

N.M. Oil Cons. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

Form 3160-3
(September 2001)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

NOV 30 2005

OCDA-ARTESIA

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. CC NM # 064637	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Rubicon Oil & Gas, LLC 194266		7. If Unit or CA Agreement, Name and No. 35269	
3a. Address 508 West Wall St STE 500 Midland, TX 79701		8. Lease Name and Well No. Henshaw 23 Federal #1	
3b. Phone No. (include area code) (432) 687-5100 96542		9. API Well No. 30-015-34448	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 660' FNL & 1980' FEL At proposed prod. zone Same		10. Field and Pool, or Exploratory Wildcat Ellenberger GRANITE	
11. Sec., T., R., M., or Blk. and Survey or Area Section 23, T-16-B, R-30-E		12. County or Parish Eddy	
13. State NM		14. Distance in miles and direction from nearest town or post office* 7 Miles NE of Loco Hills	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660' FNL & 1980' FEL		16. No. of Acres in lease 320	
17. Spacing Unit dedicated to this well 320		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1st Ellenberger Test	
19. Proposed Depth 12,800'		20. BLM/BIA Bond No. on file BLM Bond # 2922 Nationwide # B 326 446 43 STATE WIDE (EAD)	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL 3828'		22. Approximate date work will start* 11/20/2005	
23. Estimated duration 45 days		24. Attachments	

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature <i>Kay Maddox</i>	Name (Printed/Typed) Kay Maddox	Date 10/26/2005
Title Regulatory Agent (432) 688-8475		
Approved by (Signature) /s/ Joe G. Lara	Name (Printed/Typed) /s/ Joe G. Lara	Date NOV 28 2005
Title FIELD MANAGER Office CARLSBAD FIELD OFFICE		

Application approval does not warrant or certify the 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, are attached.

APPROVAL FOR 1 YEAR

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on reverse)

Roswell Controlled Water Basin

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

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

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-		² Pool Code		³ Pool Name Wildcat Ellenberger	
⁴ Property Code		⁵ Property Name Henshaw 23 Federal			⁶ Well Number 1
⁷ OGRID No. 194266		⁸ Operator Name RUBICON OIL & GAS, LLC			⁹ Elevation 3828'

¹⁰ Surface Location

UL or lot no. B	Section 23	Township 16-S	Range 30-E	Lot Idn	Feet from the 660	North/South line NORTH	Feet from the 1980	East/West line EAST	County EDDY
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¹¹ 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
¹² Dedicated Acres 320		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ 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.

16			660'			17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <u>Kay Maddox</u> Date: <u>11/1/2005</u> Printed Name: <u>Kay Maddox</u>
				1980'		
			Lease # 064637	Lease # 064637		
			Lease # 064637	Lease # 064637		
						18 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. Date of Survey Signature and Seal of Professional Surveyor: Certificate Number
		Lease # 064637	Lease # 064637			
		Lease # 064637A	Lease # 064637			

Nine Point Drilling Plan
(Supplement to BLM 3160-3)

Rubicon Oil & Gas, LLC

Henshaw 23 Federal #1

Section 23, T-16-S, R-30-E 660 FNL & 1980 FEL

Eddy Co., NM

1. Name and estimated tops of geologic horizons

Yates ~1450, Queen ~2250, Grayburg ~2650, San Andres ~3000

Tubb ~5750, Abo ~6450, Wolfcamp ~7700, Atoka ~10300

Miss Lime ~10800, Devonian ~11400, Ellenburger ~12600

2. Protection of possible useable water will be achieved by setting 13-3/8" surface casing @ 300' ~~400'~~ +/- and cementing it to surface. Isolation of the evaporate section through the San Andres Porosity will be achieved by setting 8-5/8" casing @ 3500' +/-, and cementing back to surface.

