NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1956 OCT 30 AM 10:50

Pool Eumont Formation Queen County Lea

Initial ____ Annual ____ Special X Date of Test 6-11 to 6-15,1956

Company Humble Oil & Refining Company Lease Eumont Gas Unit 4 Well No. 1

Unit N Sec. 25 Twp. 20S Rge. 36E Purchaser El Paso Natural Gas Company

Casing 5½ Wt. 17 I.D. 4.892 Set at 3700 Perf. 3410 To 3600

Tubing 2" Wt. 4.7 I.D. 1.995 Set at 3660 Perf. - To -

Gas Pay: From 3410 To 3600 L 3410 xG .670 -GL 220.5 Bar.Press. 13.2

Producing Thru: Casing X Tubing ____ Type Well G.O. Dual

Date of Completion: 3-15-53 Packer set at 3660 Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. 90

OBSERVED DATA

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

No.	Flow Data (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI								940		72
1.	4"	1.250	566	18.89	65			832		24
2.	4"	1.250	564	25.0	65			774		24
3.	4"	1.250	560	38.4	67			720		24
4.	4"	1.250	557	65.8	68			697		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.	9.643	79.4	579.2	0.9952	0.9463	1.062	766.8
2.	9.643	120.2	577.2	0.9952	0.9463	1.062	1159
3.	9.643	148.4	573.2	0.9953	0.9463	1.062	1428
4.	9.643	200.0	610.2	0.9924	0.9463	1.066	1930
5.							

PRESSURE CALCULATIONS

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

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

F_c 1.812 $(1-e^{-s})$ 0.145 P_c 953.2 P_c^2 908.5

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.	845.2	714.3	1.389	1.9293	0.2797	714.6	193.9	845.5	93.0
2.	787.2	619.8	2.100	4.4100	0.6394	620.2	288.3	787.5	88.4
3.	733.2	537.5	2.587	6.6925	0.9704	538.5	370.0	732.1	25.5
4.	710.2	504.3	3.497	12.229	1.773	506.1	402.4	225.0	26.8
5.									

Absolute Potential: 3350 MCFPD; n 0.95

COMPANY Humble Oil & Refining Company

ADDRESS Box 2347, Hobbs, N.M.

AGENT and TITLE ____ District Superintendent

WITNESSED Elmer

COMPANY El Paso Natural Gas Company

REMARKS

ELVIS A. UTZ 57
GAS ENGINEER

dfl

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.