

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Eumont Formation Queen County Lea
Initial I Annual _____ Special _____ Date of Test 6/17/56
Company Skelly Oil Co. Lease Monstate Well No. 5
Unit H Sec. 13 Twp. 19S Rge. 36E Purchaser Northern Natural
Casing 5 1/2" Wt. 17 I.D. 4.892 Set at 3570 Perf. _____ To _____
Tubing 2-3/8" Wt. 4.7 I.D. 1.995 Set at 3713 Perf. 3713 To 3717
Gas Pay: From 3570 To 3725 L 3713 xG 0.680 -GL 2525 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing I Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 8/31/53 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										
1.	4"	2.25"	450.4	6.9	74	1016.7				72 1/2
2.	"	"	459.3	14.8	67	931.3				24 1/2
3.	"	"	465.7	21.7	68	850.1				24
4.	"	"	463.1	33.0	69	774.6				23-3/4
5.						643.2				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.	40.53	1	56.56	0.9868	0.9393	1.050	2231
2.	"	83.62	472.5	0.9933	0.9393	1.052	3327
3.	"	101.95	478.9	0.9924	0.9393	1.054	4060
4.	"	125.37	476.3	0.9915	0.9393	1.054	4988
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.936 (1-e^{-s}) 0.159
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1039.9 P_c 1060.7 x 10³

No.	P _w 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.	944.5	892.1	22.167	491.4	78.13	970.2	90.5	985.0	0.96
2.	863.3	745.3	33.057	1092.8	173.76	919.7	141.6	958.7	0.93
3.	787.8	620.6	40.340	1627.3	258.74	879.3	181.4	937.7	0.91
4.	656.4	430.9	49.561	2456.3	390.55	821.5	239.2	906.4	0.88
5.									

Absolute Potential: 19,000 MCFPD; n 0.8686
COMPANY Skelly Oil Co.
ADDRESS Box 38, Hobbs, N. M.
AGENT and TITLE J. E. Cant 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} = 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 .