NE MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 3/12/75	
Company: McClellan Oil Corporation		Connection: None			
Pool: Undesignated (Double L)		Formation: Queen Sand			Unit
Completion Date: 3/5/75	Total Depth: 2249		Plug Back TD: 2234	Elevation	Farm or Lease Name: Federal 17
Csg. Size: 5 1/2	Wt.: 15.5	d: 4.95	Set At: 2249	Perforations: From 2204 To 2224	Well No.: 1
Tbg. Size: 2 3/8	Wt.: 4.7	d: 1.995	Set At: 2174	Perforations: From Open End To	Unit: A Sec.: 17 Twp.: 15S Rge.: 30E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 2174		County: Chaves
Producing Thru: Tubing	Reservoir Temp. °F: 88 @ 2100		Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2	State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
2174	2174	.900	0.02	62.58	-	2"		

	FLOW DATA					TUBING DATA		CASING DATA		
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	Duration of Flow
SI						687	46			72
1.	2	x 3/16	650		43	635	43			1
2.	2	x 1/4	621		45	621	45			1
3.	2	x 3/8	540		46	540	46			1
4.	2	x 1/2	430		43	430	43			1
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, Mcfd
1	0.6082		663.2	1.017	1.054	1.033	447
2.	1.087		634.2	1.015	1.054	1.031	759
3.	2.378		553.2	1.014	1.054	1.027	1444
4.	4.279		443.2	1.017	1.054	1.022	2078
5							

NO.	P_t	Temp. °R	T_r	Z
1.	1.19	503	1.75	.938
2.	1.14	505	1.75	.941
3.	0.99	506	1.76	.949
4.	0.79	503	1.75	.958
5.				

Gas Liquid Hydrocarbon Ratio: TSTM Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .900 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 558 P.S.I.A. P.S.I.A.
Critical Temperature: 288 R R

P_c 700.2 P_c^2 490.3

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	439.8		442.1	48.2
2	402.2		408.7	81.6
3	306.0		329.9	160.4
4	196.4		246.1	244.2
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.008$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.912$

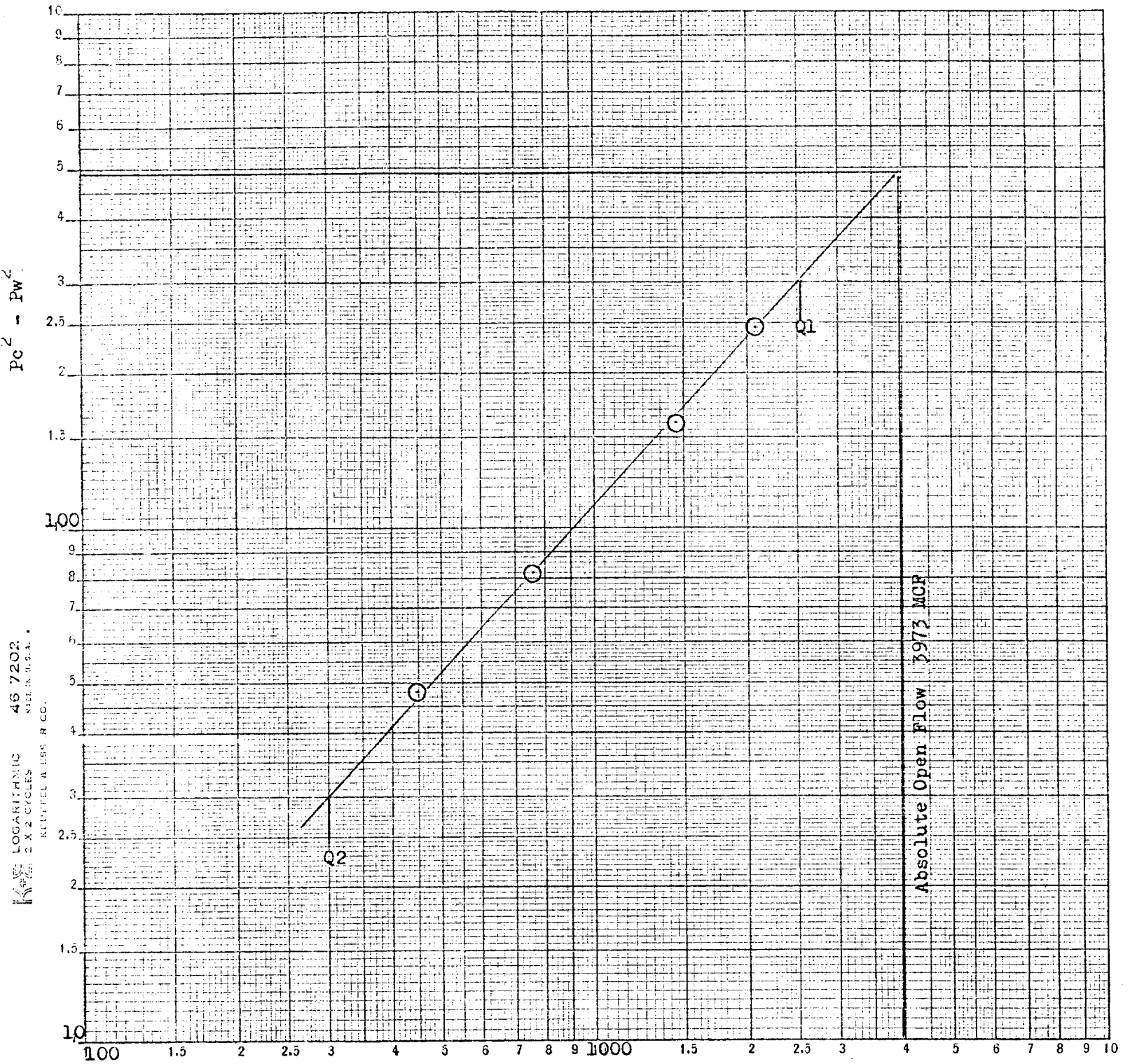
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3973$

Absolute Open Flow: 3973 Mcfd @ 15.025 Angle of Slope θ: 47° 6' Slope, n: .929

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Larry Davis	Donna Holler	

McClellan Oil Corporation
Federal 17 No. 1
Unit A, Sec. 17, T15S, R30E
Chaves County, New Mexico
March 12, 1975



Log Q1 = 3.40654
Log Q2 = 2.47712
n = 0.92942

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

Form C-122D
Adopted 9-1-65

COMPANY McClellan Oil Corporation LEASE Federal 17 WELL NO. 1 DATE 3/12/75

LOCATION: Unit A Section 17 Township 15 S Range 30 E

L 2174 H 2174 L/H 1.000 G .900 % CO_2 0.02 % N_2 62.58 % H_2S --

d 1.995 F_r .018231 GH 1957 P_{cr} 558 (TABLE IX & X) T_{cr} -- (TABLE IX & X)

LINE	1st Rate		2nd Rate		3rd Rate		4th Rate			
	1st Trial	2nd Trail	1st Trial	2nd Trial	1st Trial	2nd Trial	1st Trial	2nd Trial		
Q_m	0.447	0.447	0.759	0.759	1.445	1.445	2.078	2.078		
2 T_w (W.H. °R)	503	503	505	505	506	506	503	503		
3 T_s (B.H. °R)	548	548	548	548	548	548	548	548		
4 $T = (\frac{T_w + T_s}{2})$	525.5	525.5	526.5	526.5	527	527	525.5	525.5		
5 Z (Est.)	.940	.945	.950	.949	.950	.954	.925	.960		
6 TZ	494.0	496.6	500.2	498.7	500.7	502.8	486.1	504.5		
7 GH/TZ	3.962	3.941	3.913	3.924	3.909	3.893	4.026	3.879		
8 e^s (Table XIV)	1.160	1.159	1.158	1.159	1.158	1.157	1.163	1.157		
9 $1-e^{-s}$ (Table XIV)	0.138	0.137	0.136	0.137	0.136	0.136	0.139	0.136		
10 P_t	663.2	663.2	634.2	634.2	553.2	553.2	443.2	443.2		
11 $P_t{}^2/1000$	436.8	439.8	402.2	402.2	306.0	306.0	196.4	196.4		
2 F_r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231		
13 $F_c = F_r$ TZ	9.006	9.054	9.119	9.092	9.128	9.167	8.862	9.197		
14 $F_c Q_m$	4.03	4.05	6.92	6.90	13.20	13.25	18.42	19.11		
15 $L/H (F_c Q_m)^2$	16.24	16.40	47.89	47.61	174.24	175.6	339.3	365.2		
16 $F_w = L/H(F_c Q_m)^2(1-e^{-s})$	2.24	2.25	6.51	6.52	23.70	23.88	47.16	49.67		
17 $P_w{}^2 = P_t{}^2 + F_w$	442.0	442.1	408.7	408.7	329.7	329.9	243.6	246.1		
18 $P_s{}^2 = e^s P_w{}^2$	512.7	512.4	473.3	473.3	381.8	381.7	283.3	284.7		
19 P_s	716.0	715.8	688.0	688.0	617.9	617.8	532.3	533.6		
20 $P = (\frac{P_t + P_s}{2})$	689.6	689.5	661.1	661.1	585.5	585.5	487.7	488.4		
21 $P_r = (P/P_{cr})$	1.24	1.24	1.18	1.18	1.05	1.05	0.87	0.88		
22 $T_r = (T/T_{cr})$	1.82	1.82	1.83	1.83	1.83	1.83	1.82	1.82		
23 Z (Table XI)	.960	.945	.949	.949	.954	.954	.960	.960		

(One copy to be filed in District Office (Work copy acceptable))