



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

Analysis No: CT190007
Cust No: 20010-10080

30-039-23140

Well/Lease Information

Customer Name: CROSS TIMBERS ENERGY
Well Name: REUTER 321E; BHD
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: DK/MV
Cust. Str. No.:

Source: BRADENHEAD
Well Flowing: N
Pressure: 95 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/15/2019
Sample Time: 10.03 AM
Sampled By: PETER SCHMIDT
Sampled by (CO):

Heat Trace:
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.8796	0.8795	0.0970	0.00	0.0085
CO2	0.5390	0.5389	0.0920	0.00	0.0082
Methane	76.2147	76.2049	12.9700	769.77	0.4222
Ethane	10.4217	10.4204	2.7980	184.43	0.1082
Propane	6.8762	6.8753	1.9020	173.01	0.1047
Iso-Butane	1.2828	1.2826	0.4210	41.72	0.0257
N-Butane	1.8271	1.8269	0.5780	59.61	0.0367
I-Pentane	0.6203	0.6202	0.2280	24.82	0.0155
N-Pentane	0.4307	0.4306	0.1570	17.27	0.0107
Hexane Plus	0.9079	0.9078	0.4060	47.86	0.0300
Total	100.0000	99.9871	19.6490	1318.47	0.7704

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0041
BTU/CU.FT IDEAL: 1321.5
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1327.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1303.9
DRY BTU @ 15.025: 1353.6
REAL SPECIFIC GRAVITY: 0.7732

CYLINDER #: 6218
CYLINDER PRESSURE: 91 PSIG
ANALYSIS DATE: 07/19/2019
ANALYSIS TIME: 03:29:18 PM
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: 07/24/2019

GC Method: C6+ Gas



CROSS TIMBERS ENERGY
WELL ANALYSIS COMPARISON

Lease: REUTER 321E; BHD
Stn. No.:
Mtr. No.:

BRADENHEAD
DK/MV

07/24/2019
20010-10080

Smpl Date: 07/15/2019
Test Date: 07/19/2019
Run No: CT190007
Nitrogen: 0.8796
CO2: 0.5390
Methane: 76.2147
Ethane: 10.4217
Propane: 6.8762
I-Butane: 1.2828
N-Butane: 1.8271
I-Pentane: 0.6203
N-Pentane: 0.4307
Hexane+: 0.9079
BTU: 1327.0
GPM: 19.6490
SPG: 0.7732



2030 Afton Place
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Analysis No: CT190008
Cust No: 20010-10085

Well/Lease Information

Customer Name: CROSS TIMBERS ENERGY
Well Name: REUTER 321E; CSG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: DK/MV
Cust. Strn. No.:

Source: CASING
Well Flowing: Y
Pressure: 100 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 07/15/2019
Sample Time: 10.00 AM
Sampled By: PETER SCHMIDT
Sampled by (CO):

NMOC

JUL 26 2019

DISTRICT III

Heat Trace:
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.8800	0.8801	0.0970	0.00	0.0085
CO2	0.5413	0.5413	0.0930	0.00	0.0082
Methane	76.1879	76.1942	12.9660	769.50	0.4220
Ethane	10.4157	10.4166	2.7960	184.33	0.1081
Propane	6.8738	6.8744	1.9010	172.95	0.1047
Iso-Butane	1.2828	1.2829	0.4210	41.72	0.0257
N-Butane	1.8272	1.8274	0.5780	59.61	0.0367
I-Pentane	0.6216	0.6217	0.2280	24.87	0.0155
N-Pentane	0.4324	0.4324	0.1570	17.33	0.0108
Hexane Plus	0.9373	0.9374	0.4200	49.41	0.0310
Total	100.0000	100.0084	19.6570	1319.71	0.7712

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0041
BTU/CU.FT IDEAL: 1322.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1328.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1305.1
DRY BTU @ 15.025: 1354.8
REAL SPECIFIC GRAVITY: 0.7741

CYLINDER #: 6057
CYLINDER PRESSURE: 96 PSIG
ANALYSIS DATE: 07/19/2019
ANALYSIS TIME: 03:08:44 PM
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: 07/24/2019

GC Method: C6+ Gas



CROSS TIMBERS ENERGY
WELL ANALYSIS COMPARISON

Lease: REUTER 321E; CSG
Stn. No.:
Mtr. No.:

CASING
DK/MV

07/24/2019
20010-10085

Smpl Date: 07/15/2019
Test Date: 07/19/2019
Run No: CT190008

Nitrogen: 0.8800
CO2: 0.5413
Methane: 76.1879
Ethane: 10.4157
Propane: 6.8738
I-Butane: 1.2828
N-Butane: 1.8272
I-Pentane: 0.6216
N-Pentane: 0.4324
Hexane+: 0.9373

BTU: 1328.2
GPM: 19.6570
SPG: 0.7741



2030 Afton Place
Farmington, NM 87401
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Analysis No: CT190009
Cust No: 20010-10090

Well/Lease Information

Customer Name: CROSS TIMBERS ENERGY
Well Name: REUTER 321E; TBG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.:

Source: TUBING
Well Flowing: N
Pressure: 95 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/15/2019
Sample Time: 10.06 AM
Sampled By: PETER SCHMIDT
Sampled by (CO):

Heat Trace:
Remarks:

NMOC
JUL 26 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1876	0.1841	0.0210	0.00	0.0018
CO2	1.2959	1.2715	0.2220	0.00	0.0197
Methane	82.6800	81.1225	14.0610	835.07	0.4580
Ethane	9.0771	8.9061	2.4350	160.64	0.0942
Propane	3.5026	3.4366	0.9680	88.13	0.0533
Iso-Butane	0.6421	0.6300	0.2110	20.88	0.0129
N-Butane	1.0660	1.0459	0.3370	34.78	0.0214
I-Pentane	0.4381	0.4298	0.1610	17.53	0.0109
N-Pentane	0.3205	0.3145	0.1170	12.85	0.0080
Hexane Plus	0.7901	0.7752	0.3530	41.65	0.0261
Total	100.0000	98.1162	18.8860	1211.51	0.7064

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
BTU/CU.FT IDEAL: 1214.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1218.5
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1197.3
DRY BTU @ 15.025: 1242.9
REAL SPECIFIC GRAVITY: 0.7085

CYLINDER #: 4078
CYLINDER PRESSURE: 95 PSIG
ANALYSIS DATE: 07/19/2019
ANALYSIS TIME: 03:35:29 PM
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: 07/24/2019



CROSS TIMBERS ENERGY
WELL ANALYSIS COMPARISON

Lease: REUTER 321E; TBG
Stn. No.:
Mtr. No.:

TUBING

07/24/2019
20010-10090

Smpl Date: 07/15/2019
Test Date: 07/19/2019
Run No: CT190009
Nitrogen: 0.1876
CO2: 1.2959
Methane: 82.6800
Ethane: 9.0771
Propane: 3.5026
I-Butane: 0.6421
N-Butane: 1.0660
I-Pentane: 0.4381
N-Pentane: 0.3205
Hexane+: 0.7901
BTU: 1218.5
GPM: 18.8860
SPG: 0.7085