

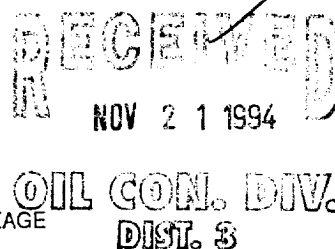
STATE OF NEW MEXICO  
ENERGY and MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

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Revised 10/01/78

This form is not to  
be used for reporting  
packer leakage tests  
in Southeast New Mexico

NORTHWEST NEW MEXICO PACKER-LEAKAGE  
TEST



Operator NORTHWEST PIPELINE CORPORATION Lease ROSA UNIT Well No. 139

Location  
of Well: Unit C Sec. 17 Twp. 31N Rge. 6W County SAN JUAN

	NAME OF RESERVOIR OR POOL	TYPE OF PROD (Flow or Art. Lift)	METHOD OF PROD. (Flow or Art. Lift)	PROD. MEDIUM (Tbg. or Csg.)
Upper Completion	PICTURED CLIFFS	GAS	FLOW	TUBING
Lower Completion	MESA VERDE	GAS	FLOW	TUBING

PRE-FLOW SHUT-IN PRESSURE DATA

Upper Completion	Hour, date shut-in 1600 HOURS, 11-08-94	Length of time shut-in 112 HOURS	SI press. psig SITP = 962, SICP = 1016	Stabilized? (Yes or No) YES
Lower Completion	Hour, date shut-in 0730 HOURS, 11-09-94	Length of time shut-in 96 HOURS	SI press. psig SITP = 1041	Stabilized? (Yes or No) YES

FLOW TEST NO. 1

Commenced at (hour, date)* 0750 MST, 11-13-94					Zone producing (Upper or Lower) UPPER	
TIME (hour, date)	LAPSED TIME SINCE*	PRESSURE			PROD. ZONE • TEMP.	REMARKS
		Upper Completion		Lower Completion		
		TBG	CSG	TBG		
0820, 11-13-94	0.5 HOURS	142	686	1041	51	IP TEST ON PICTURED CLIFFS
0850, 11-13-94	1.0 HOURS	91	488	1039	59	UNLOAD HEAVY MIST
0920, 11-13-94	1.5 HOURS	66	408	1038	63	
0950, 11-13-94	2.0 HOURS	45	376	1040	63	
1020, 11-13-94	2.5 HOURS	41	368	1041	65	
1050, 11-13-94	3.0 HOURS	34	350	1044	65	

Production rate during test:

Oil: NONE BOPD based on                      BBLs. in                      Hours,                      Grav.                      GOR                     

Gas: 560 MCF/D LIGHT MIST MCF/D: Tested thru (Orifice or Meter): 2" x 3/4" PROVER

MID-TEST SHUT-IN PRESSURE DATA

Upper Completion	Hour, date shut-in 1020 HOURS, 11-13-94	Length of time shut-in 98.5 HOURS	SI press. psig SITP = 954 SICP = 1077	Stabilized? (Yes or No) YES
Lower Completion	Hour, date shut-in 0730 HOURS, 11-09-94	Length of time shut-in 199.5 HOURS	SI press. psig SITP = 1064	Stabilized? (Yes or No) YES

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST  
FLOW TEST NO. 2

Commenced at (hour, date)* 1300 MST, 11-16-94					Zone producing (Upper or Lower) LOWER	
TIME (hour, date)	LAPSED TIME SINCE*	PRESSURE			PROD. ZONE TEMP.	REMARKS
		Upper Completion		Lower Completion		
		TBG	CSG	TBG		
1330 11-16-94	0.5 HOURS	957	1082	231	56	IP CN MESAVERDE
1400 11-16-94	1.0 HOURS	958	1084	231	56	LIGHT MIST
1430 11-16-94	1.5 HOURS	960	1085	227	56	
1500 11-16-94	2.0 HOURS	961	1085	224	58	
1530 11-16-94	2.5 HOURS	965	1087	223	58	
1600 11-16-94	3.0 HOURS	965	1087	221	59	

Oil: NONE BOPD based on \_\_\_\_\_ BBLs. in \_\_\_\_\_ Hours, \_\_\_\_\_ Grav. \_\_\_\_\_ GOR \_\_\_\_\_

Gas: 2916 MCF/D HEAVY MIST MCF/D: Tested thru (Orifice or Meter): 2" x 3/4" PROVER

Remarks: \_\_\_\_\_

I hereby certify that the information herein contained is true and complete to the best of my knowledge.

Approved NOV 2 1 1994 19\_\_\_\_\_  
New Mexico Oil Conservation Division  
*Johnny Robinson*  
By \_\_\_\_\_  
Title DEPUTY OIL & GAS INSPECTOR, DIST. #3

Operator NORTHWEST PIPELINE CORPORATION  
By Mark McCallister  
Title Senior Engineer  
Date November 17, 1994

NORTHWEST NEW MEXICO PACKER LEAKAGE TEST INSTRUCTIONS

1. A packer leakage test shall be commenced on each multiply completed well within seven days after actual completion of the well, and annually thereafter as prescribed by the order authorizing the multiple completion. Such tests shall also be commenced on all multiple completions within seven days following recompletion and/or chemical or fracture treatment, and whenever remedial work has been done on a well during which the packer or the tubing have been disturbed. Tests shall also be taken at any time that communication is suspected or when requested by the Division.

2. At least 72 hours prior to the commencement of any packer leakage test, the operator shall notify the Division in writing of the exact time the test is to be commenced. Offset operators shall also be so notified.

3. The packer leakage test shall commence when both zones of the dual completion are shut-in for pressure stabilization. Both zones shall remain shut-in until the well-head pressure in each has stabilized, provided however, that they need not remain shut-in more than seven days.

4. For Flow Test No.1 one zone of the dual completion shall be produced at the normal rate of production while the other zone remains shut-in. Such test shall be continued for seven days in the case of a gas well and for 24 hours in the case of an oil well. Note: if, on an initial packer leakage test, a gas well is being flowed to the atmosphere due to the leak of a pipeline connection the flow period shall be three hours.

5. Following completion of Flow Test No. 1, the well shall again be shut-in, in accordance with Paragraph 3 above.

6. Flow Test No. 2 shall be conducted even though no leak was indicated

as for Flow Test No. 1 except that the previously produced zoned shall remain shut-in while the zone which was previously shut-in is produced.

7. Pressures for gas-zones tests must be measured on each zone with a deadweight pressure gauge at time intervals as follows: 3 hours tests: immediately prior to the beginning of each flow-period, at fifteen-minute intervals during the first hour thereof, and at hourly intervals thereafter, including one pressure measurement immediately prior to the conclusion of each flow period. 7-day tests: immediately prior to the beginning of each flow period, at least one time during each flow period (at approximately the midway point) and immediately prior to the conclusion of each flow period. Other pressures may be taken as desired, or may be requested on wells which have previously shown questionable test data.

24-hour oil zone tests: all pressures, throughout the entire test, shall be continuously measured and recorded with recording pressure gauges the accuracy of which must be checked at least twice, once at the beginning and once at the end of each test, with a deadweight pressure gauge. If a well is a gas-oil or an oil-gas dual completion, the recording gauge shall be required on the oil zone only, with deadweight pressures as required above being taken on the gas zone.

8. The results of the above-described tests shall be filed in triplicate within 15 days after completion of the test. Test shall be filed with the Aztec District Office of the New Mexico Oil Conservation Division on Northwest new Mexico Packer Leakage Test Form Revised 10-01-78 with all deadweight pressures indicated thereon as well as the flowing temperatures (gas zones only) and gravity and GOR (oil zones only).