

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Dakota County San Juan
Initial X Annual _____ Special X Date of Test _____
Company Sunray Mid-Continent Oil Co Lease H.M. Fed. #1 Well No. 1
Unit A Sec. 6 Twp. 29N Rge. 14W Purchaser None
Casing 5 1/2 Wt. 14# I.D. _____ Set at 5680 Perf. 5112 To 5522
Tubing 2 3/8 Wt. 4.7 I.D. 1.995 Set at 5114 Perf. _____ To _____
Gas Pay: From 5112 To 5522 L 5500 xG 0.73 -GL 4015 Bar.Press. 12.0
Producing Thru: Casing _____ Tubing X Type Well Single-Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 1-9-60 Packer X Reservoir Temp. _____

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.	Press. psig	Temp. °F.	
SI						<u>1635</u>				
1.		<u>14</u>	<u>48</u>		<u>64</u>	<u>69</u>	<u>64</u>	<u>PR</u>		<u>3 Hrs</u>
2.										
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.	<u>12.3650</u>		<u>60</u>	<u>0.9962</u>	<u>0.9825</u>	<u>-</u>	<u>682</u>
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.402 (1-e^{-S}) 0.253

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1647 P_c² 2712.6

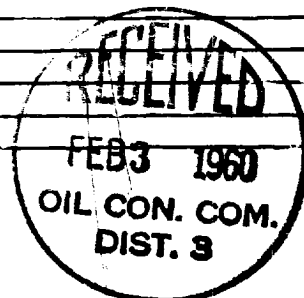
No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-S})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w P _c
1.	<u>61</u>	<u>6.56</u>	<u>6.11</u>	<u>41</u>	<u>10.37</u>	<u>16.4</u>	<u>2696.2</u>	<u>128</u>	<u>0.077</u>
2.									
3.									
4.									
5.									

Absolute Potential: 683 MCFPD; n 0.75COMPANY Sunray Mid-Continent Oil CompanyADDRESS 166 Petroleum Center Building, Farmington, N.M.AGENT and TITLE Engineer - H. M. Stierwalt

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 .

OIL CONSERVATION COMMISSION		
GENERAL INVESTIGATIVE OFFICE		
CO. Copies Received: 4		
DISTRICT		
Case No.	2	
Exhibit No.	1	
Report No.		
File No.		
Index No.		
Classification	1	✓