

SITE INFORMATION

2398

Report Type: CLOSURE REPORT

General Site Information:

Site:	Rhino #1 Tank Battery	
Company:	COG Operating LLC	
Section, Township and Range	Unit D - Sec 35 - T-17S - R-32E	
Lease Number:	30-025-36605	
County:	Lea County	
GPS:	32.78976° N	103.74474° W
Surface Owner:	Federal	
Mineral Owner:		
Directions:	From intersection of 529 and CR-126, site is located 1.0 mile east on 529 (north side of 529).	

Release Data:

Date Released:	12/31/2009
Type Release:	Produced Water
Source of Contamination:	Water main line
Fluid Released:	400 bbls
Fluids Recovered:	260 bbls

Official Communication:

Name:	Pat Ellis	Kim Dorey
Company:	COG Operating, LLC	Tetra Tech
Address:	550 W. Texas Ave. Ste. 1300	1910 N. Big Spring
P.O. Box		
City:	Midland Texas, 79701	Midland, Texas
Phone number:	(432) 686-3023	(432) 631-0348
Fax:	(432) 684-7137	
Email:	pellis@conchoresources.com	kim.dorey@tetrattech.com

Ranking Criteria

Depth to Groundwater:	Ranking Score	Site Data
<50 ft	20	
50-99 ft	10	
>100 ft.	0	
WellHead Protection:	Ranking Score	Site Data
Water Source <1,000 ft., Private <200 ft.	20	
Water Source >1,000 ft., Private >200 ft.	0	0
Surface Body of Water:	Ranking Score	Site Data
<200 ft.	20	
200 ft - 1,000 ft.	10	
>1,000 ft.	0	0
Total Ranking Score:		0

Acceptable Soil RRAL (mg/kg)

Benzene	Total BTEX	TPH
10	50	5,000



TETRA TECH

March 13, 2012

Mr. Geoffrey Leking
Environmental Engineer Specialist
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

**Re: Closure Report for the COG Operating LLC., Rhino #1 Tank Battery,
Main Line Leak, Unit D, Section 35, Township 17 South, Range 32
East, Lea County, New Mexico.**

Mr. Leking,

Tetra Tech Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the Rhino Tank Battery, Main line leak located in Unit D, Section 35, Township 17 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.78976°, W 103.74474°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on December 31, 2009. The leak occurred from a main water line located approximately 200 yards south of the Rhino #1 Tank Battery. Approximately 400 barrels of produced water was released from a tee that had parted from the produced water mainline coming from the Rhino Tank Battery. The spill did not have pooling areas, instead had multiple fingers that covered an area of approximately 75'x 1,000'. Vacuum trucks were utilized to recover 260 barrels of standing fluids. The initial C-141 is included in Appendix A.

Groundwater

No water wells were listed within Section 35. The groundwater research performed showed sparse groundwater data for the area. The New Mexico Office of the State Office Engineer Well data showed a well north of the site in Section 12, T17S, R32E, with a depth to groundwater of 120'. Several wells were located in T17S, R33E, with the closest well in Section 30 reporting a depth to

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559

Fax 432.682.3946

www.tetrattech.com



groundwater of approximately 69' below surface. In addition, one well in Section 4, T18S, R32E had a reported depth to water of 65' below surface. According to the NMOCD depth to groundwater map, groundwater in the area appears to be less than 100' below surface. Based on the reported groundwater depth, Tetra Tech proposed a temporary well to establish depth to water in the area.

On March 16, 2011, the temporary well was installed to a total depth of 130' below surface. The well was gauged on March 23, 2011 and found no measurable groundwater in the well. Based on the temporary well, it appears groundwater is greater than 130' below surface. The groundwater data and well logs are enclosed in Appendix B.

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment and Results

Auger Holes

On March 7, 2010, Tetra Tech personnel inspected the spill area. The spill migrated approximately 1000' east of the release. The spill migrated along the COG pipeline right-of-way and south into the pasture. The width of the spill ranged from 5' to 10', with some fingers.

A total of twelve (12) auger holes (AH-1 through AH-12) were installed using a stainless steel hand auger to assess the impacted soils. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. The auger hole locations are shown on Figure 3. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1.

Referring to Table 1, AH-3 and AH-4 exceeded the TPH and BTEX RRAL at 0-1', however, the deeper samples at 1-1.5' declined below the RRAL.



Elevated chloride concentrations were detected in all of the auger holes and chloride impact was not vertically defined.

Soil Borings

On August 5, 2010, Tetra Tech personnel supervised the installation of sixteen (16) soil borings (SB-1 through SB-16) utilizing an air rotary rig to define the vertical extents of the chloride impact. Some of the borings were installed in the vicinity of the previous auger holes. Soil boring (SB-2) was drilled near the south fence line to assess the impact area (approximately 10' x 75') outside the fence line located in the bar ditch. The soil borings were extended to a maximum depth of 10 to 60 feet bgs, with samples collected at 2 to 3 foot intervals for the first 10 feet and 5 foot intervals to 20' and 10' intervals thereafter. The samples were submitted to the laboratory for analysis of chlorides. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 2. The soil boring locations are shown on Figure 3.

Referring to Table 2, analytical results indicate the maximum extent of chloride impact greater than 1,000 mg/kg extended from 7' to 15' (SB-3, SB-4, SB-6, SB-8, SB-9, SB-10 and SB-13) and 20' (SB-1, SB-7 and SB-11). The deepest impact was found at (SB-2, SB-5, SB-10 and SB-14), which extended down to 30' to 40' below surface. All samples had chloride concentrations that decreased with depth. A shallow hydrocarbon impact was encountered at SB-2, SB-6, SB-8, SB-9, SB-10, SB-11 and SB-12. Several of the soil boring samples exceeded the TPH RRAL at 0-1' and declined below the RRAL at 3.0' below surface.

Based on the soil boring data, Figures 5 and 6 (Cross-Sections A-A' and B-B') were developed to evaluate distribution of the chloride impact in the subsurface soils.

Remedial Work and Closure Request

On April 5, 2011, Tetra Tech and COG met with Geoffrey Leking with NMOCD to discuss and review the results of the investigation. Based on groundwater depth and results, Mr. Leking approved the removal of 5.0' of the impacted soil and capping the excavation with a 40 mil liner.

Tetra Tech personnel supervised the excavation of the site in July, 2011. The excavation depth and liner installation are highlighted in Table 1 and shown on Figures 5 and 6 (Cross-Sections A-A' and B-B'). During the excavation, Tetra Tech field screen the soil (chlorides) to capture the spill foot print (horizontal extents) of the spill. In the areas at or near the SWD line, the line



TETRA TECH

was exposed to remove the impacted soil on top of the line and it is proposed to excavate the soils under the line to the appropriate depths. With approval of New Mexico Department of Transportation, the area (10' x 75') outside the fence line was also be excavated to the appropriate depths.

Once completed, the liner (40 mil) was installed at a depth of 5.0' below surface and the excavation backfilled with clean soil to grade. The final depths of the soil remediation for the entire spill met or exceeded the depths of the approved work plan. Approximately 11,000 yards³ were removed and hauled to CRI Inc. for proper disposal. Photos of the excavation are attached.

If you require any additional information or have any questions or comments concerning this report, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavaréz, P.G.
Senior Project Manager

cc: Pat Ellis - COG
Paul Evans - BLM
Jim Amos - BLM

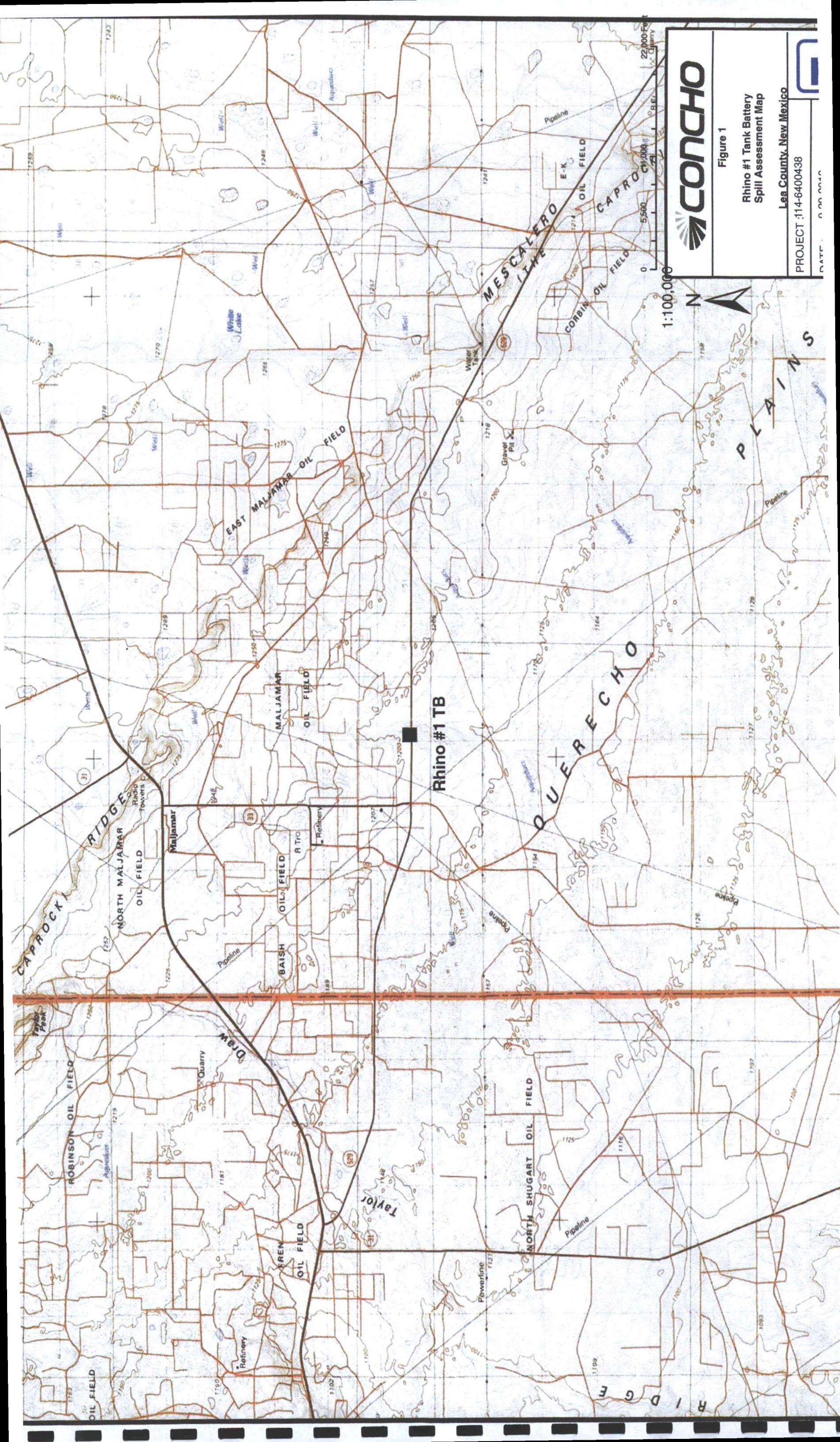


Figure 1

Rhino #1 Tank Battery
Spill Assessment Map

Lea County, New Mexico

PROJECT :114-6400438

DATE : 06/06/06





Rhino #1 TB



Figure 2

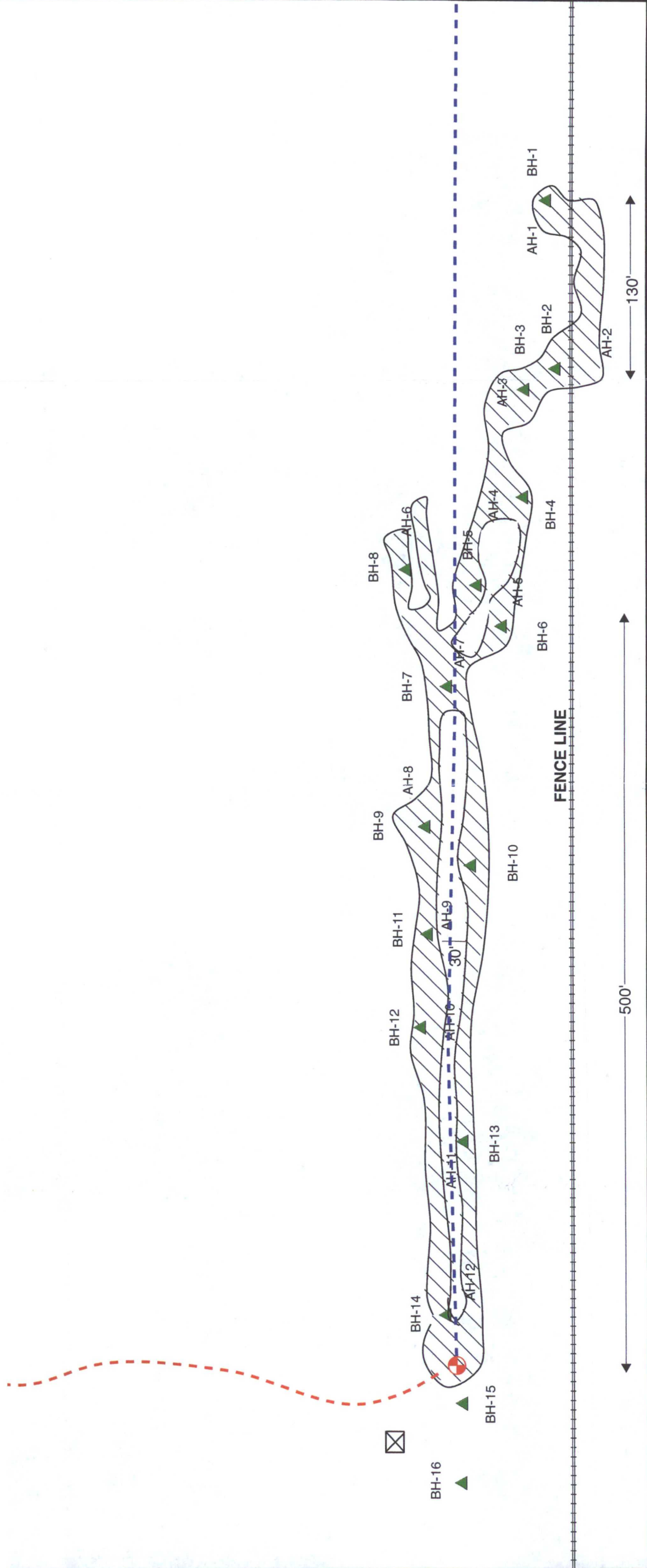
Rhino #1 Tank Battery
Spill Assessment Map

Lea County, New Mexico

PROJECT :114-6400438

DATE 9-29-2010





EXPLANATION	
---	Flow Line
---	COG Water Line
▲	Soil Borings
X	Temporary Monitor Well
	Auger Hole
●	Leak Source



CONCHO

Figure 3
Rhino #1 Tank Battery
Spill Assessment Map

Lea County, New Mexico

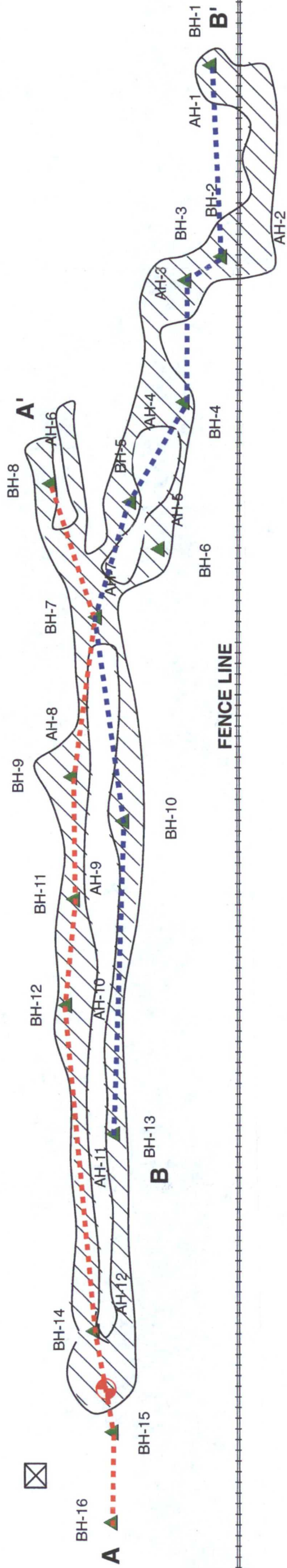
PROJECT :114-6400438

DATE : 10-5-2010

1:1,000







HIGHWAY 529

EXPLANATION

- A To A'
- B To B'
- Soil Borings
- Temporary Monitor Well
- Auger Hole
- Leak Source

1:1,000

0 55 110 220 Feet



Figure 4
Rhino #1 Tank Battery
Cross Section Reference Map
Lea County, New Mexico

PROJECT :114-6400438

DATE : 10.5.2010



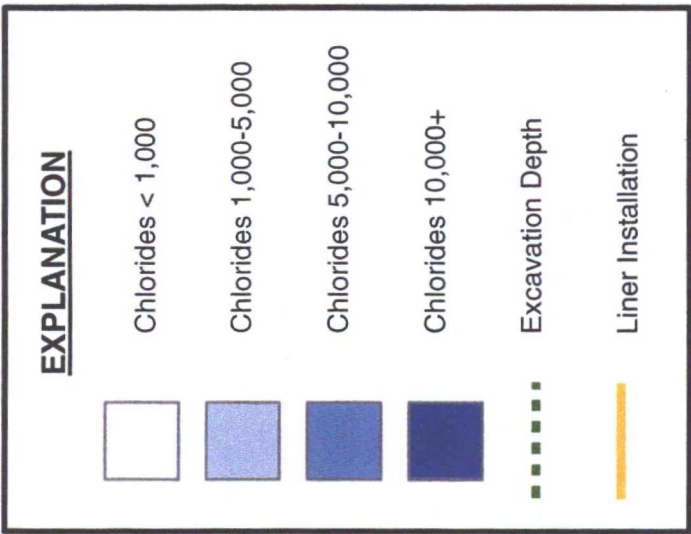
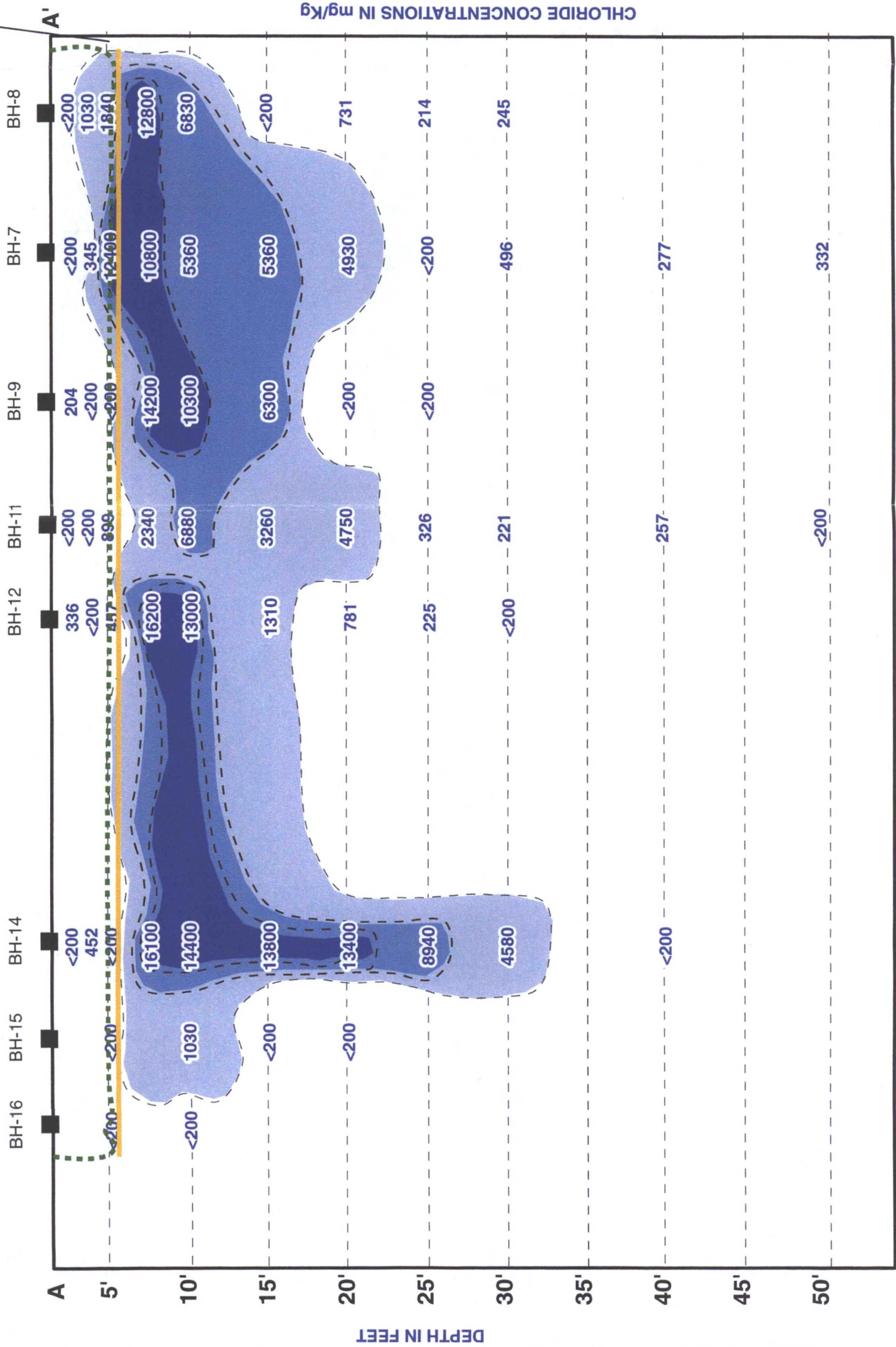


Figure 5
Rhino #1 Tank Battery
A to A' Analytical Cross Section

Lea County, New Mexico

PROJECT :114-6400438

DATE · 04-07-2011



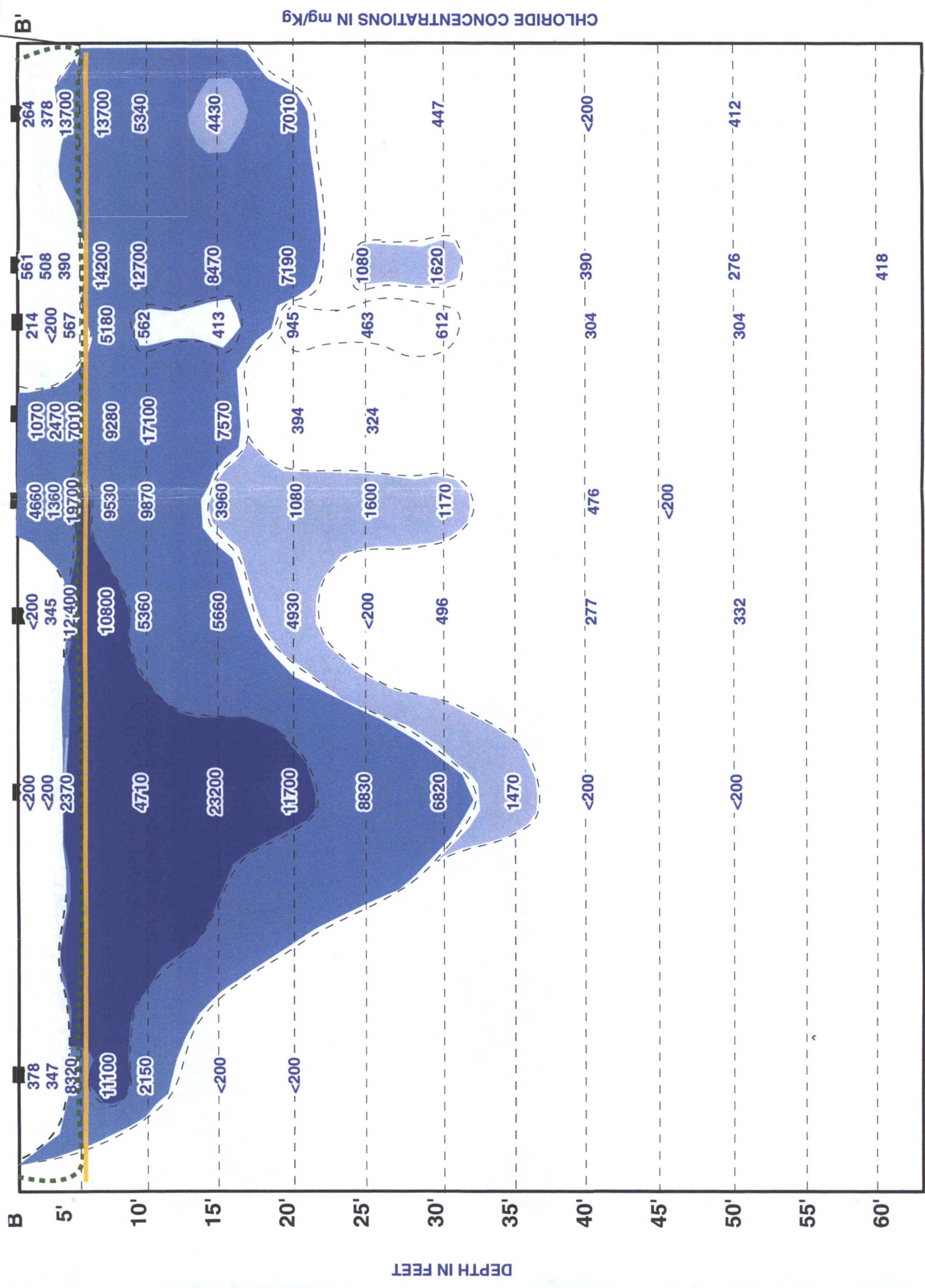


Figure 6

Rhino #1 Tank Battery

B to B' Analytical Cross Section

Lea County, New Mexico

PROJECT :114-6400438

DATE : 04-07-2011

Table 1

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-1	3/5/2010	0-1'			X	526	24	550	<0.0500	<0.0500	<0.0500	<0.0500	<200
	"	1-1.5'			X	-	-	-	-	-	-	-	<200
	"	2-2.5'			X	-	-	-	-	-	-	-	11,500
	"	3-3.5'			X	-	-	-	-	-	-	-	14,000
	"	4-4.5'			X	-	-	-	-	-	-	-	12,200
AH-2	3/5/2010	0-1'			X	708	154	862	<0.0500	<0.0500	<0.0500	0.337	212
	"	1-1.5'			X	-	-	-	-	-	-	-	591
	"	2-2.5'			X	-	-	-	-	-	-	-	7,580
	"	2.5-3'			X	-	-	-	-	-	-	-	17,200
AH-3	3/5/2010	0-1'			X	2,480	2,420	4,900	1.7	17.7	13.4	47.2	546
	"	1-1.5'			X	<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	1,790
	"	2-2.5'			X	<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	5,480
	"	3-3.5'			X	-	-	-	-	-	-	-	5,700
	"	4-4.5'			X	-	-	-	-	-	-	-	5,940
	"	5-5.5'			X	-	-	-	-	-	-	-	13,200

**COG Operating LLC.
Rhino #1 Tank Battery
LEA COUNTY, NEW MEXICO**

This image shows a blank page from a document. There are faint vertical lines running down the page, likely due to the scanning process or the original document's structure. The paper has a slightly off-white or cream color with some minor texture visible.

Table 1

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-6	3/5/2010	0-1'			X	61	<1.00	61	<0.0100	<0.0100	<0.0100	<0.0100	<200
	"	1-1.5'			X	-	-	-	-	-	-	-	<200
	"	2-2.5'			X	-	-	-	-	-	-	-	1,490
	"	3-3.5'			X	-	-	-	-	-	-	-	11,200
	"	4-4.5'			X	-	-	-	-	-	-	-	13,200
	"	5-5.5'			X	-	-	-	-	-	-	-	8,950
AH-7	3/5/2010	0-1'			X	<50.0	<5.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<200
	"	1-1.5'			X	-	-	-	-	-	-	-	<200
	"	2-2.5'			X	-	-	-	-	-	-	-	<200
	"	3-3.5'			X	-	-	-	-	-	-	-	4,710
	"	4-4.5'			X	-	-	-	-	-	-	-	10,600
	"	5-5.5'			X	-	-	-	-	-	-	-	10,300
	"	6-6.5'		X		-	-	-	-	-	-	-	9,100
	"	7-7.5'		X		-	-	-	-	-	-	-	8,210
	"	8-8.5'		X		-	-	-	-	-	-	5,710	
	"	8.5-9'		X		-	-	-	-	-	-	6,730	

Table 1

COG Operating LLC.
Rhino #1 Tank Battery
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-11	3/5/2010	0-1'		X		<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<4.00
	"	1-1.5'		X		-	-	-	-	-	-	-	<4.00
	"	2-2.5'		X		-	-	-	-	-	-	-	<4.00
	"	3-3.5'		X		-	-	-	-	-	-	-	<4.00
	"	4-4.5'		X		-	-	-	-	-	-	-	<4.00
	"	5-5.5'		X		-	-	-	-	-	-	-	<4.00
	"	6-6.5'		X		-	-	-	-	-	-	-	<4.00
AH-12	3/5/2010	0-1'		X		<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<4.00
	"	1-1.5'		X		-	-	-	-	-	-	-	<4.00
	"	2-2.5'		X		-	-	-	-	-	-	-	<4.00
	"	3-3.5'		X		-	-	-	-	-	-	-	<4.00
	"	4-4.5'		X		-	-	-	-	-	-	-	<4.00
		5-5.5'		X		-	-	-	-	-	-	-	<4.00

Excavation Depth

Liner

BEB Below Excavation Bottom

(-) Not Analyzed

Table 2
COG Operating LLC.
Rhino #1

LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
SB-1	8/5/2010	1'			X	<2.00	<50.0	<50.0	-	-	-	-	264
	8/5/2010	3'			X	-	-	-	-	-	-	-	378
	8/5/2010	5'			X	-	-	-	-	-	-	-	13,700
	8/5/2010	7'		X		-	-	-	-	-	-	-	13,700
	8/5/2010	10'		X		-	-	-	-	-	-	-	5,340
	8/5/2010	15'		X		-	-	-	-	-	-	-	4,430
	8/5/2010	20'		X		-	-	-	-	-	-	-	7,010
	8/5/2010	30'		X		-	-	-	-	-	-	-	447
	8/5/2010	40'		X		-	-	-	-	-	-	-	<200
	8/5/2010	50'		X		-	-	-	-	-	-	-	412
SB-2	8/5/2010	1'			X	25.2	16,400	16,425.2	<0.200	<0.200	<0.200	<0.200	561
	8/5/2010	3'			X	<2.00	<50.00	<50.00	-	-	-	-	508
	8/5/2010	5'			X	-	-	-	-	-	-	-	390
	8/5/2010	7'		X		-	-	-	-	-	-	-	14,200
	8/5/2010	10'		X		-	-	-	-	-	-	-	12,700
	8/5/2010	15'		X		-	-	-	-	-	-	-	8,470
	8/5/2010	20'		X		-	-	-	-	-	-	-	7,190
	8/5/2010	25'		X		-	-	-	-	-	-	-	1,080
	8/5/2010	30'		X		-	-	-	-	-	-	-	1,620
	8/5/2010	40'		X		-	-	-	-	-	-	-	390
	8/5/2010	50'		X		-	-	-	-	-	-	-	276
	8/5/2010	60'		X		-	-	-	-	-	-	-	418

LEA COUNTY, NEW MEXICO

LEA COUNTY, NEW MEXICO

Table 2

COG Operating LLC.

Rhino #1

LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
SB-6	8/6/2010	1'			X	38.9	6,480	6,518.9	<0.200	<0.200	<0.200	<0.200	<200
	8/6/2010	3'			X	41.0	1,570	1,611	-	-	-	-	9,850
	8/6/2010	5'			X	-	-	-	-	-	-	-	15,800
	8/6/2010	7'		X		-	-	-	-	-	-	-	8,010
	8/6/2010	10'		X		-	-	-	-	-	-	-	1,380
	8/6/2010	15'		X		-	-	-	-	-	-	-	1,150
	8/6/2010	20'		X		-	-	-	-	-	-	-	573
	8/6/2010	25'		X		-	-	-	-	-	-	-	<200
SB-7	8/6/2010	1'			X	<2.00	213	213	<0.0200	<0.0200	<0.0200	<0.0200	<200
	8/6/2010	3'			X	-	-	-	-	-	-	-	345
	8/6/2010	5'			X	-	-	-	-	-	-	-	12,400
	8/6/2010	7'		X		-	-	-	-	-	-	-	10,800
	8/6/2010	10'		X		-	-	-	-	-	-	-	5,360
	8/6/2010	15'		X		-	-	-	-	-	-	-	5,660
	8/6/2010	20'		X		-	-	-	-	-	-	-	4,930
	8/6/2010	25'		X		-	-	-	-	-	-	-	<200
	8/6/2010	30'		X		-	-	-	-	-	-	-	496
	8/6/2010	40'		X		-	-	-	-	-	-	-	277
	8/6/2010	50'		X		-	-	-	-	-	-	-	332
SB-8	8/9/2010	1'			X	<100	7,360	7,360	<0.0200	<0.0200	<0.0200	<0.0200	<200
	8/9/2010	3'			X	17.0	487	504.00	-	-	-	-	1,030
	8/9/2010	5'			X	-	-	-	-	-	-	-	1,840
	8/9/2010	7'		X		-	-	-	-	-	-	-	12,800
	8/9/2010	10'		X		-	-	-	-	-	-	-	6,830
	8/9/2010	15'		X		-	-	-	-	-	-	-	<200
	8/9/2010	20'		X		-	-	-	-	-	-	-	731
	8/9/2010	25'		X		-	-	-	-	-	-	-	214
	8/9/2010	30'		X		-	-	-	-	-	-	-	245

Table 2

COG Operating LLC.

Rhino #1

LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
SB-15	8/10/2010	1'			X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<200
	8/10/2010	3'			X	-	-	-	-	-	-	-	<200
	8/10/2010	5'			X	-	-	-	-	-	-	-	<200
	8/10/2010	7'		X		-	-	-	-	-	-	-	2,640
	8/10/2010	10'		X		-	-	-	-	-	-	-	1,030
	8/10/2010	15'		X		-	-	-	-	-	-	-	<200
	8/10/2010	20'		X		-	-	-	-	-	-	-	<200
SB-16	8/10/2010	1'		X		<2.00	<50.0	<50.00	-	-	-	-	<200
	8/10/2010	3'		X		-	-	-	-	-	-	-	<200
	8/10/2010	5'		X		-	-	-	-	-	-	-	<200
	8/10/2010	7'		X		-	-	-	-	-	-	-	<200
	8/10/2010	10'		X		-	-	-	-	-	-	-	<200

 Excavation Depth

 Liner

BEB Below Excavation Bottom

(-) Not Analyzed

COG Operating LLC
Rhino #1
Lea County, New Mexico



TETRA TECH



View of Excavation



View of Excavation

COG Operating LLC
Rhino #1
Lea County, New Mexico



TETRA TECH



View of Excavation



View of Excavation

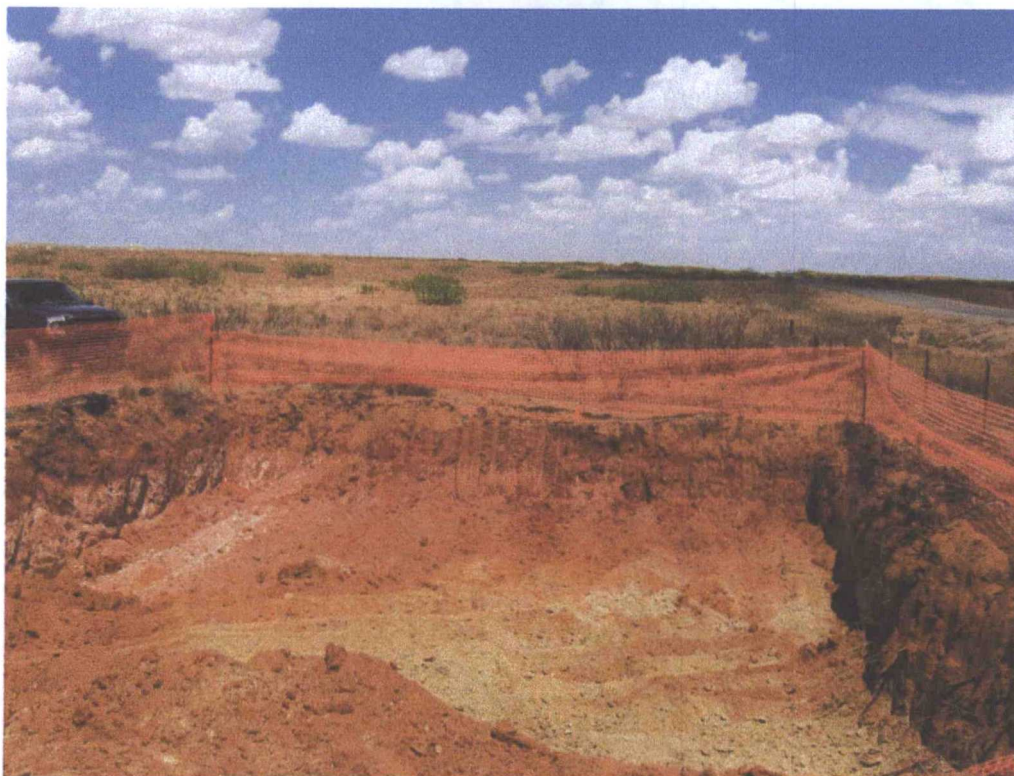
COG Operating LLC
Rhino #1
Lea County, New Mexico



TETRA TECH



View of Excavation



View of Excavation

COG Operating LLC
Rhino #1
Lea County, New Mexico



TETRA TECH



View of Excavation



View of Excavation

COG Operating LLC
Rhino #1
Lea County, New Mexico



TETRA TECH



View of Excavation and Liner Installation



View of Excavation and Liner Installation

COG Operating LLC
Rhino #1
Lea County, New Mexico



TETRA TECH



View of Excavation and Liner Installation



View of Excavation and Liner Installation

COG Operating LLC
Rhino #1
Lea County, New Mexico



TETRA TECH



View of Excavation and Liner Installation



View of Excavation and Liner Installation

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003
Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Kanicia Carrillo
Address	550 W. Texas, Suite 100 Midland, TX 79701	Telephone No.	432-685-4332
Facility Name	~ Rhino #1	Facility Type	Battery

Surface Owner	Federal	Mineral Owner		Lease No.	NMLC058698B/ 30-025-36605
---------------	---------	---------------	--	-----------	---------------------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	35	17S	32E					Lea

Latitude N32 47.384 Longitude W103 44.698
The leak is located approximately 200 yards south of the Rhino #1.

NATURE OF RELEASE

Type of Release- Produced water	Volume of Release-400 bbls	Volume Recovered- 260 bbls
Source of Release- produced water mainline	Date and Hour of Occurrence- 12/31/09	Date and Hour of Discovery 12/31/09
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Trishia Bad Bear, Larry Johnson, Geoffrey Leking	
By Whom? Pat Ellis	Date and Hour 12/31/09 9:13pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

WATERED 25'

Describe Cause of Problem and Remedial Action Taken.*

A tee had snapped apart at the produced water mainline coming from the Rhino battery.

Describe Area Affected and Cleanup Action Taken.*

The spill area does not contain many large areas, but instead multiple fingers that cover an area of approximately 75' X 1000'. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCDBLM for your approval prior to any significant remediation work.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCDBLM rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCDBLM marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCDBLM acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <u>K. Carrillo</u>	OIL CONSERVATION DIVISION <u>Johnson</u>	
Printed Name: Kanicia Carrillo	Approved by District <u>Superintendent</u> ENVIRONMENTAL ENGINEER	
Title: Regulatory Analyst	Approval Date: <u>1.18.10</u>	Expiration Date: <u>3.18.10</u>
E-mail Address: <u>kcarrillo@conchoresources.com</u>	Conditions of Approval:	Attached ☐
Date: 01/12/10 Phone: 432-685-4332	<u>SUBMIT WORKPLAN FOR APPROVAL</u>	<u>IRP# 10-1-2398</u>

* Attach Additional Sheets If Necessary

COMPLETE & SUBMIT FINAL C.A. BY 3.18.10

FGRL1002249400

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company COG Operating LLC	Contact Pat Ellis	
Address 550 W. Texas, Suite 1300 Midland, Texas 79701	Telephone No. (432) 685-4332	
Facility Name Rhino #1	Facility Type Tank Battery	
Surface Owner: Federal	Mineral Owner	Lease No. API# 30-025-36605

LOCATION OF RELEASE

Unit Letter D	Section 35	Township 17S	Range 32E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
-------------------------	----------------------	------------------------	---------------------	---------------	------------------	---------------	----------------	----------------------

Latitude 32 47.384 Longitude 103 44.698

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 400 bbls	Volume Recovered 260 bbls
Source of Release: produced water main line	Date and Hour of Occurrence 12/31/2009	Date and Hour of Discovery 12/31/09
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Trishia Bad Bear, Larry Johnson, Geoffrey Leking	
By Whom? Pat Ellis	Date and Hour 12/31/2009 9:13 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

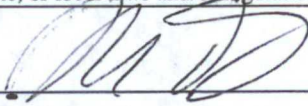
Describe Cause of Problem and Remedial Action Taken.*

A tee had snapped apart at the produced water mainline coming from Rhino battery.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech inspected site and collected samples to define spills extent. The soil that exceeded RRAL was removed and hauled away for proper disposal. As approved, the impacted soil was removal to a depth of 5.0' below surface and lined with a 40 mil liner. Site was then brought up to surface grade with clean backfill material. Tetra Tech prepared closure report and submitted to NMOCD for review.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 		OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez (agent for COG)		Approved by District Supervisor:	
Title: Project Manager		Approval Date:	Expiration Date:
E-mail Address: ike.tavarez@tetrattech.com		Conditions of Approval:	
Date: 3-13-12 Phone: (432) 682-4559		Attached ☐	

* Attach Additional Sheets If Necessary

Water Well Data
Average Depth to Groundwater (ft)
COG - Rhino #1 Tank Battery
Lea County, New Mexico

16 South 31 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
290					

16 South 32 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
					260

16 South 33 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
190	168	160			

17 South 31 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
					271

17 South 32 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
					SITE

17 South 33 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
					155

18 South 31 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
					261

18 South 32 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
					117

18 South 33 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
					177

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data
- Field water level
- New Mexico Water and Infrastructure Data System
- Tetra Tech Temporary well

SAMPLE LOG

Boring/Well: TMW-1
 Project Number: 114-6400438
 Client: COG
 Site Location: Rhino
 Location: Lea Co., NM
 Legals: T-17S R-32E Sec35
 Total Depth: 130
 Date Installed: 03/16/11
 Gauged: 3/23/11 - 133' Dry Well TOC

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5	--	Very loose brown sand - dry blow sand
10	--	Very soft white clay - dry caliche powder
15	--	Loose tan sand w/ 1mm gravel - very dry
20	--	Loose tan sand w/ 2.5mm gravel - very dry
25	--	Loose reddish sand well sorted - very dry
30	--	Soft silty clay brown/reddish - dry
35	--	Soft reddish silty clay - dry
40	--	Soft tan silty clay - dry
45	--	Soft red silty clay - dry
50	--	Stiff brown/reddish clay - dry
55	--	Stiff brown/reddish clay - dry
60	--	Stiff brown/reddish clay - dry
65	--	Stiff red clay - dry (Redbed)
70	--	Medium stiff red silty clay powder - very dry
75	--	Medium stiff red silty clay powder - very dry
80	--	Medium stiff red silty clay powder - very dry
85	--	Medium stiff red silty clay powder - very dry
90	--	Medium stiff red silty clay powder - very dry
95	--	Medium stiff red silty clay powder - very dry
100	--	Medium stiff red silty clay powder - very dry
105	--	Medium stiff red silty clay powder - very dry
110	--	Medium stiff red silty clay powder - very dry
115	--	Medium dense silty sandy clay
120	--	Medium stiff red clay - very dry
125	--	Medium stiff red clay - very dry
130	--	Medium stiff red clay - very dry

Total Depth 130' Groundwater was not encountered

A	01	17S	32E	222333	LEA	SEO		1	17S.32E.01.222333	1976-02-16	228.60
K	01	17S	32E	323	LEA	SEO		1	17S.32E.01.323	1966-03-10	173.19
K	01	17S	32E	32343	LEA	USGS	325132103430901	7	17S.32E.01.32343	1961-02-06	151.26
K	01	17S	32E	32343	LEA	USGS	325132103430901	7	17S.32E.01.32343	1966-03-15	165.85
K	01	17S	32E	32343	LEA	USGS	325132103430901	7	17S.32E.01.32343	1976-02-16	166.74
K	01	17S	32E	32343	LEA	USGS	325132103430901	7	17S.32E.01.32343	1981-01-28	172.17
K	01	17S	32E	32343	LEA	USGS	325132103430901	7	17S.32E.01.32343	1986-03-25	173.00
K	01	17S	32E	32343	LEA	USGS	325132103430901	7	17S.32E.01.32343	1990-12-07	173.44
K	01	17S	32E	32343	LEA	USGS	325132103430901	7	17S.32E.01.32343	1996-02-16	176.15
I	01	17S	32E	422311	LEA	SEO		1	17S.32E.01.422311	1990-11-30	237.79
O	02	17S	32E	43433	LEA	SEO		1	17S.32E.02.43433	1961-03-14	148.33
F	03	17S	32E	14330	LEA	SEO		1	17S.32E.03.14330	1966-02-10	168.14
K	03	17S	32E	321142	LEA	SEO		1	17S.32E.03.321142	1986-04-02	163.01
O	03	17S	32E	43333	LEA	SEO		1	17S.32E.03.43333	1996-01-12	139.03
B	11	17S	32E	21321	LEA	SEO		1	17S.32E.11.21321	1981-01-28	105.86
G	11	17S	32E	231432	LEA	SEO		1	17S.32E.11.231432	1981-06-16	79.28
N	11	17S	32E	34332	LEA	SEO		1	17S.32E.11.34332	1996-02-20	48.14
N	11	17S	32E	34342	LEA	SEO		1	17S.32E.11.34342	1976-03-01	32.35
P	12	17S	32E	444144	LEA	SEO		1	17S.32E.12.444144	1966-02-11	120.13

[illegible]

N 03	18S	33E	34133	LEA	SEO	118S.33E.03.34133	1966-04-05	60.10
N 03	18S	33E	341333	LEA	SEO	118S.33E.03.341333	1971-02-19	59.18
B 08	18S	33E	213	LEA	SEO	118S.33E.08.213		100.00
G 10	18S	33E	23244	LEA	USGS	324541103383901	1965-12-01	57.67
G 10	18S	33E	23244	LEA	USGS	324541103383901	1968-03-06	57.40
G 10	18S	33E	23244	LEA	USGS	324541103383901	1971-02-09	41.64
G 10	18S	33E	23244	LEA	USGS	324541103383901	1976-02-18	57.86
G 10	18S	33E	23244	LEA	USGS	324541103383901	1981-02-20	57.04
G 10	18S	33E	23244	LEA	USGS	324541103383901	1986-03-25	56.77
G 10	18S	33E	23244	LEA	USGS	324541103383901	1991-05-17	58.01
G 10	18S	33E	23244	LEA	USGS	324541103383901	1996-02-15	59.18
G 10	18S	33E	23244	LEA	USGS	324541103383901	2001-02-20	60.28
G 10	18S	33E	23244	LEA	USGS	324541103383901	1976-02-18	44.75
P 10	18S	33E	44211	LEA	SEO	118S.33E.10.44211	1976-02-18	44.97
P 10	18S	33E	44211 A	LEA	SEO	118S.33E.10.44211 A	1991-05-17	46.16
P 11	18S	33E	44313	LEA	SEO	118S.33E.11.44313		150.00
P 12	18S	33E	44	LEA	SEO	118S.33E.12.44		130.00
P 12	18S	33E	44	LEA	SEO	118S.33E.12.44		137.22
P 12	18S	33E	44211	LEA	USGS	324518103362601	1961-03-06	137.15
P 12	18S	33E	44211	LEA	USGS	324518103362601	1966-02-08	137.48
P 12	18S	33E	44211	LEA	USGS	324518103362601	1976-02-17	137.66
P 12	18S	33E	44211	LEA	USGS	324518103362601	1981-02-20	138.91
P 12	18S	33E	44211	LEA	USGS	324518103362601	1986-03-25	140.14
P 12	18S	33E	44211	LEA	USGS	324518103362601	1991-05-15	141.70
P 12	18S	33E	44211	LEA	USGS	324518103362601	1996-02-15	142.81
P 12	18S	33E	44211	LEA	USGS	324518103362601	2001-02-20	142.79
E 13	18S	33E	131444	LEA	SEO	118S.33E.13.131444	1976-02-17	32.19
P 13	18S	33E	44244	LEA	SEO	118S.33E.13.44244	1996-02-15	48.55
D 14	18S	33E	111	LEA	SEO	118S.33E.14.111	1976-02-18	36.41
D 14	18S	33E	11140	LEA	USGS	324502103381802	1954-06-03	35.90
D 14	18S	33E	11140	LEA	USGS	324502103381802	1961-03-10	36.02
D 14	18S	33E	11140	LEA	USGS	324502103381802	1965-12-01	37.88
D 14	18S	33E	11140	LEA	USGS	324502103381802	1966-04-05	36.07
D 14	18S	33E	11140	LEA	USGS	324502103381802	1968-03-06	35.83
D 14	18S	33E	11140	LEA	USGS	324502103381802	1971-02-09	35.20
D 14	18S	33E	11140	LEA	USGS	324502103381802	1976-02-18	36.41
D 14	18S	33E	11140	LEA	USGS	324502103381802	1981-02-20	37.98
D 14	18S	33E	11140	LEA	USGS	324502103381802	1986-03-25	37.82
D 14	18S	33E	11140	LEA	USGS	324502103381802	1991-05-17	39.05
D 14	18S	33E	11140	LEA	USGS	324502103381802	1996-02-15	40.27
A 17	18S	33E	22	LEA	SEO	118S.33E.17.22		85.00
G 23	18S	33E	23140	LEA	SEO	118S.33E.23.23140	1981-02-20	47.63
G 23	18S	33E	23140 A	LEA	SEO	118S.33E.23.23140 A	1991-05-22	48.94
H 24	18S	33E	24	LEA	SEO	118S.33E.24.24		195.00
A 30	18S	33E	22	LEA	SEO	118S.33E.30.22		35.00
B 33	18S	33E	21131	LEA	SEO	118S.33E.33.21131	1958-12-09	177.35

F	01	17S	33E	14	LEA	SEO				1	17S.33E.01.14			150.00
C	02	17S	33E	12	LEA	SEO				1	17S.33E.02.12			162.00
P	02	17S	33E	44	LEA	SEO				1	17S.33E.02.44			168.00
P	02	17S	33E	444	LEA	SEO				1	17S.33E.02.444			151.00
F	03	17S	33E	14	LEA	SEO				1	17S.33E.03.14			155.00
F	03	17S	33E	14134	LEA	SEO				1	17S.33E.03.14134	1966-02-14		146.98
H	04	17S	33E	241441	LEA	SEO				1	17S.33E.04.241441	1971-02-18		159.58
P	04	17S	33E	44321	LEA	SEO				1	17S.33E.04.44321	1990-12-07		172.65
P	04	17S	33E	44444	LEA	SEO				1	17S.33E.04.44444	1961-03-14		145.19
A	05	17S	33E	22220	LEA	USGS	325208103402601			9	17S.33E.05.22220	1961-01-19		166.50
A	05	17S	33E	22220	LEA	USGS	325208103402601			9	17S.33E.05.22220	1966-03-30		177.05
A	05	17S	33E	22220	LEA	USGS	325208103402601			9	17S.33E.05.22220	1971-03-31		162.20
A	05	17S	33E	22220	LEA	USGS	325208103402601			9	17S.33E.05.22220	1976-09-01		166.20
A	05	17S	33E	22220	LEA	USGS	325208103402601			9	17S.33E.05.22220	1981-01-27		165.40
A	05	17S	33E	22220	LEA	USGS	325208103402601			9	17S.33E.05.22220	1986-03-25		166.40
A	05	17S	33E	22220	LEA	USGS	325208103402601			9	17S.33E.05.22220	1990-12-07		167.22
A	05	17S	33E	22220	LEA	USGS	325208103402601			9	17S.33E.05.22220	1996-02-16		168.27
A	05	17S	33E	22220	LEA	USGS	325208103402601			9	17S.33E.05.22220	2001-02-20		169.40
A	06	17S	33E	22220	LEA	SEO				1	17S.33E.06.			90.00
D	06	17S	33E	111444	LEA	SEO				1	17S.33E.06.111444	1986-03-25		214.11
I	06	17S	33E	42000	LEA	SEO				1	17S.33E.06.42000	1986-03-26		170.24
F	07	17S	33E	141221	LEA	SEO				1	17S.33E.07.141221	1990-12-07		197.13
K	07	17S	33E	32	LEA	SEO				1	17S.33E.07.32			114.00
K	07	17S	33E	32	LEA	SEO				1	17S.33E.07.32			214.00
K	07	17S	33E	32322	LEA	USGS	325044103420601			9	17S.33E.07.32322	1961-03-27		188.50
K	07	17S	33E	32322	LEA	USGS	325044103420601			9	17S.33E.07.32322	1966-02-10		189.92
K	07	17S	33E	32322	LEA	USGS	325044103420601			9	17S.33E.07.32322	1971-02-15		188.61
K	07	17S	33E	32322	LEA	USGS	325044103420601			9	17S.33E.07.32322	1976-02-17		189.60
K	07	17S	33E	32322	LEA	USGS	325044103420601			9	17S.33E.07.32322	1981-01-23		190.28
K	07	17S	33E	32322	LEA	USGS	325044103420601			9	17S.33E.07.32322	1986-03-25		191.48
K	07	17S	33E	32322	LEA	USGS	325044103420601			9	17S.33E.07.32322	1990-12-07		192.25
K	07	17S	33E	32322	LEA	USGS	325044103420601			9	17S.33E.07.32322	1996-02-16		193.20
K	07	17S	33E	32322	LEA	USGS	325044103420601			9	17S.33E.07.32322	2001-02-20		193.86
E	08	17S	33E	132331	LEA	SEO				1	17S.33E.08.132331	1990-07-12		179.55
J	08	17S	33E	41	LEA	SEO				1	17S.33E.08.41			173.00
J	08	17S	33E	41	LEA	SEO				1	17S.33E.08.41			173.00
M	09	17S	33E	33	LEA	SEO				1	17S.33E.09.33			161.00
M	09	17S	33E	33	LEA	SEO				1	17S.33E.09.33			160.00
N	09	17S	33E	342113	LEA	USGS	325036103400001			8	17S.33E.09.342113	1961-03-13		168.96
N	09	17S	33E	342113	LEA	USGS	325036103400001			8	17S.33E.09.342113	1966-04-06		169.55
N	09	17S	33E	342113	LEA	USGS	325036103400001			8	17S.33E.09.342113	1971-02-15		171.36

