

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Blinbry (gas) Formation Blinbry County Lea

Initial X Annual _____ Special _____ Date of Test 1-5-58

Company Tidewater Oil Company Lease State "Q" Well No. 1

Unit N Sec. 36 Twp. 21S Rge. 37E Purchaser El Paso Natural Gas Co.

Casing 5-1/2 Wt. 15.5 I.D. _____ Set at 6530 Perf. 5520 To 5560

Tubing 2-3/8 Wt. 4.7 I.D. _____ Set at 6218 NOT sleeve PAV. 5600 To _____

Gas Pay: From 5520 To 5560 L 5520 xMix .905 -GL 4995 Bar.Press. 13.2

Producing Thru: Casing X Tubing _____ Type Well G/G dual

Date of/Completion: 11-15-58 Packer 6010 Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (CHOKE) VALVE Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) <u>(CHOKE)</u> Size	(Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								<u>1623</u>		<u>24</u>
1.	<u>2</u>	<u>1.500</u>	<u>24</u>		<u>43</u>			<u>1157</u>		<u>3</u>
2.	<u>2</u>	<u>1.500</u>	<u>27</u>		<u>39</u>			<u>973</u>		<u>3</u>
3.	<u>2</u>	<u>1.500</u>	<u>30</u>		<u>22</u>			<u>810</u>		<u>3</u>
4.										
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>54.3653</u> ✓		<u>37.2</u>	<u>1.0147</u> ✓	<u>.9271</u> ✓	<u>1.000</u> ✓	<u>1,902</u> ✓
2.	<u>54.3653</u>		<u>40.2</u>	<u>1.0208</u> ✓	<u>.9271</u>	<u>1.000</u> ✓	<u>2,067</u> ✓
3.	<u>54.3653</u>		<u>43.2</u>	<u>1.0387</u> ✓	<u>.9271</u>	<u>1.000</u> ✓	<u>2,262</u> ✓
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 12.172 cf/bbl.

Gravity of Liquid Hydrocarbons 52 deg.

F_c 1.793 ✓ (1-e^{-S}) 0.291 ✓

Specific Gravity Separator Gas 0.625

Specific Gravity Flowing Fluid .7711

P_c 1638.2 / P_c 2683.7 ✓

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>1170.2</u>	<u>1369.4</u>	<u>35.134</u>	<u>1.233</u>	<u>3.4</u>	<u>1369.4</u>	<u>1369.4</u>	<u>1369.4</u>	<u>1.0</u>
2.	<u>986.2</u>	<u>972.6</u>	<u>37.134</u>	<u>1.376</u>	<u>4.0</u>	<u>972.6</u>	<u>1710.7</u>	<u>1269.1</u>	
3.	<u>823.2</u>	<u>677.7</u>	<u>40.6406</u>	<u>1.648</u>	<u>4.179</u>	<u>677.7</u>	<u>2006.3</u>	<u>1001.2</u>	
4.									
5.									

Absolute Potential: 2,700 MCFPD; n .499

COMPANY El Paso Natural Gas

ADDRESS Jal, New Mexico

AGENT and TITLE R. A. Mikel & B. G. Boaz

WITNESSED J. W. Smith

COMPANY Tidewater Oil Company

REMARKS

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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 .

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