

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 Routier Well No. D-321
Unit M Sec. 15 Twp. 26 N Rge. 6 W Purchaser Southern Union Gas Company
Casing 5 1/2" OD Wt. 17 & 15.5 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 (8000000) (Choke) (1000000)Type Taps

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI		<u>31/32</u>				<u>2329</u>	<u>60</u>	<u>2286</u>	<u>60</u>	<u>7 days</u>
1.		<u>3/4</u>				<u>395</u>	<u>60</u>	<u>941</u>	<u>60</u>	<u>3 hours</u>
2.										
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	<u>14.1605</u>		<u>407</u>	<u>.9813</u>	<u>.9535</u>	<u>1.037</u>	<u>5591</u>
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

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

Specific Gravity Separator Gas .660
Specific Gravity Flowing Fluid
P_c 2298 P_c² 5,280,804

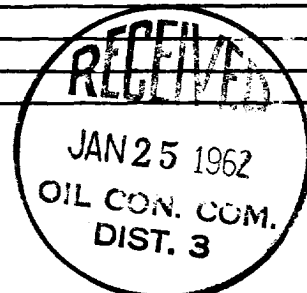
No.	$\frac{P_w}{P_t}$ (psia)	P _t ²	F _c Q	(F _c Q) ²	$\frac{(F_c Q)^2}{(1-e^{-s})}$	P _w ²	P _c ² -P _w ²	Cal. P _w	$\frac{P_w}{P_c}$
1.						<u>908,209</u>	<u>4,372,595</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 64.90 MCFPD; n 1.1536COMPANY Caulkins Oil CompanyADDRESS Box 780, Farmington, New MexicoAGENT and TITLE Frank J. Gray Superintendent

WITNESSED

COMPANY

REMARKS



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} = Supercompressibility 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 .