

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	NRM2002759285
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Merrion Oil & Gas Corporation	OGRID 14634
Contact Name Philana Thompson	Contact Telephone 505-486-1171
Contact email pthompson@merrion.bz	Incident # (assigned by OCD) NRM2002759285
Contact mailing address 610 Reilly Ave Farmington, NM 87401	

Location of Release Source

Latitude 36.3026848 Longitude -107.4227676
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Canada Mesa #1E	Site Type Gas
Date Release Discovered 11:00 AM 12/13/2019	API# (if applicable) 30-039-22118

Unit Letter	Section	Township	Range	County
C	24	24N	6W	Rio Arriba

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 checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 20 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 type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

1. Tank failed at seam
2. Well was shut in at the time
3. Tank is empty and has about a 1" of ice that could not be removed by hose

Form C-141

State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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*

<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>Philana Thompson</u>	Title: <u>HSE & Regulatory Spec.</u>
Signature: <u>Philana Thompson</u>	Date: <u>12-13-19</u>
email: <u>pthompson@emvion.biz</u>	Telephone: <u>5054861171</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

Incident ID	
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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>>100</u> (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 checked="" type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> Yes <input 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

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Printed Name: Philana Thompson Title: Regulatory Compliance SpecialistSignature: Philana Thompson Date: 4/2/2020email: pthompson@merrion.bz Telephone: 505-486-1171**OCD Only**

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Philana Thompson Title: Regulatory Compliance Specialist

Signature: Philana Thompson Date: 4/2/2020

email: pthompson@merrion.bz Telephone: 505-486-1171

OCD Only

Received by: _____ Date: _____


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: Cory Smith Date: 6/17/2020

Printed Name: Cory Smith Title: Environmental Specialist

CM 1E Hot Spots

Legend

 Wall

Wall 1 985

Bottom 602

Wall 2 737

Google Earth

© 2019 Google

30 ft

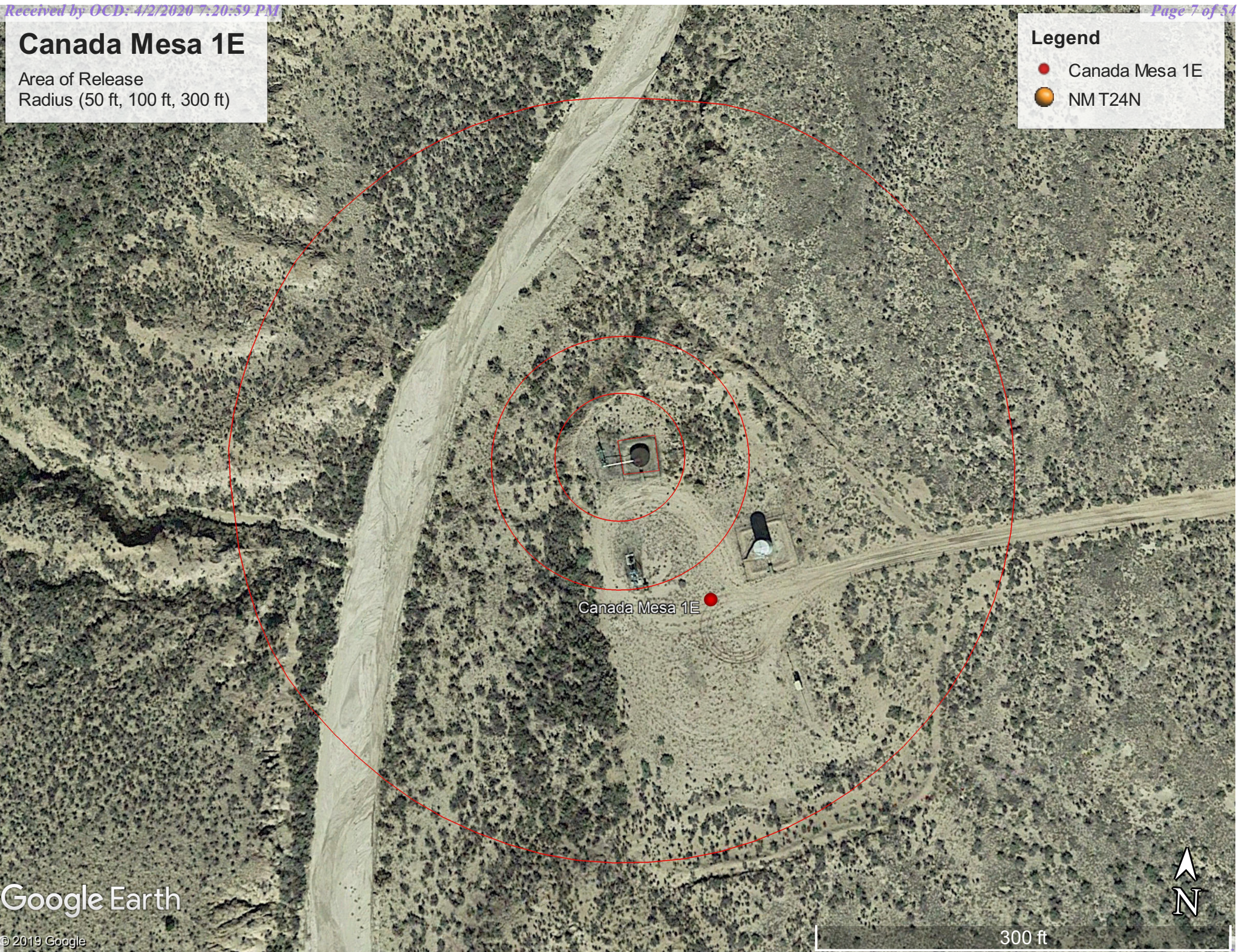


Canada Mesa 1E

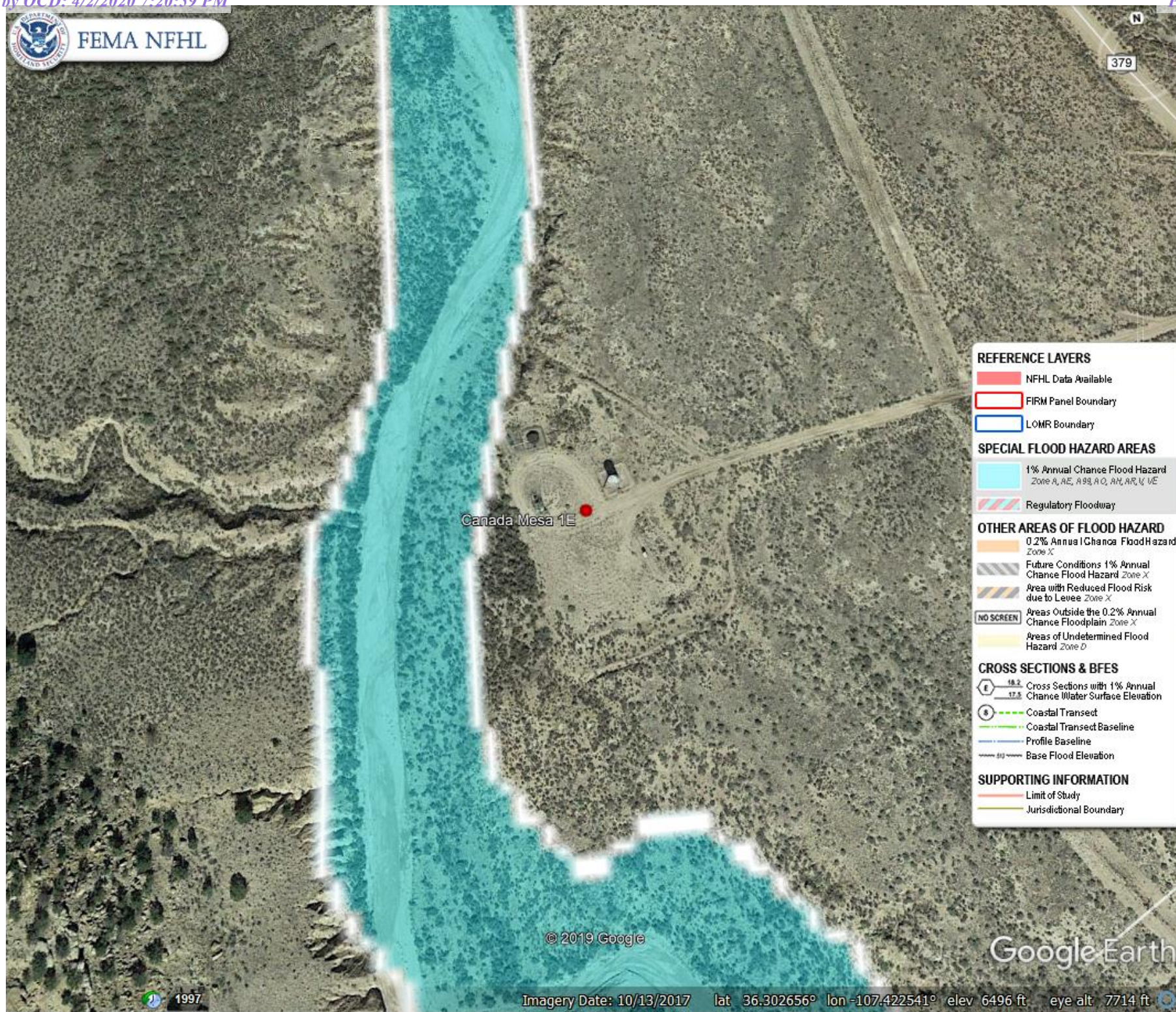
Area of Release
Radius (50 ft, 100 ft, 300 ft)

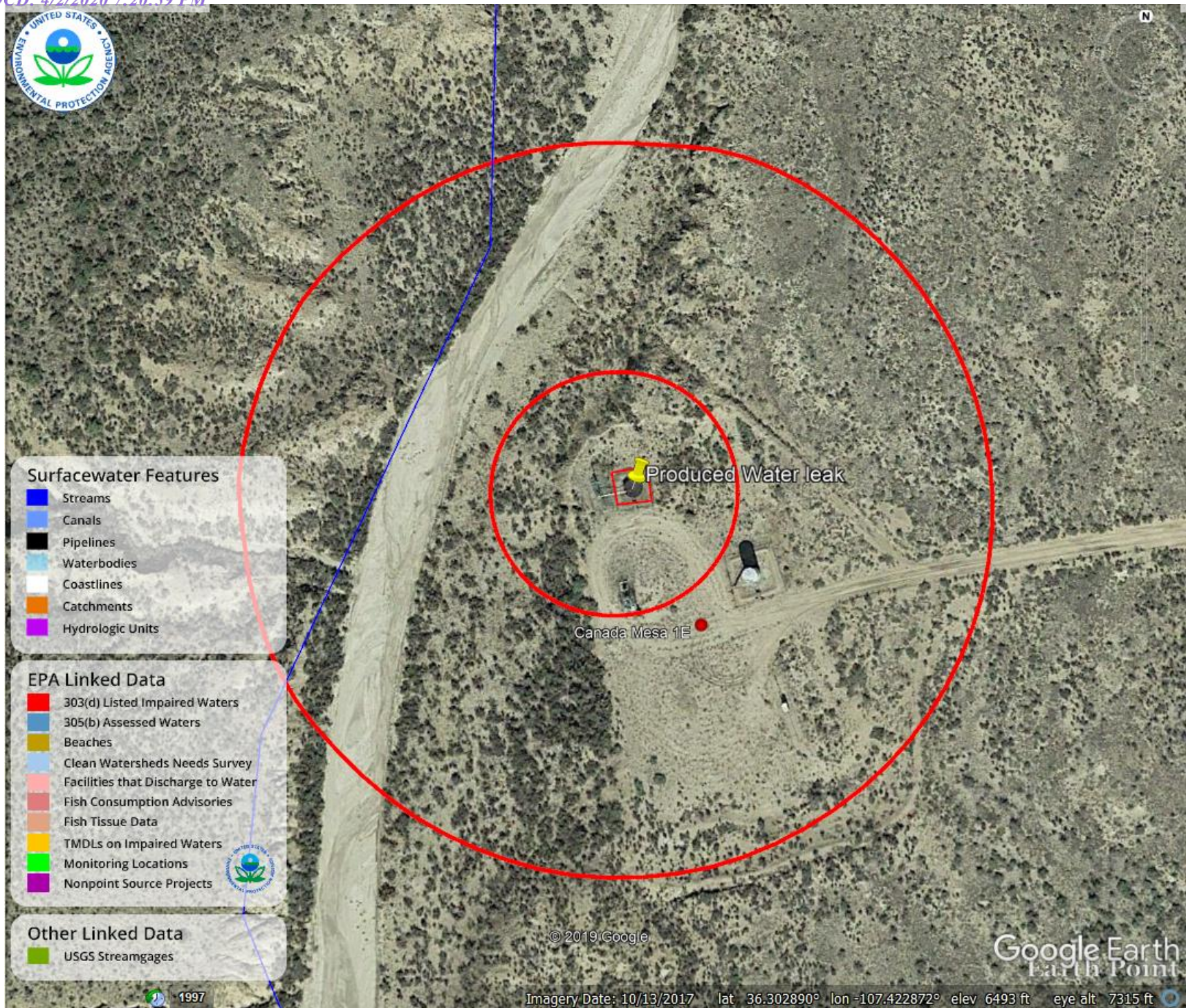
Legend

- Canada Mesa 1E
- NM T24N









12/13/19



12/14/2019



12/20/2020







2/27/2020



3/24/2020





CANADA MESA No. 1E

Well History

Dec. 13, 2019

Work Detail: Leak Noticed @ 11 AM 12/13/2019.

Spill: Produced Water

Spill Quantity: 20 bbls

What has been done to isolate leak?: Well was shut in. Tank was empty less about an 1" of ice that couldn't really be sucked out with a hose.

December 15, 2019

Work Detail: On 12/14/19 Charlie with 3D hauled one clean lode of soil to stockpile, moved the steel water pit and excavated to 4' in an attempt to remove the contamination. Samples were sent to Rule Engineering. (G. Reid)

December 18, 2019-February 25th, 2020

Continue to dig and haul soil

February 26, 2020

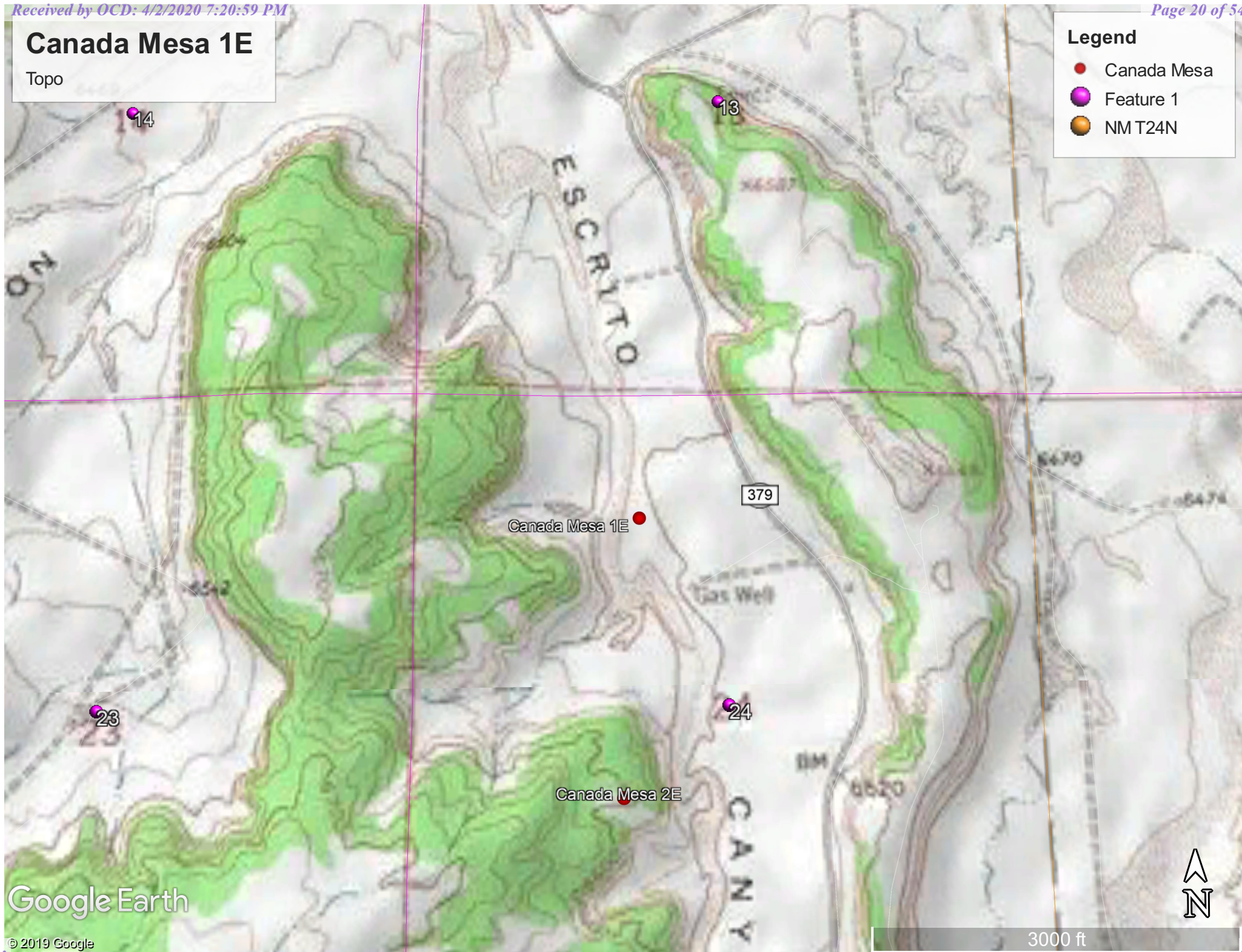
Work Detail obtained samples for final sampling, took samples to Envirotech as per Philana. OCD was not present for sampling. (S. Calkins)

March 24, 2020

Work Detail: 3 D Services and I went to location on 3/23/20. Finished backfilling hole. LD liner and set angle iron and pit, tied in water dump line. Finished painting pit and installed pit. Installed produced water placard. Will finish fence tomorrow. SDON. (S. Calkins)

Topo

- Canada Mesa
- Feature 1
- NM T24N





Analytical Report

Report Summary

Client: Merrion Oil & Gas

Samples Received: 2/6/2020

Job Number: 03048-0009

Work Order: P002017

Project Name/Location: Canada Mesa 1E Release

Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Walter Hinchman', is written over a light blue rectangular background.

Date: 2/13/20

Walter Hinchman, Laboratory Director



Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, holds the Utah TNI certification NM009792018-1 for the data reported.
Envirotech, Inc, holds the Texas TNI certification T104704557-19-2 for the data reported.



Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
02/13/20 13:17

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
CM Wall 1	P002017-01A	Soil	02/06/20	02/06/20	Glass Jar, 4 oz.
CM Wall 2	P002017-02A	Soil	02/06/20	02/06/20	Glass Jar, 4 oz.
CM Bottom	P002017-03A	Soil	02/06/20	02/06/20	Glass Jar, 4 oz.

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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
02/13/20 13:17

CM Wall 1
P002017-01 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organics by EPA 8021

Benzene	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		104 %		50-150	2007003	02/11/20	02/12/20	EPA 8021B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	2007005	02/11/20	02/11/20	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	2007005	02/11/20	02/11/20	EPA 8015D	
<i>Surrogate: n-Nonane</i>		88.2 %		50-200	2007005	02/11/20	02/11/20	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		94.5 %		50-150	2007003	02/11/20	02/12/20	EPA 8015D	

Anions by 300.0/9056A

Chloride	1260	20.0	mg/kg	1	2007010	02/11/20	02/11/20	EPA 300.0/9056A	
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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
02/13/20 13:17

CM Wall 2
P002017-02 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organics by EPA 8021

Benzene	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		104 %		50-150	2007003	02/11/20	02/12/20	EPA 8021B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	2007005	02/11/20	02/11/20	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	2007005	02/11/20	02/11/20	EPA 8015D	
<i>Surrogate: n-Nonane</i>		92.3 %		50-200	2007005	02/11/20	02/11/20	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		95.2 %		50-150	2007003	02/11/20	02/12/20	EPA 8015D	

Anions by 300.0/9056A

Chloride	595	20.0	mg/kg	1	2007010	02/11/20	02/11/20	EPA 300.0/9056A	
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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
02/13/20 13:17

CM Bottom
P002017-03 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organics by EPA 8021

Benzene	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		105 %		50-150	2007003	02/11/20	02/12/20	EPA 8021B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	2007005	02/11/20	02/11/20	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	2007005	02/11/20	02/11/20	EPA 8015D	
<i>Surrogate: n-Nonane</i>		94.1 %		50-200	2007005	02/11/20	02/11/20	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	2007003	02/11/20	02/12/20	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		94.3 %		50-150	2007003	02/11/20	02/12/20	EPA 8015D	

Anions by 300.0/9056A

Chloride	306	20.0	mg/kg	1	2007010	02/11/20	02/11/20	EPA 300.0/9056A	
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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
02/13/20 13:17

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2007003 - Purge and Trap EPA 5030A

Blank (2007003-BLK1)

Prepared: 02/11/20 0 Analyzed: 02/12/20 1

Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							

Surrogate: 4-Bromochlorobenzene-PID 8.35 " 8.00 104 50-150

LCS (2007003-BS1)

Prepared: 02/11/20 0 Analyzed: 02/12/20 1

Benzene	5.02	0.0250	mg/kg	5.00		100	70-130			
Toluene	5.15	0.0250	"	5.00		103	70-130			
Ethylbenzene	5.18	0.0250	"	5.00		104	70-130			
p,m-Xylene	10.4	0.0500	"	10.0		104	70-130			
o-Xylene	5.20	0.0250	"	5.00		104	70-130			
Total Xylenes	15.6	0.0250	"	15.0		104	0-200			

Surrogate: 4-Bromochlorobenzene-PID 8.48 " 8.00 106 50-150

Matrix Spike (2007003-MS1)

Source: P002017-01

Prepared: 02/11/20 0 Analyzed: 02/12/20 1

Benzene	4.55	0.0250	mg/kg	5.00	ND	91.0	54.3-133			
Toluene	4.68	0.0250	"	5.00	ND	93.7	61.4-130			
Ethylbenzene	4.71	0.0250	"	5.00	ND	94.2	61.4-133			
p,m-Xylene	9.41	0.0500	"	10.0	ND	94.1	63.3-131			
o-Xylene	4.73	0.0250	"	5.00	ND	94.7	63.3-131			
Total Xylenes	14.1	0.0250	"	15.0	ND	94.3	0-200			

Surrogate: 4-Bromochlorobenzene-PID 8.43 " 8.00 105 50-150

Matrix Spike Dup (2007003-MSD1)

Source: P002017-01

Prepared: 02/11/20 0 Analyzed: 02/12/20 1

Benzene	4.76	0.0250	mg/kg	5.00	ND	95.2	54.3-133	4.44	20	
Toluene	4.87	0.0250	"	5.00	ND	97.3	61.4-130	3.85	20	
Ethylbenzene	4.89	0.0250	"	5.00	ND	97.8	61.4-133	3.78	20	
p,m-Xylene	9.76	0.0500	"	10.0	ND	97.6	63.3-131	3.64	20	
o-Xylene	4.91	0.0250	"	5.00	ND	98.3	63.3-131	3.75	20	
Total Xylenes	14.7	0.0250	"	15.0	ND	97.8	0-200	3.68	200	

Surrogate: 4-Bromochlorobenzene-PID 8.48 " 8.00 106 50-150

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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
02/13/20 13:17

Nonhalogenated Organics by 8015 - DRO/ORO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2007005 - DRO Extraction EPA 3570

Blank (2007005-BLK1)

Prepared & Analyzed: 02/11/20 1

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	46.3		"	50.0		92.5	50-200			

LCS (2007005-BS1)

Prepared & Analyzed: 02/11/20 1

Diesel Range Organics (C10-C28)	430	25.0	mg/kg	500		86.1	38-132			
Surrogate: n-Nonane	48.8		"	50.0		97.7	50-200			

Matrix Spike (2007005-MS1)

Source: P002017-01

Prepared & Analyzed: 02/11/20 1

Diesel Range Organics (C10-C28)	441	25.0	mg/kg	500	ND	88.3	38-132			
Surrogate: n-Nonane	51.0		"	50.0		102	50-200			

Matrix Spike Dup (2007005-MSD1)

Source: P002017-01

Prepared & Analyzed: 02/11/20 1

Diesel Range Organics (C10-C28)	409	25.0	mg/kg	500	ND	81.9	38-132	7.50	20	
Surrogate: n-Nonane	47.8		"	50.0		95.6	50-200			

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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
02/13/20 13:17

Nonhalogenated Organics by 8015 - GRO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2007003 - Purge and Trap EPA 5030A

Blank (2007003-BLK1)

Prepared: 02/11/20 0 Analyzed: 02/12/20 1

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.63		"	8.00		95.4	50-150			

LCS (2007003-BS2)

Prepared: 02/11/20 0 Analyzed: 02/12/20 1

Gasoline Range Organics (C6-C10)	43.0	20.0	mg/kg	50.0		85.9	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.66		"	8.00		95.8	50-150			

Matrix Spike (2007003-MS2)

Source: P002017-01

Prepared: 02/11/20 0 Analyzed: 02/12/20 1

Gasoline Range Organics (C6-C10)	42.1	20.0	mg/kg	50.0	ND	84.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.53		"	8.00		94.1	50-150			

Matrix Spike Dup (2007003-MSD2)

Source: P002017-01

Prepared: 02/11/20 0 Analyzed: 02/12/20 1

Gasoline Range Organics (C6-C10)	41.6	20.0	mg/kg	50.0	ND	83.1	70-130	1.37	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.55		"	8.00		94.3	50-150			

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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
02/13/20 13:17

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2007010 - Anion Extraction EPA 300.0/9056A

Blank (2007010-BLK1)

Prepared & Analyzed: 02/11/20 1

Chloride	ND	20.0	mg/kg
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LCS (2007010-BS1)

Prepared & Analyzed: 02/11/20 1

Chloride	254	20.0	mg/kg	250	102	90-110
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Matrix Spike (2007010-MS1)

Source: P002017-01

Prepared & Analyzed: 02/11/20 1

Chloride	1780	20.0	mg/kg	250	1260	207	80-120			M2
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Matrix Spike Dup (2007010-MSD1)

Source: P002017-01

Prepared & Analyzed: 02/11/20 1

Chloride	1600	20.0	mg/kg	250	1260	137	80-120	10.3	20	M2
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QC Summary Report

Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
02/13/20 13:17

Notes and Definitions

M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

** Methods marked with ** are non-accredited methods.

Soil data is reported on an "as received" weight basis, unless reported otherwise.

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Client: Merrion Oil & Gas Corporation

Project: Canada Mesa 1E Release

Sampler: Steve Calkins

Phone: 505-486-1171

Email(s): pthompson@merrion.bz

Project Manager:

RUSH?

☐ 1d

☐ 3d

Lab Use Only		Analysis and Method						lab Only	
Lab WO#		GRO/DRO by 8015 & MRO	BTEX by 8021	TPH by 418.1	Chloride by 300.0	Benzene by 8021B			
Job Number									
P 002017									
03048-0009									
Page 1 of 1									

Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative	GRO/DRO by 8015 & MRO	BTEX by 8021	TPH by 418.1	Chloride by 300.0	Benzene by 8021B					Lab Number	Correct Cont/Prsrv
CM Wall 1			S		X	X		X	X					1	
CM Wall 2			S		X	X		X	X					2	
CM Bottom			S		X	X		X	X					3	

Relinquished by: (Signature) <i>Steve P. Calkins</i>	Date 2/6/20	Time 12:55pm	Received by: (Signature) <i>Rain Lopez</i>	Date 2/6/20	Time 12:55	Lab Use Only	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	**Received on Ice <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
						T1	T2
						AVG Temp °C 4	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

**Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

<input type="checkbox"/> Sample(s) dropped off after hours to a secure drop off area.	Chain of Custody	Notes/Billing info: OCD Table 1
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5796 US Highway 64, Farmington, NM 87401
Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865
Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com
laboratory@envirotech-inc.com

Received by: OCD: 4/2/2020 7:20:59 PM
11 fo 11 abcD



Analytical Report

Report Summary

Client: Merrion Oil & Gas

Samples Received: 2/27/2020

Job Number: 03048-0009

Work Order: P002095

Project Name/Location: Canada Mesa H 1E North
Wall

Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Walter Hinchman', is written over a light blue rectangular background.

Date: 3/5/20

Walter Hinchman, Laboratory Director



Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
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Envirotech, Inc, holds the Texas TNI certification T104704557-19-2 for the data reported.



Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa H 1E North Wall
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
03/05/20 13:02

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Canada Mesa H 1E North Wall	P002095-01A	Soil	02/27/20	02/27/20	Glass Jar, 4 oz.

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Merrion Oil & Gas	Project Name:	Canada Mesa H 1E North Wall	
610 Reilly Ave.	Project Number:	03048-0009	Reported:
Farmington NM, 87401	Project Manager:	Philana Thompson	03/05/20 13:02

**Canada Mesa H 1E North Wall
P002095-01 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organics by EPA 8021

Benzene	ND	0.0250	mg/kg	1	2009035	02/28/20	02/29/20	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	2009035	02/28/20	02/29/20	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	2009035	02/28/20	02/29/20	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	2009035	02/28/20	02/29/20	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	2009035	02/28/20	02/29/20	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	2009035	02/28/20	02/29/20	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		106 %		50-150	2009035	02/28/20	02/29/20	EPA 8021B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	2010016	03/04/20	03/05/20	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	2010016	03/04/20	03/05/20	EPA 8015D	
<i>Surrogate: n-Nonane</i>		85.2 %		50-200	2010016	03/04/20	03/05/20	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	2009035	02/28/20	02/29/20	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		92.4 %		50-150	2009035	02/28/20	02/29/20	EPA 8015D	

Anions by 300.0/9056A

Chloride	24.1	20.0	mg/kg	1	2010003	03/02/20	03/02/20	EPA 300.0/9056A	
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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa H 1E North Wall
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
03/05/20 13:02

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2009035 - Purge and Trap EPA 5030A

Blank (2009035-BLK1)

Prepared & Analyzed: 02/28/20 1

Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							

Surrogate: 4-Bromochlorobenzene-PID 8.40 " 8.00 105 50-150

LCS (2009035-BS1)

Prepared & Analyzed: 02/28/20 1

Benzene	4.96	0.0250	mg/kg	5.00		99.1	70-130			
Toluene	4.97	0.0250	"	5.00		99.4	70-130			
Ethylbenzene	4.97	0.0250	"	5.00		99.3	70-130			
p,m-Xylene	9.92	0.0500	"	10.0		99.2	70-130			
o-Xylene	4.98	0.0250	"	5.00		99.6	70-130			
Total Xylenes	14.9	0.0250	"	15.0		99.3	0-200			

Surrogate: 4-Bromochlorobenzene-PID 8.51 " 8.00 106 50-150

Matrix Spike (2009035-MS1)

Source: P002081-01

Prepared & Analyzed: 02/28/20 1

Benzene	4.89	0.0250	mg/kg	5.00	ND	97.7	54.3-133			
Toluene	4.89	0.0250	"	5.00	ND	97.9	61.4-130			
Ethylbenzene	4.89	0.0250	"	5.00	ND	97.7	61.4-133			
p,m-Xylene	9.76	0.0500	"	10.0	ND	97.6	63.3-131			
o-Xylene	4.89	0.0250	"	5.00	ND	97.9	63.3-131			
Total Xylenes	14.7	0.0250	"	15.0	ND	97.7	0-200			

Surrogate: 4-Bromochlorobenzene-PID 8.57 " 8.00 107 50-150

Matrix Spike Dup (2009035-MSD1)

Source: P002081-01

Prepared & Analyzed: 02/28/20 1

Benzene	5.01	0.0250	mg/kg	5.00	ND	100	54.3-133	2.42	20	
Toluene	4.98	0.0250	"	5.00	ND	99.6	61.4-130	1.78	20	
Ethylbenzene	4.97	0.0250	"	5.00	ND	99.4	61.4-133	1.71	20	
p,m-Xylene	9.92	0.0500	"	10.0	ND	99.2	63.3-131	1.64	20	
o-Xylene	4.97	0.0250	"	5.00	ND	99.4	63.3-131	1.57	20	
Total Xylenes	14.9	0.0250	"	15.0	ND	99.3	0-200	1.62	200	

Surrogate: 4-Bromochlorobenzene-PID 8.43 " 8.00 105 50-150

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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa H 1E North Wall
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
03/05/20 13:02

Nonhalogenated Organics by 8015 - DRO/ORO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2010016 - DRO Extraction EPA 3570

Blank (2010016-BLK1)

Prepared: 03/04/20 1 Analyzed: 03/05/20 0

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	47.7		"	50.0		95.4	50-200			

LCS (2010016-BS1)

Prepared: 03/04/20 1 Analyzed: 03/05/20 0

Diesel Range Organics (C10-C28)	475	25.0	mg/kg	500		95.0	38-132			
Surrogate: n-Nonane	50.9		"	50.0		102	50-200			

Matrix Spike (2010016-MS1)

Source: P002095-01

Prepared: 03/04/20 1 Analyzed: 03/05/20 0

Diesel Range Organics (C10-C28)	433	25.0	mg/kg	500	ND	86.5	38-132			
Surrogate: n-Nonane	47.8		"	50.0		95.6	50-200			

Matrix Spike Dup (2010016-MSD1)

Source: P002095-01

Prepared: 03/04/20 1 Analyzed: 03/05/20 1

Diesel Range Organics (C10-C28)	456	25.0	mg/kg	500	ND	91.2	38-132	5.22	20	
Surrogate: n-Nonane	50.5		"	50.0		101	50-200			

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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa H 1E North Wall
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
03/05/20 13:02

Nonhalogenated Organics by 8015 - GRO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2009035 - Purge and Trap EPA 5030A

Blank (2009035-BLK1)

Prepared & Analyzed: 02/28/20 1

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.53		"	8.00		94.1	50-150			

LCS (2009035-BS2)

Prepared & Analyzed: 02/28/20 1

Gasoline Range Organics (C6-C10)	47.6	20.0	mg/kg	50.0		95.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.58		"	8.00		94.8	50-150			

Matrix Spike (2009035-MS2)

Source: P002081-01

Prepared & Analyzed: 02/28/20 1

Gasoline Range Organics (C6-C10)	46.0	20.0	mg/kg	50.0	ND	91.9	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.61		"	8.00		95.1	50-150			

Matrix Spike Dup (2009035-MSD2)

Source: P002081-01

Prepared & Analyzed: 02/28/20 1

Gasoline Range Organics (C6-C10)	47.0	20.0	mg/kg	50.0	ND	94.1	70-130	2.34	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.51		"	8.00		93.9	50-150			

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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa H 1E North Wall
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
03/05/20 13:02

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2010003 - Anion Extraction EPA 300.0/9056A

Blank (2010003-BLK1)

Prepared & Analyzed: 03/02/20 1

Chloride	ND	20.0	mg/kg
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LCS (2010003-BS1)

Prepared & Analyzed: 03/02/20 1

Chloride	250	20.0	mg/kg	250	100	90-110
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Matrix Spike (2010003-MS1)

Source: P002092-01

Prepared & Analyzed: 03/02/20 1

Chloride	363	20.0	mg/kg	250	107	102	80-120
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Matrix Spike Dup (2010003-MSD1)

Source: P002092-01

Prepared & Analyzed: 03/02/20 1

Chloride	361	20.0	mg/kg	250	107	102	80-120	0.586	20
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QC Summary Report

Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa H 1E North Wall
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
03/05/20 13:02

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

** Methods marked with ** are non-accredited methods.

Soil data is reported on an "as received" weight basis, unless reported otherwise.

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Analytical Report

Report Summary

Client: Merrion Oil & Gas

Samples Received: 12/20/2019

Job Number: 03048-0009

Work Order: P912071

Project Name/Location: Canada Mesa 1E Release

Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Walter Hinchman', is written over a light blue rectangular background.

Date: 12/30/19

Walter Hinchman, Laboratory Director



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Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
12/30/19 10:44

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Bottom	P912071-01A	Soil	12/20/19	12/20/19	Glass Jar, 4 oz.
Wall 1	P912071-02A	Soil	12/20/19	12/20/19	Glass Jar, 4 oz.
Wall 2	P912071-03A	Soil	12/20/19	12/20/19	Glass Jar, 4 oz.
Wall 3	P912071-04A	Soil	12/20/19	12/20/19	Glass Jar, 4 oz.
Wall 4	P912071-05A	Soil	12/20/19	12/20/19	Glass Jar, 4 oz.

