



2030 Afton Place
Farmington, NM 87401
(505) 325-6622

Analysis No: HS180155
Cust No: 35825-10595

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: FEDERAL GAS COM H #1E; CSG
County/State: NM
Location:
Field: AREA N/A
Formation: DAKOTA
Cust. Stn. No.: 95618

Source: CASING
Well Flowing: Y
Pressure: 589 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 08/24/2018
Sample Time: 9.00 AM
Sampled By: KALAN DIBBLE
Sampled by (CO): HILCORP

Heat Trace: N
Remarks:

API 30045 26122

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5700	0.5646	0.0630	0.00	0.0055
CO2	1.2525	1.2407	0.2140	0.00	0.0190
Methane	82.0103	81.2345	13.9460	828.30	0.4543
Ethane	9.4793	9.3896	2.5430	167.76	0.0984
Propane	4.1270	4.0880	1.1400	103.84	0.0628
Iso-Butane	0.5639	0.5586	0.1850	18.34	0.0113
N-Butane	1.1308	1.1201	0.3580	36.89	0.0227
I-Pentane	0.3299	0.3268	0.1210	13.20	0.0082
N-Pentane	0.2877	0.2850	0.1050	11.53	0.0072
Hexane Plus	0.2486	0.2462	0.1110	13.10	0.0082
Total	100.0000	99.0541	18.7860	1192.96	0.6977

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0033
BTU/CU.FT IDEAL: 1195.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1199.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1178.7
DRY BTU @ 15.025: 1223.6
REAL SPECIFIC GRAVITY: 0.6996

CYLINDER #: 6092
CYLINDER PRESSURE: 580 PSIG
ANALYSIS DATE: 09/04/2018
ANALYSIS TIME: 10:26:06 AM
ANALYSIS RUN BY: SHYANN ELLEDGE

GPM, BTU, and SPG calculations as shown above are based on current GPA constants.

GPA Standard: GPA-2261

GC: Danalyzer Model 500

Last Cal/Verify: 09/07/2018

GC Method: C6+ Gas

NMOCB

SEP 11 2018

DISTRICT III

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HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: FEDERAL GAS COM H #1E; CSG
Stn. No.: 95618
Mtr. No.:

CASING
DAKOTA

09/07/2018
35825-10595

API 3004526122

Smpl Date: 08/24/2018
Test Date: 09/04/2018
Run No: HS180155

Nitrogen: 0.5700
CO2: 1.2525
Methane: 82.0103
Ethane: 9.4793
Propane: 4.1270
I-Butane: 0.5639
N-Butane: 1.1308
I-Pentane: 0.3299
N-Pentane: 0.2877
Hexane+: 0.2486

BTU: 1199.6
GPM: 18.7860
SPG: 0.6996



2030 Afton Place
Farmington, NM 87401
(505) 325-6622

Analysis No: HS180154
Cust No: 35825-10590

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: FEDERAL GAS COM H #1E; BHD
County/State: NM
Location:
Field: AREA N/A
Formation: DAKOTA
Cust. Stn. No.: 95618

Source: BRADENHEAD
Well Flowing: Y
Pressure: 25 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 08/24/2018
Sample Time: 9.00 AM
Sampled By: KALAN DIBBLE
Sampled by (CO): HILCORP

Heat Trace: N
Remarks:

API 3004526122

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.1190	1.0886	0.1230	0.00	0.0108
CO2	0.0229	0.0223	0.0040	0.00	0.0003
Methane	96.2247	93.6095	16.3430	971.87	0.5330
Ethane	2.0602	2.0042	0.5520	36.46	0.0214
Propane	0.1937	0.1884	0.0530	4.87	0.0029
Iso-Butane	0.2206	0.2146	0.0720	7.17	0.0044
N-Butane	0.0377	0.0367	0.0120	1.23	0.0008
I-Pentane	0.0153	0.0149	0.0060	0.61	0.0004
N-Pentane	0.0097	0.0094	0.0040	0.39	0.0002
Hexane Plus	0.0962	0.0936	0.0430	5.07	0.0032
Total	100.0000	97.2822	17.2120	1027.68	0.5775

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0021
BTU/CU.FT IDEAL: 1030.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1032.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1014.2
DRY BTU @ 15.025: 1052.9
REAL SPECIFIC GRAVITY: 0.5785

CYLINDER #: 6212
CYLINDER PRESSURE: 24 PSIG
ANALYSIS DATE: 09/04/2018
ANALYSIS TIME: 10:51:20 AM
ANALYSIS RUN BY: SHYANN ELLEDGE

GPM, BTU, and SPG calculations as shown above are based on current GPA constants.

GPA Standard: GPA-2261

GC: Danalyzer Model 500

Last Cal/Verify: 09/07/2018

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: FEDERAL GAS COM H #1E; BHD
Stn. No.: 95618
Mtr. No.:

BRADENHEAD
DAKOTA

09/07/2018
35825-10590

API 3004526122

Smpl Date: 08/24/2018
Test Date: 09/04/2018
Run No: HS180154

Nitrogen: 1.1190
CO2: 0.0229
Methane: 96.2247
Ethane: 2.0602
Propane: 0.1937
I-Butane: 0.2206
N-Butane: 0.0377
I-Pentane: 0.0153
N-Pentane: 0.0097
Hexane+: 0.0962

BTU: 1032.2
GPM: 17.2120
SPG: 0.5785

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
[http://emnrd.state.nm.us/ocd/District III/3district.htm](http://emnrd.state.nm.us/ocd/District%20III/3district.htm)

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

Date of Test 8/24/2018 Operator Hilcorp Energy Company API # 3004526122
Property Name FEDERAL GAS COM H Well No. 1E Location: Unit G Section 31 Township 030N Range 012W
Well Status Flowing Initial PSI: Tubing 510 Intermediate Casing 589 Bradenhead 25

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

Testing TIME	PRESSURE						FLOW CHARACTERISTICS	
	BRADENHEAD			INTERM			BRADENHEAD	INTERMEDIATE
	BH	Int	Csg	Int	Csg			
5 min	0		589				Steady Flow	
10 min	0		589				Surges	
15 min	0		589				Down to Nothing	Y
20 min							Nothing	
25 min							Gas	Y
30 min							Gas & Water	
							Water	

If Bradenhead flowed water, check all of the descriptions that apply below:

CLEAR FRESH SALTY SULFUR BLACK

If Intermediate flowed water, check all of the descriptions that apply below:

CLEAR FRESH SALTY SULFUR BLACK

5 MINUTE SHUT-IN PRESSURE Bradenhead 0.8 Intermediate

REMARKS:

Monica approved testing without witness.

NMOC

SEP 11 2018

DISTRICT III

Tested By kdibble Witness