

0197 N.M. Oil Cons. DIV-Dist. 2  
SUBMIT IN TRIPLICATE\*  
UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
1301 W. Grand Avenue  
Albuquerque, NM 87106  
(Other instructions on reverse side)

FORM APPROVED

OMB NO. 1004-0136

Expires: February 28, 1995

5. LEASE DESIGNATION AND SERIAL NO.

NM-2948 2748

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

Pending

8. FARM OR LEASE NAME, WELL NO.

Arnold Deep 23 Federal Com No. 2

9. API WELL NO.

30-015- 34524

10. FIELD AND POOL, OR WILDCAT

Sec. 23 T17S R30E

11. SEC. T., R., M., BLOCK AND SURVEY

OR AREA

12. COUNTY OR PARISH

Eddy

13. STATE

NM

## APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐

1b. TYPE OF WELL

OIL ☐GAS ☒SINGLE ☒MULTIPLE ☐

WELL WELL

OTHER

ZONE

ZONE

2. NAME OF OPERATOR

Gruy Petroleum Management Co.

3. ADDRESS AND TELEPHONE NO.

P.O. Box 140907 Irving TX 75014 972-401-3111

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

1750' FNL &amp; 1550' FEL

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

2 Miles East of Loco Hills

15. DISTANCE FROM PROPOSED\*  
LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, T.O.

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

1550'

16. NO. OF ACRES IN LEASE

320

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

320

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

N/A

19. PROPOSED DEPTH

11500'

20. ROTARY OR CABLE TOOLS

Rotary

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

3664' GR

Roswell Controlled Water Basin

22. APPROX. DATE WORK WILL START\*

02-01-06

## 23 PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2" WITNESS	H-40 13 3/8"	48 #	500' * WITNESS	490 sx circulate
12-1/4"	J-55 9 5/8"	40 #	4000'	1200 sx circulate
7-7/8"	P-110 5 1/2"	17 #	11500'	1620 sx TOC 2700'

\*Set surface casing 25' into the top of the Rustler, which is estimated to be between 350' and 500'.

From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 - psi BOP system. We are requesting a variance for the 13 3/8" surface casing and BOP testing from Onshore Order No. 2, which states all casing strings below the conductor shall be pressure tested to .22 psi per foot or 1500#, whichever is greater, but not to exceed 70% of the manufacturer's stated maximum internal yield. During the running of the surface pipe and the drilling of the intermediate hole we do not anticipate any pressures greater than 1000#, and we are requesting a variance to test the 13 3/8" casing and BOP system to 1000# psi and use rig pumps instead of an independent service company.

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 Zero Faus TITLE Mgr. Ops. Admin DATE 11-22-05

(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 subsurface which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY /s/ Joe G. LaraTITLE FIELD MANAGER

DATE

DEC 29 2005

\*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

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

**GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED**

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II  
1301 W. GRAND AVENUE, ARTESIA, NM 86210

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 and Natural Resources Department

OIL CONSERVATION DIVISION  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised JUNE 10, 2003  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

XX AMENDED REPORT

API Number	Pool Code 74560	Pool Name Cedar Lake Morrow
Property Code	Property Name ARNOLD DEEP 23 FEDERAL COM	Well Number 2
OGRID No. 162683	Operator Name GRUY PETROLEUM MANAGEMENT COMPANY	Elevation 3664'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	23	17-S	30-E		1750	NORTH	1550	EAST	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 Y	Consolidation Code C	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

<p>GEODETIC COORDINATES NAD 27 NME Y=663094.5 N X=621281.5 E LAT.=32°49'20.32" N LONG.=103°56'18.72" W</p>	<p>LC-029338-A</p> <p>1750'</p> <p>3677.3' 3667.9'</p> <p>600'</p> <p>600'</p> <p>3677.0' 3672.0'</p> <p>Arnold Deep 23 Fed Com #2</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Zeno Farris</i></p> <p>Signature Zeno Farris</p> <p>Printed Name Mgr Operations Admin</p> <p>Title November 30, 2005</p> <p>Date</p>
	<p>NM-2748</p> <p>Arnold Deep 23 Fed Com #1</p> <p>1755'</p> <p>2180'</p> <p>862'</p> <p>480'</p> <p>LC-028992E</p>	<p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>OCTOBER 17, 2005</p> <p>Date Surveyed Signature of Seal of Professional Surveyor RONALD EIDSON 10/24/05 05.11 1544 Certification No. RONALD EIDSON 3239</p>

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

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

Form C-144  
March 12, 2004

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: Gruy Petroleum Management Co. Telephone: 972-443-6489 e-mail address: zfarris@cimarex.com

Address: P.O. Box 140907, Irving, Tx 75014-0907

Facility or well name: Arnold Deep 23 Federal Com No. 2 API #: 30-015- U/L or Qtr/Qtr G Sec 23 T 17S R 30E

County: Eddy Latitude 324920.32N Longitude 1035618.72W NAD: 1927 ☒ 1983 ☐ Surface Owner Federal ☐ State ☐ Private ☐ Indian ☐

Pit

Type: Drilling ☒ Production ☐ Disposal ☐

Workover ☐ Emergency ☐

Lined ☒ Unlined ☐

Liner type: Synthetic ☒ Thickness 12 mil Clay ☐ Volume  
bbl

Below-grade tank

Volume: bbl Type of fluid:

Construction material:

Double-walled, with leak detection? Yes ☐ If not, explain why not.

RECEIVED

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

Less than 50 feet

50 feet or more, but less than 100 feet

100 feet or more

(20 points)

(10 points)

(0 points)

NOV 28 2005

UCC-ARTESIA

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

Yes

No

(20 points)

(0 points)

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

Less than 200 feet

200 feet or more, but less than 1000 feet

1000 feet or more

(20 points)

(10 points)

(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 ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 11-22-05

Printed Name/Title Zeno Farris Manager Operations Administration

Signature Zeno Farris

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.

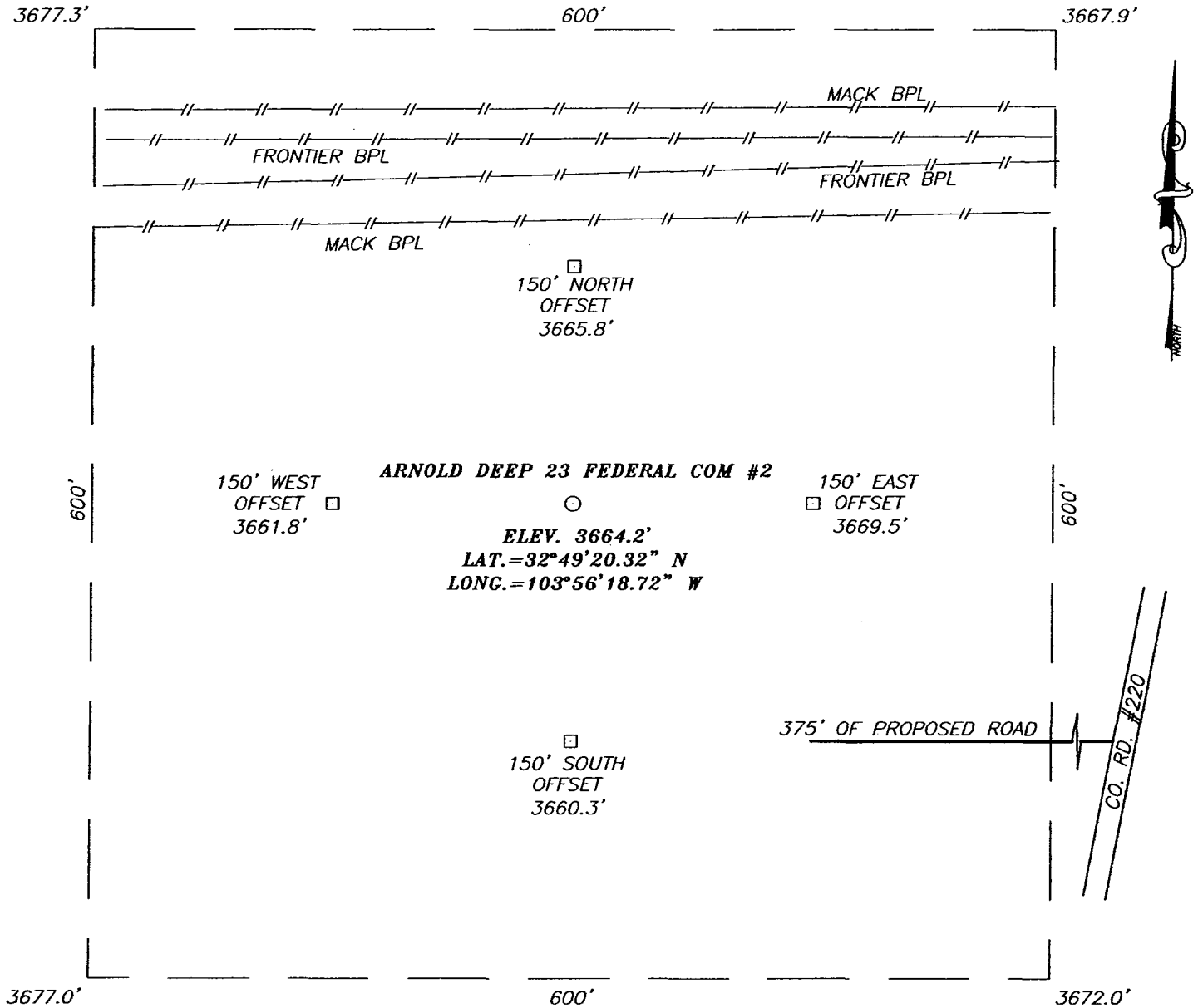
Approval:

Date: 12-5-05 Gerry Guye

Printed Name/Title Compliance Officer

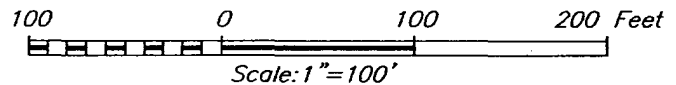
Signature Gerry Guye

**SECTION 23, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.,**  
 EDDY COUNTY, NEW MEXICO



**DIRECTIONS TO LOCATION**

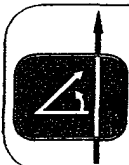
FROM THE INTERSECTION OF U.S. HWY. #82  
 (LOVINGTON HWY.) AND CO. RD. #220 (SQUARE LAKE)  
 GO NORTH ON CO. RD. #220 FOR APPROX. 0.1 MILES  
 TO A PROPOSED ROAD SURVEY. FOLLOW ROAD  
 SURVEY WEST APPROX. 375 FEET TO THIS LOCATION.



**GRUY PETROLEUM MANAGEMENT COMPANY**

ARNOLD DEEP 23 FEDERAL COM #2 WELL  
 LOCATED 1750 FEET FROM THE NORTH LINE  
 AND 1550 FEET FROM THE EAST LINE OF SECTION 23,  
 TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO.

Survey Date: 10/17/05	Sheet 1 of 1 Sheets
W.O. Number: 05.11.1544	Dr By: LA
Date: 10/21/05	Disk: CD#4
05111544	Scale: 1"=100'



PROVIDING SURVEYING SERVICES  
 SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
 412 N. DAL PASO  
 HOBBS, N.M. 88240  
 (505) 383-3117

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
LOCO HILLS, N.M. - 10'

SEC. 23 TWP. 17-S RGE. 30-E

SURVEY N.M.P.M.

COUNTY EDDY

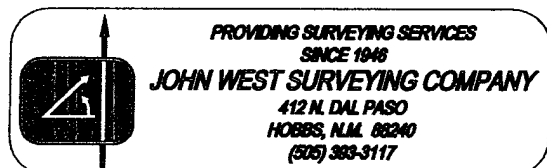
DESCRIPTION 1750' FNL & 1550' FEL

ELEVATION 3664'

OPERATOR GRUY PETROLEUM  
MANAGMENT COMPANY

LEASE ARNOLD DEEP 23 FEDERAL COM

U.S.G.S. TOPOGRAPHIC MAP  
LOCO HILLS, N.M.





## Gruy Petroleum Management Co.

600 East Las Colinas Blvd. • Suite 1100 • Irving, TX 75039 • (972) 401-3111 • Fax (469) 420-2710  
Mailing Address: P.O. Box 140907 • Irving, TX 75014-0907

*A wholly-owned subsidiary of Cimarex Energy Co., a NYSE Listed Company, "XEC"*

### STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

Bureau of Land Management  
620 East Greene Street  
Carlsbad, New Mexico 88220  
Attn: Ms. Betty Hill

Gruy Petroleum Management Co. accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land, or portion thereof, as described below:

Lease No.: LC-028992-E – S/2 SE/4 Sec 23-T17S-R30E, containing 80 acres  
Lease No.: NM-2748 – N/2 SE/4, S/2 NE/4 Sec 23-T17S-R30E, containing 160 acres  
Lease No.: LC-029338-A – N/2 NE/4 Sec 23-T17S-R30E, containing 80 acres

County: Eddy County, New Mexico

Formation (S): Morrow

Bond Coverage: Statewide BLM Bond

BLM Bond File No.: NM 2575

Authorized Signature: Zeno Farris  
Representing Gruy Petroleum Management Co.

Name: Zeno Farris

Title: Manager, Operations Administration

Date: December 2, 2005

## Application to Drill

Gruy Petroleum Management Co.  
Arnold Deep 23 Federal Com No. 1  
Unit G Section 23  
T17S - R30E Eddy County, NM

In response to questions asked under Section II B of Bulletin NTL-6 the following information is provided for your consideration:

- 1 Location: 1750' FNL & 1550' FEL
- 2 Elevation above sea level: GR 3664'
- 3 Geologic name of surface formation: Quaternary Alluvium Deposits
- 4 Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.
- 5 Proposed drilling depth: 11500'
- 6 Estimated tops of geological markers:

Rustler	500'
San Andres	3400'
Wolfcamp	8000'
Atoka	10600'
Morrow	11000'
- 7 Possible mineral bearing formation:

Strawn	Gas
Morrow	Gas

8 Casing program:

Hole Size	Interval	Casing OD	Weight	Thread	Collar	Grade
17 1/2"	0-500'	13 3/8"	48#	8-R	ST&C	H-40
12 1/4"	0-4000'	9 5/8"	40#	8-R	LT&C	J-55
7 7/8"	0-11500'	5 1/2"	17#	8-R	LT&C	P-110

## Application to Drill

Gruy Petroleum Management Co.  
Arnold Deep 23 Federal Com No. 1  
Unit G                      Section 23  
T17S - R30E              Eddy County, NM

### 9 Cementing & Setting Depth:

13 3/8"	Surface	Set 500' of 13 3/8" J-55 48# ST&C casing to a depth of 25' into the Rustler. Cement with 490 Sx. Of Class "C" cement + additives, circulate cement to surface.
9 5/8"	Intermediate	Set 4000' of 9 5/8" J-55 40# LT&C casing. Cement lead with 1000 Sx. Of Class POZ/C Cement + additives, tail with 200 Sx. Of Class "C" + additives, circulate cement to surface.
5 1/2"	Production	Set 11500' of 5 1/2" P-110 17# LT&C casing. Cement in two stages, first stage cement with 1020 Sx. of Class POZ/C Cement + additives. Second stage cement with 600 Sx of Class "C" Estimated top of cement 2700'.

### 10 Pressure control Equipment:

Exhibit "E". A 13 3/8" 5000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of pipe rams and a 5000 # annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 6000'. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor. BOP unit will be hydraulically operated. BOP will be nipped up on the 9 5/8" casing and will be operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling.

### 11 Proposed Mud Circulating System:

Depth	Mud Wt	Viscosity	Fluid Loss	Type Mud
0 - 500'	8.4 - 8.6	30 - 32	May lose circ.	Fresh water spud mud add paper to control seepage and high viscosity sweeps to clean hole.
500' - 4000'	9.7 - 10.0	28 - 29	May lose circ.	Brine water. Add paper as needed to control seepage and add lime to control pH (9-10). Use high viscosity sweeps to clean hole.
4000' - 8300'	8.4 - 9.9	28 - 29	NC	Brine water. Paper for seepage. Lime for PH (9 - 9.5)
8300' - 10000'	8.45 - 8.9	28 - 29	NC	Cut brine. Caustic for pH control.
10000' - 11500'	8.9 - 9.7	29 - 45	NC	XCD Polymer mud system.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs. Mud system monitoring equipment with derrick floor indicators and visual/audio alarms shall be installed and operative prior to drilling into the Wolfcamp formation. This equipment will remain in use until production casing is run and cemented.



## **Application to Drill**

Gruy Petroleum Management Co.  
Arnold Deep 23 Federal Com No. 1  
Unit G            Section 23  
T17S - R30E      Eddy County, NM

### 12 Testing, Logging and Coring Program:

- A. Mud logging program: One-man unit from 8000' to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
- C. No DSTs or cores are planned at this time.

### 13 Potential Hazards:

No abnormal pressures or temperatures are expected. The area has a potential H2S hazard. An H2S drilling plan is attached. Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used. Estimated BHP 4000 PSI, estimated BHT 175.

### 14 Anticipated Starting Date and Duration of Operations:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 35 - 45 days. If production casing is run an additional 30 days will be required to complete and construct surface facilities.

### 15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals. The Morrow pay will be perforated and stimulated. The well will be tested and potentialized as a gas well.

## Hydrogen Sulfide Drilling Operations Plan

1 All Company and Contract personnel admitted on location must be trained by a qualified H<sub>2</sub>S safety instructor to the following:

- A. Characteristics of H<sub>2</sub>S
- B. Physical effects and hazards
- C. Proper use of safety equipment and life support systems.
- D. Principle and operation of H<sub>2</sub>S detectors, warning system and briefing
- E. Evacuation procedure, routes and first aid.
- F. Proper use of 30 minute pressure demand air pack.

2 H<sub>2</sub>S Detection and Alarm Systems

- A. H<sub>2</sub>S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.

3 Windsock and/or wind streamers

- A. Windsock at mudpit area should be high enough to be visible.
- B. Windsock at briefing area should be high enough to be visible.

4 Condition Flags and Signs

- A. Warning sign on access road to location.
- B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H<sub>2</sub>S present in dangerous concentration. Only emergency

5 Well control equipment

- A. See exhibit "E"

6 Communication

- A. While working under masks chalkboards will be used for communication.
- B. Hand signals will be used where chalk board is inappropriate.
- C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

7 Drillstem Testing not anticipated.

## **Hydrogen Sulfide Drilling Operations Plan**

- 8 Drilling contractor supervisor will be required to be familiar with the effects H<sub>2</sub>S has on tubular goods and other mechanical equipment.
- 9 If H<sub>2</sub>S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H<sub>2</sub>S scavengers if

## Surface Use Plan

Gruy Petroleum Management Co.  
Arnold Deep 23 Federal Com No. 1  
Unit G      Section 23  
T17S - R30E      Eddy County, NM

- 1 Existing Roads: Area maps, Exhibit "B" is a reproduction of Lea Co. General Highway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing roads and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.
  - A. Exhibit "A" shows the proposed well site as staked.
  - B. From the intersection of US Hwy #82 (Lovington Hwy) and Co Rd #220 (Square Lake), go North on Co Rd #220 for approx 0.1 miles to a proposed road survey. Follow road survey West approx 375 feet to this location.
- 2 PLANNED ACCESS ROADS: 375' of proposed road will be constructed on lease.
- 3 LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS EXHIBIT "A"
  - A. Water wells -                      None known
  - B. Disposal wells -                      None known
  - C. Drilling wells -                      None known
  - D. Producing wells -                      As shown on Exhibit "A"
  - E. Abandoned wells -                      As shown on Exhibit "A"

## Surface Use Plan

Gruy Petroleum Management Co.  
Arnold Deep 23 Federal Com No. 1  
Unit G      Section 23  
T17S - R30E      Eddy County, NM

- 4 If, on completion this well is a producer Gruy Petroleum Management Co. will furnish maps and/or plats showing on site facilities or off site facilities if needed. This will be accompanied with a Sundry Notice.

5 LOCATION AND TYPE OF WATER SUPPLY:

Water will be purchased locally from a commercial source and trucked over the access roads or piped in flexible lines laid on top of the ground.

6 SOURCE OF CONSTRUCTION MATERIAL:

If possible construction will be obtained from the excavation of drill site, if additional material is needed it will be purchased from a local source and transported over the access route as shown on Exhibit "C".

