OEHI Responses to March 2012 CEC Data Requests 1-7

Amended Application for Certification
for
HYDROGEN ENERGY CALIFORNIA
(08-AFC-8A)
Kern County, California

California Energy Commssion
DOCKETED
08-AFC-8A
TN # 67728
OCT 15 2012

October 2012

CEC questions 1- 4 of the March 16, 2012 letter from R. Worl (CEC) to M. Mascaro (HECA) are in bold font below. OEHI responses are in standard font below. Note that many of the responses refer to OEHI's previously submitted Monitoring, Reporting and Verification Plan (MRV) (attached again for ease of reference) as well as the attached Phase I Underground Injection Control (UIC) application to the California Division of Oil, Gas and Geothermal Resources (DOGGR).

DATA REQUESTS

1. **Please submit a permit application to the Department of Conservation, the Division of Oil, Gas, and Geothermal Resources, with a copy to the California Energy Commission for a Class II permit for every injection well Occidental Petroleum intends to drill for purposes of utilizing carbon dioxide procured from HECA.**

A copy of OEHI's UIC permit application to DOGGR is attached. Note that, per prior agreement with DOGGR, this UIC submittal includes the first 25 injection patterns of the proposed EOR project. As the injection project expands in future phases, OEHI will submit additional UIC data as required by DOGGR to support its review of the project expansion.

2. **Please provide an engineering study to the Department of Conservation, the Division of Oil, Gas, and Geothermal Resources with a copy to the California Energy Commission. The study should include:**

   a. **Statement of the primary purpose of the project.**

See attached UIC application Section 1724.7 (A) Subsection 1

   b. **The total amount of CO_2 that is planned to be injected over the life of the project; reservoir characteristics of each injection zone, such as porosity, permeability, average thickness, areal extent, fracture gradient; original, if available, and present temperature; pressure and distribution, present and original, if available; and residual oil, gas, and water saturations.**

Over the expected 20-year duration of the project, at an annual average delivery rate of 135 million scf/d, OEHI expects to receive approximately 52 million metric tonnes of CO_2 from HECA. OEHI intends to inject the full amount. All reservoir rock and structure questions above are addressed in Section 3.1.2.1 of the MRV plan. Fracture gradient is discussed in Section 1724.7 (C) Subsection 2 of the UIC permit application. Oil (post-waterflood) saturation varies between 25% and 35% of pore volume. Pore Pressure currently ranges between 2600 psi to 3900 psi. Reservoir temperature is ~ 215º F.

c. Reservoir fluid data for each injection zone, such as oil gravity and viscosity, water quality, and specific gravity of gas.

Average Stevens zone fluid data is included in the UIC permit application Section 1724.7 (A) Subsection 3.

d. Casing diagrams, include cement plugs, and actual or calculated cement fill behind casing, of all wells within the area affected by the project, and evidence that wells in the area will not have an adverse effect on the project or cause damage to life, health, property, or natural resources.

Wellbore diagrams within a ¼ mile radius [of all proposed injection wells] are included in the Phase I UIC permit application per DOGGR requirements. Compliance with DOGGR regulations will protect life, health, property and natural resources.

e. A list of wells that may need to be remediated based upon a possible conduit for the CO_2 to migrate outside of the intended zone of injection.

Wellbore diagrams for all wells within a ¼ mile radius of all proposed injection wells are included in the Phase I UIC project application per DOGGR requirements. The identification of any wells that may need to be remediated will be done in consultation with DOGGR.

f. The planned well-drilling and abandonment program to complete the project, including a flood-pattern map showing all injection, and abandoned wells, and unit boundaries.

A Phase I pattern map is attached showing current well status in Phase 1 project area. At this time there are no plans to abandon wells for this project. Unit boundaries are included.

g. The engineering study data must include calculations for the amount of remaining oil reserves, as well as the estimated reservoir volume for the proposed CO_2 injection project, by zone. In addition, the anticipated reservoir pressure increase, as a result of the proposed injection.

Reservoir volume to handle injected CO_2 is addressed in the MRV Plan in Sections 3.1.3 and 3.2. Reservoir pressures are expected, and will be managed, to maintain those present in the current waterflood levels unless current values are below minimum

miscibility pressure. Zonal isolation will be assured and monitored as required by any DOGGR UIC permit.

h. An estimated amount of CO_2 that needs to be injected to produce an incremental barrel of oil.

Industry standard CO_2 utilization levels are between 6 mscf/bbl and 30 mscf/bbl. Oxy's utilization at Elk Hills is expected to fall within this range.

3. Please provide a geologic study to the Department of Conservation, the Division of Oil, Gas, and Geothermal Resources, with a copy to the California Energy Commission. The study should include:

a. Structural contour map drawn on a geologic marker at or near the top of each injection zone in the project area.

Please see attached UIC permit application, Section 1724.7 (B), Appendix I.

b. Isopachous maps of each injection zone or subzone in the project area.

Please see attached UIC permit application, Section 1724.7 (B), Appendix G.

c. At least one geologic cross section through at least one injection well in the project area.

Please see attached UIC permit application, Section 1724.7 (B), Appendix I.

d. Representative electric log to a depth below the deepest producing zone (if not already shown on the cross section), identifying all geologic units, formations, freshwater aquifers, and oil and gas zones.

Please see attached UIC permit application, Section 1724.7 (B), Appendix J.

e. Detailed study of the injection zone cap rock/confining layer. This should include a seismic study and an analysis of the possibility of micro-fractures in the cap rock that could allow the CO_2 to migrate outside of the zone.

Please see MRV Plan sections 3.2, 3.3.3, and 3.3.4.

f. Seismic study related to the injection of the large volumes of CO_2 and the effects on local faulting.

Please see MRV Plan sections 3.3.3, 3.3.4.

4. Please provide an injection plan, to the Department of Conservation, the Division of Oil, Gas, and Geothermal Resources, with a copy to the California Energy Commission. The plan should include:

a. A map showing injection facilities, including the anticipated total number of wells to complete the project and all pipelines.

Please see attached map of Phase I area injection facilities and overall project pipeline routes. A well-level map is also attached per the response to #2-F.

b. Maximum anticipated surface injection pressure (pump pressure) and daily rate of injection, by well.

Please see attached UIC permit application. Maximum surface pump pressures are estimated at approximately 4,000 psi for CO_2 and 3,100 psi for water. Note that actual wellhead injection pressure is capped by the established frac gradient per the UIC permit. Injection rates are anticipated at 5,000 – 15,000 mscfpd/well for CO_2, and 1,000 – 5,000 bwpd/well for water.

c. Monitoring system or method to be utilized to ensure that the injection CO_2 is confined to the intended zone or zones of injection.

Please refer to MRV Plan Section 4.

d. Design details of the type of injection project such as:

- **Water-alternating-gas (WAG) design**
  - **If a WAG pattern is used, what will happen to the delivered CO_2?**

CO_2 will continually be injected into other active patterns not concurrently on a water cycle.

  - **Will it have to be vented to the atmosphere?**

No. See response immediately above.

- **Miscible CO_2 Flood**

Miscible CO2 flooding is the primary use for the CO2.

- **Immiscible CO_2 Flood**

Immiscible CO2 flooding is a secondary use for the CO2.

e. List of proposed cathodic protection measures for plant, lines, and wells, if such measures are warranted.

Please see discussion in attached UIC permit application, Section 1724.7 (C).

f. If the project type is WAG, the source and treatment of water to be injected.

All water to be injected will be Stevens produced water, which will be treated in-field to remove trace oil and reinjected. The Water Treatment Plant is described in the Preliminary Project Description (Pre-FEED Stage), E2ManageTech Solutions, dated April 16, 2010 (page 47).

g. Source and analysis of the CO_2.

Sources of CO_2 will be the HECA plant, CO_2 produced and recovered from existing OEHI reservoirs, and possibly other future supply sources. Analysis will be provided to DOGGR once stable injection is underway and periodically thereafter in accordance with standard annual UIC reporting requirements.

h. Location and depth of each water-source well that will be used in conjunction with the project.

No water source wells will be used in the project. See response to question #4-f above.

i. Amount of CO_2 that will be produced back and reinjected, and how this will affect the rate of injection over time.

The project will accept and inject all volumes delivered by the HECA facility that meet contractually-defined quality specifications and re-inject essentially all that is produced from the reservoir. Any amount not re-injected will be quantified per the MRV plan. Thus the rate of injection of delivered and produced/recycled CO_2 will gradually increase to a stabilized peak, the volume of which will be a function of the size, orientation, and number of patterns in operation throughout the development.

j. Change of formation pressure with time as a result of the injection and

the impact on the rate of injection.

Please see response to question #2-g above.

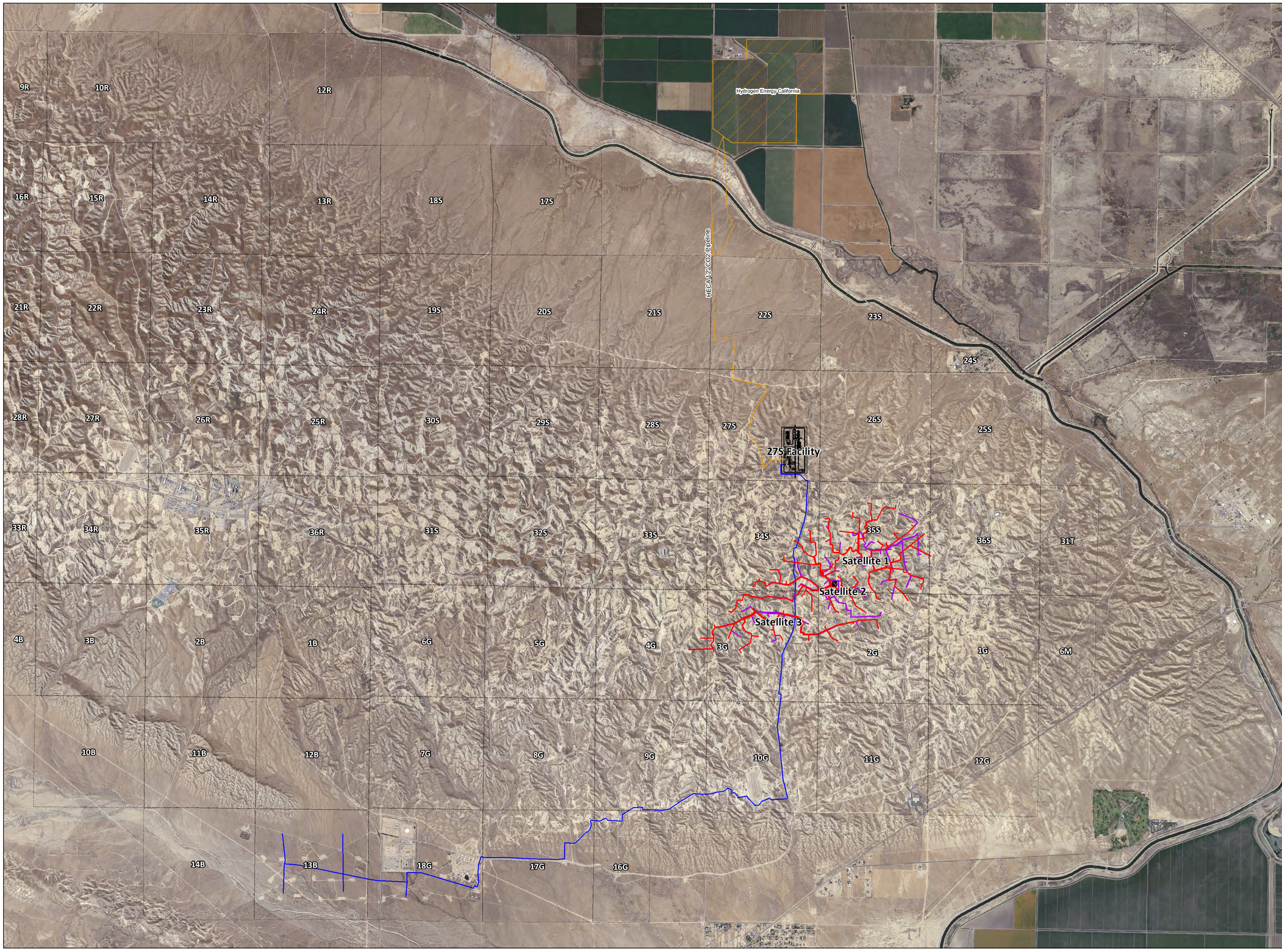
k. Corrosion testing methods for the wells and facilities and schedule.

Please see MRV Plan section 4.1.2 Tier 3.

l. Pre-injection testing such as:

- **Step rate testing**
- **Pressure falloff testing**

Pre-injection pressure transient testing is not currently planned for Phase I of this project. Standard annual wellbore injection surveys for vertical wellbore conformance will be conducted within three months following injection commencement and annually thereafter to meet UIC permit requirements.



N

1 inch = 2,200 feet

Production Lines

Injection Lines

Water Line

Elk Hills CO2 Injection Project (Phase 1)

Occidental

MUSTANG
A Wood Group Company

Date: 08/02/2012	Key Plan
Project Number: 1617910	Rev. B 16179-MUS-PIP-DWG-10-7002

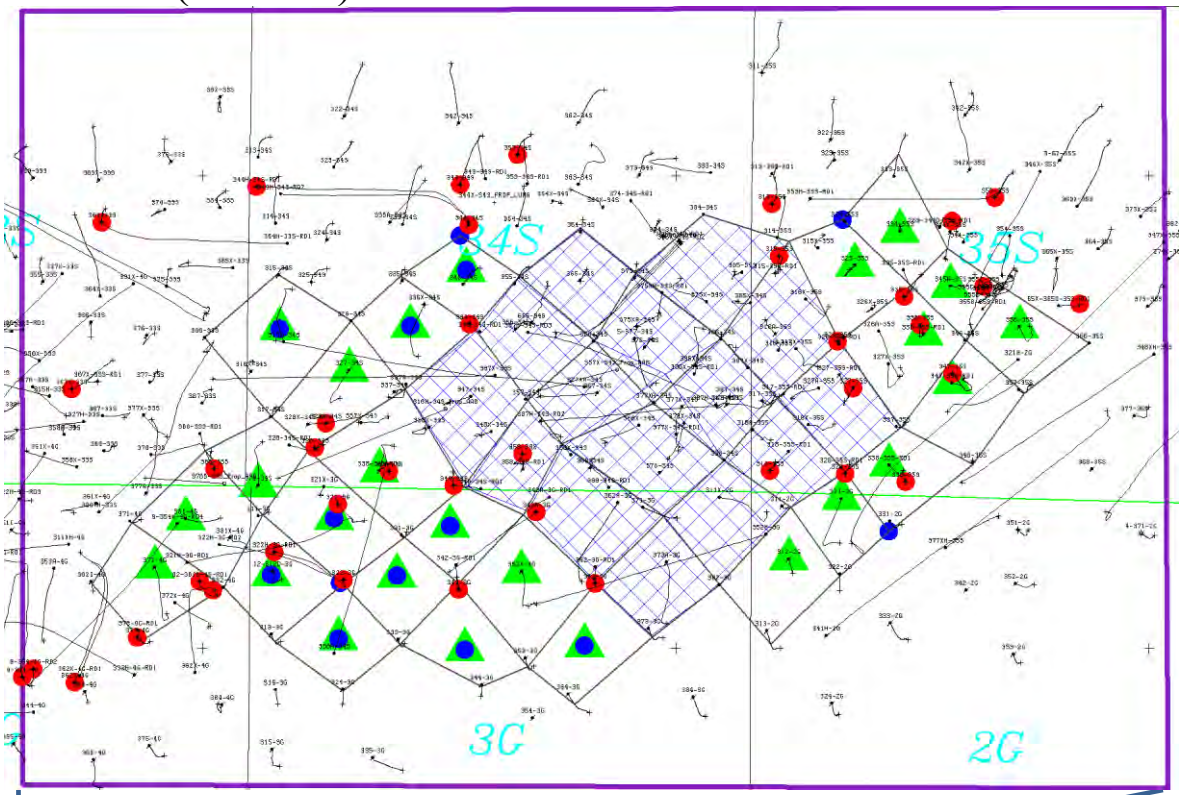
Feet

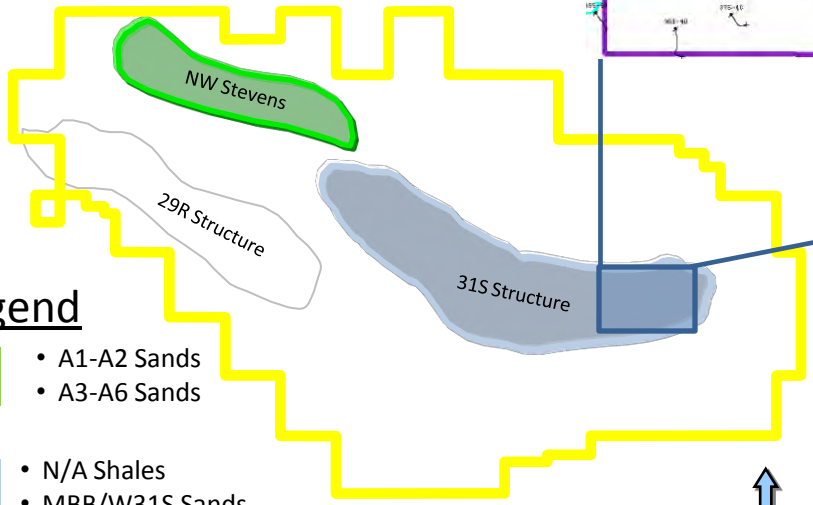
5,000 2,500 0 5,000 10,000 15,000

Elk Hills CO_2 Injection Project (Phase 1)

Legend

- Injectors
- Miscible Gas Injection Area
- Abandon/Sidetrack Wells
- New Drills
- Pattern Boundary





Legend

- A1-A2 Sands
- A3-A6 Sands

- N/A Shales
- MBB/W31S Sands

0 2 Miles

N

Oxy Elk Hills Inc.

CO2 Injection Project Document

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Wellbore data can be made available

PROPOSED ENHANCED OIL RECOVERY PROJECT
(Phase I)

UNDERGROUND INJECTION OF CARBON DIOXIDE GAS

STEVENS RESERVOIRS – T30, 31S, R23, 24E
SECTIONS 33S, 34S, 35S, 2G, 3G, & 4G

ELK HILLS FIELD
KERN COUNTY, CALIFORNIA
DISTRICT 4

ENGINEERING STUDY, GEOLOGIC STUDY, AND INJECTION PLAN

October 2, 2012

SUBMITTED BY
OCCIDENTAL OF ELK HILLS, INC.

SUBMITTED TO
STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

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PROPOSED ENHANCED OIL RECOVERY PROJECT
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UNDERGROUND INJECTION OF CARBON DIOXIDE GAS
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SECTIONS 33S, 34S, 35S, 2G, 3G, 4G

ELK HILLS FIELD
KERN COUNTY, CALIFORNIA
DISTRICT 4

ENGINEERING STUDY, GEOLOGIC STUDY, AND INJECTION PLAN

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PROPOSED ENHANCED OIL RECOVERY PROJECT
(Phase I)

UNDERGROUND INJECTION OF CARBON DIOXIDE GAS
STEVENS RESERVOIRS – T30, 31S R23, 24E
SECTIONS 33S, 34S, 35S, 2G, 3G, 4G

ELK HILLS FIELD
KERN COUNTY, CALIFORNIA
DISTRICT 4

ENGINEERING STUDY, GEOLOGIC STUDY, AND INJECTION PLAN

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1724.7 (A) ENGINEERING STUDY

Introduction

Occidental of Elk Hills, Inc. (OEHI) proposes an Enhanced Oil Recovery (EOR) project injecting carbon dioxide gas (CO2) with the intent to extend the economic limit of the Stevens reservoirs within the Elk Hills Unit. The EOR Project will utilize CO2 gas from the Hydrogen Energy California (HECA) project and other sources to mobilize by-passed oil. During normal operations, an average daily rate of up to 135 million standard cubic feet per day (MMSCF/d) of gas will be injected. Future total peak gas injection is expected to be about 550 MMSCF/d when CO2 rich produced gas from the project is combined with source CO2 and re-injected. OEHI is proposing this project based on favorable results achieved in mobilizing oil in a CO2 Injection Pilot performed in the eastern area of this proposed permit, in 35S-T30S-R24E back in 2005. The technology of mobilizing oil with CO2 and alternating with water injection (WAG) is proven and used extensively in other oil fields in the United States.

This application will permit Phase I consisting of 25 patterns. The entire project scoped above will encompass over 200 patterns once fully implemented. Subsequent pattern areas will be submitted for UIC permitting as the project proceeds.

1. Objective

The main objective of the EOR Project is to economically maximize oil recovery within the requested permit area in accordance with all county, state, and federal safety and environmental rules and regulations.

Under gas injection operations a portion of the gas will contact and become miscible with the reservoir oil. The CO2 gas-oil mixture has the favorable properties of lower viscosity, enhanced mobility, and lower interfacial tension as compared to the residual oil by-passed during the water flooding process. In effect, this process mobilizes and recovers oil that would otherwise be trapped within the rock.

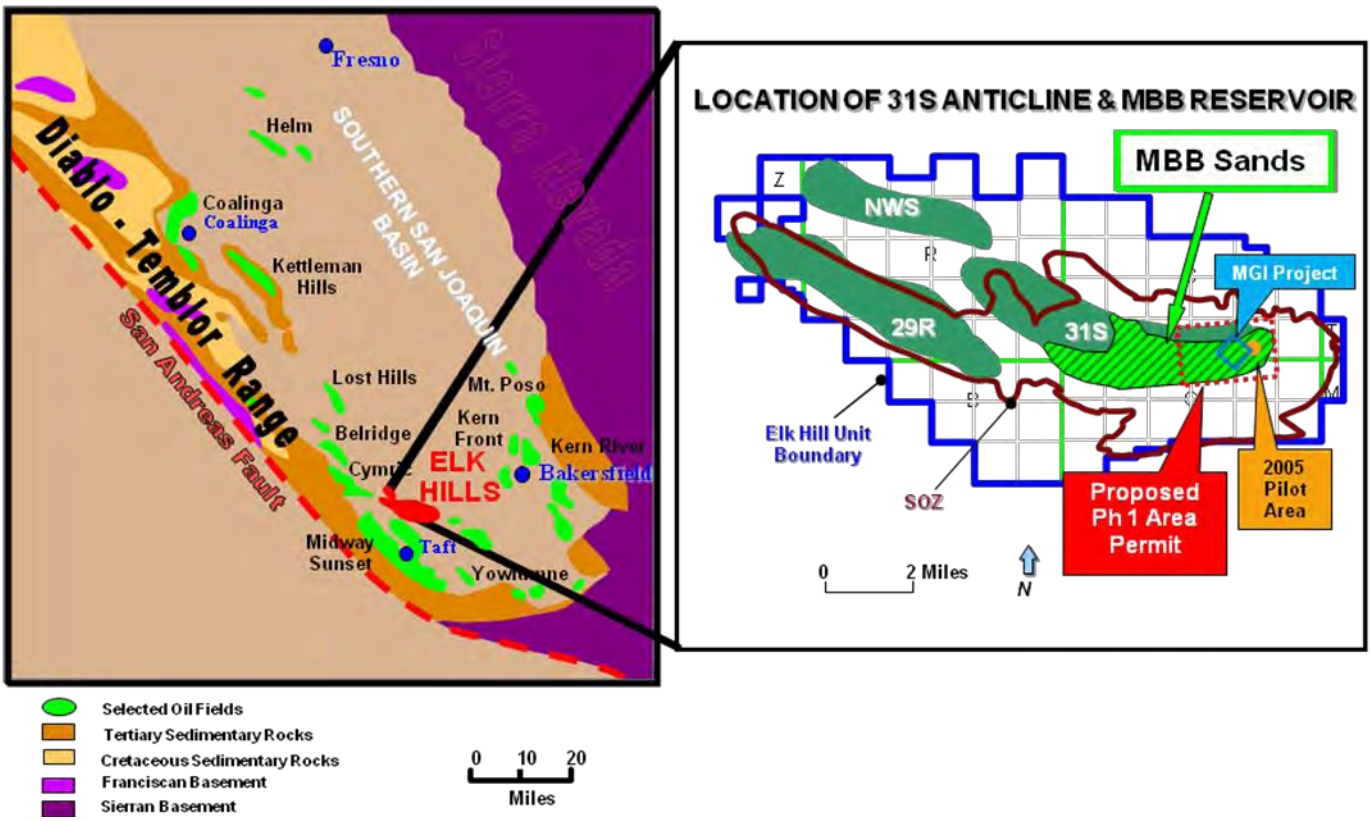
The technique of alternating the current water injection with CO2 gas injection will maintain miscibility, mobilize oil, control gas production, and sweep the CO2 gas-oil mixture to producing wells. This alternating of injectants is known as Water Alternating Gas (WAG), and is used extensively in other oil fields in the United States.

Similar bottom-hole injection pressures developed during water flooding will be maintained during gas injection, and existing wellbores will be utilized where possible.

Project Location

Phase 1 of the EOR Project will be located in parts of Sections 33S, 34S, and 35S of Township 30S Range 24E and Sections 2G, 3G, and 4G of Township 31S Range 24E. All six sections are located within Elk Hills Unit boundaries as indicated in Figure 1.

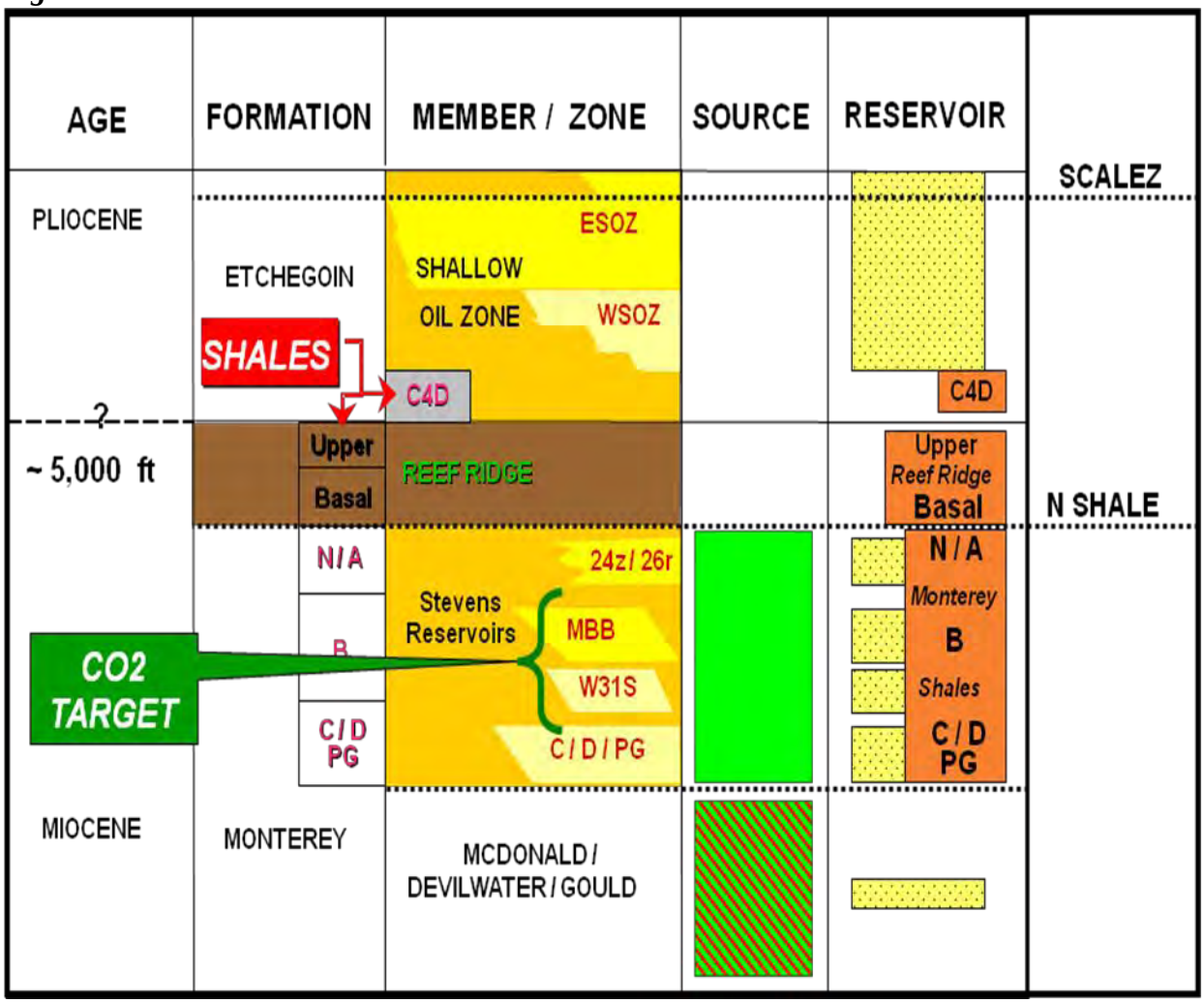
Figure 1



2. Reservoir Characteristics

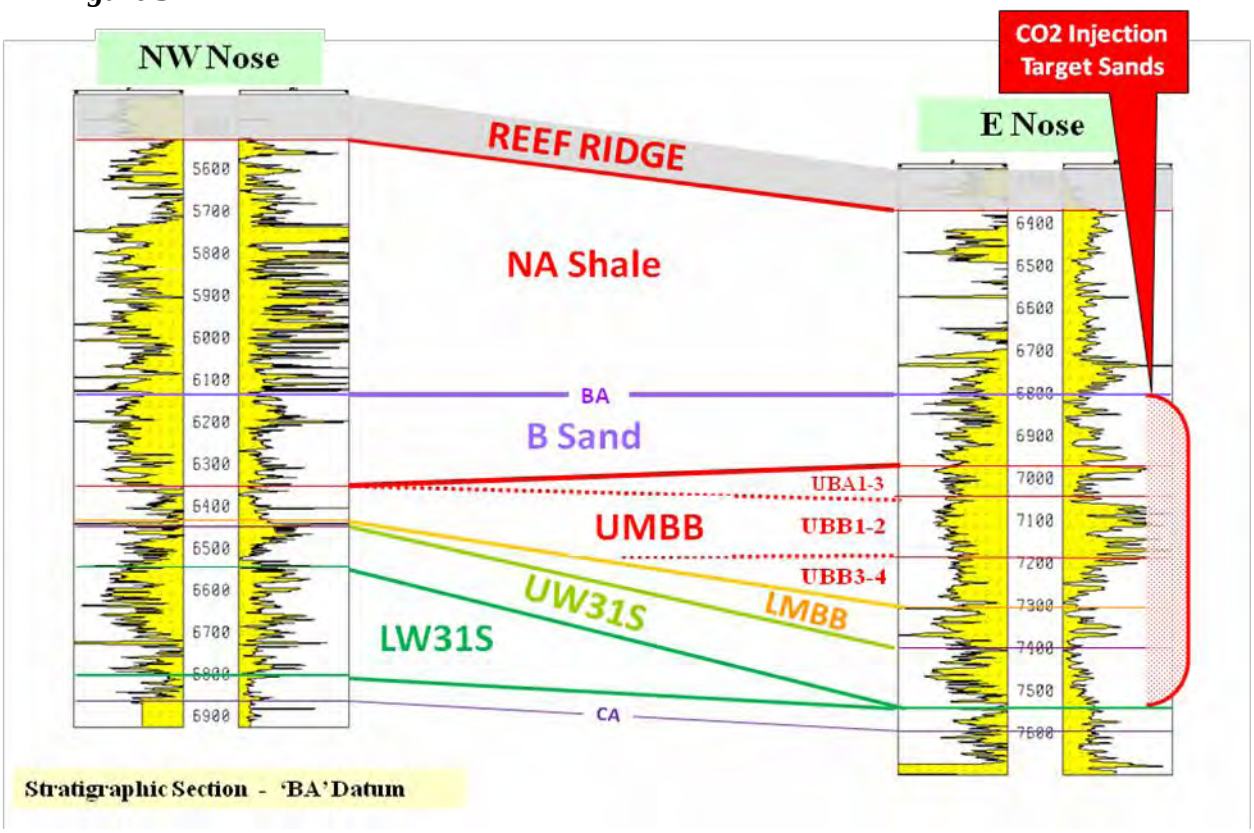
The EOR Project will be conducted in the Stevens reservoir interval as shown in the stratigraphic section in Figure 2.

Figure 2



The project will be initiated in the B-Sand, Upper and Lower Main Body B (MBB) sands, and Upper and Lower Western 31S (W31S) sand sub intervals of the Stevens 31S reservoirs as displayed in Figure 3. Any CO2 or mobilized oil that migrates into the NA Shale above the main Stevens Sands will be captured at the producers open in the Shale zone. That production would then be routed to the CO2 project facilities.

Figure 3



The average reservoir properties of the B intervals are shown below in Table 1.

Table 1

	Avg Gross Interval (Ft)	Avg. Porosity (%)	Avg. Perm (K md)	Original Avg. Temp (F)	Original Avg. Press (PSIG)	Current Avg. Temp (F)	Current Avg. Press (PSIG)
B-Sand	175	18	13	215	3200	215	2600
UBA1-3	140	16	64	215	3210	215	3200
UBB1	75	18	85	215	3210	215	3600
UBB2	46	17	48	215	3230	215	3600
UBB3	100	16	40	215	3240	215	3800
UBB4	38	16	25	215	3250	215	3900
LMBB	115	15	26	215	3280	215	3800
U&LW31S	500	13	27	215	3400	215	3700

Source of data is core and log data, from wells in project area.

3. Reservoir Fluid Data

The average fluid properties contained in the above shown reservoir intervals are displayed in Table 2:

Table 2

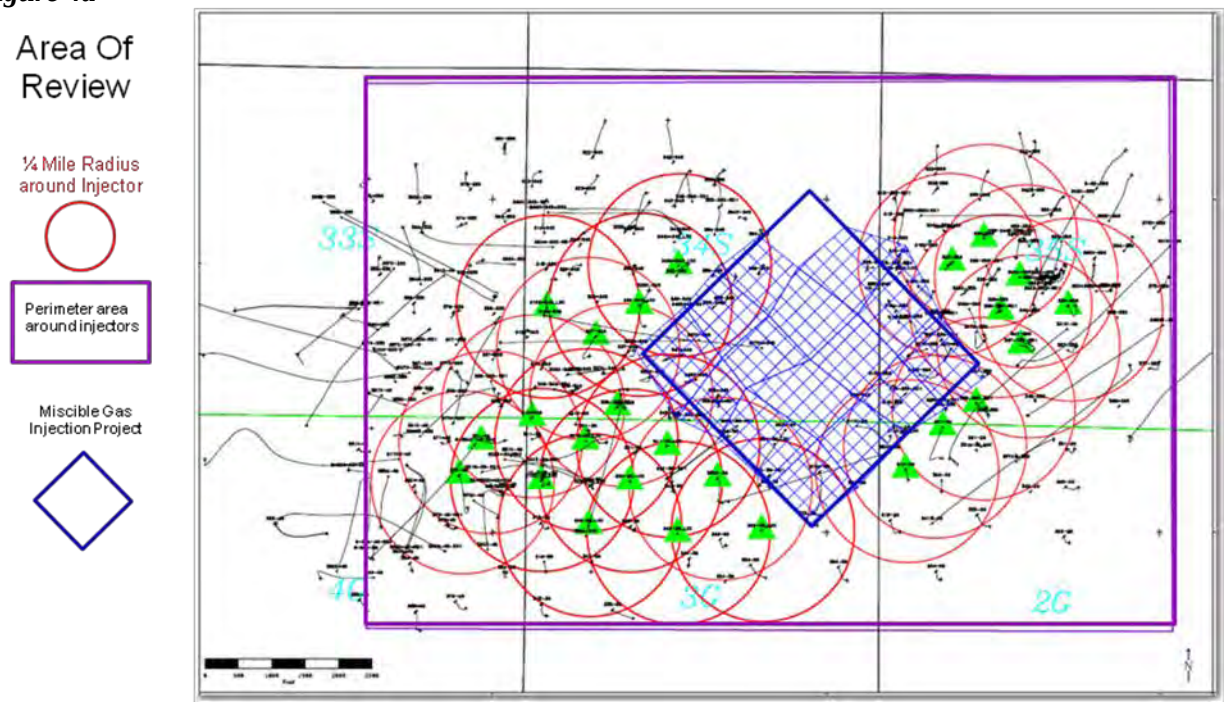
Oil Gravity (API)	Viscosity (cp)	Original Water Salinity (ppm TDS)	Current Water Salinity (ppm TDS)	Gas Gravity
36	0.4	30,000	15,017	0.82

Note: The original Stevens water salinity has been reduced by the injection of Tulare water (5,700 ppm Total Dissolved Solids) for waterflooding purposes in the past.

4. Area of Review/Casing Diagrams

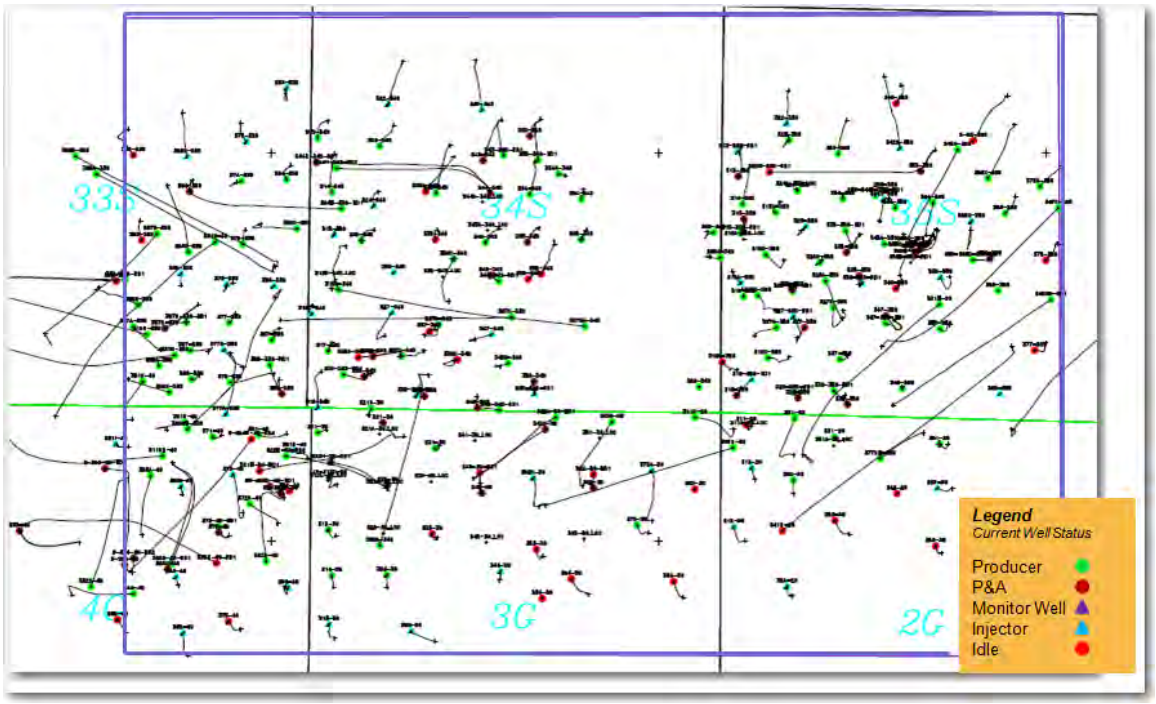
Figures 4a&b *(and Appendix A & B)* illustrate and outline the proposed permit area and the status of all wells that penetrate the confining Reef Ridge shale interval.

Figure 4a



Note wells within the blue grid but outside of the AOR circles in red were previously permitted as part of the OEHI Miscible Gas Injection project (permit# 22800035) and not repeated in this application.

Figure 4b



Appendix K includes a table that lists wells and their zone tops that penetrate the injection zone within the AOR. Casing Diagrams for those wells are included. These diagrams address items 5.a through 5.h as requested in the California Code Regulations 1724.7.

Appendix C includes a table and well spot map of wells within the AOR that do not penetrate the Reef Ridge Shale.

Wells shown on the well spot maps included in the application with the letters "LOC" as part of the well name are proposed new drill well sites that will be permitted for drilling in the future.

5. Planned well work program

The proposed EOR Project will involve the use of a total of 25 injectors and 34 producing wells. Table 3 shows wells names, current status, and planned initial well work for each pattern well.

In addition to the pattern wells in table 3, OEHI will attempt to re-enter 82-382D-4G-RD1, API# 402954085 and seal off the open hole section across the Reef Ridge Shale. An NOI will be submitted detailing the plan.

