

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

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

OIL CONSERVATION DIVISION

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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Mewbourne Oil Company						Lease or Unit Name Carlsbad 22 State Com.											
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 07/21/98			Well No. 1								
Completion Date 07/09/98			Total Depth 11275			Plug Back TD 11195			Elevation 3225' GL			Unit Ltr. - Sec. - TWP - Rge. C 22 21s 26e					
Csg. Size 5 1/2		Wt. 17#		d 4.892		Set At 11275		Perforations: From: 11062 To: 11072				County Eddy					
Tbg. Size 2 7/8		Wt. 6.5#		d 2.441		Set At 11000		Perforations: From: Open To: Ended				Pool Avalon					
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single								Packer Set At 11000				Formation Morrow					
Producing Thru Tubing			Reservoir Temp. °F 190 @ 11067			Mean Annual Temp. °F 60			Baro. Press - P _a 13.2				Connection El Paso				
* h1067		H11067		G _g 0.588		% CO ₂ 0.945		% N ₂ 0.210		% H ₂ S		Prover		Meter Run 4.026		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						3211		PACKER		20 Hrs.
1.	4.026 x	1.875	632	3.50	93	3074				1 Hr.
2.	4.026 x	1.875	647	10.00	88	2893				1 Hr.
3.	4.026 x	1.875	667	19.00	84	2651				1 Hr.
4.	4.026 x	1.875	707	30.00	72	2333				1 Hr.
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.	17.26	47.52	645.2	.9697	1.339	1.043	1,111
2.	17.26	81.25	660.2	.9741	1.339	1.047	1,915
3.	17.26	113.68	680.2	.9777	1.339	1.047	2,689
4.	17.26	146.99	720.2	.9887	1.339	1.051	3,530
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf/bbl.
1.	.96	553	1.58	.920	A.P. I. Gravity of Liquid Hydrocarbons	Dry	Deg.
2.	.98	548	1.56	.913	Specific Gravity Separator Gas	.588	XXXXXXXXXX
3.	1.01	544	1.55	.912	Specific Gravity Flowing Fluid	XXXXXX	
4.	1.07	532	1.52	.905	Critical Pressure	672	P.S.I.A. P.S.I.A.
5.					Critical Temperature	350	R R

** P _c 3267.2 P _c ² 1067.6					1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.232$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.788$	
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 6.312$			
1.	**	3114.9	9702.6	972.0				
2.	**	2936.7	8624.2	2050.4				
3.	**	2708.7	7337.1	3337.5				
4.	**	2427.3	5891.8	4782.8				
5.								

Absolute Open Flow	6,312	Mcf @ 15.025	Angle of Slope θ	54.1	Slope, n	.7239
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Remarks: * BHP Instrument set @ this depth. No fluid produced.
 ** Calculated from known BHP's & corrected back to surface.

Approved By Division	Conducted By: Jarrel Services, Inc.	Calculated By: Bob Murray	Checked By: Bob Murray
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