

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

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☐ Initial ☐ Annual ☐ Special				Test Date 1-26-74		FEB 5 1974	
Company Texas Oil & Gas Company				Connection El Paso		O. C. C.	
Pool Burton Flat				Formation Morrow		Unit ARTESIA, OFFICE	
Completion Date 5-29-73		Total Depth 11700		Plug Back TD 11,670		Elevation 3279 Gr.	
Form or Lease Name Superior Federal		Well No. 1					
Csg. Size 4 1/2	Wt. 11700	Set At 11700	Perforations: From 11625 To 11635		Unit 1		
Tbg. Size 2 3/8	Wt. 11450	Set At 11450	Perforations: From open To ended		Sec. 8	Twp. 20S	Rge. 29E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 11450 feet		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 182° @ 11,660'		Mean Annual Temp. °F 60°		State New Mexico	
L 11,405	H 11,405	G _g .6172	% CO ₂ .78	% N ₂ .28	% 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	Press. p.s.i.g.		Temp. °F
51	L-10 CHART						3023.0		PACKER	CHOKE	
1.	4"	x	1.250"	8.40	2.50	76	2415.0	61		7/64"	1.00
2.	4"	x	1.250"	8.40	4.00	80	2030.0	62		9/64"	1.00
3.	4"	x	1.250"	8.45	4.80	79	1557.0	61		11/64"	1.00
4.	4"	x	1.250"	8.50	5.40	80	1220.0	60		14/64"	1.00
5.											

RATE OF FLOW CALCULATIONS								
NO.	Coefficient (24 Hour)	Meter Factor	Diff.	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor Fpv	Rate of Flow Q, Mcfd
1.	7.469	3.162	2.50	8.40	0.9850	1.273	1.059	659
2.	7.469	3.162	4.00	8.40	0.9813	1.273	1.057	1048
3.	7.469	3.162	4.80	8.45	0.9822	1.273	1.058	1267
4.	7.469	3.162	5.40	8.50	0.9813	1.273	1.059	1434
5.								

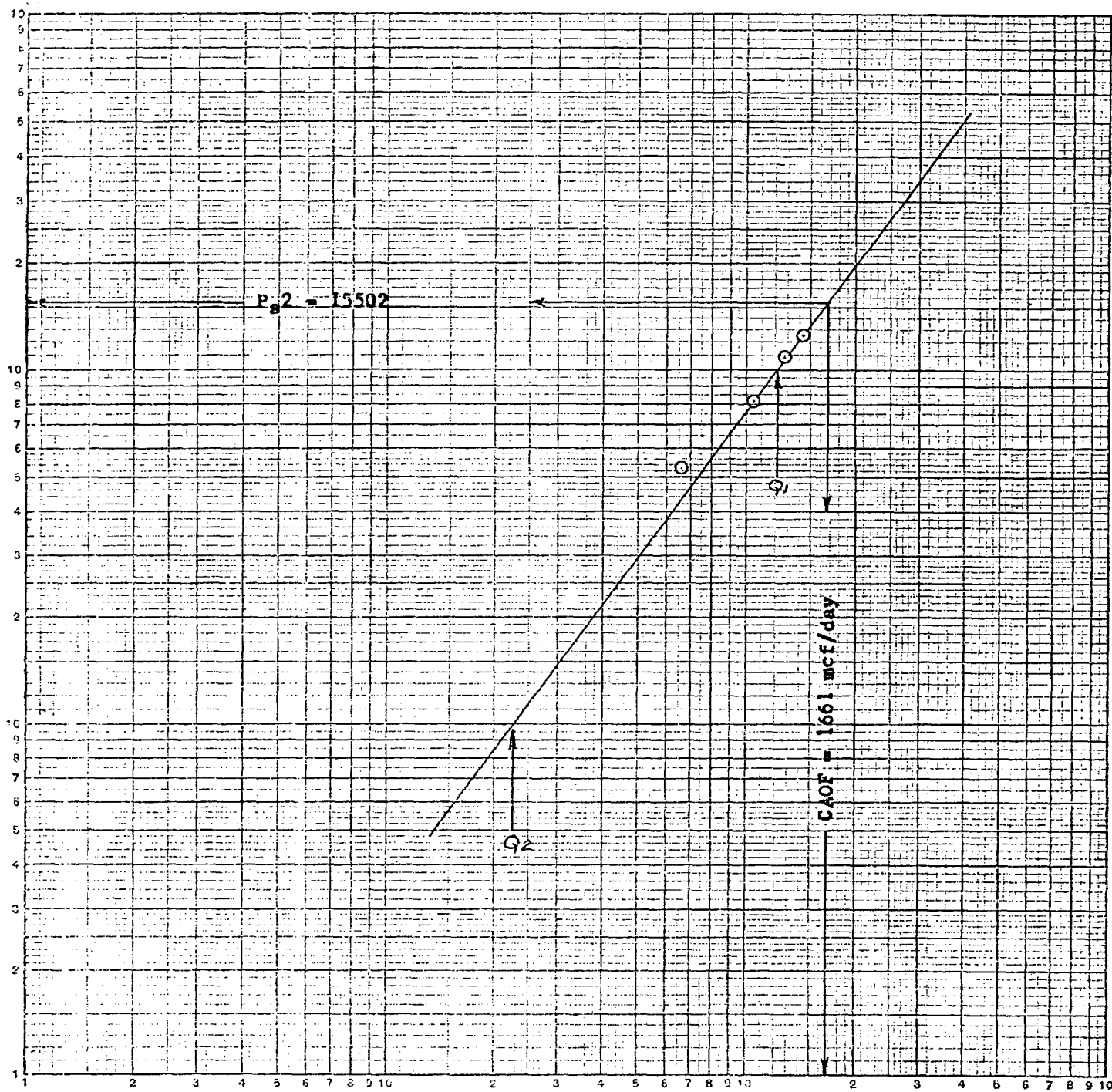
NO.	P _t	Temp. °R	T _g	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	1.05	536	1.48	.892	A.P.I. Gravity of Liquid Hydrocarbons	
2.	1.05	540	1.49	.895	Specific Gravity Separator Gas	0.6172
3.	1.06	539	1.49	.894	Specific Gravity Flowing Fluid	X X X X X
4.	1.08	540	1.49	.892	Critical Pressure	671
5.					Critical Temperature	362

NO.	P _t ²	P _w ²	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$
1		3197.2	10222	5280	1.2366	1.1581
2		2711.2	7351	8151		
3		2143.2	4593	10909		
4		1722.2	2966	12536		
5						

Absolute Open Flow			Angle of Slope	
1661			55.4°	0.691

Remarks: Bottom Hole Pressures measured w/Amerada Gauge at 11660'	
100" - 1000# Meter Range	

Approved By Commission:	Conducted By: D. Tyson	Calculated By: R. West	Checked By:
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$$\begin{aligned} \text{Abs. Slope (n)} &= Q_1 = 11150 = 8.0472749 \\ &Q_2 = 2270 = 7.3560259 \\ \hline n &= 0.6912490 \end{aligned}$$

$$\text{Abs. Pot.} = 1434(15502/12536)^{.691} = 166 \text{ mcf/day}$$

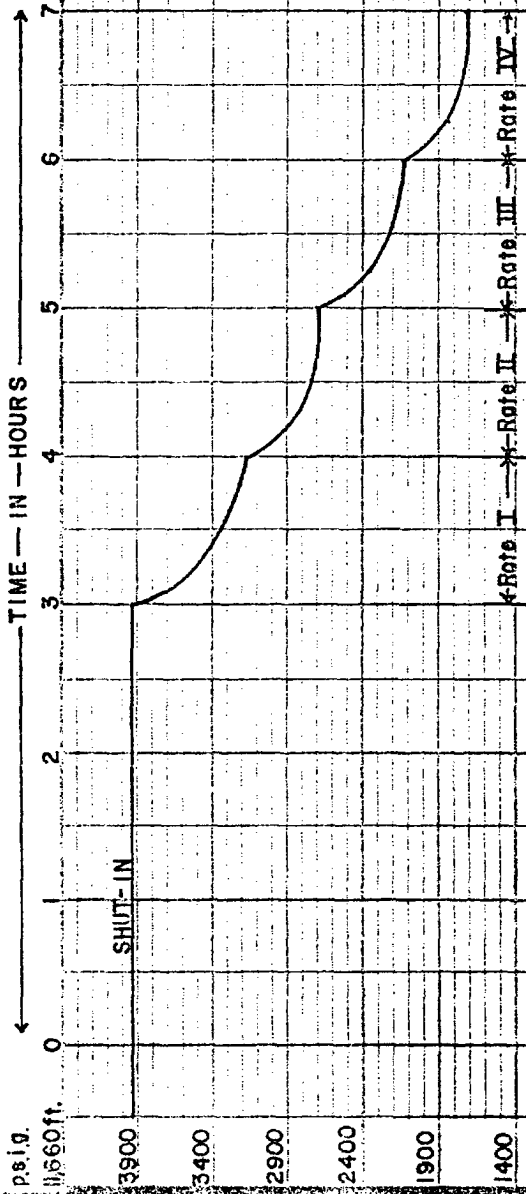
TEXAS OIL AND GAS COMPANY
 SUPERIOR FEDERAL
 WELL NO. 1
 FOUR POINT BACK PRESSURE TEST
 TABULATION OF PRESSURE AND TIME

TEST DATE: JAN. 26, 1974
 TEST DEPTH: 11,660 FEET
 ELEMENT NO.: 8534 (0-5600#)
 CLOCK NO.: 4052 (0-12 HRS.)

OPERATOR: D. TYSON

TIME	CUM. HRS. / MIN.
11:00 A.M.	SHUT-IN
2:00 P.M.	03 HRS. 00 MIN.
3:00 P.M.	04 00
3:15 P.M.	04 15
4:00 P.M.	05 00
4:15 P.M.	05 15
5:00 P.M.	06 00
5:15 P.M.	06 15
6:00 P.M.	07 00

P.S.I.G. @ 11,660 FEET
 3924 GAUGE REACHED 11,660 FEET
 3924 RATE 1 CHOKE @ 7/64
 3184 END RATE 1
 2876 RATE 2 CHOKE @ 9/64
 2698 END RATE 2
 2348 RATE 3 CHOKE @ 11/64
 2130 END RATE 3
 1831 RATE 4 CHOKE @ 14/64
 1709 END RATE 4
 END TEST



TEXAS OIL & GAS COMPANY

SUPERIOR FED.
 WELL NO. 1
 FOUR POINT BACK PRESSURE TEST
 JOHN W. WEST ENGINEERING CO. HOBBBS, NEW MEXICO
 Date: 1-26-74 Drawn by D.A.T. Scale: AS SHOWN