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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 _____ Formation Fruitland County San Juan
Initial X Annual _____ Special _____ Date of Test 1-5-59
Company Paul Case Lease Sullivan Well No. 5
Unit A Sec. 30 Twp. 29N Rge. 10W Purchaser _____
Casing 5-1/2 Wt. 14# I.D. 5.012 Set at _____ Perf. 1472 To 1550
Tubing _____ Wt. _____ I.D. _____ Set at _____ Perf. _____ To _____
Gas Pay: From 1472 To 1550 L 1705 xG .60 -GL 1023 Bar. Press. _____
Producing Thru: Casing X Tubing _____ Type Well G. G. Dual
Single-Bradenhead-G. G. or G.G. Dual
Date of Completion: 12-23-58 Packer 1705 Reservoir Temp. _____

OBSERVED DATA

Tested Through ~~Prover~~ (Choke) ~~Prover~~ 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								642		
1.		3/4"	185		52°					3 hrs.
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 1-MCFPD @ 15.025 psia
1.							
2.	12.3650		197	1.0078	1.000	1.017	2497
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
P_c 1.62 (1-e^{-S}) .072
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 651 P_c 427.716

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 _w ² - P _t ²	P _w / P _c
1.								
2.	197	38.81	4.05	16.4	1.18	39.98	387.74	1.103
3.								
4.								
5.								

Absolute Potential: 2714 MCFPD; n = .85 = 1.087
COMPANY Paul Case
ADDRESS c/o Val T. Reese & Associates, Inc., 120 So. Commercial, Farmington, New Mexico
AGENT and TITLE _____
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 .

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VAL R. REESE & ASSOCIATES, INC.

Company Paul Case

Lease Sullivan Well No. 5

Date of Test 1-5-59

Shut in Pressure (PSIG): ^{P.C.} Tubing 651 ^{Fr.} Casing 642 S I. Period 12 Days

Size Blow Nipple 3/4" T.C.

Flow Through Csg. ^{P.C.} ~~Wellhead~~ Pressures From Tbg.

Time		Fr. Pressure	Q (MCFD) 15.025 PSIA & 60°F	P.C. Wellhead Wellhead Pressure (PSIG)		Temp
Hours	Minutes					
	15	355		652	50	
	30	306		651	50	
	45	272		651	50	
1	00	255		651	50	
2	00	210		651	51	
3	00	185		651	52	

Start At 11:30 A.M. End Test At 2:30 P.M.

Remarks: Very dry throughout test

Tested by: T. A. Dugan

Witness: