

3-OCC
1-EPNG Proration Dept.
1-D
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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Dakota Formation Dakota County San Juan
Initial X Annual _____ Special _____ Date of Test 6/27/61
Company Southwest Production Co. Lease Mudge Federal Well No. 5
Unit 0 Sec. 33 Twp. 27N Rge. 11W Purchaser El Paso Nat. Gas Co.
Casing 4 1/2" Wt. 10.50 I.D. 4.040 Set at 6424 Perf. 6296 To 6334
Tubing 1 1/2" Wt. 2.9 I.D. 1.610 Set at 6316 Perf. 6316 To _____
Gas Pay: From 6296 To 6334 L 6316 xG .67 -GL 4231.7 Bar.Press. 12.0
Producing Thru: Casing _____ Tubing X Type Well Single-Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 6/16/61 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (286661) (Choke) (286661) 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						1800		1800		7-Days
1.		3/4"	210		74	210	74	1248		3-Hr.
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.	12.3650		220	.9868	.9463	1.022	2,596
2.							
3.							
4.							
5.							

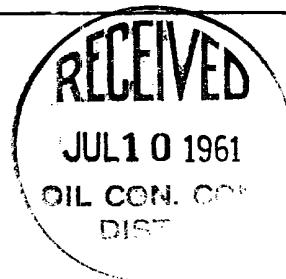
PRESSURE CALCULATIONS

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 1812 P_c² 3283.2
P_w 1260 P_w² 1587.6

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.						1587.6	1695.7		.681
2.									
3.									
4.									
5.									

Absolute Potential: 4,361 MCFPD; n .75
COMPANY Southwest Production Company
ADDRESS 162 Petr. Center Bldg., Farmington, N. M.
AGENT and TITLE George L. Hoffman, Jr., Production Foreman
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 line 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. @ 1.025 psia and 60° F.
- P_c = 72 hour well head shut-in casing (or tubing) pressure whichever is greater.
psia
- P_w = Static well head working pressure as determined at the end of flow period.
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- P_t = Flowing well head 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 .