

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

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

## SUNDRY NOTICES AND REPORTS ON WELLS

**Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

**SUBMIT IN TRIPLICATE - Other instructions on page 2.**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

FEB 19 2008

2. Name of Operator

Yates Petroleum Corporation 025575

OCD-ARTESIA

3a. Address

105 South Fourth Street, Artesia, NM 88210

3b. Phone No. (include area code)

(505) 748-1471

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

330' FNL and 480' FEL Surface Hole Location

660' FNL and 330' FWL Bottom Hole Location

Section 3, T24S-R29E

5. Lease Serial No

NM-85891

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/o

8. Well Name and No.

Knoll AOK Federal #2H

9. API Well No.

30015 35108

10. Field and Pool, or Exploratory Area

Wildcat Bone Spring

11. County or Parish, State

Eddy County, New Mexico

## 12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change of Plans.
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Yates Petroleum Corporation wishes to change the name of the captioned well from the Knoll AOK Federal #2 to the Knoll AOK Federal #2H.

Attached is a revised drilling plan and supporting information making the change from a vertically drilled well to a horizontally drilled well.

This APD was originally approved 11/1/07 as the Knoll AOK Federal #2.

Thank you.

*Name change*  
**SUBJECT TO LIKE  
APPROVAL BY STATE**

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Cy Cowan

Title

Regulatory Agent / Land Department

Signature

Date

January 16, 2008

THIS SPACE FOR FEDERAL OR STATE USE

APPROVED

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

FEB 14 2008

Title 18 U.S.C. Section 1001, 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.

PETROLEUM ENGINEER

(Instructions on reverse)

## PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Yates Petroleum Corporation
LEASE NO.:	NMNM - 85891
WELL NAME & NO.:	Knoll AOK Federal 2H
SURFACE HOLE FOOTAGE:	0330' FNL & 0480' FEL
BOTTOM HOLE FOOTAGE	0660' FNL & 0330' FWL
LOCATION:	Section 3, T. 24 S., R 29 E., NMPM
COUNTY:	Eddy County, New Mexico

### I. DRILLING

#### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

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

☒ **Eddy County**

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

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
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 650 feet (a minimum of 25 feet into the Rustler Anhydrite and 25 feet above the salt)** 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). **Please provide WOC times to inspector for cement slurries.**
  - 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.

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. **Please provide WOC times to inspector for cement slurries.**

**185' plug required at bottom of pilot hole (approximate depth 8500'). Plug to be tagged.**

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, DV tool set at 7500'.**

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 **3000 (3M)** psi.
4. The appropriate BLM office shall be notified a minimum of 4 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.

**WWI 021408**

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 Department

Form 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	Pool Name Wildcat Bone Spring
Property Code	Property Name KNOLL "AOK" FEDERAL	Well Number 2 H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3083'

Surface Location

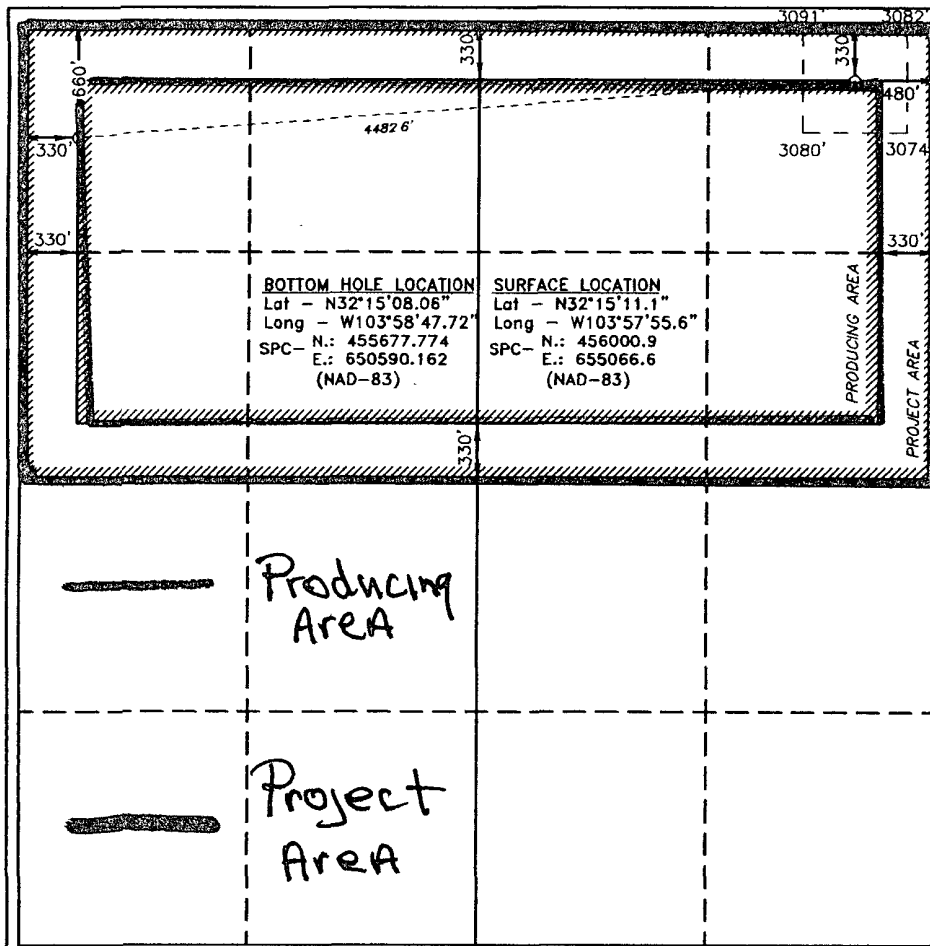
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	3	24 S	29 E		330	NORTH	480	EAST	EDDY

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
D	3	24 S	29 E		660	NORTH	330	WEST	EDDY

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



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.

*Cy Cowan*  
Signature \_\_\_\_\_ Date \_\_\_\_\_

Cy Cowan, Regulatory  
Printed Name 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.

APRIL 27 2006

Date Surveyed \_\_\_\_\_  
Signature \_\_\_\_\_  
Professional Surveyor

W.O. [Signature] #2

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

**YATES PETROLEUM CORPORATION**  
**Knoll AOK Federal #2H**  
 330' FNL & 480' FEL Surface Hole Location  
 660' FNL and 330' FWL Bottom Hole Location  
 Section 3-T24S-R29E  
 Eddy County, New Mexico

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

Rustler	312'	None	Brushy Canyon Marker	6560'	Oil Pay
Top of Salt	700'	None	Bone Spring	6830'	Oil Pay
Base of Salt	3060'	None	1 <sup>st</sup> Bone Spring Sand	7890'	Oil Pay
Bell Canyon	3170'	Oil Pay	TD (TVD)	8400'	Oil Pay
Cherry Canyon	4092'	Oil Pay	TD (MD)	12205'	Oil Pay
Brushy Canyon	5200'	Oil 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'
12 1/4"	9 5/8"	36#	J-55	ST&C	0-3150'	3150'
*8 3/4"	Pilot Hole	Open Hole			0-8400'	8400'
Lateral Hole:						
8 3/4"	5 1/2"	17#	HCP-110	LT&C	0-8075'	8075'
7 7/8"	5 1/2"	17#	HCP-110	LT&C	8075'-12205'	4130'

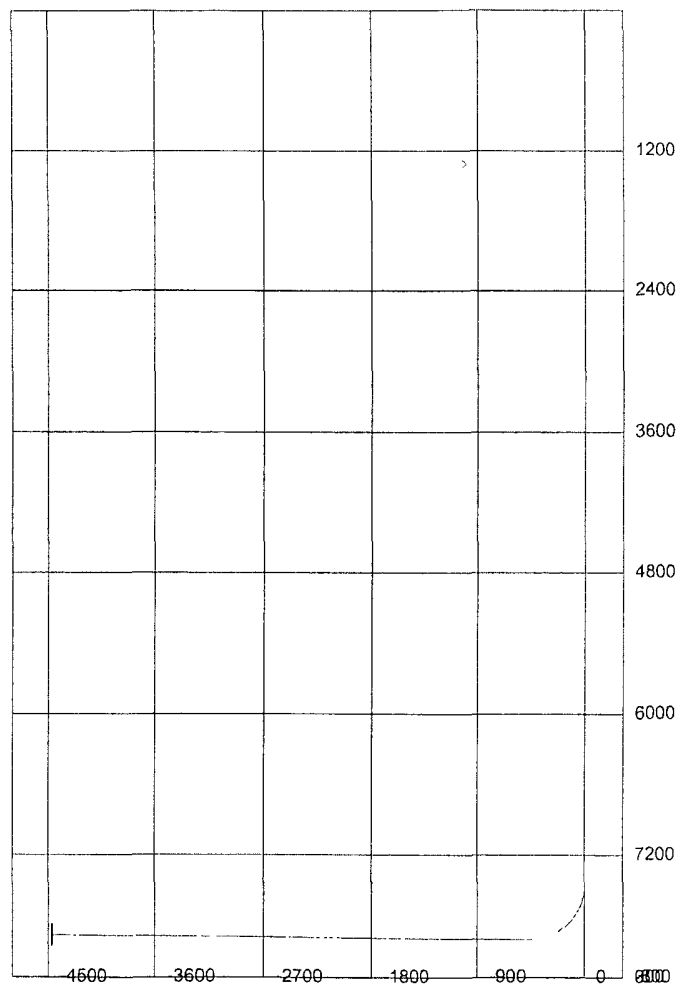
\* Pilot hole will be drilled to 8400'. Will plug back and kick off at approximately 7450' at 12 degrees per 100' with an 8 3/4" hole to 8075'MD. Hole size will be reduced to 7 7/8" and drilled to 12,205'. 5 1/2" casing will then be run and cemented back to the surface.

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.

	M.D. [ft]	Inclination [°]	Azimuth [°]	T.V.D. [ft]	N+/S- [ft]	E+/W- [ft]	D.L.S. [°/100ft]	ToolFace [°]	T.F. Ref. [HS/GN]
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	7450.00	0.00	0.00	7450.00	0.00	0.00	12.00	266	GN
3	7475.00	3.00	265.78	7474.99	-0.05	-0.65	12.00	0	HS
4	7500.00	6.00	265.78	7499.91	-0.19	-2.61	12.00	360	HS
5	7525.00	9.00	265.78	7524.69	-0.43	-5.86	12.00	0	HS
6	7550.00	12.00	265.78	7549.27	-0.77	-10.41	12.00	0	HS
7	7575.00	15.00	265.78	7573.58	-1.20	-16.22	12.00	0	HS
8	7600.00	18.00	265.78	7597.55	-1.72	-23.31	12.00	0	HS
9	7625.00	21.00	265.78	7621.11	-2.33	-31.63	12.00	0	HS
10	7650.00	24.00	265.78	7644.20	-3.04	-41.17	12.00	360	HS
11	7675.00	27.00	265.78	7666.76	-3.83	-51.90	12.00	0	HS
12	7700.00	30.00	265.78	7688.73	-4.71	-63.79	12.00	360	HS
13	7725.00	33.00	265.78	7710.05	-5.67	-76.82	12.00	360	HS
14	7750.00	36.00	265.78	7730.65	-6.71	-90.94	12.00	0	HS
15	7775.00	39.00	265.78	7750.48	-7.83	-106.12	12.00	0	HS
16	7800.00	42.00	265.78	7769.49	-9.03	-122.31	12.00	360	HS
17	7825.00	45.00	265.78	7787.62	-10.30	-139.47	12.00	0	HS
18	7850.00	48.00	265.78	7804.83	-11.63	-157.55	12.00	0	HS
19	7875.00	51.00	265.78	7821.06	-13.03	-176.51	12.00	360	HS
20	7900.00	54.00	265.78	7836.28	-14.49	-196.28	12.00	360	HS
21	7925.00	57.00	265.78	7850.44	-16.01	-216.83	12.00	0	HS
22	7950.00	60.00	265.78	7863.50	-17.58	-238.08	12.00	0	HS
23	7975.00	63.00	265.78	7875.43	-19.19	-259.99	12.00	360	HS
24	8000.00	66.00	265.78	7886.19	-20.86	-282.49	12.00	0	HS
25	8025.00	69.00	265.78	7895.75	-22.56	-305.53	12.00	360	HS
26	8050.00	72.00	265.78	7904.10	-24.29	-329.02	12.00	0	HS
27	8075.00	75.00	265.78	7911.20	-26.06	-352.93	12.00	0	HS
28	8100.00	78.00	265.78	7917.03	-27.84	-377.17	12.00	360	HS
29	8125.00	81.00	265.78	7921.59	-29.65	-401.68	12.00	0	HS
30	8150.00	84.00	265.78	7924.85	-31.48	-426.40	12.00	0	HS
31	8175.00	87.00	265.78	7926.81	-33.31	-451.25	12.00	0	HS
32	8200.00	90.00	265.78	7927.47	-35.15	-476.17	12.00	0	HS
33	8204.47	90.54	265.78	7927.44	-35.48	-480.63	12.00	360	HS
34	12204.88	90.54	265.78	7890.00	-330.00	-4470.00	0.00		

Company: Yates Petroleum Corporation  
Well: Knoll AOK Federal #2h

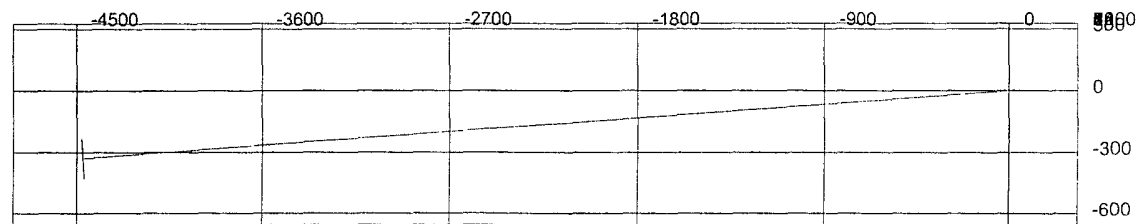
### 3D<sup>3</sup> Directional Drilling Planner - 3D View





### 3D<sup>3</sup> Directional Drilling Planner - 3D View

Company: Yates Petroleum Corporation  
Well: Knoll AOK Federal #2h



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

**B. CEMENTING PROGRAM:**

Surface casing: 350 sx Lite "C" + 2% CaCl<sub>2</sub> (YLD 2.00 WT 12.4); Tail in w/ 200 sx Class "C" + 2% CaCl<sub>2</sub> (YLD 1.34 WT 14.8). TOC Surface.

Intermediate Casing: 830 sx Lite "C" (YLD 2.00 WT 12.4); Tail in w/ 200 sx "C" + 2% CaCl<sub>2</sub> (YLD 1.32 WT 14.8). TOC Surface.

Production Casing: Stage I: 950 sx Super C (YLD 1.76 WT 13.0). TOC 7500'. *DVT 7500'*  
Stage II: 2150 sx Super C (YLD 1.76 WT 13.0). TOC Surface.

5. Mud Program and Auxiliary Equipment:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-700'	Fresh Water	8.6-9.2	29-32	N/C
700'-3150'	Brine	10.0-10.2	28	N/C
3150'-8400'	Cut Brine	8.9-9.1	28	N/C
Lateral Section				
7450'-12205'	Cut Brine	8.8-9.1	28	<15cc

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: O	TO: 700'	Anticipated Max.	BHP: 330	PSI
From: 700'	TO: 3150'	Anticipated Max.	BHP: 1670	PSI
From: 3150'	TO: 9250'	Anticipated Max.	BHP: 3975	PSI

No abnormal pressures or temperatures are anticipated.

Lost Circulation Zones Anticipated: None.

H<sub>2</sub>S Zones Anticipated: None

Maximum Bottom Hole Temperature: 168 F

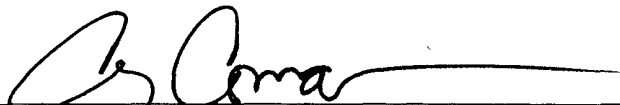
8. ANTICIPATED STARTING DATE:

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.

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 16th day of January, 2008

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) Tim Bussell, Drilling Supervisor

Address (if different from above) Same as above.

Telephone (if different from above) (505) 748-4221

E-mail (optional) \_\_\_\_\_