

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Lower Gallup County San Juan, N. M.
Initial X Annual _____ Special _____ Date of Test May 8, 1957
Company Sunray Mid-Continent Oil Co. Lease La-Ka-Mol-E-Wood Well No. 2
Unit 0 Sec. 22 Twp. 29N Rge. 11W Purchaser None
Casing 5 1/2 Wt. _____ I.D. _____ Set at 5008' Perf. 4923 To 4960
Tubing 2" Wt. _____ I.D. _____ Set at 4947' Perf. None To _____
Gas Pay: From 4923 To 4960 L 4941 xG 0.625 -GL 2780 Bar.Press. 12.0
Producing Thru: Casing X Tubing _____ Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 5-6-57 Packer _____ Reservoir Temp. 150° F.

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.	
SI	2"				60	1321	60	1329	60	72 hrs SI
1.		1/16	1323		60	1319	60	1323	60	Stabilized
2.		1/8	1290		60	1299	60	1290	60	Stabilized
3.		3/16	1222		60	1243	60	1222	60	Stabilized
4.		1/4	1104		60	1194	60	1104	60	Stabilized
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 Q-MCFPD @ 15.025 psia
1.	0.0827		1335	1.000	0.9798	1.175	127.1
2.	0.3418		1302	"	"	1.177	513.2
3.	0.7851		1231	"	"	1.178	1118.2
4.	1.4031		1116	"	"	1.177	1805.8
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c PW Measured (1-e^{-s}) _____
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1341 P_c 1798.3

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.	1331					1771.6	26.7		
2.	1311					1718.7	79.6		
3.	1257					1580.0	218.3		
4.	1206					1454.4	343.9		
5.									

Absolute Potential: 9000 MCFPD; n 0.9765

COMPANY Sunray Mid-Continent Oil Co.
ADDRESS 711 West Main Farmington NM.
AGENT and TITLE OT Mc Clanahan, Area Supt.
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 .

CHEMICAL & GEOLOGICAL LABORATORIES

GLENDIVE CASPER FARMINGTON
EDMONTON CALGARY REGINA

GAS WELL BACK PRESSURE TEST

Field: **Bisti Area** County: **San Juan** State: **New Mexico**
Well Owner: **Sunray-Midcontinent Oil Co.** Lease: **Es-Ka-Nel-Wood** Well No: **2**
Location: **Sec. 22-25N-11W** Date of Test: **May 8, 1957**
Elevation: **6469** ⁸⁷ **KB** Top Formation: **-** T.D.: **5010**
Bottom Formation: **Perf. 4923-27**
Date Completed: **May 6, 1957** Midpoint: **4929-33**
4953-60
Formation: **Lower Gallup** Casing: **5½" O.D. @ 5008**
Tubing: **2" EUE @ 4947**
Average Gravity of gas: **.625** Bottom-hole Temperature: **150°**
Well producing: **gas**

FIELD DATA

Run No.	Time of Run	Choke	Temperature	Stabilized Pressure psia	Tubing Pressure psia
0		-		1341	1333
1		1/16	60° F	1335	1331
2		1/8	60° F	1302	1311
3		3/16	60° F	1234	1257
4		1/4	60° F	1116	1206

VOLUME CALCULATIONS

Run No.	Stabilized Pressure psia	Coefficient	Gravity Factor	Temperature Factor	Compressibility Factor	Volume Mcf per day
1	1335	.0846	.9798	1.000	1.175	130.0
2	1302	.3499	.9798	1.000	1.177	525.4
3	1234	.8035	.9798	1.000	1.178	1144.4
4	1116	1.4360	.9798	1.000	1.177	1848.1

PRESSURE CALCULATIONS

P _s	1476	MPs ²	2,178.6		
Pf ₁	1470	MPf ₁ ²	2,160.9	MPs ² - MPf ₁ ²	17.7
Pf ₂	1444	MPf ₂ ²	2,085.1	MPs ² - MPf ₂ ²	93.5
Pf ₃	1384	MPf ₃ ²	1,915.5	MPs ² - MPf ₃ ²	263.1
Pf ₄	1328	MPf ₄ ²	1,763.6	MPs ² - MPf ₄ ²	415.0

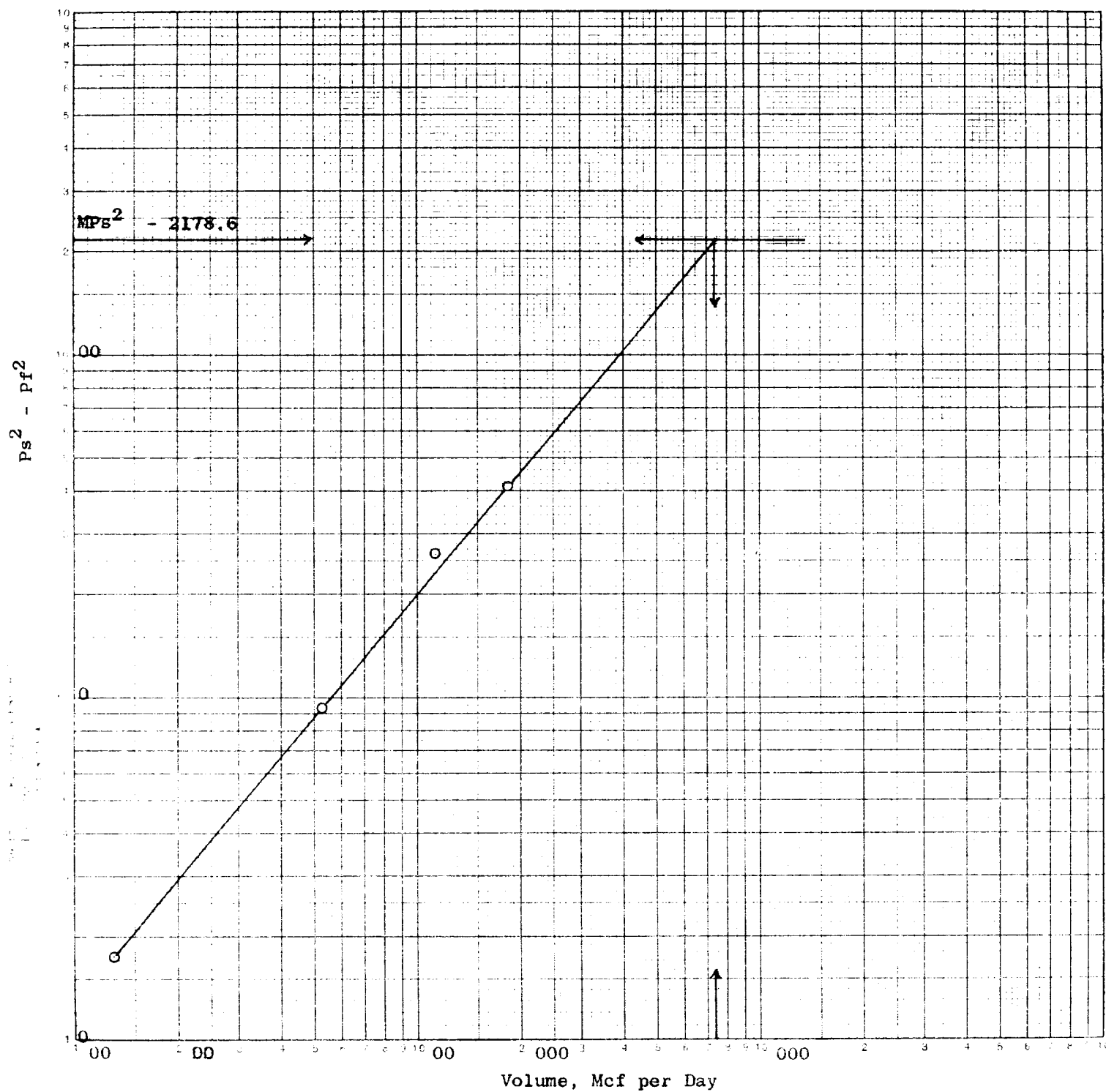
Absolute potential. **7,400 Mcf per day**

Shut-in well head pressure: **1329 psig**

SUNRAY-MIDCONTINENT OIL CO.

Es-Ka-Nel-Wood No.2

Bisti, New Mexico



Absolute potential - 7,400 Mcf/D

Shut-in pressure - 1,329 psig

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