

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Salt Lake
Pool Pennsylvania-South Formation Morrow 1900 S County Lea 53
Initial x Annual _____ Special _____ Date of Test May 2, 1960
Company TEXACO Inc. Lease St. of N. M. "CH" Well No. 1LT
Unit H Sec. 36 Twp. 20-S Rge. 32-E Purchaser Southern Union Gas Co.
Casing 7 Wt. _____ I.D. _____ Set at 11,422 Perf. 13,242 To 13,307
5 Wt. _____ I.D. _____ Set at 14,724 Perf. 13,242 To 13,307
Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 13,011 Perf. 13,008 To 13,011
Gas Pay: From 13,242 To 13,307 L 13,008 xG .6964 -GL 9054 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing x Type Well Gas-Gas Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: April 12, 1960 ker 12,999 Reservoir Temp. _____

OBSERVED DATA

Tested Through (Gauge) (Gauge) (Meter)Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						<u>4134</u>				<u>72</u>
1.	<u>2</u>	<u>1.250</u>	<u>456</u>	<u>8</u>	<u>92</u>	<u>3495</u>	<u>76</u>			<u>4</u>
2.	<u>2</u>	<u>1.250</u>	<u>505</u>	<u>23</u>	<u>88</u>	<u>3195</u>	<u>71</u>			<u>4</u>
3.	<u>2</u>	<u>1.250</u>	<u>665</u>	<u>43</u>	<u>91</u>	<u>2461</u>	<u>68</u>			<u>4</u>
4.	<u>2</u>	<u>1.250</u>	<u>775</u>	<u>66</u>	<u>101</u>	<u>1671</u>	<u>68</u>			<u>4</u>
5.	<u>2</u>	<u>1.250</u>	<u>770</u>	<u>28</u>	<u>100</u>	<u>2111</u>	<u>68</u>			<u>28</u>

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>10.48</u>	<u>61.27</u>	<u>469.2</u>	<u>.9706</u>	<u>.9697</u>	<u>1.034</u>	<u>624.9</u>
2.	<u>10.48</u>	<u>109.17</u>	<u>518.2</u>	<u>.9741</u>	<u>.9697</u>	<u>1.042</u>	<u>1126.1</u>
3.	<u>10.48</u>	<u>170.77</u>	<u>678.2</u>	<u>.9715</u>	<u>.9697</u>	<u>1.053</u>	<u>1775.3</u>
4.	<u>10.48</u>	<u>228.09</u>	<u>788.2</u>	<u>.9627</u>	<u>.9697</u>	<u>1.053</u>	<u>2349.6</u>
5.	<u>10.48</u>	<u>148.09</u>	<u>783.2</u>	<u>.9636</u>	<u>.9697</u>	<u>1.053</u>	<u>1527.0</u>

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 41.940 cf/bbl.
Gravity of Liquid Hydrocarbons 50.0 deg.
F_c 9.936 (1-e^{-s}) .464

Specific Gravity Separator Gas .638
Specific Gravity Flowing Fluid .704
P_c 4147.2 P_c² 17198

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>3508.2</u>	<u>12306</u>	<u>6.236</u>	<u>38.89</u>	<u>18.04</u>	<u>12324</u>	<u>4874</u>	<u>3510.6</u>	<u>.8464</u>
2.	<u>3208.2</u>	<u>10291</u>	<u>11.18</u>	<u>125.0</u>	<u>58.00</u>	<u>10349</u>	<u>6849</u>	<u>3217.0</u>	<u>.7757</u>
3.	<u>2474.2</u>	<u>6121</u>	<u>17.62</u>	<u>310.5</u>	<u>144.1</u>	<u>6265</u>	<u>10933</u>	<u>2503.0</u>	<u>.6036</u>
4.	<u>1684.2</u>	<u>2836</u>	<u>23.32</u>	<u>543.8</u>	<u>252.3</u>	<u>3088</u>	<u>14110</u>	<u>1758.2</u>	<u>.4239</u>
5.	<u>2124.2</u>	<u>4511</u>	<u>15.15</u>	<u>229.5</u>	<u>106.5</u>	<u>4617</u>	<u>12581</u>	<u>2148.7</u>	<u>.5182</u>

Absolute Potential: 2060 MCFPD; n .989COMPANY TEXACO Inc.ADDRESS P. O. Box 1270, Midland, TexasAGENT and TITLE F. W. Moore, District Gas Foreman F. W. Moore

WITNESSED _____

COMPANY _____

REMARKS

CORRECTED COPY

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 .