

st. 2

F-26

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

UN  
DEPARTMENT OF  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

# APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No.	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. Federal "00", Well No. 3	
2. Name of Operator Harvard Petroleum Corp. 10155		9. API Well No. 30-015-34599	
3a. Address P.O. Box 936 Roswell, NM 88202		10. Field and Pool, or Exploratory Wildcat Bone Spring 96403	
3b. Phone No. (include area code) 505/ 623-1581		11. Sec., T., R., M., or Blk. and Survey or Area Sec. 18-T21S-R27E	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1838' FNL & 2406' FEL At proposed prod. zone same		12. County or Parish Eddy	
14. Distance in miles and direction from nearest town or post office* 3 miles north of Carlsbad, NM		13. State NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 234'	16. No. of Acres in lease 320	17. Spacing Unit dedicated to this well 40	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1383'	19. Proposed Depth 5200'	20. BLM/BIA Bond No. on file NM-1109	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3226' GL	22. Approximate date work will start* April 11, 2005	23. Estimated duration 3 - 4 weeks	

## 24. Attachments

Carlsbad Controlled Water Basin

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>George R. Smith</i>	Name (Printed/Typed) George R. Smith	Date 3/22/05
Title Agent for: Harvard Petroleum Corp.		
Approved by (Signature) <i>/s/ Joe G. Lara</i>	Name (Printed/Typed) <i>/s/ Joe G. Lara</i>	Date FEB 01 2006
Title ACTING FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

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, 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)

Lease Responsibility Statement: Harvard Petroleum Corp. accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof.

*GRS*  
George R. Smith, agent

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

WITNESS: 8 1/8" CEMENT JOB

NSL  
02/11/04

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

District II  
811 South First, Artesia, NM 88210

District III  
1000 Rio Brazos Rd., Aztec NM 87410

District IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources

OIL CONSERVATION DIVISION

2040 South Pacheco

Santa Fe, N M 87505

Form C-102

Revised March 17, 1999

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name Wildcat Bone Spring.
Property Code	Property Name FEDERAL "OO"	Well Number 3
OGRID No. 10155	Operation Name HARVARD PETROLEUM	Elevation 3226

Surface Location

UL or Lot No. G	Section 18	Township 21-S	Range 27-E	Lot Idn.	Feet from the 1838	North/South line NORTH	Feet from the 2406	East/West line EAST	County EDDY
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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 4.0	Joint or Infill	Consolidation Code	Order No.
------------------------	-----------------	--------------------	-----------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTEREST HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<b>OPERATOR CERTIFICATION</b> I HEREBY CERTIFY THAT THE INFORMATION HEREIN IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.	
	Signature <i>George R. Smith</i>	
	Printed Name George R. Smith	
	Title Agent	
	Date March 22, 2005	
	<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 KNOWLEDGE AND BELIEF.	
	Date of Survey <i>MARCH 12, 2005</i>	
	Signature and Seal of Professional Surveyor	
	NM PLAT NO. 5412 Certificate Number	

State of New Mexico  
Energy Minerals and Natural Resources

Form C-144  
March 12, 2004

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For drilling and production facilities, submit to  
appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe  
office

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☐

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: Harvard Petroleum Corp. Telephone: (505) 623-1581 e-mail address: \_\_\_\_\_

Address: P.O. Box 316 Roswell, NM 88202

Facility or well name: Federal "00", Well No. 3 API #: \_\_\_\_\_ U/L or Qtr/Qtr SW4NE4 \_\_\_\_\_ Sec 18 \_\_\_\_\_ T 21S \_\_\_\_\_ R 27E \_\_\_\_\_

County: Eddy Latitude N 32°28'55.7" Longitude W 104°13'42.1" NAD: 1927 ☐ 1983X Surface Owner Federal ☐ State ☐ Private ☐ Indi  
☐

**Pit**

Type: DrillingX Production ☐ Disposal ☐

Workover ☐ Emergency ☐

LinedX Unlined ☐

Liner type: Synthetic ☐ Thickness 12 mil Clay ☐ Volume 10,000

+/-        bbl

**Below-grade tank**

Volume:        bbl Type of fluid: \_\_\_\_\_

Construction material: \_\_\_\_\_

Double-walled, with leak detection? Yes ☐ If not, explain why not: **RECEIVED**

**FEB 02 2006**

Depth to ground water (vertical distance from bottom of pit to seasonal high  
water elevation of ground water.)

Less than 50 feet

(20 points)

50 feet or more, but less than 100 feet

(10 points)

100 feet or more

(0 points)

Wellhead protection area: (Less than 200 feet from a private domestic  
water source, or less than 1000 feet from all other water sources.)

Yes

(20 points)

No

(0 points)

Distance to surface water: (horizontal distance to all wetlands, playas,  
irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet

(20 points)

200 feet or more, but less than 1000 feet

(10 points)

1000 feet or more

(0 points)

**Ranking Score (Total Points)**

**0**

**If this is a pit closure:** (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location:

onsite ☐ offsite ☐ If offsite, name of facility \_\_\_\_\_ (3) Attach a general description of remedial action taken including remediation start date and

end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and  
a diagram of sample locations and excavations.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has  
been/will be constructed or closed according to NMOCD guidelines X, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: March 22, 2005

Printed Name/Title Agent for Harvard Petroleum Corp.

Signature George R. Smith

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or  
otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or  
regulations.

Approved **FEB 02 2006**

Date: \_\_\_\_\_

Printed Name/Title \_\_\_\_\_

Signature [Signature]

## APPLICATION FOR DRILLING

### HARVARD PETROLEUM CORP.

Federal "00", Well No. 3  
1838' FNL & 2406' FEL, Sec. 18-T21S-R27E  
Lea County, New Mexico  
Lease No.: NM-0560291  
(Exploratory Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Harvard Petroleum Corp. submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Tansill	350'	Delaware	2450'
Yates	540'	Bone Spring	4860'
7 Rivers	700'	T.D.	5200'
Capitan Reef	830'		
Base of Reef	2210'		

3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water between 100' - 300'.

Oil: Possible in the Delaware 3500' - 3850' and the Bone Spring 4990 - 5020'.

Gas: None expected.

#### 4. Proposed Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	54.5#	J-55	ST&C	400'	Circ. 350 sx "C"
11"	8 5/8"	24.0#	J-55	ST&C	2,250'	Circ. 800 sx 35/65 Poz C + 150 sx C
7 7/8"	5 1/2"	15.5#	J-55	ST&C	5,200'	Circ. 600 sx 35/65 Poz C + 375 sx "C"

Note: Will consult with district BLM engineer if apparent severe lost circulation in reef section.

5. **Proposed Control Equipment:** A 11" 3000 psi wp Shaffer Type "F" BOP will be installed on the 13 3/8" casing and will be operated as a 2M system. Request that casing and BOP be tested with a rig pump before drilling out with 11". *- To 1000 psi*  
The 8 5/8" casing and BOPE will be tested to the maximum of 1500 psi as per Onshore Oil & Gas Order No. 2 before drilling out with the 7/8". See Exhibit "E".

6. MUD PROGRAM:	MUD WEIGHT	VIS.	W/L CONTROL
0' - 5200': Fresh Water w/gel:	8.4 - 8.8 ppg	29 - 31	No W/L control

7. **Auxiliary Equipment:** Blowout Preventer, Kelly cock, flow sensors and stabbing valve.

#### 8. Testing, Logging, and Coring Program:

Drill Stem Tests: None expected.

Logging: T.D. to 2250': GR-CNL-LDT-AIT

2250. to Surface: GR-CNL

Coring: Possible sidewall cores as dictated by logs.

**HARVARD PETROLEUM CORP.**

Federal "00", Well No. 3

Page 2

9. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight. Estimated evacuated BHP = 2288 psi and a surface pressure of 1144 psi with a temperature of 112°.
10. H<sub>2</sub>S: None expected. None in previous wells. The Mud Log Unit will be cautioned to use a gas trap to detect H<sub>2</sub>S and if any is detected the mud weight will be increased along with H<sub>2</sub>S inhibitors sufficient to control the gas.
11. Anticipated starting date: April 11, 2005.  
Anticipated completion of drilling operations: Approximately 25 days.

## **MULTI POINT SURFACE USE AND OPERATIONS PLAN**

### **HARVARD PETROLEUM CORP.**

Federal "00", Well No. 3  
1838' FNL & 2406' FEL, Sec. 18-T21S-T27E  
Eddy County, New Mexico  
Lease No.: NM-0560291  
(Exploratory Well)

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well; the proposed construction activities and operations plan to be followed in rehabilitating the surface and environmental effects associated with the operations.

#### **1. EXISTING ROADS:**

- A. Exhibit "A" is a portion of a BLM Topographic map showing the location of the proposed well as staked. The well site location is approximately 3 road miles north of Carlsbad, NM. Traveling north of Carlsbad on County Rd #206 there will be 3 miles of paved highway.
- B. Directions: Travel north from Carlsbad, NM on County Rd. # 206 for 3 miles to railroad crossing. Continue .2 mile east of railroad crossing to the start of the proposed access road on the northwest (left) side of the CR #206. The proposed access road will run approximately 120 feet to the northeast corner of the proposed well site.

#### **2. PLANNED ACCESS ROAD:**

- A. Length and Width: The proposed access road will be approximately 120 feet in length and 12 feet in width. The existing roads are color coded on Exhibit "A".
- B. Construction: The proposed access road will be constructed by grading and topping with compacted caliche. The surface will be properly drained.
- C. Turnouts: None required.
- D. Culverts: None.
- E. Cuts and Fills: None required.
- F. Gates, Cattle guards. None required.
- G. Off lease right of way: None required.

#### **3. LOCATION OF EXISTING WELLS:**

- A. Existing wells within a two-mile radius are shown on Exhibit "C".

#### **4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES;**

- A. Harvard Petroleum Corp. has no production facilities on the lease at this time.
- B. If the well proves to be commercial, the necessary production facilities and tank battery will be installed on the drilling pad. A 3" Poly SDR 11 gas flow line will be run on the surface for approximately 1,150 feet from the northwest corner of the pad to the meter loop on the P/A Federal "00", Well No. 2 well pad, 660' FNL & 1980' FWL Sec. 18.

**HARVARD PETROLEUM CORP.**

Federal "00", Well No. 3

Page 2

**5. LOCATIONS AND TYPE OF WATER SUPPLY:**

- A. It is planned to drill the proposed well with fresh water that will be obtained from private or commercial sources and will be transported over the existing and proposed access roads

**6. SOURCE OF CONSTRUCTION MATERIALS:**

- A. Caliche for surfacing the proposed access road and well site pad will be obtained from the location, if available, or from a State pit in NE4 SE4 Sec. 36-T20S-R27E. No surface materials will be disturbed except those necessary for actual grading and leveling of the drill site and access road.

**7. METHODS OF HANDLING WASTE DISPOSAL:**

- A. Drill cuttings will be disposed of in the reserve pits.
- B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.
- C. All pits will be fenced with normal fencing materials to prevent livestock from entering the area.
- D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or a separate disposal application will be submitted to the BLM for approval.
- E. Oil produced during operations will be stored in tanks until sold.
- F. Current laws and regulations pertaining to the 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 the wind and will be removed for deposit in an approved sanitary landfill within 30 days after finishing drilling and/or completion operations.

**8. ANCILLARY FACILITIES:**

- A. None required.

**9. WELL SITE LAYOUT:**

- A. Exhibit "D" shows the relative location and dimensions of the well pad, reserve pits, and major rig components. The pad and pit area has been staked and flagged, 500' X 500' and 200' X 420'.
- B. Mat Size: 100' X 100', plus 90' X 100' reserve pits on the west.
- C. Cut & Fill: The location will require a 1 - 2 foot cut on the southeast and fill to the northwest.
- D. The surface will be topped with compacted caliche and the reserve pits will be plastic lined.

**HARVARD PETROLEUM CORP.**

Federal "00", Well No. 3

Page 3

**10. PLANS FOR RESTORATION OF THE SURFACE:**

- A. After completion of drilling and/or completion operations, all equipment and other material not required 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 a condition as possible.
- B. Any unguarded pits containing fluids will be fenced until they are filled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management and Bureau of Reclamation will be complied with and will be accomplished as expeditiously as possible. All pits will be filled and leveled as soon as they are dry enough to be worked.

**11. OTHER INFORMATION:**

- A. Topography: The proposed well site and access road are located on the west side of Alcran Hills with a .7% slope to the northwest. The location has an elevation of 3226' GL.
- B. Soil: The topsoil at the well site is a brown to reddish-brown course textured loamy sand over indurated caliche. There should be caliche at a depth of 10 to 12 inches. The soil is part of the Tonuco loamy sand soil series.
- C. Flora and Fauna: The vegetation cover has a very sparse grass cover of three-awn, muhly and dropseed, with the primary cover being plants of mesquite, yucca, broomweed, creosote bush, cacti and miscellaneous weeds and wildflowers. The wildlife consists of rabbits, coyotes, antelope, rattlesnakes, lizards, dove, quail and other wildlife typical of the semi-arid desert land.
- D. Ponds and Streams: Lake Avalon Dam is approximately 1 mile to the northwest of the location
- E. Residences and Other Structures: None in the immediate vicinity, except oil well production facilities and the ATSF/Burl North. Railroad tracks 800 feet to the west of the location.
- F. Land Use: Cattle grazing.
- G. Surface Ownership: The proposed well site and access road is on Federal (Bureau of Reclamation) surface and minerals.
- H. There is evidence of archaeological, historical or cultural sites in the staked area. A viable location was finally found on the 80acres allowing a limited size location of 420' X 200' running 15°to the northeast. Archaeological Survey Consultants, P. O. Box D, Roswell, NM 88202, is conducting an archaeological survey and their report will be submitted to the appropriate government agencies.



**HARVARD PETROLEUM CORP.**

Federal "00", Well No. 3

Page 4

**12. OPERATOR'S REPRESENTATIVE:**

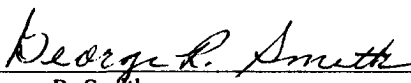
A. The field representative for assuring compliance with the approved use and operations plan is as follows:

Jeff Harvard  
HARVARD PETROLEUM CORP.  
P. O. Box 936  
Roswell, NM 88202  
Office Phone: (505) 623-1581  
Cell Phone: (505) 626-7938

**13. CERTIFICATION:**

I hereby certify that I have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist the statements made in the plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Harvard Petroleum Corp. and its contractors and subcontractors 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.

March 22, 2005

  
\_\_\_\_\_  
George R. Smith  
Agent for: Harvard Petroleum Corp.