7 METHODS OF HANDLING WASTE MATERIAL:

- A. Drill cuttings will be disposed of in the reserve pit.
- B. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed all contents will be removed and disposed of in a approved sanitary land fill.
- C. Salts remaining after completion of well will be picked up by supplier including broken sacks.
- D. Sewage from living quarters will drain into holding tanks and be cleaned out periodically. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.
- E. Remaining drilling fluids will be allowed to evaporate in the reserve pit until the pit is dry enough for breaking out. In the event that drilling fluids do not evaporate in a reasonable time they will be hauled off by transports and be disposed of at a state approved disposal facility. Later pits will be broken out to speed drying. Water produced during testing will be put in reserve pits. Any oil or condensate produced will be stored

8 ANCILLARY FACILITIES:

- A. No camps or airstrips to be constructed.

## Surface Use Plan

Gruy Petroleum Management Co.  
Arnold Deep 23 Federal Com No. 1  
Unit G      Section 23  
T17S - R30E      Eddy County, NM

### 9 WELL SITE LAYOUT

- A. Exhibit "D" shows location and rig layout.
- B. This exhibit indicates proposed location of reserve and trash pits; and living facilities.
- C. Mud pits in the active circulating system will be steel pits and the reserve pit is proposed to be unlined, unless subsurface condition encountered during pit construction indicate that lining is needed for lateral containment of fluids.
- D. If needed, the reserve pit is to be lined with PVC or polyethylene line. The pit liner will be 6 mils thick. Pit liner will extend a minimum, 2'00" over the reserve pits dikes where the liner will be anchored down.
- E. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

### 10 PLANS FOR RESTORATION OF SURFACE

Rehabilitation of the location and reserve pit will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer

However, in either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be recontoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.

## Surface Use Plan

Gruy Petroleum Management Co.  
Arnold Deep 23 Federal Com No. 1  
Unit G      Section 23  
T17S - R30E      Eddy County, NM

### 11 OTHER INFORMATION:

- A. Topography consists of a sloping plane with loose tan sands. Vegetation is mainly yucca, mesquite and shin oak.
- B. The wellsite is on surface owned by The United States Department of the Interior, Bureau of Land Management. The land is used mainly for farming, cattle ranching, recreational use, and oil and gas production.
- C. An Archaeological survey will be conducted on the location and proposed roads, and this report will be filed with the Bureau of Land Management in the Carlsbad BLM office.

### 12 OPERATORS REPRESENTATIVE:

Gruy Petroleum Management Company  
P.O. Box 14097  
Irving, TX 75014  
Office Phone: (972) 443-6489  
Zeno Farris

- 13 **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 the operations proposed herein will be performed by Gruy Petroleum Management Company and/or its contractors/subcontractors and is in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false statement.

NAME: Zeno Farris

DATE: 11/22/2005

TITLE: Manager, Operations Administration

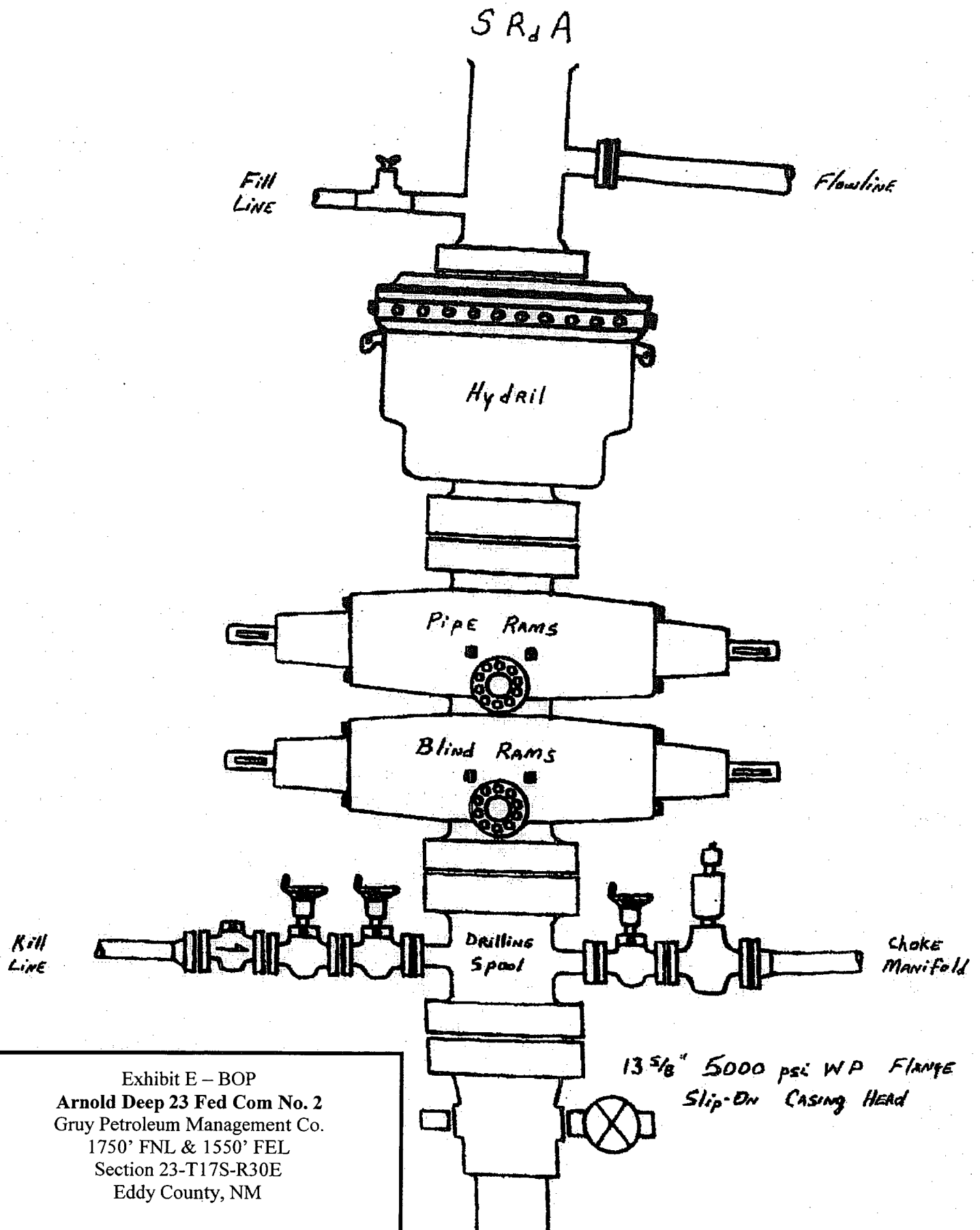


Exhibit E – BOP  
 Arnold Deep 23 Fed Com No. 2  
 Gruy Petroleum Management Co.  
 1750' FNL & 1550' FEL  
 Section 23-T17S-R30E  
 Eddy County, NM



DRILLING OPERATIONS  
CHOKE MANIFOLD  
5M SERVICE

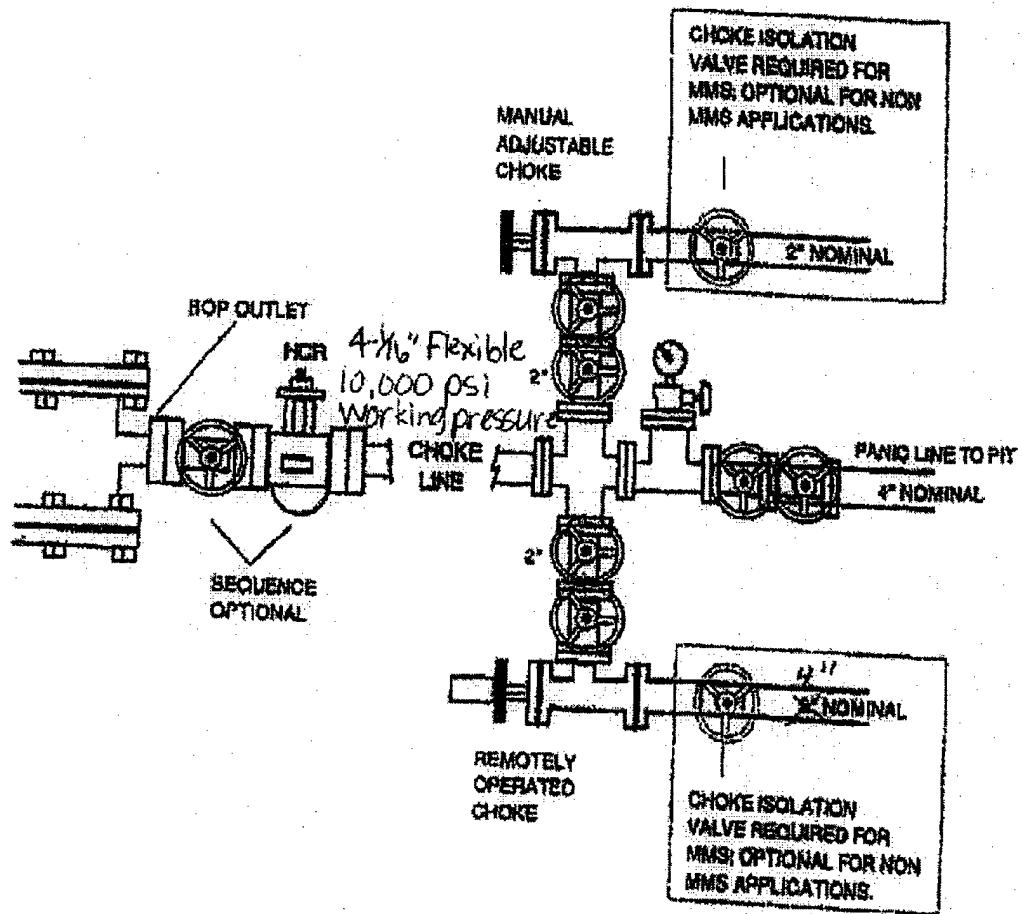


Exhibit E-1 – Choke Manifold Diagram  
**Arnold Deep 23 Federal Com No. 2**  
 Gruy Petroleum Management Co.  
 1750' FNL & 1550' FEL  
 Section 23-T17S-R30E  
 Eddy County, NM



Midwest Hose  
& Specialty, Inc.

## Specification Sheet Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium components. The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermiculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

<b>Working Pressure:</b>	5,000 or 10,000 psi working pressure
<b>Test Pressure:</b>	10,000 or 15,000 psi test pressure
<b>Reinforcement:</b>	Multiple steel cables
<b>Cover:</b>	Stainless Steel Armor
<b>Inner Tube:</b>	Petroleum resistant, Abrasion resistant
<b>End Fitting:</b>	API flanges, API male threads, threaded or butt weld hammer unions, unbolt and other special connections
<b>Maximum Length:</b>	110 Feet
<b>ID:</b>	2-1/2", 3", 3-1/2", 4"
<b>Operating Temperature:</b>	-22 deg F to +180 deg F (-30 deg C to +82 deg C)

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: GRUY PETROLEUM MANAGEMENT CO.  
Well Name & No. 2 - ARNOLD DEEP 23 FEDERAL COM  
Location: 1750' FNL & 1550' FEL - SEC 23 - T17S - R30E - EDDY COUNTY  
Lease: NM-2748

.....

### 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

B. Cementing casing: 13-3/8 inch 9-5/8 inch 5-1/2 inch

C. BOP tests

2. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan will be put into effect should H<sub>2</sub>S gas be encountered. A copy of the plan shall be posted at the drilling site. **No H<sub>2</sub>S gas has been reported in Sec 23 - T17S - R30E.**

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.

6. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

### II. CASING:

1. The 13-3/8 inch surface casing shall be set at 500 feet or 25' into the Rustler Anhydrite or in the case that salt occurs at a shallower depth above the top of the salt, below usable water and cement circulated to the surface. The surface casing shoe shall be set in the anhydrite to ensure adequate sealing. If cement does not circulate to the surface the operator may then use ready-mix cement to fill the remaining annulus. The operator is required to use an excess of 100% cement volume to fill the annulus.

2. The minimum required fill of cement behind the 9-5/8 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 200 feet above the top of the uppermost hydrocarbon bearing interval or to the base of the salt.**

### **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 9-5/8 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) required for drilling the surface and intermediate casing shall be 2000 psi. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the 9-5/8 inch casing shall be 5000 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 system to 1000# using 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.