

SITE INFORMATION

Report Type: Closure Report

General Site Information:

Site:	Antelope SWD 8" Lateral Line	
Company:	COG Operating LLC	
Section, Township and Range	Unit K - Sec 36 - T17S - R31E	
Lease Number:	B-3627	
County:	Eddy County	
GPS:	32.79151	103.82351
Surface Owner:	State	
Mineral Owner:		
Directions:	From mile marker 4 on Hwy 529, travel south on lease road 800', right 400', left 0.6 mile, at four way turn right 0.6 mile, right 0.2 mile to two track road, right 750' to location	

Release Data:

Date Released:	8/17/2010
Type Release:	Produced Fluids
Source of Contamination:	Flowline rupture
Fluid Released:	80 bbls
Fluids Recovered:	0 bbls

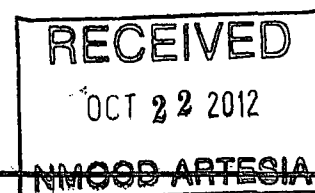
Official Communication:

Name:	Pat Ellis	Ike Tavaréz
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.tavaréz@tetrattech.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 24, 2012

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

Re: Closure Activities and Closure Request for the COG Operating LLC., Antelope State SWD 8", Unit K, Section 36, Township 17 South, Range 31 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 Antelope State SWD 8", Unit K, Section 36, Township 17 South, Range 31 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.79151°, W 103.82351°. The site location is shown on Figures 1 and 2.

Background

According to the C-141 Initial Report, the leak was discovered on August 17, 2010, and released approximately eighty (80) barrels of produced water from a SWD line that ruptured along a COG pipeline right-a-way. COG was unable to recover any fluids. The spill initiated north of a two track road (pipeline right-of-away) impacting an area approximately 45' x 65' and pooled in a native low-lying area across the two track road. In addition, the release did show some evident of overspray surrounding the spill area. The initial C-141 form is enclosed in Appendix C.

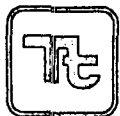
Groundwater

No water wells were listed within Section 36. According to the *Geology and Groundwater Resources of Eddy County, New Mexico* (Report 3), one well is located in Section 34, with a reported depth to water of 271' below surface. According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 375' below surface. The groundwater data is shown in Appendix B.

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559 Fax 432.682.3946 www.tetrattech.com



Regulatory

A risk-based evaluation was performed for the Site in accordance with the 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, ethyl-benzene 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, ethyl-benzene, 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, 2010, Tetra Tech personnel inspected and sampled the spill area. A total of six (6) auger holes (AH-1 through AH-6) 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. 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, all of the submitted samples were below the RRAL for BTEX and TPH. Elevated chloride concentrations were found in AH-1, AH-4, AH-5 and AH-6. Auger holes (AH-1, AH-4 and AH-6) were not vertically defined, with auger hole samples (bottom holes) of 3,340 mg/kg, 1,920 mg/kg and 10,900 mg/kg, respectively. The area of AH-5 was vertically defined and declined to <200 mg/kg at 5.0' below surface. The remaining areas (AH-2 and AH-3) did not show a significant impact to the soils.

On March 30, 2011, Tetra Tech supervised the installation of four soil bores (SB-1 through SB-4) utilizing an air rotary drilling rig to assess the soils. The sampling results are summarized in Table 1. Referring to Table 1, the areas of SB-1 and SB-2 did not show a significant chloride impact to the subsurface soils. The areas of SB-3 and SB-4 were vertically defined and declined to <200 mg/kg at 20.0' below surface.



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Closure Activities

Based on the approved work plan, Tetra Tech personnel supervised the excavation of the site. The excavated areas and depths are highlighted in Table 1 and shown on Figure 4. As shown in Table 1, the excavation depths ranged from 4.0' to 15.0' below surface. The final excavation depths of the soil remediation were met as stated in the approved work plan, except for the area of AH-4 (SB-3). Due to proximity of the active lines, the area was excavated to a depth of 4.0' to 5.0' below surface and lined with a 40 mil liner. Approximately 1,900 cubic yards of impacted soil were excavated and transported to proper disposal. Once completed, the excavations were backfilled with clean soil to grade.

Based on the remedial activities performed, COG request closure of the site. A copy of the C-141 (Final) is included in Appendix A. If you have any questions or comments concerning the remedial activities, please call at (432) 682-4559.

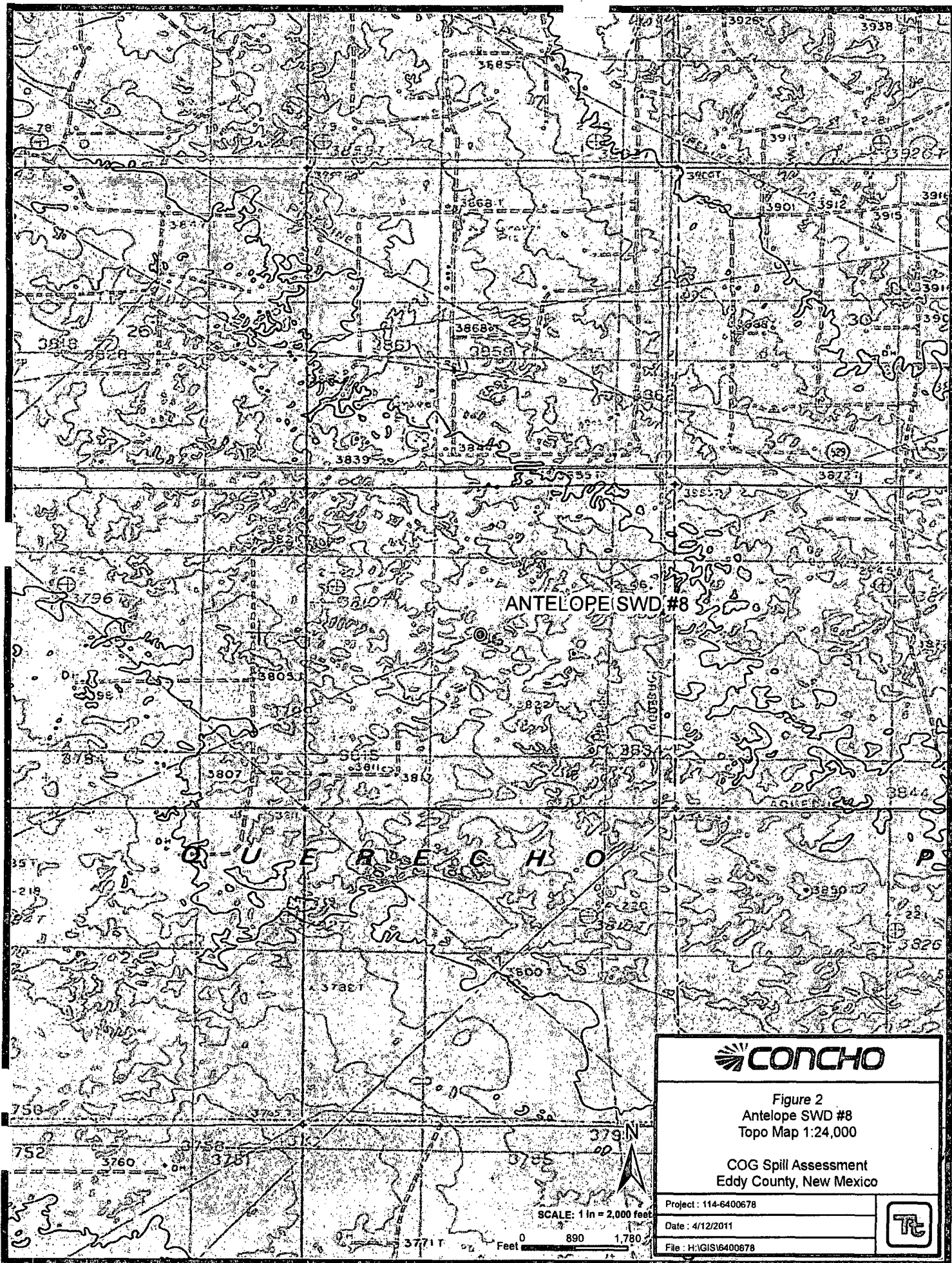
Respectfully submitted,
TETRA TECH



Ike Tavaréz, PG
Project Manager

cc: Pat Ellis – COG

Figures



CONCHO

Figure 2
Antelope SWD #8
Topo Map 1:24,000

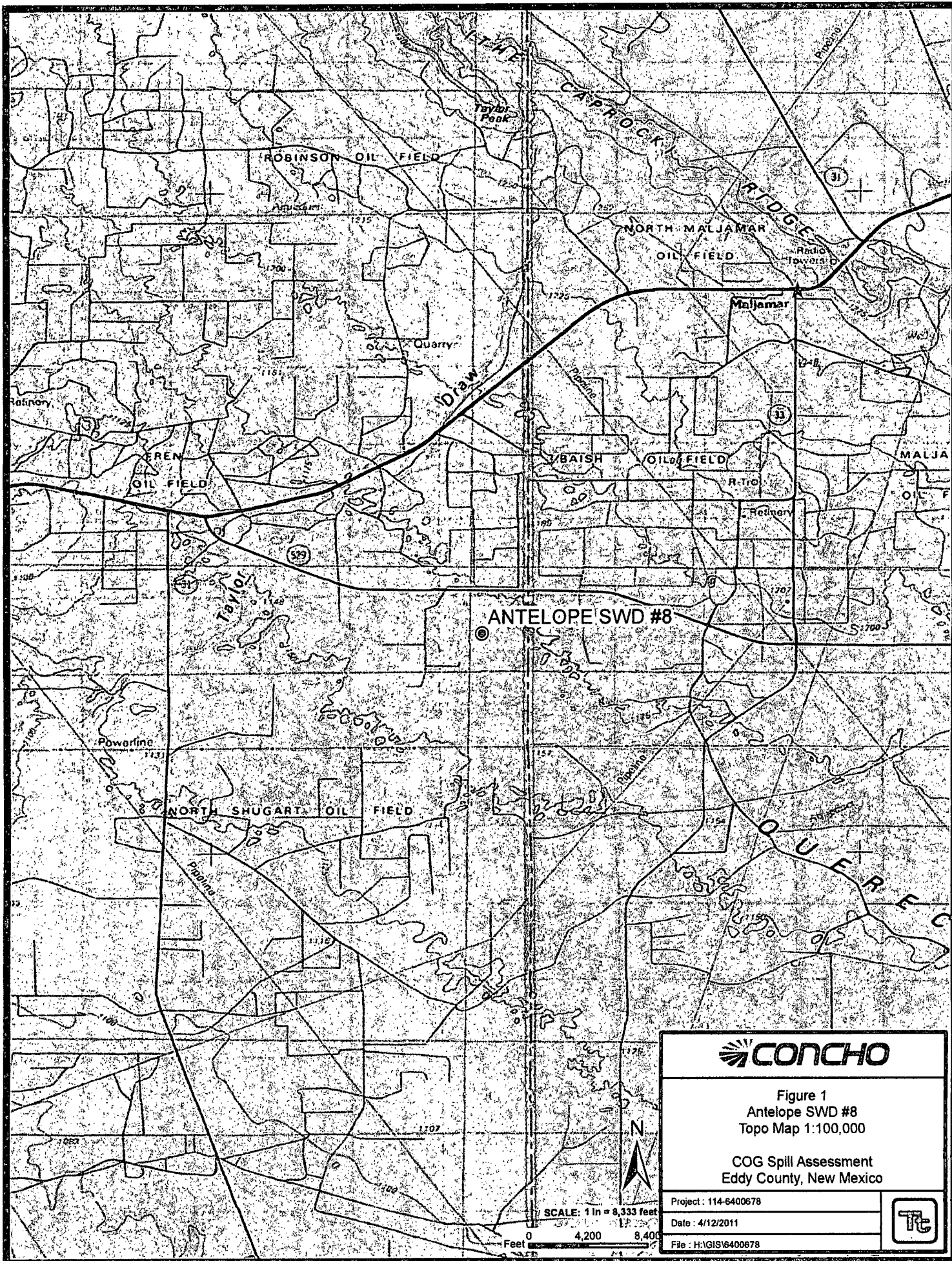
COG Spill Assessment
Eddy County, New Mexico

Project: 114-6400678

Date: 4/12/2011

File: H:\GIS\6400678





CONCHO

Figure 1
Antelope SWD #8
Topo Map 1:100,000

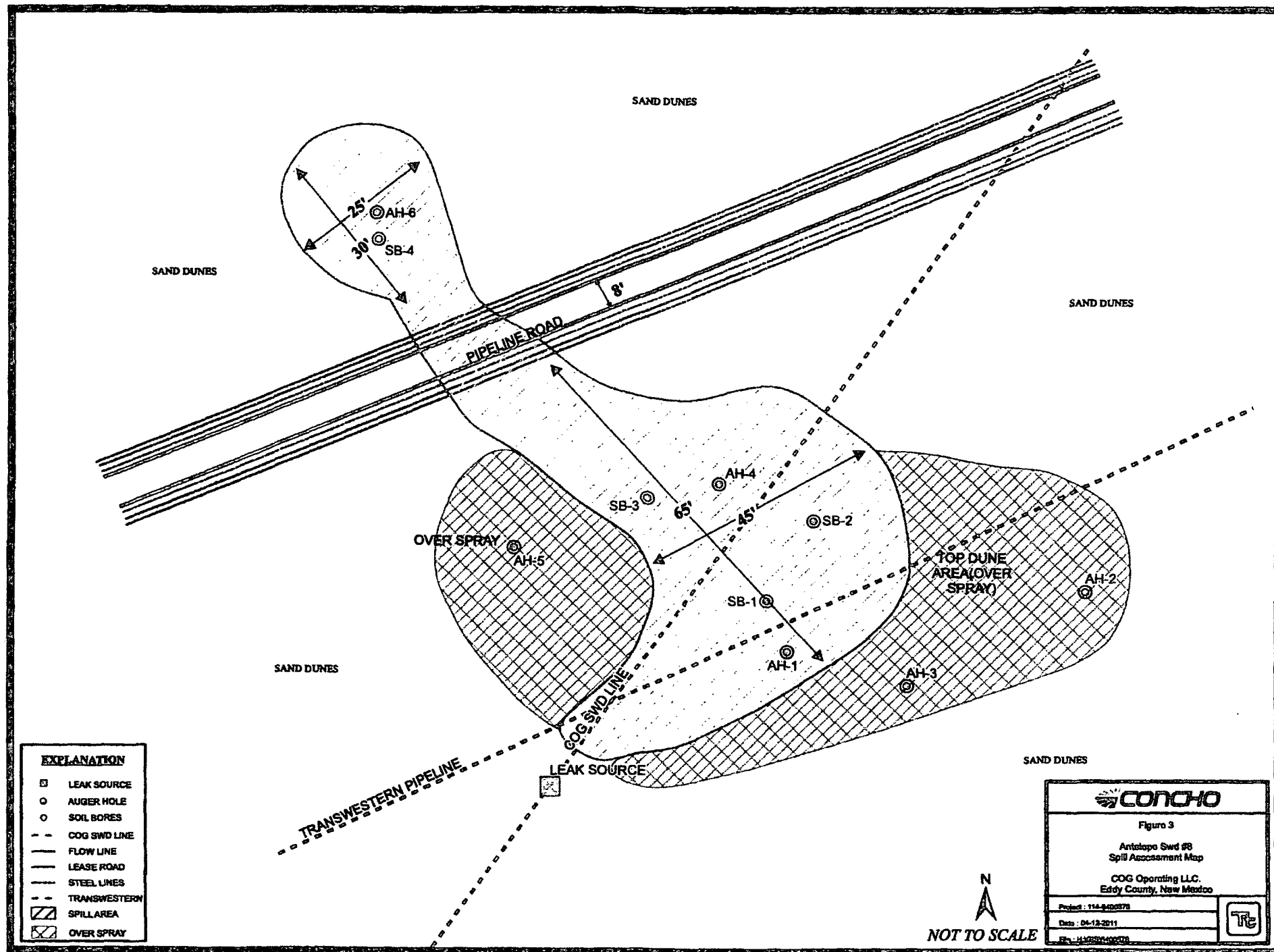
COG Spill Assessment
Eddy County, New Mexico

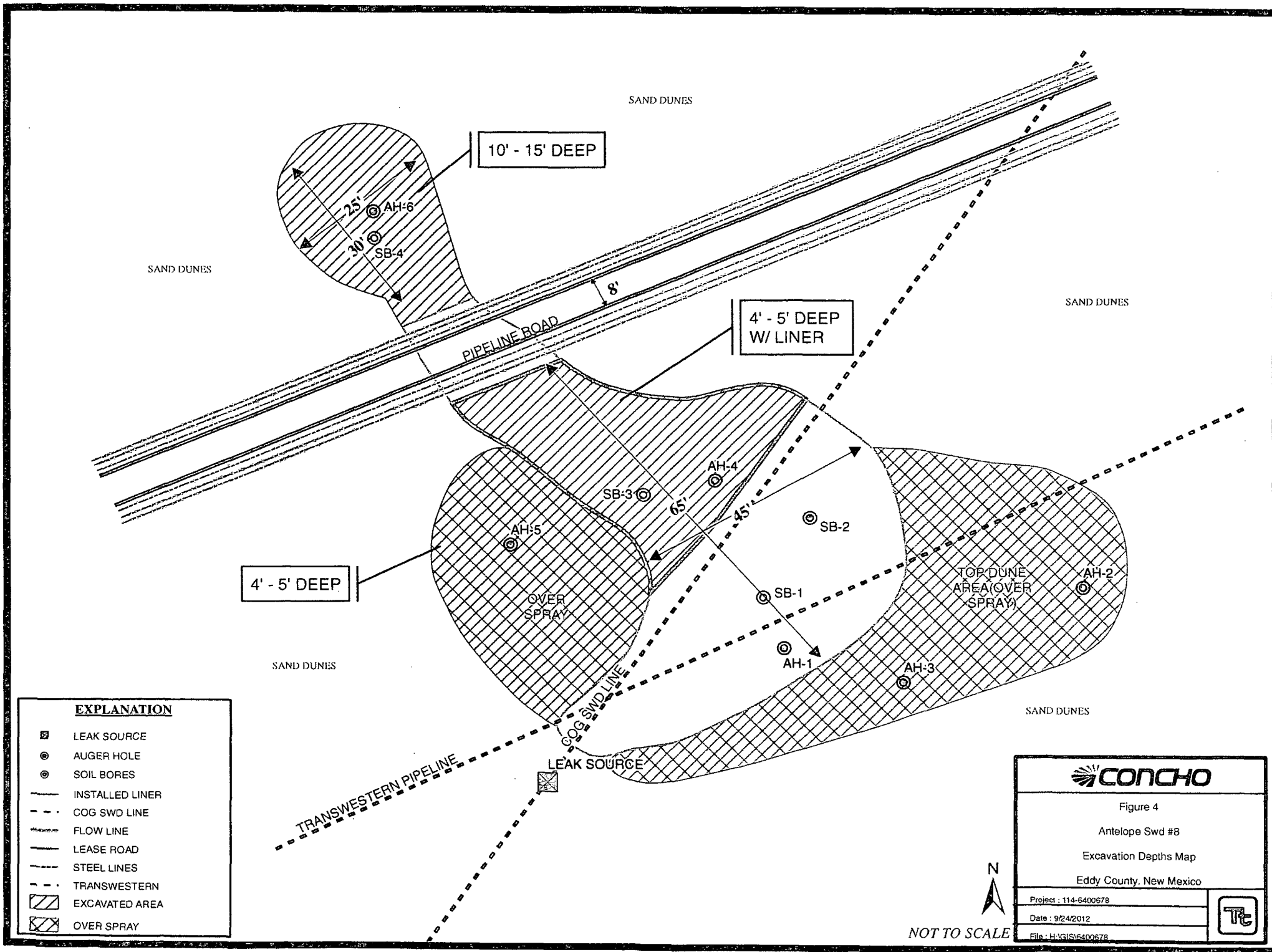
Project : 114-6400678

Date : 4/12/2011

File : H:\GIS\6400678







Tables

Table 1
COG Operating LLC.
ANTELOPE SWD 8 IN.
Eddy County, New Mexico

[illegible]

Table 1
COG Operating LLC.
ANTELOPE SWD 8 IN.
Eddy County, New Mexico

[illegible]

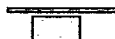
Table 1
COG Operating LLC.
ANTELOPE SWD 8 IN.
Eddy County, New Mexico

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)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-5	8/31/2010	0-1'			X	<2.00	83.1	83.1	<0.0200	<0.0200	<0.0200	<0.0200	1,250
		1-1.5'			X	-	-	-	-	-	-	-	2,480
		2-2.5'			X	-	-	-	-	-	-	-	3,830
		3-3.5'			X	-	-	-	-	-	-	-	19,800
		4-4.5'			X	-	-	-	-	-	-	-	12,000
		5-5.5'		X		-	-	-	-	-	-	-	<200
AH-6	8/31/2010	0-1'			X	<2.00	<50.0	<50.0	-	-	-	-	<200
		1-1.5'			X	-	-	-	-	-	-	-	<200
		2-2.5'			X	-	-	-	-	-	-	-	<200
		3-3.5'			X	-	-	-	-	-	-	-	315
		4-4.5'			X	-	-	-	-	-	-	-	430
		5-5.5'			X	-	-	-	-	-	-	-	1,010
		6-6.5'			X	-	-	-	-	-	-	-	2,660
		7-7.5'			X	-	-	-	-	-	-	-	3,930
		8-8.5'			X	-	-	-	-	-	-	-	13,500
		9-9.5'			X	-	-	-	-	-	-	-	10,900
SB-4	3/30/2011	0-1'			X	-	-	-	-	-	-	-	275
		3'			X	-	-	-	-	-	-	-	3,070
		5'			X	-	-	-	-	-	-	-	3,640
		7'			X	-	-	-	-	-	-	-	3,670
		10'			X	-	-	-	-	-	-	-	19,390
		15'			X	-	-	-	-	-	-	-	11,800
		20'		X		-	-	-	-	-	-	-	<200
		25'		X		-	-	-	-	-	-	-	<200
		30'		X		-	-	-	-	-	-	-	<200

