

Natural Gas Analysis Report SAN JUAN DIVISION

NOV 03 2017

Sample Information

Sample Information	
Sample Name	OHIO F GOVT 1A BH API #: 30-045-23000
TECH	Tim Doering
GC Serial	GC1008B621
Operator	XTO
Report Date	2017-10-23 09:38:12

Component Results

Component Name	Raw Amount	Norm%	Gross HV (Dry) (BTU / Ideal cu.ft.)	Relative Gas Density (Dry)	GPM (Dry) (Gal. / 1000 cu.ft.)
Nitrogen	3.0230	2.9966	0.0	0.02898	0.330
Oxygen	0.5360	0.5313	0.0	0.00587	0.047
Methane	86.5010	85.7447	868.0	0.47494	14.572
Carbon Dioxide	0.2000	0.1983	0.0	0.00301	0.034
Ethane	6.3140	6.2588	111.0	0.06498	1.678
Propane	2.2900	2.2700	57.2	0.03456	0.627
I-Butane	0.5020	0.4976	16.2	0.00999	0.163
N-Butane	0.5110	0.5065	16.6	0.01016	0.160
I-Pentane	0.3420	0.3390	13.6	0.00844	0.124
N-Pentane	0.1890	0.1873	7.5	0.00467	0.068
Hexanes	0.4740	0.4699	22.4	0.01398	0.194
Heptanes	0.0000	0.0000	0.0	0.00000	0.000
Octanes	0.0000	0.0000	0.0	0.00000	0.000
Nonanes	0.0000	0.0000	0.0	0.00000	0.000
Hydrogen Sulfide	0.0000	0.0000	0.0	0.00000	0.000
Water	0.0000	0.0000	0.0	0.00000	0.000
Total:	100.8820	100.0000	1112.6	0.65959	17.998

Results Summary

Result	Dry	Sat.
Total Normalized Mole%	100.0000	100.0000
Pressure Base (psia)	14.730	
Flowing Temperature (Deg. F)	45.0	
Flowing Pressure (psia)	5.0	
Gross Heating Value (BTU / Real cu.ft.)	1115.6	1096.6
Relative Density (G), Real	0.6611	0.6607
Compressibility (Z) Factor	0.9973	0.9969
Total GPM	17.998	17.791

Natural Gas Analysis Report SAN JUAN DIVISION

NOV 03 2017

Sample Information

Sample Information	
Sample Name	OHIO F GOVT 1A CASING API# : 30-045-23000
TECH	Tim Doering
GC Serial	GC1008B621
Operator	XTO
Report Date	2017-10-23 09:34:21

Component Results

Component Name	Raw Amount	Norm%	Gross HV (Dry) (BTU / Ideal cu.ft.)	Relative Gas Density (Dry)	GPM (Dry) (Gal. / 1000 cu.ft.)
Nitrogen	0.9510	0.9374	0.0	0.00907	0.104
Oxygen	0.0130	0.0128	0.0	0.00014	0.001
Methane	77.7650	76.6544	776.0	0.42459	13.047
Carbon Dioxide	0.0000	0.0000	0.0	0.00000	0.000
Ethane	8.8170	8.6911	154.2	0.09023	2.334
Propane	7.2720	7.1681	180.8	0.10913	1.983
I-Butane	1.3550	1.3356	43.5	0.02680	0.439
N-Butane	2.5800	2.5431	83.2	0.05103	0.805
I-Pentane	1.0070	0.9926	39.8	0.02473	0.364
N-Pentane	0.9170	0.9039	36.3	0.02252	0.329
Hexanes	0.7720	0.7610	36.3	0.02264	0.314
Heptanes	0.0000	0.0000	0.0	0.00000	0.000
Octanes	0.0000	0.0000	0.0	0.00000	0.000
Nonanes	0.0000	0.0000	0.0	0.00000	0.000
Hydrogen Sulfide	0.0000	0.0000	0.0	0.00000	0.000
Water	0.0000	0.0000	0.0	0.00000	0.000
Total:	101.4490	100.0000	1350.0	0.78089	19.720

Results Summary

Result	Dry	Sat.
Total Normalized Mole%	100.0000	100.0000
Pressure Base (psia)	14.730	
Flowing Temperature (Deg. F)	45.0	
Flowing Pressure (psia)	47.0	
Gross Heating Value (BTU / Real cu.ft.)	1355.8	1332.8
Relative Density (G), Real	0.7839	0.7814
Compressibility (Z) Factor	0.9958	0.9953
Total GPM	19.720	19.485

Natural Gas Analysis Report SAN JUAN DIVISION

OIL CONS. DIV DIST. 3
NOV 03 2017

Sample Information

Sample Information	
Sample Name	OHIO F GOVT 1A TUBING <i>API #: 20-045 23000</i>
TECH	Tim Doering
GC Serial	GC1008B621
Operator	XTO
Report Date	2017-10-23 09:30:05

Component Results

Component Name	Raw Amount	Norm%	Gross HV (Dry) (BTU / Ideal cu.ft.)	Relative Gas Density (Dry)	GPM (Dry) (Gal. / 1000 cu.ft.)
Nitrogen	0.2070	0.2037	0.0	0.00197	0.022
Oxygen	0.0020	0.0020	0.0	0.00002	0.000
Methane	83.3480	82.0014	830.1	0.45421	13.945
Carbon Dioxide	0.8680	0.8540	0.0	0.01298	0.146
Ethane	9.7590	9.6013	170.3	0.09968	2.576
Propane	4.4160	4.3447	109.6	0.06615	1.201
I-Butane	0.8710	0.8569	27.9	0.01720	0.281
N-Butane	1.1590	1.1403	37.3	0.02288	0.361
I-Pentane	0.4260	0.4191	16.8	0.01044	0.154
N-Pentane	0.2920	0.2873	11.5	0.00716	0.104
Hexanes	0.2940	0.2893	13.8	0.00861	0.119
Heptanes	0.0000	0.0000	0.0	0.00000	0.000
Octanes	0.0000	0.0000	0.0	0.00000	0.000
Nonanes	0.0000	0.0000	0.0	0.00000	0.000
Hydrogen Sulfide	0.0000	0.0000	0.0	0.00000	0.000
Water	0.0000	0.0000	0.0	0.00000	0.000
Total:	101.6420	100.0000	1217.4	0.70129	18.909

Results Summary

Result	Dry	Sat.
Total Normalized Mole%	100.0000	100.0000
Pressure Base (psia)	14.730	
Flowing Temperature (Deg. F)	41.0	
Flowing Pressure (psia)	43.0	
Gross Heating Value (BTU / Real cu.ft.)	1221.4	1200.6
Relative Density (G), Real	0.7033	0.7022
Compressibility (Z) Factor	0.9967	0.9963
Total GPM	18.909	18.687