

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

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File

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 7-23-87	
Company MCKAY OIL CORPORATION		Connection Air	
Pool West Pecos Slope Abo		Formation Abo	
Completion Date 7-23-87		Total Depth 4255'	Plug Back TD 4055'
		Elevation 4249 GL	Farm or Lease Name Inexco Federal
Csg. Size 4-1/2"	Wt. 10.5#	d 4.090	Set At 4242'
Perforations: From 3484' To 4018'		Well No. #4	
Thg. Size 2-3/8"	Wt. 4.7#	d 1.995	Set At 3447
Perforations: From -- To --		Unit Sec. Twp. Rge. E 30 5S 22E	
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 60
		Baro. Press. - P _g 13.2	State New Mexico
L 3751	H 3751	G _g 0.591	% CO ₂ 0.00
		% N ₂ 4.556	% H ₂ S 0.00
		Prover 2.00	Meter Run --
		Taps --	

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							1330		1330		SI 72 HRS.
1.	2.000		.500	91	--	58	1260	58	1264	58	60 MIN.
2.	2.000		.625	88	--	52	1180	52	1136	52	60 MIN.
3.	2.000		.750	108	--	52	885	52	986	52	60 MIN.
4.	2.000		.875	80	--	58	610	58	775	58	60 MIN.
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	4.279	--	104.2	1.0019	1.301	1.008	586
2	6.473	--	101.2	1.0078	1.301	1.007	865
3	9.453	--	121.2	1.0078	1.301	1.009	1516
4	13.000	--	93.2	1.0019	1.301	1.009	1594
5							

NO.	R	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	0.16	518	1.52	.984	0	0	0.591	XXXXXX	663	340
2	0.15	512	1.51	.985				XXXXXX		
3	0.18	512	1.51	.982						
4	0.14	518	1.52	.982						
5										

NO.	P ₁	P _w	P ₂	P ₂ ² - P _w ²
1	1277.2	1631.2	173.0	
2	1199.2	1438.1	366.1	
3	999.2	998.4	805.8	
4	788.2	621.3	1182.9	
5				

(1) $\frac{P_c^2}{P_2^2 - P_w^2} = 10.429$

(2) $\left[\frac{P_c^2}{P_2^2 - P_w^2} \right]^n = 3.960$

Post ID-2
8-28-87
Comp & BK

AOF = Q $\left[\frac{P_c^2}{P_2^2 - P_w^2} \right]^n = 2,321$

Absolute Open Flow	2,321	Mcfd @ 15.025	Angle of Slope @	59.57	Slope, n	0.587
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Remarks: Well started making 1/4 bbl. water per hour near end of third period; 1.0 BWPH on fourth flow period.

Approved By Division	Conducted By: D. Kelton	Calculated By: C. Sanders	Checked By: P. Stewart
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