



Gas Analysis Certificate

30.045-25222

GPA Standard 2261-13

Method Name C6+ Excel Recalc2
Last calibration date 6/19/2015 8:47:52 AM

Client:	BP	Project #:	03143-0880
Site Name:	GCU 134E	Meter ID:	3004525222 (BHD)
Sampled by:	Daniel F.	Date Sampled:	052815
Analyzed by:	Logan Richter	Date Received:	060215
Sample Pressure:	22 psi	Date Analyzed:	060415
Sample Temperature:	NA	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.745	0.158	0.076
Oxygen	0.274	0.463	0.024
Nitrogen	1.929	2.856	0.212
Carbon Dioxide	0.282	0.656	0.048
Methane	85.138	72.176	14.436
Ethane	6.690	10.631	1.790
Propane	3.256	7.588	0.897
i-Butane	0.473	1.453	0.155
n-Butane	0.809	2.486	0.255
i-Pentane	0.226	0.862	0.083
n-Pentane	0.176	0.671	0.064
C6+	0.000	0.000	0.000
	100.000	100.000	18.040

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99729	C2+	3.243
Density (G) (Dry Gas)	0.65337	C3+	1.454
Component MW Total	18.92	C5+	0.147
Heating Value (Dry Ideal) Total BTU	1118.13	Heating Value (Sat Ideal) Total BTU	1098.62
Heating Value (Dry Real) Total BTU	1121.17	Heating Value (Sat Real) Total BTU	1101.50

RJR
Reviewed by

07/01/2015
mm dd/yyyy



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Method Name C6+ Excel Recalc2
Last calibration date 6/19/2015 8:47:52 AM

Client:	BP	Project #:	03143-0880
Site Name:	GCU 134E	Meter ID:	3004525222 (CSG)
Sampled by:	Daniel F.	Date Sampled:	052815
Analyzed by:	Logan Richter	Date Received:	060215
Sample Pressure:	19 psi	Date Analyzed:	060415
Sample Temperature:	NA	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.342	0.075	0.035
Oxygen	0.006	0.011	0.001
Nitrogen	0.518	0.791	0.057
Carbon Dioxide	0.058	0.139	0.010
Methane	89.450	78.257	15.166
Ethane	5.262	8.628	1.407
Propane	2.602	6.257	0.717
i-Butane	0.614	1.947	0.201
n-Butane	0.812	2.572	0.256
i-Pentane	0.225	0.887	0.082
n-Pentane	0.111	0.435	0.040
C6+	0.000	0.000	0.000
	100.000	100.000	17.972

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99736	C2+	2.704
Density (G) (Dry Gas)	0.63312	C3+	1.296
Component MW Total	18.34	C5+	0.123
Heating Value (Dry Ideal) Total BTU	1121.94	Heating Value (Sat Ideal) Total BTU	1102.36
Heating Value (Dry Real) Total BTU	1124.92	Heating Value (Sat Real) Total BTU	1105.18

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07/01/2015
mm/dd/yyyy