

**1R – 428 - 41**

**ANNUAL GW  
MONITOR REPORT**

**DATE:**

**2007**

# R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

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2008 FEB 7 PM 2 42

1R428-41  
Annual GW Mon. Report  
2007

January 24, 2008

Wayne Price  
Oil Conservation Division  
1220 S. St. Francis Drive  
Santa Fe, NM 87505

RE: 2007 Annual Ground Water Monitoring Report  
I-29 Vent, Sec 29, T18S, R38E, Unit "I"  
NMOCD Case #: 1R428-41

Dear Mr. Wayne Price:

R.T. Hicks Consultants, Ltd is pleased to submit the 2007 Annual Ground Water Monitoring Report for the I-29 Vent site located in the Hobbs Salt Water Disposal System (SWD). This report consists of the following sections:

1. A table summarizing all laboratory results, depth to ground water and other pertinent data associated with ground water sampling at the site, including this past year.
2. Graphs showing chemical concentration over time for chloride, TDS, and sulfate.
3. Laboratory data sheets associated with the routine sampling for 2007.
4. Site Survey

A Correction Action Plan was submitted to NMOCD on April 13, 2007. The Correction Action Plan was approved by NMOCD on July 18, 2007. In August of 2007, the site was seeded to create the proposed infiltration barrier through surface restoration and vegetation. A Closure Report was submitted to NMOCD on Decemeber 4, 2007; we respectively request NMOCD approval in writing. As noted in the Closure Report, ROC plans to leave the well at this site in place pending investigation of other Section 29 sites.

Thank you for your consideration of this annual summary information. The attached CD contains an electronic copy of this report. If you have any questions, please contact us at 505-266-5004, or Kristin Farris Pope at ROC, 505-393-9174.

Sincerely,  
R.T. Hicks Consultants, Ltd.



Randall T. Hicks  
Principal

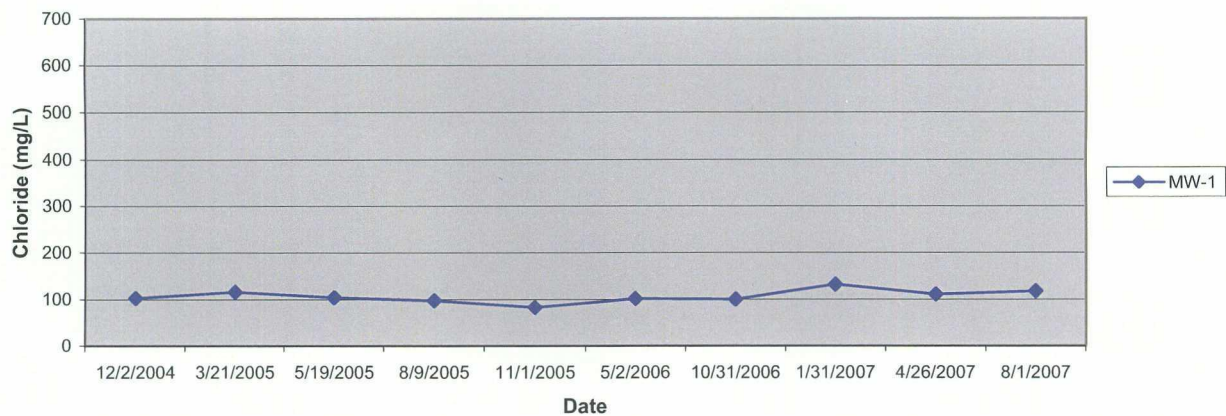
Copy: Hobbs NMOCD office; Rice Operating Company

Table 1: chemistry over time

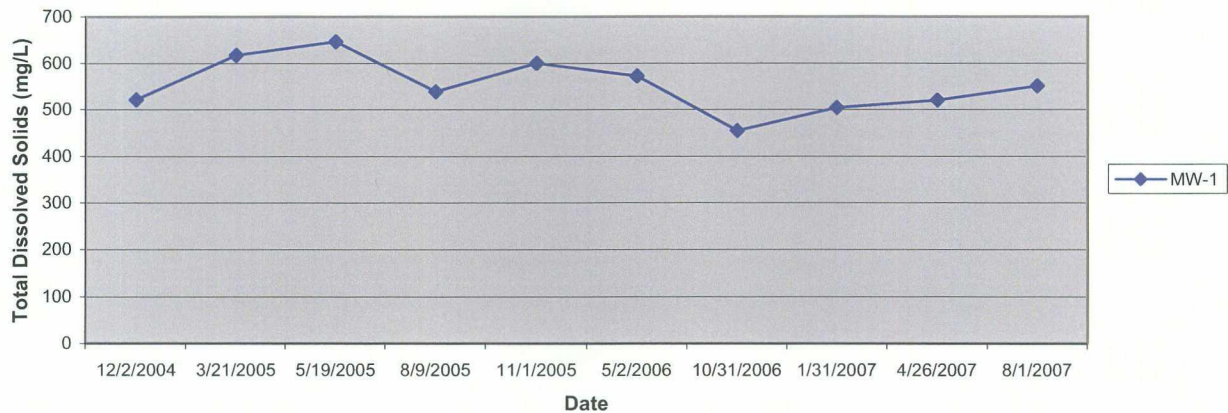
I-29 Vent

Well Name	Date	DTW (ft)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	EthylBenzene (mg/L)	Total Xylenes (mg/L)	Comments
MW-1		67.74	83.1	59.6	508	<0.001	<0.001	<0.001	<0.001	
MW-1	12/2/2004	68.12	103	97.7	521	<0.001	<0.001	<0.001	<0.001	red; silty
MW-1	3/21/2005	67.52	116	96.6	617	<0.001	<0.001	<0.001	<0.001	red; silty
MW-1	5/19/2005	67.44	104	89.7	647	<0.001	<0.001	<0.001	<0.001	
MW-1	8/9/2005	67.53	97.7	87.5	538	<0.001	<0.001	<0.001	<0.001	
MW-1	11/1/2005	67.45	82.7	68	600	<0.001	j[0.000346}	<0.001	j[0.000799]	
MW-1	5/2/2006	67.66	102	69.6	572	<0.001	<0.001	<0.001	<0.001	
MW-1	10/31/2006	67.92	100	80.3	454	<0.001	<0.001	<0.001	<0.001	No odor Clear with some sand
MW-1	1/31/2007	67.88	132	96.4	504	<0.001	<0.001	<0.001	<0.001	No
MW-1	4/26/2007	68	111	79.7	520	<0.001	<0.001	<0.001	<0.001	No Odor/ Clear with some sand
MW-1	8/1/2007	68.22	118	93.8	550	<0.001	<0.001	<0.001	<0.002	Clear No Odor Some Sand

