AP - 47

STAGE 1 & 2 WORKPLANS

DATE:

Aug. 10, 2006

Highlander Environmental Corp.

Midland, Texas

CERTIFIED MAIL
RETURN RECIEPT NO. 7005 1160 0005 3780 7150

August 10, 2006

Mr. Wayne Price
New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87504

RE: **Results of Stage 1 Abatement Plan Implementation and Request for Release From Rule 19, at the Blinebry Drinkard (BD) SWD System Junction Box F-17, Unit F, Section 17, T-21-S, R-37-E, Lea County, New Mexico, NMOCD CASE #1R0426-14 (AP-47).**

Mr. Price:

RICE Operating Company (ROC) has retained Highlander Environmental Corp (Highlander) to address potential environmental concerns at the above-referenced site. ROC is the service provider (agent) for the Blinebry Drinkard (BD) SWD System (System) and has no ownership of any portion of the pipeline, well, or facility. The System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis.

1.0 EXECUTIVE SUMMARY

As part of the ROC Junction Box Upgrade Workplan, starting on September 17, 2002, the junction box was removed and the Site was delineated vertically and horizontally with a backhoe. The Site was excavated to the approximate dimensions of 20 feet x 20 feet x 12 feet. Chloride impact was consistent vertically. No TPH impact was indicated.

During the excavation, an older junction box was discovered approximately 10 feet south of the existing location. On November 18, 2002, a soil boring was placed near this old box location and advanced to a depth of 75 feet. Chloride concentrations declined with depth, however, chloride impact to groundwater was observed. The soil boring was converted to a 2 inch diameter monitor well completed to a total depth of 85 feet.

On December 13, 2002, ROC notified the NMOCD of groundwater impact, and on November 7, 2003 ROC submitted a Junction Box Disclosure Form to the NMOCD. Groundwater has been sampled and analyzed on a quarterly basis since June 2003. The quarterly sampling has confirmed that there is no hydrocarbon impact to groundwater at this Site. The excavation was backfilled and the junction moved 45 feet south of the original site. The Site location is shown on Figure 1.

On March 17, 2005 an Investigation and Characterization Plan (ICP) was submitted to the NMOCD. On May 5, 2005, Daniel Sanchez with the NMOCD requested a Rule 19, Stage I Abatement Plan for this site. A Stage 1 Abatement Plan was submitted on July 12, 2005 and approved on February 23, 2006. As part of the Stage 1 Abatement Plan two additional monitor wells were proposed for the site. These two monitor wells (MW-2 and MW-3) were installed on March 22-23, 2006. The well locations are shown on Figure 2. MW-2 was placed down-gradient of MW-1 and MW-3 was placed up-gradient. The wells were developed and sampled on March 27, 2006, April 11, 2006 and July 11, 2006.

Monitor well MW-2, down-gradient, has shown consistently low chloride concentrations ranging from 50.8 mg/L to 60.5 mg/L. The up-gradient well, MW-3 is showing an increase in chloride concentration from 901 mg/L to 1,680 mg/L and appears to indicate an up-gradient source of groundwater impact. In reviewing the historical data for MW-1, for the first 18 months of sampling, the chloride concentrations fluctuated between 177 mg/L and 886 mg/L. Then in January 2005, the chloride concentration jumped to 2,790 mg/L and has since ranged from 1,890 mg/L to 2,510 mg/L. Considering the concentration found in the upgradient monitor well, it appears that the impact to MW-1 may be at least somewhat affected by an up-gradient source of contamination.

Also as part of the Stage I Abatement Plan, a water well database search was performed to encompass a ½ mile radius around the site.

2.0 CHRONOLOGY OF EVENTS

September 17, 2002	The junction box was removed and the Site was delineated vertically and horizontally with a backhoe. The Site was excavated to the approximate dimensions of 20' x 20' x 12'.
November 18, 2002	A soil boring was placed near the old box location and advanced to a depth of 75'. The soil boring was converted to a monitor well with a total depth of 85'.
December 13, 2002	NMOCD director notified of groundwater impact.
November 7, 2003	ROC submitted a Junction Box Disclosure Form to the NMOCD.
June 5, 2003	Monitor Well (MW-1) was purged and sampled.
August 22, 2003	Monitor Well (MW-1) was purged and sampled.
November 20, 2003	Monitor Well (MW-1) was purged and sampled.
February 25, 2004	Monitor Well (MW-1) was purged and sampled.
May 27, 2004	Monitor Well (MW-1) was purged and sampled.
September 2, 2004	Monitor Well (MW-1) was purged and sampled.
December 21, 2004	Monitor Well (MW-1) was purged and sampled.
January 21, 2005	2004 Monitor Well Report/Sampling Summary was submitted to the NMOCD.

January 26, 2005	Monitor Well (MW-1) was purged and sampled.
March 17, 2005	Investigation & Characterization Plan (ICP) submitted to the NMOCD.
April 28, 2005	Monitor Well (MW-1) was purged and sampled.
May 5, 2005	Daniel Sanchez (NMOCD) requested a Rule 19 Stage I Abatement Plan for this site.
June 21, 2005	Monitor Well (MW-1) was purged and sampled.
July 12, 2005	Stage 1 Abatement Plan submitted to NMOCD.
September 19, 2005	Monitor Well (MW-1) was purged and sampled.
October 17, 2005	Monitor Well (MW-1) was purged and sampled.
November 18, 2005	Stage 1 Abatement Plan certified "Administratively Complete" by NMOCD.
January 16, 2006	Monitor Well (MW-1) was purged and sampled.
February 23, 2006	Stage 1 Abatement Plan approved by NMOCD.
March 22-23, 2006	Monitor Wells MW-2 and MW-3 installed.
March 27, 2006	Monitor Wells MW-2 and MW-3 were purged and sampled.
April 11, 2006	Monitor Wells MW-1, MW-2 and MW-3 were purged and sampled.
July 11, 2006	Monitor Wells MW-1, MW-2 and MW-3 were purged and sampled.

3.0 BACKGROUND & PREVIOUS WORK

As part of the ROC Junction Box Upgrade Workplan, starting on September 17, 2002, the junction box was removed and the Site was delineated vertically and horizontally with a backhoe. The Site was excavated to the approximate dimensions of 20 feet x 20 feet x 12 feet. Chloride impact was consistent vertically. No TPH impact was indicated.

During the excavation, an older junction box was discovered approximately 10 feet south of the existing location. On November 18, 2002, a soil boring was placed near this old box location and advanced to a depth of 75 feet. Chloride concentrations declined with depth, however, chloride impact to groundwater was observed. The soil boring was converted to a 2 inch diameter monitor well completed to a total depth of 85 feet. A copy of the soil boring and completion log is included in Appendix B.

On December 13, 2002, ROC notified the NMOCD of groundwater impact, and on November 7, 2003 ROC submitted a Junction Box Disclosure Form to the NMOCD. Groundwater has been sampled and analyzed on a quarterly basis since June 2003. The quarterly sampling has confirmed that there is no hydrocarbon impact to groundwater at this Site. The excavation was backfilled and the junction moved 45 feet south of the original site.

On March 17, 2005 an Investigation and Characterization Plan (ICP) was submitted to the NMOCD. On May 5, 2005, Daniel Sanchez with the NMOCD requested a Rule 19, Stage I Abatement Plan for this site. A Stage 1 Abatement Plan was submitted on July 12, 2005 and approved on February 23, 2006.

4.0 GEOLOGY & HYDROGEOLOGY

4.1 Regional and Local Geology

This site is located in the Eunice Plain physiographic subdivision of southern Lea County. The Eunice Plain is bounded on the north by the Llano Estacado, and on the southwest by San Simon Ridge and Antelope Ridge. The Eunice Plain is underlain by a hard caliche surface and is almost entirely covered by a reddish-brown dune sand. Tertiary rocks in this area are represented by the Ogallala formation of Pliocene age. The Ogallala underlies most of the Eunice Plain. It is a heterogeneous complex of terrestrial sediments, which mantles an irregular erosion surface cut into the Triassic rocks.

4.2 Regional and Local Hydrogeology

Groundwater occurs under unconfined conditions in the Ogallala Formation. The Ogallala Formation is regionally known as the High Plains Aquifer. Recharge to the Ogallala Formation occurs through infiltration of rainfall and snowmelt. Discharge occurs principally through pumping from wells.

The regional flow direction for groundwater in the High Plains aquifer is primarily to the south-southeast. The depth to water in monitor well MW-1 is approximately 75' (TOC).

4.3 Water Well Inventory

In accordance with the Stage 1 Abatement Plan submitted by Highlander Environmental, ROC performed an internet search of the New Mexico Office of the State Engineer (OSE) and the United States Geologic Survey (USGS) databases for water wells within a ½ mile radius of the subject site.

One water well record was found in the OSE database for the prescribed radius. This record is listed as a permit request for a domestic well by "Right Reverend Sidney Meizger." The permit status is shown to be expired. This record is located in Unit 'C', Section 17, T21S, R37E.

One water well record was found in the USGS database for the prescribed radius. This well is located in Unit 'H', Section 17, T21S, R37E and the total depth of the well is 96 ft below land surface. The groundwater level has been measured from this well on 8 occasions since 1996. The most recent groundwater measurement was in 1997 when a measurement of 71.95 ft was recorded. The purposed of this well is unknown.

A search of a database supported by New Mexico Institute of Mining and Technology (New Mexico Tech) called New Mexico Water and Infrastructure Data System (WAIDS), yielded 3 well records in Section 17, T21S, R37E, however, the WAIDS database only provides the Section of the well location, not a quarter or unit letter. Two wells are listed as irrigation wells and the other is used for livestock watering. All three wells have the same GPS coordinates and given that the three measurement/sampling records are several years apart, these records may represent only one actual well.

The southernmost portions of Unit Letters 'O', 'N', and 'M' of Section 8 and Unit Letters 'A', 'H', and 'I' of Section 18 are also included in our search radius but the search of these databases did not yield any well records.

These reported wells, as well as any non-reported wells within the ½ mile radius of the site, were inspected in the field by Melanie Franks (RICE Operating Company). The domestic well listed in Unit C could not be located. Two stock wells were found located in Unit Letters L and G. Both of these wells were sampled on March 8, 2006. The chloride concentrations ranged from 52.5 mg/L in the Unit letter C well to 413 mg/L in the Unit letter G well. The water well inventory data is included in Appendix A.

5.0 SUBSURFACE SOILS

The soils in the vicinity of this site are of the Pyote soils and Dune land association, and soils of the Simona Series. In Pyote soils, typically, the surface layer is light-brown fine sand about 30 inches thick. The subsoil is fine sandy loam approximately 18 inches thick. The subsoil, to a depth of approximately 60 inches is pink fine sandy loam.

The Simona Series soil is represented by the Simona fine sandy loam, 0 to 3 percent slopes (SE). The Simona fine sandy loam has a surface layer consisting of grayish-brown fine sandy loam, approximately 8 inches thick. The surface layer is underlain by subsoil consisting of pale brown fine sandy loam, approximately 8 inches thick. The subsoil is underlain by a dense layer of white indurated caliche. The caliche is typically about 16 inches thick and strongly cemented.

The soil boring performed at this site indicated sand, with intermittent caliche layers and sandstone stringers to 75'.

6.0 GROUNDWATER QUALITY

6.1 Installation of Additional Monitor Wells

As approved in the Stage I Abatement Plan, two additional monitor wells were installed at the site. Monitor well MW-2 was installed down-gradient and MW-3 was installed up-gradient. Both monitor wells were constructed according to EPA and industry standards to total depths of 40' (MW-2) and 43' (MW-3).

Both wells were properly developed. Copies of the boring and completion logs are included in Appendix B. A water table map was generated for the most recent sampling event and is shown as Figure 3.

6.2 Monitoring Program

The original monitoring well (MW-1) has been sampled on a quarterly basis since June 2003. Monitor wells MW-2 and MW-3 were added to the quarterly sampling program in March, 2006. Analytical data for all monitoring events are summarized in the tables in Appendix C.

6.3 Hydrocarbons in Groundwater

With the exception of a trace of benzene (0.004 mg/L) in the first sampling event, no hydrocarbon impact has been detected in any of the monitor wells and as such is not considered a Constituent of Concern at this site.

6.4 Other Constituents of Concern

In the quarterly sampling events to date, the only constituent of concern observed was chloride. In the first 18 months of sampling, the chloride concentrations in MW-1 fluctuated between 177 mg/L and 886 mg/L. Then in January 2005, the chloride concentration jumped to 2,790 mg/L and has since ranged from 1,890 mg/L to 2,510 mg/L.

7.0 RULE 19 RELEASE REQUEST and SOIL WORK PLAN

Monitor well MW-2, down-gradient, has shown consistently low chloride concentrations ranging from 50.8 mg/L to 60.5 mg/L. The up-gradient well, MW-3 is showing an increase in chloride concentration from 901 mg/L to 1,680 mg/L and appears to indicate an up-gradient source of groundwater impact. In reviewing the historical data for MW-1, for the first 18 months of sampling, the chloride concentrations fluctuated between 177 mg/L and 886 mg/L. Then in January 2005, the chloride concentration jumped to 2,790 mg/L and has since ranged from 1,890 mg/L to 2,510 mg/L. Considering the concentration found in the up-gradient monitor well, it appears that the impact to MW-1 may be at least somewhat affected by an up-gradient source of contamination. As a result of these findings, ROC requests a release from additional Stage 1 and Stage 2 requirements and proposes to continue monitoring of the site.

Additionally, ROC will complete assessment and remediation of chloride impacted soils for closure under NMOCD approval. The horizontal extent of chloride impact to soils will be evaluated with a backhoe. Once evaluated, the soils will be excavated down below the root zone (minimum of 3.0' below ground surface) and an evapotranspiration barrier (non-compacted clay cap) will be placed into the excavation. The excavated soils will be evaluated for placement back into the excavation to ensure that it will sustain vegetative cover. Once completed, a closure report will be prepared and submitted for the soils portion of this investigation.

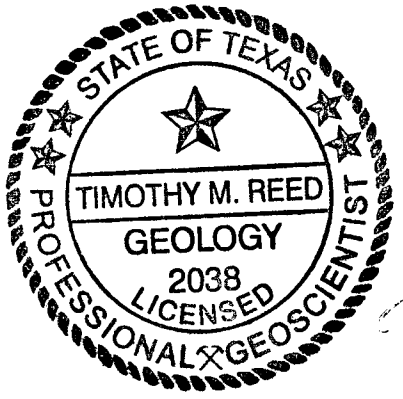
8.0 QUALITY ASSURANCE/ QUALITY CONTROL

All monitor wells were constructed to EPA and industry standards. All downhole equipment (i.e., drill rods, drill bits, etc.) was thoroughly decontaminated between each use with a steam cleaner.

The wells were inspected for the presence of phase-separated hydrocarbons (PSH) and none was detected. The wells were properly purged and sampled with clean, dedicated, polyethylene bailers and disposable line. The groundwater samples were submitted to a laboratory for analysis of Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) by method EPA 8021B, and chloride by method 300.0.

9.0 PROPOSED SCHEDULE OF ACTIVITIES

Upon approval, the horizontal soil delineation outlined above will be implemented in a timely manner, dependent upon availability of local contractors. The NMOCD will be notified at least 48 hours in advance of sampling or construction activities. Quarterly sampling of the existing monitor wells will be continued. All results of activities for 2006 will be submitted in an annual summary report within the first quarter of 2007.



Respectfully submitted,
Highlander Environmental Corp.

Timothy M. Reed, P.G.
Vice President

cc: ROC, Daniel Sanchez-NMOCD
enclosures: figures, water well information, boring and completion logs, tables

FIGURES

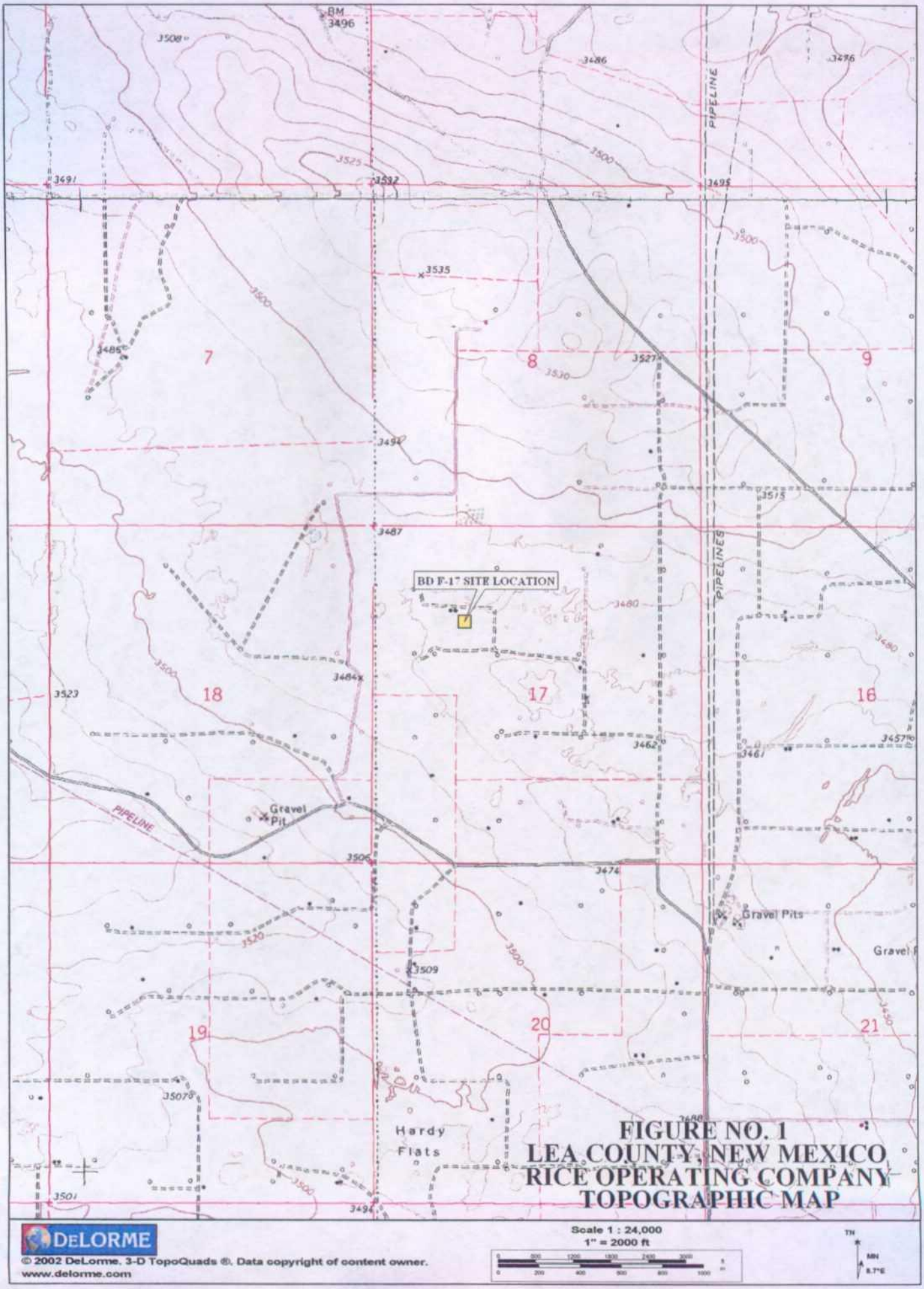


FIGURE NO. 1
LEA COUNTY, NEW MEXICO
RICE OPERATING COMPANY
TOPOGRAPHIC MAP

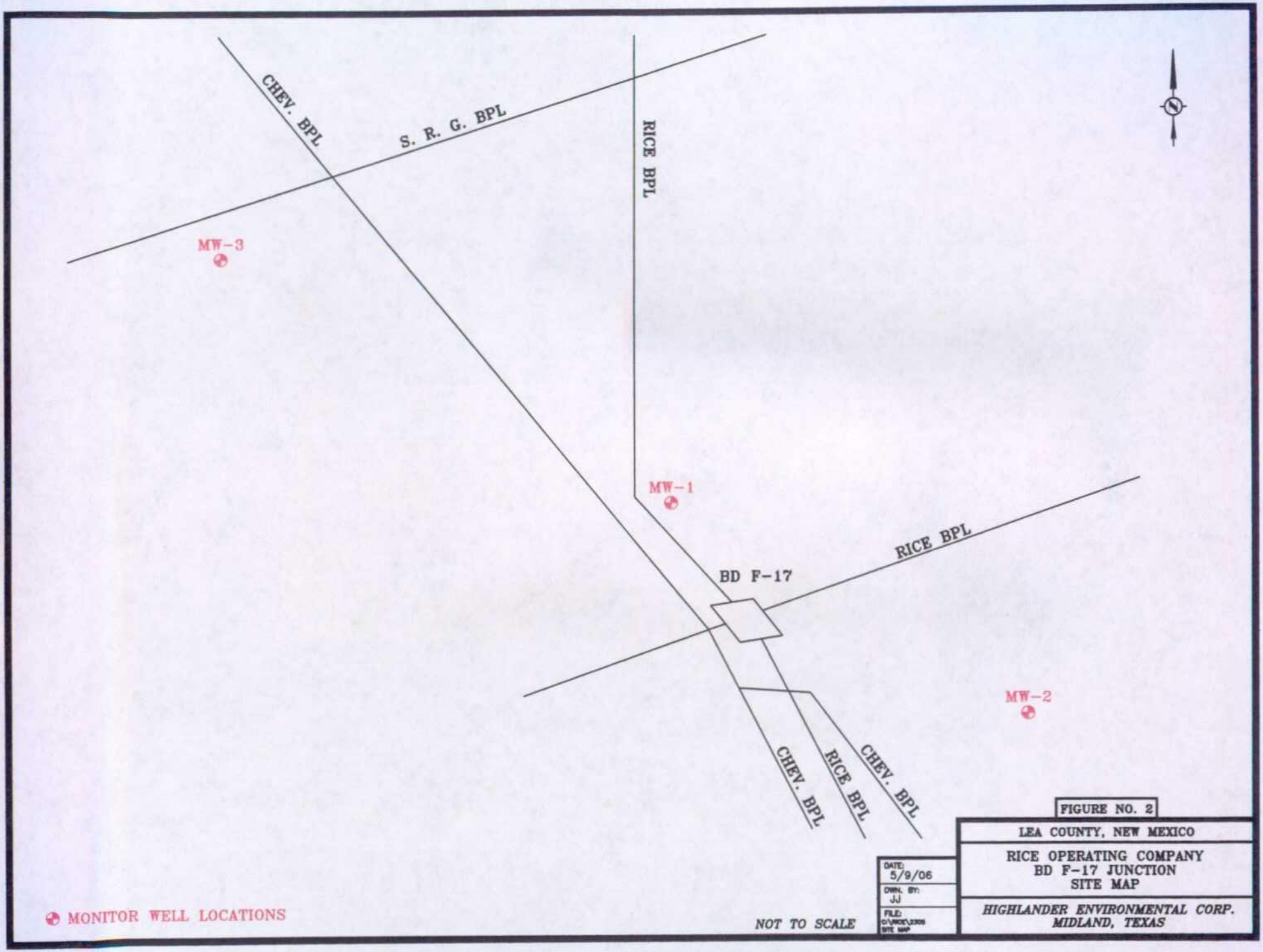
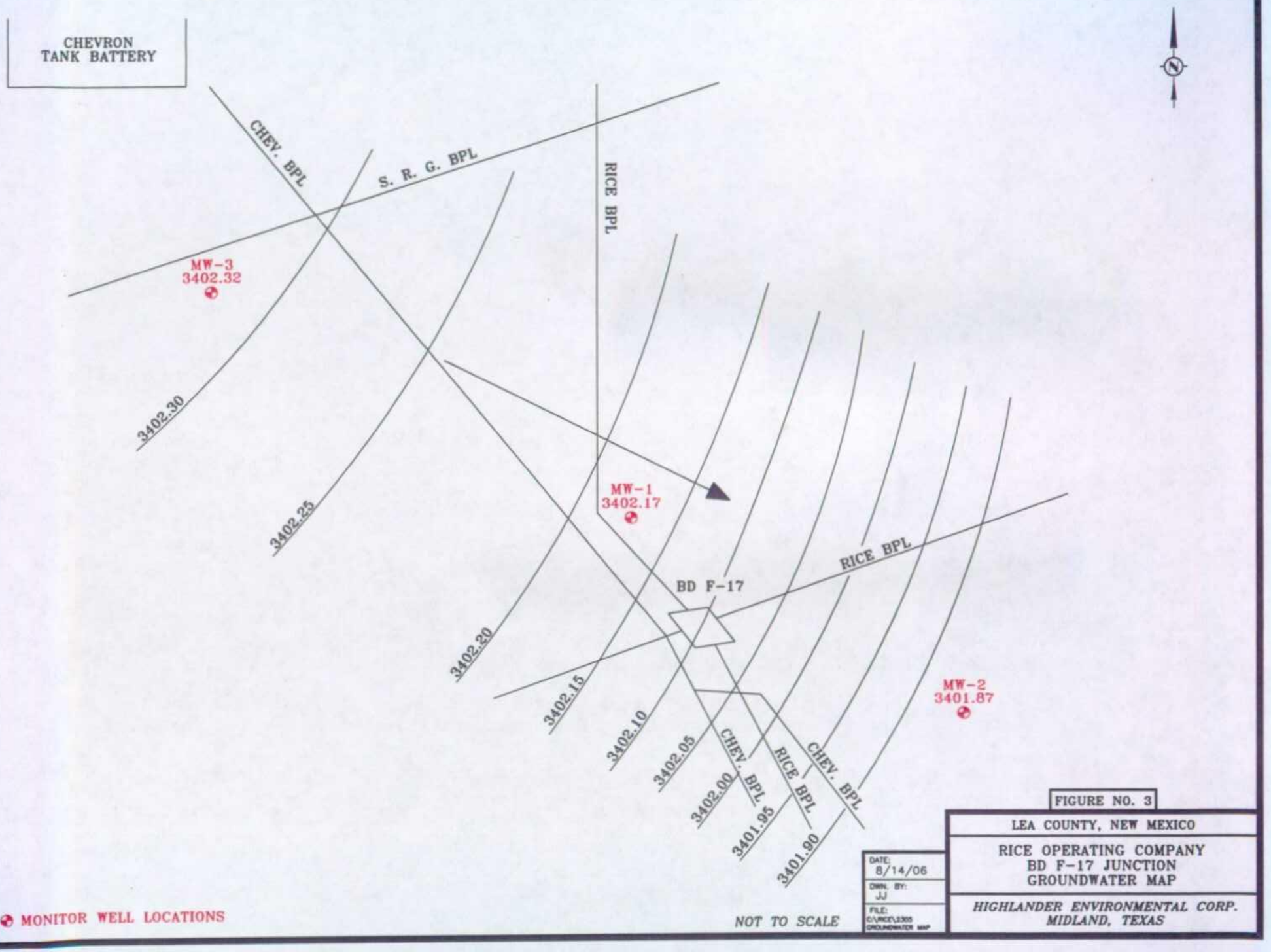


FIGURE NO. 2

LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY
BD F-17 JUNCTION
SITE MAP

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS


CHEVRON
TANK BATTERY
CHEV. BPL
S. R. G. BPL
RICE BPL
MW-3
3402.32
3402.30
3402.25
MW-1
3402.17
RICE BPL
BD F-17
3402.20
3402.15
3402.10
3402.05
3402.00
CHEV. BPL
RICE BPL
3401.95
CHEV. BPL
3401.90
MW-2
3401.87
N
MONITOR WELL LOCATIONS
NOT TO SCALE
DATE: 8/14/06
DWN. BY: JJ
FILE: C:\RICE\1305 GROUNDWATER MAP
FIGURE NO. 3
LEA COUNTY, NEW MEXICO
RICE OPERATING COMPANY
BD F-17 JUNCTION
GROUNDWATER MAP
HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

Appendix A

Water Well Database Records

NM WAIDS

DATA MAPS HOME SCALE COR

General Information About: Sample 11364			
Section/ Township/Range	17 / 21 S / 37 E	Lat/Long	32.4797 / -103.1841
Elevation	3469	Depth	120
Date Collected	10/7/1976	Chlorides	242
Collector / Point of Collection	SEO / DP	Use	Irrigation Water
Formation	OAL	TDS	0

New Mexico Tech PRRC

Section 17

General Information About: Sample 10688

Section/ Township/Range	17 / 21 S / 37 E	Lat/Long	32.4797 / -103.1841
Elevation	3469	Depth	120
Date Collected	12/20/1979	Chlorides	208
Collector / Point of Collection	SEO / DP	Use	Stock
Formation	OAL	TDS	0

General Information About: Sample 11364

Section/ Township/Range	17 / 21 S / 37 E	Lat/Long	32.4797 / -103.1841
Elevation	3469	Depth	120
Date Collected	10/7/1976	Chlorides	242
Collector / Point of Collection	SEO / DP	Use	Irrigation Water
Formation	OAL	TDS	0

General Information About: Sample 12299

Section/ Township/Range	17 / 21 S / 37 E	Lat/Long	32.4797 / -103.1841
Elevation	3469	Depth	120
Date Collected	12/2/1965	Chlorides	299
Collector / Point of Collection	SEO / DP	Use	Irrigation Water
Formation	OAL	TDS	0

http://octane.nmt.edu/waterquality/data/gwatersearch.asp

Ground-water levels for New Mexico

71.95 ft

Search Results -- 1 sites found

Search Criteria

site_no list = • 322838103111201

Save file of selected sites to local disk for future upload

USGS 322838103111201 21S.37E.17.144111

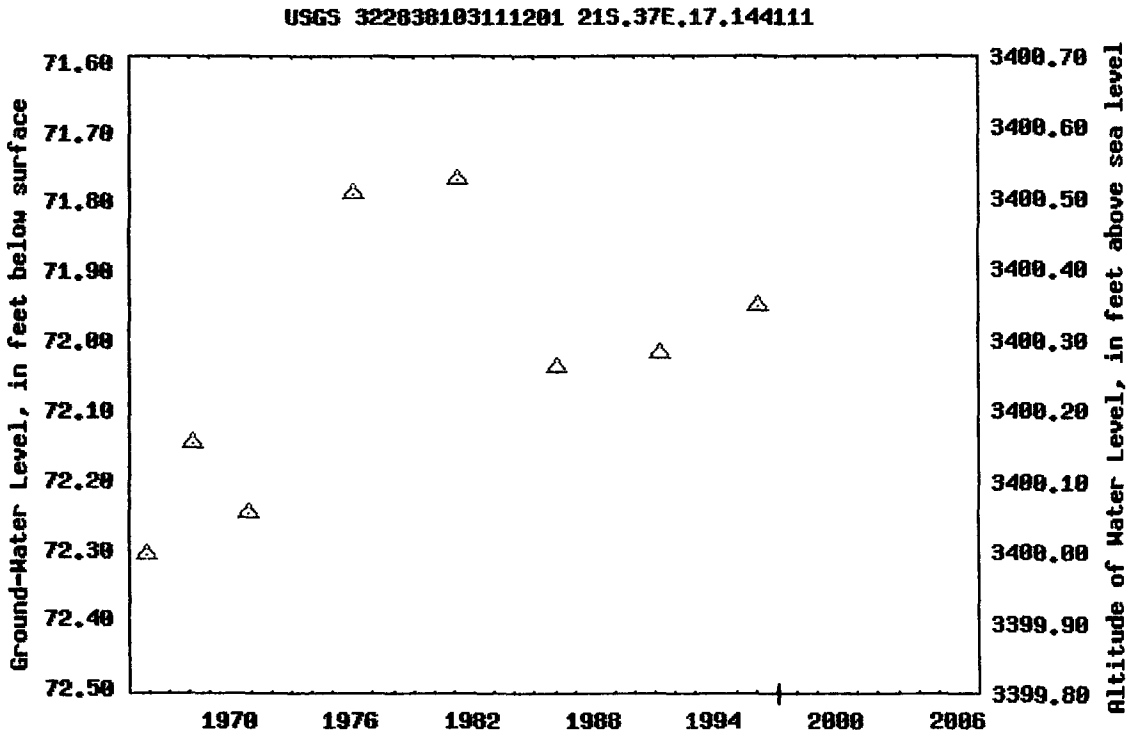
H

Graphical data for this site Ground-water: Levels GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°28'38", Longitude 103°11'12" NAD27
Land-surface elevation 3,472.30 feet above sea level NGVD29
The depth of the well is 96 feet below land surface.
This well is completed in the ALLUVIUM,BOLSON DEPOSITS AND OTHER SURFACE DEPOSITS (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.
Download a presentation-quality graph

Questions about data New Mexico NWISWeb Data Inquiries Top

New Mexico Office of the State Engineer
Water Right Summary

Inhabited housing

Back

DB File Nbr: CP 00676
Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD
Primary Status: EXP Expired
Total Acres: 0
Total Diversion: 0
Owner: JOE E. SIMS

Documents on File

Doc	File/Act	Status 1 2 3	Trans_Desc		From/To		Acres	Diversion	Consumptive
72121	04/11/1985	EXP EXP CNV	CONVERSION	CP	006	T	0	0	

(qtr are 1=NW 2=NE 3=SW 4=SE)

Point of Diversion POD Number	(qtr are biggest to smallest) Source	Tws	Rng	Sec	q	q	q	X Y are in Feet Zone	X	Y	UTM are in Meters) UTM_Zone	Easting	Northing	Latitude
CP 00676	Shallow	21S	36E	18	4	4	1				13	659876	3594085	32 28 17.46
CP 00676 EXP		21S	37E	18	4	4					13	669602	3594146	32 28 17.52

P

New Mexico Office of the State Engineer
Water Right Summary

unable to locate

Back

DB File Nbr: CP 00063
Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD
Primary Status: EXP Expired
Total Acres: 0
Total Diversion: 0
Owner: RIGHT REVEREND SIDNEY MEIZGER

Documents on File

Doc	File/Act	Status 1 2 3	Trans_Desc	From/To	Acres	Diversion	Consumptive
APPRO	10/22/1959	EXP EXP CNV	CONVERSION CP	000 T	0	0	

(qtr are 1=NW 2=NE 3=SW 4=SE)
(qtr are biggest to smallest X Y are in Feet UTM are in Meters)

Point of Diversion POD Number	Source	Tws	Rng	Sec	q q q	Zone	X	Y	UTM_Zone	Easting	Northing	Latitude
CP 00063 EXP		21S	37E	17	1 2 2				13	670483	3595465	32 28 56.7

C

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Kristin Farris-Pope
Rice Operating Co.
122 W. Taylor
Hobbs, NM 88240

Project: Stock Well SE of BD F-17 UL/G
Project Number: None Given
Location: None Given

Lab Order Number: 6C09005

Report Date: 03/16/06

Rice Operating Co.	Project: Stock Well SE of BD F-17 UL/G	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	03/16/06 09:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
UL/G Stock Well	6C09005-01	Water	03/08/06 13:30	03/09/06 07:00

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: Stock Well SE of BD F-17 UL/G	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	*03/16/06 09:57*

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UL/G Stock Well (6C09005-01) Water									
Total Alkalinity	**212**	2.00	mg/L	1	EC60905	03/09/06	03/09/06	EPA 310.1M	
Chloride	**413**	10.0	"	20	EC61306	03/10/06	03/13/06	EPA 300.0	
Total Dissolved Solids	**1480**	5.00	"	1	EC61011	03/09/06	03/10/06	EPA 160.1	
Sulfate	**286**	10.0	"	20	EC61306	03/10/06	03/13/06	EPA 300.0	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: Stock Well SE of BD F-17 UL/G	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	03/17/06 16:32

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UL/G Stock Well (6C09005-01) Water									
Calcium	**226**	0.500	mg/L	50	EC61608	03/16/06	03/16/06	EPA 6010B	
Magnesium	**75.2**	0.0500	"	"	"	"	"	"	
Potassium	**9.76**	0.500	"	10	"	"	"	"	
Sodium	**176**	0.500	"	50	"	"	"	"	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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
Batch EC60905 - General Preparation (WetChem)										
Blank (EC60905-BLK1)				Prepared & Analyzed: 03/09/06						
Total Alkalinity	ND	2.00	mg/L							
LCS (EC60905-BS1)				Prepared & Analyzed: 03/09/06						
Bicarbonate Alkalinity	216	2.00	mg/L	200		108	85-115			
Duplicate (EC60905-DUP1)		**Source: 6C02020-01**		Prepared & Analyzed: 03/09/06						
Total Alkalinity	195	2.00	mg/L		194			0.514	20	
Reference (EC60905-SRM1)				Prepared & Analyzed: 03/09/06						
Total Alkalinity	97.0		mg/L	100		97.0	90-110			
Batch EC61011 - General Preparation (WetChem)										
Blank (EC61011-BLK1)				Prepared: 03/09/06 Analyzed: 03/10/06						
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EC61011-DUP1)		**Source: 6C08002-01**		Prepared: 03/09/06 Analyzed: 03/10/06						
Total Dissolved Solids	3780	5.00	mg/L		3810			0.791	5	
Batch EC61306 - General Preparation (WetChem)										
Blank (EC61306-BLK1)				Prepared: 03/10/06 Analyzed: 03/13/06						
Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	"							
LCS (EC61306-BS1)				Prepared: 03/10/06 Analyzed: 03/13/06						
Chloride	9.48		mg/L	10.0		94.8	80-120			
Sulfate	9.55		"	10.0		95.5	80-120			

Rice Operating Co.	Project: Stock Well SE of BD F-17 UL/G	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	03/16/06 09:57

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
Batch EC61306 - General Preparation (WetChem)										
Calibration Check (EC61306-CCV1)				Prepared: 03/10/06 Analyzed: 03/13/06						
Sulfate	9.79		mg/L	10.0		97.9	80-120			
Chloride	9.64		"	10.0		96.4	80-120			
Duplicate (EC61306-DUP1)		**Source: 6C07011-01**		Prepared: 03/10/06 Analyzed: 03/13/06						
Sulfate	753	250	mg/L		812			7.54	20	
Chloride	11500	250	"		11300			1.75	20	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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
Batch EC61608 - 6010B/No Digestion										
Blank (EC61608-BLK1)				Prepared & Analyzed: 03/16/06						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EC61608-CCV1)				Prepared & Analyzed: 03/16/06						
Calcium	2.13		mg/L	2.00		106	85-115			
Magnesium	2.12		"	2.00		106	85-115			
Potassium	1.86		"	2.00		93.0	85-115			
Sodium	1.80		"	2.00		90.0	85-115			
Duplicate (EC61608-DUP1)		**Source: 6C08002-01**		Prepared & Analyzed: 03/16/06						
Calcium	230	0.500	mg/L		226			1.75	20	
Magnesium	140	0.0500	"		144			2.82	20	
Potassium	32.3	0.500	"		32.0			0.933	20	
Sodium	974	2.00	"		965			0.928	20	

Notes and Definitions

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: Raland K Tuttle Date: 3-17-06

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Kristyn Pope
Company Name: Rice Operating
Company Address: 122 w Taylor
City/State/Zip: Hobbs, NM 88240
Telephone No: 393-9174 Fax No:
Sampler Signature: Melanie Franks

Project Name: Stock well SE of BD F-17 U/G
Project #:
Project Loc:
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO3	HCl	NaOH	H2SO4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: TOTAL: TDS / CL / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	Major Cations, Cations					RUSH TAT (Pre-Schedule)
-17	U/G Stock well	3/8/08	1:30	1	X							X				X								X					

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Melanie Franks	3/8/08	4:00		3/8	17:00
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
	3/9	7:00		3/9/08	9:00

Sample Containers Intact? Y N
Temperature Upon Receipt: 4°C
Laboratory Comments:

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

Client: Rice Dp.

Date/Time: 3/9/06 8:45

Order #: 6C09005

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	4.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

_____

_____

_____

Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____

Regarding:

_____

_____

_____

Corrective Action Taken:

_____

_____

_____

_____

_____

_____

_____

_____

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Kristin Farris-Pope
Rice Operating Co.
122 W. Taylor
Hobbs, NM 88240

Project: Stock Well SW of BD F-17 UL/L
Project Number: None Given
Location: None Given

Lab Order Number: 6C09006

Report Date: 03/16/06

Rice Operating Co.	Project: Stock Well SW of BD F-17 UL/L	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	03/16/06 09:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
UL/L Stock Well	6C09006-01	Water	03/08/06 14:00	03/09/06 07:00

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: Stock Well SW of BD F-17 UL/L	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	03/16/06 09:57

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UL/L Stock Well (6C09006-01) Water									
Total Alkalinity	**162**	2.00	mg/L	1	EC60905	03/09/06	03/09/06	EPA 310.1M	
Chloride	**52.5**	5.00	"	10	EC61306	03/10/06	03/13/06	EPA 300.0	
Total Dissolved Solids	**376**	5.00	"	1	EC61011	03/09/06	03/10/06	EPA 160.1	
Sulfate	**68.7**	5.00	"	10	EC61306	03/10/06	03/13/06	EPA 300.0	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: Stock Well SW of BD F-17 UL/L	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	03/17/06 16:31

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UL/L Stock Well (6C09006-01) Water									
Calcium	**13.1**	0.100	mg/L	10	EC61608	03/16/06	03/16/06	EPA 6010B	
Magnesium	**17.9**	0.0100	"	"	"	"	"	"	
Potassium	**8.18**	0.500	"	"	"	"	"	"	
Sodium	**70.2**	0.500	"	50	"	"	"	"	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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
Batch EC60905 - General Preparation (WetChem)										
Blank (EC60905-BLK1)				Prepared & Analyzed: 03/09/06						
Total Alkalinity	ND	2.00	mg/L							
LCS (EC60905-BS1)				Prepared & Analyzed: 03/09/06						
Bicarbonate Alkalinity	216	2.00	mg/L	200		108	85-115			
Duplicate (EC60905-DUP1)		Source: 6C02020-01		Prepared & Analyzed: 03/09/06						
Total Alkalinity	195	2.00	mg/L		194			0.514	20	
Reference (EC60905-SRM1)				Prepared & Analyzed: 03/09/06						
Total Alkalinity	97.0		mg/L	100		97.0	90-110			
Batch EC61011 - General Preparation (WetChem)										
Blank (EC61011-BLK1)				Prepared: 03/09/06 Analyzed: 03/10/06						
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EC61011-DUP1)		Source: 6C08002-01		Prepared: 03/09/06 Analyzed: 03/10/06						
Total Dissolved Solids	3780	5.00	mg/L		3810			0.791	5	
Batch EC61306 - General Preparation (WetChem)										
Blank (EC61306-BLK1)				Prepared: 03/10/06 Analyzed: 03/13/06						
Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	"							
LCS (EC61306-BS1)				Prepared: 03/10/06 Analyzed: 03/13/06						
Chloride	9.48		mg/L	10.0		94.8	80-120			
Sulfate	9.55		"	10.0		95.5	80-120			

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763

Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Kristin Pope
Company Name: Rice Operating
Company Address: 122 W. Taylor
City/State/Zip: Hobbs, NM 88240
Telephone No: 393-9174
Fax No:
Sampler Signature: Melanie Franko

Project Name: Stock well SW of BD F-17 UL/L
Project #:
Project Loc:
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TDS / CL / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	Major anions/cations						RUSH TAT (Pre-Schedule)
01	UL/L Stockwell	3/8/06	2:00	1	X							X				X (TDS circled)								X						

TCLP:
TOTAL:

[illegible]

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Melanie Franko	3/8/06	4:00 ([illegible] struck out)	[illegible signature]	3/8	17:00

Relinquished by:	Date	Time	Received by ELOT:	Date	Time
[illegible signature]	3/8	7:00	[illegible signature]	4/9/06	9:00

Sample Containers Intact? (Y) N
Temperature Upon Receipt:
Laboratory Comments: [illegible]

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

Client: Rice Dp.

Date/Time: 3/9/06 8:45

Order #: 6C090006

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	4.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____

Regarding:

Corrective Action Taken:

Appendix B

Boring and Completion Logs

RICE OPERATING COMPANY

JUNCTION BOX DISCLOSURE FORM *

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
BD	F-17	F	17	21S	37E	Lea	Box has been moved 45 ft south		

LAND TYPE: BLM _____ STATE _____ FEE LANDOWNER Millard Deck Estate OTHER _____

Depth to Groundwater 72 feet NMOCD SITE ASSESSMENT RANKING SCORE: 10

Date Started 9/17/2002 Date Completed not complete OCD Witness No

Soil Excavated 175 cubic yards Excavation Length 20 Width 20 Depth 12 feet

Soil Disposed 0 cubic yards Offsite Facility n/a Location n/a

FINAL ANALYTICAL RESULTS: **Sample Date** n/a **Sample Depth** n/a

Procure 5-point composite sample of bottom and 4-point composite sample of sidewalls. TPH, BTEX and Chloride laboratory test results completed by using an approved lab and testing *procedures pursuant to NMOCD guidelines.*

Sample Location	Benzene mg/kg	Toluene mg/kg	Ethyl Benzene mg/kg	Total Xylenes mg/kg	GRO mg/kg	DRO mg/kg	Chlorides mg/kg
Vertical @ 12 ft	<0.005	0.009	<0.005	<0.015	<10.0	724	1040

General Description of Remedial Action: Site was delineated vertically and laterally with a backhoe. Chloride impact was consistent vertically, while TPH was visible to 11' bgs. The site was bored on 11/18/02 and chloride was found to impact groundwater with no indications of TPH. A cased monitor well was installed and the groundwater has been sampled and analyzed quarterly (see annual groundwater report for results). ROC has contracted a hydrologic consultant to assist ROC in developing a remediation plan for the vadose zone at groundwater-impacted sites with the ultimate objective being final closure. The excavation has been backfilled and the junction moved 45 ft south of this site.

ADDITIONAL EVALUATION IS *MEDIUM* PRIORITY.

enclosures: chloride curve, well log, photos, lab results

CHLORIDE FIELD TESTS

LOCATION	DEPTH (ft)	ppm
Vertical	3	6001
	5	1591
	11	1749
	13	3273
10' S **	7	2401
	11	4278
Soil Bore	20	5197
	50	2133
	70	1209
	75	425

** During excavation of this site, an older box was found; The bore was conducted close to this box

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

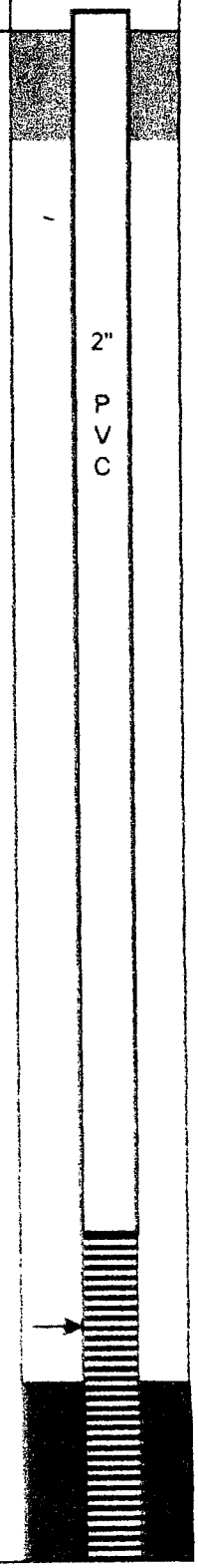
DATE 11/7/2003 PRINTED NAME Kristin Farris

SIGNATURE Kristin Farris TITLE Project Scientist

** This site is a "DISCLOSURE." It will be placed on a prioritized list of similar sites for further consideration.*

DRILLING LOG	Site Name/Location	BORING/WELL INFORMATION			Logged by: Eades
RICE Operarting Company	Jct. F-17	Well No.: M W 1	Date Drilled: 11-18-02	Driller: Eades	Completion:
122 West Taylor	17-T21S-R37E	Well Depth: 85'	Boring Depth: 85'	Well Material: PVC	Packed with
Hobbs, New Mexico 88240	BD SWD System	Casing Length: 88'	Boring Diameter: 7"	Casing Size: 2"	bentonite; grouted
(505) 393-9174	Lea County, NM	Screen Length: 20'	Drilling Method: Air Rotary	Slot Size: N/A	at surface.

DEPTH	SUBSURFACE LITHOLOGY	SAMPLE TYPE	Test Results (ppm) Cl	TPH	REMARKS	Boring
0	Ground surface		Titrate	EPA 418.1		
	Top Soil					
5	Caliche	Grab	2,212		grout	
10	Tan caliche and loam chunks	Grab	492			
15	Sand	Grab	2,412			
20	Red sand	Grab	5,197			
21	Sand and Sandstone Stringers					
25	Red Sand	Grab	3,152			
30	Tan caliche powder	Grab	4,628			
34	Sand					
35	Tan sand	Grab	2,508		bentonite	
36	Sand and Sandstone Stringers					
40	Tan Sand	Grab	352			
45	Tan Sand	Grab	2,420			
50	Reddish-brown sand	Grab	2,133			
55	Sandy Gravel	Grab	2,665			
60	Reddish-brown sand	Grab	1,905			
64	Sand and Sandstone Stringer					
65	Tan sand and Caliche	Grab	1,800			
70	Tan sand and caliche moist	Grab	1,209		screen	
75	Tan sand with rocks, moist	Grab	425			
80					water	
85	Sand and Sandstone Stringers					

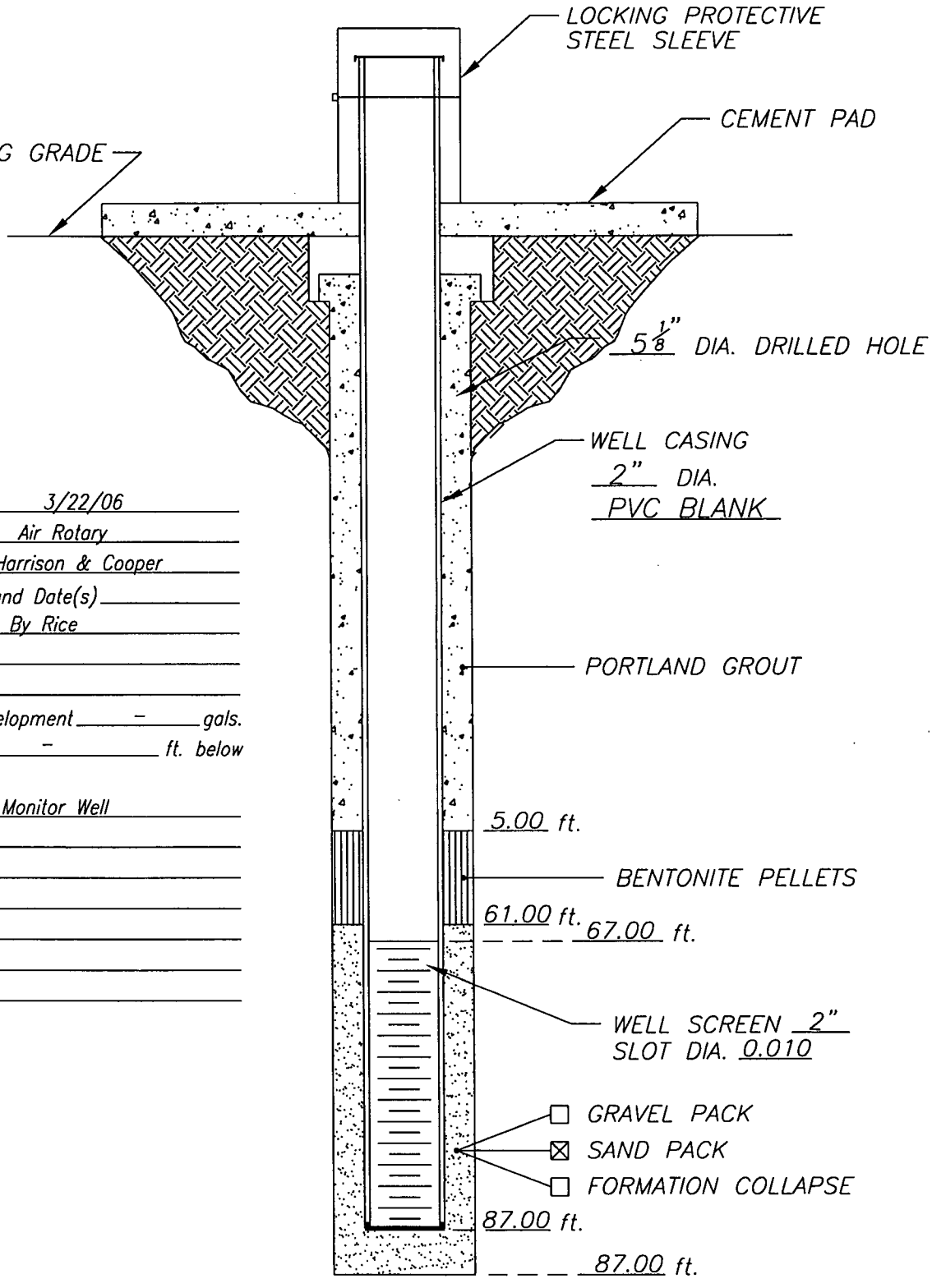


SAMPLE LOG

Boring/Well: BH-2
Project Number: 2305
Client: Rice
Site Location: F-17
Location: Lea County, New Mexico
Total Depth 87'
Date Installed: 3/22/2006

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-3	-	Lt. brown, fine grain sand, some traces of caliche
3-5	-	White, caliche and tan, fine grain sand
5.0	-	Tan, fine grain sand and some white caliche, sandy with depth
10.0	-	Tan, fine grain sand, trace of white caliche
15.0	-	Tan, fine grain sand, trace of white caliche
20	-	White, caliche, dense, some layers of fine grain sand
25	-	White, caliche, dense, some layers of fine grain sand
30.0	-	White, caliche, dense, some layers of fine grain sand
35.0	-	Tan, fine grain sand, trace of white caliche
40.0	-	Tan/lt. red, fine grain sand, loose
45.0	-	Tan/lt. red, fine grain sand, loose
50.0	-	Tan/lt. red, fine grain sand, some loose with compacted layers sand
55.0	-	Tan, gravel and fine grain sand, loose
60.0	-	Tan, gravel and fine grain sand, loose
65.0	-	Tan, gravel and fine grain sand, some broken caliche
70.0	-	Tan, limestone, dense layer, some sand stringers
75.0	-	Tan, fine grain sand, compacted with some cemented sandstone
80.0	-	Tan, fine grain sand, compacted with some cemented sandstone
87.0	-	Tan, fine grain sand, compacted with some cemented sandstone
		Total Depth - 87'

WELL CONSTRUCTION LOG



Installation Date(s) 3/22/06
Drilling Method Air Rotary
Drilling Contractor Harrison & Cooper
Development Technique(s) and Date(s)
Developed By Rice

Water Removed During Development – gals.
Static Depth to Water – ft. below Ground Level
Well Purpose Monitor Well

Remarks

DATE: 3/22/06	CLIENT: Rice Operating Company PROJECT: F-17 LOCATION: Lea County, New Mexico	WELL NO. MW-2

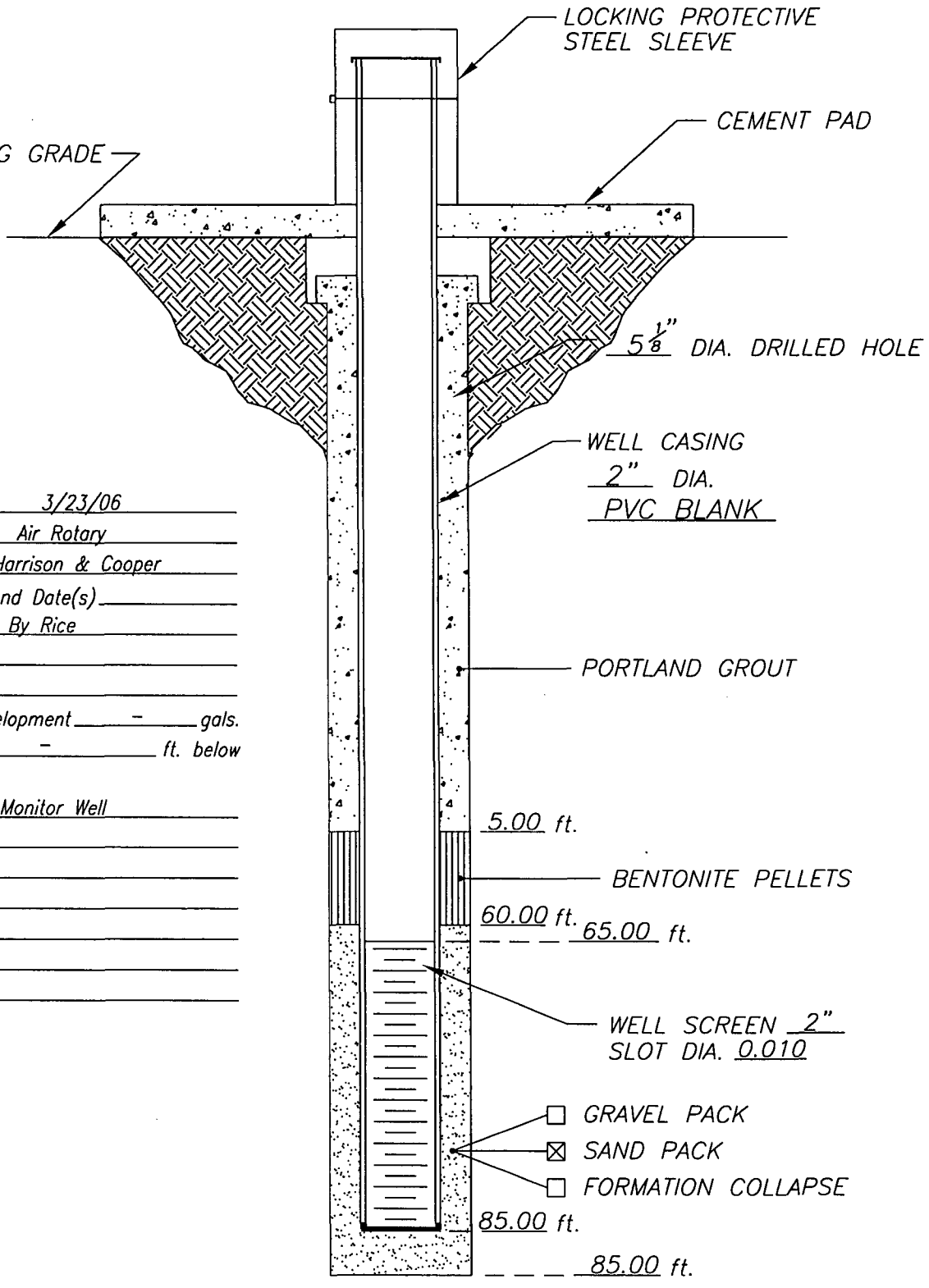
Highlander Environmental

SAMPLE LOG

Boring/Well: BH-3
Project Number: 2305
Client: Rice
Site Location: F-17
Location: Lea County, New Mexico
Total Depth 85'
Date Installed: 3/23/2006

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-3	-	Lt. brown, fine grain sand, some traces of caliche
3-5	-	White, caliche and tan, fine grain sand
5.0	-	Tan, fine grain sand and some white caliche, sandy with depth
10.0	-	Tan, fine grain sand, trace of white caliche
15.0	-	Tan, fine grain sand, trace of white caliche
20	-	White, caliche, dense, some layers of fine grain sand
25	-	White, caliche, dense, some layers of fine grain sand
30.0	-	White, caliche, dense, some layers of fine grain sand
35.0	-	Tan, fine grain sand, trace of white caliche
40.0	-	Tan/lt. red, fine grain sand, loose
45.0	-	Tan/lt. red, fine grain sand, loose
50.0	-	Tan/lt. red, fine grain sand, some loose with compacted layers sand
55.0	-	Tan, gravel and fine grain sand, loose
60.0	-	Tan, gravel and fine grain sand, loose
65.0	-	Tan, gravel and fine grain sand, some broken caliche
70.0	-	Tan, limestone, dense layer, some sand stringers
75.0	-	Tan, fine grain sand, compacted with some cemented sandstone
80.0	-	Tan, fine grain sand, compacted with some cemented sandstone
85.0	-	Tan, fine grain sand, compacted with some cemented sandstone
		Total Depth - 85'

WELL CONSTRUCTION LOG



Installation Date(s) 3/23/06
Drilling Method Air Rotary
Drilling Contractor Harrison & Cooper
Development Technique(s) and Date(s)
Developed By Rice

Water Removed During Development - gals.
Static Depth to Water - ft. below Ground Level
Well Purpose Monitor Well

Remarks

DATE: 3/23/06	CLIENT: Rice Operating Company	WELL NO.
Highlander Environmental	PROJECT: F-17	MW-3
	LOCATION: Lea County, New Mexico	

Appendix C

Analytical Data Tables

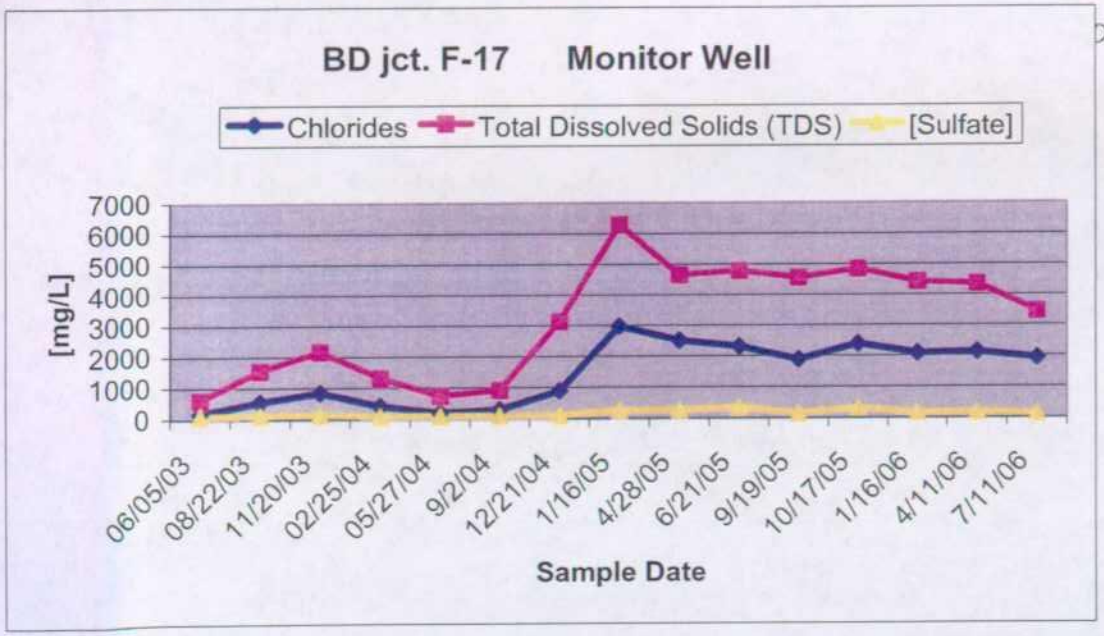
BD jct. F-17
unit 'F', Sec. 17, T21S, R37E

NMOCD Case #1R0426-14

RICE *Operating Company*
Monitor Well Data Sheet

(ft) (gal) All concentrations are in mg/L

MW #	DEPTH TO WATER *	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	SULFATE	COMMENTS
1	75.67	85.20	1.524	4.50	06/05/03	177	589	0.004	<0.001	<0.001	<0.001	97.6	
1	75.73	85.12	1.500	4.50	08/22/03	549	1540	<0.001	<0.001	<0.001	<0.001	112	
1	75.75	84.85	1.456	4.30	11/20/03	851	2160	<0.001	<0.001	<0.001	<0.001	132	
1	75.73	84.48	1.400	4.20	02/25/04	415	1300	<0.001	<0.001	<0.001	<0.001	96.8	
1	71.75	85.12	2.130	6.40	05/27/04	195	726	<0.001	<0.001	<0.001	<0.001	97.8	
1	75.48	84.60	1.46	4.40	9/2/04	284	896	<0.001	<0.001	<0.001	<0.001	90.6	lt. brown; cloudy
1	75.10	84.00	1.42	4.50	12/21/04	886	3120	<0.001	<0.001	<0.001	<0.001	96.2	
1	75.18	84.07	1.42	4.26	1/16/05	2970	6280	<0.001	<0.001	<0.001	<0.001	257	re-sample
1	75.21	84.2	1.44	5.00	4/28/05	2510	4640	<0.001	<0.001	<0.001	<0.001	259	
1	75.2	84.15	1.43	10.00	6/21/05	2310	4770	<0.001	<0.001	<0.001	<0.001	339	
1	XXX	XXX	XXX	XXX	9/19/05	1890	4540	<0.001	<0.001	<0.001	<0.001	147	
1	75.2	84.2	1.4	5	10/17/05	2400	4830	<0.001	<0.001	<0.001	<0.001	319	
1	85.15	84.2	1.4	8	1/16/06	2090	4410	<0.001	<0.001	<0.001	<0.001	154	Silt to Clear no odor
1	75.2	84.2	1.4	8	4/11/06	2130	4340	<0.001	<0.001	<0.001	<0.001	167	Silt to Clear no odor
1	75.22	84.2	1.4	10	7/11/06	1930	3440	<0.001	<0.001	<0.001	<0.001	126	Clear no odor



Depth to water is measured from top of casing
Casing is 3.104 ft

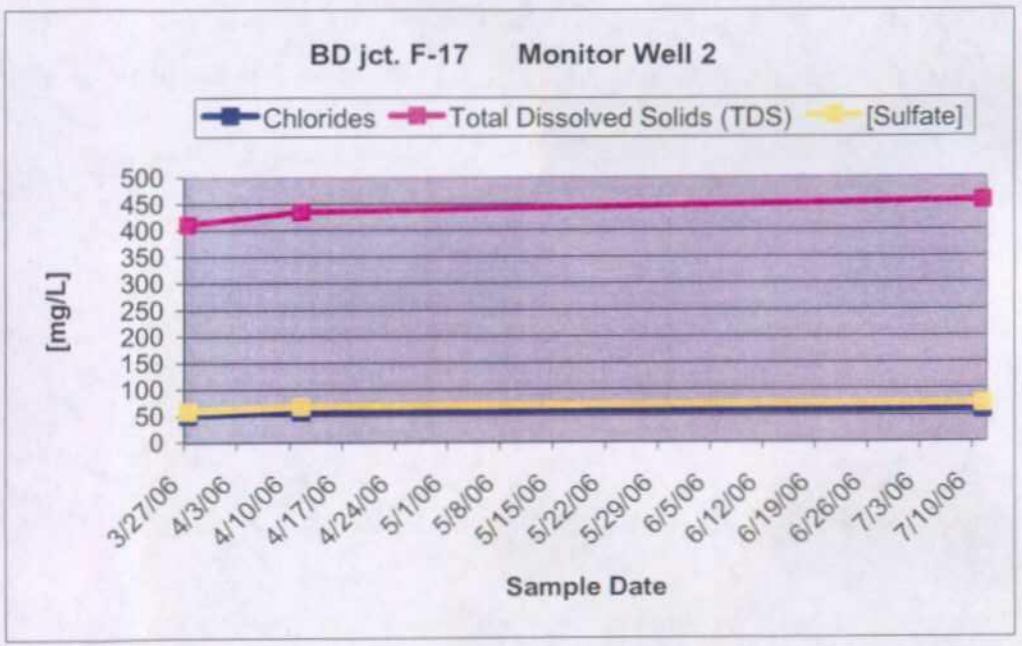
BD jct. F-17
unit 'F', Sec. 17, T21S, R37E

NMOCD Case #1R0426-14

RICE *Operating Company*
Monitor Well Data Sheet

(ft) (gal) All concentrations are in mg/L

MW #	DEPTH TO WATER *	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	SULFATE	COMMENTS
2	75.55	90.00	2.300	10.00	3/27/06	50.8	412	<0.001	<0.001	<0.001	<0.001	58.4	
2	75.90	90.00	2.300	10.00	4/11/06	57.9	436	<0.001	<0.001	<0.001	<0.001	68.2	
2	75.60	90.00	2.300	10.00	7/11/06	60.5	456	<0.001	<0.001	<0.001	<0.001	73.3	



** Depth to water is measured from top of casing*
Casing is 3.104 ft

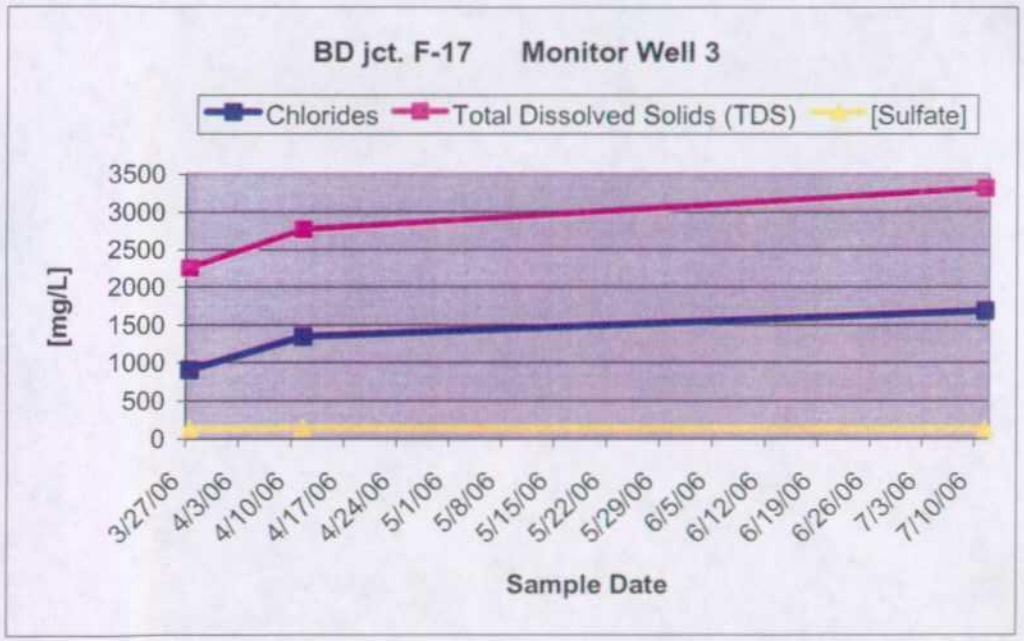
BD jct. F-17
unit 'F', Sec. 17, T21S, R37E

NMOCD Case #1R0426-14

RICE *Operating Company*
Monitor Well Data Sheet

(ft) (gal) All concentrations are in mg/L

MW #	DEPTH TO WATER *	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	SULFATE	COMMENTS
3	73.91	88.00	2.300	10.00	3/27/06	901	2240	<0.001	<0.001	<0.001	<0.001	126	
3	73.93	88.00	2.300	10.00	4/11/06	1340	2750	<0.001	<0.001	<0.001	<0.001	138	
3	73.91	88.00	2.300	10.00	7/11/06	1680	3300	<0.001	<0.001	<0.001	<0.001	125	



** Depth to water is measured from top of casing*
Casing is 3.104 ft