

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 10:51

Pool Bumont Formation Queen County Lea

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

Company Humble Oil & Refining Company Lease Bumont Gas Unit 3 Well No. 1

Unit A Sec. 35 Twp. 20S Rge. 36E Purchaser El Paso Natural Gas Company

Casing 5 1/2 Wt. 17 I.D. 4.892 Set at 3713 Perf. 3575 To 3788

Tubing 2 Wt. 4.70 I.D. 1.995 Set at 3777 Perf. 3773 To 3776

Gas Pay: From 3575 To 3788 L 3773 xG .675 -GL 2347 Bar.Press. 13.2

Producing Thru: Casing _____ Tubing X Type Well Single

Date of Completion: 8-29-56 Packer 3523 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 90

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						<u>909</u>				<u>72</u>
1.	<u>4</u>	<u>1.250</u>	<u>567</u>	<u>8.41</u>	<u>66</u>	<u>805</u>				<u>24</u>
2.	<u>4</u>	<u>1.250</u>	<u>567</u>	<u>26.01</u>	<u>72</u>	<u>743</u>				<u>24</u>
3.	<u>4</u>	<u>1.250</u>	<u>564</u>	<u>42.3</u>	<u>70</u>	<u>689</u>				<u>24</u>
4.	<u>4</u>	<u>1.250</u>	<u>601</u>	<u>45.6</u>	<u>75</u>	<u>644</u>				<u>24</u>
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wPf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	<u>9.643</u>	<u>69.85</u>	<u>580.2</u>	<u>0.9943</u>	<u>0.9427</u>	<u>1.062</u>	<u>871</u>
2.	<u>9.643</u>	<u>122.8</u>	<u>580.2</u>	<u>0.9887</u>	<u>0.9427</u>	<u>1.060</u>	<u>1170</u>
3.	<u>9.643</u>	<u>156.4</u>	<u>578.2</u>	<u>0.9903</u>	<u>0.9427</u>	<u>1.060</u>	<u>1493</u>
4.	<u>9.643</u>	<u>167.4</u>	<u>614.2</u>	<u>0.9899</u>	<u>0.9427</u>	<u>1.061</u>	<u>1592</u>
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

F_c 9.936 (1-e^{-s}) 0.161

Specific Gravity Separator Gas _____

Specific Gravity Flowing Fluid _____

P_c 922.2 P_c² 850.3

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w P _c
1.	<u>818.2</u>	<u>669.4</u>	<u>6.7</u>	<u>44.9</u>	<u>7.2</u>	<u>676.6</u>	<u>173.9</u>	<u>817.0</u>	<u>65.0</u>
2.	<u>754.2</u>	<u>568.8</u>	<u>11.8</u>	<u>139.2</u>	<u>21.7</u>	<u>568.5</u>	<u>290.3</u>	<u>707.9</u>	<u>81.7</u>
3.	<u>702.2</u>	<u>493.0</u>	<u>14.8</u>	<u>219.0</u>	<u>30.7</u>	<u>493.4</u>	<u>324.8</u>	<u>692.7</u>	<u>81.7</u>
4.	<u>657.2</u>	<u>431.9</u>	<u>15.8</u>	<u>249.6</u>	<u>40.2</u>	<u>432.1</u>	<u>346.4</u>	<u>607.0</u>	<u>83.6</u>
5.									

Absolute Potential: 3300 MCFPD; n 0.86

COMPANY Humble Oil & Refining Company

ADDRESS Box 2347, Hobbs, N.M.

AGENT and TITLE Don W. Hagan District Superintendent

WITNESSED Rimmer

COMPANY El Paso Natural Gas Company

REMARKS

ELVIS A. U.
GAS ENGINEER

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 .