

MULTIPOINT / ONE POINT BACK PRESSURE TEST FOR GAS WELL

DEC 7 1981

Type Test ☒ Initial FOUR POINT ☐ Annual ☐ Special		Test Date 11-27-81	
Company READ & STEVENS, INC.		Connection EL PASO NATURAL GAS COMPANY	
Pool <i>Buffalo Valley Perm.</i>		Formation ATOKA	
Completion Date 4-20-81	Total Depth 9068	Plug Back TD <i>8941 9010</i>	Elevation 3532 KB
Csg. Size 4.500	Wt. 11.60	d 4.000	Set At 8941
Perforations: From 8776 To 8789	Well No. 5		
Perforations: From OPEN To ENDED	Unit Sec. Twp. Rge. E 25 15S 27E		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE		Packer Set At NONE	
Producing Thru TUBING		Baro. Press. - P_a 13.2	
Reservoir Temp. °F 141 • 8760		Mean Annual Temp. °F 60	
County CHAVES		State NEW MEXICO	
L 8782	H 8782	Gg .6510	% CO ₂ .372
% N ₂ .495	% H ₂ S	Prover	Meter Run 4"
Taps FLANGE			

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	B.H.P. PSIG	Temp. °F	Duration of Flow
SI							2267		3216		72 HRS.
1.	4.000	X	1.000	670	1.5	69	1905	60	2798		1
2.	4.000	X	1.000	668	2.1	72	1853	59	2747		1
3.	4.000	X	1.000	668	2.9	72	1685	58	2543		1
4.	4.000	X	1.000	670	4.4	72	1437	56	2153		1
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	4.8740	31.78	448.9	.9915	1.2394	1.0426	198
2	4.8740	44.49	448.9	.9887	1.2394	1.0426	277
3	4.8740	61.44	448.9	.9887	1.2394	1.0426	383
4	4.8740	93.22	448.9	.9887	1.2394	1.0426	580
5							

NO.	P_r	Temp. °R	T_r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/lbbl.
1	.67	529	1.43	.920	A.P.I. Gravity of Liquid Hydrocarbons	Deq.
2	.67	532	1.43	.920	Specific Gravity Separator Gas .6510	XXXXXX
3	.67	532	1.43	.920	Specific Gravity Flowing Fluid XXXXX	.6510
4	.67	532	1.43	.920	Critical Pressure 671 P.S.I.A.	671 P.S.I.A.
5					Critical Temperature 371 R	371 R

P_c 3229.2	P_w^2 10427.7	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.8183$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.8183$
NO.	P_w	P_w^2	$P_c^2 - P_w^2$
1	2811.2	7902.8	2525
2	2760.2	7618.7	2809
3	2556.2	6534.2	3894
4	2166.2	4692.4	5735
5			

Absolute Open Flow 1,054.6 Mcld @ 15.025 Angle of Slope 45.0 Slope, n 1.0000

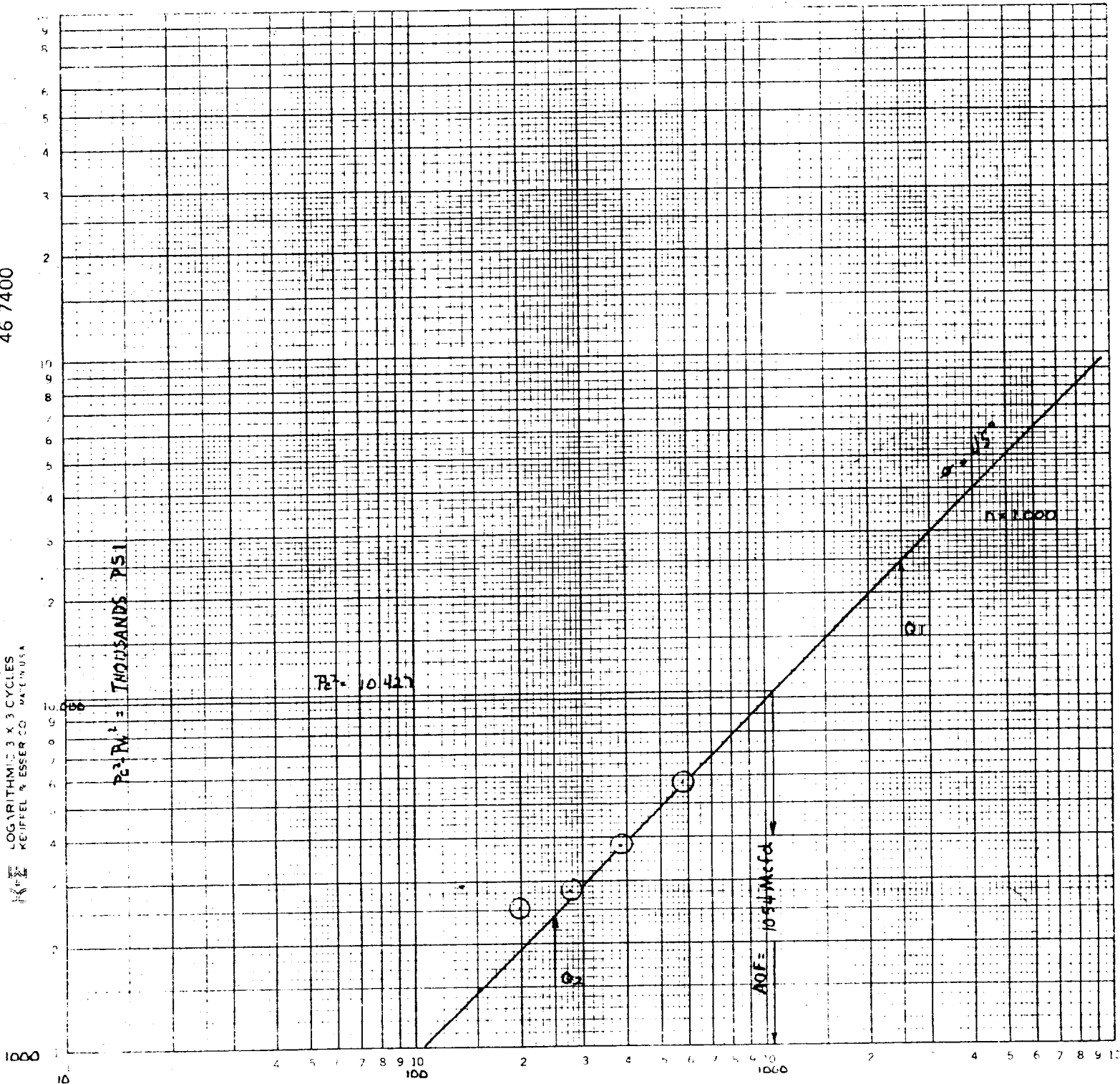
Remarks: BOTTOM HOLE PRESSURE MEASURED WITH AMERADA PRESSURE ELEMENT

Approved by Division	Conducted By: RICHARD TOWNLEY	Calculated By: WOHLFORD & JENKINS	Checked By:
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READ & STEVENS
HARRIS FEDERAL #5
E 25 155 27E
CHAVES COUNTY NEW MEXICO
11-27-81

46 7400

LOGARITHMIC 3 X 3 CYCLES
KEUFFEL & ESSER CO. WATERLOO, N.Y.



$$\frac{\Delta P}{\Delta P^2} \cdot P_e \cdot P_w = 24500$$

$$\frac{\Delta P}{\Delta P^2} \cdot P_e \cdot P_w = 2450$$

$$Q_1 = 2500$$

$$Q_2 = 250$$

Q Mcfd

$$\text{LOG } Q_1 = 3.39794$$

$$\text{LOG } Q_2 = 2.39794$$

$$n = 1.00000 = 1.000$$

Artesia, New Mexico 88210

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CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

2280 PSIA DEAD WEIGHT AT THE END OF 72 HOURS 0 MINUTES.

[illegible]

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CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

2280 PSIA DEAD WEIGHT AT THE END OF 72 HOURS 0 MINUTES.

[illegible]

NEW-TEX LA
P.O. BOX 1161
HOBBS NM 88241-1161
505-393-3561

ANALYSIS NUMBER: 6123
DATE OF RUN: 11 30 81
DATE SECURED:

ANALYSIS CERTIFICATE

SAMPLE IDENT: READ # STEVENS - HARRIS #5

CLIENT: BENNETT - CATHEY
ADDRESS: BOX 787
CITY, STATE: ARTESIA

SAMPLING PRESS: 0 PSIG SAMPLING TEMP: 0 DEG F
STATION NUMBER:

***** GAS ANALYSIS *****

	MOLE PERCENT	GAL / MCF
NITROGEN	0.4951609	
CARBON DIOXIDE	0.3716072	
METHANE	88.2417145	
ETHANE	6.6431932	1.7717400
PROPANE	2.4010289	0.6590830
ISO-BUTANE	0.2734363	0.0892223
NORMAL BUTANE	0.5656132	0.1778290
ISO-PENTANE	0.1619808	0.0591392
NORMAL PENTANE	0.1438066	0.0519717
HEXANES	0.1569545	0.0643827
HEPTANES PLUS	0.5455040	0.2510410
TOTAL	100.0000000	3.1244100

PROPANE GPM: 0.66 BUTANES GPM: 0.27
ETHANE GPM: 1.77 PENTANES PLUS GPM: 0.43

SPECIFIC GRAV (CALC): .6510
MOLE WEIGHT: 18.91

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
14.696		1127	1147
14.650		1123	1143
14.730		1129	1149
14.735		1129	1150

ANALYZED BY:

APPROVED BY:

