8180

ATS-07-550

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

D-ARTESIA HIGH CAVEKARST

RESUBMITTAL

NOV 08 2007
OCD-ARTESIA

Form 316
(April 20[illegible]

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

S

5. Lease Serial No.: **NM-78215**

6. If Indian, Allottee or Tribe Name: **Not Applicable**

7. If Unit or CA Agreement, Name and No.: **Not Applicable**

1a. Type of Work. [X] DRILL [ ] REENTER

1b Type of Well: [X] Oil Well [ ] Gas Well [ ] Other [ ] Single Zone [X] Multiple Zone

8 Lease Name and Well No.: **Hickory ALV Federal #6** ~~10365~~ 35909

2. Name of Operator: **Yates Petroleum Corporation 25575**

9. API Well No: 30-015-35909

3a. Address: **105 South Fourth Street, Artesia New Mexico 88210**

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

10. Field and Pool, or Exploratory: **Indian Basin, Upper Penn 33685**

4. Location of well *(Report location clearly and In accordance with any State requirements.*)*
At surface: **1980' FSL and 1090' FEL, Unit I**
At proposed prod. zone: **same as above**

ORTHODOX LOCATION

11. Sec., T., R., M , or Blk. And Survey or Area: **Section 18, T22S-R24E Mer NMP, SME: BLM**

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

12. County or Parish: **Eddy County**

13. State: **NM**

15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drlg. unit line, if any)	16. No. of acres in lease	17 Spacing Unit dedicated to this well
		320 - E/2

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19. Proposed Depth	20. BLM/ BIA Bond No. on file
	8900 MD	**NATIONWIDE BOND #NMB000434**

21. Elevations (Show whether DF. RT, GR, etc)	22 Aproximate date work will start*	23. Estimated duration
4409' GL	**ASAP**	**30 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 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 a authorized officer.

25. Signature	Name *(Printed/ Typed)*	Date
Cy Cowan	**Cy Cowan**	**7/6/2007**

Title: **Regulatory Agent**

Approved By *(Signature)*	Name *(Printed/ Typed)*	Date
/s/ Don Peterson	/s/ Don Peterson	NOV 5 2007

Title	Office
FIELD MANAGER	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 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 willfully to make to any department or agency of the Unite States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

* *(Instructions on page 2)*

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Carlsbad 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
	33685	Indian Basin, Upper Penn

[4] Property Code	[5] Property Name	[6] Well Number
12365	HICKORY ALV FEDERAL	6

[7] OGRID No.	[8] Operator Name	[9] Elevation
025575	YATES PETROLEUM CORPORATION	4409'

[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
I	18	22S	24E		1980	SOUTH	1090	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 E/2			

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

NM-78215

1090'

1980'

[17] 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 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

Cy Cowan 7/6/07
Signature Date

Cy Cowan
Printed Name

Regulatory Agent
Title

[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.

Date of Survey

Signature and Seal of Professional Surveyor:

REFER TO ORIGINAL PLAT

Certificate Number

District I
PO Box 1980, Hobbs, NM 88240-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 10, 1994
Instructions on back
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
		Indian Basin Upper Penn Assoc Pool

[4] Property Code	[5] Property Name	[6] Well Number
	HICKORY ALV FEDERAL	6

[7] OGRID No.	[8] Operator Name	[9] Elevation
025575	YATES PETROLEUM CORPORATION	4409.

[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
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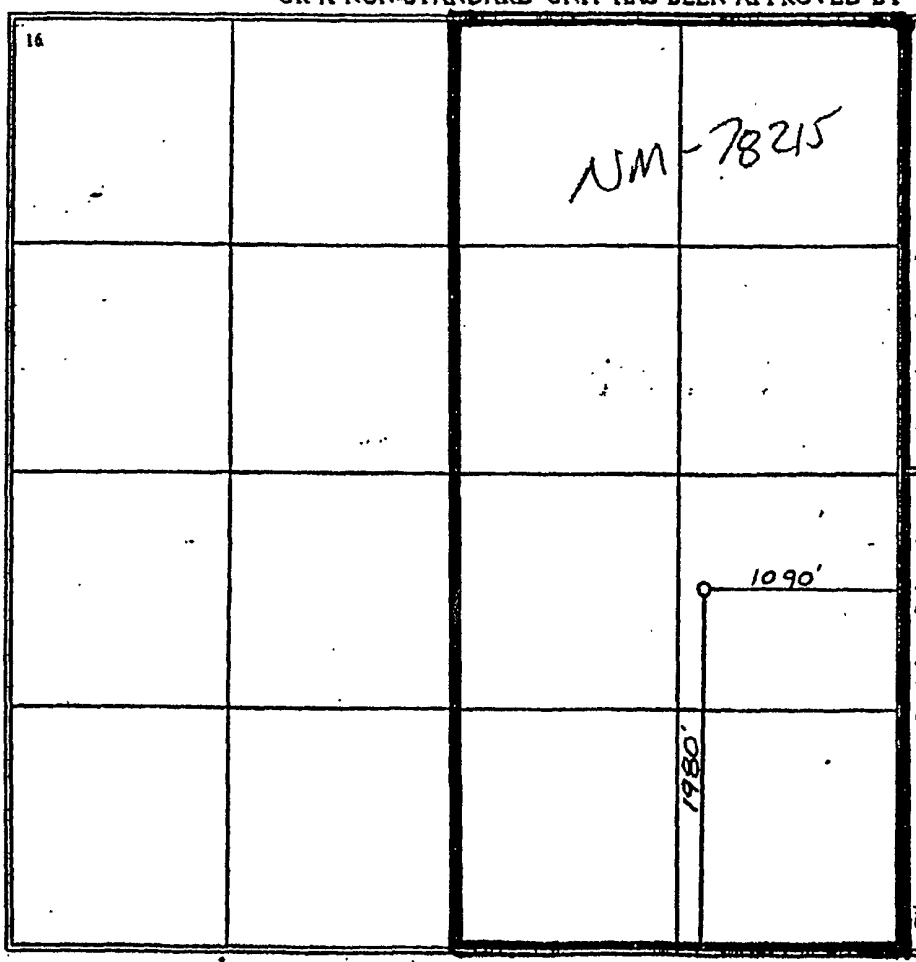
[11] Bottom Hole Location If Different From Surface

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	[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] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Signature

Printed Name
Ken Beardemphl

Title
Landman

Date 11/22/94

[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.

NOVEMBER 18, 1994
Date of Survey

Signature and Seal of Professional Surveyor:

DAN R. REDD
NEW MEXICO
5412
REGISTERED LAND SURVEYOR
NM PROFESSIONAL ENGINEER

Certificate Number 5412

YATES PETROLEUM CORPORATION
Hickory ALV Federal #6
1980' FSL and 1090' FEL
Sec. 18-T22S-R24E
Eddy County, New Mexico

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

San Andres	1293'-Oil Pay
Glorietta	2770'-Oil Pay
Bone Springs	3682'-Oil Pay
Wolfcamp	7550'-Oil Pay
Canyon	8470'-Oil Pay
TD	8900'-Oil Pay

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

Water: 0 – 200'
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)**

Hole Size	Casing Size	Wt./Ft	Grade	Coupling	Interval	Length
17 ½"	13 3/8"	54.5#	J-55	ST&C	0-350'	350'
12 ¼"	9 5/8"	36#	J-55	ST&C	0-3400'	3400'
8 ¾"	7"	26#	N-80	LT&C	0-600'	600'
8 ¾"	7"	26#	J-55	LT&C	600-1800'	1200'
8 ¾"	7"	23#	J-55	LT&C	1800-6300'	4500'
8 ¾"	7"	26#	N-80	LT&C	6300-8900'	2600'

Replaced 11/1/07 mwi

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

B. CEMENTING PROGRAM:

Surface casing: 350 sx "C" w/2% CaCl2 (Yld 1.34 WT 14.8), Cement circulated to surface.

Intermediate Casing: 1000 sx Lite and 250 sx "C" + 2% CaCl2 (Yld 1.98 WT 12.5), Cement circulated to surface. TOC

Production Casing: 650 sx "H" + 5# Gilsonite, 5# CSE (YLD 1.31 WT 15.1), DV Tool at 6000'.

2nd Stage: 850 sx Lite "C" + 5# Salt + 5# Gilsonite(Yld 1.31 WT 15.1), 0.25# Celloseal, and 100 sx "C", (Yld 1.34 WT 14.8)
Cement circulated to surface.

5. Mud Program and Auxiliary Equipment:

Interval	Type	Weight	Viscosity	Fluid Loss
0-350'	FW Spud Mud	8.3 - 8.6	30-36	N/C
350'-3750'	FW	8.3	28	N/C
3750'-7400'	FW	8.4	28	N/C
7400'-8250'	Cut Brine	8.9 - 9.4	28	N/C
8250'-TD	SW Gel/Starch	8.9 - 9.6	32-38	<12cc

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 out from under surface casing.
Logging: CNL/LDT from TD to casing w/CR-CNL up to surface; DLL from TD to casing RXO from TD.
Coring: As warranted.
DST's: As warranted.

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

From:	0	To:	350'	Anticipated Max. BHP	<175 PSI.
From:	350'	To:	3750'	Anticipated Max. BHP	<1650 PSI.
From:	3750'	To:	8900'	Anticipated Max. BHP	<3600 PSI.

No abnormal pressures or temperatures are anticipated.

Lost Circulation Zones Anticipated: None.

H2S Zones Anticipated: H2S information attached.

Maximum Bottom Hole Temperature: 159 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 20 days.

Hickory ALV Federal #6 Production casing

1st segment	0 ft to 600 ft			Make up Torque ft-lbs			Total ft = 600
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	J-55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
4,320 psi	4,980 psi	367 ,000 #		415 ,000 #		6.151	

2nd segment	600 ft to 5,300 ft			Make up Torque ft-lbs			Total ft = 4,700
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	23 #/ft	J-55	LT&C	3130	2350	3910	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
3,270	4,360 psi	313 ,000 #		366 ,000 #		6.25	

3rd segment	5,300 ft to 7,500 ft			Make up Torque ft-lbs			Total ft = 2,200
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	J-55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
4,320 psi	4,980 psi	367 ,000 #		415 ,000 #		6.151	

4th segment	7,500 ft to 8,900 ft			Make up Torque ft-lbs			Total ft = 1,400
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	L-80	LT&C	5110	3830	6390	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
5,410 psi	7,240 psi	511 ,000 #		604 ,000 #		6.151	

PB - L1

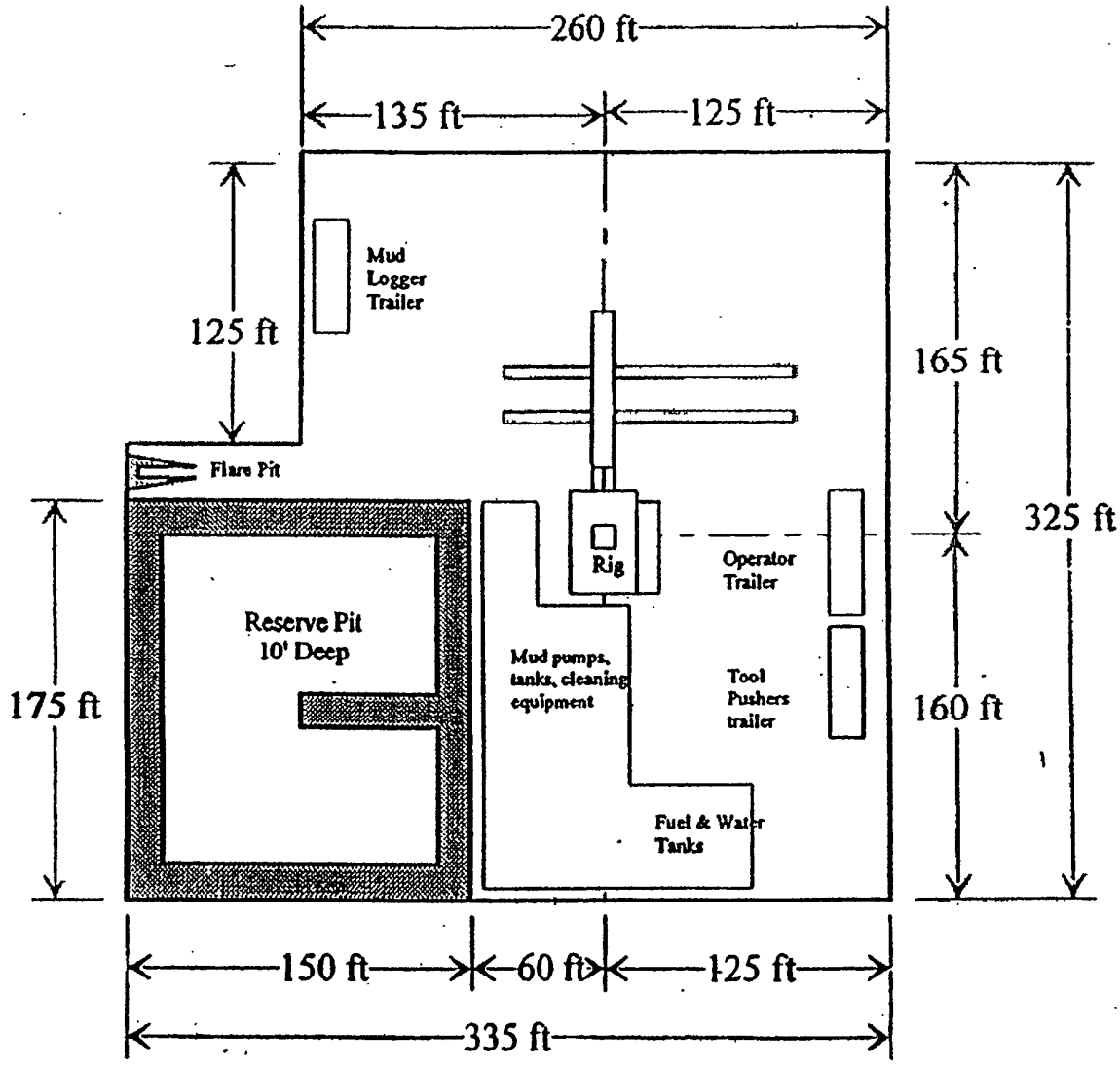
Yates Petroleum Corporation

Location Layout for Permian Basin
Up to 12,000'

Yates Petroleum Corporation
105 SOUTH 4th STREET
ARTESIA, NEW MEXICO 88210

HICKORY ALV FEDERAL #6
1980' FSL and 1090' FEL
Sec. 18-T22S-R24E
Eddy County, New Mexico

Exhibit C



Distance from Well Head to Reserve Pit will vary between rigs

The above dimension should be a maximum

BOP-3

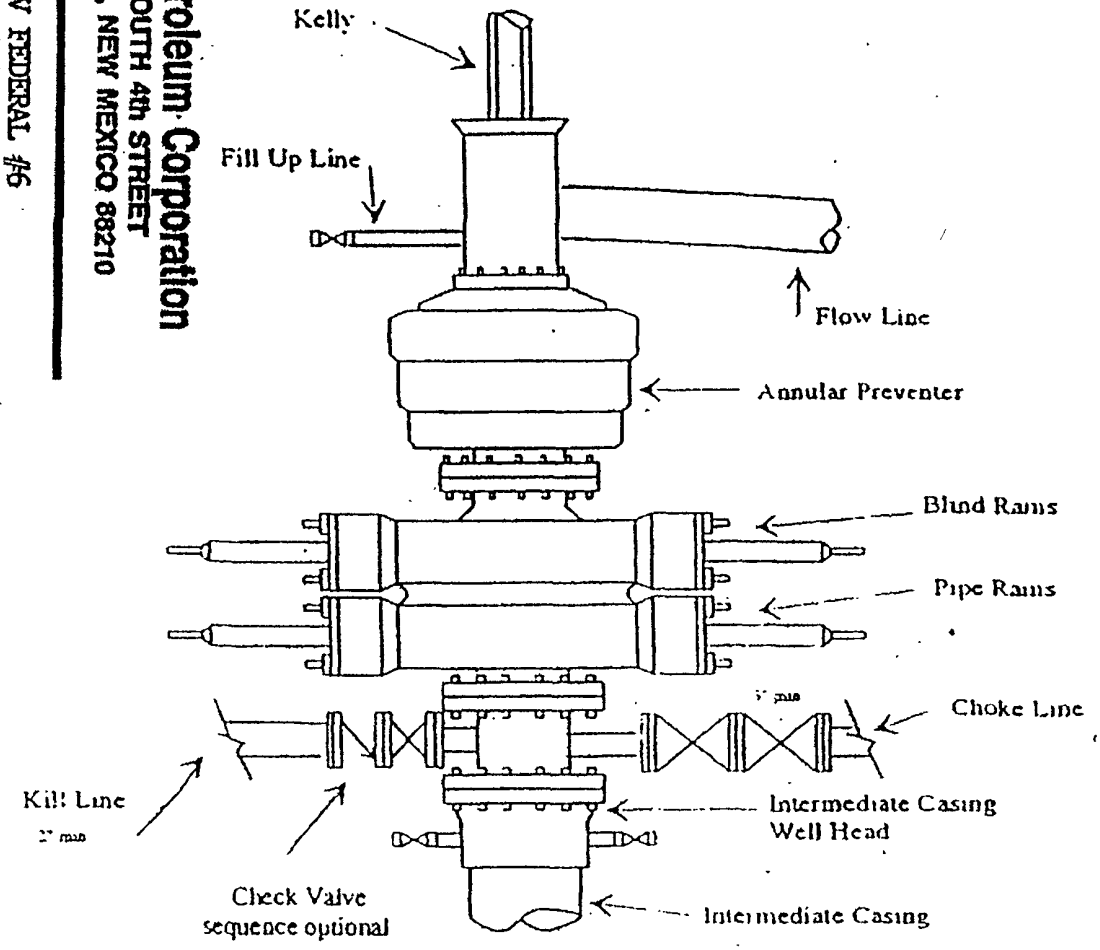
Exhibit B

HICKORY ALV FEDERAL #6
1980' FSL and 1090' FEL
Sec. 18-T22S-R24E
Eddy County, New Mexico

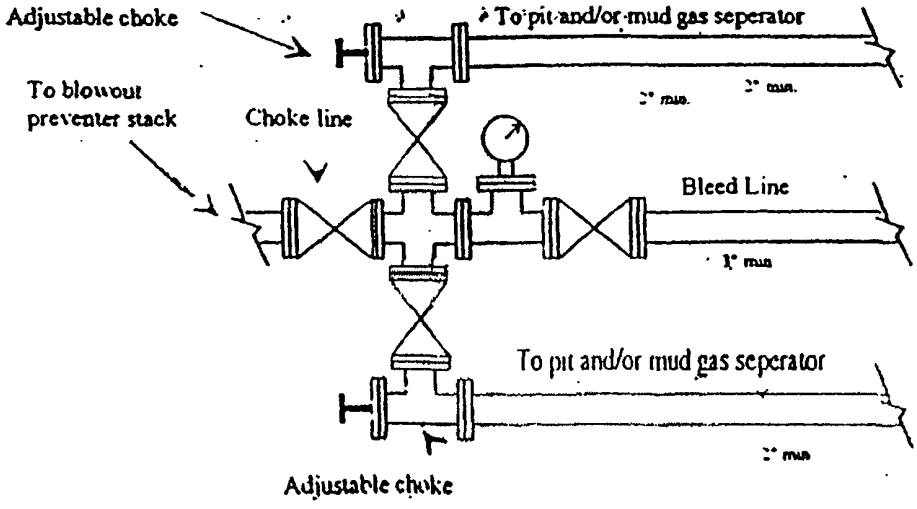
Yates Petroleum Corporation
105 SOUTH 4th STREET
ARTESIA, NEW MEXICO 88210

Yates Petroleum Corporation

Typical 3,000 psi Pressure System
Schematic
Annular with Double Ram Preventer Stack



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



YATES PETROLEUM CORPORATION
Hickory ALV Federal #6
1980' FSL and 1090' FEL
Section 18-T22S-R24E
Eddy County, New Mexico

H2S Drilling Operations Plan

Personnel employed at the rig site shall receive training in H2S detection, safe drilling procedures and contingency plans. H2S safety equipment shall be installed and functional 3 days or 500 feet prior to encountering known or probable H2S zone at 3200' feet.

Submitted with the APD is a well site diagram showing:
1) Drilling rig orientation, location of flare pit.
2) Prevailing wind direction.
3) Location of access road.

Primary briefing area will be established 150' from wellbore and up wind of prevailing wind direction. Secondary briefing area will be established 180 degrees from primary briefing area.

A H2S warning sign will be posted at the entrance of the location. Depending on conditions, a green, yellow, or red flag will be displayed.
Green - Normal conditions
Yellow - Potential danger
Red - Danger H2S present

Wind indicators will be placed on location at strategic, highly visible areas. H2S monitors (a minimum of three) will be positioned on location for best coverage and response. H2S concentrations of 10 ppm will trigger a flashing light and 20 ppm will trigger an audible siren.

H2S breathing equipment will consist of:
1) 30 minute "pressure demand" type working unit for each member of rig crew on location.
2) 5 minute escape packs for each crew member.
3) Trailer with a "cascade air system: to facilitate working in a H2S environment for time period greater than 30 minutes.

Breathing equipment will be stored in weather proof cases or facilities. They will be inspected and maintained weekly.

The mud system will be designed to minimize or eliminate the escape of H2S at the rig floor. This will be accomplished through the use of proper mud weight, proper ph control of the drilling fluid and the use of H2S scavengers in the drilling fluid. A mud gas separator will be utilized when H2S has is present in the mud.

Drilling experience has shown that wells in developmental areas, (i.e. Dagger Draw, Livingston Ridge Delaware, and Lusk Delaware) are normally pressured and don't experience either H2S kicks or loss of returns. Due to these circumstances, we request exceptions to the rule requiring flare line with remote lighter and choke manifold with minimum of one remote choke. This equipment would be provided on exploratory wells or wells with the known potential for H2S kicks. Additionally, a SO2 monitor would be positioned near the flare line, and a rotating head utilized.

The drill string, casing, tubing, wellhead, blowout preventers and associated lines and valves will be suitable for anticipated H2S encounters.

Radio and or mobile telephone communication will be available on site. Mobile telephone communication will be available in company vehicles.

Drill stem testing to be performed with a minimum number of essential people on location. They will be those necessary to safely conduct the test. If H2S is encountered during a drill stem test, essential personnel will mask up and determine H2S concentration. The recovery will then be reversed to flare pit. Pulling of test tools will be conducted in a safe manner.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN
Hickory ALV Federal #6
1980' FSL and 1090' FEL
Sec. 18-T22S-R24E
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 33 miles northwest 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 12.5 miles to Highway 137.
Turn west and go 14 miles and turn east on caliche road for 0.8 miles.
The new road will start here.

2. PLANNED ACCESS ROAD

A. The proposed new access road will be approximately 3200' in length from the point of origin to the southwest corner of the drilling pad. The road will lie in a southwest to northeast 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 will be built.
D. The route of the road is visible.
E. Existing roads will be maintained in the same manner 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 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 get any materials needed from the closest source and get any permits needed.

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 landfill. 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.
   C. A 400' x 400' 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.
   B. 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:

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:

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; 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 6th day of July, 2007.

Name Cy Cowan

Position Title Regulatory Agent

Address 105 South Fourth Street, Artesia, NM 88210

Telephone 505-748-4372

Field Representative (if not above signatory) Jim Krogman

Address (if different from above) Same

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

E-mail (optional)

SPECIAL DRILLING STIPULATIONS
FOR THE EAST INDIAN BASIN OIL FIELD DEVELOPMENT

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

OPERATOR'S NAME **Yates Petroleum Corporation**
WELL NAME & No. **Hickory ALV Fed. #6**
LOCATION **1980** F **S** L & **1090** F **E** L, SEC. **18**,
T **22** S, R **24** E LEASE NO. **NM-78215**
COUNTY **Eddy** STATE NEW MEXICO

The special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management (BLM) office. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CFR 3165.3 AND 3165.4.

This permit is valid for a period of one year from the date of approval or until lease expiration or termination, whichever is shorter.

1. ON LEASE – SURFACE REQUIREMENTS PRIOR TO DRILLING

(**x**) The BLM will monitor construction of this drill site. Notify the Carlsbad Field Office at (505) 234-5972, at least three (3) working days prior to commencing construction.

(**x**) Roads and the drill pad fort his well must be surfaced with a minimum of **4** inches of compacted caliche.

(**x**) The holder shall comply with the terms, conditions, and stipulations for drilling sites in the Azotea Mesa portion of the East Indian Basin development area, as listed below:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et. seq.) with regard to any toxic substances that are used, generated by or stored on the rights-of-way or on facilities authorized by this grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et. seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et. seq.) on the rights-of-way (unless the release or threatened release is wholly unrelated to the rights-of-way holder's activity on the rights-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the well site, any oil or other pollutant should be discharged, impacting Federal lands, the control and total

removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting there from, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

5. The holder shall conduct all activities associated with the construction, operation, and termination of the rights-of-way within the authorized limits of the rights-of-way.

6. No well or plant sites will be allowed on slopes over 20 percent. Other use or occupancy on slopes over 20 percent would be limited. Uses permitted might include mineral material extraction sites, surface pipelines, projects designed to enhance or protect renewable natural resources, or other uses as approved by the Authorized Officer (AO). Projects on these steep grades will be considered on a case-by-case basis, and may require special conditions or stipulations for slope mitigation.

7. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair impacted improvements to at least their former state. The holder shall contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence will be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed in existing fences unless approved by the Authorized Officer.

8. All above-ground structures not subject to safety requirements shall be painted by the holder to reduce visual contrasts and to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The colors selected for this project include: ( ) A "Carlsbad Canyon" (Munsell Soil Color Chart [MSCC] Number 2.5Y 6/2). ( ) B "Shale Green" [MSCC] Number 5Y 4/2), ( ) C "Desert Brown" [MSCC] Number 10YR 6/3), and ( ) D "Juniper Green" [no MSCC Number], the color(s) for individual facilities will be specified depending on the site-specific contrasts caused by the individual action. Exceptions to these color requirements may be authorized on a case-by-case basis, if determined to be more effective in meeting site-specific VRM objectives, such as for power poles, fence posts, signs, etc.

9. The holder shall take whatever steps are necessary to ensure that non-road rights-of-way are not used as roadways. The holder shall not use non-road rights-of-way as roads or access for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Stacks on heater-treaters/separator-dehydrators will be required to be covered to prevent mortality of avian species including neotopical migrants and bats.

12. The BLM will be informed at least two (2) working days prior to any blasting. Notifications of blasting should include the purpose and location of the blasting, the intended date and duration of the blasting, and the estimated volume of the excavation or cut and/or fill.

13. The site will be maintained in neat and orderly condition at all times. All waste materials, both liquid and solid, shall be disposed of promptly at an appropriate, authorized waste disposal facility in accordance with all applicable State and Federal laws. "Waste" means all discarded matter including, but not limited to, human refuse, trash, garbage, debris, petroleum products, brines, chemicals, oil drums, ashes, and equipment. No waste shall be buried on site.

14. In those areas where erosion control structures are required to stabilize soil conditions, the holder shall install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound management practices. Any earth work will require prior approval by the Authorized Officer.

15. The holder shall reseed all surface disturbed by construction activities. If reseeding is required, it will be done according to the attached seeding requirements, using the native seed mixture specified.

16. Upon completion of initial construction, the holder will promptly reclaim disturbed areas not necessary for continuing facility operation.

17. Closed circulation systems (steel pits) may be required on steeper slopes, on locations with restricted available area, in rocky zones where digging a pit could involve rock saws or blasting, or in other areas of special concern as determined by the BLM AO in consultation with Industry. Cuttings will be placed in permanent, lined pits, located by the BLM and Industry representatives during the initial on-site BLM-Industry meeting.

When reserve (mud) pits are used, they will be constructed as per the decisions made at the initial on-site meeting between industry and BLM. Pits will be lined with heavy (8 mil) pit liners which are never to be breached. Berms, sufficient to contain any spills or water flows and preferable made from excavated pit material, will be constructed around the pits. Relocation or reorientation of pits, or modified "V" pits, may be required at certain locations. Padding material, such as sand, dirt fines, or straw, may be required to prevent punctures in the bottom of the pit liners.

During reclamation the pits will be allowed to dry, then the liners will be folded over the pit sediments, and the pit will be backfilled. No pit will be drained and no pit liner will be broken. An examination and approval by a BLM representative will be required prior to closure of any reserve pit.

18. BLM will require prompt notification by the operator of any bit drops of four feet or more accompanied by circulation losses greater than 75 percent.

19. To minimize potential impacts to subsurface resources from well drilling, casing, or cementing, the BLM may require specific procedures, such as fresh water drilling in certain zones, special cement additives or sweeps, or cementing casing to the surface. These procedures, if required, will be determined by the BLM Fluid Minerals staff in consultation with the operator.

20. To minimize potential problems due to casing and cementing, the BLM may require the following actions as determined by BLM and the operator.

(1) Use of cement baskets, external casing packers, multiple-staged and/or remedial cementing to isolate voids encountered;
(2) Use of special cements or cement additives to combat lost circulation;
(3) Use of cement evaluation tools;
(4) Cementing all casing strings to surface.

21. Permanent under-liners and berms sufficient to contain any spills will be built under and around storage tanks.

22. If, during on-site inspection, it is determined that surface disturbing activities must be conducted in areas of possible T&E plant habitat (limestone shelves or rocky outcroppings), a T&E species survey may be required prior to authorization of any surface disturbing activities.

23. Cleanup of spills in excess of state-reportable levels should be accomplished using bio-remediation techniques rather then by removing contaminated soil. If measures other than bio-remediation are required for individual spill sites, these special techniques will be approved by the Authorized Officer, BLM, in consultation with the companies.

24. A sales contract for removal of mineral material (caliche, sand, gravel, fill dirt, etc.) from an authorized pit, site, or on location must be obtained from the BLM prior to commencing construction. Contact the BLM solid minerals staff for the various options to purchase mineral material.

25. Caliche pits will be reclaimed by sloping their walls, replacing the topsoil, and seeding. In some cases, caliche removed from other sites may be returned, depending on the condition of the caliche.

26. Abandoned surface pipelines and other above-ground equipment will be removed promptly once these are no longer needed, buried pipelines will be flushed and left in placed.

27. Sites built on cut-and-fill will be recontoured to blend into the surrounding natural terrain, as nearly as feasible.

28. Special Stipulations:

( ) A. On a case-by-case basis, BLM may require gates on, or physical restriction to, any new or upgraded road constructed to provide access to a new facility within the study area. The gates or physical barrier would remain closed and locked at all times and access would be granted only to essential company and BLM personnel. This restriction could help to protect important cultural and archaeological sites, as well as wildlife, watershed, and recreation values.

( ) B. To maintain Visual Resources along State Highway 137, screening with planting or natural or man-made materials, such as berms or fencing may be required at some locations.

(x) C. Padding material, such as sand, dirt fines, or straw, will be required to prevent punctures in the bottom of the pit liners.

(**x**) D. Other. **See attached Cave/Karst and Visual Resource Conditions of Approval**

II. WELL COMPLETION REQUIREMENTS

( ) A Communization Agreement covering the acreage dedicated to the well must be filed for approval with the BLM. The effective date of the agreement must be prior to any sales.

(**x**) Surface Restoration: When the well is completed, the reserve pit(s) will be dried and backfilled, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be recontoured to resemble the original contours of the surrounding terrain and reclaimed as per stipulation number 20. The disturbed area will be reseeded with the following seed mixture, in pounds of Pure Live Seed (PLS) per acre.

(Pounds of Pure Live Seed: Pounds of seed x percent purity x percent germination = Pounds Pure Live Seed.)

( ) A. Seed Mixture 1 (Loamy Sites)

Sand dropseed (Sporobolus cryptandrus0	1.00
Sideoats grama (Bouteloua curtipendula)	5.00
Winterfat (Ceratoides lanata)	1.00
OR	
Mountain Mahogany (Cerocarpus nontanus)	1.00
OR	
Apache plume (Fallugia paradoxa)	2.00

( ) B. Seed Mixture 2 (Sandy Sites

Sand dropseed (Sporobolus crytandrus)	1.00
Four-wing saltbush DWS* (Atriplex canescens)	8.00
Plains bristlegrass (Setaria macrostachya)	5.00
OR	
Desert globmallow (Sphaeralcea ambigua)	0.25
OR	

(x) C. Seed Mixture 3 (Shallow Sites)

Sideoats grama (Bouteloua curtipendula)	7.00
Plains Bristlegrass (Setaria macrostrachya)	5.00
OR	
Bottlebrush squirrel tail (Sitanion heptrix)	5.50
Mountain Mahogany (Cerocarpus nontanus)	1.00
OR	
Apache plume (Fallugia paradoxa)	2.00

( ) D. Seed Mixture 4 (Gypsum Sites)

Alkali Sacaton (Sporobolus airoides)	1.50
Four-wing saltbush DWS* (Atriplex canescens)	8.00

Seeding should be done either late in the fall (September 15 – November 15, before freeze up) or early as possible the following spring to take advantage of available ground moisture.

(x) Special: BLM's objective through this mitigative process is to restore disturbed surfaces to a condition as similar to their original state as is feasible and/or blend these areas into the surrounding landscape. To achieve that objective, the following is a list of rehabilitation or reclamation methods that will be considered, in addition to standard procedures, as appropriate for each disturbed area:

(x) Removal of caliche or other surfacing materials, these materials may be used to fill cuts for restoration or returned to the caliche pits, if the caliche is acceptable:
( ) Special seed bed preparation and seeding methods;
( ) Soil amendments, soil treatments, and fertilizers;
( ) Planting trees and shrubs (from seeds);
( ) Mulching;
( ) Initial watering;
( ) Erosion control and land treatments;
( ) Special Fencing;
( ) Other.

Conditions of Approval
Cave and Karst

EA#: NM-520-07-1053
Lease #: NM-78215
Yates Petroleum Corporation
Hickory ALV Fed. #6 RESUBMITTAL

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.

I. 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 possible hazard. It has been reported in the Township to the north. 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. When floor controls are required, (3M or Greater) controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING

1. The **13-3/8** inch surface casing shall be set at **approximately 350** 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 and Wolfcamp formations.
Possible high pressure gas bursts in the Wolfcamp and over pressured in the Pennsylvanian Section.

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

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

3. The minimum required fill of cement behind the **7** 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. The appropriate BLM office shall be notified a minimum of 2 hours in advance for a representative to witness the tests.

   a. The tests shall be done by an independent service company.

   b. The results of the test shall be reported to the appropriate BLM office.

   c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

   d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug

and 30 minutes without a test plug.

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

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

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

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

WWI 101107