

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-101  
Revised February 10, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 6 Copies  
Fee Lease - 5 Copies

☐ AMENDED REPORT

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

Operator Name and Address. Patterson Petroleum LP P.O. Drawer 1416 Snyder, Texas 79550		OGRID Number 141928
Property Code 32093	Property Name Heyward "32" State Com	API Number 30-025-36224
		Well No. 1

7 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	32	17-S	34-E		1500	South	1200	West	Lea

8 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/West line	County
Proposed Pool 1 Vacuum; Morrow					Proposed Pool 2				

Work Type Code N	Well Type Code G	Cable/Rotary Rotary	Lease Type Code S	Ground Level Elevation 4075'
Multiple No	Proposed Depth 13,800'	Formation Morrow	Contractor Patterson-UTI	Spud Date 05/01/03

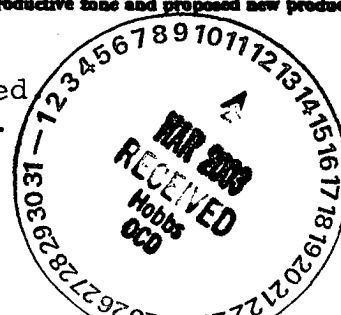
21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17-1/2"	13-3/8"	48#	400'	500	Surface
12-1/4"	9-5/8"	40#	4800'	1750	Surface
8-3/4"	7"	26#	12,900'	1500	4800'
6-1/8"	5" Liner	18#	13,800'	200	12,700'

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.

Drilling fluid synopsis attached.  
BOP: Series 900, 5000# WP - See figure 2.5 attached  
Additional casing & cementing information attached.

Permit Expires 1 Year From Approval  
Date Unless Drilling Underway



I hereby certify that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>Nolan von Roeder</i>		OIL CONSERVATION DIVISION	
Printed name: Nolan von Roeder		Approved by: <i>[Signature]</i>	
Title: Engineer		Title: PETROLEUM ENGINEER	
Date: 03/07/03		Approval Date: MAR 17 2003	
Phone: 915/573-1938		Expiration Date:	
		Conditions of Approval: Attached <input type="checkbox"/>	

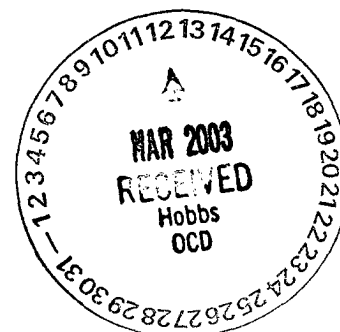
DRILLING FLUID SYNOPSIS  
PATTERSON PETROLEUM LP  
Heyward "32" State Com No. 1

Section 32  
T-17-S  
R-34-E  
Lea County, New Mexico

CASING

13 3/8" at 400'  
9 5/8" at 4800'  
7" at 12,900'  
5" liner at 13,800'

DEPTH	MUD WT.	VISCOSITY	FLUID LOSS	DRILL SOLIDS	COMMENTS
0' - 400'	8.4 to 9.0	28 to 40	No Control	5%	Spud mud & paper
400' - 4800'	8.4 to 10.3	28 to 33	No Control	1%	Brine water, paper, caustic
4800 - 12,900'	8.4 to 9.2	28 to 30	No Control	1%	Cut-brine, paper & caustic
12,900 - 13,800'	10 to 10.5	36 to 46	10 cc or less	< 5%	Xanthan gum, starch, pac, & caustic



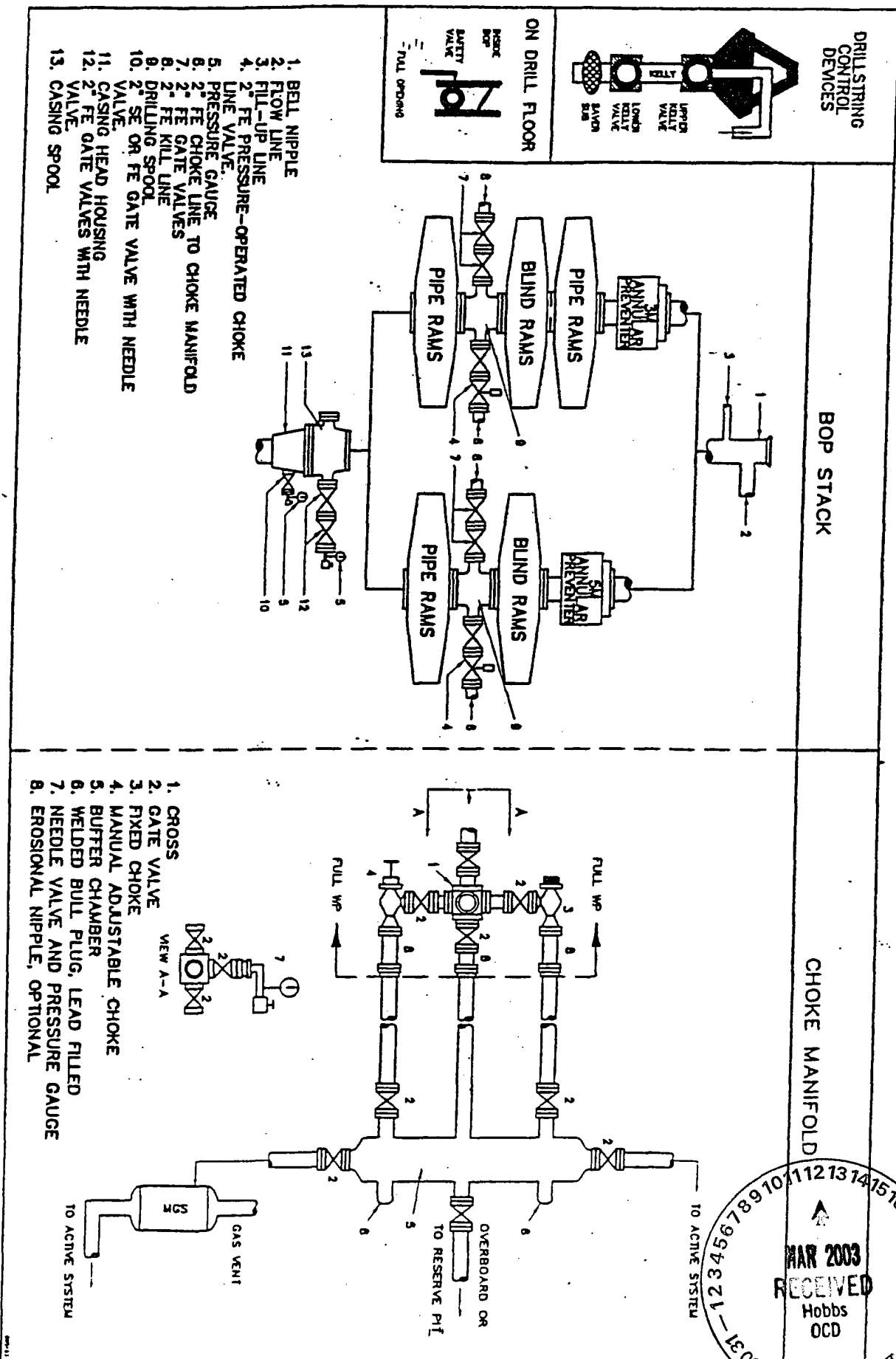


Fig. 2.5. Class 3 BOP and Choke Manifold.

MAR 2003  
RECEIVED  
Hobbs  
OCD

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

PATTERSON PETROLEUM LP  
PROPOSED CASING & CEMENTING PROGRAM  
HEYWARD "32" STATE COM WELL NO. 1

13 3/8", 48 lb/ft, H-40 Surface Casing Set at 400' - in a 17 1/2" Hole

Circulate to surface with 500 sacks of Class "C" + 2% CaCl<sub>2</sub> + 1/4 lb/sk celloflake

Slurry Weight:	14.8 ppg
Slurry Yield:	1.32 cu.ft/sk
Water Requirement:	6.3 gal./sk

9 5/8", 40 lb/ft, J-55 & N-80 Intermediate Casing Set at 4800' - in a 12 1/4" Hole

Lead : 1500 sx of 35:65 Poz Class "C" + 5% salt + 6% gel + 1/4 lb/sk celloflake  
+ 2/10 % antifoamer

Desired TOC = Surface

Slurry Weight:	12.4 ppg
Slurry Yield:	2.15 cu.ft/sk
Water Requirement:	11.99 gal/sk

Tail : 250 sx of Class "C" Neat

Slurry Weight:	14.8 ppg
Slurry Yield:	1.32 cu.ft/sk
Water Requirement:	6.31 gal/sk

7" , 26 lb/ft, N-80 & P110 Production String Casing Set at 12,900' - in an 8 3/4" Hole

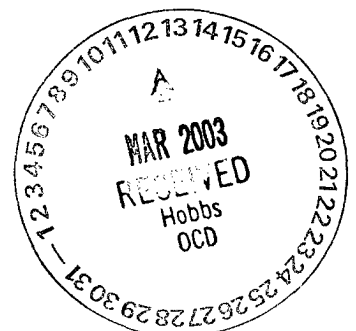
Lead : 1150 sx of 35/65 Poz H + 5% salt + 6% gel + 1/4 #/sk celloflakes

Desired TOC = 4800'

Slurry Weight:	12.4 ppg
Slurry Yield:	2.13 cu.ft/sk
Water Requirement:	11.81 gal/sk

Tail : 350 sx of 50/50 Poz H w/ 2% gel + 2/10% dispersant + 2/10% antifoamer  
and 3/10% retarder

Slurry Weight:	14.2 ppg
Slurry Yield:	1.33 cu.ft/sk
Water Requirement:	5.24 gal/sk

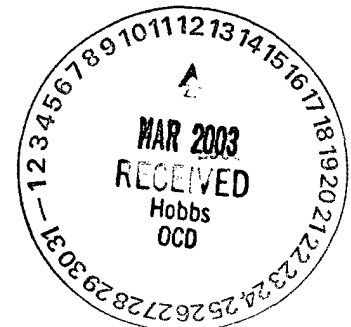


PATTERSON PETROLEUM LP  
PROPOSED CASING & CEMENTING PROGRAM  
HEYWARD "32" STATE COM WELL NO. 1

5", 18 lb/ft, N80 Production Liner Set from 12,600' to 13,800' - in a 6 1/8" Hole

Cement w/ 200 sx of Class "H" + 3/10% retarder + 2/10% antifoamer + 6/10% Gasblock

Slurry Weight:	16.4 ppg
Slurry Yield:	1.09 cu.ft/sk
Water Requirement:	5.49 gal/sk



DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

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

DISTRICT IV  
P.O. Box 2088, Santa Fe, N.M. 87504-2088

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-36224	Pool Code 86840	Pool Name Vacuum; Morrow
Property Code 32093	Property Name HEYWARD "32" STATE COM	Well Number 1
OGRID No. 141928	Operator Name PATTERSON PETROLEUM LP	Elevation 4075'

Surface Location

UL or lot No. L	Section 32	Township 17-S	Range 34-E	Lot Idn	Feet from the 1500'	North/South line SOUTH	Feet from the 1200	East/West line WEST	County LEA
--------------------	---------------	------------------	---------------	---------	------------------------	---------------------------	-----------------------	------------------------	---------------

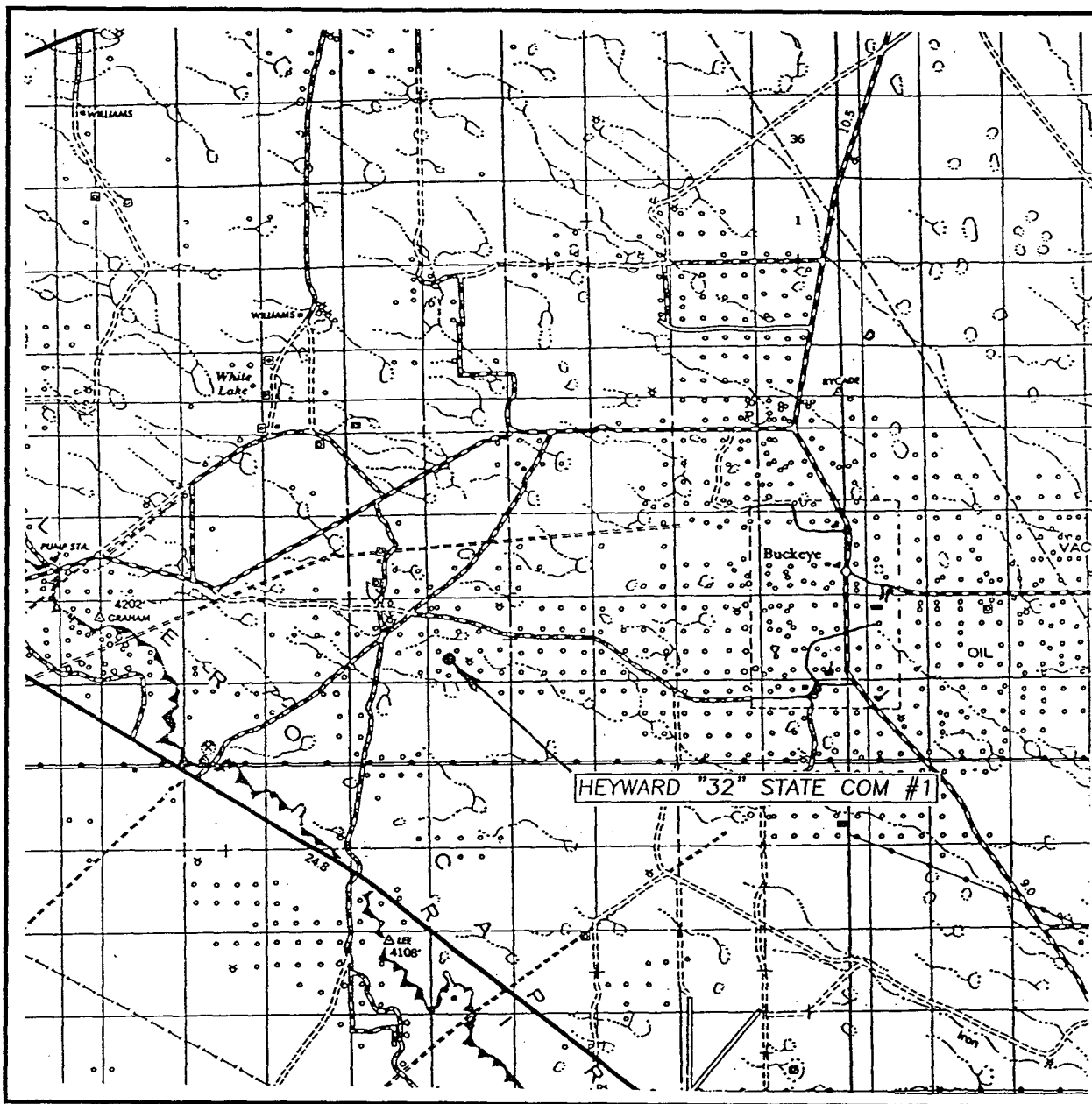
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 320	Joint or Infill	Consolidation Code	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

<p>GEODETIC COORDINATES</p> <p>NAD 1927 NMEZ</p> <p>Y = 651193.5</p> <p>X = 729393.6</p> <p>LAT. = 32°47'16.79"N</p> <p>LONG. = 103°35'12.82"W</p>		<p>1200'</p> <p>1500'</p>	<p>MAR 2003</p> <p>RECEIVED</p> <p>Hobbs</p> <p>OCD</p>	<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>Nolan von Roeder</i></p> <p>Signature</p> <p>Nolan von Roeder</p> <p>Printed Name</p> <p>Engineer</p> <p>Title</p> <p>03/07/03</p> <p>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>FEBRUARY 19, 2003</p> <p>Date Surveyed</p> <p>Signature &amp; Seal of Professional Surveyor</p> <p>AWB</p> <p>03-11-0208</p> <p>Certificate No. RONALD J. EDSON 3239</p> <p>GARY EDSON 12641</p>
--	--	---------------------------	---	--	--

# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 32 TWP. 17-S RGE. 34-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1500' FSL & 1200' FWL

