

MULTI-POINT BACK LOG

Pool Basin Dakota Formation Dakota County Rio Arriba
Initial Yes Annual Date of Test 9-30-63
Company Caulkins Oil Company Lease Breech "E" Well No. MD 64
Unit A Sec. 1 Twp. 26N Rge. 6W Southern Union Gas Company
Casing 5 1/2" Wt. 17.0 I.D. 4.95 Set at 7711 7416 To 7637
Tubing 2 3/8" Wt. 4.7 I.D. 1.995 Set at 7349 7349 To
Gas Pay: From 7416 To 7637 L 7349 .600 4409 Bar. Press. 12
Producing Thru: Casing No Tubing Yes Gas - Gas Dual
Date of Completion: 9-18-63 Packer 7340 Temp. 185°

OBSERVED

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

Flow Data						Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _l	Temp. °F.	Press. psig	Temp. °F.	
SI								
1.		<u>3/4"</u>				<u>2197</u>	<u>Pkr.</u>	<u>7 Day SI</u>
2.						<u>339</u>	<u>70°</u>	<u>3 hours</u>
3.								
4.								
5.								

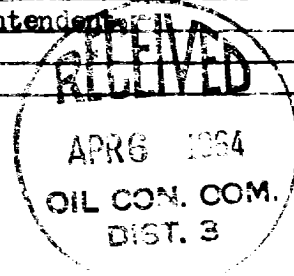
FLOW CALCULATIONS							Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow lb/hr	Flow MCFPD	Flow MCFPD		
1.	<u>14.1605</u>		<u>351</u>	<u>.9905</u>	<u>1.000</u>		<u>1.027</u>	<u>5056</u>
2.								
3.								
4.								
5.								

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c 9.402 (1-e⁻⁵) 0.274 Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
2209 P_c 4,879,681

No.	P_w P_t (psia)	P_t^2	F_{CG}	$(F_{CG})^2$	$(F_{CG})^2$	$P_C^2 - P_w^2$	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: 5724 MCFPD; (1.18)n 1.1321
COMPANY Caulkins Oil Company
ADDRESS P.O. Box 780, Farmington, New Mexico
AGENT and TITLE Frank J. Bay Production Superintendent
WITNESSED
COMPANY



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 .