



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

Analysis No: HS190236
Cust No: 35825-11935

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: VALANCE 33-2; TBG
County/State: SAN JUAN NM
Location:
Lease/PA/CA:
Formation: DK/FC
Cust. Stn. No.: API # 3004532689

Source: TUBING
Well Flowing:
Pressure: 40 PSIG
Flow Temp: 82 DEG. F
Ambient Temp: 82 DEG. F
Flow Rate: 1652/269
Sample Method: Purge & Fill
Sample Date: 08/12/2019
Sample Time: 12.47 PM
Sampled By: NED H.
Sampled by (CO):

NMOC

AUG 28 2019

DISTRICT III

AREA 2 / RUN 202

Heat Trace:
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4247	0.4206	0.0470	0.00	0.0041
CO2	1.4261	1.4125	0.2440	0.00	0.0217
Methane	80.9947	80.2202	13.7740	818.05	0.4486
Ethane	10.2303	10.1325	2.7450	181.05	0.1062
Propane	4.3034	4.2622	1.1890	108.28	0.0655
Iso-Butane	0.6355	0.6294	0.2090	20.67	0.0128
N-Butane	1.0321	1.0222	0.3260	33.67	0.0207
I-Pentane	0.2594	0.2569	0.0950	10.38	0.0065
N-Pentane	0.2008	0.1989	0.0730	8.05	0.0050
Hexane Plus	0.4930	0.4883	0.2210	25.99	0.0163
Total	100.0000	99.0437	18.9230	1206.12	0.7074

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
BTU/CU.FT IDEAL: 1208.9
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1213.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1191.9
DRY BTU @ 15.025: 1237.3
REAL SPECIFIC GRAVITY: 0.7095

CYLINDER #: 6025
CYLINDER PRESSURE: 121 PSIG
ANALYSIS DATE: 08/21/2019
ANALYSIS TIME: 08:46:57 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

GC Method: C6+ Gas

Last Cal/Verify: 08/22/2019



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: VALANCE 33-2; TBG
Stn. No.: API # 3004532689
Mtr. No.:

TUBING
DK/FC

08/22/2019
35825-11935

Smpl Date: 08/12/2019
Test Date: 08/21/2019
Run No: HS190236

Nitrogen: 0.4247
CO2: 1.4261
Methane: 80.9947
Ethane: 10.2303
Propane: 4.3034
I-Butane: 0.6355
N-Butane: 1.0321
I-Pentane: 0.2594
N-Pentane: 0.2008
Hexane+: 0.4930

BTU: 1213.0
GPM: 18.9230
SPG: 0.7095



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

Analysis No: HS190234
Cust No: 35825-11925

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: VALANCE 33-2; BHD
County/State: SAN JUAN NM
Location:
Lease/PA/CA:
Formation: DK/FC
Cust. Stn. No.: API # 3004532689

Source: BRADENHEAD
Well Flowing:
Pressure: 160 PSIG
Flow Temp: 82 DEG. F
Ambient Temp: 82 DEG. F
Flow Rate: 1652/269
Sample Method:
Sample Date: 08/12/2019
Sample Time: 12.13 PM
Sampled By: NED H.
Sampled by (CO):

AREA 2 / RUN 202

Heat Trace:
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1864	0.1849	0.0210	0.00	0.0018
CO2	0.0044	0.0044	0.0010	0.00	0.0001
Methane	94.9712	94.2182	16.1330	959.21	0.5260
Ethane	3.3188	3.2925	0.8890	58.73	0.0345
Propane	0.6534	0.6482	0.1800	16.44	0.0099
Iso-Butane	0.3453	0.3426	0.1130	11.23	0.0069
N-Butane	0.1089	0.1080	0.0340	3.55	0.0022
I-Pentane	0.0986	0.0978	0.0360	3.94	0.0025
N-Pentane	0.0629	0.0624	0.0230	2.52	0.0016
Hexane Plus	0.2501	0.2481	0.1120	13.18	0.0083
Total	100.0000	99.2071	17.5420	1068.81	0.5937

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0023
BTU/CU.FT IDEAL: 1071.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1073.8
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1055.1
DRY BTU @ 15.025: 1095.3
REAL SPECIFIC GRAVITY: 0.5949

CYLINDER #: 4086
CYLINDER PRESSURE: 116 PSIG
ANALYSIS DATE: 08/21/2019
ANALYSIS TIME: 08:38:14 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

GC Method: C6+ Gas

Last Cal/Verify: 08/22/2019



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: VALANCE 33-2; BHD
Stn. No.: API # 3004532689
Mtr. No.:

BRADENHEAD
DK/FC

08/22/2019
35825-11925

Smpl Date: 08/12/2019
Test Date: 08/21/2019
Run No: HS190234

Nitrogen: 0.1864
CO2: 0.0044
Methane: 94.9712
Ethane: 3.3188
Propane: 0.6534
I-Butane: 0.3453
N-Butane: 0.1089
I-Pentane: 0.0986
N-Pentane: 0.0629
Hexane+: 0.2501

BTU: 1073.8
GPM: 17.5420
SPG: 0.5949



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

Analysis No: HS190235
Cust No: 35825-11930

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: VALANCE 33-2; CSG
County/State: SAN JUAN NM
Location:
Lease/PA/CA:
Formation: DK/FC
Cust. Stn. No.: API # 3004532689

Source: CASING
Well Flowing:
Pressure: PSIG
Flow Temp: 82 DEG. F
Ambient Temp: 82 DEG. F
Flow Rate: 1652/269
Sample Method: Purge & Fill
Sample Date: 08/12/2019
Sample Time: 12.31 PM
Sampled By: NED H.
Sampled by (CO):

AREA 2 / RUN 202

Heat Trace:
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.8613	0.8512	0.0950	0.00	0.0083
CO2	0.5222	0.5161	0.0890	0.00	0.0079
Methane	98.4898	97.3304	16.7260	994.75	0.5455
Ethane	0.1008	0.0996	0.0270	1.78	0.0010
Propane	0.0115	0.0114	0.0030	0.29	0.0002
Iso-Butane	0.0079	0.0078	0.0030	0.26	0.0002
N-Butane	0.0028	0.0028	0.0010	0.09	0.0001
I-Pentane	0.0010	0.0010	0.0000	0.04	0.0000
N-Pentane	0.0000	0.0000	0.0000	0.00	0.0000
Hexane Plus	0.0027	0.0027	0.0010	0.14	0.0001
Total	100.0000	98.8230	16.9450	997.35	0.5634

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.002
BTU/CU.FT IDEAL: 999.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1001.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 984.3
DRY BTU @ 15.025: 1021.8
REAL SPECIFIC GRAVITY: 0.5643

CYLINDER #: 6083
CYLINDER PRESSURE: 54 PSIG
ANALYSIS DATE: 08/21/2019
ANALYSIS TIME: 08:29:59 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

GC Method: C6+ Gas

Last Cal/Verify: 08/22/2019



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: VALANCE 33-2; CSG
Stn. No.: API # 3004532689
Mtr. No.:

CASING
DK/FC

08/22/2019
35825-11930

Smpl Date: 08/12/2019
Test Date: 08/21/2019
Run No: HS190235

Nitrogen: 0.8613
CO2: 0.5222
Methane: 98.4898
Ethane: 0.1008
Propane: 0.0115
I-Butane: 0.0079
N-Butane: 0.0028
I-Pentane: 0.0010
N-Pentane: 0.0000
Hexane+: 0.0027

BTU: 1001.7
GPM: 16.9450
SPG: 0.5643