



30-045-13252

Gas Analysis Certificate

GPA Standard 2261-13

Acquisition Method Name au_report_150_C6+

Last calibration date 7/10/2015 10:21:38 AM

Client:	BP	Project #:	03143-0880
Site Name:	Navajo Allotted GC #1	Meter ID:	3004513252 (BHD)
Sampled by:	Daniel F.	Date Sampled	07-23-15
Analyzed by:	Logan Richter	Date Received:	08-27-15
Sample Pressure:	134 psig	Date Analyzed:	09-01-15
Sample Temperature	N/R	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.012	0.002	0.001
Oxygen	0.003	0.005	0.000
Nitrogen	0.286	0.420	0.031
Carbon Dioxide	0.191	0.441	0.033
Methane	88.157	74.068	14.951
Ethane	5.386	8.481	1.441
Propane	3.459	7.988	0.953
i-Butane	0.640	1.949	0.210
n-Butane	1.047	3.188	0.330
i-Pentane	0.270	1.021	0.099
n-Pentane	0.193	0.730	0.070
C6+	0.354	1.706	0.155
	100.000	100.000	18.274

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99707	C2+	3.258
Density (G) (Dry Gas)	0.65942	C3+	1.817
Component MW Total	19.09	C5+	0.324
Heating Value (Dry Ideal) Total BTU	1164.46	Heating Value (Sat Ideal) Total BTU	1144.14
Heating Value (Dry Real) Total BTU	1167.88	Heating Value (Sat Real) Total BTU	1147.38

9/10/2015



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Client:	BP	Project #:	03143-0880
Site Name:	Navajo Allotted GC #1	Meter ID:	3004513252 (INT)
Sampled by:	Daniel F.	Date Sampled	07-23-15
Analyzed by:	Logan Richter	Date Received:	08-27-15
Sample Pressure:	220 psig	Date Analyzed:	09-02-15
Sample Temperature	N/R	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.009	0.002	0.001
Oxygen	3.743	5.728	0.332
Nitrogen	13.569	18.178	1.493
Carbon Dioxide	0.198	0.416	0.034
Methane	72.625	55.718	12.310
Ethane	4.642	6.675	1.241
Propane	3.002	6.331	0.827
i-Butane	0.562	1.563	0.184
n-Butane	0.911	2.533	0.287
i-Pentane	0.239	0.825	0.087
n-Pentane	0.172	0.594	0.062
C6+	0.327	1.437	0.143
	100.000	100.000	17.001

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99764	C2+	2.832
Density (G) (Dry Gas)	0.72212	C3+	1.591
Component MW Total	20.91	C5+	0.293
Heating Value (Dry Ideal) Total BTU	972.46	Heating Value (Sat Ideal) Total BTU	955.49
Heating Value (Dry Real) Total BTU	974.76	Heating Value (Sat Real) Total BTU	957.67



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Acquisition Method Name au_report_150_C6+
Last calibration date 7/10/2015 10:21:38 AM

Client:	BP	Project #:	03143-0880
Site Name:	Navajo Allotted GC #1	Meter ID:	3004513252 (CSG)
Sampled by:	Daniel F.	Date Sampled	07-23-15
Analyzed by:	Logan Richter	Date Received:	08-27-15
Sample Pressure:	134 psig	Date Analyzed:	09-01-15
Sample Temperature	N/R	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.021	0.004	0.002
Oxygen	2.092	2.862	0.186
Nitrogen	8.470	10.148	0.933
Carbon Dioxide	0.868	1.633	0.148
Methane	66.127	45.373	11.223
Ethane	11.445	14.719	3.064
Propane	6.251	11.789	1.724
i-Butane	1.066	2.650	0.349
n-Butane	1.817	4.517	0.573
i-Pentane	0.613	1.892	0.225
n-Pentane	0.507	1.564	0.184
C6+	0.725	2.850	0.317
	100.000	100.000	18.929

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99630	C2+	6.436
Density (G) (Dry Gas)	0.80758	C3+	3.372
Component MW Total	23.38	C5+	0.725
Heating Value (Dry Ideal) Total BTU	1203.67	Heating Value (Sat Ideal) Total BTU	1182.66
Heating Value (Dry Real) Total BTU	1208.14	Heating Value (Sat Real) Total BTU	1186.90