ENSOLUM

June 5, 2023

New Mexico Oil Conservation Division
New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request
Mesa 8105 JV-P #4H Battery
Incident Number NCH1903550822
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 Mesa 8105 JV-P #4H Battery (Site). The purpose of the Site assessment, delineation, and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a historical crude oil release 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 NCH1903550822.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit C, Section 11, Township 26 South, Range 32 East, in Lea County, New Mexico (32.06412°, -103.64973°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On December 28, 2018, failure of a dump valve on a separator vessel caused the release of approximately 15 barrels (bbls) of crude oil onto the surface of the pad near the compressor. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 14.25 bbls of released crude oil were recovered. BTA reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on January 9, 2019. The release was assigned Incident Number NCH1903550822.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability 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 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-04549, located approximately 0.2 miles west of the Site. The groundwater well was drilled during July 2021 to a total depth of 103 feet bgs, and

no groundwater was encountered. All wells used for depth to groundwater determination are presented on Figure 1. The associated well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent stream, located approximately 1,278 feet west 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 (medium 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 LABORATORY ANALYTICAL RESULTS

On May 15, 2023, Ensolum personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. No visible indications of the historical release were observed during the Site visit. Six assessment soil samples (SS01 through SS06) were collected within and around the inferred release area near the compressor, at a depth of approximately 0.5 feet bgs, to assess for the presence or absence of impacted soil resulting from the crude oil release. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using 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 as 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 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 assessment soil samples SS01 and SS02, collected within the inferred release area, indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for assessment samples SS03 through SS06, collected outside of the inferred release area, were compliant with the most stringent Table 1 Closure Criteria and successfully defined the lateral extent of the release. However, vertical delineation activities were warranted to further confirm the absence of impacted soil within the release area.

DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On May 25, 2023, Ensolum personnel returned to the Site to complete vertical delineation activities to confirm the absence of impacted soil within the inferred release area. Boreholes were advanced via

hand auger at the location of assessment samples SS01 and SS02. The boreholes were advanced to depths of 1-foot and 1.5 feet bgs, respectively. Soil from the boreholes was field screened for VOCs and chloride. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Appendix C. Based on field screening results, discrete delineation soil samples SS01A, SS02A, and SS02B were collected from the boreholes at depths ranging from 1-foot to 1.5 feet bgs. The delineation soil samples were collected, handled, and analyzed following the same procedures previously described. The delineation soil sample locations were mapped utilizing a handheld 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.

Laboratory analytical results for delineation soil samples SS01A, SS02A, and SS02B indicated all COC concentrations were compliant with the Site Closure Criteria and provided vertical delineation to the most stringent Table 1 Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete analytical reports are included as Appendix D.

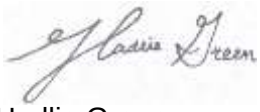
CLOSURE REQUEST

Site assessment and delineation activities were conducted at the Site to assess for the presence or absence of impacted soil resulting from the December 28, 2018, release of crude oil. Laboratory analytical results for the delineation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria and provided lateral and vertical delineation to the most stringent Table 1 Closure Criteria. Based on the laboratory analytical results, no impacted soil was identified, and no further remediation is required.

No visible indications of the release were observed. Initial response efforts and natural attenuation have mitigated impacts at this Site. Depth to groundwater is greater than 100 feet bgs and no other sensitive receptors were identified near the Site. BTA believes the remedial actions completed are protective of human health, the environment, and groundwater. As such, BTA respectfully requests closure for Incident Number NCH1903550822. Notifications submitted to the NMOCD are included in Appendix E and the final Form C-141 is included in Appendix F.

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
Project Geologist

Daniel R. Moir, PG
Senior Managing Geologist

cc: Kelton Beaird, BTA
Nathan Sirgo, BTA
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Lithologic/Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Notifications
Appendix F	Final C-141

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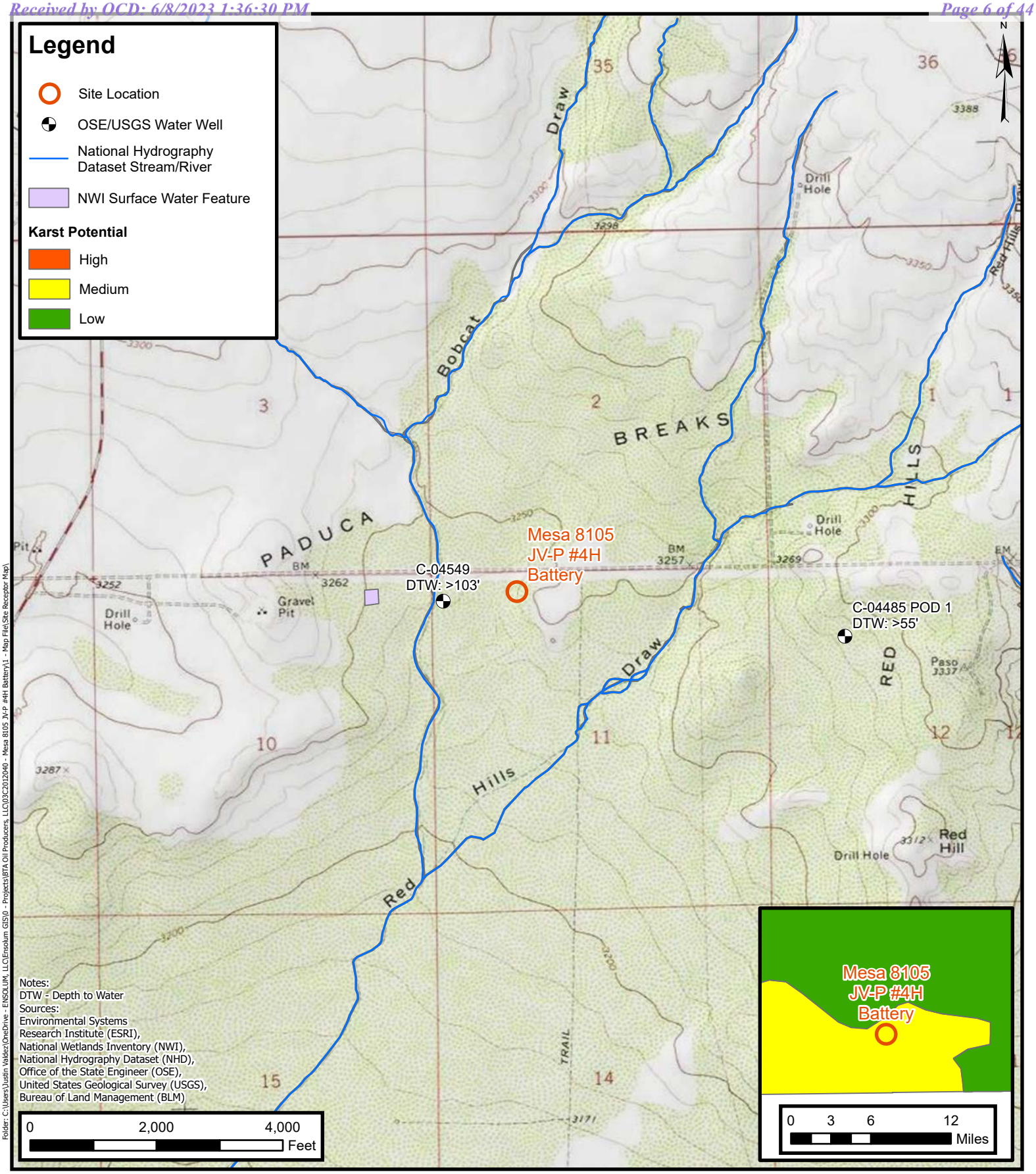
FIGURES



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\BTA Oil Producers, LLC\03C2012040 - Mesa 8105 JV-P #4H Battery\1 - Map Files\Site Receptor Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

BTA Oil Producers, LLC
Mesa 8105 JV-P #4H Battery
Incident Number: nCH1903550822
Unit C, Sec 11, T26S, R32E
Lea County, New Mexico

FIGURE 1

Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\BTA Oil Producers, LLC\03C2012040 - Mesa 8105 JV-P #4H Battery\1 - Map File\Delineation Soil Sample Locations Map\

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Delineation Soil Sample Locations

BTA Oil Producers, LLC
Mesa 8105 JV-P #4H Battery
Incident Number: nCH1903550822
Unit C, Sec 11, T26S, R32E
Lea County, New Mexico

FIGURE 2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Mesa 8105 JV-P #4H Battery
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 I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
SS01	05/15/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	7,730
SS01A	05/25/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS02	05/15/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,600
SS02A	05/25/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS02B	05/25/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	384
SS03	05/15/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SS04	05/15/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SS05	05/15/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS06	05/15/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
NMAC: New Mexico Administrative Code
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
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

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

OSE DIT AUG 2 2021 PM4:45

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (MW-1)	n/a	C-4549

WELL OWNER NAME(S)	PHONE (OPTIONAL)
BTA Oil Producers	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
104 S. Pecos St.	Midland	TX	79701

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	4	40.92	N
	LONGITUDE	103	37	53.68	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

NW NW NW Sec. 11 T26S R32E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
07/14/2021	07/14/2021	temporary well material	103	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	103	±8.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C-4549	POD NO. 1	TRN NO. 698318	
LOCATION 26S.32E.11	1.1.1	WELL TAG ID NO. NA	PAGE 1 OF 2

OSE DIT AUG 2 2021 PM4:45

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	4	4	Caliche, Consolidated , White	Y ✓ N	
4	9	5	Caliche, Consolidated , with fine-grained, Tan	Y ✓ N	
9	14	5	Caliche, Consolidated , White	Y ✓ N	
14	19	5	Caliche, Consolidated , with fine-grained, Tan	Y ✓ N	
19	69	50	Sand, Fine-grained poorly graded, with caliche , Tanish Brown	Y ✓ N	
69	79	103	Clay, Stiff, High Plasticity, Dark Brown,	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge, Cameron Pruitt, Carmelo Trevino

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 07/29/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. C-4549	POD NO. 1	TRN NO. 698318	
LOCATION 26S-32E-11	1.1.1	WELL TAG ID NO. NA	PAGE 2 OF 2

USGS 320134103284101 26S.32E.21.32311

Lea County, New Mexico
Latitude 32°01'35.2", Longitude 103°41'01.8" NAD83
Land-surface elevation 3,130 feet above NAVD88
The depth of the well is 405 feet below land surface.
The depth of the hole is 405 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Dockum Group (231DCKM) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Status	Method of measurement	Measuring agency	Source of measurement	Water-level approval status
1993-06-16		D	62610		2723.41	NGVD29	1	L			A
1993-06-16		D	62611		2725.00	NAVD88	1	L			A
1993-06-16		D	72019	405.00			1	L			A
2013-01-16	19:10 UTC	m	62610		2906.47	NGVD29	P	S	USGS	S	A
2013-01-16	19:10 UTC	m	62611		2908.06	NAVD88	P	S	USGS	S	A
2013-01-16	19:10 UTC	m	72019	221.94			P	S	USGS	S	A

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APPENDIX B

Photographic Log

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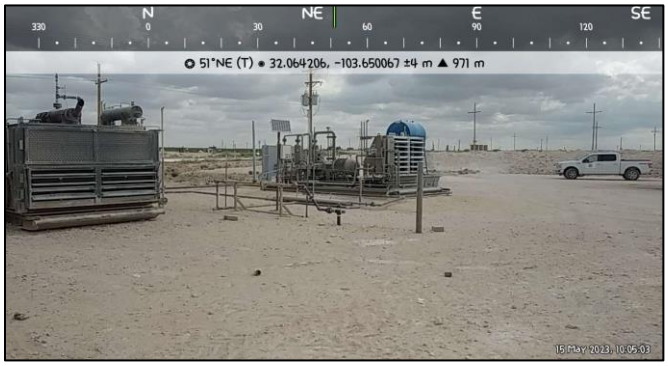
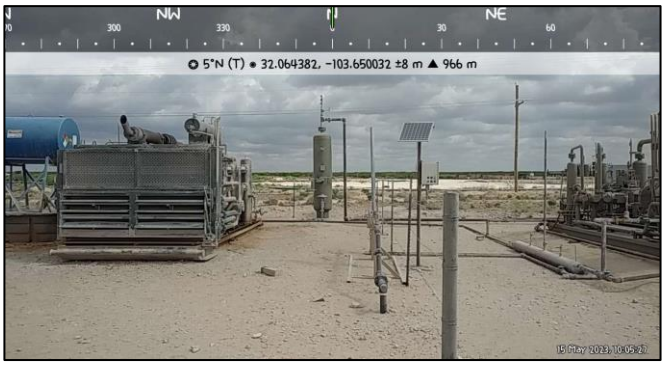
Photographic Log
BTA Oil Producers, LLC
Mesa 8105 JV-P #4H Battery
Incident Number nCH1903550822



Photograph: 1 Date: 5/15/2023
Description: Initial assessment activities
View: Northeast



Photograph: 2 Date: 5/15/2023
Description: Initial assessment activities
View: North

Photograph: 3 Date: 5/25/2023
Description: Delineation activities
View: South

Photograph: 4 Date: 5/25/2023
Description: Delineation activities
View: Southeast

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APPENDIX C

Lithologic Soil Sampling Logs

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Sample Name: Ronni Hayes	Date: 5/25/23
Site Name: Mesa 8105 JV-P #4H Battery	
Incident Number: NCH1903550822	
Job Number: 03C2012040	

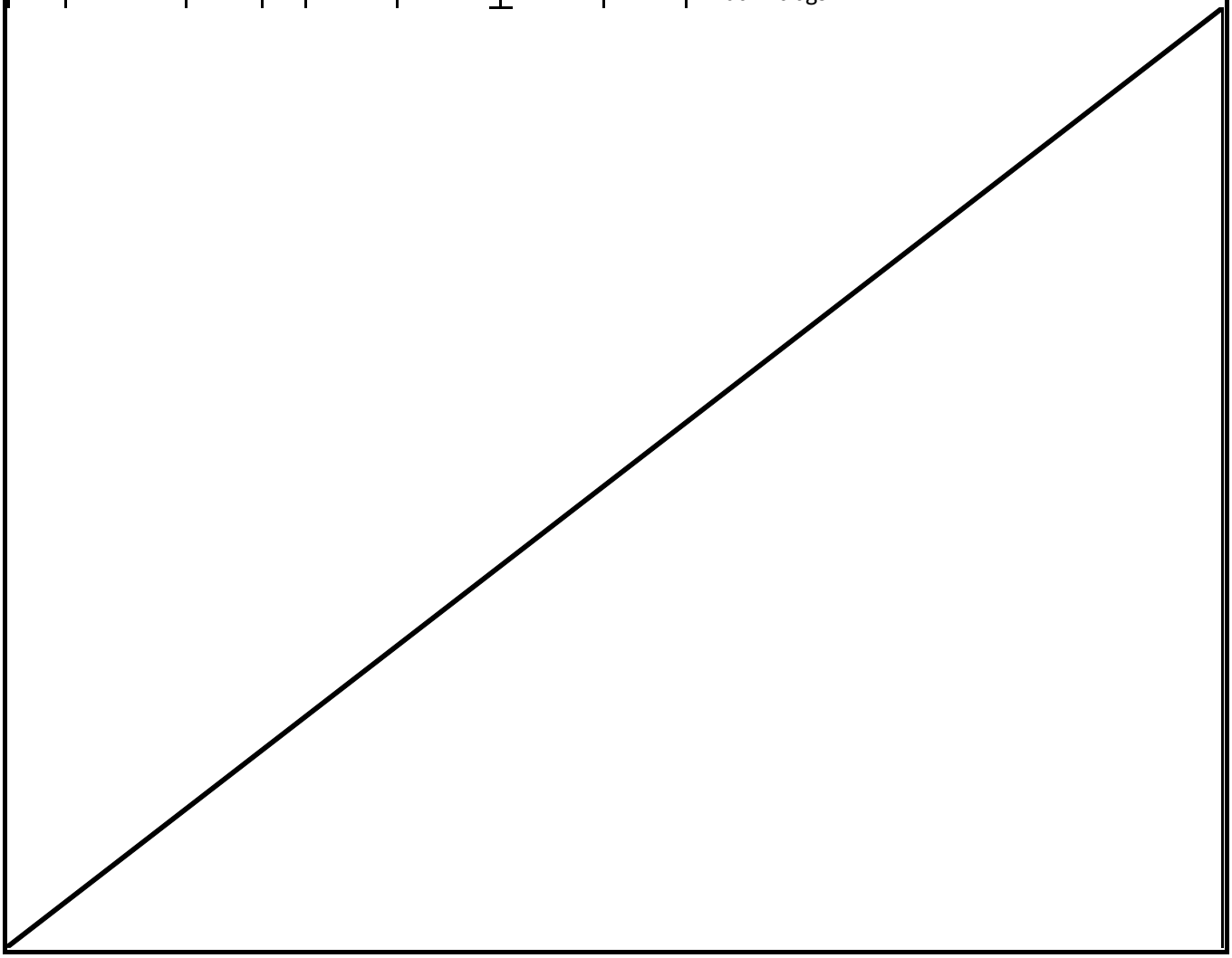
LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Ronni Hayes	Method: Hand auger
Hole Diameter: ~4"	Total Depth: 1'

Coordinates: 32.064348, -103.648981

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Dry	19,297.60	0.2	N	SS01	0.5	0.5	GW	CALICHE, no staining, no odor, light tan, poorly graded, poorly sorted, abundant limestone gravel.
Dry	<173.8	0.4	N	SS01	1	1	SAA	SAA
								TD at 1 ft bgs



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	Sample Name: SS02	Date: 5/25/23
	Site Name: Mesa 8105 JV-P #4H Battery	
	Incident Number: NCH1903550822	
	Job Number: 03C2012040	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Ronni Hayes	Method: Hand Auger
Coordinates: 32.064270, -103.649989	Hole Diameter: ~4"	Total Depth: 1.5'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
					0	0		
Dry	4,452	0.7	N	SS02	0.5	0.5	GP	CALICHE, no staining, no odor, light tan, poorly graded, poorly sorted, abundant limestone gravel.
Dry	<173.8	2.0	N	SS02A	1	1	SAA	SAA
Dry	532	0.8	N	SS02B	1.5	1.5	GP	CALICHE, no staining, no odor, medium brown, poorly graded, poorly sorted, abundant gravel.
								TD at 1.5' ft bgs

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APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

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

May 22, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA 8105 JVP #4H BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 05/17/23 14:45.

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

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:	05/17/2023	Sampling Date:	05/15/2023
Reported:	05/22/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #4H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012040	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06412,-103.64973		

Sample ID: SS 01 0.5' (H232489-01)

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	05/20/2023	ND	2.17	109	2.00	0.148	
Toluene*	<0.050	0.050	05/20/2023	ND	2.23	111	2.00	0.986	
Ethylbenzene*	<0.050	0.050	05/20/2023	ND	2.13	106	2.00	0.464	
Total Xylenes*	<0.150	0.150	05/20/2023	ND	6.54	109	6.00	0.248	
Total BTEX	<0.300	0.300	05/20/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7730**	16.0	05/18/2023	ND	400	100	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	05/18/2023	ND	186	93.1	200	6.31	
DRO >C10-C28*	<10.0	10.0	05/18/2023	ND	177	88.7	200	6.40	
EXT DRO >C28-C36	<10.0	10.0	05/18/2023	ND					

Surrogate: 1-Chlorooctane *93.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.4 %* *49.1-148*

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:	05/17/2023	Sampling Date:	05/15/2023
Reported:	05/22/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #4H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012040	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06412,-103.64973		

Sample ID: SS 02 0.5' (H232489-02)

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	05/20/2023	ND	2.17	109	2.00	0.148	
Toluene*	<0.050	0.050	05/20/2023	ND	2.23	111	2.00	0.986	
Ethylbenzene*	<0.050	0.050	05/20/2023	ND	2.13	106	2.00	0.464	
Total Xylenes*	<0.150	0.150	05/20/2023	ND	6.54	109	6.00	0.248	
Total BTEX	<0.300	0.300	05/20/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3600**	16.0	05/18/2023	ND	400	100	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	05/18/2023	ND	185	92.6	200	6.28	
DRO >C10-C28*	<10.0	10.0	05/18/2023	ND	187	93.6	200	6.63	
EXT DRO >C28-C36	<10.0	10.0	05/18/2023	ND					

Surrogate: 1-Chlorooctane *83.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.1 %* *49.1-148*

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:	05/17/2023	Sampling Date:	05/15/2023
Reported:	05/22/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #4H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012040	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06412,-103.64973		

Sample ID: SS 03 0.5' (H232489-03)

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	05/20/2023	ND	2.17	109	2.00	0.148	
Toluene*	<0.050	0.050	05/20/2023	ND	2.23	111	2.00	0.986	
Ethylbenzene*	<0.050	0.050	05/20/2023	ND	2.13	106	2.00	0.464	
Total Xylenes*	<0.150	0.150	05/20/2023	ND	6.54	109	6.00	0.248	
Total BTEX	<0.300	0.300	05/20/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	05/18/2023	ND	400	100	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	05/18/2023	ND	185	92.6	200	6.28	
DRO >C10-C28*	<10.0	10.0	05/18/2023	ND	187	93.6	200	6.63	
EXT DRO >C28-C36	<10.0	10.0	05/18/2023	ND					

Surrogate: 1-Chlorooctane *70.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *75.3 %* *49.1-148*

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:	05/17/2023	Sampling Date:	05/15/2023
Reported:	05/22/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #4H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012040	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06412,-103.64973		

Sample ID: SS 04 0.5' (H232489-04)

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	05/20/2023	ND	2.17	109	2.00	0.148	
Toluene*	<0.050	0.050	05/20/2023	ND	2.23	111	2.00	0.986	
Ethylbenzene*	<0.050	0.050	05/20/2023	ND	2.13	106	2.00	0.464	
Total Xylenes*	<0.150	0.150	05/20/2023	ND	6.54	109	6.00	0.248	
Total BTEX	<0.300	0.300	05/20/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	05/18/2023	ND	400	100	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	05/18/2023	ND	185	92.6	200	6.28	
DRO >C10-C28*	<10.0	10.0	05/18/2023	ND	187	93.6	200	6.63	
EXT DRO >C28-C36	<10.0	10.0	05/18/2023	ND					

Surrogate: 1-Chlorooctane *97.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *106 %* *49.1-148*

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:	05/17/2023	Sampling Date:	05/15/2023
Reported:	05/22/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #4H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012040	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06412,-103.64973		

Sample ID: SS 05 0.5' (H232489-05)

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	05/20/2023	ND	2.17	109	2.00	0.148	
Toluene*	<0.050	0.050	05/20/2023	ND	2.23	111	2.00	0.986	
Ethylbenzene*	<0.050	0.050	05/20/2023	ND	2.13	106	2.00	0.464	
Total Xylenes*	<0.150	0.150	05/20/2023	ND	6.54	109	6.00	0.248	
Total BTEX	<0.300	0.300	05/20/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	05/18/2023	ND	400	100	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	05/18/2023	ND	185	92.6	200	6.28	
DRO >C10-C28*	<10.0	10.0	05/18/2023	ND	187	93.6	200	6.63	
EXT DRO >C28-C36	<10.0	10.0	05/18/2023	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *113 %* *49.1-148*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	05/17/2023	Sampling Date:	05/15/2023
Reported:	05/22/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #4H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012040	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06412,-103.64973		

Sample ID: SS 06 0.5' (H232489-06)

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	05/20/2023	ND	2.17	109	2.00	0.148	
Toluene*	<0.050	0.050	05/20/2023	ND	2.23	111	2.00	0.986	
Ethylbenzene*	<0.050	0.050	05/20/2023	ND	2.13	106	2.00	0.464	
Total Xylenes*	<0.150	0.150	05/20/2023	ND	6.54	109	6.00	0.248	
Total BTEX	<0.300	0.300	05/20/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

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	05/18/2023	ND	400	100	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	05/18/2023	ND	185	92.6	200	6.28	
DRO >C10-C28*	<10.0	10.0	05/18/2023	ND	187	93.6	200	6.63	
EXT DRO >C28-C36	<10.0	10.0	05/18/2023	ND					

Surrogate: 1-Chlorooctane *93.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *101 %* *49.1-148*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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	**BILL TO**
Project Manager: Hadlie Green	P.O. #:
Address: 3122 National Parks Hwy	Company: BTA Oil
City: Carlsbad State: NM Zip: 88220	Attn: Kevin Jones
Phone #: 432-557-8895 Fax #:	Address: 104 S Pecos St
Project #: 03C2012040 Project Owner: BTA Oil	City: Midland
Project Name: Mesa 8105 JV-P #4H Battery	State: Texas Zip: 79701
Project Location: 32.06412, -103.64973	Phone #: 432-312-2203
Sampler Name: Ronni Hayes	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	TPH	Cl-
H232489																		
1	SS01	0.5'	G				X					X		5/15/23	1065	X	X	X
2	SS02														1010			
3	SS03														1045			
4	SS04														1050			
5	SS05														1025			
6	SS06														1030			
	AH	5-15-23																

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

Relinquished By:	Date: 5/17/23	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1445		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		
Delivered By: (Circle One)	Observed Temp. °C 2.1	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Corrected Temp. °C 1.5		

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

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

FORM-006 R 3.2 10/07/21

CARDINAL Laboratories

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

May 30, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MESA 8105 JVP #4H BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 05/26/23 12:05.

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:	05/26/2023	Sampling Date:	05/25/2023
Reported:	05/30/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #4H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012040	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.06412,-103.64973		

Sample ID: SS 01 A 1 (H232698-01)

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	05/26/2023	ND	1.98	98.8	2.00	1.43	
Toluene*	<0.050	0.050	05/26/2023	ND	2.06	103	2.00	1.84	
Ethylbenzene*	<0.050	0.050	05/26/2023	ND	1.96	98.0	2.00	2.49	
Total Xylenes*	<0.150	0.150	05/26/2023	ND	6.07	101	6.00	3.43	
Total BTEX	<0.300	0.300	05/26/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

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	05/26/2023	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/26/2023	ND	221	110	200	0.152	
DRO >C10-C28*	<10.0	10.0	05/26/2023	ND	200	99.8	200	1.05	
EXT DRO >C28-C36	<10.0	10.0	05/26/2023	ND					

Surrogate: 1-Chlorooctane *101 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *103 %* *49.1-148*

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:	05/26/2023	Sampling Date:	05/25/2023
Reported:	05/30/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #4H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012040	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.06412,-103.64973		

Sample ID: SS 02 A 1 (H232698-02)

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	05/26/2023	ND	1.98	98.8	2.00	1.43	
Toluene*	<0.050	0.050	05/26/2023	ND	2.06	103	2.00	1.84	
Ethylbenzene*	<0.050	0.050	05/26/2023	ND	1.96	98.0	2.00	2.49	
Total Xylenes*	<0.150	0.150	05/26/2023	ND	6.07	101	6.00	3.43	
Total BTEX	<0.300	0.300	05/26/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	05/26/2023	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/26/2023	ND	221	110	200	0.152	
DRO >C10-C28*	<10.0	10.0	05/26/2023	ND	200	99.8	200	1.05	
EXT DRO >C28-C36	<10.0	10.0	05/26/2023	ND					

Surrogate: 1-Chlorooctane *101 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *106 %* *49.1-148*

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:	05/26/2023	Sampling Date:	05/25/2023
Reported:	05/30/2023	Sampling Type:	Soil
Project Name:	MESA 8105 JVP #4H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012040	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.06412,-103.64973		

Sample ID: SS 02 B 1.5 (H232698-03)

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	05/26/2023	ND	1.98	98.8	2.00	1.43	
Toluene*	<0.050	0.050	05/26/2023	ND	2.06	103	2.00	1.84	
Ethylbenzene*	<0.050	0.050	05/26/2023	ND	1.96	98.0	2.00	2.49	
Total Xylenes*	<0.150	0.150	05/26/2023	ND	6.07	101	6.00	3.43	
Total BTEX	<0.300	0.300	05/26/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**384**	16.0	05/26/2023	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/26/2023	ND	221	110	200	0.152	
DRO >C10-C28*	<10.0	10.0	05/26/2023	ND	200	99.8	200	1.05	
EXT DRO >C28-C36	<10.0	10.0	05/26/2023	ND					

Surrogate: 1-Chlorooctane *106 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *109 %* *49.1-148*

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: 3122 National Parks Hwy
City: Carlsbad State: NM Zip: 88220
Phone #: 432 557 8895 Fax #:
Project #: 03C2012040 Project Owner:
Project Name: Mesa 8105 JV-P #4H Battery
Project Location: 32.66412, -103.64973
Sampler Name: Ronni Hayes

BILL TO
P.O. #:
Company: BTA Oil
Attn: Kevin Jones
Address: 104 S Pecos St
City: Midland
State: TX Zip: 79701
Phone #:
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	Cl-
H232698																		
1	SS01A	1	G	1			X					X		5/25/23	11:15	X	X	X
2	SS02A	1	↓	↓			↓					↓		↓	11:45	↓	↓	↓
3	SS02B	1.5	↓	↓			↓					↓		↓	12:00	↓	↓	↓
										RH		5/25/23						

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

Relinquished By: Date: 5/26/23 Time: 1205 Received By: Tamara Oldaker
Relinquished By: Date: Time: Received By:

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

Delivered By: (Circle One) Sampler - UPS - Bus - Other:
Observed Temp. °C 6.4 Corrected Temp. °C 5.8
Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No
CHECKED BY: (Initials) TO

Turnaround Time: Standard ☐ Rush ☒ 48 HRS
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

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APPENDIX E

NMOCD Notifications

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 05/22/2023
Date: Friday, May 19, 2023 2:25:29 PM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadlie,

Please be aware that notification requirements are **two business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to insure inclusion in the project file.

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, May 18, 2023 11:37 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Nathan Sirgo <nsirgo@btaoil.com>; Kevin Jones (kjones@btaoil.com) <kjones@btaoil.com>; Kelton Beaird <KBeaird@btaoil.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 05/22/2023

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

BTA anticipates collecting confirmation samples at the following locations the week of May 22, 2023.

- Harroun Ranch #005 / nAPP2200455573
  - Sampling Date: 5/23/2023 @ 9:00 AM MST

- Harroun East Tank Battery / nAPP2204151142
  - Sampling Date: 5/22/2023 @ 9:00 AM MST
- Harroun East Tank Battery / nAPP2202845563
  - Sampling Date: 5/22/2023 @ 9:00 AM MST
- Mesa Dolphin CTB / nAPP2313555368
  - Sampling Date: 5/25/2023 @ 9:00 AM MST
- Mesa 2H Production Facility / nAPP2115531696
  - Sampling Date: 5/25/2023 @ 9:00 AM MST
- Rojo 20 21 Tank Batery / nAPP2123554329
  - Sampling Date: 5/26/2023 @ 9:00 AM MST
- Rojo 38 41 Tank Battery / nAPP2123555001
  - Sampling Date: 5/26/2023 @ 9:00 AM MST
- Mesa 8105 JV-P 004H / nOY1831160155 /nCH1903550822 / nRM2004549559
  - Sampling Date: 5/24-24/2023 @ 9:00 AM MST

Thank you,

Hadlie Green
Project Geologist
432-557-8895
hgreen@ensolum.com
Ensolum, LLC

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APPENDIX F

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	NCH1903550822
District RP	1RP-5329
Facility ID	
Application ID	pCH1903551139

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 # NCH1903550822 MESA 8105-JV-P #4H BATTERY @ 30-025-42842
Contact mailing address: 104 S. Pecos St., Midland, TX 79701	

Location of Release Source

Latitude: 32.06412° Longitude: -103.64973°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Mesa 8105 JV-P #4H Battery	Site Type: Tank Battery
Date Release Discovered: 12/28/2018	API# *(if applicable)* Nearest well: Mesa 8105 JV-P #4H API #30-025-42842

Unit Letter	Section	Township	Range	County
C	11	26S	32E	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) 15 BBL (based on recovery of free product except for oil wet soil)	Volume Recovered (bbls) 14.25 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

Attributed to cold weather, failure of oil dump valve on the first 2-phase separator vessel connected to #4H well allowed oil to be pushed over and dumped out near the compressor.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
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:

Additional Initial Response Details: Free oil was vacuumed up and surface scraped with backhoe.

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: 1/9/2018

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

OCD Only

Received by: **RECEIVED** By CHernandez at 2:16 pm, Feb 04, 2019

State of New Mexico
Oil Conservation Division

Incident ID	nCH1903550822
District RP	1RP-5329
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.

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	nCH1903550822
District RP	1RP-5329
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: Kelton Beaird Title: Environmental Manager

Signature: Date: 6/5/2023

email: KBeaird@btaoil.com Telephone: 432-312-2203

OCD Only

Received by: Jocelyn Harimon Date: 06/08/2023

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: Date: 06/23/2023

Printed Name: Jocelyn Harimon Title: Environmental Specialist

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Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nCH1903550822
District RP	1RP-5329
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: Kelton Beaird Title: Environmental Manager

Signature: Date: 6/5/2023

email: KBeaird@btaoil.com Telephone: 432-312-2203

OCD Only

Received by: Jocelyn Harimon Date: 06/08/2023

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

Action 225558

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 225558
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	Closure for this release is approved. Please note that, when the well or facility is plugged or abandoned, the final remediation and reclamation shall take place in accordance with 19.15.29.12 and 19.15.29.13 NMAC once the site is no longer being used for oil and gas operations.	6/23/2023