

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 LIVAN FEDERAL			
Test Type ☒ Initial ☐ Annual ☐ Special				Test Date 8-SEP-1998		Well No. 1	
Completion Date		Total Depth		Plug Back TD		Elevation	
Csg. Size		Wt.		d		Set At	
Tbg. Size		Wt.		d		Set At	
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At		Formation	
Producing Thru TUBING		Reservoir Temp. F 153.7		Mean Annual Temp. F 60		Baro. Pressure 14.40	
L 8803		H 8803		Gg .648		% CO ₂ .98	
				% N ₂ .57		% H ₂ S	
Prover				Meter Run 3.068		Taps FLANGE	

FLOW DATA										TUBING DATA		CASING DATA		SIP/FLOW DURATION (HRS.)
NO.	(PROVER) LINE SIZE x ORIFICE SIZE	PRESS. PSIG	DIFF. h _w	TEMP. F	PRESS. PSIG	TEMP. F	PRESS. PSIG	TEMP. F						
SHUT-IN PRESSURE														
1.	3.07 x 1.75	707.50	.36	107	2340	90	3055	154	59					
2.	3.07 x 1.75	707.40	1.35	102	2312	91	3039	153	1					
3.	3.07 x 1.75	711.60	5.24	107	2297	93	3005	153	1					
4.	3.07 x 1.75	726.00	22.12	75	2213	104	2936	153	1					
					2091	84	2736	149	1					

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 _{py}	RATE OF FLOW (Q) MCFD
1.	16.010	16.121	721.9	.9577	1.2423	1.0510	322.7
2.	16.010	31.216	721.8	.9615	1.2423	1.0526	628.3
3.	16.010	61.679	726.0	.9572	1.2423	1.0511	1234.2
4.	16.010	127.975	740.4	.9859	1.2423	1.0659	2674.7

NO.	P _r	TEMP.	T _r	Z
1.	1.073	567	1.536	.9053
2.	1.073	562	1.524	.9026
3.	1.079	567	1.538	.9051
4.	1.100	535	1.450	.8802

Gas-Liquid Hydrocarbon Ratio		Mcf/bbl
API Gravity of Liquid Hydrocarbons		Deg.
Specific Gravity Separator Gas	.648	
Specific Gravity Flowing Fluid		.648
Critical Pressure	672 PSIA	672 PSIA
Critical Temperature	369 R	369 R

P _c =	3069.4	P _c ² =	9421.2
NO.	P _w	P _w ²	P _c ² - P _w ²
1.	3053.9	9326	94.911
2.	3019.7	9118	302.628
3.	2951.2	8709	711.634
4.	2750.7	7566	1854.865

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = \frac{5.079}{\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n} = 3.222$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 8618$$

Absolute Open Flow		8618	Mcf @ 15.025	Angle of Slope -	54.2	Slope, n	.720
Remarks							
Approved By Division:							
Conducted By:		CHUCK AVERY		Calculated By:		BPT System/SCHLUMBERGER	
Checked By:		D.SYKES-BOOKHAMMER					