



PO Box 1120
Carlsbad, New Mexico 88221
Phone (575) 236-6600

September 9, 2019 (addendum and edits added 12-7-2022)

NMOCD District 2
1625 N. French Drive
Hobbs, New Mexico 88240

To Whom It May Concern:

M&M Excavating, Inc. (MMX) has prepared this Remediation Closure Report for Devon Energy Production Company that describes the remediation of a release of liquids at the Thistle Unit #118H site. The site is in Unit N, Section 34, Township 23S, Range 33E, Latitude 32.2556006, Longitude -103.5616293, Lea County, New Mexico, on State land. Figure 1 provides the vicinity and site location on an USGS 7.5-minute quadrangle map.

Site Information and Closure Criteria

The Thistle Unit #118H is located approximately thirty (30) miles east of Malaga, New Mexico on State land at an elevation of approximately 3,650 feet above mean sea level (amsl).

Based upon well water data. (Appendix B), depth to groundwater in the area is estimated to be more than 51 feet below grade surface (bgs). Pod 04595 is within ½ mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) and USGS. The nearest significant watercourse is an unnamed pond located approximately 5975 feet to the southwest.

The site has been remediated to the applicable NMOCD Closure Criteria for groundwater 51-100 feet bgs. The site has been restored to meet the standards of Table I of 19.15.29.12 NMAC.

Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data is attached in Appendix B.

Release Information and Closure Criteria			
Name	Thistle Unit #118H		
API Number	30-025-43451		
Incident Number	1RP-4682		
Source of Release	Air pocket during drilling		
Released Material	Produced Water	Released Volume	300 BBLS
Recovered Volume	140 BBLS	Net Release	160 BBLS
NMOCD Closure Criteria	>100 feet to groundwater		

Release Information

On April 4, 2017, an air pocket was encountered during the drilling of the Thistle Unit #118H causing the release of 300 bbls of produced water onto the location. Initial response activities were conducted by the operator and included source elimination and site containment, recovering 140 bbls of the produced water. Figures 1 and 2 illustrate the vicinity and site location. Figure 3 illustrates the release location. The C-141 form is included in Appendix A.

Release Characterization and Remediation Activities

On August 22, 2019, MMX personnel arrived on site in response to the release associated with Thistle Unit #118H. MMX collected soil samples at the surface and at 1-foot bgs at six (6) sample locations (L1-L6) around the release. A total of twelve (12) samples were collected for laboratory analysis for a combination of total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D.

As summarized in Table 3, the results meet NMOCD Closure Criteria. Figure 3 shows the sample locations. Laboratory results are summarized in Table 3. All laboratory reports are included in Appendix C.

On behalf of Devon Energy, MMX requests closure for the release associated with 1RP-4682.

Submitted by:
M&M Excavating, Inc.

Lupe Carrasco

Lupe Carrasco

ATTACHMENTS:

Figures:

Figure 1: Vicinity and Well Head Protection Map

Figure 2: Surface Water Radius Map

Figure 3: Site and Sample Location Map

Tables:

Table 2: NMOCD Closure Criteria Justification

Table 3: Summary of Sample Results

Appendices:

Appendix A: Form C-141

Appendix B: Water Well Data

Appendix C: Laboratory Analytical Reports

Tables

Table 2: NMOCD Closure Criteria

Thistle Unit #118H
Devon Energy Production Company

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes	
Depth to Groundwater (feet bgs)		135-150	OSE & USGS (Appendix B)
Horizontal Distance From All Water Sources Within 1/2 Mile (ft)		--	
Horizontal Distance to Nearest Significant Watercourse (ft)		5975	Unnamed pond/lake to the southwest

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater			Closure Criteria (units in mg/kg)			
			Chloride *numerical limit or background, whichever is greater	TPH	GRO + DRO	BTEX Benzene
Less than 50' BGS			600	100		50 10
> 100'			20000	2500	1000	50 10
51' to 100'		x	10000	2500	1000	50 10
Surface Water	Yes	No	if yes, then			
Less than 300' from continuously flowing watercourse or other significant watercourse?		x	600	100		50 10
Less than 200' from lakebed, sinkhole or playa lake?		x				
Water Well or Water Source						
Less than 500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?		x				
Less than 1000' from fresh water well or spring?		x				
Human and Other Areas						
Less than 300' from an occupied permanent residence, school, hospital, institution or church?		x				
Within incorporated municipal boundaries or within a defined municipal fresh water well field?		x				
Less than 100' from wetland?		x				
Within area overlying a subsurface mine		x				
Within an unstable area?		x				
Within a 100-year floodplain?		x				



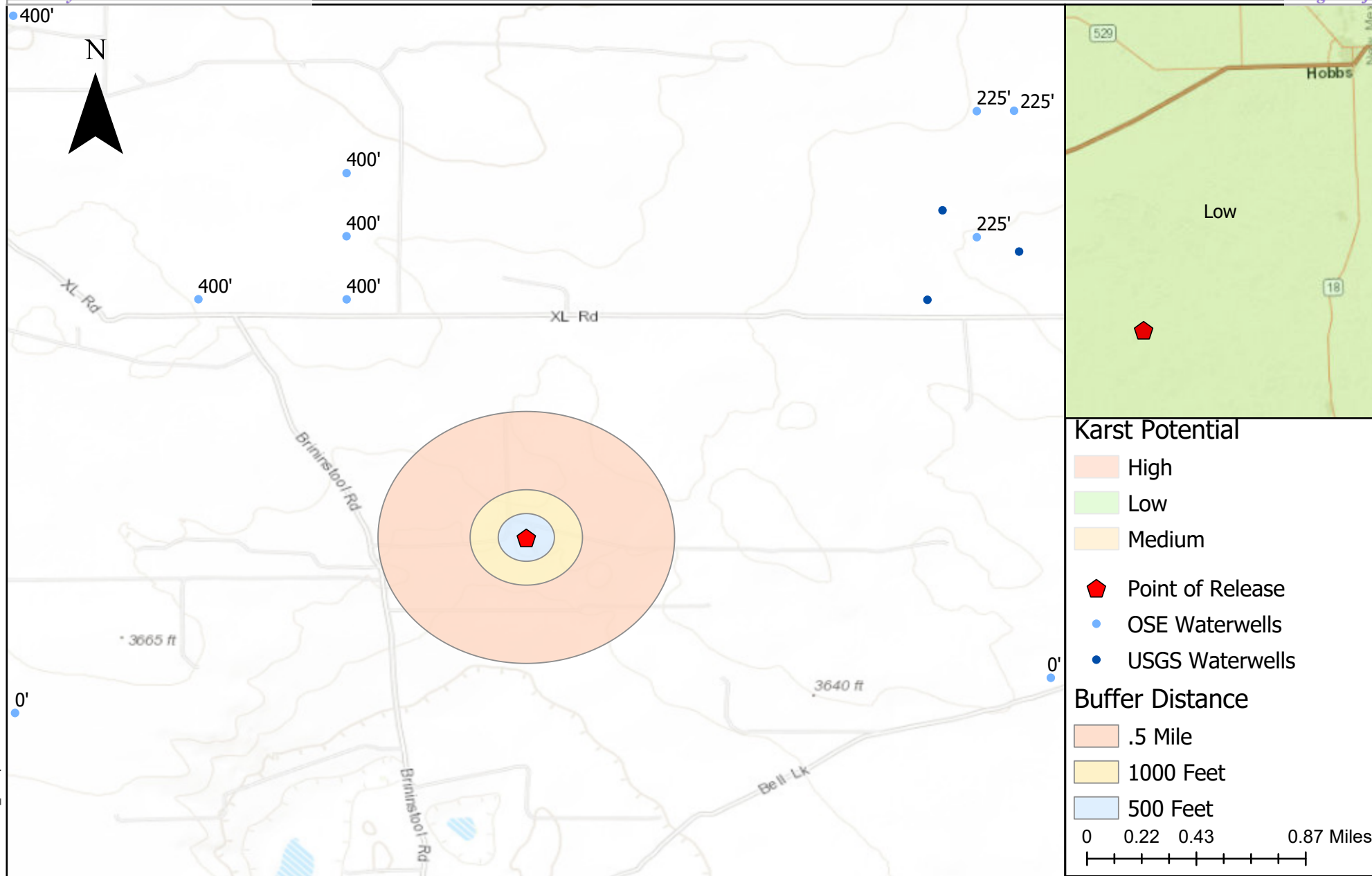
Table 3: Summary of Sample Results

Thistle Unit #118H
Devon Energy Production Company

Sample ID	Sample Date	Depth (feet bgs)	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria			50	10				2,500	10,000
L1	8/22/2019	surface	<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	2,160
		1	--	--	--	--	--	--	1,710
L2		surface	<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	2,920
		1	--	--	--	--	--	--	2,560
L3		surface	<0.300	<0.050	<10.0	76.4	87.1	164	1,380
		1	--	--	--	--	--	--	1,300
L4		surface	<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	6,400
		1	--	--	--	--	--	--	2,520
L5		surface	<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	160
		1	--	--	--	--	--	--	224
L6		surface	<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	1,810
		1	--	--	--	--	--	--	1,790



Figures



Regional Vicinity & Wellhead Protection Map
 Thistle Unit #118H - Devon Energy
 Sec 34 T23S R33E Lea County, New Mexico

Figure 1

Revisions

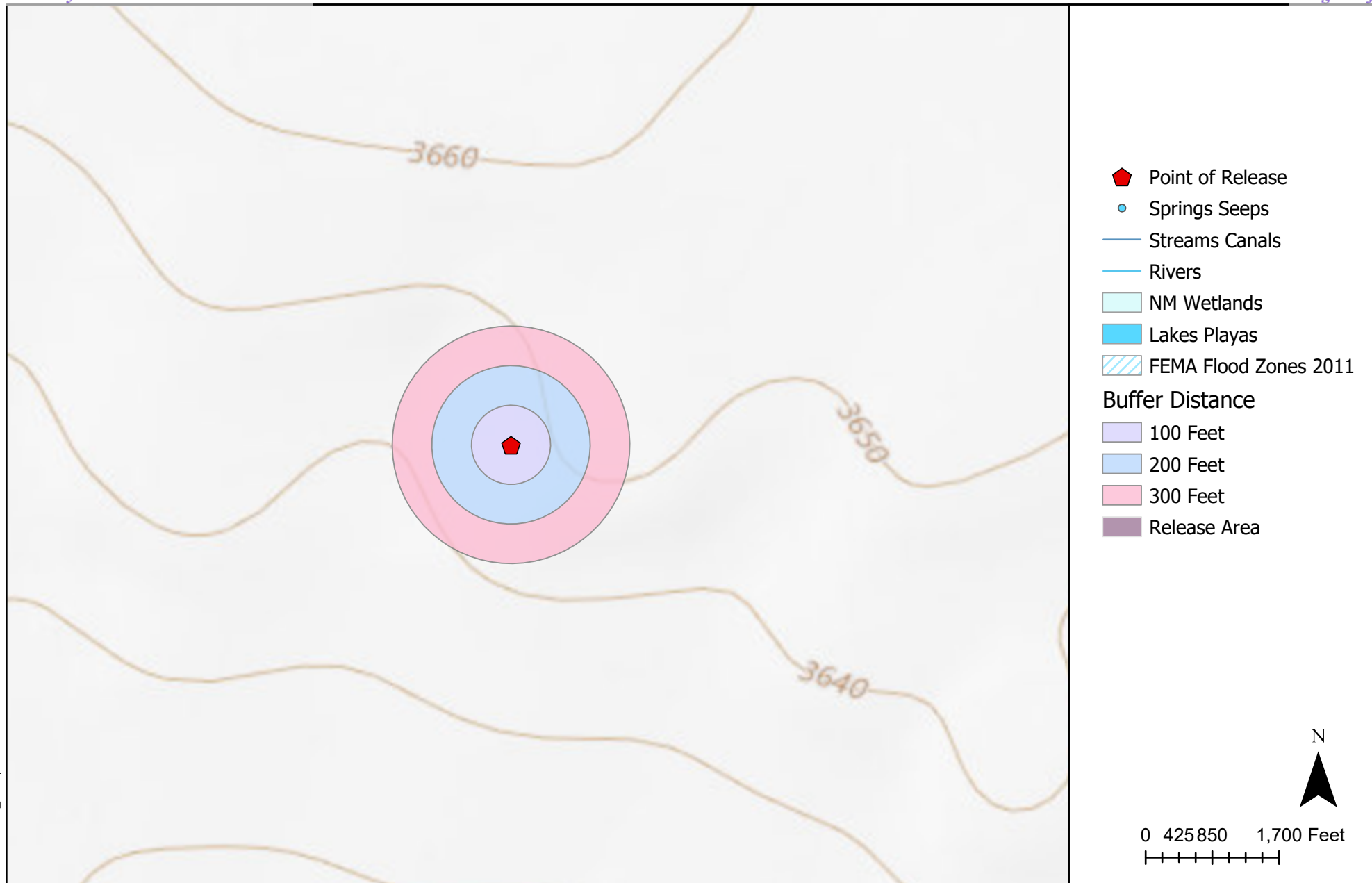
By: _____ Date: _____ Descr: _____
 By: _____ Date: _____ Descr: _____

Drawn _____
 Date 7/17/2019
 Checked _____
 Approved _____



78 Roberson Rd
 Carlsbad, NM 88220
 (575) 230-6600

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Surface Water Protection Map
 Thistle Unit #118H - Devon Energy
 Sec 34 T23S R33E Lea County, New Mexico

Figure 2

Revisions

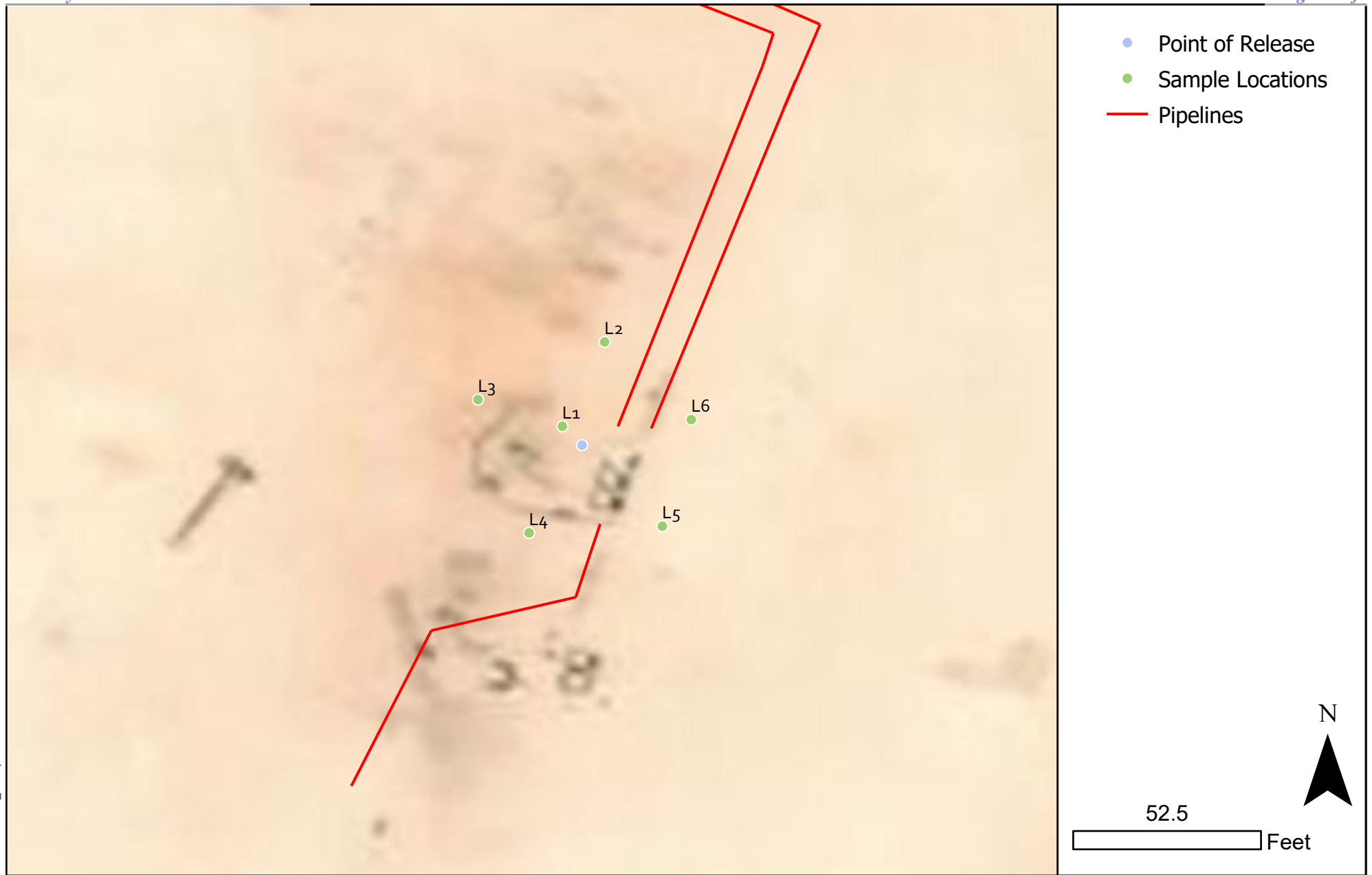
By: _____ Date: _____ Descr: _____
 By: _____ Date: _____ Descr: _____

Drawn LC
 Date 7/17/2019
 Checked _____
 Approved _____



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Site & Sample Locations
 Thistle Unit #118H - Devon Energy
 Sec. 34 T23S T33E, Lea County, NM

Figure 3

Revisions

By: _____ Date: _____ Descr: _____
 By: _____ Date: _____ Descr: _____

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Drawn
 Date
 Checked
 Approved

LC

9/9/2019



78 Roberson Rd
 Carlsbad, NM 88220
 (575) 236-6600

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Devon Energy Production Co LP (6137)	Contact: Mark Kramer Drilling Supervisor / Devon
Address: PO Box 250 Artesia, NM 88211	Telephone No. 575-748-3371
Facility Name: Thistle Unit #118H	Facility Type: Oil Well
Surface Owner: State	Mineral Owner: State
API No. 30-025-43451	

LOCATION OF RELEASE

Unit Letter N	Section 34	Township 23S	Range 33E	Feet from the 621	North/South Line South	Feet from the 2199	East/West Line WEST	County Lea
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Latitude: 32.2556006 Longitude: -103.5616293

NATURE OF RELEASE

Type of Release: Fresh Water and Cuttings	Volume of Release: 300 BBLS	Volume Recovered: 140 BBLS
Source of Release: Drilled into air pocket	Date and Hour of Occurrence 4/4/2017; 4:38 PM	Date and Hour of Discovery 4/4/2017; 4:38 PM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Olivia Yu/NMOCD	
By Whom? Mike Shoemaker, EHS Professional	Date and Hour: 4/05/2017; 07:17 PM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

RECEIVED

By Olivia Yu at 1:28 pm, Apr 21, 2017


Describe Cause of Problem and Remedial Action Taken.*

While drilling the surface hole an air pocket was encountered and fresh water based drilling mud and drill cuttings from the wellbore were released. It is estimated that 300 bbls of fresh water based drilling mud and cuttings were released to the ground surface, rig structure, and sub structure. The job was stopped and everyone mustered and a headcount was completed. A safety stand down was also completed to ensure that the incident was reviewed and a plan forward was discussed.

Describe Area Affected and Cleanup Action Taken.*

300 bbls of fresh water based drilling mud and cuttings were released. 167 bbls to the ground and 133 bbls were released to the rig structure and sub structure. A vacuum truck was dispatched to the location and recovered 140bbbls of fluid from the ground surface. A remediation contractor will be contacted to assist with remediation efforts.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Michael R. Shoemaker	OIL CONSERVATION DIVISION	
Printed Name: Michael Shoemaker	Approved by Environmental Specialist: 	
Title: Environmental Professional	Approval Date: 4/21/2017	Expiration Date:
E-mail Address: mike.shoemaker@dvn.com	Conditions of Approval: see attached directive	Attached <input checked="" type="checkbox"/>
Date: 04/17/2017 Phone: 575-748-3371		

* Attach Additional Sheets If Necessary

1RP-4682

nOY1711147510

pOY1711147812

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 4/18/2017 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 1R-4682 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 1 office in Hobbs on or before 5/21/2017. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

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

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

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

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

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

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

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

Jim Griswold

OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us



Thistle Unit #118H

300BBL Fresh WBM and Cutti



This map is for illustrative purposes only and is neither a legally recorded map nor survey and is not intended to be used as one. Devon makes no warranty, representation, or guarantee of any kind regarding this map.

WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: Mike Shoemaker
Map is current as of: 18-Apr-2017



Miles

0 0.00 0.01 0.02 1:889



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD 1 (TW-1)		WELL TAG ID NO.		OSE FILE NO(S). C-4595		
	WELL OWNER NAME(S) Devon Energy				PHONE (OPTIONAL) 575-748-1838		
	WELL OWNER MAILING ADDRESS 6488 7 Rivers Hwy				CITY Artesia	STATE NM	ZIP 88210
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 15	SECONDS 16.73 N	* 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 SE SW SW Sec. 34 T23S R33E							
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.	
	DRILLING STARTED 03/09/2022		DRILLING ENDED 03/09/2022		DEPTH OF COMPLETED WELL (FT) temporary well casing	BORE HOLE DEPTH (FT) ±55	DEPTH WATER FIRST ENCOUNTERED (FT) n/a
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) dry	DATE STATIC MEASURED 03/9/22, 3/15/22
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:						
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger						CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>
	DEPTH (feet bgl) FROM 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)
	0 55		±6.5	Boring	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM 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 01/28/2022)

FILE NO. C-4595	POD NO. 1	TRN NO. 719171
LOCATION 23S.33E.34433	WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		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)
	FROM	TO				
	0	4	4	Caliche, with medium to fine grained sand, white and Red	Y ✓ N	
	4	24	20	Sand, medium/ fine grained, poorly graded, tan	Y ✓ N	
	24	29	5	Sand, medium/ fine grained, poorly graded, Reddish Brown	Y ✓ N	
	29	55	26	Sand, medium/ fine grained, poorly graded, with clay Reddish 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	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:					TOTAL ESTIMATED WELL YIELD (gpm):	
<input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER – SPECIFY:					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 material removed and soil boring backfilled using drill cuttings from total depth to ten feet below ground surface(bgs), then hydrated bentonite chips ten feet bgs to surface.	
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge, Carmelo Trevino, Cameron Pruitt	

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:	
	 Jackie D. Atkins	03/31/2022
SIGNATURE OF DRILLER / PRINT SIGNEE NAME		DATE

USE DIT APR 4 2022 PM 2:05

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 01/28/2022)	
FILE NO. <i>C-45915</i>	POD NO. <i>1</i>	TRN NO. <i>719171</i>	
LOCATION <i>23S.33E.34 43</i>	WELL TAG ID NO. <i>—</i>	PAGE 2 OF 2	

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	
District RP	1RP-4682
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Devon Energy	OGRID: 6137
Contact Name: Amanda Davis	Contact Telephone: 575-748-0176
Contact email: Amanda.davis@dyn.com	Incident # (assigned by OCD)
Contact mailing address: 6488 Seven Rivers Highway Artesia NM 88210	

Location of Release Source

Latitude 32.2556006

Longitude -103.5616293
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Thistle Unit #118H	Site Type: Oil Well
Date Release Discovered: 4/4/2017	API# (if applicable) 30-025-43451

Unit Letter	Section	Township	Range	County
N	34	23S	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)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input checked="" type="checkbox"/> Other (describe) Fresh Water & Drill Cuttings	Volume/Weight Released (provide units) 300 bbls	Volume/Weight Recovered (provide units) 140 bbls

Cause of Release

While drilling the surface hole, an air pocket was encountered and fresh water based drilling mud and drill cutting from the wellbore were released.

Incident ID	
District RP	1RP-4682
Facility ID	
Application ID	

<p>Was this a major release as defined by 19.15.29.7(A) NMAC?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>If YES, for what reason(s) does the responsible party consider this a major release?</p> <p>></p>
<p>If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?</p> <p>Yes. To Olivia Yu (District 2) on 4/5/2017 via email</p>	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> 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: <u>Dale Woodall</u>	Title: <u>Env. Professional</u>
Signature: _____	Date: <u>12/7/2022</u>
email: <u>dale.woodall@dvn.com</u>	Telephone: <u>575-748-1838</u>
<u>OCD Only</u> Received by: _____ Date: _____	

Incident ID	nOY1711147510
District RP	1RP-4682
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?	<u>51</u> -100 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	nOY1711147510
District RP	1RP-4682
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: Dale Woodall Title: Env. Professional

Signature: Dale Woodall Date: 12/7/2022

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

Incident ID	nOY1711147510
District RP	1RP-4682
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) ****NO REMEDIATION REQUIRED**
- ☒ 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: Dale Woodall Title: Env. Professional

Signature: Dale Woodall Date: 12/7/2022

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: OCD Date: 12/07/2022

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: Ashley Maxwell Date: 2/02/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

Appendix B
Water Well Data
WITH 12/7/2022 ADDENDUM

ADDENDUM

Location name: Thistle Unit #118H

OCD Spill Number: nOY1711147510

From: Dale Woodall, Devon Energy

Date: 12/7/2022

Since this report for the above referenced spill(s) was written, there has been an update in the status of the PODs for the location.

A review of New Mexico Office of the State Engineers (OSE) online water well database (New Mexico Office of the State Engineer (NMOSE) online water well database https://gis.ose.state.nm.us/gisapps/ose_pod_locations/).

One pod location is within ½ mile radius and less than 25 years old.

C-4595 POD 1 (installed in 2022) did not encounter groundwater and is within 0.5 miles of the location


The spill was remediated to criteria for DTW of 51-100 feet bgs.

Boring log of the well C-4595 POD1 is attached.

A map denoting the location of pod C4595 and Thistle Unit 118H is attached.



New Mexico Office of the State Engineer Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
		Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	C 04595 POD1	4	3	3	34	23S	33E	635150	3569564 
<hr/>									
Driller License:	1249	Driller Company: ATKINS ENGINEERING ASSOC. INC.							
Driller Name:	JACKIE ATKINS								
Drill Start Date:	03/09/2022	Drill Finish Date:				03/09/2022	Plug Date:	03/31/2022	
Log File Date:	04/04/2022	PCW Rcv Date:					Source:		
Pump Type:		Pipe Discharge Size:					Estimated Yield:		
Casing Size:		Depth Well:				55 feet	Depth Water:		

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

12/7/22 7:31 AM

POINT OF DIVERSION SUMMARY



FIGURE 1: NM OSE POD LOCATIONS	
THISTLE UNIT 118H	
32.2556006,-103.5616293	
OCD INCIDENT nOY1711147510	
drawn by: RDW	Date: 12/2022



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
O=orphaned,
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
C 02281		CUB	LE	3	4	4	28	23S	33E	634495	3571183*	1806	545	400	145
C 02280		CUB	LE	3	2	4	28	23S	33E	634489	3571586*	2157	650	400	250
C 02279		CUB	LE	3	4	3	28	23S	33E	633691	3571173*	2341	650	400	250
C 02308		CUB	LE	1	3	1	10	24S	33E	634953	3567364*	2372	40	20	20
C 02278		CUB	LE	3	4	2	28	23S	33E	634484	3571989*	2523	650	400	250
C 03591 POD1		CUB	LE	2	1	4	05	24S	33E	632731	3568518	2991			

Average Depth to Water: **324 feet**

Minimum Depth: **20 feet**

Maximum Depth: **400 feet**

Record Count: 6

UTM NAD83 Radius Search (in meters):

Easting (X): 635490

Northing (Y): 3569675

Radius: 3000

*UTM location was derived from PLSS - see Help

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

7/17/19 4:41 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER



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Groundwater

Geographic Area:

United States

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site_no list =

- 321611103321601

Minimum number of levels = 1

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USGS 321611103321601 23S.33E.26.42100

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°16'28.0", Longitude 103°32'15.6" NAD83

Land-surface elevation 3,641 feet above NAVD88

The depth of the well is 190 feet below land surface.

This well is completed in the Chinle Formation (231CHNL) local aquifer.

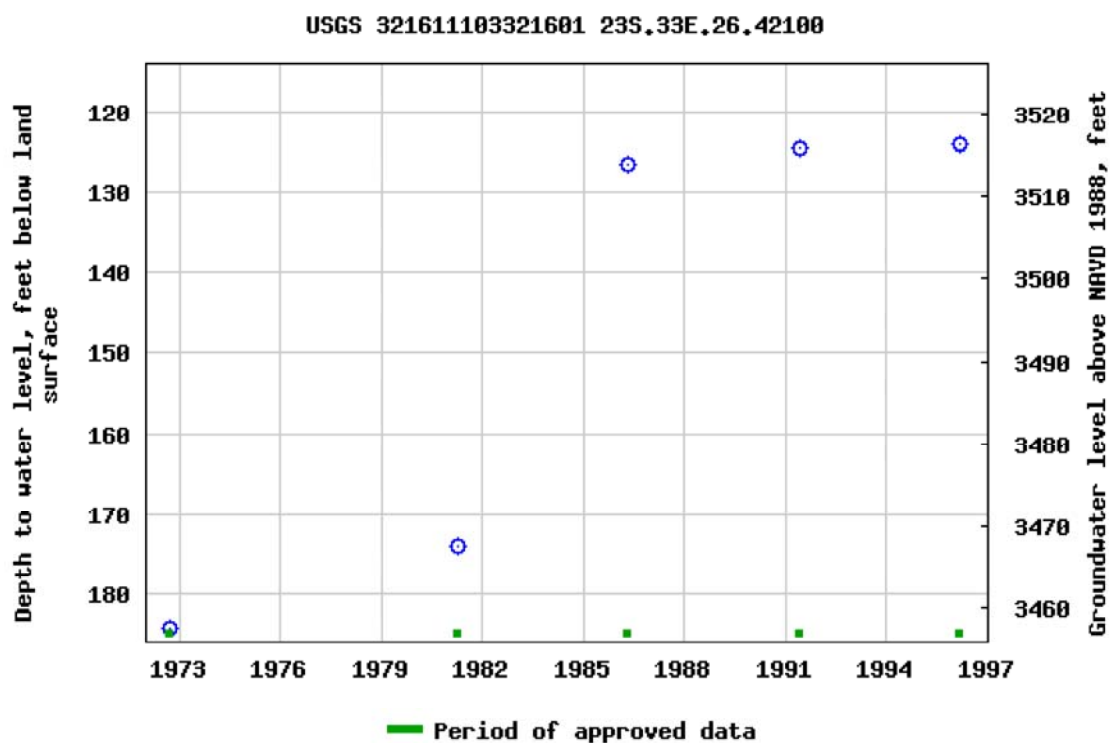
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Title: Groundwater for USA: Water Levels

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Page Contact Information: [USGS Water Data Support Team](#)

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1.25 1.09 nadww01



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site_no list =

- 321609103321701

Minimum number of levels = 1

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USGS 321609103321701 23S.33E.26.421342

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°16'09", Longitude 103°32'17" NAD27

Land-surface elevation 3,648 feet above NAVD88

The depth of the well is 173 feet below land surface.

This well is completed in the Chinle Formation (231CHNL) local aquifer.

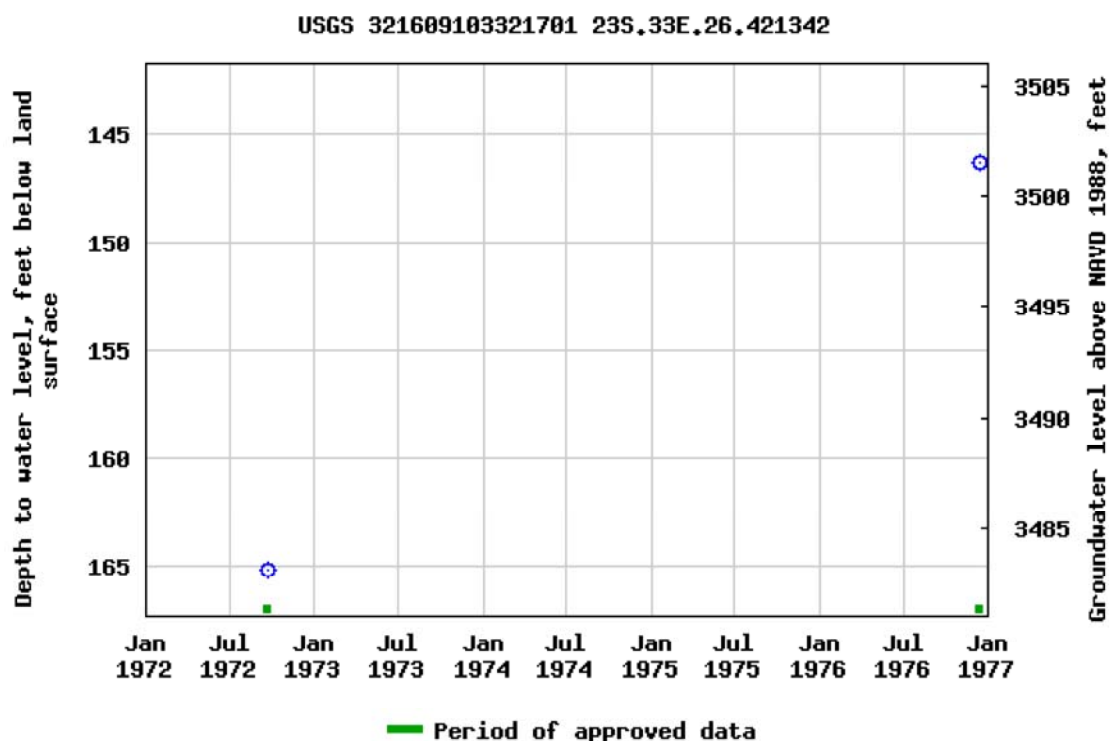
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1.04 0.91 nadww01

