SITE INFORMATION

Report Type: Work Plan

General Site Information:						
Site:	Westall A State #3 - Flow line					
Company:	COG Operating LLC					
Section, Township and Range	Unit J	Sec 36	T17S	R29E		
Lease Number:	API-30-015-03798					
County:	Eddy County					
GPS:	32.78838° N			104.02476° W		
Surface Owner:	State					
Mineral Owner:						
Directions:	From the intersection of Hwy 82 and CR 217, travel south on CR 217 for 2.9 miles, turn right on to CR 216 and travel 100', turn left and travel 0.2 miles to the site.					

Release Data:	
Date Released:	1/15/2012
Type Release:	Produced Water and Oil
Source of Contamination:	Flowline failure
Fluid Released:	40 bbls pw, 20 bbls oil
Fluids Recovered:	35 bbls pw, 18 bbls 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

May 8, 2012

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., Westall A State #3 flow line, Unit J, Section 36, Township 17 South, Range 29 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 Westall A State #3 flow line, located in Unit J, Section 36, Township 17 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.78838°, W 104.02476°. 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 January 15, 2012, and released approximately sixty (60) barrels of produced fluids from a flow line. To alleviate the problem, COG personnel repaired the flow line. Fifty-three (53) barrels of standing fluids were recovered leaving seven (7) barrels unrecovered. The spill initiated east of the pad affecting an area approximately 25' X 130' in the pasture. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 36. According to the NMOCD groundwater map, the average depth to groundwater in this area is approximately 175' below surface. The groundwater data is shown in Figure B.

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 February 16, 2012, Tetra Tech personnel inspected and sampled the spill area. Four (4) auger holes (AH-1 through AH-4) were installed using a stainless steel hand auger to assess the impacted soils. Selected samples were analyzed for TPH 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 auger hole locations are shown on Figure 3.

Referring to Table 1, none of the samples exceeded the TPH or BTEX RRAL concentrations. Elevated chloride concentrations were detected in AH-1, AH-2 and AH-3, with chloride highs of 6,450 mg/kg at 3-3.5', 4,930 mg/kg at 4-4.5' and 4,140 mg/kg at 2-2.5', respectively. The chloride impact in these areas were not vertically defined. The area of AH-4 did not show a chloride impact to the area.

On March 21, 2012, Tetra Tech personnel supervised the installation of boreholes (BH-1, BH-2 and BH-3) utilizing an air rotary drilling rig. The soil boring locations are shown on Figure 3. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1.

Referring to Table 1, the chloride concentrations in all the boreholes installed were vertically defined. The boreholes (BH-1, BH-2 and BH-3) did show chloride impact to the subsurface soils and significantly declined at approximately 6.0' to 9.0' below surface. The deepest chloride impact was

encountered in the area of SB-2 and SB-3, with chloride concentrations greater than 1,000 mg/kg extending down to approximately 14-15' below surface.

Work Plan

COG proposes to remove impacted material as highlighted (green) in Table 1 and shown on Figure 4. To remove the elevated chloride impact, the areas of AH-1, AH-2 and AH-3 will be excavated to a depth of 6.0' to 9.0' below surface. Once the areas are excavated to the appropriate depths, the excavation will be backfilled with clean soil. Upon completed, a final report will be submitted to the NMOCD.

The proposed excavation depths may not be reached due to wall cave ins and safety concerns for onsite personnel. In addition, impacted soil 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. If the excavation is not practicable, the excavated area will be capped with a 40 mil liner at 3.0' to 4.0' below surface and backfilled to grade.

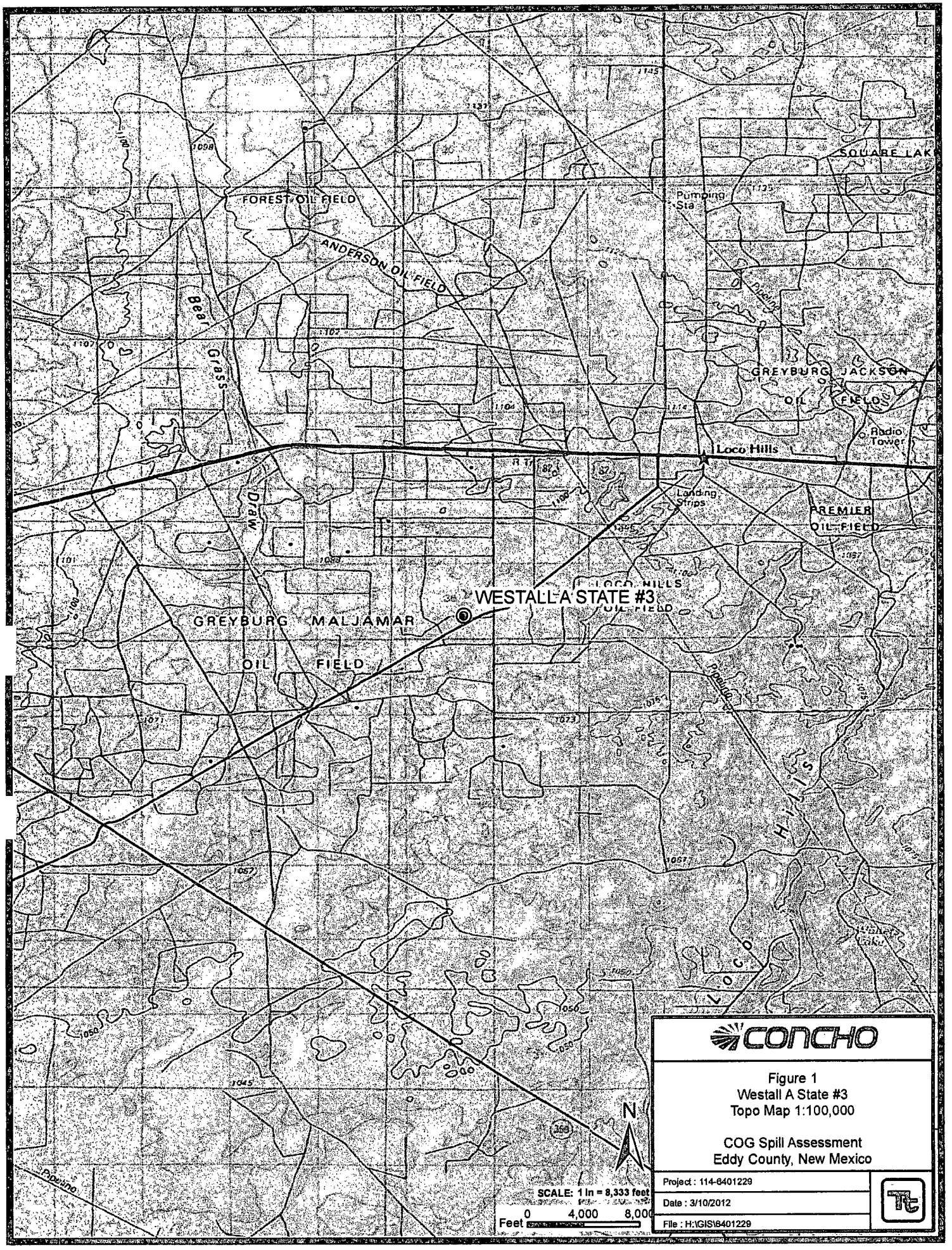
If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez
Senior Project Manager

cc: Pat Ellis – COG

Figures



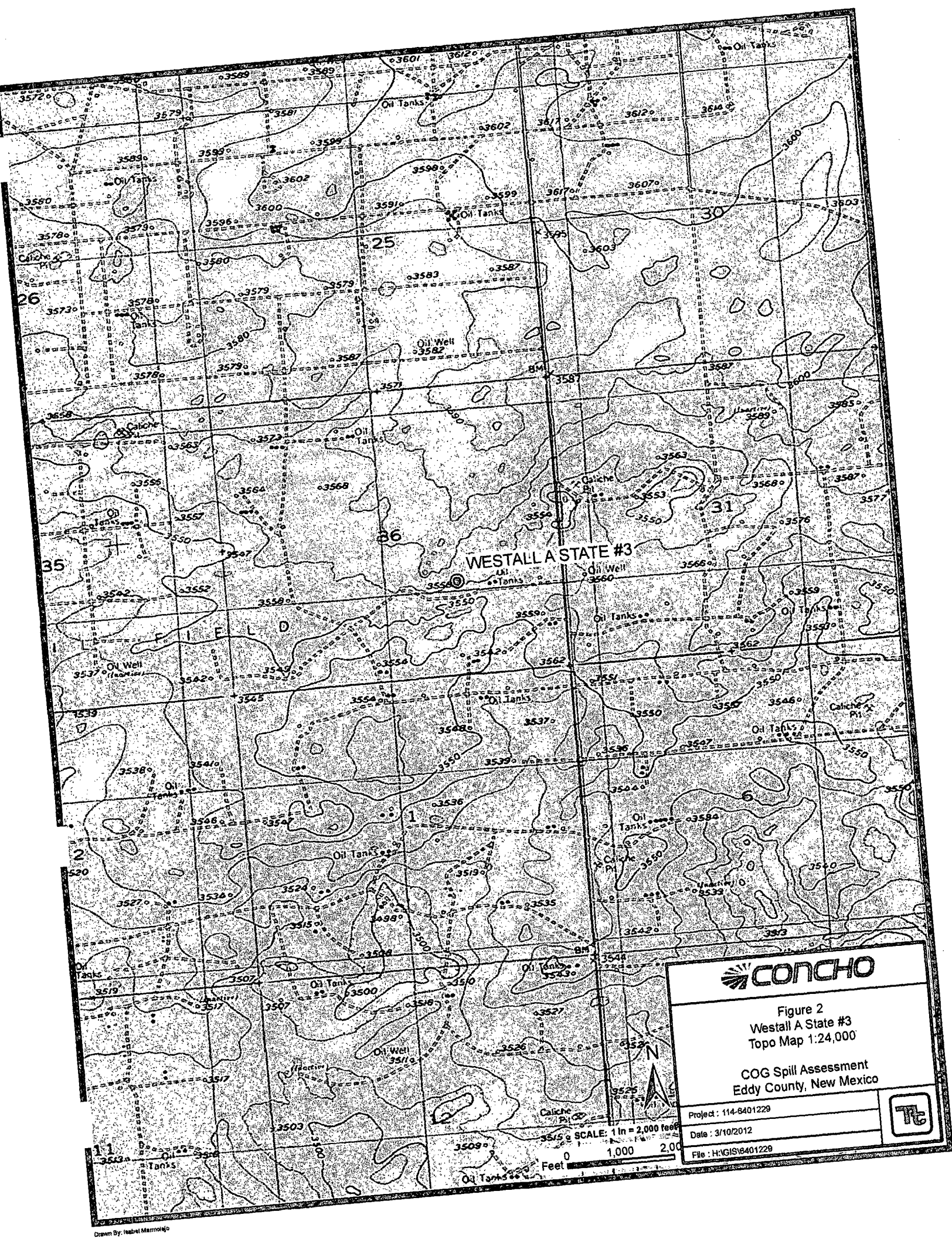
CONCHO

Figure 1
Westall A State #3
Topo Map 1:100,000

COG Spill Assessment
Eddy County, New Mexico

Project : 114-6401229	
Date : 3/10/2012	
File : H:\GIS\6401229	

Drawn By: Isabel Marmolejo



CONCHO

Figure 2
Westall A State #3
Topo Map 1:24,000

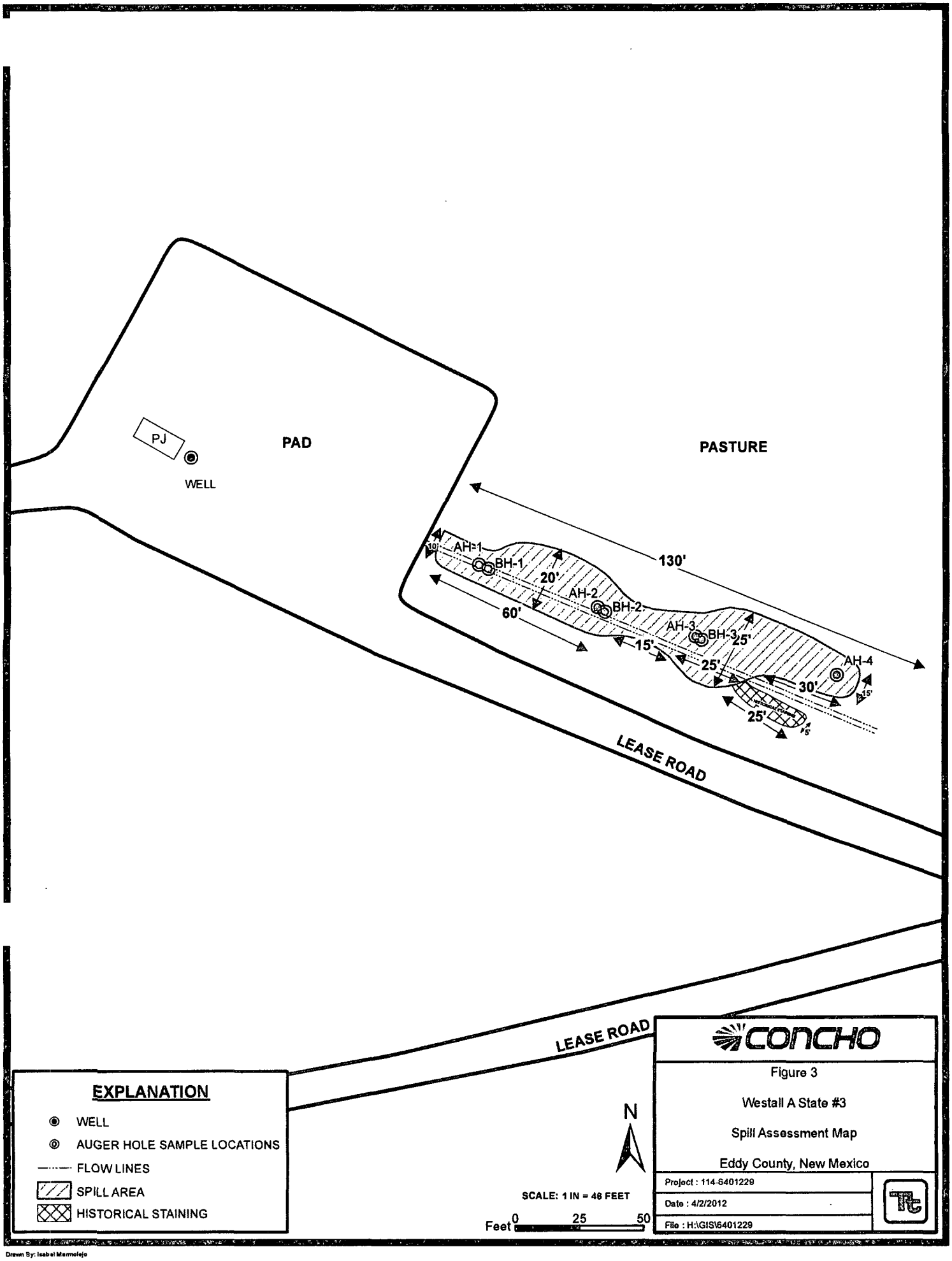
COG Spill Assessment
Eddy County, New Mexico

