envirotech

Gas Analysis Certificate

30-045-34986

GPA Standard 2261-13

Method Name	au_report_150_C6+
Last calibration date	1/15/2015 1:00:58 PM

Client:	McElvain Energy	Project #:	06039-0058
Site Name:	Ruby #2	Meter ID:	Production Casing
Sampled by:	Glenn Hise	Date Sampled	05-07-15
Analysed by:	Logan Richter	Date Received:	05-07-15
Sample Pressure:	10 psig	Date Analyzed:	05-14-15
Sample Temperature	N/R	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.000	0.000	0.000
Oxygen	0.007	0.012	0.001
Nitrogen	0.354	0.539	0.039
Carbon Dioxide	1.836	4.392	0.313
Methane	91.414	79.742	15.498
Ethane	3.224	5.271	0.862
Propane	1.515	3.633	0.417
i-Butane	0.313	0.989	0.102
n-Butane	0.480	1.517	0.151
i-Pentane	0.200	0.785	0.073
n-Pentane	0.155	0.607	0.056
C6+	0.503	2.512	0.219
	100.000	100.000	17.733

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99741	C2+	1.882
Density (G) (Dry Gas)	0.63520	C3+	1.020
Component MW Total	18.39	C5+	0.349
Heating Value (Dry Ideal) Total BTU	1084.29	Heating Value (Sat Ideal) Total BTU	1065.37
Heating Value (Dry Real) Total BTU	1087.11	Heating Value (Sat Real) Total BTU	1068.04

Reviewed by

05/28/2015
mm/dd/yyyy