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RECEIVED DATE 10/10/87

413: File

NEW MEXICO DEPARTMENT OF CONSERVATION COMMISSION
 MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

O. C. D.
 ARTESIA, OFFICE

Type Test 4 Point ☒ Initial ☐ Annual ☐ Special		Test Date 3-13-87													
Company McKay Oil Corp.		Connection To air													
Pool West Pecos Slope Abo		Formation Abo													
Completion Date 3-10-87		Total Depth 3500	Plug Line 3387												
		Elevation 4169	Form or Lease Name Middle Fork Fed.												
1" Int. Size 4.500	Wt. 9.5	d 4.090	Set At 3489												
Perforations: From 3000 To 3185		Well No. 5													
1/2" Int. Size 2.375	Wt. 4.7	d 1.995	Set At 2947												
Perforations: From open To ended		Unit E 5 6S 23E													
Type Well - Single - Blindhead - O.G. or G.O. Multiple Single		Packer Set At none													
Producing Thru Tubing		Reservoir Temp. °F 100 • 3092	Mean Annual Temp. °F 60												
		Baro. Press. - P _a 13.2	State New Mexico												
L 3092	H 3092	G _g .617	% CO ₂ .103												
		% N ₂ 5.669	% H ₂ S 0												
		Provor 2.000	Motor 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. in. H ₂ O	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F					
SI							834	57	834	57					
1.	2.000	0.625		820	0.00	58	820	58	820	58	60min				
2.	2.000	0.9375		787	0.00	60	787	60	787	60	60min				
3.	2.000	0.125		727	0.00	62	727	62	727	62	60min				
4.	2.000	0.1875		540	0.00	65	540	65	540	65	60min				
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 _{sp}	Rate of Flow Q, Mcfd								
1	0.06405	0.00	833.2	1.002	1.273	1.068	73								
2	0.1410	0.00	800.2	1.000	1.273	1.066	153								
3	0.2648	0.00	740.2	.9981	1.273	1.059	264								
4	0.6082	0.00	553.2	.9952	1.273	1.043	445								
5															
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.										
1	1.26	518	1.49	.876	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.										
2	1.21	520	1.49	.880	Specific Gravity Separator Gas _____ .617 XXXXXXXX										
3	1.12	522	1.50	.891	Specific Gravity Flowing Fluid _____ XXXXXX .617										
4	.84	525	1.51	.919	Critical Pressure _____ 660 P.S.I.A. .660 P.S.I.A.										
5					Critical Temperature _____ 348 R 348 R										
P _r 847.2 P _w 718					(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 1.7427$ (2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.4010$										
NO.	P _r	P _w	P _r	P _r - P _w	Post ID-2										
1	694	833.2	695	24	5-8-87										
2	640	800.2	640	78	comp & BK										
3	548	740.2	548	170											
4	306	553.2	306	247											
5															
Absolute Open Flow _____ 623 Mcfd @ 13.025					Angle of Slope @ _____ 58.75					Slope, n _____ 0.607					
Remarks:															
Approved By Commission:				Conducted By:				Calculated By: Richard Townley				Checked By:			

Middle Fork Federal #5

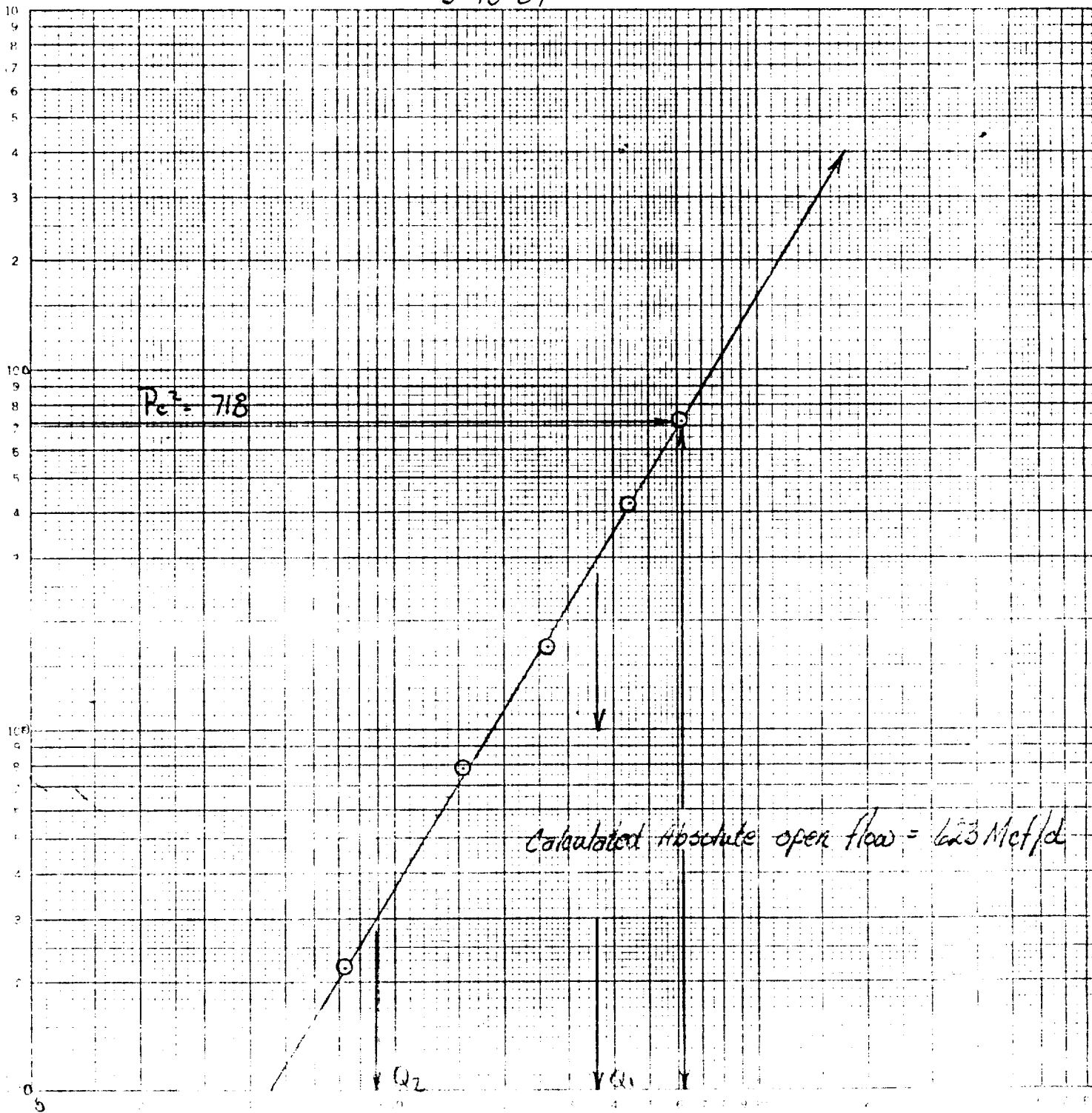
M 5 6S 23E

Chaves County

3-13-87

46 7400

LOGARITHMIC 3 X 3 CYCLES
NEUFFEL & ESSER CO. MADE IN U.S.A.



$$\Delta P_1^2 = P_c^2 - P_w^2 = 300$$

$$\Delta P_2^2 = P_c^2 - P_w^2 = 300$$

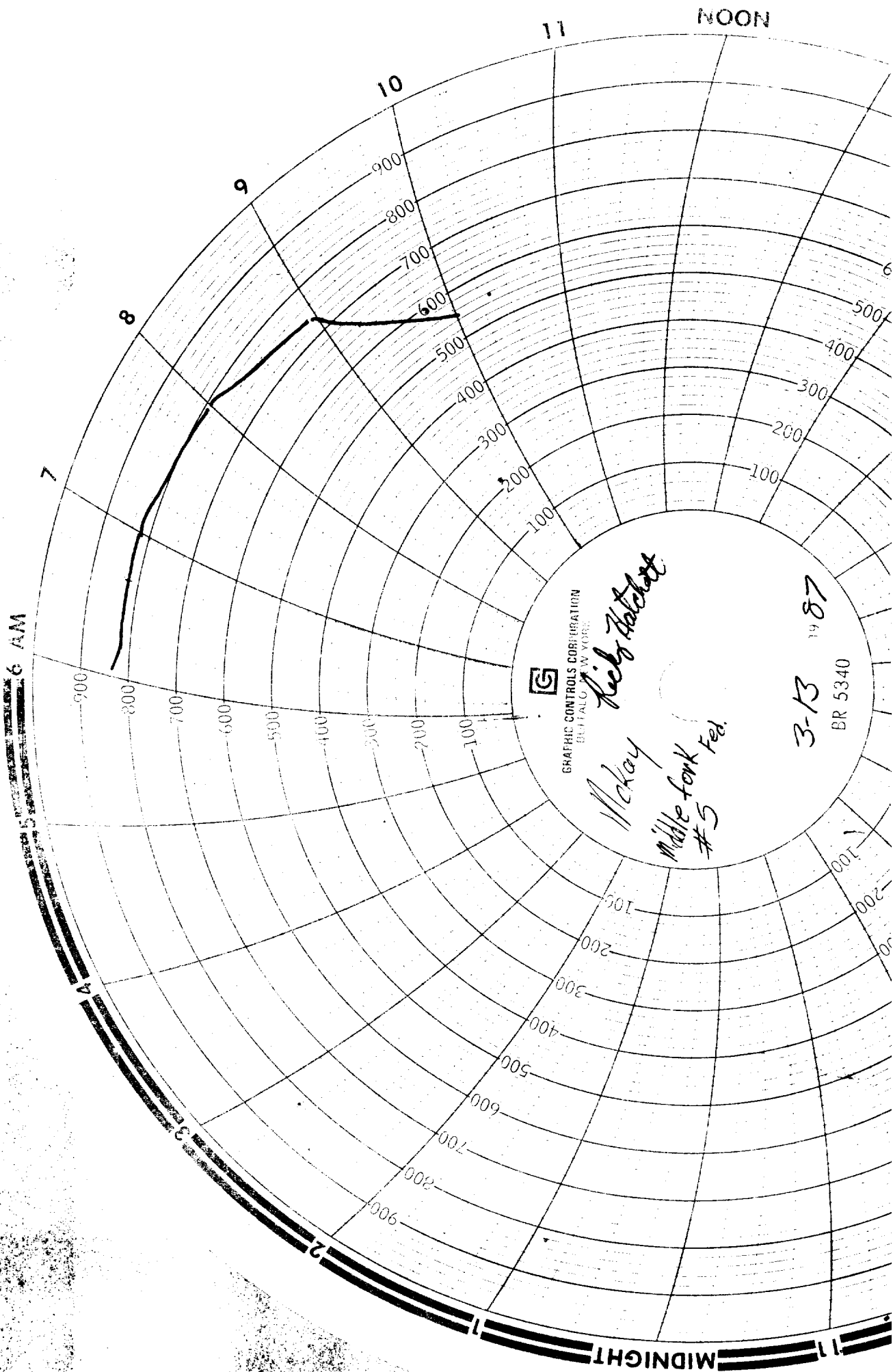
$$Q_1 = 360$$

Q, Mcf/d

$$\log Q_1 = 2.5563$$

$$\log Q_2 = 2.5563$$

$$n = 0.507$$





Our Interest in Measurement be our Concern

PRECISION SERVICE INC.

Flow Measurement Engineers

Analysis Results Summary

Casper, WY 82601

Run No. 313-9
Date Run 03/13/87
Date Sampled 03/13/87

Analysis For: BENNETT & CATHEY WRLN.

Lease: MIDDLE FORK FEDERAL #5

Location CHINA DRAW

Purpose WELL TEST

Sampling Temp. 60 °F

Volume/day

Pressure on Bomb 550

Producer MCKAY OIL CORP.

County CHAVES State NEW MEXICO

Sampled By B & C WRLN.

Atmos Temp. °F

Formation ARO

PSIG; Line Pressure 563.2 PSIA PSIG

Gas Component

Analysis

Press. Base: 14.73

Mol. %

Liq. %

GPM
Per MCF

Carbon Dioxide CO₂

.103

Oxygen O₂

Nitrogen N₂

Hydrogen Sulfide H₂S

5.669

Methane C₁

90.701

Ethane C₂

1.588

Propane C₃

.756

Iso-Butane IC₄

.153

Nor-Butane NC₄

.469

Iso-Pentane IC₅

.103

Nor-Pentane NC₅

.220

Hexanes plus

.237

Hexanes C₆

Heptanes

Heptanes Plus C₇+

Total

100.000

Pentane + G.P.M.

.227

Propane + GPM

.633

26-lb Gasoline

.351

15.373

.425

.208

.050

.148

.038

.080

.109

16.431

BTU Dry

1014

BTU Wet

996

Calc. Specific Gravity

.617

@ Std. Press. 14.696

BTU Dry

1012

BTU Wet

994

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

Reid Vap. Press. #/Sq.In.

Z Factor

.9979

N Value

1.3066

Ave Mol Wt

17.8285

Ave Cu Ft/Gal

Run by JEFFREY A. PROPP

Calculated By JEFFREY A. PROPP

Ethane + GPM

1.058

Remarks:

RECEIVED MAR 16 1987

Distribution: