

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	NHMP1417634904
District RP	2RP-2355
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 #	NHMP1417634904
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 Federal SWD	Site Type	SWD
Date Release Discovered	06/01/2014	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) 3	Volume Recovered (bbls) 2
☒ Produced Water	Volume Released (bbls) 7	Volume Recovered (bbls) 6
	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-2355 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.

Form C-141

Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NHMP1417634904
District RP	2RP-2355
Facility ID	
Application ID	

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

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <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><i>Chase Settle</i></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: _____	

Form C-141

Page 3

State of New Mexico
Oil Conservation Division

Incident ID	NHMP1417634904
District RP	2RP-2355
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141

Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NHMP1417634904
District RP	2RP-2355
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Form C-141

Page 5

State of New Mexico
Oil Conservation Division

Incident ID	NHMP1417634904
District RP	2RP-2355
Facility ID	
Application ID	

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: _____

Form C-141

Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NHMP1417634904
District RP	2RP-2355
Facility ID	
Application ID	

Closure

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

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

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

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

Printed Name: 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: _____ Date: _____

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

Closure Approved by: Bradford Billings Date: 11/17/2021
 Printed Name: Bradford Billings Title: Envi.Spec.A



EOG Resources, Inc.
Artesia Division Office
101 S. 4th Street
Artesia, N. M. 80210

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-R25E
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.

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



September 6, 2018

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

Table of Contents

I.	Location.....	1
II.	Background.....	1
III.	Surface and Ground Water.....	1
IV.	NMOCD Ranking Criteria.....	1
V.	Soils.....	2
VI.	Work Completed.....	2

Tables:

Table 1: Soil Analytical Data

Figures:

Figure 1: Site Map

Figure 2: Site Map with Sample Points

Appendices:

Appendix A: NMOSE Well Log Information

Appendix B: USGS Groundwater Data

Appendix C: Confirmation Soil Sample Laboratory Data

Appendix D: Form C-141 Initials

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 NMOC 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 NMOC 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, NMOC 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 NMOC requesting closure of the site.

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
S1-16'	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'	16'	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	-	-	-	-	-	-	-	-	-	1120
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	56	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	18.53	510	4900	-	5410	50
T1-9'	9'	6/14/17	3.1	6.2	4.5	11	24.8	570	7900	-	8470	180
T1-10'	10'	7/7/17	1.15	1.13	<0.2	21.5	23.8	541	3060	-	3601	-
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	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	9600	-	-	80
T2-3'	3'	6/14/17	ND	ND	1.3	21	22.3	690	7000	-	7690	380
T2-5'	5'	6/14/17	10	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	620
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	-	-	-	-	-	-	-	-	-	160
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	-	-	-	-	-	-	-	-	-	3600
N-13'	3'	10/10/17	-	-	-	-	-	-	-	-	-	3120
N-15'	3'	10/10/17	-	-	-	-	-	-	-	-	-	1680
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	-	-	-	-	-	-	-	-	-	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	-	-	-	-	-	-	-	-	-	2660
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	-	-	-	-	-	-	-	-	-	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

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



September 6, 2018

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	28.9	<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	0.266	9.20	3.25	12.8	63.2	395	33.1	491.3	-
T1C-10'	10'	6/29/18	0.080	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	0.110	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	1.26	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

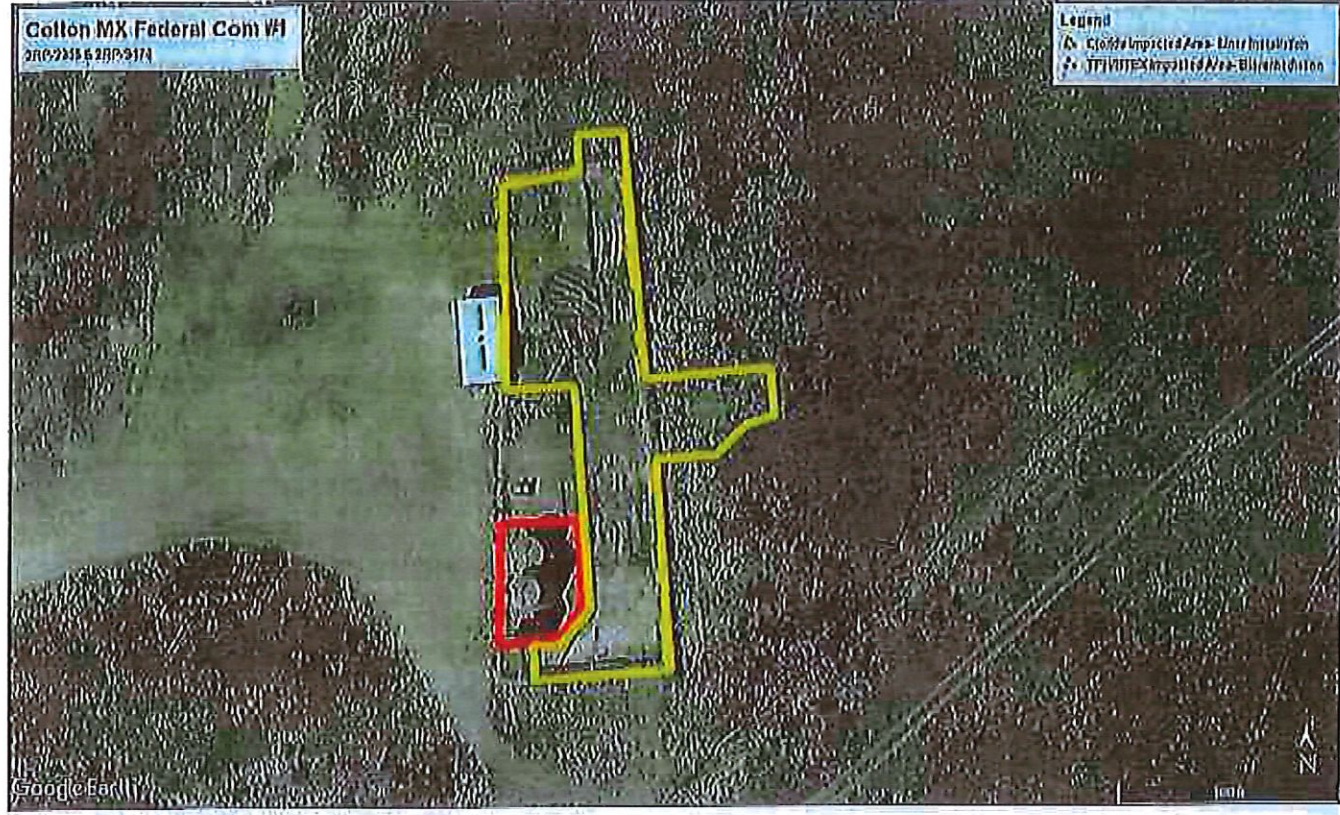
Colton MX Federal Com #1
Closure Report
2RP-2355 & 2RP-3474



September 6, 2018

Figure 1

Site Map



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



September 6, 2018

Figure 2

Map with Sample Points



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



September 6, 2018

Appendix A

NMOSE Well Log



2/23/18 1:25 PM

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



September 6, 2018

Appendix B

USGS Groundwater Data



USGS
a division of the *U.S. Department of the Interior*

National Water Information System: Map View

Files | **Map View**

Search Results

Export Sites

Site Number	Site Name
211011011711	195,25E,14,133131

Site Information

Site Number: D21953103271401
Site Name: 195,25E,14,133131
Agency: USGS
[Access Data](#)

Search Parameters

Explanation of Symbols





National Water Information System Web Interface

USGS Water Resources

USGS Home
Contact USGS
Search USGS

Primary Agency: Groundwater Geographic Area: United States 00

Click to hide News Bulletins

- [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 (110AVMB) local aquifer.

Output format:

Table of data											
Tab-separated data											
Graphic of 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	09:35 HST	m	94.50			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
2019-01-13	13:23 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 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	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

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



September 6, 2018

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	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,

Celey 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: 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	mg/kg		Analyzed by MS						
Analyte	Result	Reporting Limit	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					

Surrogate: 4-Fluorofluorobenzene (PF ₅)	133%	69.8-142
---	------	----------

TPH B015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO CG-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-Chloroocetone	87.7%	11-142
----------------------------	-------	--------

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

Cardinal Laboratories

*=Accredited Analyte

[illegible]

Elizabeth Anne

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' (H001610-02)

BTX 8021A		mg/kg	Analyzed By: MS				S-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	5.41	90.2	6.00	1.87	
Total BTX	9.89	0.300	06/14/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 143 % 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*	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-Chloronooctane 80.4 % 41-142

Surrogate: 1-Chlorooctadecane 79.2 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Quality and Integrity. Cardinal's ability and ability to deliver results solely for the client's use, whether used in court or not, shall be limited to the amount paid by client for analysis. All data, including those for reference and any other data submitted shall be stored until such time as they are released by Cardinal which may (or may not) require payment of the applicable fee. In no event shall Cardinal be liable for liability or consequential damages, including, without limitation, business interruption, loss of data, or loss of profits caused by data, its publication, or other use of information stored or related to the performance of the analysis provided by Cardinal, regardless of whether such data is stored on any of the above stated means or otherwise. Results reflect only the samples described above. This report shall not be reproduced except by written written approval of Cardinal Laboratories.

Celcy D. Keene

Celcy D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HORRIS, 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 to be received at or below 6°C. Samples reported on in as received basis (wet) unless otherwise noted on report

²=Accredited Analyte

PIERCE NOTE: Liberty and Unions, Citizens Liberty and others continue to lobby for any thing along, whether based in concern to say that he looked to the record bill by that he supports. At that, looking down the arguments and say also, some individuals that he shared what others made in talking and learned by Central union they did say also something of his specific action. In no way did Cardin by that he believed or experienced anything, including Liberty Unions, Citizens Liberty, but it is not, or just or power exempt by that, in substance, whether or someone using one of or added in the performance of the action. However by Cardin, Liberty and Unions has been told that none of the above mentioned is correct. Hence they only do the things they do. This report did not have produced enough in Liberty Union approved at that time to be valid.

Celey D. Keene, Lab Director/Quality Manager

Page 5 of 24



ARDINAL LABORATORIES
101 East Midland, Hobbs, NM 88240

(505) 383-2326 FAX (505) 383-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name:

Cotton WDX Federal Cam #1

Project Manager: Chase Smith

Chase Sente

Company Name ECG Y Resources Inc.

ECG Y-Resources Inc.

Company Address: 105 South 4th Street

105 South 4th Street

City/State/Zip: Artesia, NM 86210

Artesia, NM 88210

Telephone No: 575-748-4171

575-748-4171

Fax No.:

Report Fo

Sampler Signature:

10

ಹಾಗಾದರೆ:

Chase.Settle@edresources.com

Report Format ☒ Standard

X Standard

☐ **TRIP**

☐ NPDES

PO # 205-0750

Project Location

Coltan Mx Federal Court #1

[illegible]



PHONE (575) 393-2326 • 101 E. HARRLAND • 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	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,

Celcy 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

BTEX #0211		Analyzed by: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	MS	% 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					

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	200	1.05	
DRO >C10-C28*	101	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-Chlorooctadecane	99.1 %	37.6-147
-------------------------------	--------	----------

*=Accredited Analyte

100-367077) liberty and security. Confidential source and source indicate remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by source for services. At times, including those for negative and big other cases mentioned, that the source stated value made by working and received by Confidential source (NY) that after completion of the applicable statute. It is noted that Confidential is liable for individual or proprietary damage, including, but not limited to, Confidential's reputation, loss of use, or loss of profits incurred by source, its subsidiaries, affiliates or customers arising out of or related to the use of Confidential by the source. The source's remedy for Confidential's negligence, regardless of whether such damage is tortious or of the above stated nature is, in whole or in part, limited to the amount paid by Confidential to the source. This amount shall be subject to adjustment by Confidential within approval of Confidential's (NY).

Colby 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

DISCLAIMER: Liability and Waiver. Cardinal Laboratories and its clients warrant only for any data testing, which shall be subject to the terms and conditions set forth in the contract. All data, including those for reference and any other data submitted, shall be subject to the terms and conditions set forth in the contract. In no event shall Cardinal be liable for damages or consequential damages, including, without limitation, lost profits, lost data, or loss of profits, even if advised of the possibility of such damages. This report shall not be reproduced or used in any manner except as provided in the contract.

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 Henson

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

BTEX 8021B		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 (BFB) 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-Chlorodecane 111 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Quality and Quantity. Cardinal's ability and ability analysis results for any other source, whether listed or not, shall be subject to the amount paid by client for analysis. All data, including those for negative and any other data, shall be subject to review and control by Cardinal within 30 days after completion of the specific analysis. To the extent that Cardinal is liable for negligent or intentional damage, including, without limitation, business interruption, loss of use, or loss of profits caused by data, its subsidiaries, affiliates or associates using data it or subject to the performance of the services provided by Cardinal, regardless of whether such claim is based upon any data source, Cardinal shall not be liable. This report and not the reproduced sample is the only version of the data provided by Cardinal Laboratories.

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: 07/02/2018
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 - 12' (H801803-04)

BTEX 8021B		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 (PIL) 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	
PRO >C10-C28*	321	10.0	07/03/2018	ND	201	100	200	0.933	
EXT PRO >C28-C36	25.2	10.0	07/03/2018	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: ANALYTES AND QUANTITIES: Cardinal Laboratories does not assume liability for any data errors, omissions, or misstatements that may be found in this report. In no event shall Cardinal Laboratories be held liable for any damages, including, without limitation, consequential damages, arising out of or in connection with the use of the information contained in this report. The user agrees to hold Cardinal Laboratories harmless from and against all claims, damages, and expenses, including reasonable attorneys' fees, that may be asserted against or incurred by Cardinal Laboratories in connection with the use of the information contained in this report. This report is for informational purposes only and is not intended to be used for legal or regulatory purposes. The user agrees to hold Cardinal Laboratories harmless from and against all claims, damages, and expenses, including reasonable attorneys' fees, that may be asserted against or incurred by Cardinal Laboratories in connection with the use of the information contained in this report.

Coloy D. Koene

Coloy D. Koene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • 110005, NM 88240

Analytical Results For:

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

Received: 07/02/2018
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 - 14' (H801803-05)

BTEX 80210		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.265	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	0.0968	
Total BTEX	19.2	0.300	07/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 179 % 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*	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

Surrogate: 1-Chlorooctadecane 119 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

HEALTH NOTE: Quality and integrity of Cardinal's testing and results are solely the responsibility of the client. The client is responsible for the accuracy and completeness of the information provided. The client is responsible for the accuracy and completeness of the information provided. The client is responsible for the accuracy and completeness of the information provided.

Deley D. Keene

Deley 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 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-Bromofluorobenzene (P/E)	136 %	69.8-142
---------------------------------------	-------	----------

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
---------------------------	------	--------

<i>Spermatog.</i> 1-Chlorooctadecimic	100 %	37.6-147
---------------------------------------	-------	----------

Cardinal Laboratories

*=Accredited Analyte

FALSE NAME: NAME and NUMBER, CREDITED TO and clearly indicated clearly, in my story writing, whether found in contact in fact, shall be listed in the spaces left by them for analysis. If stated, including those for purposes and any other name whatsoever shall be derived upon some means to writing and checked by checked within thirty (30) days after completion of the applicable work. It is noted that Central has failed to indicate in consequence thereof, including, within brackets, within brackets, for use, in case of points covered by story, be indicated, whether or not necessary, within the of it listed in the presence of the writer himself by Central, signature of author, and clearly stated that of the above first sentence or sentence, shall also include the original source of story. The report shall be reproduced except in all with other copies of Central literature.

Chas. D. French

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: 07/02/2018
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-Fluorofluorobenzene (TFP) 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 % 91-142

Surrogate: 1-Chlorodecane 97.2 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Quality and Quantity. Cardinal's policy and ability to deliver results for any other laboratory, whether direct or indirect, shall be based on the amount of work performed by the laboratory. All data, including QC, for analysis and any other data submitted shall be stored until such time as the data is no longer needed by the client. In no event shall Cardinal be liable for liability or consequences arising from, without limitation, business interruption, loss of data, or loss of profit incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services furnished by Cardinal, regardless of whether such data is based upon any of the above stated elements of information. Results shall only be the property of the client. This report shall not be reproduced or used in any form without written approval of Cardinal Laboratories.

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

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: Stability and Durability. Contractor's liability and design engineer's liability for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analysis. All claims, including those for negligence and any other claim whatsoever, shall be deemed waived unless made in writing and initiated by Contract within thirty (30) days after completion of the applicable service. In no event shall Contractor be liable for indirect or consequential damages, including without limitation, business interruption, loss of data, or loss of profits incurred by client, its subsidiaries, affiliates or customers arising out of or related to the performance of the services described by Contract, regardless of whether such claim is based upon any of the above mentioned or otherwise. Further, client shall not sue or attempt to sue Contractor. This report shall not be reproduced except in a form which may appear in the Contract documents.

Celey D. Kenne, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Wendland, Hobbs, NM 88240

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

CHAIN OF CUSTODY RECORDED AND ANALYSIS REQUEST

Page 10 of 10

Project Manager: Chase Sattin

Project Name: Cotton WX Federal Com #1

Company Name EOG Resources Inc

Project#: 30-015-23315

Company Address: 105 South 4th Street

Project Loc: Cotton MX Federal Com #11

City/State/Zip: Artesia, NM 88210

PO #: 205-0750

Telephone No: 575-748-3171

Fax No:

Report Format ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature:

E-mail: Chase.Settle@eoagresources.com

(Lab use only)

ORDER# H901803

Analyze For:

ORDER #		LAB USE ONLY		ANALYSIS FEE	
H90018003					
LAB # (lab use only)		FIELD CODE		Beginning Depth	
				Ending Depth	
		Date Sampled		Time Sampled	
		Field Filtered		Total # of Containers	
		Total # of Containers		Matrix	
		Fe		TX-Drilling Water BL-Side	
		HNO ₃		GW = Groundwater S-Side	
		HCl		H ₂ O = Surface Water Specify Date	
		H ₂ SO ₄		TPH: A918B	
		NaOH		TPH: TX 1005 TX 1006	
		Na ₂ S ₂ O ₃		Cations (Ca, Mg, Na, K)	
		None		Anions (Cl, SO ₄ , Alkalinity)	
		Other (Specify)		SAR / ESP / CEC	
		TX-Drilling Water BL-Side		Metals: As Ba Ca Cd Cr Pb Hg Se	
		GW = Groundwater S-Side		Volatiles	
		H ₂ O = Surface Water Specify Date		Semivolatiles	
		TPH: A918B		BTX: 10X10	
		TPH: TX 1005 TX 1006		RCI	
		Cations (Ca, Mg, Na, K)		HORM	
		Anions (Cl, SO ₄ , Alkalinity)		Chlorides	
		SAR / ESP / CEC		SAR	
		Metals: As Ba Ca Cd Cr Pb Hg Se		RUSH TAT (Per Schedule) 74, 40, 72 hrs	
		Volatiles		Standard TAT	
		Semivolatiles			
		BTX: 10X10			
		RCI			
		HORM			
		Chlorides			
		SAR			
		RUSH TAT (Per Schedule) 74, 40, 72 hrs			
		Standard TAT			



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 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 • ROBBES, 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 - 2' (H801804-01)

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	07/02/2018	ND	1.74	87.0	2.00	0.600	
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					

Surrogate: 4-Bromofluorobenzene (PIC) 128 % 69.8-142

TPH 80X5M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	10.3	10.0	07/03/2018	ND	204	102	200	1.05	
DRO >C10-C28*	28.7	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 107 % 41-142

Surrogate: 1-Chlorodecane 102 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

NOTE: Data and Report. Cardinal's liability and ability to deliver results for any data being analyzed is based on the sample as received. All data, including data for polycyclic aromatic hydrocarbons, shall be based on the results of the analysis. It is the user's responsibility to ensure that the sample is properly prepared and that the results are properly interpreted. Cardinal Laboratories, Inc. is not responsible for any data or results obtained by users, its subsidiaries, affiliates or licensees using any of its products or services. The user shall be responsible for the accuracy and reliability of the data and results obtained. This report shall not be used for legal or regulatory purposes 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 Henson

Sample ID: T2C - 4' (H801804-02)

BTEX #021B		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 #015H		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

PLEASE NOTE: Nothing will change. Cardinal only test results unless clearly by the client stating, whether stated or not, what he intends to do with the results and by whom they will be used. All clients, including those for regulatory and any other uses, should be advised that results will be tested and checked by Cardinal only (CQ) and that results of the analysis apply. It is not valid that results be taken for regulatory or non-regulatory purposes, including those for regulatory, without being aware of the fact that, in some cases, results may be used, in addition, for regulatory purposes or for other uses and that the results may be used for regulatory purposes. This report may not be reproduced or used in any other way without approval of Cardinal Laboratories.

Celestine D. Keene

Celestine 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

*=Accredited Analyte

NOTE: Many all samples. Cardinal policy and quality control policy for any class which states limit is not to be used for the sample per by state the analysis. All items, including those for negative and any other data obtained shall be stored until such time as they are needed by the state with the (20) day after expiration of the applicable statute. In no case shall Cardinal be held to be liable for negligent or intentional damage, including without limitation, business interruption, loss of use, or loss of profits caused by such as liability, either in connection with or as a result of the performance of the services furnished by Cardinal, regardless of whether such claim is based upon any of the above stated exceptions or otherwise. Results shall only be the property of the client. This report shall not be reproduced or used in full without written approval of Cardinal Laboratories.

Celey D. Keene

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 Benson

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

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*	<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 (PIE	113%	69.8-142
--------------------------------------	------	----------

TPH B015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	RS	% 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	106.56	41-142
---------------------------	--------	--------

Surrogate: 1-Chlorooctadecane	100 %	37.6-142
-------------------------------	-------	----------

Cardinal Laboratories

*=Accredited Analyte

PERNELL BROWN: Utility and Disutility. "Corporate policy and market conditions usually fix the dollar wage, whether raised or reduced so that what is needed is the exact yield by labor for employers. In this, however, there are exceptions and my own main objection still be derived where there is no yielding and control by Capital with only the firm also exception of the individual worker. As we know that Capital has the power to determine the employment of workers, whether through business interruption or otherwise, the fact of power is what is what, the individual worker or corporation acting out of or subject to the preferences of the worker himself by Capital, regardless of whether such action is based upon any of the above five principles or not, it is the fact of power that is what is what. This power will be required and is held with the approval of Capital and laborers."

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

Sample ID: T2C - 10' (HB01804-05)

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					

Sinotogate: 4-Bromofluorobenzene (PIE)	110%	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	07/03/2018	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	108%	41-142
---------------------------	------	--------

Smoguta: 1-Chlorooctadecanę	99,8 %	37,6-147
-----------------------------	--------	----------

Cardinal Laboratories

*=Accredited Analyte

[illegible]

LeRoy Anderson

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:	07/02/2018	Sampling Date:	06/29/2018
Reported:	07/03/2018	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: T2C - 12' (H801804-06)

BTX 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	07/03/2018	ND	1.74	87.0	2.00	0.608	
Toluene*	<0.050	0.050	07/03/2018	ND	1.74	86.8	2.00	0.0927	
Ethylbenzene*	<0.050	0.050	07/03/2018	ND	1.71	85.5	2.00	0.136	
Total Xylenes*	<0.150	0.150	07/03/2018	ND	5.31	88.5	6.00	0.0908	
Total BTX	<0.300	0.300	07/03/2018	ND					

Surrogate: 4-Bromofluorobenzene (PFB) 111 % 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 103 % 41-142

Surrogate: 1-Chlorononadecane 94.9 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Cardinal Laboratories, Inc. and its subsidiaries are not responsible for any data reported herein that is not in accordance with the applicable regulatory requirements. In no event shall Cardinal Laboratories, Inc. be liable for any damages, including, without limitation, indirect or consequential damages, arising out of or in connection with the use of the data reported herein. The data reported herein is for informational purposes only and is not intended to be used for any other purpose. The data reported herein is the property of Cardinal Laboratories, Inc. and its subsidiaries and is not to be distributed or used for any other purpose without the written consent of Cardinal Laboratories, Inc. and its subsidiaries.

Coley D. Kerner

Coley D. Kerner, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HODDS, NM 80240

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 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

Cardinal Laboratories

* = Accredited Analyto

PRINTER: JAMES, Liberty and Demagog, Libby's ability and power seldom remedy for my state among, whether based in interest or not, shall be linked to the second part by them for anyone. At times, however, have the employees and my other names whatsoever shall be defined prior to this point in writing and included by Central while they still stay also completely at the applicant's expense. As an exact real control for jobs to involved in transportation, storage, delivery, volume handling, business transactions, has of any, is full of power brought by direct, in consideration, whether or necessary among and is related to the profession of the women brought by Central regardless of whether such a woman will represent any of the above named in a different, less than the other people they've been, therefore shall be as represented in the above and will further appeal of Central Libby's office.

Chas. D. Kiser

Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Merland, Hobbs, NM 88240

(505) 363-2325 FAX (505) 393-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

6 JO 6 282d

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 88210

PO #: 205-0750

Telephone No: 575-746-4171

Fax No:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature: [Signature]

e-mail: Chase.Settle@eogresources.com

(Lab use only)

ORDER #: H801804

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	T2C-2			6/29/2018	8:36		1	X		TPH: 8018B TX 1005 TX 1008 Cations (Co, Mg, Na, K) Anions (Cl, SO4, Alkalinity) SAR / ESP / CEC Metals: As Ag Ba Cd Cr Pb Hg Se Volatiles Semi-volatiles OTEC: 8021B ROI H.O.R.M. Chlorides SAR RUSH TAT (Pys-Bichrolyte) 24, 48, 72 hrs Standard TAT
2	T2C-4			6/29/2018	8:38		1	X		
3	T2C-6			6/29/2018	8:41		1	X		
4	T2C-8			6/29/2018	8:44		1	X		
5	T2C-10			6/29/2018	8:47		1	X		
6	T2C-12			6/29/2018	8:51		1	X		

Special Instructions:

TPH EXTENDED needed.

Requested by: [Signature]

Date: 7/6/18

Time: 11:30

Received by: Chad Stender

Date: 7/12/18

Time: 2:05

Relinquished by:

Date:

Time:

Received by: ELDT

Date:

Time:

Laboratory Comments:

Sample Containers: Inadequate? ☒ Y ☐ N

VOCs Free of Headspace? ☒ Y ☐ N

Labels on containers? ☒ Y ☐ N

Custody seals on containers? ☒ Y ☐ N

Custody seals on cooler(s)? ☒ Y ☐ N

Sample Hand Delivered? ☒ Y ☐ N

By Sampler/Client Rep.? ☒ Y ☐ N

UPS? ☒ Y ☐ N

DHL? ☒ Y ☐ N

FedEx? ☒ Y ☐ N

Temperature Upon Receipt: 2.32/2.25°C



PHONE (575) 393-2326 • 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	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,

Colby 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) 740-4131

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: NC- 2' (H801838-01)

BTX 80210		mg/kg	Analyzed By: MS				S-04		
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	24.0	
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					

Surrogate: 4-Bromofluorobenzene (PIL) 148 % 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*	<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

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 197 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Analyte and Compound: Cardinal Laboratories and its wholly owned subsidiary, the above listed, neither listed in contract or not, that be listed in the contract and by client for analysis. All clients, including those for analytical and any other cause whatsoever shall be deemed to have agreed to the terms and conditions of the applicable contract. It is noted that Cardinal be liable for liability or consequential damages, including, without limitation, business interruption, loss of data, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or from the performance of the services furnished by Cardinal, regardless of whether such claim is based upon any of the above stated methods or otherwise. This report shall not be reproduced, copied, or distributed without express written permission of Cardinal Laboratories.

Ceiley D. Keene

Ceiley 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:	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: NC- 5' (H801838-02)

BTX 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	07/07/2018	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 BTX	<0.300	0.300	07/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (BFL) 106% 69.8-142

TPH 0016M		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*	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% 41-142

Surrogate: 1-Chlorodecane 114% 37.6-147

Cardinal Laboratories * = Accredited Analyte

PLEASE NOTE: Quality and Quantity. Cardinal Laboratory and clients maintain liability for any data shown, whether based on testing or not, that is listed in the report sent by client for analysis. All clients, including those for emergency and any other cases, understand that the detection/confirmation results made in testing and reported by Cardinal Laboratories may vary from the results of the applicable method. In no event shall Cardinal be held liable for loss of or damage to property or consequential damages, including without limitation, business interruption, loss of use, or loss of profits incurred by client, in whatever amount or manner arising out of or related to the performance of the services furnished by Cardinal, regardless of whether such liability is based upon any of the above stated causes of action. Results shown only in the sample method column. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

FOG 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:	Coel & Intact
Project Number:	30-015-23315	Sample Received By:	Tamara Oldaker
Project Location:	COTTON MX FEDERAL COM #1		

Sample ID: NC- 10' (H801838-03)

BYEX 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	07/07/2018	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) 107 % 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	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 98.8 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Quality and Quantity. Cardinal Laboratories and its clients are not responsible for any errors or omissions that may occur in the analysis of samples. It is the responsibility of the client to provide accurate and complete information regarding the sample and its intended use. Cardinal Laboratories is not responsible for any errors or omissions that may occur in the analysis of samples. It is the responsibility of the client to provide accurate and complete information regarding the sample and its intended use.

Colley D. Keene

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

BTEX #0210		mg/lip		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					

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					

Surrogate: 1-Chlorooctadecane	91.9 %	37.6-147
-------------------------------	--------	----------

*=Accredited Analyte

[illegible]

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: EC- 5' (H801830-05)

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: 1-Bromofluorobenzene (BFB) 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	07/06/2018	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 96.6 % 41-143

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

CLIENT NOTE: Quality and integrity. Cardinal Laboratories and its clients adhere strictly to the rules of the industry, whether those rules are set by the state or by the client. We are committed to the highest quality of service and to the highest quality of results. We are committed to the highest quality of service and to the highest quality of results. We are committed to the highest quality of service and to the highest quality of results.

Celestine D. Keene

Celestine 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: 30-015-73315
Project Location: COTTON MX FEDERAL COM #1

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

DTX 8021U

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 (PFC)

109%

69.8-147

TPH 001574

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	NS	% 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

105 96

41-142

Surrogate: 1-Chlorooctadecane

97.7 %

37,6-147

Cardinal Laboratories

†=Accredited Analyte

[illegible]

Edg. A. Snow

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

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)

BYEX 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					

Startgatz: 4-Bromfluorbenzene (PIE	III %	69.8-142
------------------------------------	-------	----------

TPH 0015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRQ 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	99.4%	41-142
---------------------------	-------	--------

Stimulant: 1-Chlorooctadecane	92.9%	37.6-147
--------------------------------------	--------------	-----------------

Cardinal Laboratories

*=Accredited Analyte

ANALYSIS: ANALYST and OPERATOR Certificate holder's and their collective responsibility for any data analysis whether limited or complete or not, shall be limited to the amount paid by client for analysis. At times, including those for reference test by other states laboratories that be limited except while results is waiting and reviewed by Central values (CMV) (in this case cooperation at the appropriate service, it so exist will Central in field to identify or misinterpret drug(s), laboratory pattern features, marker interpretation, etc. if any, of test result received by client, to acknowledge, address or investigate every act or omission in the performance of the service directly by Central regardless of whether each client is satisfied or not of the overall clinical status of his/her patient. Results from tests for the sample must be shared. This report will be kept in CMV files and kept in CMV files upon approval of Central Laboratory.

Chas. D. Keane

Coley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBUS, 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: WC- 5' (H801838-08)

HTEX 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 HTEX	<0.300	0.300	07/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 106 % 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	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 95.0 % 41-142

Surrogate: 1-Chlorooctadecane 90.4 % 37.6-147

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Priority and emergency. Cardinal Laboratories and its clients maintain strictly confidential information and data, which is subject to the terms and conditions of the contract. All data, including but not limited to, test results and any other information, shall be treated as confidential and shall not be disclosed to any third party without the prior written consent of Cardinal Laboratories. In no event shall Cardinal Laboratories be liable for indirect or consequential damages, including, without limitation, loss of data, or loss of profits, caused by data, or information, whether or not caused by the negligence of the service provided by Cardinal Laboratories, regardless of whether such data is based upon any of the data stored on our servers. Results are only valid for the sample ID and date. This report shall not be reproduced or used in any other manner without the prior written approval of Cardinal Laboratories.

Celley D. Keene

Celley 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: 07/06/2018
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 BTEX	<0.300	0.300	07/07/2018	ND					

Substrate: 4-Bromofluorobenzene (PIE)

107.2%

69.8-142

TRH 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					

Substanz: 1-Chloropentane

27.4%

41-142

Surrogate: 1-Chlorononadecane

89.3 %

37,6-147

Cardinal Laboratories

*=Accredited Analyte

[illegible]

Elizabeth Hanna

Coley D. Keane, 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
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- 2' (H801838-10)

BTEX #0210	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					

Substrate: 4-Nitrofluorobenzene (PIL)	109%	69.8-142
---------------------------------------	------	----------

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	07/06/2018	ND	213	107	200	5.75	
DR0 >C10-C28*	19.7	10.0	07/06/2018	ND	214	107	200	19.7	
EXT DR0 >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
-------------------------------	--------	----------

Cardinal Laboratories

*=Accredited Analyte

page 1000. History and Geography. Conflicts fairly and evenly between itself by its own ability, whether based in nature or not, shall be found to the strongest proof of itself for success. All men, including those in positions of any other men who would be forced upon others made in nature and reached by Central where they [?] are also available in the systems of men. In an event that Central be found to be hindered in consequence of its own, having without intention, however indirectly, the use of, or use of power based by itself, its possession, whether in execution or not, is taken in the performance of the system formerly by Central, together in whether and in what manner it can be found to be hindered in the same manner. This report shall be prepared and sent to all the other agencies of Central Government.

Calvin L. Hoover

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:	07/06/2018	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: 1-Bromofluorobenzene (PFB) 108 % 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*	<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

Cardinal Laboratories

*=Accredited Analyte

NOTE: Only soil samples. Results may not be used for any other purpose. Results are based on the sample received by the laboratory. If the sample is not as described, the results may be affected. The results are based on the sample received by the laboratory. If the sample is not as described, the results may be affected. The results are based on the sample received by the laboratory. If the sample is not as described, the results may be affected.

Celley D. Keene

Celley 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
ARTEZIA 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- 10' (H801838-12)

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-Fluorofluorobenzene (PFC) 107 % 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*	<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 98.2 % 41-142

Surrogate: 1-Chlorooctadecane 90.5 % 32.6-147

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: This report was prepared by Cardinal Laboratories, Inc. and is subject to the terms and conditions of the analytical contract. The results of this analysis are for informational purposes only and should not be used for legal or regulatory purposes. The results of this analysis are for informational purposes only and should not be used for legal or regulatory purposes. The results of this analysis are for informational purposes only and should not be used for legal or regulatory purposes.

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

- 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-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 SM4500C-B does not require samples be received at or below 6°C
Samples reported on air as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

DISCLAIMER: Liability and Damages. Cardinal Laboratories and its staff neither certify nor warrant the accuracy or reliability of any data or information provided by Cardinal Laboratories. In no event shall Cardinal Laboratories be held liable for any damages, including without limitation, direct, indirect, or consequential damages, arising out of or related to the performance of the services provided by Cardinal Laboratories. The report shall not be reproduced or used in any way without the written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES
101 East Mainland, Hobbs, NM 88240

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

91 of 51 pages

Project Manager: Chase Settle

Project Name: Cotton MAX Federal Com #1

Company Name: EOG Y Resources Inc

Project #: 30-015-23315

Company Address: 105 South 4th Street

Project Loc: Cotton MAX Federal Com #1

City/State/Zip: Artesia, NM 88210

PO #: 205-0750

Telephone No: 575-748-4471

Fax No:

Report Format: ☒ Standard ☐ TRAP ☐ NPDES

Sampler Signature: [Signature]

e-mail:

Chase.Settle@eoresources.com

(Lab use only)

ORDER #: 4801838-

LAB # (if lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers	Matrix	TOX: TOTAL	Analyte For
1	NC-2'			7/4/2016	10:13 AM		1 X	For: HNO ₃ , HCl, H ₂ SO ₄ , NaOH, Na ₂ SO ₄ , None, Other (Specify)	Drinking Water, Surface Water, Groundwater, Surface Water, Other (Specify)	TPH: 1000, TX 1000	Carbon (C, H, N, S), Anions (Cl, SO ₄ , Alkalinity), BAK/ESP/CEC, Metals (As, Ag, Ba, Cd, Cr, Pb, Hg, Bi), Volatiles, Semivolatiles, DTEX: 0021B, RCI, N.O.R.M., Chlorides, SAR, RUSH TAT (pH, BOD, DO, 72 hrs), Standard TAT
2	NC-5'			7/4/2016	10:15 AM		1 X				
3	NC-10'			7/4/2016	10:18 AM		1 X				
4	EC-2'			7/4/2016	9:40 AM		1 X				
5	EC-5'			7/4/2016	9:45 AM		1 X				
6	EC-10'			7/4/2016	9:51 AM		1 X				
7	WC-2'			7/4/2016	9:56 AM		1 X				
8	WC-5'			7/4/2016	10:05 AM		1 X				
9	WC-10'			7/4/2016	10:08 AM		1 X				
10	SC-2'			7/4/2016	9:25 AM		1 X				

Special Instructions:

TPH EXTENDED needed.

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

Relinquished by: Date: Time: Received by: Date: Time:

Relinquished by: Date: Time: Received by: Date: Time:

Temperature Upon Receipt: 21.2 °C

by: [Signature] Date: 7-6-16 Time: 10:45



CARDINAL LABORATORIES
101 East Maryland, Hobbs, NM 88240

(505) 393-2226 FAX (505) 393-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Page 16 of 16

Project Manager: Chase Settle

Company Name EDGE Y Resources Inc.

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4371

Supplier Signature:

Fax: No:

ഭാഗ്യം:

Chase Settle@eogresources.com

Report Format ☒ Standard

37

☐ NPDES

Project Name: Cotton MX Federal Com #1

Project #: 30-015-23315

Project Loc: Cotton Mix Federal Com #1

FO# 205-0750

[illegible]



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

July 27, 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 07/23/18 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	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,

Celso 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
Reported: 07/27/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 07/19/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received by: Tamara Oldaker

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

BTEX 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 BTEX	<0.300	0.300	07/25/2018	ND					

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

TPH #015M	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-Chloroacetylene	90.0%	41-142
------------------------------	-------	--------

Surrogate: 1-Chlorooctadecane	87.5%	37.6-147
-------------------------------	-------	----------

Cardinal Laboratories

*=Accredited Analyte

FIXED PRICE: Quantity and description, Contractor's ability and ability to deliver entirely for the fixed selling, whether based on contract or not, shall be fixed by the amount paid by client for the material. If client, including those for redress and any other cause whatsoever shall be deemed waived when party is noting and limited by contract when party (X) that that exception of the applicable statute. It is no more than Contract as to be included in CONTRACT definition, including, without limitation, financial statements, has a limit of profit limited by that, to include that, subject to contract or contract selling and or limited to the performance of the service furnished by Contract, regardless of whether such contract is not more than the above stated contract in kind, but not in fact or in the contract itself. The contract shall not be improved or changed in fact or in the contract itself or in the contract itself.

Chy. DuRoi

Celey 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: 07/23/2018
Reported: 07/27/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 07/19/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Olander

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

UTEX 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	5.85	97.5	6.00	0.831	
Total BTEX	<0.300	0.300	07/25/2018	ND					

Synonyms: 4-Bromofluorobenzene (PIL)

116%

69.5-142

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	07/25/2018	ND	174	86.8	200	7.74	
DRO >C10-C20*	<10.0	10.0	07/25/2018	ND	193	96.3	200	2.82	
EXT DRO >C20-C36	<10.0	10.0	07/25/2018	ND					

Surrogate: 1-Chlorooctane

56.5%

41-142

Surrogate: 1-Chloro-2,4-diacetamido

86198

37.6-147

Cardinal Laboratories

*=Accredited Analyte

[illegible]

Chytrina

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: RF							
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	5.05	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-C20*	<10.0	10.0	07/25/2018	ND	193	96.3	200	2.82	
EXT DRO >C20-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: Liability and Disputes: Cardinal Analyte and clients collectives solely for the data which is collected in this report. All data, including those for negligence and any other cause whatsoever shall be deemed correct unless noted by Cardinal within 180 days of the completion of the analytical work. In no event shall Cardinal be liable for negligent or consequential damages, including, without limitation, business interruption, loss of use, or loss of profits caused by data, or substituting, altering or otherwise using any or all of the data in the performance of the project. However, by Cardinal, regardless of whether such data is collected upon any of the above stated claims or otherwise. Cardinal shall only be liable for the data which is collected. This report shall not be considered complete without the signature of Cardinal Laboratories.

Ceiley D. Keene

Ceiley 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 SM-4500C1 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 and Warranty: Cardinal hereby and clearly certifies accuracy for any data being submitted based on current as lab, that is listed in the amount paid by client for analysis. All data is subject to change and any data must always be obtained based upon results in sample and method by Cardinal within 100 days after completion of the applicable method. It is not valid that Cardinal be held for liability in subsequent damage, including, without limitation, liability for loss of time or other losses caused by data. It is further agreed that no liability shall be assumed by Cardinal for any data or results of the stated laboratory by Cardinal regardless of whether data is submitted upon any of the above stated tests or methods. Results are only for the specific listed items. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Caley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOUBBS, 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 880240

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
Reported: 07/27/2018
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 07/19/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

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	108	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

NOTES: Quality and Quantity. Cardinal Laboratories and its subsidiaries are not responsible for any errors, omissions, or delays in the analysis of samples. All data, including those for samples and any other substances, shall be deemed valid unless noted in writing and received by Cardinal within thirty (30) days after completion of the applicable analysis. In no event shall Cardinal be liable for indirect or consequential damages, including, without limitation, business interruption, loss of data, or loss of profits, caused by errors, omissions, delays, or omissions, arising out of or related to the performance of the services rendered by Cardinal, regardless of whether such errors or omissions arise from any of the above stated causes or otherwise. Results relate only to the sample(s) described above. This report shall not be relied upon except in full with written approval of Cardinal Laboratories.

Ceiley D. Keene

Ceiley 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-9 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 laboratory results are subject to any errors arising, whether based on human or test, that are listed in the report. It is the user's responsibility to ensure the accuracy and reliability of the results. Cardinal's laboratory results are subject to any errors arising, whether based on human or test, that are listed in the report. It is the user's responsibility to ensure the accuracy and reliability of the results. Cardinal's laboratory results are subject to any errors arising, whether based on human or test, that are listed in the report. It is the user's responsibility to ensure the accuracy and reliability of the results.

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 141
RECEIVED OCT 16 1900
U. S. DEPT. OF JUSTICE
OFFICE OF THE ATTORNEY GENERAL
WASHINGTON, D. C.
RECEIVED OCT 16 1900
U. S. DEPT. OF JUSTICE
OFFICE OF THE ATTORNEY GENERAL
WASHINGTON, D. C.

☒ Initial Report ☐ Final Report

ZRP-2355

District I
 1825 N. Pecos Dr., Hobbs, NM 88240
 District II
 811 S. First St., Artesia, NM 88210
 District III
 1000 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 Gallon MX Federal Cam, #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 Eddy
------------------	---------------	-----------------	--------------	-----------------------	---------------------------	------------------------	------------------------	----------------

Latitude 32.65568 Longitude -104.45631

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 1500 B/PW	Volume Recovered 1450 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 Bratbyder, Heather Patterson, Randy Dule, Jim Amor	
By Whom? Bob Ashler	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.*

Tramadol 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 remove standing fluid. Backhoe was also dispatched to remove impacted soils. Excavated soils will be hauled to a NMOC 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 BREAL's (also ranking 1-11) a Final Report, C-141 will be submitted to the OGD requesting closure. If the analytical results are above the BREAL's a work plan will be submitted to the OGD. Depth to Ground Water: 30-50' (approximately 50', Section 14, T19S-R25E, 4th Trend Road). Wellhead Protection Area: No. Distance to Surface Water Body: >1000', BTEX 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 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 Environmental Specialist:	
Title: NM Environmental Regulatory Agent	Approval Date: 1/7/16	Expiration Date: N/A
E-mail Address: csuttle@ynatespetroleum.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: 1/11/16

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 25R	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@egoresources.com		Conditions of Approval: Attached ☐
Date: Thursday, September 06, 2016 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 BOG Y Resources, Inc.	Contact Chase Settle
Address 104 S. 4th 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? Bob 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, BOG 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 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: <i>Chase Settle</i>		OIL CONSERVATION DIVISION
Printed Name: Chase Settle		Approved by Environmental Specialist:
Title: Rep Safety & Environmental II	Approval Date:	Expiration Date:
E-mail Address: Chase.Settle@ecogresources.com	Conditions of Approval:	Attached ☐
Date: Thursday, September 6, 2018	Phone: 575-748-1471	2RP-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

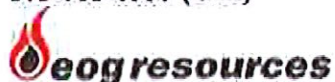
Please find attached the Closure Report for the below listed location.

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:

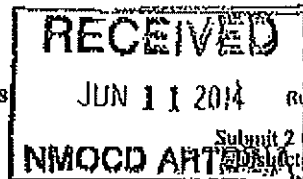
Shelly,

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

NHMP1412B34904

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Yates Petroleum Corporation	OORID 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 6/11/2014; PM	Date and Hour of Discovery 6/11/2014; 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.		
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.		

OIL CONSERVATION DIVISION

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

* Attach Additional Sheets if Necessary

7/28/14

2RP-2355

Bratcher, Mike, EMNRD

From: Tanna Adams <TCAAdams@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
TCAAdams@yatespetroleum.com

This message may contain confidential information and is intended for the named recipient only. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited. E-mail transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. The sender therefore does not accept liability for any errors or omissions in the contents of this message, which arise as a result of e-mail transmission. If verification is required please request a hard-copy version.

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)

This message may contain confidential information and is intended for the named recipient only. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited. E-mail transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. The sender therefore does not accept liability for any errors or omissions in the contents of this message, which arise as a result of e-mail transmission. If verification is required please request a hard-copy version.

YATES PETROLEUM CORP.
1912-1985
FRANK W. YATES
1926-1985
S.P. YATES
1914-1985



105 SOUTH FORTTH STREET
ARTESIA, NEW MEXICO 88210-2110
TELEPHONE (575) 748-1071

WALTER A. YATES
CHAIRMAN OF THE BOARD
JOHN A. YATES JR.
PRESIDENT
JOHN D. PERINE
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.

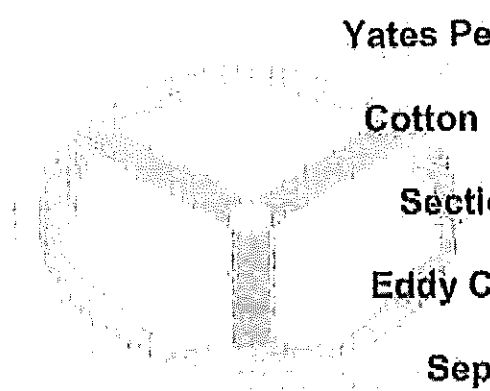
YATES PETROLEUM CORPORATION

Chase Settle
Environmental Regulatory Agent

Enclosure(s)

KATHY H. PORTER
SECRETARY

DENNIS G. 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 NMOC 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 (8/19/2014) and sent to a NMOC 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 NMOC 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 NMOC approved laboratory (8/06/2014, 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:

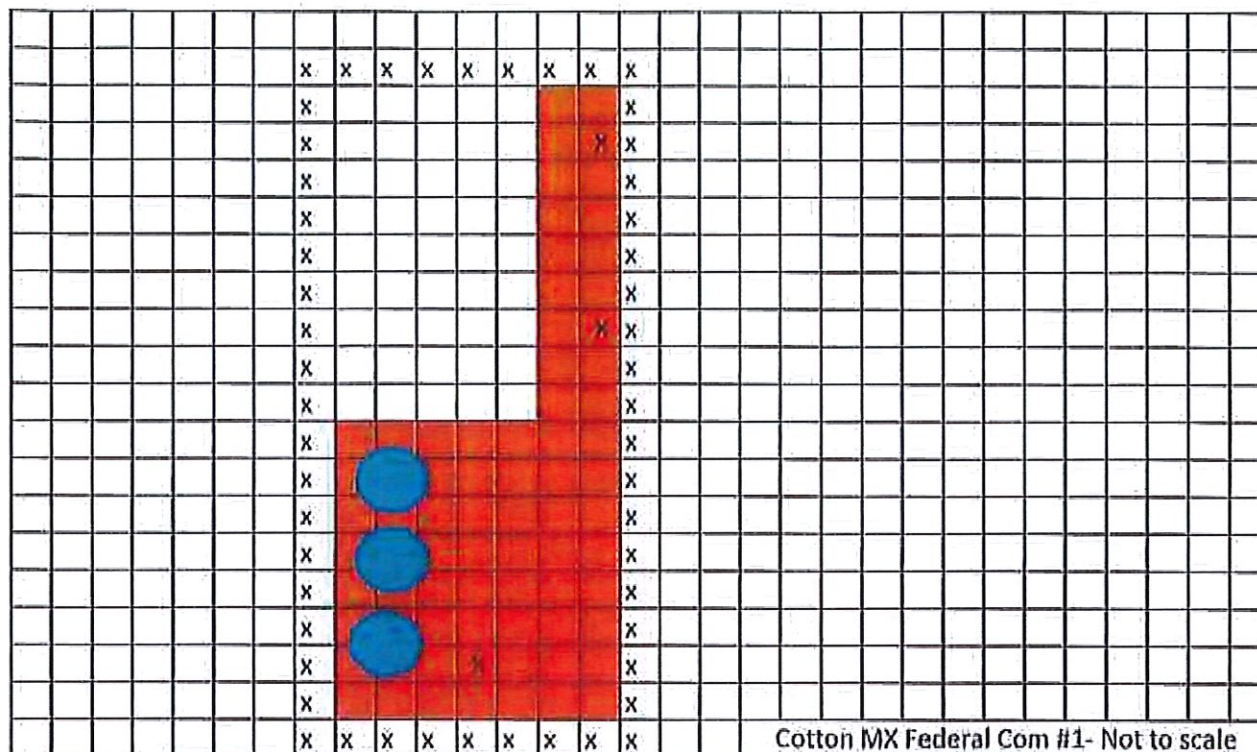
Depth to ground water	50-89'
Wellhead Protection Area	> 1000'
Distance to surface water body	> 1000'

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 NMOC 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 RRAL'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 NMOC 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,

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:	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)

BTEX 8021H		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, SM4500Cl-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	106	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

PLEASE NOTE: Analyte and Compound. Cardinal Laboratory and Client acknowledge liability for any data shown, whether based on contract or not, and is limited to the amount paid by client for analysis. All claims, including those for negligence and any other claims whatsoever, shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event will Cardinal be liable for incidental or consequential damages, including, without limitation, business interruption, loss of data, or loss of profits incurred by client, its subsidiaries, affiliates or licensees using any of or reliance on the performance of the service rendered by Cardinal, regardless of whether such claim is based upon any of the above stated causes or otherwise. Results relate only to the analytical method shown. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene

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:	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: S1-2' (H401920-02)

mg/kg			Analyzed By: CK						
BTXES 80210									
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 BTXES	<0.300	0.300	06/28/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIF) 97.2 % 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	3200	16.0	06/30/2014	ND	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed By: M5					

TPH 8015M	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	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 % 65.2-140

Surrogate: 1-Chlorononadecane 89.0 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Quality and Quantity. Cardinal Laboratories and its clients certify results for any data which should be used to support a claim. It is the responsibility of the client to ensure that the data is used for the intended purpose and that the data is not used for any other purpose. Cardinal Laboratories is not responsible for any data which is used for any other purpose. Cardinal Laboratories is not responsible for any data which is used for any other purpose. Cardinal Laboratories is not responsible for any data which is used for any other purpose.

Celestine D. Keene

Celestine 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: 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: S1-3' (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 (PIE) 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

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Liability And Coverage: Cardinal Laboratories and clients assume liability for any data errors; whether based in contract or tort, shall be limited to the amount paid by client for analysis. All claims, including those for negligence and any other cause whatsoever shall be limited to the amount paid by client and reduced by Cardinal's net profit (10) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, on whatever basis, whether or not caused by the negligence of the provider furnished by Cardinal, regardless of whether such claims filed upon any of the above stated causes or otherwise. Results reported by the analyst identified above. This report shall not be reproduced except by fully paid, written request of Cardinal Laboratories.

Coley 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) 748-1635

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: S1-4' (H401920-04)

BTEX B021B		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 Limit	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
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 69.6 % 65.2-140

Surrogate: 1-Chlorodecane 89.9 % 63.6-134

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Quality and Quantity. Cardinal Laboratories and its clients warrant only to the client and only to the extent of the contract. All data, including data for replicate and trip, are the property of Cardinal Laboratories and are not to be used for any other purpose without the written consent of Cardinal Laboratories. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profit, caused by data, its laboratory, analysis or equipment, when such loss or damage is caused by the negligence of Cardinal Laboratories. This report shall not be reproduced or used for any other purpose without the approval of Cardinal Laboratories.

Cately 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

PLEASE NOTE: Quality and Quantity. Cardinal Laboratories and clients agree to the following: In any data being, whether stated in contract or not, that be limited to the amount paid by client for analysis. All data, including those in response and any other data information that be deemed invalid unless made in writing and verified by Cardinal within thirty (30) days after completion of the applicable service. It is to be noted that Cardinal is not responsible for transportation charges, including, without limitation, handling, insurance, loss of data, or loss of data received by client, all of which are the responsibility of the client. Cardinal Laboratories and its affiliates are not responsible for the performance of the services provided by Cardinal, regardless of whether such data is based upon any of the above stated method of analysis. Cardinal Laboratories only be for samples received above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



ARBORAL LABORATORIES
101 East Mainland, Hobbs, NM 88240

(505) 393-2326 FAX (505) 393-2479

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Project Name: Cotton Federal SWD #1

Page 7 of 7

Company (ISO): 393-2326 Yates Petroleum Corporation

Project #:

Company Address: 105 South 4th Street

Project Loc: Cotton Federal SWD #1

City/State/Zip: Artesia, NM 88210

PO #: 205750

Telephone No: 575-748-4171

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ TRSP ☐ NPDES

Sampler Signature: [Signature]

e-mail: csettle@yatespetroleum.com

(Lab use only)

ORDER #: 4401920

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	S1-1			6/19/2014	1:30 PM		1	X		ICP-MS TX 1005 TX 1006 Cations (Ca, Mg, Na, K) Anions (Cl, SO4, Ammonia) SAR / ESP / OEC Metals As, Ag, Bi, Cd, Cr, Pb, Hg, Sn Volatiles Semi-volatiles BTEX (B, T, X, O) or BTEX (B, T, X, O) HCl NORM Chlorides SAR RUSH TAT (Pre-Schedule) 24, 40, 72 hrs Standard TAT
2	S1-2			6/19/2014	1:30 PM		1	X		
3	S1-3			6/19/2014	1:30 PM		1	X		
4	S1-4			6/19/2014	1:30 PM		1	X		

Special Instructions:

Relinquished by: [Signature]

Relinquished by: [Signature]

Relinquished by: [Signature]

Date: 6/25/14 Time: 11:38 AM

Date: 6/25/14 Time: 4:14 PM

Date: 6/25/14 Time: 4:14 PM

Received by: [Signature]

Received by: [Signature]

Received by: [Signature]

Date: 6/25/14 Time: 11:34 AM

Date: 6/25/14 Time: 4:14 PM

Date: 6/25/14 Time: 4:14 PM

Laboratory Comments:
Sample Containers intact?
VOCs Free of Headspace?
Labels on container(s)
Custody seals on container(s)
Custody seals on code(s)
Sample Hand Delivered
by Sampler/Client Rep.?
by Courier? UPS DHL FedEx Lane-Str

Temperature Upon Receipt: 6.0 °C



PHONE (575) 393-2326 • 101 E. MARLAND • HODDS, 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,

Celest 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)

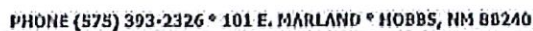
Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2160	16.0	07/15/2014	ND	432	108	400	0.00	

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Quantity and Storage: Cardinal's liability for claims and/or injury for any data arising, whether based in contract or tort, shall be limited to the amount paid by client for analysis. All claims, including those for negligence and any other claim whatsoever shall be barred against initial tests in writing and received by Cardinal within thirty (30) days after completion of the applicable analysis. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, loss of data, or loss of profits incurred by client, its subsidiaries, affiliates or customers arising out of or in connection with the performance of the services furnished by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results shown only in this report (if any) shall be void. This report shall not be reproduced except in full without written approval of Cardinal Laboratories.

Celay 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

Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Mainland, Hobbs, NM 88243

(505) 393-2326 FAX (505) 393-2375

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name:

Cotton Federal SWD = 1

Project #:

Project Loc:

Cotton Federal SMD #7

Page 4 of 4

Project Manager: Chase Settle

Comp: (505) 393-2322 Yates Petroleum Corporation

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4171

Fax No: 575-748-4131

Sampler Signature:

e-mail: csettle@vatescetroileum.com

Report Format: ☒ Standard

PD #: 205750

ilab use only

4402131

ORDER # 11402050[illegible]



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	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. 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		mg/Kg		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		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	ND	416	104	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal hereby and clearly disclaims liability for any other analysis, whether kind or extent, which is limited to the amount paid by client for analysis. No claims, whether third party negligence and any other claims, shall be asserted against Cardinal until after the receipt by Cardinal within thirty (30) days after completion of the applicable period. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, loss of data, or loss of profits caused by them, its subsidiaries, affiliates or personnel, except as is stated in the performance of the analytical services by Cardinal, regardless of whether such claim is based upon any of the above stated causes or otherwise. This report shall not be reproduced, stored in a retrieval system, or transmitted in any form or by any means electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without prior written permission of Cardinal Laboratories.

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

PLEASE NOTE: Analyte and ranges, Cardinal testing and their's accuracy is only for dry state unless otherwise noted in column 2, that is limited to the amount per dry state for analytes. All items, including those for reference and for other state laboratories that the tested analyte is made in water and received by Cardinal as dry state (D) dry state samples of the appropriate analyte. In all cases that Cardinal be used for reference or subsequent testing, including, without limitation, further processing, but of use, in form of results received by state, the laboratory, whether or accuracy being not or added to the performance of the service provided by Cardinal, regardless of whether such third party testing of the state listed analyte or otherwise, results shall only be the results listed above. This report shall not be reproduced except in full with this report of Cardinal Laboratories.

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)

This message may contain confidential information and is intended for the named recipient only. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited. E-mail transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. The sender therefore does not accept liability for any errors or omissions in the contents of this message, which arise as a result of e-mail transmission. If verification is required please request a hard-copy version.

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,

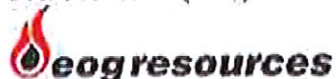
Per our meeting today (3/1/18 @ 1 p.m.), here is the Cotton MX Federal #1 Work Plan in electronic form. The request that you made for deeper samples to be taken at the FE+60 sample point during the time of remediation activities at the site is agreed to by EOG.

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.

Table of Contents

I.	Location.....	1
II.	Background.....	1
III.	Surface and Ground Water.....	1
IV.	NMOCD Ranking Criteria.....	1
V.	Soils.....	2
VI.	Scope of Work.....	2

Tables:

Table 1: Soil Analytical Data

Figures:

Figure 1: Site Map

Figure 2: Site Map with Sample Points

Appendices:

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 ml 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 BTX 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 impact 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

Cotton 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	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	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	-	-	-	-	-	-	-	-	-	3360
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	-	-	-	-	-	-	-	-	-	656
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	-	-	-	-	-	-	-	-	-	2900
S2-16'	21'	2/9/16	-	-	-	-	-	-	-	-	-	1200
S2-17'	23'	2/9/16	-	-	-	-	-	-	-	-	-	1300
S2-18'	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	-	-	-	-	-	-	-	-	-	128
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	-	-	-	-	-	-	-	-	-	2000
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	6.1	13	9.5	24	61.6	610	5600	-	6210	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	65	119.4	1000	6800	-	7800	270
T1-8'	8'	6/14/17	0.53	2.0	6.6	9.5	18.63	510	4900	-	5410	80
T1-9'	9'	6/14/17	3.1	6.2	4.5	11	24.8	570	7900	-	8470	180
T1-10'	10'	7/7/17	1.15	1.13	<0.2	21.6	23.0	541	3060	-	3601	-
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	<0.05	<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
Remediation Work Plan
2RP-2355 & 2RP-3474



March 1, 2018

T2-1'	1'	6/14/17	ND	0.06	3.3	38	42.26	620	9800	-	-	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	160	470	2800	12000	-	14900	360
T2-6'	6'	6/14/17	ND	3.3	9.2	66	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	<0.05	<0.05	<0.05	<0.15	<0.3	<10.0	<10.0	-	<10.0	-
T2-10'	10'	7/7/17	<0.05	<0.05	<0.05	<0.15	<0.3	<10.0	<10.0	-	<10.0	-
T2-12'	12'	7/7/17	<0.05	<0.05	<0.05	<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	640
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	-	-	-	-	-	-	-	-	-	260
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	-	-	-	-	-	-	-	-	-	810
NEB/T4-16'	16'	6/14/17	-	-	-	-	-	-	-	-	-	880
NEB/T4-18'	18'	6/14/17	-	-	-	-	-	-	-	-	-	260
NEB/T4-20'	20'	6/14/17	-	-	-	-	-	-	-	-	-	280
SS-1'	3'	5/6/16	-	-	-	-	-	-	-	-	-	160
SS-3'	3'	5/6/16	-	-	-	-	-	-	-	-	-	88
SE-1'	3'	5/6/16	-	-	-	-	-	-	-	-	-	1900
SE-3'	3'	5/6/16	-	-	-	-	-	-	-	-	-	420
SE-5'	3'	5/6/16	-	-	-	-	-	-	-	-	-	160
E-1'	3'	5/6/16	-	-	-	-	-	-	-	-	-	390
E-3'	3'	5/6/16	-	-	-	-	-	-	-	-	-	610
NE-1'	3'	5/6/16	-	-	-	-	-	-	-	-	-	5600
NE-3'	3'	5/6/16	-	-	-	-	-	-	-	-	-	120
N-1'	3'	5/6/16	-	-	-	-	-	-	-	-	-	4000
N-3'	3'	5/6/16	-	-	-	-	-	-	-	-	-	4600
N-5'	3'	5/6/16	-	-	-	-	-	-	-	-	-	2500
N-7'	3'	6/8/16	-	-	-	-	-	-	-	-	-	2600
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	-	-	-	-	-	-	-	-	-	2620
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	-	-	-	-	-	-	-	-	-	2880
FE+30-1'	1'	10/16/17	-	-	-	-	-	-	-	-	-	832
FE+30-3'	3'	10/16/17	-	-	-	-	-	-	-	-	-	2080
FE+46-1'	1'	10/26/17	-	-	-	-	-	-	-	-	-	<16.0
FE+46-3'	3'	10/26/17	-	-	-	-	-	-	-	-	-	304
FE+60-1'	1'	10/26/17	-	-	-	-	-	-	-	-	-	128
FE+60-3'	3'	10/26/17	-	-	-	-	-	-	-	-	-	2640

energy opportunity growth

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



March 1, 2018

FE+76-1'	1'	10/26/17	-	-	-	-	-	-	-	-	-	<10.0
FE+76-3'	3'	10/26/17	-	-	-	-	-	-	-	-	-	15

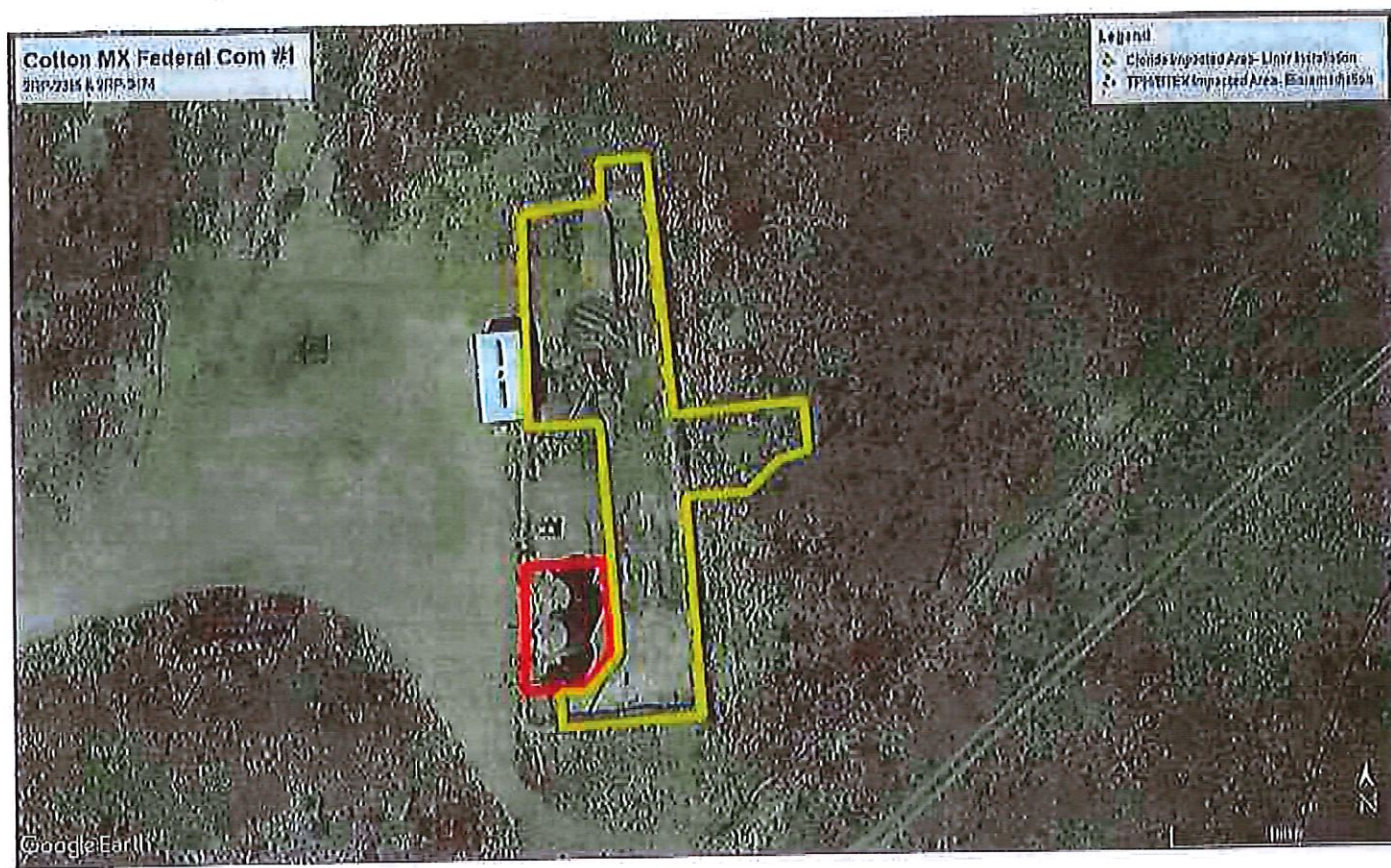
Cotton MX Federal Com #1
Remediation Work Plan
2RP-2355 & 2RP-3474



March 1, 2018

Figure 1

Site Map



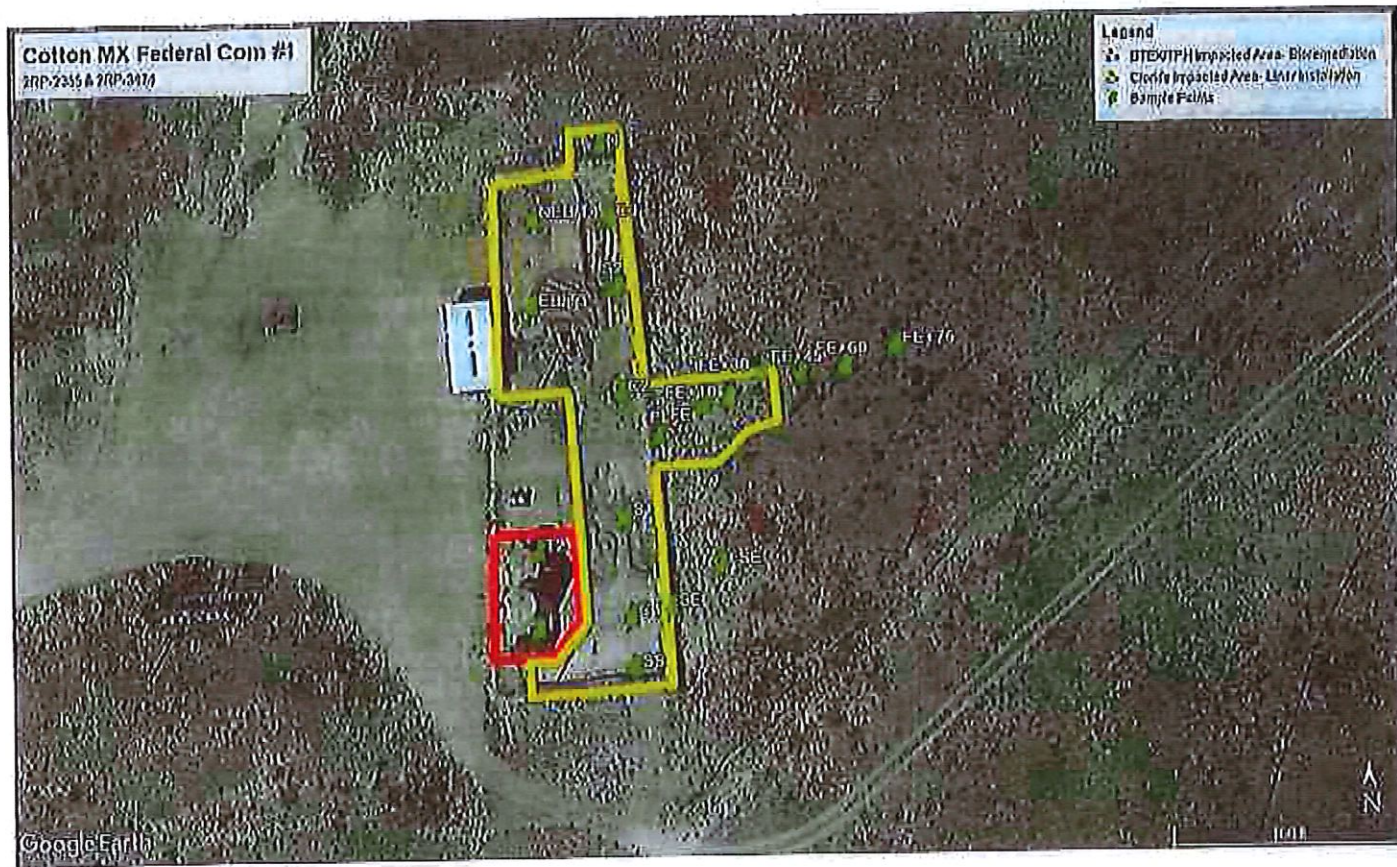
Cotton MX Federal Com #1
Remediation Work Plan
2RP-2355 & 2RP-3474



March 1, 2018

Figure 2

Map with Sample Points



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



March 1, 2018

Appendix A

NMOSE Well Log



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

CAUTION: This
information is for
information only and
should not be used
for any other purpose.

(If FOD is
located, it
should be
marked with
a red dot.)

Distance to 1-2W 2-3W 3-4W 4-5W
(in miles)

(RADII) (in miles)

(in feet)

Station
Number
404

FOU Number
RAA4116

Code
RAA4116

Depth
20

Width
10

Area
200

Volume
2000

Weight
20000

Value
200000

Cost
2000000

Benefit
20000000

Loss
200000000

Gain
2000000000

Net
20000000000

Profit
200000000000

Loss
2000000000000

Gain
20000000000000

Net
200000000000000

Profit
2000000000000000

Loss
20000000000000000

Gain
200000000000000000

Net
2000000000000000000

Profit
20000000000000000000

Loss
200000000000000000000

Gain
2000000000000000000000

Net
20000000000000000000000

Profit
200000000000000000000000

Loss
2000000000000000000000000

Record Count: 1

UTAHIANUS Radiat Search Results

Feeling (X): 550055.75

Feeling (Y): 3614100.59

Radius: 1000

*UTM location was derived from WGS-84 Map

The data is furnished by the FOD/IVRC and is accepted by the recipient with the understanding that the USBOIC makes no warranty, expressed or implied, as to the accuracy, completeness, reliability, or suitability for any particular purpose of the data.

2/28/10 1:26 PM

WELLS WITH WELL LOG INFORMATION

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



March 1, 2018

Appendix B

USGS Groundwater Data



science for a changing world

National Water Information System: Map View

Sites ☒ Map Layers

Search Results

Export Sites

Site Number	Site Name
2239531042744	195,250,14,133131
BL	

Site Information

Site Number: 223953104274401
Site Name: 195,250,14,133131
Agency: USGS
[Access Data](#)

Search Parameters

Explanation of Symbols





National Water Information System Web Interface

USGS Water Resources

 USGS Home
 Contact USGS
 Search USGS

 Data Category: **Groundwater** | Geographic Area: **United States** | **GO**

Click to Hide/Show Bulletins

- [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 , 01/01/2018
[Save file of selected sites](#) to local disk for future upload

USGS 323953104274401 196.25E.14.133131

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 (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reformat build

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		S	USGS	A
2005-02-03	09:45 MST	m	91.42				2		S	NH001	R
2005-07-14	12:30 MST	m	91.72				2		S	NH001	A
2007-02-09	11:00 MST	m	92.35				2		S	NH001	A
2009-01-15	09:25 MST	m	94.90				2		S	NH001	A
2010-01-21	10:00 MST	m	104.46				2		S	NH001	A
2011-01-21	10:35 MST	m	103.40				2		S	NH001	A
2012-01-05	06:45 MST	m	103.69				2		S	NH001	A
2015-01-13	13:23 MST	m	97.65				2		S	NH001	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	NH001	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
Remediation Work Plan
2RP-2355 & 2RP-3474



March 1, 2018

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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order: 1601540

Date Reported: 1/11/2016

Hall Environmental Analysis Laboratory, Inc.

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

Analytes	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
Analyst: LGT							
EPA METHOD 300.0: ANIONS							
Chloride	6200	300		mg/Kg	200	1/18/2016 6:46:37 PM	23267
Analyst: KJH							
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	16	9.8		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 6:51:39 PM	23236
Sum: BFB	83.8	88.2-112		%REC	1	1/18/2016 6:51:39 PM	23236
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.050		mg/Kg	1	1/18/2016 6:51:39 PM	23236
Toluene	ND	0.050		mg/Kg	1	1/18/2016 6:51:39 PM	23236
Ethylbenzene	ND	0.050		mg/Kg	1	1/18/2016 6:51:39 PM	23236
Xylenes, Total	ND	0.088		mg/Kg	1	1/18/2016 6:51:39 PM	23236
Sum: 4-Bromofluorobenzene	100	80-120		%REC	1	1/18/2016 6:51:39 PM	23236

Lab ID: 1601540-002

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

Client Sample ID: S1-2'

Matrix: SOIL

Analytes	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 6:50:02 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	88.7	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 7:16:16 PM	23236
Sum: BFB	94.0	88.2-112		%REC	1	1/18/2016 7:16:16 PM	23236
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.048		mg/Kg	1	1/18/2016 7:16:16 PM	23236
Toluene	ND	0.048		mg/Kg	1	1/18/2016 7:16:16 PM	23236
Ethylbenzene	0.057	0.048		mg/Kg	1	1/18/2016 7:16:16 PM	23236
Xylenes, Total	ND	0.088		mg/Kg	1	1/18/2016 7:16:16 PM	23236
Sum: 4-Bromofluorobenzene	105	80-120		%REC	1	1/18/2016 7:16:16 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	

Page 1 of 10

Analytical Report

Lab Order: 1601540

Date Reported: 1/21/2016

Hall Environmental Analysis Laboratory, Inc.

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	1/18/2016 7:11:27 PM	23267
Analyst: KJH							
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	140	9.8		mg/Kg	1	1/18/2016 2:40:46 PM	23241
Surf: DNOP	85.4	70-120		%REC	1	1/18/2016 2:40:46 PM	23241
Analyst: NSB							
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/18/2016 11:57:14 PM	23236
Surf: BFB	91.6	68.2-112		%REC	1	1/18/2016 11:57:14 PM	23236
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.049		mg/Kg	1	1/18/2016 11:57:14 PM	23236
Toluene	ND	0.049		mg/Kg	1	1/18/2016 11:57:14 PM	23236
Ethylbenzene	ND	0.049		mg/Kg	1	1/18/2016 11:57:14 PM	23236
Xylenes, Total	ND	0.097		mg/Kg	1	1/18/2016 11:57:14 PM	23236
Surf: 4-Bromofluorobenzene	101	80-120		%REC	1	1/18/2016 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	1/18/2016 7:28:51 PM	23267
Analyst: KJH							
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	100	9.8		mg/Kg	10	1/18/2016 6:58:44 PM	23241
Surf: DNOP	0	70-120	S	%REC	10	1/18/2016 6:58:44 PM	23241
Analyst: NSB							
EPA METHOD 8018D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/18/2016 7:38:47 PM	23236
Surf: BFB	90.8	68.2-112		%REC	1	1/18/2016 7:38:47 PM	23236
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.048		mg/Kg	1	1/18/2016 7:38:47 PM	23236
Toluene	ND	0.048		mg/Kg	1	1/18/2016 7:38:47 PM	23236
Ethylbenzene	ND	0.048		mg/Kg	1	1/18/2016 7:38:47 PM	23236
Xylenes, Total	ND	0.096		mg/Kg	1	1/18/2016 7:38:47 PM	23236
Surf: 4-Bromofluorobenzene	106	80-120		%REC	1	1/18/2016 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 times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RLD 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

Page 2 of 10

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1601540

Data Reported: 1/21/2016

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

Lab Order: 1601540

Lab ID: 1601540-005

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

Client Sample ID: S1-5'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	7100	300		mg/Kg	200	1/19/2016 7:36:16 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	23236
Sum: BFB	87.8	86.2-112		%REC	1	1/18/2016 8:02:13 PM	23236
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	1/18/2016 8:02:13 PM	23236
Toluene	ND	0.047		mg/Kg	1	1/18/2016 8:02:13 PM	23236
Ethylbenzene	ND	0.047		mg/Kg	1	1/18/2016 8:02:13 PM	23236
Xylenes, Total	ND	0.084		mg/Kg	1	1/18/2016 8:02:13 PM	23236
Sum: 4-Bromofluorobenzene	101	80-120		%REC	1	1/18/2016 8:02:13 PM	23236

Lab ID: 1601540-006

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

Client Sample ID: S1-6'

Matrix: SOIL

Analyses	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 8:02:26 PM	23241
Sum: DNOP	95.5	70-130		%REC	1	1/18/2016 8:02:26 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	23236
Sum: BFB	91.8	86.2-112		%REC	1	1/18/2016 8:25:38 PM	23236
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	1/18/2016 8:25:38 PM	23236
Toluene	ND	0.047		mg/Kg	1	1/18/2016 8:25:38 PM	23236
Ethylbenzene	ND	0.047		mg/Kg	1	1/18/2016 8:25:38 PM	23236
Xylenes, Total	ND	0.085		mg/Kg	1	1/18/2016 8:25:38 PM	23236
Sum: 4-Bromofluorobenzene	107	80-120		%REC	1	1/18/2016 8:25:38 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	

Page 3 of 10

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	1/12/2016 8:01:05 PM	23207
Analyst: KJH							
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	80	10		mg/Kg	1	1/12/2016 8:01:12 PM	23241
Sum: DNOP	70.2	70-120		%REC	1	1/12/2016 8:01:12 PM	23241
Analyst: NSB							
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	17	4.9		mg/Kg	1	1/12/2016 12:20:49 AM	23238
Sum: BFB	178	66.2-112	S	%REC	1	1/12/2016 12:20:49 AM	23238
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.049		mg/Kg	1	1/12/2016 12:20:49 AM	23238
Toluene	ND	0.049		mg/Kg	1	1/12/2016 12:20:49 AM	23238
Ethylbenzene	0.082	0.049		mg/Kg	1	1/12/2016 12:20:49 AM	23238
Xylenes, Total	0.30	0.088		mg/Kg	1	1/12/2016 12:20:49 AM	23238
Sum: 4-Bromofluorobenzene	118	80-120		%REC	1	1/12/2016 12:20:49 AM	23238

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	1/12/2016 8:13:29 PM	23267
Analyst: KJH							
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	12	9.8		mg/Kg	1	1/12/2016 3:24:15 PM	23241
Sum: DNOP	82.8	70-120		%REC	1	1/12/2016 3:24:15 PM	23241
Analyst: NSB							
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/12/2016 12:44:23 AM	23238
Sum: BFB	93.8	66.2-112		%REC	1	1/12/2016 12:44:23 AM	23238
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.049		mg/Kg	1	1/12/2016 12:44:23 AM	23238
Toluene	ND	0.049		mg/Kg	1	1/12/2016 12:44:23 AM	23238
Ethylbenzene	ND	0.049		mg/Kg	1	1/12/2016 12:44:23 AM	23238
Xylenes, Total	ND	0.099		mg/Kg	1	1/12/2016 12:44:23 AM	23238
Sum: 4-Bromofluorobenzene	109	80-120		%REC	1	1/12/2016 12:44:23 AM	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 - 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
-------------	---	---

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	3000	100		mg/Kg	100	1/10/2016 8:25:54 PM	23267
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: KJH		
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/10/2016 3:46:56 PM	23241
Sur: DNOP	89.2	70-130		%REC	1	1/10/2016 3:46:56 PM	23241
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB		
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/10/2016 8:49:11 PM	23236
Sur: BFB	80.8	68.2-112		%REC	1	1/10/2016 8:49:11 PM	23236
EPA METHOD 8021B: VOLATILES					Analyst: NSB		
Benzene	ND	0.049		mg/Kg	1	1/10/2016 8:49:11 PM	23236
Toluene	ND	0.049		mg/Kg	1	1/10/2016 8:49:11 PM	23236
Ethylbenzene	ND	0.049		mg/Kg	1	1/10/2016 8:49:11 PM	23236
Xylenes, Total	ND	0.099		mg/Kg	1	1/10/2016 8:49:11 PM	23236
Sur: 4-Bromofluorobenzene	105	80-120		%REC	1	1/10/2016 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	1/10/2016 8:38:19 PM	23267
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: KJH		
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	1/10/2016 4:07:43 PM	23241
Sur: DNOP	83.5	70-130		%REC	1	1/10/2016 4:07:43 PM	23241
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB		
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/10/2016 10:23:31 PM	23236
Sur: BFB	80.3	68.2-112		%REC	1	1/10/2016 10:23:31 PM	23236
EPA METHOD 8021B: VOLATILES					Analyst: NSB		
Benzene	ND	0.046		mg/Kg	1	1/10/2016 10:23:31 PM	23236
Toluene	ND	0.046		mg/Kg	1	1/10/2016 10:23:31 PM	23236
Ethylbenzene	ND	0.046		mg/Kg	1	1/10/2016 10:23:31 PM	23236
Xylenes, Total	ND	0.092		mg/Kg	1	1/10/2016 10:23:31 PM	23236
Sur: 4-Bromofluorobenzene	103	80-120		%REC	1	1/10/2016 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

Page 5 of 10

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

Collection Date: 1/12/2016 3:28:00 PM

Client Sample ID: S2-5'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
Analyst: LGT							
EPA METHOD 300.0: ANIONS							
Chloride	2800	75		mg/Kg	60	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	1/18/2016 4:28:20 PM	23241
Sum: DNOP	89.0	70-130		%REC	1	1/18/2016 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	0.048		mg/Kg	1	1/18/2016 10:47:01 PM	23236
Toluene	ND	0.048		mg/Kg	1	1/18/2016 10:47:01 PM	23236
Ethylbenzene	ND	0.048		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

Collection Date: 1/12/2016 3:31:00 PM

Client Sample ID: S2-6'

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
Analyst: LGT							
EPA METHOD 300.0: ANIONS							
Chloride	2100	75		mg/Kg	60	1/20/2016 1:30:18 PM	23289
Analyst: KJH							
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/18/2016 4:51:03 PM	23241
Sum: DNOP	85.2	70-130		%REC	1	1/18/2016 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 11:10:28 PM	23236
Sum: BFB	88.7	88.2-112		%REC	1	1/18/2016 11:10:28 PM	23236
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
Benzene	ND	0.048		mg/Kg	1	1/18/2016 11:10:28 PM	23236
Toluene	ND	0.048		mg/Kg	1	1/18/2016 11:10:28 PM	23236
Ethylbenzene	ND	0.048		mg/Kg	1	1/18/2016 11:10:28 PM	23236
Xylenes, Total	ND	0.098		mg/Kg	1	1/18/2016 11:10:28 PM	23236
Sum: 4-Bromofluorobenzene	98.4	80-120		%REC	1	1/18/2016 11:10:28 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	RPLD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	

Page 6 of 10

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 #22, Federal Court										
Sample ID: MB-23267	Sample Type: mblk	Test Code: EPA Method 300.0: Aroclors								
Client ID: PBS	Batch ID: 23267	Run No: 31522								
Prep Date: 1/18/2016	Analysis Date: 1/18/2016	Seq No: 864780 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Chloride	ND	1.5								
Sample ID: LCS-23267	Sample Type: lcs			Test Code: EPA Method 300.0: Aroclors						
Client ID: LCS	Batch ID: 23267			Run No: 31522						
Prep Date: 1/18/2016	Analysis Date: 1/18/2016			SeqNo: 004791		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	86.4	80	110			

Chloride	14	1.5	10.00	5	10.00					
Sample ID: MB-23269	Sample Type: MBLK	Test Code: EPA Method 300.0: Aroclors								
Client ID: PBS	Batch ID: 23269	Run No: 31548								
Prep Date: 1/18/2016	Analysis Date: 1/18/2016	Seq No: 955596				Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	ND	1.5								

ChkVide	NO	1.5								
Sample ID	LCS-23269	SampleType	LCS	TestCode: EPA Method 300.0; Aroclors						
Client ID	LCS68	Batch ID	23269	RunNo: 31548						
Prep Date	1/18/2016	Analysis Date	1/18/2016	SeqNo	865596	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	82.4	80	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
- I Analyte detected below quantitation limits
- P Sample pH Not in Range
- RL Reporting Detection Limit

Page 7 of 10

QC SUMMARY REPORT

WO#: 1601540

Hall Environmental Analysis Laboratory, Inc.

21-Jan-16

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

Sample ID: MB-23241	Sample Type: MBLK	Test Code: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 23241	Run No: 31524						
Prep Date: 1/16/2016	Analyte Date: 1/19/2016	Seq No: 954922		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	9.2		10.00		92.5	70	130	

Sample ID: LGS-23241	Sample Type: LGS	Test Code: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LGS	Batch ID: 23241	Run No: 31524						
Prep Date: 1/16/2016	Analyte Date: 1/19/2016	Seq No: 954966		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	93.8	65.8	130	
Sum: DNOP	4.8		5.000		96.6	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

QC SUMMARY REPORT

WO#: 1601540

Hall Environmental Analysis Laboratory, Inc.

21-Jan-16

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

Sample ID MB-23236		SampleType: MBLK		TestCode: EPA Method 8015D: Gasoline Range						
ClientID: PBS		Batch ID: 23236		RunNo: 31503						
Prep Date: 1/16/2016		Analysis Date: 1/18/2016		SeqNo: 864172		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Sum: BFB	870		1000		87.0	68.2	112			

Sample ID LGS-23236		SampleType: LGS		TestCode: EPA Method 8015D: Gasoline Range						
ClientID: LGS		Batch ID: 23236		RunNo: 31503						
Prep Date: 1/16/2016		Analysis Date: 1/18/2016		SeqNo: 864173		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	103	79.6	122			
Sum: BFB	830		1000		83.1	68.2	112			

Sample ID 6ML RB		SampleType: MBLK		TestCode: EPA Method 8015D: Gasoline Range						
ClientID: PBS		Batch ID: A31503		RunNo: 31503						
Prep Date:		Analysis Date: 1/18/2016		SeqNo: 864229		Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sum: BFB	880		1000		87.7	68.2	112			

Sample ID 2.6UG GRO LGS		SampleType: LGS		TestCode: EPA Method 8015D: Gasoline Range						
ClientID: LGS		Batch ID: A31503		RunNo: 31503						
Prep Date:		Analysis Date: 1/18/2016		SeqNo: 864230		Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sum: BFB	870		1000		87.4	68.2	112			

Sample ID MB-23266		SampleType: MBLK		TestCode: EPA Method 8015D: Gasoline Range						
ClientID: PBS		Batch ID: 23266		RunNo: 31528						
Prep Date: 1/18/2016		Analysis Date: 1/19/2016		SeqNo: 868267		Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sum: BFB	870		1000		87.2	68.2	112			

Sample ID LGS-23266		SampleType: LGS		TestCode: EPA Method 8015D: Gasoline Range						
ClientID: LGS		Batch ID: 23266		RunNo: 31528						
Prep Date: 1/18/2016		Analysis Date: 1/19/2016		SeqNo: 868268		Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sum: BFB	860		1000		85.8	68.2	112			

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- X 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
- Y Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

WO#: 1601540

Hall Environmental Analysis Laboratory, Inc.

21-Jan-16

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

Project: COTTON/12/27/2015										
Sample ID: MB-23235	Sample Type: MBLK	Test Code: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 23235	Run No: 31603								
Prep Date: 1/16/2016	Analysis Date: 1/19/2016	Seq No: 004250	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	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			

Sample ID: LCS-23236		Sample Type: LCS		Test Code: EPA Method 8021B: Volatiles						
Client ID: LCS		Batch ID: 23236		Run No: 31603						
Prep Date: 1/16/2016		Analysis Date: 1/18/2016		Seq No: 004254			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Benzene	0.64	0.050	1.000	0	94.3	80	120			
Toluene	0.99	0.050	1.000	0	99.0	80	120			
Ethylbenzene	1.1	0.050	1.000	0	108	80	120			
Xylenes, Total	3.2	0.10	3.000	0	107	80	120			
Sum: 4-Bromofluorobenzene	1.1		1.000		114	80	120			

Sum: 4-Bromofluorobenzene										
Sample ID: MB-23266	Sample Type: MBLK			Test Code: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 23266			Run No: 31626						
Prep Date: 1/16/2016	Analysis Date: 1/19/2016			Seq No: 005266		Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Sum: 4-Bromofluorobenzene	0.99		1.000		99.4	80	120			

Sum: 4-Bromofluorobenzene		0.00	1.000							
Sample ID: LCS-23266	SampleType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCS	Batch ID: 23266	RunNo: 31626								
Prep Date: 1/16/2016	Analysis Date: 1/19/2016	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
- RL Reporting Detection Limit

Page 10 of 10



Hall Environmental Analysis Laboratory
 3901 Haskell St.
 Albuquerque, NM 87109
 TEL: 505-343-3975 FAX: 505-343-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Yates Petroleum Corporation Work Order Number: 1001640 Rpt No: 1

Received by Date: 2/15/16 01/15/16

Logged By: Lindsay Mangin 1/16/2016 0:00:00 AM July Mingo

Completed By: Lindsay Mangin 1/16/2016 10:45:00 AM July Mingo

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? Carrier

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 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. Are samples (except VOA and ORO) 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 ☐

If all pre-bored 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 ID	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	4.1	Good	Yes			

Chain-of-Custody Record

Client: Yates Petroleum Corporation

X Standard ☐ Rush

Project Name:

Billing Address:

Cotton MX Federal Cam #1

05 South 4th Street, Artesia, NM 88210

Phone #: 575-703-6537

30-015-26315

Email or Fax: csellie@yatespetroleum.com

Project Manager:

A/QC Package

Chase Settle

PO # 205-0750

1 Standard ☐ Level 4 (Full Validation)

Accreditation:

J NELAP ☐ Other

Sampler: Chase Settle

On Ice ☒ Yes ☐ No

Sample Temperature: 47

J EDD (Type)

HEAL No. 101540

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	Date	Time
11/22/21	2:04P	Soil	S1-1	1-4oz	ICE	-001	10/15/20	
11/22/21	2:07P	Soil	S1-2	1-4oz	ICE	-002		
11/22/21	2:11P	Soil	S1-3	1-4oz	ICE	-003		
11/22/21	2:15P	Soil	S1-4	1-4oz	ICE	-004		
11/22/21	2:21P	Soil	S1-5	1-4oz	ICE	-005		
11/22/21	2:24P	Soil	S1-5	1-4oz	ICE	-006		
11/22/21	3:15P	Soil	S2-1	1-4oz	ICE	-007		
11/22/21	3:18P	Soil	S2-2	1-4oz	ICE	-008		
11/22/21	3:23P	Soil	S2-3	1-4oz	ICE	-009		
11/22/21	3:26P	Soil	S2-4	1-4oz	ICE	-010		
11/22/21	3:28P	Soil	S2-5	1-4oz	ICE	-011		
11/22/21	3:31P	Soil	S2-5	1-4oz	ICE	-012		
11/22/21	3:35P	Soil	S2-5	1-4oz	ICE	-013		
11/22/21	3:38P	Soil	S2-5	1-4oz	ICE	-014		
11/22/21	3:41P	Soil	S2-5	1-4oz	ICE	-015		
11/22/21	3:44P	Soil	S2-5	1-4oz	ICE	-016		
11/22/21	3:47P	Soil	S2-5	1-4oz	ICE	-017		
11/22/21	3:50P	Soil	S2-5	1-4oz	ICE	-018		
11/22/21	3:53P	Soil	S2-5	1-4oz	ICE	-019		
11/22/21	3:56P	Soil	S2-5	1-4oz	ICE	-020		
11/22/21	3:59P	Soil	S2-5	1-4oz	ICE	-021		
11/22/21	4:02P	Soil	S2-5	1-4oz	ICE	-022		
11/22/21	4:05P	Soil	S2-5	1-4oz	ICE	-023		
11/22/21	4:08P	Soil	S2-5	1-4oz	ICE	-024		
11/22/21	4:11P	Soil	S2-5	1-4oz	ICE	-025		
11/22/21	4:14P	Soil	S2-5	1-4oz	ICE	-026		
11/22/21	4:17P	Soil	S2-5	1-4oz	ICE	-027		
11/22/21	4:20P	Soil	S2-5	1-4oz	ICE	-028		
11/22/21	4:23P	Soil	S2-5	1-4oz	ICE	-029		
11/22/21	4:26P	Soil	S2-5	1-4oz	ICE	-030		
11/22/21	4:29P	Soil	S2-5	1-4oz	ICE	-031		
11/22/21	4:32P	Soil	S2-5	1-4oz	ICE	-032		
11/22/21	4:35P	Soil	S2-5	1-4oz	ICE	-033		
11/22/21	4:38P	Soil	S2-5	1-4oz	ICE	-034		
11/22/21	4:41P	Soil	S2-5	1-4oz	ICE	-035		
11/22/21	4:44P	Soil	S2-5	1-4oz	ICE	-036		
11/22/21	4:47P	Soil	S2-5	1-4oz	ICE	-037		
11/22/21	4:50P	Soil	S2-5	1-4oz	ICE	-038		
11/22/21	4:53P	Soil	S2-5	1-4oz	ICE	-039		
11/22/21	4:56P	Soil	S2-5	1-4oz	ICE	-040		
11/22/21	4:59P	Soil	S2-5	1-4oz	ICE	-041		
11/22/21	5:02P	Soil	S2-5	1-4oz	ICE	-042		
11/22/21	5:05P	Soil	S2-5	1-4oz	ICE	-043		
11/22/21	5:08P	Soil	S2-5	1-4oz	ICE	-044		
11/22/21	5:11P	Soil	S2-5	1-4oz	ICE	-045		
11/22/21	5:14P	Soil	S2-5	1-4oz	ICE	-046		
11/22/21	5:17P	Soil	S2-5	1-4oz	ICE	-047		
11/22/21	5:20P	Soil	S2-5	1-4oz	ICE	-048		
11/22/21	5:23P	Soil	S2-5	1-4oz	ICE	-049		
11/22/21	5:26P	Soil	S2-5	1-4oz	ICE	-050		
11/22/21	5:29P	Soil	S2-5	1-4oz	ICE	-051		
11/22/21	5:32P	Soil	S2-5	1-4oz	ICE	-052		
11/22/21	5:35P	Soil	S2-5	1-4oz	ICE	-053		
11/22/21	5:38P	Soil	S2-5	1-4oz	ICE	-054		
11/22/21	5:41P	Soil	S2-5	1-4oz	ICE	-055		
11/22/21	5:44P	Soil	S2-5	1-4oz	ICE	-056		
11/22/21	5:47P	Soil	S2-5	1-4oz	ICE	-057		
11/22/21	5:50P	Soil	S2-5	1-4oz	ICE	-058		
11/22/21	5:53P	Soil	S2-5	1-4oz	ICE	-059		
11/22/21	5:56P	Soil	S2-5	1-4oz	ICE	-060		
11/22/21	5:59P	Soil	S2-5	1-4oz	ICE	-061		
11/22/21	6:02P	Soil	S2-5	1-4oz	ICE	-062		
11/22/21	6:05P	Soil	S2-5	1-4oz	ICE	-063		
11/22/21	6:08P	Soil	S2-5	1-4oz	ICE	-064		
11/22/21	6:11P	Soil	S2-5	1-4oz	ICE	-065		
11/22/21	6:14P	Soil	S2-5	1-4oz	ICE	-066		
11/22/21	6:17P	Soil	S2-5	1-4oz	ICE	-067		
11/22/21	6:20P	Soil	S2-5	1-4oz	ICE	-068		
11/22/21	6:23P	Soil	S2-5	1-4oz	ICE	-069		
11/22/21	6:26P	Soil	S2-5	1-4oz	ICE	-070		
11/22/21	6:29P	Soil	S2-5	1-4oz	ICE	-071		
11/22/21	6:32P	Soil	S2-5	1-4oz	ICE	-072		
11/22/21	6:35P	Soil	S2-5	1-4oz	ICE	-073		
11/22/21	6:38P	Soil	S2-5	1-4oz	ICE	-074		
11/22/21	6:41P	Soil	S2-5	1-4oz	ICE	-075		
11/22/21	6:44P	Soil	S2-5	1-4oz	ICE	-076		
11/22/21	6:47P	Soil	S2-5	1-4oz	ICE	-077		
11/22/21	6:50P	Soil	S2-5	1-4oz	ICE	-078		
11/22/21	6:53P	Soil	S2-5	1-4oz	ICE	-079		
11/22/21	6:56P	Soil	S2-5	1-4oz	ICE	-080		
11/22/21	6:59P	Soil	S2-5	1-4oz	ICE	-081		
11/22/21	7:02P	Soil	S2-5	1-4oz	ICE	-082		
11/22/21	7:05P	Soil	S2-5	1-4oz	ICE	-083		
11/22/21	7:08P	Soil	S2-5	1-4oz	ICE	-084		
11/22/21	7:11P	Soil	S2-5	1-4oz	ICE	-085		
11/22/21	7:14P	Soil	S2-5	1-4oz	ICE	-086		
11/22/21	7:17P	Soil	S2-5	1-4oz	ICE	-087		
11/22/21	7:20P	Soil	S2-5	1-4oz	ICE	-088		
11/22/21	7:23P	Soil	S2-5	1-4oz	ICE	-089		
11/22/21	7:26P	Soil	S2-5	1-4oz	ICE	-090		
11/22/21	7:29P	Soil	S2-5	1-4oz	ICE	-091		
11/22/21	7:32P	Soil	S2-5	1-4oz	ICE	-092		
11/22/21	7:35P	Soil	S2-5	1-4oz	ICE	-093		
11/22/21	7:38P	Soil	S2-5	1-4oz	ICE	-094		
11/22/21	7:41P	Soil	S2-5	1-4oz	ICE	-095		
11/22/21	7:44P	Soil	S2-5	1-4oz	ICE	-096		
11/22/21	7:47P	Soil	S2-5	1-4oz	ICE	-097		
11/22/21	7:50P	Soil	S2-5	1-4oz	ICE	-098		
11/22/21	7:53P	Soil	S2-5	1-4oz	ICE	-099		
11/22/21	7:56P	Soil	S2-5	1-4oz	ICE	-100		
11/22/21	7:59P	Soil	S2-5	1-4oz	ICE	-101		
11/22/21	8:02P	Soil	S2-5	1-4oz	ICE	-102		
11/22/21	8:05P	Soil	S2-5	1-4oz	ICE	-103		
11/22/21	8:08P	Soil	S2-5	1-4oz	ICE	-104		
11/22/21	8:11P	Soil	S2-5	1-4oz	ICE	-105		
11/22/21	8:14P	Soil	S2-5	1-4oz	ICE	-106		
11/22/21	8:17P	Soil	S2-5	1-4oz	ICE	-107		
11/22/21	8:20P	Soil	S2-5	1-4oz	ICE	-108		
11/22/21	8:23P	Soil	S2-5	1-4oz	ICE	-109		
11/22/21	8:26P	Soil	S2-5	1-4oz	ICE	-110		
11/22/21	8:29P	Soil	S2-5	1-4oz	ICE	-111		
11/22/21	8:32P	Soil	S2-5	1-4oz	ICE	-112		
11/22/21	8:35P	Soil	S2-5	1-4oz	ICE	-113		
11/22/21	8:38P	Soil	S2-5	1-4oz	ICE	-114		
11/22/21	8:41P	Soil	S2-5	1-4oz	ICE	-115		
11/22/21	8:44P	Soil	S2-5	1-4oz	ICE	-116		
11/22/21	8:47P	Soil	S2-5	1-4oz	ICE	-117		
11/22/21	8:50P	Soil	S2-5	1-4oz	ICE	-118		
11/22/21	8:53P	Soil	S2-5	1-4oz	ICE	-119		
11/22/21	8:56P	Soil	S2-5	1-4oz	ICE	-120		
11/22/21	8:59P	Soil	S2-5	1-4oz	ICE	-121		
11/22/21	9:02P	Soil	S2-5	1-4oz	ICE	-122		
11/22/21	9:05P	Soil	S2-5	1-4oz	ICE	-123		
11/22/21	9:08P	Soil	S2-5	1-4oz	ICE	-124		
11/22/21	9:11P	Soil	S2-5	1-4oz	ICE	-125		
11/22/21	9:14P	Soil	S2-5	1-4oz	ICE	-126		
11/22/21	9:17P	Soil	S2-5	1-4oz	ICE	-127		
11/22/21	9:20P	Soil	S2-5	1-4oz	ICE	-128		
11/22/21	9:23P	Soil	S2-5	1-4oz	ICE	-129		
11/22/21	9:26P	Soil	S2-5	1-4oz	ICE	-130		
11/22/21	9:29P	Soil	S2-5	1-4oz	ICE	-131		
11/22/21	9:32P	Soil	S2-5	1-4oz	ICE	-132		
11/22/21	9:35P	Soil	S2-5	1-4oz	ICE	-133		
11/22/21	9:38P	Soil	S2-5	1-4oz	ICE	-134		
11/22/21	9:41P	Soil	S2-5	1-4oz	ICE	-135		
11/22/21	9:44P	Soil	S2-5	1-4oz	ICE	-136		
11/22/21	9:47P	Soil	S2-5	1-4oz	ICE	-137		
11/22/21	9:50P	Soil	S2-5	1-4oz	ICE	-138		
11/22/21	9:53P	Soil	S2-5	1-4oz	ICE	-139		
11/22/21	9:56P	Soil	S2-5	1-4oz	ICE	-140		
11/22/21	9:59P	Soil	S2-5	1-4oz	ICE	-141		
11/22/21	10:02P	Soil	S2-5	1-4oz	ICE	-142		
11/22/21	10:05P	Soil	S2-5	1-4oz	ICE	-143		
11/22/21	10:08P	Soil	S2-5	1-4oz	ICE	-144		
11/22/21	10:11P	Soil	S2-5	1-4oz	ICE	-145		
11/22/21	10:14P	Soil	S2-5	1-4oz	ICE	-146		
11/22/21	10:17P	Soil	S2-5	1-4oz	ICE	-147		
11/22/21	10:20P	Soil	S2-5	1-4oz	ICE	-148		
11/22/21	10:23P	Soil	S2-5	1-4oz	ICE	-149		
11/22/21	10:26P	Soil	S2-5	1-4oz	ICE	-150		
11/22/21	10:29P	Soil	S2-5	1-4oz	ICE	-151		
11/22/21	10:32P	Soil	S2-5	1-4oz	ICE	-152		
11/22/21	10:35P	Soil	S2-5	1-4oz	ICE	-153		
11/22/21	10:38P	Soil	S2-5	1-4oz	ICE	-154		
11/22/21	10:41P	Soil	S2-5	1-4oz	ICE	-155		
11/22/21	10:44P	Soil	S2-5	1-4oz	ICE	-156		
11/22/21	10:47P	Soil	S2-5	1-4oz	ICE	-157		
11/22/21	10:50P	Soil	S2-5	1-4oz	ICE	-158		
11/22/21	10:53P	Soil	S2-5	1-4oz	ICE	-159		
11/22/21	10:56P	Soil	S2-5	1-4oz	ICE	-160		
11/22/21	10:59P	Soil	S2-5	1-4oz	ICE	-161		
11/22/21	11:02P	Soil	S2-5	1-4oz	ICE	-162		
11/22/21	11:05P	Soil	S2-5	1-4oz	ICE	-163		
11/22/21	11:08P	Soil	S2-5	1-4oz	ICE	-164		
11/22/21	11:11P	Soil	S2-5	1-4oz	ICE	-165		
11/22/21	11:14P	Soil	S2-5	1-4oz	ICE	-166		
11/22/21	11:17P	Soil	S2-5	1-4oz	ICE	-167		



PHONE (575) 393-2326 • 101 E. MAINLAND • HOBBS, 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/fieldna/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,

Coley 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:	01/25/2016	Sampling Date:	01/12/2016
Reported:	01/27/2016	Sampling Type:	Soil
Project Name:	COTTON MX FEDERAL COM #1	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S1-7' (H600168-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4640	16.0	01/26/2016	ND	432	108	400	3.77	

Sample ID: S1-8' (H600168-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2280	16.0	01/26/2016	ND	432	108	400	3.77	

Sample ID: S1-9' (H600168-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4960	16.0	01/26/2016	ND	432	108	400	3.77	

Sample ID: S1-10' (H600168-04)

Chloride, SM4500Cl-B		mg/kg		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	108	400	3.77	

*=Accredited Analyte

Cardinal Laboratories

PLEASE NOTE: Quality and Quantity. Cardinal Laboratories is not responsible for any data obtained from this report if the data is not used in the manner intended by the client. In no event shall Cardinal be liable for indirect or consequential damages, including, without limitation, business interruption, loss of data, or loss of profits, caused by this report, its contents, or its use, or any other loss or damage, whether or not such loss or damage was foreseeable, or whether or not such loss or damage was caused in whole or in part by the negligence of Cardinal Laboratories.

Celestine D. Keene

Celestine D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAINLAND • HOOBES, 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 SM4500C4-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

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Accuracy and integrity of data are only as good as the information provided to the laboratory. It is the responsibility of the client to provide accurate and complete information. The laboratory is not responsible for errors resulting from incomplete or inaccurate information. The laboratory is not responsible for errors resulting from the use of the laboratory's services. The laboratory is not responsible for errors resulting from the use of the laboratory's services. The laboratory is not responsible for errors resulting from the use of the laboratory's services.

Coley D. Koenig

Coley D. Koenig, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Maryland, Hobbs, NM 88240

(505) 393-2325 FAX (505) 393-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name:

Cotton 100 Federal Form #1

Project:

Abstract

Column: MDX Federal Court #

Page 5 of 5

Project Manager: Chase Settle

Comp: (505) 383-2324 Yates Petroleum Corporation

Company Address: 105 South 4th Street

City/State/Zip: Artists, NM 88210

Telephone No: 575-748-6171

Sampler Signature: 

Fax No: 515-748-4131

e-mail: cseltle@vatespatrolaunt.com

Report Format: ☒ Standard

Standard

☐ **True**

NPDES

Telephone No: _____
 Sample Signature: W. B.
 e-mail: csettle@vatespectrochem.com

(Lab use only)
ORDER # 1160108

LAB / (H) / (H) / (H) / (H) / (H)		FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total L of Concentrate	Preservation & End Containers	Matrix	Notes
1	ST-7				1/12/2016	2:29 PM		1			
2	ST-8				1/12/2016	2:32 PM		1			
3	ST-9				1/12/2016	2:44 PM		1			
4	ST-10				1/12/2016	2:47 PM		1			
5	ST-11				1/12/2016	2:52 PM		1			
6	ST-12				1/12/2016	3:00 PM		1			

Lab	Field	Time	Date	Time	Date	Time	Date	Time	Date
Relinquished by:			1/25/16				1/25/16	1:45	
Relinquished by:									
Relinquished by:									

Special Instructions: _____
 Received by: W. B.
 Received by: W. B.
 Received by: W. B.

Laboratory Comments:
 Sample Containers: 1
 Vials (in container): 1
 Custody seals on container(s): 1
 Custody seals on cooler(s): 1
 Sample Hand Delivered: 1
 by Carrier? 1 UPS 1 DHL 1 FedEx 1 LurieStar 1
 Temperature Upon Receipt: 42.6 °C



PHONE (575) 393-2326 • 101 E. MARLAND • HODDS, 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/qa/lab_accred_certif.html.

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

Method EPA 852.2	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,

Celey D. Keena

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:	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: Judi Hanson

Sample ID: S2-7' (HG00169-01)

Chloride, 6M490DCI-D		Analyzed By: AP							
Analyte	Result	Reporting Unit	Analyzed	Method Blank	DS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	01/26/2016	ND	432	108	400	3.77	

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

Chloride, 6M4500Cl-B		mg/lig		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	100	3.77	

Sample ID: 52-9' (H000169-03)

Chloride, 5M4500Cl-P		Analyzed By: AP							
Analyte	Result	Reporting Unit	Analyzed	Method blank	IS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	01/26/2016	ND	432	100	400	3.77	

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

Chloride, S14500Cl-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	108	400	3.77		

Cardinal Laboratories

*eAccredited Analyte

[illegible]

Elizabeth Hanna

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAINLAND • 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 Henson

Sample ID: S2-11' (H600169-05)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2280	16.0	01/26/2016	ND	416	104	400	0.00	

Sample ID: S2-12' (H600169-06)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1760	16.0	01/26/2016	ND	416	104	400	0.00	

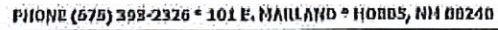
Cardinal Laboratories

*=Accredited Analyte

These data were generated by Cardinal Laboratories, Inc. and are subject to the terms and conditions of the analytical contract. The data are provided for informational purposes only and are not to be used for legal or regulatory purposes. The data are subject to change without notice. The data are provided for informational purposes only and are not to be used for legal or regulatory purposes. The data are subject to change without notice.

Coley D. Keene

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 SM4500-Cl-B does not require samples be received at or below 6°C Samples reported on as received basis (wet) unless otherwise noted on report

[illegible]

Celey D. Keene, Lab Director/Quality Manager



Project Name: Cotton WAX Federal Court #1

Project Manager: Chase Seale

Campa: (505) 293-2322 Yates Petroleum Corporation

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4171

Sample Signature: 

Fax No. 575-748-4131

e-mail: csattle@valespetroleum.com

Report Format: ☒ Standard ☐ TRAP ☐ NPDES

PO # 205.0750

Project Lead: **Cotton MX Federal Court**

ಸಿಂಹದರ್ಶನ

ಪೆನ್‌ಪ್ಲಾಟ್ ಲಾಡ್

Colton MK Federal Court #1

PO # 205.0750

Report Format: ☒ Standard ☐ TRAP ☐ NPDES

e-mail: csattle@valespetroleum.com

Sample Signature: 

Telephone No: 575-748-4171

Fax No. 575-748-4131

e-mail: csattle@valespetroleum.com

Report Format: ☒ Standard ☐ TRAP ☐ NPDES

PO # 205.0750

Project Lead Cotton MK Federal Court #1

Page 5 of 5

Lab use only		FIELD CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Analysis For
1	SE-7					1/12/2016	3:35 PM	1	1	TOX: ☐ TOTAL: ☐ Cadmium (Cr, Mg, Na, K) Arsenic (Cr, EO1, Nickel) BAR / ERP / CEO Metals: As Ag Ba Cd Cr Pb Hg Bi Volatiles BTEX (Benzene, Ethylbenzene, Toluene, Xylenes) RUSH TAT (Preliminary) 24, 48, 72 hrs Standard TAT
2	SE-8					1/12/2016	3:39 PM	1	1	
3	SE-9					1/12/2016	3:42 PM	1	1	
4	SE-10					1/12/2016	3:50 PM	1	1	
5	SE-11					1/12/2016	3:54 PM	1	1	
6	SE-12					1/12/2016	4:00 PM	1	1	

Requisitioned by:	Date	Time	Received by:	Date	Time
John S. Lee	1/24/16		John S. Lee	1/25/16	1:45

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date	Time	Received by:	Date	Time

Requisitioned by:	Date
-------------------	------



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,

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: 1602544

Date Reported: 2/23/2016

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

Lab Order: 1602544

Lab ID:	1602544-001	Collection Date:	2/9/2016 10:50:00 AM			
Client Sample ID:	SI-13'	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 23788
Lab ID:	1602544-002	Collection Date:	2/9/2016 10:56:00 AM			
Client Sample ID:	SI-15'	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 3:08:16 PM 23788
Lab ID:	1602544-003	Collection Date:	2/9/2016 11:02:00 AM			
Client Sample ID:	SI-17'	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 3:46:32 PM 23788
Lab ID:	1602544-004	Collection Date:	2/9/2016 11:07:00 AM			
Client Sample ID:	SI-19'	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 23788
Lab ID:	1602544-005	Collection Date:	2/9/2016 11:20:00 AM			
Client Sample ID:	SI-20'	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 23788

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	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit 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 9:33:46 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	76		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	76		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	76		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:	* Value exceeds Maximum Contaminant Level,	D Analyte detected in the associated Method Blank	Page 2 of 3
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	
R	RPD outside accepted recovery limits	RL Reporting Detection Limit	
R	% Recovery outside of range due to dilution or matrix	W Sample container temperature (a out of limit as specified	

QC SUMMARY REPORT **Hall Environmental Analysis Laboratory, Inc.**

WO#: 1602544

23-Feb-16

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

Project: C:\MSDCHEM\DATA\00										
---	--	--	--	--	--	--	--	--	--	--

Sample ID	LCS-23798	Sample Type	LCS	Test Code	EPA Method 300.0: Anions					
Client ID	LCS8	Batch ID	23798	Run No	32237					
Prep Date	2/17/2016	Analysis Date	2/17/2016	Seq No	986577					
				Units	mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	14	1.5	16.00	0	95.6	90	110			

Sample ID: MB-23828	Sample Type: MBLK	Test Code: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 23828	Run No: 32274								
Prep Date: 2/18/2016	Analysis Date: 2/18/2016	Seq No: 986585 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	ND	1.5								

G08018										
Sample ID: LCS-23828	Sample Type: LCS		Test Code: EPA Method 300.0: Anions							
Client ID: LCS8	Batch ID: 23828		Run No: 32274							
Prep Date: 2/18/2016	Analysis Date: 2/18/2016		Seq No: 986586		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REQ	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	14	1.6	15.00	0	95.5	90	110			

Qualifiers:

- | | |
|--|---|
| <ul style="list-style-type: none"> + 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 | <ul style="list-style-type: none"> 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 |
|--|---|



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-365-3975 FAX: 505-365-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Yates Petroleum Corp** Work Order Number: **1602544** RepNo: **1**

Received by/date: **JA 02/12/16**

Logged By: **Ashley Gallegos** 2/12/2016 9:35:00 AM **AG**

Completed By: **Ashley Gallegos** 2/12/2016 11:00:02 AM **AG**

Reviewed By: **TD 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? **Quicker**

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 ☐
8. 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)
 Adjusted? _____
 Checked by: _____
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? Yes ☒ No ☐

(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	Serial No	Expiry Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Yates Petroleum Corporation

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Failing Address:

Cotton MX Federal Cor #1

05 South 4th Street Artesia, NM 88210

Phone #:

30-015-23315

Email or Fax:

Project Manager:

Chase Settle

24/7C Package:

PO # 2015. 0750

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDP (Type)

Sampler:

Chase Settle

Date

Time

Matrix

Sample Request ID

Container Type and #

Preservative Type

Analysis Request

BTEX + MTBE + TMB's (8021)

BTEX + MTBE + TPH (Gas only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 804.1)

B310 (PNA or PAH)

RCRA 8 Metals

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

0081 Pesticides / 8082 PCB's

8280B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)

-001

-002

-003

-004

1 - 4oz

1 - 4oz

1 - 4oz

1 - 4oz

S1-13'

S1-15'

S1-17'

S1-19'

S1-20'

S2-13'

28/2016 10:50A

28/2016 10:56A

28/2016 11:02A

28/2016 11:07A

28/2016 11:20A

28/2016 12:00P

28/2016 12:00P

Soil

Soil

Soil

Soil

Soil

Soil

Soil



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

March 21, 2017

CHASE SETTLE

EOGY 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	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,

Celay D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 740-4131

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 - 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 Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	03/21/2017	ND	416	104	400	0.00	

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	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 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

NOTE: This report is for information only. It does not constitute a warranty or guarantee of accuracy. The results are based on the sample as received and may be affected by the quality of the sample and the quality of the analysis. The results are not to be used for legal or regulatory purposes. The results are not to be used for any other purpose without the written consent of Cardinal Laboratories. The results are not to be used for any other purpose without the written consent of Cardinal Laboratories.

Celay D. Keene

Celay D. Keene, Lab Director/Quality Manager



PHONE (875) 393-2326 • 101 E. MANLAND • HONOLULU, HI 96824

Notes and Definitions

Q407	The spike recovery was outside acceptance limits for this MS run/for 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.
-	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

NOTES: Quality and Integrity, Cardinal's policy and procedures apply to any data which, whether listed or not, that is related to the amount paid by client for analysis. All data, including those for employee and any other person who have access to the data, shall be treated equally and shall be subject to the same rules and regulations as the applicable matter. In no event shall Cardinal be held responsible for any data, including those for employee and any other person who have access to the data, which are not reported or are reported in error. In no event shall Cardinal be held responsible for any data, including those for employee and any other person who have access to the data, which are not reported or are reported in error. In no event shall Cardinal be held responsible for any data, including those for employee and any other person who have access to the data, which are not reported or are reported in error.

Cately D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES

101 East Maryland, Hobbs, NM, 88240

(505) 353-2326 FAX (505) 353-2478

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name:

Cotton INX Federal Contract SWVD

Page 4 of 4

Project Manager: Chase Smith

COMP: (305) 363-2226 EEOG-Y: Resources, Inc.

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4171

Fax No: 575-748-4131

Sampler Signatures

e-mail:

Chase Settlement@edresources.com

Report Format: ☒ Standard ☐ Tree ☐ NPDES

FD-305-0750

Project Loc:	Cotton MD, Federal Cam = SMT
--------------	------------------------------

[illegible]



PHONE (575) 393-2326 * 101 E. MARLAND * HOOBBS, 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 T101704398-16-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/ga/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,

Celley D. Keena

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. HATLAND • 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
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: C1 - 40' (H700715-01)

Chloride, SM4500Cl-D		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Unit	Analysis	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

PLEASE NOTE: Quality and Quantity. Cardinal Laboratories is not responsible for any errors, omissions, or delays in the analysis of samples received. It is the responsibility of the client to ensure that the samples are properly labeled and that the analysis is performed in a timely manner. The results of the analysis are based on the information provided by the client and are not to be used for legal or regulatory purposes. The results of the analysis are based on the information provided by the client and are not to be used for legal or regulatory purposes.

Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAINLAND • HONOLULU, HI 96820

Notes and Definitions

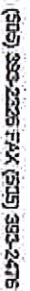
- Q# 07 The spike recovery was outside acceptance limits for the MS and/or MSD. This batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM500C1-B does not require samples to 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: Cardinal Laboratories, Inc. is not responsible for any data obtained from any other source, including but not limited to, the results of any other testing performed by other laboratories. Cardinal Laboratories, Inc. is not responsible for any data obtained from any other source, including but not limited to, the results of any other testing performed by other laboratories. Cardinal Laboratories, Inc. is not responsible for any data obtained from any other source, including but not limited to, the results of any other testing performed by other laboratories.

Celay D. Keene, Lab Director/Quality Manager



Project Name: Cotton MX Federal Com #1 SMD

Projekat:

Project Loc:	Cotton:MX Federal Com #1 SVID
--------------	-------------------------------

PO # 20540750

Fax No: 575-748-4131

Report Format ☒ Standard ☐ TRRP ☐ NPDES

Chase Settle@geogresources.com

Received by *OCD*: 11/8/2021 4:29:55 PM



PHONE (575) 393-2326 • 101 E. MARLAND • HOHDS, 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-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_accr_cred_certif.html.

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

Method EPA 557.2	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 • 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: 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	NO	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	NO	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	NO	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	NO	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

NOTE: Data is preliminary. Cardinal Laboratories and its analysts assume no responsibility for any data values, whether based in current or past, that do not conform to the current EPA or state or federal regulations. All data, including those for nitrogen and any other value, will be re-evaluated and re-tested by Cardinal Laboratories (CL) upon the completion of the applicable study. In no event shall Cardinal be liable for additional or consequential damages, including, without limitation, business interruption, loss of data, or loss of profits caused by data, its analysis, analysis or occurrence being not as stated in the presence of the results provided by Cardinal, regardless of whether such data is used upon any EPA or state or federal regulation. Results shall only be for the specific analytical method. This report shall not be used for any other purpose without the express approval of Cardinal Laboratories.

Celley D. Keene

Celley D. Keene, Lab Director/Quality Manager



Q14-07	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 as received basis (wet) unless otherwise noted on report

†=Accredited Analyte

PLEASE NOTE: Utility and Mortgage, Creditors Utility and MORTGAGE STATE for any other interest, whether listed in company or not, must be listed in the annual report for that year. All other, including those for progress and any other utility statement shall be placed under utility made to company and retained by Creditors Utility STATE for any other company of the appropriate period. In an event that Creditors be able to identify or reasonably identify, including, where necessary, further information, list of use, or list of public interest by that or otherwise, whether or necessary after end of or related to the performance of the subject borrower by Creditors regardless of whether such list is based on the use of other information or otherwise. Such other only if the appropriate company. This report shall not be a report of company or the appropriate company of Creditors Utility STATE.

Walter D. Keene

Cathy D. Keene, Lab Director/Quality Manager



Page 4 of 4

but[illegible]

Sample Containers (mm)

Customary seals on container

by Sample Client, Res
by Courier? UPS

Temperature: Open Place

Temperature: Open Place



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

March 21, 2017

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTEZIA, 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,

Caley D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAIN AVE • 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
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 - 20' (H700711-01)

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	03/21/2017	ND	416	104	400	0.00	QM-D7

Sample ID: C3 - 25' (H700711-02)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1150	16.0	03/21/2017	ND	416	104	400	0.00	

Sample ID: C3 - 30' (H700711-03)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	03/21/2017	ND	416	104	400	0.00	

Sample ID: C3 - 35' (H700711-04)

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

Cardinal Laboratories

*Accredited Analyte

These data, results and analyses are the property of Cardinal Laboratories and are not to be used for any other purpose without the written consent of Cardinal Laboratories. The data and results are provided for the use of the client only and are not to be used for any other purpose. The data and results are provided for the use of the client only and are not to be used for any other purpose. The data and results are provided for the use of the client only and are not to be used for any other purpose.

Celcy D. Keene

Celcy D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • 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: 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, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	200	16.0	03/21/2017	ND	416	104	400	0.00	

Cardinal Laboratories

* = Accredited Analyte

Please refer to the Laboratory's website for more information regarding the use of this report. This report is the property of Cardinal Laboratories, Inc. and is not to be used for any other purpose. The results of this report are based on the information provided by the client. Cardinal Laboratories, Inc. is not responsible for the accuracy or completeness of the information provided by the client. The results of this report are based on the information provided by the client. Cardinal Laboratories, Inc. is not responsible for the accuracy or completeness of the information provided by the client.

Celley D. Keane, Lab Director/Quality Manager

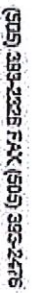


Q3-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
++	Samples not received at proper temperature of 6°C or below.
+++	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on as received basis (wet) unless otherwise noted on report

■ Accredited Analyte

[illegible]

Celey D. Keene, Lab Director/Quality Manager



Project Name: Common MX Federal Contract SMD

Cotton MX Federal Contract SMD

परिचयः

Cotton MX Federal Dam #1 GMD

PO # 205-0750

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4171

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ Table ☐ NEDES

Sampler Signetur

Signature

e-mail: Chase.Settle@geogresources.com

Preservation & Use Containers	Misc
-------------------------------	------

POLYMER FAC					
TOTAL:					
TOTAL:					
900					
2000					
1000					

[illegible]

Special Instructions:

Dealing with the Burden

Illustrated by:

Redrafted by:

Date	Time	Received by:
------	------	--------------

Date	Time	Received by:
------	------	--------------

Date	Time	Received by
------	------	-------------

Date	Title
------	-------

15



Geography Comments:
 Sample Containers: Indistinct
 VOCs Free of Hydrocarbons?
 (Labels on containers)
 Aromatic residue on monitoring
 2 2 2 2 2

Simple and Powerful
by **Stanley Clement**

Time to Visit Boat People

Temperature Upport 18-20

18:6



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

EOG 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 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 1706B31

Date Reported: 6/29/2017

CLIENT: EOG Resources, Inc.

Client Sample ID: T1-1'

Project: Cotton MX Federal Com 1

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

Lab ID: 1706B31-001

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	470	30		mg/Kg	20	6/23/2017 3:47:18 PM	32456
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	5600	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)	610	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	6.1	1.2		mg/Kg	50	6/22/2017 1:11:27 PM	32413
Toluene	19	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	55.0-132		%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.

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 limits as specified

Page 1 of 14

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B31

Date Reported: 6/29/2017

CLIENT: EOG Resources, Inc.

Client Sample ID: T1-3'

Project: Cotton MX Federal Cont 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

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 800.0: ANIONS							Analyst: MRA
Chloride	500	30		mg/Kg	20	6/23/2017 3:59:43 PM	32418
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	12000	930		mg/Kg	100	6/22/2017 8:10:53 PM	32418
Surr: DNOP	0	70-130	S	%Rec	100	6/22/2017 8:10:53 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	32418
Surr: BFB	205	54-150	S	%Rec	50	6/22/2017 1:35:37 PM	32418
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	4.8		mg/Kg	50	6/22/2017 1:35:37 PM	32418
Benzene	10	1.2		mg/Kg	50	6/22/2017 1:35:37 PM	32418
Toluene	89	2.4		mg/Kg	50	6/22/2017 1:35:37 PM	32418
Ethylbenzene	58	2.4		mg/Kg	50	6/22/2017 1:35:37 PM	32418
Xylenes, Total	98	4.8		mg/Kg	50	6/22/2017 1:35:37 PM	32418
Surr: 4-Bromofluorobenzene	140	66.6-132	B	%Rec	50	6/22/2017 1:35:37 PM	32418

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	90		mg/Kg	20	6/23/2017 4:12:08 PM	32413
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	8800	990		mg/Kg	100	6/23/2017 8:39:18 PM	32413
Sum: DNOP	0	70-130	S	%Rec	100	6/23/2017 8:39:18 PM	32413
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	1000	98		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	1.8		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	0.66		mg/Kg	20	6/23/2017 8:50:55 PM	32413
Ethylbenzene	59	0.66		mg/Kg	20	6/23/2017 8:50:55 PM	32413
Xylenes, Total	55	1.9		mg/Kg	20	6/23/2017 8:50:55 PM	32413
Sum: 4-Bromofluorobenzene	168	88.8-132	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	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 in 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: BOQ 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

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	60	30		mg/Kg	20	6/23/2017 4:24:32 PM	32458
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	4800	99		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	96		mg/Kg	20	6/23/2017 7:14:53 PM	32413
Sum: BFB	325	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	0.96		mg/Kg	20	6/23/2017 7:14:53 PM	32413
Ethylbenzene	6.6	0.96		mg/Kg	20	6/23/2017 7:14:53 PM	32413
Xylenes, Total	8.6	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: BOG 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 12:53:13 AM	32503
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	54-160	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	0.48		mg/Kg	20	6/23/2017 7:38:43 PM	32413
Toluene	6.2	0.05		mg/Kg	20	6/23/2017 7:38:43 PM	32413
Ethylbenzene	4.6	0.05		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-Bromobenzene	196	66.8-132	S	%Rec	20	6/23/2017 7:38:43 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 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
	S	% 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: BOG 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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	90	30		mg/Kg	20	6/27/2017 1:30:27 AM	32603
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	32418
Surr: DNOP	0	70-130	S	%Rec	100	6/22/2017 11:06:44 PM	32418
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	0.66		mg/Kg	20	6/23/2017 8:02:32 PM	32413
Xylenes, Total	38	2.0		mg/Kg	20	6/23/2017 8:02:32 PM	32413
Surr: 4-Bromofluorobenzene	142	66.6-132	S	%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

Page 6 of 14

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706H31

Date Reported: 6/29/2017

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	32608
EPA METHOD 8016MD: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	7000	950		mg/Kg	100	6/22/2017 11:34:34 PM	32418
Surf: DNOP	0	70-130	S	%Rec	100	6/22/2017 11:34:34 PM	32418
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	590	89		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	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 7 of 14

Hill Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B31

Date Reported: 6/29/2017

CLIENT: BOG 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

Analyses	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	166	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:	* 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 8 of 14

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	32503
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	9800	1000		mg/Kg	100	6/23/2017 12:31:40 AM	32418
Sum: DNOP	0	70-130	B	%Rec	100	6/23/2017 12:31:40 AM	32418
EPA METHOD 8016D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	1000	88		mg/Kg	20	6/23/2017 8:50:04 PM	32413
Sum: BFB	432	54-160	B	%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	0.08		mg/Kg	20	6/23/2017 8:50:04 PM	32413
Ethylbenzene	0.2	0.08		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	88.0-132	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	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 9 of 14

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1706B31
 Date Reported: 6/29/2017

CLIENT: BOG 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	32609
EPA METHOD 8018M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	200	98		mg/Kg	10	6/23/2017 1:00:23 AM	32418
Sum: DNOP	0	70-130	R	%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	6/23/2017 5:48:08 PM	32413
Sum: BFB	137	64-150		%Rec	1	6/23/2017 5:48:08 PM	32413
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.089		mg/Kg	1	6/23/2017 5:48:06 PM	32413
Benzene	ND	0.025		mg/Kg	1	6/23/2017 5:48:06 PM	32413
Toluene	ND	0.049		mg/Kg	1	6/23/2017 5:48:06 PM	32413
Ethylbenzene	ND	0.049		mg/Kg	1	6/23/2017 5:48:06 PM	32413
Xylenes, Total	ND	0.089		mg/Kg	1	6/23/2017 5:48:06 PM	32413
Sum: 4-Bromofluorobenzene	126	60.6-132		%Rec	1	6/23/2017 5:48:06 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 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

QC SUMMARY REPORT

WO#: 1706031

29-Jun-17

Hall Environmental Analysis Laboratory, Inc.

Client: BOG Resources, Inc.
 Project: Cotton MX Federal Com 1

Sample ID	MB-32458	Sample Type	mbik	Test Code	EPA Method 300.0: Anions					
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	1.6								

Sample ID: LCS-32458		SampType: lcs		TestCode: EPA Method 300.0: Anions						
Client ID: LCS		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	83.8	80	110			

Sample ID: MB-32503	Sample Type: mbik	Test Code: EPA Method 300.0: Anions								
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	1.6								

Sample ID: LCS-32503		SampType: lcs		TestCode: EPA Method 300.0: Anions						
Client ID: LCS		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	15.00	0	93.3	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
- 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

Page 11 of 14

QC SUMMARY REPORT

WO#: 1706B31

Hall Environmental Analysis Laboratory, Inc.

29-Jun-17

Client: BOG Resources, Inc.
 Project: Cotton MX Federal Com 1

Sample ID: MB-32418	SamplType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 32418	RunNo: 48710								
Prep Date: 6/21/2017	Analyte Date: 6/22/2017	SeqNo: 1377405 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Sum: DNOP	8.5		10.00		85.4	70	130			

Sample ID: LCS-32418	Sample Type: LCS	Test Code: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 32418	Run No: 48710								
Prep Date: 6/21/2017	Analyte Date: 6/22/2017	Seq No: 1377406								
		Unit: 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	105	73.2	114			
Surc: DNOP	4.6		5.000		95.4	70	130			

Qualifier:

- * 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 Precise 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 or specified

Page 12 of 14

QC SUMMARY REPORT

WO#: 1706B31

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 8016D: Gasoline Range								
Client ID: PBS	Batch ID: 32413	Run No: 43721								
Prep Date: 6/21/2017	Analysis Date: 6/22/2017	Seq No: 1377855 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								
Sw: BFB	930		1000		93.3	54	150			

Sample ID: LGS-32413	Sample Type: LGS	Test Code: EPA Method 8016D: Gasoline Range								
Client ID: LGS	Batch ID: 32413	Run No: 43721								
Prep Date: 6/21/2017	Analysis Date: 6/22/2017	Seq No: 1377857 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Gasoline Range Organics (GRO)	20	5.0	25.00	0	102	76.4	125			
Sw: BFB	1000		1000		104	54	150			

Sample ID: MB-32438	Sample Type: MBLK	Test Code: EPA Method 8016D: Gasoline Range								
Client ID: PBS	Batch ID: 32438	Run No: 43757								
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	RPD Limit	Qual
Sw: BFB	930		1000		93.3	54	150			

Sample ID: LGS-32438	Sample Type: LGS	Test Code: EPA Method 8016D: Gasoline Range								
Client ID: LGS	Batch ID: 32438	Run No: 43757								
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	RPD Limit	Qual
Sw: 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
- B Analyte detected in the associated Method Blank
- R 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 13 of 14

QC SUMMARY REPORT

WOB: 1706D31

Hall Environmental Analysis Laboratory, Inc.

29-Jun-17

Client: HOG 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: 1377583 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	68.6	132			

Sample ID: LCS-32413	Sample Type: LCS	Test Code: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 32413	Run No: 43721								
Prep Date: 6/21/2017	Analysis Date: 6/22/2017	Seq No: 1377584 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)	0.09	0.10	1.000	0	88.6	68.6	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	68.6	132			

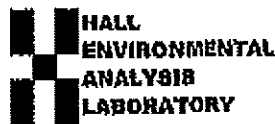
Sample ID: MB-32438	SamplType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBG	Batch ID: 32438	RunNo: 43767								
Prep Date: 6/22/2017	Analysis Date: 6/23/2017	SeqNo: 1378839 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sum: 4-Bromofluorobenzene	1.2		1.000		119	68.6	132			

Sample ID: LCS-32438	Sample Type: LCS	Test Code: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 32438	Run No: 43767								
Prep Date: 6/22/2017	Analysis Date: 6/23/2017	Seq No: 1376840			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	68.6	132			

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
- PQL Practical Quantitative Limit
- R % 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 14 of 14



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: EOG/Yates

Work Order Number: 1708B31

Rep/No: 1

Received By: Richie Erlichso

8/21/2017 8:40:00 AM

Completed By: Sophia Campuzano

8/21/2017 11:20:11 AM

Reviewed By:

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? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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	1.1	Good	Yes			

THE UNIVERSITY OF CHICAGO

X Standard E. Rush

name: Cotton VEX Federal Court #1

CottonJAX Federal Com #1

30-015-23315

Project Manager:

Chase Settle

PO # 205 0750

Sampler:	Chase, Settle
----------	---------------

On Ice - 2000

Sample Temperature: 121°C

100

Container	Preservative
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Type and #	Type
------------	------

[illegible]

1-407-ICE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

1-492	110E
-------	------

1-40Z ICE

1-467 ICE

2	1
2	1

1-402-	ICE
--------	-----

1-402-ICE

1-403	ICE
-------	-----

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

1-402 ICE

1-402	ICE
-------	-----

7-407

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

[illegible][illegible]

Received by

7

Received by:	
--------------	--

100

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

Somebody's got to pay for education

© 2006 The Authors
Journal compilation © 2006 Blackwell Publishing Ltd



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

July 17, 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 07/10/17 17:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704390-16-8. 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_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,

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) 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 - 10' (H7017B3-01)

BTEX 8021B		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	98.5	2.00	5.05	
Ethylbenzene*	<0.200	0.200	07/13/2017	ND	2.03	101	2.00	4.75	
Total Xylenes*	21.5	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

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	541	10.0	07/12/2017	ND	207	104	200	1.50	
DRO >C10-C20	3060	10.0	07/12/2017	ND	216	108	200	2.77	

Surrogate: 1-Chlorooctane 149 % 28.3164

Surrogate: 1-Chlorodecane 150 % 34.7157

Cardinal Laboratories

*=Accredited Analyte

These values, including test methods, are for informational purposes only and should not be used for legal or regulatory purposes. The results are based on the sample as received and are not a guarantee of the accuracy of the results. The results are based on the sample as received and are not a guarantee of the accuracy of the results. The results are based on the sample as received and are not a guarantee of the accuracy of the results.

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 1TH 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)

DTEX 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-Bromofluorobenzene (BFL) 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 % 28.3-164

Surrogate: 1-Chlorodecane 95.5 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

These results are preliminary. Cardinal Laboratories and its analysts are not responsible for any errors or omissions in the results reported by this laboratory. All data, including quality control data, are subject to review and approval by the laboratory. It is the policy of Cardinal Laboratories to maintain the confidentiality of all data. No part of this report should be reproduced or transmitted in any form or by any means electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without prior written permission from Cardinal Laboratories.

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

01EX 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	07/13/2017	ND	2.04	102	2.00	4.12	
Toluene*	0.054	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*	1.03	0.150	07/13/2017	ND	5.98	99.6	6.00	4.44	
Total BTEX	1.09	0.300	07/13/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE	122%	72-148
--------------------------------------	------	--------

TRIM 0015M

Nig/kg

Analyzed By: MS

5.04

Analyte	Result	Reporting Limit	Analyst	Method Blank	BS	% Recovery	True Value QC	U/D	Qualifier
GH0 C6-C10	90.9	10.0	07/12/2017	ND	207	101	200	1.50	
DRO > C10-C20	1670	10.0	07/12/2017	ND	216	100	200	2.77	

Surrogate: 1-Chlorooctane	157%	28.3-164
---------------------------	------	----------

Surrogate: 1-Chlorooctadecane	162%	34.7-157
-------------------------------	------	----------

Cardinal Laboratories

*=Accredited Analyte

Further notes: Utility and Domestic: Cardinal's father and sister continue to deny this story, whether it is correct or not, and he denied it in the sworn oath by which he swore. As above, including there the marriage and any other issue otherwise said to be denied would make it in writing and signed by Cardinal's father, this day and expiration of the specified time. In no event will Cardinal be held to be guilty or compromised directly, indirectly, or even remotely, by his father, his mother, his wife, or her or her father's property, or by any other person, whether or not it is alleged in the performance of the service tendered by Cardinal, regardless of whether such person is named upon any of the above stated pieces of evidence, or whether or not it is alleged in the sworn oath by which he swore. This report will not be repeated except by the written approval of Cardinal's father.

Mike Snyder For 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: 07/10/2017
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)

BTEX 60218		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 BTEX	<0.300	0.300	07/13/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL): 102 % 72-148

TPH 6015M		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	136	10.0	07/12/2017	ND	216	108	200	2.77	

Surrogate: 1-Chlorooctane 105 % 28.3-164

Surrogate: 1-Chlorodecane 127 % 34.7-137

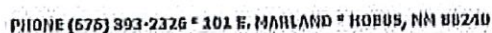
Cardinal Laboratories

*=Accredited Analyte

These data were generated by Cardinal Laboratories, Inc. using methods approved by the New Mexico Department of the Environment. The results are provided for informational purposes only and do not constitute a warranty of any kind. The results are subject to the limitations of the analytical methods used. The results are not to be used for legal or regulatory purposes without the written consent of Cardinal Laboratories, Inc. The results are not to be used for any other purpose without the written consent of Cardinal Laboratories, Inc.

Mika Snyder

Mika Snyder For Celey 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

DTEX 0021D



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					

105%

72-148

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	
GLC >C10-C28	<10.0	10.0	07/12/2017	ND	216	100	200	2.77	

99.25%

28.3-164

104 34

34.7-157

*=Accredited Analyte

PLEASE PRINT NAME AND ADDRESS. Cardiac Society and Heart Institute hereby do not discriminate in any form, manner, whether based, in whole or in part, on sex, race or ethnicity. All other members of the Society and its affiliates shall be treated equally and shall not be discriminated against on the basis of sex, race or ethnicity. It is the policy of the Society to provide equal employment opportunities to all persons without regard to sex, race or ethnicity. The Society shall not discriminate on the basis of sex, race or ethnicity in its recruitment, hiring, promotion, compensation, benefits, training, or any other term or condition of employment. The Society shall not discriminate on the basis of sex, race or ethnicity in its recruitment, hiring, promotion, compensation, benefits, training, or any other term or condition of employment. The Society shall not discriminate on the basis of sex, race or ethnicity in its recruitment, hiring, promotion, compensation, benefits, training, or any other term or condition of employment.

Mike Snyder
Mike Snyder For Colay D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HUNDS, 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	RPO	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-Chlorophenanthrene (PIC) 103 % 72-148

TPH 0015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPO	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 % 34.7-137

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Quality and Quantity. Cardinal Laboratories and its clients maintain records for any data which indicates that a sample is not suitable for analysis. If data indicates that a sample is not suitable for analysis, the sample will be re-analyzed. If the sample is re-analyzed and the results are still not suitable, the sample will be discarded. The results of the analysis will be reported as "Not Suitable for Analysis".

Mike Snyder

Mike Snyder For Celey 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

nTEX 00210		Analyzed By: MS							
Analyte	Result	Reporting Unit	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 nTEX	<0.300	0.300	07/13/2017	ND					

Surrogate: 4-Bromofluorobenzene (PHE)		104 %	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	101	200	1.50		
PFO >C10-C28	<10.0	10.0	07/12/2017	ND	216	100	200	2.77		

Surrogate: 1-Chlorooctane	92.0 %	28.3-164
Surrogate: 1-Chlorooctadecane	95.5 %	34.7-157

*=Accredited Analyst

[illegible]

Mike Snyder
Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

PHONE (575) 393-2326 • 101 E. MANLAND • HOBBS, NM 80240

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)

BTX 00210

nip/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 BTEX	<0.300	0.300	07/13/2017	ND					

Surrogato: 4-Bromofluorobenzene (PIL)

10495

72-148

YFH B015M

mg/kg

Analyzed By: MG

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	1.62	

Surrogate: 1-Chlorooctane

10636

28,3-164

Surrogate: 1-Chlorooctadecano

10956

34.7-157

Cardinal Laboratories

*=Accredited Analyte

[illegible]

Mike Snyder For Coley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MAINLAND • HONDS, NM 80240

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: Cop & Intact
Sample Received By: Tania Oldaker

Sample ID: T2 - 12' (H701783-09)

BTEX 60210		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

TPH 60154		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	07/12/2017	ND	223	111	200	1.00	
GRO >C10-C28	<10.0	10.0	07/12/2017	ND	237	119	200	4.62	

Surrogate: 1-Chlorooctane 109 % 28.3-164

Surrogate: 1-Chlorodecane 113 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

Notice: This is a preliminary report. Cardinal Laboratories is not responsible for any data errors, omissions, or delays. Data is subject to change without notice. It is the user's responsibility to verify the accuracy of the data. This report is for informational purposes only. It is not intended to be used for legal or regulatory purposes. The user is responsible for the accuracy of the data. This report is for informational purposes only. It is not intended to be used for legal or regulatory purposes. The user is responsible for the accuracy of the data.

Miko Snyder

Miko Snyder For Celey D. Keene, Lab Director/Quality Manager



504	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
TT	Samples not received at proper temperature of 6°C or below.
TTT	Insufficient time to reach temperature.
*	Chloride by SM5000-Cl-D does not require samples be received at or below 6°C
	Samples reported on as received basis (wt) unless otherwise noted on report

†=Accredited Analyte

[illegible]

Mike Snyder For Celey D. Keene, Lub Director/Quality Manager



ARDINAL LABORATORIES
101 East Maryland, Hobbs, NM 88240

(505) 393-2328 FAX (505) 393-2475

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager

Chase Sellen

Company Name

EDGE-Y Resources Inc.

Company Address: 105 South 4th Street

105 South 4th Street

City/State/Zip:

Artaria NIM 28210

Telephone No.:

575-748-4171

Sampler Signatures:

11

Fax No:

E-mail:

Chase Settle@aodresources.com

ନିମ୍ନପ୍ରଦତ୍ତ ବିବରଣୀକୁ

☒ Standard

ਬਾਇਬਲ

☐ NPDES

EO #: 2025-0750

Project Location

Commonwealth Federal Court

Page 12 of 12

[illegible]



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

TBL: (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 MK 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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	520	30		mg/Kg	20	3/7/2017 3:25:19 AM	30549
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	3/7/2017 12:41:14 PM	30529
Surf: DNOP	108	70-130		%Rec	1	3/7/2017 12:41:14 PM	30529
EPA METHOD 8016D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	3/8/2017 4:05:32 PM	30513
Surf: 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
Surf: 4-Bromofluorobenzene	84.0	68.8-132		%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	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

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 Corn 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	0.7		mg/Kg	1	3/7/2017 1:02:24 PM	30529
Surr: DNOP	109	70-120		%Rec	1	3/7/2017 1:02:24 PM	30529
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
Surr: BFB	81.8	54-160		%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	0.040		mg/Kg	1	3/6/2017 4:31:38 PM	30513
Ethylbenzene	ND	0.040		mg/Kg	1	3/6/2017 4:31:38 PM	30513
Xylenes, Total	ND	0.080		mg/Kg	1	3/6/2017 4:31:38 PM	30513
Surr: 4-Bromofluorobenzene	89.8	66.6-132		%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

Page 2 of 12

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703140

Date Reported: 3/9/2017

CLIENT: BOQ Resources

Client Sample ID: EB-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

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 800.0: ANIONS							Analyst: MHA
Chloride	1400	75		mg/Kg	ED	3/7/2017 11:18:11 PM	30549
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	3/7/2017 1:24:23 PM	30520
Sum: DNOP	111	70-130		%Rec	1	3/7/2017 1:24:23 PM	30520
EPA METHOD 8018D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	3/8/2017 6:42:54 PM	30513
Sum: 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
Sum: 4-Bromofluorobenzene	84.9	65.6-132		%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	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 3 of 12

Analytical Report

Lab Order 1703140

Date Reported: 3/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOC 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	DF	Date Analyzed	Batch
EPA METHOD 800.0: ANIONS							Analyst: MRA
Chloride	540	30		mg/Kg	20	3/7/2017 4:02:38 AM	30549
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	0.7		mg/Kg	1	3/7/2017 1:45:41 PM	30520
Sum: DNOP	100	70-130		%Rec	1	3/7/2017 1:45:41 PM	30520
EPA METHOD 8016D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/8/2017 7:09:07 PM	30513
Sum: BFB	76.8	54-100		%Rec	1	3/8/2017 7:09:07 PM	30513
EPA METHOD 8021B: VOLATILES							Analyst: NSB
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	58.8-132		%Rec	1	3/8/2017 7:09:07 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	I Analyte detected below quantitation limits	Page 4 of 12
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	

Analytical Report

Lab Order 1703140

Date Reported: 3/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources

Client Sample ID: EB-9'

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
Analyst: MRA							
EPA METHOD 800.0: ANIONS							
Chloride	1100	75		mg/Kg	50	3/7/2017 11:28:30 PM	30549
Analyst: TOM							
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	ND	6.4		mg/Kg	1	3/7/2017 2:07:10 PM	30520
Sum: DNOP	110	70-130		%Rec	1	3/7/2017 2:07:10 PM	30520
Analyst: NSB							
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	6.0		mg/Kg	1	3/6/2017 7:35:25 PM	30513
Sum: BFB	80.1	54-150		%Rec	1	3/6/2017 7:35:25 PM	30513
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
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
Sum: 4-Bromofluorobenzene	88.0	88.8-132		%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.	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

Page 5 of 12

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703140

Data 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

Analytes	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 8016M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	8.9		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 8018D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/8/2017 8:01:43 PM	30513
Surf: BFB	77.9	64-160		%Rec	1	3/8/2017 8:01:43 PM	30513
EPA METHOD 8021B: VOLATILES							Analyst: NSB
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	0.092		mg/Kg	1	3/8/2017 8:01:43 PM	30513
Surf: 4-Bromofluorobenzene	85.0	66.0-132		%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 Containment 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 6 of 12
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 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

Analyses	Result	PQL	Quant	Units	DF	Date Analyzed	Batch
Analyst: MRA							
EPA METHOD 300.0: ANIONS							
Chloride	1300	76		mg/Kg	50	3/7/2017 11:41:00 PM	30540
Analyst: TOM							
EPA METHOD 8016M/D: DIESEL RANGE ORGANICS							
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	3/7/2017 2:50:30 PM	30529
Sum: DNOP	04.8	70-130		%Rec	1	3/7/2017 2:50:30 PM	30529
Analyst: NSB							
EPA METHOD 8015D: GASOLINE RANGE							
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/8/2017 8:27:52 PM	30513
Sum: BFB	75.7	64-150		%Rec	1	3/8/2017 8:27:52 PM	30513
Analyst: NSB							
EPA METHOD 8021B: VOLATILES							
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
Sum: 4-Bromofluorobenzene	82.7	68.0-132		%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. - 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 - W Sample container temperature is out of limit as specified
-------------	---	--

Page 7 of 12

Analytical Report

Lab Order 1703140

Date Reported: 3/9/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources

Client Sample ID: NED-5'

Project: Cotton MX Federal Coin 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	9.9		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	30529
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	66.8-132		%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.

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

Page 8 of 12

QC SUMMARY REPORT **Hall Environmental Analysis Laboratory, Inc.**

WOW: 1703140
 09-Mar-17

Client: BOG Resources
 Project: Cotton MX Federal Com 1

Project: Cotton MX POCAL Cont 1

Sample ID: MB-30549	Sample Type: mbfk	Test Code: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 30549	Run No: 41183								
Prep Date: 3/8/2017	Analysis Date: 3/8/2017	Seq No: 1280122 Units: mg/Kg								
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	ND	1.6								

Sample ID: LCS-30549	Sample Type: lcs	Test Code: EPA Method 300.0: Anions								
Client ID: LOSS	Batch ID: 30549	Run No: 41183								
Prep Date: 3/8/2017	Analysis Date: 3/8/2017	Seq No: 1280128 Units: mg/Kg								
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	14	1.6	15.00	0	95.5	80	110			

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 | Y 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 9 of 12

QC SUMMARY REPORT

WO#: 1703140

Hall Environmental Analysis Laboratory, Inc.

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: LC88	Batch ID: 30520	Run No: 41184								
Prep Date: 3/8/2017	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	4.5		5.000		88.2	70	130			

Sample ID: MB-30529		Sample Type: MBLK		Test Code: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS		Batch ID: 30529		Run No: 41184						
Prep Date: 3/8/2017		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		88.5	70	130			

Sample ID: LCS-30530		Sample Type: LCS		Test Code: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LC88		Batch ID: 30530		Run No: 41180						
Prep Date: 3/8/2017		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: 3/8/2017											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																						93.7											70											130																																											

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 twice due to dilution or matrix

- D Analyte detected in the associated Method Blank
- F 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 10 of 12

QC SUMMARY REPORT

WOK: 1703140

Hall Environmental Analysis Laboratory, Inc.

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: 41169								
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	000		1000		85.5	54	150			

Sample ID: LCS-30513	Sample Type: LCS	Test Code: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 30513	Run No: 41180								
Prep Date: 3/3/2017	Analysis Date: 3/8/2017	Seq No: 1289758 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	76.4	125			
Sum: BFB	1000		1000		105	54	150			

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 limits as specified |

Page 11 of 12

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	86.6	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	78.9	117			
Xylenes, Total	3.2	0.10	3.000	0	106	79.2	115			
Sum: 4-Bromofluorobenzene	0.94		1.000		93.6	86.6	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
- E % 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 12 of 12



RepNo: 4

Reviewed By: AO 03/03/17

Page 1 of 1

Chain-of-Custody Record

Client: EOG-Y Resources, Inc.
Project Name: Cotton, MX Federal Com #1
Project #: 30-015-23315
Project Manager: Chase Sattler
PO # 205.0750
Sampler: Chase Sattler
On/Off: ☒ Yes ☐ No
Sample Temperature: 10.5 C
Container Type and #: 1-4oz
Preservative Type: ICE
HEAL No. 1703140



HALL ENVIRONMENTAL
ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel: 505-345-3975 Fax: 505-345-4107

Analyst Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	TPH Method 4016B (Gas/Dissol)	TPH (Method 410.1)	EDB (Method 504.1)	B310 (PMA or PAH)	RCRA 9 Metals	Anions (F, O, NO ₃ , NO ₂ , PO ₄ , SO ₄)	BOD ₅ / Pollution / 6002 PCBs	BZDB (VOA)	0370 (Semi-VOA)	Alc. Bubbler / V or N
2/28/2017	1:06P	Soil	EB-1	1-4oz	ICE	1703140	X	X				X				
2/28/2017	1:08P	Soil	EB-3	1-4oz	ICE	1703140	X	X				X				
2/28/2017	1:10P	Soil	EB-5	1-4oz	ICE	1703140	X	X				X				
2/28/2017	1:13P	Soil	EB-7	1-4oz	ICE	1703140	X	X				X				
2/28/2017	1:17P	Soil	EB-9	1-4oz	ICE	1703140	X	X				X				
2/28/2017	1:25P	Soil	NEB-1	1-4oz	ICE	1703140	X	X				X				
2/28/2017	1:26P	Soil	NEB-3	1-4oz	ICE	1703140	X	X				X				
2/28/2017	1:28P	Soil	NEB-5	1-4oz	ICE	1703140	X	X				X				

Remarks

Date: 3-1-17 Time: 3:24 PM
Received by: [Signature] Date: 03/01/17 Time: 09:50
Date: Time:
Received by: [Signature] Date: Time:

If necessary, samples submitted to Hall Environmental may be subcontracted to other certified laboratories. The services of these laboratories will be clearly noted on the analytical report.



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

Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources

Client Sample ID: T3-9¹

Project: Cotton MX Federal Cont 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 3:17:06 PM	32611

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	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 1 of 11

Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HOG Resources

Client Sample ID: T3-12'

Project: Cotton MK 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

Analytes	Result	PQL	Qual	Units	DV	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	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
	R % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Page 2 of 11

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

Analyses	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. - D Sample Diluted Due to Matrix - R 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 - B 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 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 MX 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
EPA METHOD 300.0; ANIONS							Analyst: MRA
Chloride	2100	75		mg/kg	60	6/29/2017 8:00:07 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 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 limits specified

Page 4 of 11

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

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 808.0: ANIONS							Analyst: SRM
Chloride	600	30		mg/Kg	20	6/27/2017 4:34:34 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	H 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 5 of 11

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

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

Analytes	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0; ANIONS							Analyst: SRM
Chloride	220	30		mg/Kg	20	6/27/2017 4:43:56 PM	32511

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

Quibblers:	* 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	T 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 6 of 11

Analytical Report

Lab Order 1706878

Date Reported: 7/13/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources

Client Sample ID: T4-12'

Project: Cotton MX Federal Com 1

Collection Date: 6/14/2017 3:16:00 PM

Lab ID: 1706878-007

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	610	30		mg/Kg	20	6/28/2017 12:45:40 PM	32536

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
	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 7 of 11

Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: BOG Resources

Client Sample ID: T4-15'

Project: Cotton MX Federal Cont 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		mg/Kg	20	6/28/2017 1:22:55 PM	32538

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
	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 8 of 11

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706B78

Date Reported: 7/13/2017

CLIENT: EOG Resources

Client Sample ID: T4-181

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	260	20		mg/Kg	20	6/26/2017 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

Page 9 of 11

Halt Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706H78

Date Reported: 7/13/2017

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: 1706H78-010

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	07/28/2017 2:12:33 PM	92696

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	F 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 10 of 11

QC SUMMARY REPORT

WO#: 1706878

Hall Environmental Analysis Laboratory, Inc.

13-Jul-17

Client: BOG Resources
 Projects: Cotton MX Federal Cont 1

Sample ID: MB-32611	Sample Type: mbtk	Test Code: EPA Method 300.0: Arsenic								
Client ID: PBS	Batch ID: 32611	Run No: 43824								
Prep Date: 6/27/2017	Analysis Date: 6/27/2017	Seq No: 1382188 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-32611	SamplType:	lcs	TestCode:	EPA Method 300.0: Arsenic					
Client ID:	LGBB	Batch ID:	32611	RunNo:	43824					
Prep Date:	6/27/2017	Analysis Date:	6/27/2017	SeqNo:	1382189					
				Units:	mg/Kg					
Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.7	90	110			

Sample ID: MB-32636	Sample Type: mbtk	Test Code: EPA Method 300.0: Arsenic								
Client ID: PBS	Batch ID: 32636	Run No: 43854								
Prep Date: 6/28/2017	Analysis Date: 6/28/2017	Seq No: 1383083 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	ND	1.5								

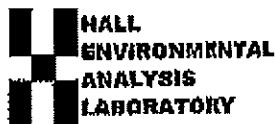
Sample ID: LCS-32636	Sample Type: lcs	Test Code: EPA Method 300.0: Arsenic								
Client ID: LCSB	Batch ID: 32636	Run No: 43854								
Prep Date: 6/28/2017	Analysis Date: 6/28/2017	Seq No: 1383084 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	%RPD	RPD Limit	Qual
Chloride	14	1.5	15.00	0	92.3	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
- 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

Page 11 of 11



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

Sample Log-In Check List

Client Name: EOG/Yalea

Work Order Number: 1706B78

Rep/No: 1

Received By: Richie Ericho 01/21/2017 9:40:00 AM
Completed By: Sophia Campuzano 01/21/2017 3:46:25 PM
Reviewed By: ENM 06/22/17

[Handwritten signature]
[Handwritten signature]

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° 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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	25.8	Good	Yes			

Chain-of-Custody Record

Client: EOG-Y Resources, Inc.

X Standard ☐ Rush

Project Name:

Mailing Address:

Cotton MX Federal Com #1

105 South 4th Street, Artesia, NM 88210

Project #:

30-015-25315

Phone #:

575-703-6537

Email or Fax: Chase Settle@eogresources.com

Project Manager:

Chase Settle

PO #205.0750

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other☐ EDD (Type)

Sampler: Chase Settle

Grubbs: ☐ Yes ☐ No

Sample Temperature: 25.95C

HEAL No.

1706878

Container Type and #

Preservative Type

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time</



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

Analytical Report

Lab Order: 1605298

Date Reported: 5/13/2016

Hall Environmental Analysis Laboratory, Inc.

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

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							
Chloride	150	30		mg/Kg	20	5/12/2016 2:30:54 PM	25260

Analyst: LGT

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							
Chloride	88	30		mg/Kg	20	5/11/2016 2:01:37 PM	25260

Analyst: LGT

Lab ID: 1605298-003

Collection Date: 5/5/2016 7:54:00 AM

Client Sample ID: SS-1'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	1800	76		mg/Kg	60	5/12/2016 2:43:16 PM	25260

Analyst: LGT

Lab ID: 1605298-004

Collection Date: 5/5/2016 7:58:00 AM

Client Sample ID: SE-3'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	420	30		mg/Kg	20	5/11/2016 2:28:28 PM	25260

Analyst: LGT

Lab ID: 1605298-005

Collection Date: 5/5/2016 8:00:00 AM

Client Sample ID: SE-5'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							
Chloride	180	30		mg/Kg	20	5/11/2016 2:38:50 PM	25260

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.	
	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	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not in Range	
	R RPD outside accepted recovery limits	RI Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1605298

Date Reported: 5/13/2016

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

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							Analyst: LGT
Chloride	390	30		mg/Kg	20	5/11/2016 3:18:04 PM	25260

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							Analyst: LGT
Chloride	510	30		mg/Kg	20	5/11/2016 3:28:28 PM	25260

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							Analyst: LGT
Chloride	5500	300		mg/Kg	200	5/12/2016 2:58:44 PM	25260

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							Analyst: LGT
Chloride	120	30		mg/Kg	20	5/11/2016 1:29:45 PM	25270

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							Analyst: LGT
Chloride	4800	150		mg/Kg	100	5/12/2016 3:38:46 PM	25270

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

Quantifiers:	* 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 2 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	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1605298

Date Reported: 5/13/2016

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	4500	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 log-in 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 - W Sample container temperature is out of limit as specified
-------------	--	--

Page 3 of 4

QC SUMMARY REPORT

WO#: 1605298

Hall Environmental Analysis Laboratory, Inc.

13-May-16

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

Sample ID: MB-26260	SampleType: MBLK	TestCode: EPA Method 300.0: Antona								
Client ID: PBS	Batch ID: 26260	RunNo: 34133								
Prep Date: 5/10/2016	Analysis Date: 5/11/2016	SeqNo: 1052329 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-25260	SampType: LCS	TestCode: EPA Method 300.0: Antona								
Client ID: LCSS	Batch ID: 25260	RunNo: 34133								
Prep Date: 5/10/2016	Analysis Date: 6/11/2016	SeqNo: 1052330 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.8	90	110			

Sample ID: MB-26270	Sample Type: mblk	Test Code: EPA Method 300.0: Antions								
Client ID: PBS	Batch ID: 26270	Run No: 34441								
Prep Date: 5/11/2016	Analysis Date: 5/11/2016	Seq No: 1052628 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-26270	Sample Type: lca	Test Code: EPA Method 300.0: Antona								
Client ID: LCS	Batch ID: 26270	Run No: 34141								
Prep Date: 5/11/2016	Analysis Date: 5/11/2016	Seq No: 1052629 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			

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 Navajo NE
 Albuquerque, NM 87109
 TEL: 505-345-3973 FAX: 505-345-1107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Yates Petroleum Corp Work Order Number: 1006200 Rep No: 1

Received by/Date:	<i>[Signature]</i> <i>05/06/16</i>
Logged By:	Lindsay Mangin 6/0/2010 10:30:00 AM <i>[Signature]</i>
Completed By:	Lindsay Mangin 6/0/2010 12:04:05 PM <i>[Signature]</i>
Reviewed By:	<i>[Signature]</i> <i>05/06/16</i>

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	Sent No	Sent 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 300.0: ANIONS							Analyst: LGT
Chloride	2600	76		mg/Kg	50	6/16/2016 5:01:49 PM	26840

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 300.0: ANIONS							Analyst: LGT
Chloride	3500	160		mg/Kg	100	6/16/2016 5:14:14 PM	26840

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.

WOR: 1606537

17-Jun-16

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

Sample ID: MB-25840	SnmpType: mbik	TestCode: EPA Method 300.0; Anions								
Client ID: PB6	Batch ID: 25840	RunNo: 34930								
Prep Date: 6/14/2016	Analysis Date: 6/14/2016	SeqNo: 1078875 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.6								

Sample ID	LC6-25840	SamplType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LC59	Batch ID:	25840	RunNo:	34930					
Prep Date:	6/14/2016	Analysis Date:	6/14/2016	SeqNo:	1078878	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.6	15.00	0	93.7	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 2 of 2



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3925 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Yates Petroleum Corporat Work Order Number: 1806637 Rep#No: 1

Received by/date: *[Signature]* 06/10/16
 Logged By: Lindsey Mangin 6/10/2016 9:30:00 AM
 Completed By: Lindsey Mangin 6/10/2016 10:58:19 AM
 Reviewed By: *[Signature]*

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? Ground

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 ☐
6. Sample(s) in proper container(s)? Approved by client
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 pit: (≤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
1	10.6	Good	Yes			



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_accred_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,

Celoy 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 -11' (H702752-01)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3600	16.0	10/12/2017	ND	432	100	400	0.00	

Sample ID: N -13' (H702752-02)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3120	16.0	10/12/2017	ND	432	100	400	0.00	

Sample ID: N -15' (H702752-03)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1580	16.0	10/12/2017	ND	432	100	400	0.00	

Sample ID: N -17' (H702752-04)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	10/12/2017	ND	432	100	400	0.00	

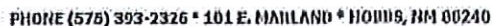
Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Analyte and sample. Cardinal Laboratories and its employees assume no responsibility for any data analysis, whether based on direct or indirect, that is not in the current and by itself for analysis. All data, including data for analysis and any other data whatsoever shall be direct and/or indirect, in value and included by Cardinal Laboratories (CL) and its employees at the applicable levels. In no case shall Cardinal Laboratories be held liable as a responsible party, including, without limitation, without limitation, for all data, or part of good results, by CL, its employees, officers or associates being not at all liable to the production of the results generated by Cardinal Laboratories or otherwise with the exception of any of the above stated reasons or otherwise. Results shall only be to the person who submitted them. This report shall not be produced or used by any other person without the written permission of Cardinal Laboratories.

Coley D. Keene

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: 10/10/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Chloride, $5M/500Cl-B$		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Unit	Analyzed	Method Blank	DS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	10/17/2017	ND	432	108	400	0.00	

Chloride, SMASOCL-B		Analyzed by: AG							
Analyte	Result	Reporting Unit	Analyzed	Method Blank	DS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	10/12/2017	ND	432	100	400	0.00	

*Accredited Analyte

[illegible]

Celey D. Keene, Lab Director/Quality Manager



PHONE (675) 303-2326 • 101 E. MARLAND • HONOLULU, HI 96840

Notes and Definitions

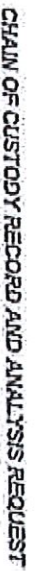
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Analyte and Biogenic Amine (BAC) results (only) for all data are subject to review and may be subject to the same rule by which the results are reported. All data, including those for analytes and BACs, will be subject to review and may be subject to the same rule by which the results are reported. In the event that results are found to be subject to review, the results will be reported as "Not Reported" or "Not Reported (Review)".

