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 * Annual Special Date of Test 9-23-64

Company Caulkins Oil Company Lease Breech "B" Well No. PD-123

Unit B Sec. 7 Twp. 26 N Rge. 6 W Purchaser Southern Union Gas Company

Casing 7" / 4½" Wt. 11.6 I.D. 4.000 Set at 6409-7570 Perf. 7284 To 7504

Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 7280 Perf. 7280 To

Gas Pay: From 8284 To 7504 L 7280 xG .700 GL 5096 Bar.Press. 12

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

Date of Completion: 9-15-64 Packer 6385 Reservoir Temp. 180

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										
1.						2490		Pkr		Shut in 184 hrs
2.		3/4"				504	84	Pkr		3 hours
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		516	.9777	.9258	1.058	6998
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c 9.402 $(1-e^{-s})$ 0.310

Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
P_c 2502 P_c^2 6,260,004

No.	P_w / P_t (psia)	P_t^2	$F_c Q$	$(F_c Q)^2$	$\frac{(F_c Q)^2}{(1-e^{-s})}$	P_w^2	$P_c^2 - P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	516	266,256	65.80	4329.64	1,342,188	1,608,444	4,651,560	2158	.506
2.									
3.									
4.									
5.									

Absolute Potential: 8764 MCFPD; n (1.35)n = 1.2524

COMPANY
ADDRESS Caulkins Oil Company Box 700, Farmington, New Mexico
AGENT and TITLE Superintendent
WITNESSED
COMPANY

RECEIVED
SEP 24 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.