

Initial Deliverability
Test

NEW MEXICO OIL CONSERVATION COMMISSION
GAS WELL TEST DATA SHEET - - SAN JUAN BASIN

(TO BE USED FOR FRUITLAND, PICTURED CLIFFS, MESAVERDE, & ALL DAKOTA
EXCEPT BARKER DOME STORAGE AREA)

Pool Blanco-Mesaverde Formation Mesaverde County Rio Arriba
Purchasing Pipeline Pacific Northwest Date Test Filed 3-7-58
Operator Magnolia Lease Jicarilla Well No. 3 N.V.-1-1
Unit N Sec. 22 Twp. 27N Rge. 3W Pay Zone: From 5733' To 6250'
Casing: OD 5 1/2" WT. 24 Set At 6,340' Tubing: OD 2 3/8" WT. 4.78 T. Perf 5,712'
Produced Through: Casing - Tubing X Gas Gravity: Measured 0.675 Estimated -
Date of Flow Test: From 1-31-58 To 2-3-58 * Date S.I.P. Measured 9-27-57
Meter Run Size 2.067" Orifice Size 0.500" Type Chart sq. rt. Type Taps flange

OBSERVED DATA

Flowing casing pressure (Dwt) - psig + 12 = - psia (a)
Flowing tubing pressure (Dwt) - psig + 12 = - psia (b)
Flowing meter pressure (Dwt) - psig + 12 = - psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading - psig + 12 = - psia (d)
Square root chart reading (-) ² x spring constant - = - psia (d)
Meter error (c) - (d) or (d) - (c) ± = - psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing: (a) - (c) Flow through casing - = - psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading - psig + 12 = - psia (g)
Square root chart average reading (8.02) ² x sp. const. 10 = 643 psia (g)
Corrected seven day avg. meter press. (p_f) (g) + (e) - = 643 psia (h)
P_t = (h) + (f) - = 643 psia (i)
Wellhead casing shut-in pressure (Dwt) - psig + 12 = - psia (j)
Wellhead tubing shut-in pressure (Dwt) 1591 psig + 12 = 1603 psia (k)
P_c = (j) or (k) whichever well flowed through - = 1603 psia (l)
Flowing Temp. (Meter Run) 42 °F + 460 - = 502 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) - = 801.5 psia (n)

Q = 118 X $\left(\frac{\sqrt{P_c} - \sqrt{P_d}}{\sqrt{P_c} - \sqrt{P_w}} \right) = \underline{118}$ MCF/day
(Integrated)

D = Q 118 $\left[\frac{(P_c^2 - P_d^2)}{(P_c^2 - P_w^2)} \right]^{0.75} = \underline{111}$ MCF/day.
0.938
0.9193

SUMMARY

P_c = 1603 psia
Q = 118 Mcf/day
P_w = 643 psia
P_d = 801.5 psia
D = 111 Mcf/day

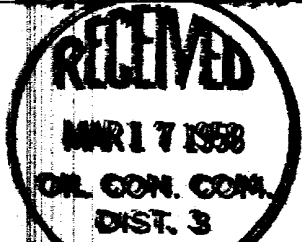
Company MAGNOLIA PETROLEUM COMPANY
By William A. Morgan
Title Jr. Gas Engineer
Witnessed by -
Company -

- * This is date of completion test.
- * Meter error correction factor

REMARKS OR FRICTION CALCULATIONS

GL	(1-e ^{-S})	(F _c Q) ²	(F _c Q) ² R ²	(1-e ^{-S})	P _t ² (Column i)	P _t ² + R ²	P _w
<u>3856</u>	<u>0.215</u>	<u>1.23</u>	<u>0.301</u>	<u>0.301</u>	<u>141.44</u>	<u>141.750</u>	<u>643</u>

OK





LTR



Job separation sheet

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Blanco-Mesaverde Formation Mesaverde County Rio Arriba
Initial X Annual _____ Special _____ Date of Test 9-27-57
Company Magnolia Petroleum Company Lease Jicarilla F Well No. 3 M.V. LT
Unit M Sec. 22 Twp. T-27N Rge. 3W Purchaser Pacific Northwest
Casing 5 1/2" Wt. 11.4 I.D. 5.012 Set at 6,340 Perf. 5,734 To 6,249
Tubing 2 3/8" Wt. 4.74 I.D. 1.995 Set at 5,712 Perf. _____ To _____
Gas Pay: From 5,733 To 6,250 L 5712 xG .68 -GL 3834 Bar.Press. _____
Producing Thru: Casing _____ Tubing X Type Well G.G. Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 7-18-57 Packer yes Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) 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.	Press. psig	Temp. °F.	
SI										
1.	2"	0.750	53	-	66	1591	66	-	-	3 hours
2.						53	66	-	-	
3.										
4.										
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.	12.365	-	65	.9943	.9393	-	751
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
P_c 9.402 (1-e^{-S}) .246

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1591 P_c² 2531.3

No.	$\frac{P_t}{P_t}$ P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	$\frac{(F_c Q)^2}{(1-e^{-S})}$	P _w ²	P _c ² -P _w ²	Cal. P _w	$\frac{P_w}{P_c}$
1.	65	4.2	7.06	49.8	12.3	16.5	2514.8	129	
2.									
3.									
4.									
5.									

Absolute Potential: 754 MCFPD; n 0.75

COMPANY MAGNOLIA PETROLEUM COMPANY
ADDRESS P.O. BOX 2406, HOBBS, NEW MEXICO
AGENT and TITLE Walter W. Kopp, 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} = 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 .

OIL CONSERVATION COMMISSION	
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