

## District I

1625 N. French Dr., Hobbs, NM 88240

## District II

1301 W. Grand Avenue, Artesia, NM 88210

## District III

1000 Rio Brazos Road, Aztec, NM 87410

## District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-101

May 27, 2004

## Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

## APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

<sup>1</sup> Operator Name and Address ConocoPhillips 4001 Penbrook Odessa, TX 79762		<sup>2</sup> OGRID Number 217817
<sup>3</sup> Property Code 013396		<sup>5</sup> API Number 30 025-32479
<sup>4</sup> Property Name Hardy 36 State		<sup>6</sup> Well No. #3
<sup>9</sup> Proposed Pool 1 North Hardy Tubb Drinkard (96356)		<sup>10</sup> Proposed Pool 2 Wildcat Blinebry <97177>

<sup>7</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/Westline	County
G	36	20S	37E		2080	North	1730	East	Lea County

<sup>8</sup> Proposed 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/Westline	County

## Additional Well Information

<sup>11</sup> Work Type Code A	<sup>12</sup> Well Type Code M	<sup>13</sup> Cable/Rotary Rotary	<sup>14</sup> Lease Type Code S	<sup>15</sup> Ground Level Elevation 3497'
<sup>16</sup> Multiple Yes	<sup>17</sup> Proposed Depth	<sup>18</sup> Formation	<sup>19</sup> Contractor	<sup>20</sup> Spud Date
Depth to Groundwater		Distance from nearest fresh water well		Distance from nearest surface water
Pit: Liner: Synthetic <input type="checkbox"/> milstuck Clay <input type="checkbox"/> Pit Volume: _____ bbls Drilling Method: _____ Closed-Loop System <input type="checkbox"/> Per Key Steel Tank Fresh Water <input type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				

<sup>21</sup> Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

This well is currently completed in the Blinebry with a CIBP over the Tubb Drinkard interval - ConocoPhillips proposes to drill out the CIBP, acidize and then put the well back on production as a downhole comingled North Hardy Tubb Drinkard/ Wildcat Blinebry well. They propose to do this using the attached procedure.

Permit Expires 1 Year From Approval  
Date Unless Drilling Underway

Adding

X Cannot produce Downhole Comingled until  
DHC approved in Santa Fe.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐ a general permit ☐ or an (attached) alternative OCD-approved plan ☐

Printed name: Kay Maddox

Title: Regulatory Agent

E-mail Address:

Date: 11/03/2004

Phone: (432)368-1207

## OIL CONSERVATION DIVISION

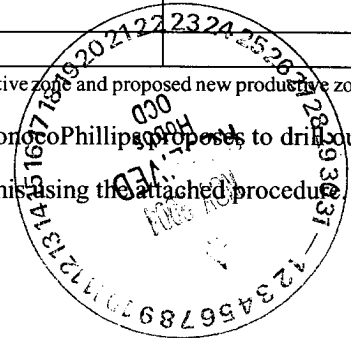
Approved by:

Title:

Approval Date: NOV 15 2004

Expiration Date:

Conditions of Approval Attached



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

Form C-10

Revised February 21, 1991  
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 30-025-32479		2 Pool Code 97177		3 Pool Name Wildcat Blinberry	
4 Property Code 013396		5 Property Name Hardy 36 State			6 Well Number #3
7 OGRID No. 257817 005073		8 Operator Name Conoco Inc., 10 Desta Drive, Ste. 100W, Midland, TX 79705-4500			9 Elevation 3497'

#### 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
G	36	20S	38E		2080	North	1730	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 40	13 Joint or Infill	14 Consolidation Code		15 Order No.					

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

16				

Diagram showing well location with dimensions 2080' and 1730'.

#### 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

April 6, 2001  
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

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
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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

Form C-102  
Revised February 10, 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 <b>30-025-32479</b>	Pool Code <b>96356</b>	Pool Name <b>North Hardy Tubb Drinkard</b>	
Property Code <b>013396</b>	HARDY 36 STATE	Property Name	Well Number <b>3</b>
GRID No. <b>217817</b>	CONOCO, INC.	Operator Name	Elevation <b>3497</b>

10 Surface Location

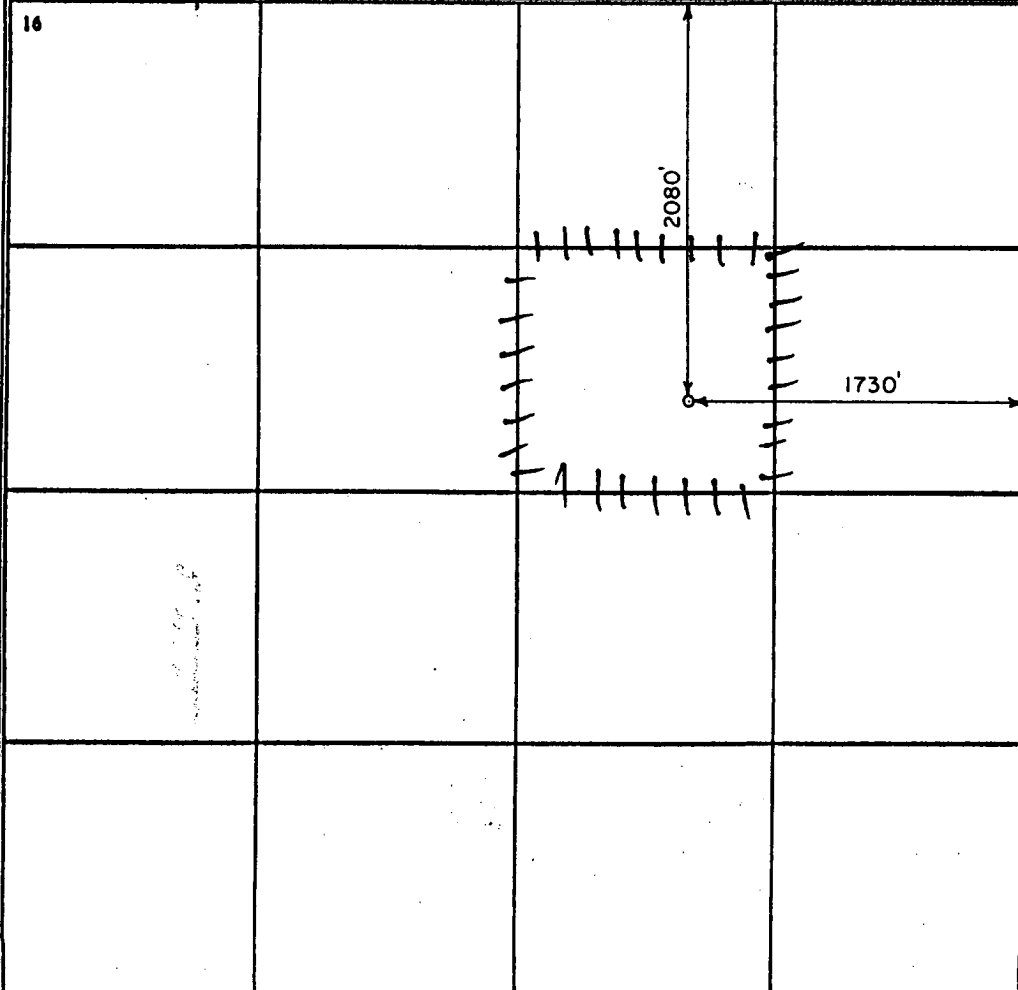
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	36	20-S	37-E		2080	NORTH	1730	EAST	LEA

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

Dedicated Acres <b>40</b>	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

16		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief  Signature <u>Kay Maddox</u> Printed Name <u>KAY MADDOX</u> Title <u>Regulatory Agent</u> Date <u>11/3/2004</u>
		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 <u>4/12/94</u> Signature and Seal of Professional Surveyor <u>Earl Foote</u> 8278 Certificate Number <u>8278</u>



### Hardy 36 State No. 3

Drill Out CIBP's Over Tubb & Drinkard & Downhole Commingle With Blinebry Procedure  
(Current Shut-In Well)

**Location:** 2080' FNL & 1730' FEL, Sec. 36 – T20S, R37E, Lea County, NM  
**Charges:** (Cost Estimate \$00,000)  
**Spud Date:** 05/1994  
**Shut-In Date:** Dec 2002 (Failed Not Repaired Due to Marginal Production)  
**API Number:** 30025 - 32479  
**Zone/Pool:** Blinebry  
**Battery Destination:** Existing Battery

**TD:** 6994'  
**PBTD:** Unknown  
**DV Tools:** 4877'

**KBE:** 3506'  
**GLE:** 3497'  
**KBM:** 9' above GL

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#### Existing Casing:

Csg Size (in)	Depth (ft)	Wt (lb/ft)	Grade	Conn	Drift ID	Burst (psi)	Coll * (psi)
9-5/8	1381'	36	K-55				
7	7000'	26	K-55	LT&C	6.151	4980	4320

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#### Project Overview:

It is recommended that the Hardy State No. 3 Blinebry well be placed back on production as a downhole commingled Tubb/Drinkard & Blinebry well. The Hardy No. 3 well failed in Dec 2002 and was not repaired due to its marginal production from the Blinebry zone estimated at 2 BOPD. This procedure consists of drilling out the CIBP's set above the Tubb and Drinkard zones, performing a small acid clean-up stimulation job over all the intervals then returning the well to production as a downhole commingled Drinkard/Tubb/Blinebry well. The well is expected to produce 10 BOPD, 150 MCFGPD and an estimated 100 to 200 BWPD.

The Hardy No. 3 well was originally completed in 1994 in the Tubb interval from 6390' to 6595' OA and the Drinkard interval from 6738' to 6842'. The well was placed on beam pump as a downhole commingled producer making approximately 10 BOPD and 150 MCFGPD before being converted to a Tubb injection well in November 1997. In Aug 2001 the No. 3 injection well was recompleted to the Blinebry making approximately 2 BOPD and 20 MCFGPD until it failed in Dec 2002.

This well is on the list of wells that the NMOCD requires either RTP or plug and abandon by yearend 2004

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**Perforations:**

<b>Existing Blinebry:</b>	5634'- 5642'
	5650'- 5662'
	5746'- 5754'
	5780'- 5790'
<b>Tubb (Under CIBP @ 6375'):</b>	6390' – 6593' OA
<b>Drinkard (Under CIBP @ 6700'):</b>	6738'-6842' OA

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**Well Control Requirements:**

**Well Control:** Well Control equipment and procedures will be in accordance with the ConocoPhillips Well Control Manual, Second Edition, Revision Two, dated August 1994.

**Well Category:** All three zones Blinebry, Tubb & Drinkard were originally normally pressured zone but are now at different stages of depletion. Since 9.5 ppg kill fluid will be used throughout the procedure the well is not anticipated to flow at any time during the operation. This well is to be considered a Category 1 well since the well is expected to produce less than 500 MCFGPD and is incapable of developing a 100 ppm H<sub>2</sub>S ROE greater than 50'. Category 1 wells require one untested barrier. Approval has been granted for use of a dynamic fluid column as that barrier.

**BOPE Class 2:** For operations the MPSP for this well is estimated to be less than 2000 PSIG. A Class 2 BOP stack is required since these last gas analysis indicated 1000 ppm H<sub>2</sub>S. The stack will rated for a minum of 5,000 PSIG WP consisting of a hydraulic operated tubing rams on top and a set of blind rams on bottom. NU shop tested BOP stack on top of companion flange. Test as per SOP.

**Kill Fluid:** Treated 9.5 ppg brine water for duration of operations

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**Drinkard/Tubb/Blinebry Artificial Lift Specs:**

(See attached beam pump design for additional information)

<b>PU Specs:</b>	American D228-213-86
<b>Source:</b>	Existing
<b>Electrical:</b>	GE Size 3
<b>PU Controller:</b>	Yes
<b>Tubing:</b>	2 3/8" J-55 Tubing
<b>Rod String:</b>	6/6 Rod String (217, 3/4" rods – 5425')
<b>Rod Pump:</b>	20-150-RHBC-20-6-00 Type "A"
<b>Stroke Length:</b>	86"
<b>PU Speed:</b>	6.5 SPM

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**Procedure**

**Note:** All depths referenced to 9.0' RKB.

1. RU pulling. Hook up water transport to the casing and kill well with 130 bbls of 9.5 ppg treated brine water. Use dynamic head kill procedure during installation / removal of BOP stack and tripping, if necessary.
2. TOOH with 5425' of 3/4" rods with 3, 1 3/8" K bars. Visually inspect rods for worn couplings and pitting. Lay down any worn or pitted rods.

3. NU 5,000 PSIG WP hydraulic operated BOPE and test to 250/5000 PSIG. RU tubing scanning equipment and TOOH laying down the production tubing. TAC set at approximately 5459' with SN at approximately 5585'.
4. MIRU reverse unit and circulating pits. PU 6 1/8" bit, drill collars on 2 7/8" workstring and TIH to drill out cement cap and CIBP set at 6375' with cement top estimated at 6340'. Continue in the hole to drill out a second CIBP set at 6700' with cement top estimated at 6665'. TOOH with bit and collars.
5. PU 6 1/8" bit and casing scrapers and TIH to tag PBTD at 6954'. Reciprocate scrapers across intervals 6340' to 6375' and 6665' to 6700'. TOOH with bit and scrapers.
6. PU a CS1 10 M treating packer for 7" 26 ppf casing and TIH to set at 6650'. Hydro-test each stand to 6,000 PSIG while tripping.
7. RU Schlumberger treating services. Install 10 M PSIG WP frac valve on the tubing. Install treating line with nitrogen actuated relief valve. Test the tree and treating line to 6000 PSIG and set the relief valve at 4300 PSIG. RU pump truck on the backside and attempt to keep the backside loaded by pumping 1/4 BPM via the casing during the stimulation job. Pump the acid treatment per the attached Schlumberger recommendation. Do not exceed 4000 PSIG treating pressure.

<b>TREATING LINE TEST PRESSURE:</b> A minimum 1000 psig over MATP	<b>6000</b>	<b>PSIG</b>
<b>MAXIMUM ALLOWABLE WORKING PRESSURE:</b> Based on weakest component in system. Burst pressure of 7" casing.	<b>4980</b>	<b>PSIG</b>
<b>NITROGEN POP OFF SET PRESSURE:</b> Relief pressure set at the lesser of : 300 psig less than 90% MAWP or, 300 psig over MATP	<b>4300</b>	<b>PSIG</b>
<b>MAXIMUM ALLOWABLE TREATING PRESSURE:</b> If reached, human action required.	<b>4000</b>	<b>PSIG</b>
<b>MAXIMUM ANTICIPATED TREATING PRESSURE:</b>	<b>3000</b>	<b>PSIG</b>

#### Drinkard Acid Stimulation:

- Load tubing and establish injection rate with 50 bbls of 2% KCL slick water
  - Pump 2,000 gals of 15% NEFE HCL acid at 5 BPM containing 150 1.3 SG, 7/8" RCN ball sealers.
  - Over displace breakdown with 50 bbls of 2% KCL slick water.
  - Surge balls off perforations.
8. RD Schlumberger pumping services. Flow back the well until it dies.
  9. Release the packer and TOOH with the tubing and packer.
  10. PU 7" RBP with ball catcher and CS-1 10 M treating packer or equivalent and TIH to set the RBP at approximately 6650'. Hydro-test each stand to 7,000 PSIG while tripping.

11. PU a couple of feet, load the tubing and pressure test the plug to 2,000 PSIG. Release the packer and PU to 6300'. Set the packer.
8. RU Schlumberger treating services. Install 10 M PSIG WP frac valve on the tubing. Install treating line with nitrogen actuated relief valve. Test the tree and treating line to 6000 PSIG and set the relief valve at 4300 PSIG. RU pump truck on the backside and attempt to keep the backside loaded by pumping ¼ BPM via the casing during the stimulation job. Pump the acid treatment per the attached Schlumberger recommendation. Do not exceed 4000 PSIG treating pressure.

<b>TREATING LINE TEST PRESSURE:</b> A minimum 1000 psig over MATP	<b>6000</b>	<b>PSIG</b>
<b>MAXIMUM ALLOWABLE WORKING PRESSURE:</b> Based on weakest component in system. Burst pressure of 7" casing.	<b>4980</b>	<b>PSIG</b>
<b>NITROGEN POP OFF SET PRESSURE:</b> Relief pressure set at the lesser of : 300 psig less than 90% MAWP or, 300 psig over MATP	<b>4300</b>	<b>PSIG</b>
<b>MAXIMUM ALLOWABLE TREATING PRESSURE:</b> If reached, human action required.	<b>4000</b>	<b>PSIG</b>
<b>MAXIMUM ANTICIPATED TREATING PRESSURE:</b>	<b>3000</b>	<b>PSIG</b>

**Tubb Acid Stimulation:**

- Load tubing and establish injection rate with 50 bbls of 2% KCL slick water
  - Pump 3,000 gals of 15% NEFE HCL acid at 5 BPM containing 300 1.3 SG, 7/8" RCN ball sealers.
  - Over displace breakdown with 50 bbls of 2% KCL slick water.
  - Surge balls off perforations.
12. RD Schlumberger pumping services. Flow back the well until it dies.
  13. Release the packer, drop down and retrieve the RBP with ball catcher and TOOH laying down the tubing RBP and packer.
  14. TIH with approximately 6,900' of 2 3/8", J-55 production tubing with the open ended SN on bottom of the tubing and a 7" TAC. The bottom joint to be polylinned. Space the tubing out to set the seating nipple at approximately 6,900' (or 60' below the bottom Drinkard perforation with the TAC at approximately 5570' (60' above the top Blinebry perforation).
  12. ND the BOP stack and install the B-1 adapter flange. Pump corrosion inhibitor down the tubing to coat the rods and pump as they are run in the hole. PU standard strainer nipple on the bottom of the 25-175-RHBC 20-6-00 2 Stage HVR Type "A" pump on 7/6 KD "Existing" rod string and RIH to place on beam pump. **(See attached Drinkard/Tubb/Blinebry Beam Pump Design.** RD and move off.
  13. Notify Champion prior to placing the well on production. As soon as the well is started have it placed on scheduled CI truck treatments. **Schedule a backside scale squeeze as soon as the fluid level is pumped off.**