NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE O. C.

Form C-122

BACK MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS DEC 17 12 22 PM '63 Revised 12-1-55

Pool Undesignated Formation San Andres County Roosevelt

Initial X Annual Special Date of Test 11-20-63

Company Kearburg & Ingram Lease Kirkpatrick Well No. 1

Unit I Sec. 11 Twp. 8 Rge. 37 Purchaser None

Casing 4 1/2" Wt. 9.5 I.D. 4.090 Set at 4622' Perf. 4536' To 4600'

Tubing 2 3/8" Wt. 4.7 I.D. 1.995 Set at 4400' Perf. - To -

Gas Pay: From 4536' To 4600' L 4400 xG 0.7000 -GL 3080 Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well Single

Date of Completion: 11-22-63 Packer 4400' Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. 105°F

OBSERVED DATA

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

No.	Flow Data (Prover) (~~Line~~) Size	(~~Choke~~) (Orifice) Size	Press. ~~Diff~~ psig	Diff. h_w	Temp. °F.	Tubing Data Press. ~~Diff~~ psig	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI						1294				
1.	2"	1"	59	-	53	208	53	-	-	72.0
2.	2"	1"	48	-	56	999	56	-	-	48
3.	2"	3/4"	80	-	50	754	50	-	-	24
4.	2"	3/4"	58	-	66	1042	66	-	-	4
5.										

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.	22.0652	-	72.2	1.0058	0.9258	-	1485.0
2.	22.0662	-	61.2	1.0039	0.9258	-	1295.1
3.	12.2023	-	93.2	1.0095	0.9258	-	1063.2
4.	12.2023	-	71.2	0.9943	0.9258	-	799.8
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl. Specific Gravity Separator Gas 0.7000

Gravity of Liquid Hydrocarbons - deg. Specific Gravity Flowing Fluid -

P_c 5.936 (1-e^-s) 0.151 P_c 1528.2 P_c^2 2355.4

Bottom Hole Pressure = 4558' (-537) * Used for Pressure Calculations

No.	P_w ~~Diff~~ P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	529.2	-	-	-	-	280.1	2055.3	-	-
2.	807.2	-	-	-	-	651.6	1683.8	-	-
3.	959.2	-	-	-	-	920.1	1415.3	-	-
4.	1238.2	-	-	-	-	1533.1	802.3	-	-
5.									

Absolute Potential: 1675 MCFPD; n 0.92

COMPANY Kearburg & Ingram

ADDRESS 100 South Kentucky Ave., P. O. Box 1737-Roswell, New Mexico

AGENT and TITLE Coleman Petroleum Engineering Company Joe A. Coleman

WITNESSED -

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.