

CSF

OIL CONSERVATION DIVISION

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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator OXY USA INC.					Lease or Unit Name VIKING FEDERAL				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 9-MAY-97		Well No. 1		
Completion Date		Total Depth		Plug Back TD		Elevation		Unit Ltr. - Sec. - TWP - Rge. N 23-17-27	
Csg. Size 5.5"		Wt. d		Set At		Perforations: From: 9289 To: 9299		County EDDY	
Tbg. Size 2.375"		Wt. 4.6		Set At		Perforations: From: MAY 10 1997 To: MAY 10 1997		Pool Logan Draw Morrow	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple					Packer Set At 9072		Formation		
Producing Thru		Reservoir Temp. °F 160		Mean Annual Temp. °F 60		Baro. Press - P 13.2		Connection	
L 9294	H 9294	Gg 0.676	% CO ₂ 0.74	% N ₂ 1.36	% H ₂ S 0	Prover		Meter Run 3.0	Taps Flange

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								3133	160	96.3
1.	3.0 X 0.875		1963	54.8	98			2536	160	1
2.	3.0 X 0.875		1725	77.7	93			2299	160	1
3.	3.0 X 0.875		1544	96.3	92			2016	160	1
4.										
5.										

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg.	Super Compress. Factor, F _{spv}	Rate of Flow Q, Mcfd
1.		329.04	1975.7	0.9653	1.2163	1.1444	928
2.		367.50	1738.2	0.9701	1.2163	1.1417	1059
3.		387.21	1556.9	0.9701	1.2163	1.1324	1239
4.							
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	2.95	558	1.48	0.764	0	
2.	2.60	553	1.46	0.767		
3.	2.33	552	1.46	0.780		
4.						
5.						

NO.	P _c	P _w	P _w ²	P _c ² - P _w ²
1.	6500	1948	3793	2007
2.	5345	1769	3130	2671
3.	4116	1559	2429	3371
4.				
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.7207$

2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.3475$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1655$

P_c 2408.4 P_c² 5800

Absolute Open Flow	1655	Mcf/d @ 15.025	Angle of Slope θ	61.2	Slope, n	0.55
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Remarks: **BASED ON BOTTOM HOLE PRESSURE DATA.**

Approved By Division	Conducted By: <i>Terry Davis by KHL</i>	Calculated By: <i>Keith L. Byler - Rockhammer</i>	Checked By:
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