NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea

Initial ____ Annual ____ Special XX Date of Test 4-8/4-12-57

Company Skelly Oil Company Lease Cooper Well No. 3

Unit N Sec. 12 Twp. 24 Rge. 36 Purchaser El Paso Natural Gas Co.

Casing 7" Wt. 20.0 I.D. ____ Set at 2845' Perf. ____ To ____

Tubing None Wt. ____ I.D. ____ Set at ____ Perf. ____ To ____

Gas Pay: From 2968 To 3210' L 2845 xG 0.645 -GL 1835 Bar.Press. 13.2

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

Date of Completion: 3-26-49 Packer ____ Reservoir Temp. ____

OBSERVED DATA

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

No.	Flow Data: (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								600		
1.	4	1.000	588	6.86	103			589		72
2.	4	1.000	583	14.06	102			584		24
3.	4	1.000	580	18.49	101			581		24
4.	4	1.000	565	51.84	95			569		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.	6.135	63.74		0.9610	0.9645	1.042	378
2.	6.135	91.55		0.9618	0.9645	1.042	544
3.	6.135	104.71		0.9627	0.9645	1.042	621
4.	6.135	165.90		0.9680	0.9645	1.048	993
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas 0.645
Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____
F_c 0.4682 $(1-e^{-s})$ 0.119 P_c 613.2 P_c^2 376.0

No.	P_w 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	$\frac{P_w}{P_c}$
1.	602.2	362.6	0.18	0.03	0.004	362.6	13.4		
2.	597.2	356.6	0.25	0.06	0.007	356.6	19.4		
3.	596.2	355.5	0.29	0.08	0.010	355.5	20.5		
4.	582.2	339.0	0.46	0.21	0.025	339.0	37.0		
5.									

Absolute Potential: 8,750 MCFPD; n 0.946
COMPANY Skelly Oil Company
ADDRESS Box 38, Hobbs, New Mexico
AGENT and TITLE ____
WITNESSED ____
COMPANY ____

REMARKS

ELVIS A. UTZ
GAS ENGINEER

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.