



Well Name: JOHNSTON FED 6B; BHD
 API #: API # 3004530065
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS200252
 Cust No: 35825-13135

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	BRADENHEAD
Well Name:	JOHNSTON FED 6B; BHD	Well Flowing:	
County/State:	SAN JUAN NM	Pressure:	99 PSIG
Location:		Flow Temp:	88 DEG. F
Lease/PA/CA:		Ambient Temp:	DEG. F
Formation:	MV	Flow Rate:	80 MCF/D
Cust. Stn. No.:	API # 3004530065	Sample Method:	Purge & Fill
	ELB 98034	Sample Date:	08/25/2020
	AREA 4 / RUN 0408	Sample Time:	10.07 AM
Heat Trace:		Sampled By:	MIKE ARCHULETA
Remarks:	PRESSURED WITH HELIUM TO 30 LBS.	Sampled by (CO):	HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	99.7731	26.5165	10.9770	0.00	0.9650
CO2	0.0610	0.0162	0.0100	0.00	0.0009
Methane	0.1471	0.0391	0.0250	1.49	0.0008
Ethane	0.0098	0.0026	0.0030	0.17	0.0001
Propane	0.0000	0.0000	0.0000	0.00	0.0000
Iso-Butane	0.0000	0.0000	0.0000	0.00	0.0000
N-Butane	0.0000	0.0000	0.0000	0.00	0.0000
I-Pentane	0.0000	0.0000	0.0000	0.00	0.0000
N-Pentane	0.0000	0.0000	0.0000	0.00	0.0000
Hexane Plus	0.0090	0.0024	0.0040	0.47	0.0003
Total	100.0000	26.5768	11.0190	2.13	0.9671

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0003	CYLINDER #:	4001
BTU/CU.FT IDEAL:	2.1	CYLINDER PRESSURE:	1 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	2.1	ANALYSIS DATE:	09/02/2020
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	2.1	ANALYSIS TIME:	11:28:24 AM
DRY BTU @ 15.025:	2.1	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:	0.967		

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: 01/06/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: JOHNSTON FED 6B; BHD
Stn. No.: API # 3004530065
Mtr. No.: ELB 98034

BRADENHEAD
MV

01/06/2021
35825-13135

Smpl Date: 08/25/2020
Test Date: 09/02/2020
Run No: HS200252

Nitrogen: 99.7731
CO2: 0.0610
Methane: 0.1471
Ethane: 0.0098
Propane: 0.0000
I-Butane: 0.0000
N-Butane: 0.0000
I-Pentane: 0.0000
N-Pentane: 0.0000
Hexane+: 0.0090

BTU: 2.1
GPM: 11.0190
SPG: 0.9670



Well Name: JOHNSTON FED 6B; CSG
 API #: API # 3004530065
 Source: CASING
 Sample Type: GAS
 Analysis No: HS200253
 Cust No: 35825-13140

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: JOHNSTON FED 6B; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation: MV
 Cust. Stn. No.: API # 3004530065
 ELB 98034

Source: CASING
 Well Flowing: Y
 Pressure: 99 PSIG
 Flow Temp: 88 DEG. F
 Ambient Temp: DEG. F
 Flow Rate: 80 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 08/25/2020
 Sample Time: 12.12 PM
 Sampled By: MIKE ARCHULETA
 Sampled by (CO): HILCORP

AREA 4 / RUN 0408

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1659	0.1634	0.0180	0.00	0.0016
CO2	3.0373	2.9919	0.5200	0.00	0.0462
Methane	82.6546	81.4196	14.0550	834.81	0.4578
Ethane	8.3826	8.2573	2.2490	148.35	0.0870
Propane	3.2167	3.1686	0.8890	80.94	0.0490
Iso-Butane	0.4147	0.4085	0.1360	13.49	0.0083
N-Butane	0.8279	0.8155	0.2620	27.01	0.0166
I-Pentane	0.2337	0.2302	0.0860	9.35	0.0058
N-Pentane	0.2046	0.2015	0.0740	8.20	0.0051
Hexane Plus	0.8620	0.8491	0.3860	45.44	0.0285
Total	100.0000	98.5056	18.6750	1167.58	0.7060

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0033
 BTU/CU.FT IDEAL: 1170.3
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1174.2
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1153.8
 DRY BTU @ 15.025: 1197.7
 REAL SPECIFIC GRAVITY: 0.708

CYLINDER #: 4128
 CYLINDER PRESSURE: 87 PSIG
 ANALYSIS DATE: 09/02/2020
 ANALYSIS TIME: 11:05:38 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: 01/06/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	JOHNSTON FED 6B; CSG	CASING	01/06/2021
Stn. No.:	API # 3004530065	MV	35825-13140
Mtr. No.:	ELB 98034		

Smpl Date: 08/25/2020
Test Date: 09/02/2020
Run No: HS200253

Nitrogen: 0.1659
CO2: 3.0373
Methane: 82.6546
Ethane: 8.3826
Propane: 3.2167
I-Butane: 0.4147
N-Butane: 0.8279
I-Pentane: 0.2337
N-Pentane: 0.2046
Hexane+: 0.8620

BTU: 1174.2
GPM: 18.6750
SPG: 0.7080



2030 Afton Place
Farmington, NM 87401
(505) 325-6622

Analysis No: HS200254
Cust No: 35825-13145

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: JOHNSTON FED 6B; INT
County/State: SAN JUAN NM
Location:
Lease/PA/CA:
Formation: MV
Cust. Stn. No.: API # 3004530065
ELB 98034

Source: INTERMEDIATE
Well Flowing: Y
Pressure: 99 PSIG
Flow Temp: 88 DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 08/25/2020
Sample Time: 10.22 AM
Sampled By: MIKE ARCHULETA
Sampled by (CO): HILCORP

AREA 4 / RUN 0408

Heat Trace:

Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1492	0.1472	0.0160	0.00	0.0014
CO2	3.0918	3.0496	0.5290	0.00	0.0470
Methane	82.9245	81.7935	14.1000	837.54	0.4593
Ethane	8.3768	8.2625	2.2470	148.24	0.0870
Propane	3.1753	3.1320	0.8770	79.89	0.0483
Iso-Butane	0.3997	0.3942	0.1310	13.00	0.0080
N-Butane	0.8176	0.8064	0.2590	26.67	0.0164
I-Pentane	0.2331	0.2299	0.0850	9.33	0.0058
N-Pentane	0.2046	0.2018	0.0740	8.20	0.0051
Hexane Plus	0.6274	0.6188	0.2810	33.07	0.0208
Total	100.0000	98.6359	18.5990	1155.94	0.6992

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0032
BTU/CU.FT IDEAL: 1158.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1162.3
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1142.1
DRY BTU @ 15.025: 1185.6
REAL SPECIFIC GRAVITY: 0.7011

CYLINDER #: 6192
CYLINDER PRESSURE: 96 PSIG
ANALYSIS DATE: 09/02/2020
ANALYSIS TIME: 10:42:10 AM
ANALYSIS RUN BY: PATRICIA KING

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: 01/06/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	JOHNSTON FED 6B; INT	INTERMEDIATE	01/06/2021
Stn. No.:	API # 3004530065	MV	35825-13145
Mtr. No.:	ELB 98034		

Smpl Date: 08/25/2020
Test Date: 09/02/2020
Run No: HS200254

Nitrogen: 0.1492
CO2: 3.0918
Methane: 82.9245
Ethane: 8.3768
Propane: 3.1753
I-Butane: 0.3997
N-Butane: 0.8176
I-Pentane: 0.2331
N-Pentane: 0.2046
Hexane+: 0.6274

BTU: 1162.3
GPM: 18.5990
SPG: 0.7011



Well Name: JOHNSTON FED 6B;TBG
 API #: API # 3004530065
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS200255
 Cust No: 35825-13150

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: JOHNSTON FED 6B;TBG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation: MV
 Cust. Stn. No.: API # 3004530065
 ELB 98034

Source: TUBING
 Well Flowing: Y
 Pressure: 99 PSIG
 Flow Temp: 88 DEG. F
 Ambient Temp: DEG. F
 Flow Rate: 80 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 08/25/2020
 Sample Time: 10.42 AM
 Sampled By: MIKE ARCHULETA
 Sampled by (CO): HILCORP

AREA 4 / RUN 0408

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2228	0.2194	0.0250	0.00	0.0022
CO2	2.9169	2.8724	0.4990	0.00	0.0443
Methane	83.1788	81.9102	14.1410	840.11	0.4607
Ethane	8.3261	8.1991	2.2330	147.35	0.0864
Propane	3.2022	3.1534	0.8850	80.57	0.0488
Iso-Butane	0.4067	0.4005	0.1330	13.23	0.0082
N-Butane	0.8225	0.8100	0.2600	26.83	0.0165
I-Pentane	0.2270	0.2235	0.0830	9.08	0.0057
N-Pentane	0.1968	0.1938	0.0720	7.89	0.0049
Hexane Plus	0.5002	0.4926	0.2240	26.37	0.0166
Total	100.0000	98.4749	18.5550	1151.42	0.6942

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0031
 BTU/CU.FT IDEAL: 1154.1
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1157.7
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1137.6
 DRY BTU @ 15.025: 1180.9
 REAL SPECIFIC GRAVITY: 0.6961

CYLINDER #: 6100
 CYLINDER PRESSURE: 95 PSIG
 ANALYSIS DATE: 09/02/2020
 ANALYSIS TIME: 11:17:59 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: 01/06/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	JOHNSTON FED 6B;TBG	TUBING	01/06/2021
Stn. No.:	API # 3004530065	MV	35825-13150
Mtr. No.:	ELB 98034		

Smpl Date: 08/25/2020
Test Date: 09/02/2020
Run No: HS200255

Nitrogen: 0.2228
CO2: 2.9169
Methane: 83.1788
Ethane: 8.3261
Propane: 3.2022
I-Butane: 0.4067
N-Butane: 0.8225
I-Pentane: 0.2270
N-Pentane: 0.1968
Hexane+: 0.5002

BTU: 1157.7
GPM: 18.5550
SPG: 0.6961

District I
1625 N. French Dr., Hobbs, NM 88240
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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 14263

CONDITIONS OF APPROVAL

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX77002			OGRID: 372171	Action Number: 14263	Action Type: GAS ANALYSIS
OCD Reviewer		Condition			
mkuehling		not a good sample taken on bradenhead			