

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE CCC

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Green County Lee

Initial Annual Special X Date of Test 6-18 to 6-22-56

Company Humble Oil & Refining Company Lease J. D. Knox Well No. 1

Unit J Sec. 10 Twp. 21S Rge. 36E Purchaser El Paso Natural Gas Company

Casing 5 1/2 Wt. 17 I.D. 4.892 Set at 3750 Perf. 2895 To 3620

Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3392 Perf. none To none

Gas Pay: From 2895 To 3620 L 3392 xG 0.680 -GL 2307 Bar.Press. 13.2

Producing Thru: Casing Re- Tubing X Type Well single

Date of Completion: 1-18-56 Packer 3392 Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. 90

OBSERVED DATA

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

Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.
SI						1018			72
1.	4	1.750	583	12.25	64	956			24
2.	4	1.750	589	27.04	63	903			24
3.	4	1.750	582	44.89	62	834			24
4.	4	1.750	576	68.06	62	752			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.	19.27	85.46	596.2	0.9962	0.9393	1.072	1652
2.	19.27	127.6	602.2	0.9971	0.9393	1.072	2469
3.	19.27	163.5	595.2	0.9981	0.9393	1.072	3166
4.	19.27	200.3	589.2	0.9981	0.9393	1.068	3865
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c 9.936 (1-e^{-s}) 0.147

Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
P_c 1031.2 P_c² 1063.4

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.	989.2	978.3	16.41	269.3	39.6	978.9	84.5	290.7	28.2
2.	916.2	839.4	26.55	601.7	88.4	927.8	133.6	268.3	35.7
3.	847.2	717.7	31.46	989.7	145.5	863.8	208.2	447.4	43.4
4.	765.2	585.5	38.40	1474.5	216.8	802.5	261.1	511.0	49.6
5.									

Absolute Potential: MCFPD; n

COMPANY Humble Oil & Refining Company
ADDRESS Box 2347, Hobbs, N.M.
AGENT and TITLE District Superintendent
WITNESSED Mabe & Denny
COMPANY El Paso Natural Gas Company

REMARKS

Test No. 1, poor point alignment. See Test No. 2

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} = Supercompressibility 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 .