GAS ANALYSIS SERVICE

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

Analysis No: GW170030
Cust No: 33050-10340

Well/Lease Information

Customer Name:	GREAT WESTERN DRILLING	Source:	INTERMEDIATE
Well Name:	J.E. DECKER 3-B; INT	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	7 PSIG
Location:		Flow Temp:	DEG. F
Field:		Ambient Temp:	63 DEG. F
Formation:	BMV	Flow Rate:	68 MCF/D
Cust. Stn. No.:	API 30-045-30320	Sample Method:	Purge & Fill
		Date Sampled:	10/19/2017
		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	0.4735	0.4577	0.0520	0.00	0.0046
CO2	0.0599	0.0579	0.0100	0.00	0.0009
Methane	84.3047	81.4894	14.3360	851.48	0.4670
Ethane	8.1399	7.8681	2.1840	144.05	0.0845
Propane	4.2587	4.1165	1.1770	107.15	0.0648
Iso-Butane	0.4903	0.4739	0.1610	15.94	0.0098
N-Butane	0.9624	0.9303	0.3040	31.40	0.0193
I-Pentane	0.2565	0.2479	0.0940	10.26	0.0064
N-Pentane	0.2309	0.2232	0.0840	9.26	0.0058
Hexane Plus	0.8232	0.7957	0.3680	43.39	0.0272
Total	100.0000	96.6606	18.7700	1212.93	0.6903

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

COMPRESSIBLITY FACTOR (1/Z):	1.0033	CYLINDER #:	7037
BTU/CU.FT IDEAL:	1215.7	CYLINDER PRESSURE:	10 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1219.8	DATE RUN:	10/26/17 12:00 AM
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1198.6	ANALYSIS RUN BY:	CAMERON MANGAN
DRY BTU @ 15.025:	1244.2		
REAL SPECIFIC GRAVITY:	0.6923		

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
Farmington, NM 87401
(505) 325-6622

Analysis No: GW170029
Cust No: 33050-10335

Well/Lease Information

Customer Name:	GREAT WESTERN DRILLING	Source:	TUBING
Well Name:	J.E. DECKER 3-B; TBG	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	121 PSIG
Location:		Flow Temp:	DEG. F
Field:		Ambient Temp:	63 DEG. F
Formation:	BMV	Flow Rate:	68 MCF/D
Cust. Stn. No.:	API 30-045-30320	Sample Method:	Purge & Fill
		Date Sampled:	10/19/2017
		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	0.1341	0.1318	0.0150	0.00	0.0013
CO2	1.7937	1.7631	0.3070	0.00	0.0273
Methane	83.5250	82.0980	14.2030	843.60	0.4626
Ethane	8.4084	8.2648	2.2560	148.80	0.0873
Propane	3.3231	3.2663	0.9180	83.61	0.0506
Iso-Butane	0.6359	0.6250	0.2090	20.68	0.0128
N-Butane	0.8660	0.8512	0.2740	28.25	0.0174
I-Pentane	0.3302	0.3246	0.1210	13.21	0.0082
N-Pentane	0.2464	0.2422	0.0900	9.88	0.0061
Hexane Plus	0.7372	0.7246	0.3300	38.86	0.0244
Total	100.0000	98.2916	18.7230	1186.90	0.6980

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

COMPRESSIBLITY FACTOR (1/Z):	1.0033	CYLINDER #:	4040
BTU/CU.FT IDEAL:	1189.6	CYLINDER PRESSURE:	124 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1193.6	DATE RUN:	10/26/17 10:30 AM
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1172.8	ANALYSIS RUN BY:	RICHARD WILSON
DRY BTU @ 15.025:	1217.5		
REAL SPECIFIC GRAVITY:	0.7		

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
Farmington, NM 87401
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Analysis No: GW170028
Cust No: 33050-10330

Well/Lease Information

Customer Name:	GREAT WESTERN DRILLING	Source:	CASING
Well Name:	J.E. DECKER 3-B; CSG	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	130 PSIG
Location:		Flow Temp:	DEG. F
Field:		Ambient Temp:	63 DEG. F
Formation:	BMV	Flow Rate:	68 MCF/D
Cust. Stn. No.:	API 30-045-30320	Sample Method:	Purge & Fill
		Date Sampled:	10/19/2017
		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	0.1528	0.1500	0.0170	0.00	0.0015
CO2	1.7512	1.7188	0.3000	0.00	0.0266
Methane	83.5360	81.9900	14.2050	843.71	0.4627
Ethane	8.3965	8.2411	2.2520	148.59	0.0872
Propane	3.3236	3.2621	0.9180	83.63	0.0506
Iso-Butane	0.6347	0.6230	0.2080	20.64	0.0127
N-Butane	0.9034	0.8867	0.2860	29.47	0.0181
I-Pentane	0.3480	0.3416	0.1280	13.92	0.0087
N-Pentane	0.2593	0.2545	0.0940	10.39	0.0065
Hexane Plus	0.6945	0.6816	0.3110	36.61	0.0230
Total	100.0000	98.1494	18.7190	1186.97	0.6975

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

COMPRESSIBLITY FACTOR (1/Z):	1.0033	CYLINDER #:	4172
BTU/CU.FT IDEAL:	1189.7	CYLINDER PRESSURE:	114 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1193.7	DATE RUN:	10/26/17 10:40 AM
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1172.9	ANALYSIS RUN BY:	RICHARD WILSON
DRY BTU @ 15.025:	1217.6		
REAL SPECIFIC GRAVITY:	0.6996		

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