GAS ANALYSIS SERVICE

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

API 30-045-11809

36.845900150 108.184446

Analysis No: HS180090
Cust No: 35825-10350

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	TUBING
Well Name:	JF BELL #2; TBG	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	107 PSIG
Location:		Flow Temp:	DEG. F
Field:		Ambient Temp:	DEG. F
Formation:	DK	Flow Rate:	MCF/D
Cust. Stn. No.:	75477	Sample Method:	
		Sample Date:	08/15/2018
		Sample Time:	9.30 AM
		Sampled By:	PETE JIM
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4932	0.4972	0.0540	0.00	0.0048
CO2	1.4972	1.5093	0.2560	0.00	0.0227
Methane	79.7162	80.3607	13.5600	805.13	0.4415
Ethane	10.5267	10.6118	2.8250	186.29	0.1093
Propane	4.2770	4.3116	1.1820	107.61	0.0651
Iso-Butane	0.6609	0.6662	0.2170	21.49	0.0133
N-Butane	1.1685	1.1779	0.3700	38.12	0.0234
I-Pentane	0.3995	0.4027	0.1470	15.98	0.0100
N-Pentane	0.3432	0.3460	0.1250	13.76	0.0085
Hexane Plus	0.9176	0.9250	0.4110	48.37	0.0304
Total	100.0000	100.8084	19.1470	1236.76	0.7291

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY
**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBLITY FACTOR (1/Z):	1.0036	CYLINDER #:	7
BTU/CU.FT IDEAL:	1239.6	CYLINDER PRESSURE:	125 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1244.1	ANALYIS DATE:	08/15/2018
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1222.5	ANALYIS TIME:	03:33:44 PM
DRY BTU @ 15.025:	1269.0	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:	0.7314		

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: 08/17/2018**
GC Method: C6+ Gas

NMOCD
SEP 18 2018
DISTRICT III

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

API 30-045-11809

Lease:	JF BELL #2; TBG	TUBING	08/17/2018
Stn. No.:	75477	DK	35825-10350
Mtr. No.:			

Smpl Date:	08/15/2018
Test Date:	08/15/2018
Run No:	HS180090
Nitrogen:	0.4932
CO2:	1.4972
Methane:	79.7162
Ethane:	10.5267
Propane:	4.2770
I-Butane:	0.6609
N-Butane:	1.1685
I-Pentane:	0.3995
N-Pentane:	0.3432
Hexane+:	0.9176
BTU:	1244.1
GPM:	19.1470
SPG:	0.7314

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API 30-045-11809

Analysis No: HS180088
Cust No: 35825-10340

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	BRADENHEAD
Well Name:	JF BELL #2; BHD	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	64 PSIG
Location:		Flow Temp:	DEG. F
Field:		Ambient Temp:	DEG. F
Formation:	DK	Flow Rate:	MCF/D
Cust. Stn. No.:	75477	Sample Method:	
		Sample Date:	08/15/2018
		Sample Time:	9.30 AM
		Sampled By:	PETE JIM
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.6669	0.6720	0.0740	0.00	0.0065
CO2	0.0015	0.0015	0.0000	0.00	0.0000
Methane	90.6302	91.3196	15.4010	915.37	0.5020
Ethane	5.2258	5.2656	1.4010	92.48	0.0543
Propane	2.3318	2.3495	0.6440	58.67	0.0355
Iso-Butane	0.4330	0.4363	0.1420	14.08	0.0087
N-Butane	0.3909	0.3939	0.1240	12.75	0.0078
I-Pentane	0.1238	0.1247	0.0450	4.95	0.0031
N-Pentane	0.0708	0.0713	0.0260	2.84	0.0018
Hexane Plus	0.1253	0.1263	0.0560	6.60	0.0041
Total	100.0000	100.7607	17.9130	1107.75	0.6238

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY
**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBLITY FACTOR	(1/Z):	1.0026	CYLINDER #:	21
BTU/CU.FT IDEAL:		1110.3	CYLINDER PRESSURE:	57 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):		1113.2	ANALYIS DATE:	08/15/2018
BTU/CU.FT (WET) CORRECTED FOR (1/Z):		1093.8	ANALYIS TIME:	02:57:56 PM
DRY BTU @ 15.025:		1135.5	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:		0.6251		

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: 08/17/2018**
GC Method: C6+ Gas

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

API 30-045-11809

Lease:	JF BELL #2; BHD	BRADENHEAD	08/17/2018
Stn. No.:	75477	DK	35825-10340
Mtr. No.:			

Smpl Date:	08/15/2018
Test Date:	08/15/2018
Run No:	HS180088
Nitrogen:	0.6669
CO2:	0.0015
Methane:	90.6302
Ethane:	5.2258
Propane:	2.3318
I-Butane:	0.4330
N-Butane:	0.3909
I-Pentane:	0.1238
N-Pentane:	0.0708
Hexane+:	0.1253
BTU:	1113.2
GPM:	17.9130
SPG:	0.6251

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API 30-045-11809

Analysis No: HS180089
Cust No: 35825-10345

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	CASING
Well Name:	JF BELL #2; CSG	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	217 PSIG
Location:		Flow Temp:	DEG. F
Field:		Ambient Temp:	DEG. F
Formation:	DK	Flow Rate:	MCF/D
Cust. Stn. No.:	75477	Sample Method:	
		Sample Date:	08/15/2018
		Sample Time:	9.30 AM
		Sampled By:	PETE JIM
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4628	0.4672	0.0510	0.00	0.0045
CO2	1.4777	1.4916	0.2530	0.00	0.0225
Methane	78.4816	79.2200	13.3510	792.66	0.4347
Ethane	11.2989	11.4052	3.0320	199.96	0.1173
Propane	4.7882	4.8332	1.3240	120.48	0.0729
Iso-Butane	0.7483	0.7553	0.2460	24.33	0.0150
N-Butane	1.3217	1.3341	0.4180	43.12	0.0265
I-Pentane	0.4569	0.4612	0.1680	18.28	0.0114
N-Pentane	0.3774	0.3810	0.1370	15.13	0.0094
Hexane Plus	0.5865	0.5920	0.2620	30.91	0.0194
Total	100.0000	100.9408	19.2420	1244.87	0.7336

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY
**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBLITY FACTOR (1/Z):	1.0037	CYLINDER #:	105
BTU/CU.FT IDEAL:	1247.8	CYLINDER PRESSURE:	218 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1252.3	ANALYIS DATE:	08/15/2018
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1230.5	ANALYIS TIME:	03:17:16 PM
DRY BTU @ 15.025:	1277.4	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:	0.7359		

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: 08/17/2018**
GC Method: C6+ Gas

GAS ANALYSIS SERVICE

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

API 30-045-11809

Lease:	JF BELL #2; CSG	CASING	08/17/2018
Stn. No.:	75477	DK	35825-10345
Mtr. No.:			

Smpl Date:	08/15/2018
Test Date:	08/15/2018
Run No:	HS180089
Nitrogen:	0.4628
CO2:	1.4777
Methane:	78.4816
Ethane:	11.2989
Propane:	4.7882
I-Butane:	0.7483
N-Butane:	1.3217
I-Pentane:	0.4569
N-Pentane:	0.3774
Hexane+:	0.5865
BTU:	1252.3
GPM:	19.2420
SPG:	0.7359