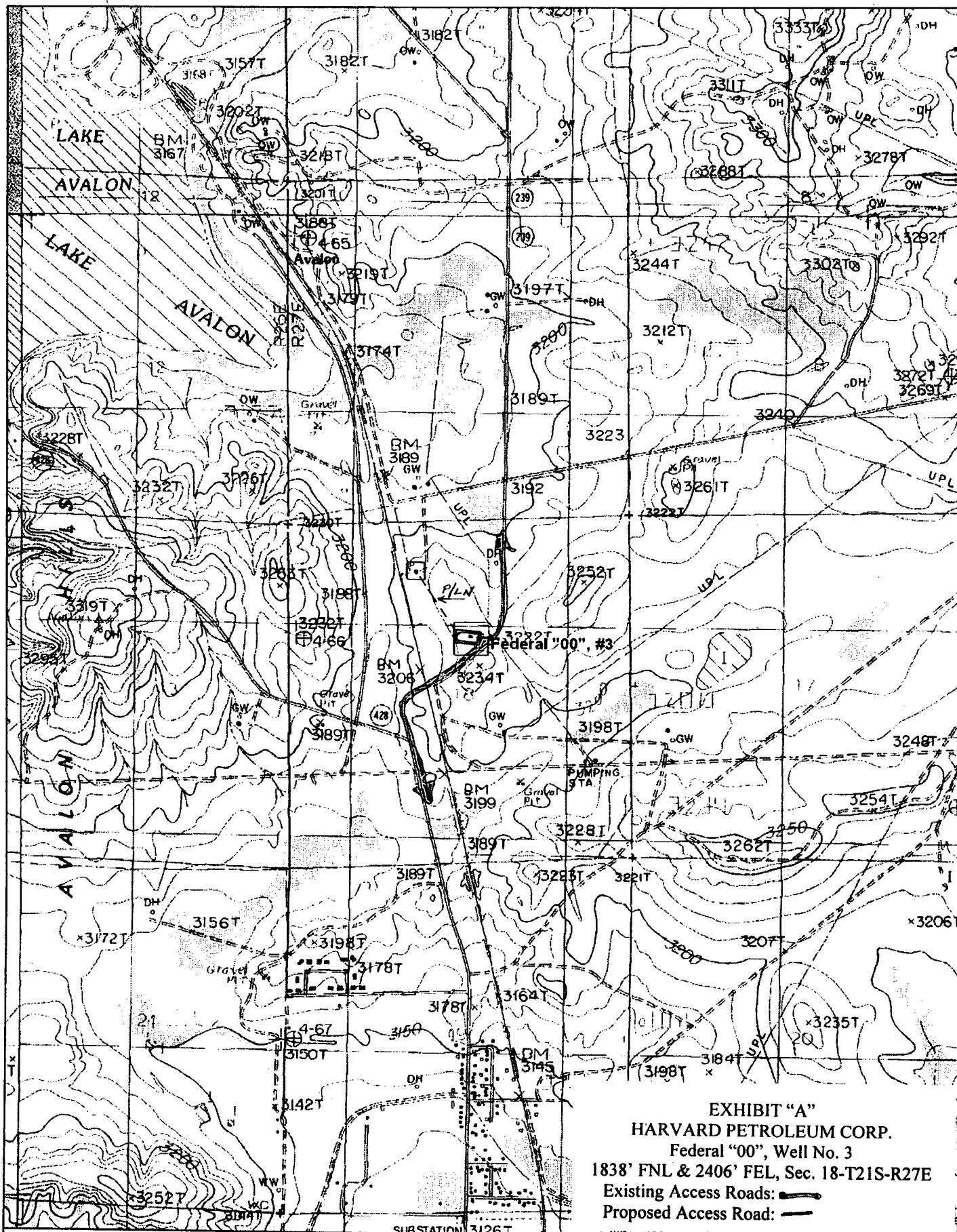


EXHIBIT "A"  
 HARVARD PETROLEUM CORP.  
 Federal "00", Well No. 3  
 1838' FNL & 2406' FEL, Sec. 18-T21S-R27E  
 Existing Access Roads: —  
 Proposed Access Road: - -

**DeLORME**

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[www.delorme.com](http://www.delorme.com)

Scale 1 : 24,000  
 1" = 2000 ft



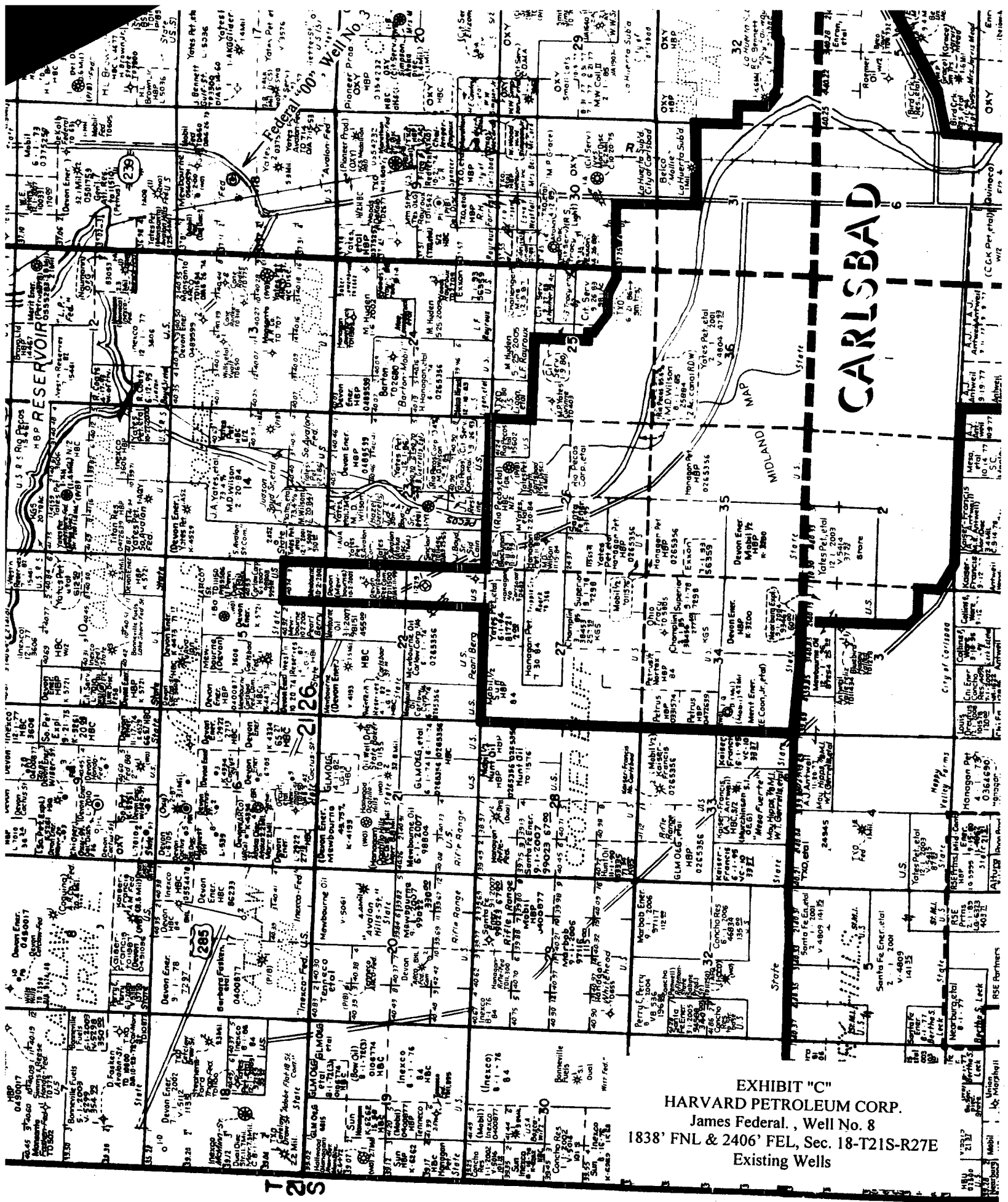


EXHIBIT "C"  
HARVARD PETROLEUM CORP.  
James Federal, Well No. 8  
1838' FNL & 2406' FEL, Sec. 18-T21S-R27E  
Existing Wells