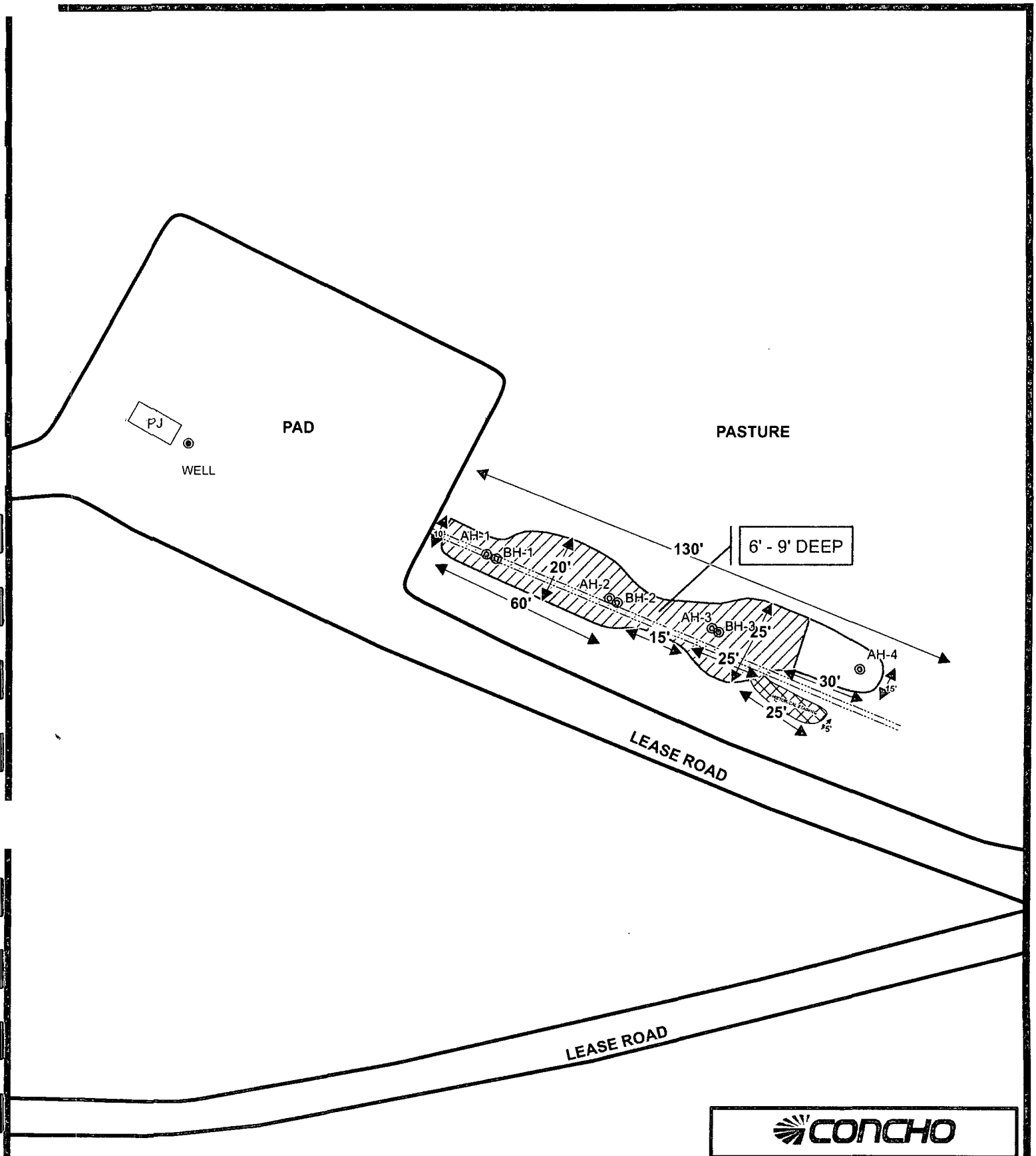
Project : 114-6401229

Date : 3/10/2012

File : H:\GIS\6401229

Drawn By: Isabel Marmolejo


PJ
WELL
PAD
PASTURE
AH-1
BH-1
AH-2
BH-2
AH-3
BH-3
AH-4
10'
20'
60'
130'
15'
25'
25'
30'
25'
15'
5'
LEASE ROAD
LEASE ROAD
EXPLANATION
WELL
AUGER HOLE SAMPLE LOCATIONS
FLOW LINES
SPILL AREA
HISTORICAL STAINING
N
SCALE: 1 IN = 46 FEET
Feet 0 25 50
CONCHO
Figure 3
Westall A State #3
Spill Assessment Map
Eddy County, New Mexico
Project : 114-6401229
Date : 4/2/2012
File : H:\GIS\6401229
Drawn By: Isabel Marmolejo



EXPLANATION

- WELL
- AUGER HOLE SAMPLE LOCATIONS
- FLOW LINES
- PROPOSED EXCAVATION AREA
- HISTORICAL STAINING

N

SCALE: 1 IN = 48 FEET

Feet 0 25 50

CONCHO

Figure 4

Westall A State #3

Proposed Excavation Areas & Depths Map

Eddy County, New Mexico

Project : 114-6401229	
Date : 4/2/2012	
File : H:\GIS\6401229	

Drawn By: Isabel Marmolejo

Tables

Table 1
COG Operating LLC.
Westall A State #3
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	EB 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	2/6/2012	0-1	1	X		84.4	186	270	<0.100	0.304	0.312	0.434	1.05	3,030
	"	1-1.5	1	X		-	-	-	-	-	-	-	-	3,070
	"	2-2.5	1	X		-	-	-	-	-	-	-	-	5,180
	"	3-3.5	1	X		-	-	-	-	-	-	-	-	6,450
BH-1	3/21/2012	0-1	-	X		-	-	-	-	-	-	-	-	2,020
	"	2-3	-	X		-	-	-	-	-	-	-	-	3,330
	"	4-5	-	X		-	-	-	-	-	-	-	-	5,180
	"	6-7	-	X		-	-	-	-	-	-	-	-	3,730
	"	9-10	-	X		-	-	-	-	-	-	-	-	739
	"	14-15	-	X		-	-	-	-	-	-	-	-	447
	"	19-20	-	X		-	-	-	-	-	-	-	-	856
	"	24-25	-	X		-	-	-	-	-	-	-	-	<200
