

Diablo Analytical BTU Report

GPA 2145-03 Analysis

Sample Information

30-045-33472

Sample Information	
Sample Name	Moseley 1-2 Tubing
Station Number	2300450197
Taken By	Alpine Analysis LLC
Operator	Travis Tapp
Method Name	StandardNatGas.met
Injection Date	2018-04-11 14:20:55
Report Date	2018-04-11 14:25:02
EZReporter Configuration File	default Standard Sample.cfgx
Source Data File	2018-04-11 14-20-43 (GMT -06-00)Moseley 1-2 Tubing
EZReporter Data File	Moseley 1-2 Tubing-20180411-142502.ezrx
Data Source	Agilent EZChrom Connector

Component Results

Component Name	Ret. Time	Peak Area	Norm%	Gross HV (Dry) (BTU / Ideal cu.ft.)	Relative Gas Density (Dry)	GPM (Dry) (Gal. / 1000 cu.ft.)
Nitrogen	0.321	1039265.0	1.50276	0.0	0.01453	0.166
Methane	0.325	46149435.0	96.91782	981.1	0.53683	16.460
Carbon Dioxide	0.377	750566.0	1.09700	0.0	0.01667	0.188
Ethane	0.431	38102.0	0.05282	0.9	0.00055	0.014
Hydrogen Sulfide	0.601	0.0	0.00000	0.0	0.00000	0.000
Propane	0.527	532497.0	0.27051	6.8	0.00412	0.075
i-Butane	0.567	328911.0	0.14351	4.7	0.00288	0.047
n-Butane	0.611	0.0	0.00000	0.0	0.00000	0.000
i-Pentane	0.709	40426.0	0.01558	0.6	0.00039	0.006
n-Pentane	0.759	0.0	0.00000	0.0	0.00000	0.000
Hexanes Plus	0.000	0.0	0.00000	0.0	0.00000	0.000
Water	0.000	0.0	0.00000	0.0	0.00000	0.000
Total:			100.00000	994.2	0.57597	16.954

Results Summary

Result	Dry	Sat. (Base)
Total Raw Mole% (Dry)	96.92800	
Pressure Base (psia)	14.730	
Temperature Base	60.0	
Water Mole%	-	1.74067
Gross Heating Value (BTU / Ideal cu.ft.)	994.2	976.9
Gross Heating Value (BTU / Real cu.ft.)	996.2	979.2
Relative Density (G), Real	0.5769	0.5779
Compressibility (Z) Factor	0.9980	0.9976
Total GPM	16.954	16.764

Diablo Analytical BTU Report

GPA 2145-03 Analysis

Sample Information

Sample Information	
Sample Name	Moseley 1-2 Casing
Station Number	2300450197
Taken By	Alpine Analysis LLC
Operator	Travis Tapp
Method Name	StandardNatGas.met
Injection Date	2018-04-11 13:55:48
Report Date	2018-04-11 13:59:40
EZReporter Configuration File	default Standard Sample.cfgx
Source Data File	2018-04-11 13-55-37 (GMT -06-00)Moseley 1-2 Casing
EZReporter Data File	Moseley 1-2 Casing-20180411-135940.ezrx
Data Source	Agilent EZChrom Connector

Component Results

Component Name	Ret. Time	Peak Area	Norm%	Gross HV (Dry) (BTU / Ideal cu.ft.)	Relative Gas Density (Dry)	GPM (Dry) (Gal. / 1000 cu.ft.)
Nitrogen	0.321	1311507.0	1.92159	0.0	0.01859	0.212
Methane	0.325	45118279.0	96.00796	971.9	0.53179	16.306
Carbon Dioxide	0.378	618379.0	0.91584	0.0	0.01392	0.157
Ethane	0.430	356865.0	0.50115	8.9	0.00520	0.134
Hydrogen Sulfide	0.601	0.0	0.00000	0.0	0.00000	0.000
Propane	0.530	696169.0	0.35835	9.0	0.00546	0.099
i-Butane	0.568	254278.0	0.11238	3.7	0.00226	0.037
n-Butane	0.612	62125.0	0.02697	0.9	0.00054	0.009
i-Pentane	0.709	353567.0	0.13778	5.5	0.00343	0.050
n-Pentane	0.774	48093.0	0.01798	0.7	0.00045	0.007
Hexanes Plus	0.000	0.0	0.00000	0.0	0.00000	0.000
Water	0.000	0.0	0.00000	0.0	0.00000	0.000
Total:			100.00000	1000.6	0.58163	17.009

Results Summary

Result	Dry	Sat. (Base)
Total Raw Mole% (Dry)	95.66030	
Pressure Base (psia)	14.730	
Temperature Base	60.0	
Water Mole%	-	1.74067
Gross Heating Value (BTU / Ideal cu.ft.)	1000.6	983.2
Gross Heating Value (BTU / Real cu.ft.)	1002.7	985.6
Relative Density (G), Real	0.5826	0.5835
Compressibility (Z) Factor	0.9980	0.9976
Total GPM	17.009	16.819

Diablo Analytical BTU Report

GPA 2145-03 Analysis

Sample Information

	Sample Information
Sample Name	Moseley 1-2 Braden
Station Number	2300450197
Taken By	Alpine Analysis LLC
Operator	Travis Tapp
Method Name	StandardNatGas.met
Injection Date	2018-04-11 13:44:58
Report Date	2018-04-11 13:48:49
EZReporter Configuration File	default Standard Sample.cfgx
Source Data File	2018-04-11 13-44-47 (GMT -06-00)Moseley 1-2 Braden
EZReporter Data File	Moseley 1-2 Braden-20180411-134849.ezrx
Data Source	Agilent EZChrom Connector

Component Results

Component Name	Ret. Time	Peak Area	Norm%	Gross HV (Dry) (BTU / Ideal cu.ft.)	Relative Gas Density (Dry)	GPM (Dry) (Gal. / 1000 cu.ft.)
Nitrogen	0.320	909405.0	1.32668	0.0	0.01283	0.146
Methane	0.325	44717036.0	94.74406	959.1	0.52479	16.093
Carbon Dioxide	0.377	0.0	0.00000	0.0	0.00000	0.000
Ethane	0.426	2014018.0	2.81636	50.0	0.02924	0.755
Hydrogen Sulfide	0.601	0.0	0.00000	0.0	0.00000	0.000
Propane	0.530	1533957.0	0.78627	19.8	0.01197	0.217
i-Butane	0.577	338772.0	0.14916	4.9	0.00299	0.049
n-Butane	0.611	287041.0	0.12386	4.1	0.00249	0.039
i-Pentane	0.715	85014.0	0.03300	1.3	0.00082	0.012
n-Pentane	0.758	44443.0	0.01655	0.7	0.00041	0.006
Hexanes Plus	0.000	13376.0	0.00406	0.0	0.00000	0.000
Water	0.000	0.0	0.00000	0.0	0.00000	0.000
Total:			100.00000	1039.8	0.58554	17.317

Results Summary

Result	Dry	Sat. (Base)
Total Raw Mole% (Dry)	96.07440	
Pressure Base (psia)	14.730	
Temperature Base	60.0	
Water Mole%	-	1.74067
Gross Heating Value (BTU / Ideal cu.ft.)	1039.8	1021.7
Gross Heating Value (BTU / Real cu.ft.)	1042.1	1024.3
Relative Density (G), Real	0.5866	0.5874
Compressibility (Z) Factor	0.9978	0.9975
Total GPM	17.317	17.121