



30-045-08263 Gas Analysis Certificate

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 Corn C-144 Meter ID: 3004508263 (CSG)
Sampled by: Daniel F. Date Sampled: 052815
Analyzed by: Logan Richter Date Received: 060215
Sample Pressure: 43 psi Date Analyzed: 060415
Sample Temperature: NA Analysis Time: Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	1.030	0.218	0.105
Oxygen	0.085	0.143	0.008
Nitrogen	0.952	1.406	0.105
Carbon Dioxide	0.086	0.200	0.015
Methane	85.390	72.270	14.480
Ethane	7.265	11.525	1.943
Propane	2.992	6.960	0.824
i-Butane	0.526	1.611	0.172
n-Butane	0.959	2.940	0.302
i-Pentane	0.373	1.421	0.137
n-Pentane	0.343	1.306	0.124
C6+	0.000	0.000	0.000
	100.000	100.000	18.215

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99718	C2+	3.503
Density (G) (Dry Gas)	0.65446	C3+	1.560
Component MW Total	18.95	C5+	0.261
Heating Value (Dry Ideal) Total BTU	1143.35	Heating Value (Sat Ideal) Total BTU	1123.40
Heating Value (Dry Real) Total BTU	1146.58	Heating Value (Sat Real) Total BTU	1126.46

R. G. B.
Reviewed by

07/01/2015
mm dd/yyyy



Gas Analysis Certificate

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 Com C-144	Meter ID:	3004505263 (BHD)
Sampled by:	Daniel F.	Date Sampled:	052815
Analyzed by:	Logan Richter	Date Received:	060215
Sample Pressure:	27 psi	Date Analyzed:	060415
Sample Temperature:	NA	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) (Mol %)	Wt Percent (%)	GPM
Helium	1.371	0.241	0.140
Oxygen	0.033	0.047	0.003
Nitrogen	0.744	0.917	0.082
Carbon Dioxide	1.714	3.319	0.293
Methane	72.978	51.508	12.392
Ethane	10.826	14.321	2.900
Propane	5.850	11.350	1.614
i-Butane	1.061	2.714	0.348
n-Butane	2.639	6.748	0.833
i-Pentane	1.335	4.236	0.489
n-Pentane	1.447	4.594	0.525
C6+	0.001	0.004	0.000
	100.000	100.000	19.619

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99585	C2+	6.710
Density (G) (Dry Gas)	0.78478	C3+	3.810
Component MW Total	22.73	C5+	1.015
Heating Value (Dry Ideal) Total BTU	1307.92	Heating Value (Sat Ideal) Total BTU	1285.10
Heating Value (Dry Real) Total BTU	1313.37	Heating Value (Sat Real) Total BTU	1290.27

Reviewed by

07/01/2015
mm/dd/yyyy