	"	29-30	-	X		-	-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
Westall A State #3
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	EB 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-2	2/6/2012	0-1	1	X		47.1	1,230	1,277	<0.100	<0.100	<0.100	<0.100	<0.100	2,520
	"	1-1.5	1	X		-	-	-	-	-	-	-	-	2,970
	"	2-2.5	1	X		-	-	-	-	-	-	-	-	2,730
	"	3-3.5	1	X		-	-	-	-	-	-	-	-	3,340
	"	4-4.5	1	X		-	-	-	-	-	-	-	-	4,930
	"	5-5.5	1	X		-	-	-	-	-	-	-	-	4,520
BH-2	3/21/2012	0-1	-	X		-	-	-	-	-	-	-	-	1,910
	"	2-3	-	X		-	-	-	-	-	-	-	-	2,860
	"	4-5	-	X		-	-	-	-	-	-	-	-	4,060
	"	6-7	-	X		-	-	-	-	-	-	-	-	3,730
	"	9-10	-	X		-	-	-	-	-	-	-	-	1,980
	"	14-15	-	X		-	-	-	-	-	-	-	-	1,050
	"	19-20	-	X		-	-	-	-	-	-	-	-	218
	"	24-25	-	X		-	-	-	-	-	-	-	-	<200
	"	29-30	-	X		-	-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
Westall A State #3
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	EB 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-3	2/6/2012	0-1	0.5	X		24.6	159	184	<0.0200	0.0667	0.0818	0.148	0.297	3,470
	"	1-1.5	0.5	X		-	-	-	-	-	-	-	-	4,070
	"	2-2.5	0.5	X		-	-	-	-	-	-	-	-	4,140
BH-3	3/21/2012	0-1	-	X		-	-	-	-	-	-	-	-	2,950
	"	2-3	-	X		-	-	-	-	-	-	-	-	2,620
	"	4-5	-	X		-	-	-	-	-	-	-	-	4,030
	"	6-7	-	X		-	-	-	-	-	-	-	-	2,070
	"	9-10	-	X		-	-	-	-	-	-	-	-	1,620
	"	14-15	-	X		-	-	-	-	-	-	-	-	1,100
	"	19-20	-	X		-	-	-	-	-	-	-	-	605
	"	24-25	-	X		-	-	-	-	-	-	-	-	<200
AH-4	2/6/2012	0-1	0.5	X		5.90	830	836	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<200
	"	1-1.5	0.5	X		-	-	-	-	-	-	-	-	<200
	"	2-2.5	0.5	X		-	-	-	-	-	-	-	-	<200

