

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	NAB1600756275
District RP	2RP-3474
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party EOG Resources, Inc.	OGRID 7377
Contact Name Chase Settle	Contact Telephone 575-748-1471
Contact email Chase_Settle@eogresources.com	Incident # NAB1600756275
Contact mailing address 104 S. 4th Street, Artesia, NM 88210	

Location of Release Source

Latitude 32.66568 Longitude -104.45631
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Cotton MX Federal Com #1	Site Type SWD
Date Release Discovered	API# 30-015-23315

Unit Letter	Section	Township	Range	County
C	14	19S	25E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 1500	Volume Recovered (bbls) 1430
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Please refer to the attached original C-141 form for 2RP-3474 for cause of release and immediate action steps. EOG Resources is submitting for closure via the new form to formally close out this incident. All sampling and correspondence is also attached.

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

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <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>Chase Settle</u> Signature: <u></u> email: <u>Chase_Settle@eogresources.com</u>	Title: <u>Rep Safety & Environmental Sr</u> Date: <u>11/08/2021</u> Telephone: <u>575-748-1471</u>
<u>OCD Only</u> Received by: _____ Date: _____	

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141

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Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: _____ Title: _____
 Signature: _____ Date: _____
 email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

State of New Mexico
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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: Chase Settle Title: Rep Safety & Environmental Sr
 Signature: Chase Settle Date: 11/08/2021
 email: Chase_Settle@eogresources.com Telephone: 575-748-1471

OCD Only

Received by: OCD Date: 11/8/2021

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: 3/17/2023
 Printed Name: Ashley Maxwell Title: Environmental Specialist



EOG Resources, Inc.
Artesia Division Office
101 S. 4th Street
Artesia, N. M. 88210

September 6, 2018

Mr. Mike Bratcher/Ms. Maria Pruett
NMOCD District II
811 S. First St.
Artesia, NM 88210

Re: Cotton MX Federal Com. #1
30-015-23315
Section 14, T19S-R26E
810 FNL & 2180 FWL
Eddy County, New Mexico
2RP-2355 & 2RP-3474

Mr. Bratcher/Ms. Pruett,

EOG Y Resources, Inc. is submitting the enclosed Closure Report for the above referenced site. The plan is being submitted subsequent to the Work Plan approved by NMOCD on May 1, 2018.

EOG Y Resources, Inc. requests closure of 2RP-2355 and 2RP-3474.

If you have any questions, feel free to call me at (575) 748-1471.

Respectfully,

Chase Settle
Rep Safety & Environmental II
EOG Y Resources, Inc.

EOG Y Resources, Inc.
Cotton MX Federal Com #1
Closure Report
Section 14, T19S-R25E
Eddy County, New Mexico
September 6, 2018
2RP-2355 & 2RP-3474

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Appendix E: Form C-141 Finals



September 6, 2018

I. Location

The battery is located 13 miles south of Artesia on US 285, west approximately 4 miles on Rocking R Red Road, and approximately 1.25 miles north and then east on the lease road.

II. Background

On October 2, 2014, NMOCD District II approved a work plan to address 2RP-2355. Excavation activities were completed, however, before liner installation and backfill could occur there was another release that impacted the same area that was impacted by the 2RP-2355 release. A Form C-141 for the release of 1500 B/PW with 1430 B/PW recovered was submitted to the NMOCD District II office on January 4, 2016. Excavation of visually impacted soils was undertaken within the release area. The total affected area was approximately 30 feet by 230 feet north of the production tanks and 40 feet by 70 feet around the tanks with the release remaining entirely within the battery berm. Initial vertical delineation samples were taken in the release area (1/12/2016, results enclosed) and sent to a NMOCD approved laboratory. Based on initial analytical results, additional delineation samples were taken (2/9/2016, results enclosed) and sent to a NMOCD approved laboratory. After receiving this set of sample data, it was determined that a core rig would be needed to fully delineate for chlorides. On March 15, 2017 (results enclosed), a core rig was used to collect samples from 3 points, these samples were sent to NMOCD approved laboratory for analysis. It was also determined that this battery should be moved and rebuilt to address all contamination, current and historic, once historical impacts were found from sampling efforts outside of the release area on February 28, 2017 (results enclosed). Horizontal delineation activities for the current release were undertaken from May 5, 2016 to October 10, 2017 (results enclosed). Once the production tanks were moved, samples were taken where they once stood on June 14, 2017 and again on July 7, 2017 (results enclosed). Another area of concern to the landowner was immediately east of the battery berm where sparse to no vegetation existed. On October 10, 16, & 26, 2017, these areas were sampled with the samples sent to an NMOCD approved laboratory (results enclosed).

III. Surface and Ground Water

Area surface geology is Paleozoic Permian. Based on information from the New Mexico Office of the State Engineer database and United States Geological Survey National Water Information System (USGS) regarding this location (Section 14, T19S-R25E), depth to groundwater is approximately 97 feet making the site ranking for this site a ten (10). Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

IV. NMOCD Ranking Criteria

The ranking for this site is ten (10) based on the following:

Depth to ground water	50-99'
Wellhead Protection Area	> 1000'
Distance to surface water body	> 1000'

Based on the ranking criteria, the NMOCD established RRALs for this site are:

Benzene	10 ppm
BTEX	50 ppm
TPH	1000 ppm
Chlorides	No established RRAL

energy opportunity growth



September 6, 2018

V. Soils

The area consists of soils that are loam based topsoil with deeper layers consisting of sand and rock which then transition to a clay layer which provides a permeability barrier to prohibit vertical percolation of contaminants into the subsurface water systems.

VI. Scope of Work

EOG Y Resources, Inc. excavated four (4) feet of impacted soil from the NEB/T4, EB/T3, FE, and FE+10 areas, and excavated four (4) feet of impacted soil in the N, SE, and NE sample points based on horizontal analytical data. This soil was hauled to a NMOCD approved facility for disposal. EOG Y Resources, Inc. then installed a geosynthetic clay liner in the S1/C1, C2, S2/C3, NEB/T4, EB/T3, FE, FE+10, and N areas at 4' bgs. Once the liner was installed, the excavation was backfilled with (4) feet of topsoil.

At the T1 and T2 areas, where the production tanks used to be, EOG Y Resources treated the BTEX and TPH in situ using Cool-Ox. This consisted of treating the top fourteen (14) feet in the T1 area and the top seven (7) feet in the T2 area. On May 30, 2018, Cool-Ox was applied to the soils as they are mixed by a trackhoe in order to ensure contact between the Cool-Ox and impacted soils. After treatment was complete, confirmation samples were collected every two (2) feet beginning at two (2) feet bgs to a depth of eighteen (18) feet in the T1 area and twelve (12) feet bgs in the T2 area (June 14 and July 3, 2018, results enclosed). Samples were also collected from the north, south, east, and west edges of the impacted area at two (2) feet, five (5) feet, and ten (10) feet bgs to ensure no horizontal impactation remained after the treatment (July 9, 2018, results enclosed). On the north edge, it was determined that some impacted soil remained, so rather than perform another treatment with Cool-Ox, the soils were excavated to the east and west boundary and a depth of ten (10) feet then were hauled to a NMOCD approved disposal facility. Samples were again taken at the north edge to insure that impacted soils were removed (July 27, 2018, results enclosed).

Also as a stipulation for closure, NMOCD requested further sampling at the FE+60 sample point. Sampling was conducted July 19, 2018, and all chloride results were below 250 mg/kg (July 27, 2018, results enclosed).

The excavated area has been backfilled and revegetated according to the private surface owner's desired objectives. This C-141 Final Report is submitted to the NMOCD requesting closure of the site.

Cotton MX Federal Com #1
Closure Report
2RP-2355 & 2RP-3474



September 6, 2018

Table 1

Soil Analytical Data

Cotton MX Federal Com #1
Closure Report
2RP-2355 & 2RP-3474



September 6, 2018

Soil Analytical Data

Sample ID	Depth (ft. bgs)	Date	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH (GRO)	TPH (DRO)	TPH EXT DRO	Total TPH	Chlorides
S1-1'	5'	1/12/16	ND	ND	ND	ND	ND	ND	15	-	15	6200
S1-2'	6'	1/12/16	ND	ND	0.057	ND	0.057	ND	35	-	35	7200
S1-3'	7'	1/12/16	ND	ND	ND	ND	ND	ND	140	-	140	7600
S1-4'	8'	1/12/16	ND	ND	ND	ND	ND	ND	190	-	190	8300
S1-5'	9'	1/12/16	ND	ND	ND	ND	ND	ND	ND	-	ND	7100
S1-6'	10'	1/12/16	ND	ND	ND	ND	ND	ND	ND	-	ND	3400
S1-7'	11'	1/12/16	-	-	-	-	-	-	-	-	-	4640
S1-8'	12'	1/12/16	-	-	-	-	-	-	-	-	-	2280
S1-9'	13'	1/12/16	-	-	-	-	-	-	-	-	-	4060
S1-10'	14'	1/12/16	-	-	-	-	-	-	-	-	-	2600
S1-11'	15'	1/12/16	-	-	-	-	-	-	-	-	-	3360
S1-12'	16'	1/12/16	-	-	-	-	-	-	-	-	-	1920
S1-13'	17'	2/9/16	-	-	-	-	-	-	-	-	-	2700
S1-15'	19'	2/9/16	-	-	-	-	-	-	-	-	-	2000
S1-17'	21'	2/9/16	-	-	-	-	-	-	-	-	-	1200
S1-19'	23'	2/9/16	-	-	-	-	-	-	-	-	-	1300
S1-20'	24'	2/9/16	-	-	-	-	-	-	-	-	-	1100
S2-1'	5'	1/12/16	ND	ND	0.082	0.30	0.382	17	98	-	115	3600
S2-2'	6'	1/12/16	ND	ND	ND	ND	ND	ND	12	-	12	7600
S2-3'	7'	1/12/16	ND	ND	ND	ND	ND	ND	ND	-	ND	3600
S2-4'	8'	1/12/16	ND	ND	ND	ND	ND	ND	ND	-	ND	2200
S2-5'	9'	1/12/16	ND	ND	ND	ND	ND	ND	ND	-	ND	2800
S2-6'	10'	1/12/16	ND	ND	ND	ND	ND	ND	ND	-	ND	2100
S2-7'	11'	1/12/16	-	-	-	-	-	-	-	-	-	688
S2-8'	12'	1/12/16	-	-	-	-	-	-	-	-	-	3000
S2-9'	13'	1/12/16	-	-	-	-	-	-	-	-	-	656
S2-10'	14'	1/12/16	-	-	-	-	-	-	-	-	-	1650
S2-11'	15'	1/12/16	-	-	-	-	-	-	-	-	-	2280
S2-12'	16'	1/12/16	-	-	-	-	-	-	-	-	-	1760
S2-13'	17'	2/9/16	-	-	-	-	-	-	-	-	-	2700
S2-15'	19'	2/9/16	-	-	-	-	-	-	-	-	-	2900
S2-17'	21'	2/9/16	-	-	-	-	-	-	-	-	-	1200
S2-19'	23'	2/9/16	-	-	-	-	-	-	-	-	-	1300
S2-20'	24'	2/9/16	-	-	-	-	-	-	-	-	-	1100
C1-20'	24'	3/15/17	-	-	-	-	-	-	-	-	-	4120
C1-25'	29'	3/15/17	-	-	-	-	-	-	-	-	-	704
C1-30'	34'	3/15/17	-	-	-	-	-	-	-	-	-	120
C1-35'	39'	3/15/17	-	-	-	-	-	-	-	-	-	144
C1-40'	44'	3/15/17	-	-	-	-	-	-	-	-	-	112
C2-20'	24'	3/15/17	-	-	-	-	-	-	-	-	-	688
C2-25'	29'	3/15/17	-	-	-	-	-	-	-	-	-	432
C2-30'	34'	3/15/17	-	-	-	-	-	-	-	-	-	208
C2-35'	39'	3/15/17	-	-	-	-	-	-	-	-	-	144
C3-20'	24'	3/15/17	-	-	-	-	-	-	-	-	-	2080
C3-25'	29'	3/15/17	-	-	-	-	-	-	-	-	-	1160
C3-30'	34'	3/15/17	-	-	-	-	-	-	-	-	-	448
C3-35'	39'	3/15/17	-	-	-	-	-	-	-	-	-	352
C3-40'	44'	3/15/17	-	-	-	-	-	-	-	-	-	288
T1-1'	1'	6/14/17	5.1	13	9.5	24	51.6	610	5600	-	6210	470
T1-3'	3'	6/14/17	19	89	66	96	260	1600	12000	-	13500	500
T1-6'	6'	6/14/17	4.4	1.0	59	65	119.4	1000	6800	-	7800	270
T1-8'	8'	6/14/17	0.53	2.0	6.5	9.5	18.63	510	4900	-	5410	50
T1-9'	9'	6/14/17	3.1	6.2	4.5	11	24.8	570	7900	-	8470	160
T1-10'	10'	7/7/17	1.15	1.13	<0.2	21.6	23.8	541	3060	-	3601	-
T1-12'	12'	7/7/17	<0.05	<0.05	<0.05	<0.16	<0.3	<10.0	<10.0	-	<10.0	-
T1-14'	14'	7/7/17	<0.05	0.054	<0.05	1.03	1.09	98.9	1670	-	1768.9	-
T1-16'	16'	7/7/17	<0.05	<0.05	<0.05	<0.15	<0.3	<10.0	130	-	136	-
T1-18'	18'	7/7/17	<0.05	<0.05	<0.05	<0.15	<0.3	<10.0	<10.0	-	<10.0	-
T1-20'	20'	7/7/17	<0.05	<0.05	<0.05	<0.15	<0.3	<10.0	<10.0	-	<10.0	-

energy opportunity growth

Cotton MX Federal Com #1
Closure Report
2RP-2355 & 2RP-3474



September 6, 2018

T2-1'	1'	6/14/17	ND	0.96	3.3	36	42.26	620	9800	-	-	80
T2-3'	3'	6/14/17	ND	ND	1.3	21	22.3	590	7000	-	7690	390
T2-5'	5'	6/14/17	ND	140	140	180	470	2000	12000	-	14900	380
T2-6'	6'	6/14/17	ND	3.3	0.2	66	78.5	1000	9600	-	10500	100
T2-7'	7'	6/14/17	ND	ND	ND	ND	ND	ND	200	-	200	100
T2-8'	8'	7/7/17	<0.05	<0.05	<0.05	<0.16	<0.3	<10.0	<10.0	-	<10.0	-
T2-10'	10'	7/7/17	<0.05	<0.05	<0.05	<0.16	<0.3	<10.0	<10.0	-	<10.0	-
T2-12'	12'	7/7/17	<0.05	<0.05	<0.05	<0.16	<0.3	<10.0	<10.0	-	<10.0	-
EB/T3-1'	1'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	520
EB/T3-3'	3'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	1100
EB/T3-5'	5'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	1400
EB/T3-7'	7'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	540
EB/T3-9'	9'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	1100
EB/T3-9'	9'	6/14/17	-	-	-	-	-	-	-	-	-	660
EB/T3-12'	12'	6/14/17	-	-	-	-	-	-	-	-	-	250
EB/T3-15'	15'	6/14/17	-	-	-	-	-	-	-	-	-	380
EB/T3-18'	18'	6/14/17	-	-	-	-	-	-	-	-	-	2100
EB/T3-20'	20'	6/14/17	-	-	-	-	-	-	-	-	-	600
NEB/T4-1'	1'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
NEB/T4-3'	3'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	1300
NEB/T4-5'	5'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	1100
NEB/T4-9'	9'	6/14/17	-	-	-	-	-	-	-	-	-	230
NEB/T4-12'	12'	6/14/17	-	-	-	-	-	-	-	-	-	610
NEB/T4-15'	15'	6/14/17	-	-	-	-	-	-	-	-	-	880
NEB/T4-18'	18'	6/14/17	-	-	-	-	-	-	-	-	-	260
NEB/T4-20'	20'	6/14/17	-	-	-	-	-	-	-	-	-	280
SS-1'	3'	5/5/16	-	-	-	-	-	-	-	-	-	150
SS-3'	3'	5/5/16	-	-	-	-	-	-	-	-	-	88
SE-1'	3'	5/5/16	-	-	-	-	-	-	-	-	-	1900
SE-3'	3'	5/5/16	-	-	-	-	-	-	-	-	-	420
SE-5'	3'	5/5/16	-	-	-	-	-	-	-	-	-	150
E-1'	3'	5/5/16	-	-	-	-	-	-	-	-	-	390
E-3'	3'	5/5/16	-	-	-	-	-	-	-	-	-	510
NE-1'	3'	5/5/16	-	-	-	-	-	-	-	-	-	5500
NE-3'	3'	5/5/16	-	-	-	-	-	-	-	-	-	120
N-1'	3'	5/5/16	-	-	-	-	-	-	-	-	-	4600
N-3'	3'	5/5/16	-	-	-	-	-	-	-	-	-	4500
N-5'	3'	5/5/16	-	-	-	-	-	-	-	-	-	2500
N-7'	3'	6/8/16	-	-	-	-	-	-	-	-	-	2500
N-9'	3'	6/8/16	-	-	-	-	-	-	-	-	-	3500
N-11'	3'	10/10/17	-	-	-	-	-	-	-	-	-	3800
N-13'	3'	10/10/17	-	-	-	-	-	-	-	-	-	3120
N-15'	3'	10/10/17	-	-	-	-	-	-	-	-	-	1580
N-17'	3'	10/10/17	-	-	-	-	-	-	-	-	-	304
N-19'	3'	10/10/17	-	-	-	-	-	-	-	-	-	336
N-21'	3'	10/10/17	-	-	-	-	-	-	-	-	-	336
FSE-1'	1'	10/10/17	-	-	-	-	-	-	-	-	-	48
FSE-2'	2'	10/10/17	-	-	-	-	-	-	-	-	-	832
FSE-3'	3'	10/10/17	-	-	-	-	-	-	-	-	-	688
FSE-4'	4'	10/10/17	-	-	-	-	-	-	-	-	-	888
FE-1'	1'	10/10/17	-	-	-	-	-	-	-	-	-	2040
FE-2'	2'	10/10/17	-	-	-	-	-	-	-	-	-	2200
FE-3'	3'	10/10/17	-	-	-	-	-	-	-	-	-	2560
FE-4'	4'	10/10/17	-	-	-	-	-	-	-	-	-	2520
FE-6'	6'	10/16/17	-	-	-	-	-	-	-	-	-	2400
FE-8'	8'	10/16/17	-	-	-	-	-	-	-	-	-	2000
FE-10'	10'	10/16/17	-	-	-	-	-	-	-	-	-	1800
FE-12'	12'	10/16/17	-	-	-	-	-	-	-	-	-	1020
FE-13'	13'	10/16/17	-	-	-	-	-	-	-	-	-	592
FE+10-1'	1'	10/16/17	-	-	-	-	-	-	-	-	-	1310
FE+10-3'	3'	10/16/17	-	-	-	-	-	-	-	-	-	2880
FE+30-1'	1'	10/16/17	-	-	-	-	-	-	-	-	-	832
FE+30-3'	3'	10/16/17	-	-	-	-	-	-	-	-	-	2080
FE+45-1'	1'	10/26/17	-	-	-	-	-	-	-	-	-	<16.0
FE+45-3'	3'	10/26/17	-	-	-	-	-	-	-	-	-	304
FE+60-1'	1'	10/26/17	-	-	-	-	-	-	-	-	-	128

energy opportunity growth

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FE+60-3'	3'	10/26/17	-	-	-	-	-	-	-	-	-	2640
FE+75-1'	1'	10/26/17	-	-	-	-	-	-	-	-	-	<16.0
FE+75-3'	3'	10/26/17	-	-	-	-	-	-	-	-	-	10
CONFIRMATION SAMPLE RESULTS												
T1C-2'	2'	6/13/18	<0.050	0.107	0.074	2.03	3.01	<10.0	19.3	<10.0	19.3	-
T1C-4'	4'	6/13/18	0.056	0.264	3.62	5.95	9.89	15.0	29.9	<10.0	44.9	-
T1C-6'	6'	6/29/18	<0.050	0.130	0.698	0.447	1.28	13.1	101	<10.0	114.1	-
T1C-8'	8'	6/29/18	0.128	0.256	9.20	3.25	12.9	63.2	395	33.1	491.3	-
T1C-10'	10'	6/29/18	0.086	0.204	8.61	2.23	9.13	61.4	384	39.1	484.5	-
T1C-12'	12'	6/29/18	0.161	0.277	7.91	3.32	11.7	44.0	321	25.2	390.2	-
T1C-14'	14'	6/29/18	0.265	0.432	12.4	6.03	19.2	82.6	631	79.0	792.6	-
T1C-16'	16'	6/29/18	<0.050	0.116	2.31	1.28	3.71	<10.0	31.2	<10.0	31.2	-
T1C-18'	18'	6/29/18	<0.050	<0.050	1.08	0.985	2.06	<10.0	33.8	<10.0	33.8	-
T2C-2'	2'	6/29/18	<0.050	0.124	1.22	2.28	3.62	10.3	28.7	<10.0	39.0	-
T2C-4'	4'	6/29/18	<0.050	0.103	0.667	1.25	2.02	<10.0	19.0	<10.0	19.0	-
T2C-6'	6'	6/29/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
T2C-8'	8'	6/29/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
T2C-10'	10'	6/29/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
T2C-12'	12'	6/29/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
NC-2'	2'	7/4/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	2880	443	3323	-
NC-5'	5'	7/4/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	892	236	1128	-
NC-10'	10'	7/4/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	14.1	<10.0	14.1	-
EC-2'	2'	7/4/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
EC-5'	5'	7/4/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
EC-10'	10'	7/4/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	41.6	<10.0	41.6	-
WC-2'	2'	7/4/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
WC-5'	5'	7/4/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
WC-10'	10'	7/4/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
SC-2'	2'	7/4/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	19.7	<10.0	19.7	-
SC-5'	5'	7/4/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
SC-10'	10'	7/4/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
N+10-2'	2'	7/19/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
N+10-5'	5'	7/19/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
N+10-10'	10'	7/19/18	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
FE+60-4'	4'	7/19/18	-	-	-	-	-	-	-	-	-	80.0
FE+60-5'	5'	7/19/18	-	-	-	-	-	-	-	-	-	240
FE+60-6'	6'	7/19/18	-	-	-	-	-	-	-	-	-	224

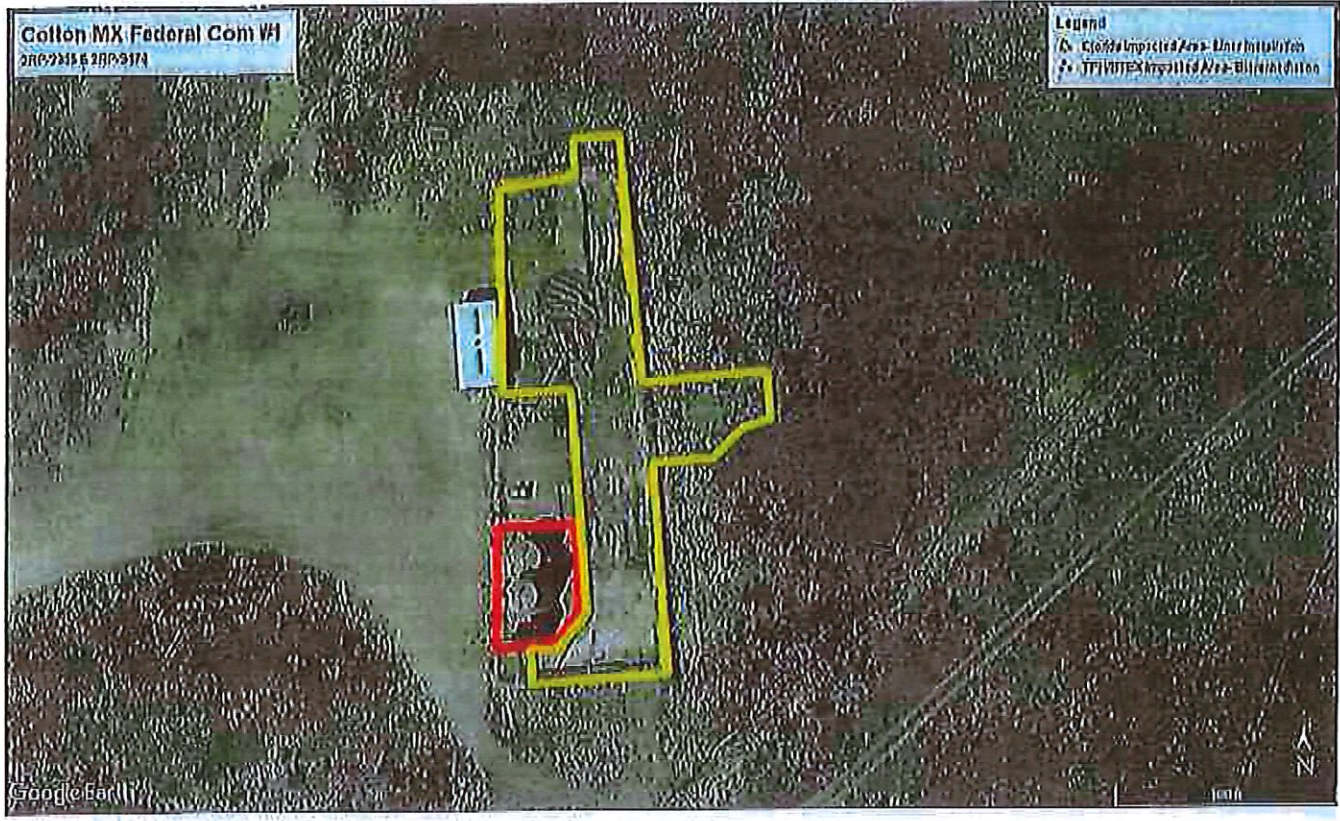
Colton MX Federal Com #1
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September 6, 2018

Figure 1

Site Map



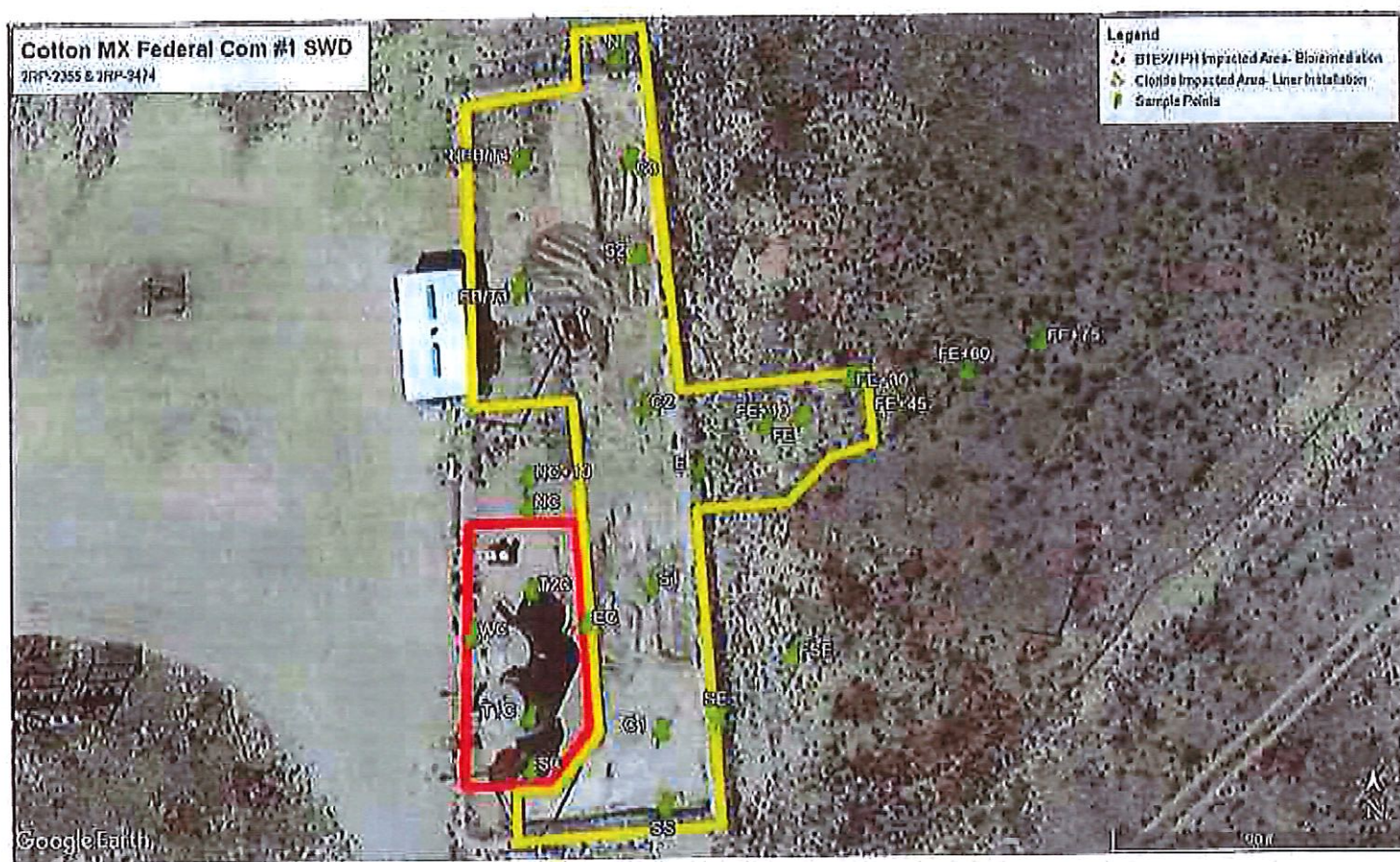
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Figure 2

Map with Sample Points



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Appendix A

NMOSE Well Log



New Mexico Office of the State Engineer Wells with Well Log Information

Wells with Well Log Information
Wells with Well Log Information
Wells with Well Log Information

(N-T) Data
Wells with Well Log Information
Wells with Well Log Information

(N-T) Data
Wells with Well Log Information
Wells with Well Log Information

(N-T) Data
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Wells with Well Log Information

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Appendix B

USGS Groundwater Data



National Water Information System: Map View

Sites

Map Overlay

Search Results

Export Sites

Site Number	Site Name
221011011111	195,25E,14,133131

Search Parameters

Explanation of Symbols



Site Information

Site Number: 021053105271401
Site Name: 195,25E,14,133131
Agency: USGS
[Access Data](#)



National Water Information System Web Interface

USGS Water Resources

USGS Home
Contact USGS
Search USGS

USGS Home
Contact USGS
Search USGS

Click to Hide/Show Buffalins

- [Please see news on new formats](#)
- [Full News](#)

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list = 323953104274401

Minimum number of levels = 1
Date range = 01/01/2004 , 01/01/2010

Save file of selected sites to local disk for future upload

USGS 323953104274401 19S.25E.14.193131

Eddy County, New Mexico
Latitude 32°39'53", Longitude 104°27'44" NAD27
Land-surface elevation 3,433 feet above NAVD83
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVNB) local aquifer.

Output format

Table of data											
Tab-separated data											
Graphical data											
Refresh period											
Date	Time	Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specified vertical datum	Referenced vertical datum	Water-level accuracy	Status	Method of measurement	Measuring agency	Source of measurement	Water-level approval status
2004-02-09		D	97.78			2		S	USGS		A
2005-07-03	09:45 HST	m	91.42			2		S	NM001		A
2006-02-14	12:30 HST	m	91.72			2		S	NM001		A
2007-02-09	11:00 HST	m	92.35			2		S	NM001		A
2008-01-15	09:25 HST	m	94.90			2		S	NM001		A
2010-01-21	10:00 HST	m	104.46			2		S	NM001		A
2011-01-21	10:35 HST	m	103.40			2		S	NM001		A
2012-01-09	00:45 HST	m	103.69			2		S	NM001		A
2015-01-33	15:33 HST	m	97.65			2		S	NM001		A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Water-level accuracy	2	Water level accuracy is nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement
Measuring agency	NM001	New Mexico State Engineers Office
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	A	Reported by another government agency (do not use "A" if reported by owner, use "O")
Source of measurement	H	Reported by person other than the owner, driller, or another government agency
Water-level approval status	A	Approved for publication -- Processing and review completed

[Questions about sites/data?](#)
[Feedback on this web site](#)
[Automated retrievals](#)
[Help](#)

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Appendix C

Confirmation Soil Sample Laboratory Data



PHONE (575) 393-2326 • 101 E. MARLAND • HORRIS, NM 88240

June 14, 2018

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: COTTON MX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 06/13/18 12:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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,

Celey D. Keene

Lab Director/Quality Manager



EDGY RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 80210
Fax To: (575) 748-4131

Received: 06/13/2018
Reported: 06/14/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 06/13/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

BTEX 80210		Analyzed by MS							
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/14/2018	ND	1.73	86.6	2.00	2.19	
Toluene*	0.107	0.050	06/14/2018	ND	1.72	85.2	2.00	2.67	
Ethylbenzene*	0.874	0.050	06/14/2018	ND	1.73	86.6	2.00	2.30	
Total Xylenes*	2.03	0.150	06/14/2018	ND	5.41	90.2	6.00	1.87	
Total BTEX	3.01	0.300	06/14/2018	ND					

TPH B015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2018	ND	197	98.3	200	23.0	
BRO >C10-C28*	19.3	10.0	06/13/2018	ND	198	99.2	200	22.9	
EXT BRO >C28-C36	<10.0	10.0	06/13/2018	ND					

Surrogate: 1-Chlorooctadecane	81.1%	37.6-147
-------------------------------	-------	----------

*=Accredited Analyte

[illegible]

Elizabeth

Celey D. Keene, Lab Director/Quality Manager

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

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 06/13/2018
Reported: 06/14/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 06/13/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: T1C - 4' (H801610-02)

BTX 80210	mg/kg		Analyzed By: MS					5-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.056	0.050	06/14/2018	ND	1.73	86.6	2.00	2.19	
Toluene*	0.264	0.050	06/14/2018	ND	1.72	86.2	2.00	2.67	
Ethylbenzene*	3.62	0.050	06/14/2018	ND	1.73	86.6	2.00	2.30	
Total Xylenes*	5.95	0.150	06/14/2018	ND	5.11	90.2	6.00	1.87	
Total BTX	9.89	0.300	06/14/2018	ND					

Surrogate: 4-Dromosfluorbenzene (PIE)	143 %	69,8-142
---------------------------------------	-------	----------

TPH 0015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value (C)	RPD	Qualifier
GRO C6-C10*	15.0	10.0	06/13/2018	ND	197	98.3	200	23.0	
DRO >C10-C28*	29.9	10.0	06/13/2018	ND	198	99.2	200	22.9	
EXT DRO >C28-C36	<10.0	10.0	06/13/2018	ND					

Surrogate: 1-Chlorooctane	80.4%	41-142
---------------------------	-------	--------

Surrogate: 1-Chlorooctadecane	79.2%	37.6-147
-------------------------------	-------	----------

Cardinal Laboratories

*=Accredited Analyte

RE: JERRY RUBIN, Victim; and MURKIN. Could the inquiry and search incident satisfy for any other filing, whether based in common law, that is filed by the person who is victim for murder. All data, including those for signature and any other name statements that he should submit with such it being and received by Central when they say date after completion of the inquiry (date). In no case that Central be liable for judicial or nonjudicial damages, including, special damages, business interruption, loss of use, or loss of profits resulting by delay in prosecution, otherwise no monetary award will be added to the jurisdiction of the various tribunals by Central, regardless of whether such claim is brought prior to the above said removal or otherwise. Any such reply to the request should be made. This request shall be the request and except to be made within approval of Central authorities.

Edgar A. Kone-

Celso D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • MORRIS, NM 88240

Notes and Definitions

5-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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

²=Accredited Analyte

PLEASE NOTE: Identity and Ownership. Candidates publicly and directly disclose records for any items stored, whether hand or hard, that are linked to the record bill by that its subject. At date, including those for signatures and any other items submitted that be shared with other state in policy and practice by federal within every (b) says also symbols of the specific policy. In no case will Confidential be able to identify or extrapolate directly, including related locations, financial statements, list of firm, or list of power sources by date, in maintenance, whether or otherwise using one or it related to the performance of the system identified by federal signatures or signatures has shared hand signs are of the state and federal records. These items may be provided to the public within approved of federal and federal.

Chrysothamnus

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. HARLAND • HOBBS, NM 88240

July 03, 2018

CHASE SETTLE

EOGY RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: COTTON MX FEDERAL.COM #1

Enclosed are the results of analyses for samples received by the laboratory on 07/02/18 14:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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-3)
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,

Caley D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-1131

Received: 07/02/2018
Reported: 07/03/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date:	06/29/2018
Sampling Type:	Soil
Sampling Condition:	Cool & Intact
Sample Received By:	Jodi Hanson

Sample ID: T1C - 6' (H801803-01)

Sample #0211		Analyzed by: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	DS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2018	ND	1.74	67.0	2.00	0.600	
Toluene*	0.130	0.050	07/02/2018	ND	1.74	86.8	2.00	0.0927	
Ethylbenzene*	0.698	0.050	07/02/2018	ND	1.71	85.5	2.00	0.136	
Total Xylenes*	0.447	0.150	07/02/2018	ND	5.31	88.5	6.00	0.0908	
Total BTEX	1.28	0.300	07/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE	114%	69.8-142
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TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	13.1	10.0	07/03/2018	ND	204	102	700	1.05	
DRO >C10-C28*	101	10.0	07/03/2018	ND	201	100	700	0.933	
EXT DRO >C28-C36	<10.0	10.0	07/03/2018	ND					

Surrogate: 1-Chlorooctane	102%	41-142
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Surrogate: 1-Chloronotadecane	99.1 %	37.6-147
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Cardinal Laboratories

#=Accredited Analyte

[illegible]

Collyer D. Hanna

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/02/2018
Reported: 07/03/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 06/29/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: T1C - 8' (H801803-02)

BTEX 80210	mg/kg	Analyzed By: MS					S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.128	0.050	07/02/2018	ND	1.74	87.0	2.00	0.608	
Toluene*	0.256	0.050	07/02/2018	ND	1.74	86.0	2.00	0.0927	
Ethylbenzene*	9.29	0.050	07/02/2018	ND	1.71	85.5	2.00	0.136	
Total Xylenes*	3.25	0.150	07/02/2018	ND	5.31	88.5	6.00	0.0908	
Total BTEX	12.9	0.300	07/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 160 % 69.8-142

TPH 8015M	mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	63.2	10.0	07/03/2018	ND	204	102	200	1.05	
DRO >C10-C28*	395	10.0	07/03/2018	ND	201	100	200	0.933	
EXT DRO >C28-C36	33.1	10.0	07/03/2018	ND					

Surrogate: 1-Chlorooctane 107 % 41-142

Surrogate: 1-Chlorodecane 108 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAILAND • HOHNS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/02/2018
Reported: 07/03/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 06/29/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Hanson

Sample ID: T1C - 10' (H801803-03)

BTEX 0021B		mg/kg	Analyzed By: MS				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.088	0.050	07/02/2018	ND	1.74	87.0	2.00	0.608	
Toluene*	0.204	0.050	07/02/2018	ND	1.74	86.8	2.00	0.0927	
Ethylbenzene*	6.61	0.050	07/02/2018	ND	1.71	85.5	2.00	0.136	
Total Xylenes*	2.23	0.150	07/02/2018	ND	5.31	88.5	6.00	0.0900	
Total BTEX	9.13	0.300	07/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (BFL) 155 % 69.8-142

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	61.4	10.0	07/03/2018	ND	204	102	200	1.05	
DRO >C10-C28*	384	10.0	07/03/2018	ND	201	100	200	0.933	
EXT DRO >C28-C36	39.1	10.0	07/03/2018	ND					

Surrogate: 1-Chlorooctane 111 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

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NOTE: Only soil samples. Cardiac blood and other samples ready for any other where, where blood is found to be, still be listed in the report and by email for analysis. All data, including those for negative and any other case, shall be placed upon the results in writing and printed by Cardinal within 100 days after completion of the specific study. In no case shall Cardinal be liable for indirect or consequential damages, including, without limitation, business interruption, loss of use, or loss of profits incurred by client, by subcontractors, affiliates or associates using our or related to the performance of the services provided by Cardinal, regardless of whether such claim is based upon any of the above stated provisions or otherwise. Results shall only be used for the intended purpose. This report shall not be reproduced except in full with the express approval of Cardinal Laboratories.

Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC.
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/02/2018
Reported: 07/03/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 06/29/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: Y1C - 12' (H801803-04)

BTEX 8021H		mg/kg	Analyzed By: MS				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.161	0.050	07/02/2018	ND	1.74	87.0	2.00	0.608	
Toluene*	0.277	0.050	07/02/2018	ND	1.74	86.6	2.00	0.0927	
Ethylbenzene*	7.91	0.050	07/02/2018	ND	1.71	85.5	2.00	0.136	
Total Xylenes*	3.32	0.150	07/02/2018	ND	5.31	88.5	6.00	0.0908	
Total BTEX	11.7	0.300	07/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PJC) 155 % 69.8-142

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	44.0	10.0	07/03/2018	ND	204	102	200	1.05	
DRO >C10-C28*	321	10.0	07/03/2018	ND	201	100	200	0.933	
EXT DRO >C28-C36	25.2	10.0	07/03/2018	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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PLEASE NOTE: ANALYTES AND QUANTITIES: Cardinal Laboratories is a service provider for the data reported herein. Data is provided to the customer for their use only. It is the customer's responsibility to ensure the data is used for the intended purpose. Data is provided to the customer for their use only. It is the customer's responsibility to ensure the data is used for the intended purpose. Data is provided to the customer for their use only. It is the customer's responsibility to ensure the data is used for the intended purpose.

Celoy D. Keene

Celoy D. Keene, Lab Director/Quality Manager



EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/02/2018
Reported: 07/03/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 06/29/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Hanson

Sample ID: TIC - 14' (H801803-05)

DTX 80210	mg/kg	Analyzed By: MS						S-04	
Analysis	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.265	0.050	07/02/2018	ND	1.74	87.0	2.00	0.608	
Toluene*	0.432	0.050	07/02/2018	ND	1.74	86.8	2.00	0.0927	
Ethylbenzene*	12.4	0.050	07/02/2018	ND	1.71	85.5	2.00	0.136	
Total Xylenes*	6.03	0.150	07/02/2018	ND	5.31	88.5	6.00	0.0908	
Total BTEX	19.2	0.300	07/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE)	179%	69.8-142
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TPH 0015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	RS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	82.6	10.0	07/03/2018	ND	204	102	200	1.05	
DRO >C10-C28*	631	10.0	07/03/2018	ND	201	100	200	0.933	
EXT DRO >C28-C36	79.0	10.0	07/03/2018	ND					

Surrogate: 1-Chlorooctane	110 %	41-142
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Surrogate: 1-Chlorooctadecene	119 %	37.6-147
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*=Accredited Analyte

[illegible]

Celey D. Keene, Lab Director/Quality Manager

PHONE (575) 393-2320 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/02/2018
Reported: 07/03/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 06/29/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: T1C - 16' (H801803-06)

NTEK 002110		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2018	ND	1.74	87.0	2.00	0.608	
Toluene*	0.116	0.050	07/02/2018	ND	1.74	86.8	2.00	0.0927	
Ethylbenzene*	2.31	0.050	07/02/2018	ND	1.71	85.5	2.00	0.136	
Total Xylenes*	1.29	0.150	07/02/2018	ND	5.31	88.5	6.00	0.0908	
Total BTEX	3.71	0.300	07/02/2018	ND					

Surrogate: 4-Aminofluorobenzene (PIE)	136 %	69.8-142
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TPH B015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/03/2018	ND	204	102	200	1.05	
DRO >C10-C28*	31.2	10.0	07/03/2018	ND	201	100	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	07/03/2018	ND					

Surrogate: 1-Chlorooctane	106%	41-142
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Substrate: 1-Chlorooctadecane	100 %	37.6-147
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* = Accredited Analyte

[illegible]

Ray D. Evans

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

EOG Y RESOURCES, INC.
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/02/2018
Reported: 07/03/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 06/29/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: TIC - 18' (H801803-07)

BTEX 00210		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2018	ND	1.74	87.0	2.00	0.608	
Toluene*	<0.050	0.050	07/02/2018	ND	1.74	86.8	2.00	0.0927	
Ethylbenzene*	1.08	0.050	07/02/2018	ND	1.71	85.5	2.00	0.136	
Total Xylenes*	0.985	0.150	07/02/2018	ND	5.31	88.5	6.00	0.0908	
Total BTEX	2.06	0.300	07/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (BFB) 130 % 69.8-142

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/03/2018	ND	204	102	200	1.05	
DRO >C10-C28*	33.0	10.0	07/03/2018	ND	201	100	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	07/03/2018	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorodecane 97.2 % 37.6-147

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOHDS, NM 86240

Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- 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 SMASOCC-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Highland, Hobbs, NM 88240

(505) 353-2326 FAX (505) 353-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Page 10 of 10

Project Manager: Chase Sattig

Project Name: Cotton MX Federal Com #1

Company Name EOG Resources Inc

Project #: 30-015-23315

Company Address: 105 South 4th Street

Project Loc: Cotton Mix Federal Corn #1

City/State/Zip: Artesia, NM 88210

PO #: 205-0750

Telephone No: 575-748-3177

Fax No:

Report Format ☒ Standard ☐ TRAP ☐ INFEES

Sampler Signature:

E-mail: Chase.Settle@eoagresources.com

Lab use only.

ಹೆಸರು: _____

[illegible]



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

July 03, 2018

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: COTTON MX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 07/02/18 14:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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	Halooacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 521.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

PHONE (575) 393-2326 • 101 E. MARLAND • ROBBES, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC.
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 80210
Fax To: (575) 748-4131

Received: 07/02/2018
Reported: 07/03/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 06/29/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Hanson

Sample ID: T2C - 2' (H801804-01)

BTEX B021B		mg/lip		Analyzed By: MS					
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2018	ND	1.74	87.0	2.00	0.608	
Toluene*	0.124	0.050	07/02/2018	ND	1.74	86.8	2.00	0.0927	
Ethylbenzene*	1.22	0.050	07/02/2018	ND	1.71	85.5	2.00	0.136	
Total Xylenes*	2.28	0.150	07/02/2018	ND	5.31	88.5	6.00	0.0908	
Total BTEX	3.62	0.300	07/02/2018	ND					

Starting material: 4-Bromofluorobenzene (PIE	128 g	69.8-142
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TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Quality
GRO C6-C10*	10.3	10.0	07/03/2018	ND	204	102	200	1.05	
DRO >C10-C18*	28.7	10.0	07/03/2018	ND	201	100	200	0.933	
EXT DRO >C18-C36	<10.0	10.0	07/03/2018	ND					

Surrogate: 1-Chlorooctane	107%	41-142
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Surrogate: 1-Chlorocyclodextrane	102%	37.6/147
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Cardinal Laboratories

*=Accredited Analyte

[illegible]

Elizabeth Anne

Celcy D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 * 101 E. MAINLAND * HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/02/2018
Reported: 07/03/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 06/29/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: T2C - 4' (H001804-02)

BTEX 00210		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2018	ND	1.74	87.0	2.00	0.608	
Toluene*	0.103	0.050	07/02/2018	ND	1.74	86.8	2.00	0.0927	
Ethylbenzene*	0.667	0.050	07/02/2018	ND	1.71	85.5	2.00	0.136	
Total Xylenes*	1.25	0.150	07/02/2018	ND	5.31	88.5	6.00	0.0908	
Total BTEX	2.02	0.300	07/02/2018	ND					

Surrogate: 4-Propionylthiophene (PIL) 130 % 69.8-142

TPH 0015H		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/03/2018	ND	204	102	200	1.05	
DRO >C10-C28*	19.0	10.0	07/03/2018	ND	201	100	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	07/03/2018	ND					

Surrogate: 1-Chlorooctane 112 % 41-142

Surrogate: 1-Chlorodecane 105 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAINLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/02/2018
Reported: 07/03/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 06/29/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: T2C - 6' (H801804-03)

BTEX 80210		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2018	ND	1.74	87.0	2.00	0.608	
Toluene*	<0.050	0.050	07/02/2018	ND	1.74	86.8	2.00	0.0927	
Ethylbenzene*	<0.050	0.050	07/02/2018	ND	1.71	85.5	2.00	0.136	
Total Xylenes*	<0.150	0.150	07/02/2018	ND	5.31	88.5	6.00	0.0908	
Total BTEX	<0.300	0.300	07/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIB) 112 % 69.8-142

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/03/2018	ND	204	102	200	1.05	
DRO >C10-C28*	<10.0	10.0	07/03/2018	ND	201	100	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	07/03/2018	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 97.0 % 37.6-147

Cardinal Laboratories

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NOTE: Many all samples. Cardinal policy and quality control policy for any data which shows that it cannot be used, and be kept to the lowest possible level for analysis. All data, including those for negative and any other data, shall be stored and used only as needed by the client within 90 days after completion of the applicable study. In no case shall Cardinal be held liable for negligent or intentional damage, including without limitation, business interruption, loss of use, or loss of profits caused by data, its inaccuracy, failure to produce data, or its (in) use by the customer of the services furnished by Cardinal, regardless of whether such data is based upon any of the above stated company or laboratory. Results shall only be the property of Cardinal. This report shall not be reproduced, stored, or used for any other purpose without the written approval of Cardinal Laboratories.

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAINLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/02/2018
Reported: 07/03/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 06/29/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Hanson

Sample ID: T2C - 8' (H801804-04)

NTEX 0021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2018	ND	1.74	87.0	2.00	0.608	
Toluene*	<0.050	0.050	07/02/2018	ND	1.74	86.8	2.00	0.0927	
Ethylbenzene*	<0.050	0.050	07/02/2018	ND	1.71	85.5	2.00	0.136	
Total Xylenes*	<0.150	0.150	07/02/2018	ND	5.31	88.5	6.00	0.0908	
Total BTEX	<0.300	0.300	07/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PJC) 113 % 69.8-142

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/03/2018	ND	204	102	200	1.05	
DRO >C10-C20*	<10.0	10.0	07/03/2018	ND	201	100	200	0.933	
EXT DRO >C20-C36	<10.0	10.0	07/03/2018	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-149

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PLEASE NOTE: Quality and Quantity. Cardinal Analyte and Matrix controls comply to the data stated. Method used, to ensure as best, that the result is the correct value by using the method. At this time, testing data for nitrogen and any other data obtained shall be correct when other data is using and analyzed by Cardinal with only 10% error the exception of the analytical system. In no event shall Cardinal be liable for damages or consequential damages, including, without limitation, business interruption, loss of data, or loss of profits incurred by client, its subsidiaries, affiliates, or decision making due to or caused by the performance of the services furnished by Cardinal, regardless of whether such damages were foreseeable at the time of such services or otherwise, provided that only the sample is the subject of the analysis. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Carey D. Keene, Lab Director/Quality Manager



EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Sampling Date: 06/29/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

BTEX 00210		ng/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2018	ND	1.74	87.0	2.00	0.608	
Toluene*	<0.050	0.050	07/02/2018	ND	1.74	86.8	2.00	0.0927	
Ethylbenzene*	<0.050	0.050	07/02/2018	ND	1.71	85.5	2.00	0.136	
Total Xylenes*	<0.150	0.150	07/02/2018	ND	5.31	88.5	6.00	0.0908	
Total BTEX	<0.300	0.300	07/02/2018	ND					

TPH 0015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/03/2018	ND	204	102	200	1.05	
DRO >C10-C28*	<10.0	10.0	07/03/2018	ND	201	100	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	07/03/2018	ND					

Subrogata: 1-Chlorooctadecană	99,8 %	37,6-147
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*=Accredited Analyte

BUFILE 100-107100 and Bureau. Captain's ledger and other records remain in my chain of command. Whether based in Iceland or not, they will be turned to the nearest post by chain of command. All these ledgers were in negligence and my other more substantial ones had normal record ability with in writing and retained by Captain until they [30] days after completion of the applicable service. As no point was stated to have to indicate or appropriate damage, including, vehicle location, business transactions, loss of, etc., as far as papers turned by ship, in substance, whether in business ledger use or in relation to the performance of the same. Records by listing, regardless of whether with dates, dates, 1950-1951, of the same data cannot be submitted. Such data only to the complete historical basis. This report will not be reproduced with the data in order to appear of record laboratory.

Celey D. Keene, Lab Director/Quality Manager



EOG Y RESOURCES, INC.
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-1131

Sampling Date: 06/29/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Hanson

DTEX 8021B mg/kg Analyzed By: MS

Surrogate: 4-Granofluorobenzene (PIT)	111 %	69.8-142
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TPH 8015M	mg/kg	Analyzed By: MS
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Surrogate: 1-Chlorooctane	103%	41-142
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Surrogate: 1-Chlorononadecane	94.9 %	37.6-147
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*=Accredited Analyte

[illegible]

Coley D. Keeno, Lab Director/Quality Manager



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 SM4500-Cl-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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[illegible]

Celey D. Keene, Lnh Director/Quality Manager



ARDINAL LABORATORIES
101 East Merland, Hobbs, NM 88240

(505) 393-2025 FAX (505) 393-2475

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

6 10 6 2524

Project Manager: Chase Settle

Project Name: Cotton MX Federal Com #1

Company Name: EOG Y Resources Inc.

Project #: 30-015-23315

Company Address: 105 South 4th Street

Project Loc: Cotton MX Federal Com #1

City/State/Zip: Artesia, NM 86210

PO #: 205-0750

Telephone No: 575-746-4171

Fax No:

Report Format: ☒ Standard ☐ TRAP ☐ NPDES

Sampler Signature:

e-mail:

Chase.Settle@eogresources.com

(Lab use only)

ORDER #: H801804

ORDER #		H801804		LAB USE ONLY																													
LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Ice	H ₂ O ₂	HCl	H ₂ SO ₄	NaOH	Na ₂ S ₂ O ₈	None	Other (Specify)	DW=Drinking Water GL=Sediment GW=Groundwater S=Surface Water NP=Non-Potable Specify Other	TPH: 8018B	TPH: TX 1005	TX 1008	Calcans (Ca, Mg, Na, K)	Anions (Cl, SO ₄ , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	OTEX: 8021B	ROI	H.O.R.M.	Chlorides	SAR	RUSH TAT (Pys-Bachelor) 24, 48, 72 hrs	Standard TAT	
1	T2C-2			6/29/2018	8:36	1	1	X								S	X										X					X	
2	T2C-4			6/29/2018	8:38	1	1	X								S	X										X					X	
3	T2C-6			6/29/2018	8:41	1	1	X								S	X										X					X	
4	T2C-8			6/29/2018	8:42	1	1	X								S	X										X					X	
5	T2C-10			6/29/2018	8:47	1	1	X								S	X										X					X	
6	T2C-12			6/29/2018	8:51	1	1	X								S	X										X					X	

TPH EXTENDED needed.

Laboratory Comments:

Sample Containers: Interlock
VOCs Free of Headspace?
Labels on containers?
Custody seals on containers?
Custody seals on cooler?
Sample Hand Delivered
By Sampler/Client, Rep.? ☒ ☐
UPS ☐ DHL ☐ FedEx ☐
Temperature Upon Receipt: 2.32/2.25°C

Received by:

Date: 7/6/18

Time: 11:30

Received by: Chase Settle

Date: 7/21/18

Time: 2:05

Received by:

Date:

Time:

Received by: ELORT:

Date:

Time:



PHONE (575) 393-2126 • 101 E. MARLAND • HOBBS, NM 88240

July 09, 2018

CHASE SETTLE

EOGY RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: COTTON MX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 07/06/18 12:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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,

Colby D. Keene

Lab Director/Quality Manager



EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/06/2018
Reported: 07/09/2018
Project Name: COTTON MX FEDERAL.COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL.COM #1

Sampling Date: 07/04/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

BTX 8021B		mg/kg		Analyzed By: MS					S-04	
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/07/2018	ND	1.61	80.7	2.00	26.0		
Toluene*	<0.050	0.050	07/07/2018	ND	1.62	81.1	2.00	24.0		
Ethylbenzene*	<0.050	0.050	07/07/2018	ND	1.62	81.0	2.00	22.9		
Total Xylenes*	<0.150	0.150	07/07/2018	ND	5.01	83.5	6.00	24.2		
Total BTX	<0.300	0.300	07/07/2018	ND						

TPH #015M	mg/kg		Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	07/06/2018	ND	213	107	200	5.75	S-06	
DRO >C10-C28*	2880	50.0	07/06/2018	ND	214	107	200	19.7	S-06	
EXT DRO >C28-C36	443	50.0	07/06/2018	ND					S-06	

<i>Surrogate: 1-Chlorooctadecane</i>	197%	37.6-147
--------------------------------------	------	----------

*** Accredited Analyte**

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Celestine D. Keerie
Celestine D. Keerie, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/06/2018
Reported: 07/09/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 07/04/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: NC- 5' (H80183B-02)

BTEX 00210		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	D5	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/07/2018	ND	1.61	80.7	2.00	26.0	
Toluene*	<0.050	0.050	07/07/2018	ND	1.62	81.1	2.00	24.8	
Ethylbenzene*	<0.050	0.050	07/07/2018	ND	1.62	81.0	2.00	22.9	
Total Xylenes*	<0.150	0.150	07/07/2018	ND	5.01	83.5	6.00	21.2	
Total BTEX	<0.300	0.300	07/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PFB)	106%	69.8-142
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TPH 8015M	mg/kg		Analyzed By: MS						
Analysis	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/06/2018	ND	213	107	200	5.75	
DRO >C10-C28*	892	10.0	07/06/2018	ND	214	107	200	19.7	
EXT DRO >C28-C36	236	10.0	07/06/2018	ND					

Surrogate: 1-Chlorooctane	84.0 %	41-143
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Surrogate: 1-Chlorooctadecane	114%	37.6-147
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Cardinal Laboratories

*=Accredited Analyte

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Chas. L. Trimmer

Ceely D. Keene, Lab Director/Quality Manager



FOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 08210
Fax To: (575) 748-4131

Sampling Date: 07/04/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

BTX 8021U

mg/kg

Analysed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/07/2018	ND	1.61	80.7	2.00	26.0	
Toluene*	<0.050	0.050	07/07/2018	ND	1.62	81.1	2.00	24.8	
Ethylbenzene*	<0.050	0.050	07/07/2018	ND	1.62	81.0	2.00	22.9	
Total Xylenes*	<0.150	0.150	07/07/2018	ND	5.01	83.5	6.00	24.2	
Total BTEX	<0.300	0.300	07/07/2018	ND					

Surrogate: 4-Hydroxyfluorobenzene (PIG)

107 98

69.8-142

TRY NOW

mg/kg

Analyzed By: M5

Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/06/2018	ND	213	107	200	5.75	
DRO >C10-C28*	14.1	10.0	07/06/2018	ND	214	107	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	07/06/2018	ND					

Surrogate: 1-Chlorooctane

28.8.26

41-142

Storage: 1-Chlorooctadecane

91.8%

37.6.147

Cardinal Laboratories

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Greg D. Kinn

Coley D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received:	07/06/2018	Sampling Date:	07/04/2018
Reported:	07/09/2018	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	30-015-23315	Sample Received By:	Tamara C/daker
Project Location:	COTTON MX FEDERAL COM #1		

Sample ID: EC- 2' (H801838-04)

DTX 0021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/07/2018	ND	1.61	80.7	2.00	26.0	
Toluene*	<0.050	0.050	07/07/2018	ND	1.62	81.1	2.00	24.8	
Ethylbenzene*	<0.050	0.050	07/07/2018	ND	1.62	81.0	2.00	22.9	
Total Xylenes*	<0.150	0.150	07/07/2018	ND	5.01	83.5	6.00	24.2	
Total BTEX	<0.300	0.300	07/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PFB) 109.9% 69.8-142

YPH 0015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/06/2018	ND	213	107	200	5.75	
DRO >C10-C28*	<10.0	10.0	07/06/2018	ND	214	107	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	07/06/2018	ND					

Surrogate: 1-Chlorooctane 99.8% 41-142

Surrogate: 1-Chlorooctadecane 91.9% 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received:	07/06/2018	Sampling Date:	07/04/2018
Reported:	07/09/2018	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	30-015-23315	Sample Received By:	Tamara Oldaker
Project Location:	COTTON MX FEDERAL COM #1		

Sample ID: EC- 5' (H801838-05)

DTX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/07/2018	ND	1.61	80.7	2.00	26.0	
Toluene*	<0.050	0.050	07/07/2018	ND	1.62	81.1	2.00	24.8	
Ethylbenzene*	<0.050	0.050	07/07/2018	ND	1.62	81.0	2.00	22.9	
Total Xylenes*	<0.150	0.150	07/07/2018	ND	5.01	83.5	6.00	24.2	
Total DTEX	<0.300	0.300	07/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PPE) 110 % 69.8-142

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/05/2018	ND	213	107	200	5.75	
DRO >C10-C20*	<10.0	10.0	07/05/2018	ND	214	107	200	19.7	
EXT DRO >C20-C36	<10.0	10.0	07/06/2018	ND					

Surrogate: 1-Chlorooctane 96.6 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

NOTE: While not required, Cardinal Laboratories strongly encourages the use of the following procedures to ensure the accuracy and reliability of the results. It is the responsibility of the client to ensure that the sample is properly collected, stored, and analyzed. The results of the analysis are based on the sample as received and are not a guarantee of the accuracy of the results. The results of the analysis are based on the sample as received and are not a guarantee of the accuracy of the results. The results of the analysis are based on the sample as received and are not a guarantee of the accuracy of the results.

Cefey D. Keene

Cefey D. Keene, Lab Director/Quality Manager



EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/06/2018
Reported: 07/09/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 07/04/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: EC- 10' (H801838-06)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/07/2018	ND	1.61	80.7	2.00	26.0	
Toluene*	<0.050	0.050	07/07/2018	ND	1.62	81.1	2.00	24.8	
Ethylbenzene*	<0.050	0.050	07/07/2018	ND	1.62	81.0	2.00	22.9	
Total Xylenes*	<0.150	0.150	07/07/2018	ND	5.01	83.5	6.00	24.2	
Total BTEX	<0.300	0.300	07/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIF)	109%	69.8-142
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TPH 0015M	mg/kg		Analyzed By: M5						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/06/2018	ND	213	107	200	5.75	
DRO >C10-C28†	41.6	10.0	07/06/2018	ND	214	107	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	07/06/2018	ND					

Surrogate: 1-Chlorooctane	103 %	41-42
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Surrogate: 1-Chloronaphthalene	97.7 %	37.6-147
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Cardinal Laboratories

†=Accredited Analyte

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Ag. A. Kien

Celoy D. Keene, Lab Director/Quality Manager



PIONEER (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/06/2018
Reported: 07/09/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 07/04/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tarnata Oldaker

Sample ID: WC- 2' (H801838-07)

HYEX 0021D		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/07/2018	ND	1.61	80.7	2.00	26.0	
Toluene*	<0.050	0.050	07/07/2018	ND	1.62	81.1	2.00	24.8	
Ethylbenzene*	<0.050	0.050	07/07/2018	ND	1.62	81.0	2.00	22.9	
Total Xylenes*	<0.150	0.150	07/07/2018	ND	5.01	83.5	6.00	24.2	
Total BTEX	<0.300	0.300	07/07/2018	ND					

Substrat: 4-Bromofluorbenzene (PIE	111 %	69.8-142
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TPH #015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RSD	Qualifier
GRX C6:C10*	<10.0	10.0	07/06/2018	ND	213	107	200	5.75	
DRX >C10:C28*	<10.0	10.0	07/06/2018	ND	214	107	200	19.7	
EXT DRX >C28:C36	<10.0	10.0	07/06/2018	ND					

Surrogate: 1-Chlorooctane	99.4%	41-142
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Starting material: 1-Chlorooctadecane	92.9%	37.6-147
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Cardinal Laboratories

*=Accredited Analyte

[illegible]

Clayton K. Moore

Coley D. Keene, Lab Director/Quality Manager



EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/06/2018
Reported: 07/09/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 07/04/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WC- 5' (H801B38-08)

BTEX 8021B		mu/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/07/2018	ND	1.61	80.7	2.00	26.0	
Toluene*	<0.050	0.050	07/07/2018	ND	1.62	81.1	2.00	24.8	
Ethylbenzene*	<0.050	0.050	07/07/2018	ND	1.62	81.0	2.00	22.9	
Total Xylenes*	<0.150	0.150	07/07/2018	ND	5.01	83.5	6.00	24.2	
Total BTEX	<0.300	0.300	07/07/2018	ND					

Starting: 4-Bromofluorobenzene (PIL)	106%	69.8-142
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TPH 0015M	mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/06/2018	ND	213	107	200	5.75	
DRQ >C10-C28†	<10.0	10.0	07/06/2018	ND	214	107	200	19.7	
EXT DRQ >C28-C36	<10.0	10.0	07/06/2018	ND					

Surrogate: 1-Chlorooctane:	95.0%	41-142
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Surrogate: 1-Chlorooctadecane	90.4%	37.6-147
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Cardinal Laboratories

* Accredited Analyte

[illegible]

Chas. D. Evans -

Celey D. Keene, Lab Director/Quality Manager



EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESTA NM, 88210
Fax To: (575) 748-4131

Received: 07/06/2018
Reported: 07/09/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 07/04/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WC- 10' (H801838-09)

BTEX 0021B

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/07/2018	ND	1.61	80.7	2.00	26.0	
Toluene*	<0.050	0.050	07/07/2018	ND	1.62	81.1	2.00	24.8	
Ethylbenzene*	<0.050	0.050	07/07/2018	ND	1.62	81.0	2.00	22.9	
Total Xylenes*	<0.150	0.150	07/07/2018	ND	5.01	83.5	6.00	24.2	
Total UTEX	<0.300	0.300	07/07/2018	ND					

Stringate: 4-Bromofluorobenzene (PIE)

107.2%

69.8.142

TPH 8015M

mg/kg

Analyzed by: MS

Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/06/2018	ND	213	107	200	5.75	
DRO >C10-C28*	<10.0	10.0	07/06/2018	ND	214	107	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	07/06/2018	ND					

Summary: 1-Chlorooctene

97.4%

41-143

Surrogate: 1-Chlorononadecane

89,3 %

37,6-147

Cardinal Laboratories

*=Accredited Analyte

[illegible]

Elizabeth

Coley D. Keone, Lab Director/Quality Manager



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

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESTA NM, 88210
Fax To: (575) 748-4131

Received:	07/06/2018	Sampling Date:	07/04/2018
Reported:	07/09/2018	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	30-015-23315	Sample Received By:	Tamara Oldaker
Project Location:	COTTON MX FEDERAL COM #1		

Sample ID: SC- 2' (H601838-10)

BTEX 80210		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/07/2018	ND	1.61	80.7	2.00	26.0	
Toluene*	<0.050	0.050	07/07/2018	ND	1.62	81.1	2.00	24.8	
Ethylbenzene*	<0.050	0.050	07/07/2018	ND	1.62	81.0	2.00	22.9	
Total Xylenes*	<0.150	0.150	07/07/2018	ND	5.01	83.5	6.00	24.2	
Total BTEX	<0.300	0.300	07/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (BFL) 109 % 69.8-142

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/06/2018	ND	213	107	200	5.75	
DRO >C10-C28*	19.7	10.0	07/06/2018	ND	214	107	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	07/06/2018	ND					

Surrogate: 1-Chlorooctane 96.3 % 41-142

Surrogate: 1-Chlorooctadecane 90.7 % 37.6-147

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Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received:	07/06/2018	Sampling Date:	07/04/2018
Reported:	07/09/2018	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	30-015-23315	Sample Received By:	Tamara Oldaker
Project Location:	COTTON MX FEDERAL COM #1		

Sample ID: SC- 5' (H801838-11)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/07/2018	ND	1.61	80.7	2.00	26.0	
Toluene*	<0.050	0.050	07/07/2018	ND	1.62	81.1	2.00	24.8	
Ethylbenzene*	<0.050	0.050	07/07/2018	ND	1.62	81.0	2.00	22.9	
Total Xylenes*	<0.150	0.150	07/07/2018	ND	5.01	83.5	6.00	24.2	
Total BTEX	<0.300	0.300	07/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PDE) 108 % 69.6-142

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/06/2018	ND	213	107	200	5.75	
DRO >C10-C28*	<10.0	10.0	07/06/2018	ND	214	107	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	07/06/2018	ND					

Surrogate: 1-Chlorooctane 97.8 % 41-142

Surrogate: 1-Chlorodecane 88.5 % 37.6-147

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PLEASE NOTE: Quality and Quantity. Cardinal Laboratories and its staff adhere closely to all state and federal testing requirements. All data, including those for methane and any other gases, shall be based on the results of testing and analysis by Cardinal Laboratories (CL) and the results of the analytical testing. It is the policy of Cardinal Laboratories to ensure that all data, including those for methane and any other gases, shall be based on the results of testing and analysis by Cardinal Laboratories (CL) and the results of the analytical testing. It is the policy of Cardinal Laboratories to ensure that all data, including those for methane and any other gases, shall be based on the results of testing and analysis by Cardinal Laboratories (CL) and the results of the analytical testing.

Celley D. Keene

Celley D. Keene, Lab Director/Quality Manager



FOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 80210
Fax To: (575) 748-1131

Received: 07/06/2018
Reported: 07/09/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 07/04/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SC- 10' (H801838-12)

HTEX 8021D

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value GC	RPD	Qualifier
Benzene*	<0.050	0.050	07/07/2018	ND	1.61	80.7	2.00	26.0	
Toluene*	<0.050	0.050	07/07/2018	ND	1.62	81.1	2.00	24.8	
Ethylbenzene*	<0.050	0.050	07/07/2018	ND	1.62	81.0	2.00	22.9	
Total Xylenes*	<0.150	0.150	07/07/2018	ND	5.01	83.5	6.00	24.2	
Total BTEX	<0.300	0.300	07/07/2018	ND					

Synonyms: 4-Iodomethoxybenzene (PIL)

107.96

69.8-142

TPH 0015M

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/06/2018	ND	213	107	260	5.75	
DRO >C10-C28*	<10.0	10.0	07/06/2018	ND	214	107	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	07/06/2018	ND					

Synonyms: 1-Chlorooctane

9828

41-142

Störbygole: 1-Chlorooctadecano

90.5%

37.6-147

Cardinal Laboratories

*=Accredited Analyte

[illegible]

Chas. L. Kane

Celey D. Keene, Lab Director/Quality Manager



S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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 Gri as received basis (wet) unless otherwise noted on report

* ☒ Accredited Analyte

NOTE: Liberty and Justice. Citizens today feel their rights freely for any other thing, whether based in custom or law, that be limited to the extent just by what he desires. At times, nothing more by request and any other cause whatever shall be denied until either there is nothing and nothing by Central power truly [It says also] corruption of the spirit of justice. In no event that Central is held to be held as successful if it is, unless, without exception, because of justice, in fact or law it is held to be held by them, as absolutely, whether or otherwise being out of or related to the performance of the service rendered by Central, regardless of whether or not it is based upon any of the other stated reasons in law, or whether only it is a matter of fact. Thus, this report shall be prepared in full with respect to Central's activities.

Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Mainland, Hobbs, NM 88240

(505) 393-2326 FAX (505) 393-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

91 of 51 page

Project Manager: Chase Settle Project Name: Cotton MAX Federal Cont #1
 Company Name: EOG Y Resources Inc Project #: 30-015-23315
 Company Address: 105 South 4th Street Project Loc: Cotton MAX Federal Cont #1
 City/State/Zip: Artesia, NM 88210 PO #: 205-0750
 Telephone No: 575-748-4471 Report Format: ☒ Standard ☐ TRAP ☐ NPDES
 Sampler Signature: [Signature] e-mail: Chase.Settle@eogresources.com

ORDER #: 4801838- (Lab use only)
 Analyze For: TOTAL
 TAT: 24, 40, 72 hrs
 Standard TAT

LAB # (lab use only)																																
FIELD CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	For	HNO ₃	HCl	H ₂ SO ₄	NaOH	Na ₂ B ₂ O ₃	None	Diluter (Specify)	DW = Drinking Water S = Surface RW = Groundwater B = Bulk/Bed N = Non-Volatile Specify Other	TPH: 1016B	TPH: TX 1005	TX 1005	Cations (Ca, Mg, Na, K)	Anions (Cl, SO ₄ , Alkalinity)	BAV/ESP/CEC	Metals: As Ag Ba Cd Cr Pb Hg	Volatiles	Semivolatiles	BTEX: 0021B	RCI	N.O.R.M.	Chlorides	SAR	RUSH TAT (Pre-September 25, 2016)	Standard TAT
1	NC-2			7/4/2016	10:13 AM		1	X								S	X	X														X
2	NC-5			7/4/2016	10:15 AM		1	X								S	X	X														X
3	NC-10			7/4/2016	10:18 AM		1	X								S	X	X														X
4	EC-2			7/4/2016	9:40 AM		1	X								S	X	X														X
5	EC-5			7/4/2016	9:45 AM		1	X								S	X	X														X
6	EC-10			7/4/2016	9:51 AM		1	X								S	X	X														X
7	WC-2			7/4/2016	9:56 AM		1	X								S	X	X														X
8	WC-5			7/4/2016	10:05 AM		1	X								S	X	X														X
9	WC-10			7/4/2016	10:08 AM		1	X								S	X	X														X
10	SC-2			7/4/2016	9:25 AM		1	X								S	X	X														X

Special Instructions: **TPH EXTENDED METHOD**

Relinquished by: [Signature] Date: 7/6/16 Time: 11:00 Received by: [Signature] Date: 7-6-18 Time: 12:05

Relinquished by: [Signature] Date: 7-6-18 Time: 12:05

Relinquished by: [Signature] Date: 7-6-18 Time: 12:05

Temperature Upon Receipt: 27.2°C

by Courier: UPS D-L: FedEx Lame Star



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

July 27, 2018

CHASE SETTLE
EOG Y RESOURCES, INC
105 SOUTH 4TH STREET
ARTESIA, NM 88210

RE: COTTON MX FEDERAL.COM #1

Enclosed are the results of analyses for samples received by the laboratory on 07/23/18 13:30.

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	Halocacetic 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,

Celcy D. Keene
Lab Director/Quality Manager



PHONE (675) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received:	07/23/2018	Sampling Date:	07/19/2018
Reported:	07/27/2018	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	30-015-23315	Sample Received By:	Tamara Oldaker
Project Location:	COTTON MX FEDERAL COM #1		

Sample ID: N+10 -2' (H802005-01)

BTX 00210		mg/lig		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2018	ND	1.81	90.6	2.00	0.424	
Toluene*	<0.050	0.050	07/25/2018	ND	1.79	89.3	2.00	0.450	
Ethylbenzene*	<0.050	0.050	07/25/2018	ND	1.79	89.4	2.00	0.0616	
Total Xylenes*	<0.150	0.150	07/25/2018	ND	5.58	93.0	6.00	0.189	
Total BTX	<0.300	0.300	07/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PFB) 114 % 69.8-142

TPH 8015M	mg/kg		Analyzed by: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10†	<10.0	10.0	07/25/2018	ND	174	86.8	200	7.74	
DRO >C10-C28*	<10.0	10.0	07/25/2018	ND	193	96.3	200	2.82	
EXT DRO >C28-C36	<10.0	10.0	07/25/2018	ND					

Surrogate: 1-Chlorooctane 90.0 % 41-142

Surrogate: 1-Chlorooctadecane 87.5 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

NOTE: Results and data are the property of Cardinal Laboratories and shall remain confidential to the client unless otherwise stated in writing. If the client requests a copy of this report, the client shall be responsible for the cost of the report. If the client requests a copy of this report, the client shall be responsible for the cost of the report. If the client requests a copy of this report, the client shall be responsible for the cost of the report.

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received:	07/23/2018	Sampling Date:	07/19/2018
Reported:	07/27/2018	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	30-015-23315	Sample Received By:	Tamara Oinker
Project Location:	COTTON MX FEDERAL COM #1		

Sample ID: N+10 -5' (H802005-02)

BTEX 0021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2018	ND	1.94	97.2	2.00	0.725	
Toluene*	<0.050	0.050	07/25/2018	ND	1.92	95.9	2.00	0.451	
Ethylbenzene*	<0.050	0.050	07/25/2018	ND	1.09	94.6	2.00	0.653	
Total Xylenes*	<0.150	0.150	07/25/2018	ND	5.85	97.5	6.00	0.031	
Total BTEX	<0.300	0.300	07/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 116 % 69.8-112

TPH 0015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2018	ND	174	86.8	200	7.74	
DRO >C10-C28*	<10.0	10.0	07/25/2018	ND	193	96.3	200	2.82	
EXT DRO >C28-C36	<10.0	10.0	07/25/2018	ND					

Surrogate: 1-Chlorooctane 86.8 % 41-142

Surrogate: 1-Chlorooctadecane 86.1 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Utility and Design, Cardinal Utility and Design certifies only the way data is collected, which is based on the data collected by the client for analysis. All data, including that for the utility and design, shall be certified only if the data is collected by Cardinal within 30 days (30) days after completion of the analysis. In no event shall Cardinal be liable for liability or consequential damages, including, without limitation, business interruption, loss of use, or loss of profits, caused by data, its analysis, storage or recovery, and/or its use by the purchaser of the analysis, regardless of whether such data is used for any other purpose or otherwise. This report shall not be reproduced except in full without the approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received:	07/23/2018	Sampling Date:	07/19/2018
Reported:	07/27/2018	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	30-015-23315	Sample Received By:	Tamara Oldaker
Project Location:	COTTON MX FEDERAL COM #1		

Sample ID: N+10 -10' (H802005-03)

BTEX 00210		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2018	ND	1.91	97.2	2.00	0.725	
Toluene*	<0.050	0.050	07/25/2018	ND	1.92	95.9	2.00	0.451	
Ethylbenzene*	<0.050	0.050	07/25/2018	ND	1.89	94.6	2.00	0.653	
Total Xylenes*	<0.150	0.150	07/25/2018	ND	5.05	97.5	6.00	0.831	
Total BTEX	<0.300	0.300	07/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 115 % 69.8-142

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2018	ND	174	86.8	200	7.74	
DRO >C10-C28*	<10.0	10.0	07/25/2018	ND	193	96.3	200	2.82	
EXT DRO >C28-C36	<10.0	10.0	07/25/2018	ND					

Surrogate: 1-Chlorooctane 88.9 % 41-142

Surrogate: 1-Chlorooctadecane 89.7 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Policy and Procedure, Cardinal's ability and data analysis comply with this policy, which is based on the fact that the data is the source of the data for analysis. All data, including data for negligence and any other cause, shall be deemed valid unless such is verified and stated by Cardinal within 100% (10) days after completion of the applicable work. It is the policy of Cardinal to follow the national or international standards, including without limitation, minimum standards, but of use, or loss of results caused by data, as submitted, without or otherwise using any or all of them on the performance of the project. However, by Cardinal, regardless of whether such data is based upon any of the above stated standards or otherwise, Cardinal's data only to the extent that it is based on the data. This report shall not be reproduced except in full without approval of Cardinal Laboratories.

Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500C1 B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Disclaimer: Liability and Warranty: Cardinal Laboratories and its staff do not accept liability for any data being, whether stated or not, that is listed in the report and is not to be used by the user. All data, including those for reference and any other source, are provided as information only. It is not to be used for any purpose other than the intended use. It is the user's responsibility to ensure the data is accurate and reliable. Cardinal Laboratories and its staff do not accept liability for any data being, whether stated or not, that is listed in the report and is not to be used by the user. All data, including those for reference and any other source, are provided as information only. It is not to be used for any purpose other than the intended use. It is the user's responsibility to ensure the data is accurate and reliable.

Celley D. Keene

Celley D. Keene, Lab Director/Quality Manager



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

July 27, 2018

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: COTTON MX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 07/23/18 13:30.

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,

Coley D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received:	07/23/2018	Sampling Date:	07/19/2018
Reported:	07/27/2018	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	30-015-23315	Sample Received By:	Jodi Henson
Project Location:	COTTON MX FEDERAL COM #1		

Sample ID: FE +60-4' (H802006-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	07/25/2018	ND	432	108	400	0.00	

Sample ID: FE +60-5' (H802006-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	07/25/2018	ND	432	108	400	0.00	

Sample ID: FE +60-6' (H802006-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	07/25/2018	ND	432	100	400	0.00	

Cardinal Laboratories * = Accredited Analyte

NOTES: Quality and Quantity. Cardinal Laboratories and its clients conduct quality by way of testing, which is based on the amount of test that is needed to be done for the project. All data, including those for negative and any other tests, shall be done and shall be in the possession of Cardinal Laboratories only (CL) and shall remain the property of the applicable client. In no event shall Cardinal Laboratories be held responsible for any data, including those for negative and any other tests, which are not in the possession of Cardinal Laboratories. Results shall be reported only to the client and shall not be used for any other purpose. The report shall not be used for any other purpose without the written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500C-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Quality and Quantity. Cardinal's liability and ability to analyze samples is very much reduced, depending upon the nature and type of sample. It should be noted that Cardinal's liability is limited to the analysis of the sample as received. It is the responsibility of the client to ensure that the sample is suitable for analysis. Cardinal is not responsible for any damage to or loss of the sample or any other material submitted for analysis. Cardinal's liability is limited to the analysis of the sample as received. It is the responsibility of the client to ensure that the sample is suitable for analysis. Cardinal is not responsible for any damage to or loss of the sample or any other material submitted for analysis.

Celey D. Keene, Lab Director/Quality Manager

Cotton MX Federal Com #1
Closure Report
2RP-2355 & 2RP-3474



September 6, 2018

Appendix D

C-141 Initials

Page 2 of 2
 10/10/2009
 2 copies to appropriate
 Office in accordance
 with Rule 16 on block
 of 10/10/2009

☒ Initial Report ☐ Final Report

ZRP - Z35's

District
 1825 N. French Dr., Hobbs, NM 88240
 District II
 811 S. First St., Artesia, NM 88210
 District III
 1009 Rio Hondo Road, Aztec, NM 87410
 District IV
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico **NM OIL CONSERVATION**
 Energy Minerals and Natural Resources **ARTESIA DISTRICT**
 Oil Conservation Division
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

Form C-141
 Revised August 8, 2011

Submit to appropriate District Office in
 accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

NAB1600756275

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Yates Petroleum Corporation	25515	Contact Chase Settle
Address 104 E. 4 th Street, Artesia, NM 88210		Telephone No. 575-748-4171
Facility Name Gotton MX Federal Conn. #1		Facility Type BWD
Surface Owner Federal	Mineral Owner Federal	API No. 30-015-23313

LOCATION OF RELEASE

Unit Letter C	Section 14	Township 19S	Range 25E	Feet from the 810'	North/South Line North	Feet from the 2180'	East/West Line West	County Bddy
------------------	---------------	-----------------	--------------	-----------------------	---------------------------	------------------------	------------------------	----------------

Latitude 32.66568 Longitude -104.45631

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 1500 bbl/w	Volume Recovered 1450 bbl/w
Source of Release Produced Water Tank overflowed.	Date and Hour of Occurrence 12/22/2015: 6:30 a.m.	Date and Hour of Discovery 12/22/2015: 6:30 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Brady, Heather Patterson, Randy Dink, Jim Amos	
By Whom? Bob Asher	Date and Hour 12/22/2015: 2:50 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*

Transducer valve failed causing the produced water tank to overflow.

Describe Area Affected and Cleanup Action Taken.* An approximate area of 30' X 230' north of the tanks in the open excavation and 40' X 70' around the tanks was impacted by the release. All released fluids were contained within the battery berm. The valve was closed and turned off and vacuum trucks were called to retrieve standing fluid. Backhoe was also dispatched to remove impacted soils. Excavated soils will be hauled to a NMOCD approved facility. Vertical and horizontal soil samples will be taken and analyzed for TPH & BTEX (chlorides for documentation). If initial analytical results for TPH & BTEX are under MRL's (also ranking is 11) a Final Report, C-141 will be submitted to the OGD requesting closure. If the analytical results are above the BRAL's a work plan will be submitted to the OGD. Depth to Ground Water 30-99' (approximately 80', Section 14, T19S-R25E, near Trend Main, Wellhead Protection Area: No. Distance to Surface Water Body >1000', SITE RANKING IS 10.

I hereby certify that the information given above is true and complete to the best of my knowledge and understanding 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 poses a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Chase Settle	Approved by Environmental Specialist:	
Title: NM Environmental Regulatory Agent	Approval Date: 1/16/16	Expiration Date: N/A
E-mail Address: csettle@yatespetroleum.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines ☐	
Date: 01/04/2016	Phone: 575-748-4171	

SUBMIT REMEDIATION PROPOSAL NO
LATER THAN: 1/16/16

22P-3474

Cotton MX Federal Com #1
Closure Report
2RP-2355 & 2RP-3474



September 6, 2018

Appendix E

C-141 Finals

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company EOG Y Resources, Inc.	OGRID Number 25575	Contact Chase Settle
Address 104 S. 4 TH Street		Telephone No. 575-748-4147
Facility Name Cotton Federal SWD	API Number 30-015-23315	Facility Type SWD
Surface Owner Federal	Mineral Owner Federal	Lease No. NM-36500

LOCATION OF RELEASE

Unit Letter C	Section 14	Township 19S	Range 25E	Feet from the 810'	North/South Line North	Feet from the 2180'	East/West Line West	County Bddy
------------------	---------------	-----------------	--------------	-----------------------	---------------------------	------------------------	------------------------	----------------

Latitude 32.66568 Longitude -104.45631

NATURE OF RELEASE

Type of Release Produced Water and Crude Oil	Volume of Release 7 B/PW and 3 H/O	Volume Recovered 6 B/PW and 2 H/O
Source of Release Gate valve failure on tank	Date and Hour of Occurrence 6/1/2014; PM	Date and Hour of Discovery 6/1/2014; PM
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully. N/A		
Describe Cause of Problem and Remedial Action Taken.* A gate valve failure on the tank caused the tank to overflow.		
Describe Area Affected and Cleanup Action Taken.* An approximate area of 32' X 145' north of the tanks and 66' X 89' around and behind the tanks. All released water and crude oil was contained within the battery berm. The valve was closed and turned off, and vacuum trucks were called to retrieve standing fluid. Backhoe was also dispatched to remove impacted soils. Excavated soils will be hauled to a NMOCD approved facility. Vertical and horizontal delineation samples will be taken and analysis ran for TPH & BTEX (chlorides for documentation). If initial analytical results for TPH & BTEX are under RRAL's (site ranking is 10) a Final Report, C-141 will be submitted to the OCD requesting closure. If the analytical results are above the RRAL's a work plan will be submitted to the OCD. Depth to Ground Water: 50-99' (approximately 80', Section 14, T19S-R25E, per Trend Map), Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 10. Based on completion of the NMOCD approved work plan, EOG Y Resources, Inc. requests closure.		
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: <i>Chase Settle</i>		OIL CONSERVATION DIVISION
Printed Name: Chase Settle		Approved by District Supervisor:
Title: Rep Safety & Environmental II	Approval Date:	Expiration Date:
E-mail Address: Chase.Settle@eogresources.com	Conditions of Approval:	Attached ☐
Date: Thursday, September 06, 2018 Phone: 575-748-1471	2RP-2355	

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Drazos 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 EOG Y Resources, Inc.	Contact Chase Settle
Address 104 S. 4 th Street, Artesia, NM 88210	Telephone No. 575-748-1471
Facility Name Cotton MX Federal Com. #1	Facility Type SWD
Surface Owner Federal	Mineral Owner Federal
API No. 30-015-23315	

LOCATION OF RELEASE

Unit Letter C	Section 14	Township 19S	Range 25E	Feet from the 810'	North/South Line North	Feet from the 2180'	East/West Line West	County Eddy
------------------	---------------	-----------------	--------------	-----------------------	---------------------------	------------------------	------------------------	----------------

Latitude 32.66568 Longitude -104.45631

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 1500 B/PW	Volume Recovered 1430 B/PW
Source of Release Produced Water Tank overflowed.	Date and Hour of Occurrence 12/22/2015; 6:30 a.m.	Date and Hour of Discovery 12/22/2015; 6:30 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Heather Patterson, Randy Dade, Jim Amos	
By Whom? Rob Asher	Date and Hour 12/22/2015; 2:30 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*

Transducer valve failed causing the produced water tank to overflow.

Describe Area Affected and Cleanup Action Taken.* An approximate area of 30' X 230' north of the tanks in the open excavation and 40' X 70' around the tanks was impacted by the release. All released fluids were contained within the battery berm. The valve was closed and turned off, and vacuum trucks were called to retrieve standing fluid. Backhoe was also dispatched to remove impacted soils. Excavated soils will be hauled to a NMOC approved facility. Vertical and horizontal delineation samples will be taken and analysis run for TPH & BTEX (chlorides for documentation). If initial analytical results for TPH & BTEX are under RRAL's (site ranking is 10) a Final Report, C-141 will be submitted to the OCD requesting closure. If the analytical results are above the RRAL's a work plan will be submitted to the OCD. Depth to Ground Water: 50-99' (approximately 80', Section 14, T19S-R25E, per Trend Map), Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 10. Based on completion of the NMOC approved work plan, EOG Y Resources, Inc. requests closure.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC 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, NMOC 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.

OIL CONSERVATION DIVISION

Signature: <i>Chase Settle</i>	Approved by Environmental Specialist:	
Printed Name: Chase Settle	Approval Date:	
Title: Rep Safety & Environmental M	Expiration Date:	Attached ☐
E-mail Address: Chase.Settle@egresources.com	Conditions of Approval:	
Date: Thursday, September 6, 2018	Phone: 575-748-1471	2RF-3474

Chase Settle

From: Chase Settle
Sent: Thursday, September 6, 2018 12:17 PM
To: Bratcher, Mike, EMNRD; 'Pruett, Maria, EMNRD'
Cc: Bob Asher; Yvette Moore; 'stucker@blm.gov'
Subject: Cotton MX Federal Com #1 SWD Closure Report 2RP-2355 & 2RP-3474
Attachments: CottonMXFederalCom#1SWD_ClosureReport_2RP-2355_2RP-3474.pdf

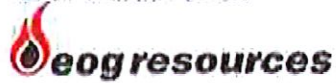
Please find attached the Closure Report for the below listed location.

Cotton MX Federal Com. #1
30-015-23315
Section 14, T19S-R25E
810 FNL & 2180 FWL
Eddy County, New Mexico
2RP-2355 & 2RP-3474

Thank you,

Chase Settle, M.S.
Rep Safety & Environmental II

EOG Resources
105 S. 4th Street
Artesia, NM 88210
575-748-4171 (Office)
575-703-6537 (Cell)



Chase Settle

From: Tucker, Shelly <stucker@blm.gov>
Sent: Monday, September 17, 2018 2:56 PM
To: Chase Settle
Cc: James Amos
Subject: Re: [EXTERNAL] Cotton MX Federal Com #1 Closure Report
Attachments: image001.png

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

BLM accepts closure request.

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

Sincerely,

Shelly J Tucker

Environmental Protection Specialist
 O&G Spill/Release Coordinator

575.234.5905 - Direct
 575.361.0084 - Cellular
 575.234.6235 - Emergency Spill Number

stucker@blm.gov

Bureau of Land Management

620 E. Greene St
 Carlsbad, NM 88220

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

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

NOTE: LPC Timing Stipulations - from March 1st through June 15th. Please plan remedial activities accordingly. Check for African Rue...treat (before it gets out of control).

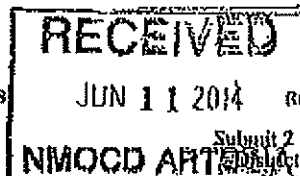
On Thu, Sep 6, 2018 at 12:33 PM Chase Settle <Chase_Settle@eogresources.com> wrote:

Shelly,

Attached is the Closure Report for the Cotton MX Federal Com #1 SWD. I had to remove the Soil Analytical Data section to get the file small enough to email.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 October 10, 2003
Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

HWMP 1417B 34904

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Yates Petroleum Corporation	GRID Number 25575	Contact Chase Settle
Address 104 S. 4 th Street	API Number 30-015-23315	Telephone No. 575-748-4147
Facility Name Cotton Federal SWD		Facility Type SWD

Surface Owner Federal	Mineral Owner Federal	Lease No. NM-36500
--------------------------	--------------------------	-----------------------

LOCATION OF RELEASE

Unit Letter C	Section 14	Township 19S	Range 25E	Feet from the 810'	North/South Line North	Feet from the 2180'	East/West Line West	County Eddy
------------------	---------------	-----------------	--------------	-----------------------	---------------------------	------------------------	------------------------	----------------

Latitude 32.66568 Longitude -104.45631

NATURE OF RELEASE

Type of Release Produced Water and Crude Oil	Volume of Release 7 B/PW and 3 B/O	Volume Recovered 6 B/PW and 2 B/O
Source of Release Gate valve failure on tank	Date and Hour of Occurrence 6/1/2014; PM	Date and Hour of Discovery 6/1/2014; PM
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		
Describe Cause of Problem and Remedial Action Taken.* A gate valve failure on the tank caused the tank to overflow.		
Describe Area Affected and Cleanup Action Taken.* An approximate area of 32' X 145' north of the tanks and 66' X 89' around and behind the tanks. All released water and crude oil was contained within the battery berm. The valve was closed and turned off, and vacuum trucks were called to retrieve standing fluid. Backhoe was also dispatched to remove impacted soils. Excavated soils will be hauled to a NMOC approved facility. Vertical and horizontal delineation samples will be taken and analysis run for TPH & BTEX (chlorides for documentation). If initial analytical results for TPH & BTEX are under RRAL's (site ranking is 10) a Final Report, C-141 will be submitted to the OCD requesting closure. If the analytical results are above the RRAL's a work plan will be submitted to the OCD. Depth to Ground Water: 50-99' (approximately 80', Section 14, T19S-R25E, per Trend Map), Wellhead Protection Area; No, Distance to Surface Water Body: >1000', SITE RANKING IS 10.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to ground water, surface water, human health or the environment. In addition, NMOC acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Chase Settle	Approved by District Supervisor:	
Title: Environmental Regulatory Agent	Approval Date: <u>6/25/14</u>	Expiration Date: <u>NA</u>
E-mail Address: CSettle@yatespetroleum.com	Conditions of Approval: Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION PROPOSAL NO LATER THAN: <u>7/25/14</u>	Attached ☐
Date: Wednesday, June 11, 2014 Phone: 575-748-4171		

* Attach Additional Sheets If Necessary

22P-2355

Bratcher, Mike, EMNRD

From: Tanna Adams <TCArms@yatespetroleum.com>
Sent: Wednesday, June 11, 2014 3:52 PM
To: Bratcher, Mike, EMNRD; dwhitloc@blm.gov
Cc: jamos@blm.gov; Bob Asher; Chase Settle
Subject: Cotton Federal SWD
Attachments: Cotton Federal SWD_C141.pdf

Good afternoon,

Please find attached the signed C141 initial for the below listed location:

Cotton Federal SWD
30-015-23315
Section 14, T19S-R25E
810' FNL & 2180' FWL
Eddy County, New Mexico

Thank you,

Tanna Adams
Yates Petroleum Corporation
Environmental Tech
Environmental Department
TCArms@yatespetroleum.com

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From: [Chase Settle](#)
To: [Bratcher, Mike, EMNRD](#); [Patterson, Heather, EMNRD](#)
Cc: [Bob Asher](#)
Subject: Cotton MX Federal Com #1 Work Plan
Date: Tuesday, September 30, 2014 7:58:06 AM
Attachments: Cotton MX Federal Com #1 Work Plan.pdf

September 30, 2014

Re: Cotton MX Federal Com #1
30-015-23315
Section 14, T19S-R25E
Eddy County, New Mexico

Mr. Bratcher,

Yates Petroleum Corporation is submitting the enclosed work plan for the above captioned well. The plan is being submitted in response to the C-141 report dated June 11, 2014.

If there are no objections with the scope of work described in the plan, Yates will have a contractor begin work on or after the week of October 14, 2014.

If you have any questions, feel free to call me at (575) 748-4171

Thank you.

YATES PETROLEUM CORPORATION

Chase Settle

Environmental Regulatory Agent
Yates Petroleum Corporation
105 S. 4th Street
Artesia, NM 88210
575-748-4171 (Office)
575-703-6537 (Cell)

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FRANK W. YATES
1936-1986

FRANK W. YATES
1936-1986

S.P. YATES
1914-2000



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210-2118
TELEPHONE (505) 748-1171

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PRESIDENT

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EXECUTIVE VP OF ADMINISTRATION
CHIEF FINANCIAL OFFICER

JAMES S. BROWN
CHIEF OPERATING OFFICER

September 30, 2014

Mr. Mike Bratcher
NMOCD District II
811 S. First St.
Artesia, NM 88210

Re: Cotton MX Federal Com #1
30-015-23315
Section 14, T19S-R25E
Eddy County, New Mexico

Mr. Bratcher,

Yates Petroleum Corporation is submitting the enclosed work plan for the above captioned well. The plan is being submitted in response to the C-141 report dated June 11, 2014.

If there are no objections with the scope of work described in the plan, Yates will have a contractor begin work on or after the week of October 14, 2014.

If you have any questions, feel free to call me at (575) 748-4171

Thank you.

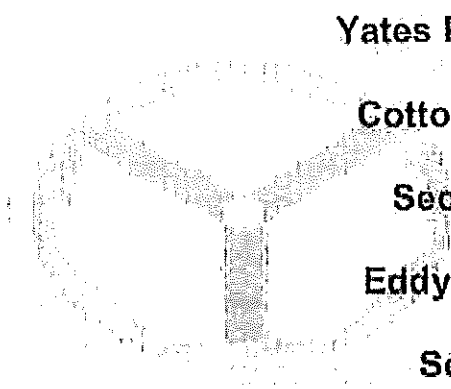
YATES PETROLEUM CORPORATION

Chase Settle
Environmental Regulatory Agent

Enclosure(s)

KATHY H. PORTER
SECRETARY

DENNIS B. KINSEY
TREASURER



Yates Petroleum Corporation
Cotton MX Federal Com #1
Section 14, T19S-R25E
Eddy County, New Mexico
September 30, 2014

I. Location

The battery is located 13 miles south of Artesia on US 285, west approximately 4 miles on Rocking R Red Road, and approximately 1.25 miles north and then east on the lease road.

II. Background

On June 11, 2014, Yates submitted to the NMOCD District II office a Form C-141 for the release of 7 B/PW and 3 B/O with 6 B/PW and 2 B/O recovered. Excavation of visually impacted soils was undertaken within the release area. The total affected area was approximately 89 feet by 66 around the tanks within the battery berm and 145 feet by 32 feet down the east side of the battery berm. Initial delineation samples were taken in the release area (6/19/2014) and sent to a NMOCD approved laboratory (7/01/2014, results enclosed). Based on analytical results (7/01/2014), additional delineation samples were taken (7/11/2014) and sent to a NMOCD approved laboratory (7/18/2014, results enclosed). Based on analytical results (7/18/2014), Yates sampled area again (7/30/2014) and sent samples to a NMOCD approved laboratory (8/08/2014, results enclosed).

III. Surface and Ground Water

Area surface geology is Paleozoic Permian. The ChevronTexaco Trend Map displays at this location (Section 14, T19S-R25E) that depth to groundwater is approximately 80 feet making the site ranking for this site a ten (10). Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

The ranking for this site is ten (0) based on the as following:

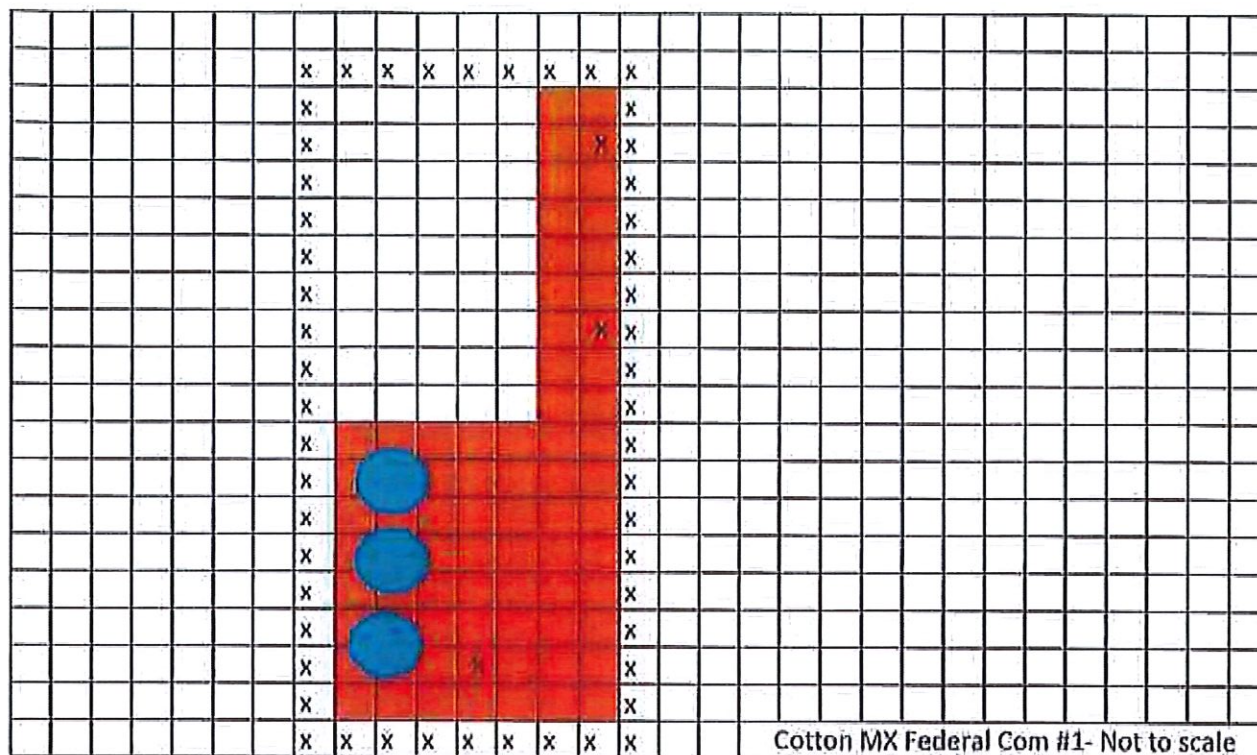
Depth to ground water	50-99'
Wellhead Protection Area	> 1000'
Distance to surface water body	> 1000'

IV. Soils

The area consists of soils that are caliche and loamy topsoil, which are interspersed with clay seams providing a low permeability barrier to retard vertical percolation of contaminants into the subsurface.

V. Scope of Work

Based on enclosed analytical results, the depth to groundwater (80'), and a decrease in chlorides, Yates Petroleum Corporation will excavate two (2) feet in the release area and haul excavated soils to a NMOCD approved facility. Yates will then install a 20 ml synthetic liner on top of a six (6) inch topsoil cushion, backfilling the remaining one and a half (1 ½) feet with caliche, providing for protection from groundwater contamination by prohibiting water percolation through the release area. The TPH & BTEX are within the RRA's for BTEX (50 ppm) and TPH (1000 ppm) for the Total Ranking Score of ten (10) in the release area, no further analytical testing of TPH and/or BTEX will be conducted (all chloride analytical results are for documentation). When remediation work is completed a C-141, Final Report will be submitted to the NMOCD requesting closure of the site.



Release area



S1 sample point

H401920	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
S1-1'	Release Area	6/19/2014	Backhoe	1'	<0.3	10		3640
S1-2'	Release Area	6/19/2014	Backhoe	2'	<0.3	10		3200
S1-3'	Release Area	6/19/2014	Backhoe	3'	<0.3	10		2000
S1-4'	Release Area	6/19/2014	Backhoe	4'	<0.3	10		2320
H402131	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
S1-5'	Release Area	7/11/2014	Backhoe	5'	N/A	N/A		2000
S1-6'	Release Area	7/11/2014	Backhoe	6'	N/A	N/A		2080
S1-7'	Release Area	7/11/2014	Backhoe	7'	N/A	N/A		912
S1-8'	Release Area	7/11/2014	Backhoe	8'	N/A	N/A		2160
H402349	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
S1-9'	Release Area	7/30/2014	Backhoe	9'	N/A	N/A		832
S1-10'	Release Area	7/30/2014	Backhoe	10'	N/A	N/A		752
S1-11'	Release Area	7/30/2014	Backhoe	11'	N/A	N/A		736
S1-12'	Release Area	7/30/2014	Backhoe	12'	N/A	N/A		496

Site Ranking is Zero (10). 50-99' (80', Section 14, T19S-R25E, Trend Map

All results are ppm. Chlorides for documentation

Released: 3 B/O, 7 B/PW; Recovered: 2 B/O, 6 B/PW Release Date: 06/01/2014



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

July 01, 2014

CHASE SETTLE

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: COTTON FEDERAL SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 06/25/14 16:14.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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,

Caley D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBBS, NM 88240

Analytical Results For:

YATES PETROLEUM CORPORATION
CHASE SETTLE
105 S 4th Street
Artesia NM, 88210
Fax To: (505) 748-4635

Received:	06/25/2014	Sampling Date:	06/19/2014
Reported:	07/01/2014	Sampling Type:	Soil
Project Name:	COTTON FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S1-1' (H401920-01)

DTEX 8021B		mg/kg	Analyzed By: CK							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/28/2014	ND	1.70	84.8	2.00	8.67		
Toluene*	<0.050	0.050	06/28/2014	ND	1.77	88.5	2.00	8.91		
Ethylbenzene*	<0.050	0.050	06/28/2014	ND	1.56	78.2	2.00	8.01		
Total Xylenes*	<0.150	0.150	06/28/2014	ND	4.86	80.9	6.00	7.21		
Total BTEX	<0.300	0.300	06/28/2014	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 96.7 % 89.4-136

Chloride, BM4500Cl-B		mg/kg	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3640	16.0	06/30/2014	ND	416	104	400	3.92		

TPH 8015M		mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	06/27/2014	ND	186	92.9	200	0.812		
DRO >C10-C28	139	10.0	06/27/2014	ND	203	102	200	3.12		

Surrogate: 1-Chlorooctane 70.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 93.3 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celely D. Keene, Lab Director/Quality Manager



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Analytical Results For:

YATES PETROLEUM CORPORATION
CHASE SETTLE
105 S 4th Street
Artesia NM, 88210
Fax To: (505) 748-4635

Received: 06/25/2014
Reported: 07/01/2014
Project Name: COTTON FEDERAL SWD #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/19/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S1-2' (H401920-02)

mg/kg			Analyzed By: CK						
BTX 00210									
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/28/2014	ND	1.70	84.8	2.00	8.67	
Toluene*	<0.050	0.050	06/28/2014	ND	1.77	88.5	2.00	8.91	
Ethylbenzene*	<0.050	0.050	06/28/2014	ND	1.56	78.2	2.00	8.01	
Total Xylenes*	<0.150	0.150	06/28/2014	ND	4.86	80.9	6.00	7.21	
Total BTX	<0.300	0.300	06/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PFC) 97.2 % 89.4-126

mg/kg			Analyzed By: AP						
Chloride, SM4500Cl-B									
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3200	16.0	06/30/2014	ND	416	104	400	3.92	

mg/kg			Analyzed By: MS						
TPH 8015M									
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/27/2014	ND	186	92.9	200	0.812	
DRO >C10-C28	<10.0	10.0	06/27/2014	ND	203	102	200	3.12	

Surrogate: 1-Chlorooctane 70.8 % 63.2-140

Surrogate: 1-Chlorooctadecane 89.0 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

YATES PETROLEUM CORPORATION
CHASE SETTLE
105 S 4th Street
Artesia NM, 88210
Fax To: (505) 740-4635

Received:	06/25/2014	Sampling Date:	06/19/2014
Reported:	07/01/2014	Sampling Type:	Soil
Project Name:	COTTON FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S1-3' (H401920-03)

DTEX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/28/2014	ND	1.70	84.8	2.00	8.67	
Toluene*	<0.050	0.050	06/28/2014	ND	1.77	80.5	2.00	8.91	
Ethylbenzene*	<0.050	0.050	06/28/2014	ND	1.56	78.2	2.00	8.01	
Total Xylenes*	<0.150	0.150	06/28/2014	ND	4.86	80.9	6.00	7.21	
Total BTEX	<0.300	0.300	06/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PCE) 97.8 % 89.4-126

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	06/30/2014	ND	416	104	400	3.92	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/27/2014	ND	186	92.9	200	0.812	
DRO >C10-C28	<10.0	10.0	06/27/2014	ND	203	102	200	3.12	

Surrogate: 1-Chlorooctane 73.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 92.8 % 63.6-154

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*=Accredited Analyte

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Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager



YATES PETROLEUM CORPORATION
CHASE SETTLE
105 S 4th Street
Artesia NM, 88210
Fax To: (505) 748-4635

Sampling Date: 06/19/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

BTEX 8021B

mg/kg

Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/28/2014	ND	1.70	84.8	2.00	8.67	
Toluene*	<0.050	0.050	06/28/2014	ND	1.77	88.5	2.00	8.91	
Ethylbenzene*	<0.050	0.050	06/28/2014	ND	1.56	78.2	2.00	8.01	
Total Xylenes*	<0.150	0.150	06/28/2014	ND	4.86	80.9	6.00	7.21	
Total BTEX	<0.300	0.300	06/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIC)	97.9 %	89.4-126
---------------------------------------	--------	----------

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AP

Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2320	16.0	06/30/2014	ND	416	104	400	3.92	

TPH B015M

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
CRO C6-C10	<10.0	10.0	06/27/2014	ND	186	92.9	200	0.812	
DRO >C10-C28	<10.0	10.0	06/27/2014	ND	203	102	200	3.12	

Surrogate: 1-Chlorooctane	69.6%	65.2-140
---------------------------	-------	----------

Surrogate: 1-Chlorooctadecane	89.9%	61.6-134
-------------------------------	-------	----------

Cardinal Laboratories

*=Accredited Analyte

[illegible]

Clayton K. Kane

Celey D. Keane, Lab Director/Quality Manager



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

Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

July 18, 2014

CHASE SETTLE

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: COTTON FEDERAL SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 07/14/14 14:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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,

Cately D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

YATES PETROLEUM CORPORATION
CHASE SETTLE
105 S 4th Street
Artesia NM, 88210
Fax To: (505) 748-4635

Received: 07/14/2014
Reported: 07/18/2014
Project Name: COTTON FEDERAL SWD #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 07/11/2014
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: S1-5' (H402131-01)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	07/15/2014	ND	400	100	400	7.69	

Sample ID: S1-6' (H402131-02)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2080	16.0	07/15/2014	ND	400	100	400	7.69	

Sample ID: S1-7' (H402131-03)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	07/15/2014	ND	432	108	400	0.00	

Sample ID: S1-8' (H402131-04)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2160	16.0	07/15/2014	ND	432	108	400	0.00	

Cardinal Laboratories

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Caley D. Keene, Lab Director/Quality Manager



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 SM500C1-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

*=Accredited Analyte

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Calvin T. Brown

Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Maranda, Hobbs, NM 88240

(505) 393-2326 FAX (505) 393-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Company (SOS): 393-2326 Yates Petroleum Corporation

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4171

Sampler Signature: *[Signature]*

Fax No: 575-748-4131

e-mail: csettle@yatespetroleum.com

Project Name:

Cotton Federal SWD #1

Project #:

Project Loc:

Cotton Federal SWD #1

PO #: 203750

Report Format:

☒ Standard

☐ TRRP

☐ NPDES

(Lab use only)

1402131

ORDER #: 1402030

LAB # (Lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers	Matrix	Analysis For
1	S1-5			7/11/2014	3:30 PM		1			
2	S1-6			8/19/2014	3:30 PM		1			
3	S1-7			8/19/2014	3:30 PM		1			
4	S1-8			8/19/2014	3:30 PM		1			

Requisitioned by	Date	Time	Received by	Date	Time
<i>[Signature]</i>	7-14-14		<i>[Signature]</i>	7/14/14	2:25
Requisitioned by	Date	Time	Received by	Date	Time
Requisitioned by	Date	Time	Received by	Date	Time

Analysis For	TCAP	TOTAL	Analysis For	TCAP	TOTAL
Capitals (Ca, Mg, Na, K)			Capitals (Ca, Mg, Na, K)		
Anions (Cl, SO ₄ , Volatility)			Anions (Cl, SO ₄ , Volatility)		
SAR / ESP / CEC			SAR / ESP / CEC		
Metals As Ag Ba Cd Cr Pb Hg Se			Metals As Ag Ba Cd Cr Pb Hg Se		
Volatiles			Volatiles		
Semi-volatiles			Semi-volatiles		
PH: 1000			PH: 1000		
TOC			TOC		
DOC			DOC		
NO ₃ -N			NO ₃ -N		
NO ₂ -N			NO ₂ -N		
Ammonia			Ammonia		
SAR			SAR		
RUSH TAT (Pre-Schedule) 24, 40, 72 hrs			RUSH TAT (Pre-Schedule) 24, 40, 72 hrs		
Standard TAT			Standard TAT		

Special Instructions:

Laboratory Comments:

Sample Containers intact?
VOCs Free of Headspace?
Labels on containers?
Custody seals on container(s)?
Custody seals on cooler(s)?
Sample Hand Delivered?
by Carrier? UPS DHL
Temperature Upon Receipt: 24.4 °C



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

August 06, 2014

CHASE SETTLE

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: COTTON FEDERAL SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 07/30/14 15:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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	Halocacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

YATES PETROLEUM CORPORATION
CHASE SETTLE
105 S 4th Street
Artesia NM, 88210
Fax To: (505) 748-4635

Received: 07/30/2014
Reported: 08/06/2014
Project Name: COTTON FEDERAL SWD #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 07/30/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S 1 - 9' (H402349-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	08/04/2014	ND	416	104	400	3.92	

Sample ID: S 1 - 10' (H402349-02)

Chloride, SM4500Cl-B		Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	08/04/2014	ND	416	104	400	3.92	

Sample ID: S 1 - 11' (H402349-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	08/04/2014	ND	416	104	400	3.92	

Sample ID: S 1 - 12' (H402349-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	08/04/2014	NO	416	104	400	3.92	

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Celey D. Keene
Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

From: Patterson, Heather, EMNRD
To: "Chase Settle"
Cc: Bob Asher, Bratcher, Mike, EMNRD; Hughes, Solomon
Subject: RE: Cotton MX Federal Com #1 Work Plan
Date: Thursday, October 02, 2014 11:08:00 AM

RE: Cotton Federal SWD * 30-015-23315 * DOR:6/1/2014 * 2RP-2355

Mr. Settle,

This work plan is approved by the OCD. Like approval by BLM is required.

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

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

Heather Patterson
Environmental Specialist
NMOCD District II
(575)748-1283 ext.101

From: Chase Settle [mailto:CSettle@yatespetroleum.com]
Sent: Tuesday, September 30, 2014 7:56 AM
To: Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD
Cc: Bob Asher
Subject: Cotton MX Federal Com #1 Work Plan

September 30, 2014

Re: Cotton MX Federal Com #1
30-015-23315
Section 14, T19S-R25E
Eddy County, New Mexico

Mr. Bratcher,

Yates Petroleum Corporation is submitting the enclosed work plan for the above captioned well. The plan is being submitted in response to the C-141 report dated June 11, 2014.

If there are no objections with the scope of work described in the plan, Yates will have a contractor begin work on or after the week of October 14, 2014.

If you have any questions, feel free to call me at (575) 748-4171

Thank you.

YATES PETROLEUM CORPORATION

Chase Settle

Environmental Regulatory Agent
Yates Petroleum Corporation

105 S. 4th Street
Artesia, NM 88210
575-748-4171 (Office)
575-703-6537 (Cell)

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2/12/2016

NMOCD District II Staff

Site Inspection

Photo Documentation

Yates Petroleum

Cotton MX Fed Com SWD #1

30-015-23315

2RP-3474

Which spilled into the excavation of

2RP-2335

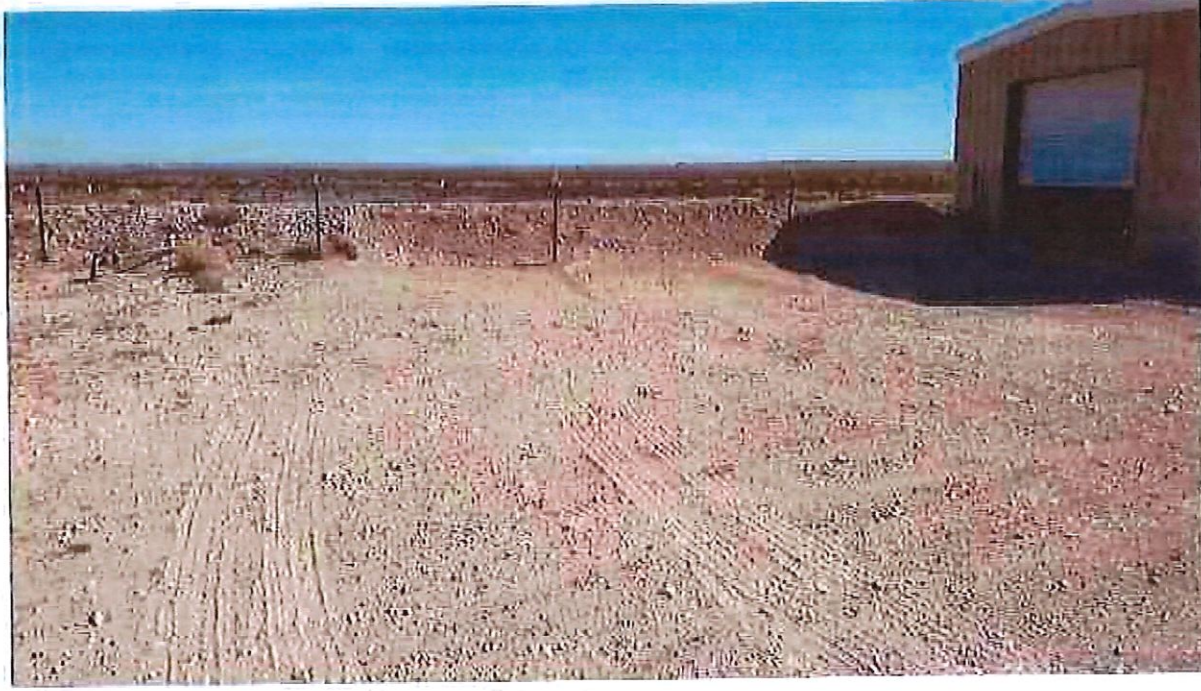












Chase Settle

From: Chase Settle
Sent: Thursday, March 1, 2018 3:14 PM
To: 'Bratcher, Mike, EMNRD'; Weaver, Crystal, EMNRD
Cc: Yvette Moore; Bob Asher
Subject: Cotton MX Federal #1 Work Plan
Attachments: Cotton MX Federal Com #1 Work Plan.pdf

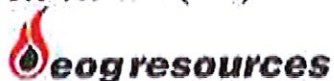
Mike,

Per our meeting today (3/1/18 @ 1 p.m.), here is the Cotton MX Federal #1 Work Plan in electronic form. The request that you made for deeper samples to be taken at the FE+60 sample point during the time of remediation activities at the site is agreed to by EOG.

Thank you,

Chase Settle, M.S.
Rep Safety & Environmental II

EOG Resources
105 S. 4th Street
Artesia, NM 88210
575-748-4171 (Office)
575-703-6537 (Cell)





EOG Resources, Inc.
Artesia Division Office
104 S. 4th Street
Artesia, N. M. 88210

March 1, 2018

Mr. Mike Bratcher/Ms. Crystal Weaver
NMOCD District II
811 S. First St.
Artesia, NM 88210

Re: Cotton MX Federal Com. #1
30-015-23315
Section 14, T19S-R25E
810 FNL & 2180 FWL
Eddy County, New Mexico
2RP-2355 & 2RP-3474

Mr. Bratcher/Ms. Weaver,

EOG Y Resources, Inc. is submitting the enclosed remediation work plan for the above referenced site. The plan is being submitted subsequent to the C-141 reports dated on June 11, 2014 and January 4, 2016.

If there are no objections with the scope of work described in the plan, EOG Y Resources, Inc. will have a contractor begin work on or after March 15, 2018.

If you have any questions, feel free to call me at (575) 748-1471.

Respectfully,

Chase Settle
Rep Safety & Environmental II
EOG Y Resources, Inc.



March 1, 2018

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Figure 2: Site Map with Sample Points

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Appendix A: NMOSE Well Log Information

Appendix B: USGS Groundwater Data

Appendix C: Soil Sample Laboratory Data

Appendix D: Form C-141 Infills



March 1, 2018

I. Location

The battery is located 13 miles south of Artesia on US 285, west approximately 4 miles on Rocking R Red Road, and approximately 1.25 miles north and then east on the lease road.

II. Background

On October 2, 2014, NMOCD District II approved a work plan to address 2RP-2355. Excavation activities were completed, however, before liner installation and backfill could occur there was another release that impacted the same area that was impacted by the 2RP-2355 release. A Form C-141 for the release of 1500 B/PW with 1430 B/PW recovered was submitted to the NMOCD District II office on January 4, 2016. Excavation of visually impacted soils was undertaken within the release area. The total affected area was approximately 30 feet by 230 feet north of the production tanks and 40 feet by 70 feet around the tanks with the release remaining entirely within the battery berm. Initial vertical delineation samples were taken in the release area (1/12/2016, results enclosed) and sent to a NMOCD approved laboratory. Based on initial analytical results, additional delineation samples were taken (2/9/2016, results enclosed) and sent to a NMOCD approved laboratory. After receiving this set of sample data, it was determined that a core rig would be needed to fully delineate for chlorides. On March 15, 2017 (results enclosed), a core rig was used to collect samples from 3 points, these samples were sent to NMOCD approved laboratory for analysis. It was also determined that this battery should be moved and rebuilt to address all contamination, current and historic, once historical impacts were found from sampling efforts outside of the release area on February 28, 2017 (results enclosed). Horizontal delineation activities for the current release were undertaken from May 5, 2016 to October 10, 2017 (results enclosed). Once the production tanks were moved, samples were taken where they once stood on June 14, 2017 and again on July 7, 2017 (results enclosed). Another area of concern to the landowner was immediately east of the battery berm where sparse to no vegetation existed. On October 10, 16, & 26, 2017, these areas were sampled with the samples sent to an NMOCD approved laboratory (results enclosed).

III. Surface and Ground Water

Area surface geology is Paleozoic Permian. Based on information from the New Mexico Office of the State Engineer database and United States Geological Survey National Water Information System (USGS) regarding this location (Section 14, T19S-R25E), depth to groundwater is approximately 97 feet making the site ranking for this site a ten (10). Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

IV. NMOCD Ranking Criteria

The ranking for this site is ten (10) based on the following:

Depth to ground water	50-99'
Wellhead Protection Area	> 1000'
Distance to surface water body	> 1000'

Based on the ranking criteria, the NMOCD established RRALs for this site are:

Benzene	10 ppm
BTEX	50 ppm
TPH	1000 ppm
Chlorides	No established RRAL

energy opportunity growth



March 1, 2018

V. Soils

The area consists of soils that are loam based topsoil with deeper layers consisting of sand and rock which then transition to a clay layer which provides a permeability barrier to prohibit vertical percolation of contaminants into the subsurface water systems.

VI. Scope of Work

Based on enclosed analytical results, and prior approval of this remediation plan by the private landowner, EOG Y Resources, Inc. proposes to excavate four (4) feet of impacted soil from the NEB/T4, EB/T3, FE, and FE+10 areas; and will also increase the size of the existing excavation at the N, SE, and NE sample points based on horizontal analytical data. This soil will be hauled to a NMOC approved facility for disposal. EOG Y Resources, Inc. will then install a geosynthetic clay liner, equivalent to or more effective than a 20 mil synthetic liner, in the S1/C1, C2, S2/C3, NEB/T4, EB/T3, FE, FE+10 areas at 4' bgs. Once the liner is installed, the excavation will be backfilled with (4) feet of soil, with at least the top two (2) feet being topsoil.

At the T1 and T2 areas, where the production tanks used to be, EOG Y Resources will treat the BTEX and TPH in situ using Cool-Ox. This will consist of treating the top fourteen (14) feet in the T1 area and the top seven (7) feet in the T2 area. Cool-Ox will be applied to the soils as they are mixed by a trackhoe in order to ensure contact between the Cool-Ox and impacted soils. After treatment is complete, confirmation samples will be collected every two (2) feet beginning at two (2) feet bgs to a depth of no less than eighteen (18) feet in the T1 area and no less than twelve (12) feet bgs in the T2 area. Samples will also be collected from the north, south, east, and west edges of the impacted area at two (2) feet, five (5) feet, and ten (10) feet bgs to further ensure no horizontal impaction remains after the treatment.

Once the excavated area has been backfilled, it will be revegetated according to the private surface owner's desired objectives. When remediation work is completed a C-141 Final Report will be submitted to the NMOC requesting closure of the site.

Cotton MX Federal Com #1
Remediation Work Plan
2RP-2355 & 2RP-3474



March 1, 2018

Table 1

Soil Analytical Data

Colton MX Federal Com #1
Remediation Work Plan
2RP-2355 & 2RP-3474



March 1, 2018

Soil Analytical Data

Sample ID	Depth (ft. bgs)	Date	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH (GRO)	TPH (DRO)	TPH EXT DRO	Total TPH	Chlorides
S1-1'	8'	1/12/16	ND	ND	ND	ND	ND	ND	15	-	15	8200
S1-2'	6'	1/12/16	ND	ND	0.057	ND	0.057	ND	35	-	35	7200
S1-3'	7'	1/12/16	ND	ND	ND	ND	ND	ND	140	-	140	7500
S1-4'	6'	1/12/16	ND	ND	ND	ND	ND	ND	190	-	190	8300
S1-5'	9'	1/12/16	ND	ND	ND	ND	ND	ND	ND	-	ND	7100
S1-6'	10'	1/12/16	ND	ND	ND	ND	ND	ND	ND	-	ND	3400
S1-7'	11'	1/12/16	-	-	-	-	-	-	-	-	-	4040
S1-8'	12'	1/12/16	-	-	-	-	-	-	-	-	-	2280
S1-9'	13'	1/12/16	-	-	-	-	-	-	-	-	-	4000
S1-10'	14'	1/12/16	-	-	-	-	-	-	-	-	-	2600
S1-11'	15'	1/12/16	-	-	-	-	-	-	-	-	-	3380
S1-12'	16'	1/12/16	-	-	-	-	-	-	-	-	-	1920
S1-13'	17'	2/9/16	-	-	-	-	-	-	-	-	-	2700
S1-16'	19'	2/9/16	-	-	-	-	-	-	-	-	-	2900
S1-17'	21'	2/9/16	-	-	-	-	-	-	-	-	-	1200
S1-18'	23'	2/9/16	-	-	-	-	-	-	-	-	-	1300
S1-20'	24'	2/9/16	-	-	-	-	-	-	-	-	-	1100
S2-1'	5'	1/12/16	ND	ND	0.082	0.30	0.382	17	98	-	115	3500
S2-2'	6'	1/12/16	ND	ND	ND	ND	ND	ND	12	-	12	7600
S2-3'	7'	1/12/16	ND	ND	ND	ND	ND	ND	ND	-	ND	3500
S2-4'	8'	1/12/16	ND	ND	ND	ND	ND	ND	ND	-	ND	2200
S2-5'	9'	1/12/16	ND	ND	ND	ND	ND	ND	ND	-	ND	2800
S2-6'	10'	1/12/16	ND	ND	ND	ND	ND	ND	ND	-	ND	2100
S2-7'	11'	1/12/16	-	-	-	-	-	-	-	-	-	688
S2-8'	12'	1/12/16	-	-	-	-	-	-	-	-	-	3000
S2-9'	13'	1/12/16	-	-	-	-	-	-	-	-	-	650
S2-10'	14'	1/12/16	-	-	-	-	-	-	-	-	-	1550
S2-11'	15'	1/12/16	-	-	-	-	-	-	-	-	-	2200
S2-12'	16'	1/12/16	-	-	-	-	-	-	-	-	-	1760
S2-13'	17'	2/9/16	-	-	-	-	-	-	-	-	-	2700
S2-15'	19'	2/9/16	-	-	-	-	-	-	-	-	-	2800
S2-17'	21'	2/9/16	-	-	-	-	-	-	-	-	-	1200
S2-18'	23'	2/9/16	-	-	-	-	-	-	-	-	-	1300
S2-20'	24'	2/9/16	-	-	-	-	-	-	-	-	-	1100
C1-20'	24'	3/15/17	-	-	-	-	-	-	-	-	-	4120
C1-25'	29'	3/15/17	-	-	-	-	-	-	-	-	-	704
C1-30'	34'	3/15/17	-	-	-	-	-	-	-	-	-	428
C1-35'	39'	3/15/17	-	-	-	-	-	-	-	-	-	144
C1-40'	44'	3/15/17	-	-	-	-	-	-	-	-	-	112
C2-20'	24'	3/15/17	-	-	-	-	-	-	-	-	-	688
C2-25'	29'	3/15/17	-	-	-	-	-	-	-	-	-	432
C2-30'	34'	3/15/17	-	-	-	-	-	-	-	-	-	208
C2-35'	39'	3/15/17	-	-	-	-	-	-	-	-	-	144
C3-20'	24'	3/15/17	-	-	-	-	-	-	-	-	-	2080
C3-25'	29'	3/15/17	-	-	-	-	-	-	-	-	-	1160
C3-30'	34'	3/15/17	-	-	-	-	-	-	-	-	-	440
C3-35'	39'	3/15/17	-	-	-	-	-	-	-	-	-	352
C3-40'	44'	3/15/17	-	-	-	-	-	-	-	-	-	288
T1-1'	1'	6/14/17	5.1	13	9.5	24	51.6	610	5600	-	8210	470
T1-3'	3'	6/14/17	19	89	58	90	260	1500	12000	-	13500	500
T1-6'	6'	6/14/17	4.4	1.0	59	55	119.4	1000	6800	-	7800	270
T1-8'	8'	6/14/17	0.53	2.0	6.5	9.5	18.53	510	4900	-	5410	50
T1-9'	9'	6/14/17	3.1	6.2	4.5	11	24.8	570	7000	-	8470	180
T1-10'	10'	7/7/17	1.15	1.13	<0.2	21.5	23.5	541	3060	-	3501	-
T1-12'	12'	7/7/17	<0.05	<0.05	<0.05	<0.15	<0.3	<10.0	<10.0	-	<10.0	-
T1-14'	14'	7/7/17	<0.05	0.054	<0.05	1.03	1.09	98.9	1670	-	1768.9	-
T1-16'	16'	7/7/17	<0.05	<0.05	<0.05	<0.15	<0.3	<10.0	135	-	135	-
T1-18'	18'	7/7/17	<0.05	<0.05	<0.05	<0.15	<0.3	<10.0	<10.0	-	<10.0	-
T1-20'	20'	7/7/17	<0.05	<0.05	<0.05	<0.15	<0.3	<10.0	<10.0	-	<10.0	-

energy opportunity growth

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T2-1'	1'	6/14/17	ND	0.06	3.3	38	42.26	620	8800	-	-	90
T2-3'	3'	6/14/17	ND	ND	1.3	21	22.3	590	7000	-	7690	390
T2-5'	5'	6/14/17	10	140	140	180	470	2800	12000	-	14800	360
T2-6'	6'	6/14/17	ND	3.3	9.2	68	78.5	1000	9600	-	10600	100
T2-7'	7'	6/14/17	ND	ND	ND	ND	ND	ND	200	-	200	100
T2-8'	8'	7/7/17	<0.06	<0.06	<0.06	<0.15	<0.3	<10.0	<10.0	-	<10.0	-
T2-10'	10'	7/7/17	<0.06	<0.06	<0.06	<0.15	<0.3	<10.0	<10.0	-	<10.0	-
T2-12'	12'	7/7/17	<0.06	<0.06	<0.06	<0.15	<0.3	<10.0	<10.0	-	<10.0	-
EB/T3-1'	1'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	520
EB/T3-3'	3'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	1100
EB/T3-5'	5'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	1400
EB/T3-7'	7'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	540
EB/T3-9'	9'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	1100
EB/T3-9'	9'	6/14/17	-	-	-	-	-	-	-	-	-	680
EB/T3-12'	12'	6/14/17	-	-	-	-	-	-	-	-	-	250
EB/T3-15'	15'	6/14/17	-	-	-	-	-	-	-	-	-	300
EB/T3-18'	18'	6/14/17	-	-	-	-	-	-	-	-	-	2100
EB/T3-20'	20'	6/14/17	-	-	-	-	-	-	-	-	-	600
NEB/T4-1'	1'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
NEB/T4-3'	3'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	1300
NEB/T4-5'	5'	2/28/17	ND	ND	ND	ND	ND	ND	ND	-	ND	1100
NEB/T4-9'	9'	6/14/17	-	-	-	-	-	-	-	-	-	230
NEB/T4-12'	12'	6/14/17	-	-	-	-	-	-	-	-	-	610
NEB/T4-15'	15'	6/14/17	-	-	-	-	-	-	-	-	-	880
NEB/T4-18'	18'	6/14/17	-	-	-	-	-	-	-	-	-	260
NEB/T4-20'	20'	6/14/17	-	-	-	-	-	-	-	-	-	280
SS-1'	3'	5/5/16	-	-	-	-	-	-	-	-	-	160
SS-3'	3'	5/5/16	-	-	-	-	-	-	-	-	-	88
SE-1'	3'	5/5/16	-	-	-	-	-	-	-	-	-	1800
SE-3'	3'	5/5/16	-	-	-	-	-	-	-	-	-	420
SE-6'	3'	5/5/16	-	-	-	-	-	-	-	-	-	160
E-1'	3'	5/5/16	-	-	-	-	-	-	-	-	-	390
E-3'	3'	5/5/16	-	-	-	-	-	-	-	-	-	610
NE-1'	3'	5/5/16	-	-	-	-	-	-	-	-	-	5500
NE-3'	3'	5/5/16	-	-	-	-	-	-	-	-	-	120
N-1'	3'	5/5/16	-	-	-	-	-	-	-	-	-	4000
N-3'	3'	5/5/16	-	-	-	-	-	-	-	-	-	4500
N-5'	3'	5/5/16	-	-	-	-	-	-	-	-	-	2500
N-7'	3'	6/8/16	-	-	-	-	-	-	-	-	-	2500
N-9'	3'	6/8/16	-	-	-	-	-	-	-	-	-	3500
N-11'	3'	10/10/17	-	-	-	-	-	-	-	-	-	3600
N-13'	3'	10/10/17	-	-	-	-	-	-	-	-	-	3120
N-15'	3'	10/10/17	-	-	-	-	-	-	-	-	-	1580
N-17'	3'	10/10/17	-	-	-	-	-	-	-	-	-	384
N-19'	3'	10/10/17	-	-	-	-	-	-	-	-	-	336
N-21'	3'	10/10/17	-	-	-	-	-	-	-	-	-	336
FSE-1'	1'	10/10/17	-	-	-	-	-	-	-	-	-	48
FSE-2'	2'	10/10/17	-	-	-	-	-	-	-	-	-	832
FSE-3'	3'	10/10/17	-	-	-	-	-	-	-	-	-	888
FSE-4'	4'	10/10/17	-	-	-	-	-	-	-	-	-	898
FE-1'	1'	10/10/17	-	-	-	-	-	-	-	-	-	2040
FE-2'	2'	10/10/17	-	-	-	-	-	-	-	-	-	2200
FE-3'	3'	10/10/17	-	-	-	-	-	-	-	-	-	2580
FE-4'	4'	10/10/17	-	-	-	-	-	-	-	-	-	2520
FE-6'	6'	10/16/17	-	-	-	-	-	-	-	-	-	2400
FE-8'	8'	10/16/17	-	-	-	-	-	-	-	-	-	2000
FE-10'	10'	10/16/17	-	-	-	-	-	-	-	-	-	1800
FE-12'	12'	10/16/17	-	-	-	-	-	-	-	-	-	1020
FE-13'	13'	10/16/17	-	-	-	-	-	-	-	-	-	692
FE+10-1'	1'	10/16/17	-	-	-	-	-	-	-	-	-	1310
FE+10-3'	3'	10/16/17	-	-	-	-	-	-	-	-	-	2860
FE+30-1'	1'	10/16/17	-	-	-	-	-	-	-	-	-	832
FE+30-3'	3'	10/16/17	-	-	-	-	-	-	-	-	-	2080
FE+46-1'	1'	10/26/17	-	-	-	-	-	-	-	-	-	<18.0
FE+46-3'	3'	10/26/17	-	-	-	-	-	-	-	-	-	304
FE+80-1'	1'	10/26/17	-	-	-	-	-	-	-	-	-	128
FE+80-3'	3'	10/26/17	-	-	-	-	-	-	-	-	-	2640

energy opportunity growth

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FE+76-1'	1'	10/28/17	-	-	-	-	-	-	-	-	-	<10.0
FE+76-3'	3'	10/26/17	-	-	-	-	-	-	-	-	-	16

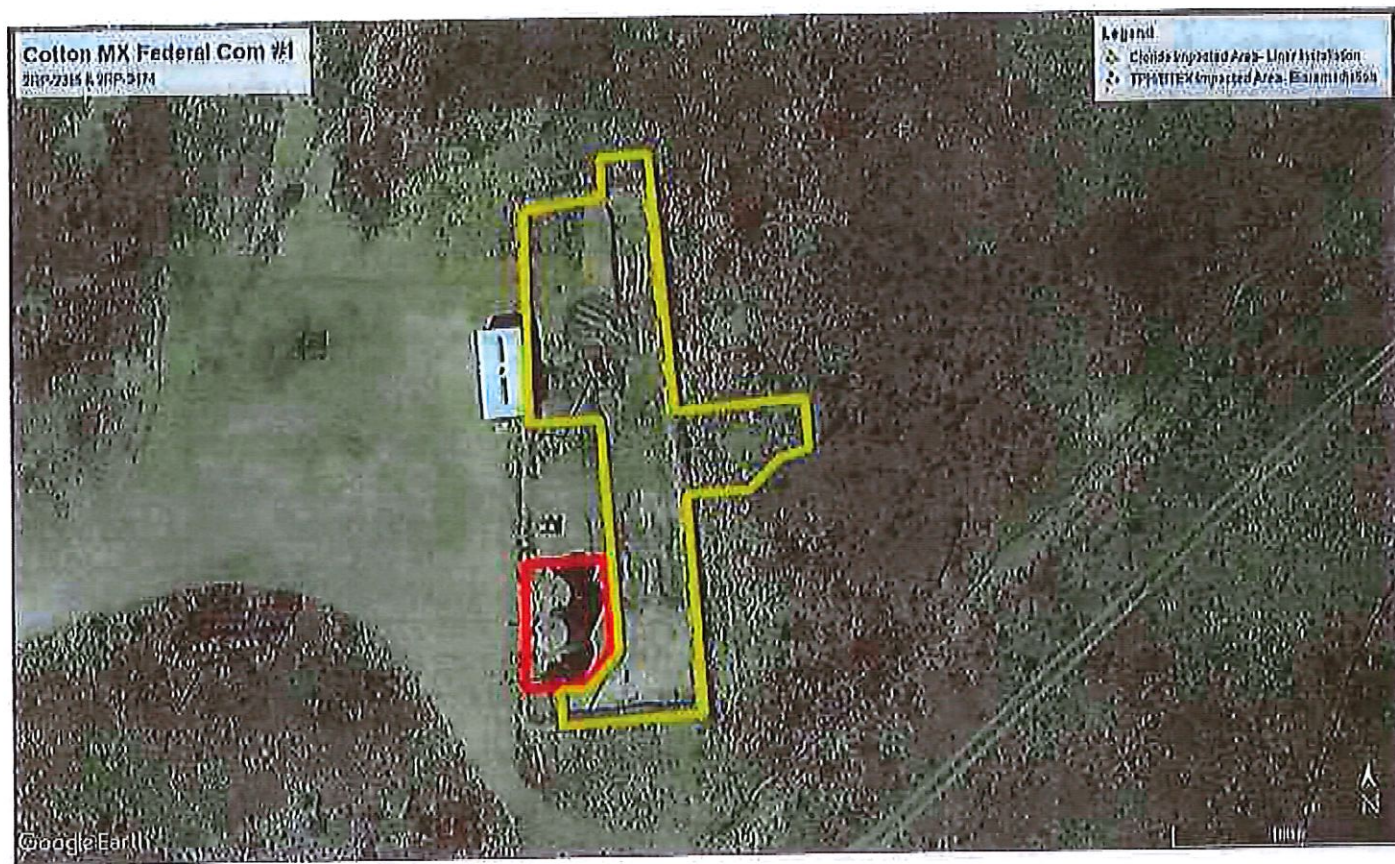
Cotton MX Federal Com #1
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Figure 1

Site Map



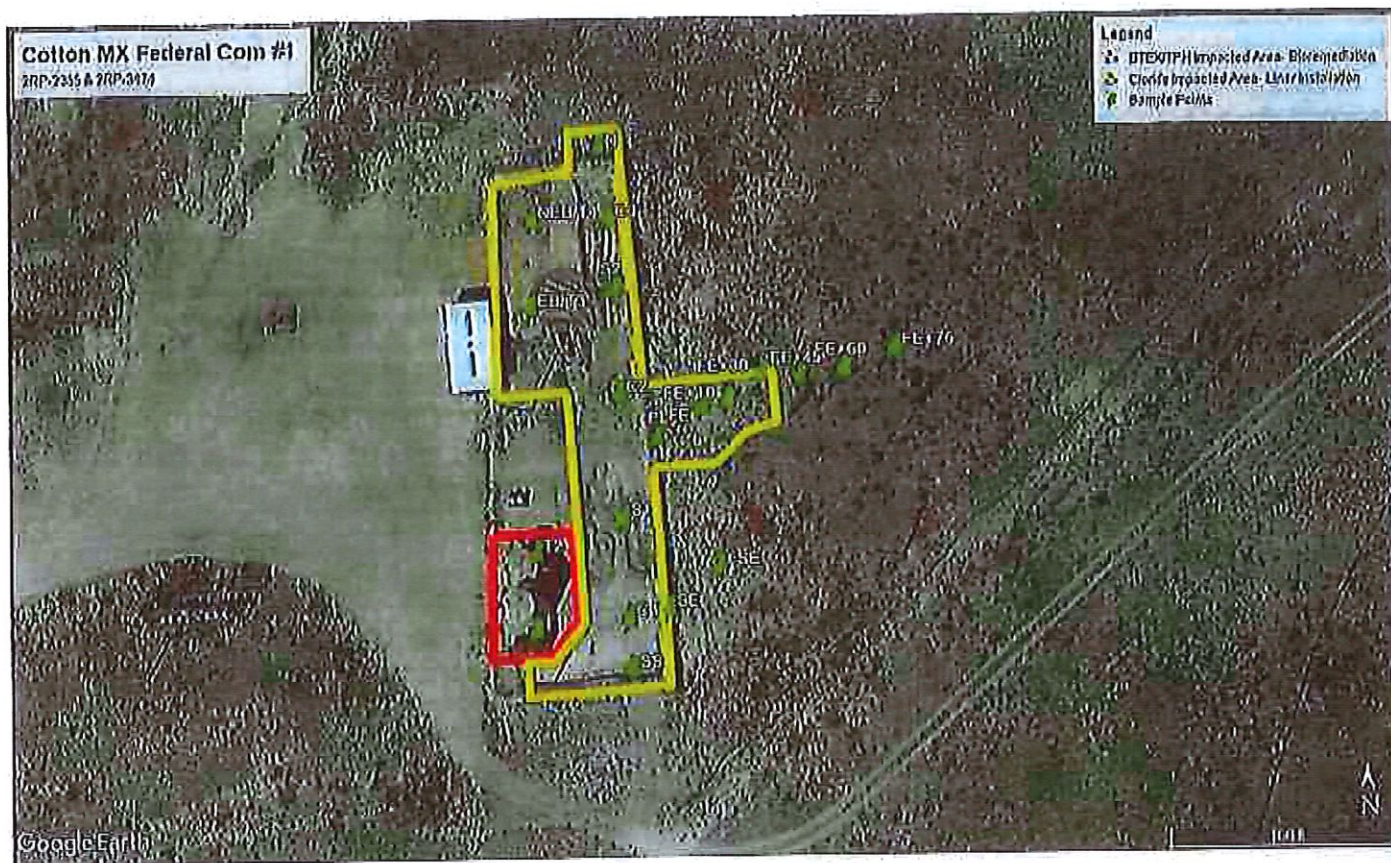
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Figure 2

Map with Sample Points



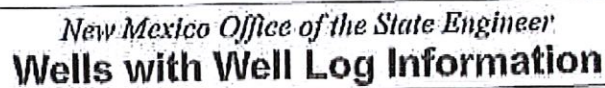
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Appendix A

NMOSE Well Log



1. Introduction

Number
461

Student: 1020

2/23/18 1:26 PM

WELLS WITH WELL LOG INFORMATION

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Appendix B

USGS Groundwater Data



National Water Information System: Map View

Sites

Map Layers

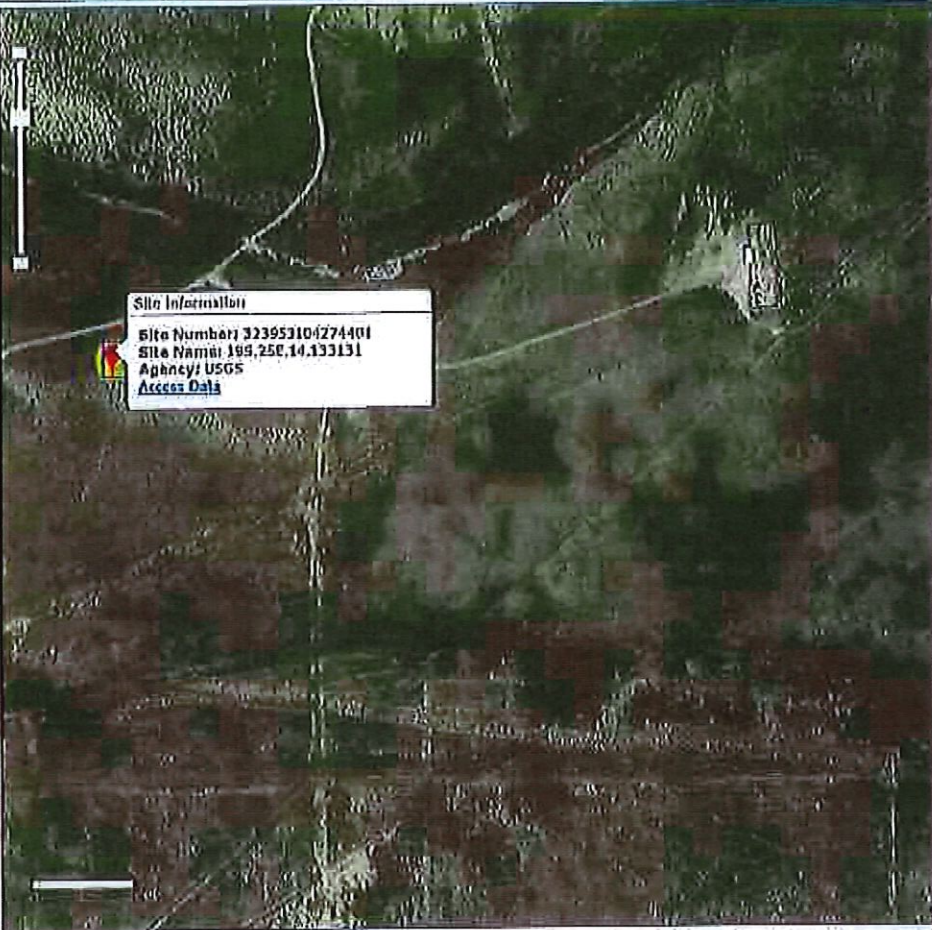
Search Results

Export Sites

Site Number	Site Name
323953104274401	199,250,14,133131

Search Parameters

Explanation of Symbols



Site Information

Site Number: 323953104274401
Site Name: 199,250,14,133131
Agency: USGS
[Access Data](#)



USGS Home
Contact USGS
Copyright USGS

National Water Information System Web Interface

USGS Water Resources

Water Category: Hydrologic Area:

Click to Hide/Show Bulletin

- [Please see news on new format](#)
- [Full News](#)

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list = 323953104274401

Minimum number of levels = 1
Data range = 01/01/2004 , 01/01/2018

[Save file of selected sites](#) to local disk for future upload

USGS 323953104274401 198.25E.14.133131

Eddy County, New Mexico

Latitude 32°39'53", Longitude 104°27'44" NAD27

Land-surface elevation 3,433 feet above NAVD80

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output format

☐ Table of data
☐ Tab-separated data
☐ Graph of data
☐ Reselect well

Date	Time	Water-level data-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Water-level accuracy	Status	Method of measurement	Measuring agency	Source of measurement	Water-level approval status
2004-02-09		D	97.78			2			USGS		A
2005-02-03	09:45 MST	m	91.42			2			NM001		A
2006-07-14	12:30 MST	m	91.72			2			NM001		A
2007-02-09	11:00 MST	m	92.35			2			NM001		A
2008-01-15	03:25 MST	m	91.90			2			NM001		A
2010-01-21	10:00 MST	m	104.46			2			NM001		A
2011-01-21	10:35 MST	m	103.40			2			NM001		A
2012-01-05	06:45 MST	m	103.89			2			NM001		A
2015-01-13	13:23 MST	m	97.65			2			NM001		A

Explanation

Section	Code	Description
Water-level data-time accuracy	D	Data is accurate to the Day
Water-level data-time accuracy	m	Data is accurate to the Minute
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement
Measuring agency	NM001	New Mexico State Engineers Office
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	A	Reported by another government agency (do not use "A" if reported by owner, use "O")
Source of measurement	R	Reported by person other than the owner, driller, or another government agency
Water-level approval status	A	Approved for publication -- Processing and review completed

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

Cotton MX Federal Com #1
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Appendix C

Soil Sample Laboratory Data



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 21, 2016

Chase Settle

Yates Petroleum Corporation

105 South Fourth Street

Artesia, NM 88210

TBL: (575) 748-4195

FAX

RE: Cotton MX Federal Com #1

OrderNo.: 1601540

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 12 sample(s) on 1/15/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1601540

Date Reported: 1/11/2016

CLIENT: Yates Petroleum Corporation
Project: Cotton MX Federal Com #1

Lab Order: 1601540

Lab ID: 1601540-001

Collection Date: 1/12/2016 2:04:00 PM

Client Sample ID: S1-1'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
Analyst: LGT							
EPA METHOD 300.0: ANIONS							
Chloride	8200	300		mg/Kg	200	1/18/2016 8:46:37 PM	23267
Analyst: KJH							
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	15	0.6		mg/Kg	1	1/18/2016 6:52:07 PM	23241
Sum: DNOP	70.6	70-130		%REC	1	1/18/2016 6:52:07 PM	23241
Analyst: NSB							
EPA METHOD 8016D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	6.0		mg/Kg	1	1/18/2016 6:51:38 PM	23236
Sum: BFB	83.8	88.2-112		%REC	1	1/18/2016 6:51:38 PM	23236
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.050		mg/Kg	1	1/18/2016 6:51:38 PM	23236
Toluene	ND	0.050		mg/Kg	1	1/18/2016 6:51:38 PM	23236
Ethylbenzene	ND	0.050		mg/Kg	1	1/18/2016 6:51:38 PM	23236
Xylenes, Total	ND	0.089		mg/Kg	1	1/18/2016 6:51:38 PM	23236
Sum: 4-Bromofluorobenzene	100	80-120		%REC	1	1/18/2016 6:51:38 PM	23236

Lab ID: 1601540-002

Collection Date: 1/12/2016 2:07:00 PM

Client Sample ID: S1-2'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
Analyst: LGT							
EPA METHOD 300.0: ANIONS							
Chloride	7200	300		mg/Kg	200	1/18/2016 8:59:02 PM	23267
Analyst: KJH							
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	35	10		mg/Kg	1	1/18/2016 2:16:54 PM	23241
Sum: DNOP	86.7	70-130		%REC	1	1/18/2016 2:16:54 PM	23241
Analyst: NSB							
EPA METHOD 8016D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	1/18/2016 7:15:15 PM	23236
Sum: BFB	94.0	88.2-112		%REC	1	1/18/2016 7:15:15 PM	23236
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.048		mg/Kg	1	1/18/2016 7:15:15 PM	23236
Toluene	ND	0.048		mg/Kg	1	1/18/2016 7:15:15 PM	23236
Ethylbenzene	0.057	0.048		mg/Kg	1	1/18/2016 7:15:15 PM	23236
Xylenes, Total	ND	0.088		mg/Kg	1	1/18/2016 7:15:15 PM	23236
Sum: 4-Bromofluorobenzene	105	80-120		%REC	1	1/18/2016 7:15:15 PM	23236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers: * Value exceeds Maximum Contaminant Level
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1601540

Date Reported: 1/21/2016

CLIENT: Yates Petroleum Corporation
Project: Cotton MX Federal Com #1

Lab Order: 1601540

Lab ID: 1601540-003

Collection Date: 1/12/2016 2:11:00 PM

Client Sample ID: SI-3'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
Analyst: LGT							
EPA METHOD 300.0: ANIONS							
Chloride	7600	300		mg/Kg	200	1/19/2016 7:11:27 PM	23267
Analyst: KJH							
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	140	9.8		mg/Kg	1	1/19/2016 2:40:46 PM	23241
Sum: DNOP	85.4	70-120		%REC	1	1/19/2016 2:40:46 PM	23241
Analyst: NSB							
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/19/2016 11:57:14 PM	23236
Sum: BFB	91.8	66.2-112		%REC	1	1/19/2016 11:57:14 PM	23236
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.048		mg/Kg	1	1/19/2016 11:57:14 PM	23236
Toluene	ND	0.048		mg/Kg	1	1/19/2016 11:57:14 PM	23236
Ethylbenzene	ND	0.049		mg/Kg	1	1/19/2016 11:57:14 PM	23236
Xylenes, Total	ND	0.097		mg/Kg	1	1/19/2016 11:57:14 PM	23236
Sum: 4-Bromofluorobenzene	101	80-120		%REC	1	1/19/2016 11:57:14 PM	23236

Lab ID: 1601540-004

Collection Date: 1/12/2016 2:15:00 PM

Client Sample ID: SI-4'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
Analyst: LGT							
EPA METHOD 300.0: ANIONS							
Chloride	8300	300		mg/Kg	200	1/19/2016 7:23:51 PM	23267
Analyst: KJH							
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	100	9.8		mg/Kg	10	1/19/2016 6:58:44 PM	23241
Sum: DNOP	0	70-120		%REC	10	1/19/2016 6:58:44 PM	23241
Analyst: NSB							
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/19/2016 7:38:47 PM	23236
Sum: BFB	90.8	66.2-112		%REC	1	1/19/2016 7:38:47 PM	23236
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.048		mg/Kg	1	1/19/2016 7:38:47 PM	23236
Toluene	ND	0.048		mg/Kg	1	1/19/2016 7:38:47 PM	23236
Ethylbenzene	ND	0.048		mg/Kg	1	1/19/2016 7:38:47 PM	23236
Xylenes, Total	ND	0.086		mg/Kg	1	1/19/2016 7:38:47 PM	23236
Sum: 4-Bromofluorobenzene	106	80-120		%REC	1	1/19/2016 7:38:47 PM	23236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding time for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1601540

Date Reported: 1/21/2016

CLIENT: Yates Petroleum Corporation
Project: Cotton MX Federal Com #1

Lab Order: 1601540

Lab ID: 1601540-005

Collection Date: 1/12/2016 2:21:00 PM

Client Sample ID: SI-5'

Matrix: SOIL

Analytes	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	7100	300		mg/Kg	200	1/18/2016 7:36:18 PM	23287
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/18/2016 7:18:17 PM	23241
Sum: DNOP	70.8	70-130		%REC	1	1/18/2016 7:18:17 PM	23241
EPA METHOD 8016D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/18/2016 8:02:13 PM	23238
Sum: BFB	87.8	68.2-112		%REC	1	1/18/2016 8:02:13 PM	23238
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	1/18/2016 8:02:13 PM	23238
Toluene	ND	0.047		mg/Kg	1	1/18/2016 8:02:13 PM	23238
Ethylbenzene	ND	0.047		mg/Kg	1	1/18/2016 8:02:13 PM	23238
Xylenes, Total	ND	0.094		mg/Kg	1	1/18/2016 8:02:13 PM	23238
Sum: 4-Bromofluorobenzene	101	80-120		%REC	1	1/18/2016 8:02:13 PM	23238

Lab ID: 1601540-006

Collection Date: 1/12/2016 2:24:00 PM

Client Sample ID: SI-6'

Matrix: SOIL

Analytes	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	3400	150		mg/Kg	100	1/19/2016 7:48:41 PM	23287
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/18/2016 8:02:28 PM	23241
Sum: DNOP	85.8	70-130		%REC	1	1/18/2016 8:02:28 PM	23241
EPA METHOD 8016D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/18/2016 8:25:38 PM	23238
Sum: BFB	91.8	68.2-112		%REC	1	1/18/2016 8:25:38 PM	23238
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	1/18/2016 8:25:38 PM	23238
Toluene	ND	0.047		mg/Kg	1	1/18/2016 8:25:38 PM	23238
Ethylbenzene	ND	0.047		mg/Kg	1	1/18/2016 8:25:38 PM	23238
Xylenes, Total	ND	0.096		mg/Kg	1	1/18/2016 8:25:38 PM	23238
Sum: 4-Bromofluorobenzene	107	80-120		%REC	1	1/18/2016 8:25:38 PM	23238

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1601540

Date Reported: 1/21/2016

CLIENT: Yates Petroleum Corporation
Project: Cotton MX Federal Com #1

Lab Order: 1601540

Lab ID: 1601540-007

Collection Date: 1/12/2016 3:15:00 PM

Client Sample ID: S2-1'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
Analyst: LGT							
EPA METHOD 300.0: ANIONS							
Chloride	3800	150		mg/Kg	100	1/19/2016 8:01:05 PM	23267
Analyst: KJH							
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	80	10		mg/Kg	1	1/19/2016 8:01:12 PM	23241
Sum: DNOP	70.2	70-120		%REC	1	1/19/2016 8:01:12 PM	23241
Analyst: NBB							
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	17	4.9		mg/Kg	1	1/19/2016 12:20:49 AM	23236
Sum: BFB	178	66.2-112	S	%REC	1	1/19/2016 12:20:49 AM	23236
Analyst: NBB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.049		mg/Kg	1	1/19/2016 12:20:49 AM	23236
Toluene	ND	0.049		mg/Kg	1	1/19/2016 12:20:49 AM	23236
Ethylbenzene	0.082	0.049		mg/Kg	1	1/19/2016 12:20:49 AM	23236
Xylenes, Total	0.30	0.096		mg/Kg	1	1/19/2016 12:20:49 AM	23236
Sum: 4-Bromofluorobenzene	118	80-120		%REC	1	1/19/2016 12:20:49 AM	23236

Lab ID: 1601540-008

Collection Date: 1/12/2016 3:18:00 PM

Client Sample ID: S2-2'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
Analyst: LGT							
EPA METHOD 300.0: ANIONS							
Chloride	7600	300		mg/Kg	200	1/19/2016 8:13:29 PM	23267
Analyst: KJH							
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	12	9.8		mg/Kg	1	1/19/2016 3:24:15 PM	23241
Sum: DNOP	82.8	70-120		%REC	1	1/19/2016 3:24:15 PM	23241
Analyst: NBB							
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/19/2016 12:44:23 AM	23236
Sum: BFB	93.6	66.2-112		%REC	1	1/19/2016 12:44:23 AM	23236
Analyst: NBB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.049		mg/Kg	1	1/19/2016 12:44:23 AM	23236
Toluene	ND	0.049		mg/Kg	1	1/19/2016 12:44:23 AM	23236
Ethylbenzene	ND	0.049		mg/Kg	1	1/19/2016 12:44:23 AM	23236
Xylenes, Total	ND	0.069		mg/Kg	1	1/19/2016 12:44:23 AM	23236
Sum: 4-Bromofluorobenzene	109	80-120		%REC	1	1/19/2016 12:44:23 AM	23236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not in Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1601540

Date Reported: 1/21/2016

CLIENT: Yates Petroleum Corporation
Project: Cotton MX Federal Com #1

Lab Order: 1601540

Lab ID: 1601540-009

Collection Date: 1/12/2016 3:23:00 PM

Client Sample ID: S2-3'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	3800	150		mg/Kg	100	1/18/2016 8:25:54 PM	23267
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/18/2016 3:46:56 PM	23241
Sum: DNOP	89.2	70-150		%REC	1	1/18/2016 3:46:56 PM	23241
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/18/2016 8:49:11 PM	23236
Sum: BFB	80.9	68.2-112		%REC	1	1/18/2016 8:49:11 PM	23236
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	1/18/2016 8:49:11 PM	23236
Toluene	ND	0.049		mg/Kg	1	1/18/2016 8:49:11 PM	23236
Ethylbenzene	ND	0.049		mg/Kg	1	1/18/2016 8:49:11 PM	23236
Xylenes, Total	ND	0.099		mg/Kg	1	1/18/2016 8:49:11 PM	23236
Sum: 4-Bromofluorobenzene	105	80-120		%REC	1	1/18/2016 8:49:11 PM	23236

Lab ID: 1601540-010

Collection Date: 1/12/2016 3:26:00 PM

Client Sample ID: S2-4'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	2200	75		mg/Kg	50	1/18/2016 8:38:18 PM	23267
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/18/2016 4:07:43 PM	23241
Sum: DNOP	83.5	70-150		%REC	1	1/18/2016 4:07:43 PM	23241
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/18/2016 10:23:31 PM	23236
Sum: BFB	90.3	68.2-112		%REC	1	1/18/2016 10:23:31 PM	23236
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	1/18/2016 10:23:31 PM	23236
Toluene	ND	0.046		mg/Kg	1	1/18/2016 10:23:31 PM	23236
Ethylbenzene	ND	0.046		mg/Kg	1	1/18/2016 10:23:31 PM	23236
Xylenes, Total	ND	0.092		mg/Kg	1	1/18/2016 10:23:31 PM	23236
Sum: 4-Bromofluorobenzene	103	80-120		%REC	1	1/18/2016 10:23:31 PM	23236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers: * Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
B Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order: 1601540
 Date Reported: 1/21/2016

CLIENT: Yates Petroleum Corporation
 Project: Cotton MX Federal Com #1
 Lab Order: 1601540

Lab ID: 1601540-011
 Client Sample ID: S2-5'
 Collection Date: 1/12/2016 3:28:00 PM
 Matrix: SOIL

Analytes	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
Analyst: LGT							
EPA METHOD 300.0: ANIONS							
Chloride	2800	75		mg/Kg	50	1/20/2016 1:17:55 PM	23289
Analyst: KJH							
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/19/2016 4:28:20 PM	23241
Sum: DNOP	89.0	70-130		%REC	1	1/19/2016 4:28:20 PM	23241
Analyst: NSB							
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/18/2016 10:47:01 PM	23236
Sum: BFB	91.0	88.2-112		%REC	1	1/18/2016 10:47:01 PM	23236
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.049		mg/Kg	1	1/18/2016 10:47:01 PM	23236
Toluene	ND	0.049		mg/Kg	1	1/18/2016 10:47:01 PM	23236
Ethylbenzene	ND	0.049		mg/Kg	1	1/18/2016 10:47:01 PM	23236
Xylenes, Total	ND	0.098		mg/Kg	1	1/18/2016 10:47:01 PM	23236
Sum: 4-Bromofluorobenzene	106	80-120		%REC	1	1/18/2016 10:47:01 PM	23236

Lab ID: 1601540-012
 Client Sample ID: S2-6'
 Collection Date: 1/12/2016 3:31:00 PM
 Matrix: SOIL

Analytes	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
Analyst: LGT							
EPA METHOD 300.0: ANIONS							
Chloride	2100	75		mg/Kg	50	1/20/2016 1:30:10 PM	23289
Analyst: KJH							
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/19/2016 4:51:03 PM	23241
Sum: DNOP	85.2	70-130		%REC	1	1/19/2016 4:51:03 PM	23241
Analyst: NSB							
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/18/2016 11:10:29 PM	23236
Sum: BFB	88.7	88.2-112		%REC	1	1/18/2016 11:10:29 PM	23236
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.046		mg/Kg	1	1/18/2016 11:10:29 PM	23236
Toluene	ND	0.046		mg/Kg	1	1/18/2016 11:10:29 PM	23236
Ethylbenzene	ND	0.046		mg/Kg	1	1/18/2016 11:10:29 PM	23236
Xylenes, Total	ND	0.093		mg/Kg	1	1/18/2016 11:10:29 PM	23236
Sum: 4-Bromofluorobenzene	90.4	80-120		%REC	1	1/18/2016 11:10:29 PM	23236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers	+	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1601540

21-Jan-16

Client: Yates Petroleum Corporation
Project: Cotton MX Federal Com #1

Project: CONRAD 1257 - 1257-12										
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Chloride	ND	1.0								
Sample ID: LCS-23287	SampleType: lcs	TestCode: EPA Method 300.0: Aroclors								
Client ID: LOSS	Batch ID: 23287	RunNo: 31622								
Prep Date: 1/18/2016	Analysis Date: 1/18/2016	SeqNo: 004791							Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.0	15.00	0	85.4	80	110			

Chloride	14	1.5	1000	1000	1000	1000	1000	1000	1000	1000	1000
Sample ID	MB-23289	Sample Type	MALK	Test Code	EPA Method 300.0: Aroclors						
Client ID	PBS	Batch ID	23289	Run No	31548						
Prep Date	1/18/2016	Analysis Date	1/18/2016	Seq No	065595	Units	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual	
Chloride	ND	1.5									

Chloride	NO	1.5								
Sample ID: LCS-23289	SampleType: LCS	TestCode: EPA Method 300.0; Aroclors								
Client ID: LCS	Batch ID: 23289	RunNo: 31548								
Prep Date: 1/18/2016	Analysis Date: 1/18/2016	SeqNo: 005596							Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.4	90	110			

Qualifiers:

- V Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- I Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1601540

21-Jan-16

Client: Yates Petroleum Corporation
Project: Cotton MX Federal Com #1

Project:		Cotton 22A Peabody Cont. #1								
Sample ID: MB-23241		SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID: PBS		Batch ID: 23241			RunNo: 31524					
Prep Date: 1/16/2016		Analysis Date: 1/19/2016			SeqNo: 884922		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Sur: DNOP	8.2		10.00		82.5	70	130			

Sur: DNOP	8.2	10.00								
Sample ID: LCS-23241	SampleType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCS	Batch ID: 23241	RunNo: 31524								
Prep Date: 1/16/2016	Analysis Date: 1/19/2016	SeqNo: 884986							Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	80.00	0	93.8	65.8	138			
Sur: DNOP	4.8		8.000		96.8	70	130			

Qualifiers

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- II Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not in Range
- RL Reporting Detection Limit

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QC SUMMARY REPORT

WO#: 1601540

21-Jan-16

Hall Environmental Analysis Laboratory, Inc.

Client: Yates Petroleum Corporation
 Project: Cotton MX Federal Com #1

Sample ID: MB-23235	Sample Type: MBLK	Test Code: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 23235	Run No: 31503								
Prep Date: 1/16/2016	Analysis Date: 1/18/2016	Seq No: 984172			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Sum: BFB	870		1000		87.0	68.2	112			

Sample ID: LGS-23235		SampType: LGS		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LGS		Batch ID: 23235		RunNo: 31503						
Prep Date: 1/16/2016		Analysis Date: 1/18/2016		SeqNo: 984173			Units: mg/Kg			
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	103	79.8	122			
Sum: BFB	930		1000		93.1	66.2	112			

Sample ID: 6ML RB		Sample Type: MBLK		Test Code: EPA Method 8015D: Gasoline Range						
Client ID: PBS		Batch ID: A31803		Run No: 31503						
Prep Date:		Analysis Date: 1/18/2016		Seq No: 864229		Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Sum: BFB	880		1000		87.7	68.2	112			

Sample ID: 2.5UG GRO LGS	SampleType: LGS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LC99	Batch ID: A31803	RunNo: 31503								
Prep Date:	Analysis Date: 1/18/2016	SeqNo: 984230 Units: %REC								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sum: BFB	970		1000		97.4	68.2	112			

Surf:BFB										
Sample ID: MB-23266	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 23266			RunNo: 31528						
Prep Date: 1/18/2016	Analysis Date: 1/19/2016			SeqNo: 985267		Units: %REC				
Analyte	Result	PQL	BPK value	BPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surf:BFB	870		1000		87.2	68.2	112			

Sample ID: LGS-23266	Sample Type: LGS	Test Code: EPA Method 8015D: Gasoline Range								
Client ID: LGS	Batch ID: 23266	Run No: 31528								
Prep Date: 1/18/2016	Analysis Date: 1/19/2016	Seq No: 985268 Unit: %REC								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Sum: BFB	860		1000		95.8	68.2	112			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- D Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

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QC SUMMARY REPORT

W/O#: 1601540

Hall Environmental Analysis Laboratory, Inc.

21-Jan-16

Client: Yates Petroleum Corporation

Project: Cotton MX Federal Coin #1

Sample ID: MB-23235	SamptType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 23235	RunNo: 31603								
Prep Date: 1/16/2016	Analysis Date: 1/16/2016	SeqNo: 064250								
Units: mg/Kg										
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Sum: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sum: 4-Bromofluorobenzene		1.0		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000		1.000	
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Sum: 4-Bromofluorobenzene										
Sample ID	MB-23266	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID: 23266			RunNo: 31626					
Prep Date:	1/16/2016	Analysis Date: 1/16/2016			SeqNo: 005266		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sum: 4-Bromofluorobenzene	0.09		1.000		89.4	80	120			

Sample ID: LGS-23266		SampType: LGS		TestCode: EPA Method 8021B: Volatiles						
Client ID: LGS		Batch ID: 23266		RunNo: 31626						
Prep Date: 1/16/2016		Analysis Date: 1/16/2016		SeqNo: 005267		Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sum: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Qualifiers

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not in Range
- RI Reporting Detection Limit

Page 10 of 10



Hall Environmental Analysis Laboratory
 4901 Mustang NE
 Albuquerque, NM 87109
 TEL: 505.343.3975 FAX: 505.343.4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Yates Petroleum Corp. Work Order Number: 1001640 Rep No: 1

Received by/dato: CSA 01/15/16
 Logged By: Lindsay Mangin 1/16/2016 0:00:00 AM [Signature]
 Completed By: Lindsay Mangin 1/16/2016 10:46:08 AM [Signature]
 Reviewed By: mg 01/15/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☒ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Carroll

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0°C to 0.0°C? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. All samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Data paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met? (If no, notify customer for authorization) Yes ☒ No ☐

of preboiled bottles checked for pH: (~2 or >12 unless noted)
 Adjusted?
 Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	<u></u>	Date:	<u></u>
By Whom:	<u></u>	Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	<u></u>		
Client Instructions:	<u></u>		

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
4.1	Good	Yuy				



PHONE (575) 393-2326 • 101 E. MAINLAND • MIDLAND • MIDLAND, NM 88240

January 27, 2016

CHASE SETTLE
YATES PETROLEUM CORPORATION
105 S 4th Street
Artesia, NM 88210

RE: COTTON MX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 01/25/16 13:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. 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/lab/lab_accr_cred_certif.html.

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

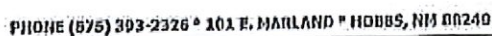
Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

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,

Coley D. Keene
Lab Director/Quality Manager



YATES PETROLEUM CORPORATION
CHASE SETTLE
105 S 4th Street
Atesla NM, 88210
Fax To: (505) 748-1635

Sampling Date: 01/12/2016
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Chloride, SM4500Cl-1		Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2600	16.0	01/26/2016	ND	432	100	400	3.77	

Carlinfini Laboratories

Celey D. Keeno, Lab Director/Quality Manager



YATES PETROLEUM CORPORATION
CHASE SETTLE
105 S 4th Street
Artesia NM, 90210
Fax To: (505) 748-1635

Sampling Date: 01/12/2016
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Hanson

Chloride, SM4500Cl-D

mg/kg

Analyzed By: AP

Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3360	16.0	01/26/2016	ND	432	100	400	3.77	

Chloride, 514500Cl-D

mg/kg

Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	DS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1920	16.0	01/26/2016	ND	432	108	400	3.77	

* = Accredited Analyte

RECEIVED JOHN HENRY AND COMPANY, CARROLL COUNTY AND DISTRICT COURTS, for my true copy, whereof I am not to be paid. In witness whereof I have hereunto set my hand and the seal of said court, this 10th day of June, 1890. J. H. AND CO. CLERK. The above is a true and correct copy of the original as the same appears in the records of the Carroll County and District Courts, for my true copy, whereof I am not to be paid. In witness whereof I have hereunto set my hand and the seal of said court, this 10th day of June, 1890. J. H. AND CO. CLERK.

Celey D. Keene
Celey D. Keene, Lab Director/Quality Manager



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 SM-4500-Cl-D does not require samples be received at or below 6°C Samples reported on m m as received basis (wet) unless otherwise noted on report

Accredited Analyte

PLEASE NOTE: Liberty and Democracy Conflicts Inquiry and Litigation includes records for any filing which, whether filed in connection with, or not, that is related to the ground rules by which the Inquiry. All filings, including those by the DOJ and any other state or subsidiary that be derived solely from such in writing and intended by Liberty and the DOJ, shall constitute part of the Inquiry's records. In no event shall Confidential be filed for the individual or organizational litigants, including Liberty Inquiry, because information, filed in writing, is not at present shared by such, the individual, whether or not known, filing and or or related to the performance of the duties assigned by such, regardless of whether such information pertains to a claim under the Freedom of Information Act, or otherwise. Such shall only be the original filed with the Inquiry. The record that be produced must be in the public domain of Confidentiality.

Chas. D. Kane

Coley D. Keene, Lab Director/Quality Manager



Cotton 10X Federal Com = 1

Project Loc: Cotton, MX Federal Comm #1

Comp: (505) 383-2324 Yates Petroleum Corporation

Company Address: 105 South 4th Street

City/State/Zip: Atlanta, NM 88210

Telephone No: 575-748-4171

Sampler Signature: 

Fax No: 575-748-4131

e-mail: cseltle@vatespetroleum.com

☒ Standard☐ TRAP ☐ NPDES

PO # 205,0750

(Tub Use Only)

ORDER# H1600168

Preparation of Containers

Walter

ANALYSIS FOR	
TEMP	
TOTAL	

[illegible]

Special Instructions:

Realized by:

Published by

Relinquished by:

11

Drift

Date:

Reviewed by:

Received by EAGLE:

1/2

10

10

1

1

10

Sample Centrifuge Inhibitor?
VOCs Free of Headspace?
Labtest on container(s)?
Closely seals on container(s)
Doubtly seals on container(s)
Sample Hand Delivered
by Sample Collection Rep.?
by Carrier? UPS DHL FedEx Lanes

12-6



PHONE (675) 393-2326 • 101 E. MARLAND • HODGES, NM 88240

January 27, 2016

CHASE SETTLE

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: COTTON MX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 01/25/16 13:45.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keena

Lab Director/Quality Manager



PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

YATES PETROLEUM CORPORATION
CHASE SETTLE
105 S 4th Street
Artesia NM, 88210
Fax To: (505) 748-4635

Received: 01/25/2016
Reported: 01/27/2016
Project Name: COTTON MX FEDERAL COM #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 01/12/2016
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Hanson

Sample ID: S2-7' (H600169-01)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	680	16.0	01/26/2016	ND	432	100	400	3.77	

Sample ID: S2-8' (H600169-02)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3000	16.0	01/26/2016	ND	432	100	400	3.77	

Sample ID: S2-9' (H600169-03)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	650	16.0	01/26/2016	ND	432	100	400	3.77	

Sample ID: S2-10' (H600169-04)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1550	16.0	01/26/2016	ND	432	100	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Values are provided as reported only and do not include any adjustments for recovery or bias, which are limited to the recovery rate for the analyte. It is the responsibility of the client to ensure that the data is used for the intended purpose. In no event shall Cardinal Laboratories be held liable for any damages, including, without limitation, direct, indirect, or consequential damages, arising out of or from the use of the data provided by Cardinal Laboratories. This report shall not be reproduced without the written permission of Cardinal Laboratories.

Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager



YATES PETROLEUM CORPORATION
CHASE SETTLE
105 S 4th Street
Artesia NM, 80210
Fax To: (505) 748-4635

Sampling Date: 01/12/2016
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Chloride, 6M4500Cl-B	mg/kg		Analyzed By: AP							
	Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride		2280	16.0	01/26/2016	ND	416	104	400	0.00	

mg/kg		Analyzed by: AP							
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1760	16.0	01/26/2016	ND	416	104	400	0.00	

^a = Accredited Analyte[illegible]

Coley D. Keene, Lab Director/Quality Manager



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 SH4500CF-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

*=Accredited Analyte

[illegible]

Chas. D. Keane

Celey D. Keene, Lab Director/Quality Manager



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 23, 2016

Chase Settle
Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4111
FAX

RE: Cotton MX Federal Com #1

OrderNo.: 1602544

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 10 sample(s) on 2/12/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1602544

Date Reported: 2/23/2016

CLIENT: Yates Petroleum Corporation
Project: Cotton MX Federal Com #1

Lab Order: 1602544

Lab ID: 1602544-001
Client Sample ID: S1-13'

Collection Date: 2/9/2016 10:50:00 AM

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	1100	30		mg/Kg	20	2/17/2016 2:58:54 PM	23798

Lab ID: 1602544-002
Client Sample ID: S1-15'

Collection Date: 2/9/2016 10:56:00 AM

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	620	30		mg/Kg	20	2/17/2016 3:08:18 PM	23798

Lab ID: 1602544-003
Client Sample ID: S1-17'

Collection Date: 2/9/2016 11:02:00 AM

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	480	30		mg/Kg	20	2/17/2016 3:48:32 PM	23798

Lab ID: 1602544-004
Client Sample ID: S1-19'

Collection Date: 2/9/2016 11:07:00 AM

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	360	30		mg/Kg	20	2/17/2016 3:58:57 PM	23798

Lab ID: 1602544-005
Client Sample ID: S1-20'

Collection Date: 2/9/2016 11:20:00 AM

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	280	30		mg/Kg	20	2/17/2016 4:11:22 PM	23798

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	A	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 3
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not in Range	
	R	RPD outside accepted recovery limits	RJ	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limits as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1602544

Date Reported: 2/23/2016

CLIENT: Yates Petroleum Corporation
Project: Cotton MX Federal Com #1

Lab Order: 1602544

Lab ID: 1602544-006

Collection Date: 2/9/2016 12:00:00 PM

Client Sample ID: S2-13'

Matrix: SOIL

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	2700	160		mg/Kg	100	2/10/2016 9:33:48 PM	23798

Analyst: LGT

Lab ID: 1602544-007

Collection Date: 2/9/2016 12:06:00 PM

Client Sample ID: S2-15'

Matrix: SOIL

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	2800	160		mg/Kg	100	2/10/2016 9:46:10 PM	23798

Analyst: LGT

Lab ID: 1602544-008

Collection Date: 2/9/2016 12:11:00 PM

Client Sample ID: S2-17'

Matrix: SOIL

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	1200	75		mg/Kg	50	2/10/2016 9:58:36 PM	23829

Analyst: LGT

Lab ID: 1602544-009

Collection Date: 2/9/2016 12:19:00 PM

Client Sample ID: S2-19'

Matrix: SOIL

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	1300	75		mg/Kg	50	2/10/2016 10:11:01 PM	23829

Analyst: LGT

Lab ID: 1602544-010

Collection Date: 2/9/2016 12:25:00 PM

Client Sample ID: S2-20'

Matrix: SOIL

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	1100	75		mg/Kg	50	2/10/2016 10:23:26 PM	23829

Analyst: LGT

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	A	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 3
	D	Sample Diluted Due to Matrix	B	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not in Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

QC SUMMARY REPORT

VOL: 1602544

Hall Environmental Analysis Laboratory, Inc.

23-Feb-16

Client: Yates Petroleum Corporation

Project: Cotton MX Federal Com #1

Sample ID	MB-23788	Sample Type	MBLK	Test Code	EPA Method 300.0: Aroclor
Client ID	PBS	Batch ID	23788	Run No	32237
Prep Date	2/17/2016	Analysis Date	2/17/2016	Seq No	886578 Units: mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC Low Limit High Limit %RPD RPD Limit Qual
Chloride	ND	1.5			

Sample ID	LCS-23788	Sample Type	LCS	Test Code	EPA Method 300.0: Aroclor
Client ID	LCS8	Batch ID	23788	Run No	32237
Prep Date	2/17/2016	Analysis Date	2/17/2016	Seq No	886577 Units: mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC Low Limit High Limit %RPD RPD Limit Qual
Chloride	14	1.5	15.00	0	95.5 90 110

Sample ID	MB-23828	Sample Type	MBLK	Test Code	EPA Method 300.0: Aroclor
Client ID	PBS	Batch ID	23828	Run No	32274
Prep Date	2/18/2016	Analysis Date	2/18/2016	Seq No	886585 Units: mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC Low Limit High Limit %RPD RPD Limit Qual
Chloride	ND	1.5			

Sample ID	LCS-23828	Sample Type	LCS	Test Code	EPA Method 300.0: Aroclor
Client ID	LCS8	Batch ID	23828	Run No	32274
Prep Date	2/18/2016	Analysis Date	2/18/2016	Seq No	886586 Units: mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC Low Limit High Limit %RPD RPD Limit Qual
Chloride	14	1.5	15.00	0	95.5 90 110

Qualifiers:

- + Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not in Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 3 of 3



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Yates Petroleum Corpore

Work Order Number: 1002544

Rep/No: 1

Received by/date:	JA	02/12/16
Logged By:	Ashley Gallegos	2/12/2016 9:35:00 AM
Completed By:	Ashley Gallegos	2/12/2016 11:00:02 AM
Reviewed By:	TO	02/12/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Cooler

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $\geq 0^{\circ}\text{C}$ to 5.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONO) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly handled on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(if no, notify customer for authorization.) Yes ☒ No ☐

# of preserved bottles checked for pH:	(<2 or >12 unless noted)
Adjusted?	
Checked by:	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

2000年12月

It is understood that the above information is being furnished to you for your information only and is not intended to be used for any other purpose. The above information is being furnished to you for your information only and is not intended to be used for any other purpose. The above information is being furnished to you for your information only and is not intended to be used for any other purpose.



PHONE (675) 393-2326 • 101 E. MAINLAND • HOBBBS, NM 88240

March 21, 2017

CHASE SETTLE
EOG Y RESOURCES, INC
105 SOUTH 4TH STREET
ARTESIA, NM 88210

RE: COTTON MX FEDERAL COM #1 SWD

Enclosed are the results of analyses for samples received by the laboratory on 03/20/17 9:12.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celcy D. Keene
Lab Director/Quality Manager



PHONE (675) 393-2326 • 101 E. HANLAND • HOHBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-1131

Received:	03/20/2017	Sampling Date:	03/15/2017
Reported:	03/21/2017	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1 SWD	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: C1 - 20' (H700712-01)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4120	16.0	03/21/2017	ND	416	104	400	0.00	

Sample ID: C1 - 25' (H700712-02)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	03/21/2017	ND	416	101	400	0.00	

Sample ID: C1 - 30' (H700712-03)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	03/21/2017	ND	416	104	400	0.00	

Sample ID: C1 - 35' (H700712-04)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	03/21/2017	ND	416	101	400	0.00	

Cardinal Laboratories * = Accredited Analyte

NOTE: While not a guarantee, Cardinal Laboratories and its staff make every effort to ensure that the data reported in this report is accurate and reliable. It is the responsibility of the client to ensure that the data is used for the intended purpose. The data is not to be used for legal or regulatory purposes. The data is not to be used for any other purpose without the written consent of Cardinal Laboratories.

Celley D. Keene

Celley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAINLAND • HOBBS, NM 88240

Notes and Definitions

- QM07 The spike recovery was outside acceptance limits for this MS method. 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.
- Chilled by SM4500CI-B does not require samples be received at or below 6°C. Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

* = Accredited Analyte

NOTE: All data and information, including but not limited to, results, findings, and conclusions, are provided to the client for their use only. It is the client's responsibility to ensure that the data is used for its intended purpose and is not misused. The client is responsible for the accuracy and reliability of the data. The client is responsible for the accuracy and reliability of the data. The client is responsible for the accuracy and reliability of the data.

Celine D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOOBES, NM 88240

March 21, 2017

CHASE SETTLE
EOG Y RESOURCES, INC
105 SOUTH 4TH STREET
ARTESIA, NM 88210

RE: COTTON MX FEDERAL COM #1 SWD

Enclosed are the results of analyses for samples received by the laboratory on 03/20/17 9:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

Method EPA 552.2	Halocetic 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,

Caley D. Keena
Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. HARLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received:	03/20/2017	Sampling Date:	03/15/2017
Reported:	03/21/2017	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1 SWD	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: C1 - 40' (H700715-01)

Chloride, SM4500Cl-D		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	03/21/2017	ND	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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C. D. Keene

Coley D. Keene, Lab Director/Quality Manager



PHONE (678) 393-2326 • 101 E. MARLAND • HUNTSVILLE, AL 35894

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM500C-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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* = Accredited Analyte

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Celay D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOLBROOK, NM 88240

March 21, 2017

CHASE SETTLE

EOG Y RESOURCES, INC.

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: COTTON MX FEDERAL COM #1 SWD

Enclosed are the results of analyses for samples received by the laboratory on 03/20/17 9:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 521.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 353-2326 • 101 E. MARLAND • HOBBBS, NM 80210

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 80210
Fax To: (575) 748-4131

Received:	03/20/2017	Sampling Date:	03/15/2017
Reported:	03/21/2017	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1 SWD	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: C2 - 20' (H700713-01)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	03/21/2017	ND	416	104	400	0.00	

Sample ID: C2 - 25' (H700713-02)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	03/21/2017	ND	416	104	400	0.00	

Sample ID: C2 - 30' (H700713-03)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	03/21/2017	ND	416	104	400	0.00	

Sample ID: C2 - 35' (H700713-04)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	03/21/2017	ND	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- Q14-02 The spike recovery was outside acceptance limits for the MS and/or MSO. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl B does not require samples be received at or below 6°C.
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Cole D. Keene

Cole D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES
101 East Mainland, Hobbs, NM 88240

(505) 393-2325 FAX (505) 393-2478

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Project Name: Cotton Mix Federal Control SMD

Company (SUS): 393-2325 EDG Y Resources, Inc.

Project #:

Company Address: 105 South 4th Street

Project Linc: Cotton Mix Federal Control SMD

City/State/Zip: Artesia, NM 88210

PO #: 205-0730

Telephone No: 575-748-4171

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ TREP ☐ NIDES

Sampler Signature:

e-mail: Chase.Settle@edgresources.com

(Lab use only)

ORDER #:

LAB # (Info. use only)	
A71023	
FIELD CODE	
Beginning Depth	
Ending Depth	
Date Sampled	
Time Sampled	
Field Filled:	
Total # of Containers	
Ice	
HNO ₃	
HCl	
H ₂ SO ₄	
NaOH	
Na ₂ S ₂ O ₈	
None	
Other (Specify)	
Preservation & # of Containers	
Any-Handling Water	
Water-Only/No Water	
Perkin Felt/No	
P/E: 410.1 001EM 6010	
P/E: TX 1005 TX 1006	
Alloys (Cr, Mg, Ni, K)	
Alloys (Al, Si, Alkalinity)	
PH / ESP / CEO	
Labels: A B C D E F G H I J K	
Labels	
Environmental	
TEX 1011 B0030 or BTEX 0200	
C	
O.R.M.	
Notes	
AR	
JSH TAT (P/E-Subs) 14, 49,	
Unlabeled TAT	

Special Instructions:

Ref. Requested By:	Date: 3-20-17	Time: 9:10 AM	Received By:	Date:	Time:
Ref. Requested By:	Date:	Time:	Received By:	Date:	Time:
Ref. Requested By:	Date:	Time:	Received By:	Date:	Time:

Ref. Requested By:	Date:	Time:	Received By:	Date:	Time:
Ref. Requested By:	Date:	Time:	Received By:	Date:	Time:
Ref. Requested By:	Date:	Time:	Received By:	Date:	Time:

Laboratory Comments:
Sample Containers (marked)
WOCs free of H₂O₂ (marked)
Labels on containers (marked)
Custody seals on containers (marked)
Custody seals on containers (marked)
Sample Hand Delivered (marked)
by Sampler/Client/Rec? (marked)
by Carrier? (marked) LPS DIL Field Line-Size



PHONE (676) 393-2326 • 101 E. MARLAND • HODDS, NM 88240

March 21, 2017

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESTA, NM 88210

RE: COTTON MX FEDERAL COM #1 SWD

Enclosed are the results of analyses for samples received by the laboratory on 03/20/17 9:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/na/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,

Coley D. Keene

Lab Director/Quality Manager



EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Sampling Date: 03/15/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AG						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2000	16.0	03/21/2017	ND	416.	104	100	0.00	QM-D7	

Chloride, 5M4300Cl-D		mg/kg		Analyzed by: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1150	16.0	03/21/2017	ND	416	104	400	0.00		

Chloride, 5M45U0CI-U		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	Time Value QC	RPD	Qualifier	
Chloride	440	16.0	03/21/2017	ND	416	104	100	0.00		

Chloride, SM4500Cl-1		Analyzed By: AC							
Analyte	Result	Reporting Unit	Analyzed	Method Blank	LS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	03/21/2017	ND	416	104	400	0.00	

*=Accredited Analyte

[illegible]

Celvy D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOUSTON, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 03/20/2017
Reported: 03/21/2017
Project Name: COTTON MX FEDERAL COM #1 SWD
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/15/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: C3 - 40' (H700711-05)

Chloride, SM4S00CI-D

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	03/21/2017	ND	416	104	100	0.00	

Cardinal Laboratories

*Accredited Analyte

PLEASE PRINT: Name and Designation. Cardinal hereby certifies results comply for any state testing, whether listed or not, that be found in the state's list by state lab analysis. All states, including those for agriculture and any other state laboratory that be tested under rules made by state and provided by Cardinal within 30 days after completion of the applicable analysis. In no event shall Cardinal be liable for negligent or intentional damages, including direct, indirect, consequential, loss of use, or loss of profits caused by state lab analysis, whether or not caused by state lab analysis. The analysis of the analysis conducted by Cardinal is subject to change and shall be subject to change without notice. This report and data are subject to change without notice. This report and data are subject to change without notice.

Coley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAINLAND • HOBBS, NM 88240

Notes and Definitions

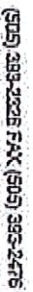
- Q9-07 The spike recovery was outside acceptance limits for the HS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ++ Samples not received at proper temperature of 6°C or below.
- +++ Insufficient time to reach temperature.
- Chloride by SMAS00C1-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Liability for Storage, Analysis, Safety and Health requires testing for any data values, whether based in current or past, that are found to be above the amount paid by client for analysis. All clients holding these for analysis and any other data whatsoever shall be deemed to have agreed to testing and storage by Cardinal Laboratories using this data and verification of the appropriate number. It is also noted that the data be received in appropriate storage, including, WQA facilities, testing laboratories, but at one, or less at points listed by client, be available, whether or otherwise stated and it is noted in the guidelines of the various hardware by Cardinal, regardless of whether such data is used or stored at the above listed locations. Results shall only be the property of Cardinal Laboratories. This report shall not be reproduced or used in any other report of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager





Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 29, 2017

Chase Settle
BOG Resources, Inc.
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4217
FAX

RE: Cotton MX Federal Com 1

OrderNo.: 1706B31

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 10 sample(s) on 6/21/2017 for the analyses presented in the following report.

These were analyzed according to RPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B31

Date Reported: 6/29/2017

CLIENT: BOG Resources, Inc.

Client Sample ID: T1-1'

Project: Cotton MX Federal Cont I

Collection Date: 6/14/2017 12:40:00 PM

Lab ID: 1706B31-001

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	470	30		mg/Kg	20	6/23/2017 3:47:18 PM	32486
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	6600	970		mg/Kg	100	6/22/2017 8:42:14 PM	32418
Sum: DNOP	0	70-130	S	%Rec	100	6/22/2017 8:42:14 PM	32418
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	410	240		mg/Kg	50	6/22/2017 1:11:27 PM	32413
Sum: BFB	161	54-160	S	%Rec	50	6/22/2017 1:11:27 PM	32413
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	4.7		mg/Kg	50	6/22/2017 1:11:27 PM	32413
Benzene	5.1	1.2		mg/Kg	50	6/22/2017 1:11:27 PM	32413
Toluene	13	2.4		mg/Kg	50	6/22/2017 1:11:27 PM	32413
Ethylbenzene	9.5	2.4		mg/Kg	50	6/22/2017 1:11:27 PM	32413
Xylenes, Total	24	4.7		mg/Kg	50	6/22/2017 1:11:27 PM	32413
Sum: 4-Bromofluorobenzene	128	60.8-132		%Rec	50	6/22/2017 1:11:27 PM	32413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifier	* Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
ND	Not Detected at the Reporting Limit	P Sample pH Not in Range
PQL	Practical Quantitative Limit	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	V Sample container temperature is out of limit as specified

Page 1 of 14

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B31

Date Reported: 6/29/2017

CLIENT: BOG Resources, Inc.

Client Sample ID: T1-3'

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 12:45:00 PM

Lab ID: 1706B31-002

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 309.0: ANIONS							Analyst: MRA
Chloride	800	30		mg/Kg	20	6/23/2017 3:58:43 PM	32418
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	12000	930		mg/Kg	100	6/22/2017 9:10:53 PM	32418
Surf: DNOP	0	70-120	S	%Rec	100	6/22/2017 9:10:53 PM	32418
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	1500	240		mg/Kg	50	6/22/2017 1:35:37 PM	32413
Surf: BFB	205	54-150	S	%Rec	50	6/22/2017 1:35:37 PM	32413
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	4.8		mg/Kg	50	6/22/2017 1:35:37 PM	32413
Benzene	10	1.2		mg/Kg	50	6/22/2017 1:35:37 PM	32413
Toluene	89	2.4		mg/Kg	50	6/22/2017 1:35:37 PM	32413
Ethylbenzene	58	2.4		mg/Kg	50	6/22/2017 1:35:37 PM	32413
Xylenes, Total	98	4.8		mg/Kg	50	6/22/2017 1:35:37 PM	32413
Surf: 4-Bromofluorobenzene	140	55.6-132	S	%Rec	50	6/22/2017 1:35:37 PM	32413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank.
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Page 2 of 14

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B31

Date Reported: 6/29/2017

CLIENT: BOG Resources, Inc.

Client Sample ID: T1-6'

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 12:56:00 PM

Lab ID: 1706B31-003

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	270	30		mg/Kg	20	6/23/2017 4:12:08 PM	32458
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	6800	900		mg/Kg	100	6/23/2017 8:39:18 PM	32418
Sum: DNOP	0	70-130	S	%Rec	100	6/23/2017 8:39:18 PM	32418
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	1000	85		mg/Kg	20	6/23/2017 8:50:55 PM	32413
Sum: BFB	407	64-160	S	%Rec	20	6/23/2017 8:50:55 PM	32413
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	20	6/23/2017 8:50:55 PM	32413
Benzene	4.4	0.48		mg/Kg	20	6/23/2017 8:50:55 PM	32413
Toluene	1.0	0.86		mg/Kg	20	6/23/2017 8:50:55 PM	32413
Ethylbenzene	59	0.80		mg/Kg	20	6/23/2017 8:50:55 PM	32413
Xylenes, Total	65	1.0		mg/Kg	20	6/23/2017 8:50:55 PM	32413
Sum: 4-Bromofluorobenzene	168	68.8-132	S	%Rec	20	6/23/2017 8:50:55 PM	32413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	I Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not in Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Page 3 of 14

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B31

Date Reported: 6/29/2017

CLIENT: HOG Resources, Inc.

Client Sample ID: T1-8'

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 1:04:00 PM

Lab ID: 1706B31-004

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DI	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	60	30		mg/Kg	20	6/23/2017 4:24:32 PM	32450
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	4800	80		mg/Kg	10	6/22/2017 10:08:07 PM	32418
Sum: DNOP	0	70-130	S	%Rec	10	6/22/2017 10:08:07 PM	32418
EPA METHOD 8016D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	610	86		mg/Kg	20	6/23/2017 7:14:53 PM	32413
Sum: BFB	326	64-160	S	%Rec	20	6/23/2017 7:14:53 PM	32413
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	20	6/23/2017 7:14:53 PM	32413
Benzene	0.63	0.48		mg/Kg	20	6/23/2017 7:14:53 PM	32413
Toluene	2.0	0.86		mg/Kg	20	6/23/2017 7:14:53 PM	32413
Ethylbenzene	6.6	0.86		mg/Kg	20	6/23/2017 7:14:53 PM	32413
Xylenes, Total	9.6	1.9		mg/Kg	20	6/23/2017 7:14:53 PM	32413
Sum: 4-Bromofluorobenzene	138	86.6-132	S	%Rec	20	6/23/2017 7:14:53 PM	32413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	+	Value exceeds Maximum Contaminant Level.	D	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Page 4 of 14

Analytical Report

Lab Order 1706B31

Date Reported: 6/29/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources, Inc.

Client Sample ID: T1-9'

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 1:08:00 PM

Lab ID: 1706B31-005

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 800.0: ANIONS							Analyst: MRA
Chloride	180	30		mg/Kg	20	6/27/2017 12:53:18 AM	32508
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	7800	99		mg/Kg	10	6/22/2017 10:36:51 PM	32416
Sum: DNOP	0	70-130	S	%Rec	10	6/22/2017 10:36:51 PM	32416
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	570	95		mg/Kg	20	6/23/2017 7:38:43 PM	32413
Sum: BFB	201	64-160	S	%Rec	20	6/23/2017 7:38:43 PM	32413
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	20	6/23/2017 7:38:43 PM	32413
Benzene	3.1	0.45		mg/Kg	20	6/23/2017 7:38:43 PM	32413
Toluene	6.2	0.95		mg/Kg	20	6/23/2017 7:38:43 PM	32413
Ethylbenzene	4.6	0.95		mg/Kg	20	6/23/2017 7:38:43 PM	32413
Xylenes, Total	11	1.9		mg/Kg	20	6/23/2017 7:38:43 PM	32413
Sum: 4-Bromofluorobenzene	136	66.8-132	S	%Rec	20	6/23/2017 7:38:43 PM	32413

Refer to the QC Summary report and sample log/in checklist for flagged QC data and preservation information.

Qualifiers:	A	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank.
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding time for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	R	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Page 5 of 14

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B31

Date Reported: 6/29/2017

CLIENT: EOG Resources, Inc.

Client Sample ID: T2-1'

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 1:53:00 PM

Lab ID: 1706B31-006

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 800.0: ANIONS							Analyst: MRA
Chloride	90	30		mg/Kg	20	6/27/2017 1:30:27 AM	32509
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	9800	1000		mg/Kg	100	6/22/2017 11:06:44 PM	32410
Surr: DNOP	0	70-130	B	%Rec	100	6/22/2017 11:06:44 PM	32410
EPA METHOD 8016D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	620	98		mg/Kg	20	6/23/2017 8:02:32 PM	32413
Surr: BFB	320	64-160	S	%Rec	20	6/23/2017 8:02:32 PM	32413
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.0		mg/Kg	20	6/23/2017 8:02:32 PM	32413
Benzene	ND	0.40		mg/Kg	20	6/23/2017 8:02:32 PM	32413
Toluene	0.05	0.40		mg/Kg	20	6/23/2017 8:02:32 PM	32413
Ethylbenzene	3.3	0.68		mg/Kg	20	6/23/2017 8:02:32 PM	32413
Xylenes, Total	88	2.0		mg/Kg	20	6/23/2017 8:02:32 PM	32413
Surr: 4-Bromofluorobenzene	142	68.8-132	B	%Rec	20	6/23/2017 8:02:32 PM	32413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	"	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not in Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1706H31

Date Reported: 6/29/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources, Inc.

Client Sample ID: T2-3'

Project: Colton MX Federal Com 1

Collection Date: 6/14/2017 1:57:00 PM

Lab ID: 1706B31-007

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 800.0: ANIONS							Analyst: MRA
Chloride	360	30		mg/Kg	20	6/27/2017 2:07:41 AM	32508
EPA METHOD 8016MD: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	7000	950		mg/Kg	100	6/22/2017 11:54:34 PM	32418
Surf: DNOP	0	70-130	S	%Rec	100	6/22/2017 11:54:34 PM	32418
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	690	99		mg/Kg	20	6/23/2017 8:28:20 PM	32413
Surf: BFB	270	54-160	S	%Rec	20	6/23/2017 8:28:20 PM	32413
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.0		mg/Kg	20	6/23/2017 8:28:20 PM	32413
Benzene	ND	0.60		mg/Kg	20	6/23/2017 8:28:20 PM	32413
Toluene	ND	0.99		mg/Kg	20	6/23/2017 8:28:20 PM	32413
Ethylbenzene	1.3	0.99		mg/Kg	20	6/23/2017 8:28:20 PM	32413
Xylenes, Total	21	2.0		mg/Kg	20	6/23/2017 8:28:20 PM	32413
Surf: 4-Bromofluorobenzene	134	60.0-132	S	%Rec	20	6/23/2017 8:28:20 PM	32413

Refer to the QC Summary report and sample log/in checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	B	Value above quantitation range
	H Holding times for preparation or analysis exceeded	I	Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P	Sample pH Not in Range
	PQL Practical Quantitative Limit	RL	Reporting Detection Limit
	R % Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1706B31

Date Reported: 6/29/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HOG Resources, Inc.

Client Sample ID: T2-5'

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 2:03:00 PM

Lab ID: 1706B31-008

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	380	30		mg/Kg	20	6/27/2017 2:20:06 AM	32503
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	12000	1000		mg/Kg	100	6/23/2017 12:03:05 AM	32418
Sum: DNOP	0	70-130	S	%Rec	100	6/23/2017 12:03:05 AM	32418
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	2900	240		mg/Kg	60	6/22/2017 8:05:10 PM	32413
Sum: BFB	384	64-160	S	%Rec	60	6/22/2017 8:05:10 PM	32413
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	4.8		mg/Kg	60	6/22/2017 8:05:10 PM	32413
Benzene	10	1.2		mg/Kg	60	6/22/2017 8:05:10 PM	32413
Toluene	140	2.4		mg/Kg	60	6/22/2017 8:05:10 PM	32413
Ethylbenzene	140	2.4		mg/Kg	60	6/22/2017 8:05:10 PM	32413
Xylenes, Total	180	4.8		mg/Kg	60	6/22/2017 8:05:10 PM	32413
Sum: 4-Bromofluorobenzene	106	66.6-132	S	%Rec	60	6/22/2017 8:05:10 PM	32413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	A	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not in Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B31

Date Reported: 6/29/2017

CLIENT: BOG Resources, Inc.

Client Sample ID: T2-6'

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 2:08:00 PM

Lab ID: 1706B31-009

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 800.0; ANIONS							Analyst: MRA
Chloride	100	30		mg/Kg	20	6/27/2017 2:32:31 AM	32603
EPA METHOD 8015/MD; DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	8800	1000		mg/Kg	100	6/23/2017 12:31:40 AM	32418
Sum: DNOP	0	70-130	S	%Rec	100	6/23/2017 12:31:40 AM	32418
EPA METHOD 8015D; GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	1800	88		mg/Kg	20	6/23/2017 8:50:04 PM	32413
Sum: BFB	432	64-160	S	%Rec	20	6/23/2017 8:50:04 PM	32413
EPA METHOD 8021B; VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.0		mg/Kg	20	6/23/2017 8:50:04 PM	32413
Benzene	ND	0.40		mg/Kg	20	6/23/2017 8:50:04 PM	32413
Toluene	3.3	0.88		mg/Kg	20	6/23/2017 8:50:04 PM	32413
Ethylbenzene	0.2	0.88		mg/Kg	20	6/23/2017 8:50:04 PM	32413
Xylenes, Total	68	2.0		mg/Kg	20	6/23/2017 8:50:04 PM	32413
Sum: 4-Bromofluorobenzene	148	66.6-132	S	%Rec	20	6/23/2017 8:50:04 PM	32413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	• Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	L	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not in Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	V	Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B31

Date Reported: 6/29/2017

CLIENT: HOG Resources, Inc.

Client Sample ID: T2-7

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 2:11:00 PM

Lab ID: 1706B31-010

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	100	30		mg/Kg	20	6/27/2017 2:44:55 AM	32409
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	200	98		mg/Kg	10	6/29/2017 1:00:23 AM	32418
Sum: DNOP	0	70-130	B	%Rec	10	6/23/2017 1:00:23 AM	32418
EPA METHOD 8016D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/29/2017 5:48:08 PM	32413
Sum: BFB	137	64-150		%Rec	1	6/29/2017 5:48:08 PM	32413
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.009		mg/Kg	1	6/29/2017 5:48:08 PM	32413
Benzene	ND	0.025		mg/Kg	1	6/29/2017 5:48:08 PM	32413
Toluene	ND	0.049		mg/Kg	1	6/29/2017 5:48:08 PM	32413
Ethylbenzene	ND	0.049		mg/Kg	1	6/29/2017 5:48:08 PM	32413
Xylenes, Total	ND	0.009		mg/Kg	1	6/29/2017 5:48:08 PM	32413
Sum: 4-Bromofluorobenzene	126	66.6-132		%Rec	1	6/29/2017 5:48:08 PM	32413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	B Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
	ND Not Detected at the Reporting Limit	P Sample pH Not in Range
	PQL Fractional Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

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QC SUMMARY REPORT

WON 1706031

Hall Environmental Analysis Laboratory, Inc.

29-Jan-17

Client: BOG Resources, Inc.
 Project: Cotton MK Federal Com 1

Sample ID	MB-32458	Sample Type	mbik	Test Code	EPA Method 300.0: Antons					
Client ID	PBS	Batch ID	32458	Run No	43753					
Prep Date	6/23/2017	Analysis Date	6/23/2017	Seq No	1379239	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	ND	1.5								

Sample ID	LCS-32458	SamptType:	lcs	TestCode:	EPA Method 300.0: Antons					
Client ID:	LCSB	Batch ID:	32458	RunNo:	43753					
Prep Date:	6/23/2017	Analysis Date:	6/23/2017	SeqNo:	1379240					
				Units:	mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.6	16.00	0	83.6	90	110			

Sample ID: MB-32503	Sample Type: mbik	Test Code: EPA Method 300.0: Antons								
Client ID: PBS	Batch ID: 32503	Run No: 43787								
Prep Date: 6/26/2017	Analysis Date: 6/26/2017	Seq No: 1380605 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	ND	1.5								

Sample ID: LCS-32503	SampleType: lcs	TestCode: EPA Method 300.0: Antons								
Client ID: LCSB	Batch ID: 32503	RunNo: 43787								
Prep Date: 6/26/2017	Analysis Date: 6/26/2017	SeqNo: 1380606 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	16.00	0	83.3	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not in Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limits as specified

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706B31

29-Jun-17

Client: BOG Resources, Inc.
Project: Cotton MX Federal Com I

Sample ID: MB-32418	Sample Type: MBLK	Test Code: EPA Method 8015/MD: Diesel Range Organics								
Client ID: PBS	Batch ID: 32418	Run No: 43710								
Prep Date: 6/21/2017	Analyte Date: 6/22/2017	Seq No: 1377405 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Diesel Range Organics (DRO)	ND	10								
Sum: DNOP	8.6		10.00		85.4	70	130			

Sample ID: LGS-32418	Sample Type: LGS	Test Code: EPA Method 8015/MD: Diesel Range Organics								
Client ID: LCSS	Batch ID: 32418	Run No: 43710								
Prep Date: 6/21/2017	Analyte Date: 6/22/2017	Seq No: 1377406 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	106	73.2	114			
Sum: DNOP	4.8		5.000		96.4	70	130			

Qualifiers

- * Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding time for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- I Analyte detected below quantitation limits
- P Sample pH Not in Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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QC SUMMARY REPORT

WO#: 1706033

Hall Environmental Analysis Laboratory, Inc.

29-Jun-17

Client: BOG Resources, Inc.
 Project: Cotton MX Federal Com 1

Sample ID: MB-32413	Sample Type: MBLK	Test Code: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 32413	Run No: 43721								
Prep Date: 6/21/2017	Analysis Date: 6/22/2017	Seq No: 1377866 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Svr: BFB	930		1000		93.3	54	150			

Sample ID: LGS-32413	Sample Type: LGS	Test Code: EPA Method 8015D: Gasoline Range								
Client ID: LGSB	Batch ID: 32413	Run No: 43721								
Prep Date: 6/21/2017	Analysis Date: 6/22/2017	Seq No: 1377867 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	70.4	125			
Svr: BFB	1000		1000		104	54	150			

Sample ID: MB-32438	Sample Type: MBLK	Test Code: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 32438	Run No: 43767								
Prep Date: 6/22/2017	Analysis Date: 6/23/2017	Seq No: 1378828 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
Svr: BFB	930		1000		93.3	54	150			

Sample ID: LGS-32438	Sample Type: LGS	Test Code: EPA Method 8015D: Gasoline Range								
Client ID: LGSB	Batch ID: 32438	Run No: 43767								
Prep Date: 6/22/2017	Analysis Date: 6/23/2017	Seq No: 1378828 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
Svr: BFB	1000		1000		104	54	150			

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- II Holding time for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- D Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not in Range
- RI Reporting Detection Limit
- V Sample container temperature is out of limit as specified

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706B31

29-June-17

Client: BOG Resources, Inc.
Project: Cotton MX Federal Com 1

Sample ID: MB-32413	Sample Type: MBLK	Test Code: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 32413	Run No: 43721								
Prep Date: 6/21/2017	Analysis Date: 6/22/2017	Seq No: 1377563 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Sum: 4-Bromofluorobenzene	1.2		1.000		119	66.6	132			

Sample ID: LCS-32413	SampleType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSB	Batch ID: 32413	RunNo: 43721								
Prep Date: 6/21/2017	Analysis Date: 6/22/2017	SeqNo: 1377564 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.09	0.10	1.000	0	88.8	66.6	120			
Benzene	1.0	0.025	1.000	0	103	80	120			
Toluene	1.1	0.050	1.000	0	106	80	120			
Ethylbenzene	1.1	0.050	1.000	0	109	80	120			
Xylenes, Total	2.3	0.10	3.000	0	110	80	120			
Sum: 4-Bromofluorobenzene	1.2		1.000		119	66.6	132			

Sample ID: MB-32438	Sample Type: MBLK	Test Code: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 32438	Run No: 43757								
Prep Date: 6/22/2017	Analysis Date: 6/23/2017	Seq No: 1378839			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Sum: 4-Bromofluorobenzene	1.2		1.000		119	66.6	132			

Sample ID: LCS-32438	Sample Type: LCS	Test Code: EPA Method 8021B: Volatiles								
Client ID: LCSB	Batch ID: 32438	Run No: 43757								
Prep Date: 6/22/2017	Analysis Date: 6/23/2017	Seq No: 1378840 Units: %Rec								
Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Sum: 4-Bromofluorobenzene	1.2		1.000		122	66.6	132			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding Times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- B % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not in Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Highway NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: EOG/Yates Work Order Number: 1708B31 Rep/No: 1

Received By: Nicole Erlich 8/21/2017 8:40:00 AM *[Signature]*
Completed By: Sophia Campuzano 8/21/2017 11:20:11 AM *[Signature]*
Reviewed By: *[Signature]* 8/21/17

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Cooler

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 8.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are materials correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	Date:
By Whom:	Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	
Client Instructions:	

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: EOG Y Resources, Inc.
Project Name: Cotton, MX Federal Com #1
Project #: 30-015-23315
Project Manager: Chase Settle
PO # 205,0750
Sampler: Chase Settle
Office: [X] Yes [] No
Sample Temperature: 11°C
Container Type and #: 1706881
Preservative Type: [] None [X] Ice
Date: 8/14/2017 12:40P Soil T1-1
Date: 8/14/2017 12:45P Soil T1-3
Date: 8/14/2017 12:56P Soil T1-6
Date: 8/14/2017 1:04P Soil T1-8
Date: 8/14/2017 1:08P Soil T1-9
Date: 8/14/2017 1:53P Soil T2-1
Date: 8/14/2017 1:57P Soil T2-3
Date: 8/14/2017 2:03P Soil T2-5
Date: 8/14/2017 2:08P Soil T2-6
Date: 8/14/2017 2:11P Soil T2-7

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel: 505-345-3975 Fax: 505-345-4107

Analysis Request

BTX + MTBE + TMB (B021)	BTX + MTBE + TMB (B021)	TPH Method 8015B (Gas/Dissol)	TPH (Method 8011)	EDB (Method 8011)	B310 (PMA or PAM)	PCB/A & Methyl	Anions (Cl, NO, PO, SO)	0091 Pesticides / 0002 PCBs	02003 (VFA)	0270 (Bent VFA)
X	X	X	X	X	X	X	X	X	X	X

Date: 8/14/2017 8:30
Relinquished by: [Signature]
Date: 8/14/2017 8:30
Relinquished by: [Signature]
Received by: [Signature]
Date: 8/14/2017 8:30
Time: 8:30
Remarks: Results By Jan 27 2017 no later than 1:00 P.M.

