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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 Bond Federal #2 Formation Dakota County San Juan
Initial X Annual _____ Special _____ Date of Test 1/5/62
Company Southwest Production Company Lease Bond Federal Well No. 2
Unit D Sec. 13 Twp. 26 Rge. 8 Purchaser El Paso Natural Gas Company
Casing 5½ Wt. 15.5 I.D. 4.990 Set at 6740 Perf. 6624 To 6686
Tubing 1½ Wt. 2.75 I.D. 1.610 Set at 6678 Perf. _____ To 6678
Gas Pay: From 6624 To 6686 L .6678 xG .686 -GL 4581 Bar.Press. 12.0
Producing Thru: Casing _____ Tubing X Type Well G.G. Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 12/22/61 Packer 6476 Reservoir Temp. _____

OBSERVED DATA

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

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						2250		2250		14 day
1.		3/4	147		66	147	66			3 hr.
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.	12.3650		159	.9943	.9359	1.018	1.862
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons .686 deg.
F_c 16.46 (1-e^{-s}) .283

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 2262 P_c² 5116.6
P_w 330 P_w² 108.9

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.	147	21,609	526.946	277,672	78,581	100,189	5007.7	318	.145
2.									
3.									
4.									
5.									

Absolute Potential: 2,160 MCFPD; n .75
COMPANY Southwest Production Company
ADDRESS 207 Petr. Club Plaza, Farmington, New Mexico
AGENT and TITLE George L. Hoffman, Production 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 .