

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

1-File
1-C-122
Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 8/11/78		AUG 18 1978	
Company Gulf Oil Corporation				Connection Air				Unit O.C.C.	
Pool Undesignated				Formation Cisco				ARTESIA, OFFICE	
Completion Date 7-26-78		Total Depth 8680		Plug Back TD 7972		Elevation 3614		Farm or Lease Name Eddy G.X. State Comm.	
Csg. Size 5 1/2	Wt. 15	d 17	Set At 8680	Perforations: From 6772 To 6818		Well No. # 1			
Thq. Size 2 3/8	Wt. 4.7	d	Set At 6694	Perforations: From To		Unit 0		Sec. 18	Twp. 18
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At 6694		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 141 @ 6694		Mean Annual Temp. °F 60°		Baro. Press. - P ₀ 13.2		State New Mexico	
L 6694	H 6694	Gg .655	% CO ₂ .28	% N ₂ 2.20	% 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	
SI							1865				72 Hr
1.	4	X	1.250	600	4.0	85	1745				1 Hr
2.	4	X	1.250	630	8.0	83	1615				1 Hr
3.	4	X	1.250	625	16.0	79	1400				1 Hr
4.	4	X	1.250	625	32.0	78	825				1 Hr
5.											

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, Mgd
1	7.469	49.53	613.2	.9768	1.236	1.057	472
2	7.469	71.73	643.2	.9786	1.236	1.059	686
3	7.469	101.05	638.2	.9822	1.236	1.061	967
4	7.469	142.91	638.2	.9831	1.236	1.061	1376
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	.92	545	1.44	.895	57.887	61.6 @ 60	.655	X X X X X X X X	670	378
2	.96	543	1.44	.891				X X X X X	668	392
3	.95	539	1.43	.889						
4	.95	538	1.42	.888						
5.										

NO.	P _r	P _w	R _w ²	P _r ² - R _w ²
1		1759.5	3095.8	431.8
2		1631.2	2660.7	866.9
3		1420.2	2017.0	1510.6
4		864.5	747.4	2780.2
5				

(1) $\frac{P_r^2}{P_r^2 - R_w^2} = 1.269$

AOF = Q $\left[\frac{P_r^2}{P_r^2 - R_w^2} \right]^n = 1.585$

(2) $\left[\frac{P_r^2}{P_r^2 - R_w^2} \right]^n = 1.152$

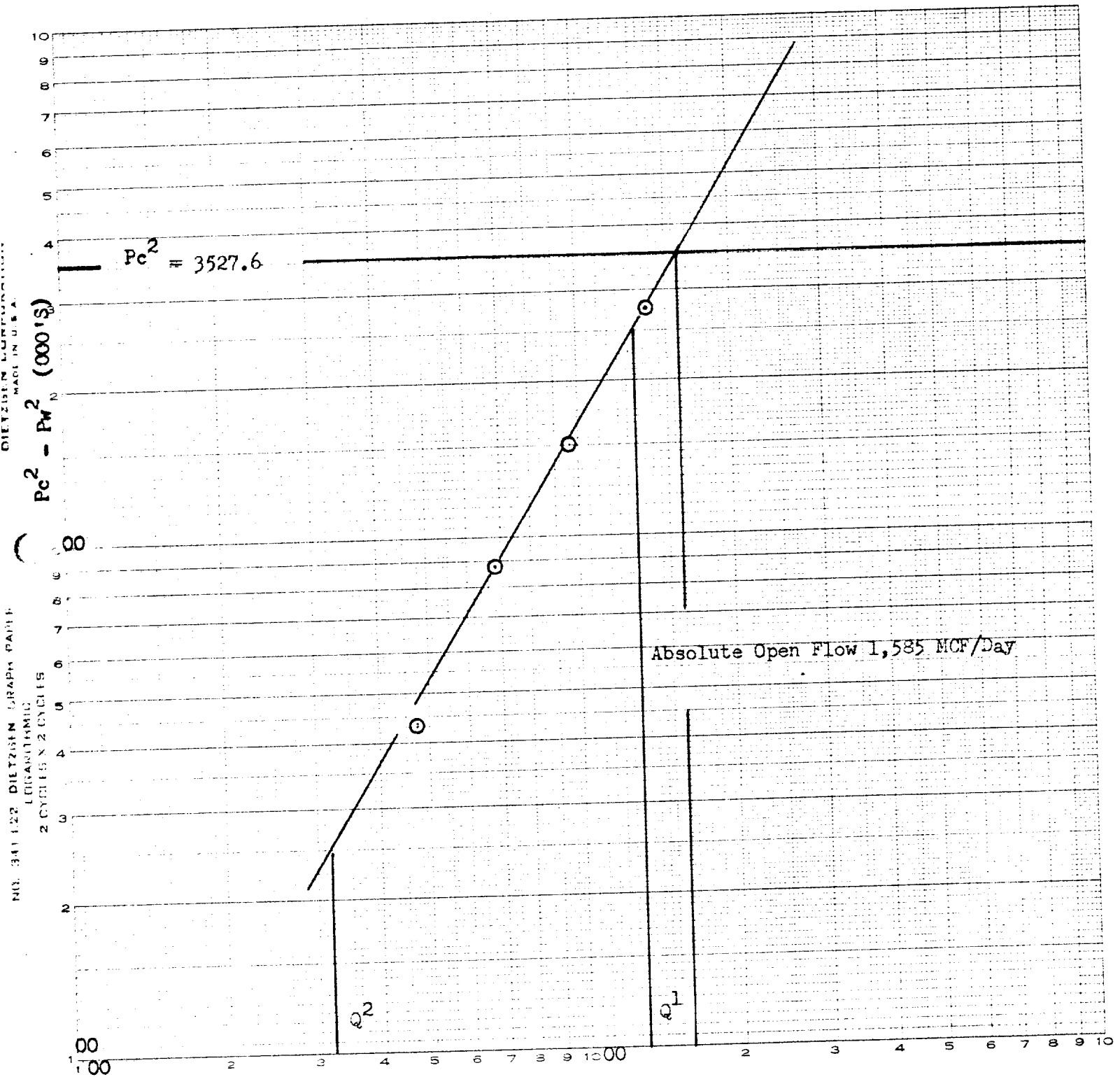
Tested 8-25-78 J.D. / EPG

Absolute Open Flow	1,585	Mgd @ 15.025	Angle of Slope	59.25°	Slope, n	.595
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Remarks: Produced 2.52 Fbbls of distillate during the test

Approved By Commission:	Conducted By: Larry Davis	Calculated By: Larry Davis	Checked By:
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Company: Gulf Oil Corporation
 Lease: Eddy GX State Comm
 Well No: # 1
 Field: Undesignated
 County: Eddy
 Date: 8/11/78



$Q = \text{MCF/Day}$
 $Q^1 = 1300; \text{Log Of } Q^1 = 3.113943$
 $Q^2 = 330; \text{Log Of } Q^2 = 2.518514$
 $N = .595$

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

Form C-122D
Adopted 9-1-65

COMPANY Gulf Oil Corporation LEASE Eddy GX State Comm. WELL NO. # 1 DATE 8/11/78

LOCATION: Unit Section 18 Township 18 Range 25

L 6694 H 6694 L/H 1.000 G mix .703 % CO₂ _____ % N₂ _____ % H₂S _____

d 1.995 F_r .018231 GH 4706 P_{cr} 668 T_{cr} 392

1st 2nd 3rd 4th

LINE	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
1 Q _m	.472	.472	.686	.686	.967	.967	1.376	1.376		
2 T _w (W.H. °R)	534	534	534	534	534	534	534	534		
3 T _s (B.H. °R)	601	601	601	601	601	601	601	601		
4 T = ($\frac{T_w + T_s}{2}$)	567.5	567.5	567.5	567.5	567.5	567.5	567.5	567.5		
5 Z (Est.)	.759	.747	.769	.756	.790	.775	.864	.850		
6 TZ	430.7	423.9	436.4	429.0	448.3	439.8	490.3	482.4		
7 GH/TZ	10,926	11,101	10,783	10,969	10,497	10,700	9,598	9,756		
8 e ^s (Table XIV)	1.506	1.516	1.498	1.509	1.482	1.494	1.433	1.442		
9 1-e ^s (Table XIV)	.336	.341	.333	.337	.325	.331	.302	.306		
10 P _i	1758.2	1758.2	1628.2	1628.2	1413.2	1413.2	838.2	838.2		
11 P _i 2/1000	3091.3	3091.3	2651.0	2651.0	1997.1	1997.1	702.6	702.6		
12 F _i (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231		
13 F _c = F _i TZ	7.853	7.729	7.956	7.822	8.173	8.018	8.939	8.794		
14 F _c Q _m	3.71	3.65	5.46	5.37	7.90	7.75	12.30	12.10		
15 L/H (F _c Q _m) ²	13.7	13.3	29.8	28.8	62.5	60.1	151.3	146.4		
16 F _w = L/H (F _c Q _m) ² (1-e ^s)	4.62	4.53	9.91	9.71	20.33	19.87	45.73	44.36		
17 P _w ² = P _i ² + F _w	3095.9	3095.8	2660.9	2660.7	2017.5	2017.0	748.3	747.4		
18 P _s ² = e ^s P _w ²	4663.6	4694.2	3987.1	4014.6	2990.6	3012.8	1072.5	1077.6		
19 P _s	2159.5	2166.6	1996.8	2003.6	1729.3	1735.7	1035.6	1038.1		
20 P = ($\frac{P_i + P_s}{2}$)	1958.9	1962.4	1812.5	1815.9	1571.3	1574.5	936.9	938.1		
21 P _i = (P/P _{cr})	2.93	2.94	2.71	2.72	2.35	2.36	1.40	1.40		
22 F _i = (T/T _{cr})	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45		
23 Z (Table XI)	.747	.747	.756	.755	.775	.774	.350	.350		