NEW MEXICO OIL CONSERVATION COMMSSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

DEC 2 1970

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 12-5-69	
Company: Elk Oil Company			Connection		
Pool: Wildcat			Formation: Morrow		Unit
Completion Date: 12-5-69	Total Depth: 13,038		Plug Back TD	Elevation: 4125 GL	Farm or Lease Name: Diamond State
Csg. Size: 4 1/2 / Wt.: 11.6 13.5 / d: 4.000 3.920 / Set At: 10,000 3,037			Perforations: From 12,756 To 12,766		Well No.: 1
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: 1.995 / Set At: 12,689			Perforations: From 12,756 To 12,766		Unit: J / Sec.: 16 / Twp.: 16 / Rge.: 34
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At		County: Lea
Producing Thru: Tbg.	Reservoir Temp. °F: @	Mean Annual Temp. °F	Baro. Press. – P_a: 13.2		State: New Mexico
L	H	Gg: .685	% CO_2: .32	% N_2: 2.14	% H_2S: .04 Grains / Prover	Meter Run: 4"	Taps: Flg.

FLOW DATA

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F
SI						
1.	4	x	1.500	426	6.0	85
2.	4	x	1.500	546	6.0	94
3.	4	x	1.500	538	23.0	97
4.	4	x	1.500	299	87.0	80
5.						

TUBING DATA / CASING DATA

NO.	Tubing Press. p.s.i.g.	Tubing Temp. °F	Casing Press. p.s.i.g.	Casing Temp. °F	Duration of Flow
SI	3900	60	3725		
1.	2180	65	3010		1 hr.
2.	1722	62	2839		1 hr.
3.	1105	64	2602		1 hr.
4.	1052	65	2509		1 hr.
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, Fpv	Rate of Flow Q, Mcfd
1	10.84	51.34	439.2	.9768	1.208	1.043	685
2.	10.84	57.93	559.2	.9683	1.208	1.052	773
3.	10.84	112.60	551.2	.9662	1.208	1.049	1,495
4.	10.84	162.41	303.2	.9813	1.208	1.030	2,150
5.							

NO.	P_r	Temp. °R	T_r	Z
1.	.66	545	1.42	.920
2.	.84	554	1.44	.904
3.	.82	557	1.45	.908
4.	.45	549	1.40	.943
5.				

Gas Liquid Hydrocarbon Ratio: 105.3 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 49.6 @ 60 Deg.
Specific Gravity Separator Gas: .685 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: P.S.I.A. P.S.I.A.
Critical Temperature: R R

P_c 3913.2 P_c^2 15313.1

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	4810.1	3023.2	9139.7	6173.4
2	3010.9	2852.2	8135.0	7178.1
3	1250.4	2635.2	6839.3	8473.8
4	1134.7	2582.2	6661.5	8651.6
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.7706$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.7706$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3,678$

Absolute Open Flow: 3,678 Mcfd @ 15.025 Angle of Slope θ: 45 Slope, n: 1.000

Remarks: 2 bbl. condensate
2 bbl. water

Approved by Commission: Conducted By: EMG Jack T. Littlefield Calculated By: EMG Jack T. Littlefield Checked By: