

Closure Report

Site Description

Site Name:	McKittrick Hills CTB
Company:	Oxy Permian
Legal Description:	U/L A, Section 14, T22S, R24E
County:	Eddy County, NM
GPS Coordinates:	N 32.39762° W-104.46145°

Release Data

Date of Release:	01/07/2017
Type of Release:	Produced water
Source of Release:	Faulty 3" ball valve on separator
Volume of Release:	8 bbls
Volume Recovered:	0 bbls

Remediation Specifications

Remediation Parameters:	Excavate the entire spill to a depth of 6 inches. Backfill the site with clean soil.	
Remediation Activities:	March 2017	
Plan Sent to OCD:	02/07/2017	Email from Cliff Brunson to Mike Bratcher
OCD Approval of Plan:	02/15/2017	Email from Mike Bratcher to Cliff Brunson
Plan Sent to BLM:	02/07/2017	Email from Cliff Brunson to Shelly Tucker
BLM Approval of Plan:	02/14/2017	Email from Shelly Tucker to Cliff Brunson

Supporting Documentation

Initial C-141	Signed 01/19/2017
Final C-141	Upon completion
Site Diagram	January 2017
Groundwater Plot	100'-125'
TOPO Maps	January 2017
Lab Summary	01/25/2017
Lab Analysis	01/25/2017
Correspondence	Request and approval of remediation plan via email

Request for Closure

Based on the completion of the remediation plan, Oxy Permian requests closure approval from NMOCD.

Wade Dittrich, Environmental Specialists, Oxy Permian

02/20/2018

**NM OIL CONSERVATION
ARTESIA DISTRICT**

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

JAN 19 2017

Form C-141
Revised August 8, 2011

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

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

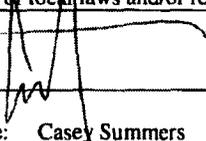
Release Notification and Corrective Action	
#NAB1431434521 NAB1702442641	OPERATOR <input checked="" type="checkbox"/> Initial Report <input type="checkbox"/> Final Report
Name of Company Oxy Permian Ltd. <i>192463</i>	Contact Casey Summers
Address PO Box 4294; Houston, TX 77210	Telephone No. (575) 513-8289
Facility Name McKittrick Hills Central Tank Battery	Facility Type Battery
Surface Owner BLM	Mineral Owner
API No. 30-015-21010	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	14	22S	24E					Eddy County, NM

Latitude N 32.39762° Longitude W 104.46145°

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 8 bbls	Volume Recovered 0 bbls
Source of Release Faulty 3" ball valve on separator	Date and Hour of Occurrence 01/07/2017	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 01/10/2017 @ 10:01 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 faulty ball valve on the separator caused a leak of 8 bbls of produced water. No fluids were recovered and the valve was returned to service.		
Describe Area Affected and Cleanup Action Taken.*		
The affected area is approximately 80' x 55' 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: 	OIL CONSERVATION DIVISION	
Printed Name: Casey Summers	Signed By:  Approved by Environmental Specialist:	
Title: NM Environmental Advisor	Approval Date: 1/23/17	Expiration Date: N/A
E-mail Address: Casey.Summers@oxy.com	Conditions of Approval: <i>See attached</i>	Attached <input type="checkbox"/>
Date: 1-19-17 Phone: (575) 513-8289		

* Attach Additional Sheets If Necessary

2RP-4087

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 1/19/17 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number APP-4087 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in ARTESIA on or before 2/17/17. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.

- Composite sampling is not generally allowed.

- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold

OCD Environmental Bureau Chief

1220 South St. Francis Drive

Santa Fe, New Mexico 87505

505-476-3465

jim.griswold@state.nm.us

Bratcher, Mike, EMNRD

From: Kathy Purvis <kathy@bbcinternational.com>
Sent: Thursday, January 19, 2017 4:07 PM
To: Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD; stucker@blm.gov
Cc: Casey_Summers@oxy.com; Jennifer_Hudgens@oxy.com;
cbrunson@bbcinternational.com; kswinney@bbcinternational.com;
jgilkey@bbcinternational.com
Subject: Initial C-141, McKittrick Hills CTB
Attachments: Initial C-141, McKittrick Hills CTB.pdf

Attached is the initial C-141 for a leak that occurred at the McKittrick Hills CTB on 01/07/2017 in Eddy County, NM. Receipt notification and the RP number via email are greatly appreciated.

Kathy Purvis

BBC International, Inc.
1324 W. Marland Blvd.
Hobbs, NM 88240
Business: (575) 397-6388
Cell: (575) 441-8619
kathy@bbcinternational.com

Bratcher, Mike, EMNRD

From: Kathy Purvis <kathy@bbcinternational.com>
Sent: Tuesday, January 10, 2017 10:01 AM
To: Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD; stucker@blm.gov
Cc: Casey_Summers@oxy.com; Jennifer_Hudgens@oxy.com;
cbrunson@bbcinternational.com; kswinney@bbcinternational.com;
jgilkey@bbcinternational.com; kathy@bbcinternational.com
Subject: McKittrick Hills CTB

This is to inform you that Oxy Permian had a release at the McKittrick Hills CTB on 01/07/2017. Oxy released 8 bbls of produced water due to a faulty 3" ball valve on the separator. The preliminary report indicates that the leak measure approximately 100' x 100' on location within the facility. It is unknown if recovery efforts were made at this time. The release is located in the NE ¼ of Section 14, T22S, R24E in Eddy County, NM. Driving directions: From Carlsbad, go N on US285 to MM44, turn L on Water Hole Rd 2MI to Big Walt sign on L, take 1st R 0.5MI to leak location API#30-015-21010 GPS coordinates: N 32.39774 W 104.46110

Kathy Purvis

BBC International, Inc.
1324 W. Marland Blvd.
Hobbs, NM 88240
Business: (575) 397-6388
Cell: (575) 441-8619
kathy@bbcinternational.com

Bratcher, Mike, EMNRD

From: Tucker, Shelly <stucker@blm.gov>
Sent: Tuesday, January 10, 2017 10:04 AM
To: Kathy Purvis
Cc: Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD; Casey Summers; Jennifer_Hudgens@oxy.com; Cliff Brunson; Ken Swinney; Jennifer Gilkey
Subject: Re: McKittrick Hills CTB

Thank you for the notification.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker

Environmental Protection Specialist
O&G Spill/Release Coordinator

Bureau of Land Management
620 E. Greene St
Carlsbad, NM 88220

575.234.5905 - Direct
575.361.0084 - Cellular
575.234.6235 - Emergency Spill Number

stucker@blm.gov

The **BLM acceptance/approval does not** relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

Confidentiality Warning: This message along with any attachments are intended only for use of the individual or entity to which it is addressed and may contain information that is privileged or confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately.

On Tue, Jan 10, 2017 at 10:01 AM, Kathy Purvis <kathy@bbcinternational.com> wrote:

This is to inform you that Oxy Permian had a release at the McKittrick Hills CTB on 01/07/2017. Oxy released 8 bbls of produced water due to a faulty 3" ball valve on the separator. The preliminary report indicates that the leak measure approximately 100' x 100' on location within the facility. It is unknown if recovery efforts were made at this time. The release is located in the NE ¼ of Section 14, T22S, R24E in Eddy County, NM. Driving directions: From Carlsbad, go N on US285 to MM44, turn L on Water Hole Rd 2MI to

Big Walt sign on L, take 1st R 0.5MI to leak location API#30-015-21010 GPS coordinates: N 32.39774 W 104.46110

Kathy Purvis

BBC International, Inc.

1324 W. Marland Blvd.

Hobbs, NM 88240

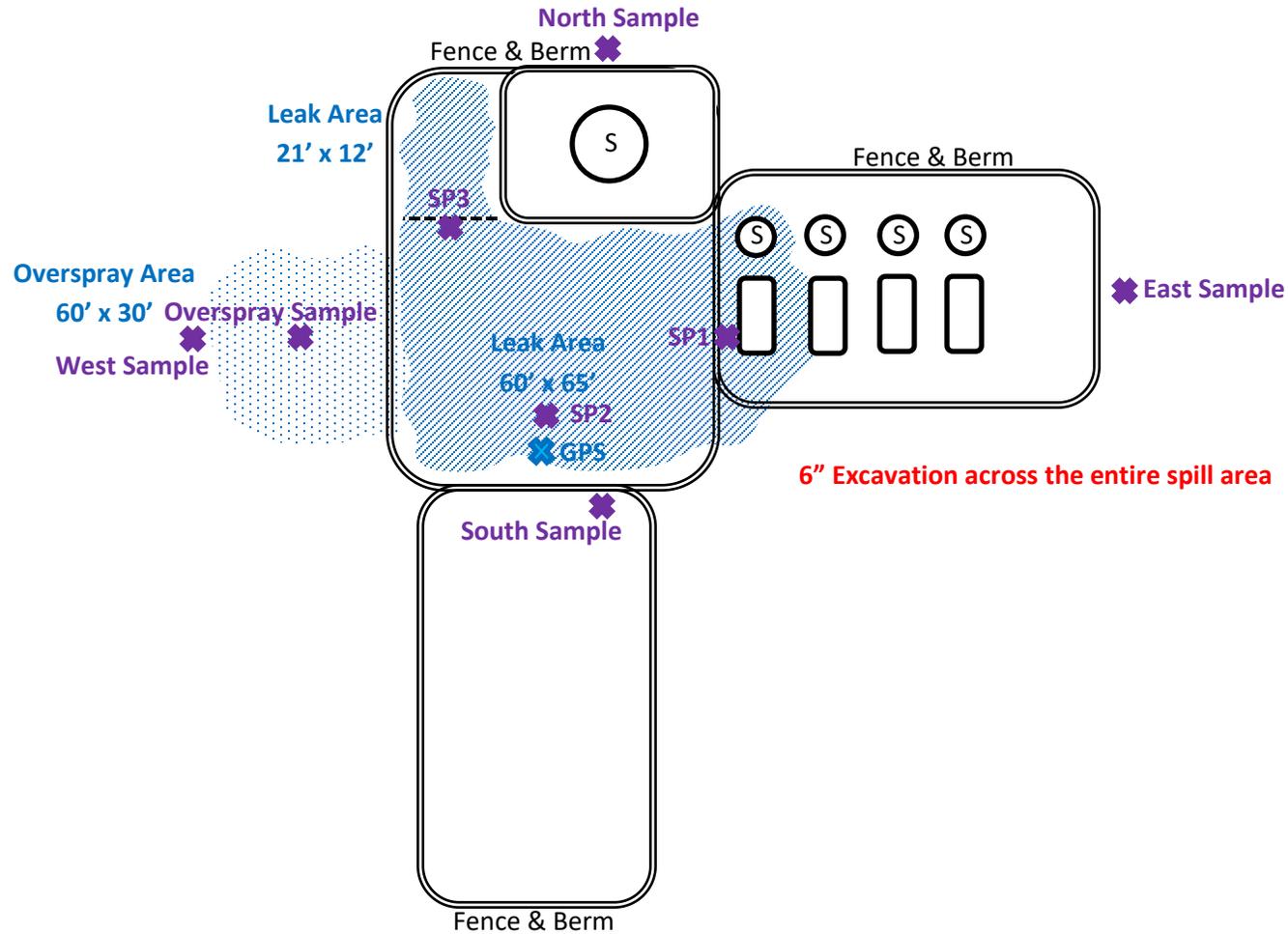
Business: (575) 397-6388

Cell: (575) 441-8619

kathy@bbcinternational.com



Oxy
McKittrick Hills CTB (1/7/17)



U/L A , Section 14, T22S, R24E

Eddy County, NM

N 32.39762° W 104.46145°

API# 30-015-21010

BBC International, Inc.	
Oxy	
McKittrick Hills CTB	
Date: 01/19/2017	DRWG by: K. Purvis
NOT TO SCALE	File: Oxy 2017



Groundwater Plot

Oxy McKittrick Hills CTB

County
Eddy

Unit Letter
A

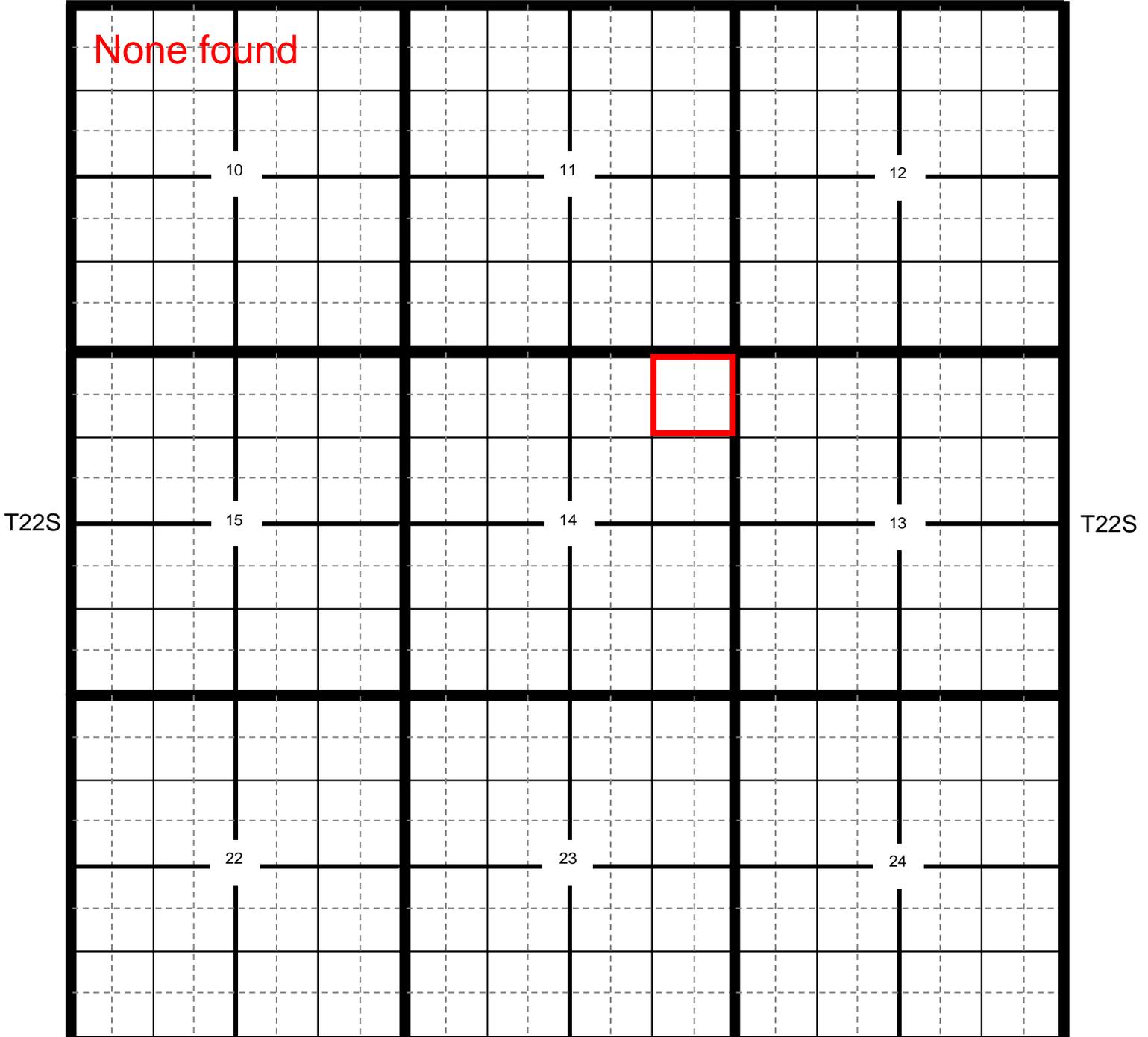
Section
14

Township
22S

Range
24E

Trend Map 100'-125'

R24E



📍 Location

● OCD

● USGS

● SEO

● All Databases

Oxy McKittrick Hills CTB

County Eddy Unit Letter A Section 14 Township 22S Range 24E

Trend Map 100'-125'

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

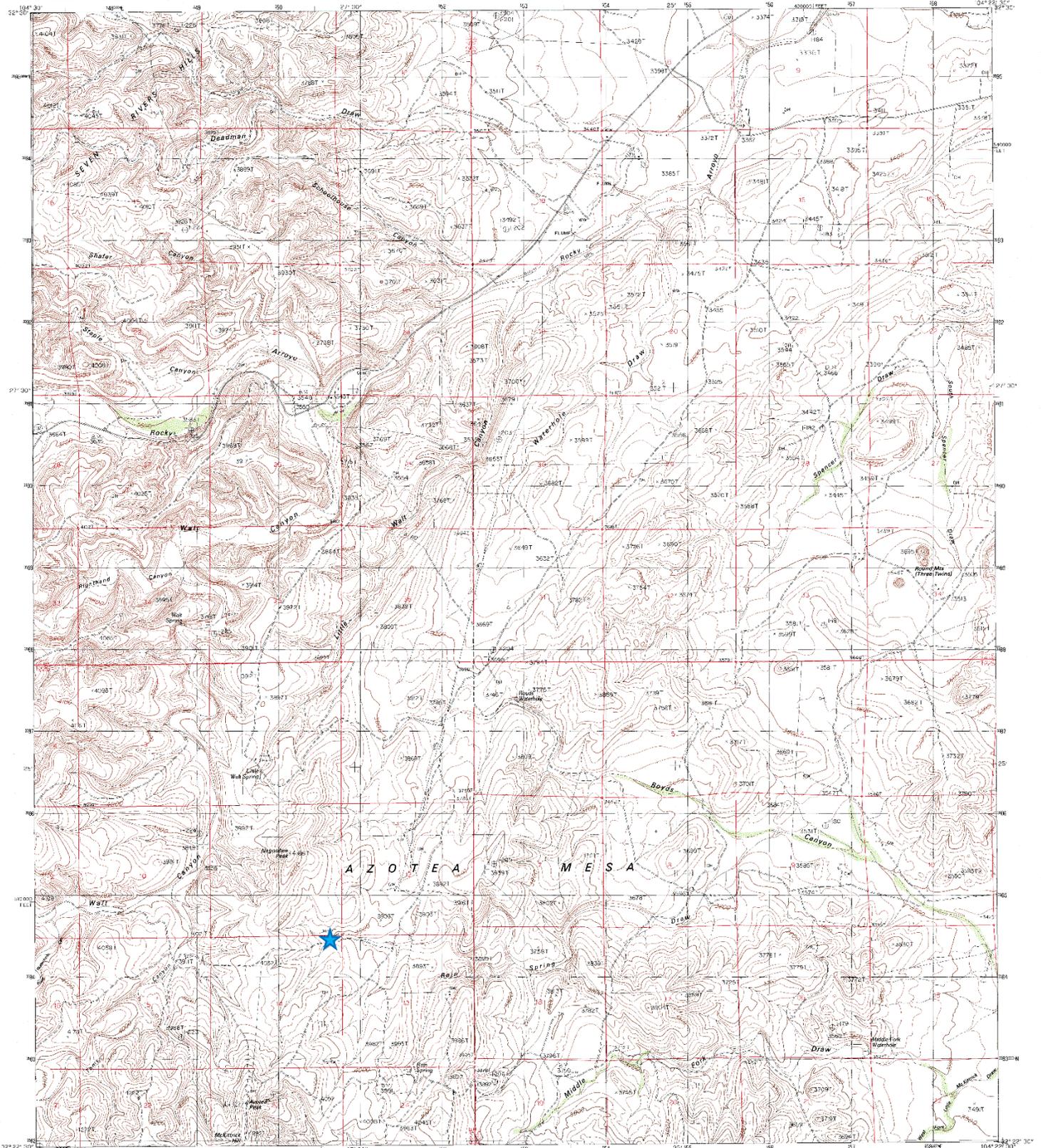
4

Oxy

McKittrick Hills CTB

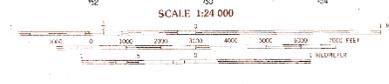
AZOTEA PEAK QUADRANGLE
NEW MEXICO-EDDY CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



PRODUCED BY THE UNITED STATES GEOLOGICAL SURVEY
CONTROL BY
COMPILED FROM AERIAL PHOTOGRAPHS TAKEN: 1977
FIELD CHECKED: 1978 MAP EDITED: 1986
DESIGNED BY: TRANSFORMERS INDICATORS
DRAWN BY: TRANSFORMERS INDICATORS
REPRODUCTION OF STATE GRID TICKS: NEW MEXICO, EAST ZONE
UTM GRID DECLINATION: 1983 EAST
ONE MAGNETIC NORTH DECLINATION OF EAST
VERTICAL DATUM: NATIONAL GEODETIC VERTICAL DATUM OF 1988
BOUNDARIES, STATES: NATIONAL AMERICAN DATUM OF 1983
To place on the predicted North American Datum of 1983, move
the projection lines as shown by dashed corner ticks
0.9 meters north and 0.7 meters east
There may be private obstructions within the boundaries of any
Federal and State Reservations shown on this map

PROVISIONAL MAP
Produced from original
manuscript drawings. Informa-
tion shown as of date of
field check.



ROAD LEGEND

	Improved Road
	Unimproved Road
	Trail
	Interstate Route
	U.S. Route
	State Route

QUADRANGLE SELECTION

1	2	3	1. Pecos Bench
4	5	6	2. Snow Flies
7	8	9	3. San McKittrick Bench
10	11	12	4. Middle Draw
13	14	15	5. Central Mesa
16	17	18	6. Southern Draw
19	20	21	7. Tachon Cove

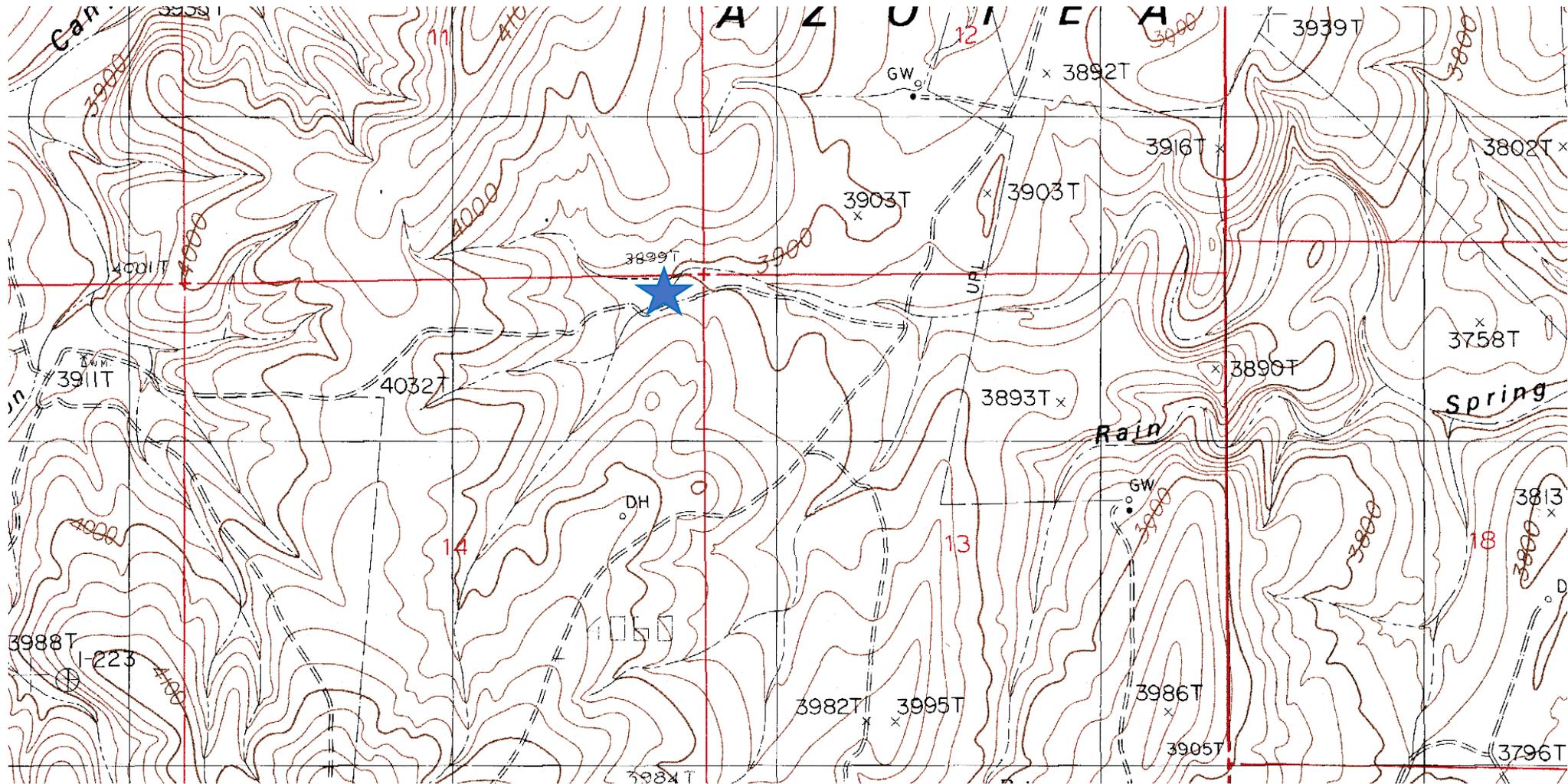
ATOMIC NUMBER 13 QUADRANGLE NAMES

AZOTEA PEAK, NEW MEXICO
PROVISIONAL EDITION 1985
32104-D4-TF-024

THIS MAP COMPLETS WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225
OR RESTON, VIRGINIA 22092

Oxy

McKittrick Hills CTB



**Laboratory Analytical Results Summary
McKittrick Hills CTB**

		Sample	SP1 @ SURFACE	SP1 @ 1'
Analyte	Method	Date	1/25/17	1/25/17
			mg/Kg	mg/Kg
Benzene	BTEX 8021B		n/a	<0.050
Toluene	BTEX 8021B		n/a	<0.050
Ethylbenzene	BTEX 8021B		n/a	<0.050
Total Xylenes	BTEX 8021B		n/a	<0.150
Total BTEX	BTEX 8021B		n/a	<0.300
Chloride	SM4500Cl-B		128	48
GRO	TPH 8015M		n/a	<10.0
DRO	TPH 8015M		n/a	2900

		Sample	SP2 @ SURFACE	SP2 @ 1'
Analyte	Method	Date	1/25/17	1/25/17
			mg/Kg	mg/Kg
Chloride	SM4500Cl-B		112	48

		Sample	SP3 @ SURFACE	SP3 @ 1'
Analyte	Method	Date	1/25/17	1/25/17
			mg/Kg	mg/Kg
Benzene	BTEX 8021B		n/a	<0.050
Toluene	BTEX 8021B		n/a	<0.050
Ethylbenzene	BTEX 8021B		n/a	<0.050
Total Xylenes	BTEX 8021B		n/a	<0.150
Total BTEX	BTEX 8021B		n/a	<0.300
Chloride	SM4500Cl-B		112	48
GRO	TPH 8015M		n/a	<10.0
DRO	TPH 8015M		n/a	2660

		Sample	OVERSPRAY @ SURFACE
Analyte	Method	Date	1/25/17
			mg/Kg
Chloride	SM4500Cl-B		16

		Sample	NORTH @ SURFACE
Analyte	Method	Date	1/25/17
			mg/Kg
Chloride	SM4500Cl-B		<16.0

		Sample	EAST @ SURFACE
Analyte	Method	Date	1/25/17
			mg/Kg
Chloride	SM4500Cl-B		<16.0

		Sample	SOUTH @ SURFACE
Analyte	Method	Date	1/25/17
			mg/Kg
Chloride	SM4500Cl-B		<16.0

		Sample	WEST @ SURFACE
Analyte	Method	Date	1/25/17
			mg/Kg
Chloride	SM4500Cl-B		<16.0



February 01, 2017

Cliff Brunson
BBC International, Inc.
P.O. Box 805
Hobbs, NM 88241

RE: MCKITTRICK HILLS CTB

Enclosed are the results of analyses for samples received by the laboratory on 01/26/17 17:00.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style.

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:	01/26/2017	Sampling Date:	01/25/2017
Reported:	02/01/2017	Sampling Type:	Soil
Project Name:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 1 @ SURFACE (H700204-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	01/31/2017	ND	432	108	400	0.00	

Sample ID: SP 1 @ 1' (H700204-02)

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	02/01/2017	ND	1.98	98.8	2.00	0.451	
Toluene*	<0.050	0.050	02/01/2017	ND	2.01	100	2.00	0.376	
Ethylbenzene*	<0.050	0.050	02/01/2017	ND	2.06	103	2.00	0.437	
Total Xylenes*	<0.150	0.150	02/01/2017	ND	5.86	97.7	6.00	0.156	
Total BTEX	<0.300	0.300	02/01/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	01/31/2017	ND	432	108	400	0.00	

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	01/30/2017	ND	188	93.8	200	3.89	
DRO >C10-C28	2900	10.0	01/30/2017	ND	223	111	200	4.73	

Surrogate: 1-Chlorooctane 85.0 % 35-147

Surrogate: 1-Chlorooctadecane 135 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



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:	01/26/2017	Sampling Date:	01/25/2017
Reported:	02/01/2017	Sampling Type:	Soil
Project Name:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 2 @ SURFACE (H700204-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	01/31/2017	ND	432	108	400	0.00	

Sample ID: SP 2 @ 1' (H700204-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	01/31/2017	ND	432	108	400	0.00	

Sample ID: SP 3 @ SURFACE (H700204-05)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	01/31/2017	ND	432	108	400	0.00	

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*=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:	01/26/2017	Sampling Date:	01/25/2017
Reported:	02/01/2017	Sampling Type:	Soil
Project Name:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 3 @ 1' (H700204-06)

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	02/01/2017	ND	1.98	98.8	2.00	0.451	
Toluene*	<0.050	0.050	02/01/2017	ND	2.01	100	2.00	0.376	
Ethylbenzene*	<0.050	0.050	02/01/2017	ND	2.06	103	2.00	0.437	
Total Xylenes*	<0.150	0.150	02/01/2017	ND	5.86	97.7	6.00	0.156	
Total BTEX	<0.300	0.300	02/01/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	01/31/2017	ND	432	108	400	0.00	

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	01/30/2017	ND	188	93.8	200	3.89	
DRO >C10-C28	2660	10.0	01/30/2017	ND	223	111	200	4.73	

Surrogate: 1-Chlorooctane 94.4 % 35-147

Surrogate: 1-Chlorooctadecane 137 % 28-171

Sample ID: OVERSPRAY @ SURFACE (H700204-07)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/31/2017	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:	01/26/2017	Sampling Date:	01/25/2017
Reported:	02/01/2017	Sampling Type:	Soil
Project Name:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	EDDY COUNTY, NM		

Sample ID: NORTH SAMPLE @ SURFACE (H700204-08)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/31/2017	ND	432	108	400	0.00	

Sample ID: EAST SAMPLE @ SURFACE (H700204-09)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/31/2017	ND	432	108	400	0.00	

Sample ID: SOUTH SAMPLE @ SURFACE (H700204-10)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/31/2017	ND	432	108	400	0.00	

Sample ID: WEST SAMPLE @ SURFACE (H700204-11)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/31/2017	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- 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





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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1082

BILL TO

ANALYSIS REQUEST

Company Name: BBC International, Inc. P.O. #:
 Project Manager: Cliff Brunson Company: Oxy
 Address: P.O. Box 805 State: NM Zip: 88241 Attn: Casey Summers
 City: Hobbs Address: 575-397-0397
 Phone #: 575-397-6388 Fax #: 575-397-0397 City: Project Owner: Oxy
 Project #: Project Name: MCKITTRICK HILLS CTB State: Zip:
 Project Location: EDDY COUNTY, NM Phone #: Fax #:
 Sampler Name: Roger Hernandez

