



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
[http://emnr.state.nm.us/ocd/District III/3distric.htm](http://emnr.state.nm.us/ocd/District%20III/3distric.htm)

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

Date of Test 9/21/14 Operator Enervest API #30-0 45-31129

Property Name Southern Union Well No. 1B Location: Unit K Section 19 Township 31 Range 12

Well Status (Shut-In or Producing) Initial PSI: Tubing 121 Intermediate 20 Casing 120 Bradenhead 177

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

Testing	PRESSURE					FLOW CHARACTERISTICS	
	Bradenhead			INTERM		BRADENHEAD	INTERMEDIATE
	BH	Int	Csg	Int	Csg		
TIME							
5 min	0	20	120	0	120	Steady Flow	X
10 min	0	20	120	0	120	Surges	X
15 min	0	20	120	0	120	Down to Nothing	
20 min	0	20	120	0	120	Nothing	
25 min	0	20	120	0	120	Gas	
30 min	0	20	120	0	120	Gas & Water	
						Water	

If bradenhead flowed water, check all of the descriptions that apply below:

CLEAR _____ FRESH _____ SALTY _____ SULFUR _____ BLACK _____

5 MINUTE SHUT-IN PRESSURE BRADENHEAD 0 INTERMEDIATE 0

REMARKS:

Braden has quick surge then just fumes for remaining time

Int. had a flow for about 1:15 with some vapors then, down to
whisper with vapors entire time.

By Jonny Salas
operator
(Position)

Witness Jonathan D. Kelly

E-mail address _____





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

Analysis No: EN140168
Cust No: 25400-11295

30-045-31129

Well/Lease Information

Customer Name: ENERVEST
Well Name: SOUTHERN #1B INTRM
County/State: SAN JUAN NM
Location:
Field:
Formation:
Cust. Stn. No.:

Source: INTERMEDIATE
Pressure: 1.1 PSIG
Sample Temp: DEG. F
Well Flowing: N
Date Sampled: 09/23/2014
Sampled By: L. MARTINEZ
Foreman/Engr.:

RECEIVED

MAR 09 2015

NMOCD

DIVISION

Remarks: PRESSURED WITH HELIUM TO 30 LBS

Analysis

Component::	Mole%:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.255	0.0280	0.00	0.0025
CO2	0.202	0.0350	0.00	0.0031
Methane	54.804	9.4060	553.52	0.3036
Ethane	8.368	2.2660	148.09	0.0869
Propane	6.746	1.8810	169.74	0.1027
Iso-Butane	3.483	1.1540	113.26	0.0699
N-Butane	7.436	2.3730	242.58	0.1492
I-Pentane	6.027	2.2310	241.13	0.1501
N-Pentane	5.243	1.9240	210.18	0.1306
Hexane Plus	7.436	3.3570	391.96	0.2461
Total	100.000	24.6550	2070.46	1.2446

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0126
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 2101.5
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 2064.9
REAL SPECIFIC GRAVITY: 1.2599

GPM, BTU, and SPG calculations as shown
above are based on current GPA factors.

DRY BTU @ 14.650: 2090.1
DRY BTU @ 14.696: 2096.6
DRY BTU @ 14.730: 2101.5
DRY BTU @ 15.025: 2143.6

CYLINDER #: 3
CYLINDER PRESSURE: PSIG
DATE RUN: 9/24/14 12:00 AM
ANALYSIS RUN BY: LOGAN CHENEY



ENERVEST
WELL ANALYSIS COMPARISON

Lease: SOUTHERN #1B INTRM
Stn. No.:
Mtr. No.:

INTERMEDIATE

09/24/2014
25400-11295

Smpl Date: 09/23/2014
Test Date: 09/24/2014
Run No: EN140168

Nitrogen: 0.255
CO2: 0.202
Methane: 54.804
Ethane: 8.368
Propane: 6.746
I-Butane: 3.483
N-Butane: 7.436
I-Pentane: 6.027
N-Pentane: 5.243
Hexane+: 7.436

BTU: 2101.5
GPM: 24.6550
SPG: 1.2599



RECEIVED

MAR 09 2015

NMOCD
DINTL2030 Afton Place
Farmington, NM 87401
(505) 325-6622Analysis No: EN140169
Cust No: 25400-11300**Well/Lease Information**

Customer Name: ENERVEST
Well Name: SOUTHERN UNION #1B TBG
County/State: SAN JUAN NM
Location:
Field:
Formation:
Cust. Stn. No.:

Source: TUBING
Pressure: 140 PSIG
Sample Temp: DEG. F
Well Flowing: N
Date Sampled: 09/23/2014
Sampled By: L. MARTINEZ
Foreman/Engr.:

Remarks: SAMPLE CONTAINED A SMALL AMOUNT OF CONDENSATE

Analysis

Component::	Mole%:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.443	0.0490	0.00	0.0043
CO2	1.805	0.3090	0.00	0.0274
Methane	78.408	13.3380	791.92	0.4343
Ethane	10.942	2.9360	193.64	0.1136
Propane	4.833	1.3360	121.60	0.0736
Iso-Butane	0.754	0.2480	24.52	0.0151
N-Butane	1.355	0.4290	44.20	0.0272
I-Pentane	0.462	0.1700	18.48	0.0115
N-Pentane	0.334	0.1210	13.39	0.0083
Hexane Plus	0.664	0.2970	35.00	0.0220
Total	100.000	19.2330	1242.76	0.7373

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0037
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1250.3
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1228.5
REAL SPECIFIC GRAVITY: 0.7398

GPM, BTU, and SPG calculations as shown
above are based on current GPA factors.

DRY BTU @ 14.650: 1243.5
DRY BTU @ 14.696: 1247.4
DRY BTU @ 14.730: 1250.3
DRY BTU @ 15.025: 1275.3

CYLINDER #: ENERVEST#2
CYLINDER PRESSURE: 130 PSIG
DATE RUN: 9/24/14 9:45 AM
ANALYSIS RUN BY: PATRICIA KING



ENERVEST
WELL ANALYSIS COMPARISON

Lease: SOUTHERN UNION #1B TBG
Str. No.:
Mtr. No.:

TUBING

09/24/2014
25400-11300

Smpl Date: 09/23/2014
Test Date: 09/24/2014
Run No: EN140169

Nitrogen: 0.443
CO2: 1.805
Methane: 78.408
Ethane: 10.942
Propane: 4.833
I-Butane: 0.754
N-Butane: 1.355
I-Pentane: 0.462
N-Pentane: 0.334
Hexane+: 0.664

BTU: 1250.3
GPM: 19.2330
SPG: 0.7398



RECEIVED

MAR 09 2015

NMOCD
DISTR2030 Afton Place
Farmington, NM 87401
(505) 325-6622Analysis No: EN140167
Cust No: 25400-11290**Well/Lease Information**

Customer Name: ENERVEST
Well Name: SOUTHERN UNION #1B BHD
County/State: SAN JUAN NM
Location:
Field:
Formation:
Cust. Stn. No.:

Source: BRADENHEAD
Pressure: 106 PSIG
Sample Temp: DEG. F
Well Flowing: N
Date Sampled: 09/23/2014
Sampled By: L. MARTINEZ
Foreman/Engr.:

Remarks:

Analysis

Component::	Mole%:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.440	0.0490	0.00	0.0043
CO2	0.009	0.0020	0.00	0.0001
Methane	77.645	13.2120	784.21	0.4301
Ethane	10.244	2.7500	181.29	0.1064
Propane	6.764	1.8700	170.19	0.1030
Iso-Butane	1.513	0.4970	49.20	0.0304
N-Butane	1.805	0.5710	58.88	0.0362
I-Pentane	0.652	0.2390	26.09	0.0162
N-Pentane	0.453	0.1650	18.16	0.0113
Hexane Plus	0.475	0.2130	25.04	0.0157
Total	100.000	19.5680	1313.06	0.7536

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.004

BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1321.4

BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1298.4

REAL SPECIFIC GRAVITY: 0.7564

GPM, BTU, and SPG calculations as shown
above are based on current GPA factors.

DRY BTU @ 14.650: 1314.2

DRY BTU @ 14.696: 1318.3

DRY BTU @ 14.730: 1321.4

DRY BTU @ 15.025: 1347.9

CYLINDER #: ENERVEST 1

CYLINDER PRESSURE: 94 PSIG

DATE RUN: 9/24/14 12:00 AM

ANALYSIS RUN BY: LOGAN CHENEY



ENERVEST
WELL ANALYSIS COMPARISON

Lease: SOUTHERN UNION #1B BHD
Stn. No.:
Mtr. No.:

BRADENHEAD

09/24/2014
25400-11290

Smpl Date: 09/23/2014
Test Date: 09/24/2014
Run No: EN140167

Nitrogen: 0.440
CO2: 0.009
Methane: 77.645
Ethane: 10.244
Propane: 6.764
I-Butane: 1.513
N-Butane: 1.805
I-Pentane: 0.652
N-Pentane: 0.453
Hexane+: 0.475

BTU: 1321.4
GPM: 19.5680
SPG: 0.7564