1R - 428-74

REPORTS

DATE:

4-22-10

R. T. HICKS CONSULTANTS, LTD.
901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266.0745

April 22, 2010

Mr. Edward J. Hansen
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: **Hobbs SWD System Junction A-6: T-19-S, R-38-E, Section 6, Unit A, Lea County, New Mexico**
Termination Request
NMOCD Case #: 1R428-74

Mr. Hansen:

On behalf of Rice Operating Company (ROC), R.T. Hicks Consultants, Ltd. is submitting this Termination Request for the Hobbs Junction A-6 site regulatory file. The investigation conducted to date demonstrates that neither chlorides nor hydrocarbons are present in the vadose zone in quantities that represent a threat to ground water quality.

Background
The Hobbs Junction A-6 site is located west of the city of Hobbs at T-19-S, R-38-E, Section 6, in Unit A. The pipeline and original equipment were abandoned prior to 2002. The Investigation Characterization Plan (ICP), dated February 19, 2009 and approved by the NMOCD on April 22, 2009, is provided as Attachment A to this letter. The ICP includes background information and a site vicinity map for this and five other nearby ROC sites.

Field Program
Hicks Consultants supervised a deep soil sampling program to characterize possible hydrocarbon and chloride impact due to past activities. On September 24, 2009, soil boring No. 1 (SB-1) was drilled 12 feet south and 6 feet west of the original junction box marker to evaluate the deep soil below the former ROC equipment, to the extent that drilling rig access was possible given overhead power lines nearby.

Soil samples were collected and field screened by ROC for hydrocarbons and chloride concentrations. Figure 1 is a site map depicting the location of SB-1, the surrounding area, and all the soil sample field screening and laboratory verification results. The highest photo-ionic detector (PID) measurement was 5.9 ppm from 5 feet below the surface. The field titration chloride concentrations encountered in the 20-foot deep soil boring ranged from 145 to 152 mg/kg, which corresponds to a laboratory concentration of 32 mg/kg from a sample recovered at the total depth of the boring. These field test results indicate that regulated hydrocarbons and chlorides are not present in the soil at concentrations that represent a threat to fresh water, human health, or the environment. Attachment B provides a soil lithology log including the field hydrocarbon and chloride screening data. Attachment C provides the

laboratory report and chain of custody for verification of the September 24, 2009 field data.

Recommendations
Based on the soil boring sampling information, we conclude that this site is in compliance with the mandates of NMAC 19.15.29 in that it does not require further corrective action as the remaining impacted soil does not and will not endanger public health or the environment.

As the natural vegetation has fully recovered at the site, no additional surface restoration is necessary (see Photograph 1 below). We recommend termination of the regulatory file.

Photograph 1. Vegetation at Jct. A-6 Site in October 2009

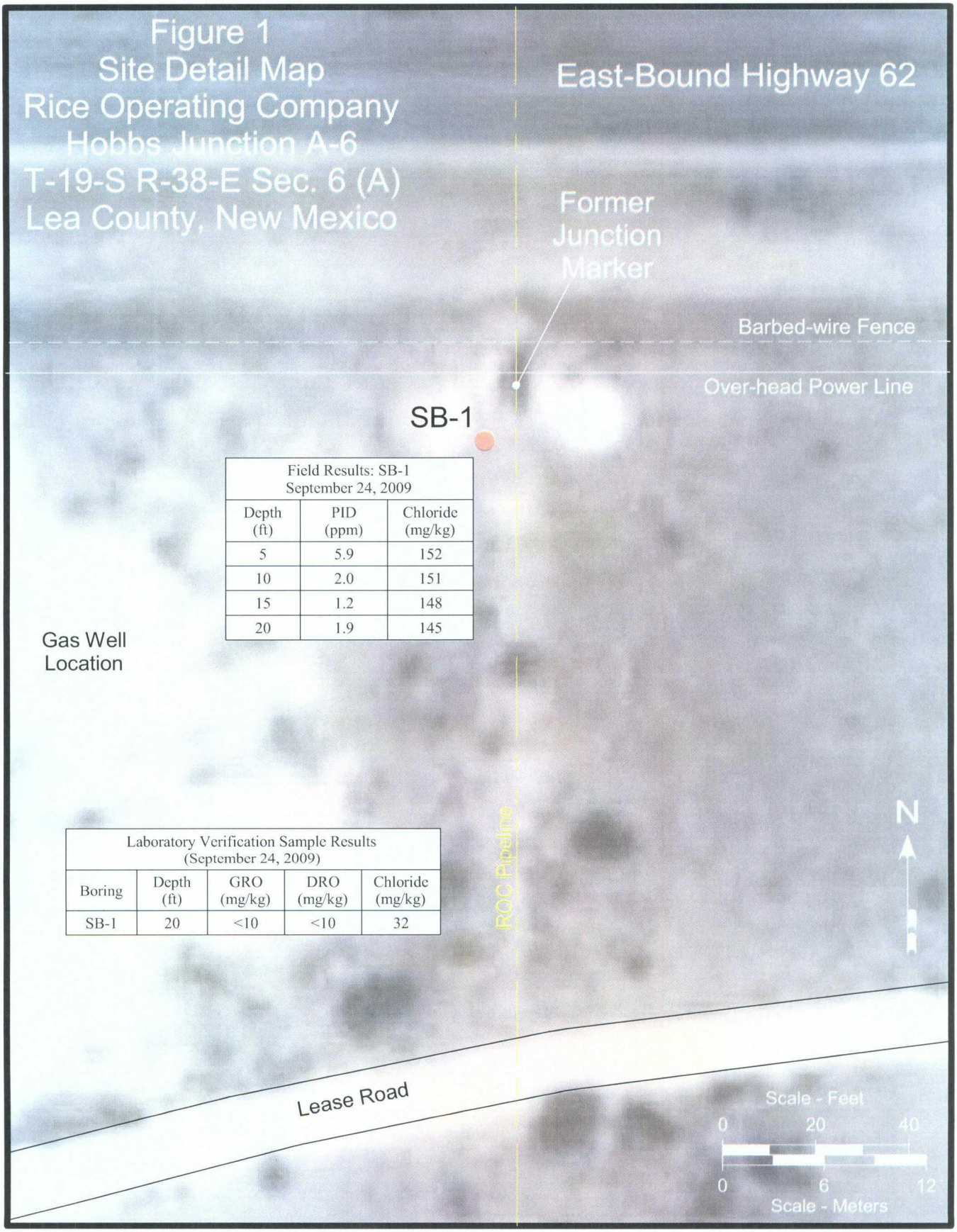
Please contact Hack Conder of ROC at 575-393-9174 if you have any questions concerning this submission. Thank you for your time and consideration.

Sincerely,
R.T Hicks Consultants, Ltd.

Dale T Littlejohn
Geologist

Copy: Hack Conder, ROC

Figure 1
Site Detail Map
Rice Operating Company
Hobbs Junction A-6
T-19-S R-38-E Sec. 6 (A)
Lea County, New Mexico



Field Results: SB-1 September 24, 2009		
Depth (ft)	PID (ppm)	Chloride (mg/kg)
5	5.9	152
10	2.0	151
15	1.2	148
20	1.9	145

Laboratory Verification Sample Results (September 24, 2009)				
Boring	Depth (ft)	GRO (mg/kg)	DRO (mg/kg)	Chloride (mg/kg)
SB-1	20	<10	<10	32

ATTACHMENT A

Investigation Characterization Plan
Submitted on February 19, 2009

R. T. HICKS CONSULTANTS, LTD.
901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

February 19, 2009

Mr. Brad Jones
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Investigation & Characterization Plan
Hobbs Salt Water Disposal System:
Jct. A-6, F-24-3 Vent, F-25 EOL, G-9 Vent, Jct. A-25, Jct. F-24-1
T18S, R37E, Sections 24 & 25, and T19S, R38E Sections 6 & 9

Dear Mr. Jones:

On behalf of Rice Operating Company (ROC), R.T. Hicks Consultants, Ltd. is pleased to submit this Investigation & Characterization Plan (ICP) for the six (6) junction box and vent sites within the Hobbs Salt Water Disposal System referenced above. Plate 1 is a map showing the sites relative to major roads in the area. Plate 2 shows the sites, nearby USGS monitoring wells, and a regional potentiometric surface map.

