8081 C/K ATS-07-322

Form 3160-3
(August 1999)

1303

OCD-ARTESIA

NOV 13 2007

OCD-ARTESIA

0
OMB No 1004-0136
Expires November 30, 2000

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Split Estate

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of Work [X] DRILL [ ] REENTER	5. Lease Serial No: NM-100315
b Type of Well [ ] Oil Well [X] Gas Well [ ] Other [ ] Single Zone [ ] Multiple Zone	6 If Indian, Allottee or Tribe Name
2. Name of Operator: Yates Petroleum Corporation	7. If Unit or CA Agreement, Name and No.
3A Address: 105 South Fourth Street, Artesia, New Mexico 88210	3b. Phone No (include area code): (505) 748-1471
4 Location of Well (Report location clearly and in accordance with any State requirements *)	8 Lease Name and Well No: Recif Federal State Unit #1
At surface: 660' FNL and 1980' FEL	9 API Well No: 30-015-35939
At proposed prod Zone: Same	10 Field and Pool, or Exploratory: Wildcat Morrow
14 Distance in miles and direction from nearest town or post office*: Approximately 31 miles west of Carlsbad, New Mexico.	11. Sec, T, R, M, or Blk, and Survey or Area: Section 7, T23S-R23E
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any): 660'	12. County or Parish: Eddy County; 13 State: NM
16. No of Acres in lease: 2270.16	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: .4 of mile	19 Proposed Depth: 10650'
20 BLM/BIA Bond No on file: NMB-000434	
21 Elevations (Show whether DF, KDB, RT, GL, etc): 4260' 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: 9/14/2007
Regulatory Agent: Regulatory Agent		
Approved by (Signature): James A. Amos	Name (Printed/Typed): James A. Amos	Date: NOV 8 2007
Title: FIELD MANAGER FOR	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 U S C Section 1001and 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

Roswell Controlled Water Basin

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	2 Pool Code	3 pool Name
	96070	Wildcat Morrow

4 Property Code	5 Property Name	6 Well Number
36851	*RECIF FEDERAL STATE UNIT*	*1*

7 OGRID No.	8 Operator Name	9 Elevation
025575	*YATES PETROLEUM CORPORATION*	*4260*

10 Surface Location

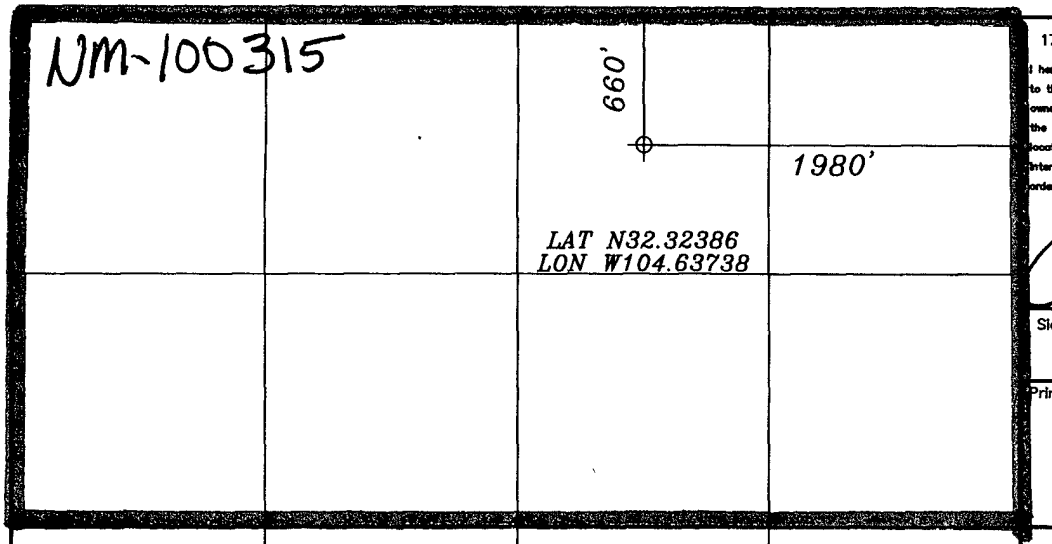
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	*7*	*23-S*	*23-E*		*660*	*NORTH*	*1980*	*EAST*	*EDDY*

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	13 Joint or Infill	14 Consolidation Code	15 Order No
320			

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.



17 OPERATORS 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 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 voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

9/14/07
Signature Date

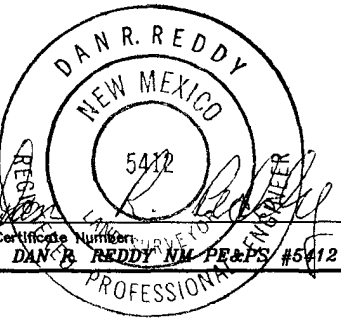
Cy Cowan
Printed Name

18 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.

FEBRUARY 5, 2007
Date of Survey

Signature and Seal of Professional Surveyor



Certificate Number
DAN R. REDDY NM PE&PS #5412

YATES PETROLEUM CORPORATION
Recif Federal State Unit #1
660' FNL and 1980' FEL
Section 7-T23S-R23E
Eddy County, New Mexico

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

Glorietta	2745'	Oil Pay	Atoka	9195'	Oil Pay
Bone Spring Lime	2995'	Oil Pay	Upper Morrow	9835'	Gas Pay
2nd Bone Spring Sand	5615'	Oil Pay	Middle Morrow	9915'	Gas Pay
3rd Bone Spring Sand	6125'	Oil Pay	Lower Morrow	10095'	Gas Pay
Wolfcamp	6385'	Oil Pay	Barnett Shale	10445'	Gas Pay
Cisco	7295'	Oil Pay	Chester Lime	10525'	Gas Pay
Strawn	8885'	Oil Pay	TD	10650'	Gas Pay

2. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:
   Water: 260'
   Oil or Gas: All potential zones. See Above.

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)**

Hole Size	Casing Size	Wt./Ft	Grade	Coupling	Interval	Length
17 ½"	13 3/8"	48#	H-40	ST&C	0-400	400'
12 ¼"	9 5/8"	36#	J-55	ST&C	0-2800'	2800'
8 ¾"	5 1/2"	17#	L-80	LT&C	0-1300'	1300'
8 ¾"	5 1/2"	17#	J-55	LT&C	1300'-8200'	6900'
8 ¾"	5 1/2"	17#	L-80	LT&C	8200'-10650'	2450'

See COA

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: Lead with 150 sx "C" Lite (YLD 1.98 WT 12.5) Tail in with 200 sx "C" + 2% CaCL2 (YLD 1.34 WT 14.8). **TOC Surface.**

Intermediate casing: Lead with 180 sx Thixotropi (YLD 1.52 WT 14.6). Tail with 625 sx "C" Lite (YLD 1.98 WT 12.5). Tail in with 200 sx "C" (YLD 1.34 WT 14.8) + 2% CaCl2. **TOC-Surface**

Production casing: Lead with 685 sx "C" Lite (YLD 2.51 WT 11.5). Tail in with 1500 sx Super "C" (YLD 1.68 WT 13.2). **TOC-2300'**

5. Mud Program and Auxiliary Equipment:

Interval	Type	Weight	Viscosity	Fluid Loss
0-400'	Fresh Water	8.4-8.8	28	N/C
400'-2800'	Fresh Water	8.4	28	N/C
2800'-7000'	Cut Brine	8.4-8.8	28	N/C
7000'-10650'	Salt Gel/Starch/4%-2% KCL	9.2-9.8	31-41	<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' samples from intermediate casing to TD.
Logging: Platform Express HRLA/NGT/FMI
Coring: Possible Sidewall Cores.
DST's: Possible from Wolfcamp to TD.

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

From:	0	To:	400'	Anticipated Max. BHP	185 PSI.
From:	400'	To:	2800'	Anticipated Max. BHP	1225 PSI.
From:	2800'	To:	10650'	Anticipated Max. BHP	5425 PSI.

No abnormal pressures or temperatures are anticipated.

Lost Circulation Zones Anticipated: None anticipated.

H2S Zones Anticipated: None Anticipated.

Maximum Bottom Hole Temperature: 178 F.

8. ANTICIPATED STARTING DATE:

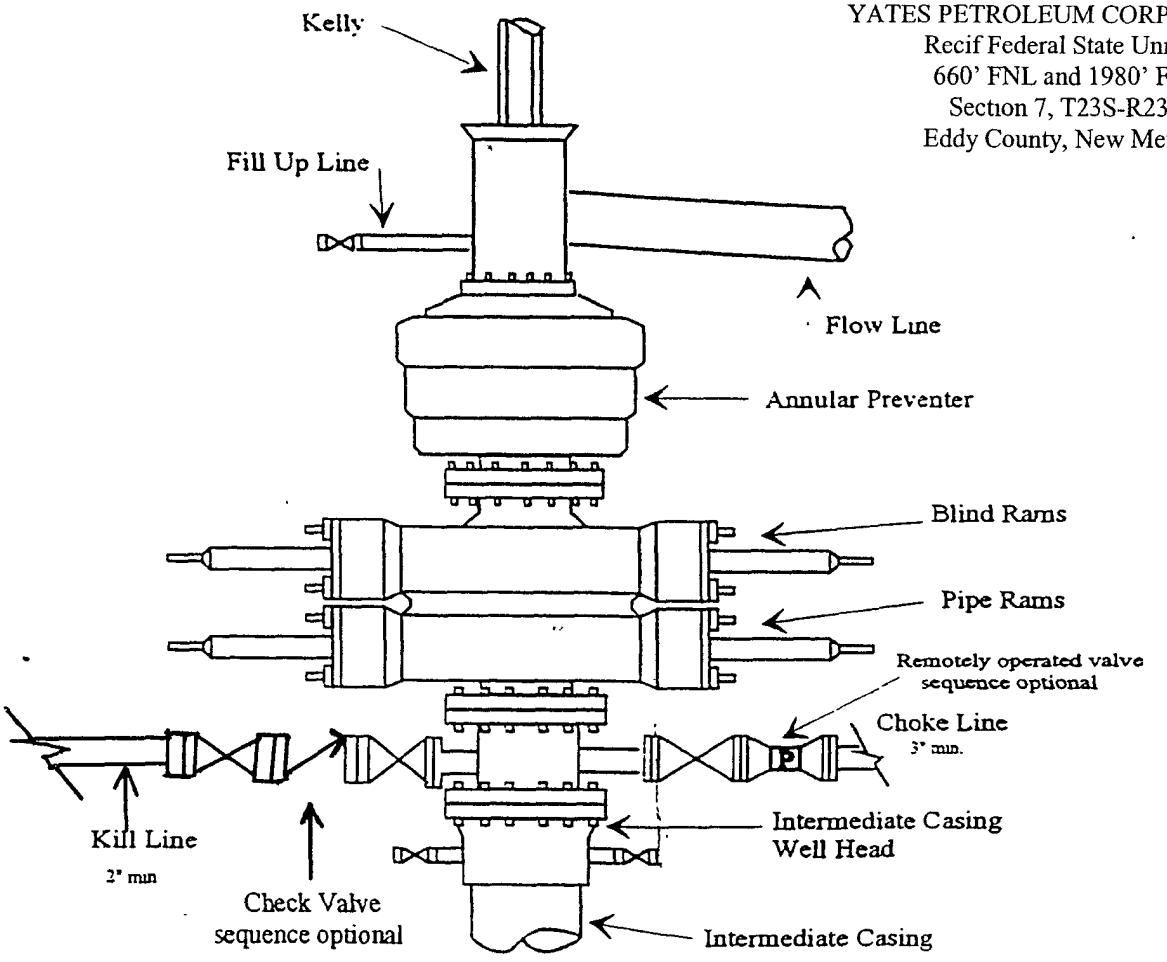
Plans are to drill this well as soon as possible after receiving approval. It should take approximately 30 days to drill the well with completion taking another 15 days.

Yates Petroleum Corporation

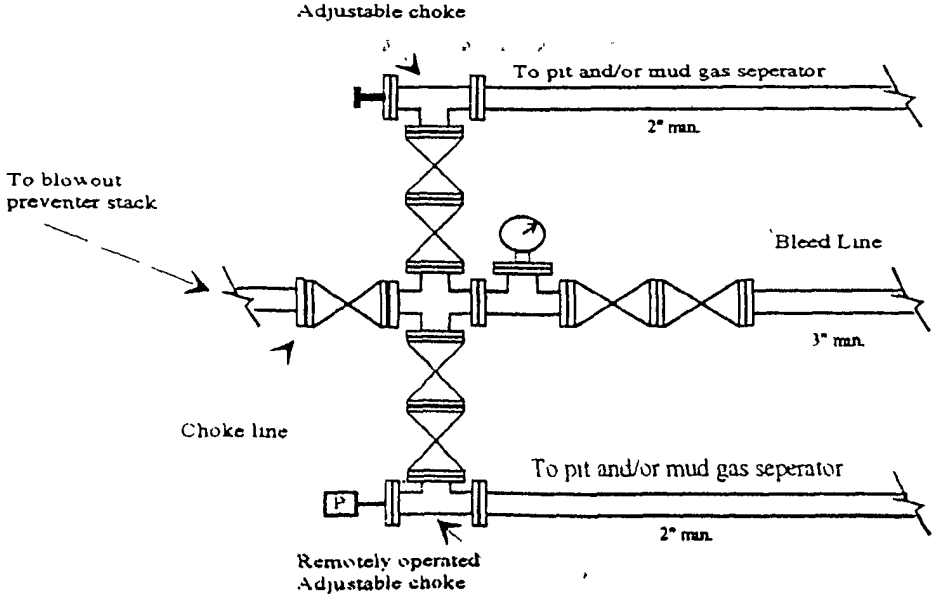
BOP-4

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

YATES PETROLEUM CORPORATION
Recif Federal State Unit #1
660' FNL and 1980' FEL
Section 7, T23S-R23E
Eddy County, New Mexico



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



MULTI-POINT SURFACE USE AND OPERATIONS PLAN
Yates Petroleum Corporation
Recif Federal State Unit #1
660' FNL and 1980' FEL
Section 7-T23S-R23E
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 31 miles west of Carlsbad, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

Go north of Carlsbad on Highway 285 for approximately 12.5 miles to Highway 137. Turn west on Highway 137 and go approximately 19.5 miles to H Bar Y Ranch Road. (CR-405). Turn right on H Bar Y Ranch Road and go approximately 4.2 miles to a white cattle guard. The access road will start here going south following an old two track road. Follow the trail road for approximately 2 miles. Turn right here on a trail road and go west for approximately .4 of a mile. The new road will start here going southwesterly for approximately .2 of a mile to the northeast corner of the proposed well location.

2. PLANNED ACCESS ROAD

The new access road will be approximately 2.6 miles in length from the point of origin to the northeast corner of the well pad.

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 not any 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 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 CONSTRUC

Need Landowner agreement or a Self-Certification Statement from Lessee and a 3814 Surface Reclamation bond in the amount of $20,000

The dirt contractor will loc
surface owner. Also the dir
construction.

QL - ONSITE DATE:
SCHEDULED
PERFORMED 7/11/07
INITIAL & RETURN TO LIE

APD DISTRIBUTION CHECK LIST

	INITIALS	DATE
Geologist:		9/18/07
Surface Prot:		
Solids:		
(If Potash)		
WIPP:		

7. METHODS OF HANDLING

A. Drill cuttings will be di
B. Drilling fluids will be al
C. Water produced duri
approved disposal sys
D. Oil produced during op
E. Current laws and reg
complied with.
F. All trash, junk, and oth
prevent scattering and ... 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. Pits will be 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.

SURFACE OWNERSHIP: Private surface owned by Daniel B. Murray, P.O. Box 285, Belevedere, CA 94921. (415) 435-3433. A surface use agreement has been made with Mr. Murray.

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.

6. SOURCE OF CONSTRUCTION MATERIALS:

The dirt contractor will locate closest pit and if possible will purchase caliche from the surface owner. Also the dirt contractor will obtain any permits and materials for 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

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13. OPERATOR'S REPRESENTATIVE

A. Through A.P.D. Approval:

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

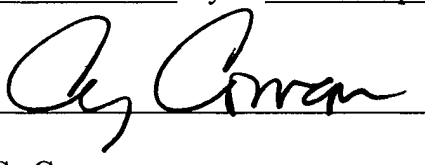
B. Through Drilling Operations, Completions and Production:

Paul Ragsdale,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)

V. SPECIAL REQUIREMENT(S)

Cave & Karst

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 then 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.

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.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (505) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

C. RESERVE PITS

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 120' X 120' on the North side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (505) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

Turnouts

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.**

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. Floor controls are required for 3M or Greater systems. These 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 400** 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.

High cave/karst.
Possible lost circulation in the San Andres, Wolfcamp and Strawn formations.
Possible over pressure in Wolfcamp and Pennsylvanian group.

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. **Set within the Glorietta Sandstone at approximately 2800 feet.**

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i.

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 500 feet into previous casing string. Operator shall provide method of verification.

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 **9-5/8"** intermediate casing shoe shall be **5000 (5M)** 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. 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.

    f. A variance to test the surface casing and BOP/BOPE to the reduced pressure of **1000** psi with the rig pumps is approved.

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.

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

WWI 110707

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2