



Well Name: GRENIER B #004E RTU;
 API #: 3004529406
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS20230021
 Cust No: 35825-12700

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	BRADENHEAD
Well Name:	GRENIER B #004E RTU; BHD	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:		Ambient Temp:	DEG. F
Formation:	DK	Flow Rate:	MCF/D
Cust. Stn. No.:	3004529406	Sample Method:	Purge & Fill
	WIH35829	Sample Date:	05/05/2023
	AREA 3 / RUN 306	Sample Time:	11.30 AM
Heat Trace:	N	Sampled By:	CHRISTOPHER VELASQUEZ
Remarks:	PRESSURED WITH HELIUM TO 30 LBS.	Sampled by (CO):	HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	2.0808	1.1373	0.2290	0.00	0.0201
CO2	0.0134	0.0073	0.0020	0.00	0.0002
Methane	92.6125	50.6188	15.7330	935.39	0.5130
Ethane	3.7247	2.0358	0.9980	65.92	0.0387
Propane	0.9651	0.5275	0.2660	24.28	0.0147
Iso-Butane	0.2335	0.1276	0.0770	7.59	0.0047
N-Butane	0.1853	0.1013	0.0590	6.05	0.0037
I-Pentane	0.0734	0.0401	0.0270	2.94	0.0018
N-Pentane	0.0282	0.0154	0.0100	1.13	0.0007
Hexane Plus	0.0831	0.0454	0.0370	4.38	0.0028
Total	100.0000	54.6565	17.4380	1047.67	0.6004

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0023	CYLINDER #:	6058
BTU/CU.FT IDEAL:	1050.1	CYLINDER PRESSURE:	PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1052.5	ANALYSIS DATE:	05/12/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1034.2	ANALYSIS TIME:	02:00:00 AM
DRY BTU @ 15.025:	1073.6	ANALYSIS RUN BY:	KERRA GONZALEZ
REAL SPECIFIC GRAVITY:	0.6015		

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:	GRENIER B #004E RTU; BHD	BRADENHEAD	05/17/2023
Stn. No.:	3004529406	DK	35825-12700
Mtr. No.:	WIH35829		

Smpl Date:	05/05/2023	07/28/2020
Test Date:	05/12/2023	08/06/2020
Run No:	HS20230021	HS200147
Nitrogen:	2.0808	1.7988
CO2:	0.0134	0.0016
Methane:	92.6125	91.8434
Ethane:	3.7247	4.5023
Propane:	0.9651	1.1789
I-Butane:	0.2335	0.2847
N-Butane:	0.1853	0.2178
I-Pentane:	0.0734	0.0851
N-Pentane:	0.0282	0.0257
Hexane+:	0.0831	0.0617
BTU:	1052.5	1065.9
GPM:	17.4380	17.5620
SPG:	0.6015	0.6069



Well Name: GRENIER B #004E RTU;
 API #: 3004529406
 Source: CASING
 Sample Type: GAS
 Analysis No: HS20230022
 Cust No: 35825-12705

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	CASING
Well Name:	GRENIER B #004E RTU; CSG	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:		Ambient Temp:	DEG. F
Formation:	DK	Flow Rate:	MCF/D
Cust. Stn. No.:	3004529406	Sample Method:	Purge & Fill
	WIH35829	Sample Date:	05/05/2023
	AREA 3 / RUN 306	Sample Time:	11.30 AM
Heat Trace:	N	Sampled By:	CHRISTOPHER VELASQUEZ
Remarks:		Sampled by (CO):	HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.7368	0.7326	0.0810	0.00	0.0071
CO2	0.2966	0.2949	0.0510	0.00	0.0045
Methane	86.6676	86.1683	14.7330	875.34	0.4801
Ethane	6.2864	6.2502	1.6860	111.25	0.0653
Propane	3.7679	3.7462	1.0410	94.80	0.0574
Iso-Butane	0.4680	0.4653	0.1540	15.22	0.0094
N-Butane	0.9447	0.9393	0.2990	30.82	0.0190
I-Pentane	0.2408	0.2394	0.0880	9.63	0.0060
N-Pentane	0.1993	0.1982	0.0720	7.99	0.0050
Hexane Plus	0.3919	0.3896	0.1750	20.66	0.0130
Total	100.0000	99.4240	18.3800	1165.72	0.6666

