

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 MANAGEMENT

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

OTHER

SINGLE ZONE ☒

2. NAME OF OPERATOR

Rubicon Oil & Gas, LLC

3. ADDRESS AND TELEPHONE NO.

400 West Illinois - Suite 1130, Midland, Texas

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

At surface

Lot 16, 3300' FSL & 660' FEL

At proposed prod. zone

Same

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

10 Miles Northeast of Artesia, New Mexico

10. DISTANCE FROM PROPOSED

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drig. unit line, if any)

Lease - 660'

Unit - 660'

18. DISTANCE FROM PROPOSED LOCATION

TO NEAREST WELL, DRILLING, COMPLETED,

OR APPLIED FOR, ON THIS LEASE, FT.

4776'

16. NO. OF ACRES IN LEASE

886 acres ±

19. PROPOSED DEPTH

8800'

17. NO. OF ACRES ASSIGNED

TO THIS WELL

320

20. ROTARY OR CABLE TOOLS

Rotary

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

GR - 3533'

ROSWELL CONTROLLED WATER BASIN

22. APPROX. DATE WORK WILL START

August 15, 2003

PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | GRADE SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|-----------------|----------------------|-----------------|---------------|------------------------|
| 17-1/2" WITNESS | 13-3/8", H-40 | 48# | 800' WITNESS | 800 sx "C" - Circulate |
| 11" | 8-5/8", J-55 | 24# | 1700' | 700 sx - Circulate |
| 7-7/8" | 5-1/2", J-55 | 17# | 0' - 1000' | |
| | 5-1/2", J-55 | 15.5# | 1000' - 6800' | 1100 sx - ETOC - 1500' |
| | 5-1/2", J-55 | 17# | 6800' - 8800' | |

MUD PROGRAM

| INTERVAL | MUD WEIGHT | VISCOSITY | WL CONTROL | REMARKS |
|--------------|------------|-----------|------------|-----------------------------|
| 0 - 800' | 8.6 - 9.0 | 32 - 34 | N/C | Fresh Water, Gel, Lime |
| 800 - 1700' | 9.0 - 9.2 | 29 - 30 | N/C | Cut Brine |
| 1700 - 7500' | 8.4 - 9.2 | 28 - 30 | N/C | Fresh Water, Cut Brine |
| 7500 - 8300' | 9.2 - 9.5 | 30 - 33 | <20 cc | Cut Brine, Starch, Polymer |
| 8300 - 8800' | 9.2 - 9.8 | 34 - 45 | 10 cc | Cut Brine, 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" - 3000# double ram BOP and an 11" - 3000# annular BOP will be installed on the 8-5/8" casing spool. The spool, double ram BOP, annular BOP and Choke Manifold will be tested to 3000# by a third party certified tester before drilling out the 8-5/8" cement and shoe.

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 depth. Give any other pertinent information.

23.

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

SIGNED

David K. Ramsey

DATE 6-25-03

(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/ Joe G. Lara

ACTING
FIELD MANAGER

30 JUL 2003

APPROVED BY

TITLE

DATE

*See Instructions on Reverse Side

APPROVAL FOR 1 YEAR

PROPOSED DRILLING PROGRAM

RUBICON OIL & GAS, LLC
DIAMOND FEDERAL #1
3300' FSL & 660' FEL (Center of Lot 16), Section 3, T16S, R27E
Eddy County, New Mexico
Lease No. NMNM-109423

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 | 810' | Abo | 5000' |
| San Andres | 1510' | Wolfcamp | 6210' |
| Glorietta | 2900' | Strawn | 8000' |
| Tubb | 4260' | Atoka | 8420' |
2. Estimated depths at which the tops and bottom of anticipated water, oil, gas or other minerals are expected to be encountered and how protected:

| | |
|-----------------------------------|---------------------|
| Ground Water, Fresh – 50' – 400' | Surface Casing |
| Oil with Gas – Queen 810' – 910'± | Intermediate Casing |
| San Andres - 1510' – 2400'± | Production Casing |
| Glorietta - 2900' – 3100'± | Production Casing |
| Gas with Condensate – | |
| Abo - 5000' – 5300'± | Production Casing |
| Atoka - 8420' - 8650'± | 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 1700' we will install a pit volume totalizer and a Flo-Sho as safety devices.
6. Testing, Logging, Coring Programs:

Mud Logging – Mud logging is planned from 800' to total depth.
DST's – One (1) DST planned in the Atoka.
Coring – No cores are planned.
Open Hole Logs – One run at total depth. Dual – Laterolog – MicroLaterolog;
Gamma Ray with Compensated Density and Compensated Neutron.

PAGE TWO

Proposed Drilling Program
Rubicon Diamond Federal #1

7. Anticipated BHP and BHT, etc.:

No abnormal pressures or temperatures are anticipated in this well-bore. Near-by wells were drilled with mud weights of 9.0 to 9.3#/gal. We expect a BHP of about 3500# at 8500' in the Atoka. BHT should be about 160°F. Small amounts of H₂S may accompany any water flows from the Permian zones. We plan to install H₂S monitoring equipment (minimal package) from the intermediate casing point to total depth.

8. Other Information:

- (a) Anticipated start of drilling operations – August 15, 2003.
- (b) Anticipated length of drilling operations – 20 Days
- (c) Anticipated length of completion operations – 20 days.

DISTRICT I
P.O. Box 1900, Hobbs, NM 88241-1900

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 - Morrow |
| Property Code | Property Name DIAMOND FEDERAL | Well Number 1 |
| OGRID No. 194266 | Operator Name RUBICON OIL & GAS LLC | Elevation 3533' |

Surface Location

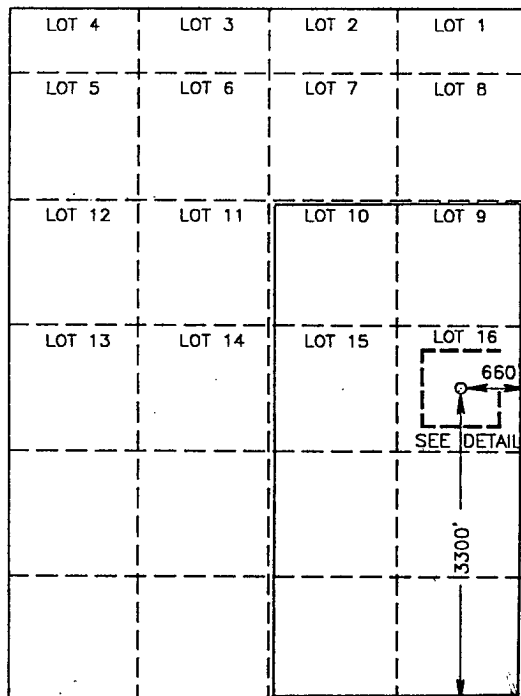
| | | | | | | | | | |
|---------------------|--------------|------------------|---------------|---------|-----------------------|---------------------------|-----------------------|------------------------|----------------|
| UL or lot No. 16 | Section 3 | Township 16-S | Range 27-E | Lot Idn | Feet from the 3300 | North/South line SOUTH | Feet from the 660' | East/West line EAST | County EDDY |
|---------------------|--------------|------------------|---------------|---------|-----------------------|---------------------------|-----------------------|------------------------|----------------|

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



OPERATOR CERTIFICATION

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

Darol K. Ramey
Signature
Darol K. Ramey
Printed Name
Agent

Title
June 26, 2003
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.

APRIL 1, 2003

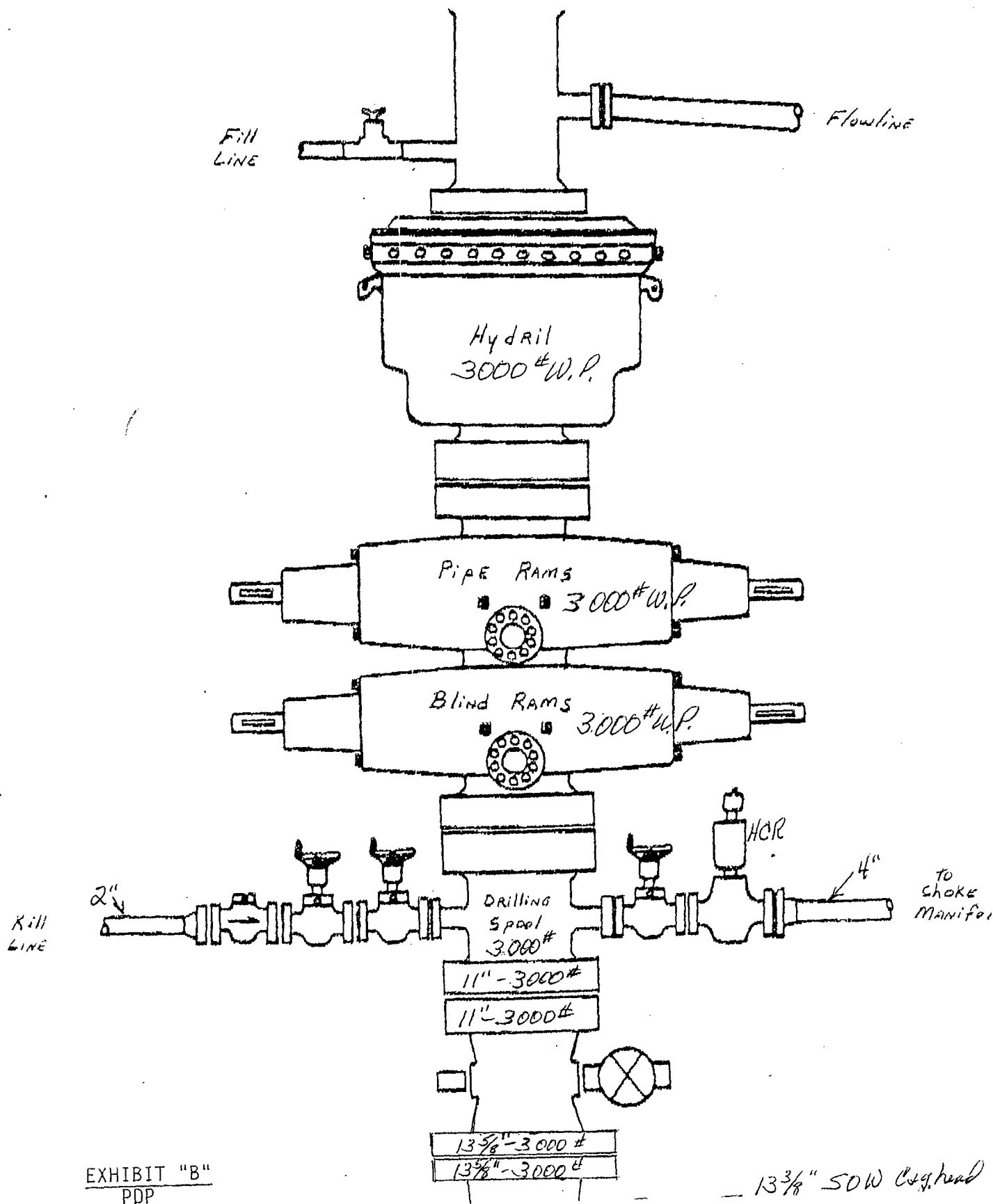
Date Surveyed A.W.B.

Signature & Seal of
Professional Surveyor

Ronald J. Edson
RONALD J. EDSON
04/02/03
03.11.0355

Certificate No. RONALD J. EDSON 3239
GARY EDSON 12641

EXHIBIT "A"
PDP



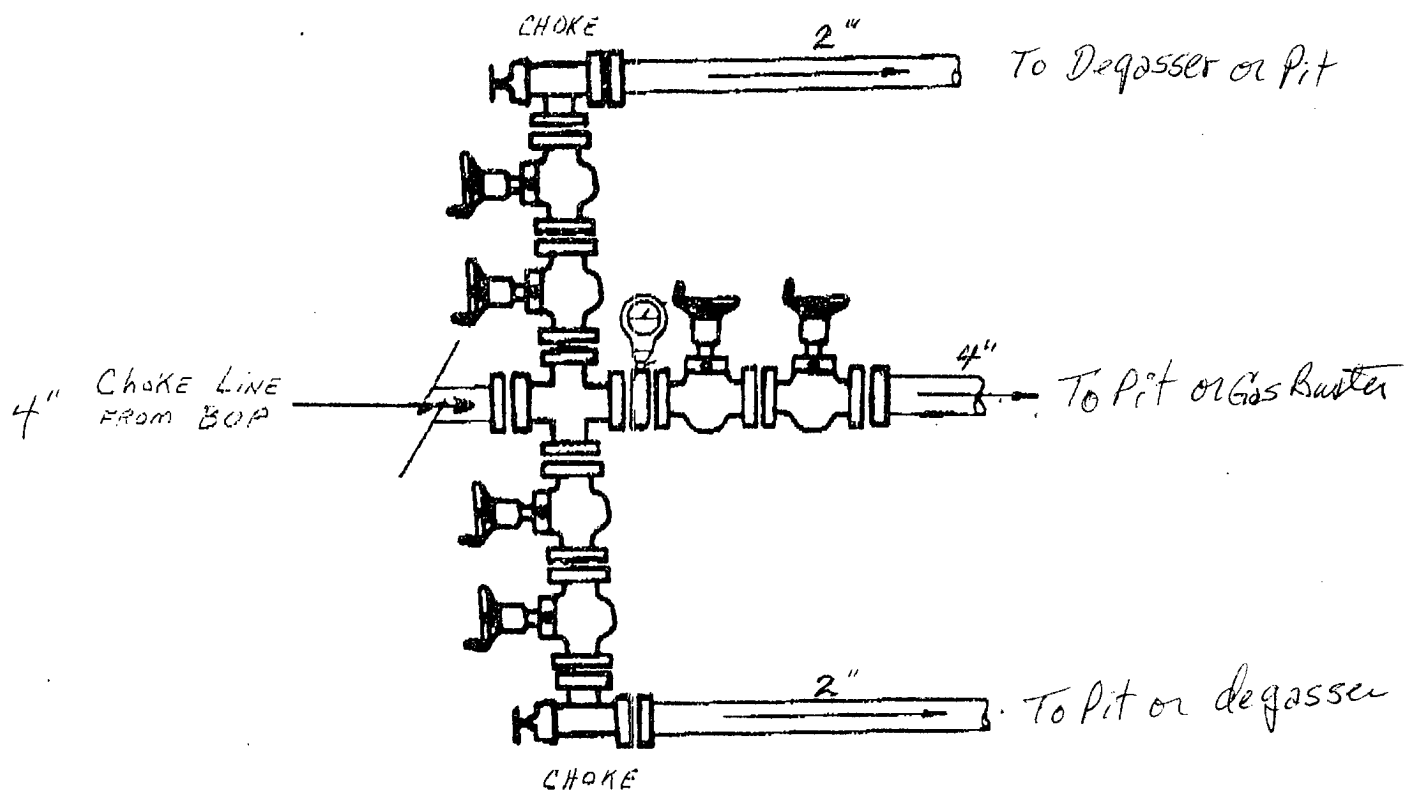
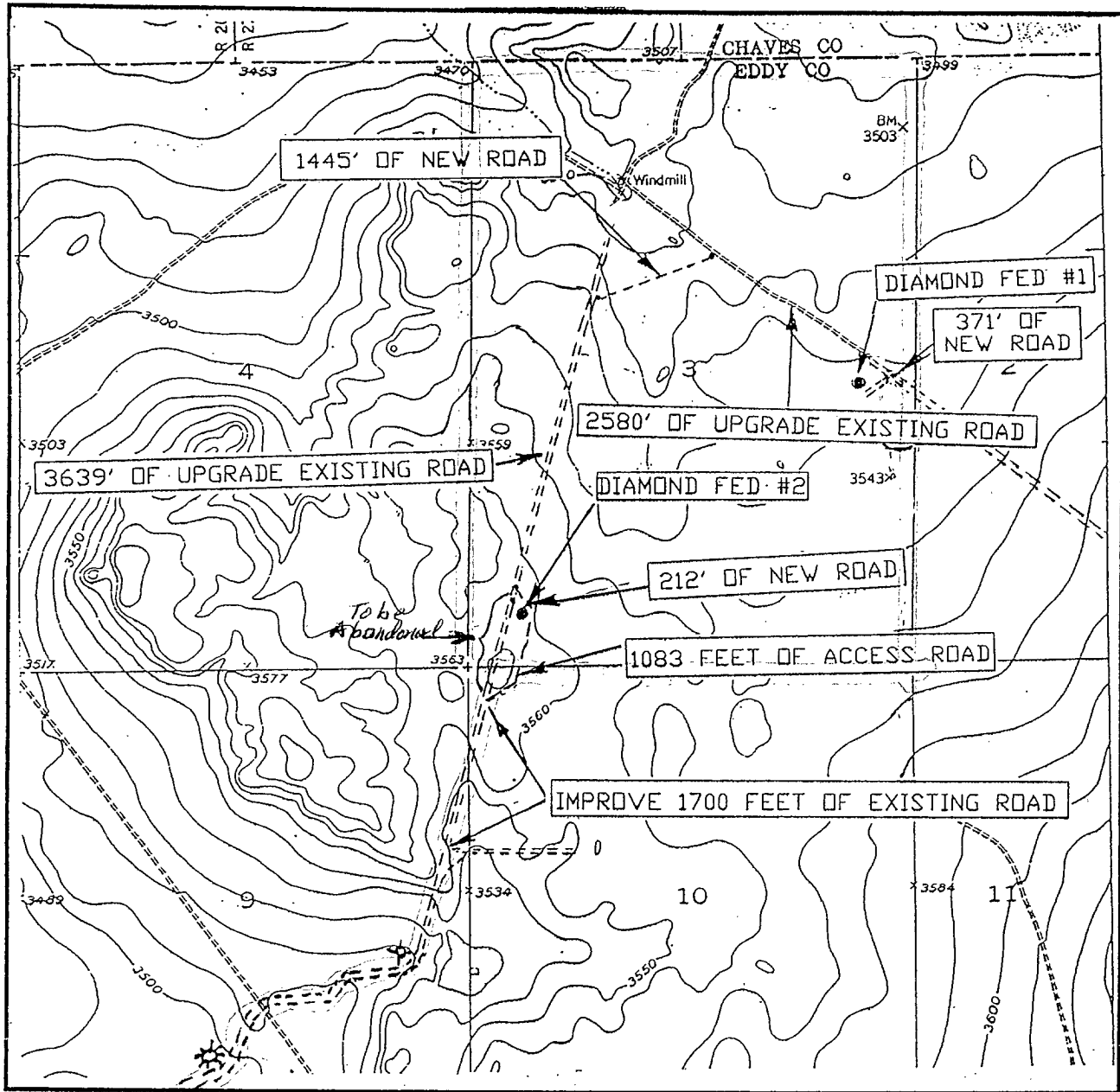


