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	SL Deep Federal #3 Tank Battery	Facility Type	Tank Battery

Surface Owner Federal	Mineral Owner	Lease No. (API#) 30-025-39441

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	30	19S	32E					Lea

Latitude 32 38.148 **Longitude** 103 48.540

NATURE OF RELEASE

Type of Release Produced water / Skim oil	Volume of Release 19bbls pw 1bbl oil	Volume Recovered 15bbls pw 1bbl oil
Source of Release Man way plate gasket at heater	Date and Hour of Occurrence 08/05/2012	Date and Hour of Discovery 08/05/2012 9:45 a.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
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.*

The gasket on the man way plate at the heater was releasing fluid and needed to be replaced. We have made all necessary repairs and the heater has been returned to service.

Describe Area Affected and Cleanup Action Taken.*

Initially 20bbls were released from the heater and we were able to recover 16bbls with a vacuum truck. The released fluid was contained inside a 20' x 20' area in the tank battery around the heater. The spill area has been scraped and the contaminated soil has been hauled. 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 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: 08/15/2012 Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

SITE INFORMATION

Report Type: Work Plan

General Site Information:						
Site:	SL Deep Federal #3 Tank Battery					
Company:	COG Operating LLC					
Section, Township and Range	Unit C	Sec 30	T19S	R32E		
Lease Number:	API-30-025-39441					
County:	Lea County					
GPS:	32.63590° N			103.80924° W		
Surface Owner:	Federal					
Mineral Owner:						
Directions:	From the intersection of Hwy 62/180 and Hwy 243, travel northwest on Hwy 243 for 4.3 miles, turn right (north) on CR126 and travel for 4.5 miles, turn left and travel 0.4 miles, turn right and travel 0.4 miles to location.					

Release Data:	
Date Released:	8/5/2012
Type Release:	Produced Water/ Skim Oil
Source of Contamination:	Man way plate gasket at heater treater
Fluid Released:	19 bbls pw 1 bbl oil
Fluids Recovered:	15 bbls pw 1 bbl oil

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) 682-4559
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

October 23, 2012

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

Re: Work Plan for the COG Operating LLC., SL Deep Federal #3 Tank Battery, Unit C, Section 30, Township 19 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 SL Deep Federal #3 Tank Battery, Unit C, Section 30, Township 19 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.63590°, W 103.80924°. 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 August 5, 2012, and released approximately twenty (20) barrels of oil and produced water from a heater treater with sixteen (16) barrels of standing fluids recovered. The spill was completely contained inside the firewalls and measured approximately 30' x 40'. The initial C-141 form is enclosed in Appendix C.

Groundwater

No water wells were listed within Section 30. According to the NMOCD groundwater map, the average depth to groundwater in this area is approximately 600' below surface. The average depth to groundwater map is shown in Appendix A.

Tetra Tech
1910 North Big Spring, Midland TX 79705
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

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 August 31, 2012, Tetra Tech personnel inspected and sampled the spill area. Two (2) auger holes (AH-1 and AH-2) 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 B. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, the area of AH-1 exceeded the RRAL at 0-1' for TPH and total BTEX, but declined below the RRAL at 1-1.5' below surface. In addition, a shallow chloride impact was detected in both of the auger holes. Auger holes (AH-1 and AH-2) at 0-1' showed chloride concentrations of 3,040 mg/kg and 3,020 mg/kg, respectively. The deeper samples significantly declined with depth at 1-1.5' below surface. In the area of AH-1, the chlorides spiked at 3.0' (1,160 mg/kg) to 4.0' (1,790 mg/kg) below surface. The deeper sample declined with depth with concentrations of 942 mg/kg at 4.5-5.0' below surface.

Work Plan

COG proposes to excavate the impacted soil to a depth of 1.0' below surface. Based upon know impact, limited area and depth to groundwater, the remaining deeper impact detected in the area of AH-1 (3.0 and 4.0') will be left undisturbed and does not appear be an environmental concern. All of the excavated material will be transported offsite for proper disposal. Once final excavation depths are achieved, the site will be backfilled with clean material and brought to grade.

TETRA TECH

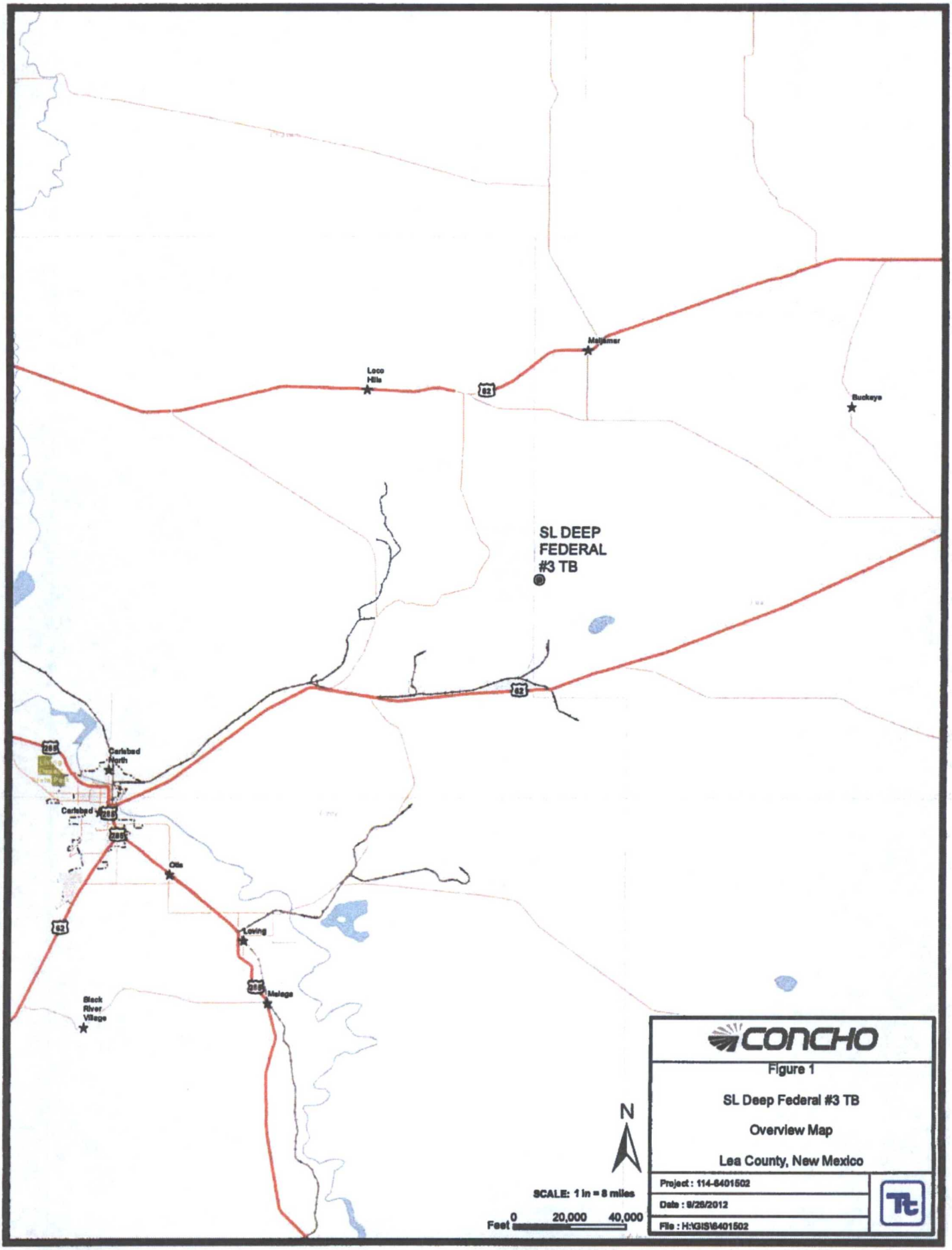
Due to the location of the spill, the proposed excavation depths or deeper excavation may not be achieved due to wall cave ins, limited access, oil and gas equipment, electrical, structures or lines which may not be feasible or practicable to be removed due to safety concerns. As such, Tetra Tech will excavate the soils to the maximum extent practicable. If the impacted soil is not accessible, the soil will be deferred until the abandonment of the facility.

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.

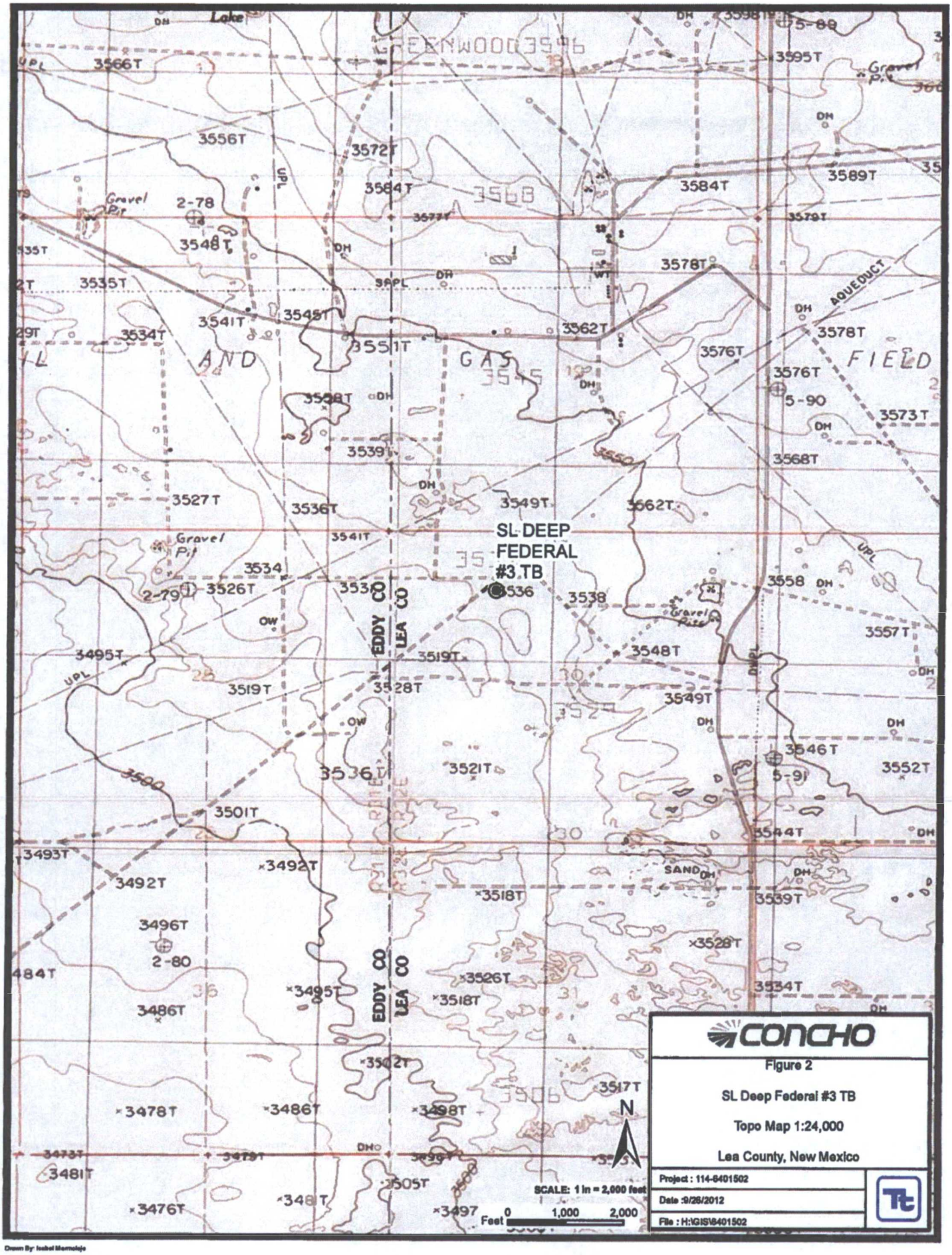
Respectfully submitted,
TETRA TECH

Ike Tavarez
Senior Project Manager

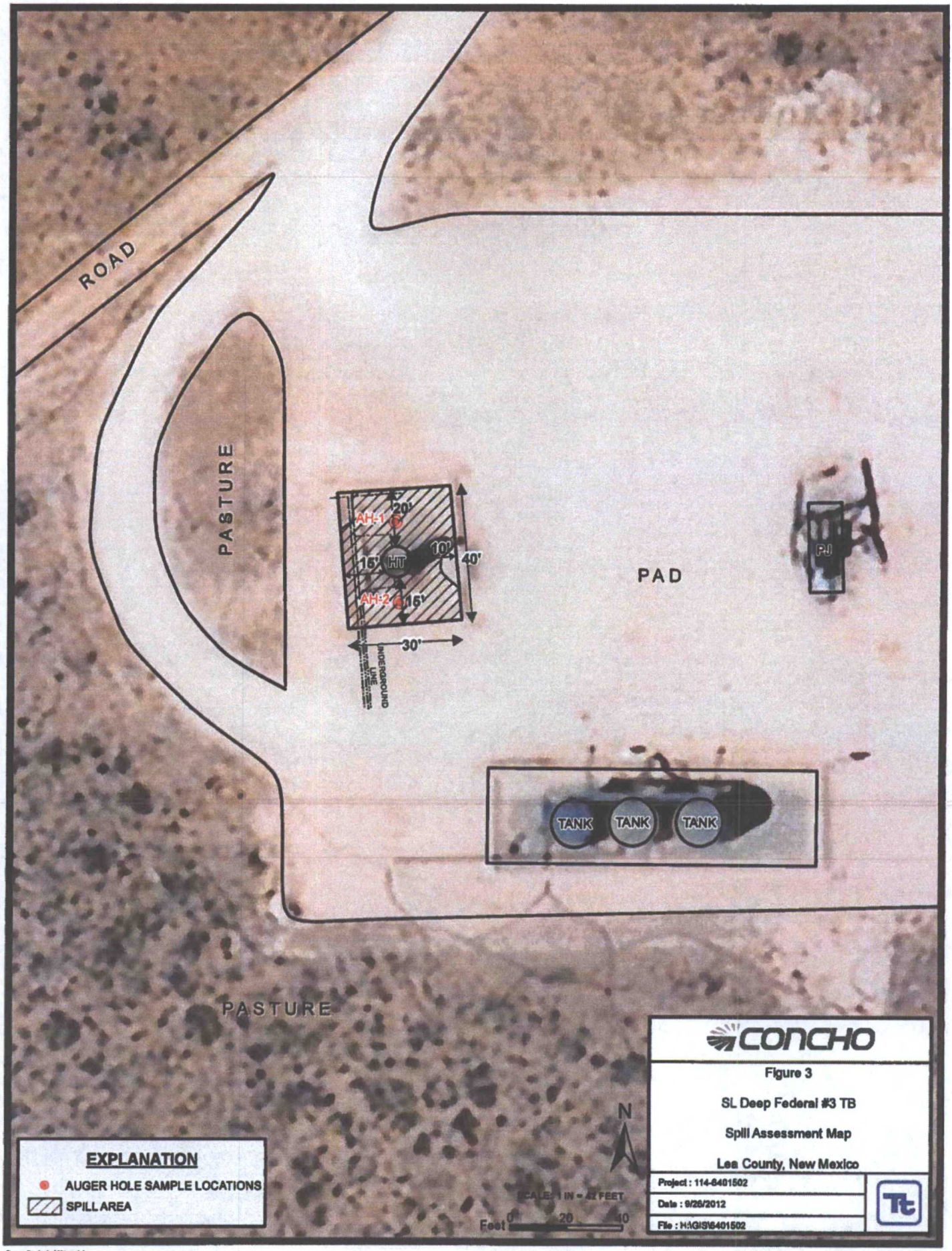
cc: Pat Ellis – COG
cc: Jim Amos – BLM



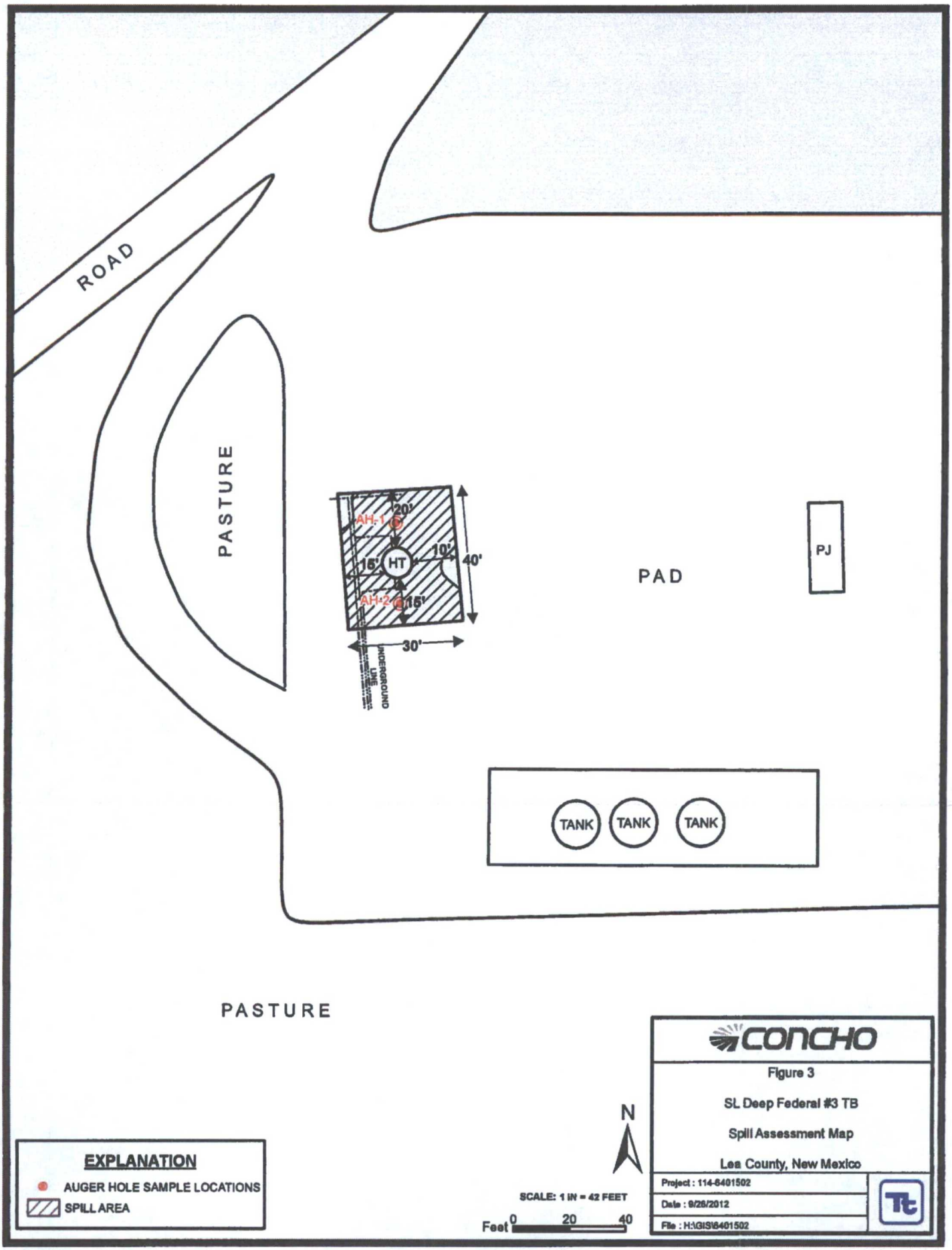
Drawn By: Isabel Mamolejo



Drawn By: Isabel Mamolejo



Drawn By: Isabel Montoya



Drawn By: Isabel Marroquin

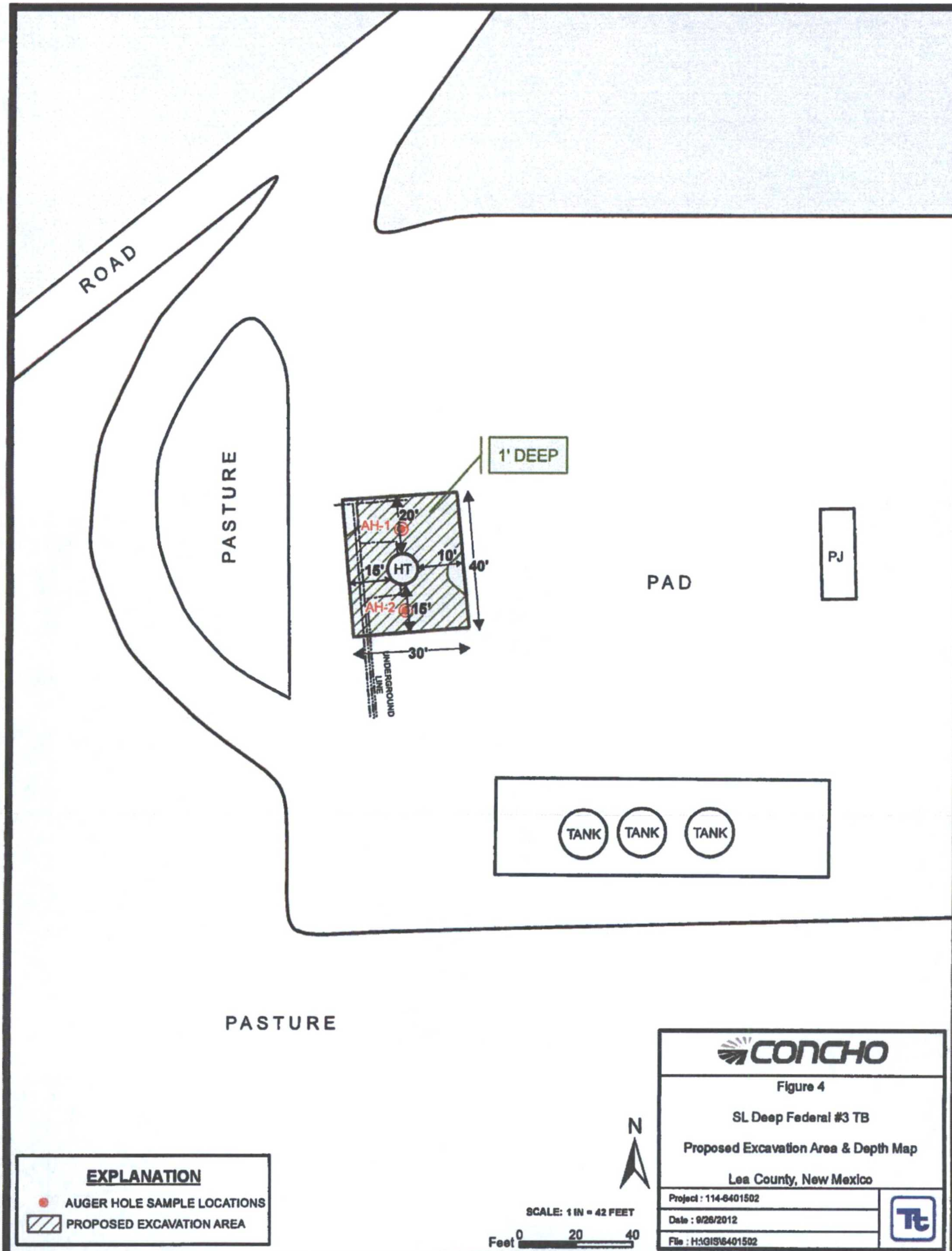


Figure 4

SL Deep Federal #3 TB

Proposed Excavation Area & Depth Map

Lea County, New Mexico

Project : 114-6401502

Date : 9/26/2012

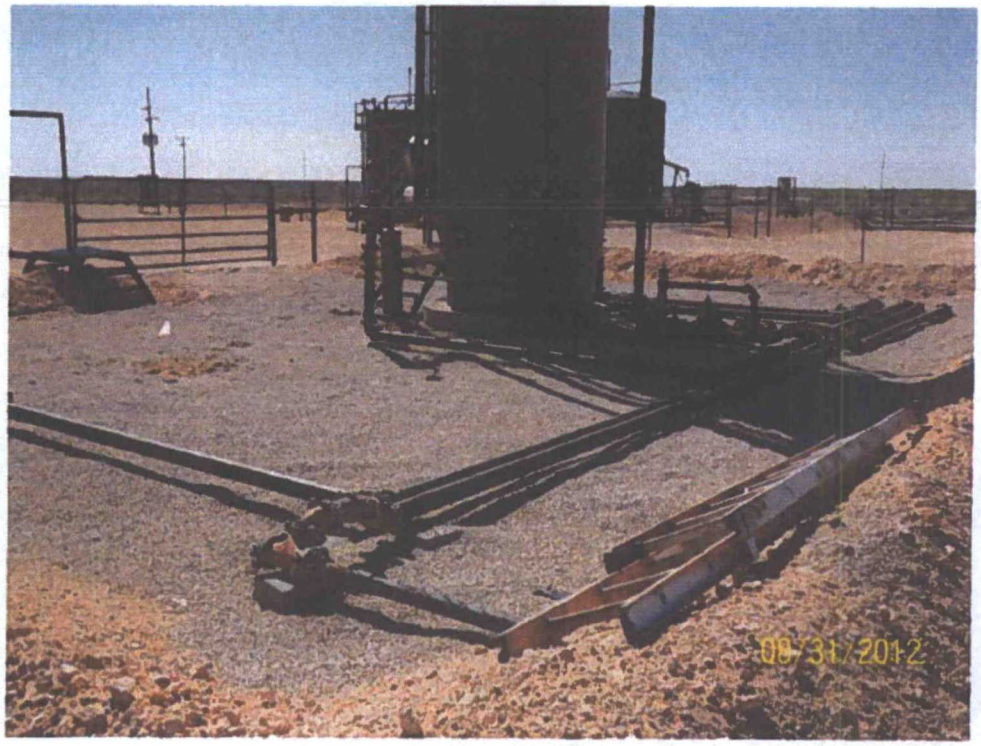
File : H:\GIS\6401502

Drawn By: Isabel Mermelejo

COG Operating LLC
SL Deep Federal #3 Tank Battery
Lea County, New Mexico

TETRA TECH

View North – Area of AH-1 and AH-2



View South – Area of AH-1 and AH-2

Table 1
COG Operating LLC.
SL Deep Federal #3 Tank Battery
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
AH-1	8/31/2012	0-1	X		3,470	19,100	22,570	<1.00	3.66	24.3	74.8	103	3,040
	"	1-1.5	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	0.0239	0.0812	0.105	333
	"	2-2.5	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	763
	"	3-3.5	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,160
	"	4-4.5	X		29.2	133	162	<0.0200	<0.0200	0.0637	0.214	0.278	1,790
	"	4.5-5	X		148	1,040	1,188	<0.0400	0.0480	0.437	1.40	1.89	942
AH-2	8/31/2012	0-1	X		4.86	<50.0	4.86	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	3,020
	"	1-1.5	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	275
	"	2-2.5	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	232

(-) Not Analyzed

Proposed Excavation Depths

Water Well Data
Average Depth to Groundwater (ft)
COG - SL Deep Federal #3 Tank Battery
Lea County, New Mexico

18 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12 400
18	17	16	15	14 317	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35 261	36

19 South 31 East

6	5 SITE	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28 180	27	26	25
31	32	33 101	34	35	36 130

20 South 31 East

6	5	4	3	2	1
7	8	9	10 130	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 60

18 South 32 East

6	5	4 65	3 Prone #2	2	1
7 460 82	8	9	10	11	12
18	17	16 84	15	14	13
19	20 164	21	22 429	23	24
30	29	28	27	26	25
31	32	33	34 117	35	36

19 South 32 East

6	5	4	3	2	1
7	8 365	9	10	11	12
18	17	16	15	14	13 135 dry
19 102	20 345	21	22	23	24
30 SITE	29	28	27	26	25
31	32	33	34 250	35	36

20 South 32 East

6	5	4	3	2	1 21.8
7	8	9	10	11	12
18 89	17	16	15	14	13
19	20	21	22	23	24
30 9.9	29	28	27 12.3	26	25
31	32	33	34	35	36 46

18 South 33 East

6	5	4	3 60	2	1
7	8 100	9	10 82	11 46	12 143 140
18	17 85	16	15	14 38	13 60
19 >140	20	21	22	23	24 195
30 35	29	28	27	26	25
31	32	33 177	34	35	36

19 South 33 East

6	5	4	3	2	1
7	8	9	10	11	12
18 340	17 116	16	15	14	13
19	20	21	22	23	24
30	29	28 130 dry	27	26 92 85	25
31	32 185	33	34	35	36

20 South 33 East

6	5 278	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24 +300
30	29	28	27	26	25
31	32	33	34	35	36

- 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

Summary Report

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

Report Date: September 19, 2012

Work Order: 12091206

Project Location: NM
Project Name: COG/SL Deep Fed. #3 TB
Project Number: 114-6401502

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
308982	AH-1 0-1'	soil	2012-08-31	00:00	2012-09-11
308983	AH-1 1-1.5'	soil	2012-08-31	00:00	2012-09-11
308984	AH-1 2-2.5'	soil	2012-08-31	00:00	2012-09-11
308985	AH-1 3-3.5'	soil	2012-08-31	00:00	2012-09-11
308986	AH-1 4-4.5'	soil	2012-08-31	00:00	2012-09-11
308987	AH-1 4.5-5'	soil	2012-08-31	00:00	2012-09-11
308988	AH-2 0-1'	soil	2012-08-31	00:00	2012-09-11
308989	AH-2 1-1.5'	soil	2012-08-31	00:00	2012-09-11
308990	AH-2 2-2.5'	soil	2012-08-31	00:00	2012-09-11

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
308982 - AH-1 0-1'	<1.00 [1]	**3.66**	**24.3**	**74.8**	**19100** Qs	**3470**
308983 - AH-1 1-1.5'	<0.0200	<0.0200	**0.0239**	**0.0812**	<50.0 Qs	<4.00
308984 - AH-1 2-2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0 Qs	<4.00
308985 - AH-1 3-3.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0 Qs	<4.00
308986 - AH-1 4-4.5'	<0.0200	<0.0200	**0.0637**	**0.214**	**133** Qs	**29.2**
308987 - AH-1 4.5-5'	<0.0400 [2]	**0.0480**	**0.437**	**1.40**	**1040** Qs	**148**
308988 - AH-2 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0 Qs	**4.86**
308989 - AH-2 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0 Qs	<4.00
308990 - AH-2 2-2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0 Qs	<4.00

Sample: 308982 - AH-1 0-1'

continued ...

[1]Sample dilution due to hydrocarbons.
[2]Sample dilution due to hydrocarbons.

sample 308982 continued ...

Param	Flag	Result	Units	RL

Param	Flag	Result	Units	RL
Chloride	Qs	3040	mg/Kg	5

Sample: 308983 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride	Qs	333	mg/Kg	5

Sample: 308984 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride	Qs	763	mg/Kg	5

Sample: 308985 - AH-1 3-3.5'

Param	Flag	Result	Units	RL
Chloride	Qs	1160	mg/Kg	5

Sample: 308986 - AH-1 4-4.5'

Param	Flag	Result	Units	RL
Chloride	Qs	1790	mg/Kg	5

Sample: 308987 - AH-1 4.5-5'

Param	Flag	Result	Units	RL
Chloride	Qs	942	mg/Kg	5

Sample: 308988 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride	Qs	3020	mg/Kg	5

Sample: 308989 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride	Q*	275	mg/Kg	5

Sample: 308990 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride	Q*	232	mg/Kg	5