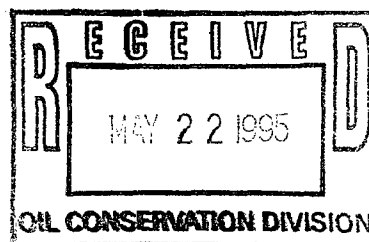


May 18, 1995

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 "B" Well #4
1650' FNL & 990' FEL, Unit H Section 21-T26N-R5W
Basin Dakota and Tapacito Gallup Pools
Rio Arriba County, New Mexico**

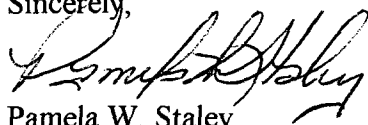
Amoco Production Company hereby requests administrative approval to downhole commingle production from the Basin Dakota and Tapacito Gallup Pools in the Jicarilla "B" Well #4 referenced above. The Jicarilla "B" Well #4 was originally a dual completion in the Dakota and Gallup formations. This well has 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 233 MCFD with 6 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 86% from the Dakota formation and 14% 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 83% of the liquid production to the Dakota formation and 17% 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 "B" Well #4

Well Location: 1650' FNL & 990' FEL
Unit H Section 21-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 132 MCFD and 2.3 BCPD. The Tapacito Gallup zone produced at an average rate of about 21 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:

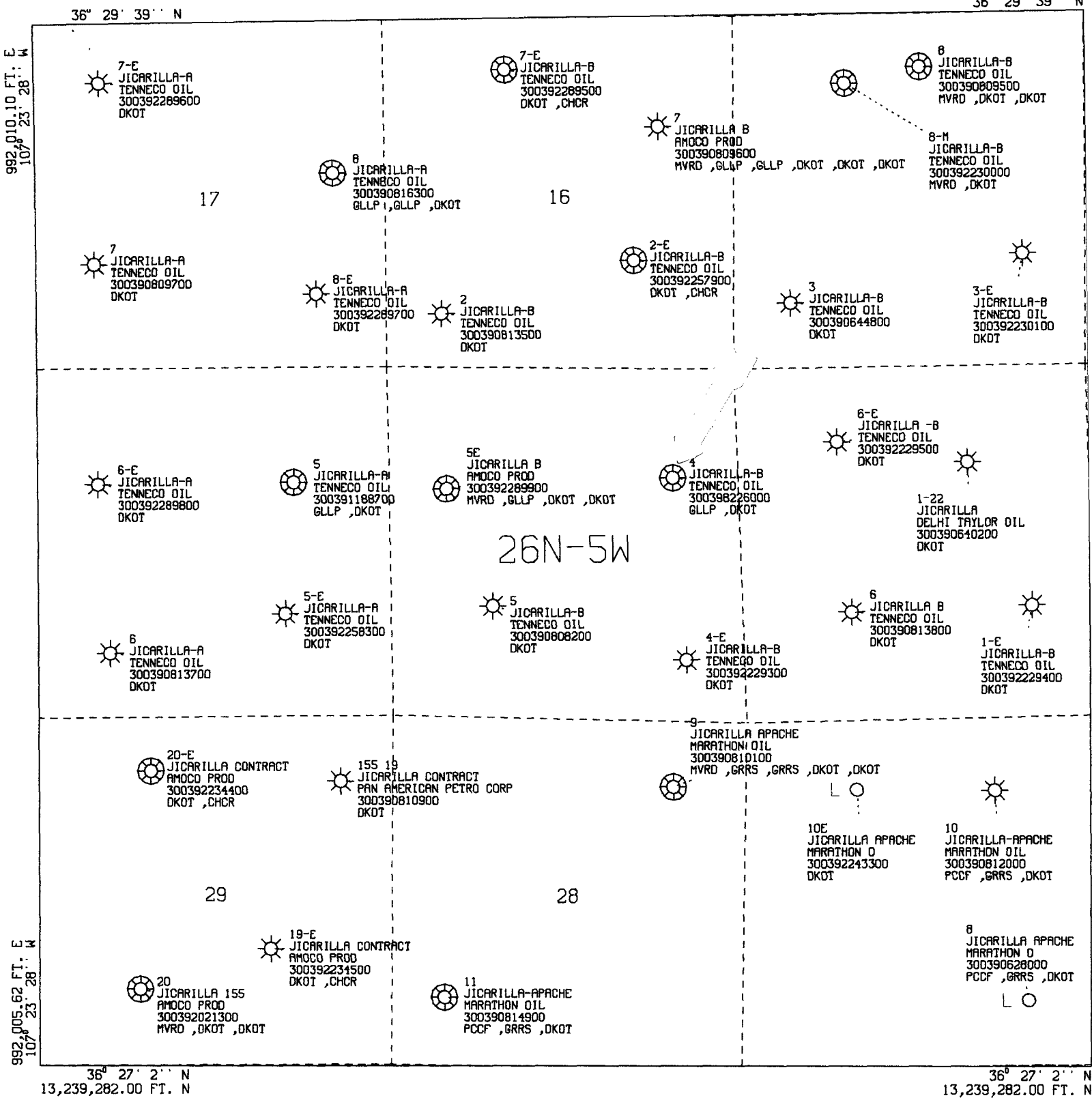
Since the BTU content of the produced fluids are very similar, we would expect the commingled production to have the same value as the sum of the individual streams.

- (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 86% from the Dakota formation and 14% 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 83% of the liquid production to the Dakota formation and 17% 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.



All geological and geophysical data, including the interpretation thereof, appearing on this map is the private and confidential property of Amoco Production Company. The publication or reproduction thereof without the written permission of said Company is strictly prohibited.

AMOCO PRODUCTION COMPANY
PLAT MAP
Jicarilla B 4
Dakota

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

POLYCONIC CENTRAL MERIDIAN - 107° 21' 50" W LON
SPHEROID - 6

992,010.10 FT. E
107° 23' 28" W

17



8 JICARILLA-A
TENNECO OIL
300390818300
GLLP, GLLP, DKOT

16



7 JICARILLA B
AMOCO PROD
300390809600
MVRD, GLLP, GLLP, DKOT, DKOT, DKOT

15



5 JICARILLA-A
TENNECO OIL
300391188700
GLLP, DKOT



SE JICARILLA B
AMOCO PROD
300392289900
MVRD, GLLP, DKOT, DKOT



4 JICARILLA-B
TENNECO OIL
300398226000
GLLP, DKOT

20

26N-5W

22

RIO ARRIBA

29

28

27

992,005.62 FT. E
107° 23' 28" W

36° 27' 2" N
13,239,282.00 FT. N

36° 27' 2" N
13,239,282.00 FT. N

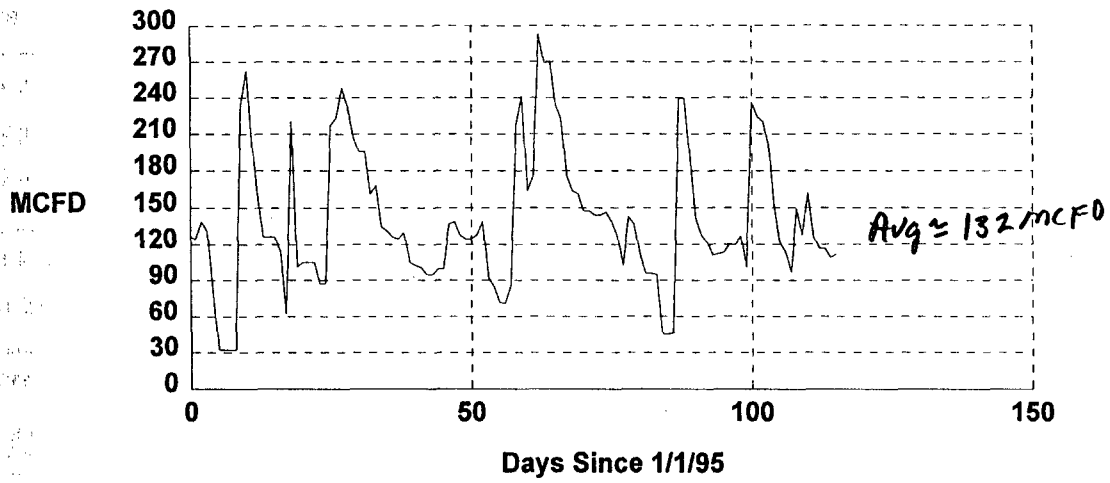
All geological and geophysical data, including the interpretation thereof, appearing on this map is the private and confidential property of Amoco Production Company. The publication or reproduction thereof without the written permission of said Company is strictly prohibited.

AMOCO PRODUCTION COMPANY
PLAT MAP
Jicarilla B 4
Gallup

POLYCONIC CENTRAL MERIDIAN - 107° 21' 50" W LONG
SPHEROID - 6

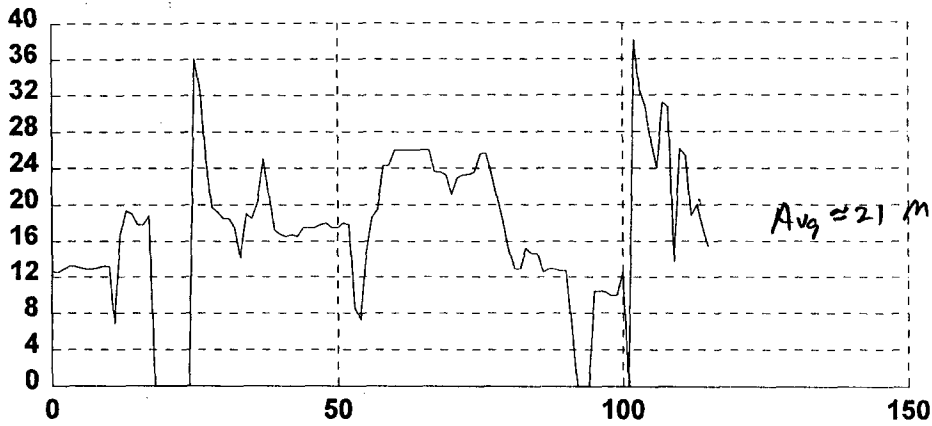
SCALE 1 IN. = 2,000 FT. MAY 11, 1995

San Juan O.C.
WELL: JICARILLA B 004-DK (97839701)
(Downtime excluded) DAKOTA



San Juan O.C. **GP**
WELL: JICARILLA B 004-DG (97839702)
(Downtime excluded) GALLUP

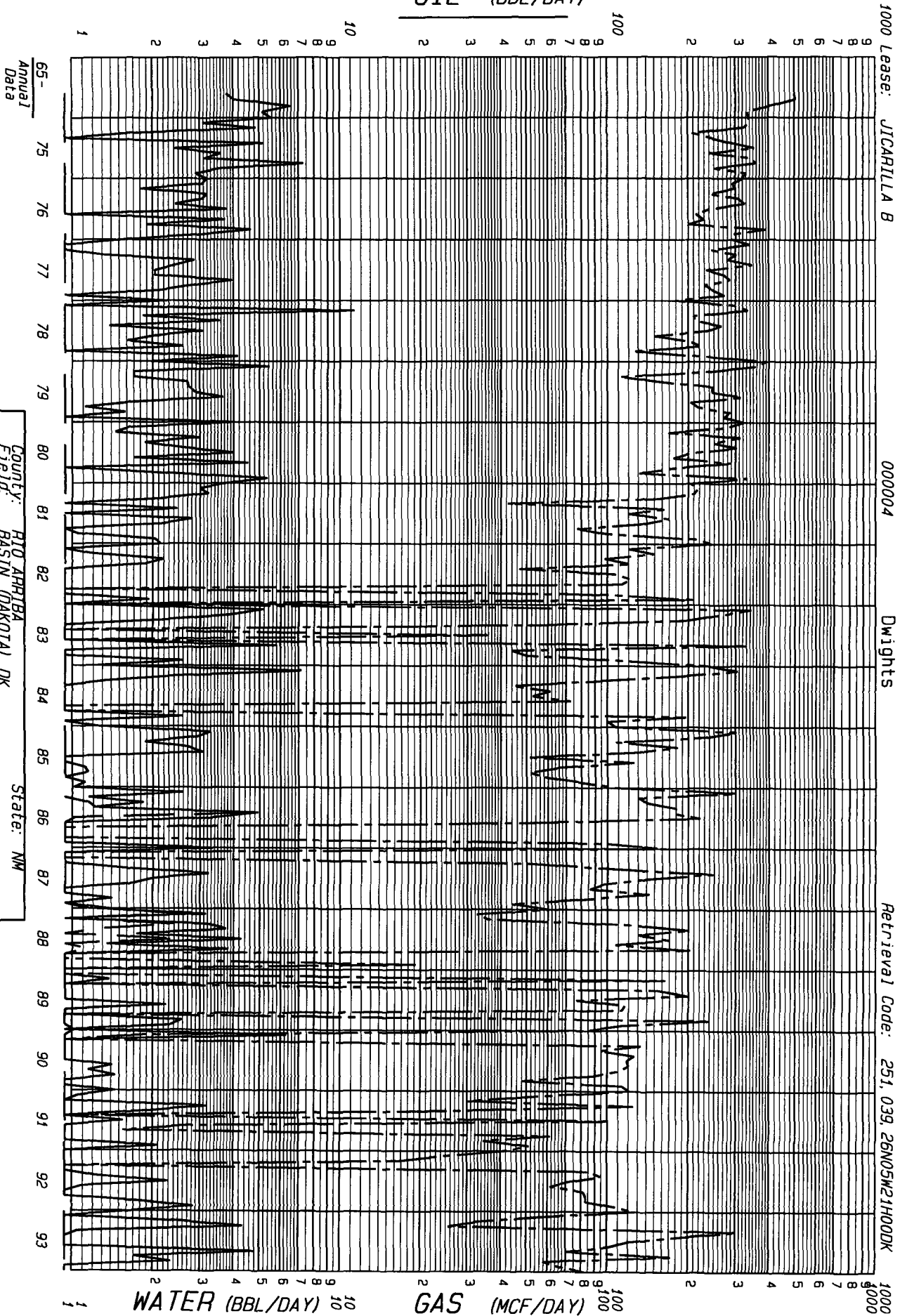
MCFD



Days Since 1/1/95

Avg = 21 MCFD

OIL (BBL/DAY)



F.P. Date 01-67

County: RIO ARriba
Field: BASIN (DAKOTA) DK
Reservoir: DAKOTA
Operator: AMOCO PRODUCTION CO
Oil Cum: 33720
Gas Cum: 2615787
Location: 21H 26N 5W

State: NM

Date: 05-12-95

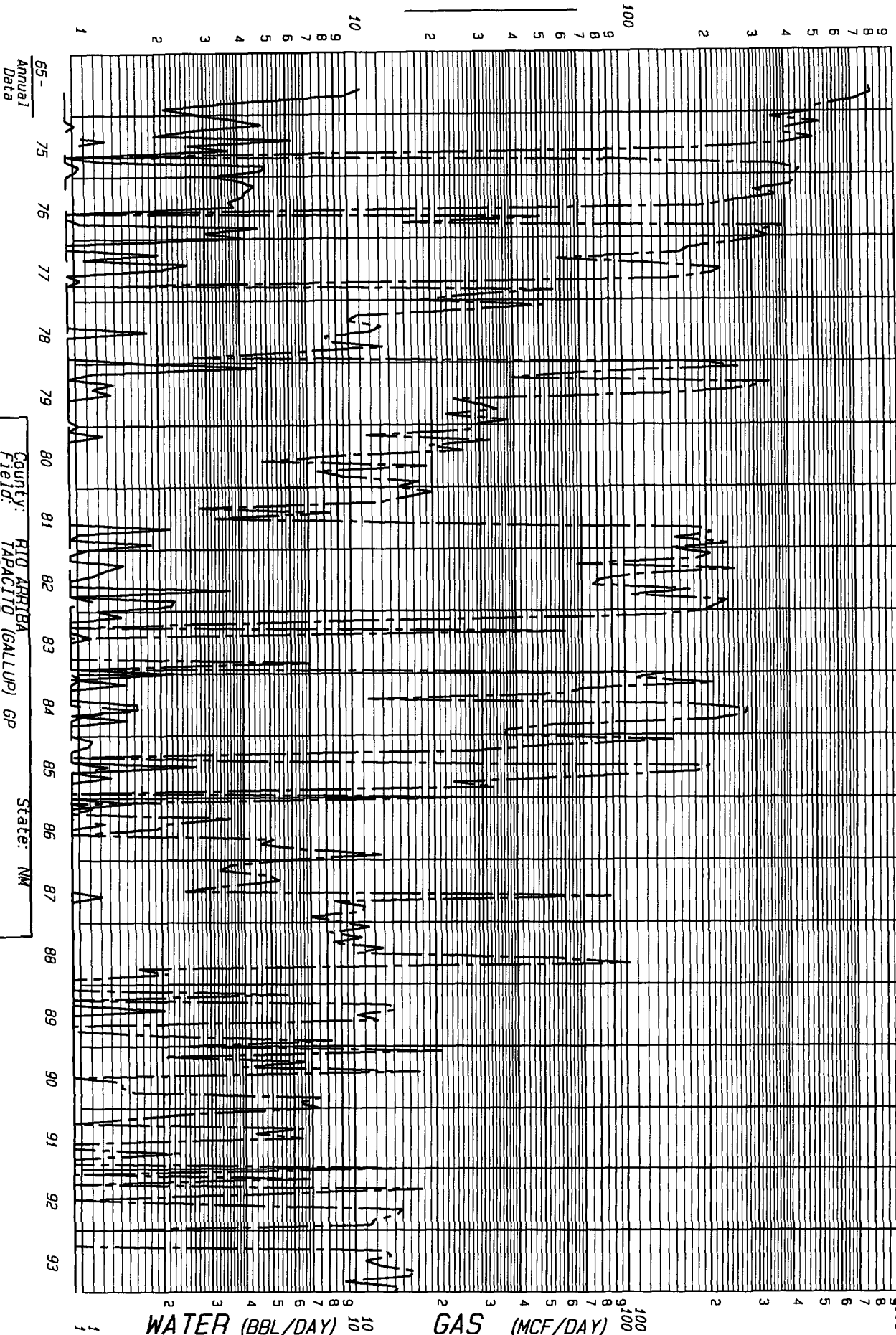
1000 Lease: JICARILLA B

000004

Dwights

Retrieval Code: 151. 039. 26N05W21H00GP

OIL (BBL/DAY)



County: RIO ARriba
Field: TAPACITO (GALLUP) GP
Reservoir: GALLUP
Operator: AMOCO PRODUCTION CO
Oil Cum: 27579
Gas Cum: 2545943
Location: 21H 26N 5W

Date: 05-12-95

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACERAGE DEDICATION PLAT**

All distances must be from the outer boundaries of the Section

Operator: TENNECO OIL COMPANY			Lease: JICARILLA "B"		Well No.: 4
Unit Letter: H	Section: 21	Township: 26 North	Range: 5 West	County: Rio Arriba	
Actual Footage Location of Well: 1650 feet from the North line and 990 feet from the East line					
Ground Level Elev: 6555 ungraded	Producing Formation: Undesignated Gallup and Basin Dakota		Pool: Undesignated Gallup and Basin Dakota	Dedicated Acreage: 320	E/2 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 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.

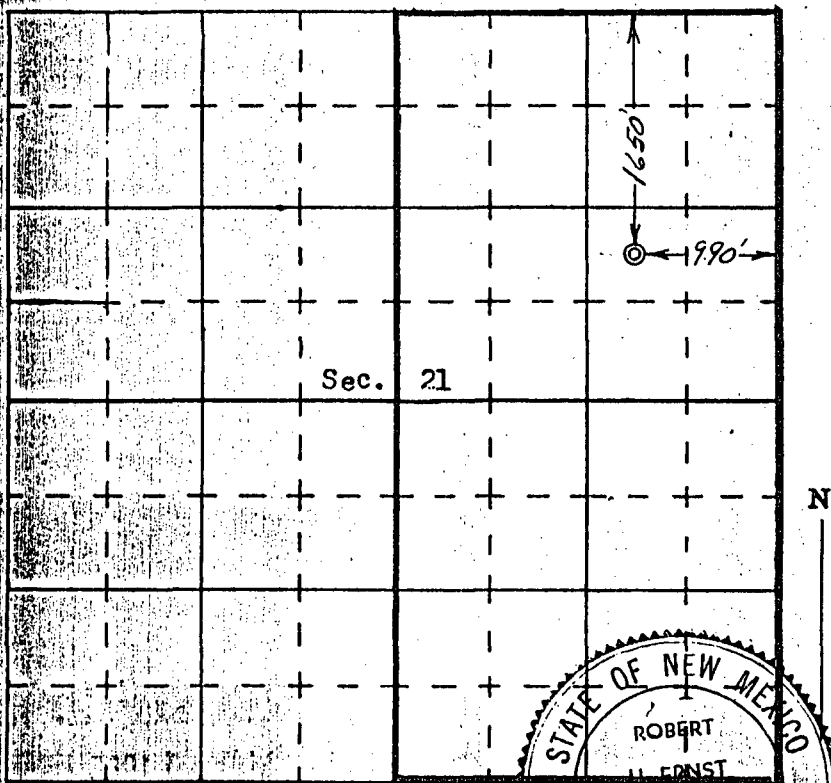
CERTIFICATION

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

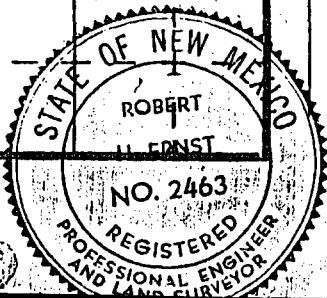
Harold C. Nichols
 Name **Harold C. Nichols**
 Position **Senior Production Clerk**
 Company **Tenneco Oil Company**
 Date **May 9, 1966**

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.

4 April 1966
 Date Surveyed
Robert H. Ernst
 Registered Professional Engineer
 and/or Land Surveyor
Robert H. Ernst
N. Mex. PE & LS 2463
 Certificate No.



ERNST ENGINEERING CO.
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.

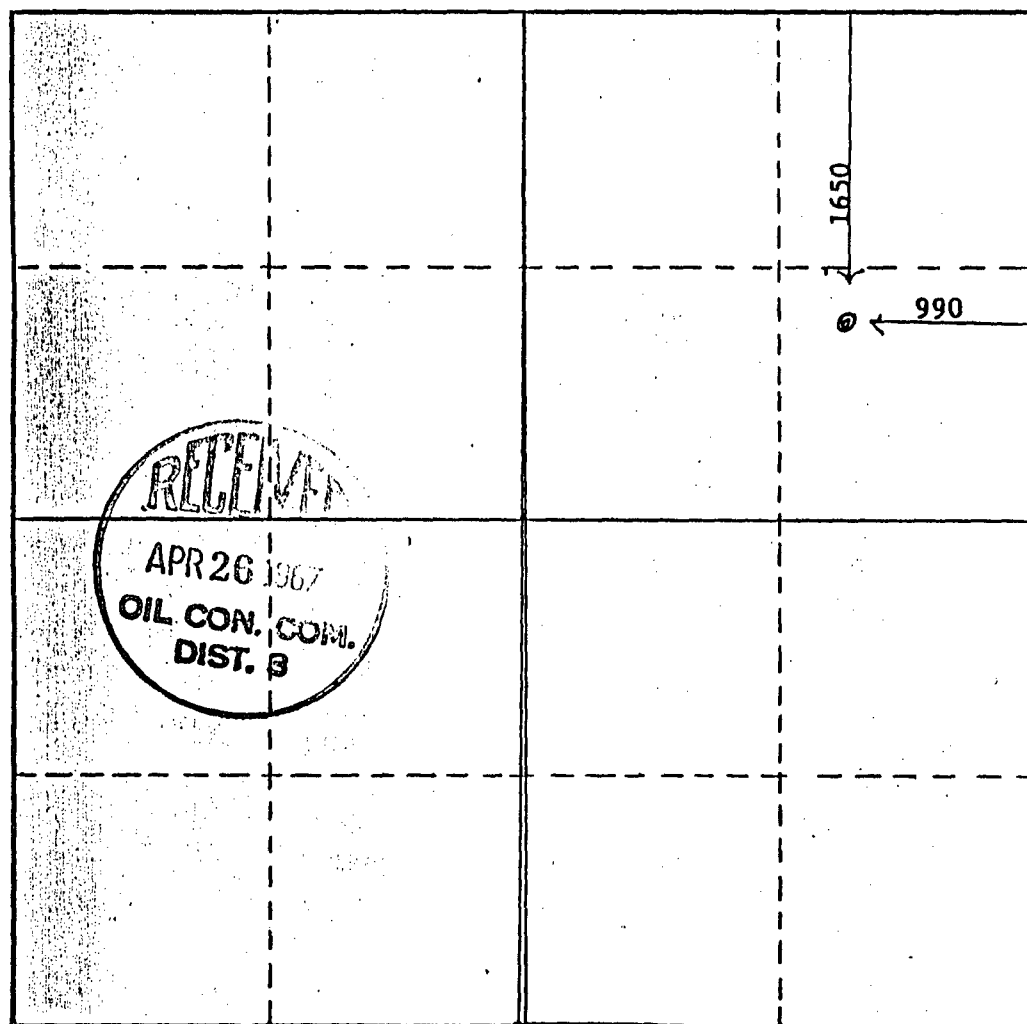
Operator Tenneco Oil Company			Lease Jicarilla "B"		Well No. 4
Unit Letter H	Section 21	Township 26N	Range 5W	County Rio Arriba	
Actual Footage Location of Well: 1650 feet from the North line and 990 feet from the East line					
Ground Level Elev: 6555 UnGr.	Producing Formation Tapacito Gallup	Pool Gallup		Dedicated Acreage 320	E/2 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.

Name **G. A. Ford**
Position **Senior Production Clerk**

Company **Tenneco Oil Company**

Date **April 25, 1967**

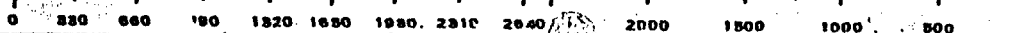
Date

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 "B" Well #4

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