



Well Name: SAN JUAN 32-8 UNIT 33;
 API #: API # 3004510943
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS200274
 Cust No: 35825-13225

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	BRADENHEAD
Well Name:	SAN JUAN 32-8 UNIT 33; BHD	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	21 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:		Ambient Temp:	DEG. F
Formation:	MV	Flow Rate:	MCF/D
Cust. Stn. No.:	API # 3004510943	Sample Method:	Purge & Fill
	72--490-01	Sample Date:	08/26/2020
	AREA 5 / RUN 0500	Sample Time:	8.40 AM
Heat Trace:	N	Sampled By:	SHAD BROWN
Remarks:		Sampled by (CO):	HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2904	0.2887	0.0320	0.00	0.0028
CO2	2.2925	2.2793	0.3920	0.00	0.0348
Methane	95.5961	95.0455	16.2360	965.52	0.5295
Ethane	1.5237	1.5149	0.4080	26.96	0.0158
Propane	0.1985	0.1974	0.0550	4.99	0.0030
Iso-Butane	0.0473	0.0470	0.0160	1.54	0.0009
N-Butane	0.0203	0.0202	0.0060	0.66	0.0004
I-Pentane	0.0102	0.0101	0.0040	0.41	0.0003
N-Pentane	0.0037	0.0037	0.0010	0.15	0.0001
Hexane Plus	0.0173	0.0172	0.0080	0.91	0.0006
Total	100.0000	99.4240	17.1580	1001.15	0.5883

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0021
 BTU/CU.FT IDEAL: 1003.5
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1005.6
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 988.1
 DRY BTU @ 15.025: 1025.7
 REAL SPECIFIC GRAVITY: 0.5893

CYLINDER #: 6239
 CYLINDER PRESSURE: 15 PSIG
 ANALYSIS DATE: 09/04/2020
 ANALYSIS TIME: 11:11:17 AM
 ANALYSIS RUN BY: RICHARD WILSON

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: 09/09/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 32-8 UNIT 33; BHD	BRADENHEAD	09/09/2020
Stn. No.:	API # 3004510943	MV	35825-13225
Mtr. No.:	72--490-01		

Smpl Date: 08/26/2020
Test Date: 09/04/2020
Run No: HS200274

Nitrogen: 0.2904
CO2: 2.2925
Methane: 95.5961
Ethane: 1.5237
Propane: 0.1985
I-Butane: 0.0473
N-Butane: 0.0203
I-Pentane: 0.0102
N-Pentane: 0.0037
Hexane+: 0.0173

BTU: 1005.6
GPM: 17.1580
SPG: 0.5893



Well Name: SAN JUAN 32-8 UNIT 33;
 API #: API # 3004510943
 Source: CASING
 Sample Type: GAS
 Analysis No: HS200275
 Cust No: 35825-13230

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: SAN JUAN 32-8 UNIT 33; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation: MV
 Cust. Stn. No.: API # 3004510943
 72-490-01

Source: CASING
 Well Flowing: Y
 Pressure: PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 08/26/2020
 Sample Time: 8.50 AM
 Sampled By: SHAD BROWN
 Sampled by (CO): HILCORP

AREA 5 / RUN 0500

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0934	0.0930	0.0100	0.00	0.0009
CO2	2.0063	1.9982	0.3430	0.00	0.0305
Methane	96.0884	95.6984	16.3200	970.49	0.5322
Ethane	1.5420	1.5357	0.4130	27.29	0.0160
Propane	0.1810	0.1803	0.0500	4.55	0.0028
Iso-Butane	0.0413	0.0411	0.0140	1.34	0.0008
N-Butane	0.0176	0.0175	0.0060	0.57	0.0004
I-Pentane	0.0103	0.0103	0.0040	0.41	0.0003
N-Pentane	0.0035	0.0035	0.0010	0.14	0.0001
Hexane Plus	0.0162	0.0161	0.0070	0.85	0.0005
Total	100.0000	99.5941	17.1680	1005.66	0.5844

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0021
 BTU/CU.FT IDEAL: 1008.0
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1010.1
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 992.5
 DRY BTU @ 15.025: 1030.3
 REAL SPECIFIC GRAVITY: 0.5854

CYLINDER #: 6191
 CYLINDER PRESSURE: 42 PSIG
 ANALYSIS DATE: 09/04/2020
 ANALYSIS TIME: 11:19:54 AM
 ANALYSIS RUN BY: RICHARD WILSON

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: 09/09/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 32-8 UNIT 33; CSG	CASING	09/09/2020
Stn. No.:	API # 3004510943	MV	35825-13230
Mtr. No.:	72-490-01		

Smpl Date:	08/26/2020
Test Date:	09/04/2020
Run No:	HS200275
Nitrogen:	0.0934
CO2:	2.0063
Methane:	96.0884
Ethane:	1.5420
Propane:	0.1810
I-Butane:	0.0413
N-Butane:	0.0176
I-Pentane:	0.0103
N-Pentane:	0.0035
Hexane+:	0.0162
BTU:	1010.1
GPM:	17.1680
SPG:	0.5854



Well Name: SAN JUAN 32-8 UNIT 33;
 API #: API # 3004510943
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS200276
 Cust No: 35825-13235

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	TUBING
Well Name:	SAN JUAN 32-8 UNIT 33; TBG	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	61 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:		Ambient Temp:	DEG. F
Formation:	MV	Flow Rate:	MCF/D
Cust. Stn. No.:	API # 3004510943	Sample Method:	Purge & Fill
	72-490-01	Sample Date:	08/26/2020
		Sample Time:	8.45 AM
	AREA 5/ RUN 0500	Sampled By:	SHAD BROWN
Heat Trace:		Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0715	0.0712	0.0080	0.00	0.0007
CO2	2.0209	2.0130	0.3460	0.00	0.0307
Methane	96.0885	95.7138	16.3200	970.49	0.5322
Ethane	1.5499	1.5439	0.4150	27.43	0.0161
Propane	0.1798	0.1791	0.0500	4.52	0.0027
Iso-Butane	0.0416	0.0414	0.0140	1.35	0.0008
N-Butane	0.0180	0.0179	0.0060	0.59	0.0004
I-Pentane	0.0104	0.0104	0.0040	0.42	0.0003
N-Pentane	0.0035	0.0035	0.0010	0.14	0.0001
Hexane Plus	0.0159	0.0158	0.0070	0.84	0.0005
Total	100.0000	99.6100	17.1710	1005.78	0.5845

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0021	CYLINDER #:	6129
BTU/CU.FT IDEAL:	1008.1	CYLINDER PRESSURE:	62 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1010.2	ANALYSIS DATE:	09/04/2020
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	992.6	ANALYSIS TIME:	10:56:54 AM
DRY BTU @ 15.025:	1030.4	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:	0.5855		

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: 09/09/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 32-8 UNIT 33; TBG	TUBING	09/09/2020
Stn. No.:	API # 3004510943	MV	35825-13235
Mtr. No.:	72-490-01		

Smpl Date:	08/26/2020
Test Date:	09/04/2020
Run No:	HS200276
Nitrogen:	0.0715
CO2:	2.0209
Methane:	96.0885
Ethane:	1.5499
Propane:	0.1798
I-Butane:	0.0416
N-Butane:	0.0180
I-Pentane:	0.0104
N-Pentane:	0.0035
Hexane+:	0.0159
BTU:	1010.2
GPM:	17.1710
SPG:	0.5855