

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE 000

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Jalnet Formation Iates - Sr. County Lee
Initial X Annual _____ Special X Date of Test 10-20-56
Company Sinclair Oil & Gas Company Lease State 197A Well No. 2
Unit J Sec. 9 Twp. 22S Rge. 3E Purchaser El Paso Natural Gas Company
Casing 7" Wt. 20# I.D. _____ Set at 3849 Perf. 3338 To 3142
Tubing 2 3/8" Wt. 65# I.D. _____ Set at 3822 Perf. _____ To _____
Gas Pay: From 3142 To 3338 L 3142 xG .670 -GL 2105 Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well G. O. Dual
Date of Completion: 4-18-55 Packer 3672 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 108

OBSERVED DATA

Tested Through (~~154.433~~) (~~20.000~~) (Meter)Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(154.433) (Line) Size	(20.000) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								<u>717</u>	<u>60</u>	<u>72</u>
1.	<u>4"</u>	<u>.750</u>	<u>361</u>	<u>16</u>	<u>67</u>			<u>654</u>	<u>60</u>	<u>24</u>
2.	<u>4"</u>	<u>.750</u>	<u>377</u>	<u>22.1</u>	<u>66</u>			<u>649</u>	<u>60</u>	<u>24</u>
3.	<u>4"</u>	<u>.750</u>	<u>370</u>	<u>34.2</u>	<u>57</u>			<u>628</u>	<u>60</u>	<u>24</u>
4.	<u>4"</u>	<u>.750</u>	<u>371</u>	<u>67.2</u>	<u>65</u>			<u>589</u>	<u>60</u>	<u>24</u>
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>3.435</u>	<u>95.83</u>	<u>574.2</u>	<u>.9933</u>	<u>.9463</u>	<u>1.062</u>	<u>328</u>
2.	<u>3.435</u>	<u>114.16</u>	<u>590.2</u>	<u>.9943</u>	<u>.9463</u>	<u>1.062</u>	<u>392</u>
3.	<u>3.435</u>	<u>141.23</u>	<u>583.2</u>	<u>1.0029</u>	<u>.9463</u>	<u>1.068</u>	<u>492</u>
4.	<u>3.435</u>	<u>198.16</u>	<u>584.2</u>	<u>.9952</u>	<u>.9463</u>	<u>1.062</u>	<u>682</u>
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c .707 (1-e^{-s}) .135

Specific Gravity Separator Gas .670
Specific Gravity Flowing Fluid _____
P_c 730.2 P_c² 533.2

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>687.2</u>	<u>472.2</u>	<u>.232</u>	<u>.05</u>	<u>.006</u>	<u>473.206</u>	<u>88.0</u>	<u>687.2</u>	<u>.97</u>
2.	<u>662.2</u>	<u>438.5</u>	<u>.277</u>	<u>.08</u>	<u>.011</u>	<u>438.311</u>	<u>94.7</u>	<u>662.2</u>	<u>.91</u>
3.	<u>641.2</u>	<u>411.1</u>	<u>.348</u>	<u>.12</u>	<u>.016</u>	<u>411.116</u>	<u>122.1</u>	<u>641.2</u>	<u>.88</u>
4.	<u>602.2</u>	<u>362.6</u>	<u>.482</u>	<u>.23</u>	<u>.031</u>	<u>362.631</u>	<u>170.6</u>	<u>602.2</u>	<u>.82</u>
5.									

Absolute Potential: 2.050 MCFPD; n .96
COMPANY Sinclair Oil & Gas Company
ADDRESS 520 East Broadway, Hobbs, New Mexico
AGENT and TITLE R. L. Harned Gas Analyst
WITNESSED Smith & Klumer
COMPANY El Paso Natural Gas Company

REMARKS

UNABLE TO OBTAIN 30% DRAW DOWN DUE TO SIZE OF CHOKES IN METER RUN

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 .