

## Bratcher, Mike, EMNRD

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**From:** Tavarez, Ike [Ike.Tavarez@tetrattech.com]  
**Sent:** Monday, October 25, 2010 12:57 PM  
**To:** Bratcher, Mike, EMNRD  
**Subject:** RE: COG - GJ West COOP #135- Work Plan and Notification  
**Attachments:** COG - GJ West State #135 Work Plan .pdf

Mike,

Here the work plan for COG - GJ West Coop #135. Please let me know if you need additional information, thank

Ike Tavarez  
Tetra Tech

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**From:** Tavarez, Ike  
**Sent:** Friday, October 22, 2010 4:43 PM  
**To:** 'mike.bratcher@state.nm.us'  
**Subject:** Re: COG - GJ West COOP #135- Work Plan and Notification

Mike,

Sorry, I will send you attachment on Monday.

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**From:** Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>  
**To:** Tavarez, Ike  
**Sent:** Fri Oct 22 16:36:04 2010  
**Subject:** RE: COG - GJ West COOP #135- Work Plan and Notification

Ike: There is no attachment with this email.

Mike

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**From:** Tavarez, Ike [mailto:Ike.Tavarez@tetrattech.com]  
**Sent:** Monday, October 11, 2010 3:24 PM  
**To:** Bratcher, Mike, EMNRD  
**Cc:** Pat Ellis; Joshua Russo  
**Subject:** COG - GJ West COOP #135- Work Plan and Notification

COG Operating  
GJ West COOP # 135 Flow line Leak  
Section 22, T17S, R29E  
Eddy County, New Mexico

Mike,

Please find enclosed the work plan for the GJ West COOP #135 Flow line leak located in Eddy County, New Mexico. On September 1, 2010, Tetra Tech met at your office to discuss the investigation data and remediation depths for the site. The proposed excavation depths were approved, as discussed in the work plan. Tetra Tech is scheduling the soil remediation this week (10-13-10). Once completed, a final closure report will be submitted for your review. Please call me if you have any questions, thanks

**Ike Tavaréz, PG** Senior Project Manager

Main: 432.682.1555 | Fax: 432.682.3946 | Cell: 432.425.3878

[Ike.Tavaréz@tetratech.com](mailto:Ike.Tavaréz@tetratech.com)

Tetra Tech - Complex World. Clear Solutions.™

1910 North Big Spring | Midland, TX 79705 | [www.tetratech.com](http://www.tetratech.com)

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Emailed Copy - Hard Copy Rec'd 4/23  
 2RP-434  
 J. M. G. G.

**SITE INFORMATION**

**Report Type: Work Plan**

**General Site Information:**

<b>Site:</b>	GJ West #135 Flowline	
<b>Company:</b>	COG Operating LLC	
<b>Section, Township and Range</b>	Section 22, T17S, R29 E	Unit Letter - B
<b>Lease Number:</b>	API-30-015-28591	
<b>County:</b>	Eddy County	
<b>GPS:</b>	32.822267° N, 104.069467° W	
<b>Surface Owner:</b>	State	
<b>Mineral Owner:</b>		
<b>Directions:</b>	In Loco Hills, from the intersection of Haggerman Cutoff and 82, travel west on 82 (4.7 miles), turn north (800 feet) straight ahead to location	

**Release Data:**

<b>Date Released:</b>	1/19/2010
<b>Type Release:</b>	Produced Water
<b>Source of Contamination:</b>	Flowline failure
<b>Fluid Released:</b>	15 bbbls
<b>Fluids Recovered:</b>	12 bbbls

**Official Communication:**

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

**Ranking Criteria**

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

<b>Acceptable Soil RRAL (mg/kg)</b>		
<b>Benzene</b>	<b>Total BTEX</b>	<b>TPH</b>
10	50	1,000



TETRA TECH

June 16, 2010

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., GJ West COOP #135 Flow Line, Unit B, Section 22, 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 GJ West COOP #135 flow line located in Unit B, Section 22, Township 17 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.82267°, W 104.069467°. 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 19, 2010, and released approximately fifteen (15) barrels of produced water from a flow line. To alleviate the problem, COG personnel replaced the flow line. Twelve (12) barrels of standing fluids were recovered. The spill initiated west of a well pad location impacting an area of approximately 40' x 130' in the pasture area and remained within a native low-lying area. The initial and final C-141 forms are enclosed in Appendix C.

### **Groundwater**

According to the *Geology and Groundwater Resources of Eddy County, New Mexico* (Report 3), one well is located in Section 22, with reported depth to water of 79' below surface. The Geology and Groundwater Resources of Eddy County, New Mexico (Report 3) well report data is shown in Appendix B.

Tetra Tech

01 11 2010 11:00 AM



## **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 1,000 mg/kg.

## **Soil Assessment and Analytical Results**

On February 22, 2009, Tetra Tech personnel inspected and sampled the spill area. A total of three (3) auger holes (AH-1 through AH-3) 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 spill area and auger hole locations are shown on Figure 3.

Referring to Table 1, AH-1, AH-2, and AH-3 samples exceeded the RRAL for TPH and BTEX at surface down to 3-3.5' below surface. Concentrations decreased to below the RRAL for TPH and BTEX at 4-4.5' below surface at each of the three auger holes. Chloride impact was defined in AH-1 and AH-2 but not at AH-3. Chloride concentration for AH-3 at 7-7.5' below surface was 6,410 mg/kg.

To delineate the chloride impact in the vicinity of AH-3, Tetra Tech supervised the installation of one borehole utilizing an air rotary drilling rig on April 20, 2010. Soil samples were collected to a total depth of 70' below surface and the results are summarized in Table 1. Referring to Table 1, chloride concentrations had a significant decline at 15' (493 mg/kg) and continued to decline with depth.



TETRA TECH

### Work Plan

Based on the results, the TPH and BTEX concentrations were vertically defined at 4' below surface in all the auger holes. In addition, the chloride impact was also defined. In order to remove the hydrocarbon and chloride impacted soil, COG proposes to excavate the soil to a depth of 4' to 10' below surface. The excavation depths are shown in Table 1. The excavated soil will be hauled to proper disposal and the excavations backfilled with clean soil. The proposed excavated area is shown on Figure 4.

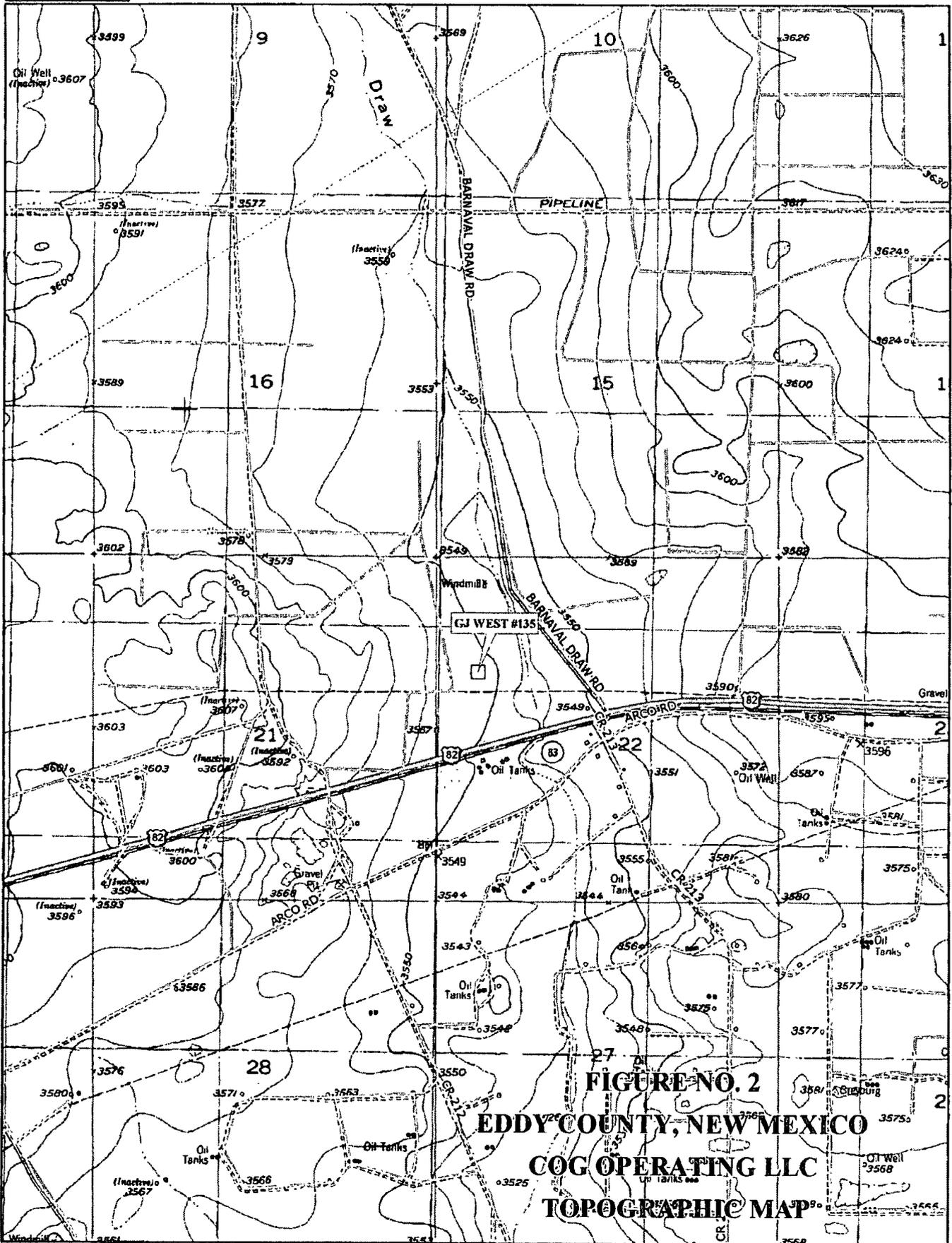
Once the remedial activities are completed, a closure report will be submitted to NMOCD and BLM for review. If you have any questions or comments concerning the assessment performed at the site, please call me at (432) 682-4559.

Respectfully submitted,  
TETRA TECH

Kim Dorey  
Staff Geologist

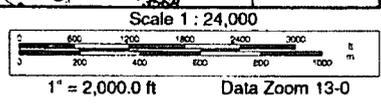
cc: Pat Ellis – COG  
cc: Terry Gregston – BLM

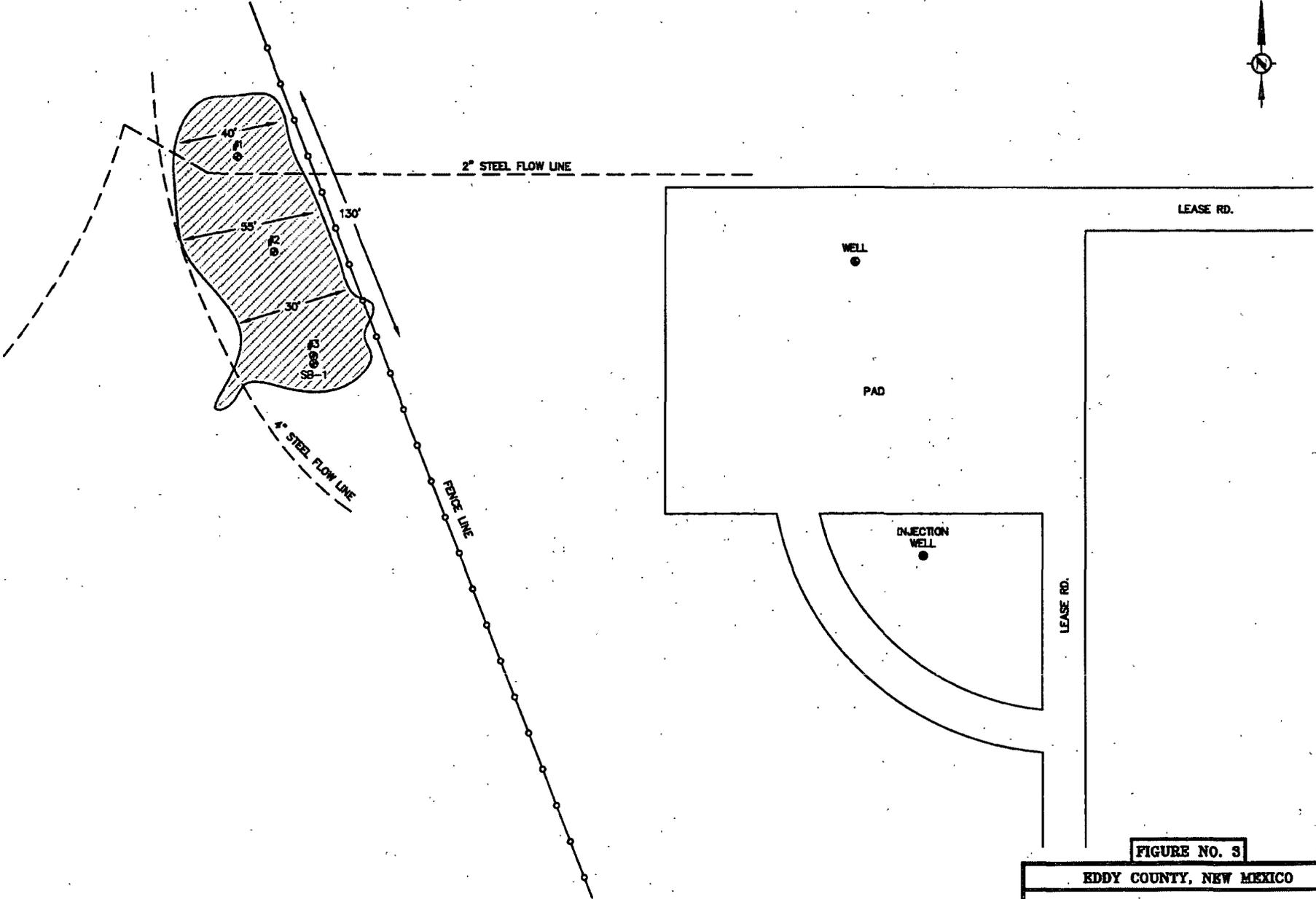




**FIGURE NO. 2**  
**EDDY COUNTY, NEW MEXICO**  
**COG OPERATING LLC**  
**TOPOGRAPHIC MAP**

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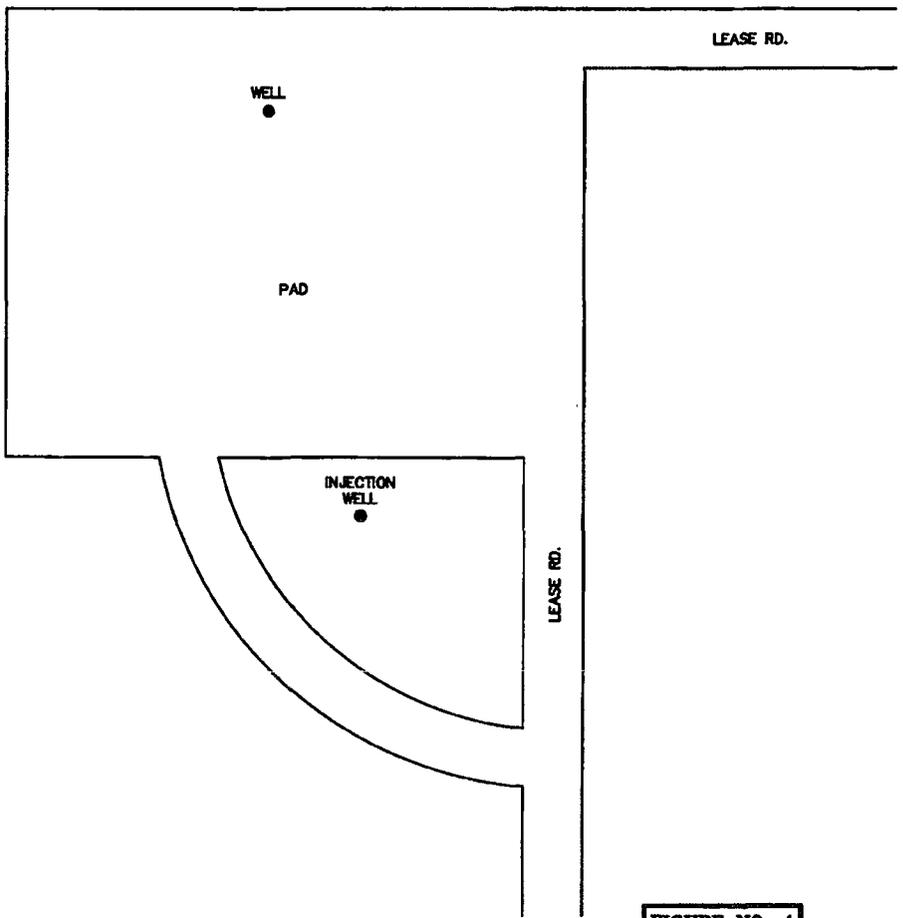
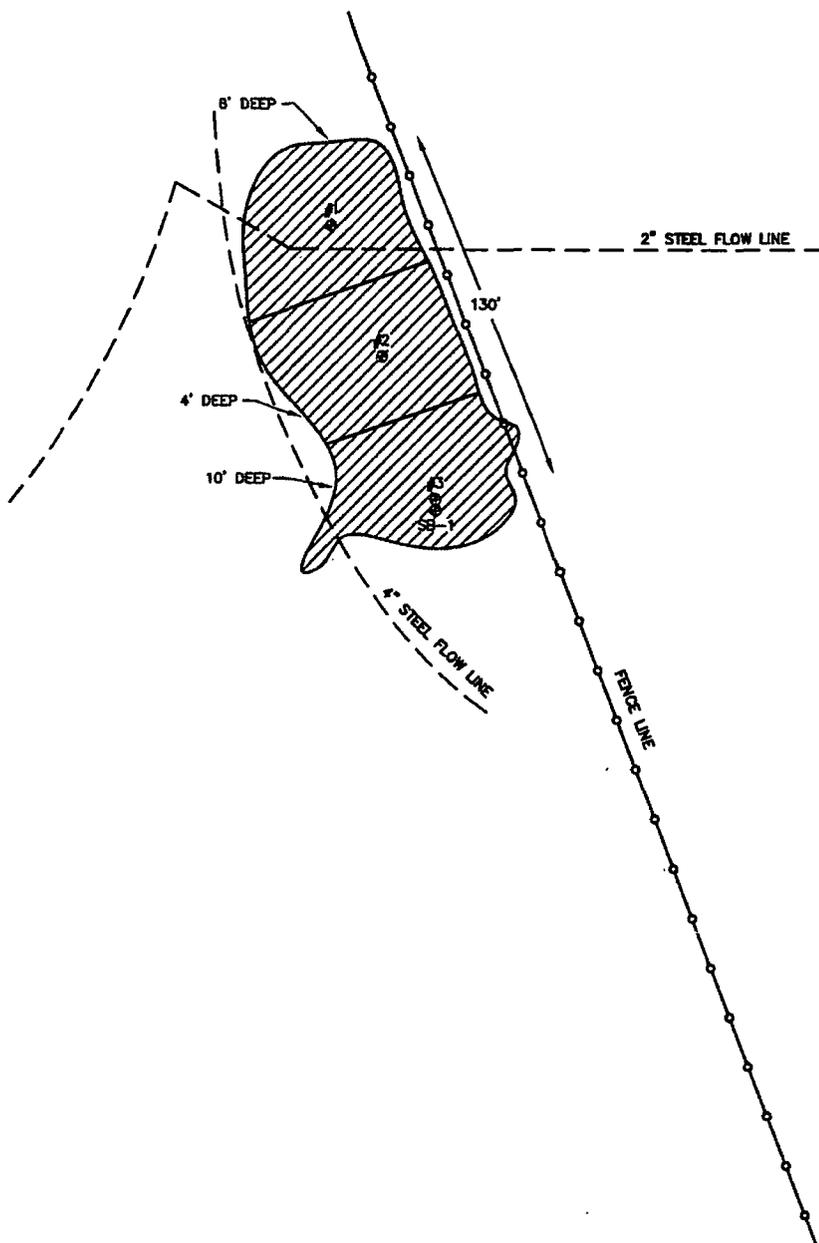


- SPILL AREA
- SAMPLE LOCATIONS
- SOIL BORING LOCATION

NOT TO SCALE

DATE:  
2/24/10  
DWG BY:  
JJ  
FILE:  
H:\PROJECTS\GJ WEST #135

FIGURE NO. 3
EDDY COUNTY, NEW MEXICO
COG OPERATING LLC
GJ WEST #135
TETRA TECH, INC. MIDLAND, TEXAS



▨ PROPOSED EXCAVATION AREA & DEPTHS  
● SAMPLE LOCATIONS  
● SOIL BORING LOCATION

DATE:  
2/24/10  
DWG. BY:  
-JJ  
FILE:  
HA/COG/0409432  
GJ WEST #135

NOT TO SCALE

FIGURE NO. 4
EDDY COUNTY, NEW MEXICO
COG OPERATING LLC
GJ WEST #135
TETRA TECH, INC. MIDLAND, TEXAS



**Table 1**  
**COG Operating LLC.**  
**GJ West #135**  
**EDDY COUNTY, NEW MEXICO**

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	DRO	GRO	Total					
AH-3	2/22/2010	0-1'		X		1,180	2,540	3,720	6.54	30.4	29.3	41.4	6,600
	2/22/2010	1-1.5'		X		2,620	2,980	5,600					12,100
	2/22/2010	2-2.5'		X		3,020	4,170	7,190	18.4	71.9	53.2	73	549
	2/22/2010	3-3.5'		X		5,060	4,890	9,950					337
	2/22/2010	4-4.5'		X		<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	4,840
	2/22/2010	5-5.5'		X									10,000
	2/22/2010	6-6.5'		X									10,200
	2/22/2010	7-7.5'		X									6,410
SB-1	4/20/2010	8'		X									10,400
	4/20/2010	10'		X									6,150
	4/20/2010	15'		X		-	-	-	-	-	-	-	493
	4/20/2010	20'		X		-	-	-	-	-	-	-	871
	4/20/2010	25'		X		-	-	-	-	-	-	-	363
	4/20/2010	30'		X		-	-	-	-	-	-	-	234
	4/20/2010	40'		X		-	-	-	-	-	-	-	249
	4/20/2010	50'		X		-	-	-	-	-	-	-	443
	4/20/2010	60'		X		-	-	-	-	-	-	-	<200
4/20/2010	70'		X		-	-	-	-	-	-	-	214	

BEB Below Excavation Bottom  
 (-) Not Analyzed  
 Proposed Excavated Depths

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

Form C-141  
Revised October 10, 2003

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

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	GJ WEST COOP UNIT #135	Facility Type	Flowline GJ WEST COOP UNIT #135
Surface Owner	State	Mineral Owner	Lease No. (API) 30-015-28591

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	22	17S	29E	990	NORTH	2310	EAST	EDDY

Latitude 32.822267 Longitude 104.069467

**NATURE OF RELEASE**

Type of Release	Produced Fluid	Volume of Release	15 bbls	Volume Recovered	12bbls
Source of Release	Flowline	Date and Hour of Occurrence	01/19/2010	Date and Hour of Discovery	01/19/2010 8:00 a.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?	Gail Lamb	Date and Hour	01/19/2010		
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.\*

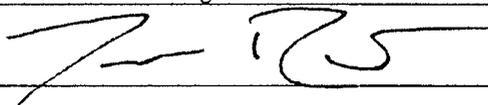
A flowline ruptured and leaked releasing produced fluids into the pasture. The ruptured flowline was replaced with a new flowline.

Describe Area Affected and Cleanup Action Taken \*

15bbls of produced fluid released into the pasture next to the ruptured flowline. A vacuum truck recovered 12 bbls of produced fluid from the initial spill. One-call protocol will be made by dirt contractor who will then remove saturated soils prior to soil sampling by Tetra Tech. (The nearest location to the release is the GJ WEST COOP UNIT #98 E-22-17S-29E 1845 FNL 687 FWL 32.822306 : 104.068998). 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 your approval prior to any significant remediation.

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:		Approved by District Supervisor:	
Printed Name:	Josh Russo	Approval Date:	Expiration Date:
Title:	HSE Coordinator - COG Operating, LLC	Conditions of Approval:	
E-mail Address:	jrusso@conchoresources.com	Attached <input type="checkbox"/>	
Date:	01/26/2010	Phone:	432-212-2399

\* Attach Additional Sheets If Necessary

**Water Well Data**  
**Average Depth to Groundwater (ft)**  
**COG - GJ West COOP Unit 135**  
**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	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	23	24
30	29	28	27	26	25
31	32	33	34	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

**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	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