

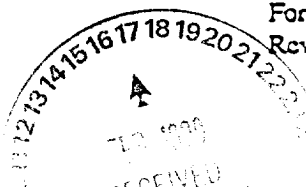
Submit in duplicate to
appropriate district office
See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Dept. ant

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

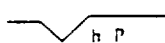
P.O. Box 2088
Santa Fe, New Mexico 87504-2088



MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator MARATHON OIL					Lease or Unit Name J. FREEDMAN 22 ST.				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 2/1/99		Well No. 1		
Completion Date		Total Depth 11060		Plug Back TD 10965		Elevation		Unit Ltr. - Sec. - TWP - Rge. C 22-18-28	
Log. Size 7"	Wt. 26	d 6.276	Set At 11060	Perforations: From: 10777 To: 10824		Country EDDY			
Log. Size 2-7/8	Wt. 6.5	d 2.441	Set At 10650	Perforations: From: To: N Fill		Pool Wells Camp Marshall			
Type Well - Single - Bradenhead - G.G. ☒ Multiple single					Packer Set At 10650		Formation MORROW		
Producing Thru TBG		Reservoir Temp. °F 181°		Mean Annual Temp. °F 60°		Baro. Press - P 13.2		Connection AIR	
L 10704	H 10704	G_g .628	% CO₂ .627	% N₂ .401	% H₂S	Prover -0-	Meas. Run 4.026	Taps FLG	

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							2715		PKR		
1.	4.026	X	2.000	280	3"	80°	2468		"		60min
2.	4.026	X	2.000	280	6"	84°	2400		"		60min
3.	4.026	X	2.000	310	14"	68°	2230		"		60min
4.	4.026	X	2.000	300	32"	60°	1895		"		60min
5.											

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)		Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super. Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd
1.	19.81	29.65	293.2	.9813	1.262	1.044	759
2.	19.81	41.94	293.2	.9777	1.262	1.043	1069
3.	19.81	67.26	323.2	.9924	1.262	1.046	1745
4.	19.81	100.11	313.2	1.000	1.262	1.047	2620
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Moist.
1.	.80	540	1.49	.918	86.014	
2.	.80	544	1.50	.920	54.2 @60°	Des.
3.	.78	528	1.46	.914	Specific Gravity Separator Gas .628	XXXXXXXXXX
4.	.77	520	1.44	.912	Specific Gravity Flowing Fluid XXXXX	
5.					Critical Pressure 674	P.S.I.A. P.S.I.A.
					Critical Temperature 361	R R

P _c 3029.5		P _c 9177.9	
NO.	P _i ²	P _w	P _w ²
1.		2770.7	7676.8
2.		2686.8	7218.9
3.		2469.9	6100.4
4.		2152.6	4633.7
5.			

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.02$

AOF = Q

2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.02$

$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5292.4$

Absolute Open Flow	5292.4	Mcfd @ 15.025	Angle of Slope θ	45°	Slope, n	1.000
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Remarks: * WELL MADE 3 BBLS OF 54.2 API GRAVITY CONDENSATE

* CALCULATED FROM KNOWN BOTTOM HOLE PRESSURES

Approved By Division	Conducted By: PRO WELL TESTING	Calculated By: MB	Checked By: BM
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