

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. b. working pressure (P_w).
MCF/day. @ 15.025 psia and 60° F.

P_{cs} = 24 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.

P_g = Gravity correction factor.

F_t = Flowing temperature correction factor.

F_{pc} = Supercompressibility Factor.

r = 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 .

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalnet Formation Yates County Lea AM 10 15
Initial _____ Annual _____ Special XX Date of Test 5-27/2-31-57
Company Skelly Oil Company Lease 801 Well No. 1
Unit D Sec. 16 Twp. 24 Rge. 37 Purchaser El Paso Natural Gas Company
Casing 7" Wt. 20.04 I.D. _____ Set at 3403' Perf. _____ To _____
Tubing 2" Wt. 4.74 I.D. _____ Set at 3290' Perf. _____ To _____
Gas Pay: From 2740' To 3290' L 2780 xG 0.645 -GL 1793 Bar.Press. 13.2
Producing Thru: Casing I Tubing _____ Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 3-10-51 Packer 3160' Reservoir Temp. _____

OBSERVED DATA

Tested Through (Packer) (Choke) (Meter)

Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	<u>(Proven)</u> (Line) Size	<u>(Choke)</u> (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI	<u>4</u>							<u>840</u>		
1.	<u>4</u>	<u>1.000</u>	<u>696</u>	<u>12.25</u>	<u>73</u>			<u>698</u>		<u>72</u>
2.	<u>4</u>	<u>1.000</u>	<u>636</u>	<u>22.56</u>	<u>73</u>			<u>640</u>		<u>24</u>
3.	<u>4</u>	<u>1.000</u>	<u>597</u>	<u>30.25</u>	<u>72</u>			<u>603</u>		<u>24</u>
4.	<u>4</u>	<u>1.000</u>	<u>584</u>	<u>31.36</u>	<u>72</u>			<u>589</u>		<u>24</u>
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.	<u>6.135</u>	<u>93.19</u>		<u>0.9877</u>	<u>0.9645</u>	<u>1.068</u>	<u>582</u>
2.	<u>6.135</u>	<u>121.01</u>		<u>0.9877</u>	<u>0.9645</u>	<u>1.061</u>	<u>750</u>
3.	<u>6.135</u>	<u>135.84</u>		<u>0.9887</u>	<u>0.9645</u>	<u>1.057</u>	<u>840</u>
4.	<u>6.135</u>	<u>136.83</u>		<u>0.9887</u>	<u>0.9645</u>	<u>1.055</u>	<u>845</u>
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 0.707 (1-e^{-S}) 0.116

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 853.2 P_c 728.0

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>711.2</u>	<u>505.8</u>	<u>0.41</u>	<u>0.17</u>	<u>0.02</u>	<u>505.8</u>	<u>222.2</u>		
2.	<u>653.2</u>	<u>426.7</u>	<u>0.53</u>	<u>0.28</u>	<u>0.03</u>	<u>426.7</u>	<u>301.3</u>		
3.	<u>616.2</u>	<u>379.7</u>	<u>0.59</u>	<u>0.35</u>	<u>0.04</u>	<u>379.7</u>	<u>348.3</u>		
4.	<u>602.2</u>	<u>362.6</u>	<u>0.60</u>	<u>0.36</u>	<u>0.04</u>	<u>362.6</u>	<u>365.4</u>		
5.									

Absolute Potential: 1.550 MCFPD; n 0.827COMPANY Skelly Oil CompanyADDRESS Box 34, Hobbs, New Mexico

AGENT and TITLE _____

WITNESSED _____

COMPANY _____

REMARKS _____

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P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia

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(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.

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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 .

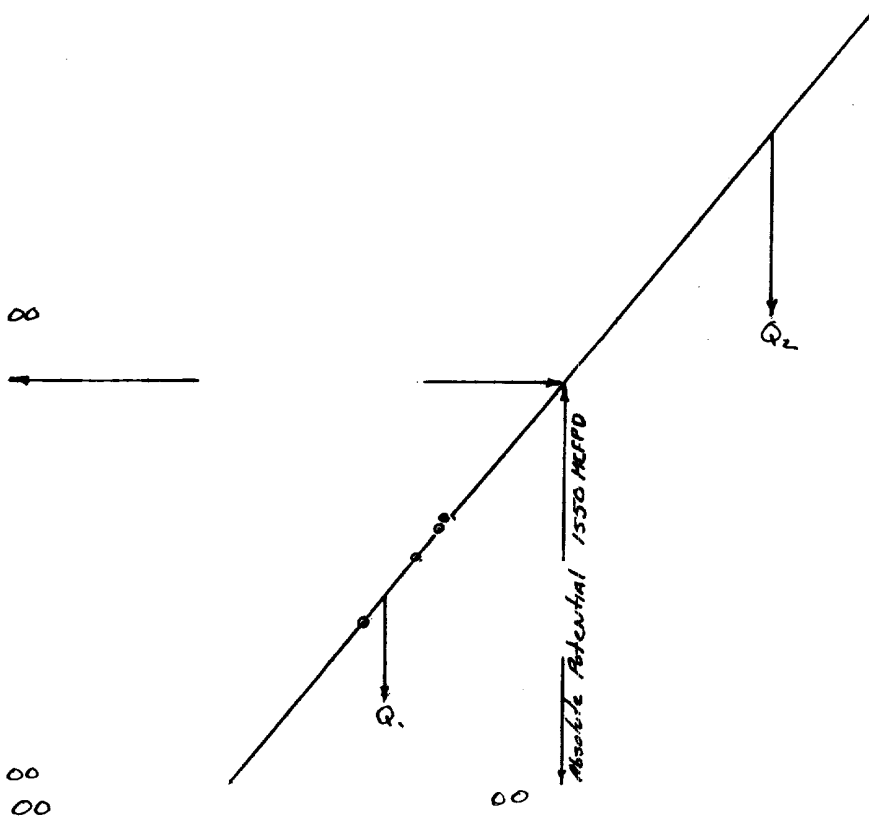
SKELLY OIL CO.
 Mexico "G" #1
 16-24-37 Lea, N.M.

$$Q_2 = 4300; \text{Log} = 3.633468$$

$$Q_1 = 640; \text{Log} = 2.806180$$

$$\frac{0.827288}{0.827288} = \text{slope } n$$

$P_c^2 - P_w^2$ (psi-sq)



Q - MCFPD - 15.025 PSIA 60°F