NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Yates - Seven Rivers County Lea

Initial ______ Annual ______ Special X Date of Test 9-21-56

Company The Atlantic Refining Company Lease State G Well No. 1

Unit V Sec. 5 Twp. 21-S Rge. 36-E Purchaser Permian Basin Pipeline Company

Casing 5½" Wt. 17# I.D. 4.892" Set at 3746 Perf. 3414 To 3630

Tubing 2-7/8" Wt. 6.5# I.D. 2.441" Set at 3856 Perf. 3853 To 3856

Gas Pay: From 3414 To 3630 L 3414 xG 0.670 -GL 2287 Bar.Press. 13.2

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

Date of Completion: 11-1-54 Packer ______ Reservoir Temp. ______

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								928.0		
1.	4	1.25	472.0	6.1	97			847.4		
2.	4	1.25	470.3	14.7	71			769.0		
3.	4	1.25	470.1	28.3	70			678.0		
4.	4	1.25	466.3	43.7	72			598.9		
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.	10.24	54.41		.9662	.9463	1.038	529
2.	10.24	84.30		.9896	.9463	1.044	844
3.	10.24	117.0		.9905	.9463	1.044	1172
4.	10.24	144.7		.9887	.9463	1.041	1443
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ______ cf/bbl. Specific Gravity Separator Gas ______
Gravity of Liquid Hydrocarbons ______ deg. Specific Gravity Flowing Fluid ______
F_c 2.507 $(1-e^{-s})$ 0.146 P_c 941.2 P_c^2 885.9

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.	860.6	740.6	1.326	1.758	.2567	740.9	145.0	860.8	.91
2.	782.2	611.8	2.116	4.477	.6536	612.5	273.4	782.6	.83
3.	691.2	477.8	2.938	8.632	1.260	479.1	406.8	692.2	.73
4.	612.1	374.7	3.618	13.09	1.911	376.6	509.3	613.7	.65
5.									

Absolute Potential: 2230 MCFPD; n .81
COMPANY The Atlantic Refining Company
ADDRESS P.O. Box 1038 Denver City, Texas
AGENT and TITLE M. A. Carr District Superintendent
WITNESSED ______
COMPANY ______

REMARKS

Retest

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.