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 ____ Special ____ Date of Test 9-30-63

Company Caulkins Oil Company Lease Breech "E" Well No. MD-64

Unit A Sec. 1 Twp. 26 N Rge. 6 W Purchaser El Paso Natural Gas Company

Casing 5½" Wt. 15.5 17.0 I.D. 4.95 Set at 7711 Perf. 7416 To 7637

Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 7349 Perf. 7349 To ____

Gas Pay: From 7416 To 7637 L 7349 xG .600 =GL 4409 Bar.Press. 12

Producing Thru: Casing ____ Tubing Yes Type Well Gas - Gas Dual
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 9-18-63 Packer 7340 Reservoir Temp. 185° F

OBSERVED DATA

Tested Through ~~(XXXXX)~~ (Choke) ~~(XXXX)~~ Type Taps ____

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						2197	70	Pkr		7 day SI
1.		3/4				339	70	Pkr		3 hr. flow
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		351	.9905	1.000	1.027	5056
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas .600
Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____
P_c 9.402 $(1-e^{-s})$ 0.274 P_c 2209 P_c^2 4,879,681

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.	351	123.201	9.402	2256.2	618.2	741.401	4,138,280	861	.389
2.									
3.									
4.									
5.									

Absolute Potential: 5,724 MCFPD; n $(1.18)^n$ 1.1321
COMPANY Caulkins Oil Company
ADDRESS Box 780, Farmington, New Mexico
AGENT and TITLE Frank Bray Superintendent
WITNESSED ____
COMPANY ____

REMARKS

RECEIVED
OCT 1 1963
COM.

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.