

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

ELVIS A. UTE
GAS ENGINEER
Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1955 OCT 8 PM 2:21

Pool Barrent Formation Barrent County Lincoln
Initial Annual Special X Date of Test 7-25-56
Company Continental Oil Co. Lease B-133 B-13 Well No. 3
Unit 7 Sec. 18 Twp. 20 Rge. 37 Purchaser Continental Oil Co.
Casing 5 1/2" Wt. 27 I.D. 4.392 Set at 3715 Perf. 3371 To 3507
Tubing 2" Wt. 4.7 I.D. 1.995 Set at 3195 Perf. To
Gas Pay: From 3371 To 3507 L 2371 xG .660 -GL Bar.Press. 13.2
Producing Thru: Casing X Tubing Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 5-11-52 Packer Reservoir Temp. 64.0

OBSERVED DATA

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

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						950				30
1.	1"	1.020	460	92	680	803				6
2.	1"	1.250	570	53	650	680				17
3.	1"	1.500	562	46	780	612				6
4.	1"	2.00	580	14	680	580				15
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.	6.135	208.7	473.2	0.9921	0.9393	1.100	1713
2.	9.643	175.8	583.2	0.9952	0.9393	1.063	1716
3.	13.99	162.65	575.2	0.9831	0.9393	1.067	2241
4.	22.58	91.13	593.2	0.9921	0.9393	1.068	2391
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c P_w Measured (1-e^{-s})
Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
P_c 963.2 P_c 966.4

No.	P _w (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.	816.2					666	397.2		.846
2.	693.2					480	483.2		.726
3.	625.2					391.5	571.7		.646
4.	593.2					351.9	611.3		.625
5.									

Absolute Potential: 3980 MCFPD; n .79COMPANY Continental Oil CompanyADDRESS Box 427, Hobbs, New MexicoAGENT and TITLE H. D. Howard, Gas Tester

WITNESSED

COMPANY

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 .