

NM OIL CONSERVATION

ARTESIA DISTRICT

NOV 01 2017

Form C-141

Revised April 3, 2017

District I

1625 N. French Dr., Hobbs, NM 88240

District II

811 S. First St., Artesia, NM 88210

District III

1000 Rio Brazos Road, Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Submitted to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NAB17301042556

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company EOG Y Resources, Inc.	#25575	Contact Chase Settle
Address 104 S. 4 th Street, Artesia, NM 88210		Telephone No. 575-748-1471
Facility Name Apollo APU Federal #3		Facility Type Well
Surface Owner Private	Mineral Owner Federal	API No. 30-015-29431

LOCATION OF RELEASE

Unit Letter P	Section 10	Township 19S	Range 25E	Feet from the 660	North/South Line South	Feet from the 660	East/West Line East	County Eddy
------------------	---------------	-----------------	--------------	----------------------	---------------------------	----------------------	------------------------	----------------

Latitude 32.67081 Longitude -104.47127 NAD83

NATURE OF RELEASE

Type of Release Crude Oil and Produced Water	Volume of Release Unknown	Volume Recovered None
Source of Release Underground flowline	Date and Hour of Occurrence December 2015	Date and Hour of Discovery March 2017
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	


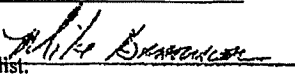
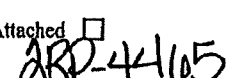
If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.* An underground steel flowline failed causing a release of crude oil and produced water. The amounts were originally determined to be below the reportable threshold and the visually impacted area was excavated with the soil hauled to a NMOCD approved disposal facility. When vegetation had not reestablished by March of 2017, it was determined that further sampling was necessary.

Describe Area Affected and Cleanup Action Taken.* An approximate area of 100 feet by 40 feet is impacted. Soil samples have been collected down to 50 feet bgs for vertical delineation and the east side of the release has been found horizontally. Due to remaining pipelines within the release area, sidewall sampling will be conducted to determine the north, south, and west horizontal extents during the time of excavation with confirmation sampling conducted prior to backfilling.

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: 	OIL CONSERVATION DIVISION	
Printed Name: Chase Settle	Approved by Environmental Specialist: 	
Title: Safety & Environmental Representative II	Approval Date: 11/2/17	Expiration Date: N/A
E-mail Address: Chase_Settle@eogresources.com	Conditions of Approval:	Attached <input type="checkbox"/> 
Date: November 1, 2017	Phone: 575-748-1471	

* 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 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 April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company EOG Y Resources, Inc.	Contact Chase Settle
Address 104 S. 4 th Street, Artesia, NM 88210	Telephone No. 575-748-1471
Facility Name Apollo APU Federal #3	Facility Type Well
Surface Owner Private	Mineral Owner Federal
API No. 30-015-29431	

LOCATION OF RELEASE

Unit Letter P	Section 10	Township 19S	Range 25E	Feet from the 660	North/South Line South	Feet from the 660	East/West Line East	County Eddy
------------------	---------------	-----------------	--------------	----------------------	---------------------------	----------------------	------------------------	----------------

Latitude 32.67081 Longitude -104.47127 NAD83

NATURE OF RELEASE

Type of Release Crude Oil and Produced Water	Volume of Release Unknown	Volume Recovered None
Source of Release Underground flowline	Date and Hour of Occurrence December 2015	Date and Hour of Discovery March 2017
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

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

Describe Cause of Problem and Remedial Action Taken.* An underground steel flowline failed causing a release of crude oil and produced water. The amounts were originally determined to be below the reportable threshold and the visually impacted area was excavated with the soil hauled to a NMOCD approved disposal facility. When vegetation had not reestablished by March of 2017, it was determined that further sampling was necessary.

Describe Area Affected and Cleanup Action Taken.* An approximate area of 100 feet by 40 feet is impacted. Soil samples have been collected down to 50 feet bgs for vertical delineation and the east side of the release has been found horizontally. Due to remaining pipelines within the release area, sidewall sampling will be conducted to determine the north, south, and west horizontal extents during the time of excavation with confirmation sampling conducted prior to backfilling. Closure Requested based on completion of the NMOCD Approved work plan

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: <i>Chase Settle</i>	Approved by Environmental Specialist:	
Printed Name: Chase Settle	Approval Date:	Expiration Date:
Title: Safety & Environmental Representative II	Conditions of Approval:	
E-mail Address: Chase.Settle@eogresources.com	Attached <input type="checkbox"/>	
Date: April 12, 2018	Phone: 575-748-1471	

* Attach Additional Sheets If Necessary



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

April 12, 2018

Ms. Crystal Weaver
NMOCD District II
811 S. First St.
Artesia, NM 88210

Re: Apollo APU Federal #3
30-015-29431
Section 10, T19S-R25E
Eddy County, New Mexico
2RP-4465

Ms. Weaver,

EOG Y Resources, Inc. is submitting the enclosed Closure Report and C-141 Final for the above referenced site. The plan is being submitted in response to the C-141 report dated on November 2, 2017 and work plan approved by NMOCD on March 2, 2018.

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

Respectfully,

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

EOG Y Resources, Inc.
Apollo APU Federal #3
Closure Report
Section 10, T19S-R25E
Eddy County, New Mexico
April 12, 2018
2RP-4465



Table of Contents

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

Tables:

Table 1: Soil Analytical Data

Photos

Figures:

Figure 1: Site Map with Sample Points

Appendices:

- Appendix A: NMOSE Well Log Information
- Appendix B: USGS Groundwater Information
- Appendix C: Soil Sample Laboratory Data
- Appendix D: Form C-141 Initial
- Appendix E: Form C-141 Final

I. Location

From the intersection of US 285 and Rocking R Red Road, follow Rocking R Red Road west for 4.0 miles. Turn north and follow lease road for 1.2 miles, then turn west on the lease road to the location, then north along the pipeline Right of Way (ROW) for 305 feet.

II. Background

On December 9, 2015, Yates Petroleum Corporation received a report of a non-reportable release that occurred on an underground flowline after a pressure test was performed on that line. The released volume reported was 2 B/O and 1 B/PW with no volumes recovered. The area visually impacted was excavated and hauled to a NMOCD approved disposal facility. In March of 2017 it was brought to the attention of the Environmental Division by the landowner that this areas vegetation had yet to recover from said release. With an affected area of approximately 100 feet by 40 feet, it was determined that soil sampling was warranted. Initial delineation samples were taken on April 18, 2017 and sent to a NMOCD approved laboratory (April 26, 2017 and May 9, 2017, results enclosed). Based on the initial sample results, further samples were collected on June 14, 2017 and sent to a NMOCD approved laboratory (June 29, 2017 and July 10, 2017, results enclosed). Due to elevated chlorides remaining, a core rig was contracted to perform further sampling on August 10, 2017 with these samples being sent to a NMOCD approved laboratory for testing (August 15, 2017, 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 10, T19S-R25E), depth to groundwater is approximately 93 feet. Watercourses in the area are dry except for infrequent flows in response to major precipitation events, with the nearest body of surface water being Brantley Lake at 7.0 miles away.

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

V. Soils

The area consists of soils that are loam based topsoil that lay atop the historic sand and river rock layers encountered at 12 feet below grade surface (bgs) before hitting clay layers between 30 and 35 feet that restrict further movement of contaminants.



April 12, 2018

VI. Work Completed

EOG Y Resources, Inc. excavated the impacted area to four (4) feet bgs, hauling all excavated soil to a NMOCD approved facility for disposal. EOG Y Resources, Inc. identified the remaining horizontal extents of contamination to the north, south and west by taking sidewall samples (3/22/18) at four (4) feet bgs during excavation activities. The South Sidewall was at 784 mg/kg for chloride during the first sampling, so approximately four (4) more inches were removed and the sidewall was resampled. Results after the second sampling (4/2/18) were 48 mg/kg for chloride. A Geosynthetic Clay Liner was installed and the excavation was backfilled according to the soil preference of the private landowner.

Remediation work is completed and a C-141 Final is hereby submitted to the NMOCD requesting closure of the site.

Table 1

Soil Analytical Data

Apollo APU Federal #3
Closure Report
2RP-4465



April 12, 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'	1'	04/18/17	ND	ND	ND	ND	ND	ND	ND	ND	ND	7700
S1-3'	3'	04/18/17	ND	ND	ND	ND	ND	ND	ND	ND	ND	13000
S2-1'	1'	04/18/17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S2-3'	3'	04/18/17	ND	ND	ND	ND	ND	ND	ND	ND	ND	37
S3-1'	1'	04/18/17	ND	ND	ND	ND	ND	ND	ND	ND	ND	430
S3-3'	3'	04/18/17	ND	ND	ND	ND	ND	ND	ND	ND	ND	11000
S1-5'	5'	04/18/17	-	-	-	-	-	-	-	-	-	7600
S1-7'	7'	04/18/17	-	-	-	-	-	-	-	-	-	11200
S1-9'	9'	04/18/17	-	-	-	-	-	-	-	-	-	12000
S1-11'	11'	04/18/17	-	-	-	-	-	-	-	-	-	10400
S1-13'	13'	04/18/17	-	-	-	-	-	-	-	-	-	7060
S2-5'	5'	04/18/17	-	-	-	-	-	-	-	-	-	208
S2-7'	7'	04/18/17	-	-	-	-	-	-	-	-	-	6800
S2-9'	9'	04/18/17	-	-	-	-	-	-	-	-	-	12100
S2-11'	11'	04/18/17	-	-	-	-	-	-	-	-	-	11200
S2-13'	13'	04/18/17	-	-	-	-	-	-	-	-	-	6800
S3-5'	5'	04/18/17	-	-	-	-	-	-	-	-	-	12600
S3-7'	7'	04/18/17	-	-	-	-	-	-	-	-	-	10700
S3-9'	9'	04/18/17	-	-	-	-	-	-	-	-	-	11300
S3-11'	11'	04/18/17	-	-	-	-	-	-	-	-	-	12500
S3-13'	13'	04/18/17	-	-	-	-	-	-	-	-	-	12400
S4-1'	1'	04/18/17	-	-	-	-	-	-	-	-	-	160
S4-3'	3'	04/18/17	-	-	-	-	-	-	-	-	-	208
S4-5'	5'	04/18/17	-	-	-	-	-	-	-	-	-	944
S4-7'	7'	04/18/17	-	-	-	-	-	-	-	-	-	5360
S4+5-1'	1'	04/18/17	-	-	-	-	-	-	-	-	-	176
S4+5-3'	3'	04/18/17	-	-	-	-	-	-	-	-	-	80
S4+5-5'	5'	04/18/17	-	-	-	-	-	-	-	-	-	1800
S4+5-7'	7'	04/18/17	-	-	-	-	-	-	-	-	-	672
S5-1'	1'	04/18/17	-	-	-	-	-	-	-	-	-	10000
S5-3'	3'	04/18/17	-	-	-	-	-	-	-	-	-	11700
S5-5'	5'	04/18/17	-	-	-	-	-	-	-	-	-	11000
S5-7'	7'	04/18/17	-	-	-	-	-	-	-	-	-	9330
S5+5-1'	1'	04/18/17	-	-	-	-	-	-	-	-	-	4930
S5+5-3'	3'	04/18/17	-	-	-	-	-	-	-	-	-	3600
S5+5-5'	5'	04/18/17	-	-	-	-	-	-	-	-	-	6530
S5+5-7'	7'	04/18/17	-	-	-	-	-	-	-	-	-	7840
T1-12'	12'	06/14/17	-	-	-	-	-	-	-	-	-	13000
T1-15'	15'	06/14/17	-	-	-	-	-	-	-	-	-	13000
T1-18'	18'	06/14/17	-	-	-	-	-	-	-	-	-	3100
T1-21'	21'	06/14/17	-	-	-	-	-	-	-	-	-	7400
T2-12'	12'	06/14/17	-	-	-	-	-	-	-	-	-	14000
T2-15'	15'	06/14/17	-	-	-	-	-	-	-	-	-	10000
T2-18'	18'	06/14/17	-	-	-	-	-	-	-	-	-	9900
T2-21'	21'	06/14/17	-	-	-	-	-	-	-	-	-	1900
T3-12'	12'	06/14/17	-	-	-	-	-	-	-	-	-	110
T3-15'	15'	06/14/17	-	-	-	-	-	-	-	-	-	79
T3-18'	18'	06/14/17	-	-	-	-	-	-	-	-	-	180
T4-12'	12'	06/14/17	-	-	-	-	-	-	-	-	-	150
T4-15'	15'	06/14/17	-	-	-	-	-	-	-	-	-	220
T4-18'	18'	06/14/17	-	-	-	-	-	-	-	-	-	130
C-25'	25'	8/10/17	-	-	-	-	-	-	-	-	-	2440
C-30'	30'	8/10/17	-	-	-	-	-	-	-	-	-	2840
C-35'	35'	8/10/17	-	-	-	-	-	-	-	-	-	288
C-40'	40'	8/10/17	-	-	-	-	-	-	-	-	-	1150
C-45'	45'	8/10/17	-	-	-	-	-	-	-	-	-	64
C-50'	50'	8/10/17	-	-	-	-	-	-	-	-	-	<16.0

Apollo APU Federal #3
Closure Report
2RP-4465



April 12, 2018

North Sidewall	4'	3/22/18	-	-	-	-	-	-	-	-	32
South Sidewall	4'	3/22/18	-	-	-	-	-	-	-	-	784
South Sidewall	4'	4/2/18	-	-	-	-	-	-	-	-	48
Northwest Sidewall	4'	3/22/18	-	-	-	-	-	-	-	-	32
Southwest Sidewall	4'	3/22/18	-	-	-	-	-	-	-	-	<16.0

Photos



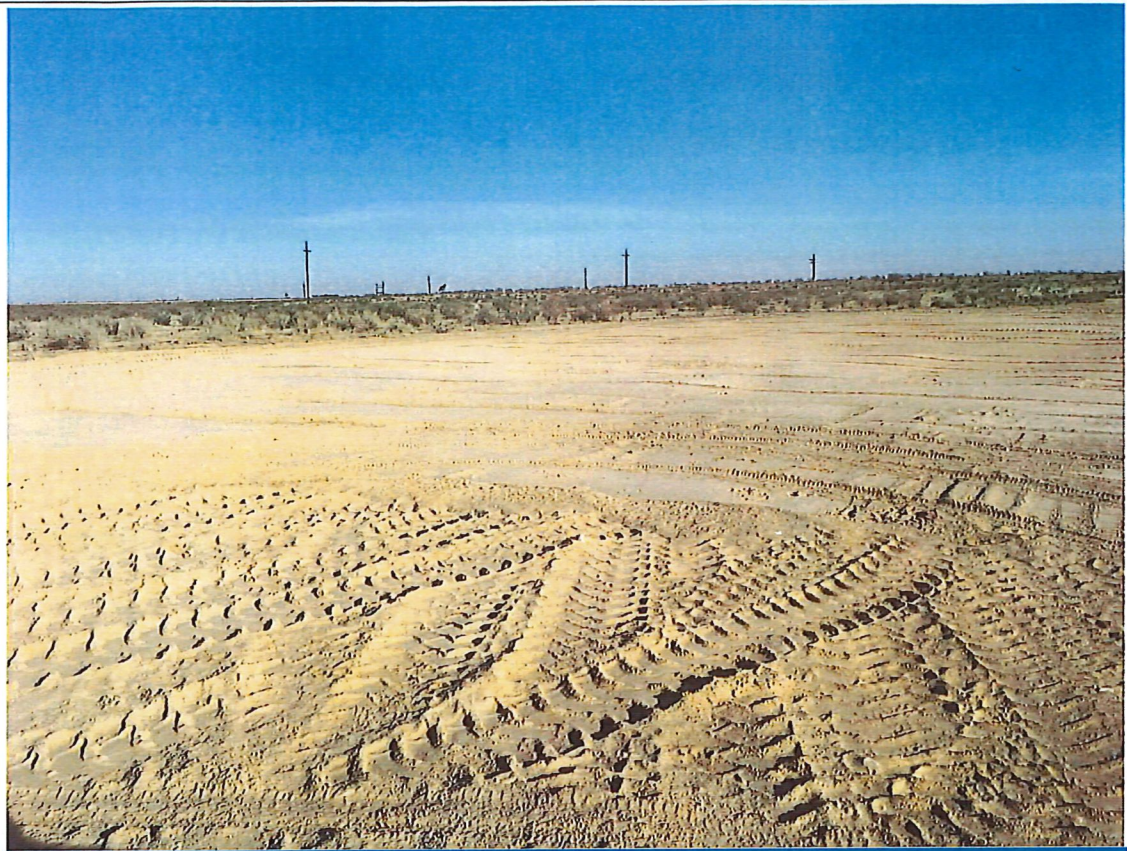


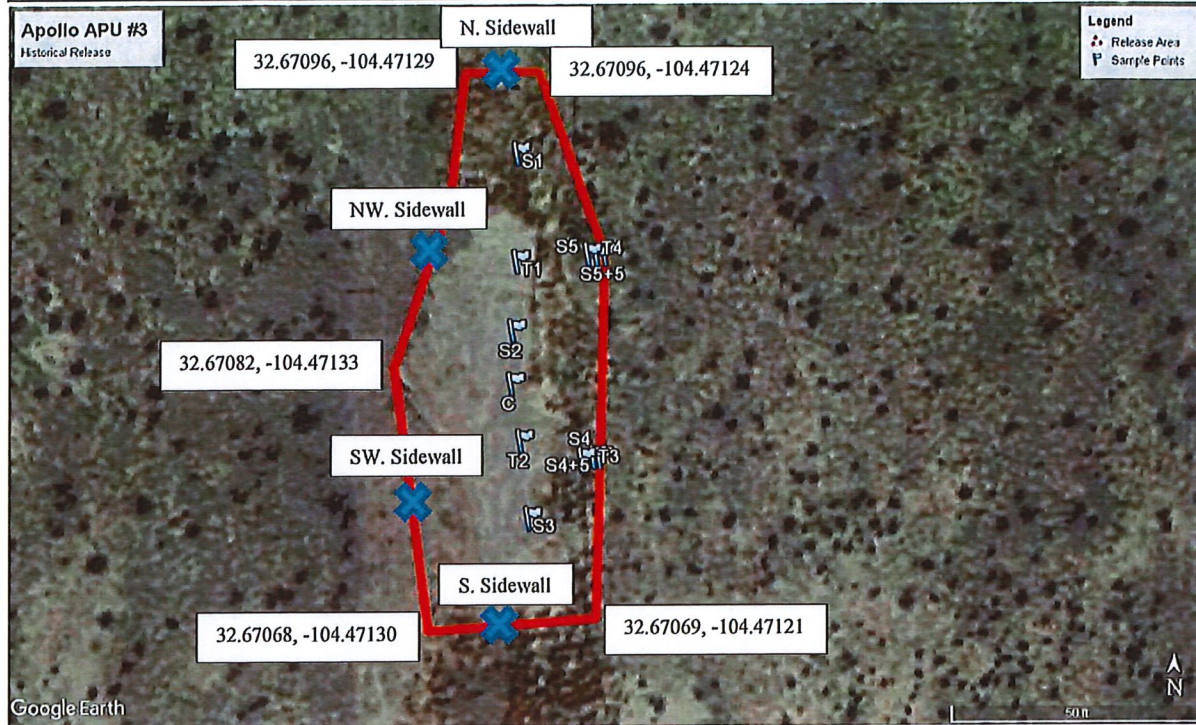
Figure 1

Site Map with Sample Points

Apollo APU Federal #3
Closure Report
2RP-4465



April 12, 2018



Appendix A

NMOSE Well Log



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

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

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

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

(NAD83 UTM in meters)

(in feet)

POD Number	Code	Subbasin	County	Source	64	16	4	Sec	Tws	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
RA 05450			CH	Shallow	4	2	15	19S	25E		550057	3614015*	1022	07/16/1968	07/21/1968	08/21/1969	204	80		464
RA 05900			ED	Shallow	2	2	16	19S	25E		548442	3614424*	1235	03/18/1974	03/19/1974	03/25/1974	185	95		460

Record Count: 2

UTM/NAD83 Radius Search (in meters):

Easting (X): 549574.97

Northing (Y): 3614916.86

Radius: 1500

*UTM location was derived from PLSS - see Help

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

11/1/17 12:48 PM

WELLS WITH WELL LOG INFORMATION

Appendix B

USGS Groundwater Information



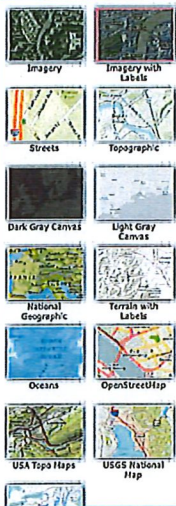
National Water Information System: Map View

USGS Home
Contact USGS
Search USGS



Style Map Layers

Basemaps



Other Map Layers



USDA FSA, DigitalGlobe, GeoEye, Microsat, CNES/Airbus DS, Etna, HERE, Garmin, IPC



National Water Information System: Web Interface

USGS Water Resources

USGS Home
Contact USGS
Search USGS

Data Category: Geographic Area:

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 =

- 324004104285801

Minimum number of levels = 1

Date range = 01/01/2000 . 11/01/2017

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

USGS 324004104285801 19S.25E.16.22332

Eddy County, New Mexico

Latitude 32°40'04", Longitude 104°28'58" NAD27

Land-surface elevation 3,487 feet above NAVD88

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
Reselect period

Date	Time	? Water-level date-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
2004-02-04		D	99.74			2		S	USGS	A	A
2006-02-14	12:05 MST	m	98.53			2		S	NM001	A	A
2007-02-13	12:00 MST	m	99.24			2		S	NM001	A	A
2008-01-14	10:15 MST	m	97.04			2		S	NM001	A	A
2009-01-06	13:45 MST	m	89.77			2		S	NM001	A	A
2010-01-20	13:25 MST	m	96.84			2		S	NM001	A	A
2012-01-05	13:20 MST	m	95.67			2		S	NM001	A	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").
Water-level approval status	A	Approved for publication -- Processing and review completed.

[Questions about sites/data?](#)[Feedback on this web site](#)[Automated retrievals](#)[Help](#)[Data Tips](#)[Explanation of terms](#)[Subscribe for system changes](#)[News](#)



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 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 = 01/01/2000 . 11/01/2017

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

USGS 323953104274401 19S.25E.14.133131

Eddy County, New Mexico

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

Land-surface elevation 3,433 feet above NAVD88

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
Reselect period

Date	Time	? Water-level date-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
2003-01-24		D	93.26				2		S	USGS	S A
2004-02-09		D	97.78				2		S	USGS	A A
2005-02-03	09:45 MST	m	91.42				2		S	NM001	R A
2006-02-14	12:30 MST	m	91.72				2		S	NM001	A A
2007-02-09	11:00 MST	m	92.35				2		S	NM001	A A
2008-01-15	09:25 MST	m	94.90				2		S	NM001	A A
2010-01-21	10:00 MST	m	104.46				2		S	NM001	A A
2011-01-21	10:35 MST	m	103.40				2		S	NM001	A A
2012-01-05	08:45 MST	m	103.69				2		S	NM001	A A
2015-01-13	13:23 MST	m	97.65				2		S	NM001	A 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	R	Reported by person other than the owner, driller, or another government agency.
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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

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

April 26, 2017

Chase Settle
EOG Resources
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4111
FAX

RE: Apollo APU 3

OrderNo.: 1704918

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 6 sample(s) on 4/20/2017 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1704918

Date Reported: 4/26/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S1-1'

Project: Apollo APU 3

Collection Date: 4/18/2017 9:22:00 AM

Lab ID: 1704918-001

Matrix: SOIL

Received Date: 4/20/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	7700	300		mg/Kg	200	4/25/2017 3:20:17 PM	31386
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/24/2017 12:36:57 PM	31361
Surr: DNOP	88.4	70-130		%Rec	1	4/24/2017 12:36:57 PM	31361
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/21/2017 6:20:13 PM	31352
Surr: BFB	95.9	54-150		%Rec	1	4/21/2017 6:20:13 PM	31352
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	4/21/2017 6:20:13 PM	31352
Toluene	ND	0.049		mg/Kg	1	4/21/2017 6:20:13 PM	31352
Ethylbenzene	ND	0.049		mg/Kg	1	4/21/2017 6:20:13 PM	31352
Xylenes, Total	ND	0.099		mg/Kg	1	4/21/2017 6:20:13 PM	31352
Surr: 4-Bromofluorobenzene	114	66.6-132		%Rec	1	4/21/2017 6:20:13 PM	31352

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 1 of 10

Analytical Report
 Lab Order 1704918
 Date Reported: 4/26/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S1-3'

Project: Apollo APU 3

Collection Date: 4/18/2017 9:25:00 AM

Lab ID: 1704918-002

Matrix: SOIL

Received Date: 4/20/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	13000	750		mg/Kg	500	4/25/2017 3:32:41 PM	31386
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/24/2017 1:59:51 PM	31361
Surr: DNOP	86.2	70-130		%Rec	1	4/24/2017 1:59:51 PM	31361
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/21/2017 6:43:52 PM	31352
Surr: BFB	97.3	54-150		%Rec	1	4/21/2017 6:43:52 PM	31352
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	4/21/2017 6:43:52 PM	31352
Toluene	ND	0.050		mg/Kg	1	4/21/2017 6:43:52 PM	31352
Ethylbenzene	ND	0.050		mg/Kg	1	4/21/2017 6:43:52 PM	31352
Xylenes, Total	ND	0.099		mg/Kg	1	4/21/2017 6:43:52 PM	31352
Surr: 4-Bromofluorobenzene	116	66.6-132		%Rec	1	4/21/2017 6:43:52 PM	31352

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 10

Analytical Report

Lab Order 1704918

Date Reported: 4/26/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S2-1'

Project: Apollo APU 3

Collection Date: 4/18/2017 9:58:00 AM

Lab ID: 1704918-003

Matrix: SOIL

Received Date: 4/20/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	4/24/2017 1:21:30 PM	31386
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/24/2017 2:27:55 PM	31361
Surr: DNOP	86.4	70-130		%Rec	1	4/24/2017 2:27:55 PM	31361
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/21/2017 7:07:15 PM	31352
Surr: BFB	96.1	54-150		%Rec	1	4/21/2017 7:07:15 PM	31352
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	4/21/2017 7:07:15 PM	31352
Toluene	ND	0.050		mg/Kg	1	4/21/2017 7:07:15 PM	31352
Ethylbenzene	ND	0.050		mg/Kg	1	4/21/2017 7:07:15 PM	31352
Xylenes, Total	ND	0.10		mg/Kg	1	4/21/2017 7:07:15 PM	31352
Surr: 4-Bromofluorobenzene	114	66.6-132		%Rec	1	4/21/2017 7:07:15 PM	31352

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 10

Analytical Report
 Lab Order 1704918
 Date Reported: 4/26/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources Client Sample ID: S2-3'
 Project: Apollo APU 3 Collection Date: 4/18/2017 10:01:00 AM
 Lab ID: 1704918-004 Matrix: SOIL Received Date: 4/20/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	37	30		mg/Kg	20	4/24/2017 1:33:55 PM	31386
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/24/2017 2:56:13 PM	31361
Surr: DNOP	83.5	70-130		%Rec	1	4/24/2017 2:56:13 PM	31361
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/21/2017 7:30:38 PM	31352
Surr: BFB	95.8	54-150		%Rec	1	4/21/2017 7:30:38 PM	31352
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	4/21/2017 7:30:38 PM	31352
Toluene	ND	0.048		mg/Kg	1	4/21/2017 7:30:38 PM	31352
Ethylbenzene	ND	0.048		mg/Kg	1	4/21/2017 7:30:38 PM	31352
Xylenes, Total	ND	0.096		mg/Kg	1	4/21/2017 7:30:38 PM	31352
Surr: 4-Bromofluorobenzene	113	66.6-132		%Rec	1	4/21/2017 7:30:38 PM	31352

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 4 of 10

Analytical Report
 Lab Order 1704918
 Date Reported: 4/26/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources Client Sample ID: S3-1'
 Project: Apollo APU 3 Collection Date: 4/18/2017 10:31:00 AM
 Lab ID: 1704918-005 Matrix: SOIL Received Date: 4/20/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	430	30		mg/Kg	20	4/24/2017 1:46:19 PM	31386
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/24/2017 3:24:20 PM	31361
Surr: DNOP	85.4	70-130		%Rec	1	4/24/2017 3:24:20 PM	31361
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/21/2017 7:53:57 PM	31352
Surr: BFB	96.3	54-150		%Rec	1	4/21/2017 7:53:57 PM	31352
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	4/21/2017 7:53:57 PM	31352
Toluene	ND	0.049		mg/Kg	1	4/21/2017 7:53:57 PM	31352
Ethylbenzene	ND	0.049		mg/Kg	1	4/21/2017 7:53:57 PM	31352
Xylenes, Total	ND	0.099		mg/Kg	1	4/21/2017 7:53:57 PM	31352
Surr: 4-Bromofluorobenzene	113	66.6-132		%Rec	1	4/21/2017 7:53:57 PM	31352

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 10

Analytical Report

Lab Order 1704918

Date Reported: 4/26/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: S3-3'

Project: Apollo APU 3

Collection Date: 4/18/2017 10:33:00 AM

Lab ID: 1704918-006

Matrix: SOIL

Received Date: 4/20/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	11000	750		mg/Kg	500	4/25/2017 3:45:06 PM	31386
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/24/2017 3:53:06 PM	31361
Surr: DNOP	86.0	70-130		%Rec	1	4/24/2017 3:53:06 PM	31361
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/21/2017 8:17:21 PM	31352
Surr: BFB	96.0	54-150		%Rec	1	4/21/2017 8:17:21 PM	31352
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	4/21/2017 8:17:21 PM	31352
Toluene	ND	0.048		mg/Kg	1	4/21/2017 8:17:21 PM	31352
Ethylbenzene	ND	0.048		mg/Kg	1	4/21/2017 8:17:21 PM	31352
Xylenes, Total	ND	0.096		mg/Kg	1	4/21/2017 8:17:21 PM	31352
Surr: 4-Bromofluorobenzene	113	66.6-132		%Rec	1	4/21/2017 8:17:21 PM	31352

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 6 of 10

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

WO#: 1704918

26-Apr-17

Client: EOG Resources

Project: Apollo APU 3

Sample ID	MB-31386	SampType:	mbk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31386	RunNo:	42317					
Prep Date:	4/24/2017	Analysis Date:	4/24/2017	SeqNo:	1330756	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31386	SampType:	Jcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31386	RunNo:	42317					
Prep Date:	4/24/2017	Analysis Date:	4/24/2017	SeqNo:	1330757	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.6	90	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 | 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 7 of 10

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1704918
26-Apr-17

Client: EOG Resources
Project: Apollo APU 3

Sample ID	MB-31361	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	31361	RunNo:	42308					
Prep Date:	4/21/2017	Analysis Date:	4/24/2017	SeqNo:	1330174	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.6		10.00		86.0	70	130			

Sample ID	LCS-31361	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	31361	RunNo:	42308					
Prep Date:	4/21/2017	Analysis Date:	4/24/2017	SeqNo:	1330470	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.0	63.8	116			
Surr: DNOP	4.3		5.000		86.6	70	130			

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 |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1704918

26-Apr-17

Client: EOG Resources

Project: Apollo APU 3

Sample ID	MB-31352	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	31352	RunNo:	42286					
Prep Date:	4/20/2017	Analysis Date:	4/21/2017	SeqNo:	1329583	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		95.5	54	150			

Sample ID	LCS-31352	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	31352	RunNo:	42286					
Prep Date:	4/20/2017	Analysis Date:	4/21/2017	SeqNo:	1329584	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.8	76.4	125			
Surr: BFB	1000		1000		103	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 limit as specified |

Page 9 of 10

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1704918

26-Apr-17

Client: EOG Resources

Project: Apollo APU 3

Sample ID	MB-31352	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	31352	RunNo:	42286					
Prep Date:	4/20/2017	Analysis Date:	4/21/2017	SeqNo:	1329596	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		115	66.6	132			

Sample ID	LCS-31352	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	31352	RunNo:	42286					
Prep Date:	4/20/2017	Analysis Date:	4/21/2017	SeqNo:	1329597	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	107	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.9	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		117	66.6	132			

Qualifiers:

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

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

Page 10 of 10



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: 1704918

RcptNo: 1

Received By: Lindsay Mangin

4/20/2017 9:50:00 AM

Completed By: Ashley Gallegos

4/20/2017 11:31:40 AM

Reviewed By:

[Signature]

04/20/17

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?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

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.)

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	3.9	Good	Yes			



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

May 09, 2017

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: APOLLO APU #3

Enclosed are the results of analyses for samples received by the laboratory on 05/03/17 14:00.

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	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:

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

Received: 05/03/2017
Reported: 05/09/2017
Project Name: APOLLO APU #3
Project Number: 30-015-29431
Project Location: APOLLO APU #3

Sampling Date: 04/18/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: S1 - 5' (H701186-01)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	7600	16.0	05/04/2017	ND	432	108	400	3.64			

Sample ID: S1 - 7' (H701186-02)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	11200	16.0	05/04/2017	ND	432	108	400	3.64			

Sample ID: S1 - 9' (H701186-03)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	12000	16.0	05/04/2017	ND	432	108	400	3.64			

Sample ID: S1 - 11' (H701186-04)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	10400	16.0	05/04/2017	ND	432	108	400	3.64			

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. 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: 05/03/2017
Reported: 05/09/2017
Project Name: APOLLO APU #3
Project Number: 30-015-29431
Project Location: APOLLO APU #3

Sampling Date: 04/18/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: S1 - 13' (H701186-05)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7060	16.0	05/04/2017	ND	432	108	400	3.64	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. 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-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 Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Marland, Hobbs, NM

101 East Marland, Hobbs, NM 88240

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Project Name: Apollo APU #3

Compac (505) 393-2326 EOG Y Resources, Inc.

Project #: 30-015-29431

Company Address: 105 South 4th Street

Project Loc: Apollo APU #3

City/State/Zip: Artesia, NM 88210

PO #: 205-0750

Telephone No: 575-748-4171

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature:

e-mail: Chase.Settle@eoqresources.com

(lab use only)

ORDER #: H70186

[illegible]



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

May 09, 2017

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: APOLLO APU #3

Enclosed are the results of analyses for samples received by the laboratory on 05/03/17 14:00.

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	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:

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

Received:	05/03/2017	Sampling Date:	04/18/2017
Reported:	05/09/2017	Sampling Type:	Soil
Project Name:	APOLLO APU #3	Sampling Condition:	** (See Notes)
Project Number:	30-015-29431	Sample Received By:	Jodi Henson
Project Location:	APOLLO APU #3		

Sample ID: S2 - 5' (H701187-01)

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	05/04/2017	ND	432	108	400	3.64	

Sample ID: S2 - 7' (H701187-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6800	16.0	05/04/2017	ND	432	108	400	3.64	

Sample ID: S2 - 9' (H701187-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12100	16.0	05/04/2017	ND	432	108	400	3.64	

Sample ID: S2 - 11' (H701187-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11200	16.0	05/04/2017	ND	432	108	400	3.64	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. 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: 05/03/2017
Reported: 05/09/2017
Project Name: APOLLO APU #3
Project Number: 30-015-29431
Project Location: APOLLO APU #3

Sampling Date: 04/18/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: S2 - 13' (H701187-05)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6800	16.0	05/04/2017	ND	432	108	400	3.64	

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. 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-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 Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. MARLAND • HOBBS, NM 88240

May 09, 2017

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: APOLLO APU #3

Enclosed are the results of analyses for samples received by the laboratory on 05/03/17 14:00.

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	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:

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

Received: 05/03/2017
Reported: 05/09/2017
Project Name: APOLLO APU #3
Project Number: 30-015-29431
Project Location: APOLLO APU #3

Sampling Date: 04/18/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: S3 - 5' (H701188-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12600	16.0	05/04/2017	ND	432	108	400	3.64	

Sample ID: S3 - 7' (H701188-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10700	16.0	05/04/2017	ND	416	104	400	0.00	QM-07

Sample ID: S3 - 9' (H701188-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11300	16.0	05/05/2017	ND	416	104	400	0.00	

Sample ID: S3 - 11' (H701188-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12500	16.0	05/05/2017	ND	416	104	400	0.00	

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. 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: 05/03/2017
Reported: 05/09/2017
Project Name: APOLLO APU #3
Project Number: 30-015-29431
Project Location: APOLLO APU #3

Sampling Date: 04/18/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: S3 - 13' (H701188-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12400	16.0	05/05/2017	ND	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



Project Name: Apollo APU #3

Project #: 30-015-29431

Project Loc: Apollo API #3

PO #: 205-0750

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ TRBP ☐ NPDES

e-mail: Chase.Settle@eogresources.com

ORDER #: H701188

Page 5 of 5



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

May 09, 2017

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: APOLLO APU #3

Enclosed are the results of analyses for samples received by the laboratory on 05/03/17 14:00.

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	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:

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

Received: 05/03/2017
Reported: 05/09/2017
Project Name: APOLLO APU #3
Project Number: 30-015-29431
Project Location: APOLLO APU #3

Sampling Date: 04/18/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: S4 - 1' (H701189-01)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	160	16.0	05/05/2017	ND	416	104	400	0.00			

Sample ID: S4 - 3' (H701189-02)

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	05/05/2017	ND	416	104	400	0.00			

Sample ID: S4 - 5' (H701189-03)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	944	16.0	05/05/2017	ND	416	104	400	0.00			

Sample ID: S4 - 7' (H701189-04)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	5360	16.0	05/05/2017	ND	416	104	400	0.00			

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. 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: 05/03/2017
Reported: 05/09/2017
Project Name: APOLLO APU #3
Project Number: 30-015-29431
Project Location: APOLLO APU #3

Sampling Date: 04/18/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: S4+5 - 1' (H701189-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	05/05/2017	ND	416	104	400	0.00	

Sample ID: S4+5 - 3' (H701189-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	05/05/2017	ND	416	104	400	0.00	

Sample ID: S4+5 - 5' (H701189-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1800	16.0	05/05/2017	ND	416	104	400	0.00	

Sample ID: S4+5 - 7' (H701189-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	05/05/2017	ND	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. 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-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 Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Mantand, Hobbs, NM 88240

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Company (505) 393-2326 EOG 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

Sample Signature: *[Signature]*

e-mail: Chase.Settle@eogresources.com

Project Name: Apollo APU #3

Project #: 30-015-29431

Project Loc: Apollo APU #3

PO #: 205-0750

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

ORDER #: **H7D1189**

LAB # (lab use only)		FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers										Matrix	Analyze For:													
									Ice	HNO ₃	HCl	H ₂ SO ₄	NaOH	Na ₂ S ₂ O ₃	None	Other (Specify)	DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Callons (Ca, Mg, Na, K)	Anions (Cl, SO ₄ , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	SAR	RUSH TAT (Pro-Schedule) 24, 48, 72 hrs	Standard TAT	
1	S4-1'				4/18/2017	11:03 AM		1										S															
2	S4-3'				4/18/2017	11:07 AM		1										S															
3	S4-5'				4/18/2017	11:14 AM		1										S															
4	S4-7'				4/18/2017	11:21 AM		1										S															
5	S4+5-1'				4/18/2017	11:03 AM		1										S															
6	S4+5-3'				4/18/2017	11:07 AM		1										S															
7	S4+5-5'				4/18/2017	11:15 AM		1										S															
8	S4+5-7'				4/18/2017	11:22 AM		1										S															

Special Instructions:

Relinquished by: *[Signature]* Date: 4/17/17 Time: 11:22 AM Received by: *[Signature]* Date: 4/17/17 Time: 2:00 PM

Relinquished by: *[Signature]* Date: 4/17/17 Time: 11:22 AM Received by: *[Signature]* Date: 4/17/17 Time: 2:00 PM

Relinquished by:

Date: Time:

Received by: ELOIT:

Date:

Time:

Temperature Upon Receipt: 17.5 °C

Laboratory Comments:
Sample Containers Intact? ☒
VOCs Free of Headspace? ☒
Labels on container(s) ☒
Custody seals on container(s) ☒
Custody seals on cooler(s) ☒
Sample Hand Delivered by Sampler/Client Rep. ? ☒
by Courier? ☒ UPS ☒ DHL ☒ FedEx ☒ Lone Star



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

May 09, 2017

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: APOLLO APU #3

Enclosed are the results of analyses for samples received by the laboratory on 05/03/17 14:00.

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	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:

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

Received:	05/03/2017	Sampling Date:	04/18/2017
Reported:	05/09/2017	Sampling Type:	Soil
Project Name:	APOLLO APU #3	Sampling Condition:	** (See Notes)
Project Number:	30-015-29431	Sample Received By:	Jodi Henson
Project Location:	APOLLO APU #3		

Sample ID: S5 - 1' (H701190-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10000	16.0	05/05/2017	ND	416	104	400	0.00	

Sample ID: S5 - 3' (H701190-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11700	16.0	05/05/2017	ND	416	104	400	0.00	

Sample ID: S5 - 5' (H701190-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11000	16.0	05/05/2017	ND	416	104	400	0.00	

Sample ID: S5 - 7' (H701190-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9330	16.0	05/05/2017	ND	416	104	400	0.00	

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. 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: 05/03/2017
Reported: 05/09/2017
Project Name: APOLLO APU #3
Project Number: 30-015-29431
Project Location: APOLLO APU #3

Sampling Date: 04/18/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: S5+5 - 1' (H701190-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4930	16.0	05/05/2017	ND	416	104	400	0.00	

Sample ID: S5+5 - 3' (H701190-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3600	16.0	05/05/2017	ND	416	104	400	0.00	

Sample ID: S5+5 - 5' (H701190-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6530	16.0	05/05/2017	ND	416	104	400	0.00	

Sample ID: S5+5 - 7' (H701190-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7840	16.0	05/05/2017	ND	416	104	400	0.00	

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. 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-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 Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Company (505) 393-2326 EOG Y Resources, Inc.

Company Address: 105 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-4171

Sampler Signature:

e-mail: Chase.Settle@eoqresources.com

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

PO #: 205-0750

Project Name: Apollo APU #3

Project #: 30-015-29431

Project Loc: Apollo APU #3

LAB # (lab use only)		FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO ₃	HCl	H ₂ SO ₄	NaOH	Na ₂ S ₂ O ₃	None	Other (Specify)	DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 410.1 8015M 8015B	TPH: TX 1005 TX 1006	Callons (Ca, Mg, Na, K)	Anions (Cl, SO ₄ , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 0260	RCI	N.O.R.M.	Chlorides	SAR	RUSH TAT (Pro-Schedule) 24, 48, 72 hrs	Standard TAT	
1	SS-1'				4/18/2017	11:29 AM		1									S																
2	SS-3'				4/18/2017	11:32 AM		1									S																
3	SS-5'				4/18/2017	11:36 AM		1									S																
4	SS-7'				4/18/2017	11:42 AM		1									S																
5	SS+5-1'				4/18/2017	11:29 AM		1									S																
6	SS+5-3'				4/18/2017	11:32 AM		1									S																
7	SS+5-5'				4/18/2017	11:37 AM		1									S																
8	SS+5-7'				4/18/2017	11:43 AM		1									S																

Special Instructions:

Relinquished by: Date: 5/17/17 Time: 11:00am Received by: Date: 5/13/17 Time: 2:00pm

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

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

Laboratory Comments:

Sample Containers Intact? ☒ N

VOCs Free of Headspace? ☒ N

Labels on container(s) ☒ N

Custody seals on container(s) ☒ N

Custody seals on cooler(s) ☒ N

Sample Hand Delivered ☒ N

by Courier? ☒ N

UPS ☒ N

DHL ☒ N

FedEx ☒ N

Lone Star ☒ N

Temperature Upon Receipt: 17.5 °C



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) 748-4195
FAX

RE: Apollo APU 3

OrderNo.: 1706B72

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 6 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

Analytical Report

Lab Order: 1706B72

Date Reported: 6/29/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources, Inc.

Lab Order: 1706B72

Project: Apollo APU 3

Lab ID: 1706B72-001

Collection Date: 6/14/2017 10:01:00 AM

Client Sample ID: T3-12'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	110	30		mg/Kg	20	6/27/2017 2:57:19 AM	32503

Lab ID: 1706B72-002

Collection Date: 6/14/2017 10:12:00 AM

Client Sample ID: T3-15'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	79	30		mg/Kg	20	6/27/2017 3:09:44 AM	32503

Lab ID: 1706B72-003

Collection Date: 6/14/2017 10:23:00 AM

Client Sample ID: T3-18'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	180	30		mg/Kg	20	6/27/2017 3:22:09 AM	32503

Lab ID: 1706B72-004

Collection Date: 6/14/2017 10:53:00 AM

Client Sample ID: T4-12'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	150	30		mg/Kg	20	6/27/2017 3:34:34 AM	32503

Lab ID: 1706B72-005

Collection Date: 6/14/2017 11:08:00 AM

Client Sample ID: T4-15'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: MRA	
Chloride	220	30		mg/Kg	20	6/27/2017 3:46:58 AM	32503

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 3
	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	

Analytical Report
 Lab Order: 1706B72
 Date Reported: 6/29/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources, Inc.
 Project: Apollo APU 3

Lab Order: 1706B72

Lab ID: 1706B72-006

Collection Date: 6/14/2017 11:16:00 AM

Client Sample ID: T4-18'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	130	30		mg/Kg	20	6/27/2017 3:59:23 AM	32503

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 2 of 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	
	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**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1706B72

29-Jun-17

Client: EOG Resources, Inc.

Project: Apollo APU 3

Sample ID	MB-32503	SampType:	mbk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	32503	RunNo:	43787					
Prep Date:	6/26/2017	Analysis Date:	6/26/2017	SeqNo:	1380605	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

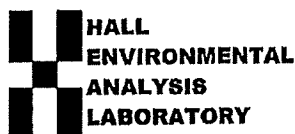
Sample ID	LCS-32503	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	32503	RunNo:	43787					
Prep Date:	6/26/2017	Analysis Date:	6/26/2017	SeqNo:	1380606	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

Qualifiers:

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

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

Page 3 of 3



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

Sample Log-In Check List

Client Name: EOG/Yates

Work Order Number: 1706B72

ReptNo: 1

Received By: Richie Erlacho 6/21/2017 9:40:00 AM

Completed By: Sophia Campuzano 6/21/2017 3:05:53 PM

Reviewed By: ENM

06/22/17

12
Sophia Campuzano

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	25.8	Good	Yes			



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

July 10, 2017

Chase Settle

EOG

105 South Fourth Street

Artesia, NM 88210

TEL: (575) 748-4195

FAX

RE: Apollo APU 3

OrderNo.: 1706B75

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 8 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

Analytical Report

Lab Order: 1706B75

Date Reported: 7/10/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG
Project: Apollo APU 3

Lab Order: 1706B75

Lab ID: 1706B75-001

Collection Date: 6/14/2017 8:18:00 AM

Client Sample ID: T1-12'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	13000	750		mg/Kg	500	6/29/2017 3:56:01 PM	32511

Lab ID: 1706B75-002

Collection Date: 6/14/2017 8:23:00 AM

Client Sample ID: T1-15'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	13000	750		mg/Kg	500	6/29/2017 4:08:26 PM	32511

Lab ID: 1706B75-003

Collection Date: 6/14/2017 8:30:00 AM

Client Sample ID: T1-18'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	3100	150		mg/Kg	100	6/30/2017 12:34:03 PM	32511

Lab ID: 1706B75-004

Collection Date: 6/14/2017 8:38:00 AM

Client Sample ID: T1-21'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	7400	300		mg/Kg	200	6/29/2017 4:33:15 PM	32511

Lab ID: 1706B75-005

Collection Date: 6/14/2017 9:09:00 AM

Client Sample ID: T2-12'

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	14000	750		mg/Kg	500	6/29/2017 4:45:39 PM	32511

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 3
	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	

Analytical Report
 Lab Order: 1706B75
 Date Reported: 7/10/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG
 Project: Apollo APU 3
 Lab Order: 1706B75

Lab ID: 1706B75-006
 Client Sample ID: T2-15'
 Collection Date: 6/14/2017 9:14:00 AM
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	10000	300		mg/Kg	200	6/29/2017 4:58:04 PM	32511

Lab ID: 1706B75-007
 Client Sample ID: T2-18'
 Collection Date: 6/14/2017 9:22:00 AM
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	9900	300		mg/Kg	200	6/29/2017 5:10:29 PM	32511

Lab ID: 1706B75-008
 Client Sample ID: T2-21'
 Collection Date: 6/14/2017 9:28:00 AM
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	1900	75		mg/Kg	50	6/29/2017 5:47:43 PM	32511

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 2 of 3
	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

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706B75

10-Jul-17

Client: EOG
Project: Apollo APU 3

Sample ID	MB-32511	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	32511	RunNo:	43824					
Prep Date:	6/27/2017	Analysis Date:	6/27/2017	SeqNo:	1382188	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-32511	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	32511	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			

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 3 of 3



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

Sample Log-In Check List

Client Name: EOG/Yates

Work Order Number: 1706B75

ReptNo: 1

Received By: Richie Erlacho 6/21/2017 9:40:00 AM

Completed By: Sophia Campuzano 6/21/2017 3:21:08 PM

Reviewed By: ENM 06/22/17

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples? Yes ☐ No ☒ NA ☐
5. Were all samples received at a temperature of >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 ☐ # 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?
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by: _____

Special Handling (if applicable)

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

Person Notified:				Date:				
By Whom:				Via:	<input type="checkbox"/> eMail	<input type="checkbox"/> Phone	<input type="checkbox"/> Fax	<input type="checkbox"/> 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			



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

August 15, 2017

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: APOLLO APU #3

Enclosed are the results of analyses for samples received by the laboratory on 08/11/17 13:00.

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	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:

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

Received: 08/11/2017
Reported: 08/15/2017
Project Name: APOLLO APU #3
Project Number: 30-015-29431
Project Location: APOLLO APU #3

Sampling Date: 08/10/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: C - 25' (H702120-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2440	16.0	08/15/2017	ND	400	100	400	3.92	

Sample ID: C - 30' (H702120-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2840	16.0	08/15/2017	ND	400	100	400	3.92	

Sample ID: C - 35' (H702120-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	08/15/2017	ND	400	100	400	3.92	

Sample ID: C - 40' (H702120-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1150	16.0	08/15/2017	ND	400	100	400	3.92	

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. 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: 08/11/2017
Reported: 08/15/2017
Project Name: APOLLO APU #3
Project Number: 30-015-29431
Project Location: APOLLO APU #3

Sampling Date: 08/10/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: C - 45' (H702120-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/15/2017	ND	400	100	400	3.92	

Sample ID: C - 50' (H702120-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/15/2017	ND	400	100	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. 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-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 Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



ORDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Project Name: Apollo APU #3

Comp: (505) 393-2326 EOG Y Resources, Inc.

Project #: 30-015-29431

Company Address: 105 South 4th Street

Project Loc: Apollo APU #3

City/State/Zip: Artesia, NM 88210

PO #: 205-0750

Telephone No: 575-748-4171

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature:

e-mail:

Chase.Settle@eogresources.com

[illegible]



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

March 23, 2018

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: APOLLO APU #3

Enclosed are the results of analyses for samples received by the laboratory on 03/21/18 11:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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:	03/21/2018	Sampling Date:	03/20/2018
Reported:	03/23/2018	Sampling Type:	Soil
Project Name:	APOLLO APU #3	Sampling Condition:	Cool & Intact
Project Number:	30-015-29431	Sample Received By:	Tamara Oldaker
Project Location:	APOLLO APU #3		

Sample ID: NORTH SIDEWALL (H800811-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/22/2018	ND	416	104	400	0.00	

Sample ID: SOUTH SIDEWALL (H800811-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	03/22/2018	ND	416	104	400	0.00	

Sample ID: NORTHWEST SIDEWALL (H800811-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/22/2018	ND	416	104	400	0.00	

Sample ID: SOUTHWEST SIDEWALL (H800811-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/22/2018	ND	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. 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: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Project Name: Apollo APU #3

Compac (505) 393-2326 EOG Y Resources, Inc.

Project #: 30-015-29431

Company Address: 105 South 4th Street

Project Loc: Apollo APU #3

City/State/Zip: Artesia, NM 88210

PO #: 205-0750

Telephone No: 575-748-4171

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature:

e-mail: Chase.Settle@eogresources.com

(lab use only)

ORDER #: 780081

[illegible]



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

April 03, 2018

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: APOLLO APU #3

Enclosed are the results of analyses for samples received by the laboratory on 04/02/18 11:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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:	04/02/2018	Sampling Date:	04/02/2018
Reported:	04/03/2018	Sampling Type:	Soil
Project Name:	APOLLO APU #3	Sampling Condition:	Cool & Intact
Project Number:	30-015-29431	Sample Received By:	Tamara Oldaker
Project Location:	APOLLO APU #3		

Sample ID: SOUTH SIDEWALL (H800899-01)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/03/2018	ND	432	108	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. 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. 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: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analytes. All claims, including those for negligence and any other cause 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 shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Project Name: Apollo APU #3

Compac (505) 393-2326 EOG Y. Resources, Inc.

Project #: 30-015-29431

Company Address: 105 South 4th Street

Project Loc: Apollo APU #3

City/State/Zip: Artesia, NM 88210

PO #: 205-0750

Telephone No: 575-748-4171

Fax No: 575-748-4131

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature:

e-mail: Chase.Settle@geogresources.com

(lab use only)

ORDER # A808899-

ORDER #:		(lab use only)		Sampler Signature:	
LAB # (lab use only)		FIELD CODE		Analyze For:	
1	South Sidewall	4'	Beginning Depth	4'	Ending Depth
		4/2/2018	Date Sampled	8:22 AM	Time Sampled
			Field Filtered	1	Total #. of Containers
			Ice		
			HNO ₃		
			HCl		
			H ₂ SO ₄		
			NaOH		
			Na ₂ S ₂ O ₃		
		X	None		
			Other (Specify)		
		S	DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Polable Specify Other		
			TPH: 418.1 8015M 8015B		
			TPH: TX 1005 TX 1006		
			Callons (Ca, Mg, Na, K)		
			Anions (Cl, SO ₄ , Alkalinity)		
			SAR / ESP / CEC		
			Metals: As Ag Ba Cd Cr Pb Hg Se		
			Volatiles		
			Semivolatiles		
			BTEX 8021B/5030 or BTEX 8260		
			RCI		
			N.O.R.M.		
		X	Chlorides		
			SAR		
		X	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs		
			Standard TAT		

Special Instructions:

Relinquished by 7

Relinquished by:

Relinquished by:

Date _____

4-2-18

Time

11:30

Received by:

Received by:

1

10

Date _____

2-18

Time

113

Laboratory Comments:
Sample Containers Intact?
VOCs Free of Headspace?
Labels on container(s)
Custody seal on container

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt

1000000 0.55c #

ZZZZ

 $z =$ 

edEx Lone

10

0.55c

Appendix D

Form C-141 Initial

Appendix E

Form C-141 Final

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company EOG Y Resources, Inc.	Contact Chase Settle
Address 104 S. 4 th Street, Artesia, NM 88210	Telephone No. 575-748-1471
Facility Name Apollo APU Federal #3	Facility Type Well
Surface Owner Private	Mineral Owner Federal
API No. 30-015-29431	

LOCATION OF RELEASE

Unit Letter P	Section 10	Township 19S	Range 25E	Feet from the 660	North/South Line South	Feet from the 660	East/West Line East	County Eddy
------------------	---------------	-----------------	--------------	----------------------	---------------------------	----------------------	------------------------	----------------

Latitude 32.67081 Longitude -104.47127 NAD83

NATURE OF RELEASE

Type of Release Crude Oil and Produced Water	Volume of Release Unknown	Volume Recovered None
Source of Release Underground flowline	Date and Hour of Occurrence December 2015	Date and Hour of Discovery March 2017
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

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

Describe Cause of Problem and Remedial Action Taken.* An underground steel flowline failed causing a release of crude oil and produced water. The amounts were originally determined to be below the reportable threshold and the visually impacted area was excavated with the soil hauled to a NMOCD approved disposal facility. When vegetation had not reestablished by March of 2017, it was determined that further sampling was necessary.

Describe Area Affected and Cleanup Action Taken.* An approximate area of 100 feet by 40 feet is impacted. Soil samples have been collected down to 50 feet bgs for vertical delineation and the east side of the release has been found horizontally. Due to remaining pipelines within the release area, sidewall sampling will be conducted to determine the north, south, and west horizontal extents during the time of excavation with confirmation sampling conducted prior to backfilling. Closure Requested based on completion of the NMOCD Approved work plan

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: <i>Chase Settle</i>	Approved by Environmental Specialist: <i>Ashley Maxwell</i>	
Printed Name: Chase Settle	Approval Date: 4/10/2023	Expiration Date:
Title: Safety & Environmental Representative II	Conditions of Approval:	
E-mail Address: Chase.Settle@eogresources.com	Attached <input type="checkbox"/>	
Date: April 12, 2018	Phone: 575-748-1471	

* Attach Additional Sheets If Necessary

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 203743

CONDITIONS

Operator: EOG Y RESOURCES, INC. 104 S 4th St Artesia, NM 88210	OGRID: 25575
	Action Number: 203743
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	4/10/2023