NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

ONE
MXXXX-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Gas Pool Formation Yates & Seven Rivers County Lea

Initial ____ Annual ____ Special X * Date of Test 4/11/ thru 4/18/5

Company The Ohio Oil Company Lease State McDonald A/c 1 Well No. 25

Unit H Sec. 16 Twp. 22-S Rge. 36-E Purchaser Permian Basin Pipeline Company

Casing 4½" Wt. 9.5# I.D. 4.090 Set at 3712 Perf. ** To ____

Tubing 2.375 Wt. 4.7# I.D. 1.995 Set at 3246' Perf. 3241' To 3245'

Gas Pay: From 3090 To 3510 L 3241 xG 0.660 -GL 2139 Bar.Press. 13.2

Producing Thru: Casing ____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 7/9/54 Packer 3018-24 Reservoir Temp. --

* Special test as authorized under Order No. R-1092-A

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps Pipe

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						766	69	Pkr	--	72 hrs S.I.
1.	4"	1.750	559	7.61	69	578	69	"	--	24 hrs
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.	21.69	65.99	572.2	0.9915	0.9535	1.058	1432
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

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

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

F_c 9.936 $(1-e^{-s})$ 0.137 P_c 779.2 P_c^2 607.2

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2$ $(1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	591.2	349.5	14.228	202.44	27.7	377.2	230.0	614.2	78.8
2.									
3.									
4.									
5.									

Absolute Potential: 3293 MCFPD; n 0.857723 ***

COMPANY The Ohio Oil Company

ADDRESS P.O. Box 2107, Hobbs, New Mexico

AGENT and TITLE John R. Barber - Petroleum Engineer

WITNESSED Tested by: Herbert H. Karby - El Paso Natural Gas Company

COMPANY Witnessed by: H. B. Chiles & M. L. Johnston - The Ohio Oil Company

REMARKS

** 4½" O.D. csg perfs as follows: 3090-3180, 3212-74, & 3314-3510

*** Slope taken from annual Multi-point Back Pressure test of 2/1/57

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.

COMPANY The Ohio Oil Company
WELL State McDonald A/c 1, Well No. 25
POOL Jalmat Gas Pool
LOCATION H 16-22S-36E
COUNTY Lea County, New Mexico
DATE April 28, 1958