

DATE IN 4/5/00	SUSPENSE 4/25/00	ENGINEER MS	LOGGED BY KN	TYPE NSL
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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]

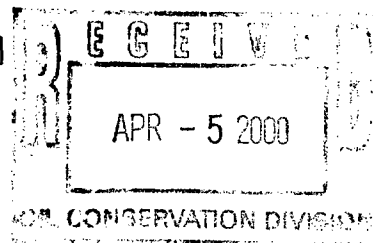
[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [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, NM 87504

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

Meyer B-31 #5 New Drill
Section 31, T-20-S, R-38-E, K
2310' FSL & 1850' FWL
API # 30-025-34960
Lea County, New Mexico

State "KL" 36 #29 New Drill
Section 31, T-20-S, R-38-E, C
2310' FWL & 330' FNL
API # N/A
Lea County, New Mexico

Dear Mr. Stogner,

Conoco, Inc respectfully requests your approval of this administrative application for a non-standard location order for the above list wells. A previous application was submitted for the Meyer B-31 #5 on March 27. That application was denied and per our conversation you requested more geologic data to support our non-standard location request. This application includes the maps you requested.

The North Hardy Strawn pool rules state that a standard location is 660' from the outer boundary of the 160 acre proration unit. The Meyer B-31 #5 is only 330' from the north line of the 160-acre proration unit. The State "KL" 36 #29 is 330' FNL & 2310' FWL. The well is staked at an unorthodox location. Please reference attached C-102 plats.

The Strawn play in this area is based on a 3-D seismic interpretation that has meticulously defined the thickest porosity zones. As evidenced by drilling and completing the Hardy State 36 #26, #27, #21, #1, SEMU # 134 and the unsuccessful Strawn completion of the # 135 it is evident that proximity to thick porosity zones is imperative to the location of new drilling prospects. Based on log correlations, stratigraphy is also a major component of porosity development. The stratigraphy coordinated with the structural trend defines a very small area in which to locate the well. Movement as little as 200' could result in a net loss of porosity resulting in a ten fold reduction in production. Conoco, Inc feels that the placement of the above listed unorthodox wells will not compromise the validity of the scientific data that resulted in the proposal to drill the well. Scientific data i.e. seismic line and structural map encompassing this area was submitted to the New Mexico Oil Conservation, May 1999 during the hearing to establish the North Hardy Strawn pool. The data submitted substantiates Conoco's belief that a standard location for these two wells would result in unsuccessful Strawn well completions. Conoco, Inc believes that the

proposed unorthodox locations are strategically staked where the good porosity development of the Strawn reservoir lies on trend with structure.

Meyer B31 #5 – See Exhibit 1

This location was chosen as a southeastern extension of the productive zone within the Strawn in the Hardy 36 State #26 well. The seismic line (Exhibit 1) is located in a north south orientation through the proposed location. The Strawn section in this area thins to the southeast onto the Brunson High. The seismic line shows the Strawn to Devonian section (yellow to purple) thins both to the north and south. Based on other wells in the Strawn, the discontinuous nature of the seismic peak (blue) within the Strawn section at about 1080 milliseconds (indicated by the black arrows) is the area that porosity is developed. This location was chosen because it would be: 1) high on structure, 2) encounter a thick section of Strawn and 3) encounter the Strawn where it appears discontinuous. For this well to be staked standard it would have to be moved 330' to the south. The seismic line shows that directly to the right (south) of the staked non-standard location there is an obvious dip in the yellow Strawn marker line. Conoco believes that the Strawn would come in low if drilled at the standard location.

State 36 "KL" #29 Exhibit 2

This location was chosen as a western extension of the productive zone within the Strawn in the Hardy 36 State #26 well. The seismic line (Exhibit 2) is located in a north south orientation through the proposed location. This seismic line shows the Strawn to Devonian section as the interval between the yellow and purple picks. This location was chosen to be as structurally high as possible. As illustrated by the blue line on the seismic line, if the location was moved south 330' to be standard for the North Hardy – Strawn pool, the well would be drilled considerably off the structural crest. The Strawn section thins both north and south of the proposed location. This location was also chosen to encounter a thick section of Strawn. Based on other productive wells in the Strawn, the discontinuous nature of the seismic peak (blue) within the Strawn section at about 1050 milliseconds (indicated by the black arrows) is the area where porosity is developed. In summary this location was chose to be: 1) high on structure, 2) encounter a thick section of Strawn and 3) encounter the Strawn where it appears discontinuous.

Additional Geologic Data Requested:

The Strawn reservoir in the Hardy area is a complex reservoir. Several techniques are used to locate wells and these indicators do not always conecide. Structural position, thickness of reservoir, seismic character and subareal exposure all appear to be important in the development of reservoir rocks within the Strawn. The geologic and geophysical model is being refined as wells are drilled and new data collected. Four maps are enclosed which demonstrate Conoco's current understanding of the Strawn.

Exhibit 3 – Strawn Depth Map

This map was generated by using the 3D seismic and the available well control is used to constrain the depth conversion. The white dots are the existing Strawn penetrations. The larger pink dots are the proposed Strawn locations. This map is contoured at a 50 foot contour interval.

Exhibit 4 – Strawn Residual Map

This map is generated from the 3D data. The Top Strawn depth map was regridded using a 4000 foot grid cell size. This regional trend grid was subtracted from the Top Strawn depth map (160 foot grid cell size) and the resulting 'residual' indicates where the Strawn may have been exposed to erosion and therefore more porosity generated. The red contour (zero value) is where the two grids intersect. The yellow and light green colors (negative values) are where the Strawn would have been high and exposed to erosion. The positive values (green to blue colors) would have

been low during a period of erosion and therefore little or no porosity would have been developed.

Exhibit 5 – Strawn to Devonian Isopach Map

This map was generated from the 3D seismic. It is the difference between the Devonian and Strawn depth maps. The thins are the red to yellow colors and the greens and blues are the thicker section of Strawn.

Exhibit 6 – Time Slice of Coherency Data

This map is generated from the 3D seismic data. The coherency process compares each adjacent seismic trace for similarity. Similar traces are plotted in black and traces which are not similar are in shades of gray. Any white traces indicate very little similarity between the traces. The discontinuous nature of the Strawn may be an indication of algal mounds. The Strawn reservoir appears to be limited by the black event to the south of the map and it becomes less distinct to the east. The red line indicates the current interpretation of the limit of the reservoir.

Meyer B31 #5

This well location was chosen where the Strawn section is thick, high on structure, on a residual high and where the seismic appears discontinuous. The coherency map indicates moving south may be at or outside the reservoir interval.

State "KL" 36 #29

This well location was chosen to be close to the isolated structural crest, residual thin and Strawn thick to the west of the Hardy 36 #26 well.

Please note that in both cases Conoco Inc. will only be encroaching 330' interior to their lease. Conoco is the lessor of the NW ¼ (LC 031696) of the SW ¼ and the N/E ¼ (NM -2511) of the SW ¼ encompassing 80 acres in the 160 acre proration unit in Section 31. Chevron is the lessor of the 80 acres encompassing the S ½ of the SW ¼ of the 160 acre proration unit. Chevron and Conoco, Inc. are partners on this well and a communitization agreement is in process.

Conoco, Inc. respectfully requests that a non-standard location order be granted for the Meyer B-31 #5 and the State "KL" 36 #29. If any additional information is required please call me at (915) 686-5798.

Sincerely,

Kay Maddox – Conoco, Inc.
Regulatory Agent

Cc: OCD- Hobbs
BLM - Roswell

DISTRICT I
1825 N. French Dr., Hobbs, NM 88240

DISTRICT II
611 South First, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Artesia, NM 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised March 17, 1990

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-34960	Pool Code 96893	Pool Name North Hardy Strawn
Property Code	Property Name MEYER B-31	Well Number 5
OGRID No.	Operator Name CONOCO INC.	Elevation 3494'

Surface Location

UL or lot No. K	Section 31	Township 20 S	Range 38 E	Lot Idn	Feet from the 2310	North/South line SOUTH	Feet from the 1850	East/West line WEST	County LEA
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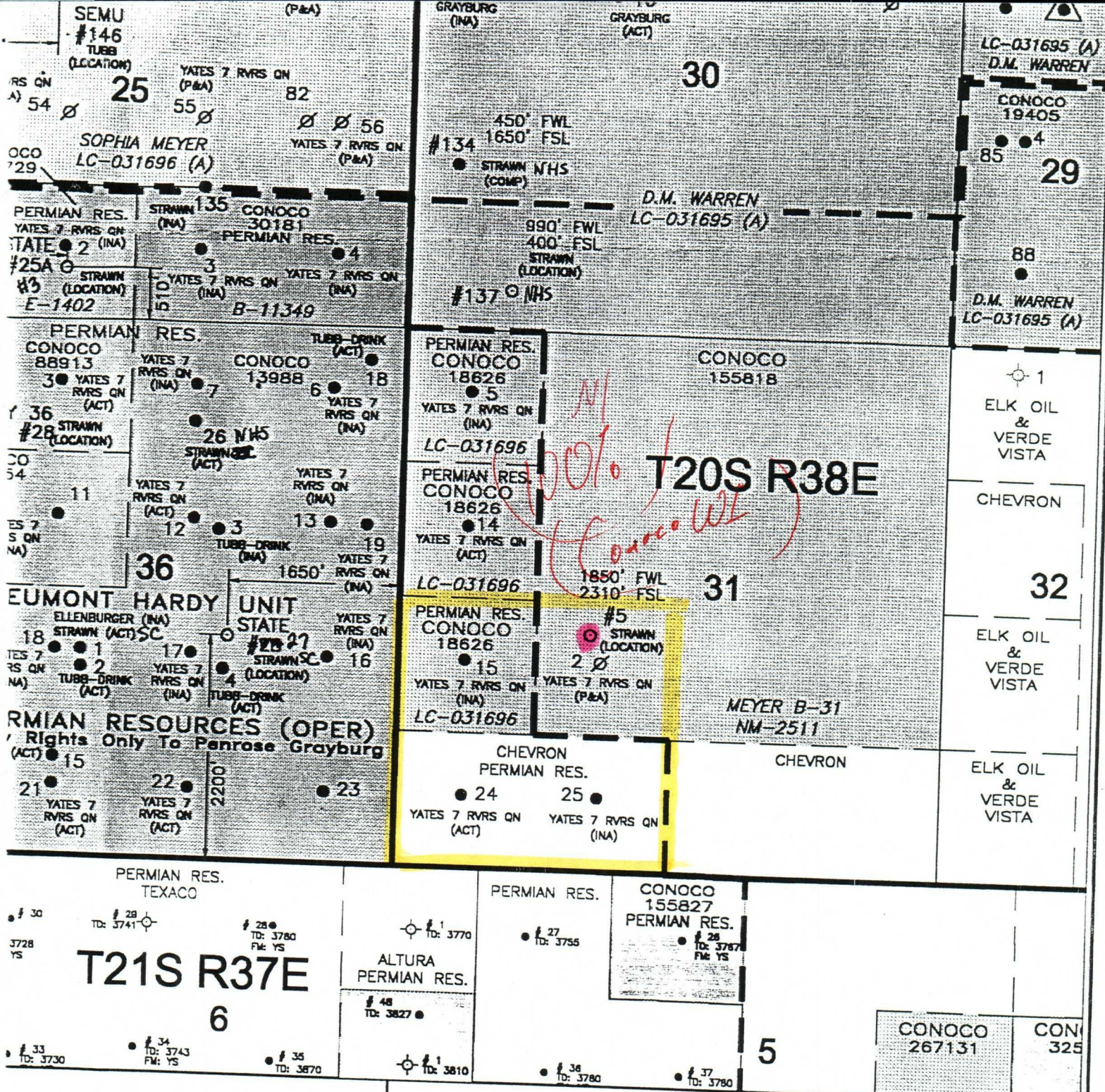
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.
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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

	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Kay Maddox</i> Signature</p> <p>KAY Maddox Printed Name</p> <p>Regulatory Agent Title</p> <p>3/27/2000 Date</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>January 12, 2000 Date Surveyed</p> <p>Signature of Surveyor Professional Surveyor</p> <p>NEW MEXICO W.O. No. 00184</p> <p>Certificate No. Gary Jones 7977</p> <p>PROFESSIONAL SURVEYOR</p>
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- ☐ CONOCO FEDERAL LEASE
- ☐ CONOCO STATE LEASE
- ☐ CONOCO LEASE

DATE: 3/3/00
DRAWN BY: glg
CHECKED BY:
APPROVED BY:
SCALE: 1" = 1320'
STATE PLANE COORDINATES REFERRED TO
NAD27 - 3001
STATE PLANE COORDINATES
ZONE - NEW MEXICO EAST

conoco EXPLORATION PRODUCTION AMERICAS

CONOCO
MEYER B-31 #5
LEA COUNTY
NEW MEXICO

STATE	API COUNTY	WELL	DRAWING
025	- 30	-34960	2000LOC

CONOCO INC. OFFICE
10 DESTA DRIVE WEST
MIDLAND, TEXAS 79705