

RECEIVED

JUN 4 1981

Type Test Initial Annual Special Test Date 5-20-81

Company Mesa Petroleum Company Connection Unconnected

Pool Undesignated ABO Formation ABO Plug Back TD 3372 Elevation 4110'

Completion Date 5-20-81 Total Depth 3412 Perforations: From 2854 To 2940

Csg. Size 4 1/2" I.D. Set At 3411 Perforations: From open ended To Packer Set At

Thg. Size 2 3/8" I.D. Set At 2733

Type Well - Single - Bradenhead - G.G. or G.O. Multiple none Baro. Press. - P_g 13.2

Producing Thru Tubing L 2733 H 2733 Gg 65 Mean Annual Temp. °F 60 % CO₂ 3 % N₂ 1 % H₂S 13.2

Reservoir Temp. °F 95° @ 3412 Prover 2" Orifice Well Tester

State Chaves

O.C.D.
ARTESIA, OFFICE

Farm or Lease Name Barn Federal
Well No. 3
Unit 3 Sec. 13 Twp. 8S Rge. 22E
County Chaves

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	TUBING DATA		CASING DATA		Duration of Flow
							Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI											
1.	2" Orifice	1	1 1/4	3.5	-	65	825	80	840	80	63 hr
2.	Well	1	1 1/4	6.5	-	65	750	80	790	80	1/2 hr
3.	Tester	1	1 1/4	8.5	-	65	695	80	715	80	3/4 hr
4.							610	80	630	80	1/2 hr
5.							520	80	540	80	1/2 hr

NO.	Coefficient (24 Hour)	√ _{hw} P _m	RATE OF FLOW CALCULATIONS				Rate of Flow O. Mcld
			Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{py}	
1	218	2" Orifice Well		.9952	.9608	208	
2	418	Tester		.9952	.9608	400	
3	587			.9952	.9608	561	
4	685			.9952	.9608	655	

NO.	P _t	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
1.								
2.								
3.								
4.								
5.								

NO.	P _c	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1	840		790	624	82
2			715	511	195
3			630	397	309
4			540	292	414
5					

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.6205$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.5$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.050$

Absolute Open Flow 1.050 Mcld @ 15.025 Angle of Slope @ 53.5°

Remarks: _____

Conducted By: James Craig

Calculated By: E.L. Buttross, Jr.

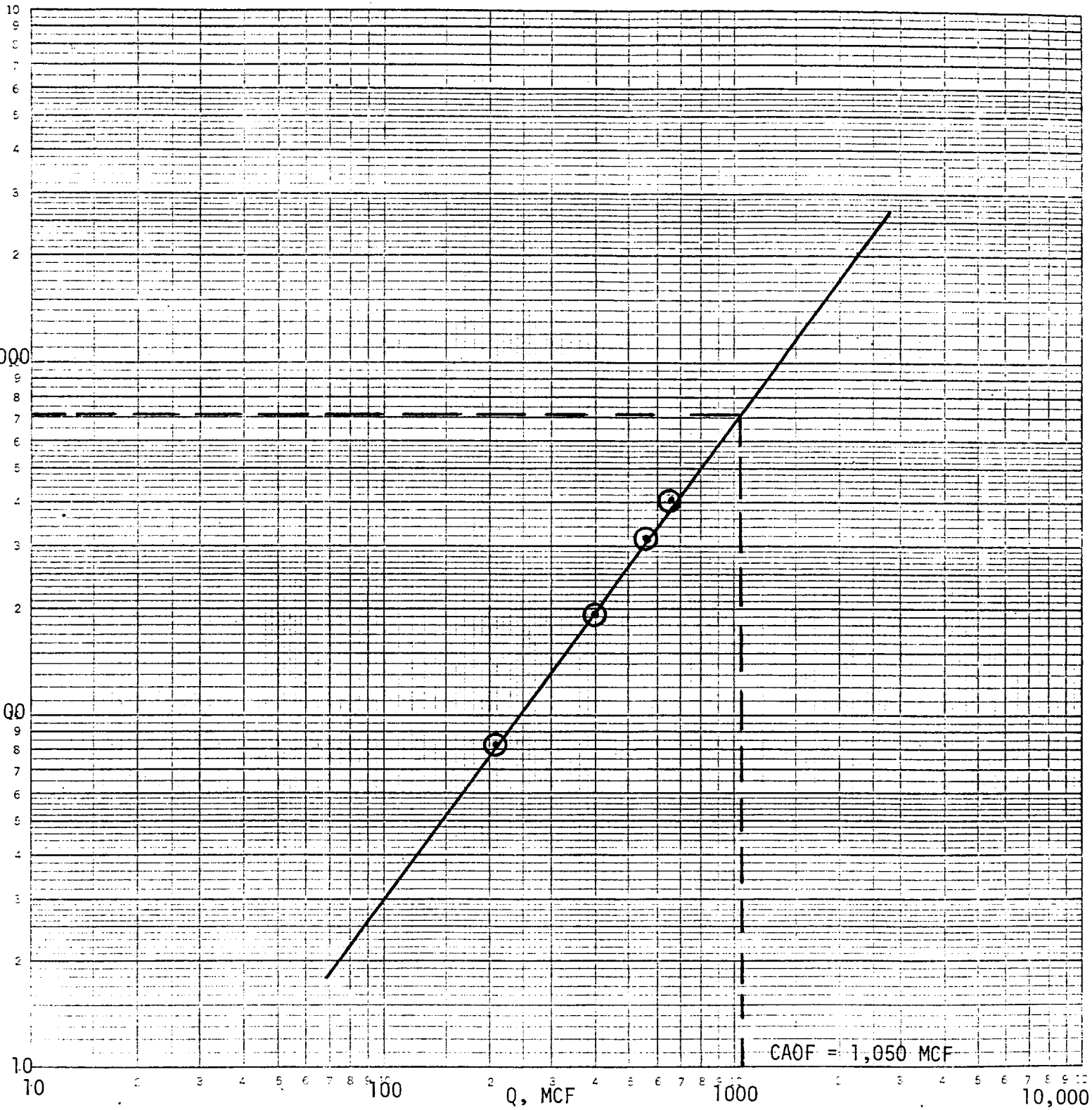
Checked By: _____

Approved By Commission: _____

487403ds

$P_C^2 - P_W^2$

LOGARITHMIC 3 X 3 CYCLES
NEUFTEL & ESSER CO. MADE IN U.S.A.



$$n = 1/\text{slope} = \frac{\text{Log } Q_2 - \text{Log } Q_1}{\text{cycle}} = \frac{\text{Log } 1,350 - \text{Log } 245}{\text{cycle}} = \frac{3.13 - 2.39}{\text{cycle}} = .74$$

$$\theta = 53.5^\circ$$