N	09	17S	33E	342113	LEA	USGS	325036103400001	8	17S.33E.09.342113	1976-02-17	173.55
N	09	17S	33E	342113	LEA	USGS	325036103400001	8	17S.33E.09.342113	1981-01-27	176.23
N	09	17S	33E	342113	LEA	USGS	325036103400001	8	17S.33E.09.342113	1986-03-26	177.25
N	09	17S	33E	342113	LEA	USGS	325036103400001	8	17S.33E.09.342113	1996-02-16	178.34
N	09	17S	33E	342113	LEA	USGS	325036103400001	8	17S.33E.09.342113	2001-02-20	178.01
O	10	17S	33E	43433	LEA	SEO		1	17S.33E.10.43433	1990-12-11	154.15
H	12	17S	33E	24333	LEA	SEO		1	17S.33E.12.24333	1990-12-11	139.86
D	13	17S	33E	11	LEA	SEO		1	17S.33E.13.11		165.00
D	13	17S	33E	11	LEA	SEO		1	17S.33E.13.11		165.00
N	13	17S	33E	34122	LEA	USGS	324940103365801	12	17S.33E.13.34122	1952-05-24	147.77
N	13	17S	33E	34122	LEA	USGS	324940103365801	12	17S.33E.13.34122	1956-01-05	151.49
N	13	17S	33E	34122	LEA	USGS	324940103365801	12	17S.33E.13.34122	1961-01-06	158.01
N	13	17S	33E	34122	LEA	USGS	324940103365801	12	17S.33E.13.34122	1966-01-13	160.84
N	13	17S	33E	34122	LEA	USGS	324940103365801	12	17S.33E.13.34122	1971-01-13	161.34
N	13	17S	33E	34122	LEA	USGS	324940103365801	12	17S.33E.13.34122	1976-01-13	167.18
N	13	17S	33E	34122	LEA	USGS	324940103365801	12	17S.33E.13.34122	1981-01-06	174.33
N	13	17S	33E	34122	LEA	USGS	324940103365801	12	17S.33E.13.34122	1986-01-08	169.50
N	13	17S	33E	34122	LEA	USGS	324940103365801	12	17S.33E.13.34122	1991-01-02	171.50
N	13	17S	33E	34122	LEA	USGS	324940103365801	12	17S.33E.13.34122	1994-01-08	178.15
N	13	17S	33E	34122	LEA	USGS	324940103365801	12	17S.33E.13.34122	2001-01-03	172.05
N	13	17S	33E	34122	LEA	USGS	324940103365801	12	17S.33E.13.34122	2004-01-08	167.87
O	13	17S	33E	43444	LEA	SEO		1	17S.33E.13.43444	1990-12-11	175.72
H	16	17S	33E	24242	LEA	SEO		1	17S.33E.16.24242	1990-12-07	195.49
	17	17S	33E		LEA	SEO		1	17S.33E.17.		180.00
	17	17S	33E		LEA	SEO		1	17S.33E.17.		180.00
A	18	17S	33E	221	LEA	SEO		1	17S.33E.18.221		188.00
A	18	17S	33E	22113	LEA	SEO		1	17S.33E.18.22113	1990-12-07	184.03
G	18	17S	33E	23	LEA	SEO		1	17S.33E.18.23		188.00
K	18	17S	33E	322332	LEA	SEO		1	17S.33E.18.322332	1986-03-26	195.15
A	20	17S	33E	22	LEA	SEO		1	17S.33E.20.22		190.00
A	20	17S	33E	221443	LEA	SEO		1	17S.33E.20.221443	1961-03-14	147.38
H	20	17S	33E	24132	LEA	SEO		1	17S.33E.20.24132	1996-04-02	170.45
O	22	17S	33E	43233	LEA	SEO		1	17S.33E.22.43233	1996-02-15	157.20
L	23	17S	33E	31	LEA	SEO		1	17S.33E.23.31		160.00
L	23	17S	33E	313242	LEA	SEO		1	17S.33E.23.313242	1976-03-02	159.25
H	25	17S	33E	24444	LEA	SEO		1	17S.33E.25.24444	1986-04-02	155.08
I	26	17S	33E	421443	LEA	SEO		1	17S.33E.26.421443	1956-09-07	162.35
A	29	17S	33E	22221	LEA	SEO		1	17S.33E.29.22221	1986-03-26	206.02
N	29	17S	33E	34411	LEA	SEO		1	17S.33E.29.34411	1990-12-12	60.62
C	30	17S	33E	12432	LEA	SEO		1	17S.33E.30.12432	1971-02-16	69.14
G	33	17S	33E	23411	LEA	SEO		1	17S.33E.33.23411	1990-12-11	120.85

I	33	17S	33E	42244	LEA	SEO	1	17S.33E.33.42244	1990-12-11	122.34
K	35	17S	33E	321	LEA	SEO	1	17S.33E.35.321		160.00
O	35	17S	33E	433	LEA	SEO	1	17S.33E.35.433		150.00



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Sub basin	Use	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 04021	MUN	LE		3	4	03	17S	32E		616761	3636252*	247		
L 04021 S	MUN	LE		4	3	2	03	17S	32E	616850	3636955*	260		
RA 08855	DOM	LE		4	1	1	10	17S	32E	616061	3635742*	158		
RA 09505	PDL	LE		2	2	1	10	17S	32E	616462	3635944	147		
RA 09505 S	PDL	LE		2	2	1	10	17S	32E	616463	3635945*	144		
RA 10175	SAN	LE		2	1	28	17S	32E		614814	3631005*	158		
RA 10846	DOM	LE		2	2	2	09	17S	32E	615659	3635938*	250		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 7

PLSS Search:

Township: 17S

Range: 32E

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Sub basin	Use	County	Q Q Q				Sec	Tws	Rng	X	Depth Depth Water		
				64	16	4	4					Y	Well	WaterColumn
CP 00566	DOM	LE		4	4	1	04	18S	32E	614960	3627280*	133	65	68
CP 00672	STK	LE		4	4	07	18S	32E	612475	3624947*	540	460	80	
CP 00677	PRO	LE		1	1	26	18S	32E	617750	3621373*	700			

Average Depth to Water: **262 feet**

Minimum Depth: **65 feet**

Maximum Depth: **460 feet**

Record Count: 3

PLSS Search:

Township: 18S Range: 32E

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Sub basin	Use	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 01695		IND	LE	4	4	2	25	17S	33E	630220	3630704*	230		
L 01883		IND	LE	4	4	4	13	17S	33E	630189	3633119*	260		
L 02687 APPRO		PRO	LE	2	2	26	17S	33E	628505	3631183*				
L 02875		PRO	LE	2	2	20	17S	33E	623662	3632717*	250	190	60	
L 02875 APPRO		PRO	LE	2	2	20	17S	33E	623662	3632717*	250	190	60	
L 03012		PRO	LE	4	1	03	17S	33E	626012	3637179*	210	155	55	
L 03012 APPRO		PRO	LE	4	1	03	17S	33E	626012	3637179*	210	155	55	
L 03133		SAN	LE	3	1	3	23	17S	33E	627188	3631868*	230		
L 03133 APPRO		SAN	LE	1	3	23	17S	33E	627289	3631969*	230	160	70	
L 03133 APPRO 2		SAN	ED	3	1	3	23	17S	33E	627188	3631868*	230	70	160
L 03133 APPRO 3		SAN	LE	1	3	23	17S	33E	627289	3631969*	230			
L 03622		PRO	LE				17	17S	33E	623053	3633703*	226	180	46
L 03622 APPRO		PRO	LE				17	17S	33E	623053	3633703*	226	180	46
L 03713		PRO	LE	3	4	1	28	17S	33E	624391	3630617*	210		
L 03713 APPRO		PRO	LE	3	4	1	28	17S	33E	624391	3630617*	210		
L 03726		DOM	LE	1	2	2	18	17S	33E	621930	3634400*	208	188	20
L 03726 APPRO		DOM	LE	3	2	18	17S	33E	621635	3633892*	208	188	20	
L 03749		PRO	LE	3	3	09	17S	33E	624036	3634734*	230	161	69	
L 03749 APPRO		PRO	LE	3	3	09	17S	33E	624036	3634734*	230	160	70	
L 03750		PRO	LE	4	1	01	17S	33E	629228	3637230*	180	150	30	
L 03750 APPRO		PRO	LE	4	1	01	17S	33E	629228	3637230*	180	150	30	
L 03782		PRO	LE	4	4	4	02	17S	33E	628532	3636311*	183	151	32
L 03782 APPRO		PRO	LE	4	4	4	02	17S	33E	628532	3636311*	183	151	32
L 04038		STK	LE	1	4	08	17S	33E	623226	3635124*	245	173	72	
L 04038 APPRO		STK	LE	1	4	08	17S	33E	623226	3635124*	245	173	72	
L 04122		DOM	LE	2	3	07	17S	33E	621216	3635093*	249	114	135	
L 04122 APPRO		DOM	LE	2	3	07	17S	33E	621216	3635093*	249	214	35	
L 04333		PRO	LE	1	1	13	17S	33E	628862	3634407*	217	165	52	
L 04333 APPRO		PRO	LE	1	1	13	17S	33E	628862	3634407*	217	165	52	

*UTM location was derived from PLSS - see Help

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

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Sub basin	Use	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Depth Y	Depth Well	Water Water	Column
L 04363		PRO	LE	1	2	3	35	17S	33E	627634	3628855*	226	160	66
L 04363 APPRO		PRO	LE	1	2	3	35	17S	33E	627634	3628855*	226	160	66
L 04524		DOM	LE				06	17S	33E	621387	3636896*	100	90	10
L 04524 APPRO		DOM	LE				06	17S	33E	621387	3636896*	100	90	10
L 04935		PRO	LE	2	1	02		17S	33E	627614	3637606*	204	162	42
L 05055		PRO	LE	3	3	4	35	17S	33E	628042	3628259*	233	150	83
L 05096		PRO	LE	3	3	4	35	17S	33E	628042	3628259*	233	150	83
L 09891		PRO	LE	3	4	4	16	17S	33E	625163	3633043*	190		
L 10212		SRO	LE	4	4	02		17S	33E	628433	3636412*	273	168	105

Average Depth to Water: **157 feet**

Minimum Depth: **70 feet**

Maximum Depth: **214 feet**

Record Count: 38

PLSS Search:

Township: 17S

Range: 33E

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

9/29/10 8:50 AM

Page 2 of 2

WATER COLUMN/ AVERAGE
DEPTH TO WATER



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Sub	County	Q Q Q						X	Depth Depth Water			
	basin		Use	64	16	4	Sec	Tws		Rng	Y	Well	Water
CP 00623	COM	LE	1	1	1	13	18S	33E	628895	3624852*	82	60	22
CP 00689	PRO	LE	2	1	13	18S	33E	629398	3624760*	100			
CP 00691	PRO	LE	4	2	24	18S	33E	630228	3622763*	215	195		20
CP 00701	PRO	LE	1	3	11	18S	33E	627373	3625534*	100			
CP 00758 EXPL	EXP	LE		3	04	18S	33E	624345	3626886*	250			
L 02878	PRO	LE	4	4	12	18S	33E	630196	3625175*	205	150		55
L 03454	DOM	LE	2	2	30	18S	33E	622200	3621422*	100	35		65
L 03454 APPRO	DOM	LE	2	2	30	18S	33E	622200	3621422*	100	35		65
L 06131	STK	LE	3	1	2	08	18S	33E	623241	3626167*	194	100	94
L 06347	STK	LE	4	4	12	18S	33E	630196	3625175*	170	130		40
L 09866	PRO	LE	2	2	17	18S	33E	623767	3624667*	238	85		153

Average Depth to Water: **98 feet**

Minimum Depth: **35 feet**

Maximum Depth: **195 feet**

Record Count: 11

PLSS Search:

Township: 18S

Range: 33E

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:
Ground Water

Geographic Area:
New Mexico

GO

News - updated January 2010

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

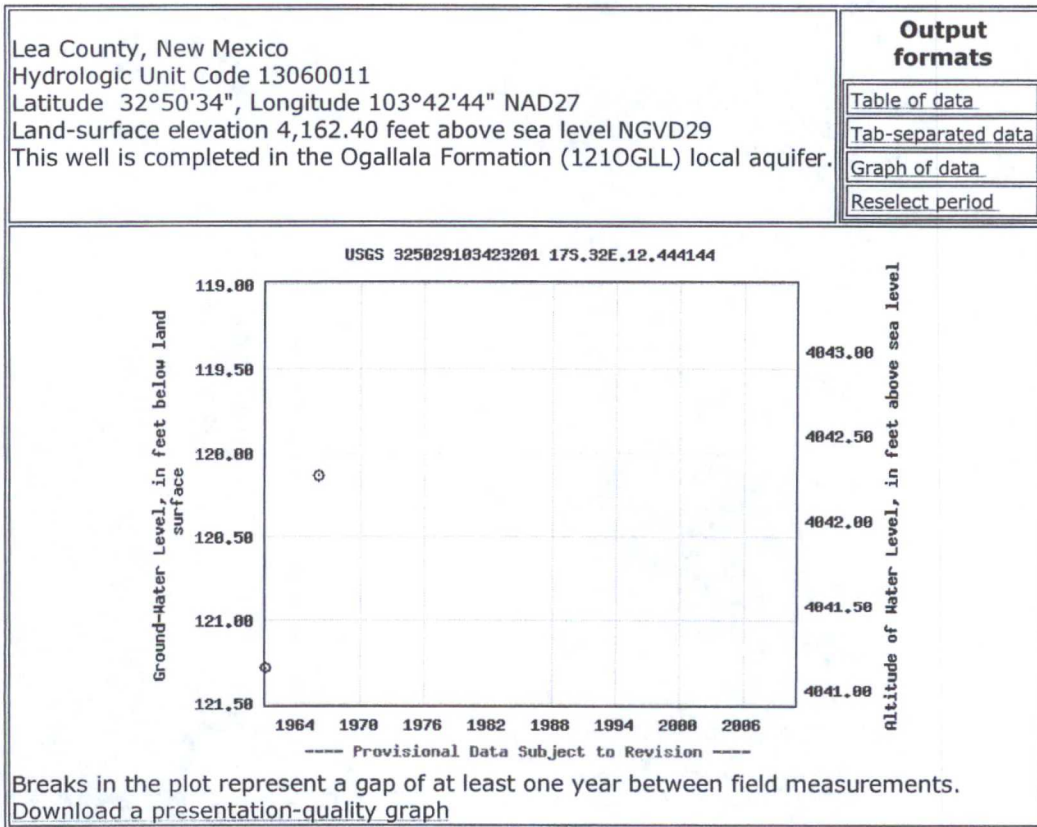
site_no list = • 325029103423201
Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 325029103423201 17S.32E.12.444144

Available data for this site Ground-water: Field measurements

GO



Questions about sites/data?

Feedback on this web site

Automated retrievals

Help

Top
Explanation of terms
Subscribe for system changes
News

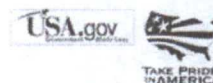
Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: Ground water for New Mexico: Water Levels

URL: [http://waterdata.usgs.gov/nm/nwis/gwlevels?](http://waterdata.usgs.gov/nm/nwis/gwlevels?site_no=325029103423201&)

Page Contact Information: New Mexico Water-Data Support Team





[USGS Home](#)
[Contact USGS](#)
[Search USGS](#)

National Water Information System: Web Interface

USGS Water Resources

Data Category:
Ground Water

Geographic Area:
New Mexico

News - updated January 2010

Ground-water levels for New Mexico

Search Results -- 1 sites found

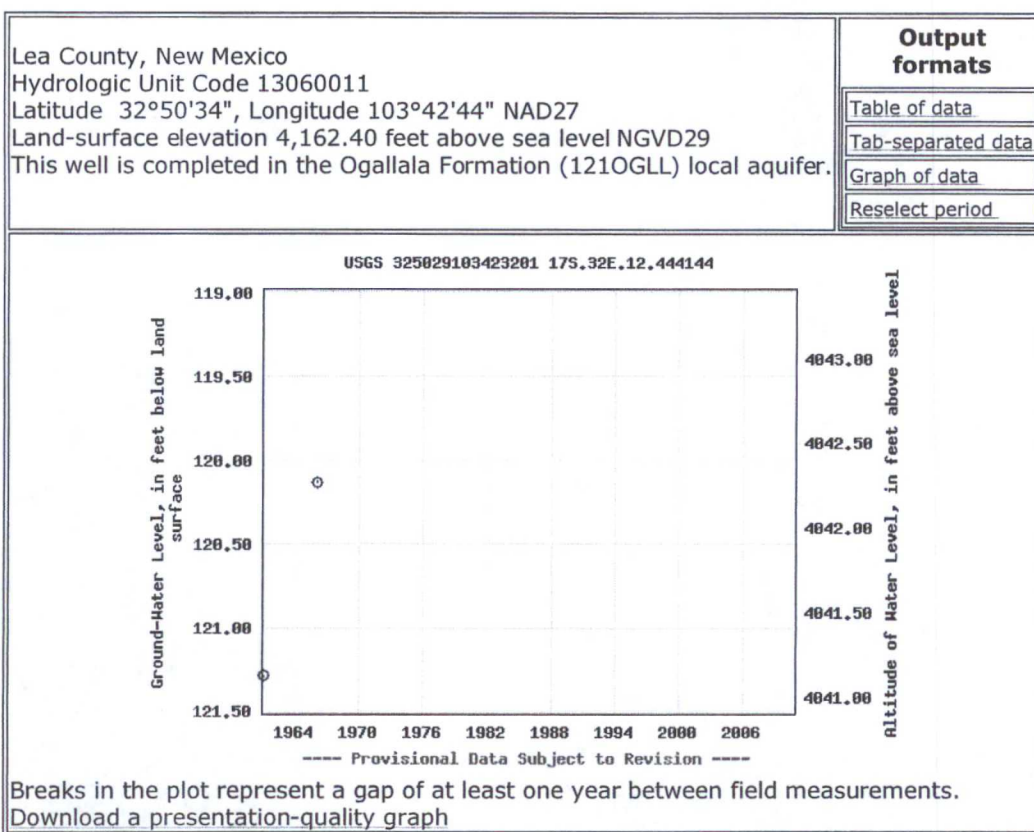
Search Criteria

site_no list = • 325029103423201
Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 325029103423201 17S.32E.12.444144

Available data for this site Ground-water: Field measurements



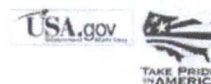
[Questions about sites/data?](#)
[Feedback on this web site](#)
[Automated retrievals](#)
[Help](#)

[Top](#)
[Explanation of terms](#)
[Subscribe for system changes](#)
[News](#)

[Accessibility](#) [FOIA](#) [Privacy](#) [Policies and Notices](#)

U.S. Department of the Interior | U.S. Geological Survey
Title: Ground water for New Mexico: Water Levels
URL: [http://waterdata.usgs.gov/nm/nwis/gwlevels?](http://waterdata.usgs.gov/nm/nwis/gwlevels?site_no=325029103423201&)

Page Contact Information: [New Mexico Water-Data Support Team](#)





USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:
Ground Water

Geographic Area:
New Mexico

GO

News - updated January 2010

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

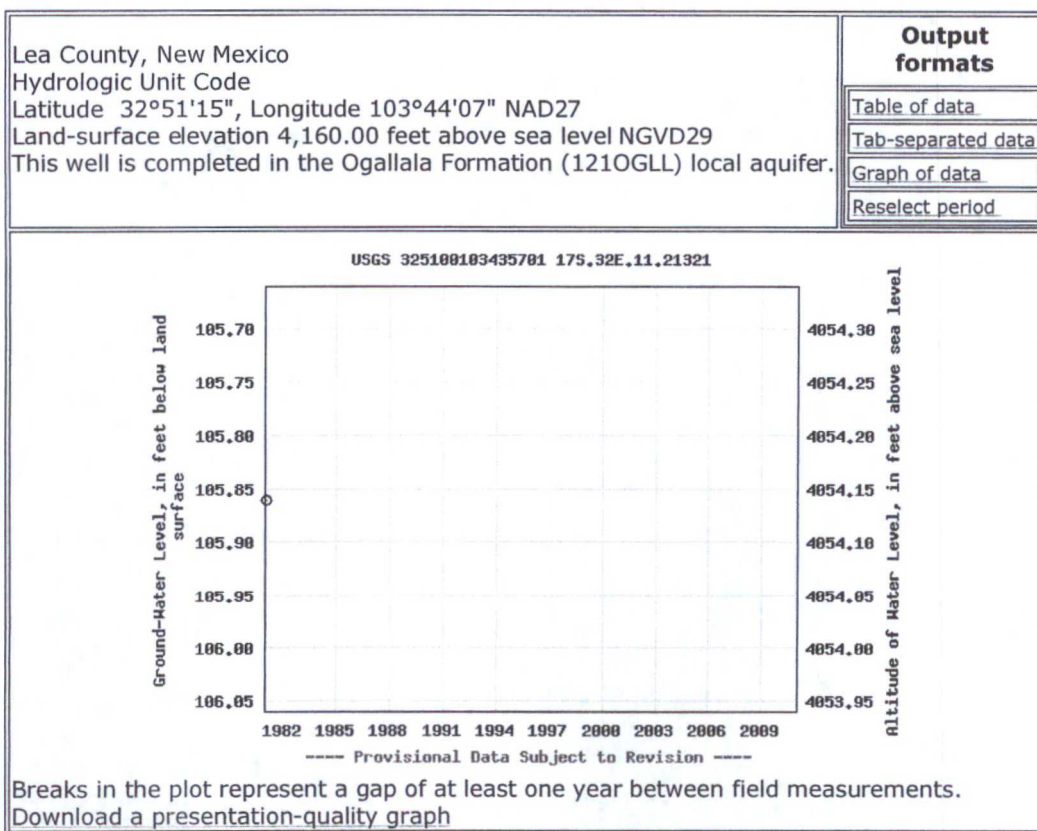
site_no list = • 325100103435701
Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 325100103435701 17S.32E.11.21321

Available data for this site Ground-water: Field measurements

GO



Questions about sites/data?

Feedback on this web site

Automated retrievals

Help

Top
Explanation of terms
Subscribe for system changes
News

Accessibility

FOIA

Privacy

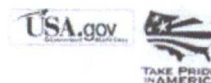
Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: Ground water for New Mexico: Water Levels

URL: <http://waterdata.usgs.gov/nm/nwis/gwlevels?>

Page Contact Information: New Mexico Water-Data Support Team





USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:
Ground Water

Geographic Area:
New Mexico

GO

News - updated January 2010

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = • 324519103474501
Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 324519103474501 18S.32E.07.44233

Available data for this site Ground-water: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°45'24", Longitude 103°47'55" NAD27

Land-surface elevation 3,759.00 feet above sea level NGVD29

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

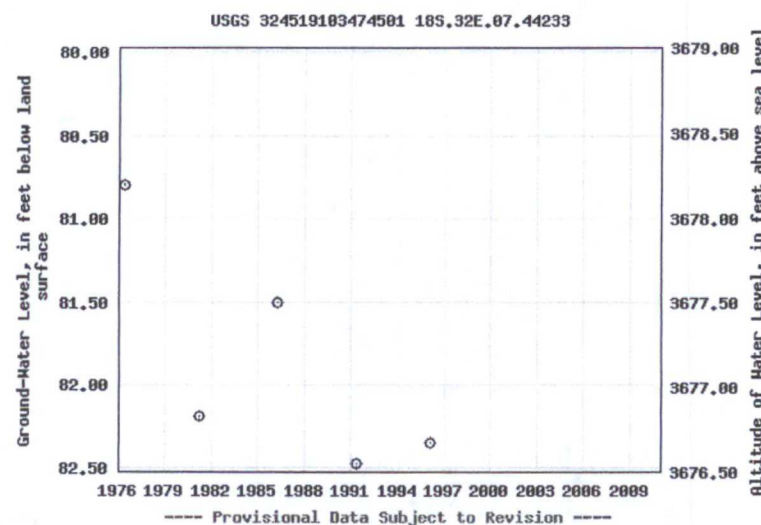
Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Top](#)
[Explanation of terms](#)
[Subscribe for system changes](#)
[News](#)

[Accessibility](#)

[FOIA](#)

[Privacy](#)

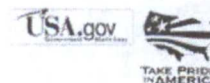
[Policies and Notices](#)

U.S. Department of the Interior | U.S. Geological Survey

Title: Ground water for New Mexico: Water Levels

URL: [http://waterdata.usgs.gov/nm/nwis/gwlevels?](http://waterdata.usgs.gov/nm/nwis/gwlevels?site_no=324519103474501&)

Page Contact Information: [New Mexico Water-Data Support Team](#)





USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:
Ground Water

Geographic Area:
New Mexico

GO

News - updated January 2010

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = . 324458103454301
Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 324458103454301 18S.32E.16.22433

Available data for this site Ground-water: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°45'05", Longitude 103°45'51" NAD27

Land-surface elevation 3,796.00 feet above sea level NGVD29

The depth of the well is 100 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

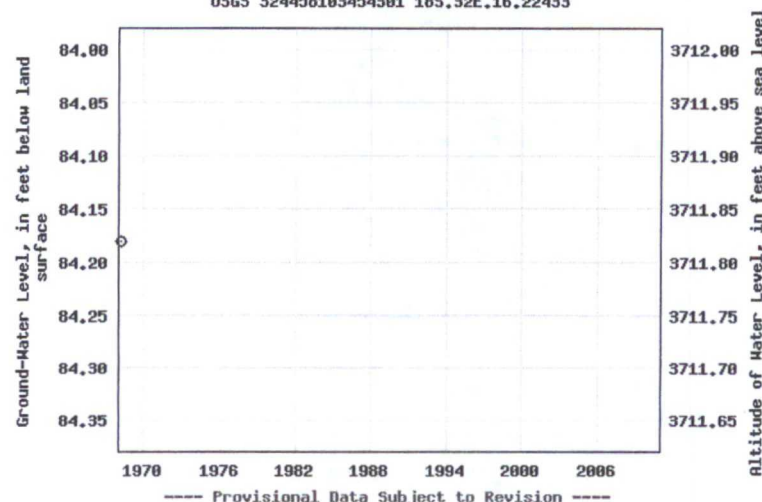
Table of data

Tab-separated data

Graph of data

Reselect period

USGS 324458103454301 18S.32E.16.22433



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?

Feedback on this web site

Automated retrievals

Help

Top
Explanation of terms
Subscribe for system changes
News

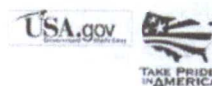
Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: Ground water for New Mexico: Water Levels

URL: <http://waterdata.usgs.gov/nm/nwis/gwlevels/>

Page Contact Information: New Mexico Water-Data Support Team



Summary Report

Ike Tavaréz
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: March 23, 2010

Work Order: 10031021



Project Location: Lea County, NM
Project Name: COG/Rhino #1 TB
Project Number: 114-6400438

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
225108	AH-1 0-1'	soil	2010-03-05	00:00	2010-03-09
225109	AH-1 1 -1.5'	soil	2010-03-05	00:00	2010-03-09
225110	AH-1 2-2.5'	soil	2010-03-05	00:00	2010-03-09
225111	AH-1 3-3.5'	soil	2010-03-05	00:00	2010-03-09
225112	AH-1 4-4.5	soil	2010-03-05	00:00	2010-03-09
225113	AH-2 0-1'	soil	2010-03-05	00:00	2010-03-09
225114	AH-2 1-1.5'	soil	2010-03-05	00:00	2010-03-09
225115	AH-2 2-2.5'	soil	2010-03-05	00:00	2010-03-09
225116	AH-2 2.5-3'	soil	2010-03-05	00:00	2010-03-09
225117	AH-3 0-1'	soil	2010-03-05	00:00	2010-03-09
225118	AH-3 1-1.5'	soil	2010-03-05	00:00	2010-03-09
225119	AH-3 2-2.5'	soil	2010-03-05	00:00	2010-03-09
225120	AH-3 3-3.5'	soil	2010-03-05	00:00	2010-03-09
225121	AH-3 4-4.5'	soil	2010-03-05	00:00	2010-03-09
225122	AH-3 5-5.5'	soil	2010-03-05	00:00	2010-03-09
225123	AH-4 0-1'	soil	2010-03-05	00:00	2010-03-09
225124	AH-4 1-1.5'	soil	2010-03-05	00:00	2010-03-09
225125	AH-4 2-2.5'	soil	2010-03-05	00:00	2010-03-09
225126	AH-4 3-3.5'	soil	2010-03-05	00:00	2010-03-09
225127	AH-4 4-4.5'	soil	2010-03-05	00:00	2010-03-09
225128	AH-4 5-5.5'	soil	2010-03-05	00:00	2010-03-09
225129	AH-4 6-6.5'	soil	2010-03-05	00:00	2010-03-09
225130	AH-4 7-7.5'	soil	2010-03-05	00:00	2010-03-09
225131	AH-4 8-8.5'	soil	2010-03-05	00:00	2010-03-09
225132	AH-4 9-9.5'	soil	2010-03-05	00:00	2010-03-09
225133	AH-5 0-1'	soil	2010-03-05	00:00	2010-03-09
225134	AH-5 1-1.5'	soil	2010-03-05	00:00	2010-03-09
225135	AH-5 2-2.5'	soil	2010-03-05	00:00	2010-03-09
225136	AH-5 3-3.5'	soil	2010-03-05	00:00	2010-03-09
225137	AH-5 4-4.5'	soil	2010-03-05	00:00	2010-03-09

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
225138	AH-6 0-1'	soil	2010-03-05	00:00	2010-03-09
225139	AH-6 1-1.5'	soil	2010-03-05	00:00	2010-03-09
225140	AH-6 2-2.5'	soil	2010-03-05	00:00	2010-03-09
225141	AH-6 3-3.5'	soil	2010-03-05	00:00	2010-03-09
225142	AH-6 4-4.5'	soil	2010-03-05	00:00	2010-03-09
225143	AH-6 5-5.5'	soil	2010-03-05	00:00	2010-03-09
225144	AH-7 0-1'	soil	2010-03-05	00:00	2010-03-09
225145	AH-7 1-1.5'	soil	2010-03-05	00:00	2010-03-09
225146	AH-7 2-2.5'	soil	2010-03-05	00:00	2010-03-09
225147	AH-7 3-3.5'	soil	2010-03-05	00:00	2010-03-09
225148	AH-7 4-4.5'	soil	2010-03-05	00:00	2010-03-09
225149	AH-7 5-5.5'	soil	2010-03-05	00:00	2010-03-09
225150	AH-7 6-6.5'	soil	2010-03-05	00:00	2010-03-09
225151	AH-7 7-7.5'	soil	2010-03-05	00:00	2010-03-09
225152	AH-7 8-8.5'	soil	2010-03-05	00:00	2010-03-09
225153	AH-7 8.5-9'	soil	2010-03-05	00:00	2010-03-09
225154	AH-8 0-1'	soil	2010-03-05	00:00	2010-03-09
225155	AH-8 1-1.5'	soil	2010-03-05	00:00	2010-03-09
225156	AH-8 2-2.5'	soil	2010-03-05	00:00	2010-03-09
225157	AH-8 3-3.5'	soil	2010-03-05	00:00	2010-03-09
225158	AH-8 4-4.5'	soil	2010-03-05	00:00	2010-03-09
225159	AH-8 5-5.5'	soil	2010-03-05	00:00	2010-03-09
225160	AH-8 6-6.5'	soil	2010-03-05	00:00	2010-03-09
225161	AH-8 7-7.5'	soil	2010-03-05	00:00	2010-03-09
225162	AH-8 8-8.5'	soil	2010-03-05	00:00	2010-03-09
225163	AH-9 0-1'	soil	2010-03-05	00:00	2010-03-09
225164	AH-9 1-1.5'	soil	2010-03-05	00:00	2010-03-09
225165	AH-9 2-2.5'	soil	2010-03-05	00:00	2010-03-09
225166	AH-9 3-3.5'	soil	2010-03-05	00:00	2010-03-09
225167	AH-9 4-4.5'	soil	2010-03-05	00:00	2010-03-09
225168	AH-9 5-5.5'	soil	2010-03-05	00:00	2010-03-09
225169	AH-9 6-6.5'	soil	2010-03-05	00:00	2010-03-09
225170	AH-9 7-7.5'	soil	2010-03-05	00:00	2010-03-09
225171	AH-9 8-8.5'	soil	2010-03-05	00:00	2010-03-09
225172	AH-9 9-9.5'	soil	2010-03-05	00:00	2010-03-09
225173	AH-10 0-1'	soil	2010-03-05	00:00	2010-03-09
225174	AH-10 1-1.5'	soil	2010-03-05	00:00	2010-03-09
225175	AH-10 2-2.5'	soil	2010-03-05	00:00	2010-03-09
225176	AH-10 3-3.5'	soil	2010-03-05	00:00	2010-03-09
225177	AH-10 4-4.5'	soil	2010-03-05	00:00	2010-03-09
225178	AH-10 5-5.5'	soil	2010-03-05	00:00	2010-03-09
225179	AH-10 6-6.5'	soil	2010-03-05	00:00	2010-03-09
225180	AH-10 7-7.5'	soil	2010-03-05	00:00	2010-03-09
225181	AH-11 0-1'	soil	2010-03-05	00:00	2010-03-09
225182	AH-11 1-1.5'	soil	2010-03-05	00:00	2010-03-09
225183	AH-11 2-2.5'	soil	2010-03-05	00:00	2010-03-09
225184	AH-11 3-3.5'	soil	2010-03-05	00:00	2010-03-09
225185	AH-11 4-4.5'	soil	2010-03-05	00:00	2010-03-09
225186	AH-11 5-5.5'	soil	2010-03-05	00:00	2010-03-09

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
225187	AH-11 6-6.5'	soil	2010-03-05	00:00	2010-03-09
225188	AH-12 0-1'	soil	2010-03-05	00:00	2010-03-09
225189	AH-12 1-1.5'	soil	2010-03-05	00:00	2010-03-09
225190	AH-12 2-2.5'	soil	2010-03-05	00:00	2010-03-09
225191	AH-12 3-3.5'	soil	2010-03-05	00:00	2010-03-09
225192	AH-12 4-4.5'	soil	2010-03-05	00:00	2010-03-09
225193	AH-12 5-5.5'	soil	2010-03-05	00:00	2010-03-09

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
225108 - AH-1 0-1'	<0.0500	<0.0500	<0.0500	<0.0500	526	24.0
225113 - AH-2 0-1'	<0.0500	<0.0500	<0.0500	0.337	708	154
225117 - AH-3 0-1'	1.70	17.7	13.4	47.2	2480	2420
225118 - AH-3 1-1.5'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
225119 - AH-3 2-2.5'					<50.0	<1.00
225123 - AH-4 0-1'	1.45	20.6	37.2	70.6	2670	3970
225124 - AH-4 1-1.5'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
225125 - AH-4 2-2.5'					<50.0	<1.00
225126 - AH-4 3-3.5'					<50.0	<1.00
225133 - AH-5 0-1'					<50.0	<1.00
225138 - AH-6 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	61.4	<1.00
225144 - AH-7 0-1'					<50.0	<5.00
225154 - AH-8 0-1'	<0.200	4.11	10.3	17.8	2060	1430
225155 - AH-8 1-1.5'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
225163 - AH-9 0-1'	<0.0500	<0.0500	0.146	1.09	868	255
225164 - AH-9 1-1.5'					<50.0	<1.00
225173 - AH-10 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	424	2.50
225181 - AH-11 0-1'					<50.0	<1.00
225188 - AH-12 0-1'					<50.0	<1.00

Sample: 225108 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225109 - AH-1 1 -1.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225110 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		11500	mg/Kg	4.00

Sample: 225111 - AH-1 3-3.5'

Param	Flag	Result	Units	RL
Chloride		14000	mg/Kg	4.00

Sample: 225112 - AH-1 4-4.5

Param	Flag	Result	Units	RL
Chloride		12200	mg/Kg	4.00

Sample: 225113 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		212	mg/Kg	4.00

Sample: 225114 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		591	mg/Kg	4.00

Sample: 225115 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		7580	mg/Kg	4.00

Sample: 225116 - AH-2 2.5-3'

Param	Flag	Result	Units	RL
Chloride		17200	mg/Kg	4.00

Sample: 225117 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		546	mg/Kg	4.00

Sample: 225118 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		1790	mg/Kg	4.00

Sample: 225119 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		5480	mg/Kg	4.00

Sample: 225120 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		5700	mg/Kg	4.00

Sample: 225121 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride		5940	mg/Kg	4.00

Sample: 225122 - AH-3 5-5.5'

Param	Flag	Result	Units	RL
Chloride		13200	mg/Kg	4.00

Sample: 225123 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		2970	mg/Kg	4.00

Sample: 225124 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		8880	mg/Kg	4.00

Sample: 225125 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		7390	mg/Kg	4.00

Sample: 225126 - AH-4 3-3.5'

Param	Flag	Result	Units	RL
Chloride		6880	mg/Kg	4.00

Sample: 225127 - AH-4 4-4.5'

Param	Flag	Result	Units	RL
Chloride		7490	mg/Kg	4.00

Sample: 225128 - AH-4 5-5.5'

Param	Flag	Result	Units	RL
Chloride		6120	mg/Kg	4.00

Sample: 225129 - AH-4 6-6.5'

Param	Flag	Result	Units	RL
Chloride		5540	mg/Kg	4.00

Sample: 225130 - AH-4 7-7.5'

Param	Flag	Result	Units	RL
Chloride		2520	mg/Kg	4.00

Sample: 225131 - AH-4 8-8.5'

Param	Flag	Result	Units	RL
Chloride		8660	mg/Kg	4.00

Sample: 225132 - AH-4 9-9.5'

Param	Flag	Result	Units	RL
Chloride		12700	mg/Kg	4.00

Sample: 225133 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225134 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225135 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		9770	mg/Kg	4.00

Sample: 225136 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride		21800	mg/Kg	4.00

Sample: 225137 - AH-5 4-4.5'

Param	Flag	Result	Units	RL
Chloride		17800	mg/Kg	4.00

Sample: 225138 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225139 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225140 - AH-6 2-2.5'

Param	Flag	Result	Units	RL
Chloride		1490	mg/Kg	4.00

Sample: 225141 - AH-6 3-3.5'

Param	Flag	Result	Units	RL
Chloride		11200	mg/Kg	4.00

Sample: 225142 - AH-6 4-4.5'

Param	Flag	Result	Units	RL
Chloride		13200	mg/Kg	4.00

Sample: 225143 - AH-6 5-5.5

Param	Flag	Result	Units	RL
Chloride		8950	mg/Kg	4.00

Sample: 225144 - AH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225145 - AH-7 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225146 - AH-7 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225147 - AH-7 3-3.5'

Param	Flag	Result	Units	RL
Chloride		4710	mg/Kg	4.00

Sample: 225148 - AH-7 4-4.5'

Param	Flag	Result	Units	RL
Chloride		10600	mg/Kg	4.00

Sample: 225149 - AH-7 5-5.5'

Param	Flag	Result	Units	RL
Chloride		10300	mg/Kg	4.00

Sample: 225150 - AH-7 6-6.5'

Param	Flag	Result	Units	RL
Chloride		9100	mg/Kg	4.00

Sample: 225151 - AH-7 7-7.5'

Param	Flag	Result	Units	RL
Chloride		8210	mg/Kg	4.00

Sample: 225152 - AH-7 8-8.5'

Param	Flag	Result	Units	RL
Chloride		5710	mg/Kg	4.00

Sample: 225153 - AH-7 8.5-9'

Param	Flag	Result	Units	RL
Chloride		6730	mg/Kg	4.00

Sample: 225154 - AH-8 0-1'

Param	Flag	Result	Units	RL
Chloride		1960	mg/Kg	4.00

Sample: 225155 - AH-8 1-1.5'

Param	Flag	Result	Units	RL
Chloride		3110	mg/Kg	4.00

Sample: 225156 - AH-8 2-2.5'

Param	Flag	Result	Units	RL
Chloride		3560	mg/Kg	4.00

Sample: 225157 - AH-8 3-3.5'

Param	Flag	Result	Units	RL
Chloride		4250	mg/Kg	4.00

Sample: 225158 - AH-8 4-4.5'

Param	Flag	Result	Units	RL
Chloride		8020	mg/Kg	4.00

Sample: 225159 - AH-8 5-5.5'

Param	Flag	Result	Units	RL
Chloride		11000	mg/Kg	4.00

Sample: 225160 - AH-8 6-6.5'

Param	Flag	Result	Units	RL
Chloride		12400	mg/Kg	4.00

Sample: 225161 - AH-8 7-7.5'

Param	Flag	Result	Units	RL
Chloride		12000	mg/Kg	4.00

Sample: 225162 - AH-8 8-8.5'

Param	Flag	Result	Units	RL
Chloride		11200	mg/Kg	4.00

Sample: 225163 - AH-9 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225164 - AH-9 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225165 - AH-9 2-2.5'

Param	Flag	Result	Units	RL
Chloride		544	mg/Kg	4.00

Sample: 225166 - AH-9 3-3.5'

Param	Flag	Result	Units	RL
Chloride		4770	mg/Kg	4.00

Sample: 225167 - AH-9 4-4.5'

Param	Flag	Result	Units	RL
Chloride		8670	mg/Kg	4.00

Sample: 225168 - AH-9 5-5.5'

Param	Flag	Result	Units	RL
Chloride		8520	mg/Kg	4.00

Sample: 225169 - AH-9 6-6.5'

Param	Flag	Result	Units	RL
Chloride		7420	mg/Kg	4.00

Sample: 225170 - AH-9 7-7.5'

Param	Flag	Result	Units	RL
Chloride		8120	mg/Kg	4.00

Sample: 225171 - AH-9 8-8.5'

Param	Flag	Result	Units	RL
Chloride		9660	mg/Kg	4.00

Sample: 225172 - AH-9 9-9.5'

Param	Flag	Result	Units	RL
Chloride		16600	mg/Kg	4.00

Sample: 225173 - AH-10 0-1'

Param	Flag	Result	Units	RL
Chloride		550	mg/Kg	4.00

Sample: 225174 - AH-10 1-1.5'

Param	Flag	Result	Units	RL
Chloride		1490	mg/Kg	4.00

Sample: 225175 - AH-10 2-2.5'

Param	Flag	Result	Units	RL
Chloride		902	mg/Kg	4.00

Sample: 225176 - AH-10 3-3.5'

Param	Flag	Result	Units	RL
Chloride		1400	mg/Kg	4.00

Sample: 225177 - AH-10 4-4.5'

Param	Flag	Result	Units	RL
Chloride		4240	mg/Kg	4.00

Sample: 225178 - AH-10 5-5.5'

Param	Flag	Result	Units	RL
Chloride		9620	mg/Kg	4.00

Sample: 225179 - AH-10 6-6.5'

Param	Flag	Result	Units	RL
Chloride		17000	mg/Kg	4.00

Sample: 225180 - AH-10 7-7.5'

Param	Flag	Result	Units	RL
Chloride		14700	mg/Kg	4.00

Sample: 225181 - AH-11 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225182 - AH-11 1-1.5'

Param	Flag	Result	Units	RL
Chloride		2830	mg/Kg	4.00

Sample: 225183 - AH-11 2-2.5'

Param	Flag	Result	Units	RL
Chloride		5700	mg/Kg	4.00

Sample: 225184 - AH-11 3-3.5'

Param	Flag	Result	Units	RL
Chloride		6140	mg/Kg	4.00

Sample: 225185 - AH-11 4-4.5'

Param	Flag	Result	Units	RL
Chloride		8640	mg/Kg	4.00

Sample: 225186 - AH-11 5-5.5'

Param	Flag	Result	Units	RL
Chloride		10500	mg/Kg	4.00

Sample: 225187 - AH-11 6-6.5'

Param	Flag	Result	Units	RL
Chloride		29900	mg/Kg	4.00

Sample: 225188 - AH-12 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225189 - AH-12 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225190 - AH-12 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 225191 - AH-12 3-3.5'

Param	Flag	Result	Units	RL
Chloride		1250	mg/Kg	4.00

Sample: 225192 - AH-12 4-4.5'

Param	Flag	Result	Units	RL
Chloride		4410	mg/Kg	4.00

Sample: 225193 - AH-12 5-5.5'

Param	Flag	Result	Units	RL
Chloride		13200	mg/Kg	4.00

Order # 10031021

Analysis Request of Chain of Custody Record



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: <i>Ike Tovar</i>	
PROJECT NO.: 114-6400438		PROJECT NAME: COG/ Rhino #1 TB	
LAB I.D. NUMBER		SAMPLE IDENTIFICATION	
	DATE 3/5	TIME 3:15	GRAB X
225118			11-1.5'
119			2-2.5'
120			3-3.5'
121			4-4.5'
122			5-5.5'
123			0-1'
124			1-1.5'
125			2-2.5'
126			3-3.5'
127			4-4.5'
RELINQUISHED BY: (Signature) <i>[Signature]</i>		RECEIVED BY: (Signature) <i>[Signature]</i>	
RELINQUISHED BY: (Signature) <i>[Signature]</i>		RECEIVED BY: (Signature) <i>[Signature]</i>	
RELINQUISHED BY: (Signature) <i>[Signature]</i>		RECEIVED BY: (Signature) <i>[Signature]</i>	
RECEIVING LABORATORY: ADDRESS: <i>Midland</i> STATE: <i>TX</i> ZIP: <i>79701</i>		REMARKS: <i>If total TPH exceeds 1,000 mg/kg, Run deeper samples</i>	
CONTACT: <i>Tracy</i>		DATE: <i>3/5/10</i>	
SAMPLE CONDITION WHEN RECEIVED: <i>7.6°C intact</i>		TIME: <i>16:10</i>	

ANALYSIS REQUEST (Circle or Specify Method No.)	
PAH 8270	☐
TCRA Metals Ag As Ba Cd Cr Pb Hg Se	☐
TCRP Metals Ag As Ba Cd Cr Pb Hg Se	☐
TCRP Volatiles	☐
TCRP Semi Volatiles	☐
RCI	☐
GC/MS Vol. 8240/8260/824	☐
GC/MS Semi. Vol. 8270/825	☐
PCB's 8080/808	☐
Post. 808/608	☐
Gamma Spec.	☐
Alpha Beta (Air)	☐
PLM (Asbestos)	☐
Major Anions/Cations, pH, TDS	☐

SAMPLED BY: (Print & Initial) <i>ST/TH/EG/SD</i>		Date: <i>3/5/10</i>
SAMPLE SHIPPED BY: (Circle) FEDEX ☒ BUS ☐ UPS ☐		Time: <i>16:10</i>
TETRA TECH CONTACT PERSON: <i>Ike Tovar</i>		Time: <i>16:10</i>
RUSH Charges Authorized:		Yes ☐ No ☐

Analysis Request of Chain of Custody Record

PAGE: 4 OF: 9

ANALYSIS REQUEST
(Circle or Specify Method No.)

TETRA TECH

**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946**

SITE MANAGER:

277

PROJECT NAME: 4007

Rhino #1 TB

Let's Go. NM

SAMPLE IDENTIFICATION

CLIENT NAME: COG						SITE MANAGER: <i>Ike Tavaraz</i>	PRESERVATIVE METHOD
PROJECT NO.: 114-6400438		PROJECT NAME: COG / Rhino #1 TB				FILTERED (Y/N)	
LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	NUMBER OF CONTAINERS	
225138	3/6		X	AH-6	0'-1'	1	HCL
139			X	AH-6	1'-1.5'		HNO3
140				AH-6	2'-2.5'		ICE
141				AH-6	3'-3.5'		NONE
142				AH-6	4'-4.5'		
143				AH-6	5'-5.5'		
144				AH-7	0'-1'		
145				AH-7	1'-1.5'		
146				AH-7	2'-2.5'		
147				AH-7	3'-3.5'		

RELINQUISHED BY: (Signature) <i>[Signature]</i>	Date: 3/9/10	RECEIVED BY: (Signature) <i>[Signature]</i>	Date: 3/9/10	SAMPLED BY: (Print & Initial) <i>ST/TH</i>	Date: 3/15/10
RELINQUISHED BY: (Signature)	Date: 3/9/10	RECEIVED BY: (Signature)	Date: 3/9/10	AIRBILL #:	
RELINQUISHED BY: (Signature)	Date: 3/9/10	RECEIVED BY: (Signature)	Date: 3/9/10	OTHER:	
RELINQUISHED BY: (Signature)	Date: 3/9/10	RECEIVED BY: (Signature)	Date: 3/9/10	SAMPLE SHIPPED BY: (Circle) <u>FEDEX</u>	
RELINQUISHED BY: (Signature)	Date: 3/9/10	RECEIVED BY: (Signature)	Date: 3/9/10	<u>MAINT DELIVERED</u> UPS	
RECEIVING LABORATORY: <i>Trace</i>	ADDRESS: <i>Midland</i>	RECEIVED BY: (Signature)	Date: 3/9/10	TECH TECH CONTACT PERSON: <i>Ik Tovariz</i>	Results by: <i>Ik Tovariz</i>
CITY: <i>Midland</i>	STATE: <i>TX</i>	DATE: 3/9/10	TIME: 10:10		RUSH Charges Authorized: ☐
CONTRACT: <i>11</i>	PHONE: <i>806-735-1111</i>	DATE: 3/9/10	TIME: 10:10		Yes ☐ No ☐

Zn & Br on highest TPT

163, 170 deeper samples

REMARKS:
If total TPN exceeds 1,000

SAMPLE CONDITION WHEN RECEIVED: 21.0 wt. %

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Order #: 10031021

Analysis Request of Chain of Custody Record

PAGE: 5 OF: 9

ANALYSIS REQUEST
(Circle or Specify Method No.)



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: Ike Tavaraz	
PROJECT NO.: 114-6400438		PROJECT NAME: COG/ Rhino #1 TB	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
225148	3/5		5 X AH-7 4'-4.5'
149			AH-7 5'-5.5'
190			AH-7 6'-6.5'
151			AH-7 7'-7.5'
152			AH-7 8'-8.5'
153			AH-7 8.5'-9'
154			AH-8 0'-1'
155			AH-8 1'-1.5'
156			AH-8 2'-2.5'
157			AH-8 3'-3.5'

RELINQUISHED BY: (Signature)	Date: 3/10	RECEIVED BY: (Signature)	Date: 3/10
RELINQUISHED BY: (Signature)	Date: 3/10	RECEIVED BY: (Signature)	Date: 3/10
RELINQUISHED BY: (Signature)	Date: 3/10	RECEIVED BY: (Signature)	Date: 3/10
RECEIVING LABORATORY:	STATE: TX	ZIP: 79701	DATE: 3/10
CITY: Midland	REMARKS: If total TPH exceeds 1,000 mg/kg, Run deeper samples		
CONTACT:	SAMPLE CONDITION WHEN RECEIVED: File intact		

TPH 8021B	BTX 8021B	TPH 8015 MOB	TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/824	GC/MS Semi. Vol. 8270/825	PCB's 8080/808	Pest. 808/808	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
															X			

SAMPLED BY: (Print & Initial)	Date: 3/10	Time: 10:10
SAMPLE SHIPPED BY: (Circle)	FEDEX	BUS
OTHER:	UPS	
TETRA TECH CONTACT PERSON:	Ike Tavaraz	
Results by:	RUSH Charges Authorized	
Yes	No	

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Analysis Request of Chain of Custody Record

PAGE: 6 OF: 9

ANALYSIS REQUEST
(Circle or Specify Method No.)

TETRA TECH

**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946**

CLIENT NAME:		PROJECT NAME:		SITE MANAGER:		PRESERVATIVE METHOD	
PROJECT NO.:		DATE		TIME		NUMBER OF CONTAINERS	
LAB I.D. NUMBER		DATE		TIME		FILTERED (Y/N)	
225158	3/6	2010	3/6	114-6400438	106/ Rhino #1 TB	1	1
159				AH-B	4'4.5'		X
160				AH-B	5'5.5'		
161				AH-B	6'6.5'		
162				AH-B	7'7.5'		
163				AH-B	8'8.5'		
164				AH-9	0-1'		
165				AH-9	1'1.5'		
166				AH-9	2'2.5'		
167				AH-9	3'3.5'		
				AH-9	4'4.5'		
RELINQUISHED BY: (Signature)		Date: 3/3/10		Time: 16:10		RECEIVED BY: (Signature)	
RELINQUISHED BY: (Signature)		Date: 3/3/10		Time: 16:10		RECEIVED BY: (Signature)	
RELINQUISHED BY: (Signature)		Date: 3/3/10		Time: 16:10		RECEIVED BY: (Signature)	
RECEIVING LABORATORY:		ADDRESS:		CITY:		STATE:	
CONTACT:		PHONE:		ZIP:		DATE:	

Run 8 BTEX on highest TPH

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Order #: 10031021

Analysis Request of Chain of Custody Record



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: Ike Tovariz	
PROJECT NO.: 114-4400438		PROJECT NAME: COG/ Rhino #1 TB	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
225168	3/6		5'-5.5'
169			2'-6.5'
170			7'-7.5'
171			8'-8.5'
172			9'-9.5'
173			0'-1'
174			1'-1.5'
175			2'-2.5'
176			3'-3.5'
177			4'-4.5'

RELINQUISHED BY: (Signature)	Date: 3/6/10	Time: 11:10	RECEIVED BY: (Signature)	Date: 3/6/10	Time: 11:10
RELINQUISHED BY: (Signature)	Date: 3/6/10	Time: 11:10	RECEIVED BY: (Signature)	Date: 3/6/10	Time: 11:10
RELINQUISHED BY: (Signature)	Date: 3/6/10	Time: 11:10	RECEIVED BY: (Signature)	Date: 3/6/10	Time: 11:10
RECEIVING LABORATORY: Tetra	RECEIVED BY: (Signature)				
ADDRESS: Midland	STATE: TX	ZIP: 79705	DATE: 3/6/10		
SAMPLE CONDITION WHEN RECEIVED: 76°C intact					

ANALYSIS REQUEST (Circle or Specify Method No.)	PAGE: 7 OF: 9
☒ BTEX 8021B ☒ TPH 8015 MOD ☐ PAH 8270 ☐ RCRA Metals Ag As Ba Cd Cr Pb Hg Se ☐ TCLP Metals Ag As Ba Cd Cr Pb Hg Se ☐ TCLP Volatiles ☐ TCLP Semi Volatiles ☐ RCI ☐ GC/MS Vol. 8240/8260/624 ☐ GC/MS Semi Vol. 8270/625 ☐ PCB's 8080/608 ☐ Pest. 808/608 ☒ Chloride ☐ Gamma Spec. ☐ Alpha Beta (Air) ☐ PLM (Asbestos) ☐ Major Anions/Cations, pH, TDS	Date: 3/5/10 Time: 11:10 SAMPLE SHIPPED BY: (Circle) FEDEX ☐ BUS ☐ UPS ☒ (AND DELIVERED) TETRA TECH CONTACT PERSON: Ike Tovariz Results by: Ike Tovariz RUSH Charges Authorized: ☐ Yes ☐ No

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Order #: 10031021

Analysis Request of Chain of Custody Record



TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: Ike Tavaraz	
PROJECT NO.: 114-4400438		PROJECT NAME: COG/ Rhino #1 TB	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
225188	3/6		2m C. NM
189			1'-1.5'
190			2'-2.5'
191			3'-3.5'
192			4'-4.5'
193			5'-5.5'

ANALYSIS REQUEST (Circle or Specify Method No.)	
PAH 8270 RCRA Metals Ag As Ba Cd Cr Pb Hg Se TCLP Metals Ag As Ba Cd Cr Pb Hg Se TCLP Volatiles TCLP Semi Volatiles RCI GC/MS Vol. 8240/8260/624 GC/MS Semi Vol. 8270/625 PCB's 8080/608 Pest. 808/608 Chloride Gamma Spec. Alpha Beta (Air) PLM (Asbestos) Major Anions/Cations, pH, TDS	BTX 8021B TPH 8015 MDD TX1006 (Ext. to C35)

RELINQUISHED BY: (Signature)	Date: 3/11/10	RECEIVED BY: (Signature)	Date: 3/11/10
RELINQUISHED BY: (Signature)	Date: 3/11/10	RECEIVED BY: (Signature)	Date: 3/11/10
RELINQUISHED BY: (Signature)	Date: 3/11/10	RECEIVED BY: (Signature)	Date: 3/11/10
RECEIVING LABORATORY: Tetra	DATE: 3/11/10	RECEIVED BY: (Signature)	DATE: 3/11/10
ADDRESS: Midland	STATE: TX	ZIP: 79701	PHONE: (432) 682-4559
REMARKS: If total TPH exceeds 1,000 mg/kg, Run deeper samples			
SAMPLE CONDITION WHEN RECEIVED: File intact			

Summary Report

Ike Tavarez
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: August 19, 2010

Work Order: 10080918



Project Location: Lea County, NM
Project Name: COG/Rhino #1 TB
Project Number: 114-6400438

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
240207	SB-1 1'	soil	2010-08-05	00:00	2010-08-09
240208	SB-1 3'	soil	2010-08-05	00:00	2010-08-09
240209	SB-1 5'	soil	2010-08-05	00:00	2010-08-09
240210	SB-1 7'	soil	2010-08-05	00:00	2010-08-09
240211	SB-1 10'	soil	2010-08-05	00:00	2010-08-09
240212	SB-1 15'	soil	2010-08-05	00:00	2010-08-09
240213	SB-1 20'	soil	2010-08-05	00:00	2010-08-09
240214	SB-1 30'	soil	2010-08-05	00:00	2010-08-09
240215	SB-1 40'	soil	2010-08-05	00:00	2010-08-09
240216	SB-1 50'	soil	2010-08-05	00:00	2010-08-09
240217	SB-2 1'	soil	2010-08-05	00:00	2010-08-09
240218	SB-2 3'	soil	2010-08-05	00:00	2010-08-09
240219	SB-2 5'	soil	2010-08-05	00:00	2010-08-09
240220	SB-2 7'	soil	2010-08-05	00:00	2010-08-09
240221	SB-2 10'	soil	2010-08-05	00:00	2010-08-09
240222	SB-2 15'	soil	2010-08-05	00:00	2010-08-09
240223	SB-2 20'	soil	2010-08-05	00:00	2010-08-09
240224	SB-2 25'	soil	2010-08-05	00:00	2010-08-09
240225	SB-2 30'	soil	2010-08-05	00:00	2010-08-09
240226	SB-2 40'	soil	2010-08-05	00:00	2010-08-09
240227	SB-2 50'	soil	2010-08-05	00:00	2010-08-09
240228	SB-2 60'	soil	2010-08-05	00:00	2010-08-09
240229	SB-3 1'	soil	2010-08-05	00:00	2010-08-09
240230	SB-3 3'	soil	2010-08-05	00:00	2010-08-09
240231	SB-3 5'	soil	2010-08-05	00:00	2010-08-09
240232	SB-3 7'	soil	2010-08-05	00:00	2010-08-09
240233	SB-3 10'	soil	2010-08-05	00:00	2010-08-09
240234	SB-3 15'	soil	2010-08-05	00:00	2010-08-09
240235	SB-3 20'	soil	2010-08-05	00:00	2010-08-09
240236	SB-3 25'	soil	2010-08-05	00:00	2010-08-09

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
240237	SB-3 30'	soil	2010-08-05	00:00	2010-08-09
240238	SB-3 40'	soil	2010-08-05	00:00	2010-08-09
240239	SB-3 50'	soil	2010-08-05	00:00	2010-08-09
240240	SB-4 1'	soil	2010-08-06	00:00	2010-08-09
240241	SB-4 3'	soil	2010-08-06	00:00	2010-08-09
240242	SB-4 5'	soil	2010-08-06	00:00	2010-08-09
240243	SB-4 7'	soil	2010-08-06	00:00	2010-08-09
240244	SB-4 10'	soil	2010-08-06	00:00	2010-08-09
240245	SB-4 15'	soil	2010-08-06	00:00	2010-08-09
240246	SB-4 20'	soil	2010-08-06	00:00	2010-08-09
240247	SB-4 25'	soil	2010-08-06	00:00	2010-08-09
240248	SB-5 1'	soil	2010-08-06	00:00	2010-08-09
240249	SB-5 3'	soil	2010-08-06	00:00	2010-08-09
240250	SB-5 5'	soil	2010-08-06	00:00	2010-08-09
240251	SB-5 7'	soil	2010-08-06	00:00	2010-08-09
240252	SB-5 10'	soil	2010-08-06	00:00	2010-08-09
240253	SB-5 15'	soil	2010-08-06	00:00	2010-08-09
240254	SB-5 20'	soil	2010-08-06	00:00	2010-08-09
240255	SB-5 25'	soil	2010-08-06	00:00	2010-08-09
240256	SB-5 30'	soil	2010-08-06	00:00	2010-08-09
240257	SB-5 40'	soil	2010-08-06	00:00	2010-08-09
240258	SB-5 50'	soil	2010-08-06	00:00	2010-08-09
240260	SB-6 1'	soil	2010-08-06	00:00	2010-08-09
240261	SB-6 3'	soil	2010-08-06	00:00	2010-08-09
240262	SB-6 5'	soil	2010-08-06	00:00	2010-08-09
240263	SB-6 7'	soil	2010-08-06	00:00	2010-08-09
240264	SB-6 10'	soil	2010-08-06	00:00	2010-08-09
240265	SB-6 15'	soil	2010-08-06	00:00	2010-08-09
240266	SB-6 20'	soil	2010-08-06	00:00	2010-08-09
240267	SB-6 25'	soil	2010-08-06	00:00	2010-08-09
240269	SB-7 1'	soil	2010-08-06	00:00	2010-08-09
240270	SB-7 3'	soil	2010-08-06	00:00	2010-08-09
240271	SB-7 5'	soil	2010-08-06	00:00	2010-08-09
240272	SB-7 7'	soil	2010-08-06	00:00	2010-08-09
240273	SB-7 10'	soil	2010-08-06	00:00	2010-08-09
240274	SB-7 15'	soil	2010-08-06	00:00	2010-08-09
240275	SB-7 20'	soil	2010-08-06	00:00	2010-08-09
240276	SB-7 25'	soil	2010-08-06	00:00	2010-08-09
240277	SB-7 30'	soil	2010-08-06	00:00	2010-08-09
240278	SB-7 40'	soil	2010-08-06	00:00	2010-08-09
240279	SB-7 50'	soil	2010-08-06	00:00	2010-08-09

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
240207 - SB-1 1'					<50.0	<2.00
240217 - SB-2 1'	<0.200	<0.200	<0.200	<0.200	16400	25.2
240218 - SB-2 3'					<50.0	<2.00

continued ...

... continued

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
240229 - SB-3 1'					<50.0	<2.00
240240 - SB-4 1'					<50.0	<2.00
240248 - SB-5 1'	<0.0200	<0.0200	<0.0200	<0.0200	124	<2.00
240260 - SB-6 1'	<0.200	<0.200	<0.200	<0.200	6480	38.9
240261 - SB-6 3'					1570	41.0
240269 - SB-7 1'	<0.0200	<0.0200	<0.0200	<0.0200	213	<2.00

Sample: 240207 - SB-1 1'

Param	Flag	Result	Units	RL
Chloride		264	mg/Kg	4.00

Sample: 240208 - SB-1 3'

Param	Flag	Result	Units	RL
Chloride		378	mg/Kg	4.00

Sample: 240209 - SB-1 5'

Param	Flag	Result	Units	RL
Chloride		13700	mg/Kg	4.00

Sample: 240210 - SB-1 7'

Param	Flag	Result	Units	RL
Chloride		13700	mg/Kg	4.00

Sample: 240211 - SB-1 10'

Param	Flag	Result	Units	RL
Chloride		5340	mg/Kg	4.00

Sample: 240212 - SB-1 15'

Param	Flag	Result	Units	RL
Chloride		4430	mg/Kg	4.00

Sample: 240213 - SB-1 20'

Param	Flag	Result	Units	RL
Chloride		7010	mg/Kg	4.00

Sample: 240214 - SB-1 30'

Param	Flag	Result	Units	RL
Chloride		447	mg/Kg	4.00

Sample: 240215 - SB-1 40'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240216 - SB-1 50'

Param	Flag	Result	Units	RL
Chloride		412	mg/Kg	4.00

Sample: 240217 - SB-2 1'

Param	Flag	Result	Units	RL
Chloride		561	mg/Kg	4.00

Sample: 240218 - SB-2 3'

Param	Flag	Result	Units	RL
Chloride		508	mg/Kg	4.00

Sample: 240219 - SB-2 5'

Param	Flag	Result	Units	RL
Chloride		390	mg/Kg	4.00

Sample: 240220 - SB-2 7'

Param	Flag	Result	Units	RL
Chloride		14200	mg/Kg	4.00

Sample: 240221 - SB-2 10'

Param	Flag	Result	Units	RL
Chloride		12700	mg/Kg	4.00

Sample: 240222 - SB-2 15'

Param	Flag	Result	Units	RL
Chloride		8470	mg/Kg	4.00

Sample: 240223 - SB-2 20'

Param	Flag	Result	Units	RL
Chloride		7190	mg/Kg	4.00

Sample: 240224 - SB-2 25'

Param	Flag	Result	Units	RL
Chloride		1080	mg/Kg	4.00

Sample: 240225 - SB-2 30'

Param	Flag	Result	Units	RL
Chloride		1620	mg/Kg	4.00

Sample: 240226 - SB-2 40'

Param	Flag	Result	Units	RL
Chloride		390	mg/Kg	4.00

Sample: 240227 - SB-2 50'

Param	Flag	Result	Units	RL
Chloride		276	mg/Kg	4.00

Sample: 240228 - SB-2 60'

Param	Flag	Result	Units	RL
Chloride		418	mg/Kg	4.00

Sample: 240229 - SB-3 1'

Param	Flag	Result	Units	RL
Chloride		214	mg/Kg	4.00

Sample: 240230 - SB-3 3'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240231 - SB-3 5'

Param	Flag	Result	Units	RL
Chloride		567	mg/Kg	4.00

Sample: 240232 - SB-3 7'

Param	Flag	Result	Units	RL
Chloride		5180	mg/Kg	4.00

Sample: 240233 - SB-3 10'

Param	Flag	Result	Units	RL
Chloride		562	mg/Kg	4.00

Sample: 240234 - SB-3 15'

Param	Flag	Result	Units	RL
Chloride		413	mg/Kg	4.00

Sample: 240235 - SB-3 20'

Param	Flag	Result	Units	RL
Chloride		945	mg/Kg	4.00

Sample: 240236 - SB-3 25'

Param	Flag	Result	Units	RL
Chloride		463	mg/Kg	4.00

Sample: 240237 - SB-3 30'

Param	Flag	Result	Units	RL
Chloride		612	mg/Kg	4.00

Sample: 240238 - SB-3 40'

Param	Flag	Result	Units	RL
Chloride		304	mg/Kg	4.00

Sample: 240239 - SB-3 50'

Param	Flag	Result	Units	RL
Chloride		304	mg/Kg	4.00

Sample: 240240 - SB-4 1'

Param	Flag	Result	Units	RL
Chloride		1070	mg/Kg	4.00

Sample: 240241 - SB-4 3'

Param	Flag	Result	Units	RL
Chloride		2470	mg/Kg	4.00

Sample: 240242 - SB-4 5'

Param	Flag	Result	Units	RL
Chloride		7010	mg/Kg	4.00

Sample: 240243 - SB-4 7'

Param	Flag	Result	Units	RL
Chloride		9280	mg/Kg	4.00

Sample: 240244 - SB-4 10'

Param	Flag	Result	Units	RL
Chloride		17100	mg/Kg	4.00

Sample: 240245 - SB-4 15'

Param	Flag	Result	Units	RL
Chloride		7570	mg/Kg	4.00

Sample: 240246 - SB-4 20'

Param	Flag	Result	Units	RL
Chloride		394	mg/Kg	4.00

Sample: 240247 - SB-4 25'

Param	Flag	Result	Units	RL
Chloride		324	mg/Kg	4.00

Sample: 240248 - SB-5 1'

Param	Flag	Result	Units	RL
Chloride		4660	mg/Kg	4.00

Sample: 240249 - SB-5 3'

Param	Flag	Result	Units	RL
Chloride		1360	mg/Kg	4.00

Sample: 240250 - SB-5 5'

Param	Flag	Result	Units	RL
Chloride		19700	mg/Kg	4.00

Sample: 240251 - SB-5 7'

Param	Flag	Result	Units	RL
Chloride		9530	mg/Kg	4.00

Sample: 240252 - SB-5 10'

Param	Flag	Result	Units	RL
Chloride		9870	mg/Kg	4.00

Sample: 240253 - SB-5 15'

Param	Flag	Result	Units	RL
Chloride		3960	mg/Kg	4.00

Sample: 240254 - SB-5 20'

Param	Flag	Result	Units	RL
Chloride		1080	mg/Kg	4.00

Sample: 240255 - SB-5 25'

Param	Flag	Result	Units	RL
Chloride		1600	mg/Kg	4.00

Sample: 240256 - SB-5 30'

Param	Flag	Result	Units	RL
Chloride		1170	mg/Kg	4.00

Sample: 240257 - SB-5 40'

Param	Flag	Result	Units	RL
Chloride		476	mg/Kg	4.00

Sample: 240258 - SB-5 50'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240260 - SB-6 1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240261 - SB-6 3'

Param	Flag	Result	Units	RL
Chloride		9850	mg/Kg	4.00

Sample: 240262 - SB-6 5'

Param	Flag	Result	Units	RL
Chloride		15800	mg/Kg	4.00

Sample: 240263 - SB-6 7'

Param	Flag	Result	Units	RL
Chloride		8010	mg/Kg	4.00

Sample: 240264 - SB-6 10'

Param	Flag	Result	Units	RL
Chloride		1380	mg/Kg	4.00

Sample: 240265 - SB-6 15'

Param	Flag	Result	Units	RL
Chloride		1150	mg/Kg	4.00

Sample: 240266 - SB-6 20'

Param	Flag	Result	Units	RL
Chloride		573	mg/Kg	4.00

Sample: 240267 - SB-6 25'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240269 - SB-7 1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240270 - SB-7 3'

Param	Flag	Result	Units	RL
Chloride		345	mg/Kg	4.00

Sample: 240271 - SB-7 5'

Param	Flag	Result	Units	RL
Chloride		12400	mg/Kg	4.00

Sample: 240272 - SB-7 7'

Param	Flag	Result	Units	RL
Chloride		10800	mg/Kg	4.00

Sample: 240273 - SB-7 10'

Param	Flag	Result	Units	RL
Chloride		5360	mg/Kg	4.00

Sample: 240274 - SB-7 15'

Param	Flag	Result	Units	RL
Chloride		5660	mg/Kg	4.00

Sample: 240275 - SB-7 20'

Param	Flag	Result	Units	RL
Chloride		4930	mg/Kg	4.00

Sample: 240276 - SB-7 25'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240277 - SB-7 30'

Param	Flag	Result	Units	RL
Chloride		496	mg/Kg	4.00

Sample: 240278 - SB-7 40'

Param	Flag	Result	Units	RL
Chloride		277	mg/Kg	4.00

Sample: 240279 - SB-7 50'

Param	Flag	Result	Units	RL
Chloride		332	mg/Kg	4.00

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 8

ANALYSIS REQUEST
(Circle or Specify Method)

TETRA TECH

**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946**

CLIENT NAME: COG		SITE MANAGER: Ike Tavaraz	
PROJECT NO.: 114-640043B		PROJECT NAME: COG/Rhino	
LAB I.D. NUMBER	DATE 2010	TIME	SAMPLE IDENTIFICATION
240207	8/5		SB-1 1'
208			SB-1 3'
209			SD-1 5'
210			SD-1 7'
211			SD-1 10'
212			SD-1 15'
213			SD-1 20'
214			SD-1 30'
215			SD-1 40'
216			SD-1 50'

PRESERVATIVE METHOD		NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE
BTEX 8021B	PH 8015 MOD TX1000						
X	X	1				X	
		1				X	
		1				X	
		1				X	
		1				X	
		1				X	
		1				X	
		1				X	
		1				X	

RECEIVED BY: (Signature) [Signature]		Date: 8/9/10	Time: 11:10
RECEIVED BY: (Signature) Cand Fox		Date: 8-17-10	Time: 9:15
RECEIVED BY: (Signature)		Date:	Time:
RECEIVED BY: (Signature)		Date:	Time:

RECEIVING LABORATORY: TRACE		ADDRESS: Middland		STATE: TX	ZIP:
CITY: Middland		PHONE:			

SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact		REMARKS: If TPH > 5000 mg/kg Run deeper samples	
RESULTS BY: Ike Tavaraz		RUSH CHARGES AUTHORIZED: Yes No	

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Run BTEX on (4) Highest TPH

WO #: 10080918

Analysis Request of Chain of Custody Record

PAGE: 2 OF: 8



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: Ike Tavaroz	
PROJECT NO.: 114-6100438		PROJECT NAME: COG / Rhino	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
210217	8/5		SB-2 1'
218			SB-2 3'
219			SB-2 5'
220			SB-2 7'
221			SB-2 10'
222			SB-2 15'
223			SB-2 20'
224			SB-2 25'
225			SB-2 30'
226			SB-2 40'

PRESERVATIVE METHOD		NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE
210217		1				X	
218		1				X	
219		1				X	
220		1				X	
221		1				X	
222		1				X	
223		1				X	
224		1				X	
225		1				X	
226		1				X	

TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
------------------------------------	----------	-------------------------------------	-------------------------------------	----------------	---------------------	-----	--------------------------	---------------------------	----------------	---------------	----------	-------------	------------------	----------------	-------------------------------

RELINQUISHED BY: (Signature)	Date: 8/11/10	Time: 11:10	RECEIVED BY: (Signature)	Date: 8/11/10	Time: 9:13
RELINQUISHED BY: (Signature)	Date: 8/11/10	Time: 9:13	RECEIVED BY: (Signature)	Date: 8/11/10	Time: 9:13
RELINQUISHED BY: (Signature)	Date: 8/11/10	Time: 9:13	RECEIVED BY: (Signature)	Date: 8/11/10	Time: 9:13
RELINQUISHED BY: (Signature)	Date: 8/11/10	Time: 9:13	RECEIVED BY: (Signature)	Date: 8/11/10	Time: 9:13

RECEIVING LABORATORY: **TRACE**
CITY: **Midland** STATE: **TX** ZIP: **79701**
PHONE: **797-79701**

REMARKS: **If TPH > 5,000 mg/kg Run deeper samples**
Run BTEX on (4) Highest TPH

SAMPLE CONDITION WHEN RECEIVED: **410°C intact**

Results by: **Ike Tavaroz**

RUSH Charges Authorized: **Yes** No

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Analysis Request of Chain of Custody Record

(Circle or Specify Method No.)



TETRA TECH

**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946**

[illegible]

WO #: 10080918

Analysis Request of Chain of Custody Record

PAGE: 6 OF: 8



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: Fle Tamer	
PROJECT NO.: 114-6400438		PROJECT NAME: COG/Rino	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
240257	8/6		SB-5 40'
258			SB-5 50'
259			SB-5 60'
260			SB-6 1'
261			SB-6 3'
262			SB-6 5'
263			SB-6 7'
264			SB-6 10'
265			SB-6 15'
266			SB-6 20'

RELINQUISHED BY: (Signature)	Date: 8/9/10	Time: 11:10	RECEIVED BY: (Signature)	Date: 8/9/10	Time: 11:10
RELINQUISHED BY: (Signature)	Date: 8-12-10	Time: 9:15	RECEIVED BY: (Signature)	Date: 8-12-10	Time: 9:15
RELINQUISHED BY: (Signature)	Date: 3.9.14.3	Time: 3.9.14.3	RECEIVED BY: (Signature)	Date: 3.9.14.3	Time: 3.9.14.3
RECEIVING LABORATORY: TRACE	STATE: TX	ZIP: 79705	RECEIVED BY: (Signature)	Date: 8/9/10	Time: 11:10
CITY: Midland	PHONE: 432-682-4559	DATE: 8/9/10	RECEIVED BY: (Signature)	Date: 8/9/10	Time: 11:10
SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact			REMARKS: IF TPH > 5000 mg/kg Run depos samples		

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Run BTEX on (4) Highest TPH

A

WD#: 10080918

Analysis Request of Chain of Custody Record

PAGE: 7 OF: 8



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: Ike Taurcz	
PROJECT NO.: 114-6100438		PROJECT NAME: COG / Rhno	
LAB ID. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
240267	8/6		SB-6 25'
268			SB-6 30'
269			SB-7 1'
270			SB-7 3'
271			SB-7 5'
272			SB-7 7'
273			SB-7 10'
274			SB-7 15'
275			SB-7 20'
276			SB-7 25'

RELINQUISHED BY: (Signature) <i>[Signature]</i>	Date: 8-9-10 Time: 11:19	RECEIVED BY: (Signature) <i>[Signature]</i>	Date: 8-12-10 Time: 9:15
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____
RECEIVING LABORATORY: ADDRESS: Midland STATE: TX ZIP: _____ CONTACT: _____ PHONE: _____		REMARKS: IF TPH > 5000 mg/kg Run deeper samples Run BTEX on (4) Highest TPH	

ANALYSIS REQUEST (Circle or Specify Method No.)	
RCHRA Metals Ag As Ba Cd Cr Pb Hg Se TCLP Metals Ag As Ba Cd Vr Pd Hg Se TCLP Volatiles TCLP Semi Volatiles RCI GC/MS Vol. 8240/8260/624 GC/MS Semi. Vol. 8270/625 PCB's 8080/608 Post. 808/608 Gamma Spec. Alpha Beta (Air) PLM (Asbestos) Major Anions/Cations, pH, TDS	PAH 8270 TPH 8015 MOD BTEX 8021B TX1005 (Ext. to C35)

SAMPLED BY: (Print & Initial) Kim	Date: 8/6/10 Time: _____
SAMPLE SHIPPED BY: (Circle) PEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:
TETRA TECH CONTACT PERSON: Ike Taurcz	
RUSH Charges Authorized: Yes ☐ No ☐	

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Analysis Request of Chain of Custody Record

ANALYSIS REQUEST
(Circle or Specify Method No.)

TETRA TECH

**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946**

[illegible]

RELINQUISHED BY: (Signature) <i>[Signature]</i>	Date: 8-9-20 Time: 11:12	RECEIVED BY: (Signature) <i>[Signature]</i>	Date: 8/9/20 Time: 11:10	SAMPLED BY: (Print & Initial) Kim	Date: 8/6/20
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature) COWAN FOX	Date: 8-12-20 Time: 9:15	SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED	AIRBILL #: _____ OTHER: _____
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature) 3914332	Date: _____ Time: _____	TETRA TECH CONTACT PERSON: <i>The Tower</i>	
RECEIVING LABORATORY: TRACE		Results by:			
ADDRESS: _____	CITY: _____	STATE: TX	ZIP: _____	RUSH Charges Authorized: _____	
CONTACT: _____	PHONE: _____	DATE: _____		TIME: _____	
				Yes _____ No _____	

REMARKS: If TPH > 5,000 mg/kg Run deeper samples

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Run BTEX on (4) Highest TPH

Summary Report

Ike Tavarez
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: August 25, 2010

Work Order: 10081108



Project Location: Lea County, NM
Project Name: COG/Rhino #1 TB
Project Number: 114-6400438

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
240477	SB-8 1'	soil	2010-08-09	00:00	2010-08-10
240478	SB-8 3'	soil	2010-08-09	00:00	2010-08-10
240479	SB-8 5'	soil	2010-08-09	00:00	2010-08-10
240480	SB-8 7'	soil	2010-08-09	00:00	2010-08-10
240481	SB-8 10'	soil	2010-08-09	00:00	2010-08-10
240482	SB-8 15'	soil	2010-08-09	00:00	2010-08-10
240483	SB-8 20'	soil	2010-08-09	00:00	2010-08-10
240484	SB-8 25'	soil	2010-08-09	00:00	2010-08-10
240485	SB-8 30'	soil	2010-08-09	00:00	2010-08-10
240487	SB-9 1'	soil	2010-08-09	00:00	2010-08-10
240488	SB-9 3'	soil	2010-08-09	00:00	2010-08-10
240489	SB-9 5'	soil	2010-08-09	00:00	2010-08-10
240490	SB-9 7'	soil	2010-08-09	00:00	2010-08-10
240491	SB-9 10'	soil	2010-08-09	00:00	2010-08-10
240492	SB-9 15'	soil	2010-08-09	00:00	2010-08-10
240493	SB-9 20'	soil	2010-08-09	00:00	2010-08-10
240494	SB-9 25'	soil	2010-08-09	00:00	2010-08-10
240496	SB-10 1'	soil	2010-08-09	00:00	2010-08-10
240497	SB-10 3'	soil	2010-08-09	00:00	2010-08-10
240498	SB-10 5'	soil	2010-08-09	00:00	2010-08-10
240499	SB-10 7'	soil	2010-08-09	00:00	2010-08-10
240500	SB-10 10'	soil	2010-08-09	00:00	2010-08-10
240501	SB-10 15'	soil	2010-08-09	00:00	2010-08-10
240502	SB-10 20'	soil	2010-08-09	00:00	2010-08-10
240503	SB-10 25'	soil	2010-08-09	00:00	2010-08-10
240504	SB-10 30'	soil	2010-08-09	00:00	2010-08-10
240505	SB-10 40'	soil	2010-08-09	00:00	2010-08-10
240506	SB-10 50'	soil	2010-08-09	00:00	2010-08-10
240507	SB-11 1'	soil	2010-08-09	00:00	2010-08-10
240508	SB-11 3'	soil	2010-08-09	00:00	2010-08-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
240509	SB-11 5'	soil	2010-08-09	00:00	2010-08-10
240510	SB-11 7'	soil	2010-08-09	00:00	2010-08-10
240511	SB-11 10'	soil	2010-08-09	00:00	2010-08-10
240512	SB-11 15'	soil	2010-08-09	00:00	2010-08-10
240513	SB-11 20'	soil	2010-08-09	00:00	2010-08-10
240514	SB-11 25'	soil	2010-08-09	00:00	2010-08-10
240515	SB-11 30'	soil	2010-08-09	00:00	2010-08-10
240516	SB-11 40'	soil	2010-08-09	00:00	2010-08-10
240517	SB-11 50'	soil	2010-08-09	00:00	2010-08-10
240518	SB-12 1'	soil	2010-08-09	00:00	2010-08-10
240519	SB-12 3'	soil	2010-08-09	00:00	2010-08-10
240520	SB-12 5'	soil	2010-08-09	00:00	2010-08-10
240521	SB-12 7'	soil	2010-08-09	00:00	2010-08-10
240522	SB-12 10'	soil	2010-08-09	00:00	2010-08-10
240523	SB-12 15'	soil	2010-08-09	00:00	2010-08-10
240524	SB-12 20'	soil	2010-08-09	00:00	2010-08-10
240525	SB-12 25'	soil	2010-08-09	00:00	2010-08-10
240526	SB-12 30'	soil	2010-08-09	00:00	2010-08-10
240527	SB-13 1'	soil	2010-08-09	00:00	2010-08-10
240528	SB-13 3'	soil	2010-08-09	00:00	2010-08-10
240529	SB-13 5'	soil	2010-08-09	00:00	2010-08-10
240530	SB-13 7'	soil	2010-08-09	00:00	2010-08-10
240531	SB-13 10'	soil	2010-08-09	00:00	2010-08-10
240532	SB-13 15'	soil	2010-08-09	00:00	2010-08-10
240533	SB-13 20'	soil	2010-08-09	00:00	2010-08-10
240534	SB-14 1'	soil	2010-08-10	00:00	2010-08-10
240535	SB-14 3'	soil	2010-08-10	00:00	2010-08-10
240536	SB-14 5'	soil	2010-08-10	00:00	2010-08-10
240537	SB-14 7'	soil	2010-08-10	00:00	2010-08-10
240538	SB-14 10'	soil	2010-08-10	00:00	2010-08-10
240539	SB-14 15'	soil	2010-08-10	00:00	2010-08-10
240540	SB-14 20'	soil	2010-08-10	00:00	2010-08-10
240541	SB-14 25'	soil	2010-08-10	00:00	2010-08-10
240542	SB-14 30'	soil	2010-08-10	00:00	2010-08-10
240543	SB-14 40'	soil	2010-08-10	00:00	2010-08-10
240545	SB-15 1'	soil	2010-08-10	00:00	2010-08-10
240546	SB-15 3'	soil	2010-08-10	00:00	2010-08-10
240547	SB-15 5'	soil	2010-08-10	00:00	2010-08-10
240548	SB-15 7'	soil	2010-08-10	00:00	2010-08-10
240549	SB-15 10'	soil	2010-08-10	00:00	2010-08-10
240550	SB-15 15'	soil	2010-08-10	00:00	2010-08-10
240551	SB-15 20'	soil	2010-08-10	00:00	2010-08-10
240552	SB-16 1'	soil	2010-08-10	00:00	2010-08-10
240553	SB-16 3'	soil	2010-08-10	00:00	2010-08-10
240554	SB-16 5'	soil	2010-08-10	00:00	2010-08-10
240555	SB-16 7'	soil	2010-08-10	00:00	2010-08-10
240556	SB-16 10'	soil	2010-08-10	00:00	2010-08-10

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
240477 - SB-8 1'	<0.0200	<0.0200	<0.0200	<0.0200	7360	<100
240478 - SB-8 3'					487	17.0
240487 - SB-9 1'	<0.400	<0.400	0.554	1.42	5170	507
240488 - SB-9 3'					68.1	3.31
240496 - SB-10 1'	<0.200	<0.200	<0.200	<0.200	1510	35.7
240507 - SB-11 1'	<1.00	<1.00	<1.00	<1.00	5140	<100
240508 - SB-11 3'					221	<2.00
240518 - SB-12 1'	<1.00	<1.00	<1.00	<1.00	8380	125
240519 - SB-12 3'					6130	1610
240520 - SB-12 5'					268	<2.00
240527 - SB-13 1'	<0.0200	<0.0200	<0.0200	<0.0200	208	<2.00
240534 - SB-14 1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
240545 - SB-15 1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
240552 - SB-16 1'					<50.0	<2.00

Sample: 240477 - SB-8 1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240478 - SB-8 3'

Param	Flag	Result	Units	RL
Chloride		1030	mg/Kg	4.00

Sample: 240479 - SB-8 5'

Param	Flag	Result	Units	RL
Chloride		1840	mg/Kg	4.00

Sample: 240480 - SB-8 7'

Param	Flag	Result	Units	RL
Chloride		12800	mg/Kg	4.00

Sample: 240481 - SB-8 10'

Param	Flag	Result	Units	RL
Chloride		6830	mg/Kg	4.00

Sample: 240482 - SB-8 15'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240483 - SB-8 20'

Param	Flag	Result	Units	RL
Chloride		731	mg/Kg	4.00

Sample: 240484 - SB-8 25'

Param	Flag	Result	Units	RL
Chloride		214	mg/Kg	4.00

Sample: 240485 - SB-8 30'

Param	Flag	Result	Units	RL
Chloride		245	mg/Kg	4.00

Sample: 240487 - SB-9 1'

Param	Flag	Result	Units	RL
Chloride		204	mg/Kg	4.00

Sample: 240488 - SB-9 3'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240489 - SB-9 5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240490 - SB-9 7'

Param	Flag	Result	Units	RL
Chloride		14200	mg/Kg	4.00

Sample: 240491 - SB-9 10'

Param	Flag	Result	Units	RL
Chloride		10300	mg/Kg	4.00

Sample: 240492 - SB-9 15'

Param	Flag	Result	Units	RL
Chloride		6330	mg/Kg	4.00

Sample: 240493 - SB-9 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240494 - SB-9 25'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240496 - SB-10 1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240497 - SB-10 3'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240498 - SB-10 5'

Param	Flag	Result	Units	RL
Chloride		2370	mg/Kg	4.00

Sample: 240499 - SB-10 7'

Param	Flag	Result	Units	RL
Chloride		4710	mg/Kg	4.00

Sample: 240500 - SB-10 10'

Param	Flag	Result	Units	RL
Chloride		23200	mg/Kg	4.00

Sample: 240501 - SB-10 15'

Param	Flag	Result	Units	RL
Chloride		11700	mg/Kg	4.00

Sample: 240502 - SB-10 20'

Param	Flag	Result	Units	RL
Chloride		8830	mg/Kg	4.00

Sample: 240503 - SB-10 25'

Param	Flag	Result	Units	RL
Chloride		6820	mg/Kg	4.00

Sample: 240504 - SB-10 30'

Param	Flag	Result	Units	RL
Chloride		1470	mg/Kg	4.00

Sample: 240505 - SB-10 40'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240506 - SB-10 50'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240507 - SB-11 1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240508 - SB-11 3'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240509 - SB-11 5'

Param	Flag	Result	Units	RL
Chloride		899	mg/Kg	4.00

Sample: 240510 - SB-11 7'

Param	Flag	Result	Units	RL
Chloride		2340	mg/Kg	4.00

Sample: 240511 - SB-11 10'

Param	Flag	Result	Units	RL
Chloride		6880	mg/Kg	4.00

Sample: 240512 - SB-11 15'

Param	Flag	Result	Units	RL
Chloride		3260	mg/Kg	4.00

Sample: 240513 - SB-11 20'

Param	Flag	Result	Units	RL
Chloride		4750	mg/Kg	4.00

Sample: 240514 - SB-11 25'

Param	Flag	Result	Units	RL
Chloride		326	mg/Kg	4.00

Sample: 240515 - SB-11 30'

Param	Flag	Result	Units	RL
Chloride		221	mg/Kg	4.00

Sample: 240516 - SB-11 40'

Param	Flag	Result	Units	RL
Chloride		257	mg/Kg	4.00

Sample: 240517 - SB-11 50'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240518 - SB-12 1'

Param	Flag	Result	Units	RL
Chloride		336	mg/Kg	4.00

Sample: 240519 - SB-12 3'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240520 - SB-12 5'

Param	Flag	Result	Units	RL
Chloride		457	mg/Kg	4.00

Sample: 240521 - SB-12 7'

Param	Flag	Result	Units	RL
Chloride		16200	mg/Kg	4.00

Sample: 240522 - SB-12 10'

Param	Flag	Result	Units	RL
Chloride		13000	mg/Kg	4.00

Sample: 240523 - SB-12 15'

Param	Flag	Result	Units	RL
Chloride		1310	mg/Kg	4.00

Sample: 240524 - SB-12 20'

Param	Flag	Result	Units	RL
Chloride		781	mg/Kg	4.00

Sample: 240525 - SB-12 25'

Param	Flag	Result	Units	RL
Chloride		225	mg/Kg	4.00

Sample: 240526 - SB-12 30'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240527 - SB-13 1'

Param	Flag	Result	Units	RL
Chloride		378	mg/Kg	4.00

Sample: 240528 - SB-13 3'

Param	Flag	Result	Units	RL
Chloride		347	mg/Kg	4.00

Sample: 240529 - SB-13 5'

Param	Flag	Result	Units	RL
Chloride		8320	mg/Kg	4.00

Sample: 240530 - SB-13 7'

Param	Flag	Result	Units	RL
Chloride		11100	mg/Kg	4.00

Sample: 240531 - SB-13 10'

Param	Flag	Result	Units	RL
Chloride		2150	mg/Kg	4.00

Sample: 240532 - SB-13 15'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240533 - SB-13 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240534 - SB-14 1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240535 - SB-14 3'

Param	Flag	Result	Units	RL
Chloride		452	mg/Kg	4.00

Sample: 240536 - SB-14 5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240537 - SB-14 7'

Param	Flag	Result	Units	RL
Chloride		16100	mg/Kg	4.00

Sample: 240538 - SB-14 10'

Param	Flag	Result	Units	RL
Chloride		14400	mg/Kg	4.00

Sample: 240539 - SB-14 15'

Param	Flag	Result	Units	RL
Chloride		13800	mg/Kg	4.00

Sample: 240540 - SB-14 20'

Param	Flag	Result	Units	RL
Chloride		13400	mg/Kg	4.00

Sample: 240541 - SB-14 25'

Param	Flag	Result	Units	RL
Chloride		8940	mg/Kg	4.00

Sample: 240542 - SB-14 30'

Param	Flag	Result	Units	RL
Chloride		4580	mg/Kg	4.00

Sample: 240543 - SB-14 40'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240545 - SB-15 1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240546 - SB-15 3'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240547 - SB-15 5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240548 - SB-15 7'

Param	Flag	Result	Units	RL
Chloride		2640	mg/Kg	4.00

Sample: 240549 - SB-15 10'

Param	Flag	Result	Units	RL
Chloride		1030	mg/Kg	4.00

Sample: 240550 - SB-15 15'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240551 - SB-15 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240552 - SB-16 1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240553 - SB-16 3'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240554 - SB-16 5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240555 - SB-16 7'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 240556 - SB-16 10'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00