ENSOLUM

February 10, 2023

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request
Rojo 34-27 Facility
Incident Number nAPP2130938365
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of BTA Oil Producers, LLC (BTA), has prepared this *Closure Request* to document assessment, delineation, and soil sampling activities performed at the Rojo 34-27 Facility (Site). The purpose of the Site assessment, delineation, and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of crude oil onto the well pad at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, BTA is submitting this *Closure Request*, describing site assessment and delineation activities that have occurred and requesting closure for Incident Number nAPP2130938365.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit E, Section 34, Township 25 South, Range 33 East, in Lea County, New Mexico (32.08933°, -103.56697°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On November 4, 2021, a broken fitting on a scrubber resulted in the release of approximately 5 barrels (bbls) of crude oil onto the surface of the well pad. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 3 bbls of crude oil were recovered. BTA reported the release to the New Mexico Oil Conservation Division (NMOCD) on November 5, 2021 and submitted a Release Notification Form C-141 (Form C-141). The release was assigned Incident Number nAPP2130938365.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicablity of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well C-02313, located approximately 1.17 miles northeast of the Site. The groundwater well has a reported depth to groundwater of 110 feet bgs and a total depth of 150 feet bgs. Ground surface elevation at the groundwater well location is 3,323 feet above mean sea level (amsl), which is approximately 8 feet lower

in elevation than the Site. All wells used for depth to water determination are depicted on Figure 1 and the referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent riverine, located approximately 12,438 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH) - gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

Between October 24, 2022 and November 7, 2022, Ensolum personel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Six assessment soil samples (SS01 through SS06) were collected within and around the release extent at a depth of approximately 0.5 feet bgs to assess surficial soil associated with the release. The preliminary soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method SM4500.

Laboratory analytical results for soil samples SS01 through SS06, collected within and around the release extent, indicated all COC concentrations were compliant with the Closure Criteria; however, additional vertical delineation activities within the release extent still appeared to be warranted.

DELINEATION ACTIVITIES AND ANALYTICAL RESULTS

On November 21, 2022, Ensolum personnel were at the Site to perform delineation activities. Two boreholes (SS01A and SS02A) were advanced via hand-auger at the respective locations of assessment soil samples SS01 and SS02. One discrete delineation soil sample was collected in each

location, SS01A and SS02A, from the boreholes at a depth of 1-foot bgs. Soil from the delineation samples was field screened for VOCs and chloride. The boreholes were backfilled with soil removed. The delineation soil sample locations are depicted in Figure 2. A photographic log is included in Appendix B.

Laboratory analytical results for delineation soil samples SS01A and SS02A, indicated all COC concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete analytical reports are included as Appendix C.

CLOSURE REQUEST

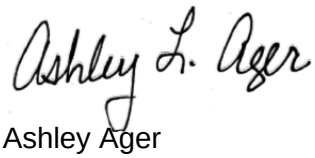
Site assessment and delineation activities were conducted at the Site to address the November 4, 2021 crude oil release. Laboratory analytical results for preliminary and delineation soil samples, collected from the on-pad release, indicated all COC concentrations were compliant with the Site Closure Criteria and met the strictest Closure Criteria. Based on the soil sample analytical results, no further remediation appears to be required.

Depth to groundwater has been estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. BTA believes these remedial actions are protective of human health, the environment, and groundwater. As such, BTA respectfully requests closure for Incident Number nAPP2130938365. The Form C-141 is included as Appendix E.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC

Hadlie Green
Staff Geologist



Ashley Ager
Principal

cc: Bob Hall, BTA Oil Producers, LLC
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Soil Sample Locations Map
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix D	Final C-141

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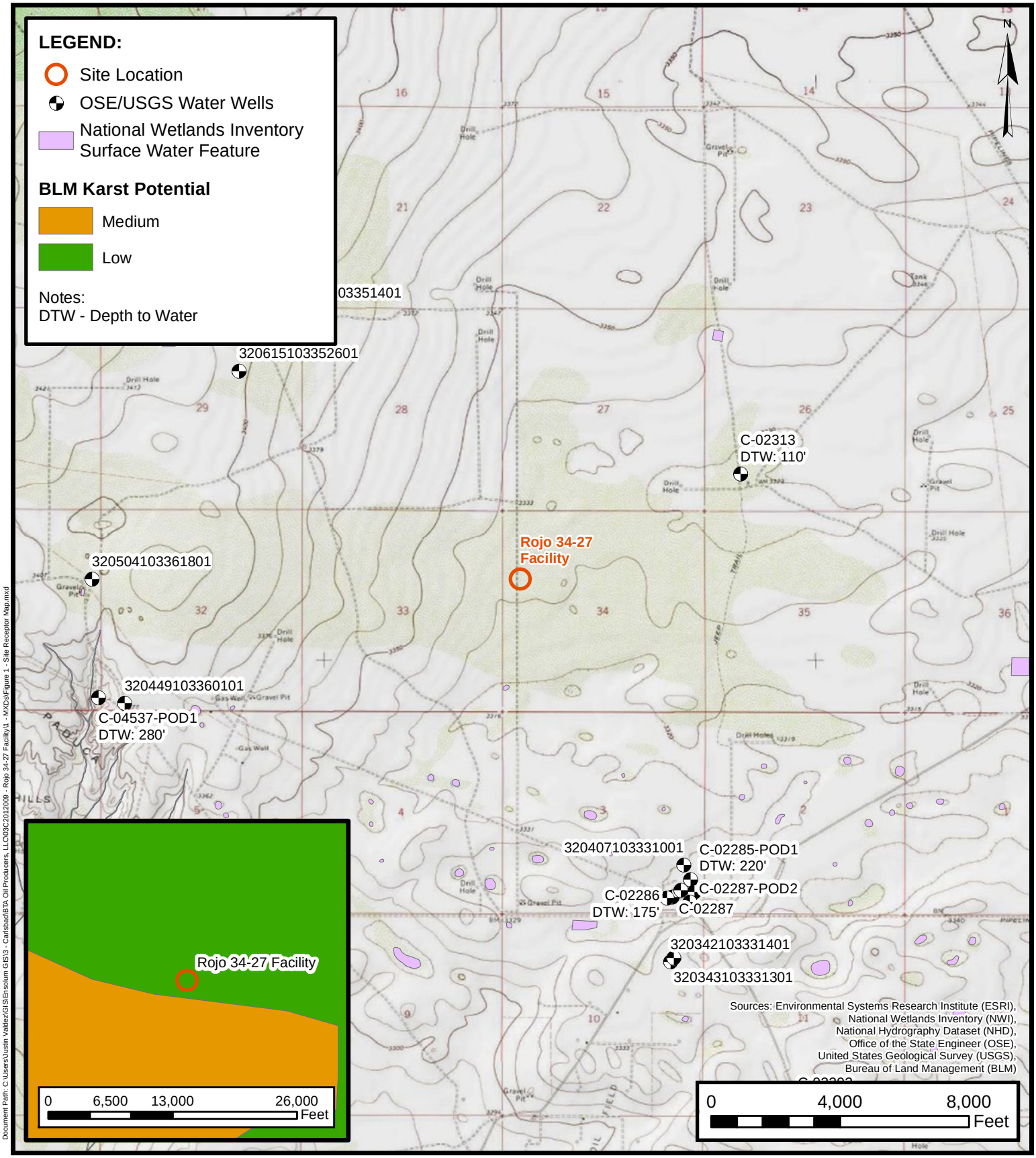
FIGURES



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\3 - Carlsbad\BTA Oil Producers, LLC\03C2012009 - Rojo 34-27 Facility\1 - MXDs\Figure 1 - Site Receptor Map.mxd

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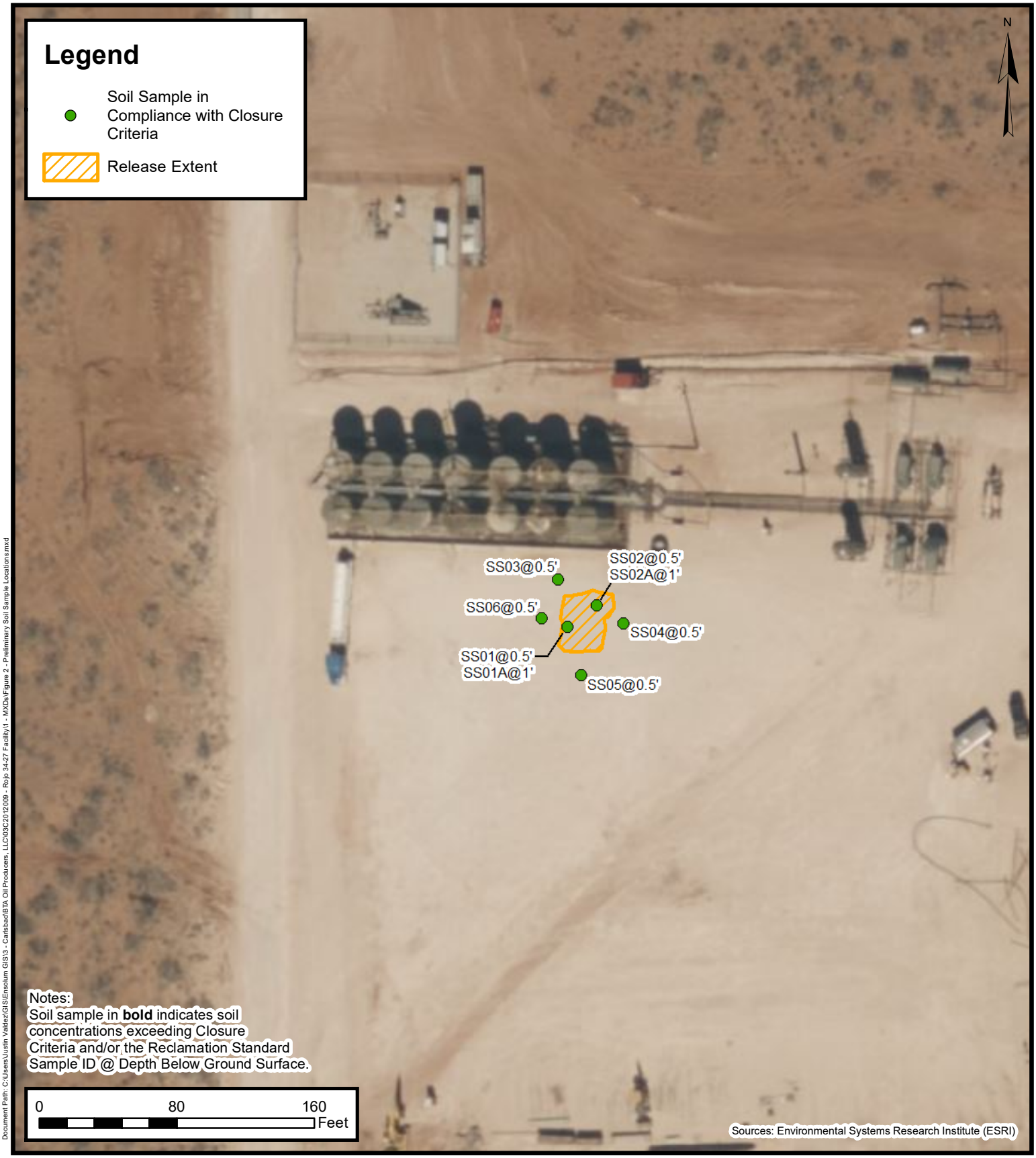
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

