NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1957 FEB 11 AM 9:48

Revised 12-1-55

Pool Eunice Formation Seven Rivers County Lea

Initial ____ Annual ____ Special X Date of Test 11-24-56

Company Sunray Mid-Continent Oil Co. Lease Reeves Well No. 2

Unit D Sec. 29 Twp. 20S Rge. 37E Purchaser None

Casing ____ Wt. ____ I.D. ____ Set at ____ Perf. ____ To ____

Tubing ____ Wt. ____ I.D. ____ Set at ____ Perf. ____ To ____

Gas Pay: From ____ To ____ L ____ xG ____ =GL ____ Bar.Press. ____

Producing Thru: Casing ____ Tubing X Type Well Single

Date of Completion: ____ Packer ____ Reservoir Temp. 90 °F. Single-Bradenhead-G. G. or G.O. Dual

OBSERVED DATA

Tested Through (Prover) ~~(Choke)~~ ~~(Meter)~~ Type Taps ____

No.	Flow Data (Prover) (Line) Size	Flow Data ~~(Choke)~~ (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI	2"	1/4"	~~987~~ 793			987		988		72 SI
1.	"	3/8	629		58	869	58	881		2½
2.	"	1/2	463		66	704	66	778		2
3.	"	3/4	248		63	550	63	810		2
4.					60	342	60	840		2
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.	1.4050		793	1.0019	.9498	1.096	1182.331
2.	3.0671		629	.9943	.9498	1.073	1956.188
3.	5.5253		465	.9971	.9498	1.058	2562.337
4.	12.2023		248	1.0000	.9498	1.038	2983.478
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry gas cf/bbl. Specific Gravity Separator Gas .665

Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____

P_c ____ $(1-e^{-s})$ ____ P_c ____ P_c^2 ____

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	793	628.8				976.1	347.3		
2.	629	395.6				976.1	580/5		
3.	463	214.4				976.1	761.7		
4.	248	61.5				976.1	914.6		
5.									

Absolute Potential: 3280.0 MCFPD; n .96

COMPANY Sunray Mid-Continent Oil Co

ADDRESS Hobbs, New Mexico

AGENT and TITLE Charles Beal Agent

WITNESSED None

COMPANY ____

REMARKS

ELVIS A. UTZ
GAS ENGINEER

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.