

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Dakota Sand County San Juan, New Mexico
Initial X Annual _____ Special _____ Date of Test May 26 & 27, 1958
Company Sunray Mid-Continent Oil Company Lease New Mexico Federal I Well No. 2
Unit A Sec. 1 Twp. 29N Rge. 14W Purchaser None
Casing 5 1/2" Wt. 15.5 I.D. 4.950 Set at 6124 Perf. 5840-60 To 5941-50
5870-90 To 5954-64
Tubing 2" Wt. 4.70 I.D. 1.995 Set at 5927 Perf. 5912-14 To 5968-90
5924 To 5927
Gas Pay: From 5840 To 5968 L. 5904 xG. .707 -GL 4174 Bar.Press. 12.0
Producing Thru: Casing _____ Tubing X Type Well Single Bradenhead
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 5-2-58 Packer None Reservoir Temp. 130 Estimated

OBSERVED DATA

Tested Through (Prover) (Midd) (Midd) 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						1705		1698		
1.	2"	3/8"	139		45°		79°	1601	79°	4 hrs. 20 min.
2.	2"	1/2"	79		35°		74°	1552	74°	4 hrs.
3.	2"	1/2"	64		20		70	1544	70	4 hrs.
4.	2"	1/2"	317		60		76	789	76	4 hrs.
5.	2	1/2	173		68		77	514	77	20.5 hrs.

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.	3.0691		151	1.0147	.8257	1.030	399.44
2.	5.5233		91	1.0249	.8257	1.021	434.27
3.	5.5233		76	1.0408	.8257	1.021	368.22
4.	5.5233		329	1.0000	.8257	1.069	1603.95
5.	5.5233		183	.9924	.8257	1.034	865.75

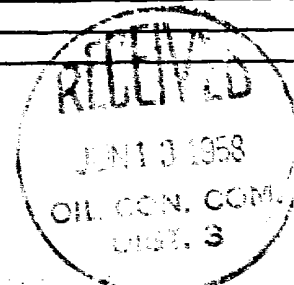
PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 72066 cf/bbl.
Gravity of Liquid Hydrocarbons 52 deg.
P_c P_w Measured (1-e^{-s})
Specific Gravity Separator Gas .880
Specific Gravity Flowing Fluid .707
P_c 1717 P_c 2948.1

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.	1613					2601.7	346.4		.939
2.	1564					2446.0	502.1		.910
3.	1556					2421.1	527.0		.906
4.	801					641.6	2306.5		.466
5.	526					276.6	2671.5		.306

Absolute Potential: 1800 MCFPD; n .84510
COMPANY Sunray Mid-Continent Oil Company
ADDRESS 11th Floor - Wilco Bldg. - Midland, Texas
AGENT and TITLE Jack Lyles - Field Petroleum Engineer w/ Unitex Engineering Service, Inc.
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.

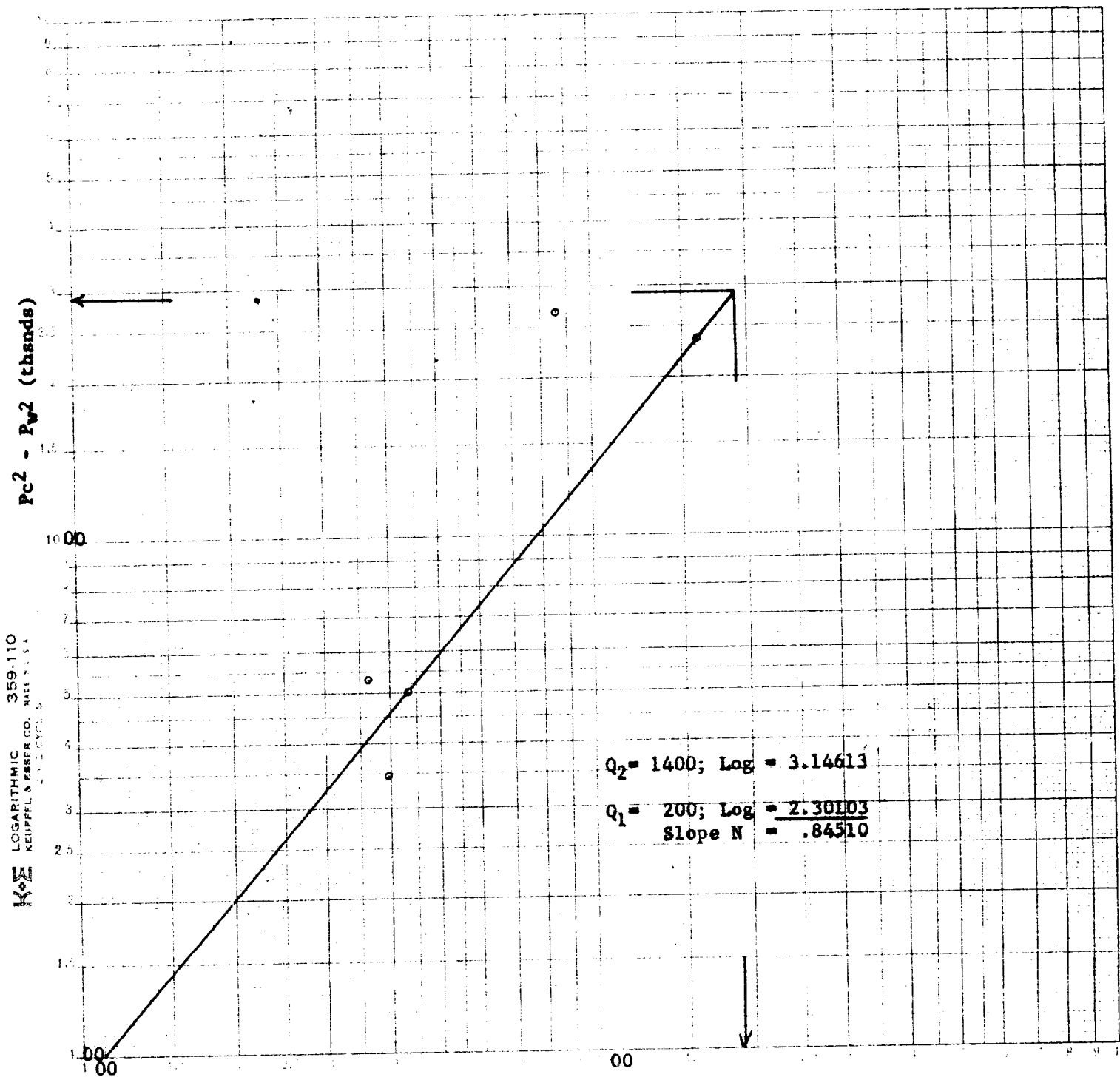
F_t = Flowing temperature correction factor.

F_{pv} = 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 .

COMPANY Sunray Mid-Continent Oil Company
 WELL New Mexico Federal 'I' No. 2
 location I-1-29N-14W
 COUNTY San Juan, New Mexico
 DATE 5/26 & 27/1958



Q-MCFD - 12 psia

Absolute Potential - 1800 MCFD

OIL CONSERVATION MISSION		
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Transported	1	☒
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