

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1953

AUG 1 3:17 PM

Pool Bagley Formation Upper Pennsylvania County Lea

Initial \_\_\_\_\_ Annual \_\_\_\_\_ Special x Date of Test 1/21-23, 1958

Company Texas Pacific Coal & Oil Co. Lease State "C" - 2 Well No. 1

Unit A Sec. 4 Twp. 12 Rge. 33 Purchaser KFNG

Casing 5 1/2" Wt. 17# I.D. \_\_\_\_\_ Set at 9986 Perf. 8572 To 8592

Tubing 2" Wt. 4.7# I.D. \_\_\_\_\_ Set at 9770 Perf. \_\_\_\_\_ To \_\_\_\_\_

Gas Pay: From 8572 To 8592 L 8572 xG .706 -GL 6052 Bar.Press. 13.2

Producing Thru: Casing x Tubing \_\_\_\_\_ Type Well G. G. Dual  
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 10-16-57 Packer Set at 9770' Reservoir Temp. \_\_\_\_\_

OBSERVED DATA

Tested Through (Pressure) (Choke) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								1690		72
1.	A	2.000	699	2.25	76			1582		24
2.	A	2.000	682	18.89	74			1341		24
3.	A	2.000	688	15.21	74			1282		24
4.	A	2.000	638	25.80	80			1028		24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Compress. Factor F <sub>pv</sub>	Rate of Flow Q-MCFPD @ 15.025 psia
1.	25.58	37.41		0.9850	0.9225	1.060	929
2.	25.58	81.84		0.9860	0.9225	1.060	2034
3.	25.58	96.56		0.9868	0.9225	1.070	2405
4.	25.58	127.58		0.9813	0.9225	1.069	3158
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
P<sub>c</sub> 1.812 (1-e<sup>-S</sup>) .341  
Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 1793.2 P<sub>c</sub> 2900.9

No.	P <sub>w</sub> P <sub>t</sub> (psia)	P <sub>t</sub> <sup>2</sup>	F <sub>c</sub> Q	(F <sub>c</sub> Q) <sup>2</sup>	(F <sub>c</sub> Q) <sup>2</sup> (1-e <sup>-S</sup> )	P <sub>w</sub> <sup>2</sup>	P <sub>c</sub> <sup>2</sup> -P <sub>w</sub> <sup>2</sup>	Cal. P <sub>w</sub>	P <sub>w</sub> /P <sub>c</sub>
1.	1515.2	2295.8	1.68	2.82	0.96	2296.8	604.1	1515.5	88.98
2.	1344.2	1807.9	3.69	13.62	4.44	1808.5	1063.4	1355.9	79.61
3.	1215.2	1476.7	4.36	19.01	4.48	1483.2	1417.7	1217.9	71.51
4.	1141.2	1302.3	5.72	32.72	11.16	1313.5	1587.4	1146.1	67.29
5.									

Absolute Potential: 5.000 MCFPD; n 1.000

COMPANY Texas Pacific Coal & Oil Company  
ADDRESS P. O. Box 1688 - Hobbs, New Mexico  
AGENT and TITLE R. A. Mihal KFNG Well Tester  
WITNESSED John Falte  
COMPANY Texas Pacific Coal & Oil Company

## 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  $P_t$ .

T. P. Coal & Oil Co.

State C - 2 No. 1

A - 4-12-33 Lea Co., N.M.

4-21-56

