

Integrated High-Resolution Microearthquake Analysis and Monitoring for Optimizing Steam Production at The Geysers Geothermal Field

GOALS

- To develop and apply high-resolution earthquake methodology for The Geysers field.
- To produce an effective monitoring system capable of providing records of microearthquakes induced by injection of large volumes of water.



PROJECT DESCRIPTION

This project seeks to apply high resolution, detailed earthquake monitoring methodology for the entire Geysers geothermal field, in order to procure and make generally available detailed records for microearthquake occurrences throughout the field. This will refine and expand an existing monitoring system. When the Santa Rosa pipeline project comes on line in late 2002, it is anticipated that some microearthquake activity may result from the large volumes of water being injected. There has been some public concern and discussion about this. This project provides baseline and ongoing data on microseismicity, which will be made available to the general public and is expected to provide some assurance that the induced microseismicity, if it occurs, can be documented and mitigating actions taken. The new methodology will provide a means to get improved information on fluid flow and reservoir dynamics at The Geysers. Such information may help to maximize the positive effects of the water injection by aiding in the detailed control of location, rate and amount of injected water.



BENEFITS TO CALIFORNIA

Over the last part of the 20th century, production at The Geysers has declined from overexploitation. The Santa Rosa pipeline project is one approach to rejuvenating the field. Microseismicity can provide information on induced subsurface effects from the water injection and help in optimizing the field management.

FUNDING AMOUNT

Commission	\$600,000
Match	\$292,000
Total	\$892,000

PROJECT STATUS

Ongoing.

FOR MORE INFORMATION

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