

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Emmont Formation Yates Date NOV 10 AM 8:00 County Lea
Initial _____ Annual _____ Special X Date of Test 11/10/56
Company Shell Oil Company Lease State "B" Well No. 1
Unit E Sec. 36 Twp. 19 S Rge. 35 E Purchaser El Paso Natural Gas Company
Casing 7 Wt. 24 I.D. 6.336 Set at 3775 Perf. 2968 To 3544
Tubing 2 1/2 Wt. 6.5 I.D. 2.447 Set at 3922 Perf. _____ To _____
Gas Pay: From 2968 To 3544 L 2968 xG .675 -GL 2003 Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well G. O. Dual
Date of Completion: 6-29-53 Packer 3573 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(<u>Prover</u>) (Line) Size	(<u>Choke</u>) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	1	1.500	147	8.82	51			817		72
2.	1	1.500	153	7.65	51			406		24
3.	1	1.500	145	6.20	48			552		24
4.	1	1.500	144	4.92	49			610		24
5.	1	1.500	144					664		24

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.	13.99	111.31		1.0038	.9427	1.016	1,505
2.	13.99	98.56		1.0038	.9427	1.017	1,333
3.	13.99	77.93		1.0117	.9427	1.017	1,058
4.	13.99	61.40		1.0107	.9427	1.017	832
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c .865 (1-e^{-s}) .129

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 830.2 P_c 689.2

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.	439.2	175.7	1.30	1.7	0.2	175.9	513.3	419.4	.5052
2.	365.2	319.5	1.15	1.3	0.2	319.7	369.5	565.4	.6810
3.	383.2	388.4	.92	.9	0.1	388.5	300.8	623.3	.7508
4.	677.2	458.6	.72	.5	0.1	458.7	230.5	677.3	.8158
5.									

Absolute Potential: 2,450 MCFPD; n .985

COMPANY Shell Oil Company
ADDRESS Box 1957 Hobbs, New Mexico
AGENT and TITLE Ed M. Haskins
WITNESSED Edward Mabe
COMPANY El Paso Natural Gas Company

REMARKS

Well tested in decreasing sequence, due to fluid.

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 .

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