NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Basin Dakota** Formation **Dakota** County **Rio Arriba**

Initial **Yes** Annual **no** Special **no** Date of Test **January 23, 1962**

Company **Caulkins Oil Company** Lease **Reuter** Well No. **D-321**

Unit **M** Sec. **15** Twp. **26 N** Rge. **6 W** Purchaser **Southern Union Gas Company**

Casing **5½" OD** Wt. **17 & 15.5** I.D. **4.950** Set at **7396** Perf. **7120** To **7344**

Tubing **2-3/8"** Wt. **4.7** I.D. **1.995** Set at **7208** Perf. **OE - pinned** To

Gas Pay: From **7120** To **7344** L **7208** xG **.660** =GL **4257** Bar.Press. **12**

Producing Thru: Casing **yes** Tubing **no** Type Well **Single gas**
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: **1-9-62** Packer **none** Reservoir Temp. **185° F**

OBSERVED DATA

Tested Through (XXXXXX) (Choke) (XXXXX) Type Taps

No.	Flow Data (Prover) (Line) Size	Flow Data (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		XXXX				2329	60	2286	60	7 days
1.		3/4				395	80	941	60	3 hours
2.										
3.										
4.										
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.	14.1605		407	.9813	.9535	1.037	5591
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl. Specific Gravity Separator Gas **.660**

Gravity of Liquid Hydrocarbons _____ deg. Specific Gravity Flowing Fluid _____

F_c _____ $(1-e^{-s})$ _____ P_c **2298** P_c^2 **5,280,804**

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2$ $(1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.						908,209	4,372,595		
2.									
3.									
4.									
5.									

Absolute Potential: **6490** MCFPD; n **1.1536**

COMPANY **Caulkins Oil Company**

ADDRESS **Box 780, Farmington, New Mexico**

AGENT and TITLE Frank Bray **Superintendent**

WITNESSED _____

COMPANY _____

REMARKS

RECEIVED
JAN 25 1962
OIL CON. COM.
DIST. 3

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 the back 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_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t.