Table 3 Proposed Permit Pattern Wells

Well Name	API No.	Current Status	Project Status	Purposed Well Work
312-2G	402927980	Active Injector	Injector	Add Perfs/Acid Stim
312E-3G			Injector	New Drill
315B-34S			Injector	New Drill
318-34S	403003445	Active Injector	Injector	Add Perfs/Acid Stim
321-2G	402979858	Producer	Injector	Convert to Injector
321A-3G			Injector	New Drill
323-3G			Injector	New Drill
325-35S	402981460	Active Injector	Injector	Add Perfs/Acid Stim
327-34S	402984186	Active Injector	Injector	Add Perfs/Acid Stim
332-3G			Injector	New Drill
334-35S	402927775	Producer	Injector	Convert to Injector
336-34S			Injector	New Drill
336-35S-RD1	402927776	Active Injector	Injector	Add Perfs/Acid Stim
338-34S-RD1	402985062	Active Injector	Injector	Add Perfs/Acid Stim
338-35S-RD1	402927777	Producer	Injector	Convert to Injector
341-3G			Injector	New Drill
343-3G			Injector	New Drill
345A-34S			Injector	New Drill
345A-35S	403021082	Producer	Injector	Convert to Injector
347-35S-RD1	402980060	Producer	Injector	Convert to Injector
352X-3G	402984529	Active Injector	Injector	Add Perfs/Acid Stim
356-35S	403022319	Active Injector	Injector	Add Perfs/Acid Stim
363-3G			Injector	New Drill
372-4G	403016902	Active Injector	Injector	Add Perfs/Acid Stim
381-4G	402981809	Producer	Injector	Convert to Injector
311-3G	402952693	Active Producer	Producer	Add Perfs/Acid Stim
313-2G	402957942	Active Injector	Producer	Convert to Producer
313-3G	402954298	Active Producer	Producer	Add Perfs/Acid Stim
315-34S	402955592	Active Injector	Producer	Convert to Producer
317-34S	402952983	Active Producer	Producer	Add Perfs/Acid Stim
322-2G	402927981	Active Producer	Producer	Add Perfs/Acid Stim
322A-3G			Producer	New Drill
324-3G	402929020	Active Producer	Producer	Add Perfs/Acid Stim
324A-35S			Producer	New Drill
326-34S	402927660	Active Injector	Producer	Convert to Producer
328-34S-RD1	402954413	Active Producer	Producer	Add Perfs/Acid Stim
331-3G	402953296	Active Producer	Producer	Add Perfs/Acid Stim
331A-2G			Producer	New Drill
333-35S	402959060	Active Producer	Producer	Add Perfs/Acid Stim
333-3G	402953880	Inactive Injector	Producer	Convert to Producer
335-34S	402953715	Inactive Injector	Producer	Convert to Producer
335-35S-RD1	402958896	Active Producer	Producer	Add Perfs/Acid Stim
342-3G-RD1	402929021	Inactive Producer	Producer	Return to Production
344-3G	402929022	Active Injector	Producer	Convert to Producer
344A-34S			Producer	New Drill
344X-35S	403033248	Active Injector	Producer	Add Perfs/Acid Stim
346-35S	402927779	Inactive Producer	Producer	Add Perfs/Acid Stim
348-35S	402927780	Active Producer	Producer	Add Perfs/Acid Stim
353-3G	402955610	Inactive Producer	Producer	Return to Production
355-35S	402955740	Inactive Producer	Producer	Return to Production
357-35S	402953114	Active Producer	Producer	Add Perfs/Acid Stim
362I-4G	402929069	Active Injector	Producer	Convert to Producer
364-3G	402955611	Inactive Producer	Producer	Return to Production
366-35S	402927781	Active Producer	Producer	Add Perfs/Acid Stim
371-4G	402953633	Active Producer	Producer	Add Perfs/Acid Stim
373-4G-RD1	402952246	Active Producer	Producer	Add Perfs/Acid Stim
382-4G	402929071	Active Producer	Producer	Add Perfs/Acid Stim
386-33S	402927617	Active Injector	Producer	Convert to Producer
388-33S-RD1	402927618	Active Producer	Producer	Add Perfs/Acid Stim

1724.7 (B) GEOLOGIC STUDY

1. Structural Contour Map

Figure 5 (*and Appendix D*) displays a TVDss structural contour map on the top of the Reef Ridge Shale, which is the Stevens cap rock (confining zone). All maps in Figures 5-8 and appendices A,B, D-K display wells which penetrate the Reef Ridge Shale. For each sub-unit within the injection zone, a larger scale of structural contour maps is located in Appendix E.

Figure 5

Cap Rock

Reef Ridge Shale

Structure Map TVDss

Reef Ridge TVDss on wells

¼ Mile Radius Perimeter area around injectors

Contour Interval 100 ft

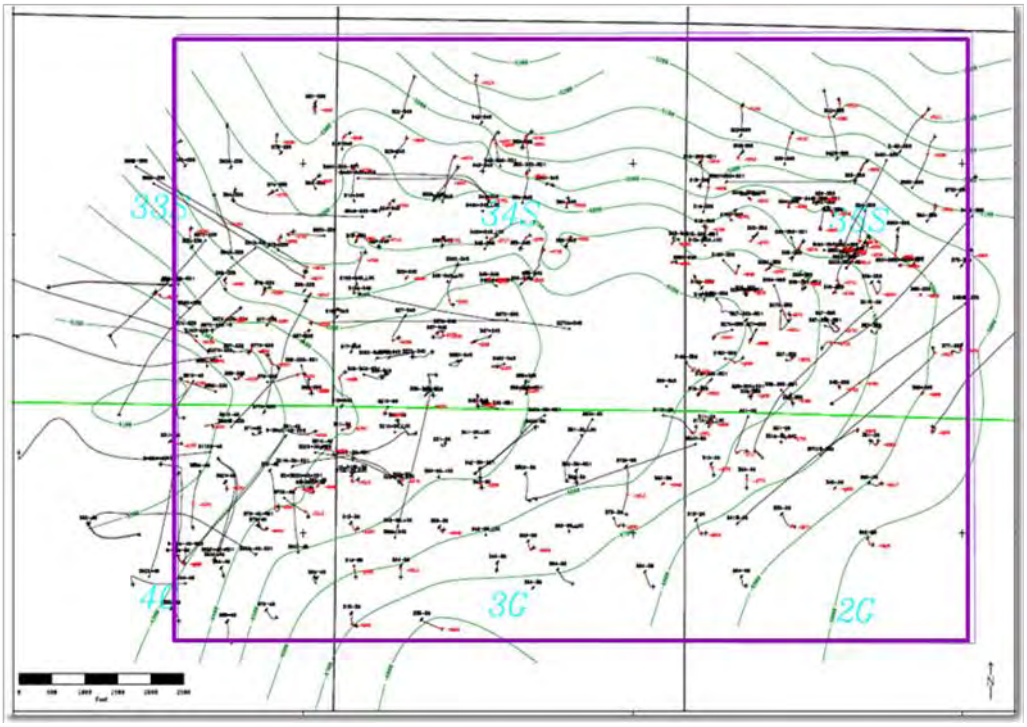
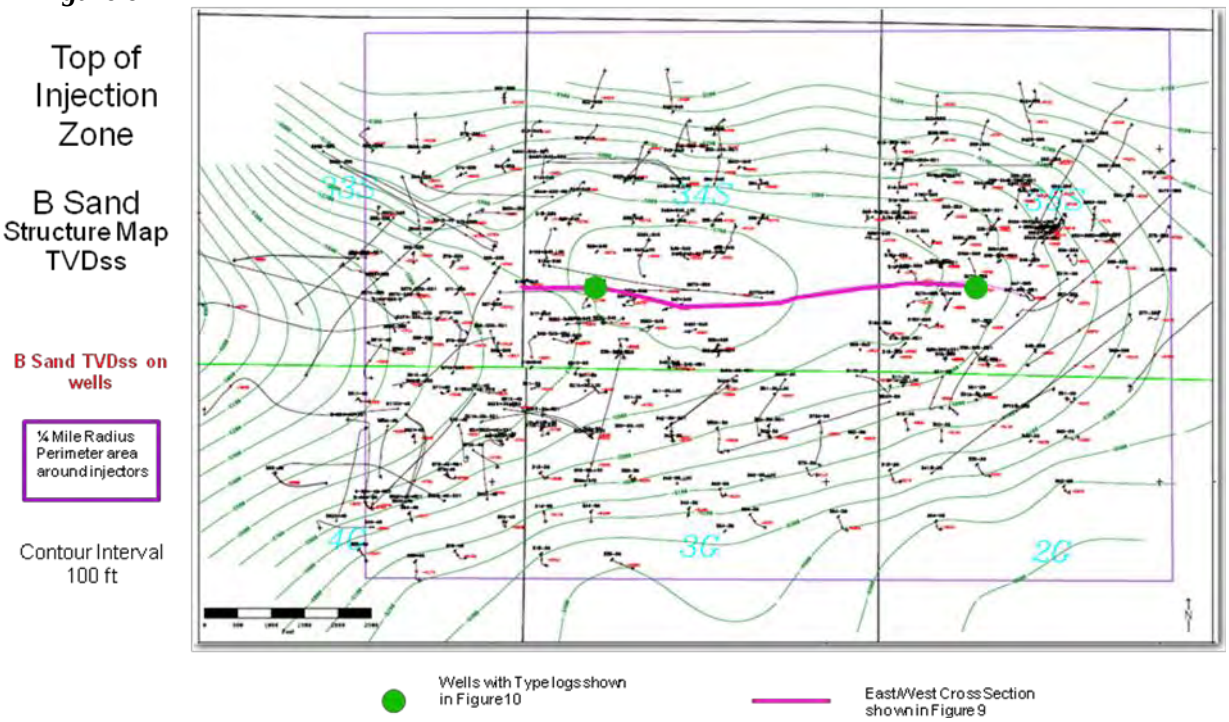


Figure 6 (*and Appendix I*) displays a TVDss structural contour map on the top of the Stevens B-Sand, an East/West Cross Section line (see Figure 9), and location of wells showing type log detail (see Figure 10).

Figure 6



2. Isopachous Map

Figure 7 (*and Appendix F*) shows an isochore map illustrating the thickness of the cap rock above the injection zone. The contoured interval includes from the top of the Reef Ridge Shale to the top of the N Shale.

Figure 7

Cap Rock

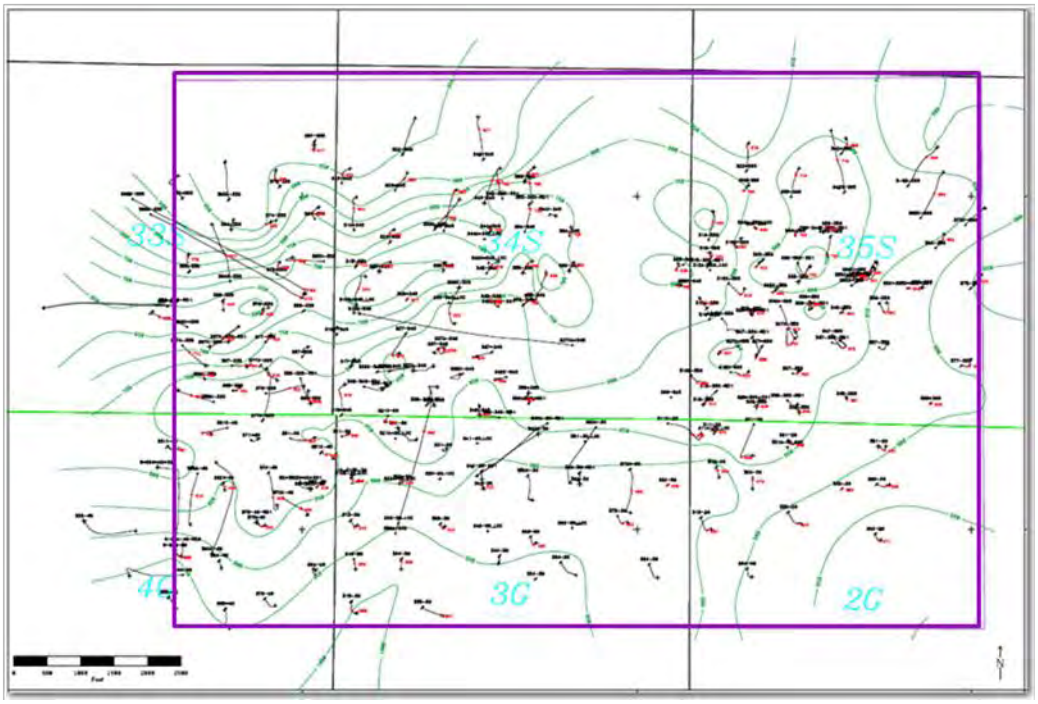
Reef Ridge to N-Shale

Isochore Map, TVT

Reef Ridge thickness in feet at well

¼ Mile Radius Perimeter area around injectors

Contour Interval 50 ft



From the above figure, it can be observed that over the proposed permit area the cap rock ranges from 600 to 1,000 feet in thickness.

Figure 8 (*and Appendix F*) displays an isochore map of the target injection zone from the top of the B Sand to the base of the Lower Western sand or top of the (BLW).

Figure 8

Injection Target

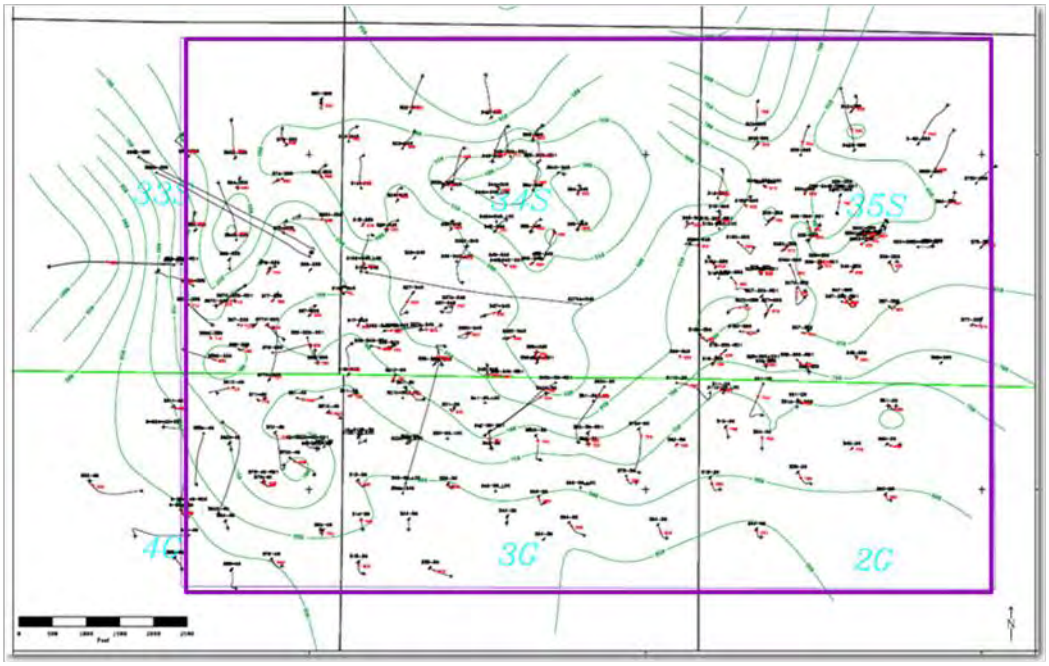
B-Sand to top of BLW

Isochore Map, TVT

Injection Target thickness in feet at well

¼ Mile Radius Perimeter area around injectors

Contour Interval 50 ft

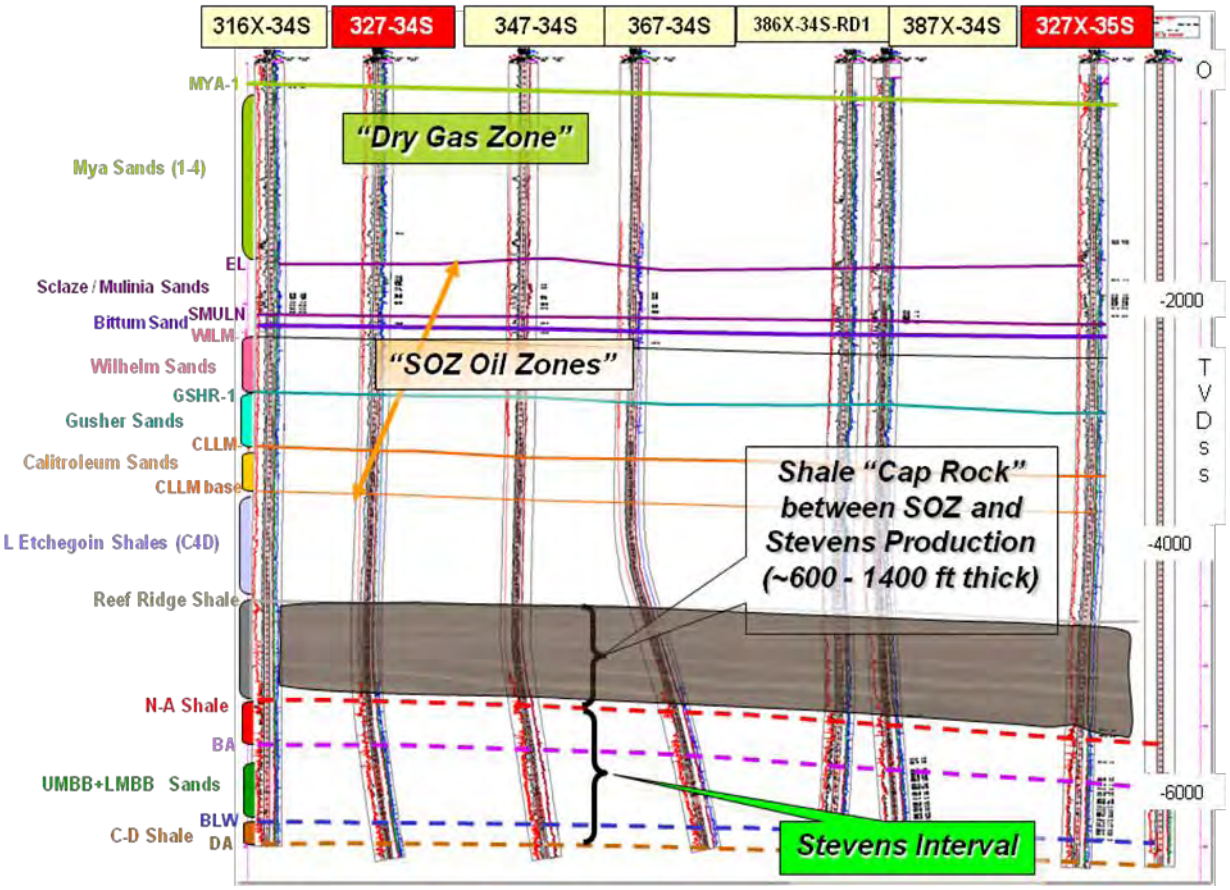


The foregoing and additional isochore maps of all horizons within the zone of proposed injection are located in Appendices F and G on a larger scale.

3. Geologic Cross Section from Surface to Deepest Zone Penetrated

Figure 9 (*and Appendix I*) shows the geologic cross section, which displays a section from the surface to the C-D Shale below the injection target zone.

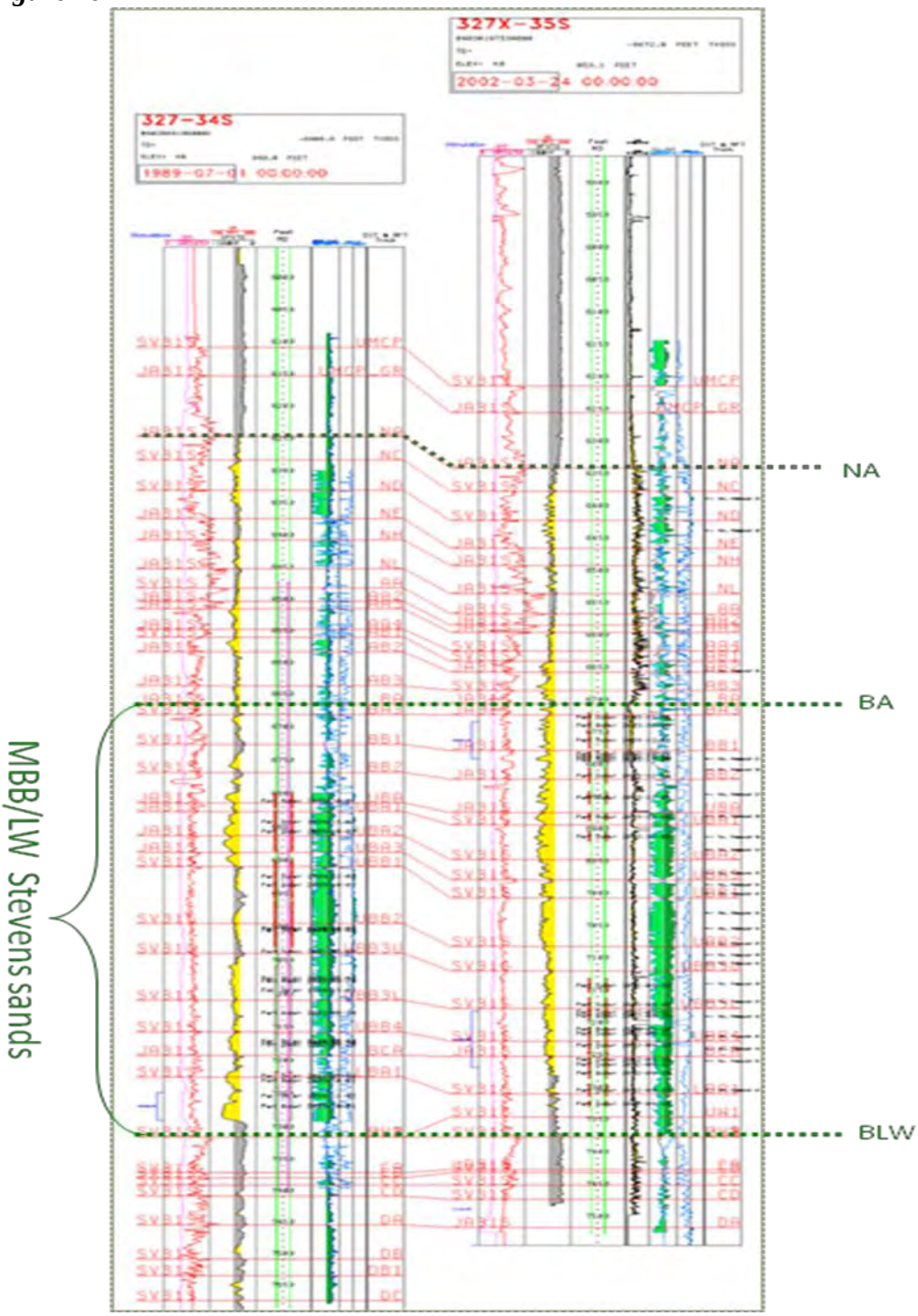
Figure 9



4. Injection Well Electric Log

An electric log from injection wells 327-34S and 327X-35S with geologic sub-unit tops has been provided as a representative type log and is included in Figure 10. See Appendix J for larger version of type log.

Figure 10


327X-35S
2002-03-24 00:00:00
327-34S
1989-07-01 00:00:00
NA
BA
BLW
MBB/LW Stevens sands

1724.7 (C) INJECTION PLAN

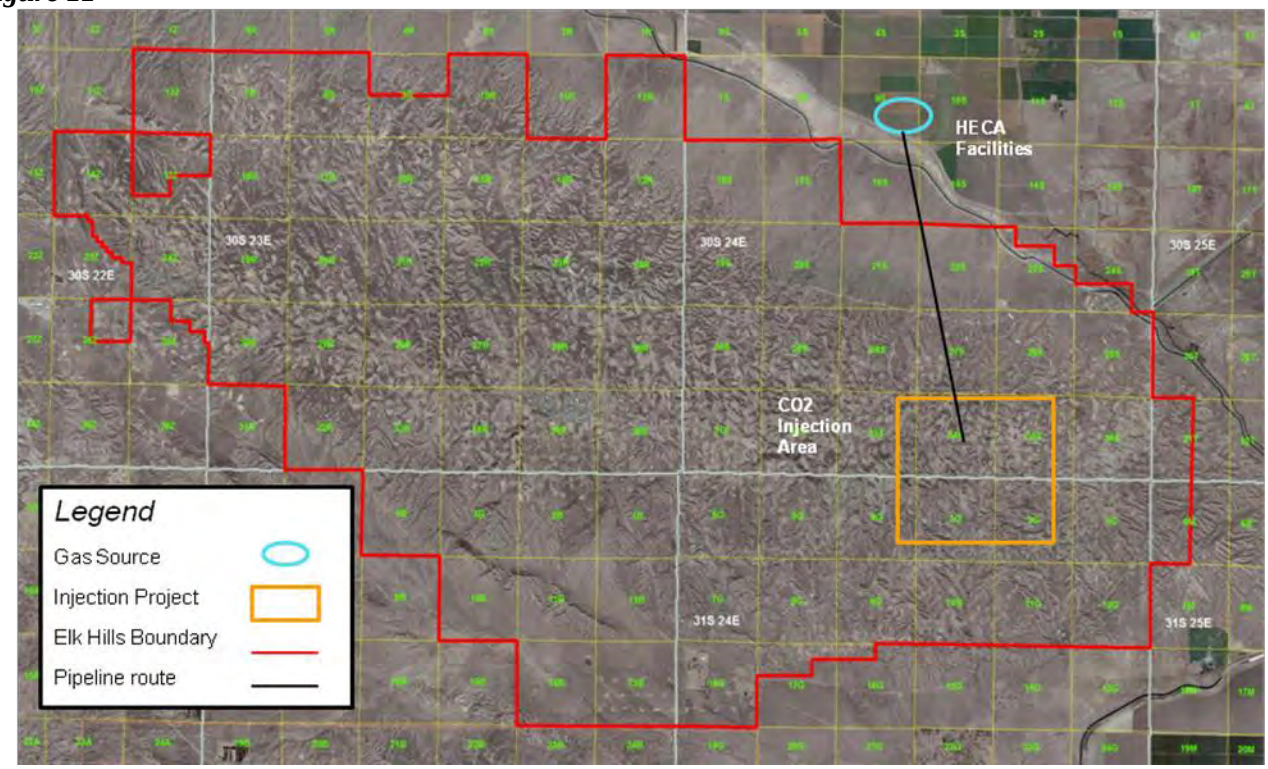
Overview

Initial project plans call for 25 injection wells in the requested permit area. The approximate location of these wells is provided in Appendix A. Each injection well will function as a central injection point surrounded by or between three to five offsetting production wells thereby allowing injected fluids to preferentially remain within each of the injection patterns.

1. Gas Injection Facilities

The finalized placement of the gas pipeline route from the HECA facility has not yet been confirmed; however Figure 11 illustrates the general pipeline route from the proposed HECA facility to the permit area.

Figure 11



2. Maximum Anticipated Surface Injection Pressure and Rate by Well

The maximum anticipated surface wellhead injection pressure (MASP) will not exceed the existing waterflood permit (#22800006) gradient of 0.9 psi per foot of depth. (Note: These calculations assume an average depth to the top perforation of 6850 and static fluid gradients of 0.44 psi/foot (water), 0.33 psi/foot (purchased gas), and 0.26 psi/ft (recycle gas). The actual depth to top perforation and type of injectant being used will result in a specific MASP for each well.)

The maximum injection rate at any injection well is anticipated to be 15 MMSCF of gas per day or 5,000 barrels of water per day. The maximum anticipated injection rate into the requested permit area (including recycled produced gas) is 500 MMSCF of gas per day and 150,000 barrels of water per day. The permit area rates will be injected via a water alternating gas injection schedule to be designed and adjusted at the pattern level based on pattern performance.

3. Proposed Monitoring System

OEHI proposes to equip each injection well with an actuated choke to control injection rate and wellhead pressure. Flow rates will be metered and tubing injection and casing annulus pressures will be monitored. The measured flow rates and pressures will tie into OEHI's existing SCADA surveillance system.

4. Method of Injection

Delivery into each injector will be through internally coated tubing and packers to allow for annular pressure monitoring for wellbore casing integrity. Upgrades will be made to existing surface facilities to ensure adequate capacity for the collection, processing, and distribution of produced and injected fluids (water and/or gas).

5. Cathodic Protection

New lines will be laid above and below ground and cathodic protection will be applied where applicable.

6. Water Treatment method

After entrained gas is removed and any adjustments to the current corrosion mitigation chemical program are addressed no other changes to the water treatment methods being utilized in the active waterflood project covering this same area and injection zone under permit #22800006 will be implemented.

7. Injection Water Analysis

See Appendix H for water analysis summary. Source of water will be produced water from the Stevens reservoirs in the Elk Hills oil field.

8. Injection Gas Analysis

Table 4 below is the current gas composition estimate from the HECA facility. An actual gas analysis will be submitted after the HECA facility starts up.

Table 4

Stream Component:	**Mole %**
	Estimated Analysis
Nitrogen	2.0
Carbon Dioxide	97.0
Methane	1.0

1724.7 (D) NOTICES TO OFFSET OPERATORS

There are no Offset Operators; consequently, there has been no correspondence.

1724.7 (E) OTHER DATA

Summary of Corrosion Mitigation, Monitoring, and Maintenance Plan

A multi-level approach will be implemented to address corrosion potential on well and surface equipment. Surface equipment that will handle the produced and injected flow streams will be designed to handle low pH fluids. Special materials, coatings and chemical inhibition will be used in areas where wet CO2 will be present. Wellheads, tubing strings, and packers will be upgraded on injectors. Producing wellheads will be upgraded where necessary and chemical programs adjusted or implemented to protect tubulars. Cathodic protection will be installed on wells and buried piping systems.

Monitoring programs will be developed that include mechanical integrity practices, fluid analysis, and coupon programs.

Maintenance programs will be developed and followed to contribute to the reliability of the surface facilities and wellbore integrity that will include pressure testing and

inspections during interventions. An automated call-up system will be used to schedule maintenance and inspection tasks.

1724.7 (F) MAPS, DIAGRAMS & EXHIBITS

Appendix A: Area Of Review map showing injectors with ¼ mile radius circles and all wells within the AOR that penetrate the Reef Ridge Shale.

Appendix B: Status map of all well that have penetrated the Reef Ridge Shale indicating active or inactive producers and injectors, and abandoned wellbores.

Appendix C: A Table and Map of wells located above the Reef Ridge Shale and within the AOR.

Appendix D: Maps of structure contours of Reef Ridge Shale, NA Shale, and B Interval (top of injection zone).

Appendix E: Structural contour maps for each sub-unit of the B Interval (BA-BLW).

Appendix F: Isochore maps for the Reef Ridge Shale, NA shale, and B Interval.

Appendix G: Isochore maps for the B Interval sub-units (BA-BLW).

Appendix H: Injection Water Analysis.

Appendix I: Map showing location of referenced well in Cross Section and full vertical Cross Section of producing intervals both above and below target injection zone

Appendix J: Type Log of Injection Target

Appendix K: Wellbore and casing diagrams within a ¼ mile radius of proposed project of all wells penetrating the Reef Ridge Shale (Cap Rock).

API	Well	Reef Ridge Top MD	NAB Top MD	(Injection Target) B sand top MD	Sec
02927616	366-33S	5507	6135	6546	33S
02927617	386-33S	5589	6257	6680	33S
02927618	388-33S	5373	6180	6615	33S
02927618	388-33S-RD1	5337	6178	6632	33S
02927660	326-34S	5,578	6,254	6,626	34S
02927661	337-34S	5,476	6,292	6,677	34S
02927661	337-34S-RD1	5,476	6,292	6,678	34S
02927662	344H-34S	5,728	6,478	6,850	34S
02927662	344H-34S-RD1	5,728	6,479	Not Penetrated	34S
02927662	344H-34S-RD2	5,728	6,479	6,844	34S
02927663	346-34S	5,458	6,258	6,575	34S
02927663	346-34S-RD1	5,459	6,247	6,583	34S
02927664	348-34S	5,344	6,232	6,650	34S
02927664	348-34S-RD1	5,344	6,238	6,664	34S
02927670	388-34S	5,434	6,373	6,780	34S
02927770	316-35S	5,488	6,288	6,652	35S
02927771	318-35S	5,516	6,328	6,720	35S
02927771	318-35S-RD1	5,516	6,326	6,716	35S
02927772	324-35S	5,528	6,368	6,652	35S
02927773	326-35S	5,364	6,247	6,599	35S
02927773	326-35S-RD1	5,431	6,247	6,603	35S
02927774	328-35S	5,485	6,307	6,699	35S
02927774	328-35S-RD1	5,485	6,304	6,698	35S
02927775	334-35S	5,647	6,432	6,763	35S
02927776	336-35S	5,468	6,323	6,690	35S
02927776	336-35S-RD1	5,468	6,321	6,691	35S
02927777	338-35S	5,489	6,329	6,718	35S
02927777	338-35S-RD1	5,489	6,321	6,710	35S
02927778	344-35S	5,616	6,427	6,788	35S
02927779	346-35S	5,516	6,358	6,719	35S
02927780	348-35S	5,518	6,386	6,777	35S
02927781	366-35S	5,574	6,487	6,877	35S
02927782	368-35S	5,719	6,615	7,033	35S
02927980	312-2G	5,541	6,466	6,928	2G
02927981	322-2G	5,728	6,607	7,075	2G
02927982	342-2G	5,754	6,663	7,121	2G
02929007	12-312D-3G	5,492	6,380	6,834	3G
02929018	314-3G	5,626	6,589	7,150	3G
02929019	322-3G	5,503	6,398	6,857	3G
02929019	322H-3G-RD1	5,503	6,398	6,856	3G
02929019	322H-3G-RD2	5,503	6,398	6,856	3G
02929020	324-3G	5,557	6,554	7,115	3G

API	Well	Reef Ridge Top MD	NAB Top MD	(Injection Target) B sand top MD	Sec
02929021	342-3G	5,576	6,476	6,921	3G
02929021	342-3G-RD1	5,576	6,465	6,915	3G
02929022	344-3G	5,657	6,607	7,139	3G
02929023	354-3G	5,690	6,660	7,257	3G
02929024	362-3G	5,542	6,463	6,920	3G
02929024	362-3G-RD1	5,542	6,481	6,917	3G
02929025	382-3G	5,558	6,488	6,946	3G
02929069	362I-4G	5,354	6,212	6,668	4G
02929070	364-4G		6,396	6,923	4G
02929071	382-4G	5,521	6,331	6,802	4G
02929072	384-4G		6,538	7,093	4G
02952195	375-33S	5,653	6,386	6,775	33S
02952246	373-4G	5,508	6,339	6,815	4G
02952246	373-4G-RD1		6,341	6,815	4G
02952276	351I-4G	5,236	6,027	6,461	4G
02952683	289-344D-35S	5,705	6,442	Not Penetrated	35S
02952683	289-344D-35S-RD1	5,705	6,442	6795	35S
02952693	311-3G	5,504	6,369	6798	3G
02952945	368-33S	5,305	6,134	6564	33S
02952983	317-34S	5,411	6,255	6,676	34S
02953114	357-35S	5,516	6,379	6,748	35S
02953241	373-3G	5,602	6,544	7,035	3G
02953296	331-3G	5,389	6,351	6,791	3G
02953380	9-354-4G	5,322	6,264	6,772	4G
02953380	9-354-4G-RD1	5,322	6,264	6,772	4G
02953380	9-354-4G-RD2	5,322	6,264	6,780	4G
02953380	9-354H-4G-RD4	5,322	6,280	Not Penetrated	4G
02953633	371-4G		6,244	6,697	4G
02953715	335-34S	5,683	6,328	6,678	34S
02953731	377-33S	5,461	6,213	6,645	33S
02953754	342A-3G	5,607	6,522	6,976	3G
02953754	342A-3G-RD1	5,607	6,533	6,987	3G
02953880	333-3G	5,523	6,445	6,933	3G
02953881	377-35S	5,744	6,647	7,044	35S
02954057	351-2G	5,704	6,601	7,033	2G
02954085	82-382D-4G	Not Penetrated	Not Penetrated	Not Penetrated	4G
02954085	82-382D-4G-RD1	5,482	6,332	6,782	4G
02954298	313-3G	5,538	6,453	6,946	3G
02954413	328-34S	5,397	6,262	6,684	34S
02954413	328-34S-RD1	5,390	6,261	6,679	34S
02954529	333-4G		6,074	6,631	4G
02954529	333H-4G-RD1		6,125	6,632	4G

API	Well	Reef Ridge Top MD	NAB Top MD	(Injection Target) B sand top MD	Sec
02955587	355-33S	5,479	6,309	6,624	33S
02955592	315-34S	5,562	6,275	6,634	34S
02955607	333-2G	5,757	6,672	7,176	2G
02955610	353-3G	5,564	6,511	7,022	3G
02955611	364-3G	5,542	6,621	7,144	3G
02955740	355-35S	5,580	6,414	6,786	35S
02955908	355-34S	5,501	6,286	6,598	34S
02955945	313-35S	5,708	6,472	6,838	35S
02955945	313-35S-RD1	5,708	6,473	6,844	35S
02955947	384-3G	5,875	6,800	7,353	3G
02955970	65X-35S	5,380	6,452	Not Penetrated	35S
02955970	65X-365D-35S-RD1	5,380	6,452	6,850	35S
02956812	331-2G	5,470	6,446	6,855	2G
02957390	333-34S	5,778	6,645	6,973	34S
02957505	322-35S	5,865	6,735	7,099	35S
02957941	375-35S	5,679	6,632	7,033	35S
02957942	313-2G	5,771	6,663	7,172	2G
02958197	353-2G		6,822	7,346	2G
02958238	353-35S	5,774	6,606	6,960	35S
02958238	353H-35S-RD1	5,774	6,596	6,960	35S
02958291	4-371-2G		6,830	7,258	2G
02958312	335-3G	5,720	6,685	7,300	3G
02958329	313-34S	5,647	6,595	6,952	34S
02958333	355-4G		6,374	6,955	4G
02958426	324-34S	5,675	6,437	6,698	34S
02958450	364-35S	5,749	6,602	6,988	35S
02958675	375-4G		6,596	7,167	4G
02958720	311-2G	5,536	6,360	6,761	2G
02958872	337-35S	5,473	6,319	6,706	35S
02958896	335-35S	5,608	6,345	6,691	35S
02958896	335-35S-RD1	5,608	6,346	6,695	35S
02959060	333-35S	5,856	6,627	6,954	35S
02960202	3-62-35S	6,084	6,970	7,285	35S
02960225	353-34S	5,981	6,804	7,170	34S
02960225	353-34S-RD1	5,939	6,742	7,099	34S
02960248	322-34S		6,890	7,298	34S
02960258	384-33S	5,798	6,592	6,930	33S
02960591	324-2G	5,748	6,839	7,414	2G
02961120	373-33S	5,726	6,663	7,074	33S
02961162	364-33S		6,614	6,993	33S
02961162	364H-33S-RD1		6,614	7,019	33S
02961922	342-35S	5,965	6,753	7,171	35S

API	Well	Reef Ridge Top MD	NAB Top MD	(Injection Target) B sand top MD	Sec
02961995	342-34S	6,011	6,925	7,340	34S
02962017	382-33S	5,788	6,763	7,188	33S
02964614	353A-4G	5,257	6,073	6,622	4G
02964657	365-4G		6,555	7,161	4G
02964713	315-3G	5,687	6,686	7,307	3G
02964986	333A-34S	5,748	6,517	6,870	34S
02966051	373A-3G	5,554	6,491	6,942	3G
02966851	364-34S	5,675	6,422	6,765	34S
02967097	385-34S	5,497	6,332	6,654	34S
02967166	364X-33S	5,601	6,414	6,839	33S
02967213	363X-35S	5,965	6,760	7,183	35S
02967216	365-34S	5,498	6,256	6,591	34S
02967218	353-33S		6,784	7,196	33S
02967313	345-34S	5,623	6,300	6,621	34S
02967315	315A-34S	5,583	6,227	6,652	34S
02967346	385X-33S	5,742	6,442	6,873	33S
02967366	325-34S	5,597	6,241	6,623	34S
02967367	356-34S	5,406	6,198	6,538	34S
02967403	336X-34S	5,457	6,303	6,667	34S
02967554	374-33S	5,628	6,579	6,932	33S
02967590	343-34S	5,834	6,679	7,014	34S
02967590	343-34S-RD1	5,834	6,635	7,033	34S
02967594	354-34S	5,812	6,528	6,916	34S
02967783	314-34S	5,569	6,454	6,811	34S
02967785	363X-33S		6,765	7,197	33S
02967945	323-34S	5,727	6,627	6,981	34S
02968290	352-2G	5,780	6,709	7,172	2G
02977553	342X-35S	5,902	6,675	7,122	35S
02979521	327-35S	5,444	6,285	6,664	35S
02979521	327-35S-RD1	5,444	6,283	6,666	35S
02979858	321-2G	5,591	6,428	6,856	2G
02979893	321H-3G	5,591	6,296	6,730	3G
02979893	321H-3G-RD1	5,591	6,297	Not Penetrated	3G
02980060	347-35S	5,416	6,325	6,698	35S
02980060	347-35S-RD1	5,416	6,235	6,697	35S
02981123	315-35S	5,598	6,361	Not Penetrated	35S
02981123	315-35S-RD1	5,598	6,361	6,667	35S
02981460	325-35S	5,484	6,277	6,631	35S
02981808	362A-3G	5,552	6,482	6,927	3G
02981809	381-4G	5,411	6,260	6,705	4G
02984186	327-34S	5,383	6,248	6,666	34S
02984218	347-34S	5,376	6,207	6,592	34S

API	Well	Reef Ridge Top MD	NAB Top MD	(Injection Target) B sand top MD	Sec
02984529	352X-3G	5,484	6,418	6,888	3G
02985062	338-34S	5,357	6,268	6,694	34S
02985062	338-34S-RD1	5,357	6,268	6,694	34S
02989111	358-34S	5,414	6,224	6,614	34S
02989111	358-34S-RD1	5,414	6,225	6,617	34S
02989733	367X-33S	5,425	6,063	6,499	33S
02989733	367X-33S-RD1	5,425	6,063	6,510	33S
02989734	387-33S		6,208	6,642	33S
02989735	376-33S	5,590	6,192	6,638	33S
03000738	378-33S	5,324	6,146	6,613	33S
03000739	314-35S	5,699	6,402	6,736	35S
03001865	351X-4G	5,209	6,031	6,492	4G
03002310	356X-33S	5,355	5,982	6,458	33S
03003445	318-34S	5,445	6,276	6,715	34S
03011885	327H-33S		5627	6191	33S
03012877	315H-33S		5665	6120	33S
03013359	367-33S	5,336	6,094	6,544	33S
03013360	358X-33S	5,263	6,127	6,623	33S
03014864	386XH-33S	5,600	6,250	Not Penetrated	33S
03015447	358A-33S	5,358	6,143	6,570	33S
03015547	357A-33S	5,404	6,115	6,571	33S
03016012	361X-4G	5,323	6,137	6,613	4G
03016526	377X-33S	5,422	6,230	6,636	33S
03016902	372-4G	5,499	6,312	6,821	4G
03017041	385X-34S	5,511	6,317	6,666	34S
03017148	381X-4G	5,532	6,357	6,805	4G
03017149	316X-34S	5,434	6,234	6,647	34S
03018328	311X-2G	5,553	6,394	6,818	2G
03018385	316X-35S	5,461	6,284	6,630	35S
03018386	317X-35S	5,483	6,261	6,624	35S
03018974	315X-35S	5,538	6,343	6,663	35S
03019562	338X-34S	5,400	6,260	6,665	34S
03019752	326X-35S	5,509	6,313	6,670	35S
03019753	327X-35S	5,508	6,342	6,707	35S
03020203	337X-34S	5,445	6,305	6,723	34S
03020338	348X-34S	5,331	6,179	6,575	34S
03020361	316A-35S	5,528	6,304	6,662	35S
03020777	318A-35S	5,530	6,351	6,733	35S
03020778	318X-35S	5,448	6,275	6,651	35S
03020804	352H-3G	5,484	6,462	Not Penetrated	3G
03021081	323-35S	5,718	6,515	6,847	35S
03021082	345A-35S	5,605	6,397	6,758	35S

API	Well	Reef Ridge Top MD	NAB Top MD	(Injection Target) B sand top MD	Sec
03022257	344-4G		Not Penetrated	Not Penetrated	4G
03022319	356-35S	5,538	6,403	6,774	35S
03022597	365X-35S	5,589	6,490	6,907	35S
03023348	355B-35S	5,566	6,396	6,745	35S
03023348	355B-35S-RD1	5,566	6,396	6,769	35S
03023349	355C-35S	5,566	6,396	6,760	35S
03023349	355C-35S-RD1	5,566	6,396	6,745	35S
03023350	355A-35S	5,591	6,429	6,786	35S
03023977	377A-33S	5,422	6,213	6,705	33S
03024824	348XH-35S	5,518	6,482	7,041	35S
03025187	372X-4G	5,497	6,366	6,861	4G
03025586	321H-2G	5,591	6,431	7,145	2G
03025617	377XH-35S	5,546	6,421	7,429	35S
03025650	373X-35S		6,714	7,118	35S
03025976	361XH-2G		6,793	7,469	2G
03026754	346X-35S	5,539	6,450	7,433	35S
03026904	341H-2G	5,729	6,636	7,468	2G
03028940	311XH-4G		5,821	6,288	4G
03028942	337A-34S	5,516	6,316	6,711	34S
03029197	328X-34S	5,450	6,300	Not Penetrated	34S
03029197	328X-34S-RD1	5,450	6,300	6,713	34S
03029251	327A-35S	5,432	6,300	6,669	35S
03029252	321X-3G	5,478	6,309	6,735	3G
03029419	326A-35S	5,531	6,356	6,728	35S
03029435	347X-35S	5,542	6,392	7,209	35S
03030335	387X-33S	5,493	6,293	8,341	33S
03031047	352X-4G		6,181	7,195	4G
03031142	338A-34S	5,458	6,333	7,627	34S
03031413	362X-4G		6,295	7,248	4G
03031413	362X-4G-RD1		6,295	7,248	4G
03031579	337X-33S		6,142	7,050	33S
03032898	382X-4G	5,475	6,374	7,213	4G
03033248	344X-35S	5,658	6,412	6,782	35S
03033981	336-33S		5775	6219	33S
03033981	336-33S-RD1		5775	6207	33S
03037071	354-35S	5,597	6,473	6,879	35S
03037087	386A-33S	5,631	6,309	6,853	33S
03037088	386B-33S	5,633	6,342	6,768	33S
03038819	655-34S	5,441	6,231	6,562	34S
03044723	327XA-34S		7,123	8,237	34S
03045343	354X-34S	5,766	6,517	6,921	34S
03046124	331X-4G		6,538	7,613	4G

Well Name	API	Status	Compl Yr	Section	TD (TVDSS)	TD (MD)	Surface X	Surface Y
51-33S	04029275820000	PROD_OIL_P & A	1944	33S	-2334.77	3150.00	6143230	2291670
51-33S-RD1	04029275820100	PROD_OIL_INACTIVE	2002	33S	-2430.67	3269.00	6143230	2291670
52-33S	04029275830000	PROD_OIL_ACTIVE	1944	33S	-2171.00	3055.00	6143112	2290995
53-33S	04029275840000	PROD_OIL_P & A	1944	33S	-2054.00	3000.00	6143146	2290458
53-33S-RD1	04029275840100	PROD_OIL_INACTIVE	2005	33S	-2178.66	3152.00	6143146	2290458
54-33S	04029275850000	PROD_OIL_P & A	1944	33S	-1889.88	2835.00	6143128	2289683
54-33S-RD1	04029275850100	PROD_OIL_INACTIVE	2002	33S	-2168.59	3153.00	6143128	2289683
56-33S	04029275870000	PROD_OIL_P & A	1944	33S	-1837.00	2853.00	6143146	2288376
57-33S	04029275880000	PROD_OIL_P & A	1944	33S	-1853.00	3048.00	6143211	2287610
58-33S	04029275890000	PROD_OIL_P & A	1944	33S	-1785.00	2925.00	6143195	2287114
58-33S-RD1	04029275890100	PROD_OIL_INACTIVE	2000	33S	-2070.59	3226.00	6143195	2287114
61-33S	04029275900000	PROD_OIL_INACTIVE	1944	33S	-2344.00	3134.00	6143827	2291650
62-33S	04029275910000	PROD_OIL_INACTIVE	1944	33S	-2201.00	3045.00	6143852	2290956
63-33S	04029275920000	PROD_OIL_P & A	1944	33S	-2033.00	2946.00	6143886	2290329
63-33S-RD1	04029275920100	PROD_OIL_INACTIVE	2004	33S	-2353.15	3302.00	6143886	2290329
64-33S	04029275930000	PROD_OIL_P & A	1944	33S	-2058.00	2946.00	6143814	2289709
64-33S-RD1	04029275930100	PROD_OIL_INACTIVE	2002	33S	-2156.48	3045.00	6143814	2289709
65-33S	04029275940000	PROD_OIL_P & A	1944	33S	-1919.77	2837.00	6143817	2289077
65-33S-RD1	04029275940100	PROD_GAS_INACTIVE	2002	33S	-2167.16	3150.00	6143817	2289077
66-33S	04029275950000	PROD_OIL_P & A	1944	33S	-2029.00	3000.00	6143816	2288460
66-33S-RD1	04029275950100	PROD_OIL_ACTIVE	2003	33S	-2215.76	3223.00	6143816	2288460
67-33S	04029275960000	PROD_OIL_P & A	1945	33S	-1815.00	2865.00	6143895	2287802
68-33S	04029275970000	PROD_OIL_P & A	1944	33S	-1905.00	3065.00	6143733	2287048
71-33S	04029275980000	PROD_OIL_P & A	1944	33S	-2399.00	3173.00	6144471	2291646
71-33S-RD1	04029275980100	PROD_OIL_P & A	2003	33S	-2609.01	3461.00	6144471	2291646
72-33S	04029275990000	PROD_OIL_INACTIVE	1944	33S	-2118.00	2996.00	6144499	2290906
73-33S	04029276000000	PROD_OIL_P & A	1944	33S	-2172.00	3060.00	6144411	2290336
73-33S-RD1	04029276000100	PROD_OIL_ACTIVE	2001	33S	-2290.16	3236.00	6144411	2290336
74-33S	04029276010000	PROD_OIL_INACTIVE	1944	33S	-2008.00	2873.00	6144384	2289652
75-33S	04029276020000	PROD_OIL_INACTIVE	1944	33S	-2116.00	3077.00	6144504	2289004
76-33S	04029276030000	PROD_OIL_P & A	1941	33S	-2179.00	3175.00	6144486	2288380
77-33S	04029276040000	PROD_OIL_P & A	1944	33S	-2005.00	3075.00	6144556	2287799
4-77-33S-RD1	04029276040100	PROD_OIL_P & A	2000	33S	-2128.56	3280.00	6144556	2287799
78-33S	04029276050000	PROD_OIL_P & A	1945	33S	-1881.00	2958.00	6144411	2287130
81-33S	04029276060000	PROD_OIL_INACTIVE	1944	33S	-2293.00	3020.00	6145184	2291642
82-33S	04029276070000	PROD_OIL_P & A	1944	33S	-2236.19	3103.00	6145188	2290900
82-33S-RD1	04029276070100	PROD_OIL_ACTIVE	2003	33S	-2386.41	3272.00	6145188	2290900
83-33S	04029276080000	PROD_OIL_ACTIVE	1944	33S	-2082.00	2905.00	6145166	2290362
84-33S	04029276090000	PROD_OIL_INACTIVE	1944	33S	-2210.00	3145.00	6145154	2289592
85-33S	04029276100000	INJ_GAS_P & A	1944	33S	-2005.00	2950.00	6145102	2289023
86-33S	04029276110000	PROD_OIL_P & A	1944	33S	-2074.00	3045.00	6145144	2288307
86-33S-RD1	04029276110100	PROD_OIL_INACTIVE	1998	33S	-2200.58	3264.00	6145144	2288307
1-34S	04029276190000	PROD_OIL_INACTIVE	1925	34S	-2464.34	3245.00	6149410	2291666
2-34S	04029276200000	PROD_OIL_ACTIVE	1924	34S	-2398.00	3217.00	6149412	2291092
2-34S	04029276200100	OIL PRODUCER	1944	34S	-2398.00	3212.00	6149412	2291092
3-34S	04029276210000	PROD_OIL_P & A	1924	34S	-2150.00	2985.00	6149394	2290477
4-34S	04029276220000	PROD_OIL_INACTIVE	1925	34S	-2192.00	2996.00	6149383	2289883
5-34S	04029276230000	PROD_OIL_P & A	1925	34S	-2121.00	2926.00	6149372	2289289
6-34S	04029276240000	PROD_OIL_P & A	1925	34S	-2092.00	2860.00	6149392	2288705
7-34S	04029276250000	PROD_OIL_P & A	1925	34S	-2080.00	2980.00	6149356	2288112
8-34S	04029276260000	PROD_OIL_INACTIVE	1925	34S	-2112.00	3031.00	6149364	2287521
9-34S	04029276270000	PROD_OIL_P & A	1930	34S	-2134.00	3112.00	6149364	2287076
11-34S	04029276280000	PROD_OIL_INACTIVE	1923	34S	-2271.00	3088.00	6148745	2291078
12-34S	04029276290000	PROD_OIL_P & A	1979	34S	-2689.00	3513.00	6148736	2290461
13-34S	04029276300000	PROD_OIL_P & A	1923	34S	-2094.00	2970.00	6148707	2289896
14-34S	04029276310000	PROD_OIL_P & A	1923	34S	-2013.00	2880.00	6148713	2289300
15-34S	04029276320000	PROD_OIL_P & A	1924	34S	-1998.00	2821.00	6148704	2288542
16-34S	04029276330000	PROD_OIL_P & A	1925	34S	-2012.00	2838.00	6148692	2287795
17-34S	04029276340000	PROD_OIL_P & A	1923	34S	-2029.00	2987.00	6148682	2287038
18-34S	04029276350001	MON_PSI_APPROVED	1944	34S	-1863.00	2897.00	6145784	2287041
21-34S	04029276360001	MON_PSI_DRILL	1943	34S	-2371.00	3138.00	6146510	2291621
22-34S	04029276370000	PROD_OIL_P & A	1945	34S	-2346.00	3155.00	6146446	2291076

23-34S	04029276380000	PROD_OIL_ACTIVE	1943	34S	-2250.00	3102.00	6146489	2290311
24-34S	04029276390000	PROD_OIL_INACTIVE	1944	34S	-2194.00	3067.00	6146412	2289693
25-34S	04029276400000	PROD_OIL_P & A	1945	34S	-2093.07	2970.00	6146468	2289017
25-34S-RD1	04029276400100	PROD_OIL_ACTIVE	2002	34S	-2410.75	3292.00	6146468	2289017
31-34S	04029276410001	MON_PSI_APPROVED	1944	34S	-2411.00	3155.00	6147231	2291607
32-34S	04029276420000	PROD_OIL_P & A	1943	34S	-2223.00	3020.00	6147159	2290957
32-34S-RD1	04029276420100	PROD_OIL_ACTIVE	2004	34S	-2447.03	3360.00	6147159	2290957
33-34S	04029276430000	PROD_OIL_P & A	1944	34S	-2309.00	3205.00	6147220	2290257
33-34S-RD1	04029276430100	PROD_OIL_ACTIVE	2003	34S	-2532.49	3545.00	6147220	2290257
34-34S	04029276440000	PROD_OIL_P & A	1944	34S	-2183.55	3113.00	6147161	2289503
35-34S	04029276450000	PROD_OIL_P & A	1944	34S	-2105.60	3059.00	6147172	2288902
36-34S	04029276460000	MON_PSI_P & A	1944	34S	-1926.00	2890.00	6147101	2288397
38-34S	04029276470000	INJ_GAS_ACTIVE	1944	34S	-1947.00	2905.00	6147090	2287016
41-34S	04029276480001	MON_PSI_DRILL	1943	34S	-2630.00	3442.00	6147832	2291599
42-34S	04029276490001	MON_PSI_APPROVED	1944	34S	-2397.00	3200.00	6147807	2290946
43-34S	04029276500000	PROD_OIL_INACTIVE	1944	34S	-2214.00	3031.00	6147806	2290276
51-34S	04029276510000	PROD_OIL_P & A	1944	34S	-2508.00	3290.00	6148624	2291585
111-34S	04029276520000	PROD_OIL_INACTIVE	1944	34S	-2380.00	3129.00	6145824	2291662
112-34S	04029276530000	PROD_OIL_ACTIVE	1944	34S	-2169.00	2938.00	6145840	2290978
113-34S	04029276540000	PROD_OIL_P & A	1944	34S	-2268.00	3060.00	6145790	2290317
113-34S-RD1	04029276540100	PROD_OIL_ACTIVE	2003	34S	-2418.50	3281.00	6145790	2290317
114-34S	04029276550000	PROD_OIL_P & A	1944	34S	-2005.00	2830.00	6145858	2289664
115-34S	04029276560000	PROD_OIL_P & A	1944	34S	-2121.71	2985.00	6145858	2288947
115-34S-RD1	04029276560100	PROD_OIL_INACTIVE	2005	34S	-2261.71	3155.00	6145858	2288947
116-34S	04029276570000	PROD_OIL_P & A	1945	34S	-2023.00	2914.00	6145780	2288376
116-34S-RD1	04029276570100	PROD_OIL_P & A	1998	34S	-2279.34	3210.00	6145780	2288376
117-34S	04029276580000	PROD_OIL_INACTIVE	1944	34S	-1978.00	2961.00	6145793	2287700
251-34S	04029276590000	PROD_OIL_INACTIVE	1953	34S	-2536.00	3280.00	6148964	2291592
1B-34S	04029276710000	PROD_OIL_P & A	1922	34S	-2564.00	3293.00	6150583	2291649
2B-34S	04029276720000	PROD_OIL_ACTIVE	1925	34S	-2523.00	3299.00	6149958	2291657
3B-34S	04029276730000	PROD_OIL_P & A	1922	34S	-2290.00	3060.00	6150570	2291052
4B-34S	04029276740000	PROD_OIL_P & A	1924	34S	-2491.00	3287.00	6149944	2291056
5B-34S	04029276750000	PROD_OIL_P & A	1924	34S	-2206.00	2917.00	6150565	2290456
6B-34S	04029276760000	PROD_OIL_P & A	1924	34S	-2194.00	2980.00	6149936	2290462
7B-34S	04029276770000	PROD_OIL_P & A	1924	34S	-2192.00	2887.00	6150555	2289860
7B-34S-RD1	04029276770100	PROD_OIL_P & A	1925	34S	-2232.00	2927.00	6150555	2289860
8B-34S	04029276780000	PROD_OIL_P & A	1925	34S	-2178.00	2933.00	6149927	2289874
9B-34S	04029276790000	PROD_OIL_P & A	1924	34S	-2158.00	2929.00	6150548	2289273
10B-34S	04029276800000	PROD_OIL_P & A	1925	34S	-2185.00	2928.00	6149916	2289280
11B-34S	04029276810000	PROD_OIL_P & A	1924	34S	-2094.00	2935.00	6150538	2288683
11B-34S-RD1	04029276810100	PROD_OIL_INACTIVE	1933	34S	-2169.00	3010.00	6150538	2288683
12B-34S	04029276820000	PROD_OIL_P & A	1925	34S	-2126.00	2917.00	6149912	2288696
13B-34S	04029276830000	PROD_OIL_ACTIVE	1924	34S	-2139.00	2975.00	6150532	2288086
14B-34S	04029276840000	PROD_OIL_P & A	1925	34S	-2134.00	2950.00	6149900	2288105
15B-34S	04029276850000	PROD_OIL_P & A	1923	34S	-1895.00	2800.00	6150520	2287505
15XB-34S	04029276860000	INJ_GAS_P & A	1924	34S	-2055.00	2963.00	6150524	2287431
16B-34S	04029276870000	PROD_OIL_P & A	1925	34S	-2150.00	3000.00	6149892	2287514
17B-34S	04029276880000	PROD_OIL_P & A	1922	34S	-1951.00	2910.00	6150504	2286916
18B-34S	04029276890000	PROD_OIL_P & A	1925	34S	-1987.00	2887.00	6149884	2286924
1-35S	04029276900000	PROD_OIL_P & A	1922	35S	-2352.00	3082.00	6151076	2291637
1-35S-RD1	04029276900100	PROD_OIL_P & A	1933	35S	-2360.00	3090.00	6151076	2291637
2-35S	04029276910000	PROD_OIL_P & A	1922	35S	-2286.00	3014.00	6151074	2291051
4-35S	04029276920000	PROD_OIL_P & A	1924	35S	-2276.00	2968.00	6151064	2290463
5-35S	04029276930000	PROD_OIL_P & A	1924	35S	-2255.00	2970.00	6151056	2289875
5-35S-RD1	04029276930100	PROD_OIL_P & A	1995	35S	-2285.00	3000.00	6151056	2289875
6-35S	04029276940000	PROD_OIL_P & A	1924	35S	-2185.00	2963.00	6151047	2289286
7-35S	04029276950000	PROD_OIL_P & A	1924	35S	-2171.00	3000.00	6151040	2288705
8-35S	04029276960000	PROD_OIL_P & A	1924	35S	-2162.00	3040.00	6151031	2288120
9-35S	04029276970000	PROD_OIL_P & A	1922	35S	-1954.00	2849.00	6151022	2287535
11-35S	04029276980000	PROD_OIL_P & A	1922	35S	-1966.00	2860.00	6151065	2286898
13-35S	04029276990000	PROD_OIL_P & A	1927	35S	-1994.00	2850.00	6151652	2286883
14-35S	04029277000000	PROD_OIL_P & A	1922	35S	-2042.00	2815.00	6152238	2286868
15-35S	04029277010000	PROD_OIL_P & A	1922	35S	-2049.00	2850.00	6152824	2286852

16-35S	04029277020000	INJ_GAS_ACTIVE	1927	35S	-2169.00	3010.00	6153402	2286835
17-35S	04029277030000	PROD_OIL_P & A	1926	35S	-2097.00	2862.00	6153995	2286872
18-35S	04029277040000	PROD_OIL_P & A	1921	35S	-2129.00	2950.00	6154576	2286858
19-35S	04029277050000	PROD_OIL_P & A	1921	35S	-2221.00	3010.00	6155163	2286843
33-35S	04029277170000	PROD_OIL_P & A	1945	35S	-2497.50	3186.00	6152410	2290248
33-35S-RD1	04029277170100	PROD_OIL_ACTIVE	2004	35S	-2605.72	3341.00	6152410	2290248
34-35S	04029277180000	PROD_OIL_P & A	1924	35S	-2526.00	3147.00	6154627	2291488
34-35S-RD1	04029277180100	PROD_OIL_INACTIVE	1924	35S	-2526.00	3147.00	6154627	2291488
35D-35S	04029277190000	PROD_OIL_P & A	1921	35S	-2700.00	3285.00	6154052	2291651
35D-35S-RD1	04029277190100	PROD_OIL_INACTIVE	1999	25S	-2663.00	3248.00	6154052	2291651
36-35S	04029277200000	PROD_OIL_P & A	1922	35S	-2495.00	3054.00	6153469	2291558
37-35S	04029277210000	PROD_OIL_P & A	1921	35S	-2505.00	3120.00	6152882	2291585
38-35S	04029277220000	PROD_OIL_P & A	1923	35S	-2589.00	3245.00	6152300	2291698
38-35S-RD1	04029277220100	PROD_OIL_P & A	1933	35S	-2544.00	3200.00	6152300	2291698
40-35S	04029277230000	PROD_OIL_P & A	1923	35S	-2371.00	3061.00	6151714	2291717
49-35S	04029277240000	PROD_OIL_P & A	1922	35S	-2001.00	2827.00	6151672	2287532
51-35S	04029277250000	PROD_OIL_P & A	1922	35S	-2044.00	2850.00	6152369	2287516
52-35S	04029277260000	PROD_OIL_P & A	1921	35S	-1994.00	2723.00	6153066	2287496
52-35S-RD1	04029277260100	PROD_OIL_P & A	1926	35S	-2045.00	2774.00	6153066	2287496
54-35S	04029277270000	PROD_OIL_P & A	1921	35S	-2205.00	3000.00	6153758	2287478
55-35S	04029277280000	PROD_OIL_P & A	1921	35S	-2216.00	2965.00	6154458	2287460
57-35S	04029277290000	PROD_OIL_P & A	1920	35S	-2193.00	2990.00	6155145	2287440
58-35S	04029277300000	PROD_OIL_P & A	1921	35S	-2235.00	3005.00	6155163	2288033
58-35S-RD1	04029277300100	PROD_OIL_P & A	1923	35S	-2195.00	2965.00	6155163	2288033
58-35S-RD2	04029277300200	PROD_OIL_P & A	1937	35S	-2235.00	3005.00	6155163	2288033
60-35S	04029277310000	PROD_OIL_P & A	1921	35S	-2302.00	3000.00	6155164	2288548
61-35S	04029277320000	PROD_OIL_P & A	1921	35S	-2302.00	2950.00	6155170	2289062
61-35S-RD1	04029277320100	PROD_OIL_P & A	1922	35S	-2252.00	2900.00	6155170	2289062
73-35S	04029277360000	PROD_OIL_P & A	1924	35S	-2464.00	3127.00	6151723	2291014
73-35S-RD1	04029277360100	PROD_OIL_P & A	1985	35S	-2464.00	3127.00	6151723	2291014
74-35S	04029277370000	PROD_OIL_P & A	1924	35S	-2351.00	2995.00	6151711	2290276
75-35S	04029277380000	PROD_OIL_P & A	1926	35S	-2295.00	2992.00	6151701	2289588
77-35S	04029277390000	PROD_OIL_P & A	1924	35S	-2208.00	2963.00	6151693	2288904
80-35S	04029277400000	PROD_OIL_P & A	1924	35S	-2480.00	3090.00	6152398	2291022
82-35S	04029277410000	PROD_OIL_P & A	1925	35S	-2377.00	3159.00	6152398	2289566
84-35S	04029277420000	PROD_OIL_P & A	1924	35S	-2228.00	3048.00	6152390	2288884
85-35S	04029277430000	PROD_OIL_P & A	1924	35S	-2074.00	2900.00	6152378	2288199
85-35S-RD1	04029277430100	PROD_OIL_P & A	1934	35S	-1424.00	2250.00	6152378	2288199
87-35S	04029277440000	PROD_OIL_P & A	1944	35S	-2494.00	3075.00	6153116	2291016
88-35S	04029277450000	PROD_OIL_ACTIVE	1925	35S	-2389.00	3058.00	6153106	2290256
89-35S	04029277460000	PROD_OIL_P & A	1924	35S	-2546.00	3276.00	6153096	2289560
91-35S	04029277470000	PROD_OIL_P & A	1924	35S	-2163.00	2915.00	6153088	2288866
92-35S	04029277480000	PROD_OIL_P & A	1923	35S	-2045.00	2811.00	6153077	2288172
101-35S	04029277490000	PROD_OIL_P & A	1924	35S	-2521.00	3207.00	6153810	2290913
102-35S	04029277500000	PROD_OIL_P & A	1924	35S	-2524.00	3250.00	6153800	2290247
103-35S	04029277510000	PROD_OIL_P & A	1924	35S	-2277.00	2981.00	6153789	2289551
105-35S	04029277520001	MON_PSI_APPROVED	1922	35S	-2101.00	2811.00	6153775	2288858
106-35S	04029277530000	PROD_OIL_P & A	1922	35S	-2164.00	2875.00	6153771	2288164
108-35S	04029277540000	PROD_OIL_P & A	1925	35S	-2437.00	3093.00	6154507	2290904
109-35S	04029277550000	PROD_OIL_P & A	1924	35S	-2354.00	3040.00	6154497	2290239
110-35S	04029277560000	PROD_OIL_P & A	1925	35S	-2284.00	2950.00	6154487	2289543
112-35S	04029277570000	PROD_OIL_P & A	1921	35S	-2147.00	2785.00	6154413	2288852
113-35S	04029277580000	PROD_OIL_P & A	1921	35S	-2193.00	2900.00	6154469	2288156
126-35S	04029277600000	PROD_OIL_P & A	1953	35S	-2475.00	3095.00	6152874	2290631
126-35S-RD1	04029277600100	PROD_OIL_ACTIVE	2004	35S	-2669.28	3440.00	6152874	2290631
208-35S	04029277610000	PROD_OIL_P & A	1926	35S	-2294.00	3155.00	6151229	2287968
240-35S	04029277650000	PROD_OIL_P & A	1954	35S	-2423.00	3132.00	6151260	2291490
273-35S	04029277670000	PROD_OIL_P & A	1953	35S	-2429.00	3090.00	6151613	2291004
274-35S	04029277680000	PROD_OIL_ACTIVE	1954	35S	-2345.00	3002.00	6151552	2290167
280-35S	04029277690000	PROD_OIL_P & A	1954	35S	-2483.00	3100.00	6152284	2291144
280-35S-RD1	04029277690100	PROD_OIL_INACTIVE	1963	35S	-2498.00	3115.00	6152284	2291144
2113-35S	04029277840000	PROD_OIL_P & A	1942	35S	-2211.00	2937.00	6154613	2288190
25-2G	04029279680000	PROD_OIL_P & A	1944	2G	-2242.90	3130.00	6151745	2283584

25-2G-RD1	04029279680101	MON_PSI_APPROVED	1996	2G	-2149.80	3037.00	6151745	2283584
45-2G	04029279710000	PROD_OIL_P & A	1943	2G	-2201.89	3016.00	6153048	2283699
45-2G-RD1	04029279710100	PROD_OIL_ACTIVE	2005	2G	-2370.15	3188.00	6153048	2283699
65-2G	04029279740000	PROD_OIL_INACTIVE	1943	2G	-2339.00	3058.00	6154366	2283602
74-2G	04029279750002	MON_PSI_DRILL	1943	2G	-2334.00	3057.00	6155009	2284250
3F-2G	04029279850000	PROD_OIL_P & A	1922	2G	-2145.00	2990.00	6154614	2286275
4F-2G	04029279860000	PROD_OIL_P & A	1922	2G	-2127.00	2940.00	6154015	2286277
5F-2G	04029279870000	PROD_OIL_P & A	1922	2G	-2072.00	2910.00	6153422	2286280
6F-2G	04029279880000	PROD_OIL_P & A	1922	2G	-2071.00	2958.00	6152829	2286283
7F-2G	04029279890000	PROD_OIL_P & A	1922	2G	-2175.00	3018.00	6152236	2286286
8F-2G	04029279900000	PROD_OIL_P & A	1922	2G	-2043.00	2856.00	6151678	2286354
9F-2G	04029279910000	PROD_OIL_P & A	1922	2G	-2040.00	2930.00	6151090	2286410
11F-2G	04029279930000	PROD_OIL_P & A	1924	2G	-2164.00	2953.00	6155178	2285672
12F-2G	04029279940000	PROD_OIL_P & A	1927	2G	-2138.89	2982.00	6154590	2285758
13F-2G	04029279950000	PROD_OIL_P & A	1924	2G	-2130.40	2966.00	6154016	2285722
14F-2G	04029279960000	PROD_OIL_P & A	1922	2G	-2137.00	2987.00	6153415	2285782
15F-2G	04029279970000	PROD_OIL_P & A	1923	2G	-2094.03	2978.00	6152772	2285743
15F-2G-RD1	04029279970100	PROD_OIL_P & A	1927	2G	-2080.03	2964.00	6152772	2285743
16F-2G	04029279980000	PROD_OIL_P & A	1922	2G	-2047.00	2917.00	6152232	2285687
17F-2G	04029279990000	PROD_OIL_P & A	1926	2G	-2060.00	2968.00	6151670	2285722
17F-2G-RD1	04029279990100	PROD_OIL_P & A	1935	2G	-2060.00	2968.00	6151670	2285722
18F-2G	04029290000000	PROD_OIL_P & A	1922	2G	-1997.00	2881.00	6151040	2285803
3G-2G	04029290030000	PROD_OIL_P & A	1924	2G	-2188.00	3018.00	6154572	2285199
4G-2G	04029290040000	PROD_OIL_P & A	1924	2G	-2149.00	2966.00	6154006	2285104
8G-2G	04029290050000	PROD_OIL_P & A	1924	2G	-2072.00	3021.00	6151629	2285225
9G-2G	04029290060000	PROD_OIL_P & A	1922	2G	-2043.00	3001.00	6151041	2285241
21-3G	04029290080001	MON_PSI_DRILL	1943	3G	-2042.00	3024.00	6146500	2286378
25-3G	04029290090000	PROD_OIL_P & A	1945	3G	-1988.00	2892.00	6146426	2283814
25-3G-RD1	04029290090100	PROD_OIL_P & A	2003	3G	-2178.62	3145.00	6146426	2283814
54-3G	04029290110001	MON_PSI_APPROVED	1943	3G	-2115.00	3012.00	6148474	2284333
85-3G	04029290160000	PROD_OIL_P & A	1944	3G	-2085.00	2990.00	6150456	2283760
85-3G-RD1	04029290160100	INJ_GAS_ACTIVE	2004	3G	-2244.06	3150.00	6150456	2283760
1K-3G	04029290260000	PROD_OIL_P & A	1922	3G	-1961.00	2885.00	6150543	2286409
2K-3G	04029290270000	PROD_OIL_P & A	1925	3G	-1958.00	2937.00	6149806	2286410
3K-3G	04029290280000	PROD_OIL_P & A	1925	3G	-1959.00	2944.00	6149288	2286414
6K-3G	04029290290000	PROD_OIL_P & A	1924	3G	-2014.00	2920.00	6150536	2285807
1-3G	04029290300000	PROD_OIL_P & A	1927	3G	-700.00	1600.00	6147882	2283819
51-4G	04029290520000	PROD_OIL_INACTIVE	1945	4G	-1751.00	2830.00	6143175	2286336
52-4G	04029290530000	PROD_OIL_P & A	1945	4G	-1722.00	2813.00	6143182	2285824
53-4G	04029290540000	PROD_OIL_P & A	1945	4G	-1796.00	2824.00	6143102	2285169
53-4G-RD1	04029290540100	PROD_OIL_ACTIVE	2003	4G	-1949.37	2979.00	6143102	2285169
55-4G	04029290550001	MON_PSI_DRILL	1952	4G	-1870.00	2825.00	6143148	2283778
61-4G	04029290560000	PROD_OIL_P & A	1945	4G	-1759.00	2902.00	6143896	2286420
61-4G-RD1	04029290560100	PROD_OIL_INACTIVE	2000	4G	-1927.23	3095.00	6143896	2286420
62-4G	04029290570000	PROD_OIL_INACTIVE	1945	4G	-1830.00	2930.00	6143840	2285668
63-4G	04029290580000	PROD_OIL_P & A	1944	4G	-1879.00	2970.00	6143794	2285084
63-4G-RD1	04029290580100	PROD_OIL_ACTIVE	2003	4G	-2008.70	3102.00	6143794	2285084
64-4G	04029290590000	PROD_OIL_P & A	1945	4G	-1863.00	2905.00	6143842	2284426
71-4G	04029290610000	PROD_OIL_P & A	1945	4G	-1863.00	3022.00	6144584	2286364
73-4G	04029290620000	PROD_OIL_P & A	1945	4G	-1889.00	2942.00	6144595	2285158
75-4G	04029290630000	PROD_OIL_P & A	1945	4G	-1943.00	2954.00	6144516	2283775
75-4G-RD1	04029290630100	PROD_OIL_P & A	2004	4G	-2098.38	3110.00	6144516	2283775
34-2G	04029505180000	INJ_GAS_P & A	1975	2G	-3335.00	4200.00	6152425	2284373
34-2G-RD1	04029505180100	INJ_GAS_ACTIVE	2004	2G	-2389.86	3255.00	6152425	2284373
15-2G	04029521600000	PROD_OIL_P & A	1976	2G	-2162.60	3115.00	6151018	2283801
15-2G-RD1	04029521600100	PROD_OIL_ACTIVE	2003	2G	-2327.82	3365.00	6151018	2283801
35-2G	04029521620001	MON_PSI_APPROVED	1976	2G	-2140.00	2950.00	6152419	2283662
45-3G	04029521660000	PROD_OIL_P & A	1976	3G	-2028.82	2866.00	6147794	2283636
45-3G-RD1	04029521660100	PROD_OIL_ACTIVE	2007	3G	-2156.51	3265.00	6147794	2283636
64-3G	04029521690000	PROD_OIL_P & A	1976	3G	-2056.90	2932.00	6149146	2284361
64-3G-RD1	04029521690100	PROD_OIL_P & A	1997	3G	-2040.40	2925.00	6149146	2284361
64-3G-RD2	04029521690200	PROD_OIL_P & A	1997	3G	-2059.00	2925.00	6149146	2284361
64-3G-RD3	04029521690300	PROD_OIL_ACTIVE	2007	3G	-2202.09	3270.00	6149146	2284361

