NEW MEXICO OIL CONSERVATION COMMSSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test: ☒ Initial ☐ Annual ☐ Special			Test Date: 2/11/72	
Company: Amoco P roduction Company	Connection: None			
Pool: Wildcat	Formation: Tubb			Unit: API #30-021-20021
Completion Date: 2/11/72	Total Depth: 2670	Plug Back TD: 2660	Elevation: 4993 RDB	Farm or Lease Name: State "EN"
Csg. Size: 4-1/2" / Wt.: 9.5# / d: 4.090 / Set At: 2670'	Perforations: From 2407 To 2661			Well No.: 1
Tbg. Size: 2-3/8" / Wt.: 4.7# / d: 1.995 / Set At: 2408	Perforations: From Open End To			Unit: J / Sec.: 23 / Twp.: 20N / Rge.: 33E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single	Packer Set At: 2376			County: Harding
Producing Thru: 2-3/8" Tbg	Reservoir Temp. °F: @ 87°	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2	State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
2408	2408	1.5194	99.92	0.08	0	-	4.00"	Flange

	FLOW DATA					TUBING DATA		CASING DATA		
NO.	Prover Line Size	X Orifice Size	Press. p.s.i.g.	Diff. h hg	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI										
1.	4"	1"	13.2	16.5	50	188	50	Pkr.	Pkr	1.5 hr.
2.	4"	1"	13.2	25	58	151	58	Pkr	Pkr	1.0 hr
3.	4"	1"	13.2	42	60	118	60	Pkr	Pkr	1.0 hr
4.	4"	1.5"	13.2	19	62	76	62	Pkr	Pkr	1.0 hr
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	366.1	-	13.2	1.0098	0.6284	1.000	232
2	463.4	-	13.2	1.0019	0.6284	1.000	295
3	650.6	-	13.2	1.000	0.6284	1.000	409
4	908.2	-	13.2	0.9931	0.6284	1.000	570
5							

NO.	P_t	Temp. °R	T_t	Z
1	0.0123	510	0.9307	1.000
2	0.0123	518	0.9452	1.000
3	0.0123	520	0.9489	1.000
4	0.0123	522	0.9525	1.000
5				

Gas Liquid Hydrocarbon Ratio: Dry gas Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Dry gas Deg.
Specific Gravity Separator Gas: 1.5194 (CO_2) XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX Dry Gas
Critical Pressure: 1073 P.S.I.A. ____ P.S.I.A.
Critical Temperature: 548 R ____ R

P_c 366.2* P_c^2 134.1

From Curve, Q= 1000 MCFD, $P_c^2 - P_w^2$ = 85.5

NO	P_t^2	P_w *	P_w^2	$P_c^2 - P_w^2$
1		324.2	105.1	29.0
2		312.2	97.5	36.6
3		297.2	88.3	45.6
4		280.2	78.5	55.6
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.568$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.856$

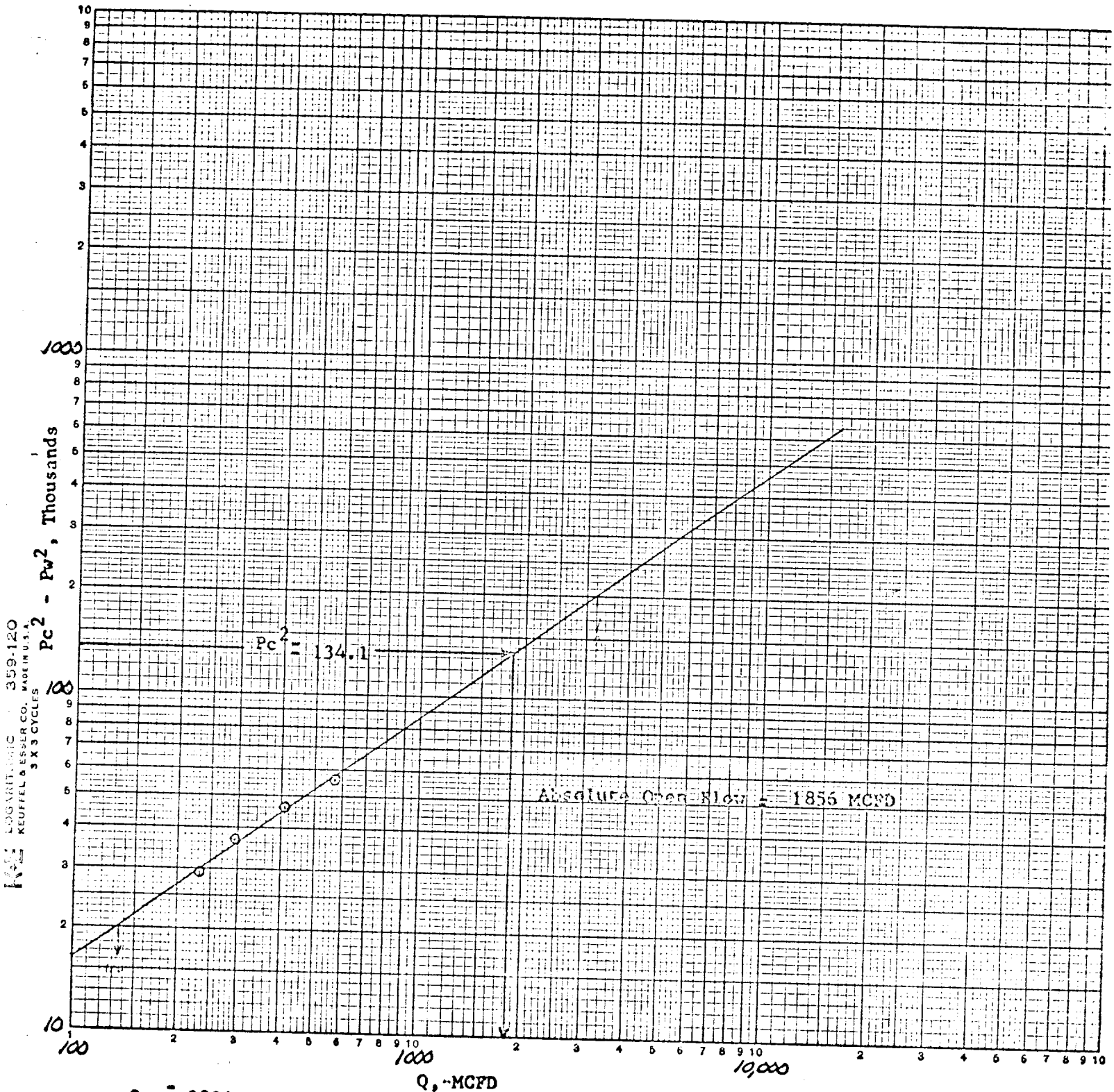
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1856$

Absolute Open Flow: 1856 Mcfd @ 15.025 Angle of Slope θ: ____ Slope, n: 1.375

Remarks: * Pc and Pw measured with bottom hole pressure recorder

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Thompson	J. E. York	E. J. Snook

Amoco Production Company
State "EN" Well No. 1
J-23-20N-33E
Harding County
2/11/72



$Q = 3200$ MCFD
$Q_2 = 135$ MCFD

$\text{Log } Q_1 = 3.50515$
$\text{Log } Q_2 = 2.13033$

$N = 1.37482 = 1.375$