

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

RECEIVED

Type Test: ☒ Initial ☐ Annual ☐ Special		Test Date: 11-15-76		NOV 29 1976	
Company: CITIES SERVICE OIL COMPANY		Connection: TO AIR		Unit: D.C.C.	
Pool: BURTON FLAT		Formation: MORROW		Unit: ARTESIA, OFFICE	
Completion Date: 11-10-76		Total Depth: 11,328		Plug Back TD: 11,330	
Csg. Size: 5 3/8"		Wt.: 17#		Elevation: 3316 GR.	
Set At: 11,328		Perforations: From 11,294 To 11,303		Farm or Lease Name: STATE "CW"	
Tbg. Size: 2 7/8"		Wt.: 6.5#		Set At: 11,275	
Perforations: From OPEN TO ENDED		Well No.: 1		Unit: F Soc: 19 Twp: 20S Rys: 28E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple: SINGLE				Packer Set At: 11,275'	
Producing Thru: TUBING				State: NEW MEXICO	
Reservoir Temp. °F: 188 @ 11,325'		Mean Annual Temp. °F: 60		Baro. Press. - P _a : 13.2	
L: 11299		H: 11299		Gg: 0.5968	
% CO ₂ : 0.49		% N ₂ : 0.25		% H ₂ S: -0-	
Prover: 4"		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. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							3568.0		PACKER	CHOKE	70 HRS
1.	4"	X	2.00"	550.0	8.0	78	3294.0	60		11/64	60 MIN
2.	4"	X	2.00"	550.0	15.5	78	3110.0	64		13/64	60 MIN
3.	4"	X	2.00"	550.0	28.0	82	2825.0	64		15/64	60 MIN
4.	4"	X	2.00"	550.0	48.0	81	2395.0	64		19/64	60 MIN
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	19.81	67.12	563.2	.9831	1.294	1.042	1763
2	19.81	93.43	563.2	.9831	1.294	1.042	2453
3	19.81	125.58	563.2	.9795	1.294	1.041	3282
4	19.81	164.42	563.2	.9804	1.294	1.041	4302
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	TSTM	Mcf/bbl.
1	0.84	538	1.52	.921	A.P.I. Gravity of Liquid Hydrocarbons		Deg.
2	0.84	538	1.52	.921	Specific Gravity Separator Gas	0.5968	XXXXXXX
3	0.84	542	1.53	.923	Specific Gravity Flowing Fluid	XXXXXX	
4	0.84	541	1.53	.923	Critical Pressure	672	P.S.I.A.
5					Critical Temperature	354	R

NO.	P _f	P _s	P _s ²	P _f ² - P _s ²
1	4459.2	19884		
1	10938	4165.2	17349	2535
2	9754	3958.2	15667	4217
3	8055	3624.2	13135	6749
4	5799	3101.2	9617	10267
5				

(1) $\frac{P_f^2}{P_f^2 - P_s^2} = 1.937$

AOF = Q $\left[\frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 6578$

(2) $\left[\frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 1.529$

Absolute Open Flow: 6578 Mcfd @ 15.025	Angle of Slope θ: 57.3°	Slope, n: 0.642
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Remarks: BOTTOM HOLE PRESSURES MEASURED WITH AMERADA GAUGE @ 11,325 FEET.
GOOD TEST-GOOD POINT ALIGNMENT

Approved By Commission:	Conducted By: D.A.T.	Calculated By: R.L.W.	Checked By: J.W.W.
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