

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

Form C-122
Revised 9-1-79

RECEIVED 10:57

Type Test: ☒ Initial ☐ Annual ☐ Special						Test Date: 07/15/80		JUL 21 1980	
Company: MESA PETROLEUM Co.				Location: AIR				O. C. D.	
Well: WILDCAT				Formation: A30				Artesia, Office	
Completion Date: 07/12/80		Total Depth: 5268		Plug Depth: 5000		Elevation: 3996.5 GL		Lease: STANCEL FEDERAL	
Casing Size: 4 1/2	Wt.: 10 1/2	d:	Set At:	Perforations: From 3786 To 3966		Well No.: # 1			
Tub. Size: 2 3/8	Wt.:	d:	Set At:	Perforations: From To		Unit: K	Sect.: 23	Twp.: 5s	Range: 24e
Type Well - Single - Prodenhead - G.G. or G.O. Multiple: SINGLE						Licker Set At: -----		County: CHAVES	
Producing Thru: TBG		Reservoir Temp. °F:		Mean Annual Temp. °F:		Base Press. - P ₀ :		State: NEW MEXICO	
L:	H:	Gg: .6807	% CO ₂ : .515	% N ₂ : 13.716	% H ₂ S:	Prover: 2"	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	
5.							1000		1000		72 Hr.
1.	2 X .500			192		49	934		945		1 Hr.
2.	2 X .500			273		56	845		883		1 Hr.
3.	2 X .500			358		65	710		795		1 Hr.
4.	2 X .500			370		71	552		744		1 Hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P ₁	Flow Temp. Factor F _t	Gravity Factor F _g	Super. Compens. Factor, F _{pv}	Rate of Flow Q, Mgd
1	4.279		205.2	1.011	1.212	1.018	1095
2	4.279		286.2	1.004	1.212	1.024	1526
3	4.279		371.2	.9952	1.212	1.029	1971
4	4.279		383.2	.9896	1.212	1.029	2024
5.							

NO.	P ₁	Temp. °R	T ₁	Z	Gas-Liquid Hydrocarbon Ratio	A.P.L. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	.32	509	1.47	.965			.6807		645	346
2	.44	516	1.49	.954						
3	.58	525	1.52	.944						
4	.59	531	1.53	.944						
5										

NO.	P ₁	P ₂	P ₁ ²	P ₂ ²	P ₁ ² - P ₂ ²
1		958.2	918.1	108.5	
2		896.2	803.2	223.4	
3		808.2	653.2	373.4	
4		757.2	573.4	453.2	
5					

(1) $\frac{P_c^2}{P_c^2 - P_1^2} = 9.462$

ACT = Q $\left[\frac{P_c^2}{P_c^2 - P_1^2} \right]^n = 3.368$

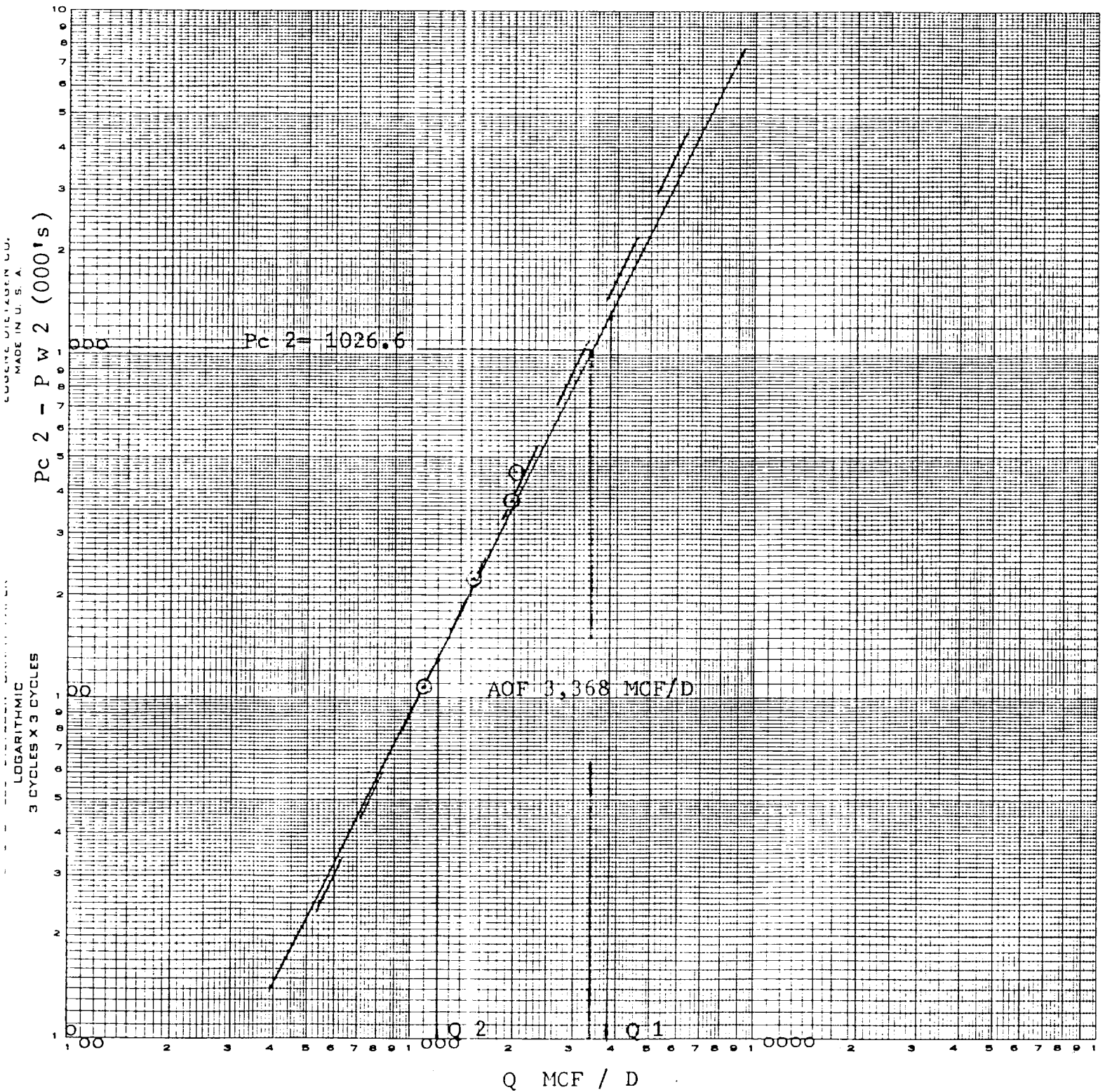
(2) $\left[\frac{P_c^2}{P_c^2 - P_1^2} \right]^n = 3.076$

Absolute Open Flow: 3,368	Meter # 15 025	Angle of Slope: 63.5	Slope, n: .500
---------------------------	----------------	----------------------	----------------

Remarks:

Approved By:	Conducted By: DAVIS SERVICES INC.	Collected By: RICK PAGAN	Checked By:
--------------	-----------------------------------	--------------------------	-------------

COMPANY : MESA PETROLEUM
 LEASE : STANCEL FEDERAL
 WELL NO. : # 1
 UNIT : K /sec 23/ twp 5s / rge 24e
 COUNTY : CHAVES
 STATE : NEW MEXICO
 DATE : JULY 15, 1980



Q 1 = 3800; LOG OF Q 1 = 3.579784
 Q 2 = 1200; LOG OF Q 2 = 3.079181

N = .500

NEW-TEX LAB

P. O. BOX 1181
HOBBS, N.M. 88240

CERTIFICATE OF ANALYSIS

No. 3692
Run No. _____
Date of Run 7-16-80
Date Secured 7-15-80

A Sample of Mesa Petroleum Stancel Federal #1
Secured from Davis Services
At Box 2033 Secured by _____
Hobbs, NM 88240 Time _____ Date _____
Sampling conditions _____ Press _____
Temp. _____

FRACTIONAL ANALYSIS

Percentage Composition

	MOL %	LIQ. %	G.P.M.
Carbon Dioxide	.515		
Air			
Nitrogen	13.716		
Oxygen			
Hydrogen sulfide			
Hydrogen			
Methane	78.204		
Ethane	4.219		1.125
Propane	1.665		.457
Butanes			
Iso-Butane	.284		.093
N-Butane	.785		.247
Pentanes			
Iso-Pentane	.176		.064
N-Pentane	.243		.088
Hexanes	.122		.050
Heptanes Plus	.071		.033
Octanes			
TOTAL	100.000		2.157

Calc. Sp. Gr. 0.6807
Calc. A.P.I. _____
Calc. Vapor Press. _____ PSIA
Sp. Gr. _____
Mol. Wt. 19.74

LIQUID CONTENT (GAL./MCF)

Propane Calc. G.P.M. _____
Butanes Calc. G.P.M. _____
Pentanes Plus. G.P.M. _____
Ethane Calc. G.P.M. _____
RVP Gasoline G.P.M. _____
B.T.U./Cu. Ft. @ 14.696 P.S.I.A.
Dry Basis 967
Wet Basis 950
Sulfur Analysis by Titration
Gr./100 Cu. Ft. _____
Hydrogen Sulfide _____
Mercaptans _____
Sulfides _____
Residual Sulfur _____
Total Sulfur _____

Run by Deane Simpson Checked by _____ Approved by Deane Simpson

Additional Data and Remarks