

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

Operator Tenneco Oil Company Lease Jicarilla Well No. C-6
Location of Well: Unit F Sec. 14 Twp. 26 Rge. 5 County Rio Arriba

	Name of Reservoir or Pool	Type of Prod. (Oil or Gas)	Method of Prod. (Flow or Art. Lift)	Prod. Medium (Tbg. or Csg.)
Upper Completion	Mesa Verde	Gas	Flow	Casing
Lower Completion	Dakota	Gas	Flow	Tubing

PRE-FLOW SHUT-IN PRESSURE DATA

Upper Compl	Hour, date 6:37 p.m. Shut-in 8-29-76	Length of time shut-in 72 Hrs.	SI press. psig 759	Stabilized? (Yes or No) No
Lower Compl	Hour, date 6:37 p.m. Shut-in 8-29-76	Length of time shut-in 72 Hrs.	SI press. psig 792	Stabilized? (Yes or No) No

FLOW TEST NO. 1

Commenced at (hour, date)* 3:30 p.m. 9-1-76		Zone producing (Upper or Lower): Lower			
Time (hour, date)	Lapsed time since*	Pressure		Prod. Zone Temp.	Remarks
		Upper Compl.	Lower Compl.		
10:25 p.m. 9-2-76	19 Hrs.	762	330		
11:25 p.m. 9-3-76	44 Hrs.	765	317		

Production rate during test
Oil: _____ BOPD based on _____ Bbls. in _____ Hrs. Grav. _____ GOR _____
Gas: 84 MCFPD; Tested thru (Orifice or Meter): Meter

MID-TEST SHUT-IN PRESSURE DATA

Upper Compl	Hour, date Shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)
Lower Compl	Hour, date Shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)

FLOW TEST NO. 2

Commenced at (hour, date)**		Zone producing (Upper or Lower):			
Time (hour, date)	Lapsed time since **	Pressure		Prod. Zone Temp.	Remarks
		Upper Compl.	Lower Compl.		

Production rate during test
Oil: _____ BOPD based on _____ Bbls. in _____ Hrs. Grav. _____ GOR _____
Gas: _____ MCFPD; Tested thru (Orifice or Meter): _____

REMARKS: _____

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

Approved: OCT 5 1976 19
New Mexico Oil Conservation Commission
By [Signature] Title DIVISION ENGINEER
Operator TENNECO OIL COMPANY
By [Signature] JOE MILLER
Date 9/17/76
Title PETROLEUM ENGINEER DIST. NO. 3

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 Commission.

2. At least 72 hours prior to the commencement of any packer leakage test, the operator shall notify the Commission 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 lack 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 during Flow Test No. 1. Procedure for Flow Test No. 2 is to be the same as for Flow Test No. 1 except that the previously produced zone shall remain shut-in while the zone which was previously shut-in is produced.
7. Pressures for gas-zone tests must be measured on each zone with a deadweight pressure gauge at time intervals as follows: 3-hour 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.

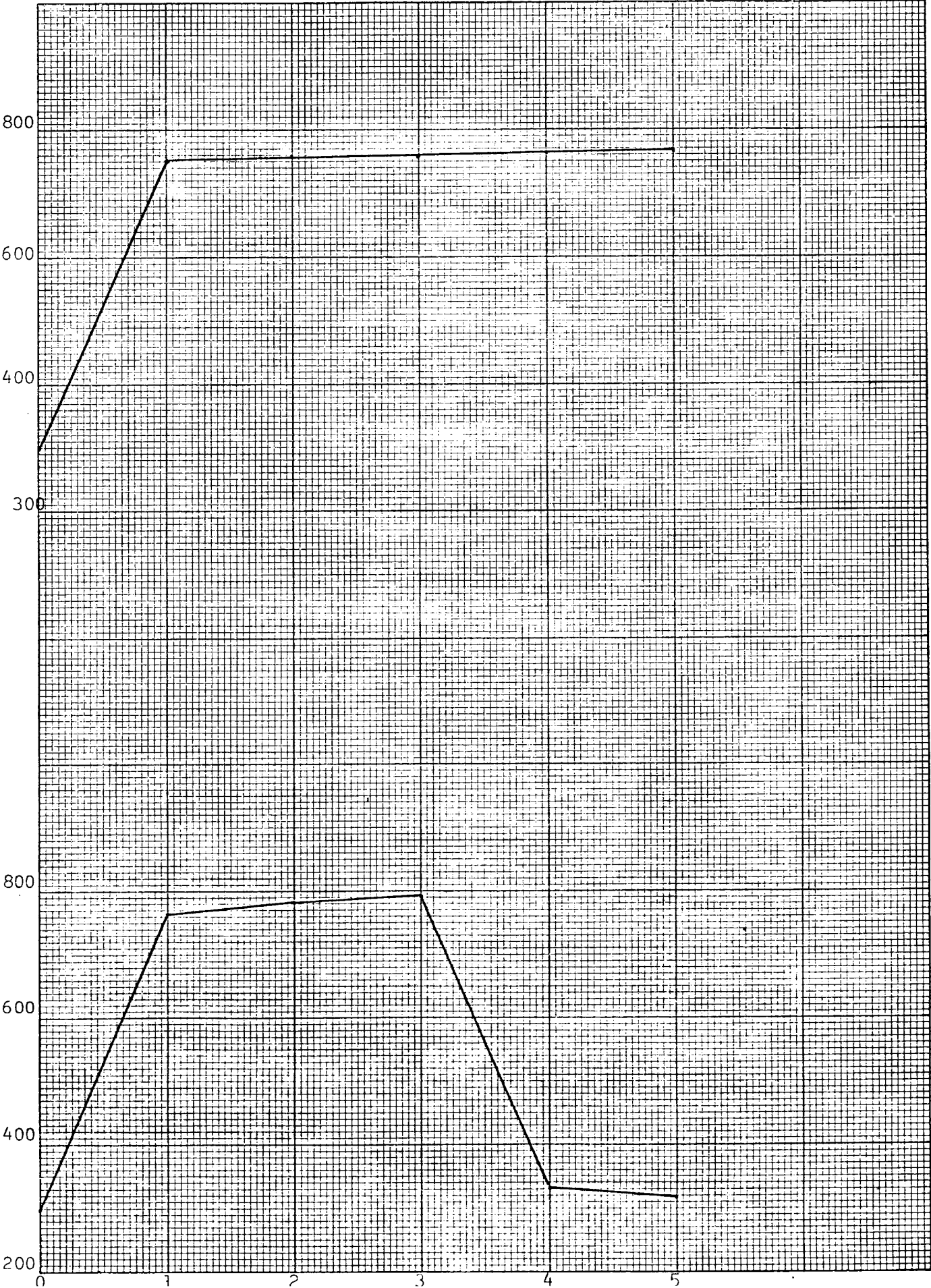
24-hour oil zone tests: all pressures, throughout the entire test, shall be continuously measured and recorded with recording pressure gauges, the accuracy of which must be checked at least twice, once at the beginning and once at the end of each test, with a deadweight pressure gauge. If a well is a 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. Tests shall be filed with the Aztec District Office of the New Mexico Oil Conservation Commission on Northwest New Mexico Packer Leakage Test Form Revised 11-1-58, with all deadweight pressures indicated thereon as well as the flowing temperatures (gas zones only) and gravity and GOR (oil zones only). A pressure versus time curve for each zone of each test shall be constructed on the reverse side of the Packer Leakage Test Form with all deadweight pressure points taken indicated thereon. For oil zones, the pressure curve should also indicate all key pressure changes which may be reflected by the recording gauge charts. These key pressure changes should also be tabulated on the front of the Packer Leakage Test Form.

MESA VERDE

PRESSURE PSIG

DAKOTA



NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

Operator Tenneco Oil Company Lease Jicarilla Well No. #6
Location of Well: Unit F Sec. 14 Twp. 26 Rge. 5 County Rio Arriba

	Name of Reservoir or Pool	Type of Prod. (Oil or Gas)	Method of Prod. (Flow or Art. Lift)	Prod. Medium (Tbg. or Csg.)
Upper Completion	Mesa Verde	Gas	Flow	Casing
Lower Completion	Dakota	Gas	Flow	Tubing

PRE-FLOW SHUT-IN PRESSURE DATA

Upper Compl	Hour, date 8-21-77 Shut-in 4:15 p.m.	Length of time shut-in 72 Hrs.	SI press. psig 738	Stabilized? (Yes or No) NO
Lower Compl	Hour, date 8-21-77 Shut-in 4:15 p.m.	Length of time shut-in 72 Hrs.	SI press. psig 353	Stabilized? (Yes or No) NO

FLOW TEST NO. 1

Commenced at (hour, date)* 8-24-77 2:00 p.m.		Zone producing (Upper or Lower): Lower			
Time (hour, date)	Lapsed time since*	Pressure		Prod. Zone Temp.	Remarks
		Upper Compl.	Lower Compl.		
8-25-77 2:20 p.m.	24 Hrs.	743	353		
8-26-77 12:30 p.m.	46 Hrs.	743	338		

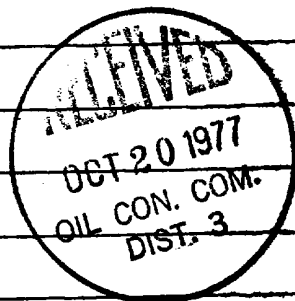
Production rate during test
Oil: _____ BOPD based on _____ Bbls. in _____ Hrs. Grav. _____ GOR _____
Gas: 166 MCFPD; Tested thru (Orifice or Meter): Meter

MID-TEST SHUT-IN PRESSURE DATA

Upper Compl	Hour, date Shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)
Lower Compl	Hour, date Shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)

FLOW TEST NO. 2

Commenced at (hour, date)**		Zone producing (Upper or Lower):			
Time (hour, date)	Lapsed time since **	Pressure		Prod. Zone Temp.	Remarks
		Upper Compl.	Lower Compl.		



Production rate during test
Oil: _____ BOPD based on _____ Bbls. in _____ Hrs. Grav. _____ GOR _____
Gas: _____ MCFPD; Tested thru (Orifice or Meter): _____

REMARKS: _____

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

Approved: OCT 20 1977 19
New Mexico Oil Conservation Commission

By [Signature]

Title PETROLEUM ENGINEER DIST. 30

Operator Tenneco Oil Company

By [Signature] Harold Korell

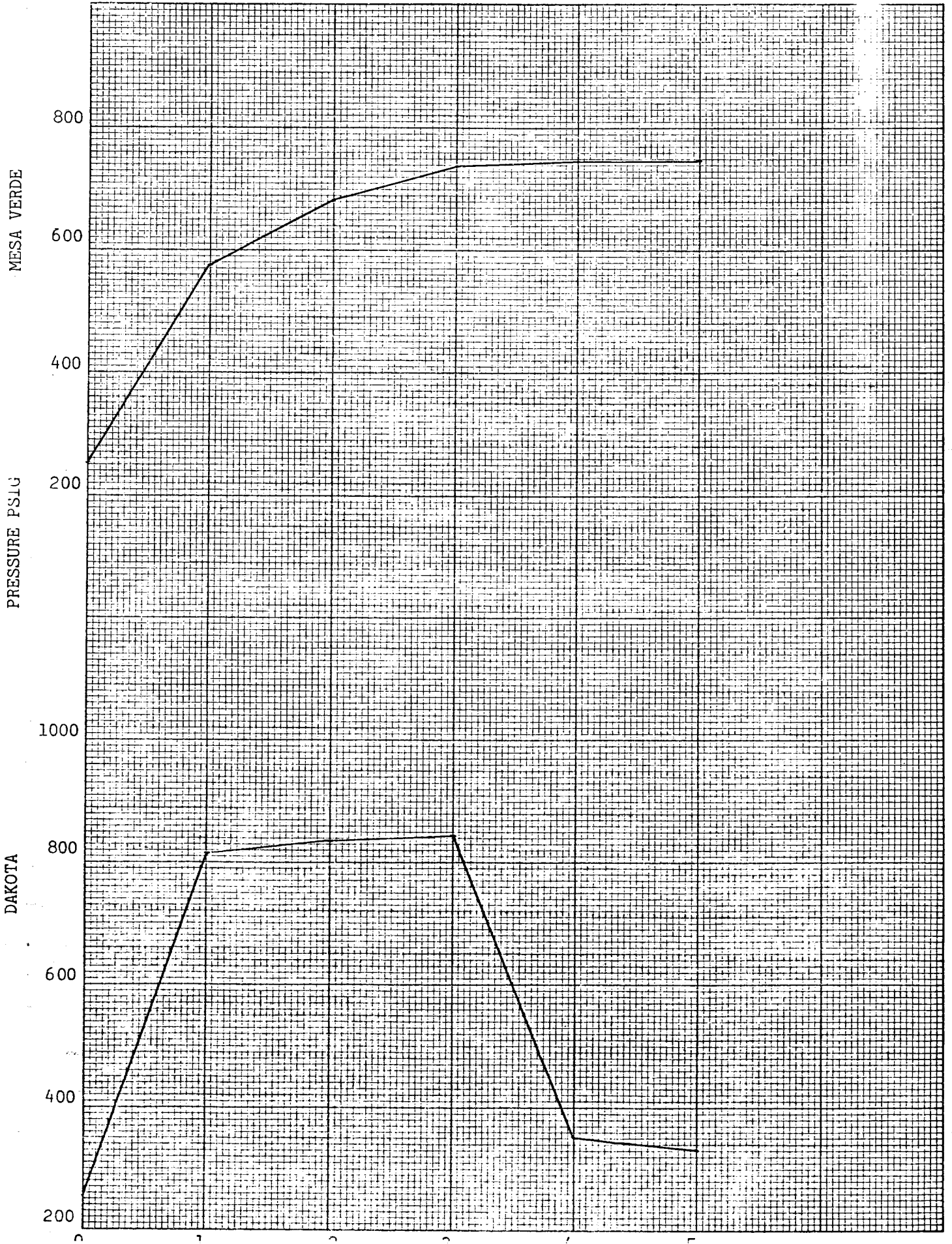
Title Division Production Engineer

Date 10-6-77

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2. At least 72 hours prior to the commencement of any packer leakage test, the operator shall notify the Commission 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.
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5. Following completion of Flow Test No. 1, the well shall again be shut-in, in accordance with Paragraph 3 above.
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- 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. Tests shall be filed with the Aztec District Office of the New Mexico Oil Conservation Commission on Northwest New Mexico Packer Leakage Test Form Revised 11-1-58, with all deadweight pressures indicated thereon as well as the flowing temperatures (gas zones only) and gravity and GOR (oil zones only). A pressure versus time curve for each zone of each test shall be constructed on the reverse side of the Packer Leakage Test Form with all deadweight pressure points taken indicated thereon. For oil zones, the pressure curve should also indicate all key pressure changes which may be reflected by the recording gauge charts. These key pressure changes should also be tabulated on the front of the Packer Leakage Test Form.

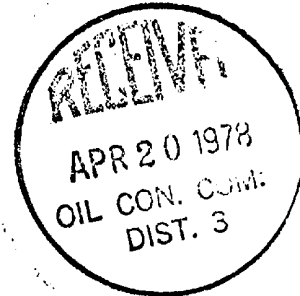


BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 6011
Order No. R-5707

APPLICATION OF TENNECO OIL COMPANY
FOR DOWNHOLE COMMINGLING,
RIO ARriba COUNTY, NEW MEXICO.



ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 31, 1977, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 18th day of April, 1978, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Tenneco Oil Company, is the owner and operator of the Jicarilla "A" Well No. 1 in Unit L of Section 18, "B" Well No. 8 in Unit B of Section 15, "C" Wells Nos. 4, 5, 6, 7, and 8, located, respectively, in Units F and I of Section 24, F of Section 14, and M and E of Section 13, all in Township 26 North, Range 5 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle Blanco Mesaverde and Basin-Dakota production within the wellbore of the above-described wells.

(4) That of the aforesaid wells, the Jicarilla "A" Well No. 1, "B" Well No. 8, and "C" Wells Nos. 6, 7, and 8 are of low productivity in either one or both of the aforesaid Blanco Mesaverde and Basin-Dakota Pools.

(5) That the Jicarilla "C" Wells Nos. 4 and 5 are at present producing from the Basin-Dakota Pool only, but are expected to be of low productivity in the Blanco Mesaverde Pool.

(6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

(7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the wells are not shut-in for an extended period.

(8) That to afford the Oil Conservation Division of the New Mexico Energy and Minerals Department the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Aztec office of the Division any time the subject wells are shut-in for 7 consecutive days.

(9) That in order to allocate the commingled production to each of the commingled zones in the subject wells, 98 percent of the gas production in Well No. A-1, 35 percent of the production in Well No. B-8, 40 percent of the production in Well No. C-6, and 80 percent of the production in both Well No. C-7 and Well No. C-8 should be attributed to the Dakota formation, and the remainder of the gas production in each well should be attributed to the Mesaverde formation. All liquid hydrocarbons should be attributed to the Dakota formation in each well.

(10) That during completion operations on Wells Nos. C-4 and C-5, the applicant should conduct productivity and pressure tests of each of the zones to be commingled, and should consult with the supervisor of the Division's Aztec office to determine an allocation formula for each of said wells.

(11) That the Division Director should have the authority to rescind the commingling authority herein granted for said Wells Nos. C-4 and C-5 in the event said productivity tests indicate non-marginal production from either or both of the commingled zones in said wells, or in the event the pressure differential between the commingled zones is of such magnitude as to possibly cause waste.

IT IS THEREFORE ORDERED:

(1) That the applicant, Tenneco Oil Company, is hereby authorized to commingle Blanco Mesaverde and Basin-Dakota production within the wellbores of the Jicarilla "A" Well No. 1 in Unit L of Section 18, "B" Well No. 8 in Unit B of Section 15, "C" Wells Nos. 4, 5, 6, 7 and 8, located, respectively, in Units F and I of Section 24, F of Section 14, and M and E of Section 13, all in Township 26 North, Range 5 West, NMPM, Rio Arriba County, New Mexico.

(2) That 98 percent of the gas production in Well No. A-1, 35 percent of the production in Well No. B-8, 40 percent of the production in Well No. C-6, and 80 percent of the production in both Well No. C-7 and Well No. C-8 shall be attributed to the Dakota formation, and the remainder of the gas production in each well shall be attributed to the Mesaverde formation. All liquid hydrocarbon production shall be attributed to the Dakota formation in each well.

(3) That during completion operations on Wells Nos. C-4 and C-5, the applicant shall conduct productivity tests and pressure tests on each of the zones to be commingled, and shall consult with the supervisor of the Division's Aztec office to determine an allocation formula for each of said wells.

(4) That the operator of the subject wells shall immediately notify the Commission's Aztec district office any time the wells have been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.

(5) That the Division Director shall have the authority to rescind the commingling authority herein granted for Wells Nos. C-4 and C-5 in the event the productivity tests on said wells indicate that either or both of the commingled zones in said wells are of non-marginal character, or in the event that the pressure tests on said wells indicate a pressure differential between the zones to be commingled of such magnitude as may cause waste.

(6) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

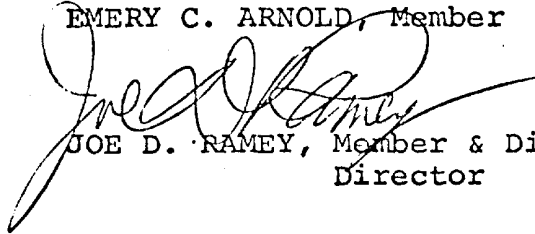
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



PHIL R. LUCERO, Chairman

EMERY C. ARNOLD, Member



JOE D. RAMEY, Member & Division
Director

S E A L

jr/