



**Amoco Production Company**

Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401  
505-325-8841

S. D. Blossom  
District Superintendent

January 10, 1984

New Mexico Oil Conservation Division  
1000 Rio Brazos Road  
Aztec, NM 87410

File: DHS-2-986.510.1

Commingling Application for the Jicarilla Contract 155 No. 20, Unit N,  
Section 29, T26N, R5W, Rio Arriba County, New Mexico

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**OIL CON. DIV.  
DIST. 3**

Amoco Production Company requests approval to downhole commingle production from the Basin Dakota and the Blanco Mesaverde pools in the subject well. The commingling will utilize a production packer set between the two zones at 6842' and a sliding sleeve set at 6832' to produce up 2-3/8" tubing landed at 6869'.

The commingling of Dakota and Mesaverde pools is necessary to more efficiently produce the Mesaverde. The gas production of the Mesaverde is not sufficient to lift Mesaverde liquids up the tubing-casing annulus. By producing the Mesaverde up the tubing, the liquids from the Mesaverde will be efficiently produced. The proposed commingling will not adversely affect either zone for the following reasons:

1. Neither zone will be damaged by the small amount of formation water which is produced. The Dakota formation has averaged 0 BWPM during 1983. The Mesaverde has averaged 0 BWPM during 1983.
2. Neither zone has a history of sensitivity to liquid hydrocarbons and should not be damaged by condensate production.
3. Both zones have common ownership, so the allocation of royalty or working interest payments will not be a problem.
4. The bottom hole pressure of the Mesaverde is 56 percent of the Basin Dakota.

In compliance with NMOCD Rule 303C, please find two copies of each of the following:

1. "Well Location and Dedication Plat" (NMOCD Form C-102).
2. Well location map showing location of all outside operated wells.
3. List of names and addresses of operators for all outside operated wells.

Page 2  
January 10, 1984  
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4. A complete well completion history (USGS Form 9-331, "Sundry Notices and Reports on Wells).
5. A complete engineering completion summary on both zones.
6. Production decline curve for the Basin Dakota.
7. Production decline curve for the Blanco Mesaverde.
8. NMOCD Form C-116 showing latest Dakota production.
9. NMOCD Form C-116 showing latest Mesaverde production.
10. Seven-day bottom hole pressure on the Dakota.
11. Calculated bottom hole pressure on the Mesaverde.
12. Gas analysis from the Dakota.
13. Gas analysis from the Mesaverde.
14. Water analysis from the Dakota.
15. Formula for the allocation of production for each commingled zone.
16. A copy of the letter sent to all offset operators and the Bureau of Land Management notifying them of our intent to commingle.

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To allocate production to the individual Mesaverde and Dakota horizons we recommend the following:

1. Allocate 14 percent of the gas production to the Mesaverde horizon.
2. Allocate 86 percent of the gas production to the Dakota horizon.
3. Allocate 36 percent of the condensate production to the Mesaverde horizon.
4. Allocate 64 percent of the condensate production to the Dakota horizon.

Please approve this commingling application as soon as possible so we can produce the Mesaverde up the tubing.

Yours very truly,

*S. D. Blossom*

MJB/lf/tk  
Attachments

AM9

Attachment 1  
 NEW MEXICO OIL CONSERVATION COMMISSION  
 WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
 Supersedes C-128  
 Effective 1-1-65

All distances must be from the outer boundaries of the Section.

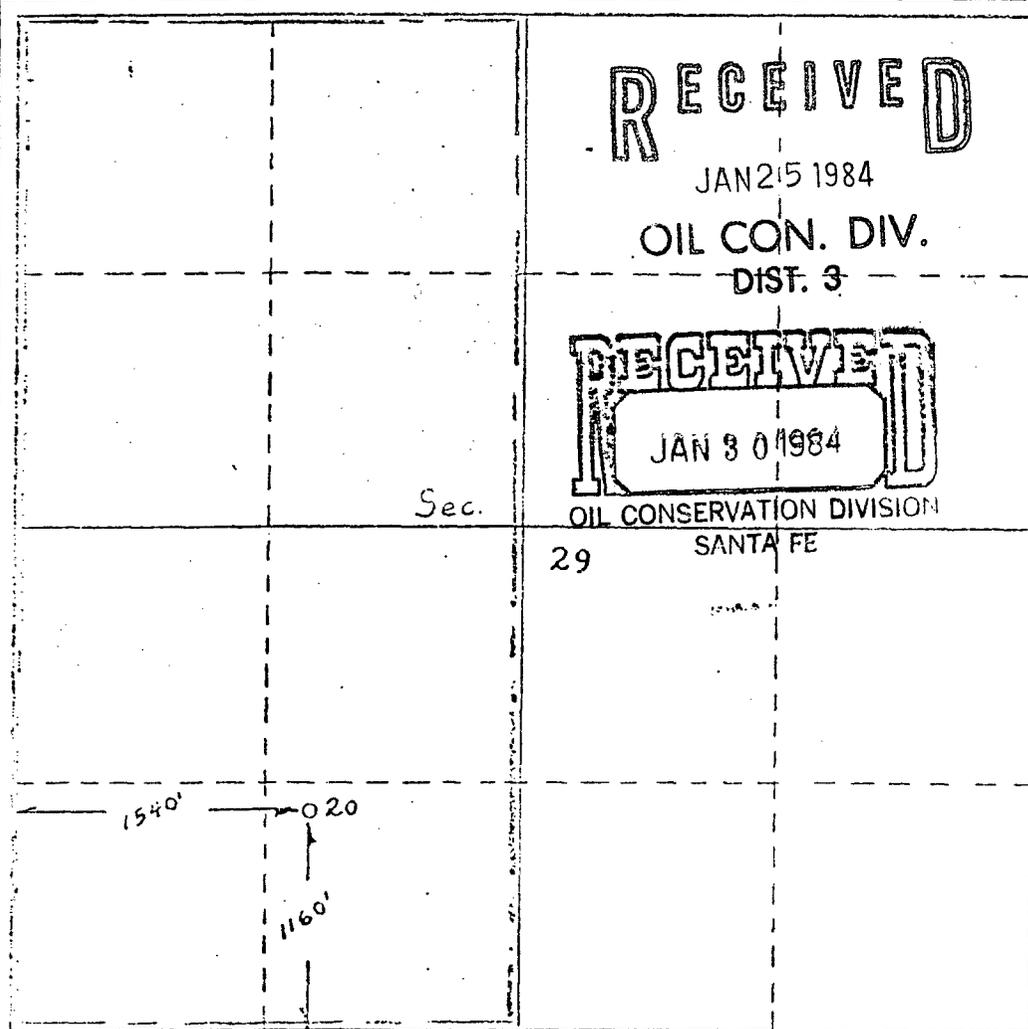
Operator <b>Pan American Petroleum Corp.</b>		Lease <b>Jicarilla Contract 155</b>		Well No. <b>20</b>	
Unit Letter <b>N</b>	Section <b>29</b>	Township <b>26N</b>	Range <b>5W</b>	County <b>Rio Arriba</b>	
Actual Footage Location of Well: <b>1160</b> feet from the <b>South</b> line and <b>1540</b> feet from the <b>West</b> line					
Ground Level Elev. <b>6433 (ungraded)</b>	Producing Formation <b>Dakota</b>		Pool <b>Basin Dakota</b>	Dedicated Acreage: <b>W/2</b> <b>320</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes     No    If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, force-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



**CERTIFICATION**

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

Name: G. W. Eaton, Jr.  
 Position: Area Engineer  
 Company: PAN AMERICAN PETROLEUM CORP.  
 Date: May 21, 1969

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: May 18, 1969  
 Registered Professional Engineer and/or Land Surveyor

Eric R. Kears  
 Certificate No.

3950



Attachment 3

Offset Operators Addresses

Tenneco Oil Company  
P.O. Box 3249  
Englewood, Colorado 80155

Marathon Oil Company  
P.O. Box 120  
Casper, Wyoming 82601

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Attachment 4  
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.  
**Jicarilla Contract 155**  
6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
**Jicarilla Apache Tribe**  
7. UNIT AGREEMENT NAME

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
**AMOCO PRODUCTION COMPANY**

3. ADDRESS OF OPERATOR  
**501 Airport Drive, Farmington, New Mexico**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17, below.)  
At surface

**1160' FSL & 1540' FWL, Unit "N", Section 29, T-26N, R-5W**

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SANTA FE

FARM OR LEASE NAME  
**Jicarilla Contract 155**  
8. WELL NO.  
**20**  
10. FIELD AND POOL, OR WILDCAT  
**Basin Dakota**  
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
**SE/4 SW/4 Section 29, T-26-N, R-5-W**  
12. COUNTY OR PARISH  
**Rio Arriba**  
13. STATE  
**New Mexico**

4. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

**6436' GL, 6448' RDB**

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF   
FRACTURE TREAT   
SHOOT OR ACIDIZE   
REPAIR WELL   
(Other)

PULL OR ALTER CASING   
MULTIPLE COMPLETE   
ABANDON\*   
CHANGE PLANS

WATER SHUT-OFF   
FRACTURE TREATMENT   
SHOOTING OR ACIDIZING   
(Other)

REPAIRING WELL   
ALTERING CASING   
ABANDONMENT\*

**Dual Completion**

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

18. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

On 9-1-73 moved in a service unit to begin dual completion operations. Set a tubing choke at 6980' and killed the well with 75 barrels water. Set a retrievematic packer at 7208' and swab tested perforations 7227-32' and 7240-50'. Acidized with 500 gallons 15% regular acid, pumping a total of 12 barrels acid into the formation at 1 BPM and 1900 psi. Swab test recovered water with no show gas. On 9-5-73 set a cement retainer at 7200' and squeezed perforations 7227-32' and 7240-50' with 100 sacks Class "C" cement with 2% CaCl. Reversed out 10' cement and cleaned out to 7200'. On 9-6-73 spotted 500 gallons 15% regular acid across the perforations. Set a Model "D" packer with expendable plug at 6900'. Perforated 4877-4882, 4960-4970, 4992-4997, 5003-5008, 5034-5039, 5051-5056, 5065-5070, 5100-5105 & 5124-48 with 1 SPF. Sand-water fraced with 40,320 gallons treated water and 20,000 pounds 10-20 sand and 20,000 pounds 8-12 sand. Dropped 25 balls midway thru frac. Breakdown pressure 1000. Maximum treating pressure 3100, minimum 3000 and average 3050 psi. AIR 54 BPM on first stage and decreased to 10 BPM on second stage. Blew well to unload, knocked plug out of packer at 6900' and blew Mesaverde and Dakota zones. Drilled packer and pushed to 7200' PBD. On 9-15-73 set a Model "D" packer at 6842'. Ran 1-1/4" tubing thru packer to bottom with 2-3/8" tubing landing in packer at 6842'.

OCT 30 1973  
FARMINGTON  
NM

18. I hereby certify that the foregoing is true and correct

Original Signed by  
SIGNED J. ARNOLD SNELL

TITLE Area Engineer

DATE October 26, 1973

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

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OTS-MSGS, Newmex  
1- HT Hunter  
1- Joe Tobe, Dallas  
1- Lopez

\*See Instructions on Reverse Side

*Open*

Attachment 4 CONT  
UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Form approved.  
Budget Bureau No. 42-R1424.

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
**AMOCO PRODUCTION COMPANY**

3. ADDRESS OF OPERATOR  
**501 Airport Drive, Farmington, New Mexico**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)  
At surface  
**1160 FSL & 1540 FWL, Unit N, Section 29, T-26-N, R-5-W**

14. PERMIT NO. \_\_\_\_\_

15. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**6436 GL 6448 RDE**

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JAN 30 1984

5. LEASE DESIGNATION AND SERIAL NO.  
**Jicarilla Contract 155**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
**Jicarilla Apache Tribe**

7. UNIT AGREEMENT NAME \_\_\_\_\_

8. FARM OR LEASE NAME  
**Jicarilla Contract 155**

9. WELL NO.  
**20**

10. FIELD AND POOL, OR WILDCAT  
**Basin Dakota**

11. SEC., T., R., OR BLK. AND SUBSURFACE AREA  
**SE/4 Section 29  
T-26-N, R-5-W**

12. COUNTY OR PARISH  
**Rio Arriba**

13. STATE  
**New Mexico**

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data:

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input checked="" type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACUTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input checked="" type="checkbox"/>	FRACUTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	(Other) <input type="checkbox"/>

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

**Amoco intends to dually complete this existing Dakota well with the Mesaverde. A water shut off in the Dakota will also be done. The proposed procedure for this work is as follows:**

1. Pull tubing and set a permanent bridge plug at 7170' to isolate Lower Dakota perms. which are believed to be producing water.
2. Set a bridge plug at 5400' and run gamma ray neutron log.
3. Perf. and sand/water frac. productive zones in the Mesaverde interval 4860-5100.
4. Drill out bridge plug at 5400'.
5. Set a production packer at 6800' and land tubing in packer.
6. Complete as a Basin Dakota and Gonzales Mesa Mesaverde well producing Dakota gas up tubing and Mesaverde gas up casing.

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FARMINGTON  
NSA

AS	
AS	
1 AS	0/15
AS	

2. [Signature]

18. I hereby certify that the foregoing is true and correct

SIGNED J. ARNOLD SNELL TITLE Area Engineer DATE 6-29-73

(This space for Federal or State office use)

**APPROVED**

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

JUL 2 1973  
*Jerry W. Long*  
JERRY W. LONG  
DISTRICT ENGINEER

**RECEIVED**  
DATE  
JUL 2 1973

\*See Instructions on Reverse Side

075-7565, Rev. 10-67  
1-47-44  
1-10-73, 1-10-73

Attachment 4 con't UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

SUBMIT IN TWO PARTS (Other Instructions on reverse side)

Form approved. Budget Bureau No. 42-R1425.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL OIL WELL [ ] GAS WELL [X] OTHER [ ]

2. NAME OF OPERATOR PAN AMERICAN PETROLEUM CORPORATION

3. ADDRESS OF OPERATOR OIL CONSERVATION DIVISION

501 Airport Drive, Farmington, New Mexico 87401 SANTA FE

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface

1160' FSL & 1540' FWL, Unit "N"

At proposed prod. zone

Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

10. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any) 3740' E.

16. NO. OF ACRES IN LEASE 2477.56

17. NO. OF ACRES ASSIGNED TO THIS WELL 320 (W/2)

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 80' SE.

19. PROPOSED DEPTH 7300'

20. ROTARY OR CABLE TOOLS Rotary Q-TD

21. ELEVATIONS (Show whether DP, RT, GR, etc.) Report Later

22. APPROX. DATE WORK WILL START\* May 26, 1969

23. PROPOSED CASING AND CEMENTING PROGRAM

Table with 5 columns: SIZE OF HOLE, SIZE OF CASING, WEIGHT PER FOOT, SETTING DEPTH, QUANTITY OF CEMENT. Includes rows for 12-1/4" and 6-3/4" hole sizes.

Well to be drilled through Dakota and completion designed from open hole logs.

Copy of Location Plat attached.

RECEIVED stamp

JAN 25 1984 stamp

OIL CON. DIV. DIST. 3 stamp

Stamp: RECEIVED MAY 26 1969 FARMINGTON, N.M. AREA ENGINEER

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. ORIGINAL SIGNED BY G. W. Eaton, Jr. TITLE Area Engineer DATE May 21, 1969

PERMIT NO. APPROVAL DATE

APPROVED stamp: MAY 23 1969 JERRY W. LONG DISTRICT ENGINEER

RECEIVED stamp: MAY 23 1969

U. S. GEOLOGICAL SURVEY DURANGO, COLO.

\*See Instructions On Reverse Side

open.

Attachment 5

Jicarilla Contract 155 No. 20 Well Completion Summary

- 10-27-69 - MIRUSU
- 10-28-69 - Clean out to PBD at 7293'
- 10-29-69 - Perforated 7227-7232' and 7240-7250' with 2' SPF. Frac with 25,620 gallons treated water and 20,000 pounds sand. Set CIBP at 7210'. Perforated 7066-72', 7078-86', 7110-15', 7156-58', 7162-70' with 2 SPF. Frac with 31,290 gallons treated water, 30,000 pounds sand. Set CIBP at 7030'. Perforated 6936-41', 6949-56', and 6964-68' with 2 SPF. Frac with 18,480 gallons treated water and 20,000 pounds sand.
- 10-30-69 - Drill out CIBP at 7030'. Drill out CIBP at 7210' and clean out to PBD of 7293'. TIH with 2-3/8" tubing and land at 7195'.
- 10-31-69 - Released rig.
- 09-02-73 - MIRUSU and TOH with 2-3/8" tubing.
- 09-04-73 - Cement squeeze intervals 7227-32 and 7240-50' with 25 sacks Class A cement.
- 09-06-73 - Perforate Mesaverde at 4877-82', 4960-70', 4992-97', 5003-08', 5034-39', 5051-56', 5065-70', 5100-05', and 5124-28'. Spot 500 gallons 15% acid across perfs. Air 4 BPM and treating pressure of 1000 psi. Frac with 40,320 gallons treated water and 40,000 pounds sand.
- 09-17-73 - TIH with 2-3/8" tubing and land in packer at 6842'. Release SU.

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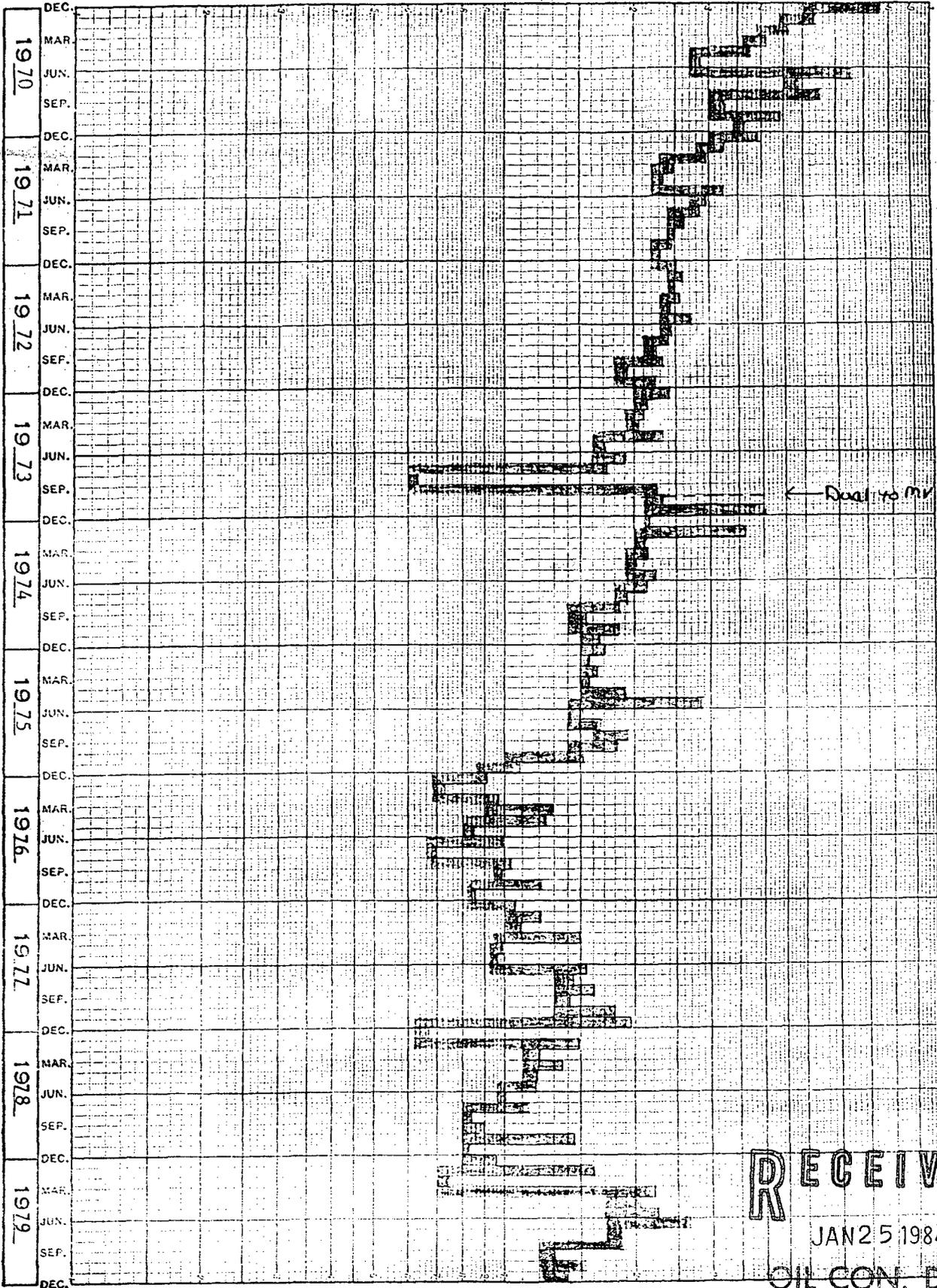
DIST. 3

