NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea

Initial ____ Annual ____ Special X Date of Test 5/6 - 5/10/57

Company Humble Oil & Refining Company Lease New Mexico State AA Well No. 1

Unit G Sec. 22 Twp. 23-S Rge. 36-E Purchaser El Paso Natural Gas Co.

Casing 7" Wt. 20 I.D. 6.456 Set at 2909 O.H. 2909 To 3130

Tubing 2" Wt. 4.7 I.D. 1.995 Set at 3107 Perf. 3102 To 3106

Gas Pay: From 3014 To 3130 L 3102 xG 0.660 -GL 2047 Bar.Press. 13.2

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

Date of Completion: 6-15-50 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						611				72
1.	4	0.500	598	4.0	74	600				24
2.	4	0.500	584	12.96	76	586				24
3.	4	0.500	562	32.49	76	564				24
4.	4	0.500	548	43.56	76	550				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.	1.525	49.44	611.2	0.9868	0.9535	1.061	75
2.	1.525	87.98	597.2	0.9850	0.9535	1.056	133
3.	1.525	136.71	575.2	0.9850	0.9535	1.056	207
4.	1.525	156.35	561.2	0.9850	0.9535	1.053	236
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____
Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____
P_c 9.936 $(1-e^{-s})$ 0.131 P_c 624.2 P_c^2 389.6

No.	Pt (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.	613.2	376.0	0.745	0.555	0.073	376.1	13.5	613.3	0.982
2.	599.2	359.0	1.321	1.745	0.229	359.3	30.3	599.4	0.960
3.	577.2	333.2	2.057	4.231	0.554	333.8	55.8	577.7	0.925
4.	563.2	317.2	2.345	5.499	0.720	317.9	71.7	563.8	0.903
5.									

Absolute Potential: 835 MCFPD; n 0.7166

COMPANY Humble Oil & Refining Company
ADDRESS P. O. Box 2347, Hobbs, New Mexico
AGENT and TITLE J. B. Thurmond District Superintendent
WITNESSED Southern
COMPANY El Paso Natural Gas Co.

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.