The work elements proposed below will allow us to characterize these sites and develop an appropriate corrective action plan.

1. ROC will identify and document the location of all current and historic equipment and pipelines associated with each site.
2. ROC will use a backhoe with a 12-foot vertical reach to install a series of sampling trenches in order to recover soil samples and delineate the lateral extent (and potentially the vertical extent) of impacted soil.
3. If characterization by the backhoe is insufficient to define the extent and magnitude of past releases, ROC and Hicks Consultants will use a drilling rig to install one soil boring at the center of the source area to delineate the vertical extent of chloride in the soil.
4. Soil samples obtained by the backhoe or drilling rig will be obtained from regular intervals below ground surface.
5. Representative soil samples will be sent to a laboratory to allow for verification of the field chloride and PID results.
6. General soil texture descriptions will be provided for each sample trench or boring.
7. The criteria to delineate the extent of impact during trenching as well as in a soil boring is 5 point chloride decline vs. depth, or:
   a. After three consecutive samples demonstrate <250 ppm chloride using field analyses and <100 ppm total hydrocarbon vapors using the headspace method (see attached ROC Quality Procedure in Appendix A), or
   b. After five consecutive samples show a decreasing trend of chloride and hydrocarbons and the last sample shows chloride < 250 ppm and total hydrocarbon vapors <100 ppm (Appendix A).
   c. Soil boring to capillary fringe should neither (a) or (b) apply

8. If the boring penetrates the capillary fringe, a monitoring well will be completed with a 2 or 4" diameter casing 25 feet down gradient from confirmed impact for use during possible corrective actions. Plate 2 presents a potentiometric surface map for the site area.
9. If field analysis of hydrocarbon vapors and observations of staining show that hydrocarbon impact is unlikely at the site or below 20-feet, collection of samples from cuttings may be substituted for split spoon sampling (chloride only).

The ROC trench characterization will be employed to identify the lateral extent of chloride at each site, if possible. If trenching does not fully characterize the lateral extent of chloride at each site, boreholes will be advanced 20 feet beyond the furthest trenches where the soil data has an average chloride concentration greater than 1,000 mg/kg. The total depth of borings installed to characterize lateral extent shall be 20 feet below ground surface with soil samples for delineation taken at 5 foot intervals.

Rice Operating Company (ROC) is the service provider (agent) for the Hobbs Saltwater Disposal System and has no ownership of any portion of pipeline, well, or facility. A consortium of oil producers who own the Hobbs System (System Partners) provide all operating capital on a percentage ownership/usage basis. Major projects require System Partner authorization for expenditures (AFE) approval and work begins as funds are received. We will implement the work outlined herein after NMOCD approval and subsequent authorization from the System Partners. The Hobbs SWD system is in abandonment.

For all environmental projects, ROC will choose a path forward that:

1. Protects public health.
2. Provides the greatest net environmental benefit.
3. Complies with NMOCD Rules.
4. Is supported by good science.

Following the site characterization described above, a Corrective Action Plan with the data and analysis supportive of a procedure for site file termination, or a termination request will be submitted, depending on characterization findings. Quality Procedures for characterization work are provided in Appendix A.

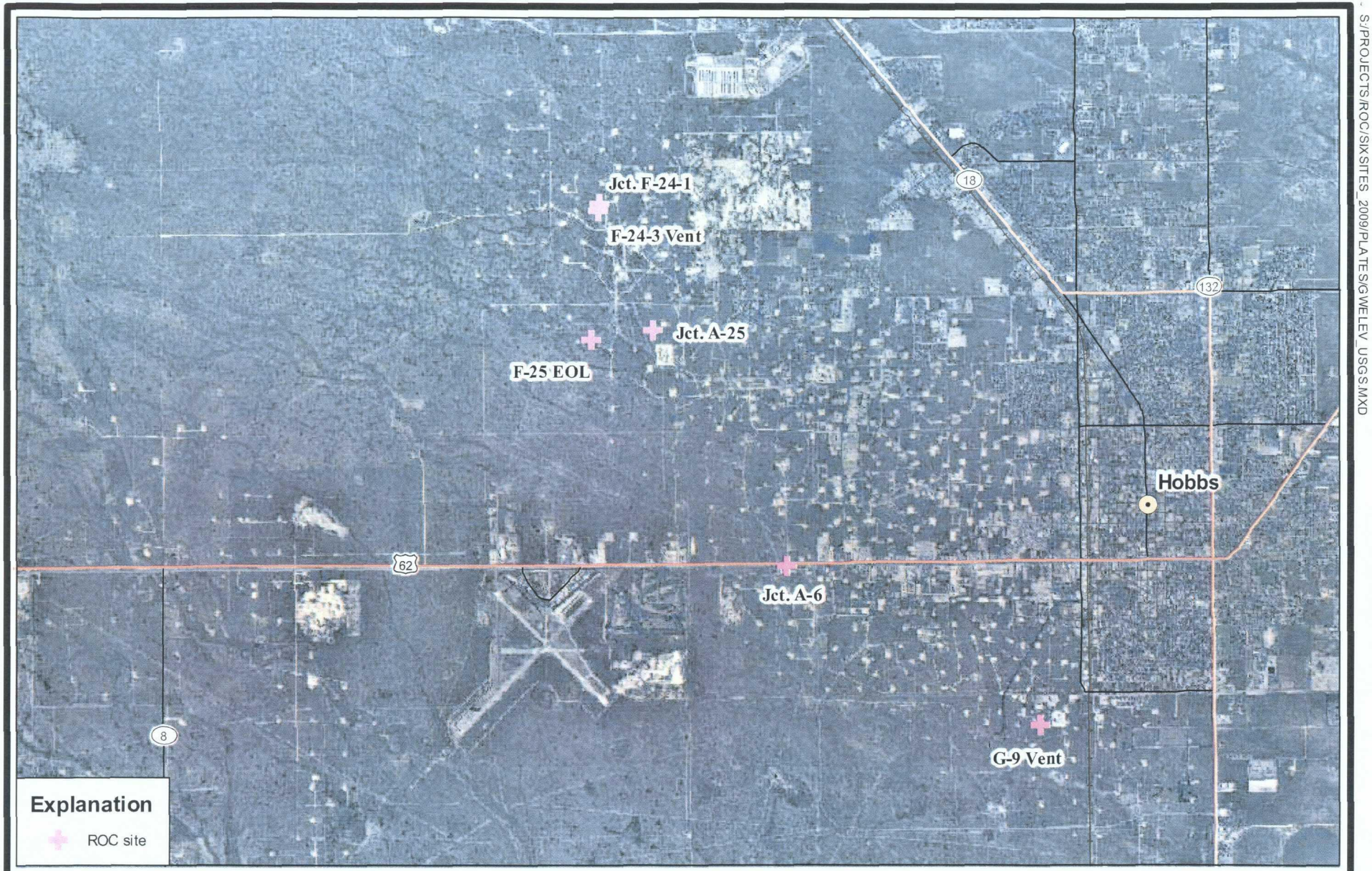
If you have any questions or comments regarding this ICP, please contact me at our Albuquerque office or Hack Conder of Rice Operating Company.

Sincerely,
R.T. Hicks Consultants, Ltd.

Katie Lee

Katie Lee
Project Scientist

Copy: Rice Operating Company
Edward J. Hansen, NMOCD



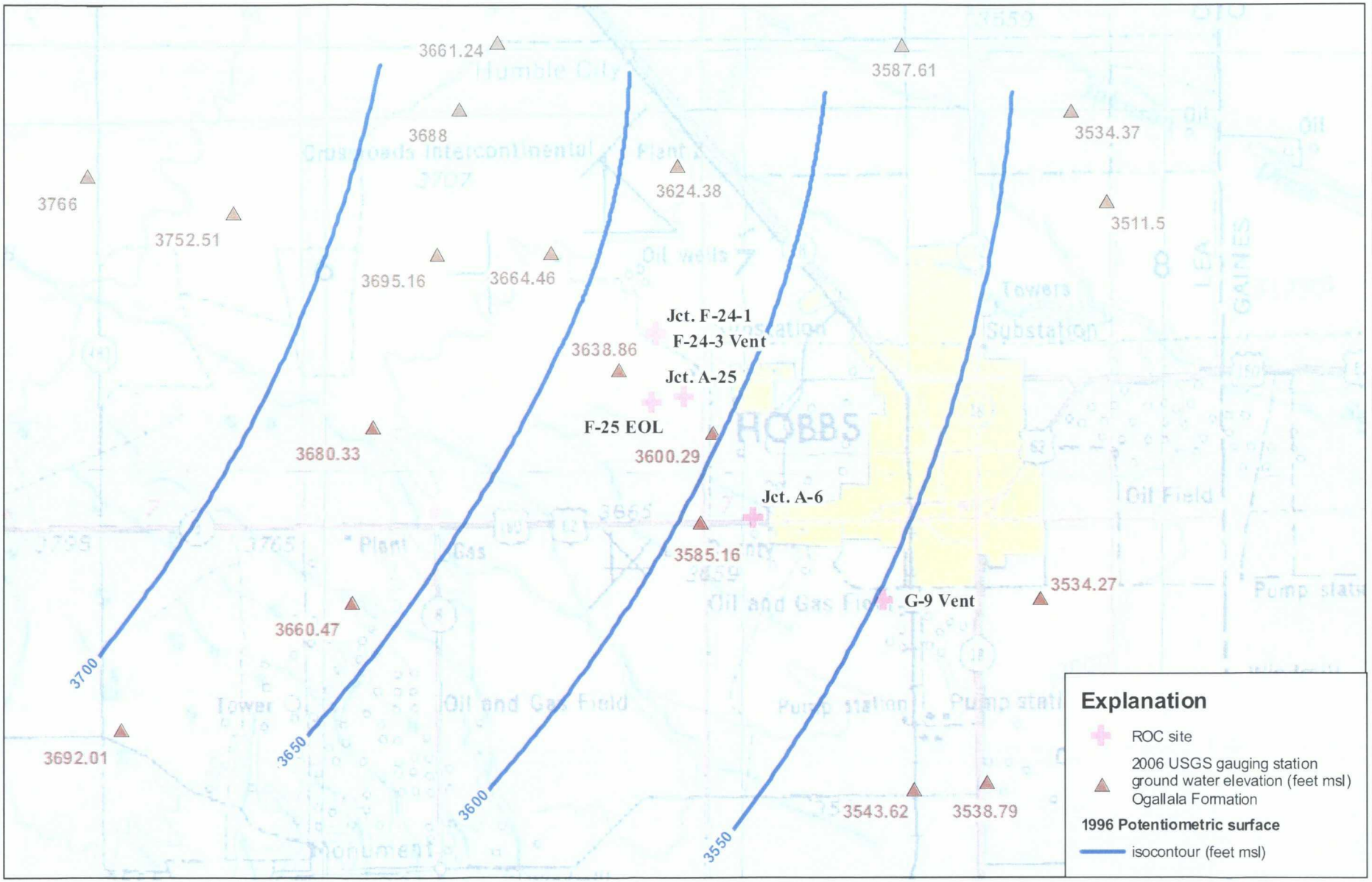
N
W E
S

0 0.5 1 Miles

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Site Map - 2005 Aerial Photo (RGIS) Jct. A-6, Jct. A-25, Jct. F-24-1, Jct. F-24-3 Vent, G-9 Vent	Plate 1
	Rice Operating Company 2009 Hobbs Investigation and Characterization Plan	January 2009

S:/PROJECTS/ROC/SIXSITES_2009/PLATES/GWELEV_USGS.MXD

1/28/2009



R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

2006 Potentiometric Surface Map
Jct. A-6, Jct. A-25, Jct. F-24-1, Jct. F-24-3 Vent, G-9 Vent

Plate 2

Rice Operating Company
2009 Hobbs Investigation and Characterization Plan

January 2009

1/28/2009

S:/PROJECTS/ROC/SIXSITES_2009/PLATES/GWELEV_USGS.MXD

ATTACHMENT B

Lithology Log from Soil Boring (Vertical Delineation)
Conducted by ROC and RTH in September 2009

Logger:	Dale Littlejohn
Driller:	Harrison & Cooper, Inc. Drilling
Consultant:	R.T. Hicks, Consultants
Drilling Method:	Air rotary
Start Date:	9/24/2009
End Date:	9/24/2009

RICE OPERATING COMPANY ROC SINCE 1955

Project Name: Hobbs jct. A-6 **Well ID:** SB #1

Location: UL/A sec. 6 T19S R38E
Lat: N32°41'46.619" **County:** Lea
Long: W103°10'58.772" **State:** NM

Comments: All samples from cuttings - too hard to split spoon.
10 feet SW of former junction box site. Electrical poles above site.
Drafted by: Lara Weinheimer
TD = 20 ft GW = 46 ft

Depth (feet)	chloride field tests	LAB	PID	Description
				0 - 5 ft
				SILT AND CALICHE
5	152		5.9	light brown
				5 - 10 ft
				SILT, CALICHE, QUARTZITE
10	151		2	light brown, no odor
				10 - 20 ft
				SILTY SAND
15	148		1.2	light pinkish brown, angular, no odor
20	145		1.9	

Lithology

Well Construction

bentonite seal

ATTACHMENT C

Laboratory Reports and Chain-of-Custody Documentation

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: HACK CONDER
122 W. TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 09/24/09
Reporting Date: 09/25/09
Project Owner: NOT GIVEN
Project Name: HOBBS JCT. A-6
Project Location: NOT GIVEN

Sampling Date: 09/24/09
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AB
Analyzed By: AB/HM

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/kg)	DRO (>C_{10}-C_{28}) (mg/kg)	Cl* (mg/kg)
ANALYSIS DATE		09/25/09	09/25/09	09/24/09
H18312-1	SB 1 20'	<10.0	<10.0	32
Quality Control		438	443	490
True Value QC		500	500	500
% Recovery		87.6	88.6	98.0
Relative Percent Difference		0.6	1.6	2.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl⁻: Std. Methods 4500-Cl⁻B
*Analysis performed on a 1:4 w:v aqueous extract. Reported on wet weight.

Chemist

09/25/09
Date

H18312 TCL RICE

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name:	RICE OPERATING	**BILL TO**	
Project Manager:	HASKS CONDER	P.O. #:	
Address:	122 W. TAYLOR	Company:	
City:	HOBBS State: NM Zip: 88240	Attn:	
Phone #:	393-9174 Fax #: 397 1471	Address:	
Project #:	Project Owner:	City:	
Project Name:	HOBBS JCT A-6	State: Zip:	
Project Location:		Phone #:	
Sampler Name:	TONY GRECO	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	CHLORIDE	TPH 8015M									
H18312-1	SB 1 20'	G	1			✓					✓		9/23/09	7:20	✓	✓									

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 9/24/09	Received By:	Phone Result:	☐ Yes ☐ No	Add'l Phone #:
	Time: 9:30a		Fax Result:	☐ Yes ☐ No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: email results jparvis@measurd.com lwinheimer@measurd.com hconder@measurd.com		
	Time:				
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Cool: ☑ Yes ☐ No Intact: ☐ Yes ☐ No	CHECKED BY: (Initials)		

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

THANK!!