Appendix C

Laboratory Analytical Reports



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

August 29, 2019

MELODIE SANJARI

MMX

2737 PECOS HWY

CARLSBAD, NM 88220

RE: 1118 H - WH

Enclosed are the results of analyses for samples received by the laboratory on 08/26/19 11:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

MMX
 MELODIE SANJARI
 2737 PECOS HWY
 CARLSBAD NM, 88220
 Fax To: (575) 236-6201

Received: 08/26/2019
 Reported: 08/29/2019
 Project Name: 1118 H - WH
 Project Number: NONE GIVEN
 Project Location: MMX

Sampling Date: 08/22/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: L 1 - SURFACE (H902928-01)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/28/2019	ND	1.77	88.6	2.00	5.48	
Toluene*	<0.050	0.050	08/28/2019	ND	1.95	97.5	2.00	4.88	
Ethylbenzene*	<0.050	0.050	08/28/2019	ND	2.09	105	2.00	4.00	
Total Xylenes*	<0.150	0.150	08/28/2019	ND	6.27	104	6.00	3.52	
Total BTEX	<0.300	0.300	08/28/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 87.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2160	16.0	08/28/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2019	ND	227	113	200	0.151	
DRO >C10-C28*	<10.0	10.0	08/28/2019	ND	234	117	200	3.14	
EXT DRO >C28-C36	<10.0	10.0	08/28/2019	ND					

Surrogate: 1-Chlorooctane 99.9 % 41-142

Surrogate: 1-Chlorooctadecane 115 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

MMX
 MELODIE SANJARI
 2737 PECOS HWY
 CARLSBAD NM, 88220
 Fax To: (575) 236-6201

Received: 08/26/2019
 Reported: 08/29/2019
 Project Name: 1118 H - WH
 Project Number: NONE GIVEN
 Project Location: MMX

Sampling Date: 08/22/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: L 2 - SURFACE (H902928-02)

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/28/2019	ND	1.77	88.6	2.00	5.48		
Toluene*	<0.050	0.050	08/28/2019	ND	1.95	97.5	2.00	4.88		
Ethylbenzene*	<0.050	0.050	08/28/2019	ND	2.09	105	2.00	4.00		
Total Xylenes*	<0.150	0.150	08/28/2019	ND	6.27	104	6.00	3.52		
Total BTEX	<0.300	0.300	08/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 87.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2920	16.0	08/28/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2019	ND	227	113	200	0.151	
DRO >C10-C28*	<10.0	10.0	08/28/2019	ND	234	117	200	3.14	
EXT DRO >C28-C36	<10.0	10.0	08/28/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 120 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

MMX
 MELODIE SANJARI
 2737 PECOS HWY
 CARLSBAD NM, 88220
 Fax To: (575) 236-6201

Received: 08/26/2019
 Reported: 08/29/2019
 Project Name: 1118 H - WH
 Project Number: NONE GIVEN
 Project Location: MMX

Sampling Date: 08/22/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: L 3 - SURFACE (H902928-03)

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/28/2019	ND	1.77	88.6	2.00	5.48		
Toluene*	<0.050	0.050	08/28/2019	ND	1.95	97.5	2.00	4.88		
Ethylbenzene*	<0.050	0.050	08/28/2019	ND	2.09	105	2.00	4.00		
Total Xylenes*	<0.150	0.150	08/28/2019	ND	6.27	104	6.00	3.52		
Total BTEx	<0.300	0.300	08/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 86.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1380	16.0	08/28/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2019	ND	227	113	200	0.151	
DRO >C10-C28*	76.4	10.0	08/28/2019	ND	234	117	200	3.14	
EXT DRO >C28-C36	87.1	10.0	08/28/2019	ND					

Surrogate: 1-Chlorooctane 98.4 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

MMX
 MELODIE SANJARI
 2737 PECOS HWY
 CARLSBAD NM, 88220
 Fax To: (575) 236-6201

Received: 08/26/2019
 Reported: 08/29/2019
 Project Name: 1118 H - WH
 Project Number: NONE GIVEN
 Project Location: MMX

Sampling Date: 08/22/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: L 4 - SURFACE (H902928-04)

BTEx 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/28/2019	ND	1.77	88.6	2.00	5.48	
Toluene*	<0.050	0.050	08/28/2019	ND	1.95	97.5	2.00	4.88	
Ethylbenzene*	<0.050	0.050	08/28/2019	ND	2.09	105	2.00	4.00	
Total Xylenes*	<0.150	0.150	08/28/2019	ND	6.27	104	6.00	3.52	
Total BTEX	<0.300	0.300	08/28/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6400	16.0	08/28/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2019	ND	227	113	200	0.151	
DRO >C10-C28*	<10.0	10.0	08/28/2019	ND	234	117	200	3.14	
EXT DRO >C28-C36	<10.0	10.0	08/28/2019	ND					

Surrogate: 1-Chlorooctane 90.0 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

MMX
 MELODIE SANJARI
 2737 PECOS HWY
 CARLSBAD NM, 88220
 Fax To: (575) 236-6201

Received: 08/26/2019
 Reported: 08/29/2019
 Project Name: 1118 H - WH
 Project Number: NONE GIVEN
 Project Location: MMX

Sampling Date: 08/22/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: L 5 - SURFACE (H902928-05)

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/28/2019	ND	1.77	88.6	2.00	5.48		
Toluene*	<0.050	0.050	08/28/2019	ND	1.95	97.5	2.00	4.88		
Ethylbenzene*	<0.050	0.050	08/28/2019	ND	2.09	105	2.00	4.00		
Total Xylenes*	<0.150	0.150	08/28/2019	ND	6.27	104	6.00	3.52		
Total BTEx	<0.300	0.300	08/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	08/28/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2019	ND	227	113	200	0.151	
DRO >C10-C28*	<10.0	10.0	08/28/2019	ND	234	117	200	3.14	
EXT DRO >C28-C36	<10.0	10.0	08/28/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 115 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

MMX
 MELODIE SANJARI
 2737 PECOS HWY
 CARLSBAD NM, 88220
 Fax To: (575) 236-6201

Received: 08/26/2019
 Reported: 08/29/2019
 Project Name: 1118 H - WH
 Project Number: NONE GIVEN
 Project Location: MMX

Sampling Date: 08/22/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: L 6 - SURFACE (H902928-06)

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/28/2019	ND	1.77	88.6	2.00	5.48		
Toluene*	<0.050	0.050	08/28/2019	ND	1.95	97.5	2.00	4.88		
Ethylbenzene*	<0.050	0.050	08/28/2019	ND	2.09	105	2.00	4.00		
Total Xylenes*	<0.150	0.150	08/28/2019	ND	6.27	104	6.00	3.52		
Total BTEX	<0.300	0.300	08/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1810	16.0	08/28/2019	ND	432	108	400	7.69	QM-07	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/27/2019	ND	218	109	200	5.82	
DRO >C10-C28*	<10.0	10.0	08/27/2019	ND	229	114	200	7.12	
EXT DRO >C28-C36	<10.0	10.0	08/27/2019	ND					

Surrogate: 1-Chlorooctane 87.1 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Analytical Results For:

MMX
 MELODIE SANJARI
 2737 PECOS HWY
 CARLSBAD NM, 88220
 Fax To: (575) 236-6201

Received: 08/26/2019
 Reported: 08/29/2019
 Project Name: 1118 H - WH
 Project Number: NONE GIVEN
 Project Location: MMX

Sampling Date: 08/22/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: L 1 - 1' (H902928-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1710	16.0	08/28/2019	ND	432	108	400	7.69	

Sample ID: L 2 - 1' (H902928-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2560	16.0	08/28/2019	ND	432	108	400	7.69		

Sample ID: L 3 - 1' (H902928-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1300	16.0	08/28/2019	ND	432	108	400	7.69	

Sample ID: L 4 - 1' (H902928-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2520	16.0	08/28/2019	ND	432	108	400	7.69	

Sample ID: L 5 - 1' (H902928-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	08/28/2019	ND	432	108	400	7.69	

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Analytical Results For:

MMX
 MELODIE SANJARI
 2737 PECOS HWY
 CARLSBAD NM, 88220
 Fax To: (575) 236-6201

Received: 08/26/2019
 Reported: 08/29/2019
 Project Name: 1118 H - WH
 Project Number: NONE GIVEN
 Project Location: MMX

Sampling Date: 08/22/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: L 6 - 1' (H902928-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1790	16.0	08/28/2019	ND	432	108	400	7.69		

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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

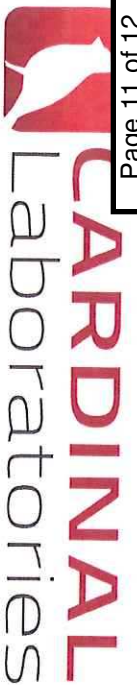
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A handwritten signature in black ink, appearing to read "C. D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST




101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

Company Name: MMX										BILL TO										ANALYSIS REQUEST																			
Project Manager: Melodir Sanjari										P.O. #:																													
Address:										Company: MMX																													
City:										State:										Attn: Lupe Carasco																			
Phone #:										Fax #:										Address:																			
Project #:										City:																													
Project Name: 1184-10H										State:										Zip:																			
Project Location:										Phone #:																													
Sample Name: MPs										Fax #:																													
FOR LAB USE ONLY										MATRIX										PRESERV										SAMPLING									
Lab I.D.										(G)RAB OR (C)OMP.										# CONTAINERS																			
Sample I.D.										GROUNDWATER										WASTEWATER										SOIL									
										OIL										SLUDGE										OTHER :									
										ACID/BASE:										ICE / COOL										OTHER :									
										DATE										TIME																			
H902908										8/22										12:00										BTX									
1										L1-Surf										✓										✓									
2										L2-Surf										✓										✓									
3										L3-Surf										✓										✓									
4										L4-Surf										✓										✓									
5										L5-Surf										✓										✓									
6										L6-Surf										✓										✓									
7										L1-1'										✓										✓									
8										L2-1'										✓										✓									
9										L3-1'										✓										✓									
10										L9-1'										✓										✓									

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Relinquished By:		Date:	8-26-19	Received By:	
		Time:	11:15		
		Date:		Received By:	
		Time:			


email results to Melodic.Saniw@Soudern

Delivered By: (Circle One)	0.92	#97	Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	UPS	0130	Cool <input type="checkbox"/> Intact <input checked="" type="checkbox"/>	
			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

	Sample Condition	CHECK (in)
0.9c #97	Cool <input type="checkbox"/> Intact <input checked="" type="checkbox"/>	
1.3c	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Y.O.

+ Cardinal cannot accept verbal changes Please fax written changes to (575) 393-2326

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

Relinquished By:	Date:	8-26-19	Received By:	
	Time:	11:15		
	Date:			
	Time:			

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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 164704

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 164704
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	2/2/2023