1,000

100

10

Basin Dakota  
Jicarilla Contract 155 No. 20  
(Commingled, Gonzales MV) DUAL



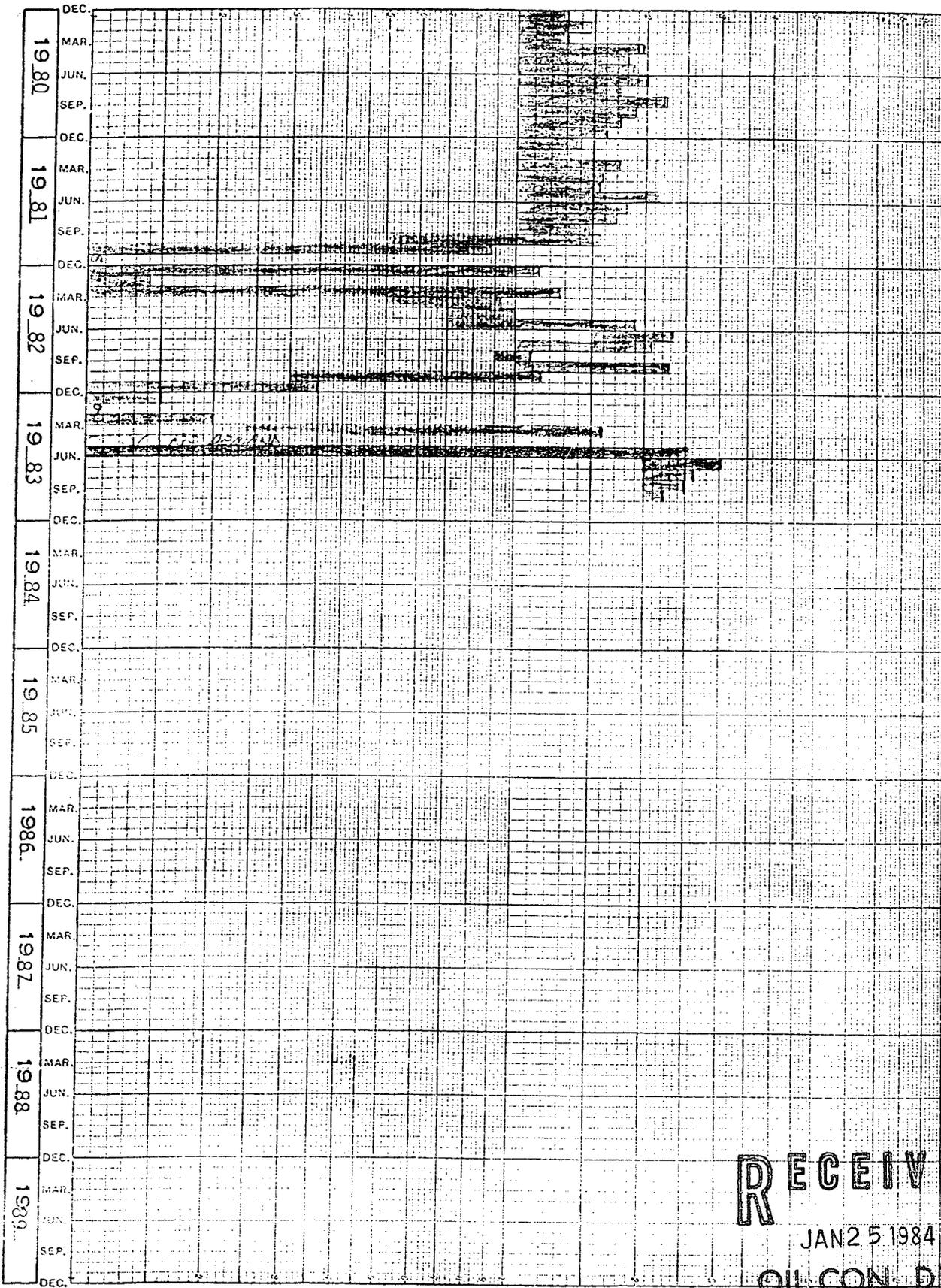
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DIST. 3

JICARILLA CONTRACT 155 #20  
N 29 26N 5W  
BASIN DAKOTA

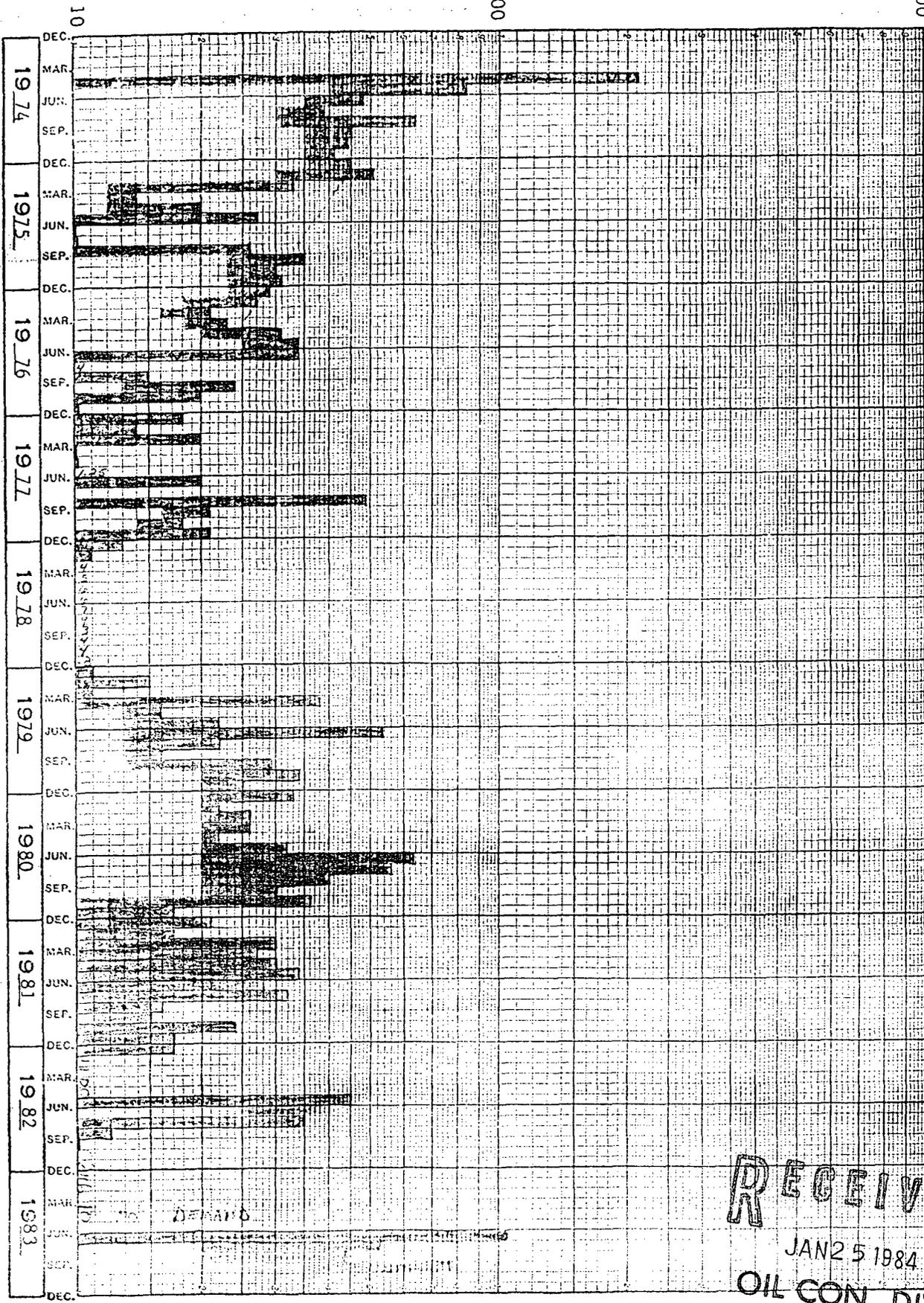


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Jicarilla Contract 155 No. 20  
Gonzales Mesaverde  
(Commingle Basin Dakota)

Attachment 7

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ATTACHMENT NO. 11K

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OIL CON. DIV.  
DIST. 3

GAS-OIL RATIO TESTS

Operator: Amoco Production Company  
 Address: 501 Airport Drive, Farmington, New Mexico 87401  
 Pool: Basin Dakota  
 County: Rio Arriba

LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	TYPE OF TEST (X)	CHOKE SIZE (IN)	DAILY ALLOWABLE	LENGTH OF TEST (HOURS)	PROD. DURING TEST			GAS-OIL RATIO (CU. FT./BBL)
		U	S	T						WATER BBL.	GRAV. OIL BBL.	OIL BBL.	
Jicarilla Contract 155 (Dark)	20	N	29	26N 5W	October	F		192	0	2	1784	892000	

Attachment 8

No well will be assigned an allowable greater than the amount of oil produced on the official test.  
 During gas-oil ratio tests, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.  
 Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.620.  
 Report casing pressure in lieu of tubing pressure for any well producing through casing.  
 Keep original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 301 and appropriate pool rules.

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

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 DIST. 3

*Shirley H. Spangler*  
 District Supervisor  
 1/23/84

GAS-OIL RATIO TESTS

Amoco Production Company 501 Airport Drive, Farmington, New Mexico 87401		Bianco Messverde 87401		Rio Arriba County	
LEASE NAME Icarilla Contract 155 (MV)		WELL NO. 20		LOCATION N 29 26N 5W	
DATE OF TEST October Production		TYPE OF TEST - (X) <input checked="" type="checkbox"/> Scheduled		PRODUCTION DURING TEST WATER BBL'S: 0 OIL BBL'S: 7 GAS M.C.F.: 230 GAS-OIL RATIO CU.FT./BBL: 32857	
CHOKER SIZE PRESS.		DAILY ALLOWABLE		LENGTH OF TEST HOURS 72	

Attachment 9

No well will be designed an allowable greater than the amount of oil produced on the official test.  
 During Rasoff ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowable when authorized by the Division.  
 Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.  
 Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 333 and appropriate pool rules.

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

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Dale H. Spangler  
 District Engineer  
 1/23/84

Attachment 10

BOITOM HOLE PRESSURE DATA

WELL NAME & NO. TIC 155-20  
FIELD PAT

Date of Test 6-10-83

Well Completion Data

Total Depth \_\_\_\_\_  
Plugged Back Depth .. \_\_\_\_\_  
Production Casing \_\_\_\_\_ " CSA \_\_\_\_\_ Ft.  
Tubing \_\_\_\_\_ " Landed At \_\_\_\_\_ Ft.  
Seating Nipple Depth \_\_\_\_\_  
Perforations \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Mid-Point Perforations \_\_\_\_\_  
Elevation \_\_\_\_\_ GL; \_\_\_\_\_ DF; \_\_\_\_\_ RDB  
Datum (Sub-Sea) \_\_\_\_\_

Pressure Data

Shut-in Tubing Pressure \_\_\_\_\_ PSIG  
Shut-in Casing Pressure \_\_\_\_\_ PSIG

Bottom Hole Pressure Data

Type Instrument Used \_\_\_\_\_  
Pressure Range of Element \_\_\_\_\_  
Date Element Calibrated \_\_\_\_\_

<u>Time</u>	<u>Depth Stopped</u>	<u>Extension</u>	<u>Pressure</u>	<u>Gradient</u>	<u>Temperature</u>
	<u>Surface</u>	<u>765</u>	<u>1163</u>		
	<u>6500</u>	<u>961</u>	<u>1463</u>		

BHP 1463 Datum \_\_\_\_\_

Remarks \_\_\_\_\_

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DIST. 3

Attachment 11

Bottom Hole Pressure

Jicarilla Contract 155 No. 20 (MV)

The Mesaverde side of the Jicarilla Contract 155 No. 20 was shut-in for seven days. Well head pressure was 700 psi. Using the Redlick-Kwong method a bottom hole pressure of 823 psi at 5100 feet was obtained. The Mesaverde bottom hole pressure is 56 percent of the Dakota bottom hole pressure.

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DIST. 3

11:11:03 07/08/82

METER CODE 2562901-1-0200-08182-JIC CONT 155 #20 BK --0000

Attachment 12

COMPONENT	MOL%	GPM	SP GR	BTU	UMOL%	SP HEAT
025	0.00	0.000	0.0000	0.	0.00	0.000
02	0.36	0.000	0.0035	0.	0.36	0.005
01	79.21	0.000	0.4397	802.	79.00	1.036
02	11.27	0.000	0.1170	200.	11.24	0.134
002	0.75	0.000	0.0114	0.	0.75	0.010
13	4.80	1.320	0.0731	121.	4.78	0.054
104	0.79	0.258	0.0159	26.	0.79	0.009
104	1.29	0.406	0.0259	42.	1.29	0.014
105	0.46	0.168	0.0115	18.	0.47	0.005
105	0.33	0.120	0.0082	15.	0.34	0.004
104	0.74	0.323	0.0238	38.	0.75	0.008
	100.00	2.595	0.731	1265.	1243.	1.279

BASE MOL% 99.77

*Sampled 6-26-82*

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13:29:15 12/23/80

86-693

MV

25 METER CODE 8669301-1-0200-01181-JIC. CONT 155 # 20 H-0000

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DEC 26 1980  
INSTRUMENT

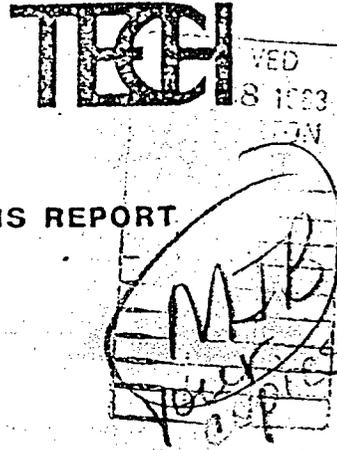
COMPONENT	MOLZ	GPH	SP GR	BTU	UNOLZ	SP HEAT
H2S	0.00	0.000	0.0000	0.	0.00	0.000
H2	0.67	0.000	0.0065	0.	0.68	0.009
C1	78.25	0.000	0.4334	792.	78.80	1.024
C2	10.86	0.000	0.1127	193.	10.94	0.129
C02	0.42	0.000	0.0064	0.	0.42	0.005
C3	6.28	1.728	0.0956	158.	6.33	0.071
IC4	1.01	0.330	0.0203	33.	1.02	0.011
NC4	1.54	0.485	0.0309	50.	1.56	0.017
ICS	0.36	0.132	0.0090	14.	0.36	0.004
MCS	0.27	0.098	0.0067	11.	0.27	0.003
C6+	0.34	0.149	0.0109	17.	0.34	0.004
	100.00	2.922	0.735	1273.	1251.	1.277

BASE MOLZ 100.74

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Attachment 14  
**T&E, Inc.**  
 333 East Main  
 Farmington  
 New Mexico  
 87401  
 505/327-3311



### OIL-FIELD WATER ANALYSIS REPORT

DATE: November 22, 1983  
 FURNISHED BY: Morris Bell  
 COPIES TO:

REPORTED TO: Amoco Production Company  
 501 Airport Drive  
 Farmington, NM 87401

