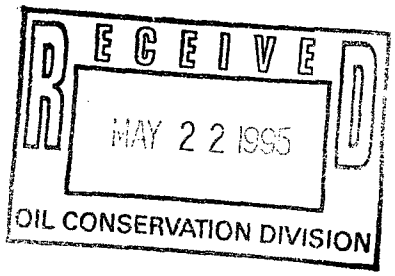
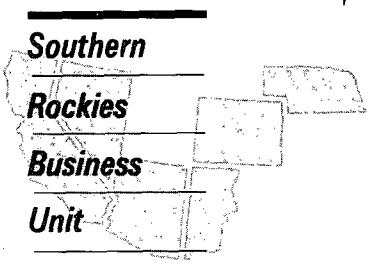
6-12-95
1138





May 18, 1995

Mr. William J. LeMay, Director
New Mexico Oil Conservation Division
2040 S. Pacheco Street
P. O. Box 6429
Santa Fe, NM 87505

Application for Exception to Rule 303-A
Downhole Commingling
Jicarilla "A" Well #5
1750' FNL & 1450' FEL, Unit G Section 20-T26N-R5W
Basin Dakota and Tapacito Gallup Pools
Rio Arriba County, New Mexico

Amoco Production Company hereby requests administrative approval to downhole commingle production from the Basin Dakota and Tapacito Gallup Pools in the Jicarilla "A" Well #5 referenced above. The Jicarilla "A" Well #5 was originally a dual completion in the Dakota and Gallup formations. This well has a marginal Gallup formation which is being produced dually with the Dakota which if left as a dual completion, the marginal zone would be shut-in in the near future. We plan to complete the well with both the Dakota and Gallup formations being downhole commingled in the wellbore. The two zones are expected to produce at a total commingled rate of about 251 MCFD with 5 BOPD. The ownership (WI, RI) of these pools is identical in this wellbore. Downhole commingling will offer an economical method of production while protecting against reservoir damage, waste of reserves and violation of correlative rights. Offset operators to this well will receive a copy of this application by certified mail.

The allocation method that we plan to use for this commingled well is as follows. Since these formations have been producing for some time, we have a good historical representation of the production by formation. Based on historical production we recommend that the allocation for gas production be 85% from the Dakota formation and 15% from the Gallup formation. Liquid production in this well has been restricted due to liquid loading problems occurring in these pressure depleted gas reservoirs. The downhole commingling and subsequent addition of a plunger lift system should increase the capability of the marginal formations to again produce condensate. Based on that premise, we propose to allocate 80% of the liquid production to the Dakota formation and 20% of the liquid production to the Gallup formation. The actual commercial value of the commingled production will not be less than the sum of the values of the production from each of the common sources of supply.

Attached to aid in your review are plats showing the location of the well and offset wells in the same formations, a historical production plot and a C-102 for each formation. This spacing unit is on a federal lease and a copy of the application will be sent to the BLM requesting their consent.

Should you have questions concerning this matter, please contact me at (303) 830-5344.

Sincerely,

Pamela W. Staley

Enclosures

cc: Steve Smethie
Patty Haefele

Frank Chavez, Supervisor
NMOCD District III
1000 Rio Brazos Road
Aztec, NM 87410

Duane Spencer
Bureau of Land Management
1235 La Plata Hwy
Farmington, NM 87401

Application for Exception to Rule 303: SEGREGATION OF PRODUCTION FROM POOLS

Requirements

(1) Name and address of the operator:

Amoco Production Company
P.O. Box 800
Denver, CO 80201

(2) Lease name, well number, well location, name of the pools to be commingled:

Lease Name:	Jicarilla "A" Well #5
Well Location:	1750' FNL&1450' FEL Unit G Section 20-T26N-R5W Rio Arriba County, New Mexico
Pools Commingled:	Tapacito Gallup Pool Basin Dakota Pool

(3) A plat of the area showing the acreage dedicated to the well and the ownership of all offsetting leases.

Attached

(4) A current (within 30 days) 24-hour productivity test on Division Form C-116 showing the amount of oil, gas and water produced from each zone.

The Basin Dakota produced an average stabilized rate of 146 MCFD and 2.3 BCPD. The Tapacito Gallup zone produced at an average rate of about 25 MCFD and 0 BCPD.

(5) A production decline curve for both zones showing that for a period of at least one year a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes.

Tapacito Gallup Completion:	Historical production curve attached.
Basin Dakota Completion:	Historical production curve attached.

(6) Estimated bottom hole pressure for each zone. A current (within 30 days) measured bottom hole pressure for each zone capable of flowing.

Bottom hole pressures were estimated from 24 hour bottom hole shut-in pressures in the Gallup and Dakota formations in the Jicarilla field. Estimated bottom hole pressure in the Gallup and the Dakota formations is 900 PSI.

(7) A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the wellbore.

The fluids have no abnormal components that would prohibit commingling, or promote the creation of emulsions or scale. Amoco has applied for and received several downhole commingling orders in this area including wells in which these two formations have been successfully downhole commingled with no apparent incompatibility in the commingled fluids.

(8) A computation showing that the value of the commingled production will not be less than the sum of the values of the individual streams:

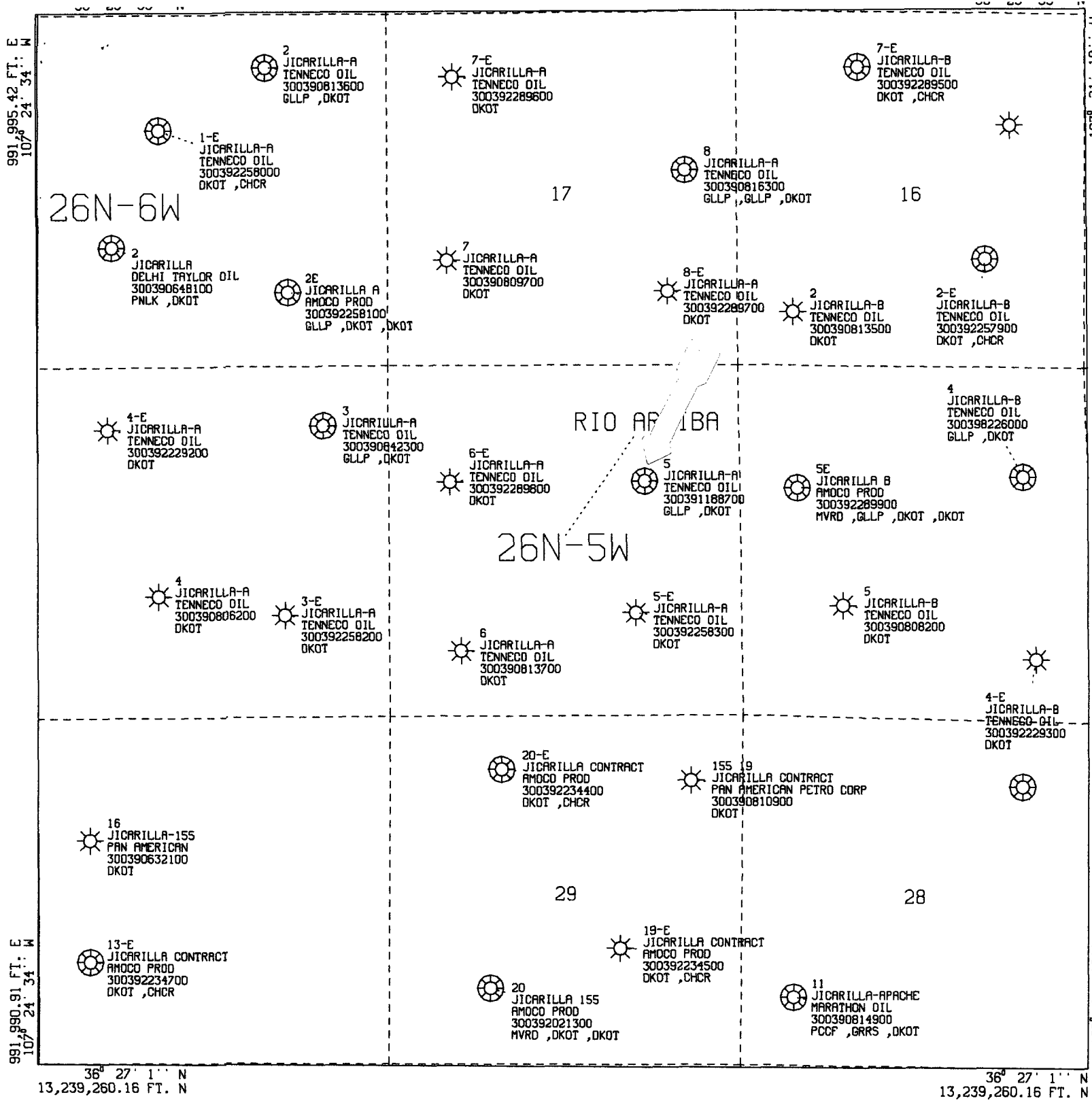
Since the BTU content of the produced fluids are very similar, we would expect the commingled production to have the same value as the sum of the individual streams.

(9) A formula for the allocation of production to each of the commingled zones and a description of the factors or data used in determining such formula:

The allocation method that we plan to use for this commingled well is as follows. Since these formations have been producing for some time, we have a good historical representation of the production by formation. Based on historical production we recommend that the allocation for gas production be 85% from the Dakota formation and 15% from the Gallup formation. Liquid production in this well has been restricted due to liquid loading problems occurring in these pressure depleted gas reservoirs. The downhole commingling and subsequent addition of a plunger lift system should increase the capability of the marginal formations to again produce condensate. Based on that premise, we propose to allocate 80% of the liquid production to the Dakota formation and 20% of the liquid production to the Gallup formation. The actual commercial value of the commingled production will not be less than the sum of the values of the production from each of the common sources of supply.

(10) A statement that all offset operators and, in the case of a well on federal land, the United States Bureau of Land Management, have been notified in writing of the proposed commingling.

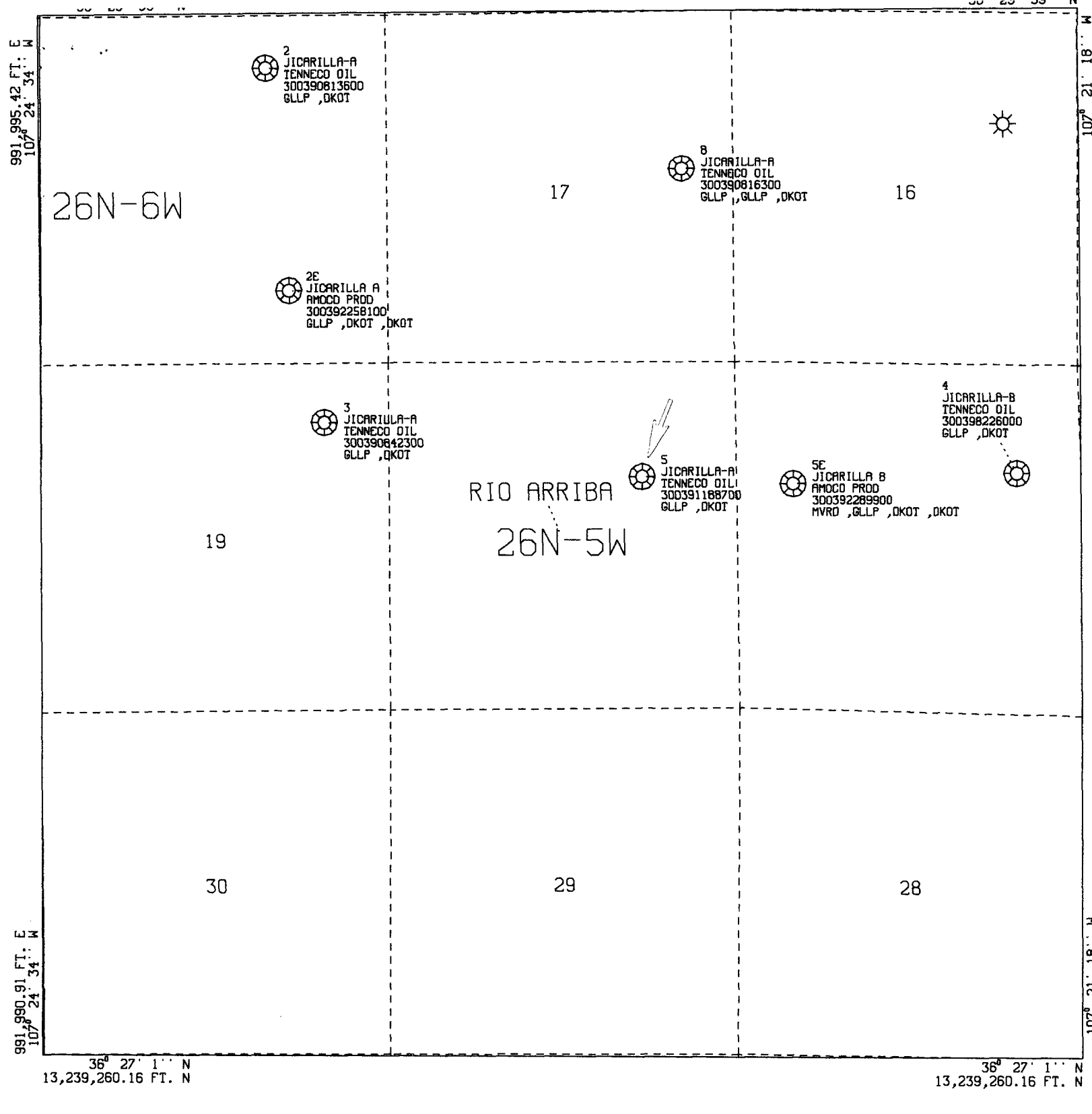
BLM will receive a copy of this application by certified mail. The offsetting operators listed on the attached sheet will receive a copy of this application by certified mail.



POLYCONIC CENTRAL MERIDIAN - 107° 22' 56'' W LON
SPHEROID - 6

AMOCO PRODUCTION COMPANY
PLAT MAP
Jicarilla A 5
Dakota

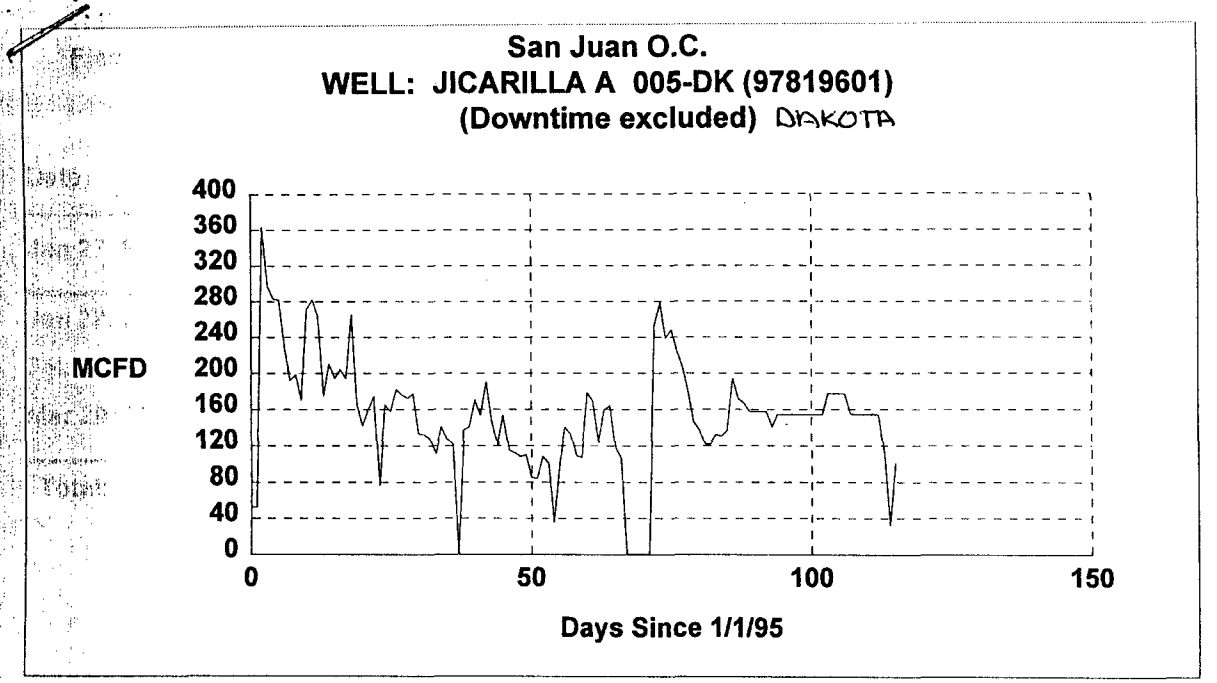
SCALE 1 IN. = 2,000 FT. MAY 11, 1995



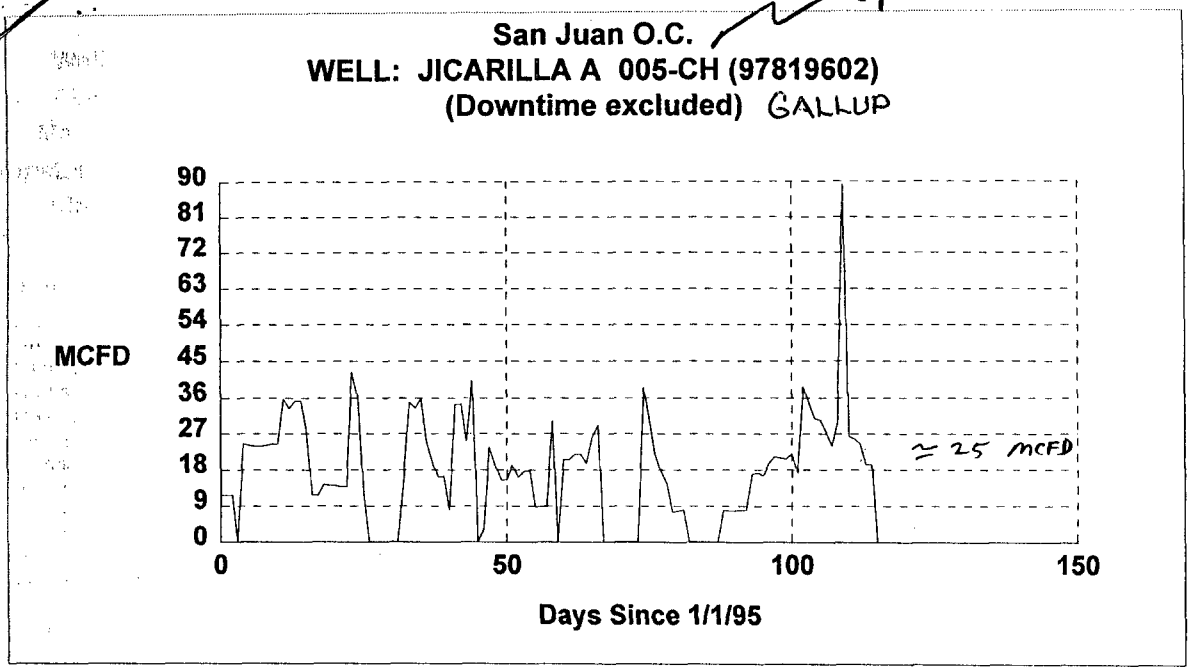
POLYCONIC CENTRAL MERIDIAN - 107° 22' 56" W LON
SPHEROID - 6

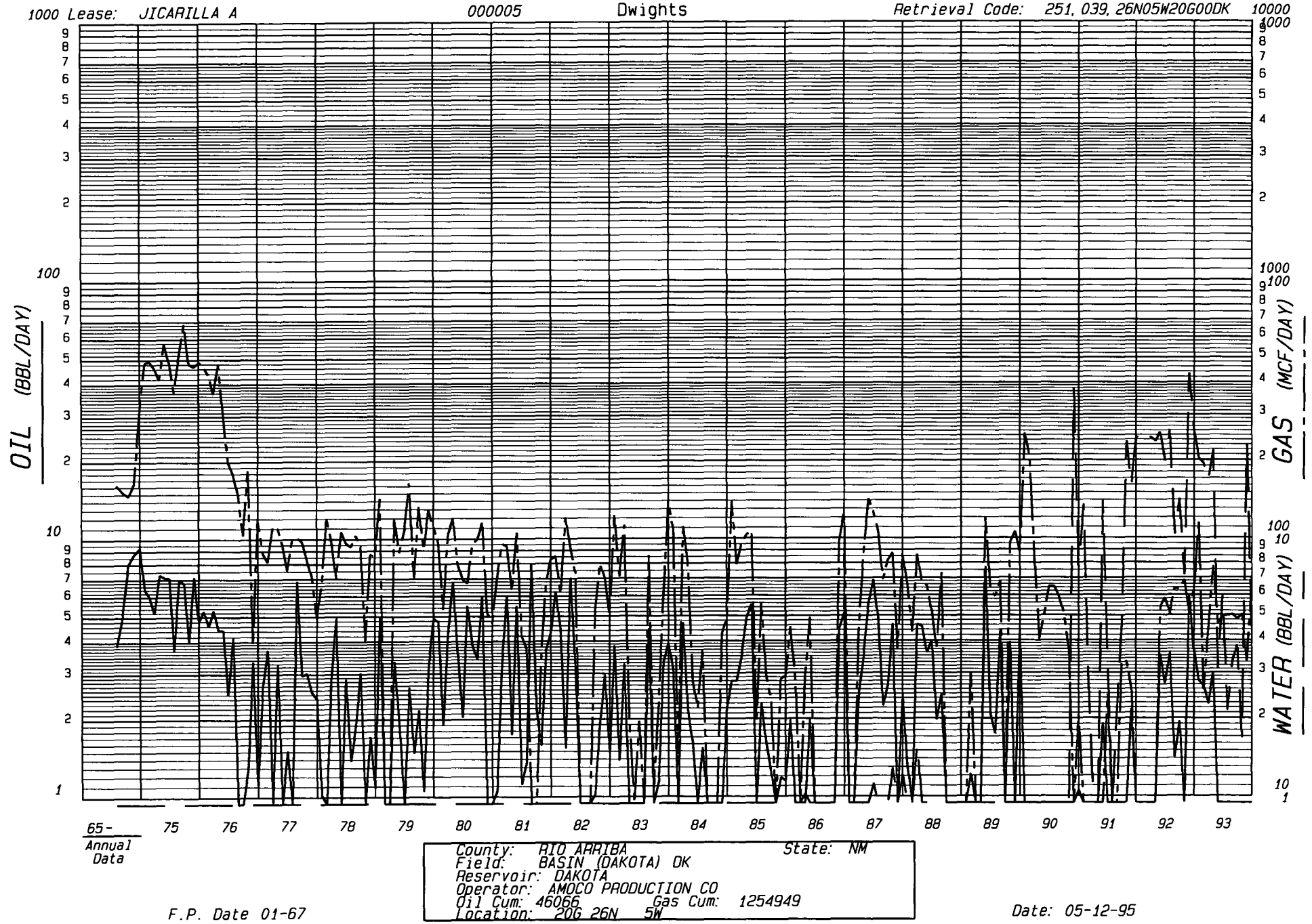
AMOCO PRODUCTION COMPANY
PLAT MAP
Jicarilla A 5
Gallup

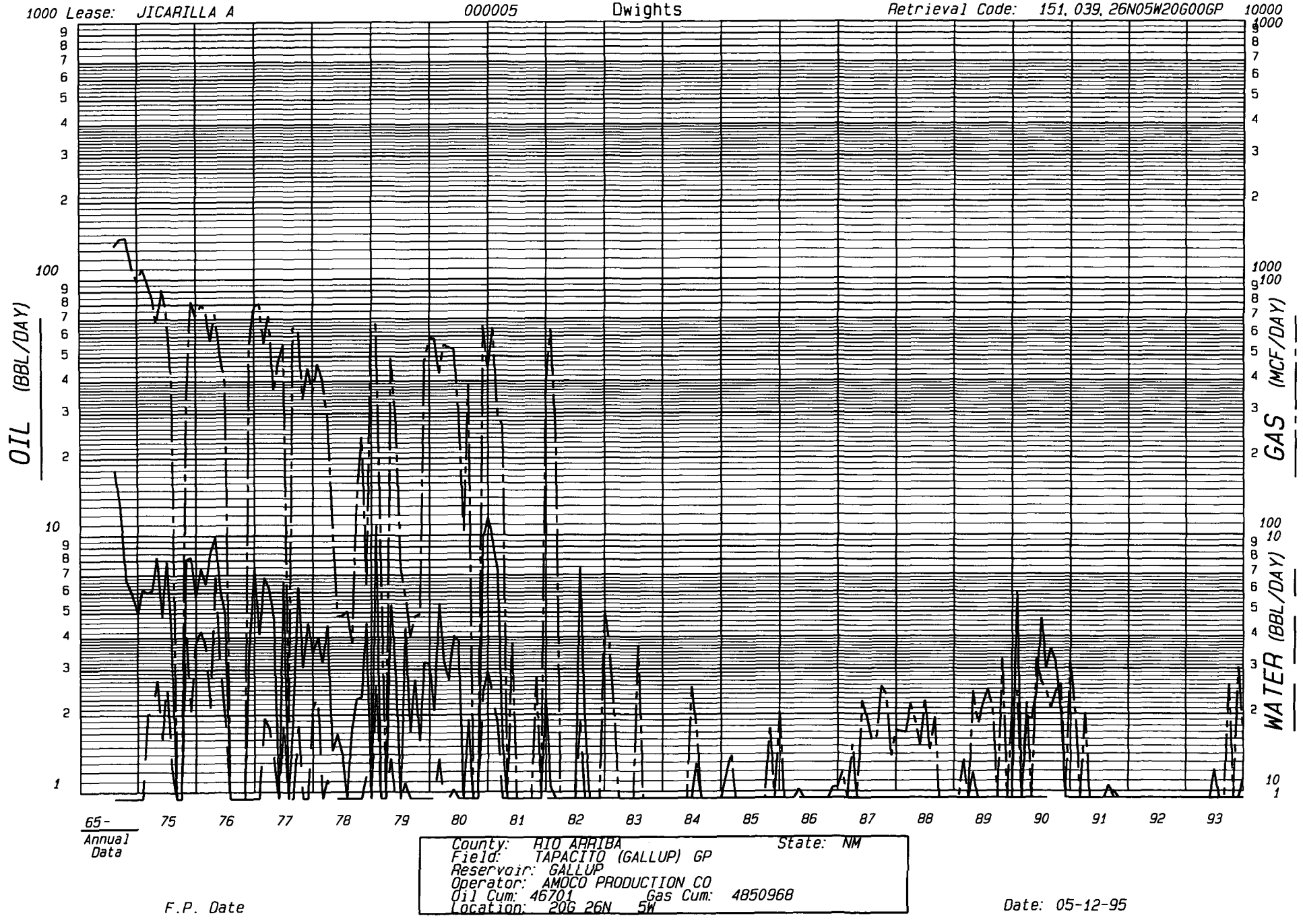
SCALE 1 IN. = 2,000 FT. MAY 12, 1995


San Juan O.C.
WELL: JICARILLA A 005-DK (97819601)
(Downtime excluded) DAKOTA
MCFD
400
360
320
280
240
200
160
120
80
40
0
0
50
100
150
Days Since 1/1/95

GP


San Juan O.C.
WELL: JICARILLA A 005-CH (97819602)
(Downtime excluded) GALLUP
MCFD
90
81
72
63
54
45
36
27
18
9
0
0
50
100
150
Days Since 1/1/95
≃ 25 MCFD


1000 Lease: JICARILLA A
000005
Dwights
Retrieval Code: 251, 039, 26N05W20G00DK
OIL (BBL/DAY)
GAS (MCF/DAY)
WATER (BBL/DAY)
65- Annual Data
75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93
County: RIO ARRIBA
State: NM
Field: BASIN (DAKOTA) OK
Reservoir: DAKOTA
Operator: AMOCO PRODUCTION CO
Oil Cum: 46066
Gas Cum: 1254949
Location: 20G 26N 5W
F.P. Date 01-67
Date: 05-12-95


1000 Lease: JICARILLA A
000005
Dwights
Retrieval Code: 151, 039, 26N05W20G00GP
OIL (BBL/DAY)
GAS (MCF/DAY)
WATER (BBL/DAY)
65-
Annual Data
75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93
County: RIO ARRIBA State: NM
Field: TAPACITO (GALLUP) GP
Reservoir: GALLUP
Operator: AMOCO PRODUCTION CO
Oil Cum: 46701 Gas Cum: 4850968
Location: 20G 26N 5W
F.P. Date
Date: 05-12-95

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	Lease	Well No.
TENNECO OIL COMPANY	JICARILLA "A"	5

Unit Letter	Section	Township	Range	County
G	20	26 North	5 West	Rio Arriba

Actual Footage Location of Well:				
1750	feet from the North	line and	1450	feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6630' ungraded	Basin Dakota	Basin Dakota	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

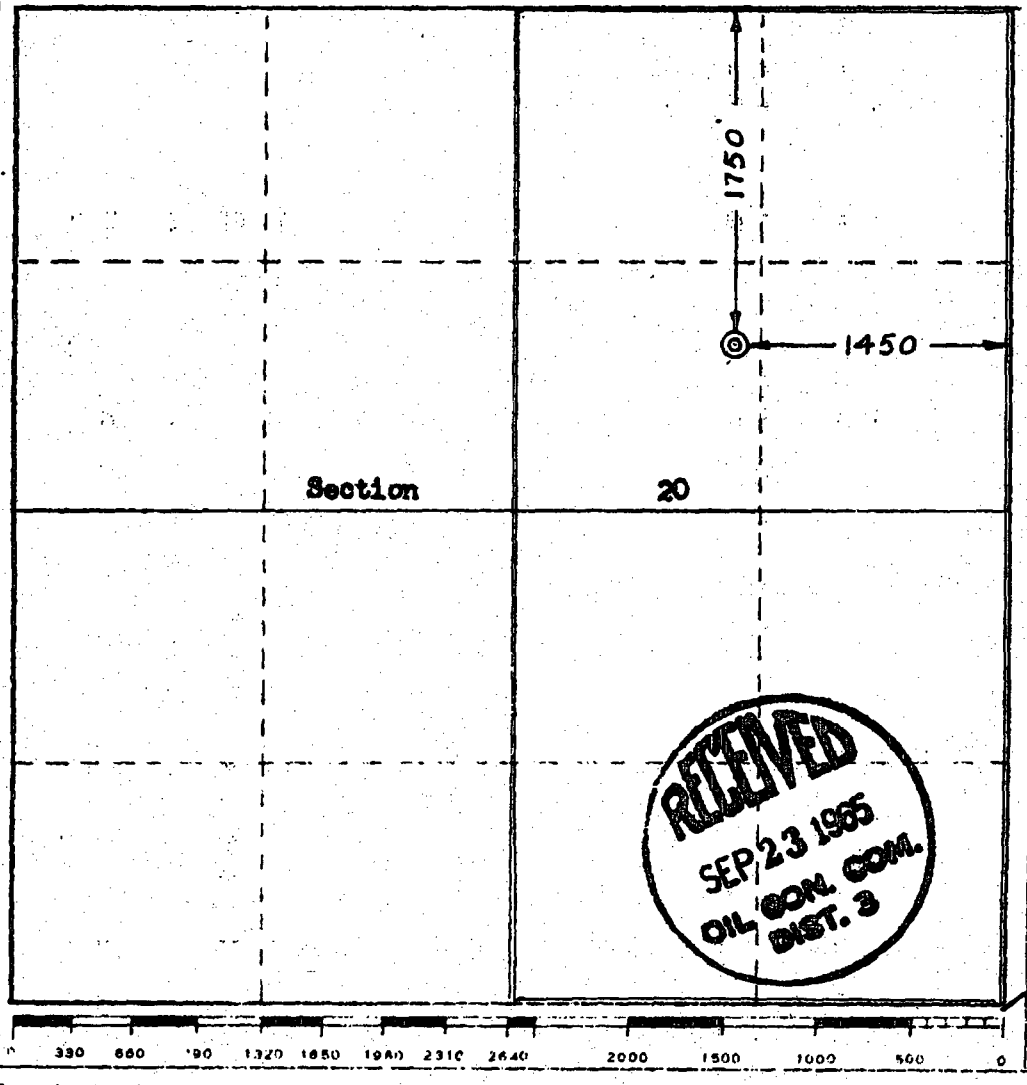
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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, forced-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.

Original Signed By
HAROLD C. NICHOLS
Name H. C. Nichols

Senior Production Clerk
Position

Tennecо Oil Company
Company

Box 1714, Durango, Colo.
Address

9-20-65
Date

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.

