

**Wild Goose Storage, LLC
a Rockpoint Gas Storage Company**

May 15, 2017

California Public Utilities Commission
Energy Division

Attention:

Dear Sir:

Re: Composition of gas after withdrawal from natural gas storage facility

In response to the data request in the subject line dated May 1, 2017, Wild Goose Storage, LLC (Wild Goose) provides the attached gas composition analyses performed on samples taken downstream from the wellhead of its storage wells during withdrawal operations.

Should you have any questions about the attached, do not hesitate to contact the undersigned.

Sincerely,

WILD GOOSE STORAGE, LLC

Wild Goose Storage, LLC

Wild Goose Kione L4 gas storage reservoir

**Compositional analysis on gas sampled from storage well "Wild Goose Gas Unit
2 No.17" during withdrawal operations**

*Taken
3-17-14*

**Energy Evaluation
GPA 2145-09 Analysis Calculation**

*Sent
3-18-14*

Sample Information

Sample Information	
Sample Name	Well 17
Gas Pressure	1000
Gas Temp	
Meter Number	
Company	WG
Sample Notes	Ambient 50
Method Name	C:\EZChrom S\Projects\Default\Method\Butch's #3.met
Operator	System
Sample Notes	Sample taken dn 3/17/2014 by [redacted] @ 9:15 AM
Injection Date	3/17/2014 4:36:22 PM
Report Date	03/17/2014 04:42:31 PM
BTU Configuration File	GPA 2145-09 Wet_BTU.cfg
Data Source	EZChrom data system connection
Source Data File:	C:\EZChrom S\Projects\Default\Data\6811.19259.dat

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	0.343	25365	1.699	0.000	0.0164	0.1869
Methane	0.354	1222213	95.592	967.716	0.5296	16.2019
CO2	0.476	10845	0.558	0.000	0.0085	
Ethane	0.558	43173	2.084	36.961	0.0216	0.5569
Propane	1.550	0	0.000	0.000	0.0000	0.0000
iso-Butane	0.569	2306	0.023	0.756	0.0005	0.0076
n-Butane	0.623	2990	0.029	0.958	0.0006	0.0092
Neopentane	0.649	0	0.000	0.000	0.0000	0.0000
iso-Pentane	0.796	740	0.007	0.285	0.0002	0.0026
n-Pentane	0.875	580	0.005	0.201	0.0001	0.0018
Hexanes plus	0.000	300	0.002	0.103	0.0001	0.0009
Hydrogen Sulfide	0.000	0	0.000	0.000	0.0000	0.0000
Total:			100.000	1006.979	0.5775	16.9678

Results Summary

Result	Dry
Total Unnormalized Mole%	99.053
Pressure Base (psia)	14.730
Gross Heating Value (Btu / Ideal cu. ft.)	1006.979
Gross Heating Value (Btu / Real cu. ft.)	1009.049
Real Relative Density	0.57847
Gas Compressibility (Z) Factor	0.99795

Wild Goose Storage, LLC

Wild Goose Kione L1 gas storage reservoir

**Compositional analysis on gas sampled from storage well "Wild Goose Gas Unit
2 No.23Hz" during withdrawal operations**

3-17-14

3-18-14

Energy Evaluation GPA 2145-09 Analysis Calculation

Sample Information

Sample Information	
Sample Name	Well 23
Gas Pressure	910
Gas Temp	
Meter Number	
Company	WG
Sample Notes	Ambient Temp 50
Method Name	C:\EZChrom\SNProjects\Default\Method\Butch's #3.met
Operator	System
Sample Notes	Sample taken on 3/17/2014 by ' ' @ 9:05 AM
Injection Date	3/17/2014 4:27:16 PM
Report Date	03/17/2014 04:34:05 PM
BTU Configuration File	GPA 2145-09 Wel_BTU.cfg
Data Source	EZChrom data system connection
Source Data File:	C:\EZChrom\SNProjects\Default\Data\6811.19258.dal

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	0.342	48189	3.220	0.000	0.0311	0.3541
Methane	0.354	1208168	94.259	954.217	0.5222	15.9759
CO2	0.476	10162	0.523	0.000	0.0079	
Ethane	0.558	40226	1.937	34.351	0.0201	0.5176
Propane	1.550	0	0.000	0.000	0.0000	0.0000
iso-Butane	0.569	2097	0.021	0.688	0.0004	0.0069
n-Butane	0.622	2815	0.028	0.922	0.0006	0.0089
Neopentane	0.649	0	0.000	0.000	0.0000	0.0000
iso-Pentane	0.796	734	0.006	0.241	0.0001	0.0022
n-Pentane	0.875	590	0.005	0.201	0.0001	0.0018
Hexanes plus	0.000	301	0.002	0.103	0.0001	0.0009
Hydrogen Sulfide	0.000	0	0.000	0.000	0.0000	0.0000
Total:			100.000	990.723	0.5827	16.8683

Results Summary

Result	Dry
Total Unnormalized Mole%	99.300
Pressure Base (psia)	14.730
Gross Heating Value (Btu / Ideal cu. ft.)	990.723
Gross Heating Value (Btu / Real cu. ft.)	992.714
Real Relative Density	0.58361
Gas Compressibility (Z) Factor	0.99799

Wild Goose Storage, LLC

Wild Goose Kione U2 gas storage reservoir

**Compositional analysis on gas sampled from storage well "Wild Goose Gas Unit
2 No.31Hz" during withdrawal operations**

TAKEN
3-19-14

Sent
3-20-14

Energy Evaluation GPA 2145-09 Analysis Calculation

Sample Information

Sample Information	
Sample Name	Well 31
Gas Pressure	900
Gas Temp	60
Meter Number	
Company	WG
Sample Notes	Sample taken on 3/19/2014 by @ 10:40 AM
Method Name	C:\EZChrom SI\Projects\Default\Method\Butch's #3.met
Operator	System
Injection Date	3/20/2014 8:19:27 AM
Report Date	03/20/2014 08:25:48 AM
BTU Configuration File	GPA 2145-09 Wet_BTU.cfg
Data Source	EZChrom data system connection
Source Data File:	C:\EZChrom SI\Projects\Default\Data\6811.19271.dat

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	0.340	49669	3.299	0.000	0.0319	0.3629
Methane	0.352	1207076	93.791	949.480	0.5196	15.8966
CO2	0.474	10458	0.529	0.000	0.0080	
Ethane	0.556	48281	2.305	40.879	0.0239	0.6159
Propane	1.549	0	0.000	0.000	0.0000	0.0000
iso-Butane	0.565	2696	0.027	0.887	0.0005	0.0089
n-Butane	0.618	3315	0.032	1.053	0.0006	0.0102
Neopentane	0.644	0	0.000	0.000	0.0000	0.0000
iso-Pentane	0.791	871	0.008	0.325	0.0002	0.0030
n-Pentane	0.869	684	0.006	0.241	0.0001	0.0022
Hexanes plus	0.000	368	0.003	0.154	0.0001	0.0013
Hydrogen Sulfide	0.000	0	0.000	0.000	0.0000	0.0000
Total:			100.000	993.018	0.5851	16.9009

Results Summary

Result	Dry
Total Unnormalized Mole%	99.322
Pressure Base (psia)	14.730
Gross Heating Value (Btu / Ideal cu. ft.)	993.018
Gross Heating Value (Btu / Real cu. ft.)	995.030
Real Relative Density	0.58603
Gas Compressibility (Z) Factor	0.99798