BEB Below Excavation Bottom

(--) Not Analyzed

Installed 40 mil liner



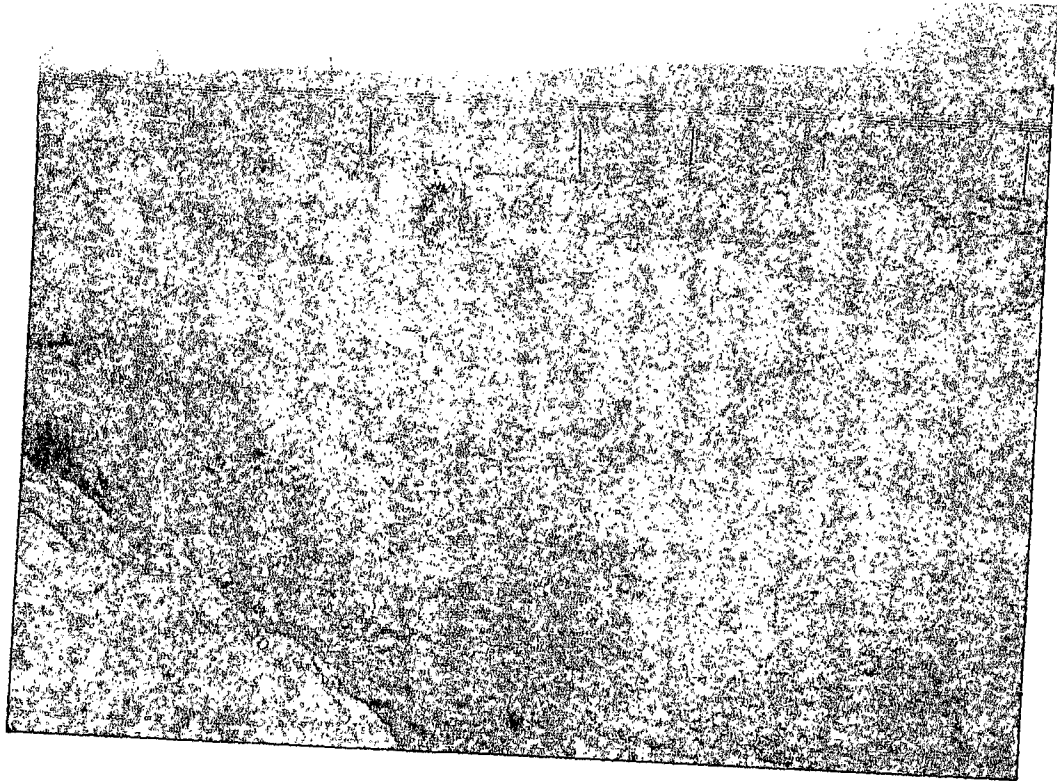
Excavated Depths

Photos

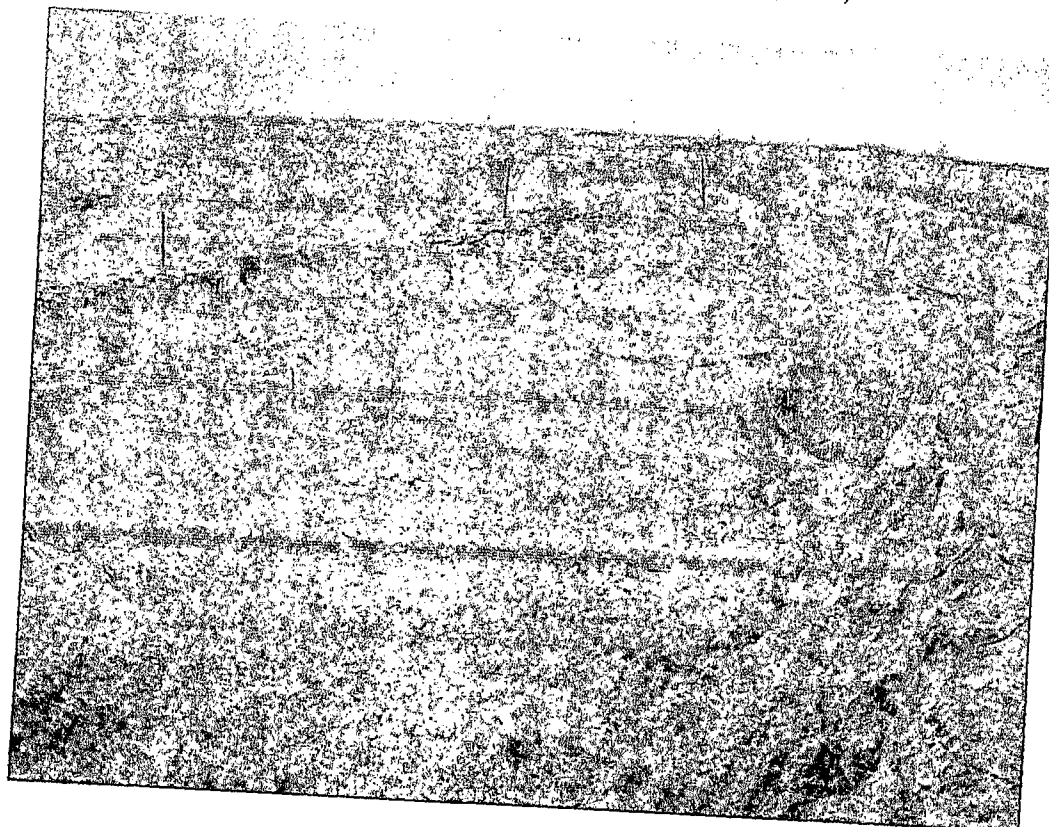
COG Operating LLC
Antelope SWD 8" Lateral Line
Eddy County, New Mexico
Excavation



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View of excavation in the area of AH-6 (SB-4)



View of excavation in the area of AH-6 (SB-4)

COG Operating LLC
Antelope SWD 8" Lateral Line
Eddy County, New Mexico
Excavation



TETRA TECH



View of excavation in the area of AH-4 (SB-3)



View of excavation in the area of AH-4 (SB-3)

COG Operating LLC
Antelope SWD 8" Lateral Line
Eddy County, New Mexico
Excavation



TETRA TECH



View of excavation in the area of AH-4 (SB-3) and liner installation



View of excavation in the area of AH-4 (SB-3) and liner installation

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
20 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, 2007

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	Antelope SWD 8" Lateral Line	Facility Type	8" SWD Line
Surface Owner	State	Mineral Owner	Lease No. B-3627

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	36	17S	31E					Eddy

Latitude 32 47.503 Longitude 103 49.432

NATURE OF RELEASE

Type of Release	Produced water	Volume of Release	80bbls	Volume Recovered	0bbls
Source of Release	8" SWD lateral line	Date and Hour of Occurrence	08/17/2010	Date and Hour of Discovery	08/17/2010 3:00 p.m.
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher—OCD		
By Whom?	Josh Russo	Date and Hour	08/17/2010 10:06 p.m.		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A 10' section of the 8" SWD line became uncovered and exposed to weather which weakened the pipe causing it to rupture. The ruptured section of the pipe has been removed and replaced with new pipe.

