

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

Form C-122
 Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 2-12-70	
Company SOUTHWESTERN NATURAL GAS				Connection NONE			
Pool OSUDO				Formation MORROW GAS		Unit -	
Completion Date 2-9-70		Total Depth 11600'		Plug Back TD 11592'		Elevation 3634' GL	
Csg. Size 4 1/2"		Wt. 13.5		Set At 11600'		Perforations: From 11281' To 11562'	
Thq. Size 2 3/8"		Wt. 4.7		Set At 11085'		Perforations: From OPEN To ENDED	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At 11085' ?		County LEA	
Producing Thru TUBING		Reservoir Temp. °F 154 @ 11000'		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L -		H 11422'		G _g 0.656		% CO ₂ 0.36	
				% N ₂ 0.31		% H ₂ S 0.00	
				Prover -		Meter Run X	
						Taps F	

FLOW DATA						TUBING DATA		CASING 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.		Temp. °F
SI							5408				45.5
1.	3	10/64	1	490	67	78	3795	65		PACKED	1.0
2.	3	9/64	1	490	49	76	3880	65		-	1.0
3.	3	7/64	1	480	36	79	4217	67		-	1.0
4.	3	5/64	1	480	16	81	4680	68		-	2.0
5.											

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 _{pv}	Rate of Flow Q, Mcfd
1	4.789	183.61	503.2	0.9831	1.235	1.045	1115.6
2	4.789	157.02	503.2	0.9850	1.235	1.046	956.8
3	4.789	133.25	493.2	0.9822	1.235	1.044	808.1
4	4.789	88.83	493.2	0.9804	1.235	1.043	537.2
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	0.75	538	1.45	0.916	5033	
2	0.75	536	1.44	0.914	52.1	
3	0.73	539	1.45	0.918	0.656	
4	0.73	541	1.46	0.920		
5.						

Specific Gravity Separator Gas XXXXXXXXXX				Specific Gravity Flowing Fluid XXXXXX			
Critical Pressure 673 P.S.I.A.				Critical Temperature 371 R			

NO.	P _r ²	P _w ²	P _w ² *	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 2.018$ (2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.869$ AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 2085$
1	-	4942.2	24425.3	23991.2	
2	-	5296.2	25049.7	20366.8	
3	-	5668.2	32128.5	16288.0	
4	-	6161.2	37960.4	10456.1	
5					

Absolute Open Flow 2090.0 Mcfd @ 15.025		Angle of Slope 48° 20'		Slope, n 0.890	
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Remarks: * 3HP @ (-7788') 11422' USED FOR PRESSURE CALCULATIONS	
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Approved By Commission: 	Conducted By: COLEMAN PET.ENG.	Calculated By: JOE A. COLEMAN	Checked By: JOE A. COLEMAN
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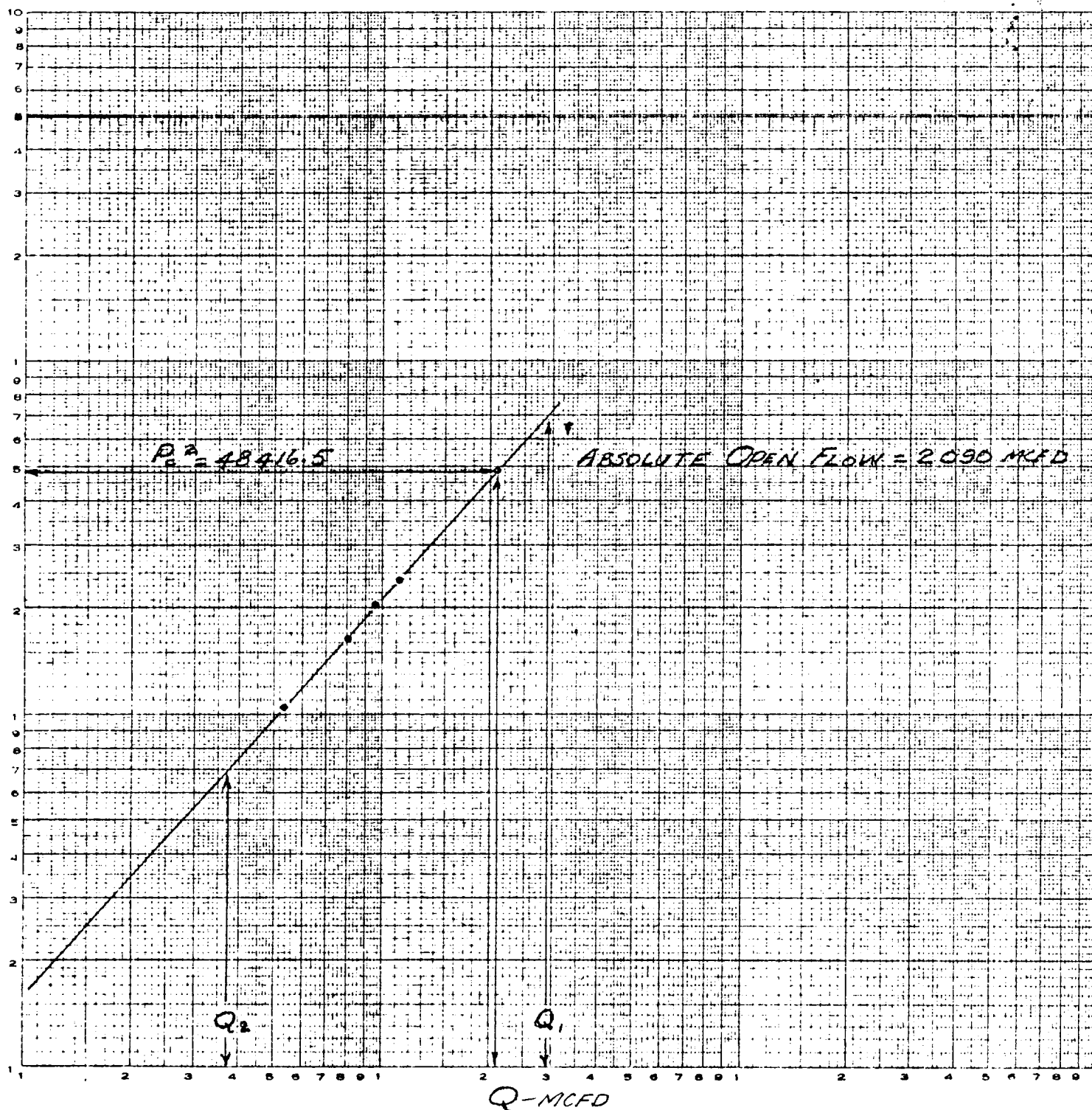
COMPANY SOUTHWEST NATURAL GAS COMPANY

WELL OSUDO STATE, NO. 1

LOCATION UNIT 1, SEC. 19 20 S 36 E

COUNTY LEA NEW MEXICO

DATE FEBRUARY 12, 1970



$$Q_1 = 2900 \text{ MCFD}; \text{LOG } Q_1 = 3.46240$$

$$Q_2 = 374 \text{ MCFD}; \text{LOG } Q_2 = 2.57287$$

$$\eta = 0.88953 = 0.890$$

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