



Well Name: ZACHRY 37; BHD
 API #: 3004525463
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS20240184
 Cust No: 35825-16115

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: ZACHRY 37; BHD
 County/State:
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3004525463

Source: BRADENHEAD
 Well Flowing: Y
 Pressure: 35 PSIG
 Flow Temp: 88 DEG. F
 Ambient Temp: 88 DEG. F
 Flow Rate: 224 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 07/09/2024
 Sample Time: 11.59 AM
 Sampled By: DYLAN RECTOR
 Sampled by (CO): HILCORP

Heat Trace: N
 Remarks: AREA 8 / RUN 0806

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	26.2688	26.1203	2.8950	0.00	0.2541
CO2	0.0312	0.0310	0.0050	0.00	0.0005
Methane	65.0660	64.6983	11.0500	657.17	0.3604
Ethane	4.6730	4.6466	1.2520	82.70	0.0485
Propane	2.3632	2.3498	0.6520	59.46	0.0360
Iso-Butane	0.5121	0.5092	0.1680	16.65	0.0103
N-Butane	0.5787	0.5754	0.1830	18.88	0.0116
I-Pentane	0.1756	0.1746	0.0640	7.03	0.0044
N-Pentane	0.1098	0.1092	0.0400	4.40	0.0027
Hexane Plus	0.2216	0.2203	0.0990	11.68	0.0073
Total	100.0000	99.4347	16.4080	857.96	0.7358

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.002
 BTU/CU.FT IDEAL: 859.9
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 861.7
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 846.7
 DRY BTU @ 15.025: 879.0
 REAL SPECIFIC GRAVITY: 0.737

CYLINDER #: 1034
 CYLINDER PRESSURE: 15 PSIG
 ANALYSIS DATE: 07/15/2024
 ANALYSIS TIME: 02:57:08 PM
 ANALYSIS RUN BY: SARAH BALLARD

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: 07/16/2024

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	ZACHRY 37; BHD	BRADENHEAD	07/16/2024
Stn. No.:	3004525463		35825-16115
Mtr. No.:			

Smpl Date: 07/09/2024
Test Date: 07/15/2024
Run No: HS20240184

Nitrogen:	26.2688
CO2:	0.0312
Methane:	65.0660
Ethane:	4.6730
Propane:	2.3632
I-Butane:	0.5121
N-Butane:	0.5787
I-Pentane:	0.1756
N-Pentane:	0.1098
Hexane+:	0.2216
BTU:	861.7
GPM:	16.4080
SPG:	0.7370



Well Name: ZACHRY 37; CSG
 API #: 3004525463
 Source: CASING
 Sample Type: GAS
 Analysis No: HS20240185
 Cust No: 35825-16120

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: ZACHRY 37; CSG
 County/State:
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3004525463

Source: CASING
 Well Flowing: Y
 Pressure: 35 PSIG
 Flow Temp: 88 DEG. F
 Ambient Temp: 88 DEG. F
 Flow Rate: 224 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 07/09/2024
 Sample Time: 12.08 PM
 Sampled By: DYLAN RECTOR
 Sampled by (CO): HILCORP

Heat Trace: N
 Remarks: AREA 8 / RUN 0806

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	10.6818	10.7703	1.1800	0.00	0.1033
CO2	0.2530	0.2551	0.0430	0.00	0.0038
Methane	64.5788	65.1135	10.9920	652.25	0.3577
Ethane	9.6547	9.7347	2.5920	170.86	0.1002
Propane	7.6977	7.7614	2.1290	193.68	0.1172
Iso-Butane	1.8554	1.8708	0.6100	60.34	0.0372
N-Butane	2.2005	2.2187	0.6970	71.79	0.0442
I-Pentane	0.8676	0.8748	0.3190	34.71	0.0216
N-Pentane	0.7005	0.7063	0.2550	28.08	0.0175
Hexane Plus	1.5100	1.5225	0.6760	79.59	0.0500
Total	100.0000	100.8281	19.4930	1291.30	0.8527

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0043
 BTU/CU.FT IDEAL: 1294.3
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1299.9
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1277.3
 DRY BTU @ 15.025: 1325.9
 REAL SPECIFIC GRAVITY: 0.8561

CYLINDER #: 1461
 CYLINDER PRESSURE: 51 PSIG
 ANALYSIS DATE: 07/15/2024
 ANALYSIS TIME: 02:48:46 PM
 ANALYSIS RUN BY: SARAH BALLARD

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: 07/16/2024

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	ZACHRY 37; CSG	CASING	07/16/2024
Stn. No.:	3004525463		35825-16120
Mtr. No.:			

Smpl Date: 07/09/2024
Test Date: 07/15/2024
Run No: HS20240185

Nitrogen:	10.6818
CO2:	0.2530
Methane:	64.5788
Ethane:	9.6547
Propane:	7.6977
I-Butane:	1.8554
N-Butane:	2.2005
I-Pentane:	0.8676
N-Pentane:	0.7005
Hexane+:	1.5100
BTU:	1299.9
GPM:	19.4930
SPG:	0.8561



Well Name: ZACHRY 37; TBG
 API #: 3004525463
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS20240186
 Cust No: 35825-16125

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: ZACHRY 37; TBG
 County/State:
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3004525463

Source: TUBING
 Well Flowing: Y
 Pressure: 35 PSIG
 Flow Temp: 88 DEG. F
 Ambient Temp: 88 DEG. F
 Flow Rate: 224 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 07/19/2024
 Sample Time: 12.20 PM
 Sampled By: DYLAN RECTOR
 Sampled by (CO): HILCORP

Heat Trace: AREA 8 / RUN 0806

Remarks: N

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5975	0.5988	0.0660	0.00	0.0058
CO2	0.6372	0.6386	0.1090	0.00	0.0097
Methane	74.1653	74.3273	12.6240	749.07	0.4108
Ethane	12.3855	12.4126	3.3260	219.19	0.1286
Propane	7.0515	7.0669	1.9510	177.42	0.1074
Iso-Butane	1.1262	1.1287	0.3700	36.62	0.0226
N-Butane	1.9467	1.9510	0.6160	63.51	0.0391
I-Pentane	0.5529	0.5541	0.2030	22.12	0.0138
N-Pentane	0.4715	0.4725	0.1720	18.90	0.0117
Hexane Plus	1.0657	1.0680	0.4770	56.17	0.0353
Total	100.0000	100.2185	19.9140	1343.00	0.7847

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0043
 BTU/CU.FT IDEAL: 1346.1
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1351.9
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1328.4
 DRY BTU @ 15.025: 1379.0
 REAL SPECIFIC GRAVITY: 0.7877

CYLINDER #: 2119
 CYLINDER PRESSURE: 36 PSIG
 ANALYSIS DATE: 07/15/2024
 ANALYSIS TIME: 03:06:30 PM
 ANALYSIS RUN BY: SARAH BALLARD

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: 07/16/2024

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	ZACHRY 37; TBG	TUBING	07/16/2024
Stn. No.:	3004525463		35825-16125
Mtr. No.:			

Smpl Date: 07/19/2024
Test Date: 07/15/2024
Run No: HS20240186

Nitrogen:	0.5975
CO2:	0.6372
Methane:	74.1653
Ethane:	12.3855
Propane:	7.0515
I-Butane:	1.1262
N-Butane:	1.9467
I-Pentane:	0.5529
N-Pentane:	0.4715
Hexane+:	1.0657
BTU:	1351.9
GPM:	19.9140
SPG:	0.7877

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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 365844

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 365844
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	Same gas bradenhead and production	7/24/2024