



Well Name: STATE GAS COM BB 1;
 API #: 3004510701
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS20230060
 Cust No: 35825-11880

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	BRADENHEAD
Well Name:	STATE GAS COM BB 1; BHD	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	29 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:		Ambient Temp:	DEG. F
Formation:		Flow Rate:	MCF/D
Cust. Stn. No.:	3004510701	Sample Method:	Purge & Fill
	75070	Sample Date:	06/14/2023
		Sample Time:	3.00 PM
	AREA 2 / RUN 0211	Sampled By:	PETE JIM
Heat Trace:		Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	4.9137	4.8096	0.5420	0.00	0.0475
CO2	0.0737	0.0721	0.0130	0.00	0.0011
Methane	77.2021	75.5659	13.1280	779.74	0.4276
Ethane	10.0150	9.8028	2.6870	177.24	0.1040
Propane	4.3954	4.3023	1.2150	110.59	0.0669
Iso-Butane	0.8079	0.7908	0.2650	26.27	0.0162
N-Butane	1.2736	1.2466	0.4030	41.55	0.0256
I-Pentane	0.4680	0.4581	0.1720	18.72	0.0117
N-Pentane	0.3369	0.3298	0.1220	13.51	0.0084
Hexane Plus	0.5137	0.5028	0.2300	27.08	0.0170
Total	100.0000	97.8808	18.7770	1194.70	0.7260

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0033	CYLINDER #:	4032
BTU/CU.FT IDEAL:	1197.5	CYLINDER PRESSURE:	31 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1201.4	ANALYSIS DATE:	06/14/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1180.5	ANALYSIS TIME:	11:30:05 AM
DRY BTU @ 15.025:	1225.5	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:	0.7281		

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: 06/15/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	STATE GAS COM BB 1; BHD	BRADENHEAD	06/15/2023
Stn. No.:	3004510701		35825-11880
Mtr. No.:	75070		

Smpl Date:	06/14/2023	06/04/2021	04/21/2021	08/07/2020	08/09/2019
Test Date:	06/14/2023	06/16/2021	04/26/2021	08/12/2020	08/19/2019
Run No:	HS20230060	HS2021118	HS2021018	HS200181	HS190225
Nitrogen:	4.9137	5.9197	8.9353	5.1887	4.2272
CO2:	0.0737	0.0195	0.0578	0.0201	0.1102
Methane:	77.2021	76.4346	74.3344	77.1036	77.7247
Ethane:	10.0150	9.9419	9.4591	9.9397	10.1064
Propane:	4.3954	4.3308	4.1468	4.3743	4.4194
I-Butane:	0.8079	0.7975	0.7722	0.8137	0.8117
N-Butane:	1.2736	1.2500	1.1842	1.2647	1.2894
I-Pentane:	0.4680	0.4440	0.4216	0.4564	0.4678
N-Pentane:	0.3369	0.3215	0.2956	0.3314	0.3438
Hexane+:	0.5137	0.5405	0.3930	0.5074	0.4994
BTU:	1201.4	1189.4	1141.9	1197.4	1209.1
GPM:	18.7770	18.6960	18.3820	18.7430	18.8280
SPG:	0.7281	0.7302	0.7325	0.7276	0.7263



Well Name: STATE GAS COM BB 1; CSG
 API #: 3004510701
 Source: CASING
 Sample Type: GAS
 Analysis No: HS20230061
 Cust No: 35825-11885

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT) Source: CASING
 Well Name: STATE GAS COM BB 1; CSG Well Flowing:
 County/State: SAN JUAN NM Pressure: 138 PSIG
 Location: Flow Temp: DEG. F
 Lease/PA/CA: Ambient Temp: DEG. F
 Formation: Flow Rate: MCF/D
 Cust. Stn. No.: 3004510701 Sample Method:
 75070 Sample Date: 06/14/2023
 AREA 2 / RUN 0211 Sample Time: 3.00 PM
 Sampled By: PETE JIM
 Heat Trace: Sampled by (CO): HILCORP
 Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2954	0.2910	0.0330	0.00	0.0029
CO2	2.5858	2.5471	0.4430	0.00	0.0393
Methane	79.9223	78.7266	13.5930	807.22	0.4427
Ethane	9.6631	9.5185	2.5930	171.01	0.1003
Propane	4.1487	4.0866	1.1470	104.39	0.0632
Iso-Butane	0.7196	0.7088	0.2360	23.40	0.0144
N-Butane	1.1690	1.1515	0.3700	38.14	0.0235
I-Pentane	0.4484	0.4417	0.1650	17.94	0.0112
N-Pentane	0.3374	0.3324	0.1230	13.53	0.0084
Hexane Plus	0.7103	0.6997	0.3180	37.44	0.0235
Total	100.0000	98.5039	19.0210	1213.05	0.7293

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0035	CYLINDER #:	7051
BTU/CU.FT IDEAL:	1215.9	CYLINDER PRESSURE:	142 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1220.1	ANALYSIS DATE:	06/14/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1198.9	ANALYSIS TIME:	02:04:24 AM
DRY BTU @ 15.025:	1244.5	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:	0.7316		

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: 06/15/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	STATE GAS COM BB 1; CSG	CASING	06/15/2023
Stn. No.:	3004510701		35825-11885
Mtr. No.:	75070		

Smpl Date:	06/14/2023	06/04/2021	08/07/2020	08/09/2019
Test Date:	06/14/2023	06/16/2021	08/12/2020	08/19/2019
Run No:	HS20230061	HS2021119	HS200182	HS190226
Nitrogen:	0.2954	0.2696	0.2974	0.3317
CO2:	2.5858	1.9727	0.0078	0.6431
Methane:	79.9223	79.9026	82.6060	81.0805
Ethane:	9.6631	10.1424	9.8224	9.8295
Propane:	4.1487	4.2189	4.2098	4.1929
I-Butane:	0.7196	0.7406	0.7757	0.7926
N-Butane:	1.1690	1.2140	1.1595	1.2888
I-Pentane:	0.4484	0.4855	0.4248	0.6070
N-Pentane:	0.3374	0.3484	0.3009	0.4318
Hexane+:	0.7103	0.7053	0.3957	0.8021
BTU:	1220.1	1234.2	1233.9	1257.5
GPM:	19.0210	19.0950	18.9440	19.1430
SPG:	0.7316	0.7304	0.6987	0.7245



Well Name: STATE GAS COM BB 1; TBG
 API #: 3004510701
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS20230062
 Cust No: 35825-11890

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	TUBING
Well Name:	STATE GAS COM BB 1; TBG	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	68 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:		Ambient Temp:	DEG. F
Formation:		Flow Rate:	MCF/D
Cust. Stn. No.:	3004510701	Sample Method:	Purge & Fill
	75070	Sample Date:	06/13/2023
	AREA 2 / RUN 0211	Sample Time:	3.00 PM
Heat Trace:	N	Sampled By:	PETE JIM
Remarks:		Sampled by (CO):	HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2775	0.2732	0.0310	0.00	0.0027
CO2	3.1458	3.0971	0.5390	0.00	0.0478
Methane	79.6170	78.3838	13.5430	804.13	0.4410
Ethane	9.6143	9.4654	2.5800	170.14	0.0998
Propane	3.7354	3.6775	1.0330	93.99	0.0569
Iso-Butane	0.8122	0.7996	0.2670	26.41	0.0163
N-Butane	1.1287	1.1112	0.3570	36.82	0.0227
I-Pentane	0.5247	0.5166	0.1930	20.99	0.0131
N-Pentane	0.3455	0.3401	0.1260	13.85	0.0086
Hexane Plus	0.7989	0.7865	0.3570	42.11	0.0264
Total	100.0000	98.4510	19.0260	1208.45	0.7352

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0036	CYLINDER #:	7047
BTU/CU.FT IDEAL:	1211.2	CYLINDER PRESSURE:	70 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1215.6	ANALYSIS DATE:	06/14/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1194.4	ANALYSIS TIME:	11:20:30 AM
DRY BTU @ 15.025:	1239.9	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:	0.7376		

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: 06/15/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	STATE GAS COM BB 1; TBG	TUBING	06/15/2023
Stn. No.:	3004510701		35825-11890
Mtr. No.:	75070		

Smpl Date:	06/13/2023	06/04/2021	08/07/2020	08/09/2019
Test Date:	06/14/2023	06/16/2021	08/12/2020	08/19/2019
Run No:	HS20230062	HS2021120	HS200184	HS190227
Nitrogen:	0.2775	3.8095	0.3478	0.4733
CO2:	3.1458	2.6118	2.6129	0.0066
Methane:	79.6170	77.2419	79.1091	81.7747
Ethane:	9.6143	8.9102	9.9483	9.7685
Propane:	3.7354	3.9576	4.3171	4.5601
I-Butane:	0.8122	0.7364	0.7969	0.8265
N-Butane:	1.1287	1.1260	1.2321	1.1912
I-Pentane:	0.5247	0.4766	0.4753	0.4477
N-Pentane:	0.3455	0.3896	0.3394	0.3342
Hexane+:	0.7989	0.7404	0.8211	0.6172
BTU:	1215.6	1178.5	1233.0	1250.4
GPM:	19.0260	18.7330	19.1220	19.0520
SPG:	0.7376	0.7428	0.7408	0.7111

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District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 228867

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 228867
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	same gas all strings	10/6/2023