EXHIBIT "C"
PDP

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'
ARTESA NE, N.M.

SEC. 3 TWP. 16-S RGE. 27-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 3300' FSL & 660' FEL

ELEVATION 3533'

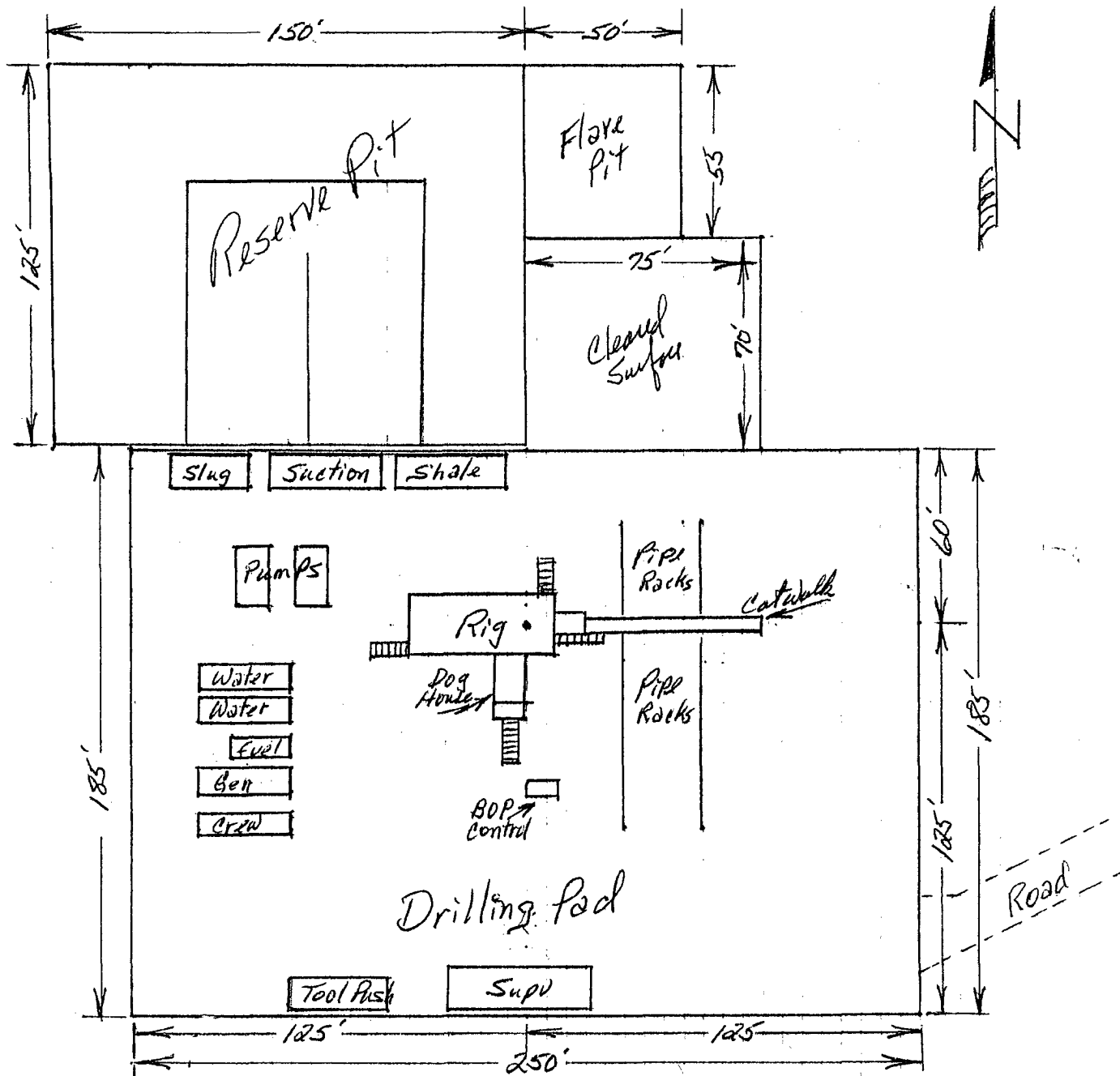
OPERATOR RUBICON OIL AND GAS, LLC

LEASE DIAMOND FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
ARTESA NE, N.M.

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

EXHIBIT "B"
M-PSU



Scale - 1" = 50'

DIAMOND FEDERAL #1

EXHIBIT "C"
M-PSU