3. The well control equipment to be employed during the drilling of this well is illustrated on attached EXHIBIT A. This equipment includes a 11"- 2 ram BOP, annular BOP and choke manifold of comparable pressure rating. Equipment will be rated for 5000 PSI and will be tested to 80% of that pressure prior to drilling out of the 8-5/8" intermediate casing. Prior to drilling out of the 13-3/8" surface casing the same equipment and casing shall be tested to 1350 PSI or 80% of the burst rating of the casing utilizing the rig pumps. A hydraulic closing unit will be a part of this equipment and will be function tested daily.

The casing strings will consist of the following:

Surface 13-3/8" OD, 48 #/ft, H40, STC, new pipe @ 400' +/- in 17-1/2" hole.

Intermediate: 8-5/8" OD, 32 #/ft, J55, STC, new pipe @ 3500 +/- in 11" hole.

Production: 5-1/2" OD, 17.0#/ft, S-95/N-80, STC, new pipe @ 13,000' +/- in 7-7/8" hole

5. Cementing programs for the above casing strings are:

Surface @ 400': Lead Slurry: 450 sks Class C w/ 2% CaCl, yld ~ 1.32 cu ft/ sk

The above volume represents 100% excess over calculated hole volume, and will be adjusted to actual setting depth of casing. The slurries will be preceded by a fresh water spacer, and displaced with brine water.

Intermediate 1 @ 3500':

Lead Slurry: 750 sks Class C Lite w/ additives, yld ~ 2 cu ft/sk

Tail Slurry: 200 sks Class C w/ 1% CaCl, yld ~ 1.32 cu ft/sk

The above volume represents 100% excess over calculated hole volume - actual volumes will be adjusted to a fluid caliper run at TD of this hole section. The cement slurries will be preceded by 20 bbls cement wash for mud removal and displaced with fresh water.

LB sample 11/16/05
1210 PSI OR 70%
OF BURST RATING

INTERNAL YIELD
PRESSURE OF 13 3/8"
48# H-40 = 4.
1730 PSI

Production 1: 13,000' to 9000'

Lead Slurry: 600 sks Class H Poz with vendor recommended additives

Production 2: 9000 to ~3500'

Lead Slurry: 700 sks Class H Lite with vendor recommended additives

Tail Slurry: 100 sks Class H with vendor recommended additives.

A stage tool located approximately 9000' will be utilized to insure coverage of all prospective zones. Actual cement type and additives will be determined from hole conditions encountered and prospective zones determined from e-logs. Actual volumes pumped will be determined from an open hole caliper recorded over this interval.

6. It is anticipated that this well will be drilled to TD utilizing the fluids shown below:
- ^{300'}
~~0-400'~~: Gel/Lime "spud mud" 8.6-9.0 PPG. Utilize native solids to maintain sufficient viscosity to clean hole. Mix paper as required to control seepage loss.
- ^{300'}
~~400-3500'~~: Brine 9.9 - 10.2 PPG. Circulate thru reserve pit for gravitational solids removal. Add paper as required to control seepage loss while maintaining pH at 10.0 - 10.5 using Lime. Brine water will minimize hole wash out in the salt.
- 3500-10300'**: Fresh Water / Cut brine Fresh Water 8.4 - 9.2 Circulate thru reserve pit for gravitational solids removal utilizing sweeps for hole cleaning and LCM as needed for seepage.
- 10300-13000'**: Cut Brine 9.2 - 9.6 PPG Utilize polymers and starch to maintain fluid loss 15 to 8 cc range and sufficient mud weights to stabilize shales and minimize any hydrocarbon influx. Utilize sweeps for hole cleaning and LCM as needed for seepage.
7. Auxiliary equipment will include an upper kelly cock valve, safety valve to fit drill pipe and pressure gauges.
8. No drill stem testing or coring is planned for this wellbore. Mudlogging will commence at intermediate casing point under the current plan. A Schlumberger Platform Express Triple Combo electric log suite or equivalent will be run at TD.
9. The estimated BHP at TD is not expected to exceed 4000 psi, and a BHT of 175 F is anticipated. There is no H₂S present in the hydrocarbons being produced in this area. Should such unexpected circumstances be encountered the operator and drilling contractor are prepared to take necessary steps to ensure safety of all personnel, and environment. Lost circulation could occur but is not expected to be a serious problem in this area, and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid.

It is estimated that this well will be drilled and cased in 45 days. Drilling will commence as soon after approval is received and services can be contracted.

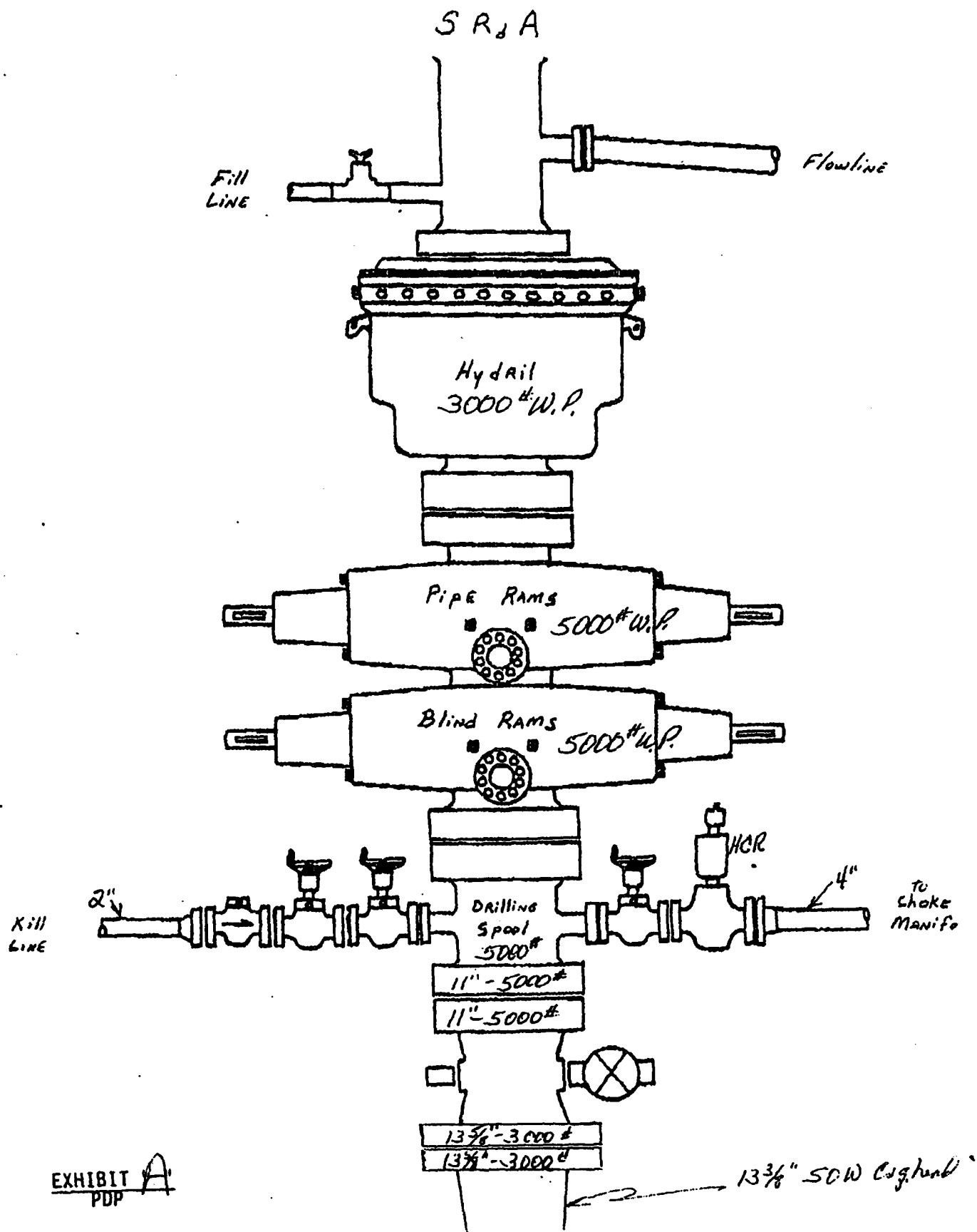
