

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Blinebry (Gas) Formation Blinebry County Lea
Initial x Annual _____ Special _____ Date of Test Dec. 11, 1957
Company N. B. Hunt Lease Weatherly Well No. 3
Unit D Sec. 21 Twp. 21-S Rge. _____ Purchaser None
Casing 5½ Wt. 15.5 I.D. 4.976 Set at 6624 Perf. 5580 To 5632
O.D. 2.375
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 5805 Perf. Drinkard Pay To _____
Gas Pay: From 5580 To 5632 L 5606 xG 876 -GL 4911 Bar. Press. 13.2
Producing Thru: Casing x Tubing _____ Type Well G. O. Dual
Date of Completion: _____ Packer 5805 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through ~~(Prover)~~ ~~(Choke)~~ ~~(Meter)~~ (Tester)

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.	
SI						1680		
1.	3"	2"			100	1472	40	3
2.	3	2"			-3	1129	44	3
3.	3	2			8	802	44	3
4.	3	2			27	374	44	3
5.								

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wP_f}}$	Pressure Inches Mer. psig	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	1369		11	1.0518	.8381	1.000	1206.8
2.	2005		21	1.1379	.8381	1.000	1912.1
3.	2568		32	1.0540	.8381	1.000	2268.5
4.	2817		37	1.0333	.8381	1.000	2439.5
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 113,114 cf/bbl.
Gravity of Liquid Hydrocarbons 58.1 deg.
P_c 1.758 (1-e^{-s}) .287

Specific Gravity Separator Gas .8541
Specific Gravity Flowing Fluid .7467
P_c 1693.2 P_c 2,866.9

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.	1485.2	2,206	2.122	4.503	1.292	2207.3	659.6	1485.7	87.7
2.	1142.2	1,305	3.361	11.296	3.242	1308.2	1538.7	1143.8	67.5
3.	815.2	665	3.989	15.912	4.567	669.6	2197.3	818.3	48.3
4.	387.2	150	4.288	18.387	5.277	155.3	2711.6	394.1	23.2
5.									

Absolute Potential: 2,600 MCFPD; n .52COMPANY West Texas Engineering Service, Inc.ADDRESS P. O. Box 2464 - Midland, TexasAGENT and TITLE R. W. Harrington - Field-Petroleum Engineer

WITNESSED _____

COMPANY _____

REMARKS

Tested with a Portable Test Tank and Low Pressure Separator.

A 24 Hr. Rate was not obtained because the gas was being vented.

Proof of Stabilization: Rate #3 - End of 2 Hrs. Well Head Pressure = 802#

End of 2½ Hrs. Well Head Pressure = 802#

End of 3 Hrs. Well Head Pressure = 802#

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 .

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Producing Thru: Casing x Tubing _____ Type Well G. O. Dual
Date of Completion: _____ Packer 5805 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Motor) (Tester)

Type Taps _____

	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
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	P_w P _w (psia)	P_c^2	$P_c Q$	$(P_c Q)^2$	$(P_c Q)^2$ (1-e ^{-S})	P_w^2	$P_c^2 - P_w^2$	Cal. F _w	$\frac{P_w}{P_c}$
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