAS40 7-AUG-84 T41N R2W S6 C
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

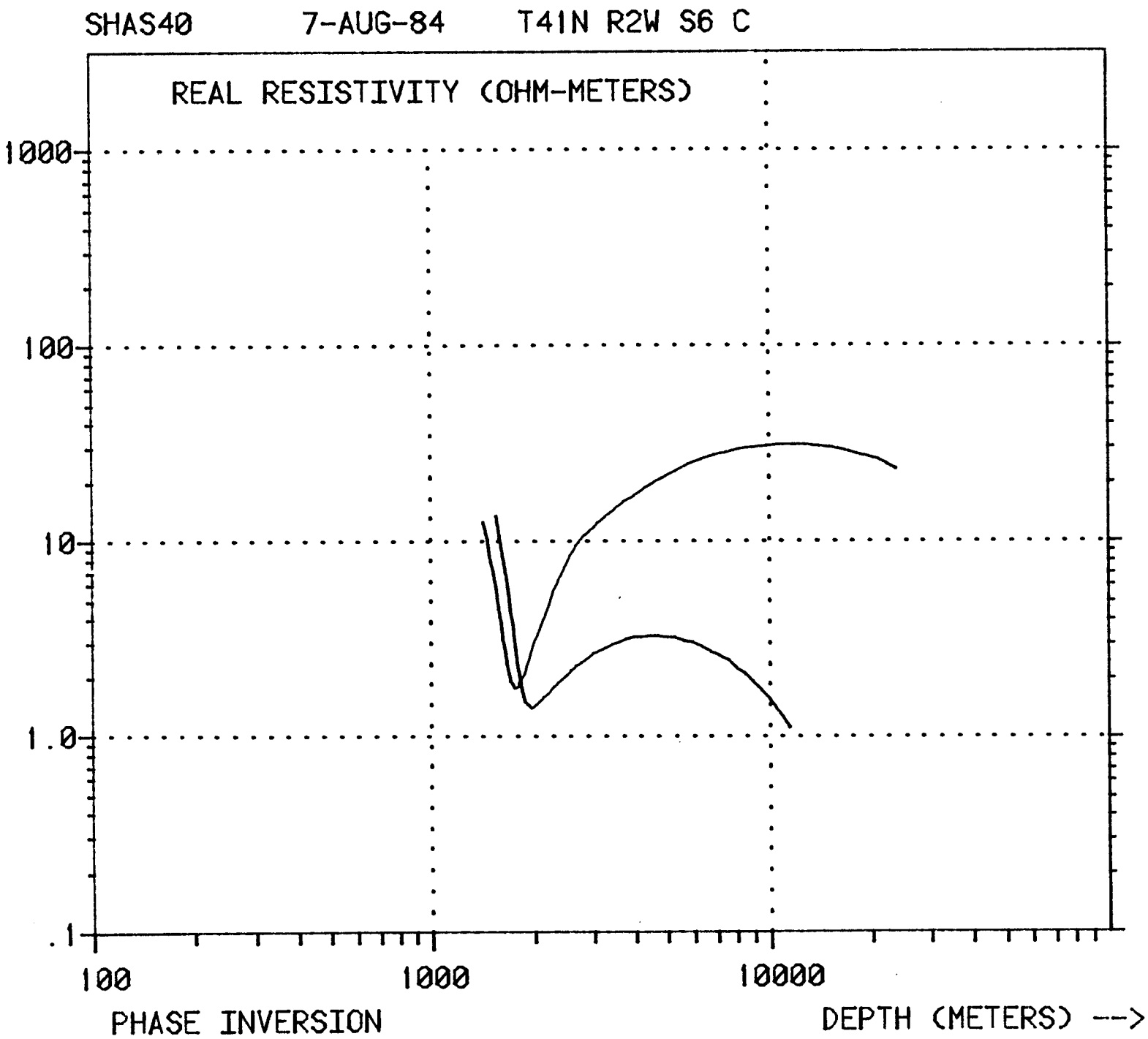
SHASTO

gmin

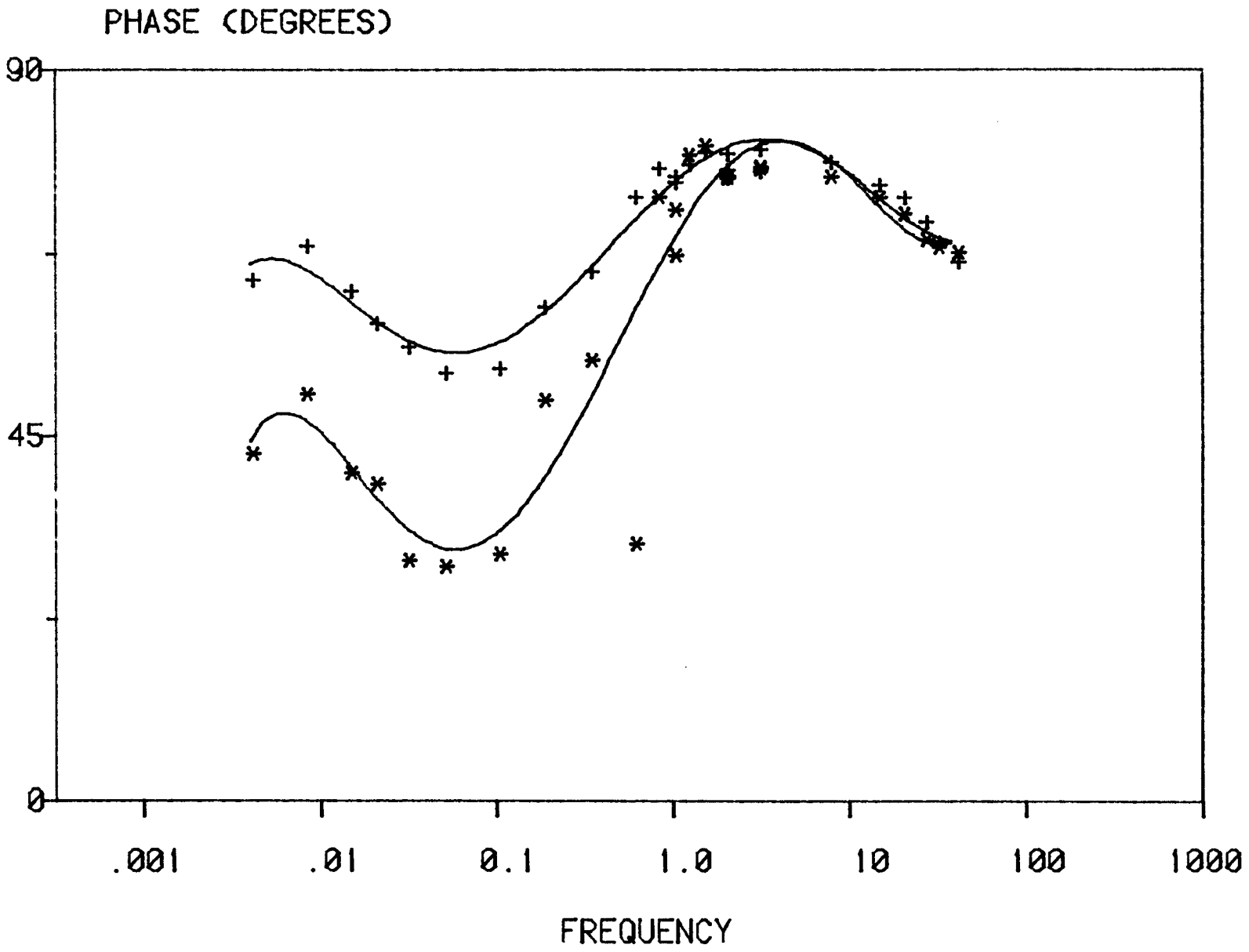



| | | | | |
|---|---|---|---|---|
| Resistivity | 0379.21 | 0003.80 | 0066.48 | 0001.08 |
| Thickness | | 1561.07 | 2224.65 | 5743.07 |
| Depth | 0000.00 | 1561.07 | 3785.73 | 9528.81 |


SHAS40 7-AUG-84 T41N R2W S6 C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS40 7-AUG-84 T41N R2W S6 C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS40 7-AUG-84 T41N R2W S6 C



THE SITE IS: SHAS40 200 HZ 7-AUG-84 T41N R2W S6 C

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.00 | 0.00 | 1 | 0.00 | 0.00 |
| 0.0020 | 0.00 | 0.00 | 2 | 0.00 | 0.00 |
| 0.0040 | 6.03 | 24.50 | 3 | 9.40 | 2.75 |
| 0.0080 | 6.15 | 28.46 | 4 | 17.30 | 0.43 |
| 0.0143 | 10.11 | 37.13 | 5 | 20.26 | 1.16 |
| 0.0200 | 11.42 | 32.66 | 6 | 13.07 | 0.38 |
| 0.0303 | 11.39 | 29.87 | 7 | 9.57 | 0.25 |
| 0.0500 | 12.95 | 26.11 | 8 | 2.93 | 0.05 |
| 0.1000 | 8.42 | 10.78 | 9 | 0.68 | 0.03 |
| 0.1818 | 10.24 | 13.01 | 10 | 0.30 | 0.03 |
| 0.3333 | 15.59 | 17.73 | 11 | 0.24 | 0.00 |
| 0.5000 | 0.00 | 0.00 | 12 | 17.30 | 0.43 |
| 0.5988 | 28.84 | 22.23 | 13 | 0.70 | 0.06 |
| 0.8000 | 32.20 | 29.99 | 14 | 0.86 | 0.01 |
| 1.0000 | 32.22 | 31.12 | 15 | 0.10 | 0.00 |
| 1.0000 | 37.56 | 44.07 | 16 | 1.38 | 0.02 |
| 1.2048 | 36.77 | 36.83 | 17 | 0.38 | 0.01 |
| 1.4925 | 40.58 | 41.54 | 18 | 0.17 | 0.00 |
| 2.0000 | 53.89 | 45.73 | 19 | 0.17 | 0.01 |
| 2.0000 | 50.88 | 51.68 | 20 | 0.03 | 0.00 |
| 2.0000 | 81.94 | 58.50 | 21 | 0.37 | 0.01 |
| 3.0303 | 74.60 | 67.69 | 22 | 0.03 | 0.00 |
| 3.0303 | 69.01 | 51.30 | 23 | 0.12 | 0.01 |
| 7.6923 | 163.83 | 156.76 | 24 | 0.74 | 0.00 |
| 14.2857 | 283.21 | 246.27 | 25 | 0.00 | 0.00 |
| 20.0000 | 347.80 | 286.32 | 26 | 0.00 | 0.00 |
| 26.3158 | 372.66 | 317.66 | 27 | 0.00 | 0.00 |
| 31.2500 | 414.28 | 332.12 | 28 | 0.00 | 0.00 |
| 40.0000 | 475.01 | 396.95 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SEAS40 200 HZ 7-AUG-84 T41N R2W S6 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 500.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 250.0 | 0.293E+02 | 0.699E+01 | 38. | 56. | 30. | 0.0016 | 0.0034 | 0.4914 | 0.12 |
| H | SEC | 0.197E+02 | 0.508E+01 | 48. | 74. | 30. | 0.0045 | 0.0064 | 78.30 | 0.16 |
| E | 125.0 | 0.303E+02 | 0.643E+01 | 50. | 69. | 30. | 0.0016 | 0.0053 | 0.1167 | 0.22 |
| H | SEC | 0.266E+02 | 0.587E+01 | 51. | 69. | 30. | 0.0020 | 0.0085 | 108.40 | 0.24 |
| E | 70.0 | 0.435E+02 | 0.124E+02 | 43. | 62. | 30. | 0.0009 | 0.0047 | 0.1802 | 0.19 |
| H | SEC | 0.308E+02 | 0.782E+01 | 38. | 64. | 30. | 0.0029 | 0.0041 | 90.00 | 0.16 |
| E | 50.0 | 0.379E+02 | 0.136E+02 | 40. | 61. | 30. | 0.0008 | 0.0047 | 0.0919 | 0.22 |
| H | SEC | 0.274E+02 | 0.923E+01 | 39. | 57. | 30. | 0.0033 | 0.0018 | 108.40 | 0.15 |
| E | 33.0 | 0.360E+02 | 0.138E+02 | 29. | 57. | 30. | 0.0002 | 0.0046 | 0.0682 | 0.18 |
| H | SEC | 0.238E+02 | 0.902E+01 | 31. | 56. | 30. | 0.0047 | 0.0025 | 104.00 | 0.12 |
| E | 20.0 | 0.330E+02 | 0.155E+02 | 27. | 52. | 30. | 0.0027 | 0.0008 | 0.0336 | 0.34 |
| H | SEC | 0.192E+02 | 0.104E+02 | 32. | 54. | 30. | 0.0035 | 0.0014 | 140.30 | 0.27 |

AVERAGE # 8
SHAS40 200 HZ 7-AUG-84 T41N R2W S6 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.128E+02 | 0.868E+01 | 29. | 53. | 30. | 0.0041 | 0.0005 | 0.0415 | 0.13 |
| H | SEC | 0.875E+01 | 0.816E+01 | 33. | 54. | 30. | 0.0015 | 0.0002 | 30.20 | 0.13 |
| E | 5.5 | 0.144E+02 | 0.112E+02 | 46. | 61. | 30. | 0.0023 | 0.0010 | 0.0180 | 0.08 |
| H | SEC | 0.116E+02 | 0.926E+01 | 53. | 61. | 30. | 0.0009 | 0.0001 | 2.20 | 0.12 |
| E | 3.0 | 0.247E+02 | 0.161E+02 | 47. | 61. | 30. | 0.0057 | 0.0009 | 0.0092 | 0.12 |
| H | SEC | 0.108E+02 | 0.151E+02 | 62. | 70. | 30. | 0.0012 | 0.0003 | 156.50 | 0.09 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.7 | 0.307E+02 | 0.281E+02 | 39. | 73. | 30. | 0.0030 | 0.0029 | 0.0033 | 0.26 |
| H | SEC | 0.137E+02 | 0.296E+02 | 25. | 76. | 30. | 0.0036 | 0.0004 | 78.10 | 0.29 |
| E | 1.2 | 0.371E+02 | 0.386E+02 | 73. | 78. | 30. | 0.0069 | 0.0042 | 0.0042 | 0.08 |
| H | SEC | 0.229E+02 | 0.258E+02 | 77. | 79. | 30. | 0.0049 | 0.0026 | 84.10 | 0.07 |
| E | 1.0 | 0.376E+02 | 0.348E+02 | 71. | 76. | 30. | 0.0005 | 0.0012 | 0.0100 | 0.03 |
| H | HZ | 0.246E+02 | 0.296E+02 | 75. | 77. | 30. | 0.0013 | 0.0016 | 168.80 | 0.03 |

AVERAGE # 8
SHAS40 200 HZ 7-AUG-84 T41N R2W S6 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.532E+02 | 0.415E+02 | 71. | 79. | 30. | 0.0059 | 0.0034 | 0.0666 | 0.19 |
| H | HZ | 0.350E+02 | 0.336E+02 | 64. | 75. | 30. | 0.0121 | 0.0026 | 76.60 | 0.15 |
| E | 1.2 | 0.467E+02 | 0.429E+02 | 80. | 78. | 30. | 0.0120 | 0.0038 | 0.0076 | 0.02 |
| H | HZ | 0.270E+02 | 0.307E+02 | 80. | 79. | 30. | 0.0059 | 0.0042 | 81.20 | 0.03 |
| E | 1.5 | 0.494E+02 | 0.473E+02 | 82. | 79. | 30. | 0.0081 | 0.0029 | 0.0078 | 0.05 |
| H | HZ | 0.337E+02 | 0.338E+02 | 80. | 81. | 30. | 0.0045 | 0.0031 | 92.70 | 0.03 |
| E | 2.0 | 0.507E+02 | 0.613E+02 | 79. | 78. | 30. | 0.0014 | 0.0034 | 0.0063 | 0.06 |
| H | HZ | 0.408E+02 | 0.465E+02 | 75. | 82. | 30. | 0.0031 | 0.0044 | 141.30 | 0.11 |
| E | 2.0 | 0.563E+02 | 0.573E+02 | 78. | 77. | 30. | 0.0024 | 0.0015 | 0.0156 | 0.01 |
| H | HZ | 0.470E+02 | 0.444E+02 | 77. | 79. | 30. | 0.0006 | 0.0022 | 48.90 | 0.04 |
| E | 2.0 | 0.639E+02 | 0.923E+02 | 77. | 77. | 30. | 0.0075 | 0.0044 | 0.0562 | 0.09 |
| H | HZ | 0.531E+02 | 0.715E+02 | 78. | 77. | 30. | 0.0020 | 0.0062 | 0.00 | 0.12 |

AVERAGE # 8
SEAS40 200 HZ 7-AUG-84 T41N R2W S6 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.740E+02 | 0.799E+02 | 78. | 77. | 30. | 0.0016 | 0.0022 | 0.0184 | 0.02 |
| H | HZ | 0.613E+02 | 0.693E+02 | 79. | 79. | 30. | 0.0004 | 0.0015 | 22.90 | 0.07 |
| E | 3.0 | 0.593E+02 | 0.723E+02 | 78. | 79. | 30. | 0.0083 | 0.0054 | 0.0066 | 0.05 |
| H | HZ | 0.433E+02 | 0.657E+02 | 79. | 82. | 30. | 0.0034 | 0.0060 | 33.70 | 0.21 |
| E | 7.7 | 0.157E+03 | 0.173E+03 | 78. | 78. | 30. | 0.0161 | 0.0266 | 0.0755 | 0.06 |
| H | HZ | 0.157E+03 | 0.154E+03 | 77. | 80. | 30. | 0.0041 | 0.0327 | 0.00 | 0.08 |
| E | 14.3 | 0.256E+03 | 0.302E+03 | 74. | 76. | 30. | 0.0190 | 0.0978 | 0.0142 | 0.07 |
| H | HZ | 0.236E+03 | 0.264E+03 | 76. | 76. | 30. | 0.0075 | 0.0698 | 0.00 | 0.14 |
| E | 20.0 | 0.304E+03 | 0.383E+03 | 72. | 73. | 30. | 0.0198 | 0.0494 | 0.0210 | 0.07 |
| H | HZ | 0.268E+03 | 0.312E+03 | 74. | 76. | 30. | 0.0105 | 0.0470 | 0.00 | 0.16 |
| E | 26.3 | 0.353E+03 | 0.407E+03 | 69. | 70. | 30. | 0.0141 | 0.1227 | 0.0189 | 0.06 |
| H | HZ | 0.282E+03 | 0.338E+03 | 70. | 74. | 30. | 0.0154 | 0.1307 | 0.00 | 0.12 |
| E | 31.2 | 0.372E+03 | 0.444E+03 | 68. | 68. | 30. | 0.0083 | 0.0703 | 0.0320 | 0.04 |
| H | HZ | 0.293E+03 | 0.385E+03 | 69. | 70. | 30. | 0.0070 | 0.1001 | 59.60 | 0.04 |
| E | 40.0 | 0.391E+03 | 0.502E+03 | 65. | 67. | 30. | 0.0070 | 0.1065 | 0.2536 | 0.04 |
| H | HZ | 0.403E+03 | 0.448E+03 | 71. | 67. | 30. | 0.0031 | 0.1047 | 68.90 | 0.06 |

SHAS40 200 HZ 7-AUG-84 T41N R2W S6 C

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 26
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2000E+03 | | 0.0000E+00 |
| | | 0.1100E+04 | |
| 2 | 0.1000E+01 | | 0.1100E+04 |
| | | 0.2000E+04 | |
| 3 | 0.8000E+01 | | 0.3100E+04 |
| | | 0.1000E+05 | |
| 4 | 0.1000E+01 | | 0.1310E+05 |

FREQUENCY RANGE ( 0.4000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3792E+03 | | 0.0000E+00 |
| | | 0.1561E+04 | |
| 2 | 0.3805E+01 | | 0.1561E+04 |
| | | 0.2225E+04 | |
| 3 | 0.6649E+02 | | 0.3786E+04 |
| | | 0.5743E+04 | |
| 4 | 0.1087E+01 | | 0.9529E+04 |

MEAN PERCENT VARIATION IS 0.1276E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 25 | 0.517E+06 | 0.207E+05 | 0.240E+00 |
| MODEL | 6 | 0.517E+06 | 0.862E+05 | 0.387E+07 |
| RESID | 19 | 0.423E+00 | 0.223E-01 | |

STANDARD ERROR = 0.149E+00

DTEST FOR MEANS = 0.432E-05

NOISE TO SIGNAL RATIO = 0.508E-01 PERCENT

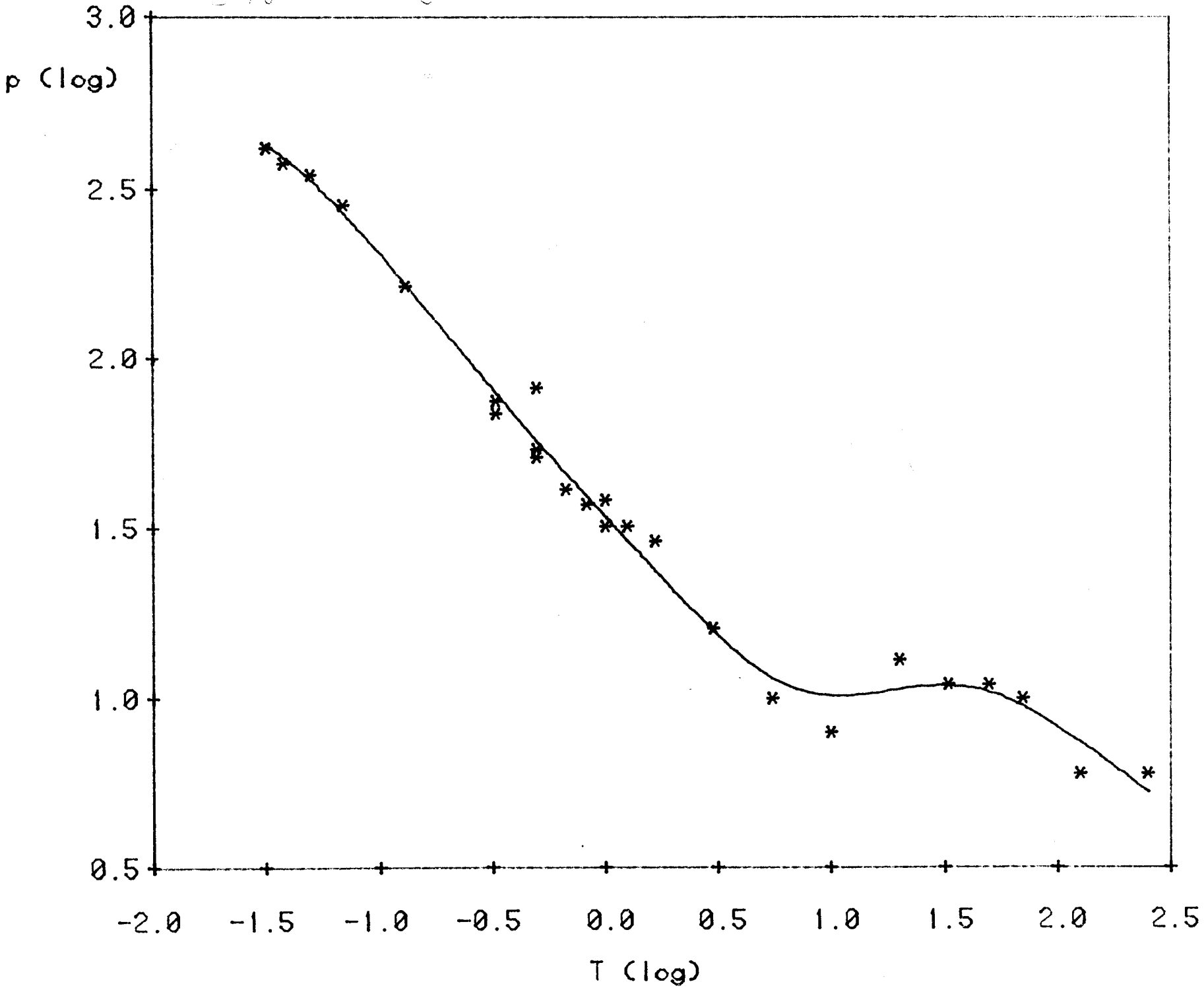
SHAS40 200 HZ 7-AUG-84 T41N R2W S6 C

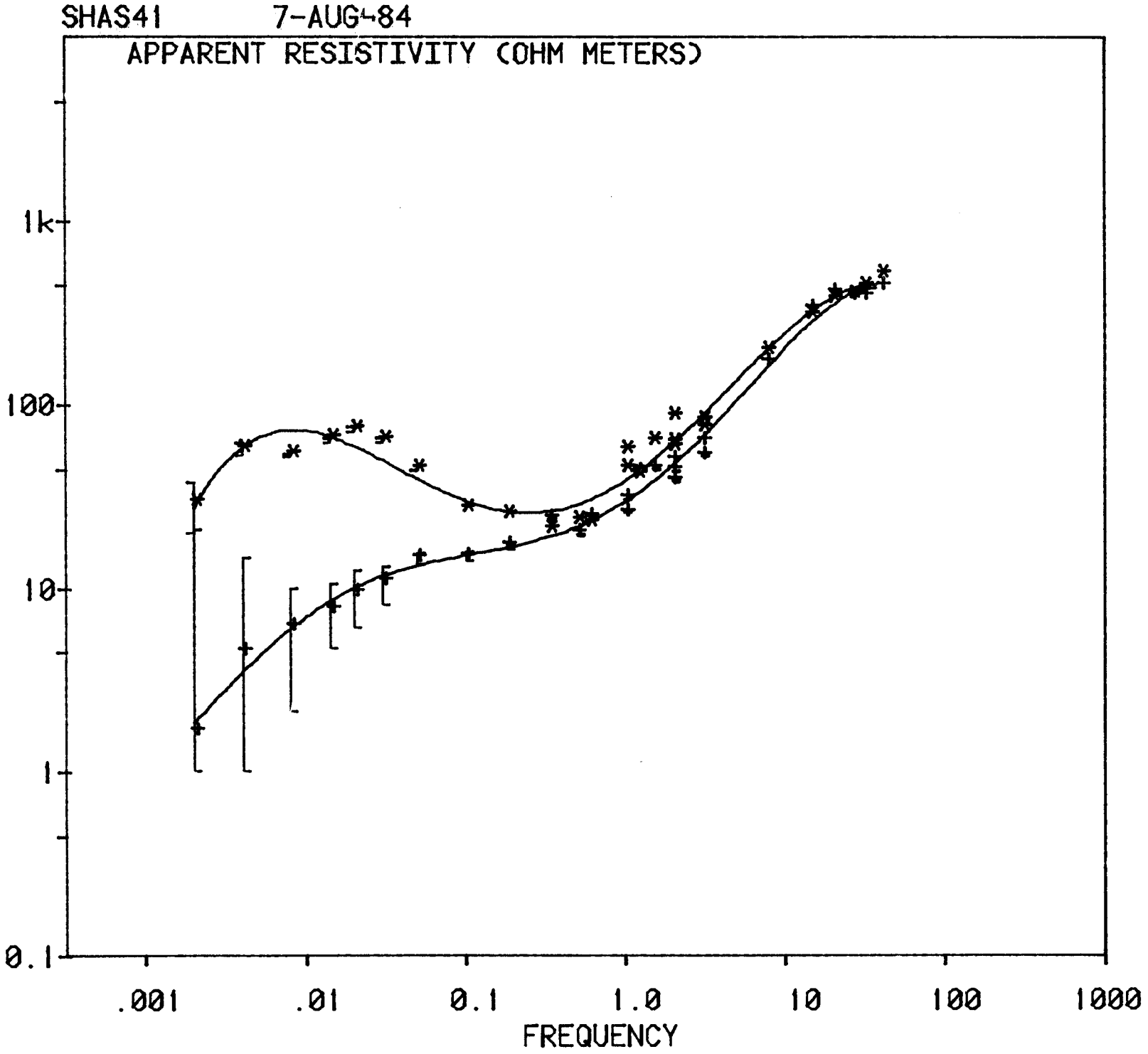
ERROR STRUCTURE OF FITTED MODEL

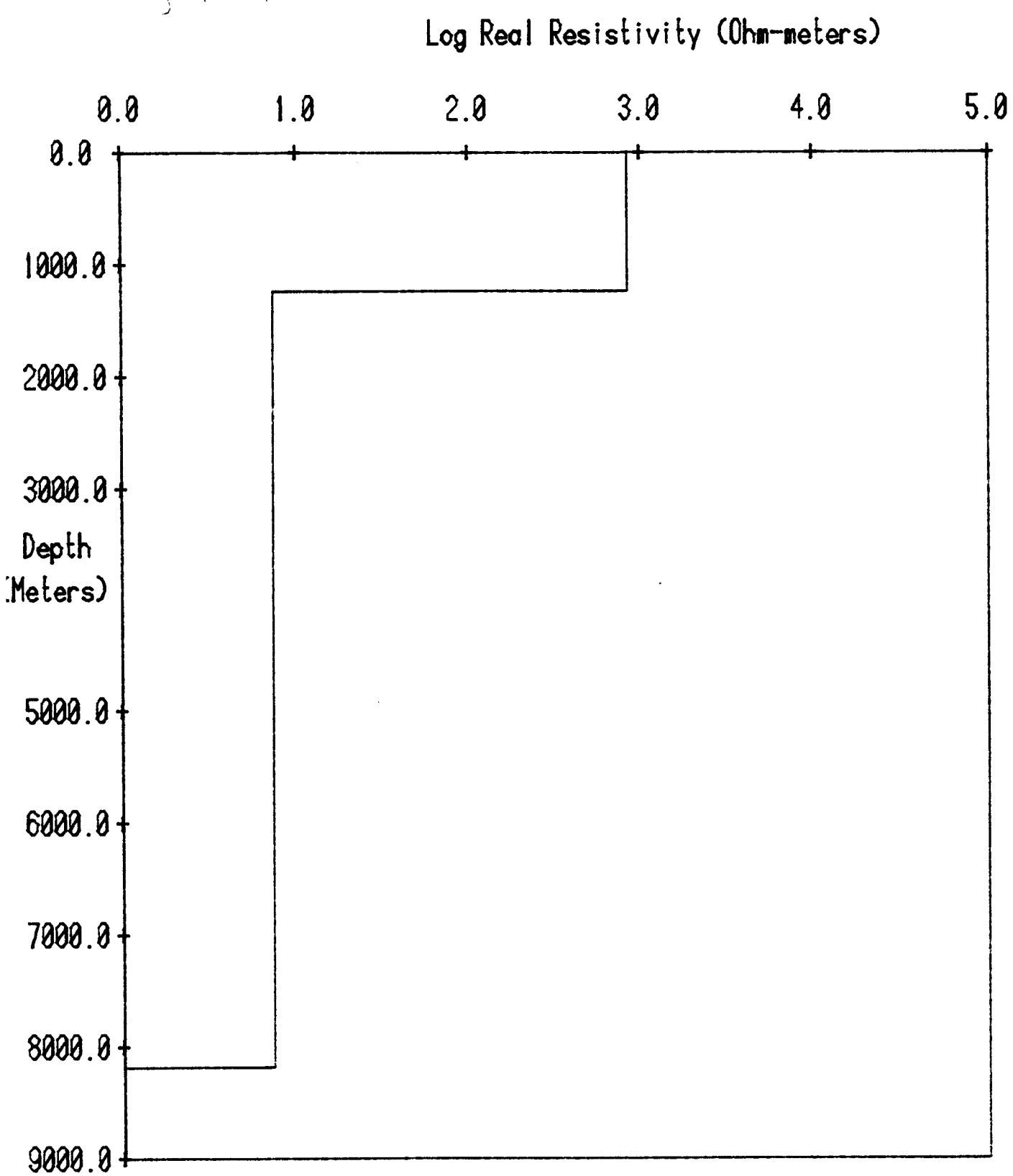
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.250E+03 | 0.600E+01 | 0.531E+01 | 0.689E+00 | 0.122E+02 |
| 2 | 0.125E+03 | 0.600E+01 | 0.755E+01 | -0.155E+01 | -0.229E+02 |
| 3 | 0.700E+02 | 0.100E+02 | 0.965E+01 | 0.346E+00 | 0.353E+01 |
| 4 | 0.500E+02 | 0.110E+02 | 0.106E+02 | 0.388E+00 | 0.359E+01 |
| 5 | 0.330E+02 | 0.110E+02 | 0.111E+02 | -0.131E+00 | -0.118E+01 |
| 6 | 0.200E+02 | 0.130E+02 | 0.107E+02 | 0.228E+01 | 0.192E+02 |
| 7 | 0.100E+02 | 0.800E+01 | 0.992E+01 | -0.192E+01 | -0.214E+02 |
| 8 | 0.550E+01 | 0.100E+02 | 0.111E+02 | -0.113E+01 | -0.107E+02 |
| 9 | 0.300E+01 | 0.160E+02 | 0.156E+02 | 0.430E+00 | 0.272E+01 |
| 10 | 0.167E+01 | 0.290E+02 | 0.237E+02 | 0.530E+01 | 0.201E+02 |
| 11 | 0.125E+01 | 0.320E+02 | 0.292E+02 | 0.275E+01 | 0.899E+01 |
| 12 | 0.100E+01 | 0.320E+02 | 0.343E+02 | -0.233E+01 | -0.703E+01 |
| 13 | 0.100E+01 | 0.380E+02 | 0.343E+02 | 0.367E+01 | 0.101E+02 |
| 14 | 0.830E+00 | 0.370E+02 | 0.393E+02 | -0.226E+01 | -0.592E+01 |
| 15 | 0.670E+00 | 0.410E+02 | 0.459E+02 | -0.490E+01 | -0.113E+02 |
| 16 | 0.500E+00 | 0.540E+02 | 0.572E+02 | -0.321E+01 | -0.577E+01 |
| 17 | 0.500E+00 | 0.510E+02 | 0.572E+02 | -0.621E+01 | -0.115E+02 |
| 18 | 0.500E+00 | 0.820E+02 | 0.572E+02 | 0.248E+02 | 0.356E+02 |
| 19 | 0.330E+00 | 0.750E+02 | 0.792E+02 | -0.423E+01 | -0.548E+01 |
| 20 | 0.330E+00 | 0.690E+02 | 0.792E+02 | -0.102E+02 | -0.138E+02 |
| 21 | 0.130E+00 | 0.164E+03 | 0.168E+03 | -0.441E+01 | -0.265E+01 |
| 22 | 0.700E-01 | 0.283E+03 | 0.271E+03 | 0.117E+02 | 0.424E+01 |
| 23 | 0.500E-01 | 0.348E+03 | 0.340E+03 | 0.844E+01 | 0.246E+01 |
| 24 | 0.380E-01 | 0.373E+03 | 0.394E+03 | -0.215E+02 | -0.560E+01 |
| 25 | 0.320E-01 | 0.414E+03 | 0.425E+03 | -0.105E+02 | -0.251E+01 |
| 26 | 0.250E-01 | 0.475E+03 | 0.457E+03 | 0.184E+02 | 0.395E+01 |

MEAN PERCENT ERROR = 0.1271E+02

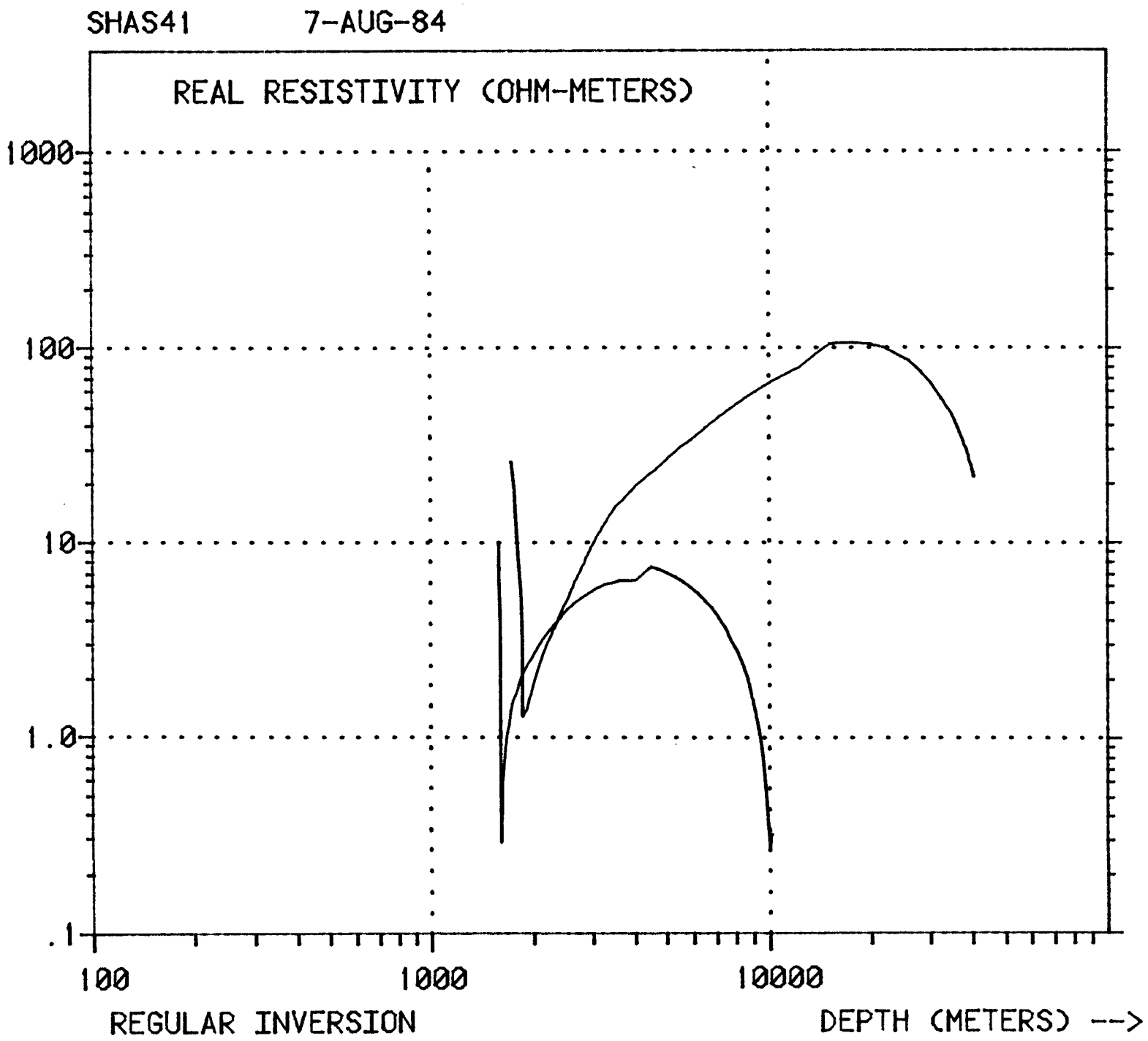
MAXIMUM PERCENT ERROR = 0.3562E+02
MAX. ERROR OCCURED AT OBSERVATION 18

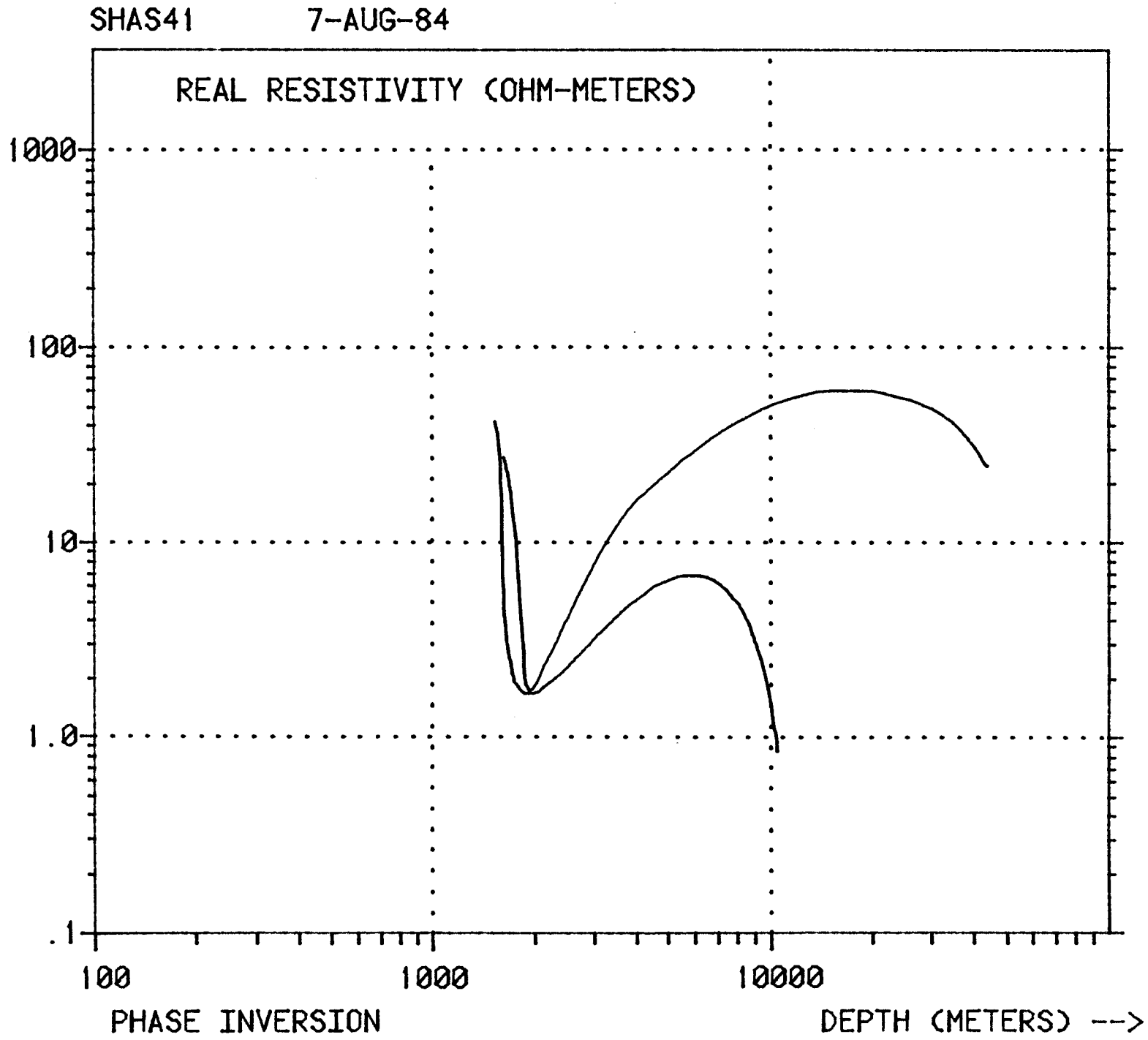

3.0
2.5
2.0
1.5
1.0
0.5
p (log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS41 7-AUG-84
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

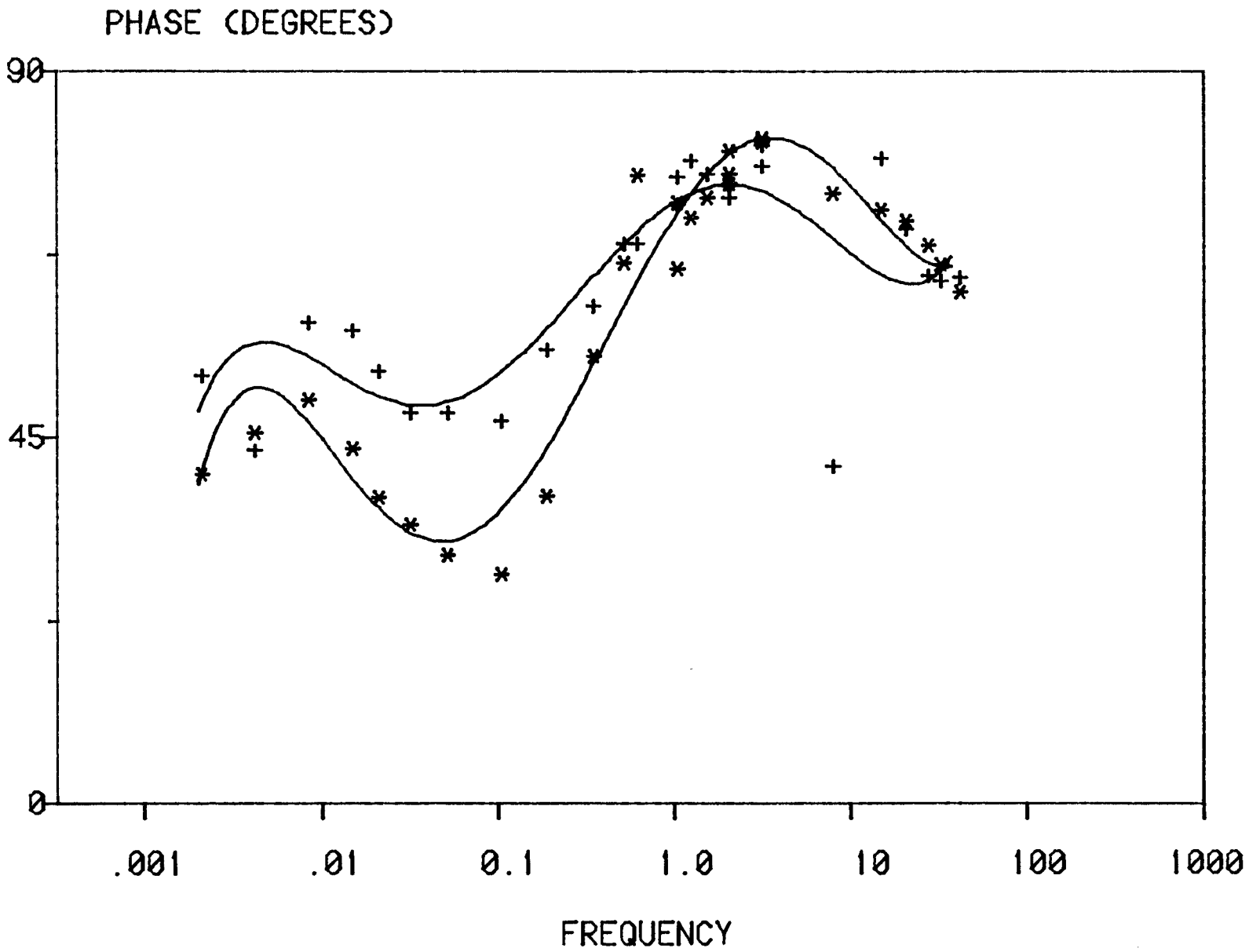



| | | | |
|---|---|---|---|
| Resistivity | 0841.75 | 0007.39 | 0000.44 |
| Thickness | | 1239.88 | 6953.96 |
| Depth | 0000.00 | 1239.88 | 8193.84 |


SHAS41 7-AUG-84
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS41
7-AUG-84
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS41 7-AUG-84



THE SITE IS: SHAS41 200 HZ 7-AUG-84

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 13.54 | 32.64 | 1 | 18.83 | 8.90 |
| 0.0020 | 1.61 | 28.67 | 2 | 9.95 | 4.31 |
| 0.0040 | 4.43 | 56.53 | 3 | 3.88 | 1.20 |
| 0.0080 | 5.98 | 51.85 | 4 | 2.83 | 1.73 |
| 0.0143 | 7.50 | 63.31 | 5 | 3.17 | 2.71 |
| 0.0200 | 9.15 | 71.77 | 6 | 2.45 | 1.56 |
| 0.0303 | 10.54 | 63.11 | 7 | 0.97 | 0.23 |
| 0.0500 | 14.27 | 43.12 | 8 | 0.83 | 0.05 |
| 0.1000 | 14.60 | 26.70 | 9 | 0.59 | 0.01 |
| 0.1818 | 16.74 | 24.57 | 10 | 0.37 | 0.01 |
| 0.3333 | 23.29 | 20.45 | 11 | 0.23 | 0.01 |
| 0.5000 | 19.23 | 23.01 | 12 | 0.17 | 0.00 |
| 0.5988 | 23.54 | 22.10 | 13 | 0.13 | 0.01 |
| 0.8000 | 41.73 | 28.02 | 14 | 0.06 | 0.01 |
| 1.0000 | 29.91 | 54.73 | 15 | 0.09 | 0.00 |
| 1.0000 | 25.26 | 43.03 | 16 | 0.51 | 0.02 |
| 1.2048 | 41.56 | 40.27 | 17 | 0.65 | 0.01 |
| 1.4925 | 43.34 | 61.40 | 18 | 0.29 | 0.02 |
| 2.0000 | 37.65 | 56.99 | 19 | 0.10 | 0.01 |
| 2.0000 | 42.38 | 60.45 | 20 | 0.02 | 0.00 |
| 2.0000 | 48.81 | 83.42 | 21 | 0.24 | 0.01 |
| 3.0303 | 61.44 | 72.71 | 22 | 0.02 | 0.00 |
| 3.0303 | 51.37 | 78.72 | 23 | 0.03 | 0.00 |
| 7.6923 | 164.15 | 192.70 | 24 | 0.41 | 0.00 |
| 14.2857 | 324.64 | 298.86 | 25 | 0.56 | 0.00 |
| 20.0000 | 395.73 | 364.12 | 26 | 0.19 | 0.00 |
| 26.3158 | 374.98 | 380.29 | 27 | 0.00 | 0.00 |
| 31.2500 | 375.16 | 425.70 | 28 | 0.02 | 0.00 |
| 40.0000 | 424.23 | 498.24 | 29 | 0.00 | 0.00 |

AVERAGE #  3
SHAS41  200 HZ  7-AUG-84
NSAMP = 1024  SI = 0.0050  TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.468E+02 | 0.777E+01 | 52. | 19. | 25. | 0.0009 | 0.0016 | 1.6014 | 0.10 |
| H | SEC | 0.468E+02 | 0.778E+01 | 52. | 17. | 25. | 0.0005 | 0.0006 | 121.10 | 0.11 |
| E | 500.0 | 0.296E+02 | 0.175E+01 | 41. | 50. | 53. | 0.0024 | 0.0050 | 0.4965 | 0.33 |
| H | SEC | 0.280E+02 | 0.143E+01 | 41. | 55. | 52. | 0.0003 | 0.0007 | 136.00 | 0.32 |
| E | 250.0 | 0.609E+02 | 0.653E+01 | 46. | 87. | 59. | 0.0023 | 0.0026 | 0.4238 | 0.44 |
| H | SEC | 0.528E+02 | 0.223E+01 | 46. | 1. | 53. | 0.0002 | 0.0007 | 34.30 | 0.43 |
| E | 125.0 | 0.556E+02 | 0.516E+01 | 49. | 62. | 43. | 0.0006 | 0.0004 | 0.1003 | 0.12 |
| H | SEC | 0.547E+02 | 0.485E+01 | 50. | 62. | 43. | 0.0008 | 0.0004 | 144.40 | 0.12 |
| E | 70.0 | 0.676E+02 | 0.656E+01 | 43. | 64. | 42. | 0.0012 | 0.0003 | 0.0449 | 0.11 |
| H | SEC | 0.672E+02 | 0.650E+01 | 43. | 64. | 42. | 0.0012 | 0.0002 | 135.90 | 0.11 |
| E | 50.0 | 0.781E+02 | 0.803E+01 | 36. | 60. | 42. | 0.0000 | 0.0000 | 0.0335 | 0.09 |
| H | SEC | 0.757E+02 | 0.800E+01 | 37. | 60. | 42. | 0.0028 | 0.0006 | 136.10 | 0.08 |
| E | 33.0 | 0.703E+02 | 0.974E+01 | 32. | 54. | 41. | 0.0003 | 0.0001 | 0.0504 | 0.09 |
| H | SEC | 0.644E+02 | 0.928E+01 | 33. | 55. | 41. | 0.0011 | 0.0004 | 119.80 | 0.09 |
| E | 20.0 | 0.477E+02 | 0.157E+02 | 28. | 52. | 37. | 0.0008 | 0.0017 | 0.1144 | 0.08 |
| H | SEC | 0.445E+02 | 0.109E+02 | 30. | 54. | 41. | 0.0003 | 0.0003 | 67.90 | 0.07 |

AVERAGE # 8
SHAS41 200 HZ 7-AUG-84
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.303E+02 | 0.160E+02 | 26. | 47. | 36. | 0.0006 | 0.0007 | 0.0368 | 0.15 |
| H | SEC | 0.267E+02 | 0.115E+02 | 28. | 54. | 39. | 0.0004 | 0.0005 | 113.30 | 0.13 |
| E | 5.5 | 0.254E+02 | 0.235E+02 | 33. | 58. | 41. | 0.0024 | 0.0010 | 0.0165 | 0.03 |
| H | SEC | 0.221E+02 | 0.120E+02 | 42. | 55. | 57. | 0.0014 | 0.0004 | 127.60 | 0.07 |
| E | 3.0 | 0.301E+02 | 0.225E+02 | 64. | 51. | 122. | 0.0060 | 0.0016 | 0.0056 | 0.01 |
| H | SEC | 0.201E+02 | 0.154E+02 | 62. | 55. | 104. | 0.0024 | 0.0009 | 121.70 | 0.05 |
| E | 2.0 | 0.256E+02 | 0.214E+02 | 66. | 68. | 58. | 0.0021 | 0.0014 | 0.0017 | 0.09 |
| H | SEC | 0.216E+02 | 0.160E+02 | 67. | 70. | 79. | 0.0022 | 0.0016 | 111.00 | 0.04 |
| E | 1.7 | 0.293E+02 | 0.274E+02 | 77. | 70. | 43. | 0.0052 | 0.0006 | 0.0021 | 0.06 |
| H | SEC | 0.190E+02 | 0.157E+02 | 68. | 78. | 138. | 0.0039 | 0.0008 | 118.90 | 0.03 |
| E | 1.2 | 0.493E+02 | 0.374E+02 | 65. | 74. | 132. | 0.0043 | 0.0007 | 0.0011 | 0.09 |
| H | SEC | 0.350E+02 | 0.181E+02 | 60. | 75. | 145. | 0.0000 | 0.0016 | 109.90 | 0.24 |
| E | 1.0 | 0.659E+02 | 0.335E+02 | 64. | 79. | 66. | 0.0023 | 0.0007 | 0.0084 | 0.12 |
| H | HZ | 0.463E+02 | 0.243E+02 | 68. | 76. | 62. | 0.0033 | 0.0016 | 104.80 | 0.04 |

AVERAGE # 8
SHAS41 200 HZ 7-AUG-84
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.466E+02 | 0.280E+02 | 74. | 74. | 55. | 0.0059 | 0.0009 | 0.0008 | 0.05 |
| H | HZ | 0.402E+02 | 0.220E+02 | 74. | 75. | 44. | 0.0064 | 0.0025 | 115.10 | 0.07 |
| E | 1.2 | 0.510E+02 | 0.375E+02 | 80. | 71. | 171. | 0.0111 | 0.0023 | 0.0067 | 0.10 |
| H | HZ | 0.419E+02 | 0.341E+02 | 80. | 72. | 178. | 0.0080 | 0.0014 | 52.80 | 0.07 |
| E | 1.5 | 0.642E+02 | 0.461E+02 | 75. | 78. | 56. | 0.0108 | 0.0026 | 0.0010 | 0.05 |
| H | HZ | 0.587E+02 | 0.405E+02 | 74. | 77. | 52. | 0.0073 | 0.0030 | 74.10 | 0.06 |
| E | 2.0 | 0.630E+02 | 0.404E+02 | 77. | 75. | 58. | 0.0011 | 0.0012 | 0.0054 | 0.07 |
| H | HZ | 0.514E+02 | 0.346E+02 | 78. | 74. | 48. | 0.0052 | 0.0018 | 48.90 | 0.06 |
| E | 2.0 | 0.727E+02 | 0.484E+02 | 80. | 75. | 68. | 0.0014 | 0.0004 | 0.0020 | 0.07 |
| H | HZ | 0.501E+02 | 0.349E+02 | 81. | 77. | 45. | 0.0016 | 0.0007 | 135.50 | 0.03 |
| E | 2.0 | 0.913E+02 | 0.527E+02 | 77. | 75. | 73. | 0.0088 | 0.0022 | 0.0035 | 0.05 |
| H | HZ | 0.802E+02 | 0.414E+02 | 78. | 75. | 63. | 0.0031 | 0.0018 | 50.40 | 0.05 |

AVERAGE # 8
SEAS41 200 HZ 7-AUG-84
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.837E+02 | 0.663E+02 | 79. | 80. | 25. | 0.0005 | 0.0005 | 0.0035 | 0.02 |
| H | HZ | 0.706E+02 | 0.486E+02 | 80. | 81. | 26. | 0.0022 | 0.0014 | 123.90 | 0.02 |
| E | 3.0 | 0.920E+02 | 0.590E+02 | 85. | 77. | 71. | 0.0028 | 0.0023 | 0.0008 | 0.07 |
| H | HZ | 0.659E+02 | 0.438E+02 | 80. | 85. | 48. | 0.0033 | 0.0030 | 126.00 | 0.08 |
| E | 7.7 | 0.194E+03 | 0.180E+03 | 74. | 84. | 44. | 0.0130 | 0.0095 | 0.0015 | 0.03 |
| H | HZ | 0.187E+03 | 0.154E+03 | 75. | 1. | 43. | 0.0137 | 0.0084 | 133.20 | 0.05 |
| E | 14.3 | 0.326E+03 | 0.296E+03 | 78. | 72. | 123. | 0.0242 | 0.0217 | 0.0017 | 0.02 |
| H | HZ | 0.348E+03 | 0.280E+03 | 83. | 73. | 125. | 0.0145 | 0.0286 | 138.00 | 0.01 |
| E | 20.0 | 0.432E+03 | 0.340E+03 | 71. | 70. | 100. | 0.0121 | 0.0155 | 0.0020 | 0.01 |
| H | HZ | 0.444E+03 | 0.311E+03 | 73. | 71. | 113. | 0.0102 | 0.0237 | 147.30 | 0.03 |
| E | 26.3 | 0.452E+03 | 0.385E+03 | 68. | 67. | 98. | 0.0107 | 0.0370 | 0.0029 | 0.01 |
| H | HZ | 0.340E+03 | 0.334E+03 | 63. | 71. | 139. | 0.0160 | 0.0612 | 172.60 | 0.04 |
| E | 31.2 | 0.486E+03 | 0.414E+03 | 67. | 65. | 94. | 0.0068 | 0.0278 | 0.0044 | 0.01 |
| H | HZ | 0.397E+03 | 0.307E+03 | 67. | 63. | 66. | 0.0151 | 0.0161 | 108.10 | 0.04 |
| E | 40.0 | 0.556E+03 | 0.418E+03 | 65. | 62. | 94. | 0.0041 | 0.0402 | 0.0201 | 0.00 |
| H | HZ | 0.499E+03 | 0.377E+03 | 63. | 66. | 67. | 0.0051 | 0.0266 | 116.30 | 0.06 |

SHAS41 200 HZ 7-AUG-84

THE NUMBER OF LAYERS = 3
THE NUMBER OF FREQUENCIES TAKEN = 27
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3000E+03 | | 0.0000E+00 |
| | | 0.1100E+04 | |
| 2 | 0.2000E+02 | | 0.1100E+04 |
| | | 0.1000E+05 | |
| 3 | 0.1000E+01 | | 0.1110E+05 |

FREQUENCY RANGE ( 0.2000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.8418E+03 | | 0.0000E+00 |
| | | 0.1240E+04 | |
| 2 | 0.7398E+01 | | 0.1240E+04 |
| | | 0.6954E+04 | |
| 3 | 0.4406E+00 | | 0.8194E+04 |

MEAN PERCENT VARIATION IS 0.1691E+02

ERROR ANALYSIS

R-SQUARED = 0.999E+00

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 26 | 0.521E+06 | 0.200E+05 | 0.154E+00 |
| MODEL | 4 | 0.521E+06 | 0.130E+06 | 0.371E+07 |
| RESID | 22 | 0.772E+00 | 0.351E-01 | |

STANDARD ERROR = 0.187E+00

DTEST FOR MEANS =-0.106E-05

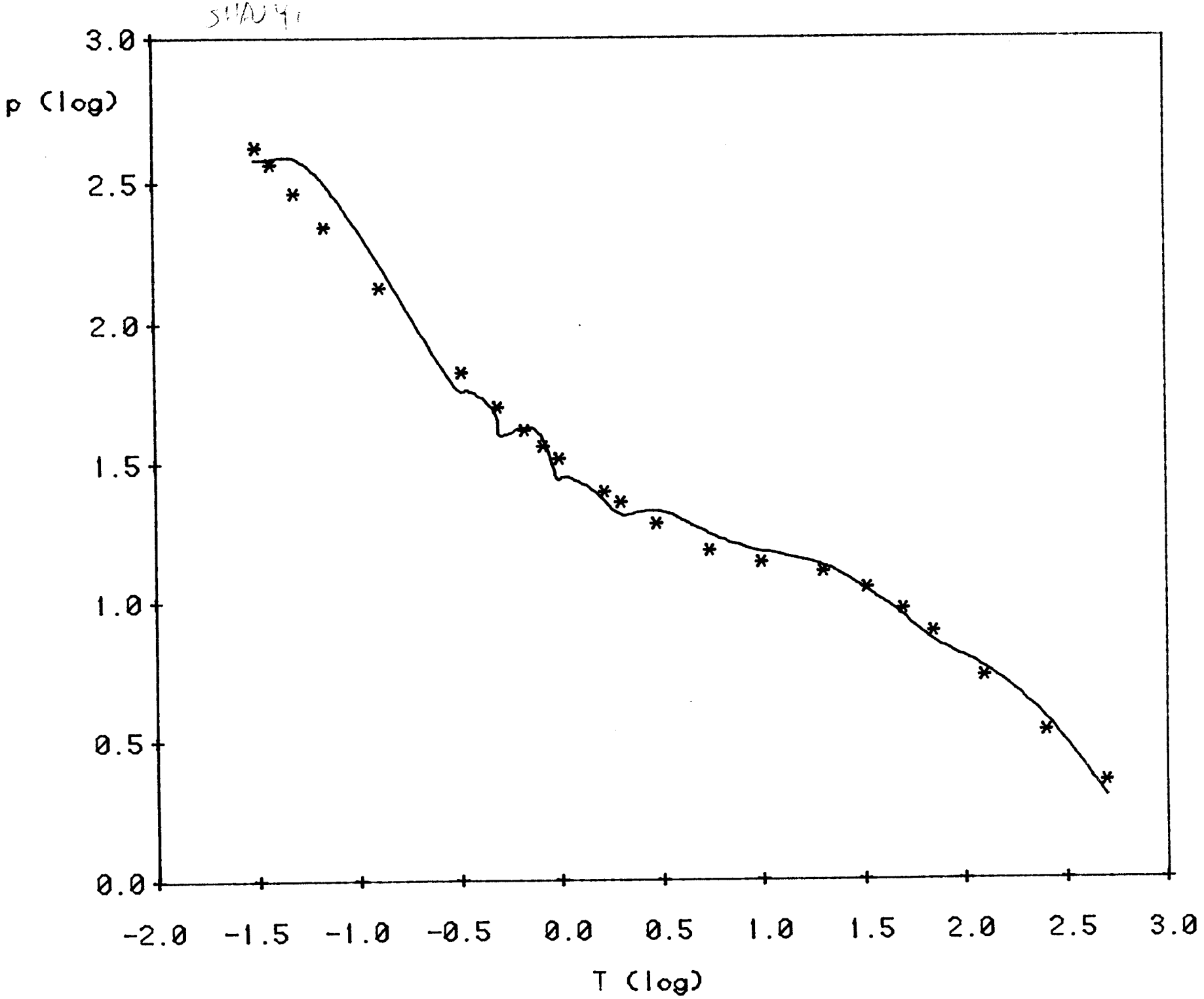
NOISE TO SIGNAL RATIO = 0.519E-01 PERCENT

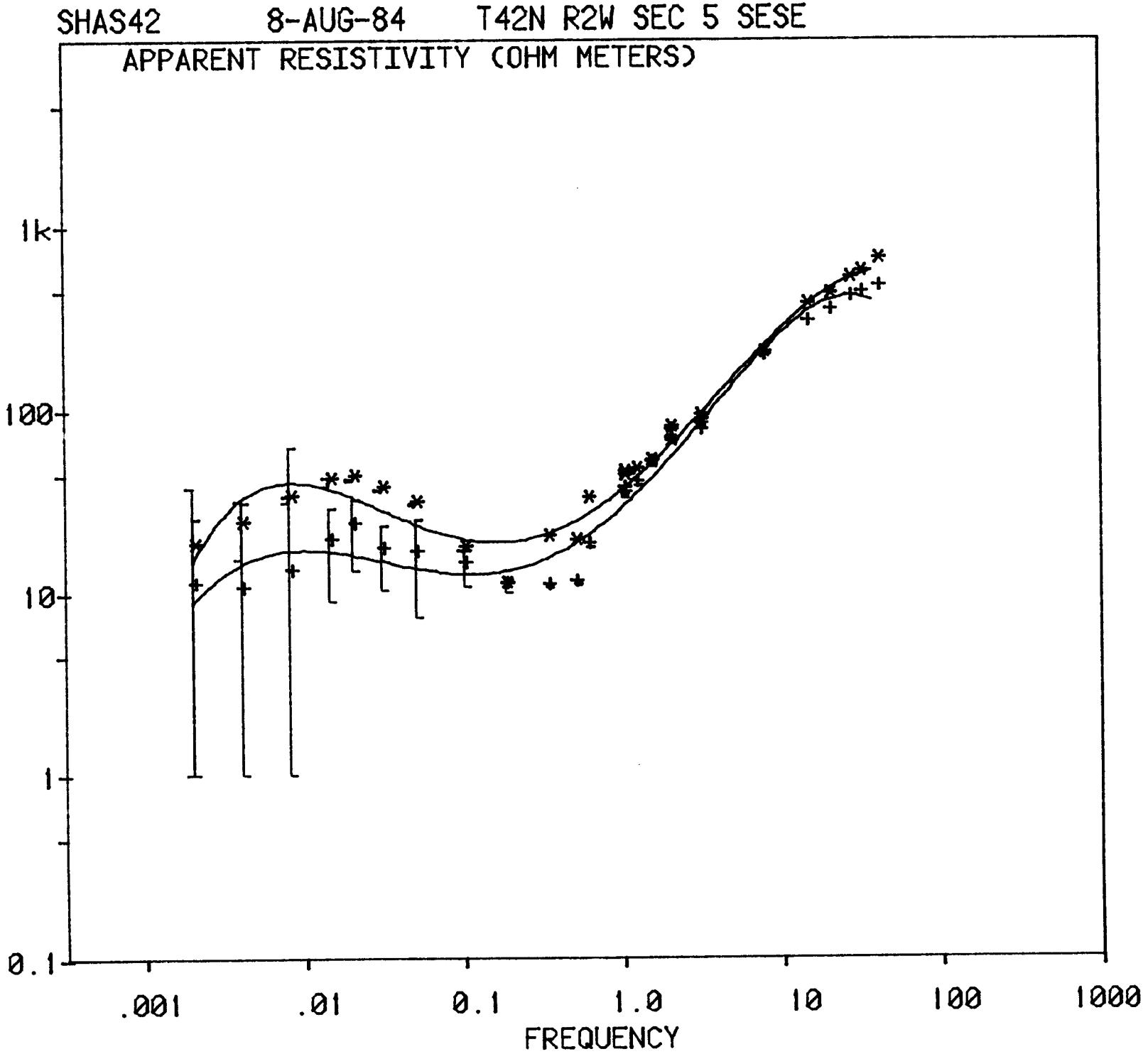
SHAS41 200 HZ 7-AUG-84

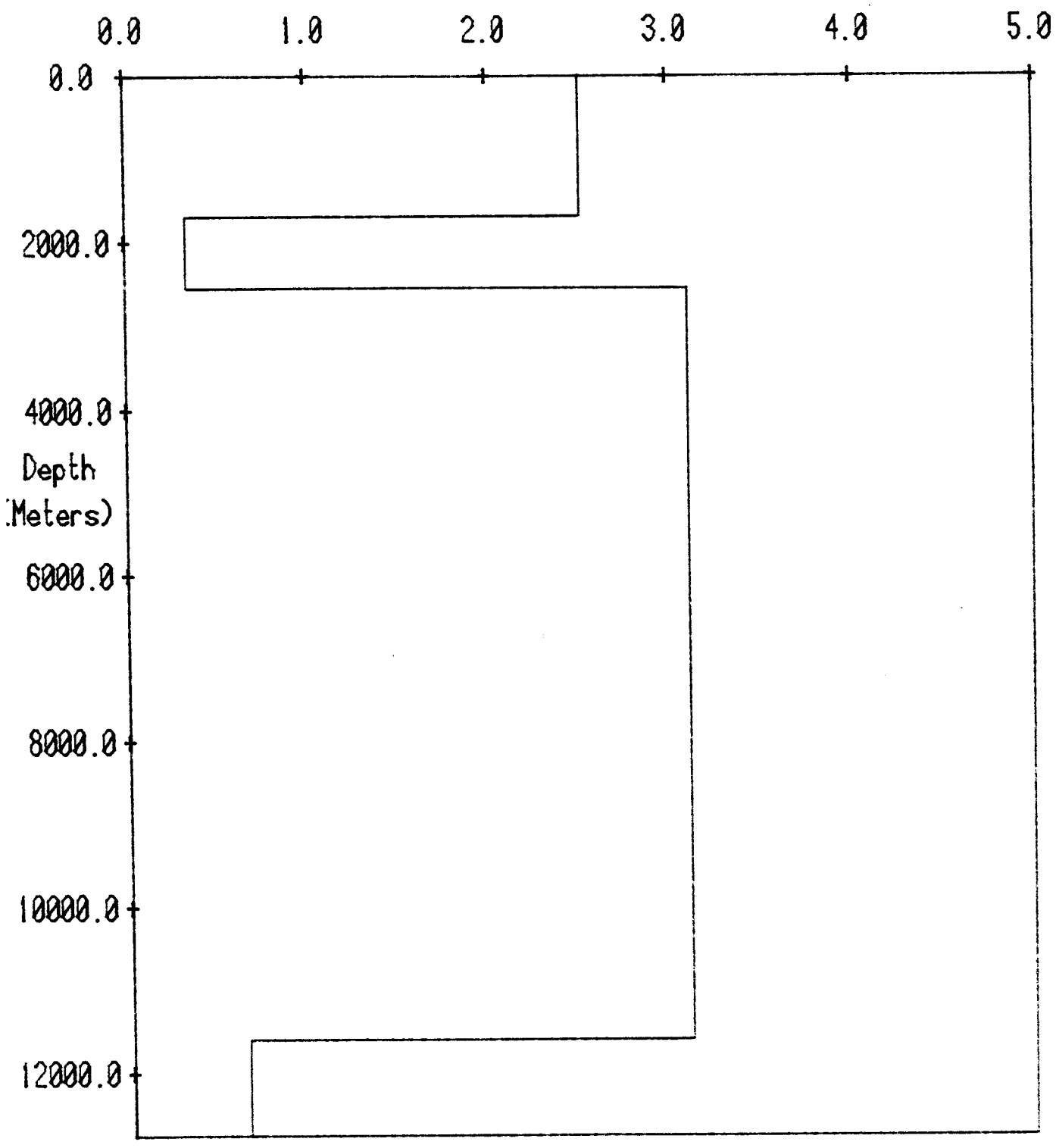
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.500E+03 | 0.200E+01 | 0.224E+01 | -0.240E+00 | -0.113E+02 |
| 2 | 0.250E+03 | 0.400E+01 | 0.343E+01 | 0.573E+00 | 0.154E+02 |
| 3 | 0.125E+03 | 0.600E+01 | 0.539E+01 | 0.613E+00 | 0.108E+02 |
| 4 | 0.700E+02 | 0.700E+01 | 0.776E+01 | -0.760E+00 | -0.103E+02 |
| 5 | 0.500E+02 | 0.900E+01 | 0.935E+01 | -0.352E+00 | -0.383E+01 |
| 6 | 0.330E+02 | 0.110E+02 | 0.112E+02 | -0.230E+00 | -0.207E+01 |
| 7 | 0.200E+02 | 0.140E+02 | 0.128E+02 | 0.120E+01 | 0.895E+01 |
| 8 | 0.100E+02 | 0.150E+02 | 0.137E+02 | 0.127E+01 | 0.882E+01 |
| 9 | 0.550E+01 | 0.170E+02 | 0.153E+02 | 0.175E+01 | 0.108E+02 |
| 10 | 0.300E+01 | 0.230E+02 | 0.189E+02 | 0.406E+01 | 0.194E+02 |
| 11 | 0.200E+01 | 0.190E+02 | 0.227E+02 | -0.370E+01 | -0.178E+02 |
| 12 | 0.167E+01 | 0.240E+02 | 0.248E+02 | -0.763E+00 | -0.313E+01 |
| 13 | 0.100E+01 | 0.300E+02 | 0.325E+02 | -0.248E+01 | -0.793E+01 |
| 14 | 0.100E+01 | 0.250E+02 | 0.325E+02 | -0.748E+01 | -0.260E+02 |
| 15 | 0.830E+00 | 0.420E+02 | 0.362E+02 | 0.583E+01 | 0.149E+02 |
| 16 | 0.670E+00 | 0.430E+02 | 0.412E+02 | 0.181E+01 | 0.431E+01 |
| 17 | 0.500E+00 | 0.380E+02 | 0.497E+02 | -0.117E+02 | -0.266E+02 |
| 18 | 0.500E+00 | 0.420E+02 | 0.497E+02 | -0.766E+01 | -0.167E+02 |
| 19 | 0.500E+00 | 0.490E+02 | 0.497E+02 | -0.662E+00 | -0.134E+01 |
| 20 | 0.330E+00 | 0.610E+02 | 0.660E+02 | -0.495E+01 | -0.780E+01 |
| 21 | 0.330E+00 | 0.510E+02 | 0.660E+02 | -0.150E+02 | -0.256E+02 |
| 22 | 0.130E+00 | 0.164E+03 | 0.133E+03 | 0.311E+02 | 0.210E+02 |
| 23 | 0.700E-01 | 0.325E+03 | 0.219E+03 | 0.106E+03 | 0.389E+02 |
| 24 | 0.500E-01 | 0.396E+03 | 0.289E+03 | 0.107E+03 | 0.312E+02 |
| 25 | 0.380E-01 | 0.375E+03 | 0.362E+03 | 0.131E+02 | 0.354E+01 |
| 26 | 0.320E-01 | 0.375E+03 | 0.416E+03 | -0.409E+02 | -0.104E+02 |
| 27 | 0.250E-01 | 0.424E+03 | 0.505E+03 | -0.813E+02 | -0.175E+02 |

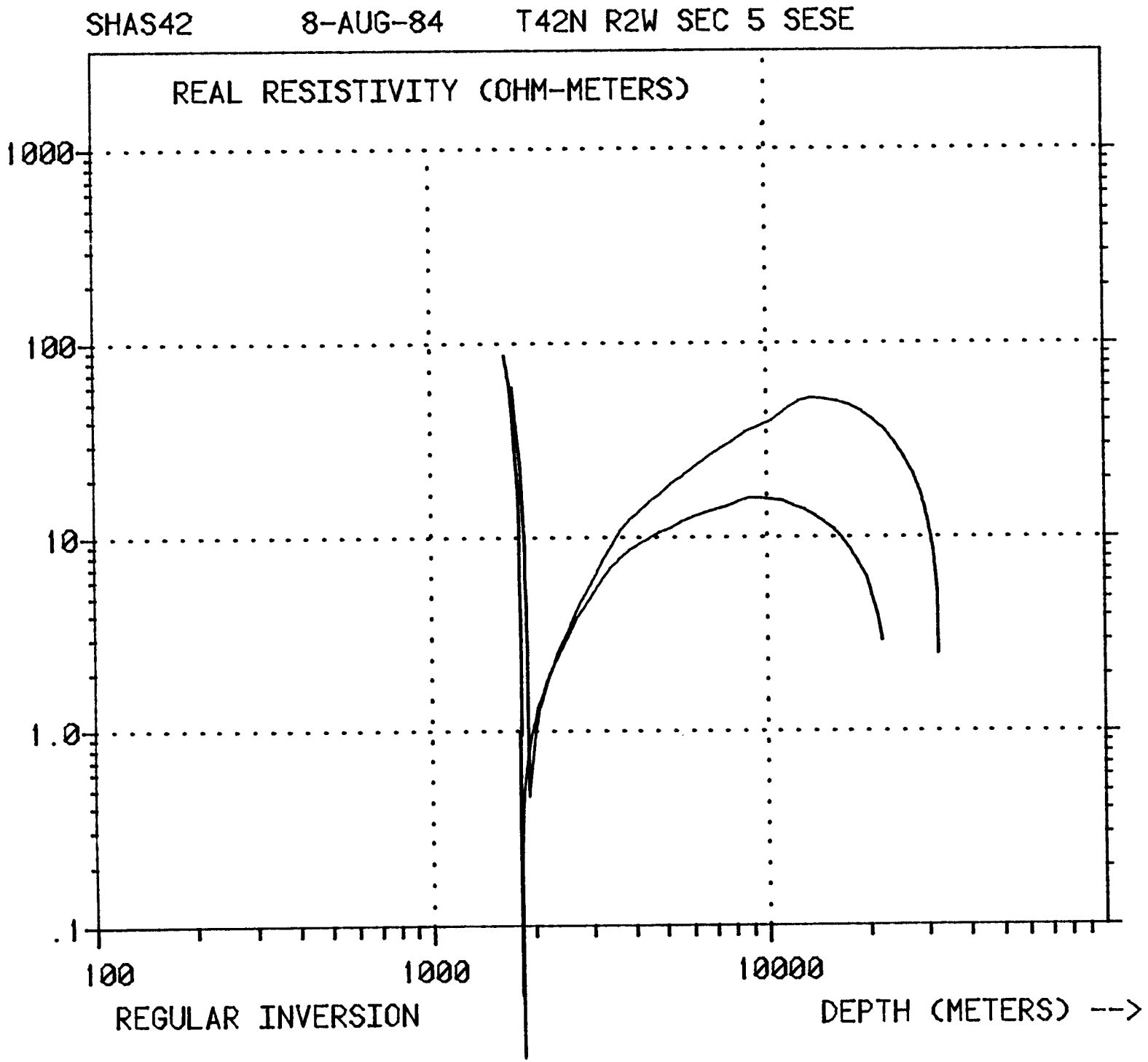
MEAN PERCENT ERROR = 0.1682E+02
MAXIMUM PERCENT ERROR = 0.3893E+02
MAX. ERROR OCCURED AT OBSERVATION 23

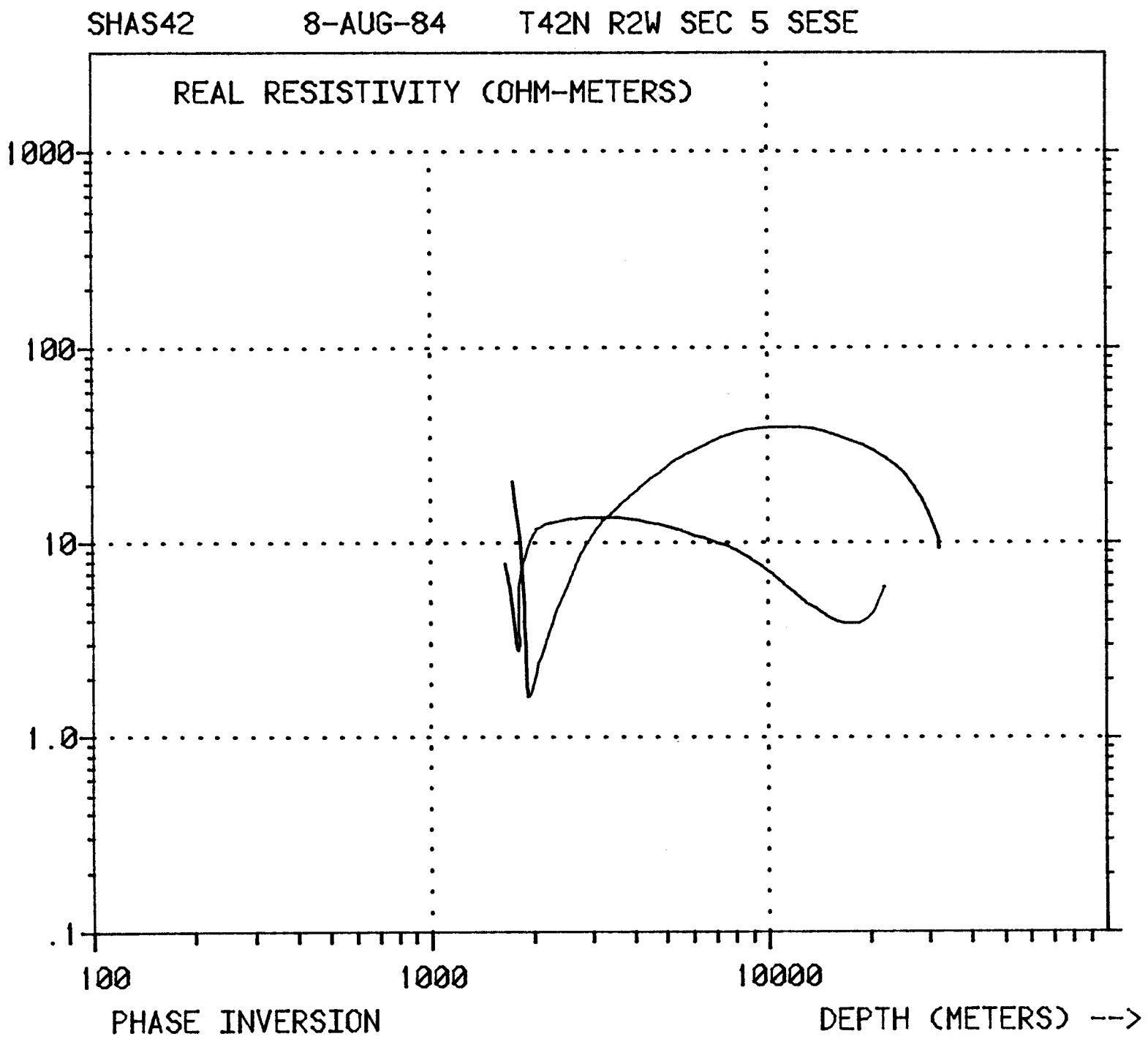

3.0
2.5
2.0
1.5
1.0
0.5
0.0
p (log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
T (log)


SHAS42 8-AUG-84 T42N R2W SEC 5 SESE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

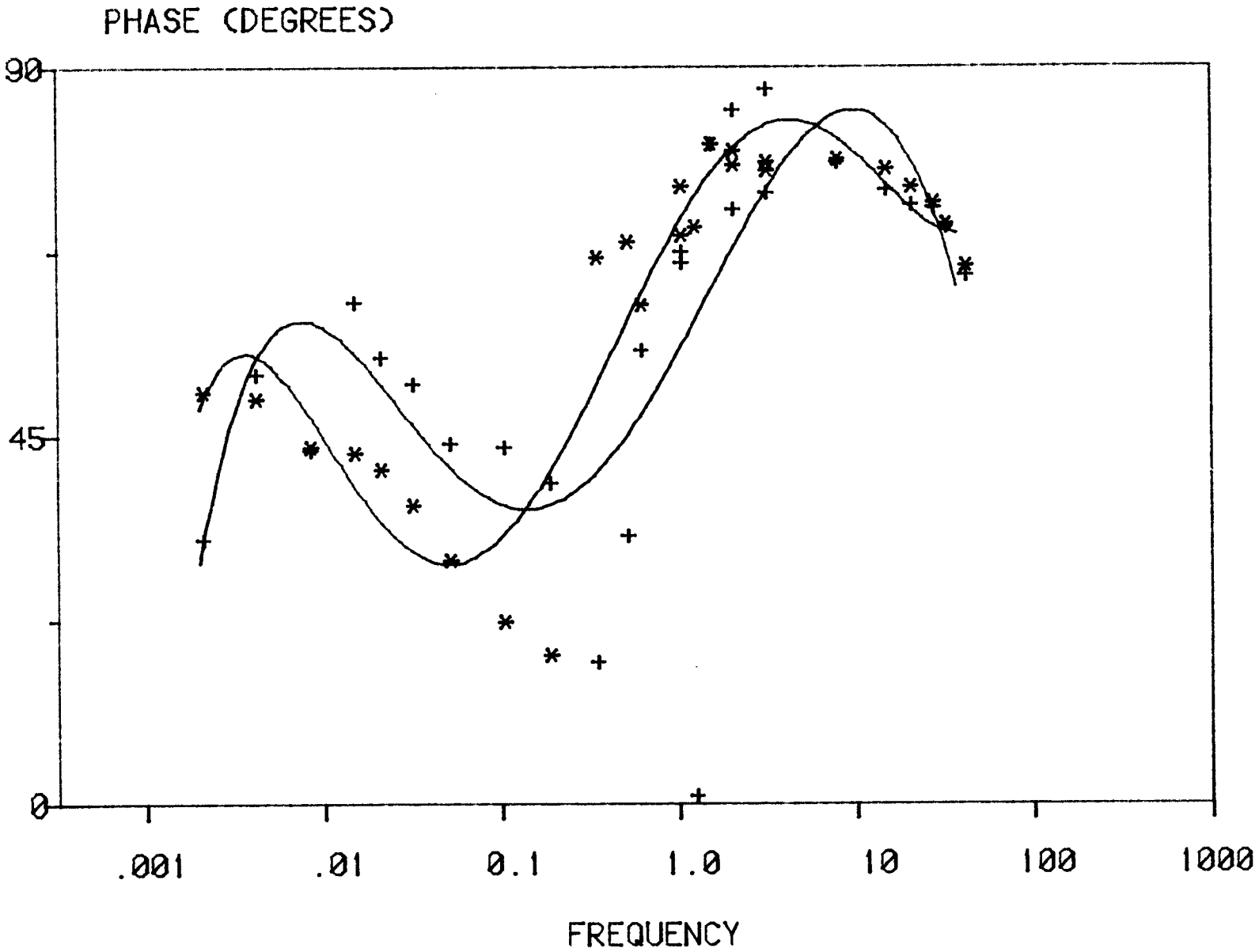



| | | | | |
|---|---|---|---|---|
| Resistivity | 0330.75 | 0002.17 | 1287.69 | 0004.46 |
| Thickness | | 1686.40 | 0863.03 | 9051.01 |
| Depth | 0000.00 | 1686.40 | 2549.44 | 11600.45 |


SHAS42 8-AUG-84 T42N R2W SEC 5 SESE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS42 8-AUG-84 T42N R2W SEC 5 SESE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS42 8-AUG-84 T42N R2W SEC 5 SESE



THE SITE IS: SHAS42 200 HZ 8-AUG-84 T42N R2W SEC 5 SESE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | RHOMAX | PERIOD # | STDEV OF RHOM | RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 4.78 | 20.55 | 1 | 16.04 | 17.80 |
| 0.0020 | 10.57 | 17.35 | 2 | 27.31 | 7.42 |
| 0.0040 | 9.97 | 22.99 | 3 | 50.85 | 1.10 |
| 0.0080 | 12.45 | 31.61 | 4 | 11.96 | 2.13 |
| 0.0143 | 18.50 | 39.40 | 5 | 9.25 | 0.31 |
| 0.0200 | 22.27 | 40.76 | 6 | 4.40 | 0.19 |
| 0.0303 | 16.44 | 35.79 | 7 | 8.28 | 0.19 |
| 0.0500 | 15.77 | 29.68 | 8 | 3.22 | 0.07 |
| 0.1000 | 13.65 | 16.64 | 9 | 1.12 | 0.01 |
| 0.1818 | 10.63 | 10.61 | 10 | 0.20 | 0.01 |
| 0.3333 | 10.49 | 19.02 | 11 | 0.11 | 0.01 |
| 0.5000 | 10.77 | 18.12 | 12 | 0.05 | 0.00 |
| 0.5988 | 17.33 | 30.40 | 13 | 1.33 | 0.06 |
| 0.8000 | 50.64 | 47.81 | 14 | 0.72 | 0.01 |
| 1.0000 | 35.08 | 41.33 | 15 | 0.12 | 0.00 |
| 1.0000 | 32.78 | 42.99 | 16 | 0.45 | 0.01 |
| 1.2048 | 37.29 | 44.60 | 17 | 0.77 | 0.02 |
| 1.4925 | 48.35 | 49.34 | 18 | 0.00 | 0.00 |
| 2.0000 | 64.70 | 62.62 | 19 | 0.84 | 0.00 |
| 2.0000 | 48.74 | 54.81 | 20 | 0.06 | 0.00 |
| 2.0000 | 73.00 | 75.13 | 21 | 0.25 | 0.00 |
| 3.0303 | 78.51 | 87.40 | 22 | 0.02 | 0.00 |
| 3.0303 | 71.94 | 82.89 | 23 | 0.00 | 0.00 |
| 7.6923 | 182.74 | 190.19 | 24 | 0.62 | 0.00 |
| 14.2857 | 279.79 | 350.63 | 25 | 0.00 | 0.00 |
| 20.0000 | 325.86 | 399.28 | 26 | 0.00 | 0.00 |
| 26.3158 | 382.81 | 483.15 | 27 | 0.00 | 0.00 |
| 31.2500 | 406.58 | 522.49 | 28 | 0.00 | 0.00 |
| 40.0000 | 433.50 | 618.19 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS42 200 HZ 8-AUG-84 T42N R2W SEC 5 SESE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.235E+02 | 0.534E+01 | 73. | 38. | 21. | 0.0023 | 0.0075 | 0.5364 | 0.42 |
| H | SEC | 0.206E+02 | 0.397E+01 | 59. | 55. | 37. | 0.0049 | 0.0153 | 77.00 | 0.34 |
| E | 500.0 | 0.171E+02 | 0.137E+02 | 56. | 39. | 76. | 0.0019 | 0.0025 | 0.2823 | 0.09 |
| H | SEC | 0.175E+02 | 0.807E+01 | 49. | 21. | 58. | 0.0039 | 0.0041 | 35.40 | 0.24 |
| E | 250.0 | 0.240E+02 | 0.122E+02 | 41. | 56. | 25. | 0.0015 | 0.0110 | 0.1182 | 0.17 |
| H | SEC | 0.229E+02 | 0.753E+01 | 54. | 56. | 49. | 0.0004 | 0.0090 | 95.60 | 0.10 |
| E | 125.0 | 0.283E+02 | 0.220E+02 | 46. | 62. | 25. | 0.0012 | 0.0083 | 0.0601 | 0.21 |
| H | SEC | 0.341E+02 | 0.421E+01 | 38. | 30. | 50. | 0.0044 | 0.0116 | 83.30 | 0.52 |
| E | 70.0 | 0.414E+02 | 0.241E+02 | 44. | 63. | 49. | 0.0027 | 0.0059 | 0.0367 | 0.14 |
| H | SEC | 0.394E+02 | 0.114E+02 | 45. | 56. | 61. | 0.0027 | 0.0039 | 86.70 | 0.19 |
| E | 50.0 | 0.413E+02 | 0.301E+02 | 40. | 58. | 48. | 0.0014 | 0.0033 | 0.0235 | 0.09 |
| H | SEC | 0.402E+02 | 0.145E+02 | 42. | 52. | 53. | 0.0018 | 0.0024 | 79.00 | 0.09 |
| E | 33.0 | 0.359E+02 | 0.163E+02 | 37. | 52. | 53. | 0.0007 | 0.0043 | 0.0515 | 0.06 |
| H | SEC | 0.361E+02 | 0.157E+02 | 37. | 51. | 52. | 0.0007 | 0.0045 | 84.50 | 0.06 |
| E | 20.0 | 0.308E+02 | 0.152E+02 | 30. | 44. | 61. | 0.0006 | 0.0010 | 0.0285 | 0.10 |
| H | SEC | 0.306E+02 | 0.149E+02 | 30. | 45. | 61. | 0.0014 | 0.0021 | 77.70 | 0.10 |

AVERAGE # 8
SHAS42 200 HZ 8-AUG-84 T42N R2W SEC 5 SESE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.185E+02 | 0.138E+02 | 22. | 42. | 57. | 0.0013 | 0.0015 | 0.0102 | 0.05 |
| H | SEC | 0.176E+02 | 0.112E+02 | 23. | 48. | 68. | 0.0069 | 0.0027 | 81.80 | 0.13 |
| E | 5.5 | 0.131E+02 | 0.118E+02 | 14. | 37. | 78. | 0.0010 | 0.0002 | 0.0485 | 0.20 |
| H | SEC | 0.124E+02 | 0.734E+01 | 15. | 56. | 76. | 0.0011 | 0.0002 | 0.90 | 0.28 |
| E | 3.0 | 0.221E+02 | 0.103E+02 | 62. | 8. | 136. | 0.0000 | 0.0006 | 0.0322 | 0.17 |
| H | SEC | 0.161E+02 | 0.114E+02 | 74. | 25. | 140. | 0.0009 | 0.0009 | 13.90 | 0.20 |
| E | 2.0 | 0.209E+02 | 0.100E+02 | 64. | 18. | 141. | 0.0018 | 0.0008 | 0.0207 | 0.17 |
| H | SEC | 0.152E+02 | 0.119E+02 | 75. | 47. | 156. | 0.0012 | 0.0010 | 14.20 | 0.12 |
| E | 1.7 | 0.353E+02 | 0.274E+02 | 57. | 82. | 3. | 0.0007 | 0.0117 | 0.0119 | 0.18 |
| H | SEC | 0.318E+02 | 0.390E+01 | 57. | 39. | 145. | 0.0033 | 0.0057 | 21.30 | 0.58 |
| E | 1.2 | 0.855E+02 | 0.342E+02 | 39. | 28. | 51. | 0.0008 | 0.0105 | 0.0021 | 0.86 |
| H | SEC | 0.644E+02 | 0.148E+02 | 6. | 27. | 139. | 0.0000 | 0.0039 | 95.70 | 0.66 |
| E | 1.0 | 0.426E+02 | 0.366E+02 | 75. | 61. | 139. | 0.0010 | 0.0012 | 0.0034 | 0.09 |
| H | HZ | 0.402E+02 | 0.334E+02 | 76. | 71. | 138. | 0.0008 | 0.0008 | 13.30 | 0.05 |

AVERAGE # 8
SHAS42 200 HZ 8-AUG-84 T42N R2W SEC 5 SESE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.472E+02 | 0.335E+02 | 71. | 67. | 119. | 0.0046 | 0.0021 | 0.0033 | 0.05 |
| H | HZ | 0.456E+02 | 0.264E+02 | 70. | 67. | 120. | 0.0048 | 0.0029 | 84.40 | 0.03 |
| E | 1.2 | 0.502E+02 | 0.449E+02 | 72. | 4. | 131. | 0.0063 | 0.0164 | 0.0093 | 0.16 |
| H | HZ | 0.390E+02 | 0.305E+02 | 68. | 0. | 145. | 0.0042 | 0.0195 | 21.70 | 0.20 |
| E | 1.5 | 0.631E+02 | 0.498E+02 | 77. | 86. | 100. | 0.0032 | 0.0388 | 0.0060 | 0.04 |
| H | HZ | 0.449E+02 | 0.388E+02 | 79. | 82. | 109. | 0.0041 | 0.0760 | 90.30 | 0.02 |
| E | 2.0 | 0.713E+02 | 0.652E+02 | 77. | 85. | 108. | 0.0030 | 0.0230 | 0.0071 | 0.10 |
| H | HZ | 0.655E+02 | 0.530E+02 | 86. | 78. | 180. | 0.0009 | 0.0261 | 28.00 | 0.07 |
| E | 2.0 | 0.643E+02 | 0.466E+02 | 77. | 66. | 139. | 0.0015 | 0.0007 | 0.0030 | 0.07 |
| H | HZ | 0.591E+02 | 0.394E+02 | 79. | 73. | 144. | 0.0012 | 0.0021 | 14.80 | 0.04 |
| E | 2.0 | 0.837E+02 | 0.688E+02 | 81. | 71. | 136. | 0.0012 | 0.0030 | 0.0061 | 0.10 |
| H | HZ | 0.860E+02 | 0.595E+02 | 79. | 74. | 146. | 0.0014 | 0.0024 | 80.30 | 0.07 |

AVERAGE # 8

SHAS42 200 HZ 8-AUG-84 T42N R2W SEC 5 SESE

NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.931E+02 | 0.828E+02 | 79. | 65. | 135. | 0.0001 | 0.0024 | 0.0046 | 0.10 |
| H | HZ | 0.847E+02 | 0.730E+02 | 79. | 82. | 131. | 0.0003 | 0.0012 | 9.40 | 0.08 |
| E | 3.0 | 0.880E+02 | 0.810E+02 | 78. | 87. | 101. | 0.0035 | 0.0341 | 0.0032 | 0.04 |
| H | HZ | 0.794E+02 | 0.615E+02 | 80. | 88. | 120. | 0.0008 | 0.0361 | 37.00 | 0.04 |
| E | 7.7 | 0.194E+03 | 0.181E+03 | 79. | 78. | 99. | 0.0047 | 0.0194 | 0.0174 | 0.09 |
| H | HZ | 0.192E+03 | 0.179E+03 | 78. | 80. | 149. | 0.0136 | 0.0143 | 76.40 | 0.08 |
| E | 14.3 | 0.362E+03 | 0.290E+03 | 78. | 75. | 110. | 0.0205 | 0.0422 | 0.0063 | 0.07 |
| H | HZ | 0.339E+03 | 0.270E+03 | 79. | 74. | 93. | 0.0189 | 0.0586 | 28.30 | 0.11 |
| E | 20.0 | 0.432E+03 | 0.352E+03 | 74. | 72. | 112. | 0.0280 | 0.0921 | 0.0088 | 0.07 |
| H | HZ | 0.386E+03 | 0.282E+03 | 76. | 76. | 85. | 0.0246 | 0.1271 | 23.60 | 0.14 |
| E | 26.3 | 0.529E+03 | 0.431E+03 | 72. | 72. | 112. | 0.0024 | 0.2128 | 0.0098 | 0.06 |
| H | HZ | 0.430E+03 | 0.343E+03 | 78. | 71. | 138. | 0.0154 | 0.1496 | 23.20 | 0.10 |
| E | 31.2 | 0.567E+03 | 0.446E+03 | 71. | 70. | 114. | 0.0109 | 0.1376 | 0.0133 | 0.06 |
| H | HZ | 0.527E+03 | 0.327E+03 | 74. | 69. | 141. | 0.0038 | 0.1610 | 93.50 | 0.09 |
| E | 40.0 | 0.643E+03 | 0.484E+03 | 67. | 65. | 106. | 0.0068 | 0.1622 | 0.0780 | 0.05 |
| H | HZ | 0.594E+03 | 0.383E+03 | 64. | 64. | 108. | 0.0025 | 0.1448 | 91.60 | 0.06 |

SHAS42 200 HZ 8-AUG-84 T42N R2W SEC 5 SESE

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 25
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3000E+03 | | 0.0000E+00 |
| | | 0.1050E+04 | |
| 2 | 0.1000E+01 | | 0.1050E+04 |
| | | 0.1100E+04 | |
| 3 | 0.2000E+02 | | 0.2150E+04 |
| | | 0.1100E+05 | |
| 4 | 0.1000E+01 | | 0.1315E+05 |

FREQUENCY RANGE ( 0.2000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.3308E+03 | | 0.0000E+00 |
| | | 0.1686E+04 | |
| 2 | 0.2179E+01 | | 0.1686E+04 |
| | | 0.8630E+03 | |
| 3 | 0.1288E+04 | | 0.2549E+04 |
| | | 0.9051E+04 | |
| 4 | 0.4466E+01 | | 0.1160E+05 |

MEAN PERCENT VARIATION IS 0.1271E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 24 | 0.474E+06 | 0.198E+05 | 0.250E+00 |
| MODEL | 6 | 0.474E+06 | 0.791E+05 | 0.352E+07 |
| RESID | 18 | 0.404E+00 | 0.224E-01 | |

STANDARD ERROR = 0.150E+00

DTEST FOR MEANS =-0.572E-05

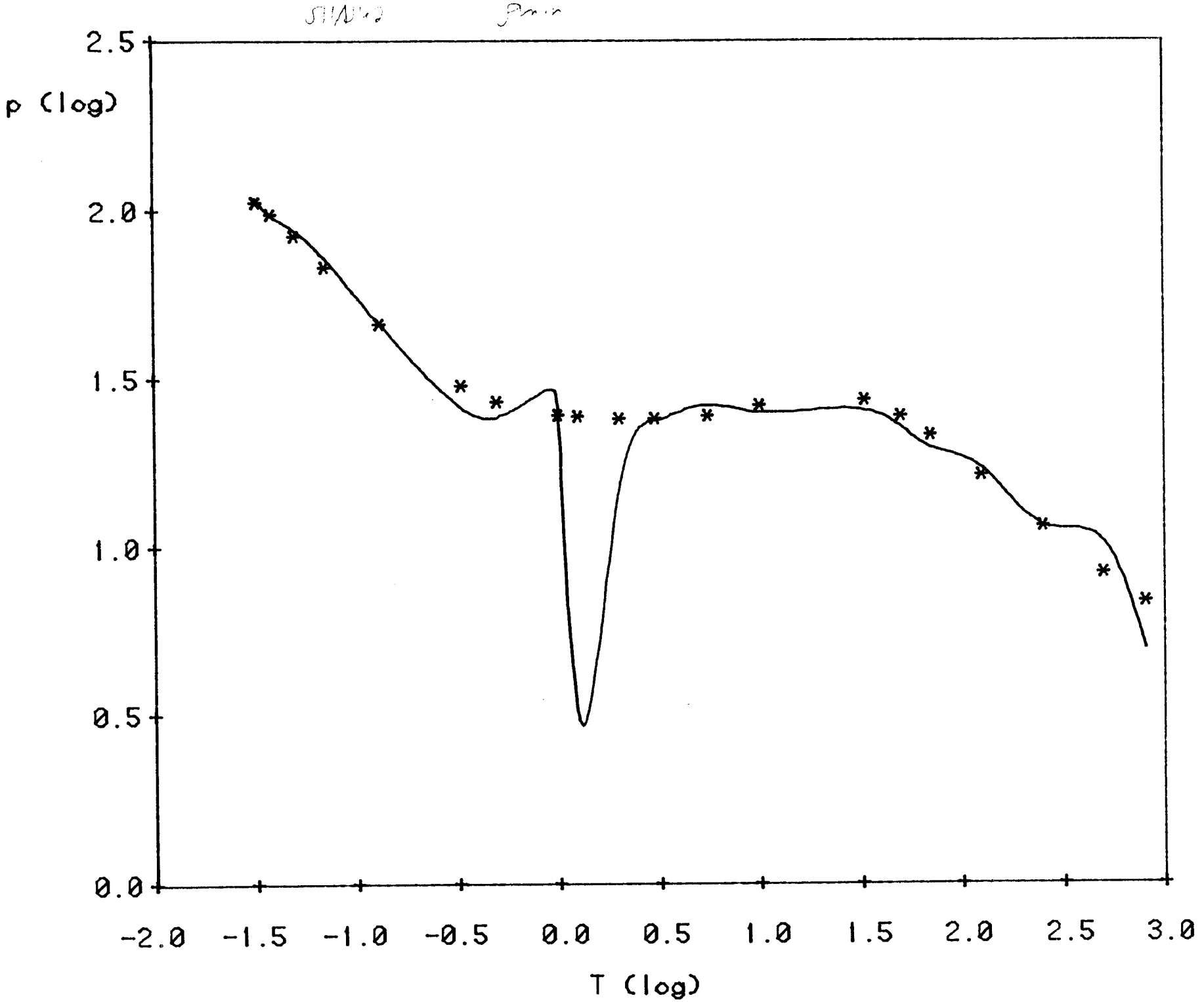
NOISE TO SIGNAL RATIO = 0.533E-01 PERCENT

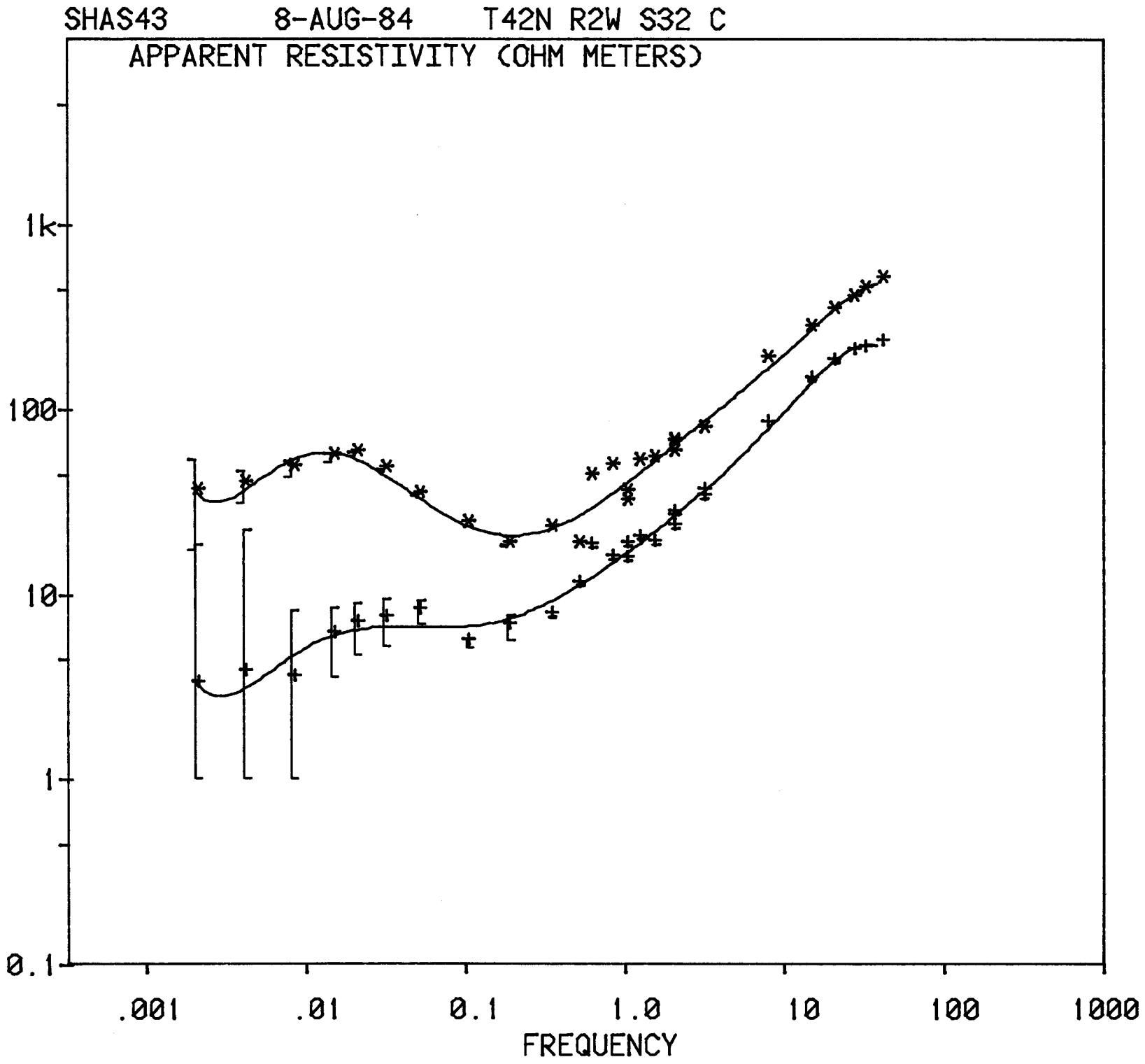
SHAS42 200 HZ 8-AUG-84 T42N R2W SEC 5 SESE

ERROR STRUCTURE OF FITTED MODEL

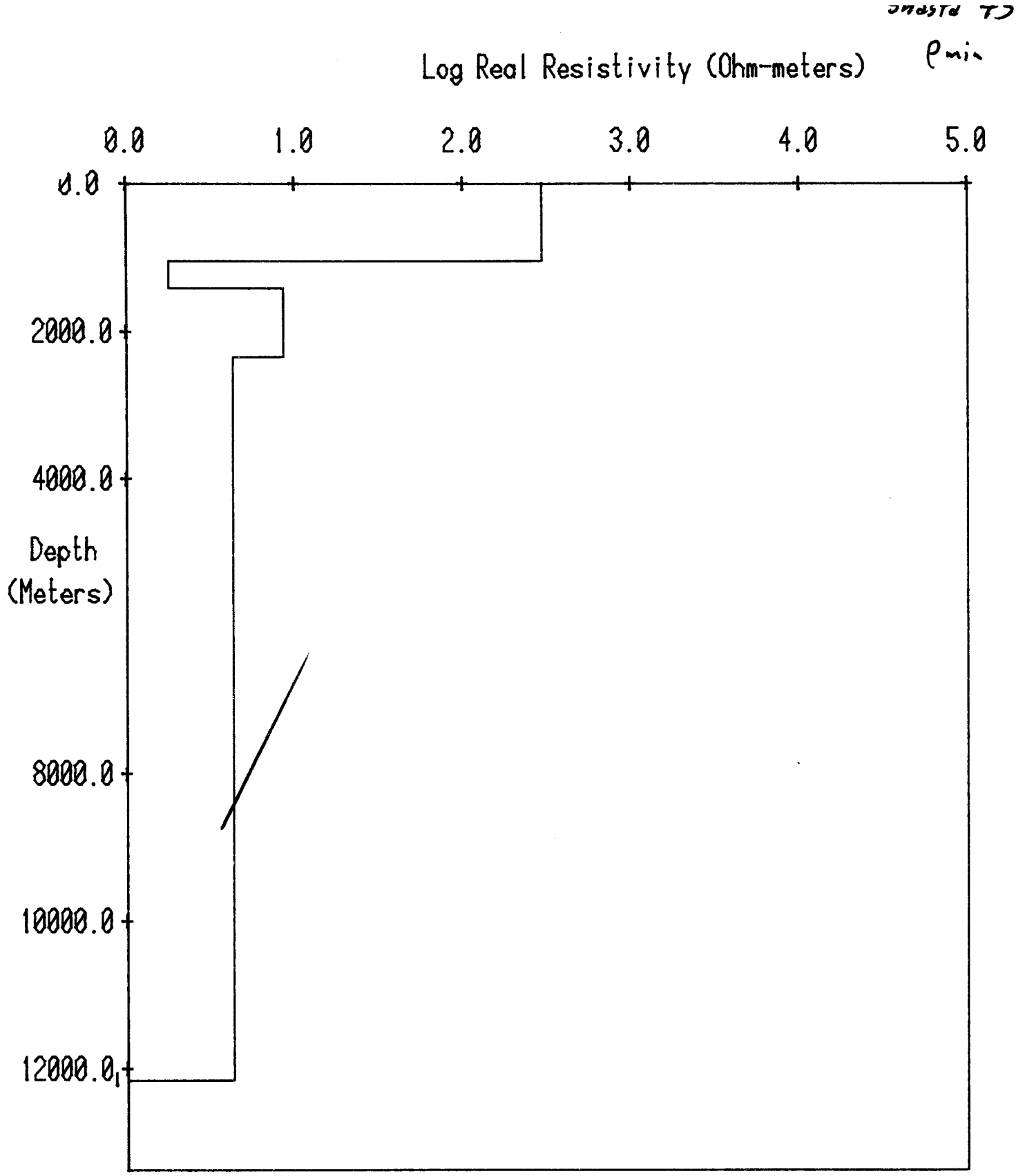
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.500E+03 | 0.110E+02 | 0.931E+01 | 0.169E+01 | 0.167E+02 |
| 2 | 0.250E+03 | 0.100E+02 | 0.117E+02 | -0.166E+01 | -0.153E+02 |
| 3 | 0.125E+03 | 0.120E+02 | 0.147E+02 | -0.272E+01 | -0.203E+02 |
| 4 | 0.700E+02 | 0.190E+02 | 0.172E+02 | 0.183E+01 | 0.101E+02 |
| 5 | 0.500E+02 | 0.220E+02 | 0.180E+02 | 0.402E+01 | 0.201E+02 |
| 6 | 0.330E+02 | 0.160E+02 | 0.178E+02 | -0.185E+01 | -0.109E+02 |
| 7 | 0.200E+02 | 0.160E+02 | 0.160E+02 | 0.288E-01 | 0.180E+00 |
| 8 | 0.100E+02 | 0.140E+02 | 0.125E+02 | 0.152E+01 | 0.114E+02 |
| 9 | 0.550E+01 | 0.110E+02 | 0.113E+02 | -0.300E+00 | -0.269E+01 |
| 10 | 0.300E+01 | 0.100E+02 | 0.134E+02 | -0.342E+01 | -0.292E+02 |
| 11 | 0.167E+01 | 0.170E+02 | 0.199E+02 | -0.295E+01 | -0.160E+02 |
| 12 | 0.100E+01 | 0.350E+02 | 0.310E+02 | 0.402E+01 | 0.122E+02 |
| 13 | 0.100E+01 | 0.330E+02 | 0.310E+02 | 0.202E+01 | 0.630E+01 |
| 14 | 0.830E+00 | 0.370E+02 | 0.367E+02 | 0.340E+00 | 0.924E+00 |
| 15 | 0.670E+00 | 0.480E+02 | 0.445E+02 | 0.347E+01 | 0.750E+01 |
| 16 | 0.500E+00 | 0.650E+02 | 0.580E+02 | 0.702E+01 | 0.114E+02 |
| 17 | 0.500E+00 | 0.730E+02 | 0.580E+02 | 0.150E+02 | 0.229E+02 |
| 18 | 0.330E+00 | 0.790E+02 | 0.835E+02 | -0.447E+01 | -0.550E+01 |
| 19 | 0.330E+00 | 0.720E+02 | 0.835E+02 | -0.115E+02 | -0.148E+02 |
| 20 | 0.130E+00 | 0.183E+03 | 0.181E+03 | 0.164E+01 | 0.901E+00 |
| 21 | 0.700E-01 | 0.280E+03 | 0.287E+03 | -0.655E+01 | -0.231E+01 |
| 22 | 0.500E-01 | 0.326E+03 | 0.347E+03 | -0.214E+02 | -0.636E+01 |
| 23 | 0.380E-01 | 0.383E+03 | 0.388E+03 | -0.475E+01 | -0.123E+01 |
| 24 | 0.320E-01 | 0.407E+03 | 0.405E+03 | 0.224E+01 | 0.553E+00 |
| 25 | 0.250E-01 | 0.433E+03 | 0.415E+03 | 0.179E+02 | 0.423E+01 |

MEAN PERCENT ERROR = 0.1269E+02
MAXIMUM PERCENT ERROR = 0.2918E+02

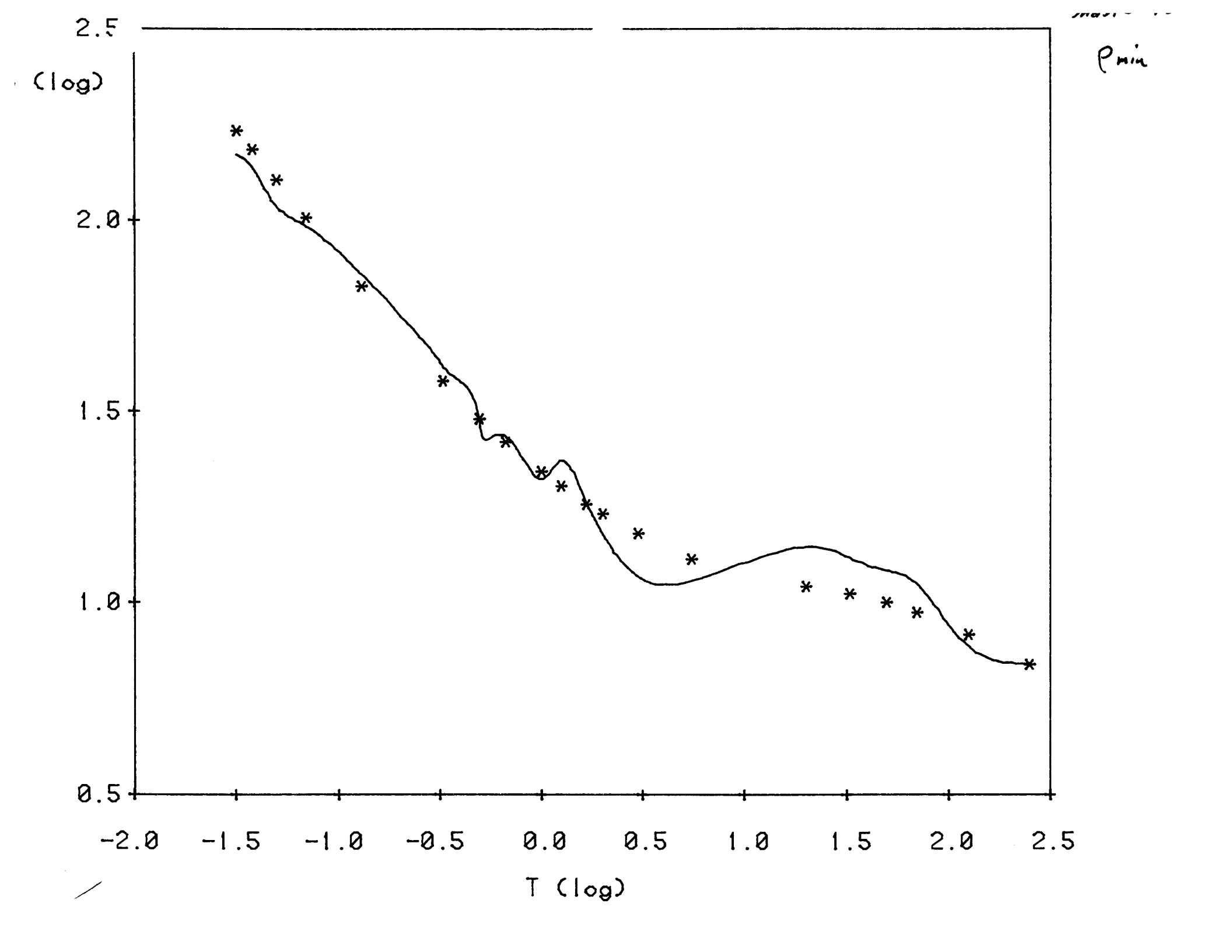

p (log)
2.5
2.0
1.5
1.0
0.5
0.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
T (log)

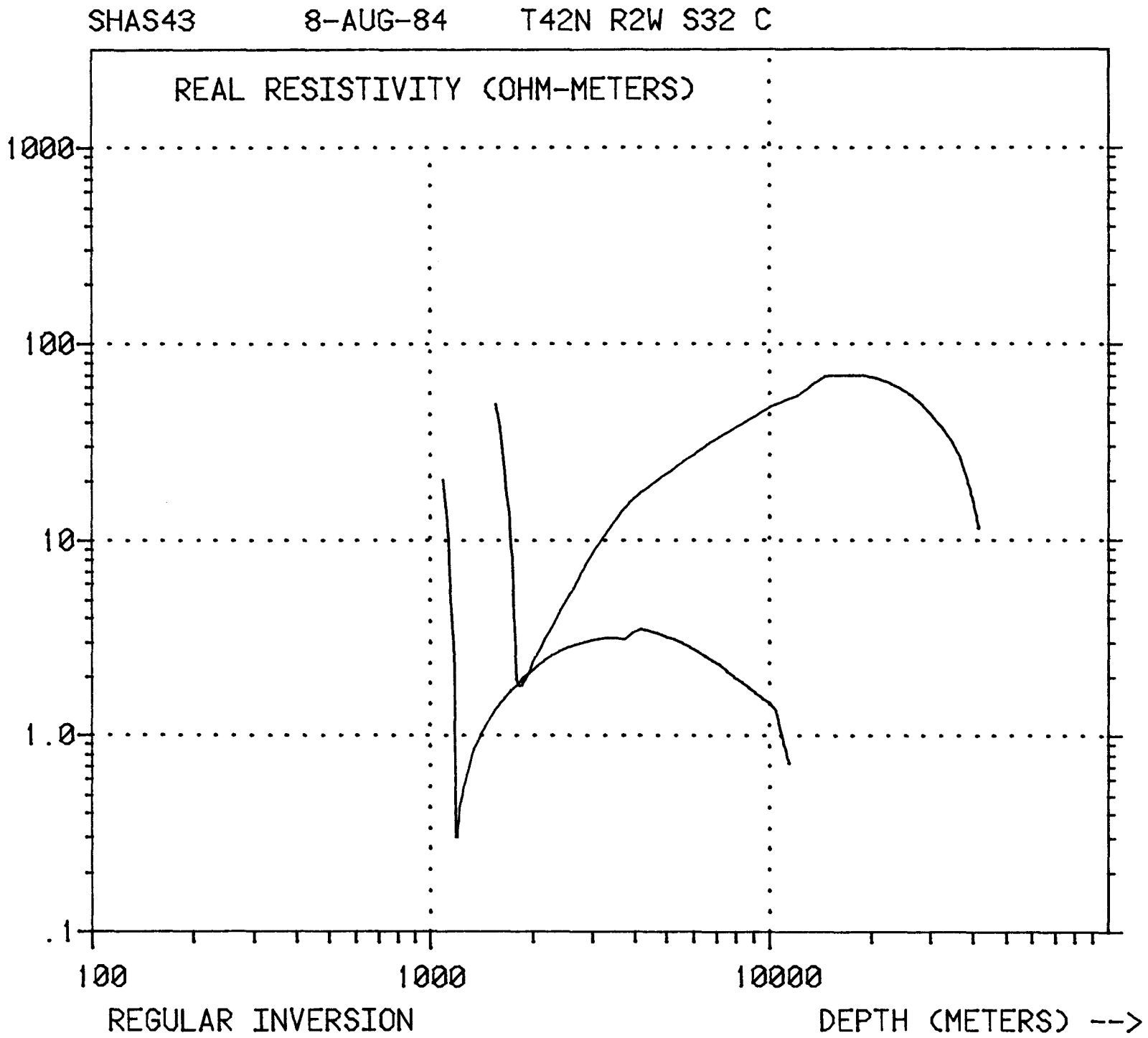

SHAS43 8-AUG-84 T42N R2W S32 C
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

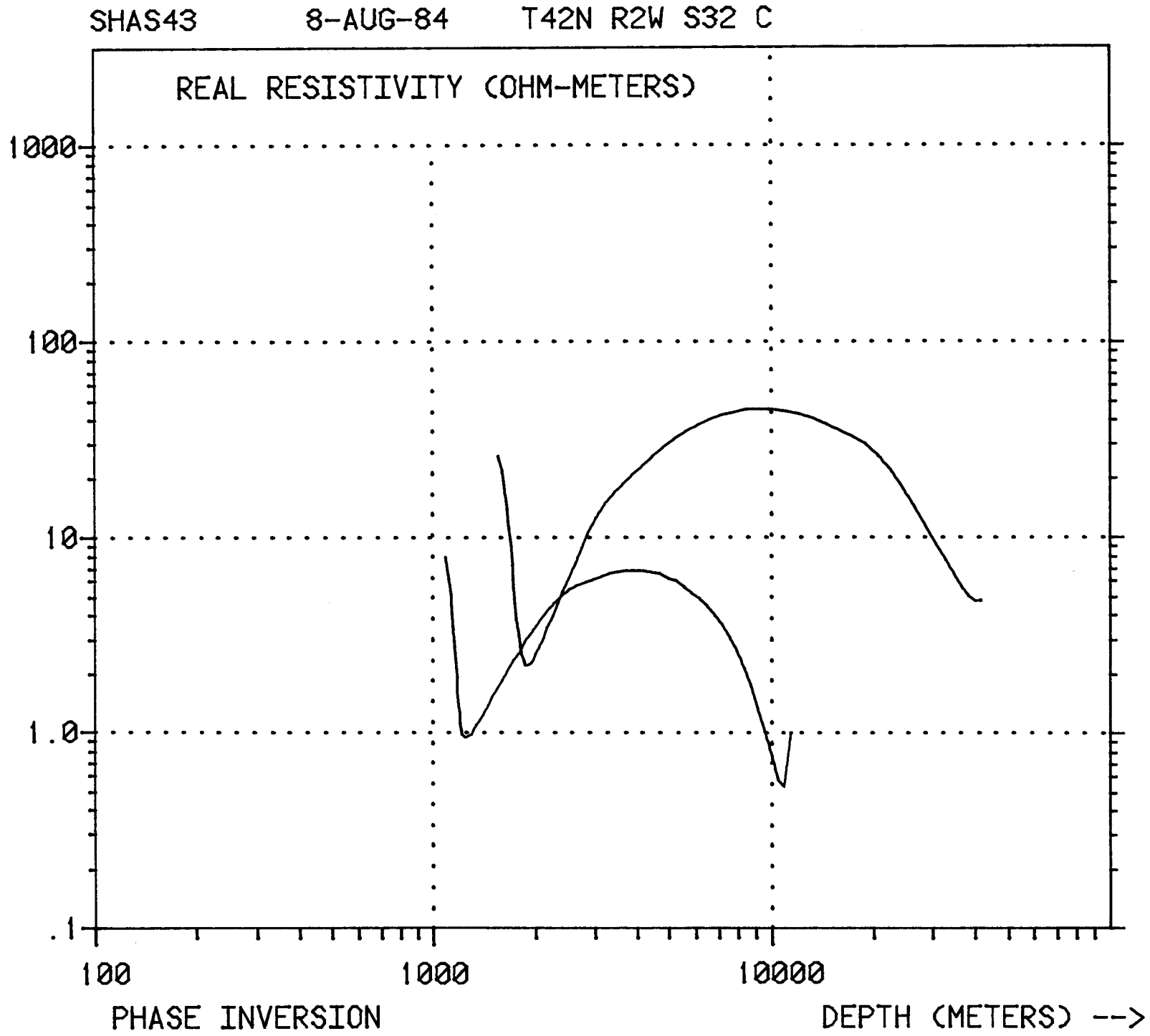
```
ILOW,IHIGH    1653    1693
IYCHCK    1926
IYCHCK    1553
IYCHCK    1179
IYCHCK     806
IYCHCK     432
IYCHCK      59
```




| | | | | | |
|---|---|---|---|---|---|
| Resistivity | 0301.35 | 0001.80 | 0008.67 | 0004.33 | 0000.13 |
| Thickness | | 1032.46 | 0381.61 | 0918.15 | 9823.75 |
| Depth | 0000.00 | 1032.46 | 1414.07 | 2332.22 | 12155.97 |


2.5
(log)
2.0
1.5
1.0
0.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)
ρmin


SHAS43 8-AUG-84 T42N R2W S32 C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS43 8-AUG-84 T42N R2W S32 C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

FILE SPEC IS: FLAG43 200 BR 8-AUG-84 2:27 PM: 332 C

BEAMS OF MERGED ANTENNA NUMBER: 0

| FREQUENCY | | HEAT OF MON | HEAT OF NONAM | PERIOD # | STORM OF MON | STORM OF NONAM |
|---|---|---|---|---|---|---|
| 0.0012 | : | 1.98 | 35.54 | 1 | 15.06 | 17.93 |
| 0.0020 | : | 3.20 | 34.35 | 2 | 10.40 | 7.50 |
| 0.0040 | : | 3.65 | 30.19 | 3 | 4.57 | 4.37 |
| 0.0080 | : | 3.39 | 47.05 | 4 | 3.43 | 2.07 |
| 0.0143 | : | 5.93 | 55.82 | 5 | 2.80 | 1.79 |
| 0.0200 | : | 6.69 | 56.36 | 6 | 2.10 | 0.68 |
| 0.0303 | : | 7.23 | 46.21 | 7 | 1.12 | 0.16 |
| 0.0500 | : | 7.93 | 33.79 | 8 | 0.31 | 0.01 |
| 0.1000 | : | 5.36 | 23.26 | 9 | 1.01 | 0.09 |
| 0.1818 | : | 6.56 | 18.19 | 10 | 0.07 | 0.01 |
| 0.3333 | : | 7.43 | 22.01 | 11 | 0.12 | 0.00 |
| 0.5000 | : | 11.00 | 18.05 | 12 | 0.09 | 0.00 |
| 0.5988 | : | 17.64 | 42.13 | 13 | 0.00 | 0.02 |
| 0.8000 | : | 15.27 | 47.88 | 14 | 0.00 | 0.02 |
| 1.0000 | : | 14.95 | 30.52 | 15 | 0.07 | 0.00 |
| 1.0000 | : | 17.80 | 33.92 | 16 | 0.15 | 0.02 |
| 1.2048 | : | 19.40 | 50.66 | 17 | 0.12 | 0.02 |
| 1.4925 | : | 18.25 | 52.17 | 18 | 0.15 | 0.02 |
| 2.0000 | : | 26.68 | 64.52 | 19 | 0.11 | 0.01 |
| 2.0000 | : | 22.32 | 56.33 | 20 | 0.05 | 0.00 |
| 2.0000 | : | 25.68 | 63.19 | 21 | 0.14 | 0.01 |
| 3.0303 | : | 32.37 | 75.39 | 22 | 0.01 | 0.00 |
| 3.0303 | : | 35.11 | 75.33 | 23 | 0.02 | 0.00 |
| 7.0525 | : | 80.20 | 179.39 | 24 | 0.46 | 0.00 |
| 14.2057 | : | 141.06 | 265.50 | 25 | 0.62 | 0.00 |
| 20.0000 | : | 175.42 | 328.32 | 26 | 0.34 | 0.00 |
| 26.3158 | : | 187.90 | 386.56 | 27 | 0.25 | 0.00 |
| 31.2500 | : | 206.33 | 425.83 | 28 | 0.09 | 0.00 |
| 40.0000 | : | 220.86 | 489.87 | 29 | 0.01 | 0.00 |

AVERAGE # 8
SHAS43 200 HZ 8-AUG-84 T42N R2W S32 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE | RHO MIN ( OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.422E+02 | 0.264E+01 | 57. | 17. | 30. | 0.1827 | 0.4821 | 0.6379 | 0.12 |
| H | SEC | 0.289E+02 | 0.131E+01 | 53. | 44. | 40. | 0.2107 | 0.5139 | 180.00 | 0.14 |
| E | 500.0 | 0.387E+02 | 0.364E+01 | 54. | 59. | 35. | 0.1025 | 0.5756 | 0.4236 | 0.06 |
| H | SEC | 0.310E+02 | 0.275E+01 | 49. | 71. | 36. | 0.1241 | 0.5176 | 180.00 | 0.08 |
| E | 250.0 | 0.397E+02 | 0.417E+01 | 62. | 76. | 36. | 0.1666 | 0.0909 | 0.3674 | 0.05 |
| H | SEC | 0.367E+02 | 0.313E+01 | 64. | 76. | 37. | 0.1269 | 0.1143 | 180.00 | 0.10 |
| E | 125.0 | 0.481E+02 | 0.378E+01 | 74. | 80. | 44. | 0.1130 | 0.0490 | 1.4868 | 0.08 |
| H | SEC | 0.460E+02 | 0.300E+01 | 76. | 80. | 42. | 0.0574 | 0.0721 | 180.00 | 0.10 |
| E | 70.0 | 0.541E+02 | 0.663E+01 | 83. | 10. | 42. | 0.2054 | 0.0463 | 0.2736 | 0.06 |
| H | SEC | 0.535E+02 | 0.523E+01 | 83. | 10. | 42. | 0.1129 | 0.0371 | 180.00 | 0.05 |
| E | 50.0 | 0.576E+02 | 0.752E+01 | 2. | 20. | 42. | 0.0485 | 0.0534 | 0.1399 | 0.10 |
| H | SEC | 0.552E+02 | 0.586E+01 | 2. | 20. | 42. | 0.1695 | 0.0573 | 180.00 | 0.08 |
| E | 33.0 | 0.470E+02 | 0.753E+01 | 16. | 34. | 42. | 0.0600 | 0.0599 | 0.1720 | 0.11 |
| H | SEC | 0.455E+02 | 0.694E+01 | 18. | 34. | 43. | 0.0332 | 0.0000 | 180.00 | 0.11 |
| E | 20.0 | 0.376E+02 | 0.953E+01 | 36. | 55. | 43. | 0.0182 | 0.0732 | 0.0361 | 0.11 |
| H | SEC | 0.300E+02 | 0.633E+01 | 40. | 52. | 45. | 0.0283 | 0.0255 | 135.20 | 0.16 |

AVERAGE # 8
SEAS43 200 HZ 8-AUG-84 T42N R2W S32 C
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

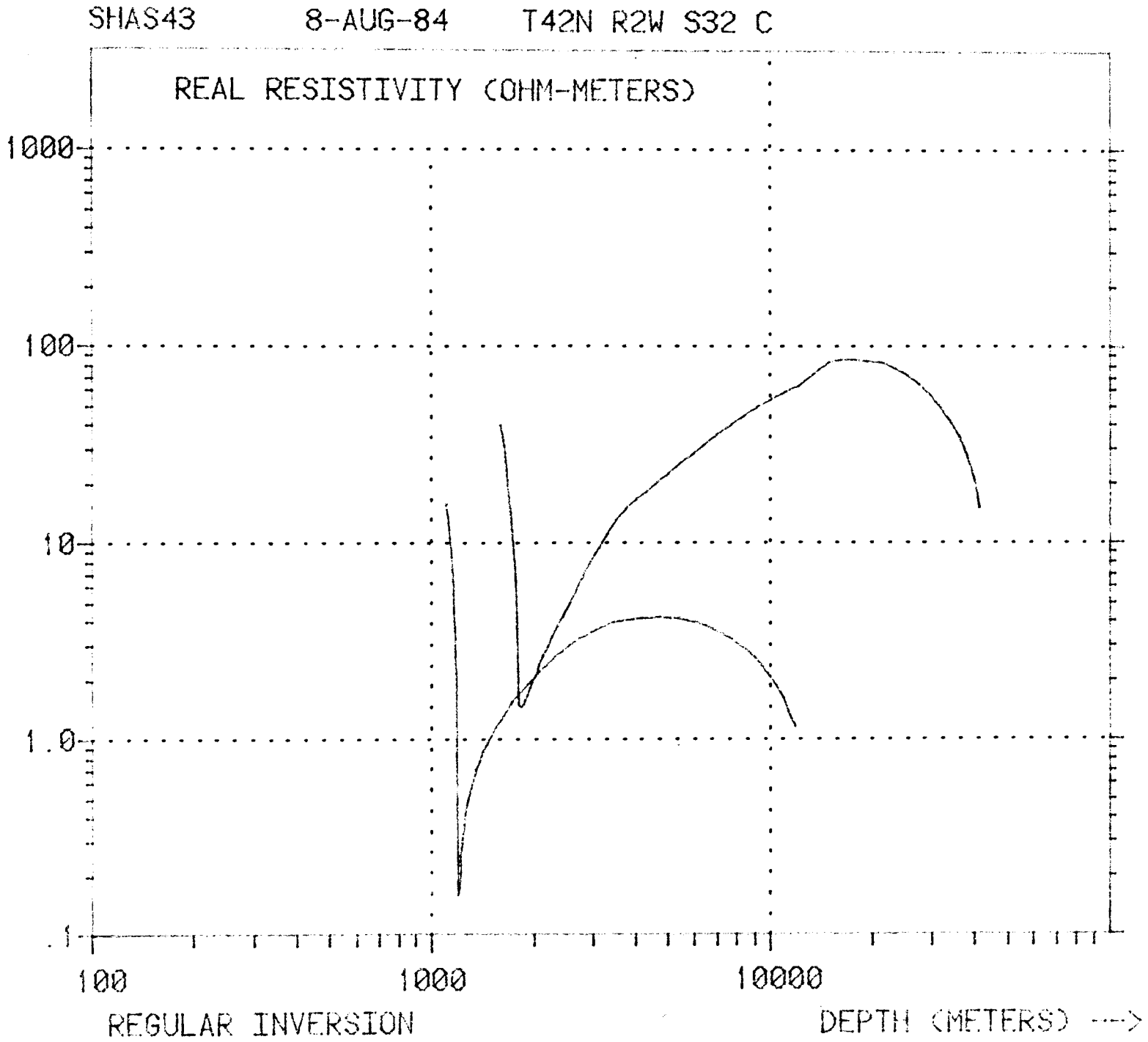
| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN VALUE ( OHM-M ) | PHI MAX (DEGREES) | PHI MIN (DEGREES) | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.237E+02 | 0.582E+01 | 64. | 88. | 46. | 0.0663 | 0.1023 | 0.0363 | 0.05 |
| H | SEC | 0.228E+02 | 0.491E+01 | 67. | 90. | 47. | 0.1479 | 0.0793 | 27.10 | 0.05 |
| E | 5.5 | 0.219E+02 | 0.844E+01 | 10. | 22. | 41. | 0.1307 | 0.0430 | 0.0232 | 0.14 |
| H | SEC | 0.145E+02 | 0.468E+01 | 19. | 12. | 67. | 0.0000 | 0.0222 | 150.20 | 0.11 |
| E | 3.0 | 0.274E+02 | 0.901E+01 | 39. | 34. | 14. | 0.1016 | 0.0537 | 0.0172 | 0.24 |
| H | SEC | 0.166E+02 | 0.585E+01 | 43. | 37. | 35. | 0.0862 | 0.0156 | 37.80 | 0.13 |
| E | 2.0 | 0.206E+02 | 0.139E+02 | 51. | 63. | 35. | 0.1111 | 0.0412 | 0.0104 | 0.03 |
| H | SEC | 0.155E+02 | 0.811E+01 | 60. | 63. | 48. | 0.0596 | 0.0499 | 102.90 | 0.05 |
| E | 1.7 | 0.523E+02 | 0.248E+02 | 70. | 70. | 49. | 0.1408 | 0.0189 | 0.0195 | 0.22 |
| H | SEC | 0.320E+02 | 0.105E+02 | 70. | 70. | 55. | 0.3067 | 0.0529 | 112.80 | 0.14 |
| E | 1.2 | 0.568E+02 | 0.180E+02 | 73. | 69. | 73. | 0.2719 | 0.0277 | 0.0048 | 0.15 |
| H | SEC | 0.390E+02 | 0.126E+02 | 75. | 70. | 67. | 0.0000 | 0.0844 | 104.60 | 0.14 |
| E | 1.0 | 0.323E+02 | 0.174E+02 | 61. | 73. | 46. | 0.0434 | 0.0726 | 0.0070 | 0.07 |
| H | HZ | 0.288E+02 | 0.125E+02 | 69. | 72. | 52. | 0.1102 | 0.0629 | 75.60 | 0.10 |

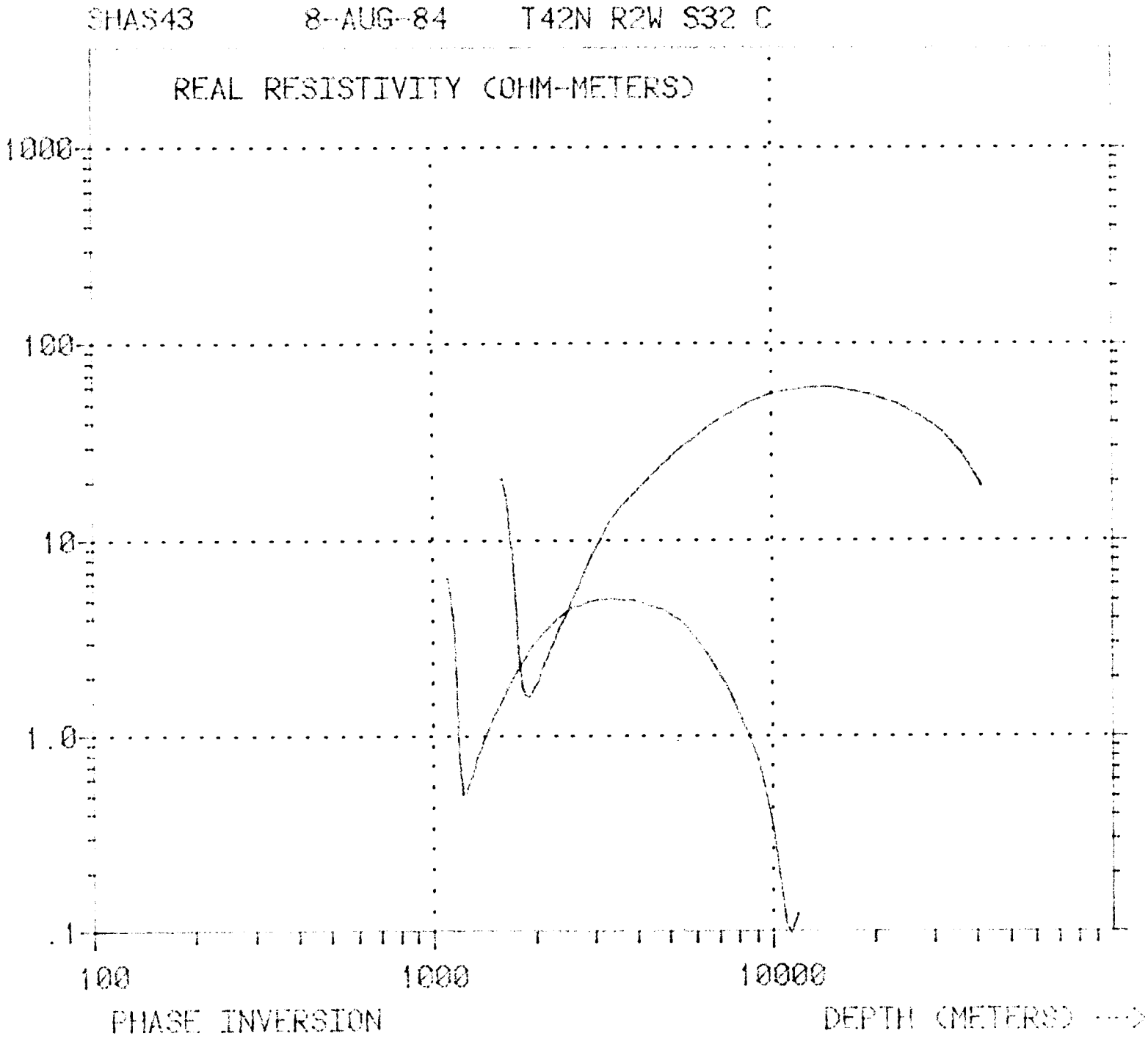
AVERAGE # 8
SHAS43 200 HZ 8-AUG-84 T42N R2W S32 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN VALUE ( OHM-M ) | PHI MAX (DEGREES) | PHI MIN (DEGREES) | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.360E+02 | 0.194E+02 | 71. | 66. | 50. | 0.4090 | 0.0373 | 0.0018 | 0.06 |
| H | HZ | 0.318E+02 | 0.164E+02 | 70. | 66. | 49. | 0.3210 | 0.0630 | 88.20 | 0.08 |
| E | 1.2 | 0.579E+02 | 0.217E+02 | 77. | 75. | 77. | 0.2527 | 0.0625 | 0.0033 | 0.12 |
| H | HZ | 0.434E+02 | 0.171E+02 | 75. | 75. | 65. | 0.3911 | 0.0532 | 82.80 | 0.11 |
| E | 1.5 | 0.560E+02 | 0.200E+02 | 75. | 77. | 58. | 0.3096 | 0.0652 | 0.0020 | 0.09 |
| H | HZ | 0.484E+02 | 0.165E+02 | 76. | 78. | 54. | 0.4618 | 0.0535 | 76.20 | 0.10 |
| E | 2.0 | 0.694E+02 | 0.316E+02 | 76. | 77. | 71. | 0.2177 | 0.1351 | 0.0040 | 0.12 |
| H | HZ | 0.597E+02 | 0.218E+02 | 77. | 78. | 61. | 0.5208 | 0.2060 | 180.00 | 0.12 |
| E | 2.0 | 0.596E+02 | 0.260E+02 | 72. | 77. | 52. | 0.0620 | 0.0472 | 0.0044 | 0.09 |
| H | HZ | 0.531E+02 | 0.187E+02 | 73. | 79. | 56. | 0.1124 | 0.0843 | 79.10 | 0.14 |
| E | 2.0 | 0.641E+02 | 0.270E+02 | 74. | 71. | 60. | 0.1318 | 0.0590 | 0.0044 | 0.09 |
| H | HZ | 0.623E+02 | 0.243E+02 | 76. | 71. | 61. | 0.6557 | 0.0622 | 180.00 | 0.10 |

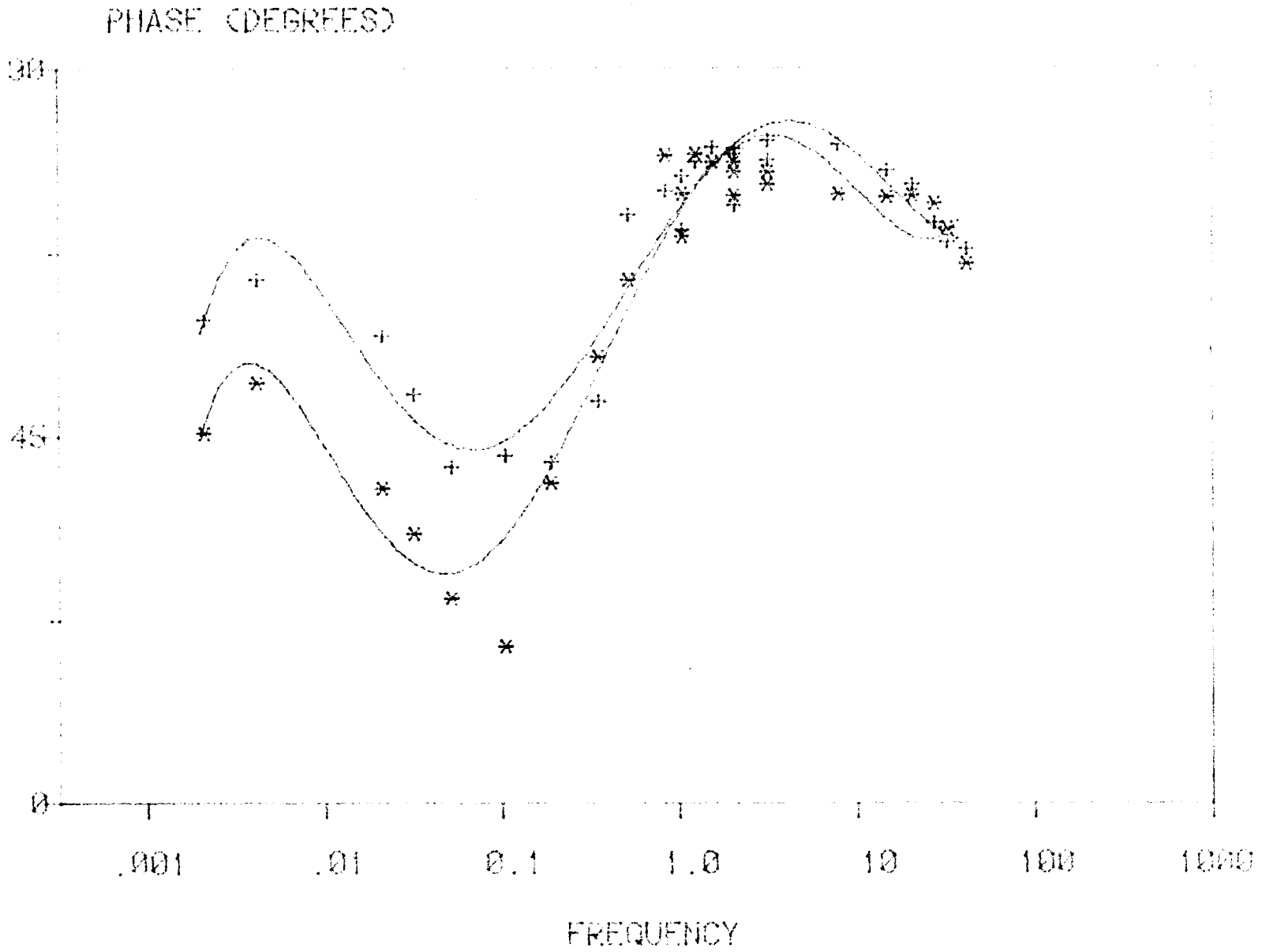
AVERAGE # 8
SHAS43 200 HZ 8-AUG-84 T42N R2W S32 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

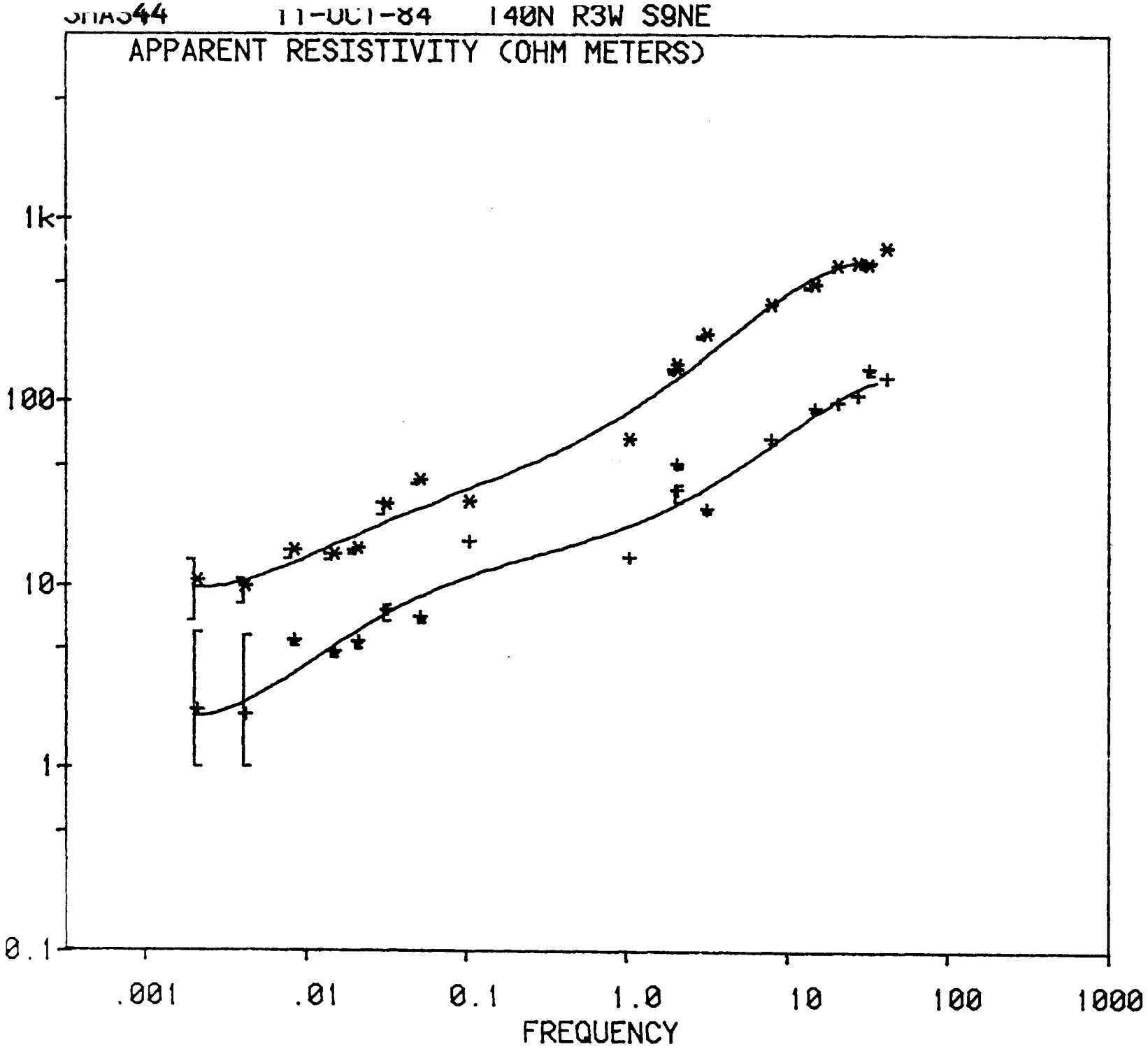
| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN VALUE ( OHM-M ) | PHI MAX (DEGREES) | PHI MIN (DEGREES) | STRIKE MIN (E OF N) | ETA X (X 100) | ETA Y (X 100) | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.777E+02 | 0.357E+02 | 74. | 77. | 52. | 0.0738 | 0.0264 | 0.0061 | 0.09 |
| H | HZ | 0.731E+02 | 0.290E+02 | 75. | 78. | 54. | 0.0000 | 0.0492 | 180.00 | 0.13 |
| E | 3.0 | 0.776E+02 | 0.392E+02 | 76. | 80. | 61. | 0.4173 | 0.1215 | 0.0069 | 0.10 |
| H | HZ | 0.731E+02 | 0.310E+02 | 76. | 80. | 64. | 0.3277 | 0.0420 | 180.00 | 0.15 |
| E | 7.7 | 0.182E+03 | 0.821E+02 | 75. | 79. | 59. | 0.5564 | 1.2717 | 0.0046 | 0.07 |
| H | HZ | 0.176E+03 | 0.783E+02 | 74. | 82. | 62. | 1.2223 | 0.9831 | 180.00 | 0.09 |
| E | 14.3 | 0.280E+03 | 0.143E+03 | 74. | 76. | 49. | 0.0000 | 1.4638 | 0.0054 | 0.03 |
| H | HZ | 0.251E+03 | 0.139E+03 | 75. | 79. | 46. | 0.0000 | 1.6425 | 180.00 | 0.08 |
| E | 20.0 | 0.354E+03 | 0.184E+03 | 74. | 73. | 50. | 2.0373 | 0.0000 | 0.0054 | 0.01 |
| H | HZ | 0.303E+03 | 0.167E+03 | 75. | 78. | 36. | 1.1910 | 1.7353 | 180.00 | 0.05 |
| E | 26.3 | 0.414E+03 | 0.216E+03 | 72. | 71. | 54. | 1.4475 | 1.6234 | 0.0214 | 0.03 |
| H | HZ | 0.359E+03 | 0.180E+03 | 75. | 72. | 49. | 0.4669 | 2.9415 | 176.10 | 0.07 |
| E | 31.2 | 0.459E+03 | 0.229E+03 | 70. | 69. | 57. | 1.1649 | 1.0278 | 0.0040 | 0.04 |
| H | HZ | 0.392E+03 | 0.184E+03 | 71. | 69. | 56. | 1.1359 | 1.8665 | 103.50 | 0.06 |
| E | 40.0 | 0.508E+03 | 0.243E+03 | 65. | 66. | 57. | 1.1052 | 2.0354 | 0.0112 | 0.04 |
| H | HZ | 0.472E+03 | 0.199E+03 | 67. | 70. | 61. | 0.5476 | 0.0000 | 144.90 | 0.11 |

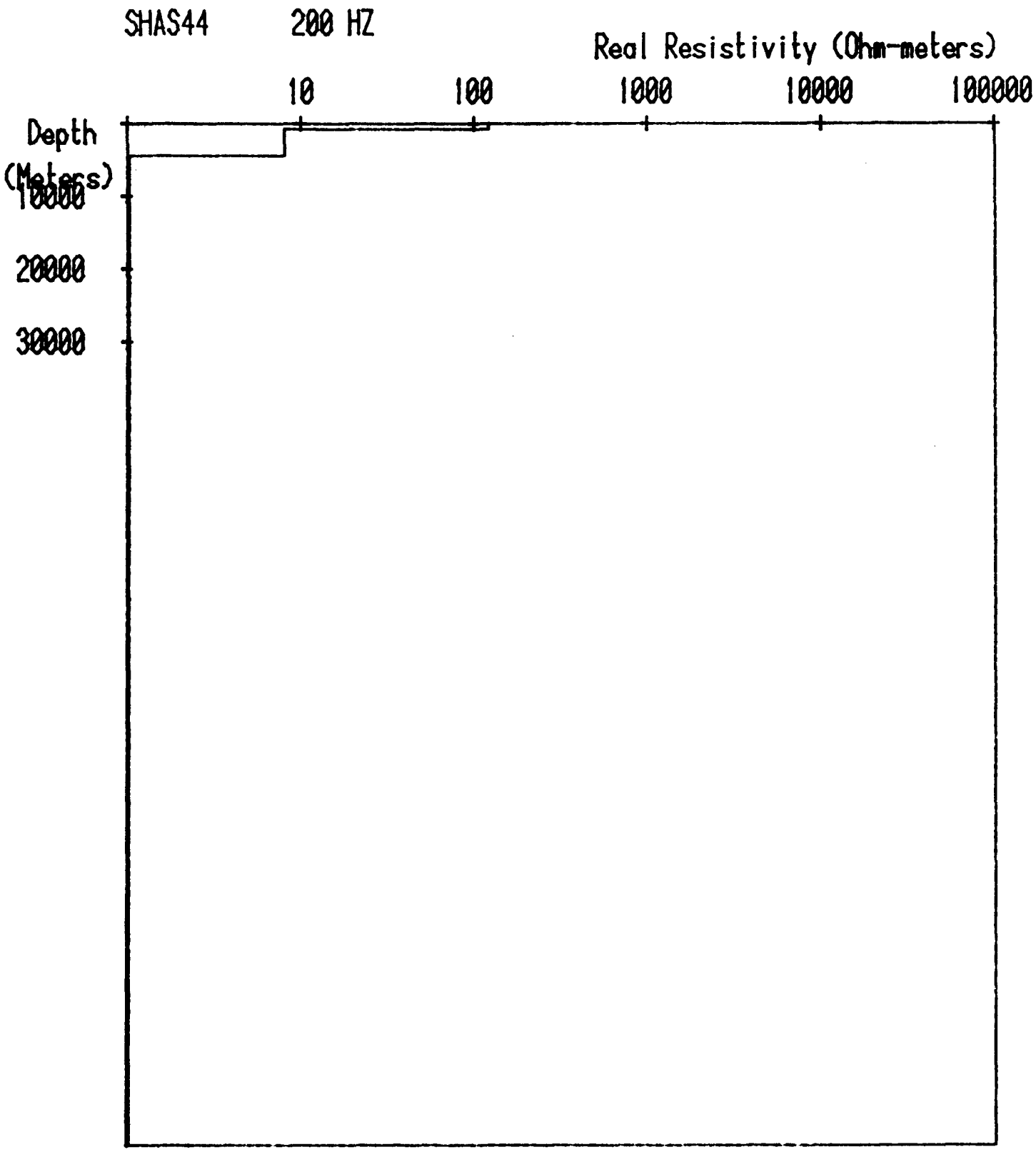

SHAS43 8-AUG-84 T42N R2W S32 C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) --->


SHAS43 8-AUG-84 T42N R2W S32 C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) --->

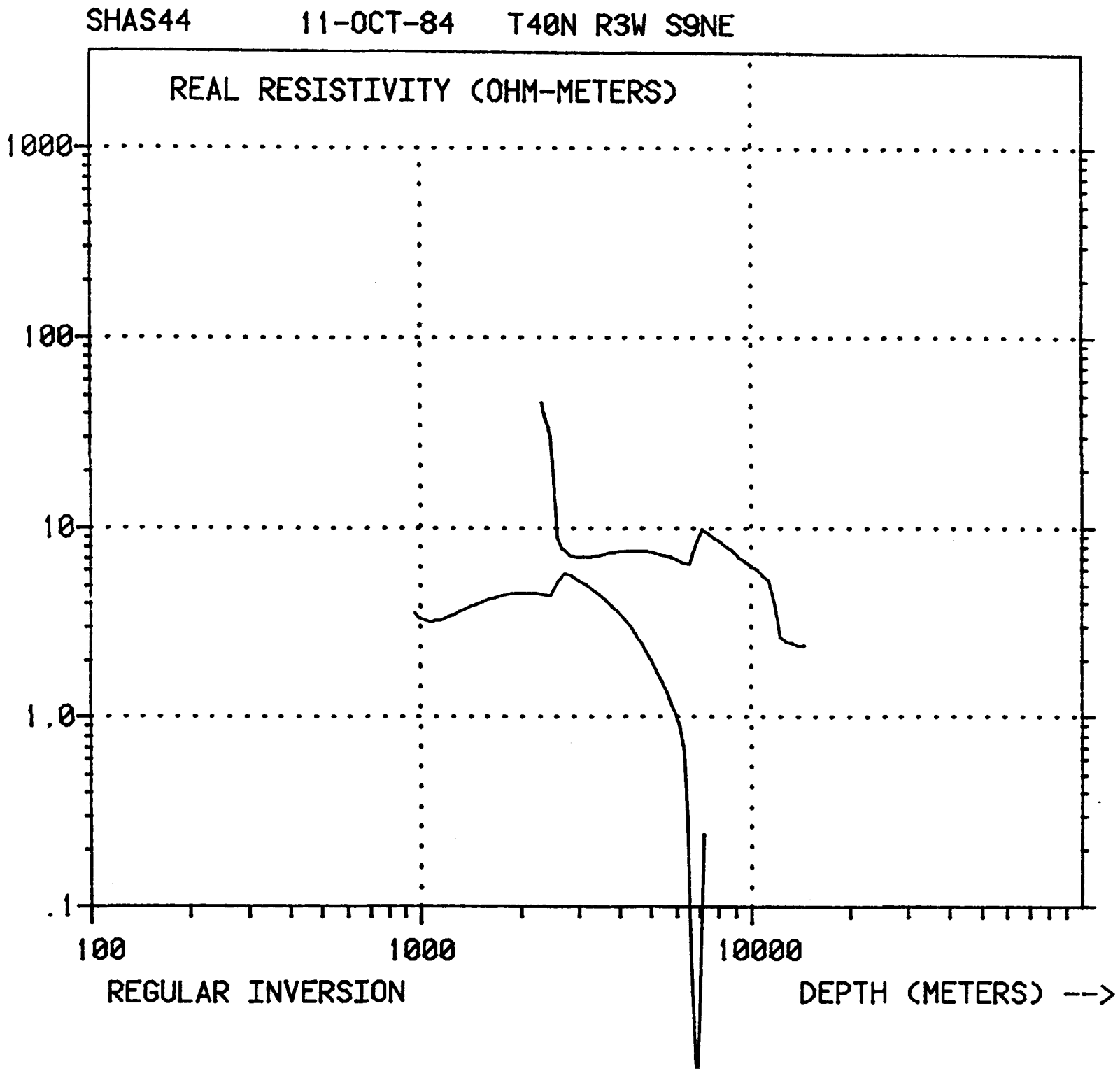
SHAS43 8-AUG-84 T42N R2W S32 C

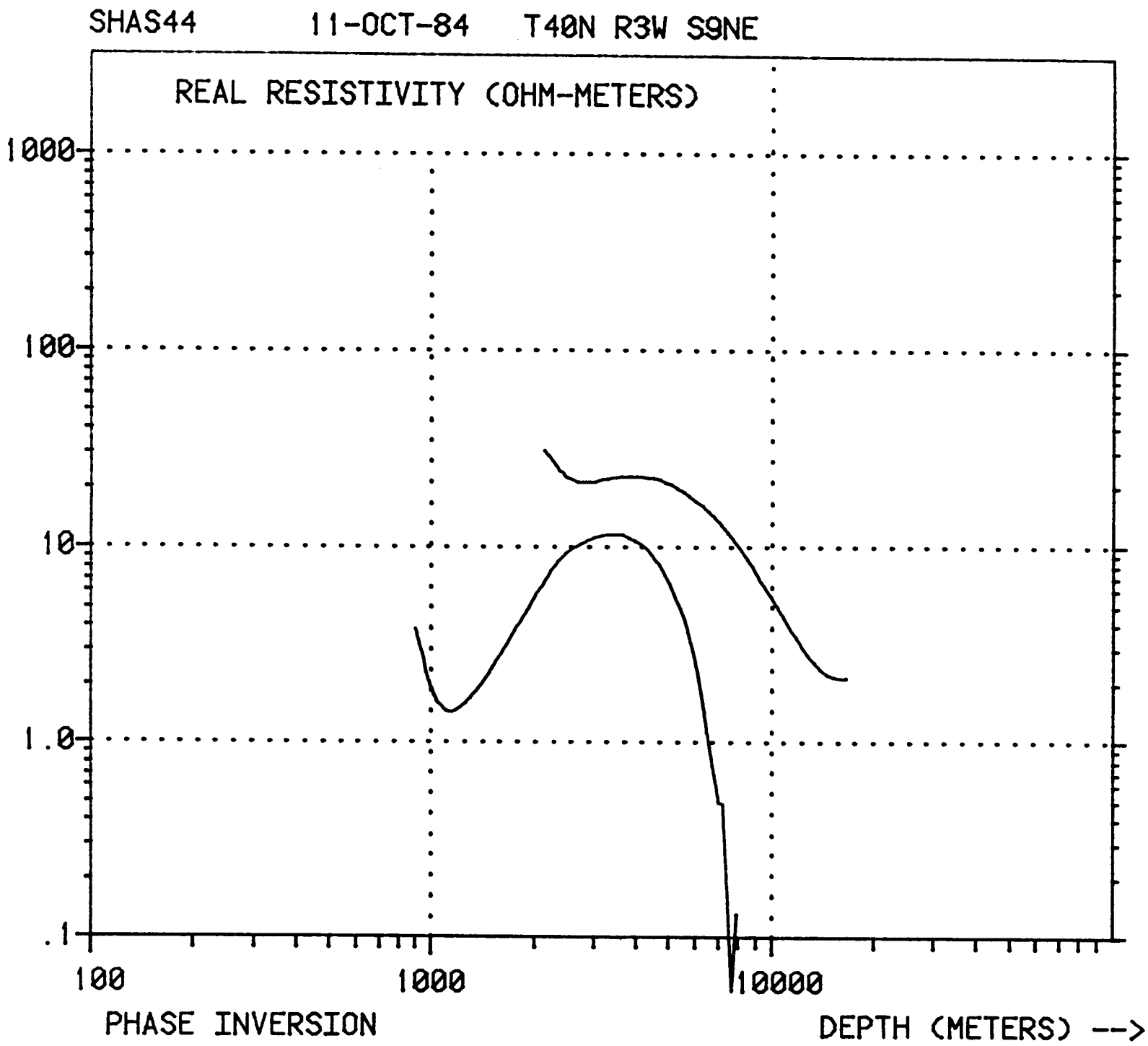



11-OCT-84 140N R3W S9NE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

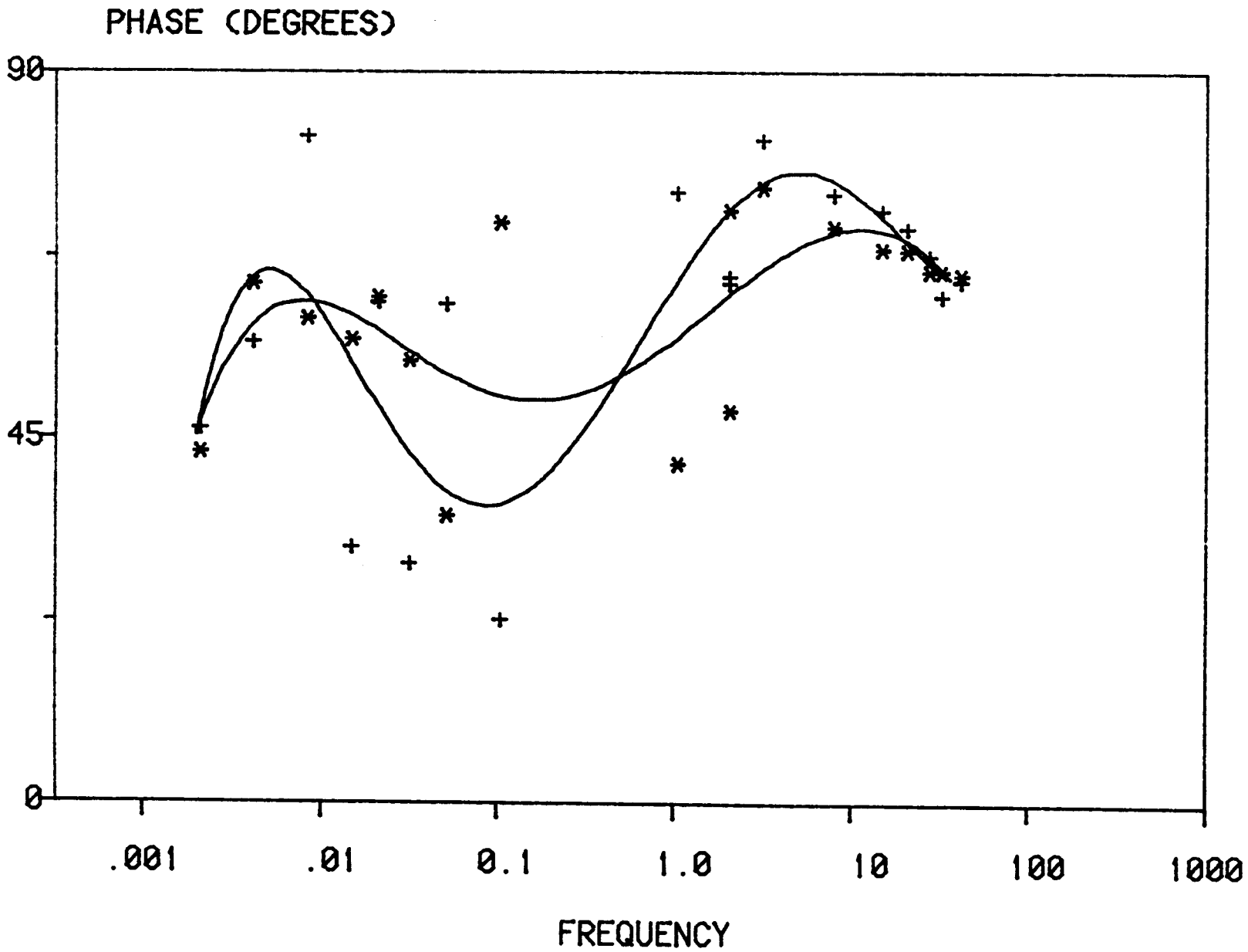



| | | | | |
|---|---|---|---|---|
| Resistivity | 123.17 | 8.06 | 1.02 | 2.28 |
| Thickness | | 760.94 | 3662.58 | 3486.50 |
| Depth | 0.00 | 760.94 | 4423.53 | 7910.00 |


SHAS44 11-OCT-84 T40N R3W S9NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS44
11-OCT-84
T40N R3W S9NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS44 11-OCT-84 T40N R3W S9NE



THE SITE IS: SHAS44 200 HZ 11-OCT-84 T40N R3W S9NE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 2.90 | 5.22 | 1 | 3.26 | 3.65 |
| 0.0020 | 2.43 | 9.09 | 2 | 3.77 | 1.40 |
| 0.0040 | 2.93 | 6.98 | 3 | 0.18 | 0.70 |
| 0.0080 | 5.94 | 11.99 | 4 | 0.14 | 0.48 |
| 0.0143 | 4.98 | 11.58 | 5 | 0.19 | 0.43 |
| 0.0200 | 5.68 | 11.22 | 6 | 0.80 | 1.55 |
| 0.0303 | 8.64 | 21.38 | 7 | 0.16 | 0.22 |
| 0.0500 | 6.33 | 34.25 | 8 | 0.01 | 0.04 |
| 0.1000 | 16.23 | 26.26 | 9 | 0.01 | 0.02 |
| 0.1818 | 0.00 | 0.00 | 10 | 3.77 | 1.40 |
| 0.3333 | 0.00 | 0.00 | 11 | 0.18 | 0.70 |
| 0.5000 | 0.00 | 0.00 | 12 | 0.14 | 0.48 |
| 0.5988 | 0.00 | 0.00 | 13 | 0.19 | 0.43 |
| 0.8000 | 0.00 | 0.00 | 14 | 0.80 | 1.55 |
| 1.0000 | 0.00 | 0.00 | 15 | 0.16 | 0.22 |
| 1.0000 | 16.09 | 52.77 | 16 | 0.01 | 0.09 |
| 1.2048 | 0.00 | 0.00 | 17 | 3.77 | 1.40 |
| 1.4925 | 0.00 | 0.00 | 18 | 0.18 | 0.70 |
| 2.0000 | 0.00 | 0.00 | 19 | 0.14 | 0.48 |
| 2.0000 | 73.60 | 85.41 | 20 | 0.01 | 0.01 |
| 2.0000 | 81.78 | 76.91 | 21 | 0.05 | 0.32 |
| 3.0303 | 36.46 | 188.79 | 22 | 0.00 | 0.01 |
| 5.0303 | 0.00 | 0.00 | 23 | 3.77 | 1.40 |
| 7.6923 | 79.27 | 269.73 | 24 | 0.01 | 0.12 |
| 14.2857 | 127.27 | 329.49 | 25 | 0.01 | 0.06 |
| 20.0000 | 153.79 | 392.69 | 26 | 0.01 | 0.02 |
| 26.3158 | 137.82 | 458.09 | 27 | 0.00 | 0.02 |
| 31.2500 | 176.01 | 462.13 | 28 | 0.00 | 0.01 |
| 40.0000 | 193.64 | 510.46 | 29 | 0.00 | 0.00 |

AVERAGE # 8

SHAS44 200 HZ 11-OCT-84 T40N R3W S9NE

NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.634E+01 | 0.300E+01 | 64. | 51. | 25. | 0.0016 | 0.0034 | 1.5092 | 0.06 |
| H | SEC | 0.410E+01 | 0.280E+01 | 9. | 56. | 25. | 0.0002 | 0.0007 | 125.40 | 0.05 |
| E | 500.0 | 0.980E+01 | 0.282E+01 | 39. | 55. | 25. | 0.0005 | 0.0016 | 1.2706 | 0.13 |
| H | SEC | 0.838E+01 | 0.204E+01 | 38. | 56. | 25. | 0.0003 | 0.0017 | 116.10 | 0.25 |
| E | 250.0 | 0.794E+01 | 0.283E+01 | 54. | 49. | 25. | 0.0001 | 0.0003 | 0.5448 | 0.14 |
| H | SEC | 0.602E+01 | 0.304E+01 | 66. | 79. | 25. | 0.0005 | 0.0009 | 86.60 | 0.22 |
| E | 125.0 | 0.167E+02 | 0.694E+01 | 63. | 79. | 25. | 0.0017 | 0.0006 | 0.3754 | 0.10 |
| H | SEC | 0.733E+01 | 0.494E+01 | 61. | 72. | 25. | 0.0000 | 0.0002 | 151.50 | 0.25 |
| E | 70.0 | 0.137E+02 | 0.646E+01 | 52. | 64. | 25. | 0.0016 | 0.0002 | 0.1845 | 0.04 |
| H | SEC | 0.942E+01 | 0.349E+01 | 67. | 75. | 25. | 0.0012 | 0.0006 | 170.50 | 0.23 |
| E | 50.0 | 0.192E+02 | 0.781E+01 | 48. | 59. | 25. | 0.0017 | 0.0008 | 0.0812 | 0.05 |
| H | SEC | 0.326E+01 | 0.355E+01 | 87. | 28. | 25. | 0.0030 | 0.0051 | 103.10 | 1.17 |
| E | 33.0 | 0.369E+02 | 0.915E+01 | 51. | 57. | 25. | 0.0010 | 0.0003 | 0.1308 | 0.08 |
| H | SEC | 0.586E+01 | 0.812E+01 | 34. | 43. | 25. | 0.0010 | 0.0005 | 122.50 | 0.18 |
| E | 20.0 | 0.509E+02 | 0.727E+01 | 44. | 60. | 25. | 0.0004 | 0.0001 | 0.1399 | 0.23 |
| H | SEC | 0.176E+02 | 0.538E+01 | 29. | 61. | 25. | 0.0009 | 0.0002 | 103.20 | 0.09 |

AVERAGE # 8

SHAS44 200 HZ 11-OCT-84 T40N R3W S9NE

NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.242E+02 | 0.132E+02 | 71. | 23. | 25. | 0.0000 | 0.0002 | 0.1712 | 1.02 |
| H | SEC | 0.283E+02 | 0.192E+02 | 72. | 23. | 25. | 0.0002 | 0.0017 | 145.50 | 1.42 |
| E | 5.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.7 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |

AVERAGE # 8

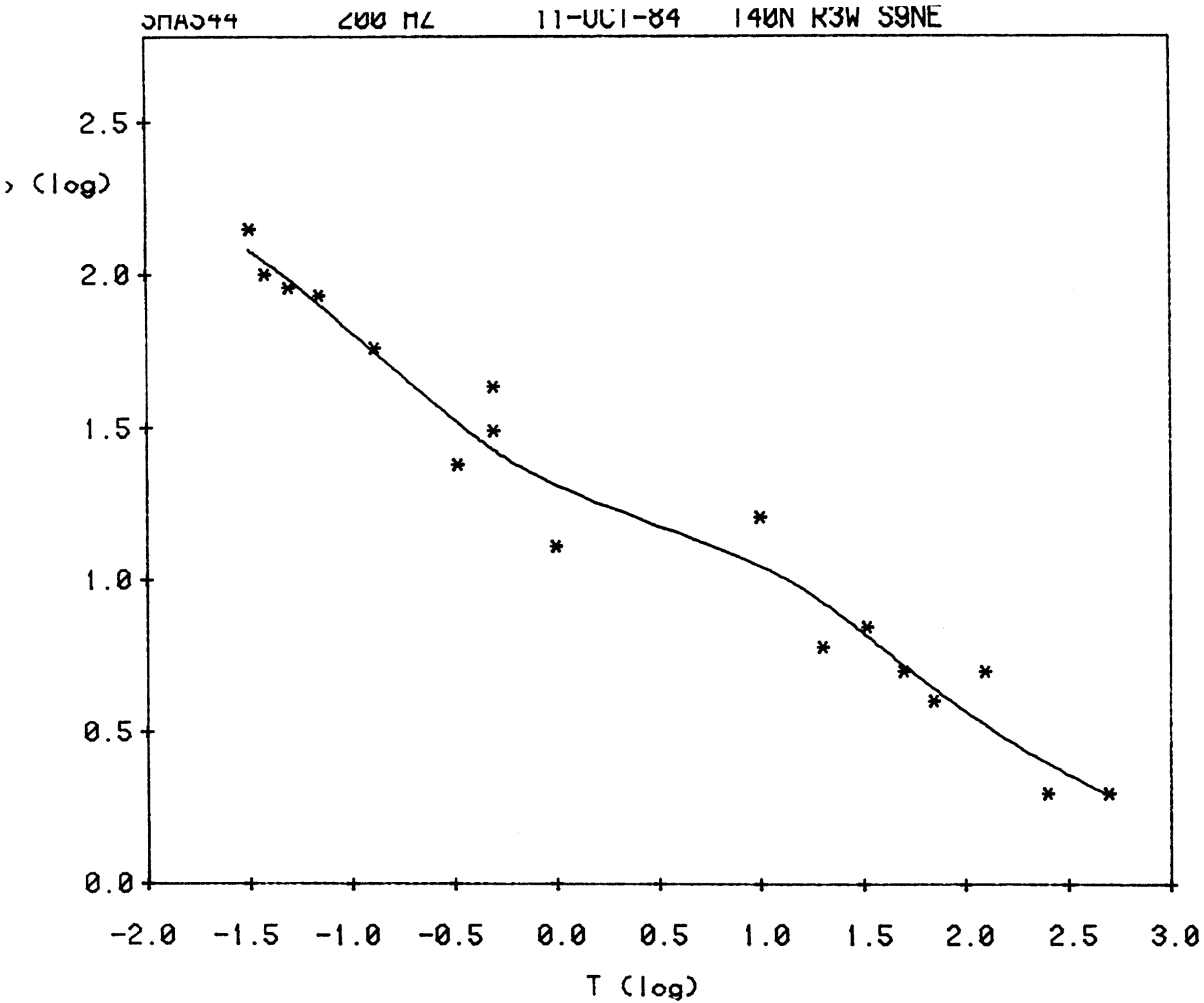
SHAS44 200 HZ 11-OCT-84 T40N R3W S9NE

NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.509E+02 | 0.167E+02 | 84. | 78. | 25. | 0.0008 | 0.0003 | 0.0027 | 0.22 |
| H | HZ | 0.547E+02 | 0.155E+02 | 2. | 72. | 25. | 0.0070 | 0.0022 | 133.60 | 0.19 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.132E+03 | 0.340E+02 | 77. | 76. | 25. | 0.0002 | 0.0001 | 0.0034 | 0.17 |
| H | HZ | 0.391E+02 | 0.113E+03 | 43. | 71. | 25. | 0.0024 | 0.0008 | 153.60 | 1.02 |
| E | 2.0 | 0.104E+03 | 0.316E+02 | 76. | 72. | 25. | 0.0006 | 0.0001 | 0.0016 | 0.15 |
| H | HZ | 0.499E+02 | 0.132E+03 | 85. | 4. | 25. | 0.0234 | 0.0101 | 144.90 | 0.74 |

AVERAGE # 8
SHAS44 200 HZ 11-OCT-84 T40N R3W S9NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.176E+03 | 0.429E+02 | 79. | 83. | 25. | 0.0006 | 0.0000 | 0.0028 | 0.16 |
| H | HZ | 0.202E+03 | 0.301E+02 | 68. | 90. | 25. | 0.0014 | 0.0002 | 97.60 | 0.18 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 7.7 | 0.252E+03 | 0.845E+02 | 72. | 75. | 25. | 0.0053 | 0.0002 | 0.0106 | 0.16 |
| H | HZ | 0.288E+03 | 0.741E+02 | 69. | 76. | 25. | 0.0110 | 0.0034 | 40.50 | 0.04 |
| E | 14.3 | 0.315E+03 | 0.129E+03 | 68. | 75. | 25. | 0.0052 | 0.0018 | 0.0195 | 0.19 |
| H | HZ | 0.344E+03 | 0.125E+03 | 70. | 69. | 25. | 0.0257 | 0.0055 | 12.50 | 0.13 |
| E | 20.0 | 0.391E+03 | 0.158E+03 | 67. | 75. | 25. | 0.0009 | 0.0015 | 0.0061 | 0.16 |
| H | HZ | 0.395E+03 | 0.150E+03 | 65. | 74. | 25. | 0.0016 | 0.0014 | 1.80 | 0.16 |
| E | 26.3 | 0.447E+03 | 0.151E+03 | 66. | 69. | 25. | 0.0033 | 0.0024 | 0.0125 | 0.15 |
| H | HZ | 0.469E+03 | 0.124E+03 | 64. | 69. | 25. | 0.0040 | 0.0032 | -1.50 | 0.07 |
| E | 31.2 | 0.472E+03 | 0.192E+03 | 65. | 69. | 25. | 0.0025 | 0.0038 | 0.0176 | 0.15 |
| H | HZ | 0.452E+03 | 0.160E+03 | 65. | 58. | 25. | 0.0067 | 0.0049 | 0.00 | 0.04 |
| E | 40.0 | 0.490E+03 | 0.220E+03 | 63. | 69. | 25. | 0.0035 | 0.0025 | 0.0248 | 0.13 |
| H | HZ | 0.531E+03 | 0.168E+03 | 68. | 59. | 25. | 0.0058 | 0.0019 | 8.40 | 0.11 |


SMA544 200 HZ 11-OCT-84 140N R3W S9NE
2.5
2.0
1.5
1.0
0.5
0.0
(log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
T (log)

SHAS44 200 HZ 11-OCT-84 T40N R3W S9NE

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 18
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 20.0000 | | 0.0000 |
| | | 1000.0000 | |
| 2 | 2.0000 | | 1000.0000 |
| | | 1000.0000 | |
| 3 | 11.0000 | | 2000.0000 |
| | | 9000.0000 | |
| 4 | 1.0000 | | 11000.0000 |

FREQUENCY RANGE ( 0.0020 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 123.1782 | | 0.0000 |
| | | 760.9454 | |
| 2 | 8.0664 | | 760.9454 |
| | | 3662.5893 | |
| 3 | 1.0260 | | 4423.5347 |
| | | ********** | |
| 4 | 2.2889 | | ********** |

MEAN PERCENT VARIATION IS 23.8836

ERROR ANALYSIS

R-SQUARED = 0.999

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 17 | 36592.500 | 2152.500 | 0.353 |
| MODEL | 6 | 36547.442 | 6091.240 | 65256.706 |
| RESID | 11 | 1.027 | 0.093 | |

STANDARD ERROR = 0.306

DTEST FOR MEANS = 0.000

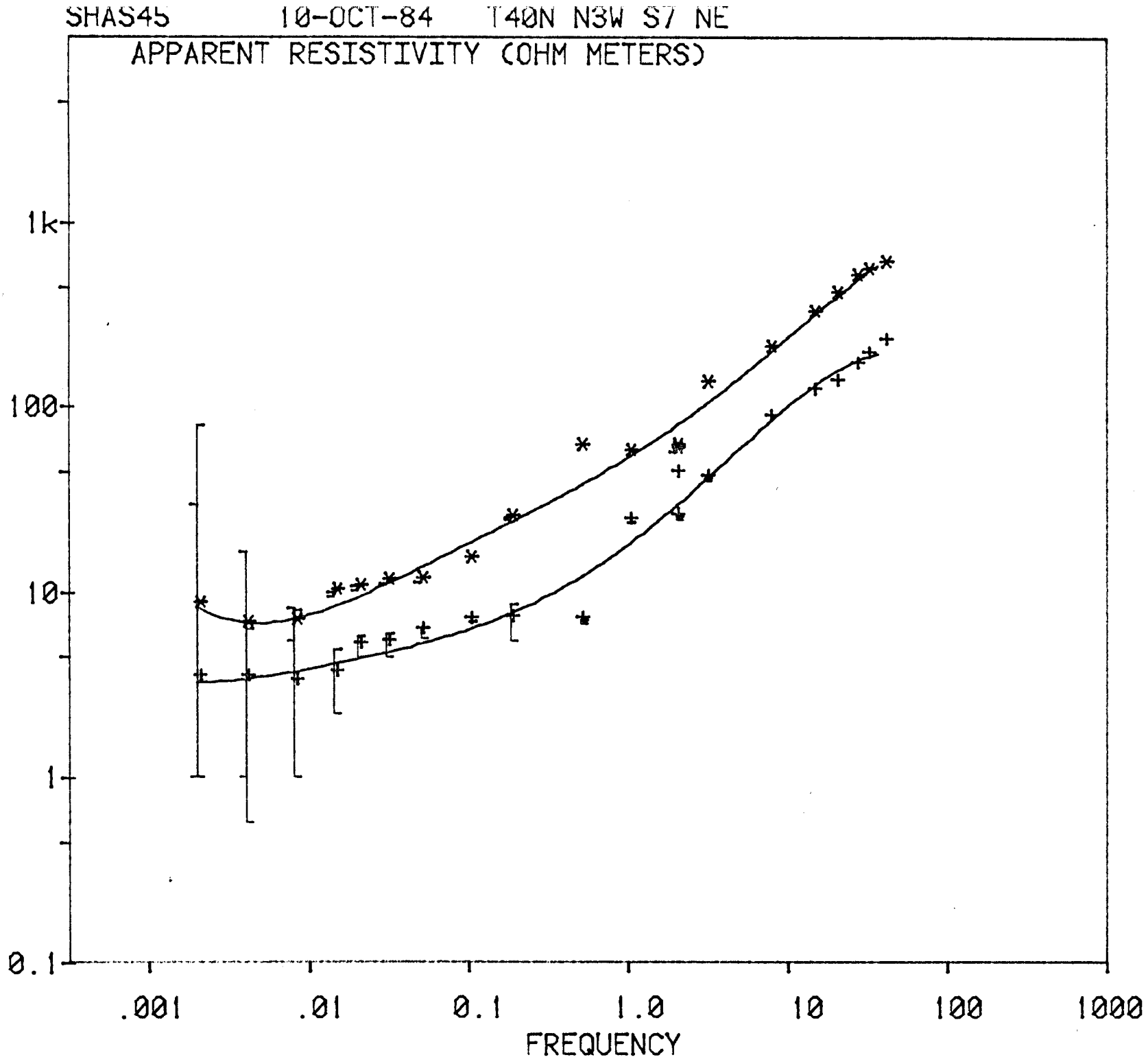
NOISE TO SIGNAL RATIO = 0.391 PERCENT

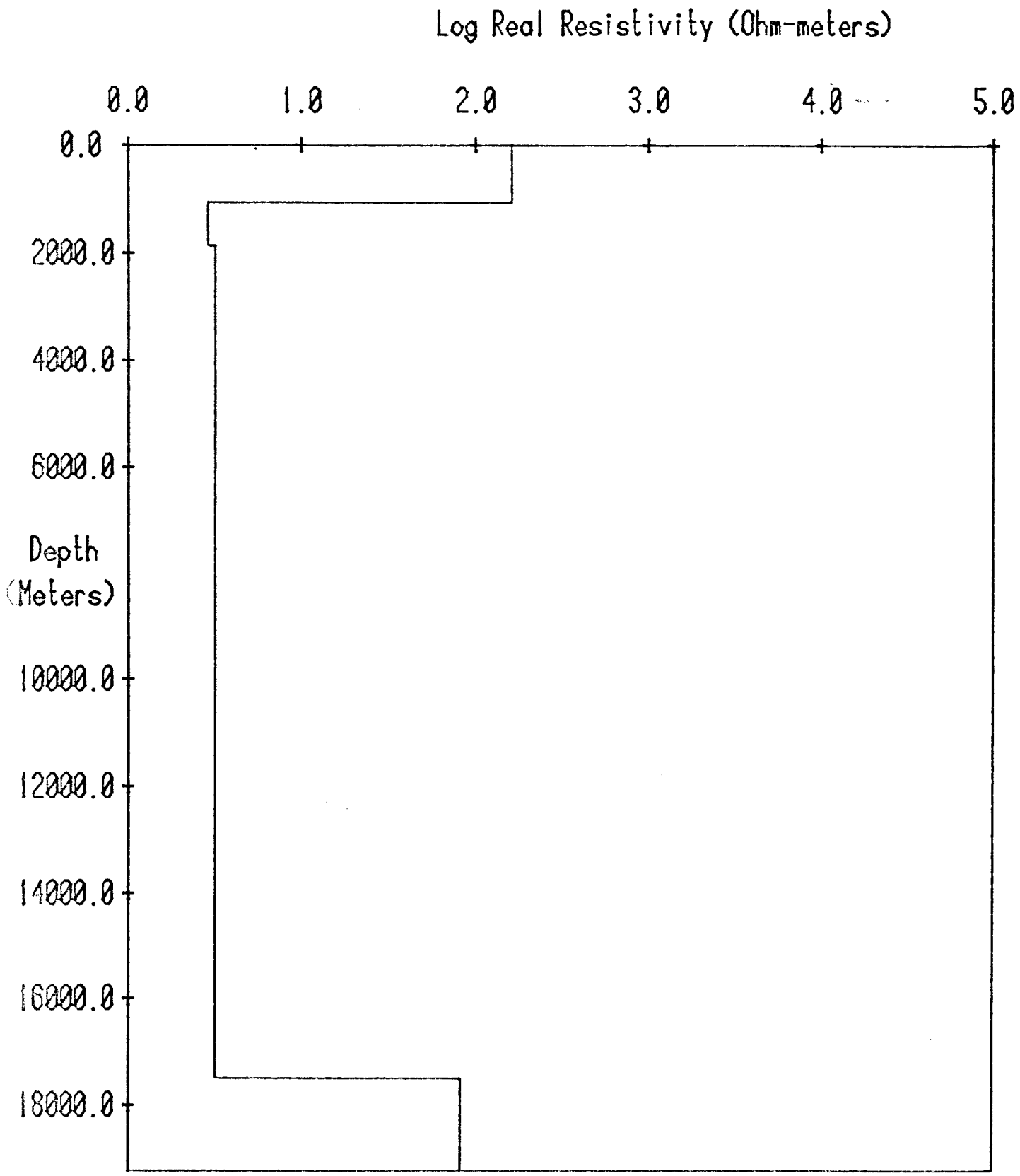
SHAS44 200 HZ 11-OCT-84 T40N R3W S9NE

ERROR STRUCTURE OF FITTED MODEL

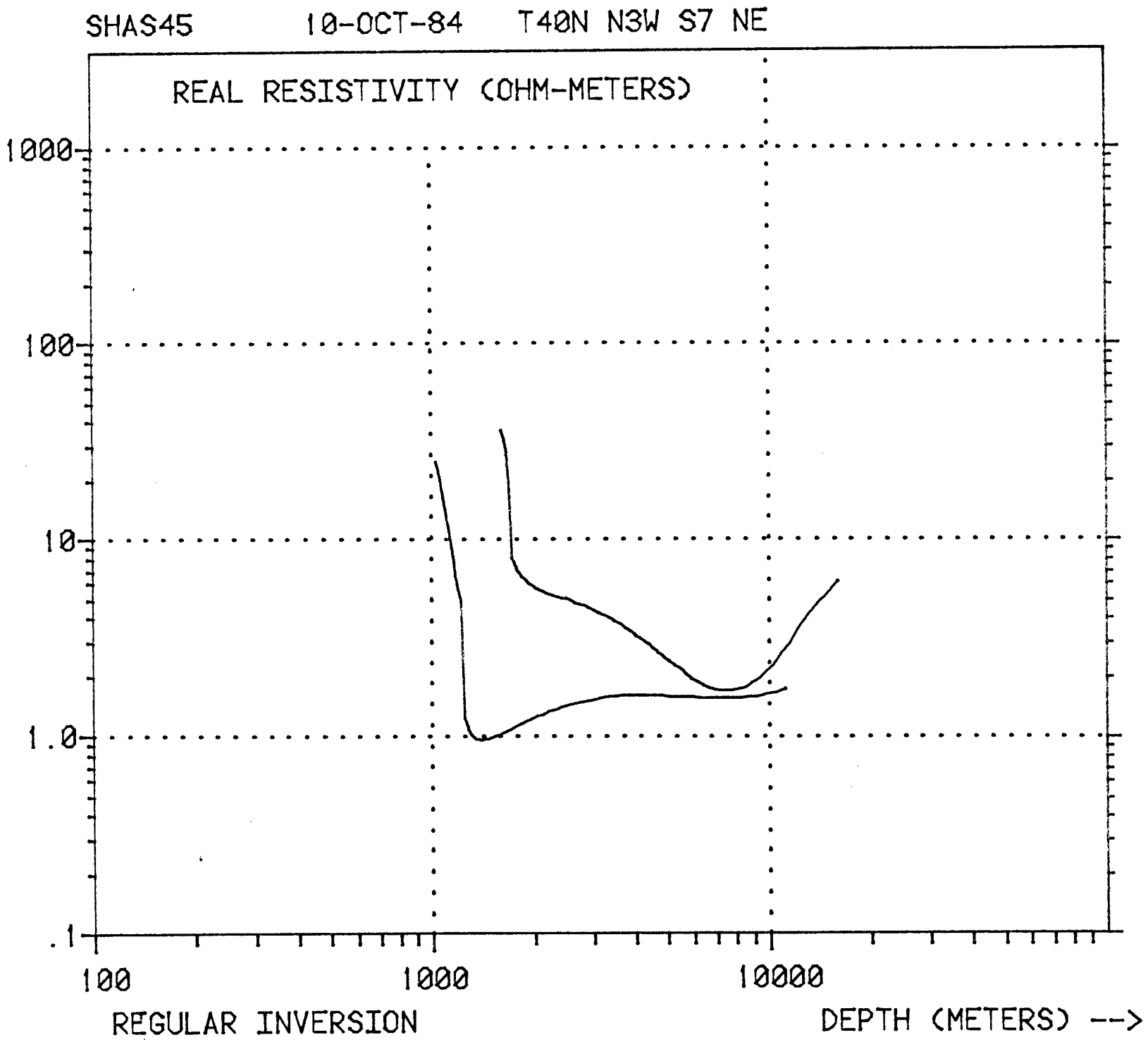
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 500.000 | 2.000 | 1.970 | 0.030 | 1.509 |
| 2 | 250.000 | 2.000 | 2.485 | -0.485 | -21.639 |
| 3 | 125.000 | 5.000 | 3.319 | 1.681 | 40.412 |
| 4 | 70.000 | 4.000 | 4.401 | -0.401 | -9.539 |
| 5 | 50.000 | 5.000 | 5.249 | -0.249 | -4.864 |
| 6 | 33.000 | 7.000 | 6.568 | 0.432 | 6.370 |
| 7 | 20.000 | 6.000 | 8.561 | -2.561 | -35.174 |
| 8 | 10.000 | 16.000 | 11.669 | 4.331 | 31.305 |
| 9 | 1.000 | 13.000 | 19.783 | -6.783 | -41.379 |
| 10 | 0.500 | 31.000 | 26.801 | 4.199 | 14.528 |
| 11 | 0.500 | 43.000 | 26.801 | 16.199 | 46.414 |
| 12 | 0.330 | 24.000 | 32.992 | -8.992 | -31.556 |
| 13 | 0.130 | 58.000 | 55.863 | 2.137 | 3.753 |
| 14 | 0.070 | 85.000 | 80.662 | 4.338 | 5.237 |
| 15 | 0.050 | 91.000 | 97.312 | -6.312 | -6.704 |
| 16 | 0.038 | 100.000 | 111.582 | -11.582 | -10.948 |
| 17 | 0.032 | 141.000 | 120.227 | 20.773 | 15.904 |
| 18 | 0.025 | 126.000 | 131.256 | -5.256 | -4.086 |

MEAN PERCENT ERROR = 23.6278
MAXIMUM PERCENT ERROR = 46.4140
MAX. ERROR OCCURED AT OBSERVATION 11


SHAS45 10-OCT-84 T40N N3W S7 NE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY




| | | | | |
|---|---|---|---|---|
| Resistivity | 0161.21 | 0002.89 | 0003.18 | 0081.42 |
| Thickness | | 1054.54 | 0817.65 | 15623.64 |
| Depth | 0000.00 | 1054.54 | 1872.19 | 17495.83 |


SHAS45 10-OCT-84 T40N N3W S7 NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->

THE SITE IS: SHAS45 200 HZ 10-OCT-84 T40N R3W S7 NE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMIN | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| ~~0.0012~~ | ~~4.51~~ | ~~6.02~~ | ~~1~~ | ~~74.49~~ | ~~20.38~~ |
| 0.0020 | 3.35 | 8.25 | 2 | 2.80 | 9.69 |
| 0.0040 | 3.37 | 6.51 | 3 | 4.65 | 1.35 |
| 0.0080 | 3.15 | 6.68 | 4 | 1.33 | 0.29 |
| 0.0143 | 3.51 | 9.59 | 5 | 0.64 | 0.25 |
| 0.0200 | 5.02 | 10.23 | 6 | 0.77 | 0.10 |
| 0.0303 | 5.15 | 10.94 | 7 | 0.39 | 0.05 |
| 0.0500 | 5.97 | 11.12 | 8 | 0.05 | 0.01 |
| 0.1000 | 6.80 | 14.44 | 9 | 1.56 | 0.12 |
| 0.1818 | 6.92 | 24.19 | 10 | 0.09 | 0.00 |
| ~~0.3333~~ | ~~50.16~~ | ~~112.81~~ | ~~11~~ | ~~0.09~~ | ~~0.00~~ |
| 0.5000 | 6.81 | 58.34 | 12 | 0.05 | 0.01 |
| ~~0.5988~~ | ~~0.00~~ | ~~0.00~~ | ~~13~~ | ~~0.64~~ | ~~0.25~~ |
| ~~0.8000~~ | ~~0.00~~ | ~~0.00~~ | ~~14~~ | ~~0.77~~ | ~~0.10~~ |
| 1.0000 | 23.15 | 53.81 | 15 | 0.00 | 0.00 |
| ~~1.0006~~ | ~~11.99~~ | ~~71.47~~ | ~~16~~ | 0.13 | 0.01 |
| ~~1.2048~~ | ~~0.00~~ | ~~0.00~~ | ~~17~~ | 0.09 | 0.00 |
| ~~1.4925~~ | ~~0.00~~ | ~~0.00~~ | ~~18~~ | 0.09 | 0.00 |
| ~~2.0000~~ | ~~0.00~~ | ~~0.00~~ | ~~19~~ | 0.05 | 0.01 |
| 2.0000 | 41.73 | 57.82 | 20 | 0.01 | 0.00 |
| 2.0000 | 24.49 | 56.05 | 21 | 0.07 | 0.00 |
| 3.0303 | 39.33 | 128.36 | 22 | 0.00 | 0.00 |
| ~~3.0303~~ | ~~0.00~~ | ~~0.00~~ | ~~23~~ | 0.09 | 0.00 |
| 7.6923 | 84.22 | 197.99 | 24 | 0.01 | 0.00 |
| 14.2857 | 117.68 | 309.06 | 25 | 0.03 | 0.00 |
| 20.0000 | 130.69 | 392.50 | 26 | 0.03 | 0.00 |
| 26.3158 | 161.93 | 489.38 | 27 | 0.02 | 0.00 |
| 31.2500 | 185.16 | 523.11 | 28 | 0.03 | 0.00 |
| 40.0000 | 216.35 | 576.45 | 29 | 0.01 | 0.00 |

SHAS45 200 HZ 10-OCT-84 T40N 13W S7 NE

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 21
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2000E+03 | | 0.0000E+00 |
| | | 0.1000E+04 | |
| 2 | 0.2000E+01 | | 0.1000E+04 |
| | | 0.8000E+03 | |
| 3 | 0.4000E+01 | | 0.1800E+04 |
| | | 0.9000E+04 | |
| 4 | 0.9000E+01 | | 0.1080E+05 |

FREQUENCY RANGE ( 0.2000E-02 , 0.4000E+02 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.1612E+03 | | 0.0000E+00 |
| | | 0.1055E+04 | |
| 2 | 0.2891E+01 | | 0.1055E+04 |
| | | 0.8177E+03 | |
| 3 | 0.3189E+01 | | 0.1872E+04 |
| | | 0.1562E+05 | |
| 4 | 0.8142E+02 | | 0.1750E+05 |

MEAN PERCENT VARIATION IS 0.1840E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 20 | 0.998E+05 | 0.499E+04 | 0.300E+00 |
| MODEL | 6 | 0.997E+05 | 0.166E+05 | 0.327E+05 |
| RESID | 14 | 0.711E+00 | 0.508E-01 | |

STANDARD ERROR = 0.225E+00

DTEST FOR MEANS =-0.594E-05

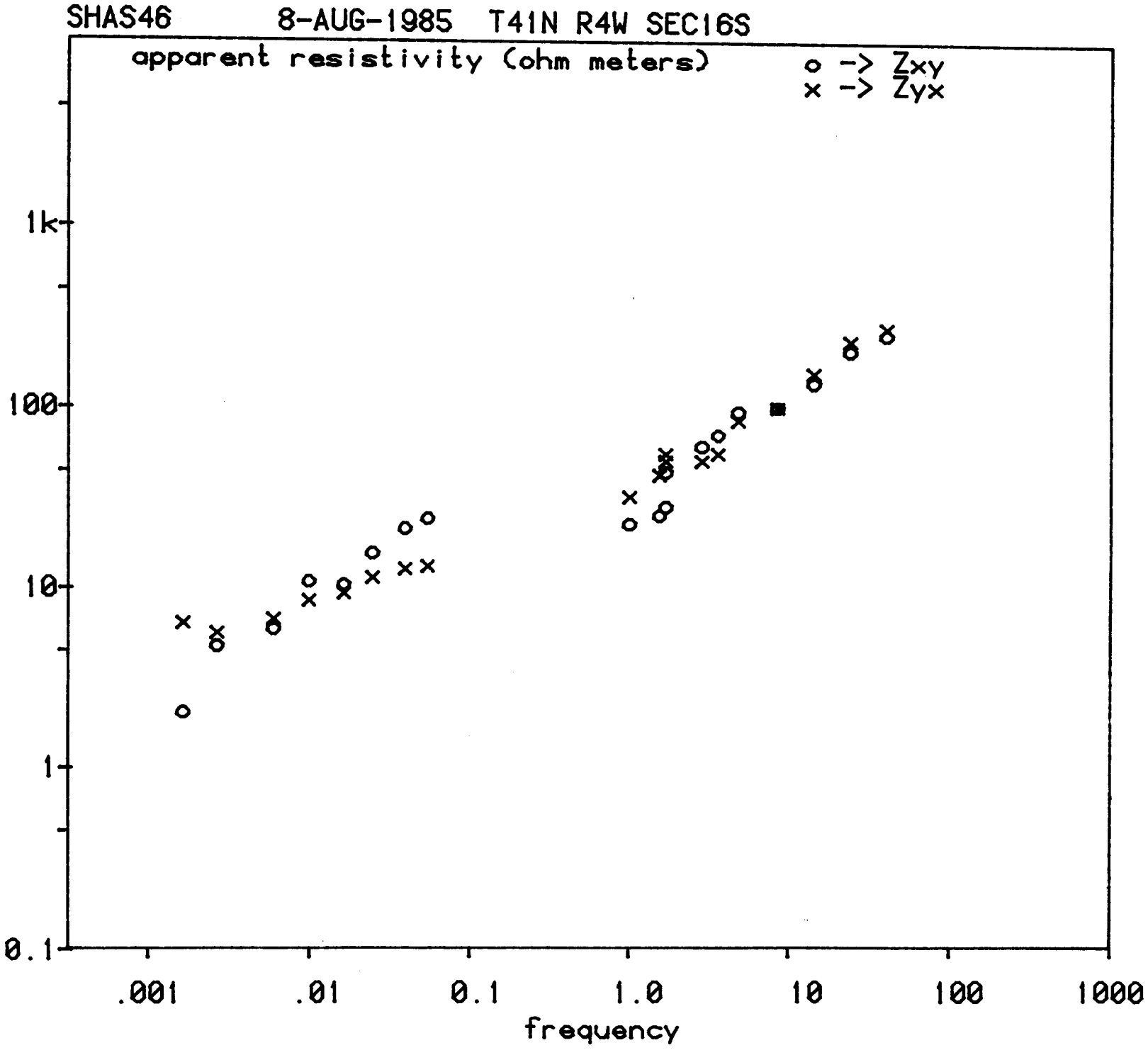
NOISE TO SIGNAL RATIO = 0.175E+00 PERCENT

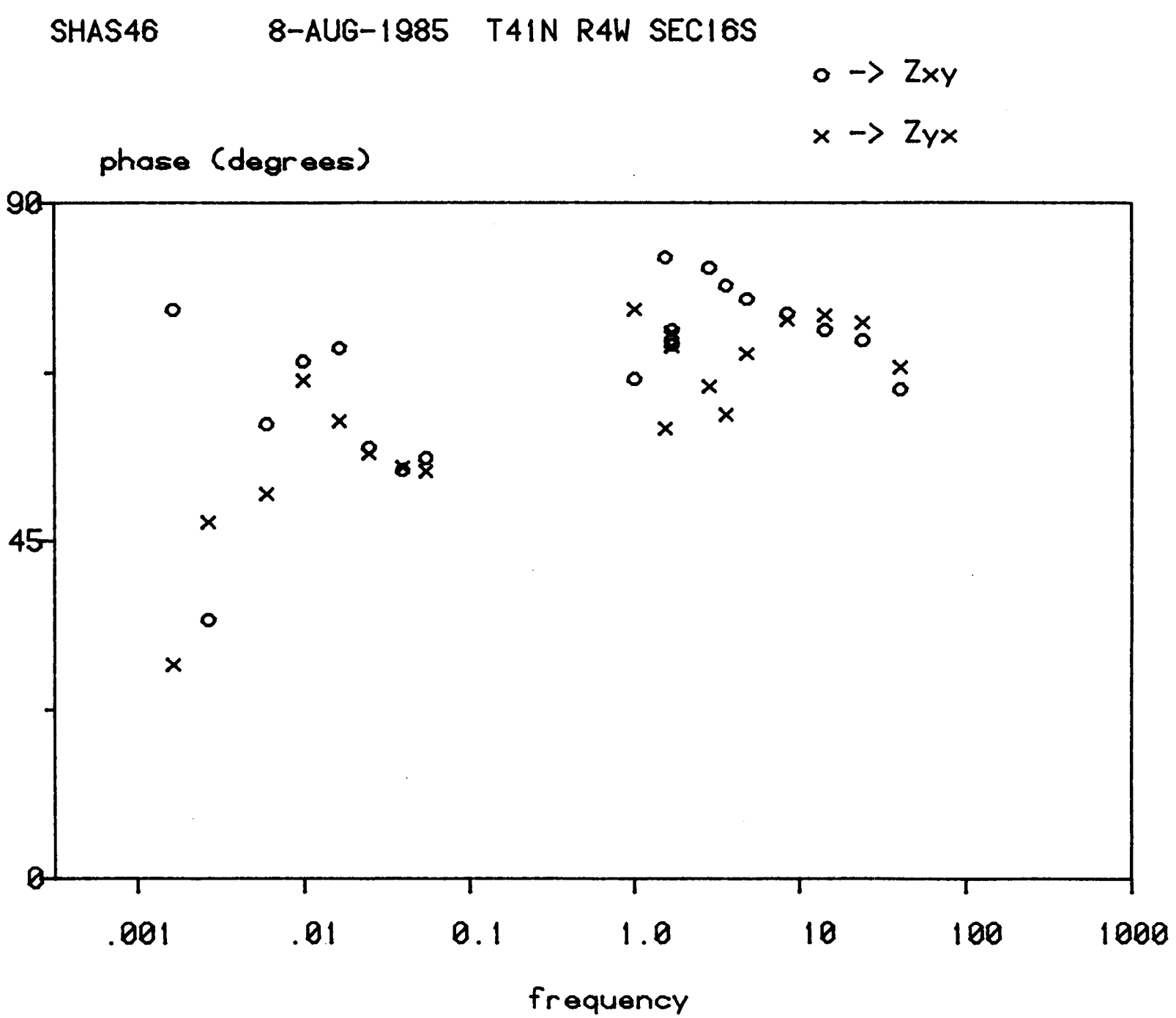
SHAS45 200 HZ 10-OCT-84 T40N N3W S7 NE

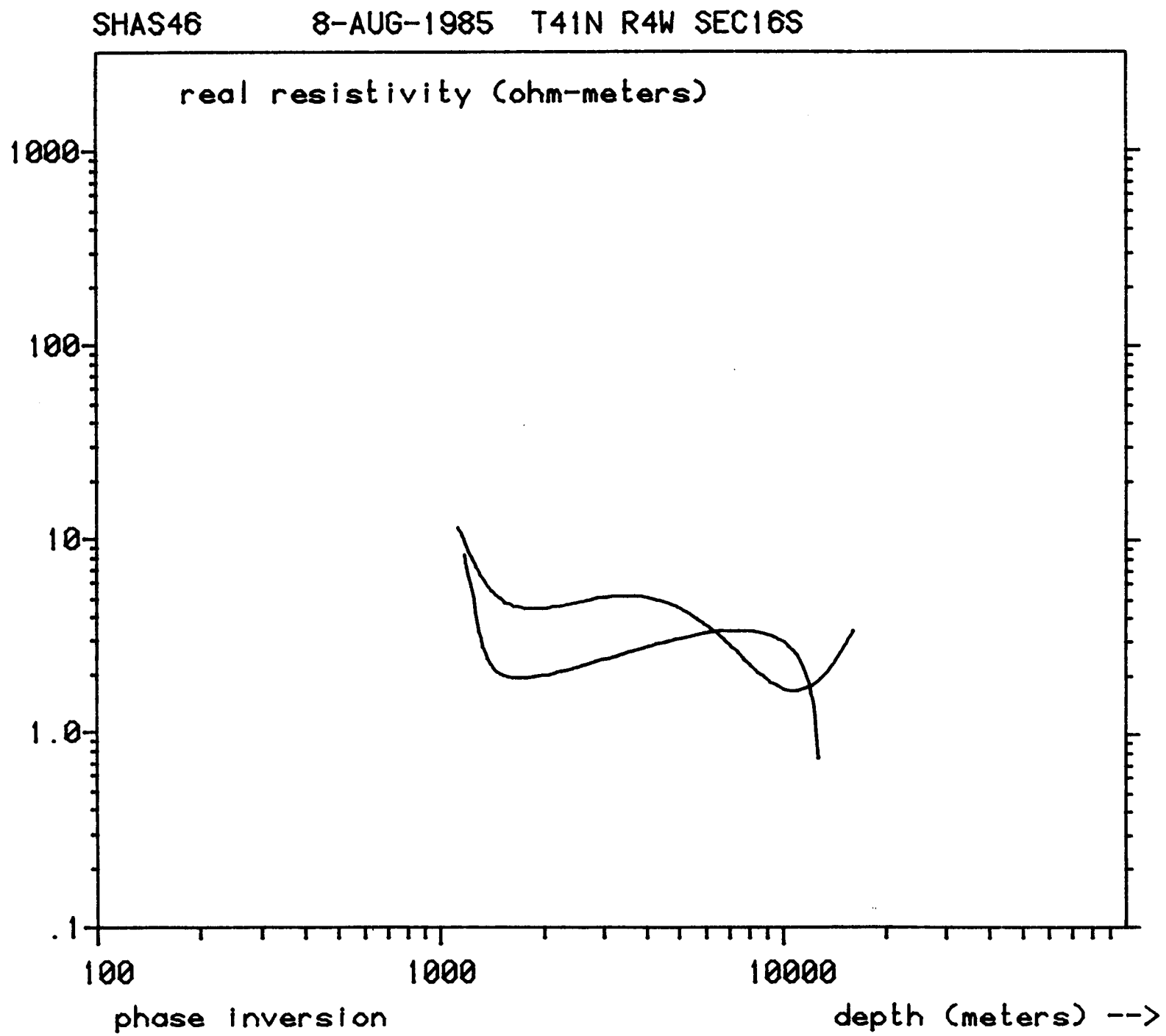
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 0.500E+03 | 0.300E+01 | 0.329E+01 | -0.294E+00 | -0.936E+01 |
| 2 | 0.250E+03 | 0.300E+01 | 0.305E+01 | -0.462E-01 | -0.153E+01 |
| 3 | 0.125E+03 | 0.300E+01 | 0.353E+01 | -0.527E+00 | -0.161E+02 |
| 4 | 0.700E+02 | 0.400E+01 | 0.408E+01 | -0.757E-01 | -0.187E+01 |
| 5 | 0.500E+02 | 0.500E+01 | 0.432E+01 | 0.679E+00 | 0.146E+02 |
| 6 | 0.330E+02 | 0.500E+01 | 0.460E+01 | 0.397E+00 | 0.826E+01 |
| 7 | 0.200E+02 | 0.600E+01 | 0.507E+01 | 0.931E+00 | 0.168E+02 |
| 8 | 0.100E+02 | 0.700E+01 | 0.608E+01 | 0.917E+00 | 0.140E+02 |
| 9 | 0.550E+01 | 0.700E+01 | 0.747E+01 | -0.473E+00 | -0.654E+01 |
| 10 | 0.200E+01 | 0.700E+01 | 0.119E+02 | -0.494E+01 | -0.522E+02 |
| 11 | 0.100E+01 | 0.230E+02 | 0.180E+02 | 0.499E+01 | 0.243E+02 |
| 12 | 0.500E+00 | 0.420E+02 | 0.289E+02 | 0.131E+02 | 0.371E+02 |
| 13 | 0.500E+00 | 0.240E+02 | 0.289E+02 | -0.486E+01 | -0.184E+02 |
| 14 | 0.330E+00 | 0.390E+02 | 0.391E+02 | -0.123E+00 | -0.315E+00 |
| 15 | 0.330E+00 | 0.000E+00 | 0.391E+02 | 0.000E+00 | 0.000E+00 |
| 16 | 0.130E+00 | 0.840E+02 | 0.793E+02 | 0.475E+01 | 0.582E+01 |
| 17 | 0.700E-01 | 0.118E+03 | 0.123E+03 | -0.536E+01 | -0.444E+01 |
| 18 | 0.500E-01 | 0.131E+03 | 0.151E+03 | -0.202E+02 | -0.143E+02 |
| 19 | 0.380E-01 | 0.162E+03 | 0.172E+03 | -0.104E+02 | -0.624E+01 |
| 20 | 0.320E-01 | 0.185E+03 | 0.183E+03 | 0.158E+01 | 0.858E+00 |
| 21 | 0.250E-01 | 0.216E+03 | 0.194E+03 | 0.218E+02 | 0.106E+02 |

MEAN PERCENT ERROR = 0.1775E+02
MAXIMUM PERCENT ERROR = 0.5220E+02
MAX. ERROR OCCURED AT OBSERVATION 10


SHAS46 8-AUG-1985 T41N R4W SEC16S
apparent resistivity (ohm meters)
o -> Zxy
x -> Zyx
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS46 8-AUG-1985 T41N R4W SEC16S
o -> Zxy
x -> Zyx
phase (degrees)
90
45
0
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS46 8-AUG-1985 T41N R4W SEC16S
real resistivity (ohm-meters)
1000
100
10
1.0
.1
100
1000
10000
phase inversion
depth (meters) -->

site title: SHAS46 200 HZ 8-AUG-1985 T41N R4W SEC16S

| # | Frequency | Mean of RHOZxy | RHOZyx | PHIZxy | PHIZyx | real mag/dir | imaginary mag/dir |
|---|---|---|---|---|---|---|---|
| 1 | 0.0017 : | 2.01 | 6.15 | 76. | 28. | 0.096/219 | 0.056/285 |
| 2 | 0.0027 : | 4.66 | 5.45 | 35. | 48. | 0.080/211 | 0.049/258 |
| 3 | 0.0061 : | 5.78 | 6.54 | 61. | 51. | 0.179/232 | 0.082/319 |
| 4 | 0.0100 : | 10.57 | 8.29 | 69. | 66. | 0.104/240 | 0.109/266 |
| 5 | 0.0167 : | 10.17 | 9.16 | 71. | 61. | 0.160/248 | 0.092/258 |
| 6 | 0.0250 : | 15.16 | 11.23 | 58. | 57. | 0.213/244 | 0.090/241 |
| 7 | 0.0400 : | 20.79 | 12.41 | 55. | 55. | 0.305/227 | 0.077/193 |
| 8 | 0.0556 : | 23.65 | 12.77 | 56. | 54. | 0.183/235 | 0.052/132 |
| 9 | 0.1000 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 10 | 0.1639 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 11 | 0.3125 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 12 | 0.5556 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 13 | 0.7143 : | 17.05 | 37.03 | 58. | 53. | 0.090/196 | 0.061/147 |
| 14 | 1.0000 : | 22.01 | 30.81 | 67. | 76. | 0.026/246 | 0.092/ 76 |
| 15 | 1.0000 : | 20.41 | 55.70 | 74. | 69. | 0.072/259 | 0.049/ 82 |
| 16 | 1.1111 : | 22.81 | 15.92 | 77. | 67. | 0.142/202 | 0.087/ 6 |
| 17 | 1.5385 : | 24.58 | 40.71 | 83. | 60. | 0.049/159 | 0.100/ 78 |
| 18 | 1.6949 : | 27.28 | 49.41 | 71. | 73. | 0.010/149 | 0.051/ 78 |
| 19 | 1.6949 : | 42.08 | 53.58 | 73. | 71. | 0.079/ 93 | 0.044/271 |
| 20 | 2.0000 : | 31.29 | 53.65 | 63. | 69. | 0.063/247 | 0.216/ 76 |
| 21 | 2.8571 : | 58.37 | 49.01 | 81. | 66. | 0.012/105 | 0.080/ 71 |
| 22 | 3.0303 : | 47.05 | 37.74 | 78. | 66. | 0.021/116 | 0.035/ 75 |
| 23 | 3.0303 : | 64.66 | 43.97 | 81. | 72. | 0.043/128 | 0.030/ 68 |
| 24 | 3.5714 : | 68.06 | 53.54 | 79. | 62. | 0.042/222 | 0.066/131 |
| 25 | 4.7619 : | 90.73 | 82.43 | 77. | 70. | 0.034/111 | 0.025/100 |
| 26 | 8.3333 : | 95.89 | 96.63 | 75. | 75. | 0.026/119 | 0.022/ 91 |
| 27 | 14.0845 : | 132.19 | 149.07 | 73. | 75. | 0.037/126 | 0.007/158 |
| 28 | 23.8095 : | 196.59 | 223.06 | 72. | 74. | 0.034/ 95 | 0.020/231 |
| 29 | 40.0000 : | 243.04 | 263.27 | 65. | 68. | 0.057/147 | 0.085/237 |

SHAS46 200 HZ 8-AUG-1985 T41N R4W SEC16S

STANDARD DEVIATIONS for MERGED AVERAGE, MT DATA

| frequency | RHOZxy | RHOZyx | PHIZxy | PHIZyx | theta | induction arrow real: MAG | DIR | imag: MAG |
|---|---|---|---|---|---|---|---|---|
| 0.0017 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0027 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0061 | 1.38 | 1.02 | 6.09 | 3.80 | 36.50 | 0.017 | 1.8 | 0.008 |
| 0.0100 | 1.92 | 1.31 | 12.33 | 0.40 | 34.11 | 0.006 | 0.4 | 0.004 |
| 0.0167 | 0.75 | 0.09 | 3.01 | 0.68 | 0.00 | 0.012 | 0.2 | 0.016 |
| 0.0250 | 1.47 | 0.52 | 1.48 | 0.64 | 0.00 | 0.028 | 0.2 | 0.008 |
| 0.0400 | 1.87 | 0.51 | 2.57 | 0.15 | 0.00 | 0.036 | 0.6 | 0.010 |
| 0.0556 | 4.34 | 1.26 | 2.48 | 1.73 | 0.00 | 0.049 | 0.3 | 0.011 |
| 0.1000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.1639 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.3125 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.5556 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.7143 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 1.0000 | 47.83 | 13.46 | 13.58 | 47.40 | 137.91 | 0.098 | 178.7 | 0.023 |
| 1.0000 | 0.02 | 0.02 | 0.01 | 0.03 | 0.04 | 0.000 | 0.0 | 0.224 |
| 1.1111 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.000 | 0.0 | 0.000 |
| 1.5385 | 5.01 | 2.41 | 4.16 | 4.97 | 111.57 | 0.026 | 1.7 | 0.010 |
| 1.6949 | 3.98 | 5.31 | 4.09 | 3.13 | 22.75 | 0.003 | 66.0 | 0.021 |
| 1.6949 | 0.18 | 0.04 | 0.02 | 0.12 | 0.25 | 0.000 | 0.0 | 0.607 |
| 2.0000 | 0.03 | 0.00 | 0.00 | 0.00 | 0.04 | 0.000 | 0.0 | 0.000 |
| 2.8571 | 4.68 | 3.24 | 4.12 | 5.12 | 12.35 | 0.001 | 38.9 | 0.046 |
| 3.0303 | 50.32 | 40.37 | 9.27 | 59.13 | 87.95 | 0.057 | 25.7 | 0.018 |
| 3.0303 | 3.25 | 2.98 | 4.88 | 2.96 | 2.65 | 0.014 | 5.4 | 0.017 |
| 3.5714 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 4.7619 | 9.85 | 6.18 | 1.78 | 2.25 | 20.40 | 0.011 | 9.5 | 0.009 |
| 8.3333 | 3.56 | 2.01 | 0.69 | 0.70 | 8.88 | 0.009 | 16.8 | 0.000 |
| 14.0845 | 2.62 | 1.51 | 0.85 | 1.02 | 22.82 | 0.009 | 11.5 | 0.000 |
| 23.8095 | 5.76 | 5.60 | 1.47 | 2.61 | 16.42 | 0.022 | 34.9 | 0.000 |
| 40.0000 | 7.79 | 10.46 | 0.52 | 3.32 | 13.44 | 0.020 | 23.5 | 0.000 |

AVERAGE # 8
SHAS46 200 HZ 8-AUG-1985 T41N R4W SEC16S
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO ZXY VALUE ( | RHO ZYX OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ | IMAG | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 600.0 | 0.232E+01 | 0.733E+01 | 77. | 26. | 0. | 0.9422 | 0.9047 | .096 | .056 | 0.26 |
| H | SEC | 0.169E+01 | 0.497E+01 | 75. | 31. | 0. | 0.9507 | 0.9148 | 219. | 285. | 0.93 |
| E | 375.0 | 0.518E+01 | 0.597E+01 | 32. | 49. | 0. | 0.9056 | 0.9908 | .080 | .049 | 0.25 |
| H | SEC | 0.415E+01 | 0.494E+01 | 37. | 47. | 0. | 0.9046 | 0.9891 | 211. | 258. | 0.88 |
| E | 165.0 | 0.757E+01 | 0.782E+01 | 61. | 50. | 0. | 0.8393 | 0.8793 | .179 | .082 | 0.15 |
| H | SEC | 0.399E+01 | 0.526E+01 | 60. | 53. | 0. | 0.8416 | 0.8852 | 232. | 319. | 0.78 |
| E | 100.0 | 0.127E+02 | 0.878E+01 | 69. | 67. | 0. | 0.8971 | 0.9535 | .104 | .109 | 0.10 |
| H | SEC | 0.845E+01 | 0.780E+01 | 69. | 66. | 0. | 0.8985 | 0.9587 | 240. | 266. | 0.93 |
| E | 60.0 | 0.116E+02 | 0.915E+01 | 70. | 62. | 0. | 0.9600 | 0.9969 | .160 | .092 | 0.06 |
| H | SEC | 0.871E+01 | 0.916E+01 | 71. | 61. | 0. | 0.9621 | 0.9970 | 248. | 258. | 0.93 |
| E | 40.0 | 0.163E+02 | 0.115E+02 | 58. | 57. | 0. | 0.9801 | 0.9904 | .213 | .090 | 0.02 |
| H | SEC | 0.140E+02 | 0.109E+02 | 58. | 57. | 0. | 0.9805 | 0.9905 | 244. | 241. | 0.94 |
| E | 25.0 | 0.220E+02 | 0.128E+02 | 55. | 55. | 0. | 0.9710 | 0.9848 | .305 | .077 | 0.05 |
| H | SEC | 0.196E+02 | 0.120E+02 | 55. | 55. | 0. | 0.9712 | 0.9850 | 227. | 193. | 0.96 |
| E | 18.0 | 0.257E+02 | 0.137E+02 | 56. | 54. | 0. | 0.9596 | 0.9656 | .183 | .052 | 0.11 |
| H | SEC | 0.215E+02 | 0.118E+02 | 56. | 54. | 0. | 0.9607 | 0.9666 | 235. | 132. | 0.86 |

AVERAGE # 8
SHAS46 200 HZ 8-AUG-1985 T41N R4W SEC16S
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO ZXY VALUE ( | RHO ZYX OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO RHA/ IMAG | | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 6.1 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 3.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 1.8 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 1.4 | 0.206E+02 | 0.475E+02 | 60. | 52. | 0. | 0.8336 | 0.8855 | .090 | .061 | 0.40 |
| H | SEC | 0.135E+02 | 0.266E+02 | 56. | 53. | 0. | 0.9144 | 0.9674 | 196. | 147. | 0.73 |
| E | 1.0 | 0.246E+02 | 0.343E+02 | 66. | 76. | 0. | 0.9155 | 0.9604 | .026 | .092 | 0.04 |
| H | HZ | 0.194E+02 | 0.273E+02 | 67. | 77. | 0. | 0.9176 | 0.9542 | 246. | 76. | 0.47 |
| E | 1.0 | 0.252E+02 | 0.581E+02 | 73. | 69. | 0. | 0.8082 | 0.9869 | .072 | .049 | 0.03 |
| H | HZ | 0.156E+02 | 0.533E+02 | 74. | 69. | 0. | 0.7828 | 0.9815 | 259. | 82. | 0.97 |

AVERAGE # 8
SHAS46 200 HZ 8-AUG-1985 T41N R4W SEC16S
NSAMP = 1024 SI = 0.0050 TO = 5.1200

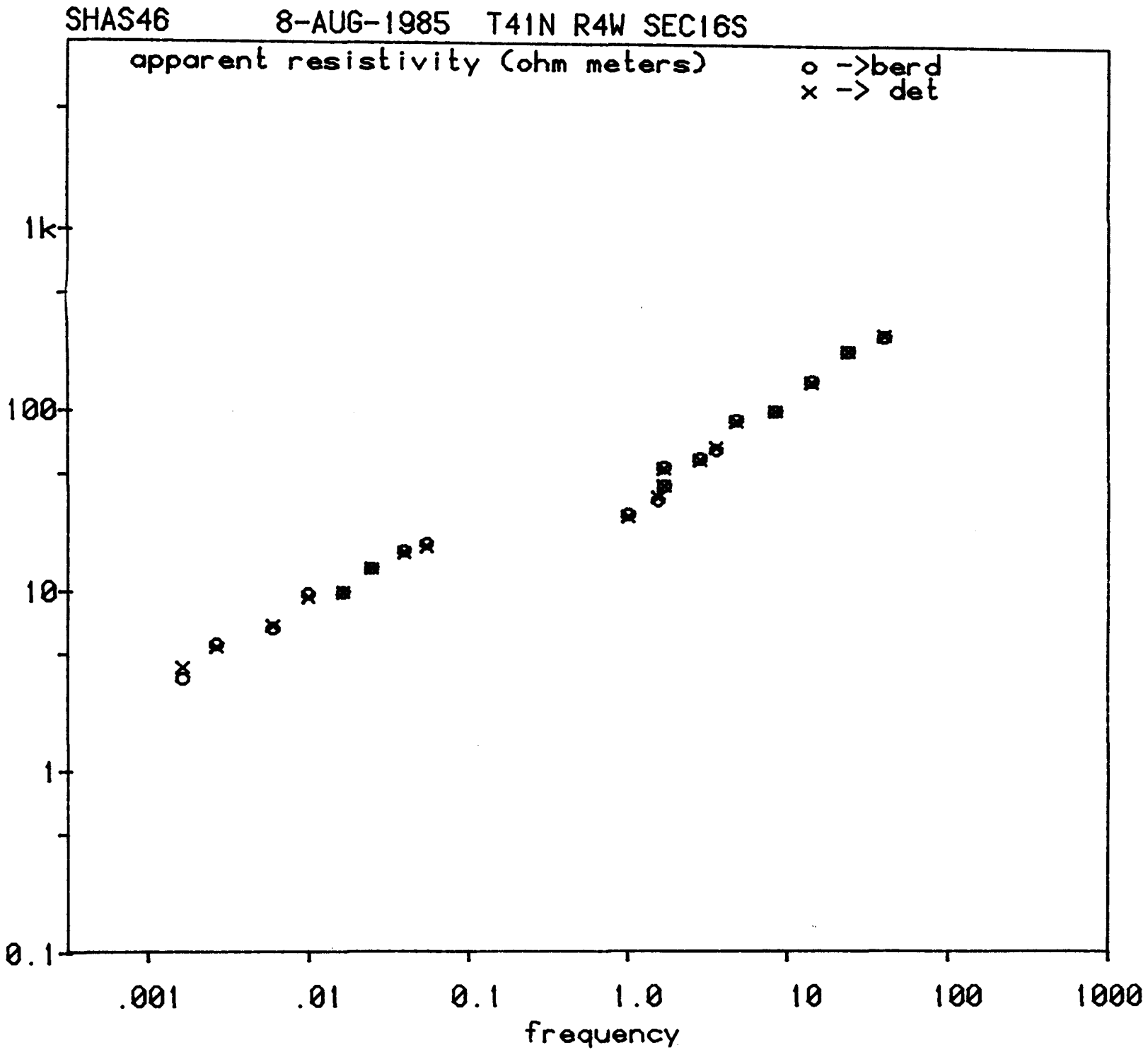
| | FREQ OR PERIOD | RHO ZXY VALUE ( | RHO ZYX OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ IMAG | | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.1 | 0.241E+02 | 0.160E+02 | 78. | 68. | 0. | 0.9550 | 0.9772 | .142 | .087 | 0.27 |
| H | HZ | 0.216E+02 | 0.158E+02 | 76. | 66. | 0. | 0.9551 | 0.9563 | 202. | 6. | 0.92 |
| E | 1.5 | 0.276E+02 | 0.429E+02 | 84. | 59. | 0. | 0.9087 | 0.9742 | .049 | .100 | 0.13 |
| H | HZ | 0.215E+02 | 0.386E+02 | 81. | 61. | 0. | 0.9041 | 0.9816 | 159. | 78. | 0.77 |
| E | 1.7 | 0.319E+02 | 0.517E+02 | 74. | 72. | 0. | 0.9191 | 0.9863 | .010 | .051 | 0.14 |
| H | HZ | 0.227E+02 | 0.471E+02 | 68. | 73. | 0. | 0.9227 | 0.9844 | 149. | 78. | 0.27 |
| E | 1.7 | 0.475E+02 | 0.532E+02 | 81. | 71. | 0. | 0.9836 | 0.9959 | .079 | .044 | 0.04 |
| H | HZ | 0.366E+02 | 0.539E+02 | 65. | 71. | 0. | 0.9763 | 0.9962 | 93. | 271. | 0.78 |
| E | 2.0 | 0.313E+02 | 0.637E+02 | 59. | 70. | 0. | 0.6224 | 0.9714 | .063 | .216 | 0.18 |
| H | HZ | 0.313E+02 | 0.436E+02 | 68. | 68. | 0. | 0.6234 | 0.9649 | 247. | 76. | 0.39 |
| E | 2.9 | 0.660E+02 | 0.514E+02 | 80. | 66. | 0. | 0.9735 | 0.9836 | .012 | .080 | 0.21 |
| H | HZ | 0.507E+02 | 0.466E+02 | 82. | 65. | 0. | 0.9819 | 0.9786 | 105. | 71. | 0.66 |

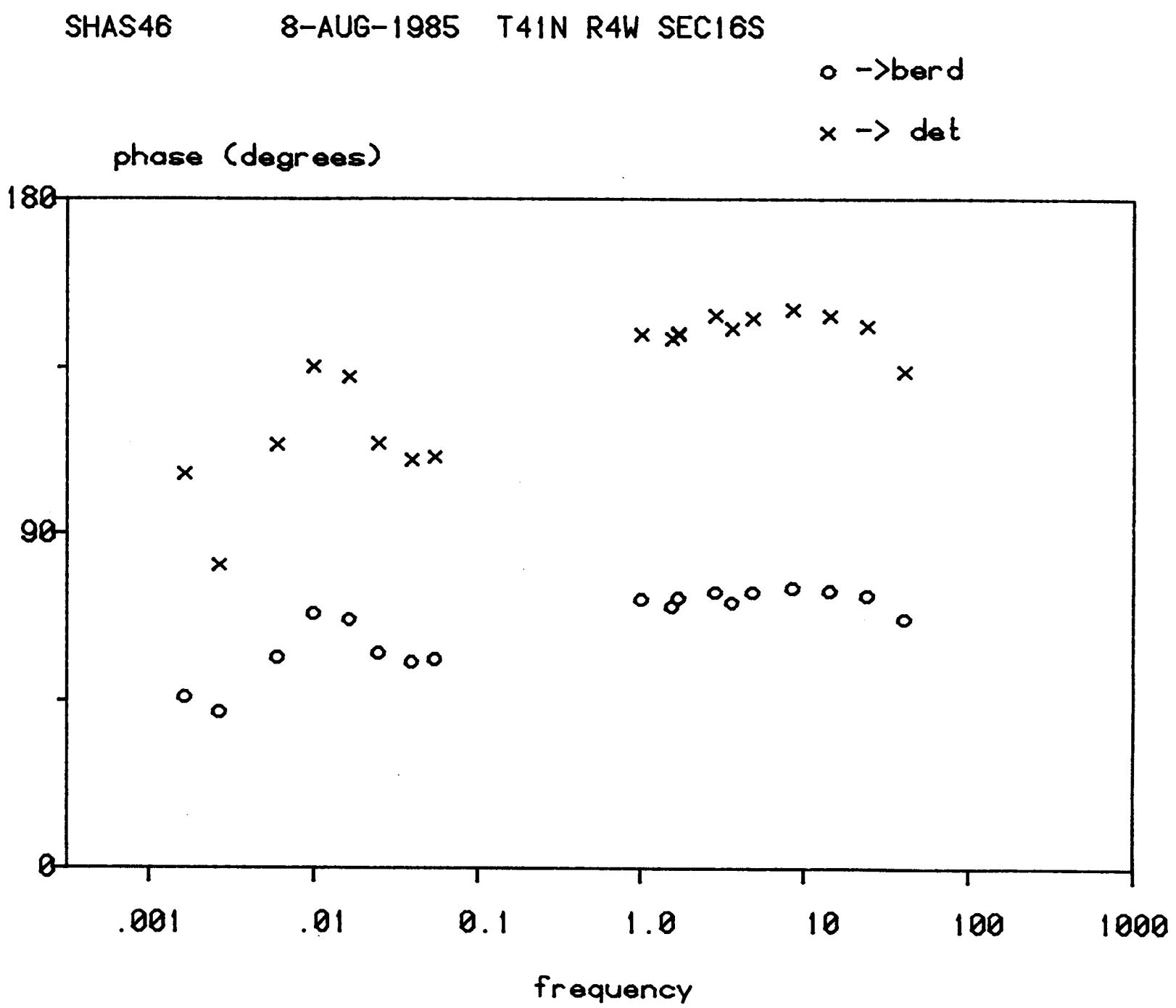
AVERAGE # 8
SHAS46 200 HZ 8-AUG-1985 T41N R4W SEC16S
NSAMP = 1024 SI = 0.0050 TO = 5.1200

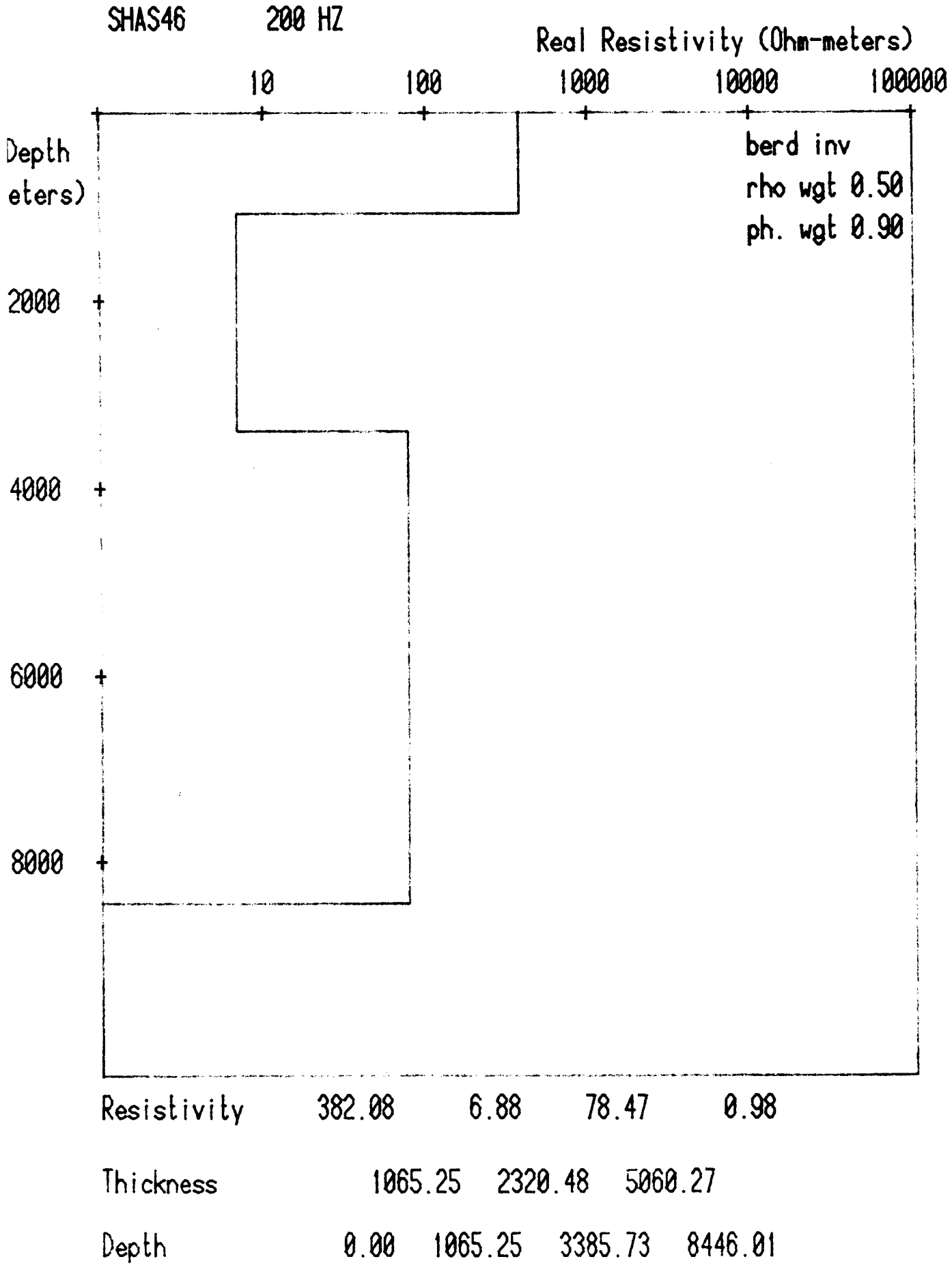
| | FREQ OR PERIOD | RHO ZXY VALUE | RHO ZYX ( OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ IMAG | | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.541E+02 | 0.460E+02 | 77. | 66. | 0. | 0.9433 | 0.9395 | .021 | .035 | 0.13 |
| H | HZ | 0.400E+02 | 0.294E+02 | 79. | 66. | 0. | 0.9481 | 0.9062 | 116. | 75. | 0.32 |
| E | 3.0 | 0.696E+02 | 0.535E+02 | 81. | 72. | 0. | 0.9766 | 0.9227 | .043 | .030 | 0.09 |
| H | HZ | 0.598E+02 | 0.344E+02 | 82. | 72. | 0. | 0.9827 | 0.9129 | 128. | 68. | 0.50 |
| E | 3.6 | 0.673E+02 | 0.523E+02 | 77. | 61. | 0. | 0.9770 | 0.9388 | .042 | .066 | 0.28 |
| H | HZ | 0.688E+02 | 0.548E+02 | 81. | 62. | 0. | 0.9757 | 0.9444 | 222. | 131. | 0.58 |
| E | 4.8 | 0.833E+02 | 0.819E+02 | 74. | 72. | 0. | 0.9302 | 0.9734 | .034 | .025 | 0.12 |
| H | HZ | 0.981E+02 | 0.830E+02 | 81. | 68. | 0. | 0.9288 | 0.9945 | 111. | 100. | 0.36 |
| E | 8.3 | 0.966E+02 | 0.101E+03 | 75. | 74. | 0. | 0.9946 | 0.9784 | .026 | .022 | 0.05 |
| H | HZ | 0.952E+02 | 0.926E+02 | 76. | 75. | 0. | 0.9942 | 0.9899 | 119. | 91. | 0.40 |
| E | 14.1 | 0.138E+03 | 0.157E+03 | 74. | 75. | 0. | 0.9806 | 0.9790 | .037 | .007 | 0.03 |
| H | HZ | 0.127E+03 | 0.142E+03 | 72. | 76. | 0. | 0.9809 | 0.9749 | 126. | 158. | 0.41 |
| E | 23.8 | 0.205E+03 | 0.231E+03 | 73. | 74. | 0. | 0.9494 | 0.9716 | .034 | .020 | 0.02 |
| H | HZ | 0.188E+03 | 0.215E+03 | 71. | 74. | 0. | 0.9530 | 0.9803 | 95. | 231. | 0.25 |
| E | 40.0 | 0.212E+03 | 0.282E+03 | 64. | 66. | 0. | 0.9229 | 0.9619 | .057 | .085 | 0.04 |
| H | HZ | 0.274E+03 | 0.245E+03 | 66. | 70. | 0. | 0.9212 | 0.9604 | 147. | 237. | 0.54 |

site title: SHAS46 200 HZ 8-AUG-1985 T41N R4W SEC16S

| # | Frequency | Mean of RHOberd | RHOdet | PHIberd | PHIdet | real mag/dir | imaginary mag/dir |
|---|---|---|---|---|---|---|---|
| 1 | 0.0017 : | 3.21 | 3.71 | 45. | 106. | 0.096/219 | 0.056/285 |
| 2 | 0.0027 : | 4.98 | 4.84 | 41. | 81. | 0.080/211 | 0.049/258 |
| 3 | 0.0061 : | 6.10 | 6.32 | 56. | 113. | 0.179/232 | 0.082/319 |
| 4 | 0.0100 : | 9.38 | 9.15 | 68. | 134. | 0.104/240 | 0.109/266 |
| 5 | 0.0167 : | 9.58 | 9.62 | 66. | 132. | 0.160/248 | 0.092/258 |
| 6 | 0.0250 : | 13.12 | 13.01 | 57. | 114. | 0.213/244 | 0.090/241 |
| 7 | 0.0400 : | 16.33 | 16.03 | 55. | 110. | 0.305/227 | 0.077/193 |
| 8 | 0.0556 : | 17.79 | 17.17 | 55. | 110. | 0.183/235 | 0.052/132 |
| 9 | 0.1000 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 10 | 0.1639 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 11 | 0.3125 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 12 | 0.5556 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 13 | 0.7143 : | 25.99 | 19.51 | 55. | 115. | 0.090/196 | 0.061/147 |
| 14 | 1.0000 : | 26.05 | 25.60 | 72. | 143. | 0.026/246 | 0.092/ 76 |
| 15 | 1.0000 : | 35.74 | 33.36 | 71. | 142. | 0.072/259 | 0.049/ 82 |
| 16 | 1.1111 : | 19.07 | 18.75 | 72. | 148. | 0.142/202 | 0.087/ 6 |
| 17 | 1.5385 : | 30.85 | 32.24 | 70. | 142. | 0.049/159 | 0.100/ 78 |
| 18 | 1.6949 : | 37.45 | 36.95 | 72. | 144. | 0.010/149 | 0.051/ 78 |
| 19 | 1.6949 : | 47.32 | 46.76 | 72. | 143. | 0.079/ 93 | 0.044/271 |
| 20 | 2.0000 : | 41.42 | 39.58 | 67. | 136. | 0.063/247 | 0.216/ 76 |
| 21 | 2.8571 : | 52.56 | 51.59 | 74. | 148. | 0.012/105 | 0.080/ 71 |
| 22 | 3.0303 : | 41.79 | 41.58 | 73. | 145. | 0.021/116 | 0.035/ 75 |
| 23 | 3.0303 : | 53.41 | 53.30 | 77. | 154. | 0.043/128 | 0.030/ 68 |
| 24 | 3.5714 : | 59.21 | 61.30 | 71. | 145. | 0.042/222 | 0.066/131 |
| 25 | 4.7619 : | 85.93 | 84.91 | 74. | 148. | 0.034/111 | 0.025/100 |
| 26 | 8.3333 : | 96.25 | 96.22 | 75. | 150. | 0.026/119 | 0.022/ 91 |
| 27 | 14.0845 : | 140.45 | 140.30 | 74. | 148. | 0.037/126 | 0.007/158 |
| 28 | 23.8095 : | 209.51 | 208.87 | 73. | 146. | 0.034/ 95 | 0.020/231 |
| 29 | 40.0000 : | 252.21 | 252.33 | 67. | 133. | 0.057/147 | 0.085/237 |


SHAS46 8-AUG-1985 T41N R4W SEC16S
apparent resistivity (ohm meters)
o ->berd
x -> det
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS46 8-AUG-1985 T41N R4W SEC16S
o ->berd
x -> det
phase (degrees)
180
90
0
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS46 200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
Depth
eters)
berd inv
rho wgt 0.50
ph. wgt 0.90
2000
4000
6000
8000
Resistivity 382.08 6.88 78.47 0.98
Thickness 1065.25 2320.48 5060.27
Depth 0.00 1065.25 3385.73 8446.01

SHAS46 200 HZ 8-AUG-1985 T41N R4W SEC16S

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 16
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 1

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 300.0000 | | 0.0000 |
| | | 1000.0000 | |
| 2 | 5.0000 | | 1000.0000 |
| | | 3000.0000 | |
| 3 | 10.0000 | | 4000.0000 |
| | | 6000.0000 | |
| 4 | 1.0000 | | 10000.0000 |

FREQUENCY RANGE ( 0.0100 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 382.0893 | | 0.0000 |
| | | 1065.2574 | |
| 2 | 6.8829 | | 1065.2574 |
| | | 2320.4816 | |
| 3 | 78.4792 | | 3385.7390 |
| | | 5060.2728 | |
| 4 | 0.9803 | | 8446.0118 |

MEAN PERCENT VARIATION IS 10.5974

SHAS46 200 HZ 8-AUG-1985 T41N R4W SEC16S

ERROR STRUCTURE OF FITTED MODEL

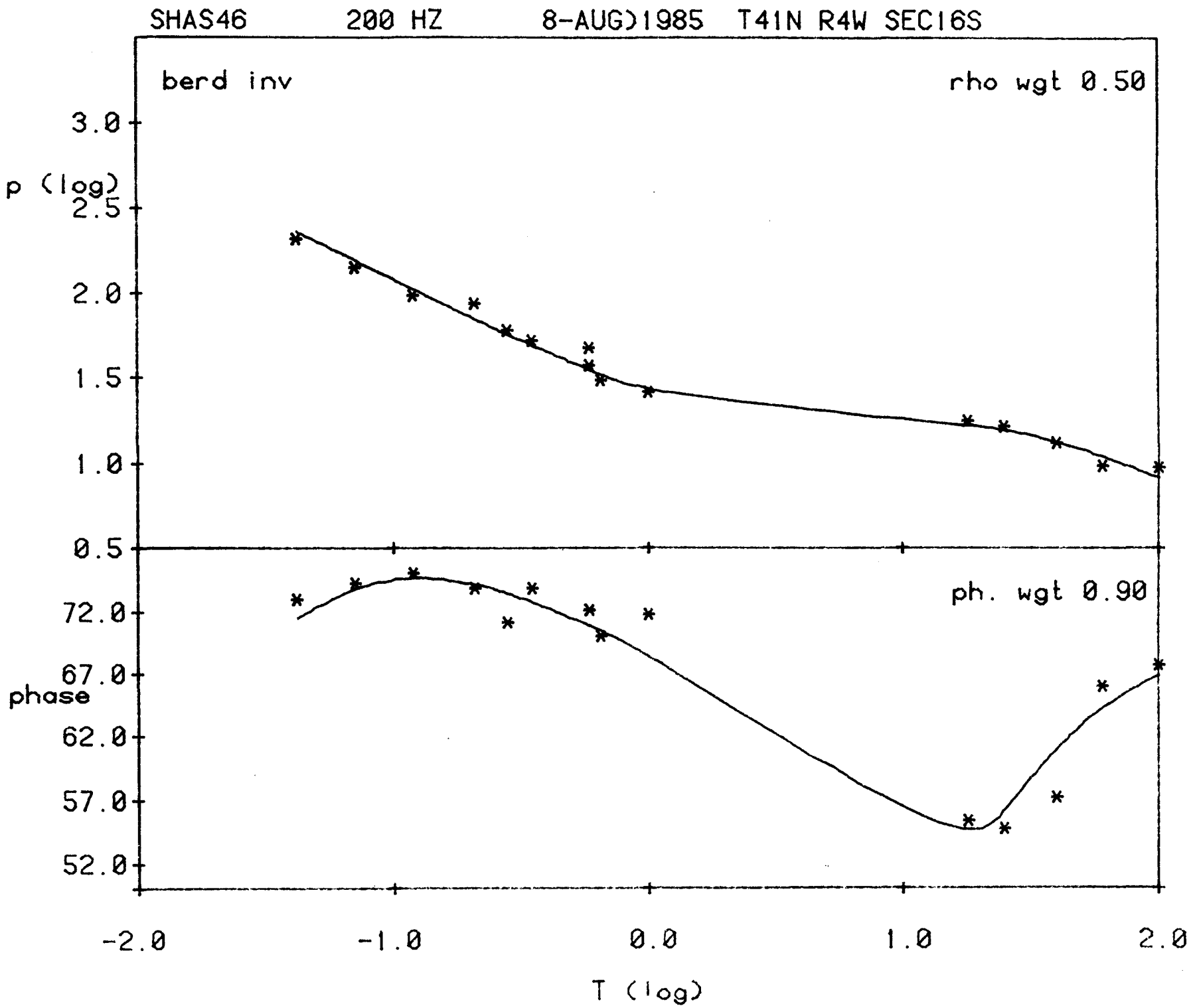
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 100.000 | 9.381 | 8.242 | 1.139 | 12.929 |
| 2 | 60.000 | 9.576 | 11.073 | -1.496 | -14.494 |
| 3 | 40.000 | 13.117 | 13.557 | -0.440 | -3.297 |
| 4 | 25.000 | 16.330 | 15.928 | 0.402 | 2.490 |
| 5 | 18.000 | 17.789 | 16.683 | 1.106 | 6.417 |
| 6 | 1.000 | 26.054 | 25.609 | 0.000 | 0.000 |
| 7 | 0.650 | 30.854 | 33.422 | -2.568 | -7.992 |
| 8 | 0.590 | 37.451 | 35.462 | 1.989 | 5.456 |
| 9 | 0.590 | 47.320 | 35.462 | 11.858 | 28.649 |
| 10 | 0.350 | 52.558 | 49.218 | 3.341 | 6.565 |
| 11 | 0.280 | 59.210 | 57.123 | 2.087 | 3.588 |
| 12 | 0.210 | 85.931 | 69.824 | 16.107 | 20.683 |
| 13 | 0.130 | 96.046 | 105.946 | -9.900 | -9.337 |

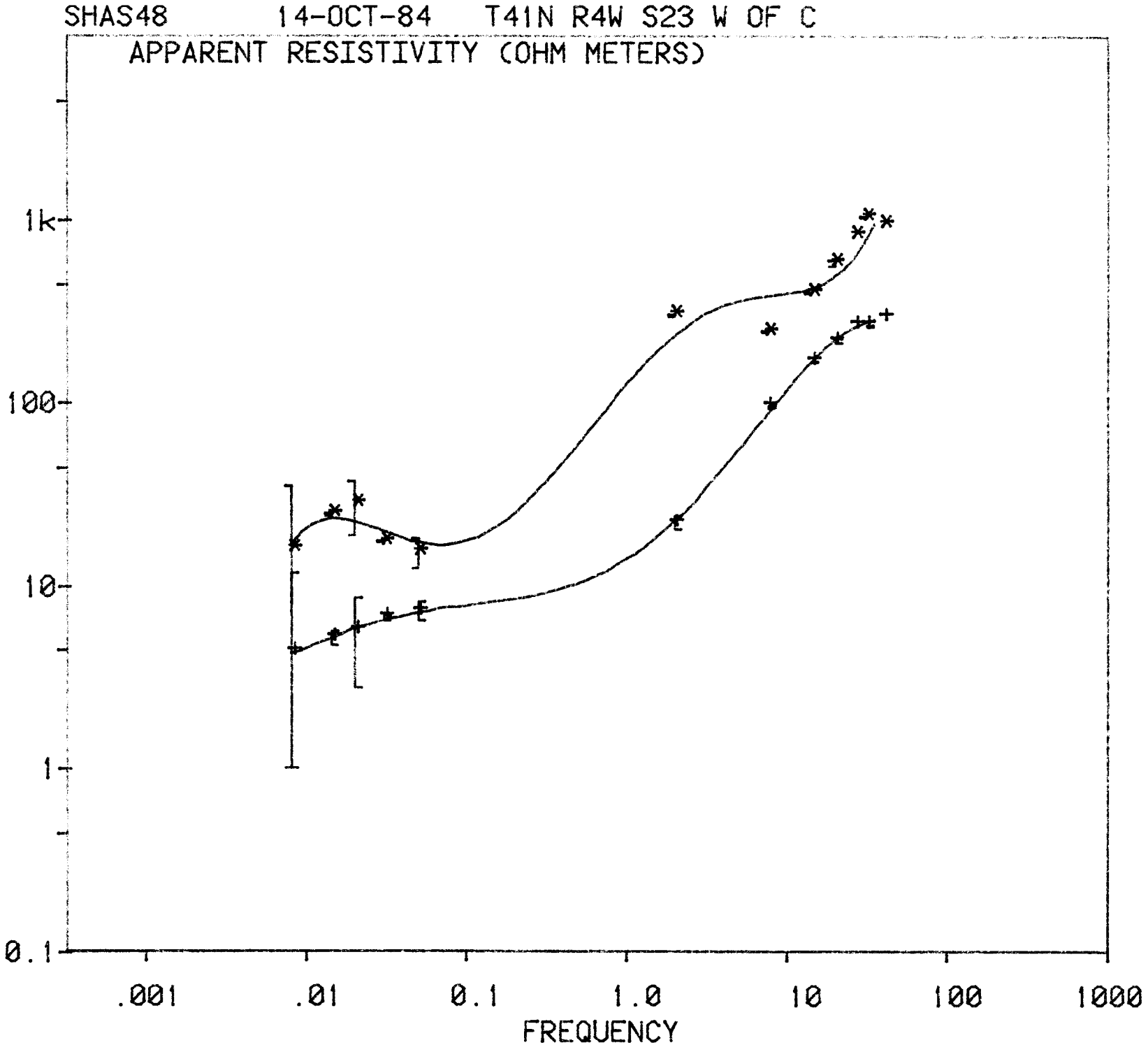
| | | | | | |
|---|---|---|---|---|---|
| 14 | 0.071 | 140.449 | 156.924 | -16.475 | -11.080 |
| 15 | 0.042 | 209.511 | 232.309 | -22.798 | -10.320 |
| 16 | 0.025 | 252.207 | 328.961 | -76.754 | -26.414 |

MEAN PERCENT ERROR = 13.3590
MAXIMUM PERCENT ERROR = 28.6489
MAX. ERROR OCCURED AT OBSERVATION 9

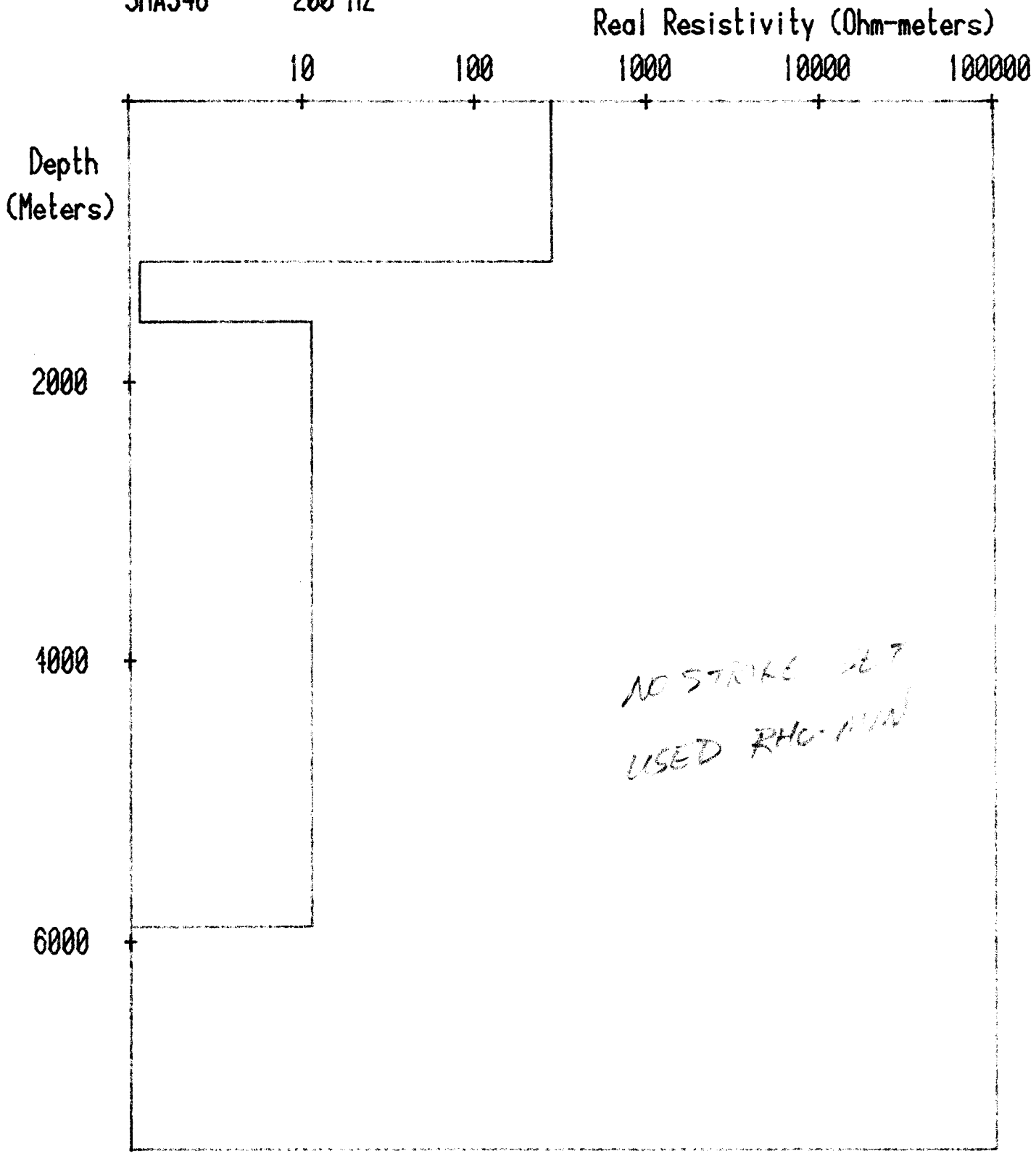
| I | T(I) | P(I) | PAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 100.000 | -67.795 | -66.936 | -0.859 | 4.222 |
| 2 | 60.000 | -66.050 | -64.540 | -1.510 | 6.938 |
| 3 | 40.000 | -57.120 | -61.229 | 4.109 | -16.283 |
| 4 | 25.000 | -54.710 | -56.138 | 1.428 | -5.333 |
| 5 | 18.000 | -55.385 | -52.429 | -2.956 | 10.832 |
| 6 | 1.000 | -71.735 | -68.676 | -3.059 | 16.747 |
| 7 | 0.650 | -69.975 | -70.520 | 0.545 | -2.993 |
| 8 | 0.590 | -72.125 | -70.875 | -1.250 | 7.252 |
| 9 | 0.590 | -72.065 | -70.875 | -1.190 | 6.894 |
| 10 | 0.350 | -73.810 | -72.749 | -1.061 | 6.719 |
| 11 | 0.280 | -71.060 | -73.481 | 2.421 | -14.563 |
| 12 | 0.210 | -73.760 | -74.242 | 0.482 | -3.175 |
| 13 | 0.120 | -74.985 | -74.853 | -0.132 | 0.914 |
| 14 | 0.071 | -74.185 | -74.054 | -0.131 | 0.869 |
| 15 | 0.042 | -72.970 | -71.430 | -1.540 | 9.231 |
| 16 | 0.025 | -66.635 | -66.560 | -0.075 | 0.359 |

MEAN PERCENT ERROR = 8.7657
MAXIMUM PERCENT ERROR = 16.7469
MAX. ERROR OCCURED AT OBSERVATION 6

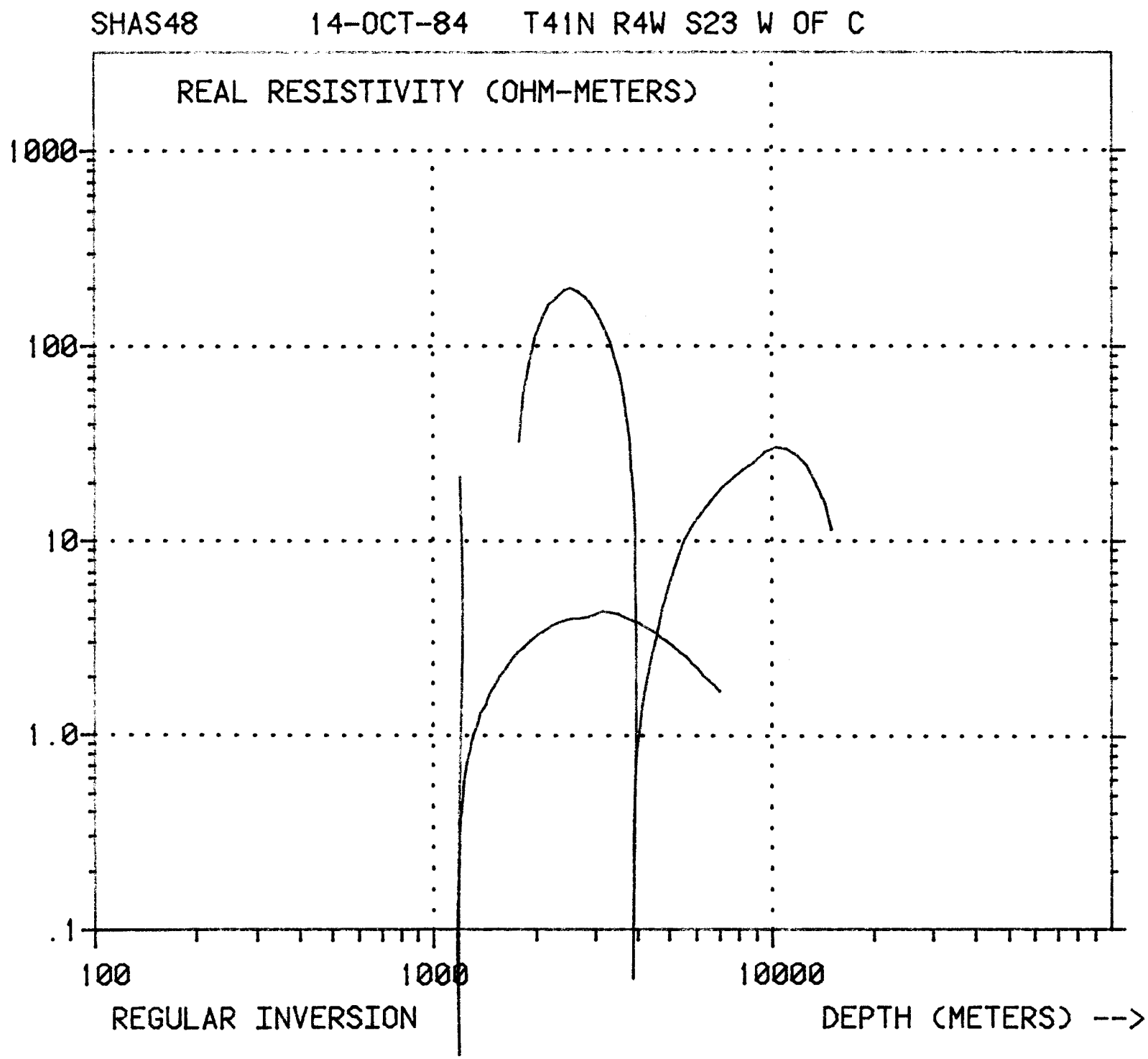

SHAS46 200 HZ 8-AUG)1985 T41N R4W SEC16S
berd inv
rho wgt 0.50
ph. wgt 0.90
p (log)
phase
3.0
2.5
2.0
1.5
1.0
0.5
72.0
67.0
62.0
57.0
52.0
-2.0
-1.0
0.0
1.0
2.0
T (log)

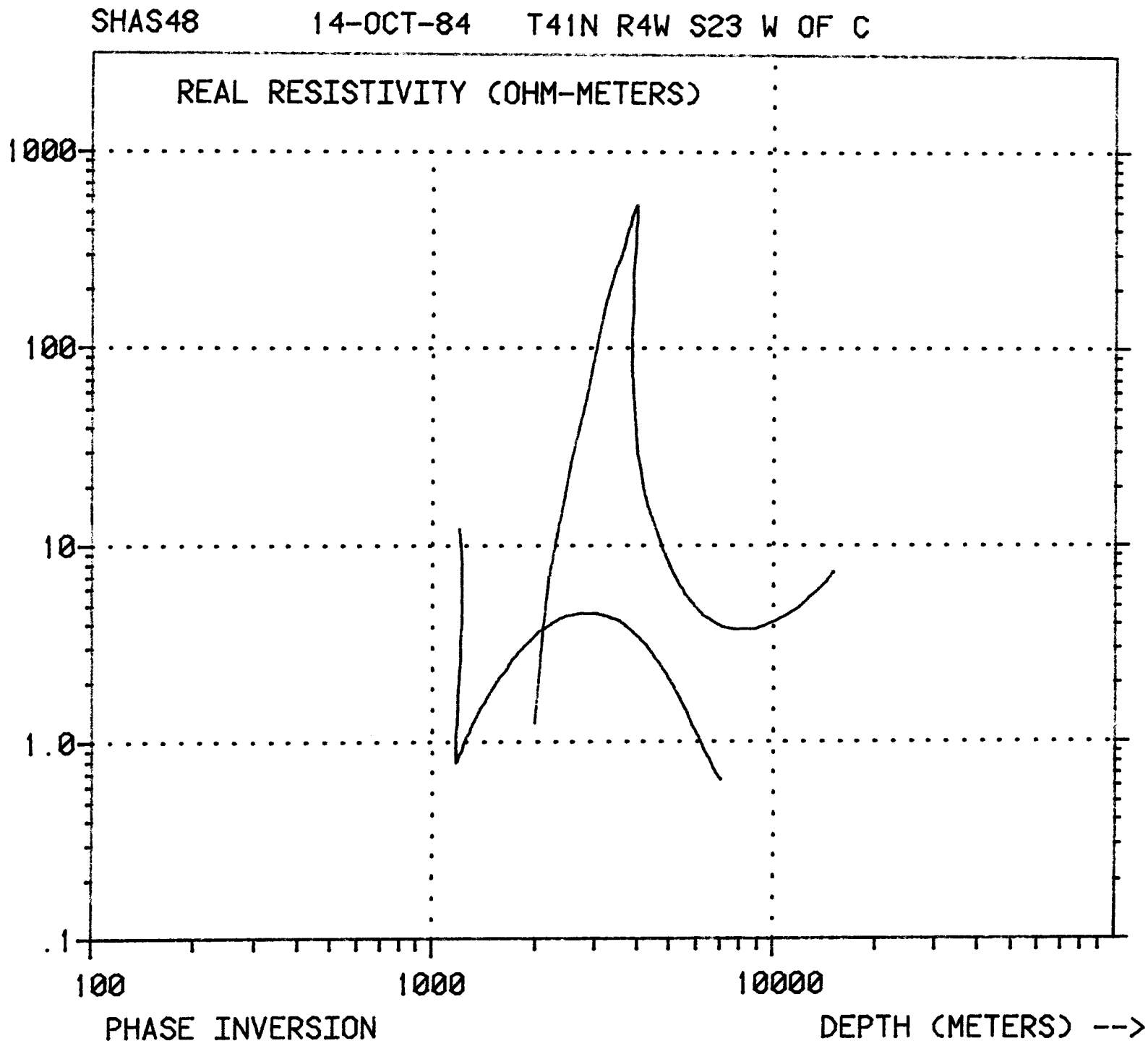

SHAS48 14-OCT-84 T41N R4W S23 W OF C
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

SHAS48 200 HZ

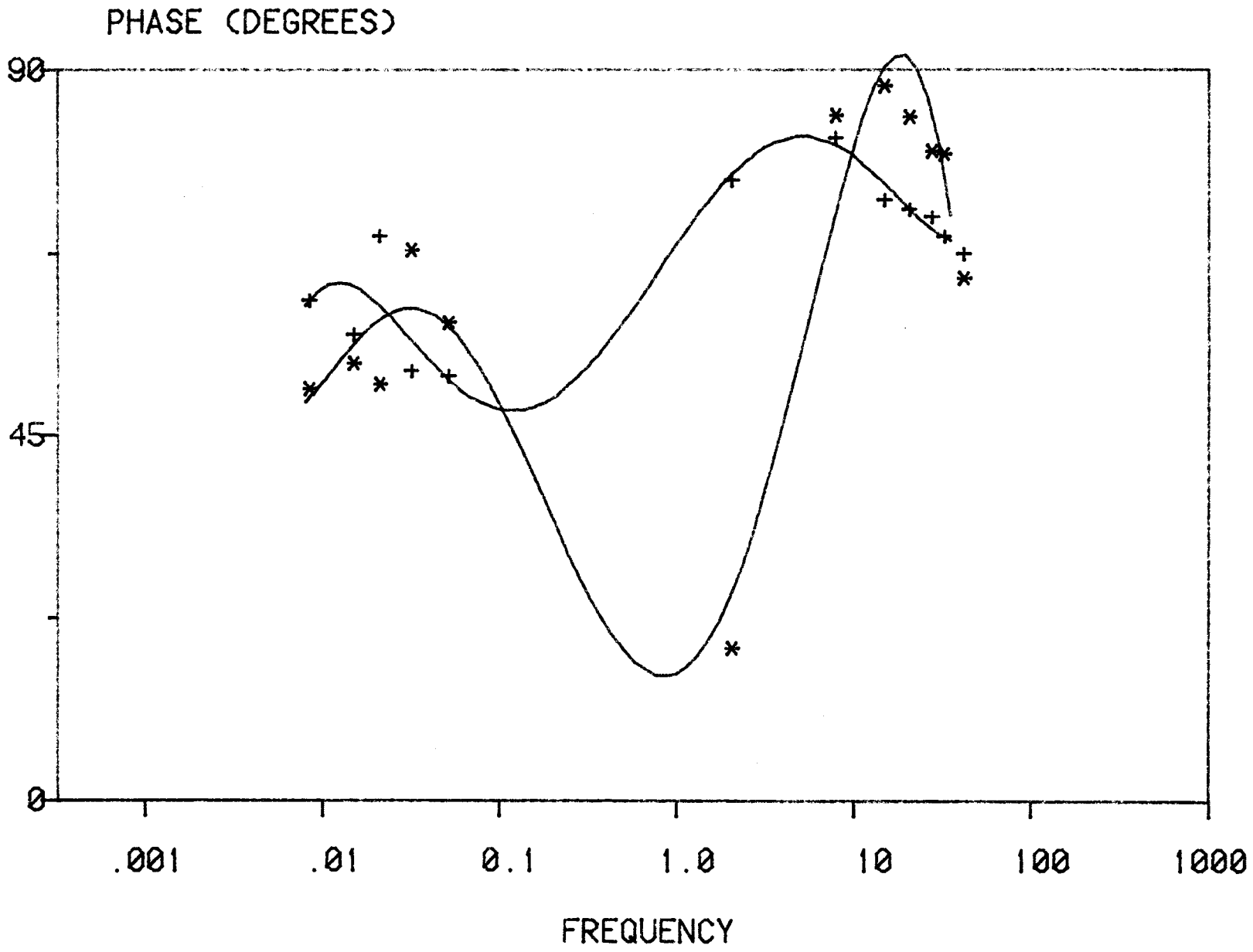



| | | | | |
|---|---|---|---|---|
| Resistivity | 281.27 | 1.14 | 11.33 | 0.99 |
| Thickness | | 1139.15 | 429.84 | 4330.85 |
| Depth | 0.00 | 1139.15 | 1569.00 | 5899.85 |


SHAS48 14-OCT-84 T41N R4W S23 W OF C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS48 14-OCT-84 T41N R4W S23 W OF C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS48 14-OCT-84 T41N R4W S23 W OF C



THE SITE IS: SHAS46 200 HZ 14-OCT-84 T41N R4W S23 W OF C

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | SDEV OF RHOMIN | SDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 8.05 | 21.30 | 1 | 7.35 | 19.48 |
| 0.0020 | 4.86 | 6.10 | 2 | 0.44 | 0.48 |
| 0.0040 | 5.64 | 54.09 | 3 | 2.84 | 8.94 |
| 0.0080 | 4.25 | 15.49 | 4 | 0.26 | 0.19 |
| 0.0143 | 5.09 | 24.12 | 5 | 0.84 | 2.97 |
| 0.0200 | 5.56 | 27.55 | 6 | 1.77 | 1.76 |
| 0.0303 | 6.59 | 17.21 | 7 | 2.00 | 3.02 |
| 0.0500 | 7.12 | 15.13 | 8 | 0.75 | 1.90 |
| 0.1000 | 0.00 | 0.00 | 9 | 7.35 | 19.48 |
| 0.1818 | 0.00 | 0.00 | 10 | 0.44 | 0.48 |
| 0.3333 | 0.00 | 0.00 | 11 | 2.84 | 8.94 |
| 0.5000 | 0.00 | 0.00 | 12 | 0.26 | 0.19 |
| 0.5988 | 0.00 | 0.00 | 13 | 0.84 | 2.97 |
| 0.8000 | 0.00 | 0.00 | 14 | 1.77 | 1.76 |
| 1.0000 | 0.00 | 0.00 | 15 | 2.00 | 3.02 |
| 1.0000 | 110.51 | 546.65 | 16 | 2.19 | 7.82 |
| 1.2048 | 0.00 | 0.00 | 17 | 0.44 | 0.48 |
| 1.4925 | 0.00 | 0.00 | 18 | 2.84 | 8.94 |
| 2.0000 | 0.00 | 0.00 | 19 | 0.26 | 0.19 |
| 2.0000 | 0.00 | 0.00 | 20 | 0.84 | 2.97 |
| 2.0000 | 21.72 | 294.09 | 21 | 0.41 | 1.70 |
| 3.0303 | 0.00 | 0.00 | 22 | 2.19 | 7.82 |
| 3.0303 | 0.00 | 0.00 | 23 | 0.44 | 0.48 |
| 7.6923 | 92.81 | 238.88 | 24 | 0.34 | 0.91 |
| 14.2857 | 164.50 | 390.63 | 25 | 0.12 | 0.23 |
| 20.0000 | 214.13 | 571.83 | 26 | 0.30 | 0.84 |
| 26.3158 | 261.92 | 809.17 | 27 | 0.06 | 0.27 |
| 31.2500 | 258.79 | 1007.07 | 28 | 0.05 | 0.21 |
| 40.0000 | 287.99 | 923.78 | 29 | 0.02 | 0.06 |

AVERAGE # 0
SHAS48 100 HZ 14-OCT-64 T41N R4W S23 W OF C
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 000.0 | 0.183E+02 | 0.951E+01 | 61. | 8. | 130. | 0.0001 | 0.0000 | 0.2999 | 1.39 |
| N | SEC | 0.243E+02 | 0.707E+01 | 66. | 6. | 131. | 0.0042 | 0.0029 | 87.30 | 1.49 |
| E | 500.0 | 0.830E+01 | 0.646E+01 | 69. | 79. | 6. | 0.0002 | 0.0008 | 0.4073 | **** |
| N | SEC | 0.806E+01 | 0.320E+01 | 10. | 58. | 21. | 0.0001 | 0.0011 | 115.40 | 2.38 |
| E | 250.0 | 0.650E+02 | 0.954E+01 | 8. | 51. | 144. | 0.0010 | 0.0015 | 0.2652 | 0.44 |
| N | SEC | 0.432E+02 | 0.174E+01 | 5. | 54. | 142. | 0.0012 | 0.0009 | -3.00 | 0.43 |
| E | 125.0 | 0.254E+02 | 0.430E+01 | 52. | 62. | 131. | 0.0017 | 0.0005 | 0.1796 | 0.13 |
| N | SEC | 0.458E+01 | 0.420E+01 | 50. | 62. | 120. | 0.0006 | 0.0008 | 164.50 | 0.14 |
| E | 70.0 | 0.363E+02 | 0.572E+01 | 53. | 60. | 150. | 0.0023 | 0.0023 | 0.0811 | 0.44 |
| N | SEC | 0.114E+02 | 0.447E+01 | 56. | 56. | 157. | 0.0022 | 0.0022 | 118.00 | 0.33 |
| E | 50.0 | 0.445E+02 | 0.457E+01 | 53. | 71. | 150. | 0.0019 | 0.0040 | 0.0857 | 0.51 |
| N | SEC | 0.106E+02 | 0.636E+01 | 51. | 69. | 174. | 0.0017 | 0.0044 | 111.10 | 0.27 |
| E | 33.0 | 0.227E+02 | 0.572E+01 | 66. | 52. | 160. | 0.0014 | 0.0035 | 0.0568 | 0.37 |
| N | SEC | 0.117E+02 | 0.746E+01 | 68. | 54. | 153. | 0.0031 | 0.0022 | 113.00 | 0.21 |
| E | 20.0 | 0.176E+02 | 0.652E+01 | 60. | 53. | 163. | 0.0017 | 0.0030 | 0.0503 | 0.21 |
| N | SEC | 0.127E+02 | 0.773E+01 | 59. | 52. | 157. | 0.0061 | 0.0045 | 128.30 | 0.16 |

AVERAGE # 0
SHAS48 200 HZ 14-OCT-84 T41N R4W S23 W OF C
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE | RHO MIN ( OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 5.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.7 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |

AVERAGE # 0
SHAS40 200 HZ 14-OCT-84 T41N R4W S23 W OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.554E+03 | 0.122E+03 | 1. | 50. | 129. | 0.0000 | 0.0075 | 0.0228 | 2.05 |
| N | HZ | 0.539E+03 | 0.992E+02 | 6. | 50. | 131. | 0.0026 | 0.0142 | 87.50 | 1.96 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| N | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| N | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| N | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| N | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.220E+03 | 0.210E+02 | 21. | 77. | 85. | 0.0091 | 0.0307 | 0.0857 | 2.40 |
| N | HZ | 0.358E+03 | 0.225E+02 | 17. | 77. | 149. | 0.0058 | 0.0229 | 82.60 | 0.82 |

AVERAGE # [illegible]
SEAS48 200 HZ 14-OCT-84 T41N R4W S23 N OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 7.7 | 0.264E+03 | 0.928E+02 | 86. | 80. | 156. | 0.0113 | 0.0281 | 0.0155 | 0.23 |
| H | HZ | 0.214E+03 | 0.928E+02 | 84. | 84. | 161. | 0.0141 | 0.0085 | 118.80 | 0.20 |
| E | 14.3 | 0.424E+03 | 0.164E+03 | 87. | 75. | 142. | 0.0060 | 0.0140 | 0.0388 | 0.20 |
| H | HZ | 0.357E+03 | 0.165E+03 | 89. | 74. | 139. | 0.0039 | 0.0145 | 120.70 | 0.18 |
| E | 20.0 | 0.602E+03 | 0.220E+03 | 84. | 74. | 142. | 0.0141 | 0.0405 | 0.0168 | 0.18 |
| H | HZ | 0.542E+03 | 0.208E+03 | 86. | 73. | 140. | 0.0162 | 0.0195 | 117.00 | 0.16 |
| E | 26.3 | 0.903E+03 | 0.264E+03 | 84. | 72. | 145. | 0.0183 | 0.0294 | 0.0272 | 0.20 |
| H | HZ | 0.715E+03 | 0.260E+03 | 77. | 72. | 143. | 0.0116 | 0.0343 | 122.90 | 0.17 |
| E | 31.2 | 0.105E+04 | 0.259E+03 | 86. | 70. | 145. | 0.0130 | 0.0375 | 0.0365 | 0.22 |
| H | HZ | 0.962E+03 | 0.258E+03 | 74. | 70. | 143. | 0.0105 | 0.0130 | 123.80 | 0.21 |
| E | 40.0 | 0.909E+03 | 0.283E+03 | 65. | 70. | 141. | 0.0020 | 0.0121 | 0.0548 | 0.24 |
| H | HZ | 0.939E+03 | 0.293E+03 | 65. | 66. | 139. | 0.0015 | 0.0164 | 125.80 | 0.24 |

SHAS48 200 HZ 14-OCT-84 T41N R4W S25 W OF C

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 12
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 100.0000 | | 0.0000 |
| | | 1000.0000 | |
| 2 | 1.0000 | | 1000.0000 |
| | | 500.0000 | |
| 3 | 10.0000 | | 1500.0000 |
| | | 4000.0000 | |
| 4 | 1.0000 | | 5500.0000 |

FREQUENCY RANGE ( 0.0000 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 281.2771 | | 0.0000 |
| | | 1139.1580 | |
| 2 | 1.1455 | | 1139.1580 |
| | | 429.8455 | |
| 3 | 11.3336 | | 1569.0035 |
| | | 4030.8547 | |
| 4 | 0.9950 | | 5599.8583 |

MEAN PERCENT VARIATION IS 7.7263

ERROR ANALYSIS

R-SQUARED = 1.000

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 11 | 153146.000 | 13922.364 | 0.546 |
| MODEL | 6 | 153092.521 | 25515.420 | ********** |
| RESID | 5 | 0.072 | 0.014 | |

STANDARD ERROR = 0.120

DIFFT FOR MEANS = -0.000

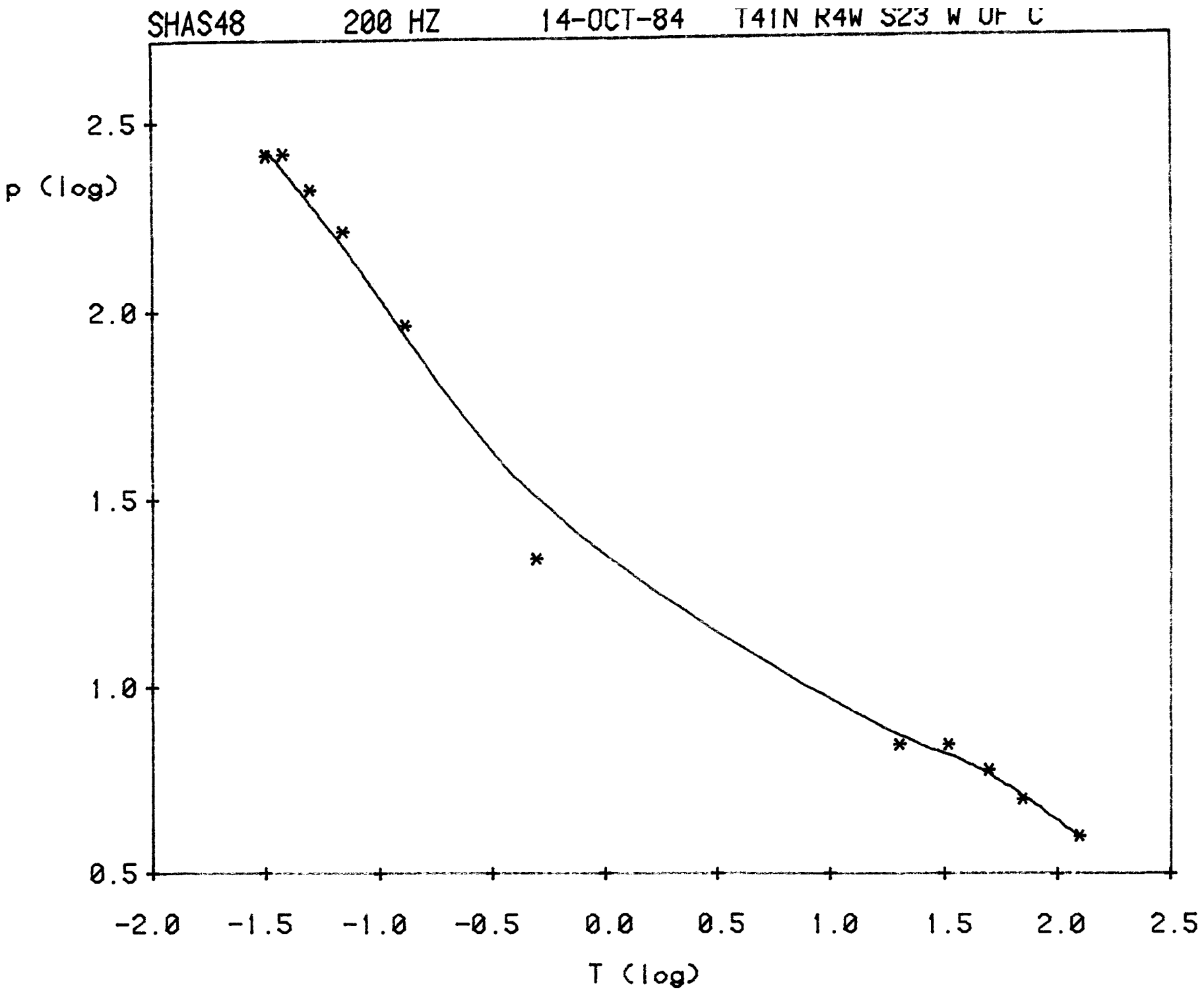
NOISE TO SIGNAL RATIO = 0.075 PERCENT

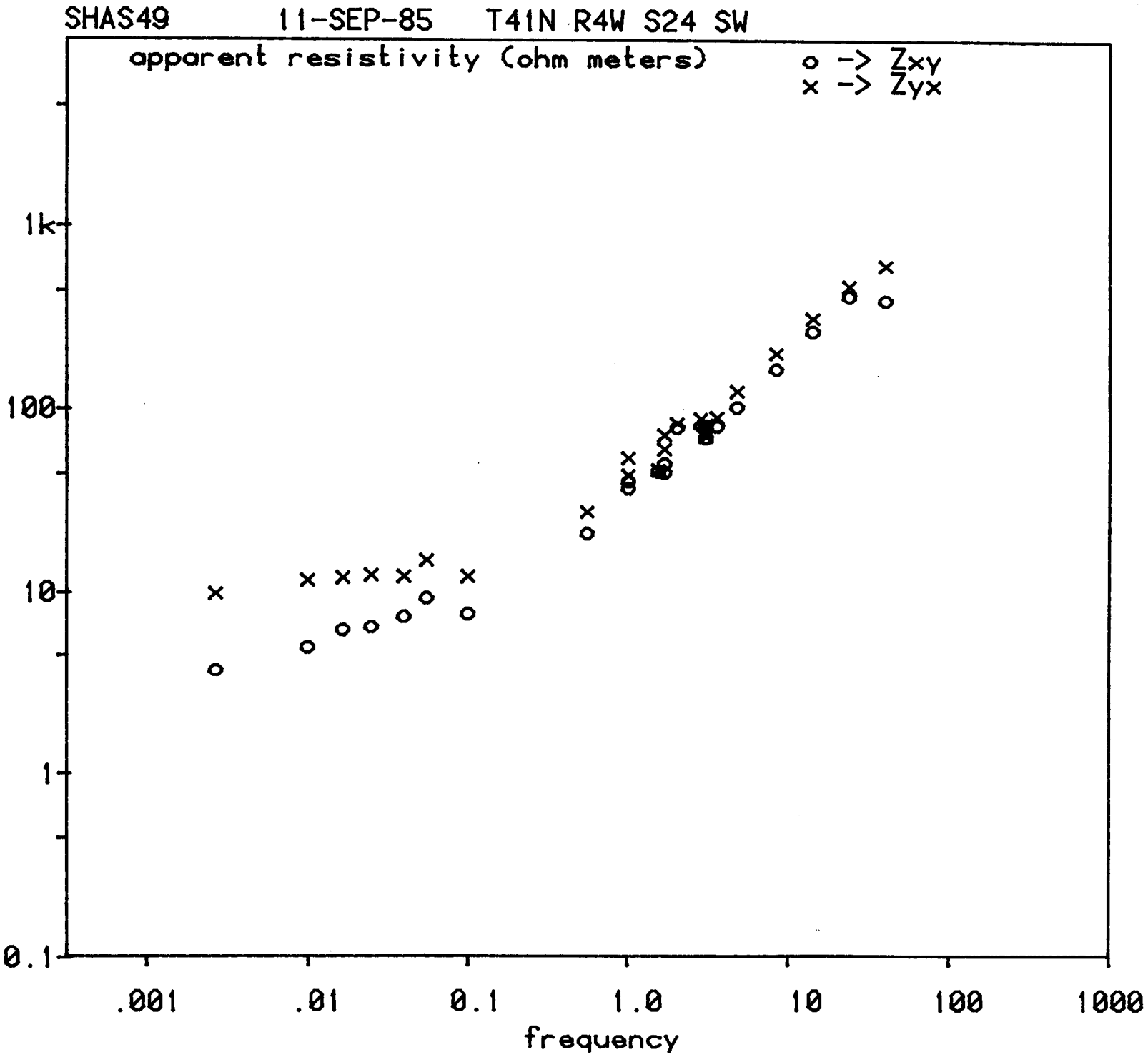
MEAS48 200 HZ 14-OCT-84 T411 R47 S23 W OF C

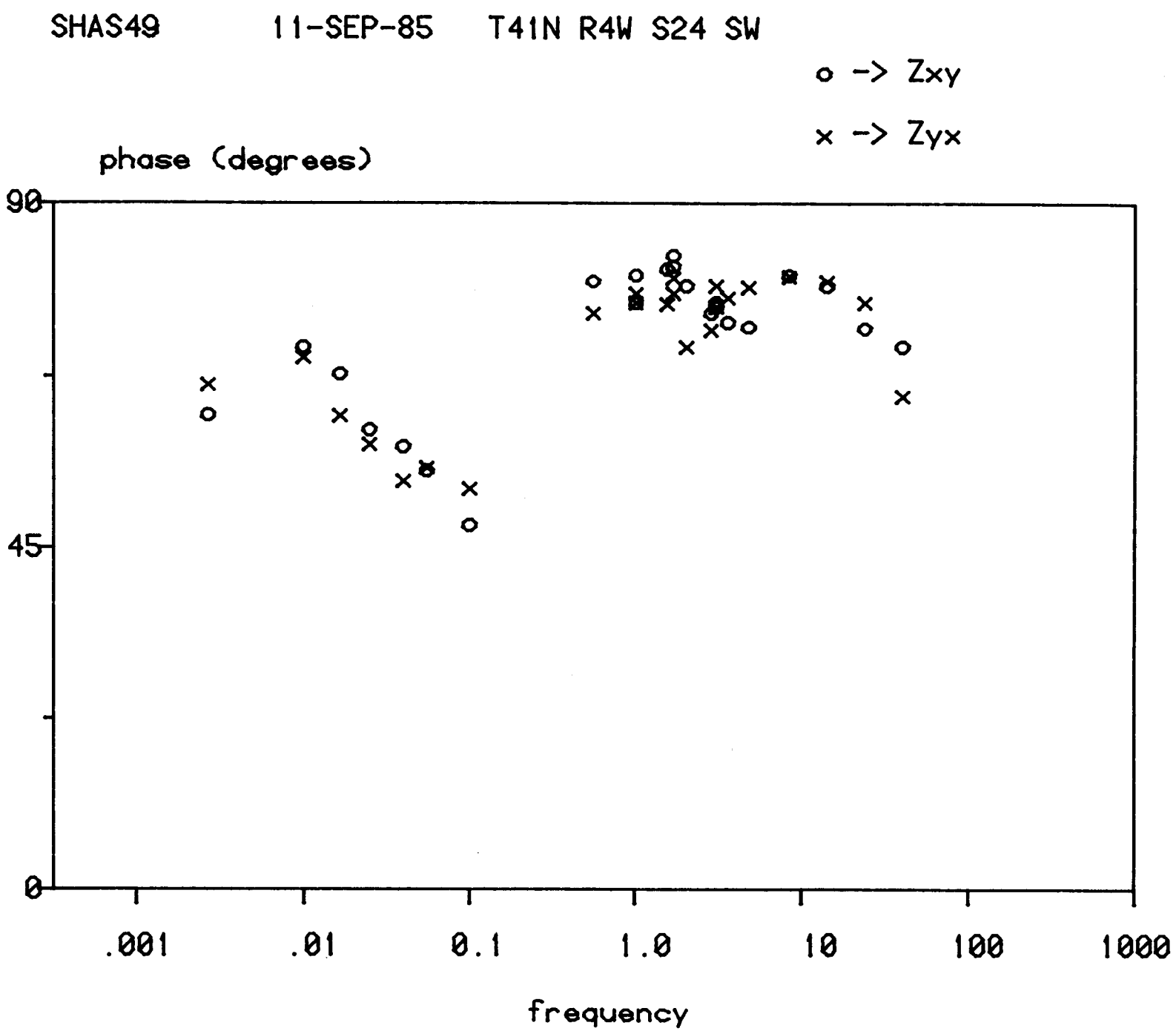
ERROR STRUCTURE OF FITTED MODEL

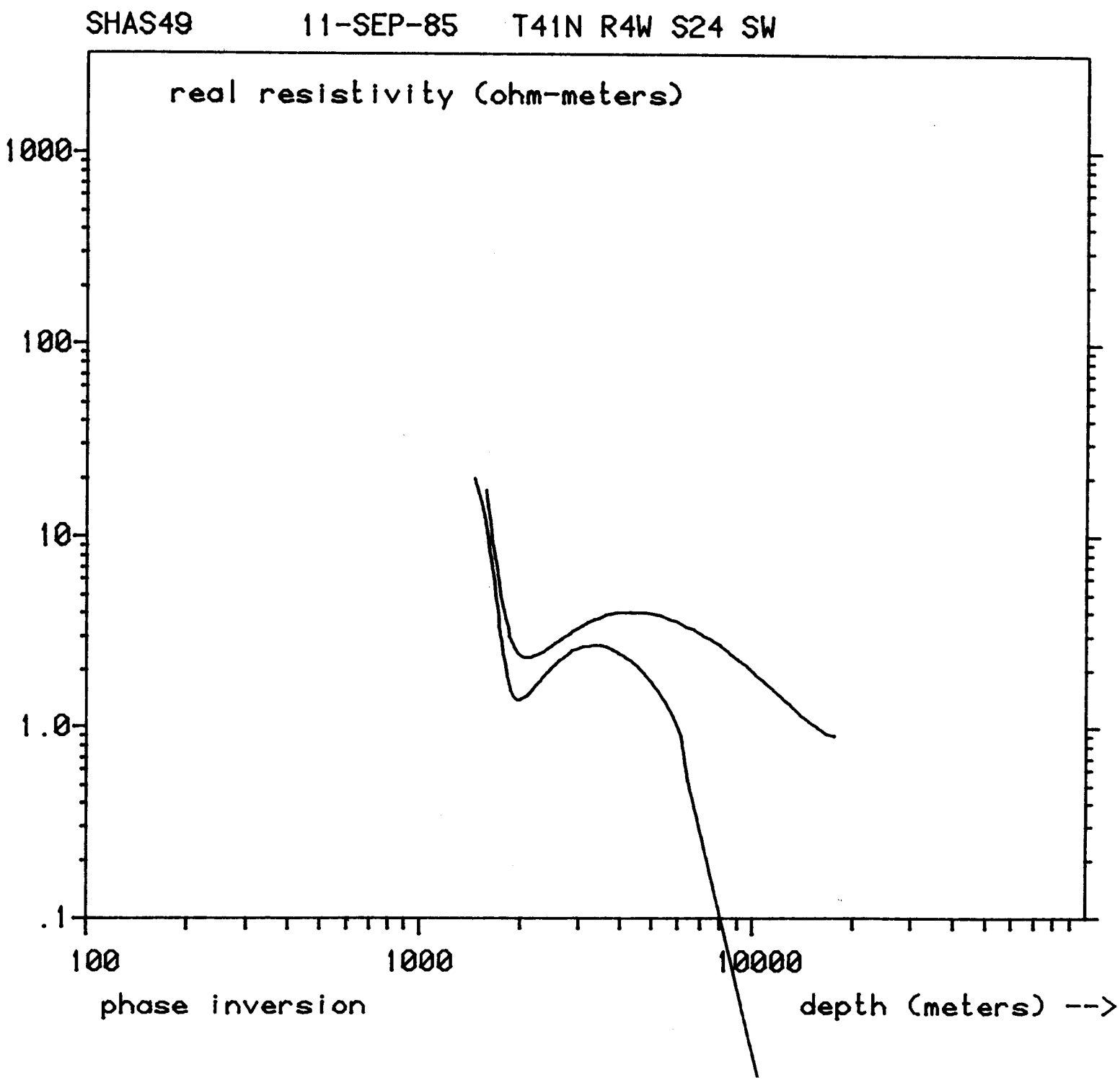
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 125.000 | 4.000 | 4.005 | -0.005 | -0.125 |
| 2 | 70.000 | 5.000 | 5.169 | -0.169 | -3.329 |
| 3 | 50.000 | 6.000 | 5.900 | 0.100 | 1.685 |
| 4 | 33.000 | 7.000 | 6.697 | 0.303 | 4.423 |
| 5 | 20.000 | 7.000 | 7.200 | -0.200 | -2.811 |
| 6 | 0.500 | 22.000 | 26.799 | -4.799 | -19.669 |
| 7 | 0.130 | 93.000 | 88.994 | 4.006 | 4.403 |
| 8 | 0.070 | 165.000 | 150.950 | 14.050 | 8.894 |
| 9 | 0.050 | 214.000 | 197.434 | 16.566 | 8.053 |
| 10 | 0.038 | 252.000 | 240.663 | 21.337 | 8.490 |
| 11 | 0.032 | 259.000 | 268.514 | -9.514 | -3.387 |
| 12 | 0.025 | 288.000 | 306.125 | -18.125 | -6.102 |

MEAN PERCENT ERROR = 7.7546
MAXIMUM PERCENT ERROR = 19.6606
MAX. ERROR OCCURED AT OBSERVATION 6


SHAS48 200 HZ 14-OCT-84 T41N R4W S23 W OF C
p (log)
2.5
2.0
1.5
1.0
0.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS49 11-SEP-85 T41N R4W S24 SW
apparent resistivity (ohm meters)
o -> Zxy
x -> Zyx
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS49 11-SEP-85 T41N R4W S24 SW
o -> Zxy
x -> Zyx
phase (degrees)
90
45
0
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS49 11-SEP-85 T41N R4W S24 SW
real resistivity (ohm-meters)
1000
100
10
1.0
.1
100
1000
10000
phase inversion
depth (meters) -->

site title: SHAS49 200 HZ 11-SEP-85 T41N R4W S24 SW

| # | Frequency | Mean of RHOZxy | RHOZyx | PHIZxy | PHIZyx | real mag/dir | imaginary mag/dir |
|---|---|---|---|---|---|---|---|
| 1 | 0.0017 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 2 | 0.0027 : | 3.61 | 9.55 | 62. | 66. | 0.105/230 | 0.040/311 |
| 3 | 0.0061 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 4 | 0.0100 : | 4.90 | 11.33 | 71. | 70. | 0.126/231 | 0.079/272 |
| 5 | 0.0167 : | 6.07 | 11.86 | 68. | 62. | 0.165/249 | 0.072/274 |
| 6 | 0.0250 : | 6.28 | 12.10 | 60. | 59. | 0.205/244 | 0.078/254 |
| 7 | 0.0400 : | 7.17 | 11.89 | 58. | 54. | 0.211/242 | 0.014/190 |
| 8 | 0.0556 : | 9.14 | 14.60 | 55. | 55. | 0.189/242 | 0.045/ 54 |
| 9 | 0.1000 : | 7.38 | 12.04 | 48. | 53. | 0.155/236 | 0.095/ 75 |
| 10 | 0.1639 : | 19.72 | 33.33 | 64. | 33. | 0.108/222 | 0.256/107 |
| 11 | 0.3125 : | 22.01 | 41.24 | 68. | 62. | 0.053/164 | 0.117/120 |
| 12 | 0.5556 : | 20.24 | 26.69 | 80. | 76. | 0.012/223 | 0.020/ 59 |
| 13 | 0.7143 : | 21.35 | 20.85 | 72. | 80. | 0.021/240 | 0.008/ 76 |
| 14 | 1.0000 : | 35.68 | 42.47 | 81. | 77. | 0.012/214 | 0.020/118 |
| 15 | 1.0000 : | 39.64 | 52.99 | 77. | 78. | 0.023/172 | 0.015/321 |
| 16 | 1.1111 : | 46.44 | 36.89 | 77. | 73. | 0.040/174 | 0.011/253 |
| 17 | 1.5385 : | 44.89 | 45.84 | 81. | 77. | 0.019/250 | 0.022/113 |
| 18 | 1.6949 : | 48.59 | 70.64 | 83. | 80. | 0.019/194 | 0.005/188 |
| 19 | 1.6949 : | 43.58 | 58.76 | 82. | 78. | 0.023/215 | 0.012/354 |
| 20 | 2.0000 : | 77.51 | 82.06 | 79. | 71. | 0.027/317 | 0.026/157 |
| 21 | 2.8571 : | 78.86 | 85.90 | 76. | 74. | 0.024/240 | 0.012/155 |
| 22 | 3.0303 : | 68.23 | 69.41 | 76. | 76. | 0.017/198 | 0.008/182 |
| 23 | 3.0303 : | 78.96 | 80.44 | 77. | 79. | 0.033/230 | 0.013/205 |
| 24 | 3.5714 : | 79.34 | 88.83 | 75. | 78. | 0.040/173 | 0.009/230 |
| 25 | 4.7619 : | 100.80 | 122.46 | 74. | 79. | 0.073/270 | 0.046/186 |
| 26 | 8.3333 : | 159.86 | 196.26 | 81. | 81. | 0.033/213 | 0.028/245 |
| 27 | 14.0845 : | 256.91 | 306.47 | 79. | 80. | 0.058/218 | 0.021/227 |
| 28 | 23.8095 : | 401.85 | 455.20 | 74. | 77. | 0.028/186 | 0.058/256 |
| 29 | 40.0000 : | 382.47 | 589.85 | 71. | 65. | 0.096/183 | 0.029/345 |

SHAS49 200 HZ 11-SEP-85 T41N R4W S24 SW

STANDARD DEVIATIONS for MERGED AVERAGE, MT DATA

| frequency | RHOZxy | RHOZyx | PHIZxy | PHIZyx | theta | induction arrow real: MAG | DIR | imag: MAG |
|---|---|---|---|---|---|---|---|---|
| 0.0017 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0027 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0061 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0100 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0167 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0250 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0400 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0556 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.1000 | 2.99 | 3.35 | 5.76 | 6.22 | 5.68 | 0.026 | 10.7 | 0.000 |
| 0.1639 | 0.00 | 0.00 | 0.00 | 0.03 | 0.08 | 0.000 | 0.0 | 0.000 |
| 0.3125 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.5556 | 2.76 | 0.67 | 3.11 | 2.19 | 2.42 | 0.016 | 23.5 | 0.000 |
| 0.7143 | 5.52 | 1.37 | 1.74 | 6.27 | 61.41 | 0.018 | 117.4 | 0.130 |
| 1.0000 | 2.53 | 1.15 | 1.23 | 0.52 | 5.81 | 0.003 | 19.8 | 0.000 |
| 1.0000 | 13.18 | 1.50 | 3.71 | 4.80 | 26.56 | 0.035 | 28.3 | 0.000 |
| 1.1111 | 9.76 | 3.97 | 3.89 | 0.37 | 11.91 | 0.013 | 121.9 | 0.085 |
| 1.5385 | 5.40 | 2.64 | 3.11 | 3.55 | 6.83 | 0.020 | 28.1 | 0.020 |
| 1.6949 | 3.61 | 1.09 | 0.71 | 0.71 | 1.63 | 0.006 | 13.4 | 0.000 |
| 1.6949 | 6.91 | 2.82 | 1.97 | 6.81 | 21.92 | 0.012 | 16.8 | 0.000 |
| 2.0000 | 3.49 | 2.86 | 4.58 | 8.12 | 5.10 | 0.006 | 22.7 | 0.040 |
| 2.8571 | 9.93 | 2.37 | 2.11 | 2.11 | 23.32 | 0.004 | 22.3 | 0.000 |
| 3.0303 | 3.92 | 1.48 | 1.10 | 4.13 | 2.07 | 0.002 | 19.9 | 0.000 |
| 3.0303 | 5.13 | 4.12 | 2.82 | 4.28 | 34.90 | 0.012 | 30.0 | 0.016 |
| 3.5714 | 6.01 | 3.46 | 2.32 | 1.49 | 23.14 | 0.016 | 15.7 | 0.036 |
| 4.7619 | 6.01 | 3.12 | 1.31 | 2.44 | 30.74 | 0.008 | 25.3 | 0.000 |
| 8.3333 | 5.71 | 3.85 | 0.55 | 0.45 | 21.45 | 0.006 | 12.4 | 0.000 |
| 14.0845 | 8.40 | 4.63 | 0.73 | 3.73 | 9.48 | 0.014 | 13.5 | 0.000 |
| 23.8095 | 21.50 | 10.30 | 0.87 | 4.13 | 11.08 | 0.008 | 14.4 | 0.000 |
| 40.0000 | 25.15 | 27.25 | 3.48 | 3.47 | 64.63 | 0.030 | 20.5 | 0.000 |

AVERAGE # 8
SHAS49 200 HZ 11-SEP-85 T41N R4W S24 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO ZXY VALUE | RHO ZYX ( OHM-M ) | PHI ZXY | PHI ZYX (DEGREES) | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ IMAG | | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 600.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 375.0 | 0.492E+01 | 0.113E+02 | 65. | 65. | 0. | 0.8483 | 0.9022 | .105 | .040 | 0.14 |
| H | SEC | 0.231E+01 | 0.786E+01 | 60. | 68. | 0. | 0.8542 | 0.9048 | 230. | 311. | 0.92 |
| E | 165.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 100.0 | 0.537E+01 | 0.136E+02 | 72. | 70. | 0. | 0.9546 | 0.9160 | .126 | .079 | 0.10 |
| H | SEC | 0.443E+01 | 0.905E+01 | 71. | 70. | 0. | 0.9557 | 0.9193 | 231. | 272. | 0.99 |
| E | 60.0 | 0.693E+01 | 0.134E+02 | 68. | 62. | 0. | 0.9888 | 0.9894 | .165 | .072 | 0.07 |
| H | SEC | 0.521E+01 | 0.104E+02 | 67. | 62. | 0. | 0.9903 | 0.9908 | 249. | 274. | 1.00 |
| E | 40.0 | 0.657E+01 | 0.133E+02 | 60. | 59. | 0. | 0.9942 | 0.9807 | .205 | .078 | 0.09 |
| H | SEC | 0.600E+01 | 0.108E+02 | 61. | 58. | 0. | 0.9946 | 0.9823 | 244. | 254. | 1.00 |
| E | 25.0 | 0.778E+01 | 0.124E+02 | 58. | 54. | 0. | 0.9781 | 0.9904 | .211 | .014 | 0.08 |
| H | SEC | 0.657E+01 | 0.113E+02 | 58. | 54. | 0. | 0.9792 | 0.9908 | 242. | 190. | 1.00 |
| E | 18.0 | 0.113E+02 | 0.166E+02 | 55. | 55. | 0. | 0.9534 | 0.9817 | .189 | .045 | 0.10 |
| H | SEC | 0.700E+01 | 0.126E+02 | 55. | 56. | 0. | 0.9605 | 0.9837 | 242. | 54. | 1.00 |

AVERAGE # 8
SHAS49 200 HZ 11-SEP-85 T41N R4W S24 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO ZXY VALUE | RHO ZYX ( OHM-M ) | PHI ZXY | PHI ZYX (DEGREES) | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ | IMAG | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.776E+01 | 0.120E+02 | 48. | 52. | 0. | 0.9791 | 0.9760 | .155 | .095 | 0.04 |
| H | SEC | 0.701E+01 | 0.121E+02 | 48. | 54. | 0. | 0.9799 | 0.9795 | 236. | 75. | 0.95 |
| E | 6.1 | 0.242E+02 | 0.351E+02 | 57. | 33. | 0. | 0.6379 | 0.7474 | .108 | .256 | 0.23 |
| H | SEC | 0.152E+02 | 0.316E+02 | 72. | 33. | 0. | 0.6566 | 0.5308 | 222. | 107. | 0.98 |
| E | 3.2 | 0.254E+02 | 0.497E+02 | 75. | 70. | 0. | 0.6370 | 0.9320 | .053 | .117 | 0.21 |
| H | SEC | 0.186E+02 | 0.328E+02 | 61. | 55. | 0. | 0.6903 | 0.9365 | 164. | 120. | 0.39 |
| E | 1.8 | 0.230E+02 | 0.300E+02 | 79. | 73. | 0. | 0.9815 | 0.9179 | .012 | .020 | 0.07 |
| H | SEC | 0.175E+02 | 0.233E+02 | 81. | 78. | 0. | 0.9863 | 0.9566 | 223. | 59. | 0.36 |
| E | 1.4 | 0.242E+02 | 0.215E+02 | 72. | 80. | 0. | 0.9948 | 0.9515 | .021 | .008 | 0.08 |
| H | SEC | 0.184E+02 | 0.202E+02 | 73. | 81. | 0. | 0.9877 | 0.9461 | 240. | 76. | 0.40 |
| E | 1.0 | 0.394E+02 | 0.462E+02 | 80. | 76. | 0. | 0.9652 | 0.9547 | .012 | .020 | 0.04 |
| H | HZ | 0.320E+02 | 0.388E+02 | 81. | 78. | 0. | 0.9599 | 0.9649 | 214. | 118. | 0.19 |
| E | 1.0 | 0.413E+02 | 0.510E+02 | 76. | 78. | 0. | 0.9601 | 0.9962 | .023 | .015 | 0.05 |
| H | HZ | 0.379E+02 | 0.549E+02 | 78. | 79. | 0. | 0.9557 | 0.9878 | 172. | 321. | 0.27 |

AVERAGE # 8
SHAS49 200 HZ 11-SEP-85 T41N R4W S24 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

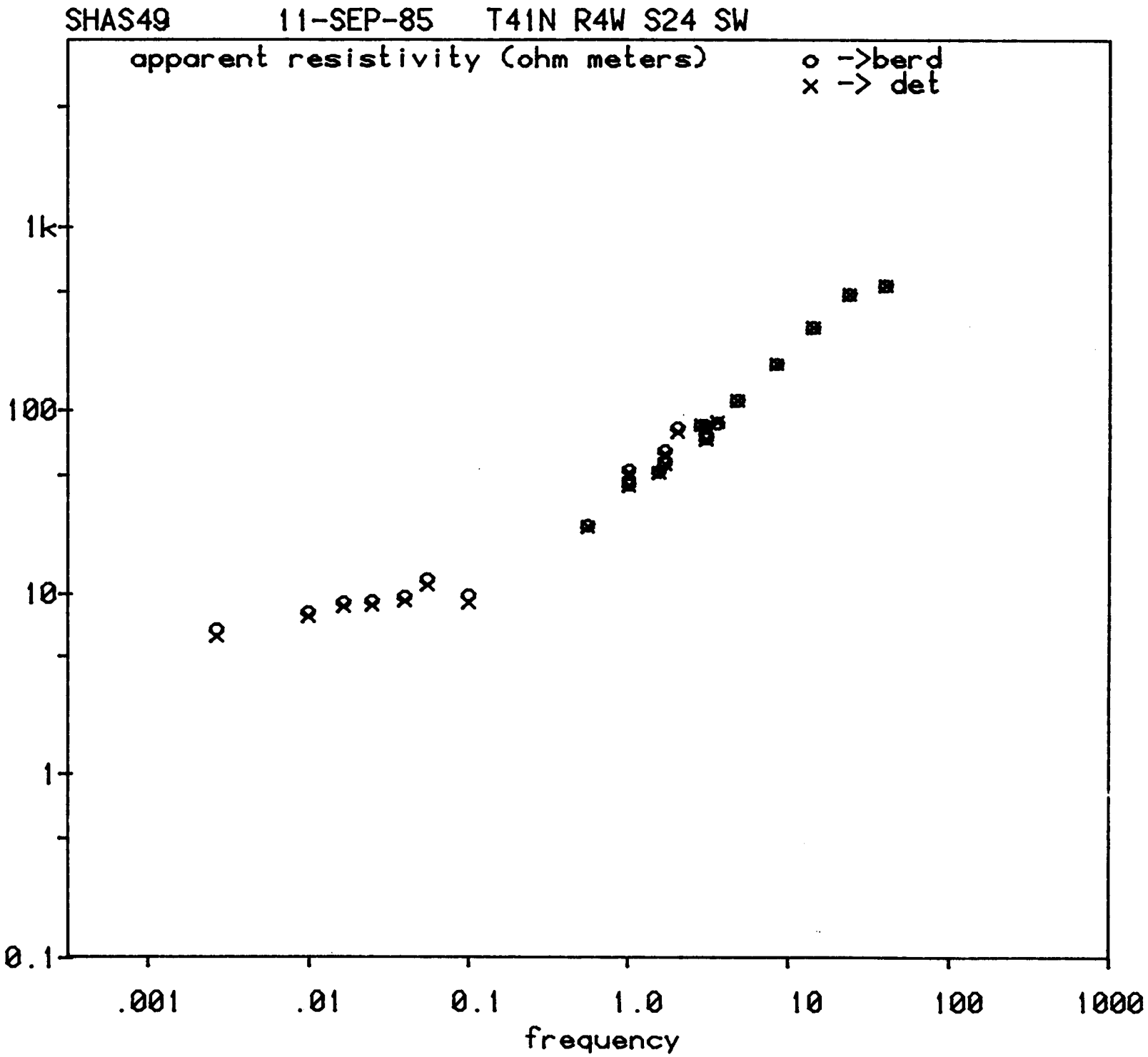
| | FREQ OR PERIOD | RHO ZXY VALUE ( OHM-M ) | RHO ZYX | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ IMAG | | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.1 | 0.505E+02 | 0.380E+02 | 78. | 73. | 0. | 0.9887 | 0.9439 | .040 | .011 | 0.03 |
| H | HZ | 0.424E+02 | 0.358E+02 | 76. | 74. | 0. | 0.9884 | 0.9731 | 174. | 253. | 0.62 |
| E | 1.5 | 0.452E+02 | 0.523E+02 | 81. | 77. | 0. | 0.9626 | 0.9118 | .019 | .022 | 0.03 |
| H | HZ | 0.445E+02 | 0.394E+02 | 82. | 77. | 0. | 0.9747 | 0.9272 | 250. | 113. | 0.39 |
| E | 1.7 | 0.492E+02 | 0.721E+02 | 81. | 78. | 0. | 0.9866 | 0.9697 | .019 | .005 | 0.08 |
| H | HZ | 0.479E+02 | 0.692E+02 | 86. | 83. | 0. | 0.9892 | 0.9783 | 194. | 188. | 0.04 |
| E | 1.7 | 0.438E+02 | 0.575E+02 | 78. | 76. | 0. | 0.9676 | 0.9969 | .023 | .012 | 0.10 |
| H | HZ | 0.433E+02 | 0.600E+02 | 85. | 81. | 0. | 0.9700 | 0.9968 | 215. | 354. | 0.31 |
| E | 2.0 | 0.807E+02 | 0.757E+02 | 80. | 71. | 0. | 0.9875 | 0.9569 | .027 | .026 | 0.07 |
| H | HZ | 0.743E+02 | 0.884E+02 | 79. | 71. | 0. | 0.9802 | 0.9573 | 317. | 157. | 0.56 |
| E | 2.9 | 0.856E+02 | 0.940E+02 | 76. | 75. | 0. | 0.9725 | 0.9184 | .024 | .012 | 0.05 |
| H | HZ | 0.721E+02 | 0.778E+02 | 76. | 73. | 0. | 0.9813 | 0.9122 | 240. | 155. | 0.35 |

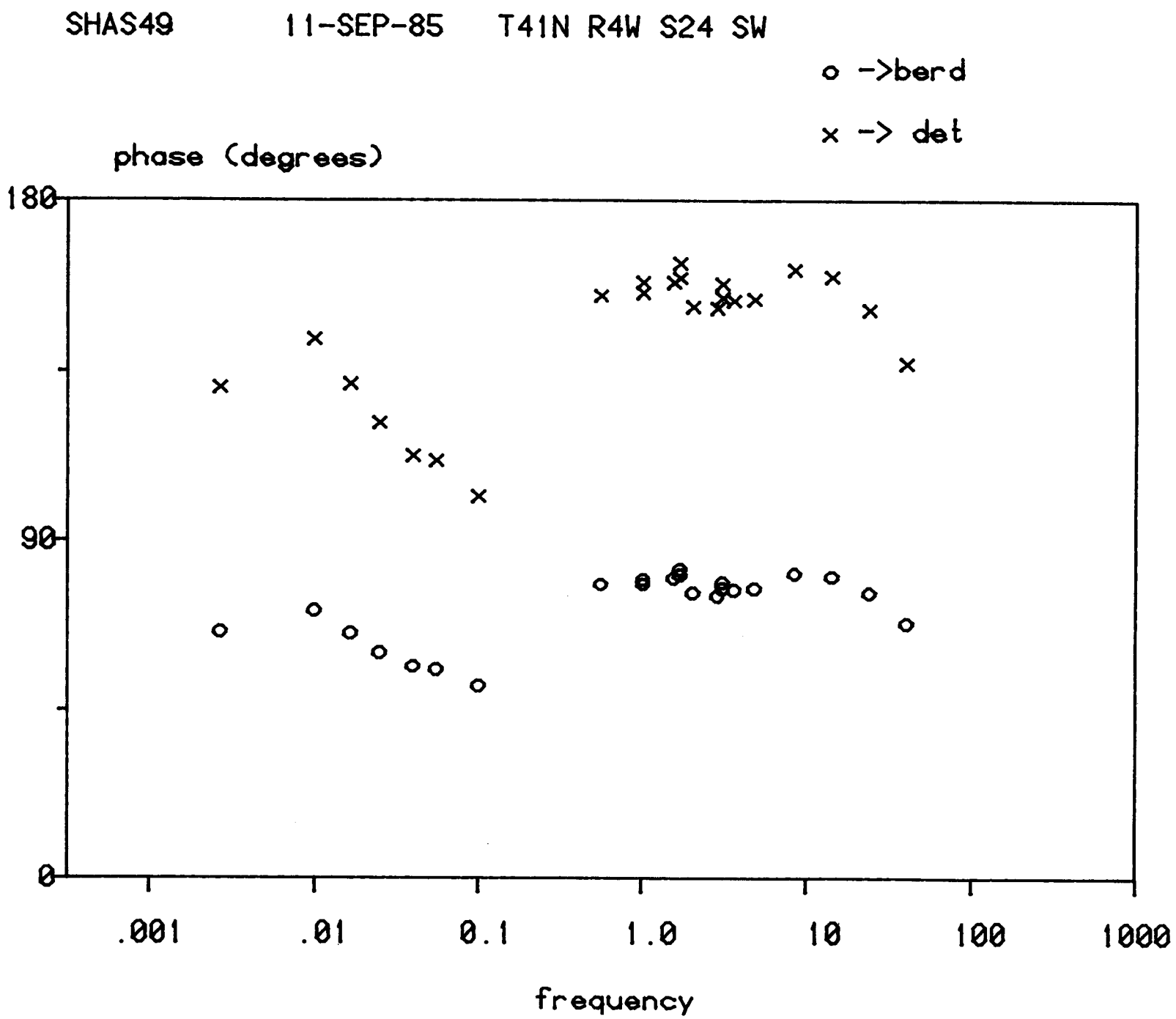
AVERAGE # 8
SHAS49 200 HZ 11-SEP-85 T41N R4W S24 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

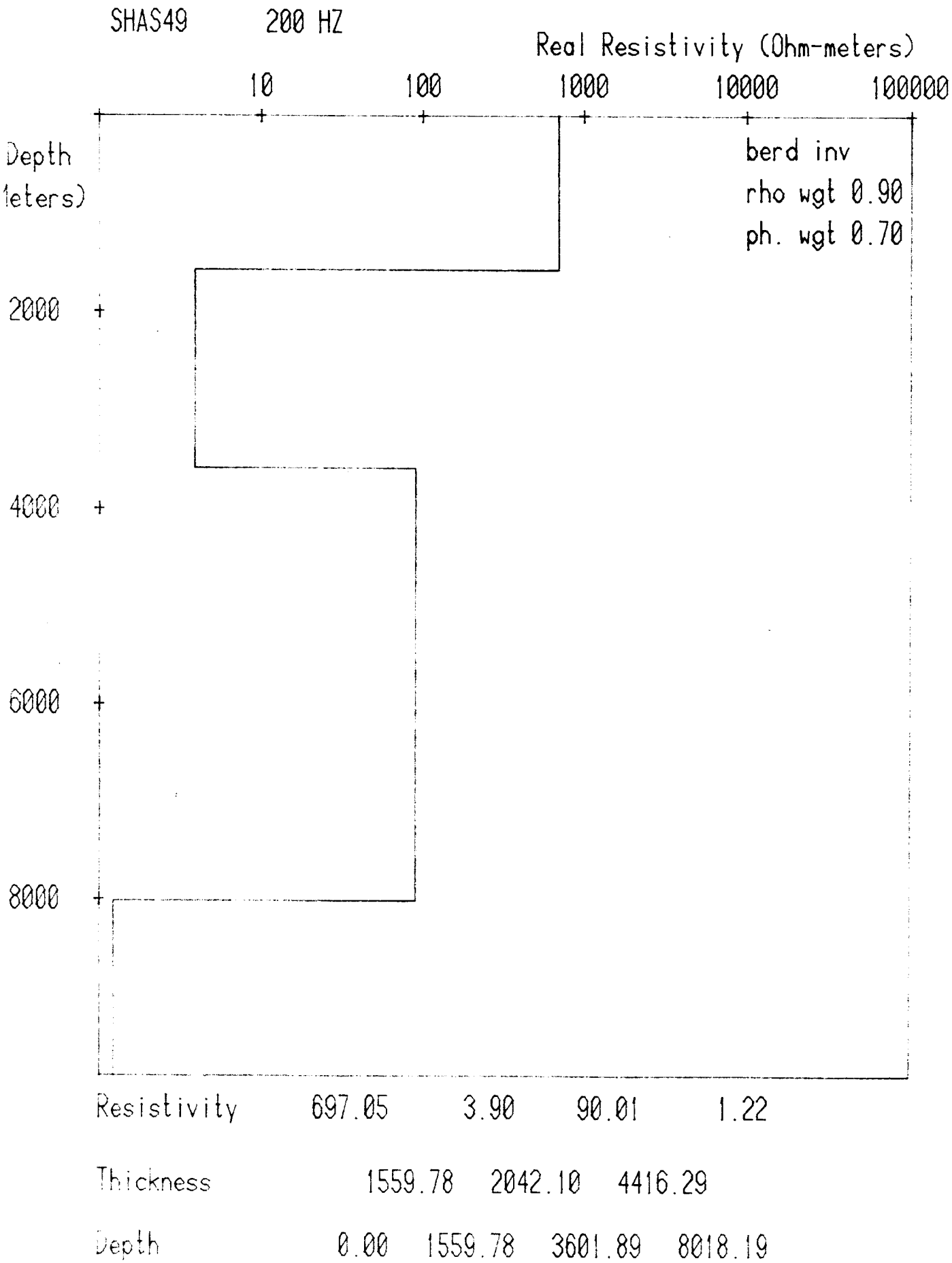
| | FREQ OR PERIOD | RHO ZXY VALUE ( | RHO ZYX OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ | IMAG | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.716E+02 | 0.781E+02 | 76. | 76. | 0. | 0.9727 | 0.9334 | .017 | .008 | 0.05 |
| H | HZ | 0.649E+02 | 0.607E+02 | 77. | 77. | 0. | 0.9718 | 0.9209 | 198. | 182. | 0.27 |
| E | 3.0 | 0.803E+02 | 0.883E+02 | 77. | 79. | 0. | 0.9986 | 0.9190 | .033 | .013 | 0.08 |
| H | HZ | 0.776E+02 | 0.725E+02 | 77. | 80. | 0. | 0.9984 | 0.9003 | 230. | 205. | 0.53 |
| E | 3.6 | 0.830E+02 | 0.957E+02 | 76. | 77. | 0. | 0.9954 | 0.9205 | .040 | .009 | 0.05 |
| H | HZ | 0.756E+02 | 0.820E+02 | 73. | 78. | 0. | 0.9944 | 0.9422 | 173. | 230. | 0.36 |
| E | 4.8 | 0.110E+03 | 0.137E+03 | 78. | 79. | 0. | 0.9657 | 0.9527 | .073 | .046 | 0.05 |
| H | HZ | 0.912E+02 | 0.107E+03 | 70. | 79. | 0. | 0.9610 | 0.9524 | 270. | 186. | 0.50 |
| E | 8.3 | 0.165E+03 | 0.203E+03 | 80. | 81. | 0. | 0.9737 | 0.9755 | .033 | .028 | 0.03 |
| H | HZ | 0.155E+03 | 0.189E+03 | 81. | 81. | 0. | 0.9757 | 0.9704 | 213. | 245. | 0.53 |
| E | 14.1 | 0.267E+03 | 0.317E+03 | 80. | 80. | 0. | 0.9284 | 0.9777 | .058 | .021 | 0.02 |
| H | HZ | 0.247E+03 | 0.296E+03 | 79. | 80. | 0. | 0.9290 | 0.9784 | 218. | 227. | 0.69 |
| E | 23.8 | 0.399E+03 | 0.485E+03 | 76. | 78. | 0. | 0.9500 | 0.9487 | .028 | .058 | 0.04 |
| H | HZ | 0.405E+03 | 0.425E+03 | 71. | 77. | 0. | 0.9488 | 0.9623 | 186. | 256. | 0.57 |
| E | 40.0 | 0.489E+03 | 0.652E+03 | 70. | 70. | 0. | 0.8854 | 0.9394 | .096 | .029 | 0.05 |
| H | HZ | 0.276E+03 | 0.528E+03 | 73. | 60. | 0. | 0.8980 | 0.9516 | 183. | 345. | 0.51 |

site title: SHAS49 200 HZ 11-SEP-85 T41N R4W S24 SW

| # | Frequency | Mean of RHOberd | RHOdet | PHIberd | PHIdet | real mag/dir | imaginary mag/dir |
|---|---|---|---|---|---|---|---|
| 1 | 0.0017 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 2 | 0.0027 : | 6.21 | 5.68 | 65. | 130. | 0.105/230 | 0.040/311 |
| 3 | 0.0061 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 4 | 0.0100 : | 7.78 | 7.31 | 71. | 143. | 0.126/231 | 0.079/272 |
| 5 | 0.0167 : | 8.70 | 8.31 | 65. | 131. | 0.165/249 | 0.072/274 |
| 6 | 0.0250 : | 8.95 | 8.45 | 59. | 121. | 0.205/244 | 0.078/254 |
| 7 | 0.0400 : | 9.37 | 8.98 | 56. | 112. | 0.211/242 | 0.014/190 |
| 8 | 0.0556 : | 11.70 | 10.84 | 55. | 111. | 0.189/242 | 0.045/ 54 |
| 9 | 0.1000 : | 9.55 | 8.76 | 51. | 101. | 0.155/236 | 0.095/ 75 |
| 10 | 0.1639 : | 24.19 | 20.32 | 46. | 109. | 0.108/222 | 0.256/107 |
| 11 | 0.3125 : | 30.80 | 28.05 | 65. | 128. | 0.053/164 | 0.117/120 |
| 12 | 0.5556 : | 23.32 | 22.76 | 78. | 154. | 0.012/223 | 0.020/ 59 |
| 13 | 0.7143 : | 20.98 | 20.15 | 76. | 151. | 0.021/240 | 0.008/ 76 |
| 14 | 1.0000 : | 38.96 | 38.13 | 79. | 158. | 0.012/214 | 0.020/118 |
| 15 | 1.0000 : | 46.05 | 44.95 | 78. | 155. | 0.023/172 | 0.015/321 |
| 16 | 1.1111 : | 41.47 | 40.28 | 75. | 149. | 0.040/174 | 0.011/253 |
| 17 | 1.5385 : | 45.24 | 44.41 | 79. | 158. | 0.019/250 | 0.022/113 |
| 18 | 1.6949 : | 59.06 | 56.88 | 82. | 163. | 0.019/194 | 0.005/188 |
| 19 | 1.6949 : | 50.83 | 50.36 | 80. | 159. | 0.023/215 | 0.012/354 |
| 20 | 2.0000 : | 79.32 | 74.79 | 75. | 151. | 0.027/317 | 0.026/157 |
| 21 | 2.8571 : | 82.31 | 81.47 | 75. | 151. | 0.024/240 | 0.012/155 |
| 22 | 3.0303 : | 68.80 | 68.71 | 76. | 154. | 0.017/198 | 0.008/182 |
| 23 | 3.0303 : | 79.63 | 78.95 | 78. | 158. | 0.033/230 | 0.013/205 |
| 24 | 3.5714 : | 83.92 | 84.25 | 76. | 153. | 0.040/173 | 0.009/230 |
| 25 | 4.7619 : | 111.04 | 111.00 | 77. | 153. | 0.073/270 | 0.046/186 |
| 26 | 8.3333 : | 177.60 | 175.86 | 81. | 162. | 0.033/213 | 0.028/245 |
| 27 | 14.0845 : | 281.13 | 279.49 | 80. | 159. | 0.058/218 | 0.021/227 |
| 28 | 23.8095 : | 427.50 | 426.49 | 76. | 151. | 0.028/186 | 0.058/256 |
| 29 | 40.0000 : | 477.08 | 472.93 | 68. | 136. | 0.096/183 | 0.029/345 |


SHAS49 11-SEP-85 T41N R4W S24 SW
apparent resistivity (ohm meters)
o ->berd
x -> det
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS49 11-SEP-85 T41N R4W S24 SW
o ->berd
x -> det
phase (degrees)
180
90
0
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS49
200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
Depth
leters)
berd inv
rho wgt 0.90
ph. wgt 0.70
2000
4000
6000
8000
Resistivity 697.05 3.90 90.01 1.22
Thickness 1559.78 2042.10 4416.29
Depth 0.00 1559.78 3601.89 8018.19

SHAS49 200 HZ 11-SEP-85 T41N R4W S24 SW

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 23
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 1

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 300.0000 | | 0.0000 |
| | | 1000.0000 | |
| 2 | 5.0000 | | 1000.0000 |
| | | 2000.0000 | |
| 3 | 10.0000 | | 3000.0000 |
| | | 7000.0000 | |
| 4 | 1.0000 | | 10000.0000 |

FREQUENCY RANGE ( 0.0027 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 697.0527 | | 0.0000 |
| | | 1559.7871 | |
| 2 | 3.9000 | | 1559.7871 |
| | | 2042.1095 | |
| 3 | 90.0138 | | 3601.8966 |
| | | 4416.2978 | |
| 4 | 1.2287 | | 8018.1943 |

MEAN PERCENT VARIATION IS 19.2881

SHAS49 200 HZ 11-SEP-85 T41N R4W S24 SW

ERROR STRUCTURE OF FITTED MODEL

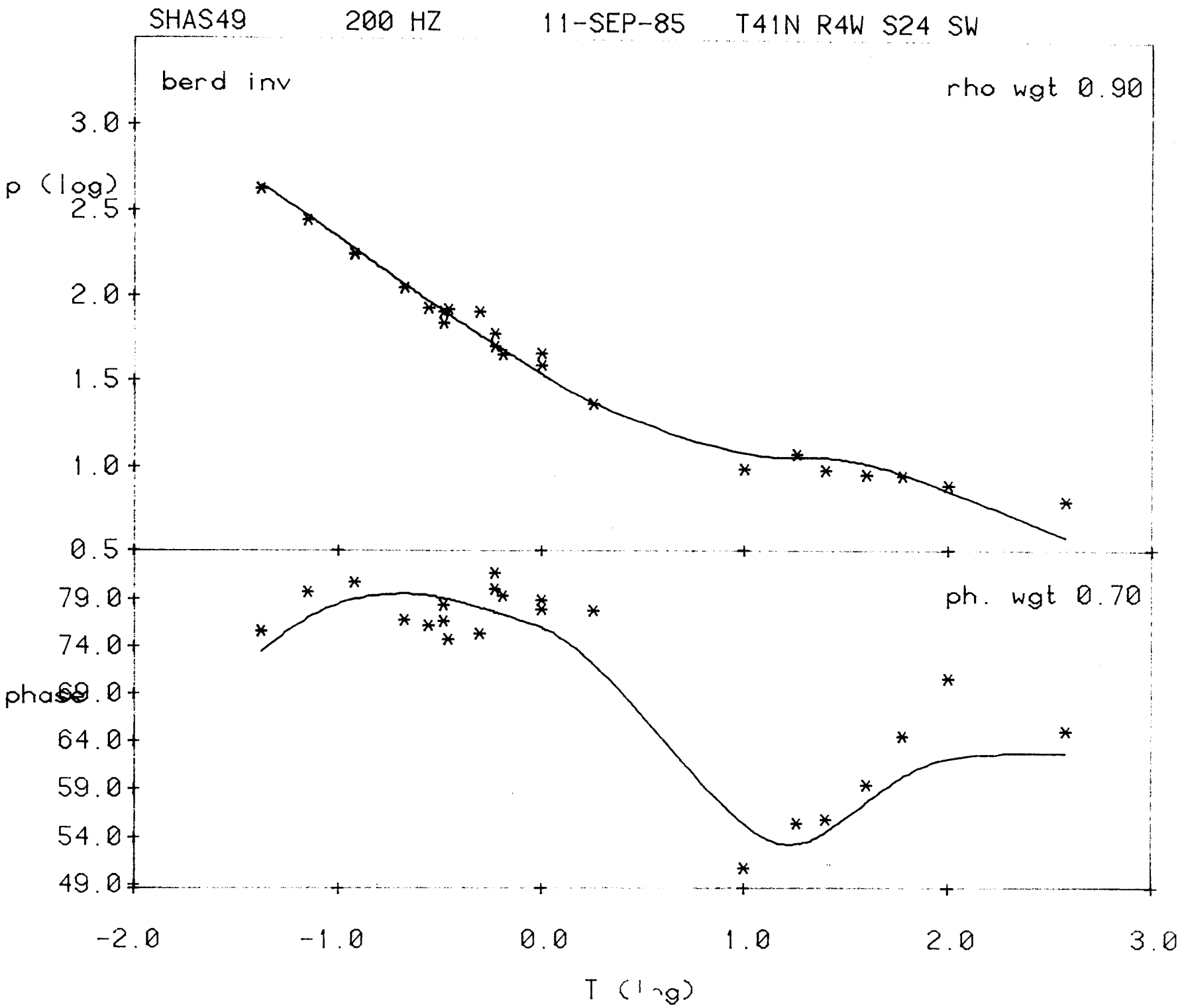
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 375.000 | 6.208 | 3.856 | 2.352 | 46.749 |
| 2 | 100.000 | 7.777 | 7.272 | 0.505 | 6.710 |
| 3 | 60.000 | 8.705 | 9.129 | -0.424 | -4.754 |
| 4 | 40.000 | 8.951 | 10.473 | -1.523 | -15.680 |
| 5 | 25.000 | 9.369 | 11.391 | -2.022 | -19.482 |
| 6 | 18.000 | 11.703 | 11.483 | 0.220 | 1.897 |
| 7 | 10.000 | 9.549 | 11.130 | -1.581 | -15.295 |
| 8 | 1.800 | 23.316 | 22.356 | 0.960 | 4.202 |
| 9 | 1.000 | 38.961 | 34.773 | 4.188 | 11.360 |
| 10 | 1.000 | 46.046 | 34.773 | 11.273 | 27.898 |
| 11 | 0.650 | 45.241 | 47.957 | -2.716 | -5.828 |
| 12 | 0.390 | 59.058 | 51.591 | 7.467 | 13.497 |

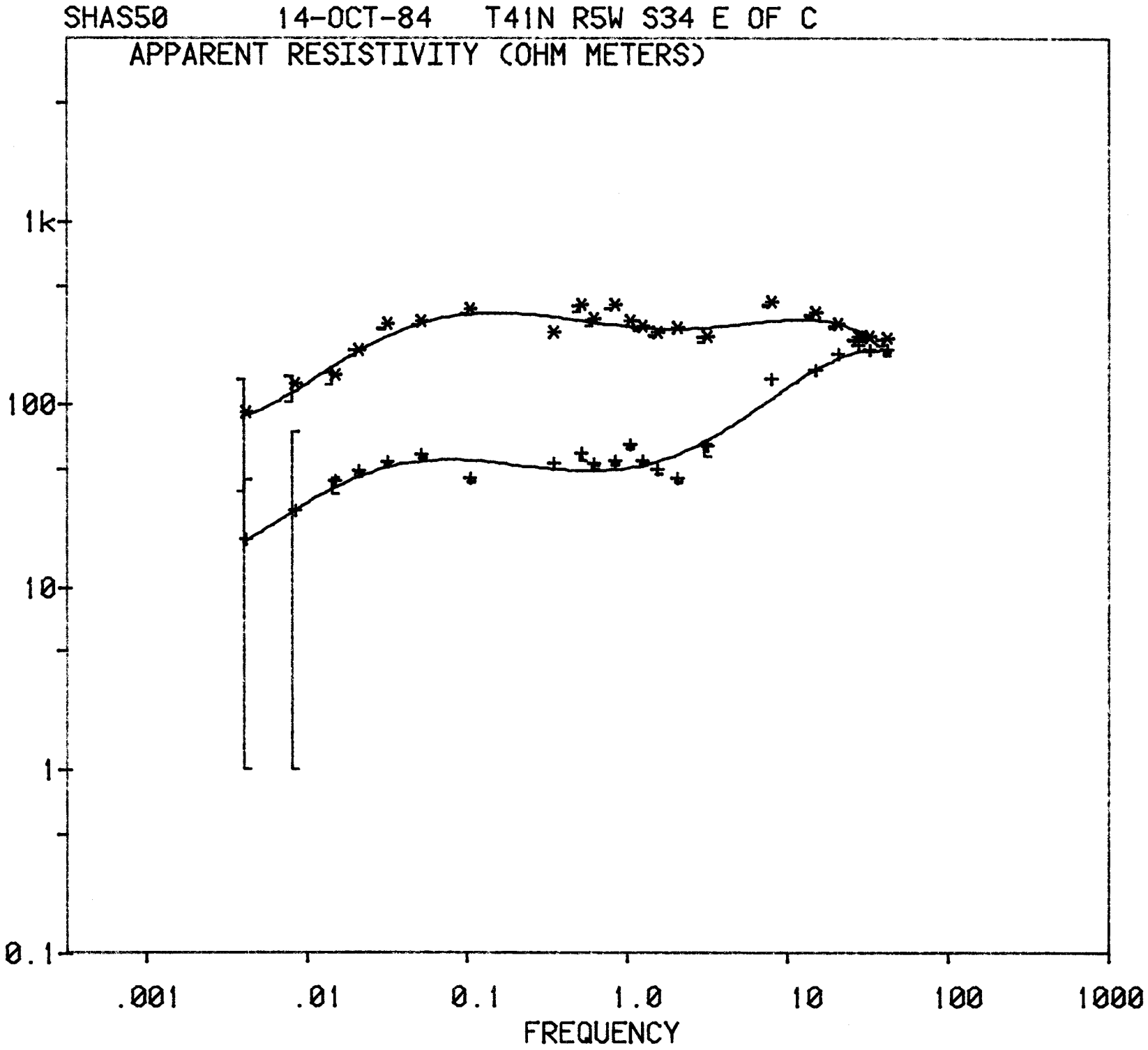
| | | | | | |
|---|---|---|---|---|---|
| 14 | 0.500 | 79.321 | 58.547 | 20.774 | 30.136 |
| 15 | 0.350 | 82.313 | 77.563 | 4.751 | 5.943 |
| 16 | 0.330 | 68.795 | 81.338 | -12.543 | -16.709 |
| 17 | 0.330 | 79.633 | 81.338 | -1.705 | -2.119 |
| 18 | 0.280 | 83.925 | 93.015 | -9.091 | -10.276 |
| 19 | 0.210 | 111.043 | 118.135 | -7.092 | -6.192 |
| 20 | 0.120 | 177.597 | 189.918 | -12.320 | -6.705 |
| 21 | 0.071 | 281.129 | 296.832 | -15.703 | -5.434 |
| 22 | 0.042 | 427.497 | 454.971 | -27.474 | -6.227 |
| 23 | 0.025 | 477.079 | 653.476 | -176.397 | -31.205 |

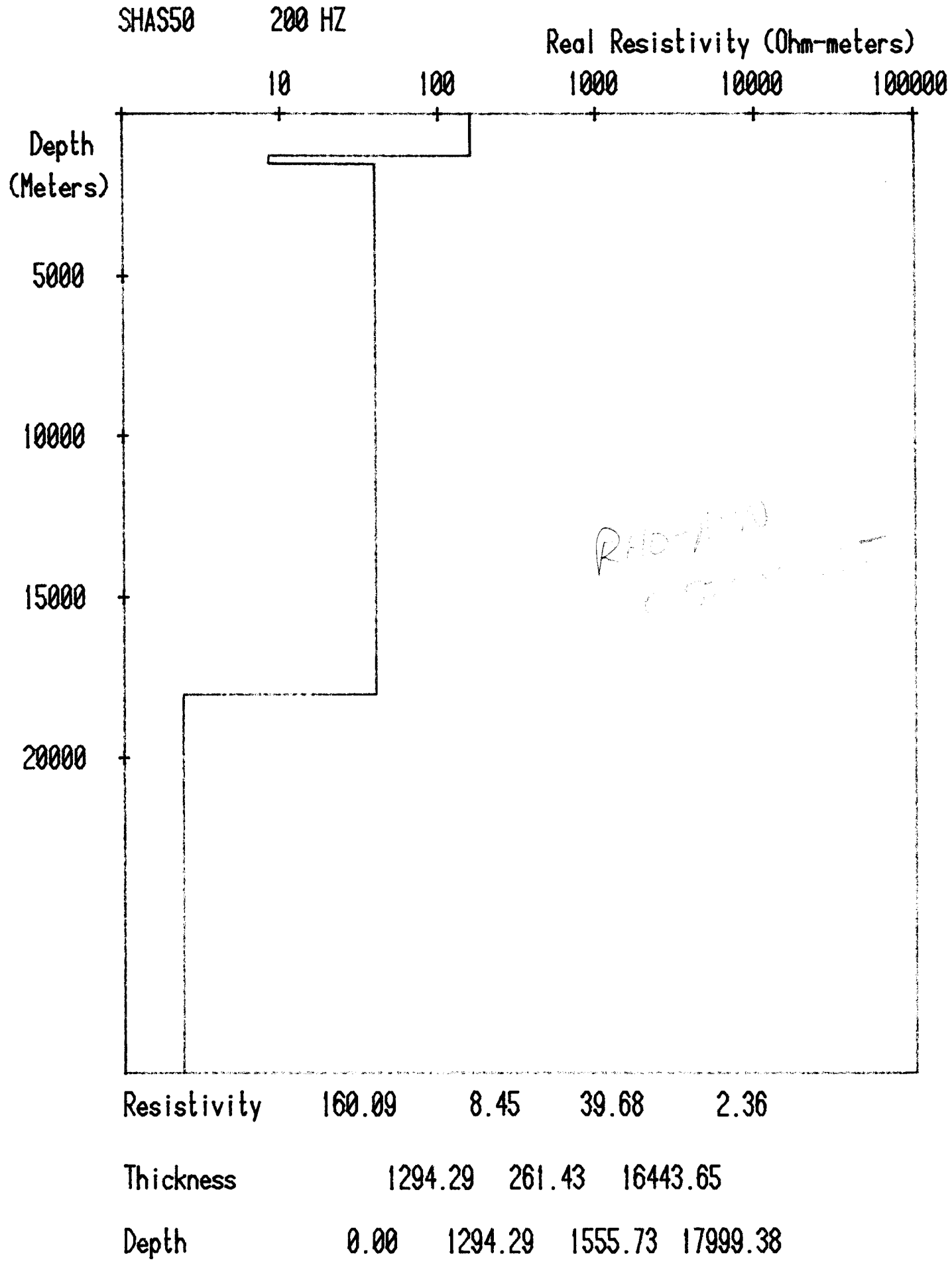
MEAN PERCENT ERROR = 17.1116
MAXIMUM PERCENT ERROR = 46.7489
MAX. ERROR OCCURED AT OBSERVATION 1

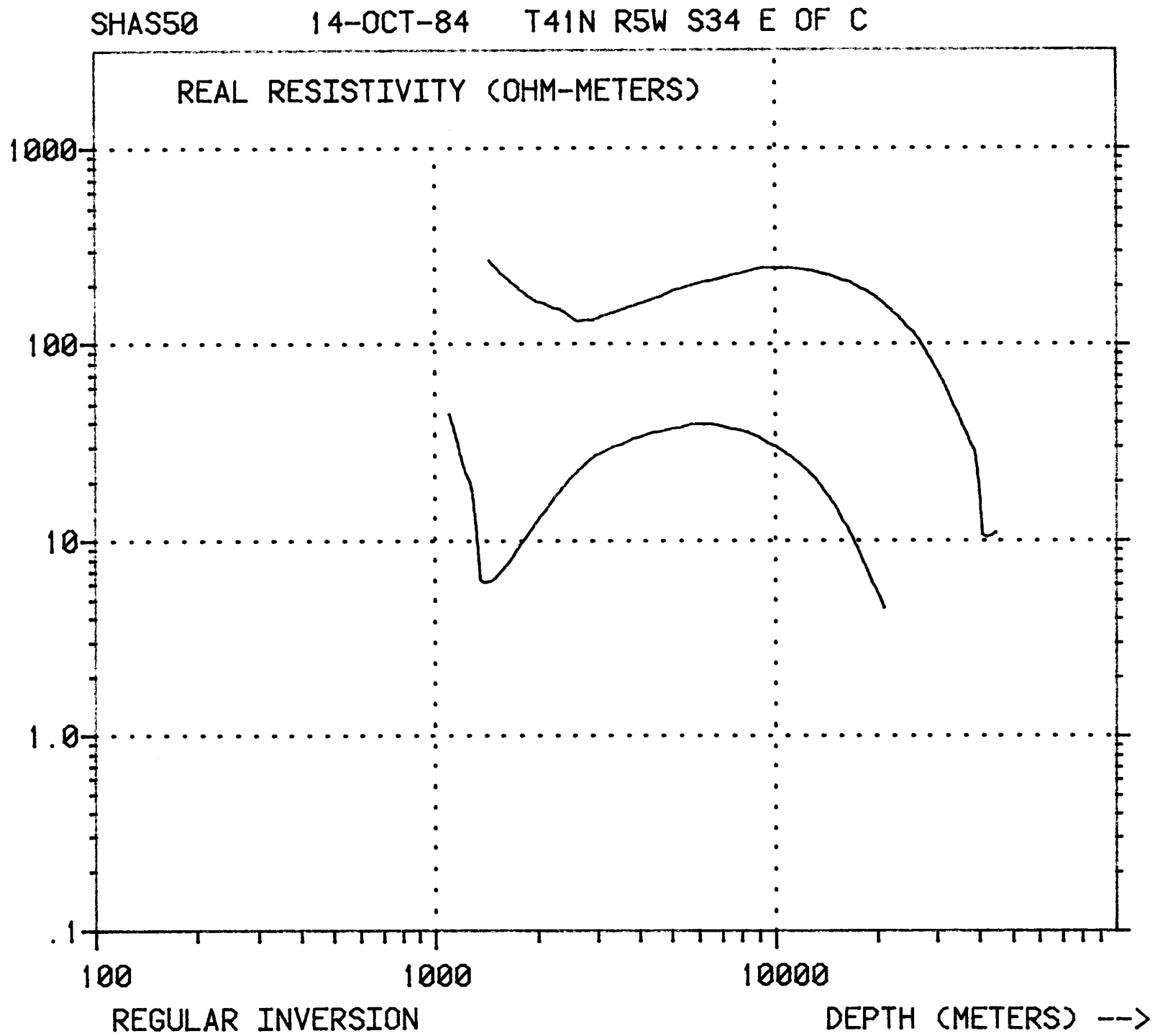
| I | T(I) | P(I) | PAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 375.000 | -64.980 | -62.753 | -2.227 | 9.825 |
| 2 | 100.000 | -70.605 | -62.749 | -7.856 | 37.594 |
| 3 | 60.000 | -64.515 | -60.336 | -4.179 | 17.759 |
| 4 | 40.000 | -59.350 | -57.537 | -1.813 | 7.096 |
| 5 | 25.000 | -55.730 | -54.199 | -1.531 | 5.685 |
| 6 | 18.000 | -55.300 | -52.703 | -2.597 | 9.527 |
| 7 | 10.000 | -50.675 | -53.895 | 3.220 | -11.608 |
| 8 | 1.800 | -77.620 | -73.141 | -4.479 | 31.977 |
| 9 | 1.000 | -78.855 | -75.961 | -2.894 | 23.731 |
| 10 | 1.000 | -77.755 | -75.961 | -1.794 | 14.141 |
| 11 | 0.650 | -79.170 | -77.299 | -1.871 | 16.356 |
| 12 | 0.590 | -81.665 | -77.582 | -4.083 | 40.188 |
| 13 | 0.590 | -79.960 | -77.582 | -2.378 | 21.723 |
| 14 | 0.500 | -75.315 | -78.051 | 2.736 | -21.294 |
| 15 | 0.350 | -74.680 | -78.922 | 4.242 | -33.272 |
| 16 | 0.330 | -76.465 | -79.037 | 2.572 | -21.646 |
| 17 | 0.330 | -78.190 | -79.037 | 0.847 | -7.640 |
| 18 | 0.280 | -76.160 | -79.305 | 3.145 | -26.428 |
| 19 | 0.210 | -76.735 | -79.560 | 2.825 | -24.516 |
| 20 | 0.120 | -80.605 | -79.121 | -1.484 | 14.946 |
| 21 | 0.071 | -79.625 | -77.231 | -2.394 | 21.256 |
| 22 | 0.042 | -75.505 | -73.334 | -2.171 | 14.643 |
| 23 | 0.025 | -67.575 | -66.996 | -0.579 | 2.837 |

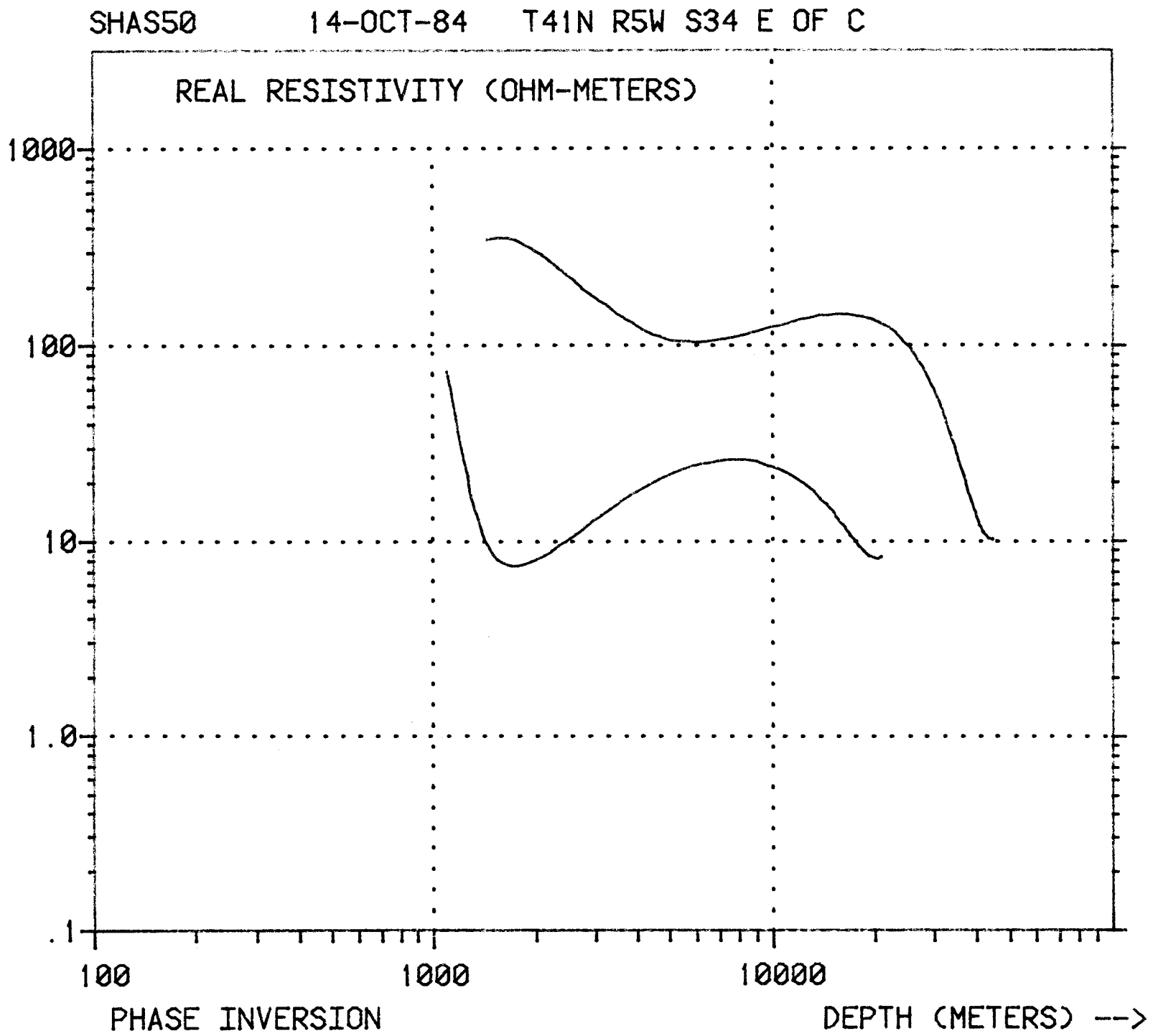
MEAN PERCENT ERROR = 21.4471
MAXIMUM PERCENT ERROR = 40.1883
MAX. ERROR OCCURED AT OBSERVATION 12


SHAS49 200 HZ 11-SEP-85 T41N R4W S24 SW
berd inv
rho wgt 0.90
ph. wgt 0.70
p (log)
phase
T (log)
3.0
2.5
2.0
1.5
1.0
0.5
79.0
74.0
69.0
64.0
59.0
54.0
49.0
-2.0
-1.0
0.0
1.0
2.0
3.0

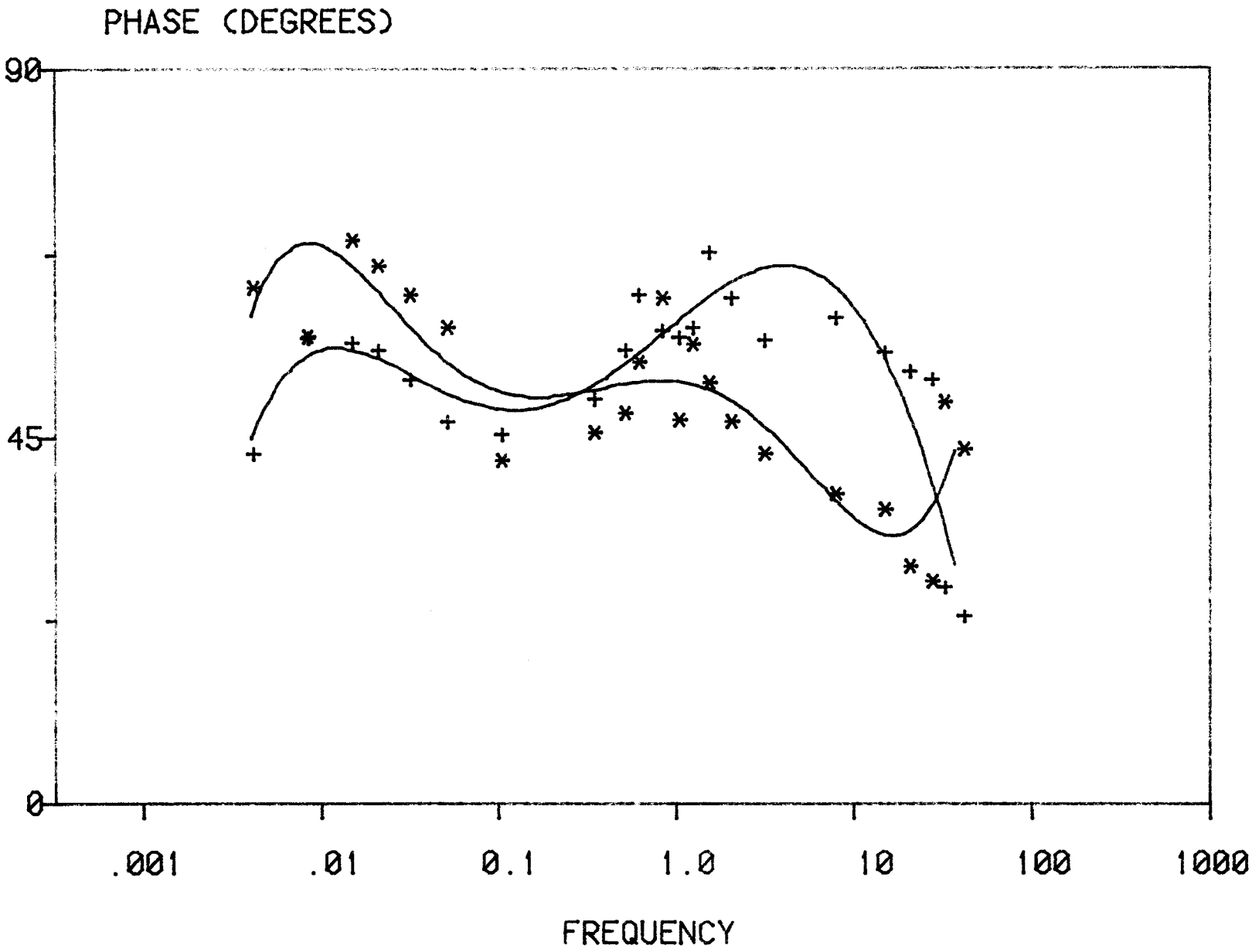

SHAS50 14-OCT-84 T41N R5W S34 E OF C
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAS50
200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
Depth
(Meters)
5000
10000
15000
20000
Resistivity 160.09 8.45 39.68 2.36
Thickness 1294.29 261.43 16443.65
Depth 0.00 1294.29 1555.73 17999.38


SHAS50 14-OCT-84 T41N R5W S34 E OF C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS50 14-OCT-84 T41N R5W S34 E OF C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS50 14-OCT-84 T41N R5W S34 E OF C



THE SITE IS: SHAS50 200 HZ 14-OCT-84 T41N R5W S34 E OF C

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 15.86 | 121.57 | 1 | 20.73 | 51.43 |
| 0.0020 | 21.19 | 85.04 | 2 | 45.24 | 19.37 |
| 0.0040 | 17.10 | 83.98 | 3 | 3.59 | 12.19 |
| 0.0080 | 24.43 | 120.25 | 4 | 1.09 | 6.75 |
| 0.0143 | 35.42 | 136.21 | 5 | 0.82 | 1.41 |
| 0.0200 | 40.38 | 185.40 | 6 | 0.45 | 1.51 |
| 0.0303 | 45.37 | 253.96 | 7 | 0.34 | 1.09 |
| 0.0500 | 49.13 | 265.04 | 8 | 0.06 | 0.09 |
| 0.1000 | 36.73 | 305.86 | 9 | 2.28 | 11.97 |
| 0.1818 | 38.58 | 419.77 | 10 | 1.15 | 8.40 |
| 0.3333 | 44.38 | 229.10 | 11 | 0.47 | 1.04 |
| 0.5000 | 50.35 | 326.68 | 12 | 0.39 | 0.58 |
| 0.5988 | 44.14 | 269.19 | 13 | 0.28 | 1.10 |
| 0.8000 | 45.99 | 322.86 | 14 | 0.24 | 2.39 |
| 1.0000 | 56.27 | 265.96 | 15 | 0.13 | 0.30 |
| 1.0000 | 92.96 | 361.72 | 16 | 4.01 | 8.17 |
| 1.2048 | 46.04 | 249.00 | 17 | 0.18 | 2.01 |
| 1.4925 | 40.97 | 229.04 | 18 | 0.32 | 2.01 |
| 2.0000 | 37.06 | 244.49 | 19 | 0.25 | 1.98 |
| 2.0000 | 0.00 | 0.00 | 20 | 0.28 | 1.10 |
| 2.0000 | 124.49 | 524.26 | 21 | 0.37 | 1.71 |
| 3.0303 | 0.00 | 0.00 | 22 | 4.01 | 8.17 |
| 3.0303 | 55.35 | 218.60 | 23 | 0.36 | 0.57 |
| 7.6923 | 128.04 | 338.14 | 24 | 0.91 | 1.26 |
| 14.2857 | 142.14 | 298.33 | 25 | 0.26 | 0.14 |
| 20.0000 | 173.39 | 257.65 | 26 | 0.42 | 0.24 |
| 26.3158 | 195.90 | 219.21 | 27 | 0.19 | 0.20 |
| 31.2500 | 183.48 | 216.76 | 28 | 0.17 | 0.09 |
| 40.0000 | 183.29 | 212.40 | 29 | 0.05 | 0.03 |

AVERAGE # 8
SHAS50 200 HZ 14-OCT-84 T41N R5W S34 E OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.120E+03 | 0.155E+02 | 46. | 49. | 145. | 0.0028 | 0.0011 | 0.4516 | 0.05 |
| H | SEC | 0.123E+03 | 0.162E+02 | 45. | 51. | 144. | 0.0021 | 0.0054 | 97.60 | 0.03 |
| E | 500.0 | 0.844E+02 | 0.226E+02 | 34. | 58. | 126. | 0.0039 | 0.0115 | 0.3147 | 0.26 |
| H | SEC | 0.857E+02 | 0.197E+02 | 30. | 57. | 127. | 0.0045 | 0.0052 | 83.00 | 0.22 |
| E | 250.0 | 0.100E+03 | 0.188E+02 | 57. | 49. | 154. | 0.0024 | 0.0021 | 0.2688 | 0.12 |
| H | SEC | 0.677E+02 | 0.154E+02 | 71. | 37. | 166. | 0.0014 | 0.0018 | 85.40 | 0.35 |
| E | 125.0 | 0.119E+03 | 0.254E+02 | 58. | 58. | 151. | 0.0016 | 0.0004 | 0.2521 | 0.09 |
| H | SEC | 0.122E+03 | 0.235E+02 | 58. | 57. | 153. | 0.0003 | 0.0006 | 42.10 | 0.08 |
| E | 70.0 | 0.144E+03 | 0.355E+02 | 69. | 57. | 154. | 0.0005 | 0.0005 | 0.1790 | 0.04 |
| H | SEC | 0.128E+03 | 0.354E+02 | 70. | 57. | 154. | 0.0003 | 0.0006 | 80.00 | 0.05 |
| E | 50.0 | 0.193E+03 | 0.400E+02 | 66. | 55. | 151. | 0.0006 | 0.0004 | 0.1375 | 0.05 |
| H | SEC | 0.177E+03 | 0.408E+02 | 66. | 57. | 151. | 0.0008 | 0.0006 | 101.20 | 0.03 |
| E | 33.0 | 0.251E+03 | 0.459E+02 | 61. | 52. | 150. | 0.0003 | 0.0002 | 0.0939 | 0.06 |
| H | SEC | 0.257E+03 | 0.449E+02 | 64. | 53. | 150. | 0.0013 | 0.0006 | 86.00 | 0.06 |
| E | 20.0 | 0.277E+03 | 0.510E+02 | 56. | 47. | 146. | 0.0001 | 0.0001 | 0.1425 | 0.08 |
| H | SEC | 0.253E+03 | 0.472E+02 | 62. | 47. | 148. | 0.0002 | 0.0001 | 78.30 | 0.13 |

AVERAGE # 8
SHAS50 200 HZ 14-OCT-84 T41N R5W S34 E OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.288E+03 | 0.427E+02 | 48. | 45. | 141. | 0.0044 | 0.0030 | 0.0336 | 0.10 |
| H | SEC | 0.324E+03 | 0.308E+02 | 38. | 46. | 146. | 0.0065 | 0.0012 | 132.40 | 0.22 |
| E | 5.5 | 0.413E+03 | 0.474E+02 | 42. | 49. | 138. | 0.0057 | 0.0017 | 0.0147 | 0.22 |
| H | SEC | 0.427E+03 | 0.297E+02 | 48. | 26. | 157. | 0.0029 | 0.0020 | 121.20 | 0.36 |
| E | 3.0 | 0.230E+03 | 0.474E+02 | 50. | 52. | 139. | 0.0022 | 0.0013 | 0.0106 | 0.12 |
| H | SEC | 0.228E+03 | 0.413E+02 | 42. | 48. | 139. | 0.0024 | 0.0003 | 123.30 | 0.12 |
| E | 2.0 | 0.332E+03 | 0.545E+02 | 48. | 56. | 144. | 0.0001 | 0.0002 | 0.0050 | 0.09 |
| H | SEC | 0.321E+03 | 0.462E+02 | 48. | 56. | 142. | 0.0008 | 0.0009 | 107.00 | 0.09 |
| E | 1.7 | 0.389E+03 | 0.309E+02 | 51. | 67. | 166. | 0.0067 | 0.0025 | 0.0082 | 0.33 |
| H | SEC | 0.149E+03 | 0.574E+02 | 58. | 58. | 156. | 0.0205 | 0.0076 | 27.10 | 0.02 |
| E | 1.2 | 0.399E+03 | 0.587E+02 | 43. | 89. | 2. | 0.0116 | 0.0059 | 0.0035 | 0.36 |
| H | SEC | 0.246E+03 | 0.333E+02 | 82. | 28. | 166. | 0.0089 | 0.0045 | 96.10 | 0.58 |
| E | 1.0 | 0.279E+03 | 0.673E+02 | 48. | 56. | 152. | 0.0025 | 0.0009 | 0.0028 | 0.04 |
| H | HZ | 0.252E+03 | 0.452E+02 | 47. | 60. | 145. | 0.0016 | 0.0018 | 121.50 | 0.07 |

AVERAGE # 8
SHAS50 200 HZ 14-OCT-84 T41N R5W S34 E OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.386E+03 | 0.104E+03 | 56. | 74. | 97. | 0.0028 | 0.0051 | 0.0022 | 0.46 |
| H | HZ | 0.337E+03 | 0.822E+02 | 26. | 45. | 99. | 0.0049 | 0.0058 | 149.50 | 0.34 |
| E | 1.2 | 0.271E+03 | 0.493E+02 | 56. | 60. | 166. | 0.0079 | 0.0049 | 0.0041 | 0.15 |
| H | HZ | 0.227E+03 | 0.427E+02 | 57. | 57. | 162. | 0.0136 | 0.0030 | 77.60 | 0.12 |
| E | 1.5 | 0.237E+03 | 0.455E+02 | 52. | 69. | 158. | 0.0052 | 0.0027 | 0.0031 | 0.09 |
| H | HZ | 0.221E+03 | 0.364E+02 | 52. | 67. | 157. | 0.0073 | 0.0052 | 85.70 | 0.09 |
| E | 2.0 | 0.252E+03 | 0.408E+02 | 47. | 62. | 158. | 0.0054 | 0.0025 | 0.0025 | 0.10 |
| H | HZ | 0.237E+03 | 0.333E+02 | 47. | 63. | 156. | 0.0095 | 0.0048 | 93.40 | 0.10 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.537E+03 | 0.106E+03 | 11. | 63. | 164. | 0.0026 | 0.0035 | 0.0036 | 0.29 |
| H | HZ | 0.512E+03 | 0.143E+03 | 5. | 68. | 163. | 0.0031 | 0.0035 | 127.00 | 0.43 |

AVERAGE # 8
SHAS50 200 HZ 14-OCT-84 T41N R5W S34 E OF C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 3.0 | 0.225E+03 | 0.597E+02 | 43. | 59. | 153. | 0.0029 | 0.0055 | 0.0018 | 0.04 |
| H | HZ | 0.212E+03 | 0.510E+02 | 44. | 56. | 150. | 0.0084 | 0.0094 | 126.70 | 0.05 |
| E | 7.7 | 0.343E+03 | 0.131E+03 | 39. | 60. | 146. | 0.0040 | 0.0062 | 0.0130 | 0.03 |
| H | HZ | 0.333E+03 | 0.125E+03 | 38. | 60. | 149. | 0.0098 | 0.0143 | 48.60 | 0.04 |
| E | 14.3 | 0.296E+03 | 0.151E+03 | 36. | 56. | 146. | 0.0010 | 0.0085 | 0.0021 | 0.05 |
| H | HZ | 0.300E+03 | 0.133E+03 | 37. | 56. | 142. | 0.0035 | 0.0068 | 126.40 | 0.03 |
| E | 20.0 | 0.261E+03 | 0.182E+03 | 30. | 54. | 156. | 0.0103 | 0.0184 | 0.0028 | 0.07 |
| H | HZ | 0.254E+03 | 0.165E+03 | 29. | 53. | 152. | 0.0081 | 0.0325 | 128.60 | 0.08 |
| E | 26.3 | 0.225E+03 | 0.205E+03 | 28. | 52. | 157. | 0.0081 | 0.0158 | 0.0030 | 0.08 |
| H | HZ | 0.213E+03 | 0.187E+03 | 27. | 53. | 157. | 0.0150 | 0.0084 | 139.50 | 0.10 |
| E | 31.2 | 0.228E+03 | 0.191E+03 | 50. | 27. | 76. | 0.0081 | 0.0148 | 0.0038 | 0.09 |
| H | HZ | 0.206E+03 | 0.176E+03 | 50. | 27. | 74. | 0.0064 | 0.0134 | 132.60 | 0.10 |
| E | 40.0 | 0.219E+03 | 0.205E+03 | 45. | 24. | 77. | 0.0046 | 0.0116 | 0.0181 | 0.05 |
| H | HZ | 0.206E+03 | 0.162E+03 | 43. | 23. | 80. | 0.0083 | 0.0113 | 130.40 | 0.09 |

SHAS50 200 HZ 14-OCT-84 T41N R5W S34 E OF C

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 21
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 300.0000 | | 0.0000 |
| | | 1200.0000 | |
| 2 | 8.0000 | | 1200.0000 |
| | | 1800.0000 | |
| 3 | 20.0000 | | 3000.0000 |
| | | 7500.0000 | |
| 4 | 8.0000 | | 10500.0000 |

FREQUENCY RANGE ( 0.0040 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 160.0904 | | 0.0000 |
| | | 1294.2969 | |
| 2 | 8.4504 | | 1294.2969 |
| | | 261.4376 | |
| 3 | 39.6847 | | 1555.7345 |
| | | 16443.6532 | |
| 4 | 2.3644 | | 17999.3877 |

MEAN PERCENT VARIATION IS 10.0318

ERROR ANALYSIS

R-SQUARED = 1.000

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 20 | 72661.238 | 3633.062 | 0.300 |
| MODEL | 6 | 72629.399 | 12104.900 | 801884.069 |
| RESID | 14 | 0.211 | 0.015 | |

STANDARD ERROR = 0.123

DTEST FOR MEANS = 0.000

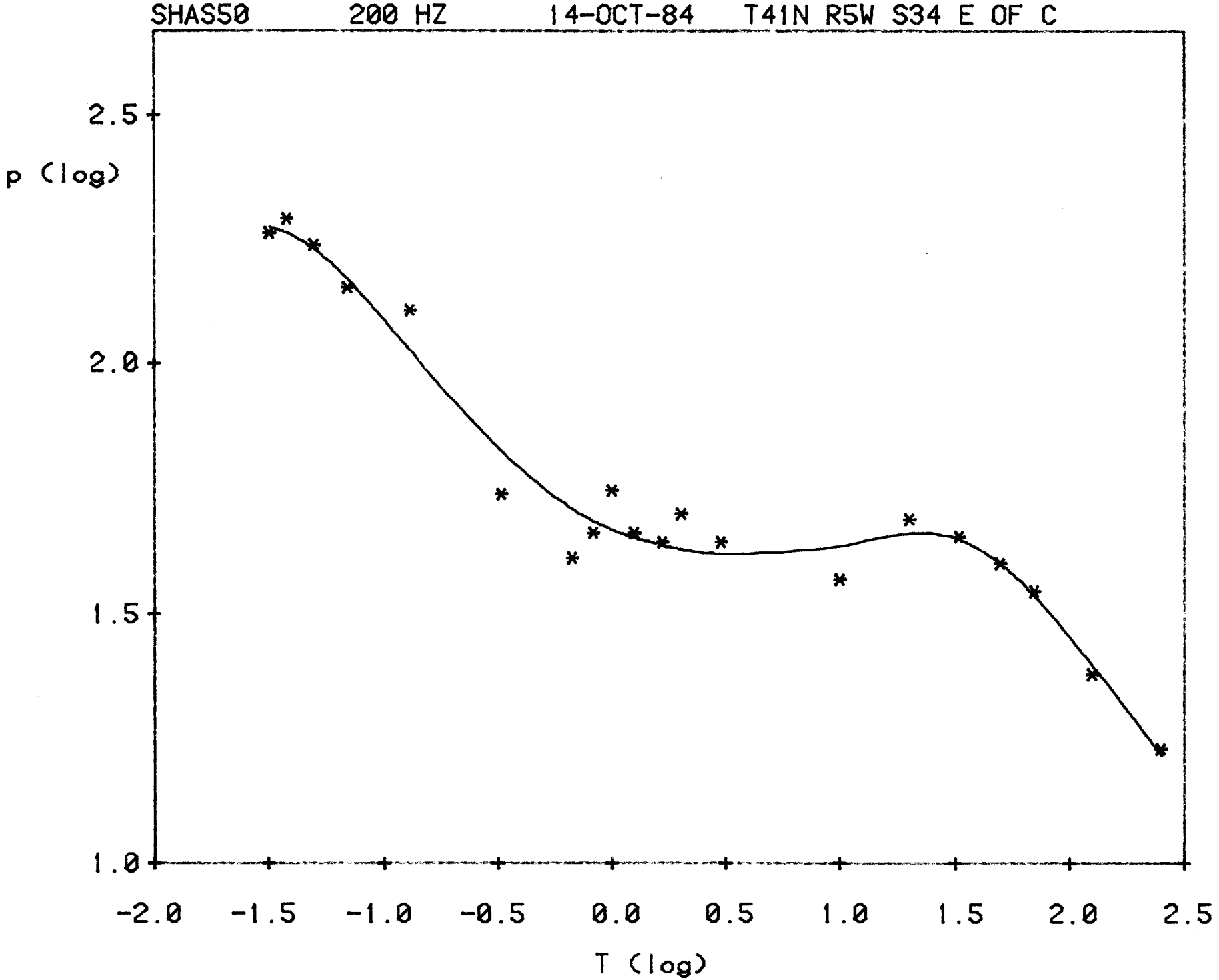
NOISE TO SIGNAL RATIO = 0.112 PERCENT

SHAS50 200 HZ 14-OCT-84 T41N R5W S34 E OF C

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 250.000 | 17.000 | 16.598 | 0.402 | 2.394 |
| 2 | 125.000 | 24.000 | 25.311 | -1.311 | -5.318 |
| 3 | 70.000 | 35.000 | 34.883 | 0.117 | 0.334 |
| 4 | 50.000 | 40.000 | 40.404 | -0.404 | -1.005 |
| 5 | 33.000 | 45.000 | 45.384 | -0.384 | -0.850 |
| 6 | 20.000 | 49.000 | 46.660 | 2.340 | 4.893 |
| 7 | 10.000 | 37.000 | 42.548 | -5.548 | -13.949 |
| 8 | 3.000 | 44.000 | 41.292 | 2.708 | 6.349 |
| 9 | 2.000 | 50.000 | 42.630 | 7.370 | 15.912 |
| 10 | 1.670 | 44.000 | 43.396 | 0.604 | 1.382 |
| 11 | 1.250 | 46.000 | 45.013 | 0.987 | 2.170 |
| 12 | 1.000 | 56.000 | 46.705 | 9.295 | 18.100 |
| 13 | 0.830 | 46.000 | 48.500 | -2.500 | -5.292 |
| 14 | 0.670 | 41.000 | 51.092 | -10.092 | -21.918 |
| 15 | 0.330 | 55.000 | 65.500 | -10.500 | -17.428 |
| 16 | 0.130 | 128.000 | 106.810 | 21.190 | 18.049 |
| 17 | 0.070 | 142.000 | 149.732 | -7.732 | -5.301 |
| 18 | 0.050 | 173.000 | 171.861 | 1.139 | 0.660 |
| 19 | 0.038 | 196.000 | 184.230 | 11.770 | 6.191 |
| 20 | 0.032 | 183.000 | 188.120 | -5.120 | -2.759 |
| 21 | 0.025 | 183.000 | 188.271 | -5.271 | -2.839 |

MEAN PERCENT ERROR = 10.0299
MAXIMUM PERCENT ERROR = 21.9181
MAX. ERROR OCCURED AT OBSERVATION 14


SHAS50 200 HZ 14-OCT-84 T41N R5W S34 E OF C
2.5
2.0
1.5
1.0
p (log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 21
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 300.0000 | | 0.0000 |
| | | 1200.0000 | |
| 2 | 8.0000 | | 1200.0000 |
| | | 1800.0000 | |
| 3 | 20.0000 | | 3000.0000 |
| | | 7500.0000 | |
| 4 | 8.0000 | | 10500.0000 |

FREQUENCY RANGE ( 0.0040 , 40.0000 )

WITH Layer #1 thickness (1000)
Fixed all else free, just for grin.

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 166.3769 | | 0.0000 |
| | | 1200.0000 | |
| 2 | 13.2422 | | 1200.0000 |
| | | 451.7598 | |
| 3 | 39.8164 | | 1651.7598 |
| | | 16248.1186 | |
| 4 | 2.5479 | | 17899.8784 |

MEAN PERCENT VARIATION IS 10.1423

ERROR ANALYSIS

R-SQUARED = 1.000

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 20 | 72661.238 | 3633.062 | 0.300 |
| MODEL | 6 | 72631.438 | 12105.240 | 784522.038 |
| RESID | 14 | 0.216 | 0.015 | |

STANDARD ERROR = 0.124

DTEST FOR MEANS = 0.000

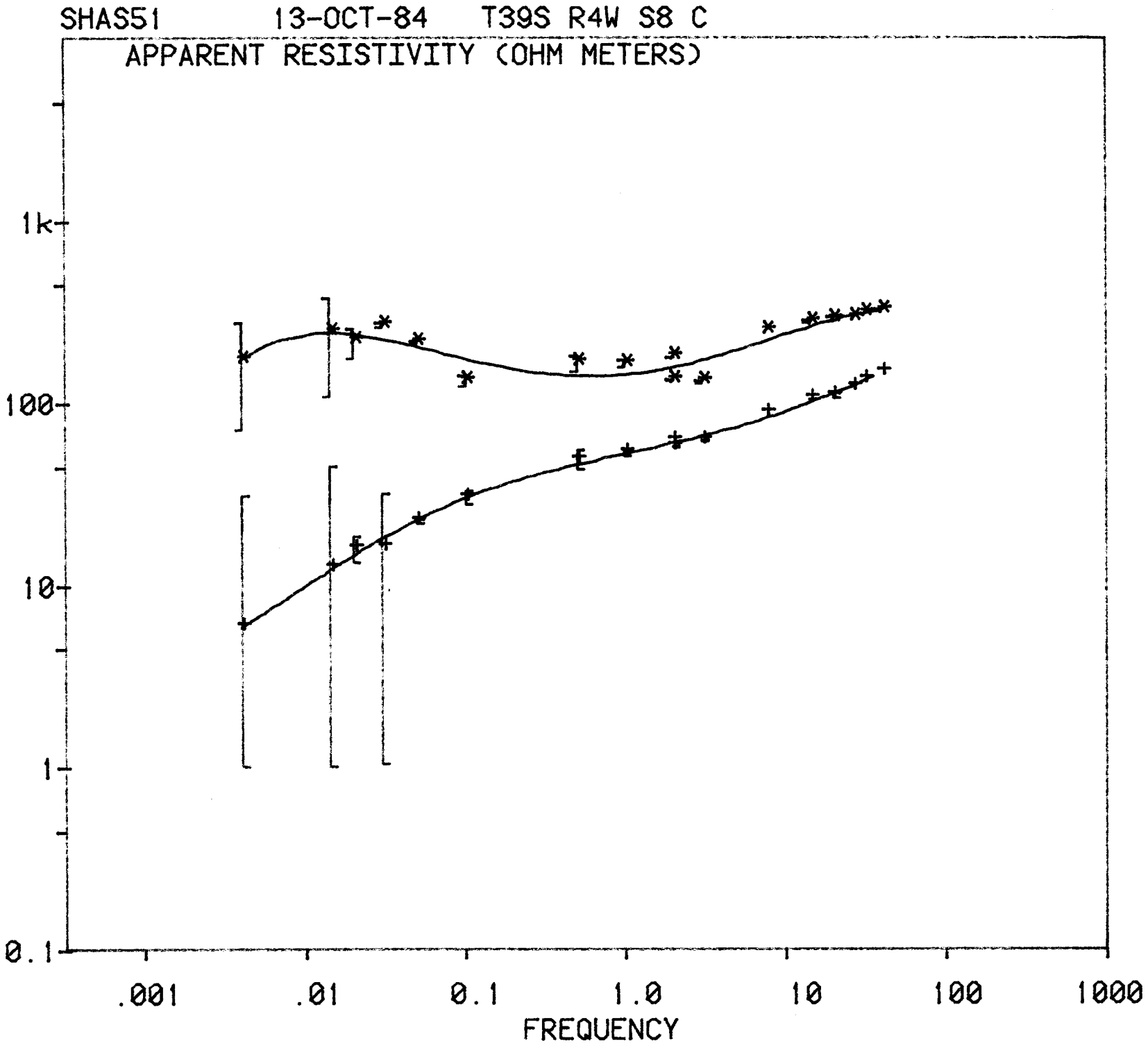
NOISE TO SIGNAL RATIO = 0.113 PERCENT

SHAS50 200 HZ 14-OCT-84 T41N R5W S34 E OF C

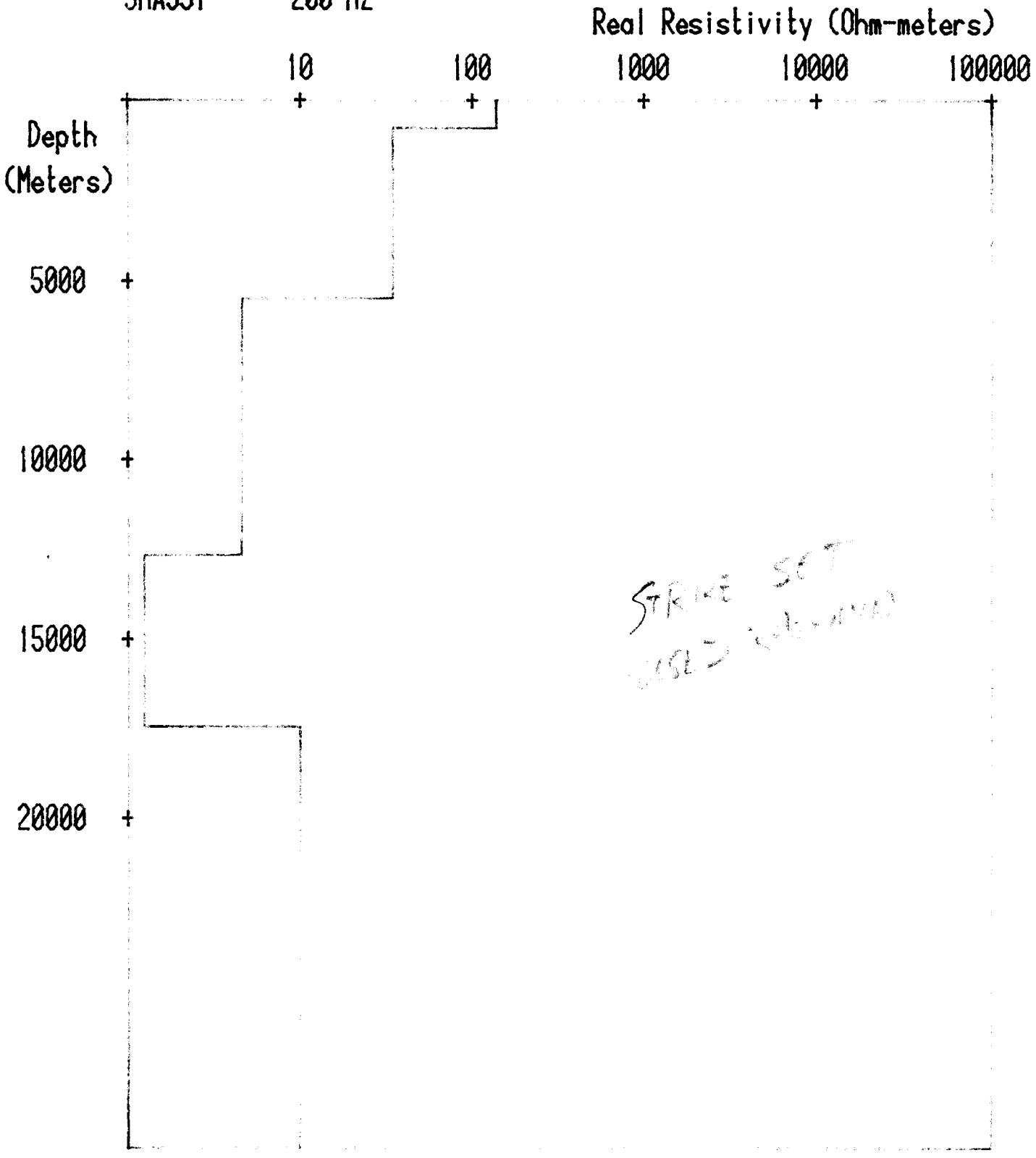
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 250.000 | 17.000 | 16.769 | 0.231 | 1.367 |
| 2 | 125.000 | 24.000 | 25.382 | -1.382 | -5.598 |
| 3 | 70.000 | 35.000 | 34.836 | 0.164 | 0.470 |
| 4 | 50.000 | 40.000 | 40.309 | -0.309 | -0.769 |
| 5 | 33.000 | 45.000 | 45.305 | -0.305 | -0.675 |
| 6 | 20.000 | 49.000 | 46.709 | 2.291 | 4.786 |
| 7 | 10.000 | 37.000 | 42.730 | -5.730 | -14.374 |
| 8 | 3.000 | 44.000 | 41.402 | 2.598 | 6.083 |
| 9 | 2.000 | 50.000 | 42.734 | 7.266 | 15.672 |
| 10 | 1.670 | 44.000 | 43.493 | 0.507 | 1.159 |
| 11 | 1.250 | 46.000 | 45.090 | 0.910 | 1.999 |
| 12 | 1.000 | 56.000 | 46.758 | 9.242 | 17.989 |
| 13 | 0.830 | 46.000 | 48.524 | -2.524 | -5.340 |
| 14 | 0.670 | 41.000 | 51.069 | -10.069 | -21.874 |
| 15 | 0.330 | 55.000 | 65.145 | -10.145 | -16.887 |
| 16 | 0.130 | 128.000 | 105.219 | 22.781 | 19.536 |
| 17 | 0.070 | 142.000 | 147.400 | -5.400 | -3.732 |
| 18 | 0.050 | 173.000 | 170.351 | 2.649 | 1.543 |
| 19 | 0.038 | 196.000 | 184.703 | 11.297 | 5.935 |
| 20 | 0.032 | 183.000 | 190.442 | -7.442 | -3.986 |
| 21 | 0.025 | 183.000 | 193.691 | -10.691 | -5.676 |

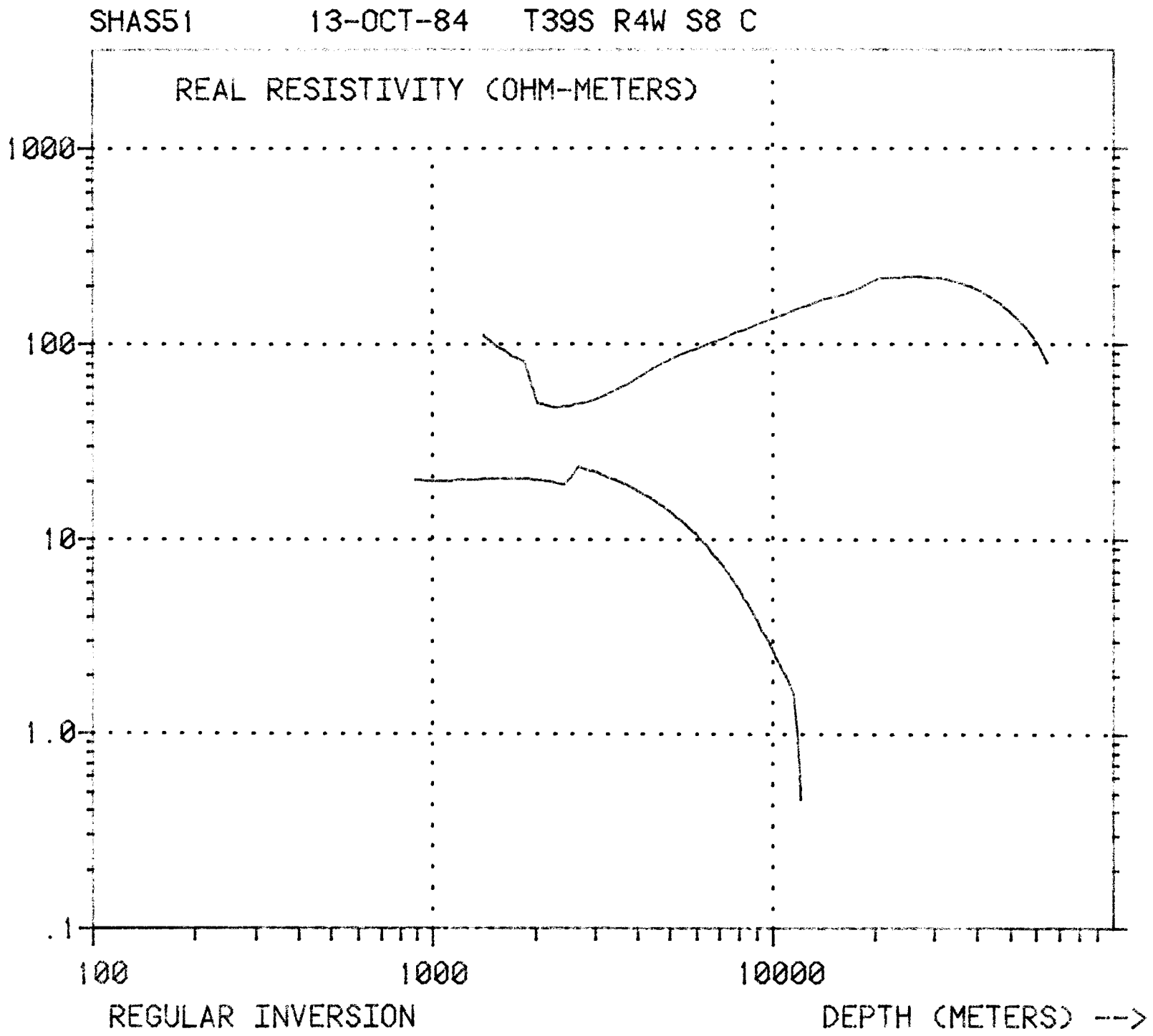
MEAN PERCENT ERROR = 10.1397
MAXIMUM PERCENT ERROR = 21.8736
MAX. ERROR OCCURED AT OBSERVATION 14

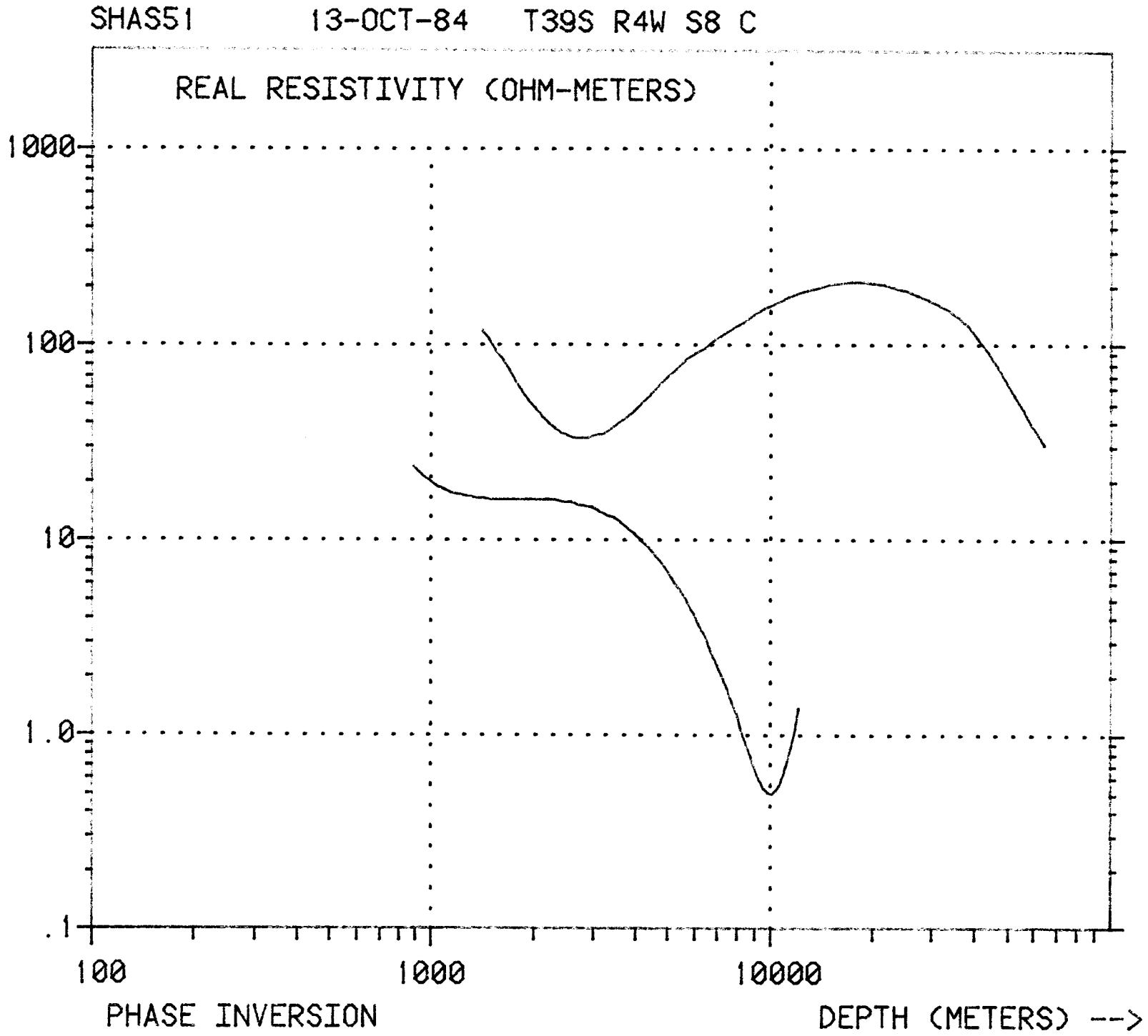

SHAS51 13-OCT-84 T39S R4W S8 C
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

SHAS51 200 HZ

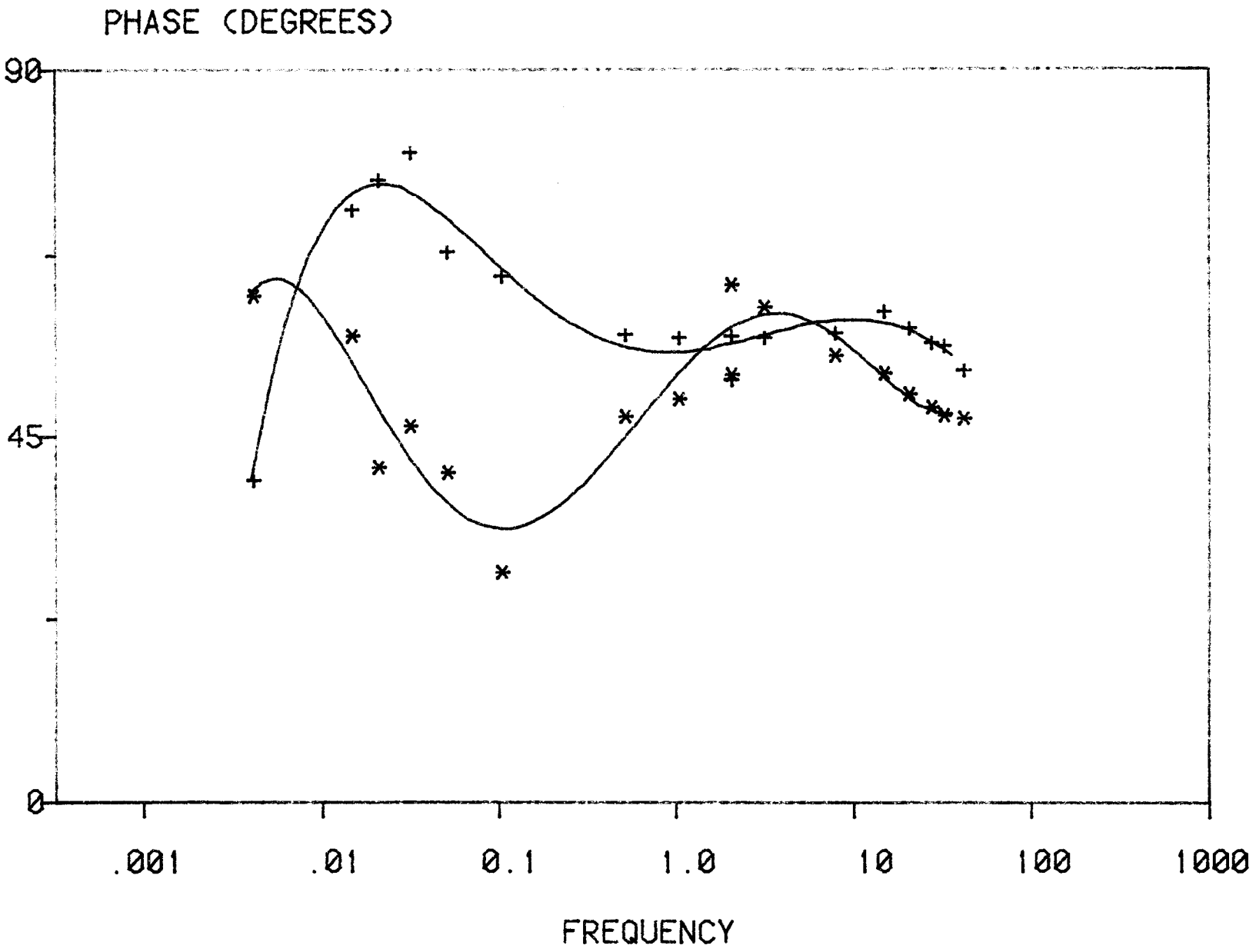



| | | | | | |
|---|---|---|---|---|---|
| Resistivity | 138.38 | 34.35 | 4.54 | 1.24 | 10.01 |
| Thickness | | 726.70 | 4797.61 | 7140.11 | 4797.94 |
| Depth | 0.00 | 726.70 | 5524.31 | 12664.43 | 17462.38 |


SHAS51 13-OCT-84 T39S R4W S8 C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS51 13-OCT-84 T39S R4W S8 C
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS51 13-OCT-84 T39S R4W S8 C



THE SITE IS: SHAS51 200 HZ 13-OCT-84 T39S R4W S8 C

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | RHOMAX | PERIOD # | STDEV OF RHOMI | RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 26.38 | 164.51 | 1 | 24.77 | 99.31 |
| 0.0020 | 27.23 | 159.96 | 2 | 32.01 | 130.67 |
| 0.0040 | 5.75 | 169.20 | 3 | 2.50 | 39.54 |
| 0.0080 | 40.29 | 88.37 | 4 | 14.96 | 6.52 |
| 0.0143 | 12.35 | 237.08 | 5 | 0.61 | 5.19 |
| 0.0200 | 15.62 | 211.53 | 6 | 2.56 | 8.27 |
| 0.0303 | 16.00 | 260.49 | 7 | 5.44 | 16.00 |
| 0.0500 | 22.22 | 208.95 | 8 | 1.89 | 6.84 |
| 0.1000 | 29.82 | 128.40 | 9 | 0.57 | 1.39 |
| 0.1818 | 8.54 | 62.44 | 10 | 0.03 | 0.80 |
| 0.3333 | 28.99 | 75.90 | 11 | 0.31 | 1.69 |
| 0.5000 | 47.94 | 161.89 | 12 | 0.05 | 0.14 |
| 0.5988 | 0.00 | 0.00 | 13 | 0.61 | 5.19 |
| 0.8000 | 0.00 | 0.00 | 14 | 2.56 | 8.27 |
| 1.0000 | 52.21 | 159.54 | 15 | 0.03 | 0.12 |
| 1.0000 | 59.13 | 230.86 | 16 | 0.30 | 0.56 |
| 1.2048 | 0.00 | 0.00 | 17 | 0.03 | 0.80 |
| 1.4925 | 0.00 | 0.00 | 18 | 0.31 | 1.69 |
| 2.0000 | 0.00 | 0.00 | 19 | 0.05 | 0.14 |
| 2.0000 | 56.08 | 129.93 | 20 | 0.01 | 0.16 |
| 2.0000 | 60.28 | 173.12 | 21 | 0.08 | 0.50 |
| 3.0303 | 60.35 | 127.69 | 22 | 0.00 | 0.13 |
| 3.0303 | 0.00 | 0.00 | 23 | 0.03 | 0.80 |
| 7.6923 | 85.35 | 242.56 | 24 | 0.07 | 0.30 |
| 14.2857 | 101.90 | 272.80 | 25 | 0.05 | 0.19 |
| 20.0000 | 106.38 | 280.51 | 26 | 0.05 | 0.12 |
| 26.3158 | 119.13 | 284.20 | 27 | 0.03 | 0.08 |
| 31.2500 | 130.67 | 299.52 | 28 | 0.02 | 0.05 |
| 40.0000 | 142.57 | 314.43 | 29 | 0.00 | 0.02 |

AVERAGE # 8
SHAS51 200 HZ 13-OCT-84 T39S R4W S8 C
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.181E+03 | 0.158E+02 | 42. | 18. | 32. | 0.0023 | 0.0021 | 0.4057 | 0.37 |
| H | SEC | 0.148E+03 | 0.370E+02 | 31. | 23. | 32. | 0.0021 | 0.0069 | 66.70 | 0.42 |
| E | 500.0 | 0.136E+03 | 0.192E+02 | 31. | 70. | 32. | 0.0073 | 0.0168 | 0.2819 | 0.28 |
| H | SEC | 0.184E+03 | 0.353E+02 | 47. | 0. | 32. | 0.0021 | 0.0066 | 43.20 | 0.86 |
| E | 250.0 | 0.173E+03 | 0.517E+01 | 61. | 78. | 32. | 0.0064 | 0.0023 | 0.1609 | 0.25 |
| H | SEC | 0.165E+03 | 0.633E+01 | 65. | 2. | 32. | 0.0024 | 0.0007 | 75.00 | 0.24 |
| E | 125.0 | 0.153E+03 | 0.108E+02 | 57. | 87. | 32. | 0.0027 | 0.0269 | 0.1818 | 0.17 |
| H | SEC | 0.233E+02 | 0.698E+02 | 72. | 19. | 32. | 0.0023 | 0.0066 | 87.00 | 1.46 |
| E | 70.0 | 0.238E+03 | 0.215E+02 | 54. | 73. | 32. | 0.0011 | 0.0038 | 0.2918 | 0.19 |
| H | SEC | 0.236E+03 | 0.325E+01 | 62. | 74. | 32. | 0.0007 | 0.0018 | 65.40 | 0.61 |
| E | 50.0 | 0.235E+03 | 0.145E+02 | 46. | 77. | 32. | 0.0059 | 0.0109 | 0.8378 | 0.13 |
| H | SEC | 0.188E+03 | 0.167E+02 | 37. | 77. | 32. | 0.0019 | 0.0048 | 80.40 | 0.19 |
| E | 33.0 | 0.263E+03 | 0.165E+02 | 47. | 81. | 32. | 0.0011 | 0.0010 | 0.0877 | 0.15 |
| H | SEC | 0.258E+03 | 0.155E+02 | 47. | 79. | 32. | 0.0021 | 0.0047 | 89.40 | 0.16 |
| E | 20.0 | 0.209E+03 | 0.224E+02 | 41. | 67. | 32. | 0.0008 | 0.0015 | 0.0487 | 0.13 |
| H | SEC | 0.209E+03 | 0.220E+02 | 41. | 69. | 32. | 0.0007 | 0.0005 | 111.30 | 0.14 |

AVERAGE # 8
SHAS51 200 HZ 13-OCT-84 T39S R4W S8 C
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.134E+03 | 0.343E+02 | 28. | 65. | 32. | 0.0030 | 0.0008 | 0.0509 | 0.23 |
| H | SEC | 0.123E+03 | 0.254E+02 | 29. | 65. | 32. | 0.0028 | 0.0021 | 7.50 | 0.43 |
| E | 5.5 | 0.737E+02 | 0.144E+02 | 25. | 36. | 32. | 0.0005 | 0.0001 | 0.0139 | 0.77 |
| H | SEC | 0.512E+02 | 0.272E+01 | 33. | 31. | 32. | 0.0007 | 0.0002 | 171.90 | 0.55 |
| E | 3.0 | 0.951E+02 | 0.254E+02 | 16. | 41. | 32. | 0.0017 | 0.0008 | 0.0030 | 0.24 |
| H | SEC | 0.567E+02 | 0.166E+02 | 25. | 82. | 32. | 0.0005 | 0.0007 | 76.40 | 0.57 |
| E | 2.0 | 0.173E+03 | 0.528E+02 | 48. | 58. | 32. | 0.0007 | 0.0003 | 0.0032 | 0.11 |
| H | SEC | 0.151E+03 | 0.431E+02 | 48. | 58. | 32. | 0.0006 | 0.0003 | 108.30 | 0.09 |
| E | 1.7 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.0 | 0.178E+03 | 0.559E+02 | 51. | 57. | 32. | 0.0005 | 0.0003 | 0.0138 | 0.11 |
| H | HZ | 0.142E+03 | 0.485E+02 | 50. | 58. | 32. | 0.0009 | 0.0005 | 113.80 | 0.13 |

AVERAGE # 8
SHAS51 200 HZ 13-OCT-84 T39S R4W S8 C
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.246E+03 | 0.589E+02 | 47. | 48. | 32. | 0.0019 | 0.0010 | 0.0056 | 0.11 |
| H | HZ | 0.232E+03 | 0.594E+02 | 46. | 48. | 32. | 0.0014 | 0.0010 | 113.50 | 0.05 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.152E+03 | 0.619E+02 | 63. | 59. | 32. | 0.0000 | 0.0003 | 0.0062 | 0.19 |
| H | HZ | 0.108E+03 | 0.503E+02 | 66. | 57. | 32. | 0.0018 | 0.0002 | 119.90 | 0.22 |
| E | 2.0 | 0.178E+03 | 0.603E+02 | 53. | 53. | 32. | 0.0031 | 0.0004 | 0.0043 | 0.12 |
| H | HZ | 0.168E+03 | 0.603E+02 | 54. | 53. | 32. | 0.0032 | 0.0006 | 95.50 | 0.11 |

AVERAGE # 8
SHAS51 200 HZ 13-OCT-84 T39S R4W S8 C
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | ETA X | ETA Y | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.147E+03 | 0.637E+02 | 60. | 58. | 32. | 0.0017 | 0.0003 | 0.0041 | 0.19 |
| H | HZ | 0.108E+03 | 0.570E+02 | 63. | 57. | 32. | 0.0017 | 0.0001 | 121.50 | 0.21 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 7.7 | 0.244E+03 | 0.860E+02 | 56. | 58. | 32. | 0.0010 | 0.0006 | 0.0071 | 0.12 |
| H | HZ | 0.241E+03 | 0.847E+02 | 55. | 58. | 32. | 0.0017 | 0.0028 | 48.70 | 0.12 |
| E | 14.3 | 0.273E+03 | 0.103E+03 | 53. | 61. | 32. | 0.0024 | 0.0018 | 0.0251 | 0.12 |
| H | HZ | 0.273E+03 | 0.101E+03 | 53. | 61. | 32. | 0.0030 | 0.0028 | 50.70 | 0.12 |
| E | 20.0 | 0.286E+03 | 0.108E+03 | 51. | 59. | 32. | 0.0021 | 0.0045 | 0.0452 | 0.12 |
| H | HZ | 0.275E+03 | 0.105E+03 | 51. | 58. | 32. | 0.0033 | 0.0032 | 51.70 | 0.12 |
| E | 26.3 | 0.291E+03 | 0.122E+03 | 49. | 57. | 32. | 0.0018 | 0.0060 | 0.0031 | 0.13 |
| H | HZ | 0.278E+03 | 0.116E+03 | 49. | 57. | 32. | 0.0041 | 0.0072 | 130.10 | 0.13 |
| E | 31.2 | 0.306E+03 | 0.134E+03 | 48. | 57. | 32. | 0.0023 | 0.0044 | 0.0033 | 0.12 |
| H | HZ | 0.293E+03 | 0.127E+03 | 48. | 57. | 32. | 0.0044 | 0.0078 | 127.00 | 0.13 |
| E | 40.0 | 0.319E+03 | 0.146E+03 | 47. | 53. | 32. | 0.0005 | 0.0027 | 0.0057 | 0.12 |
| H | HZ | 0.310E+03 | 0.139E+03 | 48. | 54. | 32. | 0.0018 | 0.0021 | 132.90 | 0.14 |

SHAS51 200 HZ 13-OCT-84 T39S R4W S8 C

THE NUMBER OF LAYERS = 5
THE NUMBER OF FREQUENCIES TAKEN = 17
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 100.0000 | | 0.0000 |
| | | 700.0000 | |
| 2 | 20.0000 | | 700.0000 |
| | | 1300.0000 | |
| 3 | 20.0000 | | 2000.0000 |
| | | 7000.0000 | |
| 4 | 1.0000 | | 9000.0000 |
| | | 5000.0000 | |
| 5 | 10.0000 | | 14000.0000 |

FREQUENCY RANGE ( 0.0040 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 138.3106 | | 0.0000 |
| | | 725.8463 | |
| 2 | 34.3689 | | 725.8463 |
| | | 4836.8170 | |
| 3 | 4.4757 | | 5562.6633 |
| | | 8376.7429 | |
| 4 | 0.9045 | | 13939.4062 |
| | | 2288.1591 | |
| 5 | 12.6909 | | 16227.5654 |

MEAN PERCENT VARIATION IS 4.4067

ERROR ANALYSIS

R-SQUARED = 1.000

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 16 | 31462.118 | 1966.382 | 0.500 |
| MODEL | 8 | 31459.665 | 3932.458952961.916 | |
| RESID | 8 | 0.033 | 0.004 | |

STANDARD ERROR = 0.064

DTEST FOR MEANS = 0.000

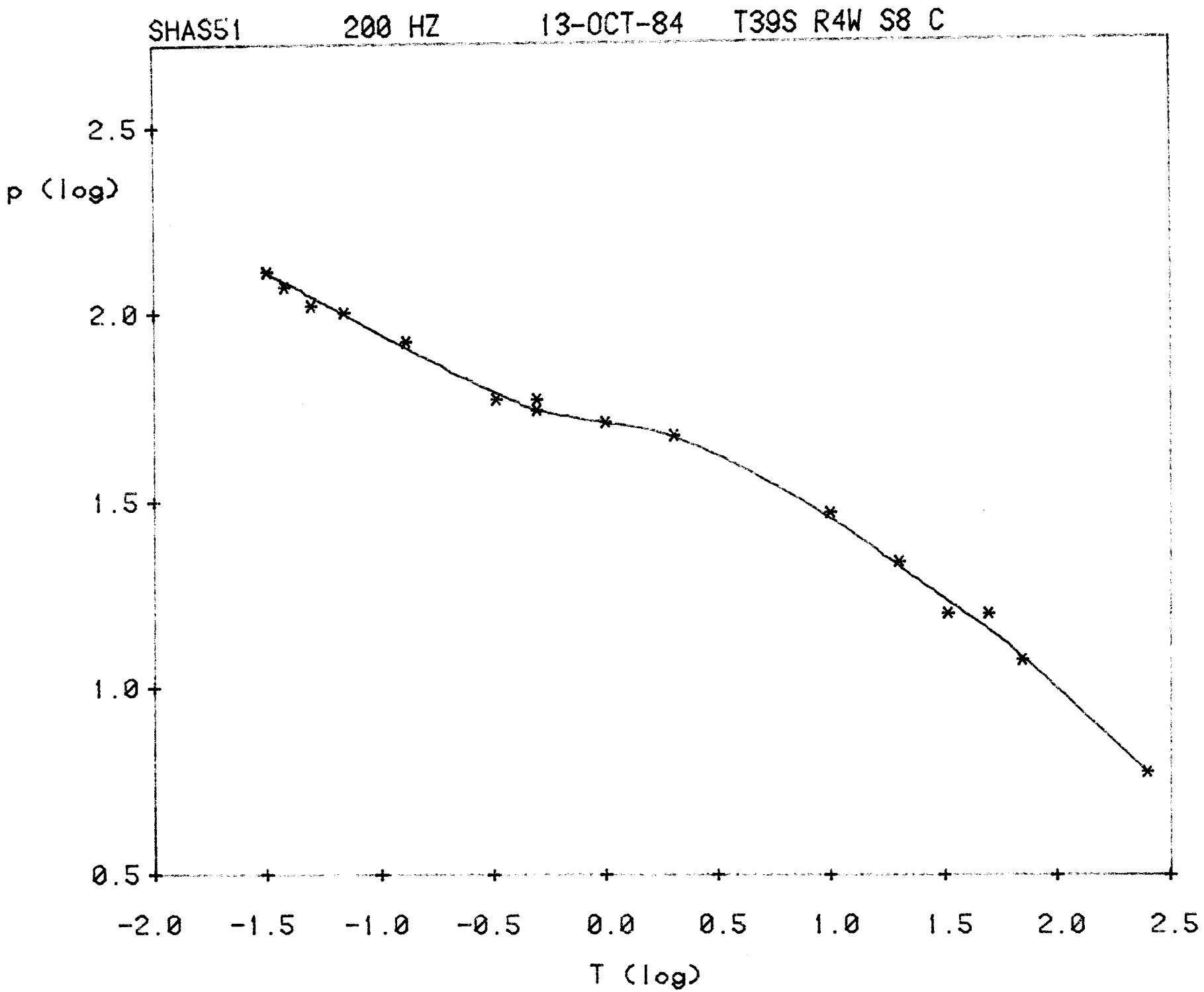
NOISE TO SIGNAL RATIO = 0.102 PERCENT

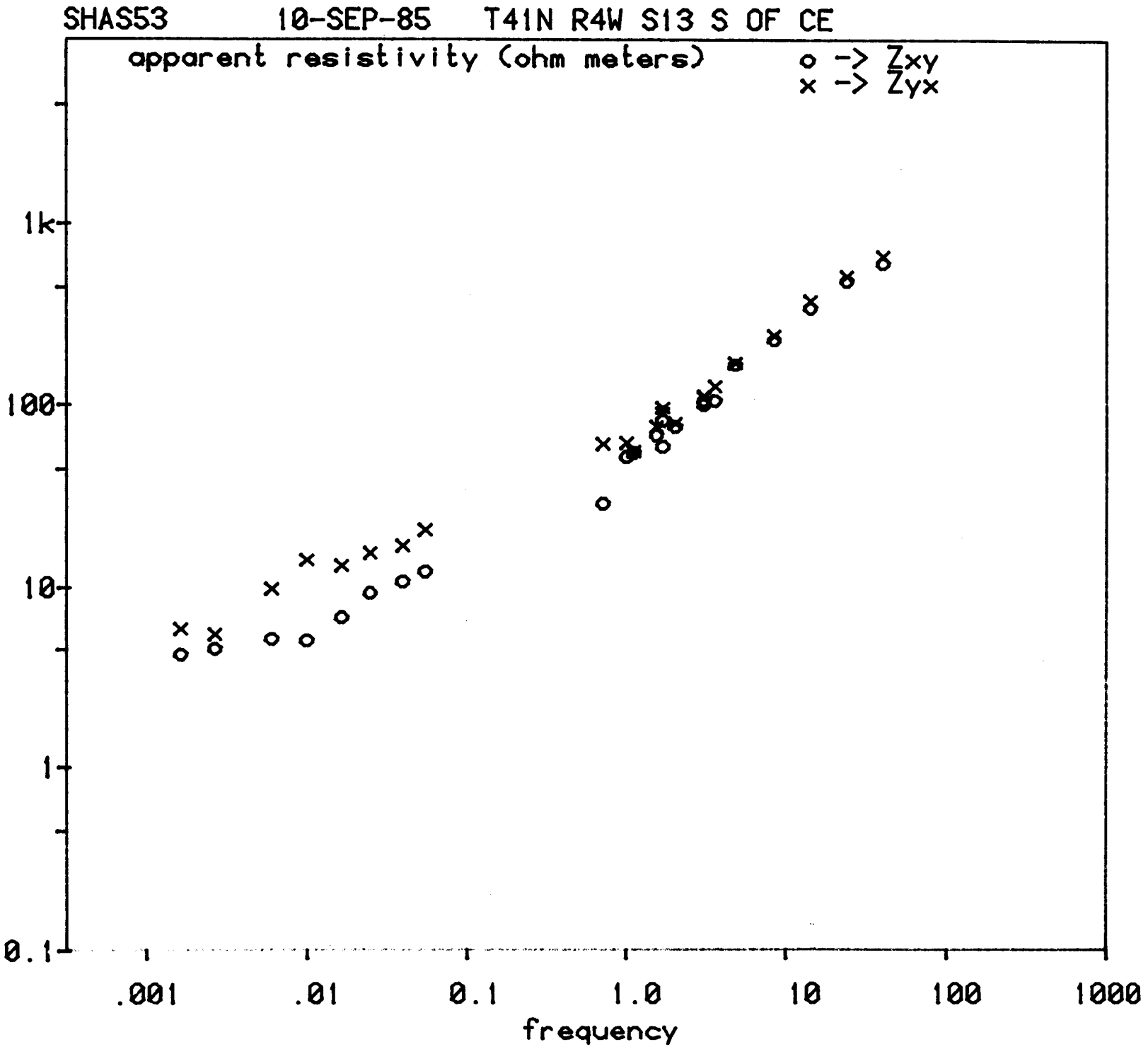
SHAS51 200 HZ 13-OCT-84 T39S R4W S8 C

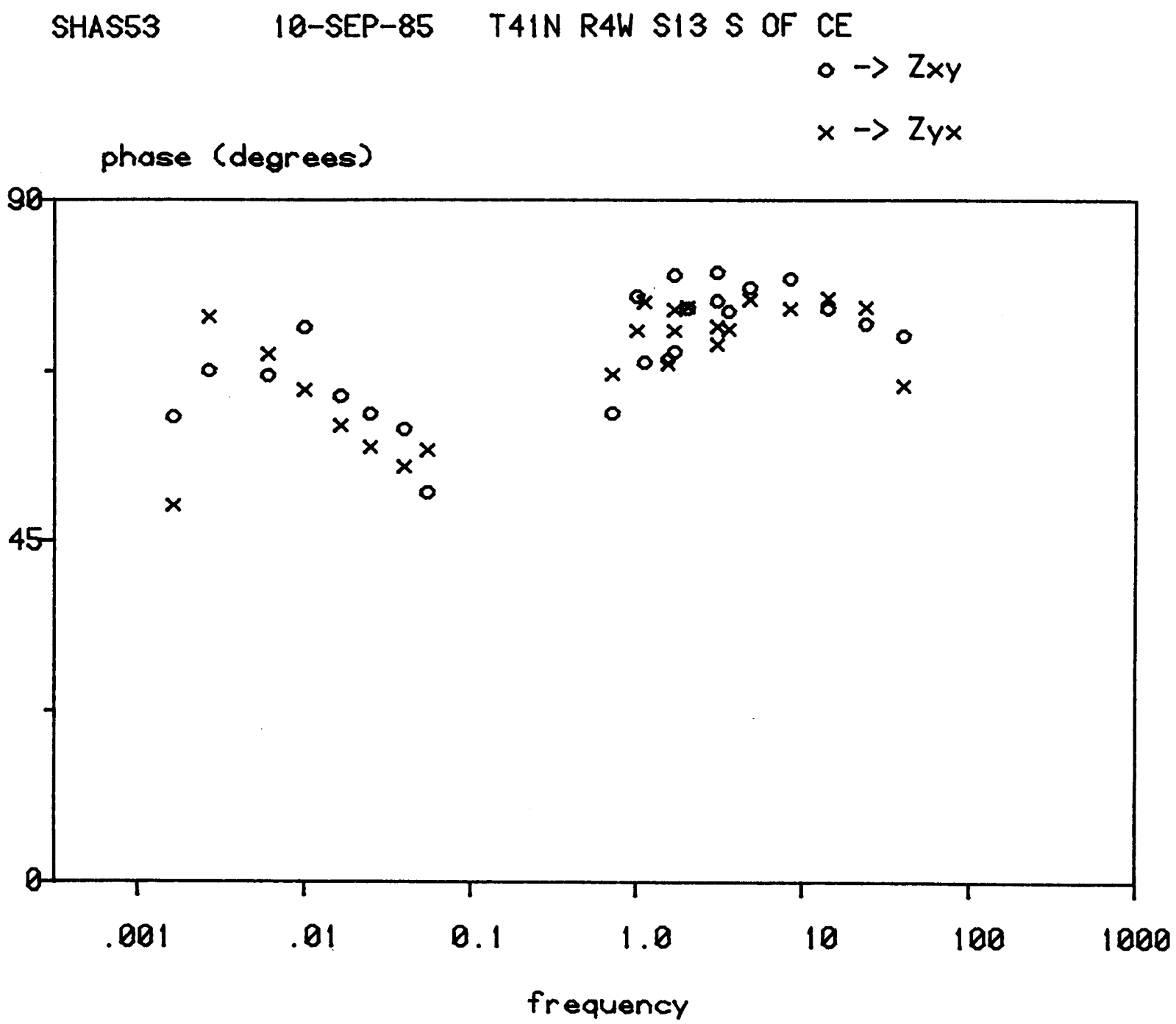
ERROR STRUCTURE OF FITTED MODEL

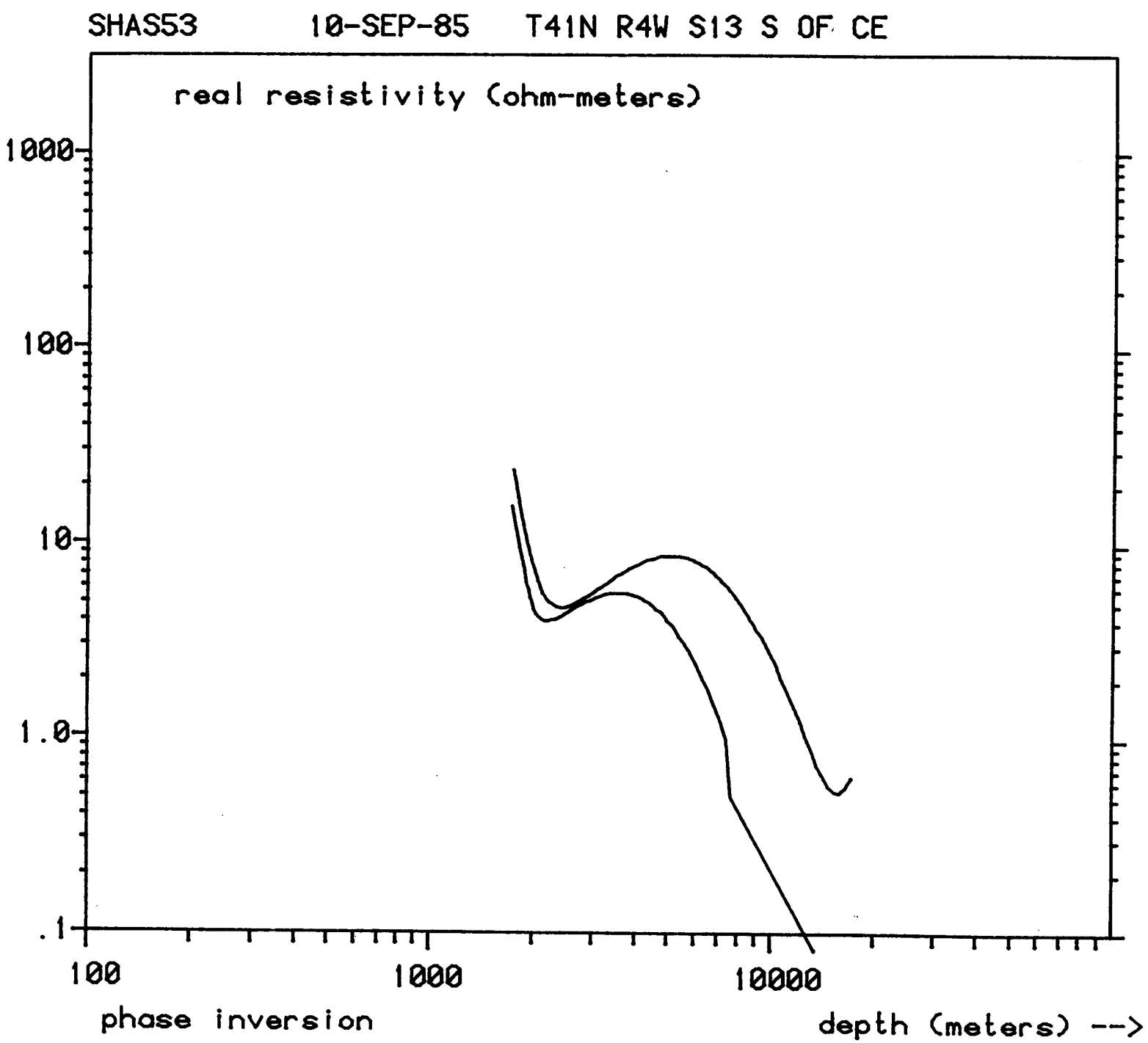
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 250.000 | 6.000 | 6.030 | -0.030 | -0.501 |
| 2 | 70.000 | 12.000 | 12.473 | -0.473 | -3.862 |
| 3 | 50.000 | 16.000 | 14.632 | 1.368 | 8.930 |
| 4 | 33.000 | 16.000 | 17.370 | -1.370 | -8.213 |
| 5 | 20.000 | 22.000 | 21.389 | 0.611 | 2.817 |
| 6 | 10.000 | 30.000 | 29.769 | 0.231 | 0.774 |
| 7 | 2.000 | 48.000 | 50.132 | -2.132 | -4.346 |
| 8 | 1.000 | 52.000 | 51.670 | 0.330 | 0.636 |
| 9 | 0.500 | 56.000 | 56.133 | -0.133 | -0.238 |
| 10 | 0.500 | 60.000 | 56.133 | 3.867 | 6.659 |
| 11 | 0.330 | 60.000 | 62.011 | -2.011 | -3.297 |
| 12 | 0.130 | 85.000 | 81.966 | 3.034 | 3.634 |
| 13 | 0.070 | 102.000 | 101.024 | 0.976 | 0.961 |
| 14 | 0.050 | 106.000 | 113.103 | -7.103 | -6.484 |
| 15 | 0.038 | 119.000 | 123.274 | -4.274 | -3.528 |
| 16 | 0.032 | 131.000 | 129.478 | 1.522 | 1.169 |
| 17 | 0.025 | 143.000 | 137.673 | 5.327 | 3.796 |

MEAN PERCENT ERROR = 4.4343
MAXIMUM PERCENT ERROR = 8.9300
MAX. ERROR OCCURED AT OBSERVATION 3


SHAS51 200 HZ 13-OCT-84 T39S R4W S8 C
p (log)
2.5
2.0
1.5
1.0
0.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS53 10-SEP-85 T41N R4W S13 S OF CE
apparent resistivity (ohm meters)
o -> Zxy
x -> Zyx
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS53 10-SEP-85 T41N R4W S13 S OF CE
o -> Zxy
x -> Zyx
phase (degrees)
90
45
0
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS53 10-SEP-85 T41N R4W S13 S OF CE
real resistivity (ohm-meters)
1000
100
10
1.0
.1
100
1000
10000
phase inversion
depth (meters) -->

site title: SHAS53 200 HZ 10-SEP-85 T41N R4W S13 S OF CE

| # | Frequency | Mean of RHOZxy | RHOZyx | PHIZxy | PHIZyx | real mag/dir | imaginary mag/dir |
|---|---|---|---|---|---|---|---|
| 1 | 0.0017 : | 4.12 | 5.78 | 62. | 50. | 0.109/208 | 0.075/270 |
| 2 | 0.0027 : | 4.46 | 5.39 | 68. | 75. | 0.100/219 | 0.058/271 |
| 3 | 0.0061 : | 5.06 | 9.65 | 67. | 70. | 0.080/226 | 0.044/304 |
| 4 | 0.0100 : | 5.01 | 13.90 | 73. | 65. | 0.082/234 | 0.072/280 |
| 5 | 0.0167 : | 6.64 | 12.94 | 64. | 60. | 0.123/250 | 0.064/269 |
| 6 | 0.0250 : | 9.15 | 15.24 | 62. | 57. | 0.168/249 | 0.032/254 |
| 7 | 0.0400 : | 10.47 | 16.58 | 60. | 55. | 0.156/248 | 0.019/ 83 |
| 8 | 0.0556 : | 11.95 | 20.48 | 52. | 57. | 0.145/241 | 0.029/ 57 |
| 9 | 0.1000 : | 6.25 | 14.91 | 44. | 47. | 0.184/240 | 0.065/ 33 |
| 10 | 0.1639 : | 11.88 | 18.13 | 60. | 36. | 0.143/245 | 0.102/ 93 |
| 11 | 0.3125 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 12 | 0.5556 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 13 | 0.7143 : | 28.19 | 59.75 | 62. | 67. | 0.023/190 | 0.024/152 |
| 14 | 1.0000 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 15 | 1.0000 : | 50.76 | 61.12 | 78. | 73. | 0.028/181 | 0.060/256 |
| 16 | 1.1111 : | 53.91 | 54.50 | 69. | 77. | 0.030/208 | 0.028/237 |
| 17 | 1.5385 : | 66.83 | 74.31 | 69. | 69. | 0.052/221 | 0.055/248 |
| 18 | 1.6949 : | 57.70 | 94.41 | 70. | 76. | 0.055/234 | 0.037/219 |
| 19 | 1.6949 : | 79.71 | 87.78 | 80. | 73. | 0.091/239 | 0.055/239 |
| 20 | 2.0000 : | 74.85 | 77.68 | 76. | 76. | 0.080/238 | 0.040/240 |
| 21 | 2.8571 : | 160.33 | 98.80 | 75. | 73. | 0.101/231 | 0.052/217 |
| 22 | 3.0303 : | 98.19 | 107.11 | 81. | 71. | 0.077/230 | 0.042/239 |
| 23 | 3.0303 : | 104.06 | 109.87 | 77. | 74. | 0.075/232 | 0.037/186 |
| 24 | 3.5714 : | 104.76 | 123.58 | 76. | 73. | 0.088/227 | 0.044/191 |
| 25 | 4.7619 : | 164.81 | 166.00 | 79. | 77. | 0.095/229 | 0.040/214 |
| 26 | 8.3333 : | 222.34 | 235.22 | 80. | 76. | 0.117/233 | 0.038/226 |
| 27 | 14.0845 : | 336.27 | 367.38 | 76. | 77. | 0.127/229 | 0.024/182 |
| 28 | 23.8095 : | 470.57 | 498.65 | 74. | 76. | 0.153/232 | 0.019/142 |
| 29 | 40.0000 : | 586.49 | 652.69 | 72. | 66. | 0.134/220 | 0.015/189 |

SHAS53 200 HZ 10-SEP-85 T41N R4W S13 S OF CE

STANDARD DEVIATIONS for MERGED AVERAGE, MT DATA

| frequency | RHOZxy | RHOZyx | PHIZxy | PHIZyx | theta | induction arrow real: MAG | DIR | imag: MAG |
|---|---|---|---|---|---|---|---|---|
| 0.0017 | 17.17 | 10.69 | 79.24 | 27.81 | 223.24 | 0.048 | 213.2 | 0.150 |
| 0.0027 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0061 | 2.94 | 2.72 | 18.59 | 18.77 | 42.23 | 0.022 | 19.0 | 0.012 |
| 0.0100 | 0.48 | 1.09 | 5.84 | 2.16 | 27.26 | 0.002 | 33.5 | 0.013 |
| 0.0167 | 1.56 | 1.33 | 8.08 | 6.61 | 51.96 | 0.005 | 43.5 | 0.014 |
| 0.0250 | 1.36 | 1.32 | 6.65 | 1.90 | 35.66 | 0.002 | 4.7 | 0.002 |
| 0.0400 | 1.53 | 1.16 | 8.29 | 3.06 | 27.35 | 0.002 | 47.9 | 0.004 |
| 0.0556 | 19.22 | 2.25 | 10.04 | 19.72 | 6.28 | 0.027 | 56.2 | 0.023 |
| 0.1000 | 1.16 | 1.02 | 5.26 | 5.05 | 66.72 | 0.023 | 124.2 | 0.064 |
| 0.1639 | 9.87 | 0.53 | 0.03 | 0.03 | 0.01 | 0.000 | 0.0 | 0.141 |
| 0.3125 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.5556 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.7143 | 7.71 | 4.43 | 2.85 | 7.99 | 17.78 | 0.008 | 237.5 | 0.017 |
| 1.0000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 1.0000 | 1.90 | 5.89 | 1.52 | 14.60 | 51.01 | 0.036 | 72.2 | 0.023 |
| 1.1111 | 87.72 | 44.87 | 14.70 | 42.03 | 129.95 | 0.095 | 242.4 | 0.031 |
| 1.5385 | 288.69 | 117.08 | 49.17 | 132.66 | 180.74 | 0.188 | 0.0 | 0.016 |
| 1.6949 | 3.06 | 3.07 | 0.73 | 1.20 | 22.16 | 0.011 | 35.7 | 0.007 |
| 1.6949 | 9.24 | 6.65 | 3.15 | 3.84 | 34.95 | 0.022 | 115.2 | 0.050 |
| 2.0000 | 195.33 | 117.18 | 33.93 | 99.04 | 192.49 | 0.149 | 0.0 | 0.048 |
| 2.8571 | 24.69 | 8.00 | 4.87 | 3.87 | 3.22 | 0.012 | 127.3 | 0.091 |
| 3.0303 | 6.13 | 2.00 | 2.29 | 3.50 | 11.01 | 0.005 | 31.2 | 0.006 |
| 3.0303 | 311.74 | 177.02 | 24.51 | 133.31 | 112.39 | 0.224 | 0.0 | 0.051 |
| 3.5714 | 3.55 | 9.90 | 1.71 | 5.84 | 34.76 | 0.005 | 109.0 | 0.056 |
| 4.7619 | 10.02 | 6.45 | 2.28 | 3.66 | 17.89 | 0.013 | 11.1 | 0.000 |
| 8.3333 | 8.56 | 7.51 | 1.16 | 2.57 | 6.13 | 0.008 | 5.2 | 0.000 |
| 14.0845 | 6.84 | 7.84 | 1.15 | 3.39 | 3.49 | 0.012 | 5.5 | 0.000 |
| 23.8095 | 21.30 | 12.98 | 1.49 | 4.17 | 7.09 | 0.011 | 3.3 | 0.000 |
| 40.0000 | 18.29 | 11.04 | 1.87 | 3.17 | 8.34 | 0.027 | 14.4 | 0.000 |

AVERAGE # 8
SHAS53 200 HZ 10-SEP-85 T41N R4W S13 S OF CE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO ZXY VALUE | RHO ZYX ( OHM-M ) | PHI ZXY | PHI ZYX (DEGREES) | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ IMAG | | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 600.0 | 0.478E+01 | 0.660E+01 | 71. | 50. | 0. | 0.9537 | 0.9313 | .109 | .075 | 0.19 |
| H | SEC | 0.346E+01 | 0.496E+01 | 52. | 49. | 0. | 0.9717 | 0.9456 | 208. | 270. | 1.01 |
| E | 375.0 | 0.581E+01 | 0.664E+01 | 70. | 77. | 0. | 0.9085 | 0.9468 | .100 | .058 | 0.16 |
| H | SEC | 0.311E+01 | 0.413E+01 | 66. | 73. | 0. | 0.9328 | 0.9631 | 219. | 271. | 0.99 |
| E | 165.0 | 0.647E+01 | 0.110E+02 | 68. | 70. | 0. | 0.8867 | 0.9539 | .080 | .044 | 0.04 |
| H | SEC | 0.364E+01 | 0.832E+01 | 66. | 70. | 0. | 0.9011 | 0.9620 | 226. | 304. | 0.97 |
| E | 100.0 | 0.633E+01 | 0.129E+02 | 71. | 63. | 0. | 0.9440 | 0.9864 | .082 | .072 | 0.13 |
| H | SEC | 0.370E+01 | 0.149E+02 | 76. | 67. | 0. | 0.9470 | 0.9983 | 234. | 280. | 0.98 |
| E | 60.0 | 0.802E+01 | 0.123E+02 | 61. | 60. | 0. | 0.8149 | 0.9595 | .123 | .064 | 0.07 |
| H | SEC | 0.527E+01 | 0.136E+02 | 67. | 60. | 0. | 0.8166 | 0.9790 | 250. | 269. | 1.01 |
| E | 40.0 | 0.104E+02 | 0.157E+02 | 64. | 57. | 0. | 0.9465 | 0.9461 | .168 | .032 | 0.06 |
| H | SEC | 0.792E+01 | 0.147E+02 | 60. | 58. | 0. | 0.9421 | 0.9651 | 249. | 254. | 0.96 |
| E | 25.0 | 0.120E+02 | 0.176E+02 | 59. | 57. | 0. | 0.8790 | 0.9384 | .156 | .019 | 0.06 |
| H | SEC | 0.896E+01 | 0.156E+02 | 60. | 53. | 0. | 0.8786 | 0.9728 | 248. | 83. | 0.95 |
| E | 18.0 | 0.137E+02 | 0.248E+02 | 56. | 53. | 0. | 0.9293 | 0.8401 | .145 | .029 | 0.14 |
| H | SEC | 0.102E+02 | 0.161E+02 | 47. | 61. | 0. | 0.9438 | 0.9650 | 241. | 57. | 0.95 |

AVERAGE # 8
SHAS53 200 HZ 10-SEP-85 T41N R4W S13 S OF CE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO ZXY VALUE ( | RHO ZYX OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ IMAG | | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.651E+01 | 0.135E+02 | 45. | 46. | 0. | 0.9550 | 0.9917 | .184 | .065 | 0.08 |
| H | SEC | 0.599E+01 | 0.163E+02 | 44. | 49. | 0. | 0.9560 | 0.9603 | 240. | 33. | 0.99 |
| E | 6.1 | 0.106E+02 | 0.209E+02 | 58. | 42. | 0. | 0.9992 | 0.9368 | .143 | .102 | 0.26 |
| H | SEC | 0.131E+02 | 0.153E+02 | 61. | 30. | 0. | 0.9851 | 0.7808 | 245. | 93. | 1.00 |
| E | 3.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 1.8 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 1.4 | 0.304E+02 | 0.630E+02 | 57. | 68. | 0. | 0.9980 | 0.9713 | .023 | .024 | 0.04 |
| H | SEC | 0.259E+02 | 0.565E+02 | 67. | 67. | 0. | 0.9802 | 0.9866 | 190. | 152. | 0.56 |
| E | 1.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 1.0 | 0.562E+02 | 0.608E+02 | 76. | 73. | 0. | 0.8145 | 0.9942 | .028 | .060 | 0.06 |
| H | HZ | 0.453E+02 | 0.615E+02 | 79. | 73. | 0. | 0.8097 | 0.9941 | 181. | 256. | 0.76 |

AVERAGE # 8
SEAS53 200 HZ 10-SEP-85 T41N R4W S13 S OF CE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

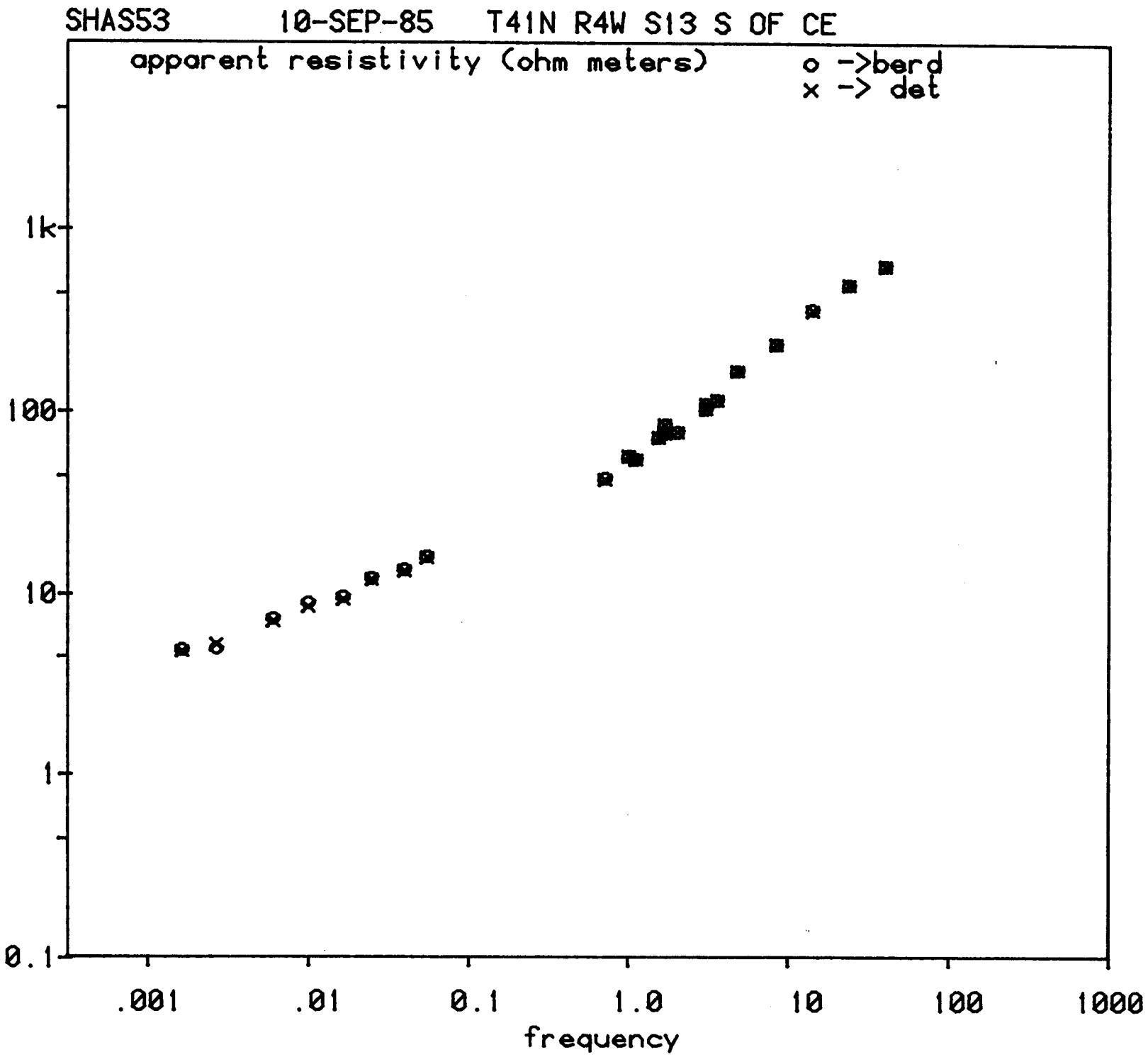
| | FREQ OR PERIOD | RHO ZXY VALUE ( OHM-M ) | RHO ZYX | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ IMAG | | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.1 | 0.624E+02 | 0.528E+02 | 67. | 75. | 0. | 0.8832 | 0.9955 | .030 | .028 | 0.20 |
| H | HZ | 0.454E+02 | 0.562E+02 | 70. | 79. | 0. | 0.8915 | 0.9854 | 208. | 237. | 0.98 |
| E | 1.5 | 0.763E+02 | 0.756E+02 | 68. | 69. | 0. | 0.9656 | 0.9924 | .052 | .055 | 0.06 |
| H | HZ | 0.573E+02 | 0.730E+02 | 70. | 68. | 0. | 0.9739 | 0.9925 | 221. | 248. | 0.85 |
| E | 1.7 | 0.677E+02 | 0.946E+02 | 71. | 75. | 0. | 0.8883 | 0.9976 | .055 | .037 | 0.16 |
| H | HZ | 0.477E+02 | 0.943E+02 | 70. | 77. | 0. | 0.8938 | 0.9928 | 234. | 219. | 0.69 |
| E | 1.7 | 0.839E+02 | 0.881E+02 | 79. | 72. | 0. | 0.9516 | 0.9974 | .091 | .055 | 0.05 |
| H | HZ | 0.755E+02 | 0.875E+02 | 82. | 74. | 0. | 0.9521 | 0.9980 | 239. | 239. | 0.81 |
| E | 2.0 | 0.768E+02 | 0.809E+02 | 78. | 75. | 0. | 0.8212 | 0.9694 | .080 | .040 | 0.03 |
| H | HZ | 0.729E+02 | 0.744E+02 | 74. | 77. | 0. | 0.8302 | 0.9680 | 238. | 240. | 0.84 |
| E | 2.9 | 0.155E+03 | 0.105E+03 | 77. | 71. | 0. | 0.8369 | 0.9779 | .101 | .052 | 0.13 |
| H | HZ | 0.166E+03 | 0.927E+02 | 72. | 75. | 0. | 0.8276 | 0.9780 | 231. | 217. | 0.91 |

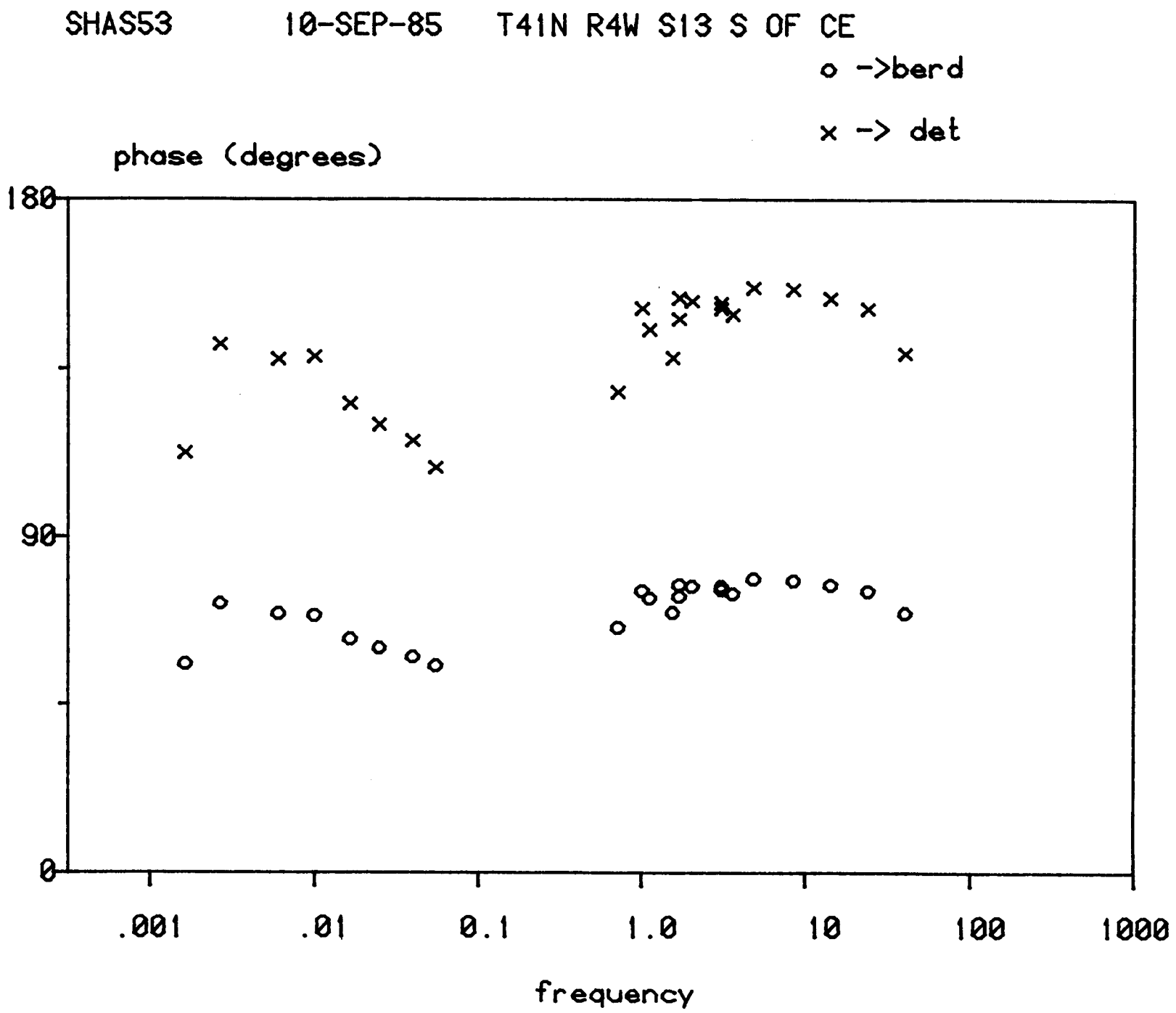
AVERAGE # 8
SHAS53 200 HZ 10-SEP-85 T41N R4W S13 S OF CE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

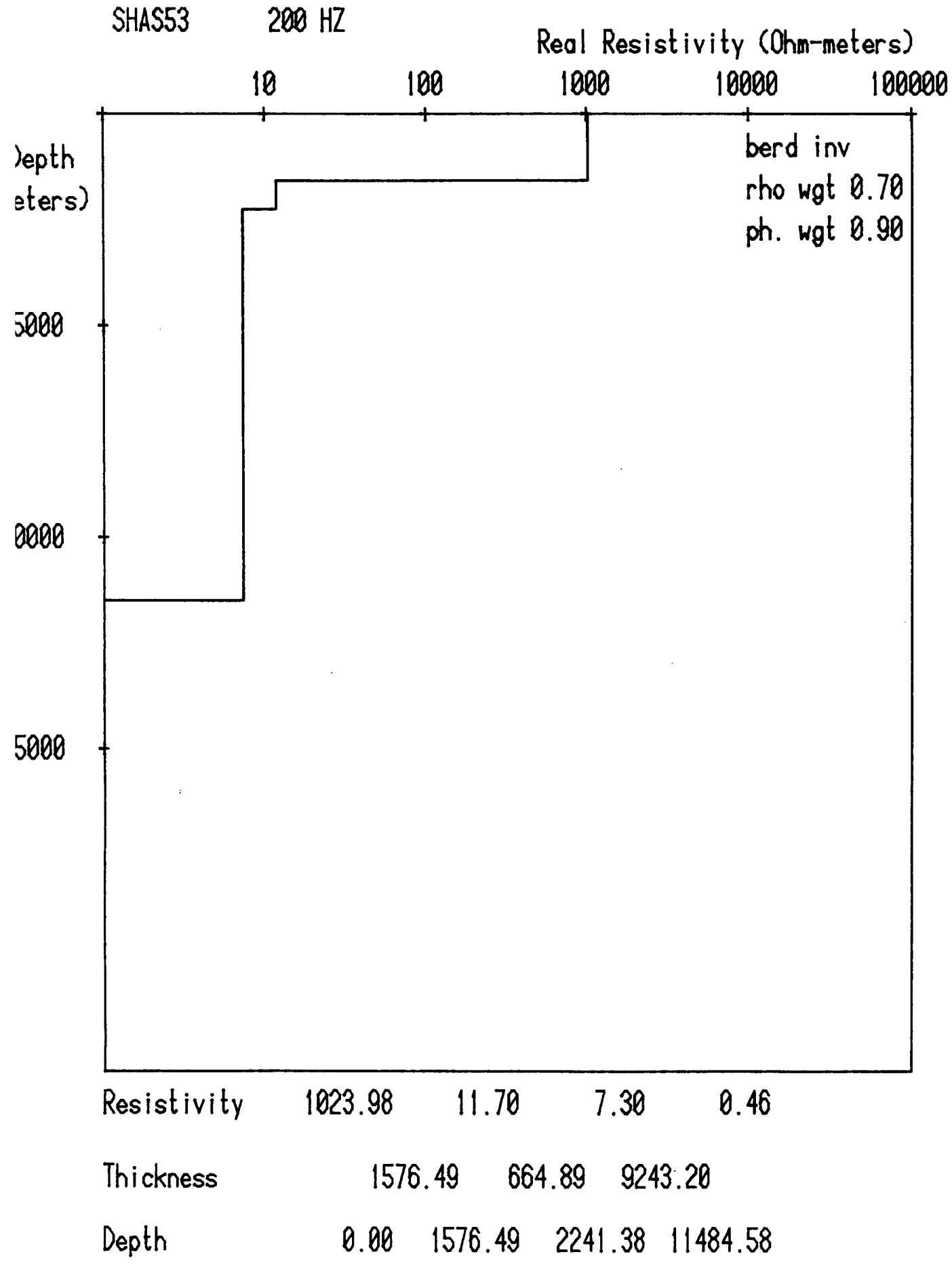
| | FREQ OR PERIOD | RHO ZXY VALUE | RHO ZYX ( OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ IMAG | | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.114E+03 | 0.109E+03 | 83. | 69. | 0. | 0.9324 | 0.9955 | .077 | .042 | 0.08 |
| H | HZ | 0.822E+02 | 0.105E+03 | 78. | 73. | 0. | 0.9231 | 0.9926 | 230. | 239. | 0.77 |
| E | 3.0 | 0.105E+03 | 0.111E+03 | 76. | 74. | 0. | 0.0000 | 0.9945 | .075 | .037 | 0.02 |
| H | HZ | 0.103E+03 | 0.109E+03 | 78. | 74. | 0. | 0.0000 | 0.9922 | 232. | 186. | 0.85 |
| E | 3.6 | 0.122E+03 | 0.124E+03 | 76. | 74. | 0. | 0.6580 | 0.9971 | .088 | .044 | 0.04 |
| H | HZ | 0.877E+02 | 0.124E+03 | 76. | 72. | 0. | 0.6907 | 0.9885 | 227. | 191. | 0.88 |
| E | 4.8 | 0.177E+03 | 0.176E+03 | 79. | 77. | 0. | 0.7451 | 0.9749 | .095 | .040 | 0.04 |
| H | HZ | 0.153E+03 | 0.156E+03 | 79. | 77. | 0. | 0.7306 | 0.9769 | 229. | 214. | 0.89 |
| E | 8.3 | 0.231E+03 | 0.240E+03 | 80. | 76. | 0. | 0.9634 | 0.9856 | .117 | .038 | 0.06 |
| H | HZ | 0.214E+03 | 0.231E+03 | 80. | 76. | 0. | 0.9633 | 0.9890 | 233. | 226. | 0.94 |
| E | 14.1 | 0.343E+03 | 0.385E+03 | 77. | 77. | 0. | 0.1965 | 0.9836 | .127 | .024 | 0.03 |
| H | HZ | 0.329E+03 | 0.350E+03 | 74. | 78. | 0. | 0.1741 | 0.9859 | 229. | 182. | 0.91 |
| E | 23.8 | 0.479E+03 | 0.552E+03 | 75. | 76. | 0. | 0.2505 | 0.9550 | .153 | .019 | 0.05 |
| H | HZ | 0.462E+03 | 0.445E+03 | 73. | 76. | 0. | 0.1811 | 0.9578 | 232. | 142. | 0.93 |
| E | 40.0 | 0.557E+03 | 0.678E+03 | 69. | 69. | 0. | 0.4344 | 0.9977 | .134 | .015 | 0.06 |
| H | HZ | 0.616E+03 | 0.628E+03 | 76. | 63. | 0. | 0.4371 | 0.9937 | 220. | 189. | 0.86 |

site title: SHAS53 200 HZ 10-SEP-85 T41N R4W S13 S OF CE

| # | Frequency | Mean of RHOberd | RHOdet | PHIberd | PHIdet | real mag/dir | imaginary mag/dir |
|---|---|---|---|---|---|---|---|
| 1 | 0.0017 : | 4.82 | 4.71 | 55. | 112. | 0.109/208 | 0.075/270 |
| 2 | 0.0027 : | 4.89 | 5.15 | 71. | 141. | 0.100/219 | 0.058/271 |
| 3 | 0.0061 : | 7.16 | 6.94 | 69. | 137. | 0.080/226 | 0.044/304 |
| 4 | 0.0100 : | 8.80 | 8.32 | 68. | 138. | 0.082/234 | 0.072/280 |
| 5 | 0.0167 : | 9.48 | 9.13 | 62. | 125. | 0.123/250 | 0.064/269 |
| 6 | 0.0250 : | 11.97 | 11.78 | 59. | 120. | 0.168/249 | 0.032/254 |
| 7 | 0.0400 : | 13.31 | 13.19 | 57. | 115. | 0.156/248 | 0.019/ 83 |
| 8 | 0.0556 : | 15.81 | 15.45 | 55. | 108. | 0.145/241 | 0.029/ 57 |
| 9 | 0.1000 : | 10.09 | 9.39 | 46. | 90. | 0.184/240 | 0.065/ 33 |
| 10 | 0.1639 : | 14.11 | 14.12 | 47. | 94. | 0.143/245 | 0.102/ 93 |
| 11 | 0.3125 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 12 | 0.5556 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 13 | 0.7143 : | 42.31 | 41.62 | 65. | 128. | 0.023/190 | 0.024/152 |
| 14 | 1.0000 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 15 | 1.0000 : | 55.68 | 55.36 | 75. | 150. | 0.028/181 | 0.060/256 |
| 16 | 1.1111 : | 53.83 | 53.36 | 73. | 145. | 0.030/208 | 0.028/237 |
| 17 | 1.5385 : | 70.44 | 70.70 | 69. | 137. | 0.052/221 | 0.055/248 |
| 18 | 1.6949 : | 74.62 | 74.03 | 73. | 148. | 0.055/234 | 0.037/219 |
| 19 | 1.6949 : | 83.35 | 83.12 | 77. | 153. | 0.091/239 | 0.055/239 |
| 20 | 2.0000 : | 76.20 | 76.33 | 76. | 152. | 0.080/238 | 0.040/240 |
| 21 | 2.8571 : | 127.38 | 127.25 | 74. | 147. | 0.101/231 | 0.052/217 |
| 22 | 3.0303 : | 101.56 | 101.43 | 76. | 152. | 0.077/230 | 0.042/239 |
| 23 | 3.0303 : | 106.84 | 106.74 | 75. | 150. | 0.075/232 | 0.037/186 |
| 24 | 3.5714 : | 113.72 | 113.04 | 74. | 149. | 0.088/227 | 0.044/191 |
| 25 | 4.7619 : | 165.37 | 164.79 | 78. | 156. | 0.095/229 | 0.040/214 |
| 26 | 8.3333 : | 228.43 | 227.97 | 78. | 155. | 0.117/233 | 0.038/226 |
| 27 | 14.0845 : | 351.50 | 349.50 | 77. | 153. | 0.127/229 | 0.024/182 |
| 28 | 23.8095 : | 484.08 | 480.31 | 75. | 150. | 0.153/232 | 0.019/142 |
| 29 | 40.0000 : | 615.23 | 611.05 | 69. | 138. | 0.134/220 | 0.015/189 |


SHAS53 10-SEP-85 T41N R4W S13 S OF CE
apparent resistivity (ohm meters)
o ->berd
x -> det
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS53 10-SEP-85 T41N R4W S13 S OF CE
o ->berd
x -> det
phase (degrees)
180
90
0
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS53 200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
berd inv
rho wgt 0.70
ph. wgt 0.90
Resistivity 1023.98 11.70 7.30 0.46
Thickness 1576.49 664.89 9243.20
Depth 0.00 1576.49 2241.38 11484.58

SHAS53 200 HZ 10-SEP-85 T41N R4W S13 S OF CE

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 22
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 1

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 300.0000 | | 0.0000 |
| | | 2000.0000 | |
| 2 | 5.0000 | | 2000.0000 |
| | | 2000.0000 | |
| 3 | 10.0000 | | 4000.0000 |
| | | 6500.0000 | |
| 4 | 1.0000 | | 10500.0000 |

FREQUENCY RANGE ( 0.0027 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 1023.9819 | | 0.0000 |
| | | 1576.4941 | |
| 2 | 11.7079 | | 1576.4941 |
| | | 664.8955 | |
| 3 | 7.3003 | | 2241.3895 |
| | | 9243.1989 | |
| 4 | 0.4603 | | 11484.5884 |

MEAN PERCENT VARIATION IS 10.8595

SHAS53 200 HZ 10-SEP-85 T41N R4W S13 S OF CE

ERROR STRUCTURE OF FITTED MODEL

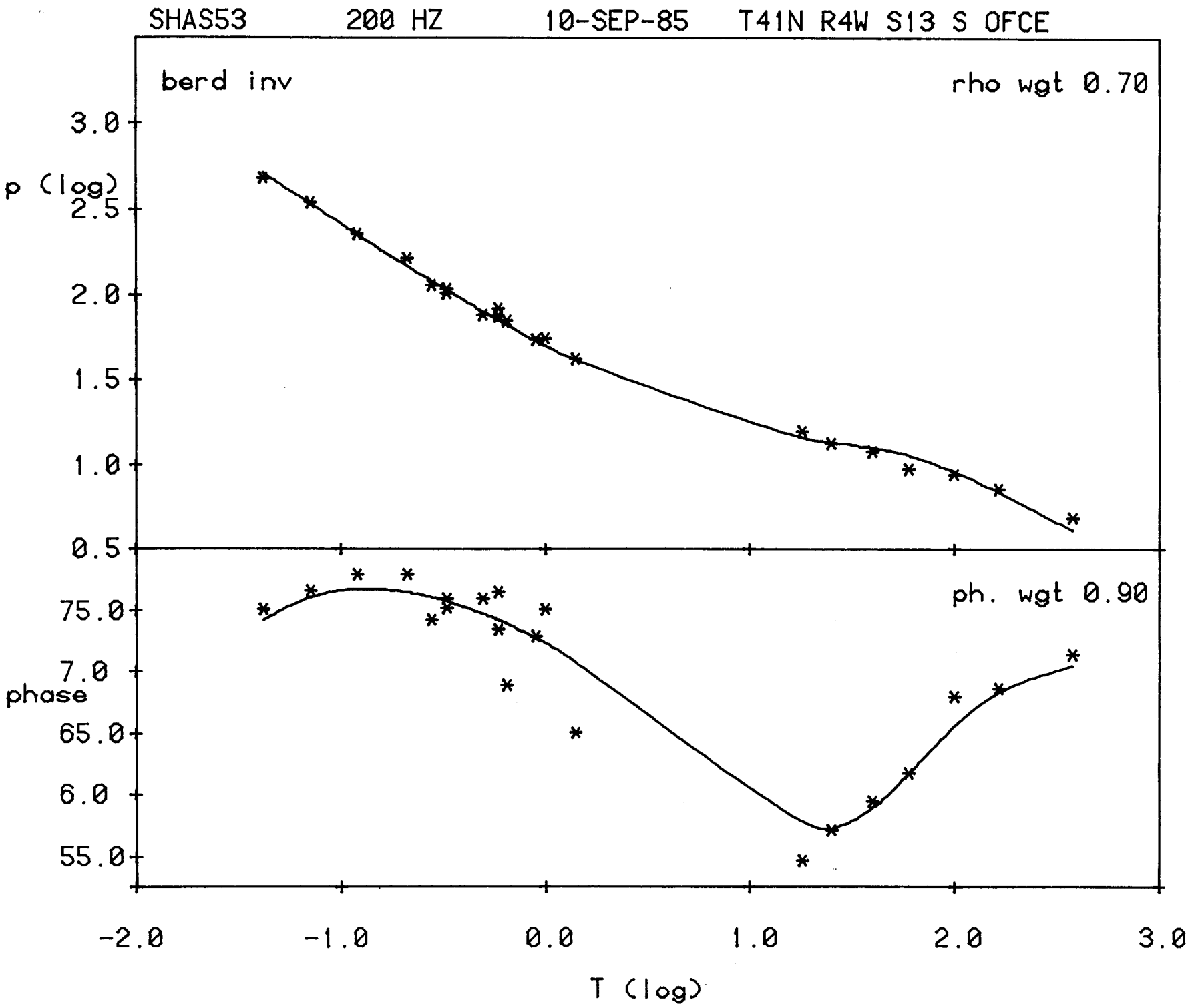
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 375.000 | 4.892 | 4.113 | 0.779 | 17.301 |
| 2 | 165.000 | 7.155 | 6.973 | 0.182 | 2.575 |
| 3 | 100.000 | 8.800 | 9.289 | -0.489 | -5.411 |
| 4 | 60.000 | 9.476 | 11.574 | -2.098 | -19.930 |
| 5 | 40.000 | 11.970 | 12.839 | -0.869 | -7.007 |
| 6 | 25.000 | 13.314 | 13.610 | -0.296 | -2.195 |
| 7 | 18.000 | 15.811 | 14.077 | 1.734 | 11.601 |
| 8 | 1.400 | 42.307 | 40.729 | 1.578 | 3.800 |
| 9 | 1.000 | 55.682 | 50.128 | 5.554 | 10.498 |
| 10 | 0.900 | 58.852 | 58.622 | 0.000 | 0.000 |
| 11 | 0.650 | 70.441 | 66.454 | 0.000 | 0.000 |
| 12 | 0.390 | 74.619 | 70.958 | 3.661 | 5.031 |

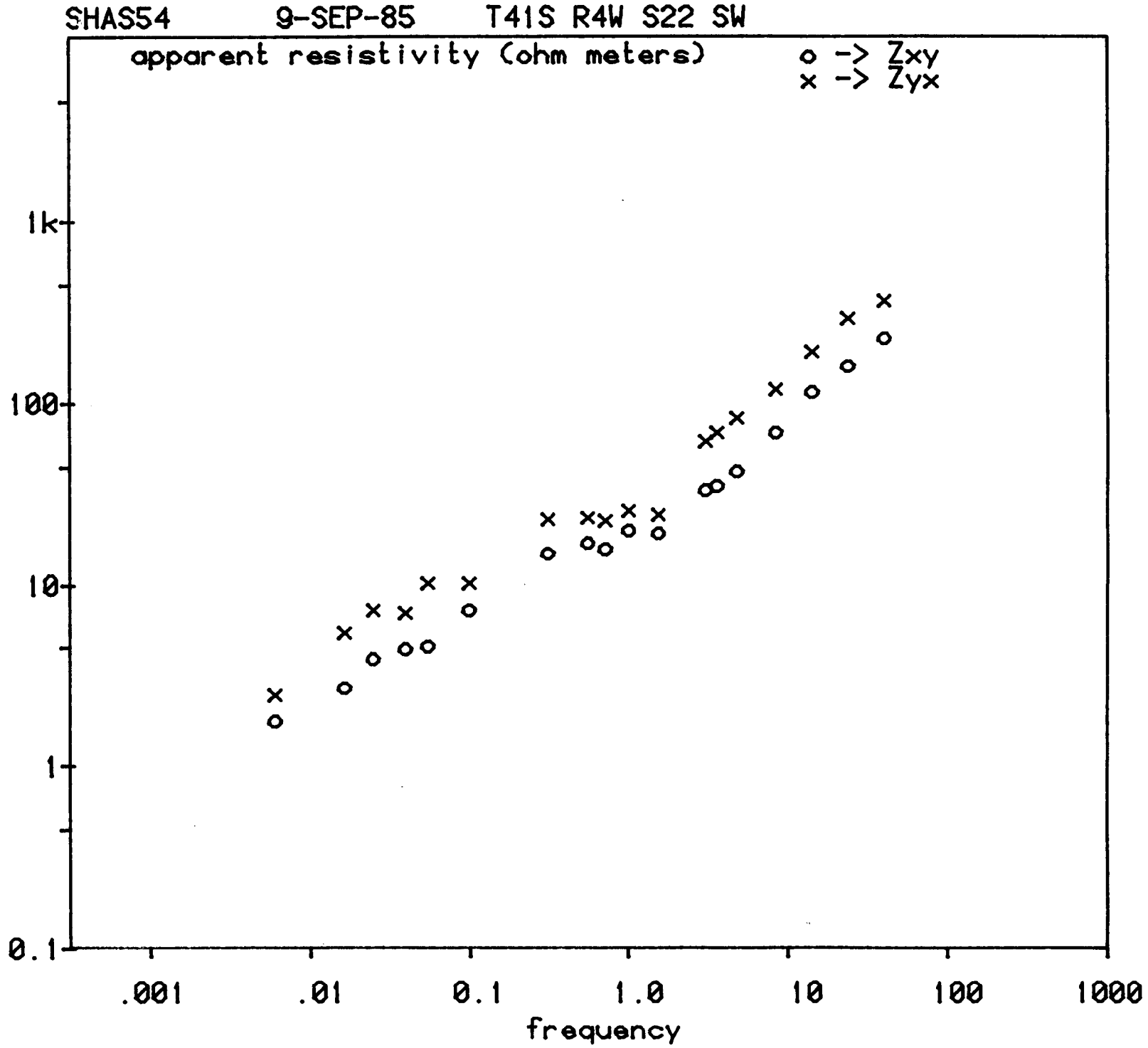
| | | | | | |
|---|---|---|---|---|---|
| 14 | 0.500 | 76.202 | 79.505 | 0.000 | 0.000 |
| 15 | 0.330 | 101.563 | 106.667 | -5.104 | -4.902 |
| 16 | 0.330 | 106.841 | 106.667 | 0.000 | 0.000 |
| 17 | 0.280 | 113.723 | 120.164 | -6.442 | -5.508 |
| 18 | 0.210 | 165.372 | 148.576 | 16.796 | 10.700 |
| 19 | 0.120 | 228.433 | 227.294 | 1.139 | 0.500 |
| 20 | 0.071 | 351.498 | 343.004 | 8.494 | 2.446 |
| 21 | 0.042 | 484.082 | 519.342 | -35.260 | -7.028 |
| 22 | 0.025 | 615.232 | 764.654 | -149.422 | -21.657 |

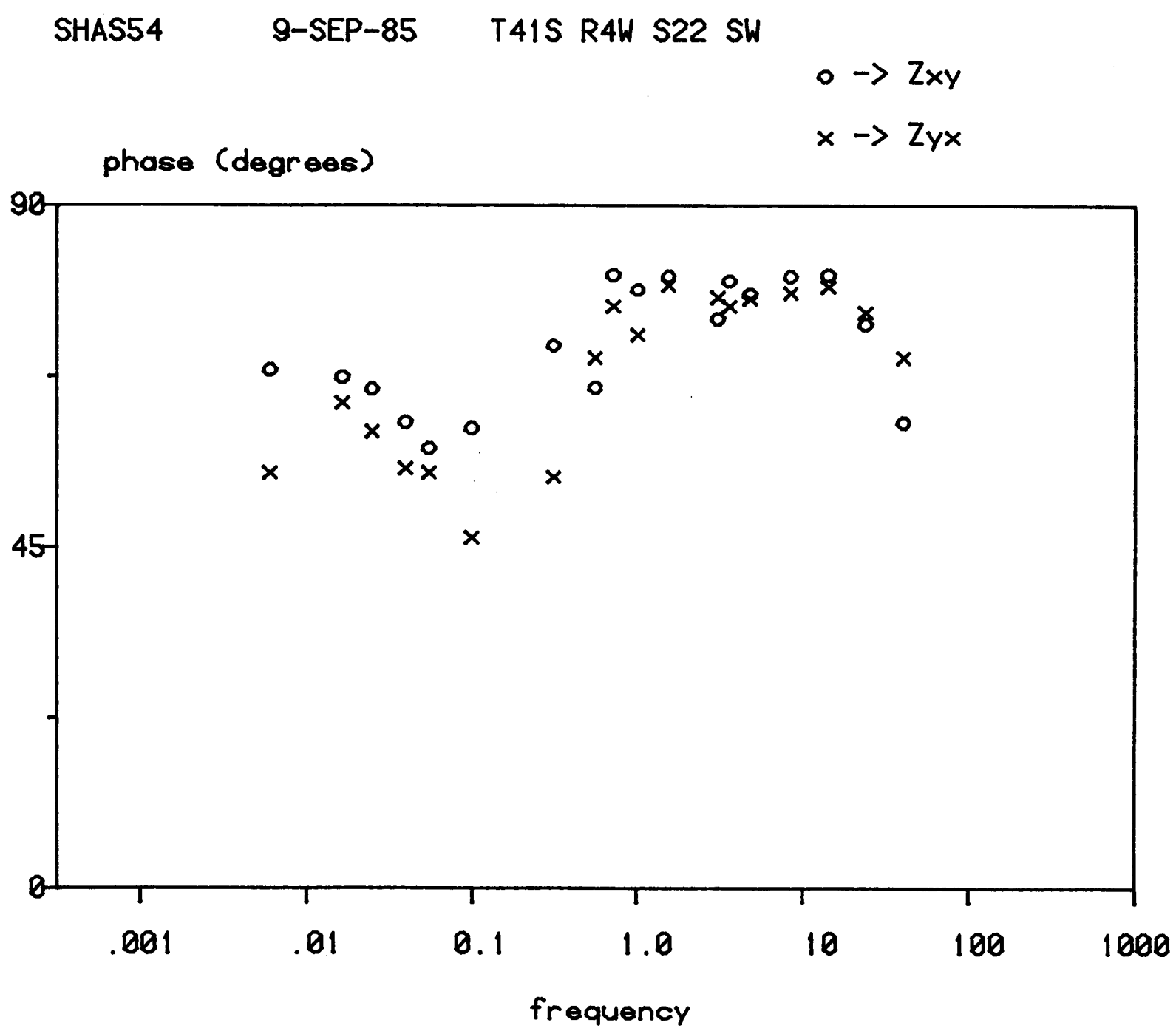
MEAN PERCENT ERROR = 9.6102
MAXIMUM PERCENT ERROR = 21.6572
MAX. ERROR OCCURED AT OBSERVATION 22

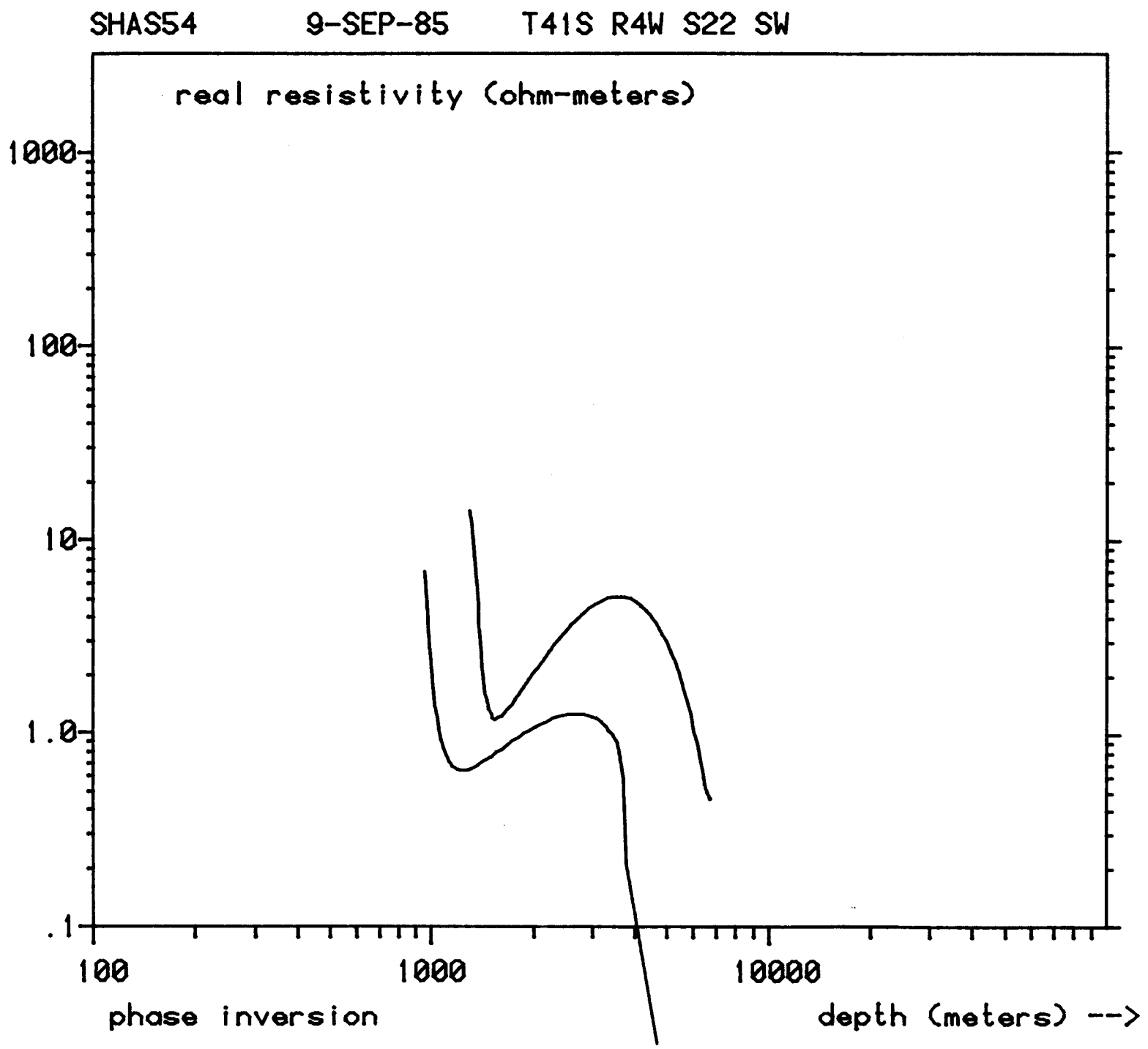
| I | T(I) | P(I) | PAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 375.000 | -71.435 | -70.559 | -0.876 | 4.964 |
| 2 | 165.000 | -68.665 | -68.793 | 0.128 | -0.660 |
| 3 | 100.000 | -68.105 | -65.809 | -2.296 | 11.120 |
| 4 | 60.000 | -61.815 | -61.714 | -0.101 | 0.425 |
| 5 | 40.000 | -59.430 | -58.691 | -0.739 | 2.925 |
| 6 | 25.000 | -57.160 | -56.965 | -0.195 | 0.747 |
| 7 | 18.000 | -54.615 | -57.381 | 2.766 | -10.407 |
| 8 | 1.400 | -65.115 | -70.986 | 5.871 | -29.502 |
| 9 | 1.000 | -75.110 | -72.396 | -2.714 | 17.626 |
| 10 | 0.900 | -72.840 | -72.805 | -0.035 | 0.213 |
| 11 | 0.650 | -68.895 | -73.962 | 5.067 | -29.252 |
| 12 | 0.590 | -73.400 | -74.273 | 0.873 | -5.698 |
| 13 | 0.590 | -76.565 | -74.273 | -2.292 | 16.415 |
| 14 | 0.500 | -76.000 | -74.769 | -1.231 | 8.799 |
| 15 | 0.330 | -75.985 | -75.807 | -0.178 | 1.316 |
| 16 | 0.330 | -75.205 | -75.807 | 0.602 | -4.335 |
| 17 | 0.280 | -74.245 | -76.133 | 1.888 | -13.327 |
| 18 | 0.210 | -77.975 | -76.579 | -1.396 | 11.337 |
| 19 | 0.120 | -77.900 | -76.919 | -0.981 | 8.048 |
| 20 | 0.071 | -76.640 | -76.317 | -0.323 | 2.477 |
| 21 | 0.042 | -75.115 | -74.246 | -0.869 | 5.949 |
| 22 | 0.025 | -69.140 | -70.067 | 0.927 | -4.950 |

MEAN PERCENT ERROR = 11.9694
MAXIMUM PERCENT ERROR = 29.5021
MAX. ERROR OCCURED AT OBSERVATION 8


SHAS53 200 HZ 10-SEP-85 T41N R4W S13 S OFCE
berd inv
rho wgt 0.70
p (log)
3.0
2.5
2.0
1.5
1.0
0.5
ph. wgt 0.90
phase
75.0
7.0
65.0
6.0
55.0
-2.0
-1.0
0.0
1.0
2.0
3.0
T (log)


SHAS54 9-SEP-85 T41S R4W S22 SW
apparent resistivity (ohm meters)
o -> Zxy
x -> Zyx
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS54 9-SEP-85 T41S R4W S22 SW
o -> Zxy
x -> Zyx
phase (degrees)
90
45
0
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS54 9-SEP-85 T41S R4W S22 SW
real resistivity (ohm-meters)
1000
100
10
1.0
.1
100
1000
10000
phase inversion
depth (meters) -->

site title: SHAS54 200 HZ 9-SEP-85 T41S R4W S22 SW

| # | Frequency | Mean of RHOZxy | RHOZyx | PHIZxy | PHIZyx | real mag/dir | imaginary mag/dir |
|---|---|---|---|---|---|---|---|
| 1 | 0.0017 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 2 | 0.0027 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 3 | 0.0061 : | 1.74 | 2.42 | 68. | 55. | 0.092/229 | 0.065/292 |
| 4 | 0.0100 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 5 | 0.0167 : | 2.67 | 5.35 | 67. | 64. | 0.180/247 | 0.115/267 |
| 6 | 0.0250 : | 3.85 | 7.16 | 66. | 60. | 0.249/249 | 0.072/241 |
| 7 | 0.0400 : | 4.39 | 6.90 | 62. | 56. | 0.305/244 | 0.027/249 |
| 8 | 0.0556 : | 4.55 | 10.08 | 58. | 55. | 0.318/247 | 0.044/ 68 |
| 9 | 0.1000 : | 7.14 | 10.22 | 61. | 46. | 0.277/237 | 0.076/108 |
| 10 | 0.1639 : | 3.38 | 8.95 | 69. | 67. | 0.047/214 | 0.103/ 34 |
| 11 | 0.3125 : | 14.53 | 22.90 | 72. | 54. | 0.161/276 | 0.108/ 78 |
| 12 | 0.5556 : | 16.57 | 23.02 | 66. | 70. | 0.026/234 | 0.042/ 78 |
| 13 | 0.7143 : | 15.61 | 22.13 | 81. | 77. | 0.110/268 | 0.069/ 76 |
| 14 | 1.0000 : | 19.67 | 25.30 | 79. | 73. | 0.012/312 | 0.042/ 63 |
| 15 | 1.0000 : | 3.83 | 28.67 | 62. | 71. | 0.055/242 | 0.115/332 |
| 16 | 1.1111 : | 2.08 | 11.81 | 77. | 77. | 0.157/241 | 0.176/ 85 |
| 17 | 1.5385 : | 18.87 | 24.01 | 81. | 79. | 0.041/238 | 0.041/ 93 |
| 18 | 1.6949 : | 38.84 | 25.76 | 84. | 80. | 0.015/304 | 0.032/102 |
| 19 | 1.6949 : | 17.81 | 17.92 | 75. | 69. | 0.070/156 | 0.041/ 65 |
| 20 | 2.0000 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 21 | 2.8571 : | 18.46 | 74.00 | 63. | 85. | 0.010/225 | 0.045/342 |
| 22 | 3.0303 : | 36.90 | 60.43 | 67. | 81. | 0.013/313 | 0.031/ 77 |
| 23 | 3.0303 : | 32.68 | 61.15 | 75. | 78. | 0.013/326 | 0.038/148 |
| 24 | 3.5714 : | 34.56 | 67.70 | 80. | 77. | 0.040/282 | 0.030/ 28 |
| 25 | 4.7619 : | 41.51 | 82.02 | 78. | 78. | 0.004/ 24 | 0.025/127 |
| 26 | 8.3333 : | 67.56 | 117.80 | 81. | 79. | 0.010/ 54 | 0.022/170 |
| 27 | 14.0845 : | 114.50 | 191.34 | 81. | 79. | 0.048/108 | 0.013/188 |
| 28 | 23.8095 : | 157.95 | 291.34 | 74. | 76. | 0.019/110 | 0.033/144 |
| 29 | 40.0000 : | 222.32 | 362.25 | 61. | 70. | 0.066/192 | 0.265/279 |

SHAS54 200 HZ 9-SEP-85 T41S R4W S22 SW

STANDARD DEVIATIONS for MERGED AVERAGE, MT DATA

| frequency | RHOZxy | RHOZyx | PHIZxy | PHIZyx | theta | induction arrow real: MAG | DIR | imag: MAG |
|---|---|---|---|---|---|---|---|---|
| 0.0017 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0027 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0061 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0100 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0167 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0250 | 0.32 | 0.83 | 1.99 | 2.32 | 0.00 | 0.002 | 0.1 | 0.000 |
| 0.0400 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.0556 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.1000 | 3.96 | 0.44 | 3.85 | 3.77 | 11.07 | 0.025 | 108.4 | 0.114 |
| 0.1639 | 0.00 | 0.01 | 0.03 | 0.06 | 0.11 | 0.000 | 0.0 | 0.967 |
| 0.3125 | 3.43 | 1.01 | 6.88 | 2.47 | 0.68 | 0.057 | 129.1 | 0.061 |
| 0.5556 | 3.48 | 1.73 | 1.30 | 2.45 | 14.92 | 0.008 | 15.8 | 0.000 |
| 0.7143 | 5.92 | 1.40 | 4.69 | 4.42 | 75.52 | 0.043 | 1.3 | 0.016 |
| 1.0000 | 1.26 | 1.03 | 1.55 | 6.35 | 14.52 | 0.008 | 7.9 | 0.009 |
| 1.0000 | 1.86 | 2.52 | 3.88 | 2.08 | 0.20 | 0.023 | 2.2 | 0.022 |
| 1.1111 | 0.01 | 0.00 | 0.01 | 0.03 | 0.01 | 0.000 | 0.0 | 0.000 |
| 1.5385 | 3.54 | 1.32 | 3.19 | 7.07 | 7.91 | 0.010 | 9.5 | 0.008 |
| 1.6949 | 3.31 | 1.60 | 1.33 | 5.40 | 3.31 | 0.002 | 113.2 | 0.028 |
| 1.6949 | 5.59 | 0.96 | 3.89 | 11.17 | 30.43 | 0.005 | 4.0 | 0.002 |
| 2.0000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 2.8571 | 7.71 | 2.59 | 2.06 | 2.94 | 42.12 | 0.007 | 4.2 | 0.008 |
| 3.0303 | 1.90 | 0.85 | 0.94 | 0.98 | 27.46 | 0.003 | 30.7 | 0.003 |
| 3.0303 | 3.42 | 2.04 | 1.71 | 4.00 | 43.28 | 0.005 | 7.6 | 0.007 |
| 3.5714 | 3.88 | 1.66 | 1.64 | 6.71 | 38.53 | 0.007 | 7.2 | 0.007 |
| 4.7619 | 5.32 | 2.10 | 1.71 | 1.46 | 31.78 | 0.007 | 5.8 | 0.011 |
| 8.3333 | 3.29 | 1.55 | 0.70 | 0.88 | 25.58 | 0.005 | 5.4 | 0.005 |
| 14.0845 | 2.95 | 3.25 | 0.49 | 0.76 | 17.74 | 0.009 | 5.9 | 0.006 |
| 23.8095 | 4.96 | 5.20 | 0.43 | 1.57 | 19.33 | 0.010 | 3.5 | 0.008 |
| 40.0000 | 8.18 | 27.55 | 1.40 | 0.57 | 2.67 | 0.003 | 8.3 | 0.026 |

AVERAGE # 8
SHAS54 200 HZ 9-SEP-85 T41S R4W S22 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO ZXY VALUE ( | RHO ZYX OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ | IMAG | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 600.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 375.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 165.0 | 0.219E+01 | 0.255E+01 | 69. | 56. | 0. | 0.8948 | 0.9481 | .092 | .065 | 0.38 |
| H | SEC | 0.129E+01 | 0.229E+01 | 68. | 54. | 0. | 0.8983 | 0.9503 | 229. | 292. | 0.99 |
| E | 100.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 60.0 | 0.304E+01 | 0.563E+01 | 67. | 65. | 0. | 0.9583 | 0.9816 | .180 | .115 | 0.19 |
| H | SEC | 0.230E+01 | 0.507E+01 | 68. | 64. | 0. | 0.9606 | 0.9827 | 247. | 267. | 1.00 |
| E | 40.0 | 0.474E+01 | 0.833E+01 | 66. | 60. | 0. | 0.8905 | 0.9141 | .249 | .072 | 0.12 |
| H | SEC | 0.296E+01 | 0.600E+01 | 66. | 61. | 0. | 0.8936 | 0.9177 | 249. | 241. | 1.00 |
| E | 25.0 | 0.492E+01 | 0.733E+01 | 62. | 55. | 0. | 0.9488 | 0.9718 | .305 | .027 | 0.10 |
| H | SEC | 0.385E+01 | 0.647E+01 | 61. | 56. | 0. | 0.9501 | 0.9725 | 244. | 249. | 0.99 |
| E | 18.0 | 0.598E+01 | 0.130E+02 | 56. | 57. | 0. | 0.8864 | 0.8738 | .318 | .044 | 0.19 |
| H | SEC | 0.312E+01 | 0.718E+01 | 60. | 53. | 0. | 0.8996 | 0.8882 | 247. | 68. | 0.99 |

AVERAGE # 8
SHAS54 200 HZ 9-SEP-85 T41S R4W S22 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO ZXY VALUE | RHO ZYX ( OHM-M ) | PHI ZXY | PHI ZYX (DEGREES) | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ IMAG | | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.957E+01 | 0.115E+02 | 65. | 49. | 0. | 0.9409 | 0.9792 | .277 | .076 | 0.19 |
| H | SEC | 0.471E+01 | 0.898E+01 | 56. | 44. | 0. | 0.9551 | 0.9887 | 237. | 108. | 0.95 |
| E | 6.1 | 0.363E+01 | 0.874E+01 | 70. | 68. | 0. | 0.9668 | 0.9978 | .047 | .103 | 0.16 |
| H | SEC | 0.312E+01 | 0.916E+01 | 68. | 67. | 0. | 0.9686 | 0.9944 | 214. | 34. | 0.96 |
| E | 3.2 | 0.204E+02 | 0.276E+02 | 69. | 53. | 0. | 0.8674 | 0.9194 | .161 | .108 | 0.24 |
| H | SEC | 0.863E+01 | 0.182E+02 | 74. | 55. | 0. | 0.8788 | 0.9303 | 276. | 78. | 0.79 |
| E | 1.8 | 0.226E+02 | 0.291E+02 | 67. | 70. | 0. | 0.8364 | 0.8986 | .026 | .042 | 0.11 |
| H | SEC | 0.105E+02 | 0.169E+02 | 65. | 70. | 0. | 0.8557 | 0.8977 | 234. | 78. | 0.35 |
| E | 1.4 | 0.226E+02 | 0.255E+02 | 80. | 76. | 0. | 0.8738 | 0.9017 | .110 | .069 | 0.38 |
| H | SEC | 0.864E+01 | 0.188E+02 | 82. | 77. | 0. | 0.8746 | 0.9789 | 268. | 76. | 0.78 |
| E | 1.0 | 0.222E+02 | 0.275E+02 | 78. | 73. | 0. | 0.9461 | 0.9627 | .012 | .042 | 0.10 |
| H | HZ | 0.171E+02 | 0.231E+02 | 79. | 73. | 0. | 0.9507 | 0.9643 | 312. | 63. | 0.23 |
| E | 1.0 | 0.341E+01 | 0.298E+02 | 60. | 72. | 0. | 0.8561 | 0.9774 | .055 | .115 | 0.18 |
| H | HZ | 0.425E+01 | 0.276E+02 | 65. | 69. | 0. | 0.8519 | 0.9958 | 242. | 332. | 0.84 |

AVERAGE # 8
SHAS54 200 HZ 9-SEP-85 T41S R4W S22 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

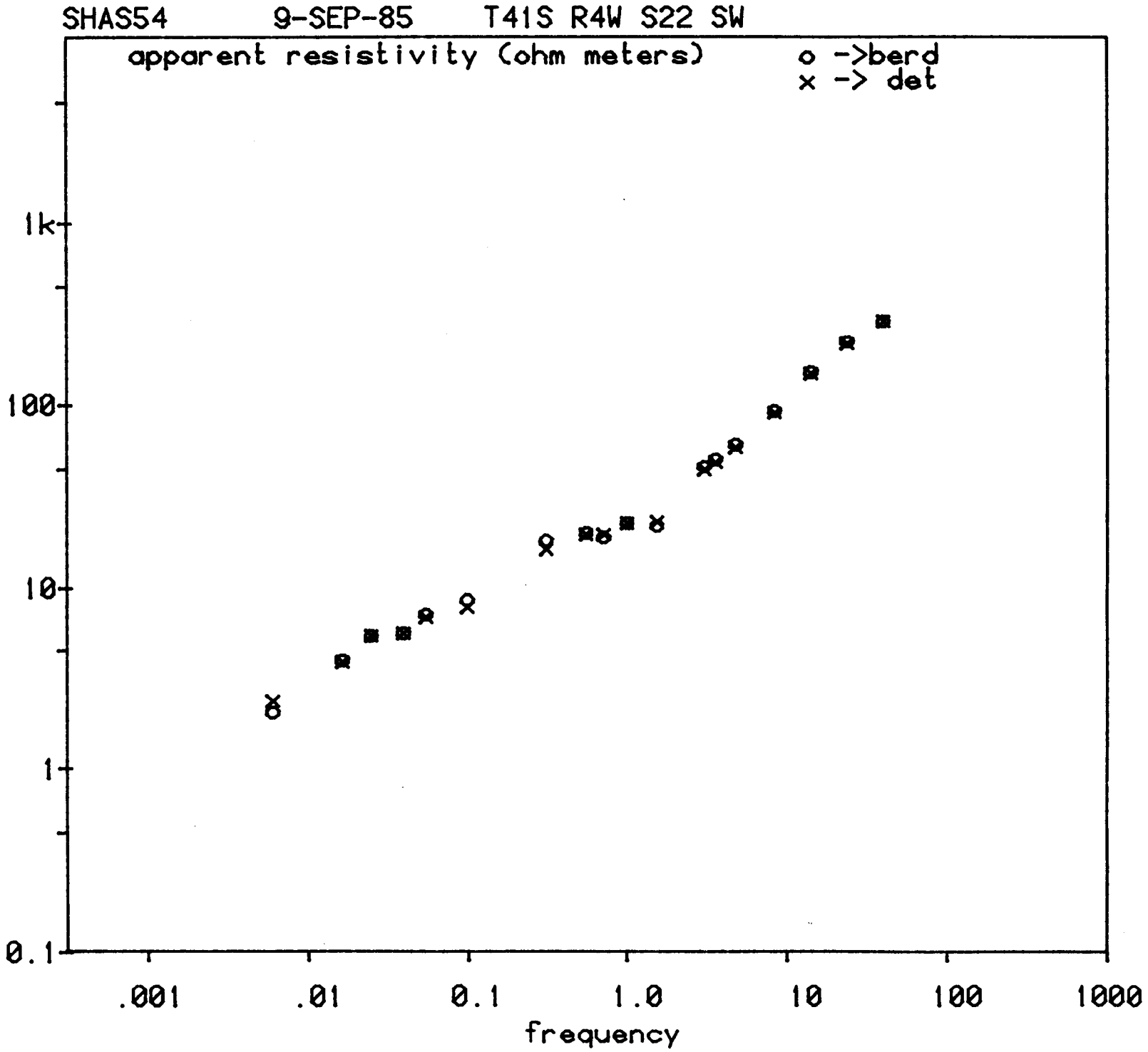
| | FREQ OR PERIOD | RHO ZXY VALUE ( | RHO ZYX OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ | IMAG | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.1 | 0.317E+01 | 0.117E+02 | 75. | 77. | 0. | 0.9754 | 0.9726 | .157 | .176 | 0.54 |
| H | HZ | 0.994E+00 | 0.119E+02 | 80. | 76. | 0. | 0.9918 | 0.9840 | 241. | 85. | 0.63 |
| E | 1.5 | 0.220E+02 | 0.251E+02 | 80. | 80. | 0. | 0.9588 | 0.9933 | .041 | .041 | 0.24 |
| H | HZ | 0.158E+02 | 0.230E+02 | 81. | 79. | 0. | 0.9659 | 0.9880 | 238. | 93. | 0.57 |
| E | 1.7 | 0.427E+02 | 0.308E+02 | 82. | 78. | 0. | 0.9828 | 0.9293 | .015 | .032 | 0.28 |
| H | HZ | 0.350E+02 | 0.207E+02 | 87. | 82. | 0. | 0.9984 | 0.9193 | 304. | 102. | 0.14 |
| E | 1.7 | 0.192E+02 | 0.192E+02 | 77. | 69. | 0. | 0.9336 | 0.9842 | .070 | .041 | 0.19 |
| H | HZ | 0.164E+02 | 0.166E+02 | 73. | 69. | 0. | 0.9344 | 0.9995 | 156. | 65. | 0.65 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 2.9 | 0.266E+02 | 0.896E+02 | 64. | 83. | 0. | 0.8372 | 0.9678 | .010 | .045 | 0.12 |
| H | HZ | 0.103E+02 | 0.584E+02 | 62. | 87. | 0. | 0.8609 | 0.9731 | 225. | 342. | 0.33 |

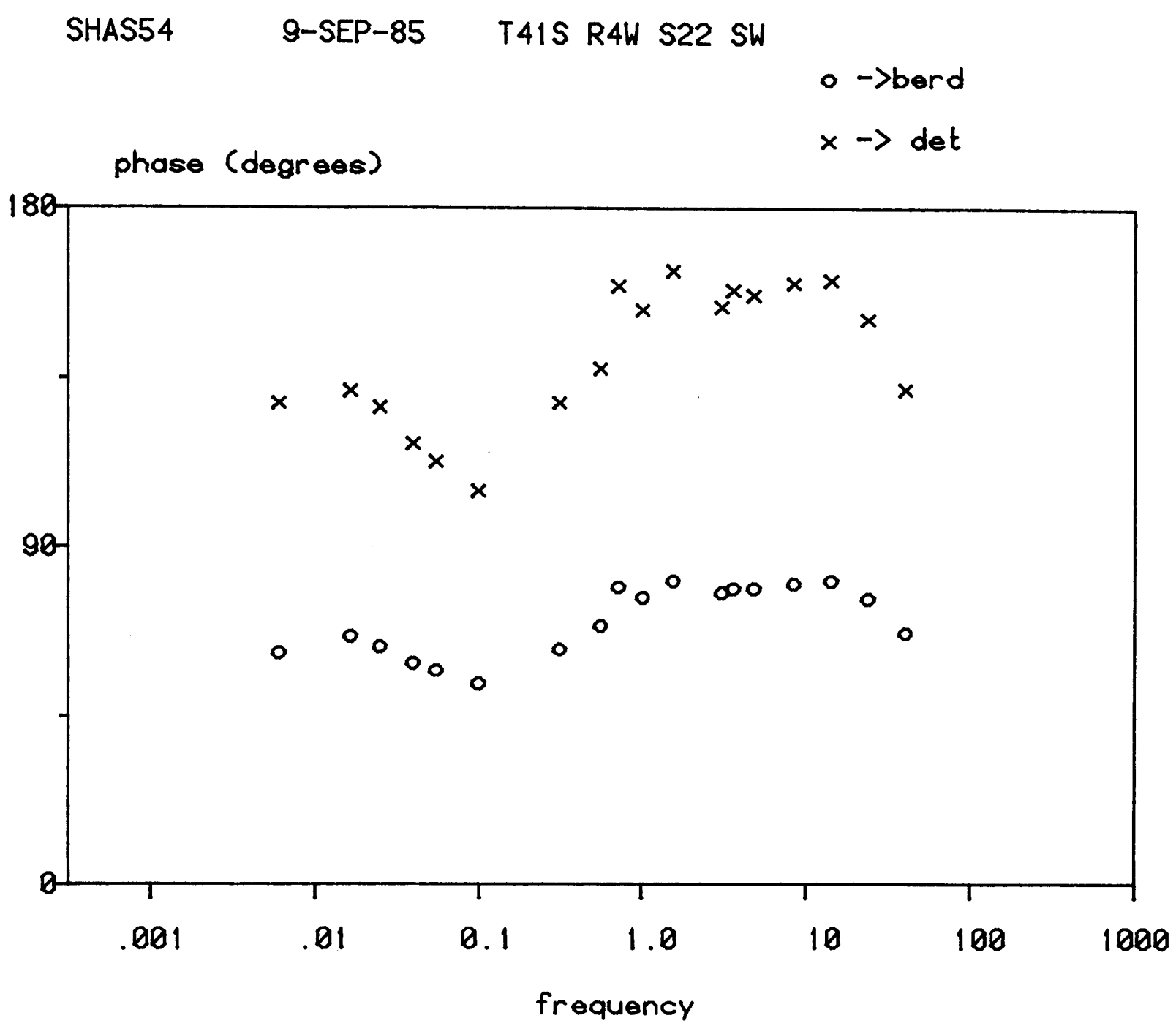
AVERAGE # 8
SHAS54 200 HZ 9-SEP-85 T41S R4W S22 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

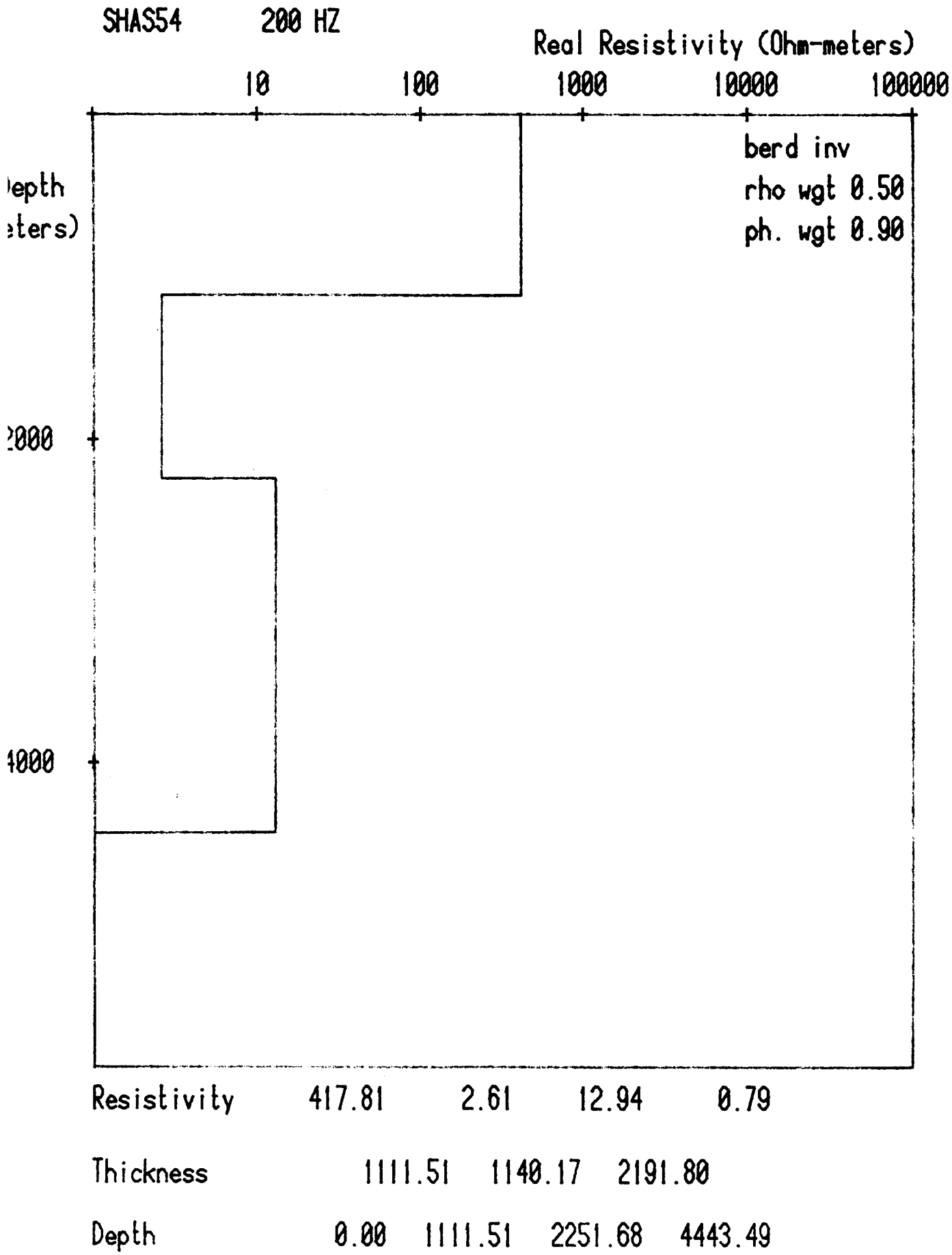
| | FREQ OR PERIOD | RHO ZXY VALUE | RHO ZYX ( OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ IMAG | | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.406E+02 | 0.650E+02 | 69. | 80. | 0. | 0.9589 | 0.9658 | .013 | .031 | 0.13 |
| H | HZ | 0.332E+02 | 0.559E+02 | 66. | 82. | 0. | 0.9611 | 0.9648 | 313. | 77. | 0.21 |
| E | 3.0 | 0.347E+02 | 0.588E+02 | 75. | 78. | 0. | 0.9299 | 0.9517 | .013 | .038 | 0.10 |
| H | HZ | 0.306E+02 | 0.635E+02 | 76. | 78. | 0. | 0.8575 | 0.9766 | 326. | 148. | 0.10 |
| E | 3.6 | 0.403E+02 | 0.640E+02 | 78. | 79. | 0. | 0.9294 | 0.9622 | .040 | .030 | 0.06 |
| H | HZ | 0.288E+02 | 0.714E+02 | 82. | 74. | 0. | 0.9245 | 0.9767 | 282. | 28. | 0.39 |
| E | 4.8 | 0.449E+02 | 0.858E+02 | 79. | 78. | 0. | 0.9634 | 0.9813 | .004 | .025 | 0.05 |
| H | HZ | 0.381E+02 | 0.783E+02 | 78. | 78. | 0. | 0.9636 | 0.9810 | 24. | 127. | 0.15 |
| E | 8.3 | 0.678E+02 | 0.123E+03 | 81. | 79. | 0. | 0.9849 | 0.9791 | .010 | .022 | 0.02 |
| H | HZ | 0.673E+02 | 0.112E+03 | 81. | 78. | 0. | 0.9855 | 0.9792 | 54. | 170. | 0.23 |
| E | 14.1 | 0.121E+03 | 0.194E+03 | 81. | 79. | 0. | 0.9851 | 0.9968 | .048 | .013 | 0.03 |
| H | HZ | 0.108E+03 | 0.188E+03 | 81. | 79. | 0. | 0.9853 | 0.9978 | 108. | 188. | 0.21 |
| E | 23.8 | 0.179E+03 | 0.297E+03 | 76. | 76. | 0. | 0.9460 | 0.9862 | .019 | .033 | 0.06 |
| H | HZ | 0.137E+03 | 0.286E+03 | 73. | 76. | 0. | 0.9464 | 0.9895 | 110. | 144. | 0.31 |
| E | 40.0 | 0.209E+03 | 0.355E+03 | 65. | 69. | 0. | 0.9583 | 0.9563 | .066 | .265 | 0.09 |
| H | HZ | 0.236E+03 | 0.369E+03 | 58. | 71. | 0. | 0.9753 | 0.9386 | 192. | 279. | 0.39 |

site title: SHAS54 200 HZ 9-SEP-85 T41S R4W S22 SW

| # | Frequency | Mean of RHOberd | RHOdet | PHIberd | PHIdet | real mag/dir | imaginary mag/dir |
|---|---|---|---|---|---|---|---|
| 1 | 0.0017 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 2 | 0.0027 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 3 | 0.0061 : | 2.03 | 2.36 | 61. | 128. | 0.092/229 | 0.065/292 |
| 4 | 0.0100 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 5 | 0.0167 : | 3.89 | 3.86 | 65. | 131. | 0.180/247 | 0.115/267 |
| 6 | 0.0250 : | 5.36 | 5.31 | 63. | 126. | 0.249/249 | 0.072/241 |
| 7 | 0.0400 : | 5.56 | 5.56 | 58. | 117. | 0.305/244 | 0.027/249 |
| 8 | 0.0556 : | 7.03 | 6.83 | 56. | 112. | 0.318/247 | 0.044/ 68 |
| 9 | 0.1000 : | 8.44 | 7.79 | 53. | 104. | 0.277/237 | 0.076/108 |
| 10 | 0.1639 : | 5.83 | 5.69 | 68. | 138. | 0.047/214 | 0.103/ 34 |
| 11 | 0.3125 : | 18.03 | 16.19 | 62. | 128. | 0.161/276 | 0.108/ 78 |
| 12 | 0.5556 : | 19.63 | 19.34 | 68. | 137. | 0.026/234 | 0.042/ 78 |
| 13 | 0.7143 : | 18.59 | 19.29 | 79. | 159. | 0.110/268 | 0.069/ 76 |
| 14 | 1.0000 : | 22.34 | 22.45 | 76. | 152. | 0.012/312 | 0.042/ 63 |
| 15 | 1.0000 : | 13.29 | 10.29 | 68. | 135. | 0.055/242 | 0.115/332 |
| 16 | 1.1111 : | 1.09 | 8.10 | 77. | 153. | 0.157/241 | 0.176/ 85 |
| 17 | 1.5385 : | 21.34 | 22.56 | 80. | 163. | 0.041/238 | 0.041/ 93 |
| 18 | 1.6949 : | 31.89 | 33.90 | 82. | 164. | 0.015/304 | 0.032/102 |
| 19 | 1.6949 : | 17.81 | 18.73 | 72. | 143. | 0.070/156 | 0.041/ 65 |
| 20 | 2.0000 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 21 | 2.8571 : | 40.19 | 36.32 | 78. | 150. | 0.010/225 | 0.045/342 |
| 22 | 3.0303 : | 47.26 | 46.17 | 75. | 148. | 0.013/313 | 0.031/ 77 |
| 23 | 3.0303 : | 45.75 | 44.05 | 77. | 153. | 0.013/326 | 0.038/148 |
| 24 | 3.5714 : | 49.48 | 47.99 | 78. | 157. | 0.040/282 | 0.030/ 28 |
| 25 | 4.7619 : | 60.05 | 58.20 | 78. | 156. | 0.004/ 24 | 0.025/127 |
| 26 | 8.3333 : | 90.90 | 89.20 | 80. | 159. | 0.010/ 54 | 0.022/170 |
| 27 | 14.0845 : | 150.43 | 147.74 | 80. | 160. | 0.048/108 | 0.013/188 |
| 28 | 23.8095 : | 219.33 | 214.69 | 75. | 150. | 0.019/110 | 0.033/144 |
| 29 | 40.0000 : | 285.78 | 281.61 | 66. | 131. | 0.066/192 | 0.265/279 |


SHAS54 9-SEP-85 T41S R4W S22 SW
apparent resistivity (ohm meters)
o ->berd
x -> det
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS54 9-SEP-85 T41S R4W S22 SW
o ->berd
x -> det
phase (degrees)
180
90
0
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS54
200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
berd inv
rho wgt 0.50
ph. wgt 0.90
epth
ters)
2000
1000
Resistivity 417.81 2.61 12.94 0.79
Thickness 1111.51 1140.17 2191.80
Depth 0.00 1111.51 2251.68 4443.49

SHAS54 200 HZ 9-SEP-85 T41S R4W S22 SW

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 17
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 1

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 300.0000 | | 0.0000 |
| | | 1000.0000 | |
| 2 | 2.0000 | | 1000.0000 |
| | | 1500.0000 | |
| 3 | 10.0000 | | 2500.0000 |
| | | 3500.0000 | |
| 4 | 1.0000 | | 6000.0000 |

FREQUENCY RANGE ( 0.0061 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 417.8152 | | 0.0000 |
| | | 1111.5160 | |
| 2 | 2.6177 | | 1111.5160 |
| | | 1140.1744 | |
| 3 | 12.9415 | | 2251.6904 |
| | | 2191.8013 | |
| 4 | 0.7907 | | 4443.4917 |

MEAN PERCENT VARIATION IS 16.2272

SHAS54 200 HZ 9-SEP-85 T41S R4W S22 SW

ERROR STRUCTURE OF FITTED MODEL

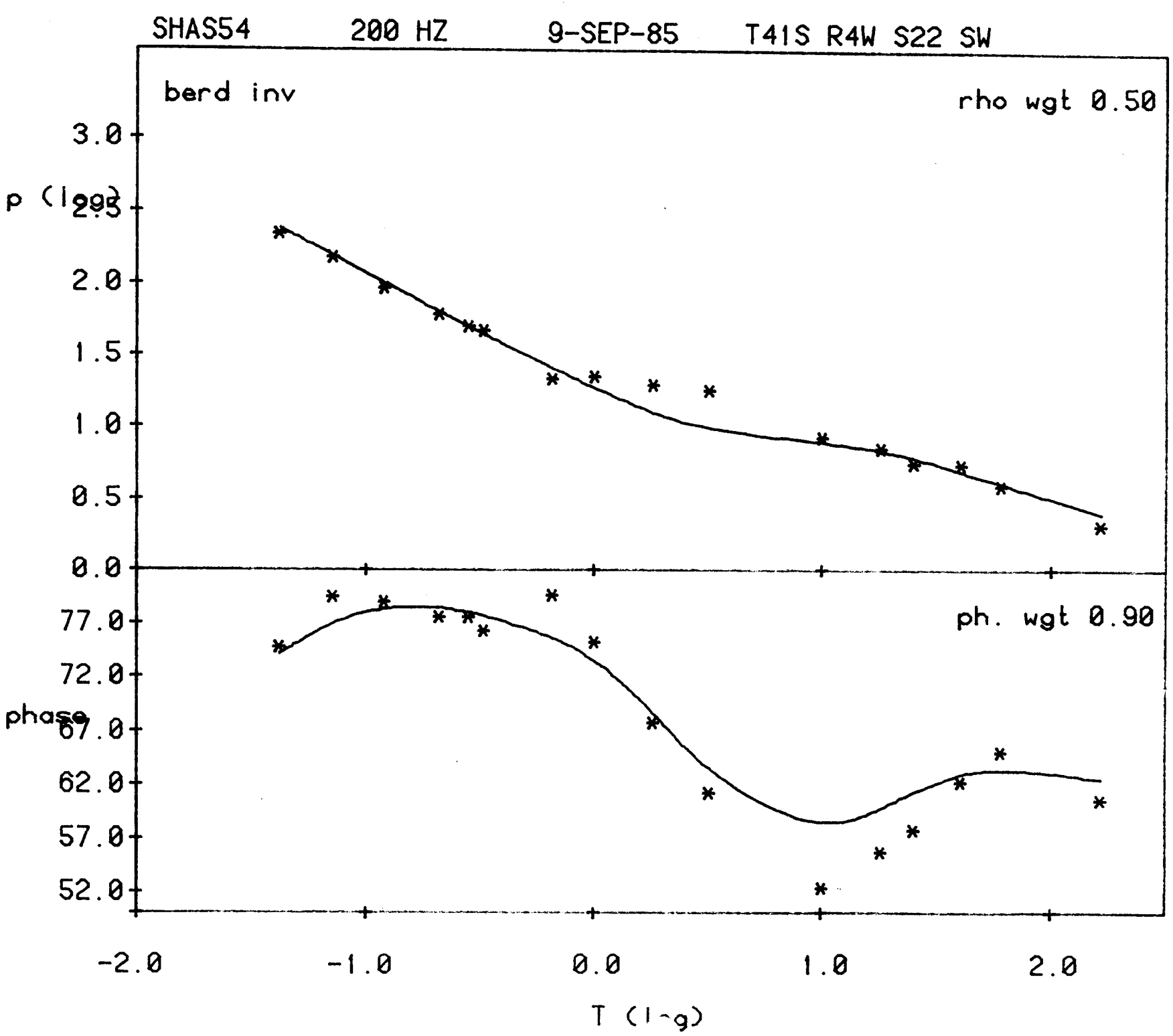
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 165.000 | 2.034 | 2.517 | -0.483 | -21.224 |
| 2 | 60.000 | 3.889 | 4.082 | -0.193 | -4.847 |
| 3 | 40.000 | 5.365 | 4.973 | 0.392 | 7.581 |
| 4 | 25.000 | 5.557 | 6.117 | -0.561 | -9.606 |
| 5 | 18.000 | 7.030 | 6.880 | 0.150 | 2.161 |
| 6 | 10.000 | 8.442 | 7.858 | 0.584 | 7.164 |
| 7 | 3.200 | 18.029 | 9.430 | 8.599 | 62.628 |
| 8 | 1.800 | 19.626 | 12.371 | 7.255 | 45.348 |
| 9 | 1.000 | 22.337 | 18.564 | 3.773 | 18.447 |
| 10 | 0.650 | 21.343 | 25.784 | -4.441 | -18.849 |
| 11 | 0.330 | 45.750 | 43.626 | 2.123 | 4.751 |
| 12 | 0.200 | 49.477 | 49.695 | -0.218 | -0.440 |

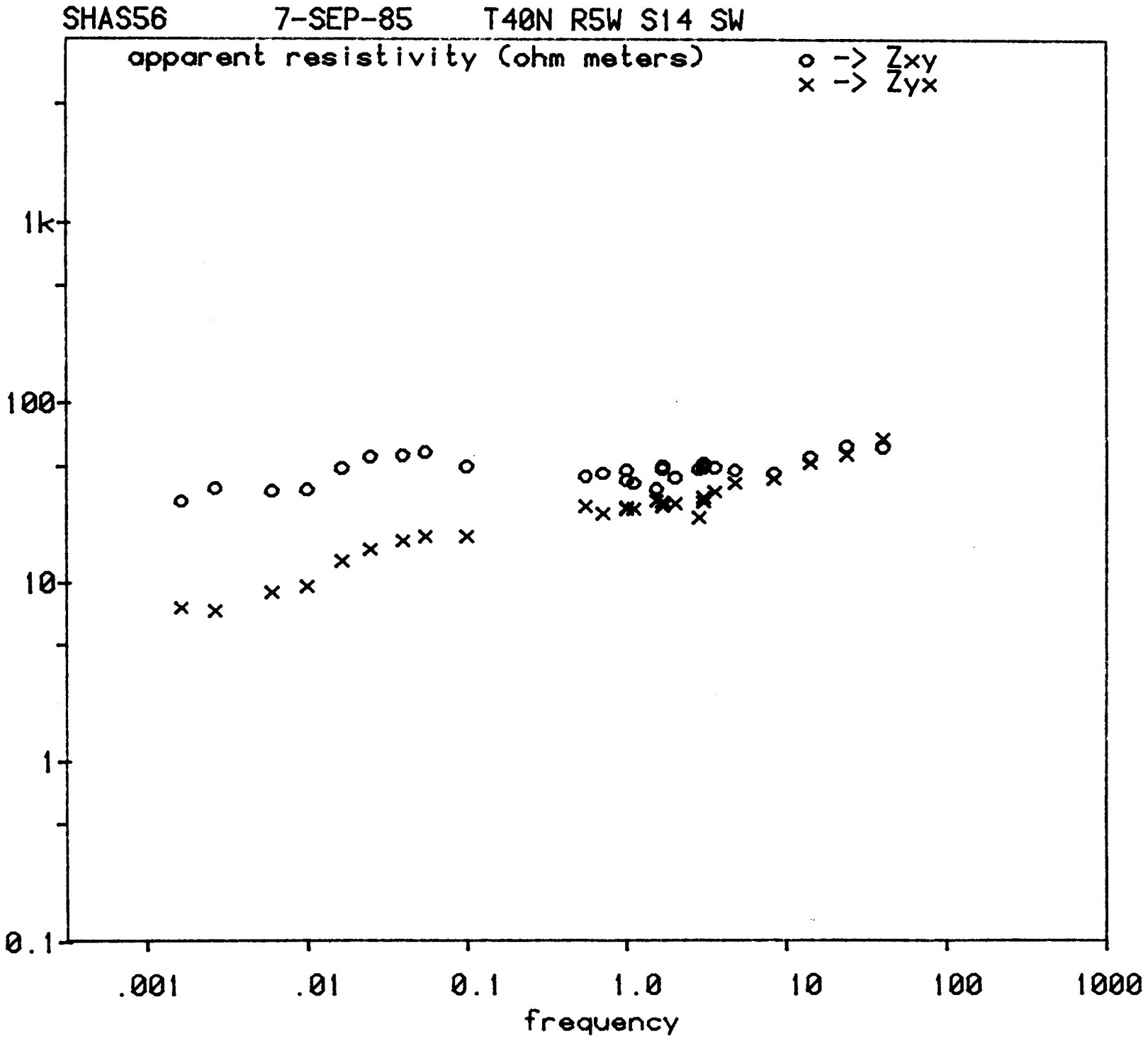
| | | | | | |
|---|---|---|---|---|---|
| 14 | 0.120 | 90.904 | 99.933 | -9.030 | -9.463 |
| 15 | 0.071 | 150.430 | 155.815 | -5.386 | -3.517 |
| 16 | 0.042 | 219.333 | 240.301 | -20.968 | -9.124 |
| 17 | 0.025 | 285.781 | 352.908 | -67.127 | -21.020 |

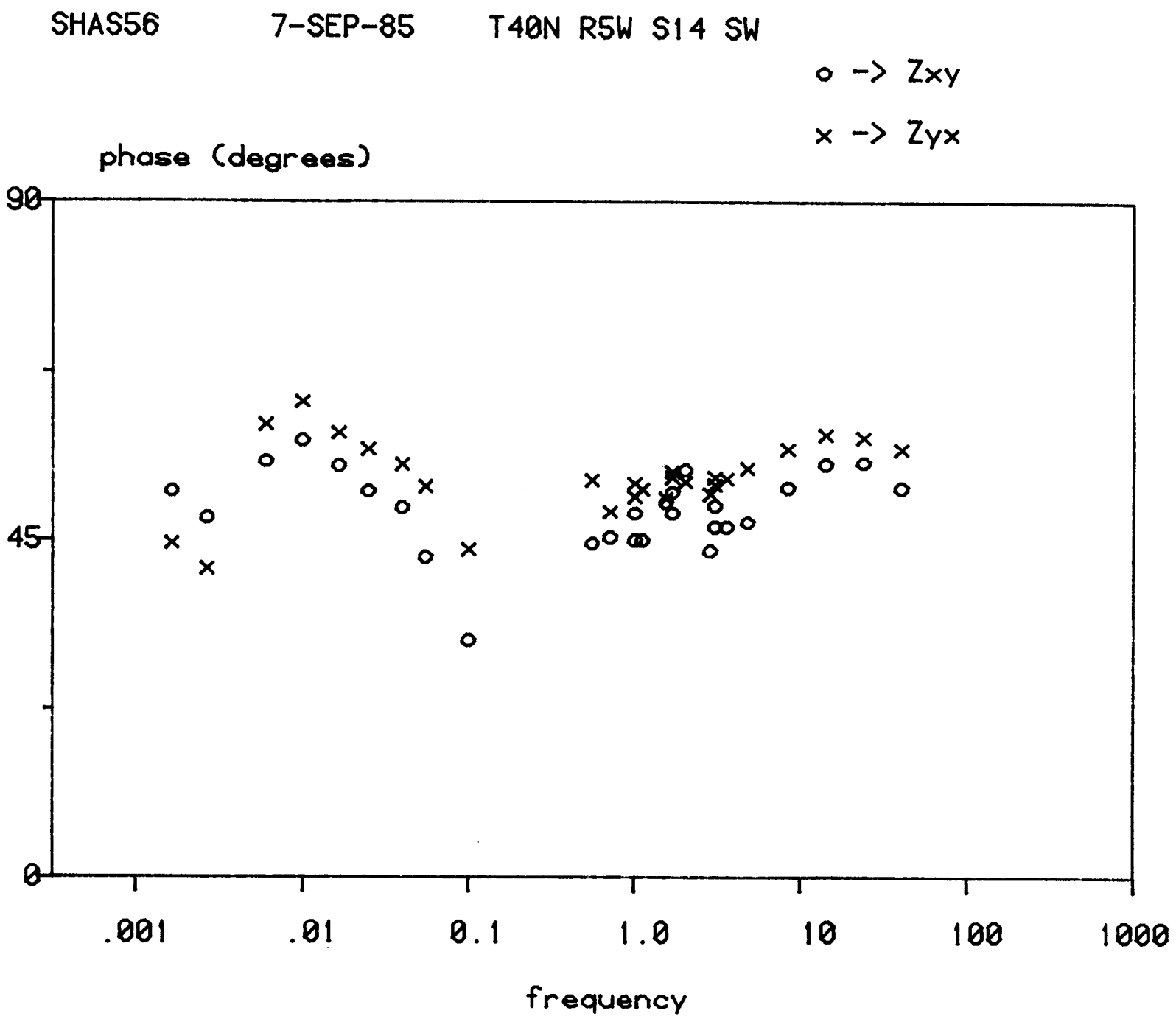
MEAN PERCENT ERROR = 21.7527
MAXIMUM PERCENT ERROR = 62.6279
MAX. ERROR OCCURED AT OBSERVATION 7

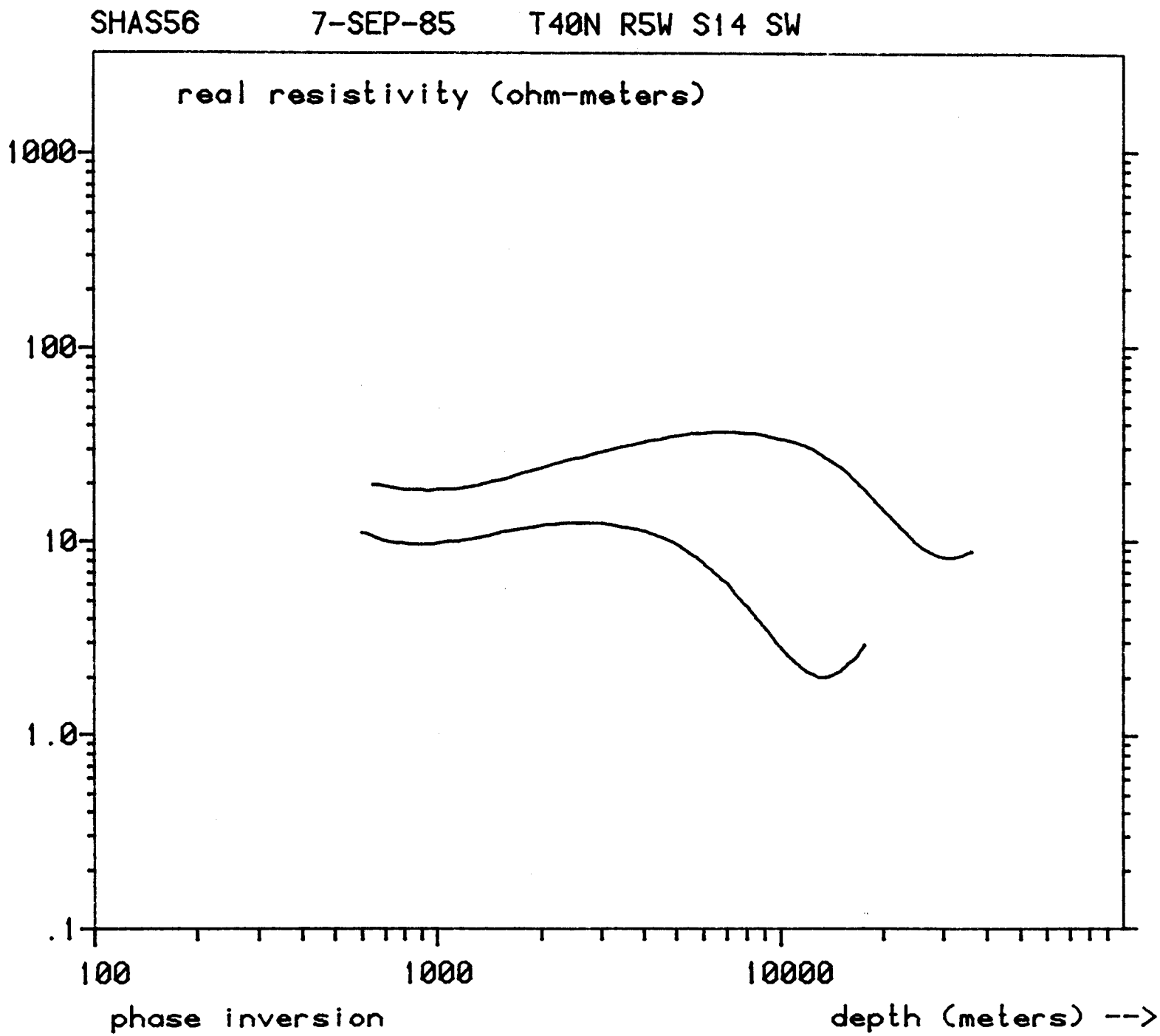
| I | T(I) | P(I) | PAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 165.000 | -61.020 | -63.078 | 2.058 | -8.673 |
| 2 | 60.000 | -65.480 | -64.204 | -1.276 | 5.786 |
| 3 | 40.000 | -62.665 | -63.496 | 0.831 | -3.593 |
| 4 | 25.000 | -58.185 | -61.769 | 3.584 | -14.429 |
| 5 | 18.000 | -56.170 | -60.180 | 4.010 | -15.607 |
| 6 | 10.000 | -52.870 | -57.822 | 4.952 | -18.455 |
| 7 | 3.200 | -61.710 | -63.201 | 1.491 | -6.344 |
| 8 | 1.800 | -68.185 | -69.529 | 1.344 | -6.974 |
| 9 | 1.000 | -75.745 | -74.358 | -1.387 | 9.710 |
| 10 | 0.650 | -80.065 | -76.411 | -3.654 | 31.937 |
| 11 | 0.330 | -76.780 | -78.286 | 1.506 | -12.465 |
| 12 | 0.280 | -78.050 | -78.605 | 0.555 | -4.893 |
| 13 | 0.210 | -78.025 | -79.019 | 0.994 | -8.896 |
| 14 | 0.120 | -79.505 | -79.037 | -0.468 | 4.464 |
| 15 | 0.071 | -80.025 | -77.709 | -2.316 | 21.328 |
| 16 | 0.042 | -75.310 | -74.561 | -0.749 | 5.208 |
| 17 | 0.025 | -66.235 | -69.096 | 2.861 | -14.201 |

MEAN PERCENT ERROR = 13.4878
MAXIMUM PERCENT ERROR = 31.9366
MAX. ERROR OCCURED AT OBSERVATION 10


SHAS54 200 HZ 9-SEP-85 T41S R4W S22 SW
berd inv
rho wgt 0.50
ph. wgt 0.90
p (log)
phase
3.0
2.5
2.0
1.5
1.0
0.5
0.0
77.0
72.0
67.0
62.0
57.0
52.0
-2.0
-1.0
0.0
1.0
2.0
T (log)


SHAS56 7-SEP-85 T40N R5W S14 SW
apparent resistivity (ohm meters)
o -> Zxy
x -> Zyx
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS56 7-SEP-85 T40N R5W S14 SW
o -> Zxy
x -> Zyx
phase (degrees)
90
45
0
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS56 7-SEP-85 T40N R5W S14 SW
real resistivity (ohm-meters)
1000
100
10
1.0
.1
100
1000
10000
phase inversion
depth (meters) -->

site title: SHAS56 200 HZ 7-SEP-85 T40N R5W S14 SW

| # | Frequency | Mean of RHOZxy | RHOZyx | PHIZxy | PHIZyx | real mag/dir | imaginary mag/dir |
|---|---|---|---|---|---|---|---|
| 1 | 0.0017 : | 27.75 | 7.02 | 51. | 45. | 0.097/191 | 0.090/258 |
| 2 | 0.0027 : | 32.99 | 6.74 | 48. | 41. | 0.092/195 | 0.067/269 |
| 3 | 0.0061 : | 31.61 | 8.64 | 56. | 60. | 0.066/195 | 0.066/274 |
| 4 | 0.0100 : | 32.32 | 9.25 | 58. | 63. | 0.069/221 | 0.108/258 |
| 5 | 0.0167 : | 42.22 | 12.81 | 55. | 59. | 0.112/236 | 0.136/248 |
| 6 | 0.0250 : | 48.77 | 15.03 | 51. | 57. | 0.187/239 | 0.150/235 |
| 7 | 0.0400 : | 49.77 | 16.54 | 49. | 55. | 0.269/233 | 0.143/225 |
| 8 | 0.0556 : | 51.33 | 17.66 | 43. | 52. | 0.317/231 | 0.117/216 |
| 9 | 0.1000 : | 42.77 | 17.62 | 32. | 44. | 0.296/224 | 0.050/190 |
| 10 | 0.1639 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 11 | 0.3125 : | 63.12 | 31.03 | 44. | 41. | 0.199/225 | 0.079/ 64 |
| 12 | 0.5556 : | 38.14 | 25.98 | 45. | 53. | 0.165/221 | 0.063/ 50 |
| 13 | 0.7143 : | 39.31 | 23.69 | 45. | 49. | 0.162/224 | 0.071/ 56 |
| 14 | 1.0000 : | 40.96 | 25.08 | 45. | 52. | 0.112/201 | 0.049/ 33 |
| 15 | 1.0000 : | 35.86 | 25.26 | 49. | 51. | 0.190/237 | 0.043/ 60 |
| 16 | 1.1111 : | 34.61 | 25.09 | 45. | 52. | 0.065/214 | 0.017/220 |
| 17 | 1.5385 : | 32.35 | 27.69 | 50. | 51. | 0.137/220 | 0.035/ 10 |
| 18 | 1.6949 : | 41.88 | 27.36 | 49. | 54. | 0.089/190 | 0.023/350 |
| 19 | 1.6949 : | 43.44 | 25.96 | 51. | 53. | 0.160/230 | 0.091/ 69 |
| 20 | 2.0000 : | 37.20 | 26.66 | 54. | 53. | 0.094/184 | 0.041/ 0 |
| 21 | 2.8571 : | 41.42 | 22.23 | 44. | 51. | 0.088/174 | 0.142/348 |
| 22 | 3.0303 : | 42.62 | 27.34 | 47. | 53. | 0.113/207 | 0.068/ 57 |
| 23 | 3.0303 : | 44.67 | 29.04 | 50. | 52. | 0.115/213 | 0.056/ 54 |
| 24 | 3.5714 : | 42.64 | 30.77 | 47. | 53. | 0.082/212 | 0.038/ 30 |
| 25 | 4.7619 : | 40.72 | 34.58 | 47. | 55. | 0.083/189 | 0.043/ 47 |
| 26 | 8.3333 : | 39.59 | 36.69 | 52. | 57. | 0.075/205 | 0.069/ 55 |
| 27 | 14.0845 : | 48.17 | 44.85 | 55. | 59. | 0.051/194 | 0.070/ 60 |
| 28 | 23.8095 : | 55.54 | 49.48 | 55. | 59. | 0.043/136 | 0.053/ 51 |
| 29 | 40.0000 : | 54.52 | 60.72 | 52. | 57. | 0.091/241 | 0.072/ 25 |

SHAS56 200 HZ 7-SEP-85 T40N R5W S14 SW

STANDARD DEVIATIONS for MERGED AVERAGE, MT DATA

| frequency | RHOZxy | RHOZyx | PHIZxy | PHIZyx | theta | induction arrow real: MAG | DIR | imag: MAG |
|---|---|---|---|---|---|---|---|---|
| 0.0017 | 7.37 | 0.54 | 1.82 | 0.09 | 0.00 | 0.003 | 2.5 | 0.000 |
| 0.0027 | 2.28 | 0.62 | 4.40 | 2.02 | 2.58 | 0.003 | 0.6 | 0.000 |
| 0.0061 | 1.41 | 1.39 | 0.41 | 4.57 | 1.33 | 0.001 | 1.7 | 0.000 |
| 0.0100 | 0.89 | 0.73 | 0.98 | 0.97 | 0.57 | 0.002 | 2.2 | 0.000 |
| 0.0167 | 0.92 | 1.14 | 0.96 | 2.09 | 0.65 | 0.003 | 1.0 | 0.000 |
| 0.0250 | 0.21 | 0.98 | 0.42 | 1.21 | 0.43 | 0.001 | 0.2 | 0.000 |
| 0.0400 | 0.50 | 0.16 | 0.16 | 2.20 | 0.21 | 0.000 | 0.9 | 0.000 |
| 0.0556 | 0.79 | 0.03 | 0.92 | 1.83 | 0.17 | 0.006 | 1.0 | 0.000 |
| 0.1000 | 1.68 | 2.62 | 1.44 | 4.34 | 2.63 | 0.009 | 80.6 | 0.018 |
| 0.1639 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.3125 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.0 | 0.000 |
| 0.5556 | 2.19 | 1.57 | 1.56 | 2.31 | 2.13 | 0.008 | 4.3 | 0.000 |
| 0.7143 | 2.55 | 1.85 | 1.93 | 2.80 | 3.53 | 0.017 | 7.7 | 0.000 |
| 1.0000 | 3.05 | 0.78 | 0.97 | 1.27 | 2.94 | 0.007 | 4.4 | 0.000 |
| 1.0000 | 4.27 | 4.48 | 3.78 | 2.51 | 11.49 | 0.019 | 20.6 | 0.000 |
| 1.1111 | 2.16 | 1.65 | 2.38 | 3.10 | 5.88 | 0.035 | 15.6 | 0.000 |
| 1.5385 | 3.29 | 2.25 | 2.03 | 2.75 | 16.89 | 0.010 | 7.9 | 0.000 |
| 1.6949 | 1.31 | 0.82 | 1.22 | 1.29 | 2.70 | 0.008 | 5.5 | 0.000 |
| 1.6949 | 10.35 | 3.08 | 1.69 | 2.81 | 7.07 | 0.023 | 18.9 | 0.000 |
| 2.0000 | 2.32 | 1.61 | 1.38 | 2.08 | 2.76 | 0.015 | 15.5 | 0.000 |
| 2.8571 | 54.25 | 26.58 | 39.50 | 70.15 | 137.09 | 0.155 | 187.7 | 0.027 |
| 3.0303 | 2.43 | 0.67 | 0.94 | 0.90 | 2.75 | 0.005 | 3.3 | 0.000 |
| 3.0303 | 2.37 | 1.03 | 1.45 | 1.65 | 2.99 | 0.010 | 8.1 | 0.000 |
| 3.5714 | 3.18 | 1.09 | 0.91 | 1.01 | 2.74 | 0.010 | 12.1 | 0.000 |
| 4.7619 | 1.97 | 0.90 | 0.89 | 0.85 | 2.61 | 0.006 | 6.5 | 0.000 |
| 8.3333 | 0.96 | 0.56 | 0.50 | 0.52 | 1.27 | 0.005 | 3.2 | 0.000 |
| 14.0845 | 0.88 | 0.53 | 0.52 | 0.35 | 0.69 | 0.009 | 5.8 | 0.000 |
| 23.8095 | 1.10 | 1.20 | 0.59 | 0.64 | 3.03 | 0.007 | 9.1 | 0.000 |
| 40.0000 | 60.21 | 35.96 | 45.10 | 53.27 | 114.96 | 0.260 | 214.2 | 0.000 |

AVERAGE # 8
SHAS56 200 HZ 7-SEP-85 T40N R5W S14 SW
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO ZXY VALUE ( | RHO ZYX OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ | IMAG | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 600.0 | 0.293E+02 | 0.783E+01 | 51. | 46. | 0. | 0.9793 | 0.9726 | .097 | .090 | 0.11 |
| H | SEC | 0.262E+02 | 0.622E+01 | 52. | 43. | 0. | 0.9796 | 0.9739 | 191. | 258. | 0.97 |
| E | 375.0 | 0.384E+02 | 0.704E+01 | 48. | 41. | 0. | 0.9496 | 0.9808 | .092 | .067 | 0.13 |
| H | SEC | 0.275E+02 | 0.644E+01 | 48. | 42. | 0. | 0.9564 | 0.9809 | 195. | 269. | 1.00 |
| E | 165.0 | 0.352E+02 | 0.998E+01 | 57. | 60. | 0. | 0.9845 | 0.9844 | .066 | .066 | 0.07 |
| H | SEC | 0.280E+02 | 0.730E+01 | 55. | 60. | 0. | 0.9888 | 0.9888 | 195. | 274. | 0.99 |
| E | 100.0 | 0.326E+02 | 0.937E+01 | 58. | 63. | 0. | 0.9986 | 0.9984 | .069 | .108 | 0.03 |
| H | SEC | 0.320E+02 | 0.913E+01 | 58. | 63. | 0. | 0.9986 | 0.9985 | 221. | 258. | 0.99 |
| E | 60.0 | 0.429E+02 | 0.129E+02 | 55. | 59. | 0. | 0.9984 | 0.9989 | .112 | .136 | 0.01 |
| H | SEC | 0.416E+02 | 0.127E+02 | 55. | 59. | 0. | 0.9985 | 0.9989 | 236. | 248. | 0.99 |
| E | 40.0 | 0.501E+02 | 0.153E+02 | 52. | 57. | 0. | 0.9976 | 0.9977 | .187 | .150 | 0.02 |
| H | SEC | 0.475E+02 | 0.147E+02 | 51. | 57. | 0. | 0.9977 | 0.9978 | 239. | 235. | 0.99 |
| E | 25.0 | 0.524E+02 | 0.170E+02 | 50. | 55. | 0. | 0.9919 | 0.9950 | .269 | .143 | 0.02 |
| H | SEC | 0.471E+02 | 0.161E+02 | 49. | 55. | 0. | 0.9926 | 0.9953 | 233. | 225. | 1.00 |
| E | 18.0 | 0.550E+02 | 0.192E+02 | 43. | 53. | 0. | 0.9919 | 0.9890 | .317 | .117 | 0.03 |
| H | SEC | 0.477E+02 | 0.161E+02 | 43. | 51. | 0. | 0.9929 | 0.9906 | 231. | 216. | 0.99 |

AVERAGE # 8
SHAS56 200 HZ 7-SEP-85 T40N R5W S14 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO ZXY VALUE | RHO ZYX ( OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ IMAG | | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.460E+02 | 0.196E+02 | 30. | 46. | 0. | 0.9342 | 0.9619 | .296 | .050 | 0.03 |
| H | SEC | 0.395E+02 | 0.156E+02 | 33. | 42. | 0. | 0.9391 | 0.9642 | 224. | 190. | 0.97 |
| E | 6.1 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | .000 | .000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0. | 0. | 0.00 |
| E | 3.2 | 0.769E+02 | 0.356E+02 | 45. | 40. | 0. | 0.8086 | 0.9078 | .199 | .079 | 0.10 |
| H | SEC | 0.494E+02 | 0.265E+02 | 43. | 42. | 0. | 0.8488 | 0.9140 | 225. | 64. | 0.94 |
| E | 1.8 | 0.460E+02 | 0.274E+02 | 44. | 54. | 0. | 0.9037 | 0.9773 | .165 | .063 | 0.01 |
| H | SEC | 0.303E+02 | 0.245E+02 | 45. | 52. | 0. | 0.9111 | 0.9799 | 221. | 50. | 0.90 |
| E | 1.4 | 0.376E+02 | 0.232E+02 | 46. | 50. | 0. | 0.9931 | 0.9855 | .162 | .071 | 0.02 |
| H | SEC | 0.410E+02 | 0.242E+02 | 44. | 47. | 0. | 0.9923 | 0.9824 | 224. | 56. | 0.91 |
| E | 1.0 | 0.433E+02 | 0.262E+02 | 45. | 53. | 0. | 0.9770 | 0.9811 | .112 | .049 | 0.05 |
| H | HZ | 0.386E+02 | 0.239E+02 | 45. | 52. | 0. | 0.9789 | 0.9836 | 201. | 33. | 0.82 |
| E | 1.0 | 0.347E+02 | 0.258E+02 | 48. | 51. | 0. | 0.8924 | 0.9647 | .190 | .043 | 0.04 |
| H | HZ | 0.371E+02 | 0.247E+02 | 49. | 50. | 0. | 0.9008 | 0.9383 | 237. | 60. | 1.02 |

AVERAGE # 8
SHAS56 200 HZ 7-SEP-85 T40N R5W S14 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

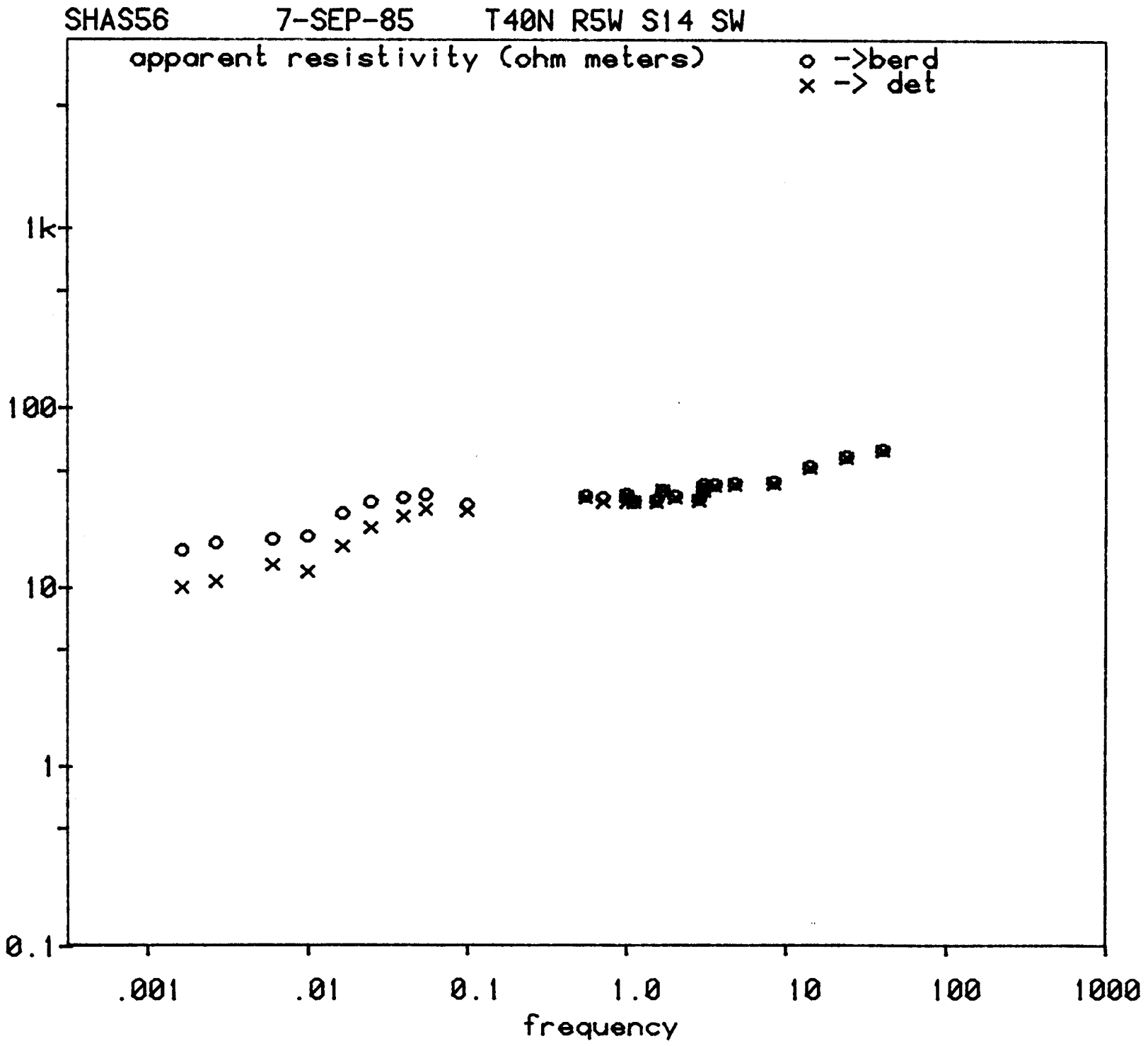
| | FREQ OR PERIOD | RHO ZXY VALUE ( | RHO ZYX OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ | IMAG | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.1 | 0.370E+02 | 0.256E+02 | 47. | 50. | 0. | 0.9838 | 0.9964 | .065 | .017 | 0.11 |
| H | HZ | 0.323E+02 | 0.246E+02 | 43. | 54. | 0. | 0.9995 | 0.9805 | 214. | 220. | 0.51 |
| E | 1.5 | 0.391E+02 | 0.277E+02 | 47. | 50. | 0. | 0.8648 | 0.9958 | .137 | .035 | 0.08 |
| H | HZ | 0.256E+02 | 0.276E+02 | 53. | 51. | 0. | 0.8833 | 0.9977 | 220. | 10. | 0.86 |
| E | 1.7 | 0.433E+02 | 0.278E+02 | 48. | 53. | 0. | 0.9630 | 0.9989 | .089 | .023 | 0.06 |
| H | HZ | 0.405E+02 | 0.270E+02 | 49. | 55. | 0. | 0.9665 | 0.9998 | 190. | 350. | 0.70 |
| E | 1.7 | 0.421E+02 | 0.265E+02 | 44. | 50. | 0. | 0.9551 | 0.9798 | .160 | .091 | 0.15 |
| H | HZ | 0.448E+02 | 0.254E+02 | 59. | 56. | 0. | 0.8834 | 0.9813 | 230. | 69. | 0.79 |
| E | 2.0 | 0.395E+02 | 0.279E+02 | 52. | 52. | 0. | 0.9929 | 0.9939 | .094 | .041 | 0.05 |
| H | HZ | 0.349E+02 | 0.254E+02 | 57. | 53. | 0. | 0.9788 | 0.9906 | 184. | 0. | 0.69 |
| E | 2.9 | 0.435E+02 | 0.313E+02 | 44. | 49. | 0. | 0.8250 | 0.9496 | .088 | .142 | 0.30 |
| H | HZ | 0.394E+02 | 0.131E+02 | 43. | 53. | 0. | 0.8230 | 0.6930 | 174. | 348. | 0.72 |

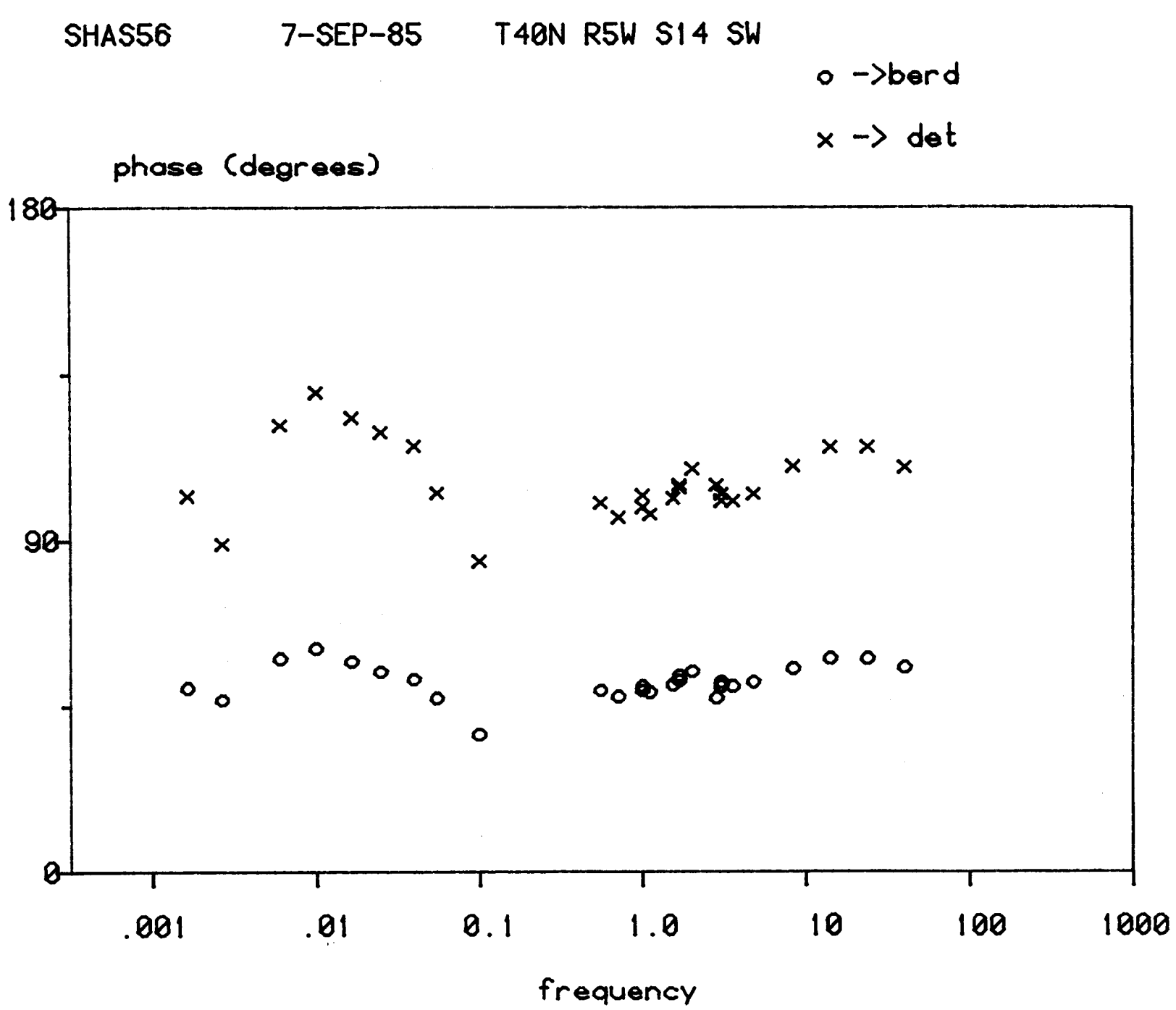
AVERAGE # 8
SHAS56 200 HZ 7-SEP-85 T40N R5W S14 SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

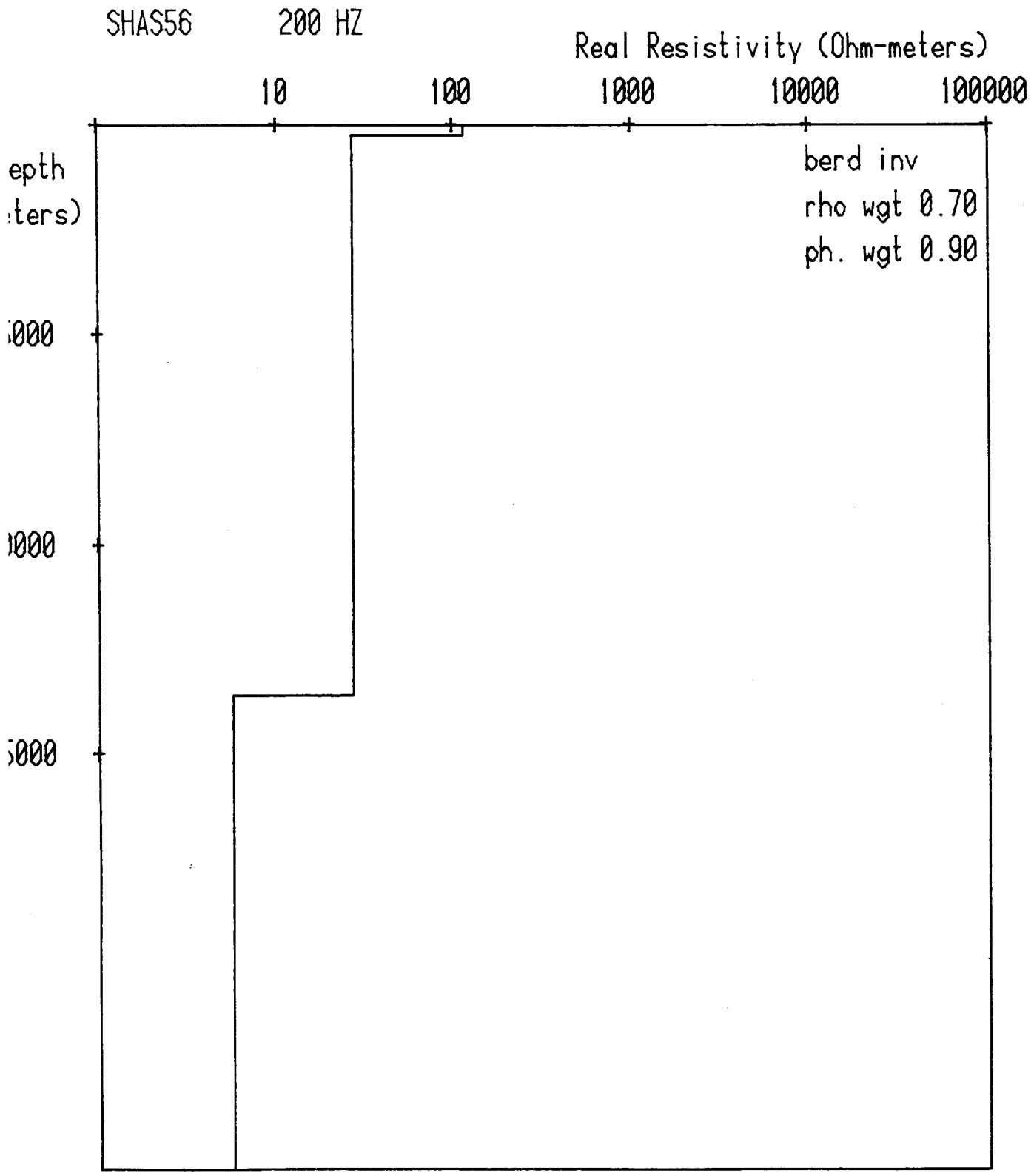
| | FREQ OR PERIOD | RHO ZXY VALUE | RHO ZYX ( OHM-M ) | PHI ZXY (DEGREES) | PHI ZYX | THETA (ZXY) (E OF N) | COHXY | COHYX | Z INFO REA/ IMAG | | SKEW IMP/ TCOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.426E+02 | 0.277E+02 | 47. | 54. | 0. | 0.9284 | 0.9968 | .113 | .068 | 0.03 |
| H | HZ | 0.427E+02 | 0.270E+02 | 46. | 53. | 0. | 0.9799 | 0.9971 | 207. | 57. | 0.78 |
| E | 3.0 | 0.444E+02 | 0.294E+02 | 49. | 53. | 0. | 0.9564 | 0.9997 | .115 | .056 | 0.04 |
| H | HZ | 0.449E+02 | 0.287E+02 | 50. | 52. | 0. | 0.9648 | 0.9995 | 213. | 54. | 0.82 |
| E | 3.6 | 0.426E+02 | 0.310E+02 | 48. | 53. | 0. | 0.9465 | 0.9995 | .082 | .038 | 0.01 |
| H | HZ | 0.427E+02 | 0.305E+02 | 46. | 53. | 0. | 0.9459 | 0.9978 | 212. | 30. | 0.68 |
| E | 4.8 | 0.424E+02 | 0.352E+02 | 50. | 55. | 0. | 0.9512 | 0.9921 | .083 | .043 | 0.02 |
| H | HZ | 0.391E+02 | 0.340E+02 | 45. | 54. | 0. | 0.9479 | 0.9903 | 189. | 47. | 0.72 |
| E | 8.3 | 0.426E+02 | 0.372E+02 | 53. | 57. | 0. | 0.9542 | 0.9991 | .075 | .069 | 0.03 |
| H | HZ | 0.365E+02 | 0.361E+02 | 51. | 57. | 0. | 0.9547 | 0.9984 | 205. | 55. | 0.82 |
| E | 14.1 | 0.501E+02 | 0.458E+02 | 54. | 59. | 0. | 0.9487 | 0.9994 | .051 | .070 | 0.03 |
| H | HZ | 0.463E+02 | 0.439E+02 | 56. | 59. | 0. | 0.9486 | 0.9999 | 194. | 60. | 0.79 |
| E | 23.8 | 0.568E+02 | 0.532E+02 | 55. | 59. | 0. | 0.9288 | 0.9661 | .043 | .053 | 0.02 |
| H | HZ | 0.542E+02 | 0.458E+02 | 56. | 58. | 0. | 0.9289 | 0.9651 | 136. | 51. | 0.62 |
| E | 40.0 | 0.529E+02 | 0.558E+02 | 51. | 55. | 0. | 0.9976 | 0.9626 | .091 | .072 | 0.07 |
| H | HZ | 0.561E+02 | 0.656E+02 | 53. | 59. | 0. | 0.9979 | 0.8522 | 241. | 25. | 0.40 |

site title: SRAS56 200 HZ 7-SEP-85 T40N R5W S14 SW

| # | Frequency | Mean of RHOberd | RHOdet | PHIberd | PHIdet | real mag/dir | imaginary mag/dir |
|---|---|---|---|---|---|---|---|
| 1 | 0.0017 : | 15.62 | 9.88 | 49. | 101. | 0.097/191 | 0.090/258 |
| 2 | 0.0027 : | 17.33 | 10.54 | 46. | 88. | 0.092/195 | 0.067/269 |
| 3 | 0.0061 : | 18.29 | 13.09 | 57. | 121. | 0.066/195 | 0.066/274 |
| 4 | 0.0100 : | 19.00 | 12.01 | 60. | 129. | 0.069/221 | 0.108/258 |
| 5 | 0.0167 : | 25.35 | 16.57 | 56. | 123. | 0.112/236 | 0.136/248 |
| 6 | 0.0250 : | 29.42 | 21.25 | 54. | 119. | 0.187/239 | 0.150/235 |
| 7 | 0.0400 : | 30.85 | 24.53 | 51. | 115. | 0.269/233 | 0.143/225 |
| 8 | 0.0556 : | 32.10 | 26.69 | 46. | 102. | 0.317/231 | 0.117/216 |
| 9 | 0.1000 : | 28.48 | 26.54 | 36. | 84. | 0.296/224 | 0.050/190 |
| 10 | 0.1639 : | 0.00 | 0.00 | 0. | 0. | 0.000/ 0 | 0.000/ 0 |
| 11 | 0.3125 : | 45.61 | 44.85 | 43. | 83. | 0.199/225 | 0.079/ 64 |
| 12 | 0.5556 : | 31.55 | 30.94 | 48. | 99. | 0.165/221 | 0.063/ 50 |
| 13 | 0.7143 : | 30.98 | 29.51 | 47. | 96. | 0.162/224 | 0.071/ 56 |
| 14 | 1.0000 : | 32.40 | 31.55 | 48. | 98. | 0.112/201 | 0.049/ 33 |
| 15 | 1.0000 : | 30.31 | 29.15 | 50. | 101. | 0.190/237 | 0.043/ 60 |
| 16 | 1.1111 : | 29.53 | 29.14 | 48. | 97. | 0.065/214 | 0.017/220 |
| 17 | 1.5385 : | 29.87 | 29.10 | 50. | 101. | 0.137/220 | 0.035/ 10 |
| 18 | 1.6949 : | 34.15 | 33.70 | 51. | 104. | 0.089/190 | 0.023/350 |
| 19 | 1.6949 : | 34.06 | 34.29 | 52. | 103. | 0.160/230 | 0.091/ 69 |
| 20 | 2.0000 : | 31.70 | 31.29 | 54. | 109. | 0.094/184 | 0.041/ 0 |
| 21 | 2.8571 : | 30.69 | 30.17 | 47. | 104. | 0.088/174 | 0.142/348 |
| 22 | 3.0303 : | 34.45 | 34.02 | 50. | 100. | 0.113/207 | 0.068/ 57 |
| 23 | 3.0303 : | 36.42 | 35.44 | 51. | 102. | 0.115/213 | 0.056/ 54 |
| 24 | 3.5714 : | 36.35 | 35.79 | 50. | 100. | 0.082/212 | 0.038/ 30 |
| 25 | 4.7619 : | 37.43 | 36.79 | 51. | 102. | 0.083/189 | 0.043/ 47 |
| 26 | 8.3333 : | 38.04 | 37.31 | 54. | 110. | 0.075/205 | 0.069/ 55 |
| 27 | 14.0845 : | 46.43 | 45.68 | 57. | 115. | 0.051/194 | 0.070/ 60 |
| 28 | 23.8095 : | 52.40 | 52.22 | 57. | 115. | 0.043/136 | 0.053/ 51 |
| 29 | 40.0000 : | 57.45 | 57.15 | 55. | 109. | 0.091/241 | 0.072/ 25 |


SHAS56 7-SEP-85 T40N R5W S14 SW
apparent resistivity (ohm meters)
o ->berd
x -> det
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
frequency


SHAS56 7-SEP-85 T40N R5W S14 SW
o ->berd
x -> det
phase (degrees)
180
90
0
.001
.01
0.1
1.0
10
100
1000
frequency




| | | | |
|---|---|---|---|
| Resistivity | 116.08 | 26.97 | 5.72 |
| Thickness | | 255.37 | 13366.90 |
| Depth | 0.00 | 255.37 | 13622.28 |

SHAS56 200 HZ 7-SEP-85 T40N R5W S14 SW

THE NUMBER OF LAYERS = 3
THE NUMBER OF FREQUENCIES TAKEN = 24
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 1

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 100.0000 | | 0.0000 |
| | | 500.0000 | |
| 2 | 30.0000 | | 500.0000 |
| | | 12000.0000 | |
| 3 | 5.0000 | | 12500.0000 |

FREQUENCY RANGE ( 0.0061 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 116.0817 | | 0.0000 |
| | | 255.3739 | |
| 2 | 26.9706 | | 255.3739 |
| | | 13366.9044 | |
| 3 | 5.7229 | | 13622.2783 |

MEAN PERCENT VARIATION IS 5.1280

SHAS56 200 HZ 7-SEP-85 T40N R5W S14 SW

ERROR STRUCTURE OF FITTED MODEL

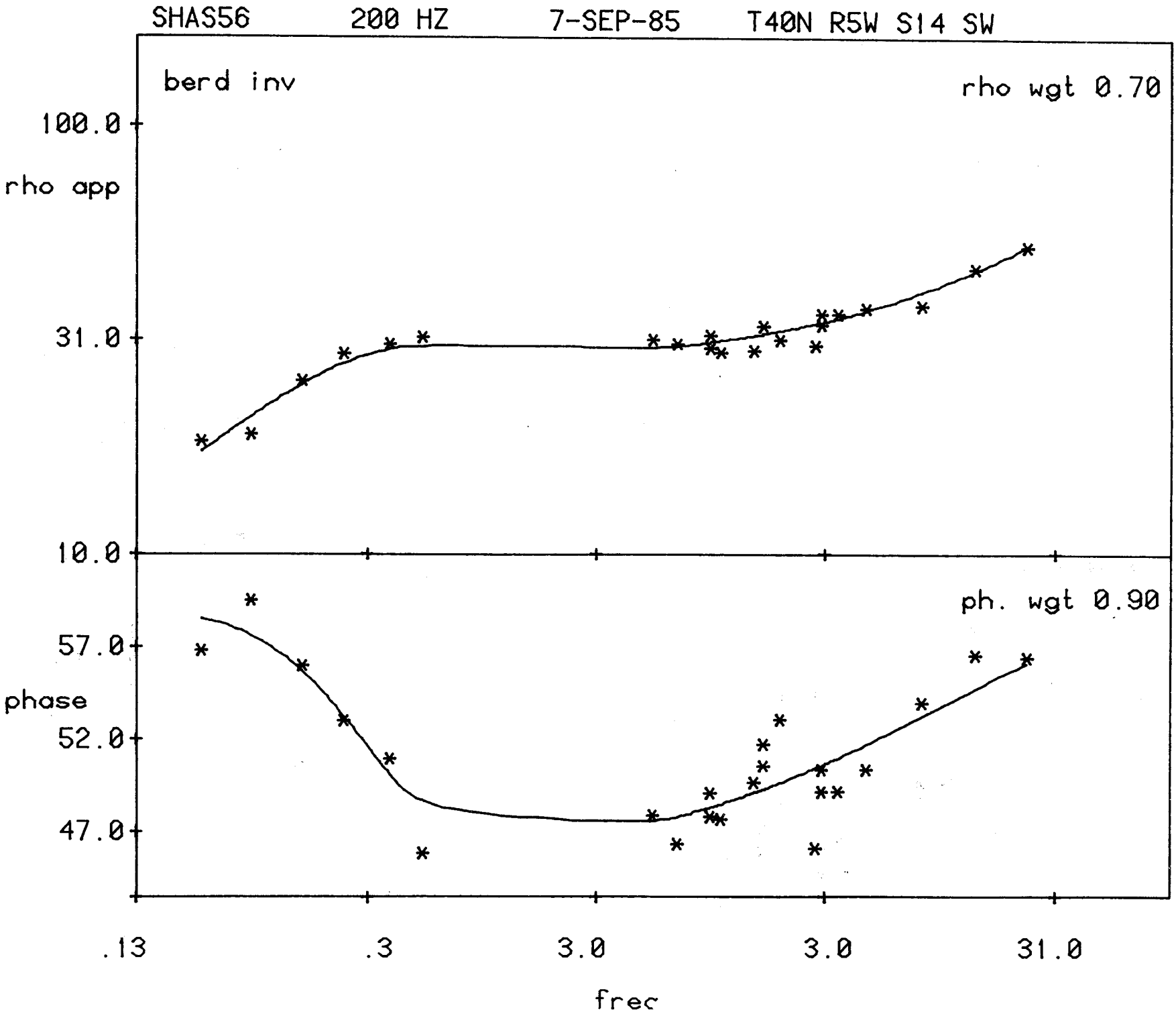
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 165.000 | 18.295 | 17.364 | 0.930 | 5.218 |
| 2 | 100.000 | 19.001 | 21.009 | -2.008 | -10.037 |
| 3 | 60.000 | 25.350 | 25.137 | 0.212 | 0.841 |
| 4 | 40.000 | 29.419 | 28.131 | 1.288 | 4.476 |
| 5 | 25.000 | 30.847 | 30.374 | 0.473 | 1.546 |
| 6 | 18.000 | 32.104 | 30.825 | 1.278 | 4.063 |
| 7 | 1.800 | 31.547 | 30.147 | 1.400 | 4.539 |
| 8 | 1.400 | 30.982 | 30.605 | 0.377 | 1.223 |
| 9 | 1.000 | 32.397 | 31.309 | 1.088 | 3.415 |
| 10 | 1.000 | 30.308 | 31.309 | -1.000 | -3.247 |
| 11 | 0.900 | 29.330 | 31.558 | -2.028 | -6.639 |
| 12 | 0.650 | 29.873 | 32.432 | -2.560 | -8.216 |
| 13 | 0.590 | 34.151 | 32.725 | 1.425 | 4.262 |
| 14 | 0.580 | 34.004 | 32.722 | 1.282 | 4.008 |
| 15 | 0.500 | 31.696 | 33.265 | -1.569 | -4.831 |
| 16 | 0.350 | 30.193 | 34.618 | 0.000 | 0.000 |

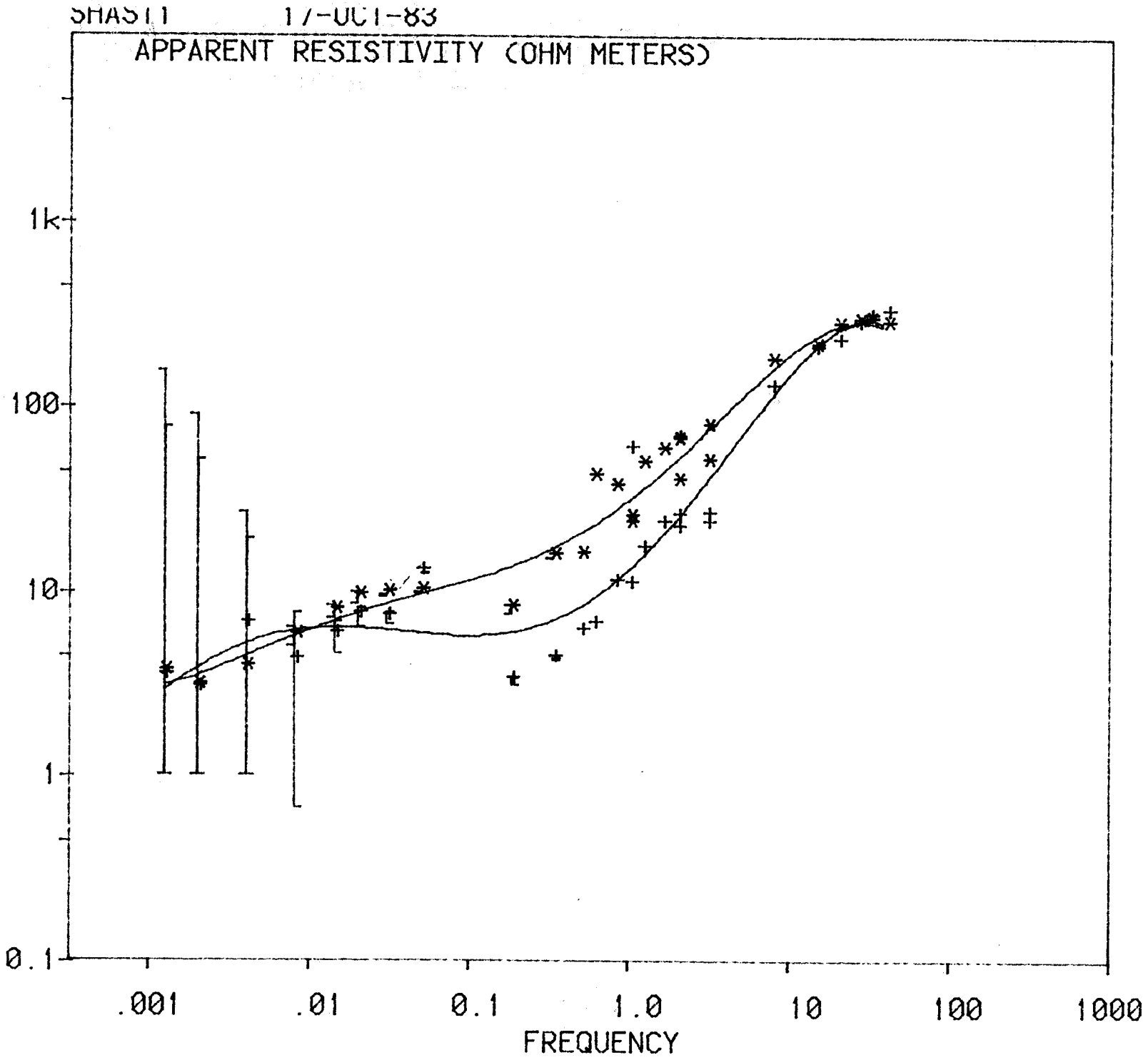
| | | | | | |
|---|---|---|---|---|---|
| 18 | 0.330 | 36.416 | 34.869 | 1.547 | 4.339 |
| 19 | 0.280 | 36.350 | 35.618 | 0.731 | 2.032 |
| 20 | 0.210 | 37.431 | 37.113 | 0.312 | 0.838 |
| 21 | 0.120 | 38.044 | 40.885 | -2.841 | -7.199 |
| 22 | 0.071 | 46.434 | 45.777 | 0.657 | 1.425 |
| 23 | 0.042 | 52.403 | 52.486 | -0.083 | -0.159 |
| 24 | 0.025 | 57.451 | 61.480 | 0.000 | 0.000 |

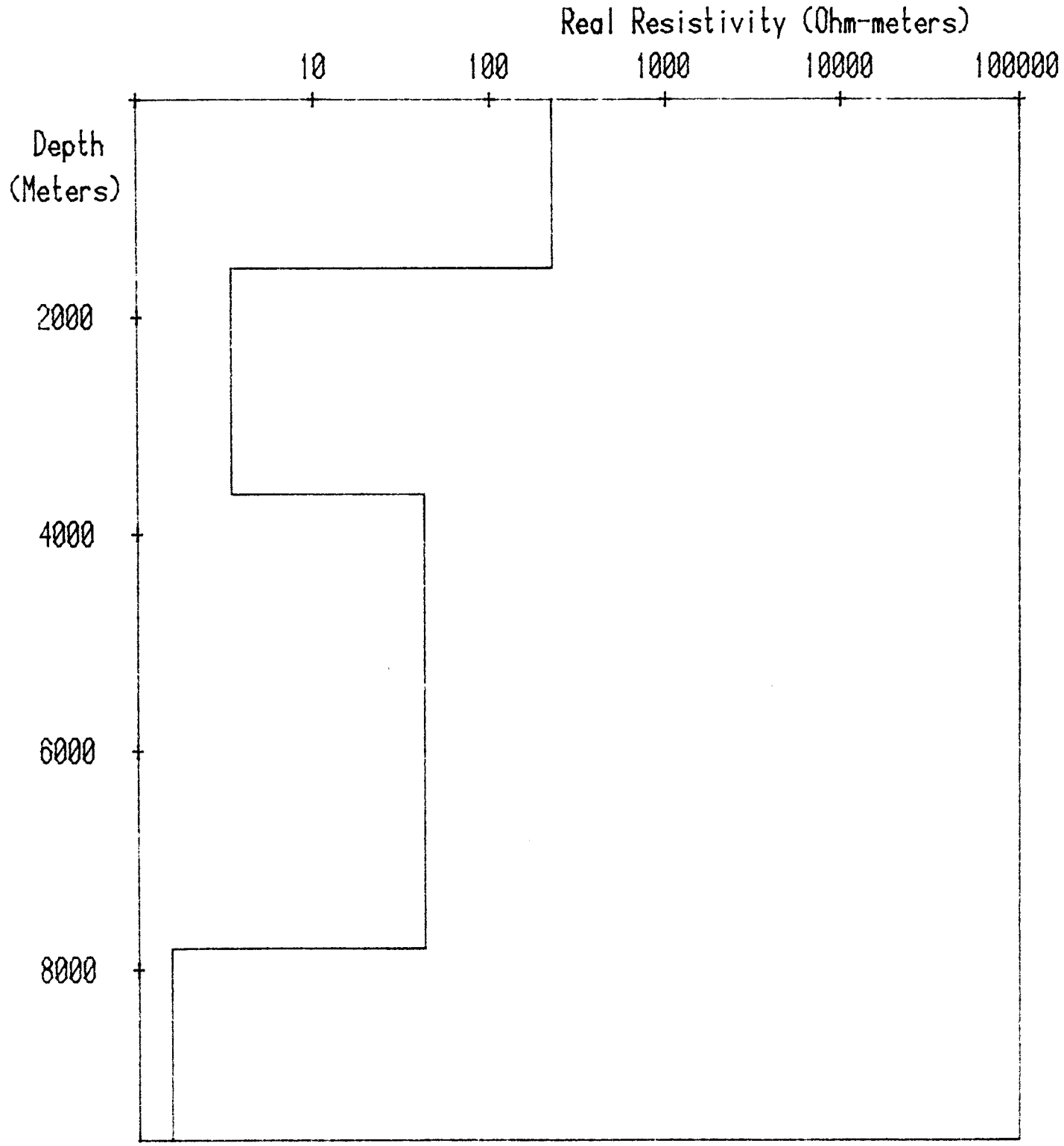
MEAN PERCENT ERROR = 4.3992
MAXIMUM PERCENT ERROR = 10.0372
MAX. ERROR OCCURED AT OBSERVATION 2

| I | T(I) | P(I) | PAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 165.000 | -57.255 | -59.060 | 1.805 | -7.027 |
| 2 | 100.000 | -60.030 | -58.332 | -1.698 | 6.734 |
| 3 | 60.000 | -56.425 | -56.325 | -0.100 | 0.380 |
| 4 | 40.000 | -53.525 | -53.868 | 0.343 | -1.255 |
| 5 | 25.000 | -51.425 | -50.530 | -0.895 | 3.192 |
| 6 | 18.000 | -46.340 | -48.374 | 2.034 | -7.122 |
| 7 | 1.800 | -48.385 | -47.946 | -0.439 | 1.541 |
| 8 | 1.400 | -46.865 | -48.284 | 1.419 | -4.972 |
| 9 | 1.000 | -48.305 | -48.807 | 0.502 | -1.767 |
| 10 | 1.000 | -49.570 | -48.807 | -0.763 | 2.690 |
| 11 | 0.900 | -48.155 | -48.988 | 0.833 | -2.929 |
| 12 | 0.650 | -50.160 | -49.589 | -0.571 | 2.024 |
| 13 | 0.590 | -51.065 | -49.781 | -1.284 | 4.565 |
| 14 | 0.590 | -52.215 | -49.781 | -2.434 | 8.685 |
| 15 | 0.500 | -53.590 | -50.123 | -3.467 | 12.450 |
| 16 | 0.350 | -46.605 | -50.922 | 4.317 | -15.185 |
| 17 | 0.330 | -49.645 | -51.062 | 1.417 | -5.032 |
| 18 | 0.330 | -50.825 | -51.062 | 0.237 | -0.844 |
| 19 | 0.280 | -49.680 | -51.463 | 1.783 | -6.343 |
| 20 | 0.210 | -50.830 | -52.204 | 1.374 | -4.922 |
| 21 | 0.120 | -54.475 | -53.752 | -0.723 | 2.656 |
| 22 | 0.071 | -57.070 | -55.250 | -1.820 | 6.868 |
| 23 | 0.042 | -56.930 | -56.632 | -0.298 | 1.134 |
| 24 | 0.025 | -54.620 | -57.654 | 3.034 | -11.438 |

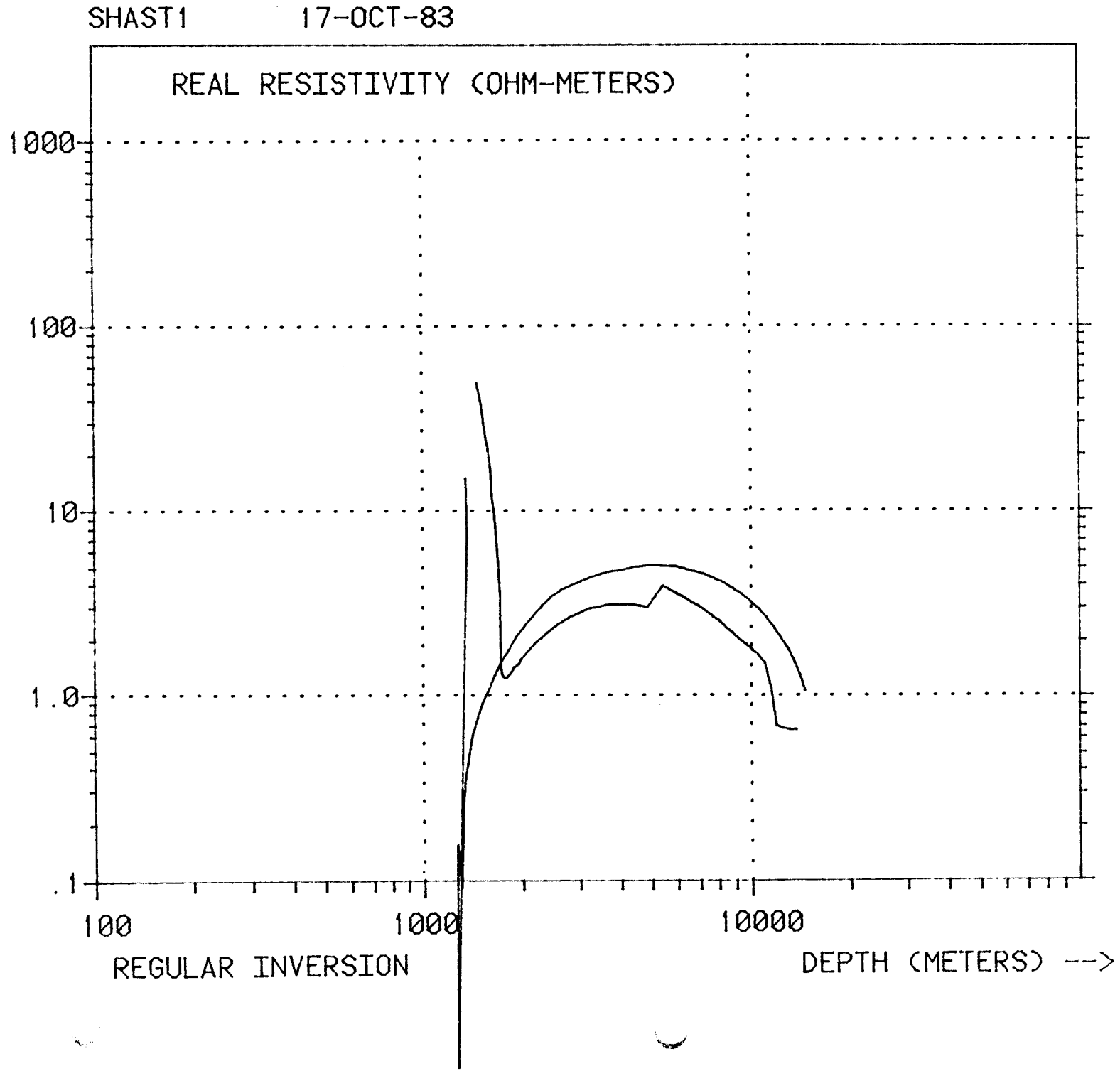
MEAN PERCENT ERROR = 6.3657
MAXIMUM PERCENT ERROR = 15.1854
MAX. ERROR OCCURED AT OBSERVATION 16

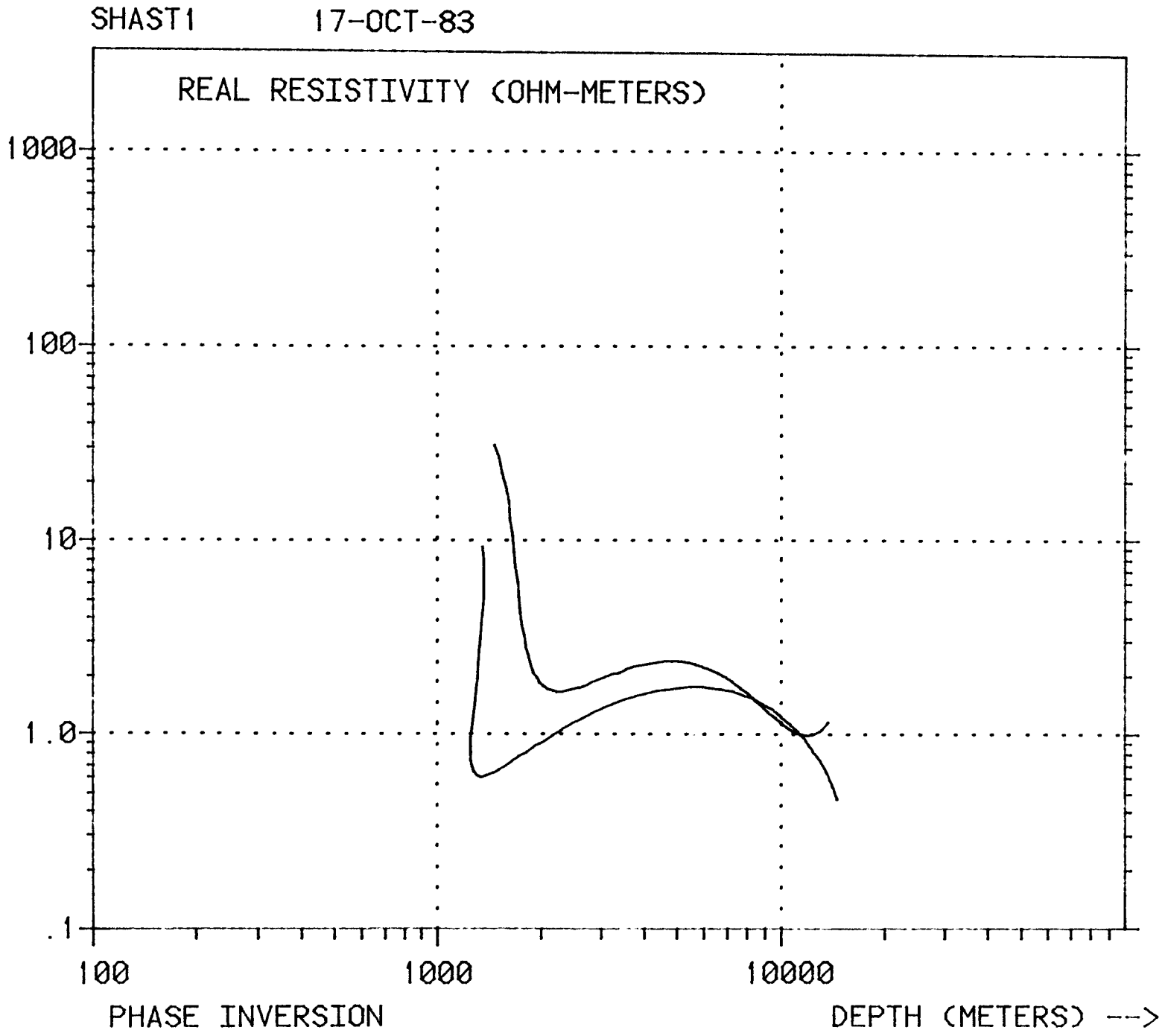

SHAS56 200 HZ 7-SEP-85 T40N R5W S14 SW
berd inv
rho wgt 0.70
100.0
rho app
31.0
10.0
ph. wgt 0.90
57.0
phase
52.0
47.0
.13
.3
3.0
3.0
31.0
frec


SHAST1 17-OCT-83
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

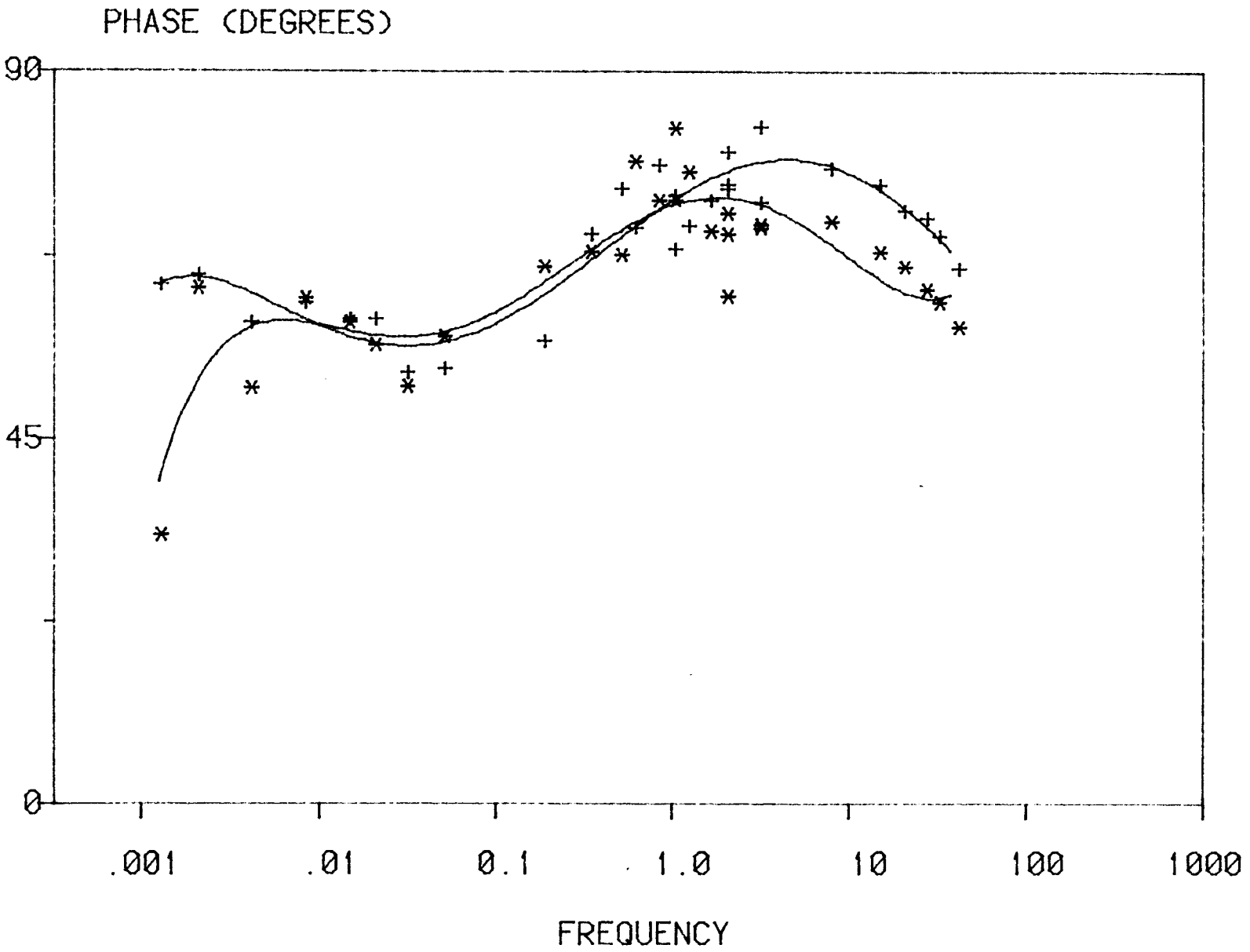



| | | | | |
|---|---|---|---|---|
| Resistivity | 228.05 | 3.37 | 42.05 | 1.55 |
| Thickness | | 1541.39 | 2089.64 | 4169.08 |
| Depth | 0.00 | 1541.39 | 3631.03 | 7800.11 |


SHAST1 17-OCT-83
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST1 17-OCT-83
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAST1 17-OCT-83



THE SITE IS: SHAST1 200 HZ 17-OCT-83

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOM | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 3.34 | 3.54 | 1 | 72.58 | 149.69 |
| 0.0020 | 2.92 | 2.95 | 2 | 48.18 | 85.44 |
| 0.0040 | 6.52 | 3.76 | 3 | 12.39 | 22.37 |
| 0.0080 | 4.12 | 5.62 | 4 | 3.46 | 0.67 |
| 0.0143 | 5.69 | 7.63 | 5 | 1.13 | 0.63 |
| 0.0200 | 7.20 | 9.20 | 6 | 0.86 | 0.68 |
| 0.0303 | 7.08 | 9.42 | 7 | 0.55 | 0.12 |
| 0.0500 | 12.51 | 9.75 | 8 | 0.03 | 0.11 |
| 0.1000 | 2.82 | 5.46 | 9 | 0.15 | 0.44 |
| 0.1818 | 3.23 | 7.86 | 10 | 0.02 | 0.06 |
| 0.3333 | 4.26 | 14.95 | 11 | 0.01 | 0.02 |
| 0.5000 | 5.94 | 15.37 | 12 | 0.00 | 0.01 |
| 0.5988 | 6.51 | 40.32 | 13 | 0.00 | 0.02 |
| 0.8000 | 10.79 | 35.63 | 14 | 0.00 | 0.01 |
| 1.0000 | 10.53 | 24.07 | 15 | 0.00 | 0.00 |
| 1.0000 | 57.30 | 22.54 | 16 | 0.03 | 0.02 |
| 1.2048 | 16.33 | 47.52 | 17 | 0.00 | 0.01 |
| 1.6129 | 22.60 | 56.41 | 18 | 0.00 | 0.00 |
| 2.0000 | 24.79 | 64.20 | 19 | 0.00 | 0.00 |
| 2.0000 | 21.31 | 38.14 | 20 | 0.00 | 0.00 |
| 2.0000 | 65.22 | 64.32 | 21 | 0.00 | 0.01 |
| 3.0303 | 22.62 | 48.76 | 22 | 0.00 | 0.00 |
| 3.0303 | 25.22 | 75.07 | 23 | 0.00 | 0.00 |
| 7.6923 | 124.04 | 170.12 | 24 | 0.00 | 0.00 |
| 14.2857 | 199.36 | 204.52 | 25 | 0.00 | 0.00 |
| 20.0000 | 216.02 | 266.73 | 26 | 0.00 | 0.00 |
| 26.3158 | 270.36 | 282.49 | 27 | 0.00 | 0.00 |
| 31.2500 | 294.68 | 287.77 | 28 | 0.00 | 0.00 |
| 40.0000 | 311.49 | 269.21 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAST1 200 HZ 17-OCT-83
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.354E+01 | 0.351E+01 | 34. | 64. | 50. | 0.9992 | 0.9996 | 0.0527 | 0.13 |
| H | SEC | 0.355E+01 | 0.316E+01 | 33. | 64. | 50. | 0.9992 | 0.9996 | 60.80 | 0.12 |
| E | 500.0 | 0.302E+01 | 0.320E+01 | 64. | 65. | 50. | 0.9897 | 0.9925 | 0.0879 | 0.24 |
| H | SEC | 0.288E+01 | 0.264E+01 | 63. | 65. | 50. | 0.9902 | 0.9927 | 42.90 | 0.23 |
| E | 250.0 | 0.412E+01 | 0.760E+01 | 50. | 60. | 50. | 0.9884 | 0.9109 | 0.0941 | 0.31 |
| H | SEC | 0.340E+01 | 0.545E+01 | 53. | 59. | 50. | 0.9889 | 0.9132 | 44.90 | 0.26 |
| E | 125.0 | 0.566E+01 | 0.424E+01 | 63. | 62. | 50. | 0.9955 | 0.9962 | 0.0613 | 0.06 |
| H | SEC | 0.558E+01 | 0.400E+01 | 63. | 62. | 50. | 0.9955 | 0.9963 | 50.10 | 0.06 |
| E | 70.0 | 0.768E+01 | 0.587E+01 | 60. | 60. | 50. | 0.9942 | 0.9897 | 0.0891 | 0.05 |
| H | SEC | 0.758E+01 | 0.551E+01 | 60. | 60. | 50. | 0.9943 | 0.9897 | 50.80 | 0.06 |
| E | 50.0 | 0.102E+02 | 0.795E+01 | 57. | 59. | 50. | 0.9983 | 0.9137 | 0.1223 | 0.07 |
| H | SEC | 0.820E+01 | 0.646E+01 | 56. | 61. | 50. | 0.9983 | 0.9154 | 47.60 | 0.06 |
| E | 33.0 | 0.101E+02 | 0.729E+01 | 51. | 54. | 50. | 0.9952 | 0.9644 | 0.1711 | 0.06 |
| H | SEC | 0.874E+01 | 0.686E+01 | 52. | 53. | 50. | 0.9953 | 0.9650 | 35.70 | 0.08 |
| E | 20.0 | 0.107E+02 | 0.181E+02 | 56. | 54. | 50. | 0.9699 | 0.9027 | 0.2018 | 0.06 |
| H | SEC | 0.880E+01 | 0.689E+01 | 59. | 53. | 50. | 0.9772 | 0.9292 | 44.80 | 0.06 |

AVERAGE #  8
SHAST1  200 HZ  17-OCT-83
NSAMP = 1024  SI = 0.0050  TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.556E+01 | 0.292E+01 | 63. | 51. | 5. | 0.9914 | 0.9831 | 0.1164 | 0.05 |
| H | SEC | 0.536E+01 | 0.272E+01 | 63. | 51. | 5. | 0.9914 | 0.9831 | 39.90 | 0.05 |
| E | 5.5 | 0.918E+01 | 0.363E+01 | 66. | 57. | 5. | 0.9186 | 0.9393 | 0.1157 | 0.01 |
| H | SEC | 0.654E+01 | 0.282E+01 | 66. | 57. | 5. | 0.9187 | 0.9393 | 20.80 | 0.02 |
| E | 3.0 | 0.184E+02 | 0.495E+01 | 69. | 70. | 5. | 0.8973 | 0.9233 | 0.2478 | 0.04 |
| H | SEC | 0.115E+02 | 0.358E+01 | 68. | 71. | 5. | 0.8986 | 0.9239 | 106.00 | 0.07 |
| E | 2.0 | 0.177E+02 | 0.712E+01 | 68. | 76. | 5. | 0.9211 | 0.9044 | 0.1866 | 0.05 |
| H | SEC | 0.130E+02 | 0.476E+01 | 67. | 76. | 5. | 0.9217 | 0.9049 | 144.30 | 0.08 |
| E | 1.7 | 0.457E+02 | 0.685E+01 | 80. | 71. | 5. | 0.9376 | 0.9834 | 0.0991 | 0.05 |
| H | SEC | 0.349E+02 | 0.617E+01 | 79. | 71. | 5. | 0.9391 | 0.9838 | 142.20 | 0.06 |
| E | 1.2 | 0.383E+02 | 0.115E+02 | 75. | 79. | 5. | 0.9630 | 0.9683 | 0.2081 | 0.04 |
| H | SEC | 0.330E+02 | 0.101E+02 | 74. | 79. | 5. | 0.9631 | 0.9684 | 150.10 | 0.05 |
| E | 1.0 | 0.290E+02 | 0.119E+02 | 75. | 75. | 5. | 0.9237 | 0.9397 | 0.2953 | 0.03 |
| H | HZ | 0.192E+02 | 0.912E+01 | 74. | 75. | 5. | 0.9263 | 0.9413 | 154.80 | 0.03 |

AVERAGE # 8
SHAST1 200 HZ 17-OCT-83
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.266E+02 | 0.839E+02 | 84. | 69. | 5. | 0.8163 | 0.7747 | 0.5908 | 0.41 |
| H | HZ | 0.185E+02 | 0.307E+02 | 83. | 68. | 5. | 0.8261 | 0.7771 | 84.90 | 0.35 |
| E | 1.2 | 0.517E+02 | 0.189E+02 | 78. | 71. | 5. | 0.9498 | 0.9247 | 0.2174 | 0.10 |
| H | HZ | 0.433E+02 | 0.138E+02 | 78. | 71. | 5. | 0.9501 | 0.9248 | 158.90 | 0.09 |
| E | 1.6 | 0.616E+02 | 0.286E+02 | 70. | 75. | 5. | 0.9400 | 0.8806 | 0.2515 | 0.11 |
| H | HZ | 0.512E+02 | 0.166E+02 | 72. | 74. | 5. | 0.9437 | 0.8833 | 167.10 | 0.05 |
| E | 2.0 | 0.701E+02 | 0.305E+02 | 70. | 76. | 5. | 0.9453 | 0.8970 | 0.3277 | 0.07 |
| H | HZ | 0.583E+02 | 0.191E+02 | 71. | 75. | 5. | 0.9472 | 0.8988 | -4.30 | 0.02 |
| E | 2.0 | 0.426E+02 | 0.262E+02 | 73. | 76. | 5. | 0.9328 | 0.8906 | 0.2219 | 0.07 |
| H | HZ | 0.337E+02 | 0.164E+02 | 73. | 76. | 5. | 0.9337 | 0.8907 | 170.20 | 0.05 |
| E | 2.0 | 0.701E+02 | 0.788E+02 | 60. | 82. | 5. | 0.9256 | 0.9023 | 0.1819 | 0.20 |
| H | HZ | 0.586E+02 | 0.516E+02 | 65. | 79. | 5. | 0.9289 | 0.9041 | 173.10 | 0.11 |

AVERAGE # 3
SHAST1 200 HZ 17-OCT-83
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | STRIKE MIN (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.588E+02 | 0.293E+02 | 72. | 83. | 5. | 0.9386 | 0.8709 | 0.2671 | 0.06 |
| H | HZ | 0.387E+02 | 0.160E+02 | 71. | 84. | 5. | 0.9468 | 0.8887 | 166.00 | 0.05 |
| E | 3.0 | 0.811E+02 | 0.280E+02 | 71. | 75. | 5. | 0.9579 | 0.9491 | 0.2940 | 0.04 |
| H | HZ | 0.690E+02 | 0.224E+02 | 71. | 74. | 5. | 0.9582 | 0.9495 | 173.90 | 0.04 |
| E | 7.7 | 0.175E+03 | 0.129E+03 | 72. | 78. | 15. | 0.9880 | 0.9846 | 0.2955 | 0.03 |
| H | HZ | 0.165E+03 | 0.119E+03 | 72. | 79. | 15. | 0.9881 | 0.9847 | 14.10 | 0.03 |
| E | 14.3 | 0.221E+03 | 0.209E+03 | 68. | 77. | 15. | 0.9742 | 0.9771 | 0.2979 | 0.05 |
| H | HZ | 0.188E+03 | 0.190E+03 | 68. | 76. | 15. | 0.9744 | 0.9773 | 19.70 | 0.05 |
| E | 20.0 | 0.292E+03 | 0.233E+03 | 66. | 73. | 15. | 0.9624 | 0.9610 | 0.2963 | 0.01 |
| H | HZ | 0.242E+03 | 0.199E+03 | 66. | 73. | 15. | 0.9625 | 0.9611 | 16.50 | 0.01 |
| E | 26.3 | 0.310E+03 | 0.299E+03 | 63. | 72. | 15. | 0.9626 | 0.9512 | 0.3266 | 0.03 |
| H | HZ | 0.255E+03 | 0.241E+03 | 64. | 72. | 15. | 0.9627 | 0.9516 | 21.80 | 0.02 |
| E | 31.2 | 0.321E+03 | 0.333E+03 | 62. | 70. | 15. | 0.9651 | 0.9453 | 0.4386 | 0.04 |
| H | HZ | 0.254E+03 | 0.256E+03 | 62. | 70. | 15. | 0.9653 | 0.9468 | 41.80 | 0.03 |
| E | 40.0 | 0.342E+03 | 0.381E+03 | 59. | 67. | 15. | 0.9437 | 0.9181 | 0.6483 | 0.04 |
| H | HZ | 0.196E+03 | 0.242E+03 | 59. | 66. | 15. | 0.9464 | 0.9264 | 74.30 | 0.07 |

SHAST1 200 HZ 17-OCT-83

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 28
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 370.0000 | | 0.0000 |
| | | 1000.0000 | |
| 2 | 45.0000 | | 1000.0000 |
| | | 4000.0000 | |
| 3 | 10.0000 | | 5000.0000 |
| | | 3000.0000 | |
| 4 | 7.0000 | | 8000.0000 |

FREQUENCY RANGE ( 0.0013 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 0.2281E+03 | | 0.0000E+00 |
| | | 0.1541E+04 | |
| 2 | 0.3375E+01 | | 0.1541E+04 |
| | | 0.2090E+04 | |
| 3 | 0.4205E+02 | | 0.3631E+04 |
| | | 0.4169E+04 | |
| 4 | 0.1555E+01 | | 0.7800E+04 |

MEAN PERCENT VARIATION IS 0.2226E+02

ERROR ANALYSIS

R-SQUARED = 0.100E+01

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 27 | 0.249E+06 | 0.923E+04 | 0.222E+00 |
| MODEL | 6 | 0.249E+06 | 0.415E+05 | 0.628E+06 |
| RESID | 21 | 0.139E+01 | 0.661E-01 | |

STANDARD ERROR = 0.257E+00

DTEST FOR MEANS =-0.242E-05

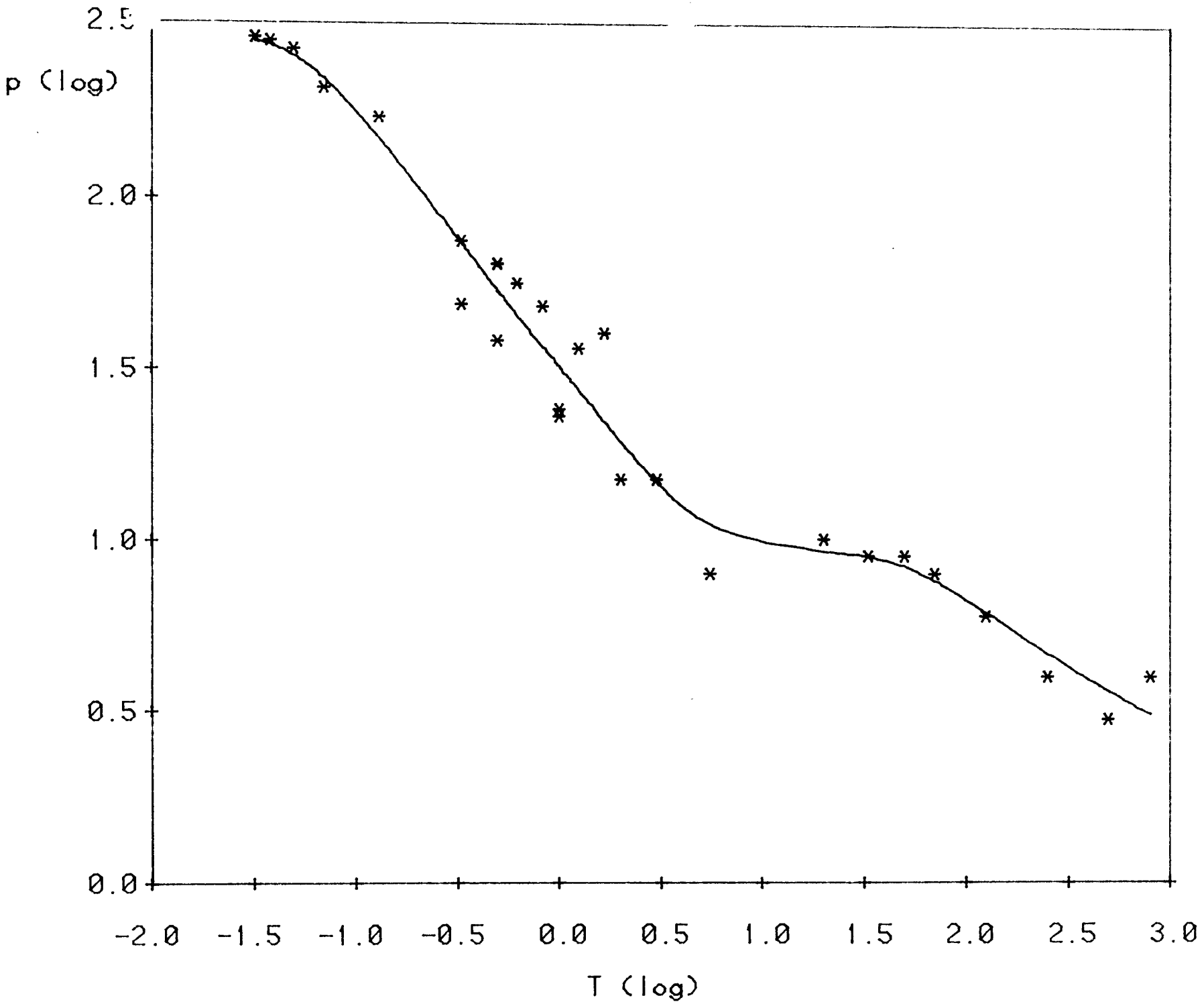
NOISE TO SIGNAL RATIO = 0.126E+00 PERCENT

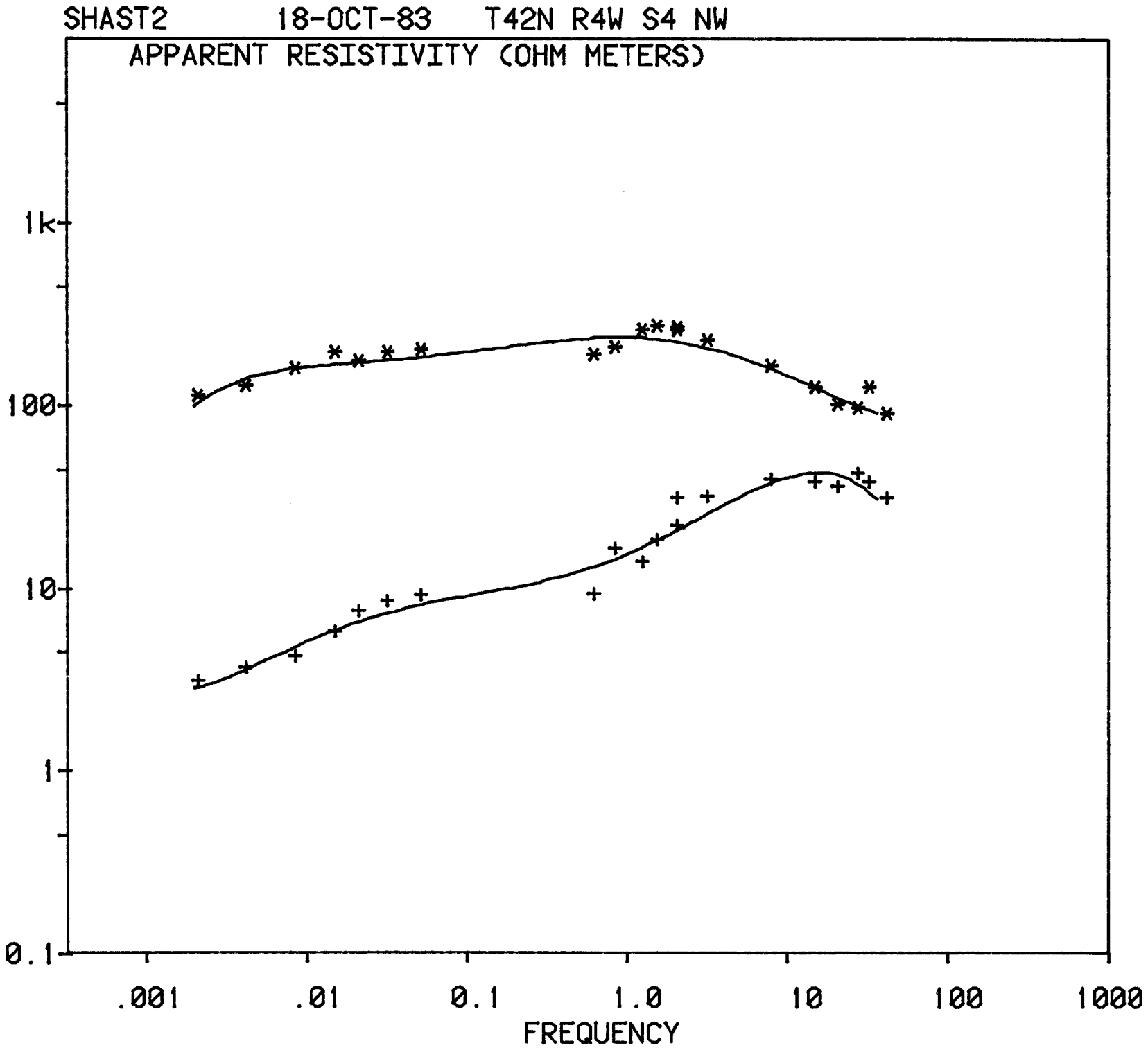
SEAST1 200 HZ 17-OCT-83

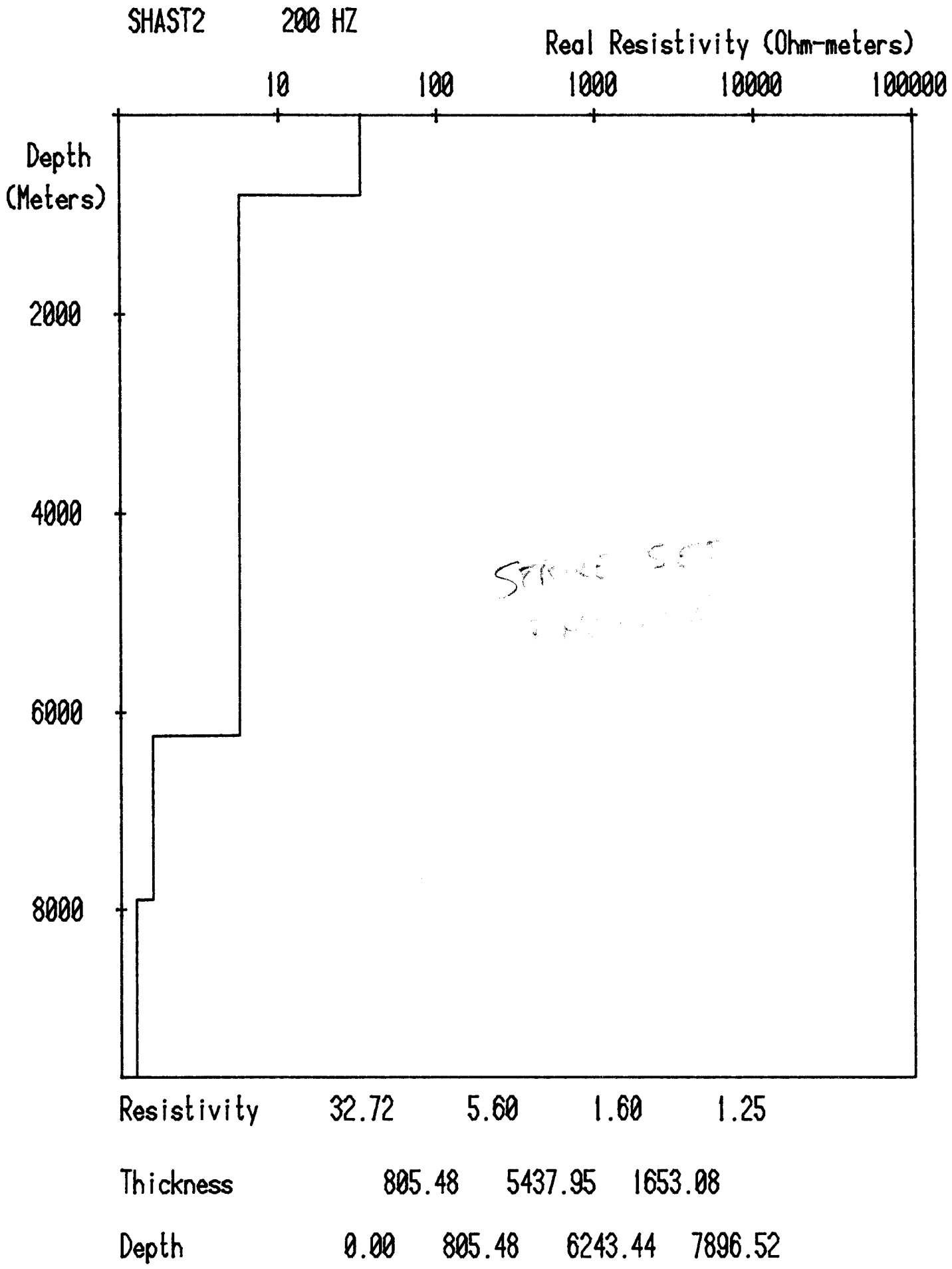
ERROR STRUCTURE OF FITTED MODEL

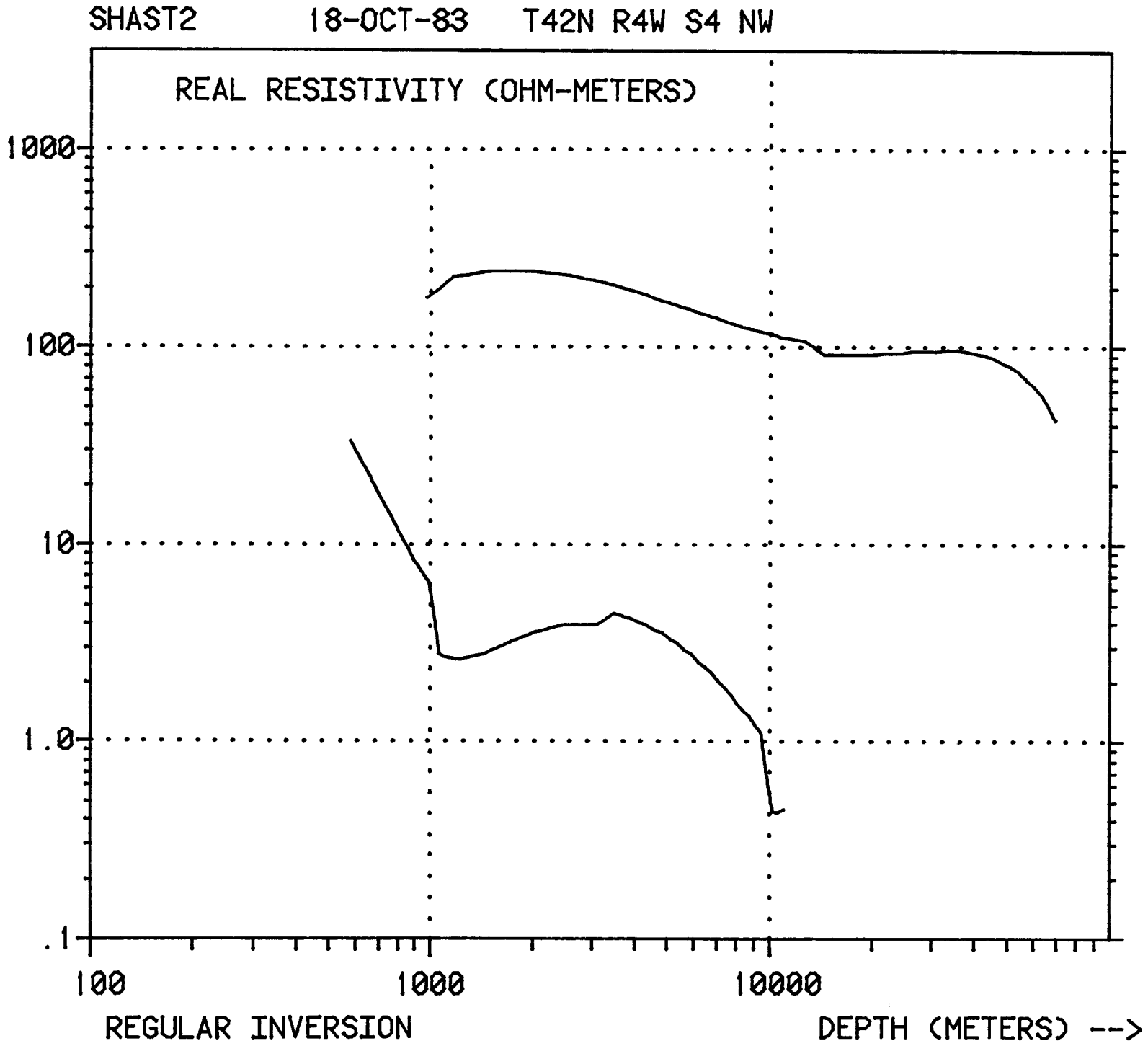
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 800.000 | 4.000 | 3.102 | 0.898 | 25.277 |
| 2 | 500.000 | 3.000 | 3.610 | -0.610 | -18.462 |
| 3 | 250.000 | 4.000 | 4.676 | -0.676 | -15.582 |
| 4 | 125.000 | 6.000 | 6.186 | -0.186 | -3.045 |
| 5 | 70.000 | 8.000 | 7.657 | 0.343 | 4.382 |
| 6 | 50.000 | 9.000 | 8.423 | 0.577 | 6.622 |
| 7 | 33.000 | 9.000 | 9.053 | -0.053 | -0.588 |
| 8 | 20.000 | 10.000 | 9.208 | 0.792 | 8.244 |
| 9 | 5.500 | 8.000 | 10.486 | -2.486 | -26.895 |
| 10 | 3.000 | 15.000 | 14.623 | 0.377 | 2.547 |
| 11 | 2.000 | 15.000 | 19.439 | -4.439 | -25.781 |
| 12 | 1.670 | 40.000 | 22.164 | 17.836 | 57.385 |
| 13 | 1.250 | 36.000 | 27.345 | 8.655 | 27.328 |
| 14 | 1.000 | 24.000 | 32.107 | -8.107 | -28.898 |
| 15 | 1.000 | 23.000 | 32.107 | -9.107 | -33.051 |
| 16 | 0.830 | 48.000 | 36.722 | 11.278 | 26.625 |
| 17 | 0.620 | 56.000 | 45.469 | 10.531 | 20.757 |
| 18 | 0.500 | 64.000 | 53.444 | 10.556 | 17.976 |
| 19 | 0.500 | 38.000 | 53.444 | -15.444 | -33.778 |
| 20 | 0.500 | 64.000 | 53.444 | 10.556 | 17.976 |
| 21 | 0.330 | 49.000 | 73.643 | -24.643 | -40.186 |
| 22 | 0.330 | 75.000 | 73.643 | 1.357 | 1.827 |
| 23 | 0.130 | 170.000 | 150.158 | 19.842 | 12.395 |
| 24 | 0.070 | 205.000 | 222.466 | -17.466 | -8.172 |
| 25 | 0.050 | 267.000 | 257.416 | 9.584 | 3.655 |
| 26 | 0.038 | 282.000 | 275.675 | 6.325 | 2.268 |
| 27 | 0.032 | 288.000 | 280.661 | 7.339 | 2.581 |
| 28 | 0.025 | 269.000 | 279.084 | -10.084 | -3.680 |

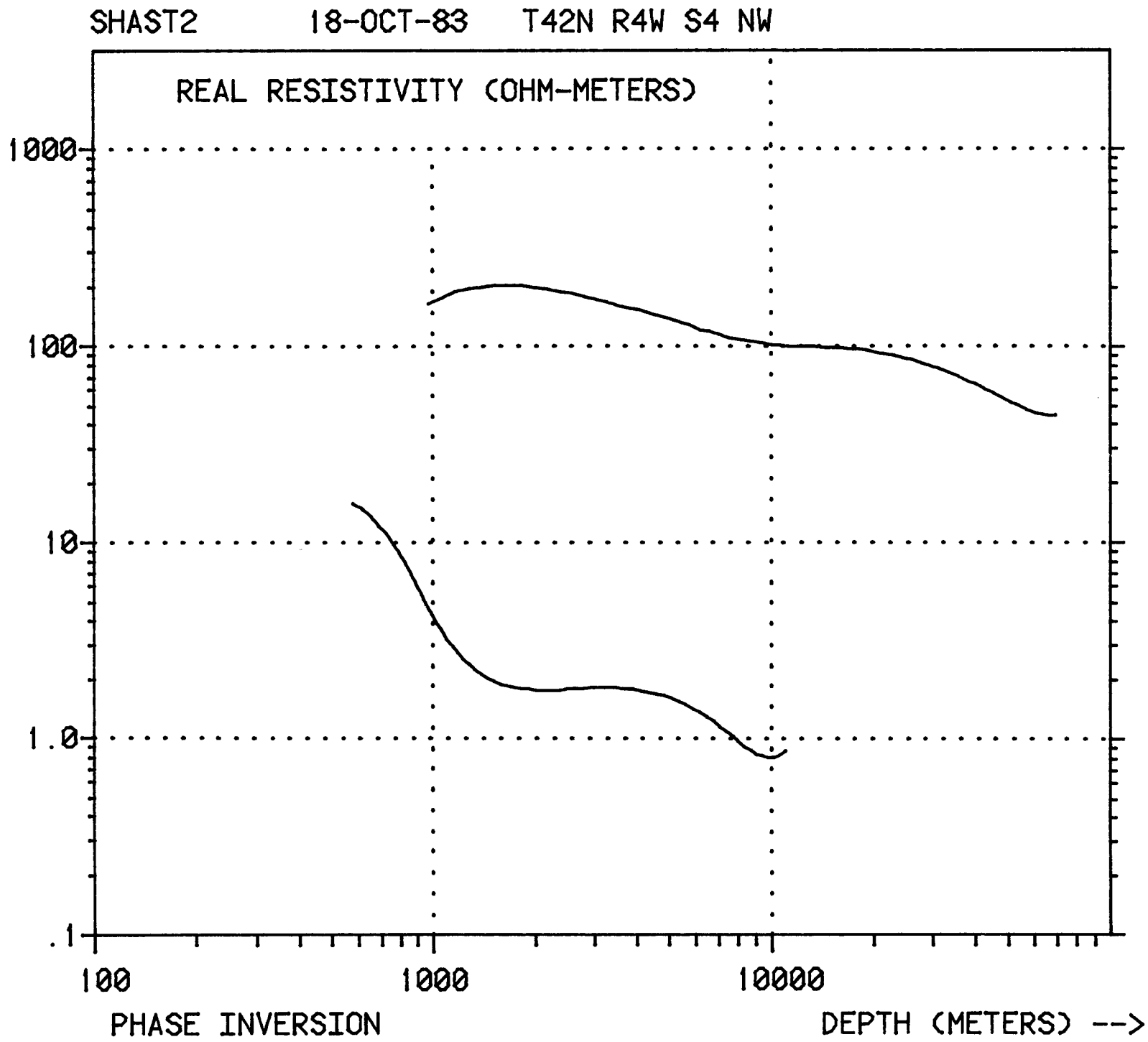
MEAN PERCENT ERROR = 21.9995
MAXIMUM PERCENT ERROR = 57.3853
MAX. ERROR OCCURED AT OBSERVATION 12


p (log)
2.5
2.0
1.5
1.0
0.5
0.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
T (log)

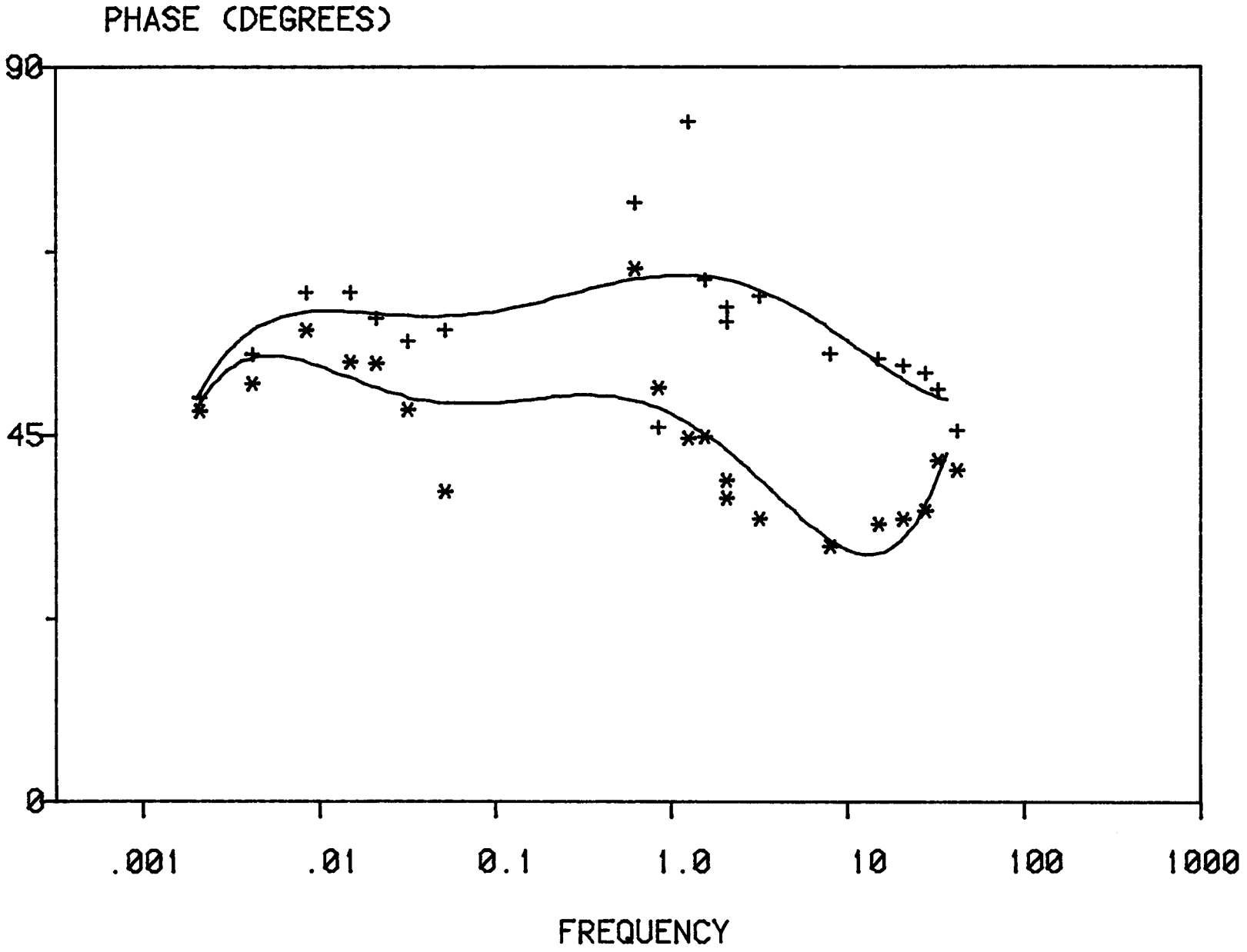

SHAST2 18-OCT-83 T42N R4W S4 NW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAST2
200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
Depth
(Meters)
2000
4000
6000
8000
Resistivity 32.72 5.60 1.60 1.25
Thickness 805.48 5437.95 1653.08
Depth 0.00 805.48 6243.44 7896.52


SHAST2 18-OCT-83 T42N R4W S4 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST2 18-OCT-83 T42N R4W S4 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAST2 18-OCT-83 T42N R4W S4 NW



THE SITE IS: SHAST2 200 HZ 18-OCT-83 T42N R4W S4 NW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 4.06 | 119.86 | 1 | 3009.21 | 7589.27 |
| 0.0020 | 2.87 | 104.34 | 2 | 2411.92 | ******* |
| 0.0040 | 3.42 | 117.79 | 3 | 632.40 | 3552.60 |
| 0.0080 | 3.95 | 149.00 | 4 | 121.82 | 851.84 |
| 0.0143 | 5.43 | 182.32 | 5 | 79.28 | 413.81 |
| 0.0200 | 6.97 | 161.98 | 6 | 53.37 | 207.72 |
| 0.0303 | 7.85 | 179.77 | 7 | 43.39 | 198.48 |
| 0.0500 | 8.57 | 187.91 | 8 | 6.12 | 39.47 |
| 0.1000 | 4.52 | 84.59 | 9 | 7.11 | 33.39 |
| 0.1818 | 2.79 | 73.23 | 10 | 1.46 | 6.68 |
| 0.3333 | 2.08 | 55.08 | 11 | 0.28 | 2.13 |
| 0.5000 | 1.14 | 87.76 | 12 | 0.21 | 1.78 |
| 0.5988 | 8.66 | 175.78 | 13 | 0.33 | 1.35 |
| 0.8000 | 15.29 | 192.40 | 14 | 0.42 | 0.53 |
| 1.0000 | 0.94 | 112.36 | 15 | 0.09 | 0.54 |
| 1.0000 | 5.80 | 45.42 | 16 | 0.00 | 0.00 |
| 1.2048 | 12.86 | 236.95 | 17 | 0.27 | 0.55 |
| 1.4925 | 17.17 | 251.82 | 18 | 0.16 | 0.51 |
| 2.0000 | 20.60 | 238.81 | 19 | 0.11 | 0.29 |
| 2.0000 | 1.37 | 116.10 | 20 | 0.04 | 0.17 |
| 2.0000 | 29.07 | 249.06 | 21 | 1.02 | 2.21 |
| 3.0303 | 1.46 | 105.24 | 22 | 0.02 | 0.08 |
| 3.0303 | 29.83 | 210.32 | 23 | 0.07 | 0.10 |
| 7.6923 | 37.05 | 152.45 | 24 | 1.12 | 1.19 |
| 14.2857 | 35.58 | 116.46 | 25 | 0.04 | 0.03 |
| 20.0000 | 33.85 | 94.33 | 26 | 0.02 | 0.01 |
| 26.3158 | 39.84 | 90.47 | 27 | 0.02 | 0.00 |
| 31.2500 | 35.63 | 117.56 | 28 | 0.01 | 0.01 |
| 40.0000 | 28.85 | 83.46 | 29 | 0.00 | 0.01 |

AVERAGE # 8
SHAST2 200 HZ 18-OCT-83 T42N R4W S4 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.116E+03 | 0.473E+01 | 33. | 44. | 143. | 0.9943 | 0.9906 | 0.2766 | 0.34 |
| H | SEC | 0.123E+03 | 0.342E+01 | 38. | 40. | 143. | 0.9949 | 0.9917 | 82.40 | 0.32 |
| E | 500.0 | 0.106E+03 | 0.299E+01 | 48. | 50. | 143. | 0.9910 | 0.9877 | 0.1081 | 0.25 |
| H | SEC | 0.103E+03 | 0.276E+01 | 48. | 50. | 143. | 0.9911 | 0.9878 | 136.80 | 0.25 |
| E | 250.0 | 0.119E+03 | 0.360E+01 | 52. | 55. | 143. | 0.9914 | 0.9838 | 0.1129 | 0.16 |
| H | SEC | 0.117E+03 | 0.323E+01 | 52. | 55. | 143. | 0.9917 | 0.9842 | 19.50 | 0.16 |
| E | 125.0 | 0.162E+03 | 0.408E+01 | 57. | 64. | 143. | 0.9812 | 0.9773 | 0.1827 | 0.06 |
| H | SEC | 0.136E+03 | 0.382E+01 | 59. | 62. | 143. | 0.9827 | 0.9790 | 11.70 | 0.11 |
| E | 70.0 | 0.192E+03 | 0.544E+01 | 54. | 64. | 143. | 0.9890 | 0.9912 | 0.2490 | 0.05 |
| H | SEC | 0.173E+03 | 0.542E+01 | 55. | 62. | 143. | 0.9893 | 0.9915 | 9.20 | 0.05 |
| E | 50.0 | 0.164E+03 | 0.700E+01 | 54. | 60. | 143. | 0.9969 | 0.9971 | 0.3329 | 0.04 |
| H | SEC | 0.160E+03 | 0.694E+01 | 54. | 59. | 143. | 0.9969 | 0.9972 | 19.10 | 0.05 |
| E | 33.0 | 0.180E+03 | 0.796E+01 | 48. | 57. | 143. | 0.9992 | 0.9989 | 0.3731 | 0.04 |
| H | SEC | 0.180E+03 | 0.773E+01 | 48. | 57. | 143. | 0.9992 | 0.9989 | 18.40 | 0.04 |
| E | 20.0 | 0.195E+03 | 0.892E+01 | 38. | 59. | 143. | 0.9952 | 0.9876 | 0.5118 | 0.08 |
| H | SEC | 0.180E+03 | 0.821E+01 | 39. | 58. | 143. | 0.9954 | 0.9881 | 9.70 | 0.05 |

AVERAGE # 8
SHAST2 200 HZ 18-OCT-83 T42N R4W S4 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE | RHO MIN ( OHM-M ) | PHI MAX | PHI MIN (DEGREES) | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.890E+02 | 0.484E+01 | 34. | 43. | 143. | 0.9748 | 0.9805 | 0.5800 | 0.10 |
| H | SEC | 0.802E+02 | 0.420E+01 | 35. | 43. | 143. | 0.9750 | 0.9806 | 10.10 | 0.12 |
| E | 5.5 | 0.851E+02 | 0.337E+01 | 34. | 33. | 143. | 0.9264 | 0.9075 | 0.6823 | 0.24 |
| H | SEC | 0.614E+02 | 0.221E+01 | 34. | 32. | 143. | 0.9271 | 0.9090 | 10.40 | 0.21 |
| E | 3.0 | 0.778E+02 | 0.278E+01 | 26. | 19. | 143. | 0.8387 | 0.7743 | 0.7214 | 0.17 |
| H | SEC | 0.324E+02 | 0.138E+01 | 23. | 15. | 143. | 0.8492 | 0.7857 | 12.00 | 0.12 |
| E | 2.0 | 0.125E+03 | 0.132E+01 | 39. | 15. | 143. | 0.8434 | 0.7862 | 0.7464 | 0.27 |
| H | SEC | 0.508E+02 | 0.961E+00 | 37. | 11. | 143. | 0.8587 | 0.7914 | 14.30 | 0.22 |
| E | 1.7 | 0.198E+03 | 0.133E+02 | 62. | 87. | 123. | 0.9189 | 0.9354 | 0.3899 | 0.16 |
| H | SEC | 0.154E+03 | 0.403E+01 | 70. | 60. | 123. | 0.9500 | 0.9606 | 32.70 | 0.50 |
| E | 1.2 | 0.211E+03 | 0.255E+02 | 52. | 3. | 123. | 0.9435 | 0.9383 | 0.4883 | 0.46 |
| H | SEC | 0.174E+03 | 0.505E+01 | 50. | 90. | 123. | 0.9487 | 0.9459 | 9.70 | 0.30 |
| E | 1.0 | 0.145E+03 | 0.137E+01 | 41. | 76. | 130. | 0.8685 | 0.8509 | 0.8082 | 0.41 |
| H | HZ | 0.799E+02 | 0.501E+00 | 41. | 65. | 130. | 0.8686 | 0.8553 | 16.30 | 0.41 |

AVERAGE # 8
SHAST2 200 HZ 18-OCT-83 T42N R4W S4 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.613E+02 | 0.749E+01 | 83. | 3. | 130. | 0.0000 | 0.0000 | 1.1390 | 7.84 |
| H | HZ | 0.296E+02 | 0.412E+01 | 4. | 29. | 130. | 0.0000 | 0.0000 | 0.00 | 1.16 |
| E | 1.2 | 0.248E+03 | 0.205E+02 | 44. | 83. | 130. | 0.9652 | 0.9599 | 0.4729 | 0.33 |
| H | HZ | 0.226E+03 | 0.521E+01 | 46. | 84. | 130. | 0.9697 | 0.9646 | 18.20 | 0.24 |
| E | 1.5 | 0.259E+03 | 0.274E+02 | 44. | 64. | 130. | 0.9768 | 0.9630 | 0.4398 | 0.19 |
| H | HZ | 0.244E+03 | 0.697E+01 | 47. | 64. | 130. | 0.9788 | 0.9718 | 31.70 | 0.10 |
| E | 2.0 | 0.248E+03 | 0.307E+02 | 39. | 61. | 130. | 0.9786 | 0.9715 | 0.3549 | 0.18 |
| H | HZ | 0.230E+03 | 0.106E+02 | 40. | 61. | 130. | 0.9790 | 0.9747 | 11.00 | 0.08 |
| E | 2.0 | 0.139E+03 | 0.259E+01 | 36. | 2. | 130. | 0.8824 | 0.9041 | 0.6282 | 0.40 |
| H | HZ | 0.931E+02 | 0.146E+00 | 36. | 58. | 130. | 0.8948 | 0.9051 | 11.40 | 0.48 |
| E | 2.0 | 0.262E+03 | 0.395E+02 | 38. | 59. | 130. | 0.9714 | 0.9745 | 0.3986 | 0.06 |
| H | HZ | 0.236E+03 | 0.186E+02 | 38. | 59. | 130. | 0.9725 | 0.9748 | 5.90 | 0.07 |

AVERAGE # 8
SHAST2 200 HZ 18-OCT-83 T42N R4W S4 MW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.125E+03 | 0.286E+01 | 32. | 3. | 130. | 0.8772 | 0.9020 | 0.6196 | 0.41 |
| H | HZ | 0.852E+02 | 0.651E-01 | 33. | 53. | 130. | 0.8959 | 0.9058 | 9.60 | 0.49 |
| E | 3.0 | 0.220E+03 | 0.393E+02 | 35. | 62. | 130. | 0.9766 | 0.9797 | 0.3443 | 0.18 |
| H | HZ | 0.200E+03 | 0.204E+02 | 35. | 63. | 130. | 0.9778 | 0.9802 | 1.40 | 0.18 |
| E | 7.7 | 0.157E+03 | 0.453E+02 | 32. | 55. | 130. | 0.9813 | 0.9821 | 0.2437 | 0.15 |
| H | HZ | 0.148E+03 | 0.288E+02 | 31. | 55. | 130. | 0.9822 | 0.9829 | 27.70 | 0.13 |
| E | 14.3 | 0.123E+03 | 0.474E+02 | 34. | 55. | 130. | 0.9581 | 0.9690 | 0.2913 | 0.11 |
| H | HZ | 0.110E+03 | 0.237E+02 | 34. | 55. | 130. | 0.9616 | 0.9701 | 43.20 | 0.12 |
| E | 20.0 | 0.101E+03 | 0.457E+02 | 35. | 54. | 130. | 0.9569 | 0.9547 | 0.3113 | 0.17 |
| H | HZ | 0.877E+02 | 0.220E+02 | 35. | 54. | 130. | 0.9585 | 0.9568 | 38.60 | 0.16 |
| E | 26.3 | 0.102E+03 | 0.499E+02 | 36. | 53. | 130. | 0.9414 | 0.9592 | 0.3028 | 0.13 |
| H | HZ | 0.792E+02 | 0.298E+02 | 36. | 53. | 130. | 0.9452 | 0.9602 | 65.10 | 0.24 |
| E | 31.2 | 0.144E+03 | 0.544E+02 | 42. | 51. | 130. | 0.8848 | 0.9080 | 1.3003 | 0.03 |
| H | HZ | 0.911E+02 | 0.169E+02 | 42. | 51. | 130. | 0.8919 | 0.9082 | 105.50 | 0.09 |
| E | 40.0 | 0.880E+02 | 0.492E+02 | 41. | 47. | 130. | 0.9505 | 0.9309 | 0.8064 | 0.05 |
| H | HZ | 0.790E+02 | 0.848E+01 | 41. | 45. | 130. | 0.9580 | 0.9485 | 101.00 | 0.10 |

SHAST2 200 HZ 18-OCT-83 T42N R4W S4 NW

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 18
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 30.0000 | | 0.0000 |
| | | 900.0000 | |
| 2 | 2.0000 | | 900.0000 |
| | | 1600.0000 | |
| 3 | 2.0000 | | 2500.0000 |
| | | 5500.0000 | |
| 4 | 1.0000 | | 8000.0000 |

FREQUENCY RANGE ( 0.0020 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 32.7300 | | 0.0000 |
| | | 805.4845 | |
| 2 | 5.6023 | | 805.4845 |
| | | 5437.9579 | |
| 3 | 1.6028 | | 6243.4424 |
| | | 1653.0813 | |
| 4 | 1.2560 | | 7896.5236 |

MEAN PERCENT VARIATION IS 13.8298

ERROR ANALYSIS

R-SQUARED = 0.996

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 17 | 3187.733 | 187.514 | 0.355 |
| MODEL | 6 | 3173.407 | 528.901 | 16899.074 |
| RESID | 11 | 0.344 | 0.031 | |

STANDARD ERROR = 0.177

DTEST FOR MEANS = 0.001

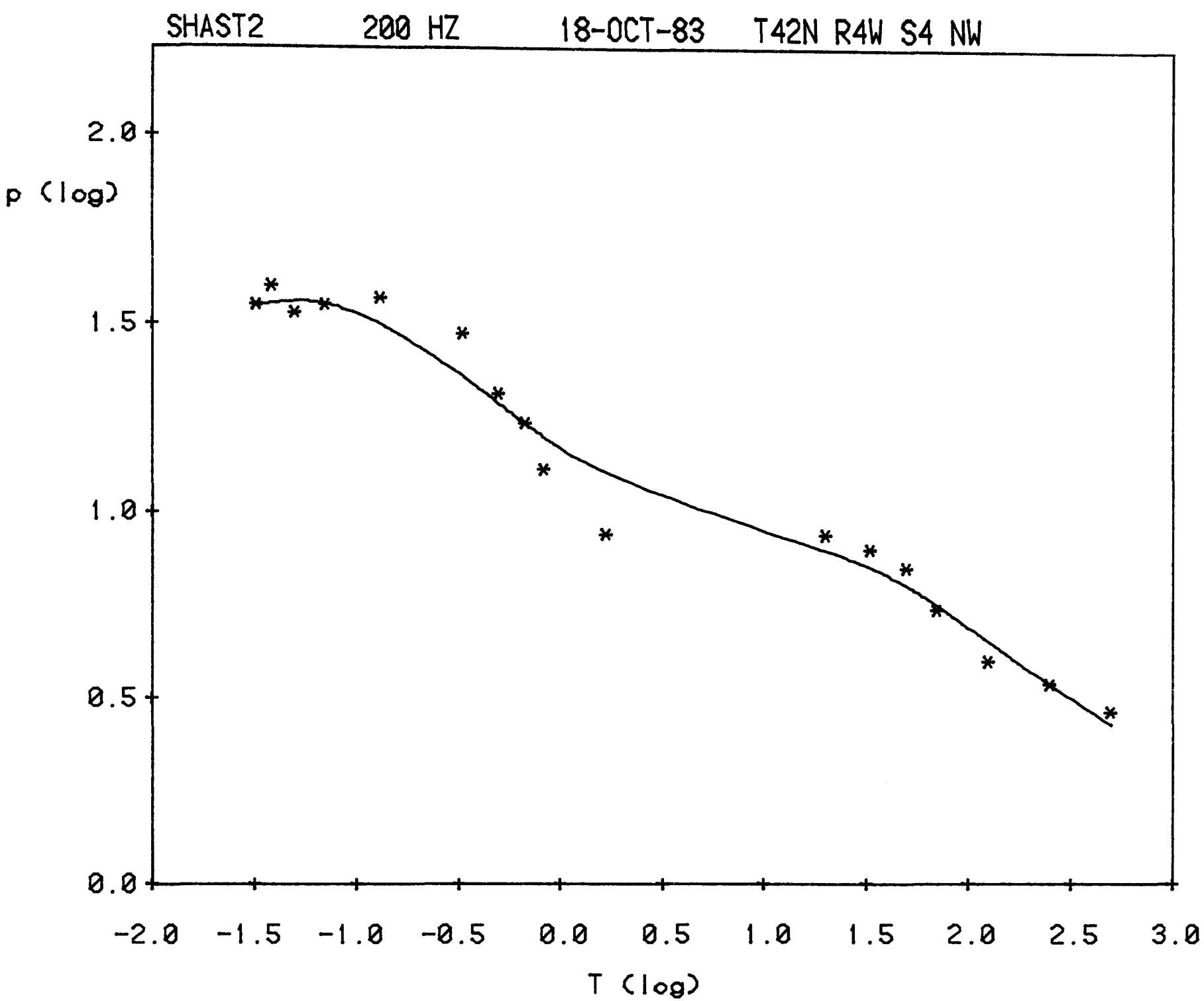
NOISE TO SIGNAL RATIO = 0.769 PERCENT

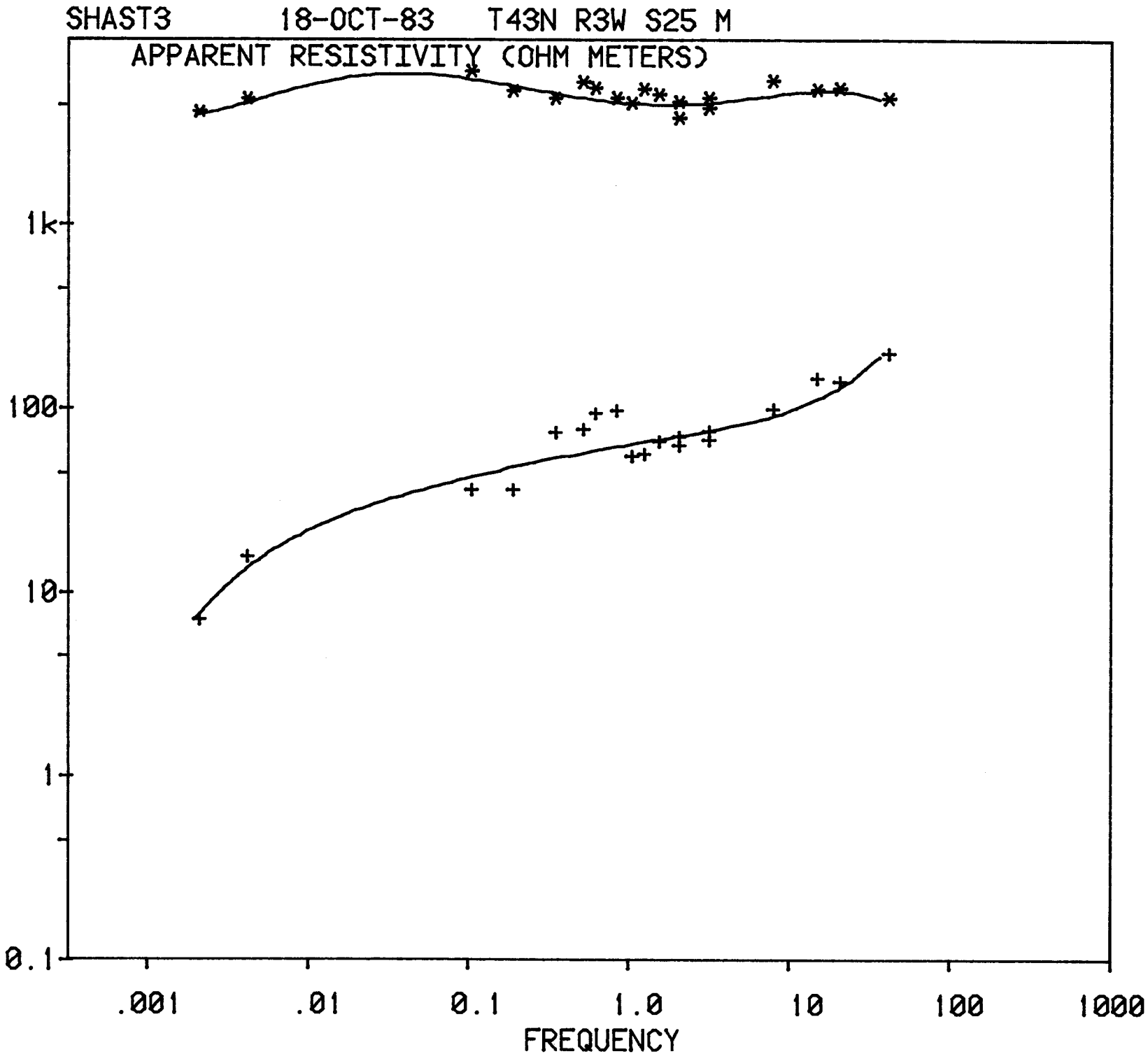
SHAST2 200 HZ 18-OCT-83 T42N R4W S4 NW

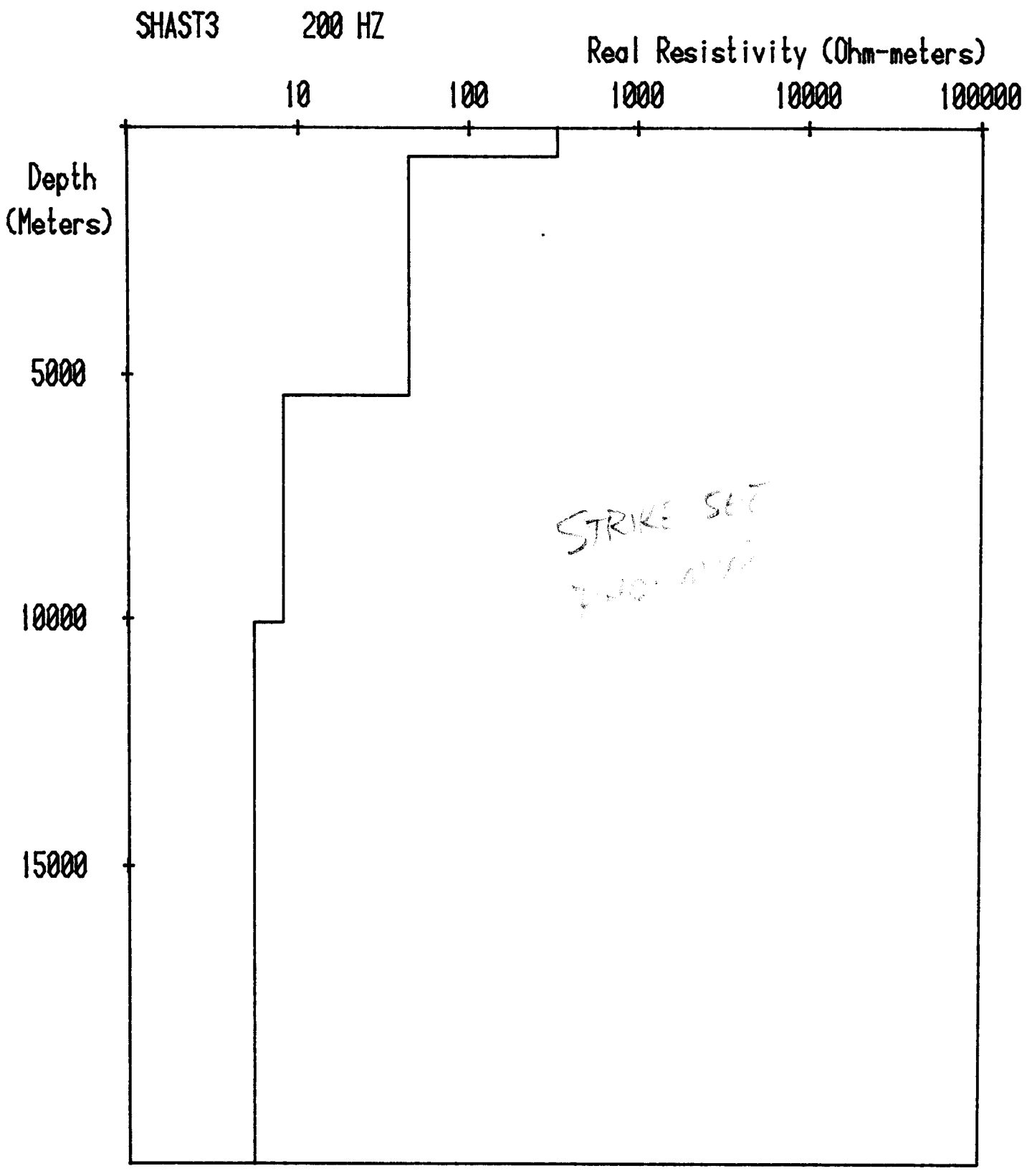
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 500.000 | 2.874 | 2.688 | 0.186 | 6.677 |
| 2 | 250.000 | 3.417 | 3.420 | -0.003 | -0.095 |
| 3 | 125.000 | 3.950 | 4.482 | -0.533 | -12.634 |
| 4 | 70.000 | 5.431 | 5.612 | -0.181 | -3.280 |
| 5 | 50.000 | 6.971 | 6.308 | 0.663 | 9.987 |
| 6 | 33.000 | 7.846 | 7.102 | 0.744 | 9.948 |
| 7 | 20.000 | 8.568 | 7.810 | 0.757 | 9.250 |
| 8 | 1.670 | 8.656 | 12.246 | -3.590 | -34.353 |
| 9 | 0.830 | 12.861 | 15.787 | -2.927 | -20.433 |
| 10 | 0.670 | 17.168 | 17.201 | -0.033 | -0.192 |
| 11 | 0.500 | 20.605 | 19.418 | 1.186 | 5.927 |
| 12 | 0.330 | 29.833 | 23.133 | 6.700 | 25.300 |
| 13 | 0.130 | 37.052 | 32.513 | 4.538 | 13.047 |
| 14 | 0.070 | 35.576 | 36.296 | -0.720 | -2.005 |
| 15 | 0.050 | 33.850 | 36.500 | -2.649 | -7.532 |
| 16 | 0.038 | 39.835 | 35.834 | 4.001 | 10.575 |
| 17 | 0.032 | 35.629 | 35.198 | 0.431 | 1.217 |
| 18 | 0.025 | 28.851 | 34.218 | -5.367 | -17.018 |

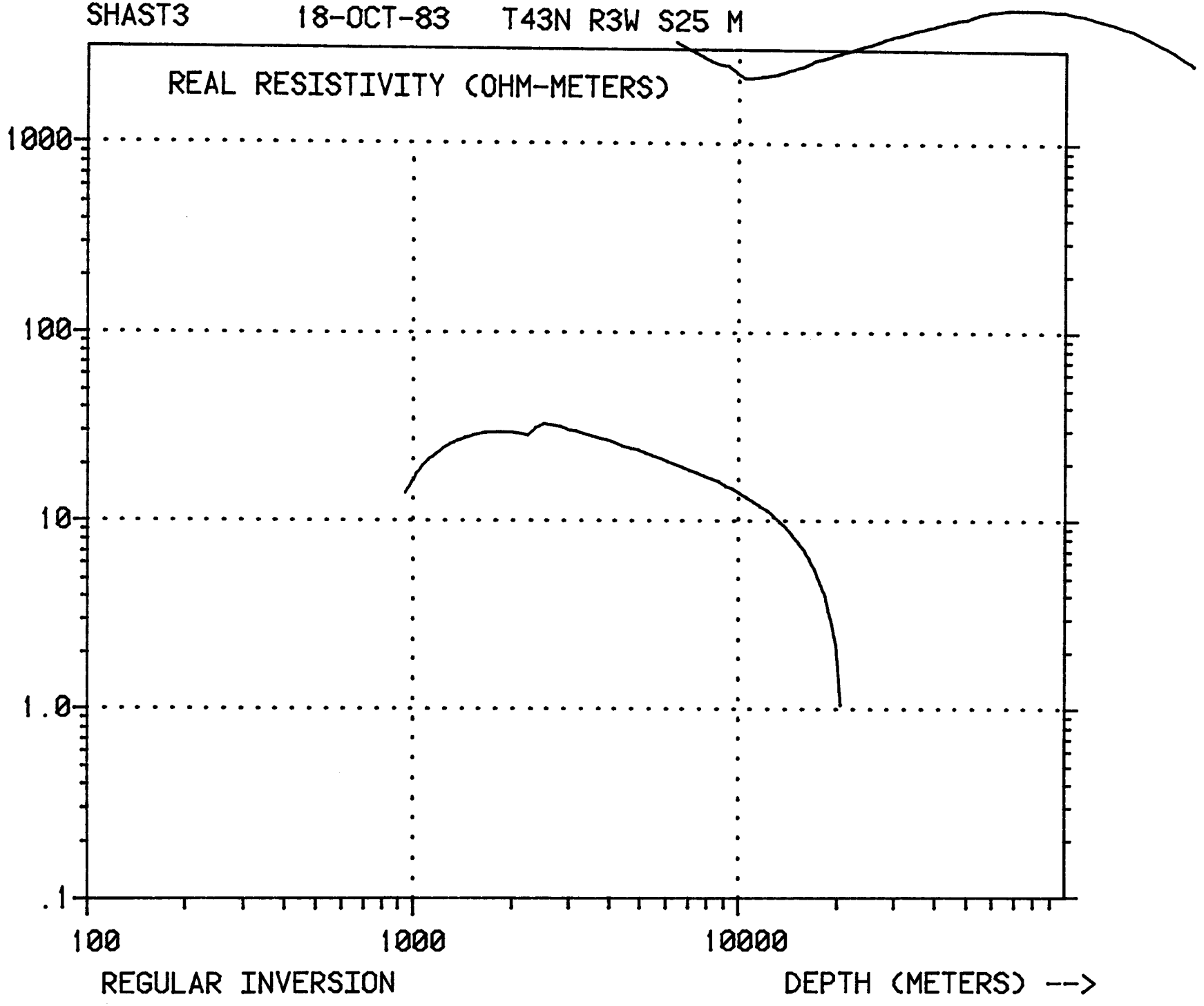
MEAN PERCENT ERROR = 13.7837
MAXIMUM PERCENT ERROR = 34.3534
MAX. ERROR OCCURED AT OBSERVATION 8

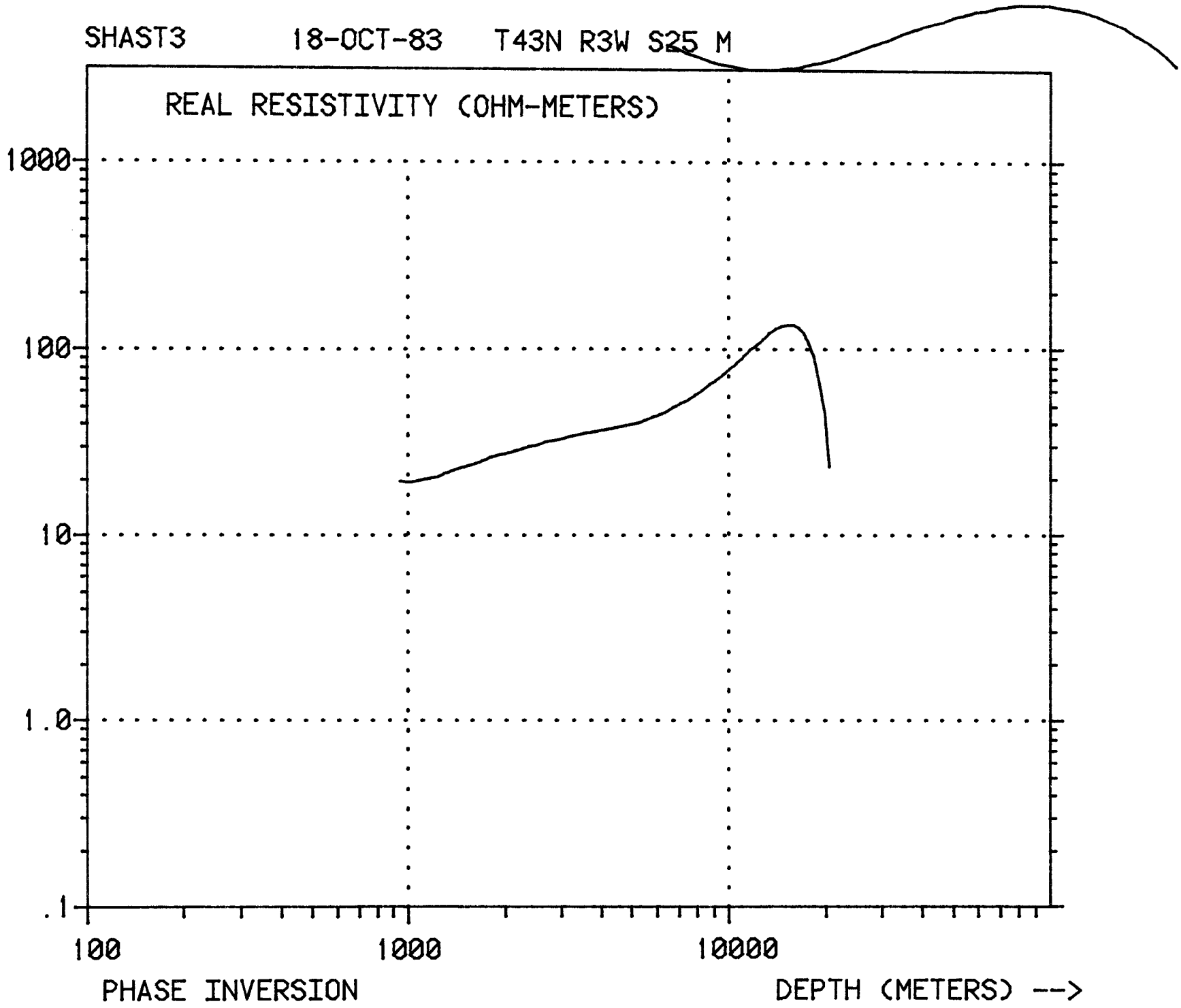

SHAST2 200 HZ 18-OCT-83 T42N R4W S4 NW
2.0
1.5
1.0
0.5
0.0
p (log)
-2.0 -1.5 -1.0 -0.5 0.0 0.5 1.0 1.5 2.0 2.5 3.0
T (log)


SHAST3 18-OCT-83 T43N R3W S25 M
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

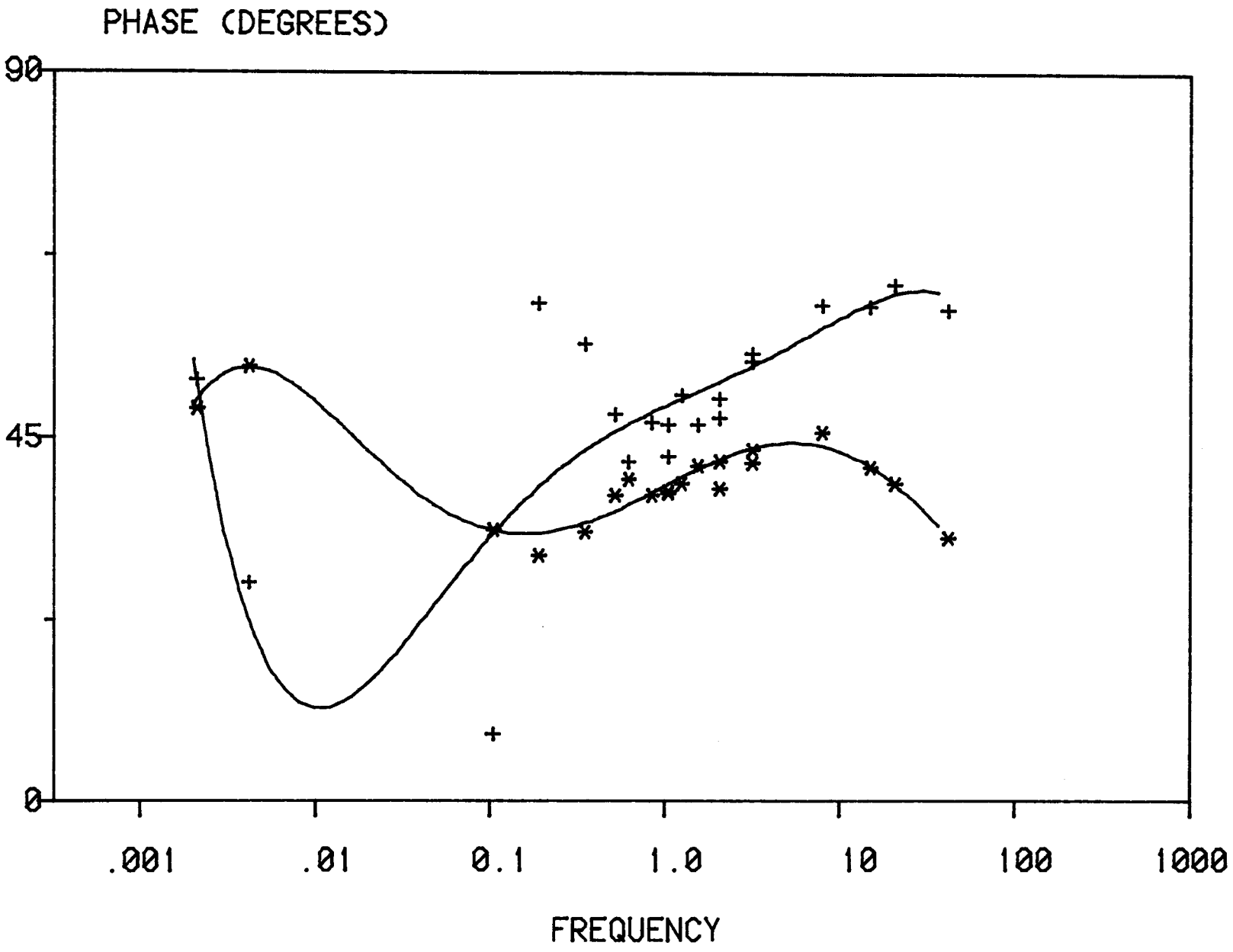



| | | | | |
|---|---|---|---|---|
| Resistivity | 331.52 | 44.35 | 8.17 | 5.49 |
| Thickness | | 557.95 | 4881.10 | 4635.59 |
| Depth | 0.00 | 557.95 | 5439.06 | 10074.65 |


SHAST3
18-OCT-83
T43N R3W S25 M
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST3 18-OCT-83 T43N R3W S25 M
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAST3 18-OCT-83 T43N R3W S25 M



THE SITE IS: SHASE3 200 HZ 18-OCT-83 T43N R3W S25 M

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 22.37 | 3220.18 | 1 | 1207.28******* | |
| 0.0020 | 6.64 | 3786.02 | 2 | 499.84******* | |
| 0.0040 | 14.41 | 4474.01 | 3 | 302.76******* | |
| 0.0060 | 4.08 | 5328.37 | 4 | 27.29 | 981.04 |
| 0.0143 | 12.62 | 8035.51 | 5 | 16.26 | 767.08 |
| 0.0200 | 28.36 | 9421.88 | 6 | 14.03 | 486.59 |
| 0.0303 | 114.53 | 9654.94 | 7 | 10.22 | 166.07 |
| 0.0500 | 0.00 | 0.00 | 8 | 0.00 | 0.00 |
| 0.1000 | 33.84 | 6252.51 | 9 | 2.29 | 66.67 |
| 0.1818 | 33.45 | 4965.04 | 10 | 0.86 | 16.42 |
| 0.3333 | 68.45 | 4512.50 | 11 | 0.44 | 6.00 |
| 0.5000 | 71.20 | 5542.28 | 12 | 0.70 | 12.14 |
| 0.5988 | 86.28 | 5178.00 | 13 | 0.37 | 4.09 |
| 0.8000 | 90.27 | 4544.81 | 14 | 0.20 | 3.86 |
| 1.0000 | 51.22 | 4213.03 | 15 | 0.13 | 4.12 |
| 1.0000 | 51.34 | 4190.03 | 16 | 1.06 | 30.26 |
| 1.2048 | 52.44 | 5107.91 | 17 | 0.08 | 2.56 |
| 1.4925 | 61.43 | 4743.64 | 18 | 0.07 | 1.91 |
| 2.0000 | 65.11 | 4302.69 | 19 | 0.03 | 1.50 |
| 2.0000 | 57.79 | 3533.01 | 20 | 0.02 | 0.57 |
| 2.0000 | 85.22 | 2977.90 | 21 | 0.08 | 2.39 |
| 3.0303 | 62.75 | 4016.92 | 22 | 0.00 | 0.32 |
| 3.0303 | 70.27 | 4519.07 | 23 | 0.01 | 0.80 |
| 7.6923 | 91.59 | 5631.47 | 24 | 0.02 | 0.86 |
| 14.2857 | 134.13 | 5026.34 | 25 | 0.01 | 0.30 |
| 20.0000 | 130.97 | 5162.15 | 26 | 0.01 | 0.22 |
| 26.3158 | 632.37 | 4523.00 | 27 | 0.00 | 0.16 |
| 31.2500 | 719.70 | 5181.23 | 28 | 0.02 | 0.15 |
| 40.0000 | 183.84 | 4506.03 | 29 | 0.00 | 0.03 |

AVERAGE # 8
SHAST3 200 HZ 18-OCT-83 T43N R3W S25 M
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE | RHO MIN ( OHM-M ) | PHI MAX | PHI MIN (DEGREES) | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.325E+04 | 0.225E+02 | 47. | 62. | 60. | 0.9966 | 0.9962 | 0.1184 | 1.06 |
| H | SEC | 0.319E+04 | 0.223E+02 | 47. | 63. | 60. | 0.9966 | 0.9962 | 89.30 | 1.06 |
| E | 500.0 | 0.382E+04 | 0.468E+01 | 49. | 54. | 60. | 0.9875 | 0.9957 | 0.1498 | 0.91 |
| H | SEC | 0.375E+04 | 0.859E+01 | 49. | 51. | 60. | 0.9881 | 0.9957 | 111.80 | 0.92 |
| E | 250.0 | 0.451E+04 | 0.137E+02 | 54. | 26. | 60. | 0.9959 | 0.9958 | 0.0871 | 0.86 |
| H | SEC | 0.444E+04 | 0.152E+02 | 54. | 28. | 60. | 0.9959 | 0.9958 | 146.60 | 0.87 |
| E | 125.0 | 0.536E+04 | 0.384E+01 | 60. | 34. | 60. | 0.9921 | 0.9972 | 0.1551 | 0.72 |
| H | SEC | 0.530E+04 | 0.431E+01 | 60. | 18. | 60. | 0.9932 | 0.9974 | 138.60 | 0.76 |
| E | 70.0 | 0.808E+04 | 0.164E+02 | 56. | 20. | 60. | 0.9956 | 0.9988 | 0.2008 | 0.68 |
| H | SEC | 0.800E+04 | 0.881E+01 | 56. | 79. | 60. | 0.9965 | 0.9988 | 136.50 | 0.71 |
| E | 50.0 | 0.954E+04 | 0.394E+02 | 51. | 15. | 60. | 0.9906 | 0.9975 | 0.2364 | 0.67 |
| H | SEC | 0.930E+04 | 0.173E+02 | 52. | 83. | 60. | 0.9934 | 0.9979 | 149.10 | 0.72 |
| E | 33.0 | 0.990E+04 | 0.207E+03 | 46. | 73. | 60. | 0.9039 | 0.9861 | 0.2972 | 0.57 |
| H | SEC | 0.941E+04 | 0.223E+02 | 46. | 46. | 60. | 0.9444 | 0.9894 | 147.90 | 0.66 |
| E | 20.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |

AVERAGE # 8
SHAST3 200 HZ 18-OCT-83 T43N R3W S25 M
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF M) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.656E+04 | 0.371E+02 | 34. | 2. | 60. | 0.9756 | 0.9781 | 0.4359 | 0.62 |
| H | SEC | 0.594E+04 | 0.306E+02 | 34. | 15. | 60. | 0.9761 | 0.9784 | 135.40 | 0.65 |
| E | 5.5 | 0.567E+04 | 0.483E+02 | 31. | 57. | 70. | 0.9434 | 0.9447 | 0.4182 | 0.45 |
| H | SEC | 0.426E+04 | 0.186E+02 | 30. | 67. | 70. | 0.9457 | 0.9467 | 141.50 | 0.51 |
| E | 3.0 | 0.528E+04 | 0.877E+02 | 34. | 53. | 70. | 0.8868 | 0.9240 | 0.5314 | 0.40 |
| H | SEC | 0.374E+04 | 0.492E+02 | 33. | 61. | 70. | 0.8899 | 0.9253 | 133.90 | 0.43 |
| E | 2.0 | 0.563E+04 | 0.758E+02 | 38. | 48. | 70. | 0.9858 | 0.9924 | 0.4675 | 0.44 |
| H | SEC | 0.546E+04 | 0.666E+02 | 38. | 48. | 70. | 0.9859 | 0.9924 | 121.00 | 0.44 |
| E | 1.7 | 0.523E+04 | 0.101E+03 | 40. | 43. | 70. | 0.9571 | 0.9947 | 0.4549 | 0.42 |
| H | SEC | 0.512E+04 | 0.717E+02 | 40. | 42. | 70. | 0.9586 | 0.9947 | 121.00 | 0.43 |
| E | 1.2 | 0.464E+04 | 0.102E+03 | 38. | 48. | 70. | 0.9679 | 0.9910 | 0.5570 | 0.43 |
| H | SEC | 0.445E+04 | 0.784E+02 | 38. | 47. | 70. | 0.9688 | 0.9910 | 115.00 | 0.44 |
| E | 1.0 | 0.435E+04 | 0.549E+02 | 38. | 47. | 70. | 0.9864 | 0.9867 | 0.4352 | 0.46 |
| H | HZ | 0.408E+04 | 0.475E+02 | 38. | 47. | 70. | 0.9866 | 0.9868 | 109.20 | 0.47 |

AVERAGE # 8
SHAST3 200 HZ 18-OCT-83 T43N R3W S25 N
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF M) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.424E+04 | 0.525E+02 | 39. | 43. | 70. | 0.9944 | 0.9946 | 0.4560 | 0.47 |
| H | HZ | 0.414E+04 | 0.501E+02 | 39. | 43. | 70. | 0.9944 | 0.9946 | 112.30 | 0.47 |
| E | 1.2 | 0.527E+04 | 0.569E+02 | 40. | 50. | 70. | 0.9641 | 0.9889 | 0.5070 | 0.49 |
| H | HZ | 0.495E+04 | 0.479E+02 | 39. | 51. | 70. | 0.9644 | 0.9890 | 104.40 | 0.48 |
| E | 1.5 | 0.491E+04 | 0.664E+02 | 42. | 47. | 70. | 0.9663 | 0.9862 | 0.4734 | 0.49 |
| H | HZ | 0.458E+04 | 0.565E+02 | 42. | 47. | 70. | 0.9666 | 0.9862 | 104.70 | 0.49 |
| E | 2.0 | 0.452E+04 | 0.700E+02 | 42. | 51. | 70. | 0.9693 | 0.9785 | 0.4102 | 0.49 |
| H | HZ | 0.409E+04 | 0.602E+02 | 42. | 49. | 70. | 0.9696 | 0.9787 | 101.60 | 0.49 |
| E | 2.0 | 0.440E+04 | 0.646E+02 | 39. | 50. | 70. | 0.9191 | 0.8908 | 0.3788 | 0.48 |
| H | HZ | 0.267E+04 | 0.510E+02 | 39. | 45. | 70. | 0.9202 | 0.8926 | 96.70 | 0.47 |
| E | 2.0 | 0.355E+04 | 0.104E+03 | 32. | 52. | 70. | 0.9408 | 0.9097 | 0.5657 | 0.45 |
| H | HZ | 0.241E+04 | 0.666E+02 | 32. | 47. | 70. | 0.9420 | 0.9128 | 108.40 | 0.47 |

AVERAGE # 8
SHAST3 200 HZ 18-OCT-83 T43N R3W S25 M
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.476E+04 | 0.639E+02 | 42. | 55. | 70. | 0.9523 | 0.9188 | 0.3734 | 0.49 |
| H | HZ | 0.327E+04 | 0.616E+02 | 42. | 56. | 70. | 0.9530 | 0.9200 | 98.40 | 0.48 |
| E | 3.0 | 0.471E+04 | 0.737E+02 | 44. | 55. | 70. | 0.9733 | 0.9820 | 0.3662 | 0.46 |
| H | HZ | 0.433E+04 | 0.668E+02 | 44. | 54. | 70. | 0.9734 | 0.9820 | 102.50 | 0.45 |
| E | 7.7 | 0.604E+04 | 0.968E+02 | 46. | 62. | 74. | 0.9688 | 0.9651 | 0.3228 | 0.41 |
| H | HZ | 0.523E+04 | 0.864E+02 | 46. | 61. | 74. | 0.9689 | 0.9652 | 108.40 | 0.41 |
| E | 14.3 | 0.587E+04 | 0.137E+03 | 41. | 63. | 74. | 0.9376 | 0.9330 | 0.5251 | 0.38 |
| H | HZ | 0.418E+04 | 0.132E+03 | 42. | 60. | 74. | 0.9397 | 0.9351 | 110.70 | 0.32 |
| E | 20.0 | 0.588E+04 | 0.147E+03 | 39. | 65. | 74. | 0.9222 | 0.9360 | 0.4857 | 0.39 |
| H | HZ | 0.445E+04 | 0.115E+03 | 40. | 63. | 74. | 0.9225 | 0.9365 | 114.10 | 0.36 |
| E | 26.3 | 0.528E+04 | 0.106E+04 | 38. | 67. | 74. | 0.6902 | 0.8560 | 0.4818 | 0.19 |
| H | HZ | 0.376E+04 | 0.208E+03 | 34. | 82. | 74. | 0.7024 | 0.8798 | 107.20 | 0.41 |
| E | 31.2 | 0.607E+04 | 0.110E+04 | 41. | 71. | 74. | 0.7263 | 0.8208 | 0.5124 | 0.16 |
| H | HZ | 0.430E+04 | 0.338E+03 | 32. | 1. | 74. | 0.7564 | 0.8608 | 118.10 | 0.45 |
| E | 40.0 | 0.545E+04 | 0.205E+03 | 33. | 62. | 74. | 0.9085 | 0.9189 | 0.7434 | 0.37 |
| H | HZ | 0.356E+04 | 0.162E+03 | 33. | 60. | 74. | 0.9123 | 0.9222 | 111.60 | 0.32 |

SHAST3 200 HZ 18-OCT-83 T43N R3W S25 H

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 20
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 40.0000 | | 0.0000 |
| | | 800.0000 | |
| 2 | 20.0000 | | 800.0000 |
| | | 5000.0000 | |
| 3 | 100.0000 | | 5800.0000 |
| | | 12000.0000 | |
| 4 | 10.0000 | | 17800.0000 |

FREQUENCY RANGE ( 0.0020 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 331.1400 | | 0.0000 |
| | | 557.2888 | |
| 2 | 44.4569 | | 557.2888 |
| | | 4897.1065 | |
| 3 | 8.1840 | | 5454.3953 |
| | | 4636.6260 | |
| 4 | 5.4975 | | 10091.0212 |

MEAN PERCENT VARIATION IS 19.9044

ERROR ANALYSIS

R-SQUARED = 0.997

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 19 | 32974.544 | 1735.502 | 0.317 |
| MODEL | 6 | 32876.639 | 5479.440 | 89898.609 |
| RESID | 13 | 0.792 | 0.061 | |

STANDARD ERROR = 0.247

DTEST FOR MEANS = 0.000

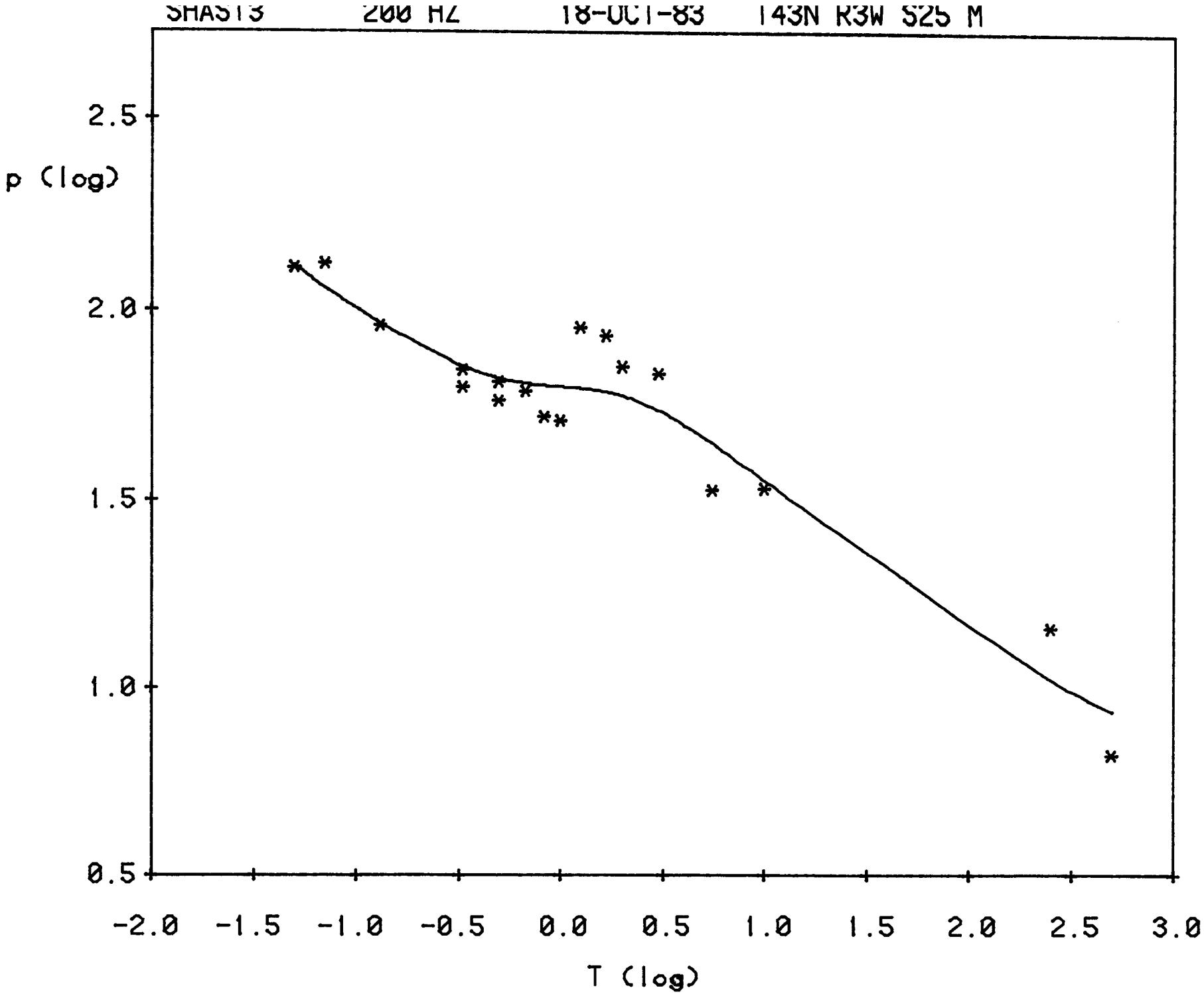
NOISE TO SIGNAL RATIO = 0.334 PERCENT

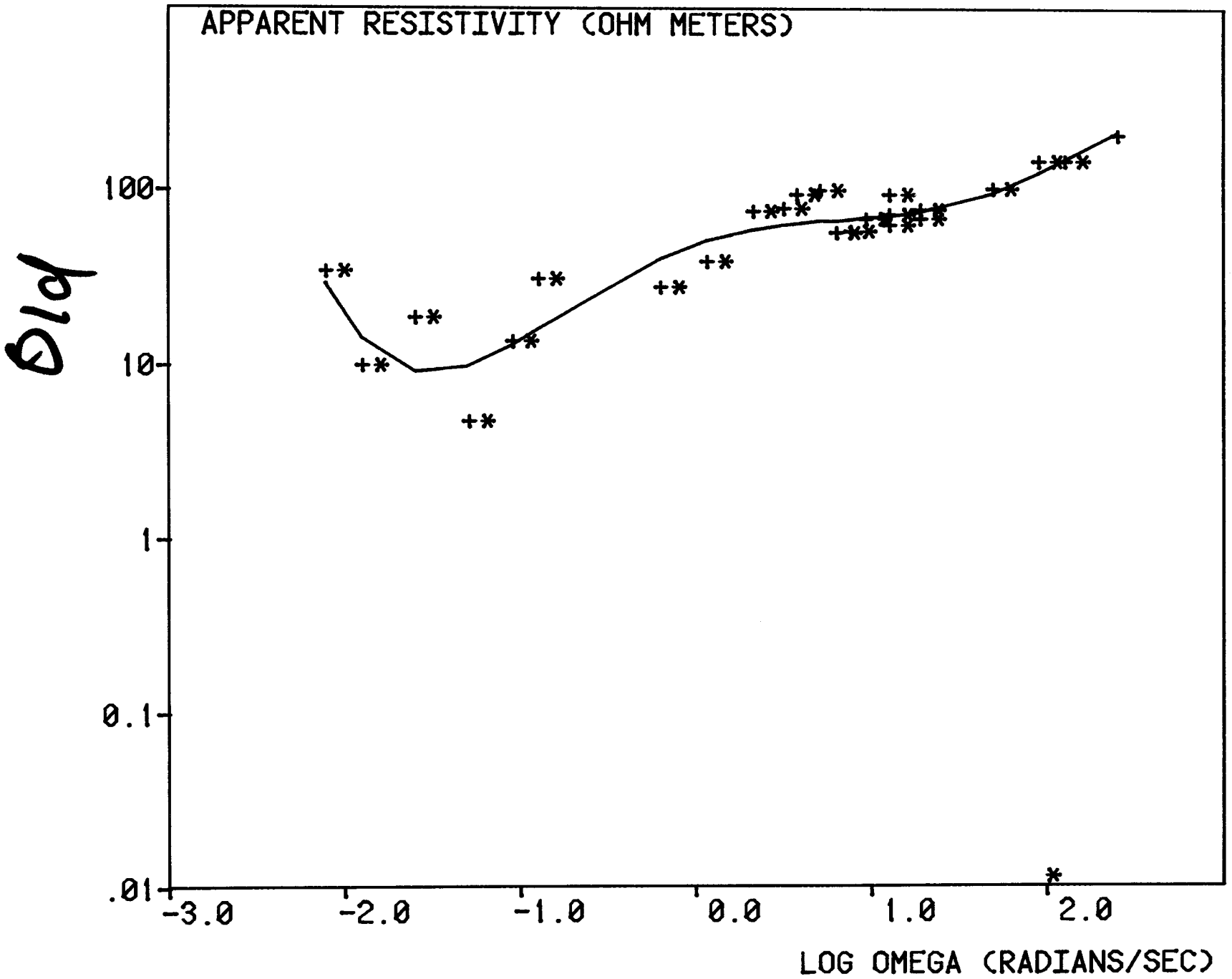
SHAST3 200 HZ 18-OCT-83 T43N R3W S25 M

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 500.000 | 6.636 | 8.694 | -2.058 | -26.851 |
| 2 | 250.000 | 14.414 | 10.288 | 4.126 | 33.409 |
| 3 | 10.000 | 33.844 | 35.556 | -1.711 | -4.932 |
| 4 | 5.500 | 33.453 | 45.240 | -11.788 | -29.959 |
| 5 | 3.000 | 68.455 | 55.208 | 13.247 | 21.424 |
| 6 | 2.000 | 71.197 | 60.072 | 11.125 | 16.950 |
| 7 | 1.670 | 86.280 | 61.461 | 24.819 | 33.598 |
| 8 | 1.250 | 90.265 | 62.782 | 27.483 | 35.915 |
| 9 | 1.000 | 51.224 | 63.329 | -12.105 | -21.134 |
| 10 | 1.000 | 51.336 | 63.329 | -11.993 | -20.918 |
| 11 | 0.830 | 52.442 | 63.752 | -11.310 | -19.467 |
| 12 | 0.670 | 61.432 | 64.495 | -3.063 | -4.864 |
| 13 | 0.500 | 65.107 | 66.417 | -1.310 | -1.992 |
| 14 | 0.500 | 57.794 | 66.417 | -8.623 | -13.884 |
| 15 | 0.330 | 62.753 | 71.556 | -8.803 | -13.109 |
| 16 | 0.330 | 70.267 | 71.556 | -1.289 | -1.818 |
| 17 | 0.130 | 91.591 | 92.625 | -1.034 | -1.122 |
| 18 | 0.070 | 134.128 | 115.388 | 18.740 | 15.021 |
| 19 | 0.050 | 130.968 | 132.262 | -1.294 | -0.983 |
| 20 | 0.025 | 183.836 | 180.488 | 3.348 | 1.838 |

MEAN PERCENT ERROR = 19.7911
MAXIMUM PERCENT ERROR = 35.9151
MAX. ERROR OCCURED AT OBSERVATION 8

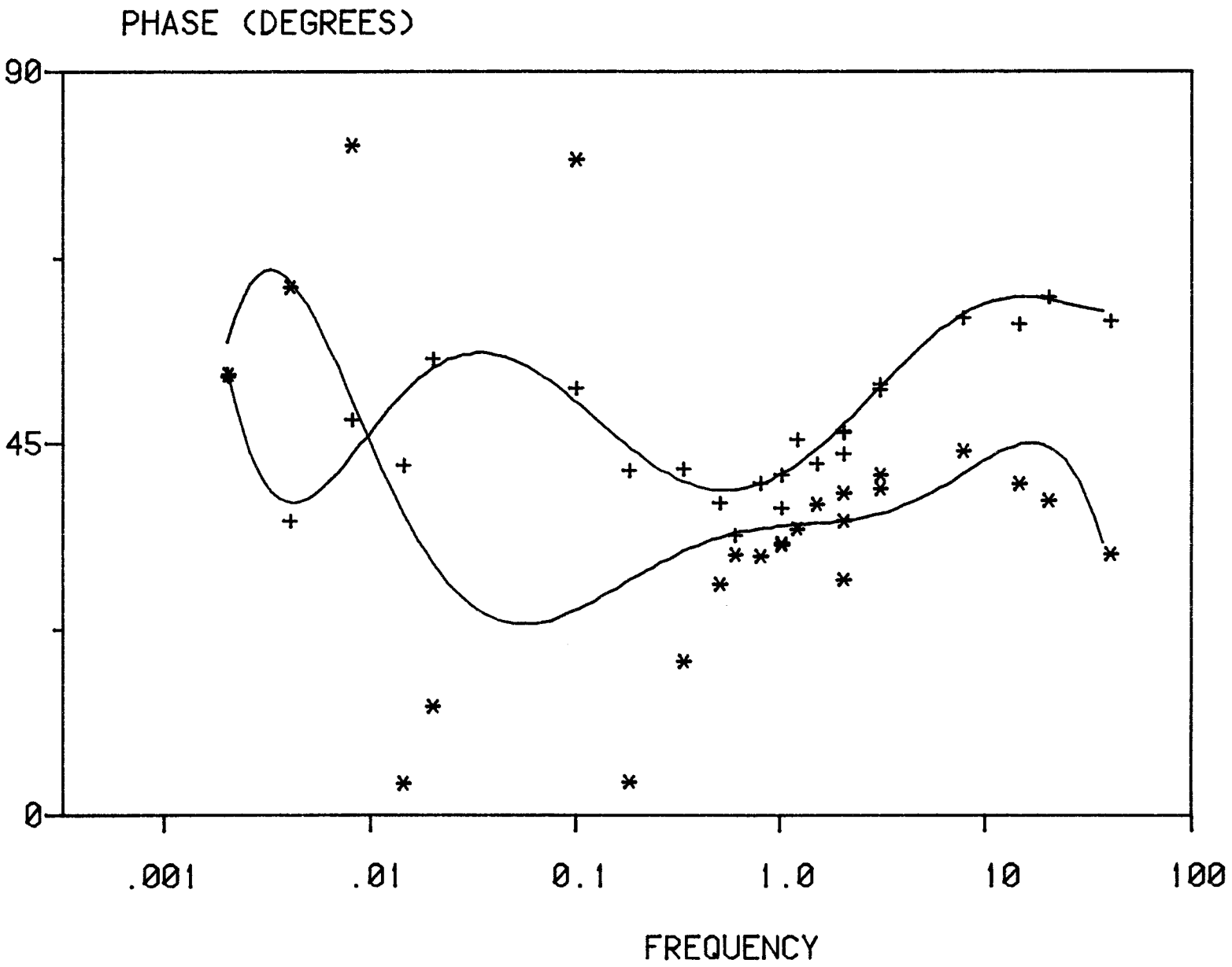

SHASTA 200 HZ 18-OCT-83 143N R3W S25 M
2.5
2.0
1.5
1.0
0.5
p (log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
T (log)


APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.01
-3.0
-2.0
-1.0
0.0
1.0
2.0
LOG OMEGA (RADIANS/SEC)

Old

SHAST 3

SHAST3 18-OCT-83 T43N R3W S25 M



THE SITE IS: SHAST3 200 EZ 18-OCT-83 T43N R3W S25 N

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMN, MEAN OF RHOMX | | PERIOD # |
|---|---|---|---|
| 0.0012 | 32.20 | ****** | 1 |
| 0.0020 | 9.36 | ****** | 2 |
| 0.0040 | 17.34 | ****** | 3 |
| 0.0080 | 4.41 | ****** | 4 |
| 0.0143 | 12.80 | ****** | 5 |
| 0.0200 | 28.77 | ****** | 6 |
| 0.0303 | 104.04 | ****** | 7 |
| 0.0500 | 0.00 | 0.00 | 8 |
| 0.1000 | 25.30 | ****** | 9 |
| 0.1818 | 35.69 | ****** | 10 |
| 0.3333 | 68.49 | ****** | 11 |
| 0.5000 | 71.19 | ****** | 12 |
| 0.5988 | 85.06 | ****** | 13 |
| 0.8000 | 89.95 | ****** | 14 |
| 1.0000 | 51.19 | ****** | 15 |
| 1.0000 | 51.33 | ****** | 16 |
| 1.2048 | 52.39 | ****** | 17 |
| 1.4925 | 61.41 | ****** | 18 |
| 2.0000 | 64.91 | ****** | 19 |
| 2.0000 | 57.25 | ****** | 20 |
| 2.0000 | 84.48 | ****** | 21 |
| 3.0303 | 61.82 | ****** | 22 |
| 3.0303 | 68.96 | ****** | 23 |
| 7.6923 | 91.80 | ****** | 24 |
| 14.2857 | 131.73 | ****** | 25 |
| 20.0000 | 130.90 | ****** | 26 |
| 26.3158 | 624.52 | ****** | 27 |
| 31.2500 | 693.12 | ****** | 28 |
| 40.0000 | 181.73 | ****** | 29 |

AVERAGE # 8
SHAST3 200 HZ 18-OCT-83 T43N R3W S25 H
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.0012 | 0.3343E+04 | 0.3229E+02 | 50.8 | 68.6 | 143.34 | 0.9966 | 0.9962 | 0.1184 |
| H | | 0.3289E+04 | 0.3210E+02 | 50.8 | 68.8 | 143.30 | 0.9966 | 0.9962 | 89.20 |
| E | 0.0020 | 0.3882E+04 | 0.7109E+01 | 54.3 | 54.5 | 144.91 | 0.9876 | 0.9958 | 0.1498 |
| H | | 0.3812E+04 | 0.1161E+02 | 54.4 | 53.9 | 145.08 | 0.9881 | 0.9958 | 111.80 |
| E | 0.0040 | 0.4545E+04 | 0.1642E+02 | 65.0 | 36.0 | 146.50 | 0.9960 | 0.9958 | 0.0871 |
| H | | 0.4475E+04 | 0.1825E+02 | 65.1 | 37.6 | 146.36 | 0.9960 | 0.9958 | 146.60 |
| E | 0.0080 | 0.5366E+04 | 0.4013E+01 | 82.0 | 58.1 | 148.79 | 0.9921 | 0.9973 | 0.1551 |
| H | | 0.5306E+04 | 0.4810E+01 | 82.2 | 39.9 | 148.23 | 0.9932 | 0.9974 | 138.60 |
| E | 0.0143 | 0.8075E+04 | 0.1642E+02 | 4.9 | 59.3 | 150.01 | 0.9957 | 0.9988 | 0.2008 |
| H | | 0.7996E+04 | 0.9181E+01 | 4.9 | 27.9 | 149.54 | 0.9966 | 0.9988 | 136.50 |
| E | 0.0200 | 0.9545E+04 | 0.3880E+02 | 14.0 | 67.9 | 150.30 | 0.9907 | 0.9976 | 0.2364 |
| H | | 0.9304E+04 | 0.1874E+02 | 14.2 | 44.9 | 149.02 | 0.9934 | 0.9979 | 149.10 |
| E | 0.0303 | 0.9969E+04 | 0.1876E+03 | 30.5 | 54.1 | 153.17 | 0.9040 | 0.9862 | 0.2972 |
| H | | 0.9411E+04 | 0.2048E+02 | 29.7 | 30.0 | 150.84 | 0.9445 | 0.9895 | 147.90 |
| E | 0.0500 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |

AVERAGE # 8
SHAST3 200 HZ 18-OCT-83 T43N R3W S25 M
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.1000 | 0.6606E+04 | 0.2705E+02 | 80.5 | 45.8 | 153.08 | 0.9757 | 0.9782 | 0.4359 |
| H | | 0.5968E+04 | 0.2355E+02 | 80.4 | 59.9 | 152.33 | 0.9762 | 0.9784 | 135.40 |
| E | 0.1818 | 0.5671E+04 | 0.5013E+02 | 5.4 | 34.4 | 158.39 | 0.9434 | 0.9447 | 0.4182 |
| H | | 0.4301E+04 | 0.2126E+02 | 4.7 | 51.5 | 155.85 | 0.9457 | 0.9467 | 141.50 |
| E | 0.3333 | 0.5285E+04 | 0.8741E+02 | 19.8 | 38.6 | 160.24 | 0.8869 | 0.9241 | 0.5314 |
| H | | 0.3740E+04 | 0.4957E+02 | 19.6 | 47.7 | 159.68 | 0.8900 | 0.9253 | 133.90 |
| E | 0.5000 | 0.5626E+04 | 0.7574E+02 | 29.0 | 38.9 | 160.09 | 0.9858 | 0.9925 | 0.4675 |
| H | | 0.5458E+04 | 0.6664E+02 | 29.0 | 38.9 | 159.99 | 0.9860 | 0.9925 | 121.00 |
| E | 0.5988 | 0.5244E+04 | 0.9968E+02 | 32.5 | 35.6 | 161.81 | 0.9571 | 0.9948 | 0.4549 |
| H | | 0.5132E+04 | 0.7044E+02 | 32.5 | 34.4 | 161.99 | 0.9587 | 0.9948 | 121.00 |
| E | 0.8000 | 0.4644E+04 | 0.1019E+03 | 32.6 | 42.0 | 160.77 | 0.9679 | 0.9911 | 0.5570 |
| H | | 0.4450E+04 | 0.7799E+02 | 32.4 | 40.7 | 161.05 | 0.9689 | 0.9911 | 115.00 |
| E | 1.0000 | 0.4348E+04 | 0.5488E+02 | 33.9 | 42.6 | 160.35 | 0.9865 | 0.9867 | 0.4352 |
| H | | 0.4079E+04 | 0.4751E+02 | 33.9 | 42.0 | 159.86 | 0.9866 | 0.9868 | 109.20 |

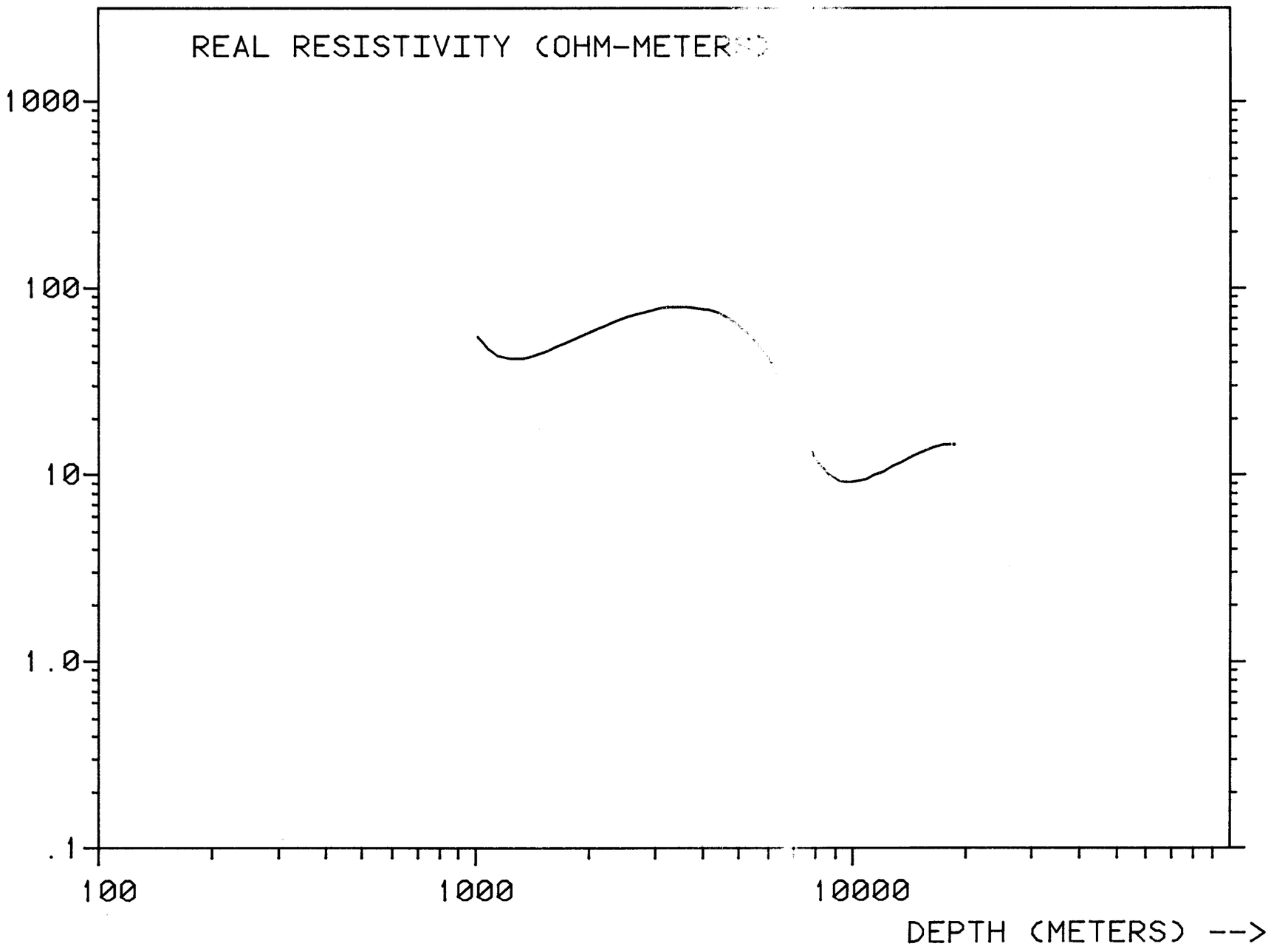
AVERAGE # 8
SHAST3 200 HZ 18-OCT-83 T43N R3W S25 H
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 1.0000 | 0.4237E+04 | 0.5252E+02 | 34.0 | 38.7 | 159.89 | 0.9944 | 0.9947 | 0.4560 |
| H | | 0.4143E+04 | 0.5014E+02 | 34.0 | 38.1 | 159.79 | 0.9945 | 0.9947 | 112.30 |
| E | 1.2048 | 0.5268E+04 | 0.5696E+02 | 36.0 | 45.9 | 159.68 | 0.9641 | 0.9890 | 0.5070 |
| H | | 0.4949E+04 | 0.4782E+02 | 35.6 | 47.4 | 160.41 | 0.9645 | 0.9891 | 104.40 |
| E | 1.4925 | 0.4906E+04 | 0.6636E+02 | 38.8 | 44.1 | 159.74 | 0.9663 | 0.9862 | 0.4734 |
| H | | 0.4582E+04 | 0.5646E+02 | 38.6 | 43.5 | 160.31 | 0.9666 | 0.9863 | 104.70 |
| E | 2.0000 | 0.4519E+04 | 0.6982E+02 | 40.1 | 48.7 | 160.57 | 0.9694 | 0.9786 | 0.4102 |
| H | | 0.4088E+04 | 0.5999E+02 | 40.0 | 46.5 | 160.86 | 0.9697 | 0.9787 | 101.60 |
| E | 2.0000 | 0.4400E+04 | 0.6418E+02 | 36.7 | 47.5 | 160.79 | 0.9191 | 0.8909 | 0.3788 |
| H | | 0.2672E+04 | 0.5033E+02 | 36.7 | 42.2 | 161.67 | 0.9202 | 0.8927 | 96.70 |
| E | 2.0000 | 0.3546E+04 | 0.1039E+03 | 29.6 | 49.7 | 159.33 | 0.9409 | 0.9097 | 0.5657 |
| H | | 0.2421E+04 | 0.6504E+02 | 29.8 | 45.3 | 157.11 | 0.9421 | 0.9128 | 108.40 |

AVERAGE # 8
SHAST3 200 HZ 18-OCT-83 T43N R3W S25 H
NSAMP = 1024 SI = 0.0050 TO = 5.1200

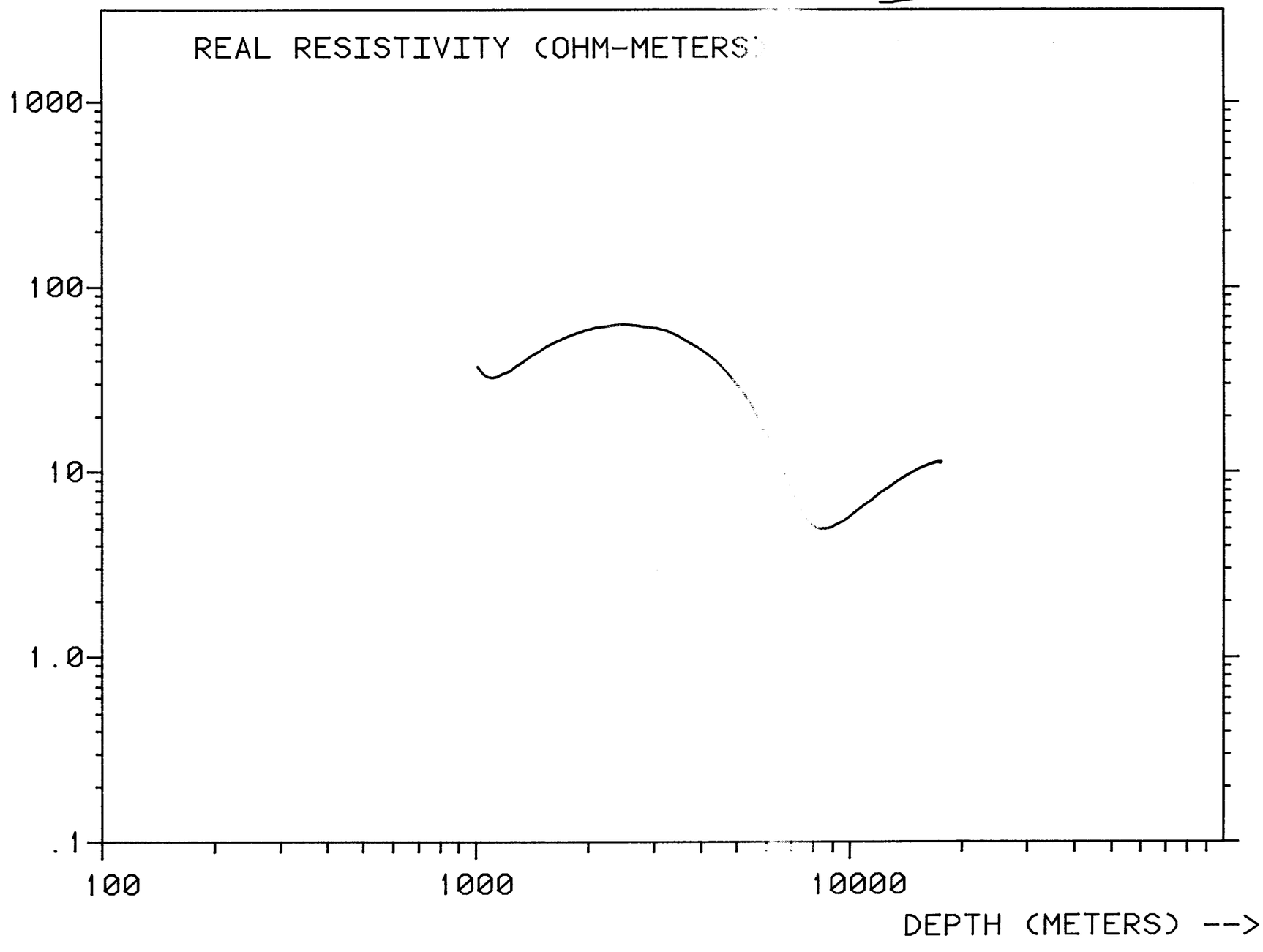
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 3.0303 | 0.4764E+04 | 0.6328E+02 | 40.6 | 52.6 | 160.97 | 0.9523 | 0.9189 | 0.3734 |
| H | | 0.3278E+04 | 0.6035E+02 | 41.0 | 53.8 | 161.57 | 0.9531 | 0.9201 | 98.40 |
| E | 3.0303 | 0.4718E+04 | 0.7261E+02 | 42.4 | 53.0 | 161.58 | 0.9734 | 0.9820 | 0.3662 |
| H | | 0.4336E+04 | 0.6531E+02 | 42.4 | 52.1 | 161.99 | 0.9735 | 0.9821 | 102.50 |
| E | 7.6923 | 0.6038E+04 | 0.9704E+02 | 45.2 | 62.2 | 163.37 | 0.9688 | 0.9651 | 0.3228 |
| H | | 0.5226E+04 | 0.8656E+02 | 45.3 | 60.3 | 163.59 | 0.9689 | 0.9652 | 108.40 |
| E | 14.2857 | 0.5875E+04 | 0.1365E+03 | 40.9 | 62.5 | 164.00 | 0.9377 | 0.9330 | 0.5251 |
| H | | 0.4197E+04 | 0.1270E+03 | 41.9 | 58.7 | 166.81 | 0.9398 | 0.9352 | 110.70 |
| E | 20.0000 | 0.5877E+04 | 0.1468E+03 | 39.2 | 65.0 | 163.20 | 0.9223 | 0.9361 | 0.4857 |
| H | | 0.4450E+04 | 0.1150E+03 | 39.5 | 62.9 | 164.49 | 0.9225 | 0.9365 | 114.10 |
| E | 26.3158 | 0.5301E+04 | 0.1039E+04 | 38.4 | 66.5 | 165.45 | 0.6903 | 0.8561 | 0.4818 |
| H | | 0.3765E+04 | 0.2099E+03 | 33.8 | 81.8 | 162.87 | 0.7024 | 0.8799 | 107.20 |
| E | 31.2500 | 0.6151E+04 | 0.1049E+04 | 41.3 | 70.4 | 168.42 | 0.7264 | 0.8209 | 0.5124 |
| H | | 0.4296E+04 | 0.3376E+03 | 31.6 | 1.3 | 163.97 | 0.7565 | 0.8608 | 118.10 |
| E | 40.0000 | 0.5450E+04 | 0.2051E+03 | 32.5 | 61.7 | 163.68 | 0.9086 | 0.9189 | 0.7434 |
| H | | 0.3579E+04 | 0.1583E+03 | 33.1 | 60.2 | 166.98 | 0.9123 | 0.9223 | 111.60 |

SHAST3 18-OCT-83 T43N R3W S. 1 M

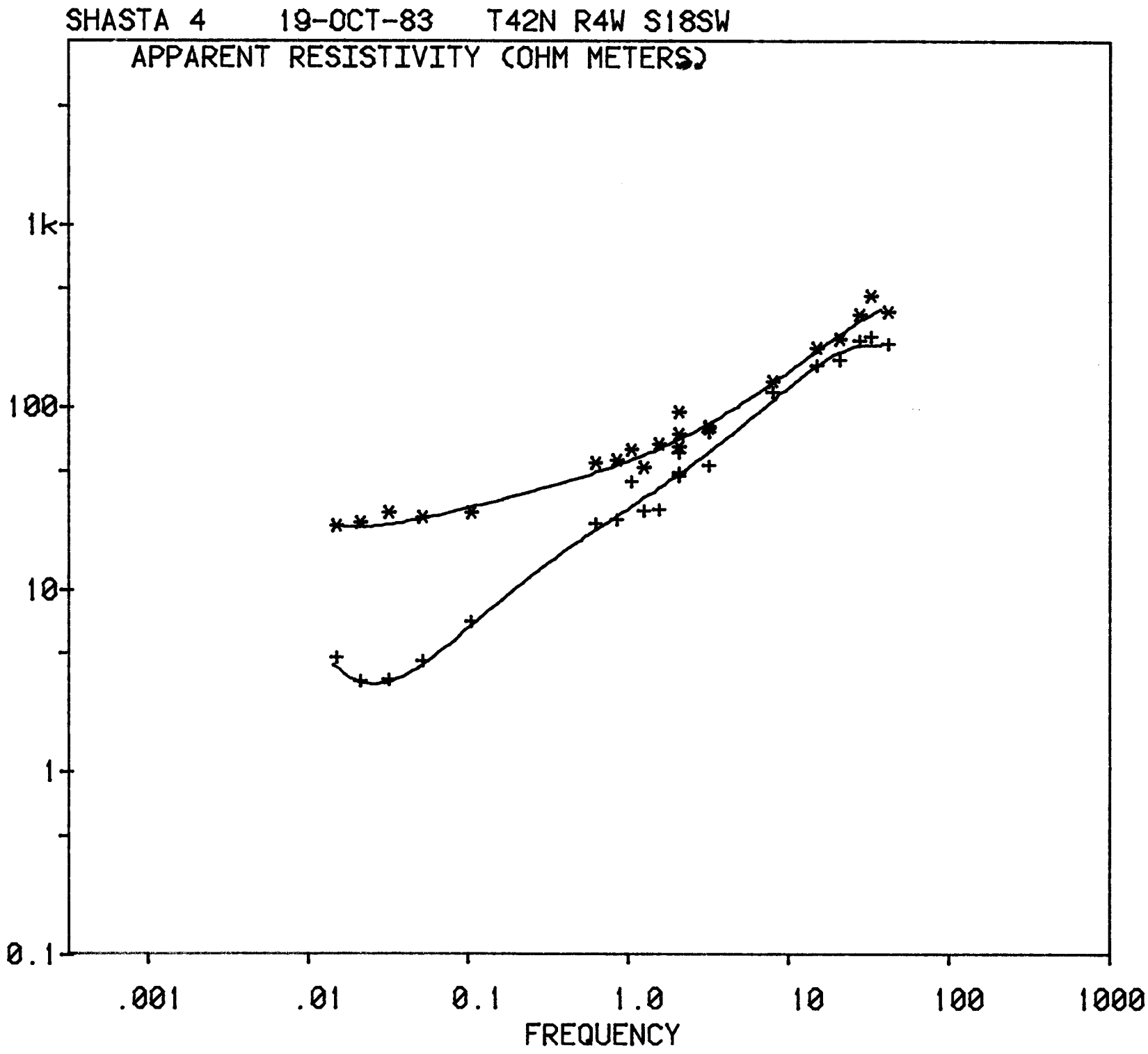


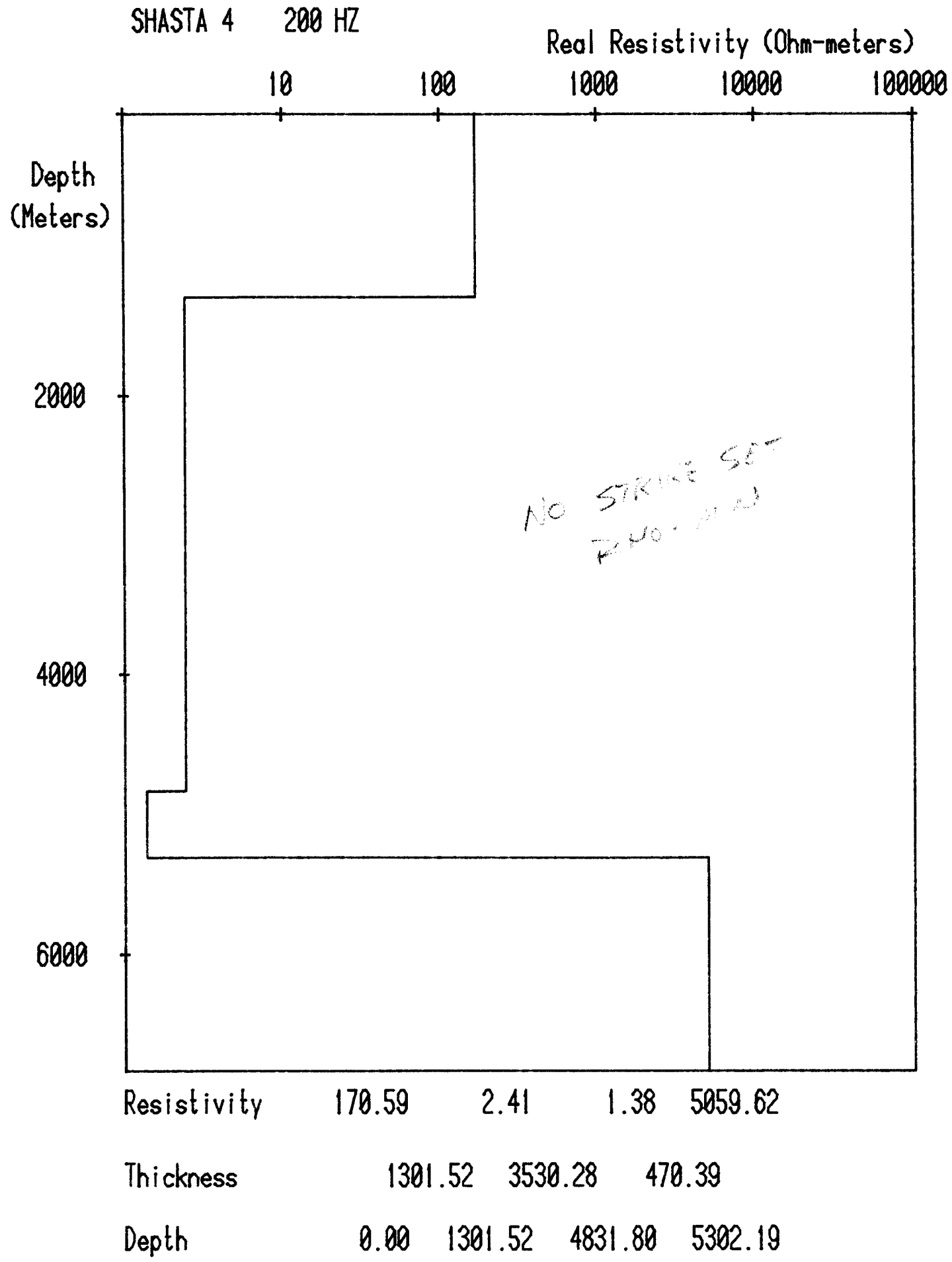
SHAST3 18-OCT-83 T43N R3W [illegible] M

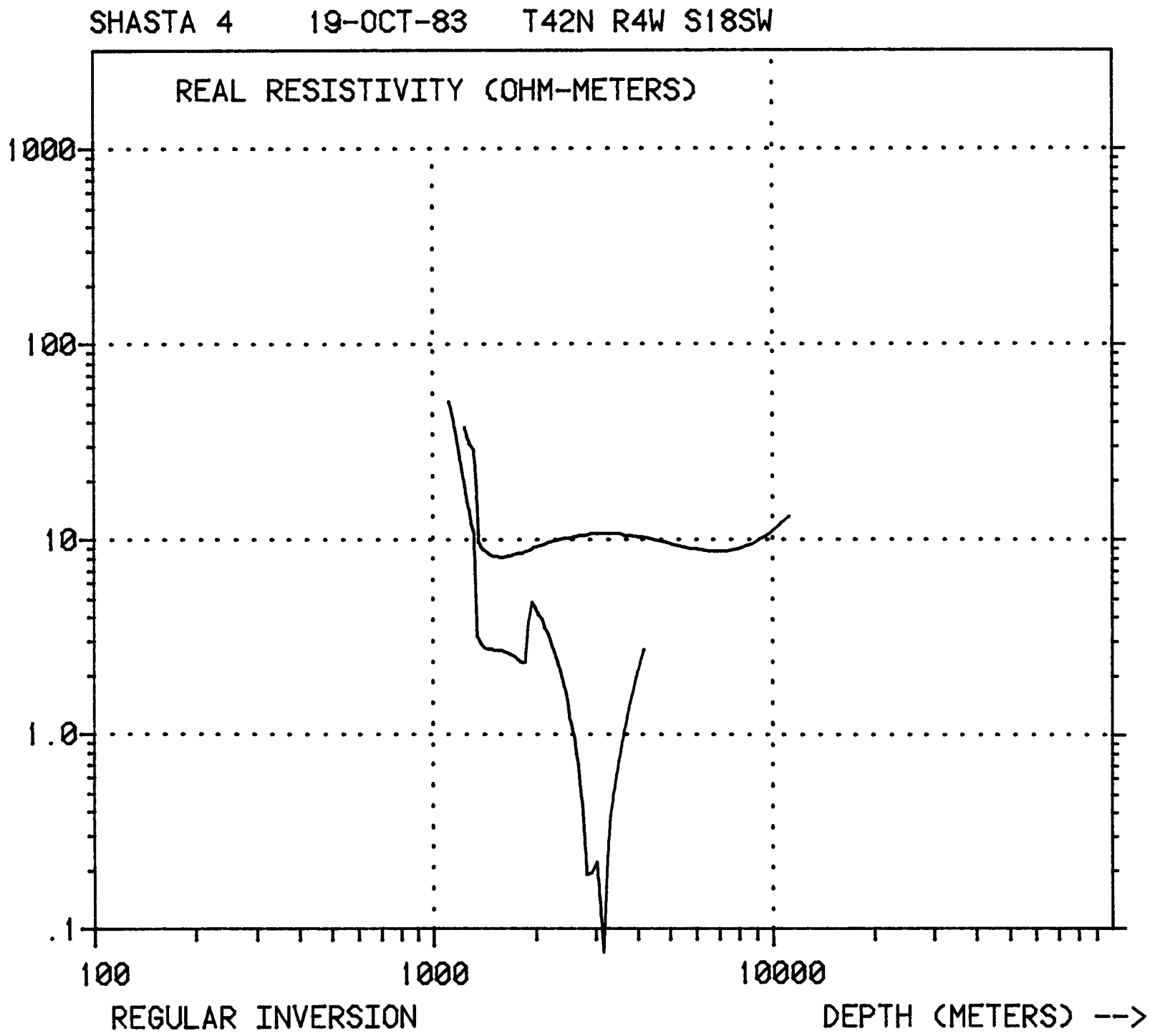
REAL RESISTIVITY (OHM-METERS)

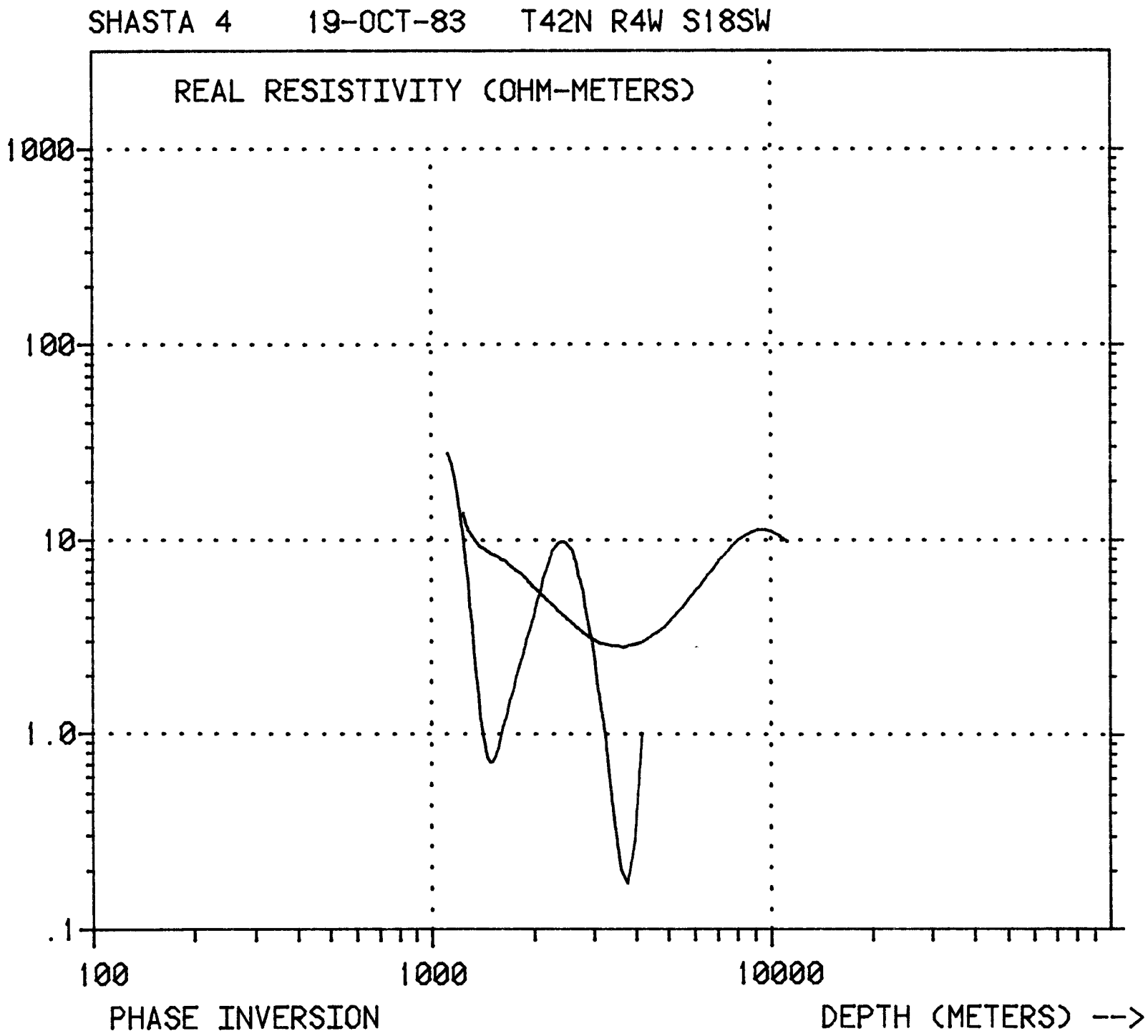



(Res)

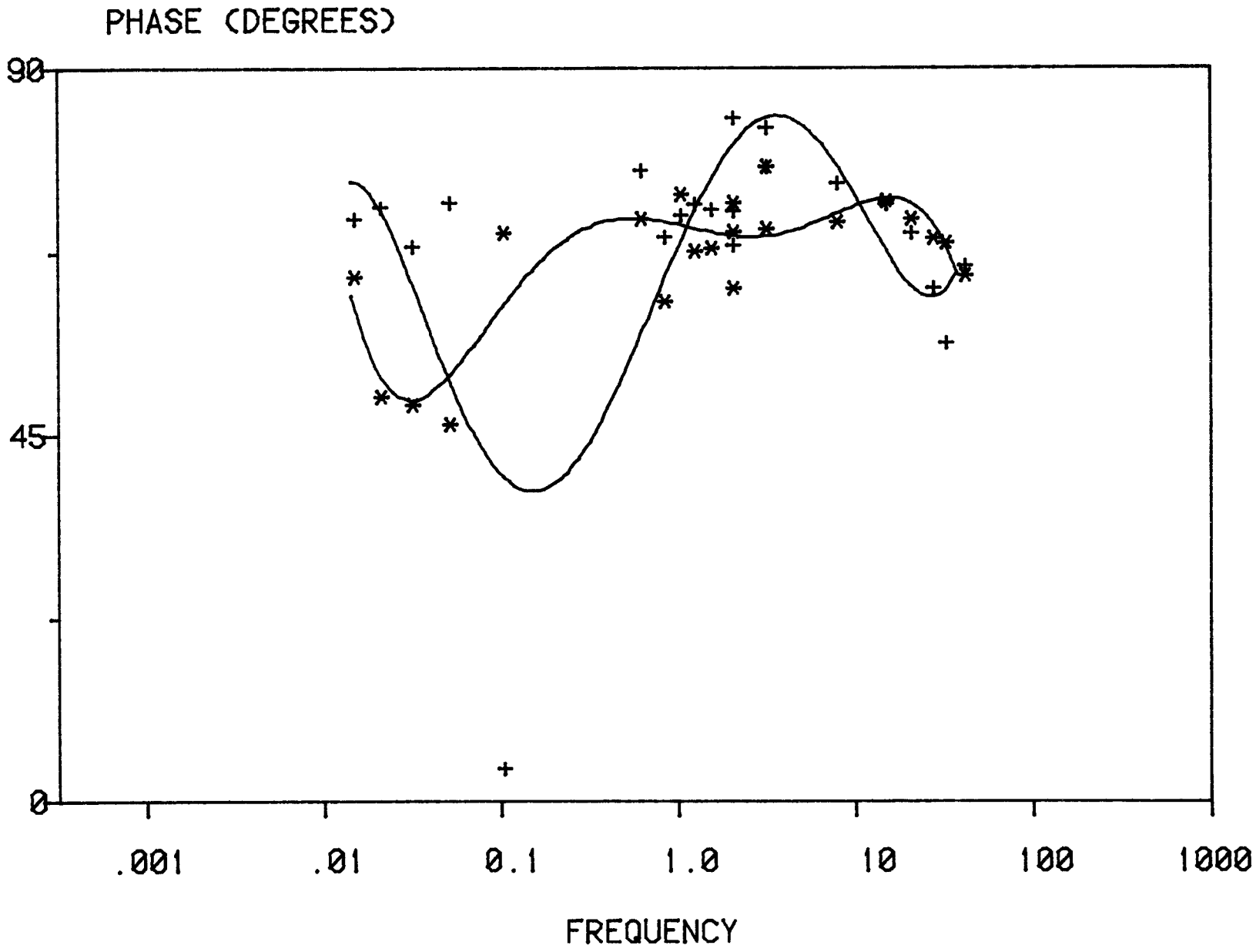

SHASTA 4 19-OCT-83 T42N R4W S18SW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHASTA 4 200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
Depth (Meters)
2000
4000
6000
NO STRIKE SET
Resistivity 170.59 2.41 1.38 5059.62
Thickness 1301.52 3530.28 470.39
Depth 0.00 1301.52 4831.80 5302.19


SHASTA 4 19-OCT-83 T42N R4W S18SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHASTA 4 19-OCT-83 T42N R4W S18SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHASTA 4  19-OCT-83  T42N R4W S18SW



THE SITE IS: SHASTA 4  200 HZ  19-OCT-83  T42N R4W S18SW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.00 | 0.00 | 1 | 0.00 | 0.00 |
| 0.0020 | 0.00 | 0.00 | 2 | 0.00 | 0.00 |
| 0.0040 | 0.00 | 0.00 | 3 | 0.00 | 0.00 |
| 0.0080 | 0.00 | 0.00 | 4 | 0.00 | 0.00 |
| 0.0143 | 3.94 | 21.05 | 5 | 15.75 | 20.49 |
| 0.0200 | 2.95 | 21.82 | 6 | 29.48 | 44.15 |
| 0.0303 | 3.02 | 24.55 | 7 | 9.88 | 25.24 |
| 0.0500 | 3.84 | 23.52 | 8 | 1.56 | 6.89 |
| 0.1000 | 6.22 | 24.60 | 9 | 0.38 | 1.28 |
| 0.1818 | 12.64 | 23.07 | 10 | 0.51 | 2.10 |
| 0.3333 | 5.71 | 19.49 | 11 | 0.30 | 0.07 |
| 0.5000 | 13.06 | 31.81 | 12 | 5.35 | 9.27 |
| 0.5988 | 21.11 | 45.95 | 13 | 0.04 | 0.08 |
| 0.8000 | 22.30 | 47.78 | 14 | 0.06 | 0.03 |
| 1.0000 | 11.91 | 34.52 | 15 | 0.88 | 2.59 |
| 1.0000 | 36.10 | 53.60 | 16 | 0.07 | 0.04 |
| 1.2048 | 25.20 | 43.30 | 17 | 0.03 | 0.11 |
| 1.4925 | 25.72 | 58.71 | 18 | 0.03 | 0.10 |
| 2.0000 | 38.67 | 65.63 | 19 | 0.03 | 0.04 |
| 2.0000 | 40.50 | 56.33 | 20 | 0.01 | 0.01 |
| 2.0000 | 52.47 | 86.73 | 21 | 0.04 | 0.11 |
| 3.0303 | 44.03 | 72.92 | 22 | 0.00 | 0.01 |
| 3.0303 | 67.33 | 70.61 | 23 | 0.03 | 0.01 |
| 7.6923 | 113.31 | 127.26 | 24 | 0.02 | 0.01 |
| 14.2857 | 157.51 | 196.40 | 25 | 0.01 | 0.01 |
| 20.0000 | 168.15 | 218.02 | 26 | 0.00 | 0.00 |
| 26.3158 | 214.87 | 296.57 | 27 | 0.01 | 0.02 |
| 31.2500 | 227.23 | 374.61 | 28 | 0.01 | 0.04 |
| 40.0000 | 206.03 | 305.79 | 29 | 0.00 | 0.01 |

AVERAGE # 8
SHASTA 4 200 HZ 19-OCT-83 T42N R4W S18SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.395E+02 | 0.859E+01 | 72. | 9. | 56. | 0.8812 | 0.9084 | 0.2003 | 0.45 |
| H | SEC | 0.973E+01 | 0.385E+01 | 69. | 0. | 61. | 0.9291 | 0.9443 | 172.90 | 0.50 |
| E | 5.5 | 0.375E+02 | 0.169E+02 | 50. | 84. | 127. | 0.4886 | 0.6924 | 1.2178 | 2.00 |
| H | SEC | 0.865E+01 | 0.834E+01 | 28. | 85. | 49. | 0.5980 | 0.8387 | 102.60 | 3.48 |
| E | 3.0 | 0.242E+02 | 0.825E+01 | 50. | 43. | 104. | 0.7956 | 0.8735 | 0.4157 | 0.20 |
| H | SEC | 0.148E+02 | 0.317E+01 | 44. | 48. | 82. | 0.8100 | 0.8881 | 136.90 | 0.13 |
| E | 2.0 | 0.328E+02 | 0.215E+02 | 58. | 62. | 80. | 0.8457 | 0.8319 | 0.0249 | 0.10 |
| H | SEC | 0.308E+02 | 0.460E+01 | 73. | 41. | 57. | 0.9104 | 0.8997 | 2.60 | 0.31 |
| E | 1.7 | 0.512E+02 | 0.274E+02 | 72. | 78. | 91. | 0.8598 | 0.9412 | 0.3204 | 0.04 |
| H | SEC | 0.407E+02 | 0.148E+02 | 72. | 78. | 87. | 0.8599 | 0.9416 | 37.80 | 0.06 |
| E | 1.2 | 0.583E+02 | 0.288E+02 | 62. | 70. | 110. | 0.8381 | 0.8853 | 0.2162 | 0.07 |
| H | SEC | 0.373E+02 | 0.158E+02 | 62. | 70. | 95. | 0.8383 | 0.8888 | 20.60 | 0.01 |
| E | 1.0 | 0.445E+02 | 0.208E+02 | 66. | 28. | 133. | 0.7181 | 0.8314 | 0.6505 | 0.20 |
| H | HZ | 0.245E+02 | 0.302E+01 | 65. | 25. | 128. | 0.7607 | 0.8462 | 105.10 | 0.28 |

AVERAGE # 8
SHASTA 4 200 HZ 19-OCT-83 T42N R4W S18SW
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.627E+02 | 0.509E+02 | 83. | 63. | 159. | 0.7931 | 0.8930 | 0.2051 | 0.20 |
| H | HZ | 0.445E+02 | 0.213E+02 | 67. | 82. | 81. | 0.7942 | 0.9014 | 16.00 | 0.03 |
| E | 1.2 | 0.486E+02 | 0.291E+02 | 68. | 74. | 121. | 0.9327 | 0.9461 | 0.1773 | 0.19 |
| H | HZ | 0.380E+02 | 0.213E+02 | 68. | 73. | 118. | 0.9333 | 0.9464 | 52.30 | 0.17 |
| E | 1.5 | 0.682E+02 | 0.313E+02 | 69. | 72. | 102. | 0.9296 | 0.9187 | 0.6461 | 0.17 |
| H | HZ | 0.492E+02 | 0.201E+02 | 68. | 74. | 113. | 0.9304 | 0.9201 | 107.20 | 0.19 |
| E | 2.0 | 0.724E+02 | 0.503E+02 | 73. | 85. | 86. | 0.8873 | 0.9503 | 0.1462 | 0.10 |
| H | HZ | 0.588E+02 | 0.270E+02 | 75. | 83. | 100. | 0.8922 | 0.9509 | 4.00 | 0.10 |
| E | 2.0 | 0.651E+02 | 0.515E+02 | 63. | 73. | 77. | 0.8777 | 0.9082 | 0.2234 | 0.05 |
| H | HZ | 0.476E+02 | 0.295E+02 | 63. | 73. | 74. | 0.8777 | 0.9087 | 5.20 | 0.04 |
| E | 2.0 | 0.122E+03 | 0.582E+02 | 80. | 58. | 149. | 0.8379 | 0.8885 | 0.1498 | 0.24 |
| H | HZ | 0.517E+02 | 0.468E+02 | 61. | 80. | 61. | 0.8459 | 0.8976 | 141.80 | 0.13 |

AVERAGE # 8
SHASTA 4 200 HZ 19-OCT-83 T42N R4W S18SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.862E+02 | 0.585E+02 | 70. | 84. | 89. | 0.8539 | 0.9033 | 0.6115 | 0.04 |
| H | HZ | 0.597E+02 | 0.296E+02 | 71. | 82. | 88. | 0.8548 | 0.9041 | 169.60 | 0.05 |
| E | 3.0 | 0.811E+02 | 0.775E+02 | 89. | 68. | 15. | 0.9218 | 0.9380 | 0.3471 | 0.05 |
| H | HZ | 0.601E+02 | 0.572E+02 | 68. | 89. | 105. | 0.9221 | 0.9380 | 131.90 | 0.04 |
| E | 7.7 | 0.132E+03 | 0.117E+03 | 71. | 76. | 88. | 0.9877 | 0.9874 | 0.2396 | 0.03 |
| H | HZ | 0.123E+03 | 0.109E+03 | 72. | 76. | 94. | 0.9878 | 0.9874 | 93.40 | 0.03 |
| E | 14.3 | 0.206E+03 | 0.169E+03 | 74. | 74. | 85. | 0.9663 | 0.9792 | 0.4029 | 0.02 |
| H | HZ | 0.187E+03 | 0.146E+03 | 74. | 74. | 93. | 0.9665 | 0.9793 | 98.50 | 0.02 |
| E | 20.0 | 0.236E+03 | 0.186E+03 | 72. | 70. | 79. | 0.9503 | 0.9622 | 0.5711 | 0.01 |
| H | HZ | 0.200E+03 | 0.150E+03 | 72. | 70. | 86. | 0.9505 | 0.9622 | 105.70 | 0.01 |
| E | 26.3 | 0.376E+03 | 0.236E+03 | 65. | 67. | 131. | 0.8807 | 0.8946 | 0.7541 | 0.12 |
| H | HZ | 0.217E+03 | 0.194E+03 | 74. | 59. | 75. | 0.8858 | 0.9007 | 92.40 | 0.13 |
| E | 31.2 | 0.525E+03 | 0.244E+03 | 56. | 69. | 148. | 0.8095 | 0.8569 | 1.1558 | 0.23 |
| H | HZ | 0.225E+03 | 0.210E+03 | 82. | 45. | 74. | 0.8260 | 0.8768 | 119.00 | 0.33 |
| E | 40.0 | 0.348E+03 | 0.264E+03 | 66. | 65. | 84. | 0.9241 | 0.9339 | 0.9324 | 0.03 |
| H | HZ | 0.264E+03 | 0.148E+03 | 64. | 67. | 119. | 0.9295 | 0.9381 | 117.60 | 0.09 |

AVERAGE # 8
SHASTA 4 200 HZ 19-OCT-83 T42N R4W S18SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 500.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 250.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 125.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 70.0 | 0.287E+02 | 0.547E+01 | 67. | 71. | 78. | 0.8655 | 0.9202 | 0.3752 | 0.23 |
| H | SEC | 0.134E+02 | 0.242E+01 | 62. | 73. | 79. | 0.9017 | 0.9420 | 161.60 | 0.23 |
| E | 50.0 | 0.227E+02 | 0.301E+01 | 50. | 74. | 64. | 0.9763 | 0.9914 | 0.2636 | 0.21 |
| H | SEC | 0.210E+02 | 0.289E+01 | 50. | 73. | 66. | 0.9764 | 0.9915 | 142.60 | 0.19 |
| E | 33.0 | 0.254E+02 | 0.307E+01 | 49. | 69. | 64. | 0.9810 | 0.9924 | 0.2669 | 0.25 |
| H | SEC | 0.237E+02 | 0.296E+01 | 49. | 69. | 65. | 0.9811 | 0.9924 | 141.20 | 0.24 |
| E | 20.0 | 0.261E+02 | 0.415E+01 | 47. | 74. | 62. | 0.9429 | 0.9591 | 0.4284 | 0.28 |
| H | SEC | 0.210E+02 | 0.353E+01 | 47. | 74. | 63. | 0.9432 | 0.9594 | 141.90 | 0.27 |

SHASTA 4  200 HZ  19-OCT-83  T42N R4W S18SW

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 18
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 100.0000 | | 0.0000 |
| | | 1300.0000 | |
| 2 | 1.0000 | | 1300.0000 |
| | | 700.0000 | |
| 3 | 10.0000 | | 2000.0000 |
| | | 1300.0000 | |
| 4 | 1.0000 | | 3300.0000 |

FREQUENCY RANGE ( 0.0143 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 170.7332 | | 0.0000 |
| | | 1299.2911 | |
| 2 | 2.4364 | | 1299.2911 |
| | | 2799.3491 | |
| 3 | 0.7347 | | 4098.6402 |
| | | 696.6356 | |
| 4 | 7321.5856 | | 4795.2758 |

MEAN PERCENT VARIATION IS 10.7996

ERROR ANALYSIS

R-SQUARED = 1.000

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 17 | 116095.885 | 6829.170 | 0.353 |
| MODEL | 6 | 116092.753 | 19348.792 | ********** |
| RESID | 11 | 0.210 | 0.019 | |

STANDARD ERROR = 0.138

DTEST FOR MEANS = -0.000

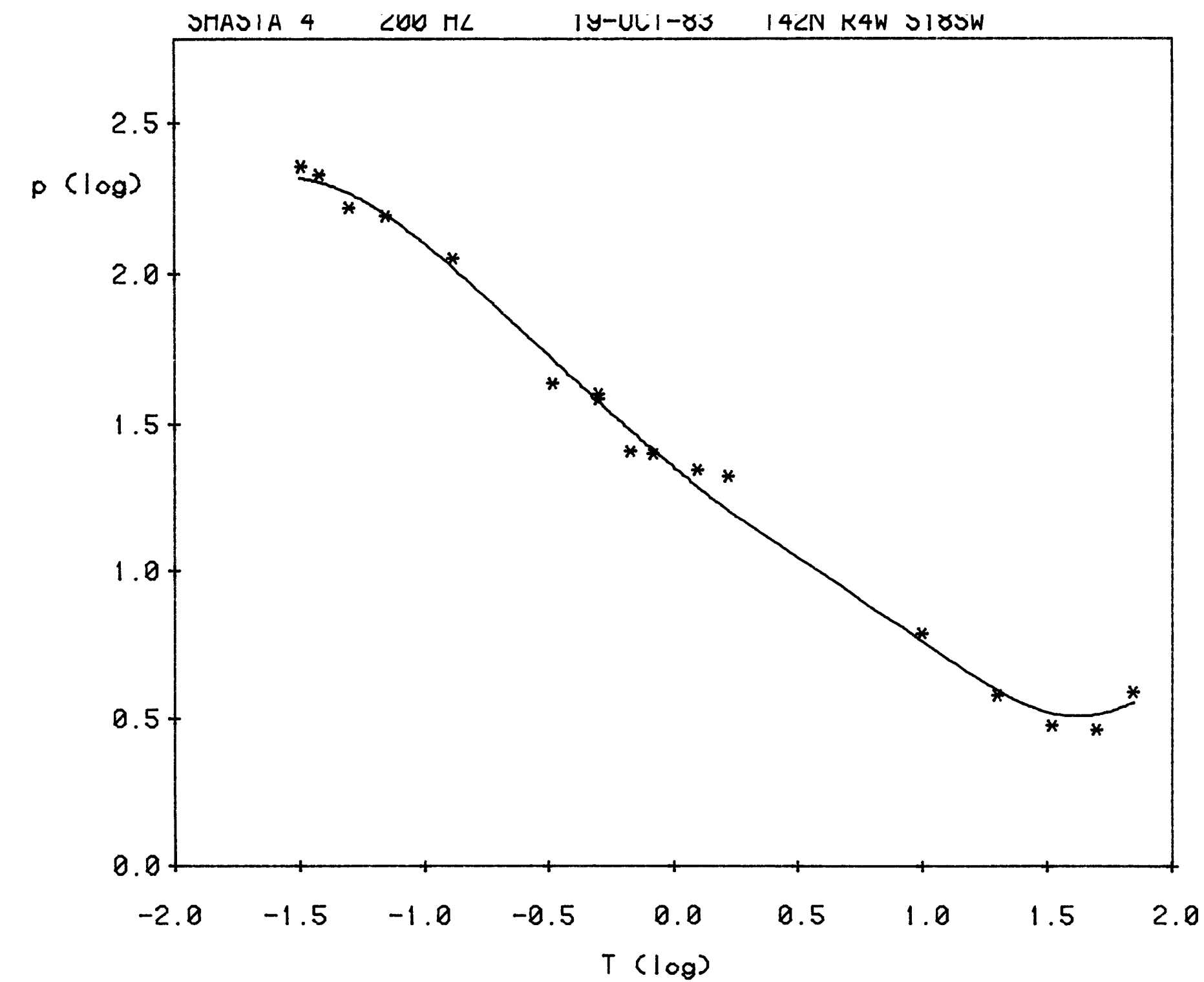
NOISE TO SIGNAL RATIO = 0.099 PERCENT

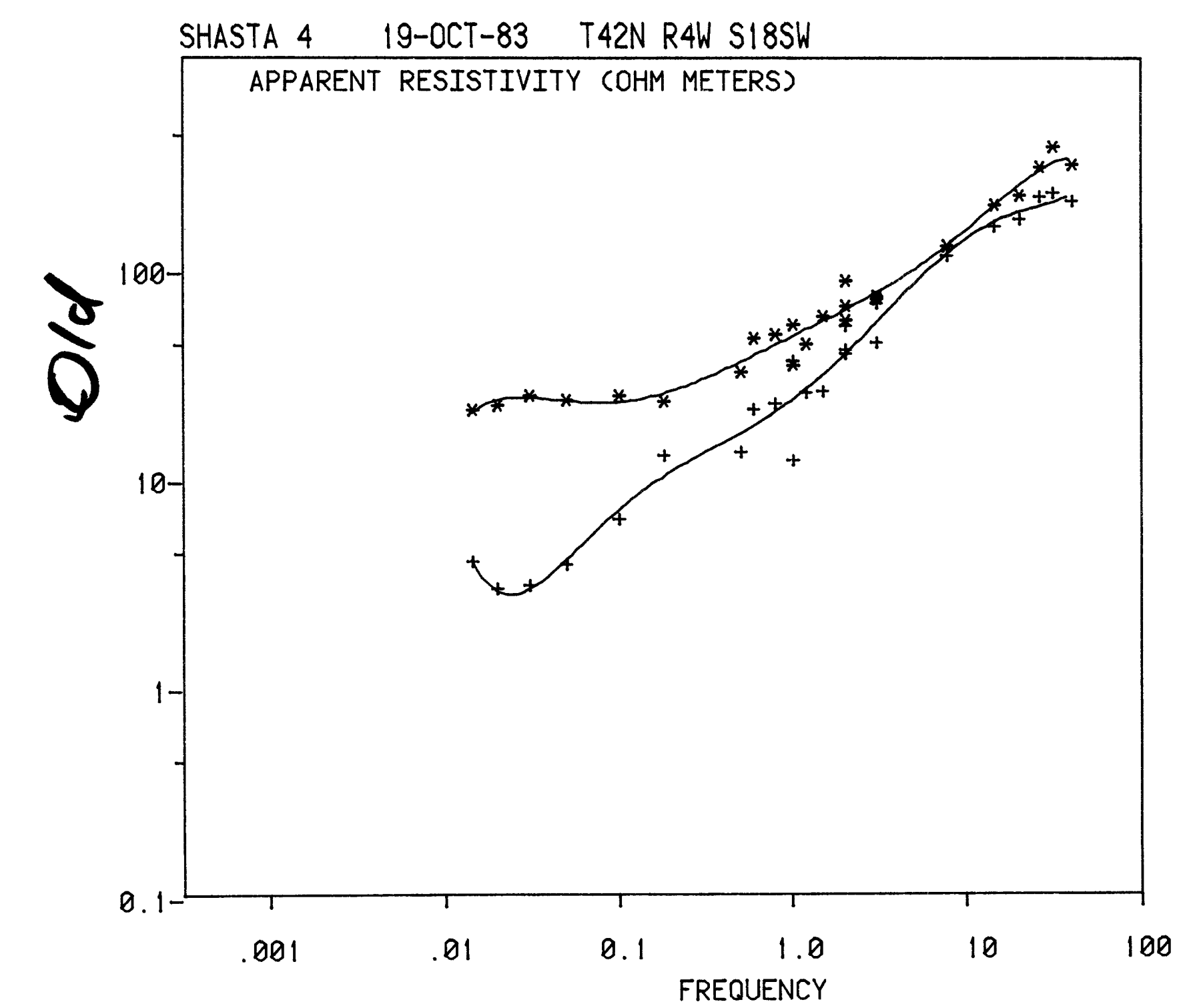
SHASTA 4 200 HZ 19-OCT-83 T42N R4W S18SW

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 70.000 | 3.945 | 3.633 | 0.312 | 8.231 |
| 2 | 50.000 | 2.951 | 3.253 | -0.302 | -9.748 |
| 3 | 33.000 | 3.017 | 3.258 | -0.240 | -7.659 |
| 4 | 20.000 | 3.839 | 3.918 | -0.079 | -2.037 |
| 5 | 10.000 | 6.218 | 5.890 | 0.327 | 5.407 |
| 6 | 1.670 | 21.112 | 16.114 | 4.999 | 26.855 |
| 7 | 1.250 | 22.300 | 19.575 | 2.725 | 13.017 |
| 8 | 0.830 | 25.201 | 26.157 | -0.956 | -3.724 |
| 9 | 0.670 | 25.722 | 30.629 | -4.907 | -17.415 |
| 10 | 0.500 | 38.667 | 38.217 | 0.450 | 1.171 |
| 11 | 0.500 | 40.497 | 38.217 | 2.280 | 5.793 |
| 12 | 0.330 | 44.034 | 52.755 | -8.721 | -18.021 |
| 13 | 0.130 | 113.314 | 108.242 | 5.072 | 4.578 |
| 14 | 0.070 | 157.506 | 162.168 | -4.662 | -2.917 |
| 15 | 0.050 | 168.147 | 189.437 | -21.290 | -11.908 |
| 16 | 0.038 | 214.868 | 204.685 | 10.183 | 4.854 |
| 17 | 0.032 | 227.230 | 209.534 | 17.696 | 8.103 |
| 18 | 0.025 | 206.027 | 209.784 | -3.758 | -1.807 |

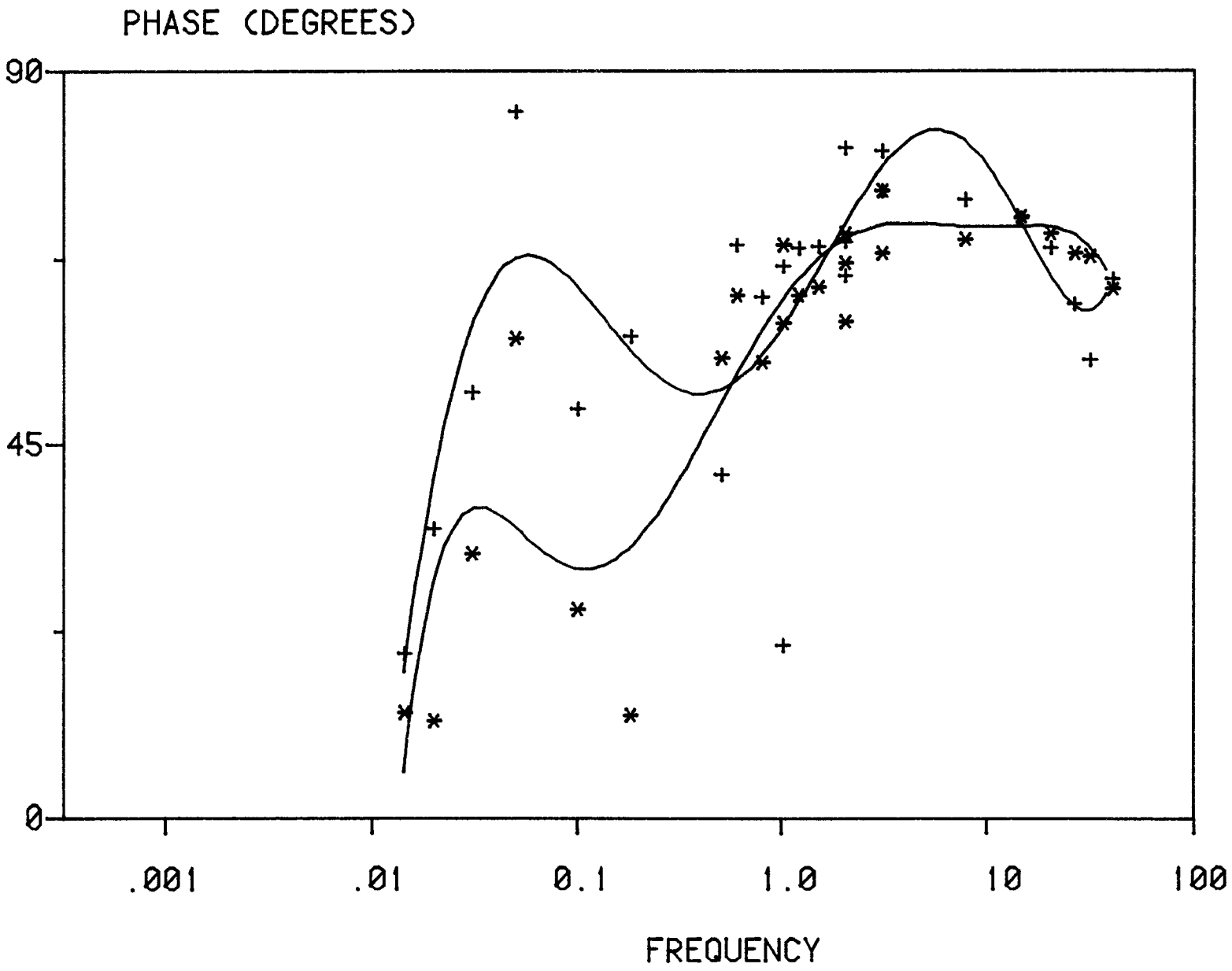
MEAN PERCENT ERROR = 10.7930
MAXIMUM PERCENT ERROR = 26.8549
MAX. ERROR OCCURED AT OBSERVATION 6


SHASTA 4 200 MZ 19-OCT-83 142N R4W S18SW
2.5
2.0
1.5
1.0
0.5
0.0
p (log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
T (log)


SHASTA 4 19-OCT-83 T42N R4W S18SW
APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.001
.01
0.1
1.0
10
100
FREQUENCY

Old

SHASTA 4  19-OCT-83  T42N R4W S18SW



THE SITE IS: SHASTA 4  200 HZ  19-OCT-83  T42N R4W S18SW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMN,MEAN OF RHOMX | | PERIOD # |
|---|---|---|---|
| 0.0012 | 0.00 | 0.00 | 1 |
| 0.0020 | 0.00 | 0.00 | 2 |
| 0.0040 | 0.00 | 0.00 | 3 |
| 0.0080 | 0.00 | 0.00 | 4 |
| 0.0143 | 3.94 | 21.05 | 5 |
| 0.0200 | 2.95 | 21.82 | 6 |
| 0.0303 | 3.02 | 24.55 | 7 |
| 0.0500 | 3.84 | 23.52 | 8 |
| 0.1000 | 6.22 | 24.60 | 9 |
| 0.1818 | 12.64 | 23.07 | 10 |
| 0.3333 | 5.71 | 19.49 | 11 |
| 0.5000 | 13.06 | 31.81 | 12 |
| 0.5988 | 21.11 | 45.95 | 13 |
| 0.8000 | 22.30 | 47.78 | 14 |
| 1.0000 | 11.91 | 34.52 | 15 |
| 1.0000 | 36.10 | 53.60 | 16 |
| 1.2048 | 25.20 | 43.30 | 17 |
| 1.4925 | 25.72 | 58.71 | 18 |
| 2.0000 | 38.67 | 65.63 | 19 |
| 2.0000 | 40.50 | 56.33 | 20 |
| 2.0000 | 52.47 | 86.73 | 21 |
| 3.0303 | 44.03 | 72.92 | 22 |
| 3.0303 | 67.33 | 70.61 | 23 |
| 7.6923 | 113.31 | 127.26 | 24 |
| 14.2857 | 157.51 | 196.40 | 25 |
| 20.0000 | 168.15 | 218.02 | 26 |
| 26.3158 | 214.87 | 296.57 | 27 |
| 31.2500 | 227.23 | 374.61 | 28 |
| 40.0000 | 206.03 | 305.79 | 29 |

AVERAGE # 8
SHASTA 4 200 HZ 19-OCT-83 T42N R4W S18SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.0012 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 0.0020 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 0.0040 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 0.0080 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 0.0143 | 0.2869E+02 | 0.5469E+01 | 16.2 | 19.5 | 168.28 | 0.8656 | 0.9203 | 0.3753 |
| H | | 0.1342E+02 | 0.2421E+01 | 11.4 | 22.4 | 168.82 | 0.9017 | 0.9420 | 161.50 |
| E | 0.0200 | 0.2266E+02 | 0.3010E+01 | 12.7 | 36.3 | 154.25 | 0.9764 | 0.9915 | 0.2636 |
| H | | 0.2099E+02 | 0.2892E+01 | 12.8 | 35.8 | 155.58 | 0.9764 | 0.9916 | 142.60 |
| E | 0.0303 | 0.2537E+02 | 0.3070E+01 | 33.0 | 52.4 | 154.27 | 0.9811 | 0.9924 | 0.2663 |
| H | | 0.2373E+02 | 0.2965E+01 | 33.0 | 52.4 | 155.22 | 0.9812 | 0.9925 | 141.30 |
| E | 0.0500 | 0.2608E+02 | 0.4145E+01 | 59.1 | 85.8 | 151.65 | 0.9430 | 0.9592 | 0.4284 |
| H | | 0.2095E+02 | 0.3533E+01 | 58.7 | 86.3 | 152.95 | 0.9433 | 0.9594 | 141.90 |

AVERAGE #  8
SHASTA 4  200 HZ  19-OCT-83  T42N R4W S18SW
NSAMP = 1024  SI = 0.0050  TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.1000 | 0.3948E+02 | 0.8586E+01 | 27.9 | 54.6 | 145.67 | 0.8813 | 0.9084 | 0.2003 |
| H | | 0.9731E+01 | 0.3849E+01 | 24.6 | 46.1 | 150.71 | 0.9292 | 0.9443 | 172.90 |
| E | 0.1818 | 0.3750E+02 | 0.1693E+02 | 24.6 | 58.5 | 36.85 | 0.4886 | 0.6924 | 1.2178 |
| H | | 0.8645E+01 | 0.8344E+01 | 2.7 | 60.0 | 139.02 | 0.5981 | 0.8387 | 102.60 |
| E | 0.3333 | 0.2422E+02 | 0.8251E+01 | 36.2 | 29.2 | 13.64 | 0.7956 | 0.8735 | 0.4157 |
| H | | 0.1476E+02 | 0.3175E+01 | 30.3 | 34.5 | 171.95 | 0.8101 | 0.8881 | 136.90 |
| E | 0.5000 | 0.3284E+02 | 0.2151E+02 | 49.1 | 53.0 | 169.89 | 0.8457 | 0.8319 | 0.0249 |
| H | | 0.3078E+02 | 0.4597E+01 | 64.1 | 32.1 | 146.71 | 0.9105 | 0.8997 | 2.60 |
| E | 0.5988 | 0.5116E+02 | 0.2743E+02 | 64.1 | 70.3 | 1.10 | 0.8598 | 0.9413 | 0.3204 |
| H | | 0.4074E+02 | 0.1479E+02 | 64.2 | 70.0 | 177.30 | 0.8600 | 0.9417 | 37.80 |
| E | 0.8000 | 0.5829E+02 | 0.2878E+02 | 56.0 | 63.9 | 20.22 | 0.8382 | 0.8854 | 0.2162 |
| H | | 0.3727E+02 | 0.1582E+02 | 56.0 | 64.0 | 5.16 | 0.8384 | 0.8889 | 20.60 |
| E | 1.0000 | 0.4450E+02 | 0.2080E+02 | 61.0 | 23.4 | 42.54 | 0.7182 | 0.8314 | 0.6505 |
| H | | 0.2453E+02 | 0.3023E+01 | 60.5 | 20.3 | 38.32 | 0.7607 | 0.8463 | 105.10 |

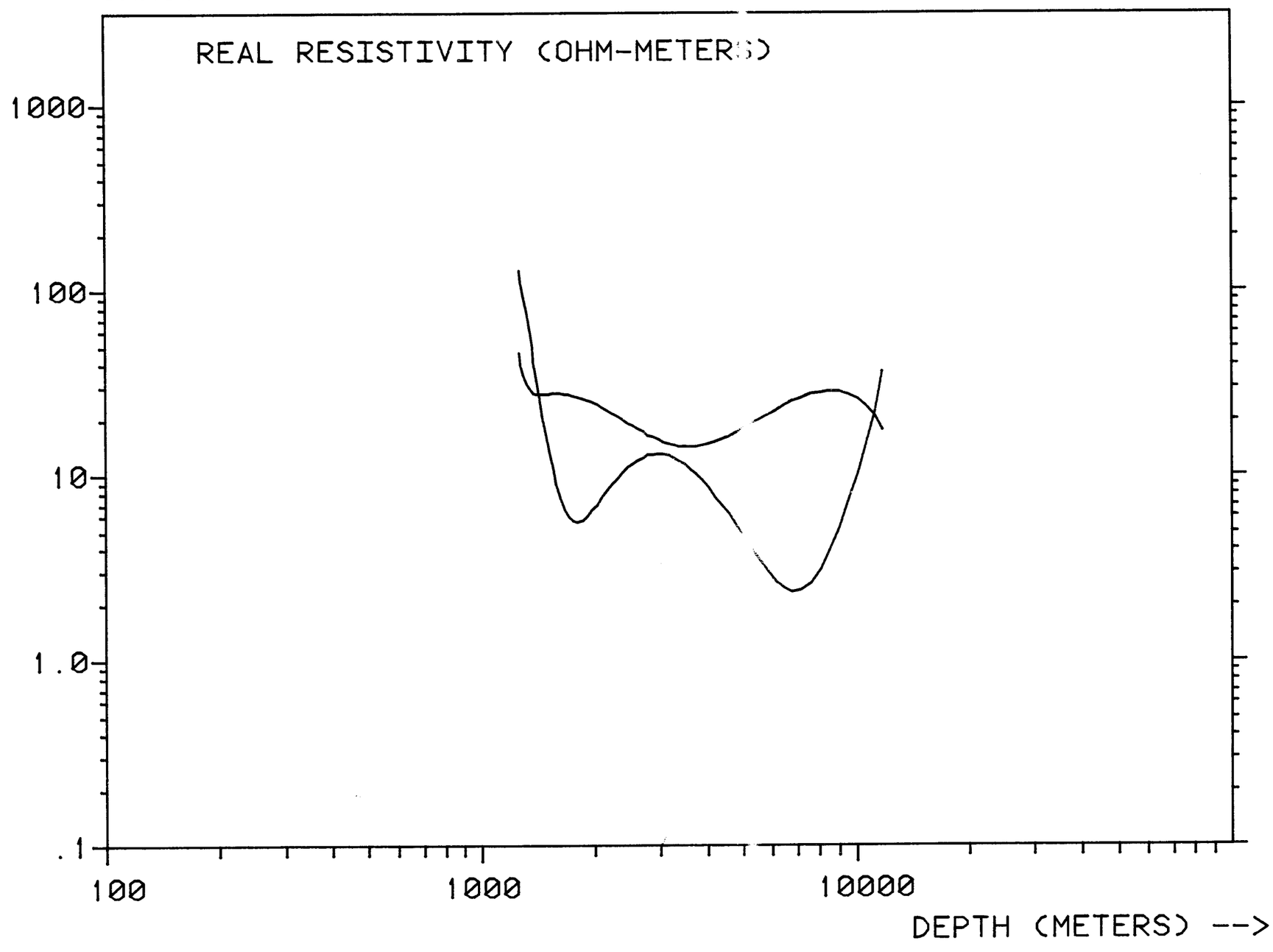
AVERAGE # 8
SHASTA 4 200 HZ 19-OCT-83 T42N R4W S18SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 1.0000 | 0.6265E+02 | 0.5091E+02 | 78.7 | 58.1 | 68.87 | 0.7932 | 0.8931 | 0.2051 |
| H | | 0.4454E+02 | 0.2130E+02 | 62.0 | 77.2 | 170.76 | 0.7942 | 0.9015 | 16.00 |
| E | 1.2048 | 0.4863E+02 | 0.2906E+02 | 64.0 | 70.5 | 30.99 | 0.9327 | 0.9461 | 0.1773 |
| H | | 0.3797E+02 | 0.2134E+02 | 64.3 | 69.4 | 27.66 | 0.9334 | 0.9465 | 52.30 |
| E | 1.4925 | 0.6819E+02 | 0.3133E+02 | 65.7 | 69.0 | 11.99 | 0.9297 | 0.9187 | 0.6461 |
| H | | 0.4924E+02 | 0.2012E+02 | 64.7 | 71.0 | 23.20 | 0.9305 | 0.9201 | 107.20 |
| E | 2.0000 | 0.7245E+02 | 0.5032E+02 | 71.0 | 82.5 | 176.30 | 0.8873 | 0.9503 | 0.1462 |
| H | | 0.5881E+02 | 0.2702E+02 | 72.2 | 81.1 | 9.66 | 0.8923 | 0.9509 | 4.00 |
| E | 2.0000 | 0.6509E+02 | 0.5148E+02 | 61.0 | 70.5 | 167.39 | 0.8777 | 0.9083 | 0.2234 |
| H | | 0.4756E+02 | 0.2952E+02 | 61.0 | 70.8 | 164.23 | 0.8777 | 0.9088 | 5.20 |
| E | 2.0000 | 0.1217E+03 | 0.5816E+02 | 77.6 | 55.5 | 58.80 | 0.8379 | 0.8885 | 0.1498 |
| H | | 0.5172E+02 | 0.4677E+02 | 58.6 | 77.5 | 151.46 | 0.8460 | 0.8977 | 141.80 |

AVERAGE # 8
SHASTA 4 200 HZ 19-OCT-83 T42N R4W S18SW
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

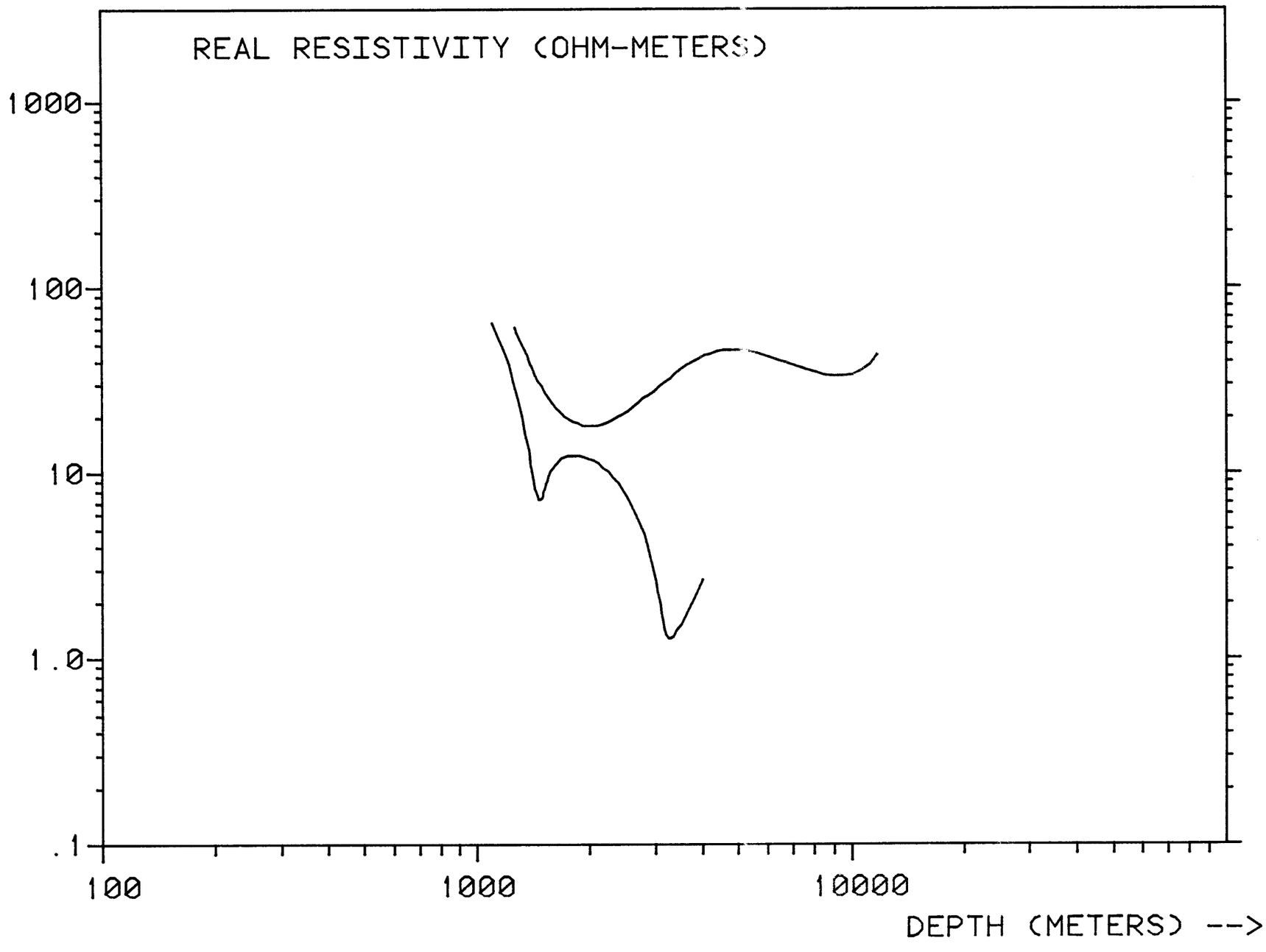
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 3.0303 | 0.8616E+02 | 0.5845E+02 | 68.7 | 82.0 | 179.22 | 0.8539 | 0.9033 | 0.6115 |
| H | | 0.5968E+02 | 0.2961E+02 | 69.8 | 80.9 | 178.09 | 0.8548 | 0.9042 | 169.60 |
| E | 3.0303 | 0.8112E+02 | 0.7746E+02 | 87.1 | 66.2 | 104.77 | 0.9219 | 0.9380 | 0.3471 |
| H | | 0.6011E+02 | 0.5721E+02 | 66.2 | 87.1 | 14.93 | 0.9221 | 0.9381 | 131.90 |
| E | 7.6923 | 0.1319E+03 | 0.1171E+03 | 70.8 | 75.7 | 177.70 | 0.9877 | 0.9874 | 0.2396 |
| H | | 0.1226E+03 | 0.1095E+03 | 71.0 | 75.6 | 4.38 | 0.9878 | 0.9875 | 93.40 |
| E | 14.2857 | 0.2055E+03 | 0.1693E+03 | 73.6 | 73.5 | 175.01 | 0.9663 | 0.9793 | 0.4029 |
| H | | 0.1873E+03 | 0.1457E+03 | 73.8 | 73.4 | 3.25 | 0.9665 | 0.9793 | 98.50 |
| E | 20.0000 | 0.2363E+03 | 0.1859E+03 | 71.6 | 69.9 | 168.90 | 0.9504 | 0.9623 | 0.5711 |
| H | | 0.1997E+03 | 0.1504E+03 | 71.6 | 69.9 | 175.55 | 0.9505 | 0.9623 | 105.70 |
| E | 26.3158 | 0.3765E+03 | 0.2358E+03 | 64.9 | 67.1 | 41.29 | 0.8807 | 0.8946 | 0.7541 |
| H | | 0.2167E+03 | 0.1939E+03 | 73.8 | 59.2 | 164.82 | 0.8858 | 0.9008 | 92.40 |
| E | 31.2500 | 0.5246E+03 | 0.2442E+03 | 55.5 | 68.4 | 57.92 | 0.8096 | 0.8569 | 1.1558 |
| H | | 0.2247E+03 | 0.2102E+03 | 82.3 | 44.4 | 163.67 | 0.8260 | 0.8768 | 119.00 |
| E | 40.0000 | 0.3477E+03 | 0.2637E+03 | 65.7 | 65.0 | 174.38 | 0.9241 | 0.9339 | 0.9324 |
| H | | 0.2639E+03 | 0.1483E+03 | 64.0 | 67.1 | 29.44 | 0.9296 | 0.9381 | 117.60 |

SHASTA 4  19-OCT-83  T42N R4W S18SW

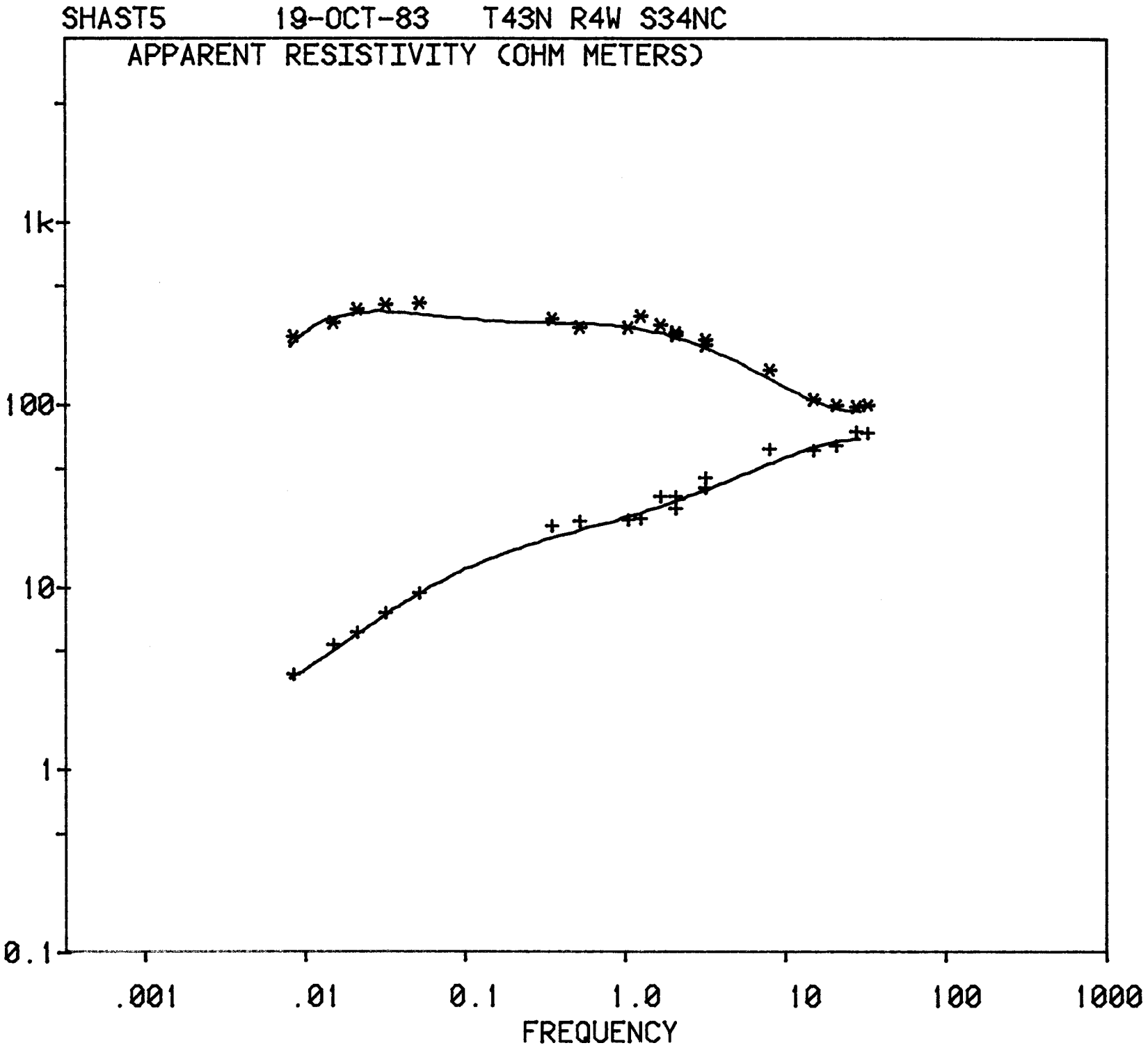


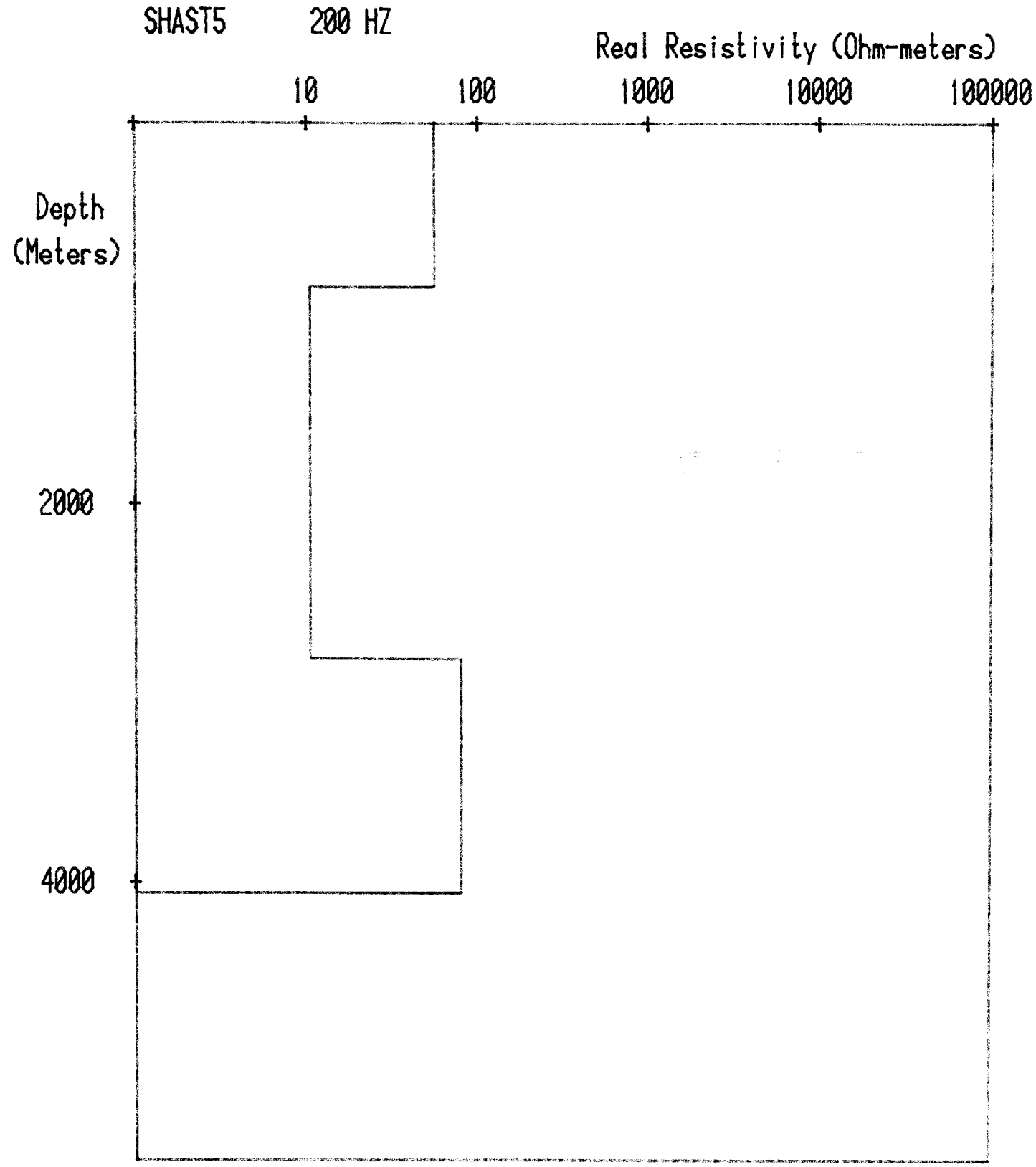

(RES)

SHASTA 4  19-OCT-83  T42N R4W S18SW

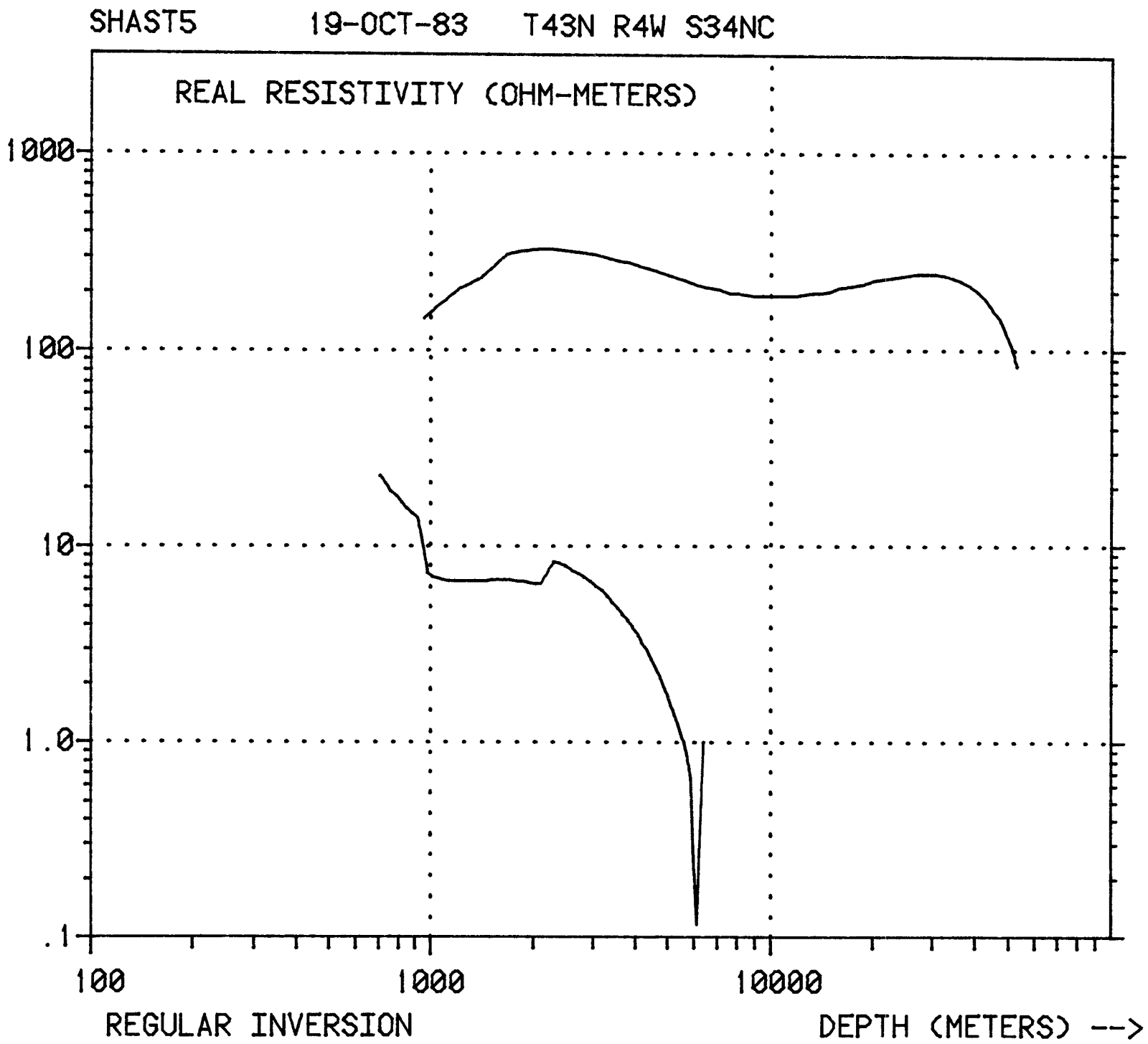


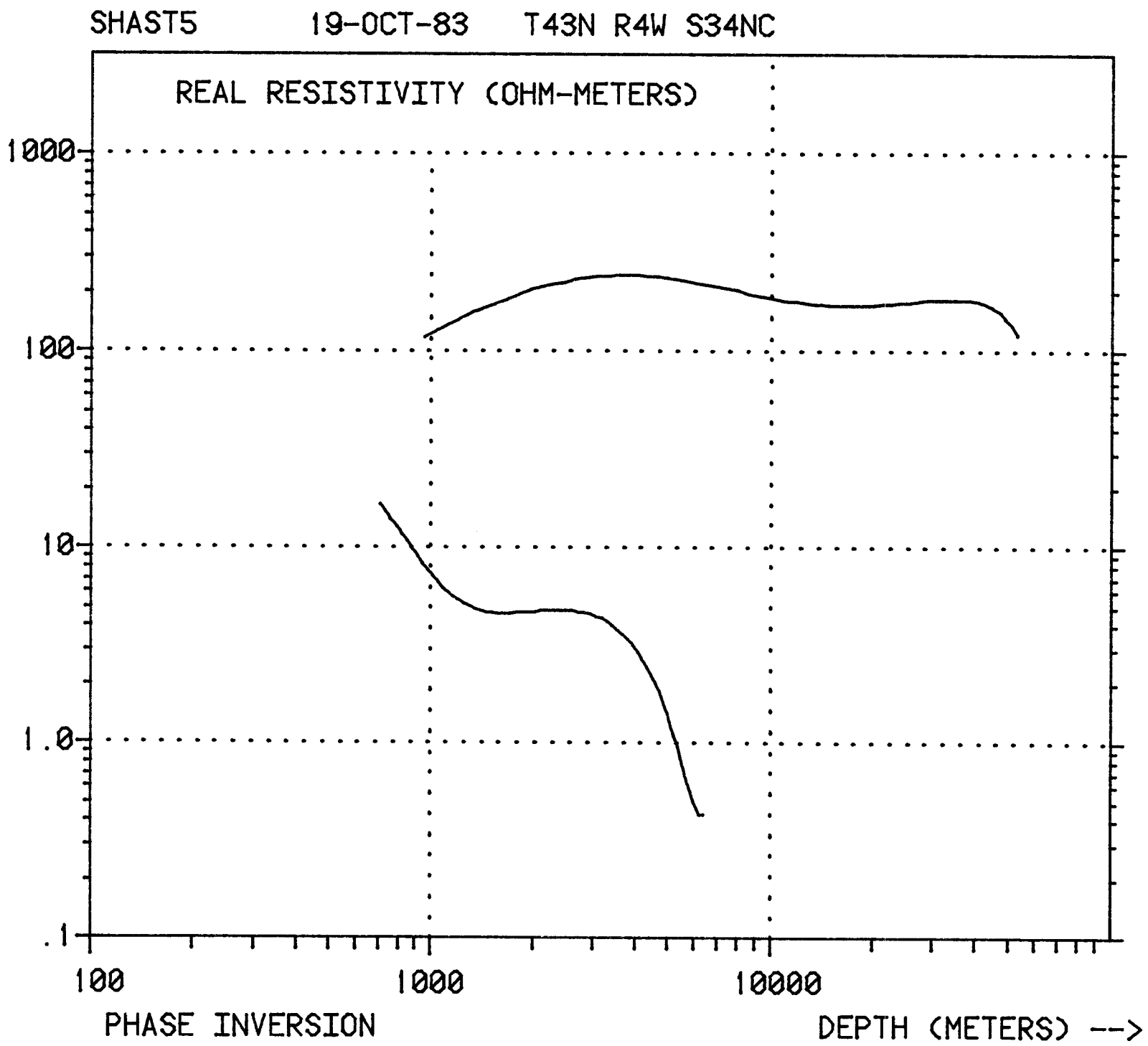

(PHASE)


SHAST5 19-OCT-83 T43N R4W S34NC
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

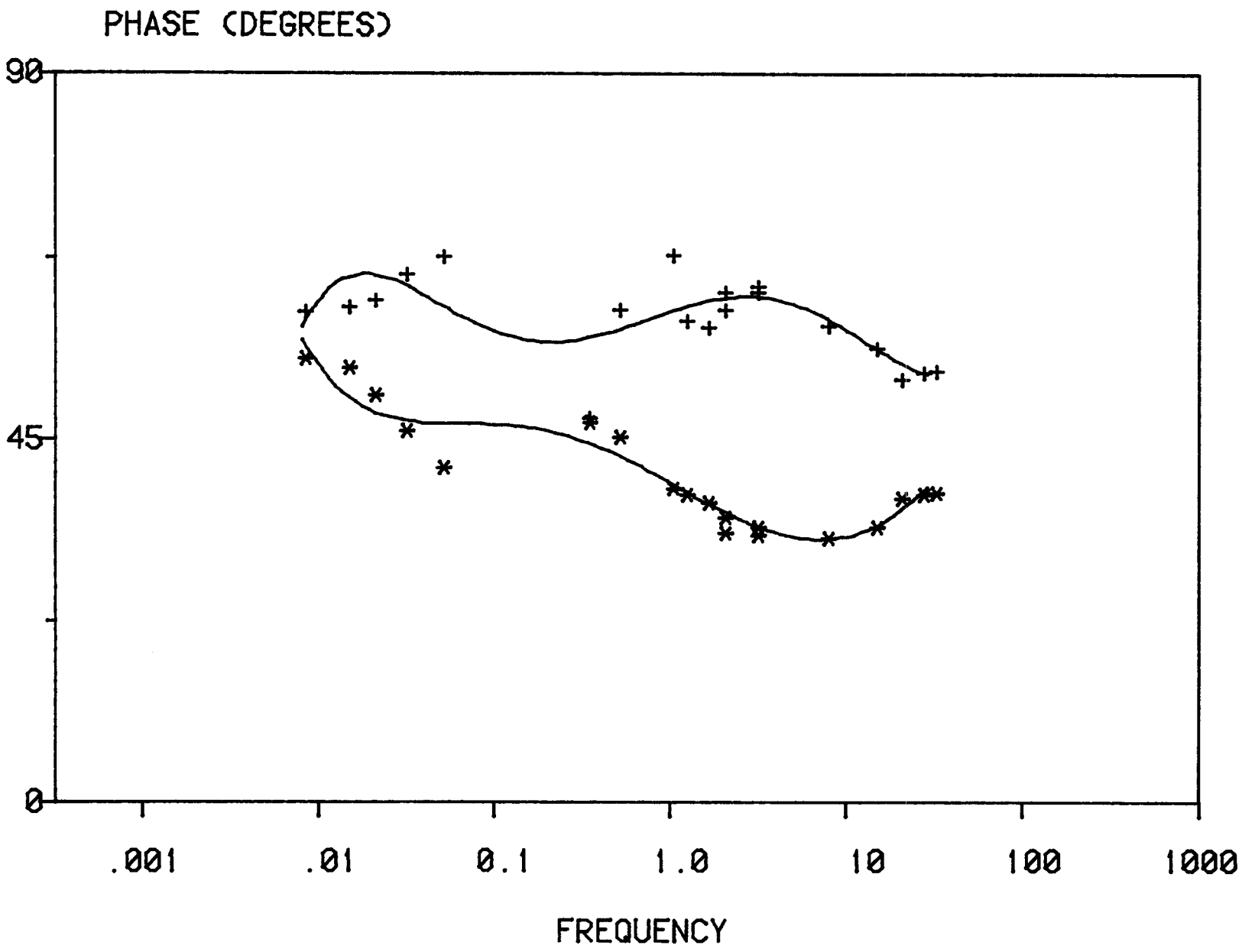



| | | | | |
|---|---|---|---|---|
| Resistivity | 55.41 | 10.47 | 80.86 | 0.97 |
| Thickness | | 858.88 | 1960.94 | 1237.09 |
| Depth | 0.00 | 858.88 | 2819.82 | 4056.91 |


SHAST5 19-OCT-83 T43N R4W S34NC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST5 19-OCT-83 T43N R4W S34NC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAST5 19-OCT-83 T43N R4W S34NC



THE SITE IS: SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 7.64 | 235.08 | 1 | 1432.82 | ******* |
| 0.0020 | 3.07 | 251.72 | 2 | 276.25 | 197.40 |
| 0.0040 | 4.44 | 167.86 | 3 | 46.44 | 104.87 |
| 0.0080 | 3.09 | 216.19 | 4 | 13.77 | 415.85 |
| 0.0143 | 4.47 | 259.43 | 5 | 5.68 | 234.60 |
| 0.0200 | 5.24 | 306.58 | 6 | 2.66 | 131.26 |
| 0.0303 | 6.74 | 323.84 | 7 | 0.80 | 28.93 |
| 0.0500 | 8.60 | 331.16 | 8 | 0.22 | 6.06 |
| 0.1000 | 8.87 | 45.51 | 9 | 0.64 | 2.04 |
| 0.1818 | 16.08 | 71.20 | 10 | 0.32 | 1.05 |
| 0.3333 | 19.99 | 269.49 | 11 | 8.23 | 42.80 |
| 0.5000 | 21.19 | 241.67 | 12 | 1074.00 | 708 4.19 |
| 0.5988 | 4.70 | 671.08 | 13 | 0.03 | 2.52 |
| 0.8000 | 97.70 | 903.13 | 14 | 0.16 | 0.78 |
| 1.0000 | 21.58 | 242.13 | 15 | 50.64 | 408.32 |
| 1.0000 | 2.81 | 401.84 | 16 | 0.02 | 1.51 |
| 1.2048 | 22.06 | 282.39 | 17 | 1.85 | 11.74 |
| 1.6129 | 29.01 | 251.23 | 18 | 0.13 | 0.58 |
| 2.0000 | 29.24 | 231.09 | 19 | 0.02 | 0.12 |
| 2.0000 | 25.17 | 220.10 | 20 | 0.03 | 0.28 |
| 2.0000 | 39.08 | 361.25 | 21 | 0.07 | 0.31 |
| 3.0303 | 32.63 | 194.15 | 22 | 0.01 | 0.03 |
| 3.0303 | 36.61 | 208.26 | 23 | 0.05 | 0.17 |
| 7.6923 | 52.99 | 142.84 | 24 | 0.05 | 0.06 |
| 14.2857 | 52.09 | 98.50 | 25 | 0.03 | 0.03 |
| 20.0000 | 54.87 | 91.20 | 26 | 0.01 | 0.01 |
| 26.3158 | 65.84 | 90.23 | 27 | 0.01 | 0.01 |
| 31.2500 | 65.21 | 91.53 | 28 | 0.00 | 0.01 |
| 40.0000 | 0.02 | 0.36 | 29 | 0.00 | 0.01 |

AVERAGE # 8
SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE | RHO MIN ( OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.248E+03 | 0.806E+01 | 68. | 44. | 167. | 0.9839 | 0.9696 | 0.0510 | 0.33 |
| H | SEC | 0.222E+03 | 0.722E+01 | 68. | 44. | 167. | 0.9847 | 0.9704 | 156.00 | 0.33 |
| E | 500.0 | 0.287E+03 | 0.319E+01 | 74. | 26. | 167. | 0.9546 | 0.9854 | 0.0642 | 0.34 |
| H | SEC | 0.216E+03 | 0.294E+01 | 73. | 25. | 167. | 0.9581 | 0.9864 | 46.50 | 0.35 |
| E | 250.0 | 0.165E+03 | 0.526E+01 | 49. | 42. | 167. | 0.9921 | 0.9906 | 0.0935 | 0.25 |
| H | SEC | 0.171E+03 | 0.361E+01 | 48. | 43. | 167. | 0.9930 | 0.9918 | 166.90 | 0.24 |
| E | 125.0 | 0.224E+03 | 0.331E+01 | 55. | 61. | 167. | 0.9860 | 0.9921 | 0.1370 | 0.18 |
| H | SEC | 0.209E+03 | 0.286E+01 | 55. | 61. | 167. | 0.9865 | 0.9922 | 171.50 | 0.17 |
| E | 70.0 | 0.262E+03 | 0.454E+01 | 54. | 62. | 167. | 0.9966 | 0.9984 | 0.1890 | 0.15 |
| H | SEC | 0.257E+03 | 0.440E+01 | 54. | 62. | 167. | 0.9966 | 0.9984 | -2.00 | 0.15 |
| E | 50.0 | 0.309E+03 | 0.538E+01 | 51. | 62. | 167. | 0.9961 | 0.9969 | 0.2391 | 0.15 |
| H | SEC | 0.304E+03 | 0.511E+01 | 51. | 62. | 167. | 0.9962 | 0.9969 | 173.80 | 0.15 |
| E | 33.0 | 0.335E+03 | 0.735E+01 | 46. | 65. | 167. | 0.9833 | 0.9853 | 0.3259 | 0.15 |
| H | SEC | 0.312E+03 | 0.613E+01 | 46. | 66. | 167. | 0.9836 | 0.9855 | 174.40 | 0.14 |
| E | 20.0 | 0.373E+03 | 0.111E+02 | 42. | 66. | 167. | 0.9580 | 0.9529 | 0.4395 | 0.12 |
| H | SEC | 0.290E+03 | 0.611E+01 | 42. | 69. | 167. | 0.9614 | 0.9575 | -3.30 | 0.16 |

AVERAGE # 8
SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.566E+02 | 0.103E+02 | 37. | 50. | 167. | 0.8896 | 0.9027 | 1.2449 | 0.55 |
| H | SEC | 0.344E+02 | 0.743E+01 | 27. | 47. | 167. | 0.9005 | 0.9130 | 102.00 | 0.66 |
| E | 5.5 | 0.685E+02 | 0.308E+02 | 40. | 11. | 160. | 0.9085 | 0.8423 | 0.5586 | 0.83 |
| H | SEC | 0.739E+02 | 0.138E+01 | 35. | 83. | 160. | 0.9262 | 0.9081 | 16.90 | 0.72 |
| E | 3.0 | 0.332E+03 | 0.346E+02 | 45. | 46. | 160. | 0.8966 | 0.9004 | 0.4431 | 0.38 |
| H | SEC | 0.207E+03 | 0.537E+01 | 50. | 50. | 160. | 0.9333 | 0.9351 | 18.10 | 0.11 |
| E | 2.0 | 0.289E+03 | 0.365E+02 | 44. | 62. | 160. | 0.9158 | 0.8866 | 0.6327 | 0.18 |
| H | SEC | 0.194E+03 | 0.586E+01 | 47. | 61. | 160. | 0.9217 | 0.9075 | 13.20 | 0.03 |
| E | 1.7 | 0.720E+03 | 0.469E+01 | 61. | 62. | 160. | 0.9654 | 0.9683 | 0.5806 | 0.29 |
| H | SEC | 0.622E+03 | 0.470E+01 | 61. | 62. | 160. | 0.9655 | 0.9685 | 129.80 | 0.29 |
| E | 1.2 | 0.954E+03 | 0.129E+03 | 34. | 59. | 160. | 0.9726 | 0.9730 | 0.3001 | 0.04 |
| H | SEC | 0.853E+03 | 0.669E+02 | 35. | 59. | 160. | 0.9781 | 0.9784 | 172.70 | 0.06 |
| E | 1.0 | 0.285E+03 | 0.353E+02 | 39. | 67. | 160. | 0.9254 | 0.9182 | 0.4711 | 0.08 |
| H | HZ | 0.199E+03 | 0.790E+01 | 39. | 69. | 160. | 0.9302 | 0.9264 | 55.40 | 0.16 |

AVERAGE # 8
SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.431E+03 | 0.281E+01 | 58. | 59. | 160. | 0.9654 | 0.9683 | 0.5806 | 0.29 |
| H | HZ | 0.373E+03 | 0.281E+01 | 58. | 59. | 160. | 0.9655 | 0.9685 | 129.80 | 0.29 |
| E | 1.2 | 0.305E+03 | 0.295E+02 | 38. | 60. | 160. | 0.9700 | 0.9728 | 0.4416 | 0.08 |
| H | HZ | 0.260E+03 | 0.146E+02 | 39. | 59. | 160. | 0.9716 | 0.9736 | 113.00 | 0.03 |
| E | 1.6 | 0.266E+03 | 0.378E+02 | 37. | 60. | 160. | 0.9735 | 0.9728 | 0.3914 | 0.02 |
| H | HZ | 0.237E+03 | 0.202E+02 | 38. | 58. | 160. | 0.9744 | 0.9739 | 99.30 | 0.08 |
| E | 2.0 | 0.247E+03 | 0.361E+02 | 35. | 61. | 160. | 0.9693 | 0.9677 | 0.3906 | 0.01 |
| H | HZ | 0.215E+03 | 0.223E+02 | 36. | 61. | 160. | 0.9697 | 0.9684 | 96.10 | 0.04 |
| E | 2.0 | 0.241E+03 | 0.402E+02 | 34. | 62. | 160. | 0.9545 | 0.8926 | 0.4399 | 0.04 |
| H | HZ | 0.199E+03 | 0.102E+02 | 33. | 64. | 160. | 0.9555 | 0.9172 | 91.50 | 0.11 |
| E | 2.0 | 0.381E+03 | 0.514E+02 | 31. | 56. | 160. | 0.9726 | 0.9730 | 0.3001 | 0.04 |
| H | HZ | 0.341E+03 | 0.267E+02 | 31. | 55. | 160. | 0.9781 | 0.9784 | 172.70 | 0.06 |

AVERAGE # 8
SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE | RHO MIN ( OHM-M ) | PHI MAX | PHI MIN (DEGREES) | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.229E+03 | 0.492E+02 | 33. | 64. | 150. | 0.9139 | 0.8688 | 0.5080 | 0.06 |
| H | HZ | 0.159E+03 | 0.161E+02 | 34. | 63. | 150. | 0.9155 | 0.8816 | 120.60 | 0.04 |
| E | 3.0 | 0.235E+03 | 0.446E+02 | 34. | 65. | 150. | 0.9409 | 0.9304 | 0.7976 | 0.11 |
| H | HZ | 0.181E+03 | 0.286E+02 | 34. | 64. | 150. | 0.9412 | 0.9316 | 136.10 | 0.07 |
| E | 7.7 | 0.148E+03 | 0.595E+02 | 33. | 59. | 150. | 0.9804 | 0.9845 | 0.2404 | 0.05 |
| H | HZ | 0.138E+03 | 0.465E+02 | 33. | 59. | 150. | 0.9812 | 0.9849 | 33.00 | 0.06 |
| E | 14.3 | 0.111E+03 | 0.684E+02 | 34. | 56. | 150. | 0.9404 | 0.9499 | 0.3173 | 0.04 |
| H | HZ | 0.863E+02 | 0.358E+02 | 35. | 57. | 150. | 0.9478 | 0.9552 | 28.20 | 0.06 |
| E | 20.0 | 0.107E+03 | 0.697E+02 | 38. | 53. | 150. | 0.9214 | 0.9351 | 0.3589 | 0.03 |
| H | HZ | 0.754E+02 | 0.400E+02 | 38. | 52. | 150. | 0.9255 | 0.9371 | 44.00 | 0.05 |
| E | 26.3 | 0.100E+03 | 0.793E+02 | 39. | 53. | 150. | 0.9452 | 0.9495 | 0.3634 | 0.07 |
| H | HZ | 0.800E+02 | 0.523E+02 | 38. | 54. | 150. | 0.9464 | 0.9503 | 61.90 | 0.05 |
| E | 31.2 | 0.101E+03 | 0.813E+02 | 39. | 53. | 150. | 0.9432 | 0.9451 | 0.4255 | 0.09 |
| H | HZ | 0.818E+02 | 0.491E+02 | 38. | 54. | 150. | 0.9449 | 0.9466 | 41.50 | 0.08 |
| E | 40.0 | 0.403E+00 | 0.251E-01 | 55. | 66. | 150. | 0.9580 | 0.9529 | 0.4395 | 0.12 |
| H | HZ | 0.317E+00 | 0.141E-01 | 56. | 64. | 150. | 0.9614 | 0.9575 | -3.30 | 0.16 |

SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 19
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 40.0000 | | 0.0000 |
| | | 800.0000 | |
| 2 | 5.0000 | | 800.0000 |
| | | 1200.0000 | |
| 3 | 5.0000 | | 2000.0000 |
| | | 3000.0000 | |
| 4 | 1.0000 | | 5000.0000 |

FREQUENCY RANGE ( 0.0080 , 31.2500 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 55.4189 | | 0.0000 |
| | | 858.8812 | |
| 2 | 10.4747 | | 858.8812 |
| | | 1960.9409 | |
| 3 | 80.8610 | | 2819.8221 |
| | | 1237.0954 | |
| 4 | 0.9753 | | 4056.9175 |

MEAN PERCENT VARIATION IS 6.6022

ERROR ANALYSIS

R-SQUARED = 0.999

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 18 | 7525.489 | 418.083 | 0.334 |
| MODEL | 6 | 7518.928 | 1253.155 | 181576.589 |
| RESID | 12 | 0.083 | 0.007 | |

STANDARD ERROR = 0.083

DTEST FOR MEANS = 0.000

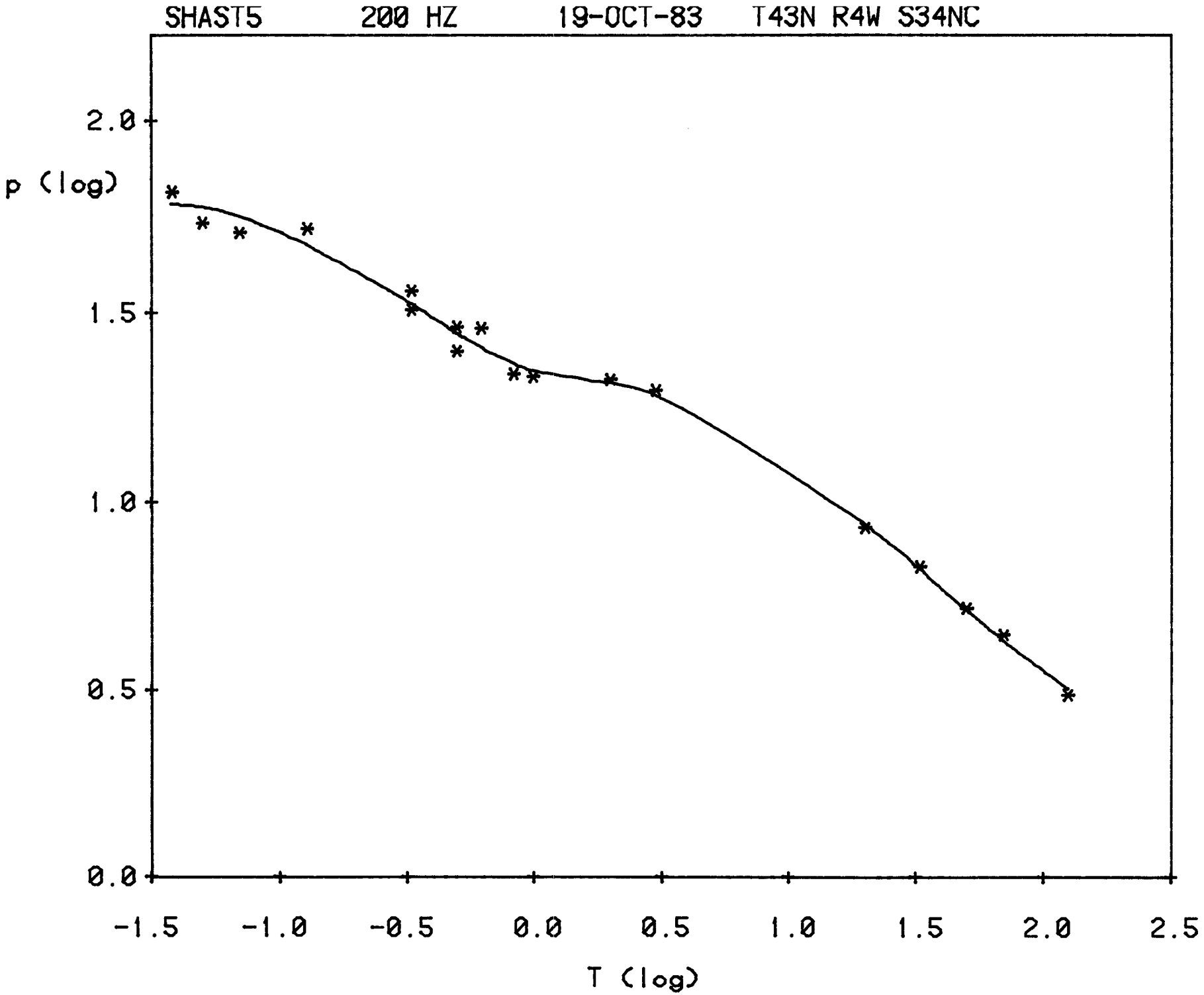
NOISE TO SIGNAL RATIO = 0.235 PERCENT

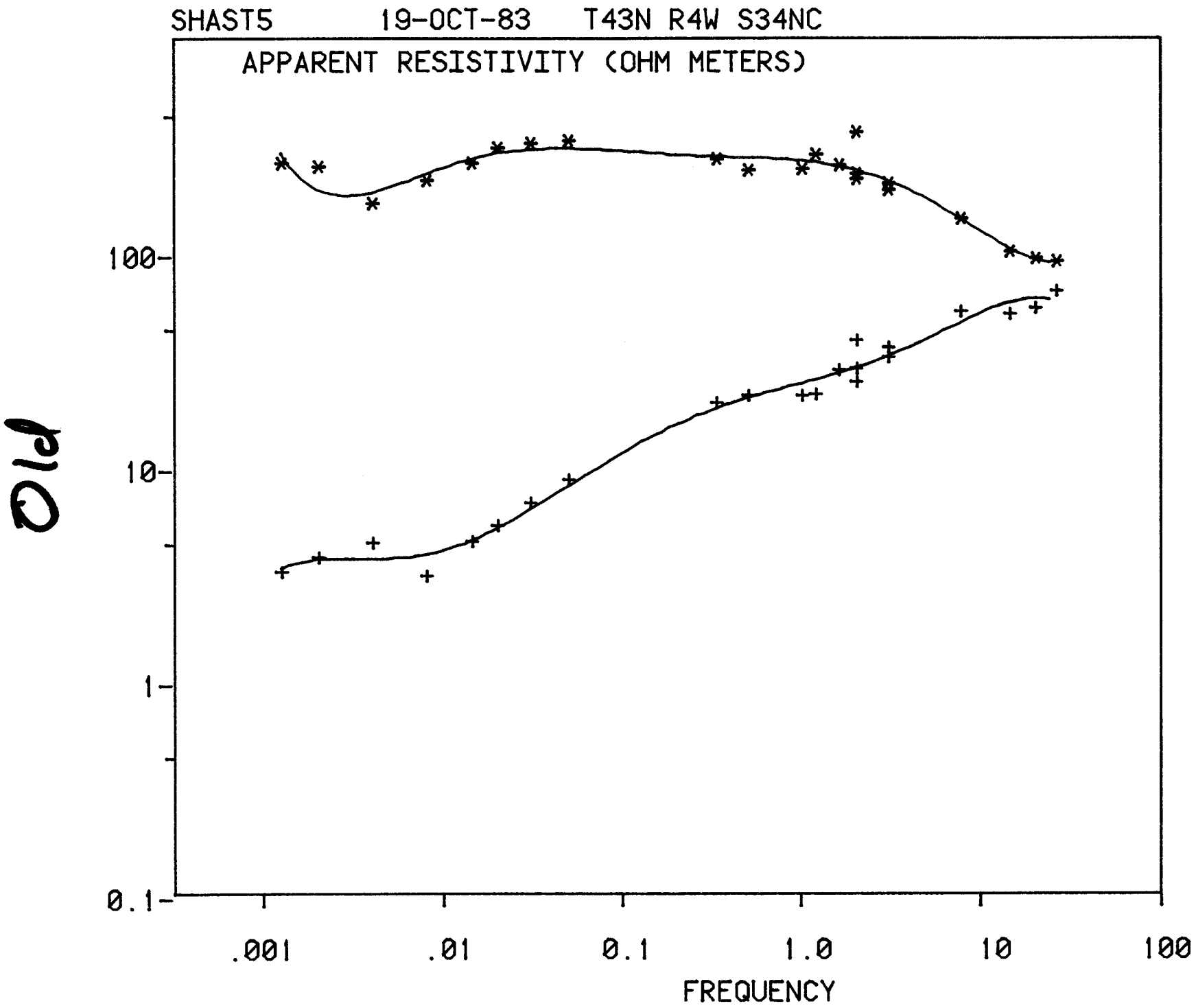
SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 125.000 | 3.087 | 3.197 | -0.111 | -3.521 |
| 2 | 70.000 | 4.466 | 4.294 | 0.172 | 3.922 |
| 3 | 50.000 | 5.244 | 5.184 | 0.060 | 1.154 |
| 4 | 33.000 | 6.740 | 6.629 | 0.111 | 1.654 |
| 5 | 20.000 | 8.601 | 9.006 | -0.405 | -4.605 |
| 6 | 3.000 | 19.993 | 20.253 | -0.260 | -1.291 |
| 7 | 2.000 | 21.189 | 20.783 | 0.406 | 1.935 |
| 8 | 1.000 | 21.577 | 22.300 | -0.723 | -3.295 |
| 9 | 0.830 | 22.056 | 23.381 | -1.325 | -5.832 |
| 10 | 0.620 | 29.014 | 25.852 | 3.162 | 11.526 |
| 11 | 0.500 | 29.236 | 28.248 | 0.988 | 3.437 |
| 12 | 0.500 | 25.174 | 28.248 | -3.073 | -11.506 |
| 13 | 0.330 | 32.625 | 33.873 | -1.248 | -3.753 |
| 14 | 0.330 | 36.611 | 33.873 | 2.738 | 7.770 |
| 15 | 0.130 | 52.990 | 48.724 | 4.266 | 8.388 |
| 16 | 0.070 | 52.092 | 57.954 | -5.862 | -10.654 |
| 17 | 0.050 | 54.873 | 60.844 | -5.972 | -10.321 |
| 18 | 0.038 | 65.836 | 61.589 | 4.247 | 6.667 |
| 19 | 0.032 | 65.214 | 61.351 | 3.864 | 6.106 |

MEAN PERCENT ERROR = 6.6235
MAXIMUM PERCENT ERROR = 11.5260
MAX. ERROR OCCURED AT OBSERVATION 10


SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC
2.0
1.5
1.0
0.5
0.0
p (log)
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAST5 19-OCT-83 T43N R4W S34NC
APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.001
.01
0.1
1.0
10
100
FREQUENCY

Old

THE SITE IS: SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMN, MEAN OF RHOMX | PERIOD | # |
|---|---|---|---|
| 0.0012 | 3.24 | 258.75 | 1 |
| 0.0020 | 3.78 | 252.10 | 2 |
| 0.0040 | 4.37 | 168.13 | 3 |
| 0.0080 | 3.08 | 216.21 | 4 |
| 0.0143 | 4.46 | 259.47 | 5 |
| 0.0200 | 5.24 | 306.59 | 6 |
| 0.0303 | 6.73 | 323.88 | 7 |
| 0.0500 | 8.56 | 331.25 | 8 |
| 0.1000 | 7.40 | 53.72 | 9 |
| 0.1818 | 30.79 | 79.12 | 10 |
| 0.3333 | 19.64 | 272.74 | 11 |
| 0.5000 | 21.22 | 242.53 | 12 |
| 0.5988 | 4.65 | 671.62 | 13 |
| 0.8000 | 96.77 | 905.51 | 14 |
| 1.0000 | 21.36 | 242.86 | 15 |
| 1.0000 | 2.79 | 402.17 | 16 |
| 1.2048 | 21.74 | 285.04 | 17 |
| 1.6129 | 28.02 | 254.48 | 18 |
| 2.0000 | 28.72 | 232.61 | 19 |
| 2.0000 | 24.76 | 220.90 | 20 |
| 2.0000 | 38.71 | 362.20 | 21 |
| 3.0303 | 32.41 | 195.34 | 22 |
| 3.0303 | 36.13 | 209.21 | 23 |
| 7.6923 | 52.79 | 143.10 | 24 |
| 14.2857 | 51.15 | 99.82 | 25 |
| 20.0000 | 54.09 | 92.26 | 26 |
| 26.3158 | 65.36 | 90.77 | 27 |
| 31.2500 | 65.37 | 91.44 | 28 |
| 40.0000 | 0.01 | 0.41 | 29 |

AVERAGE # 8
SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.0012 | 0.2748E+03 | 0.3196E+01 | 68.3 | 67.7 | 63.05 | 0.9839 | 0.9697 | 0.0510 |
| H | | 0.2427E+03 | 0.3284E+01 | 68.5 | 67.0 | 63.98 | 0.9848 | 0.9704 | 156.00 |
| E | 0.0020 | 0.2882E+03 | 0.4111E+01 | 81.1 | 24.9 | 80.58 | 0.9547 | 0.9854 | 0.0642 |
| H | | 0.2160E+03 | 0.3455E+01 | 79.8 | 27.4 | 79.10 | 0.9582 | 0.9865 | 46.50 |
| E | 0.0040 | 0.1650E+03 | 0.5230E+01 | 60.5 | 54.7 | 76.30 | 0.9922 | 0.9906 | 0.0935 |
| H | | 0.1713E+03 | 0.3518E+01 | 59.2 | 57.7 | 74.73 | 0.9931 | 0.9918 | 166.90 |
| E | 0.0080 | 0.2236E+03 | 0.3302E+01 | 77.7 | 83.1 | 77.47 | 0.9861 | 0.9921 | 0.1370 |
| H | | 0.2088E+03 | 0.2865E+01 | 77.7 | 83.6 | 76.75 | 0.9865 | 0.9923 | 171.50 |
| E | 0.0143 | 0.2621E+03 | 0.4526E+01 | 2.9 | 10.6 | 77.68 | 0.9967 | 0.9985 | 0.1890 |
| H | | 0.2568E+03 | 0.4392E+01 | 3.0 | 10.5 | 77.41 | 0.9967 | 0.9985 | 178.00 |
| E | 0.0200 | 0.3093E+03 | 0.5374E+01 | 13.4 | 25.1 | 77.31 | 0.9962 | 0.9970 | 0.2391 |
| H | | 0.3039E+03 | 0.5112E+01 | 13.3 | 25.0 | 77.08 | 0.9962 | 0.9970 | 173.80 |
| E | 0.0303 | 0.3354E+03 | 0.7355E+01 | 30.1 | 49.2 | 77.20 | 0.9834 | 0.9854 | 0.3259 |
| H | | 0.3124E+03 | 0.6106E+01 | 30.1 | 49.3 | 76.46 | 0.9837 | 0.9855 | 174.40 |
| E | 0.0500 | 0.3727E+03 | 0.1108E+02 | 53.9 | 78.3 | 76.93 | 0.9581 | 0.9529 | 0.4395 |
| H | | 0.2898E+03 | 0.6039E+01 | 54.2 | 80.9 | 76.16 | 0.9615 | 0.9576 | 176.70 |

AVERAGE # 8
SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.1000 | 0.6304E+02 | 0.1023E+02 | 76.9 | 23.3 | 97.98 | 0.8896 | 0.9027 | 1.2449 |
| H | | 0.4441E+02 | 0.4568E+01 | 70.7 | 17.3 | 100.77 | 0.9005 | 0.9130 | 102.00 |
| E | 0.1818 | 0.8403E+02 | 0.6049E+02 | 79.4 | 79.1 | 130.21 | 0.9086 | 0.8424 | 0.5586 |
| H | | 0.7420E+02 | 0.1095E+01 | 11.2 | 52.3 | 71.64 | 0.9263 | 0.9081 | 16.90 |
| E | 0.3333 | 0.3326E+03 | 0.3456E+02 | 31.8 | 29.9 | 68.19 | 0.8966 | 0.9005 | 0.4431 |
| H | | 0.2129E+03 | 0.4710E+01 | 38.2 | 22.4 | 61.90 | 0.9333 | 0.9351 | 18.10 |
| E | 0.5000 | 0.2887E+03 | 0.3702E+02 | 34.2 | 53.7 | 71.62 | 0.9159 | 0.8867 | 0.6327 |
| H | | 0.1963E+03 | 0.5415E+01 | 38.6 | 49.0 | 65.60 | 0.9218 | 0.9076 | 13.20 |
| E | 0.5988 | 0.7204E+03 | 0.4647E+01 | 52.9 | 55.1 | 71.24 | 0.9654 | 0.9683 | 0.5806 |
| H | | 0.6229E+03 | 0.4660E+01 | 52.9 | 54.3 | 71.17 | 0.9655 | 0.9685 | 129.80 |
| E | 0.8000 | 0.9556E+03 | 0.1276E+03 | 28.6 | 53.2 | 72.09 | 0.9727 | 0.9731 | 0.3001 |
| H | | 0.8554E+03 | 0.6589E+02 | 28.9 | 52.9 | 67.60 | 0.9781 | 0.9784 | 172.70 |
| E | 1.0000 | 0.2860E+03 | 0.3505E+02 | 34.6 | 62.6 | 72.77 | 0.9255 | 0.9183 | 0.4711 |
| H | | 0.1997E+03 | 0.7665E+01 | 34.8 | 63.5 | 67.94 | 0.9302 | 0.9265 | 55.40 |

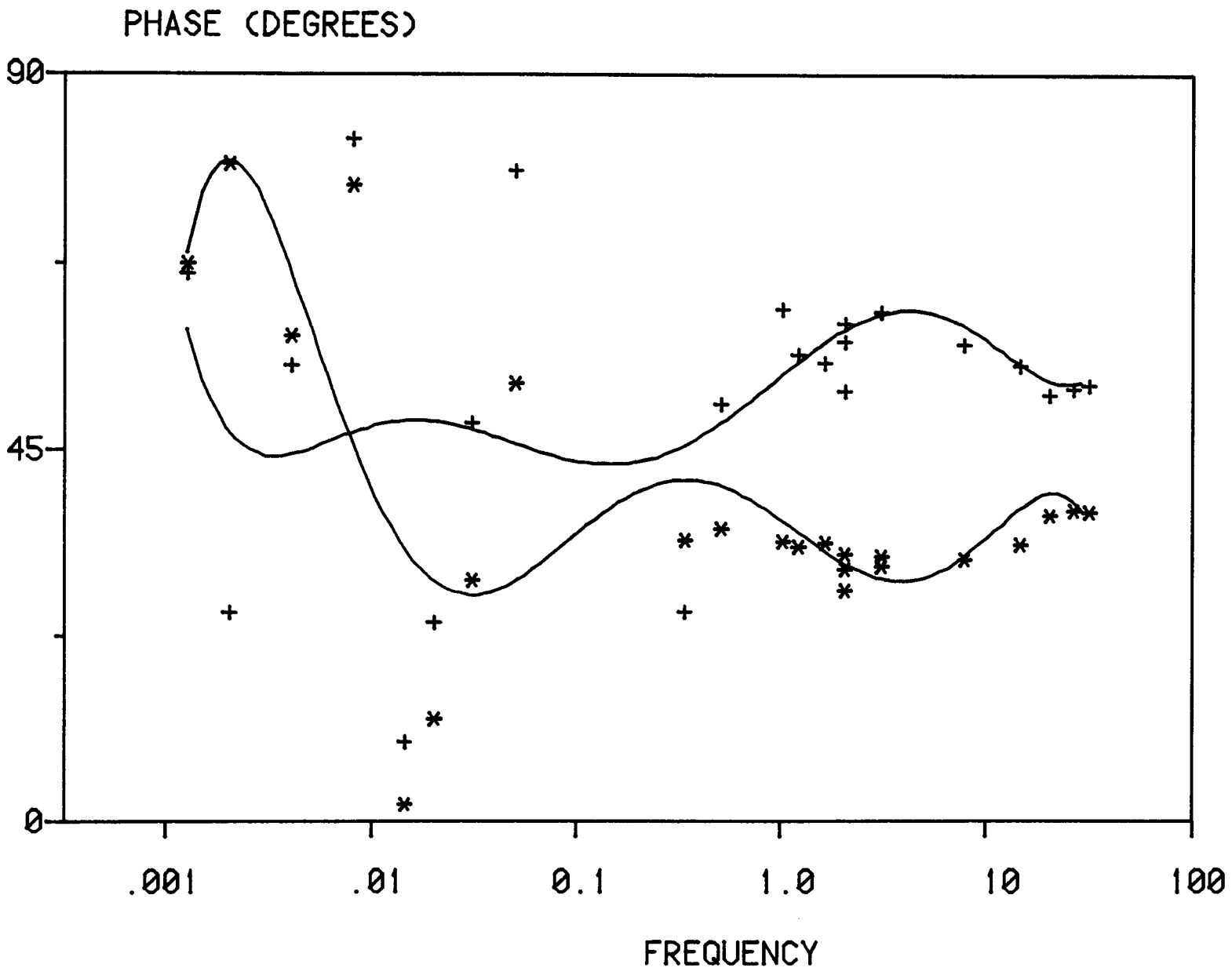
AVERAGE # 8
SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 1.0000 | 0.4314E+03 | 0.2783E+01 | 52.9 | 55.1 | 71.24 | 0.9654 | 0.9683 | 0.5806 |
| H | | 0.3730E+03 | 0.2791E+01 | 52.9 | 54.3 | 71.17 | 0.9655 | 0.9685 | 129.80 |
| E | 1.2048 | 0.3055E+03 | 0.2964E+02 | 33.9 | 57.7 | 66.67 | 0.9701 | 0.9729 | 0.4416 |
| H | | 0.2645E+03 | 0.1385E+02 | 34.6 | 57.1 | 63.98 | 0.9717 | 0.9737 | 113.00 |
| E | 1.6129 | 0.2671E+03 | 0.3735E+02 | 34.2 | 56.8 | 66.68 | 0.9736 | 0.9728 | 0.3914 |
| H | | 0.2419E+03 | 0.1868E+02 | 35.0 | 56.0 | 63.22 | 0.9745 | 0.9739 | 99.30 |
| E | 2.0000 | 0.2481E+03 | 0.3581E+02 | 33.1 | 59.3 | 66.90 | 0.9693 | 0.9678 | 0.3906 |
| H | | 0.2171E+03 | 0.2162E+02 | 33.5 | 58.8 | 65.60 | 0.9697 | 0.9685 | 96.10 |
| E | 2.0000 | 0.2427E+03 | 0.3935E+02 | 32.0 | 60.0 | 66.64 | 0.9545 | 0.8926 | 0.4399 |
| H | | 0.1991E+03 | 0.1017E+02 | 30.9 | 62.2 | 70.58 | 0.9555 | 0.9172 | 91.50 |
| E | 2.0000 | 0.3823E+03 | 0.5106E+02 | 28.6 | 53.2 | 72.09 | 0.9727 | 0.9731 | 0.3001 |
| H | | 0.3422E+03 | 0.2635E+02 | 28.9 | 52.9 | 67.60 | 0.9781 | 0.9784 | 172.70 |

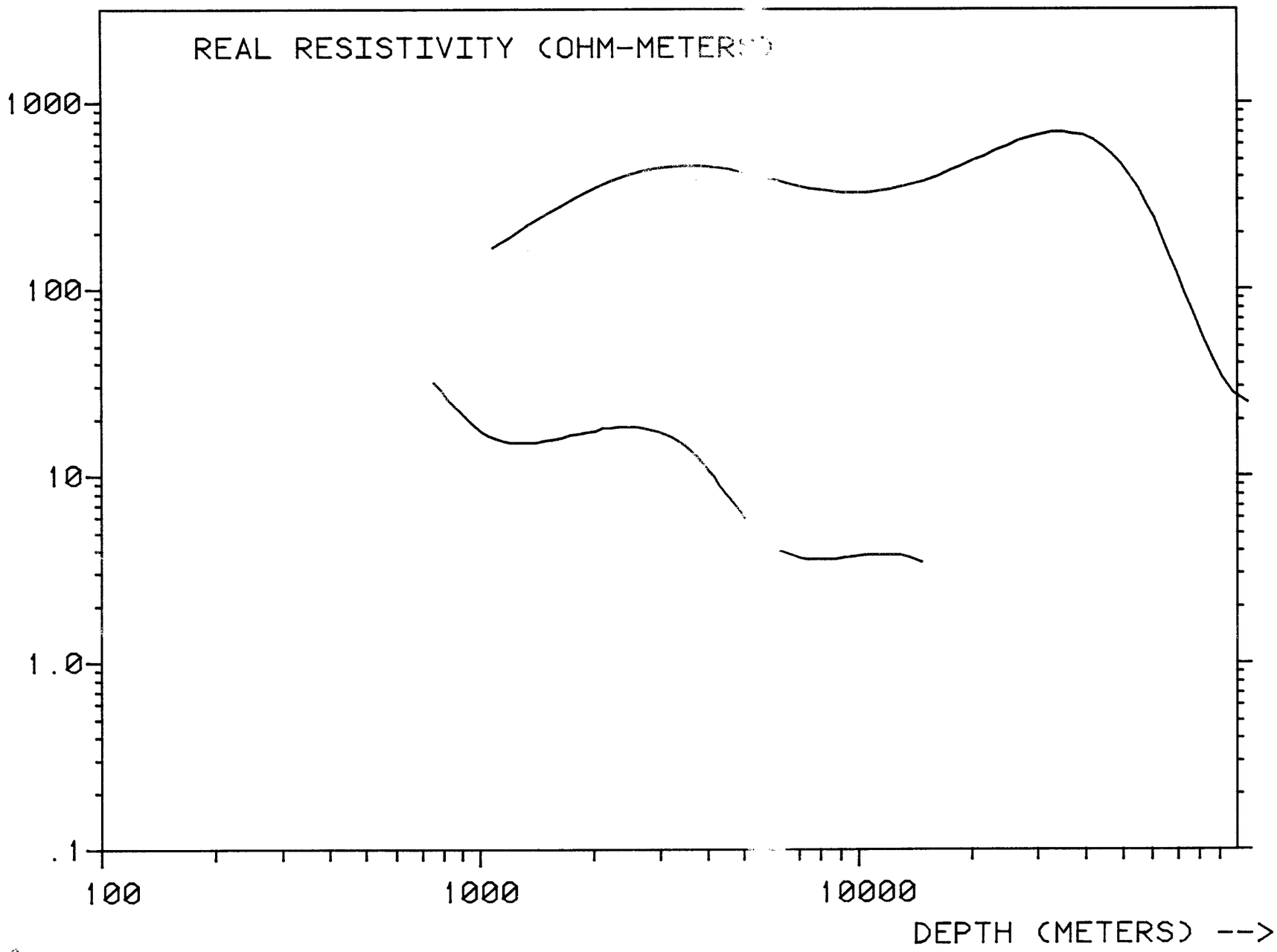
AVERAGE # 8
SHAST5 200 HZ 19-OCT-83 T43N R4W S34NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

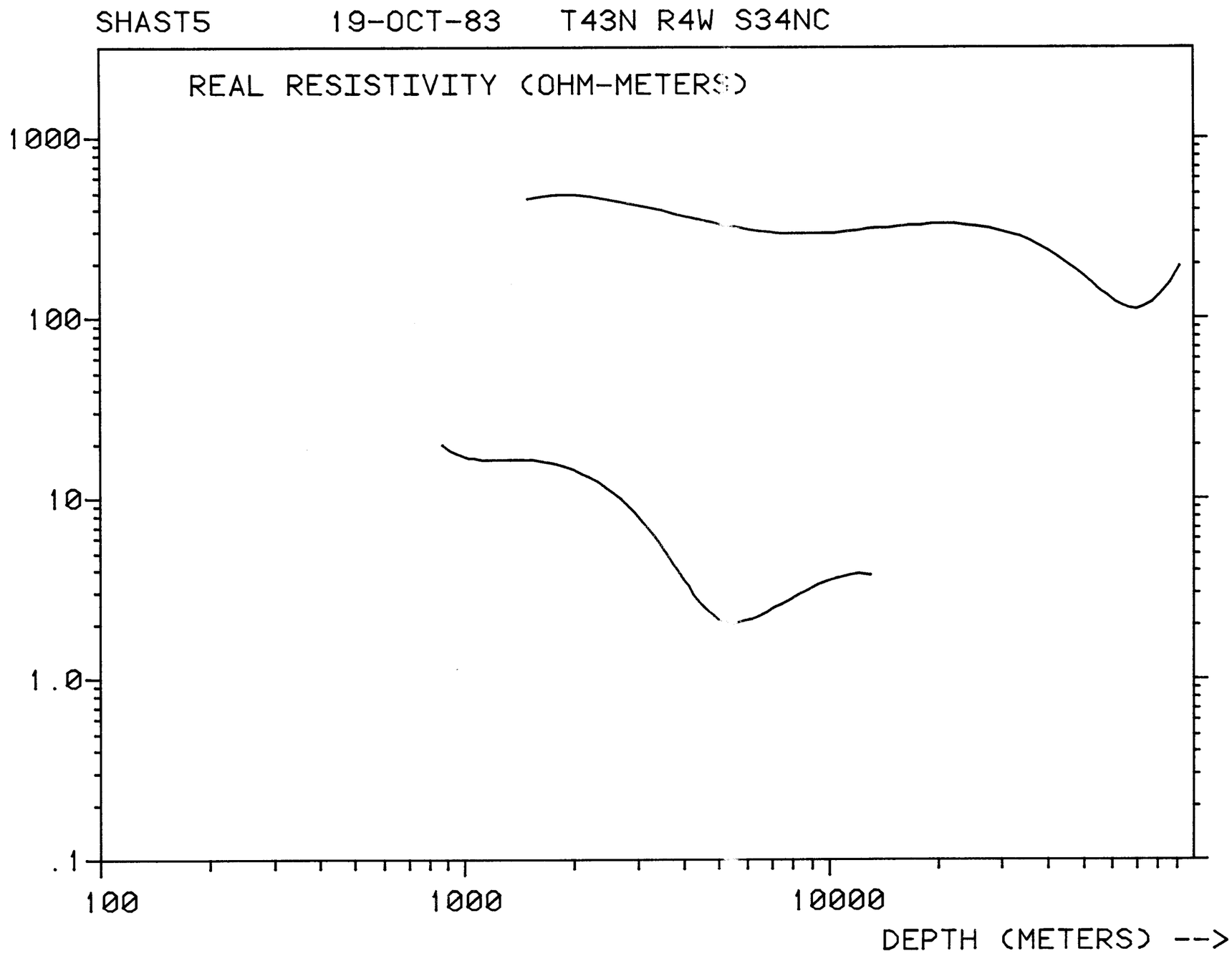
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 3.0303 | 0.2297E+03 | 0.4961E+02 | 31.6 | 62.7 | 62.95 | 0.9140 | 0.8689 | 0.5080 |
| H | | 0.1609E+03 | 0.1581E+02 | 31.9 | 62.2 | 65.15 | 0.9155 | 0.8817 | 120.60 |
| E | 3.0303 | 0.2357E+03 | 0.4419E+02 | 32.9 | 62.9 | 61.86 | 0.9410 | 0.9304 | 0.7976 |
| H | | 0.1827E+03 | 0.2807E+02 | 33.0 | 62.4 | 63.75 | 0.9413 | 0.9316 | 136.10 |
| E | 7.6923 | 0.1476E+03 | 0.5973E+02 | 32.4 | 58.6 | 60.98 | 0.9805 | 0.9845 | 0.2404 |
| H | | 0.1386E+03 | 0.4585E+02 | 32.8 | 58.4 | 57.96 | 0.9813 | 0.9850 | 33.00 |
| E | 14.2857 | 0.1105E+03 | 0.6866E+02 | 34.0 | 56.1 | 62.15 | 0.9405 | 0.9499 | 0.3173 |
| H | | 0.8917E+02 | 0.3365E+02 | 34.9 | 55.8 | 52.13 | 0.9479 | 0.9553 | 28.20 |
| E | 20.0000 | 0.1069E+03 | 0.6980E+02 | 37.5 | 52.7 | 61.79 | 0.9215 | 0.9351 | 0.3589 |
| H | | 0.7761E+02 | 0.3838E+02 | 38.3 | 52.1 | 50.31 | 0.9256 | 0.9371 | 44.00 |
| E | 26.3158 | 0.1002E+03 | 0.7965E+02 | 38.3 | 53.3 | 62.15 | 0.9453 | 0.9496 | 0.3634 |
| H | | 0.8133E+02 | 0.5107E+02 | 38.6 | 53.1 | 54.75 | 0.9465 | 0.9503 | 61.90 |
| E | 31.2500 | 0.1006E+03 | 0.8208E+02 | 38.4 | 53.4 | 65.68 | 0.9432 | 0.9452 | 0.4255 |
| H | | 0.8228E+02 | 0.4866E+02 | 38.4 | 53.7 | 58.26 | 0.9449 | 0.9466 | 41.50 |
| E | 40.0000 | 0.4659E+00 | 0.1385E-01 | 53.9 | 78.3 | 76.93 | 0.9581 | 0.9529 | 0.4395 |
| H | | 0.3622E+00 | 0.7548E-02 | 54.2 | 80.9 | 76.16 | 0.9615 | 0.9576 | 176.70 |

SHAST5 19-OCT-83 T43N R4W S34NC

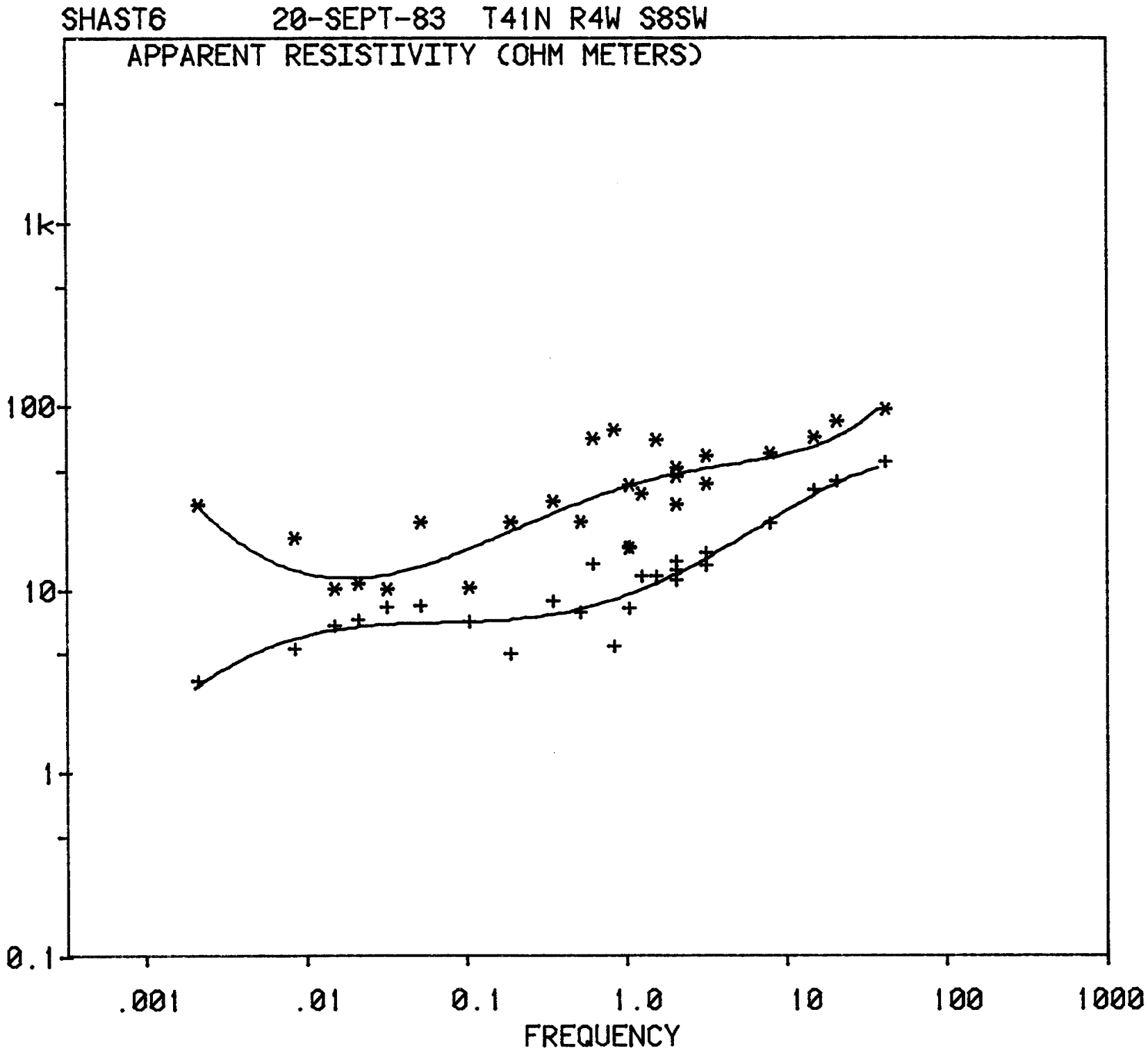


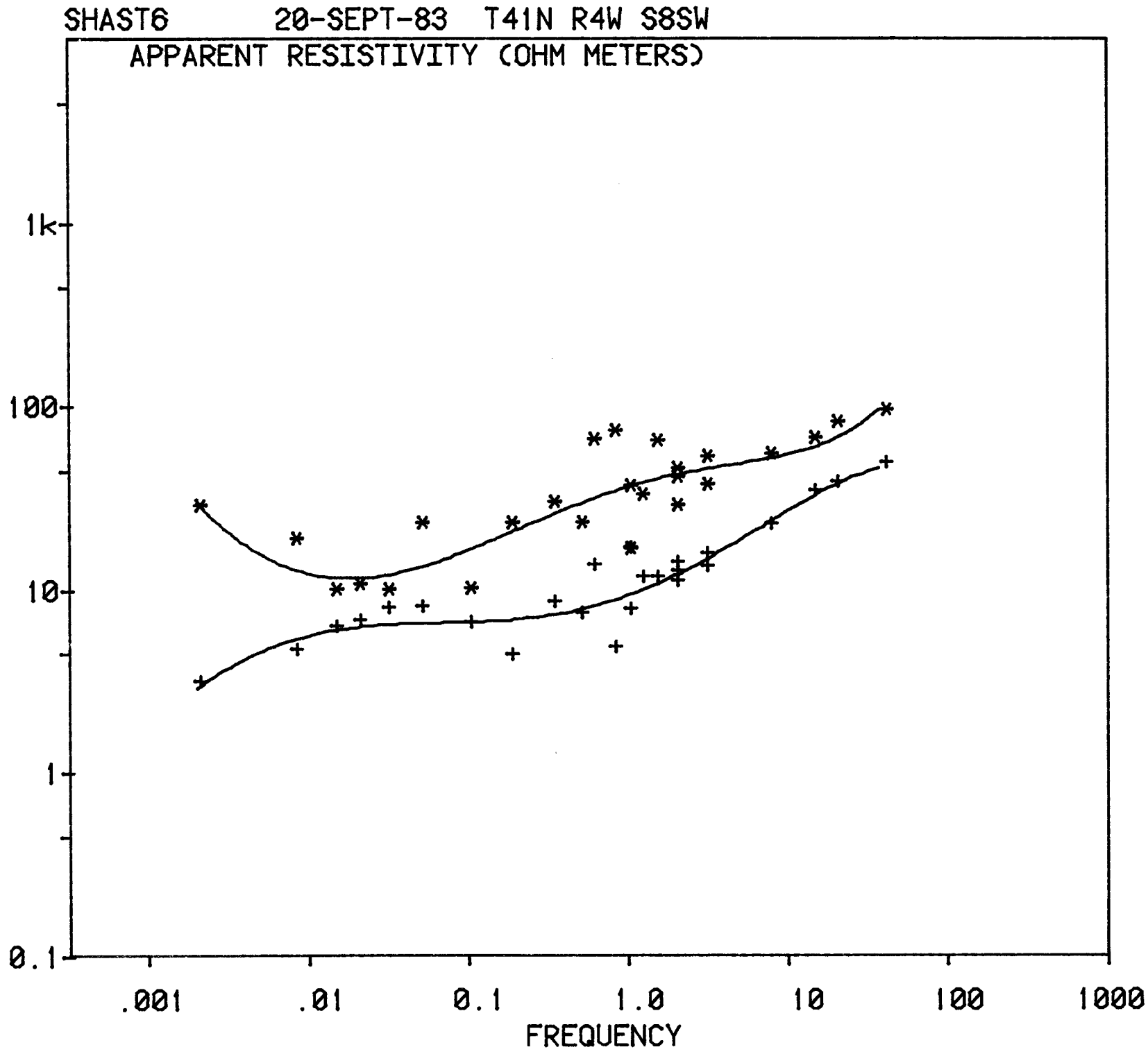
SHAST5 19-OCT-83 T43N R4W S34NC

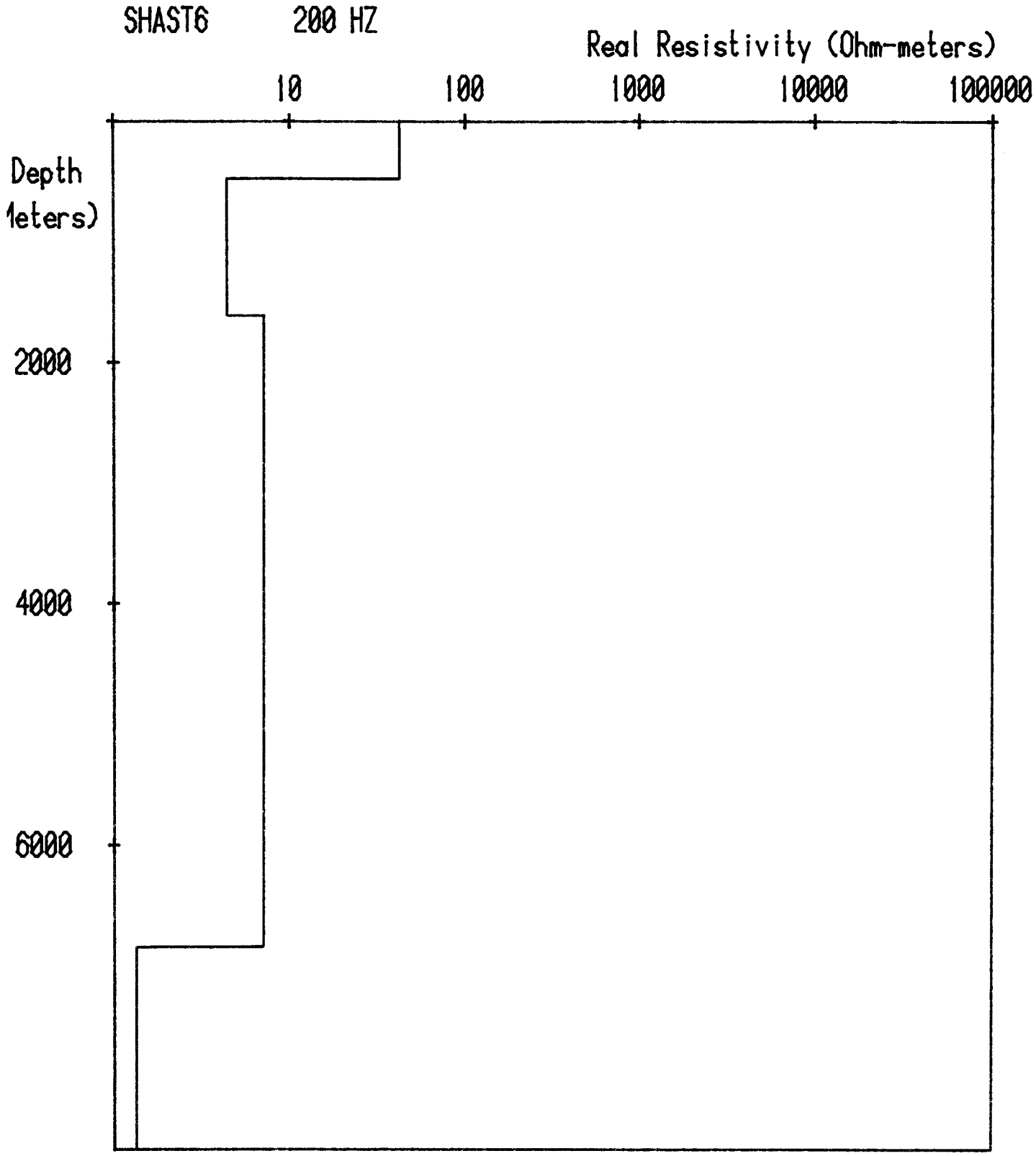



SHAST5 19-OCT-83 T43N R4W S34NC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
DEPTH (METERS) -->

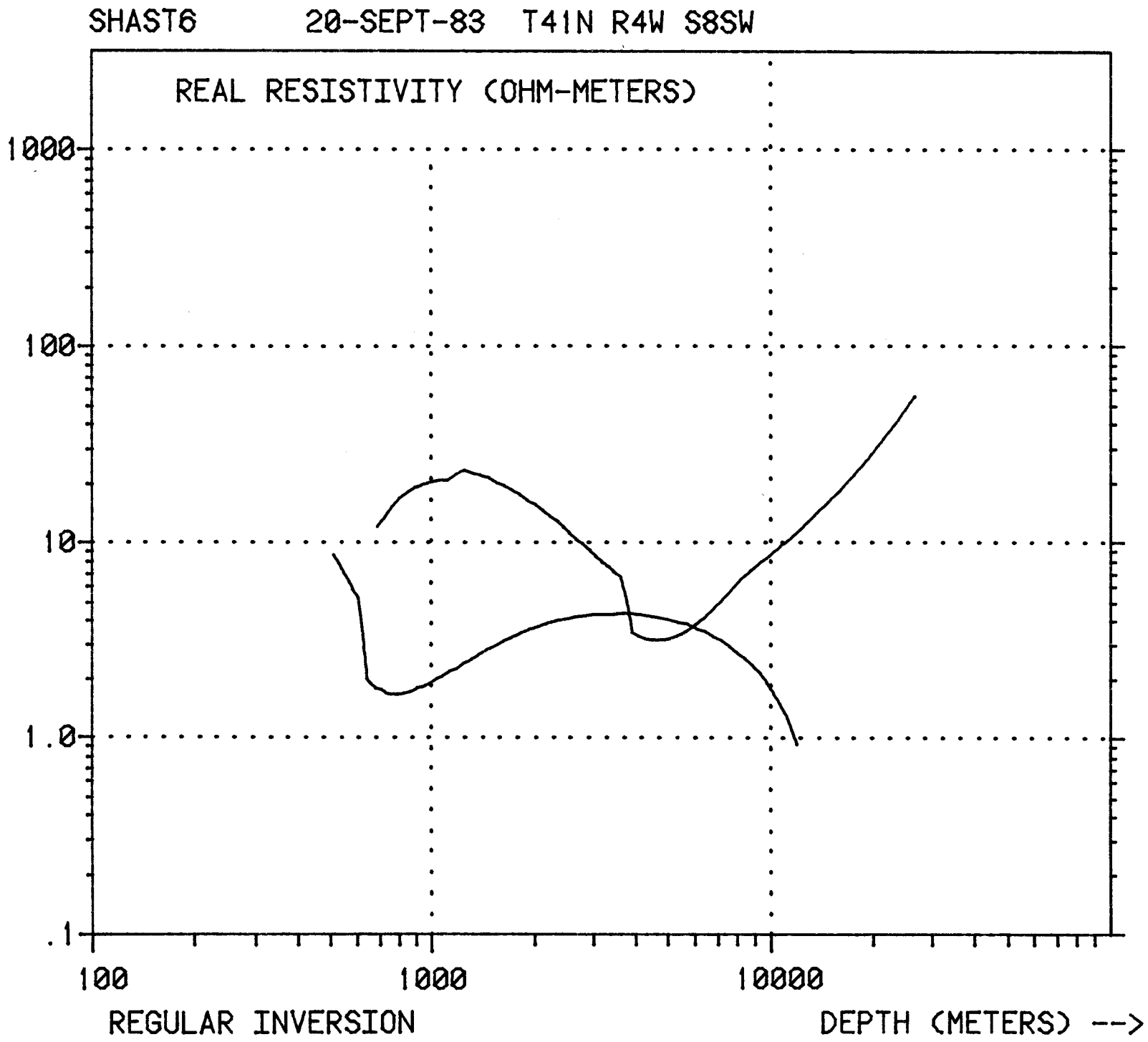
(RES)

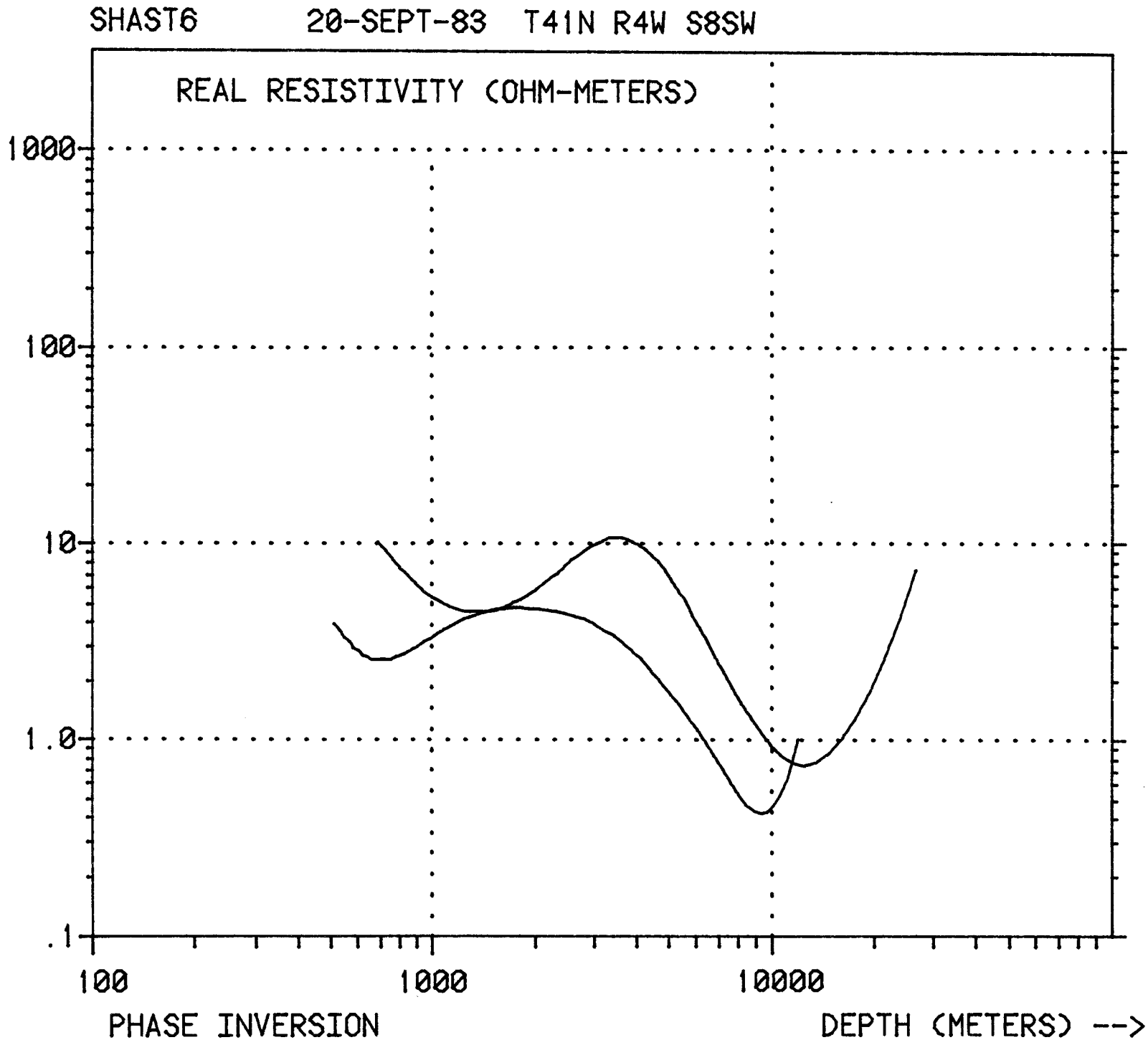

SHAST6 20-SEPT-83 T41N R4W S8SW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAST6 20-SEPT-83 T41N R4W S8SW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

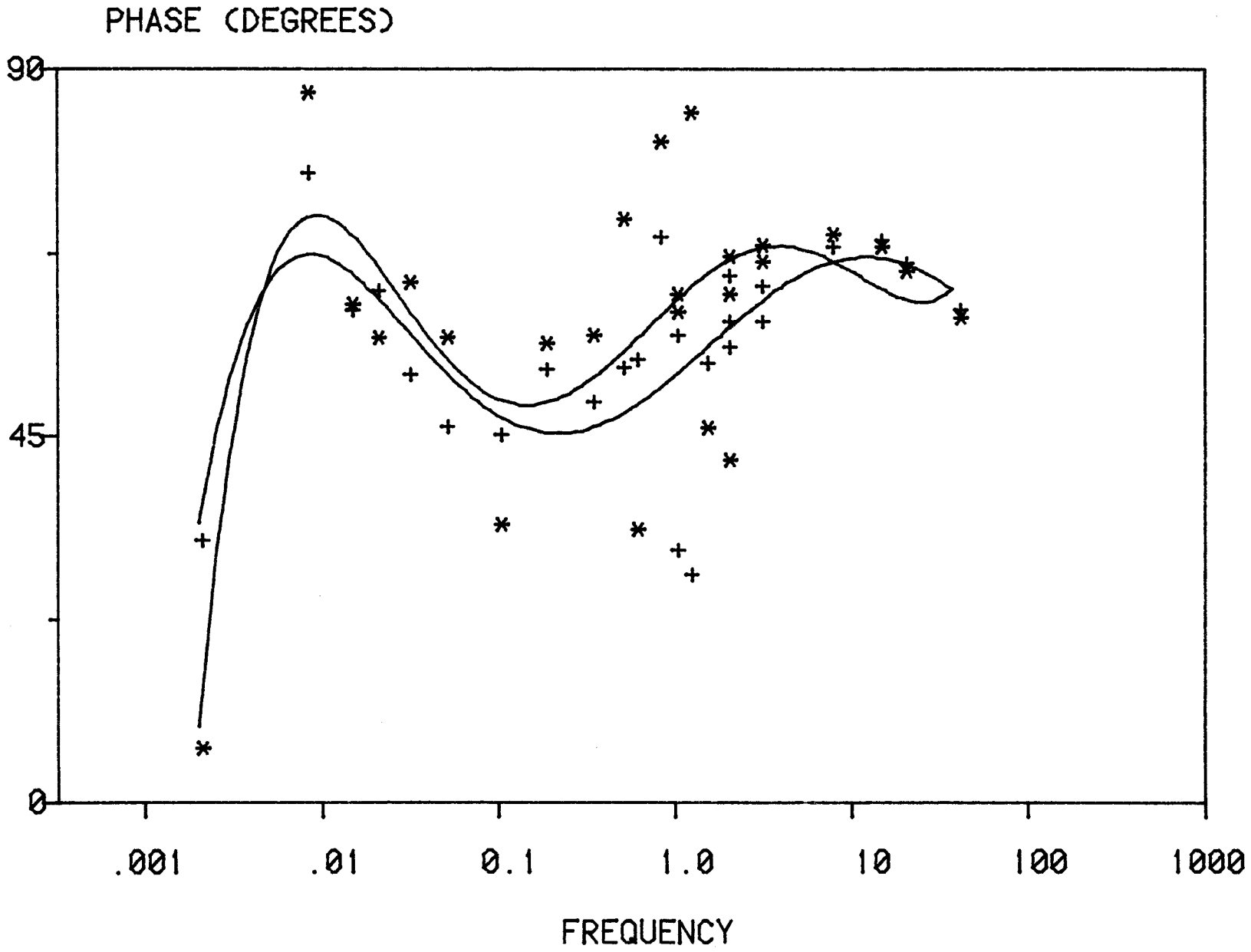



| | | | | |
|---|---|---|---|---|
| Resistivity | 42.27 | 4.43 | 7.10 | 1.33 |
| Thickness | | 473.79 | 1143.20 | 5225.50 |
| Depth | 0.00 | 473.79 | 1617.00 | 6842.50 |


SHAST6 20-SEPT-83 T41N R4W S8SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST6 20-SEPT-83 T41N R4W S8SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAST6 20-SEPT-83 T41N R4W S8SW



THE SITE IS: SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| ~~0.0012~~ | ~~0.00~~ | ~~0.00~~ | ~~1~~ | 0.00 | 0.00 |
| 0.0020 | 2.94 | 27.20 | 2 | 354.131 | 447.03 |
| ~~0.0040~~ | ~~0.00~~ | ~~0.00~~ | ~~3~~ | 0.00 | 0.00 |
| 0.0080 | 4.37 | 17.73 | 4 | 19.42 | 14.03 |
| 0.0143 | 5.94 | 9.31 | 5 | 8.76 | 5.93 |
| 0.0200 | 6.31 | 10.00 | 6 | 12.41 | 17.71 |
| 0.0303 | 7.53 | 9.33 | 7 | 13.58 | 11.05 |
| 0.0500 | 7.64 | 21.60 | 8 | 1.71 | 4.55 |
| 0.1000 | 6.23 | 9.57 | 9 | 0.38 | 1.05 |
| 0.1818 | 4.17 | 21.67 | 10 | 0.06 | 0.14 |
| 0.3333 | 8.09 | 28.21 | 11 | 0.08 | 0.13 |
| 0.5000 | 6.99 | 21.56 | 12 | 0.03 | 0.03 |
| 0.5988 | 12.66 | 61.07 | 13 | 0.41 | 0.79 |
| 0.8000 | 4.58 | 68.00 | 14 | 0.13 | 0.72 |
| 1.0000 | 7.36 | 15.60 | 15 | 0.01 | 0.04 |
| 1.0000 | 15.83 | 34.21 | 16 | 0.01 | 0.18 |
| 1.2048 | 11.03 | 30.95 | 17 | 0.11 | 0.18 |
| 1.4925 | 11.10 | 60.54 | 18 | 0.07 | 0.14 |
| 2.0000 | 13.31 | 27.16 | 19 | 0.04 | 0.04 |
| 2.0000 | 11.87 | 38.44 | 20 | 0.00 | 0.02 |
| 2.0000 | 10.40 | 42.89 | 21 | 0.00 | 0.05 |
| 3.0303 | 14.80 | 49.54 | 22 | 0.00 | 0.01 |
| 3.0303 | 12.44 | 35.12 | 23 | 0.01 | 0.01 |
| 7.6923 | 21.42 | 51.41 | 24 | 0.02 | 0.02 |
| 14.2857 | 32.31 | 63.09 | 25 | 0.01 | 0.02 |
| 20.0000 | 36.24 | 76.07 | 26 | 0.01 | 0.02 |
| ~~26.3158~~ | ~~0.00~~ | ~~0.00~~ | ~~27~~ | 0.00 | 0.05 |
| ~~31.2500~~ | ~~0.00~~ | ~~0.00~~ | ~~28~~ | 0.01 | 0.04 |
| 40.0000 | 45.83 | 88.86 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 500.0 | 0.422E+02 | 0.294E+01 | 6. | 29. | 30. | 0.8573 | 0.8867 | 0.1616 | 0.22 |
| H | SEC | 0.122E+02 | 0.295E+01 | 8. | 36. | 26. | 0.9011 | 0.9264 | 15.80 | 0.18 |
| E | 250.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 125.0 | 0.267E+02 | 0.548E+01 | 86. | 82. | 60. | 0.8222 | 0.8208 | 0.1983 | 0.28 |
| H | SEC | 0.874E+01 | 0.326E+01 | 89. | 73. | 68. | 0.8501 | 0.8488 | 32.90 | 0.19 |
| E | 70.0 | 0.125E+02 | 0.616E+01 | 65. | 57. | 28. | 0.8646 | 0.9587 | 0.2164 | 0.18 |
| H | SEC | 0.613E+01 | 0.572E+01 | 59. | 64. | 121. | 0.8743 | 0.9640 | 64.80 | 0.07 |
| E | 50.0 | 0.116E+02 | 0.617E+01 | 59. | 62. | 35. | 0.9601 | 0.9844 | 0.3057 | 0.19 |
| H | SEC | 0.842E+01 | 0.644E+01 | 56. | 64. | 55. | 0.9622 | 0.9855 | 65.10 | 0.16 |
| E | 33.0 | 0.999E+01 | 0.762E+01 | 64. | 53. | 8. | 0.9895 | 0.9955 | 0.3851 | 0.18 |
| H | SEC | 0.866E+01 | 0.744E+01 | 64. | 53. | 3. | 0.9901 | 0.9957 | 61.50 | 0.16 |
| E | 20.0 | 0.326E+02 | 0.774E+01 | 57. | 47. | 34. | 0.9299 | 0.9243 | 0.4175 | 0.23 |
| H | SEC | 0.106E+02 | 0.754E+01 | 58. | 46. | 20. | 0.9538 | 0.9497 | 61.10 | 0.20 |

AVERAGE # 8
SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.113E+02 | 0.743E+01 | 35. | 47. | 14. | 0.9440 | 0.9443 | 0.5653 | 0.34 |
| H | SEC | 0.789E+01 | 0.504E+01 | 34. | 44. | 21. | 0.9476 | 0.9480 | 68.00 | 0.28 |
| E | 5.5 | 0.288E+02 | 0.635E+01 | 55. | 50. | 72. | 0.8233 | 0.8807 | 0.3351 | 0.34 |
| H | SEC | 0.145E+02 | 0.199E+01 | 58. | 57. | 84. | 0.8415 | 0.8870 | 65.40 | 0.46 |
| E | 3.0 | 0.457E+02 | 0.849E+01 | 60. | 48. | 34. | 0.9185 | 0.8590 | 0.2203 | 0.69 |
| H | SEC | 0.107E+02 | 0.768E+01 | 55. | 51. | 28. | 0.9413 | 0.8986 | 67.40 | 0.74 |
| E | 2.0 | 0.354E+02 | 0.848E+01 | 70. | 54. | 36. | 0.9010 | 0.8549 | 0.2318 | 0.16 |
| H | SEC | 0.768E+01 | 0.549E+01 | 74. | 53. | 18. | 0.9242 | 0.8967 | 67.90 | 0.20 |
| E | 1.7 | 0.782E+02 | 0.115E+02 | 35. | 58. | 29. | 0.9225 | 0.9620 | 0.1054 | 0.61 |
| H | SEC | 0.440E+02 | 0.138E+02 | 33. | 52. | 25. | 0.9334 | 0.9699 | 53.50 | 0.73 |
| E | 1.2 | 0.891E+02 | 0.502E+01 | 80. | 69. | 29. | 0.9407 | 0.9016 | 0.2803 | 0.28 |
| H | SEC | 0.469E+02 | 0.414E+01 | 83. | 70. | 27. | 0.9577 | 0.9238 | 105.90 | 0.12 |
| E | 1.0 | 0.175E+02 | 0.791E+01 | 63. | 58. | 10. | 0.9544 | 0.9628 | 0.2449 | 0.14 |
| H | HZ | 0.137E+02 | 0.680E+01 | 63. | 57. | 6. | 0.9553 | 0.9634 | 82.60 | 0.13 |

AVERAGE # 8
SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.430E+02 | 0.170E+02 | 59. | 32. | 175. | 0.9029 | 0.9438 | 0.2176 | 0.22 |
| H | HZ | 0.254E+02 | 0.146E+02 | 62. | 31. | 166. | 0.9054 | 0.9445 | 49.20 | 0.23 |
| E | 1.2 | 0.378E+02 | 0.171E+02 | 84. | 33. | 39. | 0.9565 | 0.8379 | 0.1267 | 0.35 |
| H | HZ | 0.241E+02 | 0.496E+01 | 86. | 23. | 9. | 0.9708 | 0.8745 | -3.80 | 0.44 |
| E | 1.5 | 0.933E+02 | 0.145E+02 | 43. | 59. | 40. | 0.9122 | 0.7926 | 0.1697 | 0.13 |
| H | HZ | 0.278E+02 | 0.766E+01 | 50. | 50. | 1. | 0.9382 | 0.8488 | 58.00 | 0.21 |
| E | 2.0 | 0.354E+02 | 0.140E+02 | 43. | 55. | 32. | 0.8922 | 0.9345 | 0.6278 | 0.17 |
| H | HZ | 0.189E+02 | 0.127E+02 | 42. | 57. | 35. | 0.9022 | 0.9445 | 101.90 | 0.10 |
| E | 2.0 | 0.543E+02 | 0.141E+02 | 62. | 60. | 24. | 0.8752 | 0.8761 | 0.8004 | 0.12 |
| H | HZ | 0.226E+02 | 0.966E+01 | 64. | 59. | 10. | 0.8895 | 0.8904 | 112.80 | 0.11 |
| E | 2.0 | 0.574E+02 | 0.118E+02 | 67. | 65. | 10. | 0.8481 | 0.9303 | 0.6651 | 0.07 |
| H | HZ | 0.284E+02 | 0.902E+01 | 67. | 65. | 9. | 0.8500 | 0.9313 | 67.80 | 0.08 |

AVERAGE # 8
SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.740E+02 | 0.176E+02 | 66. | 64. | 25. | 0.8632 | 0.8694 | 1.2189 | 0.16 |
| H | HZ | 0.250E+02 | 0.120E+02 | 68. | 64. | 2. | 0.8884 | 0.8935 | 98.90 | 0.11 |
| E | 3.0 | 0.465E+02 | 0.132E+02 | 69. | 59. | 20. | 0.8524 | 0.9459 | 0.6263 | 0.04 |
| H | HZ | 0.238E+02 | 0.117E+02 | 69. | 59. | 19. | 0.8543 | 0.9509 | 114.50 | 0.04 |
| E | 7.7 | 0.600E+02 | 0.243E+02 | 70. | 69. | 7. | 0.9436 | 0.9444 | 0.4743 | 0.13 |
| H | HZ | 0.428E+02 | 0.185E+02 | 70. | 68. | 178. | 0.9460 | 0.9468 | 134.40 | 0.11 |
| E | 14.3 | 0.695E+02 | 0.338E+02 | 68. | 69. | 4. | 0.9510 | 0.9765 | 0.4017 | 0.13 |
| H | HZ | 0.567E+02 | 0.308E+02 | 68. | 69. | 4. | 0.9511 | 0.9765 | 130.50 | 0.14 |
| E | 20.0 | 0.880E+02 | 0.391E+02 | 66. | 67. | 5. | 0.9275 | 0.9614 | 0.5097 | 0.13 |
| H | HZ | 0.641E+02 | 0.334E+02 | 66. | 67. | 5. | 0.9277 | 0.9614 | 134.20 | 0.14 |
| E | 26.3 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 31.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 40.0 | 0.110E+03 | 0.543E+02 | 59. | 62. | 11. | 0.8934 | 0.8987 | 0.6291 | 0.14 |
| H | HZ | 0.680E+02 | 0.373E+02 | 60. | 60. | 175. | 0.8965 | 0.9018 | 147.30 | 0.12 |

SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 20
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 20.0000 | | 0.0000 |
| | | 500.0000 | |
| 2 | 3.0000 | | 500.0000 |
| | | 500.0000 | |
| 3 | 5.0000 | | 1000.0000 |
| | | 5000.0000 | |
| 4 | 1.0000 | | 6000.0000 |

FREQUENCY RANGE ( 0.0020 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 42.2779 | | 0.0000 |
| | | 473.7996 | |
| 2 | 4.4323 | | 473.7996 |
| | | 1143.2009 | |
| 3 | 7.1001 | | 1617.0005 |
| | | 5225.5040 | |
| 4 | 1.3365 | | 6842.5045 |

MEAN PERCENT VARIATION IS 8.7118

ERROR ANALYSIS

R-SQUARED = 0.999

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 19 | 2540.550 | 133.713 | 0.316 |
| MODEL | 6 | 2537.493 | 422.915 | 36220.399 |
| RESID | 13 | 0.152 | 0.012 | |

STANDARD ERROR = 0.108

DTEST FOR MEANS = 0.000

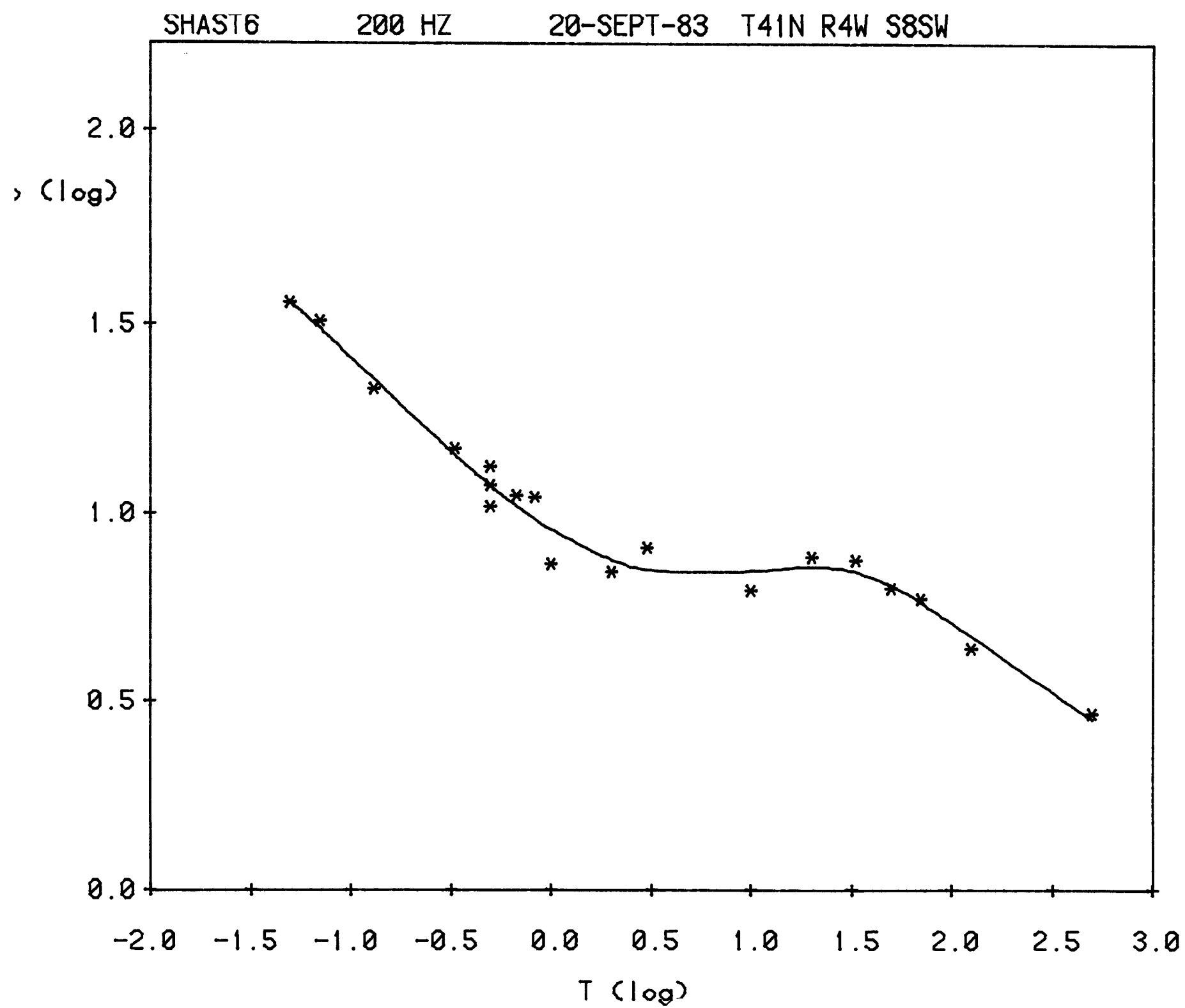
NOISE TO SIGNAL RATIO = 0.525 PERCENT

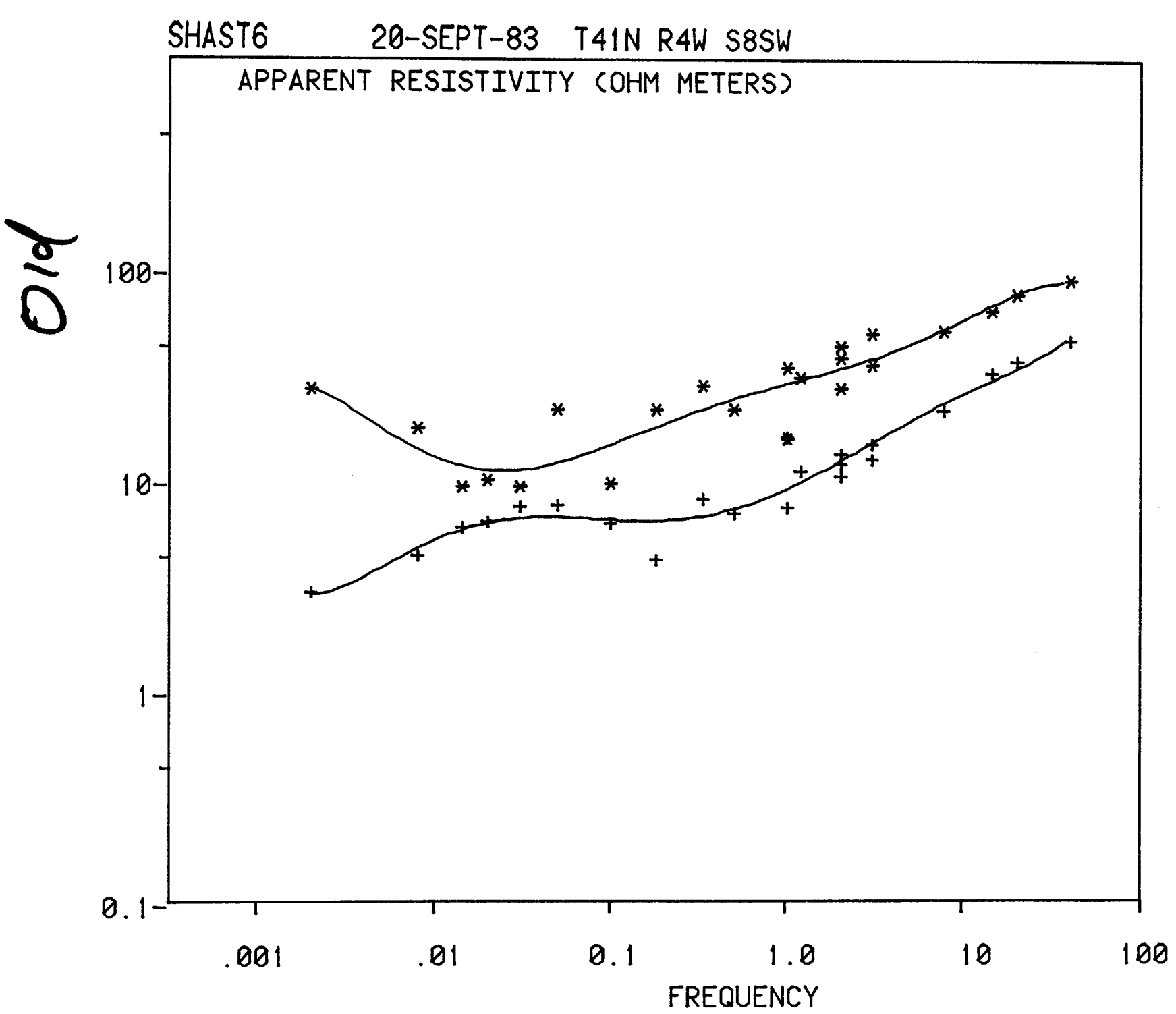
SHASTA 200 HZ 20-SEPT-83 T41N R4W S8SW

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 500.000 | 2.944 | 2.855 | 0.089 | 3.056 |
| 2 | 125.000 | 4.372 | 4.737 | -0.365 | -8.007 |
| 3 | 70.000 | 5.944 | 5.860 | 0.084 | 1.418 |
| 4 | 50.000 | 6.307 | 6.490 | -0.184 | -2.870 |
| 5 | 33.000 | 7.529 | 7.083 | 0.446 | 6.103 |
| 6 | 20.000 | 7.638 | 7.321 | 0.317 | 4.236 |
| 7 | 10.000 | 6.234 | 6.931 | -0.697 | -10.583 |
| 8 | 3.000 | 8.088 | 6.965 | 1.122 | 14.913 |
| 9 | 2.000 | 6.986 | 7.477 | -0.491 | -6.792 |
| 10 | 1.000 | 7.355 | 9.041 | -1.686 | -20.561 |
| 11 | 0.830 | 11.032 | 9.660 | 1.373 | 13.270 |
| 12 | 0.670 | 11.098 | 10.494 | 0.604 | 5.597 |
| 13 | 0.500 | 13.313 | 11.864 | 1.449 | 11.510 |
| 14 | 0.500 | 11.872 | 11.864 | 0.008 | 0.065 |
| 15 | 0.500 | 10.403 | 11.864 | -1.461 | -13.122 |
| 16 | 0.330 | 14.800 | 14.315 | 0.485 | 3.330 |
| 17 | 0.130 | 21.425 | 22.673 | -1.248 | -5.662 |
| 18 | 0.070 | 32.313 | 31.098 | 1.215 | 3.832 |
| 19 | 0.050 | 36.244 | 36.397 | -0.153 | -0.422 |
| 20 | 0.025 | 45.826 | 45.974 | -0.149 | -0.324 |

MEAN PERCENT ERROR = 8.7209
MAXIMUM PERCENT ERROR = 20.5611
MAX. ERROR OCCURED AT OBSERVATION 10


SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW
2.0
1.5
1.0
0.5
0.0
(log)
-2.0 -1.5 -1.0 -0.5 0.0 0.5 1.0 1.5 2.0 2.5 3.0
T (log)


SHAST6 20-SEPT-83 T41N R4W S8SW
APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.001
.01
0.1
1.0
10
100
FREQUENCY

Old

THE SITE IS: SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMN | MEAN OF RHOMX | PERIOD # |
|---|---|---|---|
| 0.0012 | 0.00 | 0.00 | 1 |
| 0.0020 | 2.94 | 27.20 | 2 |
| 0.0040 | 0.00 | 0.00 | 3 |
| 0.0080 | 4.37 | 17.73 | 4 |
| 0.0143 | 5.94 | 9.31 | 5 |
| 0.0200 | 6.31 | 10.00 | 6 |
| 0.0303 | 7.53 | 9.33 | 7 |
| 0.0500 | 7.64 | 21.60 | 8 |
| 0.1000 | 6.23 | 9.57 | 9 |
| 0.1818 | 4.17 | 21.67 | 10 |
| 0.3333 | 8.09 | 28.21 | 11 |
| 0.5000 | 6.99 | 21.56 | 12 |
| 0.5988 | 12.66 | 61.07 | 13 |
| 0.8000 | 4.58 | 68.00 | 14 |
| 1.0000 | 7.36 | 15.60 | 15 |
| 1.0000 | 15.83 | 34.21 | 16 |
| 1.2048 | 11.03 | 30.95 | 17 |
| 1.4925 | 11.10 | 60.54 | 18 |
| 2.0000 | 13.31 | 27.16 | 19 |
| 2.0000 | 11.87 | 38.44 | 20 |
| 2.0000 | 10.40 | 42.89 | 21 |
| 3.0303 | 14.80 | 49.54 | 22 |
| 3.0303 | 12.44 | 35.12 | 23 |
| 7.6923 | 21.42 | 51.41 | 24 |
| 14.2857 | 32.31 | 63.09 | 25 |
| 20.0000 | 36.24 | 76.07 | 26 |
| 26.3158 | 0.00 | 0.00 | 27 |
| 31.2500 | 0.00 | 0.00 | 28 |
| 40.0000 | 45.83 | 88.86 | 29 |

AVERAGE # 8
SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.0012 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 22.50 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 22.50 | 0.0000 | 0.0000 | 179.90 |
| E | 0.0020 | 0.4215E+02 | 0.2935E+01 | 11.5 | 34.8 | 120.34 | 0.8573 | 0.8868 | 0.1616 |
| H | | 0.1225E+02 | 0.2952E+01 | 13.8 | 41.5 | 116.28 | 0.9012 | 0.9264 | 15.80 |
| E | 0.0040 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 22.50 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 22.50 | 0.0000 | 0.0000 | 179.90 |
| E | 0.0080 | 0.2672E+02 | 0.5483E+01 | 18.4 | 14.6 | 149.97 | 0.8223 | 0.8209 | 0.1983 |
| H | | 0.8741E+01 | 0.3262E+01 | 21.0 | 5.6 | 158.07 | 0.8502 | 0.8489 | 32.90 |
| E | 0.0143 | 0.1250E+02 | 0.6164E+01 | 13.8 | 6.2 | 118.07 | 0.8646 | 0.9588 | 0.2164 |
| H | | 0.6128E+01 | 0.5724E+01 | 7.6 | 13.4 | 30.79 | 0.8744 | 0.9640 | 64.80 |
| E | 0.0200 | 0.1158E+02 | 0.6170E+01 | 21.4 | 24.8 | 125.34 | 0.9601 | 0.9844 | 0.3057 |
| H | | 0.8420E+01 | 0.6444E+01 | 19.0 | 27.1 | 144.63 | 0.9623 | 0.9855 | 65.10 |
| E | 0.0303 | 0.9991E+01 | 0.7622E+01 | 48.0 | 36.4 | 97.84 | 0.9896 | 0.9956 | 0.3851 |
| H | | 0.8661E+01 | 0.7436E+01 | 47.9 | 36.8 | 93.07 | 0.9901 | 0.9958 | 61.50 |
| E | 0.0500 | 0.3259E+02 | 0.7740E+01 | 69.4 | 58.8 | 124.10 | 0.9299 | 0.9244 | 0.4175 |
| | | 0.1061E+02 | 0.7537E+01 | 69.9 | 58.5 | 109.59 | 0.9538 | 0.9497 | 61.10 |

AVERAGE # 8
SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

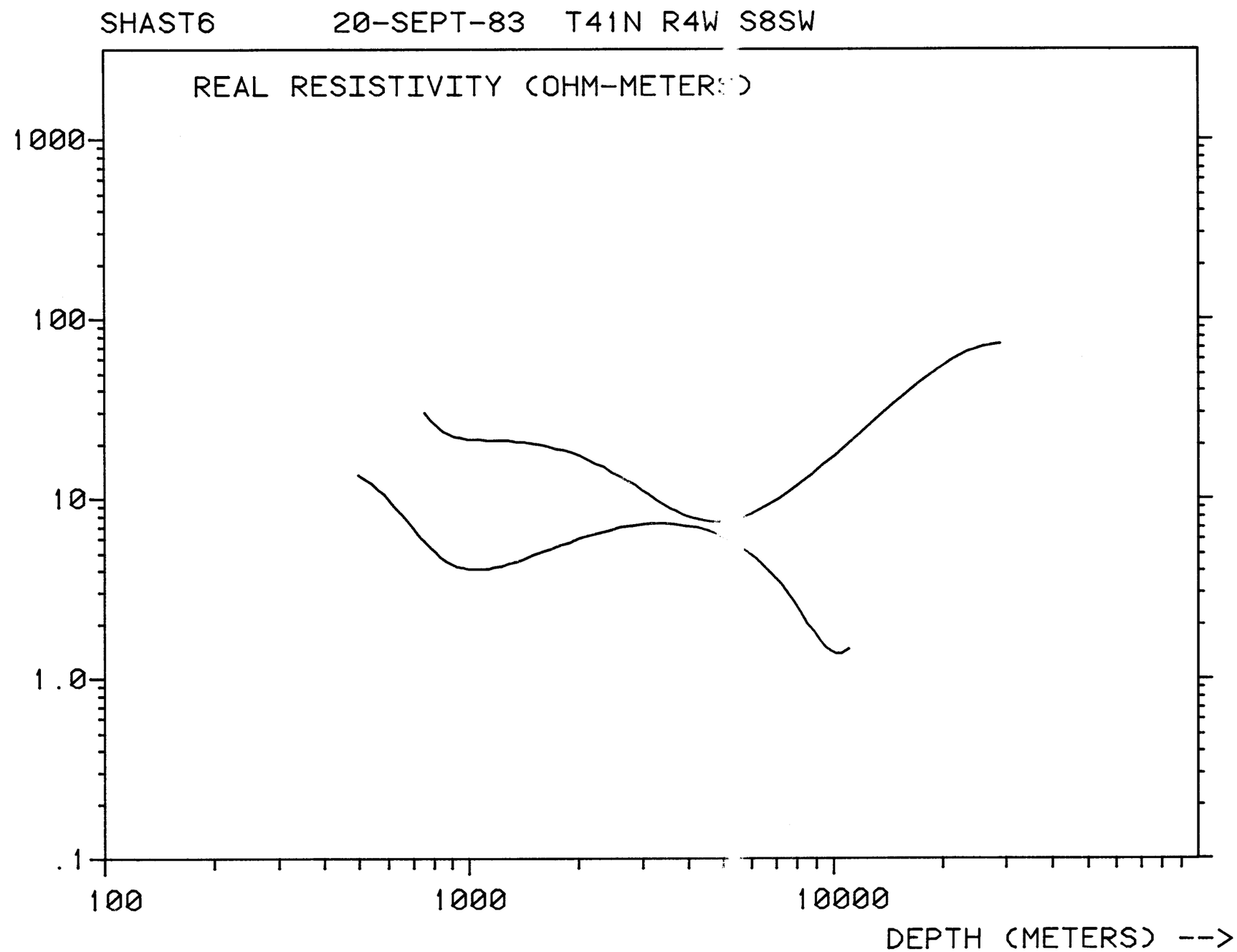
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.1000 | 0.1125E+02 | 0.7432E+01 | 80.7 | 2.9 | 104.44 | 0.9440 | 0.9444 | 0.5653 |
| H | | 0.7895E+01 | 0.5036E+01 | 80.1 | 0.2 | 111.09 | 0.9477 | 0.9480 | 68.00 |
| E | 0.1818 | 0.2879E+02 | 0.6354E+01 | 30.2 | 25.3 | 162.22 | 0.8234 | 0.8807 | 0.3351 |
| H | | 0.1454E+02 | 0.1989E+01 | 32.9 | 31.8 | 173.66 | 0.8416 | 0.8871 | 65.40 |
| E | 0.3333 | 0.4571E+02 | 0.8491E+01 | 46.0 | 34.4 | 123.95 | 0.9185 | 0.8590 | 0.2201 |
| H | | 0.1071E+02 | 0.7685E+01 | 41.7 | 36.8 | 117.72 | 0.9414 | 0.8986 | 67.30 |
| E | 0.5000 | 0.3544E+02 | 0.8477E+01 | 60.8 | 45.0 | 125.87 | 0.9011 | 0.8550 | 0.2320 |
| H | | 0.7685E+01 | 0.5494E+01 | 64.6 | 43.8 | 107.75 | 0.9243 | 0.8968 | 68.00 |
| E | 0.5988 | 0.7815E+02 | 0.1151E+02 | 27.2 | 50.0 | 119.25 | 0.9226 | 0.9620 | 0.1054 |
| H | | 0.4399E+02 | 0.1380E+02 | 24.9 | 44.1 | 115.26 | 0.9334 | 0.9699 | 53.50 |
| E | 0.8000 | 0.8913E+02 | 0.5025E+01 | 74.1 | 63.5 | 118.54 | 0.9408 | 0.9016 | 0.2803 |
| H | | 0.4687E+02 | 0.4144E+01 | 77.0 | 64.6 | 116.54 | 0.9578 | 0.9239 | 105.90 |
| E | 1.0000 | 0.1749E+02 | 0.7912E+01 | 58.1 | 53.3 | 100.11 | 0.9545 | 0.9628 | 0.2449 |
| H | | 0.1372E+02 | 0.6798E+01 | 58.2 | 52.7 | 96.36 | 0.9553 | 0.9635 | 82.60 |

AVERAGE # 8
SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

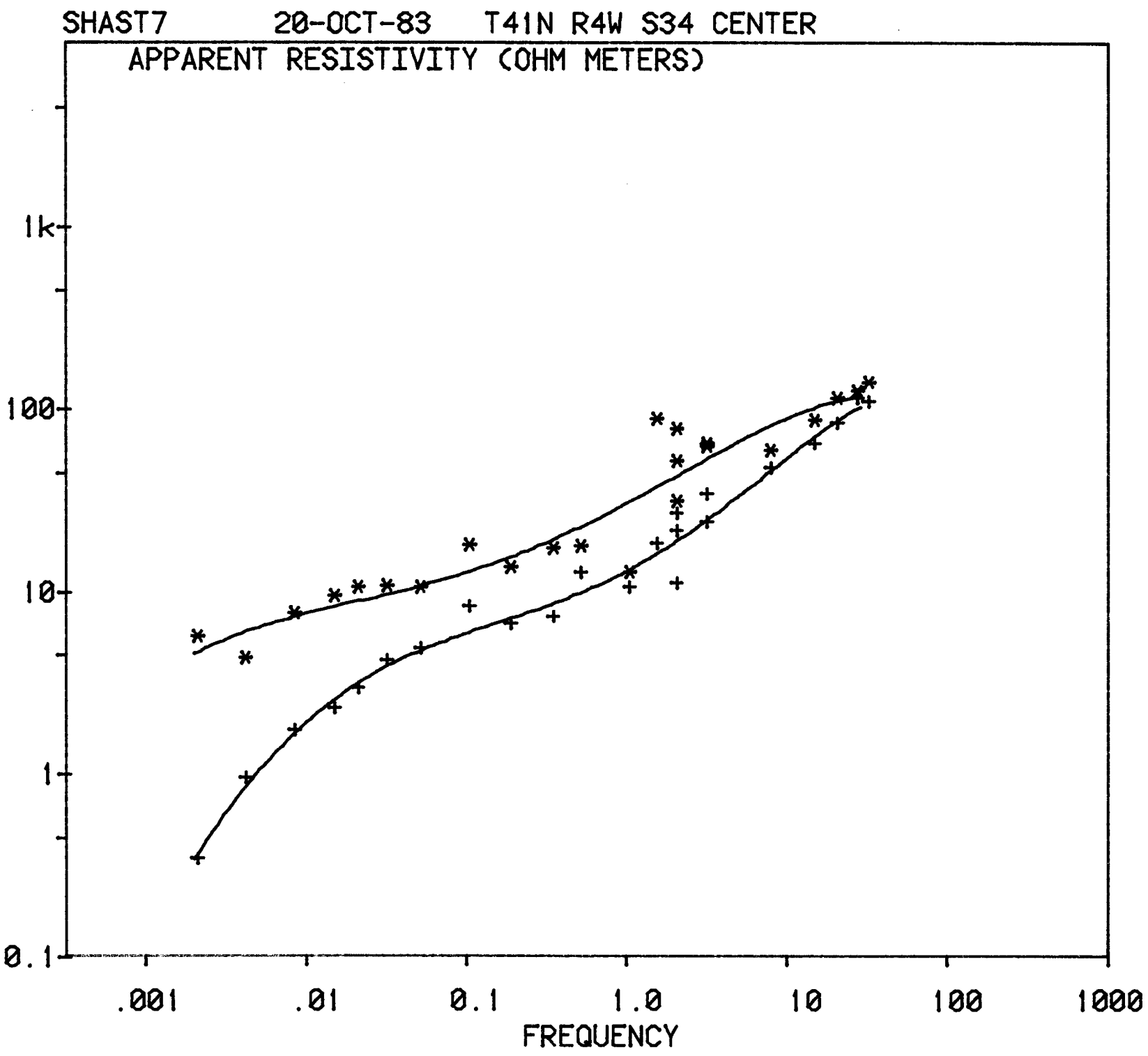
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 1.0000 | 0.4304E+02 | 0.1704E+02 | 54.6 | 26.9 | 84.85 | 0.9030 | 0.9438 | 0.2176 |
| H | | 0.2538E+02 | 0.1461E+02 | 57.3 | 26.3 | 75.98 | 0.9054 | 0.9446 | 49.20 |
| E | 1.2048 | 0.3778E+02 | 0.1711E+02 | 80.1 | 29.4 | 129.27 | 0.9566 | 0.8379 | 0.1267 |
| H | | 0.2411E+02 | 0.4958E+01 | 82.2 | 19.6 | 99.48 | 0.9708 | 0.8745 | 176.20 |
| E | 1.4925 | 0.9325E+02 | 0.1453E+02 | 39.6 | 56.0 | 129.73 | 0.9122 | 0.7926 | 0.1697 |
| H | | 0.2782E+02 | 0.7663E+01 | 47.0 | 46.5 | 90.61 | 0.9382 | 0.8489 | 58.00 |
| E | 2.0000 | 0.3544E+02 | 0.1395E+02 | 40.4 | 53.0 | 121.65 | 0.8923 | 0.9346 | 0.6278 |
| H | | 0.1888E+02 | 0.1267E+02 | 39.8 | 54.8 | 125.42 | 0.9022 | 0.9445 | 101.90 |
| E | 2.0000 | 0.5428E+02 | 0.1408E+02 | 59.5 | 57.6 | 114.42 | 0.8752 | 0.8762 | 0.8004 |
| H | | 0.2261E+02 | 0.9663E+01 | 61.5 | 56.6 | 99.93 | 0.8896 | 0.8905 | 112.80 |
| E | 2.0000 | 0.5736E+02 | 0.1178E+02 | 65.1 | 62.6 | 100.17 | 0.8481 | 0.9303 | 0.6651 |
| H | | 0.2841E+02 | 0.9021E+01 | 65.0 | 62.6 | 99.33 | 0.8501 | 0.9313 | 67.80 |

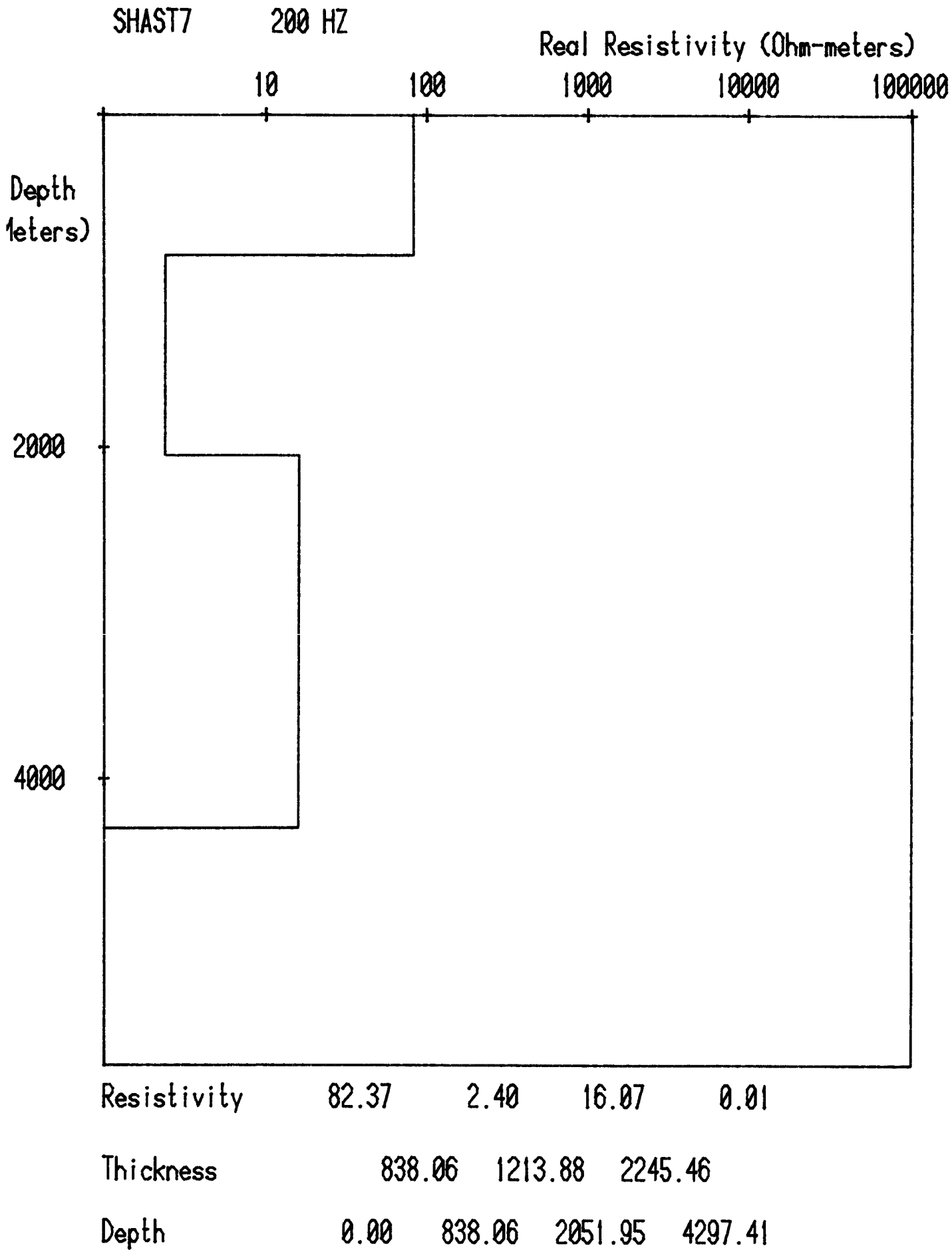
AVERAGE # 8
SHAST6 200 HZ 20-SEPT-83 T41N R4W S8SW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

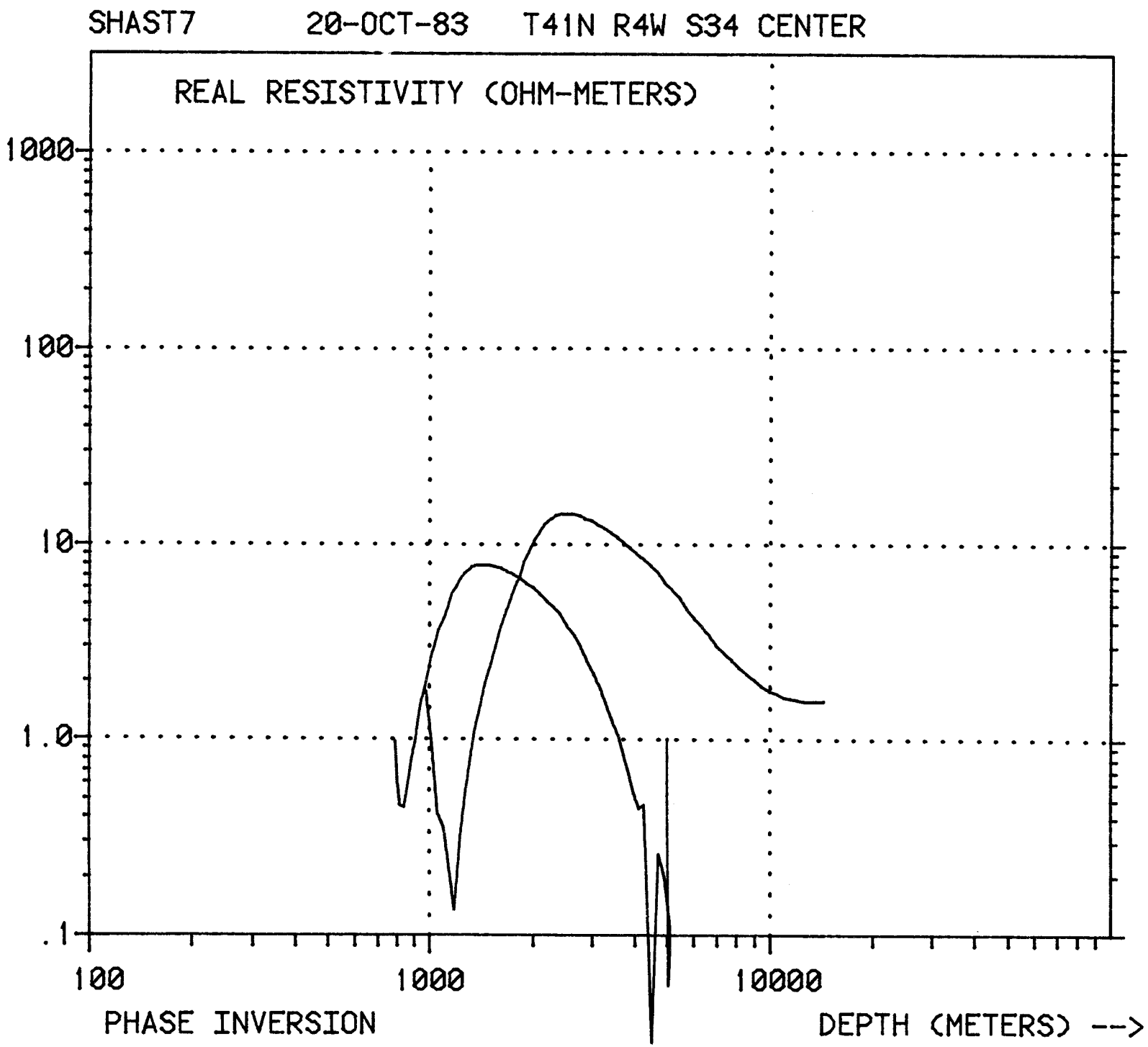
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 3.0303 | 0.7403E+02 | 0.1763E+02 | 64.5 | 62.5 | 115.44 | 0.8633 | 0.8695 | 1.2189 |
| H | | 0.2505E+02 | 0.1197E+02 | 66.0 | 62.0 | 92.45 | 0.8884 | 0.8935 | 98.90 |
| E | 3.0303 | 0.4645E+02 | 0.1320E+02 | 67.2 | 57.9 | 109.59 | 0.8525 | 0.9460 | 0.6263 |
| H | | 0.2379E+02 | 0.1168E+02 | 67.4 | 57.8 | 108.69 | 0.8544 | 0.9510 | 114.50 |
| E | 7.6923 | 0.5999E+02 | 0.2431E+02 | 69.2 | 68.6 | 97.07 | 0.9436 | 0.9445 | 0.4743 |
| H | | 0.4282E+02 | 0.1854E+02 | 69.7 | 67.3 | 88.02 | 0.9461 | 0.9468 | 134.40 |
| E | 14.2857 | 0.6950E+02 | 0.3383E+02 | 68.2 | 69.0 | 93.70 | 0.9511 | 0.9766 | 0.4017 |
| H | | 0.5668E+02 | 0.3079E+02 | 68.1 | 69.0 | 94.19 | 0.9511 | 0.9766 | 130.50 |
| E | 20.0000 | 0.8800E+02 | 0.3908E+02 | 65.4 | 66.3 | 94.68 | 0.9275 | 0.9614 | 0.5097 |
| H | | 0.6415E+02 | 0.3341E+02 | 65.3 | 66.3 | 94.52 | 0.9278 | 0.9615 | 134.20 |
| E | 26.3158 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 22.50 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 22.50 | 0.0000 | 0.0000 | 179.90 |
| E | 31.2500 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 22.50 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 22.50 | 0.0000 | 0.0000 | 179.90 |
| E | 40.0000 | 0.1097E+03 | 0.5431E+02 | 59.0 | 61.5 | 100.75 | 0.8934 | 0.8987 | 0.6291 |
| | | 0.6797E+02 | 0.3734E+02 | 60.3 | 60.0 | 85.40 | 0.8966 | 0.9019 | 147.30 |

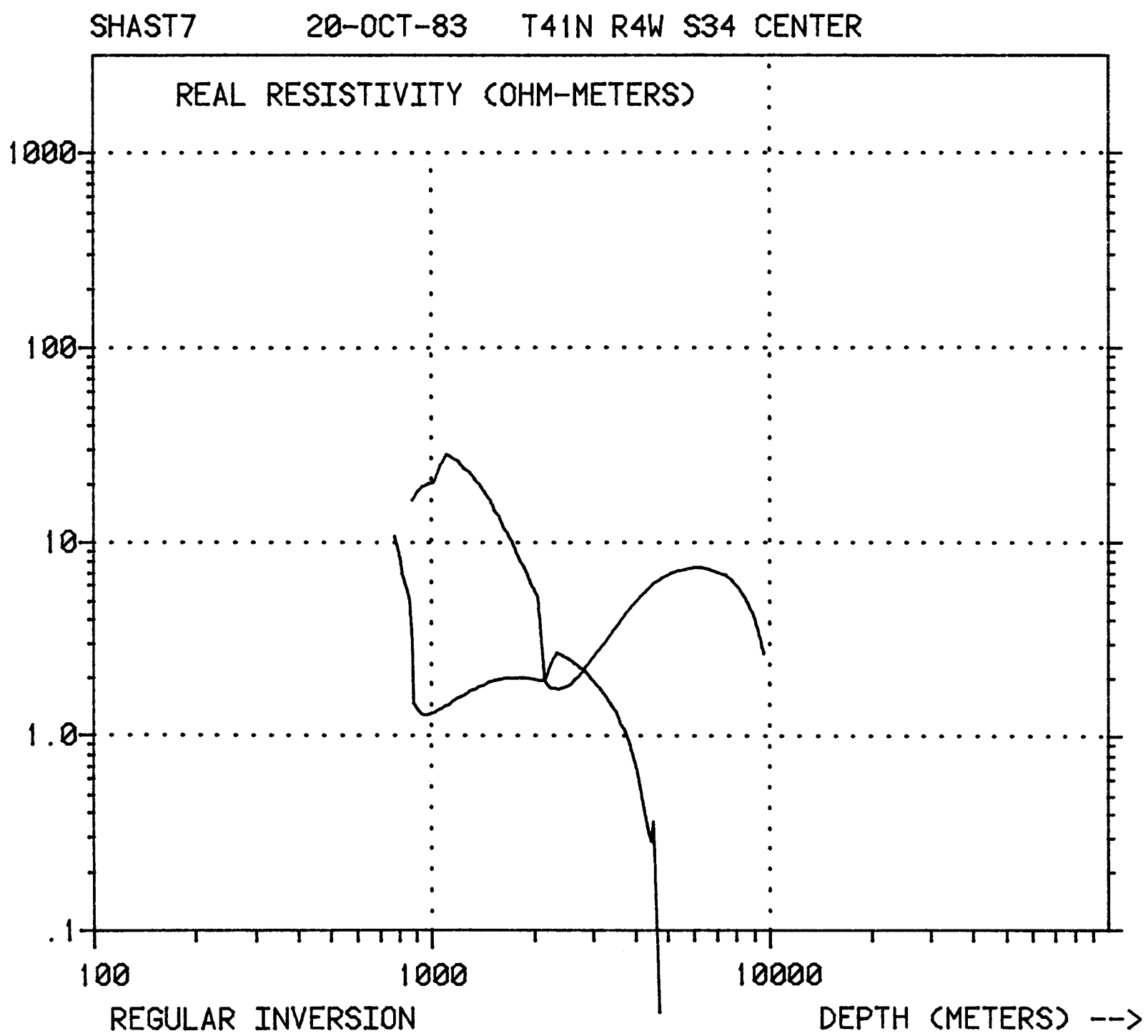

SHAST6 20-SEPT-83 T41N R4W S8SW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
DEPTH (METERS) -->

RES

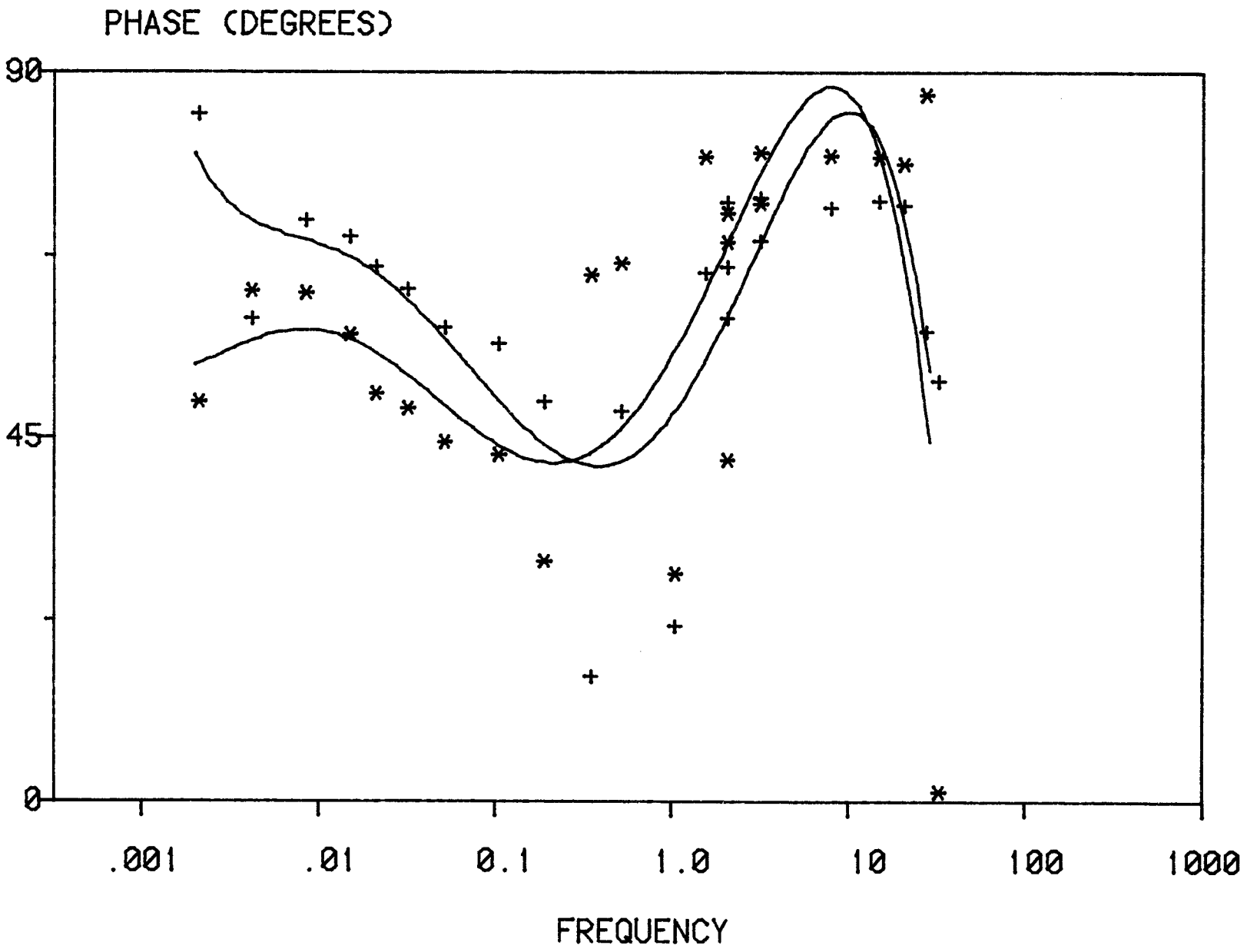

SHAST7 20-OCT-83 T41N R4W S34 CENTER
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAST7 200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
Depth
leters)
2000
4000
Resistivity 82.37 2.40 16.07 0.01
Thickness 838.06 1213.88 2245.46
Depth 0.00 838.06 2051.95 4297.41


SHAST7 20-OCT-83 T41N R4W S34 CENTER
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->


SHAST7 20-OCT-83 T41N R4W S34 CENTER
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->

SHAST7 20-OCT-83 T41N R4W S34 CENTER



THE SITE IS: SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.07 | 6.77 | 1 | 98.75 | 2748.86 |
| 0.0020 | 0.32 | 5.30 | 2 | 21.15 | 910.12 |
| 0.0040 | 0.89 | 4.06 | 3 | 42.83 | 148.09 |
| 0.0080 | 1.63 | 7.08 | 4 | 28.88 | 96.32 |
| 0.0143 | 2.16 | 8.86 | 5 | 20.07 | 58.16 |
| 0.0200 | 2.80 | 9.83 | 6 | 8.34 | 23.14 |
| 0.0303 | 3.94 | 10.03 | 7 | 1.95 | 5.54 |
| 0.0500 | 4.54 | 9.94 | 8 | 0.47 | 1.09 |
| 0.1000 | 7.74 | 16.78 | 9 | 1.68 | 3.37 |
| 0.1818 | 6.29 | 12.70 | 10 | 0.22 | 1.02 |
| 0.3333 | 6.82 | 16.19 | 11 | 0.24 | 0.48 |
| 0.5000 | 11.94 | 16.35 | 12 | 0.06 | 0.08 |
| 0.5988 | 8.33 | 46.73 | 13 | 0.46 | 0.59 |
| 0.8000 | 18.66 | 58.97 | 14 | 0.49 | 0.37 |
| 1.0000 | 2.16 | 28.09 | 15 | 0.08 | 0.12 |
| 1.0000 | 9.83 | 11.79 | 16 | 0.33 | 0.15 |
| 1.2048 | 13.85 | 751.31 | 17 | 0.10 | 0.20 |
| 1.4925 | 16.95 | 82.80 | 18 | 0.02 | 0.05 |
| 2.0000 | 20.17 | 72.97 | 19 | 0.04 | 0.04 |
| 2.0000 | 24.89 | 48.29 | 20 | 0.01 | 0.01 |
| 2.0000 | 10.43 | 28.93 | 21 | 0.03 | 0.01 |
| 3.0303 | 31.64 | 58.53 | 22 | 0.00 | 0.00 |
| 3.0303 | 22.28 | 60.43 | 23 | 0.00 | 0.02 |
| 7.6923 | 44.39 | 54.65 | 24 | 0.01 | 0.01 |
| 14.2857 | 60.29 | 80.44 | 25 | 0.00 | 0.01 |
| 20.0000 | 78.41 | 106.60 | 26 | 0.00 | 0.00 |
| 26.3158 | 107.01 | 116.83 | 27 | 0.01 | 0.02 |
| 31.2500 | 102.69 | 131.12 | 28 | 0.01 | 0.03 |
| 40.0000 | 0.01 | 0.01 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE | RHO MIN ( OHM-M ) | PHI MAX | PHI MIN (DEGREES) | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.768E+01 | 0.589E-01 | 55. | 61. | 25. | 0.9482 | 0.9272 | 0.1618 | 0.99 |
| H | SEC | 0.586E+01 | 0.762E-01 | 54. | 0. | 22. | 0.9504 | 0.9277 | 32.00 | 0.88 |
| E | 500.0 | 0.566E+01 | 0.359E+00 | 49. | 86. | 27. | 0.9910 | 0.9969 | 0.1238 | 0.57 |
| H | SEC | 0.493E+01 | 0.287E+00 | 50. | 84. | 30. | 0.9918 | 0.9970 | 27.50 | 0.57 |
| E | 250.0 | 0.428E+01 | 0.975E+00 | 63. | 60. | 33. | 0.9680 | 0.9712 | 0.1335 | 0.24 |
| H | SEC | 0.383E+01 | 0.811E+00 | 64. | 60. | 34. | 0.9681 | 0.9713 | 34.70 | 0.24 |
| E | 125.0 | 0.730E+01 | 0.165E+01 | 63. | 72. | 28. | 0.9879 | 0.9949 | 0.1140 | 0.17 |
| H | SEC | 0.687E+01 | 0.161E+01 | 63. | 72. | 29. | 0.9880 | 0.9949 | 53.70 | 0.16 |
| E | 70.0 | 0.903E+01 | 0.216E+01 | 58. | 70. | 31. | 0.9924 | 0.9974 | 0.1802 | 0.15 |
| H | SEC | 0.869E+01 | 0.215E+01 | 58. | 70. | 31. | 0.9924 | 0.9974 | 62.80 | 0.15 |
| E | 50.0 | 0.103E+02 | 0.280E+01 | 51. | 66. | 30. | 0.9788 | 0.9948 | 0.2195 | 0.15 |
| H | SEC | 0.936E+01 | 0.280E+01 | 51. | 66. | 31. | 0.9789 | 0.9949 | 63.30 | 0.14 |
| E | 33.0 | 0.108E+02 | 0.396E+01 | 49. | 63. | 27. | 0.9686 | 0.9879 | 0.2827 | 0.12 |
| H | SEC | 0.927E+01 | 0.391E+01 | 49. | 64. | 30. | 0.9689 | 0.9882 | 59.50 | 0.10 |
| E | 20.0 | 0.110E+02 | 0.469E+01 | 45. | 59. | 22. | 0.9554 | 0.9801 | 0.3109 | 0.09 |
| H | SEC | 0.888E+01 | 0.440E+01 | 45. | 59. | 26. | 0.9560 | 0.9803 | 57.20 | 0.06 |

AVERAGE # 8
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.188E+02 | 0.881E+01 | 42. | 58. | 34. | 0.9336 | 0.9921 | 0.2177 | 0.15 |
| H | SEC | 0.148E+02 | 0.667E+01 | 44. | 56. | 49. | 0.9412 | 0.9927 | 52.30 | 0.12 |
| E | 5.5 | 0.180E+02 | 0.658E+01 | 29. | 50. | 32. | 0.8703 | 0.9287 | 0.2754 | 0.13 |
| H | SEC | 0.738E+01 | 0.601E+01 | 32. | 50. | 19. | 0.8872 | 0.9402 | 55.00 | 0.24 |
| E | 3.0 | 0.182E+02 | 0.862E+01 | 65. | 16. | 102. | 0.8581 | 0.9529 | 0.2467 | 0.31 |
| H | SEC | 0.142E+02 | 0.501E+01 | 66. | 16. | 98. | 0.8618 | 0.9531 | 91.70 | 0.22 |
| E | 2.0 | 0.183E+02 | 0.169E+02 | 66. | 49. | 109. | 0.8356 | 0.9034 | 0.2559 | 0.03 |
| H | SEC | 0.144E+02 | 0.697E+01 | 67. | 48. | 108. | 0.8481 | 0.9148 | 59.10 | 0.07 |
| E | 1.7 | 0.413E+02 | 0.149E-01 | 79. | 38. | 89. | 0.8583 | 0.9715 | 0.0374 | 0.43 |
| H | SEC | 0.521E+02 | 0.166E+02 | 70. | 65. | 64. | 0.0000 | 0.9474 | 59.70 | 0.14 |
| E | 1.2 | 0.102E+03 | 0.370E+02 | 78. | 54. | 26. | 0.0000 | 0.9334 | 0.0934 | 1.04 |
| H | SEC | 0.155E+02 | 0.295E+00 | 62. | 12. | 117. | 0.5315 | 0.8933 | 168.50 | 0.42 |
| E | 1.0 | 0.289E+02 | 0.273E+01 | 70. | 14. | 99. | 0.8798 | 0.9816 | 0.2331 | 0.06 |
| H | HZ | 0.272E+02 | 0.159E+01 | 70. | 14. | 98. | 0.8810 | 0.9824 | 104.60 | 0.05 |

AVERAGE # 8
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.184E+02 | 0.150E+02 | 15. | 32. | 33. | 0.6835 | 0.8330 | 0.1888 | 0.87 |
| H | HZ | 0.519E+01 | 0.463E+01 | 42. | 12. | 124. | 0.6839 | 0.8392 | 74.10 | 0.74 |
| E | 1.2 | 0.147E+04 | 0.254E+02 | 2. | 70. | 58. | 0.4067 | 0.4281 | 0.1075 | 0.28 |
| H | HZ | 0.357E+02 | 0.230E+01 | 59. | 2. | 107. | 0.7833 | 0.8017 | 64.20 | 0.19 |
| E | 1.5 | 0.117E+03 | 0.205E+02 | 79. | 66. | 68. | 0.8709 | 0.8887 | 0.1530 | 0.12 |
| H | HZ | 0.486E+02 | 0.134E+02 | 81. | 65. | 83. | 0.8943 | 0.9093 | 62.50 | 0.05 |
| E | 2.0 | 0.993E+02 | 0.233E+02 | 70. | 63. | 65. | 0.8723 | 0.8983 | 0.1771 | 0.16 |
| H | HZ | 0.466E+02 | 0.170E+02 | 76. | 57. | 85. | 0.8853 | 0.9092 | 36.60 | 0.13 |
| E | 2.0 | 0.636E+02 | 0.311E+02 | 66. | 70. | 72. | 0.8994 | 0.8618 | 0.6534 | 0.09 |
| H | HZ | 0.330E+02 | 0.187E+02 | 73. | 63. | 114. | 0.9125 | 0.8780 | 62.60 | 0.09 |
| E | 2.0 | 0.411E+02 | 0.141E+02 | 0. | 72. | 63. | 0.9097 | 0.9068 | 0.3981 | 0.20 |
| H | HZ | 0.167E+02 | 0.676E+01 | 85. | 77. | 101. | 0.9402 | 0.9383 | 148.20 | 0.22 |

AVERAGE # 8
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.709E+02 | 0.401E+02 | 73. | 71. | 71. | 0.8790 | 0.9222 | 0.8833 | 0.09 |
| H | HZ | 0.462E+02 | 0.232E+02 | 75. | 68. | 100. | 0.8901 | 0.9300 | 43.00 | 0.06 |
| E | 3.0 | 0.813E+02 | 0.265E+02 | 80. | 76. | 67. | 0.8893 | 0.8640 | 0.2981 | 0.07 |
| H | HZ | 0.396E+02 | 0.181E+02 | 81. | 74. | 75. | 0.8935 | 0.8691 | 55.00 | 0.05 |
| E | 7.7 | 0.561E+02 | 0.487E+02 | 81. | 73. | 112. | 0.9692 | 0.9806 | 0.4022 | 0.03 |
| H | HZ | 0.532E+02 | 0.401E+02 | 80. | 74. | 102. | 0.9696 | 0.9808 | 40.00 | 0.02 |
| E | 14.3 | 0.856E+02 | 0.686E+02 | 80. | 74. | 113. | 0.9413 | 0.9694 | 2.2296 | 0.02 |
| H | HZ | 0.753E+02 | 0.520E+02 | 80. | 75. | 107. | 0.9419 | 0.9695 | 104.20 | 0.03 |
| E | 20.0 | 0.117E+03 | 0.930E+02 | 79. | 74. | 107. | 0.9216 | 0.9531 | 5.5074 | 0.01 |
| H | HZ | 0.961E+02 | 0.638E+02 | 79. | 74. | 103. | 0.9226 | 0.9532 | 94.70 | 0.03 |
| E | 26.3 | 0.135E+03 | 0.125E+03 | 88. | 58. | 150. | 0.9268 | 0.9158 | 1.0357 | 0.25 |
| H | HZ | 0.990E+02 | 0.891E+02 | 87. | 59. | 150. | 0.9273 | 0.9161 | 124.30 | 0.21 |
| E | 31.2 | 0.157E+03 | 0.125E+03 | 2. | 52. | 154. | 0.9138 | 0.8789 | 0.7430 | 0.35 |
| H | HZ | 0.105E+03 | 0.808E+02 | 2. | 52. | 155. | 0.9145 | 0.8790 | 136.00 | 0.34 |
| E | 40.0 | 0.137E-01 | 0.587E-02 | 57. | 71. | 22. | 0.9554 | 0.9801 | 0.3109 | 0.09 |
| H | HZ | 0.111E-01 | 0.549E-02 | 57. | 71. | 26. | 0.9560 | 0.9803 | 57.20 | 0.06 |

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 21
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 100.0000 | | 0.0000 |
| | | 700.0000 | |
| 2 | 1.0000 | | 700.0000 |
| | | 300.0000 | |
| 3 | 10.0000 | | 1000.0000 |
| | | 2500.0000 | |
| 4 | 1.0000 | | 3500.0000 |

FREQUENCY RANGE ( 0.0020 , 31.2500 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 82.3755 | | 0.0000 |
| | | 838.0635 | |
| 2 | 2.4070 | | 838.0635 |
| | | 1213.8888 | |
| 3 | 16.0726 | | 2051.9523 |
| | | 2245.4635 | |
| 4 | 0.0161 | | 4297.4158 |

MEAN PERCENT VARIATION IS 14.6501

ERROR ANALYSIS

R-SQUARED = 0.999

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 20 | 22151.590 | 1107.579 | 0.300 |
| MODEL | 6 | 22139.179 | 3689.863 | 114614.229 |
| RESID | 14 | 0.451 | 0.032 | |

STANDARD ERROR = 0.179

DTEST FOR MEANS = -0.000

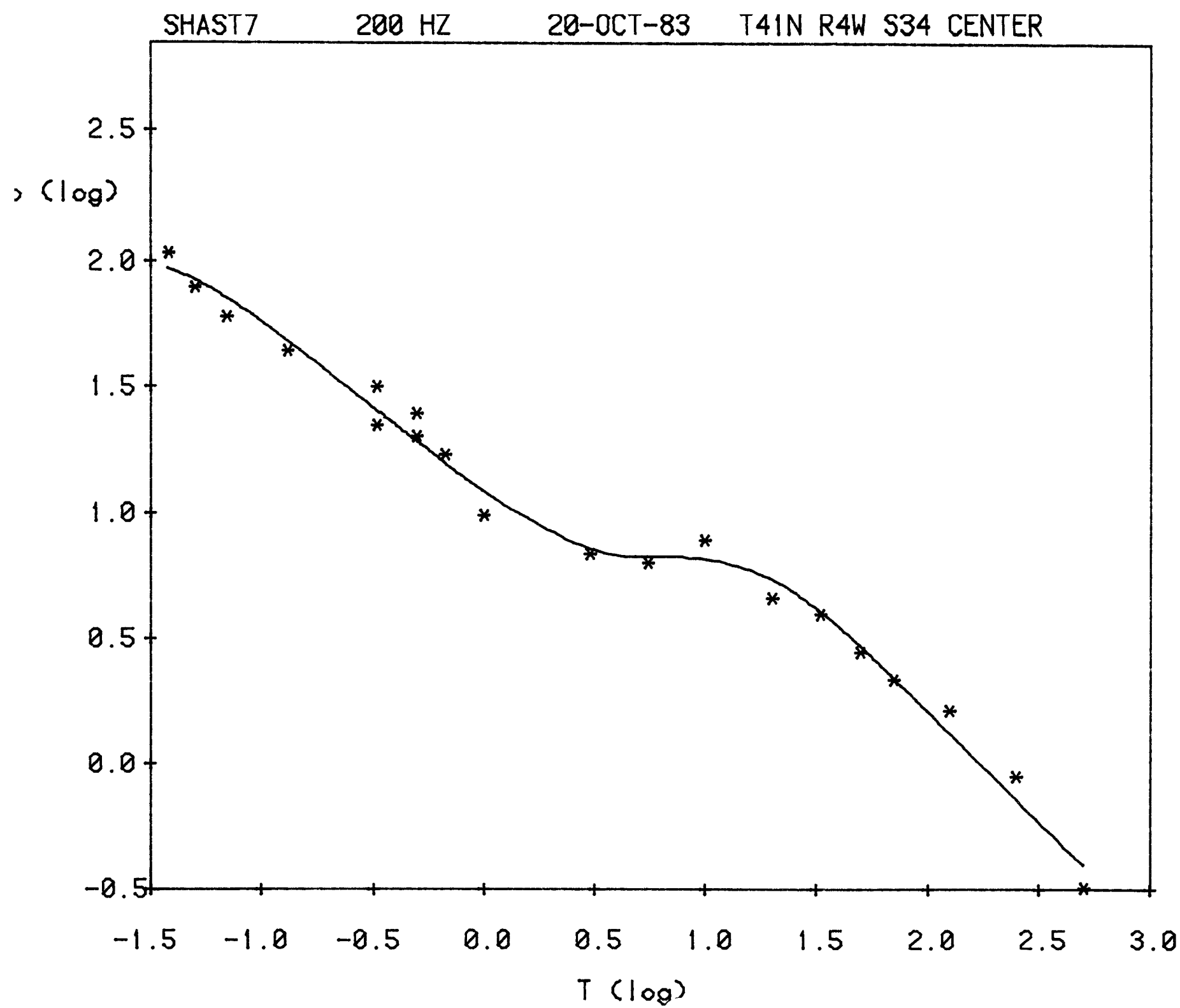
NOISE TO SIGNAL RATIO = 0.295 PERCENT

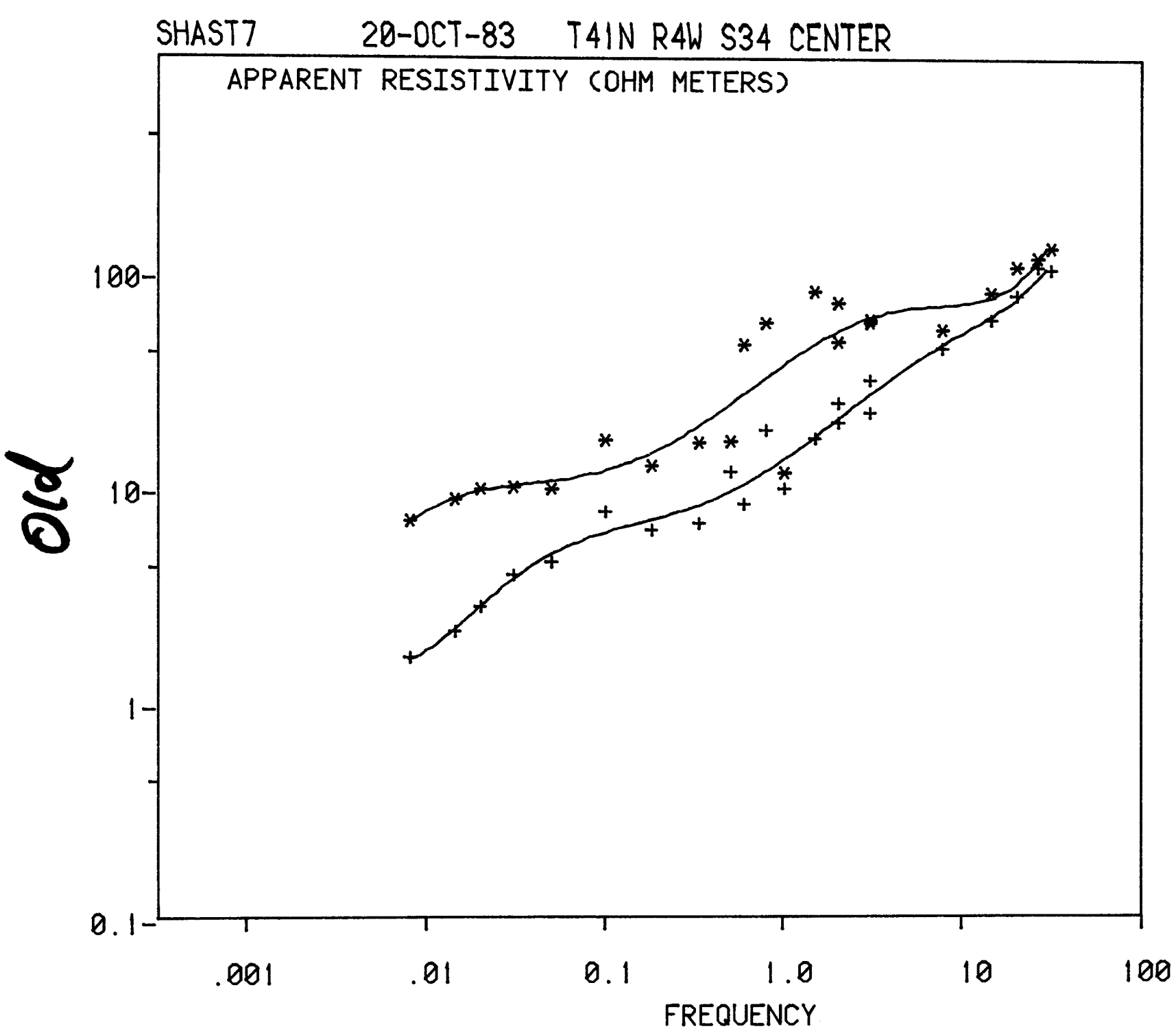
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER

ERROR STRUCTURE OF FITTED MODEL

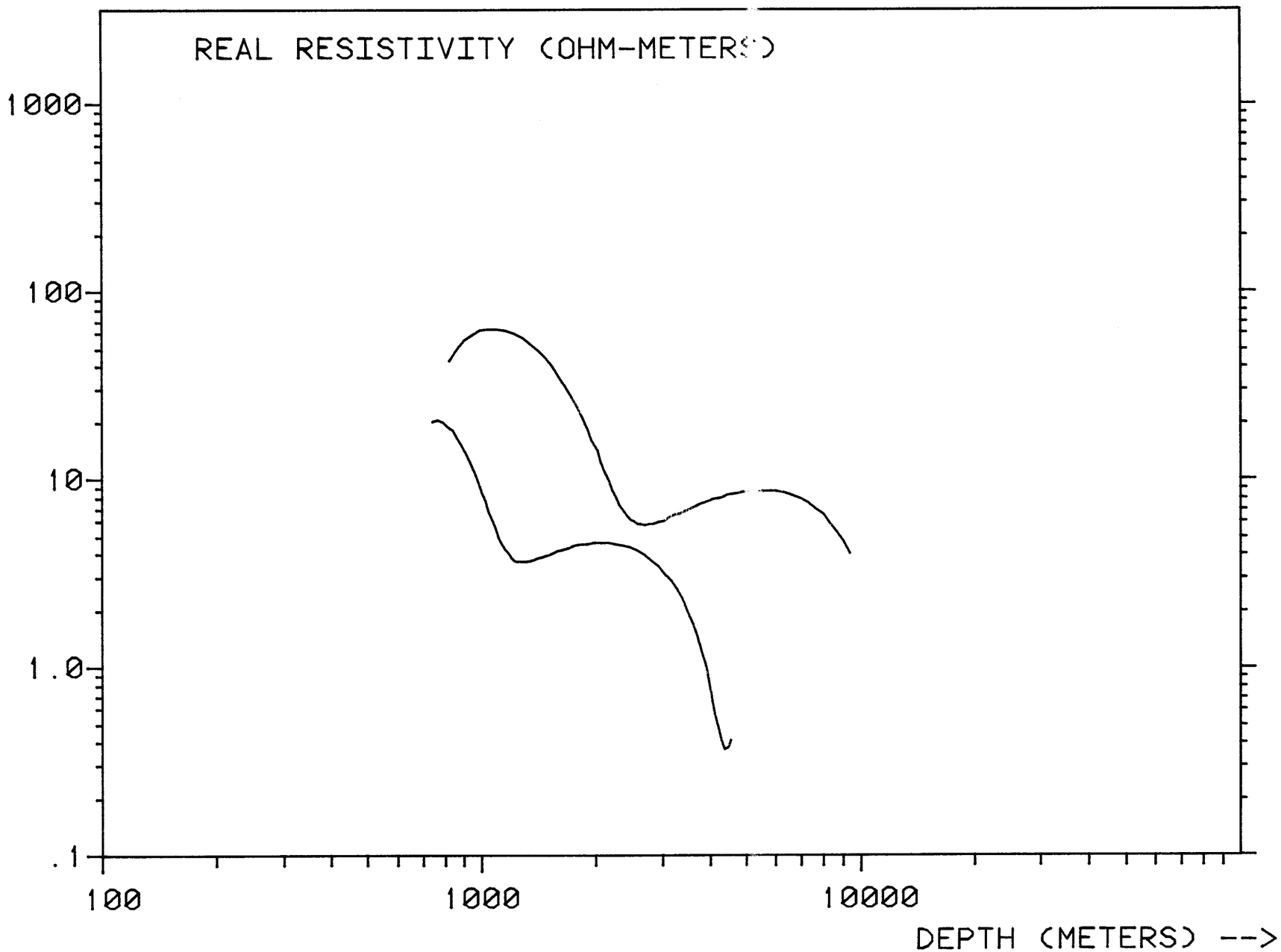
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 500.000 | 0.323 | 0.399 | -0.077 | -21.197 |
| 2 | 250.000 | 0.893 | 0.722 | 0.171 | 21.214 |
| 3 | 125.000 | 1.632 | 1.330 | 0.302 | 20.378 |
| 4 | 70.000 | 2.156 | 2.219 | -0.063 | -2.889 |
| 5 | 50.000 | 2.799 | 2.955 | -0.157 | -5.441 |
| 6 | 33.000 | 3.936 | 4.097 | -0.161 | -4.020 |
| 7 | 20.000 | 4.544 | 5.606 | -1.062 | -20.921 |
| 8 | 10.000 | 7.743 | 6.775 | 0.968 | 13.342 |
| 9 | 5.500 | 6.293 | 6.581 | -0.288 | -4.479 |
| 10 | 3.000 | 6.816 | 6.790 | 0.026 | 0.382 |
| 11 | 1.000 | 9.830 | 12.004 | -2.174 | -19.917 |
| 12 | 0.670 | 16.952 | 15.804 | 1.149 | 7.012 |
| 13 | 0.500 | 20.166 | 19.282 | 0.885 | 4.485 |
| 14 | 0.500 | 24.887 | 19.282 | 5.605 | 25.380 |
| 15 | 0.330 | 31.636 | 25.599 | 6.037 | 21.097 |
| 16 | 0.330 | 22.278 | 25.599 | -3.321 | -13.873 |
| 17 | 0.130 | 44.394 | 49.176 | -4.782 | -10.222 |
| 18 | 0.070 | 60.286 | 72.649 | -12.363 | -18.600 |
| 19 | 0.050 | 78.414 | 85.547 | -7.133 | -8.701 |
| 20 | 0.038 | 107.009 | 93.889 | 13.120 | 13.062 |
| 21 | 0.032 | 102.688 | 97.377 | 5.311 | 5.310 |

MEAN PERCENT ERROR = 14.6252
MAXIMUM PERCENT ERROR = 25.3802
MAX. ERROR OCCURED AT OBSERVATION 14


SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
(log)
-1.5 -1.0 -0.5 0.0 0.5 1.0 1.5 2.0 2.5 3.0
T (log)


SHAST7 20-OCT-83 T41N R4W S34 CENTER
APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.001
.01
0.1
1.0
10
100
FREQUENCY
Old

SHAST7 20-OCT-83 T41N R4W S34 CENTER




RD

THE SITE IS: SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOXN | MEAN OF RHOYN | PERIOD # | |
|---|---|---|---|---|
| 0.0012 | 0.07 | 6.77 | 1 | → |
| 0.0020 | 0.32 | 5.30 | 2 | → |
| 0.0040 | 0.89 | 4.06 | 3 | → |
| 0.0080 | 1.63 | 7.08 | 4 | |
| 0.0143 | 2.16 | 8.86 | 5 | |
| 0.0200 | 2.80 | 9.83 | 6 | |
| 0.0303 | 3.94 | 10.03 | 7 | |
| 0.0500 | 4.54 | 9.94 | 8 | |
| 0.1000 | 7.74 | 16.78 | 9 | |
| 0.1818 | 6.29 | 12.70 | 10 | |
| 0.3333 | 6.82 | 16.19 | 11 | |
| 0.5000 | 11.94 | 16.35 | 12 | |
| 0.5988 | 8.33 | 46.73 | 13 | |
| 0.8000 | 18.66 | 58.97 | 14 | |
| 1.0000 | 2.16 | 28.09 | 15 | |
| 1.0000 | 9.83 | 11.79 | 16 | |
| 1.2048 | 13.85 | 751.31 | 17 | → |
| 1.4925 | 16.95 | 82.80 | 18 | |
| 2.0000 | 20.17 | 72.97 | 19 | |
| 2.0000 | 24.89 | 48.29 | 20 | |
| 2.0000 | 10.43 | 28.93 | 21 | → |
| 3.0303 | 31.64 | 58.53 | 22 | |
| 3.0303 | 22.28 | 60.43 | 23 | |
| 7.6923 | 44.39 | 54.65 | 24 | |
| 14.2857 | 60.29 | 80.44 | 25 | |
| 20.0000 | 78.41 | 106.60 | 26 | |
| 26.3158 | 107.01 | 116.83 | 27 | |
| 31.2500 | 102.69 | 131.12 | 28 | |
| 40.0000 | 0.01 | 0.01 | 29 | → |
| 1.0000 | 0.01 | -0.02 | 30 | |

AVERAGE # 8
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.0012 | 0.7681E+01 | 0.5893E-01 | 58.7 | 64.7 | 114.61 | 0.9483 | 0.9273 | 0.1621 |
| H | | 0.5855E+01 | 0.7624E-01 | 57.5 | 3.8 | 112.19 | 0.9505 | 0.9278 | 32.10 |
| E | 0.0020 | 0.5662E+01 | 0.3587E+00 | 54.8 | 1.7 | 117.38 | 0.9911 | 0.9970 | 0.1238 |
| H | | 0.4930E+01 | 0.2868E+00 | 56.0 | 90.0 | 120.20 | 0.9918 | 0.9970 | 27.50 |
| E | 0.0040 | 0.4283E+01 | 0.9755E+00 | 74.3 | 71.7 | 122.89 | 0.9680 | 0.9712 | 0.1335 |
| H | | 0.3831E+01 | 0.8108E+00 | 75.0 | 70.9 | 123.89 | 0.9682 | 0.9713 | 34.70 |
| E | 0.0080 | 0.7296E+01 | 0.1652E+01 | 85.5 | 4.7 | 118.02 | 0.9880 | 0.9950 | 0.1140 |
| H | | 0.6870E+01 | 0.1612E+01 | 85.7 | 4.3 | 118.71 | 0.9881 | 0.9950 | 53.70 |
| E | 0.0143 | 0.9029E+01 | 0.2161E+01 | 6.9 | 19.3 | 121.06 | 0.9925 | 0.9975 | 0.1802 |
| H | | 0.8686E+01 | 0.2150E+01 | 7.0 | 19.1 | 121.45 | 0.9925 | 0.9975 | 62.80 |
| E | 0.0200 | 0.1030E+02 | 0.2801E+01 | 13.4 | 29.1 | 119.94 | 0.9788 | 0.9948 | 0.2195 |
| H | | 0.9359E+01 | 0.2797E+01 | 13.3 | 29.0 | 121.12 | 0.9789 | 0.9949 | 63.30 |
| E | 0.0303 | 0.1079E+02 | 0.3961E+01 | 33.0 | 47.1 | 116.88 | 0.9686 | 0.9880 | 0.2827 |
| H | | 0.9268E+01 | 0.3911E+01 | 32.4 | 47.6 | 119.53 | 0.9689 | 0.9882 | 59.50 |
| E | 0.0500 | 0.1100E+02 | 0.4694E+01 | 56.8 | 71.1 | 111.86 | 0.9555 | 0.9802 | 0.3109 |
| | | 0.8876E+01 | 0.4395E+01 | 56.8 | 70.9 | 115.75 | 0.9560 | 0.9804 | 57.20 |

AVERAGE # 8
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER
NSAMP = 1024 SI = 0.0050 TO = 5.1200

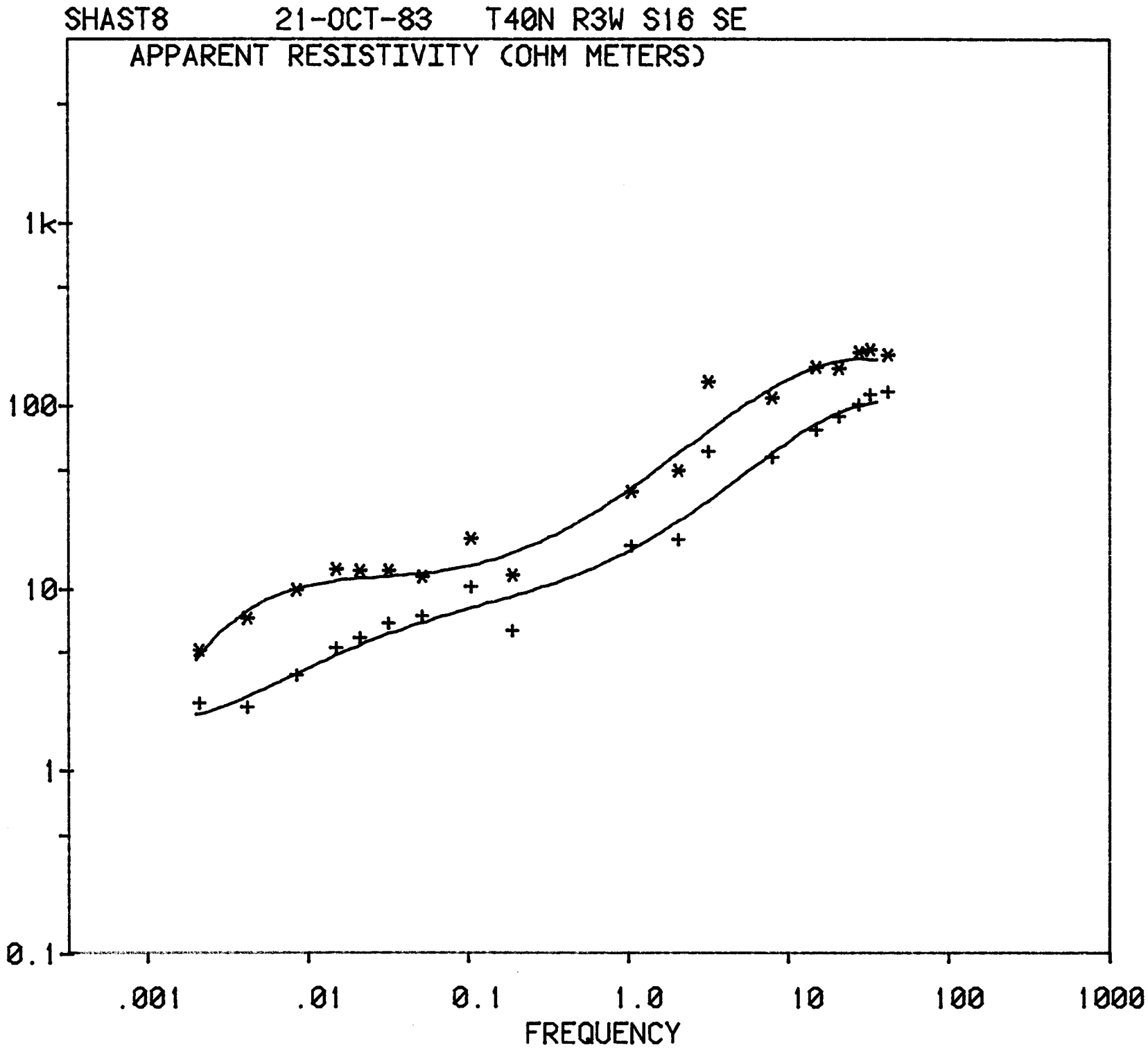
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.1000 | 0.1877E+02 | 0.8815E+01 | 88.3 | 14.3 | 123.68 | 0.9336 | 0.9921 | 0.2177 |
| H | | 0.1479E+02 | 0.6672E+01 | 0.2 | 11.6 | 139.34 | 0.9412 | 0.9927 | 52.30 |
| E | 0.1818 | 0.1802E+02 | 0.6577E+01 | 3.5 | 24.9 | 122.36 | 0.8703 | 0.9287 | 0.2754 |
| H | | 0.7381E+01 | 0.6009E+01 | 6.7 | 24.6 | 108.71 | 0.8872 | 0.9403 | 55.00 |
| E | 0.3333 | 0.1819E+02 | 0.8618E+01 | 51.0 | 2.3 | 12.19 | 0.8582 | 0.9530 | 0.2467 |
| H | | 0.1418E+02 | 0.5014E+01 | 52.1 | 1.8 | 7.85 | 0.8618 | 0.9532 | 91.70 |
| E | 0.5000 | 0.1835E+02 | 0.1690E+02 | 57.1 | 39.8 | 19.21 | 0.8357 | 0.9035 | 0.2559 |
| H | | 0.1436E+02 | 0.6970E+01 | 58.1 | 38.8 | 18.22 | 0.8482 | 0.9149 | 59.10 |
| E | 0.5988 | 0.4135E+02 | 0.1490E-01 | 71.2 | 29.9 | 178.65 | 0.8583 | 0.9716 | 0.0374 |
| H | | 0.5212E+02 | 0.1665E+02 | 62.1 | 57.0 | 154.28 | 0.0000 | 0.9474 | 59.70 |
| E | 0.8000 | 0.1025E+03 | 0.3702E+02 | 72.5 | 47.8 | 115.76 | 0.0000 | 0.9335 | 0.0934 |
| H | | 0.1549E+02 | 0.2950E+00 | 56.6 | 6.0 | 26.77 | 0.5316 | 0.8933 | 168.50 |
| E | 1.0000 | 0.2894E+02 | 0.2727E+01 | 65.2 | 9.4 | 8.66 | 0.8799 | 0.9817 | 0.2331 |
| H | | 0.2724E+02 | 0.1591E+01 | 65.3 | 9.5 | 8.25 | 0.8810 | 0.9825 | 104.60 |

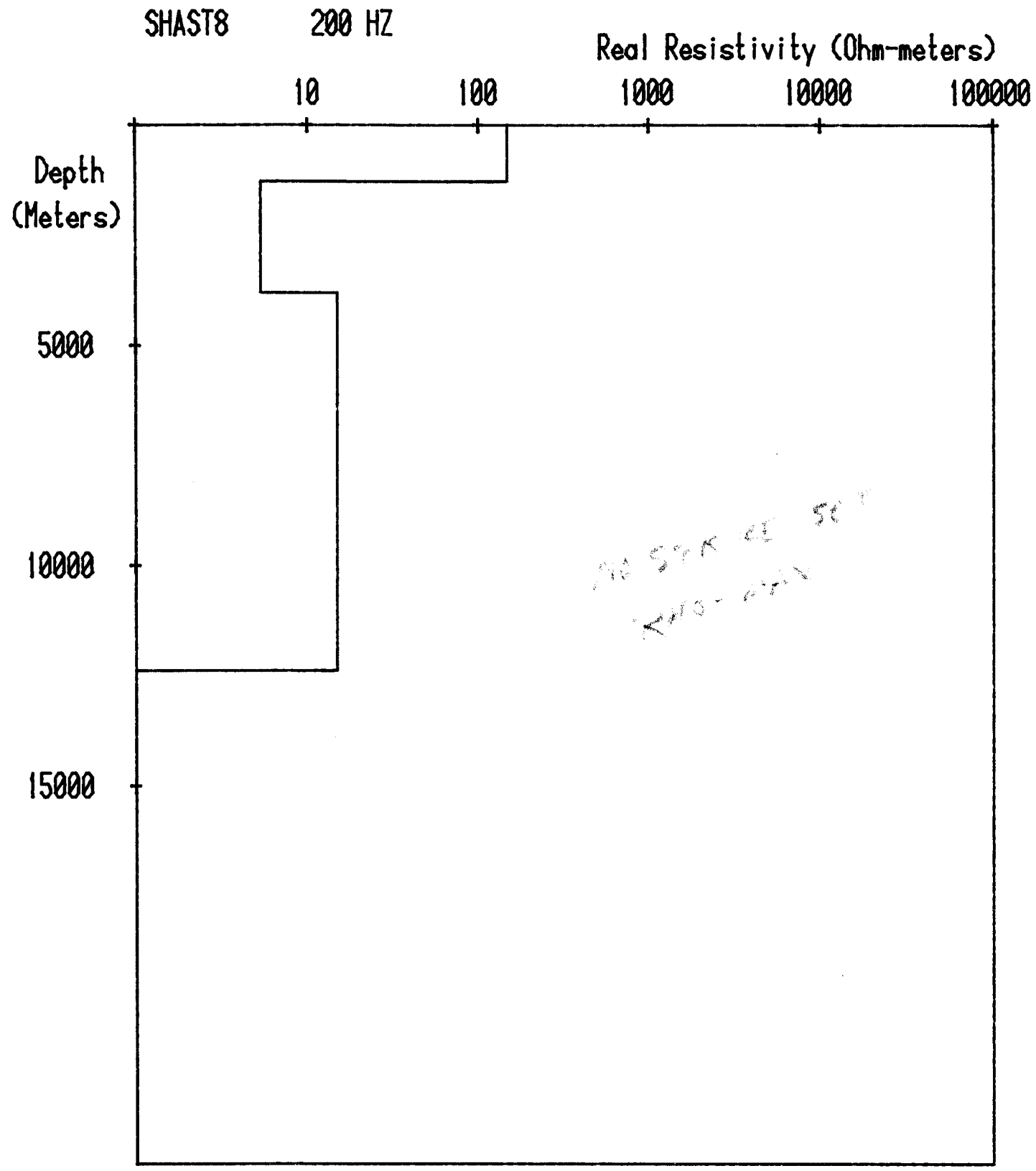
AVERAGE # 8
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN VALUE ( OHM-M ) | RHO-MAX PHASE(DEGREES) | RHO-MIN PHASE(DEGREES) | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 1.0000 | 0.1838E+02 | 0.1503E+02 | 9.9 | 27.3 | 122.59 | 0.6836 | 0.8331 | 0.1888 |
| H | | 0.5191E+01 | 0.4634E+01 | 37.7 | 7.4 | 34.21 | 0.6839 | 0.8393 | 74.10 |
| E | 1.2048 | 0.1467E+04 | 0.2540E+02 | 88.6 | 66.5 | 147.96 | 0.4068 | 0.4281 | 0.1075 |
| H | | 0.3567E+02 | 0.2297E+01 | 55.0 | 88.6 | 16.81 | 0.7833 | 0.8017 | 64.20 |
| E | 1.4925 | 0.1170E+03 | 0.2049E+02 | 75.7 | 62.9 | 158.16 | 0.8710 | 0.8887 | 0.1530 |
| H | | 0.4861E+02 | 0.1341E+02 | 77.8 | 62.1 | 173.29 | 0.8944 | 0.9093 | 62.50 |
| E | 2.0000 | 0.9933E+02 | 0.2335E+02 | 67.2 | 61.1 | 154.91 | 0.8723 | 0.8983 | 0.1771 |
| H | | 0.4660E+02 | 0.1699E+02 | 74.1 | 54.4 | 174.72 | 0.8854 | 0.9092 | 36.60 |
| E | 2.0000 | 0.6356E+02 | 0.3106E+02 | 63.3 | 67.8 | 161.67 | 0.8995 | 0.8619 | 0.6534 |
| H | | 0.3303E+02 | 0.1872E+02 | 70.7 | 60.3 | 24.45 | 0.9125 | 0.8780 | 62.60 |
| E | 2.0000 | 0.4111E+02 | 0.1409E+02 | 87.7 | 69.3 | 153.18 | 0.9098 | 0.9069 | 0.3981 |
| H | | 0.1675E+02 | 0.6759E+01 | 82.6 | 74.8 | 10.95 | 0.9402 | 0.9384 | 148.20 |

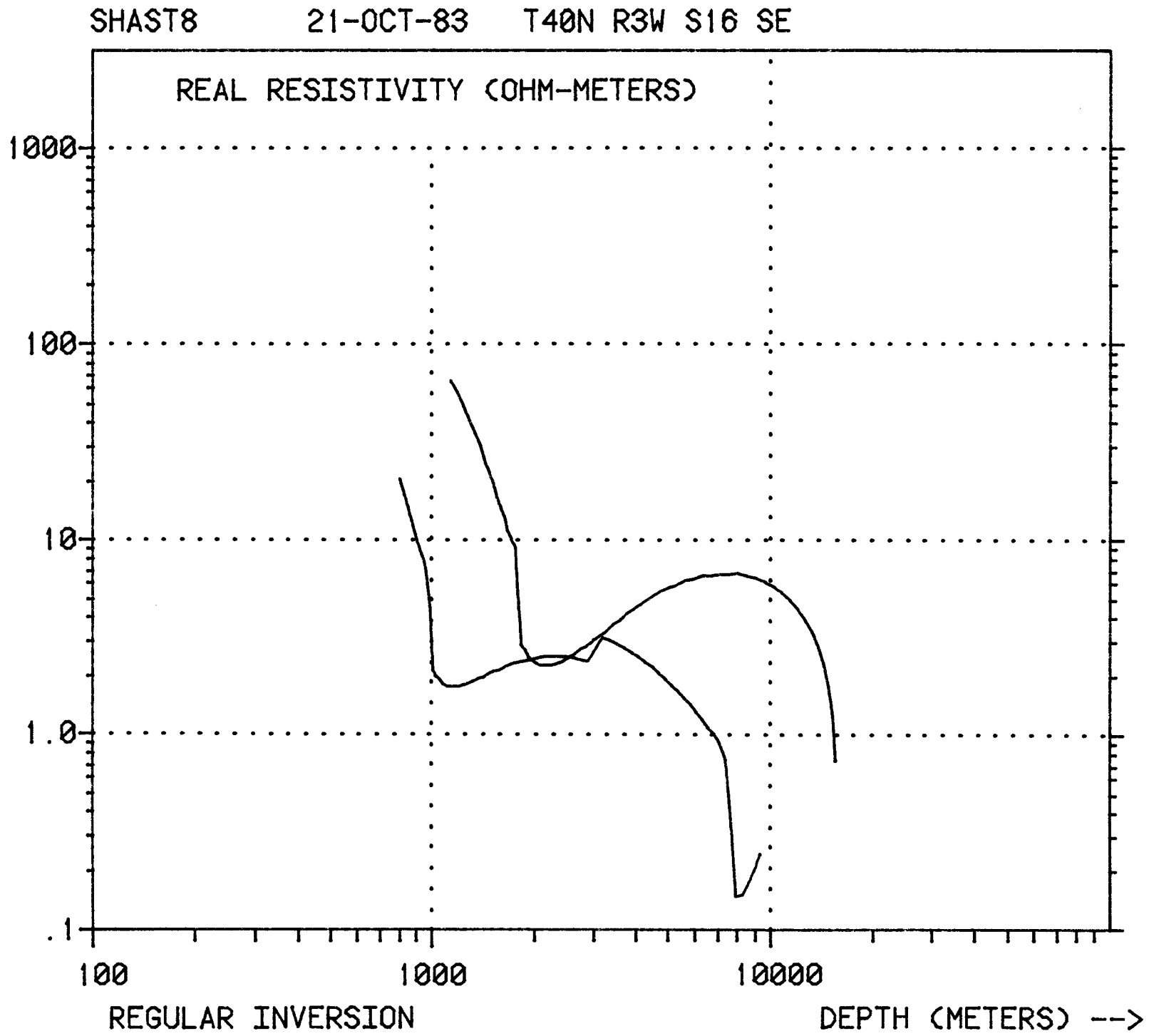
AVERAGE # 8
SHAST7 200 HZ 20-OCT-83 T41N R4W S34 CENTER
NSAMP = 1024 SI = 0.0050 TO = 5.1200

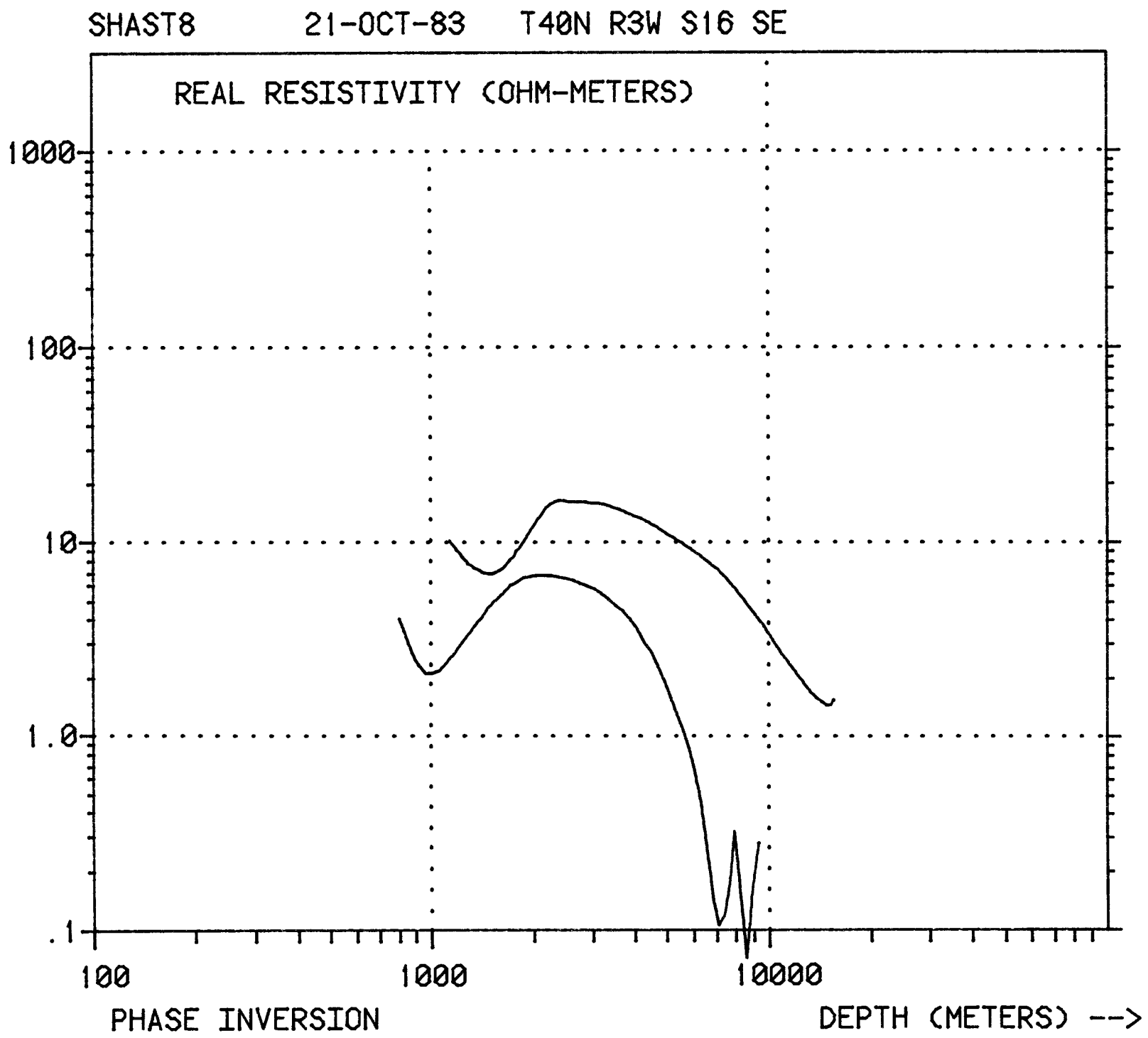
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 3.0303 | 0.7086E+02 | 0.4010E+02 | 71.2 | 69.5 | 160.75 | 0.8790 | 0.9222 | 0.8833 |
| H | | 0.4621E+02 | 0.2318E+02 | 74.0 | 66.6 | 9.59 | 0.8901 | 0.9301 | 43.00 |
| E | 3.0303 | 0.8127E+02 | 0.2647E+02 | 78.5 | 74.0 | 157.15 | 0.8893 | 0.8641 | 0.2981 |
| H | | 0.3959E+02 | 0.1808E+02 | 79.3 | 72.8 | 164.59 | 0.8936 | 0.8691 | 55.00 |
| E | 7.6923 | 0.5607E+02 | 0.4867E+02 | 80.0 | 72.7 | 22.28 | 0.9693 | 0.9806 | 0.4022 |
| H | | 0.5323E+02 | 0.4012E+02 | 79.0 | 73.7 | 12.13 | 0.9696 | 0.9808 | 40.00 |
| E | 14.2857 | 0.8556E+02 | 0.6856E+02 | 79.7 | 74.1 | 23.00 | 0.9414 | 0.9695 | 2.2296 |
| H | | 0.7531E+02 | 0.5201E+02 | 79.4 | 74.3 | 17.46 | 0.9420 | 0.9696 | 104.20 |
| E | 20.0000 | 0.1171E+03 | 0.9301E+02 | 79.1 | 73.4 | 17.25 | 0.9217 | 0.9531 | 5.5074 |
| H | | 0.9609E+02 | 0.6381E+02 | 78.7 | 73.8 | 12.99 | 0.9227 | 0.9532 | 94.70 |
| E | 26.3158 | 0.1346E+03 | 0.1249E+03 | 88.0 | 57.6 | 60.25 | 0.9268 | 0.9158 | 1.0357 |
| H | | 0.9901E+02 | 0.8908E+02 | 86.7 | 58.9 | 59.81 | 0.9274 | 0.9161 | 124.30 |
| E | 31.2500 | 0.1574E+03 | 0.1246E+03 | 1.5 | 52.1 | 64.15 | 0.9138 | 0.8789 | 0.7430 |
| H | | 0.1049E+03 | 0.8078E+02 | 1.4 | 52.2 | 65.10 | 0.9145 | 0.8791 | 136.00 |
| E | 40.0000 | 0.1374E-01 | 0.5867E-02 | 56.8 | 71.1 | 111.86 | 0.9555 | 0.9802 | 0.3109 |
| | | 0.1109E-01 | 0.5494E-02 | 56.8 | 70.9 | 115.75 | 0.9560 | 0.9804 | 57.20 |


SHAST8 21-OCT-83 T40N R3W S16 SE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

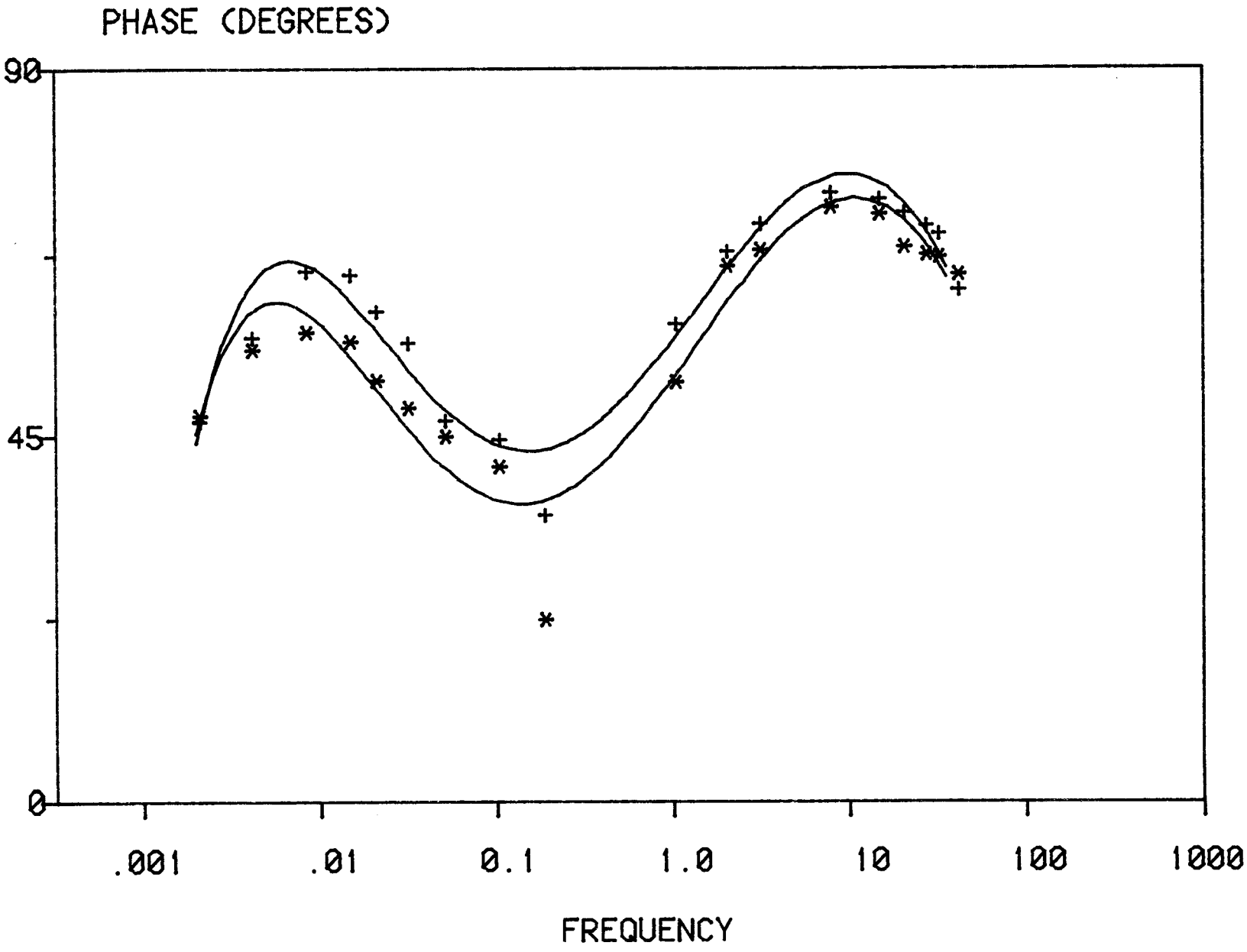



| | | | | |
|---|---|---|---|---|
| Resistivity | 147.48 | 5.36 | 15.17 | 0.67 |
| Thickness | | 1273.91 | 2508.58 | 8571.37 |
| Depth | 0.00 | 1273.91 | 3782.50 | 12353.87 |


SHAST8 21-OCT-83 T40N R3W S16 SE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST8 21-OCT-83 T40N R3W S16 SE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAST8 21-OCT-83 T40N R3W S16 SE



THE SITE IS: SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.25 | 5.52 | 1 | 317.23 | 282.42 |
| 0.0020 | 2.20 | 4.25 | 2 | 344.33 | 814.06 |
| 0.0040 | 2.07 | 6.37 | 3 | 296.36 | 466.29 |
| 0.0080 | 3.13 | 9.24 | 4 | 74.29 | 120.95 |
| 0.0143 | 4.43 | 11.83 | 5 | 31.38 | 43.82 |
| 0.0200 | 4.98 | 11.64 | 6 | 33.69 | 31.45 |
| 0.0303 | 6.02 | 11.66 | 7 | 20.20 | 26.41 |
| 0.0500 | 6.54 | 10.75 | 8 | 2.96 | 10.98 |
| 0.1000 | 9.43 | 17.27 | 9 | 7.68 | 31.82 |
| 0.1818 | 5.53 | 11.07 | 10 | 0.86 | 3.48 |
| 0.3333 | 3.12 | 6.68 | 11 | 0.10 | 0.93 |
| 0.5000 | 1.85 | 5.28 | 12 | 0.12 | 0.56 |
| 0.5988 | 52.91 | 81.34 | 13 | 0.15 | 0.31 |
| 0.8000 | 31.75 | 86.74 | 14 | 0.05 | 0.40 |
| 1.0000 | 1.66 | 5.36 | 15 | 0.05 | 0.13 |
| 1.0000 | 15.95 | 31.24 | 16 | 0.02 | 0.17 |
| 1.2048 | 35.82 | 86.77 | 17 | 0.02 | 0.24 |
| 1.4925 | 36.83 | 98.17 | 18 | 0.03 | 0.24 |
| 2.0000 | 47.18 | 95.95 | 19 | 0.04 | 0.14 |
| 2.0000 | 1.08 | 16.54 | 20 | 0.04 | 0.10 |
| 2.0000 | 17.16 | 41.38 | 21 | 0.02 | 0.14 |
| 3.0303 | 0.67 | 22.17 | 22 | 0.04 | 0.11 |
| 3.0303 | 51.99 | 124.57 | 23 | 0.01 | 0.05 |
| 7.6923 | 48.55 | 103.30 | 24 | 0.04 | 0.14 |
| 14.2857 | 69.18 | 151.11 | 25 | 0.02 | 0.07 |
| 20.0000 | 81.30 | 148.98 | 26 | 0.01 | 0.03 |
| 26.3158 | 92.97 | 182.28 | 27 | 0.01 | 0.03 |
| 31.2500 | 105.64 | 187.03 | 28 | 0.00 | 0.01 |
| 40.0000 | 110.56 | 173.02 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.669E+01 | 0.378E+00 | 41. | 46. | 37. | 0.9611 | 0.9975 | 0.4641 | 0.64 |
| H | SEC | 0.435E+01 | 0.123E+00 | 40. | 66. | 50. | 0.9788 | 0.9976 | 66.30 | 0.71 |
| E | 500.0 | 0.443E+01 | 0.269E+01 | 48. | 46. | 30. | 0.9625 | 0.9796 | 0.2391 | 0.08 |
| H | SEC | 0.408E+01 | 0.171E+01 | 48. | 48. | 40. | 0.9682 | 0.9829 | 45.10 | 0.15 |
| E | 250.0 | 0.654E+01 | 0.214E+01 | 56. | 58. | 37. | 0.9849 | 0.9941 | 0.1089 | 0.07 |
| H | SEC | 0.619E+01 | 0.200E+01 | 56. | 58. | 39. | 0.9851 | 0.9941 | 41.70 | 0.07 |
| E | 125.0 | 0.956E+01 | 0.324E+01 | 58. | 66. | 36. | 0.9815 | 0.9937 | 0.1385 | 0.07 |
| H | SEC | 0.891E+01 | 0.302E+01 | 58. | 65. | 39. | 0.9819 | 0.9938 | 48.40 | 0.05 |
| E | 70.0 | 0.123E+02 | 0.454E+01 | 57. | 65. | 38. | 0.9828 | 0.9964 | 0.2038 | 0.08 |
| H | SEC | 0.114E+02 | 0.431E+01 | 57. | 65. | 41. | 0.9831 | 0.9965 | 47.20 | 0.08 |
| E | 50.0 | 0.120E+02 | 0.507E+01 | 52. | 61. | 42. | 0.9826 | 0.9982 | 0.2279 | 0.10 |
| H | SEC | 0.113E+02 | 0.488E+01 | 52. | 61. | 44. | 0.9827 | 0.9982 | 39.00 | 0.10 |
| E | 33.0 | 0.119E+02 | 0.606E+01 | 49. | 57. | 45. | 0.9902 | 0.9979 | 0.3260 | 0.13 |
| H | SEC | 0.114E+02 | 0.597E+01 | 49. | 57. | 46. | 0.9902 | 0.9979 | 35.80 | 0.12 |
| E | 20.0 | 0.109E+02 | 0.659E+01 | 45. | 47. | 52. | 0.9940 | 0.9975 | 0.3732 | 0.12 |
| H | SEC | 0.106E+02 | 0.650E+01 | 45. | 47. | 53. | 0.9940 | 0.9975 | 36.50 | 0.13 |

AVERAGE # 8
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.182E+02 | 0.977E+01 | 41. | 45. | 58. | 0.9791 | 0.9746 | 0.3632 | 0.22 |
| H | SEC | 0.164E+02 | 0.909E+01 | 42. | 45. | 58. | 0.9792 | 0.9746 | 31.80 | 0.22 |
| E | 5.5 | 0.126E+02 | 0.634E+01 | 23. | 36. | 66. | 0.9227 | 0.9363 | 0.4544 | 0.17 |
| H | SEC | 0.956E+01 | 0.471E+01 | 23. | 36. | 67. | 0.9228 | 0.9365 | 27.80 | 0.16 |
| E | 3.0 | 0.747E+01 | 0.380E+01 | 7. | 9. | 72. | 0.9375 | 0.9398 | 0.4772 | 0.20 |
| H | SEC | 0.589E+01 | 0.244E+01 | 8. | 8. | 62. | 0.9394 | 0.9414 | 33.40 | 0.22 |
| E | 2.0 | 0.593E+01 | 0.253E+01 | 9. | 6. | 75. | 0.9507 | 0.9341 | 0.4725 | 0.15 |
| H | SEC | 0.462E+01 | 0.117E+01 | 6. | 8. | 56. | 0.9596 | 0.9470 | 41.20 | 0.17 |
| E | 1.7 | 0.116E+03 | 0.758E+02 | 59. | 66. | 19. | 0.7942 | 0.8319 | 0.1574 | 0.22 |
| H | SEC | 0.469E+02 | 0.300E+02 | 65. | 60. | 62. | 0.7965 | 0.8325 | 12.60 | 0.28 |
| E | 1.2 | 0.118E+03 | 0.378E+02 | 63. | 56. | 40. | 0.8811 | 0.9095 | 0.1563 | 0.22 |
| H | SEC | 0.558E+02 | 0.257E+02 | 63. | 56. | 47. | 0.8860 | 0.9112 | 23.10 | 0.24 |
| E | 1.0 | 0.854E+01 | 0.225E+01 | 24. | 89. | 120. | 0.8064 | 0.8029 | 0.5426 | 0.11 |
| H | HZ | 0.218E+01 | 0.107E+01 | 0. | 24. | 52. | 0.8646 | 0.8619 | 39.20 | 0.20 |

AVERAGE # 8
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.347E+02 | 0.182E+02 | 51. | 60. | 24. | 0.9164 | 0.9708 | 0.1357 | 0.10 |
| H | HZ | 0.278E+02 | 0.137E+02 | 53. | 59. | 39. | 0.9169 | 0.9713 | 22.00 | 0.16 |
| E | 1.2 | 0.105E+03 | 0.390E+02 | 65. | 65. | 34. | 0.9402 | 0.9465 | 0.1577 | 0.17 |
| H | HZ | 0.690E+02 | 0.326E+02 | 65. | 65. | 33. | 0.9414 | 0.9472 | 41.10 | 0.16 |
| E | 1.5 | 0.114E+03 | 0.405E+02 | 62. | 65. | 31. | 0.9364 | 0.9554 | 0.1550 | 0.15 |
| H | HZ | 0.828E+02 | 0.332E+02 | 62. | 66. | 34. | 0.9370 | 0.9554 | 29.40 | 0.17 |
| E | 2.0 | 0.111E+03 | 0.517E+02 | 67. | 66. | 25. | 0.9339 | 0.9577 | 0.1503 | 0.17 |
| H | HZ | 0.807E+02 | 0.427E+02 | 66. | 68. | 32. | 0.9346 | 0.9577 | 29.90 | 0.20 |
| E | 2.0 | 0.268E+02 | 0.129E+01 | 57. | 85. | 115. | 0.8035 | 0.7760 | 0.6902 | 0.12 |
| H | HZ | 0.631E+01 | 0.873E+00 | 56. | 85. | 113. | 0.8359 | 0.8091 | 38.50 | 0.12 |
| E | 2.0 | 0.471E+02 | 0.180E+02 | 66. | 68. | 44. | 0.9615 | 0.9634 | 0.1406 | 0.20 |
| H | HZ | 0.356E+02 | 0.163E+02 | 66. | 68. | 45. | 0.9622 | 0.9640 | 29.40 | 0.19 |

AVERAGE # 8
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF M) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.249E+02 | 0.830E+00 | 75. | 78. | 114. | 0.8966 | 0.9289 | 0.1311 | 0.25 |
| H | HZ | 0.194E+02 | 0.507E+00 | 75. | 77. | 114. | 0.8979 | 0.9299 | 162.50 | 0.24 |
| E | 3.0 | 0.149E+03 | 0.583E+02 | 68. | 71. | 24. | 0.9289 | 0.9400 | 0.1558 | 0.09 |
| H | HZ | 0.999E+02 | 0.457E+02 | 68. | 72. | 24. | 0.9295 | 0.9401 | 28.30 | 0.10 |
| E | 7.7 | 0.105E+03 | 0.494E+02 | 73. | 75. | 44. | 0.9932 | 0.9919 | 0.1229 | 0.13 |
| H | HZ | 0.102E+03 | 0.477E+02 | 73. | 75. | 44. | 0.9932 | 0.9919 | 31.10 | 0.13 |
| E | 14.3 | 0.157E+03 | 0.721E+02 | 73. | 75. | 51. | 0.9776 | 0.9831 | 0.1500 | 0.12 |
| H | HZ | 0.145E+03 | 0.662E+02 | 73. | 74. | 52. | 0.9776 | 0.9831 | 28.40 | 0.12 |
| E | 20.0 | 0.167E+03 | 0.872E+02 | 69. | 73. | 47. | 0.9560 | 0.9558 | 0.2304 | 0.09 |
| H | HZ | 0.131E+03 | 0.753E+02 | 69. | 73. | 47. | 0.9562 | 0.9560 | 42.30 | 0.08 |
| E | 26.3 | 0.204E+03 | 0.101E+03 | 68. | 71. | 52. | 0.9508 | 0.9526 | 0.2049 | 0.10 |
| H | HZ | 0.160E+03 | 0.849E+02 | 68. | 71. | 53. | 0.9509 | 0.9527 | 40.30 | 0.10 |
| E | 31.2 | 0.222E+03 | 0.115E+03 | 68. | 70. | 55. | 0.9426 | 0.9388 | 0.2644 | 0.09 |
| H | HZ | 0.152E+03 | 0.966E+02 | 67. | 70. | 58. | 0.9438 | 0.9401 | 54.60 | 0.08 |
| E | 40.0 | 0.224E+03 | 0.119E+03 | 62. | 67. | 58. | 0.9238 | 0.9096 | 0.5417 | 0.08 |
| H | HZ | 0.122E+03 | 0.102E+03 | 68. | 60. | 106. | 0.9279 | 0.9144 | 29.00 | 0.06 |

SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 16
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 100.0000 | | 0.0000 |
| | | 800.0000 | |
| 2 | 2.0000 | | 800.0000 |
| | | 700.0000 | |
| 3 | 10.0000 | | 1500.0000 |
| | | 5000.0000 | |
| 4 | 1.0000 | | 6500.0000 |

FREQUENCY RANGE ( 0.0020 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 147.5711 | | 0.0000 |
| | | 1271.8541 | |
| 2 | 5.4080 | | 1271.8541 |
| | | 2611.9774 | |
| 3 | 15.6879 | | 3883.8315 |
| | | 8330.9088 | |
| 4 | 0.6724 | | 12214.7402 |

MEAN PERCENT VARIATION IS 4.7563

ERROR ANALYSIS

R-SQUARED = 1.000

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 15 | 82364.718 | 5490.981 | 0.400 |
| MODEL | 6 | 82364.443 | 13727.407********** | |
| RESID | 9 | 0.036 | 0.004 | |

STANDARD ERROR = 0.063

DTEST FOR MEANS = -0.000

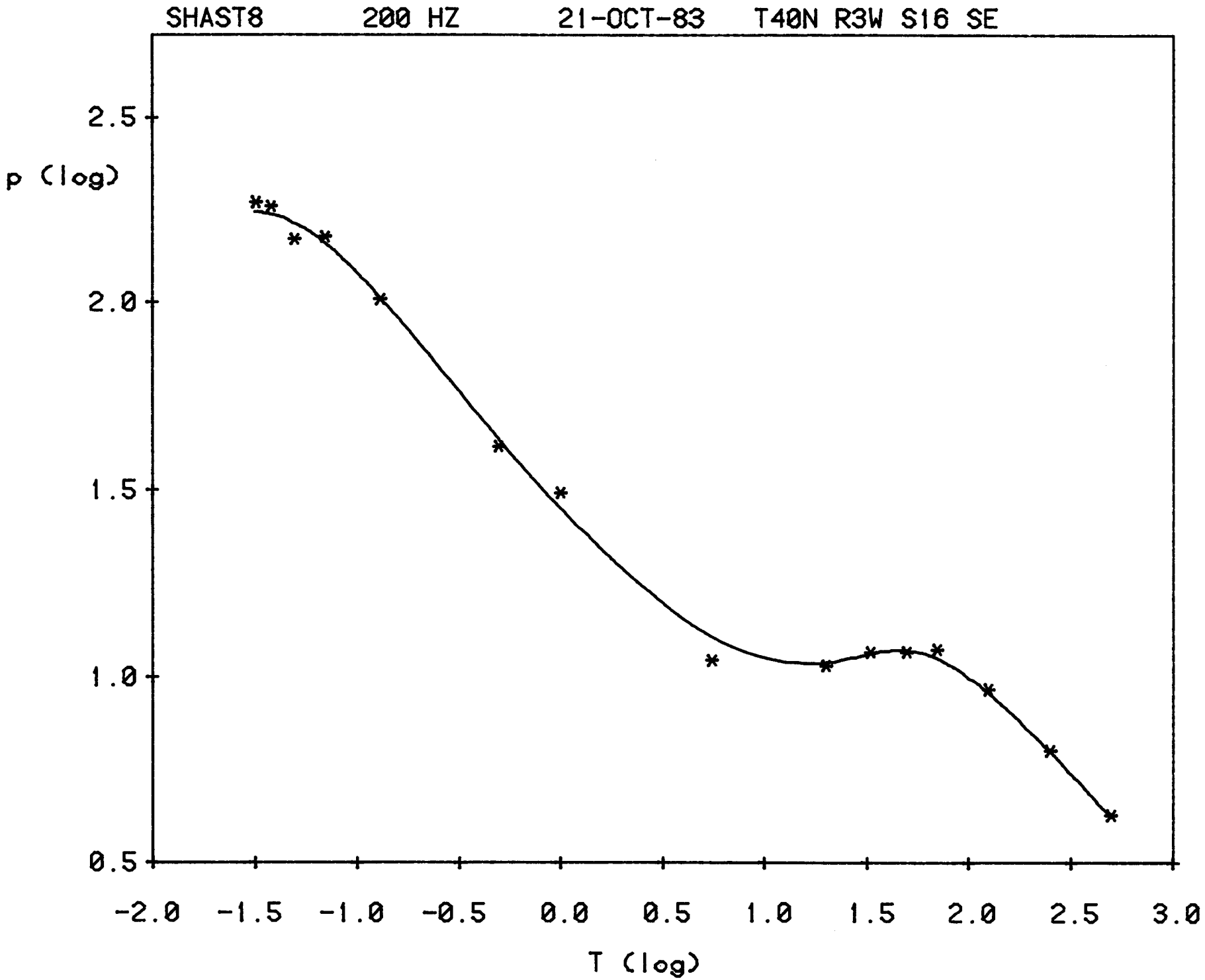
NOISE TO SIGNAL RATIO = 0.054 PERCENT

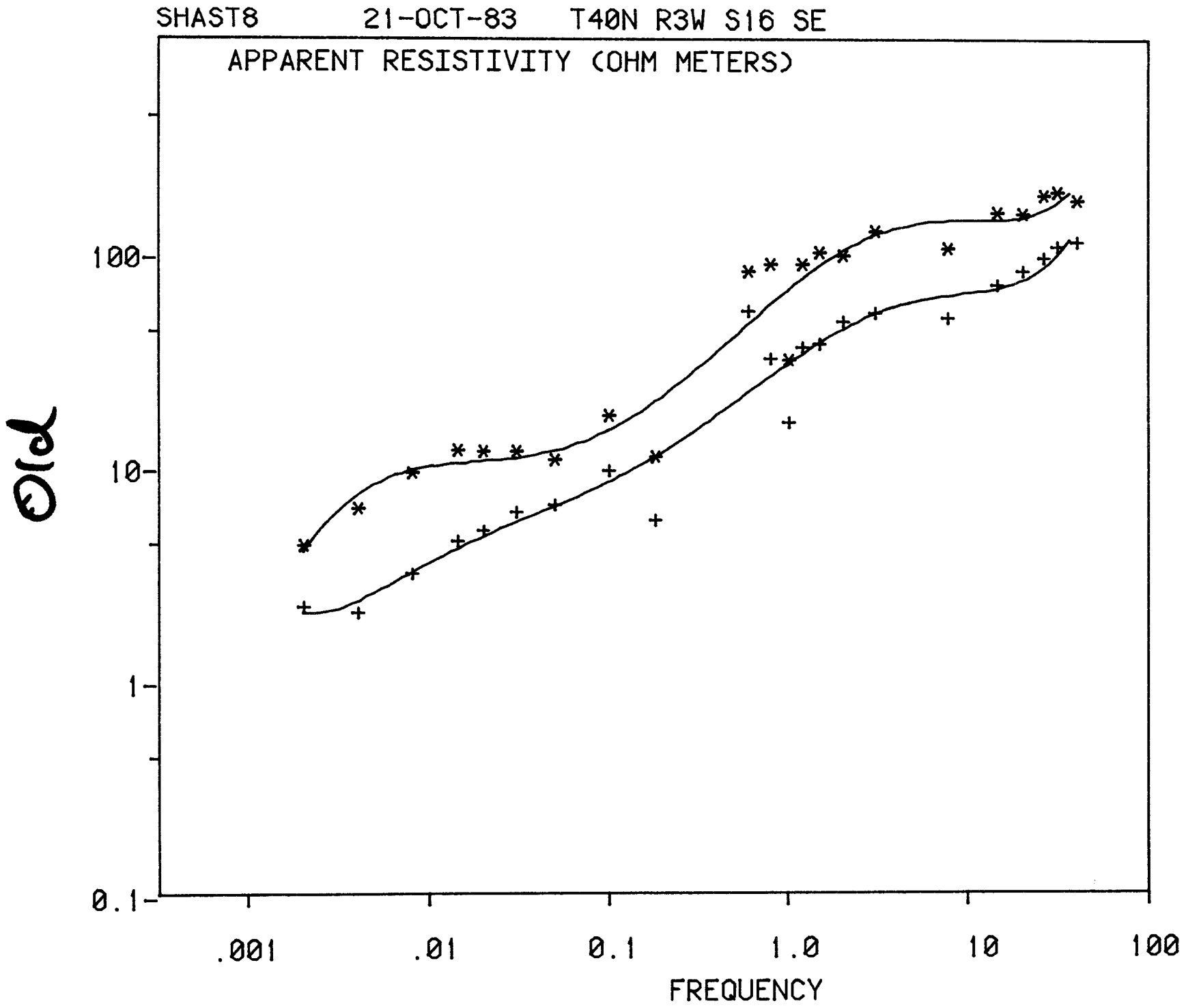
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE

ERROR STRUCTURE OF FITTED MODEL

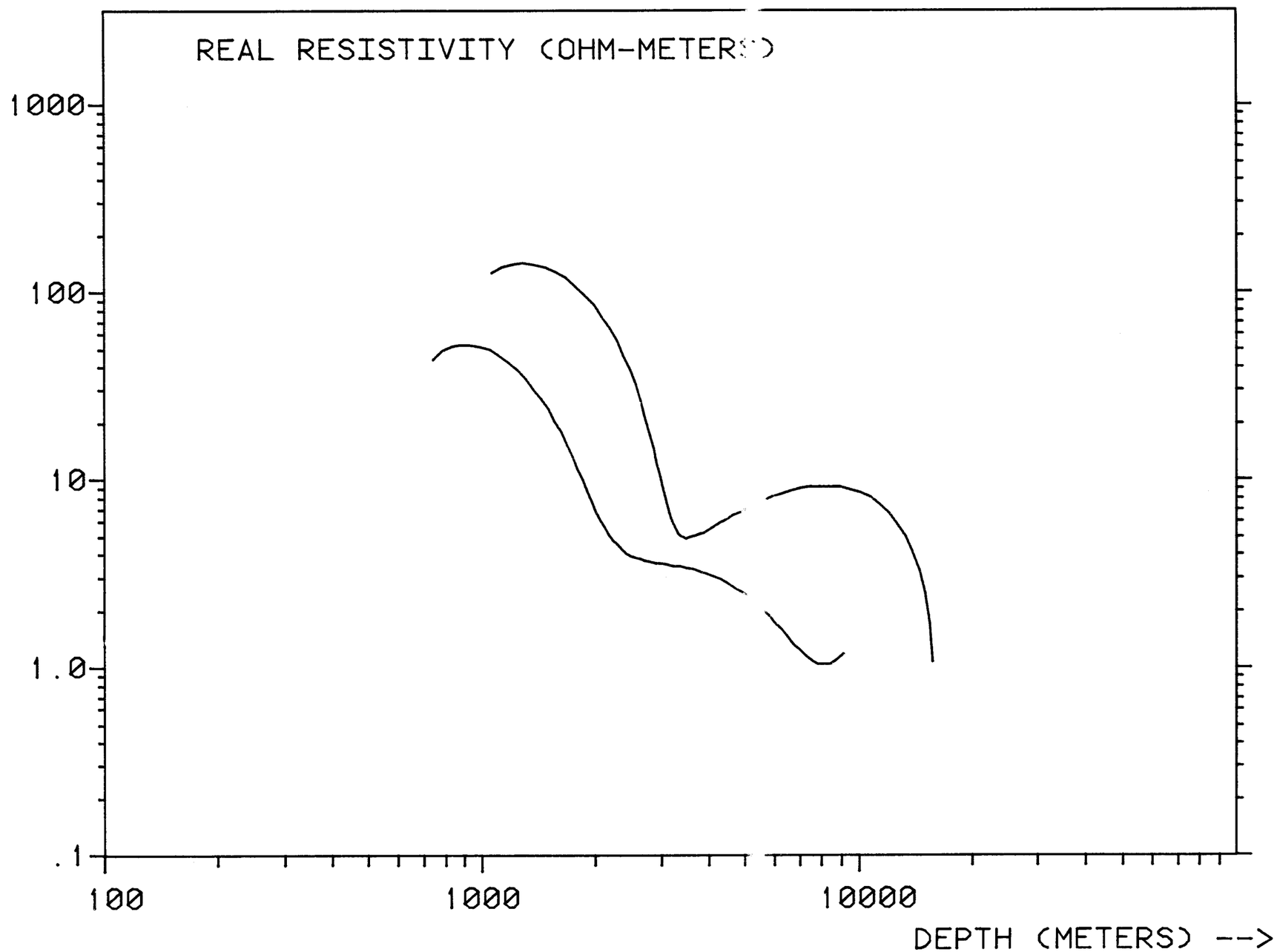
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 500.000 | 4.252 | 4.215 | 0.037 | 0.864 |
| 2 | 250.000 | 6.367 | 6.379 | -0.013 | -0.199 |
| 3 | 125.000 | 9.236 | 9.297 | -0.061 | -0.659 |
| 4 | 70.000 | 11.833 | 11.429 | 0.404 | 3.471 |
| 5 | 50.000 | 11.643 | 11.956 | -0.313 | -2.651 |
| 6 | 33.000 | 11.658 | 11.680 | -0.022 | -0.186 |
| 7 | 20.000 | 10.751 | 10.628 | 0.123 | 1.149 |
| 8 | 5.500 | 11.074 | 11.513 | -0.439 | -3.889 |
| 9 | 1.000 | 31.239 | 27.883 | 3.356 | 11.353 |
| 10 | 0.500 | 41.377 | 43.012 | -1.635 | -3.875 |
| 11 | 0.130 | 103.300 | 105.752 | -2.452 | -2.346 |
| 12 | 0.070 | 151.114 | 147.869 | 3.245 | 2.171 |
| 13 | 0.050 | 148.981 | 166.399 | -17.418 | -11.046 |
| 14 | 0.038 | 182.284 | 175.080 | 7.204 | 4.032 |
| 15 | 0.032 | 187.027 | 176.879 | 10.148 | 5.577 |
| 16 | 0.025 | 173.018 | 174.875 | -1.857 | -1.068 |

MEAN PERCENT ERROR = 4.7838
MAXIMUM PERCENT ERROR = 11.3527
MAX. ERROR OCCURED AT OBSERVATION 9

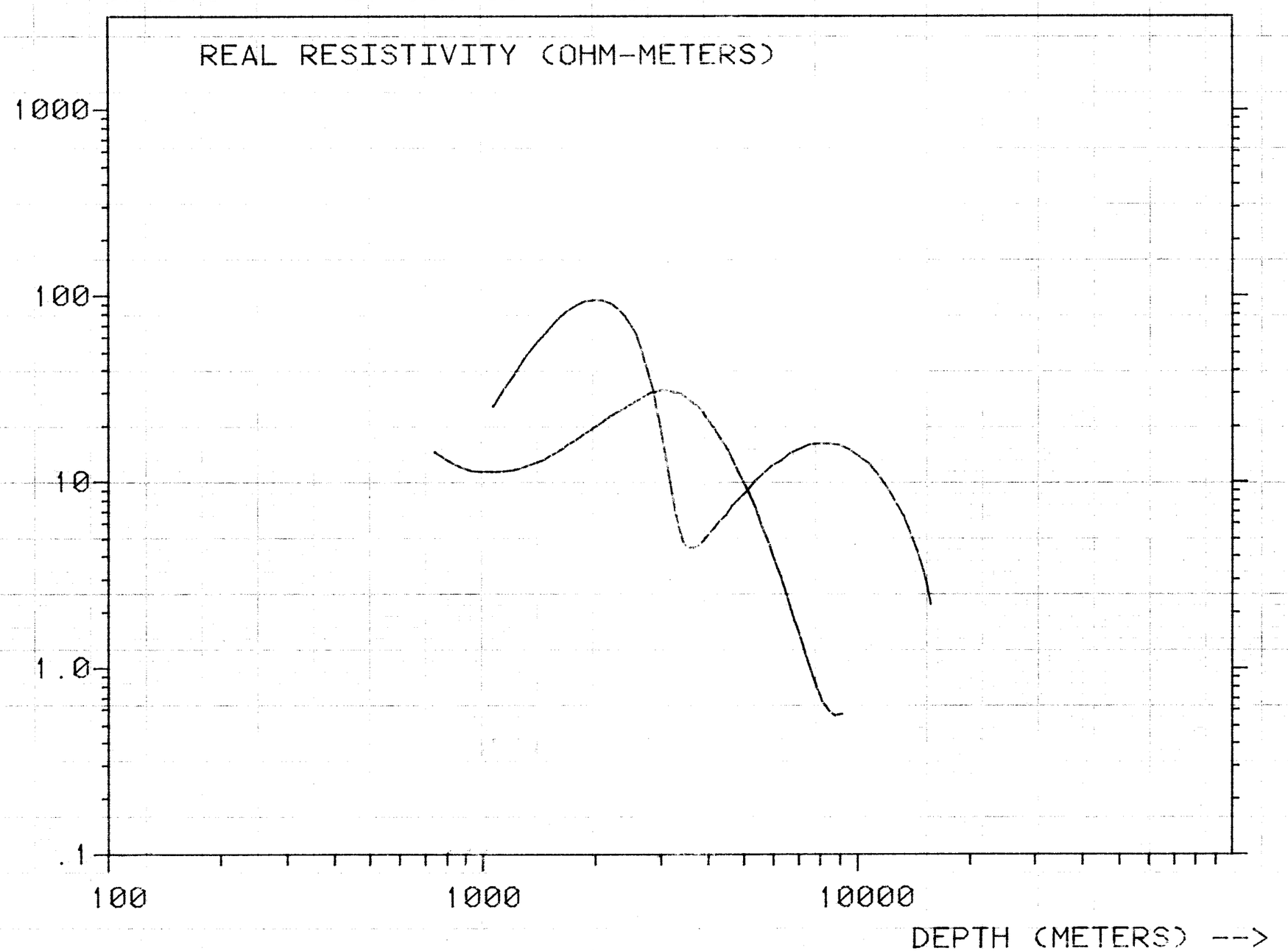

SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
p (log)
2.5
2.0
1.5
1.0
0.5
-2.0 -1.5 -1.0 -0.5 0.0 0.5 1.0 1.5 2.0 2.5 3.0
T (log)


SHAST8 21-OCT-83 T40N R3W S16 SE
APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.001
.01
0.1
1.0
10
100
FREQUENCY

SHAST8 21-OCT-83 T40N R3W S16 SE



SHAST8 21-OCT-83 T40N R3W S16 SE




Plastic

THE SITE IS: SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOYY | MEAN OF RHOXX | PERIOD # |
|---|---|---|---|
| 0.0012 | 0.25 | 5.52 | 1 |
| 0.0020 | 2.20 | 4.25 | 2 |
| 0.0040 | 2.07 | 6.37 | 3 |
| 0.0080 | 3.13 | 9.24 | 4 |
| 0.0143 | 4.43 | 11.83 | 5 |
| 0.0200 | 4.98 | 11.64 | 6 |
| 0.0303 | 6.02 | 11.66 | 7 |
| 0.0500 | 6.54 | 10.75 | 8 |
| 0.1000 | 9.43 | 17.27 | 9 |
| 0.1818 | 5.53 | 11.07 | 10 |
| 0.3333 | 3.12 | 6.68 | 11 |
| 0.5000 | 1.85 | 5.28 | 12 |
| 0.5988 | 52.91 | 81.34 | 13 |
| 0.8000 | 31.75 | 86.74 | 14 |
| 1.0000 | 1.66 | 5.36 | 15 |
| 1.0000 | 15.95 | 31.24 | 16 |
| 1.2048 | 35.82 | 86.77 | 17 |
| 1.4925 | 36.83 | 98.17 | 18 |
| 2.0000 | 47.18 | 95.95 | 19 |
| 2.0000 | 1.08 | 16.54 | 20 |
| 2.0000 | 17.16 | 41.38 | 21 |
| 3.0303 | 0.67 | 22.17 | 22 |
| 3.0303 | 51.99 | 124.57 | 23 |
| 7.6923 | 48.55 | 103.30 | 24 |
| 14.2857 | 69.18 | 151.11 | 25 |
| 20.0000 | 81.30 | 148.98 | 26 |
| 26.3158 | 92.97 | 182.28 | 27 |
| 31.2500 | 105.64 | 187.03 | 28 |
| 40.0000 | 110.56 | 173.02 | 29 |

AVERAGE # 8
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.0012 | 0.6689E+01 | 0.3781E+00 | 44.2 | 49.3 | 126.62 | 0.9612 | 0.9976 | 0.4641 |
| H | | 0.4351E+01 | 0.1225E+00 | 44.0 | 69.2 | 139.82 | 0.9789 | 0.9977 | 66.30 |
| E | 0.0020 | 0.4427E+01 | 0.2694E+01 | 53.9 | 51.9 | 119.98 | 0.9625 | 0.9797 | 0.2391 |
| H | | 0.4077E+01 | 0.1714E+01 | 53.3 | 53.7 | 129.73 | 0.9683 | 0.9830 | 45.10 |
| E | 0.0040 | 0.6539E+01 | 0.2143E+01 | 67.6 | 68.8 | 126.55 | 0.9849 | 0.9942 | 0.1089 |
| H | | 0.6194E+01 | 0.2000E+01 | 67.3 | 69.1 | 128.54 | 0.9851 | 0.9942 | 41.70 |
| E | 0.0080 | 0.9558E+01 | 0.3241E+01 | 80.4 | 88.5 | 126.49 | 0.9816 | 0.9938 | 0.1385 |
| H | | 0.8913E+01 | 0.3016E+01 | 80.9 | 87.9 | 128.80 | 0.9819 | 0.9939 | 48.40 |
| E | 0.0143 | 0.1227E+02 | 0.4541E+01 | 5.9 | 14.4 | 128.42 | 0.9828 | 0.9965 | 0.2038 |
| H | | 0.1139E+02 | 0.4314E+01 | 6.1 | 14.1 | 131.10 | 0.9832 | 0.9965 | 47.20 |
| E | 0.0200 | 0.1196E+02 | 0.5072E+01 | 14.8 | 23.6 | 131.82 | 0.9826 | 0.9982 | 0.2279 |
| H | | 0.1133E+02 | 0.4884E+01 | 15.1 | 23.3 | 134.29 | 0.9828 | 0.9982 | 39.00 |
| E | 0.0303 | 0.1187E+02 | 0.6062E+01 | 32.5 | 40.7 | 134.62 | 0.9902 | 0.9979 | 0.3260 |
| H | | 0.1144E+02 | 0.5973E+01 | 32.7 | 40.4 | 135.91 | 0.9903 | 0.9979 | 35.80 |
| E | 0.0500 | 0.1086E+02 | 0.6587E+01 | 57.4 | 59.5 | 141.60 | 0.9941 | 0.9976 | 0.3732 |
| H | | 0.1064E+02 | 0.6497E+01 | 57.4 | 59.5 | 142.61 | 0.9941 | 0.9976 | 36.50 |

AVERAGE # 8
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

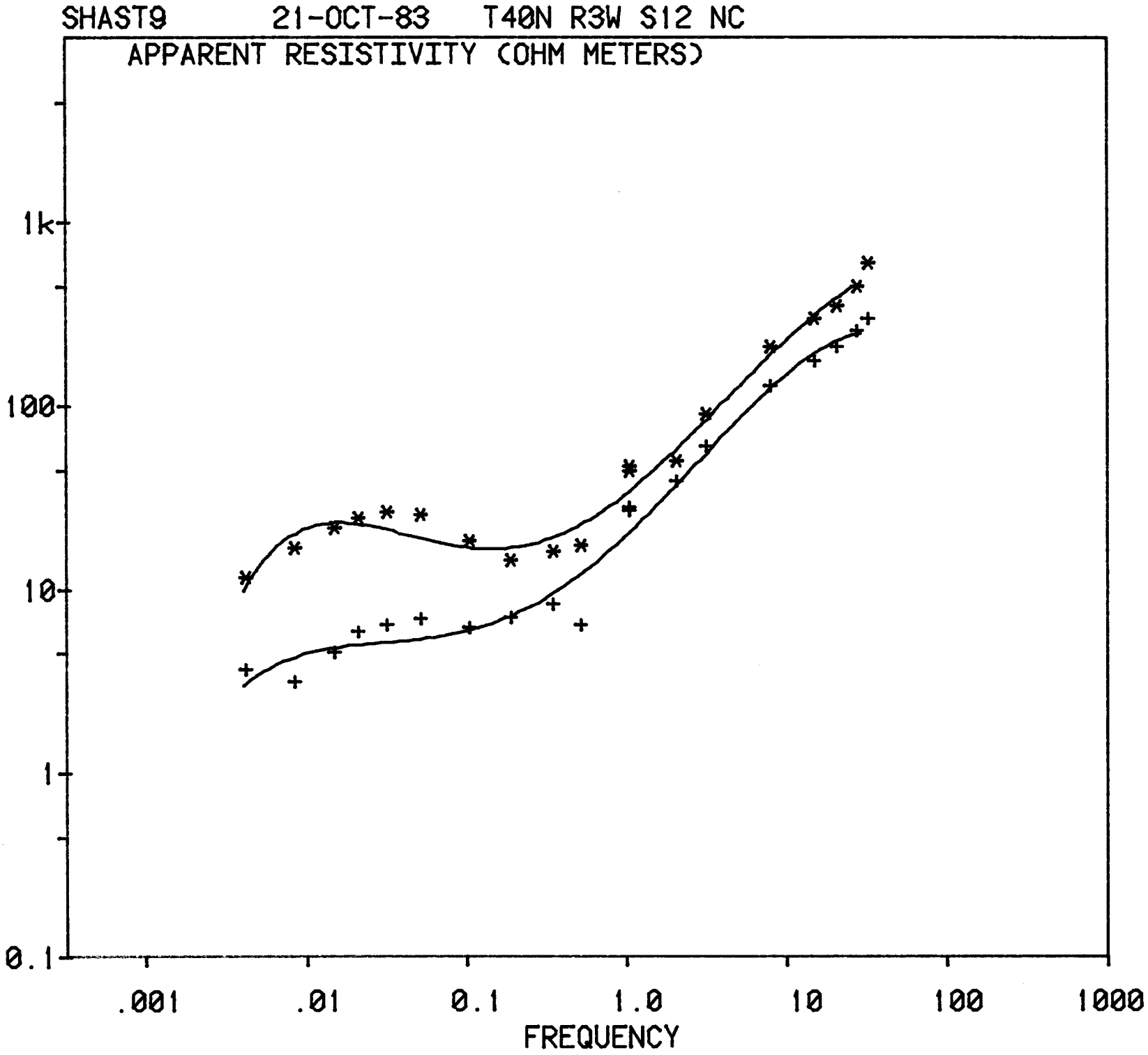
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.1000 | 0.1819E+02 | 0.9771E+01 | 87.5 | 0.9 | 148.03 | 0.9792 | 0.9746 | 0.3632 |
| H | | 0.1636E+02 | 0.9092E+01 | 87.5 | 0.9 | 148.10 | 0.9792 | 0.9746 | 31.80 |
| E | 0.1818 | 0.1259E+02 | 0.6342E+01 | 87.7 | 10.5 | 156.03 | 0.9227 | 0.9364 | 0.4544 |
| H | | 0.9558E+01 | 0.4708E+01 | 87.7 | 10.7 | 157.50 | 0.9228 | 0.9365 | 27.80 |
| E | 0.3333 | 0.7470E+01 | 0.3800E+01 | 83.7 | 85.1 | 161.87 | 0.9376 | 0.9398 | 0.4772 |
| H | | 0.5893E+01 | 0.2442E+01 | 84.7 | 83.8 | 152.21 | 0.9394 | 0.9415 | 33.40 |
| E | 0.5000 | 0.5933E+01 | 0.2528E+01 | 89.4 | 86.3 | 165.08 | 0.9508 | 0.9341 | 0.4725 |
| H | | 0.4619E+01 | 0.1167E+01 | 86.6 | 88.9 | 145.80 | 0.9596 | 0.9470 | 41.20 |
| E | 0.5988 | 0.1158E+03 | 0.7585E+02 | 51.2 | 58.0 | 108.78 | 0.7943 | 0.8320 | 0.1574 |
| H | | 0.4689E+02 | 0.2998E+02 | 57.0 | 52.0 | 151.77 | 0.7966 | 0.8325 | 12.60 |
| E | 0.8000 | 0.1176E+03 | 0.3776E+02 | 57.6 | 49.8 | 129.59 | 0.8811 | 0.9095 | 0.1563 |
| H | | 0.5585E+02 | 0.2574E+02 | 57.1 | 50.4 | 136.55 | 0.8860 | 0.9112 | 23.10 |
| E | 1.0000 | 0.8543E+01 | 0.2249E+01 | 19.1 | 84.8 | 29.61 | 0.8064 | 0.8030 | 0.5426 |
| H | | 0.2178E+01 | 0.1066E+01 | 85.8 | 19.7 | 142.12 | 0.8646 | 0.8619 | 39.20 |

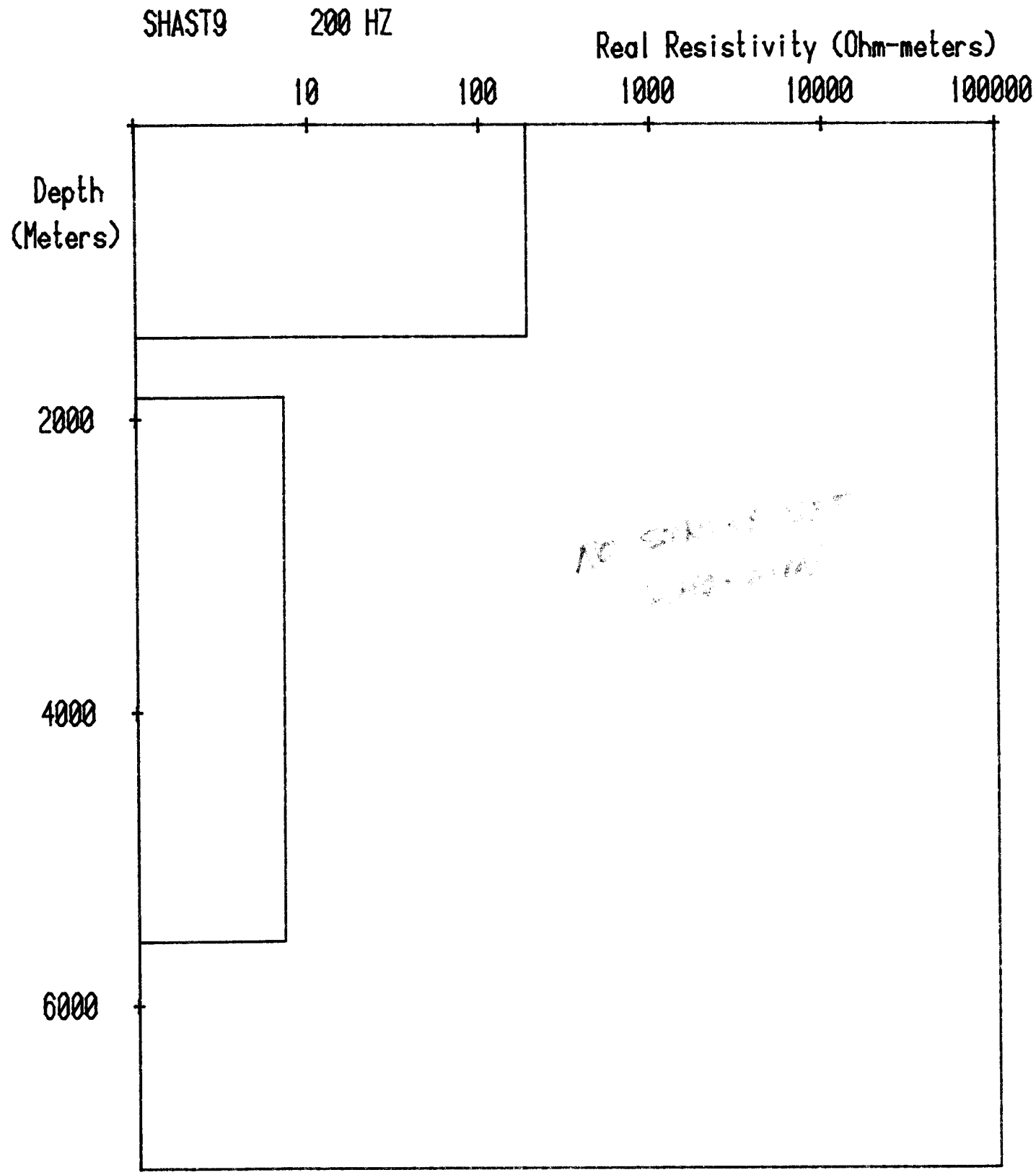
AVERAGE # 8
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 1.0000 | 0.3471E+02 | 0.1817E+02 | 46.8 | 55.0 | 113.66 | 0.9164 | 0.9709 | 0.1357 |
| H | | 0.2777E+02 | 0.1372E+02 | 48.1 | 54.0 | 129.24 | 0.9169 | 0.9714 | 22.00 |
| E | 1.2048 | 0.1045E+03 | 0.3903E+02 | 61.6 | 61.1 | 123.70 | 0.9403 | 0.9465 | 0.1577 |
| H | | 0.6900E+02 | 0.3261E+02 | 61.6 | 61.0 | 122.91 | 0.9414 | 0.9473 | 41.10 |
| E | 1.4925 | 0.1135E+03 | 0.4050E+02 | 59.2 | 62.3 | 120.65 | 0.9364 | 0.9554 | 0.1550 |
| H | | 0.8281E+02 | 0.3316E+02 | 59.1 | 62.5 | 123.62 | 0.9370 | 0.9555 | 29.40 |
| E | 2.0000 | 0.1112E+03 | 0.5168E+02 | 64.8 | 63.8 | 114.61 | 0.9339 | 0.9578 | 0.1503 |
| H | | 0.8068E+02 | 0.4267E+02 | 64.0 | 65.4 | 122.32 | 0.9346 | 0.9578 | 29.80 |
| E | 2.0000 | 0.2677E+02 | 0.1290E+01 | 54.4 | 82.6 | 24.96 | 0.8035 | 0.7760 | 0.6902 |
| H | | 0.6310E+01 | 0.8730E+00 | 53.3 | 82.9 | 23.13 | 0.8359 | 0.8091 | 38.50 |
| E | 2.0000 | 0.4715E+02 | 0.1804E+02 | 64.1 | 65.7 | 133.65 | 0.9615 | 0.9634 | 0.1406 |
| H | | 0.3561E+02 | 0.1628E+02 | 64.0 | 65.8 | 134.61 | 0.9622 | 0.9640 | 29.40 |

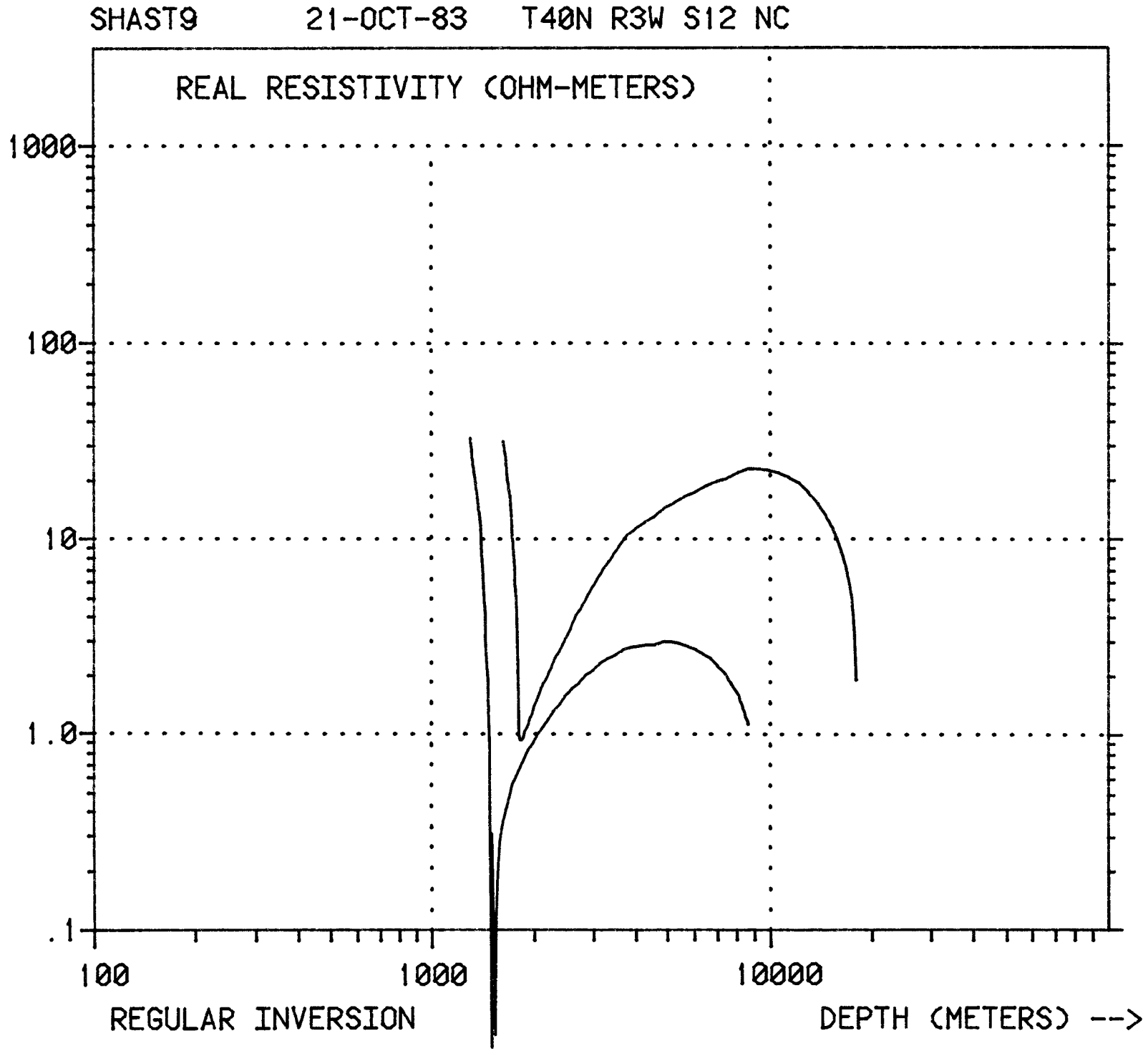
AVERAGE # 8
SHAST8 200 HZ 21-OCT-83 T40N R3W S16 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

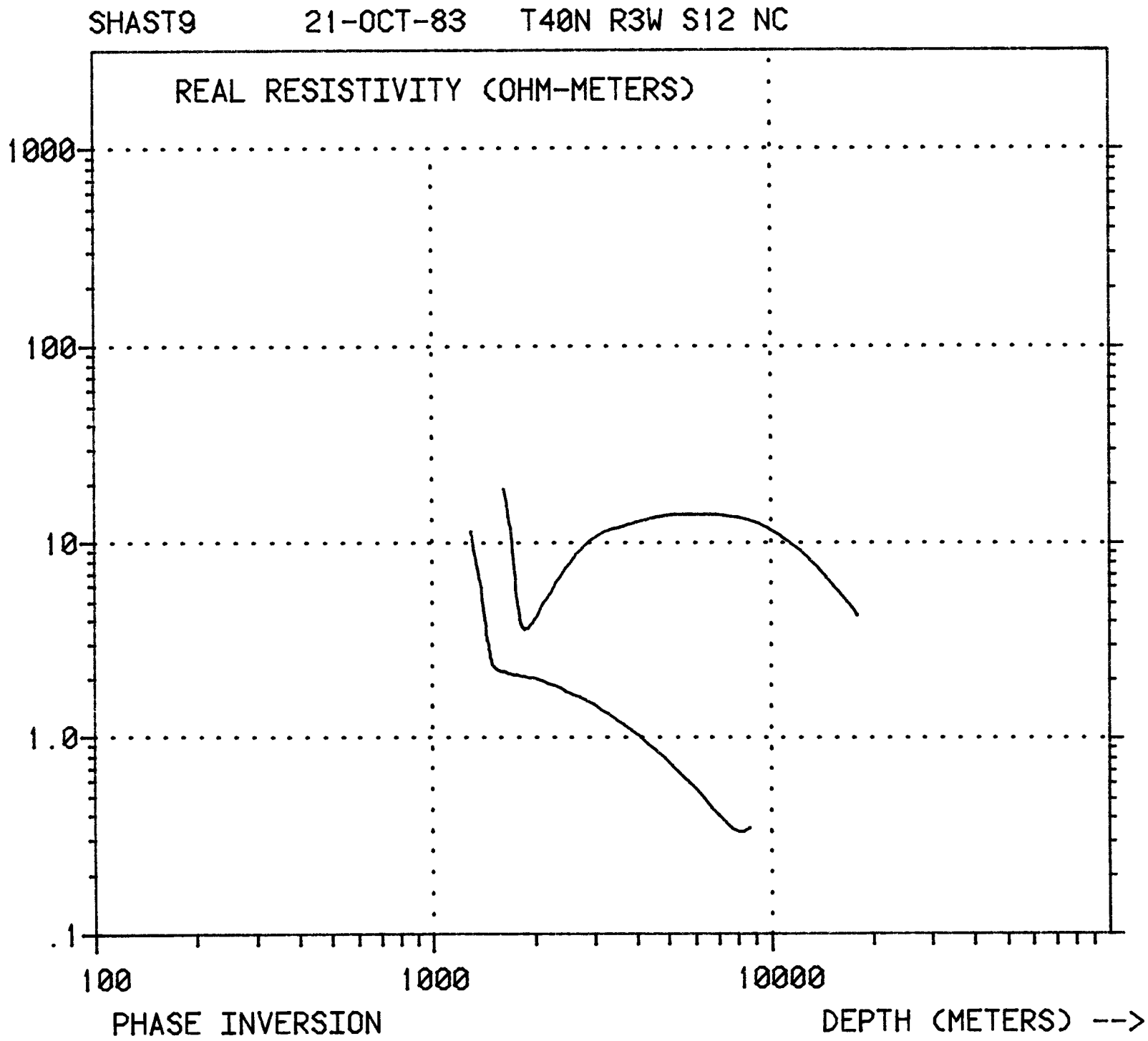
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE (DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 3.0303 | 0.2492E+02 | 0.8301E+00 | 73.9 | 76.2 | 24.35 | 0.8966 | 0.9289 | 0.1311 |
| H | | 0.1943E+02 | 0.5070E+00 | 73.8 | 75.9 | 24.05 | 0.8980 | 0.9300 | 162.50 |
| E | 3.0303 | 0.1493E+03 | 0.5826E+02 | 66.9 | 69.9 | 114.17 | 0.9289 | 0.9400 | 0.1558 |
| H | | 0.9988E+02 | 0.4572E+02 | 66.7 | 70.0 | 113.87 | 0.9296 | 0.9401 | 28.20 |
| E | 7.6923 | 0.1050E+03 | 0.4944E+02 | 72.8 | 74.8 | 133.82 | 0.9932 | 0.9919 | 0.1229 |
| H | | 0.1016E+03 | 0.4766E+02 | 72.9 | 74.6 | 133.54 | 0.9933 | 0.9920 | 31.10 |
| E | 14.2857 | 0.1568E+03 | 0.7211E+02 | 72.3 | 74.3 | 140.85 | 0.9777 | 0.9832 | 0.1500 |
| H | | 0.1454E+03 | 0.6625E+02 | 72.4 | 74.1 | 141.84 | 0.9777 | 0.9832 | 28.40 |
| E | 20.0000 | 0.1668E+03 | 0.8725E+02 | 68.4 | 72.7 | 136.51 | 0.9560 | 0.9558 | 0.2304 |
| H | | 0.1312E+03 | 0.7534E+02 | 68.6 | 72.5 | 136.67 | 0.9563 | 0.9560 | 42.30 |
| E | 26.3158 | 0.2042E+03 | 0.1010E+03 | 67.6 | 71.2 | 141.90 | 0.9508 | 0.9526 | 0.2049 |
| H | | 0.1604E+03 | 0.8494E+02 | 67.6 | 71.2 | 143.01 | 0.9510 | 0.9528 | 40.30 |
| E | 31.2500 | 0.2224E+03 | 0.1146E+03 | 67.4 | 70.1 | 145.01 | 0.9426 | 0.9388 | 0.2644 |
| H | | 0.1516E+03 | 0.9663E+02 | 67.3 | 70.2 | 147.98 | 0.9438 | 0.9401 | 54.60 |
| E | 40.0000 | 0.2243E+03 | 0.1193E+03 | 62.0 | 66.7 | 147.69 | 0.9239 | 0.9096 | 0.5418 |
| H | | 0.1217E+03 | 0.1018E+03 | 68.4 | 59.8 | 16.21 | 0.9279 | 0.9144 | 29.20 |


SHAST9 21-OCT-83 T40N R3W S12 NC
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

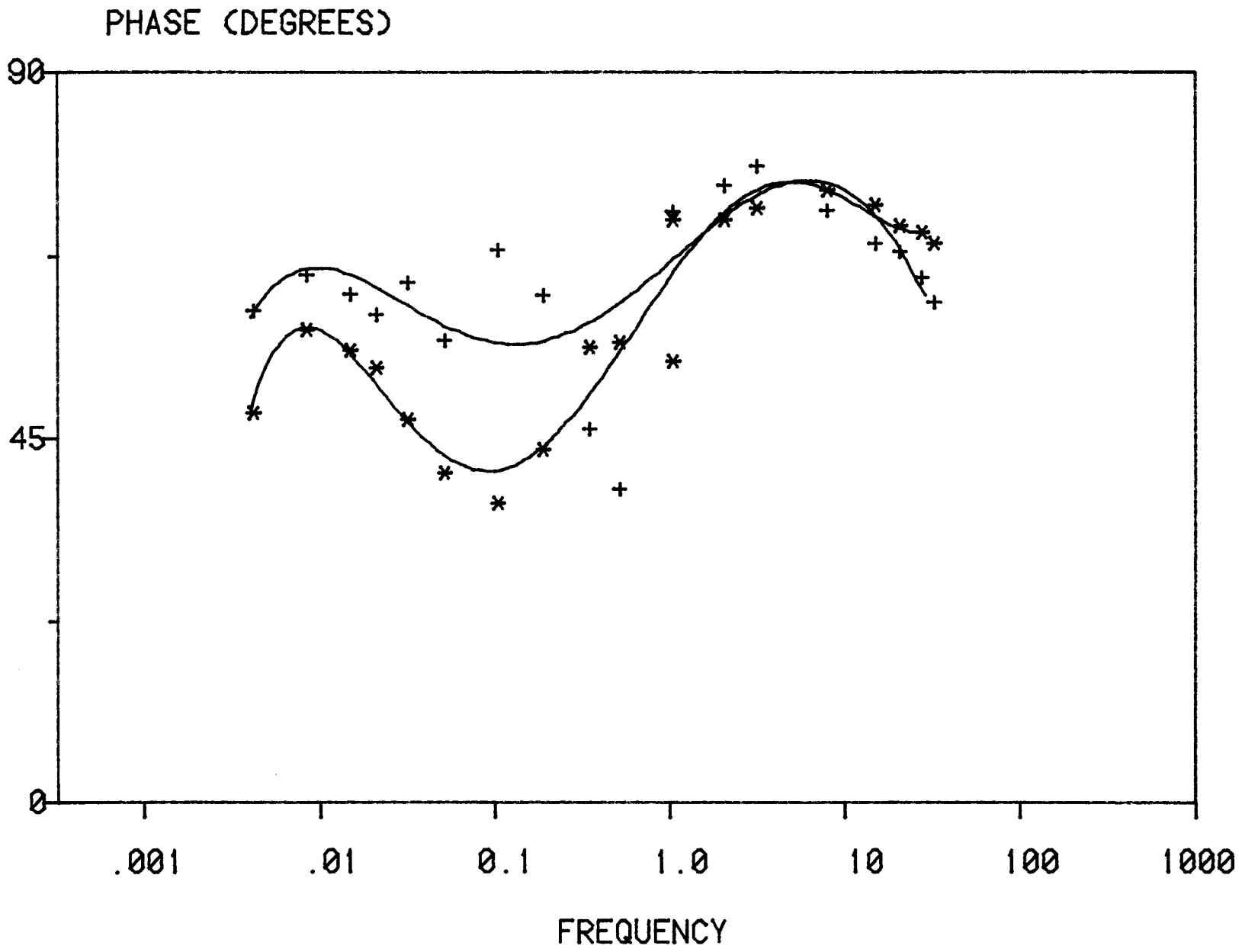



| | | | | |
|---|---|---|---|---|
| Resistivity | 189.29 | 0.89 | 7.18 | 0.63 |
| Thickness | | 1441.15 | 414.88 | 3701.34 |
| Depth | 0.00 | 1441.15 | 1856.04 | 5557.38 |


SHAST9 21-OCT-83 T40N R3W S12 NC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAST9 21-OCT-83 T40N R3W S12 NC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAST9 21-OCT-83 T40N R3W S12 NC



THE SITE IS: SHASTA 200 HZ 21-OCT-83 T40N R3W S12 NC

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | SIDEV OF RHOMI | SIDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 3.87 | 7.18 | 1 | 1427.23 | 1044.57 |
| 0.0020 | 5.72 | 10.86 | 2 | 1231.47 | 264.77 |
| 0.0040 | 3.42 | 10.81 | 3 | 370.37 | 422.03 |
| 0.0080 | 2.96 | 15.53 | 4 | 73.09 | 221.38 |
| 0.0143 | 4.27 | 20.15 | 5 | 34.70 | 84.81 |
| 0.0200 | 5.54 | 22.95 | 6 | 17.06 | 35.40 |
| 0.0303 | 6.04 | 24.77 | 7 | 7.94 | 13.97 |
| 0.0500 | 6.48 | 23.74 | 8 | 1.72 | 4.75 |
| 0.1000 | 5.78 | 17.23 | 9 | 6.27 | 10.75 |
| 0.1818 | 6.65 | 13.37 | 10 | 2.15 | 2.62 |
| 0.3333 | 7.71 | 15.08 | 11 | 0.59 | 0.55 |
| 0.5000 | 5.97 | 16.18 | 12 | 0.23 | 0.56 |
| 0.5988 | 45.55 | 830.27 | 13 | 0.16 | 3.08 |
| 0.8000 | 0.00 | 0.00 | 14 | 17.06 | 35.40 |
| 1.0000 | 26.24 | 43.48 | 15 | 0.03 | 0.10 |
| 1.0000 | 24.93 | 41.37 | 16 | 0.32 | 0.06 |
| 1.2048 | 0.00 | 0.00 | 17 | 2.15 | 2.62 |
| 1.4925 | 0.00 | 0.00 | 18 | 0.59 | 0.55 |
| 2.0000 | 24.90 | 97.93 | 19 | 0.05 | 0.05 |
| 2.0000 | 51.15 | 62.34 | 20 | 0.01 | 0.01 |
| 2.0000 | 35.93 | 47.04 | 21 | 0.05 | 0.05 |
| 3.0303 | 56.08 | 84.28 | 22 | 0.00 | 0.00 |
| 3.0303 | 0.00 | 0.00 | 23 | 2.15 | 2.62 |
| 7.6923 | 118.81 | 194.94 | 24 | 0.02 | 0.02 |
| 14.2857 | 162.04 | 273.99 | 25 | 0.01 | 0.00 |
| 20.0000 | 195.16 | 323.62 | 26 | 0.01 | 0.00 |
| 26.3158 | 238.83 | 415.25 | 27 | 0.00 | 0.01 |
| 31.2500 | 277.84 | 549.58 | 28 | 0.00 | 0.01 |
| 40.0000 | 216.09 | 423.69 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.719E+01 | 0.412E+01 | 44. | 45. | 117. | 0.9828 | 0.9986 | 0.1186 | 0.24 |
| H | SEC | 0.718E+01 | 0.362E+01 | 45. | 45. | 115. | 0.9832 | 0.9986 | 32.30 | 0.25 |
| E | 500.0 | 0.114E+02 | 0.672E+01 | 38. | 56. | 59. | 0.9178 | 0.9963 | 0.1262 | 0.19 |
| H | SEC | 0.104E+02 | 0.471E+01 | 42. | 53. | 73. | 0.9207 | 0.9966 | 6.80 | 0.17 |
| E | 250.0 | 0.109E+02 | 0.351E+01 | 48. | 61. | 99. | 0.9900 | 0.9944 | 0.1195 | 0.39 |
| H | SEC | 0.107E+02 | 0.334E+01 | 49. | 61. | 99. | 0.9900 | 0.9945 | 26.10 | 0.39 |
| E | 125.0 | 0.157E+02 | 0.307E+01 | 59. | 65. | 106. | 0.9850 | 0.9932 | 0.1249 | 0.47 |
| H | SEC | 0.154E+02 | 0.285E+01 | 59. | 66. | 107. | 0.9851 | 0.9932 | 37.30 | 0.48 |
| E | 70.0 | 0.203E+02 | 0.443E+01 | 56. | 63. | 102. | 0.9874 | 0.9968 | 0.1597 | 0.43 |
| H | SEC | 0.200E+02 | 0.412E+01 | 56. | 64. | 103. | 0.9875 | 0.9968 | 35.10 | 0.44 |
| E | 50.0 | 0.231E+02 | 0.580E+01 | 54. | 61. | 101. | 0.9851 | 0.9965 | 0.2293 | 0.39 |
| H | SEC | 0.228E+02 | 0.527E+01 | 54. | 60. | 103. | 0.9854 | 0.9965 | 33.60 | 0.39 |
| E | 33.0 | 0.252E+02 | 0.680E+01 | 47. | 65. | 99. | 0.9632 | 0.9961 | 0.2864 | 0.35 |
| H | SEC | 0.244E+02 | 0.527E+01 | 48. | 65. | 102. | 0.9649 | 0.9963 | 36.60 | 0.36 |
| E | 20.0 | 0.257E+02 | 0.783E+01 | 41. | 58. | 92. | 0.9393 | 0.9856 | 0.3000 | 0.35 |
| H | SEC | 0.218E+02 | 0.512E+01 | 41. | 57. | 102. | 0.9482 | 0.9879 | 28.20 | 0.33 |

AVERAGE # 8
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.179E+02 | 0.623E+01 | 37. | 69. | 99. | 0.9716 | 0.9825 | 0.2374 | 0.32 |
| H | SEC | 0.165E+02 | 0.532E+01 | 38. | 68. | 99. | 0.9718 | 0.9825 | 27.80 | 0.30 |
| E | 5.5 | 0.150E+02 | 0.752E+01 | 44. | 62. | 95. | 0.9386 | 0.9424 | 0.2418 | 0.22 |
| H | SEC | 0.118E+02 | 0.578E+01 | 44. | 63. | 95. | 0.9399 | 0.9435 | 20.00 | 0.25 |
| E | 3.0 | 0.175E+02 | 0.122E+02 | 58. | 44. | 120. | 0.7727 | 0.8896 | 0.2287 | 0.12 |
| H | SEC | 0.126E+02 | 0.317E+01 | 55. | 49. | 106. | 0.7900 | 0.8967 | 22.30 | 0.20 |
| E | 2.0 | 0.225E+02 | 0.102E+02 | 58. | 38. | 135. | 0.7104 | 0.7978 | 0.2371 | 0.21 |
| H | SEC | 0.982E+01 | 0.176E+01 | 56. | 41. | 126. | 0.7251 | 0.8028 | 12.30 | 0.29 |
| E | 1.7 | 0.850E+03 | 0.653E+02 | 55. | 16. | 19. | 0.9333 | 0.9031 | 0.2061 | 0.62 |
| H | SEC | 0.810E+03 | 0.258E+02 | 55. | 24. | 22. | 0.9569 | 0.9334 | 77.30 | 0.59 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.0 | 0.520E+02 | 0.352E+02 | 72. | 74. | 6. | 0.9037 | 0.9180 | 0.3086 | 0.07 |
| H | HZ | 0.349E+02 | 0.173E+02 | 73. | 73. | 150. | 0.9142 | 0.9261 | 151.80 | 0.09 |

AVERAGE # 8
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.558E+02 | 0.258E+02 | 56. | 72. | 23. | 0.9058 | 0.9630 | 0.1268 | 0.18 |
| H | HZ | 0.269E+02 | 0.240E+02 | 53. | 75. | 23. | 0.9158 | 0.9637 | 2.30 | 0.18 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.127E+03 | 0.253E+02 | 75. | 80. | 28. | 0.9102 | 0.9418 | 0.2406 | 0.11 |
| H | HZ | 0.691E+02 | 0.245E+02 | 75. | 80. | 20. | 0.9182 | 0.9485 | 134.30 | 0.10 |
| E | 2.0 | 0.818E+02 | 0.629E+02 | 73. | 78. | 75. | 0.8798 | 0.8654 | 0.5179 | 0.02 |
| H | HZ | 0.428E+02 | 0.394E+02 | 72. | 79. | 63. | 0.8798 | 0.8656 | -1.50 | 0.04 |
| E | 2.0 | 0.545E+02 | 0.460E+02 | 72. | 77. | 90. | 0.9151 | 0.9284 | 0.2957 | 0.06 |
| H | HZ | 0.396E+02 | 0.258E+02 | 72. | 76. | 112. | 0.9184 | 0.9301 | 142.00 | 0.10 |

AVERAGE # 0
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.100E+03 | 0.724E+02 | 75. | 78. | 77. | 0.8853 | 0.9215 | 0.5899 | 0.04 |
| H | HZ | 0.681E+02 | 0.398E+02 | 73. | 80. | 89. | 0.8898 | 0.9229 | 61.70 | 0.06 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 7.7 | 0.204E+03 | 0.125E+03 | 76. | 74. | 87. | 0.9772 | 0.9811 | 0.5365 | 0.05 |
| H | HZ | 0.186E+03 | 0.112E+03 | 76. | 73. | 89. | 0.9773 | 0.9811 | 116.70 | 0.05 |
| E | 14.3 | 0.284E+03 | 0.174E+03 | 74. | 69. | 91. | 0.9700 | 0.9824 | 0.4832 | 0.03 |
| H | HZ | 0.264E+03 | 0.150E+03 | 74. | 69. | 93. | 0.9702 | 0.9824 | 129.50 | 0.03 |
| E | 20.0 | 0.347E+03 | 0.209E+03 | 71. | 68. | 90. | 0.9662 | 0.9659 | 0.5803 | 0.03 |
| H | HZ | 0.300E+03 | 0.181E+03 | 71. | 68. | 92. | 0.9662 | 0.9660 | 130.30 | 0.03 |
| E | 26.3 | 0.476E+03 | 0.271E+03 | 71. | 65. | 74. | 0.9239 | 0.9383 | 0.4076 | 0.06 |
| H | HZ | 0.354E+03 | 0.207E+03 | 70. | 66. | 88. | 0.9264 | 0.9408 | 130.80 | 0.03 |
| E | 31.2 | 0.651E+03 | 0.310E+03 | 69. | 62. | 65. | 0.9183 | 0.9447 | 0.4775 | 0.08 |
| H | HZ | 0.448E+03 | 0.246E+03 | 69. | 62. | 80. | 0.9230 | 0.9487 | 138.10 | 0.05 |
| E | 40.0 | 0.473E+03 | 0.252E+03 | 63. | 62. | 92. | 0.9491 | 0.9524 | 0.8373 | 0.04 |
| H | HZ | 0.374E+03 | 0.180E+03 | 63. | 62. | 102. | 0.9503 | 0.9534 | 152.60 | 0.03 |

SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 17
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 200.0000 | | 0.0000 |
| | | 1500.0000 | |
| 2 | 1.0000 | | 1500.0000 |
| | | 500.0000 | |
| 3 | 4.0000 | | 2000.0000 |
| | | 7000.0000 | |
| 4 | 1.0000 | | 9000.0000 |

FREQUENCY RANGE ( 0.0080 , 31.2500 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 189.2925 | | 0.0000 |
| | | 1441.1551 | |
| 2 | 0.8951 | | 1441.1551 |
| | | 414.8873 | |
| 3 | 7.1816 | | 1856.0424 |
| | | 3701.3456 | |
| 4 | 0.6337 | | 5557.3880 |

MEAN PERCENT VARIATION IS 11.4088

ERROR ANALYSIS

R-SQUARED = 1.000

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 16 | 136628.229 | 8539.264 | 0.375 |
| MODEL | 6 | 136654.492 | 22775.749********** | |
| RESID | 10 | 0.221 | 0.022 | |

STANDARD ERROR = 0.149

DTEST FOR MEANS = -0.000

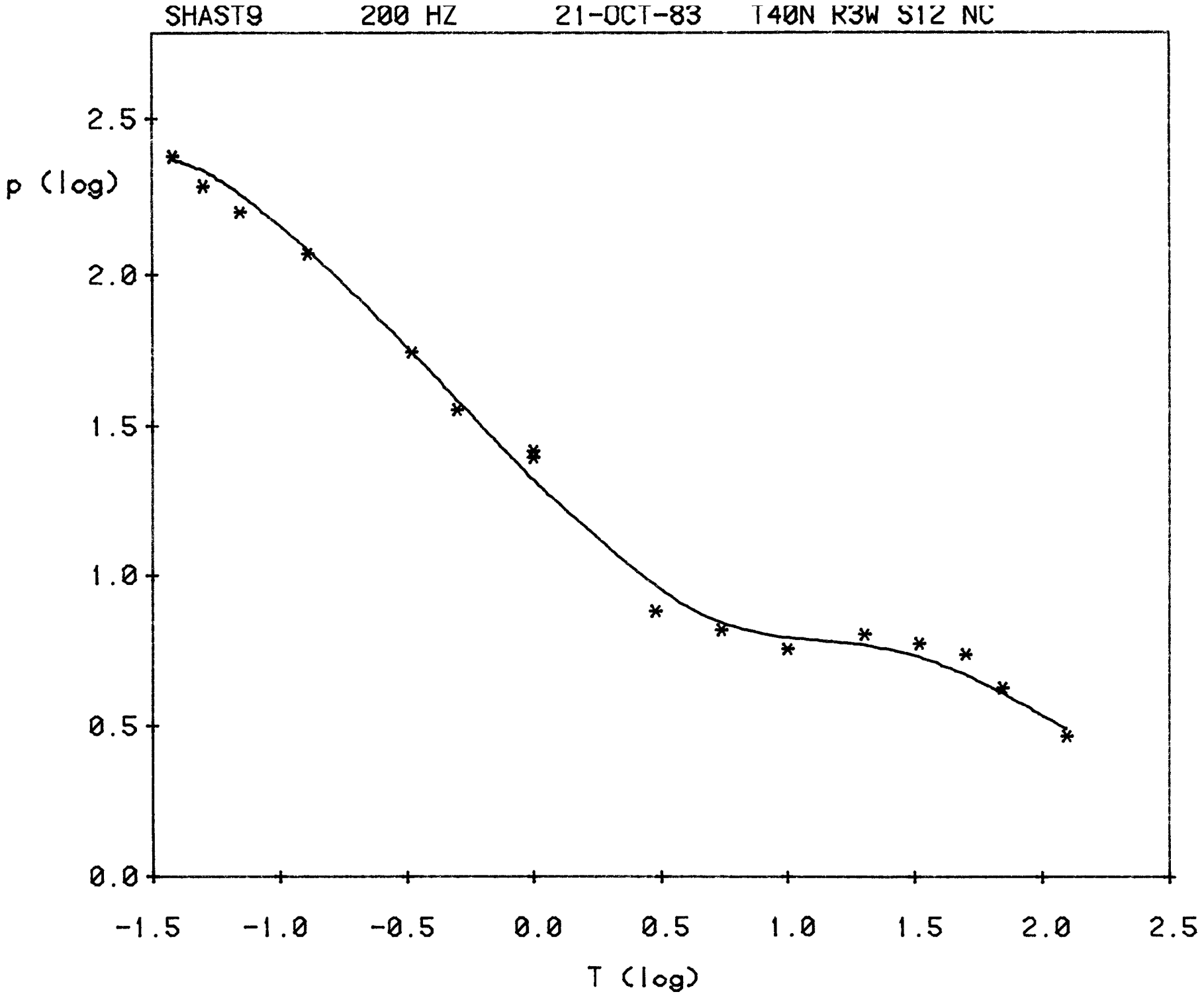
NOISE TO SIGNAL RATIO = 0.099 PERCENT

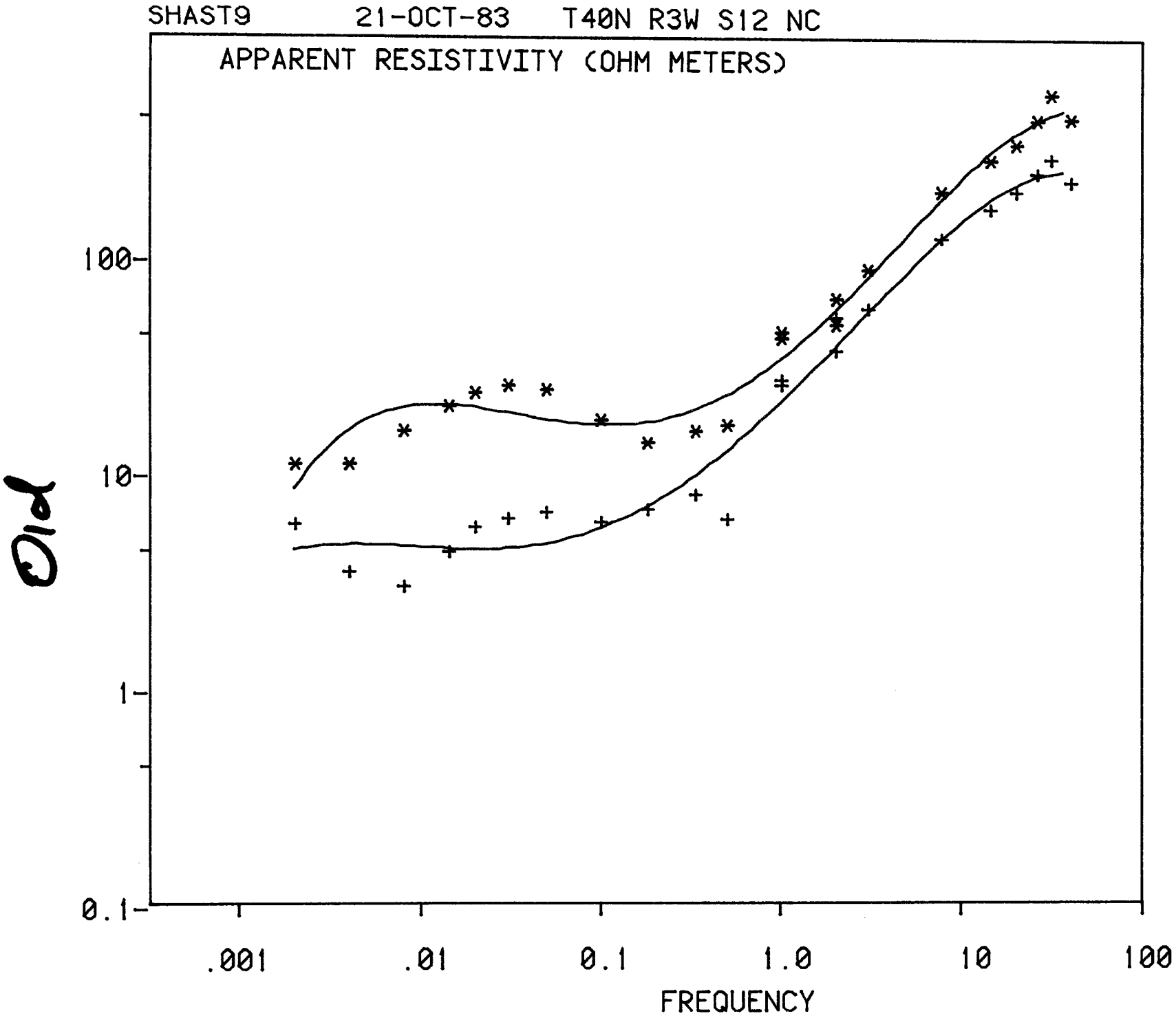
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC

ERROR STRUCTURE OF FITTED MODEL

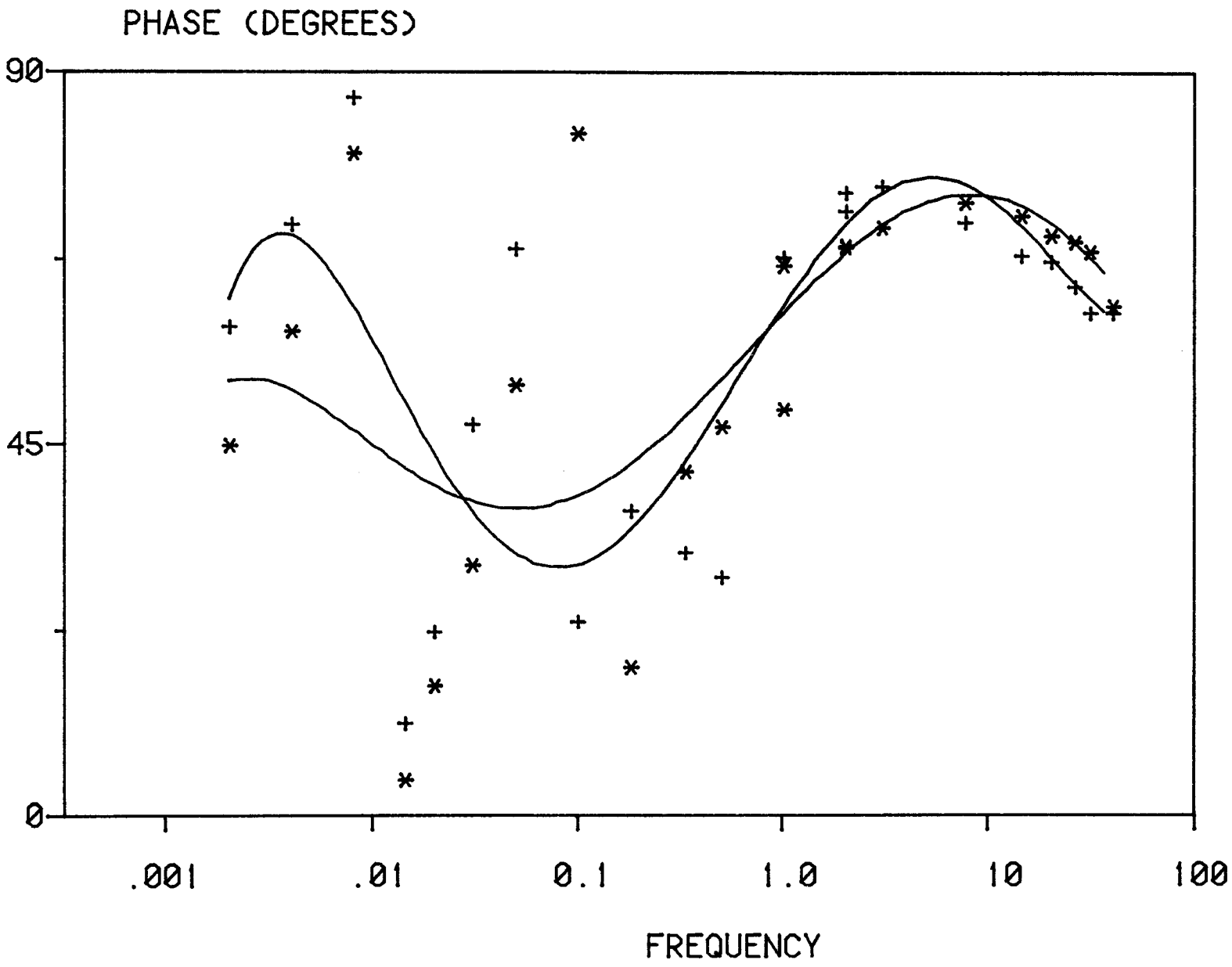
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 125.000 | 2.961 | 3.144 | -0.183 | -5.997 |
| 2 | 70.000 | 4.275 | 4.152 | 0.123 | 2.925 |
| 3 | 50.000 | 5.536 | 4.791 | 0.745 | 14.437 |
| 4 | 33.000 | 6.036 | 5.507 | 0.529 | 9.158 |
| 5 | 20.000 | 6.477 | 6.050 | 0.427 | 6.814 |
| 6 | 10.000 | 5.777 | 6.260 | -0.483 | -8.018 |
| 7 | 5.500 | 6.651 | 6.860 | -0.209 | -3.097 |
| 8 | 3.000 | 7.705 | 9.053 | -1.347 | -16.082 |
| 9 | 1.000 | 26.243 | 21.035 | 5.209 | 22.035 |
| 10 | 1.000 | 24.927 | 21.035 | 3.893 | 16.939 |
| 11 | 0.500 | 35.931 | 38.999 | -3.067 | -8.188 |
| 12 | 0.330 | 56.080 | 56.669 | -0.589 | -1.044 |
| 13 | 0.130 | 118.811 | 124.611 | -5.800 | -4.766 |
| 14 | 0.070 | 162.040 | 189.614 | -27.573 | -15.682 |
| 15 | 0.050 | 195.160 | 220.534 | -25.374 | -12.208 |
| 16 | 0.038 | 238.827 | 235.631 | 3.196 | 1.347 |
| 17 | 0.032 | 277.837 | 238.899 | 38.937 | 15.070 |

MEAN PERCENT ERROR = 11.4129
MAXIMUM PERCENT ERROR = 22.0349
MAX. ERROR OCCURED AT OBSERVATION 9


SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
p (log)
2.5
2.0
1.5
1.0
0.5
0.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAST9 21-OCT-83 T40N R3W S12 NC
APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.001
.01
0.1
1.0
10
100
FREQUENCY
Old

SHAST9 21-OCT-83 T40N R3W S12 NC



THE SITE IS: SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOIN | MEAN OF RHOMX | PERIOD # |
|---|---|---|---|
| 0.0012 | 3.87 | 7.18 | 1 |
| 0.0020 | 5.72 | 10.86 | 2 |
| 0.0040 | 3.42 | 10.81 | 3 |
| 0.0080 | 2.96 | 15.53 | 4 |
| 0.0143 | 4.27 | 20.15 | 5 |
| 0.0200 | 5.54 | 22.95 | 6 |
| 0.0303 | 6.04 | 24.77 | 7 |
| 0.0500 | 6.48 | 23.74 | 8 |
| 0.1000 | 5.78 | 17.23 | 9 |
| 0.1818 | 6.65 | 13.37 | 10 |
| 0.3333 | 7.71 | 15.08 | 11 |
| 0.5000 | 5.97 | 16.18 | 12 |
| 0.5988 | 45.55 | 830.27 | 13 |
| 0.8000 | 0.00 | 0.00 | 14 |
| 1.0000 | 26.24 | 43.48 | 15 |
| 1.0000 | 24.93 | 41.37 | 16 |
| 1.2048 | 0.00 | 0.00 | 17 |
| 1.4925 | 0.00 | 0.00 | 18 |
| 2.0000 | 24.90 | 97.93 | 19 |
| 2.0000 | 51.15 | 62.34 | 20 |
| 2.0000 | 35.93 | 47.04 | 21 |
| 3.0303 | 56.08 | 84.28 | 22 |
| 3.0303 | 0.00 | 0.00 | 23 |
| 7.6923 | 118.81 | 194.94 | 24 |
| 14.2857 | 162.04 | 273.99 | 25 |
| 20.0000 | 195.16 | 323.62 | 26 |
| 26.3158 | 238.83 | 415.25 | 27 |
| 31.2500 | 277.84 | 549.58 | 28 |
| 40.0000 | 216.09 | 423.69 | 29 |

AVERAGE # 8
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.0012 | 0.7193E+01 | 0.4120E+01 | 47.7 | 48.7 | 27.12 | 0.9829 | 0.9986 | 0.1186 |
| H | | 0.7176E+01 | 0.3621E+01 | 48.1 | 48.2 | 24.75 | 0.9833 | 0.9987 | 32.30 |
| E | 0.0020 | 0.1136E+02 | 0.6721E+01 | 44.2 | 61.8 | 148.74 | 0.9178 | 0.9964 | 0.1262 |
| H | | 0.1036E+02 | 0.4713E+01 | 47.6 | 58.9 | 162.61 | 0.9208 | 0.9967 | 6.80 |
| E | 0.0040 | 0.1091E+02 | 0.3510E+01 | 59.7 | 72.6 | 8.72 | 0.9901 | 0.9945 | 0.1195 |
| H | | 0.1072E+02 | 0.3340E+01 | 60.0 | 72.5 | 9.42 | 0.9901 | 0.9945 | 26.10 |
| E | 0.0080 | 0.1568E+02 | 0.3070E+01 | 81.3 | 87.8 | 16.40 | 0.9851 | 0.9932 | 0.1249 |
| H | | 0.1537E+02 | 0.2852E+01 | 81.2 | 88.1 | 17.22 | 0.9851 | 0.9933 | 37.30 |
| E | 0.0143 | 0.2032E+02 | 0.4431E+01 | 5.4 | 11.6 | 12.28 | 0.9874 | 0.9968 | 0.1597 |
| H | | 0.1999E+02 | 0.4119E+01 | 5.2 | 12.6 | 13.12 | 0.9876 | 0.9969 | 35.10 |
| E | 0.0200 | 0.2315E+02 | 0.5800E+01 | 16.6 | 23.5 | 11.30 | 0.9852 | 0.9965 | 0.2293 |
| H | | 0.2276E+02 | 0.5272E+01 | 17.0 | 23.2 | 12.67 | 0.9854 | 0.9966 | 33.60 |
| E | 0.0303 | 0.2516E+02 | 0.6803E+01 | 31.3 | 48.6 | 9.15 | 0.9633 | 0.9962 | 0.2864 |
| H | | 0.2438E+02 | 0.5269E+01 | 31.7 | 48.3 | 12.01 | 0.9650 | 0.9964 | 36.60 |
| E | 0.0500 | 0.2573E+02 | 0.7831E+01 | 53.1 | 70.0 | 1.98 | 0.9394 | 0.9857 | 0.3000 |
| H | | 0.2175E+02 | 0.5122E+01 | 53.4 | 69.2 | 11.71 | 0.9482 | 0.9880 | 28.20 |

AVERAGE # 8
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.1000 | 0.1794E+02 | 0.6232E+01 | 83.4 | 24.6 | 9.06 | 0.9716 | 0.9825 | 0.2374 |
| H | | 0.1651E+02 | 0.5322E+01 | 83.6 | 24.3 | 8.54 | 0.9719 | 0.9826 | 27.80 |
| E | 0.1818 | 0.1497E+02 | 0.7525E+01 | 18.9 | 37.4 | 4.54 | 0.9387 | 0.9424 | 0.2417 |
| H | | 0.1177E+02 | 0.5777E+01 | 18.9 | 38.4 | 5.31 | 0.9399 | 0.9436 | 19.90 |
| E | 0.3333 | 0.1754E+02 | 0.1224E+02 | 44.1 | 29.8 | 30.45 | 0.7728 | 0.8896 | 0.2287 |
| H | | 0.1261E+02 | 0.3169E+01 | 41.5 | 35.6 | 16.36 | 0.7901 | 0.8967 | 22.30 |
| E | 0.5000 | 0.2253E+02 | 0.1018E+02 | 49.0 | 28.3 | 44.63 | 0.7105 | 0.7978 | 0.2371 |
| H | | 0.9821E+01 | 0.1765E+01 | 47.1 | 31.4 | 35.56 | 0.7252 | 0.8029 | 12.30 |
| E | 0.5988 | 0.8504E+03 | 0.6526E+02 | 47.0 | 8.3 | 109.01 | 0.9334 | 0.9031 | 0.2061 |
| H | | 0.8101E+03 | 0.2584E+02 | 47.0 | 16.1 | 111.53 | 0.9570 | 0.9335 | 77.30 |
| E | 0.8000 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 1.0000 | 0.5201E+02 | 0.3516E+02 | 67.3 | 69.0 | 95.97 | 0.9037 | 0.9180 | 0.3086 |
| H | | 0.3495E+02 | 0.1733E+02 | 68.2 | 68.5 | 59.93 | 0.9143 | 0.9261 | 151.80 |

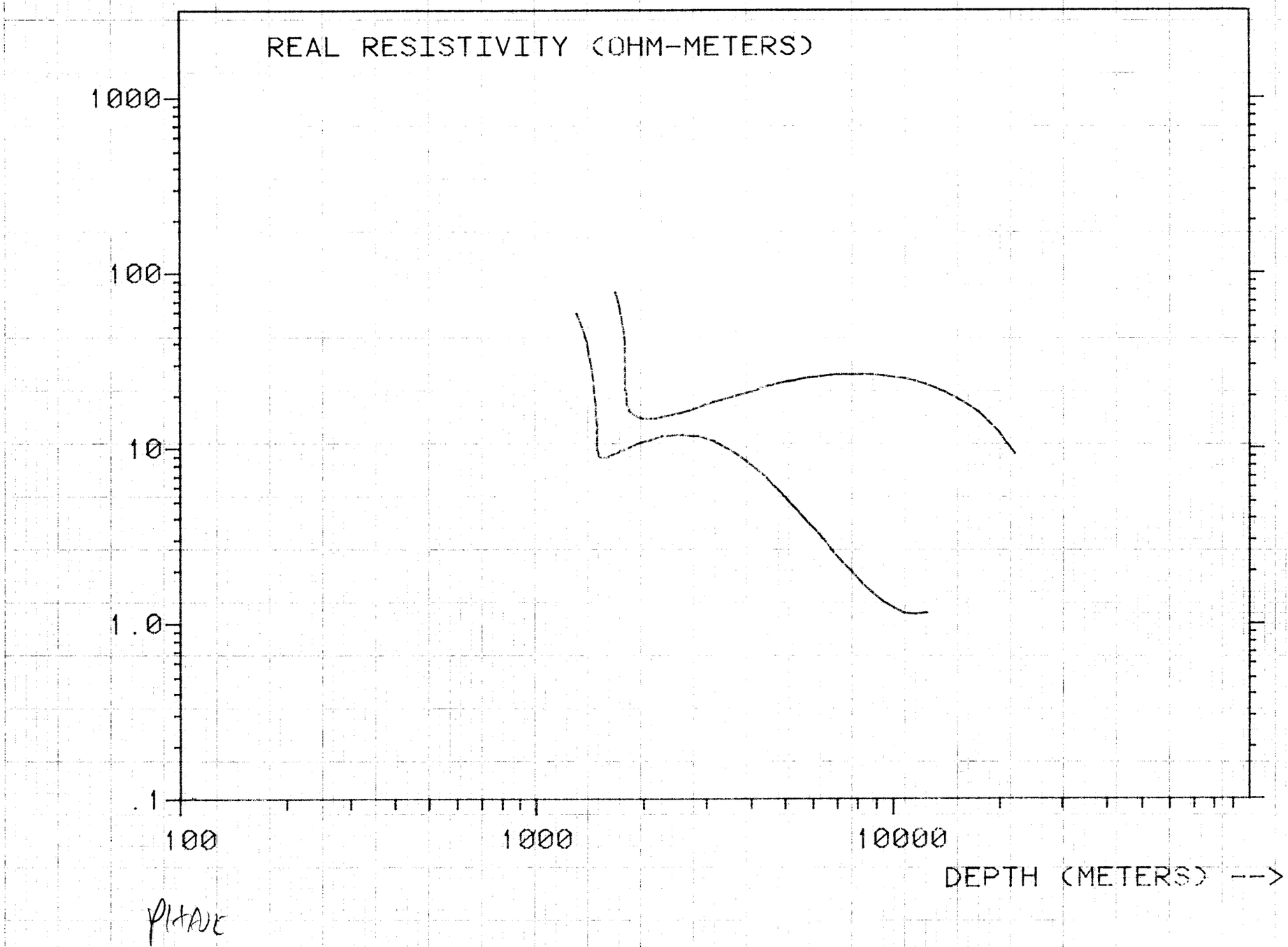
AVERAGE # 8
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE (DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 1.0000 | 0.5580E+02 | 0.2584E+02 | 51.5 | 67.5 | 112.50 | 0.9059 | 0.9630 | 0.1268 |
| H | | 0.2695E+02 | 0.2401E+02 | 48.8 | 70.0 | 113.27 | 0.9159 | 0.9637 | 2.30 |
| E | 1.2048 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 1.4925 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 2.0000 | 0.1267E+03 | 0.2534E+02 | 72.8 | 77.2 | 117.58 | 0.9102 | 0.9418 | 0.2406 |
| H | | 0.6913E+02 | 0.2445E+02 | 73.1 | 77.6 | 109.64 | 0.9183 | 0.9485 | 134.30 |
| E | 2.0000 | 0.8183E+02 | 0.6293E+02 | 70.6 | 76.0 | 152.76 | 0.8799 | 0.8654 | 0.5179 |
| H | | 0.4285E+02 | 0.3938E+02 | 69.7 | 76.9 | 152.65 | 0.8799 | 0.8656 | 178.50 |
| E | 2.0000 | 0.5448E+02 | 0.4602E+02 | 69.9 | 74.3 | 179.54 | 0.9151 | 0.9285 | 0.2957 |
| H | | 0.3960E+02 | 0.2584E+02 | 70.1 | 74.1 | 22.34 | 0.9184 | 0.9301 | 142.00 |

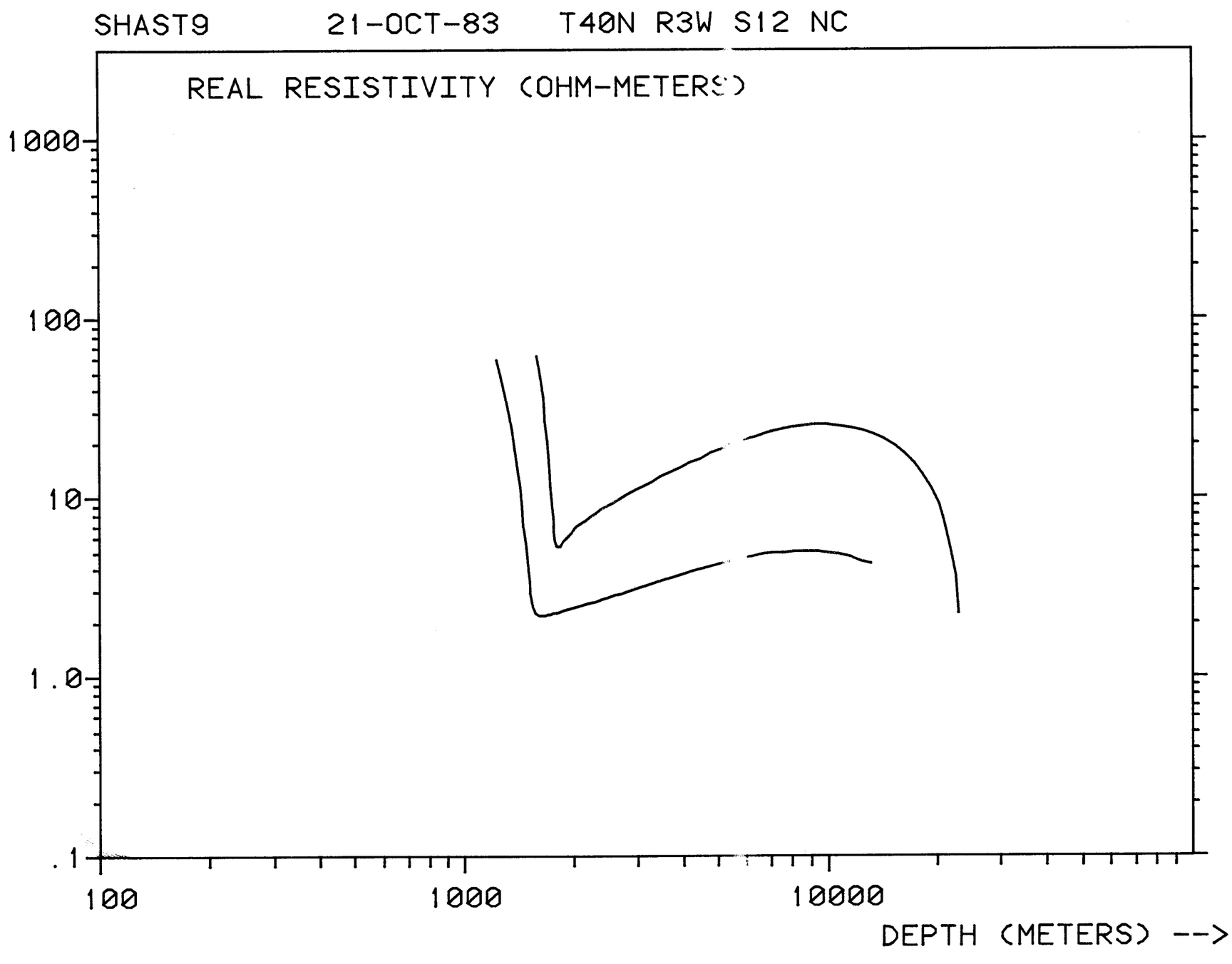
AVERAGE # 8
SHAST9 200 HZ 21-OCT-83 T40N R3W S12 NC
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE (DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 3.0303 | 0.1005E+03 | 0.7236E+02 | 73.0 | 76.3 | 166.54 | 0.8853 | 0.9215 | 0.5899 |
| H | | 0.6811E+02 | 0.3980E+02 | 71.3 | 78.3 | 178.65 | 0.8898 | 0.9230 | 61.70 |
| E | 3.0303 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 7.6923 | 0.2035E+03 | 0.1253E+03 | 75.2 | 73.1 | 177.37 | 0.9772 | 0.9811 | 0.5365 |
| H | | 0.1863E+03 | 0.1123E+03 | 75.4 | 72.7 | 178.65 | 0.9774 | 0.9812 | 116.70 |
| E | 14.2857 | 0.2844E+03 | 0.1736E+03 | 73.7 | 69.0 | 0.50 | 0.9700 | 0.9824 | 0.4832 |
| H | | 0.2636E+03 | 0.1505E+03 | 73.8 | 68.9 | 2.53 | 0.9702 | 0.9825 | 129.50 |
| E | 20.0000 | 0.3470E+03 | 0.2094E+03 | 71.1 | 68.1 | 0.39 | 0.9662 | 0.9660 | 0.5803 |
| H | | 0.3003E+03 | 0.1809E+03 | 71.3 | 68.0 | 2.17 | 0.9663 | 0.9660 | 130.30 |
| E | 26.3158 | 0.4763E+03 | 0.2706E+03 | 70.7 | 64.7 | 163.85 | 0.9240 | 0.9383 | 0.4076 |
| H | | 0.3542E+03 | 0.2070E+03 | 70.2 | 65.4 | 177.98 | 0.9265 | 0.9408 | 130.80 |
| E | 31.2500 | 0.6512E+03 | 0.3097E+03 | 69.3 | 61.7 | 155.26 | 0.9183 | 0.9447 | 0.4775 |
| H | | 0.4479E+03 | 0.2459E+03 | 69.1 | 62.2 | 169.78 | 0.9230 | 0.9488 | 138.10 |
| E | 40.0000 | 0.4729E+03 | 0.2519E+03 | 62.9 | 61.7 | 2.46 | 0.9491 | 0.9524 | 0.8373 |
| H | | 0.3744E+03 | 0.1803E+03 | 62.6 | 62.1 | 12.47 | 0.9504 | 0.9534 | 152.60 |

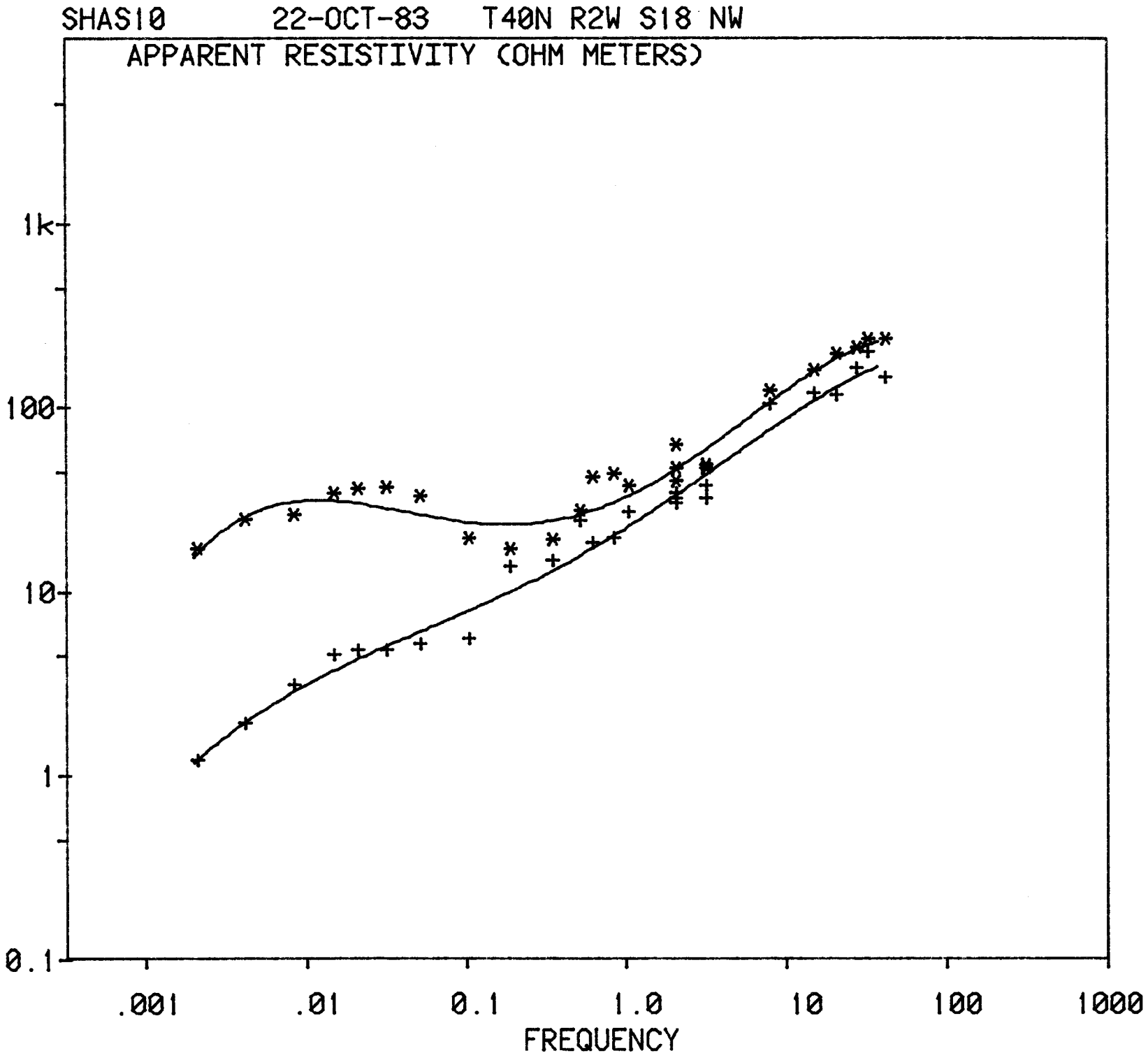
SHAST9 21-OCT-83 T40N R3W S12 NC

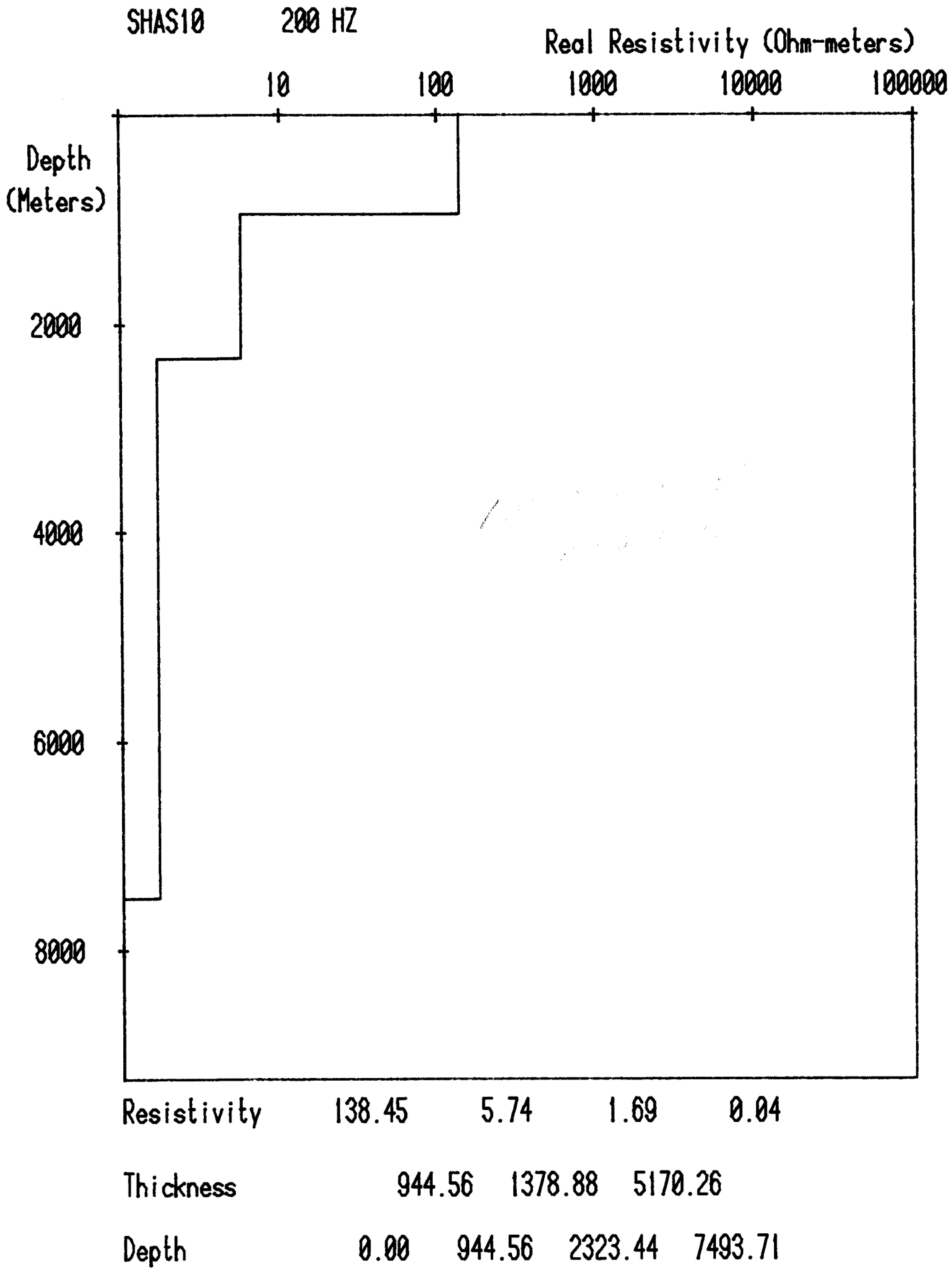


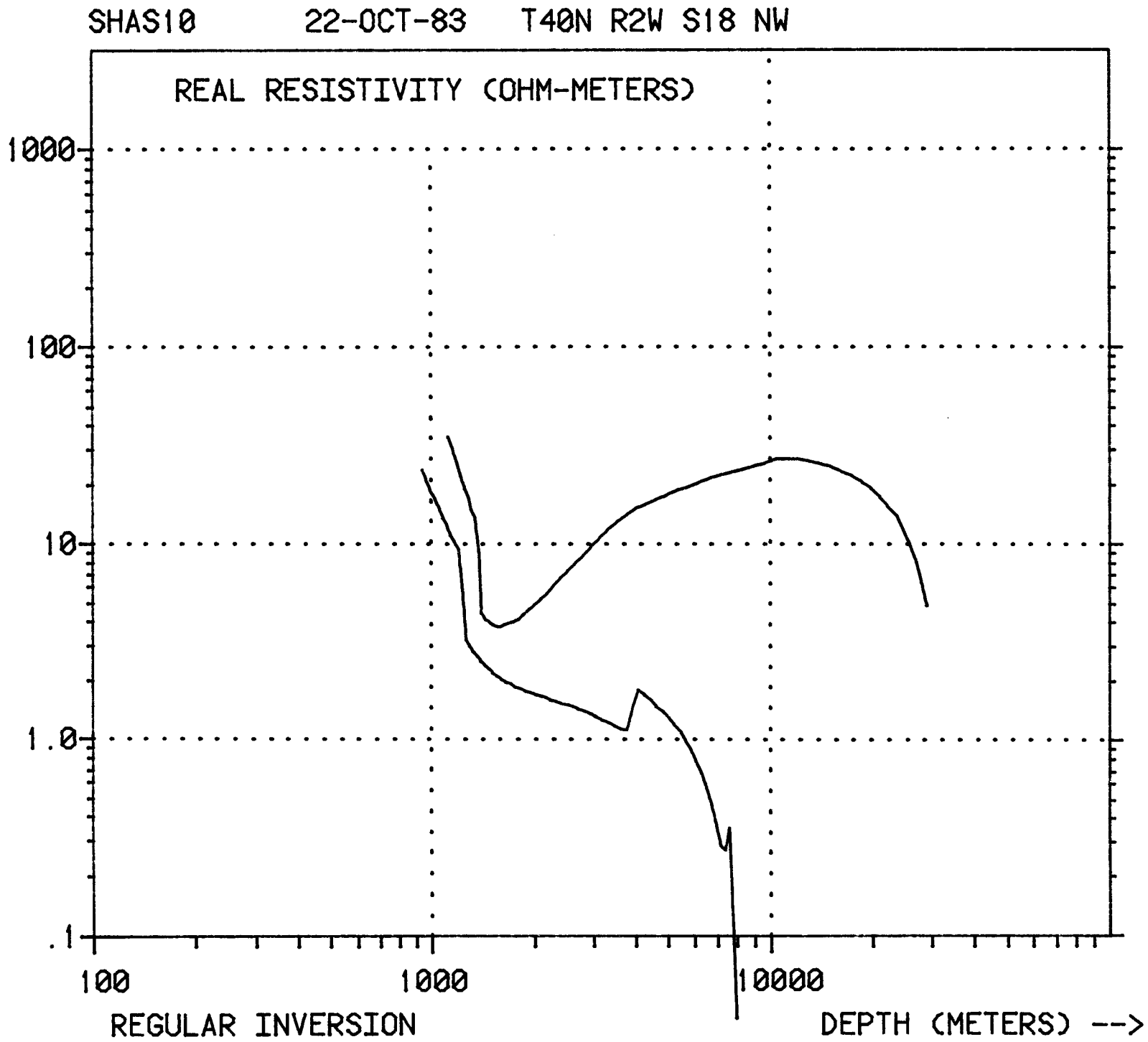

PLATE

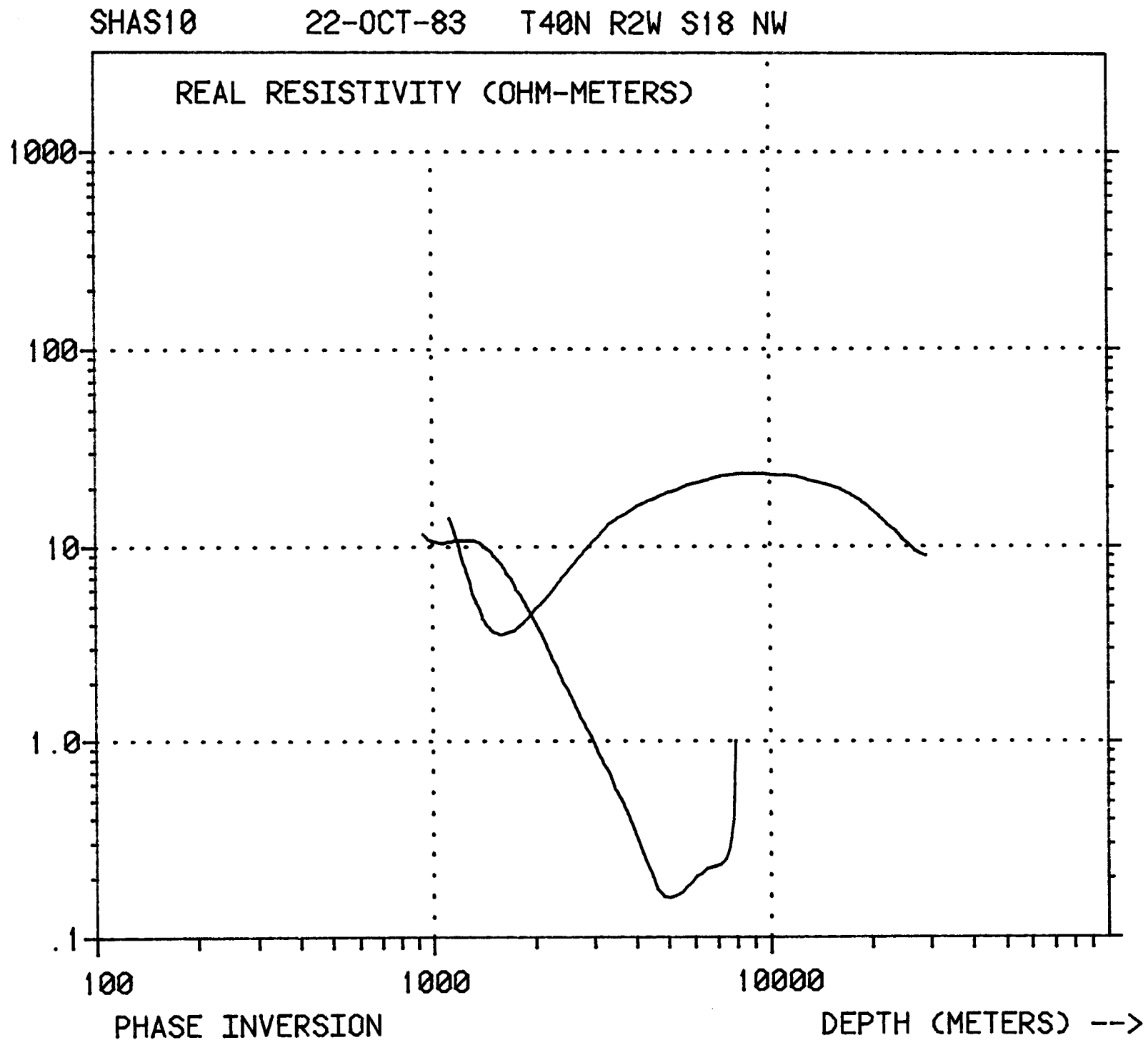

SHAST9 21-OCT-83 T40N R3W S12 NC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
DEPTH (METERS) -->

KES

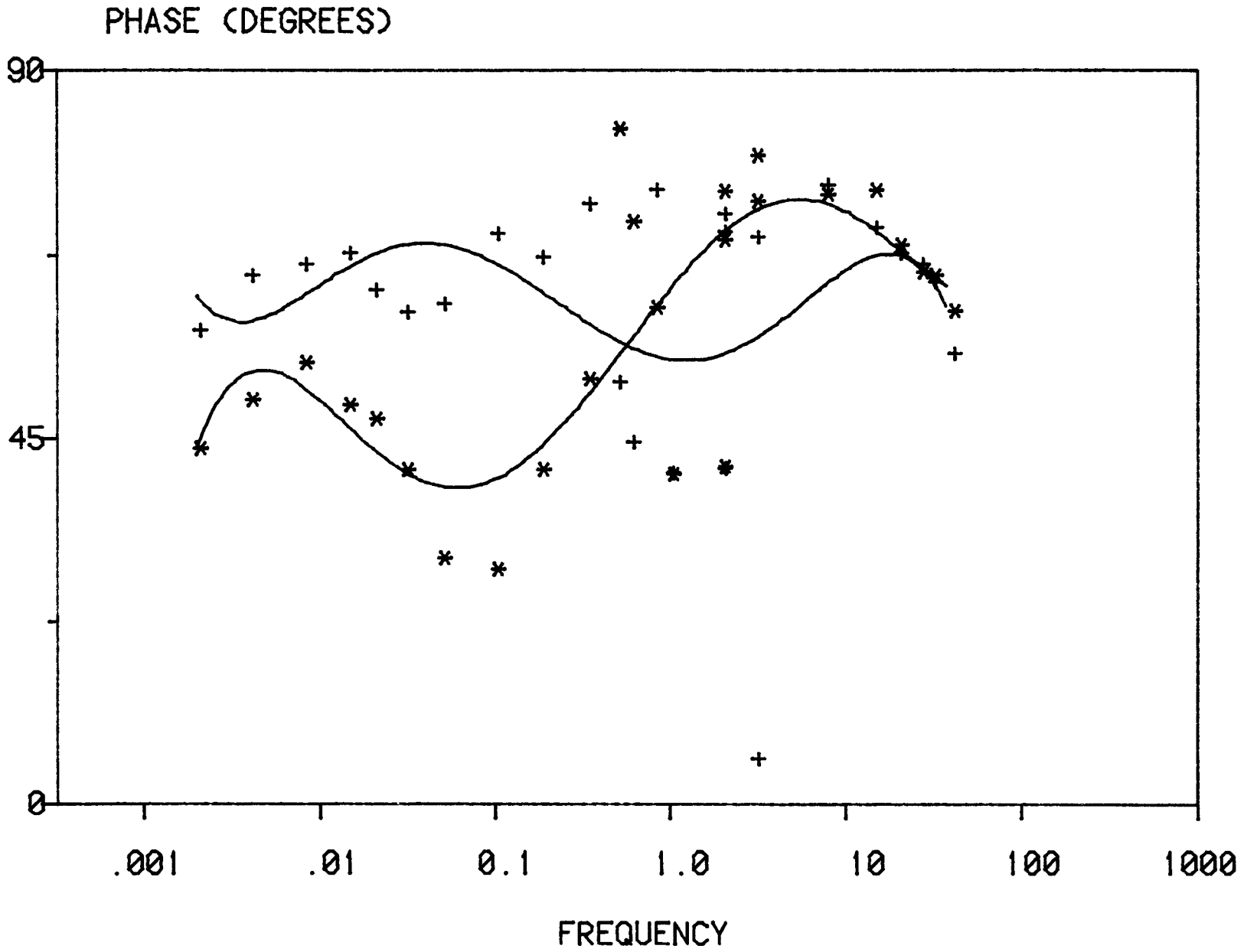

SHAS10 22-OCT-83 T40N R2W S18 NW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY


SHAS10 200 HZ
Real Resistivity (Ohm-meters)
10
100
1000
10000
100000
Depth
(Meters)
2000
4000
6000
8000
Resistivity 138.45 5.74 1.69 0.04
Thickness 944.56 1378.88 5170.26
Depth 0.00 944.56 2323.44 7493.71


SHAS10 22-OCT-83 T40N R2W S18 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS10 22-OCT-83 T40N R2W S18 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS10 22-OCT-83 T40N R2W S18 NW



THE SITE IS: SHAS10 200 HZ 22-OCT-83 T40N R2W S18 NW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| ~~0.0012~~ | ~~1.53~~ | ~~27.57~~ | ~~1~~ | 858.486 | 510.14 |
| 0.0020 | 1.15 | 15.84 | 2 | 447.622 | 426.15 |
| 0.0040 | 1.80 | 22.85 | 3 | 168.71 | 808.76 |
| 0.0080 | 2.89 | 24.25 | 4 | 48.74 | 197.94 |
| 0.0143 | 4.25 | 31.74 | 5 | 44.50 | 62.66 |
| 0.0200 | 4.52 | 33.34 | 6 | 26.85 | 39.64 |
| 0.0303 | 4.45 | 34.40 | 7 | 23.38 | 47.77 |
| 0.0500 | 4.81 | 30.64 | 8 | 6.29 | 20.88 |
| 0.1000 | 5.21 | 17.95 | 9 | 3.59 | 11.56 |
| 0.1818 | 12.70 | 15.99 | 10 | 0.15 | 0.20 |
| 0.3333 | 13.75 | 17.56 | 11 | 0.10 | 0.17 |
| 0.5000 | 22.64 | 25.73 | 12 | 0.05 | 0.14 |
| 0.5988 | 16.99 | 38.63 | 13 | 0.19 | 0.60 |
| 0.8000 | 17.97 | 40.40 | 14 | 0.12 | 0.74 |
| 1.0000 | 25.25 | 34.70 | 15 | 0.07 | 0.08 |
| ~~1.0000~~ | ~~16.56~~ | ~~143.31~~ | ~~16~~ | 0.09 | 1.23 |
| ~~1.2048~~ | ~~14.38~~ | ~~56.89~~ | ~~17~~ | 0.09 | 0.21 |
| ~~1.4925~~ | ~~9.77~~ | ~~34.01~~ | ~~18~~ | 0.15 | 0.14 |
| 2.0000 | 28.15 | 43.46 | 19 | 0.04 | 0.05 |
| 2.0000 | 29.68 | 36.55 | 20 | 0.04 | 0.03 |
| 2.0000 | 31.96 | 58.29 | 21 | 0.02 | 0.04 |
| 3.0303 | 29.40 | 43.27 | 22 | 0.02 | 0.01 |
| 3.0303 | 34.89 | 45.25 | 23 | 0.04 | 0.02 |
| 7.6923 | 96.84 | 115.49 | 24 | 0.04 | 0.05 |
| 14.2857 | 111.05 | 149.18 | 25 | 0.05 | 0.02 |
| 20.0000 | 108.76 | 180.77 | 26 | 0.03 | 0.02 |
| 26.3158 | 150.41 | 193.84 | 27 | 0.28 | 0.35 |
| 31.2500 | 183.61 | 215.47 | 28 | 0.01 | 0.01 |
| 40.0000 | 135.62 | 219.17 | 29 | 0.01 | 0.00 |

AVERAGE # 8
SHAS10 200 HZ 22-OCT-83 T40N R2W S18 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.307E+02 | 0.161E+01 | 58. | 79. | 132. | 0.9456 | 0.9803 | 0.1522 | 0.67 |
| H | SEC | 0.244E+02 | 0.145E+01 | 56. | 0. | 129. | 0.9480 | 0.9824 | 6.30 | 0.56 |
| E | 500.0 | 0.162E+02 | 0.123E+01 | 44. | 60. | 117. | 0.9723 | 0.9952 | 0.1832 | 0.36 |
| H | SEC | 0.155E+02 | 0.106E+01 | 44. | 58. | 116. | 0.9730 | 0.9953 | 55.50 | 0.35 |
| E | 250.0 | 0.229E+02 | 0.229E+01 | 50. | 65. | 121. | 0.9525 | 0.9932 | 0.0980 | 0.34 |
| H | SEC | 0.228E+02 | 0.131E+01 | 50. | 66. | 120. | 0.9567 | 0.9935 | 20.40 | 0.40 |
| E | 125.0 | 0.250E+02 | 0.312E+01 | 55. | 67. | 116. | 0.9648 | 0.9902 | 0.1100 | 0.28 |
| H | SEC | 0.235E+02 | 0.266E+01 | 55. | 67. | 115. | 0.9652 | 0.9902 | 18.90 | 0.27 |
| E | 70.0 | 0.326E+02 | 0.490E+01 | 49. | 68. | 114. | 0.9387 | 0.9984 | 0.1549 | 0.26 |
| H | SEC | 0.309E+02 | 0.360E+01 | 50. | 68. | 111. | 0.9414 | 0.9984 | 26.60 | 0.25 |
| E | 50.0 | 0.337E+02 | 0.486E+01 | 48. | 64. | 109. | 0.9845 | 0.9979 | 0.2016 | 0.20 |
| H | SEC | 0.330E+02 | 0.418E+01 | 48. | 64. | 108. | 0.9851 | 0.9979 | 33.80 | 0.19 |
| E | 33.0 | 0.344E+02 | 0.455E+01 | 42. | 61. | 108. | 0.9988 | 0.9994 | 0.3050 | 0.17 |
| H | SEC | 0.344E+02 | 0.436E+01 | 42. | 61. | 108. | 0.9988 | 0.9994 | 37.00 | 0.17 |
| E | 20.0 | 0.308E+02 | 0.488E+01 | 31. | 62. | 108. | 0.9969 | 0.9978 | 0.2480 | 0.18 |
| H | SEC | 0.305E+02 | 0.473E+01 | 31. | 62. | 108. | 0.9969 | 0.9978 | 28.50 | 0.19 |

AVERAGE # 8
SHAS10 200 HZ 22-OCT-83 T40N R2W S18 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.183E+02 | 0.549E+01 | 29. | 70. | 107. | 0.9924 | 0.9940 | 0.2284 | 0.15 |
| H | SEC | 0.176E+02 | 0.493E+01 | 29. | 71. | 108. | 0.9926 | 0.9941 | 24.10 | 0.14 |
| E | 5.5 | 0.181E+02 | 0.159E+02 | 42. | 68. | 107. | 0.8833 | 0.9384 | 0.2067 | 0.14 |
| H | SEC | 0.139E+02 | 0.949E+01 | 41. | 68. | 107. | 0.8840 | 0.9384 | 15.40 | 0.15 |
| E | 3.0 | 0.220E+02 | 0.182E+02 | 52. | 74. | 116. | 0.8882 | 0.8675 | 0.1768 | 0.16 |
| H | SEC | 0.131E+02 | 0.932E+01 | 53. | 74. | 117. | 0.8888 | 0.8695 | 14.40 | 0.13 |
| E | 2.0 | 0.321E+02 | 0.293E+02 | 85. | 52. | 175. | 0.8741 | 0.8565 | 0.2695 | 0.29 |
| H | SEC | 0.193E+02 | 0.160E+02 | 81. | 53. | 177. | 0.8787 | 0.8602 | 48.90 | 0.20 |
| E | 1.7 | 0.331E+02 | 0.287E+02 | 73. | 73. | 135. | 0.9601 | 0.9933 | 0.7082 | 0.71 |
| H | SEC | 0.441E+02 | 0.523E+01 | 71. | 17. | 148. | 0.9747 | 0.9960 | 132.00 | 1.23 |
| E | 1.2 | 0.435E+02 | 0.215E+02 | 63. | 77. | 146. | 0.9827 | 0.9921 | 0.7080 | 1.00 |
| H | SEC | 0.373E+02 | 0.144E+02 | 60. | 75. | 145. | 0.9860 | 0.9937 | 123.00 | 0.93 |
| E | 1.0 | 0.468E+02 | 0.328E+02 | 17. | 65. | 10. | 0.8157 | 0.8970 | 0.2086 | 0.24 |
| H | HZ | 0.226E+02 | 0.177E+02 | 65. | 18. | 96. | 0.8205 | 0.8991 | 22.60 | 0.26 |

AVERAGE # 8
SHAS10 200 HZ 22-OCT-83 T40N R2W S18 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.202E+03 | 0.171E+02 | 63. | 74. | 165. | 0.9180 | 0.9925 | 0.8351 | 0.97 |
| H | HZ | 0.843E+02 | 0.160E+02 | 47. | 64. | 157. | 0.9633 | 0.9968 | 117.00 | 1.19 |
| E | 1.2 | 0.749E+02 | 0.191E+02 | 48. | 4. | 68. | 0.9185 | 0.9339 | 0.1398 | 0.48 |
| H | HZ | 0.389E+02 | 0.965E+01 | 52. | 85. | 79. | 0.9311 | 0.9423 | 55.70 | 0.33 |
| E | 1.5 | 0.350E+02 | 0.178E+02 | 66. | 86. | 83. | 0.8027 | 0.9741 | 0.5616 | 0.26 |
| H | HZ | 0.330E+02 | 0.176E+01 | 66. | 9. | 89. | 0.8706 | 0.9752 | 108.60 | 0.51 |
| E | 2.0 | 0.514E+02 | 0.333E+02 | 71. | 70. | 43. | 0.9064 | 0.9580 | 0.2380 | 0.15 |
| H | HZ | 0.356E+02 | 0.230E+02 | 69. | 72. | 72. | 0.9107 | 0.9582 | 139.80 | 0.17 |
| E | 2.0 | 0.444E+02 | 0.391E+02 | 11. | 73. | 13. | 0.8821 | 0.9150 | 0.2486 | 0.25 |
| H | HZ | 0.287E+02 | 0.202E+02 | 73. | 11. | 99. | 0.8891 | 0.9186 | 173.30 | 0.26 |
| E | 2.0 | 0.777E+02 | 0.346E+02 | 75. | 74. | 42. | 0.9254 | 0.9337 | 0.3436 | 0.22 |
| H | HZ | 0.388E+02 | 0.293E+02 | 76. | 72. | 43. | 0.9298 | 0.9368 | 142.20 | 0.16 |

AVERAGE # 8
SHAS10 200 HZ 22-OCT-83 T40N R2W S18 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.495E+02 | 0.391E+02 | 75. | 6. | 97. | 0.8968 | 0.9330 | 0.4012 | 0.24 |
| H | HZ | 0.371E+02 | 0.197E+02 | 74. | 6. | 99. | 0.9037 | 0.9357 | 171.70 | 0.25 |
| E | 3.0 | 0.536E+02 | 0.525E+02 | 85. | 66. | 166. | 0.9151 | 0.9490 | 0.1855 | 0.18 |
| H | HZ | 0.369E+02 | 0.173E+02 | 75. | 74. | 124. | 0.9337 | 0.9555 | 57.30 | 0.09 |
| E | 7.7 | 0.122E+03 | 0.100E+03 | 75. | 77. | 56. | 0.9828 | 0.9845 | 0.3206 | 0.13 |
| H | HZ | 0.108E+03 | 0.933E+02 | 75. | 76. | 63. | 0.9830 | 0.9847 | 118.60 | 0.12 |
| E | 14.3 | 0.172E+03 | 0.137E+03 | 76. | 71. | 103. | 0.8910 | 0.9212 | 0.3722 | 0.13 |
| H | HZ | 0.126E+03 | 0.848E+02 | 76. | 71. | 104. | 0.8913 | 0.9214 | 160.70 | 0.13 |
| E | 20.0 | 0.208E+03 | 0.148E+03 | 70. | 67. | 76. | 0.8479 | 0.9319 | 0.4383 | 0.15 |
| H | HZ | 0.154E+03 | 0.691E+02 | 68. | 69. | 90. | 0.8533 | 0.9330 | 174.90 | 0.17 |
| E | 26.3 | 0.226E+03 | 0.176E+03 | 66. | 67. | 64. | 0.9157 | 0.9277 | 0.4550 | 0.14 |
| H | HZ | 0.161E+03 | 0.125E+03 | 66. | 67. | 77. | 0.9160 | 0.9278 | 157.70 | 0.14 |
| E | 31.2 | 0.252E+03 | 0.197E+03 | 65. | 65. | 70. | 0.9648 | 0.9239 | 0.4185 | 0.14 |
| H | HZ | 0.178E+03 | 0.170E+03 | 66. | 64. | 124. | 0.9650 | 0.9253 | 137.80 | 0.11 |
| E | 40.0 | 0.275E+03 | 0.157E+03 | 62. | 55. | 83. | 0.9526 | 0.8773 | 0.5188 | 0.17 |
| H | HZ | 0.163E+03 | 0.114E+03 | 60. | 57. | 114. | 0.9537 | 0.8843 | 149.10 | 0.12 |

SHAS10 200 HZ 22-OCT-83 T40N R2W S18 NW

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 24
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 100.0000 | | 0.0000 |
| | | 800.0000 | |
| 2 | 10.0000 | | 800.0000 |
| | | 500.0000 | |
| 3 | 10.0000 | | 1300.0000 |
| | | 2000.0000 | |
| 4 | 1.0000 | | 3300.0000 |

FREQUENCY RANGE ( 0.0020 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 138.4541 | | 0.0000 |
| | | 944.5644 | |
| 2 | 5.7433 | | 944.5644 |
| | | 1378.8827 | |
| 3 | 1.6973 | | 2323.4470 |
| | | 5170.2662 | |
| 4 | 0.0453 | | 7493.7133 |

MEAN PERCENT VARIATION IS 14.6149

ERROR ANALYSIS

R-SQUARED = 0.999

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 23 | 68292.735 | 2969.249 | 0.261 |
| MODEL | 6 | 68230.908 | 11371.818 | 377115.227 |
| RESID | 17 | 0.513 | 0.030 | |

STANDARD ERROR = 0.174

DTEST FOR MEANS = 0.000

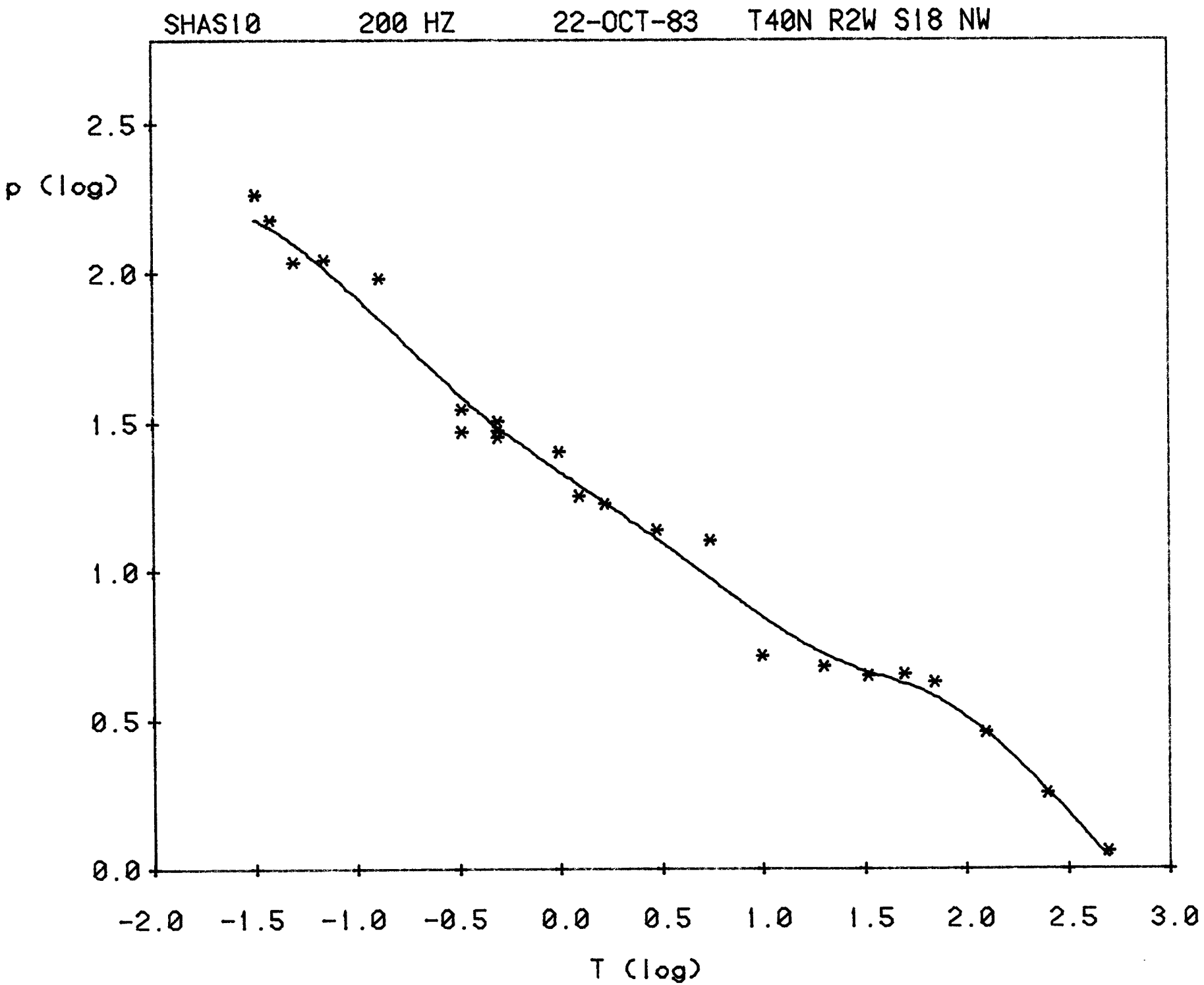
NOISE TO SIGNAL RATIO = 0.163 PERCENT

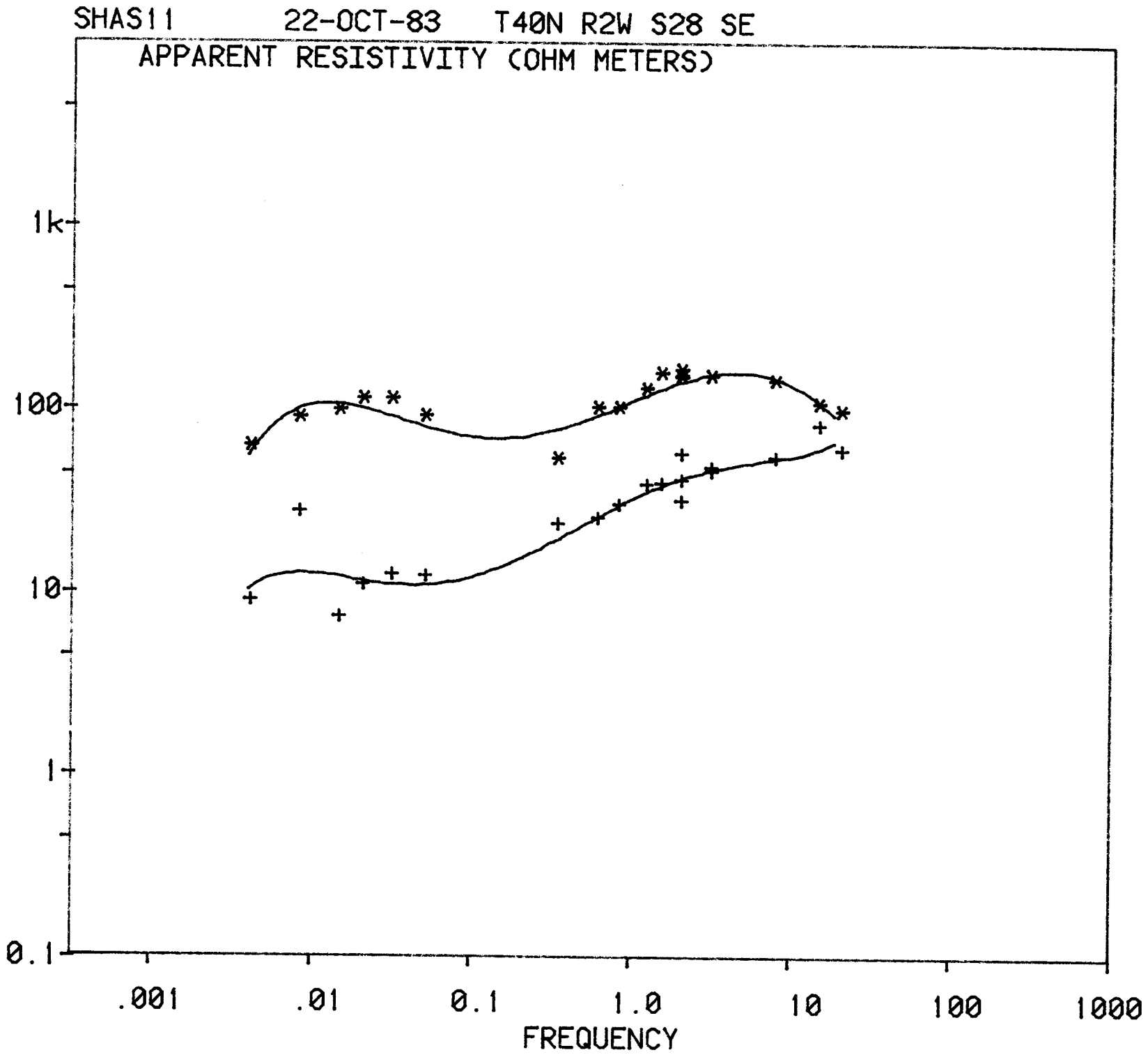
SHAS10 200 HZ 22-OCT-83 T40N R2W S18 MW

ERROR STRUCTURE OF FITTED MODEL

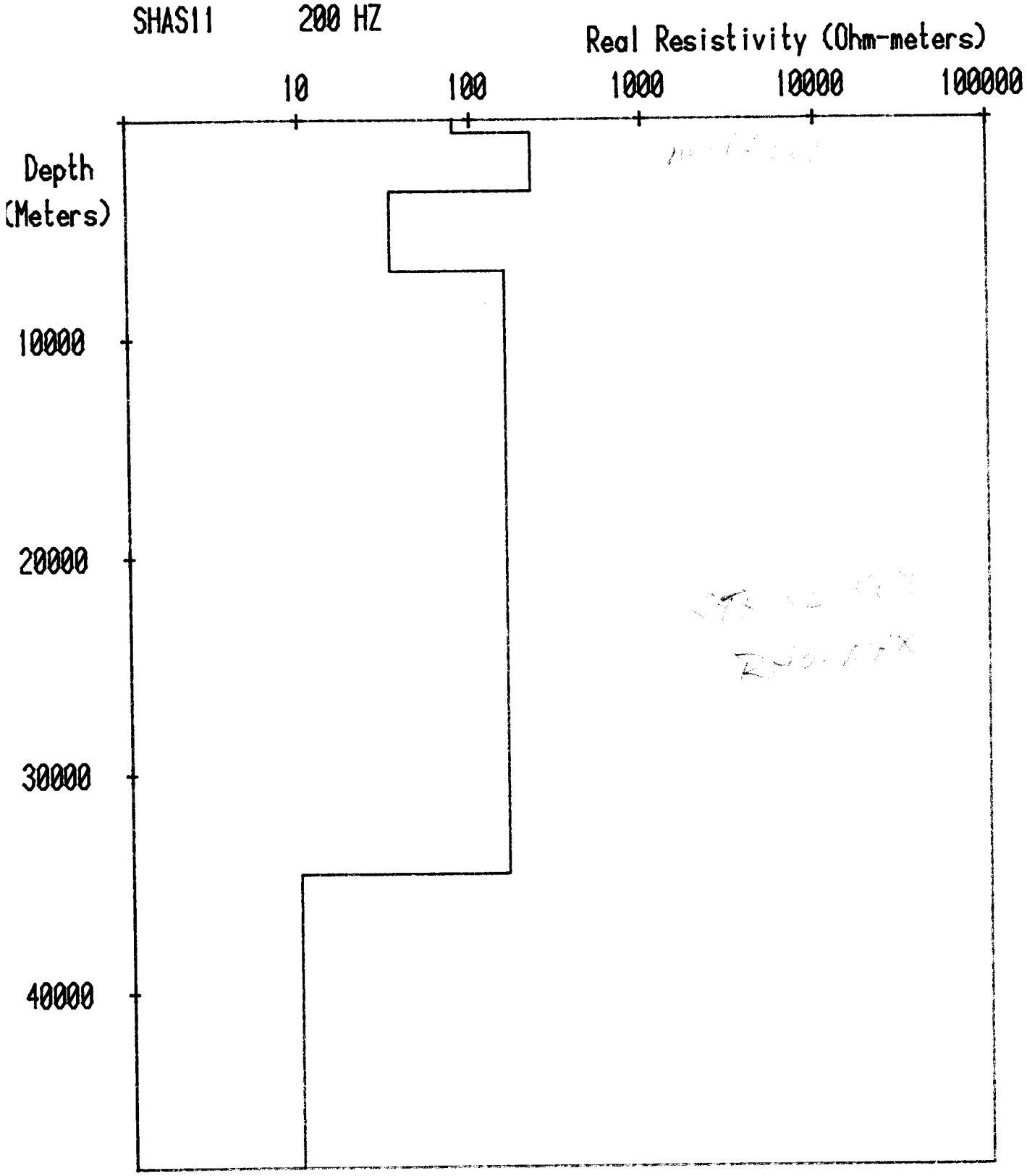
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 500.000 | 1.145 | 1.096 | 0.049 | 4.401 |
| 2 | 250.000 | 1.799 | 1.864 | -0.065 | -3.538 |
| 3 | 125.000 | 2.890 | 2.963 | -0.074 | -2.512 |
| 4 | 70.000 | 4.246 | 3.862 | 0.384 | 9.469 |
| 5 | 50.000 | 4.521 | 4.234 | 0.287 | 6.563 |
| 6 | 33.000 | 4.452 | 4.591 | -0.139 | -3.074 |
| 7 | 20.000 | 4.805 | 5.204 | -0.399 | -7.972 |
| 8 | 10.000 | 5.211 | 7.008 | -1.796 | -29.405 |
| 9 | 5.500 | 12.698 | 9.531 | 3.166 | 28.490 |
| 10 | 3.000 | 13.755 | 12.978 | 0.776 | 5.809 |
| 11 | 1.670 | 16.988 | 17.200 | -0.212 | -1.238 |
| 12 | 1.250 | 17.966 | 19.624 | -1.659 | -8.825 |
| 13 | 1.000 | 25.248 | 21.702 | 3.546 | 15.105 |
| 14 | 0.500 | 28.148 | 30.406 | -2.259 | -7.715 |
| 15 | 0.500 | 29.678 | 30.406 | -0.728 | -2.425 |
| 16 | 0.500 | 31.959 | 30.406 | 1.552 | 4.978 |
| 17 | 0.330 | 29.402 | 38.613 | -9.210 | -27.083 |
| 18 | 0.330 | 34.891 | 38.613 | -3.722 | -10.127 |
| 19 | 0.130 | 96.840 | 70.988 | 25.852 | 30.808 |
| 20 | 0.070 | 111.048 | 105.277 | 5.771 | 5.335 |
| 21 | 0.050 | 108.758 | 126.648 | -17.891 | -15.200 |
| 22 | 0.038 | 150.409 | 143.133 | 7.276 | 4.957 |
| 23 | 0.032 | 183.614 | 151.905 | 31.709 | 18.901 |
| 24 | 0.025 | 135.621 | 161.047 | -25.426 | -17.141 |

MEAN PERCENT ERROR = 14.5583
MAXIMUM PERCENT ERROR = 30.8082
MAX. ERROR OCCURED AT OBSERVATION 19

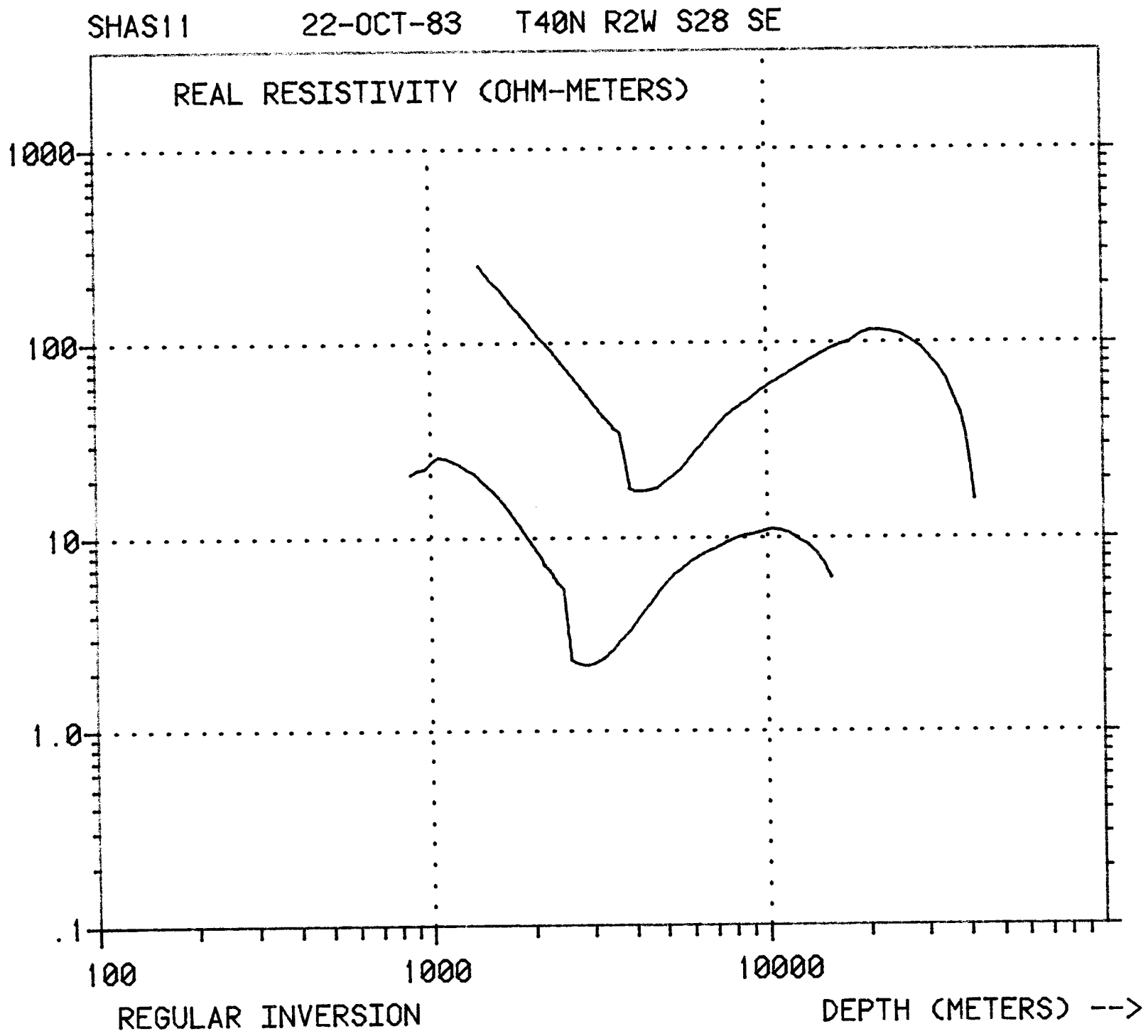

SHAS10 200 HZ 22-OCT-83 T40N R2W S18 NW
p (log)
2.5
2.0
1.5
1.0
0.5
0.0
-2.0 -1.5 -1.0 -0.5 0.0 0.5 1.0 1.5 2.0 2.5 3.0
T (log)

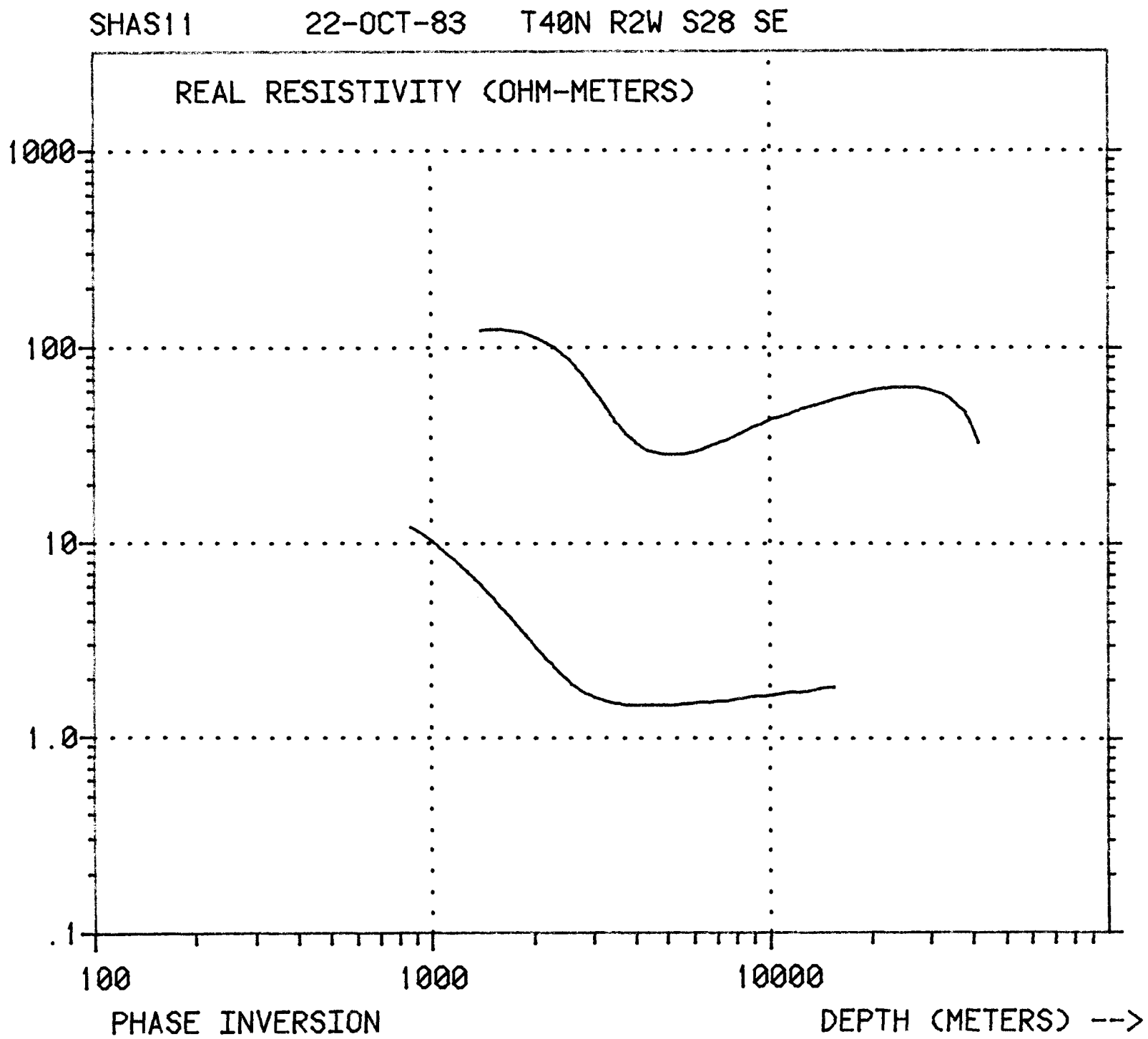

SHAS11 22-OCT-83 T40N R2W S28 SE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

SHAS11 200 HZ

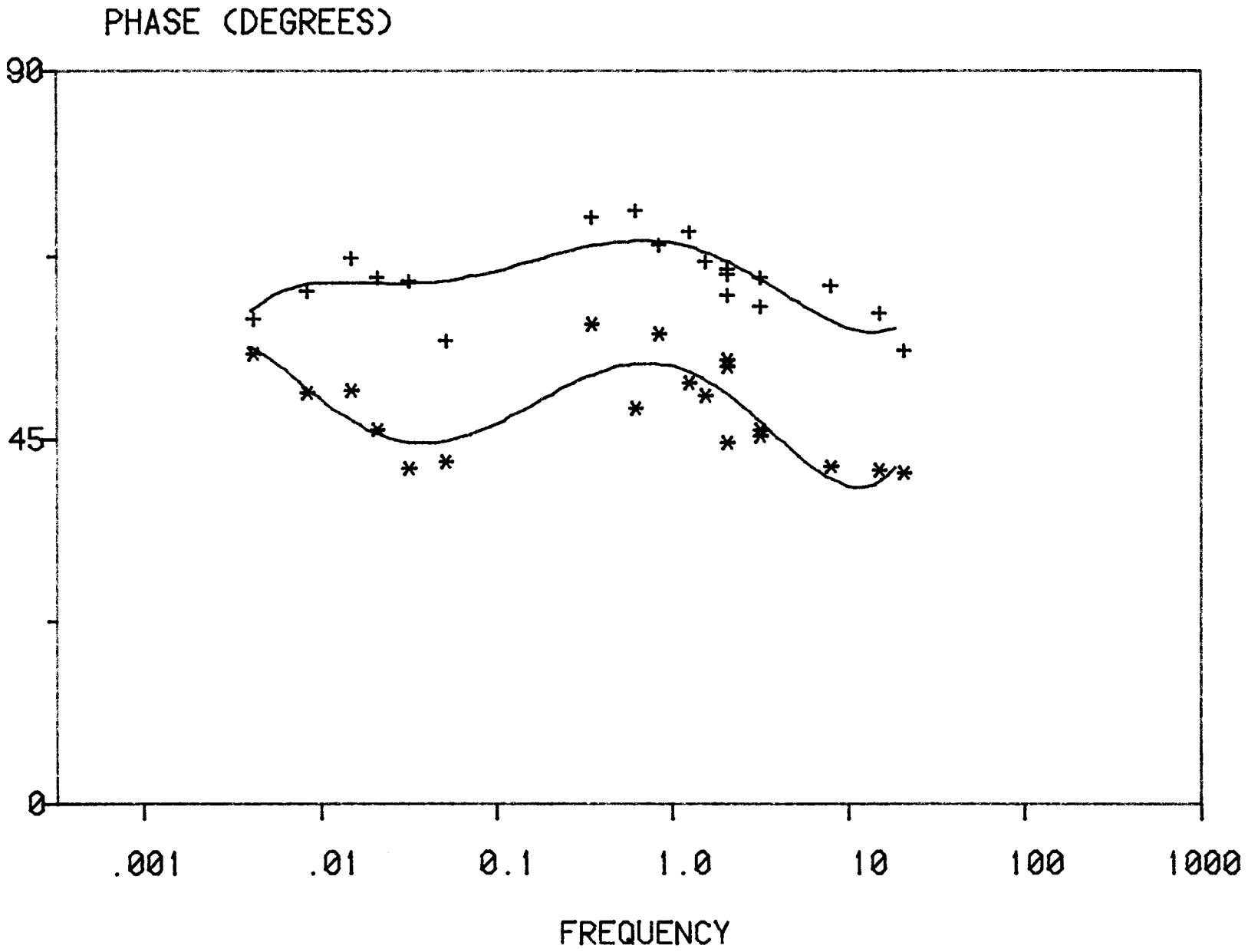



| | | | | | |
|---|---|---|---|---|---|
| Resistivity | 79.16 | 227.37 | 33.86 | 156.92 | 9.69 |
| Thickness | | 575.03 | 2660.41 | 3634.86 | 27706.51 |
| Depth | 0.00 | 575.03 | 3235.45 | 6870.31 | 34576.82 |


SHAS11 22-OCT-83 T40N R2W S28 SE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS11 22-OCT-83 T40N R2W S28 SE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS11 22-OCT-83 T40N R2W S28 SE



THE SITE IS: SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHONIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 14.41 | 21.81 | 1 | 2020.27 | 3590.98 |
| 0.0020 | 12.65 | 75.20 | 2 | 750.50 | 4753.79 |
| 0.0040 | 8.37 | 58.45 | 3 | 292.71 | 1328.87 |
| 0.0080 | 25.55 | 83.47 | 4 | 108.34 | 394.13 |
| 0.0143 | 6.83 | 91.58 | 5 | 52.98 | 387.12 |
| 0.0200 | 10.18 | 105.60 | 6 | 48.99 | 334.81 |
| 0.0303 | 11.71 | 105.57 | 7 | 23.64 | 143.46 |
| 0.0500 | 11.47 | 85.90 | 8 | 7.75 | 25.49 |
| 0.1000 | 1.75 | 16.79 | 9 | 1.34 | 10.32 |
| 0.1818 | 6.83 | 27.64 | 10 | 0.12 | 2.58 |
| 0.3333 | 22.08 | 50.26 | 11 | 0.04 | 0.03 |
| 0.5000 | 52.57 | 146.12 | 12 | 0.30 | 0.30 |
| 0.5988 | 23.83 | 95.09 | 13 | 0.28 | 0.58 |
| 0.8000 | 27.82 | 95.06 | 14 | 0.29 | 0.25 |
| 1.0000 | 9.79 | 2.28 | 15 | 0.02 | 0.04 |
| 1.0000 | 10.55 | 66.39 | 16 | 0.14 | 0.32 |
| 1.2048 | 36.43 | 122.10 | 17 | 0.19 | 0.18 |
| 1.4925 | 36.64 | 147.97 | 18 | 0.13 | 0.13 |
| 2.0000 | 37.97 | 143.82 | 19 | 0.10 | 0.12 |
| 2.0000 | 29.77 | 140.01 | 20 | 0.01 | 0.03 |
| 2.0000 | 52.71 | 154.42 | 21 | 0.07 | 0.07 |
| 3.0303 | 45.01 | 143.04 | 22 | 0.01 | 0.05 |
| 3.0303 | 42.40 | 141.56 | 23 | 0.04 | 0.06 |
| 7.6923 | 51.45 | 134.49 | 24 | 0.06 | 0.10 |
| 14.2857 | 76.37 | 101.06 | 25 | 0.03 | 0.01 |
| 20.0000 | 56.58 | 91.71 | 26 | 0.02 | 0.02 |
| 26.3158 | 56.77 | 211.39 | 27 | 0.01 | 0.01 |
| 31.2500 | 54.81 | 229.40 | 28 | 0.01 | 0.01 |
| 40.0000 | 63.72 | 48.44 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.211E+03 | 0.540E+02 | 43. | 56. | 32. | 0.7618 | 0.9448 | 0.3372 | 0.77 |
| H | HZ | 0.755E+02 | 0.360E+02 | 48. | 74. | 32. | 0.8315 | 0.9577 | 132.00 | 1.97 |
| E | 3.0 | 0.161E+03 | 0.445E+02 | 47. | 61. | 32. | 0.9500 | 0.9484 | 0.3892 | 0.02 |
| H | HZ | 0.122E+03 | 0.403E+02 | 46. | 62. | 32. | 0.9512 | 0.9496 | 130.00 | 0.01 |
| E | 7.7 | 0.146E+03 | 0.578E+02 | 42. | 64. | 32. | 0.9524 | 0.9486 | 0.1081 | 0.02 |
| H | HZ | 0.123E+03 | 0.451E+02 | 42. | 64. | 32. | 0.9525 | 0.9487 | 69.20 | 0.02 |
| E | 14.3 | 0.114E+03 | 0.830E+02 | 42. | 61. | 32. | 0.9486 | 0.9557 | 0.1159 | 0.05 |
| H | HZ | 0.883E+02 | 0.697E+02 | 42. | 61. | 32. | 0.9488 | 0.9558 | 46.90 | 0.05 |
| E | 20.0 | 0.103E+03 | 0.641E+02 | 41. | 56. | 32. | 0.9365 | 0.9377 | 0.1103 | 0.04 |
| H | HZ | 0.807E+02 | 0.491E+02 | 41. | 56. | 32. | 0.9366 | 0.9377 | 59.90 | 0.05 |
| E | 26.3 | 0.362E+03 | 0.674E+02 | 43. | 58. | 32. | 0.8185 | 0.8181 | 0.1214 | 0.13 |
| H | HZ | 0.605E+02 | 0.462E+02 | 43. | 57. | 32. | 0.8602 | 0.8599 | 61.90 | 0.09 |
| E | 31.2 | 0.379E+03 | 0.650E+02 | 48. | 58. | 32. | 0.8141 | 0.7849 | 0.1329 | 0.06 |
| H | HZ | 0.801E+02 | 0.446E+02 | 47. | 58. | 32. | 0.8564 | 0.8306 | 59.70 | 0.04 |
| E | 40.0 | 0.633E+02 | 0.729E+02 | 40. | 54. | 32. | 0.9248 | 0.9228 | 0.1476 | 0.12 |
| H | HZ | 0.336E+02 | 0.545E+02 | 41. | 54. | 32. | 0.9261 | 0.9245 | 63.10 | 0.11 |

AVERAGE # 8
SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.840E+02 | 0.139E+02 | 57. | 68. | 32. | 0.9146 | 0.8219 | 0.1043 | 0.07 |
| H | HZ | 0.488E+02 | 0.718E+01 | 63. | 62. | 32. | 0.9167 | 0.8259 | 69.50 | 0.11 |
| E | 1.2 | 0.139E+03 | 0.395E+02 | 52. | 71. | 32. | 0.9302 | 0.9627 | 0.1360 | 0.10 |
| H | HZ | 0.105E+03 | 0.334E+02 | 53. | 70. | 32. | 0.9304 | 0.9629 | 151.50 | 0.09 |
| E | 1.5 | 0.182E+03 | 0.388E+02 | 51. | 67. | 32. | 0.8976 | 0.9538 | 0.1897 | 0.03 |
| H | HZ | 0.114E+03 | 0.345E+02 | 51. | 67. | 32. | 0.8982 | 0.9555 | 147.80 | 0.02 |
| E | 2.0 | 0.164E+03 | 0.396E+02 | 45. | 66. | 32. | 0.9436 | 0.9561 | 0.2737 | 0.02 |
| H | HZ | 0.124E+03 | 0.363E+02 | 45. | 66. | 32. | 0.9443 | 0.9571 | 140.40 | 0.03 |
| E | 2.0 | 0.188E+03 | 0.428E+02 | 56. | 63. | 32. | 0.8406 | 0.7982 | 0.1969 | 0.08 |
| H | HZ | 0.918E+02 | 0.168E+02 | 52. | 69. | 32. | 0.8460 | 0.8035 | 154.50 | 0.14 |
| E | 2.0 | 0.199E+03 | 0.571E+02 | 56. | 62. | 32. | 0.8807 | 0.9195 | 0.1574 | 0.09 |
| H | HZ | 0.110E+03 | 0.484E+02 | 55. | 64. | 32. | 0.8841 | 0.9250 | 124.70 | 0.04 |

AVERAGE # 8
SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.259E+02 | 0.194E+01 | 40. | 55. | 23. | 0.7421 | 0.8157 | 0.3346 | 0.26 |
| H | SEC | 0.770E+01 | 0.155E+01 | 38. | 61. | 23. | 0.7483 | 0.8376 | 22.40 | 0.19 |
| E | 5.5 | 0.321E+02 | 0.105E+02 | 39. | 1. | 23. | 0.9345 | 0.8061 | 0.2462 | 0.43 |
| H | SEC | 0.232E+02 | 0.313E+01 | 40. | 4. | 23. | 0.9423 | 0.8250 | 36.30 | 0.45 |
| E | 3.0 | 0.669E+02 | 0.323E+02 | 64. | 69. | 32. | 0.8321 | 0.8522 | 0.2335 | 0.16 |
| H | SEC | 0.336E+02 | 0.118E+02 | 55. | 76. | 32. | 0.8482 | 0.8641 | 19.60 | 0.17 |
| E | 2.0 | 0.201E+03 | 0.828E+02 | 67. | 63. | 32. | 0.8087 | 0.8184 | 0.3209 | 0.03 |
| H | SEC | 0.912E+02 | 0.224E+02 | 66. | 68. | 32. | 0.8263 | 0.8326 | 39.60 | 0.19 |
| E | 1.7 | 0.108E+03 | 0.275E+02 | 51. | 72. | 32. | 0.9423 | 0.9082 | 0.1191 | 0.13 |
| H | SEC | 0.821E+02 | 0.201E+02 | 48. | 75. | 32. | 0.9444 | 0.9108 | -0.50 | 0.20 |
| E | 1.2 | 0.102E+03 | 0.320E+02 | 58. | 69. | 32. | 0.9549 | 0.9442 | 0.1147 | 0.07 |
| H | SEC | 0.877E+02 | 0.236E+02 | 58. | 69. | 32. | 0.9549 | 0.9445 | 152.40 | 0.05 |
| E | 1.0 | 0.339E+01 | 0.123E+02 | 70. | 65. | 32. | 0.7830 | 0.8036 | 0.1675 | 0.72 |
| H | HZ | 0.116E+01 | 0.726E+01 | 70. | 65. | 32. | 0.7874 | 0.8118 | 69.00 | 0.66 |

AVERAGE # 8
SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.222E+02 | 0.173E+02 | 5. | 42. | 23. | 0.9603 | 0.9199 | 0.1419 | 1.54 |
| H | SEC | 0.215E+02 | 0.115E+02 | 86. | 42. | 23. | 0.9631 | 0.9223 | 67.60 | 1.50 |
| E | 500.0 | 0.752E+02 | 0.171E+02 | 45. | 0. | 23. | 0.9949 | 0.9687 | 0.1144 | 0.27 |
| H | SEC | 0.752E+02 | 0.821E+01 | 47. | 1. | 23. | 0.9955 | 0.9764 | 59.20 | 0.29 |
| E | 250.0 | 0.556E+02 | 0.133E+02 | 52. | 64. | 23. | 0.9867 | 0.8898 | 0.1103 | 0.19 |
| H | SEC | 0.613E+02 | 0.343E+01 | 60. | 57. | 23. | 0.9896 | 0.9276 | 47.50 | 0.10 |
| E | 125.0 | 0.795E+02 | 0.485E+02 | 45. | 66. | 23. | 0.9827 | 0.7265 | 0.1239 | 0.35 |
| H | SEC | 0.875E+02 | 0.255E+01 | 57. | 61. | 23. | 0.9906 | 0.8873 | 35.50 | 0.10 |
| E | 70.0 | 0.922E+02 | 0.894E+01 | 51. | 67. | 23. | 0.9955 | 0.9538 | 0.1872 | 0.07 |
| H | SEC | 0.910E+02 | 0.471E+01 | 51. | 68. | 23. | 0.9960 | 0.9628 | 34.80 | 0.02 |
| E | 50.0 | 0.109E+03 | 0.145E+02 | 48. | 64. | 23. | 0.9963 | 0.9559 | 0.2107 | 0.10 |
| H | SEC | 0.102E+03 | 0.586E+01 | 45. | 67. | 23. | 0.9966 | 0.9687 | 33.60 | 0.05 |
| E | 33.0 | 0.110E+03 | 0.149E+02 | 43. | 64. | 23. | 0.9942 | 0.9390 | 0.2927 | 0.08 |
| H | SEC | 0.101E+03 | 0.852E+01 | 40. | 66. | 23. | 0.9945 | 0.9483 | 25.80 | 0.04 |
| E | 20.0 | 0.892E+02 | 0.138E+02 | 42. | 58. | 23. | 0.9791 | 0.9262 | 0.3573 | 0.02 |
| H | SEC | 0.826E+02 | 0.910E+01 | 44. | 56. | 23. | 0.9796 | 0.9296 | 26.10 | 0.05 |

SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE

THE NUMBER OF LAYERS = 5
THE NUMBER OF FREQUENCIES TAKEN = 18
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 80.0000 | | 0.0000 |
| | | 500.0000 | |
| 2 | 150.0000 | | 500.0000 |
| | | 2500.0000 | |
| 3 | 30.0000 | | 3000.0000 |
| | | 6000.0000 | |
| 4 | 60.0000 | | 9000.0000 |
| | | 40000.0000 | |
| 5 | 10.0000 | | 49000.0000 |

FREQUENCY RANGE ( 0.0040 , 20.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 80.7769 | | 0.0000 |
| | | 594.6583 | |
| 2 | 221.8119 | | 594.6583 |
| | | 2733.1367 | |
| 3 | 32.2922 | | 3327.7951 |
| | | 3420.9993 | |
| 4 | 161.2872 | | 6748.7944 |
| | | 27153.7956 | |
| 5 | 10.4278 | | 33902.5899 |

MEAN PERCENT VARIATION IS 5.0192

ERROR ANALYSIS

R-SQUARED = 0.999

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 17 | 13267.479 | 780.440 | 0.471 |
| MODEL | 8 | 13257.407 | 1657.176328 | 898.269 |
| RESID | 9 | 0.045 | 0.005 | |

STANDARD ERROR = 0.071

DTEST FOR MEANS = 0.000

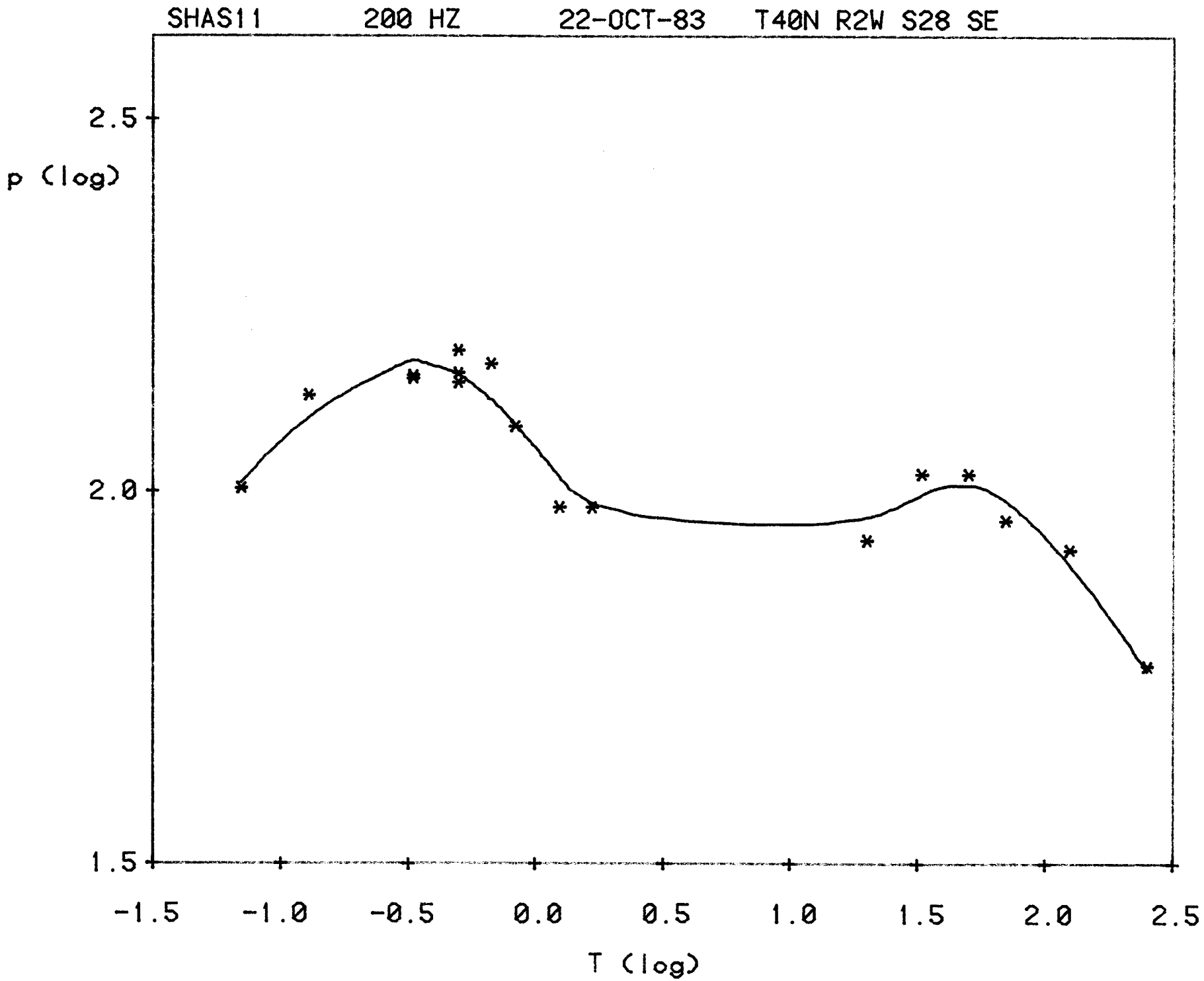
NOISE TO SIGNAL RATIO = 0.174 PERCENT

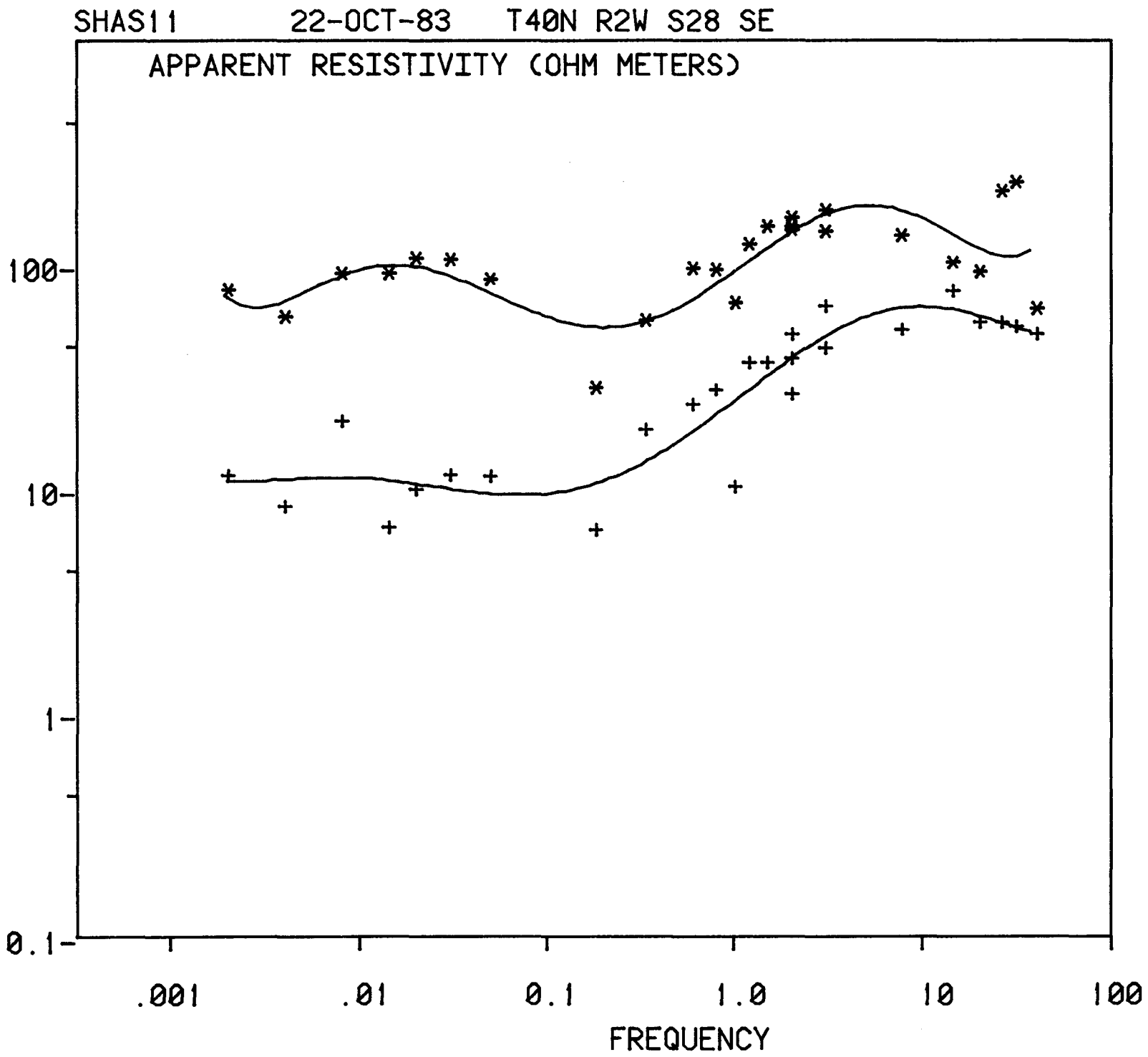
SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE

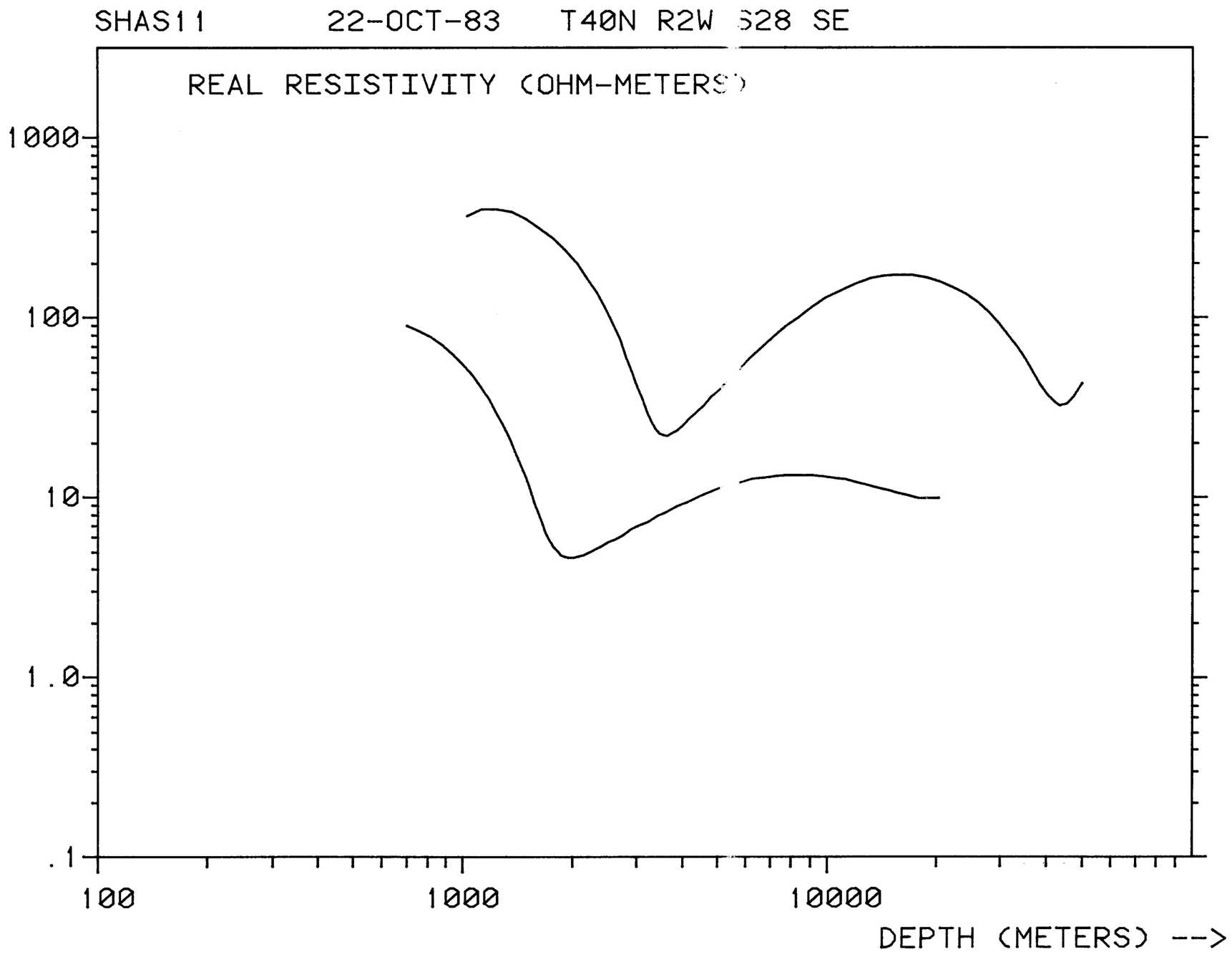
ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 250.000 | 58.453 | 57.886 | 0.567 | 0.974 |
| 2 | 125.000 | 83.468 | 81.279 | 2.189 | 2.657 |
| 3 | 70.000 | 91.580 | 98.895 | -7.316 | -7.681 |
| 4 | 50.000 | 105.601 | 103.523 | 2.078 | 1.987 |
| 5 | 33.000 | 105.574 | 100.739 | 4.836 | 4.688 |
| 6 | 20.000 | 85.897 | 88.119 | -2.222 | -2.554 |
| 7 | 1.670 | 95.092 | 92.240 | 2.852 | 3.045 |
| 8 | 1.250 | 95.062 | 104.550 | -9.488 | -9.506 |
| 9 | 0.830 | 122.097 | 123.874 | -1.776 | -1.444 |
| 10 | 0.670 | 147.970 | 133.409 | 14.561 | 10.350 |
| 11 | 0.500 | 143.822 | 143.869 | -0.048 | -0.033 |
| 12 | 0.500 | 140.015 | 143.869 | -3.854 | -2.715 |
| 13 | 0.500 | 154.423 | 143.869 | 10.553 | 7.076 |
| 14 | 0.330 | 143.037 | 150.644 | -7.607 | -5.180 |
| 15 | 0.330 | 141.562 | 150.644 | -9.082 | -6.216 |
| 16 | 0.130 | 134.490 | 128.659 | 5.831 | 4.432 |
| 17 | 0.070 | 101.058 | 102.462 | -1.404 | -1.379 |
| 18 | 0.050 | 91.712 | 91.292 | 0.420 | 0.459 |

MEAN PERCENT ERROR = 5.0443
MAXIMUM PERCENT ERROR = 10.3500
MAX. ERROR OCCURED AT OBSERVATION 10

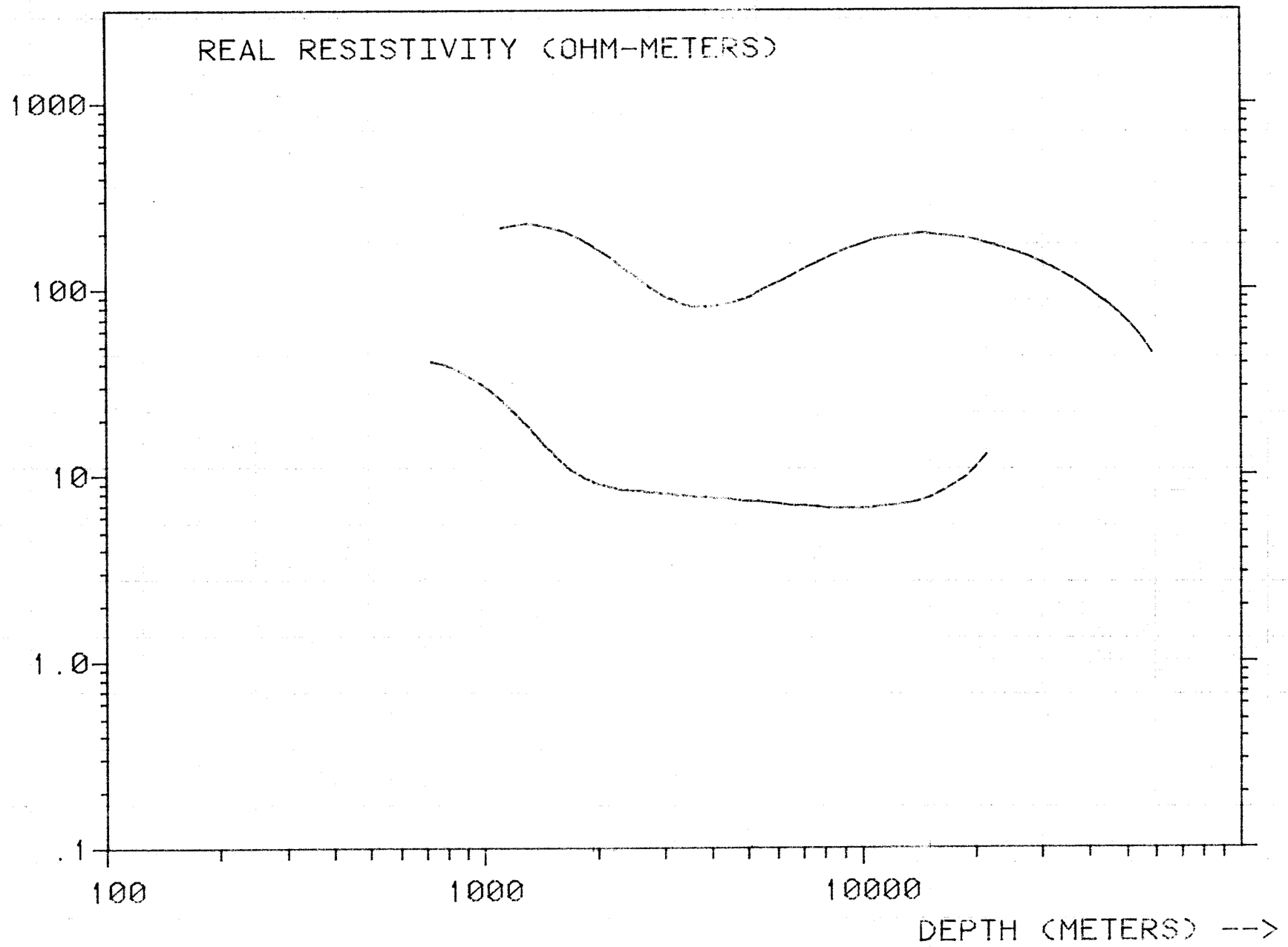

SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE
2.5
2.0
1.5
p (log)
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS11 22-OCT-83 T40N R2W S28 SE
APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.001
.01
0.1
1.0
10
100
FREQUENCY


SHAS11 22-OCT-83 T40N R2W S28 SE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
DEPTH (METERS) -->

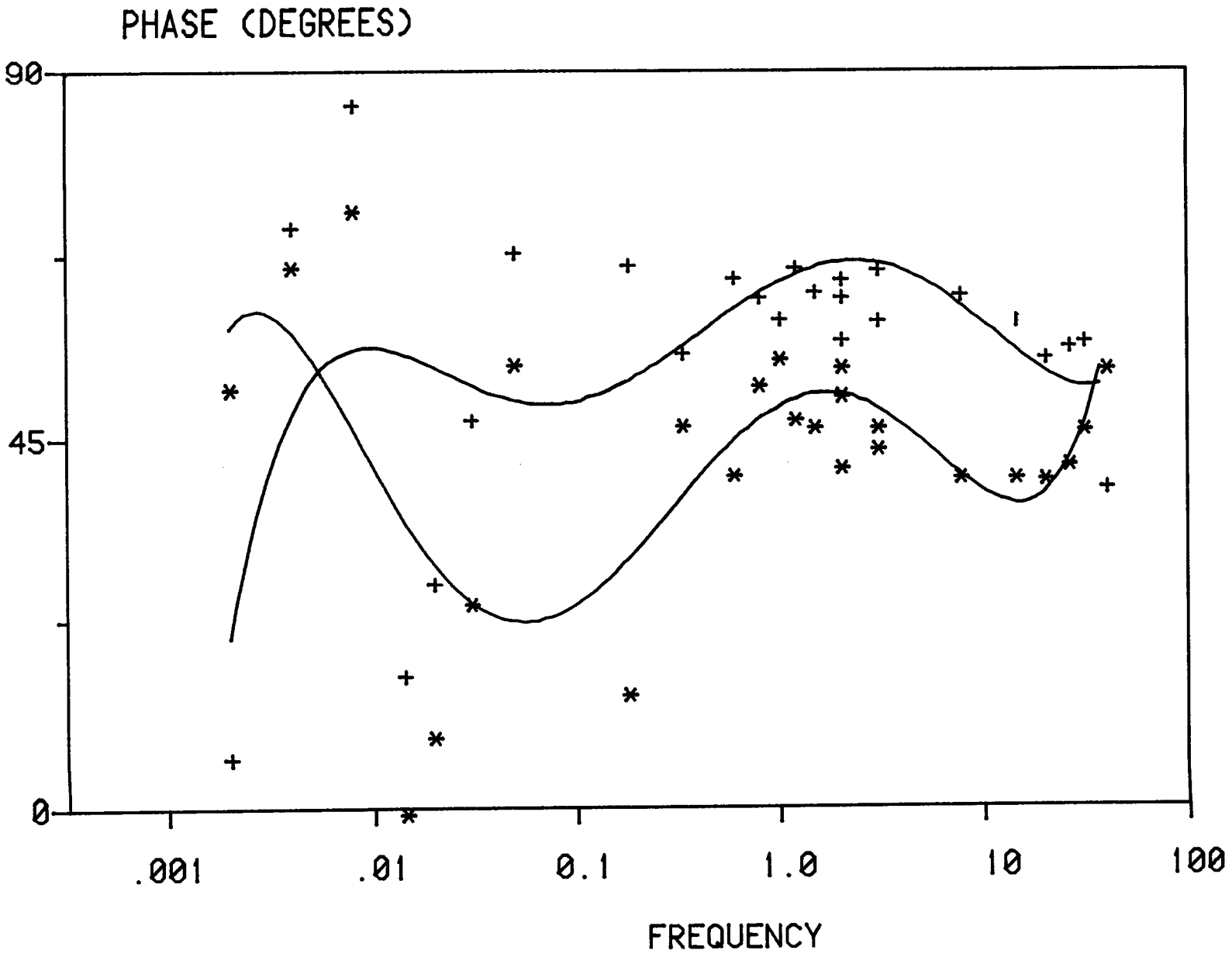
(RES)

SHAS11 22-OCT-83 T40N R2W S28 SE




PHASE

SHAS11 22-OCT-83 T40N R2W S28 SE



THE SITE IS: SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMN, MEAN OF RHOMX | PERIOD # |
|---|---|---|
| ~~0.0012~~ | ~~35.76 44.58~~ | ~~1~~ |
| 0.0020 | 11.61 76.82 | 2 |
| 0.0040 | 8.30 58.69 | 3 |
| 0.0080 | 20.08 91.03 | 4 |
| 0.0143 | 6.76 91.84 | 5 |
| 0.0200 | 9.91 106.44 | 6 |
| 0.0303 | 11.57 105.87 | 7 |
| 0.0500 | 11.30 86.19 | 8 |
| ~~0.1000~~ | ~~1.76 16.90~~ | ~~9~~ |
| 0.1818 | 6.57 27.96 | 10 |
| 0.3333 | 18.20 56.18 | 11 |
| ~~0.5000~~ | ~~32.37 196.60~~ | ~~12~~ |
| 0.5988 | 23.67 95.43 | 13 |
| 0.8000 | 27.82 95.07 | 14 |
| ~~1.0000~~ | ~~2.16 10.16~~ | ~~15~~ |
| 1.0000 | 10.18 67.30 | 16 |
| 1.2048 | 36.37 122.18 | 17 |
| 1.4925 | 36.63 147.99 | 18 |
| 2.0000 | 37.94 143.90 | 19 |
| 2.0000 | 26.49 148.04 | 20 |
| 2.0000 | 48.56 160.81 | 21 |
| 3.0303 | 65.47 173.17 | 22 |
| 3.0303 | 42.57 141.53 | 23 |
| 7.6923 | 51.45 134.49 | 24 |
| 14.2857 | 76.26 101.17 | 25 |
| 20.0000 | 55.32 93.07 | 26 |
| 26.3158 | 55.43 214.36 | 27 |
| 31.2500 | 52.74 233.30 | 28 |
| 40.0000 | 48.57 63.73 | 29 |

AVERAGE # 8
SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.0012 | 0.5437E+02 | 0.3842E+02 | 32.1 | 64.6 | 174.51 | 0.9603 | 0.9199 | 0.1419 |
| H | | 0.3478E+02 | 0.3310E+02 | 64.7 | 32.7 | 87.05 | 0.9632 | 0.9224 | 67.60 |
| E | 0.0020 | 0.7799E+02 | 0.1530E+02 | 51.7 | 6.0 | 119.50 | 0.9949 | 0.9687 | 0.1144 |
| H | | 0.7565E+02 | 0.7911E+01 | 52.5 | 6.7 | 115.09 | 0.9956 | 0.9765 | 59.20 |
| E | 0.0040 | 0.5601E+02 | 0.1320E+02 | 63.1 | 75.6 | 118.02 | 0.9867 | 0.8898 | 0.1103 |
| H | | 0.6137E+02 | 0.3405E+01 | 71.1 | 68.4 | 111.13 | 0.9897 | 0.9276 | 47.50 |
| E | 0.0080 | 0.9461E+02 | 0.3761E+02 | 69.0 | 89.7 | 134.60 | 0.9827 | 0.7266 | 0.1239 |
| H | | 0.8745E+02 | 0.2553E+01 | 79.2 | 83.1 | 112.82 | 0.9906 | 0.8874 | 35.50 |
| E | 0.0143 | 0.9267E+02 | 0.8794E+01 | 0.4 | 16.5 | 116.57 | 0.9955 | 0.9539 | 0.1872 |
| H | | 0.9100E+02 | 0.4719E+01 | 0.1 | 17.0 | 113.45 | 0.9960 | 0.9629 | 34.80 |
| E | 0.0200 | 0.1106E+03 | 0.1394E+02 | 10.7 | 27.0 | 119.17 | 0.9964 | 0.9560 | 0.2107 |
| H | | 0.1023E+03 | 0.5882E+01 | 7.8 | 29.5 | 113.73 | 0.9967 | 0.9688 | 33.60 |
| E | 0.0303 | 0.1105E+03 | 0.1463E+02 | 27.0 | 47.1 | 116.24 | 0.9943 | 0.9391 | 0.2927 |
| H | | 0.1012E+03 | 0.8507E+01 | 24.3 | 49.8 | 112.53 | 0.9946 | 0.9483 | 25.80 |
| E | 0.0500 | 0.8939E+02 | 0.1367E+02 | 53.9 | 70.2 | 111.32 | 0.9792 | 0.9262 | 0.3573 |
| H | | 0.8299E+02 | 0.8924E+01 | 56.1 | 67.7 | 110.11 | 0.9797 | 0.9296 | 26.10 |

AVERAGE # 8
SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

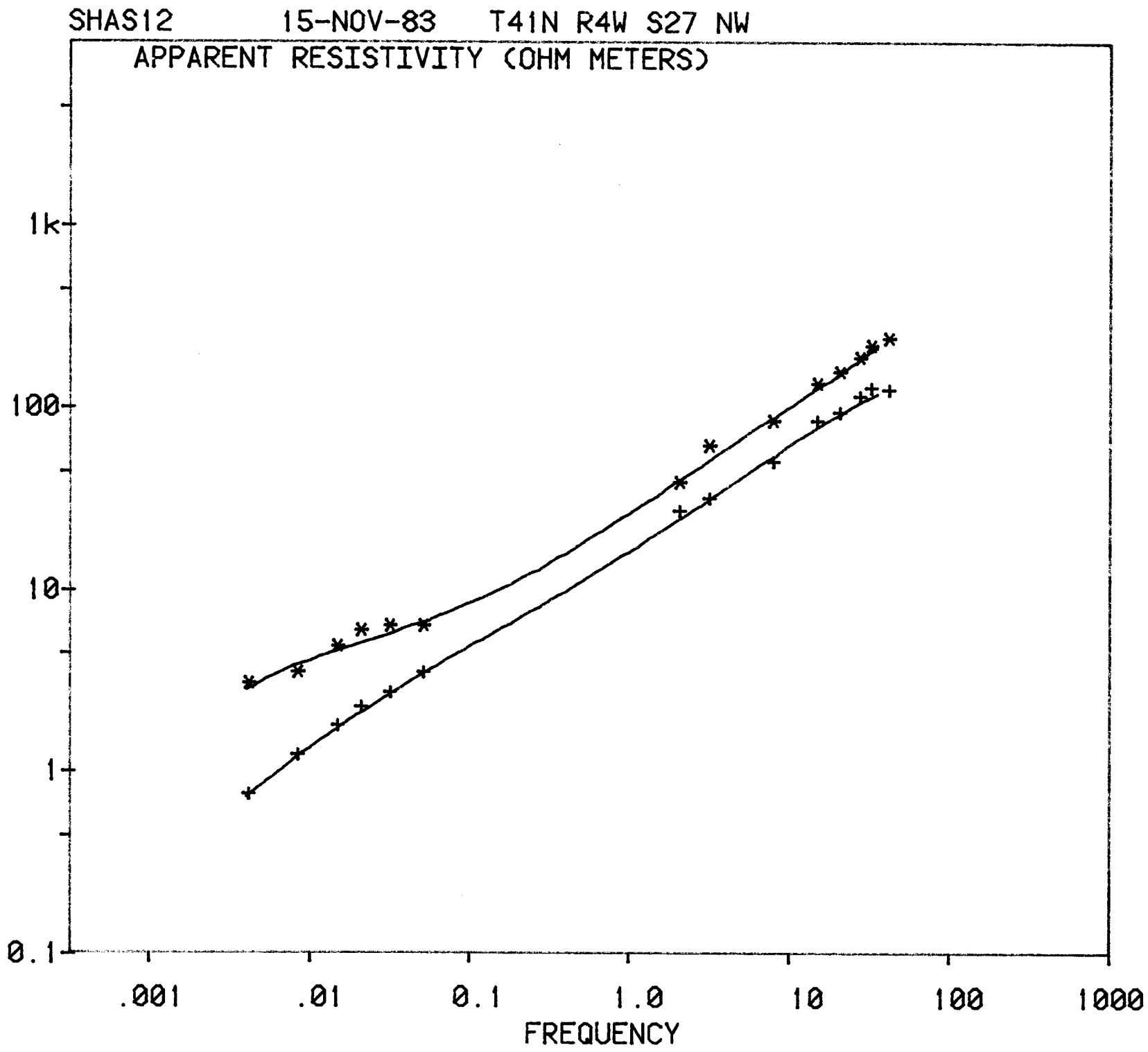
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.1000 | 0.2606E+02 | 0.1944E+01 | 85.3 | 13.3 | 117.62 | 0.7421 | 0.8158 | 0.3346 |
| H | | 0.7728E+01 | 0.1578E+01 | 82.9 | 18.8 | 118.75 | 0.7484 | 0.8376 | 22.40 |
| E | 0.1818 | 0.3266E+02 | 0.1002E+02 | 14.4 | 66.0 | 115.78 | 0.9345 | 0.8062 | 0.2462 |
| H | | 0.2325E+02 | 0.3112E+01 | 14.7 | 68.7 | 113.62 | 0.9423 | 0.8251 | 36.30 |
| E | 0.3333 | 0.7374E+02 | 0.2784E+02 | 50.6 | 54.5 | 142.12 | 0.8322 | 0.8523 | 0.2335 |
| H | | 0.3863E+02 | 0.8552E+01 | 44.6 | 58.4 | 140.54 | 0.8482 | 0.8641 | 19.60 |
| E | 0.5000 | 0.2677E+03 | 0.5421E+02 | 63.4 | 39.0 | 152.53 | 0.8087 | 0.8185 | 0.3209 |
| H | | 0.1255E+03 | 0.1053E+02 | 61.6 | 40.5 | 149.84 | 0.8263 | 0.8326 | 39.60 |
| E | 0.5988 | 0.1081E+03 | 0.2755E+02 | 43.1 | 64.3 | 120.98 | 0.9423 | 0.9083 | 0.1191 |
| H | | 0.8273E+02 | 0.1979E+02 | 39.9 | 67.1 | 117.79 | 0.9444 | 0.9108 | 179.50 |
| E | 0.8000 | 0.1025E+03 | 0.3205E+02 | 52.6 | 63.2 | 121.82 | 0.9549 | 0.9443 | 0.1147 |
| H | | 0.8768E+02 | 0.2359E+02 | 52.4 | 63.5 | 122.44 | 0.9549 | 0.9446 | 152.40 |
| E | 1.0000 | 0.1293E+02 | 0.3200E+01 | 59.7 | 62.8 | 25.13 | 0.7830 | 0.8037 | 0.1675 |
| H | | 0.7394E+01 | 0.1128E+01 | 60.2 | 63.6 | 27.42 | 0.7874 | 0.8118 | 69.00 |

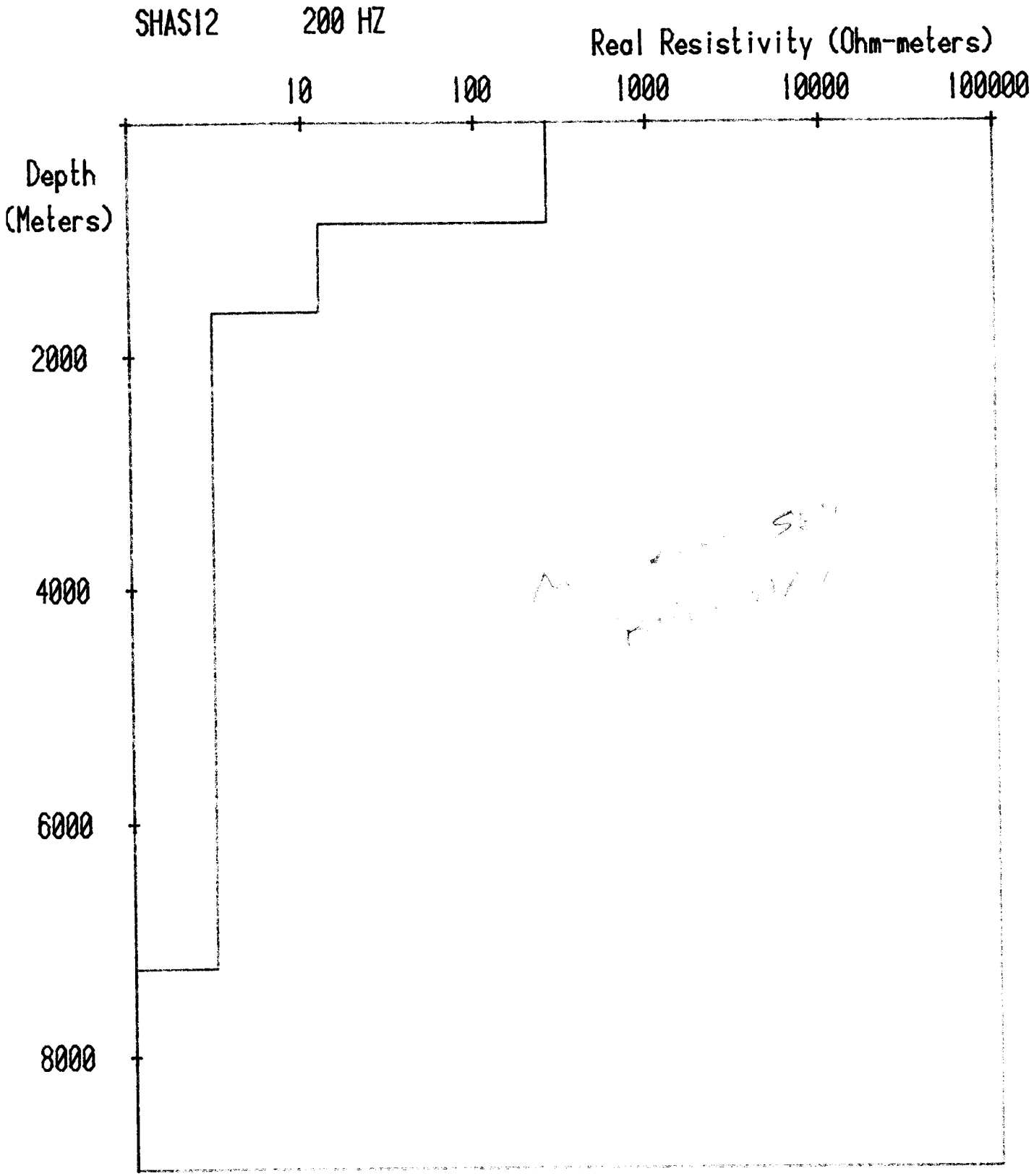
AVERAGE # 8
SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 1.0000 | 0.8552E+02 | 0.1329E+02 | 53.0 | 63.6 | 128.69 | 0.9147 | 0.8219 | 0.1042 |
| H | | 0.4908E+02 | 0.7058E+01 | 58.1 | 57.6 | 117.79 | 0.9168 | 0.8260 | 69.40 |
| E | 1.2048 | 0.1395E+03 | 0.3933E+02 | 48.3 | 67.0 | 120.69 | 0.9302 | 0.9627 | 0.1360 |
| H | | 0.1048E+03 | 0.3340E+02 | 48.7 | 66.7 | 122.52 | 0.9305 | 0.9630 | 151.50 |
| E | 1.4925 | 0.1817E+03 | 0.3875E+02 | 47.5 | 64.0 | 121.45 | 0.8977 | 0.9539 | 0.1897 |
| H | | 0.1143E+03 | 0.3451E+02 | 47.5 | 64.0 | 122.69 | 0.8983 | 0.9556 | 147.80 |
| E | 2.0000 | 0.1641E+03 | 0.3955E+02 | 42.6 | 63.3 | 123.73 | 0.9436 | 0.9561 | 0.2737 |
| H | | 0.1237E+03 | 0.3633E+02 | 42.4 | 63.4 | 122.85 | 0.9443 | 0.9571 | 140.40 |
| E | 2.0000 | 0.2025E+03 | 0.3681E+02 | 52.7 | 63.4 | 136.69 | 0.8407 | 0.7982 | 0.1969 |
| H | | 0.9360E+02 | 0.1617E+02 | 49.9 | 67.8 | 129.36 | 0.8461 | 0.8036 | 154.50 |
| E | 2.0000 | 0.2060E+03 | 0.5289E+02 | 54.5 | 57.8 | 132.65 | 0.8807 | 0.9195 | 0.1574 |
| H | | 0.1156E+03 | 0.4424E+02 | 54.5 | 58.3 | 135.34 | 0.8841 | 0.9251 | 124.70 |

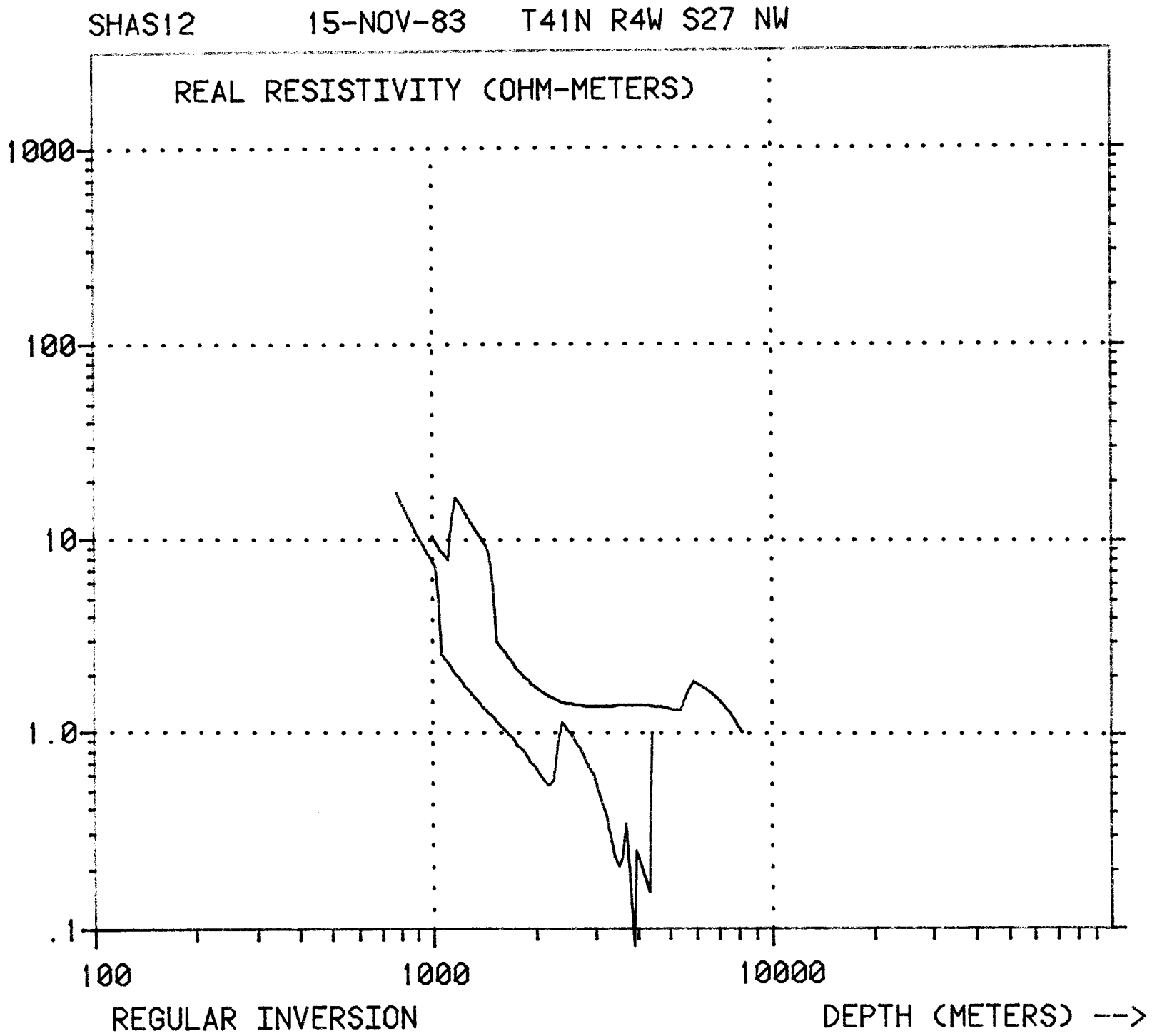
AVERAGE # 8
SHAS11 200 HZ 22-OCT-83 T40N R2W S28 SE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

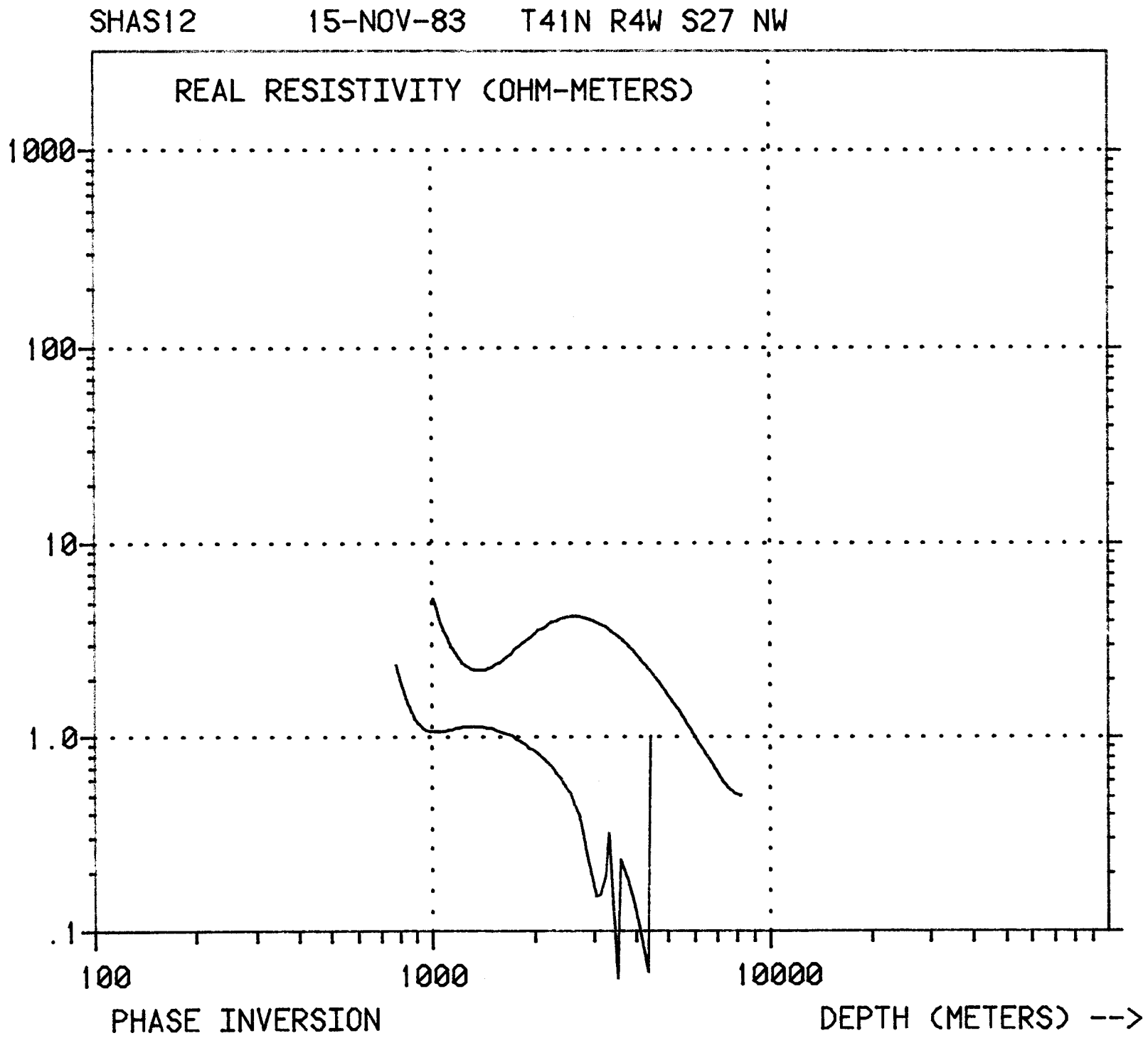
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 3.0303 | 0.2550E+03 | 0.8420E+02 | 47.8 | 63.4 | 106.91 | 0.7619 | 0.9449 | 0.3372 |
| H | | 0.9134E+02 | 0.4675E+02 | 47.4 | 70.1 | 108.52 | 0.8315 | 0.9577 | 132.00 |
| E | 3.0303 | 0.1610E+03 | 0.4464E+02 | 44.9 | 60.3 | 125.08 | 0.9501 | 0.9485 | 0.3892 |
| H | | 0.1221E+03 | 0.4049E+02 | 44.8 | 60.5 | 123.29 | 0.9513 | 0.9496 | 130.00 |
| E | 7.6923 | 0.1462E+03 | 0.5780E+02 | 41.4 | 63.6 | 122.95 | 0.9524 | 0.9487 | 0.1080 |
| H | | 0.1227E+03 | 0.4511E+02 | 41.3 | 63.6 | 122.16 | 0.9525 | 0.9488 | 69.10 |
| E | 14.2857 | 0.1142E+03 | 0.8267E+02 | 41.3 | 60.4 | 121.25 | 0.9487 | 0.9558 | 0.1159 |
| H | | 0.8818E+02 | 0.6984E+02 | 41.2 | 60.4 | 122.37 | 0.9489 | 0.9558 | 46.90 |
| E | 20.0000 | 0.1043E+03 | 0.6262E+02 | 41.3 | 55.8 | 117.46 | 0.9366 | 0.9377 | 0.1103 |
| H | | 0.8183E+02 | 0.4803E+02 | 41.1 | 55.8 | 117.31 | 0.9367 | 0.9378 | 59.90 |
| E | 26.3158 | 0.3682E+03 | 0.6468E+02 | 42.7 | 57.5 | 128.36 | 0.8185 | 0.8182 | 0.1215 |
| H | | 0.6049E+02 | 0.4617E+02 | 43.0 | 57.0 | 122.14 | 0.8603 | 0.8600 | 62.00 |
| E | 31.2500 | 0.3840E+03 | 0.6248E+02 | 47.8 | 57.4 | 127.76 | 0.8141 | 0.7850 | 0.1329 |
| H | | 0.8266E+02 | 0.4299E+02 | 46.7 | 58.3 | 108.64 | 0.8565 | 0.8306 | 59.70 |
| | 40.0000 | 0.7266E+02 | 0.6360E+02 | 54.4 | 40.0 | 35.77 | 0.9248 | 0.9229 | 0.1476 |
| H | | 0.5480E+02 | 0.3354E+02 | 54.5 | 40.2 | 40.82 | 0.9262 | 0.9245 | 63.10 |


SHAS12 15-NOV-83 T41N R4W S27 NW
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

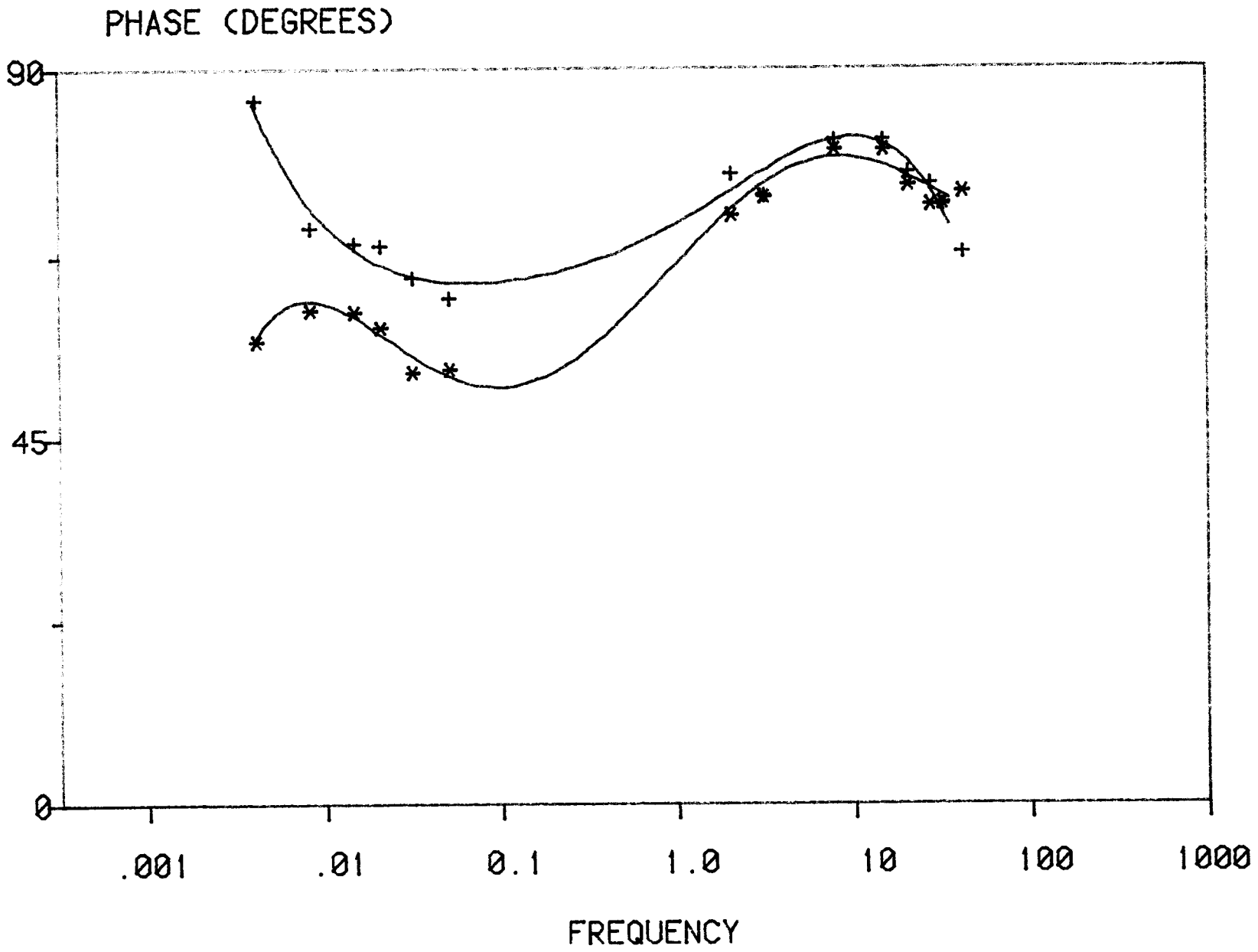



| | | | | |
|---|---|---|---|---|
| Resistivity | 262.91 | 12.39 | 3.00 | 0.69 |
| Thickness | | 854.21 | 764.35 | 5637.32 |
| Depth | 0.00 | 854.21 | 1618.57 | 7255.89 |


SHAS12 15-NOV-83 T41N R4W S27 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS12 15-NOV-83 T41N R4W S27 NW
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS12 15-NOV-83 T41N R4W S27 NW



THE SITE IS: SHAS12 200 HZ 15-NOV-83 T41N R4W S27 MW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| 0.0012 | 0.27 | 7.14 | 1 | 789.83 | 8617.01 |
| 0.0020 | 1.30 | 2.92 | 2 | 283.70 | 3209.18 |
| 0.0040 | 0.71 | 2.86 | 3 | 242.25 | 1368.32 |
| 0.0080 | 1.16 | 3.31 | 4 | 36.39 | 359.34 |
| 0.0143 | 1.68 | 4.56 | 5 | 32.32 | 115.99 |
| 0.0200 | 2.12 | 5.54 | 6 | 14.22 | 73.65 |
| 0.0303 | 2.53 | 5.87 | 7 | 10.33 | 51.15 |
| 0.0500 | 3.29 | 5.89 | 8 | 6.12 | 42.61 |
| 0.1000 | 2.75 | 15.84 | 9 | 0.21 | 1.77 |
| 0.1818 | 0.00 | 0.00 | 10 | 283.70 | 3209.18 |
| 0.3333 | 0.00 | 0.00 | 11 | 242.25 | 1368.32 |
| 0.5000 | 0.00 | 0.00 | 12 | 36.39 | 359.34 |
| 0.5988 | 0.00 | 0.00 | 13 | 32.32 | 115.99 |
| 0.8000 | 0.00 | 0.00 | 14 | 14.22 | 73.65 |
| 1.0000 | 0.00 | 0.00 | 15 | 10.33 | 51.15 |
| 1.0000 | 0.00 | 0.00 | 16 | 0.21 | 1.77 |
| 1.2048 | 0.00 | 0.00 | 17 | 283.70 | 3209.18 |
| 1.4925 | 0.00 | 0.00 | 18 | 242.25 | 1368.32 |
| 2.0000 | 0.00 | 0.00 | 19 | 36.39 | 359.34 |
| 2.0000 | 25.17 | 35.92 | 20 | 0.00 | 0.01 |
| 2.0000 | 0.00 | 0.00 | 21 | 14.22 | 73.65 |
| 3.0303 | 29.77 | 57.57 | 22 | 0.00 | 0.01 |
| 3.0303 | 0.00 | 0.00 | 23 | 283.70 | 3209.18 |
| 7.6923 | 47.09 | 77.35 | 24 | 0.01 | 0.03 |
| 14.2857 | 77.67 | 125.93 | 25 | 0.01 | 0.02 |
| 20.0000 | 87.68 | 145.53 | 26 | 0.01 | 0.02 |
| 26.3158 | 105.92 | 173.50 | 27 | 0.00 | 0.01 |
| 31.2500 | 117.85 | 201.72 | 28 | 0.00 | 0.00 |
| 40.0000 | 115.90 | 222.47 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS12 200 HZ 15-NOV-83 T41N R4W S27 MT
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.898E+01 | 0.390E+00 | 40. | 35. | 42. | 0.8034 | 0.9036 | 0.2067 | 0.91 |
| H | SEC | 0.531E+01 | 0.156E+00 | 41. | 44. | 46. | 0.8177 | 0.9061 | 141.10 | 0.87 |
| E | 500.0 | 0.349E+01 | 0.152E+01 | 50. | 49. | 59. | 0.9396 | 0.8909 | 0.1759 | 0.78 |
| H | SEC | 0.234E+01 | 0.107E+01 | 54. | 51. | 58. | 0.9434 | 0.8937 | 49.60 | 0.82 |
| E | 250.0 | 0.292E+01 | 0.863E+00 | 57. | 86. | 54. | 0.9670 | 0.9773 | 0.1230 | 0.31 |
| H | SEC | 0.279E+01 | 0.560E+00 | 58. | 87. | 54. | 0.9698 | 0.9790 | 32.00 | 0.32 |
| E | 125.0 | 0.342E+01 | 0.128E+01 | 61. | 71. | 65. | 0.9742 | 0.9758 | 0.1440 | 0.19 |
| H | SEC | 0.320E+01 | 0.104E+01 | 61. | 72. | 62. | 0.9749 | 0.9764 | 65.60 | 0.21 |
| E | 70.0 | 0.466E+01 | 0.184E+01 | 61. | 69. | 63. | 0.9844 | 0.9843 | 0.1877 | 0.14 |
| H | SEC | 0.445E+01 | 0.152E+01 | 61. | 70. | 61. | 0.9849 | 0.9848 | 70.30 | 0.16 |
| E | 50.0 | 0.562E+01 | 0.234E+01 | 59. | 69. | 62. | 0.9866 | 0.9898 | 0.2318 | 0.16 |
| H | SEC | 0.546E+01 | 0.190E+01 | 59. | 69. | 60. | 0.9872 | 0.9902 | 67.70 | 0.17 |
| E | 33.0 | 0.596E+01 | 0.263E+01 | 54. | 65. | 62. | 0.9881 | 0.9911 | 0.2613 | 0.13 |
| H | SEC | 0.578E+01 | 0.243E+01 | 53. | 65. | 62. | 0.9882 | 0.9912 | 65.10 | 0.14 |
| E | 20.0 | 0.595E+01 | 0.332E+01 | 54. | 63. | 64. | 0.9979 | 0.9962 | 0.3500 | 0.14 |
| H | SEC | 0.583E+01 | 0.327E+01 | 54. | 62. | 63. | 0.9979 | 0.9962 | 57.60 | 0.13 |

AVERAGE # 8
SHAS12 200 HZ 15-NOV-83 T41N R4W S27 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN ( OHM-M ) | PHI MAX (DEGREES) | PHI MIN (DEGREES) | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.164E+02 | 0.282E+01 | 2. | 23. | 169. | 0.9953 | 0.9934 | 0.1986 | 0.35 |
| H | SEC | 0.153E+02 | 0.269E+01 | 2. | 22. | 170. | 0.9954 | 0.9936 | 41.90 | 0.33 |
| E | 5.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.7 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |

AVERAGE # 8
SHAS12 200 HZ 15-NOV-83 T41N R4W S27 MT
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.2 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 1.5 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 2.0 | 0.474E+02 | 0.359E+02 | 76. | 74. | 120. | 0.8013 | 0.8182 | 0.3525 | 0.10 |
| H | HZ | 0.245E+02 | 0.144E+02 | 70. | 81. | 66. | 0.8218 | 0.8394 | 82.20 | 0.08 |
| E | 2.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |

AVERAGE # 0
SHAS12 200 HZ 15-NOV-83 T41N R4W S27 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.832E+02 | 0.419E+02 | 76. | 74. | 126. | 0.7585 | 0.7932 | 0.4756 | 0.15 |
| H | HZ | 0.319E+02 | 0.176E+02 | 73. | 77. | 62. | 0.7937 | 0.8313 | 60.20 | 0.06 |
| E | 3.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | HZ | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 7.7 | 0.827E+02 | 0.509E+02 | 80. | 82. | 67. | 0.9628 | 0.9808 | 0.1900 | 0.05 |
| H | HZ | 0.720E+02 | 0.432E+02 | 81. | 81. | 74. | 0.9638 | 0.9811 | 52.70 | 0.05 |
| E | 14.3 | 0.132E+03 | 0.842E+02 | 80. | 82. | 72. | 0.9583 | 0.9771 | 0.4065 | 0.05 |
| H | HZ | 0.120E+03 | 0.712E+02 | 80. | 82. | 74. | 0.9583 | 0.9771 | 66.80 | 0.04 |
| E | 20.0 | 0.159E+03 | 0.101E+03 | 76. | 78. | 72. | 0.9259 | 0.9530 | 0.7657 | 0.04 |
| H | HZ | 0.132E+03 | 0.739E+02 | 76. | 78. | 73. | 0.9261 | 0.9531 | 157.90 | 0.04 |
| E | 26.3 | 0.192E+03 | 0.121E+03 | 73. | 77. | 72. | 0.9276 | 0.9521 | 0.5641 | 0.06 |
| H | HZ | 0.155E+03 | 0.909E+02 | 74. | 76. | 80. | 0.9279 | 0.9523 | 54.50 | 0.05 |
| E | 31.2 | 0.229E+03 | 0.132E+03 | 74. | 74. | 73. | 0.9347 | 0.9460 | 0.5931 | 0.06 |
| H | HZ | 0.174E+03 | 0.103E+03 | 74. | 74. | 84. | 0.9357 | 0.9468 | 68.00 | 0.04 |
| E | 40.0 | 0.257E+03 | 0.155E+03 | 76. | 68. | 72. | 0.8445 | 0.9358 | 0.8992 | 0.08 |
| H | HZ | 0.188E+03 | 0.771E+02 | 75. | 69. | 87. | 0.8481 | 0.9364 | 48.60 | 0.08 |

SHAS12 200 HZ 15-NOV-83 T41N R4W S27 NW

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 14
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 100.0000 | | 0.0000 |
| | | 1000.0000 | |
| 2 | 2.0000 | | 1000.0000 |
| | | 1000.0000 | |
| 3 | 5.0000 | | 2000.0000 |
| | | 4000.0000 | |
| 4 | 1.0000 | | 6000.0000 |

FREQUENCY RANGE ( 0.0040 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 262.9124 | | 0.0000 |
| | | 854.2154 | |
| 2 | 12.3927 | | 854.2154 |
| | | 764.3557 | |
| 3 | 3.0048 | | 1618.5711 |
| | | 5637.3279 | |
| 4 | 0.6905 | | 7255.8990 |

MEAN PERCENT VARIATION IS 6.7479

ERROR ANALYSIS

R-SQUARED = 1.000

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 13 | 86578.879 | 6659.914 | 0.462 |
| MODEL | 6 | 86568.943 | 14428.157********** | |
| RESID | 7 | 0.064 | 0.009 | |

STANDARD ERROR = 0.095

DTEST FOR MEANS = -0.000

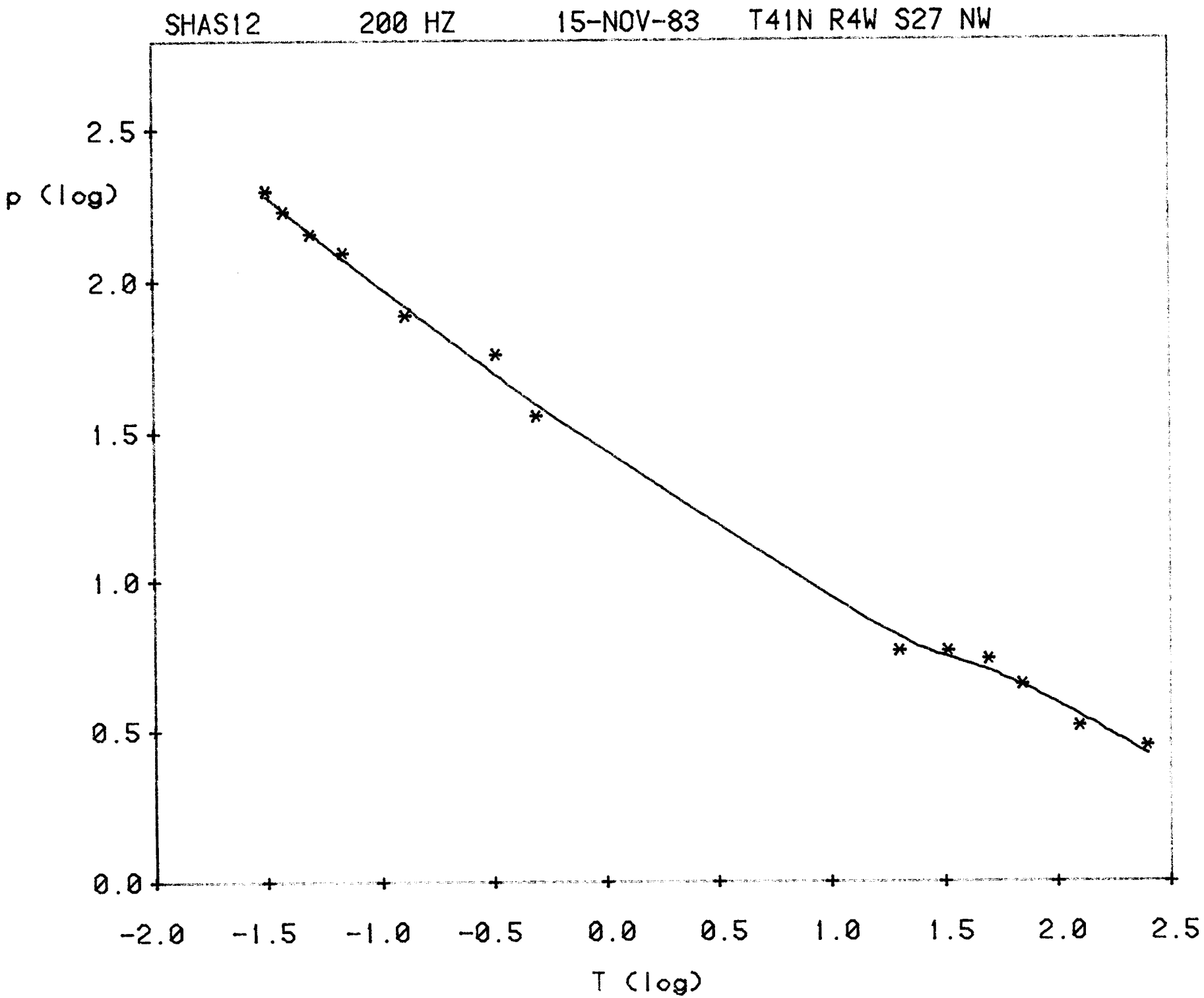
NOISE TO SIGNAL RATIO = 0.079 PERCENT

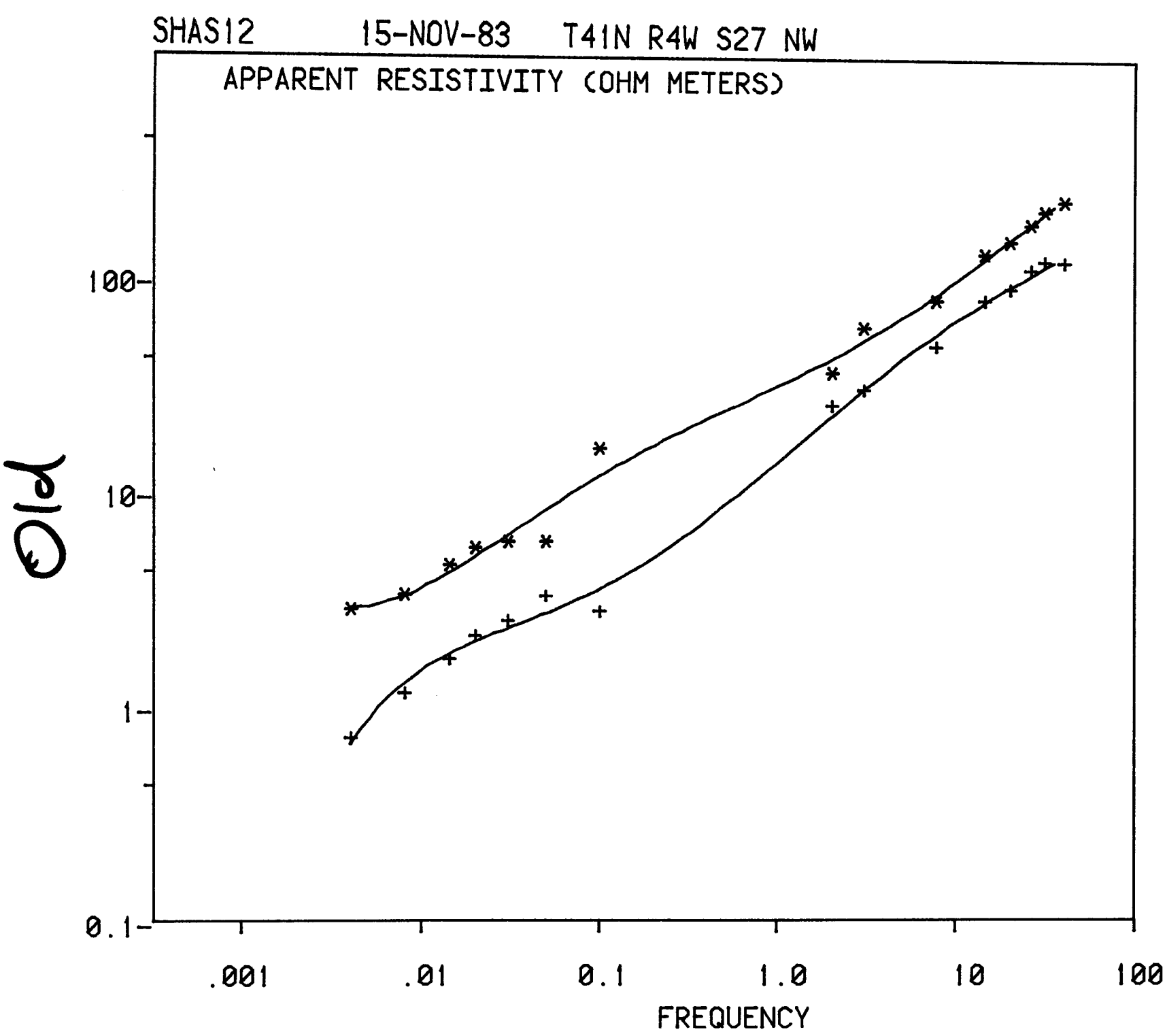
SHAS12 200 HZ 15-NOV-83 T41N R4W S27 MV

ERROR STRUCTURE OF FITTED MODEL

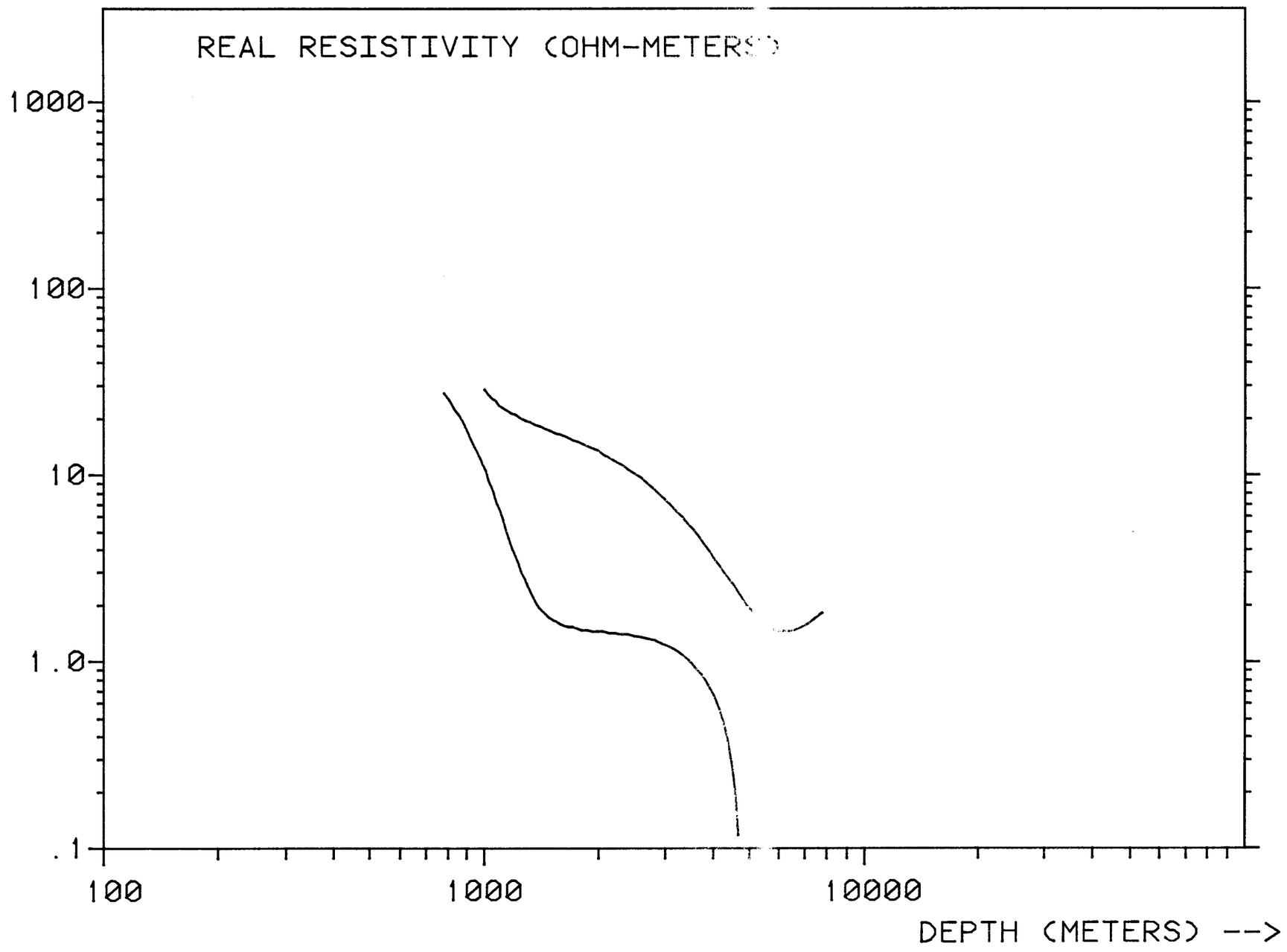
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 250.000 | 2.856 | 2.694 | 0.162 | 5.854 |
| 2 | 125.000 | 3.309 | 3.657 | -0.348 | -9.983 |
| 3 | 70.000 | 4.556 | 4.583 | -0.028 | -0.613 |
| 4 | 50.000 | 5.540 | 5.095 | 0.446 | 8.380 |
| 5 | 33.000 | 5.869 | 5.647 | 0.222 | 3.853 |
| 6 | 20.000 | 5.886 | 6.271 | -0.385 | -6.328 |
| 7 | 0.500 | 35.922 | 38.993 | -3.070 | -8.197 |
| 8 | 0.330 | 57.568 | 49.877 | 7.691 | 14.317 |
| 9 | 0.130 | 77.353 | 83.652 | -6.298 | -7.824 |
| 10 | 0.070 | 125.934 | 119.634 | 6.299 | 5.131 |
| 11 | 0.050 | 145.532 | 147.381 | -1.849 | -1.263 |
| 12 | 0.038 | 173.502 | 174.916 | -1.414 | -0.812 |
| 13 | 0.032 | 201.721 | 194.098 | 7.623 | 3.852 |
| 14 | 0.025 | 222.474 | 223.239 | -0.765 | -0.343 |

MEAN PERCENT ERROR = 6.7774
MAXIMUM PERCENT ERROR = 14.3168
MAX. ERROR OCCURED AT OBSERVATION 8


SHAS12 200 HZ 15-NOV-83 T41N R4W S27 NW
p (log)
2.5
2.0
1.5
1.0
0.5
0.0
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS12 15-NOV-83 T41N R4W S27 NW
APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.001
.01
0.1
1.0
10
100
FREQUENCY

SHAS12 15-NOV-83 T41N R4W S27 NW




RES

THE SITE IS: SHAS12  200 HZ  15-NOV-83  T41N R4W S27 NW

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHONN, MEAN OF RHONX | | PERIOD # |
|---|---|---|---|
| 0.0012 | 0.27 | 7.14 | 1 |
| 0.0020 | 1.30 | 2.92 | 2 |
| 0.0040 | 0.71 | 2.86 | 3 |
| 0.0080 | 1.16 | 3.31 | 4 |
| 0.0143 | 1.68 | 4.56 | 5 |
| 0.0200 | 2.12 | 5.54 | 6 |
| 0.0303 | 2.53 | 5.87 | 7 |
| 0.0500 | 3.29 | 5.89 | 8 |
| 0.1000 | 2.75 | 15.84 | 9 |
| 0.1818 | 0.00 | 0.00 | 10 |
| 0.3333 | 0.00 | 0.00 | 11 |
| 0.5000 | 0.00 | 0.00 | 12 |
| 0.5988 | 0.00 | 0.00 | 13 |
| 0.8000 | 0.00 | 0.00 | 14 |
| 1.0000 | 0.00 | 0.00 | 15 |
| 1.0000 | 0.00 | 0.00 | 16 |
| 1.2048 | 0.00 | 0.00 | 17 |
| 1.4925 | 0.00 | 0.00 | 18 |
| 2.0000 | 0.00 | 0.00 | 19 |
| 2.0000 | 25.17 | 35.92 | 20 |
| 2.0000 | 0.00 | 0.00 | 21 |
| 3.0303 | 29.77 | 57.57 | 22 |
| 3.0303 | 0.00 | 0.00 | 23 |
| 7.6923 | 47.09 | 77.35 | 24 |
| 14.2857 | 77.67 | 125.93 | 25 |
| 20.0000 | 87.68 | 145.53 | 26 |
| 26.3158 | 105.92 | 173.50 | 27 |
| 31.2500 | 117.85 | 201.72 | 28 |
| 40.0000 | 115.90 | 222.47 | 29 |

AVERAGE # 8
SHAS12 200 HZ 15-NOV-83 T41N R4W S27 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.0012 | 0.8979E+01 | 0.3901E+00 | 43.8 | 39.0 | 131.91 | 0.8035 | 0.9036 | 0.2067 |
| H | | 0.5306E+01 | 0.1562E+00 | 44.5 | 47.2 | 136.48 | 0.8178 | 0.9061 | 141.10 |
| E | 0.0020 | 0.3490E+01 | 0.1522E+01 | 55.6 | 54.8 | 149.49 | 0.9397 | 0.8910 | 0.1759 |
| H | | 0.2345E+01 | 0.1074E+01 | 60.0 | 56.6 | 147.89 | 0.9435 | 0.8938 | 49.60 |
| E | 0.0040 | 0.2923E+01 | 0.8632E+00 | 68.5 | 7.8 | 144.17 | 0.9671 | 0.9773 | 0.1230 |
| H | | 0.2789E+01 | 0.5604E+00 | 68.9 | 8.0 | 144.35 | 0.9698 | 0.9791 | 32.00 |
| E | 0.0080 | 0.3421E+01 | 0.1276E+01 | 83.7 | 3.6 | 154.93 | 0.9742 | 0.9758 | 0.1440 |
| H | | 0.3197E+01 | 0.1038E+01 | 83.6 | 4.0 | 152.14 | 0.9750 | 0.9765 | 65.60 |
| E | 0.0143 | 0.4660E+01 | 0.1839E+01 | 10.5 | 17.8 | 153.25 | 0.9845 | 0.9843 | 0.1877 |
| H | | 0.4451E+01 | 0.1515E+01 | 9.7 | 18.9 | 150.52 | 0.9850 | 0.9848 | 70.30 |
| E | 0.0200 | 0.5617E+01 | 0.2337E+01 | 21.8 | 31.6 | 152.08 | 0.9866 | 0.9898 | 0.2318 |
| H | | 0.5463E+01 | 0.1896E+01 | 21.5 | 32.0 | 150.08 | 0.9872 | 0.9902 | 67.70 |
| E | 0.0303 | 0.5956E+01 | 0.2631E+01 | 37.3 | 49.0 | 152.28 | 0.9882 | 0.9912 | 0.2613 |
| H | | 0.5781E+01 | 0.2425E+01 | 37.2 | 49.1 | 151.82 | 0.9883 | 0.9912 | 65.10 |
| E | 0.0500 | 0.5946E+01 | 0.3315E+01 | 66.1 | 74.8 | 153.51 | 0.9979 | 0.9962 | 0.3500 |
| H | | 0.5825E+01 | 0.3268E+01 | 66.1 | 74.6 | 153.18 | 0.9979 | 0.9963 | 57.60 |

AVERAGE # 8
SHAS12 200 HZ 15-NOV-83 T41N R4W S27 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

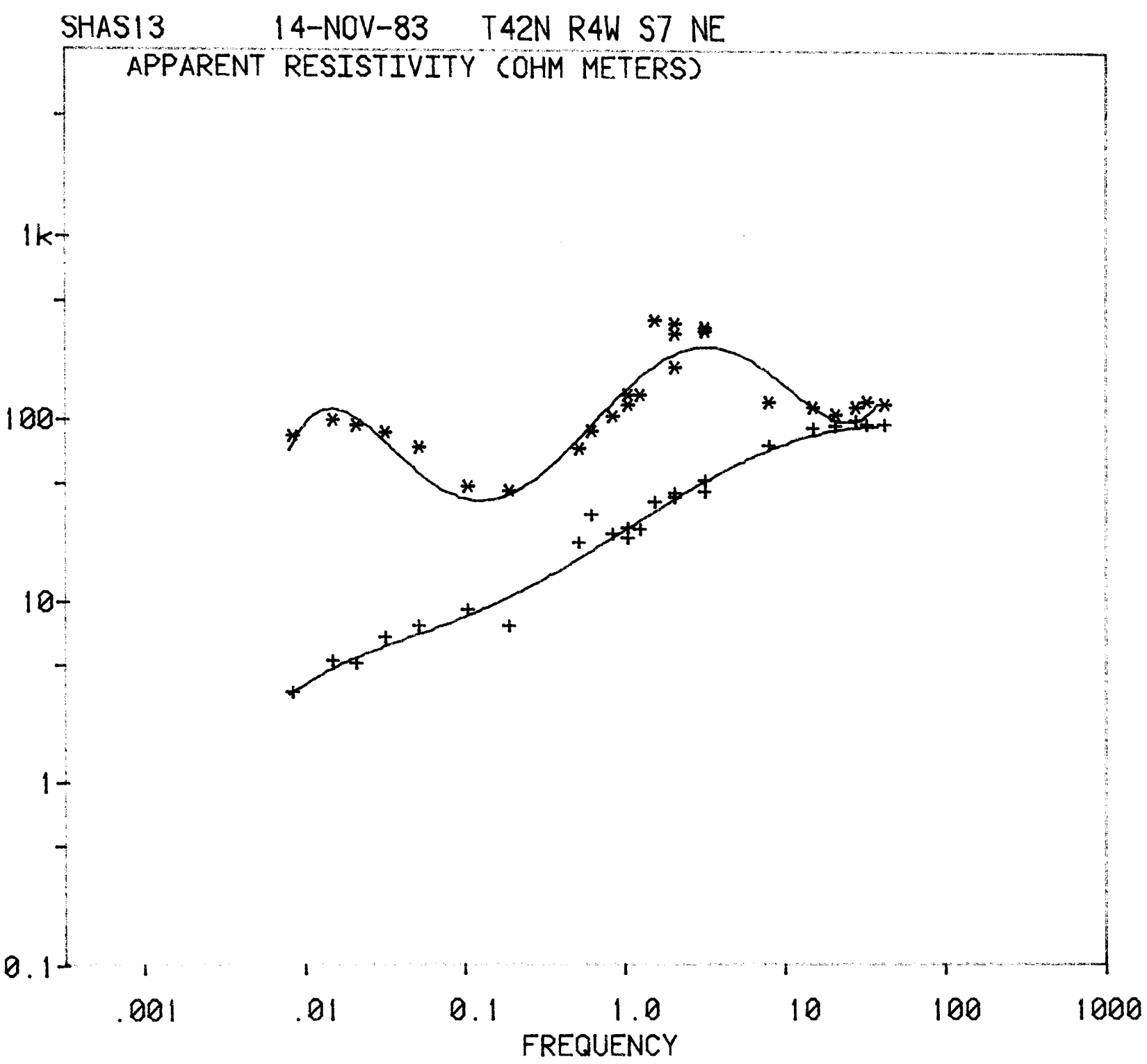
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.1000 | 0.1640E+02 | 0.2821E+01 | 47.6 | 68.9 | 79.50 | 0.9953 | 0.9935 | 0.1986 |
| H | | 0.1527E+02 | 0.2688E+01 | 48.2 | 68.1 | 79.53 | 0.9955 | 0.9937 | 41.90 |
| E | 0.1818 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 0.3333 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 0.5000 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 0.5988 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 0.8000 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 1.0000 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |

AVERAGE # 8
SHAS12 200 HZ 15-NOV-83 T41N R4W S27 MW
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

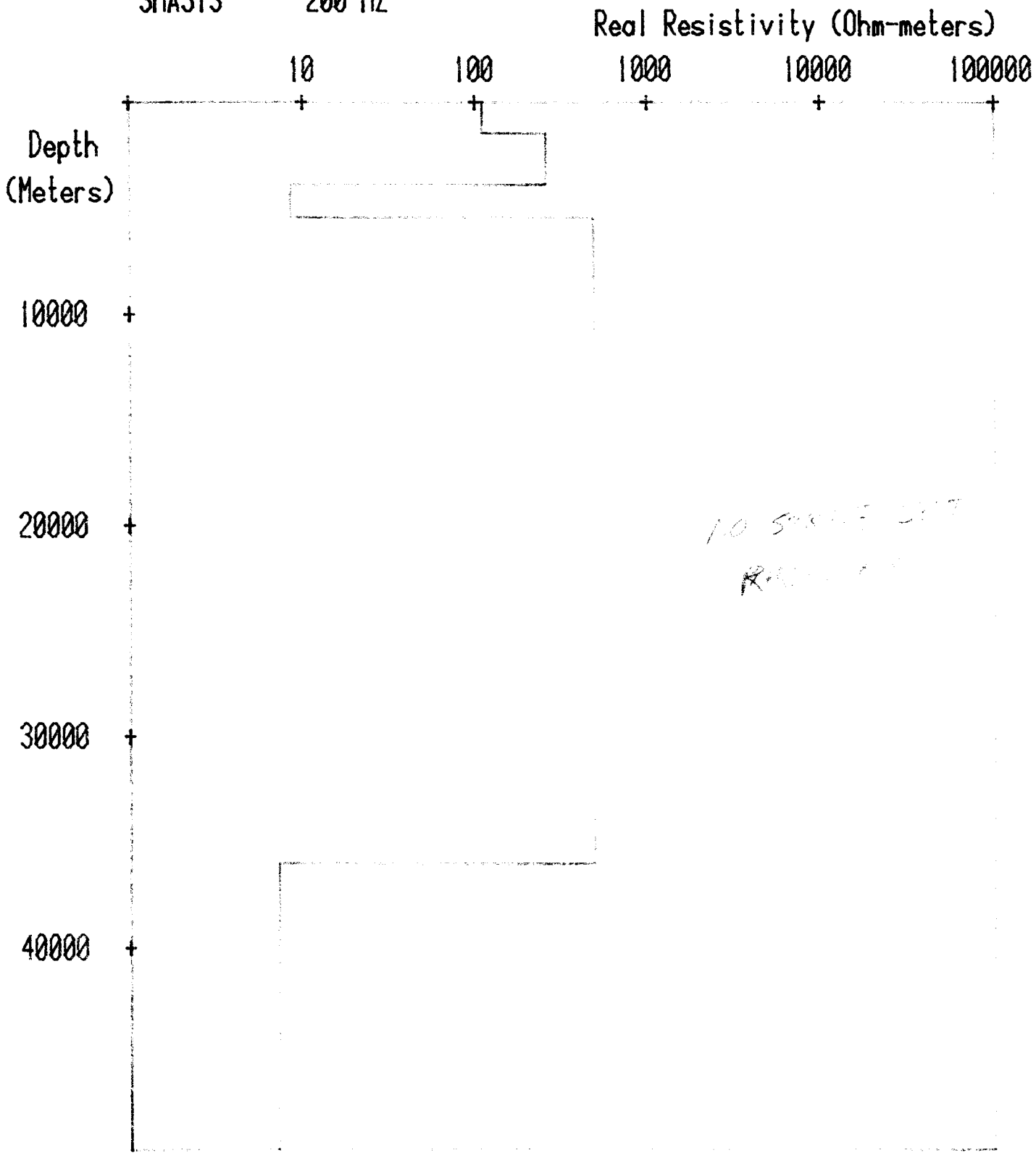
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 1.0000 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 1.2048 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 1.4925 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 2.0000 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 2.0000 | 0.4739E+02 | 0.3592E+02 | 73.3 | 71.8 | 30.44 | 0.8013 | 0.8183 | 0.3525 |
| H | | 0.2445E+02 | 0.1441E+02 | 67.5 | 78.8 | 155.95 | 0.8218 | 0.8394 | 82.20 |
| E | 2.0000 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |

AVERAGE # 8
SHAS12 200 HZ 15-NOV-83 T41N R4W S27 NW
NSAMP = 1024 SI = 0.0050 TO = 5.1200

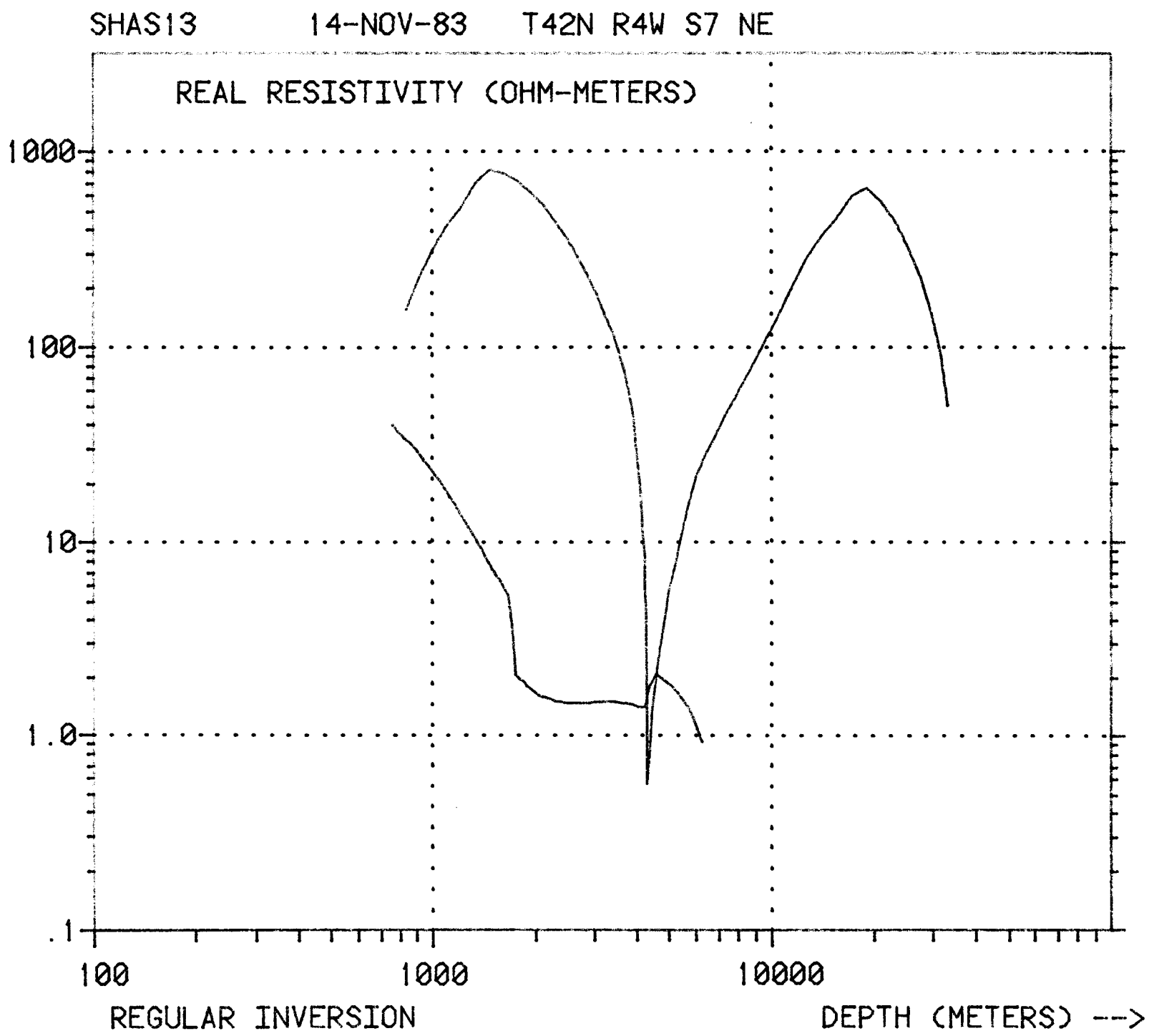
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 3.0303 | 0.8323E+02 | 0.4191E+02 | 74.9 | 72.0 | 35.60 | 0.7586 | 0.7933 | 0.4756 |
| H | | 0.3191E+02 | 0.1763E+02 | 71.9 | 75.0 | 151.86 | 0.7938 | 0.8313 | 60.20 |
| E | 3.0303 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 7.6923 | 0.8267E+02 | 0.5095E+02 | 79.8 | 81.4 | 156.87 | 0.9628 | 0.9808 | 0.1900 |
| H | | 0.7203E+02 | 0.4323E+02 | 80.1 | 80.9 | 164.15 | 0.9638 | 0.9811 | 52.70 |
| E | 14.2857 | 0.1320E+03 | 0.8416E+02 | 80.0 | 81.4 | 161.80 | 0.9583 | 0.9772 | 0.4065 |
| H | | 0.1198E+03 | 0.7118E+02 | 80.1 | 81.3 | 164.50 | 0.9583 | 0.9772 | 66.80 |
| E | 20.0000 | 0.1594E+03 | 0.1015E+03 | 75.9 | 77.7 | 161.59 | 0.9260 | 0.9531 | 0.7657 |
| H | | 0.1316E+03 | 0.7386E+02 | 76.1 | 77.5 | 163.41 | 0.9261 | 0.9531 | 157.90 |
| E | 26.3158 | 0.1924E+03 | 0.1209E+03 | 73.3 | 76.8 | 161.68 | 0.9277 | 0.9522 | 0.5641 |
| H | | 0.1546E+03 | 0.9090E+02 | 74.0 | 76.0 | 169.75 | 0.9279 | 0.9524 | 54.50 |
| E | 31.2500 | 0.2289E+03 | 0.1323E+03 | 73.7 | 74.1 | 163.02 | 0.9348 | 0.9461 | 0.5931 |
| H | | 0.1745E+03 | 0.1034E+03 | 74.3 | 73.5 | 173.69 | 0.9357 | 0.9468 | 68.00 |
| | 40.0000 | 0.2571E+03 | 0.1547E+03 | 76.0 | 67.4 | 162.04 | 0.8445 | 0.9359 | 0.8992 |
| H | | 0.1879E+03 | 0.7708E+02 | 74.8 | 68.6 | 176.70 | 0.8482 | 0.9365 | 48.60 |

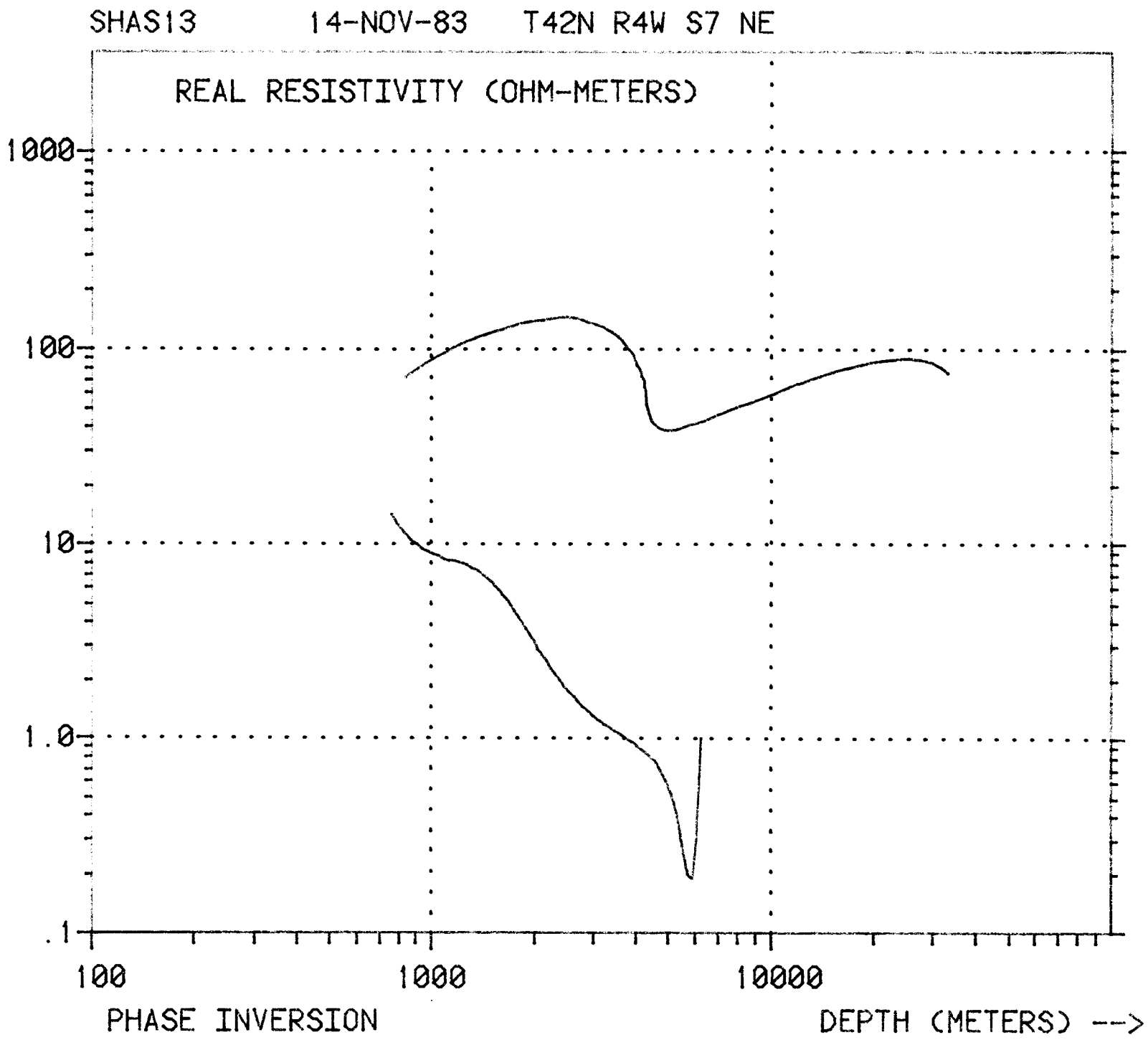

SHAS13 14-NOV-83 T42N R4W S7 NE
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

SHAS13 200 HZ

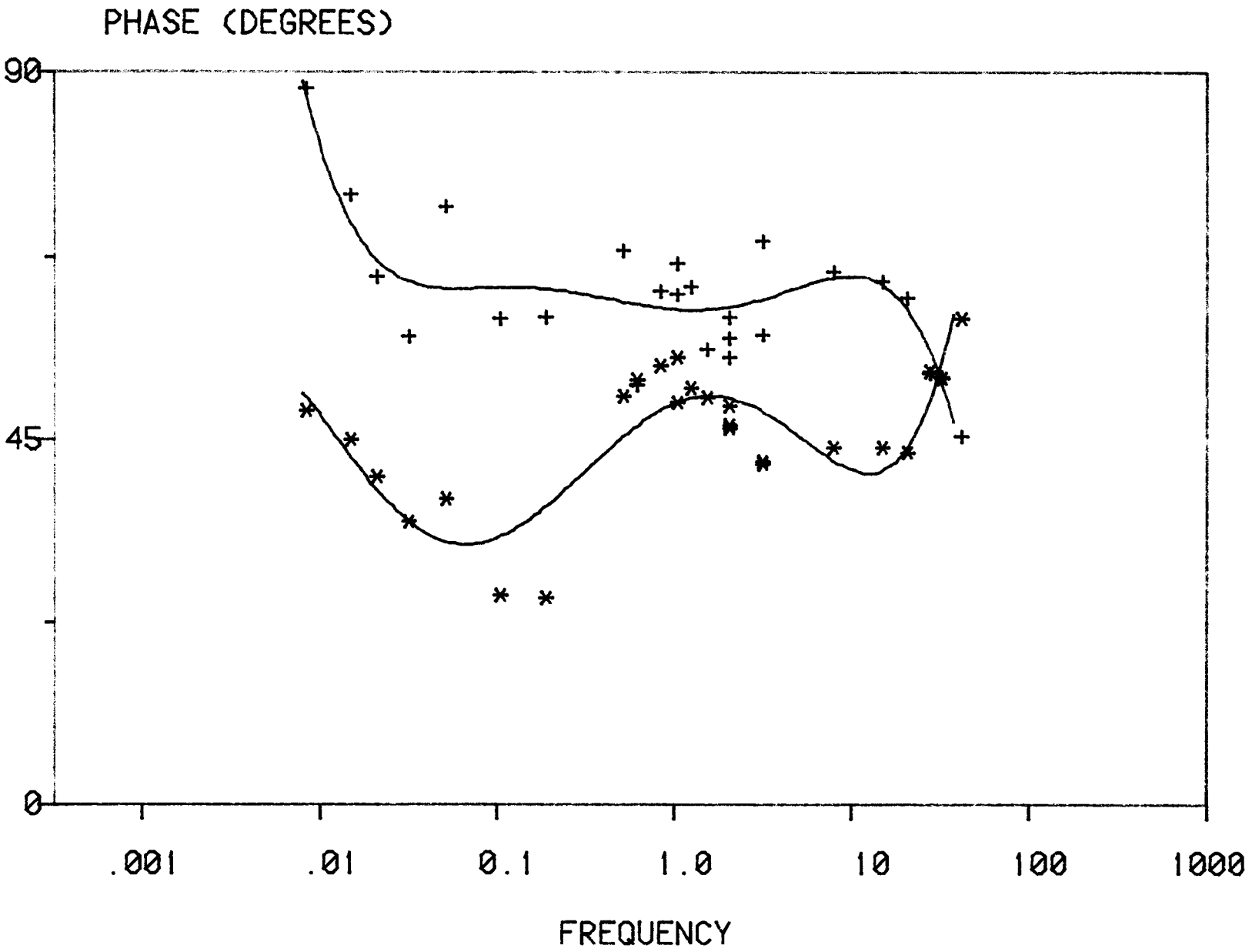



| | | | | | |
|---|---|---|---|---|---|
| Resistivity | 110.88 | 258.70 | 8.51 | 490.00 | 7.36 |
| Thickness | | 1449.93 | 2384.76 | 1598.28 | 30602.46 |
| Depth | 0.00 | 1449.93 | 3834.69 | 5432.98 | 36035.44 |


SHAS13 14-NOV-83 T42N R4W S7 NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS13 14-NOV-83 T42N R4W S7 NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS13 14-NOV-83 T42N R4W S7 NE



THE SITE IS: SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| ~~0.0012~~ | ~~0.00~~ | ~~0.00~~ | ~~1~~ | 0.00 | 0.00 |
| ~~0.0020~~ | ~~0.00~~ | ~~0.00~~ | ~~2~~ | 0.00 | 0.00 |
| ~~0.0040~~ | ~~6.39~~ | ~~66.14~~ | ~~3~~ | 345.24 | 1331.43 |
| 0.0080 | 2.95 | 74.94 | 4 | 96.25 | 425.15 |
| 0.0143 | 4.44 | 91.77 | 5 | 19.67 | 149.22 |
| 0.0200 | 4.26 | 86.20 | 6 | 8.22 | 43.20 |
| 0.0303 | 5.88 | 78.35 | 7 | 3.48 | 20.08 |
| 0.0500 | 6.84 | 64.58 | 8 | 1.30 | 3.19 |
| 0.1000 | 8.34 | 39.60 | 9 | 1.35 | 10.23 |
| 0.1818 | 6.89 | 37.24 | 10 | 0.13 | 0.54 |
| ~~0.3333~~ | ~~28.89~~ | ~~477.34~~ | ~~11~~ | 0.23 | 0.05 |
| 0.5000 | 19.53 | 63.88 | 12 | 0.09 | 0.28 |
| 0.5988 | 27.41 | 78.95 | 13 | 0.13 | 0.30 |
| 0.8000 | 21.47 | 95.14 | 14 | 0.11 | 0.33 |
| 1.0000 | 23.36 | 126.16 | 15 | 0.03 | 0.14 |
| 1.0000 | 20.61 | 110.28 | 16 | 0.09 | 0.46 |
| 1.2048 | 22.82 | 124.53 | 17 | 0.08 | 0.29 |
| 1.4925 | 32.67 | 317.07 | 18 | 0.02 | 0.47 |
| 2.0000 | 36.10 | 307.17 | 19 | 0.02 | 0.32 |
| 2.0000 | 34.53 | 272.15 | 20 | 0.00 | 0.07 |
| 2.0000 | 34.50 | 176.65 | 21 | 0.02 | 0.26 |
| 3.0303 | 42.30 | 290.55 | 22 | 0.00 | 0.01 |
| 3.0303 | 37.11 | 282.65 | 23 | 0.00 | 0.15 |
| 7.6923 | 66.39 | 113.98 | 24 | 0.04 | 0.08 |
| 14.2857 | 81.68 | 106.31 | 25 | 0.00 | 0.03 |
| 20.0000 | 84.28 | 97.39 | 26 | 0.00 | 0.02 |
| 26.3158 | 90.40 | 106.66 | 27 | 0.00 | 0.01 |
| 31.2500 | 85.38 | 115.27 | 28 | 0.00 | 0.01 |
| 40.0000 | 86.12 | 110.50 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 500.0 | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.0000 | 0.00 |
| H | SEC | 0.000E+00 | 0.000E+00 | 0. | 0. | 0. | 0.0000 | 0.0000 | 0.00 | 0.00 |
| E | 250.0 | 0.679E+02 | 0.867E+01 | 49. | 34. | 163. | 0.9918 | 0.8167 | 0.1066 | 0.71 |
| H | SEC | 0.644E+02 | 0.411E+01 | 50. | 45. | 163. | 0.9939 | 0.8217 | 22.80 | 0.75 |
| E | 125.0 | 0.764E+02 | 0.310E+01 | 49. | 88. | 167. | 0.9918 | 0.9767 | 0.1585 | 0.65 |
| H | SEC | 0.734E+02 | 0.279E+01 | 49. | 89. | 166. | 0.9920 | 0.9768 | 17.10 | 0.65 |
| E | 70.0 | 0.938E+02 | 0.537E+01 | 45. | 73. | 169. | 0.9936 | 0.9198 | 0.2156 | 0.57 |
| H | SEC | 0.897E+02 | 0.350E+01 | 45. | 77. | 167. | 0.9940 | 0.9198 | 15.90 | 0.60 |
| E | 50.0 | 0.912E+02 | 0.552E+01 | 41. | 64. | 170. | 0.9877 | 0.8907 | 0.2698 | 0.59 |
| H | SEC | 0.812E+02 | 0.299E+01 | 41. | 67. | 166. | 0.9894 | 0.8963 | 17.00 | 0.61 |
| E | 33.0 | 0.852E+02 | 0.782E+01 | 35. | 56. | 174. | 0.9902 | 0.8955 | 0.3096 | 0.57 |
| H | SEC | 0.714E+02 | 0.395E+01 | 35. | 60. | 167. | 0.9918 | 0.9086 | 16.80 | 0.60 |
| E | 20.0 | 0.777E+02 | 0.951E+01 | 41. | 65. | 176. | 0.9838 | 0.8681 | 0.3492 | 0.55 |
| H | SEC | 0.515E+02 | 0.417E+01 | 35. | 83. | 162. | 0.9897 | 0.9161 | 13.90 | 0.60 |

AVERAGE # 8
SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF H) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.434E+02 | 0.964E+01 | 25. | 58. | 175. | 0.9892 | 0.9561 | 0.4045 | 0.54 |
| H | SEC | 0.358E+02 | 0.704E+01 | 28. | 62. | 170. | 0.9897 | 0.9608 | 14.40 | 0.58 |
| E | 5.5 | 0.443E+02 | 0.893E+01 | 28. | 57. | 180. | 0.9391 | 0.8598 | 0.4795 | 0.45 |
| H | SEC | 0.301E+02 | 0.486E+01 | 23. | 64. | 173. | 0.9410 | 0.8701 | 22.30 | 0.48 |
| E | 3.0 | 0.937E+03 | 0.543E+02 | 22. | 52. | 169. | 0.0608 | 0.7676 | 1.6019 | 0.18 |
| H | SEC | 0.172E+02 | 0.345E+01 | 48. | 25. | 21. | 0.0000 | 0.0000 | 130.30 | 1.47 |
| E | 2.0 | 0.901E+02 | 0.228E+02 | 51. | 65. | 9. | 0.9329 | 0.9321 | 0.5184 | 0.38 |
| H | SEC | 0.376E+02 | 0.162E+02 | 50. | 72. | 169. | 0.9417 | 0.9411 | 14.00 | 0.47 |
| E | 1.7 | 0.105E+03 | 0.408E+02 | 60. | 42. | 29. | 0.9204 | 0.7952 | 0.6131 | 0.44 |
| H | SEC | 0.533E+02 | 0.140E+02 | 45. | 62. | 168. | 0.9266 | 0.8275 | 18.70 | 0.51 |
| E | 1.2 | 0.121E+03 | 0.241E+02 | 57. | 61. | 11. | 0.9339 | 0.9261 | 0.4909 | 0.37 |
| H | SEC | 0.697E+02 | 0.188E+02 | 52. | 66. | 179. | 0.9389 | 0.9320 | 1.30 | 0.38 |
| E | 1.0 | 0.154E+03 | 0.251E+02 | 56. | 63. | 10. | 0.9719 | 0.9655 | 0.5161 | 0.29 |
| H | HZ | 0.983E+02 | 0.216E+02 | 55. | 63. | 1. | 0.9789 | 0.9733 | 8.70 | 0.33 |

AVERAGE # 8
SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.133E+03 | 0.228E+02 | 51. | 66. | 10. | 0.9714 | 0.9622 | 0.4269 | 0.28 |
| H | HZ | 0.876E+02 | 0.184E+02 | 49. | 68. | 2. | 0.9741 | 0.9664 | 17.10 | 0.29 |
| E | 1.2 | 0.170E+03 | 0.252E+02 | 53. | 63. | 10. | 0.9251 | 0.9520 | 0.4706 | 0.28 |
| H | HZ | 0.795E+02 | 0.205E+02 | 51. | 65. | 180. | 0.9375 | 0.9595 | 4.20 | 0.34 |
| E | 1.5 | 0.471E+03 | 0.367E+02 | 51. | 57. | 20. | 0.8581 | 0.8551 | 0.7698 | 0.28 |
| H | HZ | 0.163E+03 | 0.286E+02 | 50. | 56. | 12. | 0.8872 | 0.8843 | 162.80 | 0.28 |
| E | 2.0 | 0.421E+03 | 0.387E+02 | 50. | 57. | 20. | 0.8817 | 0.8890 | 0.7712 | 0.25 |
| H | HZ | 0.193E+03 | 0.335E+02 | 49. | 59. | 14. | 0.8957 | 0.9031 | 165.50 | 0.26 |
| E | 2.0 | 0.356E+03 | 0.379E+02 | 48. | 55. | 21. | 0.9269 | 0.9009 | 0.8507 | 0.19 |
| H | HZ | 0.189E+03 | 0.312E+02 | 47. | 56. | 15. | 0.9350 | 0.9101 | 166.40 | 0.24 |
| E | 2.0 | 0.215E+03 | 0.395E+02 | 48. | 59. | 17. | 0.9496 | 0.9079 | 0.5577 | 0.23 |
| H | HZ | 0.139E+03 | 0.295E+02 | 45. | 62. | 8. | 0.9535 | 0.9149 | 1.50 | 0.23 |

AVERAGE # 8
SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.320E+03 | 0.366E+02 | 50. | 62. | 19. | 1.0166 | 0.9964 | 0.7323 | 0.19 |
| H | HZ | 0.261E+03 | 0.480E+02 | 36. | 77. | 173. | 1.1152 | 1.0969 | -1.20 | 0.14 |
| E | 3.0 | 0.377E+03 | 0.398E+02 | 43. | 58. | 21. | 0.8870 | 0.9003 | 0.7727 | 0.24 |
| H | HZ | 0.188E+03 | 0.344E+02 | 42. | 59. | 16. | 0.8966 | 0.9102 | 160.90 | 0.26 |
| E | 7.7 | 0.118E+03 | 0.673E+02 | 44. | 66. | 11. | 0.9848 | 0.9910 | 0.2708 | 0.19 |
| H | HZ | 0.110E+03 | 0.655E+02 | 44. | 66. | 10. | 0.9848 | 0.9910 | 23.60 | 0.19 |
| E | 14.3 | 0.111E+03 | 0.844E+02 | 44. | 65. | 14. | 0.9758 | 0.9857 | 0.2420 | 0.11 |
| H | HZ | 0.101E+03 | 0.790E+02 | 44. | 65. | 14. | 0.9758 | 0.9857 | 27.10 | 0.11 |
| E | 20.0 | 0.110E+03 | 0.913E+02 | 44. | 63. | 15. | 0.9337 | 0.9667 | 0.3153 | 0.11 |
| H | HZ | 0.852E+02 | 0.772E+02 | 44. | 63. | 14. | 0.9343 | 0.9667 | 28.00 | 0.12 |
| E | 26.3 | 0.117E+03 | 0.108E+03 | 44. | 63. | 17. | 0.8931 | 0.9607 | 0.3785 | 0.08 |
| H | HZ | 0.959E+02 | 0.723E+02 | 63. | 44. | 99. | 0.8937 | 0.9609 | 28.00 | 0.08 |
| E | 31.2 | 0.130E+03 | 0.105E+03 | 44. | 62. | 22. | 0.8582 | 0.9679 | 0.3652 | 0.07 |
| H | HZ | 0.101E+03 | 0.658E+02 | 61. | 44. | 97. | 0.8583 | 0.9688 | 26.70 | 0.07 |
| E | 40.0 | 0.125E+03 | 0.102E+03 | 60. | 46. | 104. | 0.9212 | 0.9333 | 0.7177 | 0.10 |
| H | HZ | 0.963E+02 | 0.699E+02 | 60. | 46. | 106. | 0.9223 | 0.9341 | 26.10 | 0.10 |

THE NUMBER OF LAYERS = 5
THE NUMBER OF FREQUENCIES TAKEN = 20
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 40.0000 | | 0.0000 |
| | | 700.0000 | |
| 2 | 200.0000 | | 700.0000 |
| | | 4500.0000 | |
| 3 | 40.0000 | | 5200.0000 |
| | | 3500.0000 | |
| 4 | 100.0000 | | 8700.0000 |
| | | 30000.0000 | |
| 5 | 10.0000 | | 38700.0000 |

FREQUENCY RANGE ( 0.0080 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 110.8854 | | 0.0000 |
| | | 1449.9312 | |
| 2 | 258.7074 | | 1449.9312 |
| | | 2384.7674 | |
| 3 | 8.5195 | | 3834.6986 |
| | | 1598.2885 | |
| 4 | 490.0030 | | 5432.9871 |
| | | 30602.4672 | |
| 5 | 7.3680 | | 36035.4544 |

MEAN PERCENT VARIATION IS 6.8090

ERROR ANALYSIS

R-SQUARED = 0.997

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 19 | 19349.710 | 1018.406 | 0.422 |
| MODEL | 8 | 19298.303 | 2412.28828616 | 9.643 |
| RESID | 11 | 0.093 | 0.008 | |

STANDARD ERROR = 0.092

DTEST FOR MEANS = -0.000

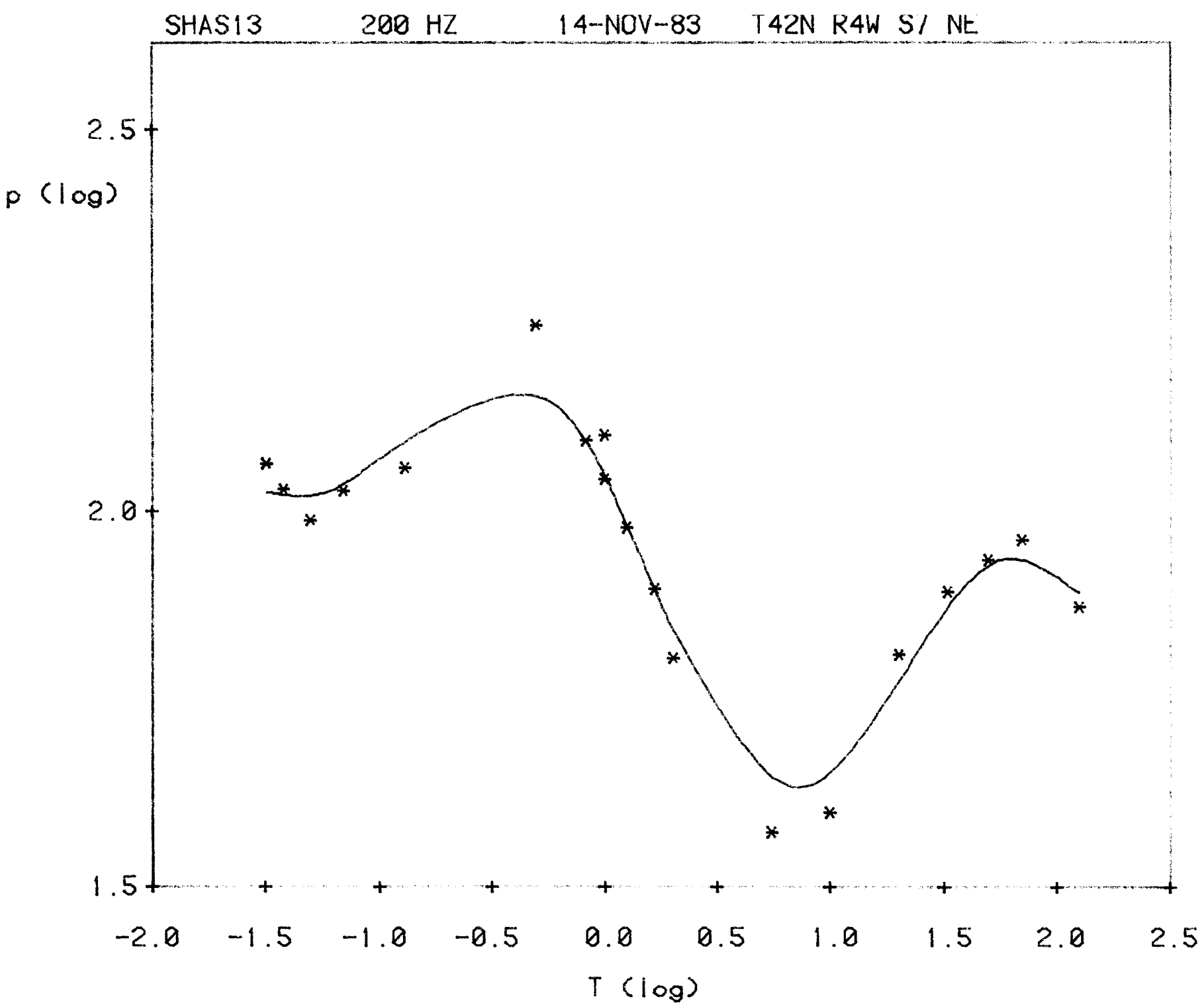
NOISE TO SIGNAL RATIO = 0.187 PERCENT

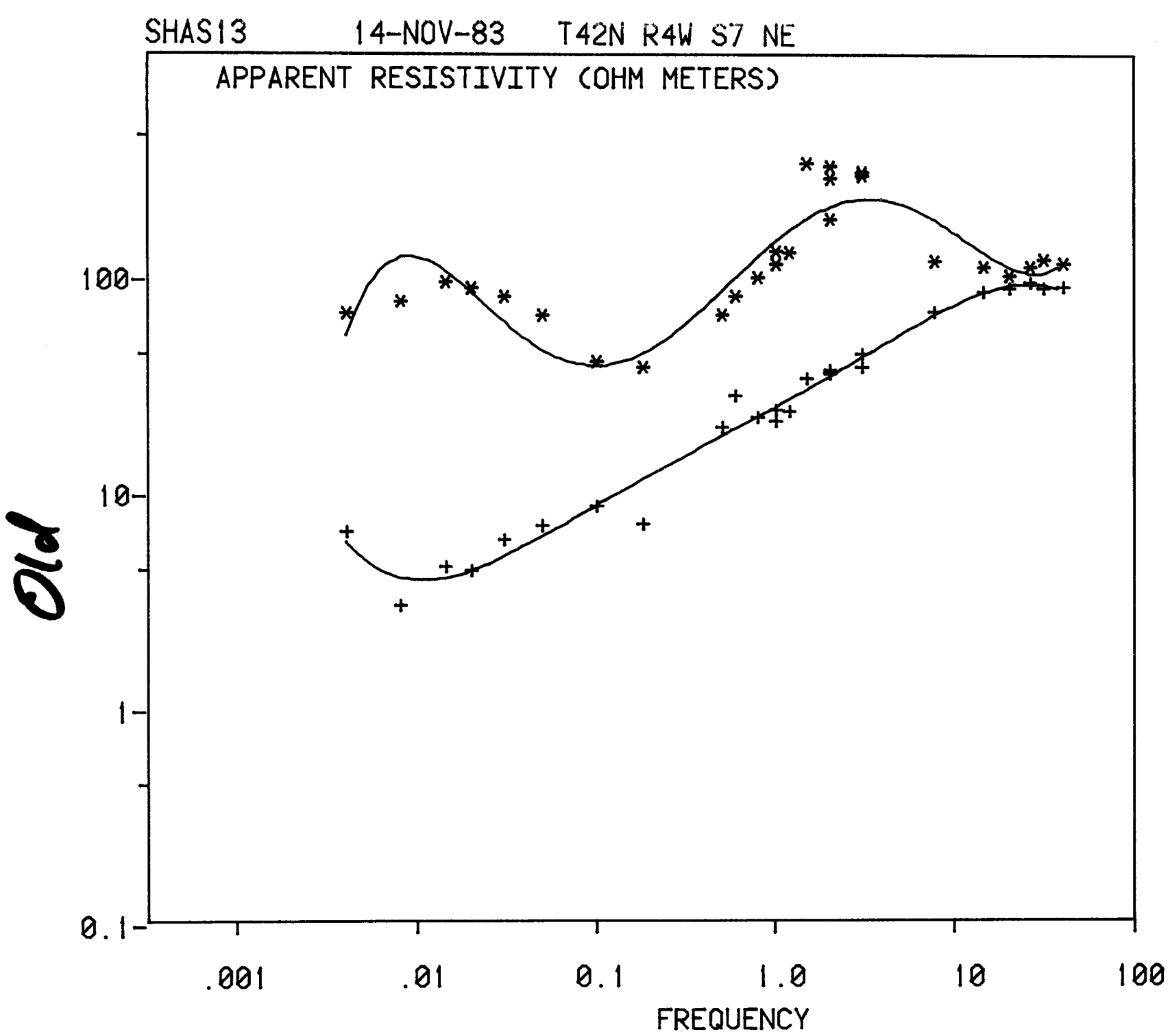
SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE

ERROR STRUCTURE OF FITTED MODEL

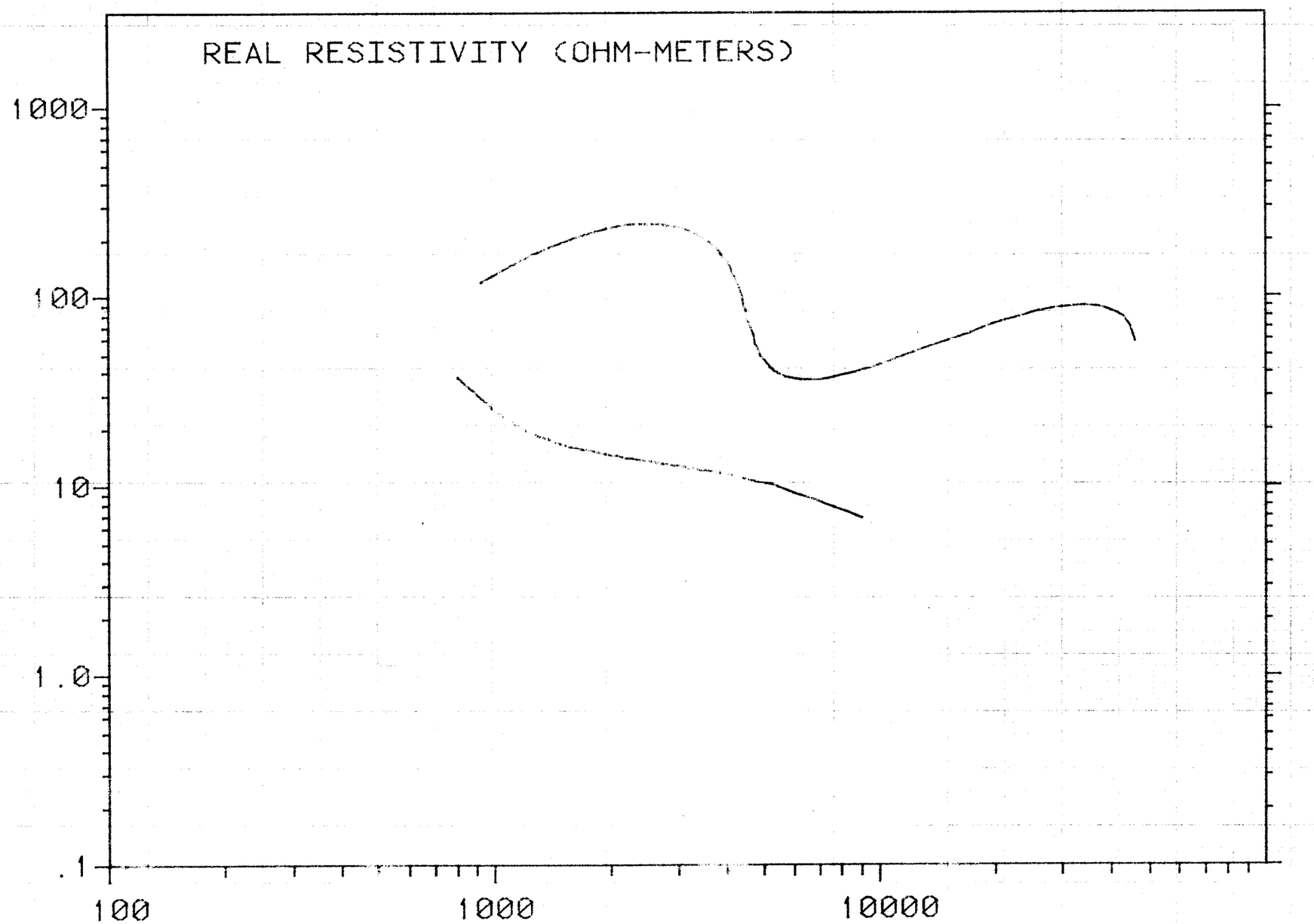
| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 125.000 | 74.936 | 78.342 | -3.406 | -4.444 |
| 2 | 70.000 | 91.770 | 88.274 | 3.496 | 3.884 |
| 3 | 50.000 | 86.205 | 86.084 | 0.121 | 0.140 |
| 4 | 33.000 | 78.346 | 75.756 | 2.590 | 3.362 |
| 5 | 20.000 | 64.579 | 59.150 | 5.429 | 8.775 |
| 6 | 10.000 | 39.603 | 43.013 | -3.411 | -8.257 |
| 7 | 5.500 | 37.237 | 41.294 | -4.057 | -10.332 |
| 8 | 2.000 | 63.878 | 69.198 | -5.320 | -7.995 |
| 9 | 1.670 | 78.952 | 78.710 | 0.242 | 0.307 |
| 10 | 1.250 | 95.138 | 96.642 | -1.504 | -1.569 |
| 11 | 1.000 | 126.159 | 112.010 | 14.150 | 11.882 |
| 12 | 1.000 | 110.285 | 112.010 | -1.725 | -1.552 |
| 13 | 0.830 | 124.535 | 125.025 | -0.490 | -0.393 |
| 14 | 0.500 | 176.655 | 153.053 | 23.602 | 14.317 |
| 15 | 0.130 | 113.979 | 125.325 | -11.346 | -9.483 |
| 16 | 0.070 | 106.309 | 106.944 | -0.635 | -0.595 |
| 17 | 0.050 | 97.395 | 104.275 | -6.880 | -6.823 |
| 18 | 0.038 | 106.664 | 104.996 | 1.668 | 1.576 |
| 19 | 0.032 | 115.266 | 106.150 | 9.115 | 8.234 |
| 20 | 0.025 | 110.500 | 108.025 | 2.475 | 2.266 |

MEAN PERCENT ERROR = 6.8276
MAXIMUM PERCENT ERROR = 14.3168
MAX. ERROR OCCURED AT OBSERVATION 14

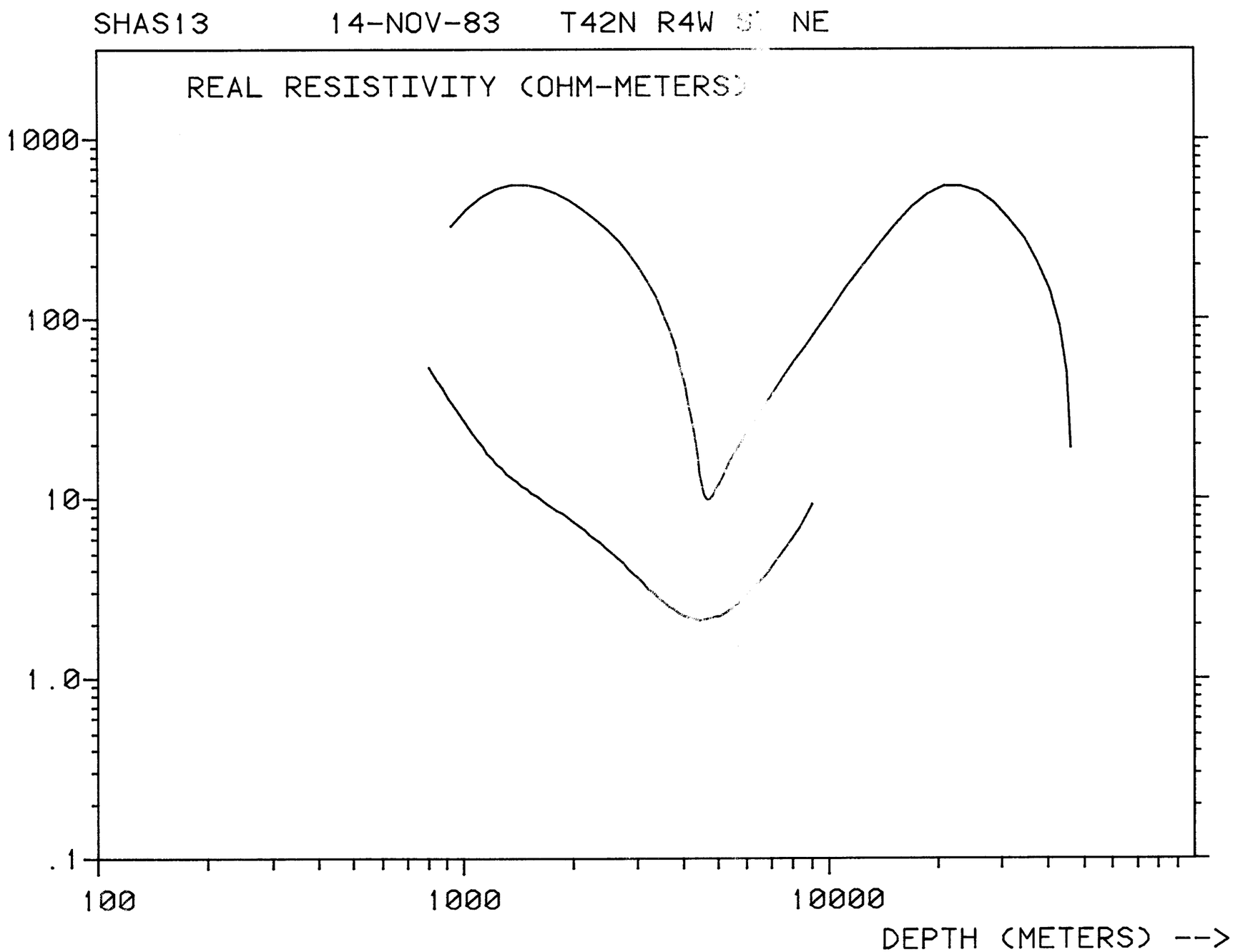

SHAS13 200 HZ 14-NOV-83 T42N R4W S/ NE
2.5
2.0
1.5
p (log)
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS13 14-NOV-83 T42N R4W S7 NE
APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.001
.01
0.1
1.0
10
100
FREQUENCY
Old

SHAS13 14-NOV-83 T42N R4W S7 NE

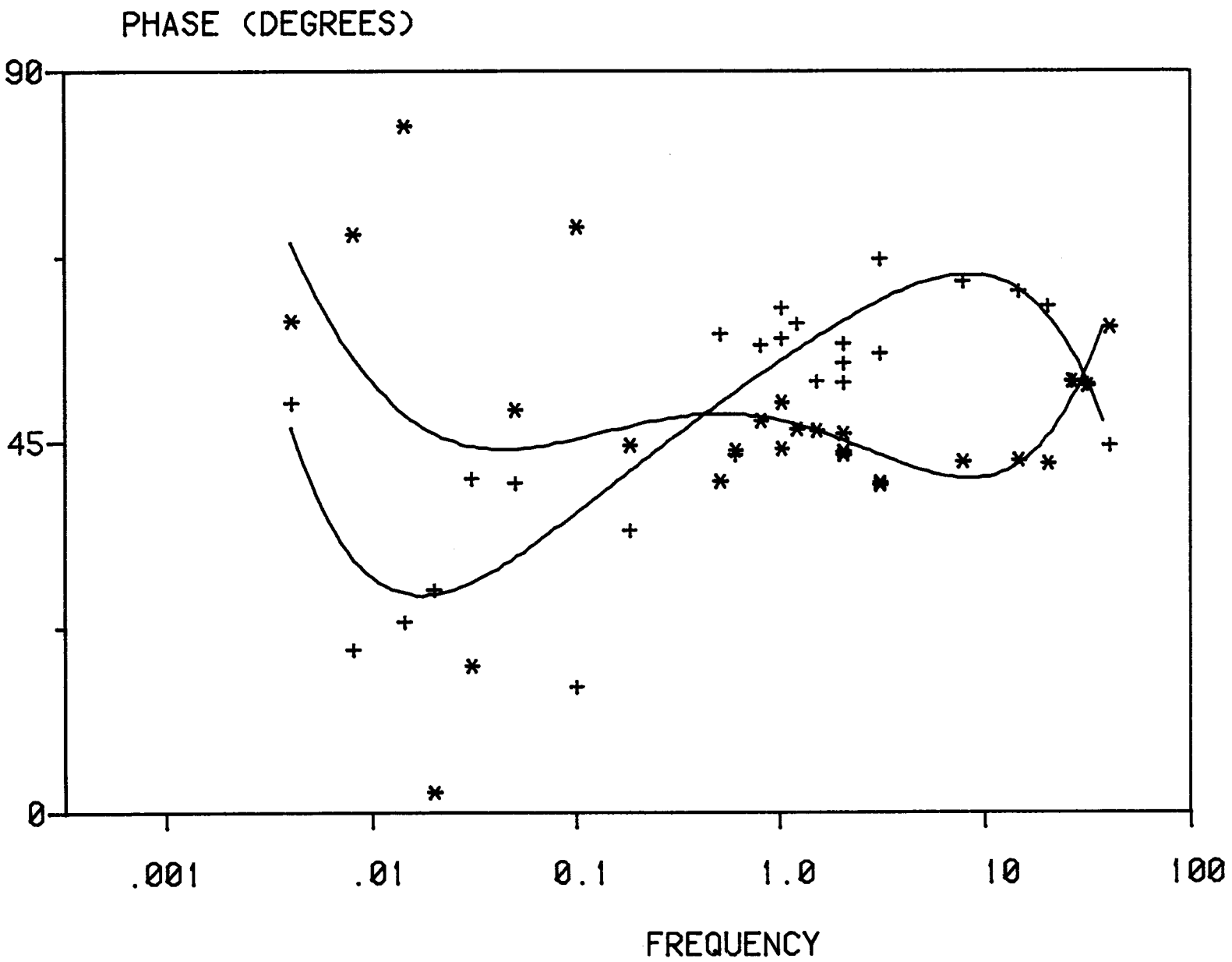



PHASE


SHAS13 14-NOV-83 T42N R4W S NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
DEPTH (METERS) -->

RES

SHAS13 14-NOV-83 T42N R4W S7 NE



THE SITE IS: SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE

MEANS OF MERGED AVERAGE NUMBER: 5

| FREQUENCY | MEAN OF RHOYY, MEAN OF RHOTX | | PERIOD # |
|---|---|---|---|
| 0.0012 | 0.00 | 0.00 | 1 |
| 0.0020 | 0.00 | 0.00 | 2 |
| 0.0040 | 6.39 | 66.14 | 3 |
| 0.0080 | 2.95 | 74.94 | 4 |
| 0.0143 | 4.44 | 91.77 | 5 |
| 0.0200 | 4.26 | 86.20 | 6 |
| 0.0303 | 5.86 | 78.35 | 7 |
| 0.0500 | 6.84 | 64.58 | 8 |
| 0.1000 | 8.34 | 39.60 | 9 |
| 0.1818 | 6.89 | 37.24 | 10 |
| 0.3333 | 28.89 | 477.34 | 11 |
| 0.5000 | 19.53 | 63.88 | 12 |
| 0.5988 | 27.41 | 78.95 | 13 |
| 0.8000 | 21.47 | 95.14 | 14 |
| 1.0000 | 23.36 | 126.16 | 15 |
| 1.0000 | 20.61 | 110.28 | 16 |
| 1.2048 | 22.82 | 124.53 | 17 |
| 1.4925 | 32.67 | 317.07 | 18 |
| 2.0000 | 36.10 | 307.17 | 19 |
| 2.0000 | 34.53 | 272.15 | 20 |
| 2.0000 | 34.50 | 176.65 | 21 |
| 3.0303 | 42.30 | 290.55 | 22 |
| 3.0303 | 37.11 | 282.65 | 23 |
| 7.6923 | 66.39 | 113.98 | 24 |
| 14.2857 | 81.68 | 106.31 | 25 |
| 20.0000 | 84.28 | 97.39 | 26 |
| 26.3158 | 90.40 | 106.66 | 27 |
| 31.2500 | 85.38 | 115.27 | 28 |
| 40.0000 | 86.12 | 110.50 | 29 |

AVERAGE # 8
SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.0012 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 0.0020 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 0.0040 | 0.6786E+02 | 0.8672E+01 | 60.7 | 44.9 | 73.13 | 0.9919 | 0.8168 | 0.1066 |
| H | | 0.6442E+02 | 0.4114E+01 | 61.0 | 56.8 | 72.77 | 0.9940 | 0.8217 | 22.80 |
| E | 0.0080 | 0.7644E+02 | 0.3103E+01 | 71.3 | 20.4 | 76.64 | 0.9918 | 0.9767 | 0.1584 |
| H | | 0.7343E+02 | 0.2789E+01 | 71.3 | 21.3 | 75.86 | 0.9920 | 0.9769 | 17.00 |
| E | 0.0143 | 0.9384E+02 | 0.5369E+01 | 84.3 | 22.2 | 79.27 | 0.9936 | 0.9198 | 0.2156 |
| H | | 0.8970E+02 | 0.3504E+01 | 84.2 | 26.2 | 77.46 | 0.9940 | 0.9198 | 15.90 |
| E | 0.0200 | 0.9121E+02 | 0.5520E+01 | 3.6 | 26.4 | 80.26 | 0.9877 | 0.8907 | 0.2698 |
| H | | 0.8120E+02 | 0.2994E+01 | 3.4 | 30.0 | 76.07 | 0.9894 | 0.8964 | 17.00 |
| E | 0.0303 | 0.8525E+02 | 0.7821E+01 | 19.2 | 40.2 | 83.67 | 0.9903 | 0.8956 | 0.3096 |
| H | | 0.7144E+02 | 0.3947E+01 | 18.8 | 43.3 | 77.05 | 0.9919 | 0.9087 | 16.80 |
| E | 0.0500 | 0.7769E+02 | 0.9515E+01 | 53.1 | 77.1 | 85.54 | 0.9839 | 0.8681 | 0.3492 |
| H | | 0.5147E+02 | 0.4173E+01 | 47.2 | 5.2 | 71.92 | 0.9898 | 0.9162 | 13.90 |

AVERAGE # 8
SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

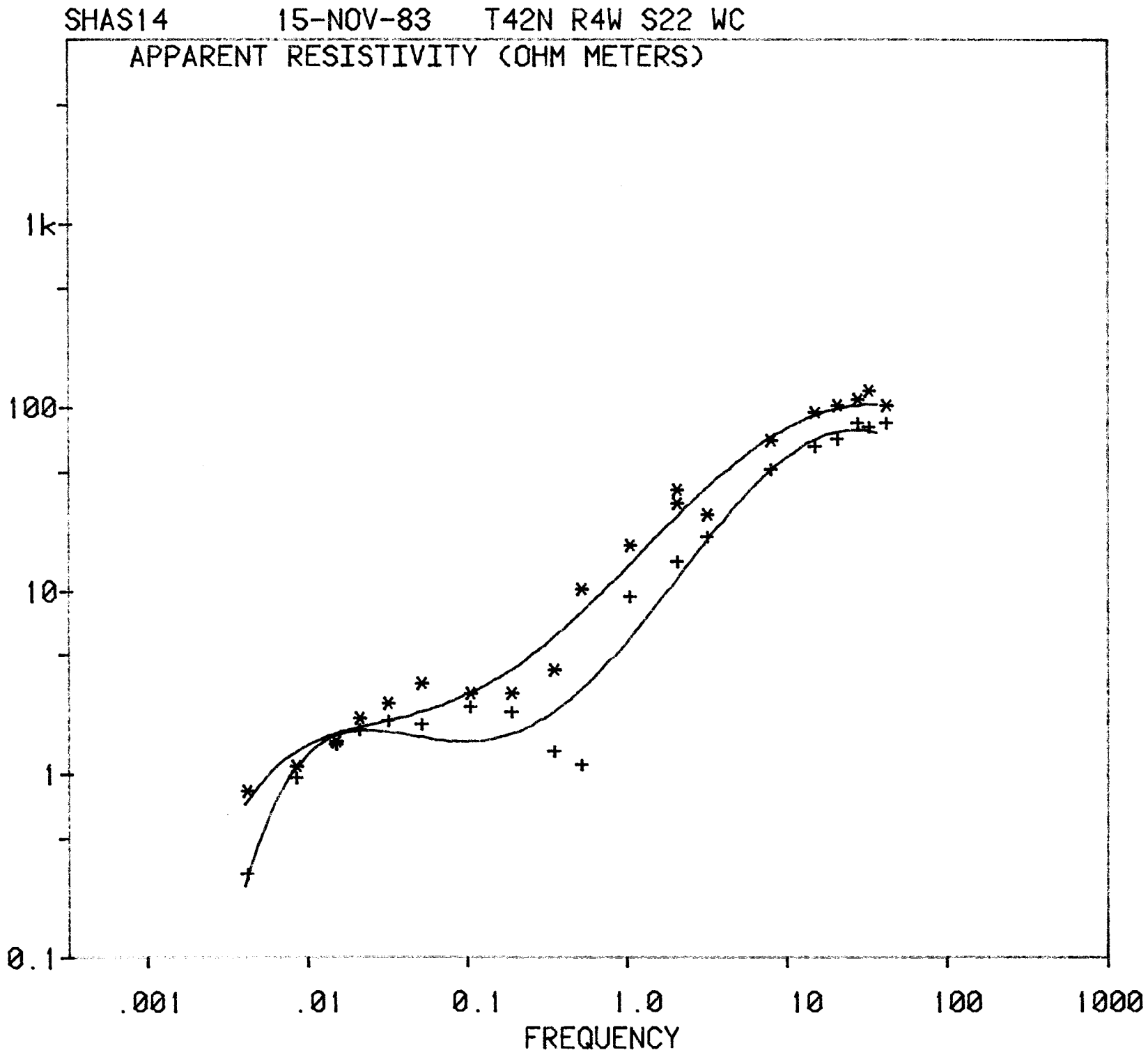
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.1000 | 0.4336E+02 | 0.9642E+01 | 70.6 | 14.3 | 84.68 | 0.9893 | 0.9562 | 0.4045 |
| H | | 0.3585E+02 | 0.7040E+01 | 73.6 | 18.3 | 79.51 | 0.9898 | 0.9608 | 14.40 |
| E | 0.1818 | 0.4433E+02 | 0.8928E+01 | 3.2 | 32.2 | 90.00 | 0.9392 | 0.8599 | 0.4795 |
| H | | 0.3014E+02 | 0.4861E+01 | 88.2 | 38.6 | 83.20 | 0.9411 | 0.8702 | 22.30 |
| E | 0.3333 | 0.9375E+03 | 0.5433E+02 | 8.2 | 38.3 | 79.29 | 0.0609 | 0.7676 | 1.6019 |
| H | | 0.1719E+02 | 0.3446E+01 | 34.0 | 10.7 | 111.41 | 0.0000 | 0.0000 | 130.30 |
| E | 0.5000 | 0.9013E+02 | 0.2282E+02 | 41.8 | 56.1 | 99.05 | 0.9329 | 0.9321 | 0.5184 |
| H | | 0.3762E+02 | 0.1623E+02 | 41.0 | 62.3 | 79.04 | 0.9418 | 0.9412 | 14.00 |
| E | 0.5988 | 0.1046E+03 | 0.4080E+02 | 52.7 | 34.1 | 119.03 | 0.9205 | 0.7953 | 0.6131 |
| H | | 0.5327E+02 | 0.1403E+02 | 37.3 | 54.8 | 77.62 | 0.9266 | 0.8275 | 18.70 |
| E | 0.8000 | 0.1206E+03 | 0.2412E+02 | 51.1 | 55.2 | 100.61 | 0.9340 | 0.9262 | 0.4907 |
| H | | 0.6965E+02 | 0.1882E+02 | 46.4 | 60.4 | 89.00 | 0.9390 | 0.9320 | 1.40 |
| E | 1.0000 | 0.1540E+03 | 0.2508E+02 | 51.2 | 58.5 | 100.16 | 0.9720 | 0.9655 | 0.5161 |
| H | | 0.9830E+02 | 0.2163E+02 | 50.5 | 58.6 | 91.24 | 0.9789 | 0.9734 | 8.70 |

AVERAGE # 8
SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

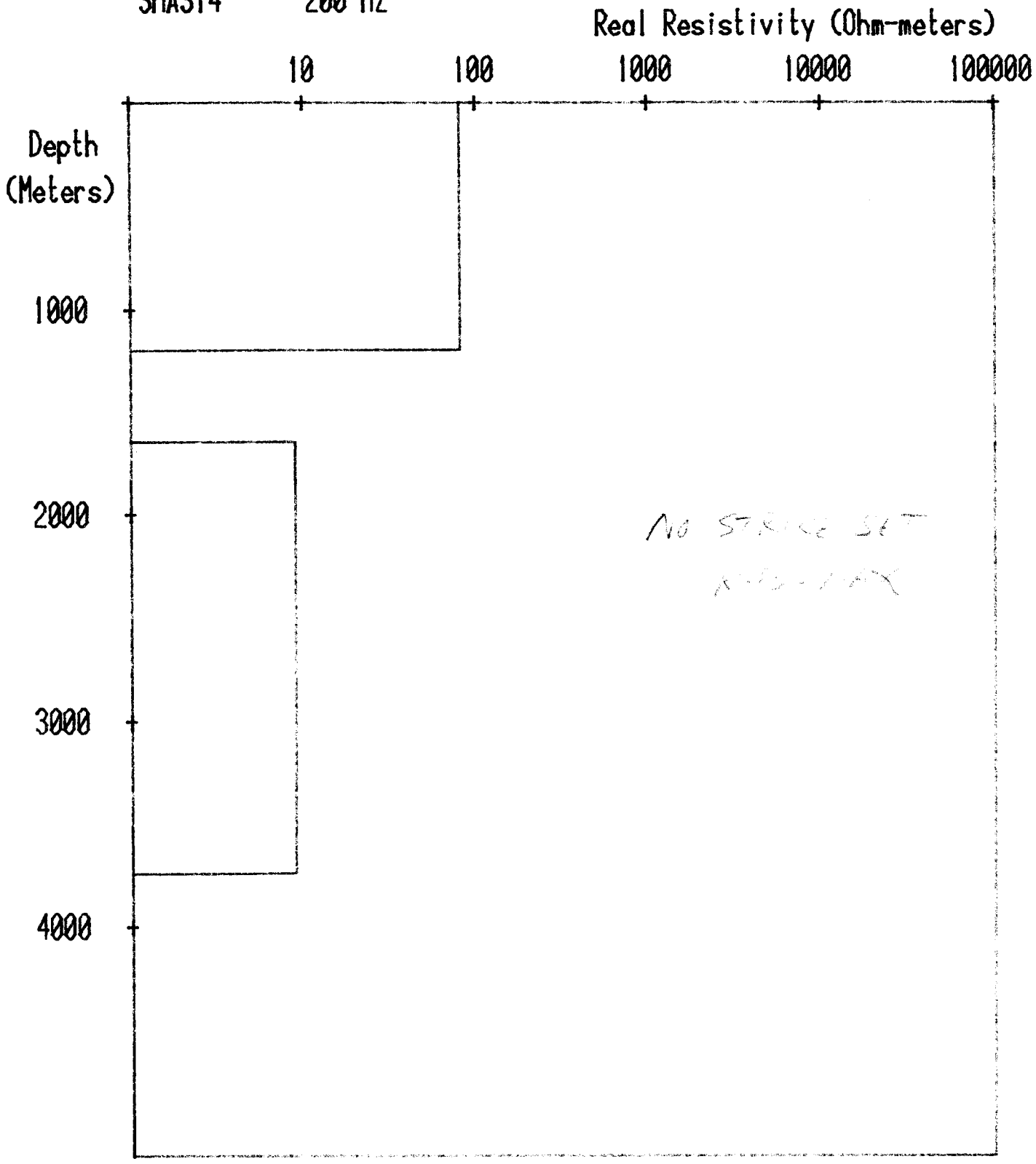
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 1.0000 | 0.1330E+03 | 0.2280E+02 | 46.6 | 61.4 | 99.69 | 0.9715 | 0.9622 | 0.4269 |
| H | | 0.8756E+02 | 0.1843E+02 | 44.0 | 63.3 | 91.73 | 0.9741 | 0.9664 | 17.10 |
| E | 1.2048 | 0.1696E+03 | 0.2518E+02 | 48.7 | 59.5 | 99.56 | 0.9252 | 0.9520 | 0.4706 |
| H | | 0.7949E+02 | 0.2045E+02 | 46.8 | 61.0 | 89.63 | 0.9376 | 0.9595 | 4.20 |
| E | 1.4925 | 0.4713E+03 | 0.3674E+02 | 48.0 | 53.5 | 110.48 | 0.8581 | 0.8551 | 0.7698 |
| H | | 0.1629E+03 | 0.2860E+02 | 47.0 | 53.4 | 102.02 | 0.8872 | 0.8844 | 162.80 |
| E | 2.0000 | 0.4209E+03 | 0.3870E+02 | 48.0 | 54.9 | 109.95 | 0.8817 | 0.8890 | 0.7712 |
| H | | 0.1935E+03 | 0.3349E+02 | 46.3 | 56.2 | 104.07 | 0.8957 | 0.9032 | 165.50 |
| E | 2.0000 | 0.3558E+03 | 0.3788E+02 | 45.4 | 52.3 | 111.18 | 0.9270 | 0.9010 | 0.8507 |
| H | | 0.1885E+03 | 0.3118E+02 | 44.4 | 54.0 | 104.89 | 0.9351 | 0.9102 | 166.40 |
| E | 2.0000 | 0.2146E+03 | 0.3952E+02 | 46.1 | 56.5 | 106.95 | 0.9496 | 0.9080 | 0.5573 |
| H | | 0.1387E+03 | 0.2948E+02 | 42.8 | 59.6 | 98.02 | 0.9536 | 0.9150 | 1.60 |

AVERAGE # 8
SHAS13 200 HZ 14-NOV-83 T42N R4W S7 NE
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

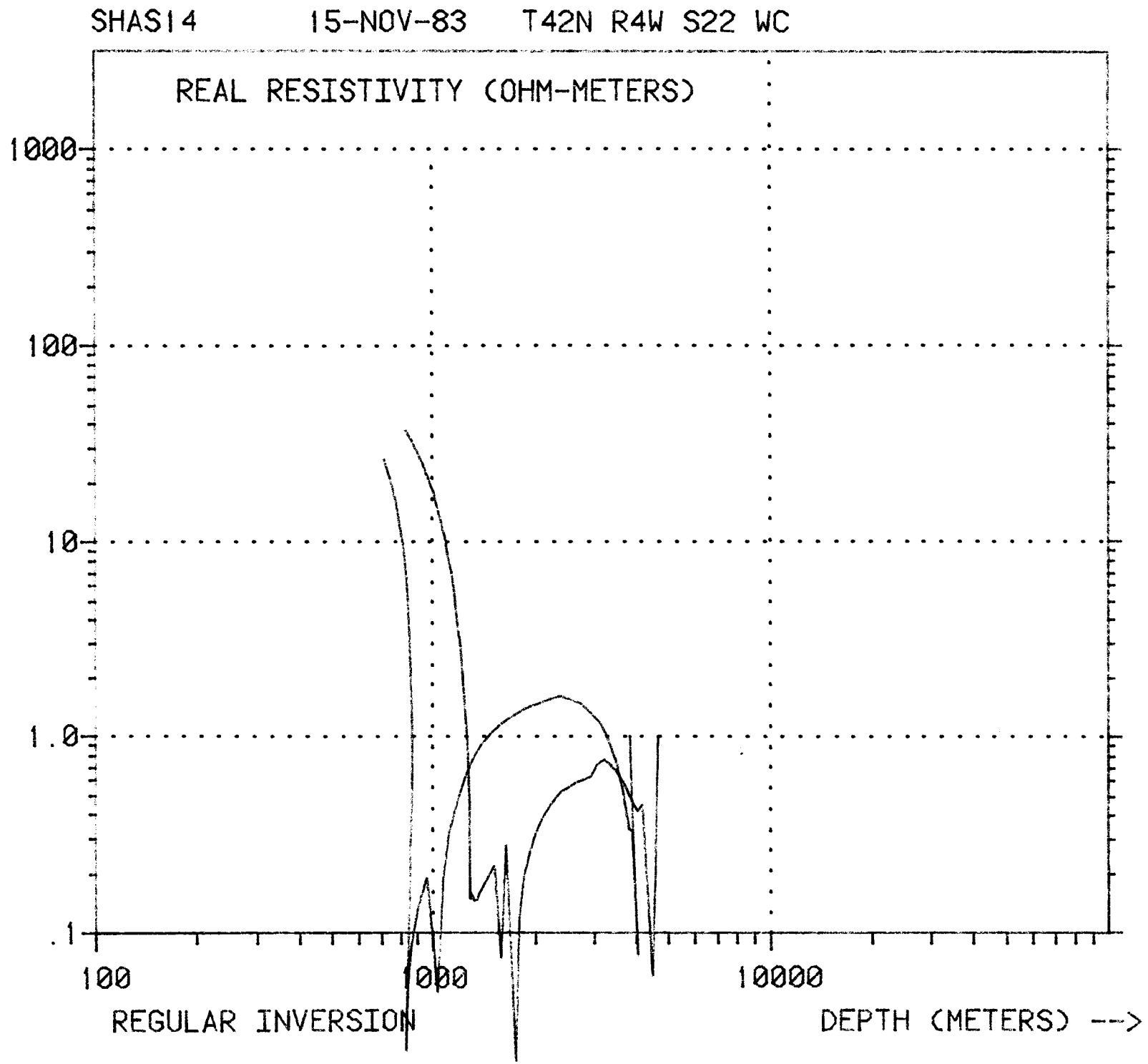
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 3.0303 | 0.3197E+03 | 0.3660E+02 | 48.0 | 60.8 | 108.54 | 1.0166 | 0.9965 | 0.7323 |
| H | | 0.2614E+03 | 0.4801E+02 | 34.1 | 75.7 | 83.21 | 1.1152 | 1.0969 | 178.80 |
| E | 3.0303 | 0.3771E+03 | 0.3977E+02 | 41.4 | 56.4 | 110.72 | 0.8870 | 0.9003 | 0.7727 |
| H | | 0.1882E+03 | 0.3444E+02 | 40.4 | 57.1 | 106.13 | 0.8966 | 0.9103 | 160.90 |
| E | 7.6923 | 0.1179E+03 | 0.6733E+02 | 43.8 | 65.4 | 100.84 | 0.9848 | 0.9910 | 0.2708 |
| H | | 0.1100E+03 | 0.6546E+02 | 43.7 | 65.5 | 100.24 | 0.9848 | 0.9911 | 23.60 |
| E | 14.2857 | 0.1111E+03 | 0.8440E+02 | 43.9 | 64.4 | 103.55 | 0.9758 | 0.9858 | 0.2420 |
| H | | 0.1015E+03 | 0.7896E+02 | 43.9 | 64.4 | 103.72 | 0.9759 | 0.9858 | 27.10 |
| E | 20.0000 | 0.1096E+03 | 0.9135E+02 | 43.4 | 62.5 | 104.94 | 0.9338 | 0.9667 | 0.3153 |
| H | | 0.8522E+02 | 0.7721E+02 | 43.5 | 62.5 | 104.16 | 0.9343 | 0.9668 | 28.00 |
| E | 26.3158 | 0.1174E+03 | 0.1085E+03 | 44.2 | 62.8 | 106.99 | 0.8932 | 0.9607 | 0.3785 |
| H | | 0.9588E+02 | 0.7233E+02 | 62.7 | 43.9 | 9.03 | 0.8937 | 0.9609 | 28.00 |
| E | 31.2500 | 0.1296E+03 | 0.1050E+03 | 44.3 | 61.7 | 111.65 | 0.8582 | 0.9679 | 0.3652 |
| H | | 0.1009E+03 | 0.6576E+02 | 61.1 | 44.2 | 7.10 | 0.8584 | 0.9688 | 26.70 |
| | 40.0000 | 0.1247E+03 | 0.1024E+03 | 59.7 | 45.7 | 14.46 | 0.9212 | 0.9333 | 0.7177 |
| | | 0.9628E+02 | 0.6989E+02 | 60.3 | 45.4 | 15.68 | 0.9223 | 0.9342 | 26.10 |

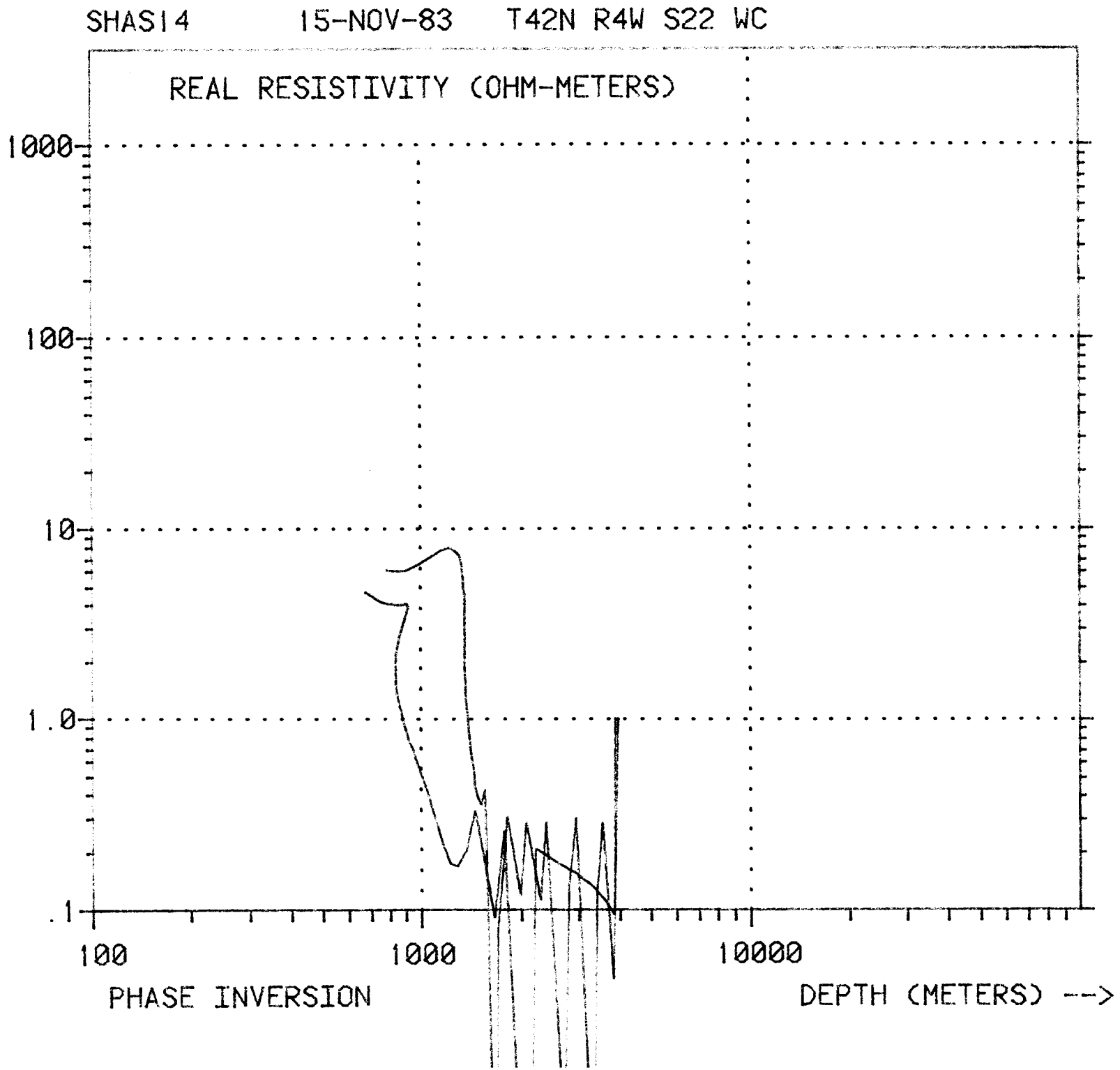

SHAS14 15-NOV-83 T42N R4W S22 WC
APPARENT RESISTIVITY (OHM METERS)
1k
100
10
1
0.1
.001
.01
0.1
1.0
10
100
1000
FREQUENCY

SHAS14 200 HZ

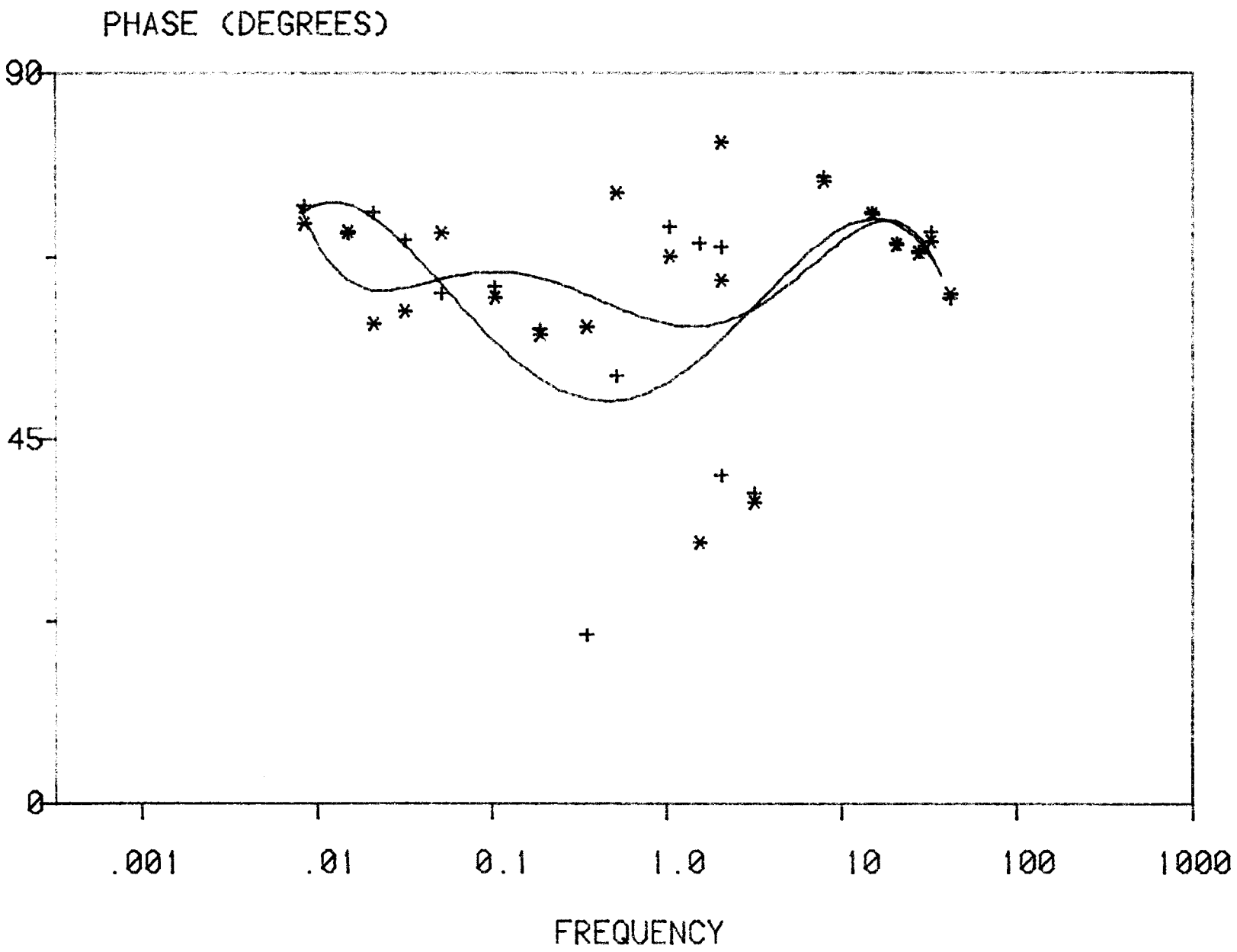



| | | | | |
|---|---|---|---|---|
| Resistivity | 81.26 | 0.34 | 8.99 | 0.07 |
| Thickness | | 1201.28 | 440.36 | 2101.29 |
| Depth | 0.00 | 1201.28 | 1641.65 | 3742.95 |


SHAS14 15-NOV-83 T42N R4W S22 WC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
REGULAR INVERSION
DEPTH (METERS) -->


SHAS14 15-NOV-83 T42N R4W S22 WC
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
PHASE INVERSION
DEPTH (METERS) -->

SHAS14 15-NOV-83 T42N R4W S22 WC



THE SITE IS: SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOMIN | MEAN OF RHOMAX | PERIOD # | STDEV OF RHOMI | STDEV OF RHOMAX |
|---|---|---|---|---|---|
| ~~0.0012~~ | ~~0.29~~ | ~~1.25~~ | ~~1~~ | 484.14 | 1380.09 |
| ~~0.0020~~ | ~~0.52~~ | ~~1.40~~ | ~~2~~ | 324.89 | 821.97 |
| 0.0040 | 0.27 | 0.76 | 3 | 90.62 | 348.97 |
| 0.0080 | 0.89 | 1.03 | 4 | 24.77 | 37.26 |
| 0.0143 | 1.36 | 1.43 | 5 | 19.55 | 9.34 |
| 0.0200 | 1.63 | 1.89 | 6 | 12.80 | 4.01 |
| 0.0303 | 1.82 | 2.29 | 7 | 6.39 | 4.31 |
| 0.0500 | 1.78 | 2.96 | 8 | 1.11 | 5.85 |
| 0.1000 | 2.18 | 2.60 | 9 | 1.51 | 2.77 |
| 0.1818 | 2.04 | 2.61 | 10 | 1.00 | 0.34 |
| 0.3333 | 1.25 | 3.49 | 11 | 0.31 | 0.67 |
| 0.5000 | 1.06 | 9.44 | 12 | 0.10 | 0.13 |
| ~~0.5988~~ | ~~9.04~~ | ~~11.08~~ | ~~13~~ | 0.48 | 0.47 |
| ~~0.8000~~ | ~~1.20~~ | ~~9.64~~ | ~~14~~ | 0.16 | 0.19 |
| ~~1.0000~~ | ~~1.39~~ | ~~9.27~~ | ~~15~~ | 0.02 | 0.11 |
| 1.0000 | 8.60 | 16.44 | 16 | 0.05 | 0.04 |
| ~~1.2048~~ | ~~4.42~~ | ~~40.80~~ | ~~17~~ | 0.04 | 0.27 |
| 1.4925 | 12.78 | 32.02 | 18 | 0.06 | 0.12 |
| 2.0000 | 13.35 | 27.92 | 19 | 0.04 | 0.07 |
| ~~2.0000~~ | ~~2.80~~ | ~~29.39~~ | ~~20~~ | 0.01 | 0.04 |
| 2.0000 | 13.46 | 32.75 | 21 | 0.02 | 0.05 |
| ~~3.0303~~ | ~~1.45~~ | ~~20.30~~ | ~~22~~ | 0.01 | 0.07 |
| 3.0303 | 18.37 | 24.04 | 23 | 0.02 | 0.04 |
| 7.6923 | 42.57 | 61.16 | 24 | 0.01 | 0.03 |
| 14.2857 | 56.79 | 86.64 | 25 | 0.02 | 0.02 |
| 20.0000 | 62.42 | 94.91 | 26 | 0.01 | 0.02 |
| 26.3158 | 76.66 | 102.60 | 27 | 0.01 | 0.01 |
| 31.2500 | 72.27 | 115.57 | 28 | 0.01 | 0.01 |
| 40.0000 | 76.58 | 94.60 | 29 | 0.00 | 0.00 |

AVERAGE # 8
SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( | RHO MIN OHM-M ) | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 800.0 | 0.161E+01 | 0.317E+00 | 67. | 35. | 26. | 0.9135 | 0.8693 | 0.1285 | 0.06 |
| H | SEC | 0.886E+00 | 0.257E+00 | 68. | 35. | 17. | 0.9290 | 0.8831 | 50.30 | 0.03 |
| E | 500.0 | 0.181E+01 | 0.686E+00 | 59. | 51. | 124. | 0.8480 | 0.9031 | 0.1250 | 0.41 |
| H | SEC | 0.982E+00 | 0.357E+00 | 58. | 58. | 114. | 0.8649 | 0.9197 | 42.10 | 0.27 |
| E | 250.0 | 0.811E+00 | 0.306E+00 | 58. | 7. | 102. | 0.9658 | 0.9723 | 0.0849 | 0.17 |
| H | SEC | 0.700E+00 | 0.231E+00 | 55. | 12. | 104. | 0.9687 | 0.9744 | 38.20 | 0.28 |
| E | 125.0 | 0.118E+01 | 0.104E+01 | 78. | 68. | 18. | 0.9146 | 0.9513 | 0.1029 | 0.07 |
| H | SEC | 0.882E+00 | 0.749E+00 | 66. | 80. | 96. | 0.9197 | 0.9551 | 74.40 | 0.11 |
| E | 70.0 | 0.156E+01 | 0.150E+01 | 63. | 79. | 87. | 0.9614 | 0.9439 | 0.1340 | 0.07 |
| H | SEC | 0.130E+01 | 0.122E+01 | 79. | 63. | 178. | 0.9622 | 0.9447 | 74.20 | 0.08 |
| E | 50.0 | 0.198E+01 | 0.174E+01 | 60. | 73. | 87. | 0.9719 | 0.9823 | 0.1503 | 0.04 |
| H | SEC | 0.180E+01 | 0.152E+01 | 60. | 73. | 88. | 0.9725 | 0.9827 | 69.30 | 0.05 |
| E | 33.0 | 0.252E+01 | 0.195E+01 | 61. | 70. | 68. | 0.9685 | 0.9754 | 0.1963 | 0.01 |
| H | SEC | 0.205E+01 | 0.169E+01 | 61. | 70. | 77. | 0.9699 | 0.9764 | 62.30 | 0.06 |
| E | 20.0 | 0.321E+01 | 0.184E+01 | 71. | 63. | 32. | 0.9719 | 0.9881 | 0.2119 | 0.11 |
| H | SEC | 0.270E+01 | 0.172E+01 | 70. | 63. | 35. | 0.9727 | 0.9882 | 61.90 | 0.12 |

AVERAGE # 8
SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 10.0 | 0.273E+01 | 0.225E+01 | 63. | 64. | 24. | 0.9765 | 0.9799 | 0.2188 | 0.05 |
| H | SEC | 0.248E+01 | 0.212E+01 | 63. | 64. | 20. | 0.9766 | 0.9799 | 57.40 | 0.04 |
| E | 5.5 | 0.344E+01 | 0.239E+01 | 52. | 66. | 29. | 0.8711 | 0.8722 | 0.1660 | 0.11 |
| H | SEC | 0.178E+01 | 0.169E+01 | 64. | 53. | 110. | 0.8776 | 0.8787 | 45.00 | 0.08 |
| E | 3.0 | 0.486E+01 | 0.169E+01 | 60. | 21. | 129. | 0.8284 | 0.8379 | 0.9846 | 0.17 |
| H | SEC | 0.213E+01 | 0.808E+00 | 59. | 22. | 129. | 0.8305 | 0.8396 | 52.00 | 0.17 |
| E | 2.0 | 0.182E+02 | 0.173E+01 | 81. | 90. | 119. | 0.7671 | 0.5249 | 0.5070 | 0.50 |
| H | SEC | 0.669E+00 | 0.394E+00 | 70. | 17. | 137. | 0.8358 | 0.6833 | 53.00 | 0.26 |
| E | 1.7 | 0.173E+02 | 0.162E+02 | 18. | 73. | 77. | 0.6208 | 0.6096 | 0.3809 | 0.47 |
| H | SEC | 0.487E+01 | 0.187E+01 | 20. | 4. | 57. | 0.7059 | 0.6964 | 43.30 | 0.64 |
| E | 1.2 | 0.146E+02 | 0.206E+01 | 9. | 74. | 58. | 0.8721 | 0.5903 | 0.3342 | 0.30 |
| H | SEC | 0.471E+01 | 0.344E+00 | 90. | 79. | 40. | 0.8758 | 0.6100 | 33.70 | 0.27 |
| E | 1.0 | 0.175E+02 | 0.231E+01 | 60. | 75. | 122. | 0.7395 | 0.4762 | 0.4644 | 0.61 |
| H | HZ | 0.102E+01 | 0.480E+00 | 60. | 1. | 132. | 0.7489 | 0.4909 | 34.50 | 0.26 |

AVERAGE # 8
SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 1.0 | 0.231E+02 | 0.951E+01 | 69. | 70. | 43. | 0.8954 | 0.8843 | 0.1300 | 0.05 |
| H | HZ | 0.978E+01 | 0.769E+01 | 67. | 73. | 11. | 0.9075 | 0.8974 | 3.00 | 0.12 |
| E | 1.2 | 0.676E+02 | 0.709E+01 | 58. | 74. | 40. | 0.6282 | 0.7399 | 0.5403 | 0.29 |
| H | HZ | 0.140E+02 | 0.175E+01 | 59. | 71. | 50. | 0.6295 | 0.7458 | 73.20 | 0.29 |
| E | 1.5 | 0.495E+02 | 0.174E+02 | 32. | 69. | 179. | 0.7424 | 0.8325 | 0.2578 | 0.37 |
| H | HZ | 0.146E+02 | 0.815E+01 | 33. | 70. | 174. | 0.7467 | 0.8373 | 39.70 | 0.35 |
| E | 2.0 | 0.385E+02 | 0.161E+02 | 90. | 76. | 19. | 0.8156 | 0.9206 | 0.0932 | 0.14 |
| H | HZ | 0.174E+02 | 0.106E+02 | 74. | 6. | 72. | 0.8218 | 0.9206 | 49.50 | 0.17 |
| E | 2.0 | 0.489E+02 | 0.533E+01 | 89. | 72. | 120. | 0.6480 | 0.5042 | 0.1009 | 0.91 |
| H | HZ | 0.988E+01 | 0.276E+00 | 83. | 86. | 130. | 0.7258 | 0.5430 | 105.60 | 0.48 |
| E | 2.0 | 0.441E+02 | 0.159E+02 | 65. | 69. | 42. | 0.9020 | 0.8541 | 0.3429 | 0.06 |
| H | HZ | 0.214E+02 | 0.110E+02 | 65. | 69. | 31. | 0.9067 | 0.8604 | 11.90 | 0.08 |

AVERAGE # 8
SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ OR PERIOD | RHO MAX VALUE ( OHM-M ) | RHO MIN | PHI MAX (DEGREES) | PHI MIN | THETA (MAX) (E OF N) | PREDEX | PREDEY | TIPPER MAG/ DIR | SKEW |
|---|---|---|---|---|---|---|---|---|---|---|
| E | 3.0 | 0.239E+02 | 0.271E+01 | 81. | 5. | 143. | 0.5898 | 0.6507 | 0.0974 | 0.14 |
| H | HZ | 0.167E+02 | 0.190E+00 | 80. | 83. | 137. | 0.6812 | 0.7626 | 108.90 | 0.31 |
| E | 3.0 | 0.268E+02 | 0.235E+02 | 7. | 68. | 172. | 0.8934 | 0.9792 | 0.0886 | 0.21 |
| H | HZ | 0.213E+02 | 0.133E+02 | 68. | 10. | 78. | 0.9030 | 0.9793 | 46.50 | 0.26 |
| E | 7.7 | 0.643E+02 | 0.443E+02 | 77. | 78. | 44. | 0.9704 | 0.9853 | 0.1775 | 0.04 |
| H | HZ | 0.580E+02 | 0.408E+02 | 77. | 78. | 49. | 0.9705 | 0.9853 | -2.50 | 0.04 |
| E | 14.3 | 0.920E+02 | 0.640E+02 | 73. | 73. | 50. | 0.9482 | 0.9708 | 0.3369 | 0.02 |
| H | HZ | 0.813E+02 | 0.495E+02 | 73. | 73. | 55. | 0.9489 | 0.9709 | 147.90 | 0.02 |
| E | 20.0 | 0.104E+03 | 0.762E+02 | 69. | 70. | 45. | 0.9139 | 0.9569 | 0.4688 | 0.02 |
| H | HZ | 0.856E+02 | 0.486E+02 | 70. | 69. | 58. | 0.9165 | 0.9571 | 121.70 | 0.00 |
| E | 26.3 | 0.129E+03 | 0.931E+02 | 71. | 66. | 45. | 0.8914 | 0.8699 | 2.6958 | 0.07 |
| H | HZ | 0.759E+02 | 0.602E+02 | 66. | 71. | 18. | 0.8967 | 0.8748 | 57.60 | 0.07 |
| E | 31.2 | 0.153E+03 | 0.103E+03 | 78. | 62. | 49. | 0.8533 | 0.7442 | 0.6485 | 0.13 |
| H | HZ | 0.780E+02 | 0.415E+02 | 62. | 80. | 176. | 0.8752 | 0.7587 | 12.70 | 0.15 |
| E | 40.0 | 0.130E+03 | 0.102E+03 | 63. | 63. | 49. | 0.8356 | 0.8197 | 0.9566 | 0.00 |
| H | HZ | 0.588E+02 | 0.507E+02 | 64. | 63. | 34. | 0.8362 | 0.8203 | 9.20 | 0.03 |

THE NUMBER OF LAYERS = 4
THE NUMBER OF FREQUENCIES TAKEN = 21
THE FLAG FOR THIS RUN IS 2
THE PHASE CODE IS 0

THE INITIAL MODEL IS

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 100.0000 | | 0.0000 |
| | | 1000.0000 | |
| 2 | 1.0000 | | 1000.0000 |
| | | 1000.0000 | |
| 3 | 10.0000 | | 2000.0000 |
| | | 3000.0000 | |
| 4 | 1.0000 | | 5000.0000 |

FREQUENCY RANGE ( 0.0040 , 40.0000 )

FINAL MODEL AFTER INVERSION

| I | RO(I) | H(I) | DEPTH |
|---|---|---|---|
| 1 | 81.2655 | | 0.0000 |
| | | 1201.2860 | |
| 2 | 0.3404 | | 1201.2860 |
| | | 440.3679 | |
| 3 | 8.9926 | | 1641.6538 |
| | | 2101.2982 | |
| 4 | 0.0732 | | 3742.9520 |

MEAN PERCENT VARIATION IS 21.2137

ERROR ANALYSIS

R-SQUARED = 0.999

ANALYSIS OF VARIANCE

| SOURCE | DF | SS | MS | F |
|---|---|---|---|---|
| TOTAL | 20 | 32457.891 | 1622.895 | 0.300 |
| MODEL | 6 | 32435.601 | 5405.933 | 80084.196 |
| RESID | 14 | 0.945 | 0.068 | |

STANDARD ERROR = 0.260

DTEST FOR MEANS = -0.000

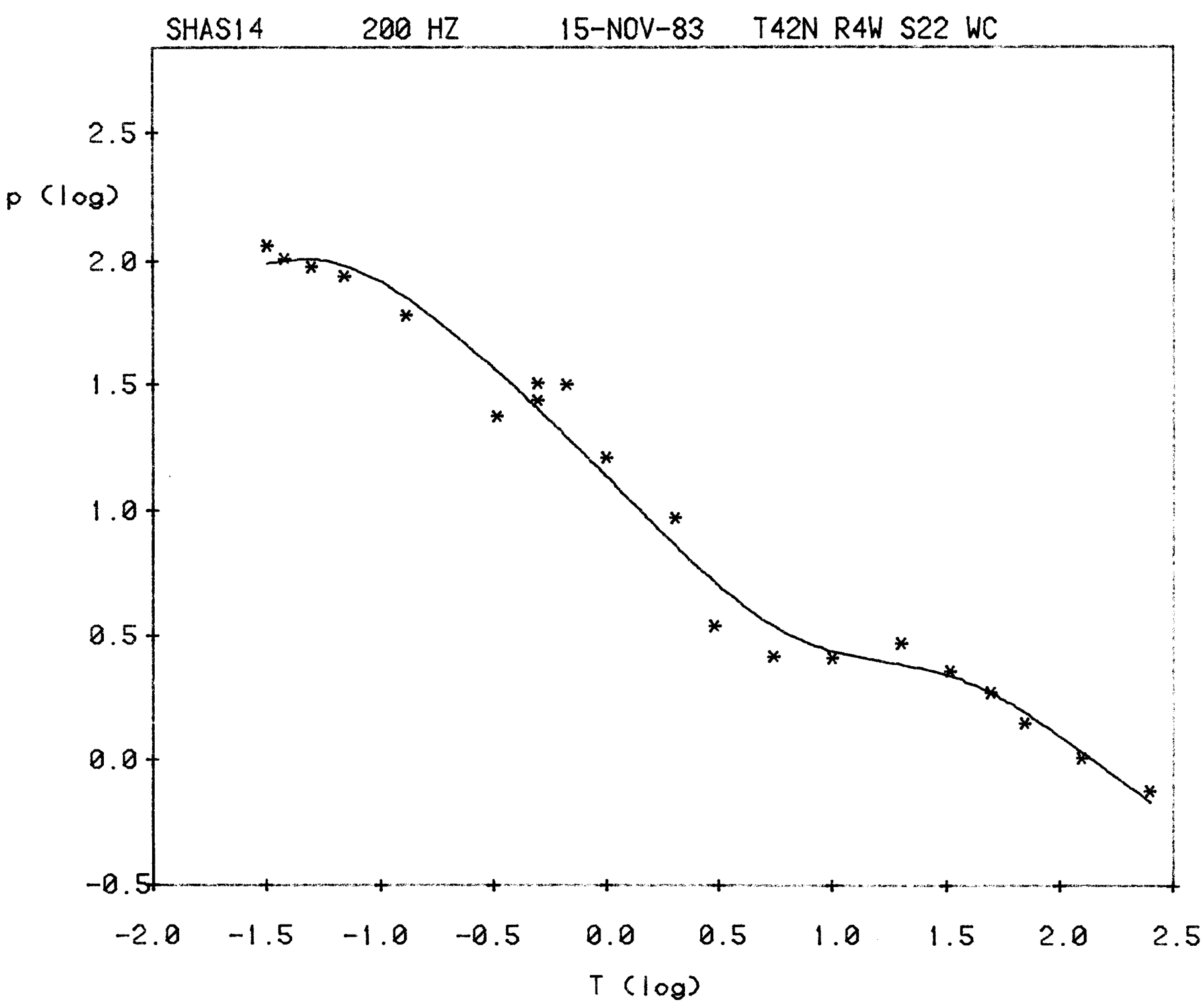
NOISE TO SIGNAL RATIO = 0.353 PERCENT

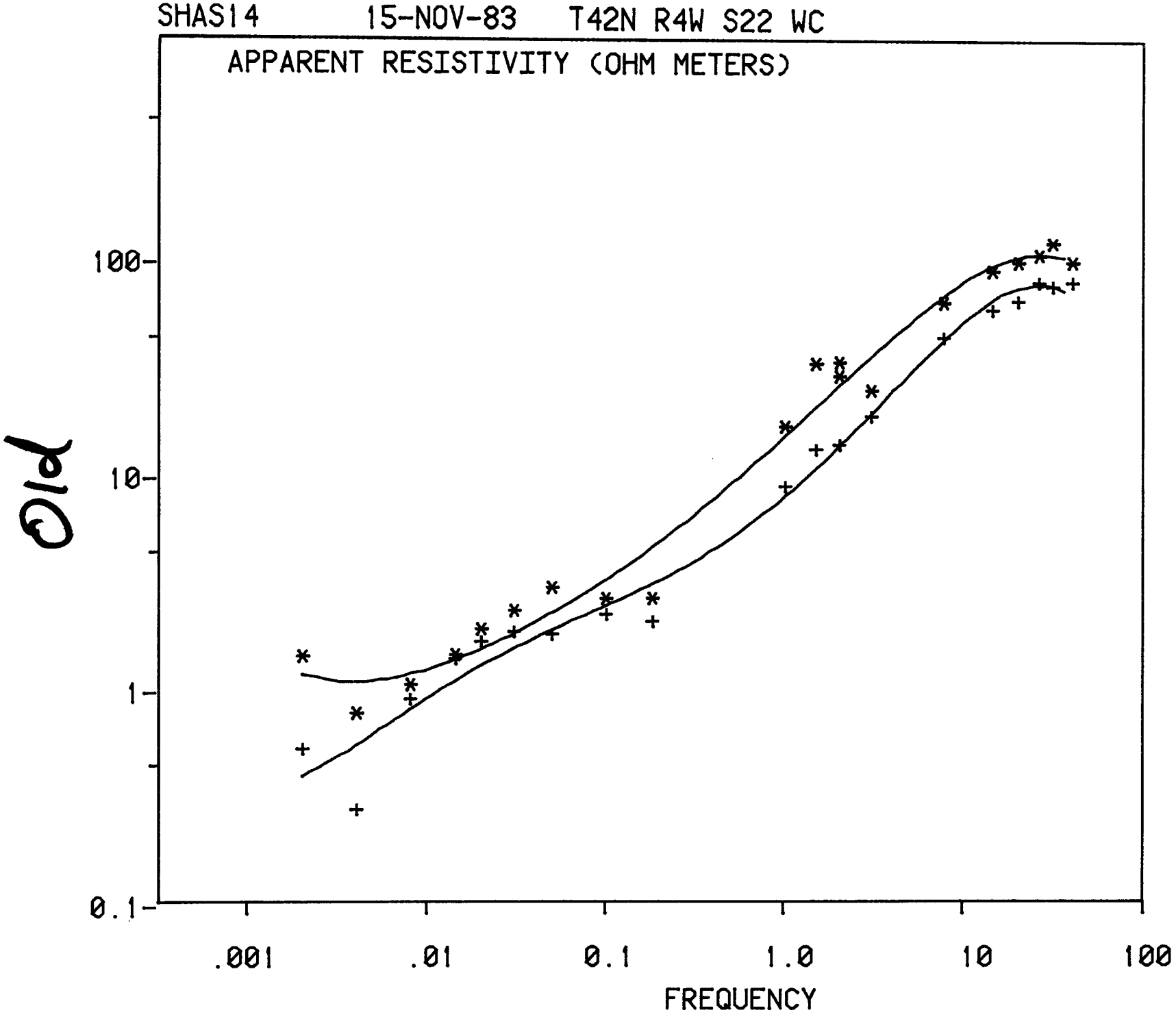
SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC

ERROR STRUCTURE OF FITTED MODEL

| I | T(I) | R(I) | RAP(I) | ERR | PERCENT |
|---|---|---|---|---|---|
| 1 | 250.000 | 0.756 | 0.692 | 0.064 | 8.912 |
| 2 | 125.000 | 1.029 | 1.105 | -0.076 | -7.128 |
| 3 | 70.000 | 1.430 | 1.593 | -0.164 | -10.824 |
| 4 | 50.000 | 1.892 | 1.903 | -0.011 | -0.561 |
| 5 | 33.000 | 2.288 | 2.234 | 0.054 | 2.398 |
| 6 | 20.000 | 2.958 | 2.465 | 0.493 | 18.173 |
| 7 | 10.000 | 2.605 | 2.693 | -0.088 | -3.323 |
| 8 | 5.500 | 2.611 | 3.393 | -0.782 | -26.036 |
| 9 | 3.000 | 3.495 | 5.199 | -1.704 | -39.204 |
| 10 | 2.000 | 9.439 | 7.370 | 2.069 | 24.622 |
| 11 | 1.000 | 16.437 | 13.868 | 2.568 | 16.949 |
| 12 | 0.670 | 32.015 | 19.912 | 12.103 | 46.614 |
| 13 | 0.500 | 27.921 | 25.783 | 2.138 | 7.963 |
| 14 | 0.500 | 32.746 | 25.783 | 6.963 | 23.794 |
| 15 | 0.330 | 24.040 | 36.864 | -12.824 | -42.112 |
| 16 | 0.130 | 61.160 | 75.071 | -13.911 | -20.423 |
| 17 | 0.070 | 86.640 | 98.873 | -12.233 | -13.188 |
| 18 | 0.050 | 94.915 | 102.788 | -7.873 | -7.965 |
| 19 | 0.038 | 102.599 | 100.424 | 2.175 | 2.142 |
| 20 | 0.032 | 115.567 | 97.210 | 18.357 | 17.255 |
| 21 | 0.025 | 94.597 | 91.697 | 2.900 | 3.114 |

MEAN PERCENT ERROR = 21.0062
MAXIMUM PERCENT ERROR = 46.6145
MAX. ERROR OCCURED AT OBSERVATION 12


SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC
p (log)
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
T (log)


SHAS14 15-NOV-83 T42N R4W S22 WC
APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.001
.01
0.1
1.0
10
100
FREQUENCY
Old

THE SITE IS: SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOYN | MEAN OF RHOXX | PERIOD # |
|---|---|---|---|
| 0.0012 | 0.29 | 1.25 | 1 |
| 0.0020 | 0.52 | 1.40 | 2 |
| 0.0040 | 0.27 | 0.76 | 3 |
| 0.0080 | 0.89 | 1.03 | 4 |
| 0.0143 | 1.36 | 1.43 | 5 |
| 0.0200 | 1.63 | 1.89 | 6 |
| 0.0303 | 1.82 | 2.29 | 7 |
| 0.0500 | 1.78 | 2.96 | 8 |
| 0.1000 | 2.18 | 2.60 | 9 |
| 0.1818 | 2.04 | 2.61 | 10 |
| 0.3333 | 1.25 | 3.49 | 11 |
| 0.5000 | 1.06 | 9.44 | 12 |
| 0.5988 | 9.04 | 11.08 | 13 |
| 0.8000 | 1.20 | 9.64 | 14 |
| 1.0000 | 1.39 | 9.27 | 15 |
| 1.0000 | 8.60 | 16.44 | 16 |
| 1.2048 | 4.42 | 40.80 | 17 |
| 1.4925 | 12.78 | 32.02 | 18 |
| 2.0000 | 13.35 | 27.92 | 19 |
| 2.0000 | 2.80 | 29.39 | 20 |
| 2.0000 | 13.46 | 32.75 | 21 |
| 3.0303 | 1.45 | 20.30 | 22 |
| 3.0303 | 18.37 | 24.04 | 23 |
| 7.6923 | 42.57 | 61.16 | 24 |
| 14.2857 | 56.79 | 86.64 | 25 |
| 20.0000 | 62.42 | 94.91 | 26 |
| 26.3158 | 76.66 | 102.60 | 27 |
| 31.2500 | 72.27 | 115.57 | 28 |
| 40.0000 | 76.58 | 94.60 | 29 |

AVERAGE # 8
SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN VALUE ( OHM-M ) | RHO-MAX PHASE (DEGREES) | RHO-MIN PHASE (DEGREES) | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.0012 | 0.1607E+01 | 0.3173E+00 | 70.9 | 38.8 | 115.51 | 0.9136 | 0.8694 | 0.1285 |
| H | | 0.8862E+00 | 0.2573E+00 | 71.5 | 38.7 | 107.19 | 0.9290 | 0.8832 | 50.30 |
| E | 0.0020 | 0.1813E+01 | 0.6857E+00 | 65.1 | 57.1 | 33.50 | 0.8481 | 0.9032 | 0.1250 |
| H | | 0.9824E+00 | 0.3570E+00 | 63.2 | 63.9 | 24.26 | 0.8650 | 0.9198 | 42.10 |
| E | 0.0040 | 0.8115E+00 | 0.3064E+00 | 69.4 | 17.9 | 11.73 | 0.9658 | 0.9723 | 0.0849 |
| H | | 0.7005E+00 | 0.2314E+00 | 66.6 | 23.0 | 14.37 | 0.9688 | 0.9745 | 38.20 |
| E | 0.0080 | 0.1175E+01 | 0.1039E+01 | 10.0 | 0.3 | 108.21 | 0.9147 | 0.9514 | 0.1029 |
| H | | 0.8824E+00 | 0.7490E+00 | 88.5 | 12.7 | 6.38 | 0.9197 | 0.9552 | 74.40 |
| E | 0.0143 | 0.1562E+01 | 0.1501E+01 | 11.6 | 28.0 | 176.89 | 0.9615 | 0.9439 | 0.1340 |
| H | | 0.1297E+01 | 0.1222E+01 | 28.1 | 11.6 | 87.92 | 0.9623 | 0.9448 | 74.20 |
| E | 0.0200 | 0.1984E+01 | 0.1741E+01 | 22.4 | 35.9 | 177.46 | 0.9719 | 0.9823 | 0.1503 |
| H | | 0.1800E+01 | 0.1523E+01 | 22.3 | 36.1 | 177.85 | 0.9725 | 0.9827 | 69.30 |
| E | 0.0303 | 0.2524E+01 | 0.1947E+01 | 45.2 | 53.7 | 157.93 | 0.9685 | 0.9755 | 0.1963 |
| H | | 0.2052E+01 | 0.1689E+01 | 44.9 | 53.8 | 166.61 | 0.9700 | 0.9765 | 62.30 |
| E | 0.0500 | 0.3213E+01 | 0.1839E+01 | 83.1 | 75.5 | 122.36 | 0.9720 | 0.9882 | 0.2119 |
| H | | 0.2703E+01 | 0.1719E+01 | 82.6 | 75.6 | 125.32 | 0.9727 | 0.9883 | 61.90 |

AVERAGE # 8
CHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN VALUE ( OHM-M ) | RHO-MAX PHASE(DEGREES) | RHO-MIN PHASE(DEGREES) | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.1000 | 0.2733E+01 | 0.2251E+01 | 18.9 | 20.1 | 113.91 | 0.9766 | 0.9799 | 0.2188 |
| H | | 0.2476E+01 | 0.2119E+01 | 18.7 | 20.4 | 110.39 | 0.9766 | 0.9800 | 57.40 |
| E | 0.1818 | 0.3438E+01 | 0.2392E+01 | 27.0 | 40.6 | 119.15 | 0.8712 | 0.8722 | 0.1660 |
| H | | 0.1784E+01 | 0.1686E+01 | 39.4 | 27.5 | 19.79 | 0.8776 | 0.8787 | 45.00 |
| E | 0.3333 | 0.4859E+01 | 0.1685E+01 | 45.8 | 6.7 | 38.89 | 0.8284 | 0.8380 | 0.9846 |
| H | | 0.2130E+01 | 0.8080E+00 | 45.2 | 7.8 | 38.75 | 0.8305 | 0.8396 | 52.00 |
| E | 0.5000 | 0.1821E+02 | 0.1734E+01 | 72.1 | 80.7 | 29.05 | 0.7671 | 0.5249 | 0.5070 |
| H | | 0.6686E+00 | 0.3943E+00 | 60.7 | 7.4 | 46.70 | 0.8359 | 0.6834 | 53.00 |
| E | 0.5988 | 0.1729E+02 | 0.1620E+02 | 10.2 | 65.6 | 166.90 | 0.6209 | 0.6096 | 0.3809 |
| H | | 0.4871E+01 | 0.1875E+01 | 12.0 | 86.7 | 146.69 | 0.7060 | 0.6964 | 43.30 |
| E | 0.8000 | 0.1457E+02 | 0.2061E+01 | 3.0 | 68.5 | 148.42 | 0.8721 | 0.5904 | 0.3343 |
| H | | 0.4710E+01 | 0.3442E+00 | 83.9 | 72.8 | 129.62 | 0.8759 | 0.6100 | 33.60 |
| E | 1.0000 | 0.1752E+02 | 0.2308E+01 | 55.1 | 70.5 | 32.39 | 0.7396 | 0.4763 | 0.4644 |
| H | | 0.1024E+01 | 0.4795E+00 | 55.3 | 86.4 | 41.55 | 0.7489 | 0.4909 | 34.50 |

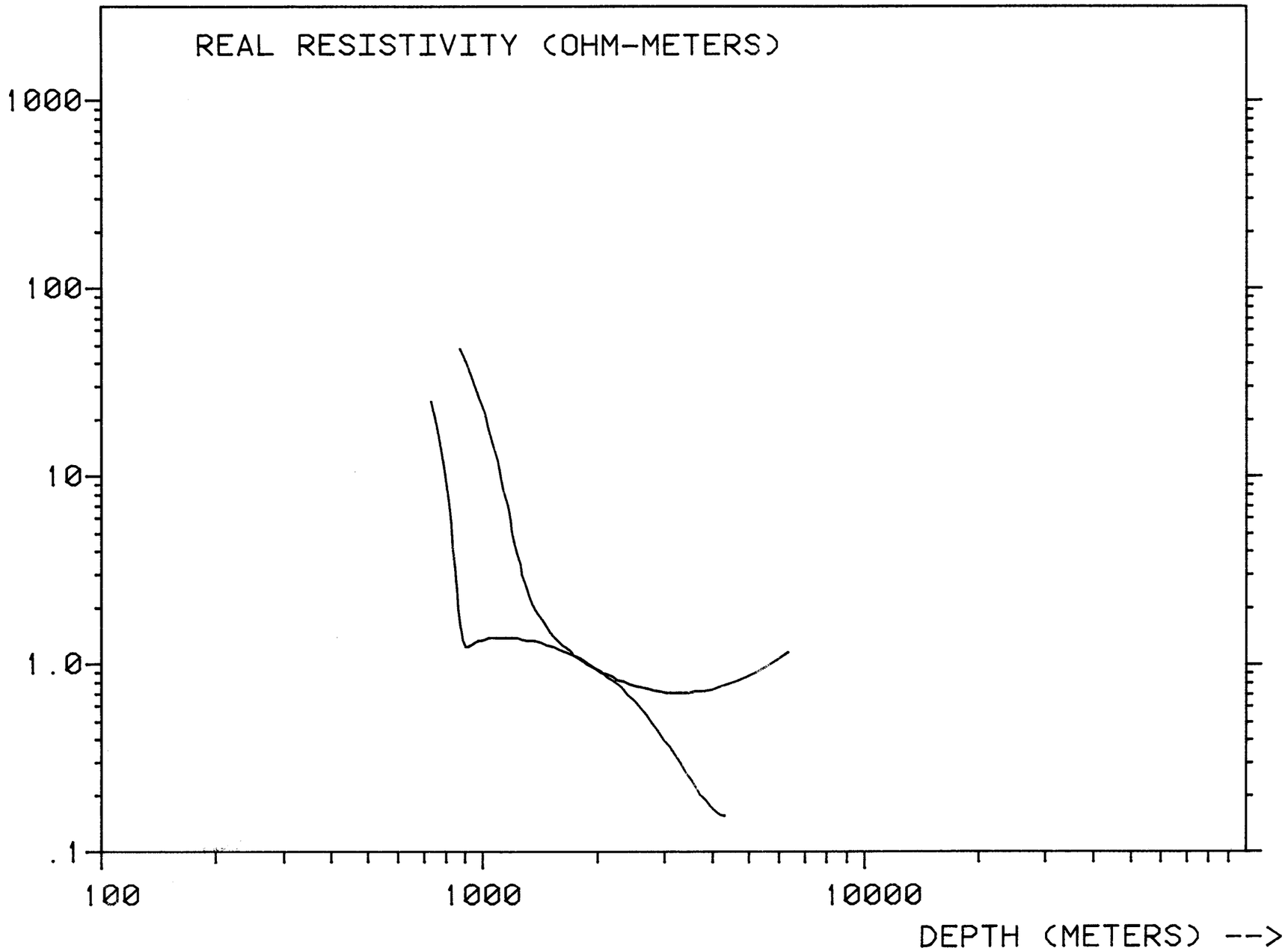
AVERAGE # 8
SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN VALUE ( OHM-M ) | RHO-MAX PHASE (DEGREES) | RHO-MIN PHASE (DEGREES) | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 1.0000 | 0.2309E+02 | 0.9508E+01 | 64.5 | 65.2 | 132.95 | 0.8954 | 0.8844 | 0.1300 |
| H | | 0.9783E+01 | 0.7689E+01 | 62.1 | 68.6 | 100.71 | 0.9075 | 0.8975 | 3.00 |
| E | 1.2048 | 0.6759E+02 | 0.7088E+01 | 54.6 | 69.7 | 130.13 | 0.6283 | 0.7399 | 0.5403 |
| H | | 0.1402E+02 | 0.1750E+01 | 55.7 | 67.3 | 139.73 | 0.6295 | 0.7459 | 73.20 |
| E | 1.4925 | 0.4946E+02 | 0.1740E+02 | 28.8 | 65.5 | 88.95 | 0.7425 | 0.8326 | 0.2578 |
| H | | 0.1457E+02 | 0.8147E+01 | 30.2 | 67.3 | 83.77 | 0.7467 | 0.8373 | 39.70 |
| E | 2.0000 | 0.3848E+02 | 0.1606E+02 | 87.5 | 74.0 | 109.36 | 0.8157 | 0.9206 | 0.0932 |
| H | | 0.1736E+02 | 0.1064E+02 | 71.7 | 3.5 | 162.22 | 0.8219 | 0.9207 | 49.40 |
| E | 2.0000 | 0.4891E+02 | 0.5328E+01 | 86.7 | 69.8 | 29.96 | 0.6481 | 0.5043 | 0.1009 |
| H | | 0.9878E+01 | 0.2756E+00 | 81.1 | 83.4 | 40.46 | 0.7259 | 0.5430 | 105.60 |
| E | 2.0000 | 0.4406E+02 | 0.1590E+02 | 62.6 | 67.0 | 131.81 | 0.9021 | 0.8542 | 0.3429 |
| H | | 0.2143E+02 | 0.1102E+02 | 62.9 | 66.6 | 120.96 | 0.9067 | 0.8605 | 11.90 |

AVERAGE # 8
SHAS14 200 HZ 15-NOV-83 T42N R4W S22 WC
NSAMP = 1024 SI = 0.0050 TO = 5.1200

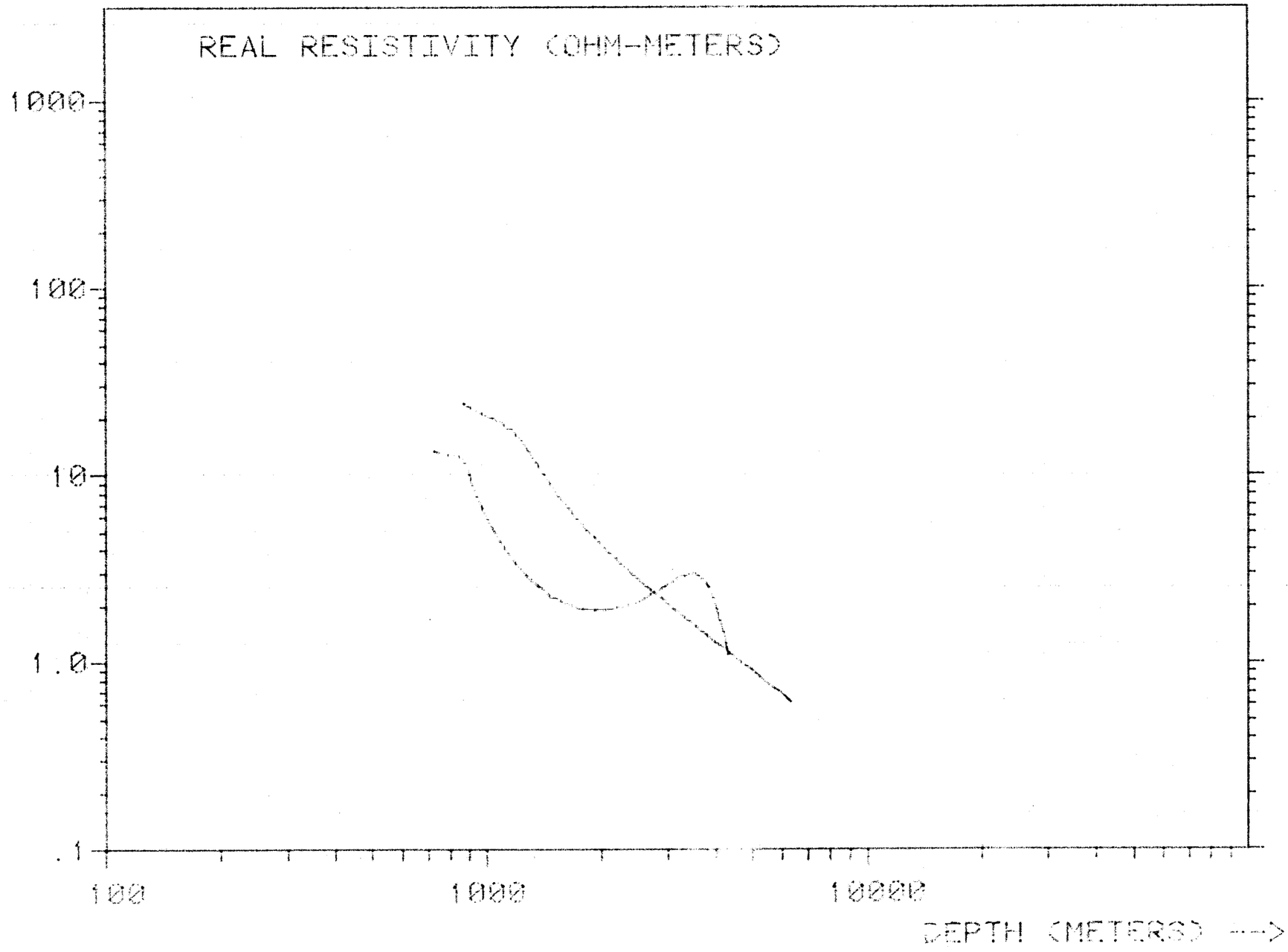
| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 3.0303 | 0.2393E+02 | 0.2713E+01 | 79.4 | 3.5 | 52.75 | 0.5899 | 0.6507 | 0.0975 |
| H | | 0.1667E+02 | 0.1895E+00 | 78.9 | 81.9 | 46.66 | 0.6812 | 0.7626 | 108.80 |
| E | 3.0303 | 0.2675E+02 | 0.2345E+02 | 5.6 | 66.3 | 81.70 | 0.8934 | 0.9793 | 0.0886 |
| H | | 0.2133E+02 | 0.1330E+02 | 66.5 | 8.4 | 167.90 | 0.9030 | 0.9794 | 46.50 |
| E | 7.6923 | 0.6434E+02 | 0.4433E+02 | 76.4 | 77.2 | 133.78 | 0.9705 | 0.9853 | 0.1775 |
| H | | 0.5798E+02 | 0.4082E+02 | 76.5 | 77.1 | 138.85 | 0.9706 | 0.9854 | 177.50 |
| E | 14.2857 | 0.9199E+02 | 0.6404E+02 | 72.6 | 73.0 | 139.76 | 0.9483 | 0.9708 | 0.3369 |
| H | | 0.8129E+02 | 0.4954E+02 | 72.9 | 72.8 | 145.37 | 0.9489 | 0.9709 | 147.90 |
| E | 20.0000 | 0.1042E+03 | 0.7622E+02 | 68.8 | 69.6 | 135.25 | 0.9140 | 0.9570 | 0.4688 |
| H | | 0.8559E+02 | 0.4863E+02 | 69.3 | 69.1 | 147.88 | 0.9165 | 0.9571 | 121.70 |
| E | 26.3158 | 0.1293E+03 | 0.9313E+02 | 70.5 | 65.8 | 135.45 | 0.8915 | 0.8700 | 2.6958 |
| H | | 0.7586E+02 | 0.6020E+02 | 65.7 | 71.1 | 107.72 | 0.8967 | 0.8748 | 57.60 |
| E | 31.2500 | 0.1531E+03 | 0.1030E+03 | 77.4 | 62.1 | 139.37 | 0.8534 | 0.7442 | 0.6485 |
| H | | 0.7801E+02 | 0.4151E+02 | 61.9 | 79.4 | 86.31 | 0.8792 | 0.7588 | 12.70 |
| | 40.0000 | 0.1304E+03 | 0.1025E+03 | 63.0 | 62.9 | 139.44 | 0.8356 | 0.8198 | 0.9564 |
| | | 0.5877E+02 | 0.5072E+02 | 63.4 | 62.4 | 123.59 | 0.8363 | 0.8203 | 9.10 |

SHAS14 15-NOV-83 T42N R4W S22 WC

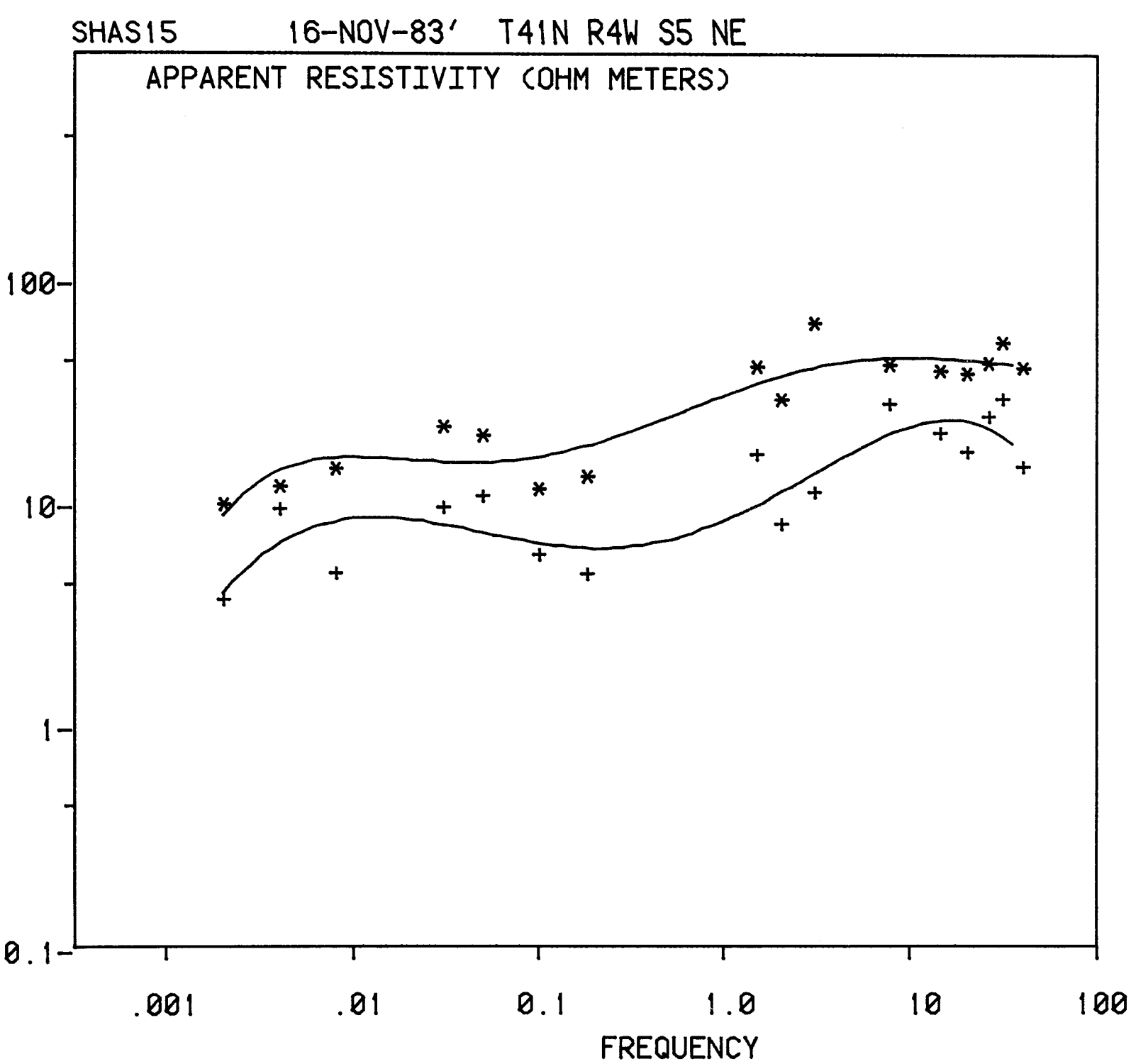



Rt

SHAS14 15-NOV-83 T42N R4W S22 WC




Pmax


SHAS15 16-NOV-83' T41N R4W S5 NE
APPARENT RESISTIVITY (OHM METERS)
100
10
1
0.1
.001
.01
0.1
1.0
10
100
FREQUENCY

THE SITE IS: SHAS15 200 HZ 16-NOV-83' T41N R4W S5 NE

MEANS OF MERGED AVERAGE NUMBER: 8

| FREQUENCY | MEAN OF RHOYN | MEAN OF RHOYX | PERIOD # |
|---|---|---|---|
| 0.0012 | 11.04 | 18.29 | 1 |
| 0.0020 | 3.66 | 9.79 | 2 |
| 0.0040 | 9.30 | 11.62 | 3 |
| 0.0080 | 4.83 | 14.00 | 4 |
| 0.0143 | 0.00 | 0.00 | 5 |
| 0.0200 | 0.00 | 0.00 | 6 |
| 0.0303 | 9.46 | 21.75 | 7 |
| 0.0500 | 10.46 | 19.69 | 8 |
| 0.1000 | 5.77 | 11.41 | 9 |
| 0.1818 | 4.73 | 12.91 | 10 |
| 0.3333 | 2.63 | 3.95 | 11 |
| 0.5000 | 1.49 | 2.84 | 12 |
| 0.5988 | 2.79 | 132.92 | 13 |
| 0.8000 | 5.13 | 142.45 | 14 |
| 1.0000 | 0.87 | 1.65 | 15 |
| 1.0000 | 8.26 | 140.95 | 16 |
| 1.2048 | 0.00 | 0.00 | 17 |
| 1.4925 | 16.05 | 39.68 | 18 |
| 2.0000 | 7.91 | 28.39 | 19 |
| 2.0000 | 0.72 | 1.49 | 20 |
| 2.0000 | 0.00 | 0.00 | 21 |
| 3.0303 | 0.46 | 1.67 | 22 |
| 3.0303 | 10.85 | 61.88 | 23 |
| 7.6923 | 27.34 | 40.69 | 24 |
| 14.2857 | 20.02 | 38.36 | 25 |
| 20.0000 | 16.30 | 36.96 | 26 |
| 26.3158 | 23.73 | 41.19 | 27 |
| 31.2500 | 28.46 | 50.85 | 28 |
| 40.0000 | 14.00 | 39.60 | 29 |

AVERAGE # 8
SHAS15 200 HZ 16-NOV-83' T41N R4W S5 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.0012 | 0.2703E+02 | 0.1587E+02 | 73.5 | 38.2 | 109.09 | 0.7318 | 0.6676 | 0.2139 |
| H | | 0.9554E+01 | 0.6213E+01 | 79.2 | 43.1 | 100.84 | 0.7772 | 0.6762 | 53.10 |
| E | 0.0020 | 0.1397E+02 | 0.4129E+01 | 86.5 | 47.7 | 130.77 | 0.8863 | 0.8985 | 0.0657 |
| H | | 0.5609E+01 | 0.3199E+01 | 45.5 | 83.7 | 37.01 | 0.9235 | 0.9326 | 33.30 |
| E | 0.0040 | 0.1345E+02 | 0.1234E+02 | 75.7 | 18.6 | 30.54 | 0.9308 | 0.9686 | 0.0858 |
| H | | 0.9792E+01 | 0.6263E+01 | 73.8 | 18.8 | 29.66 | 0.9476 | 0.9773 | 21.00 |
| E | 0.0080 | 0.1953E+02 | 0.6825E+01 | 87.4 | 83.4 | 116.00 | 0.7768 | 0.7026 | 0.1173 |
| H | | 0.8476E+01 | 0.2839E+01 | 87.3 | 82.8 | 65.26 | 0.8314 | 0.7218 | 85.10 |
| E | 0.0143 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 0.0200 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 22.50 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 22.50 | 0.0000 | 0.0000 | 179.90 |
| E | 0.0303 | 0.2781E+02 | 0.1437E+02 | 35.8 | 47.2 | 103.57 | 0.7611 | 0.7875 | 0.2564 |
| H | | 0.1568E+02 | 0.4551E+01 | 38.0 | 34.4 | 41.03 | 0.8353 | 0.8627 | 57.70 |
| E | 0.0500 | 0.2386E+02 | 0.1401E+02 | 51.8 | 66.7 | 104.45 | 0.9248 | 0.9638 | 0.3000 |
| H | | 0.1552E+02 | 0.6915E+01 | 61.7 | 53.7 | 30.88 | 0.9530 | 0.9788 | 50.40 |

AVERAGE # 8
SHAS15 200 HZ 16-NOV-83' T41N R4W S5 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 0.1000 | 0.1143E+02 | 0.7088E+01 | 3.4 | 73.0 | 10.02 | 0.9698 | 0.9831 | 0.3109 |
| H | | 0.1140E+02 | 0.4456E+01 | 0.1 | 74.7 | 19.29 | 0.9737 | 0.9850 | 56.10 |
| E | 0.1818 | 0.1885E+02 | 0.6419E+01 | 85.2 | 4.6 | 96.63 | 0.8222 | 0.9495 | 0.2912 |
| H | | 0.6974E+01 | 0.3032E+01 | 9.3 | 80.5 | 43.10 | 0.8690 | 0.9548 | 48.30 |
| E | 0.3333 | 0.4146E+01 | 0.3711E+01 | 14.5 | 85.0 | 108.46 | 0.9281 | 0.9600 | 0.2672 |
| H | | 0.3755E+01 | 0.1546E+01 | 85.4 | 13.8 | 34.25 | 0.9456 | 0.9697 | 62.00 |
| E | 0.5000 | 0.3181E+01 | 0.1955E+01 | 86.8 | 0.0 | 57.24 | 0.9125 | 0.9226 | 0.2921 |
| H | | 0.2507E+01 | 0.1015E+01 | 86.6 | 89.6 | 46.84 | 0.9178 | 0.9268 | 58.30 |
| E | 0.5988 | 0.1478E+03 | 0.3020E+01 | 52.0 | 43.5 | 95.25 | 0.9677 | 0.9850 | 0.4422 |
| H | | 0.1180E+03 | 0.2553E+01 | 50.9 | 26.2 | 93.05 | 0.9698 | 0.9865 | 102.70 |
| E | 0.8000 | 0.2206E+03 | 0.7501E+01 | 44.8 | 67.7 | 90.16 | 0.7470 | 0.8607 | 0.5702 |
| H | | 0.6433E+02 | 0.2762E+01 | 45.8 | 42.7 | 92.48 | 0.7507 | 0.9709 | 96.40 |
| E | 1.0000 | 0.1898E+01 | 0.1315E+01 | 83.0 | 87.1 | 74.69 | 0.8769 | 0.8723 | 0.2892 |
| H | | 0.1404E+01 | 0.4239E+00 | 85.2 | 84.7 | 49.60 | 0.8933 | 0.8896 | 58.10 |

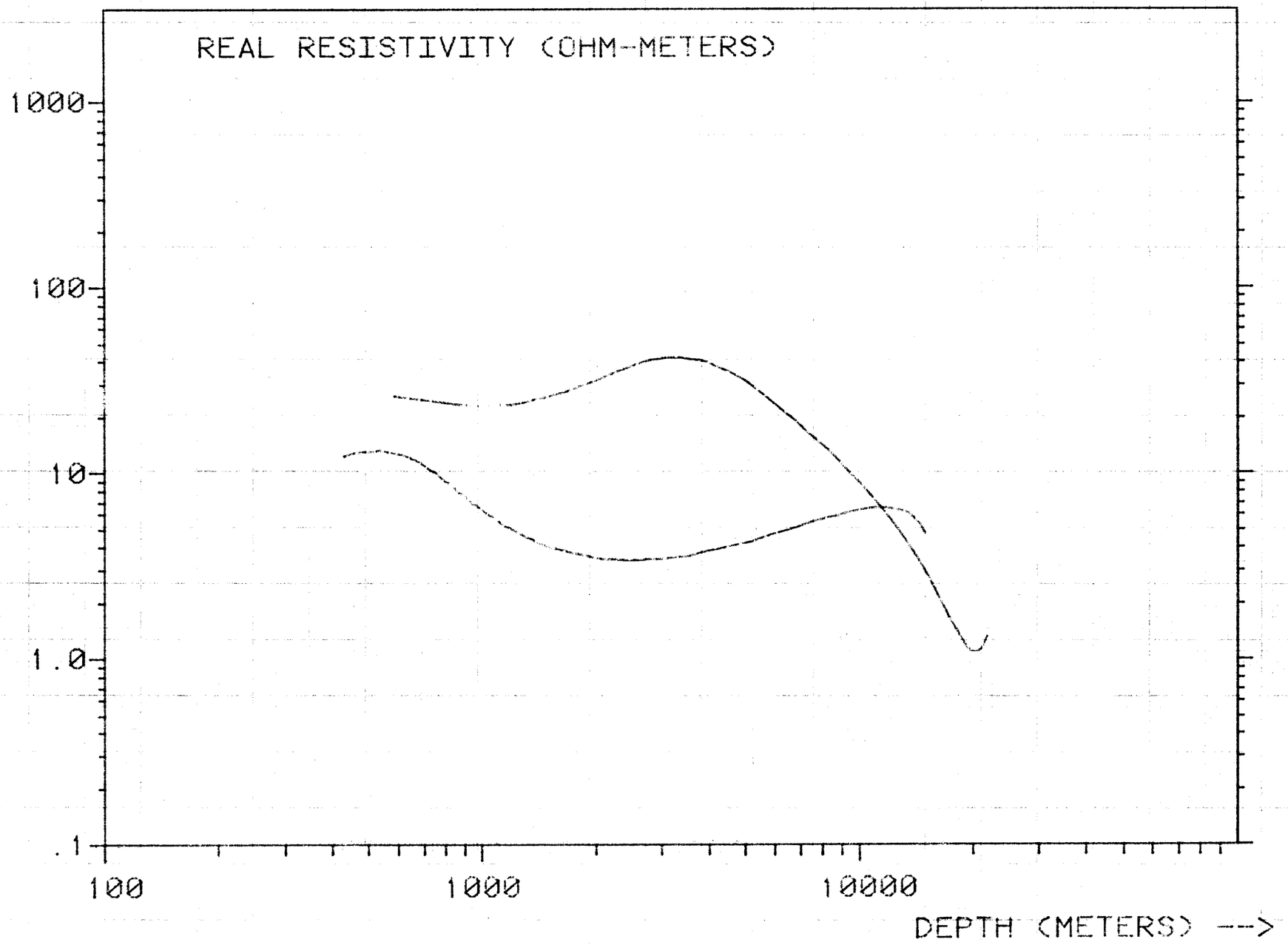
AVERAGE # 8
SHAS15 200 HZ 16-NOV-83' T41N R4W S5 NE
NSAMP = 1024 SI = 0.0050 T0 = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 1.0000 | 0.2613E+03 | 0.1275E+02 | 74.8 | 44.0 | 126.91 | 0.6316 | 0.4689 | 0.3489 |
| H | | 0.2061E+02 | 0.3763E+01 | 69.7 | 30.0 | 94.55 | 0.8493 | 0.6854 | 151.20 |
| E | 1.2048 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |
| E | 1.4925 | 0.4948E+02 | 0.2995E+02 | 37.5 | 60.7 | 147.86 | 0.8704 | 0.7244 | 0.3738 |
| H | | 0.2988E+02 | 0.2154E+01 | 59.5 | 43.4 | 47.08 | 0.9459 | 0.8740 | 111.90 |
| E | 2.0000 | 0.2918E+02 | 0.1124E+02 | 58.0 | 53.5 | 48.22 | 0.9743 | 0.9621 | 0.3660 |
| H | | 0.2759E+02 | 0.4577E+01 | 60.6 | 51.1 | 46.91 | 0.9808 | 0.9727 | 126.80 |
| E | 2.0000 | 0.2272E+01 | 0.1102E+01 | 0.1 | 87.6 | 80.91 | 0.7221 | 0.8011 | 0.3066 |
| H | | 0.7158E+00 | 0.3453E+00 | 1.1 | 87.6 | 52.47 | 0.7338 | 0.8066 | 59.10 |
| E | 2.0000 | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.0000 |
| H | | 0.0000E+00 | 0.0000E+00 | 0.0 | 0.0 | 0.00 | 0.0000 | 0.0000 | 0.00 |

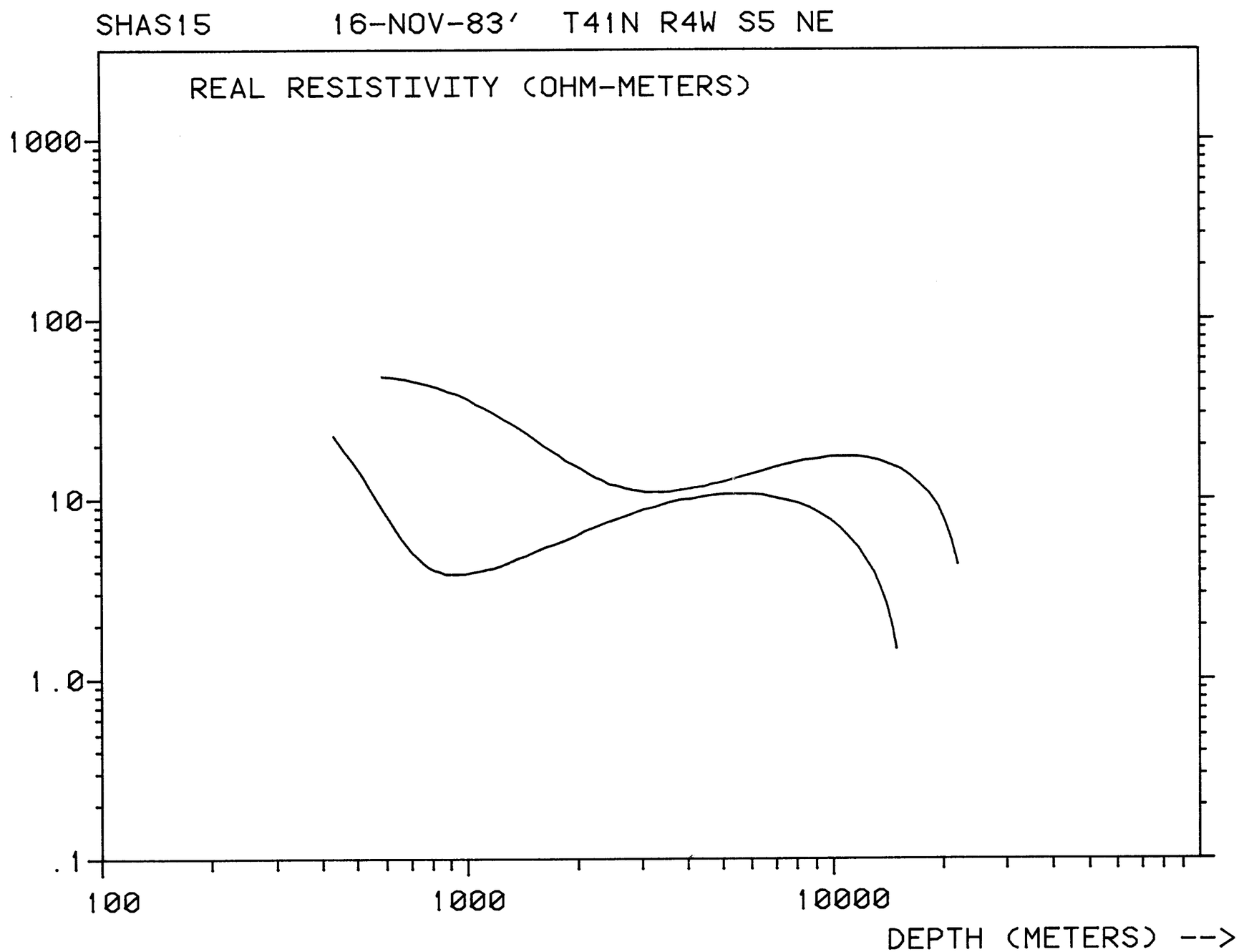
AVERAGE # 8
SHAS15 200 HZ 16-NOV-83' T41N R4W S5 NE
NSAMP = 1024 SI = 0.0050 TO = 5.1200

| | FREQ (HZ) | RHO-MAX VALUE ( OHM-M ) | RHO-MIN | RHO-MAX PHASE(DEGREES) | RHO-MIN | STRIKE (E OF N) | PREDEX | PREDEY | TIPPER MAG/DIR |
|---|---|---|---|---|---|---|---|---|---|
| E | 3.0303 | 0.2668E+01 | 0.7431E+00 | 1.5 | 83.3 | 87.36 | 0.6953 | 0.7997 | 0.2473 |
| H | | 0.6778E+00 | 0.1855E+00 | 87.0 | 87.8 | 58.41 | 0.7261 | 0.8093 | 51.30 |
| E | 3.0303 | 0.9567E+02 | 0.1619E+02 | 47.1 | 53.4 | 137.09 | 0.8676 | 0.8418 | 0.6130 |
| H | | 0.2809E+02 | 0.5522E+01 | 49.9 | 48.2 | 32.78 | 0.9325 | 0.9217 | 122.80 |
| E | 7.6923 | 0.4416E+02 | 0.3768E+02 | 59.4 | 56.1 | 137.20 | 0.9387 | 0.9564 | 0.5279 |
| H | | 0.3722E+02 | 0.1700E+02 | 54.8 | 59.7 | 31.58 | 0.9535 | 0.9668 | 134.60 |
| E | 14.2857 | 0.4325E+02 | 0.3168E+02 | 56.7 | 58.6 | 17.47 | 0.8534 | 0.9016 | 0.5346 |
| H | | 0.3347E+02 | 0.8371E+01 | 56.0 | 58.9 | 27.52 | 0.8797 | 0.9157 | 167.10 |
| E | 20.0000 | 0.4554E+02 | 0.2664E+02 | 56.1 | 56.0 | 26.22 | 0.8035 | 0.8399 | 0.4455 |
| H | | 0.2838E+02 | 0.5962E+01 | 56.3 | 55.9 | 30.94 | 0.8263 | 0.8552 | 169.40 |
| E | 26.3158 | 0.4954E+02 | 0.3717E+02 | 54.7 | 55.7 | 178.50 | 0.8314 | 0.8595 | 0.5420 |
| H | | 0.3284E+02 | 0.1029E+02 | 55.0 | 55.0 | 27.57 | 0.8540 | 0.8767 | 177.80 |
| E | 31.2500 | 0.6638E+02 | 0.4086E+02 | 53.7 | 57.8 | 143.41 | 0.8401 | 0.8319 | 0.6796 |
| H | | 0.3532E+02 | 0.1606E+02 | 55.9 | 54.7 | 32.79 | 0.8674 | 0.8603 | 172.20 |
| E | 40.0000 | 0.5903E+02 | 0.2635E+02 | 52.3 | 67.8 | 46.61 | 0.6981 | 0.6915 | 0.6113 |
| H | | 0.2016E+02 | 0.1658E+01 | 52.5 | 67.9 | 45.38 | 0.7292 | 0.7251 | 165.90 |

SHAS15 16-NOV-83' T41N R4W S5 NE




PHASE


SHAS15 16-NOV-83' T41N R4W S5 NE
REAL RESISTIVITY (OHM-METERS)
1000
100
10
1.0
.1
100
1000
10000
DEPTH (METERS) -->

Res