

OCD-ARTESIA

NOV 06 2007

OCD-ARTESIA

Form 3160-3
(February 2005)



SECRETARY'S POTASH
ED STATES
OF THE INTERIOR
AND MANAGEMENT
MIT TO DRILL OR REENTER

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

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

1a. Type of Work: ☒ DRILL ☐ REENTER
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone
2. Name of Operator

Yates Petroleum Corporation 025575

3a. Address: 105 South Fourth Street, Artesia, NM 88210
3b. Phone No (include area code): 505-748-1471

4. Location of well (Report location clearly and in accordance with any State requirements. *)
At surface: 2310' FNL and 480' FEL Unit Letter H
At proposed prod. zone: Same

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

Approximately 34 miles east of Malaga, NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg unit line, if any): 480'
16. No. of acres in lease: 318.62
17. Spacing Unit dedicated to this well: 40 SE/4NE/4

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: .4 of mile
19. Proposed Depth: 9,250
20. BLM/ BIA Bond No. on file: NATIONWIDE BOND #NMB000434

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3061 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:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by existing bond on file(see item 20 above).
- Operator certification.
- Such other site specific information and/ or plans as may be required by the BLM

25. Signature:
Name (Printed/ Typed): Cy Cowan
Date: 9/13/2007
Title: Regulatory Agent

Approved By (Signature): /s/ Linda S.C. Rundell
Name (Printed/ Typed): /s/ Linda S.C. Rundell
Date: NOV 1 2007
Title: STATE DIRECTOR
Office: NM STATE 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 cc 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 wilfully 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

Previously Approved

C-144 attached

C-102 attached

CARLSBAD CONTROLLED WATER BASIN

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

**Witness Surface &
Intermediate Casing**

**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 & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 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

¹ API Number 30-015-35109	² Pool Code	³ Pool Name Wildcat Bone Spring
⁴ Property Code 15751	⁵ Property Name Knoll AOK Federal	
⁷ OGRID No. 025575	⁸ Operator Name Yates Petroleum Corporation	
		⁶ Well Number 3
		⁹ Elevation 3058

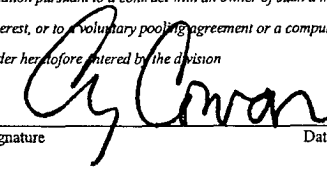
¹⁰ Surface Location

UL or lot no. H	Section 3	Township 24 S	Range 29 E	Lot Idn	Feet from the 2310	North/South line North	Feet from the 480	East/West line East	County Eddy
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¹¹ 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
¹² Dedicated Acres 40 SE/4NE/4	¹³ Joint or Infill	¹⁴ Consolidation Code		¹⁵ 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.

¹⁶						<div><p>¹⁷ OPERATOR CERTIFICATION</p><p><i>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 or has a right to drill this well at this 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</i></p><p> 9/10/07</p><p>Signature _____ Date _____</p><p>Cy Cowan, Regulatory Agent</p><p>Printed Name _____</p></div>
						<div><p>¹⁸ SURVEYOR CERTIFICATION</p><p><i>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</i></p><p>_____</p><p>Date of Survey _____</p><p>Signature and Seal of Professional Surveyor: _____</p><p>REFER TO ORIGINAL PLAT</p><p>_____</p><p>Certificate Number _____</p></div>

L. French Dr., Hobbs, NM 88240

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-103

Revised March 17, 1909

Instruction on back

Submit to Appropriate District Office

State Lease - 4 Copies

For Lease - 3 Copies

STRICT II.

1 South First, Artesia, NM 86210

DISTRICT III

1009 Rio Brazos Rd., Artec, NM 87410

DISTRICT IV

2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name
			Wildcat Bone Spring
Property Code	Property Name		Well Number
	KNOLL "AOK" FEDERAL		3
OWNER No.	Operator Name		Elevation
025575	YATES PETROLEUM CORPORATION		3058

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	3	24S	29E		2310	NORTH	480	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	Joint or Infill	Consolidation Code	Order No.						
40									

**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>2310</p>	<p>OPERATOR CERTIFICATION</p> <p><i>I hereby certify the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p><i>Cy Cowan</i></p> <p>Signature _____</p> <p>Cy Cowan</p> <p>Printed Name _____</p> <p>Regulatory Agent</p> <p>Title _____</p> <p>July 11, 2006</p> <p>Date _____</p>
		<p>N.32°14'51.5" W.103°57'55.4" N.454022.0 E.655087.4 (NAD-84)</p>	<p>NM-85891</p> <p>3063 3055</p> <p>3058 3050</p> <p>480'</p>	<p>SURVEYOR CERTIFICATION</p> <p><i>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.</i></p> <p>4/27/2006</p> <p>Date Surveyed _____</p> <p>Signature & Seal of Professional Surveyor _____</p> <p>HERSCHEL L. JONES NEW MEXICO 3540 GENERAL SURVEYING COMPANY</p> <p>Certificate No. Herschel L. Jones RLS 3640</p>	

0 330' 660' 990' 1650' 1980' 2310' 2310' 1980' 1650' 990' 660' 330' 0'

YATES PETROLEUM CORPORATION
Knoll AOK Federal #3
 2310' FNL & 480' FEL
 Section 3-T24S-R29E
 Eddy County, New Mexico

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

Rustler	312'-Oil Pay	Brushy Canyon Marker	6560'-Gas Pay
Top of Salt	700'-Oil Pay	Bone Spring	6830'-Gas Pay
Base of Salt	3060'-Oil Pay	1 st Bone Spring Sand	7830'-Gas Pay
Bell Canyon	3170'-Oil Pay	2 nd Bone Spring Sand	8700'-Gas Pay
Cherry Canyon	4092'-Gas Pay	TD	9250'-Gas Pay
Brushy Canyon	5200'-Gas Pay		

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

Water: Approx 150'

Oil or Gas: All potential zones.

3. ~~Pressure Control Equipment: BOPE will be installed on the 13-3/8" casing and rated for 3000 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)

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt./Ft</u>	<u>Grade</u>	<u>Coupling</u>	<u>Interval</u>	<u>Length</u>
17 1/2"	13 3/8"	48#	H-40	ST&C	0-700'	700'
11"	8 5/8"	32#	J-55	ST&C	0-100'	100'
11"	8 5/8"	24#	J-55	ST&C	100'-2200'	2100'
11"	8 5/8"	32#	J-55	ST&C	2200'-3150'	950'
7 7/8"	5 1/2"	17#	J-55	LT&C	0-600'	600'
7 7/8"	5 1/2"	15.5#	J-55	LT&C	600'-6300'	5700'
7 7/8"	5 1/2"	17#	J-55	LT&C	6300'-9250'	2950'

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.

Minimum Casing Design Factors: Collapse 1.125, Burst 1.0, Joint Strength 1.8

B. CEMENTING PROGRAM:

Surface casing: 350 sx Lite "C" (YLD 1.98 WT 12.6); Tail in w/ 200 sx Class "C" + 2% CaCl₂ (YLD 1.36 WT 14.8). Surface

Intermediate Casing: 600 sx Lite "C" (YLD 2.18 WT 12.4); Tail in w/ 200 sx "C" + 2% CaCl₂ (YLD 1.31 WT. 14.8) Surface

Production Casing: Stage I: TOC 6000', 800 sx Pecos VILt (YLD 14.1 WT 13.0) TOC 6000'
 Stage II: 700 sx Lite Crete (YLD 2.78 WT 9.90); Tail in w/ 100 sx Pecos VILt (YLD 13.0 WT 14.8) Surface

5. Mud Program and Auxiliary Equipment:

Interval	Type	Weight	Viscosity	Fluid Loss
0-700'	Fresh Water	8.6-9.2	32-34	N/C
700'-3150'	Brine	10.0-10.2	28	N/C
3150'-8000'	Cut Brine	8.8-8.8	28	N/C
8000'-9150'	Cut Brine	8.8-8.9	28	N/C
9150'-9250'	Cut Brine	8.9-9.10	28	<15-20

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: 30' samples surface to 3000'; 10' samples 3000'-TD.

Logging: Platform HALS; CMR.

Coring: None Anticipated.

DST's: As warranted.

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

Anticipated BHP:

From: 0	TO: 700'	Anticipated Max.	BHP: 325	PSI
From: 700'	TO: 3150'	Anticipated Max.	BHP: 1670	PSI
From: 3150'	TO: 9250'	Anticipated Max.	BHP: 4375	PSI

No abnormal pressures or temperatures are anticipated.

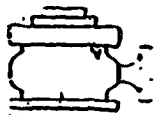
Lost Circulation Zones Anticipated: None.

