Well file

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
OCT 8 1971
O. C. C.
ARTESIA, OFFICE

Type Test: [x] Initial [ ] Annual [ ] Special				Test Date: 10-1-71	
Company: Cities Service Oil Company			Connection: None		Unit
Pool: South Carlsbad			Formation: Morrow		
Completion Date: 10-5-71	Total Depth: 11750		Plug Back TD: 11700	Elevation: 3161 GL	Farm or Lease Name: Merland "A" Com
Csg. Size: 5½" liner / Wt.: 17 & 20 / d: 4.778 / Set At: 11749			Perforations: From 11318 To 11653		Well No.: 1
Tbg. Size: 2 3/8" / Wt.: 4.6 / d: 1.995 / Set At: 11240			Perforations: From To		Unit: O / Sec.: 19 / Twp.: 22S / Rge.: 27E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: single			Packer Set At: 11240		County: Eddy
Producing Thru: tubing	Reservoir Temp. °F: 190 @ 11700	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2		State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11240	11240	0.582	1.02	0.25	-	orifice	4"	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	BHP p.s.i.g.	Temp. °F	Duration of Flow
SI	24 hr. SI				3186		3987		
1.	4" x 1.250	190	14	84	2892	76	3609		1 hr.
2.	4" x 1.250	300	47	76	2376	76	2993		1 hr.
3.	4" x 1.250	660	32	80	1730	74	2339		1 hr.
4.	4" x 1.250	690	43	78	957	77	1660		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	9.643	51.6	203.2	.9777	1.311	1.014	647
2.	9.643	118.8	313.2	.9850	1.311	1.024	1515
3.	9.643	145.3	673.2	.9813	1.311	1.048	1889
4.	9.643	172.3	703.2	.9831	1.311	1.051	2251
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	.301	544	1.55	.973
2.	.463	536	1.53	.953
3.	.996	540	1.54	.910
4.	1.040	538	1.53	.905
5.				

Gas Liquid Hydrocarbon Ratio - Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons - Deg.
Specific Gravity Separator Gas .582 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 676.9 P.S.I.A. ____ P.S.I.A.
Critical Temperature 351.3 R ____ R

P_c ____ P_c^2 ____

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		3622.2	13120333	2775836
2		3006.2	9037238	6858931
3		2352.2	5532845	10363324
4		1673.2	2799598	13096571
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.53$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.41$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 2.6635 MMCF

Point 3

Absolute Open Flow 2.6635 MMCF Mcfd @ 15.025 | Angle of Slope θ ____ | Slope, n .804

Remarks: 72 hrs. S.I. 4224 psi from BHP bomb
Made 6 bbls. water during test.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
		S.C. Nichols	Brad Bennett