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NEW MEXICO OIL CONSERVATION COMMISSION

JUL 22 1960

O. C. G. Form C-122
 ANTERIA; OFFICE
 Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool RED LAKE Formation PREMIER SAND County EDDY
 Initial X Annual _____ Special _____ Date of Test 5-19-60
 Company CHAMBERS & KENNEDY Lease GULF STATE Well No. 1
 Unit P Sec. 22 Twp. 175 Rge. 28 E Purchaser _____
 Casing 4 1/2 Wt. 16.25 I.D. 4.082 Set at 1996' Perf. 1910' To 1916'
 Tubing 2.375 Wt. 4.7 I.D. 1.995 Set at 1990' Perf. NONE To _____
 Gas Pay: From 1910' To 1916' L 6 xG .721 -GL _____ Bar. Press. 13.3
 Producing Thru: Casing _____ Tubing X Type Well SINGLE
 Date of Completion: 5-13-60 Packer _____ Reservoir Temp. _____
 • Single-Bradenhead-G. G. or G.O. Dual

OBSERVED DATA

Tested Through (Prover) (Choke)(Orifice) 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
SI						353	85	353	85
1.						298	79	301	85
2.						253	80	267	85
3.						205	80	229	85
4.						126	80	175	85
5.									

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	Pressure psia	Flow Temp. Factor Ft	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	644		16.5	.9786	.9141	1.003	578
2.	841		25.0	.9786	.9141	1.003	754
3.	1052		15.5	.9777	.9141	1.003	943
4.	1270		21.0	.9777	.9141	1.003	1138
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
 Gravity of Liquid Hydrocarbons _____ deg.
 F_c P_w MEASURED (1-e^{-s})
 Specific Gravity Separator Gas .721
 Specific Gravity Flowing Fluid .721
 P_c 366.3 P_c 133.96

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.	314.3					98.59	35.31		1.17
2.	280.3					78.40	55.56		1.32
3.	211.3					58.08	75.88		1.54
4.	188.3					35.34	98.62		2.0
5.									

Absolute Potential: 1,400 MCFPD; n .713

COMPANY APEX ENGINEERING COMPANY
 ADDRESS Box 4125, MIDLAND, TEXAS
 AGENT and TITLE RICHARD TURNER, MANAGER
 WITNESSED HARRY E. LEGENDRE - OWNER
 COMPANY APEX ENGINEERING 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} = 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 .

OIL CONSERVATION COMMISSION
ARTESIA DISTRICT OFFICE

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