

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Corrected report

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 02-13-80		MAR 12 1980	
Company MESA PETROLEUM				Connection AIR		O. C. D.		
Well Diamond Mine - UNDESIGNATED				Formation ATOKA		Well ARTESIA, OFFICE		
Completion Date 1-28-80		Total Depth 8912'		Plug back To 8821'		Elevation 3642 GL		Field or Lease Name WELLS FEDERAL
Csg. Size 4 1/2	Wt. 11.6/10.5	d 5	Set At 8911	Perforations: From 8678 To 8706'		Well No. # 2		
Tiq. Size 2 3/8	Wt. 4.7	d 5	Set At 8625	Perforations: From To		Unit Sec. Twp. Rge. G 11 16 27		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE - GAS				Pecker Set At 8625		County EDDY		
Producing Thru TBG.		Reservoir Temp. °F 160 @ 8625		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State NEW MEXICO
L 8625	H 8625	G _g .660	% CO ₂ 1.619	% N ₂ .968	% H ₂ S	Prover	Meter Run 4"	Temp. FLG.

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							2296				72 HR.
1.	4 X 1.000			450	5.0	56	1922				1 HR.
2.	4 X 1.000			435	8.0	74	1682				1 HR.
3.	4 X 1.000			435	12.0	94	1360				1 HR.
4.	4 X 1.000			425	14.5	102	980				1 HR.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mgd
1	4.753	48.12	463.2	1.004	1.231	1.052	297
2	4.753	59.88	448.2	.9868	1.231	1.043	361
3	4.753	73.34	448.2	.9688	1.231	1.038	432
4	4.753	79.71	438.2	.9619	1.231	1.035	464
5							

NO.	P _f	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.69	516	1.37	.904	A.P.I. Gravity of Liquid Hydrocarbons	Dep.
2.	.66	534	1.42	.920	Specific Gravity Separator Gas .660	XXXXXXXXXX
3.	.66	554	1.47	.929	Specific Gravity Flowing Fluid XXXXX	
4.	.65	562	1.49	.933	Critical Pressure 674	P.S.I.A. P.S.I.A.
5.					Critical Temperature 377	R R

NO.	P _f ²	P _w ²	P _w ²	P _c ² - P _w ²
1	1935.8	3747.3	1585.1	
2	1696.2	2877.1	2455.3	
3	1375.0	1890.7	3441.7	
4	996.3	992.6	4339.8	
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.229$

ACF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = .514$

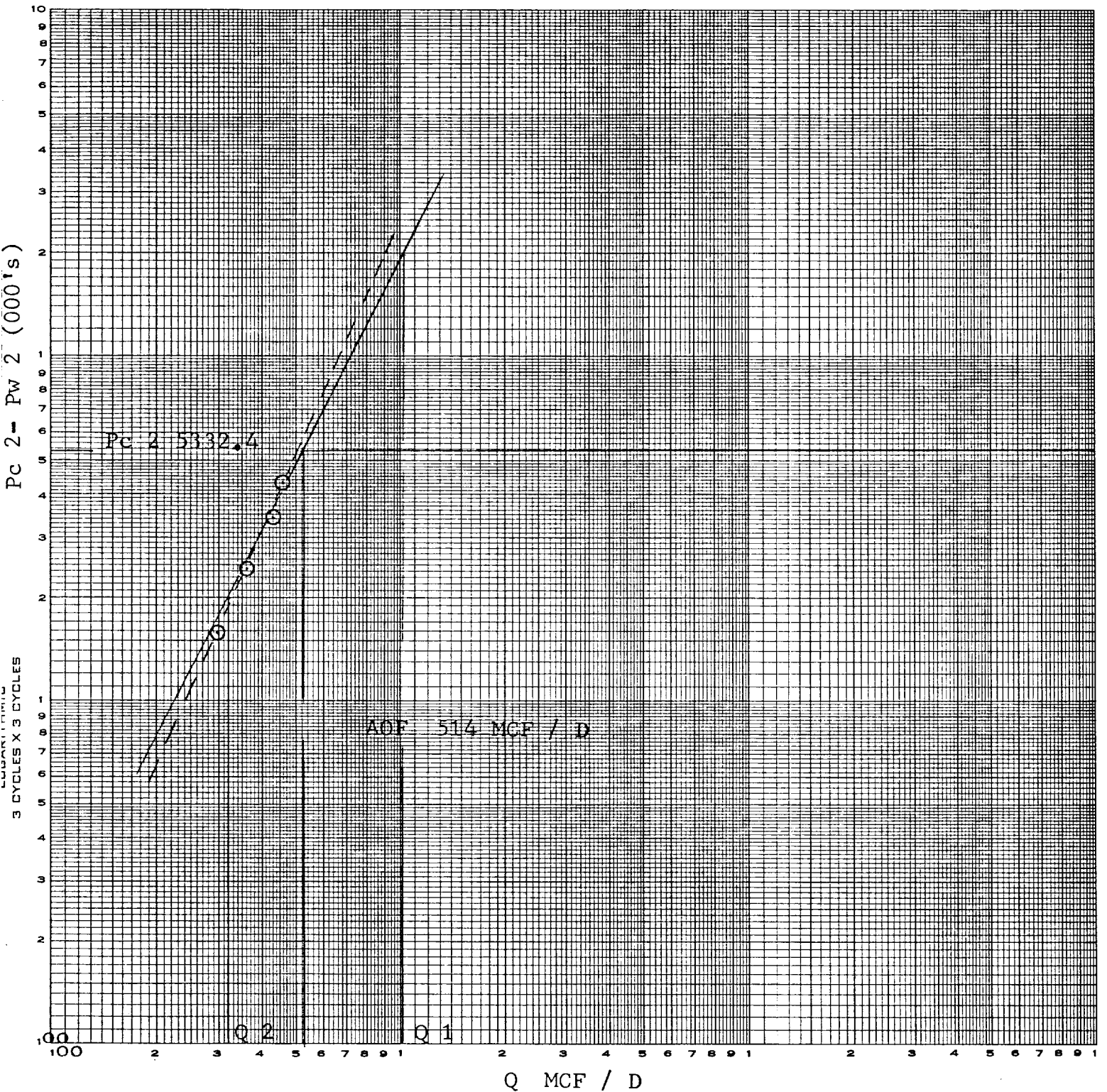
(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.108$

Absolute Open Flow	514	Mgd @ 15.025	Angle of Slope @	63.5	Slope, n	.500
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Remarks:

Approved By Commission:	Conducted By: Larry Davis	Calculated By: Larry Davis	Checked By:
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COMPANY : MESA PETROLEUM
 LEASE : WELLS FEDER
 WELL NO. : # 2
 UNIT : G / 11/16/27
 COUNTY : EDDY
 STATE : NEW MEXICO
 DATE : FEBRUARY 13, 1980



Q 1 = 1012; LOG OF Q 1 = 3.005149
 Q 2 = 320; LOG OF Q 2 = 2.505149
 N = .500