

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 8-12-87	
Company MCKAY OIL CORPORATION		Correction Air	
Pool West Pecos Slope		Formation Abo	
Completion Date 8-12-87		Total Depth 3462'	Plug Back TD 3198'
		Elevation 4115 GL	Farm or Lease Name Charolette
Ceq. Size 4-1/2"	Wt. 9.5#	d 4.090	Set At 3280'
Perforations: From 2931' To 2950'		Well No. #2	
Trq. Size 2-3/8"	Wt. 4.7#	d 1.995	Set At 2912'
Perforations: From -- To --		Unit Sec. Twp. Rge. F 17 6S 23E	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single		Packer Set At --	County Chaves
Producing Thru Tubing	Reservoir Temp. °F 90° 2940.5	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2
State New Mexico			
L 2940.5	H 2940.5	G _g 0.638	% CO ₂ 1.217
		% N ₂ 4.840	% H ₂ S 0.00
		Prayer 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							1017		1020		SI 72 HRS
1.	2.000		0.375	155	--	79	974	79	979	79	60 MIN
2.	2.000		0.500	132	--	73	935	73	942	73	60 MIN
3.	2.000		0.625	115	--	60	882	60	891	60	60 MIN
4.	2.000		0.750	178	--	58	580	58	624	58	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	--	168.2	0.9822	1.252	1.012	498
2	4.279	--	145.2	0.9877	1.252	1.011	777
3	6.473	--	128.2	1.000	1.252	1.010	1049
4	9.453	--	191.2	1.0019	1.252	1.016	2303
5							

NO.	R ₁	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	0.25	539	1.54	.976	0	
2	0.22	533	1.52	.978	0	
3	0.19	520	1.48	.980	0	
4	0.29	518	1.48	.968	0	
5						

NO.	P _i ²	P _w ²	P _w ²	P _i ² - P _w ²
1		992.2	984.5	83.0
2		955.2	912.4	155.1
3		904.2	817.6	249.9
4		637.2	406.0	661.5
5				

P _c 1033.2 P _c ² 1067.5	
(1) $\frac{P_c^2}{P_i^2 - P_w^2} = 12.86$	(2) $\left[\frac{P_c^2}{P_i^2 - P_w^2} \right]^n = 6.170$
AOF = Q $\left[\frac{P_c^2}{P_i^2 - P_w^2} \right]^n = 3,072$	

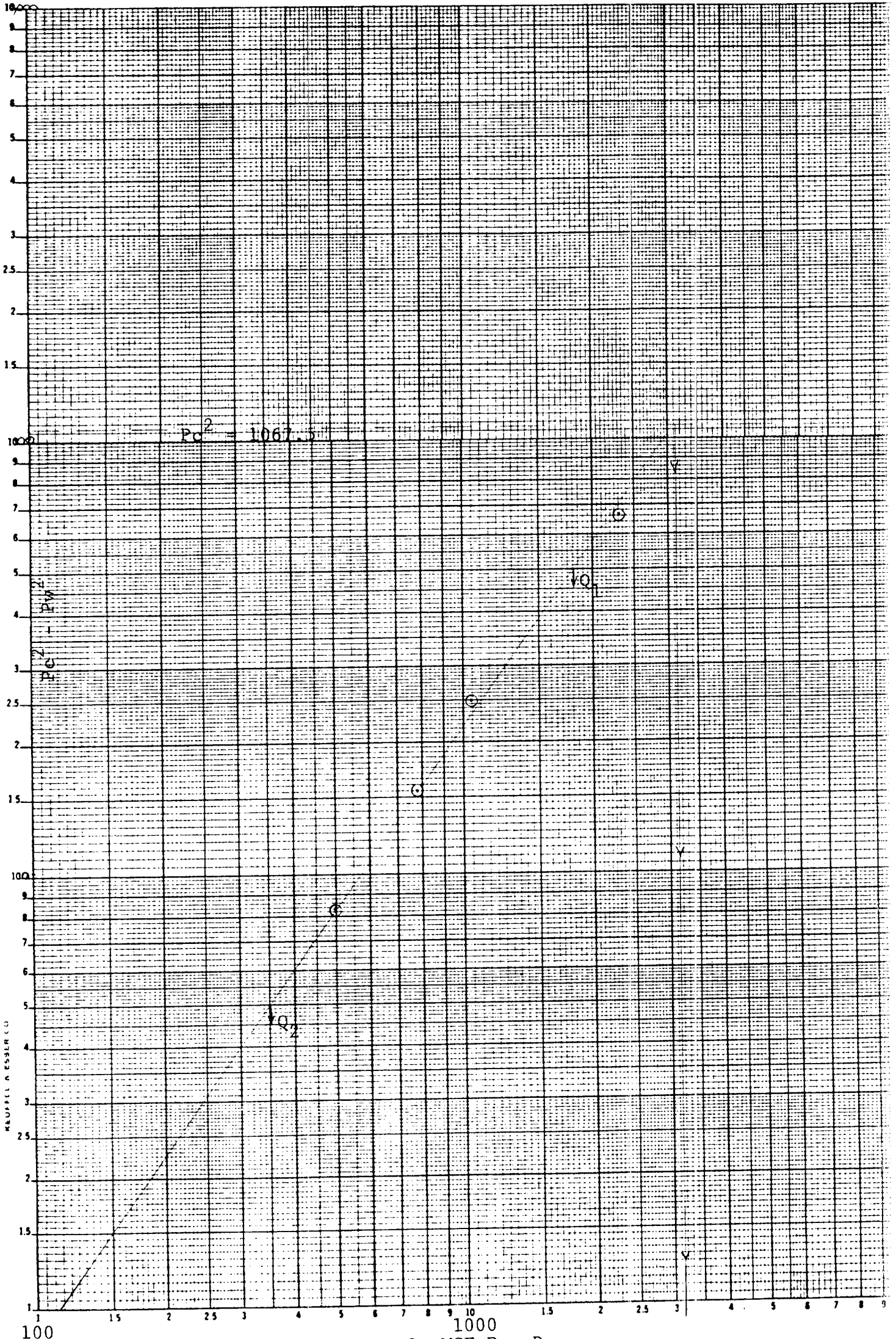
Absolute Open Flow	3072	Mcf @ 15.025	Angle of Slope @	54.54	Slope, n	0.7124
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Remarks: No water or liquid produced during test.			
Approved By Division	Conducted By: D. Kelton	Calculated By: C. Sanders	Checked By: P. Stewart

MCKAY OIL CORPORATION
Charolette #2

Sec. 17, T6S, R23E
08-12-87

K-E LOGARITHMIC 46 7203
2 X 2 CYCLES
HEUFFEL & ESSER CO.
MADE IN U.S.A.



AOF = 3072 MCFPD

Q, MCF Per Day
Q₁ = 1810; log = 3.25768
Q₂ = 351; log = 2.54531
n = 0.71237
n = 0.7124



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

Run No 013-3
Date Run 08/13/87
Date Sampled 08/12/87

Analysis For: MCKAY OIL CORPORATION

Lease: <u>CHARLOTTE #2</u>	Producer <u>MCKAY OIL CORP.</u>
Location <u>CHINA DRAW</u>	County <u>CHAVES</u> State <u>NEW MEXICO</u>
Purpose <u>WELL TEST</u>	Sampled By <u>C. SPERLING</u>
Sampling Temp. <u>54</u> °F	Atmos Temp. _____ °F
Volume/day _____	Formation <u>ABO</u>
Pressure on Bomb <u>192</u>	PSIG; Line Pressure <u>205.2</u> PSIA PSIG _____

Gas Component

Analysis

Press. Base: 14.73

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO ₂	1.217		
Oxygen O ₂			
Nitrogen N ₂	4.840		
Hydrogen Sulfide H ₂ S			
Methane C ₁	88.533		15.006
Ethane C ₂	2.840		.759
Propane C ₃	1.224		.337
Iso-Butane IC ₄	.193		.063
Nor-Butane NC ₄	.518		.163
Iso-Pentane IC ₅	.128		.047
Nor-Pentane NC ₅	.204		.074
Hexanes plus	.304		.140
Hexanes C ₆			
Heptanes			
Heptanes Plus C ₇ +			
Total	100.000		16.590
Pentane + G.P.M.			.261
Propane + GPM			.824
26-lb Gasoline			.407

BTU Dry 1033
BTU Wet 1015
Calc. Specific Gravity .638

@ Std. Press. 14.696

BTU Dry 1031
BTU Wet 1013

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

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

Z Factor .9978
N Value 1.3031
Ave Mol Wt 18.4454
Ave Cu Ft/Gal _____

Run by JEFFREY A. PROPP

Calculated By JEFFREY A. PROPP

Ethane + GPM 1.584

Remarks:

Distribution: