



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

30-045-34530

Analysis No: HS180212
Cust No: 35825-10870

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: MADDOX C WN FED 1F; BHD

County/State: SAN JUAN NM

Location:

Field: AREA 1 / RUN 116

Formation: DK

Cust. Stn. No.: 88495

Source: BRADENHEAD

Well Flowing: Y

Pressure: 67 PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 09/26/2018

Sample Time: 8.00 AM

Sampled By: DANIEL RIOS

Sampled by (CO): HILCORP

Heat Trace: N

Remarks:

NMDCD
OCT 01 2018
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3135	0.3084	0.0350	0.00	0.0030
CO2	0.0038	0.0037	0.0010	0.00	0.0001
Methane	93.1806	91.6507	15.8290	941.12	0.5161
Ethane	4.9975	4.9154	1.3390	88.44	0.0519
Propane	1.1384	1.1197	0.3140	28.64	0.0173
Iso-Butane	0.1600	0.1574	0.0520	5.20	0.0032
N-Butane	0.1260	0.1239	0.0400	4.11	0.0025
I-Pentane	0.0218	0.0214	0.0080	0.87	0.0005
N-Pentane	0.0109	0.0107	0.0040	0.44	0.0003
Hexane Plus	0.0475	0.0467	0.0210	2.50	0.0016
Total	100.0000	98.3580	17.6430	1071.33	0.5966

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0023
BTU/CU.FT IDEAL: 1073.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1076.3
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1057.6
DRY BTU @ 15.025: 1097.9
REAL SPECIFIC GRAVITY: 0.5977

CYLINDER #: 4125
CYLINDER PRESSURE: 81 PSIG
ANALYSIS DATE: 09/26/2018
ANALYSIS TIME: 11:05:30 AM
ANALYSIS RUN BY: SHYANN ELLEDGE

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: 09/26/2018

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: MADDOX C WN FED 1F; BHD
Stn. No.: 88495
Mtr. No.:

BRADENHEAD
DK

09/26/2018
35825-10870

Smpl Date: 09/26/2018
Test Date: 09/26/2018
Run No: HS180212
Nitrogen: 0.3135
CO2: 0.0038
Methane: 93.1806
Ethane: 4.9975
Propane: 1.1384
I-Butane: 0.1600
N-Butane: 0.1260
I-Pentane: 0.0218
N-Pentane: 0.0109
Hexane+: 0.0475
BTU: 1076.3
GPM: 17.6430
SPG: 0.5977



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

30-045-34530

Analysis No: HS180214
Cust No: 35825-10880

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: **MADDOX C WN FED 1F; TBG**
County/State: SAN JUAN NM
Location:
Field: AREA 1 / RUN 116
Formation: DK
Cust. Stn. No.: 88495

Source: TUBING
Well Flowing: Y
Pressure: 151 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 09/26/2018
Sample Time: 8.05 AM
Sampled By: DANIEL RIOS
Sampled by (CO): HILCORP

Heat Trace: N
Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5509	0.5495	0.0610	0.00	0.0053
CO2	1.5096	1.5058	0.2590	0.00	0.0229
Methane	79.2311	79.0299	13.4780	800.23	0.4389
Ethane	10.3139	10.2877	2.7680	182.53	0.1071
Propane	4.5706	4.5590	1.2640	115.00	0.0696
Iso-Butane	0.7127	0.7109	0.2340	23.18	0.0143
N-Butane	1.3285	1.3251	0.4200	43.34	0.0267
I-Pentane	0.4414	0.4403	0.1620	17.66	0.0110
N-Pentane	0.4146	0.4135	0.1510	16.62	0.0103
Hexane Plus	0.9267	0.9243	0.4150	48.85	0.0307
Total	100.0000	99.7460	19.2120	1247.40	0.7368

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0037
BTU/CU.FT IDEAL: 1250.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1254.9
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1233.1
DRY BTU @ 15.025: 1280.0
REAL SPECIFIC GRAVITY: 0.7392

CYLINDER #: 6195
CYLINDER PRESSURE: 174 PSIG
ANALYSIS DATE: 09/26/2018
ANALYSIS TIME: 11:44:43 AM
ANALYSIS RUN BY: SHYANN ELLEDGE

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: 09/26/2018

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: MADDOX C WN FED 1F; TBG
Stn. No.: 88495
Mtr. No.:

TUBING
DK

09/26/2018
35825-10880

Smpl Date: 09/26/2018
Test Date: 09/26/2018
Run No: HS180214
Nitrogen: 0.5509
CO2: 1.5096
Methane: 79.2311
Ethane: 10.3139
Propane: 4.5706
I-Butane: 0.7127
N-Butane: 1.3285
I-Pentane: 0.4414
N-Pentane: 0.4146
Hexane+: 0.9267
BTU: 1254.9
GPM: 19.2120
SPG: 0.7392



30-045-3450

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

Analysis No: HS180213
Cust No: 35825-10875

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: MADDOX C WN FED 1F; CSG

County/State: SAN JUAN NM

Location:

Field: AREA 1 / RUN 116

Formation: DK

Cust. Stn. No.: 88495

Source: CASING

Well Flowing: Y

Pressure: 158 PSIA

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 09/26/2018

Sample Time: 7.53 AM

Sampled By: DANIEL RIOS

Sampled by (CO): HILCORP

Heat Trace: N

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.9384	0.8926	0.1040	0.00	0.0091
CO2	0.8151	0.7753	0.1390	0.00	0.0124
Methane	86.0922	81.8890	14.6320	869.53	0.4769
Ethane	8.7236	8.2977	2.3390	154.38	0.0906
Propane	2.5031	2.3809	0.6910	62.98	0.0381
Iso-Butane	0.2420	0.2302	0.0790	7.87	0.0049
N-Butane	0.2889	0.2748	0.0910	9.42	0.0058
I-Pentane	0.0724	0.0689	0.0270	2.90	0.0018
N-Pentane	0.0579	0.0551	0.0210	2.32	0.0014
Hexane Plus	0.2664	0.2534	0.1190	14.04	0.0088
Total	100.0000	95.1179	18.2420	1123.45	0.6497

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0028
BTU/CU.FT IDEAL: 1126.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1129.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1109.6
DRY BTU @ 15.025: 1151.8
REAL SPECIFIC GRAVITY: 0.6513

CYLINDER #: 5017
CYLINDER PRESSURE: 174 PSIG
ANALYSIS DATE: 09/26/2018
ANALYSIS TIME: 11:26:38 AM
ANALYSIS RUN BY: SHYANN ELLEDGE

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: 09/26/2018

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: MADDOX C WN FED 1F; CSG
Stn. No.: 88495
Mtr. No.:

CASING
DK

09/26/2018
35825-10875

Smpl Date: 09/26/2018
Test Date: 09/26/2018
Run No: HS180213
Nitrogen: 0.9384
CO2: 0.8151
Methane: 86.0922
Ethane: 8.7236
Propane: 2.5031
I-Butane: 0.2420
N-Butane: 0.2889
I-Pentane: 0.0724
N-Pentane: 0.0579
Hexane+: 0.2664
BTU: 1129.2
GPM: 18.2420
SPG: 0.6513

Well Name: MADDOX C WN FEDERAL COM #1F

API / UWI 3004534530	Surface Legal Location 014-030N-013W-O	Field Name BASIN DAKOTA	License No.	State/Province NEW MEXICO	Well Configuration Type VERTICAL
Original KB/RT Elevation (ft) 5,717.00	KB-Tubing Hanger Distance (ft)	Original Spud Date 2/11/2008 09:00	Rig Release Date	PBTD (All) (ftKB) Original Hole - 6,476.0	Total Depth All (TVD) (ftKB) Original Hole - 6,510.9

Most Recent Job

Job Category COMPLETIONS	Primary Job Type INITIAL COMPLETION	Secondary Job Type INITIAL COMPLETION	Actual Start Date 4/9/2008	End Date 6/27/2008
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TD: 6,512.0
VERTICAL, Original Hole, 9/26/2018 2:52:39 PM
