



Well Name: OSWELL FED 1; BHD

API #: 3004508805

Source: BRADENHEAD

Sample Type: GAS

Analysis No: HS20230124

Cust No: 35825-12295

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: OSWELL FED 1; BHD
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: SF043260
 Formation: DK
 Cust. Stn. No.: 3004508805

Source: BRADENHEAD
 Well Flowing: Y
 Pressure: 76 PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 07/06/2023
 Sample Time: 8.38 AM
 Sampled By: AUSTIN HAWS
 Sampled by (CO): HILCORP

AREA 7 / RUN 703

Heat Trace:

Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2180	0.2176	0.0240	0.00	0.0021
CO2	0.0038	0.0038	0.0010	0.00	0.0001
Methane	89.5335	89.3719	15.2160	904.29	0.4959
Ethane	6.5398	6.5280	1.7530	115.73	0.0679
Propane	2.4027	2.3984	0.6640	60.45	0.0366
Iso-Butane	0.3933	0.3926	0.1290	12.79	0.0079
N-Butane	0.5221	0.5212	0.1650	17.03	0.0105
I-Pentane	0.1495	0.1492	0.0550	5.98	0.0037
N-Pentane	0.0943	0.0941	0.0340	3.78	0.0023
Hexane Plus	0.1430	0.1427	0.0640	7.54	0.0047
Total	100.0000	99.8195	18.1050	1127.60	0.6317

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
 BTU/CU.FT IDEAL: 1130.2
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1133.3
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1113.6
 DRY BTU @ 15.025: 1156.0
 REAL SPECIFIC GRAVITY: 0.6332

CYLINDER #: 1429
 CYLINDER PRESSURE: 58 PSIG
 ANALYSIS DATE: 07/12/2023
 ANALYSIS TIME: 11:09:51 AM
 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: 07/17/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	OSWELL FED 1; BHD	BRADENHEAD	07/17/2023
Stn. No.:	3004508805	DK	35825-12295
Mtr. No.:			

Smpl Date:	07/06/2023	10/07/2020	06/09/2020
Test Date:	07/12/2023	10/20/2020	07/14/2020
Run No:	HS20230124	HS200333	HS200065
Nitrogen:	0.2180	0.2193	0.2279
CO2:	0.0038	0.0182	0.0117
Methane:	89.5335	88.6037	87.3970
Ethane:	6.5398	7.2178	7.4682
Propane:	2.4027	2.7446	3.1111
I-Butane:	0.3933	0.4083	0.5151
N-Butane:	0.5221	0.4940	0.7123
I-Pentane:	0.1495	0.1180	0.2141
N-Pentane:	0.0943	0.0739	0.1465
Hexane+:	0.1430	0.1022	0.1961
BTU:	1133.3	1139.9	1164.0
GPM:	18.1050	18.1840	18.3590
SPG:	0.6332	0.6376	0.6531



Well Name: OSWELL FED 1; CSG

API #: 3004508805

Source: CASING

Sample Type: GAS

Analysis No: HS20230125

Cust No: 35825-12300

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: OSWELL FED 1; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: SF043260
 Formation: DK
 Cust. Stn. No.: 3004508805

Source: CASING
 Well Flowing: Y
 Pressure: 127 PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 07/06/2023
 Sample Time: 8.39 AM
 Sampled By: AUSTIN HAWS
 Sampled by (CO): HILCORP

AREA 7 / RUN 703

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2645	0.2641	0.0290	0.00	0.0026
CO2	0.0036	0.0036	0.0010	0.00	0.0001
Methane	86.7813	86.6385	14.7570	876.49	0.4807
Ethane	6.3339	6.3235	1.6990	112.09	0.0658
Propane	2.6865	2.6821	0.7420	67.60	0.0409
Iso-Butane	0.6408	0.6397	0.2100	20.84	0.0129
N-Butane	1.0434	1.0417	0.3300	34.04	0.0209
I-Pentane	0.5753	0.5744	0.2110	23.02	0.0143
N-Pentane	0.5074	0.5066	0.1840	20.34	0.0126
Hexane Plus	1.1633	1.1614	0.5200	61.32	0.0385
Total	100.0000	99.8356	18.6830	1215.73	0.6892

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0033
 BTU/CU.FT IDEAL: 1218.5
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1222.6
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1201.3
 DRY BTU @ 15.025: 1247.1
 REAL SPECIFIC GRAVITY: 0.6912

CYLINDER #: 1411
 CYLINDER PRESSURE: 107 PSIG
 ANALYSIS DATE: 07/12/2023
 ANALYSIS TIME: 11:20:04 AM
 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: 07/17/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	OSWELL FED 1; CSG	CASING	07/17/2023
Stn. No.:	3004508805	DK	35825-12300
Mtr. No.:			

Smpl Date:	07/06/2023	10/07/2020	06/09/2020
Test Date:	07/12/2023	10/20/2020	07/14/2020
Run No:	HS20230125	HS200332	HS200066
Nitrogen:	0.2645	0.3963	0.3851
CO2:	0.0036	1.3875	1.2694
Methane:	86.7813	83.6155	83.9823
Ethane:	6.3339	7.6061	7.7497
Propane:	2.6865	3.7608	3.6804
I-Butane:	0.6408	0.6790	0.6761
N-Butane:	1.0434	1.0902	0.9807
I-Pentane:	0.5753	0.4091	0.3562
N-Pentane:	0.5074	0.3195	0.2713
Hexane+:	1.1633	0.7360	0.6488
BTU:	1222.6	1206.1	1197.9
GPM:	18.6830	18.7430	18.6880
SPG:	0.6912	0.7043	0.6970



Well Name: OSWELL FED 1; TBG

API #: 3004508805

Source: TUBING

Sample Type: GAS

Analysis No: HS20230126

Cust No: 35825-12305

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: OSWELL FED 1; TBG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: SF043260
 Formation: DK
 Cust. Stn. No.: 3004508805

Source: TUBING
 Well Flowing: Y
 Pressure: 110 PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 07/06/2023
 Sample Time: 8.40 AM
 Sampled By: AUSTIN HAWS
 Sampled by (CO): HILCORP

AREA 7 / RUN 703

Heat Trace:

Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2297	0.2301	0.0250	0.00	0.0022
CO2	1.9008	1.9039	0.3250	0.00	0.0289
Methane	87.2461	87.3899	14.8300	881.19	0.4833
Ethane	6.1753	6.1855	1.6560	109.28	0.0641
Propane	2.2697	2.2734	0.6270	57.11	0.0346
Iso-Butane	0.4552	0.4560	0.1490	14.80	0.0091
N-Butane	0.6643	0.6654	0.2100	21.67	0.0133
I-Pentane	0.2833	0.2838	0.1040	11.33	0.0071
N-Pentane	0.2154	0.2158	0.0780	8.63	0.0054
Hexane Plus	0.5602	0.5611	0.2500	29.53	0.0185
Total	100.0000	100.1649	18.2540	1133.55	0.6665

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0029
 BTU/CU.FT IDEAL: 1136.2
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1139.5
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1119.7
 DRY BTU @ 15.025: 1162.3
 REAL SPECIFIC GRAVITY: 0.6681

CYLINDER #: 1371
 CYLINDER PRESSURE: 95 PSIG
 ANALYSIS DATE: 07/12/2023
 ANALYSIS TIME: 10:56:01 AM
 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: 07/17/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	OSWELL FED 1; TBG	TUBING	07/17/2023
Stn. No.:	3004508805	DK	35825-12305
Mtr. No.:			

Smpl Date:	07/06/2023	06/09/2020
Test Date:	07/12/2023	07/14/2020
Run No:	HS20230126	HS200067
Nitrogen:	0.2297	0.2211
CO2:	1.9008	1.8312
Methane:	87.2461	87.2817
Ethane:	6.1753	6.1391
Propane:	2.2697	2.2465
I-Butane:	0.4552	0.4493
N-Butane:	0.6643	0.6519
I-Pentane:	0.2833	0.2913
N-Pentane:	0.2154	0.2228
Hexane+:	0.5602	0.6651
BTU:	1139.5	1144.2
GPM:	18.2540	18.2800
SPG:	0.6681	0.6699

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1220 S. St Francis Dr., Santa Fe, NM 87505
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 243984

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 243984
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	similar gas all strings	9/20/2023