

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPLE AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

SK
yfk
C-122
Revised 9-65
2732
RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 6-29-80		SEP 18 1980	
Company GENERAL AMERICAN OIL CO. OF TX.				To AIR		O. C. D.	
Well <i>South Empire Morrow</i>				MORROW		Unit ARTESIA, OFFICE	
Completion Date 6-26-80		Total Depth 10,680		Flow Back To 10,680		Elevation 3690.2	
Csg. Size 5 1/2		Wt. 17.00		d 4.892		Set At 10,680	
Tbg. Size 2 7/8		Wt. 6.40		d 2.875		Set At 10,420	
Perforations: From 10,604 To 10,630				Well No. 10			
Perforations: From OPEN To END				Unit Sec. Twp. Rge. G 18 17S 29E			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At 10,420		County EDDY	
Producing Thru TUBING		Reservoir Temp. °F 180°@ 10,616		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2	
L 10, 16		H 10,616		G _g .696		% CO ₂ .370	
				% N ₂ .816		% H ₂ S	
				Prover		Meter Run 4"	
						Taps FLANGE	

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							3150				
1.	4 X 1.00			490	19	105	499				1 HR.
2.	4 X 1.00			480	16	106	610				1 HR.
3.	4 X 1.00			480	9	108	847				1 HR.
4.	4 X 1.00			550	1	110	1227				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 F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	4.753	97.78	503.2	.9594	1.199	1.044	558
2	4.753	88.83	493.2	.9585	1.199	1.043	506
3	4.753	66.62	493.2	.9568	1.199	1.043	379
4	4.753	23.73	563.2	.9555	1.199	1.048	135
5							

NO.	P _t	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	.75	565	1.46	.918	822	46.3 @ 60°	.696	X X X X X X X X	669	388
2	.74	566	1.46	.919				X X X X X		
3	.74	568	1.46	.919						
4	.84	570	1.47	.910						
5										

* P _c 4105.7 P _c ² 16856.8			
NO.	P _t ²	P _w	P _w ²
1	* 981.2	962.8	15894.0
2	* 1108.2	1228.1	15628.7
3	* 1432.0	2050.6	14806.2
4	* 2086.2	4352.2	12504.6
5			

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.061$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.061$$

$$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = .592$$

Absolute Open Flow	592	Mcfd @ 15.025	Angle of Slope	45°	Slope, n	1.00
Remarks: 80 BBLS FLUID DURING TEST						
*CALCULATED FROM KNOWN BOTTOM HOLE PRESSURES						
Approved By Commission:	Conducted By:	Calculated By:	Checked By:			
	W.S.	R.R.	J.W.W.			