

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Dakota County San Juan
 Initial X Annual _____ Special _____ Date of Test 3/24/60
 Company Sunray Mid-Continent Oil Company Lease N.M. Federal "N" Well No. 2
 Unit A Sec. 17 Twp. 30N Rge. 12W Purchaser None
 Casing 4 1/2" Wt. 11.60 I.D. _____ Set at 6738 Perf. 6452 To 6660
 Tubing 2 3/8" Wt. 4.70 I.D. 1995 Set at 6420 Perf. _____ To _____
 Gas Pay: From 6452 To 6660 L _____ xG _____ -GL _____ Bar.Press. 14.2
 Producing Thru: Casing _____ Tubing X Type Well Single
 Single-Bradenhead-G. G. or G.O. Dual _____
 Date of Completion: _____ Packer _____ Reservoir Temp. 165° F

OBSERVED DATA

Tested Through (Choke) (Choke) _____ 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.	
1.		<u>3/4</u>	<u>251</u>		<u>85</u>	<u>2025</u>		<u>1895</u>		<u>3 Hours</u>
2.						<u>323</u>		<u>1090</u>		
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>12.3650</u>		<u>254</u>	<u>.9765</u>	<u>.9258</u>	<u>1.026</u>	<u>3029</u>
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 2028 P_c 1119
1868 3409

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w /P _c
1.	<u>1193</u>					<u>1423</u>	<u>2690</u>		
2.							<u>1621</u>		
3.									
4.									
5.									

Absolute Potential: 1162 MCFPD; n 0.75

COMPANY Sunray Mid-Continent Oil Company
 ADDRESS 166 Petroleum Center Bldg., Farmington, New Mexico
 AGENT and TITLE H. N. Stierwalt, Engineer
 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} = 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 .