

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

ckr
File

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 06/07/87		RECEIVED BY JUL -7 1987 Unit O. C. D. ARTESIA, OFFICE	
Company MUKAY OIL CORPORATION				Connection AIR			
Pool West Pecos Slope <i>Auto</i>				Formation Abo			
Completion Date 06/07/87		Total Depth 3375		Plug Back TD 3288			
Farm or Lease Name Royale Federal Com.							
Ceq. Size 4-1/2		Wt. 9.5#		d 4.090		Set At 3359	
Perforations: From 2744 To 3134		Well No. #1					
Thq. Size 2-3/8		Wt. 4.7		d 1.995		Set At 2689	
Perforations: From -- To --		Unit Sec. Twp. Rge. L 19 6S 23E					
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single						Packer Set At	
Producing Thru Tubing						County Chaves	
Reservoir Temp. °F 92		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2		State New Mexico	
L 2939		H 2939		G _g .611		% CO ₂ 0.182	
				% N ₂ 5.916		% H ₂ S 0	
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							754		756		SI 72 HRS
1.	2.000		.375	88	--	67	707	67	711	67	60 MIN
2.	2.000		.500	104	--	62	616	62	621	62	60 MIN
3.	2.000		.625	92	--	62	482	62	492	62	60 MIN
4.	2.000		.625	87	--	63	274	63	337	63	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	2.378	--	101.2	.9933	1.279	1.008	308
2	4.279	--	117.2	.9981	1.279	1.009	646
3	6.473	--	105.2	.9981	1.279	1.008	876
4	6.473	--	100.2	.9971	1.279	1.008	834
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	0.15	527	1.53	.985	0	
2	0.18	522	1.51	.982	0	
3	0.16	522	1.51	.984		
4	0.15	523	1.52	.985		
5						

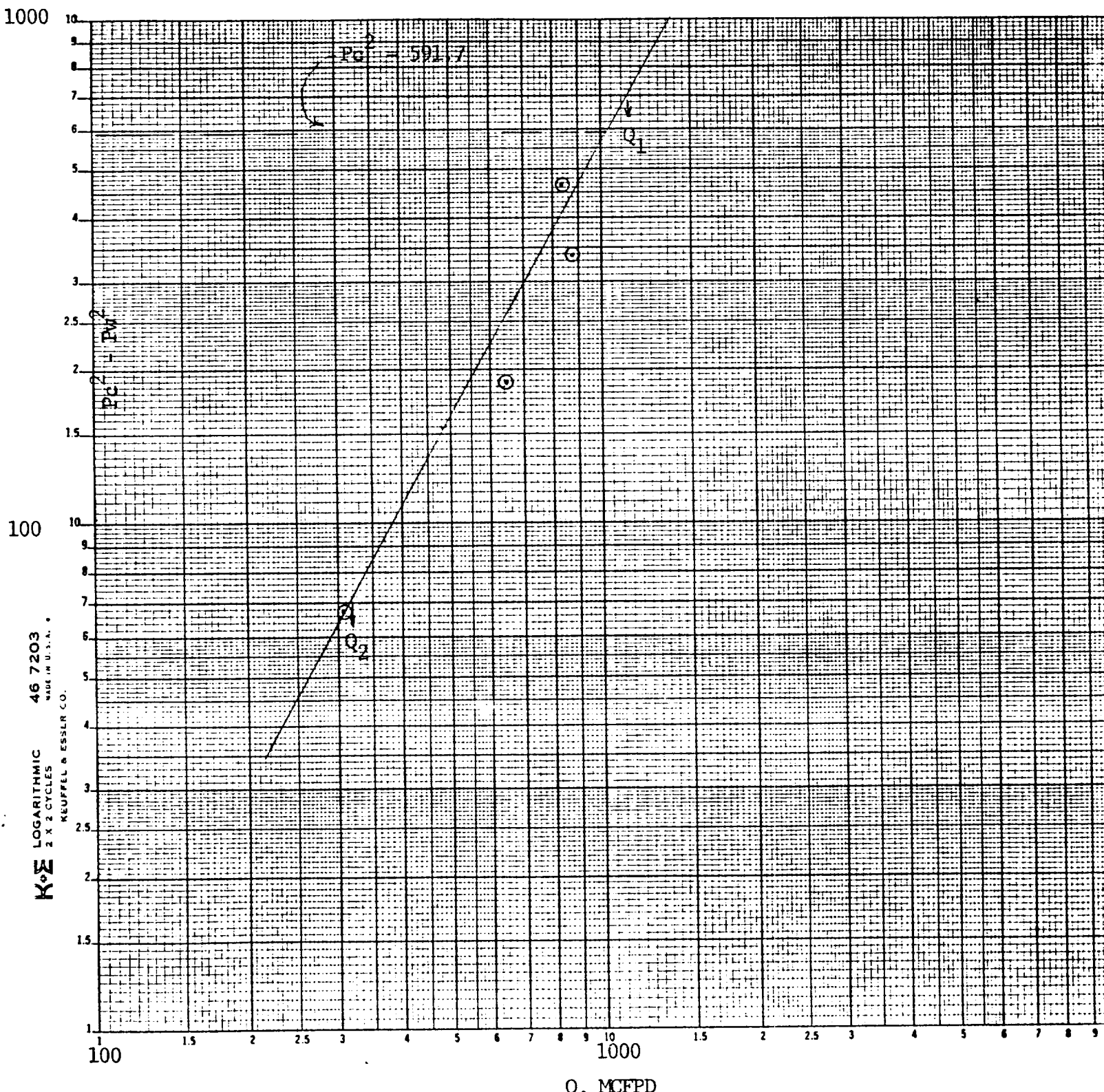
NO.	P _t	P _w	P _w ²	P _t ² - P _w ²	(1) $\frac{P_t^2}{P_t^2 - P_w^2} =$	(2) $\left[\frac{P_t^2}{P_t^2 - P_w^2} \right]^n =$
1	--	724.2	524.4	67.3 [†]	8.79	3.31
2	--	634.2	402.2	189.5		
3	--	505.2	255.2	336.5		
4	--	350.2	122.6	469.1		
5						

Absolute Open Flow <u>1,018</u>		Mcf @ 15.025		Angle of Slope θ <u>61.28</u>		Slope, n <u>0.55</u>	
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Remarks: <u>No water produced during test.</u>							
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Approved By Division	Conducted By: R. Snyder	Calculated By: C. Sanders	Checked By: P. Stewart
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MCKAY OIL CORPORATION
 Royale Federal Comm. #1
 Sec. 19, T6S, R23E
 06-07-87



$$\begin{aligned} Q_1 &= 1130, \log = 3.05308 \\ Q_2 &= 320, \log = 2.50515 \\ n &= \frac{0.54793}{0.55} \end{aligned}$$

Let your Interest in Measurement be our Concern"



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

Run No. 615-4
Date Run 06/15/87
Date Sampled 06/07/87

Analysis For: McKAY OIL CORPORATION

Lease: ROYAL FEDERAL COM #1 Producer: MCKAY OIL CORP.
Location: CHINA DRAW County: CHAVES State: NEW MEXICO
Purpose: WELL TEST Sampled By: K.ESLINGER
Sampling Temp. 61 °F Atmos Temp. °F
Volume/day Formation
Pressure on Bomb 152 PSIG: Line Pressure 165.2 PSIA PSIG

Gas Component

Analysis

Press. Base: 14.73

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO ₂	.182		
Oxygen O ₂			
Nitrogen N ₂	5.916		
Hydrogen Sulfide H ₂ S			
Methane C ₁	90.613		15.359
Ethane C ₂	1.855		.496
Propane C ₃	.658		.181
Iso-Butane IC ₄	.107		.035
Nor-Butane NC ₄	.308		.097
Iso-Pentane IC ₅	.077		.028
Nor-Pentane NC ₅	.120		.043
Hexanes plus	.164		.076
Hexanes C ₆			
Heptanes			
Heptanes Plus C ₇ +			
Total	100.000		16.315
Pentane + G.P.M.			.147
Propane + GPM			.461
26-lb Gasoline			.228

BTU Dry 999
BTU Wet 982
Calc. Specific Gravity .611

@ Std. Press. 14.696

BTU Dry 997
BTU Wet 980

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

Z Factor .9980
N Value 1.3076
Ave Mol Wt 17.6700
Ave Cu Ft/Gal

Run by JEFFREY A. PROPP

Calculated By JEFFREY A. PROPP

Ethane + GPM .957

Remarks:

Distribution: