

ATS-08-161

OCD-ARTESIA

DEC 17 2007

Form 3160-3
(April 2004)

OCD-ARTESIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

139

S

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

5 Lease Serial No
~~NMNM 063418~~ **LC-063418A**

6 If Indian, Allottee or Tribe Name

7 If Unit or CA Agreement, Name and No
NMNM 71016X

8 Lease Name and Well No
Capitan 9 Federal #1

9 API Well No
30-015-35998

10 Field and Pool, or Exploratory
Undesignated

11 Sec, T R M or Blk and Survey or Area
Sec 9, T21N, R29E
S 1E

12 County or Parish
Eddy County

13 State
NM

1a Type of work ☒ DRILL ☐ REENTER

1b Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

2 Name of Operator
BEPCO, L. P. **1801**

3a Address **P. O. Box 2760
Midland, TX 79702**

3b Phone No. (include area code)
432-683-2277

4 Location of Well (Report location clearly and in accordance with any State requirements *)
At surface **SWNW, UL E, 1650 FNL, 610 F2L, Lat N32.496686, Lon W103.996117**
At proposed prod zone **Same**

14 Distance in miles and direction from nearest town or post office*
10 miles East of Carlsbad, New Mexico **Capitan Controlled Water Basin**

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg unit line, if any)
610'

16 No of acres in lease
640

17 Spacing Unit dedicated to this well
40.00

18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft
50'

19 Proposed Depth
1950'

20 BLM/BIA Bond No on file
NM 2204

21 Elevations (Show whether DF, KDB, RT, GL, etc)
3404' GL

22 Approximate date work will start*
12/20/2007

23 Estimated duration
7 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

- | | |
|---|--|
| 1 Well plat certified by a registered surveyor | 4 Bond to cover the operations unless covered by an existing bond on file (see Item 20 above) |
| 2 A Drilling Plan | 5 Operator certification |
| 3 A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office) | 6 Such other site specific information and/or plans as may be required by the authorized officer |

25 Signature **Annette Childers**
Title **Administrative Assistant**

Name (Printed/Typed)
Annette Childers

Date
11-7-07

Approved by (Signature) **/s/ Don Peterson**

Name (Printed/Typed)
/s/ Don Peterson

Date
DEC 12 2007

Title
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 TWO YEARS

Title 18 USC Section 1001 and Title 43 USC 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 page 2)

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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 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 October 12, 2005

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
			Undesignated
Property Code 36902	Property Name CAPITAN "9" FEDERAL		Well Number 1
OGRID No. 001801	Operator Name BEPCO, L.P.		Elevation 3404'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	9	21 S	29 E		1650	NORTH	610	WEST	EDDY

Bottom Hole Location If Different From Surface

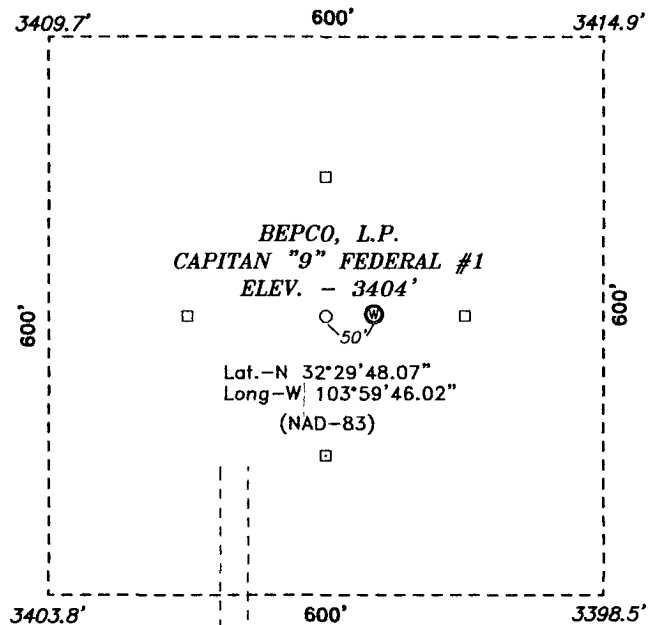
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres 40	Joint or Infill N	Consolidation Code	Order No.
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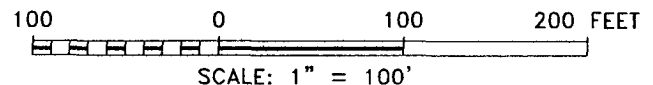
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>LAT - N32°29'48.07" LONG - W103°59'46.02" N.: 544590.4 E.: 645303.6 (NAD-83)</p>	<p>OPERATOR CERTIFICATION</p> <p>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 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.</p> <p><i>Gary E. Gerhard</i> 11/7/07 Signature Date</p> <p>Gary E. Gerhard Printed Name</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>NOVEMBER 10 2007 Date Surveyed</p> <p><i>Gary E. Gerhard</i> Signature & Seal Professional Surveyor</p> <p>7977 Certificate No. Gary E. Jones 7977</p> <p>BASIN SURVEYS</p>	

SECTION 9, TOWNSHIP 21 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



Lat.-N 32°29'48.07"
Long.-W 103°59'46.02"
(NAD-83)



DIRECTIONS TO LOCATION:

FROM THE JUNCTION OF STATE HWY 62-180 AND STATE
HWY 31, PROCEED WEST ON STATE 62-180 FOR 1.2 MILE
TO LEASE ROAD, ON LEASE ROAD PROCEED SOUTH 2.5
MILE TO LEASE ROAD, FOLLOW LEASE ROAD TO
LOCATION

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number 18739 Drawn By: J. M. SMALL

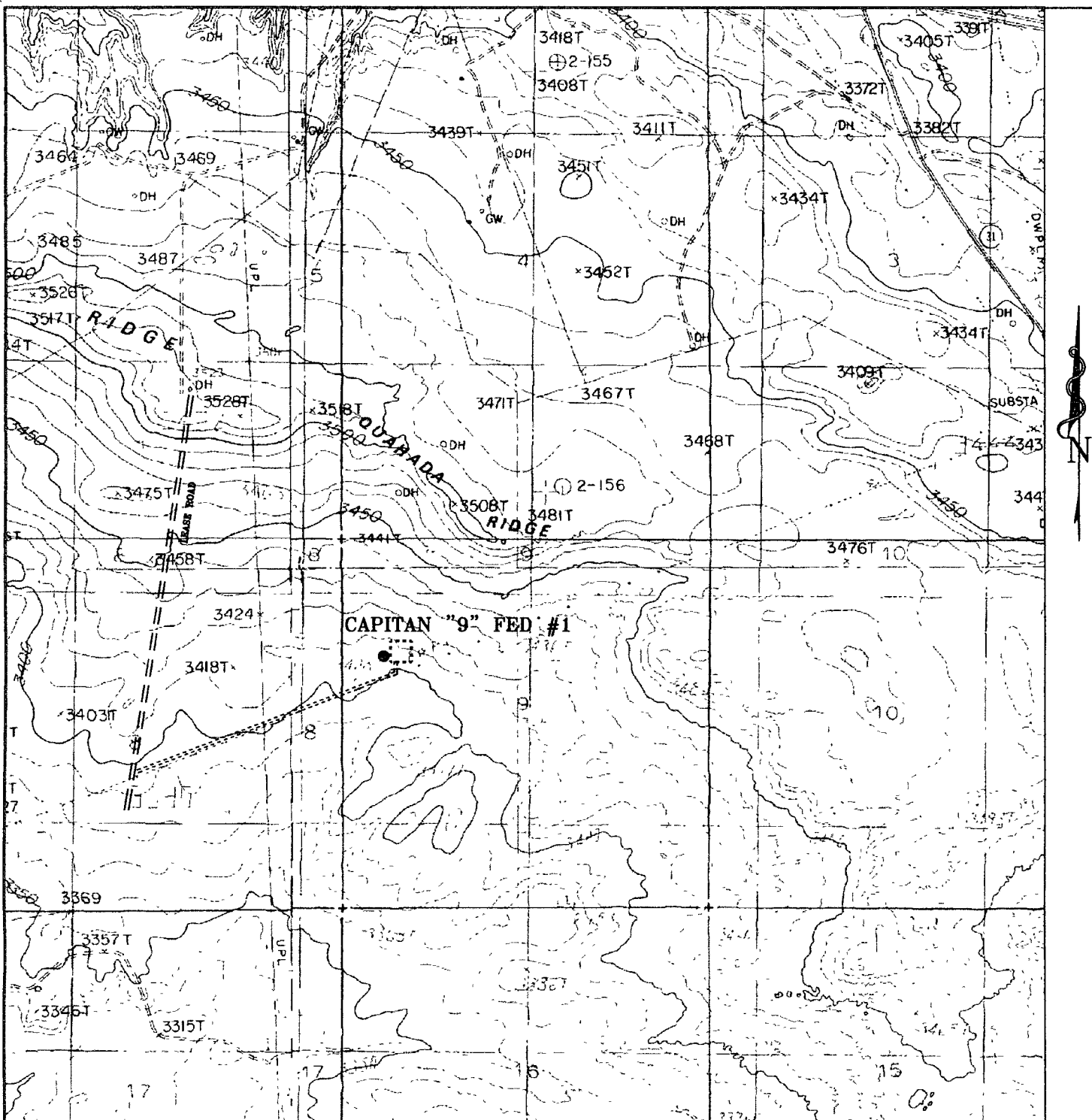
Date 11-02-2007 Disk: JMS 18739W

BEPCO, L.P.

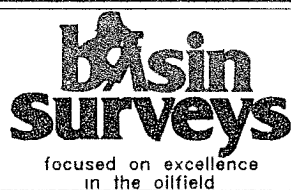
REF: CAPITAN "9" FEDERAL #1 / Well Pad Topo

THE CAPITAN "9" FEDERAL #1 LOCATED 1650' FROM
THE NORTH LINE AND 610' FROM THE WEST LINE OF
SECTION 9, TOWNSHIP 21 SOUTH, RANGE 29 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date. 11-01-2007 Sheet 1 of 1 Sheets



CAPITAN "9" FEDERAL #1
 Located at 1650' FNL and 610' FWL
 Section 9, Township 21 South, Range 29 East,
 N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
basinsurveys.com

W O Number 18739T

Survey Date 11-01-2007

Scale 1" = 2000'

Date 11-02-2007

BEPCO, L.P.

Surface casing to be set into the Rustler below all fresh water sands.

Production casing will be cemented using Schlumberger LiteCrete system with Cement circulated to surface

Drilling procedure, BOP diagram, anticipated tops and surface plans attached.

This well is located outside the Secretary's Potash area and outside the R-111 Potash area. Barren and/or minor potash reserves are within 1 mile of the location.

**EIGHT POINT DRILLING PROGRAM
BEPCO, L.P.**

NAME OF WELL: Capitan 9 Federal #1

Legal Description - Surface: 1650' FNL & 610' FWL, Section 9, T-21-S, R-29-E, Eddy County, New Mexico.

POINT 1: ESTIMATED FORMATION TOPS

(See No. 2 Below)

POINT 2: WATER, OIL, GAS AND/OR MINERAL BEARING FORMATIONS

Anticipated Formation Tops: KB 3412' (est) GL 3404'

<u>FORMATION</u>	<u>ESTIMATED TOP FROM KB</u>	<u>ESTIMATED SUBSEA TOP</u>	<u>BEARING</u>
T/Rustler	947'	+2465'	Barren
T/Castile Anhydrite	1179'	+2233'	Barren
T/Tansill Dolomite	1659'	+1753'	Oil/Gas
TD	1950'	+1462'	

POINT 3: CASING PROGRAM

<u>TYPE</u>	<u>INTERVALS</u>	<u>Hole Size</u>	<u>PURPOSE</u>	<u>CONDITION</u>
14"	0' - 60'	20"	Conductor	Contractor Discretion
8-5/8", 32#, K-55, LT&C	0' - 980'	11"	Surface	New
4-1/2", 11.6#, J-55, LT&C	0' - 1950'	7-7/8"	Production	New

CASING DESIGN SAFETY FACTORS:

<u>TYPE</u>	<u>TENSION</u>	<u>COLLAPSE</u>	<u>BURST</u>
8-5/8", 32#, J-55, LT&C	25.88	9.50	6.75
4-1/2", 11.6#, J-55, LT&C	2.15	1.36	1.49
5-1/2", 17#, J-55, LT&C	14.84	1.37	1.64

per operator
11-26-07

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS:

SURFACE CASING

Tension	A 1.6 design factor utilizing the effects of buoyancy (9.2 ppg).
Collapse	A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.
Burst	A 1.3 design factor with a surface pressure equal to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Backup pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient. The effects of tension on burst will not be utilized.

PROTECTIVE CASING

Tension	A 1.6 design factor utilizing the effects of buoyancy (10 ppg).
Collapse	A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered In the case of development drilling, collapse design should be analyzed using internal evacuation equal to 1/3 the proposed total depth of the well. This criterion will be used when there is absolutely no potential of the protective string being used as a production casing string.
Burst	A 1.0 surface design factor and a 1.3 downhole design factor with a surface pressure equivalent to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Back pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient.

PRODUCTION CASING

Tension	A 1.6 design factor utilizing the effects of buoyancy (9.2 ppg).
Collapse	A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.
Burst	A 1.25 design factor with anticipated maximum tubing pressure (3529 psig) on top of the maximum anticipated packer fluid gradient. Backup on production strings will be formation pore pressure. The effects of tension on burst will not be utilized.

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM)

A BOP equivalent to Diagram 1 will be nipped up on the surface casing head. The BOP stack, choke, kill lines, kelly cocks, inside BOP, etc. when rigged up on the surface casing will be hydro-tested to 70% of internal yield pressure of casing or 1000 psig whichever is less with the rig pump.

These tests will be performed:

- a) Upon installation
- b) After any component changes
- c) Fifteen days after a previous test
- d) As required by well conditions

↑
see
COA

A function test to insure that the preventers are operating correctly will be performed on each trip.

POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 980'	FW Spud Mud	8.5 - 9.2	38-70	NC	NC	NC	10.0
980' - 1950'	Brine Water	9.8 - 10.2	28-34	NC	NC	NC	9.5 - 10.5

NOTE: May increase vis for logging purposes only.

POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING

None anticipated.

B) LOGGING

GR-CNL-LDT-AIT from TD to top of Tansill (+/- 1672')
GR-CNL-CAL from top of Tansill to surface.

C) CONVENTIONAL CORING

None anticipated.

D) CEMENT

<u>INTERVAL</u>	<u>AMOUNT SXS</u>	<u>FT OF FILL</u>	<u>TYPE</u>	<u>GALS/SX</u>	<u>PPG</u>	<u>FT³/SX</u>
SURFACE						
Lead: 0' - 680' (100% excess circ to surface)	215	680	35/65 Poz C + 6% D20 + 3% S1 + 5 pps D130	10.27	12.6	1.98
Tail: 680' - 980' (100% excess)	125	300	Class C + 2% S1	6.34	14.8	1.34
PRODUCTION:						
Lead: 0' - 1650' (50% excess circ to surface)	230	1650	LiteCrete 39:31 (D961.D124) + 2% D153 +0.05 gps 4AM + 0.03 gps M45 + ps D24 + 0.04 gps D801	9.755	10.2	2.47
Tail: 1650' - 1950' (50% excess)	50	300	LiteCrete 39:31 (D961.D124) + 2% D153 +0.05 gps 4AM + 0.03 gps M45 + ps D24 + 0.04 gps D801	6.32	10.5	2.10

E) DIRECTIONAL DRILLING

No directional services anticipated.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 860 psi (max) or MWE of 8.7 ppg is expected.

POINT 8: OTHER PERTINENT INFORMATION**A) Auxiliary Equipment**

Upper and lower kelly cocks. Full opening stab in valve on the rig floor.

B) Anticipated Starting Date

Upon approval

7 days drilling operations

7 days completion operations

GEG/mac

November 7, 2007

United Drilling, Inc. Rig #34 Rig Layout Schematic

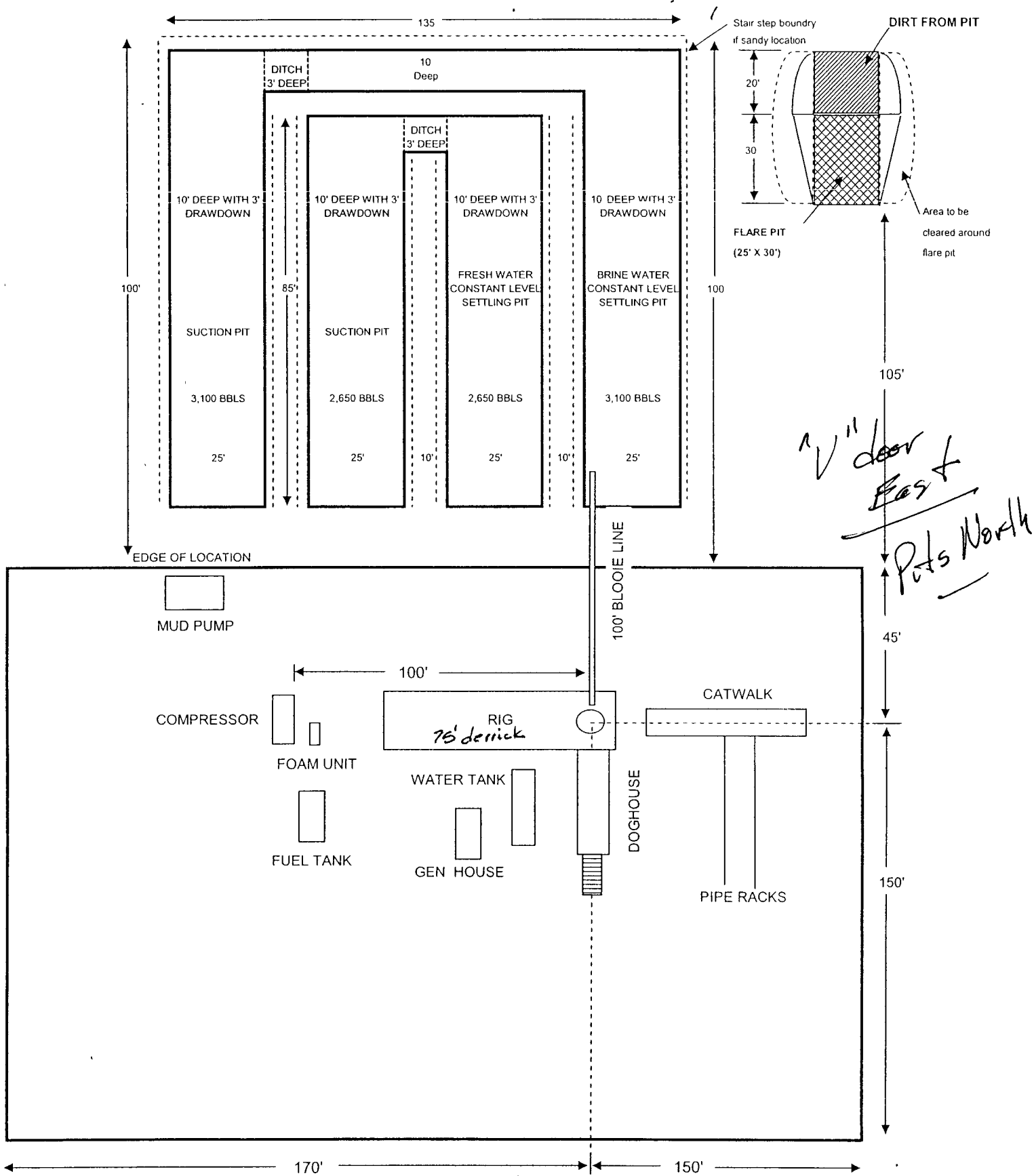
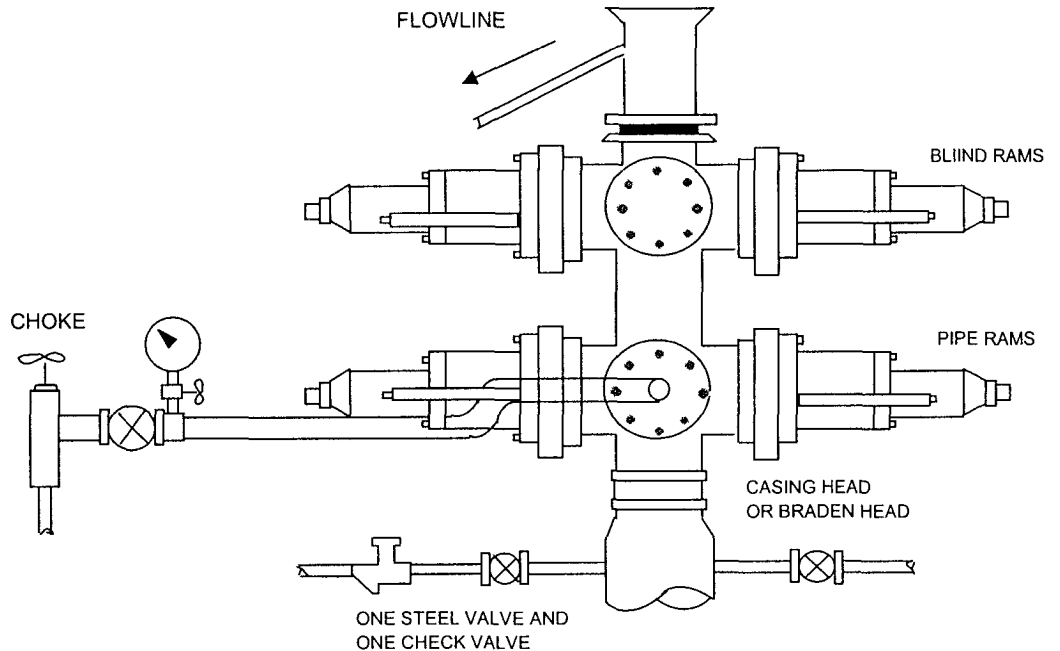
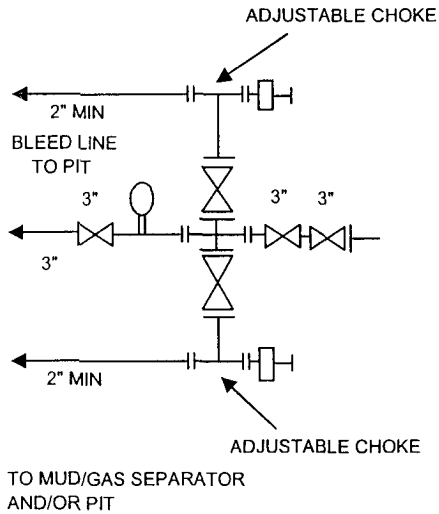


Exhibit "A"

BEPCO, L. P.

3000 PSI WP (8")

TO MUD/GAS SEPARATOR
AND/OR PIT



THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

- A. One double gate Blowout preventer with lower rams for pipe and upper rams blind, all hydraulically controlled.
- B. Opening on preventers between rams to be flanged, studded or clamped and at least two inches in diameter.
- C. All connections from operating manifold to preventers to be all steel hose or tube a minimum of one inch in diameter.
- D. The available closing pressure shall be at least 15% in excess of that required with sufficient volume to operate (close, open, and re-close) the preventers.
- E. All connections to and from preventers to have a pressure rating equivalent to that of the BOP's.
- F. Manual controls to be installed before drilling cement plug.
- G. Valve to control flow through drill pipe to be located on rig floor.
- H. Chokes must be adjustable. Choke spool may be used between rams.

DIAGRAM 1

MULTI-POINT SURFACE USE PLAN

NAME OF WELL: Capitan 9 Federal #1

Legal Description - Surface: 1650' FNL & 610' FWL, Section 9, T-21-S, R-29-E, Eddy County, New Mexico.

POINT 1: EXISTING ROADS

A) Proposed Well Site Location:

See Exhibit A and Survey Plats

B) Existing Roads:

From the junction of Co. Rd. 31 and US Highway 62-180, proceed east on 62/180 for approximately 1 mile to lease road (Mile Marker 51.7); thence south 3.1 miles to Golden "8" Battery. Just before battery turn left on lease road to Big Eddy Unit #163. Capitan 9 Federal #1 is a twin well to Big Eddy Unit #163.

C) Existing Road Maintenance or Improvement Plan:

See Exhibit B and Survey Plats.

POINT 2: NEW PLANNED ACCESS ROUTE

A) Route Location:

No new road is required.

B) Width

12'

C) Maximum Grade

Grade to match existing topography or as per BLM requirements.

D) Turnout Ditches

Spaced per BLM requirements.

E) Culverts, Cattle Guards, and Surfacing Equipment

If required, culverts and cattle guards will be set per BLM Specs.

POINT 3: LOCATION OF EXISTING WELLS

Exhibit A indicates existing wells within the surrounding area.

