STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 29-Oct-87	
Company: Pennzoil Company		Connection: NONE			
Pool: Quail Ridge		Formation: Morrow		Unit	
Completion Date: 10-21-87	Total Depth: 13,690'	Plug Back TD: 13,646'	Elevation: 3598.3	Farm or Lease Name: Pennzoil -36- State Com.	
Csg. Size: 5 1/2" / Wt.: 17 & 20# / d / Set At: 13,690'		Perforations: From 13145 To 13333		Well No.: 1	
Tbg. Size: 2 7/8 / Wt.: 6.5# / d: 2.441 / Set At: 1305 8		Perforations: From To		Unit: I / Sec.: 36 / Twp.: 19S / Rge.: 33E	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 1305 8		County: Lea	
Producing Thru: Tubing	Reservoir Temp. °F: 160 @ 13239	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2	State: New Mexico	
L: 13054 / H: 13054	Gg: 0.6595	% CO_2: 0.44	% N_2: 0.64	% H_2S: -	Prover: / Meter Run: 4.026 / Taps: Flange

FLOW DATA

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA Press. p.s.i.g.	TUBING DATA Temp. °F	CASING DATA Press. p.s.i.g.	CASING DATA Temp. °F	Duration of Flow
SI	72 hrs.						4355	72	pkr		
1.	4.026	x	2.000	185	7	101	4059	75			1
2.	4.026	x	2.000	190	12	79	3897	77			1
3.	4.026	x	2.000	200	20	85	3724	82			1
4.	4.026	x	2.000	475	30	55	3047	82			1
5.											

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	19.81	37.248	198.2	0.9628	1.2314	1.0175	890
2.	19.81	49.380	203.2	0.9822	1.2314	1.0180	1204
3.	19.81	65.299	213.2	0.9768	1.2314	1.0189	1585
4.	19.81	121.021	488.2	1.005	1.2314	1.0448	3100
5.							

NO.	P_t	Temp. °R	T_t	Z
1.	0.30	561	1.51	0.966
2.	0.30	539	1.45	0.965
3.	0.32	545	1.47	0.963
4.	0.73	515	1.38	0.916
5.				

Gas Liquid Hydrocarbon Ratio: 17.358 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 51.8 Deg.
Specific Gravity Separator Gas: 0.6595 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX 0.829
Critical Pressure: 668 P.S.I.A. 665 P.S.I.A.
Critical Temperature: 372 R 434 R

P_c 6267 P_c^2 39275.3

NO	P_f^2	P_f	P_f^2	$P_f^2 - P_f^2$
1	16582.8	5935	35224.2	4051.1
2	15289.7	5752	33085.5	6189.8
3	13966.7	5556	30869.1	8406.2
4	9364.8	4778	22829.3	16446.0
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.741$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.304$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 6608.5$

Absolute Open Flow: 6608.5 Mcfd @ 15.025 | Angle of Slope θ: 47.8 | Slope, n: 0.906

Remarks: Gas Liquid ratio determined from total fluid volume produced during the test.

APR 28 1988

Approved By Division	Conducted By:	Calculated By:	Checked By:
Orig. Signed by Paul Kautz Geologist	Fowler/Bedgood	Simper	