

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Eumont Formation Queen County Lea
Initial X Annual _____ Special _____ Date of Test 8-26/8-30-57
Company Continental Oil Company Lease State J-2 Well No. 9
Unit G Sec. 2 Twp. 22 Rge. 36 Purchaser El Paso Natural Gas Company
Casing 5 1/2 Wt. 17 I.D. 4.892 Set at 3712 Perf. 3432 To 3745
Tubing 2 3/8 Wt. 4.70 I.D. 1.995 Set at 3796 Perf. _____ To _____
Gas Pay: From 3432 To 3745 L 3432 xG .690 -GL 2368 Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well G. O. Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 2-23-57 Packer 3650 Reservoir Temp. 90°

OBSERVED DATA

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

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Pressure) (Line) Size	(Stroke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								<u>1244</u>		<u>72</u>
1.	<u>4"</u>	<u>1.250</u>	<u>565</u>	<u>9.6</u>	<u>88</u>			<u>1196</u>		<u>24</u>
2.	<u>4"</u>	<u>1.250</u>	<u>576</u>	<u>14.44</u>	<u>84</u>			<u>1176</u>		<u>24</u>
3.	<u>4"</u>	<u>1.250</u>	<u>582</u>	<u>26.0</u>	<u>79</u>			<u>1133</u>		<u>24</u>
4.	<u>4"</u>	<u>1.250</u>	<u>584</u>	<u>34.8</u>	<u>77</u>			<u>1087</u>		<u>24</u>
5.										

FLOW CALCULATIONS

No.	Coefficient Flg. (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>9.643</u>	<u>74.53</u>		<u>.9741</u>	<u>.9325</u>	<u>1.057</u>	<u>690</u>
2.	<u>9.643</u>	<u>92.22</u>		<u>.9777</u>	<u>.9325</u>	<u>1.058</u>	<u>857</u>
3.	<u>9.643</u>	<u>124.40</u>		<u>.9822</u>	<u>.9325</u>	<u>1.064</u>	<u>1170</u>
4.	<u>9.643</u>	<u>144.16</u>		<u>.9840</u>	<u>.9325</u>	<u>1.064</u>	<u>1360</u>
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 1.812 (1-e^{-s}) 0.150
Specific Gravity Separator Gas .690
Specific Gravity Flowing Fluid _____
P_c 1257.2 P_c² 1580.6

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>1209.2</u>	<u>1462.2</u>	<u>1.25</u>	<u>1.56</u>	<u>.23</u>	<u>1462.4</u>	<u>118.2</u>	<u>1209.3</u>	<u>96.18</u>
2.	<u>1189.2</u>	<u>1414.2</u>	<u>1.55</u>	<u>2.40</u>	<u>.36</u>	<u>1414.6</u>	<u>166.0</u>	<u>1189.4</u>	<u>94.60</u>
3.	<u>1146.2</u>	<u>1313.8</u>	<u>2.12</u>	<u>4.50</u>	<u>.70</u>	<u>1314.5</u>	<u>266.1</u>	<u>1146.5</u>	<u>91.19</u>
4.	<u>1100.2</u>	<u>1210.4</u>	<u>2.50</u>	<u>6.25</u>	<u>.94</u>	<u>1211.3</u>	<u>369.3</u>	<u>1100.6</u>	<u>87.54</u>
5.									

Absolute Potential: 3875 MCFPD; n .617
COMPANY Continental Oil Company
ADDRESS Box 82, Eumont, New Mexico
AGENT and TITLE [Signature]
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 .