

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 P.O. DRAWER 1416 SNYDER, TX 79550		² OGRID Number 141938 141928
		³ API Number 30 - 025 - 37567
⁴ Property Code 35246	⁵ Property Name BOUGAINVILLEA 33 STATE	
⁹ Proposed Pool 1 VACUUM; MORROW (GAS)		¹⁰ Proposed Pool 2 VACUUM; ATOKA, WEST

7 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the 2010	North/South line	Feet from the 660	East/West line	County
I	33	17S	34E			SOUTH		EAST	LEA

8 Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the 1980	North/South line	Feet from the 660	East/West line	County
I	33	17S	34E			SOUTH		EAST	LEA

Additional Well Information

¹¹ Work Type Code N	¹² Well Type Code G	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 4047'
¹⁶ Multiple N	¹⁷ Proposed Depth 13,800'	¹⁸ Formation MORROW	¹⁹ Contractor PATTERSON UTI	²⁰ Spud Date 11/28/05
Depth to Groundwater		Distance from nearest fresh water well		Distance from nearest surface water
Pit: Liner: Synthetic <input checked="" type="checkbox"/> 12_mils thick Clay <input type="checkbox"/> Pit Volume: 15,000_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"/>				

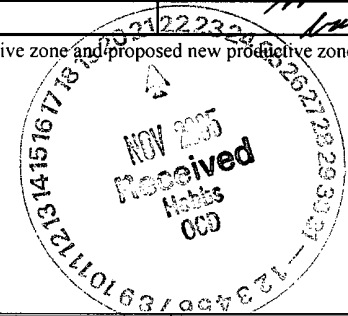
21 Proposed Casing and Cement Program

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' 4-700' must tie back

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 attach

**Permit Expires 1 Year From Approval
Date Unless Drilling Underway**



OIL CONSERVATION DIVISION

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"/> .		Approved by: 	
Printed name: Nolan von Roeder		Title: PETROLEUM ENGINEER	
Title: Engineer		Approval Date: NOV 22 2005	
E-mail Address: vonroeder@patenergy.com		Expiration Date:	
Date:		Conditions of Approval Attached <input type="checkbox"/> must tie back cement	

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 16, 2000
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

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

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

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 3D-025-37567	Pool Code 86840	Pool Name VACUUM; MORROW (GAS)
Property Code 35246	Property Name BOUGAINVILLEA 33 STATE	Well Number 1
OGRID No. 141928	Operator Name PATTERSON PETROLEUM, LP	Elevation 4047'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	33	17 S	34 E		2010	SOUTH	660	EAST	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
I	33	17S	34E		1980	South	660	East	Lea
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

	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. Signature Nolan von Roeder Printed Name Engineer Title November 11, 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. October 21, 2005 Date Surveyed Signature & Seal of Professional Surveyor W.O. Num. 2005-1005 Certificate No. MACON, McDONALD 12185

NOTE:
1) Plane Coordinates shown hereon are Transverse Mercator Grid and Conform to the "New Mexico Coordinate System", New Mexico East Zone, North American Datum of 1983. Distances shown hereon are mean horizontal surface values.



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

Bougainvillea 33 State No. 1

Section 33

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
BOUGAINVILLEA 33 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 + 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

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

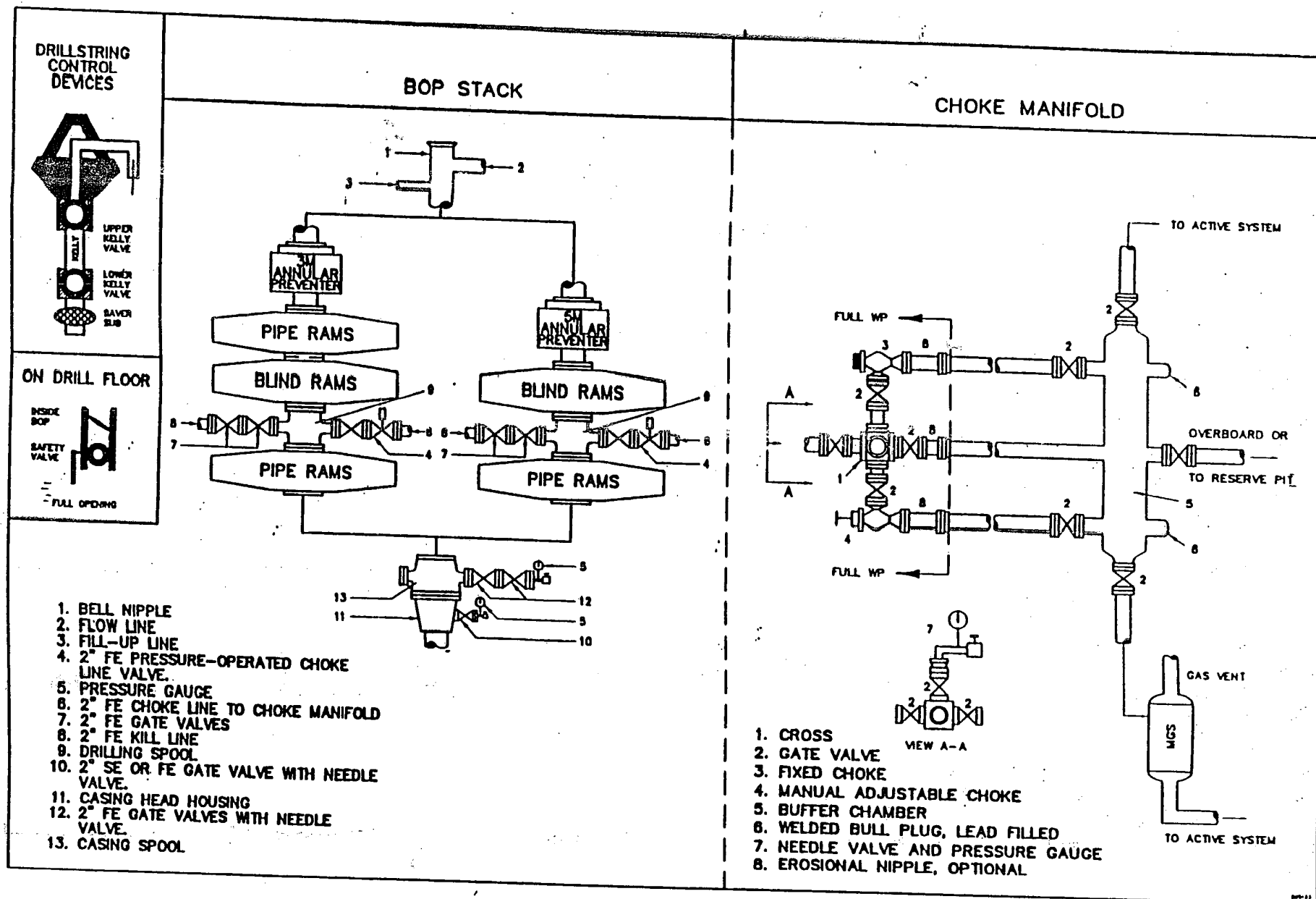
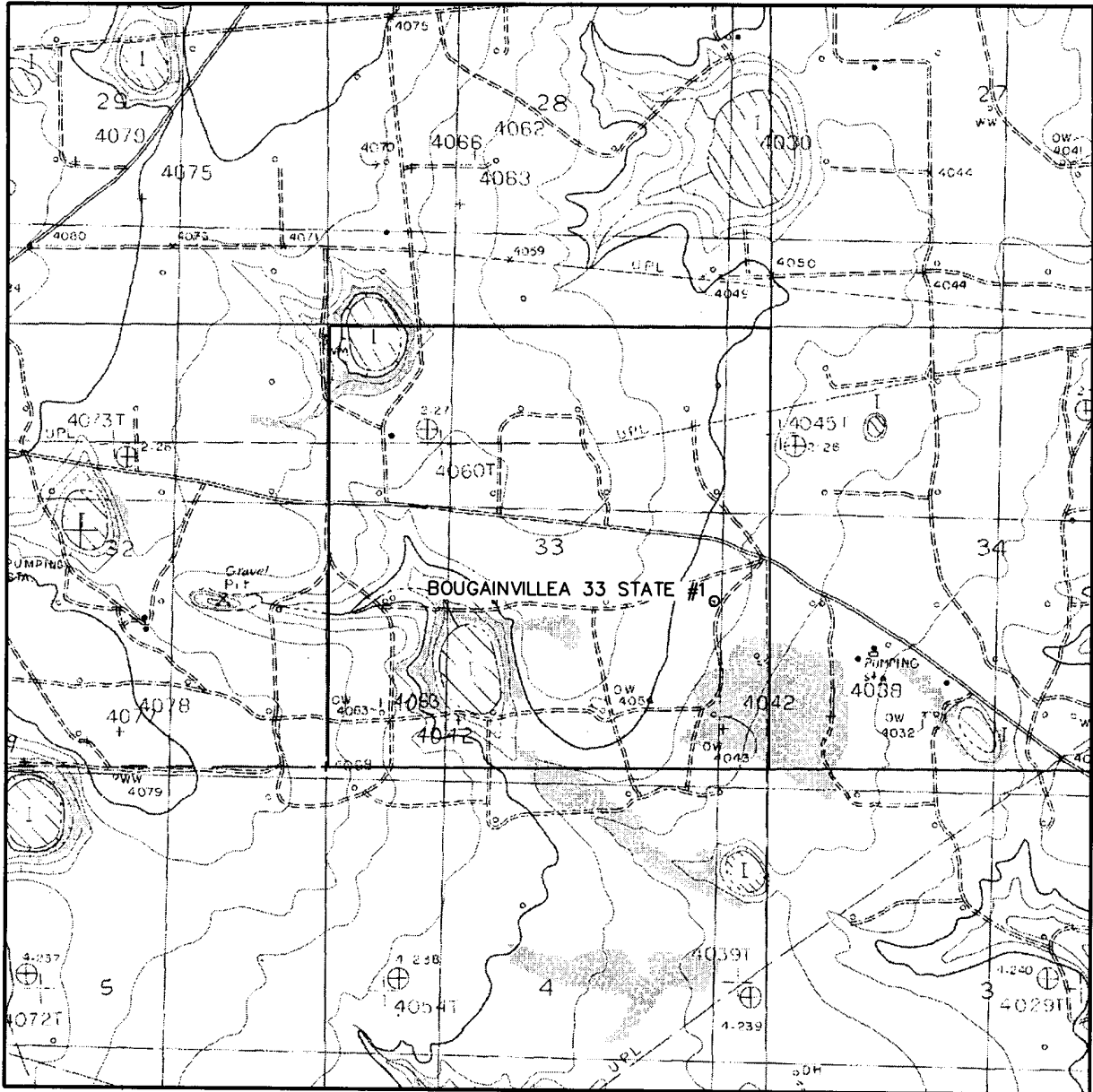


Fig. 2.5. Class 3 BOP and Choke Manifold.

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
BUCKEYE - 5'

SEC. 33 TWP. 17-S RGE. 34-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 2010' FSL & 660' FEL

ELEVATION 4047'

OPERATOR PATTERSON PETROLEUM, LP

LEASE BOUGAINVILLEA 33 STATE

U.S.G.S. TOPOGRAPHIC MAP

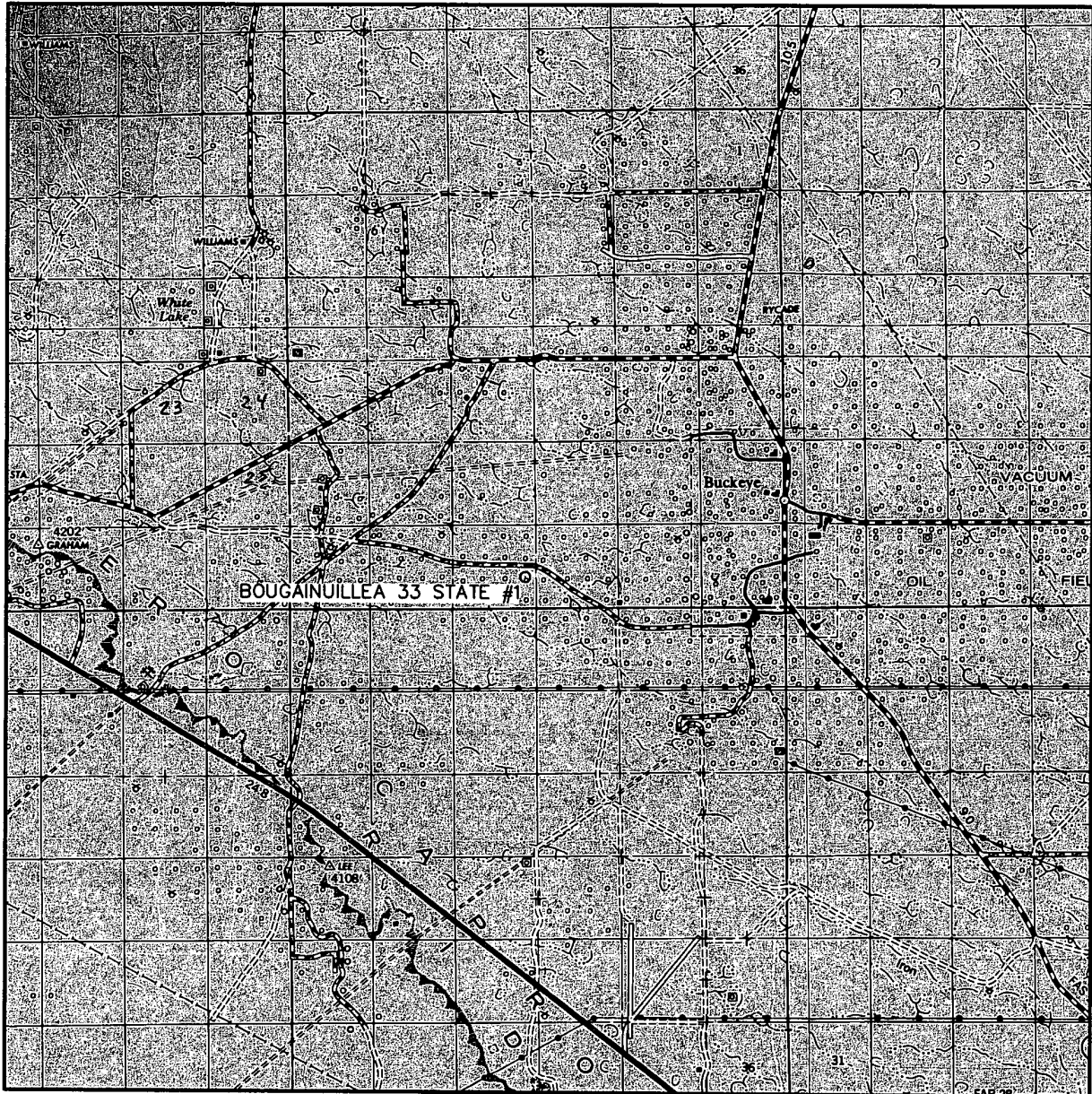
BUCKEYE, N.M.



**WEST
COMPANY**
of Midland, Inc.

110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 - (432) 687-0868 FAX

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 33 TWP. 17-S RGE. 34-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 2010' FSL & 660' FEL

ELEVATION 4047'

OPERATOR PATTERSON PETROLEUM, LP

LEASE BOUGAINVILLEA 33 STATE



WEST
COMPANY
of Midland, Inc.

110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 - (432) 687-0868 FAX

**New Mexico Office of the State Engineer
Well Reports and Downloads**

Township: Range: Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ☐ Non-Domestic ☐ Domestic
☒ All

Well / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

WATERS Menu

Help

WATER COLUMN REPORT 11/09/2005

		(quarters are 1=NW 2=NE 3=SW 4=SE)											
		(quarters are biggest to smallest)											
Well Number		Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column
<u>L 07196</u>		18S	34E	03	2	4	2				100	60	
<u>L 03367 APPRO</u>		18S	34E	03	4	1	1				150	100	
<u>L 03367</u>		18S	34E	03	4	1	1				150	100	
<u>L 07018</u>		18S	34E	05							236	105	1

Record Count: 4

**New Mexico Office of the State Engineer
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Township: Range: Sections:

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WATERS Menu

Help

WATER COLUMN REPORT 11/09/2005

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

Well Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water Column
L 01696 S	17S	34E	27	2								
L 01696 S 2	17S	34E	27	2	1	3						
L 02724	17S	34E	27	3	2	2						
L 07227	17S	34E	27	3	4					125		
L 07226	17S	34E	27	4	4					130		
L 02724 S-2	17S	34E	27	4	4	4						
L 03398	17S	34E	28	2	2	3				242	125	1
L 01650	17S	34E	34									
L 03958	17S	34E	34	3	2	3						
L 03068	17S	34E	34	4								
L 05883 EXPL	17S	34E	34	4	3					244	93	41
L 02724 S-3	17S	34E	34	4	3							
L 08100	17S	34E	34	4	4	3				135	80	

Record Count: 13



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

November 11, 2005

New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division
1625 N. French Drive
Hobbs, NM 88240

PATTERSON PETROLEUM LP
BOUGAINVILLEA 33 STATE NO. 1
LEA COUNTY, NM

Attached for your review is an APD with attachments for our Bougainvillea 33 State No. 1 well. The desired surface location of 1980' FSL & 660' FEL was previously drilled as the Chevron Texaco West Vacuum Unit No. 25 (API #30-025-02189). This wellbore has been plugged and abandoned and will not be utilized. Also, other surface lines would not allow us to build our location further south. The Bougainvillea 33 State No. 1 will be directionally drilled as necessary to achieve the proposed bottomhole location for the proposed pools.

If you have any questions or comments, please contact us at 325-573-1938.

NOLAN VON ROEDER, ENGINEER

