NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

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1957 NOV 21 PM 3:48

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Seven Rivers County Lea

Initial ____ Annual ____ Special X Date of Test 11-7 to 11-11-57

Company The Atlantic Refining Company Lease State 24 Well No. 1

Unit M Sec. 32 Twp. 24-S Rge. 37-E Purchaser El Paso Natural Gas Company

Casing 5½ Wt. 17# I.D. 4.892 Set at 3332 Perf. ____ To ____

Tubing 2½ Wt. 6.5 I.D. 2.4441 Set at 3446 Perf. ____ To ____

Gas Pay: From 3470 To 3546 L 3446 xG 0.685 -GL 2361 Bar.Press. 13.2

Producing Thru: Casing ____ Tubing X Type Well Single

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

Date of Completion: 10-20-43 Packer None Reservoir Temp. ____

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						303				72
1.	4"	2.000	46.3	2.72	60	263				24
2.	4"	2.000	51.9	3.32	60	242				24
3.	4"	2.000	38.4	4.52	60	206				24
4.	4"	2.000	49.1	5.62	60	149				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.	25.58	20.825		1.000	0.9359	—	499	498.6
2.	25.58	26.598		1.000	0.9359	—	636	636.8
3.	25.58	32.324		1.000	0.9359	—	774	773.8
4.	25.58	44.201		1.000	0.9359	—	1059	1058.2
5.								

PRESSURE CALCULATIONS

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

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

P_c 5.866 $(1-e^{-s})$ .150 P_c 316.2 P_c^2 100.0

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.	276.2	76.3	2.92	8.53	1.28	77.4	22.6	278.2	88.0
2.	255.2	65.1	3.74	13.99	2.10	67.2	32.8	259.2	82.0
3.	219.2	48.0	4.54	20.61	3.09	51.1	48.9	226.0	71.5
4.	162.2	26.3	6.21	38.56	5.78	32.1	67.9	179.2	56.7
5.									

Absolute Potential: 1,320 MCFPD; n 0.656

COMPANY The Atlantic Refining Company

ADDRESS P.O. Box 1038 Denver City, Texas

AGENT and TITLE N.A. Carr, District Superintendent

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.