Celay D. Keene, Lab Director/Quality Manager



Needs

Chase Settle@georesources.com

ORDER

Special Instructions:

Time

#75 Corrected 1-25-5



PHONE (575) 393-2320 • 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 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/field/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	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. Keene

Lab Director/Quality Manager



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

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 740-4131

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: FSE -1' (H702754-01)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	40.0	16.0	10/12/2017	ND	432	100	400	0.00	

Sample ID: FSE -2' (H702754-02)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	10/12/2017	ND	432	100	400	0.00	

Sample ID: FSE -3' (H702754-03)

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	10/12/2017	ND	432	100	400	0.00	

Sample ID: FSE -4' (H702754-04)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	896	16.0	10/12/2017	ND	440	112	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Quality and Reliability. Cardinal Laboratories and its staff adhere strictly to the highest standards of quality and accuracy in all testing and analysis. We are committed to providing you with the most accurate and reliable results possible. In the event that a result is found to be outside of the acceptable range, we will retest the sample at no charge. We also offer a variety of services to help you understand and interpret your results. For more information, please contact us at (575) 393-2326. We are committed to your satisfaction and will do everything we can to ensure that you receive the best possible results. We are committed to your satisfaction and will do everything we can to ensure that you receive the best possible results.

Colley D. Keene

Colley 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 apply only to the sample as received. Cardinal Laboratories and its clients assume no liability for any errors or omissions in the analysis of samples received. In no event shall Cardinal Laboratories be held liable for any damages, including consequential damages, arising out of or from the use of the results of the analysis. The results of the analysis are for informational purposes only and are not to be used for any other purpose.

C. D. Keene

Celcy D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES
101 East Mainland, Hobbs, NM 88240

(505) 393-2325 FAX (505) 393-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Company Name: EOG Resources Inc

Company Address: 105 South 4th Street

City/State/Zip: Alameda, NM 88210

Telephone No: 575-746-4121

Sampler Signature: [Signature]

Fax No: _____

e-mail: _____

Chase Settle@eogresources.com

Report Format: ☒ Standard ☐ TRAP ☐ NPDES

PO #: 205-6750

Project Name: Cotton MX Federal Dam #1

Project #: 30-015-23315

Project Loc: Cotton MX Federal Dam #1

ORDER #:

Preservation & # of Containers

Matrix

TOTAL	
TOXIC	
TOXIC	

FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filled	Total # of Containers	Matrix	Analysis For
1 FSE-1			10/10/2017	2:02 PM		1	S	TOXIC: 1015B TOXIC: 1X 1000 Cations (Ca, Mg, Na, K) Anions (Cl, SO4, Nitrate) UV / EB / CEO Metals: As, Al, Ba, Cd, Cr, Pb, Hg, B, Ag Volatiles Benzene/Phenol NITEX: 1021D RO N.O.H.M. Chloride BAR RUBI TAT (P,p-Hexachloro) 24, 46, 72 hrs Standard TAT
2 FSE-2			10/10/2017	2:04 PM		1	S	
3 FSE-3			10/10/2017	2:05 PM		1	S	
4 FSE-4			10/10/2017	2:08 PM		1	S	

Special Instructions:

Relinquished by:

Relinquished by:

Relinquished by:

Date

Date

Date

Time

Time

Time

Received by:

Received by:

Received by:

Date

Date

Date

Time

Time

Time

Laboratory Comments:
Sample Containers Used?
VOCs Free of Headspace?
Labels on containers?
Custody seals on containers?
Custody seals on cooler?
Sample Name Delivered
by Carrier? UPS DHL FedEx
Temperature Upon Receipt: 1.9 / 22.5 °C

Signature: [Signature]

Signature: [Signature]



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

October 13, 2017

CHASE SETTLE
EQGY 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/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 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,

Caley D. Keene
Lab Director/Quality Manager



PHONE (575) 393-2920 • 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: 90-015-23315
Project Location: NOT GIVEN

Sampling Date: 10/10/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: 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

NOTES: Quality and Quantity. Cardinal Laboratories and its analysts are not responsible for any data errors, whether caused by error or not, that is caused by the client or by the client's equipment. All data, including data for analytes and any other data submitted, shall be derived solely from the results of the analysis performed by Cardinal Laboratories (CL) and the responsibility of the client's results. In no event shall Cardinal be held liable for incorrect or incomplete analysis, including, without limitation, but not limited to, the loss of data caused by data, its collection, storage or transmission, or its failure to be subject to the policies of the client's records by Cardinal Laboratories or its data. This report shall not be reproduced, copied or otherwise used without the written permission of Cardinal Laboratories.

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2926 • 101 E. MARLAND • HONDS, NM 88240

Notes and Definitions

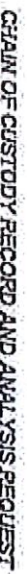
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
.	Chloride by SM-1500CI-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*#Accredited Analyte

PLEASE NOTE: Analyte and element. Cardinal Laboratories and its staff conduct testing for any other testing, whether based in contract or not, shall be limited to the extent permitted by state or federal law. All testing, including those for regulatory and non-regulatory purposes, shall be based upon the results and is subject to review by Cardinal Laboratories. The results of the analysis shall be reported to the client. In no event shall Cardinal be liable for liability or consequences arising from, including, but not limited to, errors in sampling, use of the, or loss of data caused by client or publisher, whether or not caused by any of its staff or the performance of the services rendered by Cardinal Laboratories. Such disclaimer shall not apply to the extent of the state or federal law, and shall not apply to the results of the analysis. The results of the analysis shall be reported to the client by the staff of Cardinal Laboratories.

Colby D. Keene, Lab Director/Quality Manager



Page 4 of 4

Laboratory Comments:
 Sample Container: Intact
 VOCs: Free of Headspace?
 Labels on container(s):
 Custody seal(s) on container(s):
 Custody seal(s) on label(s):
 Sample Hand Delivered:
 by Sample Client Rec.? ☐
 by Carrier? ☐ UPS ☐ DHL ☐
 Temperature Upon Receipt: 21.8°C
 Date: 1/29/05



PHONE (575) 393-2320 • 101 E. MARLAND • HOBUS, NM 80240

October 24, 2017

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 80210

RE: COTTON MX FEDERAL COM #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/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)

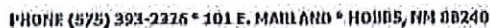
Accreditation applies to public drinking water matrices.

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. Keena

Lab Director/Quality Manager



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

Sampling Date: 10/16/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

mg/kg		Analyzed By: AC							
Analyte	Result	Reporting Unit	Analyzed	Method Ref	DS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2400	16.0	10/20/2017	ND	432	108	400	0.00	

Chloride, 6M4500Cl-D		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	

Chloride, SM4500Cl-B		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	

Chloride, M4500Cl-B		Analyzed by: AC							
	mg/kg								
Analysis	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	

*=Accredited Analyte

ENTIRE TITLE: Utility and Insurance. Cardinal Henry and Henry's children agree to pay their debts, whether bills in contract or law, such as bills to the French king by Henry for his pension. It shows, including that the payment for the whole term of the contract shall be divided among them made in money and divided by Cardinal Henry only (20) the last conclusion of the specific rules, to be sure that Cardinal Henry bills for his pension or compensation, including, among others, before his death, but of course, as well as those owned by Henry, for his pension, either as a successor or as a successor of the French king by Henry's agreement with Cardinal Henry's children.

Celey 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. Kinn

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-3326 • 101 N. MARLAND • HOBBS, NM 88240

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-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

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: This is not a Certificate of Analysis. Cardinal Laboratories and its clients neither accept nor are responsible for any data analysis, whether based on test, that is required to be reported and by them for analysis. All data, including those for analysis and any other data information that is shared with our clients is subject to review and control under policy (SOP) for the retention of the appropriate data. In the event that Cardinal Laboratories is notified of potential or suspected misuse, including without limitation, to assist in litigation, for all data, or data of public interest by client, we shall retain all data as required by law and as related to the performance of the service provided by Cardinal Laboratories and shall not delete or destroy the data until such time as the client has been notified. This report shall not be reproduced or used for any other purpose without the written consent of Cardinal Laboratories.

Caley D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Mainland, Hobbs, NM 88240

(505) 353-2326 FAX (505) 393-2475

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Company Name: EOG Y Resources Inc.

Company Address: 105 South 4th Street

City/State/Zip: Alameda, NM 88210

Telephone No: 575-748-4171

Sampler Signature: [Signature]

Fax No:

E-mail: Chase.Settle@eogresources.com

Report Format: ☒ Standard ☐ TSP ☐ NPDES

PO #: 205-0750

Project Name:

Cotton Mill Federal Dam #1

Project #: 30-015-23315

Project Loc:

Cotton Mill Federal Dam #1

Lab use only

ORDER #: 47028246

LAB # (for use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Flood Filtered	Total # of Containers	For	Matrix	Analysis For
1	FE-8			10/16/2017	9:02 AM		1	X	S	
2	FE-8			10/16/2017	9:05 AM		1	X	S	
3	FE-10			10/16/2017	9:12 AM		1	X	S	
4	FE-12			10/16/2017	9:18 AM		1	X	S	
5	FE-13			10/16/2017	9:25 AM		1	X	S	

Residuals & % of Containers	Matrix
As	
Co	
Cr	
Cu	
Fe	
Mn	
Ni	
Pb	
Sb	
Se	
Si	
Ti	
V	
Zn	
Other (Specify)	
OW-Water/Water	OW-Water
SW-Water	SW-Water
SL-Sediment	SL-Sediment
SP-Soil	SP-Soil
IPH: <u>TX 1005</u>	TX 1005
Offense (Ca, Mg, Na, K)	
Anions (Cl, SO ₄ , NO ₃)	
BAR/EBP/CEC	
Metals: As Ag In Cd Cr Pb Hg Bi	
Volatiles	
Semivolatiles	
DTX: #0210	
(H)	
N.O.R.M.	
Chlorides	
SAR	
RUSH TAT (Type of Analysis) 24, 48, 72 hr	
Standard TAT	

Special Instructions

Photograph by: [Signature] Date: 10/18/17 Time: 11:30 AM Received by: Holby Curdson

Requested by: [Signature] Date: 10/18/17 Time: 3:46

Sampled by: [Signature] Date: 10/18/17 Time: 3:46

Received by: [Signature] Date: 10/18/17 Time: 3:46

Temperature Upon Receipt: 24.6 °C

by Courier? UPS DL Sec Line Star

Sample Hand Delivered

Laboratory Comments: Sample Containers labeled with date of receipt. Labels on containers. Custody seals on containers. Custody seals on containers. Sample Hand Delivered



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

October 24, 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 10/18/17 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	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,

Celay D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 00210
Fax To: (575) 748-4131

Received:	10/10/2017	Sampling Date:	10/16/2017
Reported:	10/24/2017	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:	COTTON MX FEDERAL COM #1		

Sample ID: FE +10-1' (H702827-01)

Chloride, SM4500Cl-D			mg/kg							Analyzed By: AC
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1310	16.0	10/20/2017	ND	416	104	400	3.77		

Sample ID: FE +10-3' (H702827-02)

Chloride, SM4500Cl-D			mg/kg							Analyzed By: AC
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2880	16.0	10/20/2017	ND	432	108	400	0.00	QM-07	

Sample ID: FE +30-1' (H702827-03)

Chloride, SM4500Cl-D			mg/kg							Analyzed By: AC
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	832	16.0	10/20/2017	ND	432	108	400	0.00		

Sample ID: FE +30-3' (H702827-04)

Chloride, SM4500Cl-D			mg/kg							Analyzed By: AC
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2000	16.0	10/20/2017	ND	432	108	400	0.00		

Cardinal Laboratories * = Accredited Analyte

ADDITIONAL: Accuracy and Precision. Cardinal Laboratories will perform analysis according to any other testing, whether based in method or not, that is listed in the current test by which the analysis. All data, including those for accuracy and precision, shall be checked against values made by using the method by Cardinal Laboratories (CL) for the verification of the specific method. In no case shall Cardinal Laboratories be held responsible for any data, including accuracy and precision, that is not in line with the method by which the analysis, whether or not the analysis is performed by Cardinal Laboratories. This report shall not be reproduced except in full and without alteration of the original document.

Deley D. Keene

Deley D. Keene, Lab Director/Quality Manager



PHONE (875) 393-2326 • 201 E. MARLAND • HOBBES, NM 88240

Notes and Definitions

- 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 SM1510C1-B does not require samples be received at or below 6°C
- Samples reported on dry or received basis (wet) unless otherwise noted on report

Cardinal Laboratories

* = Accredited Analyte

DISCLAIMER: Accuracy and Precision: Cardinal Laboratories and clients acknowledge generally for any data analysis, whether based on testing or by other means, that the results are not to be used for legal purposes. All data, including those for purposes and any other uses, shall remain the property of Cardinal Laboratories and shall not be used for any other purpose without the written consent of Cardinal Laboratories. It is the policy of Cardinal Laboratories to not be held responsible for any data analysis, whether based on testing or by other means, that the results are not to be used for legal purposes. It is the policy of Cardinal Laboratories to not be held responsible for any data analysis, whether based on testing or by other means, that the results are not to be used for legal purposes. It is the policy of Cardinal Laboratories to not be held responsible for any data analysis, whether based on testing or by other means, that the results are not to be used for legal purposes.

Celey D. Keeno, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Main Street, Hobbs, NM 88240

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

CHAIN OF CUSTODY/RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Company Name: EOG Resources Inc.

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4171

Sampler Signature:

Fax No: e-mail: Chase.Settle@eogresources.com

Report Format: ☒ Standard ☐ TSP ☐ NPDES

Project Name: Cotton MX Federal Court

Project #: 30-015-28315

Project Loc: Cotton MX Federal Court

PO #: 205-0750

ORDER #: H702827

LAB # (lab use only)		FIELD CODE			
		Beginning Depth			
		Ending Depth			
DATE SAMPLED		Date Sampled			
TIME SAMPLED		Time Sampled			
		Field Filtered			
1		Total N. of Containers			
		Lab			
		HNO ₃			
		HCl			
		H ₂ SO ₄			
		H ₂ O ₂			
		H ₂ SO ₄			
X		None			
		Other (Specify)			
S		UV-Visible Water EL=End of OW = Groundwater EL=End of H ₂ O ₂ = 15% H ₂ O ₂ EL=End of H ₂ O ₂ = 15% H ₂ O ₂ EL=End of			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			
		TPT 1000			

Special Instructions:

Requested by:

Date: 10/16/17

Time: 11:30 AM

Received by: Holly Curran

Date: 10/16/17

Time: 3:50

Temperature Upon Receipt: 33.4°C

Relinquished by:

Date:

Time:

Received by: B.OT

Date:

Time:

Temperature Upon Receipt: 33.4°C



PHONE (575) 393-2326 • 101 E. MARLAND • HOODES, 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/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,

Celay D. Keene
Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HONDS, NM 88210

Analytical Results For:

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

Received: 11/01/2017
Reported: 11/06/2017
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 10/26/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celay D. Keene

Sample ID: FE+45 -1' (H703007-01)

Chloride, SM4500Cl-D		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/03/2017	ND	448	112	400	0.00	

Sample ID: FE+45 -3' (H703007-02)

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	

Sample ID: FE+60 -1' (H703007-03)

Chloride, SM4500Cl-D		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	11/03/2017	ND	448	112	400	0.00	

Sample ID: FE+60 -3' (H703007-04)

Chloride, SM4500Cl-D		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2640	16.0	11/03/2017	ND	448	112	400	0.00	

Cardinal Laboratories

* = Accredited Analyte

NOTES: Analyte not detected. Cardinal Laboratories and its staff adhere to the EPA's strictest standards for any data testing, whether field or lab, and to the highest standards for data integrity. All data, including those for analytes not listed on this report, are stored electronically and are available to the client upon request. In no event shall Cardinal be liable for damages or consequential damages, including, without limitation, business interruption, loss of data, or loss of profits, caused by the use of the data provided by Cardinal, regardless of whether such damages could have been reasonably anticipated. This report shall be used only for the specific purpose stated on the report and is not to be used for any other purpose without the written approval of Cardinal Laboratories.

Celay D. Keene, Lab Director/Quality Manager



PHOENIX (675) 393-2326 • 101 E. MARLBOROUGH • HOUSTON, TX 77040

Analytical Results For:

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

Received: 11/01/2017
Reported: 11/06/2017
Project Name: COTTON MX FEDERAL COM #1
Project Number: 30-015-23315
Project Location: COTTON MX FEDERAL COM #1

Sampling Date: 10/26/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Coley D. Keene

Sample ID: FE+75 -1' (H703007-05)

Chloride, SM4500Cl-B		mg/kg		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	400	0.00	

Sample ID: FE+75 -3' (H703007-06)

Chloride, SM4500Cl-B		mg/kg		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	400	0.00	

Cardinal Laboratories

Accredited Analyte

These results are based on the information provided by the client and are not to be used for legal or regulatory purposes. The results are based on the information provided by the client and are not to be used for legal or regulatory purposes. The results are based on the information provided by the client and are not to be used for legal or regulatory purposes.

Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2320 • 101 E. MAINLAND • 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 SM/MSOCT-11 does not require samples be received at or below 6°C
- Samples reported on an as received basis (wt) unless otherwise noted on report

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Analyte and Compound: Cardinal hereby and expressly warrants that the data and/or results listed in this report are correct as far as they are based on the amount paid by client for analysis. It is hereby declared that the negligence and/or error shall constitute that the stated value shall be correct and issued by Cardinal within 100 days after completion of the applicable analysis. In no event shall Cardinal be liable or responsible for consequential damages, including, without limitation, lost profits, or loss of profits caused by this, its subsidiaries, divisions or divisions acting out of its failure to the performance of the analysis conducted by Cardinal, regardless of whether such damages result from the negligence or otherwise, but only to the extent that the data and/or results are based on the amount paid by client for analysis. This report shall be voided if any sample is not properly stored and/or handled by Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES
101 East Maryland, Hobbs, NM 88240

(505) 393-2228 FAX (505) 393-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Company Name: EOS Y Resources Inc

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 86210

Telephone No: 575-748-4171

Sampler Signature: [Signature]

Fax No:

e-mail:

Chase.Settle@eosresources.com

Report Format: ☒ Standard ☐ TREP ☐ NPDES

Project Name: Cotton Mill Federal Cont #1

Project #: 30-015-23315

Project Loc: Cotton Mill Federal Cont #1

PO#: 205-0750

(Lab use only)

ORDER #: H103007

LAB # (Ink only)		FIELD CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & Test Containers										Notes	ANALYZE FOR																	
01		FE+5-1'				10/26/2017	8:49 AM		1	Ice	HNO ₃	HCl	H ₂ SO ₄	NaOH	NH ₄ OH	Other (Specify)	Drinking Water	SW - Drinking	SW - Industrial	SW - Potable	TPH	TPH: TX 1000	TX 1000	Coliform (Col, MP, NP, TP)	Ammonia (Cl, SO ₄ , Alkalinity)	BAR / EGP / CEC	Molality As Ag Ba Cd Cr Pb Hg Bi	Volatiles	Barium/Sulfate	UTERX / 8011B	RO	NORM	Other	SAH	RUSH TAT (Pro-Estimate) 21, 40, 72 hrs	Standard TAT		
02		FE+5-3'				10/26/2017	8:51 AM		1	X																												
03		FE+60-1'				10/26/2017	8:55 AM		1	X																												
04		FE+80-3'				10/26/2017	8:57 AM		1	X																												
05		FE+75-1'				10/26/2017	9:00 AM		1	X																												
06		FE+75-3'				10/26/2017	9:02 AM		1	X																												

Special Instructions:

Receiving by:

Date:

Time:

Received by:

Date:

Time:

Laboratory Comments:

Sample Containers Intact?

VOCs Free of Headspace?

Labels on Containers?

Custody seals on containers?

Sample Hand Delivered?

by Carrier?

UPS

DEL

FedEx

Longest

Y

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

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



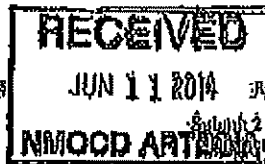
March 1, 2018

Appendix D

C-141 Initials

Director
1025 N. Pecos St., Hobbs, NM 88240.
District II
1301 W. Grand Avenue, Amarillo, NM 89210
District III
1000 Rio Pecos Road, Aztec, NM 87410.
District IV
1320 East Front St., 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 06/09/10, 2013
Submit 2 copies to appropriate
Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

1417634904

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Yates Petroleum Corporation	OGRIN Number 25598	Contact Chris Seale
Address 100 S. 4th Street	API Number 30-015-23315	Telephone No. 575-748-1147
Facility Name Central Federal SWD	Facility Type SWD	
Surface Owner Federal	Mineral Owner Federal	Lease No. NM36500

LOCATION OF RELEASE

Unit/Letter O	Section 14	Township 19S	Range 25E	Feet from the B/O	North/South Line North	Feet from the 2180'	Body/Water Line Well	Country Eddy
------------------	---------------	-----------------	--------------	----------------------	---------------------------	------------------------	-------------------------	-----------------

Latitude 32.65568 Longitude -104.45631

NATURE OF RELEASE

Type of Release Produced Water and Crude Oil	Volume of Release 7 B/W and 3 B/O	Volume Recovered 5 B/W and 2 B/O
Source of Release Gate valve failure on tank	Date and Hour of Occurrence 6/11/2014, 1 PM	Date and Hour of Discovery 6/11/2014, 1 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 Impelling the Watercourse N/A	
Is a Watercourse, Well, Impoundment, or Other Facility N/A		
Describe Cause of Event 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 of 32" X 183" north of the tank 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 impounded water was pumped to a nearby storage tank. Backflow was also disrupted by temporary impounded water. Excavated soil will be hauled to an NMOCB approved facility. Vertical and horizontal delineation samples will be taken and analysis run for TPH & BTEX (analytes for groundwater), if initial analysis results for TPH & BTEX are under BRLs (this requires a 10% Final Report, C-141 will be submitted to the OGD requesting closure. If the analytical results are above the BRL, a work plan will be submitted to the OGD. Depth to Ground Water: 30-99' (approximately 80' Section 14, T19S-R15E, per Trend Map). Wellhead Protection Area: No Distance to Surface Water. B68; >1000'; SITE RANKING: 19 10.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understanding pursuant to NMOCB rules and regulations. All operators are required to report and file a release notification and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCB 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, NMOCB 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: Chris Seale	Approved by District Supervisor:	
Title: Environmental Regulatory Agent	Approval Date: 6/25/14	Expiration Date: N/A
E-mail Address: OSeale@yatespetroleumcorp	Conditions of Approval: Remediation per OGD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 7/25/14	Attached ☐

ZRP-2355

District I
 1625 N. Franklin Dr., Hobbs, NM 88240
 District II
 811 E. First St., Artesia, NM 88210
 District III
 1600 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**
 Oil Conservation Division
 1220 South St. Francis Dr.
 Santa Fe, NM 87503

Form C-141
 Revised August 8, 2011

JAN 16 2016
 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 Seftle
Address 104 S. 4th Street, Artesia, NM 88210		Telephone No. 575-748-4171
Facility Name Cotton MX Federal Com. #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 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 Brecheer, Heather Patterson, 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 boom. The valve was closed and turned off, and vacuum trucks were called to reflows 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 & RTEX (chlorides for documentation). If initial analytical results for TPH & RTEX 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 60-90' (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: 

Printed Name: Chase Seftle

Title: NM Environmental Regulatory Agent

E-mail Address: cseftle@yatespetroleum.com

Date: 01/04/2016

Phone: 575-748-4171

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: 

Approval Date: 1/7/16

Expiration Date: N/A

Conditions of Approval:

Remediation per O.C.D. Rules & Guidelines ☐

SUBMIT REMEDIATION PROPOSAL NO

LATER THAN: 1/11/16

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 60903

CONDITIONS

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 60903
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bbillings	None	11/17/2021