



Well Name: COZZENS C 1E; BHD

API #: 30-045-23671

Source: BRADENHEAD

Sample Type: GAS

Analysis No: HS20230002

Cust No: 35825-14520

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: COZZENS C 1E; BHD

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation:

Cust. Stn. No.:

Source: BRADENHEAD

Well Flowing:

Pressure: 80 PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method:

Sample Date: 02/24/2023

Sample Time: 12.00 AM

Sampled By: SHAD BROWN

Sampled by (CO): HILCORP

AREA 7/ RUN 703

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2244	0.2254	0.0250	0.00	0.0022
CO2	0.1551	0.1558	0.0270	0.00	0.0024
Methane	87.2188	87.6145	14.8270	880.91	0.4831
Ethane	7.2665	7.2995	1.9490	128.60	0.0754
Propane	2.9196	2.9328	0.8070	73.46	0.0445
Iso-Butane	0.5294	0.5318	0.1740	17.22	0.0106
N-Butane	0.8317	0.8355	0.2630	27.13	0.0167
I-Pentane	0.2967	0.2980	0.1090	11.87	0.0074
N-Pentane	0.2089	0.2098	0.0760	8.37	0.0052
Hexane Plus	0.3489	0.3505	0.1560	18.39	0.0115
Total	100.0000	100.4536	18.4130	1165.95	0.6590

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.003
 BTU/CU.FT IDEAL: 1168.6
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1172.0
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1151.6
 DRY BTU @ 15.025: 1195.5
 REAL SPECIFIC GRAVITY: 0.6606

CYLINDER #: 4009
 CYLINDER PRESSURE: 80 PSIG
 ANALYSIS DATE: 02/24/2023
 ANALYSIS TIME: 09:48:33 AM
 ANALYSIS RUN BY: KERRA GONZALEZ

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: 02/24/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: COZZENS C 1E; BHD
Stn. No.:
Mtr. No.:

BRADENHEAD

02/24/2023
35825-14520

Smpl Date:	02/24/2023	07/25/2022
Test Date:	02/24/2023	07/25/2022
Run No:	HS20230002	HS20220121
Nitrogen:	0.2244	0.3983
CO2:	0.1551	0.7801
Methane:	87.2188	81.0884
Ethane:	7.2665	9.9424
Propane:	2.9196	4.4227
I-Butane:	0.5294	0.6487
N-Butane:	0.8317	1.2826
I-Pentane:	0.2967	0.4556
N-Pentane:	0.2089	0.3743
Hexane+:	0.3489	0.6069
BTU:	1172.0	1241.6
GPM:	18.4130	19.0540
SPG:	0.6606	0.7172



Well Name: COZZENS C 1E; CSG

API #: 30-045-23671

Source: CASING

Sample Type: GAS

Analysis No: HS20230004

Cust No: 35825-14530

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: COZZENS C 1E; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.:

Source: CASING
 Well Flowing: Y
 Pressure: 110 PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: MCF/D
 Sample Method:
 Sample Date: 02/22/2023
 Sample Time: 10.05 AM
 Sampled By: SHAD BROWN
 Sampled by (CO): HILCORP

AREA 7/ RUN 703

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4802	0.4816	0.0530	0.00	0.0046
CO2	0.3725	0.3736	0.0640	0.00	0.0057
Methane	87.3291	87.5874	14.8460	882.02	0.4837
Ethane	5.8981	5.9155	1.5820	104.38	0.0612
Propane	3.1857	3.1951	0.8800	80.16	0.0485
Iso-Butane	0.5342	0.5358	0.1750	17.37	0.0107
N-Butane	0.9562	0.9590	0.3020	31.19	0.0192
I-Pentane	0.3487	0.3497	0.1280	13.95	0.0087
N-Pentane	0.2865	0.2873	0.1040	11.48	0.0071
Hexane Plus	0.6088	0.6106	0.2720	32.09	0.0201
Total	100.0000	100.2956	18.4060	1172.65	0.6696

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.003
 BTU/CU.FT IDEAL: 1175.4
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1178.9
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1158.4
 DRY BTU @ 15.025: 1202.5
 REAL SPECIFIC GRAVITY: 0.6714

CYLINDER #: 4196
 CYLINDER PRESSURE: 120 PSIG
 ANALYSIS DATE: 02/24/2023
 ANALYSIS TIME: 09:40:47 AM
 ANALYSIS RUN BY: KERRA GONZALEZ

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: 02/24/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: COZZENS C 1E; CSG

CASING

02/24/2023

Stn. No.:

35825-14530

Mtr. No.:

Smpl Date:	02/22/2023	07/26/2022
Test Date:	02/24/2023	07/25/2022
Run No:	HS20230004	HS20220123
Nitrogen:	0.4802	0.4092
CO2:	0.3725	0.7999
Methane:	87.3291	80.8230
Ethane:	5.8981	10.1203
Propane:	3.1857	4.5677
I-Butane:	0.5342	0.6496
N-Butane:	0.9562	1.2399
I-Pentane:	0.3487	0.4471
N-Pentane:	0.2865	0.3715
Hexane+:	0.6088	0.5718
BTU:	1178.9	1242.0
GPM:	18.4060	19.0650
SPG:	0.6714	0.7179



Well Name: COZZENS C 1E; TBG

API #: 30-045-23671

Source: TUBING

Sample Type: GAS

Analysis No: HS20230003

Cust No: 35825-14525

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: COZZENS C 1E; TBG

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation:

Cust. Stn. No.:

Source: TUBING

Well Flowing: Y

Pressure: 100 PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method:

Sample Date: 02/22/2023

Sample Time: 10.00 AM

Sampled By: SHAD BROWN

Sampled by (CO): HILCORP

AREA 7/ RUN 703

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4063	0.4032	0.0450	0.00	0.0039
CO2	1.1707	1.1617	0.2010	0.00	0.0178
Methane	74.8926	74.3184	12.7440	756.42	0.4148
Ethane	13.2182	13.1168	3.5480	233.92	0.1372
Propane	6.2815	6.2333	1.7370	158.05	0.0956
Iso-Butane	0.8829	0.8761	0.2900	28.71	0.0177
N-Butane	1.6540	1.6413	0.5230	53.96	0.0332
I-Pentane	0.4976	0.4938	0.1830	19.91	0.0124
N-Pentane	0.4043	0.4012	0.1470	16.21	0.0101
Hexane Plus	0.5919	0.5874	0.2650	31.20	0.0196
Total	100.0000	99.2332	19.6830	1298.37	0.7624

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.004
 BTU/CU.FT IDEAL: 1301.4
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1306.6
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1283.9
 DRY BTU @ 15.025: 1332.8
 REAL SPECIFIC GRAVITY: 0.7651

CYLINDER #: 4061
 CYLINDER PRESSURE: 110 PSIG
 ANALYSIS DATE: 02/24/2023
 ANALYSIS TIME: 09:27:26 AM
 ANALYSIS RUN BY: KERRA GONZALEZ

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: 02/24/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: COZZENS C 1E; TBG
Stn. No.:
Mtr. No.:

TUBING

02/24/2023
35825-14525

Smpl Date:	02/22/2023	07/25/2022
Test Date:	02/24/2023	07/25/2022
Run No:	HS20230003	HS20220122
Nitrogen:	0.4063	0.3943
CO2:	1.1707	0.7211
Methane:	74.8926	81.6270
Ethane:	13.2182	9.5737
Propane:	6.2815	4.1925
I-Butane:	0.8829	0.6705
N-Butane:	1.6540	1.3634
I-Pentane:	0.4976	0.4612
N-Pentane:	0.4043	0.3873
Hexane+:	0.5919	0.6090
BTU:	1306.6	1238.9
GPM:	19.6830	19.0110
SPG:	0.7651	0.7145

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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 192088

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 192088
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	same gas bradenhead and production casing	3/30/2023