

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

- [NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
- [DD-Directional Drilling] [SD-Simultaneous Dedication]
- [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
- [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
- [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
- [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
- [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION - Check Those Which Apply for [A]**

[A] Location - Spacing Unit - Directional Drilling

- NSL NSP DD SD

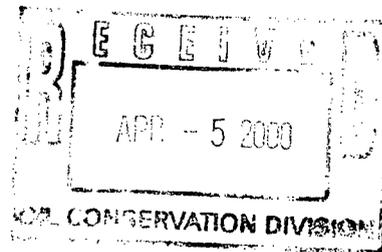
Check One Only for [B] and [C]

[B] Commingling - Storage - Measurement

- DHC CTB PLC PC OLS OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

- WFX PMX SWD IPI EOR PPR



[2] **NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply**

[A] Working, Royalty or Overriding Royalty Interest Owners

[B] Offset Operators, Leaseholders or Surface Owner

[C] Application is One Which Requires Published Legal Notice

[D] Notification and/or Concurrent Approval by BLM or SLO

U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] Waivers are Attached

[3] **INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding**

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

Kay Maddox
Print or Type Name

Kay Maddox
Signature

Regulatory Agent
Title

4/3/2000
Date



Mid-Continent Region
Exploration/Production

Conoco Inc.
10 Desta Drive, Suite 100W
Midland, TX 79705-4500
(915) 686-5400

April 4, 2000

Mr. Michael Stogner
New Mexico Oil Conservation Division
2040 Pacheco
Santa Fe, New Mexico 87504

RE: Application for Unorthodox Location
North Hardy Strawn Pool (96893)

Hardy "36" State # 27
T-20-S, R-37-E, Section 36, J
2200' FSL & 1650' FEL
API # 30-025-34794
Lea County, New Mexico

Dear Mr. Stogner,

Conoco permitted and drilled the Hardy 36 State No.27 at a location of 2200' FSL and 1650' FEL of Sec.36, T-20S, R-37E, Lea County, NM. It was permitted and drilled as a South Cass Strawn Oil well and positioned at a standard location governed by statewide 40 acre oil spacing. The proximity of the new well to the outline of the existing South Cass Pool was the overriding factor in the initial selection of the pool. New data acquired during the drilling of this well indicates the well should be governed by the temporary pool rules for the North Hardy-Strawn Pool which Conoco brought to hearing on May 13, 1999 before examiner David R. Catanach. (Order No.R-11221, Case No.12182). Hobbs NMOCDD District Geologist Paul Kautz supports the contention that the well should be placed in the North Hardy-Strawn Pool on a geologic basis and has approved the well as a North Hardy-Strawn well.

At the May 13, 1999 hearing, Conoco was unsuccessful in getting relaxation from the statewide spacing requirements for a 160-acre pool, requiring 660 foot setbacks from the exterior of the outer boundary of the quarter section lines and 330 foot setbacks from the interior quarter-quarter section lines. The Hardy 36 State No.27 therefore is located non-standard to the temporary pool rules and requires a NSL order to allow the well to be governed under the temporary pool rules of the North Hardy-Strawn Pool.

Geologic evidence supporting the placement of the Hardy 36 State No.27 into the North Hardy-Strawn Pool is provided in two attachments to this letter.

Attachment No.1: The first attachment is a copy of the geologic cross-section presented at the May 13, 1999 hearing. This cross-section displays our lithologic interpretation of both the South Cass Strawn Pool to the southwest and the North Hardy-Strawn Pool to the northeast. The cross-section displays the massive limestone intervals of the South Cass grading into a dolomitic lithology in the northeast. Thin shaly limestones separate the major reservoir intervals. A small fault is interpreted between the two fields as mapped by 3-D seismic.

Attachment No.2: The second attachment is a display of the open-hole porosity logs and mudlogs of the Hardy 36 State No.21, No.26 and newly drilled No.27. As can be seen on the logs, the lithology is different in the Strawn pay zones when comparing the No.21 South Cass well (limestone) to the No.26 and No.27 North Hardy-Strawn (dolomite) wells. From the open-hole interpretation, the Hardy 36 State No.26 and No.27 rock sequences can be correlated to one

another, however, the dolomitic pay zone found in the North Hardy-Strawn wells (No.26 and No.27) is not present in the South Cass well No.21.

Additional reservoir information supports the placement of the Hardy 36 State No.27 into the North Hardy-Strawn Pool. A bottomhole pressure was taken (Repeat Formation Tester) prior to cementing production casing in the Hardy 36 State No.27. The test indicates virgin reservoir pressure (2948 psig) exists in the main pay section at a depth of 7630'. The Hardy 36 State No.1 (closest South Cass producer), had a bottomhole pressure of 2106 psig recorded on May 13, 1998 after a build-up period of 383 total hours. The No.1 well has continued to produce for the last two years and likely has a bottomhole pressure of a few hundred pounds less than that measured in 1998. If the Hardy 36 State No.27 were connected to the South Cass Pool, it should have encountered a reservoir with depleted pressure based on the proximity of the two wells (direct 40 acre offsets).

Extremely good rock quality appears to exist in the No.27 well, similar to that found in the No.26 well. The No.26 continues to flow at the daily allowable of 652 BOPD. Core analysis in the No.27 indicates a dolomitic zone from 7626'-7650 with excellent porosity values as high as 20% and permeability values greater than 100 millidarcies. This zone is directly correlative to the producing dolomite in the No.26 that measured 17 millidarcies from a pressure build-up in May 1998. It is likely the rock in the No.27 will produce at extremely high rates and dependent on aerial connectivity, will be able to drain reserves from more than the 40 acre South Cass development spacing. Based on the data acquired to date on probable drainage, the North Hardy-Strawn Pool (160-acre drainage) is more appropriate for development spacing.

Finally, a survey plat is attached which identifies the location of the Hardy 36 State No.27 wellbore and the 100' offset stakes for pad construction. Based on proximity to the South Cass Pool, the well was permitted in the South Cass and the optimum location of the wellbore was selected based on 3-D seismic. However, if the well had been originally permitted as a North Hardy-Strawn producer, we still would have had to request a non-standard location due to surface obstructions. As indicated on the plat, a Dynegy buried transmission line would have precluded us from moving the well location 220' south (northernmost limit of a standard North Hardy-Strawn location).

Conoco plans to re-open the North Hardy-Strawn temporary rules prior to December 2000. In addition to presenting material to support continuation of the existing spacing and allowable, we will again petition for a relaxation of the boundary location spacing restrictions.

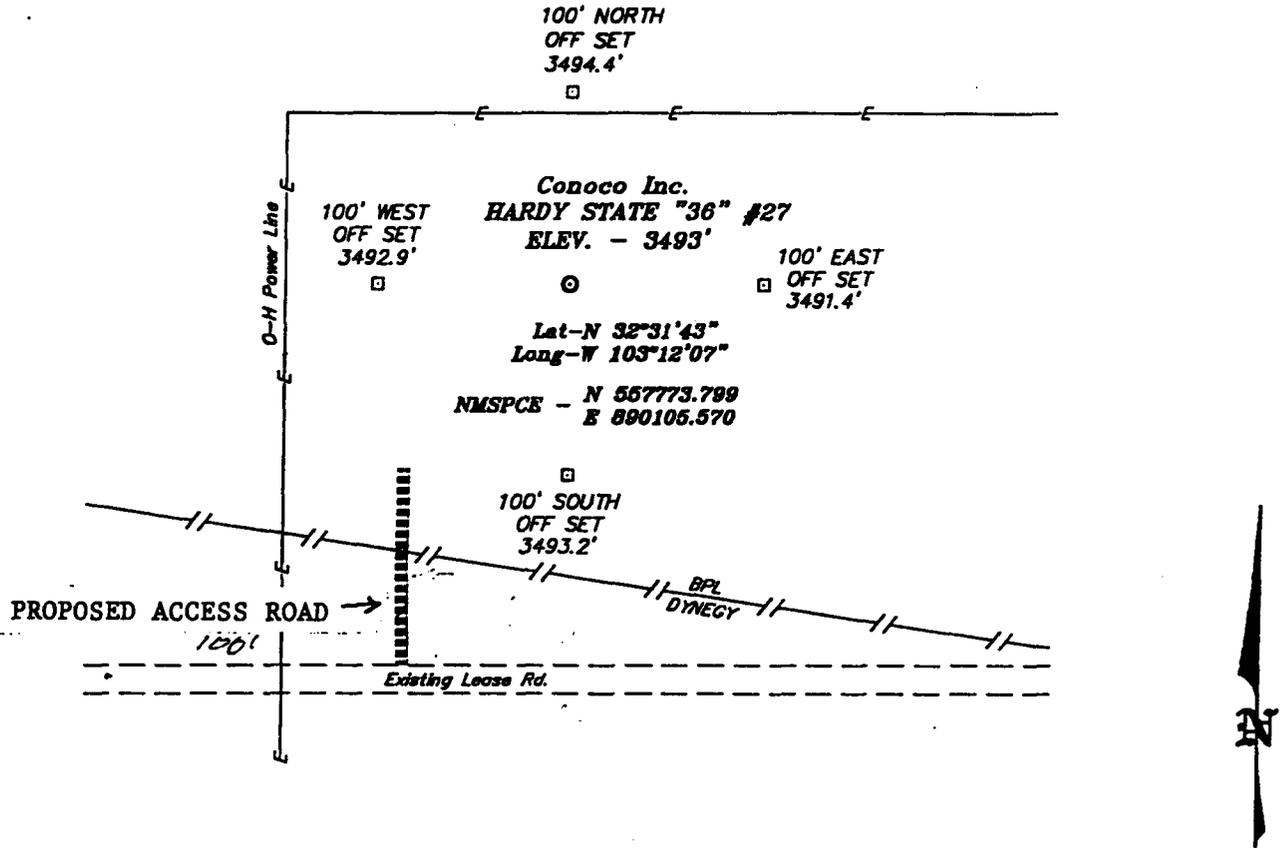
Sincerely,



Kay Maddox
Regulatory Agent – Conoco, Inc.

CC: NMOCD – Hobbs
BLM- Roswell

**SECTION 36, TOWNSHIP 20 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



DIRECTIONS TO WELL LOCATION:

FROM JUNCTION NORTH LOOP 18 AND COUNTY ROAD C-22 IN EUNICE, GO NORTH ON LOOP 18 TO COUNTY ROAD C-34; THENCE NORTHWEST ON C-34 APPROX. 3.5 MILES TO A POINT WHICH LIES 200' SOUTH OF THE PROPOSED WELL LOCATION.



SCALE: 1" = 100'

Conoco Inc.

REF: HARDY STATE "36" No. 27 / Well Pad Topo

THE HARDY STATE "36" No. 27 LOCATED 2200' FROM THE SOUTH LINE AND 1650' FROM THE EAST LINE OF SECTION 36, TOWNSHIP 20 SOUTH, RANGE 37 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 9399 Drawn By: K. GOAD

Date: 11-12-99 Disk: KJG #122 - 9399A.DWG

Survey Date: 11-11-99

Sheet 1 of 1 Sheets

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd. Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Revised February 21, 1994
instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-34794		2 Pool Code 96893		3 Pool Name North Hardy Strawn	
4 Property Code 13396		5 Property Name Hardy "36' State			6 Well Number #27
7 OGRID No. 005073		8 Operator Name Conoco Inc., 10 Desta Drive, Ste. 100W, Midland, TX 79705-4500			9 Elevation 3493'

10 Surface Location

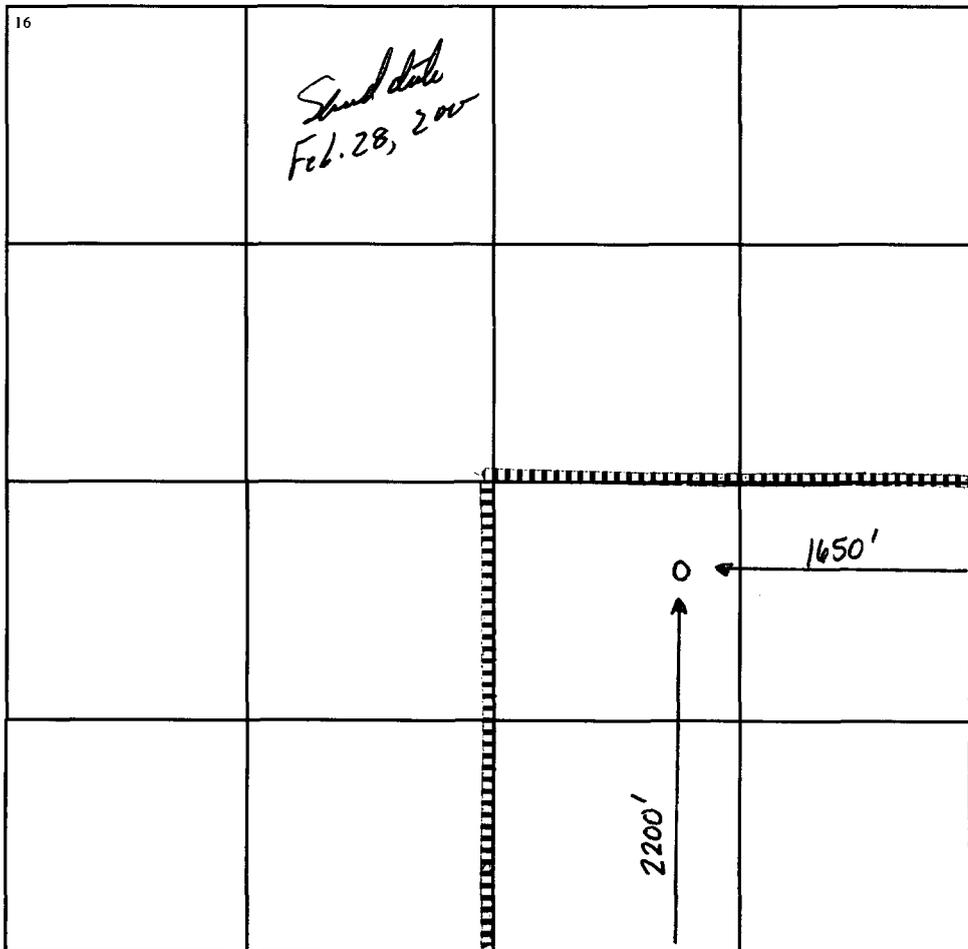
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	36	20S	37E		2200'	South	1650'	East	Lea

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

12 Dedicated Acres 160	13 Joint or Infill	14 Consolidation Code	15 Order No. 0
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



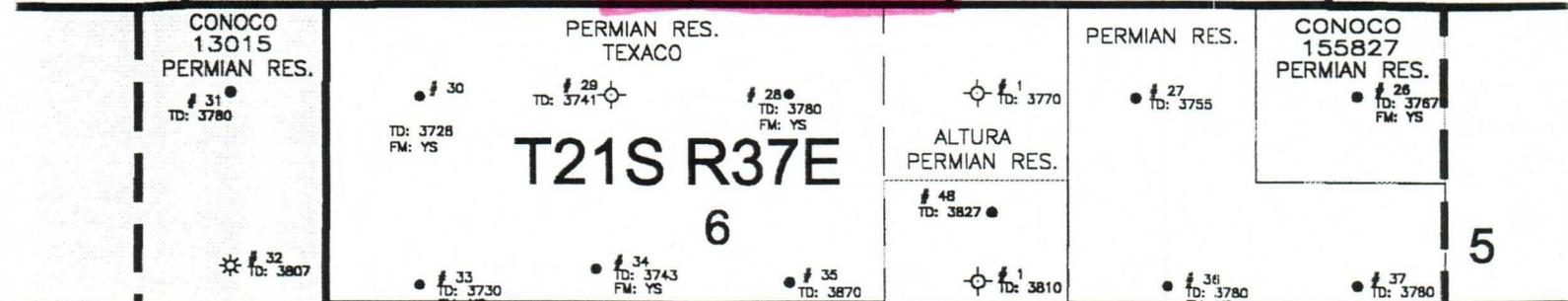
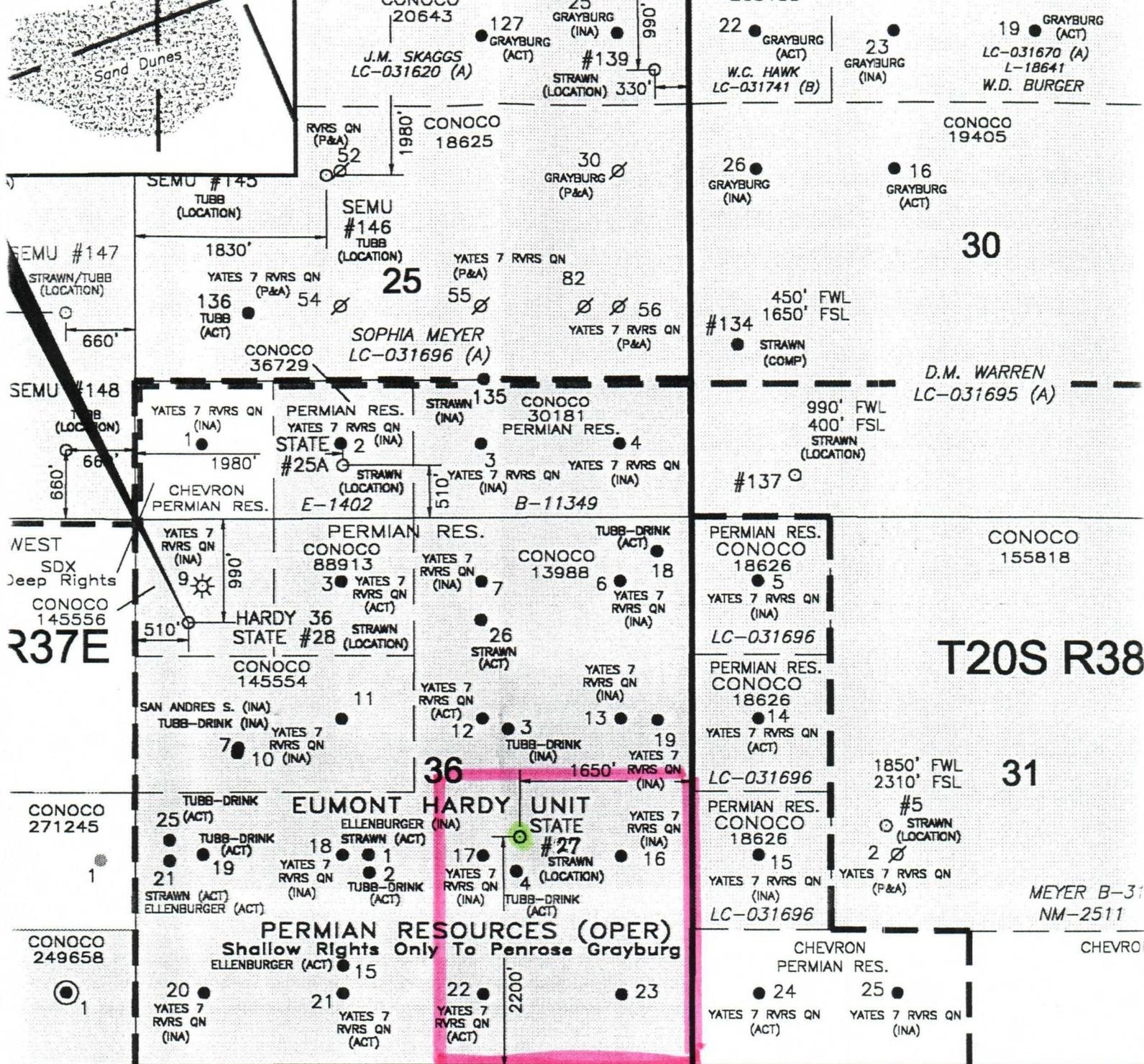
17 OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Kay Maddox
Signature
Kay Maddox
Printed Name
Regulatory Agent
Title
March 28, 2000
Date

18 SURVEYOR CERTIFICATION
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 belief.

Date of Survey
Signature and Seal of Professional Surveyor

Certificate Number



UNITES NORTH HARDY STRAWN (96893)		HARDY "36" STATE #27		
DATE: 3/3/00		DRAWN BY: glg		
CHECKED BY:		APPROVED BY:		STATE API COUNT 025 - 30
SCALE: 1" = 1320'		STATE PLANE COORDINATES REFERRED TO		

EAST MONUMENT UNIT
 - OPERATOR

HARDY UNIT
 RESOURCES - OPERATOR

- CONOCO FEDERAL LEASE
- CONOCO STATE LEASE
- CONOCO LEASE