

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Jalmat Formation Yates County Lea

Initial _____ Annual _____ Special XX Date of Test 3-25/3-29-57

Company Skelly Oil Company Lease King "D" Well No. 1

Unit B Sec. 6 Twp. 23 Rge. 37 Purchaser El Paso Natural Gas Company

Casing 7" Wt. 20 # I.D. _____ Set at 2870' Perf. _____ To _____

Tubing _____ Wt. _____ I.D. _____ Set at _____ Perf. _____ To _____

Gas Pay: From 2950 To 3485 L 2870 xG 0.650 -GL 1866 Bar.Press. 13.2

Producing Thru: Casing XX Tubing _____ Type Well _____

Date of Completion: 7-23-50 Packer None Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. _____

OBSERVED DATA

Tested Through (~~ROCKY MOUNTAIN~~) (Meter) Type Taps _____

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	
SI								
1.	4	1.500	763	16.0	82			24
2.	4	1.500	745	22.1	68			24
3.	4	1.500	702	33.6	69			24
4.	4	1.500	680	41.0	68			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.	13.99	111.43		0.9795	0.9608	1.072	1,573
2.	13.99	129.40		0.9924	0.9608	1.077	1,859
3.	13.99	155.09		0.9915	0.9608	1.073	2,218
4.	13.99	168.48		0.9924	0.9608	1.069	2,402
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

F_c 0.4682 (1-e^{-S}) 0.120

Specific Gravity Separator Gas _____

Specific Gravity Flowing Fluid _____

P_c 877.2 P_c² 769.5

No.	$\frac{P_w}{P_t}$ (psia)	P _t ²	F _c Q	(F _c Q) ²	$\frac{(F_c Q)^2}{(1-e^{-S})}$	P _w ²	P _c ² -P _w ²	Cal. P _w	$\frac{P_w}{P_c}$
1.	781.2	610.3	7.36	54.17	6.5	616.8	152.7		
2.	768.2	590.1	8.70	75.69	9.1	599.2	170.3		
3.	726.2	527.4	10.38	107.74	12.9	540.3	229.2		
4.	705.2	497.3	11.25	126.56	15.2	512.5	257.0		
5.									

Absolute Potential: 4,950 MCFPD; n 0.665COMPANY Skelly Oil CompanyADDRESS Box 38, Hobbs, New Mexico

AGENT and TITLE _____

WITNESSED _____

COMPANY _____

REMARKS

ELVIS A. UTZ
GAS ENGINEER

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 .