

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Emont Formation Queen County Lea
Initial _____ Annual X Special _____ Date of Test 7-23-56
Company Skelly Oil Co. Lease Mexico W Well No. 4
Unit H Sec. 2 Twp. 21S Rge. 35E Purchaser Northern Natural
Casing 5 1/2" Wt. 14.0# I.D. 5.012 Set at 3907 Perf. 3504 To 3630
Tubing 2-3/8" Wt. 4.7# I.D. 1.995 Set at 3898 Perf. _____ To _____
Gas Pay: From 3504 To 3630 L 3504 xG 0.675 -GL 2365 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: 4-1-55 Packer 3821 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								745.6		72-1/4
1.	4"	1.5"	483.7	4.3	97			651.8		23-3/4
2.	4"	1.5"	490.9	7.2	91			607.0		24
3.	4"	1.5"	491.3	10.8	77			559.2		23-3/4
4.	4"	1.5"	497.5	12.4	77			523.2		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.	15.26	46.23	496.9	0.9662	0.9427	1.043	670
2.	15.26	60.25	504.1	0.9715	0.9427	1.047	881 8791
3.	15.26	73.82	504.5	0.9840	0.9427	1.050	1097
4.	15.26	79.58	510.7	0.9840	0.9427	1.054	1187 11838
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 1.712 (1-e^{-s}) 0.150

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 758.8 P_c² 575.8 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.	665.0	442.2	1.147	1.316	0.1974	442.24	133.44	665.02	0.88
2.	620.2	384.6	1.508	2.275	0.3411	384.9	190.9	620.4	0.82
3.	572.4	327.6	1.878	3.527	0.5291	328.1	247.7	572.8	0.75
4.	536.4	287.7	2.032	4.129	0.6196	288.3	287.5	536.9	0.71
5.									

Absolute Potential: 1960 MCFPD; n 0.7230

COMPANY Skelly Oil Co.
ADDRESS P. O. Box 38, Hobbs, N. M.
AGENT and TITLE J. E. Cobb 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 .