## RIG #3

### BLOWOUT PREVENTOR ARRANGEMENT

10" SHAFFER TYPE "E", 3000 psi WP

80 GALLON, 4 STATION KOOMEY ACCUMULATOR

3000 psi WP CHOKE MANIFOLD

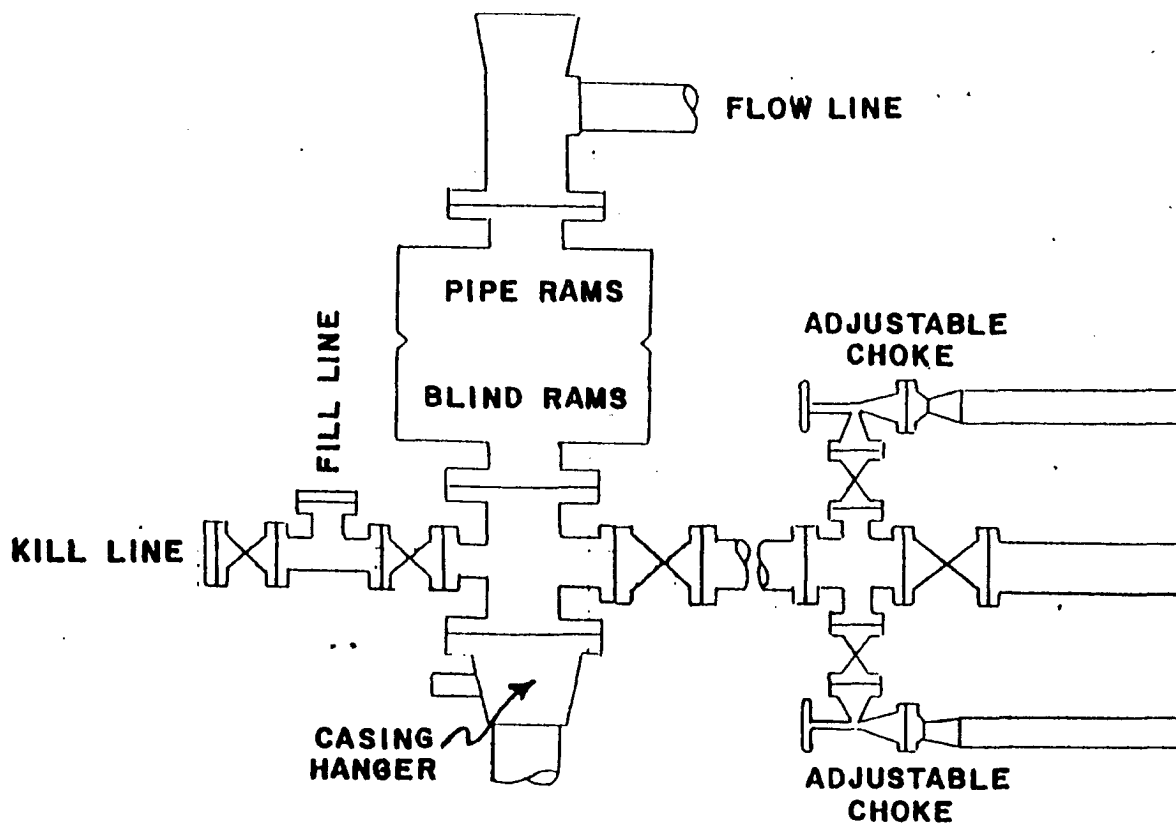


EXHIBIT "E"  
HARVARD PETROLEUM CORP.  
Federal "00", Well No. 3  
BOP Specifications

## **MINERAL LEASING STIPULATIONS CARLSBAD AND TUCUMCARI PROJECT LANDS**

The United States Bureau of Reclamation (Reclamation) is the surface managing agency for approximately 59,800 acres of acquired and withdrawn lands in the Roswell Area Office's Bureau of Land Management mineral jurisdiction. The subject lands are located within and adjacent to three reservoirs of the Carlsbad Project and two reservoirs of the Tucumcari Project, being listed as follows:

Carlsbad Project	-	Brantley Reservoir	=	43,500 acres
Carlsbad Project	-	Avalon Reservoir	=	4,000 acres
Carlsbad Project	-	Sumner Reservoir	=	11,500 acres
Tucumcari Project	-	Hudson Lake	=	160 acres
Tucumcari Project	-	Dry Lake	=	640 acres

With regard to the leasing of the mineral estate(s) within the 59,800 acres, Reclamation will provide specific leasing stipulations for each prospective lease. The general leasing stipulations and requirements for the subject Reclamation managed lands are as follows:

### **Brantley Reservoir**

No surface occupancy will be allowed within one half mile of the Brantley Dam site, drilling between one half mile and one mile of the Brantley dam site will be reviewed on a case by case basis.  
No surface occupancy within the Brantley Lake State Park.  
No storage facilities will be allowed below contour elevation 3286.  
No surface occupancy below natural contour elevation 3271.

### **Avalon Reservoir**

No surface occupancy will be allowed within one half mile of the Avalon Dam site.  
No surface occupancy below contour elevation 3190.  
No storage facilities below contour elevation 3200.

### **Sumner Reservoir**

No surface occupancy will be allowed within one half mile of the Sumner Dam site.  
No surface occupancy within Sumner Lake State Park.  
No surface occupancy below contour elevation 4279.  
No storage facilities below contour elevation 4300.

### **Hudson Lake**

No surface occupancy within the boundaries of Hudson Lake

### **Dry Lake**

No surface occupancy below contour elevation 4085.

In addition to those restrictions above, Reclamation proposes that the first paragraph of page 3 of MANAGEMENT COMMON TO ALL ALTERNATIVES be omitted. The subject paragraph states that if lands presently managed by Reclamation revert to BLM, they would be leased and managed under appropriate Roswell District Office stipulations or conditions of approval (e.g. stipulations for flood plains). **Once production of all wells permitted are terminated, the permittee shall immediately plug the well hole and reclaim the surface disturbed by the operation**

## CONDITIONS OF APPROVAL - DRILLING

Well Name & No. 3 - FEDERAL 'OO'  
Operator's Name: HARVARD PETROLEUM CORP.  
Location: 1838' FNL & 2406' FEL - SEC 18 - T21S - R27E - EDDY COUNTY  
Lease: NM-0560291

### 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) 234-5909 or (505) 361-2822 (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

**NOTE: Will consult with BLM should severe lost circulation occur in the reef section**

B. Cementing casing: 13-3/8 inch 8-5/8 inch 5-1/2 inch

#### C. BOP tests

2. No H<sub>2</sub>S gas is expected however the mud logging unit will be cautioned to use a gas trap to detect H<sub>2</sub>S and if any is expected the mud weight will be increased along with H<sub>2</sub>S inhibitors sufficient to control the gas. No H<sub>2</sub>S gas has been reported from wells in this section.

3 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.

4. 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.

5. 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 400 feet and cement circulated to the surface.

2. The 8-5/8 inch intermediate casing shall be set at 2250 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.

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.**

FIG. SGD.) LES BABYAN

### **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) is 2000 psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

- A variance to test the 13-3/8" casing and BOP to the reduced pressure of 1000 psi with 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.