

NEW MEXICO OIL CONSERVATION COMMISSION

Oct 21 3 09 PM '63 Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Blinebry Formation Blinebry County Lea
Initial _____ Annual _____ Special X Date of Test 7-26-63
Company Tidewater Oil Co. Lease Sarkeys Well No. 3
Unit C Sec. 26 Twp. 21 Rge. 37 Purchaser El Paso Natural Gas Co.
Casing 5 1/2 Wt. 17.0 I.D. _____ Set at 6553 Perf. 5550 To 5620
Tubing 2 Wt. 4.7 I.D. _____ Set at 6557 Perf. _____ To _____
Gas Pay: From 5550 To 5620 L 5550 xG Mix..706 -GL 3918 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: _____ Packer _____ 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>1426</u>		<u>72</u>
1.	<u>4</u>	<u>1.750</u>	<u>534</u>	<u>1.00</u>	<u>93</u>			<u>1006</u>		<u>24</u>
2.	<u>4</u>	<u>1.750</u>	<u>551</u>	<u>13.69</u>	<u>75</u>			<u>952</u>		<u>24</u>
3.	<u>4</u>	<u>1.750</u>	<u>557</u>	<u>28.62</u>	<u>75</u>			<u>821</u>		<u>24</u>
4.	<u>4</u>	<u>1.750</u>	<u>547</u>	<u>37.82</u>	<u>78</u>			<u>713</u>		<u>24</u>
5.	<u>Poor point alignment. A slope of 1.000 was drawn thru the point corresponding to the highest rate of flow.</u>									

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>19.27</u>	<u>23.39</u>		<u>.9697</u>	<u>.9318</u>	<u>1.051</u>	<u>428.0</u>
2.	<u>19.27</u>	<u>27.89</u>		<u>.9859</u>	<u>.93.8</u>	<u>1.060</u>	<u>1,649</u>
3.	<u>19.27</u>	<u>127.75</u>		<u>.9859</u>	<u>.9318</u>	<u>1.060</u>	<u>2,397</u>
4.	<u>19.27</u>	<u>145.56</u>		<u>.9831</u>	<u>.9318</u>	<u>1.057</u>	<u>2,713</u>
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 172,365 cf/bbl.
Gravity of Liquid Hydrocarbons 57.9 deg.
F_c 1,812 (1-e^{-s}) .238
Specific Gravity Separator Gas .691
Specific Gravity Flowing Fluid 17471
P_c 1439.2 P_c 2071.3

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>1019.2</u>	<u>1038.8</u>	<u>.7755</u>	<u>.6014</u>	<u>.142</u>	<u>1038.9</u>	<u>1032.4</u>	<u>1019.3</u>	<u>1019.2</u>
2.	<u>965.2</u>	<u>931.6</u>	<u>2.988</u>	<u>8.928</u>	<u>3.11</u>	<u>935.7</u>	<u>1137.6</u>	<u>965.2</u>	<u>965.2</u>
3.	<u>834.2</u>	<u>695.9</u>	<u>1375.4</u>	<u>18.88</u>	<u>4.45</u>	<u>700.3</u>	<u>1371.0</u>	<u>834.2</u>	<u>834.2</u>
4.	<u>728.2</u>	<u>530.3</u>	<u>1541.0</u>	<u>24.20</u>	<u>5.71</u>	<u>536.0</u>	<u>1535.3</u>	<u>728.2</u>	<u>728.2</u>
5.									

Absolute Potential: 3,700 MCFPD; n 1.000
COMPANY Tidewater Oil Co.
ADDRESS Box 249, Hobbs, New Mexico
AGENT and TITLE C. L. Wade, Area Supt.
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} = 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 .

Elevator 111 Co.
 Barkeys No. 1
 Dec. 26, 1963
 Los Angeles Co. M.
 July 24, 1963