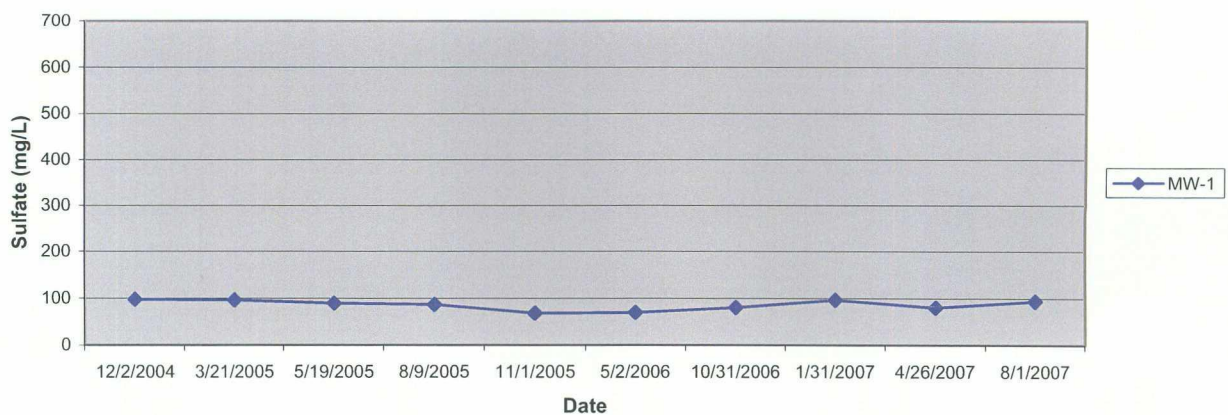
I-29 Vent  
Chloride Over Time



I-29 Vent  
TDS Over Time



I-29 Vent  
Sulfate Over Time



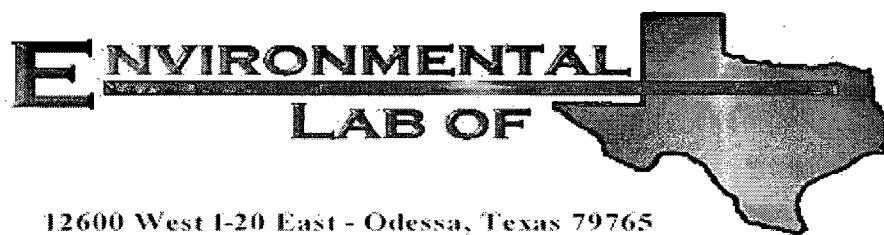
R.T. Hicks Consultants, Ltd  
901 Rio Grande Blvd NW, Suite F-142  
Albuquerque, NM 87104  
505-266-5004

Ground Water Chemistry

Rice Operating Company  
2007 Annual Report

I-29 Vent

1/24/2008



12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories Company

## Analytical Report

**Prepared for:**

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: Hobbs I-29 Vent

Project Number: None Given

Location: T18S R38E Sec.29 I- Lea County, NM

Lab Order Number: 7B01017

Report Date: 02/08/07

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #1	7B01017-01	Water	01/31/07 11:25	02-01-2007 15:42

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Monitor Well #1 (7B01017-01) Water</b>									
Benzene	ND	0.00100	mg/L	1	EB70501	02/05/07	02/07/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		89.8 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		118 %	80-120		"	"	"	"	

Environmental Lab of Texas

A Xenco Laboratories Company

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

Page 2 of 10

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Monitor Well #1 (7B01017-01) Water</b>									
<b>Total Alkalinity</b>	<b>178</b>	2.00	mg/L	1	EB70209	02/02/07	02/02/07	EPA 310.1M	
<b>Chloride</b>	<b>132</b>	5.00	"	10	EB70208	02/02/07	02/03/07	EPA 300.0	
<b>Total Dissolved Solids</b>	<b>504</b>	10.0	"	1	EB70302	02/02/07	02/03/07	EPA 160.1	
<b>Sulfate</b>	<b>96.4</b>	5.00	"	10	EB70208	02/02/07	02/03/07	EPA 300.0	

Environmental Lab of Texas

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Page 3 of 10



Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Total Metals by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Monitor Well #1 (7B01017-01) Water</b>									
Calcium	62.5	4.05	mg/L	50	EB70612	02/06/07	02/06/07	EPA 6010B	
Magnesium	17.6	0.360	"	10	"	"	"	"	
Potassium	1.79	0.600	"	"	"	"	"	"	
Sodium	52.8	2.15	"	50	"	"	"	"	

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Page 4 of 10

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EB70501 - EPA 5030C (GC)**

**Blank (EB70501-BLK1)**

Prepared: 02/05/07 Analyzed: 02/06/07

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	47.2		ug/l	40.0		118	80-120			
Surrogate: 4-Bromofluorobenzene	35.0		"	40.0		87.5	80-120			

**LCS (EB70501-BS1)**

Prepared: 02/05/07 Analyzed: 02/06/07

Benzene	0.0405	0.00100	mg/L	0.0500		81.0	80-120			
Toluene	0.0420	0.00100	"	0.0500		84.0	80-120			
Ethylbenzene	0.0425	0.00100	"	0.0500		85.0	80-120			
Xylene (p/m)	0.0857	0.00100	"	0.100		85.7	80-120			
Xylene (o)	0.0414	0.00100	"	0.0500		82.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	45.3		ug/l	40.0		113	80-120			
Surrogate: 4-Bromofluorobenzene	37.8		"	40.0		94.5	80-120			

**Calibration Check (EB70501-CCV1)**

Prepared: 02/05/07 Analyzed: 02/07/07

Benzene	42.8		ug/l	50.0		85.6	80-120			
Toluene	42.5		"	50.0		85.0	80-120			
Ethylbenzene	45.8		"	50.0		91.6	80-120			
Xylene (p/m)	81.2		"	100		81.2	80-120			
Xylene (o)	42.1		"	50.0		84.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	47.8		"	40.0		120	80-120			
Surrogate: 4-Bromofluorobenzene	39.7		"	40.0		99.2	80-120			

**Matrix Spike (EB70501-MS1)**

Source: 7B01002-01

Prepared: 02/05/07 Analyzed: 02/07/07

Benzene	0.0430	0.00100	mg/L	0.0500	ND	86.0	80-120			
Toluene	0.0447	0.00100	"	0.0500	ND	89.4	80-120			
Ethylbenzene	0.0474	0.00100	"	0.0500	ND	94.8	80-120			
Xylene (p/m)	0.0910	0.00100	"	0.100	ND	91.0	80-120			
Xylene (o)	0.0418	0.00100	"	0.0500	ND	83.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	47.3		ug/l	40.0		118	80-120			
Surrogate: 4-Bromofluorobenzene	47.2		"	40.0		118	80-120			

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EB70501 - EPA 5030C (GC)**

**Matrix Spike Dup (EB70501-MSD1)**

**Source: 7B01002-01**

Prepared: 02/05/07

Analyzed: 02/07/07

Benzene	0.0401	0.00100	mg/L	0.0500	ND	80.2	80-120	6.98	20	
Toluene	0.0403	0.00100	"	0.0500	ND	80.6	80-120	10.4	20	
Ethylbenzene	0.0490	0.00100	"	0.0500	ND	98.0	80-120	3.32	20	
Xylene (p/m)	0.0873	0.00100	"	0.100	ND	87.3	80-120	4.15	20	
Xylene (o)	0.0430	0.00100	"	0.0500	ND	86.0	80-120	2.83	20	
Surrogate: a,a,a-Trifluorotoluene	36.6		ug/l	40.0		91.5	80-120			
Surrogate: 4-Bromofluorobenzene	44.7		"	40.0		112	80-120			

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EB70208 - General Preparation (WetChem)**

**Blank (EB70208-BLK1)**

Prepared: 02/02/07 Analyzed: 02/03/07

Sulfate	0.459	0.500	mg/L							B, J
Chloride	ND	0.500	"							

**LCS (EB70208-BS1)**

Prepared: 02/02/07 Analyzed: 02/03/07

Sulfate	11.6	0.500	mg/L	10.0		116	80-120			
Chloride	10.7	0.500	"	10.0		107	80-120			

**Calibration Check (EB70208-CCV1)**

Prepared: 02/02/07 Analyzed: 02/03/07

Sulfate	11.8		mg/L	10.0		118	80-120			
Chloride	10.5		"	10.0		105	80-120			

**Duplicate (EB70208-DUP1)**

Source: 7B01017-01

Prepared: 02/02/07 Analyzed: 02/03/07

Chloride	127	5.00	mg/L		132			3.86	20	
Sulfate	93.0	5.00	"		96.4			3.59	20	

**Duplicate (EB70208-DUP2)**

Source: 7B01020-02

Prepared: 02/02/07 Analyzed: 02/03/07

Sulfate	2410	50.0	mg/L		2400			0.416	20	
Chloride	2220	50.0	"		2240			0.897	20	

**Matrix Spike (EB70208-MS1)**

Source: 7B01017-01

Prepared: 02/02/07 Analyzed: 02/03/07

Chloride	240	5.00	mg/L	100	132	108	80-120			
Sulfate	204	5.00	"	100	96.4	108	80-120			

**Matrix Spike (EB70208-MS2)**

Source: 7B01020-02

Prepared: 02/02/07 Analyzed: 02/03/07

Sulfate	3500	50.0	mg/L	1000	2400	110	80-120			
Chloride	3330	50.0	"	1000	2240	109	80-120			

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EB70209 - General Preparation (WetChem)**

**Blank (EB70209-BLK1)**

Prepared & Analyzed: 02/02/07

Total Alkalinity ND 2.00 mg/L

**Duplicate (EB70209-DUP1)**

Source: 7B01016-01

Prepared & Analyzed: 02/02/07

Total Alkalinity 310 2.00 mg/L 314 1.28 20

**Reference (EB70209-SRM1)**

Prepared & Analyzed: 02/02/07

Total Alkalinity 246 mg/L 250 98.4 90-110

**Batch EB70302 - Filtration Preparation**

**Blank (EB70302-BLK1)**

Prepared: 02/02/07 Analyzed: 02/03/07

Total Dissolved Solids ND 10.0 mg/L

**Duplicate (EB70302-DUP1)**

Source: 7B01016-01

Prepared: 02/02/07 Analyzed: 02/03/07

Total Dissolved Solids 1920 10.0 mg/L 1840 4.26 20

**Duplicate (EB70302-DUP2)**

Source: 7B01020-01

Prepared: 02/02/07 Analyzed: 02/03/07

Total Dissolved Solids 6280 10.0 mg/L 5700 9.68 20

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Total Metals by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EB70612 - 6010B/No Digestion**

**Blank (EB70612-BLK1)**

Prepared & Analyzed: 02/06/07

Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360	"							
Potassium	ND	0.0600	"							
Sodium	ND	0.0430	"							

**Calibration Check (EB70612-CCV1)**

Prepared & Analyzed: 02/06/07

Calcium	1.79		mg/L	2.00		89.5	85-115			
Magnesium	1.98		"	2.00		99.0	85-115			
Potassium	1.80		"	2.00		90.0	85-115			
Sodium	1.74		"	2.00		87.0	85-115			

**Duplicate (EB70612-DUP1)**

Source: 7B01016-01

Prepared & Analyzed: 02/06/07

Calcium	172	4.05	mg/L		176			2.30	20	
Magnesium	111	1.80	"		109			1.82	20	
Potassium	17.0	0.600	"		16.8			1.18	20	
Sodium	306	4.30	"		305			0.327	20	

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### Notes and Definitions

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).  
B Analyte is found in the associated blank as well as in the sample (CLP B-flag).  
DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
LCS Laboratory Control Spike  
MS Matrix Spike  
Dup Duplicate

Report Approved By: 

Date: 2/8/2007

Brent Barron, Laboratory Director/Corp. Technical Director  
Celey D. Keene, Org. Tech Director  
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer  
Jeanne Mc Murrey, Inorg. Tech Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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# Environmental Lab of Texas

## Variance/ Corrective Action Report- Sample Log-In

Client: Rice Dr.  
 Date/ Time: 2-1-07 15:42  
 Lab ID #: 1B017  
 Initials: OK

### Sample Receipt Checklist

Client Initials

#1	Temperature of container/ cooler?	Yes	No	4.0 °C	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELDT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

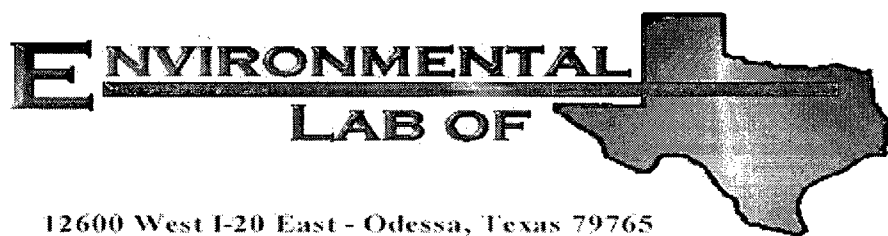
### Variance Documentation

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that Apply:
- ☐ See attached e-mail/ fax
  - ☐ Client understands and would like to proceed with analysis
  - ☐ Cooling process had begun shortly after sampling event



12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories Company

## Analytical Report

**Prepared for:**

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: Hobbs I-29 Vent

Project Number: None Given

Location: T18S R38E Sec29 1 ~ Lea County New Mexico

Lab Order Number: 7D26012

Report Date: 05/07/07

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well # 1	7D26012-01	Water	04/26/07 12:35	04-26-2007 16:25

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Monitor Well # 1 (7D26012-01) Water</b>									
Benzene	ND	0.00100	mg/L	1	ED73007	04/30/07	05/01/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		109 %	80-120		"	"	"	"	
Surrogate: <i>4</i> -Bromofluorobenzene		99.6 %	80-120		"	"	"	"	

Environmental Lab of Texas

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Page 2 of 10

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Monitor Well # 1 (7D26012-01) Water</b>									
<b>Total Alkalinity</b>	<b>180</b>	2.00	mg/L	1	ED73002	04/30/07	04/30/07	EPA 310.1M	
<b>Chloride</b>	<b>111</b>	5.00	"	10	EE70307	05/03/07	05/03/07	EPA 300.0	
<b>Total Dissolved Solids</b>	<b>520</b>	10.0	"	1	EE70209	04/27/07	05/02/07	EPA 160.1	
<b>Sulfate</b>	<b>79.7</b>	5.00	"	10	EE70307	05/03/07	05/03/07	EPA 300.0	

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Page 3 of 10

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Total Metals by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Monitor Well # 1 (7D26012-01) Water</b>									
Calcium	110	4.05	mg/L	50	ED72704	04/27/07	04/27/07	EPA 6010B	
Magnesium	17.9	0.360	"	10	"	"	"	"	
Potassium	1.10	0.600	"	"	"	"	"	"	
Sodium	53.0	2.15	"	50	"	"	"	"	

Environmental Lab of Texas

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Page 4 of 10

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ED73007 - EPA 5030C (GC)**

**Blank (ED73007-BLK1)**

Prepared & Analyzed: 04/30/07

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	51.7		ug/l	50.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	52.3		"	50.0		105	80-120			

**LCS (ED73007-BS1)**

Prepared & Analyzed: 04/30/07

Benzene	0.0564	0.00100	mg/L	0.0500		113	80-120			
Toluene	0.0571	0.00100	"	0.0500		114	80-120			
Ethylbenzene	0.0575	0.00100	"	0.0500		115	80-120			
Xylene (p/m)	0.106	0.00100	"	0.100		106	80-120			
Xylene (o)	0.0575	0.00100	"	0.0500		115	80-120			
Surrogate: a,a,a-Trifluorotoluene	55.4		ug/l	50.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	54.8		"	50.0		110	80-120			

**Calibration Check (ED73007-CCV1)**

Prepared: 04/30/07 Analyzed: 05/01/07

Benzene	0.0547		mg/L	0.0500		109	80-120			
Toluene	0.0555		"	0.0500		111	80-120			
Ethylbenzene	0.0550		"	0.0500		110	80-120			
Xylene (p/m)	0.102		"	0.100		102	80-120			
Xylene (o)	0.0566		"	0.0500		113	80-120			
Surrogate: a,a,a-Trifluorotoluene	53.8		ug/l	50.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	53.8		"	50.0		108	80-120			

**Matrix Spike (ED73007-MS1)**

Source: 7D26012-01

Prepared: 04/30/07 Analyzed: 05/01/07

Benzene	0.0565	0.00100	mg/L	0.0500	ND	113	80-120			
Toluene	0.0568	0.00100	"	0.0500	ND	114	80-120			
Ethylbenzene	0.0549	0.00100	"	0.0500	ND	110	80-120			
Xylene (p/m)	0.105	0.00100	"	0.100	ND	105	80-120			
Xylene (o)	0.0577	0.00100	"	0.0500	ND	115	80-120			
Surrogate: a,a,a-Trifluorotoluene	54.0		ug/l	50.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	53.6		"	50.0		107	80-120			

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ED73007 - EPA 5030C (GC)**

**Matrix Spike Dup (ED73007-MSD1)**

**Source: 7D26012-01**

Prepared: 04/30/07 Analyzed: 05/01/07

Benzene	0.0542	0.00100	mg/L	0.0500	ND	108	80-120	4.52	20	
Toluene	0.0551	0.00100	"	0.0500	ND	110	80-120	3.57	20	
Ethylbenzene	0.0561	0.00100	"	0.0500	ND	112	80-120	1.80	20	
Xylene (p/m)	0.102	0.00100	"	0.100	ND	102	80-120	2.90	20	
Xylene (o)	0.0557	0.00100	"	0.0500	ND	111	80-120	3.54	20	
Surrogate: a,a,a-Trifluorotoluene	52.7		ug/l	50.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	52.8		"	50.0		106	80-120			

Environmental Lab of Texas

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ED73002 - General Preparation (WetChem)**

**Blank (ED73002-BLK1)**

Prepared & Analyzed: 04/30/07

Total Alkalinity	ND	2.00	mg/L
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**LCS (ED73002-BS1)**

Prepared & Analyzed: 04/30/07

Total Alkalinity	0.00	2.00	mg/L				85-115
Bicarbonate Alkalinity	180	2.00	"	200		90.0	85-115

**Duplicate (ED73002-DUP1)**

Source: 7D26006-01

Prepared & Analyzed: 04/30/07

Total Alkalinity	214	2.00	mg/L		218			1.85	20
Bicarbonate Alkalinity	0.00	2.00	"		0.00				20

**Reference (ED73002-SRM1)**

Prepared & Analyzed: 04/30/07

Total Alkalinity	256		mg/L	250		102	90-110
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**Batch EE70209 - General Preparation (WetChem)**

**Blank (EE70209-BLK1)**

Prepared: 04/27/07 Analyzed: 05/02/07

Total Dissolved Solids	ND	10.0	mg/L
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**Duplicate (EE70209-DUP1)**

Source: 7D26007-01

Prepared: 04/27/07 Analyzed: 05/02/07

Total Dissolved Solids	1500	10.0	mg/L		1470			2.02	20
------------------------	------	------	------	--	------	--	--	------	----

**Duplicate (EE70209-DUP2)**

Source: 7D26009-01

Prepared: 04/27/07 Analyzed: 05/02/07

Total Dissolved Solids	712	10.0	mg/L		684			4.01	20
------------------------	-----	------	------	--	-----	--	--	------	----

**Batch EE70307 - General Preparation (WetChem)**

**Blank (EE70307-BLK1)**

Prepared & Analyzed: 05/03/07

Chloride	ND	0.500	mg/L
Sulfate	ND	0.500	"

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch EE70307 - General Preparation (WetChem)</b>										
<b>LCS (EE70307-BS1)</b>		Prepared & Analyzed: 05/03/07								
Chloride	9.62	0.500	mg/L	10.0		96.2	80-120			
Sulfate	10.0	0.500	"	10.0		100	80-120			
<b>Calibration Check (EE70307-CCV1)</b>		Prepared & Analyzed: 05/03/07								
Sulfate	11.6		mg/L	10.0		116	80-120			
Chloride	8.93		"	10.0		89.3	80-120			
<b>Duplicate (EE70307-DUP1)</b>		<b>Source: 7D26006-01</b>		Prepared & Analyzed: 05/03/07						
Sulfate	342	12.5	mg/L		339			0.881	20	
Chloride	941	50.0	"		917			2.58	20	
<b>Duplicate (EE70307-DUP2)</b>		<b>Source: 7D26010-01</b>		Prepared & Analyzed: 05/03/07						
Sulfate	74.1	5.00	mg/L		75.5			1.87	20	
Chloride	93.1	5.00	"		94.3			1.28	20	
<b>Matrix Spike (EE70307-MS1)</b>		<b>Source: 7D26006-01</b>		Prepared & Analyzed: 05/03/07						
Sulfate	728	12.5	mg/L	250	339	156	80-120			M1
<b>Matrix Spike (EE70307-MS2)</b>		<b>Source: 7D26010-01</b>		Prepared & Analyzed: 05/03/07						
Chloride	278	5.00	mg/L	100	94.3	184	80-120			M1
Sulfate	204	5.00	"	100	75.5	128	80-120			M1
<b>Matrix Spike (EE70307-MS3)</b>		<b>Source: 7D26006-01</b>		Prepared & Analyzed: 05/03/07						
Chloride	1800	50.0	mg/L	1000	917	88.3	80-120			

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Total Metals by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ED72704 - 6010B/No Digestion**

**Blank (ED72704-BLK1)**

Prepared & Analyzed: 04/27/07

Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360	"							
Potassium	ND	0.0600	"							
Sodium	ND	0.0430	"							

**Calibration Check (ED72704-CCV1)**

Prepared & Analyzed: 04/27/07

Calcium	2.13		mg/L	2.00		106	85-115			
Magnesium	2.15		"	2.00		108	85-115			
Potassium	2.14		"	2.00		107	85-115			
Sodium	1.98		"	2.00		99.0	85-115			

**Duplicate (ED72704-DUP1)**

Source: 7D23010-01

Prepared & Analyzed: 04/27/07

Calcium	44.1	0.810	mg/L		42.4			3.93	20	
Magnesium	43.0	0.360	"		42.4			1.41	20	
Potassium	22.7	0.600	"		22.1			2.68	20	
Sodium	41.9	0.430	"		40.8			2.66	20	

Environmental Lab of Texas

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: Hobbs I-29 Vent  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### Notes and Definitions

M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).  
DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
LCS Laboratory Control Spike  
MS Matrix Spike  
Dup Duplicate

Report Approved By:



Date:

5/7/2007

Brent Barron, Laboratory Director/Corp. Technical Director  
Celey D. Keene, Org. Tech Director  
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer  
Jeanne Mc Murrey, Inorg. Tech Director

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If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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# Environmental Lab of Texas

## Variance/ Corrective Action Report- Sample Log-In

Client: Rice

Date/ Time: 4-26-07 4:25

Lab ID #: 7026012

Initials: CL

### Sample Receipt Checklist

Client Initials

#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>-1.0</u> °C	
#2	Shipping container in good condition?	<u>Yes</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	Not Present	
#5	Chain of Custody present?	<u>Yes</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont / Lid	
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11	Containers supplied by ELOT?	<u>Yes</u>	No		
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13	Samples properly preserved?	<u>Yes</u>	No	See Below	
#14	Sample bottles intact?	<u>Yes</u>	No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

### Variance Documentation

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

Check all that Apply:

☐

See attached e-mail/ fax

☐

Client understands and would like to proceed with analysis

☐

Cooling process had begun shortly after sampling event

# **Analytical Report 287161**

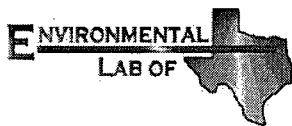
**for**

**Rice Operating Co.**

**Project Manager: Kristin Pope**

**Hobbs I-29 Vent**

**21-AUG-07**



**12600 West I-20 East Odessa, Texas 79765**

**A Xenco Laboratories Company**

**NELAC certification numbers:**

**Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675**

**Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America**



21-AUG-07

Project Manager: **Kristin Pope**  
**Rice Operating Co.**  
122 West Taylor  
Hobbs, NM 88240

Reference: XENCO Report No: **287161**  
**Hobbs I-29 Vent**  
Project Address: T18S R38E Sec29 I ~ Lea County New Mexico

**Kristin Pope:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 287161. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report N287161 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Brent Barron**

Odessa Laboratory Director

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# Certificate of Analysis Summary 287161

Rice Operating Co., Hobbs, NM



Project Name: Hobbs I-29 Vent

Project Id:

