

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Undesignated Formation San Andres County Roosevelt
Initial X Annual _____ Special _____ Date of Test 11-23-63
Company Hearburg & Ingram Lease Kirkpatrick Well No. 2
Unit 8 Sec. 14 Twp. 8 Rge. 37 Purchaser None
8 5/8" 32.0 7.907 4100'
Casing 4 1/2" Wt. 10.5 I.D. 4.052 Set at 3981' Perf. 4528' To 4592'
4628'
Tubing 2 3/8" Wt. 4.70 I.D. 1.945 Set at 4507' Perf. - To -
Gas Pay: From 4528' To 4592' L 4507 xG 0.7000 -GL 3155 Bar. Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 11-24-63 Packer 4414 Reservoir Temp. 104°F

OBSERVED DATA

Tested Through (Prover) (Shoke) (Meter)Type Taps -

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) <u>(Shoke)</u> Size	(Orifice) Size	Press. DWT psig	Diff. h_w	Temp. °F.	Press. DWT psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	2"	1/2"	144	-	58°	1287	55°			72.0
2.	2"	3/8"	229	-	34°	206	58°	Fkr	-	6.0
3.	2"	3/8"	214	-	62°	536	34°	-	-	6.0
4.	2"	1/4"	349	-	66°	765	62°	-	-	17.0
5.						995	66°	-	-	4.0

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.	5.5233	-	157.2	1.0019	0.9258	1.018	819.9
2.	3.0691	-	242.2	1.0260	0.9258	1.031	728.0
3.	3.0691	-	227.2	0.9981	0.9258	1.026	661.1
4.	1.4030	-	362.2	0.9943	0.9258	1.041	457.0
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons - deg.
 P_c 9.936 $(1-e^{-S})$ 0.195

Specific Gravity Separator Gas 0.7000
Specific Gravity Flowing Fluid -
 P_c 1521.2 P_c^2 2314.0

Bottom Hole Pressure @ 4560' (-529)* Used For Pressure Calculations

No.	P_w SHP	P_c^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.	500.2	-	-	-	-	250.2	2063.8	-	-
2.	701.2	-	-	-	-	491.7	1822.3	-	-
3.	909.2	-	-	-	-	826.6	1487.4	-	-
4.	1175.2	-	-	-	-	1381.1	932.9	-	-
5.									

Absolute Potential: 290.0 MCFPD; n 0.66COMPANY Hearburg & IngramADDRESS 100 South Kentucky Ave., P.O. Box 1757-Roswell, New MexicoAGENT and TITLE Coleman Petroleum Engineering CompanyWITNESSED -COMPANY -

REMARKS

* Mid Point Of Casing Perforations

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 .