From:	Yu, Olivia, EMNRD
To:	LovelyTaylor, Kayla; Mann, Ryan
Cc:	Pope, Gregory; Wells, Todd
Subject:	RE: 1RP 4533 - ConocoPhillips - Vacuum Abo Unit 14-02 Closure Report
Date:	Thursday, July 5, 2018 10:06:00 AM

Ms. Taylor:

Thank you for your patience and the additional documents for 1RP-4533. Trenches were 1 ft. in depth, which indicate that at least 1 ft. of excavation is possible. Due to the extremely high chloride levels demonstrated in the initial sampling from January 31, 2017, NMOCD requests an additional attempt to complete further excavation for the areas represented by SB-1 and SB-2, due to the groundwater table at 51- 100 ft. bgs.

NMSLO may have additional concerns regarding revegetation potential.

Thanks,
Olivia

From: Yu, Olivia, EMNRD
Sent: Tuesday, July 3, 2018 4:23 PM
To: LovelyTaylor, Kayla <Kayla.LovelyTaylor@tetratech.com>
Cc: Pope, Gregory <Greg.Pope@tetratech.com>; Wells, Todd <Todd.Wells@tetratech.com>
Subject: RE: 1RP 4533 - ConocoPhillips - Vacuum Abo Unit 14-02 Closure Report

Ms. Taylor:

Thanks for the reminder. Will review on Thursday. Have a relaxing 4th!

Olivia

From: LovelyTaylor, Kayla <Kayla.LovelyTaylor@tetratech.com>
Sent: Monday, July 2, 2018 12:31 PM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>
Cc: Pope, Gregory <Greg.Pope@tetratech.com>; Wells, Todd <Todd.Wells@tetratech.com>
Subject: FW: 1RP 4533 - ConocoPhillips - Vacuum Abo Unit 14-02 Closure Report

Ms. Yu,

I was just checking back in on the status for this site, 1RP-4533 Vacuum Abo 14-02. I have located the original email with attachments, in case it got lost in your inbox. Please let me know if the emails below answered your questions and how you would like to proceed to gain closure on this spill release.

Thanks,

Kayla Taylor | Geologist
Direct Office: **432.687.8143** | Cell: **432.210.5443** | Fax : **432.682.3946**
kayla.lovelytaylor@tetratech.com

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4000 N. Big Spring St., Suite 401 | Midland, TX 79705 | www.tetratech.com

TETRA TECH

From: LovelyTaylor, Kayla
Sent: Tuesday, May 22, 2018 11:10 AM
To: 'Yu, Olivia, EMNRD' <Olivia.Yu@state.nm.us>; Mark Naranjo (MNaranjo@slo.state.nm.us) <MNaranjo@slo.state.nm.us>; Mann, Ryan <rmann@slo.state.nm.us>
Cc: Goates, R. Neal <N.Goates@conocophillips.com>; Wells, Todd <Todd.Wells@tetratech.com>; Pope, Gregory <Greg.Pope@tetratech.com>
Subject: RE: 1RP 4533 - ConocoPhillips - Vacuum Abo Unit 14-02 Closure Report

Ms. Yu,

Tetra Tech was provided with a spill outline overlaying Google Earth. A Google Earth image without the image overlay is also provided as reference to show the distinctive excavation area that occurred by February 1, 2017 following the December 2016 release.

There was no field data provided. However, five shallow soil samples collected on January 31, 2017 were sent for laboratory analysis. Sample locations within the release area were not provided.

Kayla Taylor | Geologist
Direct Office: **432.687.8143** | Cell: **432.210.5443** | Fax : **432.682.3946**
kayla.lovelytaylor@tetratech.com

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TETRA TECH

From: Yu, Olivia, EMNRD [mailto:Olivia.Yu@state.nm.us]
Sent: Monday, May 21, 2018 1:28 PM
To: LovelyTaylor, Kayla <Kayla.LovelyTaylor@tetratech.com>; Mark Naranjo (MNaranjo@slo.state.nm.us) <MNaranjo@slo.state.nm.us>; Mann, Ryan <rmann@slo.state.nm.us>
Cc: Goates, R. Neal <N.Goates@conocophillips.com>; Wells, Todd <Todd.Wells@tetratech.com>; Pope, Gregory <Greg.Pope@tetratech.com>
Subject: RE: 1RP 4533 - ConocoPhillips - Vacuum Abo Unit 14-02 Closure Report

Ms. Taylor:

Thank you for the soil bore logs for 1RP-4533. Since confirmatory soil samples were not taken, were field tests conducted to verify that the emergency response addressed the entire impacted area? Please provide some documentation that there was a defined edge between impacted and non-release area (e.g., GPS track, kmz file, dated photos at time of release showing excavation of impacted/non-impacted surface) for closure approval.

NMSLO may have additional concerns or stipulations.

Thanks,
Olivia

From: LovelyTaylor, Kayla <Kayla.LovelyTaylor@tetratech.com>
Sent: Monday, May 21, 2018 10:42 AM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; Mark Naranjo (MNaranjo@slo.state.nm.us) <MNaranjo@slo.state.nm.us>
Cc: Goates, R. Neal <N.Goates@conocophillips.com>; Wells, Todd <Todd.Wells@tetratech.com>; Pope, Gregory <Greg.Pope@tetratech.com>
Subject: RE: 1RP 4533 - ConocoPhillips - Vacuum Abo Unit 14-02 Closure Report

Ms. Yu,

In a previous email, you identified the following concerns for 1RP-4533. Below, is your concern followed by Tetra Tech's response.

- *Provide soil boring logs to verify the depth and thickness of the caliche layer.*
    - The boring logs are attached for reference. The boring logs indicate from surface to 10 feet bgs the presence of strongly cemented limestone fragments. The sand particles logged from the drill cuttings represent crushed caliche particles created during the drilling activities.

- *Were representative sidewall and bottom confirmatory samples taken from the impacted area to demonstrate that horizontal characterization has been completed and to indicate the current levels of chlorides at initially excavated 6-inch to 1 foot bgs?*
    - An emergency excavation has performed after the initial release and followed the spill footprint. Sidewall confirmation samples were not collected due to the 0.5' foot

depth. Soil samples were not collected during the emergency excavation to indicate the chloride concentrations from the surface to 1 foot bgs.

Please, let me know if you have any other questions or concerns.

Thank,

Kayla Taylor | Geologist
Direct Office: **432.687.8143** | Cell: **432.210.5443** | Fax : **432.682.3946**
kayla.lovelytaylor@tetratech.com

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TETRA TECH

From: Yu, Olivia, EMNRD [mailto:Olivia.Yu@state.nm.us]
Sent: Wednesday, March 14, 2018 10:55 AM
To: Pope, Gregory <Greg.Pope@tetratech.com>; Mark Naranjo (MNaranjo@slo.state.nm.us) <MNaranjo@slo.state.nm.us>
Cc: Goates, R. Neal <N.Goates@conocophillips.com>; Wells, Todd <Todd.Wells@tetratech.com>; LovelyTaylor, Kayla <Kayla.LovelyTaylor@tetratech.com>
Subject: RE: 1RP 4533 - ConocoPhillips - Vacuum Abo Unit 14-02 Closure Report

Mr. Pope:

NMOCD agrees that delineation is complete for 1RP-4533.

However, please address these concerns, regarding the proposed remediation plan:

- Provide soil boring logs to verify the depth and thickness of the caliche layer.
- Were representative sidewall and bottom confirmatory samples taken from the impacted area to demonstrate that horizontal characterization has been completed and to indicate the current levels of chlorides at initially excavated 6-inch to 1 foot bgs?

Thanks,
Olivia

From: Pope, Gregory [mailto:Greg.Pope@tetratech.com]
Sent: Friday, February 23, 2018 5:06 PM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; Mark Naranjo (MNaranjo@slo.state.nm.us)

<MNaranjo@slo.state.nm.us>
Cc: Goates, R. Neal <N.Goates@conocophillips.com>; Wells, Todd <Todd.Wells@tetratech.com>; LovelyTaylor, Kayla <Kayla.LovelyTaylor@tetratech.com>
Subject: 1RP 4533 - ConocoPhillips - Vacuum Abo Unit 14-02 Closure Report

Ms. Yu and Mr. Naranjo,

Please find the attached Closure Report for the above referenced ConocoPhillips site. This document is being submitted for your review and approval, if in agreement. Please call me or reply to this email with any questions or comments. Thank you.

Greg W. Pope, P.G. | **Senior Project Manager / Geologist**
Direct Office: 432.687.8134 | Cell: 432.661.3852 | Fax : 432.682.3946
greg.pope@tetratech.com

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CARDINAL Laboratories

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

February 07, 2017

JUSTIN WRIGHT

Conoco Phillips - Hobbs

P. O. BOX 325

Hobbs, NM 88240

RE: VAC ABO 14-02

Enclosed are the results of analyses for samples received by the laboratory on 01/31/17 16:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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 (V1, 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:

Conoco Phillips - Hobbs
JUSTIN WRIGHT
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	01/31/2017	Sampling Date:	01/31/2017
Reported:	02/07/2017	Sampling Type:	Soil
Project Name:	VAC ABO 14-02	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY		

Sample ID: T-1-1' (H700229-01)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	02/02/2017	ND	1.73	86.4	2.00	0.798	
Toluene*	**0.249**	0.100	02/02/2017	ND	1.83	91.7	2.00	0.284	
Ethylbenzene*	**0.824**	0.100	02/02/2017	ND	1.91	95.3	2.00	0.125	
Total Xylenes*	**1.96**	0.300	02/02/2017	ND	5.41	90.1	6.00	0.153	
Total BTEX	**3.03**	0.600	02/02/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *116 %* *73.6-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4000**	16.0	02/03/2017	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**112**	50.0	02/01/2017	ND	185	92.7	200	5.75	
DRO >C10-C28	**5820**	50.0	02/01/2017	ND	206	103	200	4.37	

Surrogate: 1-Chlorooctane *105 %* *35-147*

Surrogate: 1-Chlorooctadecane *170 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

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:

Conoco Phillips - Hobbs
JUSTIN WRIGHT
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	01/31/2017	Sampling Date:	01/31/2017
Reported:	02/07/2017	Sampling Type:	Soil
Project Name:	VAC ABO 14-02	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY		

Sample ID: T-2-1' (H700229-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2017	ND	1.73	86.4	2.00	0.798	
Toluene*	**0.219**	0.050	02/02/2017	ND	1.83	91.7	2.00	0.284	
Ethylbenzene*	**0.241**	0.050	02/02/2017	ND	1.91	95.3	2.00	0.125	
Total Xylenes*	**0.639**	0.150	02/02/2017	ND	5.41	90.1	6.00	0.153	
Total BTEX	**1.10**	0.300	02/02/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**13300**	16.0	02/03/2017	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**27.7**	10.0	02/01/2017	ND	185	92.7	200	5.75	
DRO >C10-C28	**5870**	10.0	02/01/2017	ND	206	103	200	4.37	

Surrogate: 1-Chlorooctane *76.9 %* *35-147*

Surrogate: 1-Chlorooctadecane *369 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

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:

Conoco Phillips - Hobbs
JUSTIN WRIGHT
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	01/31/2017	Sampling Date:	01/31/2017
Reported:	02/07/2017	Sampling Type:	Soil
Project Name:	VAC ABO 14-02	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY		

Sample ID: T-3-1' (H700229-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/02/2017	ND	1.73	86.4	2.00	0.798	
Toluene*	<0.050	0.050	02/02/2017	ND	1.83	91.7	2.00	0.284	
Ethylbenzene*	<0.050	0.050	02/02/2017	ND	1.91	95.3	2.00	0.125	
Total Xylenes*	<0.150	0.150	02/02/2017	ND	5.41	90.1	6.00	0.153	
Total BTEX	<0.300	0.300	02/02/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**22000**	16.0	02/03/2017	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/01/2017	ND	185	92.7	200	5.75	
DRO >C10-C28	**74.0**	10.0	02/01/2017	ND	206	103	200	4.37	

Surrogate: 1-Chlorooctane *80.1 %* *35-147*

Surrogate: 1-Chlorooctadecane *79.0 %* *28-171*

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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:

Conoco Phillips - Hobbs
JUSTIN WRIGHT
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	01/31/2017	Sampling Date:	01/31/2017
Reported:	02/07/2017	Sampling Type:	Soil
Project Name:	VAC ABO 14-02	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY		

Sample ID: T-4-1' (H700229-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	02/02/2017	ND	1.73	86.4	2.00	0.798	
Toluene*	<0.100	0.100	02/02/2017	ND	1.83	91.7	2.00	0.284	
Ethylbenzene*	**0.446**	0.100	02/02/2017	ND	1.91	95.3	2.00	0.125	
Total Xylenes*	**1.78**	0.300	02/02/2017	ND	5.41	90.1	6.00	0.153	
Total BTEX	**2.22**	0.600	02/02/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *114 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5330**	16.0	02/03/2017	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**109**	50.0	02/01/2017	ND	185	92.7	200	5.75	
DRO >C10-C28	**5900**	50.0	02/01/2017	ND	206	103	200	4.37	

Surrogate: 1-Chlorooctane *102 %* *35-147*

Surrogate: 1-Chlorooctadecane *170 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

