

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Bumont Formation Queen County Lea

Initial I Annual _____ Special _____ Date of Test 6/17/56

Company Skelly Oil Co. Lease Mexico wyo Well No. 1

Unit H Sec. 29 Twp. 19S Rge. 37E Purchaser Northern Natural Gas Co.

Casing 5 1/2" Wt. 14 I.D. 5.012 Set at 3660 Perf. 3/500' To 3624'

Tubing 2-3/8" Wt. 4.7 I.D. 1.995 Set at 3632 Perf. 3629 To 3632

Gas Pay: From 3500 To 3624 L 3629 xG 0.679 -GL 24.64 Bar.Press. 13.2

Producing Thru: Casing _____ Tubing I Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 8/15/54 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (PROVER) (CHOKE) (METER) Type Taps Pipe

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						977.5				72
1.	1"	2.00	451.8	9.3	50	879.5				23-3/4
2.	"	"	458.7	18.6	71	805.7				24
3.	"	"	457.5	25.8	56	738.4				24
4.	"	"	458.4	31.9	58	660.7				24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	29.92	65.76	465.0	1.0098	0.9400	1.056	1972
2.	"	93.69	471.9	0.9896	0.9400	1.048	2733
3.	"	110.20	470.7	1.0039	0.9400	1.054	3280
4.	"	126.44	471.6	1.0019	0.9400	1.054	3755
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

F_c 9.936 (1-e^{-s}) 0.156

Specific Gravity Separator Gas _____

Specific Gravity Flowing Fluid _____

P_c 990.7 P_c 981.5 x 10³

No.	P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w /P _c
1.	892.7	796.9	19.594	383.9	59.89	856.8	124.7	925.6	0.94
2.	818.9	670.6	27.155	737.4	115.03	785.6	195.9	886.3	0.90
3.	751.6	564.9	32.590	1062.1	165.69	730.6	250.9	854.7	0.87
4.	673.9	454.1	37.310	1392.0	217.15	671.3	310.2	819.3	0.83
5.									

Absolute Potential: 8400 MCFPD; n 0.69897

COMPANY Skelly Oil Co.

ADDRESS Box 38, Hobbs, N. M.

AGENT and TITLE J. E. Clark 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} = Supercompressibility 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 .