NEW MEXICO OIL CONSERVATION COMMISSION

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 4-15-57

Company Skelly Oil Co. Lease Baker "B" Well No. 2

Unit K Sec. 10 Twp. 22S Rge. 37E Purchaser Northern Natural

Casing 7" Wt. 20# I.D. 6.456 Set at 3570' Perf. 3430' To 3490'

Tubing 2-3/8" Wt. 4.7# I.D. 1.995" Set at 3672' Perf. 3632' To 3635'

Gas Pay: From 3430' To 3490' L 3430 xG 0.675 =GL 2315 Bar.Press. 13.2

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

Date of Completion: 2-1-54 Packer 3520 Reservoir Temp. ____

OBSERVED DATA

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

No.	Flow Data (Prover) 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								499.7		69
1.	2"	5/16"	458.2		67			458.2		3
2.	2"	3/8"	436.6		72			437.0		3
3.	2"	7/16"	410.5		72			411.0		3
4.	2"	1/2"	382.7		69			383.7		3
5.	2"	1/2"	363.8		74			364.8		20

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.	2.1577		471.4	0.9933	0.9427	1.050	1000
2.	3.0691		449.8	0.9887	"	1.046	1346
3.	4.3997		423.7	0.9887	"	1.044	1814
4.	5.5233		395.9	0.9915	"	1.041	2128
5.	5.5233		377.0	0.9868	"	1.038	2011

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c 0.707 $(1-e^{-s})$ 0.147

Specific Gravity Separator Gas ____
Specific Gravity Flowing Fluid ____
P_c 512.9 P_c^2 263.1

No.	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.	471.4	222.2	0.707	0.500	0.074	222.3	40.8	471.5	0.92
2.	450.2	202.7	0.952	0.906	0.133	202.8	60.3	450.3	0.88
3.	424.4	180.1	1.282	1.644	0.242	180.3	82.8	424.6	0.83
4.	396.9	157.5	1.504	2.262	0.333	157.8	105.3	397.2	0.77
5.	378.0	142.9	1.422	2.022	0.297	143.2	119.9	378.4	0.74

Absolute Potential: 4400 MCFPD; n 0.7942

COMPANY Skelly Oil Co.
ADDRESS Box 38, Hobbs, N. M.
AGENT and TITLE (SIGNED) H. E. Aab Dist. Supt.
WITNESSED None
COMPANY ____

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.