SF File 122

N MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 9-1-65

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED
DEC 3 - 1979
O. C. C.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 11-26-79	
Company: Southland Royalty Company		Connection: El Paso Nat. Gas			
Pool: South Millman Morrow		Formation: Morrow			Unit
Completion Date: 10 19 78	Total Depth: 11340		Plug Back TD: 11110	Elevation: 3493	Farm or Lease Name: State 19 Comm.
Csg. Size: 4.500 / Wt.: 11.6 / d: 4.000 / Set At: 11150			Perforations: From 10748 To 11062		Well No.: 2
Tbg. Size: 2.375 / Wt.: 4.7 / d: 1.995 / Set At: 10650			Perforations: From 0 To 0		Unit: N / Sec.: 19 / Twp.: 19 / Rge.: 28
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 10650		County: Eddy
Producing Thru: Tbg	Reservoir Temp. °F: 168 @ 10905	Mean Annual Temp. °F: 60.0	Baro. Press. – P_a: 13.2		State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
10905	10905	0.636	0.74	0.57	0	0	4.0	Flange

	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.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					3030	60			24.0
1.	4.03 x 1.250	518	7.6	84	2645	66	0	0	1.0
2.	4.03 x 1.250	525	16.0	80	2335	66	0	0	1.0
3.	4.02 x 1.250	533	31.0	76	1870	67	0	0	1.0
4.	4.02 x 1.250	540	44.0	80	1220	67	0	0	1.0
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	7.47	63.54	531.2	0.9777	1.2539	1.0437	607
2	7.47	92.80	538.2	0.9813	1.2539	1.0457	892
3	7.47	130.12	546.2	0.9850	1.2539	1.0477	1258
4	7.47	156.02	553.2	0.9813	1.2539	1.0469	1501
5							

NO.	P_t	Temp. °R	T_r	Z
1	0.79	544	1.48	0.918
2	0.80	540	1.47	0.915
3	0.81	536	1.46	0.911
4	0.82	540	1.47	0.912
5				

Gas Liquid Hydrocarbon Ratio 0 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 54.5 Deg.

Specific Gravity Separator Gas	0.636	xxxxxxxxx
Specific Gravity Flowing Fluid	xxxxx	0.636
Critical Pressure	673 P.S.I.A.	673 P.S.I.A.
Critical Temperature	367 R	367 R

P_c 3043.2 P_c^2 9261

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	7066	2654	7043	2218
2	5514	2347	5509	3752
3	3546	1889	3567	5694
4	1521	1255	1574	7687
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.2048$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.1445$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1718$

Absolute Open Flow 1718 Mcfd @ 15.025 Angle of Slope θ 54.1 Slope, n 0.725

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	B.J. TESTING	D. CRAIG	D. CRAIG