

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

¹ Operator Name and Address PATTERSON PETROLEUM LP		² OGRID Number 141928 ✓
³ Property Code 34851	⁵ Property Name NATHANIEL 29 STATE ✓	⁴ API Number 30-025-37291
⁹ Proposed Pool 1 VACUUM; MORROW (Bas) 86840		¹⁰ Proposed Pool 2 VACUUM: ATOKA, WEST
		⁶ 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
M	29	17-S	34-E		660	South	990	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

¹¹ Work Type Code					¹² Well Type Code		¹³ Cable/Rotary		¹⁴ Lease Type Code		¹⁵ Ground Level Elevation	
N					G		Rotary		S ✓		4085'	
¹⁶ Multiple No			¹⁷ Proposed Depth			¹⁸ Formation			¹⁹ Contractor		²⁰ Spud Date	
No			13,800'			Morrow			Patterson-UTI		07/30/05	
Depth to Groundwater				Distance from nearest fresh water well				Distance from nearest surface water				
135'				4000'				None				
Pit: Liner: Synthetic <input checked="" type="checkbox"/> 12 mils thick Clay <input type="checkbox"/> Pit Volume: 15000 bbls Drilling Method:												
Closed-Loop System <input type="checkbox"/> Fresh Water <input checked="" type="checkbox"/> Brine <input checked="" type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>												

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"	5-1/2"	17#	13,800'	1000	8000'

²² 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



²³ 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 <input checked="" type="checkbox"/> , a general permit <input type="checkbox"/> , or an (attached) alternative OCD-approved plan <input type="checkbox"/> .	OIL CONSERVATION DIVISION	
	Approved by:	
Printed name: Nolan von Roeder	Title: PETROLEUM ENGINEER	
Title: Engineer	Approval Date: JUN 10 2005	Expiration Date:
E-mail Address: vonroedern@patenergy.com		
Date: 06/08/05	Phone: 325-573-1938	Conditions of Approval Attached <input type="checkbox"/>

State of New Mexico

Energy, Minerals and Natural Resources Department

DISTRICT I

1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised JUNE 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

API Number 30-025.37291	Pool Code 86840	Pool Name VACUUM; MORROW (Gas)
Property Code 34851	Property Name NATHANIEL 29 STATE	Well Number 1
OGRID No. 141928	Operator Name PATTERSON PETROLEUM, LP	Elevation 4085'

Surface Location

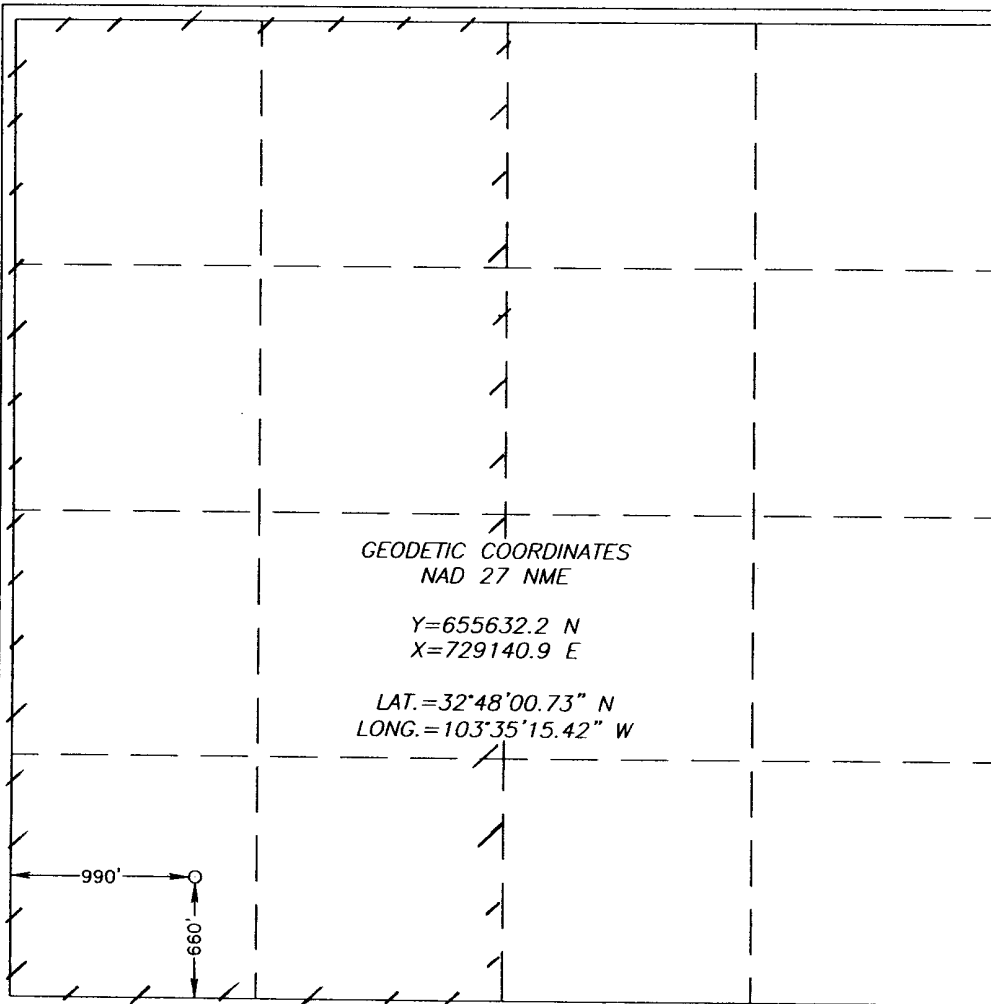
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	29	17-S	34-E		660	SOUTH	990	WEST	LEA

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



GEODETC COORDINATES
NAD 27 NME

Y=655632.2 N
X=729140.9 E

LAT.=32°48'00.73" N
LONG.=103°35'15.42" W

OPERATOR CERTIFICATION

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

Nolan von Roeder
Signature

Nolan von Roeder
Printed Name

Engineer
Title

06/08/2005
Date

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.

MAY 26, 2005

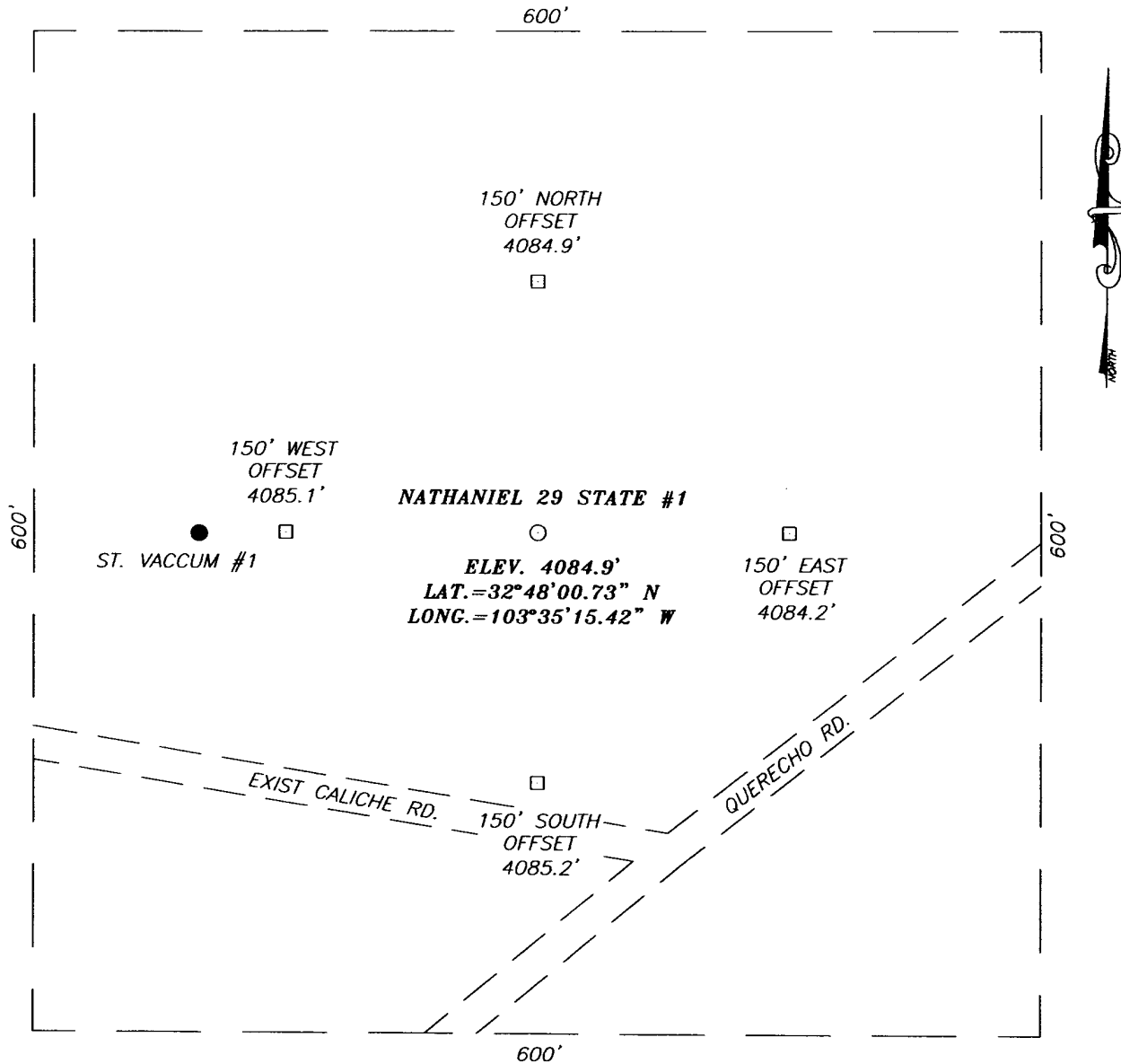
Date Surveyed _____ JR

Signature & Seal of Professional Surveyor

Gary Eidsos
GARY EIDSON
NEW MEXICO
PROFESSIONAL SURVEYOR
05.110822

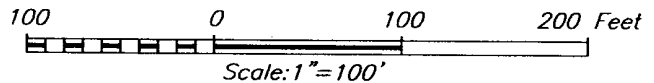
Certificate No. GARY EIDSON 12641

SECTION 29, TOWNSHIP 17 SOUTH, RANGE 34 EAST, N.M.P.M.,
 LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #529 AND QUERECHO RD., GO NORTH/NE ON QUERECHO RD. FOR APPROX. 3.7 MILES TO CALICHE ROAD TO THE WEST. THIS LOCATION IS APPROX. 20' NW.



