SITE INFORMATION

Report Type: Work Plan

General Site Information:						
Site:	Moose Federal 23					
Company:	COG Operating LLC					
Section, Township and Range	Unit L	Sec 23	T16S	R28E		
Lease Number:	API-30-015-25332					
County:	Eddy County					
GPS:	32.905833° N			104.152166° W		
Surface Owner:	Federal					
Mineral Owner:						
Directions:	From the intersection of Hwy 82 and Co Rd 217 travel west on Hwy 82 for 9.3 miles, turn right and travel 2.5 miles, turn left and travel 2.3 miles, turn left and travel 2.3 miles, turn right and travel 0.9 miles, turn left and travel 2.7 miles to site.					

Release Data:	1st Spill	2nd Spill
Date Released:	02/21/2011	02/26/2011
Type Release:	Oil	Oil
Source of Contamination:	Swedge in Tank Battery	Stock Tank
Fluid Released:	65 bbls	40 bbls
Fluids Recovered:	63 bbls	35 bbls

Official Communication:			
Name:	Pat Ellis		Ike Tavarez
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) 425-3878
Fax:	(432) 684-7137		
Email:	pellis@conchoresources.com		ike.tavarez@tetratech.com

Ranking Criteria		
Depth to Groundwater:	***Ranking Score***	***Site Data***
<50 ft	20	
50-99 ft	10	
>100 ft.	0	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

September 16, 2011

Mr. Mike Bratcher
Environmental Engineer Specialist
Oil Conservation Division, District 2
1301 West Grand Avenue
Artesia, New Mexico 88210

Re: Work Plan for the COG Operating LLC., Moose Federal 23 Tank Battery, Unit L, Section 23, Township 16 South, Range 28 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the Moose Federal 23 Tank Battery located in Unit L, Section 23, Township 16 South, Range 28 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.905833°, W 104.152166°. The site location is shown on Figures 1 and 2.

Background (Spill #1 and #2)

According to the State of New Mexico C-141 Initial Reports, COG had two reportable leaks at the facility. On February 21, 2011, a spill occurred when a swedge failed on a circulating line, releasing approximately sixty five (65) barrels of oil, which was contained inside the facility firewalls. Sixty three (63) barrels of standing fluids were recovered. The spill area measured approximately 10' x 100'.

On February 26, 2011, the second spill was discovered when a hole developed on an oil tank and released approximately forty (40) barrels. Thirty-five (35) barrels of fluid were recovered. The release was contained inside the facility firewall and measured approximately 20' x 50'. The initial C-141 forms are enclosed in Appendix A.

Tetra Tech
1910 North Big Spring Midland TX 79705
Tel 432 682 4559 Fax 432 682 3946 www.tetratech.com

Groundwater

No water wells were listed within Section 23. According to the NMOCD groundwater map, the average depth to groundwater in this area is less than 50' below surface. A well located in Section 24, T16S, R23E showed a depth to groundwater of 24', with an elevation of approximately 3,570'. In addition, a well located in Section 2, T17S, R28E showed a depth to water of 34' with a surface elevation of 3,574'. The Moose Federal 23 Tank Battery is located on top of the Pavo Mesa, with a surface elevation of 3750', approximately 175' high in elevation. Based on the site relative elevations, the groundwater depth at the Moose Federal Tank Battery should be greater than 100' below surface. The well report data and topographic maps are included 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 Analytical Results

On March 24, 2010, Tetra Tech personnel inspected and sampled the spill area. Nine (9) auger holes (AH-1 and AH-9) were installed using a stainless steel hand auger to assess the impacted soils. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The spill area and auger hole locations are shown on Figure 3.

Referring to Table 1, the areas of auger holes (AH-6 and AH-7) did not show TPH and BTEX concentrations above the RRAL. However, AH-1, AH-3, AH-5 and AH-8 samples were above the RRAL for TPH at 0-1' and only

the area of AH-3 was vertically defined at 2.5' below surface. In addition, either the total BTEX or benzene concentrations exceeded the RRAL at 0-1' in the areas of AH-1, AH-2, AH-3, AH-4, AH-5, AH-8 and AH-9. Auger holes (AH-2, AH-3 and AH-4) were vertically defined at 1.0', 2.0' and 1.0', respectively.

Elevated chloride concentrations were detected at 0-1' in the areas of AH-5 and AH-8 with concentrations of 1,570 mg/kg and 2,270 mg/kg, respectively. Due to the dense caliche formation, these areas were not defined using a hand auger.

Work Plan

In order to remediate the site, COG proposes to remove impacted soil above the RRAL as highlighted (green) in Table 1. The proposed excavation depths are estimated at 1.0' to 2.0' below surface. In the TPH and BTEX impacted areas not vertically defined, confirmation samples will be collected from the excavation bottoms for evaluation. In the areas of AH-5 and AH-8, backhoe trenches will be installed to better define the chloride impact in these areas. Once excavated to the appropriate depths, the excavations will backfilled with clean soil.

Based on the spill location, the excavations around oil and gas equipment, structures or lines may not be feasible or practicable to be removed due to safely concerns. As such, Tetra Tech will excavate the soils to the maximum extent practicable or defer the impacted soil until abandonment.

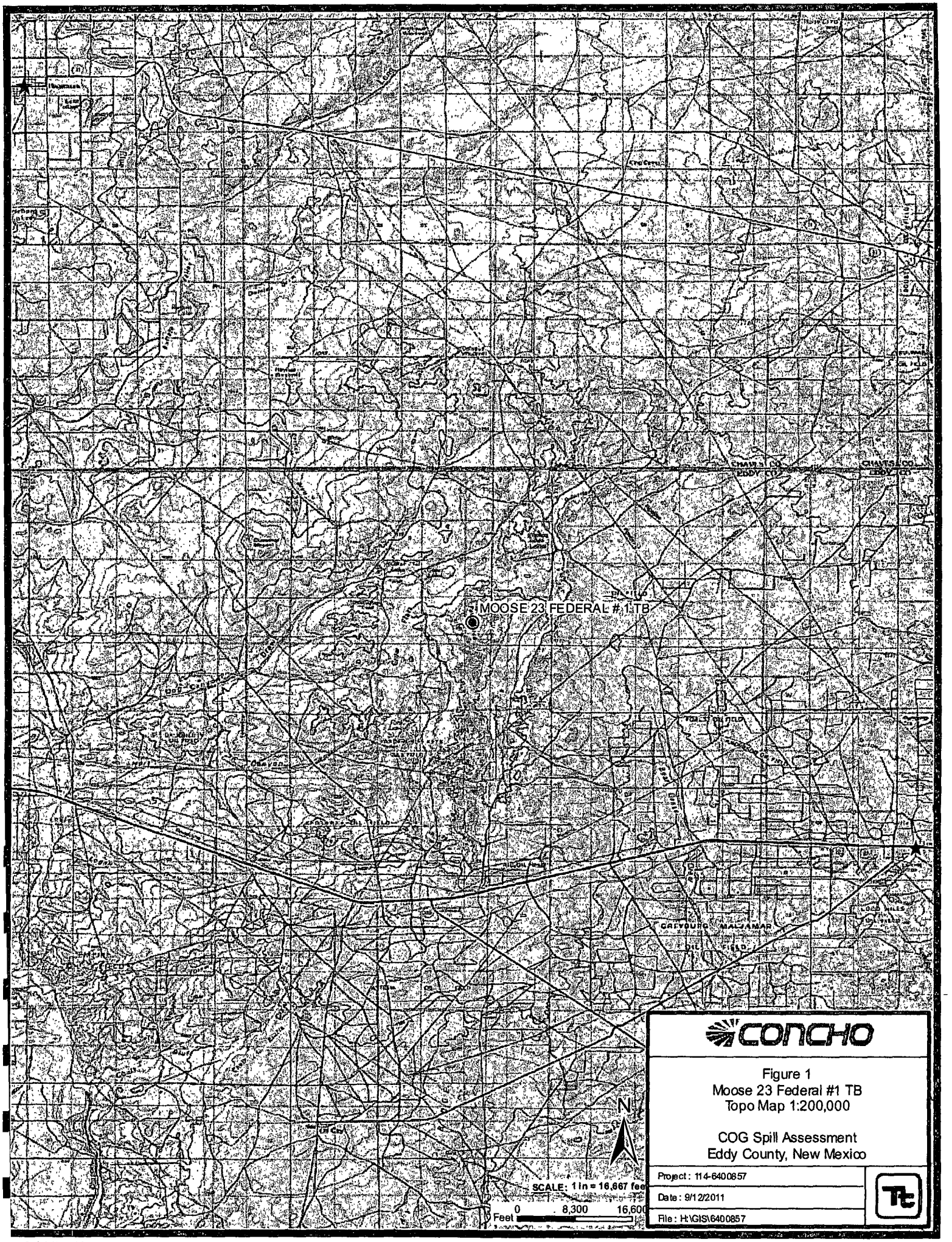
Upon completion, a final report will be submitted to the NMOCD. If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez
Project Manager

cc: Pat Ellis – COG
cc: Terry Gregston – BLM

Figures



CONCHO

Figure 1
Moose 23 Federal #1 TB
Topo Map 1:200,000

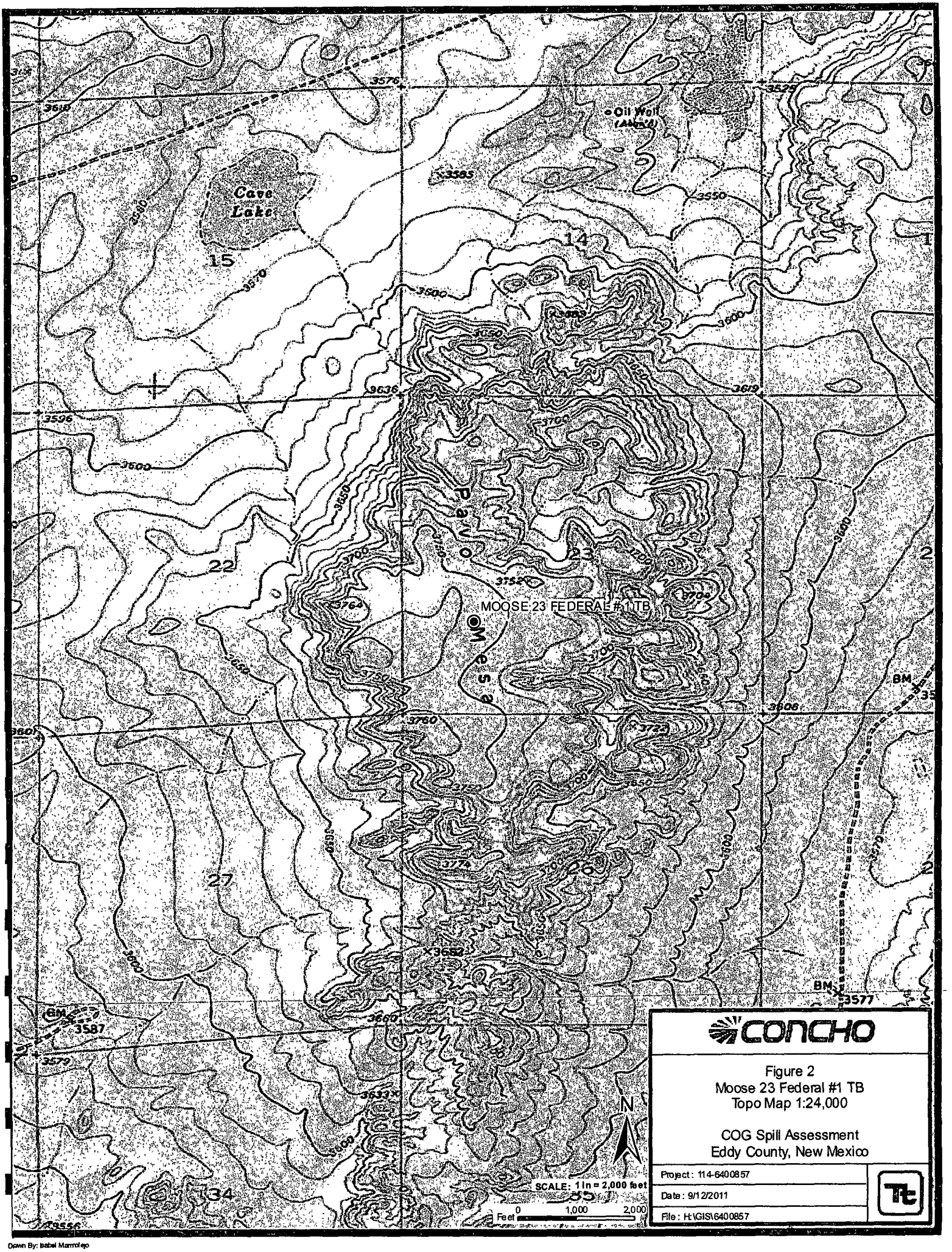
COG Spill Assessment
Eddy County, New Mexico

Project : 114-6400857

Date : 9/12/2011

File : H:\GIS\6400857

Drawn By: Isabel Marmolejo



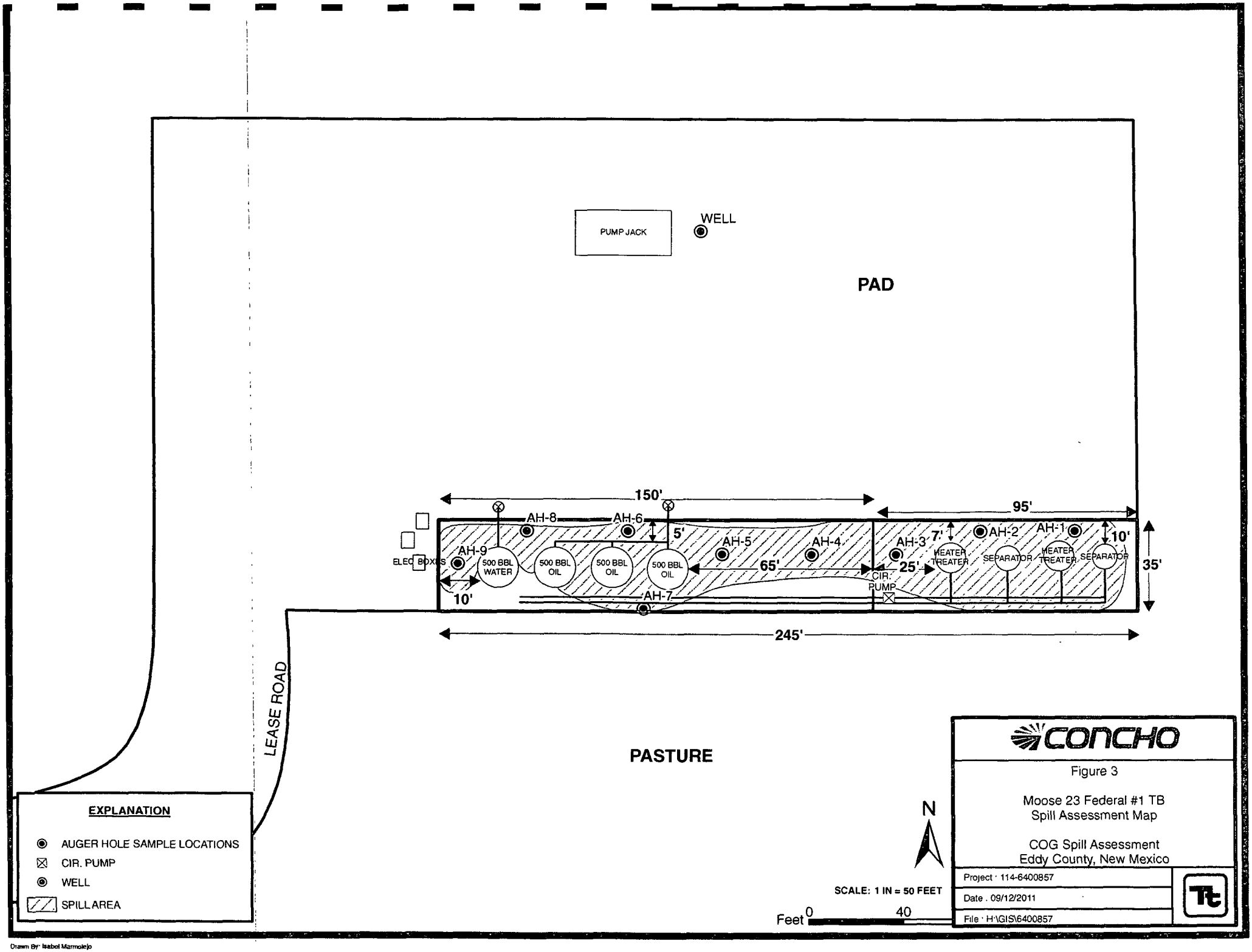
CONCHO

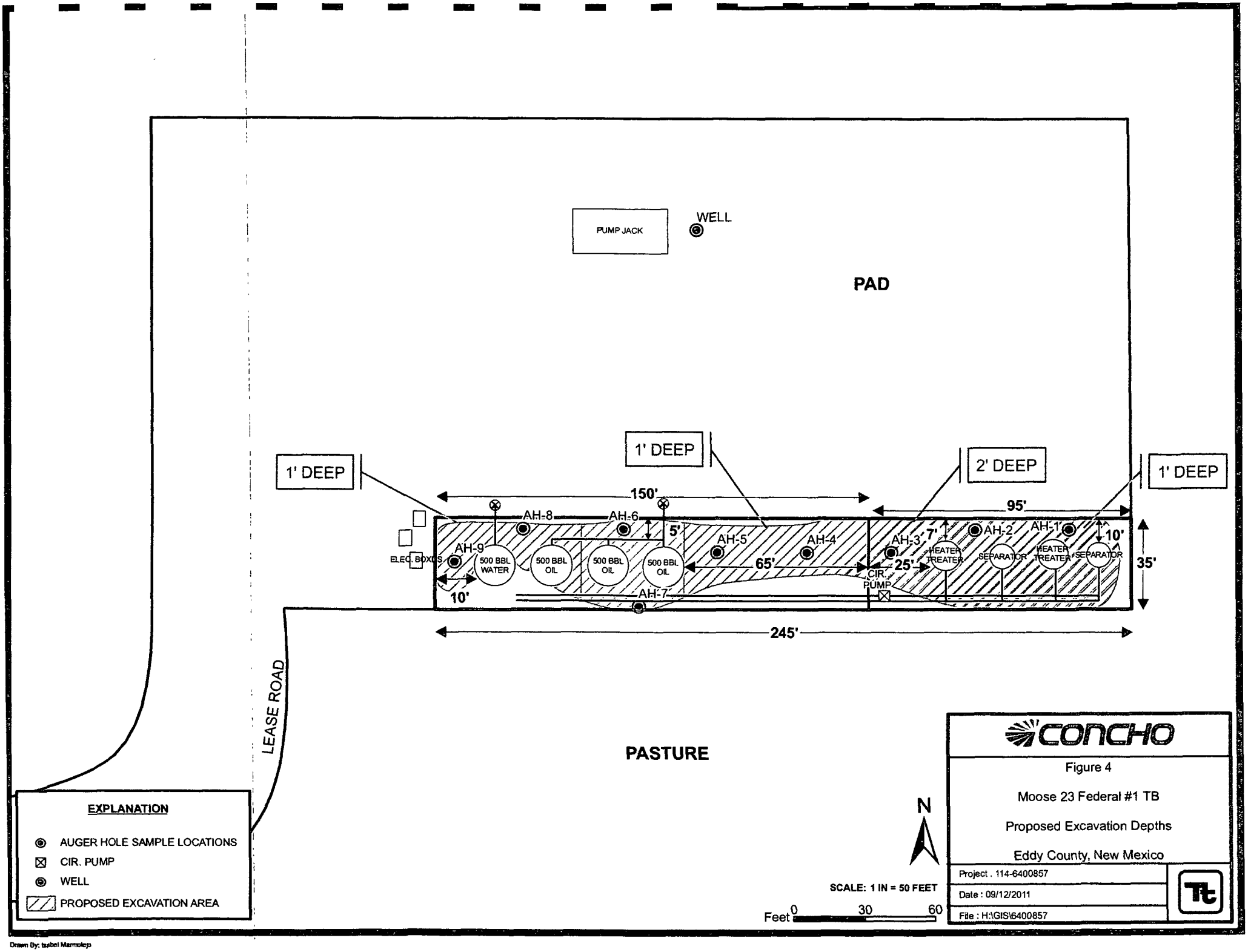
Figure 2
Moose 23 Federal #1 TB
Topo Map 1:24,000

COG Spill Assessment
Eddy County, New Mexico

Project: 114-6400857	
Date: 9/12/2011	
File: H:\GIS\6400857	

Drawn By: Isabel Marmolejo


PUMP JACK
WELL
PAD
150'
95'
AH-8
AH-6
5'
AH-5
AH-4
AH-3
7'
AH-2
AH-1
10'
AH-9
ELEC BOXES
500 BBL WATER
500 BBL OIL
500 BBL OIL
500 BBL OIL
65'
25'
CIR. PUMP
HEATER TREATER
SEPARATOR
HEATER TREATER
SEPARATOR
35'
10'
AH-7
245'
LEASE ROAD
PASTURE
EXPLANATION
AUGER HOLE SAMPLE LOCATIONS
CIR. PUMP
WELL
SPILL AREA
N
SCALE: 1 IN = 50 FEET
Feet 0 40
CONCHO
Figure 3
Moose 23 Federal #1 TB
Spill Assessment Map
COG Spill Assessment
Eddy County, New Mexico
Project · 114-6400857
Date . 09/12/2011
File · H:\GIS\6400857
Drawn By: Isabel Marmolejo



Drawn By: Isabel Marmolejo

Tables

Table 1
COG Operating LLC.
MOOSE FEDERAL #23 TANK BATTERY
Eddy County, New Mexico

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)	Total BTEX	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-1	3/24/2011	0-1'	0.5'	X		3,190	1,990	**5,180**	**15.6**	148	97.2	165	**425.8**	<200
AH-2	3/24/2011	0-1'	0.5'	X		632	929	1,561	0.209	7.40	15.0	28.3	**50.9**	<200
	"	1-1.5'	0.5'	X		64.9	78.8	143.7	<0.0200	0.147	0.244	0.645	1.04	<200
AH-3	3/24/2011	0-1'		X		4,870	11,700	**16,570**	**21.3**	165	130	212	**528.3**	324
	"	1-1.5'		X		5,020	8,780	**13,800**	**27.7**	160	113	183	**483.7**	<200
	"	2-2.5'		X		7.26	<50.0	7.26	<0.02	0.171	0.157	0.426	0.75	<200
AH-4	3/24/2011	0-1'		X		688	3710	4398	1.37	20.5	19.4	33.8	**75.1**	<200
	"	1-1.5'		X		28.1	<50.0	28.1	<0.0200	0.177	0.277	0.749	1.2	<200
	"	2-2.5'		X		10.3	<50.0	10.3	-	-	-	-	-	<200
AH-5	3/24/2011	0-1'		X		3,360	7,300	**10,660**	**13.0**	83.5	73	124	**293.5**	1,570

Table 1
COG Operating LLC.
MOOSE FEDERAL #23 TANK BATTERY
Eddy County, New Mexico

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)	Total BTEX	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-6	3/24/2011	0-1'		X		127	293	420	-	-	-	-	-	385
AH-7	3/24/2011	0-1'		X		156	2,770	2,926	0.223	0.162	0.154	1.83	2.4	547
AH-8	3/24/2011	0-1'		X		1,280	4,090	**5,370**	4.25	12.8	5.85	32.9	**55.8**	2,270
AH-9	3/24/2011	0-1'	1'	X		1,420	2,290	3,710	**22.2**	111	58.0	96.7	**287.9**	781

BEB Below Excavation Bottom

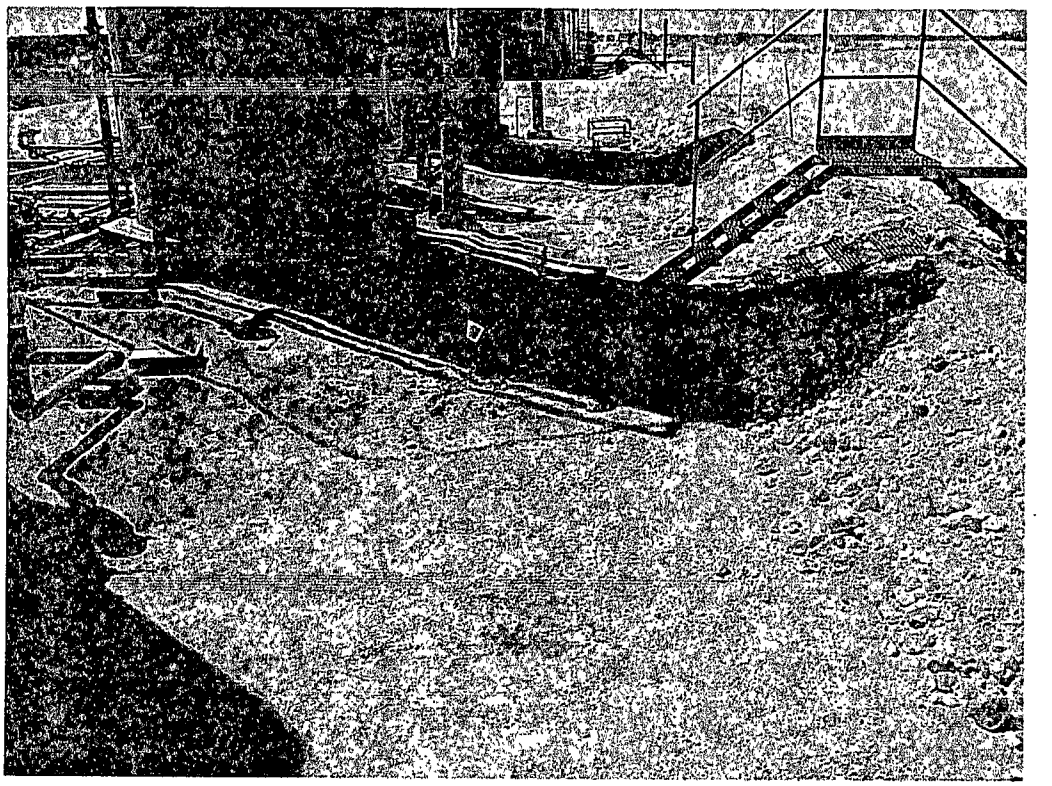
(--) Not Analyzed

Proposed Excavation Depths

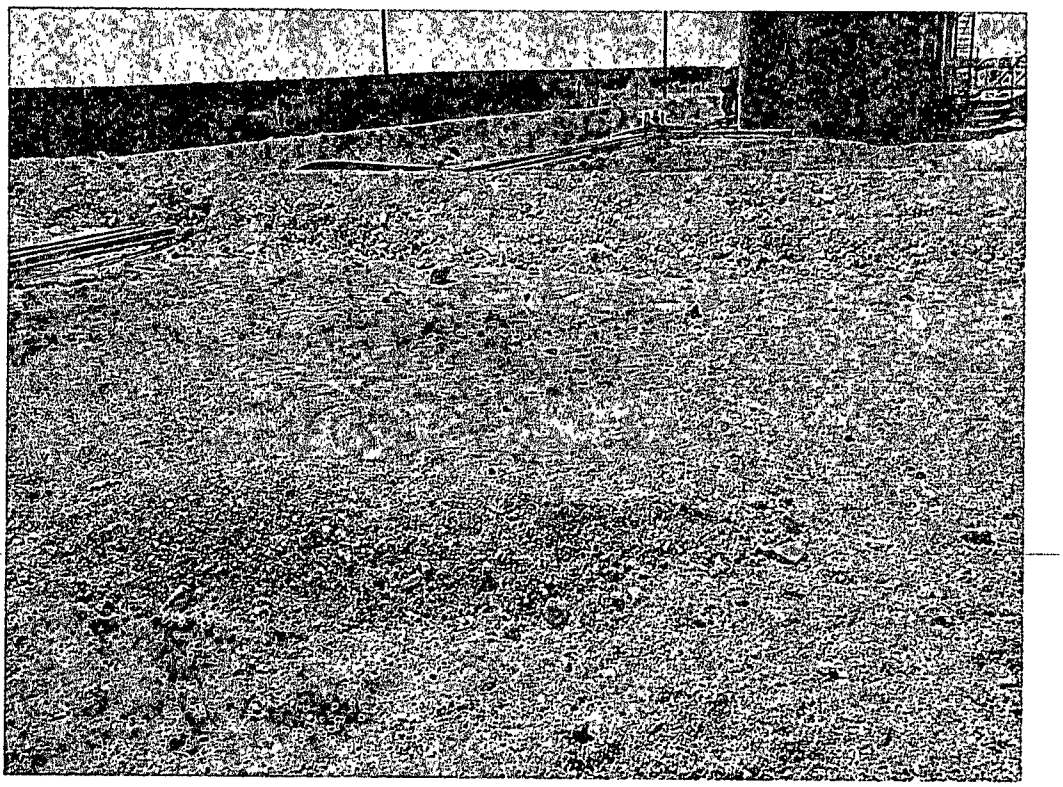
Photos

COG Operating LLC
Moose Federal 23
Eddy County, New Mexico

TETRA TECH



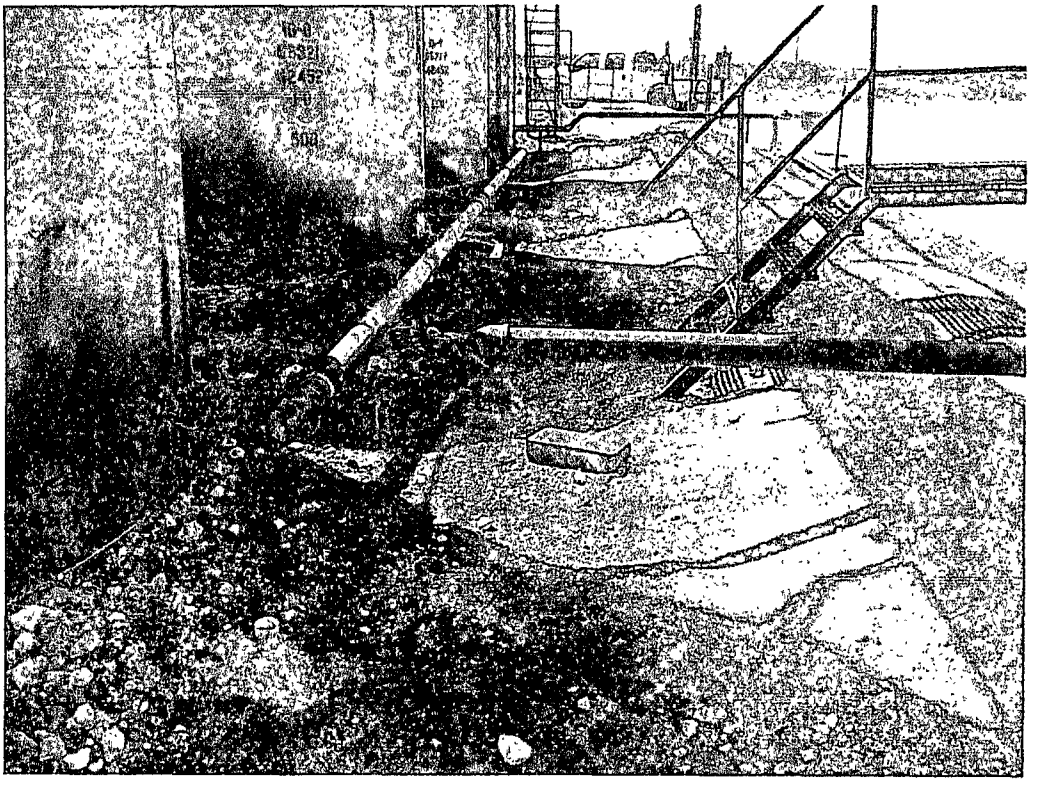
View West – AH-1, 2



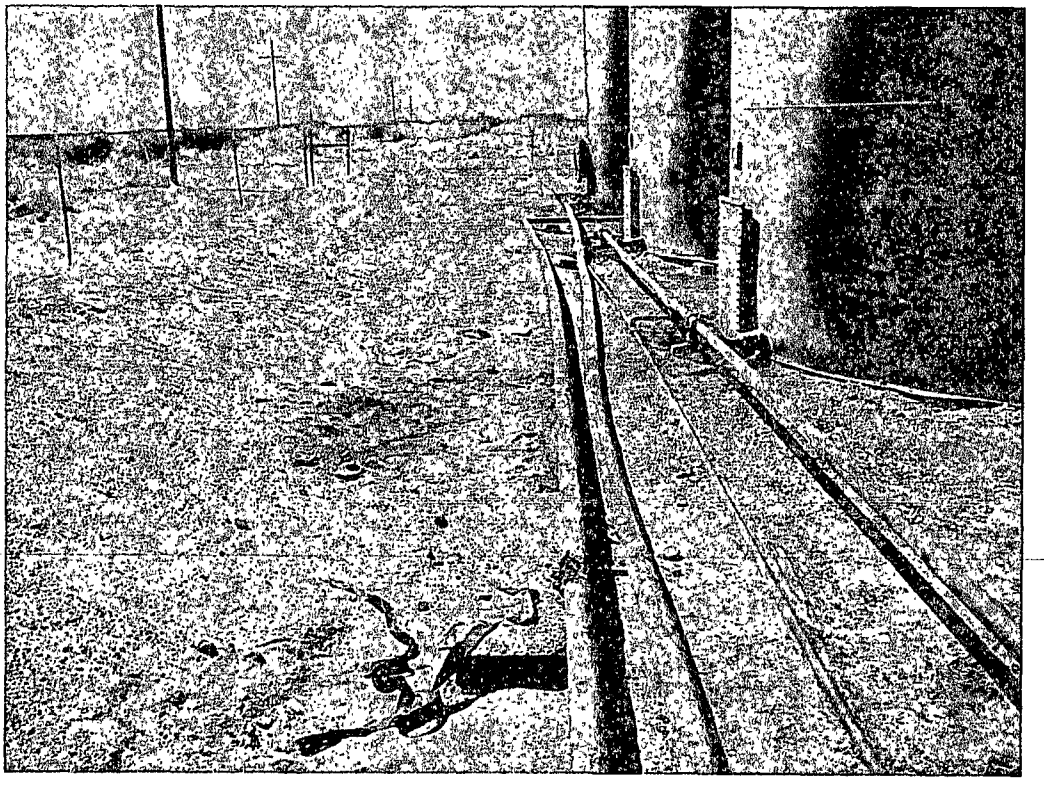
View West – AH-3, 4, 5

COG Operating LLC
Moose Federal 23
Eddy County, New Mexico

TETRA TECH



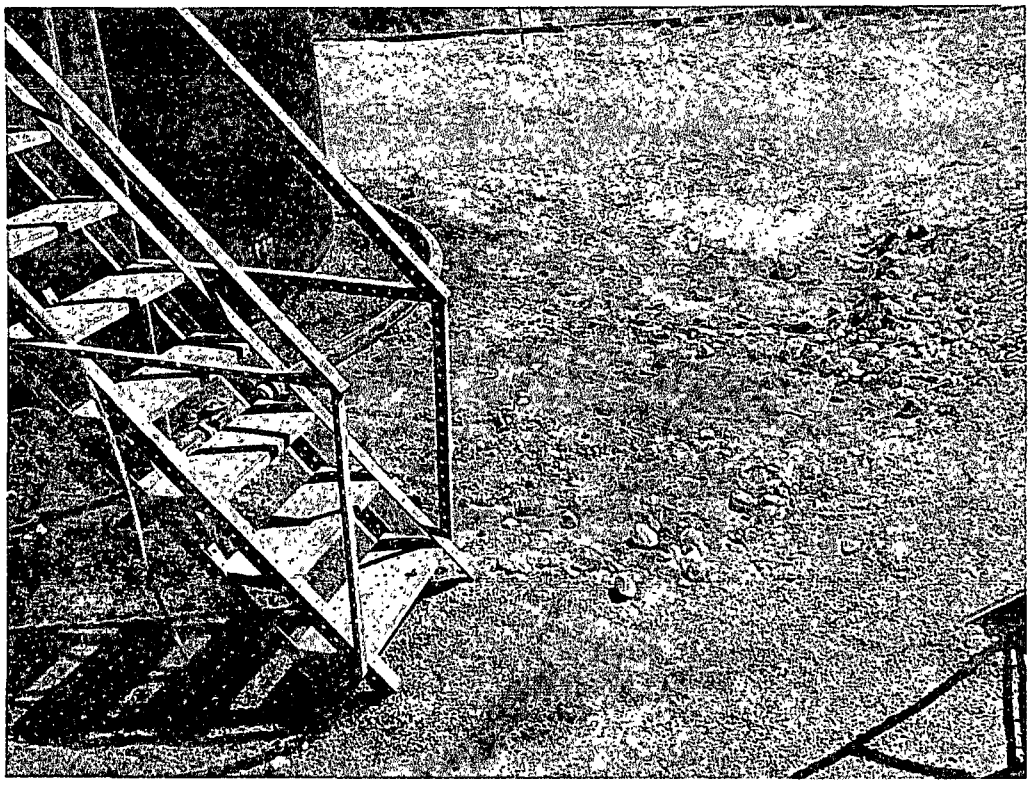
View West – AH-6, 8



View West – AH-7

COG Operating LLC
Moose Federal 23
Eddy County, New Mexico

TETRA TECH



View South – AH-9

Site info and picture details

Appendix A

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 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Moose Federal 23	Facility Type	Tank Battery

Surface Owner Federal	Mineral Owner	Lease No. (API#) 30-015-25332

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	23	16S	28E					Eddy

Latitude 32 54.350 **Longitude** 104 09.130

NATURE OF RELEASE

Type of Release Oil	Volume of Release 65bbls	Volume Recovered 63bbls
Source of Release Swedge inside tank battery	Date and Hour of Occurrence 02/21/2011	Date and Hour of Discovery 02/21/2011 4:30 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher—OCD	
By Whom? Josh Russo	Date and Hour 02/22/2011 3:43 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
OCT 17 2011
NMOCD ARTESIA

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Swedge failed on circulating line coming off of production tank. The swedge has been replaced with a new one.

Describe Area Affected and Cleanup Action Taken.*

Initially 65bbls of oil was released and completely contained inside the walls of the facility. We were able to recover 63bbls with a vacuum truck and all standing fluid has been recovered. The contaminated soil has been removed from the facility and the spill area measured 10' x 100'. 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 NMOCD / BLM for 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 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: Josh Russo	Approved by District Supervisor:	
Title: HSE Coordinator	Approval Date:	Expiration Date:
E-mail Address: jrusso@conchoresources.com	Conditions of Approval:	Attached ☐
Date: 03/02/2011 Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

District I
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OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Moose Federal 23	Facility Type	Tank Battery

Surface Owner Federal	Mineral Owner	Lease No. (API#) 30-015-25332

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	23	16S	28E					Eddy

Latitude 32 54.350 **Longitude** 104 09.130

NATURE OF RELEASE

Type of Release Oil	Volume of Release 40bbls	Volume Recovered 35bbls
Source of Release Stock tank	Date and Hour of Occurrence 02/26/2011	Date and Hour of Discovery 02/26/2011 8:30 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher—OCD	
By Whom? Josh Russo	Date and Hour 02/28/2011 9:38 a.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A hole developed in a stock tank at the tank battery. The tank has been removed from service.

Describe Area Affected and Cleanup Action Taken.*

Initially 40bbls of oil was released from the stock tank and we were able to recover 35bbls with a vacuum truck. The entire release was contained inside the berm walls of the facility and measured an area of 20' x 50' around the tanks and toward the heaters. The contaminated soil has been removed and all free fluids have been picked up. 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 NMOCD / BLM for 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 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: Josh Russo	Approved by District Supervisor:
Title: HSE Coordinator	Approval Date: / Expiration Date:
E-mail Address: jrusso@conchoresources.com	Conditions of Approval: / Attached ☐
Date: 03/02/2011 Phone: 432-212-2399	

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - Moose Federal 23
Eddy County, New Mexico

26 East

3	2	1
10	11	12
15	14	13
22	23	24
27	26	25
34	35	36

15 South 27 East

6 **18**	5	4	3	2	1 **23**
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 **40**	22	23	24
30	29	28	27	26	25
31 **62**	32	33	34 **85**	35	36

15 South 28 East

6	5	4	3	2	1	6
7	8	9	10	11	12	7
18 **35**	17 **43**	16	15	14	13	18
19	20	21	22	23	24	19
30	29	28	27	26	25	30
31	32	33	34	35	36	31

16 South 27 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 **70**	26	25
31	32	33	34	35	36

16 South 28 East

6	5	4	3	2	1
7	8	9	10	11	12 **47'**
18	17	16	15	14	13
19	20	21	22	23 **Site**	24 **24'**
30	29	28	27	26	25
31	32	33	34	35	36

16 South 29 East

6	5	4	3	2
7	8	9	10	11
18	17	16	15	14
19 **110**	20	21	22	23
30	29	28	27	26
31	32	33	34	35

17 South 27 East

6	5 **30**	4	3	2	1
7 **14**	8	9	10	11 **54** **50**	12
18 **86**	17 **283**	16 **194**	15	14	13
19	20	21	22	23 **40**	24
30	29	28	27	26	25
31	32 **120**	33	34	35	36

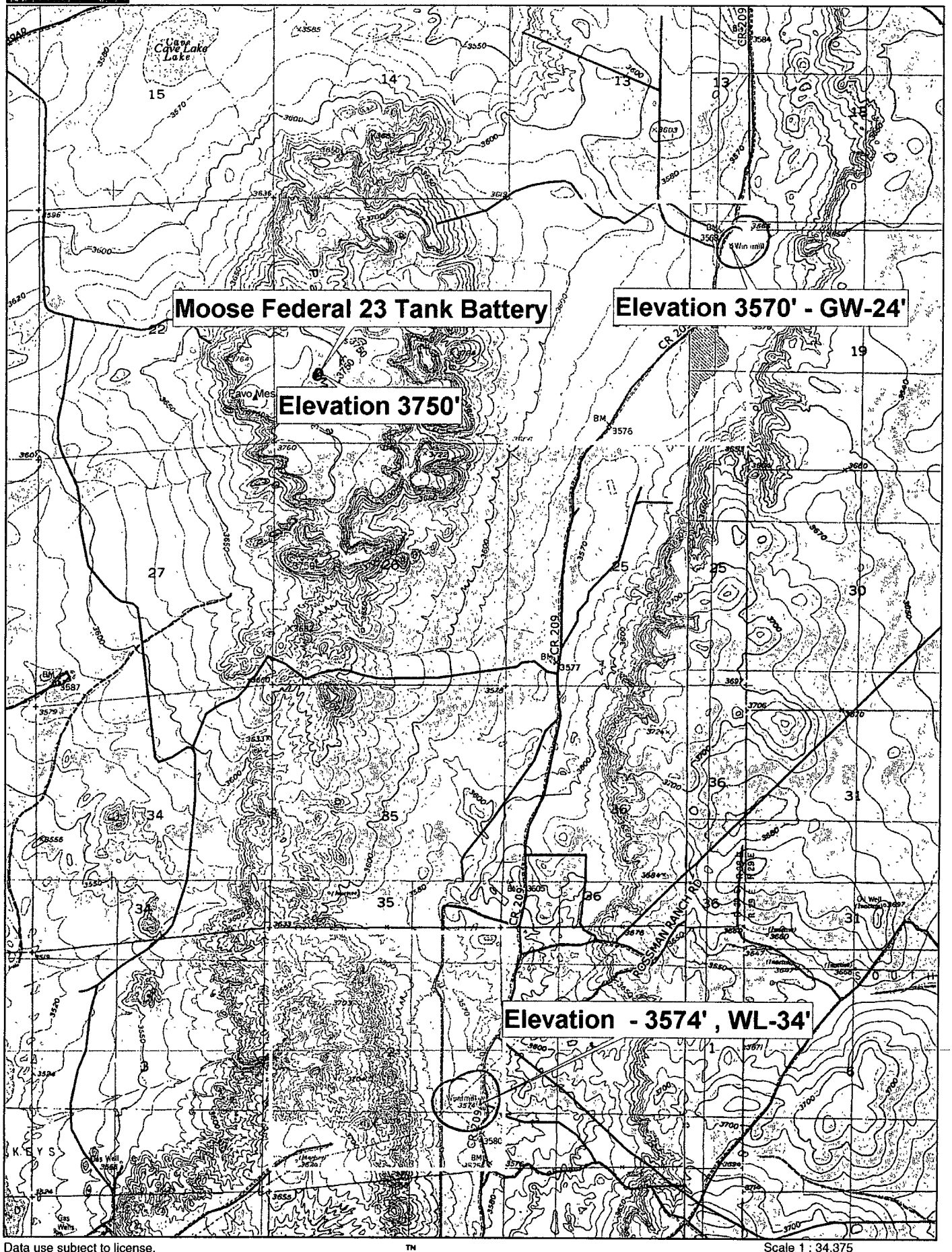
17 South 28 East

6	5	4	3	2 **34'**	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22 **79**	23	24
30	29	28	27	26	25
31	32	33	34 **53**	35	36

17 South 29 East

6	5	4	3	2
7	8	9	10	11
18	17	16	15	14
19	20	21	22 **80**	23
30	29 **210** **208'**	28	27	26
31	32	33	34	35 153

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD Map - Groundwater Data



TN

MN (7.9°E)

Scale 1 : 34,375

0 1000 2000 3000 4000 5000 ft

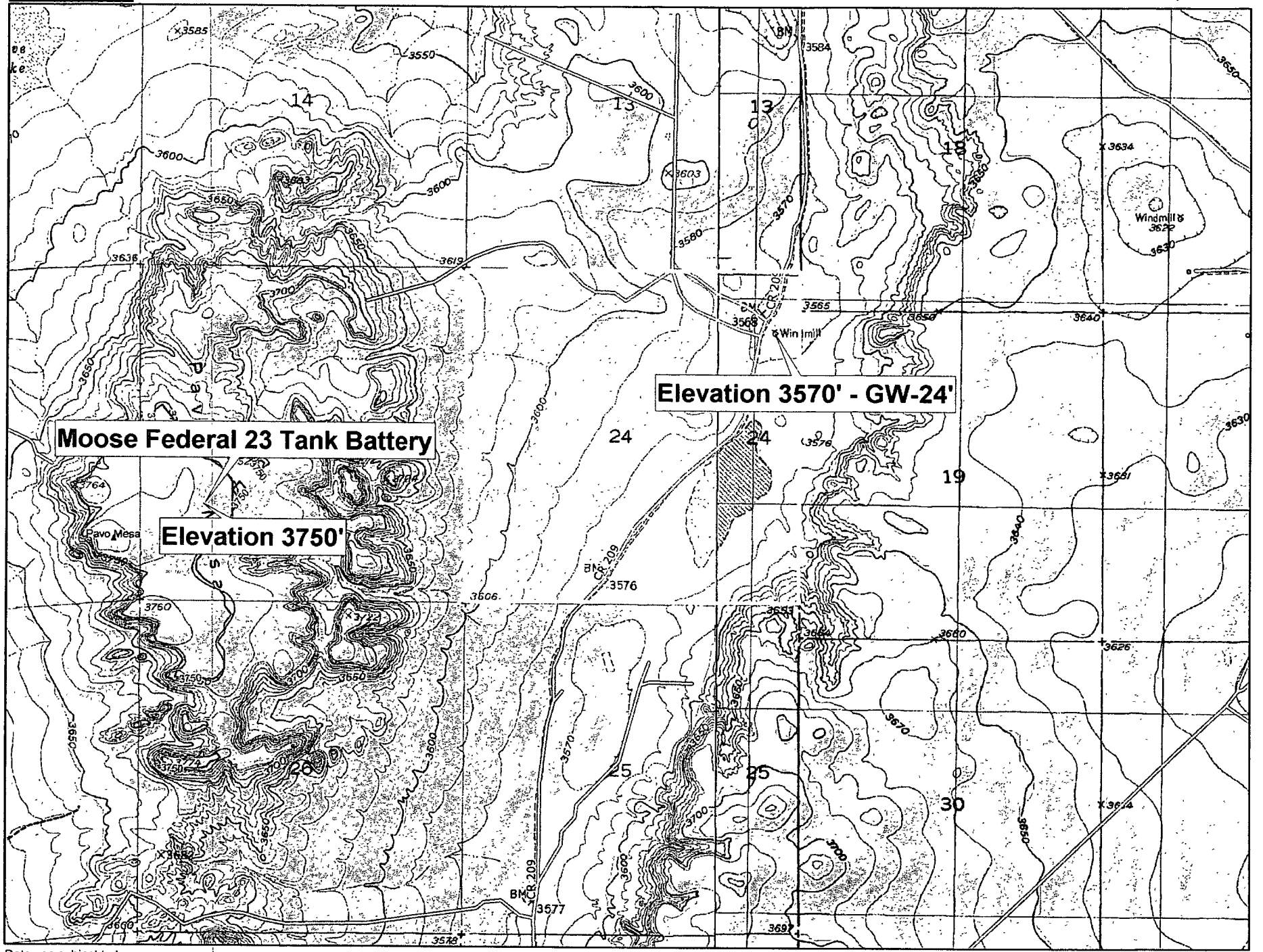
0 200 400 600 800 1000 m

1" = 2,864.6 ft

Data Zoom 12-5

DeLORME

Topo USA® 8



TN

MN (7.9°E)

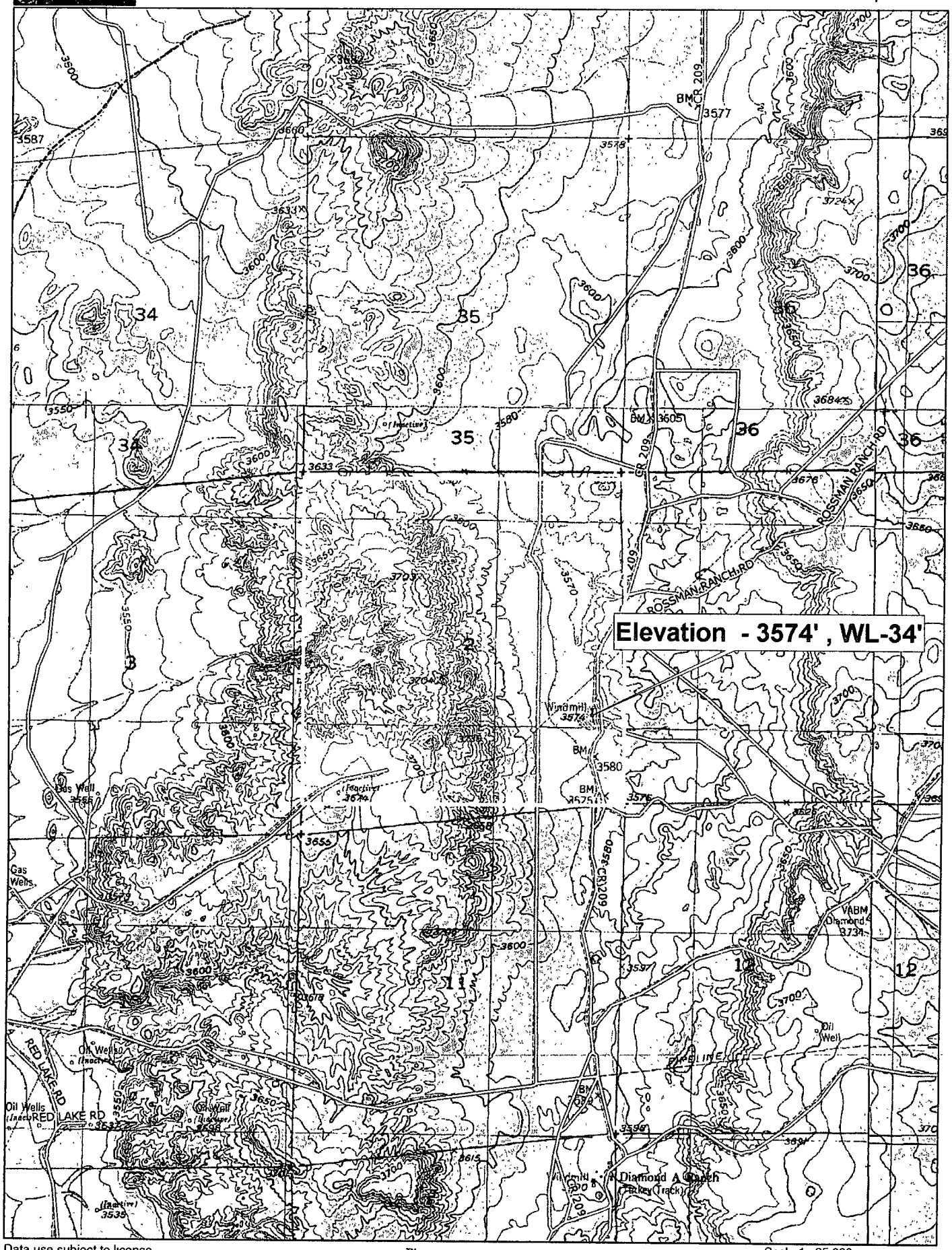
Scale 1 : 25,000

1" = 2,083.3 ft

Data Zoom 13-0

DeLORME

Topo USA® 8



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TN

MN (7.9°E)