Date Received in Lab Aug-02-07 12:50 pm

Contact: Kristin Pope

Report Date: 21-AUG-07

Project Location: T18S R38E Sec29 I ~ Lea County New M

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<b>Lab Id:</b> 287161-001			
	<b>Field Id:</b> Monitor Well # 1			
	<b>Depth:</b>			
	<b>Matrix:</b> WATER			
	<b>Sampled:</b> Aug-01-07 13:05			
<b>Alkalinity by EPA 310.1</b>	<b>Extracted:</b>			
	<b>Analyzed:</b> Aug-07-07 13:00			
	<b>Units/RL:</b> mg/L RL			
Alkalinity, Total (as CaCO3)		248	4.00	
<b>BTEX by EPA 8021B</b>	<b>Extracted:</b> Aug-09-07 17:31			
	<b>Analyzed:</b> Aug-13-07 19:02			
	<b>Units/RL:</b> mg/L RL			
Benzene		ND	0.0010	
Toluene		ND	0.0010	
Ethylbenzene		ND	0.0010	
m,p-Xylene		ND	0.0020	
o-Xylene		ND	0.0010	
Total Xylenes		ND		
Total BTEX		ND		
<b>Metals per ICP by SW846 6010B</b>	<b>Extracted:</b>			
	<b>Analyzed:</b> Aug-03-07 14:39			
	<b>Units/RL:</b> mg/L RL			
Calcium		109	0.100	
Magnesium		15.4	0.010	
Potassium		1.69	0.500	
Sodium		37.7	0.500	
<b>Residue, Filterable (TDS) by EPA 160.1</b>	<b>Extracted:</b>			
	<b>Analyzed:</b> Aug-06-07 16:20			
	<b>Units/RL:</b> mg/L RL			
Total dissolved solids		550	5.00	
<b>Inorganic Anions by EPA 300</b>	<b>Extracted:</b>			
	<b>Analyzed:</b> Aug-17-07 11:47			
	<b>Units/RL:</b> mg/L RL			
Chloride		118	2.50	
Sulfate		93.8	2.50	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron  
Odessa Laboratory Director



## Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.

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Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America

11381 Meadowglen Lane Suite L Houston, Tx 77082-2647  
9701 Harry Hines Blvd , Dallas, TX 75220  
5332 Blackberry Drive, Suite 104. San Antonio, TX 78238  
2505 N. Falkenburg Rd., Tampa, FL 33619  
5757 NW 158th St, Miami Lakes, FL 33014

Phone	Fax
(281) 589-0692	(281) 589-0695
(214) 902 0300	(214) 351-9139
(210) 509-3334	(201) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555



## Form 2 - Surrogate Recoveries



Project Name: Hobbs I-29 Vent

Work Order #: 287161

Project ID:

Lab Batch #: 702184

Sample: 287161-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery % R [D]	Control Limits % R	Flags
Analytes					
4-Bromofluorobenzene	0.0634	0.0500	127	80-120	**

Lab Batch #: 702184

Sample: 287161-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery % R [D]	Control Limits % R	Flags
Analytes					
4-Bromofluorobenzene	0.0437	0.0500	87	80-120	

Lab Batch #: 702184

Sample: 287161-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery % R [D]	Control Limits % R	Flags
Analytes					
4-Bromofluorobenzene	0.0420	0.0500	84	80-120	

Lab Batch #: 702184

Sample: 498102-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery % R [D]	Control Limits % R	Flags
Analytes					
4-Bromofluorobenzene	0.0459	0.0500	92	80-120	

Lab Batch #: 702184

Sample: 498102-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery % R [D]	Control Limits % R	Flags
Analytes					
4-Bromofluorobenzene	0.0429	0.0500	86	80-120	

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Blank Spike Recovery



Project Name: Hobbs I-29 Vent

Work Order #: 287161

Project ID:

Lab Batch #: 701789

Sample: 701789-1-BKS

Matrix: Water

Date Analyzed: 08/07/2007

Date Prepared: 08/07/2007

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Alkalinity by EPA 310.1	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike % R [D]	Control Limits % R	Flags
Analytes						
Alkalinity, Total (as CaCO <sub>3</sub> )	ND	200	194	97	80-120	

Lab Batch #: 702184

Sample: 498102-1-BKS

Matrix: Water

Date Analyzed: 08/10/2007

Date Prepared: 08/09/2007

Analyst: CELKEE

Reporting Units: mg/L

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

BTEX by EPA 8021B	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike % R [D]	Control Limits % R	Flags
Analytes						
Benzene	ND	0.0500	0.0495	99	70-125	
Toluene	ND	0.0500	0.0510	102	70-125	
Ethylbenzene	ND	0.0500	0.0539	108	71-129	
m,p-Xylene	ND	0.1000	0.0952	95	70-131	
o-Xylene	ND	0.0500	0.0514	103	71-133	

Lab Batch #: 702542

Sample: 702542-1-BKS

Matrix: Water

Date Analyzed: 08/17/2007

Date Prepared: 08/17/2007

Analyst: MAB

Reporting Units: mg/L

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike % R [D]	Control Limits % R	Flags
Analytes						
Chloride	ND	5.00	4.93	99	90-110	
Sulfate	ND	5.00	5.34	107	90-110	

Lab Batch #: 701571

Sample: 701571-1-BKS

Matrix: Water

Date Analyzed: 08/03/2007

Date Prepared: 08/03/2007

Analyst: LATCOR

Reporting Units: mg/L

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Metals per ICP by SW846 6010B	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike % R [D]	Control Limits % R	Flags
Analytes						
Calcium	ND	2.00	1.83	92	75-125	
Magnesium	ND	2.00	2.08	104	75-125	
Potassium	ND	2.00	2.28	114	75-125	
Sodium	ND	2.00	1.94	97	75-125	

Blank Spike Recovery [D] = 100\*[C]/[B]

All results are based on MDL and validated for QC purposes.



