NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

1957 FEB 11 AM 10:06

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Queen County Lea

Initial ____ Annual X Special ____ Date of Test Aug. 24, 1956

Company John H. Kelly Lease Humble State Well No. 1

Unit K Sec. 16 Twp. 19S Rge. 37E Purchaser Permian Basin

Casing 5 1/2 Wt. 15.5 I.D. 4.95 Set at 3622 Perf. ____ To ____

Tubing 2 3/8 Wt. 4.7 I.D. 1.995 Set at 3610 Perf. ____ To ____

Gas Pay: From 3604 To 3650 L 3610 xG 0.675 =GL 2572 Bar.Press. 13.2

Producing Thru: Casing ____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: Dec. 22, 1954 Packer No Reservoir Temp. ____

OBSERVED DATA

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

No.	Flow Data: (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data: Press. psig	Tubing Data: Temp. °F.	Casing Data: Press. psig	Casing Data: Temp. °F.	Duration of Flow Hr.
SI						902.5		913.2		72
1.	4	1.75	466.7	14.0	81	779.0		880.7		24
2.	4	1.75	461.7	25.5	75	699.0		775.7		24
3.	4	1.75	465.9	30.0	63	618.7		734.8		25 3/4
4.	4	1.75	470.5	38.7	67	544.2		695.0		24
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.	21.60	80.85	466.8	0.9904	0.9427	1.038	1688
2.	21.60	105.60	474.9	0.9877	0.9427	1.042	2222
3.	21.60	121.40	477.1	0.9871	0.9427	1.046	2589
4.	21.60	136.80	483.7	0.9855	0.9427	1.046	2903
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl.

Gravity of Liquid Hydrocarbons ____ deg.

F_c ____ $(1-e^{-s})$ ____

Specific Gravity Separator Gas ____

Specific Gravity Flowing Fluid ____

P_c 926.4 P_c^2 858.2

No.	P_w or 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.	798.8	627.6				698.8	159.8	856.9	.90
2.	702.8	495.1				619.2	239.0	786.9	.83
3.	651.0	399.6				558.6	299.6	747.4	.81
4.	667.4	510.7				501.5	356.7	708.2	.76
5.									

Absolute Potential: 5275 MCFPD; n 0.68

COMPANY John H. Kelly

ADDRESS Box 5071, Roswell, New Mexico

AGENT and TITLE Kenneth Whipple Production Superintendent

WITNESSED R. L. West

COMPANY Permian Basin Pipeline

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.