

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Unders. (Mesa Queen) Formation Queen County Lea
Initial X Annual _____ Special _____ Date of Test August 17, 1965
Company Robert A. Dean Lease Pan American 7 State Well No. 1
Unit K Sec. 7 Twp. 16 S Rge. 32 E Purchaser Not Connected
Casing 2 7/8 Wt. 6.50 I.D. 2.441 Set at 3374 Perf. 3336 To 3346
Tubing none Wt. _____ I.D. _____ Set at _____ Perf. _____ To _____
Gas Pay: From 3336 To 3346 L 3336 xG .845 -GL 2819 Bar.Press. 13.2
Producing Thru: Casing X Tubing none Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 8/65 Packer none Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (~~Choke~~) (~~Motor~~)

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.	Press. psig	Temp. °F.	
SI						<u>Choke Size</u>		<u>953</u>		<u>48</u>
1.	<u>2"</u>	<u>3/8</u>	<u>166</u>		<u>41</u>	<u>10/64</u>		<u>896</u>		<u>1</u>
2.	<u>2"</u>	<u>3/8</u>	<u>270</u>		<u>49</u>	<u>12/64</u>		<u>842</u>		<u>1</u>
3.	<u>2"</u>	<u>3/8</u>	<u>456</u>		<u>60</u>	<u>16/64</u>		<u>731</u>		<u>1</u>
4.	<u>2"</u>	<u>3/8</u>	<u>596</u>		<u>70</u>	<u>36/64</u>		<u>610</u>		<u>1</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>3.0691</u>		<u>179.2</u>	<u>1.0188</u>	<u>.8426</u>	<u>1.035</u>	<u>489</u>
2.	<u>3.0691</u>		<u>283.2</u>	<u>1.0107</u>	<u>.8426</u>	<u>1.054</u>	<u>780</u>
3.	<u>3.0691</u>		<u>469.2</u>	<u>1.0000</u>	<u>.8426</u>	<u>1.093</u>	<u>1326</u>
4.	<u>3.0691</u>		<u>609.2</u>	<u>0.9905</u>	<u>.8426</u>	<u>1.106</u>	<u>1726</u>
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
P_c 5.866 (1-e^{-s}) 0.176

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 966.2 P_c² 933.5

No.	P_t 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>909.2</u>	<u>826.6</u>	<u>2.868</u>	<u>8.23</u>	<u>1.45</u>	<u>828.1</u>	<u>105.4</u>	<u>910.0</u>	<u>.94</u>
2.	<u>855.2</u>	<u>731.4</u>	<u>4.575</u>	<u>20.93</u>	<u>3.68</u>	<u>735.1</u>	<u>198.4</u>	<u>857.4</u>	<u>.89</u>
3.	<u>744.2</u>	<u>553.8</u>	<u>7.778</u>	<u>60.50</u>	<u>10.65</u>	<u>564.5</u>	<u>369.0</u>	<u>751.3</u>	<u>.78</u>
4.	<u>623.2</u>	<u>388.4</u>	<u>10.125</u>	<u>102.52</u>	<u>18.04</u>	<u>406.4</u>	<u>527.1</u>	<u>637.5</u>	<u>.66</u>
5.									

Absolute Potential: 2700 MCFPD; n 0.78

COMPANY Robert A. Dean
ADDRESS c/o Oil Reports & Gas Services, Box 763, Hobbs, New Mexico
AGENT and TITLE H. R. Smith Independent Gas Tester
WITNESSED None
COMPANY _____

REMARKS

* Gravity exceeds highest in New Mexico tables. Factors were taken from Texas RRC Manual.

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 .