NEW MEXICO OIL CONSERVATION COMMISSION

ILLEGIBLE

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Bumont Formation Yates - Seven Rivers County Lea

Initial X Annual ____ Special ____ Date of Test 7-14-58

Company THE ATLANTIC REFINING COMPANY Lease SEALE FEDERAL Well No. 4

Unit ____ Sec. 34 Twp. 20-S Rge. 36-E Purchaser Phillips Petroleum Co.

Casing 5½" Wt. 14# I ~~14~~ I.D. 5.012 Set at 3883' Perf. 3814 To 3850

Tubing 2" Wt. 4.7# I ~~8~~ I.D. 2.000 Set at 3793' Perf. ____ To ____

Gas Pay: From 3814' To 3850' L 3814' xG 0.685 -GL 2613 Bar.Press. 13.2

Producing Thru: Casing ____ Tubing X Type Well Single

Date of Completion: 1/28/58 Packer TIW @3827.7 Reservoir Temp. ____

Single-Bradenhead-G. G. or G.O. Dual

OBSERVED DATA

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

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	3.068					510		0		72
1.	3.068	1.75	24	14	105	55		0		24
2.	3.068	1.25	22	30	110	110		0		24
3.	3.068	1.25	82	40	105	180		0		24
4.	3.068	1.25	21	21	105	220		0		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.	20.15	22.81	27.2	0.9992	0.9329	1.005	414.67
2.	9.781	41.95	35.2	0.9951	0.9359	1.005	388.60
3.	9.781	37.53	95.2	0.9992	0.9359	1.005	338.10
4.	9.781	26.80	34.2	0.9992	0.9359	1.005	236.49
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c 9.936 $(1-e^{-s})$ 0.165

Specific Gravity Separator Gas ____
Specific Gravity Flowing Fluid ____
P_c 523.2 P_c^2 273.74

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.	68.2	4.651	4.12	16.974	2.800	7.451	266.289	86.32	0.16498
2.	123.2	15.178	3.862	13.410	2.212	17.390	256.350	151.87	0.29025
3.	173.2	30.000	3.290	10.82	1.785	31.786	243.955	178.30	0.34079
4.	233.2	54.382	2.349	5.518	0.9105	55.292	218.477	235.0	0.44915
5.									

Absolute Potential: 430 MCFPD; n 1

COMPANY THE ATLANTIC REFINING COMPANY
ADDRESS P.O. Box 1038
AGENT and TITLE E.A. Carr, Dist. Supt. 8-20-58
WITNESSED ____
COMPANY ____

REMARKS

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.