



Well Name: SULLIVAN A 1F; BHD

API #: 3004535372

Source: BRADENHEAD

Sample Type: GAS

Analysis No: HS2021222

Cust No: 35825-12360

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: SULLIVAN A 1F; BHD

County/State: SAN JUAN NM

Location:

Lease/PA/CA: FEE

Formation: CH

Cust. Stn. No.: 3004535372
91118

AREA 7 / RUN 0705

Heat Trace: N

Remarks:

Source: BRADENHEAD

Well Flowing: Y

Pressure: 71 PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 08/24/2021

Sample Time: 9.17 AM

Sampled By: NATE NICHOLS

Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4565	0.4449	0.0500	0.00	0.0044
CO2	0.0168	0.0164	0.0030	0.00	0.0003
Methane	88.5797	86.3285	15.0540	894.65	0.4906
Ethane	6.7603	6.5885	1.8120	119.64	0.0702
Propane	2.7856	2.7148	0.7690	70.09	0.0424
Iso-Butane	0.4627	0.4509	0.1520	15.05	0.0093
N-Butane	0.5825	0.5677	0.1840	19.00	0.0117
I-Pentane	0.1534	0.1495	0.0560	6.14	0.0038
N-Pentane	0.0924	0.0901	0.0340	3.70	0.0023
Hexane Plus	0.1101	0.1073	0.0490	5.80	0.0036
Total	100.0000	97.4586	18.1630	1134.07	0.6387

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
 BTU/CU.FT IDEAL: 1136.7
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1139.8
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1120.0
 DRY BTU @ 15.025: 1162.6
 REAL SPECIFIC GRAVITY: 0.6401

CYLINDER #: 4207
 CYLINDER PRESSURE: 47 PSIG
 ANALYSIS DATE: 09/01/2021
 ANALYSIS TIME: 03:37:06 AM
 ANALYSIS RUN BY:

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: 09/07/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SULLIVAN A 1F; BHD	BRADENHEAD	09/07/2021
Stn. No.:	3004535372	CH	35825-12360
Mtr. No.:	91118		

Smpl Date:	08/24/2021	10/15/2020	09/30/2020	07/10/2020
Test Date:	09/01/2021	10/16/2020	10/07/2020	07/14/2020
Run No:	HS2021222	HS200330	HS200322	HS200073
Nitrogen:	0.4565	0.6882	0.4298	0.4777
CO2:	0.0168	0.0275	0.0040	0.0016
Methane:	88.5797	88.5177	88.4494	89.1019
Ethane:	6.7603	6.6630	6.7666	6.5309
Propane:	2.7856	2.7341	2.8050	2.6616
I-Butane:	0.4627	0.4576	0.4777	0.4481
N-Butane:	0.5825	0.5669	0.6293	0.5399
I-Pentane:	0.1534	0.1459	0.1836	0.1273
N-Pentane:	0.0924	0.0864	0.1202	0.0699
Hexane+:	0.1101	0.1127	0.1344	0.0411
BTU:	1139.8	1135.0	1144.8	1130.4
GPM:	18.1630	18.1280	18.1970	18.0890
SPG:	0.6401	0.6397	0.6429	0.6341



Well Name: SULLIVAN A 1F; CSG

API #: 3004535372

Source: CASING

Sample Type: GAS

Analysis No: HS2021223

Cust No: 35825-12365

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: SULLIVAN A 1F; CSG

County/State: SAN JUAN NM

Location:

Lease/PA/CA: FEE

Formation: CH

Cust. Stn. No.: 3004535372
91118

AREA 7 / RUN 0705

Heat Trace:

Remarks:

Source: CASING

Well Flowing: Y

Pressure: 44 PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 08/24/2021

Sample Time: 2.15 PM

Sampled By: NATE NICHOLS

Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3637	0.3623	0.0400	0.00	0.0035
CO2	1.2587	1.2540	0.2160	0.00	0.0191
Methane	78.6071	78.3128	13.3750	793.93	0.4354
Ethane	10.7140	10.6739	2.8760	189.61	0.1112
Propane	4.6570	4.6396	1.2880	117.17	0.0709
Iso-Butane	0.7833	0.7804	0.2570	25.47	0.0157
N-Butane	1.4037	1.3984	0.4440	45.79	0.0282
I-Pentane	0.5381	0.5361	0.1980	21.53	0.0134
N-Pentane	0.4530	0.4513	0.1650	18.16	0.0113
Hexane Plus	1.2214	1.2168	0.5470	64.38	0.0404
Total	100.0000	99.6256	19.4060	1276.05	0.7492

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0039
 BTU/CU.FT IDEAL: 1279.0
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1284.0
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1261.7
 DRY BTU @ 15.025: 1309.7
 REAL SPECIFIC GRAVITY: 0.7518

CYLINDER #: 6027
 CYLINDER PRESSURE: 69 PSIG
 ANALYSIS DATE: 09/01/2021
 ANALYSIS TIME: 03:36:49 PM
 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: 09/07/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SULLIVAN A 1F; CSG	CASING	09/07/2021
Stn. No.:	3004535372	CH	35825-12365
Mtr. No.:	91118		

Smpl Date:	08/24/2021	10/15/2020	09/30/2020	07/10/2020
Test Date:	09/01/2021	10/16/2020	10/07/2020	07/14/2020
Run No:	HS2021223	HS200331	HS200321	HS200074
Nitrogen:	0.3637	0.3826	0.3536	0.4083
CO2:	1.2587	1.3409	1.2954	0.8229
Methane:	78.6071	78.3079	77.8174	80.3864
Ethane:	10.7140	10.7893	11.1245	10.3252
Propane:	4.6570	4.6715	4.7747	4.4659
I-Butane:	0.7833	0.7943	0.8306	0.6610
N-Butane:	1.4037	1.4184	1.4751	1.2040
I-Pentane:	0.5381	0.5425	0.5617	0.3963
N-Pentane:	0.4530	0.4571	0.4825	0.3466
Hexane+:	1.2214	1.2955	1.2845	0.9834
BTU:	1284.0	1287.8	1295.8	1256.8
GPM:	19.4060	19.4390	19.5060	19.1740
SPG:	0.7518	0.7558	0.7599	0.7277

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1000 Rio Brazos Rd., Aztec, NM 87410
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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 47164

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 47164
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	None	10/18/2021