

ATC-07-760

NOV 09 2007

OCD-ARTESIA 1328

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Form 3160-3 (April 2004)

OCD-ARTESIA RESUBMITTAL

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

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

Form with fields 1a-23 including Type of work, Name of Operator, Address, Location of Well, Distance in miles, etc.

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. 2. A Drilling Plan. 3. A Surface Use Plan... 4. Bond to cover the operations... 5. Operator certification. 6. Such other site specific information...

25 Signature: Angela Lightner, Title: Consultant, Name: Angela Lightner, Date: 09/19/2007

Approved by (Signature): James A. Ames, Title: FIELD MANAGER, Name: James A. Ames, Office: CARLSBAD FIELD OFFICE, Date: NOV 7 2007

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 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 page 2)

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

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

Roswell Controlled Water Basin

DISTRICT I
1626 N. FRENCH DR., BOBBS, NM 86240

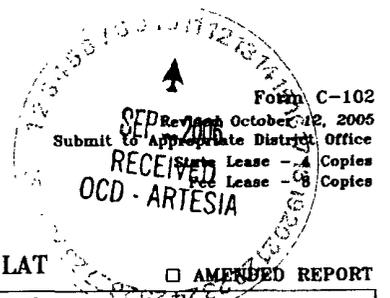
DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Artec, 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



WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

API Number	Pool Code 97219	Pool Name Morrow
Property Code 303860	Property Name FRONTIER 9 FEDERAL COM	Well Number 1
OGRID No. 243452	Operator Name Corkran Energy, L.P.	Elevation 4603'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	9	23-S	22-E		1980	SOUTH	1980	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	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>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=479119.7 N X=384986.3 E</p> <p>LAT.=32°19'00.00" N LONG.=104°42'20.29" W</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Lindsay Truesdell</i> 9/8/2006 Signature Date Lindsay Truesdell Printed Name</p> <hr/> <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>SEPTEMBER 1, 2006 Date Surveyed MR</p> <p><i>Gary Ridgion</i> Signature & Seal of Professional Surveyor 06-11-1355 Certificate No. GARY RIDGION 12841</p>
--	---

Arrant, Bryan, EMNRD

From: Arrant, Bryan, EMNRD
Sent: Wednesday, October 25, 2006 11:26 AM
To: 'angela@rkford.com'
Subject: FW: test

From: Arrant, Bryan, EMNRD
Sent: Wednesday, October 25, 2006 11:25 AM
To: Arrant, Bryan, EMNRD
Cc: john_simitz@blm.gov
Subject: RE: test

Dear Angela,

The API # for the Frontier '9' Federal Com. # 1, located in Section 9 of T-23-S R 22-E in Eddy County, New Mexico is: 30-015-35207.

Please note that the condition of approval (**in part**) is that a fresh water mud system is to be used in drilling the surface and intermediate strings of casing.

You may review this particular matter in more detail of the conditions of approval in the BLM's:

CONDITION OF APPROVAL-DRILLING II. CASING: items 1,2 and 3.

If you have any questions about this matter, please call me or Mr. John Simitz at: 505-627-0288 in Roswell at the Bureau of Land Management's office.

Yours truly,

Bryan G. Arrant
NMOCD District II Geologist
505-748-1283 ext. 103

CC: Well file

From: Arrant, Bryan, EMNRD
Sent: Wednesday, October 25, 2006 9:49 AM
To: 'angela@rkford.com'
Subject: test

10/25/2006



R. K. FORD & ASSOCIATES

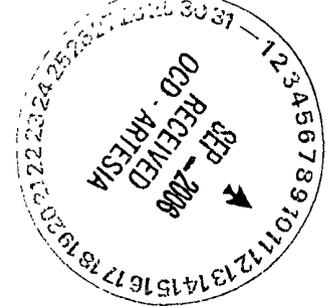
Engineering, Drilling & Completion

415 West Wall
Suite 1700 • Wilco Building
Midland, Texas 79701

(915) 682-0440
Fax (915) 682-0441
e-mail: RKFord1700@AOL.COM

September 7, 2006

State of New Mexico
Oil Conservation Division
Attn: Mr. Bryan Arrant
1301 West Grand Avenue
Artesia, New Mexico 88210



Re: Preston Exploration, LLC: Application to drill the Frontier '9' Federal Com. # 1,
located in Section 9, Township 23 South, Range 22 East, 1980' FSL & 1980'
FEL, Eddy County, New Mexico, NMPM

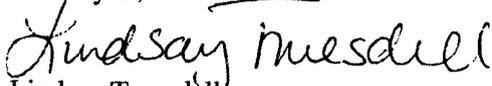
Dear Mr. Arrant,

On August 16, 2006 our office received your letter in regards to Preston Explorations APD for the Frontier 9 Fed Com #1 well. You had several issues about the APD that needed to be resolved before you could issue and API number and this letter is to hopefully correct the problems.

