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NEW MEXICO OIL CONSERVATION COMMISSION

O. C. C.
ARTESIA, OFFICE Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Morrow Sand County Eddy
Initial X Annual _____ Special _____ Date of Test 2-1-64
Company TEXACO Inc. Lease Wooley Unit Well No. 1
Unit F Sec. 16 Twp. 17S Rge. 30E Purchaser None
Casing 3-1/2 Wt. _____ I.D. _____ Set at 11,300 Perf. 11,102 To 11,143
Tubing 1-1/2 Wt. 2.75 I.D. 1.610 Set at 11,113 Perf. _____ To _____
Gas Pay: From 11102 To 11143 L 11113 xG .799 -GL 8879 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 2-1-64 Packer None Reservoir Temp. _____

OBSERVED DATA

Tested Through UNDESIGNATED (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						3080		3080		72
1.	2"	1.000	32	22	60	2660		2760		24
2.	2"	1.000	32	50	80	2419		2567		24
3.	2"	1.000	52	45	72	2243		2442		24
4.	2"	1.000	60	56	75	1800		2120		24
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.	6.386	31.53	45.2	1.000	.9129		183.8
2.	6.386	47.54	45.2	.9813	.9129		272.0
3.	6.386	54.17	65.2	.9887	.9129		312.2
4.	6.386	64.02	73.2	.9859	.9129		368.0
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 33,410 cf/bbl.
Gravity of Liquid Hydrocarbons 52.0 deg.
F_c P_w Measured (1-e^{-s})
Specific Gravity Separator Gas .720
Specific Gravity Flowing Fluid .799
P_c 3093.2 P_c 9568

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.	2773.2					7691	1877		.896
2.	2580.2					6657	2911		.824
3.	2455.2					6028	3540		.794
4.	2133.2					4550	5018		.690
5.									

Absolute Potential: 710 MCFPD; n .831
COMPANY TEXACO Inc.
ADDRESS Box 1270, Midland, Texas
AGENT and TITLE F. W. Moore, District Supervisor (Gas)
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 .