GAS ANALYSIS SERVICE

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

Analysis No: GW170032
Cust No: 33050-10220

Well/Lease Information

Customer Name:	GREAT WESTERN DRILLING	Source:	BRADENHEAD
Well Name:	J.E. DECKER 1A B.H.D	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	124 PSIG
Location:		Flow Temp:	DEG. F
Field:		Ambient Temp:	57 DEG. F
Formation:	MESA VERDE	Flow Rate:	MCF/D
Cust. Stn. No.:		Sample Method:	Purge & Fill
		Date Sampled:	10/23/2017
		Sample Time:	10.50 AM
		Sampled By:	CULLAN
		Sampled by (CO):	GWDC

OIL CONS. DIV DIST. 3
NOV 07 2017

Remarks:

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1554	0.1537	0.0170	0.00	0.0015
CO2	1.7581	1.7384	0.3010	0.00	0.0267
Methane	83.6625	82.7231	14.2270	844.99	0.4634
Ethane	8.1439	8.0525	2.1850	144.12	0.0845
Propane	3.3283	3.2909	0.9200	83.74	0.0507
Iso-Butane	0.6700	0.6625	0.2200	21.79	0.0134
N-Butane	0.8740	0.8642	0.2760	28.51	0.0175
I-Pentane	0.3341	0.3303	0.1230	13.37	0.0083
N-Pentane	0.2503	0.2475	0.0910	10.03	0.0062
Hexane Plus	0.8234	0.8142	0.3680	43.40	0.0273
Total	100.0000	98.8773	18.7280	1189.96	0.6996

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY
**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBLITY FACTOR (1/Z):	1.0033	CYLINDER #:	6023
BTU/CU.FT IDEAL:	1192.7	CYLINDER PRESSURE:	126 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1196.7	DATE RUN:	10/30/17 10:50 AM
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1175.9	ANALYSIS RUN BY:	RICHARD WILSON
DRY BTU @ 15.025:	1220.7		
REAL SPECIFIC GRAVITY:	0.7017		

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: 10/30/2017**
GC Method: C6+ Gas

GAS ANALYSIS SERVICE

2030 Afton Place
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Analysis No: GW170042
Cust No: 33050-10375

Well/Lease Information

Customer Name:	GREAT WESTERN DRILLING	Source:	TUBING
Well Name:	J.E. DECKER 1A; TBG	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	120 PSIG
Location:		Flow Temp:	DEG. F
Field:		Ambient Temp:	54 DEG. F
Formation:	BMV	Flow Rate:	MCF/D
Cust. Stn. No.:	API 30-045-23080	Sample Method:	Purge & Fill
		Date Sampled:	10/27/2017
		Sample Time:	10.40 AM
		Sampled By:	CULLAN
		Sampled by (CO):	GWDC

OIL CONS. DIV DIST. 3
NOV 07 2017

Remarks:

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1254	0.1237	0.0140	0.00	0.0012
CO2	1.8091	1.7848	0.3100	0.00	0.0275
Methane	83.5097	82.3886	14.2010	843.45	0.4626
Ethane	8.2268	8.1164	2.2070	145.59	0.0854
Propane	3.4142	3.3684	0.9430	85.90	0.0520
Iso-Butane	0.6860	0.6768	0.2250	22.31	0.0138
N-Butane	0.8919	0.8799	0.2820	29.10	0.0179
I-Pentane	0.3296	0.3252	0.1210	13.19	0.0082
N-Pentane	0.2471	0.2438	0.0900	9.91	0.0062
Hexane Plus	0.7602	0.7500	0.3400	40.07	0.0252
Total	100.0000	98.6576	18.7330	1189.51	0.6998

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY
**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBLITY FACTOR (1/Z):	1.0033	CYLINDER #:	7011
BTU/CU.FT IDEAL:	1192.3	CYLINDER PRESSURE:	112 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1196.2	DATE RUN:	10/31/17 12:00 AM
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1175.4	ANALYSIS RUN BY:	PATRICIA KING
DRY BTU @ 15.025:	1220.2		
REAL SPECIFIC GRAVITY:	0.7019		

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: 11/01/2017**
GC Method: C6+ Gas

GAS ANALYSIS SERVICE

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

Analysis No: GW170041
Cust No: 33050-10380

Well/Lease Information

Customer Name:	GREAT WESTERN DRILLING	Source:	CASING
Well Name:	J.E. DECKER 1A; CSG	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	120 PSIG
Location:		Flow Temp:	DEG. F
Field:		Ambient Temp:	54 DEG. F
Formation:	BMV	Flow Rate:	MCF/D
Cust. Stn. No.:	API 30-045-23080	Sample Method:	Purge & Fill
		Date Sampled:	10/27/2017
		Sample Time:	10.30 AM
		Sampled By:	CULLAN
		Sampled by (CO):	GWDC

OIL CONS. DIV DIST. 3
NOV 07 2017

Remarks:

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1230	0.1215	0.0140	0.00	0.0012
CO2	1.7995	1.7776	0.3080	0.00	0.0273
Methane	83.7269	82.7088	14.2370	845.64	0.4638
Ethane	8.1810	8.0815	2.1950	144.78	0.0849
Propane	3.3569	3.3161	0.9280	84.46	0.0511
Iso-Butane	0.6774	0.6692	0.2220	22.03	0.0136
N-Butane	0.8833	0.8726	0.2790	28.82	0.0177
I-Pentane	0.3313	0.3273	0.1220	13.25	0.0083
N-Pentane	0.2461	0.2431	0.0890	9.87	0.0061
Hexane Plus	0.6746	0.6664	0.3020	35.56	0.0223
Total	100.0000	98.7841	18.6960	1184.41	0.6964

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY
**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBLITY FACTOR (1/Z):	1.0033	CYLINDER #:	4162
BTU/CU.FT IDEAL:	1187.1	CYLINDER PRESSURE:	126 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1191.0	DATE RUN:	10/31/17 12:00 AM
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1170.3	ANALYSIS RUN BY:	PATRICIA KING
DRY BTU @ 15.025:	1214.9		
REAL SPECIFIC GRAVITY:	0.6983		

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: 11/01/2017**
GC Method: C6+ Gas