



Well Name: JOHNSTON A 1E; BHD

API #: API # 3004524981

Source: BRADENHEAD

Sample Type: GAS

Analysis No: HS2021006

Cust No: 35825-13440

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: JOHNSTON A 1E; BHD

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation: DK

Cust. Stn. No.: API # 3004524981

94-151-01

AREA 8 / RUN 0807

Source: BRADENHEAD

Well Flowing: N

Pressure: PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 04/06/2021

Sample Time: 11.22 AM

Sampled By: LEON S

Sampled by (CO): HILCORP

Heat Trace:

Remarks: PRESSURED WITH HELIUM TO 30LBS

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.1992	0.3563	0.1320	0.00	0.0116
CO2	0.0788	0.0234	0.0130	0.00	0.0012
Methane	90.2934	26.8269	15.3430	911.96	0.5001
Ethane	4.9702	1.4767	1.3320	87.96	0.0516
Propane	2.1231	0.6308	0.5860	53.42	0.0323
Iso-Butane	0.4480	0.1331	0.1470	14.57	0.0090
N-Butane	0.4581	0.1361	0.1450	14.94	0.0092
I-Pentane	0.1380	0.0410	0.0510	5.52	0.0034
N-Pentane	0.0926	0.0275	0.0340	3.71	0.0023
Hexane Plus	0.1986	0.0590	0.0890	10.47	0.0066
Total	100.0000	29.7108	17.8720	1102.56	0.6274

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0026
 BTU/CU.FT IDEAL: 1105.1
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1108.0
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1088.7
 DRY BTU @ 15.025: 1130.2
 REAL SPECIFIC GRAVITY: 0.6287

CYLINDER #: 5032
 CYLINDER PRESSURE: PSIG
 ANALYSIS DATE: 04/13/2021
 ANALYSIS TIME: 08:28:56 AM
 ANALYSIS RUN BY: RICHARD WILSON

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: 04/15/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	JOHNSTON A 1E; BHD	BRADENHEAD	04/15/2021
Stn. No.:	API # 3004524981	DK	35825-13440
Mtr. No.:	94-151-01		

Smpl Date: 04/06/2021
Test Date: 04/13/2021
Run No: HS2021006

Nitrogen: 1.1992
CO2: 0.0788
Methane: 90.2934
Ethane: 4.9702
Propane: 2.1231
I-Butane: 0.4480
N-Butane: 0.4581
I-Pentane: 0.1380
N-Pentane: 0.0926
Hexane+: 0.1986

BTU: 1108.0
GPM: 17.8720
SPG: 0.6287



Well Name: JOHNSTON A 1E; CSG

API #: API # 3004524981

Source: CASING

Sample Type: GAS

Analysis No: HS2021007

Cust No: 35825-13445

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: JOHNSTON A 1E; CSG

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation: DK

Cust. Stn. No.: API # 3004524981

94-151-01

AREA 8 / RUN 0807

Source: CASING

Well Flowing: N

Pressure: PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 04/06/2021

Sample Time: 12.39 PM

Sampled By: Leon S.

Sampled by (CO): HILCORP

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1094	0.1073	0.0120	0.00	0.0011
CO2	0.6661	0.6530	0.1140	0.00	0.0101
Methane	93.9218	92.0791	15.9580	948.61	0.5202
Ethane	3.0754	3.0151	0.8240	54.43	0.0319
Propane	0.9254	0.9072	0.2560	23.28	0.0141
Iso-Butane	0.2411	0.2364	0.0790	7.84	0.0048
N-Butane	0.0696	0.0682	0.0220	2.27	0.0014
I-Pentane	0.0559	0.0548	0.0200	2.24	0.0014
N-Pentane	0.0476	0.0467	0.0170	1.91	0.0012
Hexane Plus	0.8877	0.8703	0.3970	46.79	0.0294
Total	100.0000	98.0381	17.6990	1087.37	0.6156

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0025
 BTU/CU.FT IDEAL: 1089.9
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1092.6
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1073.6
 DRY BTU @ 15.025: 1114.5
 REAL SPECIFIC GRAVITY: 0.6169

CYLINDER #: 6204
 CYLINDER PRESSURE: 19 PSIG
 ANALYSIS DATE: 04/13/2021
 ANALYSIS TIME: 08:38:37 AM
 ANALYSIS RUN BY: RICHARD WILSON

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: 04/15/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: JOHNSTON A 1E; CSG
Stn. No.: API # 3004524981
Mtr. No.: 94-151-01

CASING
DK

04/15/2021
35825-13445

Smpl Date: 04/06/2021
Test Date: 04/13/2021
Run No: HS2021007

Nitrogen: 0.1094
CO2: 0.6661
Methane: 93.9218
Ethane: 3.0754
Propane: 0.9254
I-Butane: 0.2411
N-Butane: 0.0696
I-Pentane: 0.0559
N-Pentane: 0.0476
Hexane+: 0.8877

BTU: 1092.6
GPM: 17.6990
SPG: 0.6169



Well Name: JOHNSTON A 1E; TBG

API #: API # 3004524981

Source: TUBING

Sample Type: GAS

Analysis No: HS2021008

Cust No: 35825-13450

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: JOHNSTON A 1E; TBG

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation: DK

Cust. Stn. No.: API # 3004524981

94-151-01

AREA 8 / RUN 0807

Source: TUBING

Well Flowing: N

Pressure: PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 04/06/2021

Sample Time: 12.40 PM

Sampled By: LEON S.

Sampled by (CO): HILCORP

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1276	0.1258	0.0140	0.00	0.0012
CO2	0.6318	0.6231	0.1080	0.00	0.0096
Methane	94.8989	93.5895	16.1210	958.48	0.5256
Ethane	3.0862	3.0436	0.8270	54.62	0.0320
Propane	0.9169	0.9042	0.2530	23.07	0.0140
Iso-Butane	0.2263	0.2232	0.0740	7.36	0.0045
N-Butane	0.0610	0.0602	0.0190	1.99	0.0012
I-Pentane	0.0235	0.0232	0.0090	0.94	0.0006
N-Pentane	0.0061	0.0060	0.0020	0.24	0.0002
Hexane Plus	0.0217	0.0214	0.0100	1.14	0.0007
Total	100.0000	98.6202	17.4370	1047.84	0.5897

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0023
 BTU/CU.FT IDEAL: 1050.3
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1052.6
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1034.3
 DRY BTU @ 15.025: 1073.7
 REAL SPECIFIC GRAVITY: 0.5908

CYLINDER #: 6084
 CYLINDER PRESSURE: 19 PSIG
 ANALYSIS DATE: 04/13/2021
 ANALYSIS TIME: 09:00:36 AM
 ANALYSIS RUN BY: RICHARD WILSON

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: 04/15/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	JOHNSTON A 1E; TBG	TUBING	04/15/2021
Stn. No.:	API # 3004524981	DK	35825-13450
Mtr. No.:	94-151-01		

Smpl Date: 04/06/2021
Test Date: 04/13/2021
Run No: HS2021008

Nitrogen: 0.1276
CO2: 0.6318
Methane: 94.8989
Ethane: 3.0862
Propane: 0.9169
I-Butane: 0.2263
N-Butane: 0.0610
I-Pentane: 0.0235
N-Pentane: 0.0061
Hexane+: 0.0217

BTU: 1052.6
GPM: 17.4370
SPG: 0.5908

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District II
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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 25682

CONDITIONS OF APPROVAL

Operator:	HILCORP ENERGY COMPANY	1111 Travis Street	Houston, TX77002	OGRID:	372171	Action Number:	25682	Action Type:	GAS ANALYSIS
OCD Reviewer	Condition								
mkuehling	None								