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See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

RECEIVED Form C-122

Revised 4-1-91

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G.L.D.

151
File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator MEWBORNE OIL COMPANY						Lease or Unit Name CHALK BLUFF 36 STATE					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 5-18-93		Well No. 1			
Completion Date 3-18-93		Total Depth 10060		Plug Back TD 10009		Elevation 3635		Unit Ltr. Sec. TWP - Rge. 36-17S-27E			
Csg. Size 4 1/2	Wt. 11.60	d 4.052	Set At 10012	Perforations: From: 9842 To: 9856				County EDDY			
Tbg. Size 2 3/8 2 7/8	Wt. 6.5 4.7	d 2.441 1.91	Set At 8024 9688	Perforations: From: 9864 To: 9886				Pool NORTH ILLINOIS			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple single						Packer Set At 9688		Formation MORROW			
Producing Thru tbg.		Reservoir Temp. °F		Mean Annual Temp. °F 60°		Baro. Press - P _a 13.2		Connection Transwestern			
L 9864	H 9864	G _g .645	% CO ₂ .41	% N ₂ .41	% H ₂ S	Prover		Meter Run 3.068	Taps Flg.		

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	Orifice X 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						2140		Pkr.		
1.	3.068	X 1.000	425	15.00	105	2125		"		60 Min
2.	3.068	X 1.000	425	57.00	90	2100		"		60 Min
3.	3.068	X 1.750	425	38.00	82	1990		"		60 Min
4.	3.068	X 2.000	440	74.00	75	1800		"		60 Min
5.										

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	4.789	81.07	438.2	.9594	1.245	1.034	480
2.	4.789	158.04	438.2	.9680	1.245	1.038	947
3.	15.61	129.04	438.2	.9795	1.245	1.039	2552
4.	21.32	183.13	453.2	.9859	1.245	1.047	5018
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
					62.479	
1.	.654	565	1.519	.935	A.P. I. Gravity of Liquid Hydrocarbons 53	Deg.
2.	.654	550	1.478	.929	Specific Gravity Separator Gas .645	XXXXXXXXXX
3.	.654	542	1.457	.926	Specific Gravity Flowing Fluid XXXXXX	GMIX .693
4.	.676	535	1.438	.913	Critical Pressure 670 P.S.I.A.	669 P.S.I.A.
5.					Critical Temperature 372 R	388 R

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		2172.6	4720.2	71.5
2.		2153.7	4638.4	153.3
3.		2068.9	4280.3	511.4
4.		1924.4	3703.3	1088.4
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.403$

2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.594$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 18.034$

$P_c = 2189.0$ $P_c^2 = 4791.7$

Absolute Open Flow 18,034 Mcfd @ 15.025		Angle of Slope Θ 49	Slope, n .863
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Remarks: **6 BBLS of 53 Gravity Oil During Test**
Calculated with B.H.P. Instruments.

Approved By Division	Conducted By: PRO WELL TESTERS	Calculated By: KS	Checked By: KS
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