

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

c/sr
File

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 5/28/87		RECEIVED BY JUL -7 1987 Unit O. C. D. APRESIA OFFICE S. Four Mile Draw Federal Comm.	
Company MCKAY OIL CORPORATION				Connection Air					
Pool West Pecos Slope <i>Ab</i>				Formation Abo					
Completion Date 5/28/87		Total Depth 3400		Plug Back TD 3240		Elevation 4256 KB			
Coq. Size 4-1/2"	Wt. 10.5#	d 4.090	Set At 3295	Perforations: From 2824 To 3105.5		Well No. #9			
Thq. Size 2-3/8"	Wt. 4.7#	d 1.995	Set At 2792	Perforations: From -- To --		Unit A		Sec. 22	Twp. 6S
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At		County Chaves	
Producing thru Tubing		Reservoir Temp. °F 92 @ 2964.75		Mean Annual Temp. °F 60		Baro. Press. - P ₀ 13.2		State N.M.	
L 2964.75	H 2964.75	G ₀ .628	% CO ₂ 0.215	% N ₂ 5.487	% H ₂ S 0	Prover 200	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							882		888		SI 72 HRS
1.	2.000		.375	74	--	84	792	84	796	84	60 MIN
2.	2.000		.375	114	--	77	744	77	751	77	60 MIN
3.	2.000		.500	82	--	71	662	71	692	71	60 MIN
4.	2.000		.625	60	--	60	572	60	622	60	60 MIN
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	2.378	--	87.2	.9777	1.262	1.007	258
2	2.378	--	127.2	.9840	1.262	1.009	379
3	4.279	--	95.2	.9896	1.262	1.007	512
4	6.473	--	73.2	1.000	1.262	1.006	602
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	0.13	544	1.55	.986	0	
2	0.19	537	1.53	.982	0	
3	0.14	531	1.51	.986		
4	0.11	520	1.48	.988		
5						

A.P.I. Gravity of Liquid Hydrocarbons 0 Specific Gravity Separator Gas .628 Specific Gravity Flowing Fluid X X X X X Critical Pressure 662 P.S.I.A. Critical Temperature 351 R				X X X X X X X X X X P.S.I.A. R			
--	--	--	--	--------------------------------------	--	--	--

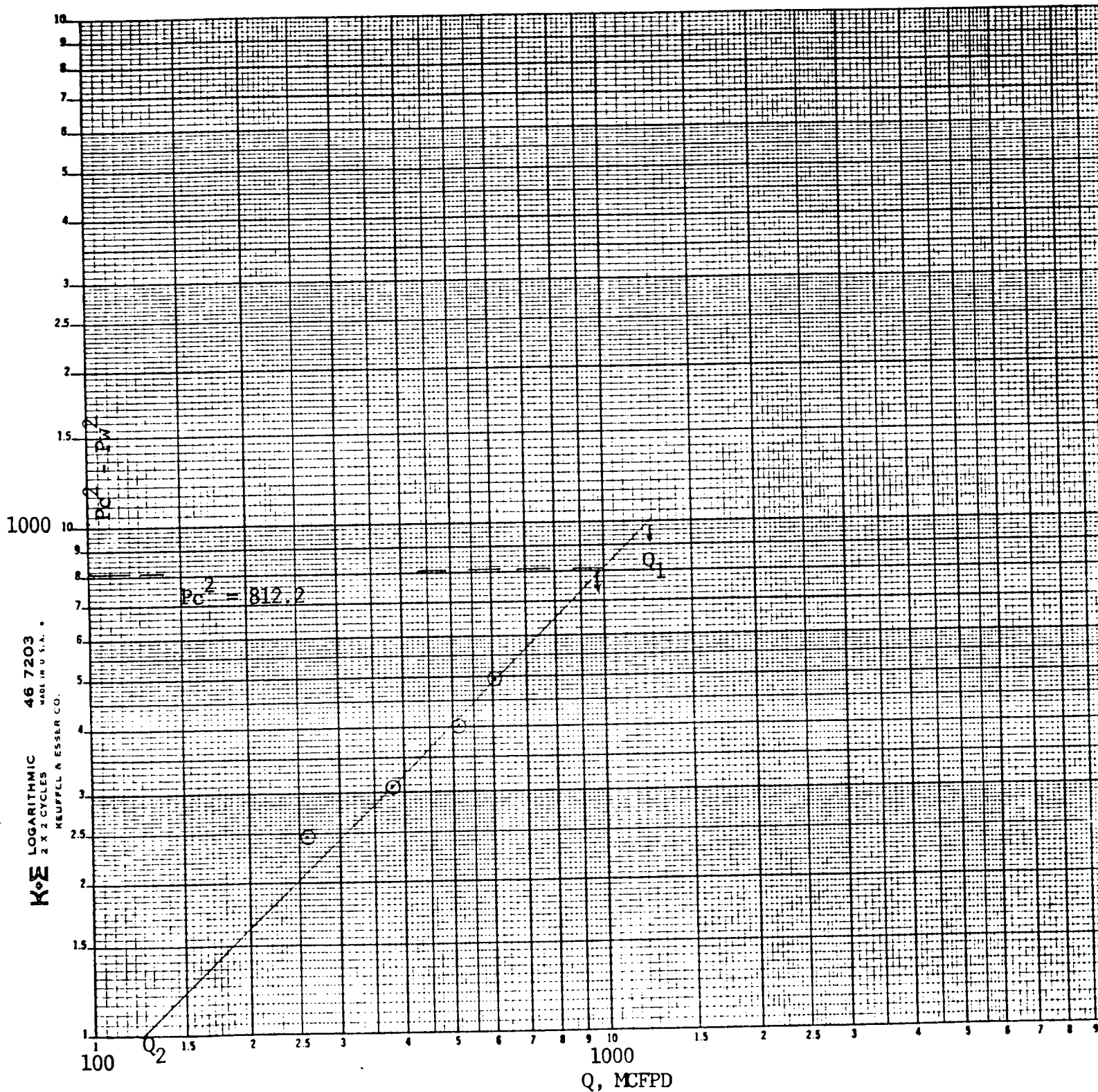
P _c 901.2 P _c ² 812.2 (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.561$				(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.561$			
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²			
1		809.2	654.8	246.4			
2		764.2	584.0	317.2			
3		705.2	497.3	403.9			
4		635.2	403.5	497.7			
5							

Absolute Open Flow 970 Mcfd @ 15.025 Angle of Slope @ 45.000 Slope, n 1.000

Remarks: _____

Approved By Division	Conducted By: R. Snyder	Calculated By: C. Sanders	Checked By: P. Stewart
----------------------	-------------------------	---------------------------	------------------------

MCKAY OIL CORPORATION
 S. Four Mile Draw Federal Comm. #9
 Sec. 22, T6S, R22E
 05/23/37



$$Q_1 = 1240 \text{ MCFPD; } \log = 3.09342$$

$$Q_2 = 124 \text{ MCFPD; } \log = 2.09342$$

$$n = 1.00000$$

$$AOF = 970 \text{ MCFPD}$$



Our Interest in Measurement be our Concern

PRECISION SERVICE INC.
Flow Measurement Engineers
Analysis Results Summary
Casper, WY 82601

RECEIVED JUN - 5 1987

Run No. 604-5
Date Run 06/04/87
Date Sampled 05/28/87

Analysis For: MCKAY OIL CORPORATION

Lease: S 4 MILE DRAW FED COMM #9 Producer MCKAY OIL CORP.
Location CHINA DRAW County CHAVES State NEW MEXICO
Purpose WELL TEST Sampled By K. ESLINGER
Sampling Temp. 78 °F Atmos Temp. °F
Volume/day Formation
Pressure on Bomb 85 PSIG; Line Pressure 98.2 PSIA PSIG

Gas Component

Analysis

Press. Base: 14.73

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO ₂	.110		
Oxygen O ₂			
Nitrogen N ₂	7.288		
Hydrogen Sulfide H ₂ S			
Methane C ₁	90.825		15.395
Ethane C ₂	1.449		.387
Propane C ₃	.219		.060
Iso-Butane IC ₄	.018		.006
Nor-Butane NC ₄	.054		.017
Iso-Pentane IC ₅	.009		.003
Nor-Pentane NC ₅	.013		.005
Hexanes plus	.014		.007
Hexanes C ₆			
Heptanes			
Heptanes Plus C ₇ +			
Total	100.000		15.880
Pentane + G.P.M.			.015
Propane + GPM			.098
26-lb Gasoline			.022

BTU Dry 956
BTU Wet 940
Calc. Specific Gravity .597

@ Std. Press. 14.696

BTU Dry 954
BTU Wet 938

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

Z Factor .9982
N Value 1.3116
Ave Mol Wt 17.2658
Ave Cu Ft/Gal

Run by JEFFREY A. PROPP

Calculated By JEFFREY A. PROPP

Ethane + GPM .485

Remarks:

Distribution: