

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 ☐ Annual ☐ Special						Test Date 11-4-81	
Company Stevens Operating Corp.				Connection TO AIR			
Pool Pecos Slope - Abo Gas WILBERT Und. Abo				Formation ABO		Unit ARTESIAN	
Completion Date 10-27-81		Total Depth 4100		Plug Back TD 4100		Elevation 3795.2 G1	
Csg. Size 4 1/2		Wt. 10.5		Set At 4100		Perforations: From 3944.5 To 3973.0	
Thg. Size 2 3/8		Wt. 4.7		Set At 3871		Perforations: From OPENENDED	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At 3871	
Producing Thru Tubing		Reservoir Temp. °F 93 @ 3960		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2	
L 3960		H 3960		G _g .6466		% CO ₂ -0-	
				% N ₂ 6.996		% H ₂ S -0-	
				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	Press. p.s.i.g.	
SI							960		960	CHOKE
1.	4	X	2"	300	1"	58°	955	56°	955	11/64
2.	4	X	2"	550	2"	59°	950	59°	950	13/64
3.	4	X	2"	570	8"	73°	850	64°	870	15/64
4.	4	X	2"	580	11"	83°	830	65°	860	18/64
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	19.81	17.70	313.2	1.002	1.243	1.029	449
2	19.81	33.56	563.2	1.001	1.243	1.051	869
3	19.81	68.31	583.2	.9877	1.243	1.047	1739
4	19.81	80.78	593.2	.9786	1.243	1.044	2032
5.							

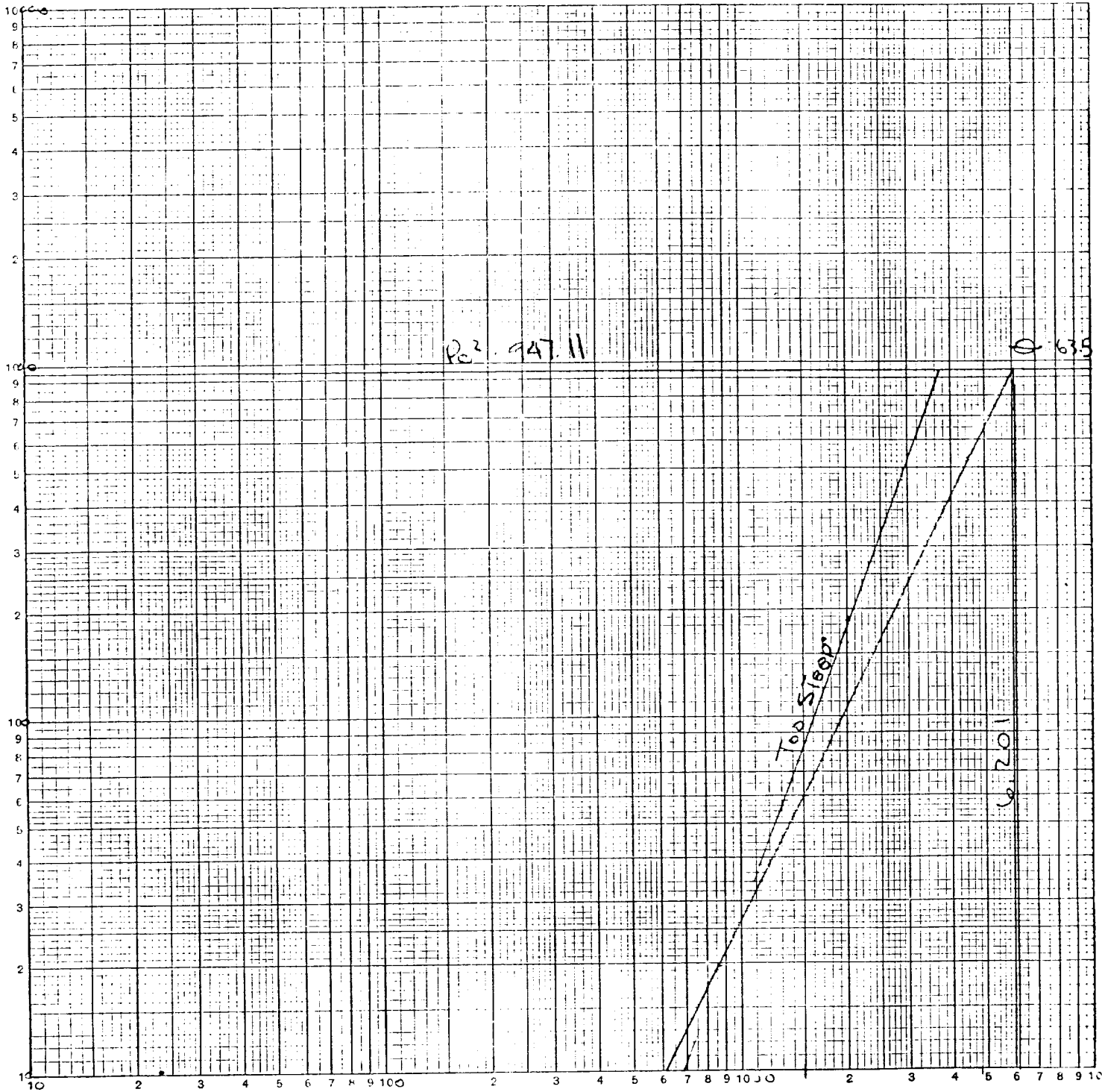
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.	.476	518	1.46	.945	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.	.856	519	1.46	.905	Specific Gravity Separator Gas _____ X X X X X X X X
3.	.886	533	1.50	.912	Specific Gravity Flowing Fluid _____ X X X X X
4.	.902	543	1.53	.917	Critical Pressure _____ 658 P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ 355 R _____ R

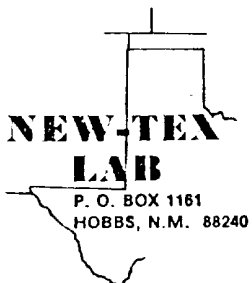
$P_c = 973.2$ $P_c^2 = 947.11$					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 48.92$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 7.1358$
NO	P _r ²	P _w	P _w ²	P _c ² - P _w ²		
1		968.2	937.41	9.7		
2		963.2	927.75	19.36		
3		883.2	780.04	167.1		
4		873.2	762.47	184.6		
5						

Absolute Open Flow <u>6,201</u> Mcfd @ 15.025			Angle of Slope θ <u>63.5°</u>	Slope, n <u>.50515</u>
Remarks: <u>Slope was too steep used 63.5° thru low rate.</u>				

Approved By Commission:	Conducted By: W.S.	Calculated By: M.K.	Checked By: M.K.
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$$869 \left(\frac{947.11}{9.36} \right)^{.50515} - 6,201$$





No. 5977
Run No. _____
Date of Run 11-5-81
Date Secured 11-4-81

CERTIFICATE OF ANALYSIS

Sample of Stevens Oil Co. Edmondson Fed. #1
Secured from John West Engineering
At 412 N. Dal Paso Secured by _____
Hobbs, NM 88240 Time _____ Date _____
Sampling conditions _____ Press _____
Temp. _____ Station No. _____

FRACTIONAL ANALYSIS

Percentage Composition

MOL % LIQ. % G.P.M.

Carbon Dioxide	Nil	
Air		
Nitrogen	6.996	
Oxygen		
Hydrogen sulfide		
Hydrogen		
Methane	85.243	
Ethane	4.635	1.236
Propane	1.728	.474
Butanes		
iso-Butane	.273	.089
N-Butane	.557	.175
Pentanes		
iso-Pentane	.163	.060
N-Pentane	.168	.061
Hexanes	.116	.048
Heptanes	.121	.056
Octanes		
TOTAL	100.000	2.199

Calc. Sp. Gr. 0.6466
Calc. A.P.I. _____
Calc. Vapor Press. _____ PSIA
Sp. Gr. _____
Mol. Wt. 18.73

LIQUID CONTENT (GAL./MCF)

Propane Calc. G.P.M. .474
Butanes Calc. G.P.M. .264
Pentanes Plus. G.P.M. .225
Ethane Calc. G.P.M. 1.236
RVP Gasoline G.P.M. _____

B.T.U./Cu. Ft. @ 14.696 P.S.I.A.
Dry Basis 1039
Wet Basis 1021

Sulfur Analysis by Titration
Gr./100 Cu. Ft. _____
Hydrogen Sulfide _____
Mercaptans _____
Sulfides _____
Residual Sulfur _____
Total Sulfur _____

Run by R.H. Hamilton Checked by Deane Simpson Approved by Deane Simpson

Additional Data and Remarks

STEVENS OPERATING COMPANY
 EDMONDSON FEDERAL NO. 1
 4-POINT BACK PRESSURE TEST AND,
 BOTTOM HOLE PRESSURE BUILD-UP TEST.
 TABULATION OF TIMES AND PRESSURES.

TEST CONDUCTED BY:
 JOHN WEST ENGINEERING COMPANY

TEST DATE: NOVEMBER 3-6, 1981
 TEST DEPTH: 3960 FEET
 ELEMENT NO: 18129 (0-2500 psi)
 OPERATOR: W.S.

<u>DATE</u>	<u>TIME</u>	<u>CUM HRS. / MIN.</u>	<u>PSIG @ 3960 FEET</u>
11-3-81	11:30 A.M.		1044 Gauge reached 3960 Feet
	11:45 A.M.	00 Hrs. 00 Min.	1044 Begin Test.
	12:00 Noon	00 15	1043
	12:15 P.M.	00 30	1043 End Rate I
	12:30 P.M.	00 45	1038
	12:45 P.M.	01 00	1039 End Rate II
	1:00 P.M.	01 15	1025
	1:15 P.M.	01 30	1020
	1:30 P.M.	01 45	1019 End Rate III
	1:45 P.M.	02 00	1010
	2:00 P.M.	00 Hrs. 00 Min.	1008 End Rate IV
		00 15	1023
		00 30	1028
		00 45	1030
	3:00 P.M.	01 00	1033
	4:00 P.M.	02 00	1036
	5:00 P.M.	03 00	1039
	5:30 P.M.	03 30	1040 Clock Stopped
	9:00 A.M.	69 15	1067 Gauge out, End of Test.

TEST DATE: NOVEMBER 3-6, 1981
TEST DEPTH: 3960 FEET

ELEMENT NO: 18129
RANGE: 0-2500 PSI
CLOCK NO: 22507
RANGE: 0-72 Hour

Note: See tabulation of Times and Pressures on attached sheet.

TIME-IN-HOURS

