

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea
Initial _____ Annual _____ Special XX Date of Test 12-10/12-14-56
Company Skelly Oil Company Lease Coates Well No. 2
Unit N Sec. 3 Twp. 24 Rge. 36 Purchaser El Paso Natural Gas Company
Casing 7" Wt. 24# I.D. 6.336" Set at 3512' Perf. 3204' To 3222'
Tubing 2" Wt. 4.7# I.D. 1.995 Set at 3118 Perf. _____ To _____
Gas Pay: From 3204' To 3222' L 3118' xG 0.665 -GL 2073 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Date of Completion: 9-27-35 Packer 3051 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (~~Pressure~~) (Chokes) (Meter)

Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Pressure) (Line) Size	(Chokes) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						<u>378</u>				<u>72</u>
1.	<u>4</u>	<u>1.000</u>	<u>238</u>	<u>10.24</u>	<u>56</u>	<u>352</u>				<u>24</u>
2.	<u>4</u>	<u>1.000</u>	<u>239</u>	<u>15.21</u>	<u>69</u>	<u>327</u>				<u>24</u>
3.	<u>4</u>	<u>1.000</u>	<u>245</u>	<u>27.04</u>	<u>61</u>	<u>297</u>				<u>24</u>
4.	<u>4</u>	<u>1.000</u>	<u>244</u>	<u>50.41</u>	<u>64</u>	<u>246</u>				<u>24</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>6.135</u>	<u>50.70</u>		<u>1.0039</u>	<u>0.9498</u>	<u>1.026</u>	<u>304</u>
2.	<u>6.135</u>	<u>61.91</u>		<u>1.0010</u>	<u>0.9498</u>	<u>1.026</u>	<u>370</u>
3.	<u>6.135</u>	<u>83.52</u>		<u>0.9990</u>	<u>0.9498</u>	<u>1.026</u>	<u>499</u>
4.	<u>6.135</u>	<u>113.82</u>		<u>0.9962</u>	<u>0.9498</u>	<u>1.026</u>	<u>677</u>
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.936 (1-e^{-s}) 0.133

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 391.2 P_c² 153.0

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _s ²	P _c ² -P _w ²	Cal. P _w	P _w P _c
1.	<u>365.2</u>	<u>133.4</u>	<u>3.02</u>	<u>9.12</u>	<u>1.2</u>	<u>134.6</u>	<u>18.4</u>		
2.	<u>340.2</u>	<u>115.7</u>	<u>3.68</u>	<u>13.54</u>	<u>1.8</u>	<u>117.5</u>	<u>35.5</u>		
3.	<u>310.2</u>	<u>96.2</u>	<u>4.96</u>	<u>24.60</u>	<u>3.3</u>	<u>99.5</u>	<u>53.5</u>		
4.	<u>259.2</u>	<u>67.2</u>	<u>6.73</u>	<u>45.29</u>	<u>6.0</u>	<u>73.2</u>	<u>79.8</u>		
5.									

Absolute Potential: 1,100 MCFPD; n 0.742
COMPANY Skelly Oil Company
ADDRESS Box 38, Hobbs, New Mexico
AGENT and TITLE _____
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 .