Scale 1 : 25,000

0 600 1200 1800 2400 3000 ft

0 200 400 600 800 1000 m

1" = 2,083.3 ft

Data Zoom 13-0

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
RA 09342		DOM	ED	4	4	3	19	16S	29E	582737	3640640*	220	110	110

Average Depth to Water: **110 feet**

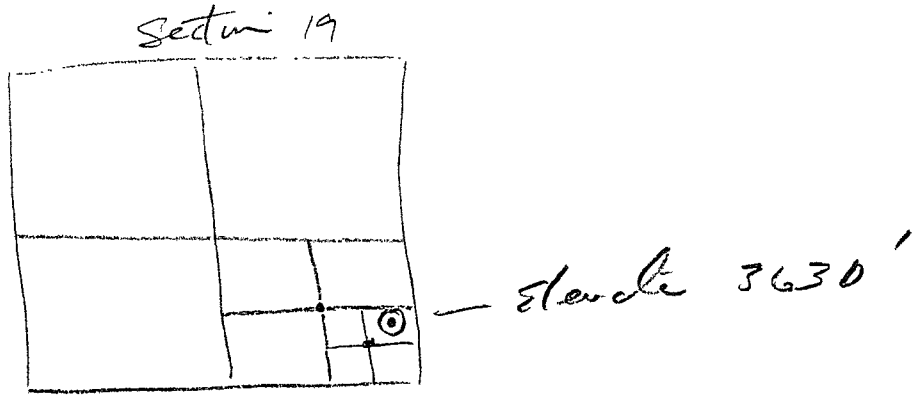
Minimum Depth: **110 feet**

Maximum Depth: **110 feet**

Record Count: 1

PLSS Search:

Township: 16S **Range:** 29E



***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PLSS Search:

Township: 16S **Range:** 28E

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	Twn	Rng	X	Y	Depth Well	Depth Water	Water Column
RA 09342		DOM	ED	4	4	3	19	16S	29E	582737	3640640*	220	110	110

Average Depth to Water: **110 feet**

Minimum Depth: **110 feet**

Maximum Depth: **110 feet**

Record Count: 1

PLSS Search:

Township: 16S **Range:** 29E

***UTM location was derived from PLSS - see Help**

Appendix C

Summary Report

Victoria Inman
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: April 4, 2011

Work Order: 11032822

Project Location: Eddy Co., NM
Project Name: COG/Moose Fed. #23 TB
Project Number: 114-6400857

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
261908	AH-1 0-1' 0.5' BEB	soil	2011-03-24	00:00	2011-03-28
261909	AH-2 0-1' 0.5' BEB	soil	2011-03-24	00:00	2011-03-28
261910	AH-2 1-1.5' 0.5' BEB	soil	2011-03-24	00:00	2011-03-28
261911	AH-3 0-1'	soil	2011-03-24	00:00	2011-03-28
261912	AH-3 1-1.5'	soil	2011-03-24	00:00	2011-03-28
261913	AH-3 2-2.5'	soil	2011-03-24	00:00	2011-03-28
261914	AH-4 0-1'	soil	2011-03-24	00:00	2011-03-28
261915	AH-4 1-1.5'	soil	2011-03-24	00:00	2011-03-28
261916	AH-4 2-2.5'	soil	2011-03-24	00:00	2011-03-28
261917	AH-5 0-1'	soil	2011-03-24	00:00	2011-03-28
261918	AH-6 0-1'	soil	2011-03-24	00:00	2011-03-28
261919	AH-7 0-1'	soil	2011-03-24	00:00	2011-03-28
261920	AH-8 0-1'	soil	2011-03-24	00:00	2011-03-28
261921	AH-9 0-1' 1' BEB	soil	2011-03-24	00:00	2011-03-28

Sample - Field Code	BTEX Benzene (mg/Kg)	BTEX Toluene (mg/Kg)	BTEX Ethylbenzene (mg/Kg)	BTEX Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
261908 - AH-1 0-1' 0.5' BEB	**15.6**	**148**	**97.2**	**165**	**1990**	**3190**
261909 - AH-2 0-1' 0.5' BEB					**929**	**632**
261910 - AH-2 1-1.5' 0.5' BEB					**78.8**	**64.9**
261911 - AH-3 0-1'	**21.3**	**165**	**130**	**212**	**11700**	**4870**
261912 - AH-3 1-1.5'	**27.7**	**160**	**113**	**183**	**8780**	**5020**
261913 - AH-3 2-2.5'	<0.0200	**0.171**	**0.157**	**0.426**	<50.0	**7.26**
261914 - AH-4 0-1'					**3710**	**688**
261915 - AH-4 1-1.5'					<50.0	**28.1**
261916 - AH-4 2-2.5'					<50.0	**10.3**
261917 - AH-5 0-1'	**13.0**	**83.5**	**73.0**	**124**	**7300**	**3360**
261918 - AH-6 0-1'					**293**	**127**

continued ...

... continued

Sample - Field Code	BTEX Benzene (mg/Kg)	BTEX Toluene (mg/Kg)	BTEX Ethylbenzene (mg/Kg)	BTEX Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
261919 - AH-7 0-1'					**2770**	**156**
261920 - AH-8 0-1'	**4.25**	**12.8**	**5.85**	**32.9**	**4090**	**1280**
261921 - AH-9 0-1' 1' BEB					**2290**	**1420**

Sample: 261908 - AH-1 0-1' 0.5' BEB

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

Sample: 261909 - AH-2 0-1' 0.5' BEB

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

Sample: 261910 - AH-2 1-1.5' 0.5' BEB

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

Sample: 261911 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**324**	mg/Kg	4.00

Sample: 261912 - AH-3 1-1.5'

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

Sample: 261913 - AH-3 2-2.5'

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

Sample: 261914 - AH-4 0-1'

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

Sample: 261915 - AH-4 1-1.5'

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

Sample: 261916 - AH-4 2-2.5'

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

Sample: 261917 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**1570**	mg/Kg	4.00

Sample: 261918 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		**385**	mg/Kg	4.00

Sample: 261919 - AH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		**547**	mg/Kg	4.00

Sample: 261920 - AH-8 0-1'

Param	Flag	Result	Units	RL
Chloride		**2270**	mg/Kg	4.00

Sample: 261921 - AH-9 0-1' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**781**	mg/Kg	4.00

Summary Report

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

Report Date: September 8, 2011

Work Order: 11032822

Project Location: Eddy Co., NM
Project Name: COG/Moose Fed. #23 TB
Project Number: 114-6400857

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
261909	AH-2 0-1' 0.5' BEB	soil	2011-03-24	00:00	2011-03-28
261910	AH-2 1-1.5' 0.5' BEB	soil	2011-03-24	00:00	2011-03-28
261914	AH-4 0-1'	soil	2011-03-24	00:00	2011-03-28
261915	AH-4 1-1.5'	soil	2011-03-24	00:00	2011-03-28
261919	AH-7 0-1'	soil	2011-03-24	00:00	2011-03-28
261921	AH-9 0-1' 1' BEB	soil	2011-03-24	00:00	2011-03-28

	BTEX			
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)
261909 - AH-2 0-1' 0.5' BEB	**0.209**	**7.40**	**15.0**	**28.3**
261910 - AH-2 1-1.5' 0.5' BEB	<0.0200	**0.147**	**0.244**	**0.645**
261914 - AH-4 0-1'	**1.37**	**20.5**	**19.4**	**33.8**
261915 - AH-4 1-1.5'	<0.0200	**0.177**	**0.277**	**0.749**
261919 - AH-7 0-1'	**0.223**	**0.162**	**0.154**	**1.83**
261921 - AH-9 0-1' 1' BEB	**22.2**	**111**	**58.0**	**96.7**