44-2G	04029522160001	MON_PSI_DRILL	1976	2G	-3209.00	4025.00	6153035	2284335
44-34S	04029526840000	PROD_OIL_P & A	1976	34S	-2445.00	3370.00	6147702	2289431
44-34S-RD1	04029526840100	PROD_OIL_INACTIVE	2003	34S	-2458.17	3470.00	6147702	2289431
53-34S	04029526850000	PROD_OIL_P & A	1976	34S	-2461.00	3330.00	6148508	2290273
53-34S-RD1	04029526850100	PROD_OIL_ACTIVE	2002	34S	-2355.31	3287.00	6148508	2290273
65-3G	04029531280001	MON_PSI_DRILL	1976	3G	-2133.00	2936.00	6149196	2283640
11-3G	04029533900000	PROD_OIL_P & A	1976	3G	-1970.00	3077.00	6145588	2286443
77-34S	04029537010000	PROD_OIL_ACTIVE	1976	34S	-2645.00	3500.00	6149844	2287584
72-4G	04029537550000	PROD_OIL_P & A	1976	4G	-1891.00	2980.00	6144542	2285452
72-4G-RD1	04029537550100	PROD_OIL_ACTIVE	2001	4G	-2047.23	3164.00	6144542	2285452
28-34S	04029538280000	PROD_OIL_INACTIVE	1976	34S	-2048.00	3030.00	6146394	2287054
54-2G	04029538380000	PROD_OIL_P & A	1977	2G	-2255.24	3040.00	6153732	2284302
54-2G-RD1	04029538380100	PROD_OIL_ACTIVE	1999	2G	-2267.97	3075.00	6153732	2284302
231-34S	04029539040000	PROD_OIL_ACTIVE	1977	34S	-2463.00	3220.00	6147266	2291519
83-4G	04029541380000	PROD_OIL_INACTIVE	1976	4G	-1918.00	2990.00	6145140	2285116
81-4G	04029545400000	PROD_OIL_P & A	1977	4G	-1917.78	2985.00	6145236	2286470
81-4G-RD1	04029545400100	PROD_OIL_ACTIVE	2002	4G	-2085.26	3155.00	6145236	2286470
75-2G	04029547300000	PROD_OIL_P & A	1982	2G	-2340.00	3065.00	6155082	2283567
75-2G-RD1	04029547300100	PROD_OIL_P & A	2003	2G	-2418.69	3270.00	6155082	2283567
87-33S	04029555840000	PROD_OIL_INACTIVE	1977	33S	-2113.00	3110.00	6145131	2287758
26-34S	04029555880000	PROD_OIL_INACTIVE	1977	34S	-2290.00	3220.00	6146414	2288626
27-34S	04029555890000	PROD_OIL_P & A	1977	34S	-2019.00	2960.00	6146450	2287619
27-34S-RD1	04029555890100	PROD_OIL_INACTIVE	2004	34S	-2173.77	3115.00	6146450	2287619
47-34S	04029555900000	PROD_OIL_P & A	1977	34S	-2028.00	2950.00	6147636	2287593
47-34S-RD1	04029555900100	PROD_OIL_INACTIVE	1977	34S	-2077.35	3110.00	6147636	2287593
72-34S	04029555910000	PROD_OIL_P & A	1977	34S	-2341.00	3120.00	6150024	2290754
72-34S-RD1	04029555910100	PROD_OIL_ACTIVE	2001	34S	-2660.07	3512.00	6150024	2290754
64X-35S	04029555930002	INJ_GAS_INACTIVE	1977	35S	-2460.00	3155.00	6154495	2289920
65-4G	04029556130000	PROD_OIL_INACTIVE	1977	4G	-1922.00	2900.00	6143802	2283784
74-4G	04029556140000	PROD_OIL_INACTIVE	1977	4G	-1923.00	2985.00	6144640	2284390
265-35S	04029556320000	PROD_OIL_P & A	1977	35S	-3638.79	4290.00	6155368	2290884
265-35S-RD1	04029556320100	PROD_OIL_P & A	1977	35S	-2508.20	3270.00	6155368	2290884
265-35S-RD2	04029556320200	PROD_OIL_INACTIVE	2001	35S	-2572.87	3307.00	6155368	2290884
73-2G	04029556330000	PROD_OIL_ACTIVE	1977	2G	-3556.00	4315.00	6155104	2284905
54X-35S	04029556710000	PROD_OIL_INACTIVE	1977	35S	-2342.00	3085.00	6153788	2289776
114X-34S	04029556910000	PROD_OIL_ACTIVE	1977	34S	-2242.00	3080.00	6145654	2289771
235-34S	04029556920000	PROD_OIL_ACTIVE	1977	34S	-2350.51	3305.00	6147060	2289060
21X-35S	04029560910000	PROD_OIL_P & A	1977	35S	-2528.00	3200.00	6152026	2291629
42A-35S	04029561360001	MON_PSI_DRILL	1977	35S	-2463.00	3050.00	6153102	2291084
71X-34S	04029562100000	PROD_OIL_P & A	1977	34S	-2643.00	3440.00	6149932	2291301
71X-34S-RD1	04029562100100	PROD_OIL_ACTIVE	2005	34S	-2829.97	3631.00	6149932	2291301
53X-35S	04029562150000	PROD_OIL_P & A	1977	35S	-2548.00	3250.00	6153674	2290477
53X-35S-RD1	04029562150100	PROD_OIL_ACTIVE	2002	35S	-2601.12	3306.00	6153674	2290477
88-33S	04029564390000	PROD_OIL_ACTIVE	1977	33S	-2219.80	3215.00	6145192	2287036
81-34S	04029565100000	PROD_OIL_P & A	1977	34S	-2338.00	3090.00	6150689	2291298
81-34S-RD1	04029565100100	PROD_OIL_ACTIVE	1977	34S	-2355.88	3127.00	6150689	2291298
63X-35S	04029565110000	PROD_OIL_INACTIVE	1977	35S	-2266.00	2955.00	6154197	2290240
26X-34S	04029568840000	PROD_OIL_INACTIVE	1978	34S	-2036.00	2970.00	6146422	2288128
44X-35S	04029571960000	PROD_OIL_P & A	1978	35S	-2451.00	3165.00	6152810	2289805
44X-35S-RD1	04029571960100	PROD_OIL_INACTIVE	2002	35S	-2820.88	3536.00	6152810	2289805
33X-35S	04029572740001	MON_PSI_DRILL	1978	35S	-2432.00	3070.00	6152066	2290576
34X-35S	04029575320000	PROD_OIL_ACTIVE	1978	35S	-2399.00	3170.00	6152306	2289672
54-4G	04029576870000	PROD_OIL_P & A	1978	4G	-1847.00	2850.00	6143176	2284452
54-4G-RD1	04029576870100	PROD_OIL_ACTIVE	2003	4G	-1966.72	3050.00	6143176	2284452
65A-35S	04029576910002	MON_PSI_DRILL	1978	35S	-2342.00	3005.00	6154278	2289273
61A-33S	04029578380000	PROD_OIL_INACTIVE	1978	33S	-2436.00	3250.00	6143915	2291424
81X-33S	04029578520000	PROD_OIL_P & A	1978	33S	-2359.00	3100.00	6145154	2291408
81X-33S-RD1	04029578520100	PROD_OIL_ACTIVE	2002	33S	-2451.59	3272.00	6145154	2291408
42A-34S	04029580810000	PROD_OIL_ACTIVE	1978	34S	-2293.00	3100.00	6147869	2290880
33A-34S	04029581560000	PROD_OIL_P & A	1978	34S	-2240.00	3105.00	6147361	2290401
33A-34S-RD1	04029581560100	PROD_OIL_ACTIVE	2004	34S	-2430.41	3400.00	6147361	2290401
111A-34S	04029581800000	PROD_OIL_P & A	1978	34S	-2232.00	2999.00	6145991	2291521
111A-34S-RD1	04029581800100	PROD_OIL_ACTIVE	2003	34S	-2391.98	3238.00	6145991	2291521

112A-34S	04029582220000	PROD_OIL_ACTIVE	1978	34S	-2320.00	3100.00	6146009	2291002
113A-34S	04029582410000	PROD_OIL_P & A	1978	34S	-2152.77	2955.00	6145980	2290363
113A-34S-RD1	04029582410100	PROD_OIL_ACTIVE	2002	34S	-2454.55	3285.00	6145980	2290363
32A-34S	04029582900000	PROD_OIL_ACTIVE	1978	34S	-2439.00	3240.00	6147191	2291050
22A-34S	04029583030000	PROD_OIL_P & A	1978	34S	-2246.00	3060.00	6146522	2291121
22A-34S-RD1	04029583030100	PROD_OIL_ACTIVE	2003	34S	-2501.71	3416.00	6146522	2291121
34A-34S	04029588980000	PROD_OIL_INACTIVE	1979	34S	-2252.00	3210.00	6146974	2289460
52X-33S	04029593010000	PROD_OIL_ACTIVE	1979	33S	-2294.28	3180.00	6143234	2290783
63X-34S	04029593650000	PROD_OIL_P & A	1979	34S	-2511.63	3360.00	6149023	2290615
63X-34S-RD1	04029593650100	PROD_OIL_INACTIVE	2003	34S	-2420.81	3358.00	6149023	2290615
23X-34S	04029593690000	PROD_OIL_P & A	1979	34S	-2300.00	3150.00	6146374	2290447
23X-34S-RD1	04029593690100	PROD_OIL_ACTIVE	2003	34S	-2443.57	3417.00	6146374	2290447
21A-34S	04029602010001	MON_PSI_DRILL	1979	34S	-2291.00	3061.00	6146526	2291748
63X-2G	04029602520000	PROD_OIL_P & A	1980	2G	-2240.00	3062.00	6154385	2285164
63X-2G-RD1	04029602520100	PROD_OIL_ACTIVE	1997	2G	-2426.20	3344.00	6154385	2285164
64-2G	04029660290000	PROD_OIL_ACTIVE	1982	2G	-2423.90	3166.00	6154422	2284212
33B-34S	04029660300000	PROD_OIL_ACTIVE	1982	34S	-2300.00	3200.00	6147353	2289973
222-34S	04029672250000	PROD_OIL_ACTIVE	1982	34S	-2370.00	3181.00	6146610	2291154
55-2G	04029680150000	PROD_OIL_INACTIVE	1983	2G	-2304.00	3044.00	6153724	2283604
271-33S	04029694620000	PROD_OIL_P & A	1983	33S	-2362.00	3145.00	6144538	2291752
271-33S-RD1	04029694620100	PROD_OIL_ACTIVE	2002	33S	-2710.63	3534.00	6144538	2291752
206-35S	04029716260000	PROD_OIL_P & A	1984	35S	-2300.00	3085.00	6150998	2289396
206-35S-RD1	04029716260100	PROD_OIL_INACTIVE	2003	35S	-2434.37	3244.00	6150998	2289396
24A-34S	04029753950000	PROD_OIL_P & A	1985	34S	-2224.00	3137.00	6146642	2289648
24A-34S-RD1	04029753950100	PROD_OIL_INACTIVE	1985	34S	-2096.80	3015.00	6146642	2289648
73X-35S	04029754420000	PROD_OIL_P & A	1985	35S	-2600.00	3250.00	6155197	2290626
73X-35S-RD1	04029754420100	PROD_OIL_INACTIVE	1985	35S	-2344.10	3000.00	6155197	2290626
72X-35S	04029798070000	PROD_OIL_P & A	1987	35S	-2612.60	3263.00	6154940	2291097
72X-35S-RD1	04029798070100	PROD_OIL_INACTIVE	1987	35S	-2426.30	3078.00	6154940	2291097
44N-34S	04029822880000	PROD_OIL_P & A	1988	34S	-2547.60	3407.00	6147964	2290246
44N-34S-RD1	04029822880100	PROD_OIL_P & A	1988	34S	-1625.50	2459.00	6147964	2290246
44N-34S-RD2	04029822880200	PROD_OIL_P & A	1988	34S	-2316.00	3164.00	6147964	2290246
44N-34S-RD3	04029822880300	PROD_OIL_ACTIVE	2002	34S	-2621.79	3478.00	6147964	2290246
204-35S	04030002910000	PROD_OIL_INACTIVE	1992	35S	-2460.90	3155.00	6151041	2290412
117X-34S	04030009440000	PROD_OIL_INACTIVE	1993	34S	-2140.30	3260.00	6146057	2287624
16X-35S	04030009450000	PROD_OIL_P & A	1993	35S	-2245.70	3085.00	6151166	2288431
16X-35S-RD1	04030009450100	PROD_OIL_INACTIVE	2002	35S	-2817.73	3710.00	6151166	2288431
84-34S	04030027350000	PROD_OIL_INACTIVE	1994	34S	-2402.48	3115.00	6150583	2289932
84A-33S	04030027560000	PROD_OIL_ACTIVE	1994	33S	-2272.51	3236.00	6145140	2289579
25N-34S	04030041060000	PROD_OIL_INACTIVE	1995	34S	-2299.20	3202.00	6146337	2289363
226-34S	04030065870000	PROD_OIL_P & A	1996	34S	-2276.20	3362.00	6146456	2288162
226-34S-RD1	04030065870100	PROD_OIL_P & A	2000	34S	-890.28	1827.00	6146456	2288162
226-34S-RD2	04030065870200	PROD_OIL_P & A	2000	34S	-2100.55	3150.00	6146456	2288162
226-34S-RD3	04030065870300	PROD_OIL_ACTIVE	2004	34S	-2309.53	3374.00	6146456	2288162
83SW-33S	04030075310000	PROD_OIL_INACTIVE	1997	33S	-2252.60	3115.00	6145027	2290090
74-34S	04030078870000	PROD_OIL_P & A	1997	34S	-2330.70	3125.00	6149543	2289481
74-34S-RD1	04030078870100	PROD_OIL_ACTIVE	2004	34S	-2336.27	3202.00	6149543	2289481
75-34S	04030082450000	PROD_OIL_P & A	1997	34S	-2264.30	3045.00	6149991	2288966
75-34S-RD1	04030082450100	PROD_OIL_P & A	2004	34S	-2360.04	3201.00	6149991	2288966
75-34S-RD2	04030082450200	PROD_OIL_INACTIVE	2004	34S	-2353.47	3201.00	6149991	2288966
18X-34S	04030084500000	PROD_OIL_ACTIVE	1997	34S	-2085.16	3114.00	6145658	2287169
15S-35S	04030108180000	PROD_OIL_INACTIVE	1998	35S	-2315.95	3163.00	6151035	2288914
54NE-2G	04030108250000	PROD_OIL_ACTIVE	1998	2G	-2269.91	3160.00	6153701	2284788
153-35S	04030108750000	PROD_OIL_P & A	1998	35S	-2540.17	3231.00	6153088	2290538
54A-3G	04030112270000	PROD_OIL_P & A	1998	3G	-2140.16	3102.00	6148604	2283949
54A-3G-RD1	04030112270100	PROD_OIL_ACTIVE	1999	3G	-2184.15	3129.00	6148604	2283949
36X-34S	04030112300000	PROD_OIL_P & A	1998	34S	-2320.52	3382.00	6147201	2288124
36X-34S-RD1	04030112300100	PROD_OIL_P & A	1998	34S	-2342.73	3521.00	6147201	2288124
36X-34S-RD2	04030112300200	PROD_OIL_ACTIVE	1998	34S	-2335.00	3526.00	6147201	2288124
72-2G	04030112320000	PROD_OIL_P & A	1998	2G	-2338.71	3145.00	6154917	2285184
72-2G-RD1	04030112320100	PROD_OIL_INACTIVE	1998	2G	-2361.69	3169.00	6154917	2285184
173-34S	04030118810000	PROD_OIL_INACTIVE	1998	34S	-2512.31	3340.00	6149726	2290348
23A-35S	04030121360000	PROD_OIL_P & A	1998	35S	-2430.64	3115.00	6152067	2290543

23A-35S-RD1	04030121360100	DRY HOLW	1998	35S	-2639.37	3433.00	6152067	2290543
25A-35S	04030121370000	PROD_OIL_INACTIVE	1998	35S	-2375.41	3161.00	6151906	2288910
34S-35S	04030121380000	PROD_OIL_INACTIVE	1998	35S	-3310.19	4124.00	6152603	2288996
61SE-33S	04030121720000	PROD_OIL_ACTIVE	1998	33S	-2321.57	3183.00	6143922	2291389
21-2G	04030122160000	PROD_OIL_ACTIVE	1998	2G	-3032.83	3942.00	6151761	2286119
64S-3G	04030122170000	PROD_OIL_P & A	1998	3G	-2138.13	3055.00	6149076	2284302
64S-3G-RD1	04030122170100	PROD_OIL_ACTIVE	1998	3G	-2107.56	3007.00	6149076	2284302
52A-4G	04030122860000	PROD_OIL_INACTIVE	1998	4G	-1988.90	3174.00	6143140	2286569
53X-33S	04030122870000	PROD_OIL_INACTIVE	1998	33S	-2179.28	3178.00	6143081	2290240
85X-33S	04030122880000	PROD_OIL_ACTIVE	1998	33S	-2318.52	3280.00	6144882	2289032
85-34S	04030122890000	PROD_OIL_INACTIVE	1998	34S	-2252.69	3090.00	6150579	2288943
13X-35S	04030123330000	PROD_OIL_INACTIVE	1998	35S	-2279.45	3043.00	6150989	2290082
61A-35S	04030123340001	INJ_GAS_ACTIVE	1998	35S	-3970.53	4645.00	6154634	2291669
24N-34S	04030124180000	PROD_OIL_INACTIVE	1998	34S	-2283.45	3191.00	6146343	2290094
78N-33S	04030124210000	PROD_OIL_INACTIVE	1998	33S	-2250.57	3362.00	6144412	2287185
84NE-33S	04030124220000	PROD_OIL_INACTIVE	1998	33S	-2546.08	3459.00	6145233	2289801
87SE-33S	04030124230000	PROD_OIL_INACTIVE	1998	33S	-2058.85	3082.00	6144991	2287724
76NE-34S	04030124980000	PROD_OIL_P & A	1998	34S	-2233.39	3123.00	6149693	2288338
76NE-34S-RD1	04030124980101	MON_PSI_APPROVED	1998	34S	-2225.51	3184.00	6149693	2288338
77NE-34S	04030124990000	PROD_OIL_ACTIVE	1998	34S	-2436.55	3327.00	6149758	2287880
16SW-35S	04030125690000	PROD_OIL_INACTIVE	1998	35S	-2266.85	3175.00	6151000	2288333
31X-2G	04030127020000	PROD_OIL_P & A	1998	2G	-2180.29	3098.00	6152488	2286295
31X-2G-RD1	04030127020100	PROD_OIL_ACTIVE	1998	2G	-2112.90	3048.00	6152488	2286295
64E-3G	04030127760000	PROD_OIL_P & A	1998	3G	-2110.51	3015.00	6149733	2284318
64E-3G-RD1	04030127760100	PROD_OIL_INACTIVE	1998	3G	-2195.50	3115.00	6149733	2284318
64S-33S	04030127940000	PROD_OIL_INACTIVE	1999	33S	-2132.57	3076.00	6143987	2289724
45NE-2G	04030133070000	PROD_OIL_INACTIVE	1999	2G	-2321.53	3129.00	6153362	2284071
63N-35S	04030134330000	PROD_OIL_INACTIVE	1999	35S	-2465.05	3251.00	6154579	2290401
72NE-2G	04030136750000	PROD_OIL_ACTIVE	1999	2G	-2307.71	3197.00	6154852	2285220
14S-34S	04030137290000	PROD_OIL_INACTIVE	1999	34S	-2221.16	3070.00	6145819	2289875
45X-35S	04030138260000	PROD_OIL_P & A	2002	35S	260.00	477.00	6153161	2288921
66X-35S	04030138270001	INJ_GAS_ACTIVE	1999	35S	-3313.80	4050.00	6154587	2288204
86N-33S	04030140170000	PROD_OIL_P & A	1999	33S	-2262.04	3268.00	6145303	2288428
86N-33S-RD1	04030140170100	PROD_OIL_INACTIVE	1999	33S	-2193.91	3234.00	6145303	2288428
68NE-33S	04030165630000	PROD_OIL_ACTIVE	2000	33S	-1998.32	3168.00	6143723	2287293
12-2G	04030165690000	PROD_OIL_INACTIVE	2000	2G	-2183.42	3091.00	6151164	2285685
71-3G	04030165720000	PROD_OIL_ACTIVE	2000	3G	-2258.73	3709.00	6149954	2286344
65E-34S	04030177910000	PROD_OIL_ACTIVE	2001	34S	-2302.07	3103.00	6149354	2288993
68SW-34S	04030177920000	PROD_OIL_ACTIVE	2001	34S	-2261.12	3371.00	6149039	2286909
88N-33S	04030177940000	PROD_OIL_P & A	2001	33S	-2197.46	3207.00	6145217	2287423
88N-33S-RD1	04030177940100	PROD_OIL_ACTIVE	2001	33S	-2220.05	3252.00	6145217	2287423
12SW-2G	04030177960000	PROD_OIL_ACTIVE	2001	2G	-2230.47	3180.00	6150996	2285355
21SW-2G	04030177970000	PROD_OIL_ACTIVE	2001	2G	-2236.00	3150.00	6151630	2286073
54SE-2G	04030178650000	PROD_OIL_INACTIVE	2001	2G	-2498.56	3252.00	6153932	2284054
84NW-3G	04030181190000	PROD_OIL_P & A	2001	3G	-2242.68	3161.00	6150162	2284557
42-3G	04030181230000	PROD_OIL_INACTIVE	2001	3G	-2180.25	3312.00	6148131	2285640
61SE-4G	04030183770000	PROD_OIL_ACTIVE	2001	4G	-2039.87	3171.00	6143998	2286136
66NE-33S	04030186150000	PROD_OIL_INACTIVE	2001	33S	-2231.62	3431.00	6144345	2288354
75NW-33S	04030186160000	PROD_OIL_INACTIVE	2001	33S	-2346.52	3243.00	6144670	2289366
73S-33S	04030186170000	PROD_OIL_INACTIVE	2001	33S	-2326.26	3185.00	6144511	2290026
74NE-34S	04030186270000	PROD_OIL_INACTIVE	2001	34S	-2437.91	3195.00	6149839	2289827
15NE-34S	04030186540000	PROD_OIL_INACTIVE	2001	34S	-2263.37	3161.00	6146136	2289263
4-11-2G	04030186560000	PROD_OIL_P & A	2001	2G	-2222.26	3366.00	6151501	2286297
52SE-33S	04030186910000	PROD_OIL_P & A	2001	33S	-2319.66	3223.00	6143489	2290698
52SE-33S-RD1	04030186910100	PROD_OIL_ACTIVE	2005	33S	-2302.45	3224.00	6143489	2290698
45SE-2G	04030187200000	PROD_OIL_ACTIVE	2001	2G	-2525.38	3330.00	6153314	2283603
54SE-33S	04030188170000	PROD_OIL_INACTIVE	2001	33S	-2204.15	3116.00	6143567	2289482
25SW-34S	04030188920000	PROD_OIL_INACTIVE	2001	34S	-2295.85	3220.00	6146278	2288983
52-3G	04030188930000	PROD_OIL_ACTIVE	2001	3G	-2241.28	3625.00	6148690	2285320
4-83NW-3G	04030189850000	PROD_OIL_P & A	2001	3G	-1250.29	2301.00	6150296	2285054
4-83NW-3G-RD1	04030189850100	PROD_OIL_P & A	2001	3G	-2131.29	3182.00	6150296	2285054
4-83NW-3G-RD2	04030189850200	PROD_OIL_P & A	2002	3G	-2101.29	3152.00	6150296	2285054
87-34S	04030190140000	PROD_OIL_P & A	2001	34S	-2400.41	3340.00	6150512	2287464

87-34S-RD1	04030190140100	PROD_OIL_P & A	2001	34S	-2293.36	3250.00	6150512	2287464
87-34S-RD2	04030190140200	PROD_OIL_P & A	2004	34S	-2465.73	3444.00	6150512	2287464
87-34S-RD3	04030190140300	PROD_OIL_ACTIVE	2004	34S	-2448.53	3473.00	6150512	2287464
72N-4G	04030192350000	PROD_OIL_ACTIVE	2001	4G	-2202.71	3348.00	6144954	2285726
15NE-3G	04030192470000	PROD_OIL_ACTIVE	2001	3G	-2247.23	3234.00	6146055	2283950
44NE-33S	04030193410000	PROD_OIL_P & A	2001	33S	-2266.35	3243.00	6142928	2290214
44NE-33S-RD1	04030193410100	PROD_OIL_INACTIVE	2001	33S	-2297.01	3288.00	6142928	2290214
43-3G	04030193440000	PROD_OIL_ACTIVE	2001	3G	-2232.93	3523.00	6147700	2284843
62-3G	04030193450000	PROD_OIL_ACTIVE	2001	3G	-2269.97	3656.00	6148986	2285783
61S-4G	04030193470000	PROD_OIL_ACTIVE	2001	4G	-2109.31	3240.00	6143960	2286164
467NE-33S	04030195360000	PROD_OIL_P & A	2001	33S	-2216.50	3235.00	6144094	2287895
63-34S	04030195840000	PROD_OIL_INACTIVE	2002	34S	-2440.67	3315.00	6149175	2290351
37W-35S	04030195880000	PROD_OIL_ACTIVE	2002	35S	-2405.91	3515.00	6152202	2287494
72W-35S	04030195890000	PROD_OIL_INACTIVE	2002	35S	-2659.79	3337.00	6154818	2290850
84SW-34S	04030197510000	PROD_OIL_INACTIVE	2002	34S	-2407.58	3147.00	6150191	2289519
61N-35S	04030200970000	PROD_OIL_ACTIVE	2002	35S	-2980.17	3623.00	6154660	2291748
4-75N-33S	04030201220001	PROD_GAS_INACTIVE	2002	33S	-2468.47	3393.00	6144272	2289489
64NE-33S	04030201230000	PROD_OIL_INACTIVE	2002	33S	-2435.69	3303.00	6144107	2289828
67W-33S	04030201240001	MON_PSI_APPROVED	2002	33S	-2153.48	3641.00	6143490	2287560
24SE-35S	04030207280000	PROD_OIL_ACTIVE	2002	35S	-2500.31	3244.00	6152028	2289327
62NE-4G	04030207540000	PROD_OIL_ACTIVE	2002	4G	-1992.58	3110.00	6144355	2285638
73NE-33S	04030208190000	PROD_OIL_P & A	2002	33S	-2108.36	2965.00	6144770	2290639
73NE-33S-RD1	04030208190100	PROD_OIL_P & A	2002	33S	-2191.17	3054.00	6144770	2290639
73NE-33S-RD2	04030208190200	PROD_OIL_INACTIVE	2002	33S	-2074.51	2988.00	6144770	2290639
78SE-33S	04030208200000	PROD_OIL_ACTIVE	2002	33S	-2140.43	3216.00	6144655	2287073
71W-4G	04030208210000	PROD_OIL_INACTIVE	2002	4G	-2046.50	3188.00	6144240	2286434
11NW-3G	04030208720000	PROD_OIL_INACTIVE	2002	3G	-2105.04	3245.00	6099294	2290065
52NE-35S	04030208730000	PROD_OIL_ACTIVE	2002	35S	-2809.11	3481.00	6153949	2290966
62W-4G	04030209990000	PROD_OIL_ACTIVE	2002	4G	-1949.31	3087.00	6143717	2285568
43SE-35S	04030210010000	PROD_OIL_ACTIVE	2003	35S	-2650.79	3310.00	6153282	2290115
34SE-35S	04030211810000	PROD_OIL_INACTIVE	2002	35S	-2546.67	3346.00	6152530	2289306
76NW-34S	04030211820000	PROD_OIL_ACTIVE	2002	34S	-2331.31	3142.00	6149467	2288488
25NW-35S	04030213910000	PROD_OIL_ACTIVE	2002	35S	-2449.75	3229.00	6151639	2289267
64N-33S	04030215530000	PROD_OIL_ACTIVE	2003	33S	-2218.78	3112.00	6143963	2289889
64NE-34S	04030215540000	PROD_OIL_INACTIVE	2002	34S	-2503.39	3329.00	6149083	2289666
4-88NE-34S	04030215920001	PROD_GAS_P & A	2003	34S	-2549.26	3467.00	6150722	2287082
74NE-33S	04030217060000	PROD_OIL_INACTIVE	2003	33S	-2332.28	3223.00	6144671	2289588
23SE-34S	04030217320000	PROD_OIL_P & A	2003	34S	-2399.60	3285.00	6146948	2290076
23SE-34S-RD1	04030217320100	PROD_OIL_INACTIVE	2006	34S	-2357.52	3233.00	6146948	2290076
63NE-33S	04030218090000	PROD_OIL_INACTIVE	2003	33S	-2359.73	3280.00	6144340	2290734
4-68E-33S	04030220390001	PROD_GAS_INACTIVE	2003	33S	-1936.85	3015.00	6144160	2287021
71-2G	04030220820000	PROD_OIL_P & A	2003	2G	-2351.74	3234.00	6154934	2286265
71-2G-RD1	04030220820100	INJ_GAS_ACTIVE	2005	2G	-2383.77	3253.00	6154934	2286265
84NW-34S	04030221600000	PROD_OIL_INACTIVE	2003	34S	-2424.82	3218.00	6149841	2289694
71N-4G	04030221610000	PROD_OIL_ACTIVE	2003	4G	-1952.05	3134.00	6144378	2286635
61NE-4G	04030221620000	PROD_OIL_ACTIVE	2003	4G	-1929.97	3109.00	6143913	2286593
17N-35S	04030222500000	PROD_OIL_ACTIVE	2003	35S	-2234.56	3118.00	6151152	2288006
65E-33S	04030222510000	PROD_OIL_INACTIVE	2003	33S	-2160.60	3100.00	6143834	2289008
25E-35S	04030223780000	PROD_OIL_ACTIVE	2003	35S	-2510.93	3289.00	6152051	2288964
53NE-4G	04030223830000	PROD_OIL_ACTIVE	2003	4G	-1947.33	2995.00	6143268	2285404
63SW-4G	04030223840000	PROD_OIL_ACTIVE	2003	4G	-1979.68	3022.00	6143420	2284720
45SW-2G	04030224640000	PROD_OIL_ACTIVE	2003	2G	-2351.22	3150.00	6152906	2283442
15SE-35S	04030225030000	PROD_OIL_INACTIVE	2003	35S	-2445.80	3248.00	6151295	2288938
78-34S	04030225310000	PROD_OIL_P & A	2003	34S	-2459.56	3350.00	6149655	2287178
78-34S-RD1	04030225310100	INJ_GAS_ACTIVE	2006	34S	-2223.60	3264.00	6149655	2287178
73-34S	04030226860000	PROD_OIL_INACTIVE	2003	34S	-2438.04	3247.00	6149643	2289760
84S-34S	04030226870000	PROD_OIL_ACTIVE	2003	34S	-2568.07	3355.00	6150622	2289419
88SW-34S	04030226880000	PROD_OIL_INACTIVE	2003	34S	-2212.83	3200.00	6150252	2286855
24NE-35S	04030226890000	PROD_OIL_INACTIVE	2003	35S	-2532.23	3256.00	6151960	2289784
84N-34S	04030230480000	PROD_OIL_INACTIVE	2003	34S	-2541.35	3278.00	6150295	2290076
15NW-35S	04030230490000	PROD_OIL_INACTIVE	2003	35S	-2423.88	3233.00	6151146	2289102
63W-35S	04030230500000	PROD_OIL_P & A	2003	35S	-2432.77	3485.00	6154545	2290251
63W-35S-RD1	04030230500100	PROD_OIL_ACTIVE	2005	35S	-2492.57	3605.00	6154545	2290251

45E-2G	04030231040000	PROD_OIL_ACTIVE	2003	2G	-2370.44	3140.00	6153286	2283853
65NW-33S	04030234750000	PROD_OIL_INACTIVE	2003	33S	-2215.24	3138.00	6143709	2289114
56NW-35S	04030236870000	PROD_OIL_ACTIVE	2003	35S	-2499.07	3257.00	6153417	2288071
71N-3G	04030237090000	PROD_OIL_INACTIVE	2003	3G	-2197.75	3255.00	6150006	2286351
17SE-35S	04030237100000	PROD_OIL_INACTIVE	2003	35S	-2239.45	3138.00	6151114	2287486
65NE-34S	04030239190000	PROD_OIL_P & A	2004	34S	-2319.93	3134.00	6149265	2289238
65NE-34S-RD1	04030239190100	PROD_OIL_ACTIVE	2001	34S	-2346.80	3219.00	6149265	2289238
72SE-34S	04030239240000	PROD_OIL_INACTIVE	2004	34S	-2495.91	3278.00	6150095	2290791
33-3G	04030239540000	PROD_OIL_ACTIVE	2004	3G	-2098.90	3065.00	6147051	2284952
56-35S	04030245720000	PROD_OIL_ACTIVE	2004	35S	-2371.45	3080.00	6153719	2288481
35NW-34S	04030248410000	PROD_OIL_INACTIVE	2004	34S	-2387.50	3368.00	6147024	2289358
24-35S	04030254360000	PROD_OIL_ACTIVE	2004	35S	-2401.22	3152.00	6151558	2289462
45SE-34S	04030257700000	PROD_OIL_P & A	2004	34S	-2197.66	3141.00	6147946	2288930
13S-35S	04030259500000	PROD_OIL_INACTIVE	2004	35S	-2507.33	3243.00	6151080	2289691
83NE-34S	04030259520000	PROD_OIL_INACTIVE	2004	34S	-2534.91	3267.00	6150631	2290533
11SW-2G	04030273840000	PROD_OIL_ACTIVE	2005	2G	-2249.01	3152.00	6151523	2286032
63-3G	04030274000000	INJ_GAS_P & A	2005	3G	-2040.94	3018.00	6149222	2285333
46-35S	04030277780000	PROD_OIL_ACTIVE	2005	35S	-2299.48	3091.00	6152989	2288401
47NE-35S	04030277800000	PROD_OIL_ACTIVE	2005	35S	-2300.68	3039.00	6153149	2287822
63S-33S	04030280180000	PROD_OIL_INACTIVE	2006	33S	-2210.37	3135.00	6143783	2290279
75N-34S	04030280190000	MON_PSI_P & A	2005	34S	-2325.91	3110.00	6150041	2289012
75N-34S-RD1	04030280190100	MON_PSI_APPROVED	2005	34S	-2326.68	3110.00	6150041	2289012
74NW-33S	04030280540000	MON_PSI_APPROVED	2005	33S	-2204.01	3075.00	6144487	2289951
83-34S	04030281760000	PROD_OIL_INACTIVE	2005	34S	-2502.69	3281.00	6149994	2290265
72S-34S	04030281770000	PROD_OIL_ACTIVE	2005	34S	-2459.01	3223.00	6149974	2290267
13S-34S	04030282130000	PROD_OIL_ACTIVE	2005	34S	-2508.08	3318.00	6145731	2290277
13X-34S	04030282140000	PROD_OIL_INACTIVE	2005	34S	-2470.53	3290.00	6145728	2290298
25X-35S	04030282150000	PROD_OIL_ACTIVE	2005	35S	-2401.31	3165.00	6151885	2289083
25SE-35S	04030283220000	PROD_OIL_INACTIVE	2005	35S	-2425.75	3260.00	6152079	2288538
34SW-35S	04030283230000	PROD_OIL_ACTIVE	2005	35S	-2462.37	3248.00	6152330	2289347
82NE-33S	04030283590000	PROD_OIL_ACTIVE	2005	33S	-2500.70	3310.00	6145470	2291044
24S-35S	04030283600000	PROD_OIL_ACTIVE	2005	35S	-2387.00	3139.00	6151554	2289184
15X-35S	04030283610000	PROD_OIL_ACTIVE	2005	35S	-2361.44	3120.00	6151554	2289203
56XH-35S	04030283620000	PROD_OIL_ACTIVE	2005	35S	-2010.79	4300.00	6153631	2287767
72N-2G	04030284520000	PROD_OIL_INACTIVE	2005	2G	-2334.95	3140.00	6155040	2285712
63SE-34S	04030284530000	PROD_OIL_ACTIVE	2005	34S	-2422.55	3195.00	6149626	2289822
74SE-34S	04030284990000	PROD_OIL_INACTIVE	2005	34S	-2421.32	3200.00	6149816	2289391
75SW-34S	04030285000000	PROD_OIL_ACTIVE	2005	34S	-2375.99	3211.00	6149763	2288512
74E-34S	04030285200000	PROD_OIL_ACTIVE	2005	34S	-2410.53	3167.00	6149810	2289420
14H-2G	04030290180000	PROD_OIL_ACTIVE	2006	2G	-2064.58	4410.00	6151099	2284583
61X-2G	04030291340000	MON_PSI_P & A	2005	2G	-2307.97	3205.00	6154382	2286415
51X-4G	04030291350000	MON_PSI_APPROVED	2005	4G	-1936.52	3033.00	6143187	2286665
24-3G	04030294960000	PROD_OIL_ACTIVE	2006	3G	-2150.56	3201.00	6146496	2284479
68NE-35S	04030294980000	INJ_GAS_ACTIVE	2006	35S	-2394.11	3222.00	6154415	2286953
61SW-33S	04030295500000	PROD_OIL_INACTIVE	2006	33S	-2599.50	3450.00	6143541	2291242
52N-33S	04030298770000	PROD_OIL_ACTIVE	2006	33S	-2602.70	3503.00	6142751	2291249
84N-33S	04030306140000	PROD_OIL_INACTIVE	2006	33S	-2332.56	3210.00	6144989	2290040
82SE-33S	04030306150000	PROD_OIL_INACTIVE	2006	33S	-2356.87	3201.00	6145229	2290794
32S-34S	04030306160000	PROD_OIL_ACTIVE	2006	34S	-2484.33	3330.00	6147098	2291006
24W-34S	04030306170000	PROD_OIL_INACTIVE	2006	34S	-2279.01	3198.00	6146281	2289418
13NE-34S	04030306760000	PROD_OIL_ACTIVE	2006	34S	-2395.40	3197.00	6145789	2290451
51SE-34S	04030306770000	PROD_OIL_ACTIVE	2006	34S	-2660.88	3433.00	6148984	2291639
78SW-35S	04030306780000	PROD_OIL_ACTIVE	2006	35S	-2459.77	3285.00	6155149	2286988
84E-33S	04030306960000	PROD_OIL_ACTIVE	2006	33S	-2344.16	3263.00	6145296	2289863
83W-33S	04030306970000	PROD_OIL_INACTIVE	2006	33W	-2318.95	3212.00	6144710	2290556
24E-34S	04030306980000	PROD_OIL_ACTIVE	2006	34S	-2342.42	3270.00	6146465	2289532
54NE-33S	04030307220000	PROD_OIL_ACTIVE	2006	33S	-2188.27	3171.00	6143764	2290273
62NE-33S	04030307230000	PROD_OIL_INACTIVE	2006	33S	-2351.23	3224.00	6143905	2290941
72NE-33S	04030307240000	PROD_OIL_INACTIVE	2006	33S	-2394.23	3274.00	6144970	2290997
62S-33S	04030307250000	PROD_OIL_INACTIVE	2006	33S	-2275.14	3222.00	6143765	2290379
71S-33S	04030307260000	PROD_OIL_ACTIVE	2006	33S	-2400.82	3191.00	6144590	2291474
64SE-33S	04030307270000	PROD_OIL_INACTIVE	2006	33S	-2216.91	3188.00	6143708	2289525
64SW-33S	04030307280000	PROD_OIL_INACTIVE	2006	33S	-2166.17	3075.00	6143698	2289508

33E-34S	04030307290000	PROD_OIL_INACTIVE	2006	34S	-2387.69	3254.00	6147564	2289998
35N-34S	04030307300000	PROD_OIL_ACTIVE	2006	34S	-2377.23	3317.00	6147292	2289203
25SE-34S	04030307310000	PROD_OIL_ACTIVE	2006	34S	-2337.53	3266.00	6146737	2289082
44W-34S	04030307320000	PROD_OIL_ACTIVE	2006	34S	-2393.30	3341.00	6147679	2289313
43E-34S	04030313440000	PROD_OIL_ACTIVE	2006	34S	-2519.34	3417.00	6148309	2290413
53NE-34S	04030314020000	PROD_OIL_P & A	2006	34S	-2604.31	3454.00	6148684	2290800
53NE-34S-RD1	04030314020100	PROD_OIL_ACTIVE	2006	34S	-2619.86	3461.00	6148684	2290800
31SE-34S	04030314030000	PROD_OIL_ACTIVE	2006	34S	-2469.23	3252.00	6147482	2291250
27H-35S	04030317240000	PROD_OIL_ACTIVE	2006	35S	-1970.37	4614.00	6152319	2287823
74H-3G	04030317370000	PROD_OIL_ACTIVE	2006	3G	-1997.90	4452.00	6149810	2284301
45H-35S	04030318450000	PROD_OIL_ACTIVE	2006	35S	-1996.01	4250.00	6153081	2288922
13N-35S	04030328510000	PROD_OIL_ACTIVE	2007	35S	-2378.54	3067.00	6150886	2290061
13SW-35S	04030328520000	PROD_OIL_ACTIVE	2007	35S	-2441.18	3242.00	6150938	2289370
53-3G	04030332540000	PROD_OIL_ACTIVE	2007	3G	-2356.55	3277.00	6148685	2285052
53N-3G	04030332550000	PROD_OIL_ACTIVE	2007	3G	-2258.39	3235.00	6148714	2285042
63NE-3G	04030332560000	PROD_OIL_ACTIVE	2007	3G	-2277.73	3275.00	6149255	2285350
63NW-3G	04030332570000	PROD_OIL_ACTIVE	2007	3G	-2254.93	3220.00	6148771	2285025
63SE-3G	04030332580000	PROD_OIL_ACTIVE	2007	3G	-2273.45	3316.00	6149285	2285342
63SW-3G	04030332590000	PROD_OIL_ACTIVE	2007	3G	-2284.88	3205.00	6148800	2284664
54N-3G	04030332600000	PROD_OIL_ACTIVE	2007	3G	-2261.79	3187.00	6148745	2284735
64NW-3G	04030332610000	PROD_OIL_INACTIVE	2007	3G	-2270.40	3176.00	6148819	2284640
64N-3G	04030332670000	INJ_H2O_ACTIVE	2007	3G	-2197.11	3170.00	6148781	2284687
63E-3G	04030332680000	INJ_H2O_ACTIVE	2007	3G	-2259.20	3175.00	6148742	2285034
53SE-3G	04030332690000	INJ_H2O_ACTIVE	2007	3G	-2275.46	3160.00	6148763	2284711
72E-2G	04030339740000	PROD_OIL_ACTIVE	2007	2G	-2350.08	3198.00	6154944	2285750
72SW-2G	04030339750000	PROD_OIL_ACTIVE	2007	2G	-2335.50	3158.00	6154638	2285062
44S-35S	04030343200000	PROD_OIL_ACTIVE	2007	35S	-2834.99	3595.00	6152824	2289074
44NW-34S	04030348710000	PROD_OIL_ACTIVE	2008	34S	-2653.94	3520.00	6147540	2289673
21A-35S	04030348720000	PROD_OIL_ACTIVE	2008	35S	-2982.10	3667.00	6151950	2291230
12-35S	04030348750000	PROD_OIL_ACTIVE	2008	35S	-2780.12	3477.00	6151589	2290890
64X-3G	04030350320000	PROD_OIL_ACTIVE	2008	3G	-2278.80	3160.00	6149063	2284392
43E-3G	04030357620000	PROD_OIL_ACTIVE	2008	3G	-2275.98	3241.00	6147649	2284897
62N-3G	04030357630000	PROD_OIL_ACTIVE	2008	3G	-2220.90	3206.00	6149071	2285729
73SW-2G	04030357710000	PROD_OIL_ACTIVE	2008	2G	-2779.74	3583.00	6154686	2284713
86-34S	04030361720000	PROD_OIL_ACTIVE	2008	34S	-2357.16	3220.00	6150707	2288274
16A-35S	04030361730000	PROD_OIL_INACTIVE	2008	35S	-2400.80	3275.00	6150942	2288409
33E-35S	04030361740000	PROD_OIL_ACTIVE	2008	35S	-2744.89	3400.00	6152819	2290417
33NE-35S	04030361750000	PROD_OIL_ACTIVE	2008	35S	-2754.05	3400.00	6152823	2290446
15A-35S	04030361870000	PROD_OIL_ACTIVE	2008	35S	-2418.05	3218.00	6151106	2288946
67SE-34S	04030361880000	PROD_OIL_ACTIVE	2008	34S	-2359.41	3310.00	6149287	2287243
52SW-35S	04030361890000	PROD_OIL_ACTIVE	2008	35S	-2960.84	3634.00	6153647	2290904
84X-34S	04030361900000	PROD_OIL_INACTIVE	2008	34S	-2402.15	3161.00	6150230	2290080
62-2G	04030365370000	PROD_OIL_P & A	2008	2G	-2377.41	3230.00	6154339	2285572
44E-3G	04030365750000	PROD_OIL_ACTIVE	2008	3G	-2271.47	3225.00	6148003	2284482
42N-3G	04030365770000	PROD_OIL_ACTIVE	2008	3G	-2242.46	3215.00	6148133	2285720
52N-3G	04030365780000	PROD_OIL_ACTIVE	2008	3G	-2261.06	3240.00	6148396	2285674
42S-3G	04030365790000	PROD_OIL_ACTIVE	2008	3G	-2243.39	3220.00	6148180	2285666
42E-3G	04030366370000	INJ_H2O_ACTIVE	2008	3G	-2240.27	3203.00	6148366	2285682
53NW-3G	04030366380000	INJ_H2O_ACTIVE	2008	3G	-2263.15	3225.00	6148549	2285393
53SW-3G	04030366390000	INJ_H2O_ACTIVE	2008	3G	-2241.52	3147.00	6148488	2284716
62W-3G	04030366400000	INJ_H2O_ACTIVE	2008	3G	-2264.78	3227.00	6148577	2285405
43A-34S	04030366920000	PROD_OIL_ACTIVE	2008	34S	-2663.35	3490.00	6147867	2290318
32N-34S	04030366930000	PROD_OIL_ACTIVE	2008	34S	-2612.16	3450.00	6147159	2291113
32SE-34S	04030366940000	PROD_OIL_INACTIVE	2008	34S	-2617.85	3483.00	6147565	2290469
42SE-34S	04030366950000	PROD_OIL_ACTIVE	2008	34S	-2681.10	3565.00	6148356	2290859
62W-34S	04030367430000	PROD_OIL_ACTIVE	2008	34S	-2782.44	3575.00	6149043	2291048
82S-4G	04030369060000	PROD_OIL_ACTIVE	2011	4G	-2125.98	3214.00	6145225	2285519
72SW-4G	04030369070000	PROD_OIL_ACTIVE	2008	4G	-2131.62	3234.00	6144212	2285270
73SW-4G	04030369080000	PROD_OIL_INACTIVE	2008	4G	-2141.97	3215.00	6144343	2285023
81SW-4G	04030369090000	PROD_OIL_ACTIVE	2010	4G	-2130.52	3260.00	6144934	2285905
71E-33S	04030370890000	PROD_OIL_ACTIVE	2008	33S	-2714.74	3502.00	6144659	2291772
61-34S	04030370900000	PROD_OIL_ACTIVE	2008	34S	-2797.96	3626.00	6149247	2291424
52NW-34S	04030370910000	PROD_OIL_INACTIVE	2008	34S	-2759.09	3595.00	6148602	2291118

81NW-34S	04030370920000	PROD_OIL_ACTIVE	2008	34S	-2864.19	3600.00	6150474	2291741
61SW-34S	04030370930000	PROD_OIL_ACTIVE	2008	34S	-2743.81	3585.00	6149226	2291403
462-3G	04030373410000	PROD_GAS_ACTIVE	2008	3G	-1952.73	2927.00	6149111	2285651
72-35S	04030373420000	PROD_OIL_ACTIVE	2008	35S	-2612.77	3285.00	6155041	2290936
38E-34S	04030378190000	PROD_OIL_ACTIVE	2008	34S	-2211.12	3132.00	6147509	2287131
55NW-2G	04030378530000	PROD_OIL_INACTIVE	2009	2G	-2550.06	3339.00	6153642	2283952
64NW-2G	04030378540000	PROD_OIL_INACTIVE	2008	2G	-2535.35	3305.00	6154092	2284436
63S-2G	04030378550000	PROD_OIL_ACTIVE	2008	2G	-2555.84	3358.00	6154576	2284633
72-3G	04030389330000	INJ_H2O_ACTIVE	2009	3G	-2425.58	3420.00	6149414	2285732
62E-3G	04030389340000	INJ_H2O_ACTIVE	2010	3G	-2291.60	3270.00	6149256	2285785
43N-3G	04030389350000	INJ_H2O_ACTIVE	2010	3G	-2371.97	3330.00	6147580	2284903
73NW-3G	04030389360000	INJ_H2O_ACTIVE	2010	3G	-2436.81	3450.00	6150130	2285026
43S-3G	04030389370000	INJ_H2O_ACTIVE	2010	3G	-2389.93	3325.00	6147669	2284806
71S-3G	04030389380000	INJ_H2O_ACTIVE	2010	3G	-2197.51	3216.00	6149433	2285793
51SE-3G	04030389390000	INJ_H2O_ACTIVE	2010	3G	-2385.29	3432.00	6148448	2285842
61SE-3G	04030389400000	INJ_H2O_ACTIVE	2010	3G	-2259.58	3262.00	6149197	2285776
51SW-3G	04030389410000	INJ_H2O_ACTIVE	2010	3G	-2377.83	3385.00	6148390	2285856
42X-3G	04030389420000	INJ_H2O_ACTIVE	2010	3G	-2178.64	3224.00	6147516	2285292
62NE-3G	04030389550000	PROD_OIL_ACTIVE	2009	3G	-2285.85	3271.00	6149369	2285761
42SW-3G	04030390920000	PROD_OIL_ACTIVE	2010	3G	-2175.59	3181.00	6147546	2285290
43W-3G	04030390930000	PROD_OIL_ACTIVE	2009	3G	-2294.25	3225.00	6147550	2284902
44W-3G	04030390940000	PROD_OIL_ACTIVE	2009	3G	-2318.42	3275.00	6147639	2284805
51E-3G	04030390950000	PROD_OIL_ACTIVE	2009	3G	-2262.54	3320.00	6148419	2285849
61-3G	04030390960000	PROD_OIL_ACTIVE	2010	3G	-2269.54	3328.00	6149167	2285778
71W-3G	04030390970000	PROD_OIL_ACTIVE	2010	3G	-2266.24	3332.00	6149227	2285779
71X-3G	04030390980000	PROD_OIL_ACTIVE	2010	3G	-2279.97	3285.00	6149960	2286299
72NE-3G	04030390990000	PROD_OIL_ACTIVE	2010	3G	-2303.74	3380.00	6149285	2285792
72SE-3G	04030391000000	PROD_OIL_ACTIVE	2009	3G	-2329.05	3333.00	6150145	2285052
73E-3G	04030391010000	PROD_OIL_ACTIVE	2009	3G	-2412.53	3376.00	6150115	2285000
65NE-2G	04030393180000	INJ_GAS_ACTIVE	2010	2G	-2624.98	3360.00	6154461	2283547
64-35S	04030393400000	PROD_OIL_ACTIVE	2010	35S	-2604.40	3265.00	6154660	2289513
71SW-35S	04030393410000	PROD_OIL_ACTIVE	2010	35S	-2833.17	3490.00	6155177	2291337
12S-35S	04030405920000	PROD_OIL_ACTIVE	2010	35S	-2723.02	3425.00	6151302	2290541
34N-34S	04030406950000	PROD_OIL_ACTIVE	2010	34S	-2441.14	3335.00	6146996	2290104
43NE-34S	04030406960000	PROD_OIL_ACTIVE	2010	34S	-2506.81	3335.00	6147956	2290508
82SE-34S	04030406970000	PROD_OIL_ACTIVE	2010	34S	-2565.29	3320.00	6150768	2290732
11SE-35S	04030407380000	PROD_OIL_ACTIVE	2010	35S	-2703.59	3405.00	6151646	2291512
33SW-3G	04030409350000	PROD_OIL_ACTIVE	2011	3G	-2313.82	3257.00	6147216	2284922
34-3G	04030409360000	PROD_OIL_ACTIVE	2011	3G	-2330.58	3247.00	6147284	2284590
35N-3G	04030409370000	PROD_OIL_ACTIVE	2011	3G	-2350.35	3244.00	6147423	2283987
45NE-3G	04030409380000	PROD_OIL_ACTIVE	2011	3G	-2103.92	3095.00	6148037	2284418
45NW-3G	04030409390000	PROD_OIL_ACTIVE	2011	3G	-2368.89	3240.00	6147418	2283947
55N-3G	04030409410000	PROD_OIL_ACTIVE	2011	3G	-2386.50	3288.00	6148416	2283927
35S-3G	04030409460000	PROD_OIL_ACTIVE	2010	3G	-2369.99	3268.00	6147234	2283528
45SE-3G	04030409470000	PROD_OIL_ACTIVE	2011	3G	-2397.99	3254.00	6147897	2283619
45SW-3G	04030409480000	PROD_OIL_ACTIVE	2011	3G	-2375.91	3252.00	6147888	2283591
81-3G	04030409510000	PROD_OIL_ACTIVE	2011	3G	-2352.43	3291.00	6150681	2286517
82NW-3G	04030409520000	PROD_OIL_ACTIVE	2011	3G	-2369.50	3309.00	6150441	2285645
82SW-3G	04030409530000	PROD_OIL_ACTIVE	2011	3G	-2417.75	3346.00	6150405	2285598
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34XA-35S	04030409950000	PROD_OIL_ACTIVE	2011	35S	-2642.32	3364.00	6152313	2289834
33NE-3G	04030410380000	INJ_H2O_ACTIVE	2010	3G	-2130.70	3085.00	6147245	2284949
33SE-3G	04030410390000	INJ_H2O_ACTIVE	2011	3G	-2100.03	3015.00	6147312	2284564
34SE-3G	04030410400000	INJ_H2O_ACTIVE	2011	3G	-2190.96	3072.00	6147430	2284027
35E-3G	04030410410000	INJ_H2O_ACTIVE	2011	3G	-2174.58	3083.00	6147212	2283561
44S-3G	04030410420000	INJ_H2O_ACTIVE	2011	3G	-2181.06	3154.00	6148009	2284390
45E-3G	04030410430000	INJ_H2O_ACTIVE	2011	3G	-2221.73	3084.00	6147907	2283647
54SE-3G	04030410440000	INJ_H2O_ACTIVE	2011	3G	-2141.62	3085.00	6148454	2283916
54SW-3G	04030410450000	INJ_H2O_ACTIVE	2011	3G	-2222.10	3144.00	6148378	2283937
55W-3G	04030410460000	INJ_H2O_ACTIVE	2011	3G	-2202.03	3086.00	6147917	2283678
81SW-3G	04030410470000	PROD_GAS_P & A	2011	3G	-2191.48	3146.00	6150718	2286504
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81W-33S	04030412630000	PROD_OIL_ACTIVE	2010	33S	-2752.91	3492.00	6145130	2291800

22NW-34S	04030415600000	PROD_OIL_ACTIVE	2010	34S	-2497.25	3310.00	6146314	2291489
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12X-34S	04030425020000	PROD_OIL_ACTIVE	2011	34S	-2486.83	3285.00	6146080	2290996
51SW-34S	04030425030000	PROD_OIL_ACTIVE	2011	34S	-2749.16	3542.00	6148515	2291409
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54W-34S	04030425050000	PROD_OIL_ACTIVE	2011	34S	-2567.21	3474.00	6148384	2289972
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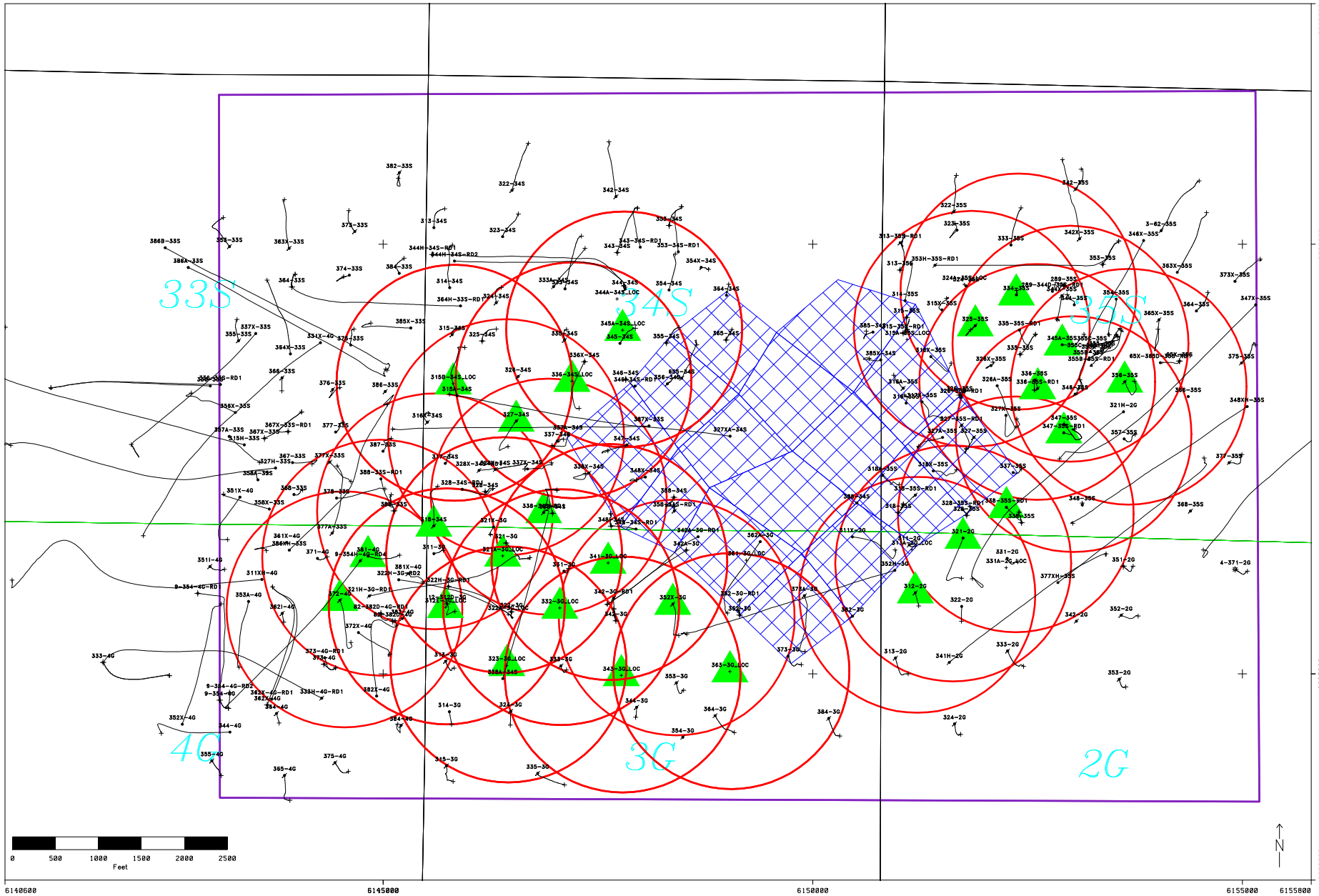
12NE-35S	04030425070000	PROD_OIL_ACTIVE	2011	35S	-2634.24	3306.00	6151613	2290975
22S-35S	04030425080000	PROD_OIL_ACTIVE	2011	35S	-2598.82	3273.00	6151688	2290751
23E-35S	04030425090000	PROD_OIL_ACTIVE	2011	35S	-2692.80	3340.00	6152042	2290522
55NE-4G	04030425140000	PROD_OIL_ACTIVE	2011	4G	-2033.00	3058.00	6143239	2284395
81E-33S	04030426090000	PROD_OIL_ACTIVE	2011	33S	-2663.08	3399.00	6145243	2291681
52N-35S	04030426100000	PROD_OIL_ACTIVE	2011	35S	-2868.25	3461.00	6153498	2291507
81X-3G	04030426190000	INJ_H2O_ACTIVE	2011	3G	-2197.70	3200.00	6150497	2285717
22SW-34S	04030427560000	PROD_OIL_INACTIVE	2011	34S	-2455.51	3278.00	6146080	2290996
42SW-2G	04030428320000	PROD_OIL_ACTIVE	2011	2G	-2472.71	3370.00	6152993	2285630
72NW-35S	04030428400000	PROD_OIL_ACTIVE	2011	35S	-2666.05	3314.00	6155180	2291260
22NE-34S	04030432960000	PROD_OIL_ACTIVE	2011	34S	-2620.09	3411.00	6146988	2291563
11NE-35S	04030432970000	PROD_OIL_ACTIVE	2011	35S	-2703.12	3405.00	6151590	2291557
64EX-3G	04030448530000	PROD_OIL_ACTIVE	xx	3G	-2271.32	3194.00	6149316	2284624
51W-35S	04030459840000	PROD_OIL_ACTIVE	xx	35S	-2828.18	3402.00	6153264	2291690
55SE-3G	04030459860000	PROD_OIL_ACTIVE	xx	3G	-2262.90	3121.00	6148484	2283506
32SE-35S	04030461020000	PROD_OIL_ACTIVE	xx	35S	-2751.96	3397.00	6152456	2290808
33A-35S	04030461030000	PROD_OIL_ACTIVE	xx	35S	-2652.68	3329.00	6152417	2290798
41W-35S	04030461040000	PROD_OIL_ACTIVE	xx	35S	-2988.10	3615.00	6152764	2291741
21W-34S	04030461190000	PROD_OIL_ACTIVE	xx	34S	-2516.71	3320.00	6146228	2291553
42E-34S	04030461220000	PROD_OIL_ACTIVE	xx	34S	-2550.16	3401.00	6148032	2291168
21E-34S	04030462390000	PROD_OIL_ACTIVE	xx	34S	-2581.17	3363.00	6146913	2291660



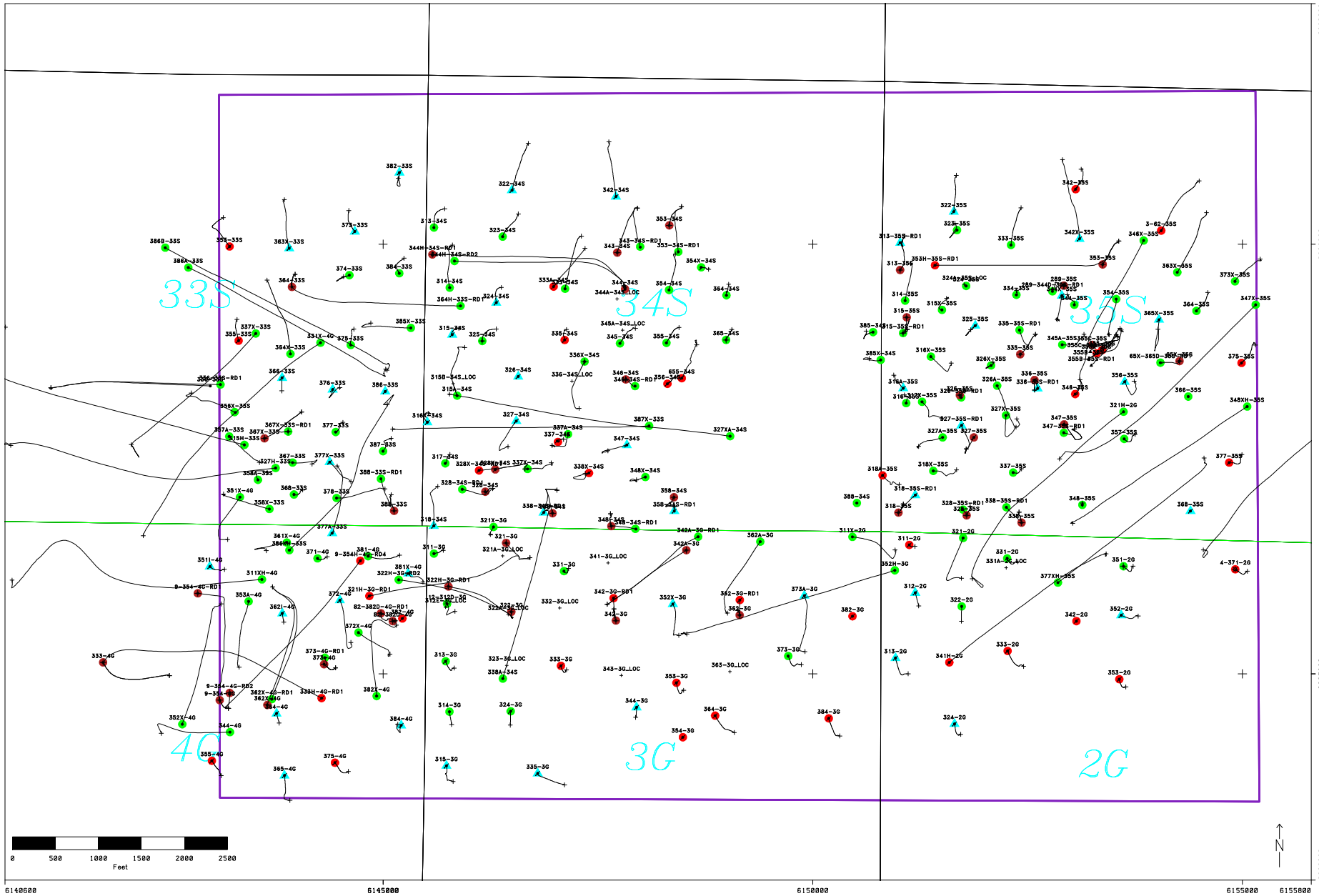
Well Symbols

- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL
- PROD_GAS_INACTIVE

AREA OF REVIEW (AOR)

- Injector Well Per Pattern at BA Pick
- 1/4 Mile Radius Around Injector
- 1/4 Mile Buffer
- Miscible Gas Injection Permit. # 22800035

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 11-July-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL
- PROD_GAS_INACTIVE

Well Status

- PRODUCING
- P&A
- PSI/TEMP MONITORS
- INJECTOR
- IDLE
- 1/4 Mile Buffer

Occidental of Elk Hills

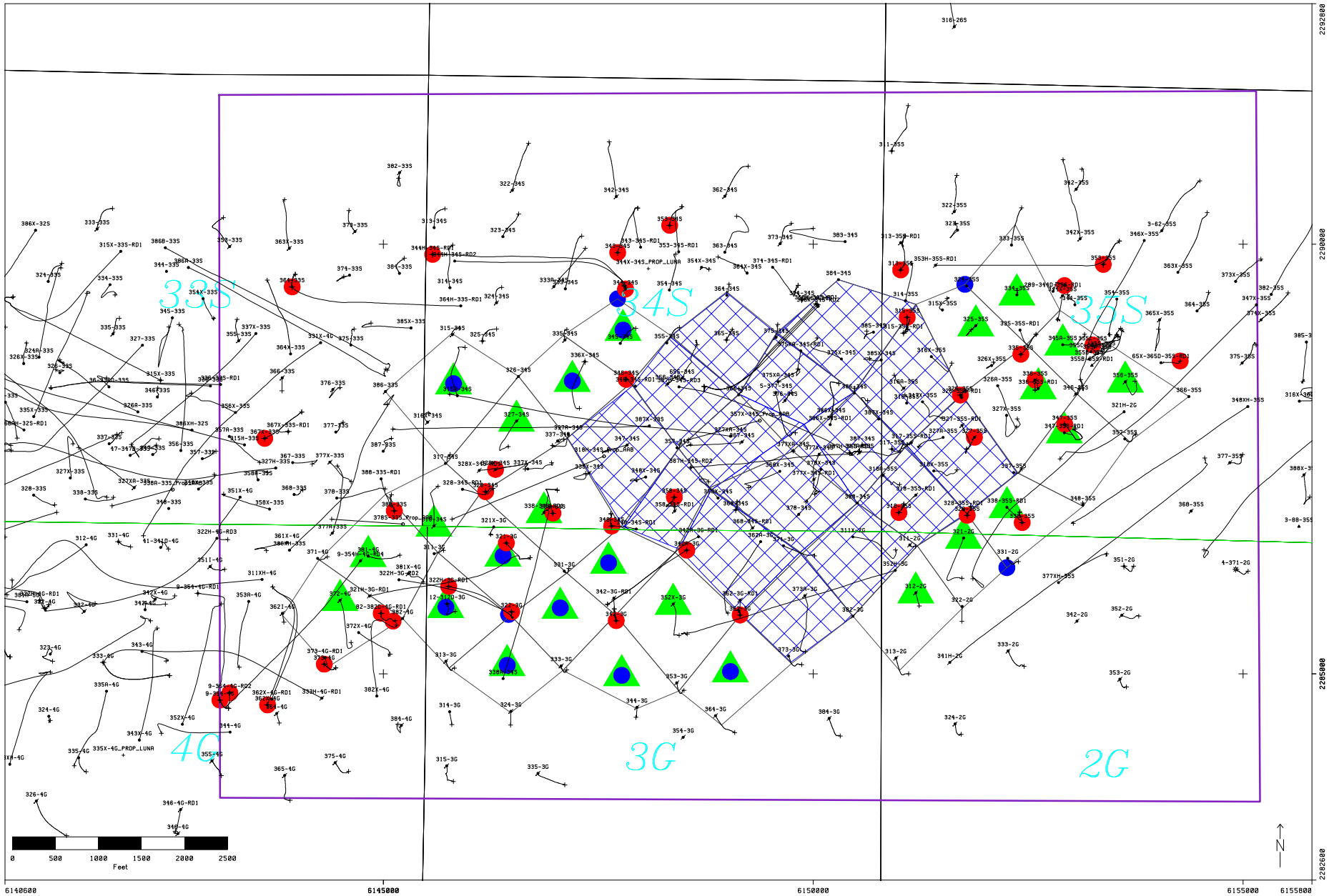
ELK_HILLS

STEVENS RMT

Scale:	Units:
1:6000	FEET
Interpreter: TLB	Date: 20-August-2012

HECA Phase 1 UIC

All Wells Penetrate Reef Ridge Shale



Well Symbols

- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- MON_PSI_APPROVED
- INJ_H2O_ACTIVE
- LOCATION
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- PROD_GAS_INACTIVE

Well Status

- Miscible Gas Injection Area
- Pattern Boundary
- Abandon/Sidetrack Wells
- Injectors
- New Drills

Occidental of Elk Hills

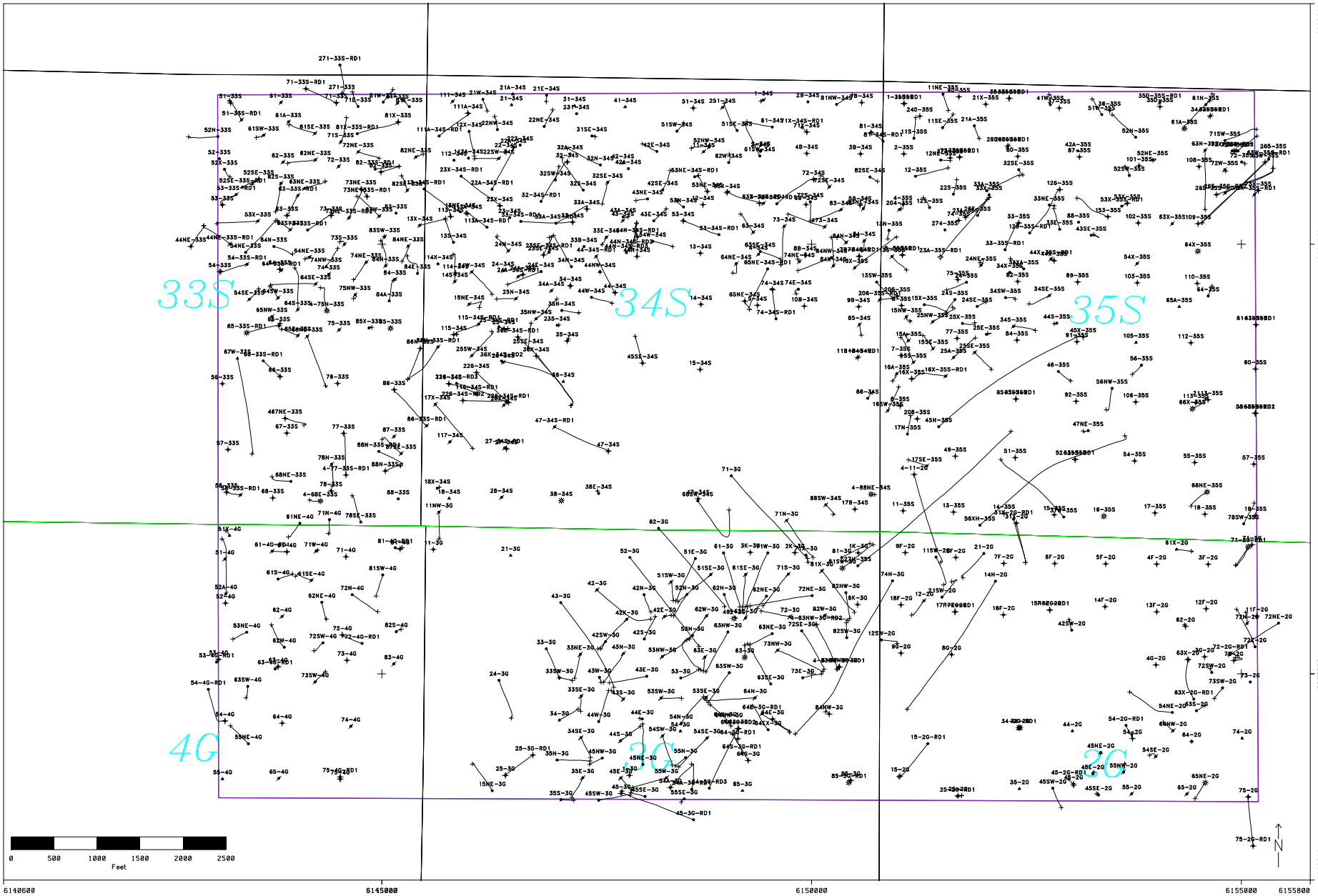
ELK_HILLS

STEVENS RMT

Scale:	Units:
1:6000	FEET
Interpreter: TLB	Date: 23-August-2012

HECA Phase 1 UIC

All Wells Penetrate Reef Ridge Shale



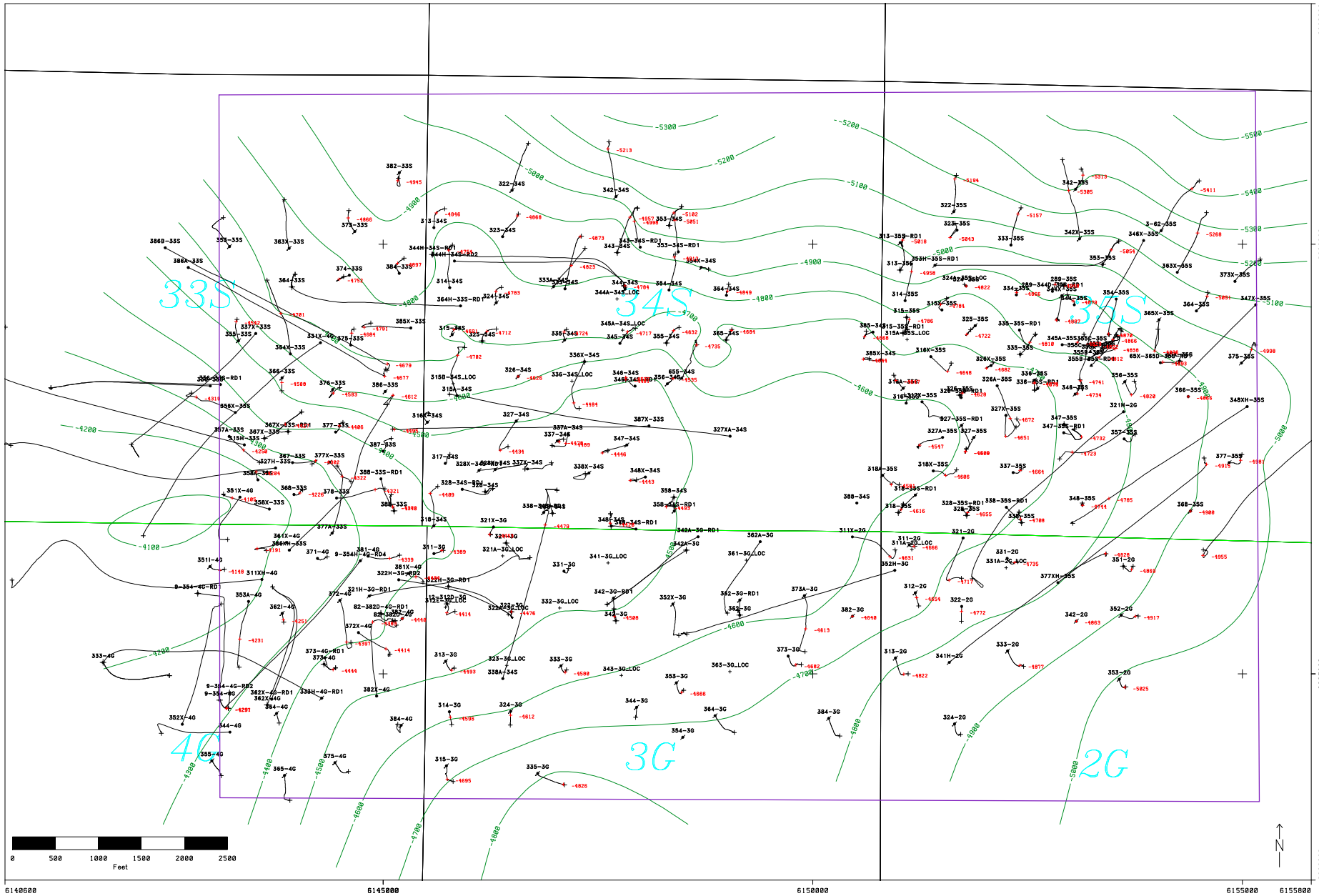
Well Symbols

- Surface Location
- PROD_OIL_INACTIVE
- PROD_OIL_P & A
- MON_PSI_APPROVED
- PROD_OIL_ACTIVE
- INJ_GAS_ACTIVE
- DRY HOLE
- INJ_H2O_ACTIVE
- PROD_GAS_INACTIVE
- PROD_GAS_ACTIVE

Wells Above Reef Ridge

◇ 1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 11-July-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

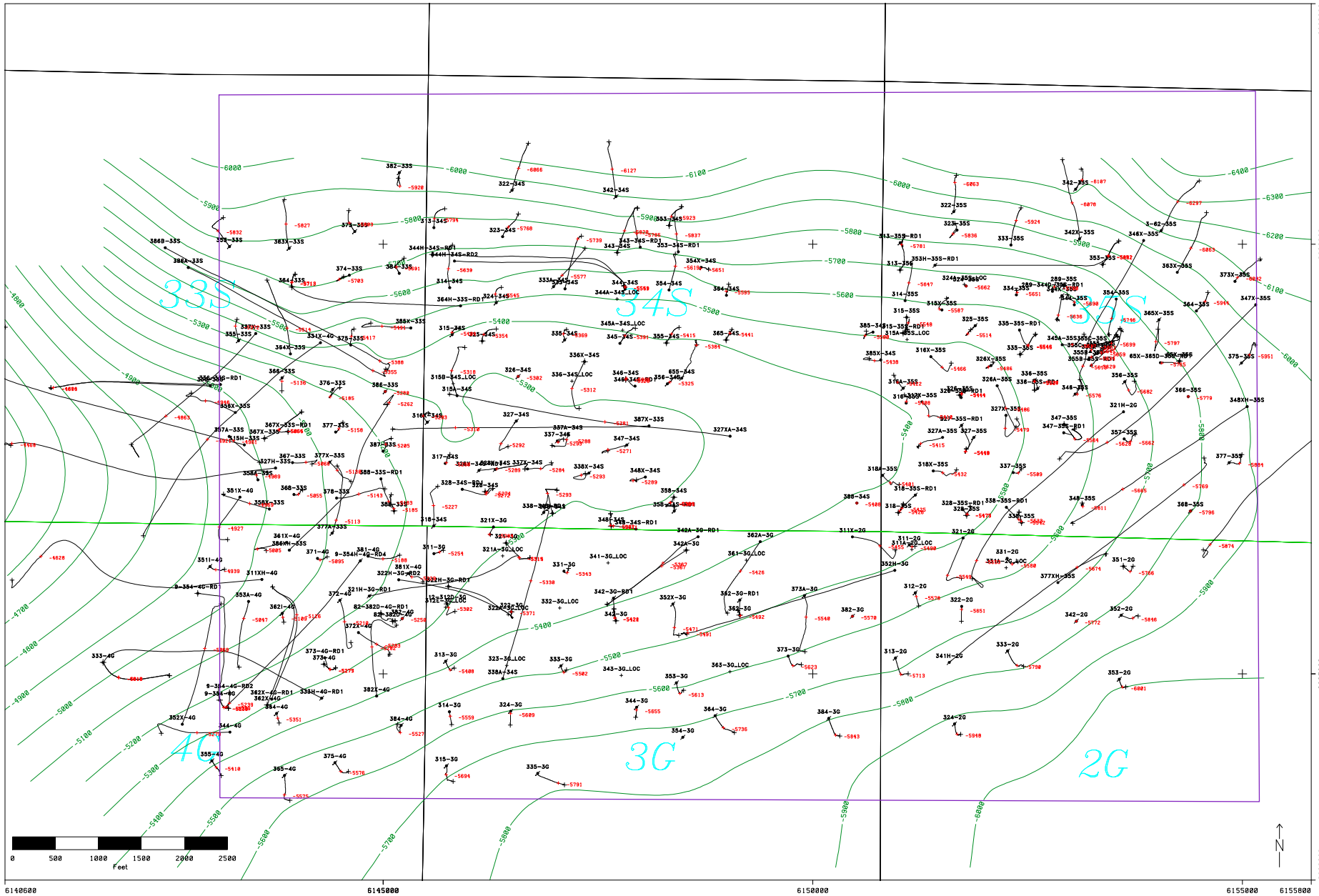
Reef Ridge Shale Structural Contour TVDss

Contour Interval 100 ft.

