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See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION
2040 Pacheco St.
Santa Fe, NM 87505

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

33941

Operator RAND PAULSON OIL COMPANY, INC				Lease or Unit Name STATE 33			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 8-21-97		Well No. #1	
Completion Date 8-17-97		Total Depth 12,625		Plug Back TD 12,580'		Elevation 3604.9' GR	
Csg. Size 4 1/2		Wt. 11.6		d 4.000		Set At 12,625	
Perforations: From: 12,542 To: 12,550				Country LEA			
Tbg. Size 2 3/8		Wt. 8,2050		d 4.7		Set At 1.995	
Tbg. Size 2 7/8		Wt. 10,400		d 6.5		Set At 2.441	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 12,450'		Pool Gramma Ridge	
Producing Thru Tubing		Reservoir Temp. °F 17 S		Mean Annual Temp. °F 74°		Baro. Press - P _a 13.8	
Formation Middle Morrow		Connection 9-3-97					
L 12545.	H 12545.	Gg .623	% CO ₂ .35	% N ₂ .50	% H ₂ S .00	Prover .0	Meter Run 4.0
						Taps FLANCE	

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							6215.	60.			72.0
1.	4.03	X	2.500	220.	3.5	80.	5550.	74.	0.	0.	1.0
2.	4.03	X	2.500	210.	8.0	82.	5200.	74.	0.	0.	1.0
3.	4.03	X	2.500	190.	15.5	82.	5025.	74.	0.	0.	1.0
4.	4.03	X	2.500	420.	34.0	74.	4410.	74.	0.	0.	1.0
5.											

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	32.64	28.57	233.2	.9813	1.2670	1.0187	1181.
2.	32.64	42.26	223.2	.9795	1.2670	1.0176	1742.
3.	32.64	56.12	203.2	.9795	1.2670	1.0160	2310.
4.	32.64	121.36	433.2	.9868	1.2670	1.0367	5135.
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.35	540.	1.48	.964	165.4	
2.	.33	542.	1.49	.966	54.9	Deg.
3.	.30	542.	1.49	.969	.623	XXXXXXXXXX
4.	.64	534.	1.47	.930	XXXXX	.640
5.					672.	P.S.I.A. 671. P.S.I.A.
					364.	R 369. R

P _c	6228.2	P _c ²	38790.	
NO.	P _c ²	P _w	P _w ²	P _c ² - P _w ²
1.	30949.	5549.	30795.	7996.
2.	27177.	5200.	27045.	11746.
3.	25383.	5028.	25278.	13512.
4.	19565.	4437.	19684.	19107.
5.				

$$1) \frac{P_c^2}{P_c^2 - P_w^2} = 2.0302 \quad (2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.0302$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 10424.$$

Absolute Open Flow	10424.	Mcf/d @ 15.025	Angle of Slope Θ	45.0	Slope, n	1.000
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Remarks:

Approved By Division

Conducted By:

Calculated By:

Checked By: