

## N.M. Oil Cons. Div-Dist. 2

1301 W. Grand Avenue

Artesia, NM 88210

Form 3160-3  
(July 1992)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTSUBMIT IN TRIPLICATE  
the production on  
reverse side)FORM APPROVED  
OMB NO. 1004-0136  
Expires: February 28, 1995

## APPLICATION FOR PERMIT TO DRILL OR DEEPEN

## 1a. TYPE OF WORK

DRILL ☒DEEPEN ☐

## 5. LEASE DESIGNATION AND SERIAL NO.

NMNM109422

## 6. IF INDIAN, ALLOTTEE OR TRIBE NAME

## 7. UNIT AGREEMENT NAME

## 8. FARM OR LEASE NAME, WELL NO.

Buffalo Federal #1

## 9. API WELL NO.

30-005-63589

## 10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R. M., OR BLK.  
AND SURVEY OR AREA

Sec. 11, T15S, R27E

## 12. COUNTY OR PARISH

Chaves

## 13. STATE

New Mexico

## b. TYPE OF WELL

OIL  
WELL ☐GAS  
WELL ☒

OTHER

SINGLE  
ZONE ☒MULTIPLE  
ZONE ☐

## 2. NAME OF OPERATOR

Rubicon Oil &amp; Gas, LLC

## 3. ADDRESS AND TELEPHONE NO.

400 W. Illinois - Suite 1130 - Midland, Texas 79701

## 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

Unit H, 1980' FNL &amp; 660' FEL

At proposed prod. zone

Same

## 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

9 Miles Southeast of Hagermon, New Mexico

## 16. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drilg. unit line, if any)

Lease 660'

## 18. NO. OF ACRES IN LEASE

640

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

160 acres

18. DISTANCE FROM PROPOSED LOCATION\*  
TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

## 19. PROPOSED DEPTH

8800'

## 20. ROTARY OR CABLE TOOLS

Rotary

## 21. ELEVATIONS (Show whether DF, RT, GR, etc.)

GR -3542'

## 22. APPROX. DATE WORK WILL START\*

August 1, 2003

## 23.

## PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8", H-40	48#	450'	500 sx "C" - Circulated
11"	8-5/8", J-55	24#	1750'	700 sx Circulated
7-7/8"	5-1/2", K-55	17# LT&C	0' - 1000'	1100 sx - ETOC - 1500'
	5-1/2", K-55	15.5# LT&C	1000' - 6900'	
	5-1/2", K-55	17# - LT&C	6900' - 8800'	

## MUD PROGRAM\*

INTERVAL	MUD WEIGHT	VISCOSITY	WL CONTROL	COMMENT
0-450'	8.6 - 9.0#	32-34	N/C	Fresh water Gel & Lime
450-1750'	9.0 - 9.2#	29-30	N/C	Cut Brine
1750-7350'	8.4 - 9.2#	28-29	N/C	Fresh Water & Cut Brine
7350-8150'	9.2 - 9.5#	30-33	<20	Polymer - Starch
8150-8800'	9.2 - 9.8#	34-35	10-15	Salt Gel - Starch

## BOP PROGRAM\*

A 13-5/8" - 3000# double ram BOP will be installed on the 13-3/8" casinghead and tested to 1000# with the rig pump. An 11" - 5000# double ram BOP and an 11" - 3000# annular BOP will be installed on the 8-5/8" casing spool. The spool, double ram BOP and choke manifold will be tested to 5000# by a third party, certified, tester before drilling out the 8-5/8" shoe. The annular BOP will be tested to 3000# at this same time.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

## 24.

SIGNED

TITLE

Agent

DATE June 2, 2003

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

/S/LARRY D. BRAY

Assistant Field Manager,  
Lands And Minerals

APPROVED FOR 1 YEAR

JUL 24 2003

APPROVED BY

TITLE

DATE

\*See Instructions On Reverse Side

## PROPOSED DRILLING PROGRAM

Rubicon Oil & Gas, LLC  
Buffalo Federal #1  
1980' FNL & 660' FEL of Section 11, T15S, R27E  
Chaves County, New Mexico  
Lease No. NMNM-109422

In conjunction with Form 3160-3, Application for Permit to Drill this well Rubicon Oil & Gas, LLC submits the following items of pertinent information in accordance with BLM requirements.

