

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

ELVIS A. UTZ
OIL ENGINEER 07

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Bumont Formation 1956 OCT 10 PM 3:06
Tates - Seven Rivers County LeeInitial _____ Annual _____ Special x Date of Test 8-13 to 8-17-56Company Stanolind Oil and Gas Company Lease State "I" Well No. 2Unit C Sec. 22 Twp. 21 S Rge. 36 E Purchaser El Paso Natural Gas CompanyCasing 7" Wt. 24 I.D. _____ Set at 3806 Perf. 2910 To 3645Tubing 2" Wt. 4.7 I.D. 1.995 Set at 3790 Perf. _____ To _____Gas Pay: From 2910 To 3645 L 2910 * xG .660 -GL 1921 Bar.Press. 13.2Producing Thru: Casing x Tubing _____ Type Well G. O. Dual

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 8-23-55 Packer 3790 Reservoir Temp. _____

OBSERVED DATA

Tested Through (Pressure) (Strain) (Meter) Type Taps Flange

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Strain) (Line) Size	(Strain) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								<u>1069</u>		<u>72</u>
1.	<u>A</u>	<u>1.500</u>	<u>569</u>	<u>3.32</u>	<u>86</u>			<u>1042</u>		<u>24</u>
2.	<u>A</u>	<u>1.500</u>	<u>582</u>	<u>4.62</u>	<u>83</u>			<u>1023</u>		<u>24</u>
3.	<u>A</u>	<u>1.500</u>	<u>585</u>	<u>6.452</u>	<u>80</u>			<u>994</u>		<u>24</u>
4.	<u>A</u>	<u>1.500</u>	<u>572</u>	<u>9.52</u>	<u>76</u>			<u>912*</u>		<u>24</u>
5.										

*Unable to get 30% draw down - maximum capacity of meter run.

FLOW CALCULATIONS

No.	Coefficient <u>n_L</u> (24-Hour)	$\sqrt{h_{wP_f}}$	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>13.99</u>	<u>79.54</u>		<u>.9759</u>	<u>.9535</u>	<u>1.052</u>	<u>1090</u>
2.	<u>13.99</u>	<u>112.21</u>		<u>.9786</u>	<u>.9535</u>	<u>1.053</u>	<u>1343</u>
3.	<u>13.99</u>	<u>137.73</u>		<u>.9813</u>	<u>.9535</u>	<u>1.053</u>	<u>2174</u>
4.	<u>13.99</u>	<u>223.82</u>		<u>.9850</u>	<u>.9535</u>	<u>1.056</u>	<u>3133</u>
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c .740 (1-e^{-S}) .124Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1082 P_c² 1171

No.	Flow 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>1034.2</u>	<u>1113.4</u>	<u>.806</u>	<u>.65</u>	<u>.08</u>	<u>1113.5</u>	<u>97.5</u>		
2.	<u>1034.2</u>	<u>1073.7</u>	<u>1.14</u>	<u>1.30</u>	<u>.16</u>	<u>1073.8</u>	<u>97.2</u>		
3.	<u>1007.2</u>	<u>1014.5</u>	<u>1.61</u>	<u>2.59</u>	<u>.32</u>	<u>1014.5</u>	<u>156.5</u>		
4.	<u>925.2</u>	<u>855.9</u>	<u>2.32</u>	<u>5.38</u>	<u>.667</u>	<u>856.6</u>	<u>314.4</u>		
5.									

Absolute Potential: 6.750 MCFPD; n .575COMPANY Stanolind Oil and Gas CompanyADDRESS Box 68 - Hobbs, New MexicoAGENT and TITLE _____ FIELD ENGINEER Harold C. McPhail

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} = 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 .