NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Dakota Formation Dakota County San Juan

Initial x Annual ____ Special ____ Date of Test 2-5-62

Company The Atlantic Refining Company Lease State Gas Unit C Well No. 1

Unit B Sec. 16 Twp. 30-N Rge. 12 W Purchaser Southern Union Gas Company

Casing 4½ Wt. 9.5 / 11.6 I.D. 4.090 / 4.000 Set at 6691 Perf. 6450 / 6564 To 6464 / 6580

Tubing 2 Wt. 4.7 I.D. 1.995 Set at 6433 Perf. ____ To ____

Gas Pay: From 6450 To 6464 L 6424 xG .68 GL 4368 Bar.Press. 12

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

Date of Completion: 11-4-61 Packer None Reservoir Temp. 160° (Schlumberger)

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						1665		1665		
1.		3/4	130		68°	130	68°	560		3 Hours
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.	12.3650		142	.9924	.9393	1.015	1661
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____

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

P_c ____ $(1-e^{-s})$ ____ P_c 1677 P_c^2 2800

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.						326	2474		1.134
2.									
3.									
4.									
5.									

Absolute Potential: 1827 MCFPD; n .75

COMPANY The Atlantic Refining Company

ADDRESS P. O. Box 2197 Farmington, New Mexico

AGENT and TITLE B. J. Sartain Drilling Production Supervisor

WITNESSED La Roy Knott

COMPANY The Atlantic Refining Company

REMARKS

RECEIVED
FEB 7 1962
OIL CON. COM
DIST. 3

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.