

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

S. File
Form C-122
Revised 9-1-65
C12

RECEIVED

Type Test ☒ Initial FOUR POINT ☐ Annual ☐ Special						Test Date 6-30-81		JUL 13 1981	
Company FRED POOL - JR.				Connection AIR - NEW WELL				O. C. D.	
Pool WILDCAT				Formation ABO				Unit ARTESIA, OFFICE	
Completion Date 6-21-81		Total Length 3096 3/101		Log Back To 3057 3060		Elevation 4332KB		Farm or Lease Name MCKNIGHT	
Csg. Size 4 1/2"	Wt. 10.5	d	Set At 3093	Perforations: From 2734 To 59		Well No. 3			
Tbg. Size 2 3/8"	Wt.	d	Set At 2680	Perforations: From To		Unit Sec. Twp. Rge. H 20 6S 22E			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE						Packer Set At NONE		County CHAVES	
Producing Thru TUBING		Reservoir Temp. °F 98 @ 2747		Mean Annual Temp. °F 85		Baro. Press. - P _a 13.2		State NEW MEXICO	
L 2747	H 2747	Gg .664	% CO ₂ .26	% N ₂ 13.7	% H ₂ S 0	Prover	Meter Run 4.026	Taps FLANGE	

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							1020.0	85.	1100.2	85.0	219.50
1.	4"	X	1.0	615.	4.0	81	970.0	70.	1042.7	85.0	1.0
2.	4"	X	1.0	615.	7.5	84	930.0	67.	1000.3	85.0	1.0
3.	4"	X	1.0	620.	17.8	84	875.0	68.	942.2	85.0	1.0
4.	4"	X	1.0	620.	35.0	84	810.0	66.	874.9	85.0	1.0
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	4.8740	50.13	628.2	.9804	1.2272	1.0392	305.
2	4.8740	68.64	628.2	.9777	1.2272	1.0381	417.
3	4.8740	106.16	633.2	.9777	1.2272	1.0386	645.
4	4.8740	148.87	633.2	.9777	1.2272	1.0386	904.
5.							

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	Critical Temperature
1	.97	541.	1.60	.926	0	0	.6640	X X X X X X X X	648	338
2	.97	544.	1.61	.928			X X X X X			
3	.98	544.	1.61	.927						
4	.98	544.	1.61	.927						
5.										

NO.	P _c	P _w	P _c ²	P _w ²	P _c ² - P _w ²
1	1113.4	1055.9	1239.7	1114.9	125.0
2		1013.5		1027.2	212.0
3		955.4		912.8	327.0
4		888.1		788.7	451.0
5					

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \underline{2.7487}$

ADP = $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{2484.8}$

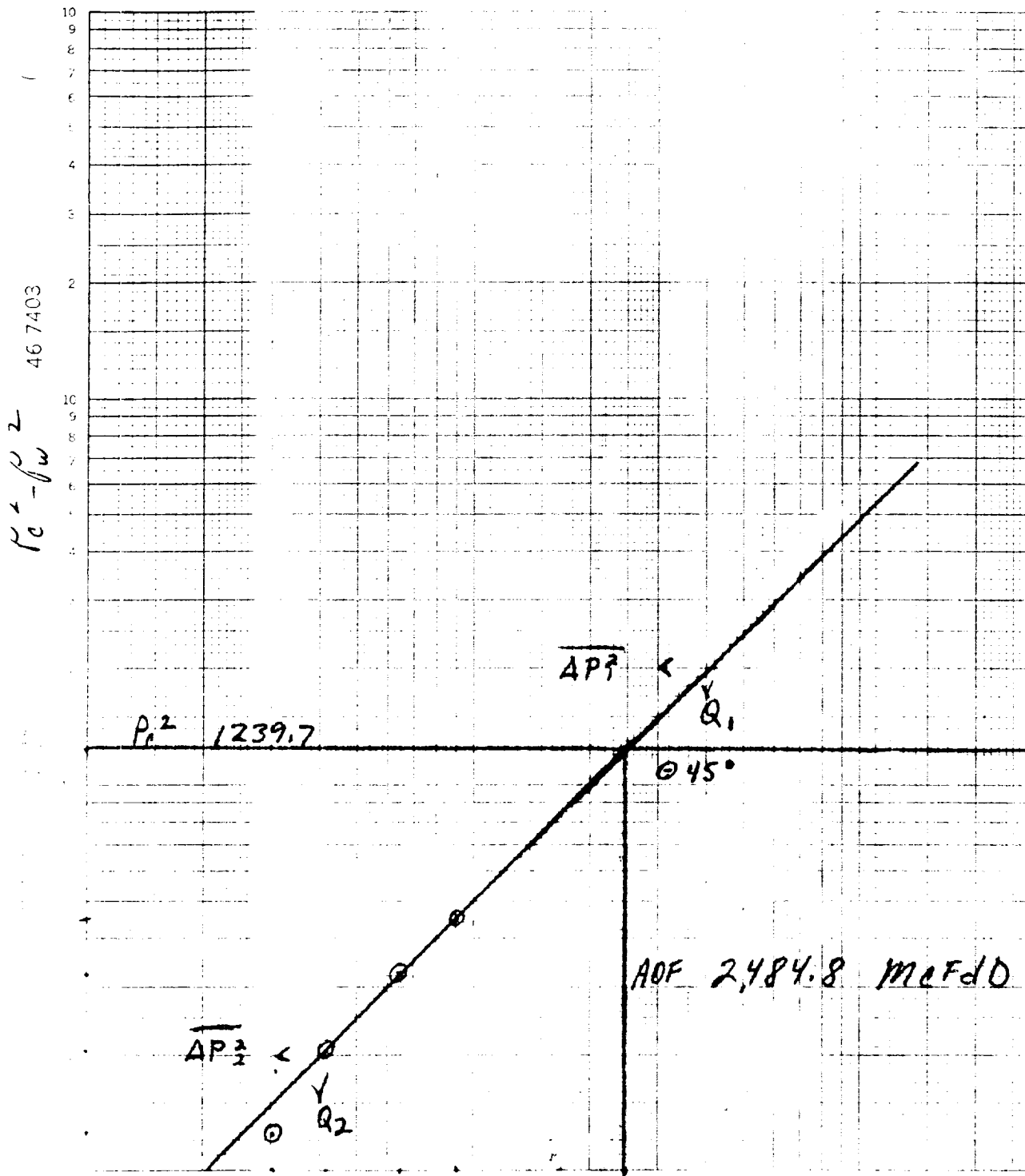
(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{2.7487}$

Absolute Open Flow 2484.8	Mcfd @ 15.025	Angle of Slope @ 1.000	Slope, n 45.
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Remarks:

Approved By Commission:	Conducted By: DON BENNETT	Calculated By: WOHLFORD & JENKINS	Checked By:
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Fred 100% O.R.
 McKnight Well No 3
 Unit H, Sec 20, Twp 6S, Rge 22E
 Chaves County
 June 30, 1981



Q_1 , McFDD
 $\overline{AP^2}$ $P_c^2 - P_w^2 = 2000$
 $\overline{AP^2}$ $P_c^2 - P_w^2 = 200$
 $Q_1 = 4250$ McFDD
 n m l l

$\log Q_1 = 3.6283$
 $\log Q_2 = \frac{2.6283}{1.0000}$

NEW-TEX LAB

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

No. 5222
Run No. _____
Date of Run 7-1-81
Date Secured _____

CERTIFICATE OF ANALYSIS

A Sample of Fred Poole Jr. McKnight #3
Secured from Bennet Wireline
At Box 787 Secured by _____
Artesia, NM 88210 Time _____ Date _____
Sampling conditions _____ Press _____
Temp. _____

FRACTIONAL ANALYSIS

Percentage Composition

	MOL %	LIQ. %	G.P.M.
Carbon Dioxide	.258		
Air			
Nitrogen	13.696		
Oxygen			
Hydrogen sulfide			
Hydrogen			
Methane	80.081		
Ethane	3.288		.877
Propane	1.486		.408
Butanes			
Iso-Butane	.184		.060
N-Butane	.550		.173
Pentanes			
Iso-Pentane	.101		.037
N-Pentane	.161		.058
Hexanes	.075		.031
Heptanes	.120		.055
Octanes			
TOTAL	100.000		1.699

Calc. Sp. Gr. — 0.6638
Calc. A.P.I. — _____
Calc. Vapor Press. — _____ PSIA
Sp. Gr. _____
Mol. Wt. 19.25

LIQUID CONTENT (GAL./MCF)

Propane Calc. G.P.M. .408
Butanes Calc. G.P.M. .233
Pentanes Plus. G.P.M. .181
Ethane Calc. G.P.M. .877
_____ RVP Gasoline G.P.M. _____
B.T.U./Cu. Ft. @ 14.696 P.S.I.A.
Dry Basis 950
Wet Basis 933
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