

NE MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
 Revised 9-1-65

Type Test 4 POINT ☒ Initial ☐ Annual ☐ Special				Test Date 12-26-84		1980 FSL	
Company SOUTHLAND ROYALTY				Connection TO AIR			
Pool PITCHFORK RANCH				Formation MORROW		Unit NM-28881	
Completion Date 12-22-84		Total Depth 15505.		Plug Back To 15467.		Elevation 3536.	
Casing Size 5.500		ID 23.0		Set At 4.670		Well No. COM #1	
Perforations: From 14854. To 15166.		Perforations: From 0. To 0.		Unit Sec. Twp. Hgt. K 30 24S 34E			
Type Well - Single - Widenhead - G.G. or G.O. Multiple SINGLE				Factor Set At 12750.		County LEA	
Producing thru TUBING		Reservoir Temp. °F 210. 15010.		Mean Annual Temp. °F 60.0		State NEW MEXICO	
L 15010.		H 15010.		Gg 0.580		Prover 4.0	
% CO ₂ 0.50		% N ₂ 0.34		% H ₂ S 0.		Top FLANGE	

FLOW DATA						TUBING DATA		B.H.P. DATA		Duration of Flow	
NO	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		CHUCK
1	4.03 X 2.500			205.	17.0	65.	6970.	60.		6/64	1.0
2	4.03 X 2.500			280.	35.0	44.	6740.	60.		8.5/64	1.0
3	4.03 X 2.500			400.	45.5	29.	6490.	60.		12/64	1.0
4	4.03 X 2.500			450.	56.0	24.	6235.	60.		15.5/64	1.0
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RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super. Compress. Factor F _{sp}	Rate of Flow Q, Mscf
1	32.64	60.90	218.2	0.9952	1.3131	1.0170	2642.
2	32.64	101.30	293.2	1.0157	1.3131	1.0272	4530.
3	32.64	137.12	413.2	1.0312	1.3131	1.0419	6314.
4	32.64	161.06	463.2	1.0365	1.3131	1.0493	7507.
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NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	0.32	525.	1.50	0.967	437.4	60.0	0.580	XXXXXX	675.	350.
2	0.43	504.	1.44	0.948				XXXXXX		
3	0.61	489.	1.40	0.921				XXXXXX		
4	0.69	484.	1.38	0.908				XXXXXX		
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NO.	P _t	P _w	P _w ²	P _t ² - P _w ²	(1) $\frac{P_c^2}{P_t^2 - P_w^2} = 4.4801$	(2) $\left[\frac{P_c^2}{P_t^2 - P_w^2} \right]^n = 3.1922$
1	48765.	6999.	48981.	2815.		
2	45606.	6790.	46104.	5692.		
3	42292.	6571.	43178.	8618.		
4	39040.	6343.	40235.	11561.		
5						

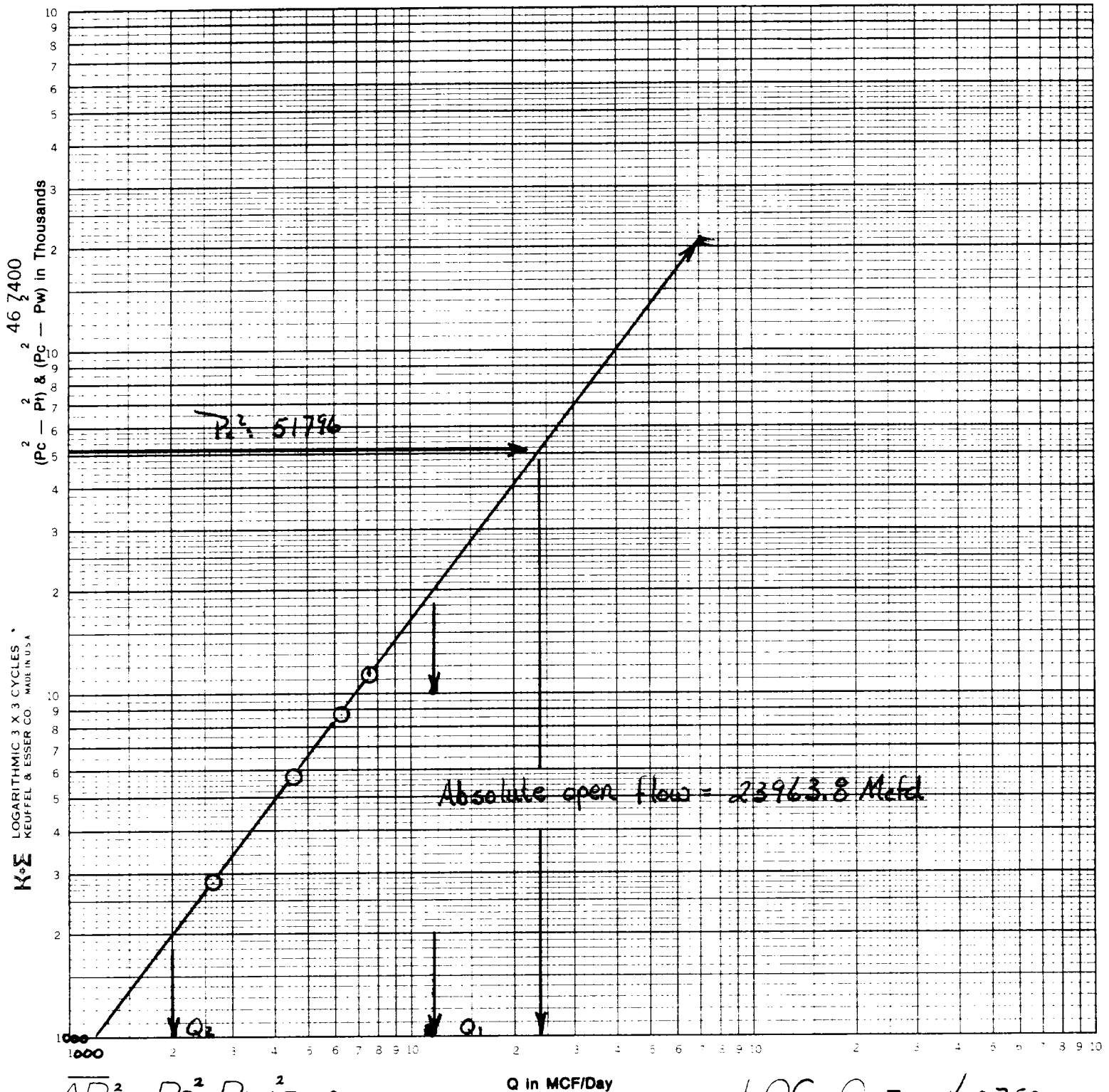
Absolute Open Flow <u>23963.8</u> Mscf @ 15.025				Angle of Slope @ <u>52.25</u>		Slope, n <u>.774</u>	
Remarks							

Approved by Commission:	Conducted by: DON BENNETT	Calculated by: BENNETT & CATHEY INC.	Checked by: DARRELL ROBERTS
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BENNETT & CATHEY PRODUCTION TESTING BACK PRESSURE CURVE

Operator Southland Royalty Lease Vaca Ridge "30" Fed Well No. Com 1
 County Lea Field Pitchfork Ranch Location 30 24S 34E
 Date of Test 12-26-84 Slope "n" 0.774 Angle of Slope 52.25

Calc. Abs. Potential 23963.8 MCF/D



$$\overline{\Delta P}_1^2 \quad P_c^2 - P_w^2 = 20000$$

$$\overline{\Delta P}_2^2 \quad P_c^2 - P_w^2 = 2000$$

$$Q_1 = 11886$$

$$Q_2 = 2000$$

Q in MCF/Day

$$\text{LOG } Q_1 = 4.0750$$

$$\text{LOG } Q_2 = 3.3010$$

$$n = 0.774$$

