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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 Undesignated Formation Dakota County Rio Arriba
Initial X Annual _____ Special _____ Date of Test 10-7-59
Company Kern County Land Co. Lease McKenzie Federal Well No. 1
Unit 2M Sec. 25 Twp. 25N Rge. 6W Purchaser Southern Union
Casing 5 1/8 Wt. 15.5 I.D. _____ Set at 7140 Perf. 7008 To 6987
Spang 2-1/16 3.40 1.751 6047
Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 6885 Perf. Open ended To _____
Spang 6 1/11 4135
Gas Pay: From 7008 To 6987 L 2-3/8-762 xG 0.680 -GL 518 Bar.Press. _____
Producing Thru: Casing _____ Tubing X Type Well Dual - Gas - Oil
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 9-25-59 Packer Baker Model "D" Reservoir Temp. _____
6820

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) _____ 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.	
1.						2310		1637	Gallup	
2.										
3.		3/4"	157		98°			1640	Gallup	3 hrs
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.							
2.							
3.	12.3630		109	1.0019	.9393	1.024	2904
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
P_c 2-1/16 Spang - 13.20 (1-e^{-s}) 0.261
2-3/8 9.402 0.082
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 2322 P_c 5,391.684

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.									
2.	169	28,561	18,841	353	28.9				
3.									
4.			26,453	700	182.7	211.6	5180		1.0410
5.									

Absolute Potential: 2066 MCFPD; n .75 1.031
COMPANY Kern County Land Co.
ADDRESS 301 Kerber Bldg., Albuquerque, N.M.
AGENT and TITLE T. A. Dugan, Consulting 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 .

OIL CONSERVATION COMMISSION		
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