

NOV 20 AM 10:45
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea
Initial _____ Annual _____ Special X Date of Test 11-9-59
Company Jal Oil Company, Inc. Lease Harner Well No. 2
Unit J Sec. 20 Twp. 25 Rge. 37 Purchaser El Paso Natural Gas Co.
Casing 7 Wt. 23.0 I.D. _____ Set at 3444 Perf. 2670 To 3170
Tubing 2 1/2 Wt. 6.5 I.D. _____ Set at 3300 Perf. 3298 To _____
Gas Pay: From 2670 To 3274 L 3170 xG .684 -GL 1826 Bar.Press. 13.2
Producing Thru: Casing X Tubing X Type Well G. O. Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 10-21-59 Packer none Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

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>382</u>		<u>72</u>
1.	<u>2</u>	<u>.1875</u>	<u>364</u>		<u>75</u>			<u>364</u>		<u>3</u>
2.	<u>2</u>	<u>.218</u>	<u>356</u>		<u>68</u>			<u>356</u>		<u>3</u>
3.	<u>2</u>	<u>.3125</u>	<u>319</u>		<u>64</u>			<u>319</u>		<u>3</u>
4.	<u>2</u>	<u>.500</u>	<u>202</u>		<u>64</u>			<u>202</u>		<u>3</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>.7851</u>		<u>377.2</u>	<u>.9859</u>	<u>.9366</u>	<u>1.038</u>	<u>284</u>
2.	<u>1.0834</u>		<u>369.2</u>	<u>.9924</u>	<u>.9366</u>	<u>1.040</u>	<u>387</u>
3.	<u>2.1577</u>		<u>332.2</u>	<u>.9962</u>	<u>.9366</u>	<u>1.036</u>	<u>693</u>
4.	<u>5.5233</u>		<u>215.2</u>	<u>.9962</u>	<u>.9366</u>	<u>1.023</u>	<u>1135</u>
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio dry cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c .865 (1-e^{-s}) .139

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 395.2 P_c² 156.2

unable to obtain 24 hr. mint due to closeness of residence.

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>377.2</u>	<u>142.3</u>	<u>.25</u>	<u>.06</u>	<u>.007</u>	<u>142.3</u>	<u>13.9</u>	<u>377.2</u>	<u>.95</u>
2.	<u>369.2</u>	<u>136.3</u>	<u>.33</u>	<u>.11</u>	<u>.013</u>	<u>136.3</u>	<u>19.9</u>	<u>369.2</u>	<u>.94</u>
3.	<u>332.2</u>	<u>110.4</u>	<u>.60</u>	<u>.36</u>	<u>.042</u>	<u>110.4</u>	<u>45.8</u>	<u>332.2</u>	<u>.98</u>
4.	<u>215.2</u>	<u>46.3</u>	<u>.98</u>	<u>.96</u>	<u>.113</u>	<u>46.3</u>	<u>109.9</u>	<u>215.2</u>	<u>.12</u>
5.									

Potential: 1,750 MCFPD; n .754

COMPANY Jal Oil Company, Inc.
ADDRESS Drawer 2, Jal, New Mexico
AGENT and TITLE Production Superintendent
WITNESSED L. D. Southern
COMPANY El Paso Natural Gas Co.

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 .