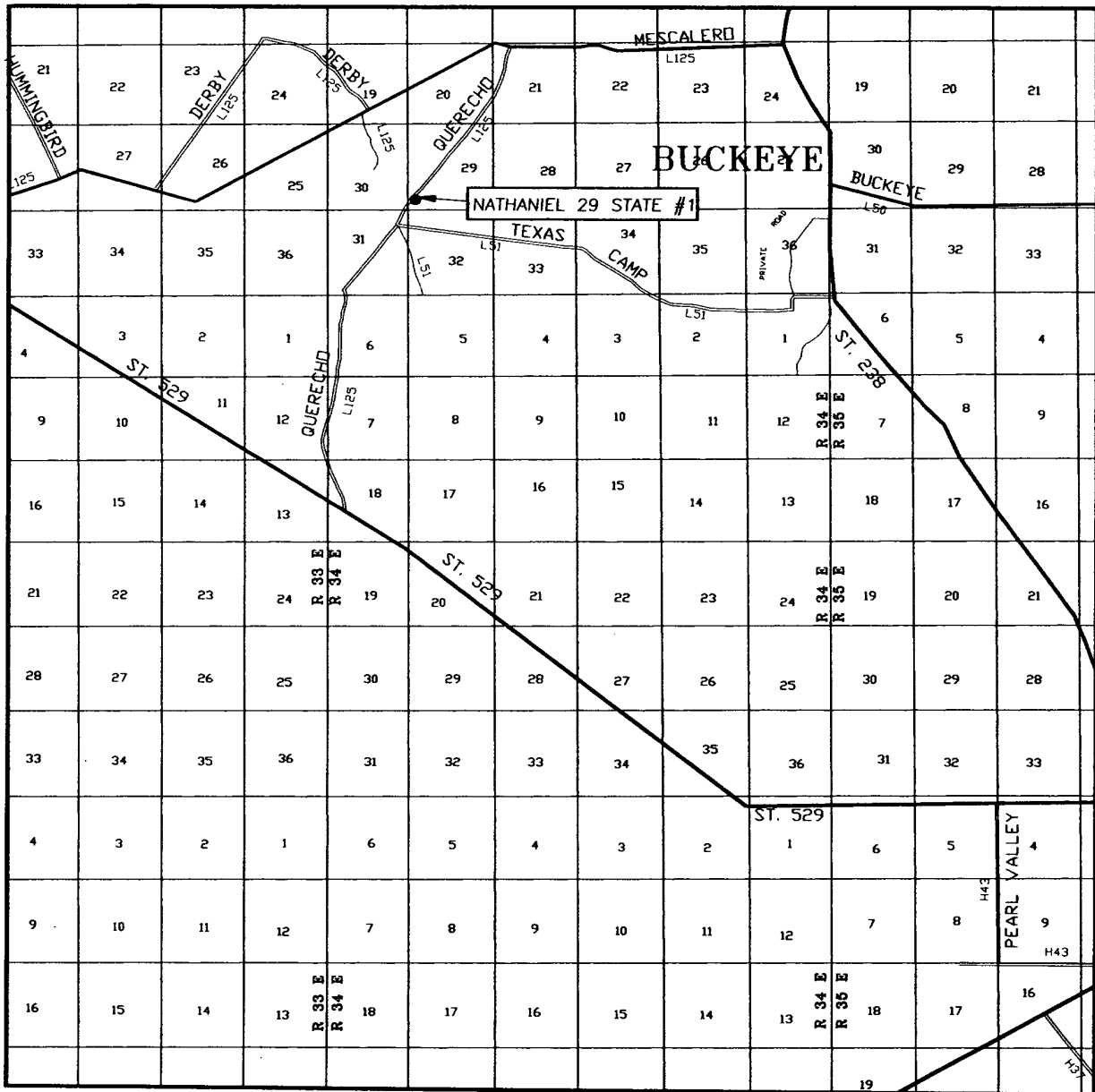
PATTERSON PETROLEUM, LP

NATHANIEL 29 STATE #1 WELL
 LOCATED 660 FEET FROM THE SOUTH LINE
 AND 990 FEET FROM THE WEST LINE OF SECTION 29,
 TOWNSHIP 17 SOUTH, RANGE 34 EAST, N.M.P.M.,
 LEA COUNTY, NEW MEXICO.

Survey Date: 05/26/05	Sheet 1 of 1 Sheets
W.O. Number: 05.11.0822	Dr By: J.R. Rev 1:N/A
Date: 05/31/05	Disk: CD#5 05110822 Scale: 1"=100'

PROVIDING SURVEYING SERVICES
 SINCE 1948
JOHN WEST SURVEYING COMPANY
 412 N. DAL PASO
 HOBBS, N.M. 88240
 (505) 393-3117

VICINITY MAP

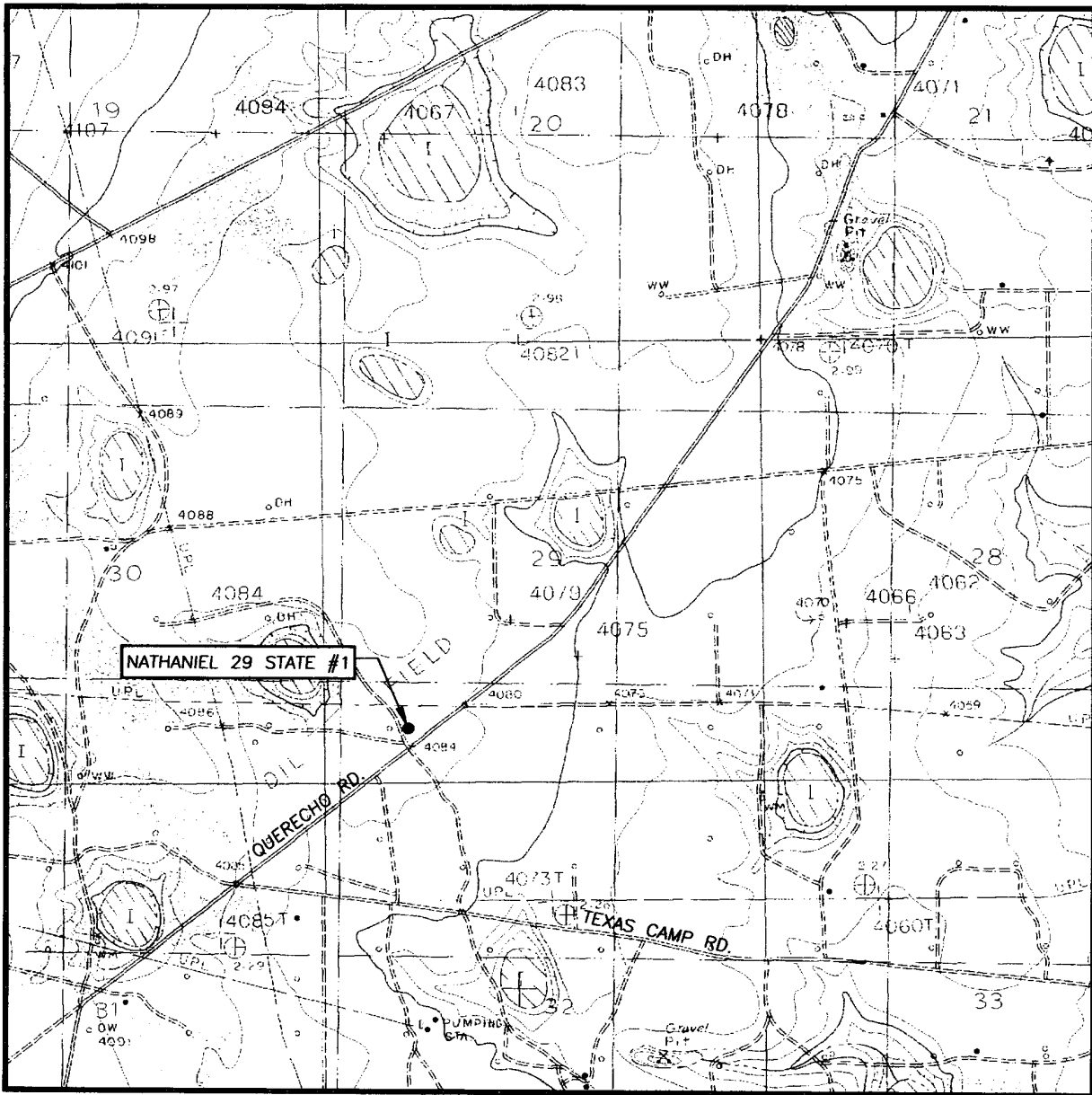


SCALE: 1" = 2 MILES

SEC. 29 TWP. 17-S RGE. 34-E
 SURVEY N.M.P.M.
 COUNTY LEA
 DESCRIPTION 660' FSL & 990' FWL
 ELEVATION 4085'
 OPERATOR PATTERSON
PETROLEUM, LP
 LEASE NATHANIEL 29 STATE

PROVIDING SURVEYING SERVICES
 SINCE 1946
JOHN WEST SURVEYING COMPANY
 412 N. DAL PASO
 HOBBS, N.M. 88240
 (505) 383-3117

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
BUCKEYE, N.M. - 5'

SEC. 29 TWP. 17-S RGE. 34-E

SURVEY _____ N.M.P.M. _____

COUNTY _____ LEA _____


DESCRIPTION 660' FSL & 990' FWL

ELEVATION _____ 4085' _____

OPERATOR _____ PATTERSON
_____ PETROLEUM, LP _____

LEASE _____ NATHANIEL 29 STATE _____

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



PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBES, N.M. 88240
(505) 383-3117



PATTERSON PETROLEUM LP

A LIMITED PARTNERSHIP

P.O. Box 1416, Snyder, TX 79550
4510 Lamesa Hwy., Snyder, TX 79549
Phone: 325-573-1938 • Fax 325-573-1939

DRILLING FLUID SYNOPSIS

PATTERSON PETROLEUM LP

Nathaniel 29 State No. 1

Section 29
T-17-S
R-34-E
Lea County, New Mexico

CASING

13 3/8" at 400'
9 5/8" at 4800'
5 1/2" 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

PATTERSON PETROLEUM LP
PROPOSED CASING & CEMENTING PROGRAM
NATHANIEL 29 STATE 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% CaCl₂ + ¼ 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

5 1/2" , 17 lb/ft, N-80 & P110 Production String Casing Set at 13,800' - in an 8 3/4" Hole

Lead : 700 sx of Halliburton Light H + 5% salt + 3/10% HR-7 retarder

Desired TOC = 8000'

Slurry Weight:	12.7 ppg
Slurry Yield:	1.95 cu.ft/sk
Water Requirement:	10.48 gal/sk

