



Well Name: WM HANLEY 1E; BHD

API #: 3004524313

Source: BRADENHEAD

Sample Type: GAS

Analysis No: HS20230107

Cust No: 35825-15075

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: WM HANLEY 1E; BHD

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation: DK

Cust. Stn. No.: 3004524313

93-345-01

AREA 7 / RUN 704

Heat Trace:

Remarks:

Source: BRADENHEAD

Well Flowing: Y

Pressure: PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 06/30/2023

Sample Time: 12.30 PM

Sampled By: CURT WILLIAMS

Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3373	0.3324	0.0370	0.00	0.0033
CO2	0.0842	0.0830	0.0140	0.00	0.0013
Methane	82.7495	81.5493	14.0740	835.77	0.4583
Ethane	7.8474	7.7336	2.1050	138.88	0.0815
Propane	5.2120	5.1364	1.4410	131.14	0.0794
Iso-Butane	1.1267	1.1104	0.3700	36.64	0.0226
N-Butane	1.4646	1.4434	0.4630	47.78	0.0294
I-Pentane	0.4544	0.4478	0.1670	18.18	0.0113
N-Pentane	0.2734	0.2694	0.0990	10.96	0.0068
Hexane Plus	0.4505	0.4440	0.2020	23.75	0.0149
Total	100.0000	98.5497	18.9720	1243.09	0.7088

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
 BTU/CU.FT IDEAL: 1246.0
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1250.3
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1228.5
 DRY BTU @ 15.025: 1275.3
 REAL SPECIFIC GRAVITY: 0.711

CYLINDER #: 8004
 CYLINDER PRESSURE: 21 PSIG
 ANALYSIS DATE: 07/06/2023
 ANALYSIS TIME: 03:53:41 PM
 ANALYSIS RUN BY: ALEXIS MITCHELL

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: 08/04/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: WM HANLEY 1E; BHD
Stn. No.: 3004524313
Mtr. No.: 93-345-01

BRADENHEAD
DK

08/04/2023
35825-15075

Smpl Date: 06/30/2023
Test Date: 07/06/2023
Run No: HS20230107

Nitrogen: 0.3373
CO2: 0.0842
Methane: 82.7495
Ethane: 7.8474
Propane: 5.2120
I-Butane: 1.1267
N-Butane: 1.4646
I-Pentane: 0.4544
N-Pentane: 0.2734
Hexane+: 0.4505

BTU: 1250.3
GPM: 18.9720
SPG: 0.7110



Well Name: WM HANLEY 1E; CSG

API #: 3004524313

Source: CASING

Sample Type: GAS

Analysis No: HS20230108

Cust No: 35825-15080

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: WM HANLEY 1E; CSG

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation: DK

Cust. Stn. No.: 3004524313

93-345-01

AREA 7 / RUN 704

Heat Trace:

Remarks: RETURNED WITH NO END CAPS

Source: CASING

Well Flowing: Y

Pressure: PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 06/30/2023

Sample Time: 12.30 PM

Sampled By: CURT WILLIAMS

Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3083	0.3087	0.0340	0.00	0.0030
CO2	1.5736	1.5756	0.2690	0.00	0.0239
Methane	80.7431	80.8438	13.7340	815.51	0.4472
Ethane	9.6660	9.6781	2.5940	171.06	0.1004
Propane	4.0076	4.0126	1.1080	100.84	0.0610
Iso-Butane	0.7676	0.7686	0.2520	24.96	0.0154
N-Butane	1.1704	1.1719	0.3700	38.18	0.0235
I-Pentane	0.4463	0.4469	0.1640	17.86	0.0111
N-Pentane	0.3830	0.3835	0.1390	15.35	0.0095
Hexane Plus	0.9341	0.9353	0.4180	49.24	0.0309
Total	100.0000	100.1250	19.0820	1232.99	0.7260

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0036
 BTU/CU.FT IDEAL: 1235.8
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1240.3
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1218.7
 DRY BTU @ 15.025: 1265.1
 REAL SPECIFIC GRAVITY: 0.7283

CYLINDER #: 2149
 CYLINDER PRESSURE: 71 PSIG
 ANALYSIS DATE: 07/06/2023
 ANALYSIS TIME: 04:05:40 PM
 ANALYSIS RUN BY: ALEXIS MITCHELL

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: 08/04/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: WM HANLEY 1E; CSG
Stn. No.: 3004524313
Mtr. No.: 93-345-01

CASING
DK

08/04/2023
35825-15080

Smpl Date: 06/30/2023
Test Date: 07/06/2023
Run No: HS20230108

Nitrogen: 0.3083
CO2: 1.5736
Methane: 80.7431
Ethane: 9.6660
Propane: 4.0076
I-Butane: 0.7676
N-Butane: 1.1704
I-Pentane: 0.4463
N-Pentane: 0.3830
Hexane+: 0.9341

BTU: 1240.3
GPM: 19.0820
SPG: 0.7283



Well Name: WM HANLEY 1E; TBG

API #: 3004524313

Source: TUBING

Sample Type: GAS

Analysis No: HS20230109

Cust No: 35825-15085

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: WM HANLEY 1E; TBG

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation: DK

Cust. Stn. No.: 3004524313

93-345-01

AREA 7 / RUN 704

Heat Trace:

Remarks:

Source: TUBING

Well Flowing: Y

Pressure: PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 06/30/2023

Sample Time: 12.30 PM

Sampled By: CURT WILLIAMS

Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3862	0.3872	0.0430	0.00	0.0037
CO2	1.6353	1.6395	0.2800	0.00	0.0248
Methane	80.4880	80.6939	13.6910	812.93	0.4458
Ethane	9.8001	9.8252	2.6300	173.43	0.1017
Propane	4.0972	4.1077	1.1330	103.09	0.0624
Iso-Butane	0.7725	0.7745	0.2540	25.12	0.0155
N-Butane	1.1553	1.1583	0.3650	37.69	0.0232
I-Pentane	0.4219	0.4230	0.1550	16.88	0.0105
N-Pentane	0.3581	0.3590	0.1300	14.36	0.0089
Hexane Plus	0.8854	0.8877	0.3960	46.67	0.0293
Total	100.0000	100.2560	19.0770	1230.17	0.7260

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0036
 BTU/CU.FT IDEAL: 1233.0
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1237.5
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1216.0
 DRY BTU @ 15.025: 1262.3
 REAL SPECIFIC GRAVITY: 0.7283

CYLINDER #: 2036
 CYLINDER PRESSURE: 71 PSIG
 ANALYSIS DATE: 07/06/2023
 ANALYSIS TIME: 04:12:41 PM
 ANALYSIS RUN BY: ALEXIS MITCHELL

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: 08/04/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	WM HANLEY 1E; TBG	TUBING	08/04/2023
Stn. No.:	3004524313	DK	35825-15085
Mtr. No.:	93-345-01		

Smpl Date: 06/30/2023
Test Date: 07/06/2023
Run No: HS20230109

Nitrogen: 0.3862
CO2: 1.6353
Methane: 80.4880
Ethane: 9.8001
Propane: 4.0972
I-Butane: 0.7725
N-Butane: 1.1553
I-Pentane: 0.4219
N-Pentane: 0.3581
Hexane+: 0.8854

BTU: 1237.5
GPM: 19.0770
SPG: 0.7283

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District III
1000 Rio Brazos Rd., Aztec, NM 87410
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 255465

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 255465
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	simialr gas bradenhead and production casing	9/15/2023