

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

Form C-122
Revised 9-1-65

Type Test ☒ Initial 4 POINT ☐ Annual ☐ Special						Test Date 1-3-83																															
Company STEVENS OPERATING				Connection AIR NEW WELL																																	
Pool PECOS SLOPE U.D. <i>Alto</i>				Formation ABO																																	
Completion Date 12-29-82 / 1-4-83		Total Depth 4530 4590		Plug Hole 4518 4528		Elevation 3657																															
Well No. 2		Farm or Lease Name HELEN COLLINS FED.																																			
Well Size 4.500	Wt. 10.5	d 4.052	Set At 4590 4518	Perforations From 4085 To 4312	Unit Sec. Twp. Age. I 9 7S 26E																																
Thq. Size 2.375	Wt. 4.7	d 1.995	Set At 1590 3996	Perforations From 0 To 0																																	
Type Well - Single - Floodhead - G.O. or G.O. Multiple SINGLE				Packer Set At 3996		County CHAVES																															
Producing Thru TUBING		Reservoir Temp. °F 110 4193		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2																															
State NEW MEXICO																																					
L 4193.	H 4193.	Q _g 0.673	% CO ₂ 0.07	% N ₂ 5.50	% H ₂ S 0	Prover 2.0	Meter Run 0																														
Taps																																					
FLOW DATA				TUBING DATA																																	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.																														
51							980 44																														
1.	2.00 X 0.094			953	0	53	955 49																														
2.	2.00 X 0.125			933	0	53	935 49																														
3.	2.00 X 0.188			575	0	51	896 49																														
4.	2.00 X 0.219			720	0	49	782 48																														
5.																																					
Duration of Flow 29.5 HRS																																					
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, Mcd																														
1	0.14	0	966.2	1.0068	1.2190	1.1034	184.																														
2	0.26	0	946.2	1.0068	1.2190	1.1010	338.																														
3	0.61	0	588.2	1.0088	1.2190	1.0620	466.																														
4	0.84	0	733.2	1.0107	1.2190	1.0797	817.																														
5																																					
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcd/bbl.																																
1	1.46	513.	1.40	0.821	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.																																
2	1.43	513.	1.40	0.825	Specific Gravity Separator Gas 0.673 XXXXXXXXXXXX																																
3	0.89	511.	1.40	0.887	Specific Gravity Flowing Fluid XXXXXX																																
4	1.11	509.	1.39	0.858	Critical Pressure 660. P.S.I.A. _____ P.S.I.A.																																
5					Critical Temperature 366. R _____ R																																
P_r 996.7 P_c^2 993. <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>NO.</td> <td>P_1^2</td> <td>P_2^2</td> <td>R_1^2</td> <td>$P_c^2 - R_1^2$</td> </tr> <tr> <td>1</td> <td>937.</td> <td>971.</td> <td>942.</td> <td>51.</td> </tr> <tr> <td>2</td> <td>899.</td> <td>951.</td> <td>905.</td> <td>89.</td> </tr> <tr> <td>3</td> <td>827.</td> <td>913.</td> <td>833.</td> <td>160.</td> </tr> <tr> <td>4</td> <td>632.</td> <td>802.</td> <td>644.</td> <td>350.</td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>								NO.	P_1^2	P_2^2	R_1^2	$P_c^2 - R_1^2$	1	937.	971.	942.	51.	2	899.	951.	905.	89.	3	827.	913.	833.	160.	4	632.	802.	644.	350.	5				
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$(1) \frac{P_c^2}{P_c^2 - R_1^2} = 2.8419$ $(2) \left[\frac{R_1^2}{P_c^2 - R_1^2} \right]^n = 2.1200$ $AOF = Q \left[\frac{R_1^2}{P_c^2 - R_1^2} \right]^n = 1733.$																																					
Absolute Open Flow 1733. Mcd @ 15.025 Angle of Slope 54.3 Slope, n 0.719																																					
Remarks:																																					
Approved By Commission:		Conducted By: DON BENNETT		Calculated By: BENNETT- CATHEY		Checked By:																															