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Merrion Oil & Gas	Project Name:	Canada Mesa 1E Release	Reported: 12/30/19 10:44
610 Reilly Ave.	Project Number:	03048-0009	
Farmington NM, 87401	Project Manager:	Philana Thompson	

Bottom
P912071-01 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organic Compounds by 8260

Benzene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Toluene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Ethylbenzene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
p,m-Xylene	ND	0.0500	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
o-Xylene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Total Xylenes	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		97.0 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: Toluene-d8		101 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: Bromofluorobenzene		97.3 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1952002	12/23/19	12/24/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1952002	12/23/19	12/24/19	EPA 8015D	
Surrogate: n-Nonane		97.0 %		50-200	1952002	12/23/19	12/24/19	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: 1,2-Dichloroethane-d4		97.0 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: Toluene-d8		101 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: Bromofluorobenzene		97.3 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	

Anions by 300.0/9056A

Chloride	602	20.0	mg/kg	1	1952005	12/23/19	12/24/19	EPA 300.0/9056A	
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Merrion Oil & Gas	Project Name:	Canada Mesa 1E Release	
610 Reilly Ave.	Project Number:	03048-0009	Reported:
Farmington NM, 87401	Project Manager:	Philana Thompson	12/30/19 10:44

Wall 1
P912071-02 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organic Compounds by 8260

Benzene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Toluene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Ethylbenzene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
p,m-Xylene	ND	0.0500	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
o-Xylene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Total Xylenes	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		101 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: Toluene-d8		102 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: Bromofluorobenzene		97.7 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1952002	12/23/19	12/24/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1952002	12/23/19	12/24/19	EPA 8015D	
Surrogate: n-Nonane		100 %		50-200	1952002	12/23/19	12/24/19	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: 1,2-Dichloroethane-d4		101 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: Toluene-d8		102 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: Bromofluorobenzene		97.7 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	

Anions by 300.0/9056A

Chloride	985	20.0	mg/kg	1	1952005	12/23/19	12/24/19	EPA 300.0/9056A	
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Merrion Oil & Gas	Project Name:	Canada Mesa 1E Release	Reported: 12/30/19 10:44
610 Reilly Ave.	Project Number:	03048-0009	
Farmington NM, 87401	Project Manager:	Philana Thompson	

Wall 2
P912071-03 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organic Compounds by 8260

Benzene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Toluene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Ethylbenzene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
p,m-Xylene	ND	0.0500	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
o-Xylene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Total Xylenes	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		99.8 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: Toluene-d8		102 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: Bromofluorobenzene		97.8 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1952002	12/23/19	12/24/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1952002	12/23/19	12/24/19	EPA 8015D	
Surrogate: n-Nonane		101 %		50-200	1952002	12/23/19	12/24/19	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: 1,2-Dichloroethane-d4		99.8 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: Toluene-d8		102 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: Bromofluorobenzene		97.8 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	

Anions by 300.0/9056A

Chloride	737	20.0	mg/kg	1	1952005	12/23/19	12/24/19	EPA 300.0/9056A	
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Merrion Oil & Gas	Project Name:	Canada Mesa 1E Release	Reported: 12/30/19 10:44
610 Reilly Ave.	Project Number:	03048-0009	
Farmington NM, 87401	Project Manager:	Philana Thompson	

Wall 3
P912071-04 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organic Compounds by 8260

Benzene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Toluene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Ethylbenzene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
p,m-Xylene	ND	0.0500	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
o-Xylene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Total Xylenes	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		102 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: Toluene-d8		100 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: Bromofluorobenzene		96.5 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1952002	12/23/19	12/24/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1952002	12/23/19	12/24/19	EPA 8015D	
Surrogate: n-Nonane		101 %		50-200	1952002	12/23/19	12/24/19	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: 1,2-Dichloroethane-d4		102 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: Toluene-d8		100 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: Bromofluorobenzene		96.5 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	

Anions by 300.0/9056A

Chloride	281	20.0	mg/kg	1	1952005	12/23/19	12/24/19	EPA 300.0/9056A	
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Merrion Oil & Gas	Project Name:	Canada Mesa 1E Release	Reported: 12/30/19 10:44
610 Reilly Ave.	Project Number:	03048-0009	
Farmington NM, 87401	Project Manager:	Philana Thompson	

Wall 4
P912071-05 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organic Compounds by 8260

Benzene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Toluene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Ethylbenzene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
p,m-Xylene	ND	0.0500	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
o-Xylene	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Total Xylenes	ND	0.0250	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		100 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: Toluene-d8		102 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	
Surrogate: Bromofluorobenzene		94.3 %		70-130	1952001	12/23/19	12/24/19	EPA 8260B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1952002	12/23/19	12/24/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1952002	12/23/19	12/24/19	EPA 8015D	
Surrogate: n-Nonane		100 %		50-200	1952002	12/23/19	12/24/19	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: 1,2-Dichloroethane-d4		100 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: Toluene-d8		102 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	
Surrogate: Bromofluorobenzene		94.3 %		70-130	1952001	12/23/19	12/24/19	EPA 8015D	

Anions by 300.0/9056A

Chloride	216	20.0	mg/kg	1	1952005	12/23/19	12/24/19	EPA 300.0/9056A	
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Merrion Oil & Gas	Project Name:	Canada Mesa 1E Release	Reported: 12/30/19 10:44
610 Reilly Ave.	Project Number:	03048-0009	
Farmington NM, 87401	Project Manager:	Philana Thompson	

Volatile Organic Compounds by 8260 - Quality Control**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1952001 - Purge and Trap EPA 5030A**Blank (1952001-BLK1)**

Prepared: 12/23/19 0 Analyzed: 12/24/19 1

Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							
Surrogate: 1,2-Dichloroethane-d4	0.502		"	0.500		100	70-130			
Surrogate: Toluene-d8	0.500		"	0.500		99.9	70-130			
Surrogate: Bromofluorobenzene	0.475		"	0.500		94.9	70-130			

LCS (1952001-BS1)

Prepared: 12/23/19 0 Analyzed: 12/24/19 1

Benzene	2.36	0.0250	mg/kg	2.50		94.5	70-130			
Toluene	2.40	0.0250	"	2.50		95.9	70-130			
Ethylbenzene	2.47	0.0250	"	2.50		98.7	70-130			
p,m-Xylene	4.77	0.0500	"	5.00		95.5	70-130			
o-Xylene	2.35	0.0250	"	2.50		94.2	70-130			
Total Xylenes	7.13	0.0250	"	7.50		95.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.496		"	0.500		99.2	70-130			
Surrogate: Toluene-d8	0.519		"	0.500		104	70-130			
Surrogate: Bromofluorobenzene	0.501		"	0.500		100	70-130			

