



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

Analysis No: EN170187
Cust No: 25400-11435

Well/Lease Information

Customer Name: ENERVEST
Well Name: ARNSTEIN #1Y; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation:
Cust. Stn. No.: API 3004531218

OIL CONS. DIV DIST. 3

OCT 30 2017

Source: CASING
Well Flowing: Y
Pressure: 77 PSIG
Flow Temp: DEG. F
Ambient Temp: 66 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Date Sampled: 10/24/2017
Sample Time: 12.05 PM
Sampled By: LEROY MARTINEZ
Sampled by (CO): ENERVEST

Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4432	0.4108	0.0490	0.00	0.0043
CO2	0.7216	0.6688	0.1240	0.00	0.0110
Methane	81.7992	75.8115	13.9110	826.17	0.4531
Ethane	9.6984	8.9885	2.6020	171.63	0.1007
Propane	4.3322	4.0151	1.1970	109.00	0.0660
Iso-Butane	0.7229	0.6700	0.2370	23.51	0.0145
N-Butane	1.0035	0.9300	0.3170	32.74	0.0201
I-Pentane	0.3319	0.3076	0.1220	13.28	0.0083
N-Pentane	0.2622	0.2430	0.0950	10.51	0.0065
Hexane Plus	0.6849	0.6348	0.3060	36.10	0.0227
Total	100.0000	92.6801	18.9600	1222.94	0.7071

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
BTU/CU.FT IDEAL: 1225.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1230.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1208.6
DRY BTU @ 15.025: 1254.6
REAL SPECIFIC GRAVITY: 0.7092

CYLINDER #: 9
CYLINDER PRESSURE: 77 PSIG
DATE RUN: 10/25/17 12:00 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: 10/25/2017

GC Method: C6+ Gas



ENERVEST
WELL ANALYSIS COMPARISON

Lease: ARNSTEIN #1Y; CSG
Stn. No.:
Mtr. No.:

CASING

10/25/2017
25400-11435

Smpl Date:	10/24/2017	02/13/2015
Test Date:	10/25/2017	02/20/2015
Run No:	EN170187	EN150054
Nitrogen:	0.4432	0.3980
CO2:	0.7216	1.7070
Methane:	81.7992	80.7242
Ethane:	9.6984	10.0319
Propane:	4.3322	4.1730
I-Butane:	0.7229	0.6840
N-Butane:	1.0035	1.0860
I-Pentane:	0.3319	0.3540
N-Pentane:	0.2622	0.2500
Hexane+:	0.6849	0.5920
BTU:	1230.0	1217.8
GPM:	18.9600	18.9620
SPG:	0.7092	0.7169



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

Analysis No: EN170188
Cust No: 25400-11785

Well/Lease Information

Customer Name: ENERVEST
Well Name: ARNSTEIN #1Y; INT
County/State: SAN JUAN NM
Location:
Field:
Formation:
Cust. Stn. No.: API 3004531218

OIL CONS. DIV DIST. 3

OCT 30 2017

Source: INTERMEDIATE
Well Flowing: Y
Pressure: 59 PSIG
Flow Temp: DEG. F
Ambient Temp: 66 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Date Sampled: 10/24/2017
Sample Time: 11.50 AM
Sampled By: LEROY MARTINEZ
Sampled by (CO): ENERVEST

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3299	0.3280	0.0360	0.00	0.0032
CO2	0.0279	0.0277	0.0050	0.00	0.0004
Methane	78.6450	78.1879	13.3810	794.31	0.4356
Ethane	9.4599	9.4049	2.5390	167.41	0.0982
Propane	7.1316	7.0901	1.9720	179.44	0.1086
Iso-Butane	1.4495	1.4411	0.4760	47.14	0.0291
N-Butane	1.6457	1.6361	0.5210	53.69	0.0330
I-Pentane	0.4719	0.4692	0.1730	18.88	0.0118
N-Pentane	0.3612	0.3591	0.1310	14.48	0.0090
Hexane Plus	0.4774	0.4746	0.2140	25.16	0.0158
Total	100.0000	99.4187	19.4480	1300.51	0.7447

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0039
BTU/CU.FT IDEAL: 1303.5
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1308.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1285.8
DRY BTU @ 15.025: 1334.8
REAL SPECIFIC GRAVITY: 0.7473

CYLINDER #: 105
CYLINDER PRESSURE: 58 PSIG
DATE RUN: 10/25/17 11:50 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: 10/25/2017

GC Method: C6+ Gas