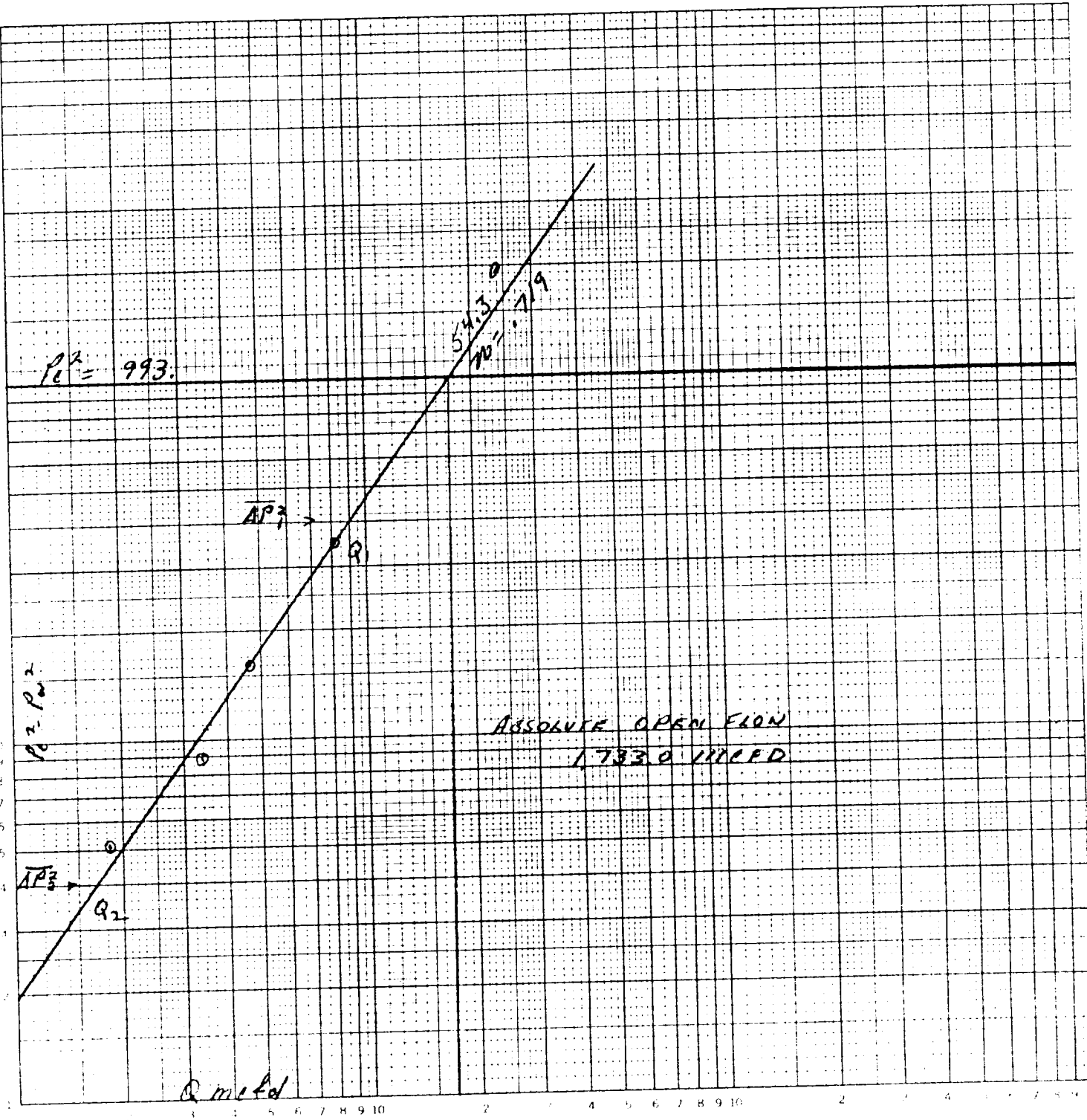
*Post FD-2
1-28-83
Camp BK*

Well No. 6
Unit 1, S 9, T 15 R 4 E
Chaves County

1-3-83

46 7400

LOG-PROB. MIC 3 X 3 CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.



$$\Delta P_1 \quad P_c^2 - P_w^2 = 400$$

$$\Delta P_2 \quad P_c^2 - P_w^2 = 40$$

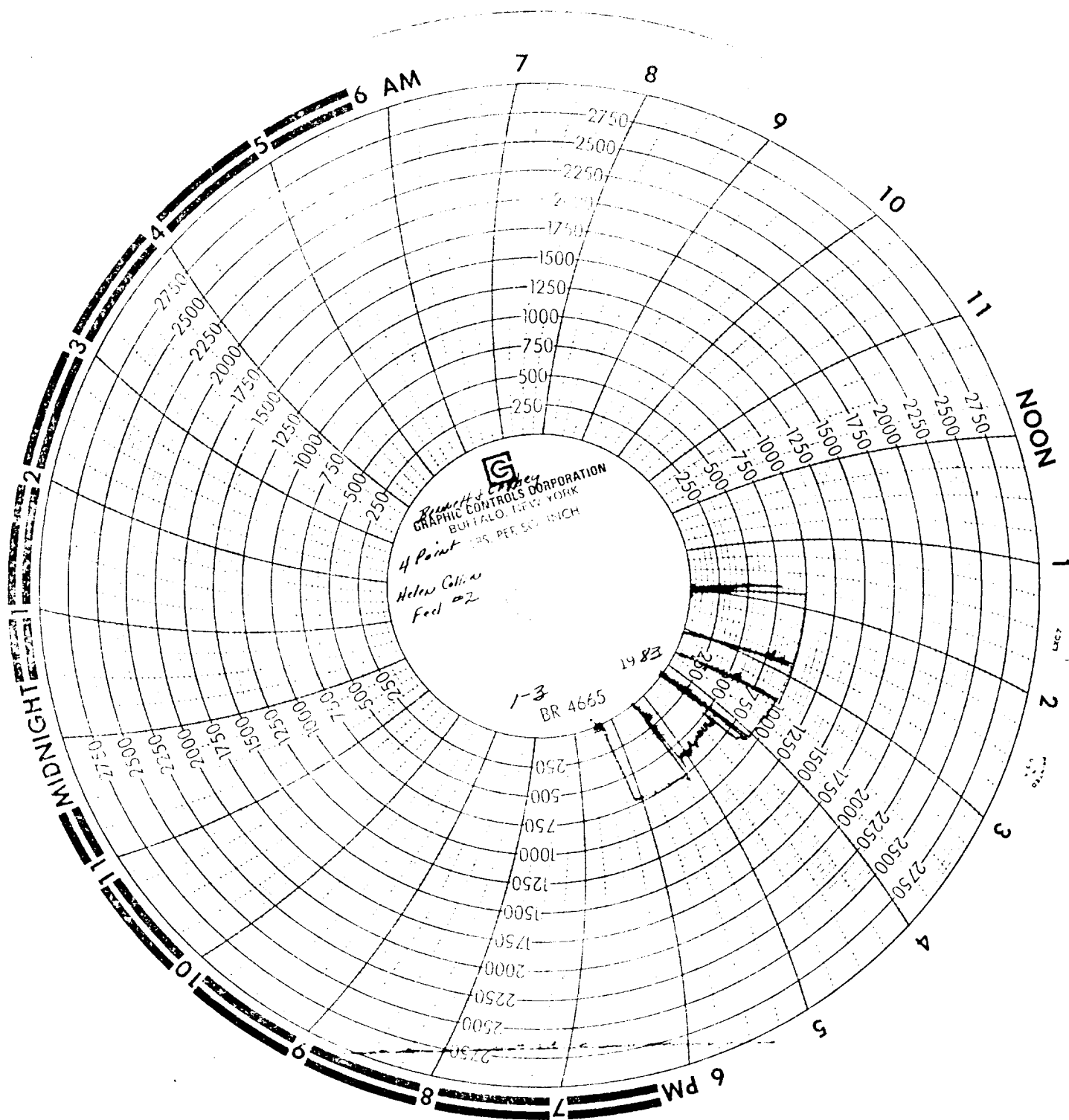
$$Q_1 = 895.0 \text{ mcf/d}$$

$$Q_2 = 170.6 \text{ mcf/d}$$

$$\log Q_1 = 2.951$$

$$\log Q_2 = 2.232$$

$$m = .719$$





Analysis Report Summary
Case: W-0000

Date: 1/14/83
Time: 1:42:33
Page: 1/1

Analysis For: STEVENS OPERATING CO.
Lease: Helen Collins Fed. #2
Location: I-S-9-T.79-R.26E
Purpose:
Sampling Temp:
Volume, day:
Pressure on Bomb: 850

Producer: Stevens Operating
County: State:
Sampled by: R & C Wireline
Sample Temp: °F
Formation:
PSIG Line Pressure: PSIG

Gas Component

Analysis

Press. Base: 14.65

Mol. % Liq. % GPM
Per MCF

Carbon Dioxide CO ₂	.069		
Oxygen O ₂			
Nitrogen N ₂	5.497		
Hydrogen Sulfide H ₂ S			
Methane C ₁	85.076		14.420
Ethane C ₂	4.599		1.226
Propane C ₃	1.920		.527
Iso-Butane IC ₄	.380		.124
Nor-Butane NC ₄	.820		.258
Iso-Pentane IC ₅	.355		.129
Nor-Pentane NC ₅	.419		.151
Hexanes C ₆			
Hexanes	.865		.355
Heptanes Plus C ₇ +			
Total	100.000		17.191
Pentane + G.P.M.			.636
ROPANE + G.P.M.			1.545

BTU Dry 1099
BTU Wet 1080
Calc. Specific Gravity .673

@ Std. Press. 14.696

BTU Dry 1103
BTU Wet 1084

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

Z Factor .9974
N Value 1.2979
Ave Mol Wt 19.4499

Run by JAP

Calculated By JAP

Remarks:

Distribution: