

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Langlie Mattix Formation Queen County Lea
Initial _____ Annual _____ Special x Date of Test 2-11 to 2-15-57
Company Amerada Petroleum Corporation Lease Winberly Well No. 2
Unit ✓ Sec. 25 Twp. 258 Rge. 37E Purchaser El Paso Natural Gas
Casing 7" Wt. _____ I.D. _____ Set at 2900' Perf. _____ To _____
Tubing 2" Wt. 4.7# I.D. 1.995 Set at 3230 Perf. 3226 To 3229'
Gas Pay: From 2958 To 3229 L 3230 xG .655 -GL 2115 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing x Type Well Single
Date of Completion: 8-25-52 Packer 2708 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 87°F

OBSERVED DATA

Tested Through ~~XXXXXXXXXXXX~~ (Meter) Type Taps Flange

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.
	(XXXXXX) (Line) Size	(XXXXXX) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	
SI						<u>720</u>		<u>72</u>
1.	<u>4"</u>	<u>1.00"</u>	<u>597</u>	<u>14.44</u>	<u>73</u>	<u>669</u>		<u>24</u>
2.	<u>4"</u>	<u>1.00"</u>	<u>547</u>	<u>33.06</u>	<u>72</u>	<u>643</u>		<u>24</u>
3.	<u>4"</u>	<u>1.00"</u>	<u>538</u>	<u>44.89</u>	<u>70</u>	<u>623</u>		<u>24</u>
4.	<u>4"</u>	<u>1.00"</u>	<u>592</u>	<u>46.92</u>	<u>70</u>	<u>616</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>89.92</u>	<u>560.2</u>	<u>.9859</u>	<u>.9571</u>	<u>1.053</u>	<u>549</u>
2.	<u>6.135</u>	<u>136.07</u>	<u>560.2</u>	<u>.9887</u>	<u>"</u>	<u>1.054</u>	<u>834</u>
3.	<u>6.135</u>	<u>160.10</u>	<u>571.2</u>	<u>.9905</u>	<u>"</u>	<u>1.057</u>	<u>984</u>
4.	<u>6.135</u>	<u>168.49</u>	<u>605.2</u>	<u>.9905</u>	<u>"</u>	<u>1.061</u>	<u>1040</u>
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.936 (1-e^{-s}) .135
Specific Gravity Separator Gas .655
Specific Gravity Flowing Fluid _____
P_c 733.2 P_c 537.6

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>682.2</u>	<u>465.4</u>	<u>5.45</u>	<u>29.70</u>	<u>4.01</u>	<u>469.4</u>	<u>68.2</u>	<u>663^w</u>	<u>.93</u>
2.	<u>656.2</u>	<u>430.6</u>	<u>8.29</u>	<u>68.72</u>	<u>9.28</u>	<u>439.9</u>	<u>97.7</u>	<u>664</u>	<u>.91</u>
3.	<u>636.2</u>	<u>404.8</u>	<u>9.78</u>	<u>95.65</u>	<u>12.91</u>	<u>417.7</u>	<u>119.9</u>	<u>646</u>	<u>.88</u>
4.	<u>629.2</u>	<u>395.9</u>	<u>10.33</u>	<u>106.71</u>	<u>14.41</u>	<u>410.3</u>	<u>127.3</u>	<u>641</u>	<u>.87</u>
5.									

Absolute Potential: 4200 MCFPD; n .97
COMPANY Amerada Petroleum Corporation
ADDRESS Drawer D - Monument, New Mexico
AGENT and TITLE W.G. Abbott - District Engineer *W.G. Abbott*
WITNESSED E.G. Smith
COMPANY El Paso Natural Gas

REMARKS

ELVIS A. U.
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 .