## Form 3 - MS / MSD Recoveries



Project Name: Hobbs I-29 Vent

Work Order # 287161

Lab Batch ID: 702184

Date Analyzed: 08/13/2007

Reporting Units: mg/L

Project ID:

QC- Sample ID: 287161-001 S Batch #: 1 Matrix: Water

Date Prepared: 08/09/2007 Analyst: CELKEE

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.0500	0.0453	91	0.0500	0.0463	93	2	70-125	25
	Toluene	ND	0.0500	0.0468	94	0.0500	0.0483	97	3	70-125	25
	Ethylbenzene	ND	0.0500	0.0505	101	0.0500	0.0513	103	2	71-129	25
	m,p-Xylene	ND	0.1000	0.0909	91	0.1000	0.0921	92	1	70-131	25
	o-Xylene	ND	0.0500	0.0482	96	0.0500	0.0485	97	1	71-133	25

Lab Batch ID: 702542

Date Analyzed: 08/17/2007

Reporting Units: mg/L

QC- Sample ID: 287161-001 S Batch #: 1 Matrix: Water

Date Prepared: 08/17/2007 Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Chloride	118	25.0	145	108	25.0	145	108	0	90-110	20
	Sulfate	93.8	25.0	122	113	25.0	130	145	25	90-110	20

Matrix Spike Percent Recovery  $[D] = 100 \cdot (C-A)/B$   
Relative Percent Difference  $RPD = 200 \cdot (D-G)/(D+G)$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \cdot (F-A)/E$



## Sample Duplicate Recovery



Project Name: Hobbs I-29 Vent

Work Order #: 287161

Lab Batch #: 701789

Date Analyzed: 08/07/2007

QC- Sample ID: 287122-001 D

Reporting Units: mg/L

Project ID:

Analyst: WRU

Date Prepared: 08/07/2007

Batch #: 1

Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Alkalinity by EPA 310.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Alkalinity, Total (as CaCO <sub>3</sub> )	216	216	0	20	

Lab Batch #: 702542

Date Analyzed: 08/17/2007

QC- Sample ID: 287161-001 D

Reporting Units: mg/L

Date Prepared: 08/17/2007

Batch #: 1

Analyst: MAB

Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	118	120	2	20	
Sulfate	93.8	95.2	1	20	

Lab Batch #: 701571

Date Analyzed: 08/03/2007

QC- Sample ID: 287179-001 D

Reporting Units: mg/L

Date Prepared: 08/03/2007

Batch #: 1

Analyst: LATCOR

Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Metals per ICP by SW846 6010B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Calcium	301	285	5	25	
Magnesium	120	134	11	25	
Potassium	20.1	15.8	24	25	
Sodium	284	265	7	25	

Lab Batch #: 701790

Date Analyzed: 08/06/2007

QC- Sample ID: 287122-001 D

Reporting Units: mg/L

Date Prepared: 08/06/2007

Batch #: 1

Analyst: IRO

Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Residue, Filterable (TDS) by EPA 160.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	754	784	4	30	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$

All Results are based on MDL and validated for QC purposes.



## Sample Duplicate Recovery



Project Name: Hobbs I-29 Vent

Work Order #: 287161

Lab Batch #: 701790

Date Analyzed: 08/06/2007

QC- Sample ID: 287348-002 D

Reporting Units: mg/L

Date Prepared: 08/06/2007

Batch #: 1

Project ID:

Analyst: IRO

Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Residue, Filterable (TDS) by EPA 160.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	6250	6290	1	30	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$   
All Results are based on MDL and validated for QC purposes.

# Environmental Lab of Texas

## CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East  
Odessa, Texas 79765

Project Manager: Kristin Farris Pope kpope@riceswd.com

Company Name: RICE Operating Company

Company Address: 122 W. Taylor Street

City/State/Zip: Hobbs, New Mexico 88240

Telephone No: (505) 393-9174

Fax No: (505) 397-1471

Sampler Signature: Rozanne Johnson (505) 631-9310

e-mail: rozanne@valornet.com

Project Name: Hobbs I-29 Vent

Project #:

Project Loc: T18S R38E Sec29 1 - Lea County New Mexico

PO #:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

ORDER #: 287141

Field Filled

Field # of Containers

Time Sampled

Date Sampled

Beginning Depth

Ending Depth

FIELD CODE

Monitor Well #1

LAB # (lab use only)

Matrix

Preservation & # of Containers

Other (Specify)

GW = Groundwater S = Soil Solid

AP = Asbestos-Probable Specify Other

Matrix

Standard TAT

RUSH TAT (Pre-Schedule) 24, 48, 72 hrs

Total Dissolved Solids

NORM

RCI

BTEX 80218/5030

Semivolatiles

Volatiles

Metals: As Ag Ba Cd Cr Pb Hg Se

SAR/ESP/CEC

Anions (Cl, SO4, Alkalinity)

Cations (Ca, Mg, Na, K)

TPH: TX 1005 TX 1006

TPH: 418.1 8015M 8015B

AP/Non-Probable Specify Other

GW = Groundwater S = Soil Solid

AP = Asbestos-Probable Specify Other

Matrix

Preservation & # of Containers

Other (Specify)

GW = Groundwater S = Soil Solid

AP = Asbestos-Probable Specify Other

Matrix

Preservation & # of Containers

Other (Specify)

GW = Groundwater S = Soil Solid

AP = Asbestos-Probable Specify Other

Matrix

Preservation & # of Containers

Other (Specify)

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Anions (Cl, SO4, Alkalinity)

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TPH: 418.1 8015M 8015B

AP/Non-Probable Specify Other

GW = Groundwater S = Soil Solid

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Matrix

Preservation & # of Containers

Other (Specify)

GW = Groundwater S = Soil Solid

AP = Asbestos-Probable Specify Other

Matrix

Preservation & # of Containers

Other (Specify)

GW = Groundwater S = Soil Solid

AP = Asbestos-Probable Specify Other

Matrix

Preservation & # of Containers

Other (Specify)

### Special Instructions:

Please email to: kpope@riceswd.com

rozanne@valornet.com

### Laboratory Comments:

Sample Containers Intact?

VOCs Free of Headspace?

Labels on container(s)

Custody seals on container(s)

Custody seals on cooler(s)

Sample Hand Delivered

by Sampler/Client Rep?

by Courier?

UPS

DHL

FedEx

Lone Star

Temperature Upon Receipt:

1.5 °C

Received by:

Rozanne Johnson

Relinquished by:

Rozanne Johnson

Received by:

Raelyn Gardner

Relinquished by:

Raelyn Gardner

Date

8/26/07

Time

9:15

Date

8/26/07

Time

12:56

Received by:

Raelyn Gardner

Received by:

Raelyn Gardner

Received by:

Raelyn Gardner

Date

8/26/07

Time

9:16

Date

8-26-07

Time

12:56

Date

8/26/07

Time

9:16

Date

8-26-07

Time

12:56



**Environmental Lab of Texas**  
Variance/ Corrective Action Report- Sample Log-In

Client: Rice  
Date/ Time: 8.2.07 12:50  
Lab ID #: 287161  
Initials: al

**Sample Receipt Checklist**

				Client Initials
#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>1.5</u> °C
#2	Shipping container in good condition?	<u>Yes</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	Not Present
#4	Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	Not Present
#5	Chain of Custody present?	<u>Yes</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No	
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
#11	Containers supplied by ELOT?	<u>Yes</u>	No	
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below
#13	Samples properly preserved?	<u>Yes</u>	No	See Below
#14	Sample bottles intact?	<u>Yes</u>	No	
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No	
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable

**Variance Documentation**

Contact \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

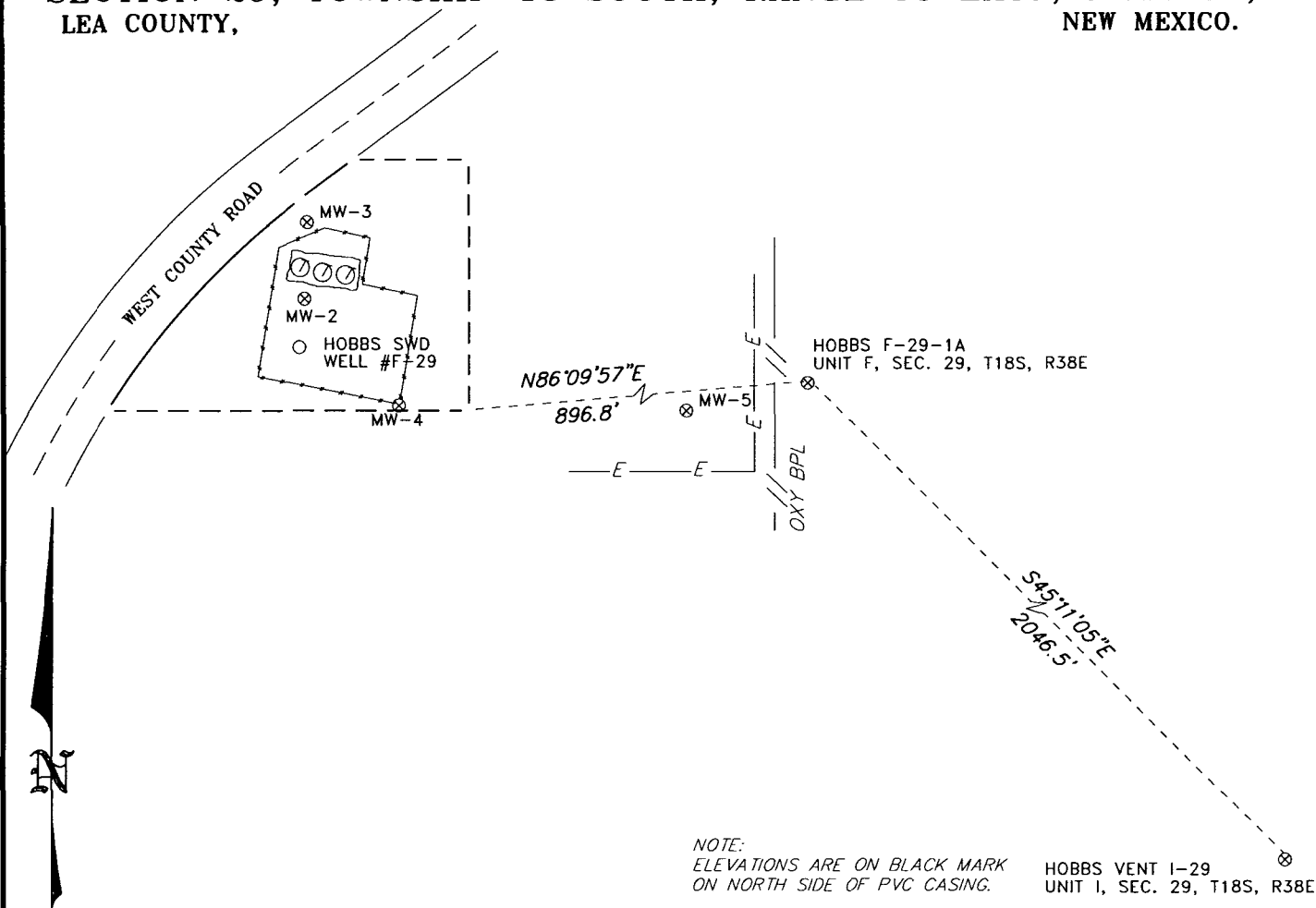
Corrective Action Taken: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- Check all that Apply:
- ☐ See attached e-mail/ fax
  - ☐ Client understands and would like to proceed with analysis
  - ☐ Cooling process had begun shortly after sampling event

SECTION 29, TOWNSHIP 18 SOUTH, RANGE 38 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



NEW MEXICO STATE PLANE COORDINATES (NAD83)

WELL	NORTHING	EASTING	LATITUDE	LONGITUDE	ELEVATION
MW-2	627819.025	898021.191	N 32°43'14.0"	W 103°10'24.9"	3645.71'
MW-3	627908.779	898025.082	N 32°43'14.9"	W 103°10'24.8"	3645.76'
MW-4	627693.822	898134.408	N 32°43'12.7"	W 103°10'23.6"	3645.76'
MW-5	627687.313	898477.159	N 32°43'12.7"	W 103°10'19.5"	3646.74' PVC 3644.37'-GRND
HOBBS F-29-1A MARK ON NORTH SIDE OF NORTH 2" PVC	627753.789	899029.184	N 32°43'13.2"	W 103°10'13.1"	3648.89' 3645.5'-GRND
HOBBS F-29-1A MARK ON NORTH SIDE OF SOUTH 2" PVC	627753.579	899029.160	N 32°43'13.2"	W 103°10'13.1"	3648.76' 3645.5'-GRND
HOBBS VENT I-29 MARK ON NORTH SIDE OF 2" PVC	626311.386	900480.915	N 32°42'58.8"	W 103°09'56.3"	3650.65' 3647.6'-GRND

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED  
FROM FIELD NOTES AND ORIGINAL SURVEY AND  
MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND  
SURVEYS AS SPECIFIED IN THIS STATE.



GARY L. JONES No. 7977  
LEA COUNTY, N.M.S. No. 5074

200 0 200 400 FEET

**RICE OPERATING COMPANY**

REF: MONITOR WELLS

MONITOR WELLS LOCATED IN

SECTION 29, TOWNSHIP 18 SOUTH, RANGE 38 EAST,  
N.M.P.M., LEA COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: RICE Drawn By: K. GOAD

Date: 02-11-2005 Disk: KJG CD#4 - RICEB.DWG

Survey Date: VARIES

Sheet 1 of 1 Sheets