



Certificate of Analysis

Number: 6030-20080139-008A

Artesia Laboratory
200 E Main St.
Artesia, NM 88210
Phone 575-746-3481

Tyler Cox
EOG Resources
1201 S. 3rd St
Jal, NM 88252

Aug. 19, 2020

Station Name: Black Bear 36 St #4h GI
Station Number: 60384055
Cylinder No: 5030-00947
Instrument: 70104124 (Inficon GC-MicroFusion)
Last Inst. Cal.: 08/10/2020 0:00 AM
Analyzed: 08/19/2020 13:05:00 by PGS

Sampled By: Jesse Selman
Sample Of: Gas Spot
Sample Date: 08/16/2020 09:31
Sample Conditions: 701.77 psig, @ 101.19 °F
Effective Date: 08/16/2020 09:31
Method: GPA-2261M

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.73 psia		
Water	0.0000	0.1729	0.1321		GPM TOTAL C2+	5.190
Nitrogen	4.5508	4.5383	5.3931		GPM TOTAL C3+	2.611
Carbon Dioxide	9.0436	9.0189	16.8377		GPM TOTAL iC5+	0.416
Methane	68.1848	67.9983	46.2757			
Ethane	9.6350	9.6087	12.2565	2.5786		
Propane	5.3574	5.3427	9.9940	1.4770		
Iso-butane	0.6536	0.6518	1.6071	0.2140		
n-Butane	1.5988	1.5944	3.9312	0.5044		
Iso-pentane	0.3873	0.3862	1.1820	0.1417		
n-Pentane	0.3689	0.3679	1.1260	0.1338		
Hexanes Plus	0.3208	0.3199	1.2646	0.1401		
	100.1010	100.0000	100.0000	5.1896		

Physical Properties	Total	C6+
GPM TOTAL C2+	5.190	
GPM TOTAL C3+	2.611	
GPM TOTAL iC5+	0.416	
Relative Density Real Gas	0.8166	3.2176
Calculated Molecular Weight	23.57	93.19
Compressibility Factor	0.9963	
GPA 2172 Calculation:		
Calculated Gross BTU per ft³ @ 14.73 psia & 60°F		
Real Gas Dry BTU	1119.68	5141.09
Water Sat. Gas Base BTU	1100.64	5051.61
Calculated Gross BTU per ft³ @ 14.65 psia & 60°F		
Real Gas Dry BTU	1113.58	5113.17
Water Sat. Gas Base BTU	1094.54	5023.69

Comments: H2S Field Content 0 ppm
C6+ Composition Group Properties (assumed): C6 - 60.00%, C7 - 30.00%, C8 - 10.00%

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. 14
Submitted by: EOG Resources, Inc. Hearing
Date: January 7, 2021
Case No. 21567

Hydrocarbon Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.



Certificate of Analysis

Number: 6030-20090158-010A

Artesia Laboratory
200 E Main St.
Artesia, NM 88210
Phone 575-746-3481

Tyler Cox
EOG Resources
1201 S. 3rd St
Jal, NM 88252

Sep. 22, 2020

Station Name: Brown Bear 36 #1h
Station Number: 60381055
Cylinder No: 5030-02526
Instrument: 70104251 (Inficon GC-MicroFusion)
Last Inst. Cal.: 09/21/2020 0:00 AM
Analyzed: 09/21/2020 15:19:20 by PGS

Sampled By: Jesse Selman
Sample Of: Gas Spot
Sample Date: 09/07/2020 12:26
Sample Conditions: 91.3 psig, @ 96.1 °F
Effective Date: 09/07/2020 12:26
Method: GPA-2261M

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.73 psia	
Water	0.0000	0.9552	0.7429		GPM TOTAL C2+ 5.189
Hydrogen Sulfide	0.0000	0.0005	0.0007		GPM TOTAL C3+ 2.466
Nitrogen	4.1317	4.0926	4.9492		GPM TOTAL iC5+ 0.377
Carbon Dioxide	8.2162	8.1386	15.4620		
Methane	69.0944	68.4418	47.3983		
Ethane	10.2425	10.1458	13.1697	2.7231	
Propane	5.4456	5.3942	10.2681	1.4914	
Iso-butane	0.5731	0.5677	1.4244	0.1864	
n-Butane	1.3130	1.3006	3.2633	0.4115	
Iso-pentane	0.3221	0.3190	0.9935	0.1171	
n-Pentane	0.2922	0.2894	0.9014	0.1053	
Hexanes Plus	0.3580	0.3546	1.4265	0.1553	
	99.9888	100.0000	100.0000	5.1901	

Physical Properties	Total	C6+
GPM TOTAL C2+	5.189	
GPM TOTAL C3+	2.466	
GPM TOTAL iC5+	0.377	
Relative Density Real Gas	0.8026	3.2176
Calculated Molecular Weight	23.16	93.19
Compressibility Factor	0.9962	

GPA 2172 Calculation:

Calculated Gross BTU per ft³ @ 14.73 psia & 60°F

Real Gas Dry BTU	1127.36	5141.09
Water Sat. Gas Base BTU	1108.18	5051.61

Calculated Gross BTU per ft³ @ 14.65 psia & 60°F

Real Gas Dry BTU	1121.21	5113.17
Water Sat. Gas Base BTU	1102.04	5023.69

Comments: H2S Field Content 5 ppm

Hydrocarbon Laboratory Manager

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Certificate of Analysis

Number: 6030-20080164-002A

Artesia Laboratory
200 E Main St.
Artesia, NM 88210
Phone 575-746-3481

Tyler Cox
EOG Resources
1201 S. 3rd St
Jal, NM 88252

Aug. 21, 2020

Station Name: Hawk 25 Fed 1h
Station Number: 60381067
Cylinder No: 5030-02196
Instrument: 6030_GC2 (Agilent GC-7890B)
Last Inst. Cal.: 05/05/2020 13:27 PM
Analyzed: 08/20/2020 11:34:13 by KNF

Sampled By: Andrew Jeter
Sample Of: Gas Spot
Sample Date: 08/13/2020 13:52
Sample Conditions: 118 psig, @ 99 °F Ambient: 102 °F
Effective Date: 08/13/2020 13:52
Method: GPA-2261M

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.73 psia	
Water	0.0000	0.8133	0.6376		GPM TOTAL C2+ 5.372
Hydrogen Sulfide	0.0000	0.0002	0.0003		GPM TOTAL C3+ 2.630
Nitrogen	2.8360	2.8291	3.4489		GPM TOTAL iC5+ 0.501
Carbon Dioxide	7.0060	6.9891	13.3854		
Methane	70.7000	70.5291	49.2383		
Ethane	10.2390	10.2142	13.3655	2.7417	
Propane	5.0690	5.0567	9.7034	1.3982	
Iso-butane	0.6220	0.6205	1.5694	0.2038	
n-Butane	1.6700	1.6659	4.2136	0.5271	
Iso-pentane	0.4090	0.4081	1.2813	0.1498	
n-Pentane	0.4240	0.4229	1.3278	0.1539	
Hexanes Plus	0.4520	0.4509	1.8285	0.1975	
	99.4270	100.0000	100.0000	5.3720	

Physical Properties	Total	C6+
GPM TOTAL C2+	5.372	
GPM TOTAL C3+	2.630	
GPM TOTAL iC5+	0.501	
Relative Density Real Gas	0.7962	3.2176
Calculated Molecular Weight	22.98	93.19
Compressibility Factor	0.9961	

GPA 2172 Calculation:

Calculated Gross BTU per ft³ @ 14.73 psia & 60°F

Real Gas Dry BTU	1167.76	5141.09
Water Sat. Gas Base BTU	1147.91	5051.61

Calculated Gross BTU per ft³ @ 14.65 psia & 60°F

Real Gas Dry BTU	1161.39	5113.17
Water Sat. Gas Base BTU	1141.54	5023.69

Comments: H2S Field Content 1.5 ppm
C6+ Composition Group Properties (assumed): C6 - 60.00%, C7 - 30.00%, C8 - 10.00%

Hydrocarbon Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.



Certificate of Analysis

Number: 5030-20110652-010A

Midland Laboratory

2200 East I-20

Midland, TX 79706

Phone 432-689-7252

Tyler Cox
EOG Resources
1201 S. 3rd St
Jal, NM 88252

Dec. 05, 2020

Station Name: Hawk 25 Fed 2h
Station Number: 60381068
Cylinder No: 5030-02523
Instrument: 5030_GC12 (Varian 450)
Last Inst. Cal.: 10/05/2020 13:09 PM
Analyzed: 12/04/2020 18:44:08 by DMA

Sampled By: Kaleb Adams
Sample Of: Gas Spot
Sample Date: 11/19/2020 09:50
Sample Conditions: 114 psia, @ 74 °F Ambient: 61 °F
Effective Date: 11/19/2020 09:50
Method: GPA-2261

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.73 psia	
Water	0.0000	0.3840	0.2952		GPM TOTAL C2+ 5.306
Hydrogen Sulfide	0.0000	0.0004	0.0006		GPM TOTAL C3+ 2.616
Nitrogen	3.2750	3.2518	3.8872		GPM TOTAL iC5+ 0.497
Carbon Dioxide	8.6950	8.6333	16.2134		
Methane	69.6230	69.1294	47.3245		
Ethane	10.0950	10.0235	12.8615	2.6903	
Propane	5.2040	5.1671	9.7229	1.4287	
Iso-butane	0.6350	0.6305	1.5638	0.2071	
n-Butane	1.5380	1.5271	3.7876	0.4832	
Iso-pentane	0.3630	0.3604	1.1096	0.1323	
n-Pentane	0.3540	0.3514	1.0819	0.1278	
Hexanes Plus	0.5450	0.5411	2.1518	0.2370	
	100.3270	100.0000	100.0000	5.3064	

Physical Properties	Total	C6+
Relative Density Real Gas	0.8119	3.2176
Calculated Molecular Weight	23.43	93.19
Compressibility Factor	0.9962	

GPA 2172 Calculation:

Calculated Gross BTU per ft³ @ 14.73 psia & 60°F

Real Gas Dry BTU	1143.48	5141.09
Water Sat. Gas Base BTU	1124.04	5051.61

Calculated Gross BTU per ft³ @ 14.65 psia & 60°F

Real Gas Dry BTU	1137.24	5113.17
Water Sat. Gas Base BTU	1117.80	5023.69

Comments: H2S Field Content 3.5 ppm

Hydrocarbon Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.



Certificate of Analysis

Number: 6030-20100123-001A

Artesia Laboratory
200 E Main St.
Artesia, NM 88210
Phone 575-746-3481

Tyler Cox
EOG Resources
1201 S. 3rd St
Jal, NM 88252

Oct. 16, 2020

Station Name: Ophelia 27 #1h
Station Number: 60381057
Cylinder No: 5030-03196
Instrument: 6030_GC6 (Inficon GC-3000 Micro)
Last Inst. Cal.: 10/12/2020 0:00 AM
Analyzed: 10/16/2020 10:53:05 by KNF

Sampled By: Nathaniel Torres
Sample Of: Gas Spot
Sample Date: 10/12/2020 09:36
Sample Conditions: 103 psig, @ 70 °F Ambient: 65 °F
Effective Date: 10/12/2020 09:36
Method: GPA-2261M

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.73 psia		
Water	0.0000	0.3704	0.2930		GPM TOTAL C2+	6.743
Nitrogen	2.0471	2.0083	2.4705		GPM TOTAL C3+	3.367
Carbon Dioxide	2.6916	2.6407	5.1034		GPM TOTAL iC5+	0.472
Methane	72.5548	71.1816	50.1463			
Ethane	12.8162	12.5737	16.6028	3.3757		
Propane	7.2554	7.1180	13.7832	1.9686		
Iso-butane	0.8155	0.8000	2.0419	0.2628		
n-Butane	2.1362	2.0958	5.3492	0.6633		
Iso-pentane	0.4017	0.3941	1.2486	0.1447		
n-Pentane	0.4235	0.4155	1.3164	0.1512		
Hexanes Plus	0.4097	0.4019	1.6447	0.1760		
	101.5517	100.0000	100.0000	6.7423		

Physical Properties	Total	C6+
Relative Density Real Gas	0.7892	3.2176
Calculated Molecular Weight	22.77	93.19
Compressibility Factor	0.9959	

GPA 2172 Calculation:

Calculated Gross BTU per ft³ @ 14.73 psia & 60°F

Real Gas Dry BTU	1280.80	5141.09
Water Sat. Gas Base BTU	1259.03	5051.61

Calculated Gross BTU per ft³ @ 14.65 psia & 60°F

Real Gas Dry BTU	1273.81	5113.17
Water Sat. Gas Base BTU	1252.05	5023.69

Comments: H2S Field Content 0 ppm
C6+ Composition Group Properties (assumed): C6 - 60.00%, C7 - 30.00%, C8 - 10.00%

Hydrocarbon Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

7639G	67244266	Red Hills Aladdin To Lucid Discharge	
Sample Point Code	Sample Point Name	Sample Point Location	
Laboratory Services	2019020151	1410	C Lanier - Spot
Source Laboratory	Lab File No	Container Identity	Sampler
USA	USA	USA	New Mexico
District	Area Name	Field Name	Facility Name
Aug 13, 2019 09:45	Aug 13, 2019 09:45	Aug 27, 2019 13:01	Jan 4, 1900
Date Sampled	Date Effective	Date Received	Date Reported
79.00	0	1116 @ 90	
Ambient Temp (°F)	Flow Rate (Mcf)	Analyst	Press PSI @ Temp °F Source Conditions
EOG Resources Inc.		NG	
Operator		Lab Source Description	

Component	Normalized Mol %	Un-Normalized Mol %	GPM
H2S (H2S)	0.0000	0	
Nitrogen (N2)	1.9330	1.933	
CO2 (CO2)	1.7600	1.76	
Methane (C1)	72.6540	72.653	
Ethane (C2)	12.5510	12.551	3.3660
Propane (C3)	6.8100	6.81	1.8820
I-Butane (IC4)	0.8810	0.881	0.2890
N-Butane (NC4)	2.1380	2.138	0.6760
I-Pentane (IC5)	0.4260	0.426	0.1560
N-Pentane (NC5)	0.4620	0.462	0.1680
Hexanes Plus (C6+)	0.3850	0.385	0.1680
TOTAL	100.0000	99.9990	6.7050

Method(s): Gas C6+ - GPA 2261, Extended Gas - GPA 2286, Calculations - GPA 2172

Analyzer Information			
Device Type:	Gas Chromatograph	Device Make:	Shimadzu
Device Model:	GC-2014	Last Cal Date:	Aug 31, 2019

Gross Heating Values (Real, BTU/ft³)			
14.65 PSI @ 60.00 °F		14.73 PSI @ 60.00 °F	
Dry	Saturated	Dry	Saturated
1,285.5	1,264.5	1,292.5	1,271.4

Calculated Total Sample Properties	
GPA2145-16 *Calculated at Contract Conditions	
Relative Density Real	Relative Density Ideal
0.7797	0.7769
Molecular Weight	
22.5026	

C6+ Group Properties		
Assumed Composition		
C6 - 60.000%	C7 - 30.000%	C8 - 10.000%

Field H2S
0 PPM

PROTREND STATUS:
 Passed By Validator

DATA SOURCE:
 Imported

PASSED BY VALIDATOR REASON:
 Close enough to be considered reasonable.

VALIDATOR:
 Dustin Armstrong

VALIDATOR COMMENTS:
 OK

Jafar Compressor Station – Gas Analysis

GQ Source Analysis Editor - 67244366 [Jafar to Enterprise]

Start Date: 06/01/2017 00:00:00
End Date: 01/18/2038 21:14:07

☐ Apply at Meter Contract Hour
☐ Inhibited

Relative Density
Dry
Saturated
As Deliv
Wobbe

Real: 0.8030
1367.000
1344.000
Ideal: 0.7983
1359.589
1335.927

Heating Value

1525.34

Pressure Base: 14.73
Temperature Base: S:60
Viscosity: 0.00000690
Spec. Heat Ratio: 1.3000
Zb: 0.995603
Zf: 0.817098

Mole %
Mass %
Dewpoint
Sulfurs
Liq. Content
Sample
Custom

Carbon Dioxide (CO2) 0.4870
Nitrogen (N2) 1.3110
Methane (C1) 70.6520
Ethane (C2) 14.1950
Propane (C3) 8.1250
iso-Butane (iso-C4) 0.9750
n-Butane (n-C4) 2.5900
iso-Pentane (iso-C5) 0.5070
n-Pentane (n-C5) 0.5800
neo-Pentane (neo-C5)
Hexane (C6) 0.5780

Heptane (C7)
Octane (C8)
Nonane (C9)
Decane (C10)
Argon (Ar)
Carbon Monoxide (CO)
Hydrogen (H2)
Oxygen (O2)
Helium (He)
Water (H2O)
Hydrogen Sulfide (H2S) 0.0000 0.0000

Normalized Total: 100.000000
Un-Normalized Total:

C6+ Extended
Calculate
Normalize
Exceptions
Full Analysis
New
Edit
Save
Exit
Print

Legend

Calculated

Edited

Exception

Modified

Reason: Enter GA
Lab Date: 06/01/2017 00:00:00
User Name: BLINDSEY1

CAP NUM 1/5/2021 14:09