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File C-122

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JUL 10 1979
U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

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

Form C-122
Revised 9-1-65

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JUL 12 1979
O. C. C.
ARTESIA, OFFICE

Type Test: ☒ Initial ☐ Annual ☐ Special				Test Date: 6-29-79	
Company: CITIES SERVICE COMPANY			Connection: E P N G Co.		Unit:
Pool: Bay Lion Petro. Corp.			Formation: CISCO		
Completion Date:	Total Depth: 8,350'		Plug Back TD: 7,290'	Elevation: 4399 GR.	Farm or Lease Name: LITTLE BOX CANYON
Csg. Size: 5½" / Wt.: 17# / d: 4.892" / Set At: 8,314'			Perforations: From 5,864' To 6,089'		Well No.: 1
Tbg. Size: 2 7/8" / Wt.: 6.5# / d: 2.441" / Set At: 5,739'			Perforations: From OPEN ENDED		Unit: J / Sec.: 7 / Twp.: 21S / Rge.: 22E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE			Packer Set At: 5,739'		County: EDDY
Producing Thru: TUBING	Reservoir Temp. °F: 134 @ 5,976'	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
5976	5976	0.666	0.22	1.71			4"	FLANGE

NO.	FLOW DATA: Prover Line Size x Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					1377	70	PKR.	CHOKE	72 HR
1.	4" x 1.250"	600	2.56	88	1351	72		8/64	1 HR
2.	4" x 1.250"	610	9.00	88	1295	73		12/64	1 HR
3.	4" x 1.250"	615	21.44	81	1208	73		16/64	1 HR
4.	4" x 1.250"	630	56.25	78	1047	73		18/64	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	7.469	39.62	613.2	.9741	1.225	1.056	373
2.	7.469	74.89	623.2	.9741	1.225	1.056	705
3.	7.469	116.05	628.2	.9804	1.225	1.060	1103
4.	7.469	190.21	643.2	.9831	1.225	1.062	1817
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	.92	548	1.45	.897
2.	.93	548	1.45	.897
3.	.94	541	1.43	.890
4.	.96	538	1.42	.886
5.				

Gas Liquid Hydrocarbon Ratio: DRY GAS Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: ____ Deg.
Specific Gravity Separator Gas: 0.666 | XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX | ____
Critical Pressure: 670 P.S.I.A. | ____ P.S.I.A.
Critical Temperature: 378 R | ____ R

* P_c 1409.7 P_c^2 1987.3

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	*1384.0	1915.5		71.8
2	*1334.4	1780.6		206.7
3	*1258.4	1583.6		403.7
4	*1087.4	1182.4		804.9
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.469$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.872$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.402$

Absolute Open Flow: 3,402 Mcfd @ 15.025 | Angle of Slope θ: 55.25 | Slope, n: .694

Remarks: *CALCULATED FROM KNOWN BOTTOM HOLE PRESSURES. BOTTOM HOLE PRESSURES WERE MEASURED WITH AMERADA GAUGE @ 5,976 FEET.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	JOHN WEST ENGR. CO.	R.R.	J.W.W.