20 June 1965
Date Surveyed

ROBERT H. ERNST
Registered Professional Engineer and/or Land Surveyor

N. Mex. PE & LS 2463
Certificate No.

Ernst Engineering Company, Durango, Colorado

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	Lease	Well No.
Tenneco Oil Company	Jicarilla "A"	5

Unit Letter	Section	Township	Range	County
G	20	26N	5W	Rio Arriba

Actual Footage Location of Well:
1750 feet from the North line and 1450 feet from the East line

Ground Level Elev:	Producing Formation	Pool	Dedicated Acreage:
6630 Gr.	Tapacito Gallup	Tapacito Gallup	320 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.) _____

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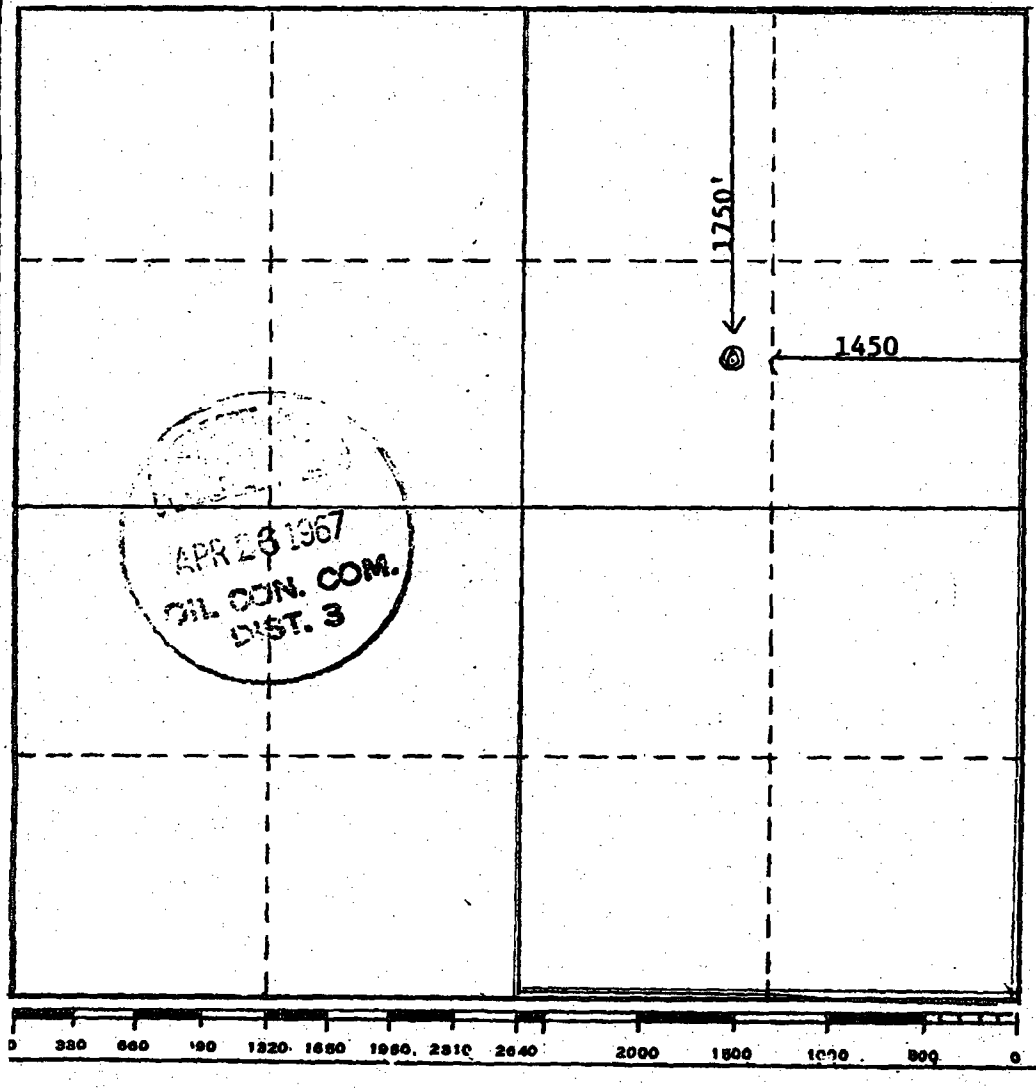

CERTIFICATION

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

Name G. A. Ford

Senior Production Clerk
Position

Tenneco Oil Company
Company

April 25, 1967
Date

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

Registered Professional Engineer and/or Land Surveyor

Certificate No.

LIST OF ADDRESSES FOR OFFSET OPERATORS
Jicarilla "A" Well #5

1 Marathon Oil Co.
P.O. Box 552
Midland, TX 79702