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.003	CYLINDER #:	4109
BTU/CU.FT IDEAL:	1168.4	CYLINDER PRESSURE:	103 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1171.9	ANALYSIS DATE:	05/10/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1151.5	ANALYSIS TIME:	08:50:54 AM
DRY BTU @ 15.025:	1195.4	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.6683		

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:	GRENIER B #004E RTU; CSG	CASING	05/17/2023
Stn. No.:	3004529406	DK	35825-12705
Mtr. No.:	WIH35829		

Smpl Date:	05/05/2023	05/05/2023	07/28/2020
Test Date:	05/10/2023	05/10/2023	08/06/2020
Run No:	HS20230022	HS20230022	HS200148
Nitrogen:	0.7368	0.7368	0.5107
CO2:	0.2966	0.2966	0.3116
Methane:	86.6676	86.6676	88.1242
Ethane:	6.2864	6.2864	6.4052
Propane:	3.7679	3.7679	2.9911
I-Butane:	0.4680	0.4680	0.3601
N-Butane:	0.9447	0.9447	0.7054
I-Pentane:	0.2408	0.2408	0.1788
N-Pentane:	0.1993	0.1993	0.1458
Hexane+:	0.3919	0.3919	0.2671
BTU:	1171.9	1171.9	1146.3
GPM:	18.3800	18.3800	18.2090
SPG:	0.6683	0.6683	0.6497



Well Name: GRENIER B #004E RTU;
 API #: 3004529406
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS20230023
 Cust No: 35825-12710

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	TUBING
Well Name:	GRENIER B #004E RTU; TBG	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:		Ambient Temp:	DEG. F
Formation:	DK	Flow Rate:	MCF/D
Cust. Stn. No.:	3004529406	Sample Method:	Purge & Fill
	WIH35829	Sample Date:	05/05/2023
	AREA 3 / RUN 306	Sample Time:	11.30 AM
Heat Trace:	N	Sampled By:	CHRISTOPHER VELASQUEZ
Remarks:		Sampled by (CO):	HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2777	0.2768	0.0310	0.00	0.0027
CO2	0.8998	0.8970	0.1540	0.00	0.0137
Methane	83.3181	83.0607	14.1680	841.51	0.4615
Ethane	8.7527	8.7257	2.3480	154.90	0.0909
Propane	3.8878	3.8758	1.0740	97.82	0.0592
Iso-Butane	0.7059	0.7037	0.2320	22.96	0.0142
N-Butane	0.9976	0.9945	0.3150	32.54	0.0200
I-Pentane	0.3386	0.3376	0.1240	13.55	0.0084
N-Pentane	0.2606	0.2598	0.0950	10.45	0.0065
Hexane Plus	0.5612	0.5595	0.2510	29.58	0.0186
Total	100.0000	99.6911	18.7920	1203.31	0.6956

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0033	CYLINDER #:	6247
BTU/CU.FT IDEAL:	1206.1	CYLINDER PRESSURE:	91 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1210.1	ANALYSIS DATE:	05/10/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1189.0	ANALYSIS TIME:	09:00:31 AM
DRY BTU @ 15.025:	1234.3	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.6976		

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:	GRENIER B #004E RTU; TBG	TUBING	05/17/2023
Stn. No.:	3004529406	DK	35825-12710
Mtr. No.:	WIH35829		

Smpl Date:	05/05/2023	07/28/2020
Test Date:	05/10/2023	08/06/2020
Run No:	HS20230023	HS200149
Nitrogen:	0.2777	0.3846
CO2:	0.8998	0.3223
Methane:	83.3181	87.9521
Ethane:	8.7527	6.4114
Propane:	3.8878	3.0032
I-Butane:	0.7059	0.3653
N-Butane:	0.9976	0.7172
I-Pentane:	0.3386	0.1866
N-Pentane:	0.2606	0.1544
Hexane+:	0.5612	0.5029
BTU:	1210.1	1158.8
GPM:	18.7920	18.2920
SPG:	0.6976	0.6566

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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 230081

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 230081
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	different gas on bradenhead	10/6/2023