POINT 4: LOCATION OF EXISTING OR PROPOSED FACILITIES

Page 2

- A) Existing facilities are located within one mile which are owned or controlled by lessee/operator:

Closest Oil/Gas production facilities are located at the Golden "8" Battery. The Golden "8" Battery is located approximately 5/8 of a mile west of the proposed well.

- B) New Facilities in the Event of Production:

BEPCO, L.P. will install an electric line and a flowline that will service the Capitan 9 Federal #1. The electric line will consist of 12,470 volts 3 phase. The electric line will connect with the existing line that services Golden Lane "D" wells. The flowline will consist of 2-7/8" steel pipe and will run along the side of the lease road from the Golden "8" Federal battery located at Sec. 8, T21S, R29E to Big Eddy Unit #163 well pad. The flowline and electric line will lie within 30' of the center line of the roadway. The existing ROW's have been arch cleared. A map is attached showing the proposed route of the electric line and flowline. BEPCO will install additional production facilities as needed for oil and gas measurement. See Exhibit "C".

- C) Rehabilitation of Disturbed Areas Unnecessary for Production.

Following flowline construction, those access areas required for continued production will be graded to provide drainage and minimize erosion. The areas unnecessary for use will be graded to blend in with the surrounding topography (see Point 10)

POINT 5: LOCATION AND TYPE OF WATER SUPPLY

- A) Location and Type of Water Supply

Fresh water will be hauled from Johnson Station 50 miles east of Carlsbad, New Mexico or other commercial facilities. Brine water will be hauled from commercial facilities.

- B) Water Transportation System

Water hauling to the location will be over the existing and proposed roads.

POINT 6: SOURCE OF CONSTRUCTION MATERIALS

- A) Materials

Nearest location of caliche source is in Section 5 (NWSE) approximately 1 mile north of Capitan 9 Federal #1. (See Exhibit A)

- B) Land Ownership

Federally Owned.

- C) Materials Foreign to the Site

No construction materials foreign to this area are anticipated for this drill site

- D) Access Roads

See Exhibit B.

POINT 7: METHODS FOR HANDLING WASTE MATERIAL

Page 3

A) Cuttings

Cuttings will be contained in the reserve pit.

B) Drilling Fluids

Drilling fluids will be contained in the reserve pit.

C) Produced Fluids

Water production will be contained in the reserve pit.

Hydrocarbon fluid or other fluids that may be produced during testing will be retained in test tanks. Prior to cleanup operations, any hydrocarbon material in the reserve pit will be removed by skimming or burning as the situation would dictate.

D) Sewage

Current laws and regulations pertaining to the disposal of human waste will be complied with.

E) Garbage

Portable containers will be utilized for garbage disposal during the drilling of this well.

F) Cleanup of Well Site

Upon release of the drilling rig, the surface of the drilling pad will be graded to accommodate a completion rig if electric log analysis indicates potential productive zones. The reserve pit will be fenced and bird netted. The fence will be maintained until the pit is backfilled. Reasonable cleanup will be performed prior to the final restoration of the site.

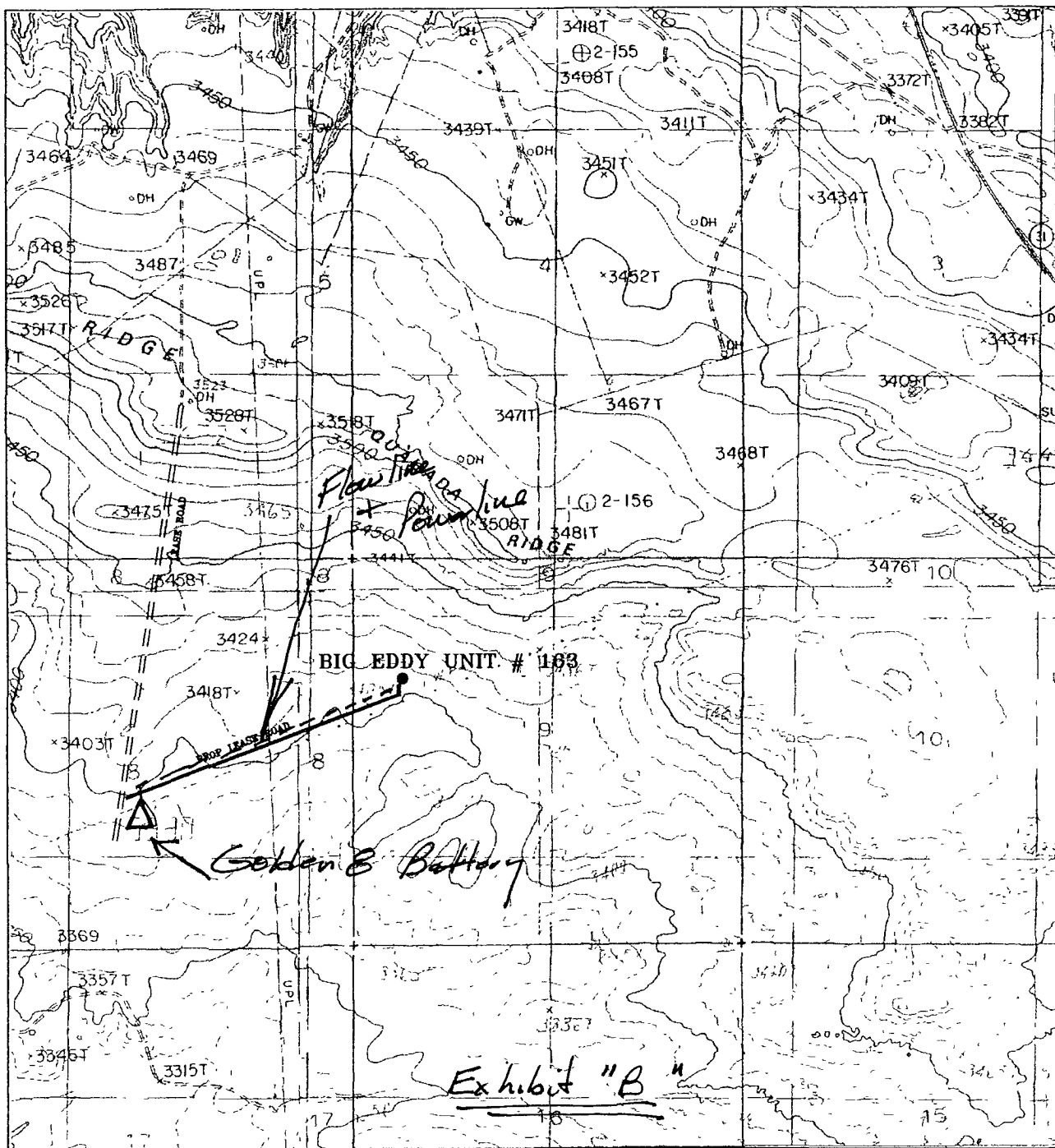
POINT 8: ANCILLARY FACILITIES

None required.

POINT 9: WELL SITE LAYOUT

A) Rig Orientation and Layout

Exhibit "D" shows the dimensions of the well pad and reserve pits, and the location of major rig components. Only minor leveling of the well site will be required. No significant cuts or fills will be necessary.



BIG EDDY UNIT #163

Located at 1650' FNL and 660' FWL
 Section 9, Township 21 South, Range 29 East,
 N.M.P.M., Eddy County, New Mexico.

**basin
surveys**

focused on excellence
in the oilfield

P O Box 1786
 1120 N West County Rd
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

W O Number 6594T

Survey Date 07-08-2006

Scale 1" = 2000'

Date 07-12-2006

BEPCO, L.P.

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 2 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

- 1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts to the BLM.**
- 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.

B. CASING

- 1. The 8-5/8 inch surface casing shall be set **a minimum of 25 feet into the Rustler Anhydrite and above the salt at approximately 980 feet** and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial action will be done prior to drilling out that string.

Medium cave/karst.

2. The minimum required fill of cement behind the 5-1/2 inch production casing is:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

3. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. The appropriate BLM office shall be notified a minimum of 2 hours in advance for a representative to witness the tests.
 - a. The tests shall be done by an independent service company.
 - b. The results of the test shall be reported to the appropriate BLM office.
 - c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
 - d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
 - e. **No variance given with two casing strings. Schematic qualifies as 2M system, which is minimum acceptable per Onshore Order II.**

Engineer on call phone (after hours): Carlsbad: (575) 706-2779

WWI 120407