



Well Name: SAN JUAN 29-5 UNIT 68;
 API #: 3003920712
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS2021238
 Cust No: 35825-14055

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	BRADENHEAD
Well Name:	SAN JUAN 29-5 UNIT 68; BHD	Well Flowing:	Y
County/State:	RIO ARRIBA NM	Pressure:	61.2 PSIG
Location:		Flow Temp:	89 DEG. F
Lease/PA/CA:	NMSF078281	Ambient Temp:	91 DEG. F
Formation:	MV / DK	Flow Rate:	246 MCF/D
Cust. Stn. No.:	3003920712	Sample Method:	Purge & Fill
		Sample Date:	09/14/2021
		Sample Time:	10.40 AM
		Sampled By:	KYLE SMITH
		Sampled by (CO):	HILCORP

Heat Trace: N

Remarks:

AREA 12 / RUN 1208

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3271	0.3211	0.0360	0.00	0.0032
CO2	1.4147	1.3889	0.2420	0.00	0.0215
Methane	96.5379	94.7802	16.3960	975.03	0.5347
Ethane	1.4521	1.4257	0.3890	25.70	0.0151
Propane	0.1748	0.1716	0.0480	4.40	0.0027
Iso-Butane	0.0416	0.0408	0.0140	1.35	0.0008
N-Butane	0.0237	0.0233	0.0070	0.77	0.0005
I-Pentane	0.0114	0.0112	0.0040	0.46	0.0003
N-Pentane	0.0037	0.0036	0.0010	0.15	0.0001
Hexane Plus	0.0130	0.0128	0.0060	0.69	0.0004
Total	100.0000	98.1792	17.1430	1008.54	0.5792

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0021	CYLINDER #:	6095
BTU/CU.FT IDEAL:	1010.9	CYLINDER PRESSURE:	56 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1013.0	ANALYSIS DATE:	09/16/2021
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	995.4	ANALYSIS TIME:	02:45:11 PM
DRY BTU @ 15.025:	1033.3	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:	0.5802		

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: 09/20/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 29-5 UNIT 68; BHD	BRADENHEAD	09/20/2021
Stn. No.:	3003920712	MV / DK	35825-14055
Mtr. No.:			

Smpl Date: 09/14/2021
Test Date: 09/16/2021
Run No: HS2021238

Nitrogen: 0.3271
CO2: 1.4147
Methane: 96.5379
Ethane: 1.4521
Propane: 0.1748
I-Butane: 0.0416
N-Butane: 0.0237
I-Pentane: 0.0114
N-Pentane: 0.0037
Hexane+: 0.0130

BTU: 1013.0
GPM: 17.1430
SPG: 0.5802



Well Name: SAN JUAN 29-5 UNIT 68;
 API #: 3003920712
 Source: INTERMEDIATE CASING
 Sample Type: GAS
 Analysis No: HS2021240
 Cust No: 35825-14065

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	INTERMEDIATE CASING
Well Name:	SAN JUAN 29-5 UNIT 68; INTRM	Well Flowing:	Y
County/State:	RIO ARRIBA NM	Pressure:	61.2 PSIG
Location:		Flow Temp:	89 DEG. F
Lease/PA/CA:	NMSF078281	Ambient Temp:	90 DEG. F
Formation:	MV / DK	Flow Rate:	246 MCF/D
Cust. Stn. No.:	3003920712	Sample Method:	Purge & Fill
		Sample Date:	09/14/2021
		Sample Time:	10.30 AM
		Sampled By:	KYLE SMITH
		Sampled by (CO):	HILCORP

Heat Trace: N

Remarks:

AREA 12 / RUN 1208

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3229	0.3163	0.0360	0.00	0.0031
CO2	0.0181	0.0177	0.0030	0.00	0.0003
Methane	97.7329	95.7246	16.5990	987.10	0.5413
Ethane	1.4746	1.4443	0.3950	26.10	0.0153
Propane	0.1802	0.1765	0.0500	4.53	0.0027
Iso-Butane	0.0438	0.0429	0.0140	1.42	0.0009
N-Butane	0.0236	0.0231	0.0070	0.77	0.0005
I-Pentane	0.0148	0.0145	0.0050	0.59	0.0004
N-Pentane	0.0051	0.0050	0.0020	0.20	0.0001
Hexane Plus	0.1840	0.1802	0.0820	9.70	0.0061
Total	100.0000	97.9451	17.1930	1030.42	0.5707

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0021	CYLINDER #:	4211
BTU/CU.FT IDEAL:	1032.8	CYLINDER PRESSURE:	56 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1035.0	ANALYSIS DATE:	09/16/2021
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1017.0	ANALYSIS TIME:	02:35:11 AM
DRY BTU @ 15.025:	1055.7	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:	0.5717		

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: 09/20/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 29-5 UNIT 68; INTRM	INTERMEDIATE CASING	09/20/2021
Stn. No.:	3003920712	MV / DK	35825-14065
Mtr. No.:			

Smpl Date: 09/14/2021
Test Date: 09/16/2021
Run No: HS2021240

Nitrogen: 0.3229
CO2: 0.0181
Methane: 97.7329
Ethane: 1.4746
Propane: 0.1802
I-Butane: 0.0438
N-Butane: 0.0236
I-Pentane: 0.0148
N-Pentane: 0.0051
Hexane+: 0.1840

BTU: 1035.0
GPM: 17.1930
SPG: 0.5717



Well Name: SAN JUAN 29-5 UNIT 68;
 API #: 3003920712
 Source: CASING
 Sample Type: GAS
 Analysis No: HS2021239
 Cust No: 35825-14060

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: SAN JUAN 29-5 UNIT 68; CSG
 County/State: RIO ARRIBA NM
 Location:
 Lease/PA/CA: NMSF078281
 Formation: MV / DK
 Cust. Stn. No.: 3003920712

Source: CASING
 Well Flowing: Y
 Pressure: 45 PSIG
 Flow Temp: 89 DEG. F
 Ambient Temp: 91 DEG. F
 Flow Rate: 247 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 09/14/2021
 Sample Time: 10.00 AM
 Sampled By: KYLE SMITH
 Sampled by (CO): HILCORP

AREA 12 / RUN 1208

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	4.1631	4.1400	0.4590	0.00	0.0403
CO2	1.7809	1.7710	0.3050	0.00	0.0271
Methane	79.7580	79.3145	13.5630	805.56	0.4418
Ethane	7.2164	7.1763	1.9360	127.71	0.0749
Propane	3.3284	3.3099	0.9200	83.75	0.0507
Iso-Butane	0.7987	0.7943	0.2620	25.97	0.0160
N-Butane	0.9533	0.9480	0.3010	31.10	0.0191
I-Pentane	0.4228	0.4204	0.1550	16.92	0.0105
N-Pentane	0.3134	0.3117	0.1140	12.56	0.0078
Hexane Plus	1.2650	1.2580	0.5660	66.68	0.0419
Total	100.0000	99.4441	18.5810	1170.24	0.7301

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0033
 BTU/CU.FT IDEAL: 1172.9
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1176.8
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1156.3
 DRY BTU @ 15.025: 1200.4
 REAL SPECIFIC GRAVITY: 0.7322

CYLINDER #: 6246
 CYLINDER PRESSURE: 45 PSIG
 ANALYSIS DATE: 09/16/2021
 ANALYSIS TIME: 02:26:27 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: 09/20/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 29-5 UNIT 68; CSG	CASING	09/20/2021
Stn. No.:	3003920712	MV / DK	35825-14060
Mtr. No.:			

Smpl Date: 09/14/2021
Test Date: 09/16/2021
Run No: HS2021239

Nitrogen: 4.1631
CO2: 1.7809
Methane: 79.7580
Ethane: 7.2164
Propane: 3.3284
I-Butane: 0.7987
N-Butane: 0.9533
I-Pentane: 0.4228
N-Pentane: 0.3134
Hexane+: 1.2650

BTU: 1176.8
GPM: 18.5810
SPG: 0.7322



Well Name: SAN JUAN 29-5 UNIT 68;
 API #: 3003920712
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS2021241
 Cust No: 35825-14070

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	TUBING
Well Name:	SAN JUAN 29-5 UNIT 68; TBG	Well Flowing:	Y
County/State:	RIO ARRIBA NM	Pressure:	339 PSIG
Location:		Flow Temp:	89 DEG. F
Lease/PA/CA:	NMSF078281	Ambient Temp:	90 DEG. F
Formation:	MV / DK	Flow Rate:	247 MCF/D
Cust. Stn. No.:	3003920712	Sample Method:	Purge & Fill
		Sample Date:	09/14/2021
		Sample Time:	10.10 AM
		Sampled By:	KYLE SMITH
		Sampled by (CO):	HILCORP

Heat Trace: N

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	14.5419	14.6341	1.6030	0.00	0.1406
CO2	0.0063	0.0063	0.0010	0.00	0.0001
Methane	76.4266	76.9109	12.9830	771.91	0.4233
Ethane	5.2006	5.2336	1.3940	92.04	0.0540
Propane	2.2577	2.2720	0.6230	56.81	0.0344
Iso-Butane	0.5165	0.5198	0.1690	16.80	0.0104
N-Butane	0.5318	0.5352	0.1680	17.35	0.0107
I-Pentane	0.1876	0.1888	0.0690	7.51	0.0047
N-Pentane	0.1247	0.1255	0.0450	5.00	0.0031
Hexane Plus	0.2063	0.2076	0.0920	10.87	0.0068
Total	100.0000	100.6338	17.1470	978.27	0.6881

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0023	CYLINDER #:	4201
BTU/CU.FT IDEAL:	980.5	CYLINDER PRESSURE:	291 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	982.8	ANALYSIS DATE:	09/16/2021
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	965.7	ANALYSIS TIME:	02:34:19 PM
DRY BTU @ 15.025:	1002.5	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.6894		

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: 09/20/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 29-5 UNIT 68; TBG	TUBING	09/20/2021
Stn. No.:	3003920712	MV / DK	35825-14070
Mtr. No.:			

Smpl Date: 09/14/2021
Test Date: 09/16/2021
Run No: HS2021241

Nitrogen: 14.5419
CO2: 0.0063
Methane: 76.4266
Ethane: 5.2006
Propane: 2.2577
I-Butane: 0.5165
N-Butane: 0.5318
I-Pentane: 0.1876
N-Pentane: 0.1247
Hexane+: 0.2063

BTU: 982.8
GPM: 17.1470
SPG: 0.6894

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

CONDITIONS

Action 51455

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 51455
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	same gas intermediate and bradenhead	10/12/2021