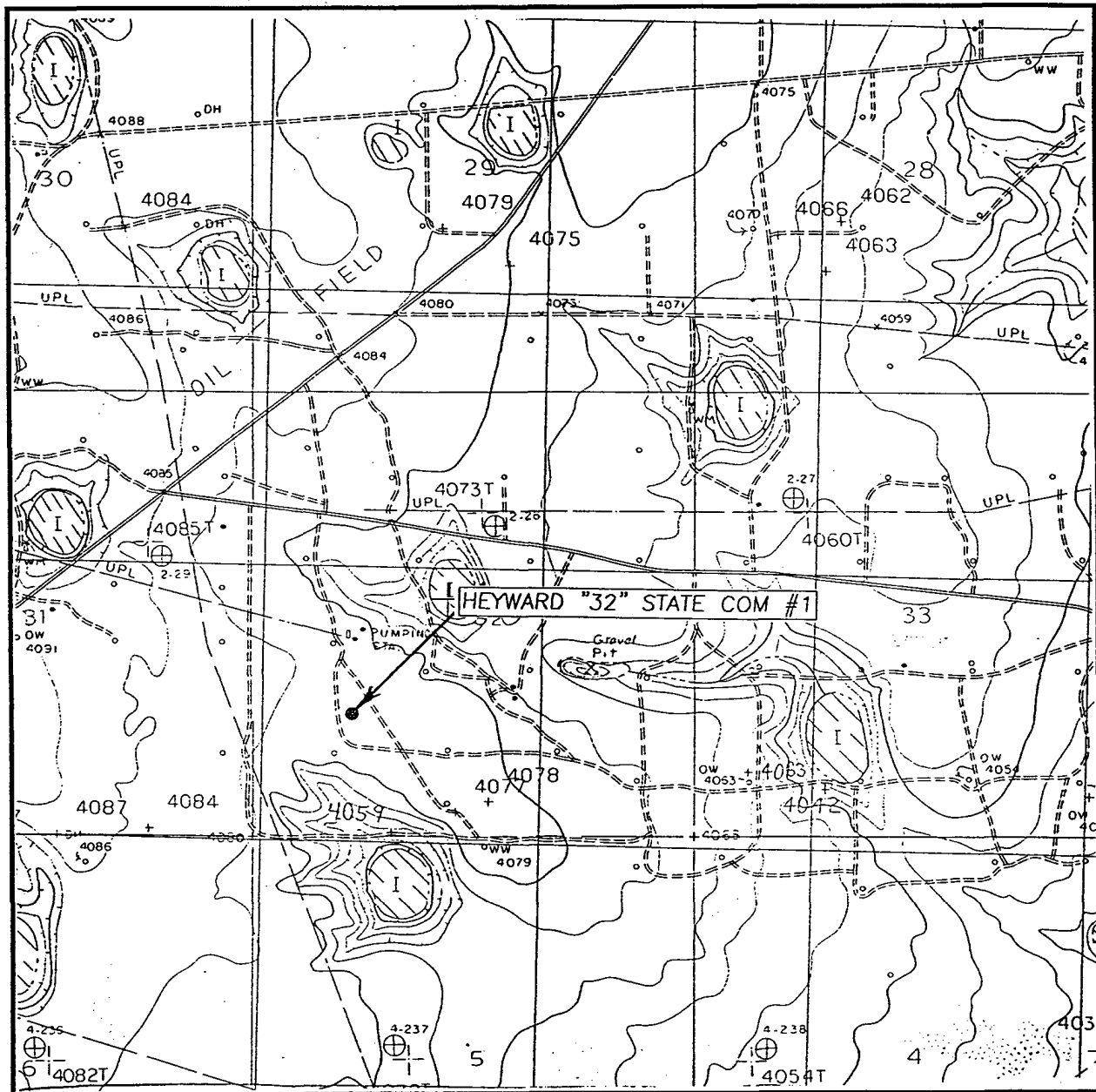
ELEVATION 4075'

OPERATOR PATTERSON PETROLEUM LP

LEASE HEYWARD "32" STATE COM

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 5'  
BUCKEYE, N.M.

SEC. 32 TWP. 17-S RGE. 34-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1500' FSL & 1200' FWL

ELEVATION 4075'

OPERATOR PATTERSON PETROLEUM LP

LEASE HEYWARD "32" STATE COM

U.S.G.S. TOPOGRAPHIC MAP  
BUCKEYE, N.M.

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117

