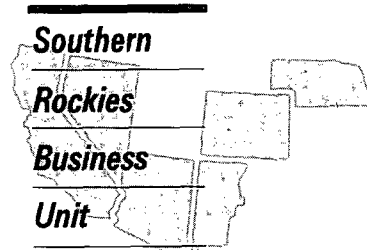
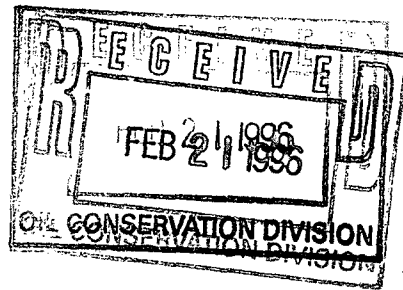


DHC. 3-12-96
1194



February 13, 1996

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-C
Downhole Commingling
Riddle Com A #1M Well
1590' FSL & 5700' FEL, Unit I Section 9-T27N-R9W
Blanco Mesaverde and Basin Dakota Pools
San Juan County, New Mexico

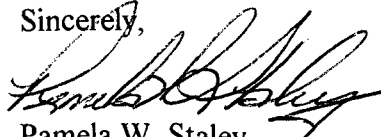
Amoco Production Company hereby requests administrative approval to downhole commingle production from the Blanco Mesaverde and Basin Dakota Pools in the Riddle Com A #1M well referenced above. The Riddle Com A #1M is currently a dual completion in the Mesaverde and Basin Dakota formations. We recently performed a Packer Leakage Test on this well and communication was noted between the Dakota and Mesaverde horizons. When we went in to repair the leakage, we were unable to reestablish the dual completion and decided to pull the packer and prepare for downhole commingling. We notified your Aztec District of our reasons for changing to a downhole commingling setup on this well. This well is currently shut-in awaiting your approval to downhole commingle. We plan to complete the well with both the Mesaverde and Dakota formations being downhole commingled in the wellbore. This commingling will allow both the Mesaverde and the Dakota formations to be produced through common surface equipment thus reducing operating costs and extending the well life. The two zones are expected to produce at a total commingled rate of about 55 MCFD with a very small amount of condensate (less than 1 BCPD) from each formation. Downhole commingling will offer an economical method of production while protecting against reservoir damage, waste of reserves and violation of correlative rights. The ownership (WI, RI, ORI) of these pools is not common in this wellbore. Offset operators to this well will receive a copy of this application by certified mail. All interest owners will also receive a copy of this application as their notice.

The allocation method that we plan to use for this commingled well is as follows. Since the well has been producing as a dual completion for some time, we would expect post commingling rates to be unchanged and therefore propose a percentage allocation. The Mesaverde is currently producing 10 MCFD and the Dakota is currently producing 55 MCFD. We therefore recommend that we allocate 15% of gas production to the Mesaverde and 85% of gas production to the Dakota. This well has produced a small amount of Condensate from each zone. The Dakota is currently producing

approximately 0.5 BCPD and the Mesaverde is currently producing 0.85 BCPD. Based on that production we recommend that 40 % of Condensate production be attributed to the Dakota and that 60 % of Condensate production be attributed to the Mesaverde. 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 is a plat showing the location of the well and offset wells in the same formation, a historical and recent production plot and a C-102 for each formation. This spacing unit is located on a federal lease (SF-078354) and we will send a copy of the application to the BLM as their notice. Should you have questions concerning this matter, please contact me at (303) 830-5344.

Sincerely,



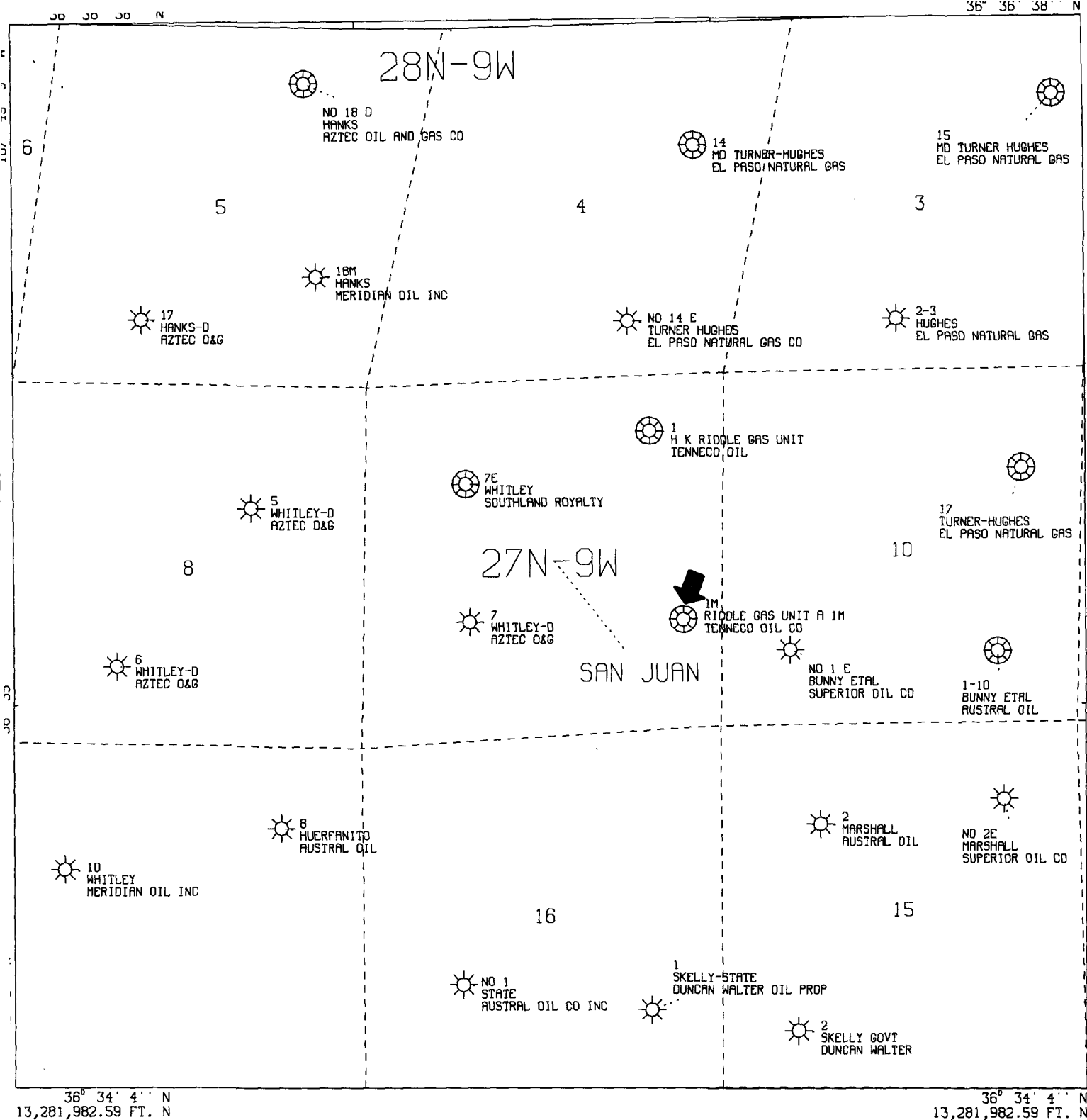
Pamela W. Staley

Enclosures

cc: Mark Rothenberg
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

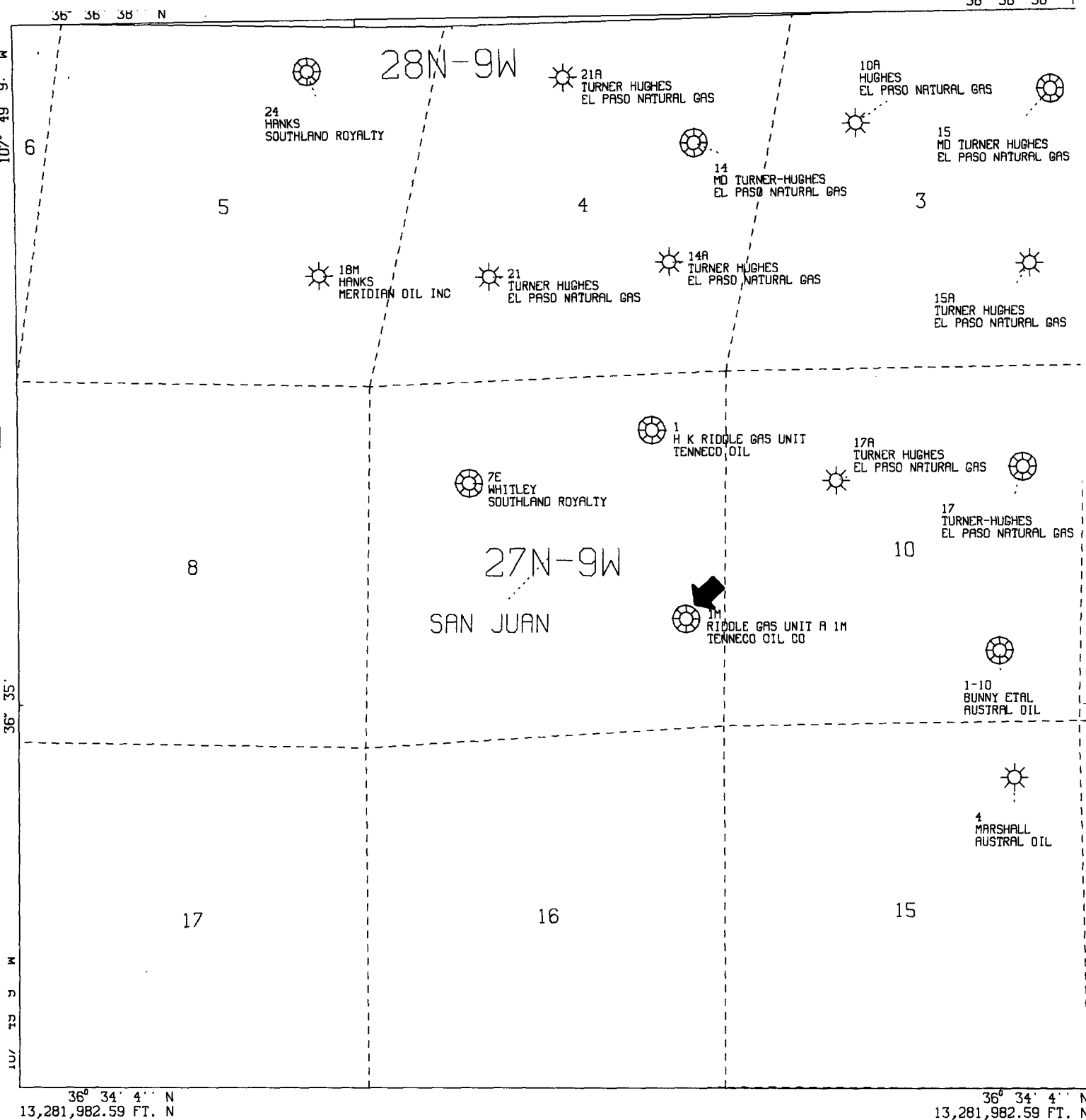


All geological and geophysical data, including the interpretation thereof, appearing on this map is the private and confidential property of Amoco Production Company. The publication or reproduction thereof without the written permission of said Company is strictly prohibited.

AMOCO PRODUCTION COMPANY
PLAT MAP
Riddle Com A 1M
Dakota Formation

POLYCONIC CENTRAL MERIDIAN - 107° 47' 33" W LON
SPHEROID - 6

SCALE 1 IN. = 2,000 FT. JAN 25, 1996



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
Riddle Com A 1M
Mesaverde Formation

POLYCONIC CENTRAL MERIDIAN - 107° 47' 33" W LON
SPHEROID - 6

SCALE 1 IN. = 2,000 FT. JAN 25, 1996

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: Riddle Com A

Well Number: #1M

Well Location: 1590' FSL & 5700' FEL
Unit I Section 9-T27N-R9W
San Juan County, New Mexico

Pools Commingled: Blanco Mesaverde 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 Blanco Mesaverde produced an average stabilized rate of 10 MCFD and less than 1 BCPD. The Basin Dakota zone produced at an average rate of about 55 MCFD and less than 1 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.

Basin Dakota Completion:

Historical production curve attached.

Blanco Mesaverde Completion:

Historical production curve attached.

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

Bottomhole pressures were estimated from 72 hour shut-in pressures during a 1993 packer leakage test for the well. This test was prior to the communication between zones. Estimated bottomhole pressure in the

Mesaverde formation is 711 PSI while the estimated bottomhole pressure in the Dakota is 956 PSI. See attached calculations.

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

The two formations do not produce any fluids that, when combined, would prohibit commingling or promote the creation of emulsions or scale.

- (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 gasses and the API gravities are very similar between formations, we would expect the commingled production to have a similar 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 the well has been producing as a dual completion for some time, we would expect post commingling rates to be unchanged and therefore propose a percentage allocation. The Mesaverde is currently producing 10 MCFD and the Dakota is currently producing 55 MCFD. We therefore recommend that we allocate 15% of gas production to the Mesaverde and 85% of gas production to the Dakota. This well has produced a small amount of Condensate from each zone. The Dakota is currently producing approximately 0.5 BCPD and the Mesaverde is currently producing 0.85 BCPD. Based on that production we recommend that 40 % of Condensate production be attributed to the Dakota and that 60 % of Condensate production be attributed to the Mesaverde. 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.

- (11) Referencing NMOCD Order No. 10470 Rule 303 (D) (11): In a case where there is diversity of ownership between the zones to be commingled (including working royalty, or overriding royalty interest), the applicant shall submit a statement that all such interest owners have been notified in writing of the proposed commingling.

All interest owners in the two formations will receive a copy of this application by certified mail.

OIL CONSERVATION DIVISION

P. O. BOX 2068

SANTA FE, NEW MEXICO 87501

Form C-189
Revised 10-1-

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

Operator TENNECO OIL COMPANY			Lease RIDDLE GAS UNIT "A"		Well No. 1M
Unit Letter I	Section 9	Township 27N	Range 9W	County San Juan	
Actual Footage Location of Wells 1590 feet from the South line and 570 feet from the East line					
Ground Level Elev: 6158	Producing Formation Dakota/Mesaverde		Pool Basin Dakota/Blanco Mesaverde	Dedicated Acreage: E 316.18 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 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.



Sec.

SF-078354-A
TOC 100%Fee
TOC 100%SF-078354-A
TOC 100%
9

570'

1590'

CERTIFICATION

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

Name

Ken Russell

Position

Sr. Production Analyst

Company

Tenneco Oil Company

Date

September 7, 1982

I hereby certify that the well location shown on this plot 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

February 1981

Registered Professional Engineer
and Land Surveyor
Fred A. Kerr, Jr.

Certificate No. KERR, JR.

3960

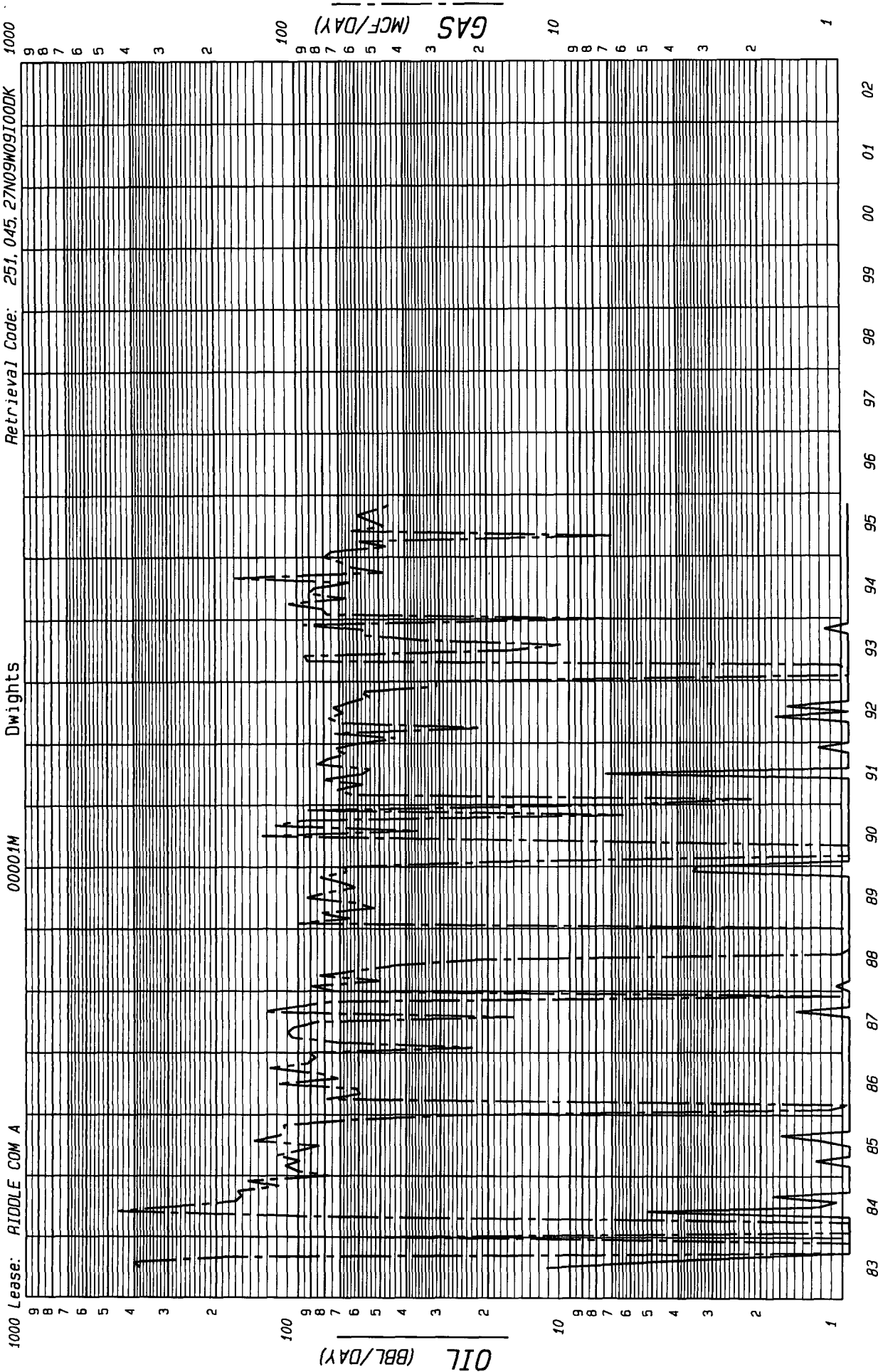
Scale: 1"=1000'

3038304777: # 2 / 6

AMOCO SJOC-

: 2-15-96 : 7:18AM :

SENT BY: AMOCO FARMINGTON NM



1000 Lease: RIDDLE COM A

00001M

1000 Lease: RIDDLE COM A

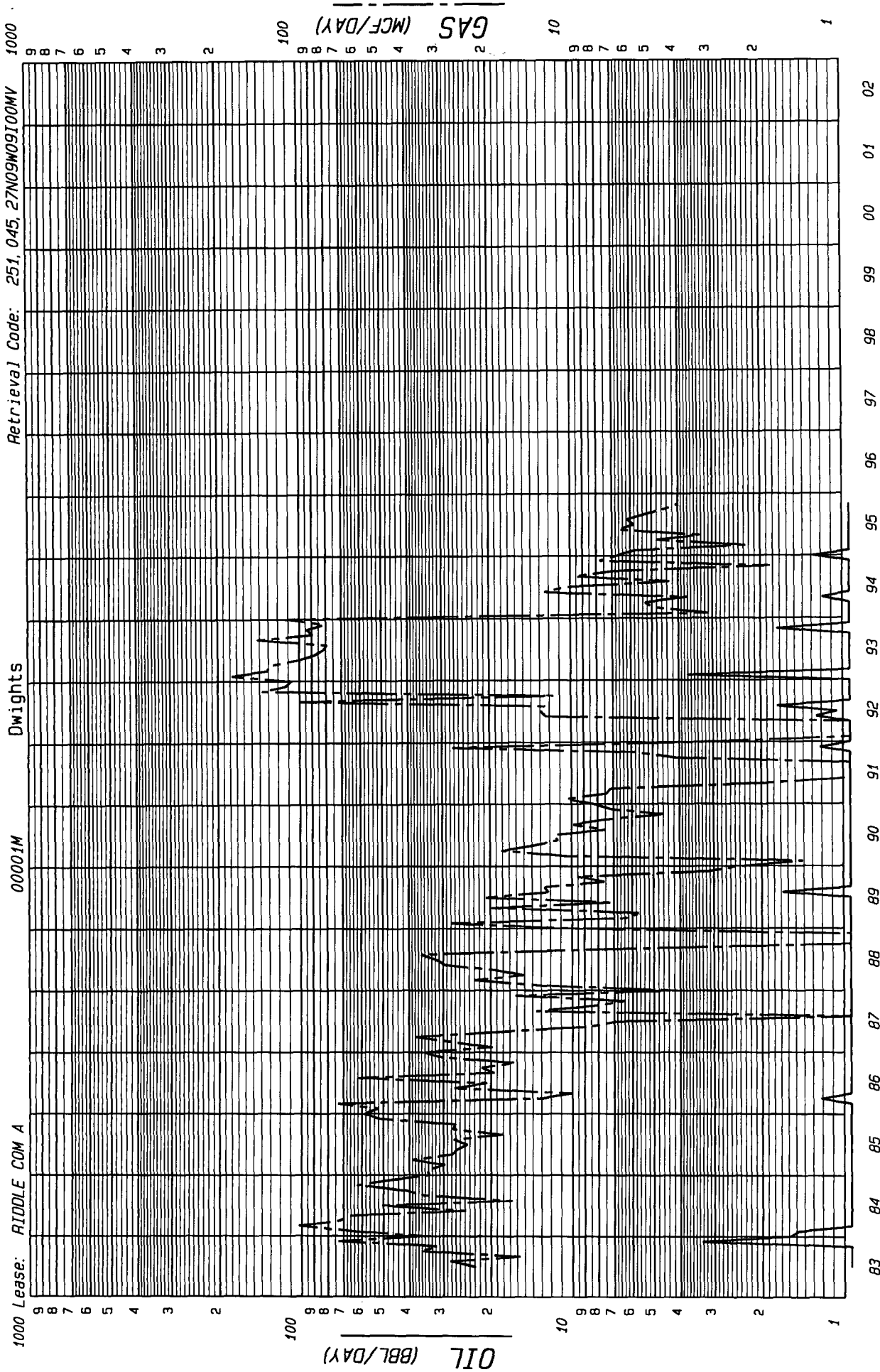
Retrieval Code: 251, 045, 27N09W09I00DK

County: SAN JUAN
 Field: BASIN (DAKOTA) DK
 Reservoir: DAKOTA
 Operator: AMOCO PRODUCTION CO.
 Oil Cum: 2827
 Gas Cum: 327399
 Location: 91 27N 9W

State: NM

F.P. Date 06-83

Date: 02-13-96



County: SAN JUAN
 Field: BLANCO (MESAVEDE) MV
 Reservoir: MESAVEDE
 Operator: AMOCO PRODUCTION CO.
 Oil Cum: 1828
 Gas Cum: 129008
 Location: 91 27N 9W
 State: NM

Date: 02-13-96

F.P. Date 06-83

Amoco Production Company

Offset Operator Plat

Riddle A-1M

T27N-R9W Sec. 9

1590' FSL & 570' FEL

Blanco Mesaverde Formation

5	②	4	②	②	3
8	①	9	° RIDDLE A-1M	②	10
17	③	16	③	②	15

- ① Southland Royalty Company
- ② Meridian Oil, Inc.
- ③ El Paso Production Company

Amoco Production Company

Offset Operator Plat

Riddle A-1M

T27N-R9W Sec. 9

1590' FSL & 570' FEL

Dakota Formation

5	②	4	②	②	3
8	①	9	° RIDDLE A-1M	②	10
17	③	16	③	②	15

- ① Southland Royalty Company
② Meridian Oil, Inc.
③ El Paso Production Company

LIST OF ADDRESSES FOR OFFSET OPERATORS
RIDDLE COM A #1M

1 Meridian Oil, Inc.
P.O. Box 4289
Farmington, NM 87499

69827600 00001

ZJAM63

134698 00

CROSS TIMBERS OIL COMPANY

P O BOX 840287

DALLAS

TX 75284-0287

69827600 00001

ZJAM63

617000 00

AMOCO PRODUCTION COMPANY

P O BOX 591

TULSA

OK 74102-0591

69827600 00001

ZJAM63

682456 00

MARGUERITE SULLIVAN FRAME ESTATE

PAULA JAKUBANIS CONSERVATOR

C/O SANDY ELLIOT

HUTCHISON, HUGINS AND FREDERICK

P O BOX 2250

DURANGO

CO 81302-2250

69946200 00001

ZJAM63

686967 01

TAMANACO OIL CORPORATION

P O BOX 13326

ALBUQUERQUE

NM 87192-3326

69946200 00001

ZJAM63

710000 01

MINERALS MANAGEMENT SERVICE

ROYALTY MANAGEMENT PROGRAM

PO BOX 5810 TA

DENVER

CO 80217-5810

69946200 00001

ZJAM63

926406 00

MABEL OTSTOT AND COMPANY

3096 WEST 109TH PLACE

WESTMINSTER

CO 80030-6826

69946200 00001

ZJAM63

682455 00

R BRUCE SULLIVAN

MARY HELENE SULLIVAN SIKES ATTY-N-FACT

P O BOX 400

BLOOMFIELD

NM 87413-0400

ESTIMATED BOTTOMHOLE PRESSURES BY FORMATION
Riddle Com A #1M

MV Perforations at 4458' - 4618' midperf at 4538'
DK Perforations at 6704'-6782' midperf at 6743'

9/19/93 PACKER LEAKAGE TEST PRESSURE DATA
6/94 shut in pressures --- MV = 348 PSIG
DK =417 PSIG

GRADIENT = 0.08 PSI/FT

MV BHP = 348 PSIG + 4538' X 0.08 PSIG
= 711 PSIG

DK BHP = 417 psig +6743' X 0.08 PSIG
= 956 PSIG

Post-It™ brand fax transmittal memo 7671 # of pages 1

Form C-103
Revised 1-1-89Submit 3 Co
to Appropria
District OffiDISTRICT I
P.O. Box 19DISTRICT I
P.O. DrawerDISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

To DAVID CATMURCH	From EMILIE BUECH
Co.	Co.
Dept.	Phone #
Fax #	Fax #

WELL API NO.
30045254625. Indicate Type of Lease
STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Riddle Corn A

8. Well No.

1M

9. Pool name or Wildcat
Basin Dakota/Blanco MV

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"
(FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:

OIL
WELL ☐GAS
WELL ☒

OTHER

2. Name of Operator

Amoco Production Company

Attention:

Patty Haeefe

3. Address of Operator

P.O. Box 800 Denver Colorado 80201 (303) 830-4988

4. Well Location

Unit Letter I : 1590 Feet From The South Line and 570 Feet From The East LineSection 9 Township 27N Range 9W NMPM San Juan County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

6170' KB

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐PLUG AND ABANDON ☐TEMPORARILY ABANDON ☐CHANGE PLANS ☐PULL OR ALTER CASING ☐OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ALTERING CASING ☐COMMENCE DRILLING OPNS. ☐PLUG AND ABANDONMENT ☐CASING TEST AND CEMENT JOB ☐OTHER: Downhole Commingle ☒

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Amoco Production Company has performed a downhole commingle on this well per the following:

Work commenced 1/19/96. Tag at 6692' - Dakota side only. PBDT 6778'. Cleanout 6697-6766'. Tag at 6756', tried to unload hole, pressure up to 1700 psi. Milled out packer and circulate hole clean. Pressure test tubing 1000 psi, held ok. Reperforated Mesaverde at 4500-4510' and 4521-4533' with 2 JSPF, .390" diameter, 40 total shots, 3.125" gun, 120 deg phasing, 14 gms. Land tubing 6690'. ND BOP and NU WH. Swab well. Tag fluid at 5290' and swab down to 5940, CP 190 psi. Work completed 2/8/96.

RECEIVED
MAR 4 1996

OIL CON. DIV.

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

DIST. 3

SIGNATURE

Patty Haeefe

TITLE

Staff Assistant

DATE 02-29-1996

TYPE OR PRINT NAME

Patty Haeefe

TELEPHONE NO. (303) 830-4988

(This space for State Use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
GOVERNOR

OIL CONSERVATION
RECEIVED

AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-8178 Fax (505) 334-8170

'96 MAR 1 AM

JENNIFER A. SALISBURY
CABINET SECRETARY

ADMINISTRATIVE ORDER RECOMMENDATION

Date: 2/28/96

New Mexico Oil Conservation Division
PO Box 2088
Santa Fe NM 87504-2088

RE: Proposed MC _____
Proposed NSL _____
Proposed WFX _____
Proposed NSP _____

Proposed DHC ☒ _____
Proposed SWD _____
Proposed PMX _____
Proposed DD _____

Gentlemen:

I have examined the application received on 2/21/96
for the Amos Riddle Com A #1M
OPERATOR LEASE & WELL NUMBER
1-9-27N 9W and my recommendations are as follows:

UL-S-T-R

Approve

Yours truly,

[Signature]