

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE 900

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1955 OCT 22 AM 10:21  
Formation Cusco

Pool Lumont County Loa

Initial Annual Special X Date of Test 9-21-56

Company Continental Oil Company Lease Sanderson A-11 Well No. 1

Unit I Sec. 11 Twp. 20 Rge. 36 Purchaser EPNG

Casing 5 1/2 Wt. 17 I.D. - Set at 3778 Perf. - To -

Tubing 2 1/2 Wt. 6.5 I.D. - Set at - Perf. - To -

Gas Pay: From 2453 To 3000 L. 2453 xG .670 -GL 1644 Bar.Press. 13.2

Producing Thru: Casing X Tubing - Type Well Bradenhead

Date of Completion: 9-30-36 Packer - Reservoir Temp. 90°

OBSERVED DATA

Tested Through ~~Worflow~~ ~~Corose~~ (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	<del>Worflow</del> (Line) Size	<del>Worflow</del> (Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								830		72
1.	4	1.500	593	58	74			584		23
2.	4	1.500	616	35	74			613		25
3.	4	1.500	608	25	74			616		24
4.	4	1.250	601	.64	74			758		24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	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.	13.99	185.46	**	.9868	.9463	1.067	2587
2.	13.99	146.84		.9868	.9463	1.067	2048
3.	13.99	123.29		.9868	.9463	1.067	1720
4.	9.643	19.61		.9868	.9463	1.067	188
5.							

\*Note - L-10 chart used

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio - cf/bbl.  
Gravity of Liquid Hydrocarbons - deg.  
F<sub>c</sub> Not applicable (1-e<sup>-s</sup>) Not applicable  
Specific Gravity Separator Gas -  
Specific Gravity Flowing Fluid -  
P<sub>c</sub> 843.2 P<sub>c</sub> 711.0

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.	597.2	356.6	-	-	-	356.6	356.6	597.2	.71
2.	626.2	392.1	-	-	-	392.1	318.9	626.2	.74
3.	629.2	395.9	-	-	-	395.9	315.1	629.2	.75
4.	771.2	594.7	-	-	-	594.7	116.3	771.2	.91
5.									

Absolute Potential: 5,150 MCFPD; n 1.00  
COMPANY Continental Oil Company  
ADDRESS Box 427, Hobbs, New Mexico  
AGENT and TITLE W. D. Howard, Gas Tester  
WITNESSED See Test 7-15-56  
COMPANY -

REMARKS

Slope greater than 1.00. Slope of 1.00 drawn thru highest rate of flow per photographs 10c and 10d of Back-pressure Manual. Due to unbalanced flow, water-lagging and testing into purchaser's pipeline, this well has been extremely difficult to test. This test was preceded by an unsuccessful test by pipeline and one by operator (attached).

## 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  $P_t$ .

advertising and other information. The Commission is not responsible for the accuracy of the information provided by the well owner. The Commission is not responsible for the accuracy of the information provided by the well owner. The Commission is not responsible for the accuracy of the information provided by the well owner.