NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Gas Pool Formation Yates & Seven Rivers 2 County Lee

Initial ___ Annual X Special ___ Date of Test 1/25 thru 2/1/57

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. --

OBSERVED DATA

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

	Flow Data					Tubing Data		Casing Data		
No.	~~(Prover)~~ (Line) Size	~~(Choke)~~ (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
SI						807	--	Pkr.	--	72 hr S.I.
1.	4"	1.750	606	1.28	95	733	--	"	--	3½ hrs
2.	4"	1.750	595	7.61	94	685	--	"	--	3½ hrs
3.	4"	1.750	630	8.82	98	669	--	"	--	3½ hrs
4.	4"	1.750	587	13.94	97	622	--	"	--	3½ hrs
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	28.15	619.2	0.9680	0.9535	1.052	593
2.	21.69	68.03	608.2	0.9688	0.9535	1.054	1437
3.	21.69	75.32	643.2	0.9653	0.9535	1.054	1585
4.	21.69	91.47	600.2	0.9662	0.9535	1.048	1915
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons -- deg.
F_c 9.936 $(1-e^{-s})$ 0.137

Specific Gravity Separator Gas --
Specific Gravity Flowing Fluid --
P_c 820.2 P_c^2 672.7

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.	746.2	556.8	5.892	34.72	4.8	561.6	111.1	749.4	91.4
2.	698.2	487.5	14.278	203.86	27.9	515.4	157.3	717.9	87.5
3.	682.2	465.4	15.749	248.03	34.0	499.4	173.3	706.7	86.2
4.	635.2	403.5	19.027	362.03	49.6	453.1	219.6	673.1	82.1
5.									

Absolute Potential: 5,000 MCFPD; n 0.857723

COMPANY The Ohio Oil Company
ADDRESS P. O. Box 2107, Hobbs, New Mexico
AGENT and TITLE Thomas O. Webb - Petroleum Engineer
WITNESSED Mr. P. N. Randolph
COMPANY El Paso Natural Gas Company

REMARKS

* 4½" O.D. casing perfs as follows:
3090-3180, 3212-3274, 3314-3510

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.

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	February 20, 1957