

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool South Elanco Formation Pictured Cliffs County Rio Arriba
Initial x Annual _____ Special _____ Date of Test 8-26-57
Company Magnolia Petroleum Company Lease W. O. Hughes Well No. 2
Unit A Sec. 8 Twp. 24N Rge. 3W Purchaser Pacific Northwest
Casing 5 1/2" Wt. 14# I.D. _____ Set at 3260 Perf. 3153 To 3214
Tubing 2 3/8" Wt. 4.7# I.D. 1.995" Set at 3,200 Perf. - To -
Gas Pay: From 3153 To 3214 L _____ xG 0.68(est) -GL _____ Bar.Press. 12 psia
Producing Thru: Casing _____ Tubing x Type Well single
Single-Bradenhead-G. G. or G.O. Dual _____
Date of Completion: 8-12-57 Packer none Reservoir Temp. _____

OBSERVED DATA

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

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Pressure) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						<u>974</u>		<u>973</u>		
1.	<u>2"</u>	<u>0.750</u>	<u>201</u>	<u>-</u>	<u>62</u>	<u>201</u>	<u>62</u>	<u>503</u>	<u>-</u>	<u>3 hours</u>
2.										
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wPf}}$	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>12.3650</u>	<u>-</u>	<u>213</u>	<u>.9981</u>	<u>.9393</u>	<u>1.023</u>	<u>2,526</u>
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
P_c _____ (1-e^{-s})
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 984 P_c 968.3

No.	P _w P _{tm} (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>515</u>					<u>265.2</u>	<u>703.1</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 3.317 MCFPD; n 0.85

COMPANY MAGNOLIA PETROLEUM COMPANY
ADDRESS Box 2406, Hobbs, New Mexico
AGENT and TITLE W. O. Hughes Gas Engineer
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 .

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