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:

Conoco Phillips - Hobbs
JUSTIN WRIGHT
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	01/31/2017	Sampling Date:	01/31/2017
Reported:	02/07/2017	Sampling Type:	Soil
Project Name:	VAC ABO 14-02	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY		

Sample ID: T-5-1' (H700229-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/07/2017	ND	2.18	109	2.00	0.505	
Toluene*	**0.103**	0.050	02/07/2017	ND	2.15	108	2.00	0.763	
Ethylbenzene*	**0.270**	0.050	02/07/2017	ND	2.15	108	2.00	0.169	
Total Xylenes*	**0.944**	0.150	02/07/2017	ND	6.07	101	6.00	0.0884	
Total BTEX	**1.32**	0.300	02/07/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4560**	16.0	02/03/2017	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**71.5**	50.0	02/02/2017	ND	185	92.7	200	5.75	
DRO >C10-C28	**11700**	50.0	02/02/2017	ND	206	103	200	4.37	

Surrogate: 1-Chlorooctane *126 %* *35-147*

Surrogate: 1-Chlorooctadecane *381 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

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

Page_____ of _____

Company Name:	Conoco
Project Manager:	Justin Wright
Address:	Justin.Wright@ConocoPhillips.com
City:	Hobbs State: NM Zip: 88240
Phone #:	575-631-9092 Fax #:
Project #:	VACABO 14-02 Project Owner:
Project Name:	VACABO 14-02
Project Location:	Lea County
Sampler Name:	Justin Wright

BILL TO

P.O. #:	
Company:	
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	Chloride	TPH	BTEX	Benzene
H700229- 01	T-1-1'					✓					✓		1/31/17	1526	✓	✓	✓	✓
02	T-2-1'					✓					✓		1/31/17	1529	✓	✓	✓	✓
03	T-3-1'					✓					✓		1/31/17	1532	✓	✓	✓	✓
04	T-4-1'					✓					✓		1/31/17	1536	✓	✓	✓	✓
05	T-5-1'					✓					✓		1/31/17	1541	✓	✓	✓	✓

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 consequental 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.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	John	Date: 1/31/17 Time: 4:25p	Received By:
Relinquished By:		Date: Time:	Received By:

Phone Result: ☐ No Add'l Phone #:
Fax Result: ☐ No Add'l Fax #:
REMARKS:

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

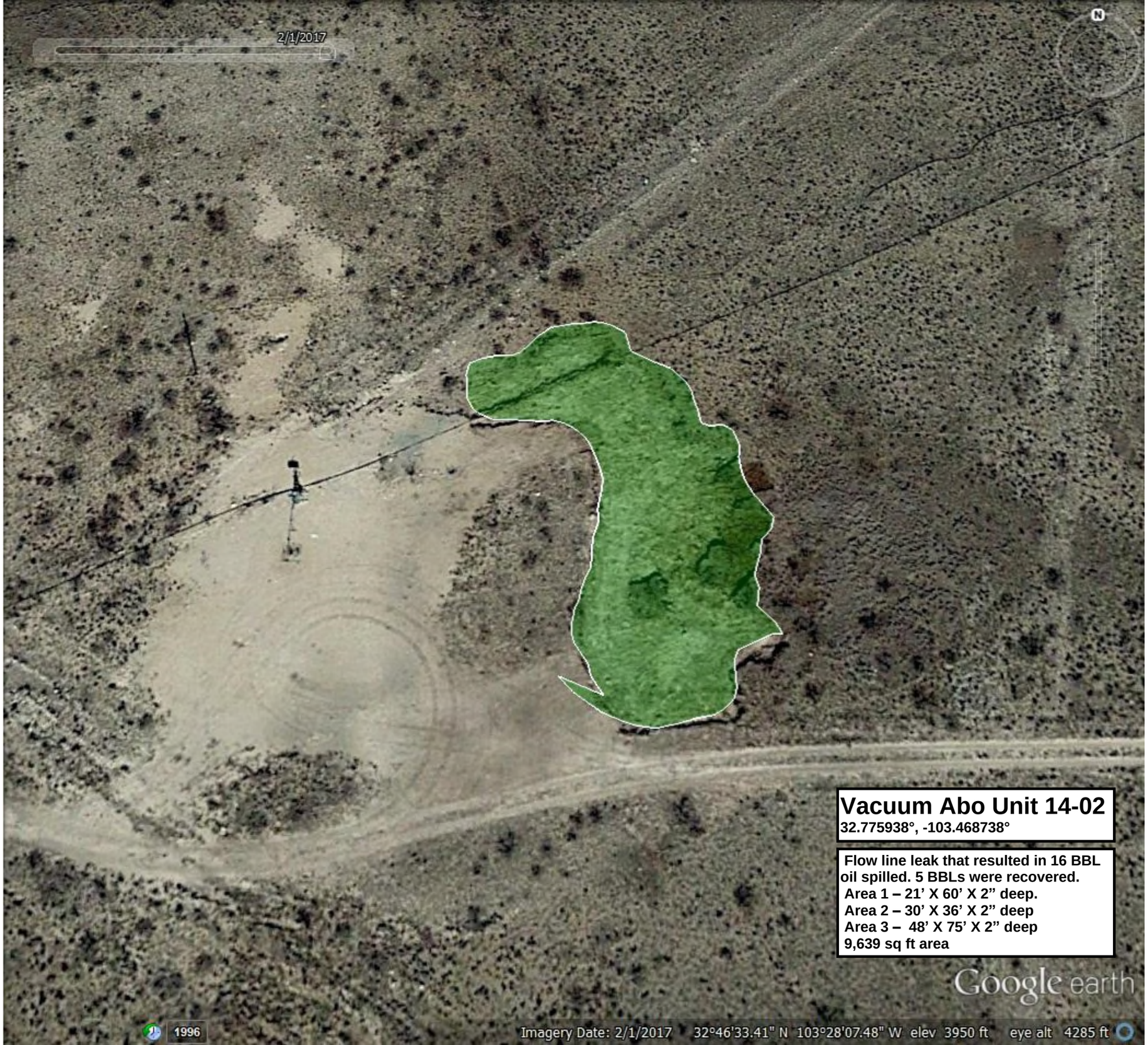
Temp. 5.4°C

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

CHECKED BY: (Initials) CM #75

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.


Vacuum Abo 14-02 1RP-4533
February 2017 following December 2016 release
Legend
N
200 ft
Google earth


2/1/2017
N
Vacuum Abo Unit 14-02
32.775938°, -103.468738°
Flow line leak that resulted in 16 BBL oil spilled. 5 BBLs were recovered.
Area 1 – 21’ X 60’ X 2” deep.
Area 2 – 30’ X 36’ X 2” deep
Area 3 – 48’ X 75’ X 2” deep
9,639 sq ft area
Google earth
1996
Imagery Date: 2/1/2017 32°46'33.41" N 103°28'07.48" W elev 3950 ft eye alt 4285 ft

BORING LOG

Client:	**ConocoPhillips**
Site Name	**Vacuum Abo 14-02**
Boring/Well:	**SB-1**
GPS	**32.77009, -103.46867**
Total Depth	**10'**
Date Installed:	**8/7/2017**

DEPTH (Ft)	SAMPLE DESCRIPTION	NOTES	CONDUCTIVITY (ppm)
0-3'	***Sand, pink, coarse with small to medium grained strongly cemented limestone fragments***	***No stain or odor - Dry***	***400***
3-10'	***Sand, pink, fine to medium grained, loose with fine grained strongly cemented limestone fragments***	***No stain or odor - Dry***	***126***

BORING LOG

Client:	**ConocoPhillips**
Site Name	**Vacuum Abo 14-02**
Boring/Well:	**SB-2**
GPS	**32.77595, -103.46863**
Total Depth	**15'**
Date Installed:	**8/7/2017**

DEPTH (Ft)	SAMPLE DESCRIPTION	NOTES	CONDUCTIVITY (ppm)
0-3'	***Sand, pink, coarse with small to medium grained strongly cemented limestone fragments***	***No stain or odor - Dry***	***712***
3-15'	***Sand, pink, fine to medium grained, loose with fine grained strongly cemented limestone fragments***	***No stain or odor - Dry***	***560***

BORING LOG

Client:	**ConocoPhillips**
Site Name	**Vacuum Abo 14-02**
Boring/Well:	**SB-3**
GPS	**32.77579, -103.46861**
Total Depth	**10'**
Date Installed:	**8/7/2017**

DEPTH (Ft)	SAMPLE DESCRIPTION	NOTES	CONDUCTIVITY (ppm)
0-3'	*Sand, pink, coarse with small to medium grained strongly cemented limestone fragments*	*No stain or odor - Dry*	*407*
3-10'	*Sand, pink, fine to medium grained, loose with fine grained strongly cemented limestone fragments*	*No stain or odor - Dry*	*170*