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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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator MERIDIAN OIL INC.						Lease or Unit Name C. W. SHEPHERD FEDERAL NO. 9					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 12-23-91		Well No. 9			
Completion Date 12-1-91		Total Depth 3100'		Plug Back TD 3041'		Elevation 2979.7' GR		Unit Ltr. - Sec. - TWP - Rge. 5 26 37			
Csg. Size 4 1/2	Wt. d	d	Set At 3050	Perforations: From: 2771 To: 2943				County Lea			
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 3000	Perforations: From: To:				Pool RHODES-YATES-7 RIVERS			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At none		Formation YATES			
Producing Thru CSG		Reservoir Temp. °F 60		Mean Annual Temp. °F 60		Baro. Press - P. 13.2		Connection Vented			
L 2771	H 2771	Gg .664	% CO ₂ 1.80	% N ₂ 1.48	% 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						470		470		24 hrs.
1.	3 X 2.000		50	2.00	46			445		1 hr.
2.	3 X 2.000		60	6.00	48			420		1 Hr.
3.	3 X 2.000		80	12.00	49			390		1 Hr.
4.	3 X 2.000		120	22.00	56			330		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.	21.32	11.24	63.2	1.014	1.227	1.008	301
2.	21.32	20.96	73.2	1.012	1.227	1.010	560
3.	21.32	33.44	93.2	1.011	1.227	1.010	893
4.	21.32	54.13	133.2	1.004	1.227	1.015	1,443
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf/bbl.
1.	.09	506	1.35	.984			
2.	.10	508	1.35	.980			
3.	.13	509	1.36	.978			
4.	.19	516	1.37	.971			
5.							

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		458.2	210.1	23.4
2.		433.7	188.1	45.4
3.		404.6	163.7	69.8
4.		347.5	120.8	112.7
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.072$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.990$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.072$

Absolute Open Flow 2,990 Mcfd @ 15.025	Angle of Slope θ 45.0	Slope, n 1000
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Remarks: * Corrected to 1.80% CO₂ & 1.48% N₂

No Fluid Produced During Test

Approved By Division 	Conducted By: Pro Well Testers	Calculated By: BM	Checked By: BM
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