1. Estimated top of important geologic markers:

Queen – 830'	Wolfcamp – 6300'
San Andres – 1510'	Cisco – 7090'
Glorietta – 2600'	Canyon – 7420'
Tubb – 4300'	Strawn – 8000'
Abo – 5080'	Atoka – 8250'
2. Estimated depths at which the top and bottom of anticipated water, oil, gas or other minerals are expected to be encountered.

Ground Water, Fresh – 50' 400'	Surface Casing
Oil W/Gas- Queen – 830' – 930'	Intermediate Casing
San Andres – 1550' – 2400'	Production Casing
Abo – 5100' – 5400'	Production Casing
Gas with condensate –	
Strawn – 8000' – 8200'	Production Casing
Atoka – 8250' – 8600'	Production Casing
3. Pressure Control Equipment – See Form 3160-3 and Exhibit “B” and Exhibit “C”
4. Proposed Casing Program – See Form 3160-3
5. Proposed Mud Program – See Form 3160-3.  
Based on records from nearby wells, no abnormal pressures are anticipated to total depth. However, before drilling below the intermediate casing (at 1750') we will install a pit volume totalizer and a Flo-Sho as safety devices.
6. Testing, Logging and Coring Program:  
Mud Log – Mud logging is planned from 450' to total depth.  
DST'S – One (1) DST planned in the Atoka.  
Electric Logs – One run at total depth. Dual-Laterolog – Micro Laterolog; Gamma Ray with Compensated Density and Compensated Neutron.

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Proposed Drilling Program Buffalo Federal #1

7. Anticipated BHP & BHT, etc:

No abnormal pressures or temperatures are expected in this well bore. Near-by wells were drilled with mud weights of 9.3 – 9.5 lbs./gal. We expect a BHP of about 3500# at 8600' in the Atoka. BHT should be about 160° F. Small amounts of H<sub>2</sub>S may accompany any water flows from the Permian zones. We plan to install H<sub>2</sub>S monitoring equipment (minimal package) from the intermediate casing point to total depth.

8. Other Information:

- a. Anticipated start of drilling operations – August 1, 2003
- b. Anticipated length of drilling operations – Twenty (20) days
- c. Anticipated length of completion and testing operations – Twenty (20) days

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., Aztec, 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		Pool Code	Pool Name WILDCAT	
Property Code	Property Name BUFFALO FEDERAL		Well Number 1	
OGRID No. 194266	Operator Name RUBICON OIL & GAS LLC		Elevation 3542'	

Surface Location

UL or lot No. H	Section 11	Township 15-S	Range 27-E	Lot Idn	Feet from the 1980'	North/South line NORTH	Feet from the 660'	East/West line EAST	County CHAVES
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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
Dedicated Acres 160		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

	<b>OPERATOR CERTIFICATION</b>  I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.  Signature Darol K. Ramey Printed Name Agent Title June 3, 2003 Date	
	<b>SURVEYOR CERTIFICATION</b>  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.  MARCH 31, 2003 Date Surveyed Signature & Seal of Professional Surveyor A.W.B. NEW MEXICO Gary B. Eidson 4/2/03 03.11.0354	
	Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12641	

EXHIBIT "A"

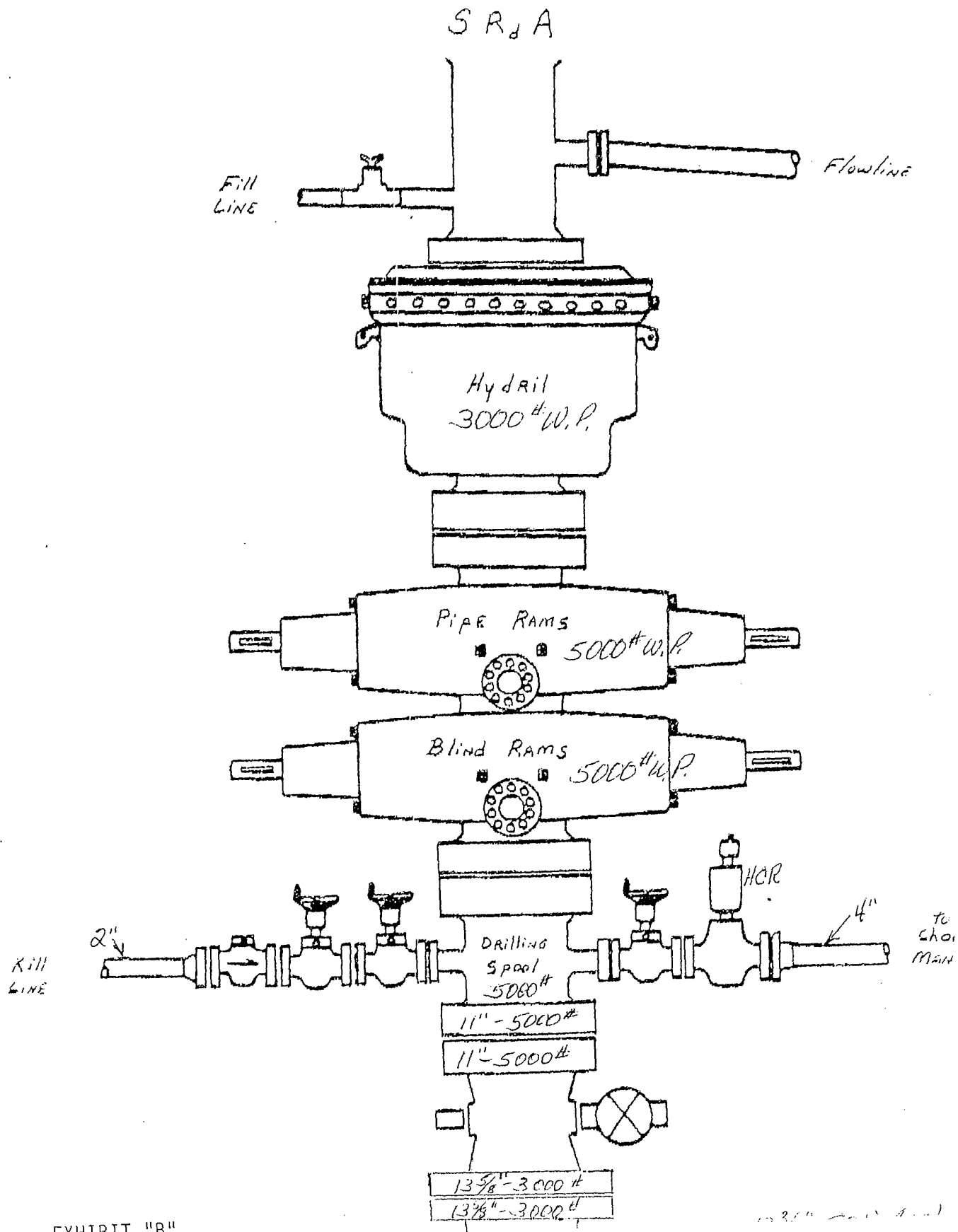


EXHIBIT "B"

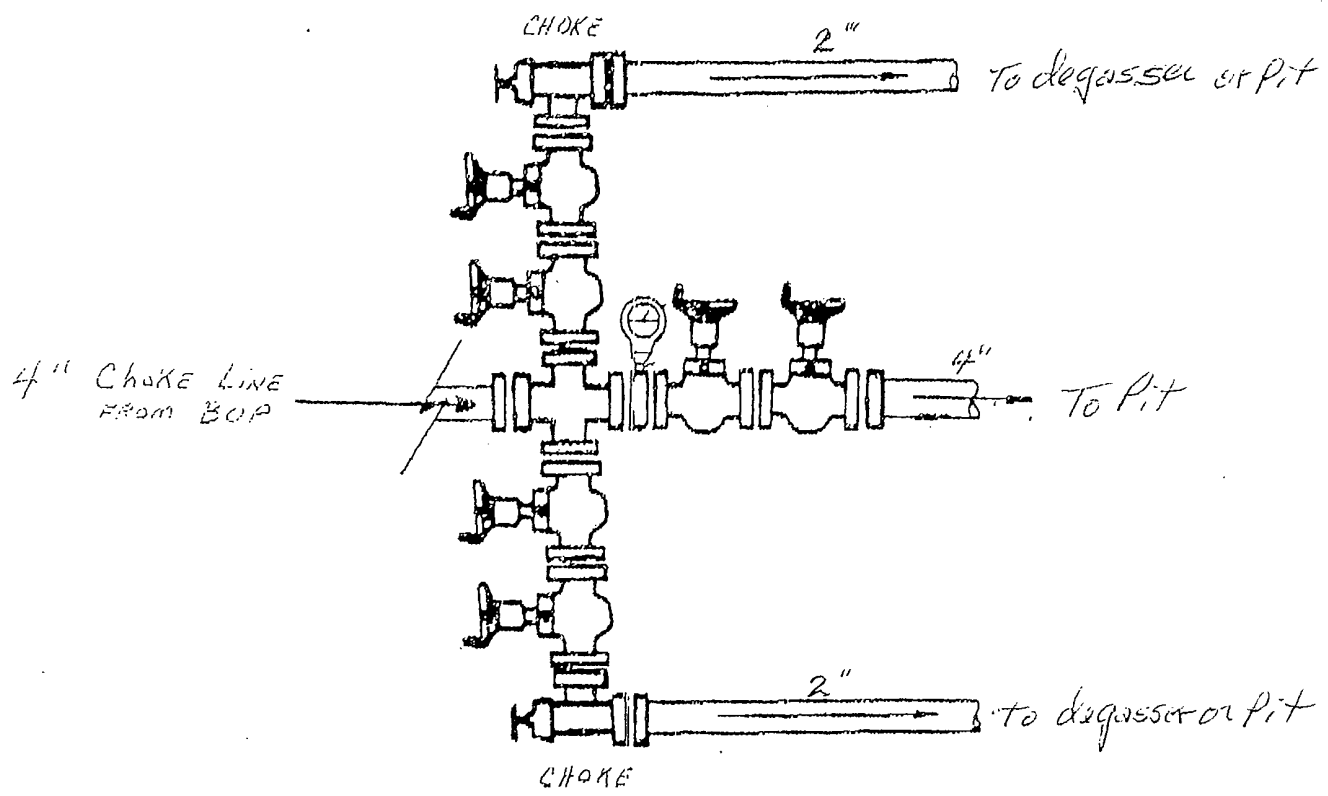


EXHIBIT "C"  
PDP

## MULTI- POINT SURFACE USE AND OPERATIONS PLAN

RUBICON OIL & GAS, LLC  
Buffalo Federal #1  
1980' FNL & 660' FEL of Section 11, T15S, R27E  
Chaves County, New Mexico  
Lease No. NMNM-109422

This plan is submitted with Form 3160-3, Application for Permit to Drill the subject well. The purpose of this plan is to describe the location of the well, the proposed construction and operations plan for the drilling and the rehabilitation of the surface environmental effects associated with this operation.

1. EXISTING ROADS AND WELL SITE LOCATION:
  - A. Exhibit "A" is a portion of the Derrick Draw, New Mexico, USGS Topographic map showing the existing roads and the new proposed road to permit access to this location. This well-site is about 9 miles Southeast of Hagerman, New Mexico.
  - B. Directions to location: From NM249, about 7 miles East of Hagerman, New Mexico, turn South on caliche lease road. Follow main lease road South for 3.5± miles. Turn left or Southeast with main lease road and go 0.75± miles. Turn due South on caliche lease road for 0.4± miles. Turn West on new proposed road and follow to location (0.6± miles).
2. ACCESS ROADS TO BE CONSTRUCTED AND RE-CONSTRUCTED:
  - A. Existing caliche lease roads provide access to the producing well in the NW-1/4 of Section 12, T15S, R27E. These existing roads are in good condition and will only require repair of any damage during the drilling and completion operations.
  - B. At a point about 900' South of the North line of Section 12 we plan to construct a new lease road in a Westerly direction, following a ranchers trail, for about 2000' West and then South about 900' to the location. (See Exhibit "B") This new road will be constructed with a 14' driving surface and 6" compacted caliche.
  - C. Drainage Design: This area is relative flat. No drainage problem is anticipated.
  - D. Cuts and Fills: None
  - E. Culverts: None
  - F. Turn Outs: A turnout will be provided at the corner North of the well-site.
  - G. Gates and cattle guards: None required.
  - H. Off lease right-of-way needed:
    1. Existing roads – Sections 23, 26 and 35 in T14S, R27E and Section 12, T15S, R27E, Chaves County, New Mexico. The length of these existing roads is about 17,150'.
    2. New construction roads: Section 12, T15S, R27E, Chaves County, New Mexico. The length of the new construction road is about 1550'.

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Multi-Point Surface Use and Operations Plan  
Rubicon Buffalo Federal #1

3. LOCATION OF EXISTING AND/OR PROPOSED PRODUCTION FACILITIES:
  - A. There are no oil or gas production facilities on the lease at this time.
  - B. If the proposed project results in commercial production the necessary production equipment will be installed on the drilling pad of this well.
4. LOCATION AND TYPE OF WATER SUPPLY:

It is planned to drill this well with a combination of fresh and brine water. The fresh and brine water will be obtained from commercial sources and transported to the location by tank-truck. Existing lease roads and new lease roads will be utilized.
5. METHODS FOR HANDLING WASTE DISPOSAL:
  - A. Drill cuttings will be disposed of in the reserve pit
  - B. .Drilling fluids will be contained in the reserve pit and allowed to evaporate until the pit is dry.
  - C. Pits will be fenced with normal fencing materials to prevent live stock from entering the pit area.
  - D. Any oil produced during testing operations will be stored in tanks until sold.
  - E. Water produced during testing operations will be stored in tanks until hauled to an approved disposal.
  - F. Current laws and regulations regarding disposal of human waste will be complied with.
  - G. Trash, waste paper, garbage and junk will be contained in trash bins to prevent scattering by wind and animals and will be removed for deposit in an approved sanitary land fill within thirty (30) days after finishing drilling and/or completion operations.
6. ANCILLARY FACILITIES:

None required.
7. WELL SITE LAYOUT:
  - A. Exhibit "C" shows the relative location and dimensions of the proposed drilling pad, reserve pit and major rig components.
  - B. Drilling pad size: 250' x 185'.
  - C. Reserve pit size: 150' x 125' with double horseshoe.
  - D. Reserve pit lining: 9 mil plastic.
  - E. Cut and fill: Minor leveling of surface, 2' cut on the Southeast and 2' fill on the Northwest.
  - F. The surface of drilling pad will be topped with 6" compacted caliche.



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Multi-Point Surface Use and Operations Plans  
Rubicon Buffalo Federal #1

8. PLANS FOR RECLAMATION OF THE SURFACE:

- A. After completion of drilling and/or completion operations, all equipment and other materials, not needed for operations, will be removed. Pits will be filled and the location cleaned of all trash and junk to leave the well site in an aesthetically pleasing condition.
- B. Any pits containing fluid will be fenced until they are filled.
- C. If this well is non-productive, or when production ceases, surface rehabilitation and re-vegetation requirements of the BLM will be complied with as expeditiously as possible.

9. SURFACE OWNERSHIP:

The surface ownership of the proposed well site and the proposed new road and existing road in Sections 11 and 12, T15S, R27E is held by the BLM.

10. OTHER INFORMATION:

- A. Topography: The proposed location and access road are in a relatively flat area of rocky soil. The slope of the surface is about 100' per mile to the Northwest. This is a karst area.
- B. Flora and Fauna: The vegetation in the area is a poor cover of miscellaneous native grasses along with mesquite, yucca, cacti and miscellaneous weeds and wild flowers. The animal life consists of rabbits, fox, coyotes, snakes, lizards, dove, quail, native birds and other wild life typical of this semi-arid desert land.
- C. Ponds and streams: None in the area.
- D. Residence and other structures: None in the area.
- E. Land use: Cattle grazing.
- F. Archaeological: An archaeological survey has been ordered.

11. OPERATOR'S REPRESENTATIVE AND CERTIFICATION:

- A. The field representative responsible for assuring compliance with the approved surface use and operations plan is as follows:

Darol K. Ramey  
Ramey Petroleum Consultants, Inc.  
303 W. Wall Avenue – Suite 1005  
Midland, Texas 79701  
Telephone – 432/687-1192  
Cellular Telephone – 432/553-0531  
Fax – 432/685-4065

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Multi-Point Surface Use and Operations Plan

Rubicon Buffalo Federal #1

B. CERTIFICATION:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Rubicon Oil & Gas, LLC and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the Provisions of 18 U.S.C. 1001 for the filing of a false statement.

DATE: June 3, 2003

  
Darol K. Ramey  
Agent for Rubicon Oil & Gas, LLC

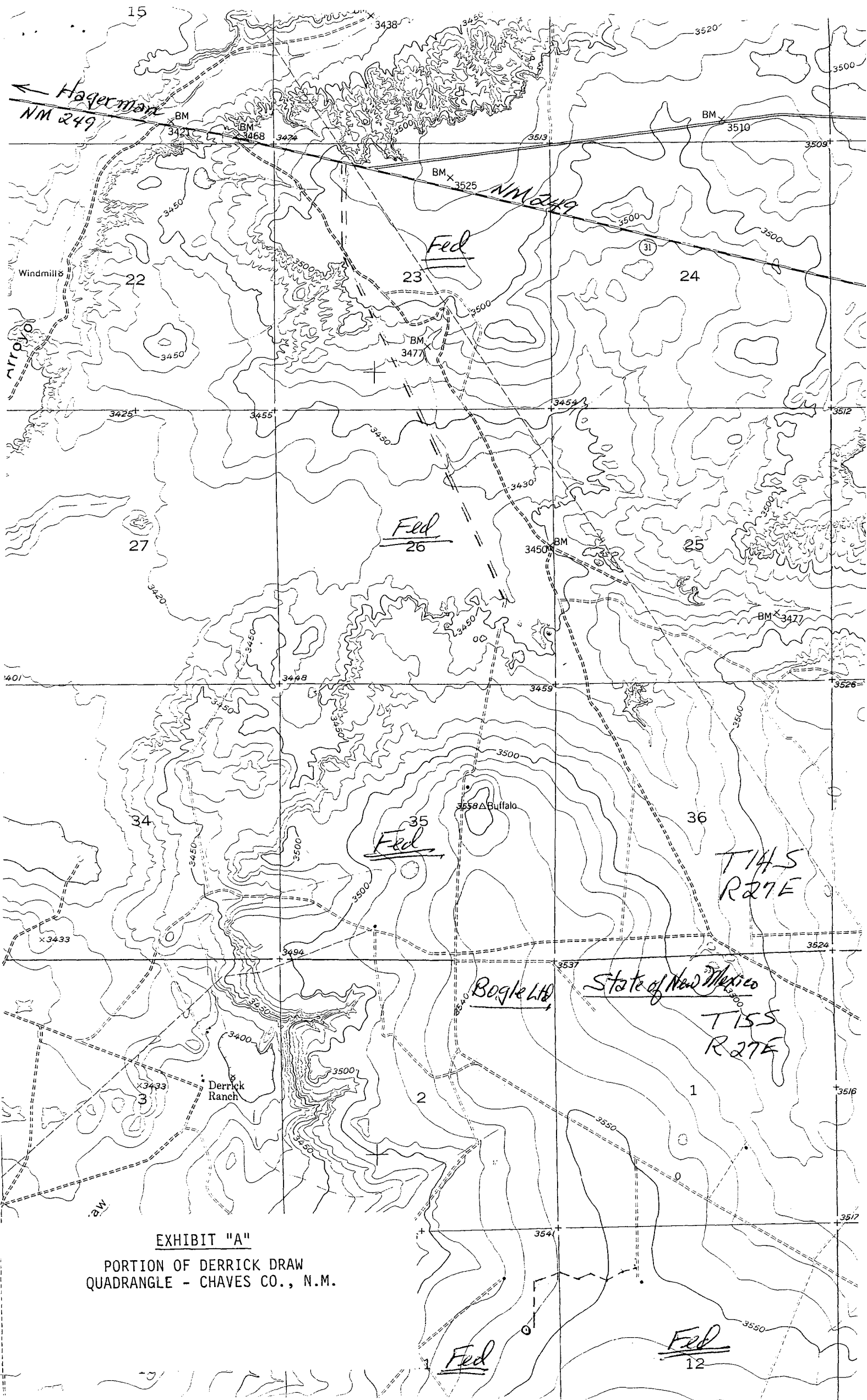
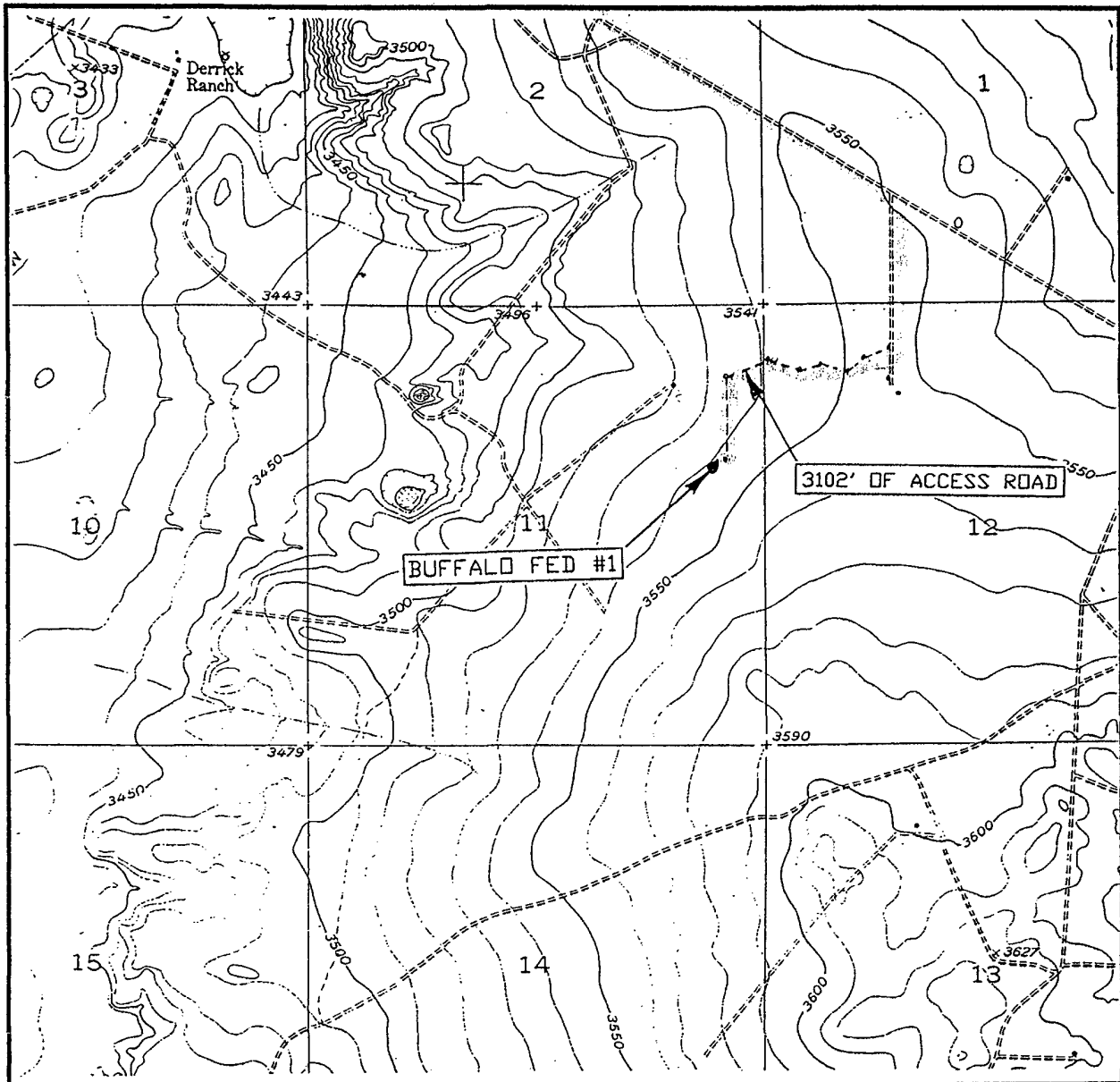


EXHIBIT "A"  
PORTION OF DERRICK DRAW  
QUADRANGLE - CHAVES CO., N.M.

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'  
DERRICK DRAW, N.M.

SEC. 11 TWP. 15-S RGE. 27-E

SURVEY N.M.P.M.

COUNTY CHAVES

DESCRIPTION 1980' FNL & 660' FEL

ELEVATION 3542'

OPERATOR RUBICON OIL AND GAS, LLC

LEASE BUFFALO FEDERAL

U.S.G.S. TOPOGRAPHIC MAP

DERRICK DRAW, N.M.

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

EXHIBIT "B"  
M-PSU & OP

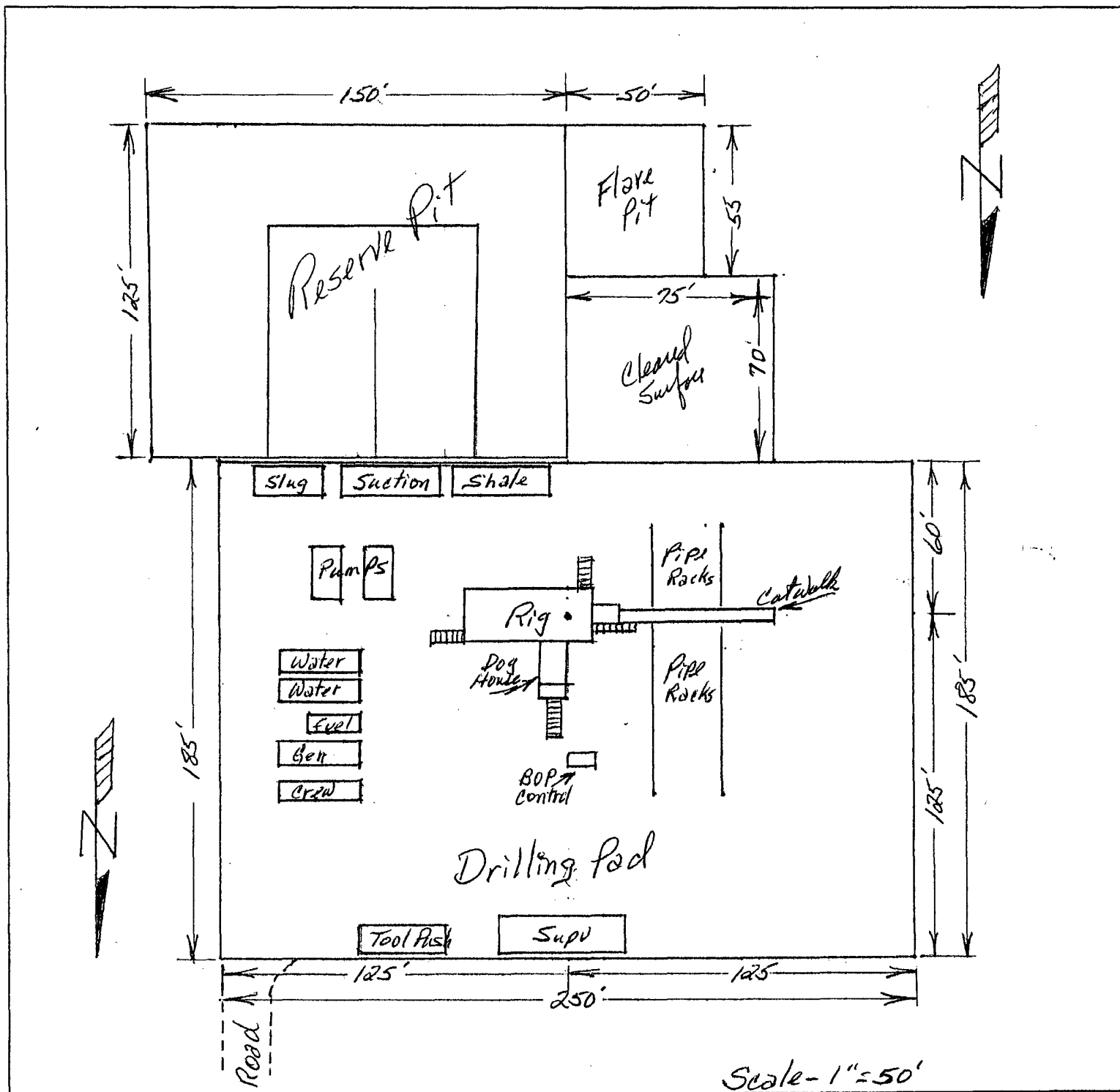


EXHIBIT "C"  
M-PSU & OP.