



DELINEATION WORKPLAN

OXY – SPUDS 25 FEDERAL BATTERY (Leak Date: 1/10/17)

RP # 4091
API # 30-015-29882

This delineation workplan and remediation proposal addresses the release associated with RP #4091.

The following information includes:

1. Scaled digital site map with spill area demarcated and leak point identified along with sample point locations and areas of remediation at appropriate depths.
2. GPS information for sample points and sample methodology
3. Depth to groundwater information (i.e., pdf of OSE search results and/or copy of Chevron groundwater trend map).
4. Laboratory analysis results summary table and original laboratory analysis reports
5. A copy of the initial C-141
6. Potentially other pertinent information as necessary for site specific purposes.

Based on the information included in this package and the NMOCD guidelines, the following remediation is proposed:

OXY will excavate the spill area as depicted on the following site diagram. The entire leak area will be excavated to a depth of 6 inches.

The entire site will then be backfilled with clean soil and revegetated (if warranted) to the standards of the appropriate regulatory agency or private surface owner.

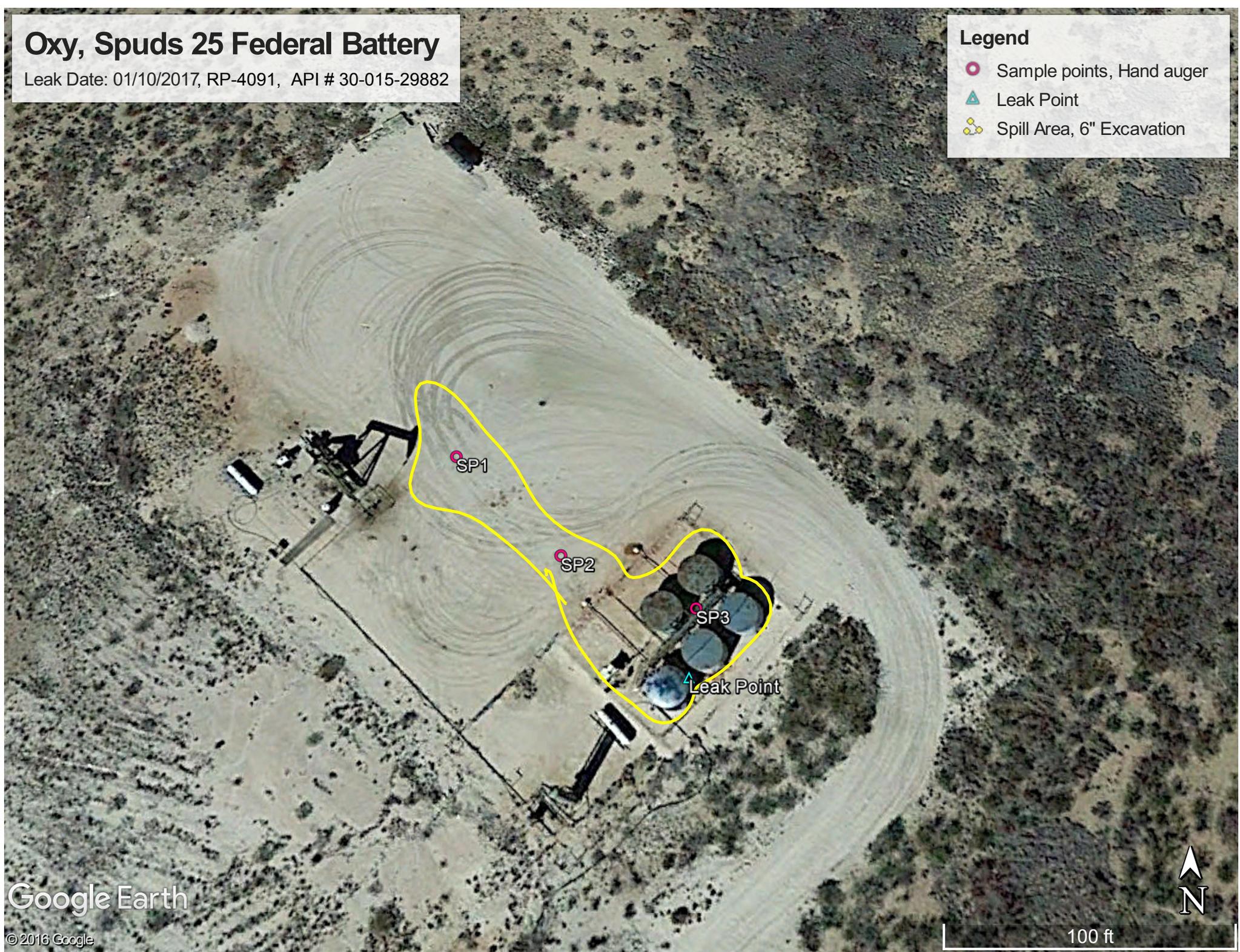
All excavated materials will be disposed of at an NMOCD-approved disposal facility.

