

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE 000

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1957 JAN 14 AM 8:24

Pool Summit Formation Carbon County Lea

Initial _____ Annual _____ Special X Date of Test 12-8 to 12-9-56

Company Shell Oil Company Lease State Well No. 1

Unit 1 Sec. 29 Twp. 19-S Rge. 37-E Purchaser El Paso Natural Gas Company

Casing 7 Wt. 26 I.D. 6.276 Set at 3657 Perf. 3400 To 3552

Tubing 2 1/2 Wt. 6.5 I.D. 2.441 Set at 3930 Perf. _____ To _____

Gas Pay: From 3400 To 3552 L 3400 xG .660 -GL 2303 Bar.Press. 11.2

Producing Thru: Casing X Tubing _____ Type Well G. O. Dual

Date of Completion: 1-1-57 Packer 3635 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (~~PROVER~~) (~~PROVER~~)

Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (PROVER) Size	(PROVER) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								728		24
1.	2"	.185	636		68			636		3
2.	2"	.187	581		54			581		3
3.	2"	.218	466		57			466		3
4.	2"	.250	433		63			433		3
5.	2"	.250	463		61			463		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.	.3138		689.2	1.0117	.9535	1.075	224
2.	.7857		581.2	1.0058	.9535	1.053	169
3.	1.0874		479.2	1.0019	.9535	1.053	522
4.	1.1030		446.2	.9990	.9535	1.050	626
5.	1.1030		476.2	.9990	.9535	1.051	640

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c .970 (1-e^{-S}) .317

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 741.2 P_c² 549.1

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.	629.2	395.8	.20	.04	.005	395.8	153.5	629.5	85.9
2.	581.2	337.8	.37	.14	.02	337.8	205.0	581.2	59.1
3.	479.2	229.6	.48	.23	.03	229.6	319.8	479.5	64.7
4.	446.2	199.1	.57	.32	.05	199.1	350.3	446.5	60.2
5.	476.2	226.8	.61	.37	.05	226.8	322.6	476.1	64.2

Absolute Potential: 1,110 MCFPD; n 1,000

COMPANY Shell Oil Company

ADDRESS Box 257, Hobbs, New Mexico

AGENT and TITLE J. M. Hunkaple

WITNESSED Edward Mabe

COMPANY El Paso Natural Gas Company

REMARKS

Well would not produce into El Paso's high pressure line. Slope of test points greater than 1,000. Slope of 1,000 drawn through highest rate of flow.

EL PASO
ENGINEER

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 .