

MULTIPOINT AND ONE POINT BACK PRESSURE-TEST FOR GAS WELL

RECEIVED, c/sf
File

Type Test ☒ Initial FOUR POINT ☐ Annual ☐ Special		Test Date 2-25-83		MAR 11 1983	
Company MCKAY OIL CORP.		Connection AIR NEW WELL		O. C. D. ARTESIA, OFFICE	
Pool W. PECOS SLOPE W.D.		Formation ABO		Unit #	
Completion Date 2-25-83		Total Depth 3350.		Plug Back TD 3219. 3360	
Elevation 4101 4113.		Date of Lease Name APRIL FEDERAL		Well No. 4	
Csg. Size 4.500	Wt. 11.6	d 4.000	Set At 3332.	Perforations: From 3140. To 3146.	Unit Sec. Twp. Rge. E34 8S 22E
Tub. Size 2.375	Wt. 4.7	d 1.995	Set At 3085.	Perforations: From 0. To 0.	County CHAVES
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At 0.	
Producing Thru TUBING		Reservoir Temp. °F 101 @ 3143.		Mean Annual Temp. °F 60.0	
Buro. Press. - P _a 13.2		State NEW MEXICO		Meter Run 0.	
L 3143.	H 3143.	G _g 0.754	% CO ₂ 17.84	% N ₂ 5.89	% H ₂ S 0.
Prover 2.0		Meter Run 0.		Flow 0.	

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	
5.							1030.	56.			215.0
1.	2.00 X 0.094			955.	0.	51.	960.	51.	0.	0.	1.0
2.	2.00 X 0.125			830.	0.	49.	857.	49.	0.	0.	1.0
3.	2.00 X 0.188			400.	0.	44.	733.	44.	0.	0.	1.0
4.	2.00 X 0.188			490.	0.	40.	495.	40.	0.	0.	1.0
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _L	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mscf
1.	0.14	0.	968.2	1.0088	1.1516	1.0878	172.
2.	0.26	0.	843.2	1.0107	1.1516	1.0773	279.
3.	0.61	0.	413.2	1.0157	1.1516	1.0382	305.
4.	0.61	0.	503.2	1.0198	1.1516	1.0484	376.
5.							

NO.	P _r	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.	1.32	511.	1.42	0.845	0.	0.	0.754	X X X X X X X X X	733.	360.
2.	1.15	509.	1.41	0.862				X X X X X		
3.	0.56	504.	1.40	0.928						
4.	0.69	500.	1.39	0.910						
5.										

NO.	P _r	P _w	P _w ²	P _c ² - P _w ²
1.	947.	975.	951.	140.
2.	757.	872.	761.	330.
3.	557.	749.	561.	530.
4.	258.	511.	261.	829.
5.				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.3151$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1476$

ADP = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 431.$

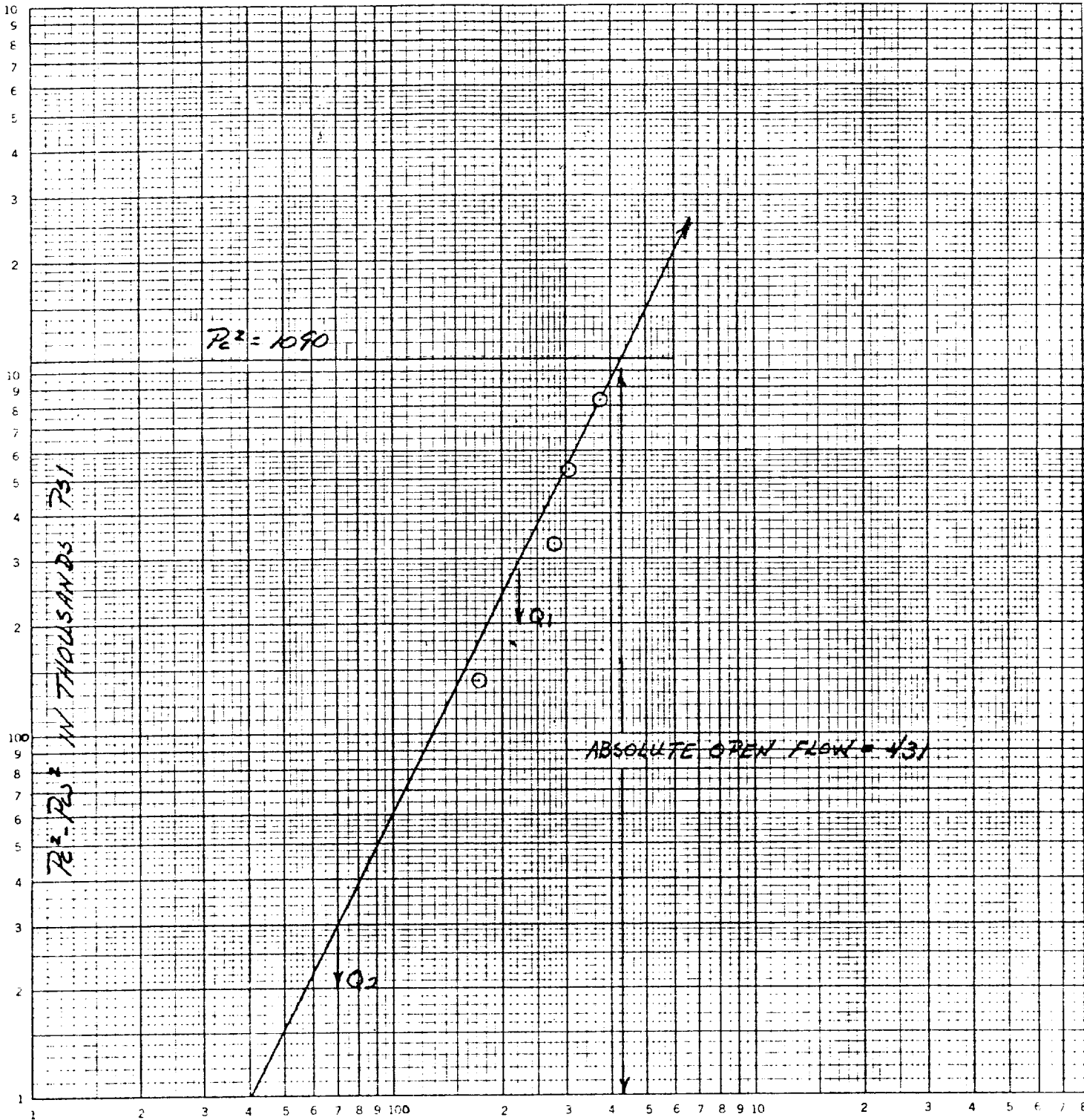
Post ID-2
4-1-83
Comp + BK

Absolute Open Flow 431.		Mscf @ 15.025		Angle of Slope 63.3		Slope, n 0.503	
Remarks:							
Approved By Commission:		Conducted By: DON BENNETT		Calculated By: BENNETT & CATHEY		Checked By: <i>[Signature]</i>	

34 85 22E
CHAVES
2-25-83

46 7400

K&E LOGARITHMIC 3 X 3 CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.



$$\overline{\Delta P} \frac{1}{2} P_2 - P_{w2} = 300$$

$$\overline{\Delta P} \frac{1}{2} P_2 - P_{w2} = 30$$

$$Q_1 = 223$$

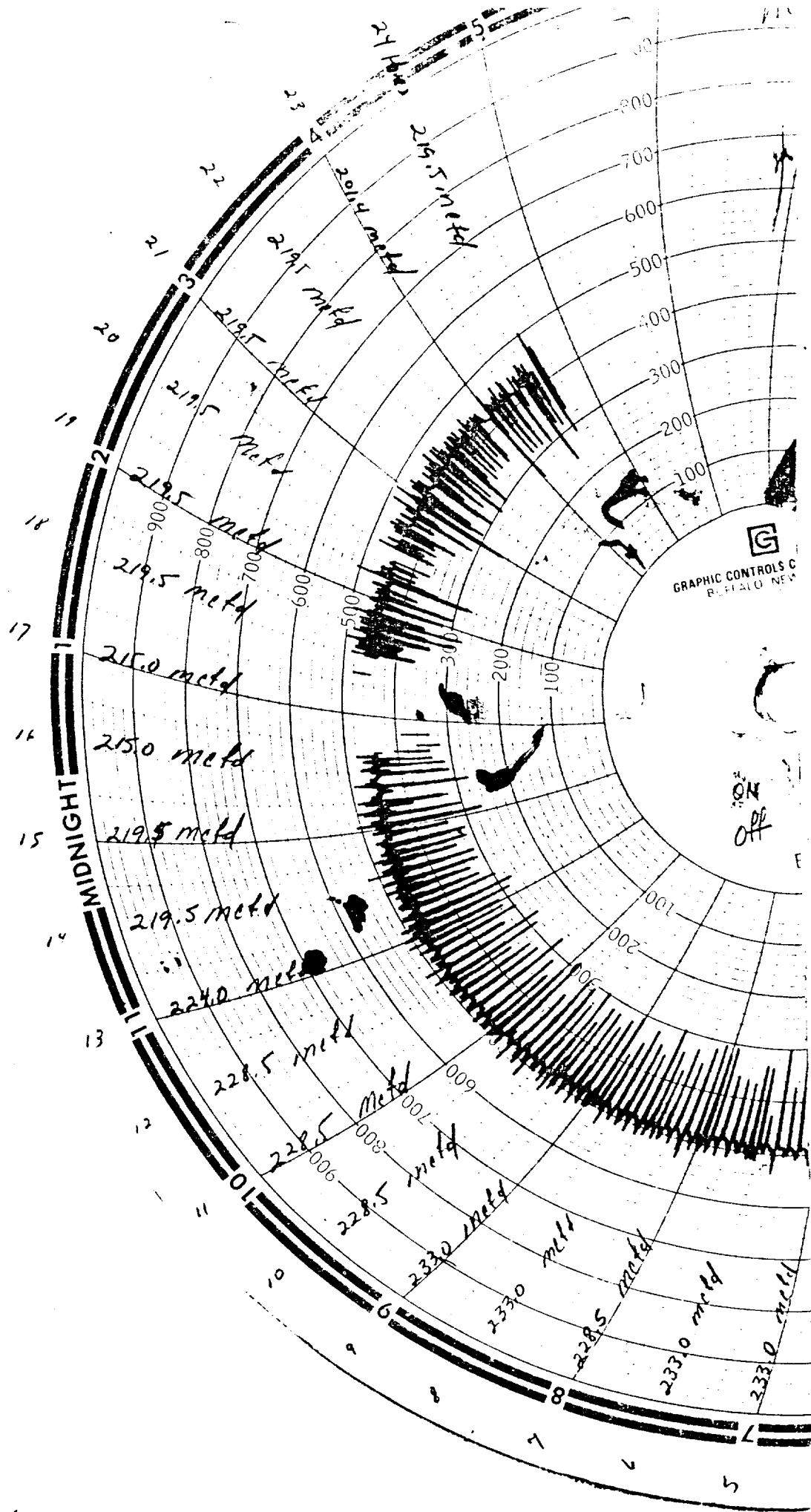
$$Q_2 = 70$$

Q, Mcfd

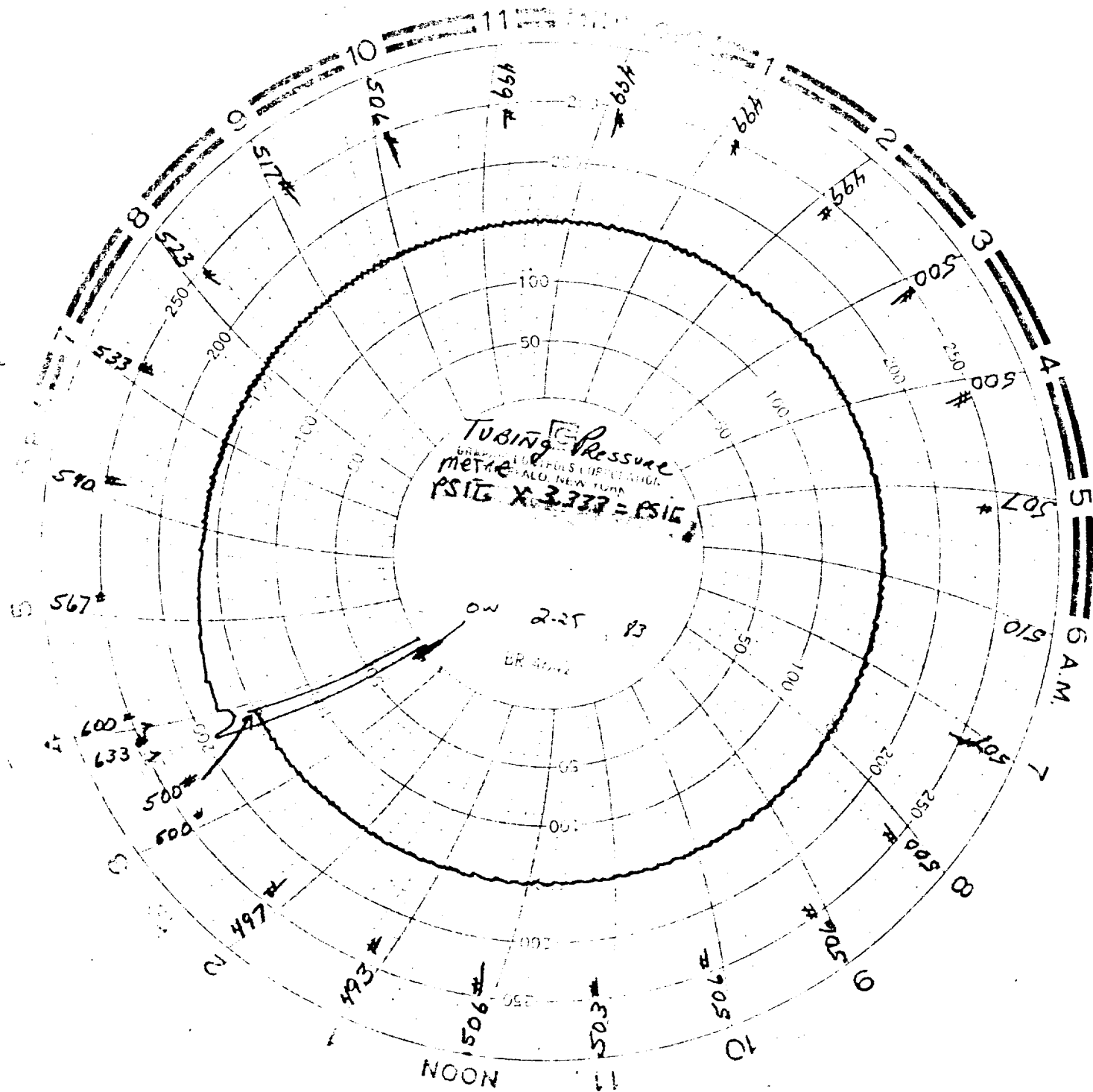
$$\text{LOG } Q_1 = 2.3483$$

$$\text{LOG } Q_2 = 1.8451$$

$$1 = .5032 = .5$$







SUGGESTED FIELD DATA SHEET (NOT REQUIRED TO BE FILED)

Type of Well ☐ Initial ☐ Annual FLOW ☐ Special		Date 2-25-83										
Property MC KAY OIL CORP.		Location AIR NEW WELL										
Field PECOS SLOPE U.D.		Formation ABO										
Completion Date 2-25-83	Total Depth 3350	Flowback To 3219	Elevation 4113									
Perforations: From 3140 To 3146		Well No. 4										
Perforations: From 0 To 0	Unit Sect. Twp. R. F 34 8S 22E											
Type of Well - Single - Perforated - C.G. or C.O. Multiple SINGLE		County CHAVES										
Producing Zone TUBING		State NEW MEXICO										
Reservoir Temp. °F 101	Mean Annual Temp. °F 60	Baro. Press. - 1" 13.2										
L 3143	H 3143	Gg 0.754	% CO ₂ 17.84									
		% H ₂ 5.89	% H ₂ S 0									
Company CHARLES SANDERS		Prover 2"										
TEST RUN BY: DON BENNETT		TIME ARRV.:										
TIME REFILED:		TIME REFILED:										
MILEAGE LEAVE: 294-7538		ARRV.: TOTAL MILEAGE ONE WAY 68 1/4										
DATE TIME OF READING	ELAP. HOUR	WELLHEAD PRESS. IBG PSIG	TEMP °F	PRES. PSI	DIFF.	TEMP °F	ORIF. SIZE	MCED	TOP FLUID	CUT H ₂ O	COND. MADE	H ₂ O MADE
1600	0	600	50	230		50		282.6				
1700	1	567	50	230		50		260.1				WELL MADE
1800	2	540	50	230		50		251.1				SOME WATER
1900	3	533	50	230		50		255.6				DURING 24
2000	4	523	50	230		50		245.6				FLOW.
2100	5	517	50	230		50		233.0				
2200	6	506	50	230		50		233.0				
2300	7	499	50	230		50		228.5				
2400	8	499	50	230		50		233.0				
0100	9	499	50	230		50		233.0				
0200	10	499	50	230		50		228.5				
0300	11	500	50	230		50		228.5				
0400	12	500	50	230		50		228.5				
0500	13	507	50	230		50		224.0				
0600	14	510	50	230		50		219.5				
0700	15	507	50	230		50		219.5				
0800	16	500	50	230		50		215.0				
0900	17	506	50	230		50		215.0				
1000	18	506	50	230		50		219.5				
1100	19	503	50	230		50		219.5				
1200	20	506	50	230		50		219.5				
1300	21	493	50	230		50		219.5				
1400	22	497	50	230		50		219.5				
1500	23	500	50	230		50		201.4				
1600	24	500	50	230		50		219.5				