

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

962

AT507-472

Form 3160-3
(August 1999)

JUL
OCD-ARTE...

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HIGH CAVEKARST



APPLICATION FOR PERMIT TO DRILL OR REENTER

0
OMB No. 1004-0136
Expires November 30, 2000

1a. Type of Work: ☒ DRILL ☐ REENTER

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

2 Name of Operator

Yates Petroleum Corporation

CARLSBAD CONTROLLED WATER BASIN

3A Address 105 South Fourth Street
Artesia, New Mexico 88210

3b. Phone No. (include area code)
(505) 748-1471

5. Lease Serial No.

NM-104661

6 If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8 Lease Name and Well No.

Paintbrush BHR Federal Com.2

9. API Well No

30-015-35711

4. Location of Well (Report location clearly and in accordance with any State requirements *)

At surface 1060' FNL and 1650' FWL
At proposed prod. Zone Same

10 Field and Pool, or Exploratory

Chosa Draw Morrow

11 Sec., T., R., M., or Blk. and Survey or Area

Section 20, T25S-R26E

14. Distance in miles and direction from nearest town or post office*

Approximately 17 miles south of Carlsbad, New Mexico.

12 County or Parish

Eddy County

13 State

NM

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

1060'

16. No. of Acres in lease

1600

17. Spacing Unit dedicated to this well

N/2

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

1800 feet

19. Proposed Depth

12250'

20. BLM/BIA Bond No. on file

NMB-000434

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

3436' GL

22. Approximate date work will start*

ASAP

23. Estimated duration

45 days

24. Attachments

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

1. Well plat certified by a registered surveyor
2. A Drilling Plan.
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.

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized office

25 Signature

Cy Cowan

Name (Printed/Typed)

Cy Cowan

Date

6/18/2007

Regulatory Agent

Regulatory Agent

Approved by (Signature)

/S/ DON PETERSON

Name (Printed/Typed)

/S/ DON PETERSON

Date

JUL 17 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.

APPROVAL FOR TWO YEARS

Conditions of approval, if any, are attached.

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)

C-144 attached

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 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources DepartmentForm C-102
Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 74900	Pool Name Chosa Draw; MORROW
Property Code 35387	Property Name PAINTBRUSH "BHR" FEDERAL COM.	Well Number 2
OGRID No. 025575	Operator Name YATES PETROLEUM CORPORATION	Elevation 3436

Surface Location

UL or lot No. B	Section 20	Township 25S	Range 26E	Lot Idn	Feet from the 1060	North/South line NORTH	Feet from the 1650	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 320	Joint or Infill	Consolidation Code	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

	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <i>Cy Cowan</i> Date: 6/20/07 Cy Cowan, Regulatory Agent
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date Surveyed: 5/14/2007 Signature & Seal of Professional Surveyor:

GEODETIC COORDINATES
 NAD 83 NME
 SURFACE HOLE LOCATION
 Y=407368.1 N
 X=548051.6 E
 LAT.=32.119944
 LONG.=104.311639
 (NAD-83)

YATES PETROLEUM CORPORATION
Paintbrush "BHR" Federal Com. #2
 1060' FNL and 1650' FEL
 Section 20-T25S-R26E
 Eddy County, New Mexico

1. The estimated tops of geologic markers are as follows:

Delaware	1664'	Strawn	10,570'
Cherry Canyon	3064'	Atoka	10,820'
Brushy Canyon	4432'	Morrow Clastics	11,335'
Bone Spring	5212'	Lower Morrow	11,900'
3 rd Bone Spring	8026'	TD	12,250'
Wolfcamp	8428'		

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

Water: 118'
 Oil or Gas: All potential zones

3. Pressure Control Equipment: BOPE will be installed on the 9 5/8" casing and rated for 5000 BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout Preventor controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventors will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B.

Auxiliary Equipment:

- A. Auxiliary Equipment: Kelly cock, pit level indicators, flow sensor equipment and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.

