

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 11-28-77		SPUD DATE: 11-1-77	
Company DOYLE HARTMAN				Connection To AIR			
Pool EUNICE MONUMENT GRAYBURG SAN ANDRES				Unit			
Completion Date 11-28-77		Total Depth 3,842'		Plug Back TD 3,838'		Elevation 3562 GR.	
Farm or Lease Name CITIES LAUGHLIN				Well No. 1			
Csg. Size 5 1/2"	Wt. 15.5#	Id 4.976"	Set At 3,750'	Perforations: From 3594' To 3648'			
Tbg. Size 2 3/8"	Wt. 4.7#	Id 1.995"	Set At 3,578'	Perforations: From OPEN ENDED		Unit Sec. Twp. Rge. J 5 20S 37E	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple SINGLE				Packer Set At NONE		County LEA	
Producing Thru TUBING		Reservoir Temp. °F 90 @ 3621'		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2	
State NEW MEXICO							
L 3621	H 3621	Gg 0.674	% CO ₂ 3.32	% N ₂ 1.82	% H ₂ S 0.14	Prover POSITIVE CHOKES	Meter Run Taps

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							477.0	67	477.0		2 HR.
1.	4/64			468.0	N.A.	69	468.0	69	468.0		1 HR.
2.	8/64			455.0	"	70	455.0	70	456.0		1 HR.
3.	12/64			421.0	"	72	421.0	72	433.0		1 HR.
4.	16/64			352.0	"	73	352.0	73	409.0		1 HR.
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	*0.2532 (EST)	N.A.	481.2	0.9915	1.218	1.046	154*
2	0.2618	"	468.2	0.9905	1.218	1.045	155
3	0.6101	"	434.2	0.9887	1.218	1.014	332
4	1.112	"	365.2	0.9877	1.218	1.034	505
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	TSTM	Mcf/bbl.
1.					A.P.I. Gravity of Liquid Hydrocarbons		Deq.
2.					Specific Gravity Separator Gas	0.674	X X X X X X X X
3.					Specific Gravity Flowing Fluid	X X X X X	
4.					Critical Pressure	676	P.S.I.A.
5.					Critical Temperature	373	R

P _c 490.2 P _c ² 240.3			
NO.	P _t ²	P _w	P _w ²
1	481.2	481.2	231.6
2	219.2	469.2	220.1
3	188.2	446.2	199.1
4	133.4	422.2	178.3
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.8758$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1957$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.8758$

Absolute Open Flow	1957	Mcf/d @ 15.025	Angle of Slope °	45.0°	Slope, n	1.00 LIMIT
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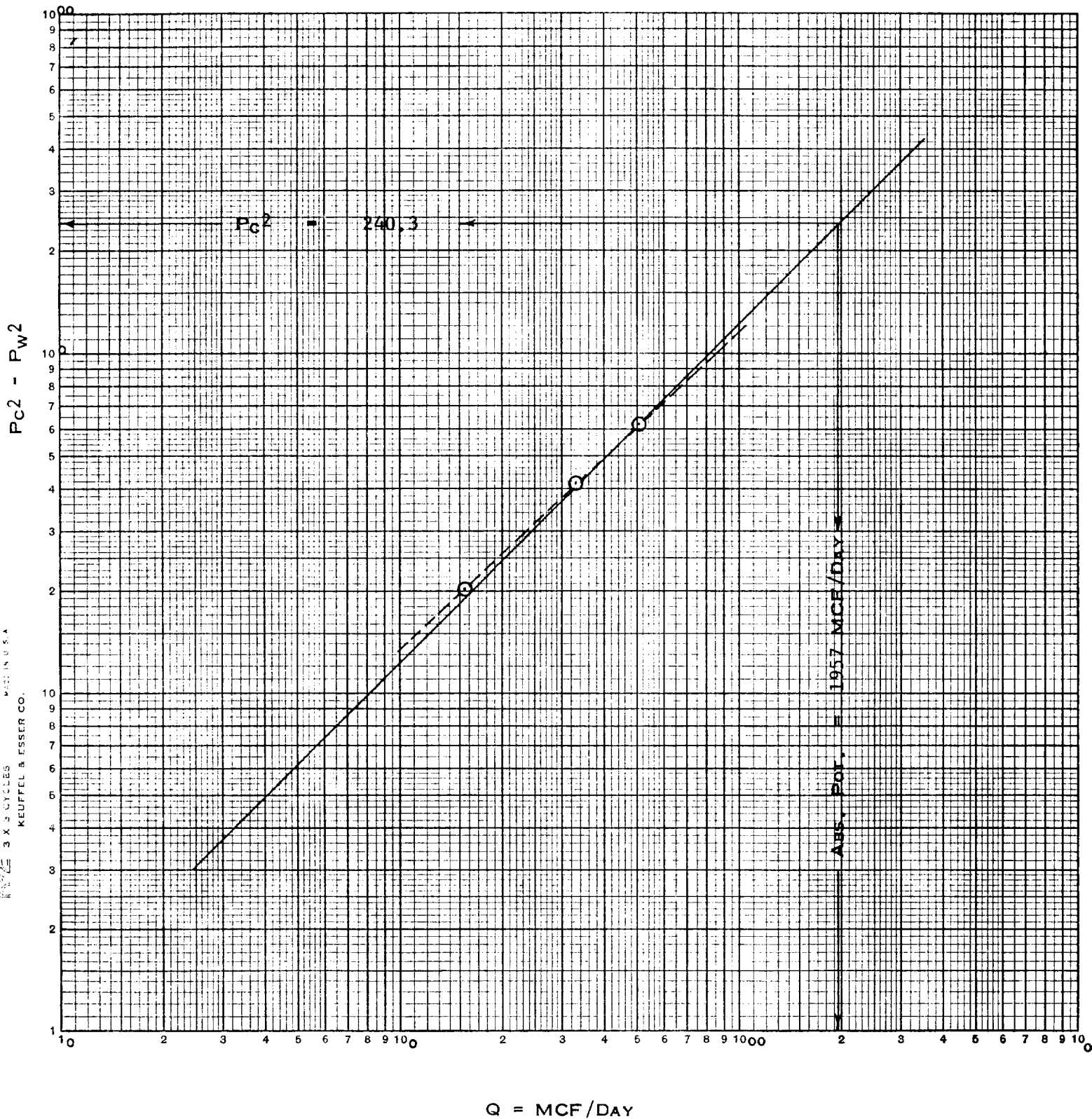
Remarks: *FIRST RATE DISREGARDED-NO COEFFICIENT IN N.M. TABLES FOR 4/64" POSITIVE OR ADJUSTABLE CHOKE-GOOD POINT ALIGNMENT IN EXCESS OF 1,000 LIMITS.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	M.C.T.	R.L.W.	J.W.W.

ABS. SLOPE (N) = 1.000 LIMITED

$$\text{ABS. POT.} = 505 \left(\frac{240.3}{62.0} \right)^{1.000} = 1957 \text{ MCF/DAY}$$

LOG-LOG PLOT
3 X 5 CYCLES
KEUFFEL & ESSER CO.



RECEIVED

JAN 26 1978

GIL CONRAD
HOBBS, N. M.