



Well Name: CULPEPPER MARTIN 8A;

API #: 3004523334

Source: BRADENHEAD

Sample Type: GAS

Analysis No: HS20230217

Cust No: 35825-10010

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: CULPEPPER MARTIN 8A; BHD
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation: MV
 Cust. Stn. No.: 3004523334
 34659-30

Source: BRADENHEAD
 Well Flowing: N
 Pressure: 75 PSIG
 Flow Temp: DEG. F
 Ambient Temp: 96 DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 08/04/2023
 Sample Time: 12.18 PM
 Sampled By: JEFF HOWE
 Sampled by (CO): HILCORP

Heat Trace: AREA 1, RUN 102
 N

Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2109	0.2068	0.0230	0.00	0.0020
CO2	0.8851	0.8680	0.1520	0.00	0.0134
Methane	83.2760	81.6645	14.1620	841.09	0.4613
Ethane	8.7507	8.5814	2.3480	154.86	0.0908
Propane	3.5103	3.4424	0.9700	88.32	0.0534
Iso-Butane	0.6411	0.6287	0.2100	20.85	0.0129
N-Butane	1.0575	1.0370	0.3340	34.50	0.0212
I-Pentane	0.4150	0.4070	0.1520	16.60	0.0103
N-Pentane	0.3262	0.3199	0.1190	13.08	0.0081
Hexane Plus	0.9272	0.9093	0.4150	48.87	0.0307
Total	100.0000	98.0650	18.8850	1218.17	0.7043

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
 BTU/CU.FT IDEAL: 1221.0
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1225.2
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1203.9
 DRY BTU @ 15.025: 1249.7
 REAL SPECIFIC GRAVITY: 0.7064

CYLINDER #: 4173
 CYLINDER PRESSURE: 75 PSIG
 ANALYSIS DATE: 08/09/2023
 ANALYSIS TIME: 10:04:18 AM
 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: 08/15/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	CULPEPPER MARTIN 8A; BHD	BRADENHEAD	08/15/2023
Stn. No.:	3004523334	MV	35825-10010
Mtr. No.:	34659-30		

Smpl Date:	08/04/2023	09/27/2017
Test Date:	08/09/2023	09/27/2017
Run No:	HS20230217	HS170003
Nitrogen:	0.2109	0.2196
CO2:	0.8851	0.8038
Methane:	83.2760	83.3194
Ethane:	8.7507	8.7581
Propane:	3.5103	3.5808
I-Butane:	0.6411	0.6336
N-Butane:	1.0575	1.1089
I-Pentane:	0.4150	0.4252
N-Pentane:	0.3262	0.3318
Hexane+:	0.9272	0.8188
BTU:	1225.2	1223.8
GPM:	18.8850	18.8740
SPG:	0.7064	0.7043



Well Name: CULPEPPER MARTIN 8A;
 API #: 3004523334
 Source: CASING
 Sample Type: GAS
 Analysis No: HS20230218
 Cust No: 35825-10015

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	CASING
Well Name:	CULPEPPER MARTIN 8A; CSG	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	72 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:	FEE	Ambient Temp:	96 DEG. F
Formation:	MV	Flow Rate:	MCF/D
Cust. Stn. No.:	3004523334	Sample Method:	Purge & Fill
	34659-30	Sample Date:	08/04/2023
	AREA 1, RUN 102	Sample Time:	12.25 PM
Heat Trace:	N	Sampled By:	JEFF HOWE
Remarks:		Sampled by (CO):	HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2418	0.2420	0.0270	0.00	0.0023
CO2	0.9884	0.9893	0.1690	0.00	0.0150
Methane	81.6887	81.7636	13.8940	825.06	0.4525
Ethane	9.4614	9.4701	2.5390	167.44	0.0982
Propane	3.9766	3.9803	1.0990	100.06	0.0605
Iso-Butane	0.7135	0.7142	0.2340	23.20	0.0143
N-Butane	1.2518	1.2530	0.3960	40.84	0.0251
I-Pentane	0.4758	0.4762	0.1750	19.04	0.0119
N-Pentane	0.3812	0.3816	0.1390	15.28	0.0095
Hexane Plus	0.8208	0.8216	0.3670	43.26	0.0272
Total	100.0000	100.0919	19.0390	1234.17	0.7166

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0035	CYLINDER #:	4186
BTU/CU.FT IDEAL:	1237.0	CYLINDER PRESSURE:	78 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1241.4	ANALYSIS DATE:	08/08/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1219.8	ANALYSIS TIME:	03:56:00 AM
DRY BTU @ 15.025:	1266.3	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.7188		

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: 08/15/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	CULPEPPER MARTIN 8A; CSG	CASING	08/15/2023
Stn. No.:	3004523334	MV	35825-10015
Mtr. No.:	34659-30		

Smpl Date:	08/04/2023	05/24/2022	09/27/2017
Test Date:	08/08/2023	05/26/2022	09/27/2017
Run No:	HS20230218	HS20220087	HS170004
Nitrogen:	0.2418	0.2389	0.1940
CO2:	0.9884	7.4505	0.9726
Methane:	81.6887	91.5505	82.7556
Ethane:	9.4614	0.4022	8.8447
Propane:	3.9766	0.2002	3.6236
I-Butane:	0.7135	0.0447	0.6654
N-Butane:	1.2518	0.0153	1.1451
I-Pentane:	0.4758	0.0072	0.4495
N-Pentane:	0.3812	0.0000	0.3461
Hexane+:	0.8208	0.0905	1.0034
BTU:	1241.4	948.2	1234.4
GPM:	19.0390	17.0780	18.9580
SPG:	0.7188	0.6354	0.7136



Well Name: CULPEPPER MARTIN 8A;
 API #: 3004523334
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS20230219
 Cust No: 35825-10013

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	TUBING
Well Name:	CULPEPPER MARTIN 8A; TBG	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	72 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:	FEE	Ambient Temp:	96 DEG. F
Formation:		Flow Rate:	MCF/D
Cust. Stn. No.:	3004523334	Sample Method:	Purge & Fill
		Sample Date:	08/04/2023
		Sample Time:	12.30 PM
		Sampled By:	JEFF HOWE
		Sampled by (CO):	HILCORP

Heat Trace: N

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2194	0.2154	0.0240	0.00	0.0021
CO2	1.0232	1.0045	0.1750	0.00	0.0155
Methane	81.1350	79.6514	13.8010	819.46	0.4494
Ethane	9.7123	9.5347	2.6060	171.88	0.1008
Propane	4.1505	4.0746	1.1470	104.43	0.0632
Iso-Butane	0.7283	0.7150	0.2390	23.68	0.0146
N-Butane	1.2780	1.2546	0.4040	41.69	0.0256
I-Pentane	0.4846	0.4757	0.1780	19.39	0.0121
N-Pentane	0.3797	0.3728	0.1380	15.22	0.0095
Hexane Plus	0.8890	0.8727	0.3980	46.86	0.0294
Total	100.0000	98.1714	19.1100	1242.62	0.7223

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0036	CYLINDER #:	6110
BTU/CU.FT IDEAL:	1245.5	CYLINDER PRESSURE:	73 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1250.0	ANALYSIS DATE:	08/09/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1228.2	ANALYSIS TIME:	09:46:25 AM
DRY BTU @ 15.025:	1275.0	ANALYSIS RUN BY:	SARAH BALLARD
REAL SPECIFIC GRAVITY:	0.7246		

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: 08/15/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	CULPEPPER MARTIN 8A; TBG	TUBING	08/15/2023
Stn. No.:	3004523334		35825-10013
Mtr. No.:			

Smpl Date:	08/04/2023
Test Date:	08/09/2023
Run No:	HS20230219
Nitrogen:	0.2194
CO2:	1.0232
Methane:	81.1350
Ethane:	9.7123
Propane:	4.1505
I-Butane:	0.7283
N-Butane:	1.2780
I-Pentane:	0.4846
N-Pentane:	0.3797
Hexane+:	0.8890
BTU:	1250.0
GPM:	19.1100
SPG:	0.7246

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1000 Rio Brazos Rd., Aztec, NM 87410
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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 252534

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 252534
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	gas does not appear to be the same	9/18/2023