If necessary, samples submitted to Hall Environmental may be submitted to other accredited laboratories. This serves as notice of this possibility. Any sub-identified data will be clearly noted on the analytical report.



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBBS, NM 88240

July 17, 2017

CHASE SETTLE
EOG Y RESOURCES, INC
105 SOUTH 4TH STREET
ARTESIA, NM 88210

RE: COTTON MX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 07/10/17 17:06.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-B. 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,

Mike Snyder For Coley D. Keene
Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAINLAND • HOBBS, NM 88240

Analytical Results For:

COG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESTA NM, 88210
Fax To: (575) 740-4131

Received: 07/10/2017
Reported: 07/17/2017
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: NOT GIVEN

Sampling Date: 07/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: T1 - 10' (H7017B3-01)

BTEX 6021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.15	0.200	07/13/2017	ND	2.04	102	2.00	4.12	
Toluene*	1.13	0.200	07/13/2017	ND	1.91	95.5	2.00	5.05	
Ethylbenzene*	<0.200	0.200	07/13/2017	ND	2.03	101	2.00	4.75	
Total Xylenes*	2.15	0.600	07/13/2017	ND	5.98	99.6	6.00	4.44	
Total BTEX	23.0	1.20	07/13/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIB)		121 %	72-148						
TPI 0015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	541	10.0	07/12/2017	NO	207	104	200	1.50	
DR0 >C10-C20	9060	10.0	07/12/2017	ND	216	108	200	2.77	

Surrogate: 1-Chlorooctane 149 % 28.3-164
Surrogate: 1-Chlorodecane 150 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

These data, including this report, contain neither recommendations nor conclusions of the laboratory. It is the responsibility of the client to use these data in accordance with the intended purpose of the data and to provide appropriate safety precautions. The laboratory is not responsible for the accuracy or completeness of the data provided by the client. The laboratory is not responsible for the accuracy or completeness of the data provided by the client. The laboratory is not responsible for the accuracy or completeness of the data provided by the client.

Mike Snyder

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/10/2017
Reported: 07/17/2017
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: NOT GIVEN

Sampling Date: 07/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: T1 - 12' (H701783-02)

DTX 00210		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/13/2017	ND	2.04	102	2.00	4.12	
Toluene*	<0.050	0.050	07/13/2017	ND	1.91	95.5	2.00	5.05	
Ethylbenzene*	<0.050	0.050	07/13/2017	ND	2.03	101	2.00	4.75	
Total Xylenes*	<0.150	0.150	07/13/2017	ND	5.98	99.6	6.00	4.44	
Total DTEX	<0.300	0.300	07/13/2017	ND					

Surrogate: 4-Fluorofluorobenzene (FFL) 103 % 72-148

TPH 0015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	07/12/2017	ND	207	104	200	1.50		
DRO >C10-C28	<10.0	10.0	07/12/2017	ND	216	108	200	2.77		

Surrogate: 1-Chlorooctane 90.5 % 28.9-164

Surrogate: 1-Chlorodecane 95.5 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: While we strive to ensure the highest quality and accuracy of our data, we cannot be held responsible for errors or omissions in the results presented by this report. It is the responsibility of the client to ensure that the data presented in this report is used for the intended purpose only. We do not warrant the accuracy of the results presented in this report for any other purpose. The results presented in this report are for informational purposes only and should not be used for legal or regulatory purposes. The results presented in this report are for informational purposes only and should not be used for legal or regulatory purposes. The results presented in this report are for informational purposes only and should not be used for legal or regulatory purposes.

Mike Snyder

Mike Snyder For Celay D. Keene, Lab Director/Quality Manager



EOG Y RESOURCES, INC.
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Sampling Date: 07/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Analyzed By: MS

Analyzed By: MS

Surrogate: 1-Chlorooctadecane	162%	34.7-157
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*=Accredited Analyte

Mike Snyder For Coley D. Keene, Lab Director/Quality Manager

PHONE (675) 323-2326 • 101 E. MAILLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC.
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 80210
Fax To: (575) 748-4131

Received: 07/10/2017
Reported: 07/17/2017
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: NOT GIVEN

Sampling Date: 07/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: T1 - 16' (H701783-04)

DTX 00216

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/13/2017	ND	2.04	102	2.00	4.12	
Toluene*	<0.050	0.050	07/13/2017	ND	1.91	95.5	2.00	5.05	
Ethylbenzene*	<0.050	0.050	07/13/2017	ND	2.03	101	2.00	4.75	
Total Xylenes*	<0.150	0.150	07/13/2017	ND	5.98	99.6	6.00	4.44	
Total BTEX	<0.300	0.300	07/13/2017	ND					

Surrogate: d-Transfluorobenzene (TFB)

10298

72-148

TPH B015N

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	DS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	<10.0	10.0	07/12/2017	ND	207	104	200	1.50	
DRO >C10-C28	136	10.0	07/12/2017	ND	216	108	200	2.77	

Surrogate: 1-Chlorooctane

105 5/4

28.3-164

Surrogate: 1-Chloro-2-decano

127%

34.7-157

Cardinal Laboratories

Accredited Analyte

[illegible]

Wm. C. Smith

Mike Snyder For Celey D. Keeno, Lab Director/Quality Manager



EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Sampling Date: 07/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

DTEX 00210

Analyzed By: MS

Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/13/2017	ND	2.04	102	2.00	4.12	
Toluene*	<0.050	0.050	07/13/2017	ND	1.91	95.5	2.00	5.05	
Ethylbenzene*	<0.050	0.050	07/13/2017	ND	2.03	101	2.00	4.75	
Total Xylenes*	<0.150	0.150	07/13/2017	ND	5.90	99.6	6.00	4.44	
Total BTEX	<0.300	0.300	07/13/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE	105 %	72-148
--------------------------------------	-------	--------

7PM 0015M

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GLC C6-C10	<10.0	10.0	07/12/2017	ND	207	104	200	1.50	
DRO >C10-C28	<10.0	10.0	07/12/2017	ND	216	100	200	2.77	

Simogole: 1-Chloroacetate	99.2 %	28.3-16V
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Surrogate: 1-Chloromaxadecane	104.96	34.7-157
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[illegible]

Wm. A. Smith

Mike Snyder For Celay D. Keene, Lab Director/Quality Manager



PHONE (575) 303-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/10/2017
Reported: 07/17/2017
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: NOT GIVEN

Sampling Date: 07/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: T1 - 20' (H701783-06)

BTEX 00210			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RSD	Qualifier
Benzene*	<0.050	0.050	07/13/2017	ND	2.04	102	2.00	4.12	
Toluene*	<0.050	0.050	07/13/2017	ND	1.91	95.5	2.00	5.05	
Ethylbenzene*	<0.050	0.050	07/13/2017	ND	2.03	101	2.00	4.75	
Total Xylenes*	<0.150	0.150	07/13/2017	ND	5.98	99.6	6.00	4.44	
Total BTEX	<0.300	0.300	07/13/2017	ND					

Surrogate: 4-Dihydrofluorobenzene (PH) 103 % 72.148

TPH 0015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RSD	Qualifier
GRO C6-C10	<10.0	10.0	07/12/2017	ND	207	104	200	1.50	
DRO >C10-C28	<10.0	10.0	07/12/2017	ND	216	108	200	2.77	

Surrogate: 1-Chlorooctane 123 % 28.3-164

Surrogate: 1-Chlorooctadecane 129 % 34.7-157

Cardinal Laboratories

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAINLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received:	07/10/2017	Sampling Date:	07/07/2017
Reported:	07/17/2017	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1	Sampling Condition:	Cool & Intact
Project Number:	30-015-23315	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: T2 - 0' (H701703-07)

DTEX 00210		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	DS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/13/2017	ND	2.04	102	2.00	4.12	
Toluene*	<0.050	0.050	07/13/2017	ND	1.91	95.5	2.00	5.05	
Ethylbenzene*	<0.050	0.050	07/13/2017	ND	2.03	101	2.00	4.75	
Total Xylenes*	<0.150	0.150	07/13/2017	ND	5.98	99.6	6.00	4.44	
Total DTEX	<0.300	0.300	07/13/2017	ND					

Surrogate: 4-Bromofluorobenzene (PFB) 104% 22-148

TPH 0015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	DS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/12/2017	ND	207	104	200	1.50	
DRO >C10-C28	<10.0	10.0	07/12/2017	ND	216	109	200	2.77	

Surrogate: 1-Chlorooctane 92.0% 28.3-164

Surrogate: 1-Chlorodecane 95.5% 34.7-157

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOOBES, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/10/2017
Reported: 07/17/2017
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: NOT GIVEN

Sampling Date: 07/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: T2 - 10' (H701783-08)

ANALYTE	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/13/2017	ND	2.04	102	2.00	4.12	
Toluene*	<0.050	0.050	07/13/2017	ND	1.91	95.5	2.00	5.05	
Ethylbenzene*	<0.050	0.050	07/13/2017	ND	2.03	101	2.00	4.75	
Total Xylenes*	<0.150	0.150	07/13/2017	ND	5.98	99.6	6.00	4.44	
Total BTEX	<0.300	0.300	07/13/2017	ND					

Surrogate: 4-Bromofluorobenzene (PHE) 104 % 72-148

ANALYTE	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/12/2017	ND	223	111	200	1.00	
DRO >C10-C28	<10.0	10.0	07/12/2017	ND	237	119	200	4.62	

Surrogate: 1-Chlorooctane 106 % 28.3-164

Surrogate: 1-Chlorooctadecane 109 % 34.7-157

Cardinal Laboratories

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Mike Snyder

Mike Snyder For Coley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HONDS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 07/10/2017
Reported: 07/17/2017
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: NOT GIVEN

Sampling Date: 07/07/2017
Sampling Type: Soil
Sampling Condition: Copl & Intact
Sample Received By: Taniaia Oldaker

Sample ID: T2 - 12' (H701783-09)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/13/2017	ND	2.04	102	2.00	4.12	
Toluene*	<0.050	0.050	07/13/2017	ND	1.91	95.5	2.00	5.05	
Ethylbenzene*	<0.050	0.050	07/13/2017	ND	2.03	101	2.00	4.75	
Total Xylenes*	<0.150	0.150	07/13/2017	ND	5.90	99.6	6.00	4.44	
Total BTEX	<0.300	0.300	07/13/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 104% 72-148

TFH 8016H		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	<10.0	10.0	07/12/2017	ND	223	111	200	1.00	
DKO >C10-C28	<10.0	10.0	07/12/2017	ND	237	119	200	4.62	

Surrogate: 1-Chlorooctane 109% 28.3-164

Surrogate: 1-Chlorooctadecane 113% 34.7-157

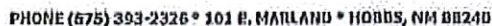
Cardinal Laboratories

*=Accredited Analyte

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Milko Snyder

Milko Snyder For Celey D. Keene, Lab Director/Quality Manager



S01	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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 SM5000-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

†=Accredited Analyte

REASON FACTOR: Liberty and Expression, Economic Liberty and Social Justice, Peace and Non-Violence, Gender Justice, and Environmental Justice are key ideas which constitute basis in system as well, and are linked to the success of the system. All these, including their inter-connections and very close inter-relationships, that are discussed within below relate to values and thoughts by Gandhi which were key days after completion of the 1970s studies. In no event will Gandhi be taken for granted or considered thoughtless. Gandhi's thought, freedom, human development, law of non-violence, justice, non-violence, and so on, are of prime importance by nature, as evidenced, studies or otherwise being put in or related to the performance of the Success Assessment by Gandhi, judgments of whether such values in Gandhi were of the highest level or not, and so on. This report will be prepared only in the event of approval of the Success Assessment by Gandhi.

Mike Snyder
Mike Snyder For Caley D. Keene, Lub Director/Quality Manager



ARDINAL LABORATORIES
101 East Maryland, Hobbs, NM 88240

(505) 353-2326 FAX (505) 393-2475

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name: Cotton NY Federal Court

Project#: 30-015-23315

Cotton/Ark Federal Comm

PO: 205-0750

City/State/Zip: Artesia NM 88210

Telephone No: 575-748-5171

Fax No.:

Sampler Signature

உயர்நீதிமன்றம்

ChaseSettlementResources.com

Report Format ☒ Standard

SEAN TREP

Page 12 of 12

ORDER #:		Date		Time		Received By		Date		Time	
1083		7/10/17		5:05		V. M. M. M.		7/10/17		5:06	
FIELD CODE		Beginning Depth		Ending Depth		Date Sampled		Time Sampled		Field Filled	
1 T1-10'						7/7/2017		8:24 AM		1 X	
2 T1-12'						7/7/2017		8:29 AM		1 X	
3 T1-14'						7/7/2017		8:38 AM		1 X	
4 T1-15'						7/7/2017		8:48 AM		1 X	
5 T1-18'						7/7/2017		8:59 AM		1 X	
6 T1-20'						7/7/2017		9:02 AM		1 X	
7 T2-8'						7/7/2017		9:36 AM		1 X	
8 T2-10'						7/7/2017		9:41 AM		1 X	
9 T2-12'						7/7/2017		9:44 AM		1 X	
Special Instructions:											
Laboratory Comments: Sample Containers: Inter- VOCs Free of Headspaces? Labels on container(s)? Custody seals on container(s)? Custody seals on cooler(s)? Sample Hand Delivered by Sampler/Client Rep.? ☒ by Courier? ☐ UPS ☐ DHL ☐ FedEx ☐ Lane Star ☐ Temperature Upon Receipt: 19.5°C											



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 09, 2017

Chase Settle
BOG Resources
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4195
FAX

RE: Cotton MX Federal Com 1

OrderNo.: 1703140

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 8 sample(s) on 3/2/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703140

Date Reported: 3/9/2017

CLIENT: EOG Resources

Client Sample ID: EB-1'

Project: Cotton MX Federal Com 1

Collection Date: 2/28/2017 1:06:00 PM

Lab ID: 1703140-001

Matrix: SOIL

Received Date: 3/2/2017 9:50:00 AM

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	520	30		mg/Kg	20	3/7/2017 3:26:19 AM	30549
EPA METHOD 8016/MO: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	0.8		mg/Kg	1	3/7/2017 12:41:14 PM	30629
Surr: DNOP	108	70-130		%Rec	1	3/7/2017 12:41:14 PM	30629
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	3/8/2017 4:05:32 PM	30513
Surr: BFB	77.0	54-150		%Rec	1	3/8/2017 4:05:32 PM	30513
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/8/2017 4:05:32 PM	30513
Toluene	ND	0.040		mg/Kg	1	3/8/2017 4:05:32 PM	30513
Ethylbenzene	ND	0.049		mg/Kg	1	3/8/2017 4:05:32 PM	30513
Xylenes, Total	ND	0.097		mg/Kg	1	3/8/2017 4:05:32 PM	30513
Surr: 4-Bromofluorobenzene	64.0	68.5-132		%Rec	1	3/8/2017 4:05:32 PM	30513

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	B	Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P	Sample pH Not in Range
	R RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Page 1 of 12

Analytical Report

Lab Order 1703140

Date Reported: 3/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources

Client Sample ID: BB-3'

Project: Cotton MX Federal Com 1

Collection Date: 2/28/2017 1:08:00 PM

Lab ID: 1703140-002

Matrix: SOIL

Received Date: 3/2/2017 9:50:00 AM

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1100	75		mg/Kg	60	3/7/2017 11:03:45 PM	30549
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/7/2017 1:02:24 PM	30528
Surf: DNOP	100	70-120		%Rec	1	3/7/2017 1:02:24 PM	30528
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/6/2017 4:31:38 PM	30513
Surf: BFB	81.8	54-150		%Rec	1	3/6/2017 4:31:38 PM	30513
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/6/2017 4:31:38 PM	30513
Toluene	ND	0.048		mg/Kg	1	3/6/2017 4:31:38 PM	30513
Ethylbenzene	ND	0.048		mg/Kg	1	3/6/2017 4:31:38 PM	30513
Xylenes, Total	ND	0.096		mg/Kg	1	3/6/2017 4:31:38 PM	30513
Surf: 4-Bromofluorobenzene	89.6	86.6-132		%Rec	1	3/6/2017 4:31:38 PM	30513

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

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H&H Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703140

Date Reported: 3/9/2017

CLIENT: BOG Resources

Client Sample ID: BB-5'

Project: Cotton MX Federal Com 1

Collection Date: 2/28/2017 1:10:00 PM

Lab ID: 1703140-003

Matrix: SOIL

Received Date: 3/2/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 800.0: ANIONS							Analyst: MRA
Chloride	1400	75		mg/Kg	60	3/7/2017 11:18:11 PM	30549
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/7/2017 1:24:23 PM	30529
Surf: DNOP	111	70-130		%Rec	1	3/7/2017 1:24:23 PM	30529
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	3/8/2017 6:42:54 PM	30513
Surf: BFB	77.1	54-150		%Rec	1	3/8/2017 6:42:54 PM	30513
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/8/2017 6:42:54 PM	30513
Toluene	ND	0.048		mg/Kg	1	3/8/2017 6:42:54 PM	30513
Ethylbenzene	ND	0.048		mg/Kg	1	3/8/2017 6:42:54 PM	30513
Xylenes, Total	ND	0.096		mg/Kg	1	3/8/2017 6:42:54 PM	30513
Surf: 4-Bromofluorobenzene	84.3	65.6-192		%Rec	1	3/8/2017 6:42:54 PM	30513

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	+	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not in Range
	R	RFD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703140

Date Reported: 3/9/2017

CLIENT: BOG Resources

Client Sample ID: BB-7'

Project: Cotton MX Federal Com 1

Collection Date: 2/28/2017 1:13:00 PM

Lab ID: 1703140-004

Matrix: SOIL

Received Date: 3/2/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DT	Date Analyzed	Batch
EPA METHOD 800.0: ANIONS							Analyst: MRA
Chloride	640	30		mg/Kg	20	3/7/2017 4:02:33 AM	30549
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	0.7		mg/Kg	1	3/7/2017 1:48:41 PM	30520
Sum: DNOP	109	70-130		%Rec	1	3/7/2017 1:48:41 PM	30520
EPA METHOD 8016D: GASOLINE RANGE							Analyst: NBB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/8/2017 7:09:07 PM	30513
Sum: BFR	78.8	54-100		%Rec	1	3/8/2017 7:09:07 PM	30513
EPA METHOD 8021B: VOLATILES							Analyst: NBB
Benzene	ND	0.024		mg/Kg	1	3/8/2017 7:09:07 PM	30513
Toluene	ND	0.048		mg/Kg	1	3/8/2017 7:09:07 PM	30513
Ethylbenzene	ND	0.048		mg/Kg	1	3/8/2017 7:09:07 PM	30513
Xylenes, Total	ND	0.097		mg/Kg	1	3/8/2017 7:09:07 PM	30513
Sum: 4-Bromofluorobenzene	63.5	68.8-132		%Rec	1	3/8/2017 7:09:07 PM	30513

Refer to the QC Summary report and sample log/in checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
B	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1703140

Date Reported: 3/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources

Client Sample ID: EB-9¹

Project: Cotton MX Federal Com 1

Collection Date: 2/28/2017 1:17:00 PM

Lab ID: 1703140-005

Matrix: SOIL

Received Date: 3/2/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DT	Date Analyzed	Batch
EPA METHOD 800.0: ANIONS							Analyst: MRA
Chloride	1100	75		mg/Kg	50	3/7/2017 11:28:30 PM	30549
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	0.4		mg/Kg	1	3/7/2017 2:07:10 PM	30520
Surf: DNOP	110	70-130		%Rec	1	3/7/2017 2:07:10 PM	30520
EPA METHOD 8016D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	6.0		mg/Kg	1	3/6/2017 7:35:25 PM	30513
Surf: BFB	80.1	64-160		%Rec	1	3/6/2017 7:35:25 PM	30513
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/6/2017 7:35:25 PM	30513
Toluene	ND	0.050		mg/Kg	1	3/6/2017 7:35:25 PM	30513
Ethylbenzene	ND	0.050		mg/Kg	1	3/6/2017 7:35:25 PM	30513
Xylenes, Total	ND	0.10		mg/Kg	1	3/6/2017 7:35:25 PM	30513
Surf: 4-Bromofluorobenzene	86.0	68.8-132		%Rec	1	3/6/2017 7:35:25 PM	30513

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level	R	Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E	Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P	Sample pH Not in Range
	R RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703140

Date Reported: 3/9/2017

CLIENT: BOG Resources

Client Sample ID: NBB-1'

Project: Cotton MX Federal Com 1

Collection Date: 2/28/2017 1:25:00 PM

Lab ID: 1703140-006

Matrix: SOIL

Received Date: 3/2/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	20		mg/Kg	20	3/7/2017 4:27:23 AM	30549
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	0.0		mg/Kg	1	3/7/2017 2:28:44 PM	30529
Surf: DNOP	81.4	70-130		%Rec	1	3/7/2017 2:28:44 PM	30529
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NBB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	3/8/2017 8:01:43 PM	30513
Surf: BFB	77.0	64-150		%Rec	1	3/8/2017 8:01:43 PM	30513
EPA METHOD 8021B: VOLATILES							Analyst: NBB
Benzene	ND	0.023		mg/Kg	1	3/8/2017 8:01:43 PM	30513
Toluene	ND	0.046		mg/Kg	1	3/8/2017 8:01:43 PM	30513
Ethylbenzene	ND	0.046		mg/Kg	1	3/8/2017 8:01:43 PM	30513
Xylenes, Total	ND	0.093		mg/Kg	1	3/8/2017 8:01:43 PM	30513
Surf: 4-Bromofluorobenzene	85.0	66.6-132		%Rec	1	3/8/2017 8:01:43 PM	30513

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers	* Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RFD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1703140

Date Reported: 3/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources

Client Sample ID: NBB-3'

Project: Cotton MX Federal Com 1

Collection Date: 2/28/2017 1:26:00 PM

Lab ID: 1703140-007

Matrix: SOIL

Received Date: 3/2/2017 9:50:00 AM

Analytes	Result	PQL	Quat	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1900	75		mg/Kg	50	3/7/2017 11:41:00 PM	30540
EPA METHOD 8016/MD: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/7/2017 2:50:30 PM	30529
Sur: DNOP	84.8	70-130		%Rec	1	3/7/2017 2:50:30 PM	30529
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	3/8/2017 8:27:52 PM	30513
Sur: BFB	78.7	64-160		%Rec	1	3/8/2017 8:27:52 PM	30513
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/8/2017 8:27:52 PM	30513
Toluene	ND	0.048		mg/Kg	1	3/8/2017 8:27:52 PM	30513
Ethylbenzene	ND	0.048		mg/Kg	1	3/8/2017 8:27:52 PM	30513
Xylenes, Total	ND	0.096		mg/Kg	1	3/8/2017 8:27:52 PM	30513
Sur: 4-Bromofluorobenzene	82.7	68.8-132		%Rec	1	3/8/2017 8:27:52 PM	30513

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	• Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RFD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1703140

Date Reported: 3/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources

Client Sample ID: NEB-5'

Project: Cotton MX Federal Corn 1

Collection Date: 2/28/2017 1:28:00 PM

Lab ID: 1703140-008

Matrix: SOIL

Received Date: 3/2/2017 9:50:00 AM

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1100	75		mg/Kg	50	3/7/2017 11:53:26 PM	30549
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	3/7/2017 3:12:10 PM	30529
Sum: DNOP	98.8	70-130		%Rec	1	3/7/2017 3:12:10 PM	30629
EPA METHOD 8016D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/6/2017 8:54:01 PM	30513
Sum: BFB	78.2	64-150		%Rec	1	3/6/2017 8:54:01 PM	30513
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/6/2017 8:54:01 PM	30513
Toluene	ND	0.050		mg/Kg	1	3/6/2017 8:54:01 PM	30513
Ethylbenzene	ND	0.050		mg/Kg	1	3/6/2017 8:54:01 PM	30513
Xylenes, Total	ND	0.10		mg/Kg	1	3/6/2017 8:54:01 PM	30513
Sum: 4-Bromofluorobenzene	85.3	68.8-132		%Rec	1	3/6/2017 8:54:01 PM	30513

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifier			
*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding time for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WOW: 1703140

09-Mar-17

Client: BOQ Resources
Project: Cotton MX Federal Com 1

Sample ID: MB-30549	Sample Type: mbjk	Test Code: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 30549	Run No: 41163								
Prep Date: 3/8/2017	Analysis Date: 3/8/2017	Seq No: 1250122 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	ND	1.6								

Sample ID: LGS-30549	Sample Type: lcs	Test Code: EPA Method 300.0: Anions								
Client ID: LGS6	Batch ID: 30549	Run No: 41163								
Prep Date: 3/8/2017	Analysis Date: 3/8/2017	Seq No: 1250123 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	14	1.6	15.80	0	88.5	80	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- K RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1783140

09-Mar-17

Client: BOG Resources
Project: Cotton MX Federal Com 1

Sample ID: LCS-30520	Sample Type: LCS	Test Code: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCS8	Batch ID: 30520	Run No: 41184								
Prep Date: 3/6/2017	Analysis Date: 3/7/2017	Seq No: 1280180 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	84.1	63.8	118			
Sum: DNOP	4.3		5.000		86.2	70	130			

Sample ID: MB-30520	Sample Type: MBLK	Test Code: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 30520	Run No: 41184								
Prep Date: 3/6/2017	Analysis Date: 3/7/2017	Seq No: 1280181 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Diesel Range Organics (DRO)	ND	10								
Sum: DNOP	8.7		10.00		86.5	70	130			

Sample ID: LCS-30530	Sample Type: LCS	Test Code: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCS8	Batch ID: 30530	Run No: 41180								
Prep Date: 3/6/2017	Analysis Date: 3/7/2017	Seq No: 1280704 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Sum: DNOP	4.1		5.000		81.0	70	130			

Sample ID: MB-30530	Sample Type: MBLK	Test Code: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 30530	Run No: 41180								
Prep Date: 3/6/2017	Analysis Date: 3/7/2017	Seq No: 1280706 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Sum: DNOP	9.4		10.00		83.7	70	130			

Qualifiers:

- | | | | |
|----|---|----|---|
| + | Value exceeds Maximum Contaminant Level | D | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | R | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not in Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703140

09-Mar-17

Client: BOG Resources
Project: Cotton MX Federal Com 1

Sample ID: MB-30513	Sample Type: MBLK	Test Code: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 30513	Run No: 41159								
Prep Date: 3/3/2017	Analysis Date: 3/8/2017	Seq No: 1289765							Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Sum: BFB	080		1000		85.6	64	150			

Sample ID: LCS-30513	Sample Type: LCS	Test Code: EPA Method 8015D: Gasoline Range								
Client ID: LCS8	Batch ID: 30513	Run No: 41180								
Prep Date: 3/3/2017	Analysis Date: 3/8/2017	Seq No: 1289768 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	117	70.4	125			
Sum: BFB	1000		1000		105	54	150			

Qualifiers:

- A Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding time for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703140

09-Mar-17

Client: BOG Resources

Project: Cotton MX Federal Com 1

Sample ID: MH-30513	Sample Type: MBLK	Test Code: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 30513	Run No: 41158								
Prep Date: 3/3/2017	Analysis Date: 3/6/2017	Seq No: 1289777 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Sum: 4-Bromofluorobenzene	0.94		1.000		93.6	66.6	132			

Sample ID: LGS-30513	Sample Type: LGS	Test Code: EPA Method 8021B: Volatiles								
Client ID: LGS8	Batch ID: 30513	Run No: 41159								
Prep Date: 3/3/2017	Analysis Date: 3/6/2017	Seq No: 1289778 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Benzene	0.98	0.025	1.000	0	98.7	76.2	115			
Toluene	1.0	0.050	1.000	0	101	80.7	112			
Ethylbenzene	1.0	0.050	1.000	0	102	76.9	117			
Xylenes, Total	3.2	0.10	2.000	0	106	79.2	115			
Sum: 4-Bromofluorobenzene	0.94		1.000		93.6	66.6	132			

Qualifiers

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory
4901 Hawkeye NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **EOG/Yale** Work Order Number: **1708140** Rep No: **1**

Received by/date: **AS 02/02/17**

Logged By: **Lindsay Mangin 0/2/2017 9:50:00 AM**

Completed By: **Lindsay Mangin 3/3/2017 11:05:00 AM**

Reviewed By: **AG 03/03/17**

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☒ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? **Courier**

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 8.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels? Yes ☒ No ☐ # of preserved bottles checked for pH: **(2 or >12 unless noted)**
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ Adjusted?
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met? Yes ☒ No ☐ Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	Date:
By Whom:	Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	
Client Instructions:	

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client:	EOG Resources, Inc.	☒ Standard	☐ Rush
Mailing Address:	Project Name:		
105 South 4th Street, Artesia, NM 88210	Cotton MX Federal Com #1		
Phone #: 575-703-6637	Project #:		
Email or Fax #: Chase_Settle@eogresources.com	30-015-23315		
QA/QC Package:	Project Manager:		
☐ Standard	Chase Settle		
Accreditation:	PO # 205.0750		
☐ NELAP	Sampler: Chase Settle		
☐ EDD (Type)	Onicer: ☐ Yes ☐ No		
	Sample Temperature: 1.0°C		

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
2/28/2017	1:06P	Soil	EB-1'	1-4oz	ICE	-001
2/28/2017	1:08P	Soil	EB-3'	1-4oz	ICE	-002
2/28/2017	1:10P	Soil	EB-5'	1-4oz	ICE	-003
2/28/2017	1:13P	Soil	EB-7'	1-4oz	ICE	-004
2/28/2017	1:17P	Soil	EB-9'	1-4oz	ICE	-005
2/28/2017	1:25P	Soil	NEB-1'	1-4oz	ICE	-006
2/28/2017	1:26P	Soil	NEB-3'	1-4oz	ICE	-007
2/28/2017	1:28P	Soil	NEB-5'	1-4oz	ICE	-008

Date:	Time:	Relinquished by:	Received by:	Date:	Time:
3-17	3:25pm	[Signature]	[Signature]	03/01/17	09:50
Date:	Time:	Relinquished by:	Received by:	Date:	Time:

If necessary, samples submitted to Hall Environmental may be subcontracted to other unaffiliated laboratories. This services notice of this possibility. Any cost associated with this will be clearly marked on the analytical report.



HALL ENVIRONMENTAL
ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel: 505-345-3975 Fax: 505-345-4107

Analysis Request

BTX + MTBE + TMBs (0021)	TPH Method 410.1	TPH Method 410.1	EDB (Method 504.1)	B310 (PMA or PAH)	RGRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	BOD ₅ (Pollutants / 6002 PCBs)	WZGDB (VQA)	0270 (Semi-VQA)	Alc Bubbler (VQA)
☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 13, 2017

Chase Settle
EOG Resources
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4195
FAX

RE: Cotton MX Federal Com 1

OrderNo.: 1706B78

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 10 sample(s) on 6/21/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hal Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

CLIENT: EOG Resources

Client Sample ID: T3-9'

Project: Cotton MX Federal Con 1

Collection Date: 6/14/2017 3:03:00 PM

Lab ID: 1706B78-001

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: SRM
Chloride	660	30		mg/Kg	20	6/27/2017 3:17:05 PM	32611

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level,	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	B Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not in Range
	PQL Fastest Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Page 1 of 11

Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources

Client Sample ID: T3-12'

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 3:07:00 PM

Lab ID: 1706B78-002

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DT Date Analyzed	Batch
EPA METHOD 300.0; ANIONS						Analyst: SRM
Chloride	250	30		mg/Kg	20 6/27/2017 3:20:30 PM	32511

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

CLIENT: BOG Resources

Client Sample ID: T3-151

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 3:12:00 PM

Lab ID: 1706B78-003

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							
Chloride	380	30		mg/Kg	20	6/27/2017 4:08:46 PM	32511

Analyst: SRM

Refer to the QC Summary report and sample log in checklist for flagged QC data and preservation information.

