



NMOCD REC'D
9/30/20

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

Analysis No: HS200309
Cust No: 35825-13175

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 32-9 UNIT 33; INT
County/State: SAN JUAN NM
Location:
Lease/PA/CA:
Formation: MV
Cust. Stn. No.: API # 3004511016
71-023-01

Source: INTERMEDIATE
Well Flowing: N
Pressure: 99 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 09/21/2020
Sample Time: 11.30 AM
Sampled By: JOHN RANTS
Sampled by (CO): HILCORP

AREA 4 / RUN 0405

Heat Trace:
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1531	0.1500	0.0170	0.00	0.0015
CO2	2.1064	2.0643	0.3610	0.00	0.0320
Methane	84.8292	83.1355	14.4230	856.77	0.4699
Ethane	7.3356	7.1891	1.9680	129.82	0.0762
Propane	2.8676	2.8103	0.7920	72.15	0.0437
Iso-Butane	0.5600	0.5488	0.1840	18.21	0.0112
N-Butane	0.8875	0.8698	0.2810	28.95	0.0178
I-Pentane	0.3306	0.3240	0.1210	13.23	0.0082
N-Pentane	0.2497	0.2447	0.0910	10.01	0.0062
Hexane Plus	0.6803	0.6667	0.3040	35.86	0.0225
Total	100.0000	98.0032	18.5420	1165.00	0.6892

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0032
BTU/CU.FT IDEAL: 1167.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1171.3
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1150.9
DRY BTU @ 15.025: 1194.8
REAL SPECIFIC GRAVITY: 0.6911

CYLINDER #: 5028
CYLINDER PRESSURE: 98 PSIG
ANALYSIS DATE: 09/26/2020
ANALYSIS TIME: 12:50:23 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: 09/29/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 32-9 UNIT 33; INT	INTERMEDIATE	09/29/2020
Stn. No.:	API # 3004511016	MV	35825-13175
Mtr. No.:	71-023-01		

Smpl Date:	09/21/2020	08/27/2020
Test Date:	09/26/2020	09/02/2020
Run No:	HS200309	HS200260
Nitrogen:	0.1531	0.1770
CO2:	2.1064	1.9100
Methane:	84.8292	83.5234
Ethane:	7.3356	8.3392
Propane:	2.8676	3.2731
I-Butane:	0.5600	0.5801
N-Butane:	0.8875	0.8890
I-Pentane:	0.3306	0.3336
N-Pentane:	0.2497	0.2539
Hexane+:	0.6803	0.7207
BTU:	1171.3	1189.6
GPM:	18.5420	18.6980
SPG:	0.6911	0.6998



Well Name: SAN JUAN 32-9 UNIT 33;
 API #: API # 3004511016
 Source: CASING
 Sample Type: GAS
 Analysis No: HS200308
 Cust No: 35825-13350

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	CASING
Well Name:	SAN JUAN 32-9 UNIT 33; CSG	Well Flowing:	
County/State:		Pressure:	99 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:		Ambient Temp:	DEG. F
Formation:	MV	Flow Rate:	MCF/D
Cust. Stn. No.:	API # 3004511016	Sample Method:	Purge & Fill
	71-023-01	Sample Date:	09/21/2020
	AREA 04/ RUN 0405	Sample Time:	11.30 AM
Heat Trace:	N	Sampled By:	JOHN RANTS
Remarks:		Sampled by (CO):	HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1632	0.1597	0.0180	0.00	0.0016
CO2	2.1101	2.0650	0.3610	0.00	0.0321
Methane	84.8119	82.9990	14.4210	856.60	0.4698
Ethane	7.3324	7.1757	1.9670	129.76	0.0761
Propane	2.8392	2.7785	0.7850	71.44	0.0432
Iso-Butane	0.5526	0.5408	0.1810	17.97	0.0111
N-Butane	0.8824	0.8635	0.2790	28.79	0.0177
I-Pentane	0.3318	0.3247	0.1220	13.27	0.0083
N-Pentane	0.2511	0.2457	0.0910	10.07	0.0063
Hexane Plus	0.7253	0.7098	0.3240	38.23	0.0240
Total	100.0000	97.8624	18.5490	1166.13	0.6901

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0032	CYLINDER #:	6031
BTU/CU.FT IDEAL:	1168.8	CYLINDER PRESSURE:	105 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1172.6	ANALYSIS DATE:	09/26/2020
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1152.2	ANALYSIS TIME:	01:14:21 PM
DRY BTU @ 15.025:	1196.1	ANALYSIS RUN BY:	SHYANN ELLEDGE
REAL SPECIFIC GRAVITY:	0.692		

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: 09/29/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 32-9 UNIT 33; CSG	CASING	09/29/2020
Stn. No.:	API # 3004511016	MV	35825-13350
Mtr. No.:	71-023-01		

Smpl Date: 09/21/2020
Test Date: 09/26/2020
Run No: HS200308

Nitrogen: 0.1632
CO2: 2.1101
Methane: 84.8119
Ethane: 7.3324
Propane: 2.8392
I-Butane: 0.5526
N-Butane: 0.8824
I-Pentane: 0.3318
N-Pentane: 0.2511
Hexane+: 0.7253

BTU: 1172.6
GPM: 18.5490
SPG: 0.6920



Well Name: SAN JUAN 32-9 UNIT 33;
 API #: API # 3004511016
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS200310
 Cust No: 35825-13355

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	TUBING
Well Name:	SAN JUAN 32-9 UNIT 33; TBG	Well Flowing:	N
County/State:		Pressure:	99 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:		Ambient Temp:	DEG. F
Formation:	MV	Flow Rate:	MCF/D
Cust. Stn. No.:	API # 3004511016	Sample Method:	Purge & Fill
	71-023-01	Sample Date:	09/21/2020
		Sample Time:	11.30 AM
	AREA 04 / RUN 0405	Sampled By:	JOHN RANTS
Heat Trace:		Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3446	0.3367	0.0380	0.00	0.0033
CO2	2.1449	2.0956	0.3670	0.00	0.0326
Methane	84.6172	82.6724	14.3860	854.63	0.4687
Ethane	7.4430	7.2719	1.9960	131.72	0.0773
Propane	2.8910	2.8246	0.7990	72.74	0.0440
Iso-Butane	0.5214	0.5094	0.1710	16.96	0.0105
N-Butane	0.8026	0.7842	0.2540	26.18	0.0161
I-Pentane	0.3031	0.2961	0.1110	12.13	0.0076
N-Pentane	0.2292	0.2239	0.0830	9.19	0.0057
Hexane Plus	0.7030	0.6868	0.3140	37.06	0.0233
Total	100.0000	97.7016	18.5190	1160.60	0.6890

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0031	CYLINDER #:	6100
BTU/CU.FT IDEAL:	1163.3	CYLINDER PRESSURE:	97 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1166.9	ANALYSIS DATE:	09/26/2020
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1146.6	ANALYSIS TIME:	01:02:53 PM
DRY BTU @ 15.025:	1190.3	ANALYSIS RUN BY:	SHYANN ELLEDGE
REAL SPECIFIC GRAVITY:	0.6909		

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: 09/29/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 32-9 UNIT 33; TBG	TUBING	09/29/2020
Stn. No.:	API # 3004511016	MV	35825-13355
Mtr. No.:	71-023-01		

Smpl Date:	09/21/2020
Test Date:	09/26/2020
Run No:	HS200310
Nitrogen:	0.3446
CO2:	2.1449
Methane:	84.6172
Ethane:	7.4430
Propane:	2.8910
I-Butane:	0.5214
N-Butane:	0.8026
I-Pentane:	0.3031
N-Pentane:	0.2292
Hexane+:	0.7030
BTU:	1166.9
GPM:	18.5190
SPG:	0.6909