TALON LPE

AMARILLO
921 North Bivins
Amarillo, Texas 79107
Phone 806.467.0607
Fax 806.467.0622

ARTESIA
408 West Texas Ave.
Artesia, New Mexico 88210
Phone 575.746.8768
Fax 575.746.8905

AUSTIN
911 West Anderson Lane
Suite 202
Austin, Texas 78757
Phone 512.989.3428
Fax 512.989.3487

HOBBS
318 East Taylor Street
Hobbs, New Mexico 88240
Phone 575.393.4261
Fax 575.393.4658

MIDLAND
2901 State Hwy 349
Midland, Texas 79706
Phone 432.522.2133
Fax 432.522.2180

SAN ANTONIO
11 Commercial Place
Schertz, Texas 78154
Phone 210.265.8025
Fax 210.568.2191

TULSA
525 South Main Street
Suite 535
Tulsa, Oklahoma 74103
Phone 918.742.0871
Fax 918.382.0232

ENVIRONMENTAL CONSULTING
ENGINEERING
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SPILL MANAGEMENT
GENERAL CONTRACTING

Toll Free: 866.742.0742
www.talonlpe.com

October 20, 2011

Ms. Jennifer Van Curen
Bureau of Land Management
620 E. Green Street
Carlsbad, NM 88220

Subject: **Soil Assessment and Remediation Work Plan**
Cimerax Energy Corporation
Callaway Federal #1 Drilling Pit Remediation
API # 30-015-23060

Dear Ms. Van Curen,

Cimerax Energy has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the referenced Callaway Federal #1 location. Our soil sampling results and proposed remediation activities consists of the following:

Incident Date

May 18, 2011

Background Information

The Callaway Federal #1 is located approximately twenty (20) miles northeast of Artesia, New Mexico. The legal location for the site is Section 6, Township 16 South and Range 28 East in Eddy County, New Mexico. More Specifically the latitude and longitude for the release are 32.9589 North and -104.22069 West.

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soil in this area is made up of Reeves-Gypsum land complex soils with 0 to 3 percent slopes. The local surface and shallow geology, Quaternary Age sedimentary deposits, is comprised of alluvium and eolian sands which includes silty soils under lain by gypsum and hard caliches. Drainage courses in this area are normally dry. The New Mexico State Engineer web site indicates the nearest ground water data to be in S34-T15S-R27E. The ground water in Section 34 is reported to be at depth of 85' below ground surface (bgs). The referenced groundwater data is presented in Appendix I.

The ranking for this site is 10 based on the as following:

Depth to ground water	50'-100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

Incident Description

On May 18, 2011 the Bureau of Land Management notified Cimarex Energy Corporation that the drilling pit at the Callaway Federal #1 needed to be downsized. BLM also requested a work plan for the restoration of the non-vegetated pit area.

Actions Taken

On July 13, 2011 Talon mobilized personnel to begin the assessment and soil sampling for the construction of a work plan. The soil sample S-1 was collected from soil within the drilling pit area.

The soil sample was collected by Talon personnel wearing clean nitrile gloves. The sample was placed in a laboratory provided sample container and transported to Cardinal Laboratories in Hobbs, New Mexico for analysis of chlorides using Method SM4500CL-B. The complete laboratory report is attached as Appendix II.

Analytical Results

Analytical results received from Cardinal Laboratories are summarized below:

July 18, 2011

Sample, Depth		Chlorides
S-1	0'	20,800 mg/kg

Summary and Conclusions

- Groundwater in the project vicinity is greater than 50-feet below land surface per the New Mexico State Engineer Database.
- Based upon the results of the laboratory data obtained for this investigation, the chloride impacts have been documented to be 20,800 mg/kg at the surface of the drilling pit area.
- Based on the depth to groundwater at the sample location, it is unlikely that the chloride impacts identified from this release will pose a threat to groundwater after proposed remediation activities are complete.

Proposed Remedial Actions

- A decontamination station will be set up to pressure wash off all equipment and vehicles before leaving location to prevent the cross contamination of the African Rue.

- The surface of the closed drilling pit area will be bladed to prepare for the installation of a liner. Rock and debris will be deep buried into the drilling reserve pit area.

- A composite 20 millimeter liner will be installed over the closed drilling pit area. The edges of the liner will be keyed a minimum of three 3-feet deep into a trench excavated at the boundaries of the closed drilling pit area. Visually impacted area outside the drilling pit will be pushed up under the liner area with a dozer.

- The Callaway Federal No. 1 location will be down sized. This soil removed from the location will be placed over the top of the 20 millimeter liner with a 3-foot soil lift. New soil may also be transported to the location from a local borrow pit if needed. The soil lift will be contoured to match the surrounding terrain and seeded using the recommended BLM seed mixture for the area.

- Erosion control berms will be installed to prevent storm waters from the east running across area.

- A final report will be provided to the Bureau of Land Management Carlsbad Office utilizing Form 3160.

If we can provide additional information or be of further assistance please contact our office at 575.746.8768.

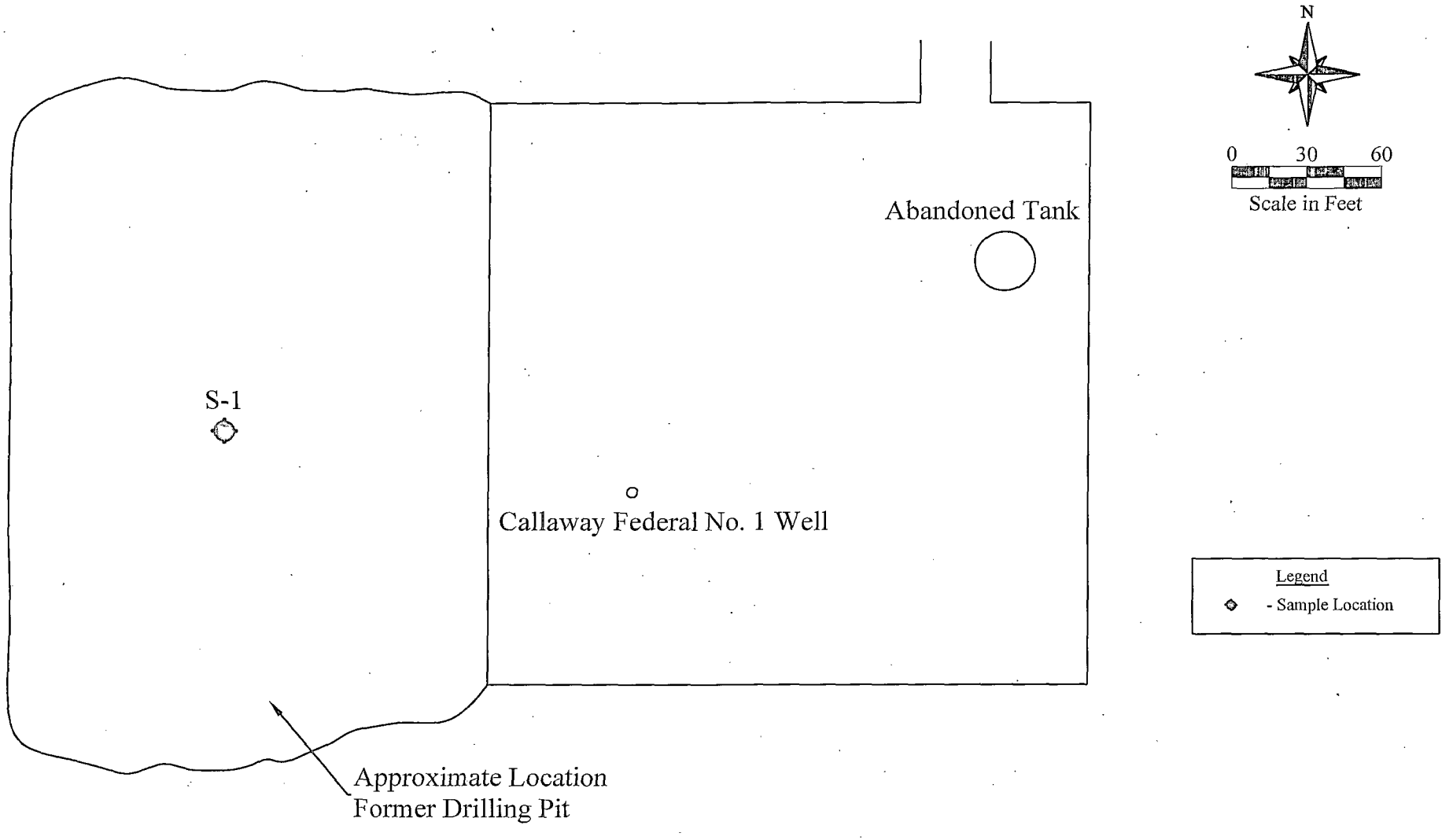
Respectfully submitted,

TALON/LPE

Mike Stubblefield
Project Manager

David J. Adkins
District Manager

SITE MAP



Date:	10/20/2011
Scale:	1" = 60'
Drawn By:	TJS

Callaway Federal No. 1
Cimarex Energy Co.
Artesia, Eddy County, New Mexico
Figure 1 - Site Plan

APPENDIX I

GROUNDWATER DATA

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	Distance	Depth Well	Depth Water	Water Column
RA 08613		DOM	CH	4	4	1	34	15S	27E	572480	3648590*	1617	200	85	115

Average Depth to Water: **85 feet**

Minimum Depth: **85 feet**

Maximum Depth: **85 feet**

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 572692 **Northing (Y):** 3646986 **Radius:** 5000

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

James Tinney

From: Mark Cummings
Sent: Wednesday, May 18, 2011 11:00 AM
To: Terry Ainsworth; James Tinney
Subject: FW: location that need work-response requested.

FYI, on the lease inspection that we should be doing now let's make sure we catch this kind of stuff before the BLM ships us these type of letters.
Thanks

Mark Cummings
Midland - Texas
Cimarex Energy

mcummings@cimarex.com
(432) 571-7816 office
(956) 744-0137 cell

-----Original Message-----
From: Zeno Farris
Sent: Wednesday, May 18, 2011 10:45 AM
To: Edgar F. Locke; John Osborne; Mark Martino; Mark Cummings
Subject: FW: location that need work-response requested.

-----Original Message-----
From: jvancure@blm.gov [mailto:jvancure@blm.gov]
Sent: Wednesday, May 18, 2011 10:37 AM
To: Zeno Farris
Subject: location that need work-response requested.

1. Callaway Fed 3--The location has not vegetated and is past due on a reclamation. Complete reclamation of location by 6-17-11. Contact me with plan of action before start.
2. Callaway Fed 4--Remove unused equipment, Replace windsock, Downsize and use material for pit remediation. Contact me before starting pit remediation.
3. Callaway Fed 1--Remove unused tank, Downsize location and use material for pit remediation after testing and also to prevent stormwater from east. Contact me before starting any remediation and so we can go over test sampling of chlorides.
4. Callaway Fed 2-- Block trespass road, Remove polyline from pit area, Remediation of pit area and stormwater prevention a must. Contact me before

APPENDIX II

LABORATORY RESULTS

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

July 18, 2011

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: CALLAWAY FED #1

Enclosed are the results of analyses for samples received by the laboratory on 07/14/11 14:47.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TALON LPE
MIKE STUBBLEFIELD
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	07/14/2011	Sampling Date:	07/13/2011
Reported:	07/18/2011	Sampling Type:	Soil
Project Name:	CALLAWAY FED #1	Sampling Condition:	Cool & Intact
Project Number:	701162-005.01	Sample Received By:	Jodi Henson
Project Location:	SEC. 6. T16S - R28E		

Sample ID: S-1 0' DRILLING PIT (H101460-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**20800**	16.0	07/15/2011	ND	416	104	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	Talon/LPE
Project Manager:	Mike Stubblefield
Address:	408 W. Texas Ave.
City:	Artesia State: NM Zip: 88210
Phone #:	505-441-7254 Fax #:
Project #:	701162.005.01 Project Owner: Cimarex Energy
Project Name:	Callaway Fed No. 1
Project Location:	Sec. 6. T16S-R28E
Sampler Name:	Mike Stubblefield

BILL TO

P.O. #:	
Company:	Talon/LPE
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	PRESERV.: ACID/BASE:	ICE / COOL	OTHER	SAMPLING: DATE	TIME	Total Chlorides
H1D1460-1	S.1 0' drilling pit	G				✓					✓		2/13/2011	3:31PM	✓

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 2/14/2011 Time: 2:47PM	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Mike Stubblefield		Jodi Henson	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date: Time:	Received By:	REMARKS:

Delivered By: (Circle One)
Sampler - UPS - Bus - (Other)

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials) GK

5°C

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#26