



Well Name: CULPEPPER MARTIN 13;
 API #: 3004511222
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS20230202
 Cust No: 35825-12990

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	BRADENHEAD
Well Name:	CULPEPPER MARTIN 13; BHD	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:	FEE	Ambient Temp:	DEG. F
Formation:	MV / DK	Flow Rate:	MCF/D
Cust. Stn. No.:	3004511222	Sample Method:	Purge & Fill
	3583830	Sample Date:	08/04/2023
	AREA 2 / RUN 201	Sample Time:	1.15 PM
Heat Trace:	N	Sampled By:	JEFF HOWE
Remarks:		Sampled by (CO):	HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3536	0.3545	0.0390	0.00	0.0034
CO2	0.0019	0.0019	0.0000	0.00	0.0000
Methane	88.7902	89.0131	15.0920	896.78	0.4918
Ethane	5.8157	5.8303	1.5590	102.92	0.0604
Propane	2.6047	2.6112	0.7190	65.54	0.0397
Iso-Butane	0.7653	0.7672	0.2510	24.89	0.0154
N-Butane	0.7971	0.7991	0.2520	26.00	0.0160
I-Pentane	0.3276	0.3284	0.1200	13.11	0.0082
N-Pentane	0.2067	0.2072	0.0750	8.29	0.0051
Hexane Plus	0.3372	0.3380	0.1510	17.77	0.0112
Total	100.0000	100.2509	18.2580	1155.30	0.6511

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0029
BTU/CU.FT IDEAL:	1158.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1161.3
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1141.1
DRY BTU @ 15.025:	1184.6
REAL SPECIFIC GRAVITY:	0.6527

CYLINDER #:	2182
CYLINDER PRESSURE:	PSIG
ANALYSIS DATE:	08/09/2023
ANALYSIS TIME:	07:46:14 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 13; BHD	BRADENHEAD	08/15/2023
Stn. No.:	3004511222	MV / DK	35825-12990
Mtr. No.:	3583830		

Smpl Date:	08/04/2023	08/21/2020
Test Date:	08/09/2023	08/25/2020
Run No:	HS20230202	HS200219
Nitrogen:	0.3536	0.5038
CO2:	0.0019	0.0053
Methane:	88.7902	88.0383
Ethane:	5.8157	5.7916
Propane:	2.6047	2.9712
I-Butane:	0.7653	0.9568
N-Butane:	0.7971	0.8301
I-Pentane:	0.3276	0.3615
N-Pentane:	0.2067	0.2062
Hexane+:	0.3372	0.3352
BTU:	1161.3	1171.1
GPM:	18.2580	18.3300
SPG:	0.6527	0.6607



Well Name: CULPEPPER MARTIN 13;
 API #: 3004511222
 Source: CASING
 Sample Type: GAS
 Analysis No: HS20230203
 Cust No: 35825-12995

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	CASING
Well Name:	CULPEPPER MARTIN 13; 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 / DK	Flow Rate:	MCF/D
Cust. Stn. No.:	3004511222	Sample Method:	Purge & Fill
	3583830	Sample Date:	08/04/2023
	AREA 2 / RUN 201	Sample Time:	1.03 PM
Heat Trace:	N	Sampled By:	JEFF HOWE
Remarks:		Sampled by (CO):	HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2262	0.2201	0.0250	0.00	0.0022
CO2	1.3307	1.2946	0.2280	0.00	0.0202
Methane	80.9258	78.7292	13.7690	817.35	0.4482
Ethane	8.8783	8.6373	2.3830	157.12	0.0922
Propane	3.6806	3.5807	1.0180	92.61	0.0560
Iso-Butane	0.7692	0.7483	0.2530	25.01	0.0154
N-Butane	1.3007	1.2654	0.4120	42.43	0.0261
I-Pentane	0.6960	0.6771	0.2550	27.85	0.0173
N-Pentane	0.5813	0.5655	0.2110	23.30	0.0145
Hexane Plus	1.6112	1.5675	0.7210	84.93	0.0533
Total	100.0000	97.2857	19.2750	1270.60	0.7455

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0039	CYLINDER #:	2176
BTU/CU.FT IDEAL:	1273.5	CYLINDER PRESSURE:	74 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1278.5	ANALYSIS DATE:	08/09/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1256.3	ANALYSIS TIME:	10:57:27 AM
DRY BTU @ 15.025:	1304.1	ANALYSIS RUN BY:	SARAH BALLARD
REAL SPECIFIC GRAVITY:	0.7482		

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 13; CSG	CASING	08/15/2023
Stn. No.:	3004511222	MV / DK	35825-12995
Mtr. No.:	3583830		

Smpl Date:	08/04/2023	08/21/2020
Test Date:	08/09/2023	08/25/2020
Run No:	HS20230203	HS200220
Nitrogen:	0.2262	0.2370
CO2:	1.3307	2.0252
Methane:	80.9258	79.4696
Ethane:	8.8783	9.4453
Propane:	3.6806	3.7011
I-Butane:	0.7692	0.8356
N-Butane:	1.3007	1.1910
I-Pentane:	0.6960	0.7925
N-Pentane:	0.5813	0.6285
Hexane+:	1.6112	1.6742
BTU:	1278.5	1282.2
GPM:	19.2750	19.3740
SPG:	0.7482	0.7619



Well Name: CULPEPPER MARTIN 13;
 API #: 3004511222
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS20230204
 Cust No: 35825-13005

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	TUBING
Well Name:	CULPEPPER MARTIN 13; TBG	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	63 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:	FEE	Ambient Temp:	96 DEG. F
Formation:	MV / DK	Flow Rate:	MCF/D
Cust. Stn. No.:	3004511222	Sample Method:	Purge & Fill
	3583830	Sample Date:	08/04/2023
	AREA 2 / RUN 201	Sample Time:	12.58 PM
Heat Trace:	N	Sampled By:	JEFF HOWE
Remarks:		Sampled by (CO):	HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2388	0.2346	0.0260	0.00	0.0023
CO2	1.2048	1.1838	0.2060	0.00	0.0183
Methane	80.4815	79.0757	13.6910	812.86	0.4458
Ethane	9.9203	9.7470	2.6620	175.56	0.1030
Propane	4.2062	4.1327	1.1630	105.83	0.0640
Iso-Butane	0.7452	0.7322	0.2450	24.23	0.0150
N-Butane	1.2836	1.2612	0.4060	41.87	0.0258
I-Pentane	0.5109	0.5020	0.1870	20.44	0.0127
N-Pentane	0.3893	0.3825	0.1420	15.61	0.0097
Hexane Plus	1.0194	1.0016	0.4560	53.73	0.0337
Total	100.0000	98.2533	19.1840	1250.14	0.7303

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0037	CYLINDER #:	6165
BTU/CU.FT IDEAL:	1253.0	CYLINDER PRESSURE:	70 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1257.7	ANALYSIS DATE:	08/09/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1235.8	ANALYSIS TIME:	10:14:12 AM
DRY BTU @ 15.025:	1282.9	ANALYSIS RUN BY:	SARAH BALLARD
REAL SPECIFIC GRAVITY:	0.7327		

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 13; TBG	TUBING	08/15/2023
Stn. No.:	3004511222	MV / DK	35825-13005
Mtr. No.:	3583830		

Smpl Date:	08/04/2023	08/21/2020
Test Date:	08/09/2023	08/25/2020
Run No:	HS20230204	HS200222
Nitrogen:	0.2388	0.2191
CO2:	1.2048	0.9980
Methane:	80.4815	81.4619
Ethane:	9.9203	9.8668
Propane:	4.2062	4.1526
I-Butane:	0.7452	0.7296
N-Butane:	1.2836	1.2104
I-Pentane:	0.5109	0.4424
N-Pentane:	0.3893	0.3246
Hexane+:	1.0194	0.5946
BTU:	1257.7	1234.3
GPM:	19.1840	19.0140
SPG:	0.7327	0.7141

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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 252539

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 252539
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

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