

**AP - 27**

**ANNUAL  
MONITORING REPORT**

**YEAR(S):**

**2004**

# RICE Operating

AP-27      BD  
LEAK      ~~Donation Box~~ E-15  
2004 Annual Report



Whole Earth Environmental  
2103 Arbor Cove  
Katy, TX 77494  
281.394.2050  
[whearth@msn.com](mailto:whearth@msn.com)

# **RICE** *Operating Company*

122 West Taylor • Hobbs, New Mexico 88240  
Phone: (505)393-9174 • Fax: (505) 397-1471

CERTIFIED MAIL  
RETURN RECEIPT NO. 7002 2410 0000 4940 1848

January 28, 2005

Mr. Wayne Price  
New Mexico Energy, Minerals, & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87505

**RE: 2004 MONITOR WELL REPORT/SAMPLING SUMMARY  
E-15 LEAK SITE, BD SWD SYSTEM  
UNIT 'E', SEC. 15, T22S, R37E  
NMOCD CASE #AP-27**

Mr. Price:

Rice Operating Company (ROC) takes this opportunity to submit the 2004 Annual Monitor Well Report prepared by Whole Earth Environmental, Inc. (Whole Earth) of Houston, Texas for the E-15 leak site located in the Blinebry-Drinkard (BD) Salt Water Disposal (SWD) System. As in 2004, Whole Earth will sample the wells and Environmental Lab of Texas of Odessa will continue to conduct the water analysis in 2005. With the recent resolution of various landowner issues, NMOCD may expect to see significant progress on this site in 2005.

ROC is the service provider (operator) for the BD Salt Water Disposal System and has no ownership of any portion of pipeline, well, or facility. The BD SWD System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis.

Thank you for your consideration concerning this annual summary of groundwater monitoring information. If you have any questions, do not hesitate to contact me or Mike Griffin.

RICE OPERATING COMPANY



Kristin Farris Pope  
Project Scientist

enclosures: 2004 annual report

cc: LBG, CDH, Whole Earth, file, Rob Roy Industries,

Chris Williams  
NMOCD, District I Office  
1625 N. French Drive  
Hobbs, NM 88240



## **Executive Summary**

### **Location**

The site is located approximately five miles southeast of Eunice, New Mexico on fee land. The primary land use of the area is for the grazing of cattle.

### **Remediation History**

In October, 2001 Whole Earth excavated approximately twenty-nine thousand cubic yards of brine contaminated soils from an area having the approximate dimensions of 140' X 160' X 35' bgs. In accordance with the remediation protocol PR-62, each of the four side walls and the bottom of the excavation were sampled and tested at Environmental Labs of Texas for the presence and concentrations of BTEX, TPH and chlorides.

A clay liner having the minimum compacted thickness of 12" was constructed at the bottom of the excavation and tested by Pettigrew and Associates for density. A 20 mil high density polyethylene liner was placed atop the clay barrier and brought up the sides of the excavation to the surface. Care was taken to insure that the liner was not cut or punctured during placement or backfilling. The excavated soils were replaced within the excavation and compacted to minimize future subsidence. A top liner also consisting of 20 mil high density polyethylene was set at a maximum depth of 5' bgs and the bottom liner folded over all edges.

Fresh topsoils were placed atop the upper liner and contoured to match the surrounding elevations. The area was seeded with native grasses to minimize erosion, and posts were installed at each corner of the encapsulated area advising of the presence of a buried liner.

### **Hydrological Activities**

Significant delays were encountered in obtaining easement agreements with the affected landowners to install additional delineation and recovery wells. Final agreement was concluded on November 1<sup>st</sup>, 2004. The first available date for scheduling a drilling rig was December 27<sup>th</sup>.

We attempted to advance a monitor well to the southeast of the existing delineation string drilling to a total depth of 107' below ground surface (bgs) without finding water though the redbeds were encountered at 85' bgs. The lack of water at monitor well 5DH clearly defines the southeastern (down-gradient) edge of the plume. Split spoon soil samples were obtained during the drilling of the monitor well and showed nominal chloride concentrations throughout the entire vertical profile. The dry hole was sealed with bentonite at the top and bottom of the bore and grouted within the interval.

A second 4" diameter source well was advanced at a point approximately equidistant between monitor wells one and two encountering water at an approximate depth of 73' bgs. The well was cased, screened, developed and tested on December 28<sup>th</sup>. The results of the water quality survey are contained within the laboratory analytical section of this report.

We will be setting another monitor well to the east of the existing string in February pending a favorable outcome of citing discussions with the landowner. The NMOCD will be notified in advance of the drilling event to witness the operations.

Investigations are continuing as to the best method of drawing and treating fluids from the recovery well. We are presently considering four options:

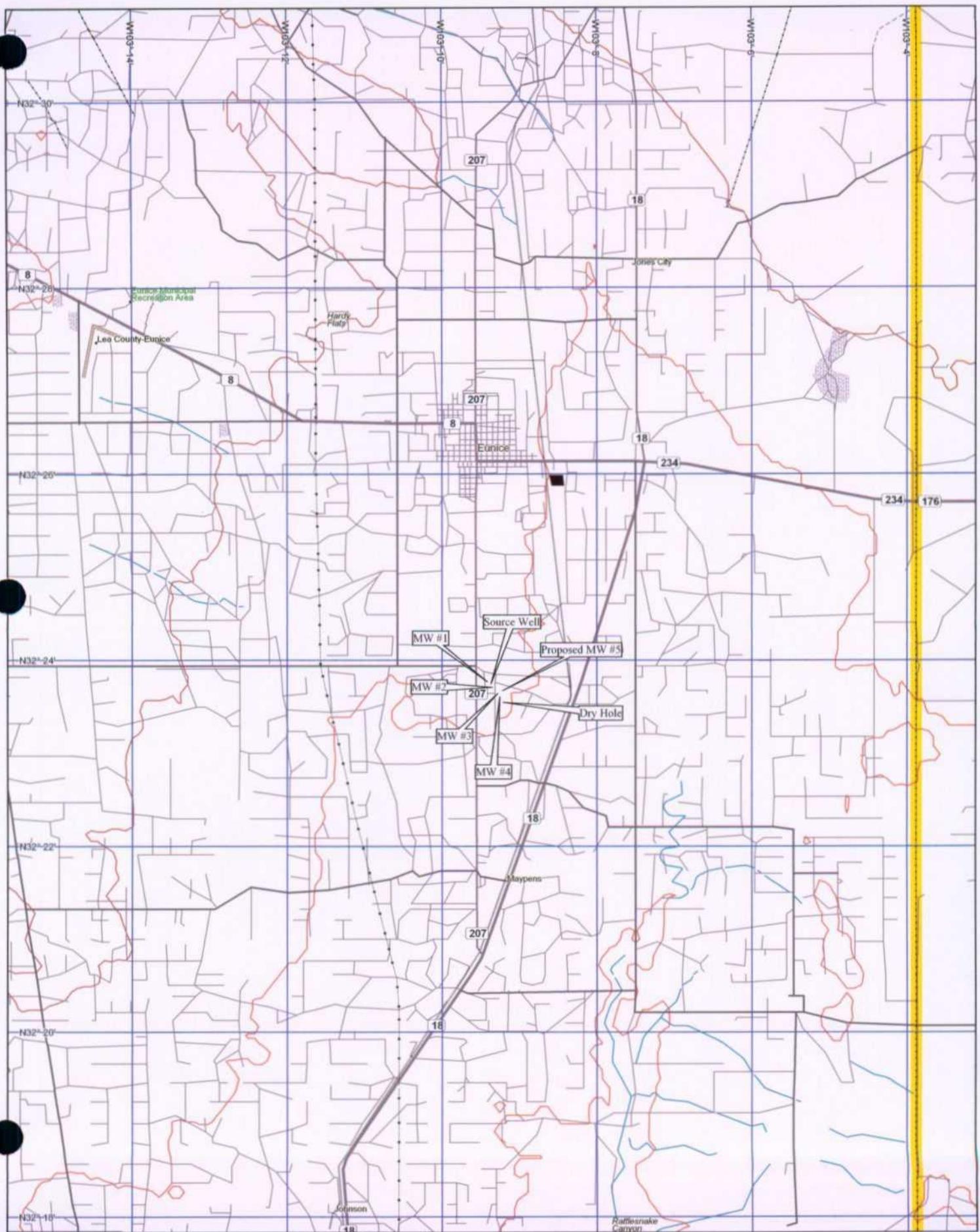
- Solar panels to power a down-hole pump and reverse osmosis system capable of pumping approximately 1,000 gallons of fluid per day producing approximately 300 gallons per day of potable water.
- Skid mounted electrical generators powering both the down-hole pump and RO unit-again producing approximately 1,000 gallons per day.
- A hard wired system. The potential volumes of produced fluids are quite flexible and depend largely on the disposal systems capacity for transporting the highly concentrated effluent generated by the RO unit.
- A purely mechanical system driven entirely by wind power.

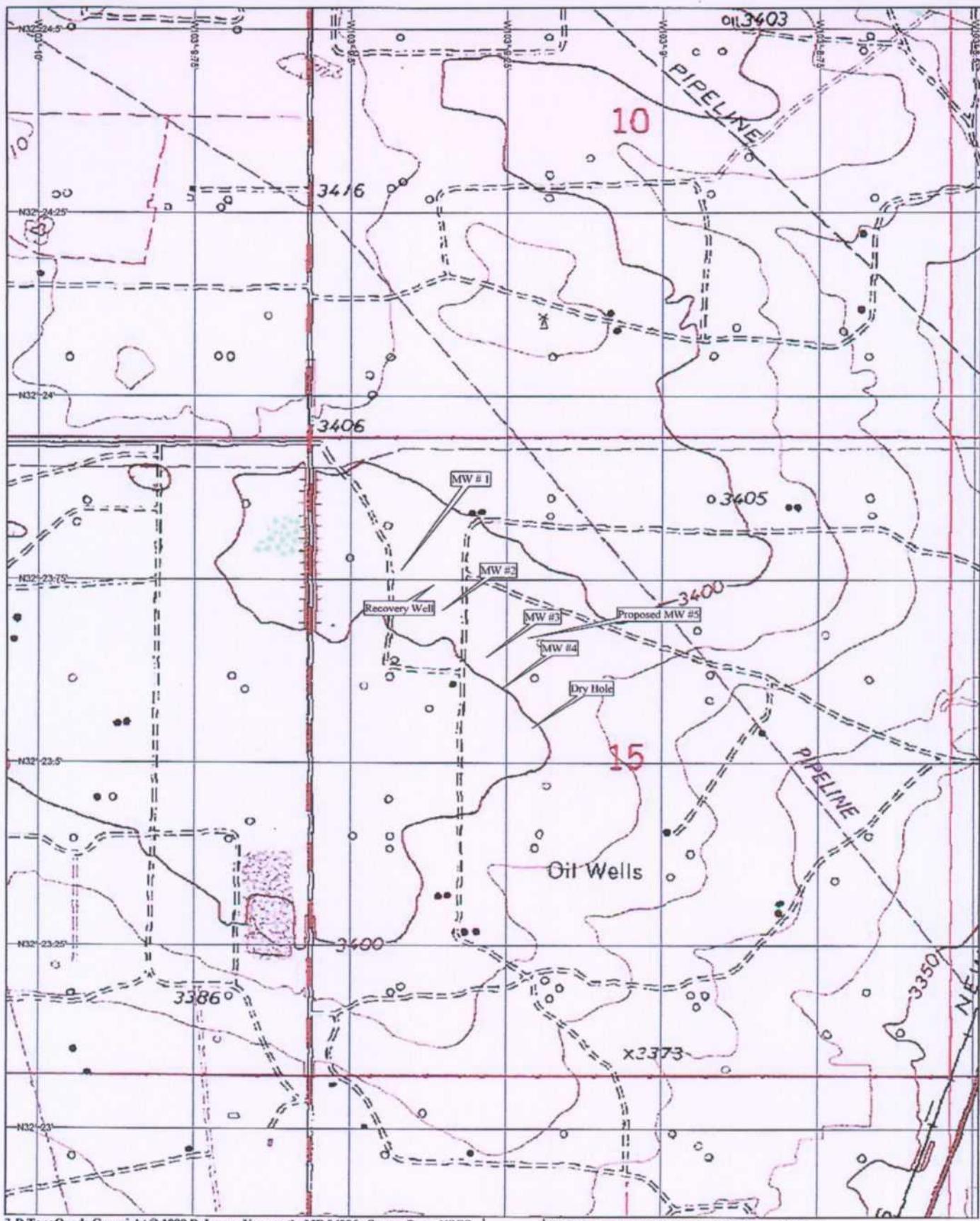
We hope to have a final decision on the treatment approach by the end of March.



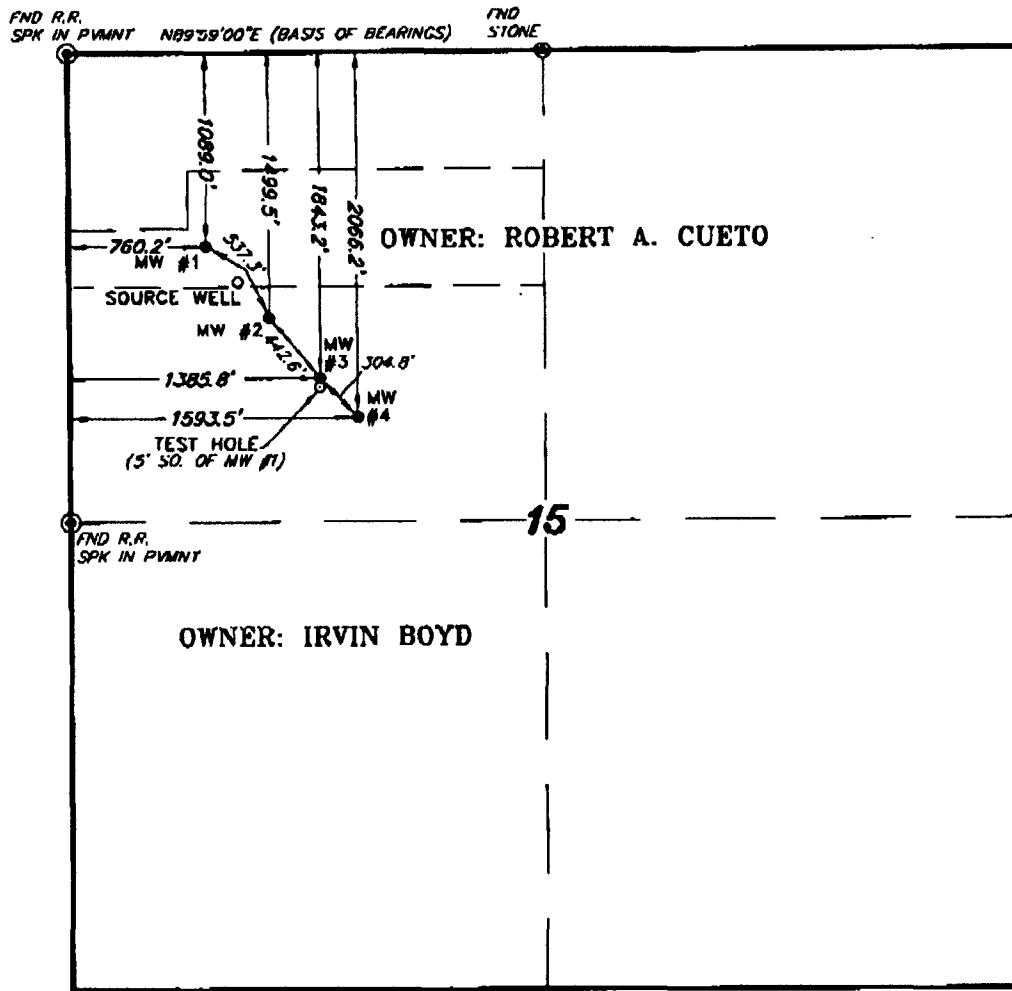
## **Exhibit Index**

1. U.S.G.S. topographical map showing the location relative to major landmarks
2. U.S.G.S. topographical map showing surface contours
3. Basin Survey plat map showing the exact location of the monitor wells
4. Gradient chart
5. Chloride isopleth
6. Potentiometric contour map showing surface elevations and site landmarks
7. Boring Log recovery well
8. Boring Log monitor well # 1
9. Boring Log monitor well # 2
10. Boring Log monitor well # 3
11. Boring Log monitor well # 4
12. Boring Log monitor well # 5DH





**SECTION 15, TOWNSHIP 22 SOUTH, RANGE 37 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.**



WELL	GRND ELEV.	PAD ELEV.	NORTHING	EASTING	LATITUDE	LONGITUDE
MW #1	3398.3'	3398.6'	N509436.578	E904771.875	N32°23'42.0"	W103°09'21.2"
MW #2	3398.4'	3398.9'	N509096.706	E905055.281	N32°23'38.6"	W103°09'17.9"
MW #3	3397.6'	3397.8'	N509842.177	E904419.441	N32°23'46.1"	W103°09'25.2"
MW #4	3397.9'	3398.6'	N508876.745	E905266.429	N32°23'36.4"	W103°09'15.5"

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

1000 0 1000 2000 FEET

RICE OPERATING COMPANY

REF: MONITOR WELLS BD SITE - Jct. Box E-15

MONITOR WELLS LOCATED IN  
SECTION 15, TOWNSHIP 22 SOUTH, RANGE 37 EAST,  
N.M.P.M., LEA COUNTY, NEW MEXICO.

GARY L. JONES N.M. P.S.  
TEXAS P.L.S. No. 7977  
No. 5074

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

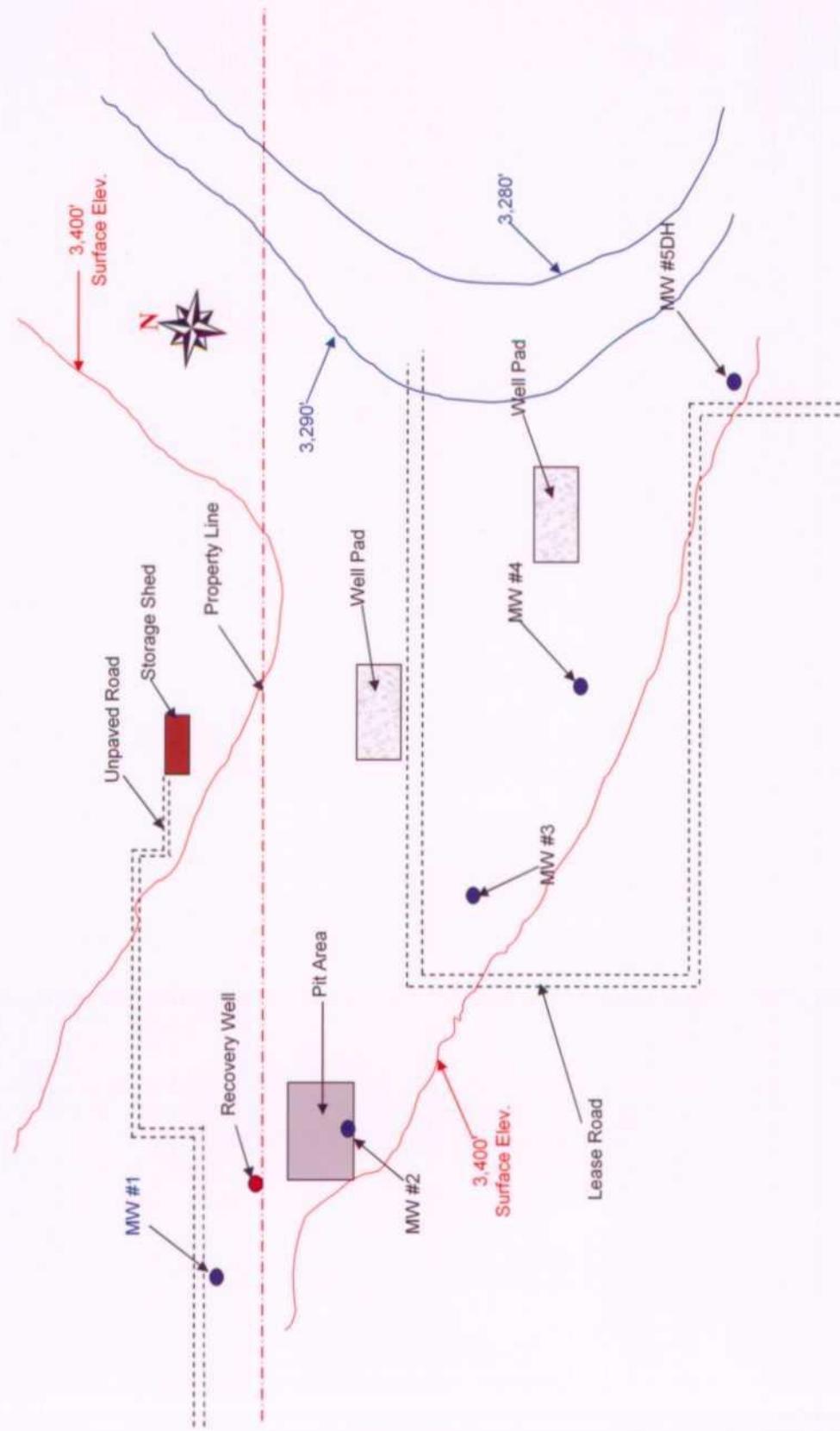
W.O. Number: 1522 Drawn By: K. GOAD

Date: 03-13-2003 Disk: KJG CD#3 - RC1522A.DWG Survey Date: 03-13-2003 Sheet 1 of 1 Sheets

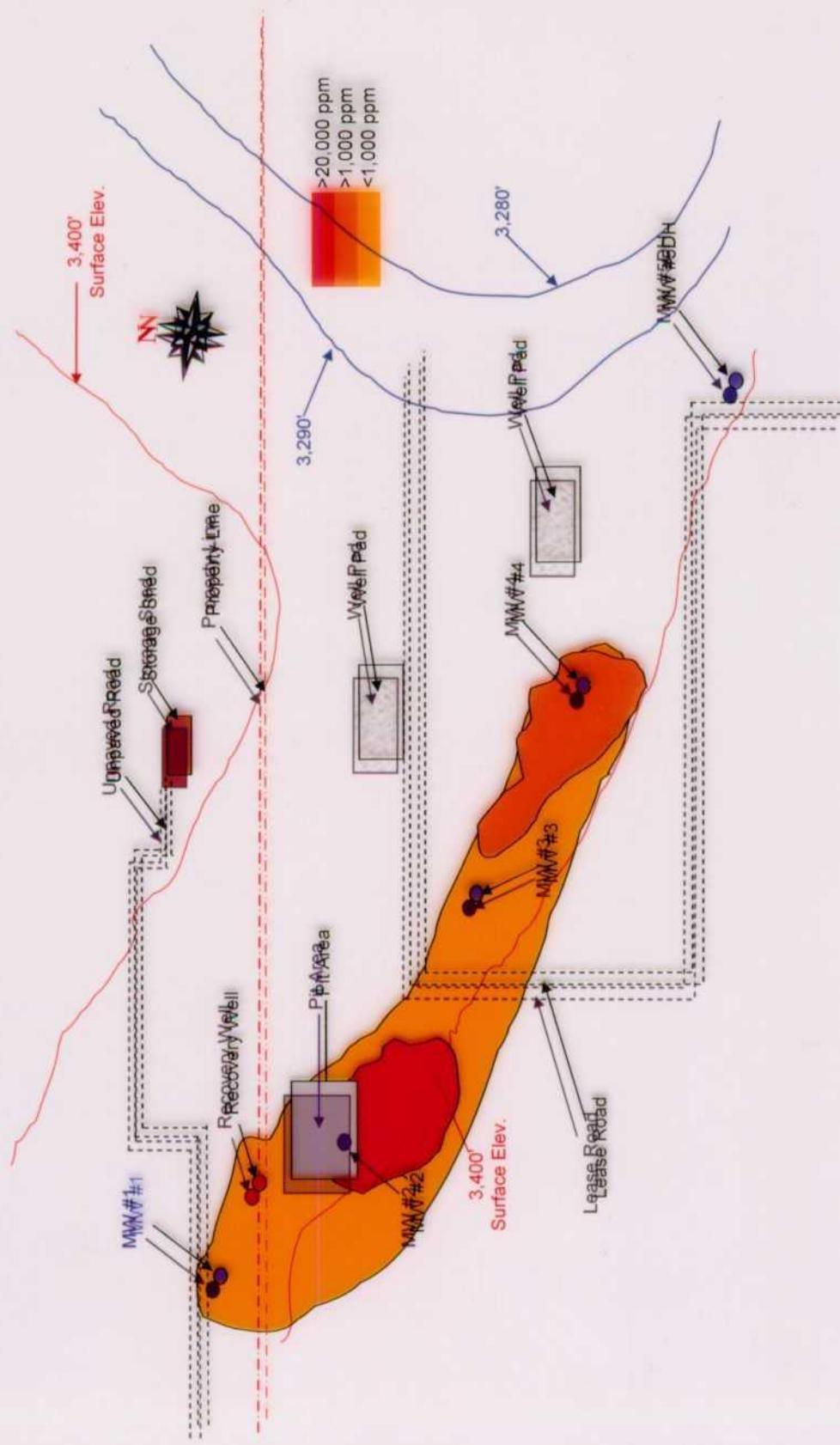
**Rice Operating Company**  
**E-15 Remediation Project**  
**Abatement Plan AP-27**  
**Gradient Detail**

Location	Latitude		Longitude		Surface Elevation	Top of Water	Bottom of Bore	Offset Distance	Gradient (Ft/ft)
	Degrees	Minutes	Degrees	Minutes					
MW 1	32 <sup>0</sup>	23.767' N	103 <sup>0</sup>	9.418' W	3,398.3	3,469.3	3,488.3		
MW 2	32 <sup>0</sup>	23.704' N	103 <sup>0</sup>	9.354' W	3,398.4	3,472.4	3,485.3	537.5	0.1376744
MW 3	32 <sup>0</sup>	23.639' N	103 <sup>0</sup>	9.283' W	3,397.6	3,474.4	3,493.7	442.6	0.1735201
MW 4	32 <sup>0</sup>	23.604' N	103 <sup>0</sup>	9.255' W	3,397.9	3,482.0	3,494.9	304.8	0.2759186
MW 5 (Proposed)	32 <sup>0</sup>	23.671' N	103 <sup>0</sup>	9.217' W					
Dry Hole	32 <sup>0</sup>	23.547' N	103 <sup>0</sup>	9.209' W					
Source Well	32 <sup>0</sup>	23.748' N	103 <sup>0</sup>	9.369' W					

Rice Operating Company  
E-15 (AP-27)  
Potentiometric Contour Map



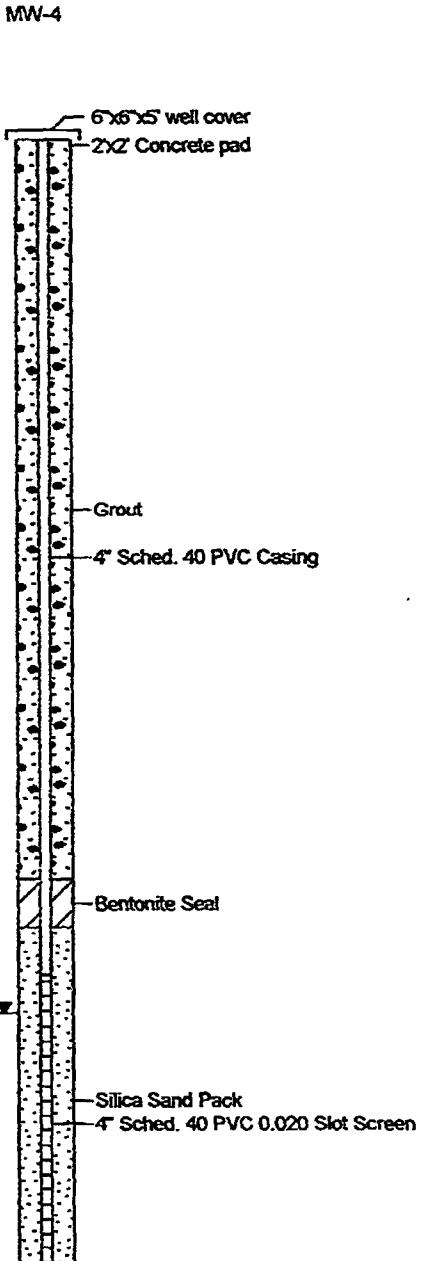
Rice Operating Company  
EEIS (APP27)  
Potential Methane Isoppth Map



ATKINS ENGINEERING ASSOCIATES, INC.  
Professional Engineering Land Surveying  
Water Resources Environmental Science

Source Well  
Log of Boring BD-E-15

Rice Operating Company 122 West Taylor Hobbs, New Mexico 88240 Contact: Roy Rascon Job#: WHOLETH.RIC.04				Drill Start/End : (12-28-04) 1045/1715 Drill Start/End : (12-29-04) 0730/1145 Site Location : NW 1/4 NW 1/4, Sec. 15, T22S, R37E Auger Type : 6 1/4 Hollow Stem Logged By : M. Bates
Depth in Feet	USCS	GRAPHIC	Sample	DESCRIPTION
0	SM			Silty Sand, Loose, Redish Tan, Damp
SC				Clayey Sand, Loose, Redish, Tan, Damp
5	SC			Clayey Sand w/Caliche, Loose, Tan, Damp
10				Silty Sand w/Caliche, Loose, Tan, Dry
15				
20				
25				
30	SM			
35				
40				
45				
50	SM			Silty Sand, Loose, Tan, Dry
55				
60	SM			Silty Sand w/Sandstone, Firm, Light Tan, Dry
65				Silty Sand, Loose, Tan, Dry
70	SM			
75	SM			Silty Sand, Loose, Tan, Damp
SP				Poorly Graded Sand w/Gravel, Loose, Tan, Damp
80	SC			Clayey Sand, Loose to Stiff, Redish Brown, Damp
85				Clayey Sand, Soft, Redish Brown, Wet
90	SC			
95				Total Depth, 95 ft. Water Level 73.20 ft.
100				



## Exhibit 16I

Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 88202-3156				LOG OF BORING Rice Operating MW-4 (Page 1 of 2)						
Whole Earth Environmental 19606 San Gabriel Houston, TX 77084				Date : 05-11-01	Site Location : SE Eunice, NM					
Contact: Mike Griffin				Drill Start/End : 0900/1500	: Sec. 15, T22S, R37E					
Job#: EUNICEG.MWD.01				Boring Location : 3 mi. S. Eunice & 1/4 mi. East	Auger Type : Hollow Stem					
					Logged By : Mort Bates					
Depth in Feet	GRAPHIC	USCS	Samples	DESCRIPTION			Lab	PID ppm-v		
0	SP	SM		Sand, red, loose, dry						
5		SM		Sand w/ caliche, tan, loose, dry						
10				Caliche, tan, hard, dry						
15										
20										
25										
30		SM		Sand w/ caliche, yellow, loose, dry						
35		SP		Sand, tan, loose, dry						
40		SP		Sand, tan, loose, dry						
45		SP								
50		SP		Sand, reddish tan, loose, dry						
55										

Well: MW-4

C:\MTECH4\6EUNICEGMWD01mw4.bor

05-14-2001

Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 88202-3156				LOG OF BORING Rice Operating MW-4 (Page 2 of 2)				
Whole Earth Environmental 19606 San Gabriel Houston, TX 77084				Date : 05-11-01	Site Location : SE Eunice, NM			
Contact: Mike Griffin				Drill Start/End : 0900/1500	: Sec. 15, T22S, R37E			
Job#: EUNICEG.MWD.01				Boring Location : 3 mi. S. Eunice & 1/4 mi. East	Auger Type : Hollow Stem			Logged By : Mort Bates
Depth in Feet	GRAPHIC	USCS	Samples	DESCRIPTION	Lab	PID ppm-v	Well: MW-4	
55				Sand, reddish tan, loose, dry				
60		SP						
65				Sand, tan, loose, damp				
70		SP						
75								
80		SP		Sand, tan, soft, wet				
85		SP		Sand, reddish, tan, soft, wet				
90								
95		CL		Sandy clay, red, tight, moist				
100								
TD 100'								
WL 78'								
105								
110								

TD 100'  
WL 78'

55' to 110' depth scale.

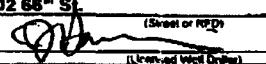
Geological Units:

- 55' - 65': Sand, reddish tan, loose, dry (SP)
- 65' - 75': Sand, tan, loose, damp (SP)
- 75' - 80': Sand, tan, soft, wet (SP)
- 80' - 85': Sand, reddish, tan, soft, wet (SP)
- 85' - 100': Sandy clay, red, tight, moist (CL)

Casing Placement:

- Grout (top layer)
- Bentonite seal (second layer)
- 2" PVC casing (third layer)
- Sand pack (fourth layer)
- 2" .020 slot screen (bottom layer)

## Exhibit 16G

Send original copy by certified mail to: TDLR, P.O.		Texas Department of Licensing & Regulation P.O. Box 12157 Austin, TX 78711 512-463-7880			
<b>State of Texas WELL REPORT</b>					
1) OWNER	Rice Operating Co. (Name)	ADDRESS	122 W. Taylor (Street or RFD)	Hobbs	NM 88240 (City) (State) (Zip)
2) ADDRESS OF WELL'S LOCATION:	County Lea	Long.	Eunice	NM 88231 (City) (State) (Zip)	Lat. GRID #
3) TYPE OF WORK (Check): <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Deepening <input type="checkbox"/> Reconditioning <input type="checkbox"/> Plugging	4) PROPOSED USE (Check): <input type="checkbox"/> Monitor <input type="checkbox"/> Environmental Soil Boring <input type="checkbox"/> Domestic <input type="checkbox"/> Industrial <input type="checkbox"/> Irrigation <input type="checkbox"/> Injection <input type="checkbox"/> Public Supply <input type="checkbox"/> De-watering <input type="checkbox"/> Testwell If Public Supply well, were plans submitted to the TNRCC? <input type="checkbox"/> Yes <input type="checkbox"/> No	5) N			
5) WELL LOG: Date Drilling: Started 1/22/01 Completed 1/22/01	DIAMETER OF HOLE Dia. (in.) From (ft.) To (ft.)				
From (ft.) To (ft.) Description and color of formation material	7) BOREHOLE COMPLETION (Check): <input type="checkbox"/> Open Hole <input type="checkbox"/> Straight Wall <input type="checkbox"/> Underreamed <input type="checkbox"/> Gravel Packed <input type="checkbox"/> Other 16/30 Filter Sand If Gravel Packed give interval from 60 ft. to 99 ft.				CASING, BLANK PIPE, AND WELL SCREEN DATA:
0 5 Sand - Red	8) Casing Dia. (in.) or (ft.) Used Perf., Slotted, etc Screen Mfg., if commercial	9) Blank Pipe Dia. (in.) or (ft.) Used Perf., Slotted, etc Screen Mfg., if commercial	10) Setting (ft.)	Geog. Casting Screen	
5 30 Caliche - Tan	2 N PVC Solid	0 65			
30 78 Sand - Red/Brown	2 N PVC Slotted	65 85	0.010		
78 81 Sandstone - Tan					
81 97 Clay - Red					
97 99 Clayey Gravel - Tan					
(Use reverse side of Well Owner's copy, if necessary)					
13) <input type="checkbox"/> Well plugged within 48 hours					
Causing left in well	Cement/bentonite placed in well	Sacks used:	Method used		
From (ft.) To (ft.)	From (ft.) To (ft.)		Slurry		
			Cemented by Harrison & Cooper, Inc.		
Distance to septic system field lines or other concentrated contamination _____ ft.					
Method of verification of above distance					
10) SURFACE COMPLETION					
<input type="checkbox"/> Specified Surface Stab Installed <input type="checkbox"/> Specified Steel Stove Installed <input type="checkbox"/> Pitless Adapter Used <input type="checkbox"/> Approved Alternative Procedure Used					
11) WATER LEVEL					
Static level 78 ft. below land surface Date 1/22/01 Artesian Flow _____ gpm Date _____					
12) PACKERS: Type Depth					
I certify that I drilled this well (or the well was drilled under my direct supervision) and that each and all of the statements herein are true and correct. I understand that failure to complete items 1 thru 16 will result in the log(s) being returned for completion and resubmission.					
COMPANY NAME Cleborne Harrison (Type or Print)			WELL DRILLER'S LICENSE NO. WD-1271		
ADDRESS 7202 66 <sup>th</sup> St. (Street or RFD)			Lubbock (City) TX 79407 (State) (Zip)		
(Signed) 			(Signed) _____ (Certified by _____)		

Please attach electric log, chemical analysis, and other pertinent information, if available.

Exhibit 16H

Send original copy by certified mail to: TDLR, P.O. I

Send original copy by certified mail to:		TDUR, P.O. 1	Texas Department of Licensing & Regulation P.O. Box 12157 Austin, TX 78711 512-455-7880																	
<b>State of Texas WELL REPORT</b>																				
1) OWNER	Rice Operating Co. (Name)	ADDRESS	122 W. Taylor (Street or RFD)	Hobbs (City)	NM 88240 (State) (Zip)															
2) ADDRESS OF WELL'S LOCATION:		Long.		Lat.																
County	Lea	3 S. on Hwy. 207 (Street, RFD or other)	Eunice (City)	NM 88231 (State) (Zip)	GRID #															
3) TYPE OF WORK (Check):		4) PROPOSED USE (Check):		5)																
<input checked="" type="checkbox"/> New Well	<input type="checkbox"/> Deepening	<input type="checkbox"/> Monitor	<input type="checkbox"/> Environmental Soil Boring	<input type="checkbox"/> Domestic																
<input type="checkbox"/> Reconditioning	<input type="checkbox"/> Plugging	<input type="checkbox"/> Industrial	<input type="checkbox"/> Irrigation	<input type="checkbox"/> De-watering	<input type="checkbox"/> Testwell															
		<input type="checkbox"/> Injection		<input type="checkbox"/> Public Supply	<input type="checkbox"/> Jetting															
				<input type="checkbox"/> Yes	<input type="checkbox"/> No															
6) WELL LOG:		DIAMETER OF HOLE		7) DRILLING METHOD (Check):																
Date Drilling:		Dia. (In.)	From (ft.)	To (ft.)	<input type="checkbox"/> Driven															
Started 1/22/01		5	Surface	99	<input checked="" type="checkbox"/> Air Rotary															
Completed 1/22/01					<input type="checkbox"/> Mud Rotary															
					<input type="checkbox"/> Bored															
					<input type="checkbox"/> Air Hammer															
					<input type="checkbox"/> Cable Tool															
					<input type="checkbox"/> Jetec															
					<input type="checkbox"/> Other															
From (ft.)	To (ft.)	Description and color of formation material																		
MW-2																				
0 5	Sand - Red	8) Borehole Completion (Check):																		
5 30	Caliche - Tan	<input type="checkbox"/> Open Hole <input type="checkbox"/> Straight Wall																		
30 78	Sand - Red/Brown	<input type="checkbox"/> Underreamed <input type="checkbox"/> Gravel Pack <input type="checkbox"/> Other																		
78 79	Sandstone - Tan	16/30 Filter Sand																		
79 97	Clay - Red	<input type="checkbox"/> Gravel Pack give interval from 70 ft. to 99 ft.																		
97 99	Clayey Gravel - Tan	Casing, BLANK PIPE, AND WELL SCREEN DATA:																		
<table border="1"> <tr> <td>Dis. (in.)</td> <td>New or Used</td> <td>Steel, Plastic, etc.</td> <td>Setting (ft.)</td> <td>Gage Casing Screen</td> </tr> <tr> <td>2</td> <td>N</td> <td>PVC Solid</td> <td>0</td> <td>76</td> </tr> <tr> <td>2</td> <td>N</td> <td>PVC Slotted</td> <td>76</td> <td>97 0.010</td> </tr> </table>						Dis. (in.)	New or Used	Steel, Plastic, etc.	Setting (ft.)	Gage Casing Screen	2	N	PVC Solid	0	76	2	N	PVC Slotted	76	97 0.010
Dis. (in.)	New or Used	Steel, Plastic, etc.	Setting (ft.)	Gage Casing Screen																
2	N	PVC Solid	0	76																
2	N	PVC Slotted	76	97 0.010																
(Use reverse side of Well Owner's copy, if necessary)																				
13) <input type="checkbox"/> Well plugged within 48 hours																				
Casing left in well:		Cementitious placed in well	Sacks used:																	
From (ft.)	To (ft.)	From (ft.)	To (ft.)																	
14) TYPE PUMP:																				
<input type="checkbox"/> Turbine	<input type="checkbox"/> Jet	<input type="checkbox"/> Submersible	<input type="checkbox"/> Cylinder	Method used:																
<input type="checkbox"/> Other					<input type="checkbox"/> Slurry															
Depth to pump bowl, cylinder, jet, etc. ft.																				
15) WELL TESTS:																				
Type test	<input type="checkbox"/> Pump	<input type="checkbox"/> Baile	<input type="checkbox"/> Jetted	<input type="checkbox"/> Estimated	Cemented by <b>Harrison &amp; Cooper, Inc.</b>															
Yield	gpm with	ft. drawdown after	hrs.	Distance to septic system field lines or other concentrated contamination ft.																
Method of verification of above distance _____																				
16) SURFACE COMPLETION																				
<input type="checkbox"/> Specified Surface Slab Installed <input type="checkbox"/> Specified Steel Sleeve Installed <input type="checkbox"/> Pitless Adapter Used <input type="checkbox"/> Approved Alternative Procedure Used																				
17) WATER LEVEL																				
Static level <b>N/A</b> ft. below land surface Date <b>1/22/01</b>																				
Artesian Flow gpm Date _____																				
18) PACKERS: Type Depth																				
I certify that I drilled this well (or the well was drilled under my direct supervision) and that each and all of the statements herein are true and correct. I understand that failure to complete items 1 thru 18 will result in the log(s) being returned for completion and resubmission.																				
COMPANY NAME <b>Clairborne Harrison</b> (Type or Print)			WELL DRILLER'S LICENSE NO. <b>WD-1271</b>																	
ADDRESS <b>7202 66<sup>th</sup> St.</b> (Street or RFD)  <i>[Signature]</i>		Lubbock (City)		TX	79407 (State) (Zip)															
(Signed)  <i>[Signature]</i>		(Signed)  <i>[Signature]</i>		15th Amendment Policy Training																

Please attach electric fire, chemical analysis, and other pertinent information if available.

## Exhibit 16J

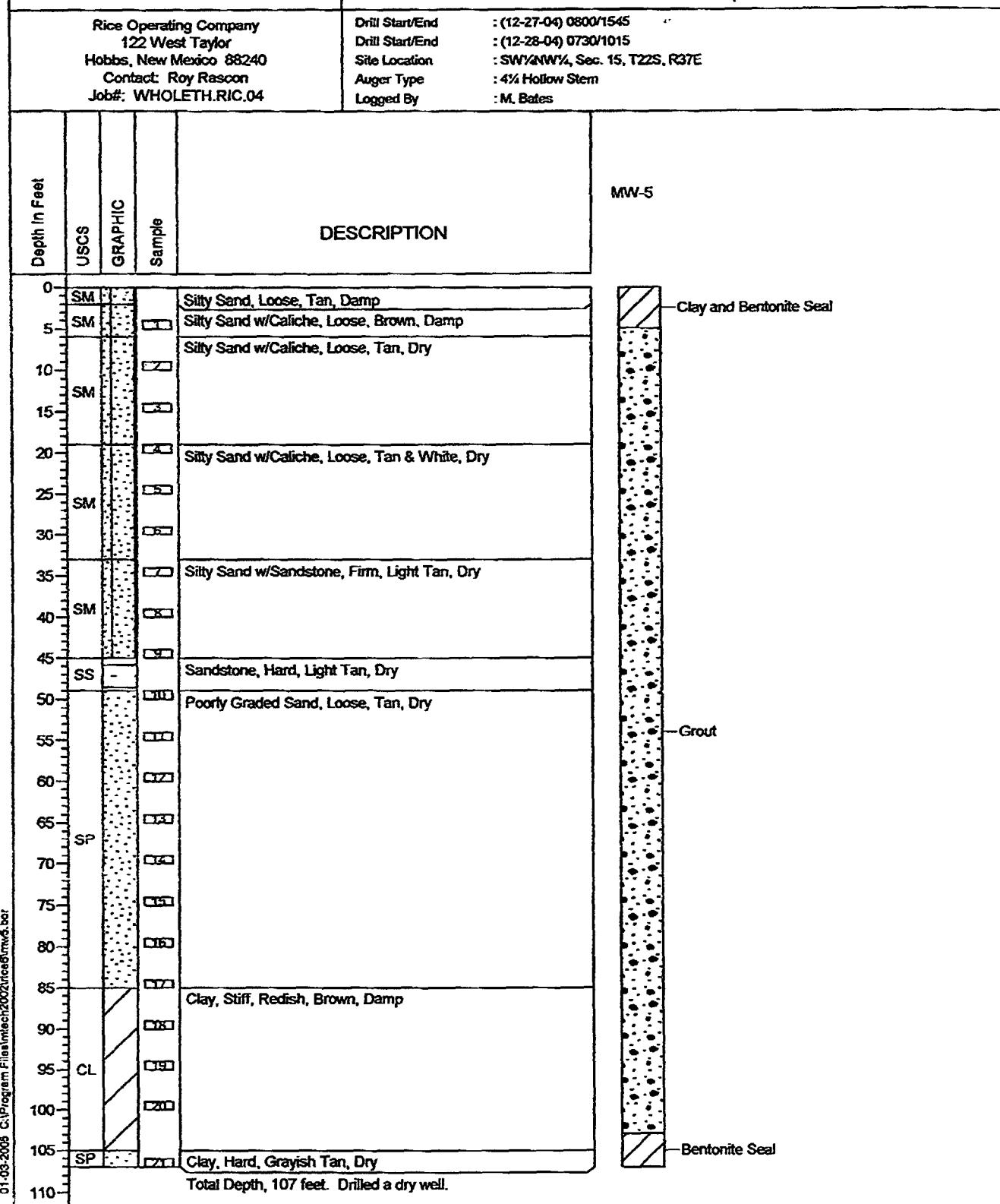
Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 88202-3156			LOG OF BORING Rice Operating MW-3				
			(Page 1 of 2)				
Whole Earth Environmental 19606 San Gabriel Houston, TX 77084			Date : 05-08 & 05-09-01	Site Location : SE Eunice, NM			
Contact: Mike Griffin			Drill Start : a.m.	Auger Type : Hollow Stem			
Job#: EUNICEG.MWD.01			Drill End : 12:00	Boring Location : 3 1/4 mi SE of Eunice & 1/2 mi E. Logged By : Mort Bates			
Depth in Feet	GRAPHIC	USCS	Samples	DESCRIPTION	Lab	PID ppm-v	Well: MW-3
0				Sand, reddish tan, loose, dry			
5				Sand w/ caliche, tan, loose, dry			
10							
15							
20							
25				Silty sand w/ caliche, reddish, tan, loose, dry			
30							
35							
40				Caliche, tan, hard, dry			
45							
50				Sand w/ caliche, tan, firm, dry			
55							

The diagram illustrates the borehole profile and surrounding soil layers. The borehole is shown as a vertical line with various soil descriptions and engineering properties (SP, SM) indicated along its length. To the right, a cross-section shows the borehole cased with 2" PVC casing, filled with grout, and topped with a concrete cap. A 4" x 4" x 5' well cover is shown above the concrete cap.

Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 88202-3156				LOG OF BORING Rice Operating MW 4 (Page 2 of 2)				
Whole Earth Environmental 19606 San Gabriel Houston, TX 77084				Date : 05-08 & 05-09-01	Site Location : SE Eunice, NM			
Contact: Mike Griffin		Drill Start : a.m.				: Sec. 15, T22S, R37E		
Job#: EUNICEG.MWD.01		Drill End : 12:00		Auger Type : Hollow Stem				
		Boring Location : 3 1/4 mi SE of Eunice & 1/4 mi Elogged By						Mort Bates
Depth in Feet	GRAPHIC	USCS	Samples	DESCRIPTION	Lab	PID ppm-v	Well: MW-3	
55				Sand w/ caliche, tan, firm, dry				
60								
65		SM						
70								
75		SS		Sandstone, tan, hard, dry				
80		SP						
85		SS		Sand, tan, soft, moist				
				Broken sandstone, tan, firm, moist				
				Sand, tan, soft, wet				
90								
95								
100				TD 100' WL 83.55'				
105								
110								

**ATKINS ENGINEERING ASSOCIATES, INC.**  
 Professional Engineering Land Surveying  
 Water Resources Environmental Science

## Log of Boring BD-E-15 Monitor Well 5 DH





## **Laboratory Analytical Results**

This section contains a copy of the chain of custody, quality control documents and analytical results for the chloride concentrations encountered at the E-15 site over the past two years. Also included is an additional report for the new source well listing the testing results for cations and anions, hardness, pH, and BTEX. A summary spreadsheet for chlorides shows little change over the testing period.

**Rice Operating Company**  
**E-15 Remediation Project**  
**Chloride Concentrations Within Monitor Wells (Mg/L)**

Sample Date	4/15/2003	6/19/2003	10/11/2003	1/26/2004	5/12/2004	10/5/2004	12/30/2004
MW #1	709	736	709	727	744	762	762
MW #2	29,200	29,200	28,500	25,900	25,200	23,900	25,400
MW #3	886	886	922	851		904	993
MW #4	1,510	1,750	1,770	1,770	1,880	1,840	1,840
Source Well							1,680

# **ANALYTICAL REPORT**

## **Prepared for:**

**MIKE GRIFFIN  
WHOLE EARTH  
19606 SAN GABRIEL  
HOUSTON, TX 77084**

**Project:                  E-15**

**PO#:**

**Order#:                  G0306251**

**Report Date:    04/16/2003**

## **Certificates**

**US EPA Laboratory Code TX00158**

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

WHOLE EARTH  
19606 SAN GABRIEL  
HOUSTON, TX 77084  
281-646-8996

Order#: G0306251  
Project:  
Project Name: E-15  
Location: Eunice, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample:</u>	<u>Matrix:</u>	<u>Collected</u>	<u>Received</u>	<u>Container</u>	<u>Preservative</u>
0306251-01	Cueto	WATER	4/14/03	4/14/03 12:45	4 oz glass	Ice
	<u>Lab Testing:</u> Chloride	Rejected: No		Temp: 0.0 C		
0306251-02	Source Well	WATER	4/14/03	4/14/03 12:45	4 oz glass	Ice
	<u>Lab Testing:</u> Chloride	Rejected: No		Temp: 0.0 C		
0306251-03	Center	WATER	4/14/03	4/14/03 12:45	4 oz glass	Ice
	<u>Lab Testing:</u> Chloride	Rejected: No		Temp: 0.0 C		
0306251-04	Southeast	WATER	4/14/03	4/14/03 12:45	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 0.0 C		

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

MIKE GRIFFIN  
WHOLE EARTH  
19606 SAN GABRIEL  
HOUSTON, TX 77084

Order#: G0306251  
Project:  
Project Name: E-15  
Location: Eunice, NM

Lab ID: 0306251-01  
Sample ID: Cueto

### **Test Parameters**

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	709	mg/L	1	5.00	9253	4/15/03	SB

Lab ID: 0306251-02  
Sample ID: Source Well

### **Test Parameters**

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	29200	mg/L	1	5.00	9253	4/15/03	SB

Lab ID: 0306251-03  
Sample ID: Center

### **Test Parameters**

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	886	mg/L	1	5.00	9253	4/15/03	SB

Lab ID: 0306251-04  
Sample ID: Southeast

### **Test Parameters**

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	1510	mg/L	1	5.00	9253	4/15/03	SB

Approval: *Celey McMurrey 04-18-03* Date  
 Raland K. Tuttle, Lab Director, QA Officer  
 Celey D. Keene, Org. Tech. Director  
 Jeanne McMurrey, Inorg. Tech. Director  
 Sandra Biezugbe, Lab Tech.  
 Sara Molina, Lab Tech.

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

### Test Parameters

Order#: G0306251

<b>BLANK</b>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0005234-01			<5.00		
<b>MS</b>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0306250-01	88.6	250	337	99.4%	
<b>MSD</b>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0306250-01	88.6	250	332	97.4%	1.5%
<b>SRM</b>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0005234-04		5000	4960	99.2%	

# 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:

Company Name Whole Earth Environmental, Inc.

Company Address: 19606 San Gabriel

City/State/Zip: Houston, Tx 77084

Telephone No: (800) 864-4358

Sampler Signature:

Fax No: (281) 646-8998

Project Name: E-15

Project #:

Project Loc: Eunice, NM

PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Analyze For:		TCLP: TOTAL:	RUSH TAT Pre-Schedule	Standard TAT	Sample Containers Intact?	Temperature Upon Receipt:	Laboratory Comments:		
					TPH 418.1	TPH 8015M GR0/DR0								
01	Cueto	4/14/03	12:45	1	X	X				N	Y	O.O.C.		
02	Source Well			1	X	X								
03	Center			1	X	X								
04	Southeast			1	X	X								
<i>150603</i>												<i>4/12/03</i>	<i>4/14/03</i>	
<i>jeanne memory</i>												<i>jeanne memory</i>	<i>jeanne memory</i>	
Invoice Rice Oper. Copy of results to Rice & Whole Earth. Gate Combination: 4216														
Relinquished by:	Date	Time	Received by:	Date	Time									
<i>M. G. R.</i>	<i>4/14/03</i>	<i>12:45</i>												
Relinquished by:	Date	Time	Received by ELOT:	Date	Time									
			<i>jeanne memory</i>	<i>04-1403</i>	<i>1245</i>									

# **ANALYTICAL REPORT**

**Prepared for:**

**MIKE GRIFFIN  
WHOLE EARTH  
19606 SAN GABRIEL  
HOUSTON, TX 77084**

**Project:           E-15**

**PO#:**

**Order#:           G0306755**

**Report Date:    06/20/2003**

**Certificates**

**US EPA Laboratory Code TX00158**

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

WHOLE EARTH  
 19606 SAN GABRIEL  
 HOUSTON, TX 77084  
 281-646-8996

Order#: G0306755  
 Project:  
 Project Name: E-15  
 Location: Eunice, New Mexico

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u>		<u>Container</u>	<u>Preservative</u>
			<u>Collected</u>	<u>Received</u>		
<b>0306755-01</b>	Cueto (2)	WATER		6/17/03 16:10	See COC	Ice
	<u>Lab Testing:</u> Chloride		Rejected: No	Temp: 4.0 C		
<b>0306755-02</b>	Source Well (1)	WATER		6/17/03 16:10	See COC	Ice
	<u>Lab Testing:</u> Chloride		Rejected: No	Temp: 4.0 C		
<b>0306755-03</b>	Center (3)	WATER		6/17/03 16:10	See COC	Ice
	<u>Lab Testing:</u> Chloride		Rejected: No	Temp: 4.0 C		
<b>0306755-04</b>	Southeast (4)	WATER		6/17/03 16:10	See COC	Ice
	<u>Lab Testing:</u> Chloride		Rejected: No	Temp: 4.0 C		

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

MIKE GRIFFIN  
WHOLE EARTH  
19606 SAN GABRIEL  
HOUSTON, TX 77084

Order#: G0306755  
Project:  
Project Name: E-15  
Location: Eunice, New Mexico

Lab ID: 0306755-01  
Sample ID: Cueto (2)

**Test Parameters**

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	736	mg/L	1	5.00	9253	6/19/03	SB

Lab ID: 0306755-02  
Sample ID: Source Well (1)

**Test Parameters**

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	29200	mg/L	1	5.00	9253	6/19/03	SB

Lab ID: 0306755-03  
Sample ID: Center (3)

**Test Parameters**

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	886	mg/L	1	5.00	9253	6/19/03	SB

Lab ID: 0306755-04  
Sample ID: Southeast (4)

**Test Parameters**

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	1750	mg/L	1	5.00	9253	6/19/03	SB

Approval:

Raland K. Tuttle, Lab Director, QA Officer

Date

Celey D. Keene, Org. Tech. Director

Jeanne McMurrey, Inorg. Tech. Director

Sandra Biezugbe, Lab Tech.

Sara Molina, Lab Tech.

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

### Test Parameters

Order#: G0306755

<b>BLANK</b>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0005902-01			<5.00		
<b>MS</b>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0306757-01	3770	2500	6290	100.8%	
<b>MSD</b>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0306757-01	3770	2500	6250	99.2%	0.6%
<b>SRM</b>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0005902-04		5000	4960	99.2%	

**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:**

Company Name Whole Earth Environmental, Inc.

Company Address: 19606 San Gabriel

City/State/Zip: Houston Tx 77084

Telephone No: (800) 854-4358

**Sampler Signature:**

Fax No: (281) 646-8996

Printed Name: E 16

Project #:

Project 1 | 62: Eunice NM

BN #:

# **ANALYTICAL REPORT**

**Prepared for:**

**MIKE GRIFFIN  
WHOLE EARTH  
19606 SAN GABRIEL  
HOUSTON, TX 77084**

**Project:            E-15**

**PO#:**

**Order#:            G0307701**

**Report Date:    10/13/2003**

**Certificates**

**US EPA Laboratory Code TX00158**

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

WHOLE EARTH  
 19606 SAN GABRIEL  
 HOUSTON, TX 77084  
 281-646-8996

Order#: G0307701  
 Project:  
 Project Name: E-15  
 Location: Eunice, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas make no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u>		<u>Date / Time</u>		<u>Preservativ</u>
			<u>Collected</u>	<u>Received</u>	<u>Container</u>		
<b>0307701-01</b>	Cueto (2)	WATER	10/11/03	10/11/03 10:35	4 oz glass		Ice
	<u>Lab Testing:</u> Chloride		Rejected: No	Temp: 2.5 C			
<b>0307701-02</b>	Source Well (1)	WATER	10/11/03	10/11/03 10:35	4 oz glass		Ice
	<u>Lab Testing:</u> Chloride		Rejected: No	Temp: 2.5 C			
<b>0307701-03</b>	Center (3)	WATER	10/11/03	10/11/03 10:35	4 oz glass		Ice
	<u>Lab Testing:</u> Chloride		Rejected: No	Temp: 2.5 C			
<b>0307701-04</b>	Southeast (4)	WATER	10/11/03	10/11/03 10:35	4 oz glass		Ice
	<u>Lab Testing:</u> Chloride		Rejected: No	Temp: 2.5 C			

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

MIKE GRIFFIN  
WHOLE EARTH  
19606 SAN GABRIEL  
HOUSTON, TX 77084

Order#: G0307701  
Project:  
Project Name: E-15  
Location: Eunice, NM

Lab ID: 0307701-01  
Sample ID: Cueto (2)

### **Test Parameters**

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	709	mg/L	1	5.00	9253	10/11/03	SB

Lab ID: 0307701-02  
Sample ID: Source Well (1)

### **Test Parameters**

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	28500	mg/L	1	5.00	9253	10/11/03	SB

Lab ID: 0307701-03  
Sample ID: Center (3)

### **Test Parameters**

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	922	mg/L	1	5.00	9253	10/11/03	SB

Lab ID: 0307701-04  
Sample ID: Southeast (4)

### **Test Parameters**

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	1770	mg/L	1	5.00	9253	10/11/03	SB

Approval: Roland K. Tuttle 10-13-03  
 Roland K. Tuttle, Lab Director, QA Officer      Date  
 Celey D. Keene, Org. Tech. Director  
 Jeanne McMurrey, Inorg. Tech. Director  
 Sandra Biezugbe, Lab Tech.  
 Sara Molina, Lab Tech.

**ENVIRONMENTAL LAB OF TEXAS**  
**QUALITY CONTROL REPORT**

**Test Parameters**

Order#: G0307701

<b>BLANK</b> WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L	0007110-01			<5.00		
<b>MS</b> WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L	0307697-01	1100	500	1600	100.%	
<b>MSD</b> WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L	0307697-01	1100	500	1600	100.%	0.%
<b>SRM</b> WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L	0007110-04		5000	4960	99.2%	

Environmental Lab of Texas, Inc.

West 1-20 East  
Texas 79763

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

## **CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST**

Project Manager:

Company Name Whole Earth Environmental Inc

卷之三

City/State/Zip: Houston, Tx. 77084

Telephone No: (800) 851-1358

Sammler-Signaturen:

Project Name: E-15

### **Project #:**

Environ Monit Assess (2007) 130:1–11

四

Fax No: (201) 646 9006

Sammler-Signaturen:

Environmental Lab of Texas, Inc.

12600 West I-20 East  
Odessa, Texas 79763

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

CHART OF CHARTERED RECORD AND ANNUAL STATEMENT

## **Project Manager:**

Company Name Whole Earth Environmental, Inc.

**Company Address:** 19606 San Gabriel

City/State/Zip: Houston, Tx 77084

Telephone No: (800) 854-4358

**Sampler Signature:**

**Project Name:** E-15      **Project #:** \_\_\_\_\_  
**Project Loc:** Eunice, NM      **PO #:** \_\_\_\_\_  
  
\_\_\_\_\_  
**Whole Earth Environmental, Inc.**  
19606 San Gabriel  
Houston, Tx. 77084

Fax No: (281) 646-8996

87

Sampler Signature:		LAB # (lab use only)		FIELD CODE		Date Sampled		Time Sampled		No. of Contaminants		Other (Specify)		Matrix		TCLP:		TOTAL:		Analyze For:			
03266755				01 Cueto (2)						1		X		Soil		Other (Specify):		TPH TX 1005/1006		TPH 418.1		TDS / CL / SAR / EC	
				02 Source Well (1)						1		X		Water		Metals: As Ag Ba Cd Cr Pb Hg Se		TPH 8015M GRO/DRD		TPH 418.1		Volatile	
				03 Center (3)						1		X		Sediment		Semi-volatiles		BTEX 8021B/5030		Metals		Chlorides	
				04 Southeast (4)						1		X		Groundwater		Metals		TPH 8021B/5030		Volatile		Analyze For:	

**Special Instructions:**

Invoice Rice Oper. Copy of results to Rice & Whole Earth. State Concentration: 4:1G

**Relinquished by:** M. Gh. *M. Gh.* **Date:** 10/17/03 **Time:** 4:10 **Received by ELS:** *J. Anderson* **Date:** 10/17/03 **Time:** 4:00 **Relinquished by:** *J. Anderson* **Date:** 10/17/03 **Time:** 4:00 **Received by:** *J. Anderson* **Date:** 10/17/03 **Time:** 4:00

**Sample Containers intact?** *Y* **N**

**Temperature Upon Receipt:** *4.0*

**Laboratory Comments:**



## Analytical Report

**Prepared for:**

Mike Griffin

WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove

Katy, TX 77494

Project: E-15

Project Number: None Given

Location: Eunice, N.M.

Lab Order Number: 4A26003

Report Date: 01/28/04

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
WHOLE EARTH ENVIRONMENTAL

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

(281) 394-2051  
Reported:  
01/28/04 16:59

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Cueto (2)	4A26003-01	Water	01/21/04 00:00	01/26/04 08:00
Source Well (1)	4A26003-02	Water	01/21/04 00:00	01/26/04 08:00
Center (3)	4A26003-03	Water	01/21/04 00:00	01/26/04 08:00
Southeast (4)	4A26003-04	Water	01/21/04 00:00	01/26/04 08:00

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
WHOLE EARTH ENVIRONMENTAL

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

(281) 394-2051  
Reported:  
01/28/04 16:59

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Cueto (2) (4A26003-01) Water Sampled: 01/21/04 00:00 Received: 01/26/04 08:00</b>									
Chloride	727	5.00	mg/L	1	EA42607	01/26/04	01/26/04	EPA 325.3	
<b>Source Well (1) (4A26003-02) Water Sampled: 01/21/04 00:00 Received: 01/26/04 08:00</b>									
Chloride	25900	5.00	mg/L	1	EA42607	01/26/04	01/26/04	EPA 325.3	
<b>Center (3) (4A26003-03) Water Sampled: 01/21/04 00:00 Received: 01/26/04 08:00</b>									
Chloride	851	5.00	mg/L	1	EA42607	01/26/04	01/26/04	EPA 325.3	
<b>Southeast (4) (4A26003-04) Water Sampled: 01/21/04 00:00 Received: 01/26/04 08:00</b>									
Chloride	1770	5.00	mg/L	1	EA42607	01/26/04	01/26/04	EPA 325.3	

Environmental Lab of Texas

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

Raland Tuttle, Laboratory Director

Page 2 of 4

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
WHOLE EARTH ENVIRONMENTAL

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

(281) 394-2051  
Reported:  
01/28/04 16:59

**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 EA42607 - General Preparation (WetChem)**

Blank (EA42607-BLK1)				Prepared & Analyzed: 01/26/04				
Chloride	ND	5.00	mg/L					
Calibration Check (EA42607-CCV1)					Prepared & Analyzed: 01/26/04			
Chloride	4960		mg/L	5000	99.2	80-120		
Matrix Spike (EA42607-MS1)					Source: 4A26003-01 Prepared & Analyzed: 01/26/04			
Chloride	1220		mg/L	500	727	98.6	80-120	
Matrix Spike Dup (EA42607-MSD1)					Source: 4A26003-01 Prepared & Analyzed: 01/26/04			
Chloride	1210		mg/L	500	727	96.6	80-120	0.823
								20

Environmental Lab of Texas

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

Raland Tuttle, Laboratory Director

Page 3 of 4

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
WHOLE EARTH ENVIRONMENTAL

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

(281) 394-2051  
Reported:  
01/28/04 16:59

#### 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

---

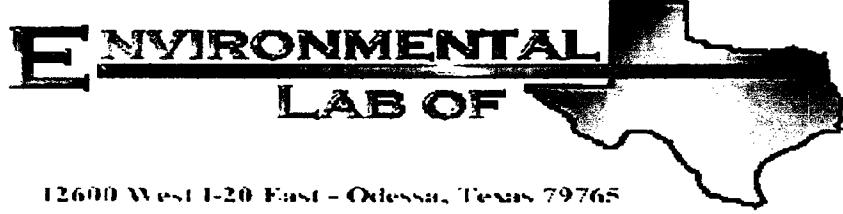
Environmental Lab of Texas

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

---

Raland Tuttle, Laboratory Director

Page 4 of 4



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

Prepared for:

Mike Griffin

WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove

Katy, TX 77494

Project: E-15

Project Number: None Given

Location: Lea County, NM

Lab Order Number: 4E12005

Report Date: 05/13/04

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
05/13/04 09:27

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Cueto	4E12005-01	Water	05/08/04 00:00	05/12/04 09:45
Source Well	4E12005-02	Water	05/08/04 00:00	05/12/04 09:45
MW #4	4E12005-03	Water	05/08/04 00:00	05/12/04 09:45

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
05/13/04 09:27

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Cueto (4E12005-01) Water</b>									
Chloride	744	5.00	mg/L	1	EE41203	05/12/04	05/12/04	EPA 325.3M	
<b>Source Well (4E12005-02) Water</b>									
Chloride	25200	5.00	mg/L	1	EE41203	05/12/04	05/12/04	EPA 325.3M	
<b>MW #4 (4E12005-03) Water</b>									
Chloride	1880	5.00	mg/L	1	EE41203	05/12/04	05/12/04	EPA 325.3M	

Environmental Lab of Texas

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Quality Assurance Review

Page 2 of 4

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WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
05/13/04 09:27

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 EE41203 - General Preparation (WetChem)**

**Blank (EE41203-BLK1)** Prepared & Analyzed: 05/12/04

Chloride ND 5.00 mg/L

**Matrix Spike (EE41203-MS1)** Source: 4E11004-01 Prepared & Analyzed: 05/12/04

Chloride 886 5.00 mg/L 500 390 99.2 80-120

**Matrix Spike Dup (EE41203-MSD1)** Source: 4E11004-01 Prepared & Analyzed: 05/12/04

Chloride 877 5.00 mg/L 500 390 97.4 80-120 1.02 20

**Reference (EE41203-SRM1)** Prepared & Analyzed: 05/12/04

Chloride 4960 mg/L 5000 99.2 80-120

Environmental Lab of Texas

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Quality Assurance Review

Page 3 of 4

**WHOLE EARTH ENVIRONMENTAL**  
2103 Arbor Cove  
Katy TX, 77494

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
05/13/04 09:27

**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

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Environmental Lab of Texas

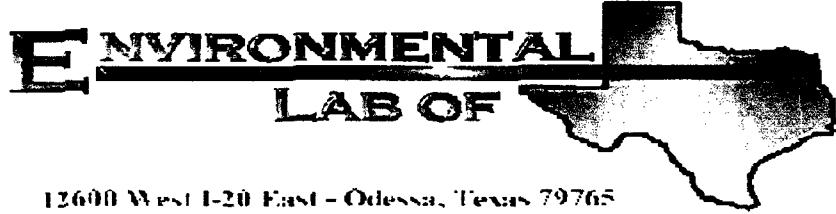
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Quality Assurance Review

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12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Mike Griffin

WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove

Katy, TX 77494

Project: E-15

Project Number: None Given

Location: None Given

Lab Order Number: 4J04005

Report Date: 10/10/04

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
10/10/04 11:28

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Cueto	4J04005-01	Water	10/01/04 00:00	10/03/04 13:00
Source	4J04005-02	Water	10/01/04 00:00	10/03/04 13:00
MW-3	4J04005-03	Water	10/01/04 00:00	10/03/04 13:00
MW-4	4J04005-04	Water	10/01/04 00:00	10/03/04 13:00

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
10/10/04 11:28

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Cueto (4J04005-01) Water</b>									
Chloride	762	5.00	mg/L	1	EJ40704	10/05/04	10/05/04	EPA 325.3M	
<b>Source (4J04005-02) Water</b>									
Chloride	23900	5.00	mg/L	1	EJ40704	10/05/04	10/05/04	EPA 325.3M	
<b>MW-3 (4J04005-03) Water</b>									
Chloride	904	5.00	mg/L	1	EJ40704	10/05/04	10/05/04	EPA 325.3M	
<b>MW-4 (4J04005-04) Water</b>									
Chloride	1840	5.00	mg/L	1	EJ40704	10/05/04	10/05/04	EPA 325.3M	

Environmental Lab of Texas

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WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
10/10/04 11:28

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

Analytic	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
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**Batch EJ40704 - General Preparation (WetChem)**

<b>Blank (EJ40704-BLK1)</b>					Prepared & Analyzed: 10/05/04					
Chloride	ND	5.00	mg/L							
<b>Matrix Spike (EJ40704-MS1)</b>		Source: 4I29007-01			Prepared & Analyzed: 10/05/04					
Chloride	4250	5.00	mg/L	1000	3260	99.0	80-120			
<b>Matrix Spike Dup (EJ40704-MSD1)</b>		Source: 4I29007-01			Prepared & Analyzed: 10/05/04					
Chloride	4270	5.00	mg/L	1000	3260	101	80-120	0.469	20	
<b>Reference (EJ40704-SRM1)</b>					Prepared & Analyzed: 10/05/04					
Chloride	4960		mg/L		5000	99.2	80-120			

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WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051

Reported:  
10/10/04 11:28

#### 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:

Date: 10/10/04

Raland K. Tuttle, Lab Manager  
Cely D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murray, Inorg. Tech Director  
James L. Hawkins, Chemist/Geologist  
Sandra Biezugbe, Lab Tech.

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## Analytical Report

**Prepared for:**

Mike Griffin

WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove

Katy, TX 77494

Project: E-15

Project Number: None Given

Location: Eunice, NM

Lab Order Number: 4L30011

Report Date: 01/03/05

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
**Reported:**  
01/03/05 17:55

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4L30011-01	Water	12/30/04 00:00	12/30/04 11:40
MW-2	4L30011-02	Water	12/30/04 00:00	12/30/04 11:40
MW-3	4L30011-03	Water	12/30/04 00:00	12/30/04 11:40
MW-4	4L30011-04	Water	12/30/04 00:00	12/30/04 11:40

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
01/03/05 17:55

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (4L30011-01) Water</b>									
Chloride	762	5.00	mg/L	1	EL43005	12/30/04	12/30/04	EPA 325.3M	
<b>MW-2 (4L30011-02) Water</b>									
Chloride	25400	5.00	mg/L	1	EL43005	12/30/04	12/30/04	EPA 325.3M	
<b>MW-3 (4L30011-03) Water</b>									
Chloride	993	5.00	mg/L	1	EL43005	12/30/04	12/30/04	EPA 325.3M	
<b>MW-4 (4L30011-04) Water</b>									
Chloride	1840	5.00	mg/L	1	EL43005	12/30/04	12/30/04	EPA 325.3M	

Environmental Lab of Texas

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WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
01/03/05 17:55

**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 EL43005 - General Preparation (WetChem)</b>									
<b>Blank (EL43005-BLK1)</b> Prepared & Analyzed: 12/30/04									
Chloride	ND	5.00	mg/L						
<b>Matrix Spike (EL43005-MS1)</b> Source: 4L29009-01      Prepared & Analyzed: 12/30/04									
Chloride	368		mg/L	250	124	97.6	80-120		
<b>Matrix Spike Dup (EL43005-MSD1)</b> Source: 4L29009-01      Prepared & Analyzed: 12/30/04									
Chloride	363		mg/L	250	124	95.6	80-120	1.37	20
<b>Reference (EL43005-SRM1)</b> Prepared & Analyzed: 12/30/04									
Chloride	4960		mg/L	5000		99.2	80-120		

Environmental Lab of Texas

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WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: E-15  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051

Reported:  
01/03/05 17:55

#### 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: 1/3/2005

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murray, Inorg. Tech Director  
James L. Hawkins, Chemist/Geologist  
Sandra Sanchez, Lab Tech.

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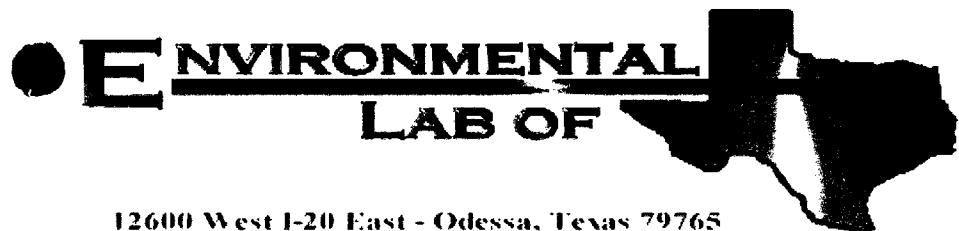
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12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Mike Griffin

WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove

Katy, TX 77494

Project: Rice E-15 Source Well

Project Number: None Given

Location: Eunice, NM

Lab Order Number: 4L30010

Report Date: 01/13/05

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: Rice E-15 Source Well  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
**Reported:**  
01/13/05 14:26

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E-15 Source Well	4L30010-01	Water	12/30/04 00:00	12/30/04 11:40

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: Rice E-15 Source Well  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
01/13/05 14:26

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>E-15 Source Well (4L30010-01) Water</b>									
Benzene	ND	0.00100	mg/L	1	EA50619	01/05/05	01/05/05	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>		100 %	80-120	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98.4 %	80-120	"	"	"	"	"	

Environmental Lab of Texas

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WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: Rice E-15 Source Well  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
**Reported:**  
01/13/05 14:26

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>E-15 Source Well (4L30010-01) Water</b>									
Total Alkalinity	272	2.00	mg/L	1	EL43013	12/30/04	12/30/04	EPA 310.2M	
Chloride	1680	5.00	"	"	EL43005	12/30/04	12/30/04	EPA 325.3M	
Sulfate	260	2.50	"	5	EL43014	12/30/04	12/30/04	EPA 375.4	

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: Rice E-15 Source Well  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
**Reported:**  
01/13/05 14:26

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>E-15 Source Well (4L30010-01) Water</b>									
Calcium	198	1.00	mg/L	100	EA51302	01/12/05	01/13/05	EPA 6010B	
Magnesium	148	0.100	"	"	"	"	"	"	
Potassium	29.6	0.500	"	10	"	"	"	"	
Sodium	861	1.00	"	100	"	"	"	"	

Environmental Lab of Texas

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WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: Rice E-15 Source Well  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
01/13/05 14:26

**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 EA50619 - EPA 5030C (GC)**

**Blank (EA50619-BLK1)**

Prepared & Analyzed: 01/05/05

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: <i>a,a,a</i> -Trifluorotoluene	97.7		ug/l	100		97.7	80-120		
Surrogate: 4-Bromofluorobenzene	102		"	100		102	80-120		

**LCS (EA50619-BS1)**

Prepared & Analyzed: 01/05/05

Benzene	95.3		ug/l	100		95.3	80-120		
Toluene	97.6		"	100		97.6	80-120		
Ethylbenzene	106		"	100		106	80-120		
Xylene (p/m)	237		"	200		118	80-120		
Xylene (o)	118		"	100		118	80-120		
Surrogate: <i>a,a,a</i> -Trifluorotoluene	119		"	100		119	80-120		
Surrogate: 4-Bromofluorobenzene	118		"	100		118	80-120		

**Calibration Check (EA50619-CCV1)**

Prepared: 01/05/05 Analyzed: 01/06/05

Benzene	89.6		ug/l	100		89.6	80-120		
Toluene	89.1		"	100		89.1	80-120		
Ethylbenzene	98.6		"	100		98.6	80-120		
Xylene (p/m)	227		"	200		114	80-120		
Xylene (o)	118		"	100		118	80-120		
Surrogate: <i>a,a,a</i> -Trifluorotoluene	105		"	100		105	80-120		
Surrogate: 4-Bromofluorobenzene	115		"	100		115	80-120		

**Matrix Spike (EA50619-MS1)**

Source: 4L30010-01

Prepared & Analyzed: 01/05/05

Benzene	82.8		ug/l	100	ND	82.8	80-120		
Toluene	82.5		"	100	ND	82.5	80-120		
Ethylbenzene	89.0		"	100	ND	89.0	80-120		
Xylene (p/m)	201		"	200	ND	100	80-120		
Xylene (o)	102		"	100	ND	102	80-120		
Surrogate: <i>a,a,a</i> -Trifluorotoluene	91.0		"	100		91.0	80-120		
Surrogate: 4-Bromofluorobenzene	110		"	100		110	80-120		

Environmental Lab of Texas

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WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: Rice E-15 Source Well  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
01/13/05 14:26

Organics by GC - Quality Control  
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
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**Batch EA50619 - EPA 5030C (GC)**

Matrix Spike Dup (EA50619-MSD1)	Source: 4L30010-01		Prepared & Analyzed: 01/05/05						
Benzene	90.6		ug/l	100	ND	90.6	80-120	9.00	20
Toluene	87.5	"		100	ND	87.5	80-120	5.88	20
Ethylbenzene	104	"		100	ND	104	80-120	15.5	20
Xylene (p/m)	239	"		200	ND	120	80-120	18.2	20
Xylene (o)	118	"		100	ND	118	80-120	14.5	20
<i>Surrogate: a,a,a-Trifluorotoluene</i>	97.0	"		100		97.0	80-120		
<i>Surrogate: 4-Bromofluorobenzene</i>	119	"		100		119	80-120		

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: Rice E-15 Source Well  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
01/13/05 14:26

**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	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	---------	-----------	-------

**Batch EL43005 - General Preparation (WetChem)**

Blank (EL43005-BLK1)				Prepared & Analyzed: 12/30/04					
Chloride	ND	5.00	mg/L						
Matrix Spike (EL43005-MS1)				Source: 4L29009-01	Prepared & Analyzed: 12/30/04				
Chloride	368		mg/L	250	124	97.6	80-120		
Matrix Spike Dup (EL43005-MSD1)				Source: 4L29009-01	Prepared & Analyzed: 12/30/04				
Chloride	363		mg/L	250	124	95.6	80-120	1.37	20
Reference (EL43005-SRM1)				Prepared & Analyzed: 12/30/04					
Chloride	4960		mg/L	5000		99.2	80-120		

**Batch EL43013 - General Preparation (WetChem)**

Blank (EL43013-BLK1)				Prepared & Analyzed: 12/30/04					
Total Alkalinity	ND	2.00	mg/L						
Duplicate (EL43013-DUP1)				Source: 4L29009-01	Prepared & Analyzed: 12/30/04				
Total Alkalinity	141	2.00	mg/L		140			0.712	20
Reference (EL43013-SRM1)				Prepared & Analyzed: 12/30/04					
Carbonate Alkalinity	0.0501		mg/L	0.0500		100	80-120		

**Batch EL43014 - General Preparation (WetChem)**

Blank (EL43014-BLK1)				Prepared & Analyzed: 12/30/04				
Sulfate	ND	0.500	mg/L					

Environmental Lab of Texas

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WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: Rice E-15 Source Well  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
01/13/05 14:26

**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	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	---------	-----------	-------

**Batch EL43014 - General Preparation (WetChem)**

Calibration Check (EL43014-CCV1)		Prepared & Analyzed: 12/30/04					
Sulfate	48.6		mg/L	50.0	97.2	80-120	
Duplicate (EL43014-DUP1)		Source: 4L29009-01			Prepared & Analyzed: 12/30/04		
Sulfate	1340	12.5	mg/L	1300	3.03	20	

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WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: Rice E-15 Source Well  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
01/13/05 14:26

**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	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	---------	-----------	-------

**Batch EA51302 - 6010B/No Digestion**

**Blank (EA51302-BLK1)**

Calcium	ND	0.0100	mg/L
Magnesium	ND	0.00100	"
Potassium	ND	0.0500	"
Sodium	ND	0.0100	"

Prepared: 01/12/05 Analyzed: 01/13/05

**Calibration Check (EA51302-CCV1)**

Calcium	2.24	mg/L	2.00	112	85-115
Magnesium	2.30	"	2.00	115	85-115
Potassium	1.79	"	2.00	89.5	85-115
Sodium	1.99	"	2.00	99.5	85-115

**Duplicate (EA51302-DUP1)**

	Source: SA03002-06		Prepared: 01/12/05	Analyzer: 01/13/05		
Calcium	238	1.00	mg/L	240	0.837	20
Magnesium	99.2	0.100	"	99.9	0.703	20
Potassium	5.34	0.500	"	6.42	18.4	20
Sodium	231	1.00	"	232	0.432	20

WHOLE EARTH ENVIRONMENTAL  
2103 Arbor Cove  
Katy TX, 77494

Project: Rice E-15 Source Well  
Project Number: None Given  
Project Manager: Mike Griffin

Fax: (281) 394-2051  
Reported:  
01/13/05 14:26

#### 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:

Date: 1/13/2005

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murray, Inorg. Tech Director  
James L. Hawkins, Chemist/Geologist  
Sandra Sanchez, Lab Tech.

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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

12500 West I-20 East  
Odessa, Texas 79765  
Phone: 432-563-1800  
Fax: 432-563-1713

Project Manager: M.C.A.

Company Name Whole Earth Environmental

Company Address:

City/State/Zip:

Telephone No.:

Sampler Signature: M.C.A.

## CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name: Rice E-15 Source Well

Project #: \_\_\_\_\_

Project Loc: Elunice, NM

PO #:

Fax No.: \_\_\_\_\_

LAB # (Lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative	Matrix	Analyze For:		TOTAL:	TCIP:	RUSH TAT (Pre-Schedule)	Standard TAT
							SEM/ROSES	ROI				
4L30010	E-15 Source Well	12-3-04	12:30 PM	3	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl NaOH None Water Sludge Soil	Other (Specify): TPH: 418.1, B015M 1005 1006 Gallions (Ca, Mg, Na, K) Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> ) SAR / ESP / CEC Metals: As Ag Ba Cd Cr Pb Hg Se Volatile	X	X	X	X	X	
BTX 8021B(G03) or BTX 8280												
BTX 8021B(G03) or BTX 8280												

Sample Containers intact?  N

Temperature Upon Receipt:  14°C

Laboratory Comments: 1 - L HOPE

Special Instructions: 2 - 40ml glass w/HCl on ice

Relinquished by <u>M.C.A.</u>	Date 12/3	Time 11:40	Received by: EL01:	Date 12-30-04	Time 11:40
Relinquished by <u>M.C.A.</u>	Date 12/3	Time 11:40	Received by EL01:	Date 12-30-04	Time 11:40