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Form C-122 Revised 4-1-91

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

JUL 26 1993

O.C.D.

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator COLLINS & WARE				Lease or Unit Name RAM EWE FEDERAL			
Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special				Test Date 7/6/93		Well No. 1	
Completion Date		Total Depth 11750		Plug Back TD 11659		Elevation	
Csg. Size 7 & 4 1/2"		Wt. d		Set At 11750		Perforations: From: 10998 To: 11171	
Tbg. Size 2 3/8"		Wt. d 4.7 1.995		Set At 10949		Perforations: From: To:	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At 10949		Formation MORROW	
Producing Thru TBG		Reservoir Temp. °F 184 @ 11000		Mean Annual Temp. °F 60°		Baro. Press - P <sub>a</sub> 13.2	
L 10949		H 10949		G <sub>g</sub> .581		% CO <sub>2</sub> .81	
				% N <sub>2</sub> 1.69		% H <sub>2</sub> S	
				Prover		Meter 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 <sub>w</sub>	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							3180		PKR		72 HRS
1.	4	X	1.250	330	16.00	72	2615		"		1 HR
2.	4	X	1.250	330	25.00	68	2185		"		1 HR
3.	4	X	1.250	330	39.00	69	1727		"		1 HR
4.	4	X	1.250	330	42.00	75	1335		"		1 HR
5.											

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$h_w P_m$	Pressure P <sub>m</sub>	Flow Temp. Factor Ft.	Gravity Factor F <sub>g</sub>	Super Compress. Factor, F <sub>pv</sub>	Rate of Flow Q, Mcfd
1.	7.469	74.10	343.2	.9887	1.312	1.027	737
2.	7.469	92.63	343.2	.9924	1.312	1.027	925
3.	7.469	115.69	343.2	.9915	1.312	1.027	1154
4.	7.469	120.06	343.2	.9859	1.312	1.027	1191
5.							

NO.	P <sub>r</sub>	Temp. °R	T <sub>r</sub>	Z	Gas Liquid Hydrocarbon Ratio	DRY GAS	Mcf/bbl.
1.	.51	532	1.53	.948	A.P. I. Gravity of Liquid Hydrocarbons	DRY	Deg.
2.	.51	528	1.52	.948	Specific Gravity Separator Gas	.581	XXXXXXXXXX
3.	.51	529	1.52	.948	Specific Gravity Flowing Fluid	XXXXXX	
4.	.51	535	1.54	.948	Critical Pressure * 671	P.S.I.A.	P.S.I.A.
5.					Critical Temperature * 347	R	R

p<sub>c</sub> 3193.2      p<sub>c</sub><sup>2</sup> 10196.5

NO.	P <sub>t</sub> <sup>2</sup>	P <sub>w</sub>	P <sub>w</sub> <sup>2</sup>	P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>
1.		2631.5	6924.6	3271.9
2.		2204.3	4858.8	5337.8
3.		1752.1	3070.0	7126.5
4.		1364.9	1863.0	8333.6
5.				

1)  $\frac{P_c^2}{P_c^2 - P_w^2} = 1.431$       2)  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.216$

AOF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.403$

Absolute Open Flow 1,403 Mcfd @ 15.025      Angle of Slope θ 61.5      Slope, n .545

Remarks: TRACE OF FLUID DURING TEST  
\* = CORRECTED TO 1.69% N<sub>2</sub>

Approved By Division	Conducted By: JOHN WEST ENG. CO	Calculated By: GW & BM	Checked By: GW & BM
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