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appropriate district office
See Rule 401 & Rule 1122

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

126 - 7 1992

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS

Operator MEWBOURNE OIL COMPANY						Lease or Unit Name EMPIRE 20" STATE			
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 11-23-92		Well No. 1	
Completion Date 11-6-92		Total Depth 10,920' K.B.		Plug Back TD 10880' K.B.		Elevation 3626' GL		Unit Ltr. - Sec. - TWP - Rge. F-20- 17S- 29	
Csg. Size 5 1/2"	Wt. 17.0	d	Set At 10920'	Perforations: From: 10620 To: 10640				County Eddy	
Tbg. Size 2 7/8"	Wt. 6.5	d	Set At 10532	Perforations: From: 10750 To: 10767				Pool 6. Empire Morrow	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 10532		Formation Morrow			
Producing Thru tbg		Reservoir Temp. °F 150		Mean Annual Temp. °F 60		Baro. Press - P. 13.2		Connection Transwestern	
L 10532	H 10532	Gg .660	% CO ₂ .46	% N ₂ .61	% H ₂ S	Prover		Meter Run 3.068	Taps flg.

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	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						3185		Pkr.		72 hr.
1.	3 X 1.750		586.8	1.00	65	3122		"		1 hr.
2.	3 X 1.750		586.8	3.00	64	3050		"		1 hr.
3.	3 X 1.750		586.8	7.00	62	2749		"		1 hr.
4.	3 X 1.750		596.8	22.00	60	2630		"		1 hr.
5.	3 X 1.750		596.8	61.00	61	2010		"		1 hr.

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, F _{pv}	Rate of Flow Q, Mcfd
1.	15.61	24.49	600.00	.9952	1.231	1.090	511
2.	15.61	42.43	600.0	.9962	1.231	1.090	885
3.	15.61	64.81	600.0	.9981	1.231	1.090	1355
4.	15.61	115.84	610.0	1.000	1.231	1.089	2424
5.	15.61	192.90	610.0	.9990	1.231	1.089	4033

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf/bbl.
1.	1.11	525	1.38	.841	A.P. L Gravity of Liquid Hydrocarbons	Dry	Deg.
2.	1.11	524	1.38	.841	Specific Gravity Separator Gas	.660	XXXXXXXXXX
3.	1.11	522	1.38	.841	Specific Gravity Flowing Fluid	XXXXXX	
4.	1.09	520	1.37	.843	Critical Pressure	670	P.S.I.A. P.S.I.A.
5.	1.09	521	1.37	.843	Critical Temperature	378	R R

P_c **3198.2** P_c² **10228.5**

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1.		3135.7	9832.6	359.9
2.		3064.7	9392.4	836.1
3.		2766.0	7650.6	2577.9
4.		2655.7	7052.6	3175.9
5.		2066.6	4270.9	5957.2

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.717$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 6,138$

2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.522$

Absolute Open Flow 6,138 Mcfd @ 15.025	Angle of Slope θ 52.2	Slope, n .777
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Remarks: **no fluid produced during test**

Approved By Division	Conducted By: MEWBOURNE OIL	Calculated By: BM	Checked By: BM
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