The first concern you had was the need for an H₂S contingency plan. Sources at Preston Exploration, LLC advised me that they do not anticipate enough H₂S from the surface to TD to meet the OCD's minimum requirements for the submission of a contingency plan per Rule 118, however H₂S monitoring equipment will be on location from below surface casing to TD. Secondly was an updated C-102, which I have enclosed. On August 17, 2006, you and I had a conversation on the telephone that resolved the issue over the mud program.

Please let me know if you need any additional information.

Thank you,


Lindsay Truesdell
R.K. Ford and Associates

United States Department of the Interior
Bureau of Land Management
Roswell Field Office
2909 Second Street
Roswell, New Mexico 88201-1287

Statement Accepting Responsibility for Operations

Operator Name: Corkran Energy, LP
Street or Box: 330 Beardsley Lane, C-204
City, State: Austin, Texas
Zip Code: 78746

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Lease No: NM NM 113387

Legal Description of Land:

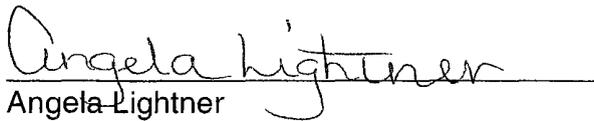
Township 23 South, Range 22 East, Eddy, New Mexico

E/2 of Section 9

Bond Coverage:

Corkran Energy, LP

BLM Bond File No.: NMB-000428

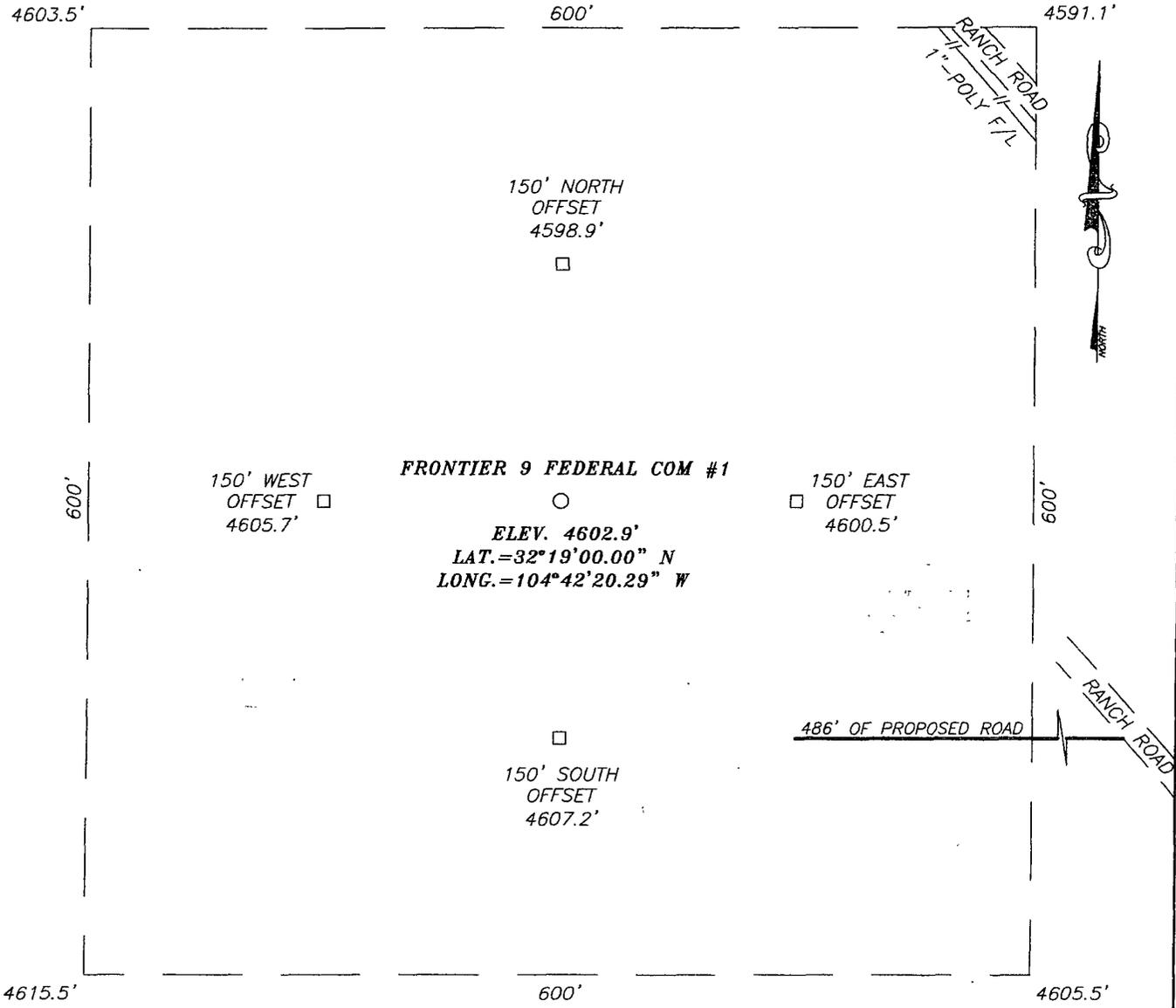


Angela Lightner

Agent

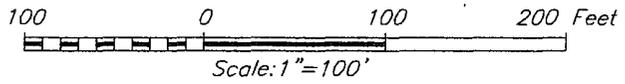
September 19, 2007

SECTION 9, TOWNSHIP 23 SOUTH, RANGE 22 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