Cap Rock

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

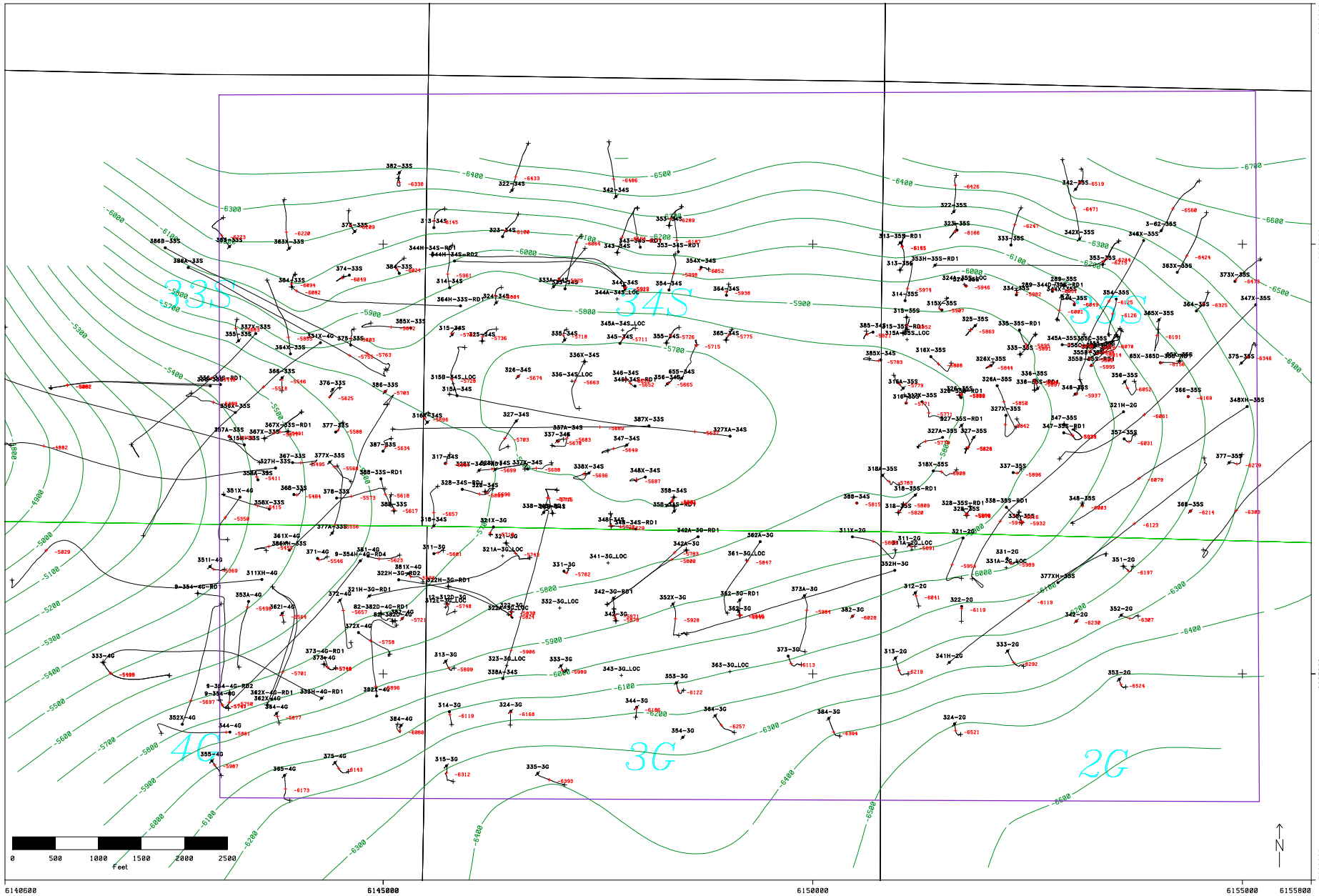
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

N-Shale Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

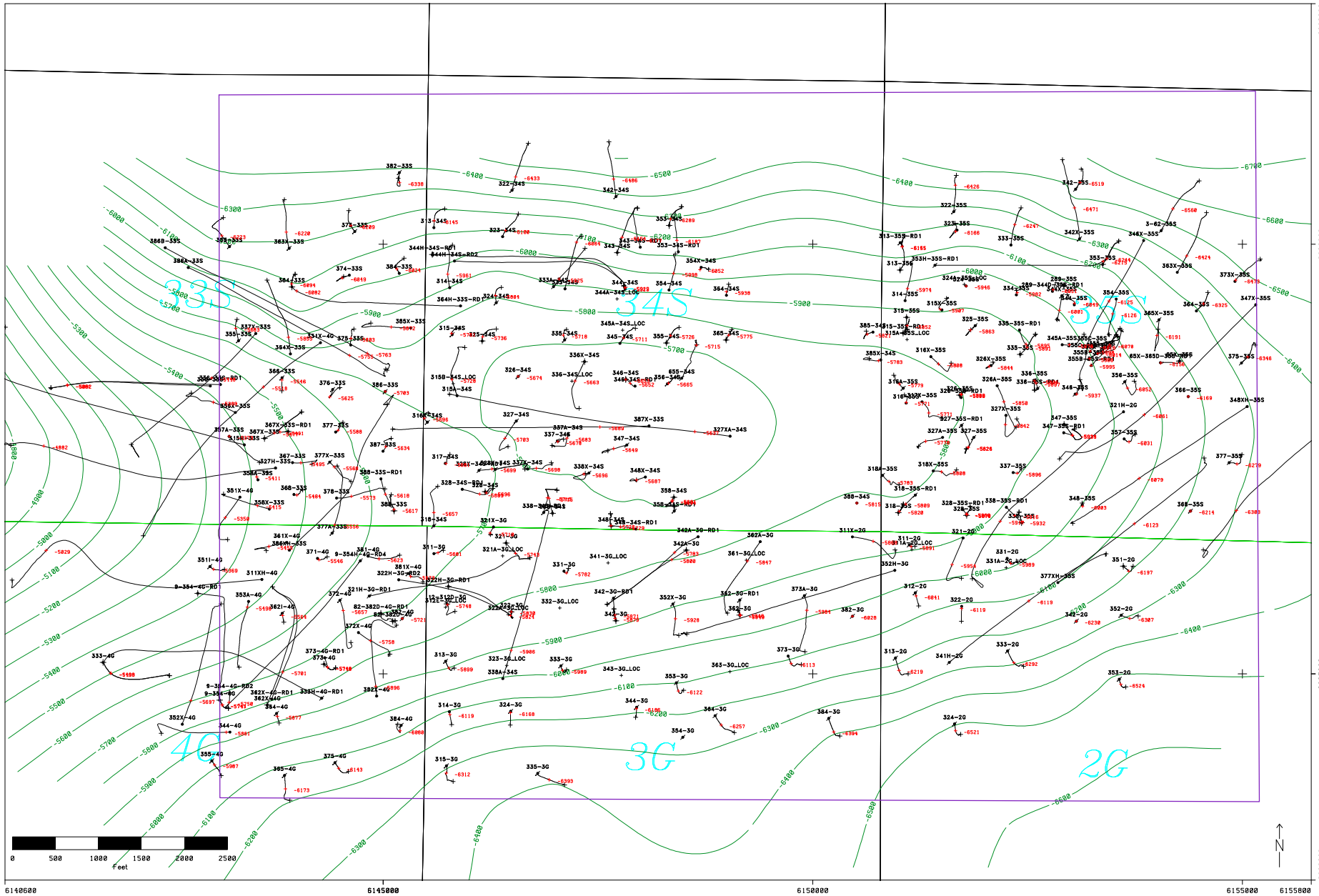
B Sand Structural Contour (BA) TVDss

Contour Interval 100 ft.

Top of Injection Zone

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

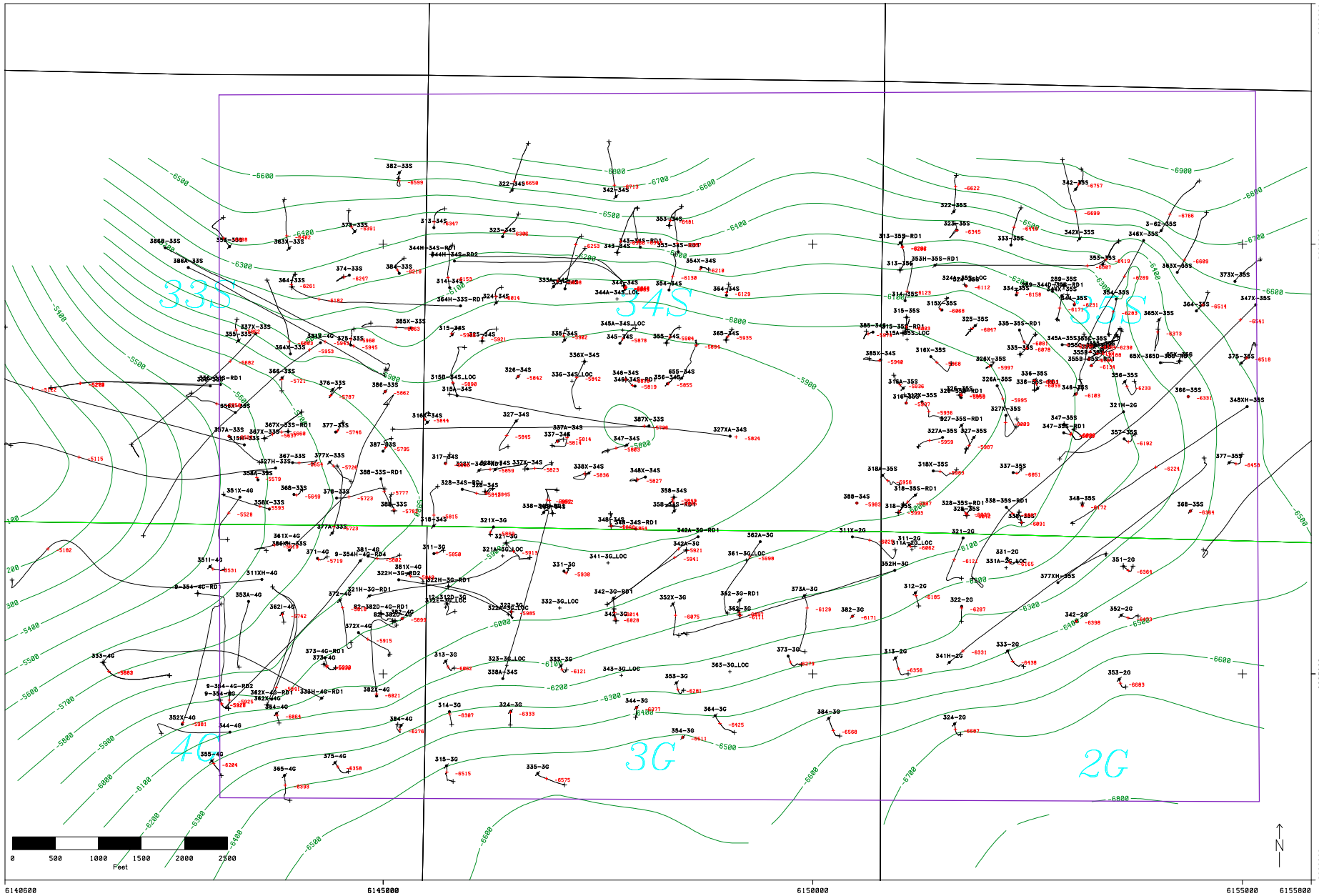
B Sand Structural Contour (BA) TVDss

Contour Interval 100 ft.

Top of Injection Zone

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

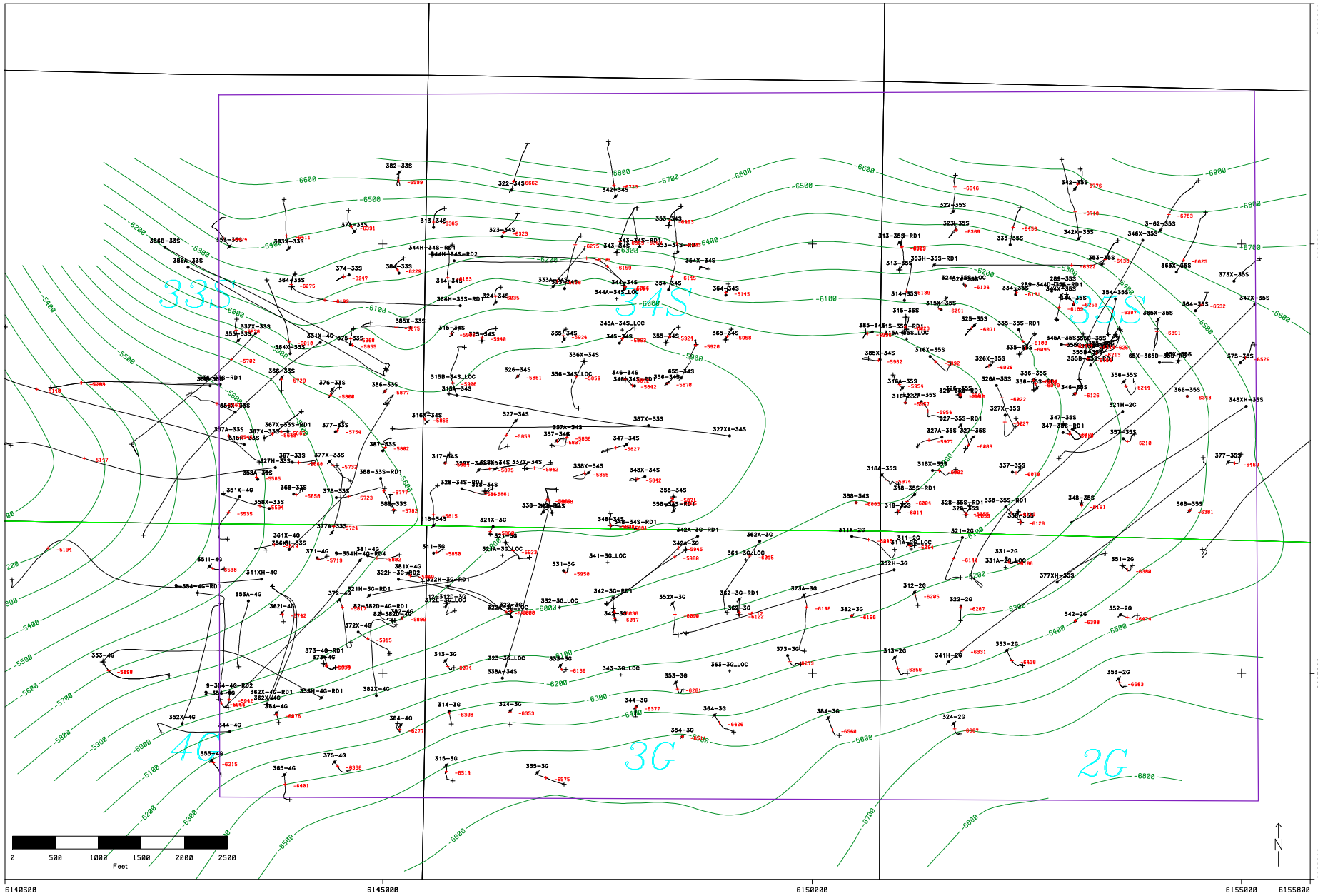
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

UBA Sand Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

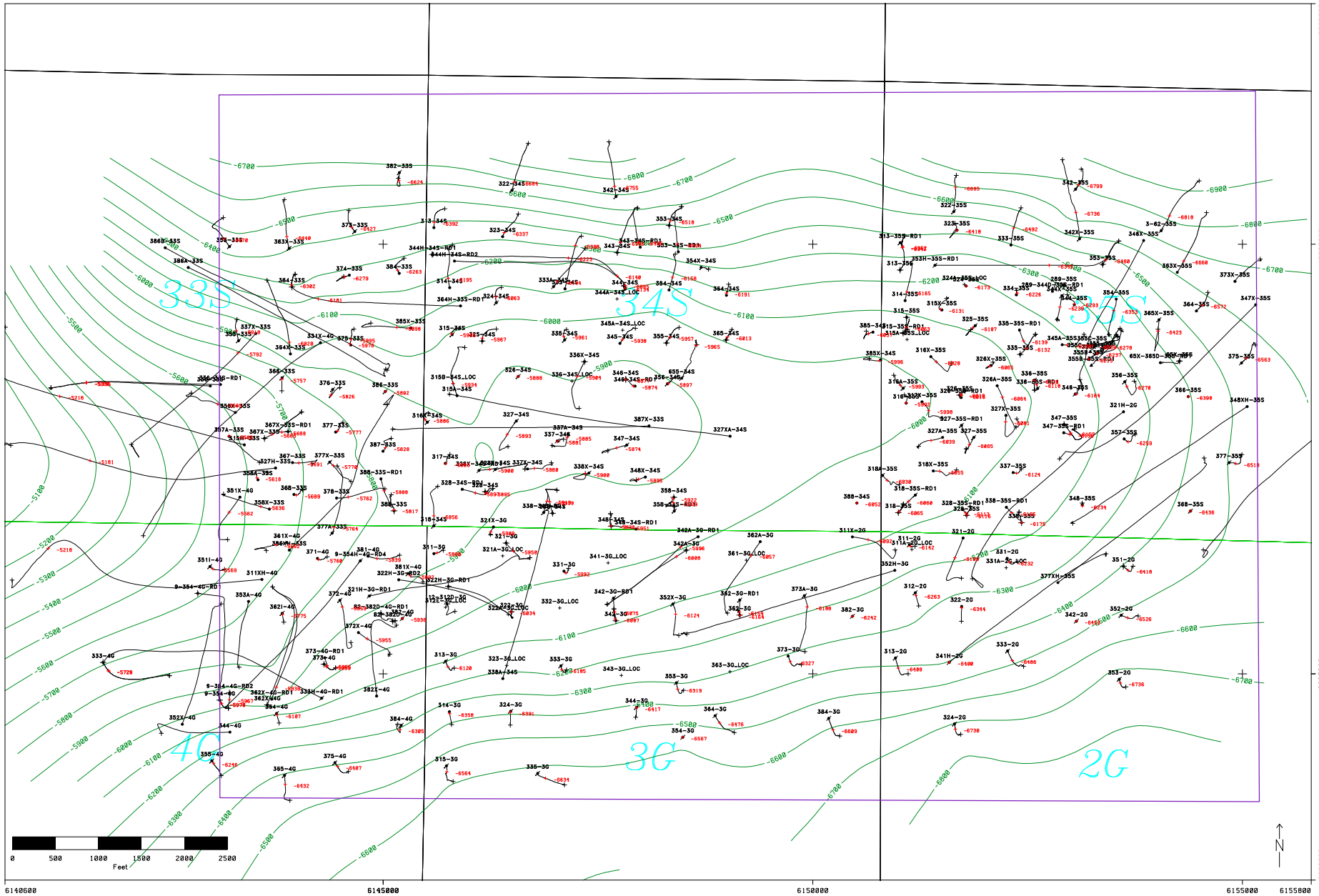
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

UBA1 Sand Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

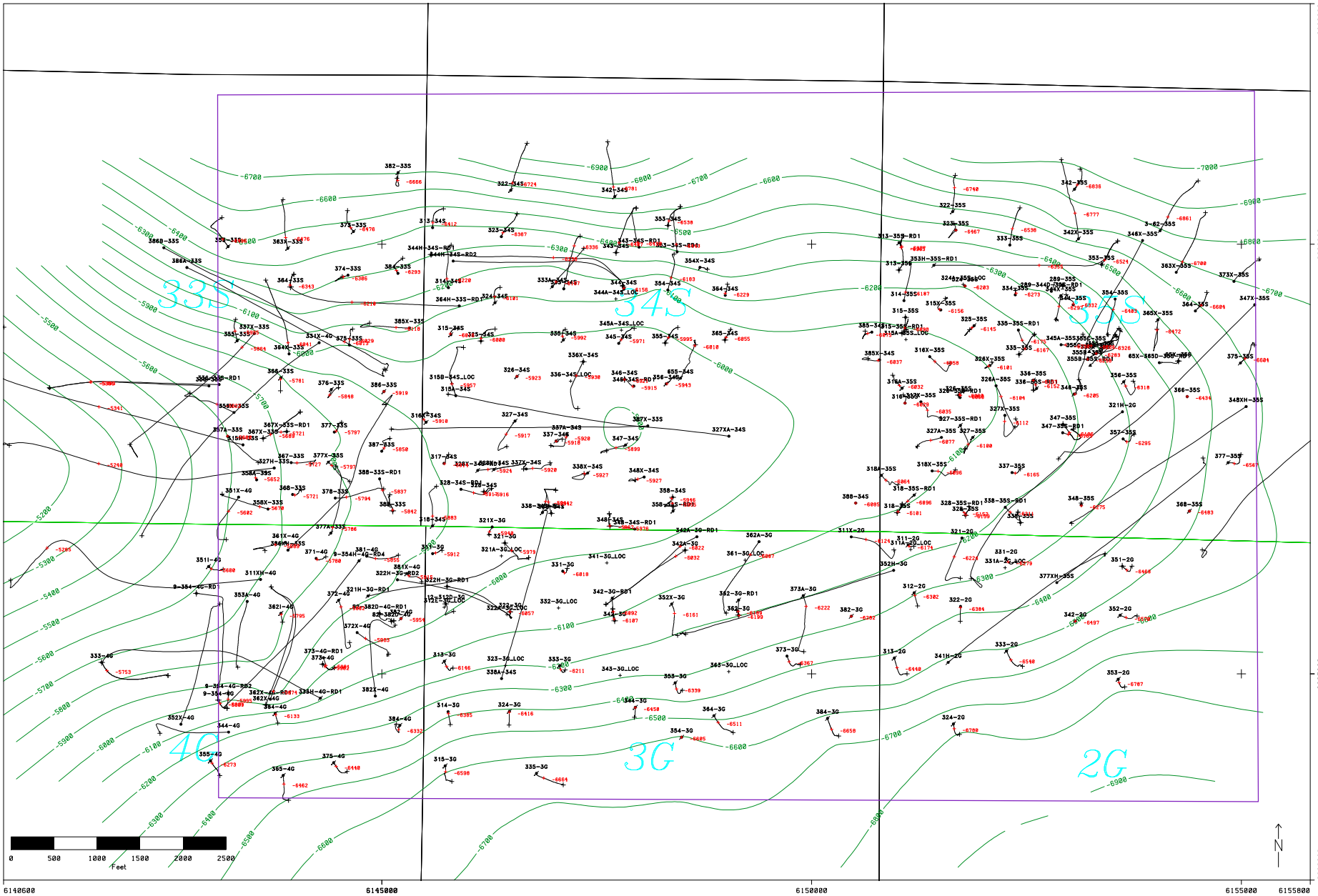
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

UBA2 Sand Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

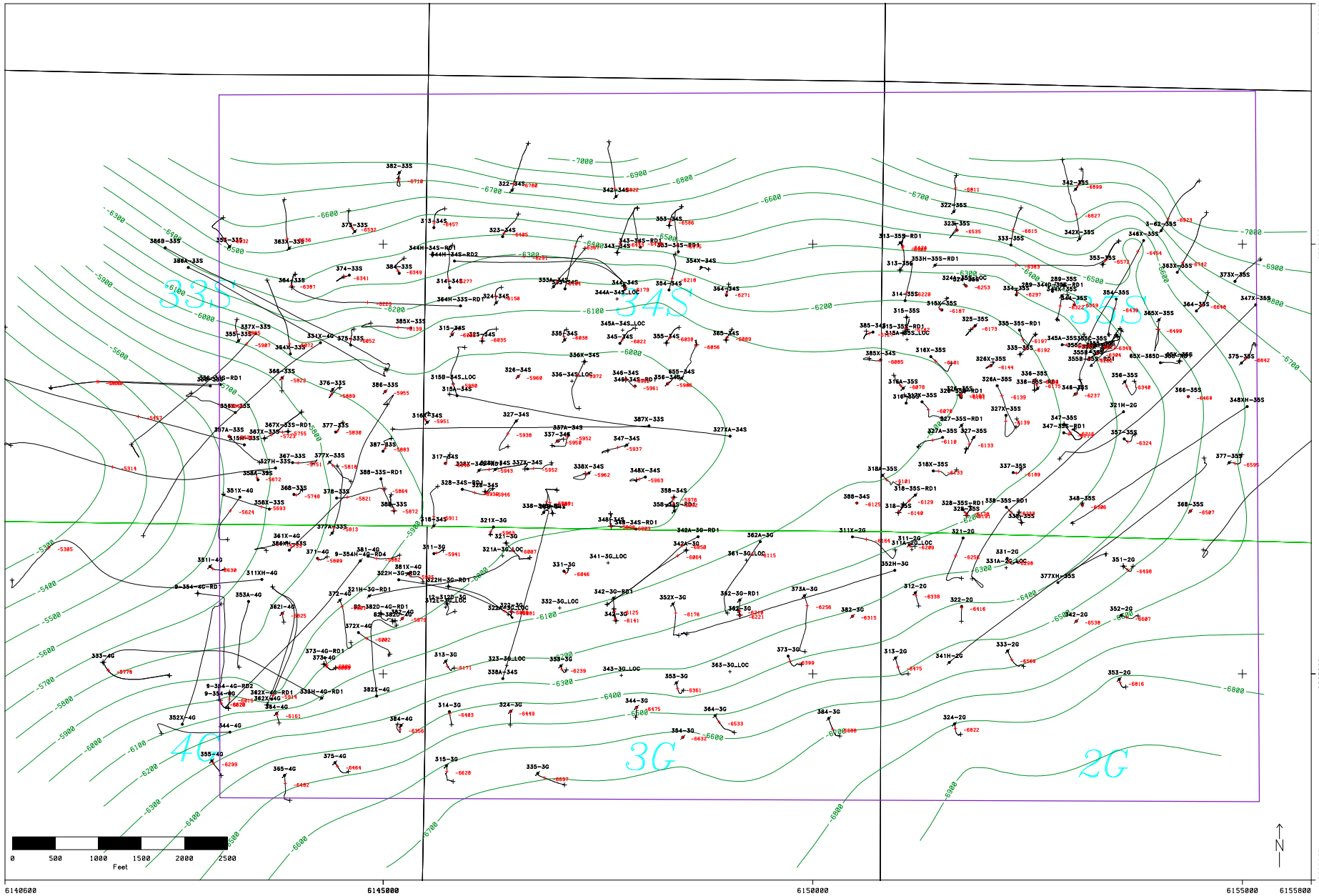
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

UBA3 Sand Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

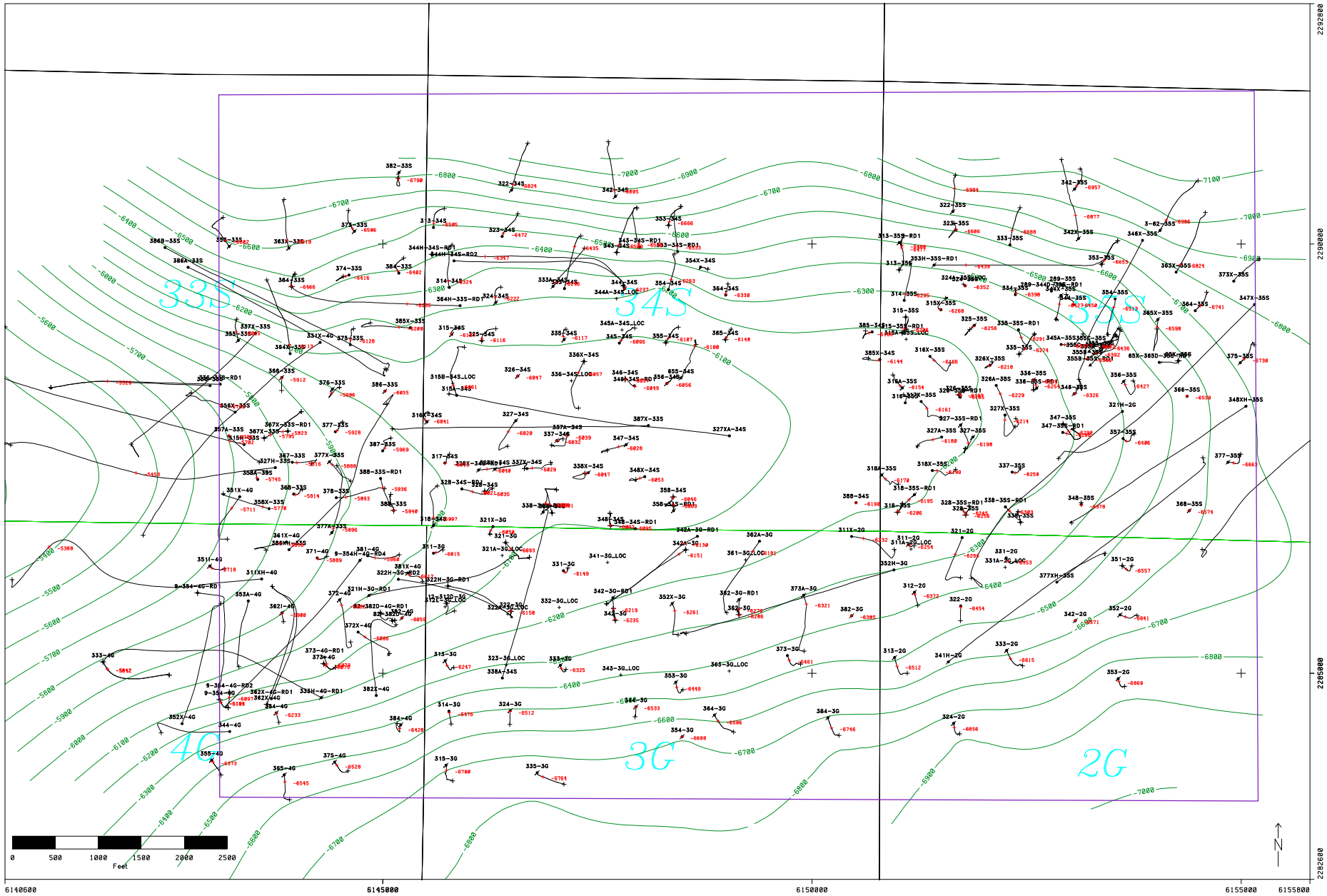
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

UBB1 Sand Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

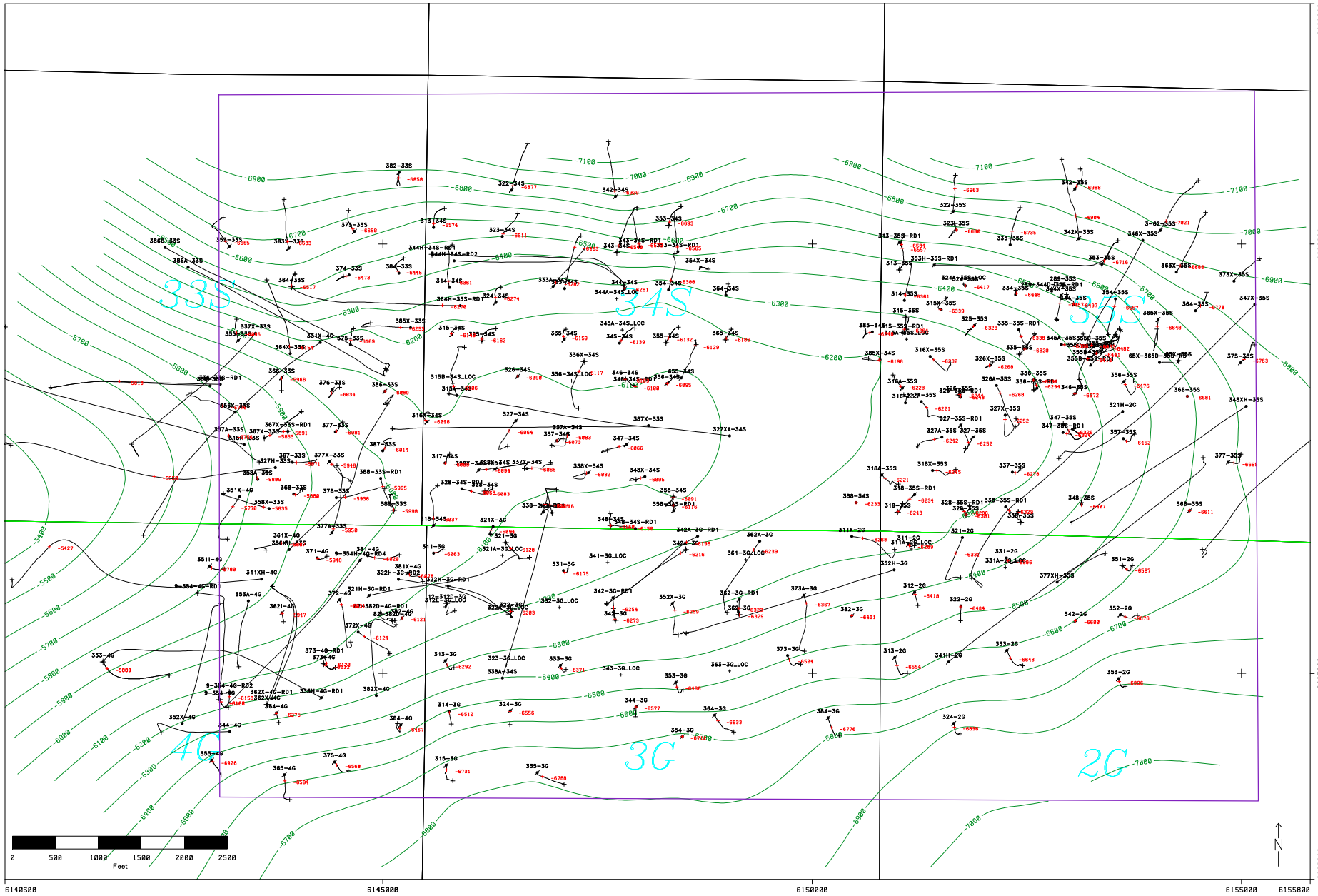
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

UBB2 Sand Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

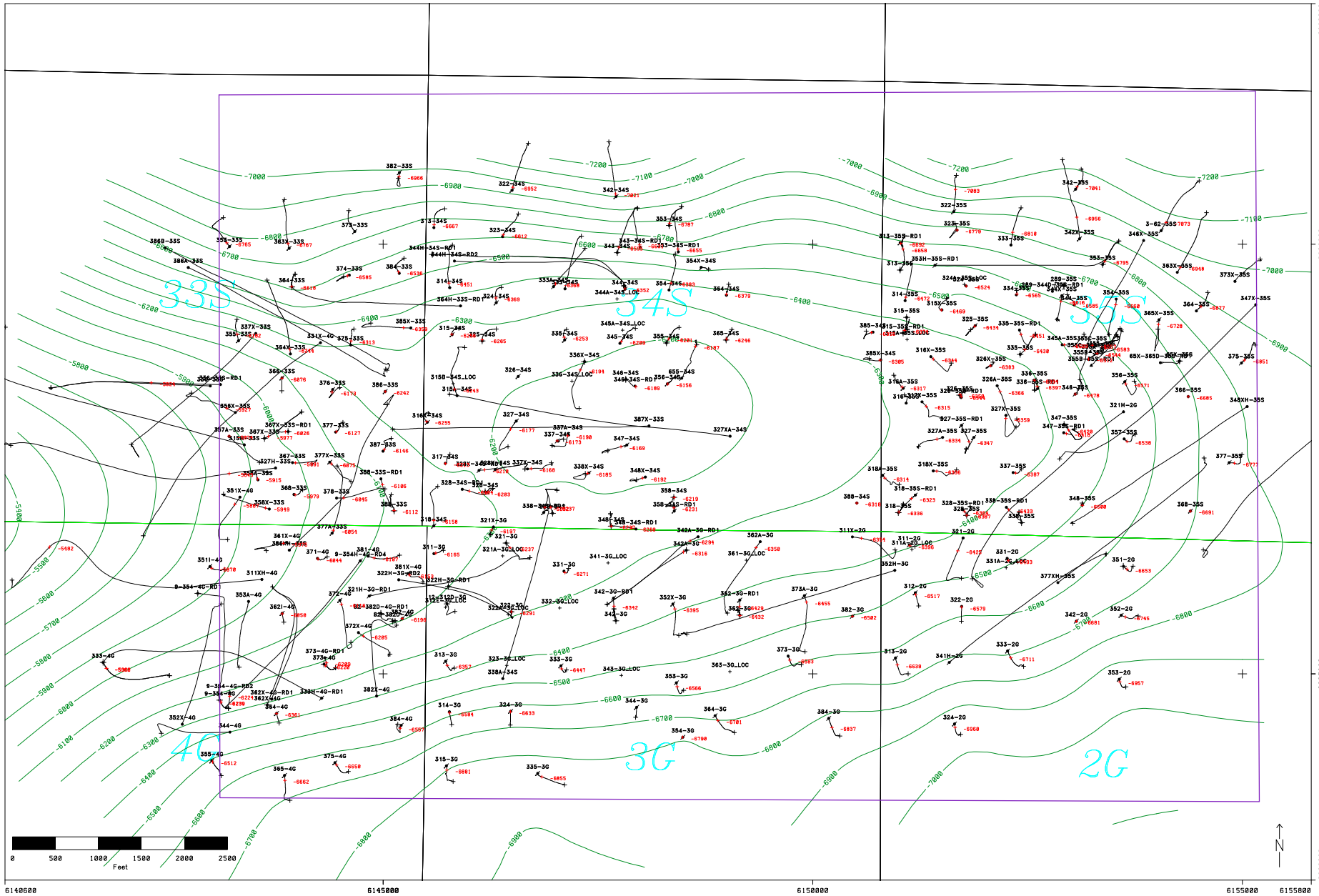
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

UBB3 Sand Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

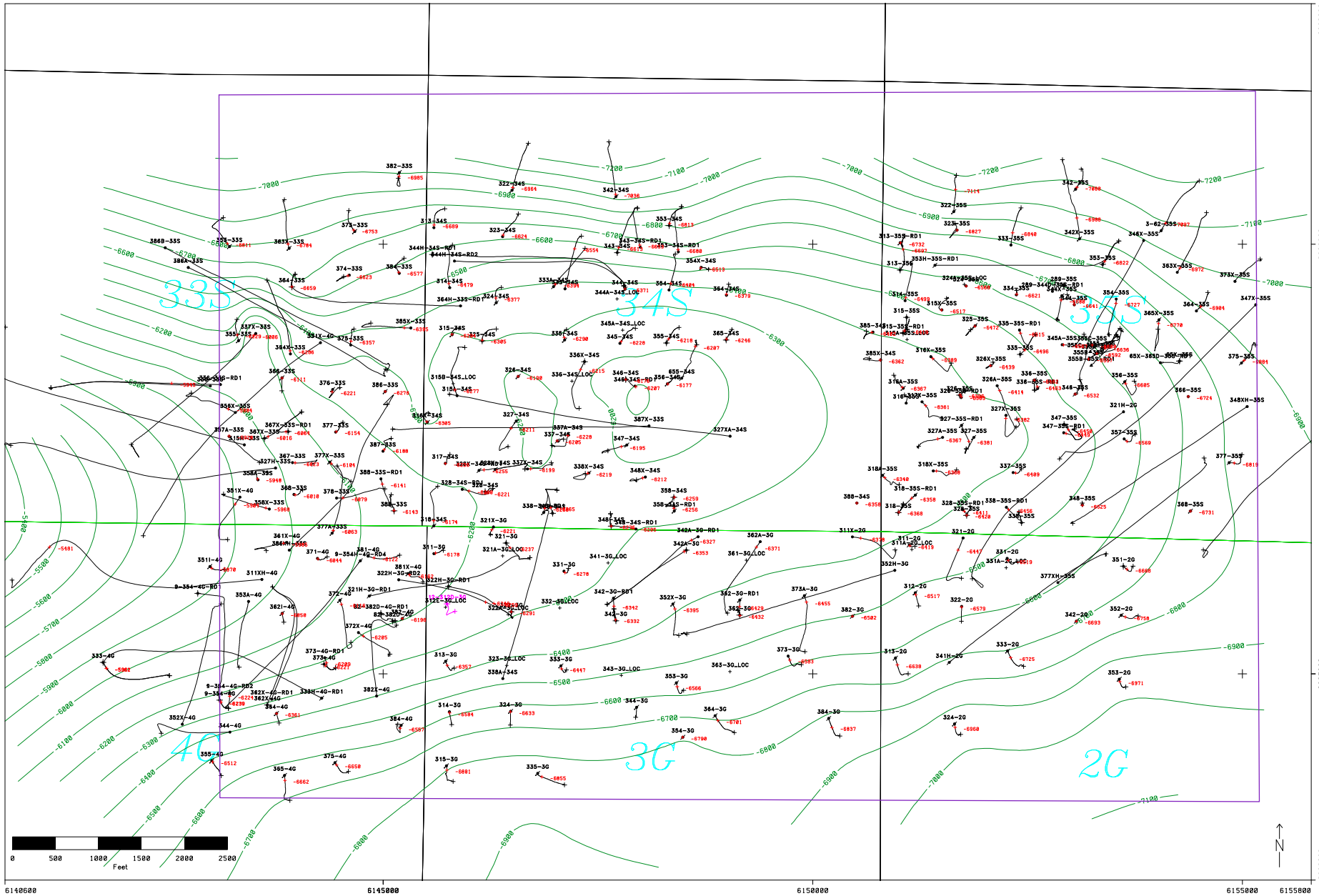
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

UBB4 Sand Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

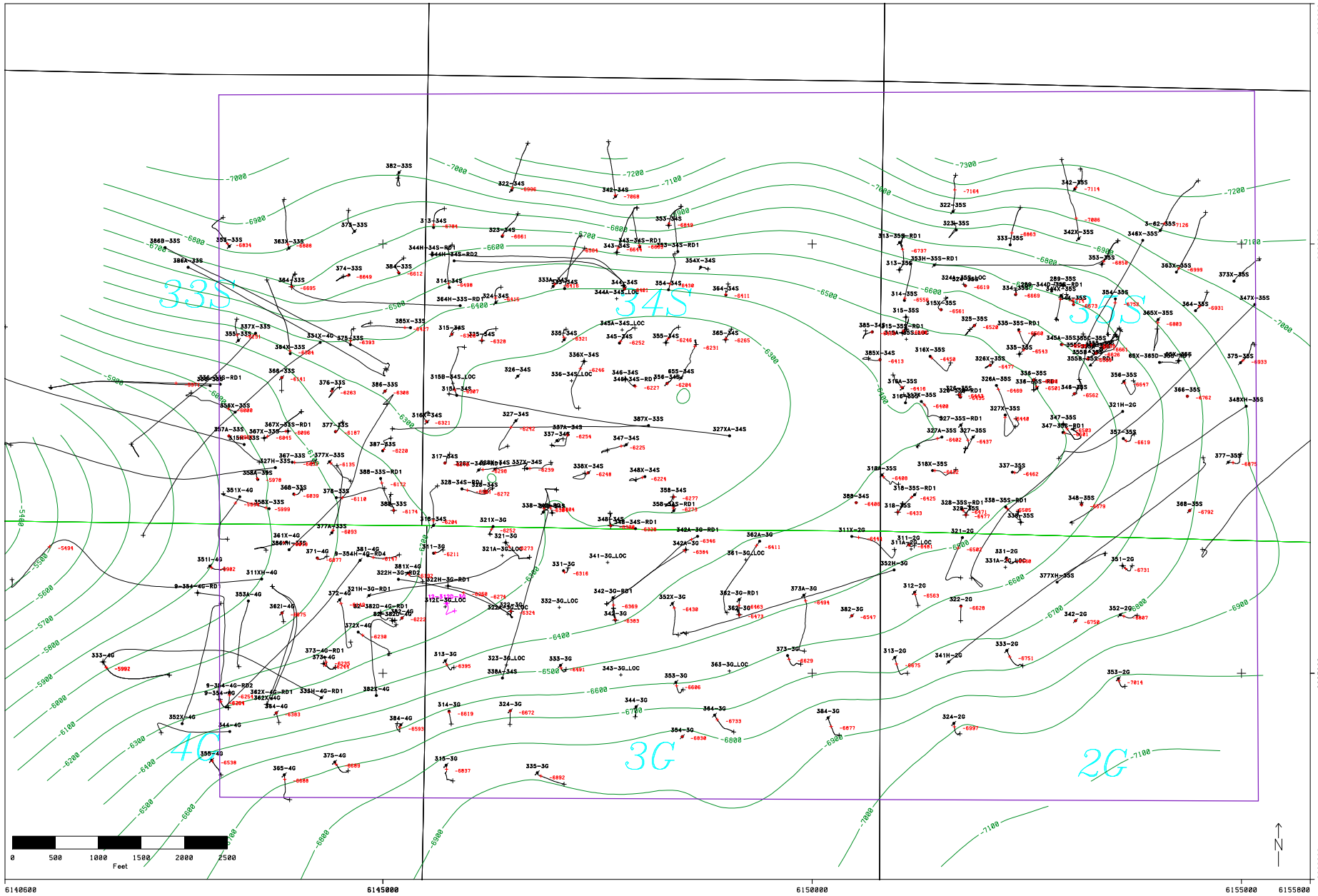
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

BCA Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

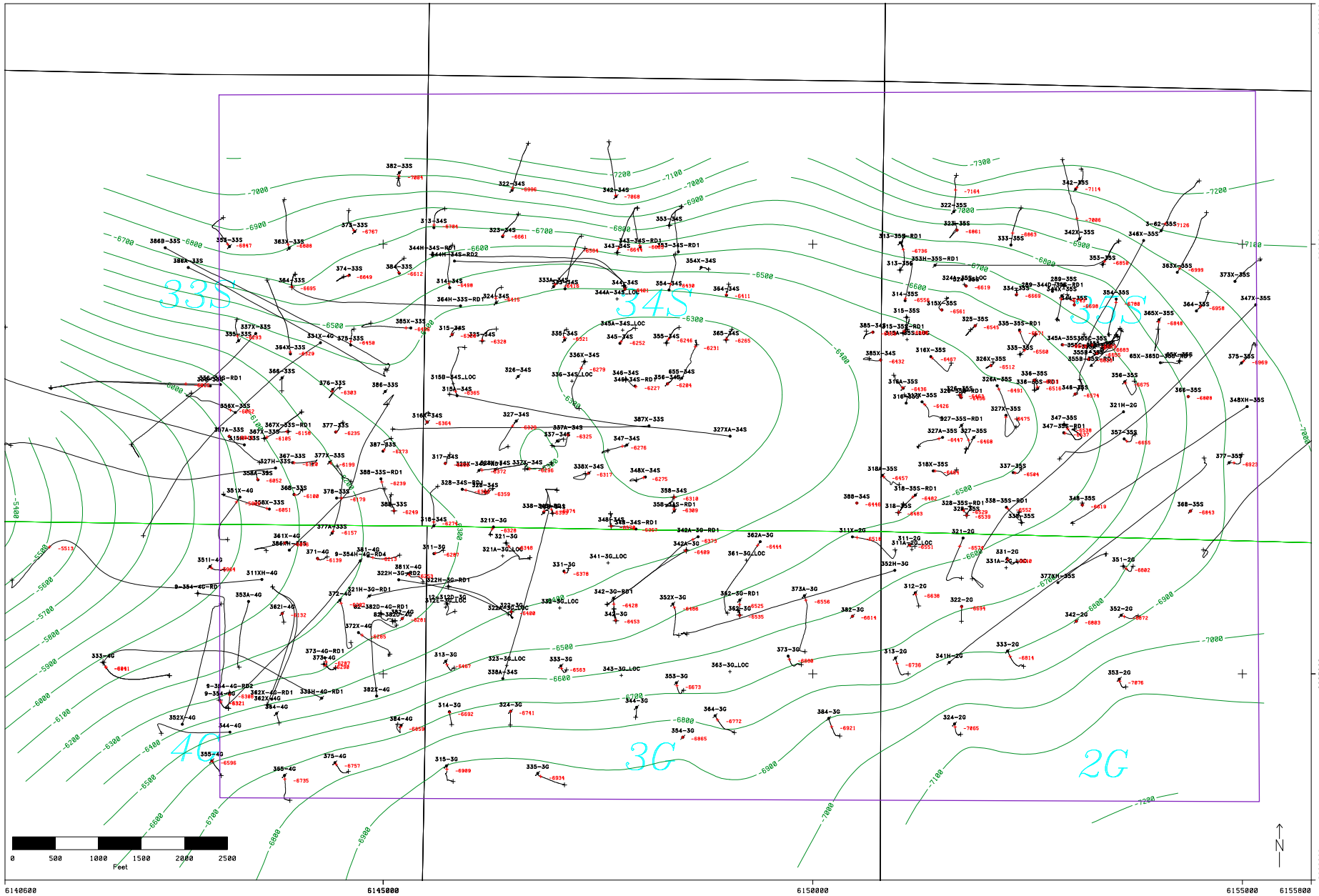
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

LBA1 Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

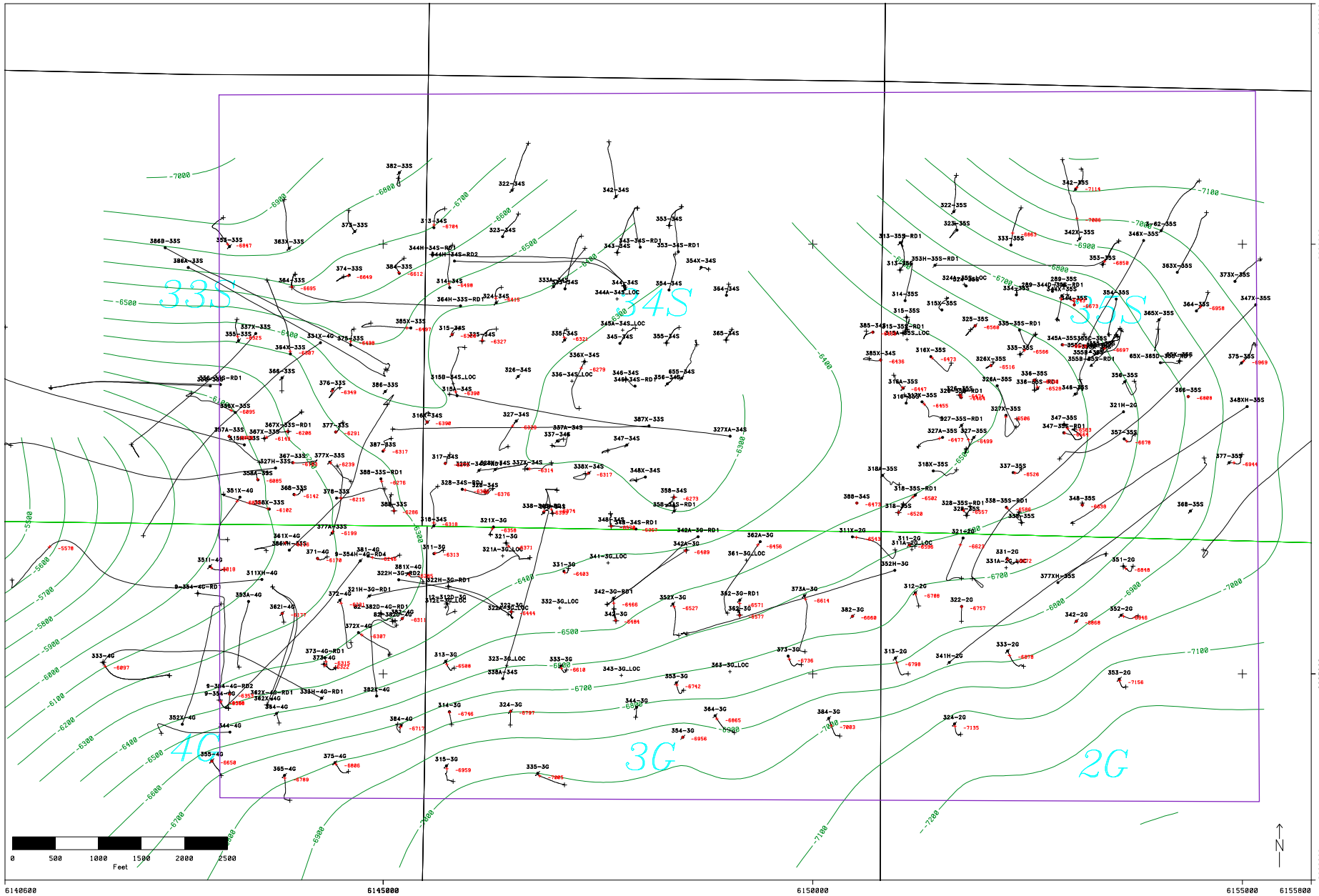
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

UW1 Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

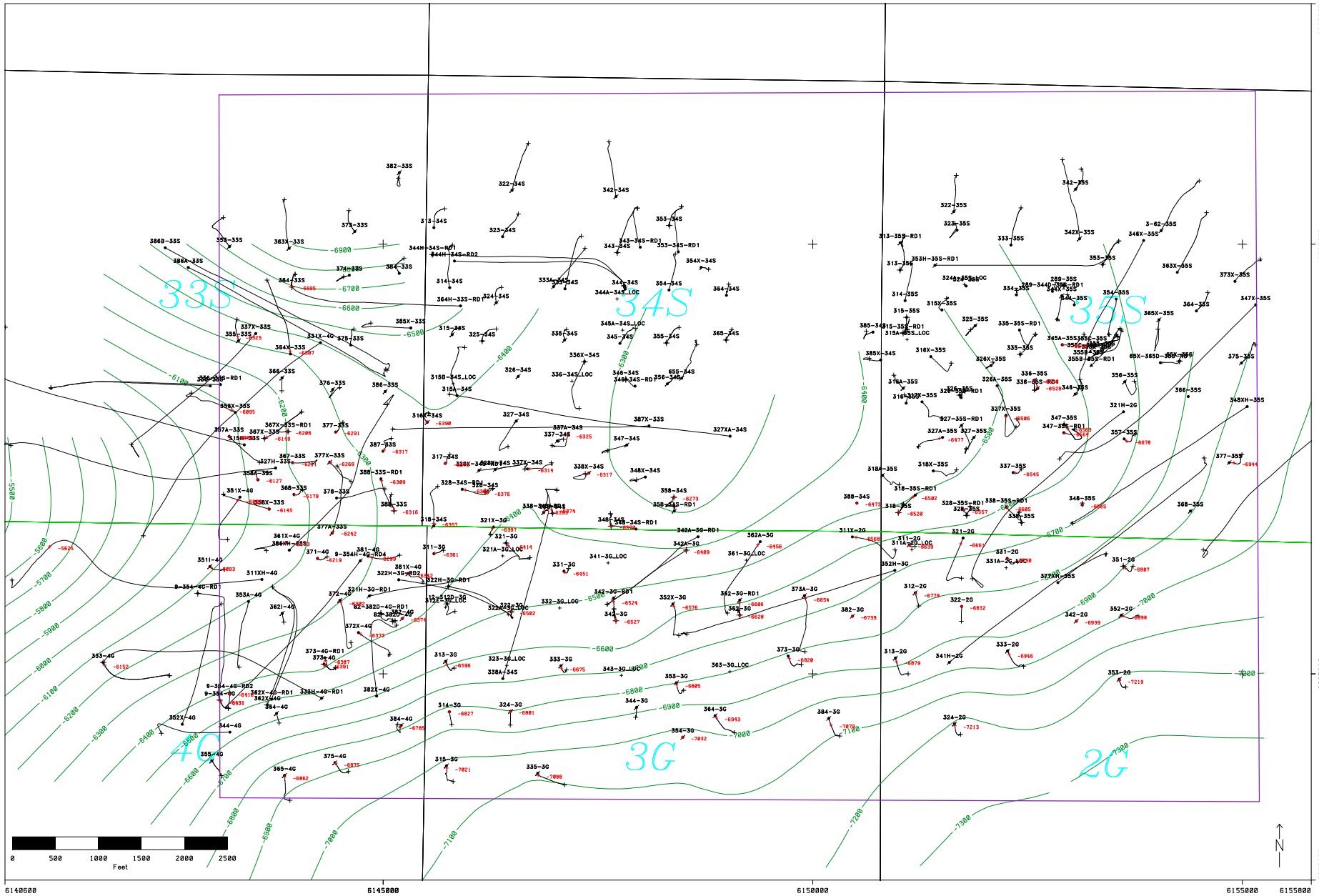
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

UW2 Structural Contour TVDss

Contour Interval 100 ft.

□ 1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

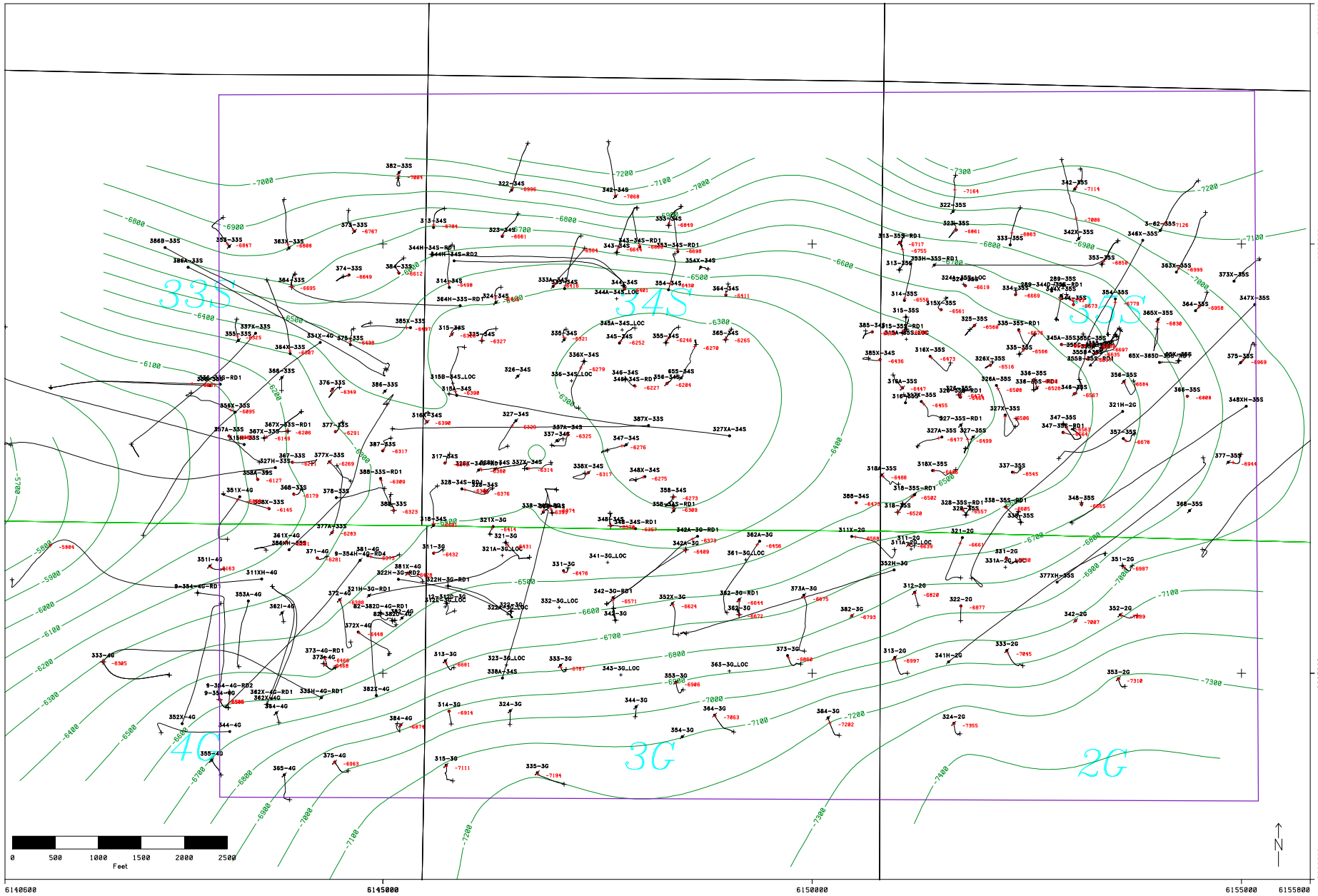
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

UW3 Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

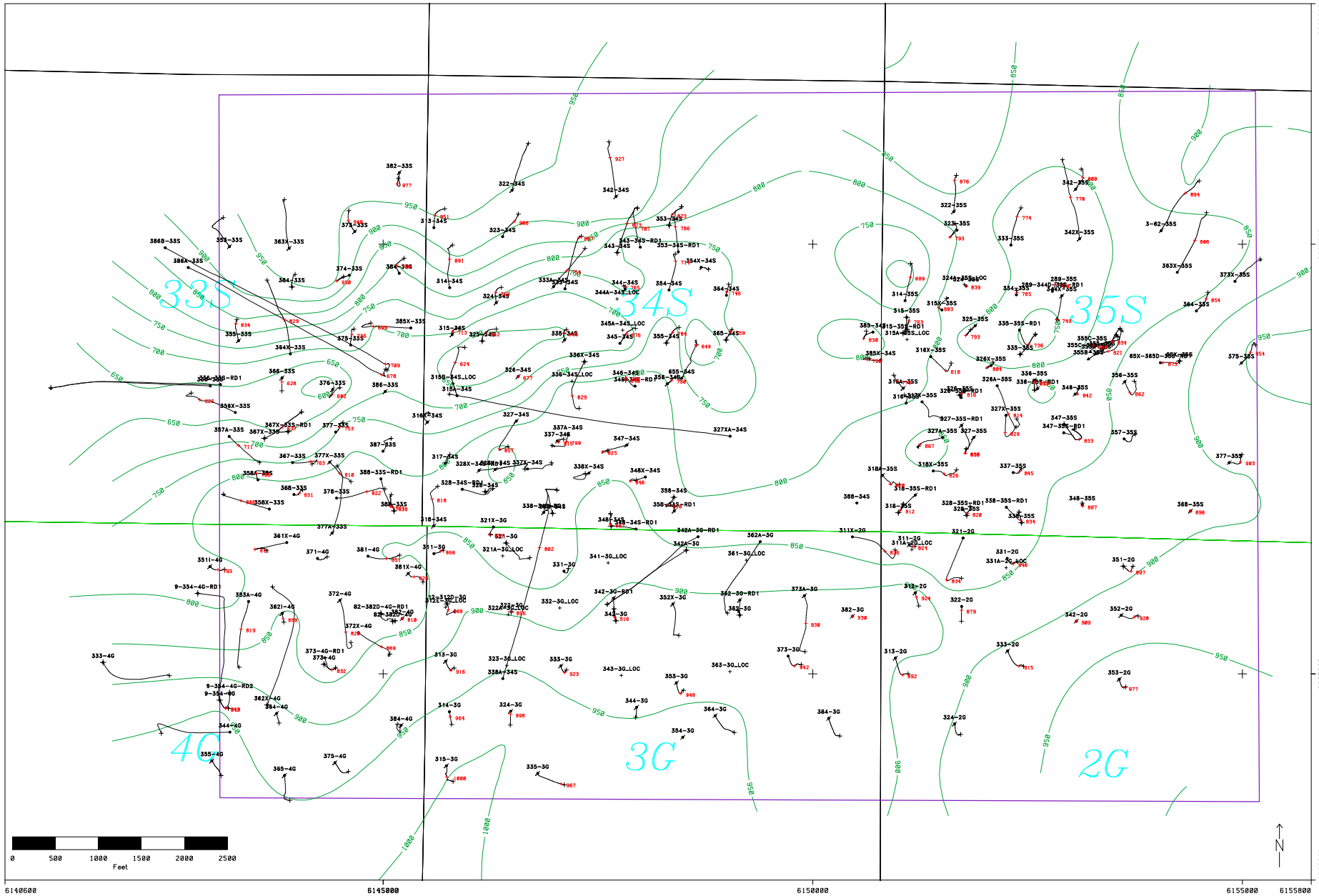
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

BLW Structural Contour TVDss

Contour Interval 100 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 16-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols
Surface Location
PROD_OIL_P & A
PROD_OIL_ACTIVE
PROD_OIL_INACTIVE
INJ_H2O_ACTIVE
PROD_CO2_INACTIVE
INJ_CO2_INACTIVE
MON_TEMP_DRILL

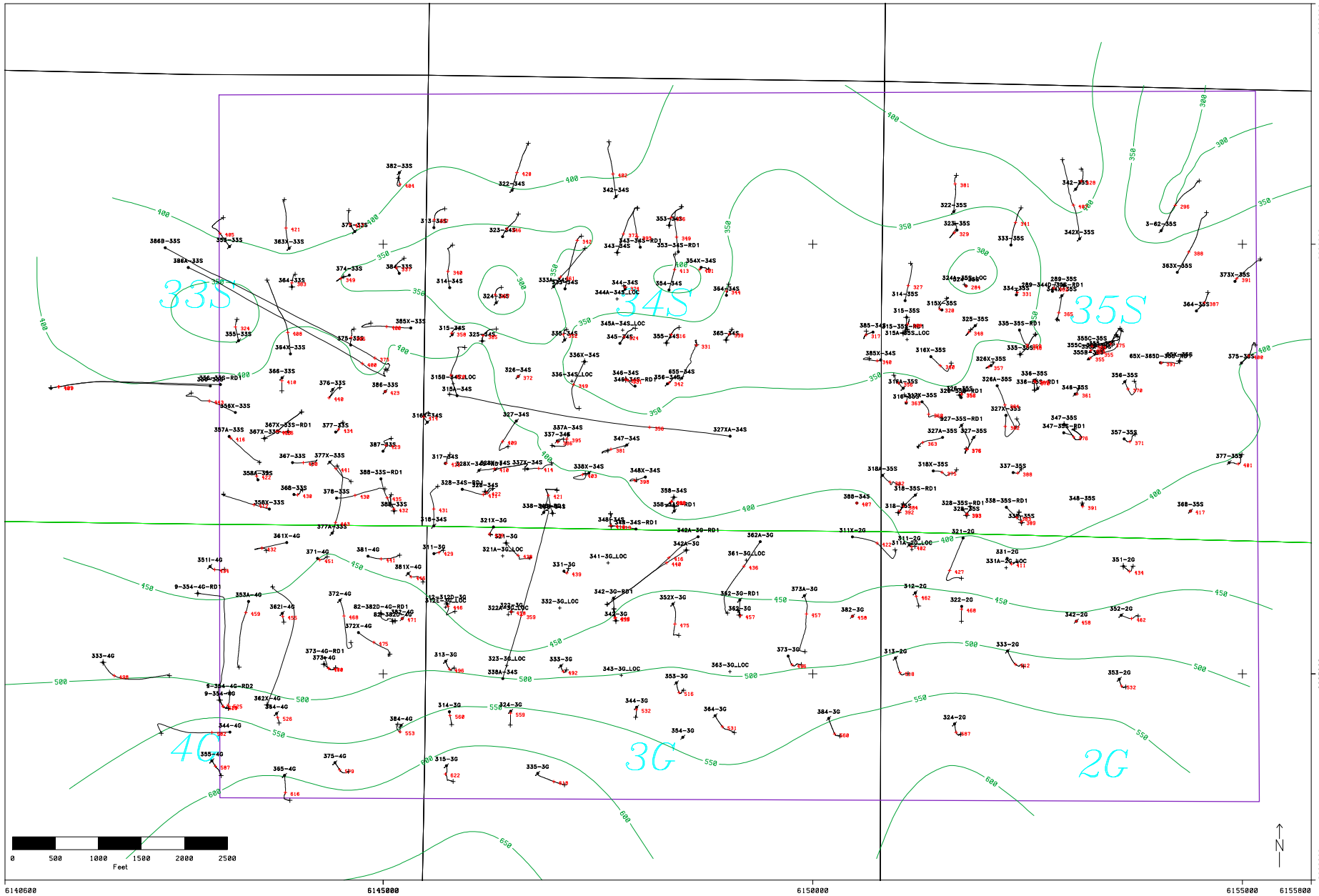
Isochore Reef Ridge Shale (RFDG to Top of N-Shale) TVT

Contour Interval 50 ft.

Cap Rock

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 17-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



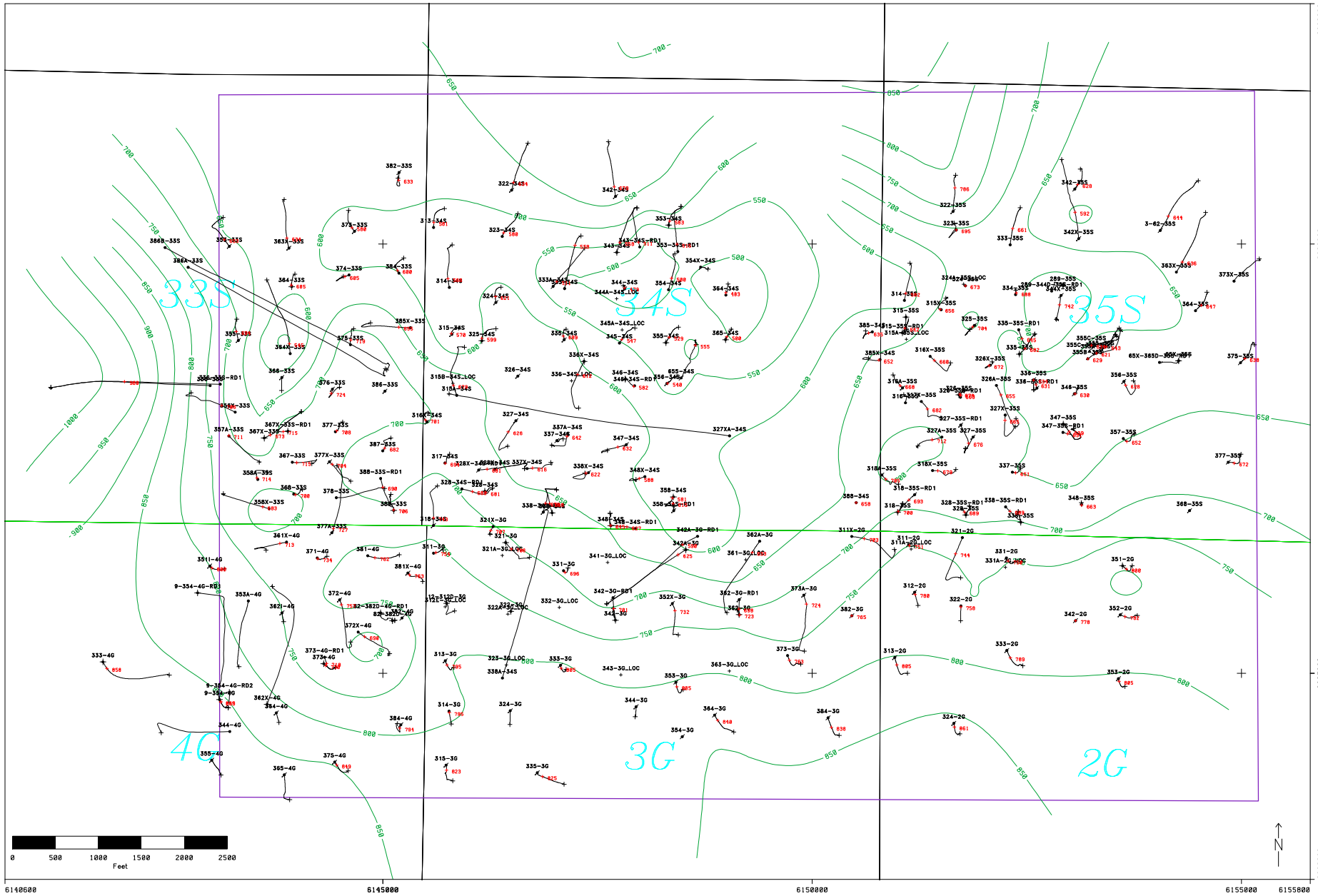
Well Symbols
Surface Location
PROD_OIL_P & A
PROD_OIL_ACTIVE
PROD_OIL_INACTIVE
INJ_H2O_ACTIVE
PROD_CO2_INACTIVE
INJ_CO2_INACTIVE
MON_TEMP_DRILL

Isochore Top of N-Shale (NA) to Top of B Sand (BA) TVT

Contour Interval 50 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 17-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

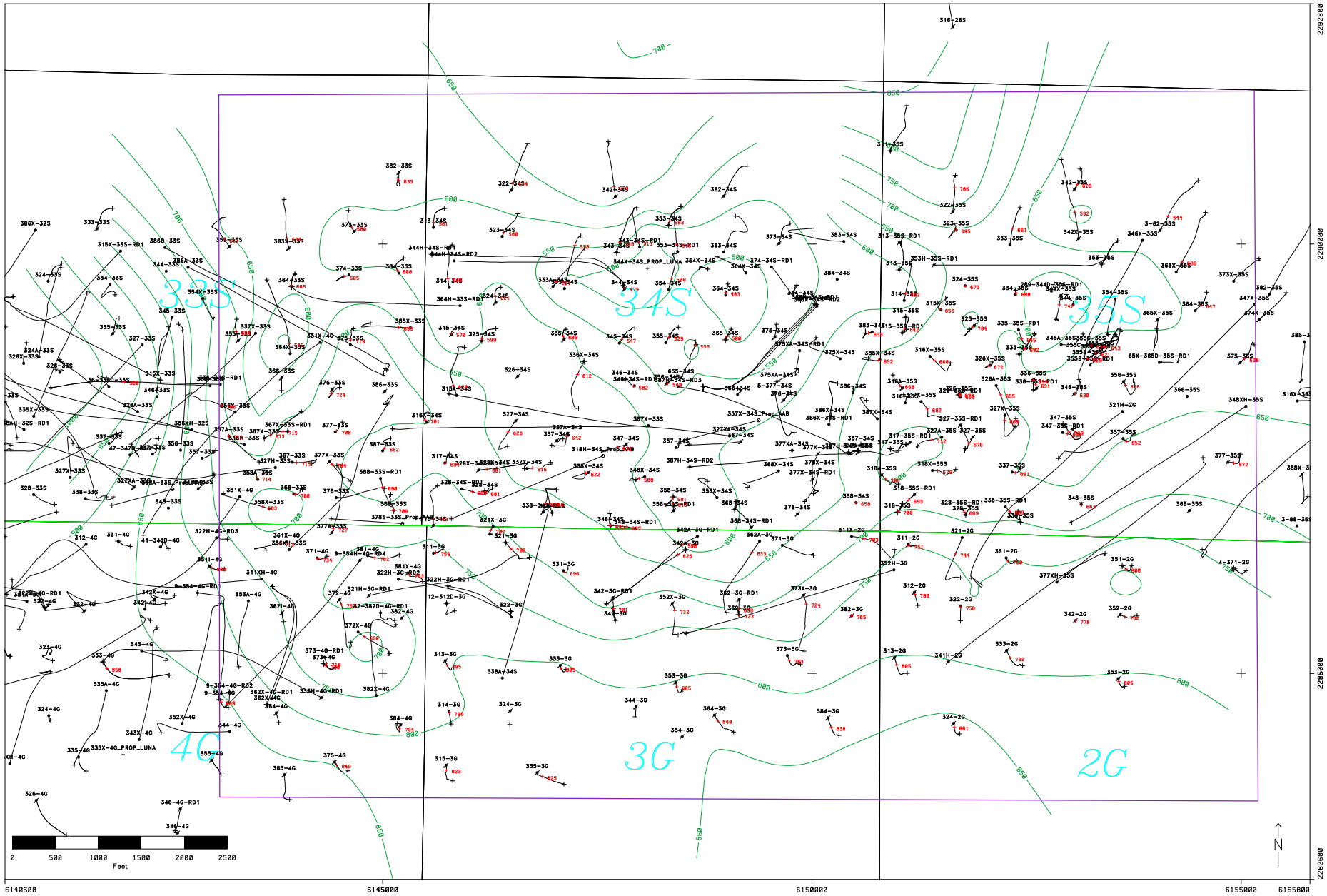
Isochore B Sand to Top of BLW TVT

Contour Interval 50 ft.

Injection Zone

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 17-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- MON_PSI_APPROVED
- INJ_H2O_ACTIVE
- LOCATION
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- PROD_GAS_INACTIVE

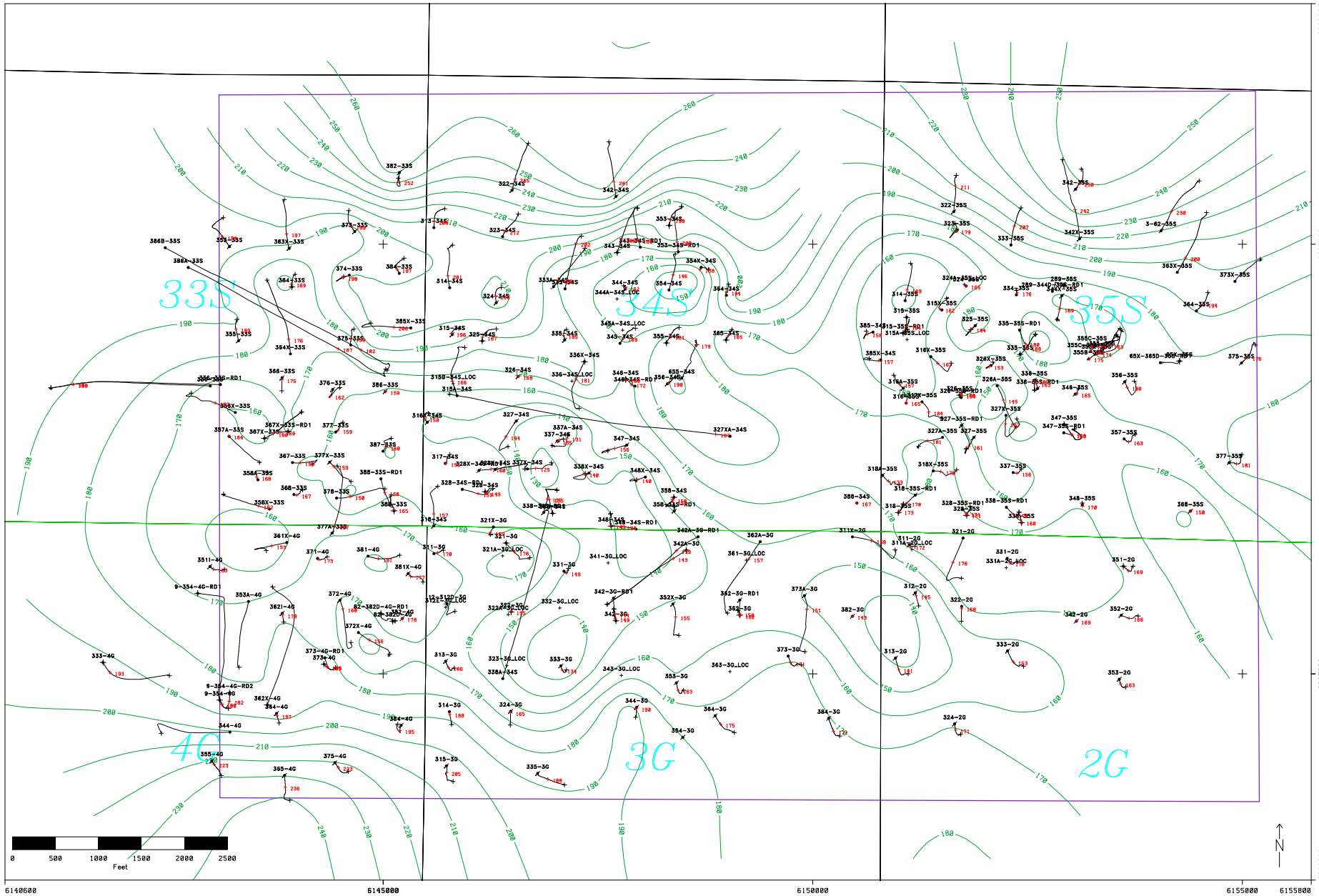
Isochore NA to Top of BLW TVT

Contour Interval 50 ft.

Injection Zone

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 23-August-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols
Surface Location
PROD_OIL_P & A
PROD_OIL_ACTIVE
PROD_OIL_INACTIVE
INJ_H2O_ACTIVE
PROD_CO2_INACTIVE
INJ_CO2_INACTIVE
MON_TEMP_DRILL

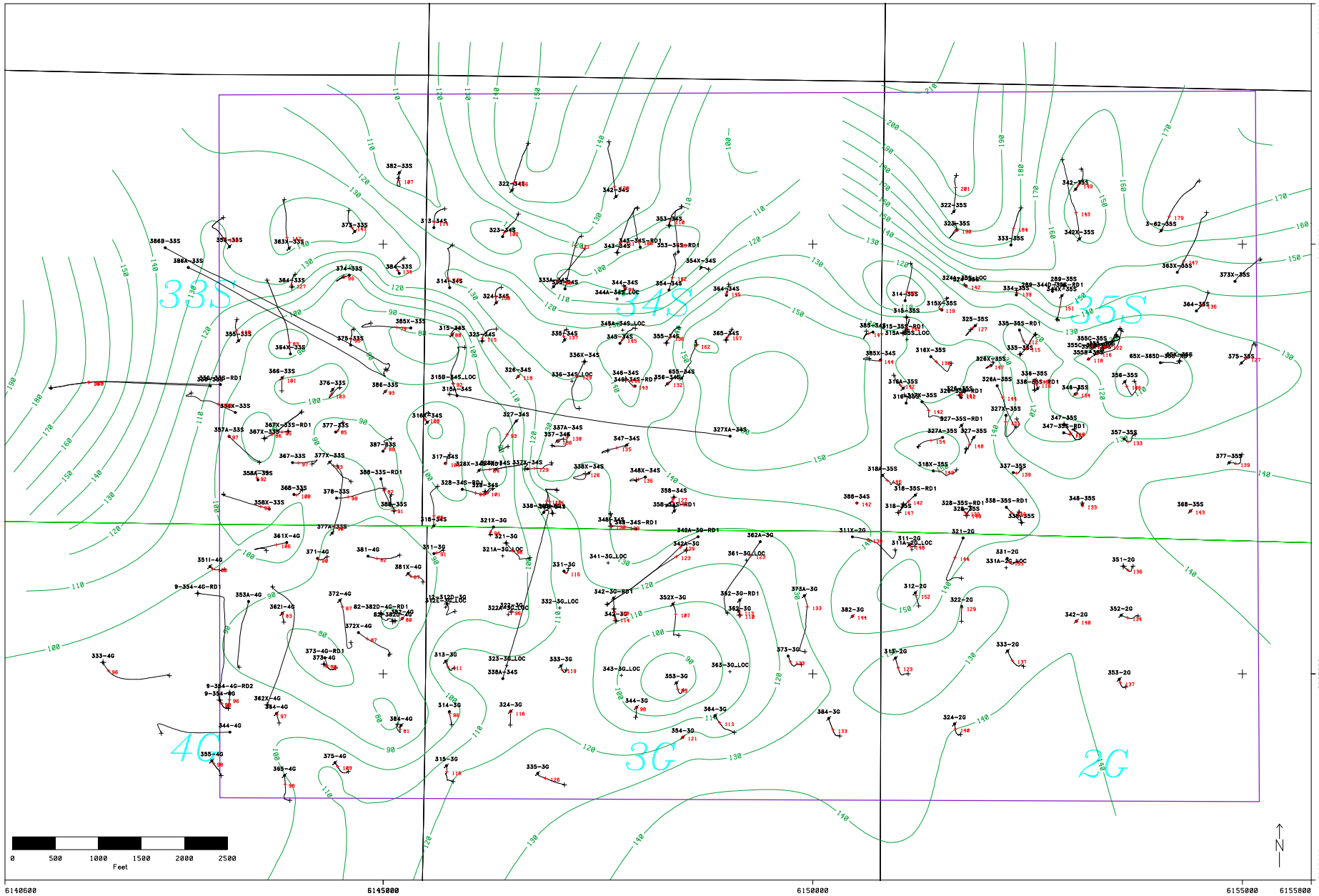
Isochore B Sand (BA to Top of UBA) TVT

Contour Interval 10 ft.

Top of Injection Zone

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 17-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



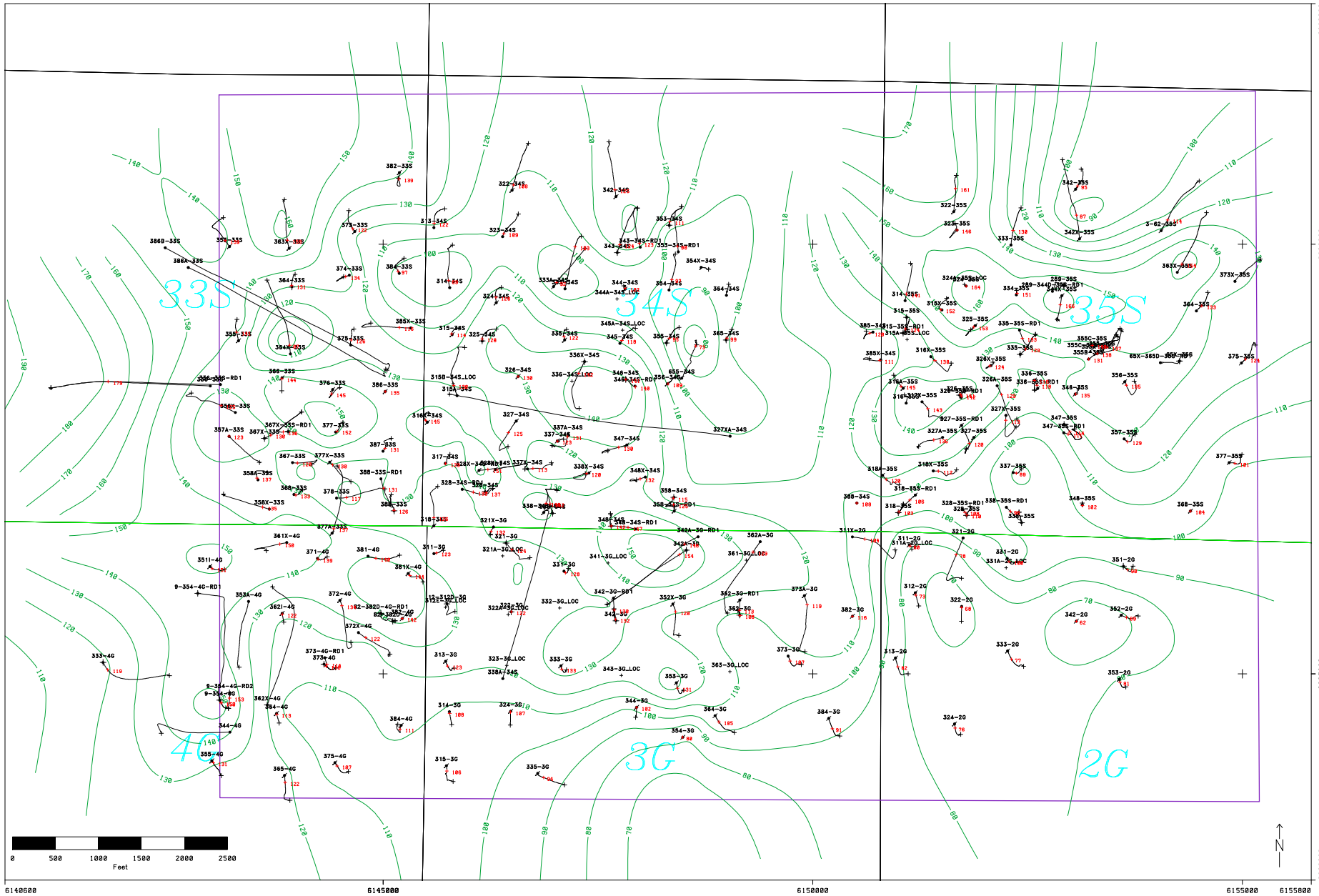
Well Symbols
Surface Location
PROD_OIL_P & A
PROD_OIL_ACTIVE
PROD_OIL_INACTIVE
INJ_H2O_ACTIVE
PROD_CO2_INACTIVE
INJ_CO2_INACTIVE
MON_TEMP_DRILL

Isochore UBA Sands (UBA to Base of UBA3) TVT

Contour Interval 10 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 17-May-2012
HECA Phase 1 UIC All Wells Penetrate Reef Ridge Shale	



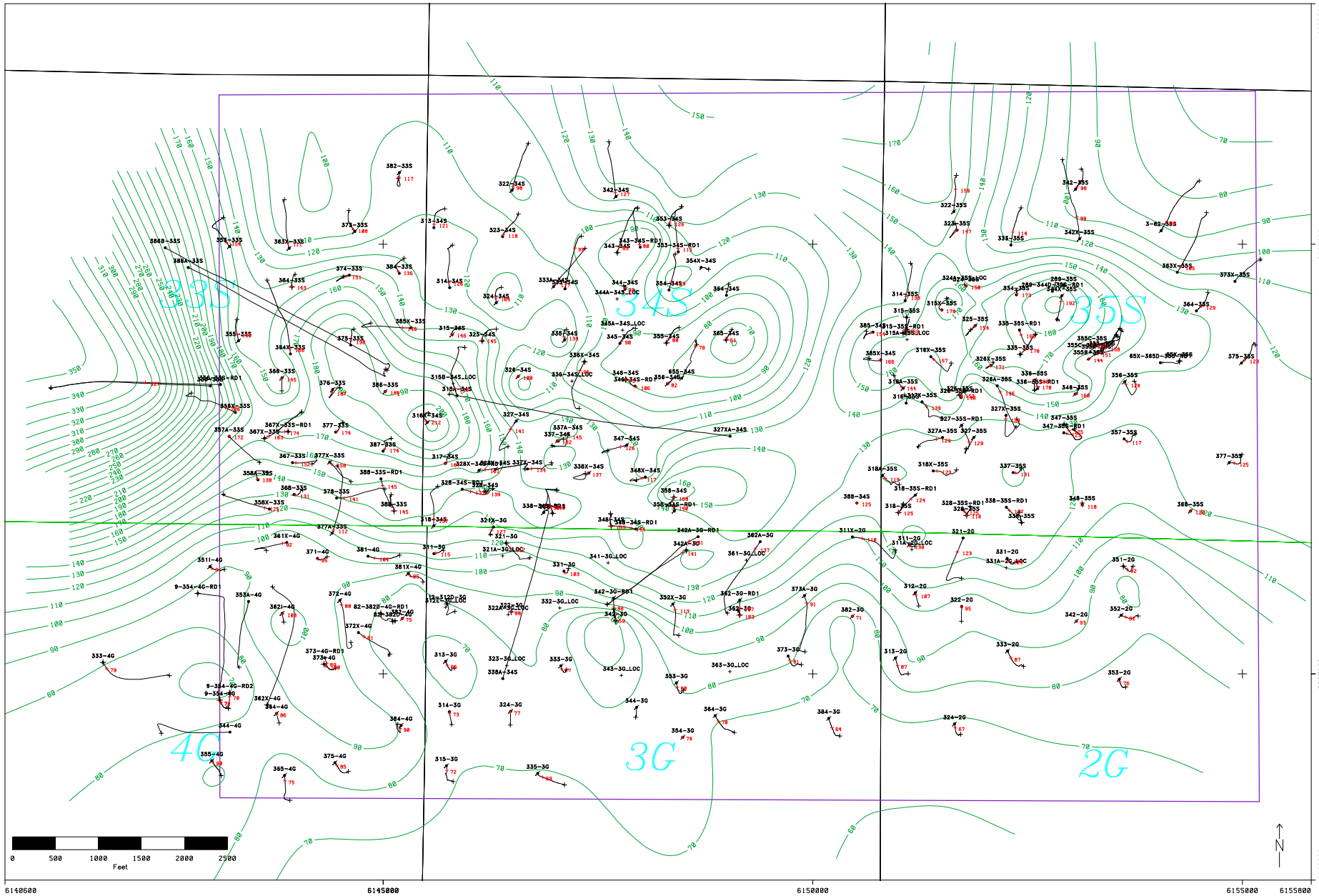
Well Symbols
Surface Location
PROD_OIL_P & A
PROD_OIL_ACTIVE
PROD_OIL_INACTIVE
INJ_H2O_ACTIVE
PROD_CO2_INACTIVE
INJ_CO2_INACTIVE
MON_TEMP_DRILL

Isochore UBB1 & UBB2 Sands (UBB1 to Base of UBB2) TVT

Contour Interval 10 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 17-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

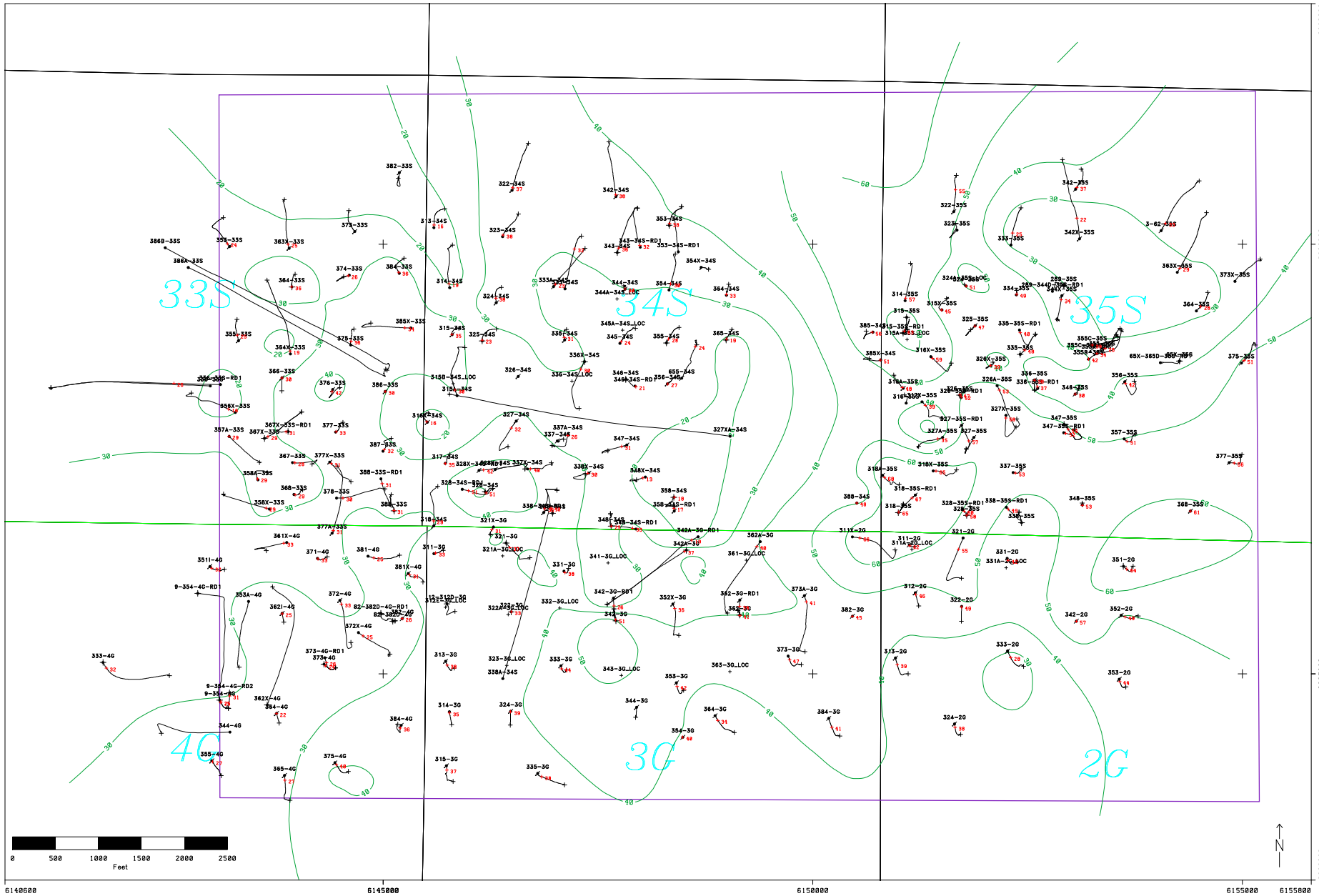
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

Isochore UBB3 & UBB4 Sands (UBB3 to Base of UBB4) TVT

Contour Interval 10 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 17-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

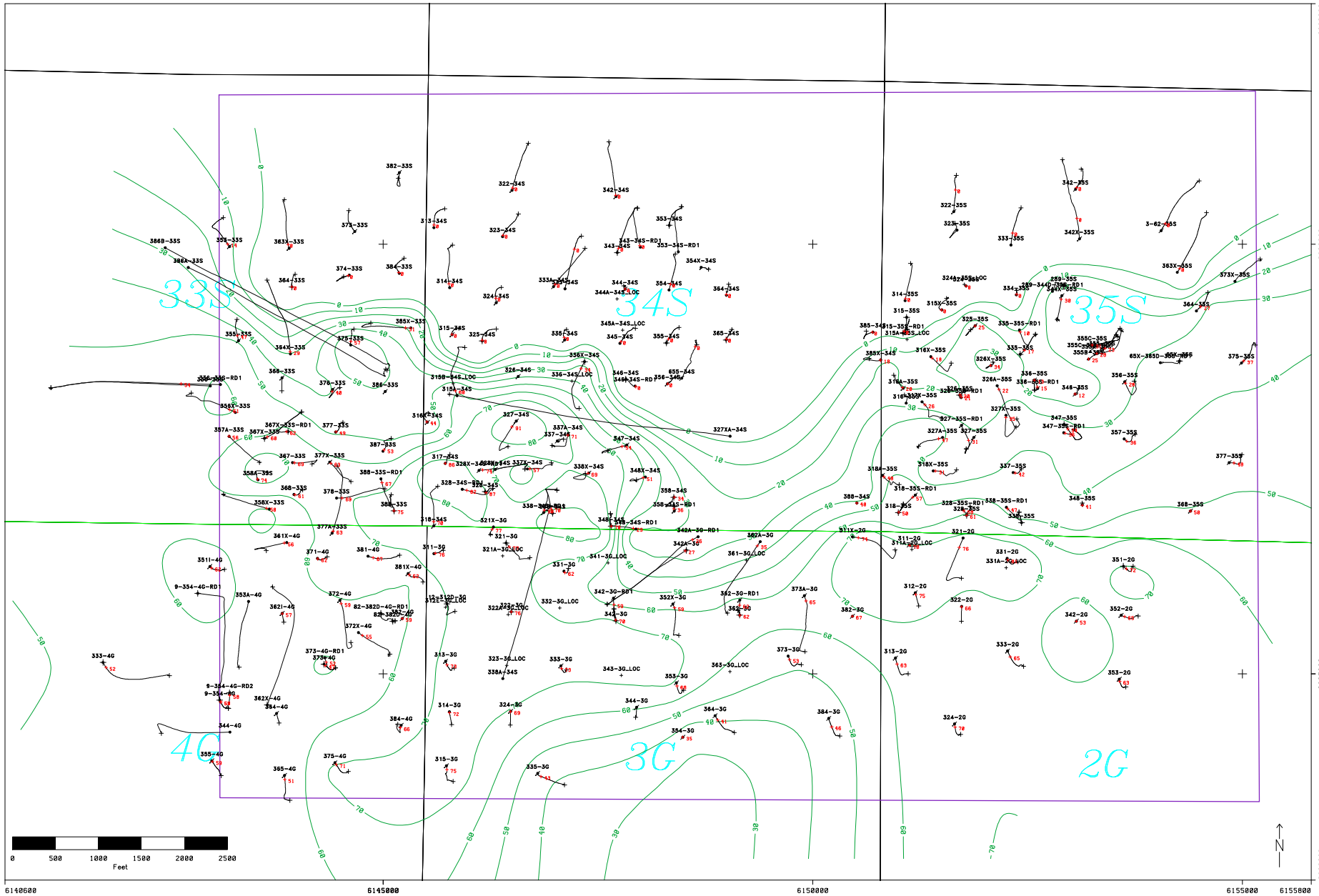
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

Isochore BCA (BCA to Top of LBA1) TVT

Contour Interval 10 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 17-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

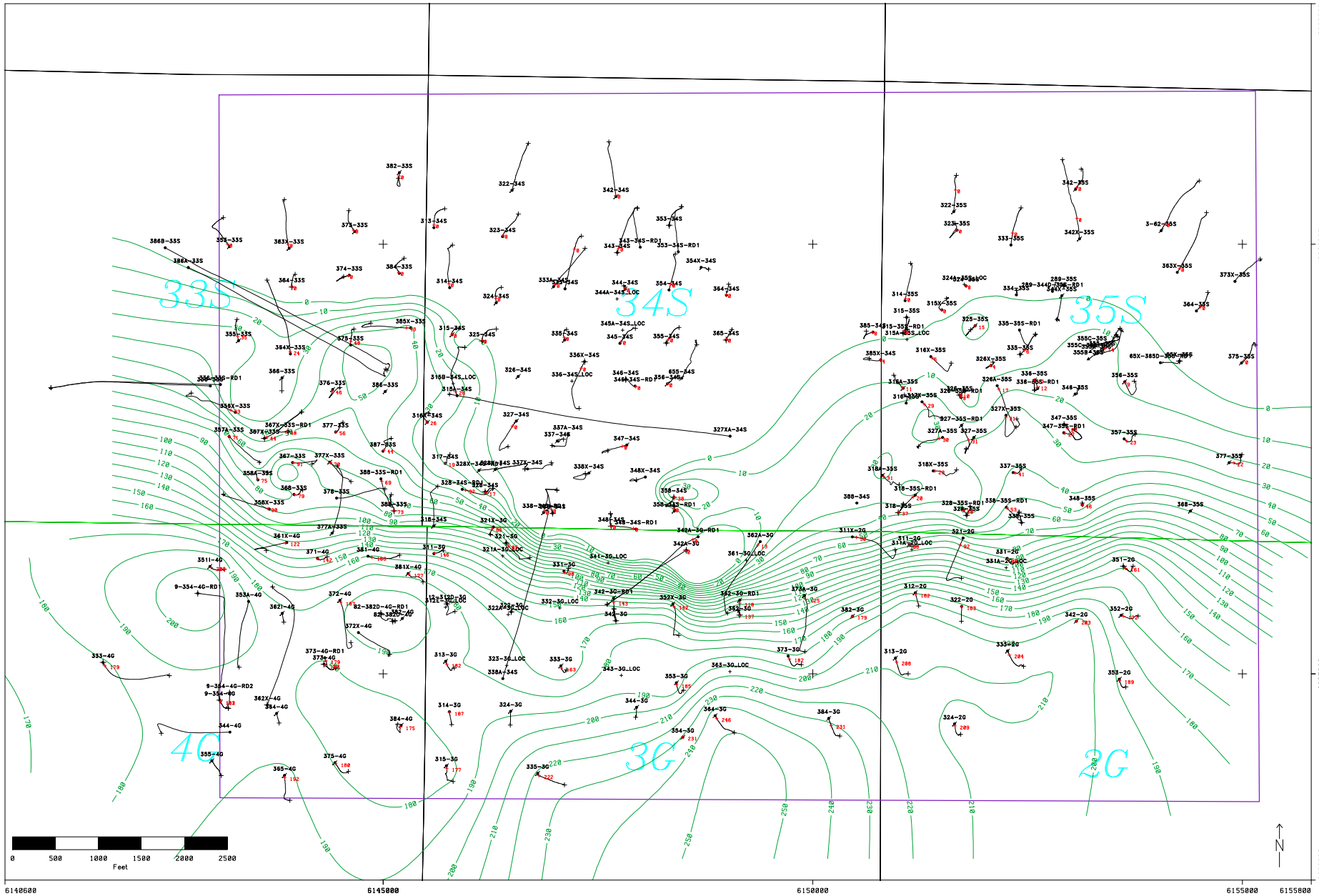
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

Isochore LBA1 (LBA1 to Top of UW1) TVT

Contour Interval 10 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 17-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols

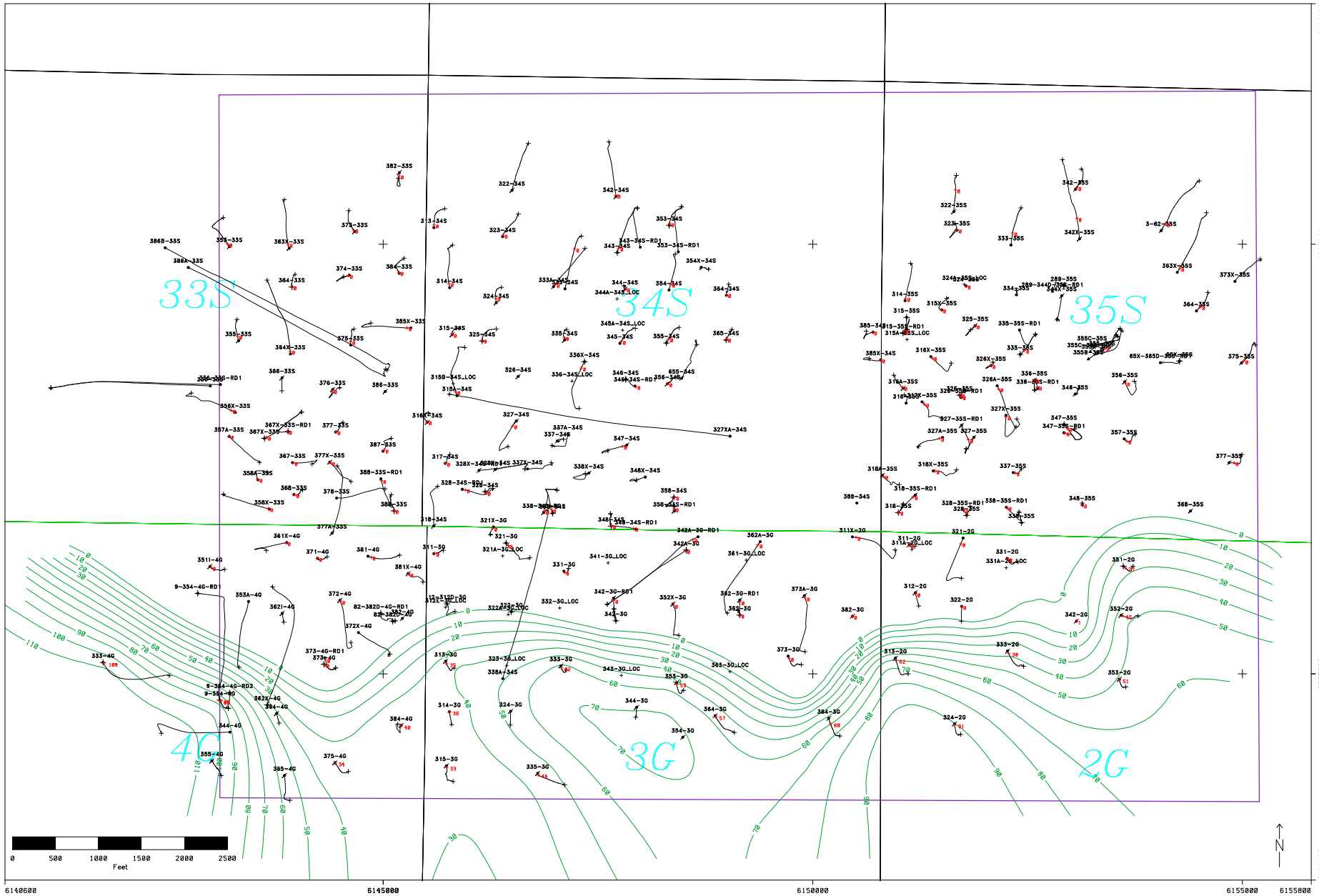
- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

Isochore UW Sands (UW1 to Base of UW3) TVT

Contour Interval 10 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 17-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	



Well Symbols
Surface Location
PROD_OIL_P & A
PROD_OIL_ACTIVE
PROD_OIL_INACTIVE
INJ_H2O_ACTIVE
PROD_CO2_INACTIVE
INJ_CO2_INACTIVE
MON_TEMP_DRILL

Isochore LW Sands (LW1 to BLW) TVT

Contour Interval 10 ft.

1/4 Mile Buffer

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 17-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Occidental of Elk Hills, Inc. P.O. Box 309 Tupman, CA 93276	**Reported:** 02/24/2012 14:29 Project: Misc. Samples Project Number: 00029 Project Manager: Phil Westendorf

Water Analysis (General Chemistry)

BCL Sample ID: 1202964-08 | **Client Sample Name:** 12076 18G Proj. Code 22800006, 2/17/2012 10:09:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Total Calcium	240	mg/L	2.0	EPA-6010B	ND	A01	1
Total Magnesium	73	mg/L	1.0	EPA-6010B	ND	A01	1
Total Sodium	10000	mg/L	10	EPA-6010B	ND	A01	1
Total Potassium	190	mg/L	20	EPA-6010B	ND	A01	1
Total Alkalinity as CaCO3	1700	mg/L	8.2	EPA-310.1	ND		2
Chloride	15000	mg/L	50	EPA-300.0	ND	A01	3
Sulfate	ND	mg/L	100	EPA-300.0	ND	A01	3
Hardness as CaCO3	900	mg/L	0.50	Calc	ND		4
Resistivity	0.25	Ohmmeter	0.010	Calc	ND		4
pH	7.33	pH Units	0.05	EPA-150.1		S05	5
Electrical Conductivity @ 25 C	40500	umhos/cm	1.00	EPA-120.1			6
Total Dissolved Solids @ 180 C	28000	mg/L	1000	EPA-160.1	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	02/22/12	02/23/12 08:35	ARD	PE-OP1	20	BVB1486
2	EPA-310.1	02/22/12	02/22/12 13:55	RML	MET-1	2	BVB1496
3	EPA-300.0	02/22/12	02/22/12 15:55	AKB	IC2	100	BVB1448
4	Calc	02/23/12	02/24/12 09:49	TMS	Calc	1	BVB1635
5	EPA-150.1	02/22/12	02/22/12 13:55	RML	MET-1	1	BVB1496
6	EPA-120.1	02/22/12	02/22/12 13:55	RML	MET-1	1	BVB1496
7	EPA-160.1	02/23/12	02/23/12 11:00	JES	MANUAL	100	BVB1659

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
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Occidental of Elk Hills, Inc.
P.O. Box 309
Tupman, CA 93276

Reported: 02/24/2012 14:29
Project: Misc. Samples
Project Number: 00029
Project Manager: Phil Westendorf

Water Analysis (Metals)

BCL Sample ID: 1202964-08 | **Client Sample Name:** 12076 18G Proj. Code 22800006, 2/17/2012 10:09:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Total Boron	110	mg/L	2.0	EPA-6010B	ND	A01	1
Total Iron	6.7	mg/L	1.0	EPA-6010B	ND	A01	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	02/22/12	02/23/12 08:35	ARD	PE-OP1	20	BVB1486

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
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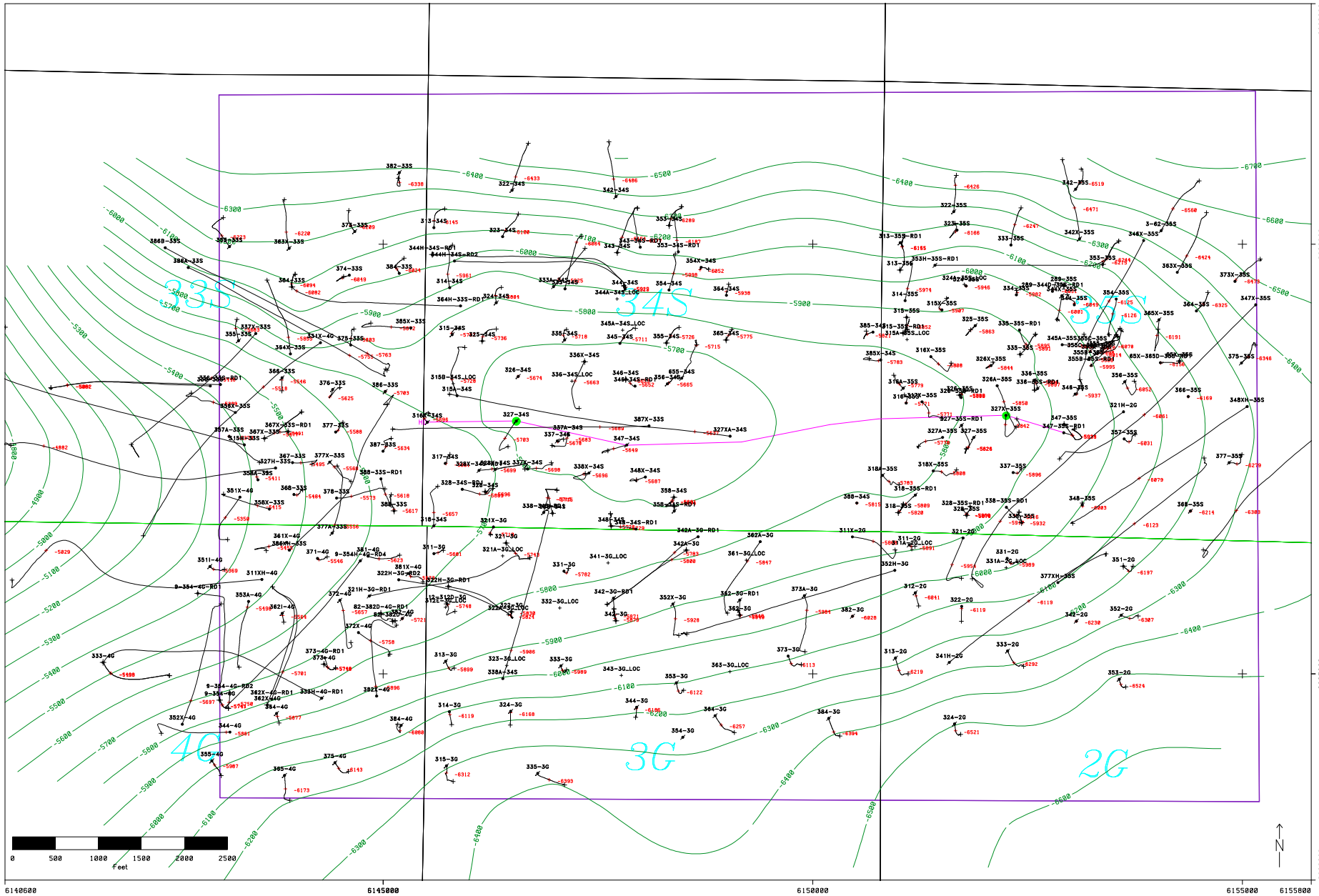


Well Symbols

- Surface Location
- PROD_OIL_P & A
- PROD_OIL_ACTIVE
- PROD_OIL_INACTIVE
- INJ_H2O_ACTIVE
- PROD_CO2_INACTIVE
- INJ_CO2_INACTIVE
- MON_TEMP_DRILL

B Sand Structural Contour (BA) TVDss

Contour Interval 100 ft.

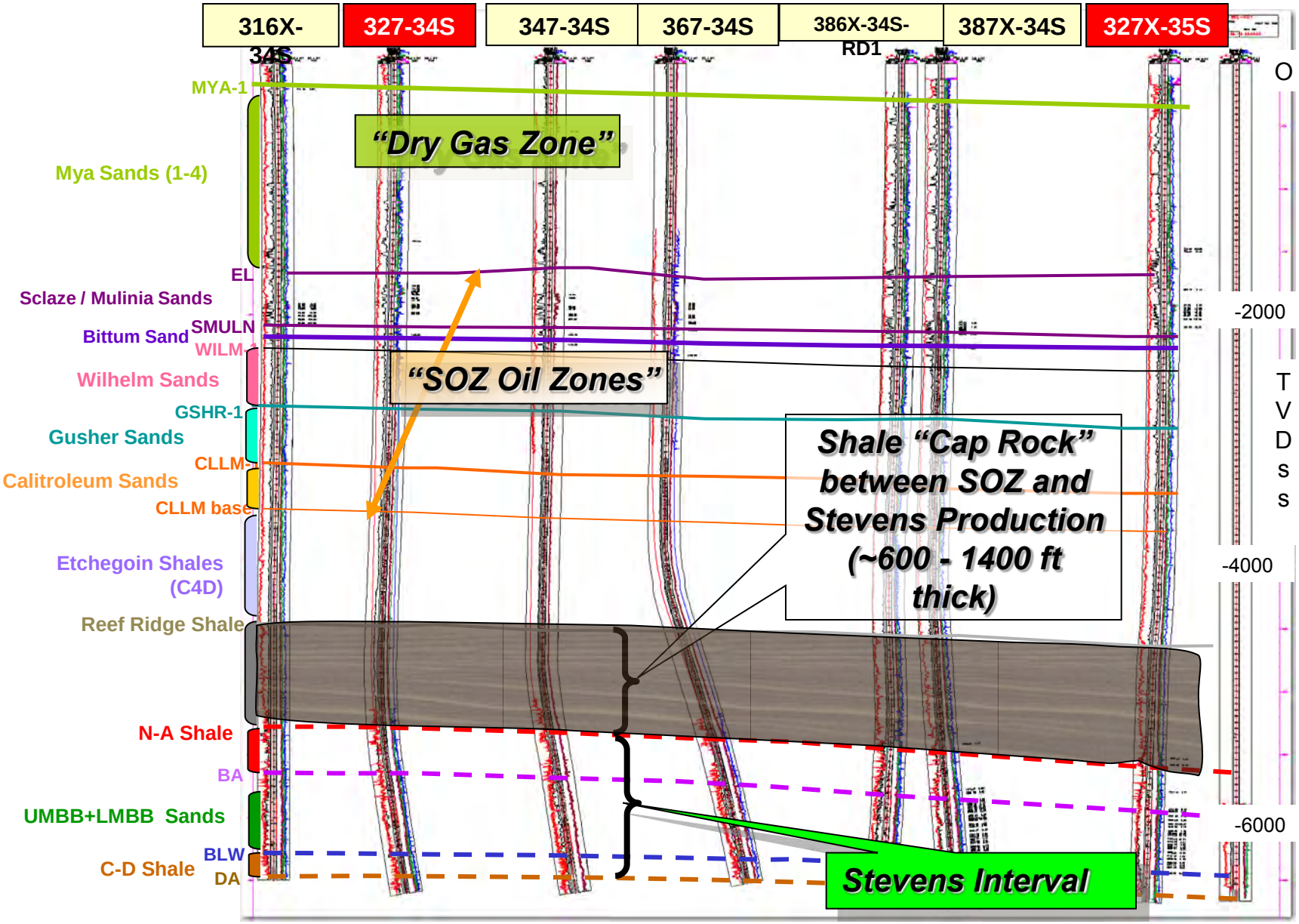
Top of Injection Zone

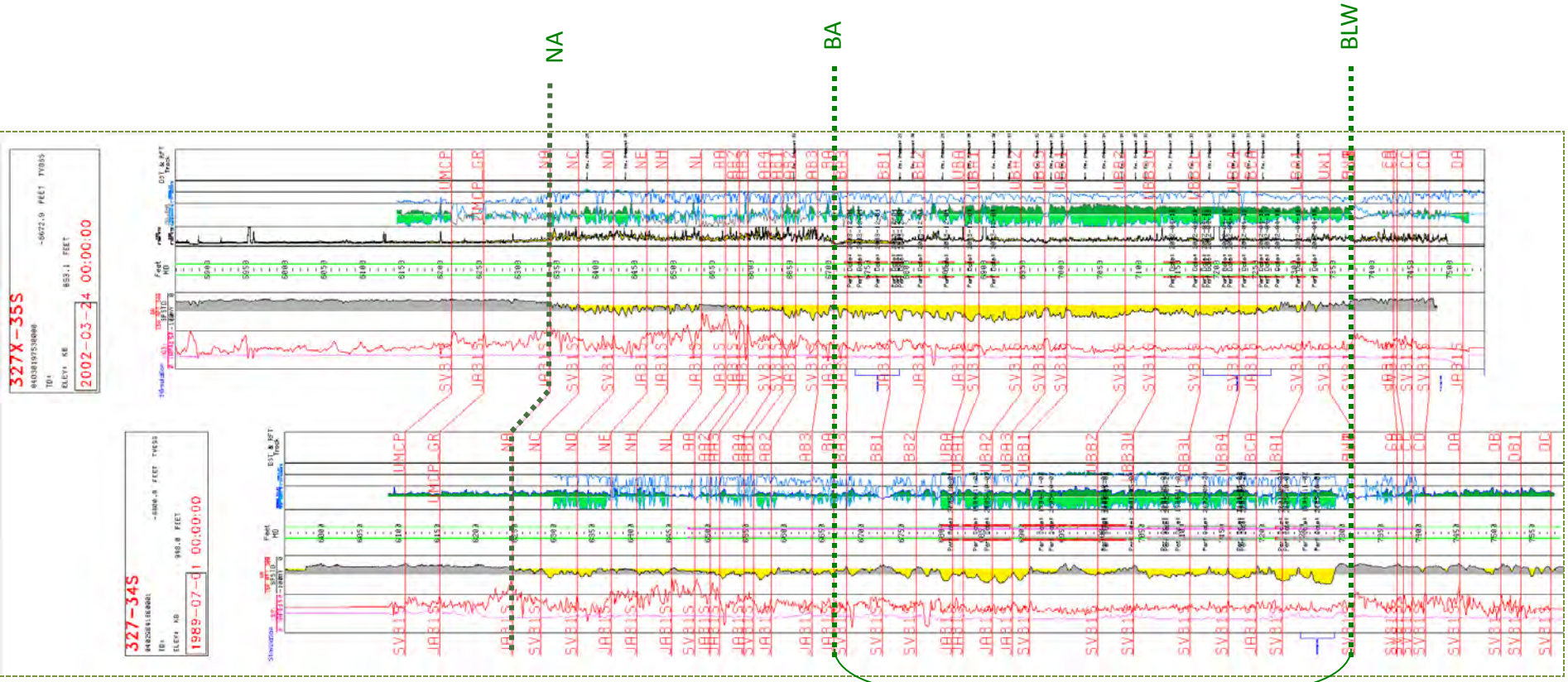
1/4 Mile Buffer

Reference for Line of Structure

Reference Wells for Stratigraphic Section

Occidental of Elk Hills	
ELK_HILLS	
STEVENS RMT	
Scale: 1:6000	Units: FEET
Interpreter: TLB	Date: 21-May-2012
HECA Phase 1 UIC	
All Wells Penetrate Reef Ridge Shale	


316X-34S
327-34S
347-34S
367-34S
386X-34S-RD1
387X-34S
327X-35S
MYA-1
Mya Sands (1-4)
"Dry Gas Zone"
EL
Sclaze / Mulinia Sands
SMULN
Bittum Sand
WILM
Wilhelm Sands
"SOZ Oil Zones"
GSHR-1
Gusher Sands
CLLM-1
Calitroleum Sands
CLLM base
Etchegoin Shales (C4D)
Reef Ridge Shale
Shale "Cap Rock" between SOZ and Stevens Production (~600 - 1400 ft thick)
N-A Shale
BA
UMBB+LMBB Sands
BLW
C-D Shale
DA
Stevens Interval
-2000
-4000
-6000
TVDss



MBB/LW Stevens sands

Appendix K

Files not included in this submittal to minimize file size.

These diagrams can be made available as needed.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
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AMENDED APPLICATION FOR CERTIFICATION FOR THE HYDROGEN ENERGY CALIFORNIA PROJECT

Docket No. 08-AFC-08A
(Revised 10/8/12)

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DECLARATION OF SERVICE

I, Dale Shileikis, declare that on October 15, 2012, I served and filed a copy of the attached OEHI Responses to March 2012 CEC Data Request 1-7, dated October, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at:
http://www.energy.ca.gov/sitingcases/hydrogen_energy/index.html

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:
(*Check all that Apply*)

For service to all other parties:

_X_ Served electronically to all e-mail addresses on the Proof of Service list;

____ Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses marked *"hard copy required" or where no e-mail address is provided.

AND

For filing with the Docket Unit at the Energy Commission:

_X_ by sending one electronic copy to the e-mail address below (preferred method); OR

____ by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT
Attn: Docket No. 08-AFC-08A
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.ca.gov

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

____ Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
michael.levy@energy.ca.gov

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.