BTA Oil Producers, LLC
Rojo 34-27 Facility
nAPP2130938365
Unit E, Sec 34, T25S, R33E
Lea County, New Mexico

FIGURE
1



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\3 - Carlsbad\BTA Oil Producers, LLC\03C2012009 - Rojo 34-27 Facility\1 - MXDs\Figure 2 - Preliminary Soil Sample Locations.mxd

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Environmental, Engineering and Hydrogeologic Consultants

Soil Sample Locations

BTA Oil Producers, LLC
Rojo 34-27 Facility
nAPP2130938365
Unit E, Sec 34, T25S, R33E
Lea County, New Mexico

FIGURE
2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Rojo 34-27 Facility
BTA Oil Producers, LLC
Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Soil Samples										
SS01	10/24/2022	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS01A	11/21/2022	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SS02	10/24/2022	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SS02A	11/21/2022	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SS03	11/07/2022	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SS04	11/07/2022	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS05	11/07/2022	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SS06	11/07/2022	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon

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APPENDIX A

Referenced Well Records

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 02313 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: DCL DECLARATION

Total Acres: 0 **Subfile:** - **Header:** -

Total Diversion: 3 **Cause/Case:** -

Owner: NGL WATER SOLUTIONS PERMIAN

Contact: R CHARLES WILKIN

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	633160	COWNF	2018-09-17	CHG	PRC	C 02313	T	0	0	
	207100	COWNF	2001-01-03	CHG	PRC	C 02313	T	0	0	
get images	144654	DCL	1998-02-09	DCL	PRC	C 02313 AMENDMENT	T	0	3	
	198282	DCL	1993-04-20	DCL	PRC	C 02313	T	0	3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 02313			2	3	3	26	25S	33E	636971	3552098*	

***An (*) after northing value indicates UTM location was derived from PLSS - see Help**

Priority Summary

Priority	Status	Acres	Diversion	Pod Number
12/31/1925	DCL	0	3	C 02313

Place of Use

Q 256	Q 64	Q16	Q4	Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
							0	3		STK		DCL	NO PLACE OF USE GIVEN
							0	3		STK	06/30/1925	DCL	NO PLACE OF USE GIVEN

Source

Acres	Diversion	CU	Use	Priority	Source	Description
0	3		STK		GW	
0	3		STK	06/30/1925	GW	

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 02313	2	3	3	26	25S	33E	636971	3552098*

Driller License: **Driller Company:**

Driller Name: UNKNOWN

Drill Start Date:	01/01/1925	**Drill Finish Date:**	06/30/1925	**Plug Date:**	
Log File Date:		**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	60 GPM
Casing Size:	6.88	**Depth Well:**	150 feet	**Depth Water:**	110 feet

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

National Water Information System: Web Interface

USGS Water Resources

Data Category: Site Information GO | Geographic Area: United States

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

USGS 320407103331001 26S.33E.03.444110

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°04'07", Longitude 103°33'10" NAD27
Lea County, New Mexico , Hydrologic Unit 13070007
Well depth: 180 feet
Land surface altitude: 3,311 feet above NAVD88.
Well completed in "Other aquifers" (N9999OTHER) national aquifer.
Well completed in "Alluvium, Bolson Deposits and Other Surface Deposits" (110AVMB) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1954-07-23	1954-07-23	1
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

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Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms

Subscribe for system changes
News

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=320407103331001

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2022-10-10 17:07:57 EDT
0.26 0.26 caww01

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APPENDIX B

Photographic Log

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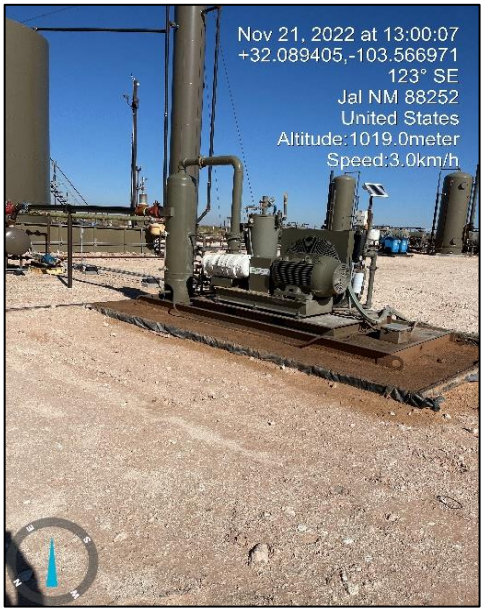
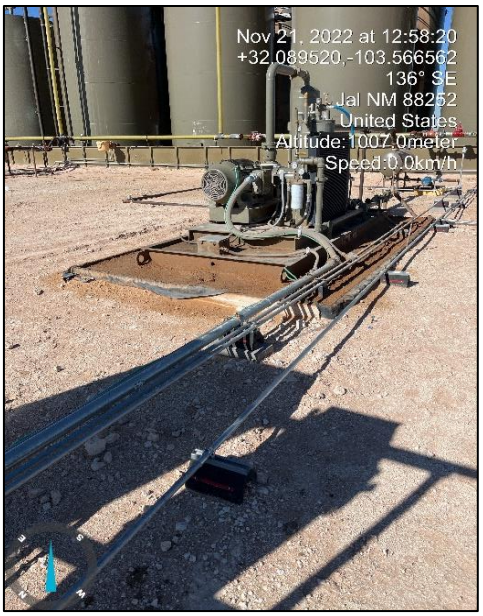
Photographic Log
BTA Oil Producers, LLC
Rojo 34-27 Facility
Incident Number nAPP2130938365

Photograph: 1 Date: 11/4/2021
Description: Soil staining in release footprint
View: Southeast

Photograph: 2 Date: 10/20/2022
Description: Initial Assessment activities
View: Southeast



Photograph: 3 Date: 11/21/2022
Description: Delineation activities
View: Southeast



Photograph: 4 Date: 11/21/2022
Description: Delineation activities
View: Southeast

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APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

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

November 15, 2022

HADLIE GREEN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: ROJO 34-27

Enclosed are the results of analyses for samples received by the laboratory on 10/24/22 14:22.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: ROJO 34-27 Project Number: 03C2012009 Project Manager: HADLIE GREEN Fax To:	Reported: 15-Nov-22 09:12

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS 01 .5'	H224993-01	Soil	20-Oct-22 12:40	24-Oct-22 14:22
SS 02 .5'	H224993-02	Soil	20-Oct-22 12:45	24-Oct-22 14:22

11/15/22 - Client changed the sample IDs (see COC). This is the revised report and will replace the one sent on 10/31/22.

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: ROJO 34-27 Project Number: 03C2012009 Project Manager: HADLIE GREEN Fax To:	Reported: 15-Nov-22 09:12

SS 01 .5'

H224993-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**16.0**		16.0	mg/kg	4	2102764	AC	27-Oct-22	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	2102635	JH	30-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2102635	JH	30-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2102635	JH	30-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2102635	JH	30-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2102635	JH	30-Oct-22	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*92.7 %*	*69.9-140*		*2102635*	JH	*30-Oct-22*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	2102716	MS	28-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2102716	MS	28-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2102716	MS	28-Oct-22	8015B	
Surrogate: 1-Chlorooctane			*84.8 %*	*45.3-161*		*2102716*	MS	*28-Oct-22*	*8015B*	
Surrogate: 1-Chlorooctadecane			*85.9 %*	*46.3-178*		*2102716*	MS	*28-Oct-22*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: ROJO 34-27 Project Number: 03C2012009 Project Manager: HADLIE GREEN Fax To:	Reported: 15-Nov-22 09:12

SS 02 .5'

H224993-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	2102764	AC	27-Oct-22	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	2102635	JH	30-Oct-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2102635	JH	30-Oct-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2102635	JH	30-Oct-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2102635	JH	30-Oct-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2102635	JH	30-Oct-22	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*92.1 %*	*69.9-140*		*2102635*	JH	*30-Oct-22*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	2102716	MS	28-Oct-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2102716	MS	28-Oct-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2102716	MS	28-Oct-22	8015B	
Surrogate: 1-Chlorooctane			*93.6 %*	*45.3-161*		*2102716*	MS	*28-Oct-22*	*8015B*	
Surrogate: 1-Chlorooctadecane			*94.7 %*	*46.3-178*		*2102716*	MS	*28-Oct-22*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: ROJO 34-27 Project Number: 03C2012009 Project Manager: HADLIE GREEN Fax To:	Reported: 15-Nov-22 09:12

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2102764 - 1:4 DI Water										
Blank (2102764-BLK1)				Prepared & Analyzed: 27-Oct-22						
Chloride	ND	16.0	mg/kg							
LCS (2102764-BS1)				Prepared & Analyzed: 27-Oct-22						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (2102764-BSD1)				Prepared & Analyzed: 27-Oct-22						
Chloride	448	16.0	mg/kg	400		112	80-120	11.3	20	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: ROJO 34-27 Project Number: 03C2012009 Project Manager: HADLIE GREEN Fax To:	Reported: 15-Nov-22 09:12

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2102635 - Volatiles										
Blank (2102635-BLK1)				Prepared: 26-Oct-22 Analyzed: 30-Oct-22						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*92.5*	*69.9-140*			
LCS (2102635-BS1)				Prepared: 26-Oct-22 Analyzed: 30-Oct-22						
Benzene	1.95	0.050	mg/kg	2.00		97.7	83.4-122			
Toluene	2.12	0.050	mg/kg	2.00		106	84.2-126			
Ethylbenzene	2.10	0.050	mg/kg	2.00		105	84.2-121			
m,p-Xylene	4.27	0.100	mg/kg	4.00		107	89.9-126			
o-Xylene	2.01	0.050	mg/kg	2.00		101	84.3-123			
Total Xylenes	6.28	0.150	mg/kg	6.00		105	89.1-124			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0446*		mg/kg	*0.0500*		*89.2*	*69.9-140*			
LCS Dup (2102635-BSD1)				Prepared: 26-Oct-22 Analyzed: 30-Oct-22						
Benzene	1.75	0.050	mg/kg	2.00		87.3	83.4-122	11.3	12.6	
Toluene	1.88	0.050	mg/kg	2.00		94.1	84.2-126	11.9	13.3	
Ethylbenzene	1.86	0.050	mg/kg	2.00		92.8	84.2-121	12.5	13.9	
m,p-Xylene	3.78	0.100	mg/kg	4.00		94.4	89.9-126	12.3	13.6	
o-Xylene	1.78	0.050	mg/kg	2.00		88.8	84.3-123	12.6	14.1	
Total Xylenes	5.55	0.150	mg/kg	6.00		92.5	89.1-124	12.4	13.4	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0454*		mg/kg	*0.0500*		*90.8*	*69.9-140*			

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC 705 W WADLEY AVE. MIDLAND TX, 79705	Project: ROJO 34-27 Project Number: 03C2012009 Project Manager: HADLIE GREEN Fax To:	Reported: 15-Nov-22 09:12

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2102716 - General Prep - Organics										
Blank (2102716-BLK1)				Prepared: 27-Oct-22 Analyzed: 28-Oct-22						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*45.4*		mg/kg	*50.0*		*90.7*	*45.3-161*			
Surrogate: 1-Chlorooctadecane	*44.4*		mg/kg	*50.0*		*88.8*	*46.3-178*			
LCS (2102716-BS1)				Prepared: 27-Oct-22 Analyzed: 28-Oct-22						
GRO C6-C10	191	10.0	mg/kg	200		95.5	76.8-124			
DRO >C10-C28	192	10.0	mg/kg	200		96.1	74.9-127			
Total TPH C6-C28	383	10.0	mg/kg	400		95.8	77.5-124			
Surrogate: 1-Chlorooctane	*47.8*		mg/kg	*50.0*		*95.7*	*45.3-161*			
Surrogate: 1-Chlorooctadecane	*45.7*		mg/kg	*50.0*		*91.4*	*46.3-178*			
LCS Dup (2102716-BSD1)				Prepared: 27-Oct-22 Analyzed: 28-Oct-22						
GRO C6-C10	187	10.0	mg/kg	200		93.7	76.8-124	1.86	17.2	
DRO >C10-C28	188	10.0	mg/kg	200		94.2	74.9-127	2.07	18.6	
Total TPH C6-C28	376	10.0	mg/kg	400		93.9	77.5-124	1.97	17.6	
Surrogate: 1-Chlorooctane	*49.7*		mg/kg	*50.0*		*99.4*	*45.3-161*			
Surrogate: 1-Chlorooctadecane	*49.5*		mg/kg	*50.0*		*99.0*	*46.3-178*			

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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC
Project Manager: Hadlie Green
Address: 601 N. Marienfeld St. STE 400
City: Midland State: TX Zip: 79701
Phone #: 432-557-8895 805-798-2708 Fax #:
Project #: 03C2012009 Project Owner: BTA
Project Name: Rojo 34-27
Project Location:
Sampler Name: Conner Whitmire

BILL TO

P.O. #:
Company: BTA Oil
Attn: Bob Hall
Address: 104 S Pecos St.
City: Midland
State: TX Zip: 79701
Phone #: 432-312-2203
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	SAMPLING TIME	BTEX	TPH	Chloride
H224993 1	SS01	.5'	G	1			X					X		10/20/22	1240	X	X	X
2	SS02	.5'	G	1			X					X		10/20/22	1245	X	X	X

TD: 11/14/22

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.

Relinquished By: Conner Whitmire Date: 10.21.22 Time: 1422 Received By: S Rodriguez
Relinquished By: Date: Time: Received By:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
BJennings@ensolum.com
REMARKS: hgreen@ensolum.com

Delivered By: (Circle One) Sampler - UPS - Bus - Other:
Observed Temp. °C 1.2 Corrected Temp. °C 0.6
Sample Condition: Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No
CHECKED BY: (Initials) SK

Turnaround Time: Standard ☑ Rush ☐
Thermometer ID #113 Correction Factor -0.5°C
Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

CARDINAL Laboratories

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

November 14, 2022

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: ROJO 34-27

Enclosed are the results of analyses for samples received by the laboratory on 11/09/22 14:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/09/2022	Sampling Date:	11/07/2022
Reported:	11/14/2022	Sampling Type:	Soil
Project Name:	ROJO 34-27	Sampling Condition:	Cool & Intact
Project Number:	03C2012009	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA CO NM		

Sample ID: SS03 (H225289-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/11/2022	ND	1.94	96.9	2.00	9.64	
Toluene*	<0.050	0.050	11/11/2022	ND	2.14	107	2.00	8.94	
Ethylbenzene*	<0.050	0.050	11/11/2022	ND	2.02	101	2.00	8.10	
Total Xylenes*	<0.150	0.150	11/11/2022	ND	6.04	101	6.00	9.16	
Total BTEX	<0.300	0.300	11/11/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.2 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	11/10/2022	ND	416	104	400	3.92	

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	11/09/2022	ND	233	117	200	24.7	
DRO >C10-C28*	<10.0	10.0	11/09/2022	ND	254	127	200	21.4	
EXT DRO >C28-C36	<10.0	10.0	11/09/2022	ND					

Surrogate: 1-Chlorooctane *94.9 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *93.2 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/09/2022	Sampling Date:	11/07/2022
Reported:	11/14/2022	Sampling Type:	Soil
Project Name:	ROJO 34-27	Sampling Condition:	Cool & Intact
Project Number:	03C2012009	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA CO NM		

Sample ID: SS04 (H225289-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/11/2022	ND	1.94	96.9	2.00	9.64	
Toluene*	<0.050	0.050	11/11/2022	ND	2.14	107	2.00	8.94	
Ethylbenzene*	<0.050	0.050	11/11/2022	ND	2.02	101	2.00	8.10	
Total Xylenes*	<0.150	0.150	11/11/2022	ND	6.04	101	6.00	9.16	
Total BTEX	<0.300	0.300	11/11/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	11/10/2022	ND	416	104	400	3.92	

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	11/09/2022	ND	233	117	200	24.7	
DRO >C10-C28*	<10.0	10.0	11/09/2022	ND	254	127	200	21.4	
EXT DRO >C28-C36	<10.0	10.0	11/09/2022	ND					

Surrogate: 1-Chlorooctane *69.8 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *71.0 %* *46.3-178*

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:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/09/2022	Sampling Date:	11/07/2022
Reported:	11/14/2022	Sampling Type:	Soil
Project Name:	ROJO 34-27	Sampling Condition:	Cool & Intact
Project Number:	03C2012009	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA CO NM		

Sample ID: SS05 (H225289-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/11/2022	ND	1.94	96.9	2.00	9.64	
Toluene*	<0.050	0.050	11/11/2022	ND	2.14	107	2.00	8.94	
Ethylbenzene*	<0.050	0.050	11/11/2022	ND	2.02	101	2.00	8.10	
Total Xylenes*	<0.150	0.150	11/11/2022	ND	6.04	101	6.00	9.16	
Total BTEX	<0.300	0.300	11/11/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.8 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	11/10/2022	ND	416	104	400	3.92	

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	11/10/2022	ND	233	117	200	24.7	
DRO >C10-C28*	<10.0	10.0	11/10/2022	ND	254	127	200	21.4	
EXT DRO >C28-C36	<10.0	10.0	11/10/2022	ND					

Surrogate: 1-Chlorooctane *58.9 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *59.0 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/09/2022	Sampling Date:	11/07/2022
Reported:	11/14/2022	Sampling Type:	Soil
Project Name:	ROJO 34-27	Sampling Condition:	Cool & Intact
Project Number:	03C2012009	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA CO NM		

Sample ID: SS06 (H225289-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/11/2022	ND	1.89	94.5	2.00	7.02	
Toluene*	<0.050	0.050	11/11/2022	ND	2.00	99.8	2.00	8.06	
Ethylbenzene*	<0.050	0.050	11/11/2022	ND	1.92	96.2	2.00	8.28	
Total Xylenes*	<0.150	0.150	11/11/2022	ND	5.88	98.0	6.00	8.29	
Total BTEX	<0.300	0.300	11/11/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *89.6 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/10/2022	ND	416	104	400	3.92	

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	11/10/2022	ND	233	117	200	24.7	
DRO >C10-C28*	<10.0	10.0	11/10/2022	ND	254	127	200	21.4	
EXT DRO >C28-C36	<10.0	10.0	11/10/2022	ND					

Surrogate: 1-Chlorooctane *78.7 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *75.1 %* *46.3-178*

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

QR-04	The RPD for the BS/BSD was outside of historical limits.
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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Ensolum
Project Manager:	Hadlie Green
Address:	3122 National Parks Hwy
City:	Carlsbad State: NM Zip: 88220
Phone #:	432-557-8895 Fax #:
Project #:	03C2012009 Project Owner: BTA Oil
Project Name:	ROJO 34-27
Project Location:	Lea County
Sampler Name:	Chris Brown

BILL TO

P.O. #:	
Company:	BTA Oil
Attn:	Bob Hall
Address:	104 S Pecos
City:	Midland
State:	TX Zip:
Phone #:	432-312-2203
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	CHL	BTX	TPH
H225289																	
1	SS03	G	1			X							11-7	1215	X	X	X
2	SS04	↓	1			X							↓	1235	X	X	X
3	SS05	↓	1			X							↓	1255	X	X	X
4	SS06	↓	1			X							↓	1310	X	X	X

Relinquished By:	Date: 11-9	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1430		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 3.8	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C 3.2			Thermometer ID #113 Correction Factor -0.5°C -0.6°C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No

Observed Temp. °C

Corrected Temp. °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

CARDINAL Laboratories

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

November 28, 2022

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: ROJO 34-27

Enclosed are the results of analyses for samples received by the laboratory on 11/21/22 14:42.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/21/2022	Sampling Date:	11/21/2022
Reported:	11/28/2022	Sampling Type:	Soil
Project Name:	ROJO 34-27	Sampling Condition:	** (See Notes)
Project Number:	03C2012009	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - 32.08933, -103.56697		

Sample ID: SS01 A @ 1' (H225485-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/23/2022	ND	1.92	96.0	2.00	7.81	
Toluene*	<0.050	0.050	11/23/2022	ND	2.16	108	2.00	9.03	
Ethylbenzene*	<0.050	0.050	11/23/2022	ND	1.96	97.8	2.00	7.29	
Total Xylenes*	<0.150	0.150	11/23/2022	ND	5.91	98.5	6.00	8.94	
Total BTEX	<0.300	0.300	11/23/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.0 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	11/22/2022	ND	400	100	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	11/23/2022	ND	202	101	200	3.24	
DRO >C10-C28*	<10.0	10.0	11/23/2022	ND	199	99.4	200	0.00252	
EXT DRO >C28-C36	<10.0	10.0	11/23/2022	ND					

Surrogate: 1-Chlorooctane *89.1 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *95.5 %* *46.3-178*

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:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	11/21/2022	Sampling Date:	11/21/2022
Reported:	11/28/2022	Sampling Type:	Soil
Project Name:	ROJO 34-27	Sampling Condition:	** (See Notes)
Project Number:	03C2012009	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - 32.08933, -103.56697		

Sample ID: SS02 A @ 1' (H225485-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/23/2022	ND	1.92	96.0	2.00	7.81	
Toluene*	<0.050	0.050	11/23/2022	ND	2.16	108	2.00	9.03	
Ethylbenzene*	<0.050	0.050	11/23/2022	ND	1.96	97.8	2.00	7.29	
Total Xylenes*	<0.150	0.150	11/23/2022	ND	5.91	98.5	6.00	8.94	
Total BTEX	<0.300	0.300	11/23/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.0 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	11/22/2022	ND	400	100	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	11/23/2022	ND	202	101	200	3.24	
DRO >C10-C28*	<10.0	10.0	11/23/2022	ND	199	99.4	200	0.00252	
EXT DRO >C28-C36	<10.0	10.0	11/23/2022	ND					

Surrogate: 1-Chlorooctane *96.9 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *104 %* *46.3-178*

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

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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Ensolum, LLC
Project Manager:	Hadlie Green
Address:	3122 Nat'l Parks Hwy
City:	Carlsbad State: NM Zip: 88220
Phone #:	432-557-8895 Fax #:
Project #:	03C2D12009 Project Owner:
Project Name:	Rojo 34-27 Facility
Project Location:	32.08933, -103.56697
Sampler Name:	Meredith Roberts

BILL TO

P.O. #:	
Company:	BTA Oil
Attn:	Bob Hall
Address:	104 S Pecos St
City:	Midland
State: TX Zip:	79701
Phone #:	432-312-2203
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	Chlorides	BTEX	TPH
H225485																	
1	SS01A@1'	G	2			X					X		11/21/22	1250	X	X	X
2	SS02A@1'	G	2			X					X		11/21/22	1255	X	X	X

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.

Relinquished By:	Date: 11/21/22 Time: 1442	Received By:	
Relinquished By:	Date: Time:	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 7.1 Corrected Temp. °C 6.5	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials)

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
hgreen@ensolum.com tmorrissey@ensolum.com
REMARKS:
Incident #: nAPP2130938365 TEMP BLANK: 4.3°C

Turnaround Time: Standard ☑ Rush ☐
Thermometer ID #113
Correction Factor -0.5°C 0.0°C

Bacteria (only) Sample Condition: Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No
Observed Temp. °C
Corrected Temp. °C

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

FORM-006 R 3.2 10/07/21

ENSOLUM

APPENDIX D

Final C-141

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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	nAPP2130938365
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: BTA Oil Producers, LLC	OGRID: 260297
Contact Name: Bob Hall	Contact Telephone: 432-682-3753
Contact email: bhall@btaoil.com	Incident # *(assigned by OCD)* nAPP2130938365
Contact mailing address: 104 S. Pecos St., Midland, TX 79701	

Location of Release Source

Latitude: 32.08933 Longitude: -103.56697
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Rojo 34-27 Facility	Site Type: Tank Battery / Production Facility
Date Release Discovered: 11/4/2021	API# *(if applicable)* Nearest well: Rojo 7811 34-27 Federal #019H API #30-025-44298

Unit Letter	Section	Township	Range	County
E	34	25S	33E	Lea

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:*)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☒ Crude Oil	Volume Released (bbls) 5 BBL	Volume Recovered (bbls) 3 BBL
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Piping Failure.
A broken fitting on a scrubber for a VRT-VRU allowed 5 BBL oil to be released on the facility pad in the area of the scrubber. A vacuum truck was immediately used to recover 3 BBL of oil. On this same day of the release, the impacted soil in the area has been scraped and stockpiled on location.
(See attached spill calculation spreadsheet.)

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2130938365
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Bob Hall Title: Environmental Manager

Signature: Bob Hall Date: 11/5/2021

email: bhall@btaoil.com Telephone: 432-682-3753

OCD Only

Received by: Ramona Marcus Date: 11/8/2021

NAPP2130938365

Location Rojo 34-27 Facility
API #
Spill Date 11/4/2021

Spill Dimensions

ENTER - Length of Spill	27	**feet**
ENTER - Width of Spill	27	**feet**
ENTER - Saturation Depth of Spill	6	**inches**
ENTER - Porosity Factor	0.03	**decimal**

Oil Cut - Well Test / Vessel Throughput or Contents

Oil	99.99
Water	0.01
Calculated Oil Cut	0.9999

Volume Recovered in Truck / Containment

ENTER - Recovered Oil	3	**BBL**
ENTER - Recovered Water	0	**BBL**

Calculated Values	*calculated*	
Release of Oil in Soil - Unrecovered	2	***BBL***
Release of Water in Soil - Unrecovered	0	***BBL***
Unrecovered Total Release	2	***BBL***

Calculated Values	*calculated*	
Total Release of Oil	5	***BBL***
Total Release of Water	0	***BBL***
Total Release	5	***BBL***

Types of Soil	Porosity Factor
Gravel	0.25
Sand	0.20
Clay/silt/sand Mix	0.15
Clay	0.05
Caliche	0.03
Unknown	0.25

(Length X Width X Depth X 1 ft/12 in) X Porosity
5.615 ft^3 / BBL

X

Oil Cut
(or Water Cut)

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 60481
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	11/8/2021

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2130938365
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

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Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2130938365
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Bob Hall Title: Environmental Manager

Signature: Bob Hall Date: 2/14/2023

email: bhall@btaoil.com Telephone: 432-682-3753

OCD Only

Received by: Jocelyn Harimon Date: 02/14/2023

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2130938365
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Bob Hall Title: Environmental Manager

Signature: Bob Hall Date: 2/14/2023

email: bhall@btaoil.com Telephone: 432-682-3753

OCD Only

Received by: Jocelyn Harimon Date: 02/14/2023

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Jennifer Nobui Date: 02/23/2023

Printed Name: Jennifer Nobui Title: Environmental Specialist A

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 185887

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 185887
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	2/23/2023