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 X Annual Special Date of Test 9-25-63

Company Caulkins Oil Company Lease Breech "F" Well No. D-11

Unit B Sec. 35 Twp. 27N Rge. 6W Purchaser Southern Union Gas Company

Casing 4 1/2" Wt. 11.6 / 10.5 I.D. 4.000 Set at 7663 Perf. 7403 To 7632

Tubing 2 3/8" Wt. 4.7 I.D. 1.995 Set at 7401 Perf. 7397 To 7401

Gas Pay: From 7403 To 7632 L 7397 xG .660 -GL 4882 Bar.Press. 12

Producing Thru: Casing No Tubing Yes Type Well Single Gas

Date of Completion: 9-13-63 Packer None Reservoir Temp. 180° Single-Bradenhead-G. G. or G.O. Dual

OBSERVED DATA

Tested Through ~~(Prover)~~ (Choke) ~~(Meter)~~ 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						2458		2456		7 day SI
1.						310	70°	1072	70°	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		322	1.0048	.9535	1.033	4512
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

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

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

F_c _____ $(1-e^{-s})$ _____ P_c 2470 P_c^2 6,100,900

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.						1,175,056	4,925,844		.439
2.									
3.									
4.									
5.									

Absolute Potential: 5,302 MCFPD; n (1.24) 1.1750

COMPANY Caulkins Oil Company

ADDRESS P. O. Box 780, Farmington, New Mexico

AGENT and TITLE Frank M. Gray Superintendent

WITNESSED _____

COMPANY _____

REMARKS

RECEIVED
APR 6 1964
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.