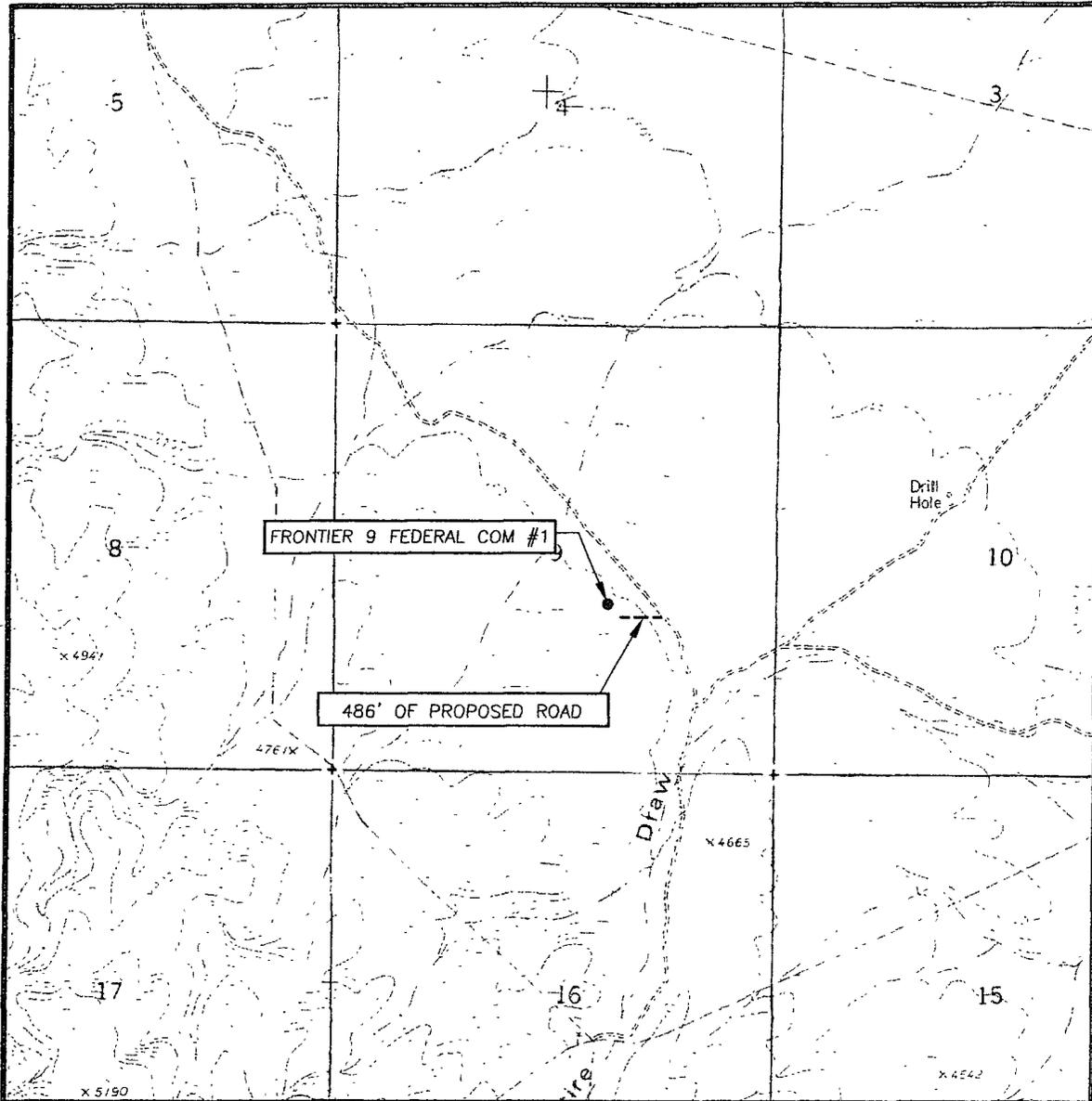
FROM THE INTERSECTION OF ST. HWY. #137 AND CO. RD. #405 (H BAR RANCH RD.) GO WEST ON CO. RD. #405 FOR APPROX. 5.5 MILES. TURN RIGHT (NW/WEST) AND GO APPROX. 0.4 MILES, CONTINUE SW FOR APPROX. 1.5 MILES TO THE EXISTING YATES BIG FREDDY #2. FROM THE SEC OF EXIST PAD GO CONTINUE SW FOR APPROX. 0.8 MILES TO A ROAD INTERSECTION, VEER RIGHT (NW) AND GO APPROX. 0.2 MILES TO A PROPOSED ROAD SURVEY. FOLLOW PROPOSED ROAD SURVEY APPROX. 486' TO THIS LOCATION.



PROVIDING SURVEYING SERVICES
 SINCE 1946
JOHN WEST SURVEYING COMPANY
 412 N. DAL PASO
 HOBBS, N.M. 88240
 (505) 393-3117

CORKRAN ENERGY, LP			
FRONTIER 9 FEDERAL COM #1 WELL LOCATED 1980 FEET FROM THE SOUTH LINE AND 1980 FEET FROM THE EAST LINE OF SECTION 9, TOWNSHIP 23 SOUTH, RANGE 22 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.			
Survey Date: 11/07/05	Sheet 1 of 1 Sheets		
W.O. Number: 06.11.1355	Dr By: J.R.	Rev 1: 12/19/06	
Date: 09/01/06	Disk: CD#5	06111355	Scale: 1"=100'

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
RED BLUFF DRAW, N.M. - 20'

SEC. 9 TWP. 23-S RGE. 22-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1980' FSL & 1980' FEL

ELEVATION 4603'

OPERATOR CORKRAN ENERGY, LP

LEASE FRONTIER 9 FEDERAL COM

U.S.G.S. TOPOGRAPHIC MAP
RED BLUFF DRAW, N.M.



PROVIDING SURVEYING SERVICES
 SINCE 1946
JOHN WEST SURVEYING COMPANY
 412 N. DAL PASO
 HOBBS, N.M. 88240
 (505) 393-3117

DRILLING PROGRAM

Corkran Energy, LP
FRONTIER 9 FEDERAL COM #1
1980' FSL & 1980' FEL
Section 9, T-23-S, R-22-E
Eddy County, New Mexico

The following items supplement Form 3160-3 in accordance with instructions contained in Onshore Oil and Gas Orders #1 and #2, and all other applicable federal and state regulations.

1. ESTIMATED TOPS OF GEOLOGIC MARKERS (TVD):

San Andres	550'
Glorietta	2,050'
Bone Spring Lm	3,100'
3 rd Bone Spring	5,460'
Wolfcamp	5,705'
Cisco	7,580'
Canyon	8,050'
Strawn	8,695'
Atoka	8,975'
Atoka Clastics	9,215'-9,420'
Top Morrow A	9,420'
Lower Morrow A	9,600'
Morrow Clastics B	9,660'
Lower Morrow C	9,840'
Lower Morrow C pay sand	9,935'
Miss (Barnett Shale)	9,970'
Total Depth	10,200'

2. ESTIMATED DEPTHS TO WATER, OIL, OR GAS FORMATIONS:

Fresh Water	Above 200'
Oil and Gas	Delaware, Atoka Sand, Middle Morrow, Lower Morrow

3. Pressure control equipment: The blow out preventer equipment (BOP) shown in Exhibit #1 will consist of a 3000 psi double ram type preventer for drilling the 12-1/4" hole. The blowout preventer stack for the production (8-1/2") hole as shown on Exhibit #2 will consist of at least a double-ram blowout preventer and annular preventer rated to 3000 psi working pressure. A diagram of the BOPs and choke manifold is attached. All BOPs and accessory equipment will be tested according to Onshore Order #2 before drilling out.

4. PROPOSED CASING PROGRAM: *Need Safety factors, not performance factors*

Hole Sz	Interval	Csg	Wt	Grade, Jt	Collapse	Tension	Burst	N-U
26"	0 - 40'	20"	94#	Structural				
17-1/2"	0 - 380'	13-3/8"	54.5#	J-55, STC	1130	514	2730	JN 10/11/07
12-1/4"	0 - 2,000'	9-5/8"	36#	K-55, LTC	2020	489	3520	JN
8-1/2"	0 - 9,800' <i>10,200'</i>	5-1/2"	17#	N-80, LTC	6280	348	7740	JN

SEE E-mail
From Brian Ramey

Equivalent or adequate grades and weights of casing may be substituted at time casing is run, depending on availability.

5. PROPOSED CEMENTING PROGRAM

20" conductor	cemented with ready mix to surface
13-3/8" surface	590 sxs Class C cement + 2% CaCl + 0.25 lbs/sk Cello Flake + 56.3% fresh water Yield = 1.35, slurry wt. = 14.80
9-5/8" intermediate	Lead slurry: 265 sxs 50:50 POZ class C cement + 10% Bentonite + 5% Sodium Chloride + 0.25 lbs/sk Cello Flake + 139.7% fresh water. Yield = 2.45, slurry wt. = 11.80 Tail slurry: 200 sxs Class C cement + 2% CaCl + 56.4% fresh water. Yield = 1.34, slurry wt = 14.80
5-1/2" production	1080 sxs 50:50 POZ Class H Cement + 2% Bentonite + 0.5% FL-25 + 0.5% FL-52A + 5% Solium Chloride + 58.3% fresh water. Yield = 1.3, slurry wt. = 14.20.

see
COA
TOCs
not
shown

6. PROPOSED MUD SYSTEM:

DEPTH	DESCRIPTION	MUD WEIGHT	VISCOSITY	WATER LOSS
0 - 380'	fresh water	8.6 - 8.9 ppg	34 - 40	NC
380' - 2,000'	<i>fresh</i> brine water	8.4 - 8.5 ppg	28 - 29	NC
2,000' - 7,800'	fresh/brine/mud	8.4 - 9.4 ppg	28 - 29	NC
7,800' - 10,200'	fresh water	9.4 - 9.6 ppg	32 - 36	15-6 cc

see
COA →

7. TESTING, LOGGING AND CORING PROGRAM:

Samples	10' Samples from 2,000'
DST's	Possible Cisco, Strawn, Atoka, Morrow, Mississippian
Logging	Density, Resistivity (Sonic, RFT's, EMI - possible)
Coring	Possible sidewall core



"Brian Ramey"
<B.Ramey@corkranenergy.com>

10/11/2007 12:49 PM

To <duncan_whitlock@nmblm.gov>
cc
bcc
Subject: Frontier 9 Fed Com. #1

Duncan,

Please be advised that Corkran Energy, LP intends to use new casing material for all strings of casing run in the Frontier 9 Fed Com #1 well.

If you have any additional questions, please let me know.

Brian Ramey
Operations Manager
Corkran Energy, LP
b.ramey@corkranenergy.com
432.528.0076 (cell)
432.218.8750 (home)

Operations Office
Corkran Energy, LP
303 W. Wall Street, Suite 900
Midland, TX 79701
432.684.0809
432.684.0817 fax

8. ABNORMAL PRESSURES AND TEMPERATURES:

None anticipated. Maximum bottom hole pressure should not exceed 5,200 psi.

This area has a potential H₂S hazard. An H₂S drilling plan is attached.

ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

It is planned that operations will commence on November 30, 2007. Drilling should be completed within 20 days followed by completion operations.

See COA
Part South

DRILLING RIG LAYOUT
~~Preston Exploration, LLC~~
Frontier 9 Federal Com #1
CORKRAN ENERGY LP

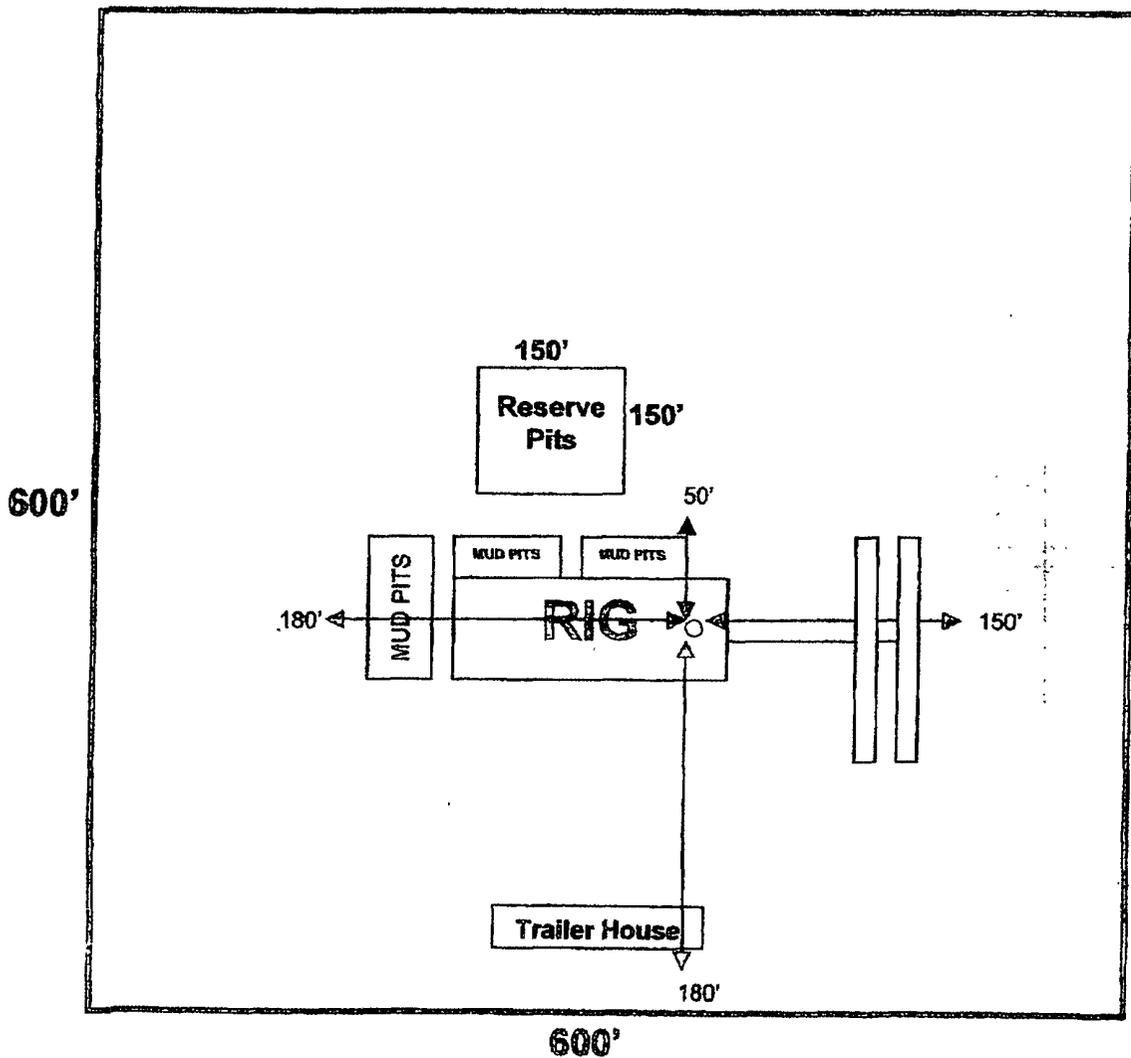
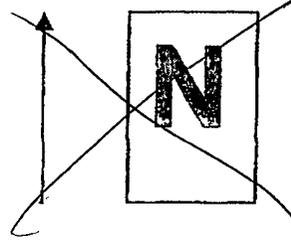
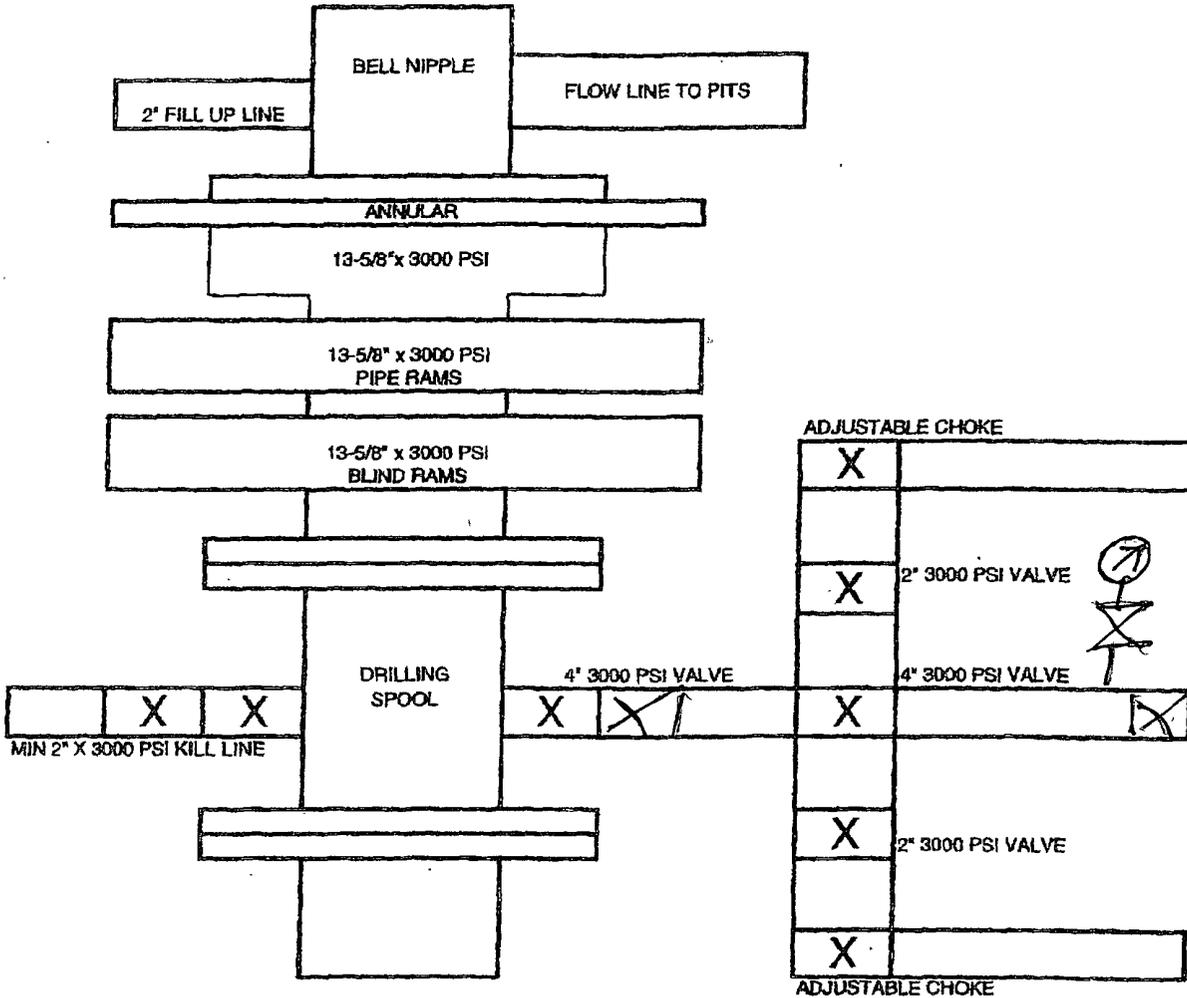


Exhibit "C"

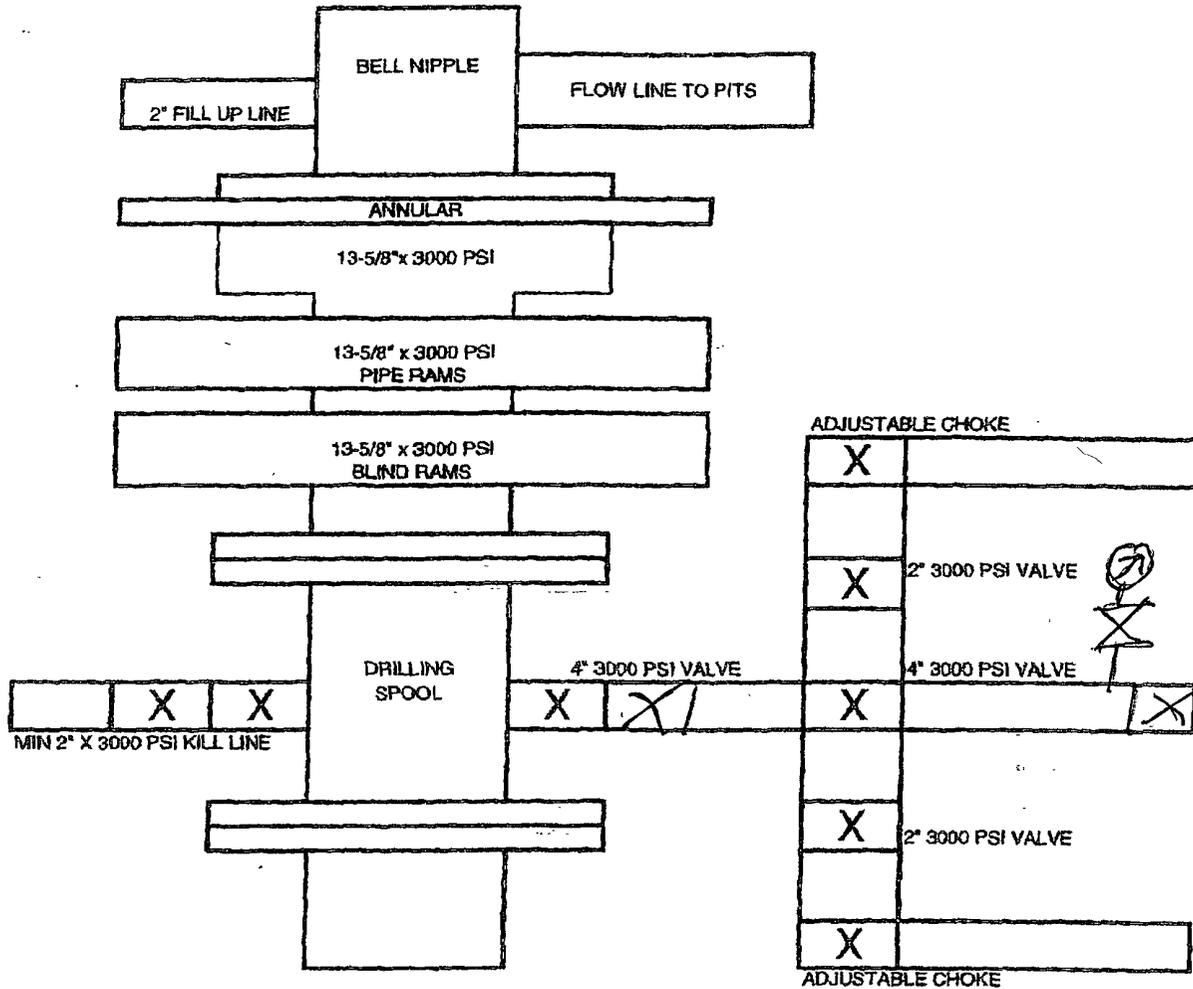
BOP SCHEMATIC FOR
12-1/4" HOLE



CORKRAN ENERGY, LP
~~Preston Exploration, LLC~~
 Frontier 9 Federal Com #1
 Eddy County, New Mexico

Exhibit 1

BOP SCHEMATIC FOR
8-1/2" HOLE



CORKRAN Energy, LP
Preston Exploration, LLC
Frontier 9 Federal Com #1
Eddy County, New Mexico

Exhibit 2

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

Corkran Energy, LP Frontier 9 Federal Com #1

I. HYDROGEN SULFIDE TRAINING

- A.** All regularly assigned personnel, contracted or employed by Cabal Energy Corporation, will receive training from a qualified instructor in the following areas prior to commencing drilling potential hydrogen sulfide bearing formations in this well:
1. The hazards and characteristics of hydrogen sulfide (H₂S).
 2. The proper use and maintenance of personal protective equipment and life support systems.
 3. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures and prevailing winds.
 4. The proper techniques for first aid and rescue procedures.
- B.** In addition, supervisory personnel will be trained in the following areas:
1. The effects of H₂S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
 3. The contents and requirements of the H₂S Drilling Operations Plan.
- C.** There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S Drilling Operations Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

II. H₂S SAFETY EQUIPMENT AND SYSTEMS

Note: All H₂S safety equipment and systems will be installed, tested and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H₂S.

A. Well Control Equipment.

1. Flare line with continuous pilot.
2. Choke manifold with a minimum of one remote choke.
3. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
4. Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head and flare.

B. Protective Equipment for Essential Personnel:

Mark II Surviveair 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

C. H₂S Detection and Monitoring Equipment:

1. Two portable H₂S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H₂S levels of 20 ppm are reached.
2. One portable SO₂ monitor positioned near flare line.

D. Visual Warning Systems

1. Wind direction indicators are shown on well site diagram.
2. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used when appropriate. See example attached.

E. Mud Program

1. The Mud Program has been designed to minimize the volume of H₂S circulated to the surface. Proper mud weights, safe drilling

practices and the use of H₂S scavengers will minimize hazards when penetrating H₂S bearing zones.

2. A mud-gas separator will be utilized as needed.

F. Metallurgy:

All drill strings, casing, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and line and valves shall be suitable for H₂S service.

G. Communication:

Cellular telephone communications in company vehicles, rig floor and mud logging trailer.

H. Well Testing:

Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing and an H₂S environment will be conducted during the daylight hours.

MULTI POINT SURFACE USE AND OPERATIONS PLAN FOR

Corkran Energy, LP
Frontier 9 Federal Com #1

Surface Location: 1980' FSL & 1980' FEL
Section 9, T-23-S, R-22-E
Eddy County, New Mexico
Lease No.: NMNM 113387

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 operation.

1. EXISTING ROADS:

A. Directions: From the intersection of St. Hwy #137 and Co. Rd. #405 (H Bar Ranch Road) go West on Co. Rd. #405 for approximately 5.5 miles. Turn right (Northwest/West) and go approximately 0.4 miles, continue southwest for approximately 1.5 miles to the existing Yates Big Freddy #2 well. From the southeast of existing pad continue to go southwest for approximately 0.8 miles to a road intersection, veer right (northwest) and go approximately 0.2 miles to a proposed road survey. Follow proposed road survey for approximately 486' to this location.

2. PLANNED ACCESS ROAD:

- A. Length and Width: Exhibit "B" is the proposed access road. It will be approximately 486' long and 12' wide and run West to the East corner of the location.
- 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 necessary.
- E. Cuts and Fills: 1' cut to the north with 1' fill to the south
- F. Gates and Cattle Guards: None necessary.
- G. Off lease right of way: None required.

3. LOCATION OF EXISTING WELLS:

Existing wells in the immediate area are shown on the Vicinity Map, Exhibit "A".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. Corkran Energy, LP has no production facilities on this lease at this time.
- B. If the well proves to be commercial, the necessary production facilities, gas separation-process equipment and tank battery, if required, will be installed on the drilling pad.

5. LOCATION AND TYPE OF WATER SUPPLY:

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 MATERIAL:

Caliche for surfacing the proposed access road and well site pad will be obtained from the location, if available, or from an approved Federal pit. 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 drilling 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 tests will be stored in test tanks.
- F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- G. All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations.

D. RECORD LESSEE:

J Bar Cane Inc.

100%

E. BOND COVERAGE:

\$25,000 Statewide Oil & Gas Surety Bond
BLM Bond #: NM000428

12. OPERATOR'S REPRESENTATIVE:

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

R. K. Ford & Associates
415 West Wall, Suite 1700
Midland, Texas 79701
432-682-0440 (Office)
432-682-0441 (Fax)
432-570-7216 (Home)
432-559-2222 (Cell)
Randell@rkford.com (E-mail)

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 Corkran Energy, LP and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

October 2, 2007


Angela Lightner
Consultant

CORKRAN ENERGY, LP

September 19, 2007

To whom it may concern;

I, Brian Ramey with Corkran Energy, LP, authorize Angela Lightner with R. K. Ford and Associates to act as agent and file regulatory forms with the New Mexico OCD and BLM.

Best regards,

A handwritten signature in cursive script that reads "Brian Ramey".

Brian Ramey

Operations Manager

Corkran Energy, LP

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,
(505) 361-2822

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. Please report measurements to the BLM if Hydrogen Sulfide is encountered.**
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. When floor controls are required, (3M or Greater) controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING

1. The 13-3/8 inch surface casing shall be set at **approximately 380** feet and cemented to the surface. **Fresh water mud to be used to setting of 13-3/8" surface casing and 9-5/8" intermediate casing to adequately protect the water in this township.**
 - 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.

High cave/karst.

Possible lost circulation in the San Andres, Wolfcamp, and Strawn formations.

Possible high pressure gas bursts from the Wolfcamp and over pressured zones in the Pennsylvanian Section.

- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

Cement to surface. If cement does not circulate see B.1.a-d above.

This casing should be set at approximately 1900 feet at the base of the Goat Seep Reef and fresh water mud is to be used to this setting depth.

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

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

Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Additional cement required.**

- 4. 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. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation **if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days**. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. 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.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

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