

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Sumont Formation Iates County Lea
Initial Annual X Special _____ Date of Test 7-23-56
Company Skelly Oil Co. Lease Mexico Wm Well No. 1
Unit PX Sec. 2 Twp. 21S Rge. 35E Purchaser Northern Natural
Casing 7" Wt. 20# I.D. 6.331 Set at 3810' Perf. 3676' To 3782'
Tubing 2-3/8" Wt. 4.7# I.D. 1.995 Set at 3701 Perf. 3701' To 3704'
Gas Pay: From 3676 To 3701 L 3701 xG 0.675 -GL 24.98 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 6/17/54 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (Booster) (000000) (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										
1.	1"	1.50"	482.6	8.3	80			784.1		72-1/4
2.	1"	1.50"	489.6	11.6	79			633.3		23-3/4
3.	1"	1.50"	490.0	17.0	83			581.2		24
4.	1"	1.50"	497.6	16.2	79			506.2		23-3/4
5.								512.6		24

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	64.15	495.8	0.9813	0.9427	1.0481.047	948	949
2.	"	76.37	502.8	0.9822	0.9427	1.0501.049	1112	1133
3.	"	92.49	503.2	0.9786	0.9427	1.0491.048	1366	1374.5
4.	"	90.97	510.8	0.9822	0.9427	1.0541.050	1355	1374.6
5.								

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.936 (1-e^{-s}) 0.158
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 797.3 P_c² 635.7 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.	646.5	418.0	9.423	88.79	14.03	432.0	203.7	657.3	0.82
2.	594.4	353.3	11.257	126.72	20.02	373.3	263.4	611.0	0.77
3.	519.4	269.8	13.573	184.23	29.11	298.9	336.8	546.7	0.69
4.	525.8	276.5	13.443	181.25	28.64	305.1	330.8	552.4	0.69
5.				179.91	27.74	291.6			

Absolute Potential: 2260 MCFPD; n 0.7679
COMPANY Skelly Oil Co.
ADDRESS P. O. Box 38, Hobbs, N. M.
AGENT and TITLE J. E. Lab 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 casing, 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 .