Describe Area Affected and Cleanup Action Taken.*

Initially 80bbls of produced water was released from the 8" SWD line and we were unable to recover any fluid due to the location of the release and the absorption rate of the sand. The dimensions of the release area is 12' x 90'. (The release site is 100 yards north of the Antelope State #3 well location. 2310' FSL 2310' FWL, Sec.36-T17S-R-31E, Eddy Co., NM, B-3627, AP# 30-015-32151). 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 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.

OIL CONSERVATION DIVISION

Signature:

Printed Name: Josh Russo

Title: HSE Coordinator

E-mail Address: jrusso@conchoresources.com

Date: 08/30/2010 Phone: 432-212-2399

Approved by District Supervisor:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☐

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
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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) 230-0077
Facility Name	Antelope SWD 8" Lateral Line	Facility Type	8" SWD Line

Surface Owner:	State	Mineral Owner		Lease No.	B-3627
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	36	17S	31E					Eddy

Latitude N 32 47.503° Longitude W 103 49.432°

NATURE OF RELEASE

Type of Release: Produced Fluid	Volume of Release 80 bbls	Volume Recovered 0 bbls
Source of Release: 8" SWD line	Date and Hour of Occurrence 08/17/2010	Date and Hour of Discovery 08/17/2010 3:00 pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher - OCD	
By Whom? Josh Russo	Date and Hour 8/17/10 10:06 pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

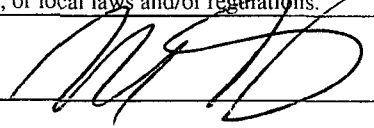
Describe Cause of Problem and Remedial Action Taken.*

A 10" section on the 8" SWD line became uncovered and exposed to the weather which weakened the pipe causing it to rupture. The rupture section of the pipe has been removed and replaced with new pipe.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech inspected and assessed the spill area for extents. A work plan was submitted for the remediation of the soils. The soils exceeding RRAL and the elevated chlorides were removed and transported to proper disposal. Once excavated to the appropriate depths, Tetra Tech prepared a closure report and submitted to the 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@TetraTech.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 9-24-12	Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - Skelly Unit #942
Eddy County, New Mexico

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

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

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
220		210		210	
30	29	28	27	26	25
31	32	33	34	35	36

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








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

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

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

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

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

-  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 - Antelope SWD 8"

Appendix C

Summary Report

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

Report Date: September 9, 2010

Work Order: 10090303



Project Name: COG/Antelope SWD 8 in.
Project Number: 114-6400678

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
243467	AH-1 0-1' BEB	soil	2010-08-31	00:00	2010-09-02
243468	AH-1 1-1.5' BEB	soil	2010-08-31	00:00	2010-09-02
243469	AH-1 2-2.5' BEB	soil	2010-08-31	00:00	2010-09-02
243470	AH-1 3-3.5' BEB	soil	2010-08-31	00:00	2010-09-02
243471	AH-1 4-4.5' BEB	soil	2010-08-31	00:00	2010-09-02
243472	AH-1 5-5.5' BEB	soil	2010-08-31	00:00	2010-09-02
243473	AH-1 6-6.5' BEB	soil	2010-08-31	00:00	2010-09-02
243474	AH-2 0-1' BEB	soil	2010-08-31	00:00	2010-09-02
243475	AH-2 1-1.5' BEB	soil	2010-08-31	00:00	2010-09-02
243476	AH-2 2-2.5' BEB	soil	2010-08-31	00:00	2010-09-02
243477	AH-2 3-3.5' BEB	soil	2010-08-31	00:00	2010-09-02
243478	AH-3 0-1' BEB	soil	2010-08-31	00:00	2010-09-02
243479	AH-3 1-1.5' BEB	soil	2010-08-31	00:00	2010-09-02
243480	AH-3 2-2.5' BEB	soil	2010-08-31	00:00	2010-09-02
243481	AH-3 3-3.5' BEB	soil	2010-08-31	00:00	2010-09-02
243482	AH-3 4-4.5' BEB	soil	2010-08-31	00:00	2010-09-02
243483	AH-3 6-6.5' BEB	soil	2010-08-31	00:00	2010-09-02
243484	AH-4 0-1' BEB	soil	2010-08-31	00:00	2010-09-02
243485	AH-4 1-1.5' BEB	soil	2010-08-31	00:00	2010-09-02
243486	AH-4 2-2.5' BEB	soil	2010-08-31	00:00	2010-09-02
243487	AH-4 3-3.5' BEB	soil	2010-08-31	00:00	2010-09-02
243488	AH-4 4-4.5' BEB	soil	2010-08-31	00:00	2010-09-02
243489	AH-4 5-5.5' BEB	soil	2010-08-31	00:00	2010-09-02
243490	AH-4 6-6.5' BEB	soil	2010-08-31	00:00	2010-09-02
243491	AH-4 7-7.5' BEB	soil	2010-08-31	00:00	2010-09-02
243492	AH-4 8-8.5' BEB	soil	2010-08-31	00:00	2010-09-02
243493	AH-4 9-9.5' BEB	soil	2010-08-31	00:00	2010-09-02
243494	AH-5 0-1' BEB	soil	2010-08-31	00:00	2010-09-02
243495	AH-5 1-1.5' BEB	soil	2010-08-31	00:00	2010-09-02
243496	AH-5 2-2.5' BEB	soil	2010-08-31	00:00	2010-09-02
243497	AH-5 3-3.5' BEB	soil	2010-08-31	00:00	2010-09-02