Proposed Excavated Depths

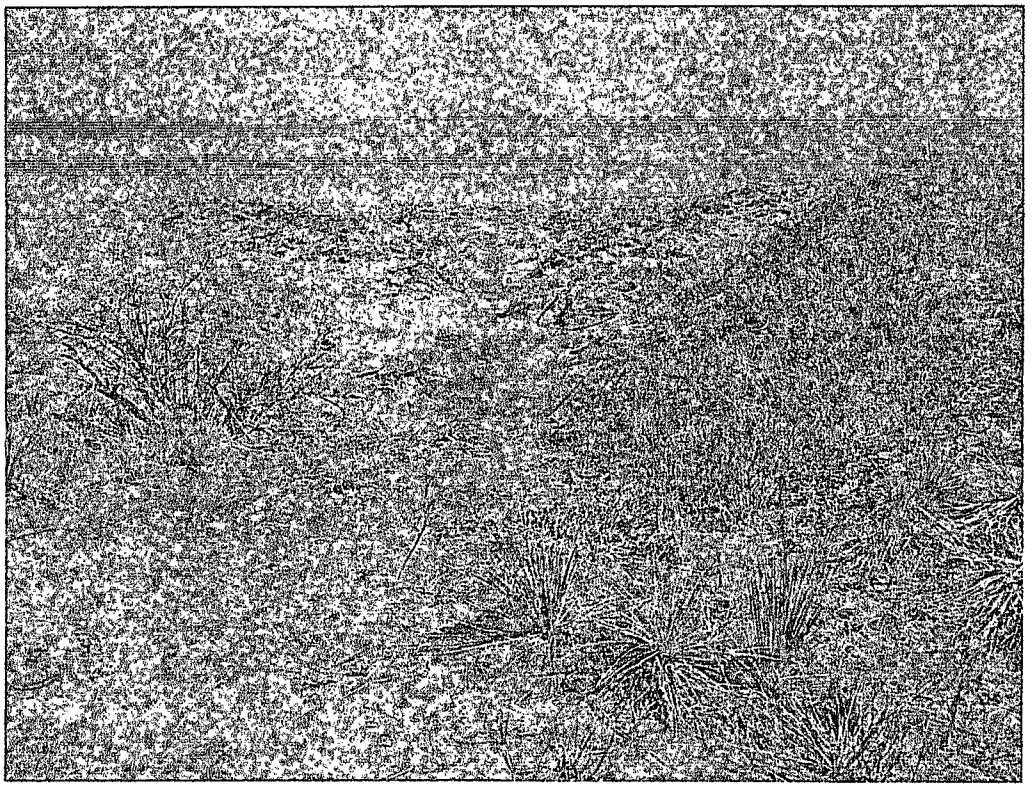
(-) Not Analyzed

(EB) Excavation Bottom

Photos

COG Operating LLC
Westall A State #3
Eddy County, New Mexico

TETRA TECH



View East – Area of AH-1

View East – Area of AH-2, 3 and 4

COG Operating LLC
Westall A State #3
Eddy County, New Mexico

TETRA TECH

View East – Area of AH-4

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	Westall A State #3	Facility Type	Flowline

Surface Owner State	Mineral Owner	Lease No. (API#) 30-015-03798

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	36	17S	29E					Eddy

Latitude 32.78836 **Longitude** 104.02499

NATURE OF RELEASE

Type of Release Produced water and Oil	Volume of Release 40bbls pw 20bbls oil	Volume Recovered 35bbls pw 18bbls oil
Source of Release Poly flowline	Date and Hour of Occurrence 01/15/2012	Date and Hour of Discovery 01/15/2012 10:30 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher-OCD	
By Whom? Josh Russo	Date and Hour 01/16/2012 2:54 p.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.*

The poly flowline ruptured causing the release of produced fluids. The poly flowline has been fused back together and has been returned to service.

Describe Area Affected and Cleanup Action Taken.*

Initially 60bbls of fluid was released from the ruptured flowline and we were able to recover 53bbls with a vacuum truck. All fluids were released in an area off of location measuring roughly 20' x 80'. We have scraped the spill area and disposed of all contaminated material appropriately. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a workplan to the NMOCD 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: 01/30/2012 Phone: 432-212-2399	

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - Westall A State #3
Eddy County, New Mexico

16 South 28 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

16 South 29 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19 110	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

16 South 30 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

17 South 28 East

6	5	4	3	2	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	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 30 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

18 South 28 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 65	36

18 South 29 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

18 South 30 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

- 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
- Site Location - Westall A State #3

Appendix C

Summary Report

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

Report Date: March 30, 2012

Work Order: 12032209

Project Location: Eddy Co., NM
Project Name: COG/Westall A State #3
Project Number: 114-6401229

