NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Formation Mesa Verde County San Juan

Initial X Annual _____ Special _____ Date of Test 31 July, 1957

Company Southern Union Gas Lease Nordhaus Well No. 3

Unit A Sec. 11 Twp. 31N Rge. 9W Purchaser Southern Union Gas Co.

Casing 5½ Wt. 15.5 I.D. 4.995 Set at 5586 Perf. 5092 To 5506

Tubing 2 3/8" Wt. 4.7 I.D. 2.0" Set at 5504 Perf. 5474 To 5504

Gas Pay: From 5092 To 5506 L _____ xG 0.67 =GL _____ Bar.Press. 12.0

Producing Thru: Casing _____ Tubing X Type Well Single-Gas
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: May 26, 1957 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through ~~(Prover)~~ ~~(Choke)~~ ~~(Orifice)~~ Opened at 2:40 P. M.

Type Taps _____

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						827		1074		61 Days
1.		3/4	236		71°	236	71°	688		3 Hours
2.										
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.	2.3650		248	0.9896	0.9463	1.026	2,950
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ c.f./bbl.

Gravity of Liquid Hydrocarbons _____ deg.

F_c _____ $(1-e^{-s})$ _____

Specific Gravity Separator Gas _____

Specific Gravity Flowing Fluid _____

P_c 1086 P_c^2 1179.4

P_w 700 P_w^2 490

No.	P_w 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.						490	689.4		
2.									
3.									
4.									
5.									

Absolute Potential: 4,410 MCFPD; n 0.75

COMPANY _____

ADDRESS ~~Southern Union Gas~~ Box 815 ~~Farmington, New Mexico~~

AGENT and TITLE ~~Gilbert Noland, Jr.~~

WITNESSED _____

COMPANY _____

REMARKS

RECEIVED
AUG 7 1957
OIL CON. COM.
DIST. 3

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_c cannot be taken because of manner of completion or condition of well, then P_c can be calculated by adding the pressure drop due to friction within the tubing to P_t.

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