Oxy, Spuds 25 Federal Battery

Leak Date: 01/10/2017, RP-4091, API # 30-015-29882

Legend

- Sample points, Hand auger
- ▲ Leak Point
- Spill Area, 6" Excavation



Google Earth

© 2016 Google

100 ft



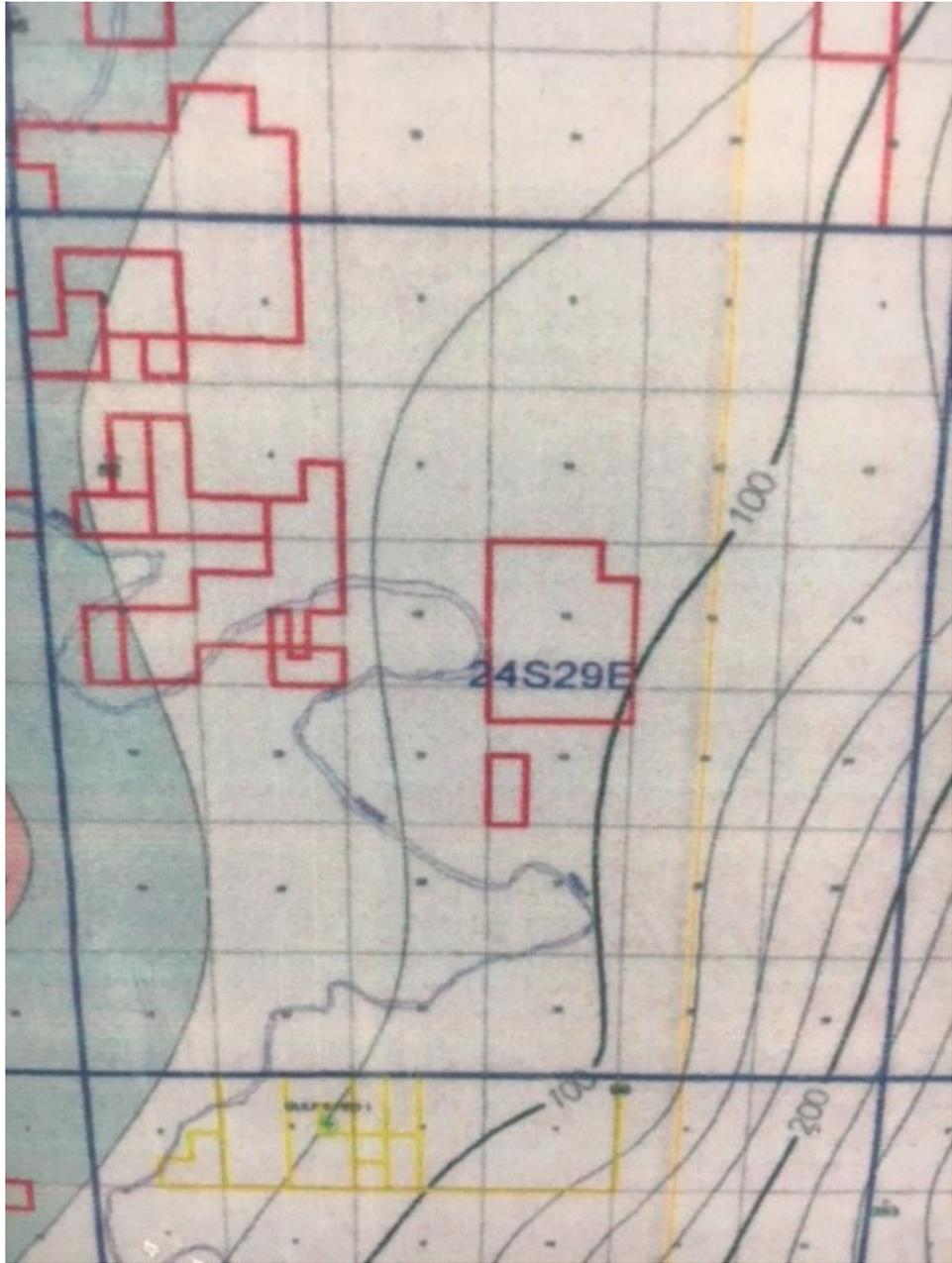
Oxy, Spuds 25 Federal Battery

Samples, Hand Auger

SP1, GPS POINT: N 32.18353 W-103.94383

SP2, GPS POINT: N 32.18342 W-103.94369

SP3, GPS POINT: N 32.18336 W-103.94353





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)

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 599498

Northing (Y): 3561198

Radius: 1700

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/9/17 10:10 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER

Public Land Survey System (PLSS)

Q64: Q16: SW Q4: SW Sec: 25 Tws: 24S Rng: 29E

State Plane Coordinate System - NAD27

X: ft Y: ft Zone:

State Plane Coordinate System - NAD83

X: ft Y: ft Zone:

Degrees/Minutes/Seconds

Longitude (X): Degrees: ° Minutes: ' Seconds: "

Latitude (Y): Degrees: ° Minutes: ' Seconds: "

UTM - NAD27

Easting (X): mtrs Northing (Y): mtrs Zone:

SUBMIT

All Conversion Results are displayed as NAD 1983 UTM Zone 13

Easting (X): mtrs Northing (Y): mtrs

~~ Please keep screen open to copy UTM values for Reports. ~~



Groundwater Plot

Oxy Spuds 25 Federal Battery

County
Eddy

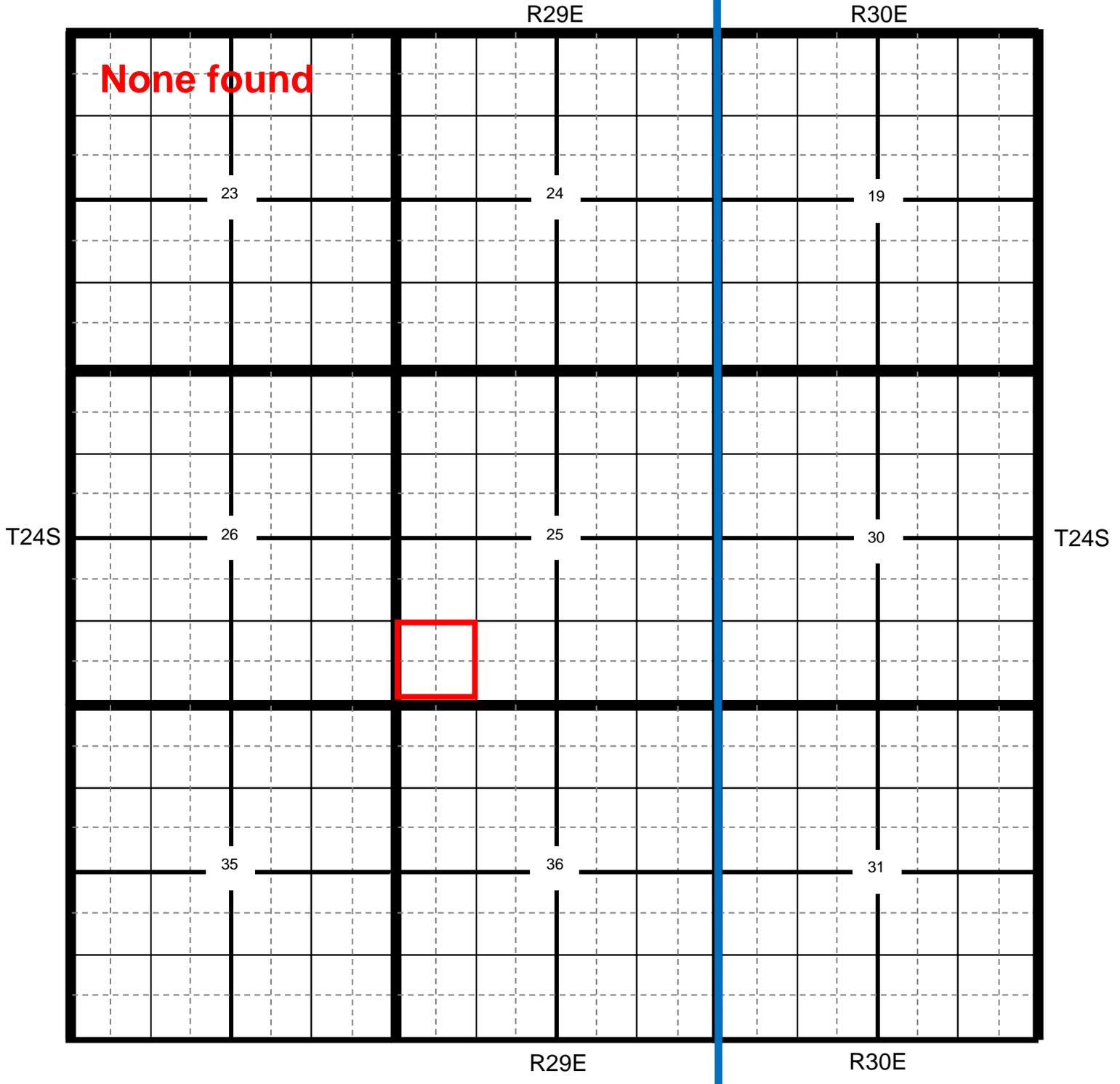
Unit Letter
M

Section
25

Township
24S

Range
29E

Trend Map 150'



📍 Location

● OCD

● USGS

● SEO

● All Databases

Oxy Spuds 25 Federal Battery

County Eddy Unit Letter M Section 25 Township 24S Range 29E

Trend Map 150'

1

2

NW/NW None found	NE/NW	NW/NE	NE/NE
Unit Letter D	Unit Letter C	Unit Letter B	Unit Letter A
SW/NW	SE/NW	SW/NE	SE/NE
Unit Letter E	Unit Letter F	Unit Letter G	Unit Letter H
NW/SW	NE/SW	NW/SE	NE/SE
Unit Letter L	Unit Letter K	Unit Letter J	Unit Letter I
SW/SW	SE/SW	SW/SE	SE/SE
Unit Letter M	Unit Letter N	Unit Letter O	Unit Letter P

3

4

📍 Location

● OCD

● USGS

● SEO

● All Databases

**Laboratory Analytical Results Summary
Spuds 25 Federal Battery**

		Sample	SP1 @ SURFACE	SP1 @ 1'	SP1 @ 2'	SP1 @ 3'
Analyte	Method	Date	1/30/17	1/30/17	1/30/17	1/30/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		18400	576	144	32

		Sample	SP2 @ SURFACE	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'	SP2 @ 4'
Analyte	Method	Date	1/30/17	1/30/17	1/30/17	1/30/17	1/30/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		34000	768	576	1070	240

		Sample	SP3 @ SURFACE	SP3 @ 1'	SP3 @ 2'
Analyte	Method	Date	1/30/17	1/30/17	1/30/17
			mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		10000	240	288

February 09, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: SPUDS 25 FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/02/17 15:00.

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 accredited 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

Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	02/02/2017	Sampling Date:	01/30/2017
Reported:	02/09/2017	Sampling Type:	Soil
Project Name:	SPUDS 25 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	EDDY COUNTY, NM		

Sample ID: SP1 @ SURFACE (H700257-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	18400	16.0	02/06/2017	ND	432	108	400	0.00	

Sample ID: SP1 @ 1' (H700257-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	02/06/2017	ND	432	108	400	0.00	

Sample ID: SP1 @ 2' (H700257-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	02/06/2017	ND	432	108	400	0.00	

Sample ID: SP1 @ 3' (H700257-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/06/2017	ND	432	108	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	02/02/2017	Sampling Date:	01/30/2017
Reported:	02/09/2017	Sampling Type:	Soil
Project Name:	SPUDS 25 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	EDDY COUNTY, NM		

Sample ID: SP2 @ SURFACE (H700257-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	34000	16.0	02/06/2017	ND	432	108	400	0.00	

Sample ID: SP2 @ 1' (H700257-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	768	16.0	02/06/2017	ND	432	108	400	0.00	

Sample ID: SP2 @ 2' (H700257-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	02/06/2017	ND	432	108	400	0.00	

Sample ID: SP2 @ 3' (H700257-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1070	16.0	02/06/2017	ND	432	108	400	0.00	

Sample ID: SP2 @ 4' (H700257-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	02/06/2017	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	02/02/2017	Sampling Date:	01/30/2017
Reported:	02/09/2017	Sampling Type:	Soil
Project Name:	SPUDS 25 FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	EDDY COUNTY, NM		

Sample ID: SP3 @ SURFACE (H700257-10)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10000	16.0	02/06/2017	ND	432	108	400	0.00	

Sample ID: SP3 @ 1' (H700257-11)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	02/06/2017	ND	416	104	400	0.00	

Sample ID: SP3 @ 2' (H700257-12)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	02/06/2017	ND	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- 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, Lab Director/Quality Manager