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
291995	BH-1 @ AH-1 0-1'	soil	2012-03-21	00:00	2012-03-22
291996	BH-1 @ AH-1 2-3'	soil	2012-03-21	00:00	2012-03-22
291997	BH-1 @ AH-1 4-5'	soil	2012-03-21	00:00	2012-03-22
291998	BH-1 @ AH-1 6-7'	soil	2012-03-21	00:00	2012-03-22
291999	BH-1 @ AH-1 9-10'	soil	2012-03-21	00:00	2012-03-22
292000	BH-1 @ AH-1 14-15'	soil	2012-03-21	00:00	2012-03-22
292001	BH-1 @ AH-1 19-20'	soil	2012-03-21	00:00	2012-03-22
292002	BH-1 @ AH-1 24-25'	soil	2012-03-21	00:00	2012-03-22
292003	BH-1 @ AH-1 29-30'	soil	2012-03-21	00:00	2012-03-22
292005	BH-2 @ AH-2 0-1'	soil	2012-03-21	00:00	2012-03-22
292006	BH-2 @ AH-2 2-3'	soil	2012-03-21	00:00	2012-03-22
292007	BH-2 @ AH-2 4-5'	soil	2012-03-21	00:00	2012-03-22
292008	BH-2 @ AH-2 6-7'	soil	2012-03-21	00:00	2012-03-22
292009	BH-2 @ AH-2 9-10'	soil	2012-03-21	00:00	2012-03-22
292010	BH-2 @ AH-2 14-15'	soil	2012-03-21	00:00	2012-03-22
292011	BH-2 @ AH-2 19-20'	soil	2012-03-21	00:00	2012-03-22
292012	BH-2 @ AH-2 24-25'	soil	2012-03-21	00:00	2012-03-22
292013	BH-2 @ AH-2 29-30'	soil	2012-03-21	00:00	2012-03-22
292015	BH-3 @ AH-3 0-1'	soil	2012-03-21	00:00	2012-03-22
292016	BH-3 @ AH-3 2-3'	soil	2012-03-21	00:00	2012-03-22
292017	BH-3 @ AH-3 4-5'	soil	2012-03-21	00:00	2012-03-22
292018	BH-3 @ AH-3 6-7'	soil	2012-03-21	00:00	2012-03-22
292019	BH-3 @ AH-3 9-10'	soil	2012-03-21	00:00	2012-03-22
292020	BH-3 @ AH-3 14-15'	soil	2012-03-21	00:00	2012-03-22
292021	BH-3 @ AH-3 19-20'	soil	2012-03-21	00:00	2012-03-22
292022	BH-3 @ AH-3 24-25'	soil	2012-03-21	00:00	2012-03-22

Sample: 291995 - BH-1 @ AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**2020**	mg/Kg	4

Sample: 291996 - BH-1 @ AH-1 2-3'

Param	Flag	Result	Units	RL
Chloride		**3330**	mg/Kg	4

Sample: 291997 - BH-1 @ AH-1 4-5'

Param	Flag	Result	Units	RL
Chloride		**5180**	mg/Kg	4

Sample: 291998 - BH-1 @ AH-1 6-7'

Param	Flag	Result	Units	RL
Chloride		**3730**	mg/Kg	4

Sample: 291999 - BH-1 @ AH-1 9-10'

Param	Flag	Result	Units	RL
Chloride		**739**	mg/Kg	4

Sample: 292000 - BH-1 @ AH-1 14-15'

Param	Flag	Result	Units	RL
Chloride		**447**	mg/Kg	4

Sample: 292001 - BH-1 @ AH-1 19-20'

Param	Flag	Result	Units	RL
Chloride		**856**	mg/Kg	4

Sample: 292002 - BH-1 @ AH-1 24-25'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 292003 - BH-1 @ AH-1 29-30'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 292005 - BH-2 @ AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**1910**	mg/Kg	4

Sample: 292006 - BH-2 @ AH-2 2-3'

Param	Flag	Result	Units	RL
Chloride		**2860**	mg/Kg	4

Sample: 292007 - BH-2 @ AH-2 4-5'

Param	Flag	Result	Units	RL
Chloride		**4060**	mg/Kg	4

Sample: 292008 - BH-2 @ AH-2 6-7'

Param	Flag	Result	Units	RL
Chloride		**3730**	mg/Kg	4

Sample: 292009 - BH-2 @ AH-2 9-10'

Param	Flag	Result	Units	RL
Chloride		**1980**	mg/Kg	4

Sample: 292010 - BH-2 @ AH-2 14-15'

Param	Flag	Result	Units	RL
Chloride		**1050**	mg/Kg	4

Sample: 292011 - BH-2 @ AH-2 19-20'

Param	Flag	Result	Units	RL
Chloride		**218**	mg/Kg	4

Sample: 292012 - BH-2 @ AH-2 24-25'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 292013 - BH-2 @ AH-2 29-30'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 292015 - BH-3 @ AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**2950**	mg/Kg	4

Sample: 292016 - BH-3 @ AH-3 2-3'

Param	Flag	Result	Units	RL
Chloride		**2620**	mg/Kg	4

Sample: 292017 - BH-3 @ AH-3 4-5'

Param	Flag	Result	Units	RL
Chloride		**4030**	mg/Kg	4

Sample: 292018 - BH-3 @ AH-3 6-7'

Param	Flag	Result	Units	RL
Chloride		**2070**	mg/Kg	4

Sample: 292019 - BH-3 @ AH-3 9-10'

Param	Flag	Result	Units	RL
Chloride		**1620**	mg/Kg	4

Sample: 292020 - BH-3 @ AH-3 14-15'

Param	Flag	Result	Units	RL
Chloride		**1100**	mg/Kg	4

Sample: 292021 - BH-3 @ AH-3 19-20'

Param	Flag	Result	Units	RL
Chloride		**605**	mg/Kg	4

Sample: 292022 - BH-3 @ AH-3 24-25'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Summary Report

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

Report Date: February 20, 2012

Work Order: 12021024

Project Location: Eddy Co., NM
Project Name: COG/Westall A State #3
Project Number: 114-6401229

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
288842	AH-1 0-1' 1' BEB	soil	2012-02-06	00:00	2012-02-10
288843	AH-1 1-1.5' 1' BEB	soil	2012-02-06	00:00	2012-02-10
288844	AH-1 2-2.5' 1' BEB	soil	2012-02-06	00:00	2012-02-10
288845	AH-1 3-3.5' 1' BEB	soil	2012-02-06	00:00	2012-02-10
288846	AH-2 0-1' 1' BEB	soil	2012-02-06	00:00	2012-02-10
288847	AH-2 1-1.5' 1' BEB	soil	2012-02-06	00:00	2012-02-10
288848	AH-2 2-2.5' 1' BEB	soil	2012-02-06	00:00	2012-02-10
288849	AH-2 3-3.5' 1' BEB	soil	2012-02-06	00:00	2012-02-10
288850	AH-2 4-4.5' 1' BEB	soil	2012-02-06	00:00	2012-02-10
288851	AH-2 5-5.5' 1' BEB	soil	2012-02-06	00:00	2012-02-10
288852	AH-3 0-1' 0.5' BEB	soil	2012-02-06	00:00	2012-02-10
288853	AH-3 1-1.5' 0.5' BEB	soil	2012-02-06	00:00	2012-02-10
288854	AH-3 2-2.5' 0.5' BEB	soil	2012-02-06	00:00	2012-02-10
288855	AH-4 0-1' 0.5' BEB	soil	2012-02-06	00:00	2012-02-10
288856	AH-4 1-1.5' 0.5' BEB	soil	2012-02-06	00:00	2012-02-10
288857	AH-4 2-2.5' 0.5' BEB	soil	2012-02-06	00:00	2012-02-10

	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)
288842 - AH-1 0-1' 1' BEB	<0.100	**0.304**	**0.312**	**0.434**	**186**	**84.4**
288846 - AH-2 0-1' 1' BEB	<0.100	<0.100	<0.100	<0.100	**1230**	**47.1**
288852 - AH-3 0-1' 0.5' BEB	<0.0200	**0.0667**	**0.0818**	**0.148**	**159** Qs	**24.6**
288855 - AH-4 0-1' 0.5' BEB	<0.0200	<0.0200	<0.0200	<0.0200	**830**	**5.90**

Sample: 288842 - AH-1 0-1' 1' BEB

continued ...

sample 288842 continued ...

Param	Flag	Result	Units	RL

Param	Flag	Result	Units	RL
Chloride		**3030**	mg/Kg	4

Sample: 288843 - AH-1 1-1.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**3070**	mg/Kg	4

Sample: 288844 - AH-1 2-2.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**5180**	mg/Kg	4

Sample: 288845 - AH-1 3-3.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**6450**	mg/Kg	4

Sample: 288846 - AH-2 0-1' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**2520**	mg/Kg	4

Sample: 288847 - AH-2 1-1.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**2970**	mg/Kg	4

Sample: 288848 - AH-2 2-2.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**2730**	mg/Kg	4

Sample: 288849 - AH-2 3-3.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**3340**	mg/Kg	4

Sample: 288850 - AH-2 4-4.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**4930**	mg/Kg	4

Sample: 288851 - AH-2 5-5.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**4520**	mg/Kg	4

Sample: 288852 - AH-3 0-1' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		**3470**	mg/Kg	4

Sample: 288853 - AH-3 1-1.5' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		**4070**	mg/Kg	4

Sample: 288854 - AH-3 2-2.5' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		**4140**	mg/Kg	4

Sample: 288855 - AH-4 0-1' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288856 - AH-4 1-1.5' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288857 - AH-4 2-2.5' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4