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 M Annual _____ Special X Date of Test 8-6-56

Company Skelly Oil Co. Lease Christmas Well No. 1

Unit M Sec. 25 Twp. 19S Rge. 36E Purchaser El Paso Natural

Casing 7" Wt. 24.0# I.D. 6.336 Set at 3790 Perf. _____ To _____

Tubing 2-3/8" Wt. 4.7# I.D. 1.995 Set at 3726 Perf. _____ To _____

Gas Pay: From 3430 To 3512 L 3430 xG 0.690 -GL 2367 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: 12-20-49 Packer 3725 Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps Flange

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI										
1.	4"	0.750	688	75.7	78			916		72
2.	"	0.750	631	64.0	80			690		24
3.	"	0.750	669	43.6	78			631		24
4.	"	0.750	680	9.6	84			671		24
5.								680		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.	3.435	220.3	641.2	0.9831	0.9325	1.067	740
2.	"	203.1	644.2	0.9813	"	1.065	680
3.	"	172.5	682.2	0.9831	"	1.071	582
4.	"	81.6	693.2	0.9777	"	1.073	274
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl. Specific Gravity Separator Gas _____

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

P_c 929.2 P_c^2 863.4 x 10^3

c 0.740 $(1-e^{-s})$ 0.150

No.	P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2 (1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	P_w/P_c
1.	643.2	413.7	0.548	.3.00	.0.45	414.2	449.2	643.6	0.69
2.	644.2	415.0	0.503	.2.53	.0.38	414.4	448.0	644.5	0.69
3.	684.2	468.1	0.431	.1.86	.0.28	468.8	395.0	684.4	0.74
4.	693.2	480.5	0.203	.0.41	.0.06	480.5	382.8	693.3	0.75
5.									

Absolute Potential: 1940 MCFPD; n 1.0000

COMPANY Skelly Oil Co.

ADDRESS Box 38, Hobbs, N. M.

AGENT and TITLE _____ Dist. Supt.

WITNESSED None

COMPANY _____

REMARKS

This is a retest. The first test had a similar point alignment with an absolute potential of 1650 MCFPD.

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.