

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildcat Formation Morrow County Lea
Initial X Annual _____ Special _____ Date of Test May 18, 1965
Company Jake L. Hamon Lease State "E" 8913 Well No. 1
Unit D Sec. 20 Twp. 20-8 Rge. 36E Purchaser None
Casing 5 1/2" Wt. 20.0 I.D. 4.778 Set at 11,440 Perf. _____ To _____
Tubing 2 3/8 Wt. 4.7 I.D. 1.995 Set at 11,320 Perf. _____ To _____
Gas Pay: From 11,440 To 11,457 L 11,320 xG Mix 692 -GL 7833 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Sing.
Date of Completion: May 18, 1965 Packer 11,320 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.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	4	2.000	420	7.0	65	5205	64			48
2.	4	2.000	447	23.0	69	5106	74			1 1/2
3.	4	2.000	545	42.0	54	4998	77			1
4.	4	2.000	575	87.0	41	4862	79			1 1/2
5.						4623	80			1 1/2

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.	25.58	55.12	433.2	.9952	.9902	1.036	1.439
2.	25.58	102.9	460.2	.9915	.9902	1.037	2.680
3.	25.58	153.1	558.2	1.0058	.9902	1.054	6.187
4.	25.58	226.2	588.2	1.0188	.9902	1.060	6.187
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 34,924 cf/bbl.
Gravity of Liquid Hydrocarbons 51.2 API deg.
F_c 9.936 (1-e^{-s}) .417

Specific Gravity Separator Gas .612
Specific Gravity Flowing Fluid .7745
P_c 5218.2 P_c² 27,230

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.	5119.2	26,206	14,298	204.43	85.25	26,291	939	5127.5	98.3
2.	5011.2	25,112	26,628	709.05	295.67	25,408	1822	5040.6	96.6
3.	4875.2	23,768	40,837	1667.66	695.41	24,463	2767	4946.0	94.8
4.	4638.2	21,494	51,474	3779.05	1575.86	23,070	4160	4803.1	92.0
5.									

Absolute Potential: 39,000 MCFPD; n .981

COMPANY Jake L. HamonADDRESS 908 Vaughn Building, Midland, Texas

AGENT and TITLE

WITNESSED A. L. ElfordCOMPANY Shell Oil CompanyCecil H. Barton Cecil H. Barton, Pet. Engr.

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 .