Well Name: SAN JUAN 29-6 UNIT 8M;
API #: 3003929751
Source: BRADENHEAD
Sample Type: GAS

Analysis No: HS20230036
Cust No: 35825-14765

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	BRADENHEAD
Well Name:	SAN JUAN 29-6 UNIT 8M; BHD	Well Flowing:	Y
County/State:	RIO ARRIBA NM	Pressure:	PSIG
Location:		Flow Temp:	75 DEG. F
Lease/PA/CA:	NM-012698	Ambient Temp:	55 DEG. F
Formation:		Flow Rate:	MCF/D
Cust. Stn. No.:	3003929751	Sample Method:	Purge & Fill
	83001	Sample Date:	05/04/2023
		Sample Time:	11.44 AM
	AREA 12 / RUN 1205	Sampled By:	KYLE SMITH
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.6521	0.6436	0.0720	0.00	0.0063
CO2	0.0051	0.0050	0.0010	0.00	0.0001
Methane	81.3196	80.2633	13.8340	821.33	0.4504
Ethane	7.9386	7.8355	2.1300	140.49	0.0824
Propane	5.8704	5.7941	1.6230	147.71	0.0894
Iso-Butane	1.3609	1.3432	0.4470	44.26	0.0273
N-Butane	1.3361	1.3187	0.4230	43.59	0.0268
I-Pentane	0.4339	0.4283	0.1590	17.36	0.0108
N-Pentane	0.3047	0.3007	0.1110	12.21	0.0076
Hexane Plus	0.7786	0.7685	0.3480	41.04	0.0258
Total	100.0000	98.7009	19.1480	1267.98	0.7269

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

COMPRESSIBLITY FACTOR (1/Z):	1.0037	CYLINDER #:	2074
BTU/CU.FT IDEAL:	1270.9	CYLINDER PRESSURE:	28 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1275.6	ANALYIS DATE:	05/10/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1253.4	ANALYIS TIME:	03:21:49 PM
DRY BTU @ 15.025:	1301.1	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.7293		

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: 05/17/2023**
GC Method: C6+ Gas

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 29-6 UNIT 8M; BHD	BRADENHEAD	05/17/2023
Stn. No.:	3003929751		35825-14765
Mtr. No.:	83001		

Smpl Date:	05/04/2023
Test Date:	05/10/2023
Run No:	HS20230036
Nitrogen:	0.6521
CO2:	0.0051
Methane:	81.3196
Ethane:	7.9386
Propane:	5.8704
I-Butane:	1.3609
N-Butane:	1.3361
I-Pentane:	0.4339
N-Pentane:	0.3047
Hexane+:	0.7786
BTU:	1275.6
GPM:	19.1480
SPG:	0.7293

Well Name: SAN JUAN 29-6 UNIT 8M;
API #: API # 3003929751
Source: INTERMEDIATE CASING
Sample Type: GAS

Analysis No: HS20230039
Cust No: 35825-12325

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	INTERMEDIATE CASING
Well Name:	SAN JUAN 29-6 UNIT 8M; INT	Well Flowing:	Y
County/State:	RIO ARRIBA NM	Pressure:	PSIG
Location:		Flow Temp:	76 DEG. F
Lease/PA/CA:		Ambient Temp:	55 DEG. F
Formation:	MV/DK	Flow Rate:	MCF/D
Cust. Stn. No.:	API # 3003929751	Sample Method:	Purge & Fill
		Sample Date:	05/04/2023
		Sample Time:	11.58 AM
	AREA 12 / RUN 1205	Sampled By:	KYLE SMITH
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5101	0.5074	0.0560	0.00	0.0049
CO2	0.0022	0.0022	0.0000	0.00	0.0000
Methane	68.6049	68.2477	11.6870	692.91	0.3800
Ethane	11.6468	11.5861	3.1300	206.11	0.1209
Propane	11.7007	11.6398	3.2390	294.40	0.1781
Iso-Butane	2.9025	2.8874	0.9540	94.39	0.0582
N-Butane	2.8432	2.8284	0.9010	92.75	0.0571
I-Pentane	0.7806	0.7765	0.2870	31.23	0.0194
N-Pentane	0.4773	0.4748	0.1740	19.13	0.0119
Hexane Plus	0.5317	0.5289	0.2380	28.03	0.0176
Total	100.0000	99.4792	20.6660	1458.96	0.8483

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

COMPRESSIBLITY FACTOR (1/Z):	1.0051	CYLINDER #:	2055
BTU/CU.FT IDEAL:	1462.3	CYLINDER PRESSURE:	66 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1469.8	ANALYIS DATE:	05/10/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1444.2	ANALYIS TIME:	03:45:25 PM
DRY BTU @ 15.025:	1499.2	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.8523		

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: 05/17/2023**
GC Method: C6+ Gas

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 29-6 UNIT 8M; INT	INTERMEDIATE CASING	05/17/2023
Stn. No.:	API # 3003929751	MV/DK	35825-12325
Mtr. No.:			

Smpl Date:	05/04/2023	07/09/2020
Test Date:	05/10/2023	07/14/2020
Run No:	HS20230039	HS200083
Nitrogen:	0.5101	0.5911
CO2:	0.0022	0.0027
Methane:	68.6049	85.1792
Ethane:	11.6468	7.0871
Propane:	11.7007	4.2037
I-Butane:	2.9025	0.8959
N-Butane:	2.8432	0.8623
I-Pentane:	0.7806	0.2843
N-Pentane:	0.4773	0.1923
Hexane+:	0.5317	0.7014
BTU:	1469.8	1211.5
GPM:	20.6660	18.6660
SPG:	0.8523	0.6874

Well Name: SAN JUAN 29-6 UNIT 8M;
API #: API # 3003929751
Source: CASING
Sample Type: GAS

Analysis No: HS20230037
Cust No: 35825-12320

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	CASING
Well Name:	SAN JUAN 29-6 UNIT 8M;CSG	Well Flowing:	Y
County/State:	RIO ARRIBA NM	Pressure:	PSIG
Location:		Flow Temp:	75 DEG. F
Lease/PA/CA:		Ambient Temp:	55 DEG. F
Formation:	MV/DK	Flow Rate:	MCF/D
Cust. Stn. No.:	API # 3003929751	Sample Method:	Purge & Fill
	83001	Sample Date:	05/04/2023
		Sample Time:	11.35 AM
	AREA 12 / RUN 1205	Sampled By:	KYLE SMITH
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.6772	0.6688	0.0750	0.00	0.0065
CO2	0.0162	0.0160	0.0030	0.00	0.0002
Methane	84.7106	83.6566	14.4030	855.58	0.4692
Ethane	7.1920	7.1025	1.9290	127.28	0.0747
Propane	4.6145	4.5571	1.2750	116.11	0.0703
Iso-Butane	1.0152	1.0026	0.3330	33.01	0.0204
N-Butane	0.9679	0.9559	0.3060	31.58	0.0194
I-Pentane	0.2810	0.2775	0.1030	11.24	0.0070
N-Pentane	0.1780	0.1758	0.0650	7.14	0.0044
Hexane Plus	0.3474	0.3431	0.1550	18.31	0.0115
Total	100.0000	98.7559	18.6470	1200.24	0.6837

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

COMPRESSIBLITY FACTOR (1/Z):	1.0032	CYLINDER #:	2090
BTU/CU.FT IDEAL:	1203.0	CYLINDER PRESSURE:	64 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1206.9	ANALYIS DATE:	05/10/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1185.9	ANALYIS TIME:	03:37:41 PM
DRY BTU @ 15.025:	1231.1	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.6856		

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: 05/17/2023**
GC Method: C6+ Gas

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 29-6 UNIT 8M;CSG	CASING	05/17/2023
Stn. No.:	API # 3003929751	MV/DK	35825-12320
Mtr. No.:	83001		

Smpl Date:	05/04/2023	07/09/2020
Test Date:	05/10/2023	07/14/2020
Run No:	HS20230037	HS200082
Nitrogen:	0.6772	0.6472
CO2:	0.0162	0.0055
Methane:	84.7106	86.2449
Ethane:	7.1920	6.5682
Propane:	4.6145	3.8540
I-Butane:	1.0152	0.8345
N-Butane:	0.9679	0.8037
I-Pentane:	0.2810	0.2854
N-Pentane:	0.1780	0.1930
Hexane+:	0.3474	0.5636
BTU:	1206.9	1192.9
GPM:	18.6470	18.5170
SPG:	0.6856	0.6762

Well Name: SAN JUAN 29-6 UNIT 8M;
API #: API # 3003929751
Source: TUBING
Sample Type: GAS

Analysis No: HS20230038
Cust No: 35825-12390

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	TUBING
Well Name:	SAN JUAN 29-6 UNIT 8M; TBG	Well Flowing:	Y
County/State:	RIO ARRIBA NM	Pressure:	PSIG
Location:		Flow Temp:	39 DEG. F
Lease/PA/CA:		Ambient Temp:	55 DEG. F
Formation:	MV/DK	Flow Rate:	MCF/D
Cust. Stn. No.:	API # 3003929751	Sample Method:	Purge & Fill
	83001	Sample Date:	05/04/2023
		Sample Time:	11.15 AM
	AREA 12 / RUN 1205	Sampled By:	KYLE SMITH
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1213	0.1199	0.0130	0.00	0.0012
CO2	1.9812	1.9586	0.3390	0.00	0.0301
Methane	86.9325	85.9400	14.7800	878.02	0.4815
Ethane	6.0641	5.9949	1.6260	107.32	0.0630
Propane	2.2930	2.2668	0.6340	57.69	0.0349
Iso-Butane	0.5043	0.4985	0.1650	16.40	0.0101
N-Butane	0.6569	0.6494	0.2080	21.43	0.0132
I-Pentane	0.3075	0.3040	0.1130	12.30	0.0077
N-Pentane	0.2173	0.2148	0.0790	8.71	0.0054
Hexane Plus	0.9219	0.9114	0.4120	48.59	0.0305
Total	100.0000	98.8583	18.3690	1150.47	0.6776

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

COMPRESSIBLITY FACTOR (1/Z):	1.0031	CYLINDER #:	2051
BTU/CU.FT IDEAL:	1153.1	CYLINDER PRESSURE:	66 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1156.6	ANALYIS DATE:	05/10/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1136.5	ANALYIS TIME:	12:59:06 AM
DRY BTU @ 15.025:	1179.8	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.6793		

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: 05/17/2023**
GC Method: C6+ Gas

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 29-6 UNIT 8M; TBG	TUBING	05/17/2023
Stn. No.:	API # 3003929751	MV/DK	35825-12390
Mtr. No.:	83001		

Smpl Date:	05/04/2023	07/13/2020
Test Date:	05/10/2023	07/15/2020
Run No:	HS20230038	HS200084
Nitrogen:	0.1213	0.2829
CO2:	1.9812	1.8502
Methane:	86.9325	86.9845
Ethane:	6.0641	5.8759
Propane:	2.2930	2.2780
I-Butane:	0.5043	0.4875
N-Butane:	0.6569	0.5815
I-Pentane:	0.3075	0.2635
N-Pentane:	0.2173	0.1783
Hexane+:	0.9219	1.2177
BTU:	1156.6	1162.8
GPM:	18.3690	18.3920
SPG:	0.6793	0.6829

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
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 230415

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 230415
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	bradenhead and production casing are same gas - intermediate is an odd one	10/6/2023