LABORATORY No. 4-216-1

PAGE: 1/1

Company Amoco Production Company		Sample No.	Date Sampled 11-17-83	
Field Basin Dakota	Legal Description Unit N, Sec. 29, T26N, R5W	County or Parish Rio Arriba	State NM	
Lease or Unit 155   Well Jicarilla Contract	20	Depth 7250	Formation Dakota	Water, B/D
Type of Water (Produced, Supply, etc.) Produced	Sampling Point Production Unit	Sampled By Terry Muniz		

**DISSOLVED SOLIDS**

CATIONS	mg/l	me/l
Sodium, Na (calc.)	1700	74
Calcium, Ca	47	2.3
Magnesium, Mg	34	2.8
Barium, Ba		
Potassium	27	0.7

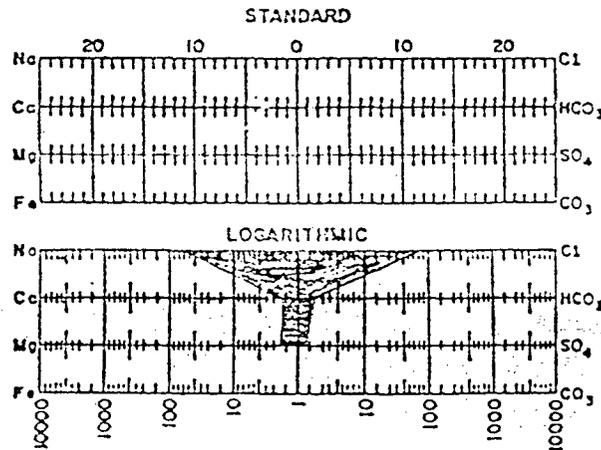
**OTHER PROPERTIES**

pH	7.84
Specific Gravity, 60/60 F.	1.0063
Resistivity (ohm-meters) 72 F.	1.25

**ANIONS**

Chloride, Cl	2600	73
Sulfate, SO <sub>4</sub>	85	1.7
Carbonate, CO <sub>3</sub>	none	none
Bicarbonate, HCO <sub>3</sub>	168	2.7
Total Dissolved Solids	4672	
Iron, Fe (total)		
Sulfide, as H <sub>2</sub> S		

**WATER PATTERNS — me/l**



Date Received 11-18-83	Preserved	Date Analyzed 11-18-83	Analyzed By NO
---------------------------	-----------	---------------------------	-------------------

REMARKS & RECOMMENDATIONS:

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T&E, Inc.  
 By M. J. Bell 888

Attachment 15  
Allocation of Production

Average Gas Production

Dakota 112 MCFD  
Mesaverde 18 MCFD

---

Total 130 MCFD

Average Condensate Production

2.9 BOPD  
1.6 BOPD

---

4.5 BOPD

Allocate 86% gas production and 64% condensate production to the Basin Dakota horizon.

Allocate 14% gas production and 36% condensate production to the Blanco Mesaverde horizon.

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**Amoco Production Company**

Petroleum Center Building  
501 Airport Drive  
Farmington, New Mexico 87401  
505-325-8841

S. D. Blossom  
District Superintendent

January 6, 1984

Tenneco Oil Company  
P.O. Box 3249  
Englewood, CO 80155

Bureau of Land Management  
Caller Service 4104  
Farmington, NM 87499

Marathon Oil Company  
P. O. Box 120  
Casper, WY 82601

File: DHS-8-986.510.1

Proposed Downhole Commingling of Jicarilla Contract 155 No. 20,  
Rio Arriba County, New Mexico

This is to advise you that the Farmington District Office of Amoco Production Company is requesting approval from the New Mexico Oil Conservation Division to downhole commingle production from the following well:

Jicarilla Contract 155 No. 20, Unit N, Section 29, T26N, R5W

This well has been completed in the Basin Dakota and Blanco Mesaverde pools.

Enclosed is a wellbore diagram and a map showing the location of offset wells.

If you, as an offset operator, have no objections to the commingling of production from the Basin Dakota and Blanco Mesaverde pools of the subject well, please sign the waiver below and send to:

New Mexico Oil Conservation Division  
Box 2088  
Sante Fe, NM 87501

We would appreciate your sending one executed copy to the undersigned.

Very truly yours,

*S. D. Blossom*  
*MSB*

MJB/tk  
Enclosures

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DIST. 3

Page 2  
January 6, 1984  
File: DHS-8-986.510.1

Waiver

We hereby waive any objections to Amoco Production Company's application for commingling as set forth above.

\_\_\_\_\_  
Company

\_\_\_\_\_  
By

\_\_\_\_\_  
Date

AM13

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STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
 OIL CONSERVATION DIVISION  
 AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD  
 AZTEC, NEW MEXICO 87410  
 (505) 334-6178

OIL CONSERVATION DIVISION  
 BOX 2088  
 SANTA FE, NEW MEXICO 87501

DATE January 26, 1983

RE: Proposed MC \_\_\_\_\_  
 Proposed DHC  \_\_\_\_\_  
 Proposed NSL \_\_\_\_\_  
 Proposed SWD \_\_\_\_\_  
 Proposed WFX \_\_\_\_\_  
 Proposed PMX \_\_\_\_\_

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 SANTA FE

Gentlemen:

I have examined the application dated January 25, 1983  
 for the Amow pic Cont. 155 #20 N-29-26W-5N  
 Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Yours truly,

\_\_\_\_\_