

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

Revised 9-1-65

copy test

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 5/23-24/66	
Company Gulf Oil Corporation				Connection Marathon Plant	
Pool Indian Basin Upper Penn				Formation Upper Penn	
Completion Date 1/18/66		Total Depth 7541		Plug Back TD 7517	Elevation
Farm or Lease Name Helbing Fed Gas (Comm)					
Csg. Size 5 1/2	Wt. 15.5 & 14.0	Set At 7540	Perforations: From 7224 To 7463		Well No. 1
Thg. Size 2 3/8	Wt. 4.60	Set At 7160	Perforations: From open To ended		Unit F Sec. 15 Twp. 22 S Rge. 23 E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 7160	County Eddy
Producing Thru Tubing		Reservoir Temp. *F 152 @ Est	Mean Annual Temp. *F 60	Baro. Press. - P _a 12.7	State New Mexico
L *7150	H 7150	G _g .640	% CO ₂ 0.51	% N ₂ 0.90	% H ₂ S 0.37
			Prover	Meter Run X	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
SI							2338				30 min
1.	3.068 x 1.625			1082.0	10.89	68	2250	69			2
2.	" "			1086.0	21.62	75	2187	71			2
3.	" "			1093.0	37.21	70	2087	72			2
4.	" "			1102.0	62.41	75	1940	72			2
5.	" "			1112.0	17.22	75	2198	74			16

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	13.24	109.21	1095.2	.9924	1.250	1.109	1989
2	13.24	154.16	1099.2	.9859	1.250	1.102	2772
3	13.24	202.88	1106.2	.9905	1.250	1.110	3692
4	13.24	263.82	1115.2	.9859	1.250	1.104	4752
5	13.24	139.20	1125.2	.9859	1.250	1.105	2510
73,093 Average							Mcf/bbl.

NO.	P _r	Temp. *R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Deg.
1.	1.63	528	1.42	0.813	60.1	.640	X X X X X X X X
2.	1.64	535	1.44	0.823			.679
3.	1.65	530	1.42	0.811			669 P.S.I.A.
4.	1.66	535	1.44	0.821			382 R
5.	1.68	535	1.44	0.819			

NO.	P _r	P _r ²	** P _w	P _w ²	P _r ² - P _w ²
1	2351.2	5528.1	2305.2	5313.9	214.2
2			2255.2	5085.9	442.2
3			2198.2	4832.1	696.0
4			2132.2	4546.3	981.8
5			2267.2	5140.2	387.9

(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 14.251$

AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 15.045$

(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 5.994$

Absolute Open Flow 15,045 Mcfd @ 15.025	Angle of Slope @	Slope, n 0.674
--	------------------	-----------------------

Remarks: ***BHP gauge setting**

****Calculated from BHP. See C-122F attached**

Maximum SIP 30 minutes after end of test.

Approved By Commission:	Conducted By: W. L. Smith	Calculated By: W. L. Smith	Checked By:
-------------------------	----------------------------------	-----------------------------------	-------------