

File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 7/10/87	
Company MCKAY OIL CORPORATION		Connection AIR	
Pool West Pecos Slope Abo		Formation Abo	
Completion Date 7/10/87		Total Depth 3400	
Plug Back TD 3322		ARTIFICIAL LIFT 4301 KB	
Farm or Lease Name S. Four Mile Draw Fed.		Well No. #1	
Coq. Size 4-1/2	Wt. 9.5#	d 4.090	Set At 3386
Thq. Size 2-3/8	Wt. 4.7#	d 1.995	Set At 3262
Perforations: From 2800 To 3254		Perforations: From -- To --	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single		Packer Set At --	
Producing Thru Tubing		Reservoir Temp. °F 90 @ 3027	
Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 3027	H 3027	G _g 0.629	% CO ₂ 0.00
% N ₂ 5.273		% H ₂ S 0.00	
Prover 2.00		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							993		998		SI 72 HRS.
1.	2.000		.250	74	--	84	976	84	982	84	60 MIN.
2.	2.000		.500	59	--	75	916	75	921	75	60 MIN.
3.	2.000		.750	60	--	60	739	60	748	60	60 MIN.
4.	2.000		.750	75	--	66	418	66	428	66	60 MIN.
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, Mcfd
1.	1.087	--	87.2	.9777	1.261	1.006	118
2.	4.279	--	72.2	.9859	1.261	1.006	386
3.	9.453	--	73.2	1.0000	1.261	1.006	878
4.	9.453	--	88.2	.9943	1.261	1.007	1053
5.							

NO.	P _r	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.	0.13	544	1.55	.988			0.629		662	351
2.	0.11	535	1.52	.989						
3.	0.11	520	1.48	.988						
4.	0.13	526	1.50	.986						
5.										

P _c 1011.2		P _c ² 1022.5	
NO.	P _i ²	P _w	P _w ²
1		995.2	991.0
2		934.2	872.7
3		761.2	579.4
4		441.2	194.7
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 6.83$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1,453.2$

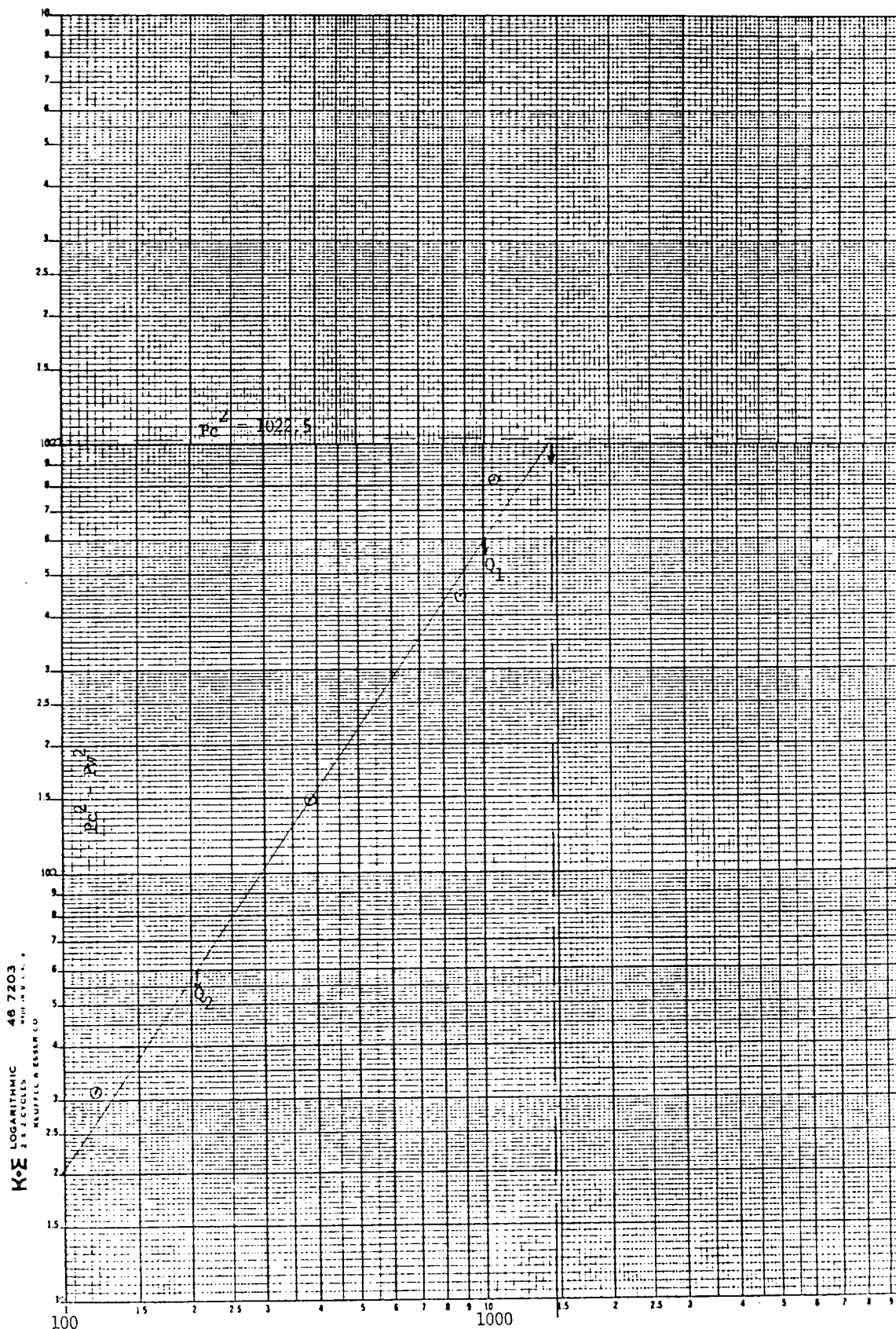
(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.76$

Absolute Open Flow	1,453	Mcfd @ 15.025	Angle of Slope @	55.46	Slope, n	0.69
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Remarks: No liquids produced during test.

Approved By Division	Conducted By: R. Snyder	Calculated By: C. Sanders	Checked By: J. N. N. N.
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MCKAY OIL CORPORATION
 South Four Mile Draw Federal #1
 Sec. 23, T6S, R22E
 7/10/87



Q, MCF Per Day
 $Q_1 = 1010$; $\log = 3.00432$
 $Q_2 = 207$; $\log = 2.31597$
 $n = 0.63335$
 $n = 0.69$

At your Interest in Measurement be our Concern



PRECISION SERVICE INC.

Flow Measurement Engineers

Analysis Results Summary

Casper, WY 82601

Run No. 610-1
Date Run 06/18/87
Date Sampled 06/17/87

Analysis For: MCKAY OIL CORPORATION

Lease: SOUTH 4 MILE DRAW FED #1

Location CHINA DRAW

Purpose WELL TEST

Sampling Temp. 100 °F

Volume/day

Pressure on Bomb 101

Producer MCKAY OIL CORP.

County CHAVES State NEW MEXICO

Sampled By K.ESLINGER

Atmos Temp. °F

Formation

PSIG: Line Pressure 114.2 PSIA PSIG

Gas Component

Analysis

Press. Base: 14.73

Mol. %

Liq. %

GPM
Per MCF

Carbon Dioxide CO₂

Oxygen O₂

Nitrogen N₂

Hydrogen Sulfide H₂S

Methane C₁

Ethane C₂

Propane C₃

Iso-Butane IC₄

Nor-Butane NC₄

Iso-Pentane IC₅

Nor-Pentane NC₅

Hexanes plus

Hexanes C₆

Heptanes

Heptanes Plus C₇+

Total

Pentane + G.P.M.

Propane + GPM

26-lb Gasoline

BTU Dry

BTU Wet

Calc. Specific Gravity

@ Std. Press. 14.696

BTU Dry

BTU Wet

Calc. Vap. Press. #/Sq.In.

Reid Vap. Press. #/Sq.In.

Z Factor

N Value

Ave Mol Wt

Ave Cu Ft/Gal

Run by JEFFREY A. PROPP

Calculated By JEFFREY A. PROPP

Ethane + GPM

1.667

Remarks:

Distribution: