Well Name: SJ 32-7 #8; BHD
API #: 86080-01
Source: BRADENHEAD
Sample Type: GAS

Analysis No: HS20230251
Cust No: 35825-15440

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	BRADENHEAD
Well Name:	SJ 32-7 #8; BHD	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	0 PSIG
Location:		Flow Temp:	77 DEG. F
Lease/PA/CA:	SF-078998	Ambient Temp:	77 DEG. F
Formation:	MV	Flow Rate:	25 MCF/D
Cust. Stn. No.:	86080-01	Sample Method:	
	3004510715	Sample Date:	08/30/2023
		Sample Time:	10.36 AM
		Sampled By:	ANTHONY RIOS
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:	PRESSURED WITH HELIUM TO 30 LBS.		

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	98.9654	18.3269	10.8880	0.00	0.9572
CO2	0.1301	0.0241	0.0220	0.00	0.0020
Methane	0.7069	0.1309	0.1200	7.14	0.0039
Ethane	0.0691	0.0128	0.0180	1.22	0.0007
Propane	0.0346	0.0064	0.0100	0.87	0.0005
Iso-Butane	0.0113	0.0021	0.0040	0.37	0.0002
N-Butane	0.0140	0.0026	0.0040	0.46	0.0003
I-Pentane	0.0076	0.0014	0.0030	0.30	0.0002
N-Pentane	0.0000	0.0000	0.0000	0.00	0.0000
Hexane Plus	0.0610	0.0113	0.0270	3.22	0.0020
Total	100.0000	18.5185	11.0960	13.58	0.9670

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

COMPRESSIBLITY FACTOR (1/Z):	1.0003	CYLINDER #:	4156
BTU/CU.FT IDEAL:	13.6	CYLINDER PRESSURE:	PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	13.6	ANALYIS DATE:	09/05/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	13.4	ANALYIS TIME:	03:47:15 AM
DRY BTU @ 15.025:	13.9	ANALYSIS RUN BY:	SARAH BALLARD
REAL SPECIFIC GRAVITY:	0.9669		

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: 09/07/2023**
GC Method: C6+ Gas

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

Lease:	SJ 32-7 #8; BHD	BRADENHEAD	09/07/2023
Stn. No.:	86080-01	MV	35825-15440
Mtr. No.:	3004510715		

Smpl Date:	08/30/2023
Test Date:	09/05/2023
Run No:	HS20230251
Nitrogen:	98.9654
CO2:	0.1301
Methane:	0.7069
Ethane:	0.0691
Propane:	0.0346
I-Butane:	0.0113
N-Butane:	0.0140
I-Pentane:	0.0076
N-Pentane:	0.0000
Hexane+:	0.0610
BTU:	13.6
GPM:	11.0960
SPG:	0.9669

GAS ANALYSIS SERVICE

Well Name: SAN JUAN 32-7 UNIT 8;
API #: API # 3004510715
Source: INTERMEDIATE CASING
Sample Type: GAS

Analysis No: HS20230261
Cust No: 35825-13105

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	INTERMEDIATE CASING
Well Name:	SAN JUAN 32-7 UNIT 8; INT	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	174.2 PSIG
Location:		Flow Temp:	83 DEG. F
Lease/PA/CA:		Ambient Temp:	83 DEG. F
Formation:	MV	Flow Rate:	25 MCF/D
Cust. Stn. No.:	API # 3004510715	Sample Method:	Purge & Fill
	8608001	Sample Date:	08/31/2023
		Sample Time:	11.22 AM
	AREA 5 / RUN 0505	Sampled By:	ANTHONY RIOS
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0913	0.0913	0.0100	0.00	0.0009
CO2	1.5285	1.5285	0.2610	0.00	0.0232
Methane	94.1445	94.1424	15.9930	950.86	0.5215
Ethane	3.2722	3.2721	0.8770	57.91	0.0340
Propane	0.6196	0.6196	0.1710	15.59	0.0094
Iso-Butane	0.1161	0.1161	0.0380	3.78	0.0023
N-Butane	0.0933	0.0933	0.0290	3.04	0.0019
I-Pentane	0.0414	0.0414	0.0150	1.66	0.0010
N-Pentane	0.0214	0.0214	0.0080	0.86	0.0005
Hexane Plus	0.0717	0.0717	0.0320	3.78	0.0024
Total	100.0000	99.9978	17.4340	1037.47	0.5971

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

COMPRESSIBLITY FACTOR (1/Z):	1.0023	CYLINDER #:	035
BTU/CU.FT IDEAL:	1039.9	CYLINDER PRESSURE:	165 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1042.3	ANALYIS DATE:	09/06/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1024.2	ANALYIS TIME:	11:25:23 AM
DRY BTU @ 15.025:	1063.2	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.5983		

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: 09/11/2023**
GC Method: C6+ Gas

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 32-7 UNIT 8; INT	INTERMEDIATE CASING	09/11/2023
Stn. No.:	API # 3004510715	MV	35825-13105
Mtr. No.:	8608001		

Smpl Date:	08/31/2023	08/20/2020
Test Date:	09/06/2023	08/26/2020
Run No:	HS20230261	HS200242
Nitrogen:	0.0913	0.1945
CO2:	1.5285	0.8888
Methane:	94.1445	93.6235
Ethane:	3.2722	4.0284
Propane:	0.6196	0.8441
I-Butane:	0.1161	0.1376
N-Butane:	0.0933	0.1350
I-Pentane:	0.0414	0.0491
N-Pentane:	0.0214	0.0303
Hexane+:	0.0717	0.0687
BTU:	1042.3	1058.7
GPM:	17.4340	17.5380
SPG:	0.5983	0.5995

Well Name: SJ 32-7 #8; CSG
API #: 3004510715
Source: CASING
Sample Type: GAS

Analysis No: HS20230260
Cust No: 35825-15475

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	CASING
Well Name:	SJ 32-7 #8; CSG	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	171.9 PSIG
Location:		Flow Temp:	83 DEG. F
Lease/PA/CA:	SF-078998	Ambient Temp:	83 DEG. F
Formation:		Flow Rate:	25 MCF/D
Cust. Stn. No.:	3004510715	Sample Method:	Purge & Fill
		Sample Date:	08/31/2023
		Sample Time:	10.56 AM
	AREA 5/ RUN 0505	Sampled By:	ANTHONY RIOS
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0825	0.0825	0.0090	0.00	0.0008
CO2	1.5298	1.5296	0.2620	0.00	0.0232
Methane	94.1697	94.1586	15.9970	951.11	0.5216
Ethane	3.2648	3.2644	0.8750	57.78	0.0339
Propane	0.6153	0.6152	0.1700	15.48	0.0094
Iso-Butane	0.1173	0.1173	0.0380	3.81	0.0024
N-Butane	0.0975	0.0975	0.0310	3.18	0.0020
I-Pentane	0.0386	0.0386	0.0140	1.54	0.0010
N-Pentane	0.0188	0.0188	0.0070	0.75	0.0005
Hexane Plus	0.0657	0.0657	0.0290	3.46	0.0022
Total	100.0000	99.9882	17.4320	1037.13	0.5968

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

COMPRESSIBLITY FACTOR (1/Z):	1.0023	CYLINDER #:	2163
BTU/CU.FT IDEAL:	1039.5	CYLINDER PRESSURE:	167 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1041.9	ANALYIS DATE:	09/06/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1023.8	ANALYIS TIME:	11:35:25 AM
DRY BTU @ 15.025:	1062.8	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.598		

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: 09/11/2023**
GC Method: C6+ Gas

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

Lease:	SJ 32-7 #8; CSG	CASING	09/11/2023
Stn. No.:	3004510715		35825-15475
Mtr. No.:			

Smpl Date:	08/31/2023
Test Date:	09/06/2023
Run No:	HS20230260
Nitrogen:	0.0825
CO2:	1.5298
Methane:	94.1697
Ethane:	3.2648
Propane:	0.6153
I-Butane:	0.1173
N-Butane:	0.0975
I-Pentane:	0.0386
N-Pentane:	0.0188
Hexane+:	0.0657
BTU:	1041.9
GPM:	17.4320
SPG:	0.5980

Well Name: SJ 32-7 #8; TBG
API #: 3004510715
Source: TUBING
Sample Type: GAS

Analysis No: HS20230259
Cust No: 35825-15470

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	TUBING
Well Name:	SJ 32-7 #8; TBG	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	79.6 PSIG
Location:		Flow Temp:	83 DEG. F
Lease/PA/CA:	SF-078998	Ambient Temp:	83 DEG. F
Formation:	MV	Flow Rate:	25 MCF/D
Cust. Stn. No.:	3004510715	Sample Method:	Purge & Fill
		Sample Date:	08/31/2023
		Sample Time:	10.25 AM
	AREA 5/ RUN 0505	Sampled By:	ANTHONY RIOS
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0663	0.0661	0.0070	0.00	0.0006
CO2	1.6737	1.6675	0.2860	0.00	0.0254
Methane	95.8969	95.5392	16.2890	968.56	0.5312
Ethane	2.0169	2.0094	0.5400	35.69	0.0209
Propane	0.2245	0.2237	0.0620	5.65	0.0034
Iso-Butane	0.0375	0.0374	0.0120	1.22	0.0008
N-Butane	0.0227	0.0226	0.0070	0.74	0.0005
I-Pentane	0.0116	0.0116	0.0040	0.46	0.0003
N-Pentane	0.0072	0.0072	0.0030	0.29	0.0002
Hexane Plus	0.0427	0.0425	0.0190	2.25	0.0014
Total	100.0000	99.6272	17.2290	1014.86	0.5847

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

COMPRESSIBLITY FACTOR (1/Z):	1.0022	CYLINDER #:	2022
BTU/CU.FT IDEAL:	1017.2	CYLINDER PRESSURE:	70 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1019.5	ANALYIS DATE:	09/06/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1001.8	ANALYIS TIME:	11:44:35 AM
DRY BTU @ 15.025:	1039.9	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.5857		

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: 09/11/2023**
GC Method: C6+ Gas

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

Lease:	SJ 32-7 #8; TBG	TUBING	09/11/2023
Stn. No.:	3004510715	MV	35825-15470
Mtr. No.:			

Smpl Date:	08/31/2023
Test Date:	09/06/2023
Run No:	HS20230259
Nitrogen:	0.0663
CO2:	1.6737
Methane:	95.8969
Ethane:	2.0169
Propane:	0.2245
I-Butane:	0.0375
N-Butane:	0.0227
I-Pentane:	0.0116
N-Pentane:	0.0072
Hexane+:	0.0427
BTU:	1019.5
GPM:	17.2290
SPG:	0.5857

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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

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 273209
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	intermediate and production casing have same gas - are also equalized	10/6/2023