

-GCC

1-H.L. Kendrick
1-B. Ferrieh
1-Comm. of Public Lands
2-BP&L, Perm., El Paso
1-Phillips, 1-TCA
1-Smedley (Holland)

NEW MEXICO OIL CONSERVATION COMMISSION

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Form C-122
Revised 12-1-55

Pool BASIN DAKOTA Formation DAKOTA County BLU ANTERA
Initial X Annual _____ Special _____ Date of Test 11/27/63
Company Beta Development Co. Lease BJ 20-4 Unit Well No. 76
Unit 1 Sec. 23 Twp. 20N Rge. 6W Purchaser ENR Co.
Casing 4" Wt. 11.60 I.D. 4.030 Set at 8043' Perf. 7932' To 8043'
Tubing 2 3/8" Wt. 4.70 I.D. 1.995 Set at 7641' Perf. Open To End
Gas Pay: From 7932' To 8043' L 7641' xG .67 -GL 5119' Bar.Press. 12.0
Producing Thru: Casing _____ Tubing X Type Well Single - Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 11/16/63 Packer 7632 Reservoir Temp. _____

OBSERVED DATA

Tested Through (PESSE) (Choke) (Venturi) Type Taps _____

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Orifice) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.		<u>3/4</u>	<u>144</u>		<u>68</u>	<u>144</u>	<u>68</u>			<u>7 Days</u>
2.										<u>3 Hours</u>
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.	<u>12.3650</u>		<u>156</u>	<u>.9924</u>	<u>.9463</u>	<u>1.015</u>	<u>1.839</u>
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c _____ (1-e^{-S})
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1995 P_c² 3980.0
P_w 343 P_w² 117.3

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.	<u>156</u>	<u>24,336</u>	<u>17,280</u>	<u>298,944</u>	<u>921971</u>	<u>117.3</u>	<u>3862.6</u>		<u>.171</u>
2.									
3.									
4.									
5.									

Absolute Potential: 1.981 MCFPD; n .75

COMPANY Beta Development Co.
ADDRESS 234 Petroleum Club Plaza, Farmington, N.M.
AGENT and TITLE George L. Hoffman, Production Engineer
WITNESSED _____
COMPANY _____

REMARKS

No casing pressures, production packer @ 7641'.



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 .