Matrix Spike (1952001-MS1)

Source: P912068-01

Prepared: 12/23/19 0 Analyzed: 12/24/19 1

Benzene	2.30	0.0250	mg/kg	2.50	ND	92.2	48-131			
Toluene	2.34	0.0250	"	2.50	ND	93.4	48-130			
Ethylbenzene	2.42	0.0250	"	2.50	ND	96.8	45-135			
p,m-Xylene	4.64	0.0500	"	5.00	ND	92.8	43-135			
o-Xylene	2.31	0.0250	"	2.50	ND	92.3	43-135			
Total Xylenes	6.95	0.0250	"	7.50	ND	92.7	43-135			
Surrogate: 1,2-Dichloroethane-d4	0.500		"	0.500		100	70-130			
Surrogate: Toluene-d8	0.509		"	0.500		102	70-130			
Surrogate: Bromofluorobenzene	0.499		"	0.500		99.7	70-130			

Matrix Spike Dup (1952001-MSD1)

Source: P912068-01

Prepared: 12/23/19 0 Analyzed: 12/24/19 1

Benzene	2.24	0.0250	mg/kg	2.50	ND	89.6	48-131	2.82	23	
Toluene	2.21	0.0250	"	2.50	ND	88.3	48-130	5.70	24	
Ethylbenzene	2.30	0.0250	"	2.50	ND	92.1	45-135	4.98	27	
p,m-Xylene	4.43	0.0500	"	5.00	ND	88.6	43-135	4.67	27	
o-Xylene	2.21	0.0250	"	2.50	ND	88.4	43-135	4.41	27	
Total Xylenes	6.64	0.0250	"	7.50	ND	88.5	43-135	4.58	27	
Surrogate: 1,2-Dichloroethane-d4	0.499		"	0.500		99.7	70-130			
Surrogate: Toluene-d8	0.502		"	0.500		100	70-130			
Surrogate: Bromofluorobenzene	0.494		"	0.500		98.7	70-130			

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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
12/30/19 10:44

Nonhalogenated Organics by 8015 - DRO/ORO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1952002 - DRO Extraction EPA 3570

Blank (1952002-BLK1)

Prepared: 12/23/19 1 Analyzed: 12/27/19 1

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	51.6		"	50.0		103	50-200			

LCS (1952002-BS1)

Prepared: 12/23/19 1 Analyzed: 12/27/19 1

Diesel Range Organics (C10-C28)	499	25.0	mg/kg	500		99.8	38-132			
Surrogate: n-Nonane	52.7		"	50.0		105	50-200			

Matrix Spike (1952002-MS1)

Source: P912056-01

Prepared: 12/23/19 1 Analyzed: 12/27/19 1

Diesel Range Organics (C10-C28)	431	25.0	mg/kg	500	ND	86.1	38-132			
Surrogate: n-Nonane	51.0		"	50.0		102	50-200			

Matrix Spike Dup (1952002-MSD1)

Source: P912056-01

Prepared: 12/23/19 1 Analyzed: 12/27/19 1

Diesel Range Organics (C10-C28)	433	25.0	mg/kg	500	ND	86.7	38-132	0.647	20	
Surrogate: n-Nonane	49.4		"	50.0		98.8	50-200			

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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
12/30/19 10:44

Nonhalogenated Organics by 8015 - GRO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1952001 - Purge and Trap EPA 5030A

Blank (1952001-BLK1)

Prepared: 12/23/19 0 Analyzed: 12/24/19 1

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1,2-Dichloroethane-d4	0.502		"	0.500		100	70-130			
Surrogate: Toluene-d8	0.500		"	0.500		99.9	70-130			
Surrogate: Bromofluorobenzene	0.475		"	0.500		94.9	70-130			

LCS (1952001-BS2)

Prepared: 12/23/19 0 Analyzed: 12/24/19 1

Gasoline Range Organics (C6-C10)	56.3	20.0	mg/kg	50.0		113	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.499		"	0.500		99.8	70-130			
Surrogate: Toluene-d8	0.507		"	0.500		101	70-130			
Surrogate: Bromofluorobenzene	0.487		"	0.500		97.3	70-130			

Matrix Spike (1952001-MS2)

Source: P912068-01

Prepared: 12/23/19 0 Analyzed: 12/24/19 1

Gasoline Range Organics (C6-C10)	52.4	20.0	mg/kg	50.0	ND	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.489		"	0.500		97.8	70-130			
Surrogate: Toluene-d8	0.506		"	0.500		101	70-130			
Surrogate: Bromofluorobenzene	0.485		"	0.500		97.0	70-130			

Matrix Spike Dup (1952001-MSD2)

Source: P912068-01

Prepared: 12/23/19 0 Analyzed: 12/24/19 1

Gasoline Range Organics (C6-C10)	49.0	20.0	mg/kg	50.0	ND	98.0	70-130	6.75	20	
Surrogate: 1,2-Dichloroethane-d4	0.496		"	0.500		99.2	70-130			
Surrogate: Toluene-d8	0.507		"	0.500		101	70-130			
Surrogate: Bromofluorobenzene	0.488		"	0.500		97.6	70-130			

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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
12/30/19 10:44

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1952005 - Anion Extraction EPA 300.0/9056A

Blank (1952005-BLK1)

Prepared: 12/23/19 1 Analyzed: 12/23/19 2

Chloride	ND	20.0	mg/kg
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LCS (1952005-BS1)

Prepared: 12/23/19 1 Analyzed: 12/23/19 2

Chloride	256	20.0	mg/kg	250	102	90-110
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Matrix Spike (1952005-MS1)

Source: P912056-01

Prepared: 12/23/19 1 Analyzed: 12/23/19 2

Chloride	296	20.0	mg/kg	250	41.0	102	80-120
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Matrix Spike Dup (1952005-MSD1)

Source: P912056-01

Prepared: 12/23/19 1 Analyzed: 12/23/19 2

Chloride	301	20.0	mg/kg	250	41.0	104	80-120	1.66	20
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QC Summary Report

Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

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Merrion Oil & Gas
610 Reilly Ave.
Farmington NM, 87401

Project Name: Canada Mesa 1E Release
Project Number: 03048-0009
Project Manager: Philana Thompson

Reported:
12/30/19 10:44

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

** Methods marked with ** are non-accredited methods.

Soil data is reported on an "as received" weight basis, unless reported otherwise.

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