

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 07 Lee

Initial Armadillo Special X Date of Test 12-21-56

Company Humble Oil & Refining Co. Lease E.E. Hunter Well No. 1

Unit C Sec. 24 Twp. 24N Rge. 34E Purchaser EPN

Casing 7" Wt. 24 I.D. 6.366 Set at 3551 Perf. 2900 To 3200

Tubing 2" Wt. 4.7 I.D. 1.995 Set at 2890 Perf. To

Gas Pay: From 2900 To 3200 L. 2890 XG 0.670 -GL 1936 Bar. Press. 13.2

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

Date of Completion: 1-10-36 Packer None Reservoir Temp.

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Proven) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	4	1.250	213	6.3	43	365				72
2.	4	1.250	212	11.2	51	330				24
3.	4	1.250	213	18.5	55	310				24
4.	4	1.250	210	57.8	68	282				24
5.	4	1.250	210			214				24

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wp}}$	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	37.75	226.2	1.0166	0.9463	1.024	352
2.	9.643	50.22	225.2	1.0088	0.9463	1.024	173
3.	9.643	64.68	226.2	1.0048	0.9463	1.024	607
4.	9.643	113.58	223.2	0.9924	0.9463	1.022	1051
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.

Gravity of Liquid Hydrocarbons deg.

c 9.936 (1-e^{-s}) 0.125

Specific Gravity Separator Gas 0.670

Specific Gravity Flowing Fluid

P_c 378.2 P_c² 143.0

No.	P _{st} 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.	343.2	117.8	3.56	12.67	1.58	119.4	23.6	345.6	0.914
2.	323.2	104.5	4.70	22.0	2.75	107.3	35.7	327.6	0.966
3.	295.2	87.1	6.03	36.36	4.54	91.6	51.4	302.7	0.800
4.	227.2	51.6	10.44	109.0	13.6	65.2	77.8	255.4	0.675
5.									

Absolute Potential: 1215 MCFPD; n 0.6789

COMPANY Humble Oil & Refining Co.

ADDRESS Box 2347, Hobbs, New Mexico

AGENT and TITLE Dist. Supt.

WITNESSED Smith

COMPANY El Paso Natural Gas Co.

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 .