

clsf
File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 8-7-87	
Company MCKAY OIL CORPORATION		Correction Air	
Pool W. Pecos Slope		Formation Abo	
Completion Date 8-7-87		Total Depth 4317'	Plug Back TD 4220'
		Elevation 4113 GL	Farm or Lease Name Inexco State
Ceq. Size 4-1/2"	Wt. 11.6#	d 4.000	Set At 4308'
Perforations: From 2935' To 3053'		Well No. #5	
Thq. Size 2-3/8"	Wt. 4.7#	d 1.995	Set At 2894'
Perforations: From -- To --		Unit Sec. Twp. Rye. K 33 5S 22E	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single		Packer Set At -----	
Producing Thru Tubing		Reservoir Temp. °F 90 @ 2994'	Mean Annual Temp. °F 60
		Baro. Press. - P _a 13.2	State New Mexico
L 2994	H 2994	G _o 0.607	% CO ₂ 0.00
		% N ₂ 5.409	% 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							576		576		SI 72 HRS.
1.	2.000		.125	196	--	100	564	100	565	100	60 MIN.
2.	2.000		.250	108	--	95	540	95	541	95	60 MIN.
3.	2.000		.250	172	--	96	505	96	507	96	60 MIN.
4.	2.000		.375	105	--	91	461	91	463	91	60 MIN.
5.	2.000		.375	160	--	76	370	76	374	76	60 MIN.

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	.2648	--	209.2	.9636	1.284	1.0122	69
2	1.0870	--	121.2	.9680	1.284	1.0070	165
3	1.0870	--	185.2	.9671	1.284	1.0107	253
4	2.3780	--	118.2	.9437	1.284	1.0071	343
5	2.3780	--	173.2	.9701	1.284	1.0117	519

NO.	R _i	Temp. °R	T _i	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	0.32	560	1.63	.976	0	0	0.607	XXXXXX	662	344
2	0.18	555	1.61	.986						
3	0.28	556	1.62	.979						
4	0.18	551	1.60	.986						
5	0.26	536	1.56	.977						

NO.	P _i ²	P _w	P _w ²	P _e ² - P _w ²
1	589.2	578.2	334.3	13.0
2	347.2	554.2	307.1	40.1
3		520.2	270.6	76.6
4		476.2	226.8	120.4
5		387.2	149.9	197.3

$$(1) \frac{P_e^2}{P_e^2 - P_w^2} = 1.760$$

$$AOF = O \left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 790$$

$$(2) \left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 1.523$$

Absolute Open Flow	790	Mcfd @ 15.025	Angle of Slope @	53.36	Slope, n	0.744
--------------------	-----	---------------	------------------	-------	----------	-------

Remarks: No water Produced during test.

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