Tail : 300 sx of Halliburton Super H w/ 0.5% Lap-1+ 0.4% dispersant +
0.25% antifoamer and 0.25% retarder

Slurry Weight:	13.2 ppg
Slurry Yield:	1.60 cu.ft/sk
Water Requirement:	8.21 gal/sk

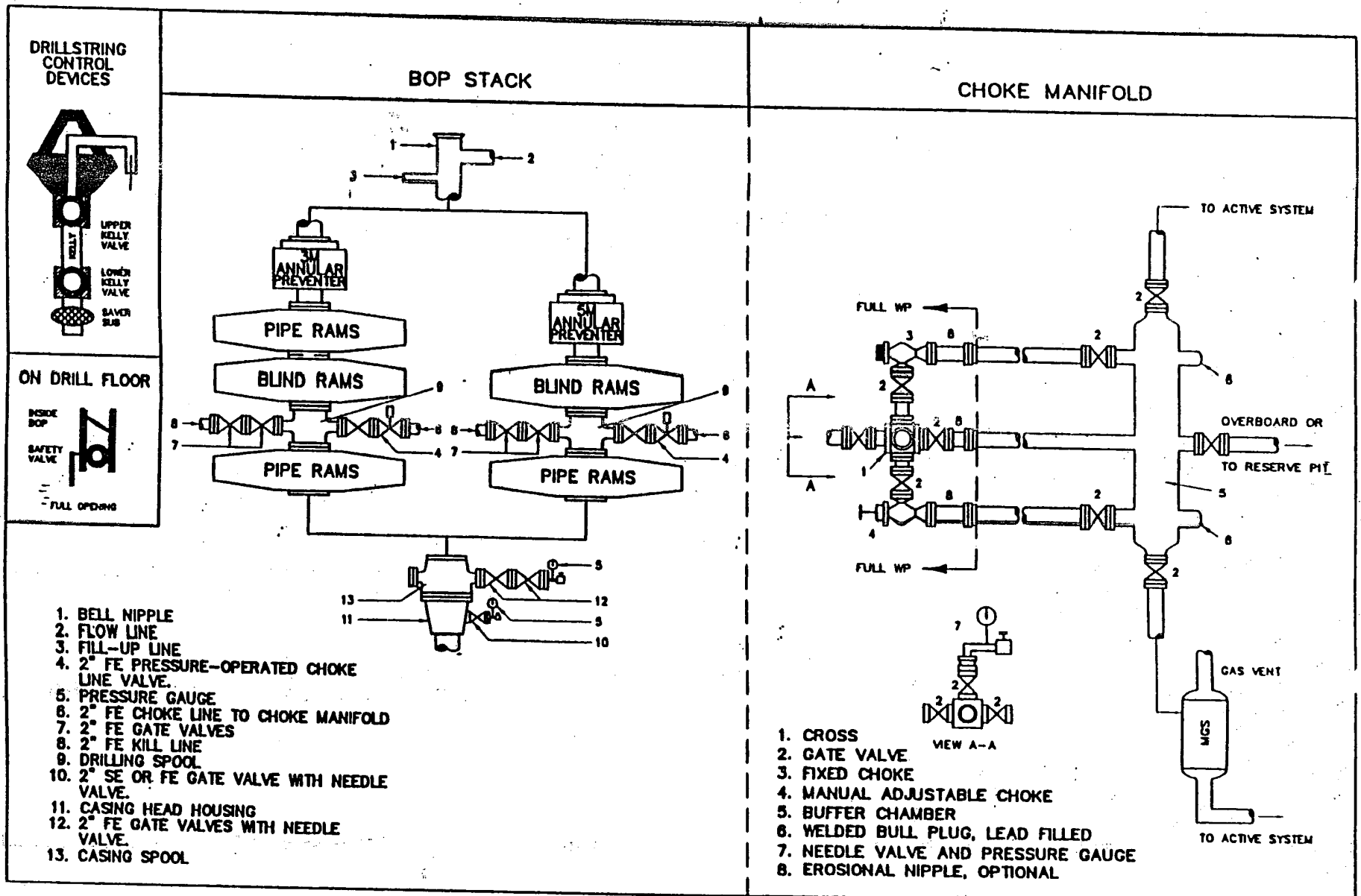


Fig. 2.5. Class 3 BOP and Choke Manifold.