CARDINAL LABORATORIES
 101 East Marland, Hobbs, NM 88240
 (505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: BBC International, Inc.		P.O. #:			
Project Manager: Cliff Brunson		Company: Oxy			
Address: P.O. Box 805		Attn: Cassidy Williams			
City: Hobbs		Address:			
State: NM Zip: 88241		City:			
Phone #: 575-397-6388		State:			
Fax #: 575-397-0397		Zip:			
Project #: Project Owner: Oxy		Phone #:			
Project Name: Spuds 25 Federal Battery		Fax #:			
Project Location: Eddy County, NM		PRESERV:			
Sampler Name: Price Brunson		OTHER:			
FOR LAB USE ONLY		SAMPLING			
Lab I.D. Sample I.D.		DATE		TIME	
HT002571		1/30/17		10:00 AM	
01 SP1 @ SURFACE		✓		✓	
02 SP1 @ 1'		✓		✓	
03 SP1 @ 2'		✓		✓	
04 SP1 @ 3'		✓		✓	
05 SP2 @ SURFACE		✓		✓	
06 SP2 @ 1'		✓		✓	
07 SP2 @ 2'		✓		✓	
08 SP2 @ 3'		✓		✓	
09 SP2 @ 4'		✓		✓	
10 SP3 @ SURFACE		✓		✓	

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Relinquished By: *Price Brunson*

Received By: *Brett Young*

Date: *1/30/17* Time: *9:00 AM*

Relinquished By: *Price Brunson* Received By: *Brett Young*

Date: *1/30/17* Time: *9:00 AM*

Delivered By: (Circle One) *-2.5°*

Sampler - UPS - Bus - Other: *BC*

Sample Condition: Cool Intact

Checked By: (Initials) *BC*

Phone Result: Yes No Add'l Phone #:

Fax Result: Yes No Add'l Fax #:

REMARKS:



CARDINAL LABORATORIES
 101 East Marland, Hobbs, NM 88240
 (505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2/2/17

Company Name: BBC International, Inc. **BILL TO** ANALYSIS REQUEST

Project Manager: Cliff Brunson P.O. #:
 Address: P.O. Box 805 Company: *Oxy*
 City: Hobbs State: NM zip: 88241 Attn: *Craig Summers*
 Phone #: 575-397-6388 Fax #: 575-397-0397 Address:
 Project #: Project Owner: Oxy City:
 Project Name: Spuds 25 Federal Battery State: Zip:
 Project Location: Eddy County, NM Phone #:
 Sampler Name: Price Brunson Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	CHECKED BY:
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			
<i>H100257-</i>												
<i>11</i>	<i>SP3 @ 1'</i>		<i>6</i>			<input checked="" type="checkbox"/>			<i>1/30/17</i>	<i>2:40 PM</i>	<i>BT</i>	
<i>12</i>	<i>SP3 @ 2'</i>		<i>6</i>			<input checked="" type="checkbox"/>			<i>1/30/17</i>	<i>3:10 PM</i>	<i>BT</i>	

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Relinquished By: *Cliff Brunson* Date: *1/30/17* Received By: *Brittany Felder*
 Time: *5:30 PM*
 Relinquished By: Date: Received By: Time:

Delivered By: (Circle One) UPS Bus Other: *-2.50*
 Sample Condition: Cool Intact Yes No
 CHECKED BY: (Initials) *BT*

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

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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 August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company	Oxy Permian Ltd.	Contact	Casey Summers
Address	PO Box 4294; Houston, TX 77210	Telephone No.	(575) 513-8289
Facility Name	Spuds 25 Federal Battery	Facility Type	Battery
Surface Owner	BLM	Mineral Owner	
		API No.	30-015-29882

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	25	24S	29E					Eddy County, NM

Latitude N 32.18353° Longitude W 103.94360°

NATURE OF RELEASE

Type of Release	Produced water	Volume of Release	20 bbls	Volume Recovered	15 bbls
Source of Release	3 rd Party trucking company struck a tank causing it to spill	Date and Hour of Occurrence	01/10/2017	Date and Hour of Discovery	
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher, Crystal Weaver- NMOCD; Shelly Tucker- BLM		
By Whom?	Kathy Purvis @ BBC International	Date and Hour	01/12/2017 @ 11:36 am		
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 third party trucking company struck a tank causing it to spill 20 bbls of produced water. A vacuum truck recovered 15 bbls of produced water.

Describe Area Affected and Cleanup Action Taken.*

The affected area is approximately 75' x 150' on location. Remediation will be completed in accordance with a remediation plan approved by both NMOCD and the BLM.

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:	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Casey Summers	Approved by Environmental Specialist:		
Title: NM Environmental Advisor	Approval Date:	Expiration Date:	
E-mail Address: Casey_Summers@oxy.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 1-25-17	Phone: (575) 513-8289		

* Attach Additional Sheets If Necessary