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296

This is only a summary. Please, refer to the complete report package for quality control data.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
243498	AH-5 4-4.5' BEB	soil	2010-08-31	00:00	2010-09-02
243499	AH-3 5-5.5' BEB	soil	2010-08-31	00:00	2010-09-02
243500	AH-6 0-1' BEB	soil	2010-08-31	00:00	2010-09-02
243501	AH-6 1-1.5' BEB	soil	2010-08-31	00:00	2010-09-02
243502	AH-6 2-2.5' BEB	soil	2010-08-31	00:00	2010-09-02
243503	AH-6 3-3.5' BEB	soil	2010-08-31	00:00	2010-09-02
243504	AH-6 4-4.5' BEB	soil	2010-08-31	00:00	2010-09-02
243505	AH-6 5-5.5' BEB	soil	2010-08-31	00:00	2010-09-02
243506	AH-6 6-6.5' BEB	soil	2010-08-31	00:00	2010-09-02
243507	AH-6 7-7.5' BEB	soil	2010-08-31	00:00	2010-09-02
243508	AH-6 8-8.5' BEB	soil	2010-08-31	00:00	2010-09-02
243509	AH-6 9-9.5' BEB	soil	2010-08-31	00:00	2010-09-02

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)
243467 - AH-1 0-1' BEB	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243474 - AH-2 0-1' BEB	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243478 - AH-3 0-1' BEB	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243484 - AH-4 0-1' BEB	<0.0200	0.132	0.875	3.62	1120	154
243485 - AH-4 1-1.5' BEB	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243494 - AH-5 0-1' BEB	<0.0200	<0.0200	<0.0200	<0.0200	83.1	<2.00
243500 - AH-6 0-1' BEB	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

Sample: 243467 - AH-1 0-1' BEB

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

Sample: 243468 - AH-1 1-1.5' BEB

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

Sample: 243469 - AH-1 2-2.5' BEB

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

Sample: 243470 - AH-1 3-3.5' BEB

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

Sample: 243471 - AH-1 4-4.5' BEB

Param	Flag	Result	Units	RL
Chloride		883	mg/Kg	4.00

Sample: 243472 - AH-1 5-5.5' BEB

Param	Flag	Result	Units	RL
Chloride		2300	mg/Kg	4.00

Sample: 243473 - AH-1 6-6.5' BEB

Param	Flag	Result	Units	RL
Chloride		3340	mg/Kg	4.00

Sample: 243474 - AH-2 0-1' BEB

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

Sample: 243475 - AH-2 1-1.5' BEB

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

Sample: 243476 - AH-2 2-2.5' BEB

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

Sample: 243477 - AH-2 3-3.5' BEB

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

Sample: 243478 - AH-3 0-1' BEB

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

Sample: 243479 - AH-3 1-1.5' BEB

Param	Flag	Result	Units	RL
Chloride		1670	mg/Kg	4.00

Sample: 243480 - AH-3 2-2.5' BEB

Param	Flag	Result	Units	RL
Chloride		245	mg/Kg	4.00

Sample: 243481 - AH-3 3-3.5' BEB

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

Sample: 243482 - AH-3 4-4.5' BEB

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

Sample: 243483 - AH-3 6-6.5' BEB

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

Sample: 243484 - AH-4 0-1' BEB

Param	Flag	Result	Units	RL
Chloride		3680	mg/Kg	4.00

Sample: 243485 - AH-4 1-1.5' BEB

Param	Flag	Result	Units	RL
Chloride		3090	mg/Kg	4.00

Sample: 243486 - AH-4 2-2.5' BEB

Param	Flag	Result	Units	RL
Chloride		4270	mg/Kg	4.00

Sample: 243487 - AH-4 3-3.5' BEB

Param	Flag	Result	Units	RL
Chloride		3880	mg/Kg	4.00

Sample: 243488 - AH-4 4-4.5' BEB

Param	Flag	Result	Units	RL
Chloride		4160	mg/Kg	4.00

Sample: 243489 - AH-4 5-5.5' BEB

Param	Flag	Result	Units	RL
Chloride		3570	mg/Kg	4.00

Sample: 243490 - AH-4 6-6.5' BEB

Param	Flag	Result	Units	RL
Chloride		3560	mg/Kg	4.00

Sample: 243491 - AH-4 7-7.5' BEB

Param	Flag	Result	Units	RL
Chloride		4180	mg/Kg	4.00

Sample: 243492 - AH-4 8-8.5' BEB

Param	Flag	Result	Units	RL
Chloride		2960	mg/Kg	4.00

Sample: 243493 - AH-4 9-9.5' BEB

Param	Flag	Result	Units	RL
Chloride		1920	mg/Kg	4.00

Sample: 243494 - AH-5 0-1' BEB

Param	Flag	Result	Units	RL
Chloride		1250	mg/Kg	4.00

Sample: 243495 - AH-5 1-1.5' BEB

Param	Flag	Result	Units	RL
Chloride		2480	mg/Kg	4.00

Sample: 243496 - AH-5 2-2.5' BEB

Param	Flag	Result	Units	RL
Chloride		3830	mg/Kg	4.00

Sample: 243497 - AH-5 3-3.5' BEB

Param	Flag	Result	Units	RL
Chloride		19800	mg/Kg	4.00

Sample: 243498 - AH-5 4-4.5' BEB

Param	Flag	Result	Units	RL
Chloride		12000	mg/Kg	4.00

Sample: 243499 - AH-3 5-5.5' BEB

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

Sample: 243500 - AH-6 0-1' BEB

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

Sample: 243501 - AH-6 1-1.5' BEB

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

Sample: 243502 - AH-6 2-2.5' BEB

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

Sample: 243503 - AH-6 3-3.5' BEB

Param	Flag	Result	Units	RL
Chloride		315	mg/Kg	4.00

Sample: 243504 - AH-6 4-4.5' BEB

Param	Flag	Result	Units	RL
Chloride		430	mg/Kg	4.00

Sample: 243505 - AH-6 5-5.5' BEB

Param	Flag	Result	Units	RL
Chloride		1010	mg/Kg	4.00

Sample: 243506 - AH-6 6-6.5' BEB

Param	Flag	Result	Units	RL
Chloride		2660	mg/Kg	4.00

Sample: 243507 - AH-6 7-7.5' BEB

Param	Flag	Result	Units	RL
Chloride		3930	mg/Kg	4.00

Sample: 243508 - AH-6 8-8.5' BEB

Param	Flag	Result	Units	RL
Chloride		13500	mg/Kg	4.00

Sample: 243509 - AH-6 9-9.5' BEB

Param	Flag	Result	Units	RL
Chloride		10900	mg/Kg	4.00

Summary Report

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

Report Date: April 8, 2011

Work Order: 11040106



Project Location: Eddy Co., NM
Project Name: COG/Antelope 8 in.
Project Number: 114-6400678

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
262322	SB-1 0-1'	soil	2011-03-30	00:00	2011-03-31
262323	SB-1 3'	soil	2011-03-30	00:00	2011-03-31
262324	SB-1 5'	soil	2011-03-30	00:00	2011-03-31
262325	SB-1 7'	soil	2011-03-30	00:00	2011-03-31
262326	SB-1 10'	soil	2011-03-30	00:00	2011-03-31
262327	SB-1 15'	soil	2011-03-30	00:00	2011-03-31
262328	SB-1 20'	soil	2011-03-30	00:00	2011-03-31
262329	SB-1 25'	soil	2011-03-30	00:00	2011-03-31
262330	SB-2 0-1'	soil	2011-03-30	00:00	2011-03-31
262331	SB-2 3'	soil	2011-03-30	00:00	2011-03-31
262332	SB-2 5'	soil	2011-03-30	00:00	2011-03-31
262333	SB-2 7'	soil	2011-03-30	00:00	2011-03-31
262334	SB-2 10'	soil	2011-03-30	00:00	2011-03-31
262335	SB-3 0-1'	soil	2011-03-30	00:00	2011-03-31
262336	SB-3 3'	soil	2011-03-30	00:00	2011-03-31
262337	SB-3 5'	soil	2011-03-30	00:00	2011-03-31
262338	SB-3 7'	soil	2011-03-30	00:00	2011-03-31
262339	SB-3 10'	soil	2011-03-30	00:00	2011-03-31
262340	SB-3 15'	soil	2011-03-30	00:00	2011-03-31
262341	SB-3 20'	soil	2011-03-30	00:00	2011-03-31
262342	SB-3 25'	soil	2011-03-30	00:00	2011-03-31
262343	SB-3 30'	soil	2011-03-30	00:00	2011-03-31
262344	SB-3 40'	soil	2011-03-30	00:00	2011-03-31
262345	SB-4 0-1'	soil	2011-03-30	00:00	2011-03-31
262346	SB-4 3'	soil	2011-03-30	00:00	2011-03-31
262347	SB-4 5'	soil	2011-03-30	00:00	2011-03-31
262348	SB-4 7'	soil	2011-03-30	00:00	2011-03-31
262349	SB-4 10'	soil	2011-03-30	00:00	2011-03-31
262350	SB-4 15'	soil	2011-03-30	00:00	2011-03-31
262351	SB-4 20'	soil	2011-03-30	00:00	2011-03-31

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
262352	SB-4 25'	soil	2011-03-30	00:00	2011-03-31
262353	SB-4 30'	soil	2011-03-30	00:00	2011-03-31

Sample: 262322 - SB-1 0-1'

Param	Flag	Result	Units	RL
Chloride		398	mg/Kg	4.00

Sample: 262323 - SB-1 3'

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

Sample: 262324 - SB-1 5'

Param	Flag	Result	Units	RL
Chloride		806	mg/Kg	4.00

Sample: 262325 - SB-1 7'

Param	Flag	Result	Units	RL
Chloride		444	mg/Kg	4.00

Sample: 262326 - SB-1 10'

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

Sample: 262327 - SB-1 15'

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

Sample: 262328 - SB-1 20'*continued ...*

sample 262328 continued ...

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

Sample: 262329 - SB-1 25'

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

Sample: 262330 - SB-2 0-1'

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

Sample: 262331 - SB-2 3'

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

Sample: 262332 - SB-2 5'

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

Sample: 262333 - SB-2 7'

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

Sample: 262334 - SB-2 10'

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

Sample: 262335 - SB-3 0-1'

Report Date: April 8, 2011

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

Sample: 262336 - SB-3 3'

Param	Flag	Result	Units	RL
Chloride		1710	mg/Kg	4.00

Sample: 262337 - SB-3 5'

Param	Flag	Result	Units	RL
Chloride		4740	mg/Kg	4.00

Sample: 262338 - SB-3 7'

Param	Flag	Result	Units	RL
Chloride		3340	mg/Kg	4.00

Sample: 262339 - SB-3 10'

Param	Flag	Result	Units	RL
Chloride		5680	mg/Kg	4.00

Sample: 262340 - SB-3 15'

Param	Flag	Result	Units	RL
Chloride		6260	mg/Kg	4.00

Sample: 262341 - SB-3 20'

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

Sample: 262342 - SB-3 25'

Param	Flag	Result	Units	RL
Chloride		503	mg/Kg	4.00

Sample: 262343 - SB-3 30'

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

Sample: 262344 - SB-3 40'

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

Sample: 262345 - SB-4 0-1'

Param	Flag	Result	Units	RL
Chloride		275	mg/Kg	4.00

Sample: 262346 - SB-4 3'

Param	Flag	Result	Units	RL
Chloride		3070	mg/Kg	4.00

Sample: 262347 - SB-4 5'

Param	Flag	Result	Units	RL
Chloride		3640	mg/Kg	4.00

Sample: 262348 - SB-4 7'

Param	Flag	Result	Units	RL
Chloride		3670	mg/Kg	4.00

Sample: 262349 - SB-4 10'

Param	Flag	Result	Units	RL
Chloride		9390	mg/Kg	4.00

Sample: 262350 - SB-4 15'

Param	Flag	Result	Units	RL
Chloride		11800	mg/Kg	4.00

Report Date: April 8, 2011

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Sample: 262351 - SB-4 20'

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

Sample: 262352 - SB-4 25'

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

Sample: 262353 - SB-4 30'

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