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JUN - 9 1978

O. C. C.
ARTESIA, OFFICE

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

Form C-122
Revised 9-1-65

Type Test: [X] Initial [ ] Annual [ ] Special						Test Date: 5-30-78			
Company: CITIES SERVICE COMPANY				Connection: TRANSWESTERN, EL PASO, LLANO GAS					
Pool: SOUTH CARLSBAD Strawn				STRAWN				Unit	
Completion Date: 5-27-78		Total Depth: 11,820'		Plug Back TD: 10,355'		Elevation:		Farm or Lease Name: SPENCER "A"	
Csg. Size: 7"	Wt.: 20#	d: 6.456"	Set At: 10,609'	Perforations: From 10,323' To 10,331'				Well No.: 1	
Tbg. Size: 2 3/8"	Wt.: 4.7#	d: 1.995"	Set At: 10,261'	Perforations: From OPEN No ENDED				Unit: O Sec.: 30 Twp.: 22S Rge.: 27E	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE				Packer Set At: 10,261'				County: EDDY	
Producing Thru: TUBING		Reservoir Temp. °F: 177 @ 10,327'		Mean Annual Temp. °F: 60		Baro. Press. – P_a: 13.2		State: NEW MEXICO	
L: 10,327	H: 10,327	Gg: 0.663	% CO_2: .46	% N_2: 1.71	% H_2S: -0-	Prover:	Meter Run: 4"	Taps: FLANGE	

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA Press. p.s.i.g.	TUBING DATA Temp. °F	CASING DATA Press. p.s.i.g.	CASING DATA Temp. °F	Duration of Flow
SI							2415				72 HR.
1.	4"	x	.875"	468	15	87	2290	73			1 HR.
2.	4"	x	.875"	470	30	88	2185	73			1 HR.
3.	4"	x	.875"	470	52	88	2005	71			1 HR.
4.	4"	x	.875"	470	82	85	1842	71			1 HR.
5.											1 HR.

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	2.661	84.96	481.2	.9750	1.228	1.043	282
2	2.661	120.40	483.2	.9741	1.228	1.043	400
3	2.661	158.51	483.2	.9741	1.228	1.043	526
4	2.661	199.05	483.2	.9768	1.228	1.044	663
5							

NO.	P_t	Temp. °R	T_r	Z
1	.72	547	1.45	.919
2	.72	548	1.45	.919
3	.72	548	1.45	.919
4	.72	545	1.44	.917
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 64 @ 60 Deg.
Specific Gravity Separator Gas .663 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 670 P.S.I.A. _____ P.S.I.A.
Critical Temperature 378 R _____ R

P_f 3313.2 P_f^2 10,977.3

NO	P_t^2	P_w	P_w^2	$P_f^2 - P_w^2$
1		3179.2	10107.3	870.0
2		3036.2	9218.5	1758.8
3		2876.2	8272.5	2704.8
4		2597.2	6745.4	4231.9
5				

(1) $\frac{P_f^2}{P_f^2 - P_w^2} = 2.594$ (2) $\left[\frac{P_f^2}{P_f^2 - P_w^2}\right]^n = 1.678$

$\left[\frac{P_f^2}{P_f^2 - P_w^2}\right]^n = 1.112$

Absolute Open Flow 1,112 Mcfd @ 15.025 Angle of Slope θ 61.5 Slope, n .543

Remarks: BOTTOM HOLE PRESSURE MEASURED WITH AMERADA GAUGE AT 10,327 FEET.
NO WAY TO MEASURE FLUID DURING TEST, SEPARATOR MAL-FUNCTION.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	R.E.R.	J.A.B.	J.W.W.