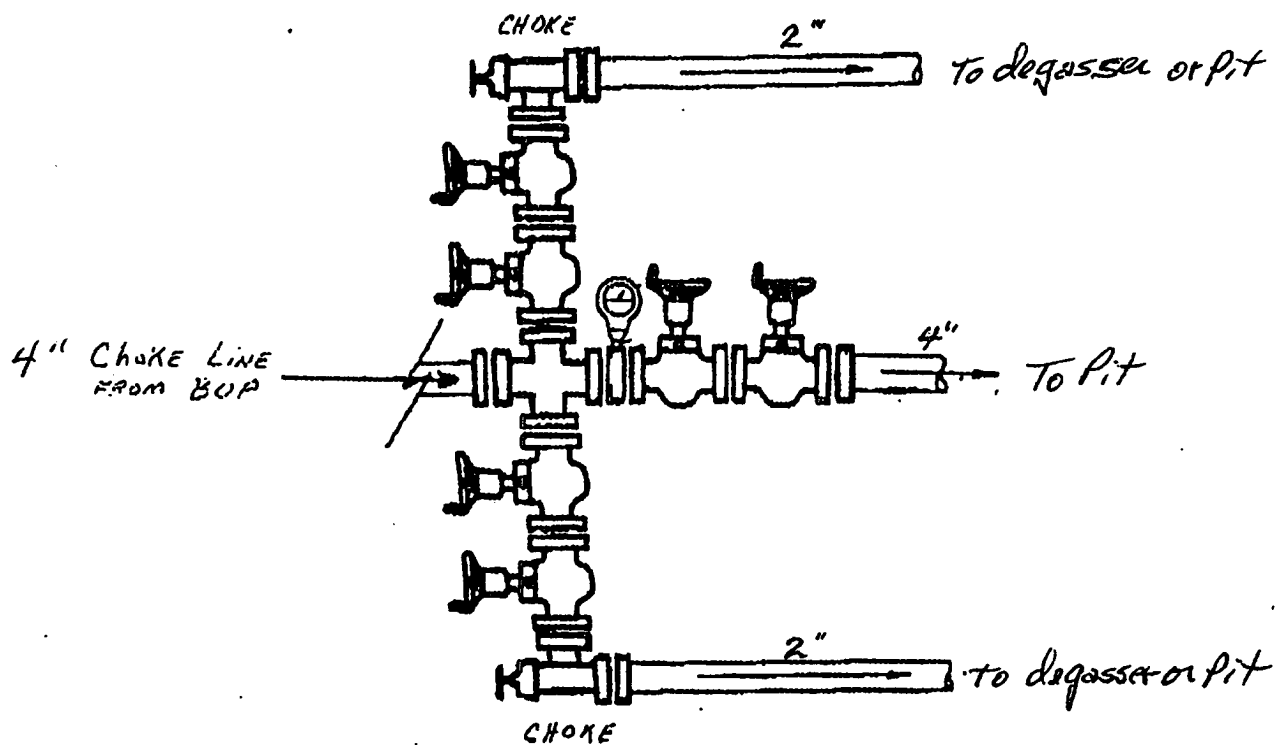


EXHIBIT A
PDP



5000 PSI w/P

EXHIBIT "A"
PDP

Thirteen Point Plan for Surface Use
(Additional data for form 3160-3)

Rubicon Oil & Gas, LLC

Henshaw 23 Federal #1

Section 23, T-16-S, R-30-E

660 FNL & 1980 FEL, Unit Ltr B

BLM Lease # NM 064637

Eddy County, NM

1. **EXISTING ROADS** - A "VICINITY MAP" and a "LOCATION VERIFICATION MAP" by John West Surveying are attached which show the location of existing roads and the area topography.
The road log to the location is as follows:
 - a) From intersection of Co Rd 216 and Co. Rd 253 (Shell Rd), proceed east for 4.5 miles.
 - b) Turn south on caliche road and proceed 366' to location
2. **PLANNED ACCESS ROAD** — Approximately 366' of new N-S access road will be built from existing Co Rd 253
3. **LOCATION OF EXISTING WELLS** - EXHIBIT B shows the location of other wells within a mile radius of the proposed location.
4. **LOCATION OF PROPOSED FACILITIES** – This production well will be tied new facilities built on location.
5. **LOCATION AND TYPE OF WATER SUPPLY** - All water (fresh or otherwise) needed for the drilling and completion of this well will be purchased from a commercial source and trucked to the location via the existing and proposed access road. No water source wells will be drilled, and no surface water will be utilized.
6. **SOURCE OF CONSTRUCTION MATERIALS** - Construction material (caliche) required for the preparation of the drill site is available from a local source. It is not anticipated that a significant amount of material will be required as the terrain is relatively flat. Transportation will be over the existing roads.
7. **METHODS FOR HANDLING WASTE DISPOSAL** -
 - Drill cuttings will be disposed into drilling pits after fluids have evaporated.
 - The drilling pits will be lined with a biodegradable plastic liner, and buried as per regulatory requirements. The pits will be located on the drill site.

- Receptacles for solid wastes (paper, plastic, etc) will be provided and equipped to prevent scattering by wind, animals, etc. This waste will be hauled to an approved landfill site.

- Any other waste generated by the drilling, completion, testing of this well will be removed from the site within 30 days of the completion of drilling or testing operations.

- A Porta-John will be provided for the crews. This will be properly maintained during the drilling operations and removed upon completion of the well.

8. **ANCILLARY FACILITIES** - The drilling, completion, and/or testing of this well will require no ancillary facilities.
9. **WELLSITE LAYOUT** - Attached, as EXHIBITS C & D are plats showing the anticipated orientation of the drilling rig and the pad.
10. **PLANS FOR SURFACE RESTORATION** - Reclamation of the surface location will be in accordance with the requirements set forth by the BLM. As stated earlier all waste generated by this operation will be disposed of in an approved manner, and the site restored as closely as possible to its pre-operation appearance. Due to the topography of the area no problems are anticipated in achieving this status and no erosion or other detrimental effects are expected as a result of this operation.
11. **OTHER INFORMATION** - The surface ownership of the drill site and the access routes are under the control/ownership of:

Bureau of Land Management

P. O. Box 1778

Carlsbad, New Mexico 88221-1778

505-234-5972

The BLM representative for this area is Barry Hunt who can be reached at the above number, or 505-361-4078.

The site was archaeologically surveyed in September, 2005. Danny Boone, the registered archeological surveyor, should forward a copy of that report to the BLM.

Bogle Farms leases the surface for grazing.

12. **OPERATORS REPRESENTATIVE** – Rubicon Oil & Gas, LLC is covered by Nationwide Bond No. B 326 446 43, BLM Bond # 2922, Oil & Gas State of NM Blanket Plugging Bond B 326 446 41. Rubicon is represented by:

Brett Smith

Rubicon Oil & Gas, LLC

(432) 687-5100

Drilling Engineer:

Mike Wallace

Cell (432) 528-5599

Office (432) 686-4327

13. OPERATORS CERTIFICATION

I hereby certify that I, Mike Wallace -Operations Engineer, have inspected the proposed drill site and access route and that I am familiar with the conditions that currently exist; that the statements made in the APD package are to the best of my knowledge true and correct; and that the work associated with operations herein will be performed by Rubicon Oil & Gas, LLC and it's contractors and subcontractors in conformity with the terms and conditions of this APD package. I also certify responsibility for the operations conducted on that portion of the leased lands associated with this application with bond coverage being provided under a BLM nationwide bond.

This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Name and title: Mike Wallace, Consulting Operations Engineer for Rubicon Oil & Gas, LLC

Signature:

Date:

M. Wallace
10/26/2005

SECTION 23, TOWNSHIP 16 SOUTH, RANGE 30 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO

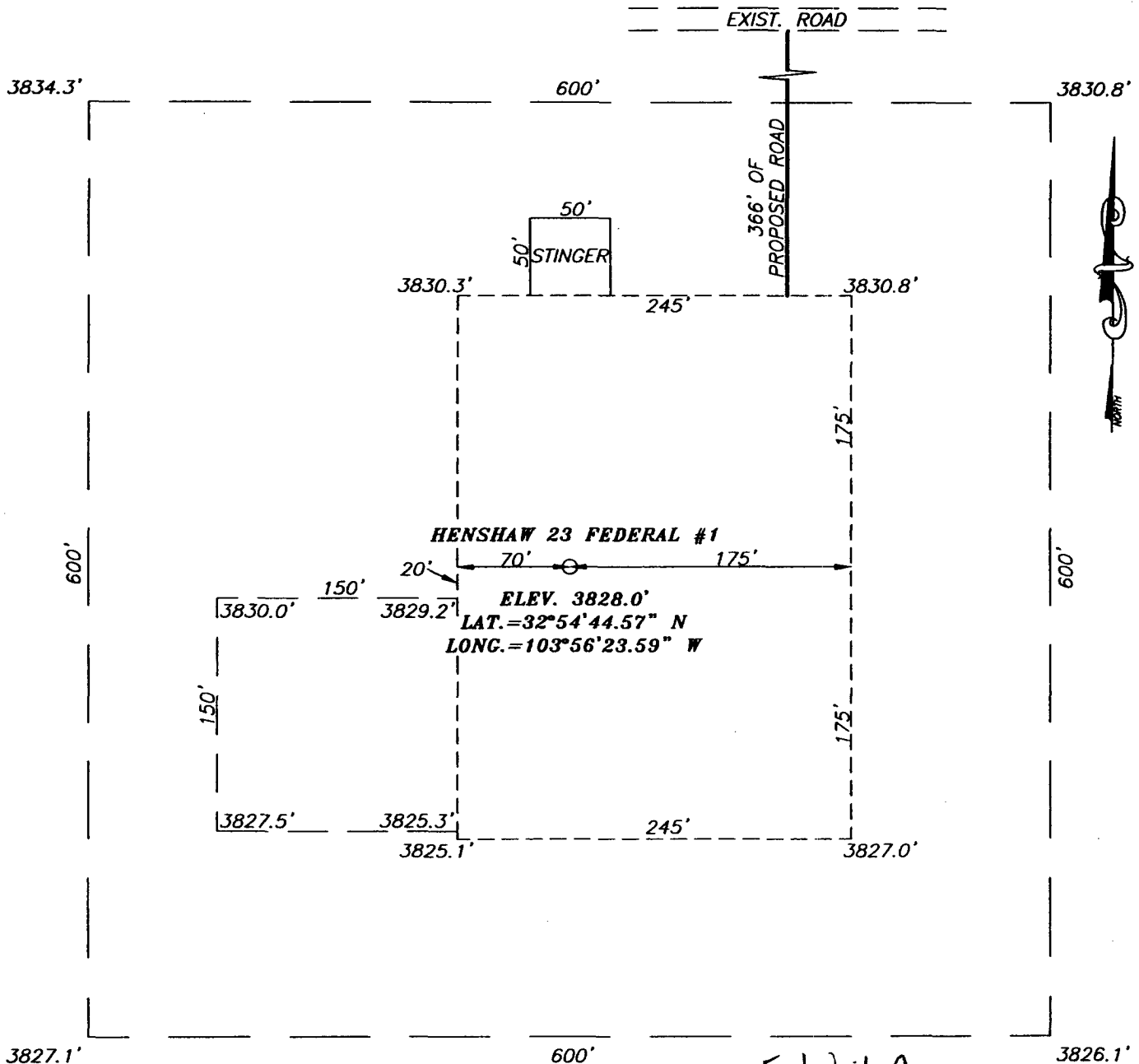
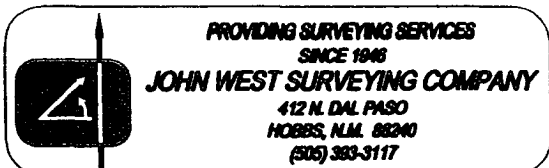
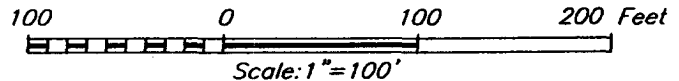


Exhibit C
DRILLING PAD LAYOUT

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #82 & CO. RD. #217 (HAGERMAN CUTOFF RD) GO NORTH ON CO. RD. #217 APPROX. 6.7 MILES. TURN RIGHT AND GO EAST ON CO. RD. #253 (SHELL RD.) APPROX. 2.7 MILES TO A PROPOSED ROAD SURVEY ON THE RIGHT. FOLLOW PROPOSED ROAD SURVEY APPROX. 366 FEET SOUTH TO THIS LOCATION.



RUBICON OIL AND GAS, LLC

HENSHAW 23 FEDERAL #1 WELL
 LOCATED 660 FEET FROM THE NORTH LINE
 AND 1980 FEET FROM THE EAST LINE OF SECTION 23,
 TOWNSHIP 16 SOUTH, RANGE 30 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO.

Survey Date: 9/6/05	Sheet 1 of 1 Sheets
W.O. Number: 05.11.1364	Dr By: LA
Date: 9/13/05	Disk: CD#4
05111364	Scale: 1"=100'

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: RUBICON OIL & GAS, LLC
Well Name & No. 1 - HENSHAW 23 FEDERAL
Location: 660' FNL & 1980' FEL - SEC 23 - T16S - R30E - EDDY COUNTY
Lease: LC-064637

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I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 (Daytime) or (505) 369-2814 (After hours) -for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:
- A. Spudding
- B. Cementing casing: 13-3/8 inch 8-5/8 inch 5-1/2 inch
- C. BOP tests
- 2 Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.
4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

II. CASING:

1. The 13-3/8 inch surface casing shall be set at 300 feet below usable water and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.
2. The minimum required fill of cement behind the 8-5/8 inch salt protection casing is circulate cement to the surface.
3. The minimum required fill of cement behind the 5-1/2 inch production casing is cement shall extend upward a minimum of 500 feet above the uppermost hydrocarbon bearing interval.

ORIG. SGD. LES BABYAK

III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13-3/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi to a depth of 3500+ feet and 5000 psi to a depth of 13,000+ feet.
3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
 - Prior to drilling out of the 13-3/8" surface casing the same equipment and casing shall be tested to 1210 psi or 70% of the burst rating of the casing utilizing the rig pumps is approved.
 - The tests shall be done by an independent service company.
 - The results of the test shall be reported to the appropriate BLM office.
 - Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
 - Testing must be done in a safe workman-like manner. Hard line connections shall be required.
 - BOPE must be tested prior to drilling into the Wolfcamp formation by an independent service company.

IV. DRILLING MUD:

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp Formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

1. Recording pit level indicator to indicate volume gains and losses
2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips
3. Flow-sensor on the flow line to warn of abnormal mud returns from the well