OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator					Lease or Unit Name	
					JACKSON A Unit	
Test Type: ☐ Initial ☐ Annual ☐ Special					Test Date: 12-21-99	Well No.: 7
Completion Date		Total Depth: 13600		Plug Back TD: 13600	Elevation	Unit Ltr - Sec - TWP - Rge: J - 15 - 24S - 37E
Csg. Size: 7.000	Wt.: 29.000	d: 6.340	Set At: 13600	Perforation: From 13236 To 13552		County: LEA
Tbg. Size: 3.500	Wt.: 8.700	d: 2.995	Set At: 13210	Perforation: From To		Pool: Johnson Ranch
Type Well-Single-Bradenhead-G.G. or G.O. Multiple				Packer Set At		Formation: Wolfcamp
Producing Thru: tubing	Reservoir Temp.F: 187		Mean Annual Temp.F: 38	Baro. Pressure: 13.30		Connection
L: 13600	H: 13600	Og: .677	% CO_2: 1.51	% N_2: .90	% H_2S:	Prover: meter	Meter Run: 4.026	Taps: flange

No.	Flow Data (Prover) Line Size x Orifice Size	Press. PSIG	Diff. h_w	Temp. F	Tubing Data Press. PSIG	Tubing Data Temp. F	Casing Data Press. PSIG	Casing Data Temp. F	SIP/Flow Duration (HRS.)
	Shut-in Pressure				2134	45			
1.	4.03 x 2.25	262.30	5.80	51	2026	56			1
2.	4.03 x 2.25	269.80	13.50	48	1971	53			1
3.	4.03 x 2.25	291.00	29.20	62	1816	67			1
4.	4.03 x 2.25	344.00	64.10	50	1656	56			1

RATE OF FLOW CALCULATIONS

No.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. FACTOR F_t	Gravity FACTOR F_g	Super Compress. FACTOR F_{pv}	Rate of Flow (Q) MCFD
1.	31.150	39.981	275.6	1.0088	1.2154	1.0295	1572.0
2.	31.150	61.821	283.1	1.0117	1.2154	1.0310	2441.4
3.	31.150	94.263	304.3	.9981	1.2154	1.0304	3670.2
4.	31.150	151.337	357.3	1.0098	1.2154	1.0392	6012.2

No.	P_t	TEMP.	T_r	Z
1.	.409	511	1.355	.9434
2.	.421	508	1.347	.9407
3.	.452	522	1.384	.9418
4.	.531	510	1.352	.9260

Gas-Liquid Hydrocarbon Ratio	21.0		Mcf/bbl
API Gravity of Liquid Hydrocarbons	52.0		Deg.
Specific Gravity Separator Gas	.677		
Specific Gravity Flowing Fluid		.817	
Critical Pressure	673 PSIA	666	PSIA
Critical Temperature	377 R	421	R

P_c 2147.3 P_c^2 4610.9

No.	Pw	Pw^2	$Pc^2 - Pw^2$
1.	2043.4	4175	435.612
2.	1993.7	3974	636.123
3.	1853.0	3433	1177.278
4.	1735.0	3010	1600.649

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 2.881 (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 2.839

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 17066

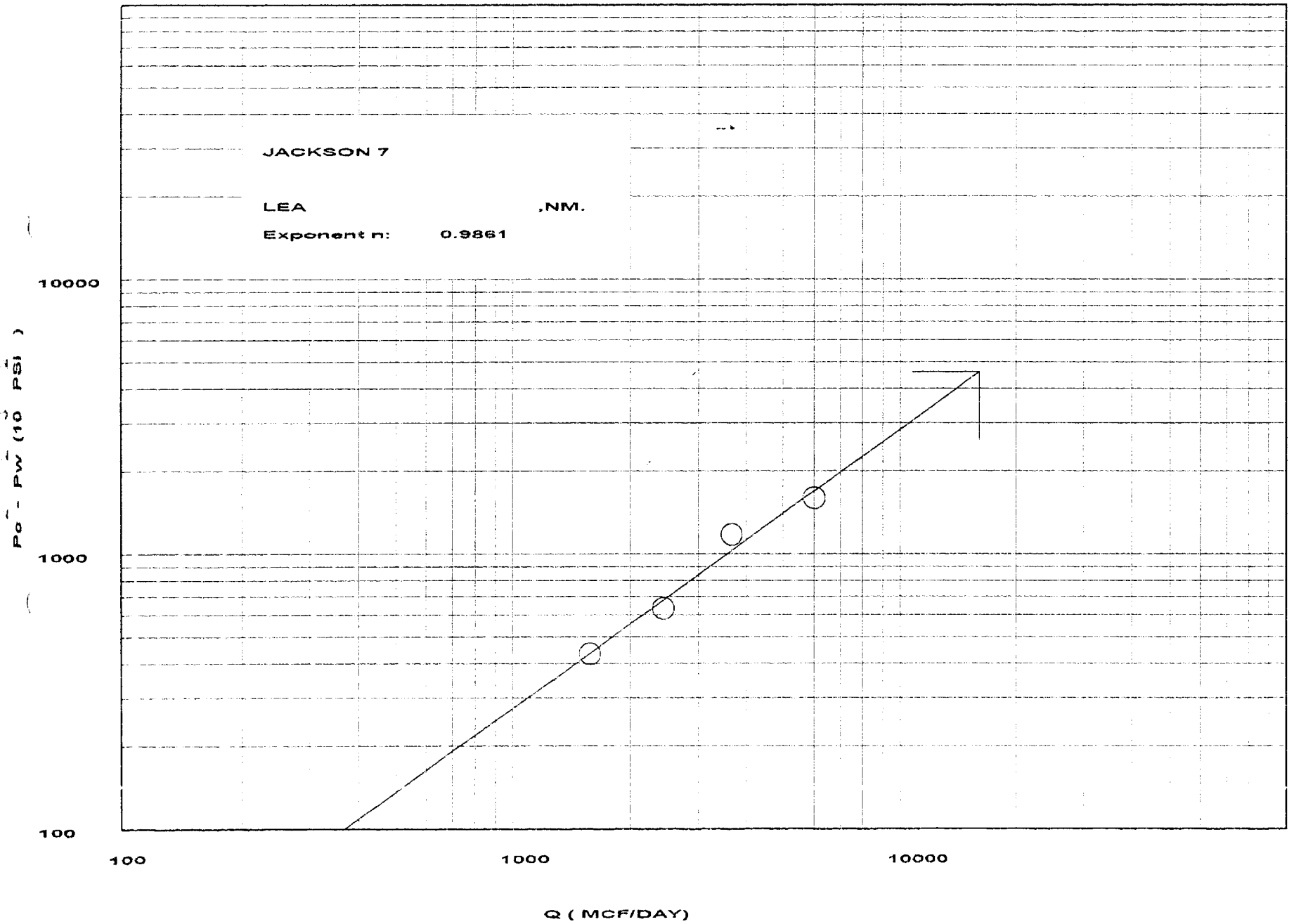
Absolute Open Flow	17066	Mcfd @ 15.025	Angle of Slope -	45.4	Slope, n	.986
Remarks						

Approved By Division:	Conducted By:	Calculated By:	Checked By:
	LARRY RACKLEY	BPT System/Guardian	Larry Rackley

WELL TESTER: LARRY RACKLEY

GAS WELL BACK PRESSURE CURVE

TEST DATE: 12-21-99



MITCHELL ANALYTICAL LABORATORY

2638 Faudree
Odessa, Texas 79765-8538
561-5579

Gas Analysis

Company.... Guardian
Producer...
Lease..... **JACKSON #7**
Station #.. **MURCHISON**
Cylinder #.
Date Run... 12/23/1999
Lab Ref #.. 99-DEC-G8650

Sample Press.. 566.0
Sample Temp... 45.0
Date Sampled.. 12/12/1999
Sampled by.... LARRY RACKLEY
Field Gravity. 0.0000
Analyzed by... DANIEL
Field H2S..... 0.0000

Physical Constants per GPA 2145-93
Calculations per GPA 2172-86
@ 14.65 psia & 60.0 Deg. F.

	MOL %	GPM (Ideal)	BTU (Ideal Dry)
Nitrogen	0.902	0.098	0.0
Methane	83.234	14.033	838.0
CO2	1.515	0.254	0.0
Ethane	9.508	2.528	167.7
H2S	0.000	0.000	0.0
Propane	3.149	0.862	79.0
Iso-Butane	0.433	0.141	14.1
N-Butane	0.688	0.216	22.4
Iso-Pentane	0.161	0.059	6.4
N-Pentane	0.149	0.054	6.0
2,2-DMB	0.000	0.000	0.0
2-Me-C5	0.000	0.000	0.0
3-Me-C5	0.000	0.000	0.0
Hexanes +	0.261	0.111	12.4
TOTALS	100.000	18.355	1145.9

GROSS HEATING VALUE @ 14.65 PSIA

Dry	Wet	
1149	1130	**BTU/Real Cu.Ft.**
0.6771	0.6764	**Specific Gravity (Real)**
1146	1127	BTU/Ideal Cu.Ft.
0.6753	0.6744	Specific Gravity (Ideal)

Z Factor : 0.9970

GASOLINE CONTENT (GPM/Real)

Ethane & Heavier	3.982
Propane & Heavier ...	1.446
Butane & Heavier	0.581
Pentane & Heavier ...	0.224

Guardian