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Natural Gas Analysis Report SAN JUAN DIVISION

MAY 11 2015
KB
REGULATORY COMPLIANCE

30-045-09249

Sample Information

Sample Information	
Sample Name	FEDERAL A3 BH
TECH	Tim Doering
GC Serial	GC1008B621
Report Date	2015-05-08 08:50:57

Component Results

Component Name	Norm%	Gross HV (Dry) (BTU / Ideal cu.ft.)	Relative Gas Density (Dry)	GPM (Dry) (Gal. / 1000 cu.ft.)
Nitrogen	0.7136	0.0	0.00690	0.079
Oxygen	0.0336	0.0	0.00037	0.003
Methane	84.2001	852.4	0.46638	14.316
Carbon Dioxide	0.4062	0.0	0.00617	0.070
Ethane	7.7265	137.1	0.08022	2.072
Propane	3.9245	99.0	0.05975	1.084
I-Butane	0.9586	31.2	0.01924	0.315
N-Butane	0.9725	31.8	0.01952	0.307
I-Pentane	0.4428	17.8	0.01103	0.162
N-Pentane	0.3390	13.6	0.00844	0.123
Hexanes	0.1838	8.8	0.00547	0.076
Heptanes	0.0721	4.0	0.00249	0.033
Octanes	0.0247	1.5	0.00097	0.013
Nonanes	0.0020	0.1	0.00009	0.001
Hydrogen Sulfide	0.0000	0.0	0.00000	0.000
Water	0.0000	0.0	0.00000	0.000
Total:	100.0000	1197.3	0.68705	18.655

Results Summary

Result	Dry	Sat
Total Normalized Mole%	100.0000	100.0000
Pressure Base (psia)	14.730	
Flowing Temperature (Deg. F)	50.0	
Flowing Pressure (psia)	50.0	
Gross Heating Value (BTU / Real cu.ft.)	1201.1	1180.6
Relative Density (G), Real	0.6889	0.6881
Compressibility (Z) Factor	0.9968	0.9964
Total GPM	18.655	18.437

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Sample Information

Sample Information	
Sample Name	FEDERAL A3 CASEING
TECH	Tim Doering
GC Serial	GC1008B621
Report Date	2015-05-08 08:57:29

Component Results

Component Name	Norm%	Gross HV (Dry) (BTU / Ideal cu.ft.)	Relative Gas Density (Dry)	GPM (Dry) (Gal / 1000 cu.ft.)
Nitrogen	0.5547	0.0	0.00537	0.061
Oxygen	0.0039	0.0	0.00004	0.000
Methane	84.2888	853.3	0.46688	14.331
Carbon Dioxide	0.4273	0.0	0.00649	0.073
Ethane	7.7653	137.7	0.08062	2.083
Propane	3.9734	100.2	0.06050	1.098
I-Butane	0.9731	31.7	0.01953	0.319
N-Butane	0.9860	32.2	0.01979	0.312
I-Pentane	0.4550	18.2	0.01133	0.167
N-Pentane	0.3454	13.9	0.00860	0.126
Hexanes	0.1550	7.4	0.00461	0.064
Heptanes	0.0622	3.4	0.00215	0.029
Octanes	0.0089	0.6	0.00035	0.005
Nonanes	0.0010	0.1	0.00004	0.001
Hydrogen Sulfide	0.0000	0.0	0.00000	0.000
Water	0.0000	0.0	0.00000	0.000
Total:	100.0000	1198.8	0.68630	18.668

Results Summary

Result	Dry	Sat
Total Normalized Mole%	100.0000	100.0000
Pressure Base (psia)	14.730	
Flowing Temperature (Deg. F)	50.0	
Flowing Pressure (psia)	200.0	
Gross Heating Value (BTU / Real cu.ft.)	1202.6	1182.1
Relative Density (G), Real	0.6882	0.6873
Compressibility (Z) Factor	0.9968	0.9964
Total GPM	18.668	18.450

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30-045 09249

Sample Information

Sample Information	
Sample Name	FEDERAL A3 TUBEING
TECH	Tim Doering
GC Serial	GC1008B621
Report Date	2015-05-08 09:04:16

Component Results

Component Name	Norm%	Gross HV (Dry) (BTU / Ideal cu.ft.)	Relative Gas Density (Dry)	GPM (Dry) (Gal. / 1000 cu.ft.)
Nitrogen	0.5360	0.0	0.00518	0.059
Oxygen	0.0069	0.0	0.00008	0.001
Methane	84.2518	852.9	0.46667	14.326
Carbon Dioxide	0.0684	0.0	0.00104	0.012
Ethane	7.8444	139.1	0.08144	2.104
Propane	4.0490	102.1	0.06165	1.119
I-Butane	1.0194	33.2	0.02046	0.335
N-Butane	1.0363	33.9	0.02080	0.328
I-Pentane	0.5102	20.5	0.01271	0.187
N-Pentane	0.3884	15.6	0.00968	0.141
Hexanes	0.2031	9.7	0.00604	0.084
Heptanes	0.0386	2.1	0.00134	0.018
Octanes	0.0059	0.4	0.00023	0.003
Nonanes	0.0416	2.9	0.00184	0.023
Hydrogen Sulfide	0.0000	0.0	0.00000	0.000
Water	0.0000	0.0	0.00000	0.000
Total:	100.0000	1212.4	0.68915	18.739

Results Summary

Result	Dry	Sat.
Total Normalized Mole%	100.0000	100.0000
Pressure Base (psia)	14.730	
Flowing Temperature (Deg. F)	50.0	
Flowing Pressure (psia)	200.0	
Gross Heating Value (BTU / Real cu.ft.)	1216.4	1195.7
Relative Density (G), Real	0.6911	0.6902
Compressibility (Z) Factor	0.9968	0.9964
Total GPM	18.739	18.520