

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 San Juan
 Initial X Annual _____ Special _____ Date of Test 12-18-60
 Company Sunray Mid-Continent Oil Co. Lease N. M. Federal "N" Well No. 5
 Unit M Sec. 7 Twp. 30N Rge. 12W Purchaser Southern Union Gas Co.
 Casing 4 1/2 Wt. 11.6 I.D. 4.000 Set at 6602 Perf. 6604 To 6759
 Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 6593 Perf. open end To _____
 Gas Pay: From 6604 To 6759 L 6700 xG 0.750 -GL 5025 Bar.Press. 12.0
 Producing Thru: Casing _____ Tubing X Type Well single
 Date of Completion: 11-21-60 Packer _____ Reservoir Temp. _____
 Single-Bradenhead-G. G. or G.O. Dual _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) 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.	
1.		<u>1/4</u>	<u>785</u>		<u>85</u>	<u>1959</u>	<u>1999</u>	<u>3 hrs.</u>
2.						<u>295</u>	<u>852</u>	
3.								
4.								
5.								

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	Pressure psia	Flow Temp. Factor Ft	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	<u>12.3550</u>		<u>277</u>	<u>0.9760</u>	<u>0.8704</u>	<u>1.035</u>	<u>3,321</u>
2.							
3.							
4.							
5.							

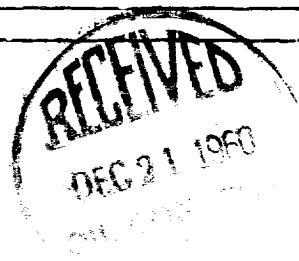
PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
 Gravity of Liquid Hydrocarbons _____ deg.
 F_c _____ (1-e^{-s})
 Specific Gravity Separator Gas _____
 Specific Gravity Flowing Fluid _____
 P_c 2011 P_c 1044

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>864</u>					<u>746.5</u>	<u>3297.5</u>		<u>0.430</u>
2.									
3.									
4.									
5.									

Absolute Potential: 4125 MCFPD; n 0.75
 COMPANY Sunray Mid-Continent Oil Company
 ADDRESS 166 Petroleum Center Building
 AGENT and TITLE Hel M. Stewart 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} = 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 .