Qualifiers:	• Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	B	Value above quantitation range
	R Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL Practical Quantitative Limit	RL	Reporting Detection Limit
	% % Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Page 3 of 11

Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources

Client Sample ID: T3-18'

Project: Cotton MK Federal Com 1

Collection Date: 6/14/2017 3:19:00 PM

Lab ID: 1706B78-004

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
Analyst: MRA							
EPA METHOD 300.0: ANIONS							
Chloride	2100	75		mg/kg	60	6/29/2017 6:00:07 PM	32511

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifier:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	R	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report
 Lab Order 1706B78
 Date Reported: 7/13/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: T3-20

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 3:25:00 PM

Lab ID: 1706B78-005

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: SRM
Chloride	600	30		mg/Kg	20	07/27/2017 4:31:34 PM	32611

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	• Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E	Value above quantitation range
	H Holding times for preservation or analysis exceeded	J	Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P	Sample pH Not in Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources

Client Sample ID: T4-9'

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 3:32:00 PM

Lab ID: 1706B78-006

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DT	Date Analyzed	Batch
EPA METHOD 300.0; ANIONS							Analyst: SRM
Chloride	230	30		mg/Kg	20	6/27/2017 4:43:58 PM	32511

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	B Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not in Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources

Client Sample ID: T4-12'

Project: Cotton MX Federal Com I

Collection Date: 6/14/2017 3:36:00 PM

Lab ID: 1706B78-007

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DX	Date Analyzed	Batch
EPA METHOD 309.0: ANIONS							Analyst: MRA
Chloride	610	30		mg/Kg	20	6/28/2017 12:45:40 PM	32688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding time for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not in Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	R % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

CLIENT: ROG Resources

Client Sample ID: T4-15'

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 3:40:00 PM

Lab ID: 1706B78-008

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	880	80		ng/Kg	20	6/28/2017 1:22:55 PM	32538

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	+	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not in Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: T4-18'

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 3:45:00 PM

Lab ID: 1706B78-009

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	250	20		mg/Kg	20	6/28/2017 1:35:19 PM	32536

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifier	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	R	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: T4-20'

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 3:51:00 PM

Lab ID: 1706B78-010

Matrix: SOIL

Received Date: 6/21/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0; ANIONS							Analyst: MRA
Chloride	280	30		mg/Kg	20	6/28/2017 2:12:33 PM	32696

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	B Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706878

13-Jul-17

Client: BOG Resources
Project: Cotton MX Federal Cont 1

Sample ID	MB-32511	SampleType	mbik	TestCode	EPA Method 300.0: Anions					
Client ID	PBS	Batch ID	32511	RunNo	43824					
Prep Date	6/27/2017	Analysis Date	6/27/2017	SeqNo	1382188	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-32511	Sample Type	lcs	Test Code	EPA Method 300.0: Anions					
Client ID	LCS6	Batch ID	32511	Run No	43824					
Prep Date	6/27/2017	Analysis Date	6/27/2017	Seq No	1382189					
				Units	mg/Kg					
Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	14	1.5	15.00	0	92.7	90	110			

Sample ID	MB-32536	Sample Type	mbik	Test Code	EPA Method 300.0: Anions					
Client ID	PBS	Batch ID	32536	Run No	43854					
Prep Date	6/28/2017	Analysis Date	6/28/2017	Seq No	1383061					
				Units	mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	ND	1.5								

Sample ID	LCS-32536	SampleType	lcs	TestCode	EPA Method 300.0: Anions					
Client ID	LCS6	Batch ID	32536	RunNo	43854					
Prep Date	6/28/2017	Analysis Date	6/28/2017	SeqNo	1383064					
				Units	mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.3	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding time for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory
4901 Hawks NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: EOG/Yale

Work Order Number: 170BB75

Rept No: 1

Received By: Richie Eriacho

01/21/2017 9:40:00 AM

Completed By: Sophia Campuzano

01/21/2017 3:46:25 PM

Reviewed By: ENM

06/22/17

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☐ No ☒ NA ☐
5. Were all samples received at a temperature of $\geq 0^{\circ}\text{C}$ to 6.0°C ? Yes ☐ No ☒ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒
- Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	25.8	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 13, 2016

Chase Settle
Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4195
FAX

RE: Cotton MX Federal Com 1

OrderNo.: 1605298

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 12 sample(s) on 5/6/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1605298

Date Reported: 5/13/2016

CLIENT: Yates Petroleum Corporation
Project: Cotton MX Federal Com I

Lab Order: 1605298

Lab ID:	1605298-001	Collection Date:	5/5/2016 7:46:00 AM			
Client Sample ID:	SS-1'	Matrix:	SOIL			
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed Batch ID
EPA METHOD 300.0: ANIONS						Analyst: LGT
Chloride	150	30		mg/Kg	20	5/12/2016 2:30:54 PM 25260
Lab ID:	1605298-002	Collection Date:	5/5/2016 7:50:00 AM			
Client Sample ID:	SS-3'	Matrix:	SOIL			
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed Batch ID
EPA METHOD 300.0: ANIONS						Analyst: LGT
Chloride	88	30		mg/Kg	20	5/11/2016 2:01:37 PM 25260
Lab ID:	1605298-003	Collection Date:	5/5/2016 7:54:00 AM			
Client Sample ID:	SL-1'	Matrix:	SOIL			
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed Batch ID
EPA METHOD 300.0: ANIONS						Analyst: LGT
Chloride	1900	75		mg/Kg	60	5/12/2016 2:43:10 PM 25260
Lab ID:	1605298-004	Collection Date:	5/5/2016 7:58:00 AM			
Client Sample ID:	SB-3'	Matrix:	SOIL			
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed Batch ID
EPA METHOD 300.0: ANIONS						Analyst: LGT
Chloride	420	30		mg/Kg	20	5/11/2016 2:28:28 PM 25260
Lab ID:	1605298-005	Collection Date:	5/5/2016 8:00:00 AM			
Client Sample ID:	SB-5'	Matrix:	SOIL			
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed Batch ID
EPA METHOD 300.0: ANIONS						Analyst: LGT
Chloride	150	30		mg/Kg	20	5/11/2016 2:38:50 PM 25260

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifier:	* Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank.	Page 1 of 4
D	Sample Diluted Due to Matrix	B	Value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Analytical Report

Lab Order: 1605298

Date Reported: 6/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation
Project: Cotton MX Federal Com I

Lab Order: 1605298

Lab ID: 1605298-006

Collection Date: 5/5/2016 8:03:00 AM

Client Sample ID: E-1'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	390	30		mg/Kg	20	5/11/2016 3:15:04 PM	25250

Analyst: LGT

Lab ID: 1605298-007

Collection Date: 5/5/2016 8:07:00 AM

Client Sample ID: E-3'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	510	30		mg/Kg	20	5/11/2016 3:28:28 PM	25260

Analyst: LGT

Lab ID: 1605298-008

Collection Date: 5/5/2016 8:12:00 AM

Client Sample ID: NE-1'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	5500	300		mg/Kg	200	5/12/2016 2:55:44 PM	25260

Analyst: LGT

Lab ID: 1605298-009

Collection Date: 5/5/2016 8:16:00 AM

Client Sample ID: NE-3'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	120	30		mg/Kg	20	5/11/2016 1:20:45 PM	25270

Analyst: LGT

Lab ID: 1605298-010

Collection Date: 5/5/2016 8:19:00 AM

Client Sample ID: N-1'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	4600	150		mg/Kg	100	5/12/2016 3:38:46 PM	25270

Analyst: LGT

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank	Page 2 of 4
D Sample Diluted Due to Matrix	E Value above quantitation range		
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits		
ND Not Detected at the Reporting Limit	P Sample pH Not in Range		
R RPD outside accepted recovery limits	RL Reporting Detection Limit		
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified		

Analytical Report

Lab Order: 1605298

Date Reported: 5/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation
Project: Cotton MX Federal Cont 1

Lab Order: 1605298

Lab ID: 1605298-011

Collection Date: 5/5/2016 8:21:00 AM

Client Sample ID: N-3'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	4600	160		mg/Kg	100	5/12/2016 3:51:10 PM	25270

Lab ID: 1605298-012

Collection Date: 5/5/2016 8:23:00 AM

Client Sample ID: N-5'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	2600	160		mg/Kg	100	5/12/2016 4:03:34 PM	25270

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level	D Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 3 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1605298

13-May-16

Client: Yates Petroleum Corporation

Project: Cotton MX Federal Com 1

Sample ID: MB-26260	Sample Type: MBLK	Test Code: EPA Method 300.0: Antone								
Client ID: PBS	Batch ID: 26260	Run No: 34133								
Prep Date: 5/10/2016	Analysis Date: 5/11/2016	Seq No: 1082329 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	ND	1.5								

Sample ID: LOS-25260	Sample Type: LOS	Test Code: EPA Method 300.0: Antone								
Client ID: LCSS	Batch ID: 25260	Run No: 34133								
Prep Date: 5/10/2016	Analysis Date: 5/11/2016	Seq No: 1052330 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

Sample ID: MB-26270	SampleType: mblk	TestCode: EPA Method 300.0: Antlone								
Client ID: PBS	Batch ID: 26270	RunNo: 34441								
Prep Date: 5/11/2016	Analysis Date: 5/11/2016	SeqNo: 1082828 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LOS-26270	SampleType: los	TestCode: EPA Method 300.0: Antone								
Client ID: LCSS	Batch ID: 26270	RunNo: 34141								
Prep Date: 5/11/2016	Analysis Date: 5/11/2016	SeqNo: 1052829 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 4 of 4



Hall Environmental Analysis Laboratory
 4901 Hankins NE
 Albany, GA 31709
 TEL: 303-345-3973 FAX: 303-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Yates Petroleum Corp Work Order Number: 1006200 Rep ID: 1

Received by/Date: *JA* *05/06/16*

Logged By: Lindsay Mangin 6/0/2010 10:30:00 AM *JA*

Completed By: Lindsay Mangin 6/0/2010 12:54:05 PM *JA*

Reviewed By: *JA* *05/06/16*

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0° C? Yes ☐ No ☒ NA ☐
 Approved by client: _____
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels? Yes ☒ No ☐
 (Note discrepancies on Chain of Custody) # of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ Adjusted? _____
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met? Yes ☒ No ☐ Checked by: _____
 (If no, notify customer for authorization.)

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp. C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
	10.0	Good	Not Present			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 17, 2016

Chase Settle

Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4195
FAX

RE: Cotton MX Federal Com 1

OrderNo.: 1606537

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/10/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1606537

Date Reported: 6/17/2016

CLIENT: Yates Petroleum Corporation
Project: Cotton MX Federal Com 1

Lab Order: 1606537

Lab ID: 1606537-001

Collection Date: 6/8/2016 2:14:00 PM

Client Sample ID: N-7'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
----------	--------	-----	------	-------	----	---------------	----------

EPA METHOD 800.0: ANIONS

Analyst: LGT

Chloride

2500

76

mg/Kg

50

6/16/2016 5:01:40 PM

25840

Lab ID: 1606537-002

Collection Date: 6/8/2016 2:15:00 PM

Client Sample ID: N-9'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
----------	--------	-----	------	-------	----	---------------	----------

EPA METHOD 800.0: ANIONS

Analyst: LGT

Chloride

3500

150

mg/Kg

100

6/16/2016 5:14:14 PM

25840

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank	
D	Sample Diluted Due to Matrix	E	Value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 1 of 2
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WON: 1606537

17-Jun-16

Client: Yates Petroleum Corporation
Project: Cotton MX Federal Com 1

Sample ID: MB-26840	Sample Type: mblk	Test Code: EPA Method 300.0; Antons								
Client ID: PBB	Batch ID: 26840	Run No: 34930								
Prep Date: 6/14/2016	Analysis Date: 6/14/2016	Seq No: 1078875			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	ND	1.6								

Sample ID	LC6-26840	SamplType	lcs	TestCode	EPA Method 300.0; Antons					
Client ID	LC69	Batch ID	26840	RunNo	34930					
Prep Date	6/14/2016	Analysis Date	6/14/2016	SeqNo	1078876	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	16	1.6	15.00	0	96.7	30	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding time for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not in Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 2 of 2



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-343-3975 FAX: 505-343-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Yates Petroleum Corporat Work Order Number: 1006637 Rep/No: 1

Received by/date:

Logged By: Lindsey Mangin

6/10/2016 9:30:00 AM

Completed By: Lindsey Mangin

6/10/2016 10:35:19 AM

Reviewed By:

Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☒

No ☐

Not Present ☐

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

Cooler

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ?

Yes ☐

No ☒

NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

Approved by client

7. Sufficient sample volume for indicated test(s)?

Yes ☒

No ☐

8. Are samples (except VOA and ONG) properly preserved?

Yes ☒

No ☐

9. Was preservative added to bottles?

Yes ☐

No ☒

NA ☐

10. VOA vials have zero headspace?

Yes ☐

No ☐

No VOA Vials ☒

11. Were any sample containers received broken?

Yes ☐

No ☒

of preserved bottles checked for pH:

12. Does paperwork match bottle labels?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

13. Are matrices correctly identified on Chain of Custody?

Yes ☒

No ☐

Adjusted?

14. Is it clear what analyses were requested?

Yes ☒

No ☐

15. Were all holding times able to be met?

Yes ☒

No ☐

Checked by:

(If no, notify customer for authorization.)

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?

Yes ☐

No ☐

NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	19.6	Good	Yes			

Chain-of-Custody Record

United States Petroleum Corporation

Small primary tumor

☒ Standard ☐ Rush

Project Name:

Living Address:

Cotton MX Federal Com #1

5 South 4th Street, Apt 23a, NM 88210

One 575-703-8537

Mail or Fax: csattle@statespotlight.com

OC Feedback:

Standard ☐ Level 4 (Full Validation)

आवश्यकताएं:-

NELAP ☐ Other ☐

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1. **Author:** [Name of the author]

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

October 13, 2017

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: COTTON MX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 10/11/17 15:54.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accrtd_certif.html.

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

Method EPA 552.2	Halocyclic 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,

Celso D. Keene

Lab Director/Quality Manager



EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Sampling Date: 10/10/2017
Sampling Type: Soil
Sampling Condition: *† (See Notes)
Sample Received By: Tamara Oldaker

Chloride, 5M4500Cl-B		Analyzed By: AC							
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3600	16.0	10/12/2017	ND	432	100	400	0.00	

Chloride, SM4500Cl-D		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3120	16.0	10/12/2017	ND	432	100	400	0.00		

Chloride, SM4500Cl-B	mg/Kg		Analyzed by AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1580	16.0	10/12/2017	ND	432	100	400	0.00	

Chloride, SM4500Cl-B		mg/kg								Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	384	16.0	10/12/2017	ND	432	100	400	0.00			

PLEASE NOTE: Nothing and nothing. Confidentiality and privacy concerns primary for any other subject, whether listed in Exhibit A or not, shall be limited to the extent and by whom the subject. All items, including those for inspection and any other items otherwise shall be directed subject review under no viewing and disclosed by Exhibit A which shall not deny their inspection at the appropriate levels. In no event shall Confidential be able to be disclosed as confidential matters, including, without limitation, internal correspondence, has at all, or lack of good faith) by whom, for disclosure, whether or otherwise being and of or related to USA performance of the subject matter by Confidential regarding or whether such information upon any of these could result or otherwise. It shall not be the purpose of this document. This subject shall be produced subject to the following terms of Confidentiality.

Celcy D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAINLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/11/2017
Reported: 10/13/2017
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: NOT GIVEN

Sampling Date: 10/10/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: N -19' (H702752-05)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	10/12/2017	ND	432	108	400	0.00	

Sample ID: N -21' (H702752-06)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	10/12/2017	ND	432	108	400	0.00	

Cardinal Laboratories

*Accredited Analyte

Cardinal Laboratories and its analysts are not responsible for any data errors, whether caused by human or machine error, that may occur in the course of the analysis. It is the responsibility of the client to ensure that the data is accurate and reliable. The client is responsible for the accuracy of the data. The client is responsible for the accuracy of the data. The client is responsible for the accuracy of the data.

Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager



PHONE (875) 393-2326 • 101 E. MARLAND • HONOLULU, HI 96840

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below,
***	Insufficient time to reach temperature.
-	Chloride by SM4500CL-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Samples and results are confidential and shall remain confidential for the life of the sample. Results shall be reported as they are received by the laboratory. In cases where the laboratory has determined that the results are not reliable, the laboratory shall report the results as "Not Reliable". In no event shall Cardinal Laboratories be held liable for any damages, including consequential damages, arising out of the use of the results of the analysis. The results of the analysis shall be reported as they are received by the laboratory. The results of the analysis shall be reported as they are received by the laboratory.

Celay D. Keene, Lab Director/Quality Manager



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Coman Wil Federal Court

Report Format

☐ TRAP

News

Unase Sewer & Building Services Ltd. www.unase.co.uk

[illegible]Special Instructions

Custody seals on container(s)	N
Electrify seals on model(s)	N
Sample Hand Delivered by Sample/Clean Rep.? Y	(N) (N)
UPS Del.	
FedEx	
Air Mail	

#75 Connected to 25.4



PHONE (575) 393-2320 • 101 E. MARLAND • HOLLIS, NM 88240

October 13, 2017

CHASE SETTLE

EOGY RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: COTTON MX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 10/11/17 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-B. 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/q3/lab_accred_certif.html.

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

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

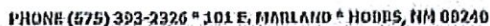
Accreditation applies to public drinking water matrices.

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,

Caley D. Keene

Lab Director/Quality Manager



EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Sampling Date: 10/10/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Taniara Oldaker

Chloride, SM4500Cl-D		mg/kg		Analyzed by: AC					
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	40.0	16.0	10/12/2017	ND	432	100	400	0.00	

Chloride, SM4500Cl-D	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	032	16.0	10/12/2017	ND	432	100	400	0.00	

Chloride, SM150DC1-D		Analyzed By: AC							
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	600	16.0	10/12/2017	ND	432	100	400	0.00	

Chloride, SM4500Cl-P		mg/kg		Analyzed By: AG					
Appx. Site	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	Train Volume QC	RPD	Qualifier
Chloride	896	16.0	10/17/2017	ND	448	112	400	0.00	

*=Accredited Analyte

[illegible]

Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*= Accredited Analyte

These results, validity and accuracy, Cardinal Laboratory and clients acknowledge are only valid when the data is used for the purpose for which it was generated. It is the responsibility of the client to ensure that the data is used for the purpose for which it was generated. In no event shall Cardinal be held liable for any damages, including consequential damages, arising out of or from the use of the data. The data is provided as is, without warranty, and the client assumes all responsibility for the use of the data. The data is not to be used for any other purpose without the written consent of Cardinal Laboratories.

[Signature]

Celcy D. Keane, Lab Director/Quality Manager



Page 4 of 4

☐ NPDES

721

Standard 7A)

34386
Z Z Z Z

Sample Containers: Inactive
VOCs Free of Hexamono?
Labels on containers?
Custody seals on containers?
Custody seals on labels?
Sample Name:
By: Sup:
by: DCL:
FedEx:
Lone Star:

Received by OCD: 11/8/2021 4:51:23 PM



PHONE (575) 393-2326 • 101 W. MARLAND • HOBBS, NM 88240

October 13, 2017

CHASE SETTLE
EQB Y RESOURCES, INC
105 SOUTH 4TH STREET
ARTESIA, NM 88210

RE: COTTON MX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 10/11/17 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/flecd/na/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,

Celey D. Keene
Lab Director/Quality Manager



PHONE (675) 393-2320 • 101 E. MAINLAND • HOUBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received:	10/11/2017	Sampling Date:	10/10/2017
Reported:	10/13/2017	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1	Sampling Condition:	** (See Notes)
Project Number:	30-015-23315	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: FE -1' (H702753-01)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2040	16.0	10/12/2017	ND	432	100	400	0.00	

Sample ID: FE -2' (H702753-02)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2200	16.0	10/12/2017	ND	432	100	400	0.00	

Sample ID: FE -3' (H702753-03)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2560	16.0	10/12/2017	ND	432	100	400	0.00	

Sample ID: FE -4' (H702753-04)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2520	16.0	10/12/2017	ND	432	100	400	0.00	

Cardinal Laboratories * = Accredited Analyte

FROM: EOG Y RESOURCES, INC. CHASE SETTLE, NM. ANALYSIS FOR CHLORIDE. ANALYST: AC. DATE: 10/12/2017. METHOD: SM4500Cl-B. RESULTS: 2040, 2200, 2560, 2520 mg/kg. QUALITY CONTROL: TRUE VALUE QC 400 mg/kg, RPD 0.00. ANALYST SIGNATURE: [Signature].

Celey D. Koene
Celey D. Koene, Lab Director/Quality Manager



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 SM-ISOCL-D does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

*=Accredited Analyte

[illegible]

Colley D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Mainland, Hobbs, NM 88240

(315) 333-2325 FAX (315) 392-2475

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Patient Name:

Donor MX Federal 2am 21

Company Name **EOG Resources Inc.**

Project: 30-015-23315

Company Address: 105 South 4th Street

Project Loc:

Collier MW = Federal Domain

City/State/Zip: Asia NM 88210

PO # 205-0750

Telephone No: 575-748-4121

Fax No.:

Report Format

☐ TRIPS ☐ NEEDS

Signature

E-mail:

Chase Seattle@georesources.com

Lab use only		ORDER #		Preservation & # of Containers		Matrix		TOTAL		TOTAL		TOTAL	
LAD # (Lab use only) H702753		FIELD CODE		Beginning Depth		Ending Depth		Date Sampled		Time Sampled		Total Filtrates	
1		10/10/2017		1:51 PM		1		1		1		1	
2		10/10/2017		1:53 PM		1		1		1		1	
3		10/10/2017		1:55 PM		1		1		1		1	
4		10/10/2017		1:57 PM		1		1		1		1	
5		10/10/2017		1:59 PM		1		1		1		1	
6		10/10/2017		2:01 PM		1		1		1		1	
7		10/10/2017		2:03 PM		1		1		1		1	
8		10/10/2017		2:05 PM		1		1		1		1	
9		10/10/2017		2:07 PM		1		1		1		1	
10		10/10/2017		2:09 PM		1		1		1		1	
11		10/10/2017		2:11 PM		1		1		1		1	
12		10/10/2017		2:13 PM		1		1		1		1	
13		10/10/2017		2:15 PM		1		1		1		1	
14		10/10/2017		2:17 PM		1		1		1		1	
15		10/10/2017		2:19 PM		1		1		1		1	
16		10/10/2017		2:21 PM		1		1		1		1	
17		10/10/2017		2:23 PM		1		1		1		1	
18		10/10/2017		2:25 PM		1		1		1		1	
19		10/10/2017		2:27 PM		1		1		1		1	
20		10/10/2017		2:29 PM		1		1		1		1	
21		10/10/2017		2:31 PM		1		1		1		1	
22		10/10/2017		2:33 PM		1		1		1		1	
23		10/10/2017		2:35 PM		1		1		1		1	
24		10/10/2017		2:37 PM		1		1		1		1	
25		10/10/2017		2:39 PM		1		1		1		1	
26		10/10/2017		2:41 PM		1		1		1		1	
27		10/10/2017		2:43 PM		1		1		1		1	
28		10/10/2017		2:45 PM		1		1		1		1	
29		10/10/2017		2:47 PM		1		1		1		1	
30		10/10/2017		2:49 PM		1		1		1		1	
31		10/10/2017		2:51 PM		1		1		1		1	
32		10/10/2017		2:53 PM		1		1		1		1	
33		10/10/2017		2:55 PM		1		1		1		1	
34		10/10/2017		2:57 PM		1		1		1		1	
35		10/10/2017		2:59 PM		1		1		1		1	
36		10/10/2017		3:01 PM		1		1		1		1	
37		10/10/2017		3:03 PM		1		1		1		1	
38		10/10/2017		3:05 PM		1		1		1		1	
39		10/10/2017		3:07 PM		1		1		1		1	
40		10/10/2017		3:09 PM		1		1		1		1	
41		10/10/2017		3:11 PM		1		1		1		1	
42		10/10/2017		3:13 PM		1		1		1		1	
43		10/10/2017		3:15 PM		1		1		1			



PHONE (575) 393-2320 • 101 E. MARLAND • HOBBS, NM 88240

October 24, 2017

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: COTTON MIX FEDERAL CON #1

Enclosed are the results of analyses for samples received by the laboratory on 10/18/17 15:46.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/qa_lab_accr_cred_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,

Celay D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAINLAND • HOHNS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/18/2017
Reported: 10/24/2017
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 10/16/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: FE -6' (H702826-01)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2400	16.0	10/20/2017	ND	432	100	400	0.00	

Sample ID: FE -8' (H702826-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	10/20/2017	ND	432	100	400	0.00	

Sample ID: FE -10' (H702826-03)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1800	16.0	10/20/2017	ND	432	100	400	0.00	

Sample ID: FE -12' (H702826-04)

Chloride, SM4500Cl-B		mg/lip		Analyzed By: AC					
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1020	16.0	10/20/2017	ND	432	100	400	0.00	

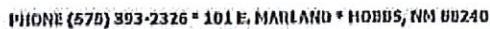
Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Quality and integrity of data is dependent on the quality of the sample and the quality of the analysis. It is the responsibility of the client to ensure that the sample is properly collected, stored, and transported. Cardinal Laboratories is not responsible for the quality of the sample or the results of the analysis if the sample is not properly collected, stored, and transported. Cardinal Laboratories is not responsible for the results of the analysis if the sample is not properly collected, stored, and transported. Cardinal Laboratories is not responsible for the results of the analysis if the sample is not properly collected, stored, and transported.

Colay D. Keene

Colay D. Keene, Lab Director/Quality Manager



EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 80210
Fax To: (575) 748-4131

Sampling Date: 10/16/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Chloride, 5M4500Cl-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	10/20/2017	ND	432	108	100	0.00	

*=Accredited Analyte

[illegible]

Chas. D. Fenn

Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by 5144500CI-II does not require samples be received at or below 6°C
Samples reported on all as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Only the results of the analysis of the sample are reported. The results of the analysis are based on the sample as received. The results of the analysis are not a guarantee of the accuracy of the results. The results of the analysis are not a guarantee of the accuracy of the results. The results of the analysis are not a guarantee of the accuracy of the results.

Celey D. Keene, Lab Director/Quality Manager



CHAIN OF CUSTODY, RECORDED AND ANALYSIS REQUEST

INDEX

ANALYZE FOR					
TOTAL					
TOTAL					

[illegible]

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Date	Time	Received by

VOC's Free of Headspace?

N N

Date	11/18/17	3:46	Customer speaks on cell phone
Time	1:00:00		
Received from			

Date	Time	Received by SGT:	Date	Time
by Courier? UPS DHL FedEx Line Star				

Temperature Upon Receipt

Temperature Upon Receipt 24.6 °C



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

October 24, 2017

CHASE SETTLE
EOG Y RESOURCES, INC
105 SOUTH 4TH STREET
ARTESTA, NM 88210

RE: COTTON MX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 10/18/17 15:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

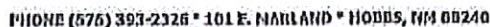
Method EPA 552.2	Halocacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

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,

Celcy D. Keene
Lab Director/Quality Manager



EOG Y RESOURCES, INC.
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 00210
Fax To: (575) 748-4131

Sampling Date: 10/16/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Analyte	mg/kg	Analyzed By: AC							
		Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD
Chloride	1310	16.0	10/20/2017	ND	416	104	400	3.77	

chloride, SM4500Cl-D		Analyzed By: AC								
Analyte	Result	Reporting Unit	Analyzed	Method Blank	DS	% Recovery	True Value QC	RPD	Qualifier	
chloride	2880	16.0	10/20/2017	ND	432	108	100	0.00	QM-07	

Chloride, SM4500Cl-B		Analyzed by: AG							
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	10/20/2017	ND	432	108	400	0.00	

Chloride, SM4500Cl-B		Analyzed By: AC							
Analyte	Revol	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	10/20/2017	ND	432	106	400	0.00	

*=Accredited Analyte

[illegible]

Celey D. Keene, Lab Director/Quality Manager



QM-07.	The spike recovery was outside acceptance limits for this 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 SM4500-Cl-B does not require samples be received at or below 6°C Samples reported on n/bs received basis (wet) unless otherwise noted on report

*=Accredited Analyte

[illegible]

Celey D. Keeno, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOOB, NM 88240

November 06, 2017

CHASE SETTLE
EOG Y RESOURCES, INC
105 SOUTH 4TH STREET
ARTESIA, NM 88210

RE: COTTON MX FEDERAL COM #1

Enclosed are the results of analyses for samples received by the laboratory on 11/01/17 14:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/lab/lab_accr_cred_certif.html.

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

Method EPA 552.2	Halocacetic Acids (HAA-5)
Method EPA 521.2	Total Trihalomethanes (TTHM)
Method EPA 521.4	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,

Coley D. Keene

Lab Director/Quality Manager



EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 80210
Fax To: (575) 748-4131

Sampling Date: 10/26/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celay D. Keene

Chloride, SM4500Cl-D	mg/kg		Analyzed By: AG						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	IS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/03/2017	ND	448	112	100	0.00	

Chloride, SM4500Cl-D		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	11/03/2017	ND	448	112	400	0.00	

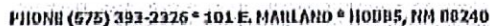
Client/Id: 8144500CLD	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value CC	RPD	Qualifier
Chlorido	128	16.0	11/03/2017	ND	448	112	400	0.00	

Chloride, SM44500Cl-D		Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	DS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2640	16.0	11/03/2017	ND	44B	112	400	0.00	

*=Accredited Analyte

FILED 1977). WATKINS AND COMPANY, CHARLES WATKINS and others executed copies for my client WATKINS, WATKINS listed by name on list, which he turned to the named pool by client for witnesses. All items, including those for signature and by other means indicated that he cleared before action made by witness and issued by Charles WATKINS 1977. On the day completion of the affidavit before. In the state with control he spoke for individual or confidential sources, including WATKINS, WATKINS, business information, list of a, or list of public interest by client, for substantially identical to business being out of the subject to the performance of the various business by Charles, regardless of whether such (b)(7)(D) copies of documents were released to defendant. WATKINS listed only by the original listed name. The subject was not represented by a legal or other representative of CHARLES WATKINS.

Celey D. Keene, Lab Director/Quality Manager



FOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 80210
Fax To: (575) 748-4131

Sampling Date: 10/26/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Caley D. Keene

Chloride, 5M4508Cl-II		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	UPD	Qualifier
Chloride	<16.0	16.0	11/03/2017	ND	448	112	400	0.00	

Chloride, 6H4500Cl-D		mg/l/g		Analyzed By: AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	11/03/2017	ND	448	112	100	0.00		

★ Accredited Analyte

[illegible]

Wm. D. France

Coley D. Keene, Lab Director/Quality Manager

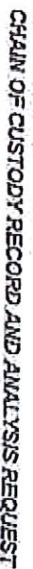


W/D	Analyte NOT DETECTED at or above the reporting limit
W/D	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM-1300C-II does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

†=Accredited Analyte

[illegible]

Celey D. Keene, Lab Director/Quality Manager



Chase Sellie@eogresources.com

ORDER #: H703007

Page 5 of 5

Cotton MX Federal Com #1
Remediation Work Plan
2RP-2355 & 2RP-3474



March 1, 2018

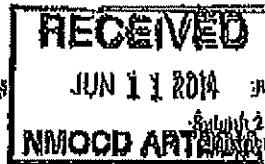
Appendix D

C-141 Initials

energy opportunity growth

Director
1625 N. Pueblo Dr., Hobbs, NM 88240.
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Puerco 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 06/06/10, 2003
Submittal 2 Contact to appropriate
Office in accordance
with Rule 16 on back
side of form

Release Notification and Corrective Action

14147834904

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Yates Petroleum Corporation	OGRAD Number 25575	Contact Cherie Seale
Address 104 S. 4th Street	API Number 30-015-23315	Telephone No. 575-748-4147
Facility Name Cotton Federal SWD	Facility Type SWD	
Surface Owner Federal	Mineral Owner Federal	Lease No. NM436500

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	14	19S	23E	800'	North	2100'	West	Eddy

Latitude: 32.66368 Longitude: -104.45631

NATURE OF RELEASE

Type of Release Produced Water and Crude Oil	Volume of Release 7 B/W and 13 B/D	Volume Recovered 6 B/W and 2 B/D
Source of Release Gate valve failure on tank	Date and Hour of Occurrence 6/11/2014 8 PM	Date and Hour of Discovery 6/11/2014 8 PM
Was Immediate Action Taken? ☐ Yes ☐ No ☒ Not Required	If Yes, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
When Watercourse Reached? ☐ Yes ☒ No	If Yes, Volume Impacting the Watercourse N/A	
Has Watercourse been Impacted? Describe Fully N/A		
Describe Cause of Problem and Remedial Action Taken: A gate valve failure on the tank caused the tank to overflow.		
Describe Area Affected and Cleanup Action Taken: An approximately 1/2 acre area of 32' x 183' north of the tanks and 66' x 82' around and behind the tanks. All released water and crude oil was contained within the battery limits. The valve was closed and pumped out by vacuum trucks. A spill response team was dispatched to the site. Vertical and horizontal delineation samples will be taken and analyzed for TPH, BTEX (hydrocarbons for gasoline), if initial analysis results for TPH & BTEX are under RRA's (also called in 10) a Final Report C-141 will be submitted to the OGD requesting closure. If the analytical results are above the RRA's a work plan will be submitted to the OGD. Depth to Ground Water: 50-92' (approximately 80', Section 14, T19S-R3E, per Trend Map). Wellhead Protection Area: No. Distance to Surface Water: 660'. SITE RANKING: 19 10.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understanding and that pursuant to NMOC rules and regulations all operators are required to report and/or file spill or 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 NMOC is marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to ground water, surface water, human health, or the environment. In addition, NMOC does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		

Signature 	OIL CONSERVATION DIVISION	
Printed Name: Cherie Seale	Approved by District Supervisor 	
Title: Environmental Regulatory Agent	Approval Date: 6/25/14	Expiration Date: N/A
Email Address: CSeale@yatespetroleum.com	Conditions of Approval: Remediation per OGD Rule & Guidelines, & like approval by D.M. SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 7/26/14	Attached ☐
Date: Wednesday, June 11, 2014 Phone: 575-748-4147	2RP-2355	

District I
1624 N. French Dr., Hobbs, NM 88240
District II
811 E. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87503

State of New Mexico NM OIL CONSERVATION
Energy Minerals and Natural Resources ARTESIA DISTRICT

Form C-141
Revised August 8, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87503

JAN 14 2016
Submit to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

NAB1600756275

Name of Company Yates Petroleum Corporation		25515	OPERATOR	☒ Initial Report	☐ Final Report
Address 104 S. 4th Street, Artesia, NM 88210			Contact Chase Scott		
Facility Name Cotton MX Federal Com. #1			Telephone No. 575-748-4171		
			Facility Type BWD		
Surface Owner Federal		Mineral Owner Federal	API No. 30-015-23313		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	14	19S	25E	810'	North	2180'	West	Eddy

Latitude 32.66568 Longitude -104.45631

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 1500 B/PW	Volume Recovered 1430 B/PW
Source of Release Produced Water Tank overflowed.	Date and Hour of Occurrence 12/22/2015; 6:30 a.m.	Date and Hour of Discovery 12/22/2015; 6:30 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Heather Peterson, Randy Dade, Jim Amos	
By Whom? Bob Asher	Date and Hour 12/22/2015; 2:50 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		

Describe Cause of Problem and Remedial Action Taken.*

Transducer valve failed causing the produced water tank to overflow.

Describe Area Affected and Cleanup Action Taken.* An approximate area of 30' X 230' north of the tanks in the open excavation and 40' X 70' around the tanks was impacted by the release. All released fluids were contained within the battery room. The valve was closed and turned off, and vacuum trucks were called to remove standing fluid. Backhoe was also dispatched to remove impacted soils. Excavated soils will be hauled to a NMOC approved facility. Vertical and horizontal delineation samples will be taken and analysis run for TPH & BTEX (chlorides for documentation). If initial analytical results for TPH & BTEX are under RRAL's (also ranking 10) a Final Report, C-141 will be submitted to the OCD requesting closure. If the analytical results are above the RRAL's a Work Plan will be submitted to the OCD. Depth to Ground Water: 50-99' (approximately 80', Section 14, T19S-R25E, per Trend Map). Wellhead Protection Area: No. Distance to Surface Water Body: >1000', SITE RANKING IS 10.

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

OIL CONSERVATION DIVISION

Signature:	Approved by Environmental Specialist:	
Printed Name: Chase Scott	Approval Date: 1/7/16	Expiration Date: N/A
Title: NM Environmental Regulatory Agent	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines ☐	
E-mail Address: cscott@yatespetroleum.com	SUBMIT REMEDIATION PROPOSAL NO	
Date: 01/04/2016	Phone: 575-748-4171	LATER THAN: 1/14/16

22P-3474

Chase Settle

From: Chase Settle
Sent: Tuesday, May 1, 2018 2:26 PM
To: 'Bratcher, Mike, EMNRD'; Weaver, Crystal, EMNRD
Cc: Yvette Moore; Bob Asher
Subject: RE: Cotton MX Federal Com #1 Work Plan pt 1

Mike,

The "N" area is to be lined along with the other areas.

Thanks,

Chase

From: Bratcher, Mike, EMNRD [mailto:mike.bratcher@state.nm.us]
Sent: Tuesday, May 1, 2018 1:38 PM
To: Chase Settle <Chase_Settle@eogresources.com>; Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>
Cc: Yvette Moore <Yvette_Moore@eogresources.com>; Bob Asher <Bob_Asher@eogresources.com>
Subject: RE: Cotton MX Federal Com #1 Work Plan pt 1

** External email. Use caution.**

RE: EOG Y * Cotton MX Fed Com 1 * 2RP-2355 & 2RP-3474 * DOR: 6/1/14 & 12/22/15

Chase,

Your proposal for remediation of the above referenced releases is approved. If I am interpreting the data correctly, OCD would request liner placement in the "N" area, as well as the other areas proposed. Please advise once remedial activities have been scheduled.

Thank you,

Mike Bratcher
 NMOC District 2
 811 South First Street
 Artesia, NM 88210
 575-748-1283 Ext 108

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

From: Chase Settle <Chase_Settle@eogresources.com>
Sent: Friday, March 2, 2018 8:45 AM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>
Cc: Yvette Moore <Yvette_Moore@eogresources.com>; Bob Asher <Bob_Asher@eogresources.com>
Subject: Cotton MX Federal Com #1 Work Plan pt 1

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 60904

CONDITIONS

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 60904
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	3/17/2023