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MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

JUN 02 1986

Type Test 4-POINT ☒ Initial ☐ Annual ☐ Special		Test Date 5-23-86	
Company MCKAY OIL		Connection TO AIR	
Pool WEST PECOS		Formation ABO	
Completion Date 5-22-86		Total Depth 3350	
Plug Back TD 3270 3072'		Elevation 4196 4074'	
Farm or Lease Name CHINA DRAW FED		Well No. 5	
Coq. Size 4.5	Wt. 9.5	d 4.092	Set At 3122
Perforations: From 2815 To 2943		Well No. 5	
Thq. Size 2.375	Wt. 4.7	d 1.995	Set At 2782
Perforations: From OPEN To ENDED		Unit Soc. Twp. Rye. 30 65 23E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE		Packer Set At 0	
County CHAVES		State N.M.	
Producing Thru TUBING		Reservoir Temp. °F 101 # 2879	
Mean Annual Temp. °F 60		Boro. Press. - P _a 13.2	
L 2879	H 2879	G _g .619	% CO ₂ .159
% N ₂ 4.994	% H ₂ S 0	Prover 2.000	Meter Run 0
Taps 0			

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							755	74	755	74	24HRS
1.	2.000		0.125	715	0.00	60	715	74	720	74	60MIN.
2.	2.000		0.1875	650	0.00	54	650	74	650	74	60MIN.
3.	2.000		0.21875	595	0.00	51	595	73	600	73	60MIN.
4.	2.000		0.250	525	0.00	46	525	73	530	73	60MIN.
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	.2648	0.00	728.2	1.000	1.271	1.062	260
2	.6082	0.00	663.2	1.006	1.271	1.059	546
3	.8393	0.00	608.2	1.009	1.271	1.055	691
4	1.087	0.00	538.2	1.014	1.271	1.050	792
5.							

NO.	P _i	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcft/bbl.
1	1.10	520	1.48	.887	0	
2	1.00	514	1.46	.892	0	
3	.92	511	1.46	.899	.619	XXXXXX
4	.81	506	1.44	.907	XXXXXX	
5						

P _c 768.2		P _c ² 590		(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.7570$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.0338$	
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²			
1		733.2	538	52			
2		663.2	440	150			
3		613.2	376	214			
4		543.2	295	295			
5							

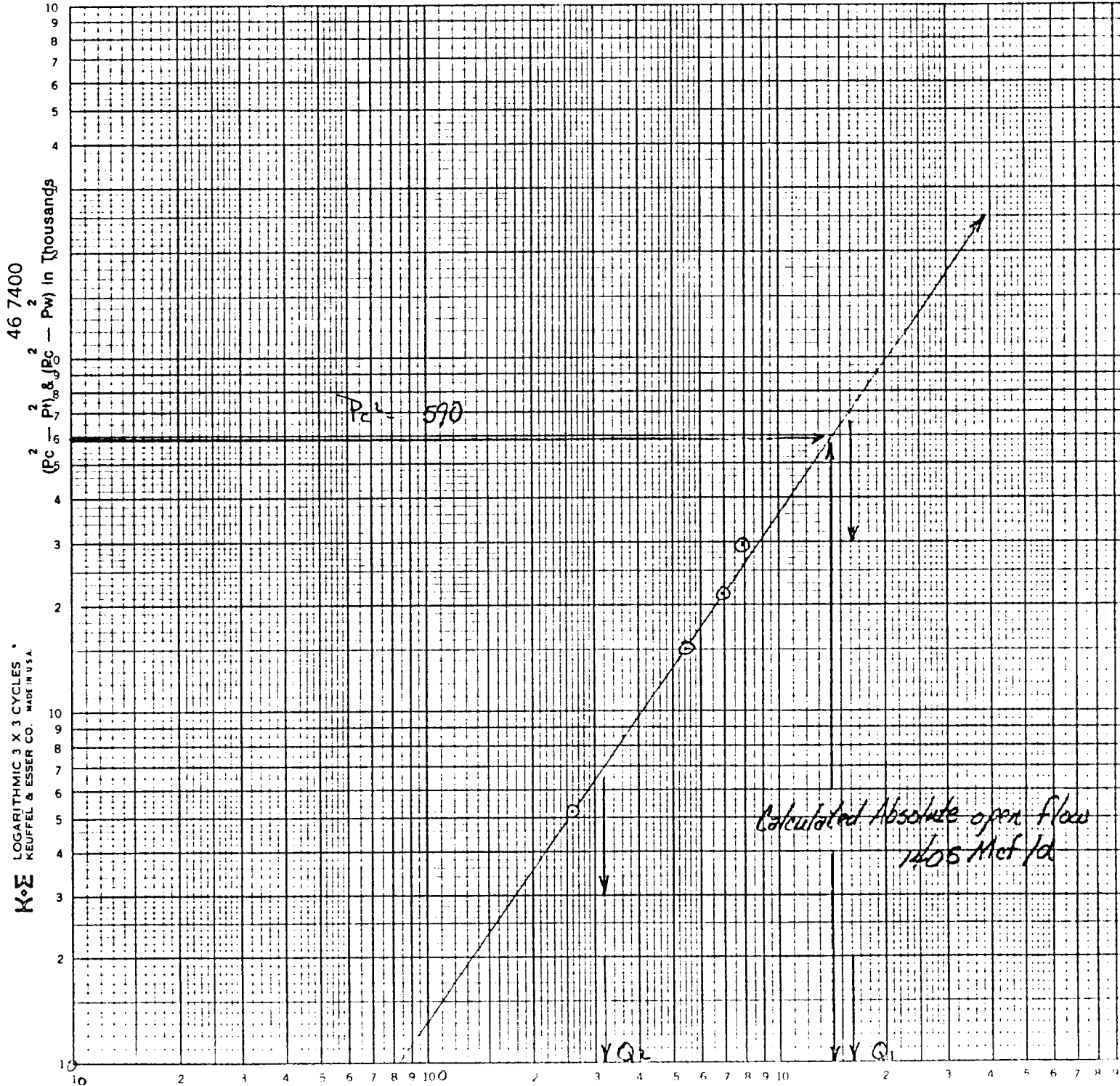
Absolute Open Flow 1405 Mcfd @ 15.025 Angle of Slope 55° Slope, n 0.700

Remarks:

Approved By Division Conducted By: Calculated By: Checked By:

BACK PRESSURE CURVE

Operator McKay Oil Lease China draw Fed Well No. 5
 County Chaves Field West Pecos Slope Location 30 6S 23E
 Date of Test 5-23-86 Slope "n" 0.700 Angle of Slope 55°
 Calc. Abs. Potential 1405 MCF/D



$$\frac{\Delta P_1^2}{\Delta P_2^2} \frac{P_c^2 - P_w^2}{P_c^2 - P_w^2} = \frac{700}{70}$$

$$\frac{\Delta P_1^2}{\Delta P_2^2} \frac{P_c^2 - P_w^2}{P_c^2 - P_w^2} = \frac{70}{70}$$

$$Q_1 = \frac{1604}{1.22}$$

$$Q_2 = \frac{1604}{1.22}$$

Q in MCF/Day

$$\text{LOG } Q_1 = 3.2052$$

$$\text{LOG } Q_2 = 2.5052$$

$$n = .7000$$

