NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Jalmat** Formation **Seven-Rivers** County **Lea**

Initial ____ Annual **X** Special ____ Date of Test **April 15/22/60**

Company **Cities Service Oil Co.** Lease **Closson** Well No. **1**

Unit **J** Sec. **6** Twp. **22** Rge. **36** Purchaser **United Carbon Co.**

Casing **5½"** Wt. **20#** I.D. **4.778** Set at **3737** Perf. **3462** To **3640**

Tubing **2"** Wt. **4.7#** I.D. **1.995** Set at **3442** Perf. ____ To ____

Gas Pay: From **3462** To **3640** L **3442** xG **660** -GL **2272** Bar.Press. **13.2**

Producing Thru: Casing ____ Tubing **X** Type Well **Single**

Date of Completion: **April 5, 1957** Packer **none** Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. **106 Est.**

OBSERVED DATA

Tested Through ~~XXXXXXXX~~ (~~XXXXX~~ ~~(Choke)~~ ~~(Meter)~~) Type Taps /

No.	Flow Data (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						604		603		72 hrs.
1.	6"	2.250	48	22	75	579		589		24 hrs.
2.	6"	2.250	47	42	80	556		580		24 hrs.
3.	6"	2.250	53	82	78	504		558		24 hrs.
4.	6"	3.000	52	78	81	191		441		24 hrs.
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	31.47	36.69	61.2	.9859	.9535	1.004	1090
2.	31.47	50.29	60.2	.9813	.9535	1.004	1487
3.	31.47	73.67	66.2	.9831	.9535	1.005	2184
4.	57.46	71.32	65.2	.9804	.9535	1.005	3850
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **dry** cf/bbl.
Gravity of Liquid Hydrocarbons **N/A** deg.
F_c **N/A** $(1-e^{-s})$ **N/A**

Specific Gravity Separator Gas **.660**
Specific Gravity Flowing Fluid **N/A**
P_c **617.2** P_c^2 **380.9**

No.	P_w / P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	602.2					362.6	18.3		
2.	593.2					351.9	29.0		
3.	571.2					326.3	54.6		
4.	454.2					206.3	174.6		
5.									

Absolute Potential: 1460 MCFPD; n **.622**

COMPANY **Cities Service Oil Co.**
ADDRESS **Box 97, Hobbs, New Mexico**
AGENT and TITLE **Richard O. Berg Production Engineer**
WITNESSED **W. H. Wallis**
COMPANY **United Carbon Co.**

REMARKS

Well produced no fluid during test. Corrected and resubmitted.

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and two log log pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w). MCF/da. @ 15.025 psia and 60° F.

P_c = 72 hour wellhead shut-in (casing or tubing) pressure whichever is greater. psia

P_w = Static wellhead working pressure as determined at the end of flow period. (Casing if flowing thru tubing, tubing if flowing thru casing.) psia

P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing) psia

P_f = Meter pressure, psia

h_w = Differential meter pressure, inches water

F_g = Gravity correction factor

F_t = Flowing temperature correction factor.

F_{pv} = Supercompressability factor

n = Slope of back pressure curve

Note: If P_c cannot be taken because of manner of completion or condition of well, then P_c can be calculated by adding the pressure drop due to friction within the tubing to P_t.