

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 10/28/87		NOV 19 '87 O.C.D. ARTS & OFFICE	
Company MCKAY OIL CORPORATION				Connection AIR			
Pool WEST PECOS SLOPE ABO				Formation ABO			
Completion Date 10/28/87		Total Depth 4319'		Plug Back TD 4250'		Elevation 4160 GL	
Csg. Size 4-1/2"		Wt. 10.5#		d 4.090		Set At 4300'	
Perforations: From 2953' To 2960'		Well No. 2		Unit J		Sec. Twp. Rge. 32 5S 22E	
Thq. Size 2-3/8"		Wt. 4.7#		d 1.995		Set At 2932'	
Perforations: From -- To --		County Chaves		State New Mexico		Farm or Lease Name INEXCO STATE	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single				Packer Set At --		Producing Thru Tubing	
Reservoir Temp. °F 90		Mean Annual Temp. °F --		Baro. Press. - P _g --		Prover 2.000	
L 2956.5		H 2956.5		G _g 0.589		% CO ₂ 0.043	
% N ₂ 7.196		% H ₂ S 0.00		Meter Run ----		Taps ----	
FLOW DATA				TUBING DATA		CASING DATA	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.
1.	2.000	.250	163	--	69	1100	975
2.	2.000	.375	131	--	65	979	683
3.	2.000	.375	105	--	72	687	385
4.	2.000	.500	39	--	82	387	155
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, Mc/d
1.	1.087	--	176.2	.9915	1.303	1.011	250
2.	2.378	--	144.2	.9952	1.303	1.010	445
3.	2.378	--	118.2	.9887	1.303	1.007	365
4.	4.279	--	52.2	.9795	1.303	1.004	286
5.							
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio -- Mcf/bbl.		
1.	0.27	529	1.60	.978	A.P.I. Gravity of Liquid Hydrocarbons -- Deg.		
2.	0.22	525	1.59	.981	Specific Gravity Separator Gas 0.589 XXXXXXXXXX		
3.	0.18	532	1.61	.986	Specific Gravity Flowing Fluid XXXXX		
4.	0.08	542	1.64	.993	Critical Pressure 660 P.S.I.A. P.S.I.A.		
5.					Critical Temperature 330 R R		
P _c 1117.2 P _c 1248.1							
NO.	P _i ²	P _w	P _r ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$		
1.		992.2	984.5	263.6	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$		
2.		700.2	490.3	757.8			
3.		400.2	160.2	1087.9			
4.		168.2	28.3	1219.8			
5.							
Absolute Open Flow *250 Mc/d @ 15.025					Angle of Slope θ		Slope, n
Remarks: *Estimated AOF 250 MCFPD. Insufficient permeability to maintain starting rates of last 2 periods. No evidence of water. This well is too weak to test by normal method. Copy of flow chart attached.							
Approved By Division		Conducted By:		Calculated By:		Checked By:	
		D. Kelton		C. Sanders		P. Stewart	