H₂S Zones Anticipated: None

Maximum Bottom Hole Temperature: 168 F

8. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 30 days to drill the well with completion taking another 15 days.



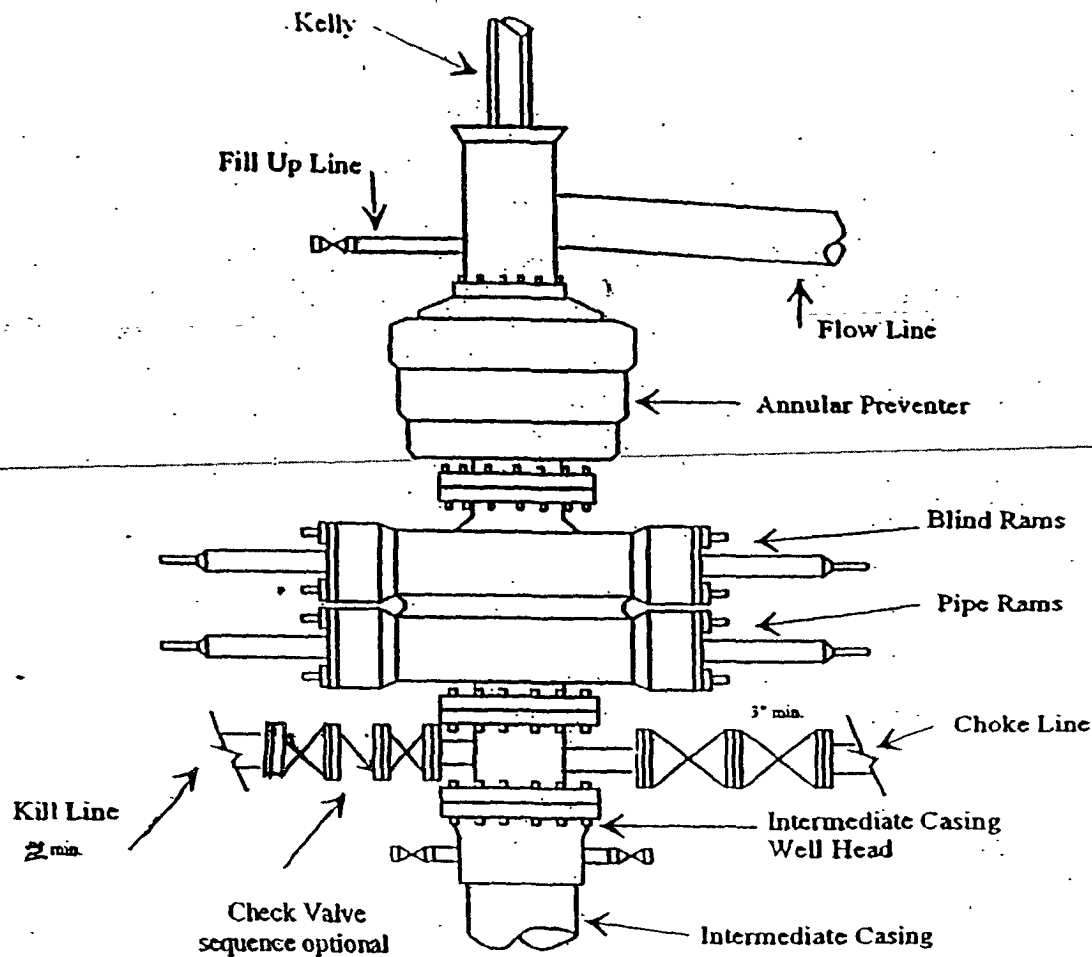
Yates Petroleum Corporation

Typical 3,000 psi Pressure System

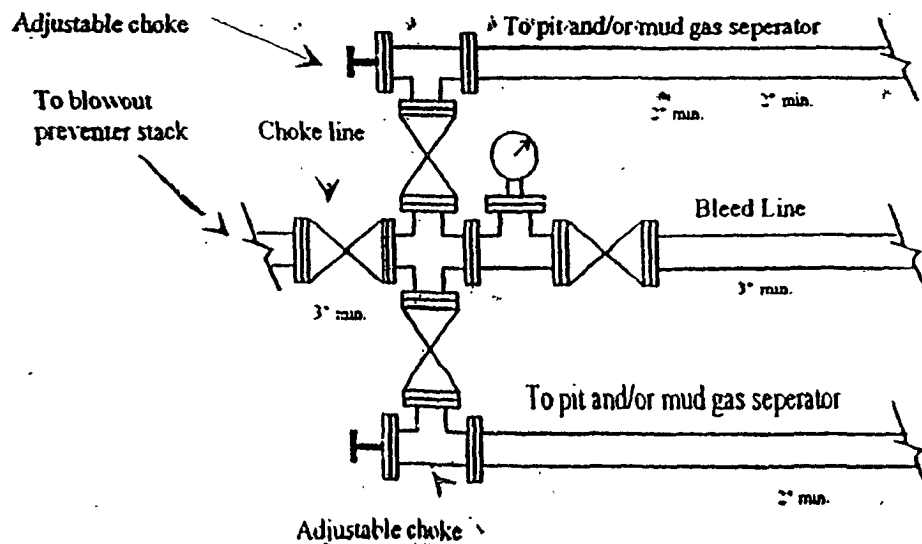
Schematic

Annular with Double Ram Preventer Stack

BOP-3



Typical 3,000 psi choke manifold assembly with at least these minimum features



MULTI-POINT SURFACE USE AND OPERATIONS PLAN
Yates Petroleum Corporation
Knoll AOK Federal #3
2310' FNL & 480' FEL
Section 3-T24S-R29E
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 36 miles east of Malaga, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

Go east of Malaga, New Mexico on Duarte Road (CR-720) for .7 of a mile to Harroun Road (CR-745). Turn left on Harroun Road and go approx. 2.9 miles to Dog Town Road (CR-788). Turn right on Dog Town Road and go approx. 1.1 miles. Turn left here on caliche road and go 1.9 miles. Turn left here at a cattleguard and go past dry hole location with tanks on it to one more cattleguard. From the cattleguard go north on lease road for approx. .4 of a mile to the River Bend Federal #1 well. Follow the lease road to the left and go up the hill for approx. .6 of a mile to the HB 3 Federal #2 Battery. Follow the lease road for approximately .8 of a mile. The new road will start here going north for approximately 300 feet to the southeast corner of the proposed well location. Please note this road will pass the proposed Knoll AOK Federal #3 location while going to the Knoll AOK Federal #2.

2. PLANNED ACCESS ROAD.

- A. The proposed new access will be approximately 300 feet going north to the southeast corner of the 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. 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. Exhibit D 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 fresh water system. The fresh 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:

Dirt contractor will locate closest pit and obtain any permits and materials needed for 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, the location of the drilling equipment, rig orientation and access road approach.
- B. The reserve pits will be plastic lined and will face to the north. 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 after they have evaporated and dried.

11. SURFACE OWNERSHIP: Federal surface, Administered by the Bureau of Land Management, Carlsbad, New Mexico.

12. OTHER INFORMATION:

- 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.

~~13. OPERATOR'S REPRESENTATIVE~~

A. Through A.P.D. Approval:

B. Through Drilling Operations,
Completions and Production:

Cy Cowan, Regulatory Agent
Yates Petroleum Corporation
105 South Fourth Street
Artesia, New Mexico 88210
Phone (505) 748-1471

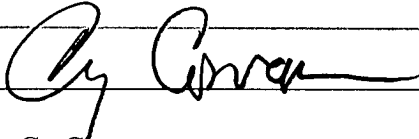
Ray Stall, Operations Manager
Yates Petroleum Corporation
105 South Fourth Street
Artesia, New Mexico 88210
Phone (505) 748-1471

CERTIFICATION
YATES PETROLEUM CORPORATION

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; and an someone under employment of Yates Petroleum Corporation has 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 14th day of September, 20 07

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) _____

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 no Hydrogen Sulfide has been reported in this section, it is always a potential hazard.**
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 **a minimum of 25 feet into the Rustler Anhydrite and above the salt at approximately 700 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.

**Possible lost circulation in the Delaware and Bone Spring formations.
Moderate cave/karst.**

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

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

- 3. 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.

Both stages to circulate.

- 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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.
- 3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **8-5/8"** intermediate casing shoe shall be **3000 (3M)** psi.
- 4. 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. A variance to test the surface casing and BOP/BOPE to the reduced pressure of **1000** psi with the rig pumps is approved.

D. DRILL STEM TEST

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

Engineer on call phone (after hours): Carlsbad: (505) 706-2779

WWI 100507