4. THE PROPOSED CASING AND CEMENTING PROGRAM:

A. Casing Program: **(All New)**

See Cor

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt./Ft</u>	<u>Grade</u>	<u>Thread</u>	<u>Interval</u>	<u>Length</u>
17 1/2"	13 3/8"	48#	H-40	ST&C	0-400'	400'
12 1/4"	9 5/8"	36#	J-55	ST&C	0-1700'	1700'
8 3/4"	7 "	26#	J-55	LT&C	0-200'	200'
8 3/4"	7"	23#	J-55	LT&C	200'-5300'	5100'
8 3/4"	7"	26#	J-55	LT&C	5300'-7400'	2100'
8 3/4"	7"	26#	L-80	LT&C	7400'-8600'	1200'
6 1/8"	4 1/2"	11.6#	HCP-110	LT&C	0'-12250'	12250'

Yates Petroleum Corporation requests a variance to install a rotating head on the surface casing strings when intermediate casing will be set. If a BOP system is required then we wish to install a 2M system and receive a variance to test the system to 1000# using the rig pumps. The test will be held for 30 minutes on each system component. Components to be tested include pipe rams, blind rams, and annular preventer.

7" casing will only be set if hole conditions dictate.

Minimum Casing Design Factors: Collapse 1.125, Burst 1.8, Joint Strength 2.0

REVISED FOR BLM 6/26/07

B. CEMENTING PROGRAM:

Surface casing: 220 sx Prem + "C" (YLD 1.35 WT.14.8). Tail with 200 sx Prem + "C" (YLD 1.35 WT 14.8).

Intermediate Casing:

Intermediate I: 9 5/8" Casing: 400 sx Prem Lite (YLD 1.97 WT 12.5). Tail in with 225 sx Premium PI + 2% CaCl₂ (YLD 1.35 WT 14.8).

Intermediate II: 7" Casing: 400 sx Interfill (YLD 2.76 WT 11.50) Tail in with 650 sx Super "H" (YLD 1.30 WT 16.6).

Production Casing: 475 sx Super H (YLD 1.67 WT 13.0).

5. Mud Program and Auxiliary Equipment:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
Spud to 400'	Freshwater Gel	8.4-9.0	32-34	N/C
400'-1700'	Brine	10	28	N/C
1700'-8600'	Fresh Water	8.4-9.9	28	N/C
8600'-10700'	Brine	10	28	N/C
10700'-12250'	Salt Gel/Starch/6% KCL	10.7-11	36-40	<10cc

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Mud will be checked hourly by rig personnel.

6. EVALUATION PROGRAM:

Samples: 10' from out from under surface casing.

Logging: Platform Express, CMR over Delaware and possible Strawn and Morrow.

Coring: None anticipated.

DST's: None anticipated.

7. Abnormal Conditions, Bottom hole pressure and potential hazards:

Anticipated BHP:

From: Spud	TO 400'	Anticipated Max.	BHP: 190	PSI
From: 400'	TO 1700'	Anticipated Max.	BHP: 885	PSI
From: 1700'	TO 8600'	Anticipated Max.	BHP: 4430	PSI
From: 8600'	TO 12250'	Anticipated Max.	BHP: 7010	PSI

Abnormal Pressures Anticipated: None

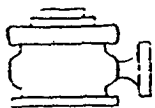
Lost Circulation Zones Anticipated: None.

H₂S Zones Anticipated: None

Maximum Bottom Hole Temperature: 156° F

8. ANTICIPATED STARTING DATE:

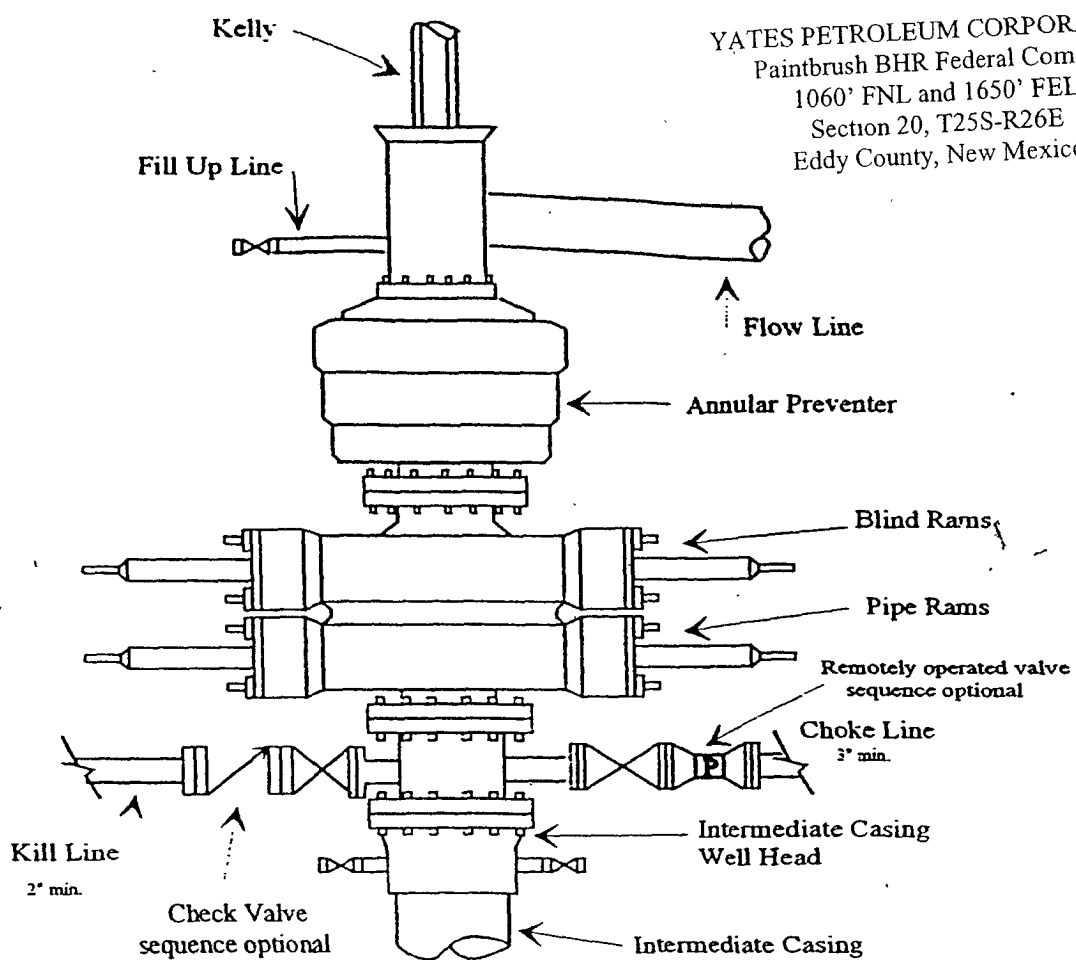
Plans are to drill this well as soon as possible after receiving approval. It should take approximately 35 days to drill the well with completion taking another 20 days.



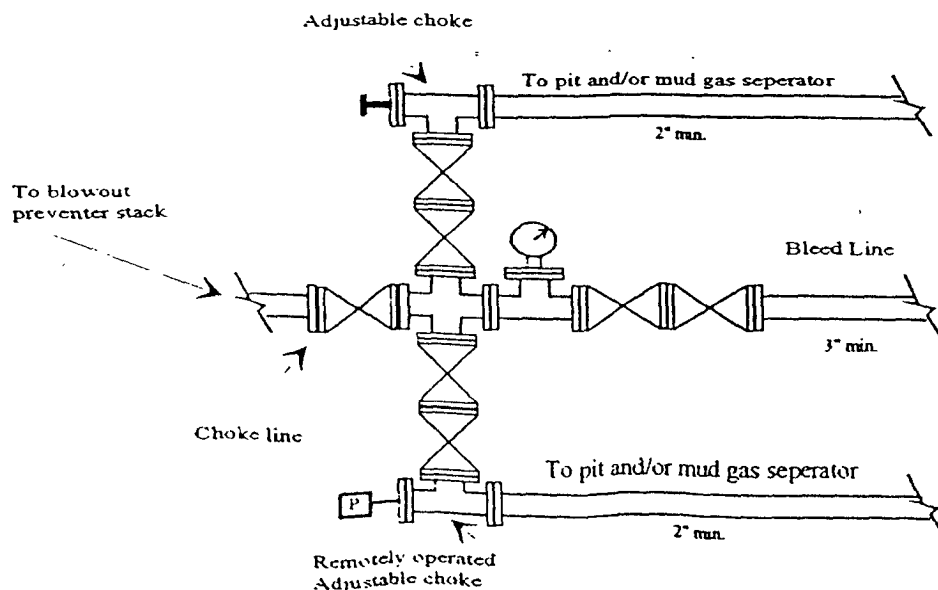
Yates Petroleum Corporation

BOP-4

Typical 5,000 psi Pressure System Schematic Annular with Double Ram Preventer Stack



Typical 5,000 psi choke manifold assembly with at least these minimum features



MULTI-POINT SURFACE USE AND OPERATIONS PLAN
YATES PETROLEUM CORPORATION
Paintbrush BHR Federal Com. #2
1060' FNL and 1650' FEL
Section 20-T25S-R26E
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

Exhibit A is a portion of the BLM map showing the well and roads in the vicinity of the proposed location. The proposed wellsite is located approximately 17 miles southwest of Carlsbad, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

From the Carlsbad Airport go approximately 9.8 miles south on National Parks Highway to County Road 772 (Means and National Parks Highway). Turn left on CR 772 and go approximately 1.7 miles to intersection of County Roads 772 and 476. Turn left here and follow CR 772 as it loops around the ranch house. Continue south on CR 772 for approx. 2.8 miles. The road will fork here. Keep going south on CR-772 for approx. 1.9 miles. Turn left here on existing lease road and go approx. .5 of a mile to the Paintbrush BHR Federal Com. #1 location. Continue going east on lease road for another .2 of a mile. There will be a pipeline riser at this point. The new access road will start here going north.

2. PLANNED ACCESS ROAD:

- A. The proposed new access will be approximately 0.2 mile in length from the point of origin to the southeast corner of drilling pad. The road will lie in a south to north direction.
- B. The new road will be 14 feet in width (driving surface) and will be adequately drained to control runoff and soil erosion.
- C. The new road will be bladed with drainage on one side. Some traffic turnouts may be built.
- D. The route of the road is visible.
- E. Existing roads will be maintained in the same or better condition.

3. LOCATION OF EXISTING WELL

- A. There is drilling activity within a one-mile radius of the wellsite.
- B. An exhibit shows existing wells within a one-mile radius of the proposed wellsite.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

- A. There are production facilities on this lease at the present time.
- B. In the event that the well is productive, the necessary production facilities will be installed on the drilling pad. If the well is productive oil, a gas or diesel self-contained unit will be used to provide the necessary power. No power will be required if the well is productive of gas.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. It is planned to drill the proposed well with a cut brine water system. The water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit A.

6. SOURCE OF CONSTRUCTION MATERIALS:

The dirt contractor will locate the closest pit and obtain any permits and material needed for the construction.

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. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
- D. Oil produced during operations will be stored in tanks until sold.
- E. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- F. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary land fill. Burial on site is not approved.

8. ANCILLARY FACILITIES: None

9. WELLSITE LAYOUT:

- A. Exhibit C shows the relative location and dimensions of the well pad, the reserve pits, location of the drilling equipment, rig orientation and access road approach.
- B. The reserve pits will be plastic lined. Yates Petroleum Corporation is in full compliance with the OCD General Plan for Drilling Pits approved on April 15, 2004.
- C. A 600' x 600' area has been staked and flagged.

10. PLANS FOR RESTORATION

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the wellsite in as aesthetically pleasing a condition as possible.
- B. Unguarded pits, if any, containing fluids will be fenced until they have dried and been leveled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible. All pits will be filled level within 90 days after abandonment.

11. SURFACE OWNERSHIP: Bureau of Land Management, Carlsbad, New Mexico.

OTHER INFORMATION:

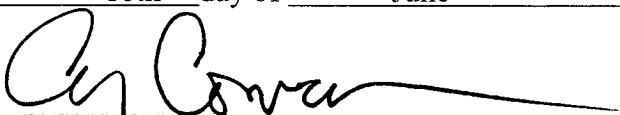
12. A. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.
- B. The primary surface use is for grazing.

CERTIFICATION
YATES PETROLEUM CORPORATION

PAINTBRUSH BHR FEDERAL COM. #2

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 18th day of June, 2007

Signature 

Name Cy Cowan

Position Title Regulatory Agent

Address 105 South Fourth Street, Artesia, New Mexico 88210

Telephone (505) 748-4372

Field Representative (if not above signatory) Jim Krogman, Drilling Supervisor

Address (if different from above) Same as above.

Telephone (if different from above) (505) 748-4215

E-mail (optional) _____

Conditions of Approval Cave and Karst

EA#: NM-080-07-0962

Lease #: NM-104661

**Yates Petroleum Corporation
Paintbrush BHR Fed. Com. #2**

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Berming:

Any tank batteries will be constructed and bermed large enough to contain any spills that may occur.

Bermed areas will be lined with rip-stop padding to prevent tears or punctures in liners and lined with a permanent 20 mil plastic liner.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:

Rotary drilling techniques in cave or karst areas will include the use of fresh water as a circulating medium in zones where caves or karst features are expected. Use depth to the deepest expected fresh water as listed in the geologist report.

Casing:

All casing will meet or exceed National Association of Corrosion Engineers specifications pertaining to the geology of the location and be run to American Petroleum Institute and BLM standards.

Lost Circulation:

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported.

Regardless of the type of drilling machinery used, if a void (bit drops) of four feet or more and circulation losses greater than 75 percent occur simultaneously while drilling in any cave-bearing zone, drilling operations will immediately stop and the BLM will be notified by the operator. The BLM will assess the consequences of the situation and work with operator on corrective actions to resolve the problem.

Abandonment Cementing:

Upon well abandonment the well bore will be cemented completely from 100 feet below the bottom of the cave bearing zone to the surface.

Pressure Tests:

Annual pressure tests will be performed by the Operator on all casing annuli. If the test results indicated a casing failure, remedial actions approved by the BLM will be undertaken to correct the problem.

Differential Shut-off Systems:

A leak detection system and differential shut off systems will be installed for pipelines and tanks used in production or drilling.

Record Keeping:

The Operator will track customary drilling activities, including the rate of penetration, pump pressure, weight on bit, bit drops, percent of mud returns, and presence of absence of cuttings returning to the surface. As part of customary record keeping, each detectable void or sudden increase in the rate of penetration not attributable to a change in the formation type should be documented and evaluated as it is encountered.

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Yates Petroleum Corp.
Well Name & No. Paintbrush BHR Federal Com # 2
Location: 1060'FNL, 1650'FEL, SEC20, T25S, R26E, Eddy County, NM
Lease: NM-104661

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I. DRILLING OPERATIONS REQUIREMENTS:

- A. The Bureau of Land Management (BLM) is to be notified a minimum of 4 hours in advance for a representative to witness:
1. Spudding well
 2. Setting and/or Cementing of all casing strings
 3. BOPE tests
- Eddy County call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822
- B. A Hydrogen Sulfide (H₂S) Drilling Plan is N/A.
- C. 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.
- D. If 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.

II. CASING:

- A. The 13.375 inch surface casing shall be set at approximately 400 feet and cemented to the surface.
1. 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.
 2. Wait on cement (WOC) time for a primary cement job will be a minimum of 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compression strength, whichever is greater. (This is to include the lead cement)
 3. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.
 4. If cement falls back, remedial action will be done prior to drilling out that string.
- B. The minimum required fill of cement behind the 9.625 inch intermediate casing is circulating cement to the surface. If cement does not circulate see A.1 thru 4. **This string will be set at least 100 feet below the base of the salt.**

- C. The minimum required fill of cement behind the 7 inch intermediate casing is cement shall extend 200 feet above the shoe of the 9.625 inch casing, if the 7 inch casing is run.
- D. The minimum required fill of cement behind the 4.5 inch production casing is cement shall extend 500 feet above the shoe of the 9.625 inch casing or the 7 inch_ intermediate casing, if the 7 inch casing is run.
- E. 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 I joints of the drill pipe will be installed prior to continuing drilling operations.

III. PRESSURE CONTROL:

- A. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2.
- B. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 2000 psi.
- C. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9.625 inch Intermediate casing shoe shall be 5000 psi.
- D. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 7 inch Intermediate casing shoe shall be 5000 psi.
- E. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - 1. The tests shall be done by an independent service company.
 - 2. The results of the test shall be reported to the appropriate BLM office.
 - 3. 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.
 - 4. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi in accordance with API RP 53, section 17. 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.
 - 5. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.
 - 6. A variance to test the BOP/BOPE nipped up on the surface casing to the reduced pressure of 1000 psi with the rig pumps is approved.

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.

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

V. Hazards:

1. Our geologist has indicated that there is high potential for Cave / Karst features, with a known cave near by.
2. Our geologist has indicated that there is potential for lost circulation in the Delaware.
3. Our geologist has indicated that there is potential for abnormal pressures in the Wolfcamp formation and Pennsylvanian system.

Engineering can be reached at 505-706-2779 for variances.

FWright 6/28/07