

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Formation Dakota County San Juan
Initial X Annual _____ Special _____ Date of Test 12-12-61
Company Skelly Oil Company Lease Mexico-Fed "K" Well No. 1
Unit D Sec. 9 Twp. 28N Rge. 10W Purchaser _____
Casing 4 1/2" OD Wt. 11.6# I.D. 4.000 Set at 6492' Perf. 6243' To 6462'
Tubing 2-3/8" OD Wt. 4.7# I.D. 1.995 Set at 6429' Perf. 6429' open-ended To _____
Gas Pay: From 6243' To 6462' L 6429' xG .700 -GL 4500 Bar.Press. 12.0
Producing Thru: Casing _____ Tubing X Type Well Single - Gas
Single-Bradenhead-G. G. or G.O. Dual _____
Date of Completion: 12-14-61 Packer None Reservoir Temp. _____

OBSERVED DATA

Tested Through (11/1/61) (Choke) (11/1/61) Type Taps _____

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.	
1.		<u>3/4"</u>	<u>443</u>		<u>60</u>	<u>1955</u>	<u>1992</u>	<u>3 hours</u>
2.						<u>443</u>	<u>60</u>	
3.								
4.								
5.								

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	<u>12.3650</u>		<u>455</u>	<u>1.0000</u>	<u>.9258</u>	<u>1.058</u>	<u>5511</u>
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
P_c _____ (1-e^{-s})
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 2004 P_c 4016.0

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.						<u>990.0</u>	<u>3026</u>		<u>.4965</u>
2.									
3.									
4.									
5.									

Absolute Potential: 6814 MCFPD; n 0.75
COMPANY SKELLY OIL COMPANY
ADDRESS P. O. DRAWER 510, FARMINGTON, NEW MEXICO
AGENT and TITLE William Singley PRODUCTION ENGINEER
WITNESSED _____
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 .

