NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MAIN OFFICE OCC
1961 SEP 29 AM 9 45

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Atoka** Formation **Pennsylvania** County **Eddy**

Initial ____ Annual ____ Special **x** Date of Test **8-27-61**

Company **Yates Petroleum Company** Lease **Len Mayer** Well No. **1**

Unit **6** Sec. **28** Twp. **18 S** Rge. **26 E** Purchaser **Trans-Western Pipeline Company**

Casing **5½** Wt. **17.00** I.D. **4.892** Set at **9210** Perf. **9069** To **9172**

Tubing **2** Wt. **4.70** I.D. **1.995** Set at **8907** Perf. ____ To ____

Gas Pay: From **9098** To **9105** L ~~**9102**~~ 8907 xG ~~**.631**~~ 669 -GL ~~**5743**~~ 5959 Bar.Press. **13.2**

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

Date of Completion: ____ Packer ____ Reservoir Temp. ____

OBSERVED DATA

Tested Through ~~(Prover) (Choke)~~ (Meter) Type Taps **Flange**

No.	Flow Data (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI						2636	72			76
1.	4.000	1.875	665	10.5	78	2581	72			3
2.	"	"	675	20.5	76	2540	73			3
3.	"	"	695	41.0	73	2452	75			3
4.	"	"	750	69.0	77	2321	84			24
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.	22.28 2	84.53	678.2	.9831	.9721	~~1.057~~ 1.059	1,897 1906
2.	"	118.82	688.2	.9850	.9721	~~1.057~~ 1.059	2,678 2684.
3.	" 170.40	171.79	708.2	.9877	.9721	~~1.059~~ 1.068	3,883 3878
~~xxxxxxxxxxxxxxxx~~							
4.	" 229.48	227.14	763.2	.9840	.9721	1.069 –	5,160 5228.0

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **78,999** cf/bbl. Specific Gravity Separator Gas **.635**
Gravity of Liquid Hydrocarbons **55.3** deg. Specific Gravity Flowing Fluid **.738**
F_c **9.936** $(1-e^{-s})$ ~~**.326**~~ .336 P_c **2649.2** P_c^2 ~~**7002**~~ 7018.2

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.	2594.2	6729	18.85	355.3	116	6845	157	2616.3	98.8
2.	2553.2	6518	26.71	713.4	231	6749	253	2597.9	98.1
3.	2465.2	6076	38.58	1488.4	486	6562	486	2561.6	96.7
4.	2334.2	5448	51.27	2628.6	857	6305	697	2510.6	94.8
5.									

Absolute Potential: ~~**28,000**~~ 29000 MCFPD; n **0.718** .723

COMPANY **Yates Petroleum Company**
ADDRESS **Carper Bldg. Artesia, New Mexico**
AGENT and TITLE [signature] **Agent**
WITNESSED
COMPANY

REMARKS

(1)	18.94	358.72	120.53	6850.4	167.9	2617.3	9879
(2)	26.67	[illegible]	[illegible]	[illegible]7.8	260.5	2599.6	9813
(3)	38.54	1485.3	499.06	6576.3	442.0	2564.4	[illegible]
(4)	51.94	[illegible]	[illegible]	[illegible]	663.2	2520.9	9516

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.