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	CHECKED BY:	REMARKS:
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :				
11700804-													
01	SP1 @ SURFACE		1			✓				1/25/17	10:00 AM	✓	✓
02	SP1 @ 1'		1			✓				1/25/17	10:20 AM	✓	✓
03	SP2 @ SURFACE		1			✓				1/25/17	10:40 AM	✓	✓
04	SP2 @ 1'		1			✓				1/25/17	11:20 AM	✓	✓
05	SP3 @ SURFACE		1			✓				1/25/17	12:00 PM	✓	✓
06	SP3 @ 1'		1			✓				1/25/17	12:30 PM	✓	✓
07	OVERSPRAY @ SURFACE		1			✓				1/25/17	1:00 PM	✓	✓
08	NORTH SAMPLE @ SURFACE		1			✓				1/25/17	1:10 PM	✓	✓
09	EAST SAMPLE @ SURFACE		1			✓				1/25/17	1:15 PM	✓	✓
10	SOUTH SAMPLE @ SURFACE		1			✓				1/25/17	1:20 PM	✓	✓

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Relinquished By: *Roger Hernandez* Date: 1/25/17 Received By: *Casey Summers*
 Relinquished By: *Casey Summers* Date: 1/26/17 Received By: *Casey Summers*
 Delivered By: (Circle One) UPS Bus Other: *-59°C*
 Sample Condition: Intact Damaged
 Checked By: *Casey Summers* (Initials) *CS*
 Phone Result: Yes No Add'l Phone #:
 Fax Result: Yes No Add'l Fax #:
 REMARKS:

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

From: Bratcher, Mike, EMNRD
To: [Cliff Brunson](#)
Cc: [Weaver, Crystal, EMNRD](#); [Casey Summers](#); [Jennifer Hudgens](#); [Ken Swinney](#); [Jennifer Gilkey](#); [Kathy Purvis](#); [Tucker, Shelly](#)
Subject: RE: OXY - McKittrick Hills CTB (2RP-4087) - Remediation Plan
Date: Wednesday, February 15, 2017 1:09:39 PM

RE: OXY USA * McKittrick Hills CTB * **2RP-4087** * DOR: 1/7/17

Cliff,

Your proposal for remediation of the above referenced release is approved. Please advise once remedial activities have been scheduled. Federal sites require BLM approval.

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notification, please contact me.

Mike Bratcher
NMOCD District 2
811 S. First St.
Artesia NM 88210
575-748-1283 Ext 108
mike.bratcher@state.nm.us

From: Cliff Brunson [mailto:cbrunson@bbcinternational.com]
Sent: Tuesday, February 7, 2017 3:14 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Cc: Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Casey Summers <Casey_Summers@oxy.com>; Jennifer Hudgens <jennifer_hudgens@oxy.com>; Ken Swinney <kswinney@bbcinternational.com>; Jennifer Gilkey <jgilkey@bbcinternational.com>; Kathy Purvis <kathy@bbcinternational.com>
Subject: OXY - McKittrick Hills CTB (2RP-4087) - Remediation Plan

Mike,

This e-mail is to confirm our discussion concerning the remediation plan for the OXY McKittrick Hills CTB release. I have attached the information packet that we used in our discussion with a cover page describing the remediation plan that we agreed upon.

If you would please reply via e-mail with your concurrence on this plan, it would be greatly appreciated.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS
President
BBC International, Inc.
World-Wide Environmental Specialists
Mailing Address:
P. O. Box 805
Hobbs, NM 88241-0805 USA
Shipping Address:
1324 W. Marland St.
Hobbs, NM 88240 USA
Phone: (575) 397-6388
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E-Mail: cbrunson@bbcinternational.com



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From: Tucker, Shelly
To: [Cliff Brunson](#)
Cc: [Casey Summers](#); [Jennifer Hudgens](#); [Ken Swinney](#); [Jennifer Gilkey](#); [Kathy Purvis](#)
Subject: Re: OXY - McKittrick Hills CTB - Remediation Plan
Date: Tuesday, February 14, 2017 2:46:34 PM

BLM concurs with the NMOCD approval.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker

Environmental Protection Specialist
O&G Spill/Release Coordinator

Bureau of Land Management
620 E. Greene St
Carlsbad, NM 88220

575.234.5905 - Direct
575.361.0084 - Cellular
575.234.6235 - Emergency Spill Number

stucker@blm.gov

The **BLM acceptance/approval does not** relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

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On Tue, Feb 7, 2017 at 3:30 PM, Cliff Brunson <cbrunson@bbcinternational.com> wrote:

Shelly,

I have attached a remediation plan for the OXY McKittrick Hills CTB release. This plan has been approved by Mike Bratcher of the NMOCD. OXY is requesting the BLM's approval of this plan as well. Upon your review of the materials, it would be appreciated if

you would respond via email with the BLM's approval.

If you have any questions, please let me know.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS

President

BBC International, Inc.

World-Wide Environmental Specialists

Mailing Address:

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Hobbs, NM 88241-0805 USA

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