

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test 4POINT ☒ Initial ☐ Annual ☐ Special					Test Date 11-10-86				
Company MCKAY OIL					Connection TO AIR				
Pool PECOS SLOPE					Formation ABO				
Completion Date 11-7-86			Total Depth 3400		Plug Back TD 3247		Elevation 4092		Form or Lease Name REMMELE
Csg. Size 4.500	Wt. 10.5	d 4.052	Set At 3307	Perforations: From 2786 To 3086		Well No. 7			
Tub. Size 2.375	Wt. 4.7	d 1.995	Set At 2743	Perforations: From OPEN To ENDED		Unit P 24 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 93 @ 2936		Mean Annual Temp. °F 60°		Burst. Press. - P _c 13.2		State NEW MEXICO	
L 2936	H 2936	Gg .616	% CO ₂ .142	% N ₂ 5.617	% H ₂ S 0	Prover 2.00	Meter Run 0	Taps 0	

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							918	52	918		72 HRS
1.	2.000	0.125		870	0.00	49	870	49	869		60 MIN
2.	2.000	0.1875		758	0.00	53	758	53	760		60 MIN
3.	2.000	0.21875		625	0.00	56	625	56	630		60 MIN
4.	2.000	0.250		487	0.00	56	487	56	496		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, Mhd
1	0.2648	0.00	883.2	1.011	1.274	1.079	325
2	0.6082	0.00	771.2	1.007	1.274	1.067	642
3	0.8393	0.00	638.2	1.004	1.274	1.054	722
4	1.087	0.00	500.2	1.004	1.274	1.043	725
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1	1.34	509	1.46	.859	A.P.L. Gravity of Liquid Hydrocarbons _____ Deg.
2	1.17	513	1.47	.878	Specific Gravity Separator Gas _____ XXXXXXXXXX
3	0.96	516	1.48	.900	Specific Gravity Flowing Fluid _____ XXXXXX
4	0.76	516	1.48	.920	Critical Pressure _____ 660 P.S.I.A.
5					Critical Temperature _____ 348 R

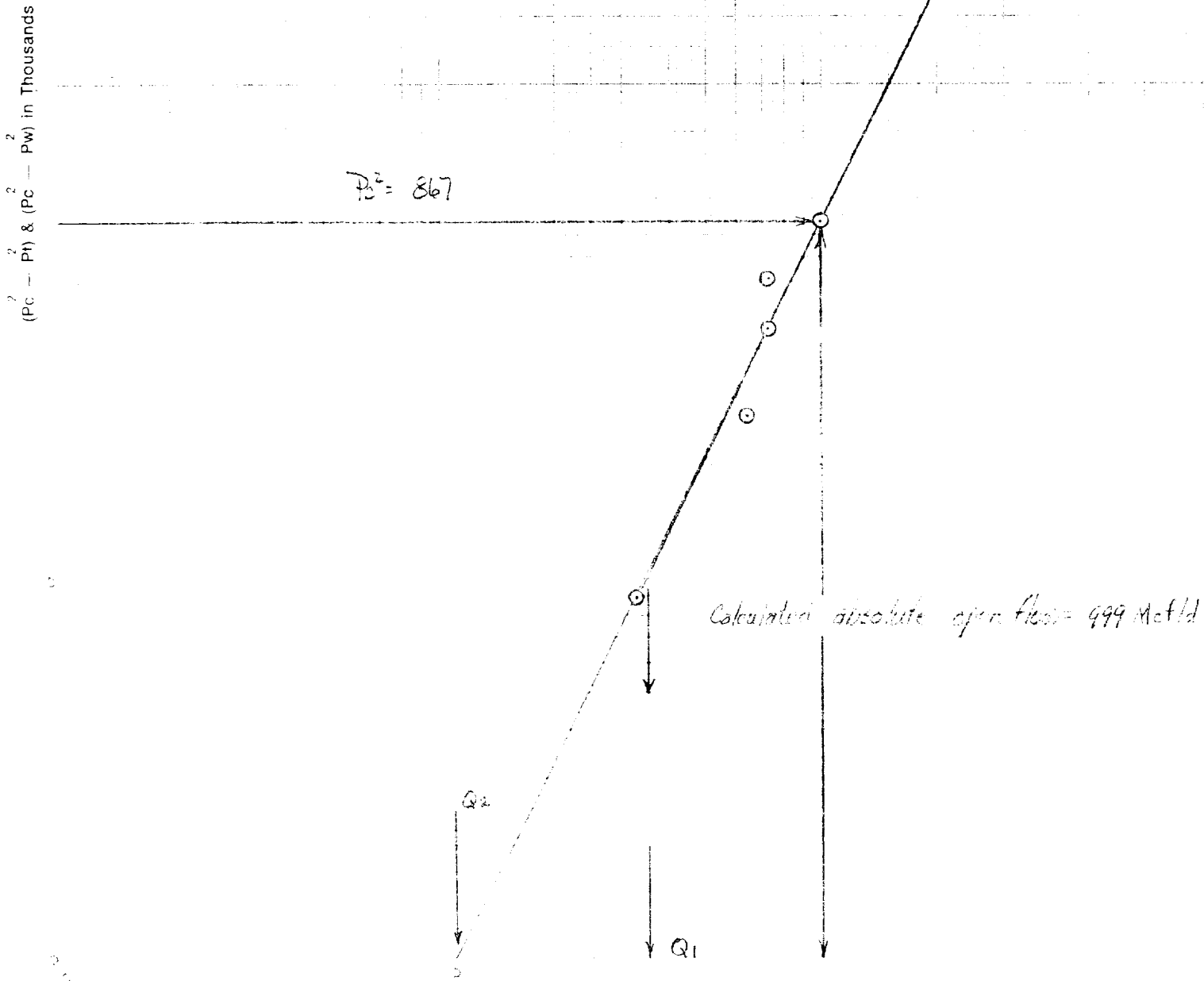
P _c 931.2	P _c ² 867	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.9139$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.3834$	
NO.	P _t	P _w	P _w ²	P _c ² - P _w ²	
1		882.2	778	89	
2		773.2	598	269	
3		643.2	414	453	
4		509.2	259	608	
5					

AOI = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 999$

Absolute Open Flow _____ 999 _____ Mhd @ 15.025	Angle of Slope θ _____ 63.5	Slope, n _____ 0.500
Remarks: _____		
Approved By Division _____	Conducted By: _____	Calculated By: _____
Checked By: _____		

BACK PRESSURE C. VE

Operator McKay Oil Lease Remmele Well No. 7
 County Chaves Field Pecos Slope Location P 24 6S 22E
 Date of Test 11-10-86 Slope "n" 0.500 Angle of Slope 63.5
 Calc. Abs. Potential 999 MCF/D



$$\frac{\Delta P_1^2}{\Delta P_2^2} \frac{P_c^2 - P_w^2}{P_c^2 - P_w^2} = \frac{100}{10}$$

$$Q_1 = \underline{246}$$

$$Q_2 = \underline{110}$$

Q in MCF/Day

$$\text{LOG } Q_1 = \underline{2.5416}$$

$$\text{LOG } Q_2 = \underline{2.0414}$$

$$n = \underline{0.5002} = .50$$



PRECISION SERVICE INC.

Flow Measurement Engineers

Analysis Results Summary

Casper, WY 82601

Run No. 1112-4

Date Run 11/12/86

Date Sampled 11/10/86

Analysis For BENNETT & CATHEY WRLN.

Lease Remmele Fed Com #7

Producer McKay Oil Corp.

Location China Draw

County Chaves State New Mexico

Purpose Well Test

Sampled By B & C WRLN

Sampling Temp. °F

Atmos Temp 55 °F

Volume (Lb)

Formation

Pressure on Bomb 648

PSIG, Line Pressure 661.2 PSIG

Gas Component

Analysis

Press. Base: 14.73

Mol. %

Liq. %

GPM
Per MCF

Carbon Dioxide CO₂

.142

BTU Dry

1013

Oxygen O₂

BTU Wet

995

Nitrogen N₂

5.617

Calc. Specific Gravity

.616

Hydrogen Sulfide H₂S

@ Std. Press. 14.696

Methane C₁

90.044

15.262

BTU Dry

1011

Ethane C₂

2.339

.626

BTU Wet

993

Propane C₃

.968

.267

Isobutane IC₄

.142

.046

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

Nor-Butane NC₄

.403

.127

Reid Vap. Press. #/Sq. In.

iso-Pentane IC₅

.086

.031

Z Factor

.9979

Nor-Pentane NC₅

.140

.051

N Value

1.3060

Hexanes plus

.120

.055

Ave Mol Wt

17.8113

Hexanes C₆

Ave Cu Ft/Gal

Heptanes

Run by Jeffrey A. Propp

Octanes C₈ +

Total

100.000

16.465

Calculated By Jeffrey A. Propp

Pentanes + GPM

.137

Propane + GPM

.577

Ethane + GPM

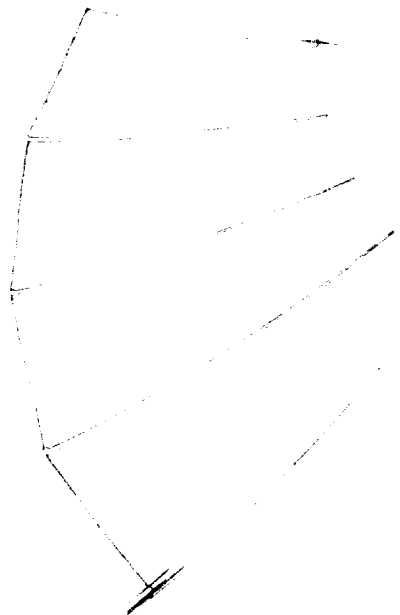
1.203

26-lb Gasoline

.207

Remarks:

Description:



3' critical flow pressure
 1/11 sheet

12.05.8

3.0.5 A

11-10-80

11-10-80 McKoy Oil

Remmele #7
 Matt for