

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test 4 pt. ☒ Initial ☐ Annual ☐ Special				Test Date 4-20-82			
Company MGF OIL COMPANY				Connection TO AIR			
Pool Undesignated				Formation Seven Rivers		Unit	
Comp. or Date 4-15-82		Total Depth 4415		Plug Back TD 3180		Elevation	
Farm or Lease Name Sun							
Coq. Size 4 1/2	Wt. 11.6#	Set At 3225	Perforations: From 3007 To 3121			Well No. 1	
Thq. Size 2 3/8	Wt.	Set At 2930	Perforations: From To			Unit Sec. Twp. Rye. N 32 19S 39E	
Type of Well - Single - Brdenhead - G.C. or G.O. Multiple Single				Packer Set At 2930		County Lea	
Producing Thru Tbg.		Reservoir Temp. °F 103 2930		Mean Annual Temp. °F 60°		Baro. Press. - P ₀ 13.2	
State New Mexico							
L 2930	H 2930	Gg .763	% CO ₂ .43	% N ₂ 23.40	% H ₂ S	Prover	Meter Run 2.00"
						Taps Flg.	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover 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							1573				72 + hrs.
1.	2.0 X 1.250			50	6"	52	1526				30 min.
2.	2.0 X 1.250			51	13"	49	1458				1 hr.
3.	2.0 X 1.250			51	34"	46	1314				1 hr.
4.	2.0 X 1.250			53	79"	37	1072				1 hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	8.120	19.47	63.2	1.008	1.145	NIL	182
2.	8.120	28.89	64.2	1.011	1.145	NIL	272
3	8.120	46.72	64.2	1.014	1.145	NIL	440
4.	8.120	72.32	66.2	1.023	1.145	NIL	688
5.							

NO.	$\bar{r}$	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
1	.10	512	1.47	NIL	Specific Gravity Separator Gas .763	XXXXXXX
2.	.10	509	1.46		Specific Gravity Flowing Fluid XXXXX	
3.	.10	506	1.45		Critical Pressure 628 P.S.I.A.	P.S.I.A.
4.	.11	497	1.43		Critical Temperature 348 R	R
5						

NO.	P _c	P _w	P _w ²	P _c ² - P _w ²
1	1586.2	2516.0		
1		1539.2	2369.1	146.9
2		1471.5	2165.3	350.7
3		1328.1	1763.8	752.2
4		1087.8	1183.4	1332.6
5				

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.888$$

$$AOR = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.053$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.531$$

Absolute Open Flow	1,053	Mcfd @ 15.025	Angle of Slope	56.25	Slope, n	.6698
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Remarks: Made no fluid during test.

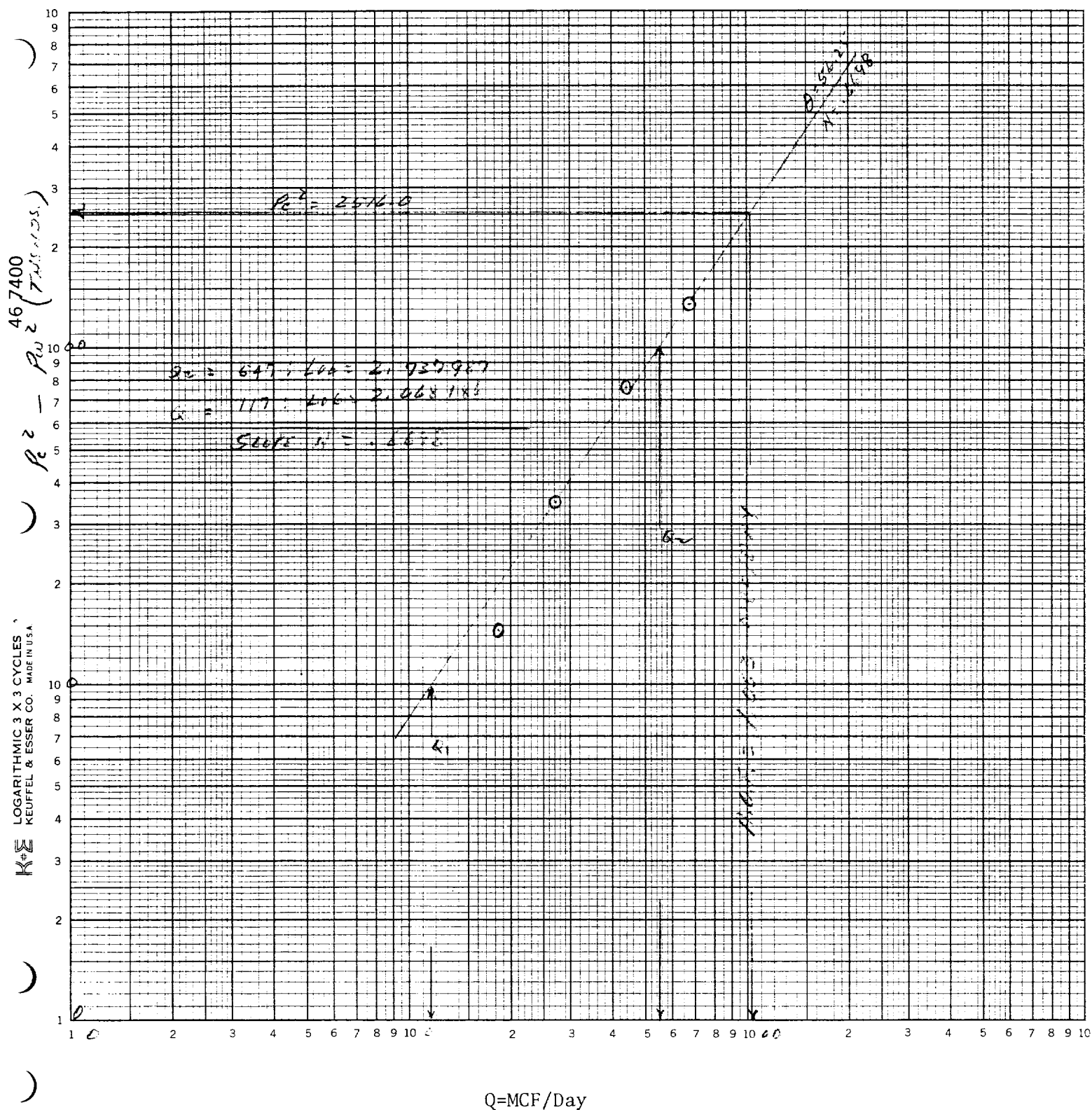
Approved by Division	Conducted by EL PASO EXPLORATION CO. Bill Rea	Calculated by EL PASO EXPLORATION CO. J. B. Murray	Checked by:
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MAY 19 1982

HOBBY SPACE

MGF OIL COMPANY
 Sun No. 1
 N-32-19S-39E, Lea County, New Mexico
 April 20, 1982



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HOBBS OFFICE**

SUGGESTED FIELD DATA SHEET (Not Required To File)

4 pt.	☒ Initial	☐ Annual	☐ Special	Test Date 4-20-82	Lease No. or Serial No.
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Field	Reservoir	Location	Unit
Undesignated	Seven Rivers		

Completion Date	Total Depth	Plug Back TD	Elevation	Farm or Lease Name
4-15-82	4415	3180		

4 1/2	11.6	Set At 3225	Perforations: From 3007	To 3121	Well No. 1
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2 5/8	2930	Sec.	19S	Hge.-Su
Type Completion (Describe)		32	19S	39E

Producing Thru	Reservoir Temp. F	Mean Annual Temp. F	Baro. Press. - P _a	2930	Lea
Thru					State

L	H	G _g	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run	Tap
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TIME	Wellhead Working Pressure						METER OR PROVER	REMARKS
	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure		
Time of								

Time of Reading	Hrs.	Tq. Psig.	Csq. Psig.	Temp. F	Pressure Psig.	Diff.	Temp. F	Orifice	(Include liquid production data:)
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1573	PKR	1.250	SIP
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[illegible]

11:00	1527		50	6"	52	1.250	11/64
11:15	1526		50	6"	52	1.250	11/64

11:30	1469	F1	15H	44	100%
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11:45	1461	48	12"	47	
12:00	1452	48	12"	48	

12:15	1458	51	13"	49	283 MCF/Day
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12:30	1368		50	45"	40	12/64
12:45	1368					

1:00	1328		51	37"	42
1:15	1334				

[illegible]

1:45	1150	53	74"	39	14.5/64
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2:15	1072		53	79"	37	718 MCF/Day
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HOBBS OFFICE**

FILED 4-20-82

COMPANY M G F Oil Co. LEASE SUP WELL NO. #1 DATE 4-20-82

LOCATION: Unit N Section 32 Township 19 Range 39

L 2000 H 2930 L/H 1.000 G .963 % CO₂ .43 % N₂ 23.40 % H₂S —

d 1.995 F_r .018231 GH 2236 P_{cr} 628 T_{cr} 348

1st Rate 2nd Rate 3rd Rate 4th Rate

LINE	1	2	1	2	1	2	1	2
1 Q _m		.182	.272	.272	.440	.440	.688	.688
2 T _w (W.H. °R)	534	534	534	534	534	534	534	534
3 T _s (B.H. °R)	563	563	563	563	563	563	563	563
4 T = $(\frac{T_w + T_s}{2})$	548.5	548.5	548.5	548.5	548.5	548.5	548.5	548.5
5 Z (Est.)	.842	.838	.846	.842	.856	.851	.875	.871
6 TZ	461.8	455.6	464.0	461.8	466.5	466.8	479.9	477.7
7 GH/TZ	4.841	4.865	4.819	4.841	4.762	4.790	4.660	4.680
8 e ^s (Table XIV)	1.199	1.200	1.198	1.198	1.196	1.197	1.191	1.192
9 1 - e ^s (Table XIV)	.166	.167	.165	.166	.164	.164	.160	.161
10 P _t	1539.2	1539.5	1491.2	1491.2	1329.2	1329.2	1085.2	1085.2
11 P _t ^{2/1000}	2369.1	2369.1	2164.4	2164.4	1761.5	1761.5	1177.7	1177.7
12 F _r (Table XVI)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231
13 F _c = F _r TZ	8.470	8.380	8.460	8.620	8.560	8.510	8.450	8.710
14 F _c Q _m	1.53	1.53	2.301	2.290	3.766	3.740	6.020	5.992
15 L/H (F _c Q _m) ²	2.348	2.326	5.295	5.245	14.180	14.020	38.238	35.908
16 F _w = L/H (F _c Q _m) ² (1 - e ^s)	.398	.388	.875	.871	2.220	2.205	5.809	5.780
17 P _w ² = P _t ² + F _w	2369.5	2369.5	2165.3	2165.3	1763.1	1763.8	1182.5	1183.4
18 P _s ² = e ^s P _w ²	2841.3	2843.7	2596.2	2596.0	2108.6	2110.8	1409.0	1410.5
19 P _s	1685.6	1686.3	1611.6	1611.3	1452.1	1452.9	1187.2	1187.6
20 P = $(\frac{P_t + P_s}{2})$	1612.0	1612.8	1800.9	1801.3	1739.7	1739.0	1186.2	1186.4
21 P _r = (P/P _s)	2.57	2.57	2.45	2.45	2.21	2.21	1.81	1.81
22 T _r = (T/T _{cr})	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56
23 Z (Table XI)	.838	.842	.842	.842	.851	.851	.871	.871

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