

## NRG SERVICES

### GPA 2145-09 Wet and Dry Analysis

#### Sample Information

	Sample Information
Sample Name	Hawxhurst 24-10B
Method Name	Peak To Peak
Operator	Sam E. Thornhill
Sample Notes	Check H2S levels with RAE tube enter analysis data into field RTU
Injection Date	11/15/2014 11:50:01 AM
Report Date	11/15/2014 11:54:37 AM
BTU Configuration File	Piceance Energy, LLC GPM H2S 20141105.cfg
Data Source	Cerity data system connection
Instrument	G2801AGC - US10711003
Data Saved To:	20141115-115437-Hawxhurst 24-10B.btu

#### Component Results

Component Name	Ret. Time	Peak Area	Normalized Mole%	Heating Value (Btu / cu. ft.)	Molar Mass Ratio (G)	GPM (Gal. / 1000 cu. ft.)	
Nitrogen	0.265	1703	0.2997	0.0000	0.0029		
Methane	0.272	529475	88.1006	891.8747	0.4880		
Carbon Dioxide	0.369	19820	2.1189	0.0000	0.0322		
Ethane	0.413	57349	5.7781	102.4916	0.0600	1.5492	
Propane	1.103	23887	2.0158	50.8369	0.0307	0.5568	
i-Butane	0.331	16345	0.4056	13.2202	0.0081	0.1331	
n-Butane	0.352	20453	0.4892	15.9961	0.0098	0.1546	
i-Pentane	0.418	8363	0.1828	7.3306	0.0046	0.0670	
n-Pentane	0.446	7306	0.1546	6.2118	0.0039	0.0562	
Hexanes	0.569	8341	0.1721	8.2038	0.0051	0.0710	
Heptanes	0.836	7223	0.1565	8.6315	0.0054	0.0724	
Octanes	1.374	4424	0.1064	6.6643	0.0042	0.0546	
Nonanes	2.429	402	0.0095	0.6662	0.0004	0.0054	
Hydrogen Sulfide	0.000	0	0.0102	0.0651	0.0001	0.0014	
Total:			100.0000	1112.1928	0.6554	2.7216	

#### Results Summary

Result	Dry	Sat.
Total Unnormalized Mole%	98.2707	
Pressure Base (psia)	14.730	
Water Mole%	-	1.7404
Gross Heating Value (Btu / Ideal cu. ft.)	1112.1928	1092.8363
Gross Heating Value (Btu / Real cu. ft.)	1115.2969	1096.2741
Real Relative Density	0.65695	0.65660
Gas Compressibility (Z) Factor	0.99722	0.99686