NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Bennett Formation Yates County Lea

Initial ____ Annual X Special ____ Date of Test 6/13/56

Company Skelly Oil Co. Lease Van Etten Well No. 9

Unit L Sec. 9 Twp. 20S Rge. 37E Purchaser Southern Union Gas Co.

Casing 7" Wt. 20# I.D. 6.456 Set at 3531 Perf. 3220 To 3240

Tubing 2½" Wt. 6.5# I.D. 2.441 Set at 3766 Perf. 3761 To 3766

Gas Pay: From 3220 To 3747 L 3761 xG 0.654 =GL 2460 Bar.Press. 13.2

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

Date of Completion: ____ Packer ____ 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								916		72
1.	4"	1"	510	15	82			871		24
2.	"	1"	530	76	75			811		"
3.	"	1"	540	26	74			767		"
4.	"	3/8"	644	*	72			-		"
5.										

* No. 4 test was taken with a critical flow prover.

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	88.6	523.2	0.9795	0.9578	1.047	534
2.	"	203.2	543.2	0.9859	"	1.053	1239
3.	"	119.9	553.2	0.9868	"	1.054	~~1585~~ 1328
4.	3.039	-	657.2	0.9887	"	1.064	2012
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____
Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____
F_c 5.866 $(1-e^{-s})$ 0.156 P_c 929.2 P_c^2 863.4

No.	P_w / 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.	884.2	781.8	3.13	9.80	1.53	783.3	80.1	885.0	0.95
2.	824.2	679.3	7.27	52.85	8.24	687.5	175.9	829.2	0.89
3.	780.2	608.7	4.30	18.49	2.88	611.6	251.8	782.0	0.84
4.	-								
5.									

Absolute Potential: 24,700 MCFPD; n 1.0000

COMPANY Skelly Oil Co.

ADDRESS Box 38, Hobbs, N. M.

AGENT and TITLE (SIGNED) H. E. Aab Dist. Supt.

WITNESSED None

COMPANY ____

REMARKS

Poor point alignment so a slope of 1.0 was drawn through the point representing the highest flow rate.

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.