

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

ATS-07-312
EA-07-1000

Form 3160-3
(April 2004)



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

AUG 02 2007
OCD-ARTESIA

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

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		Lease Serial No. NM-104620	
1b. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Yates Petroleum Corporation		If Unit or CA Agreement, Name and No.	
3a. Address 105 South Fourth Street Artesia, New Mexico 88210		8. Lease Name and Well No. Catwoman BBC Federal #1H	
3b. Phone No. (include area code) (505) 748-1471		9. API Well No. 30-015-35739	
4. Location of well (Report location clearly and in accordance with any State requirements. *) At surface 1970' FSL and 476' FWL Surface Hole Location At proposed prod. zone 1970' FSL and 660' FEL Bottom Hole Location		10. Field and Pool, or Exploratory Bunting Ranch Wolfcamp	
14. Distance in miles and direction from the nearest town or post office* Approximately 16 miles southwest of Hope, New Mexico		11. Sec., T., R., M., or Blk. And Survey or Area Section 20, T19S-R21E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any) 476'		12. County or Parish Eddy	
16. No. of acres in lease 480.00		13. State NM	
17. Spacing Unit dedicated to this well S/2		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 20'	
19. Proposed Depth 8214' - per operator 4350' Vert 8100' Horiz. 4/20/07		20. BLM/ BIA Bond No. on file NATIONWIDE BOND #NMB000434	
21. Elevations (Show whether DF RT, GR, etc) 4485' GL		22. Aproximate 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 | 4 Bond to cover the operations unless covered by existing bond on file(see item 20 above). |
| 2 A Drilling Plan | 5 Operator certification. |
| 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). | 6. Such other site specific information and/ or plans as may be required by the a authorized officer. |

25. Signature 	Name (Printed/ Typed) Cy Cowan	Date 6/14/2007
Title Regulatory Agent		
Approved By (Signature) /s/ Don Peterson	Name (Printed/ Typed) CARLSBAD FIELD OFFICE	Date JUL 30 2007
Title FIELD MANAGER		

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 United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Roswell Controlled Water Basin
Roswell Controlled Water Basin

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

**APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED**

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources 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 97605	Pool Name Bunting Ranch Wolfcamp
Property Code 36650	Property Name CATWOMAN BBC FEDERAL	Well Number 1H
OGRID No. 025575	Operator Name YATES PETROLEUM CORPORATION	Elevation 4485

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	20	19S	21E		1970	SOUTH	476	WEST	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
I	20	19S	21E		1970	SOUTH	660	EAST	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

<p>PENETRATION POINT Y=598350.0 N X=349523.5 E</p>	<p>GEODETIC COORDINATES NAD 27 NME SURFACE HOLE LOCATION Y=598350.1 N X=349338.9 E LAT.=32.643972 LONG.=104.822806 (NAD-27)</p>	<p>BOTTOM HOLE LOCATION Y=598348.7 N X=353471.2 E LAT.=32.644060 N LONG.=104.809370 W</p>	<p>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 6/6/07 Signature Date Cy Cowan, Regulatory Printed Name Agent</p>
<p>PROJECT AREA NM-104620 GRID AZ. = 90°01'08" HORIZ. DIST. = 4132.3' PRODUCING AREA</p>			<p>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. 5/10/2007 Date Surveyed Signature & Seal of Professional Surveyor HERSCHELL L. JONES NEW MEXICO 3640 Certificate No. Herschel L. Jones 3640 PROFESSIONAL SURVEYOR</p>

YATES PETROLEUM CORPORATION

Catwoman BBC Federal #1H

1970' FSL & 476' FWL (Pilot Hole)

1970' FSL & 660' FEL (Bottom Hole)

Section 20, T19S-R21E

Eddy County, New Mexico

- The estimated tops of geologic markers are as follows:

San Andres	500'	Wolfcamp Pay	4210'
Glorietta	1350'	Base Wolfcamp Pay	4260'
Upper Yeso	1500'	Wolfcamp Shale	4290'
Tubb	2710'	TD (Pilot Hole)	4500'
Lower Yeso	2855'	TD (Lateral Hole)	8100'
Abo	3345'		8214' - per operator 6/20/07 WWI

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

Water: 835'

Oil or Gas: All potential formations.

- Pressure Control Equipment: BOPE will be installed on the 9 5/8" casing and the 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.

- THE PROPOSED CASING AND CEMENTING PROGRAM:

A. Casing Program: (All New)

Hole Size	Casing Size	Wt./Ft	Grade	Coupling	Interval	Length
14 3/4"	9 5/8"	36#	J-55	ST&C	0-1500'	1500'
8 3/4"	5 1/2"	17#	HCP-110	LT&C	0-8214' MD	8214'
**8 3/4"	7"	23#	J-55	ST&C	0-4350'	4530' - 4350' well
6 1/8"	4 1/2' Liner	11.6#	HCP-110	LT&C	3850'-8214'	4364'

***Pilot hole will be drilled to 4500'. Well will then be plugged back and kicked off at approximately 3850' at 15 degrees per 100' with an 8 3/4" hole to 4350' MD. If hole conditions warrant, 7" casing will be set and cemented back to previous casing. A 6 1/8" hole will then be drilled to a TD of 8214' and 4 1/2" casing will be set and cement tied back to the 7" casing. If 7" casing is not warranted then hole size will be reduced to 7 7/8" and drilled to 8214'. 5 1/2" casing will be set and cemented.

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 500# 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, and Tensile Strength 1.8

B. CEMENTING PROGRAM:

Surface Casing: TOC-Surface. Lead with 900 sx 'C' Lite + 2% CaCl₂ (YLD 2.0 WT 12.5). Tail in with 200 sx 'C' (YLD 1.35 WT 14.8)

Production Casing: TOC-Surface Lead with 575 sx 'C' Lite (YLD 2.05 WT 12.5). Tail in with 725 sx Acid Soluble Cement (YLD 2.60 WT 11.15).

If 7' casing is run a 6 1/8" hole will be drilled and 4 1/2" production liner will be set. TOC-1000' Lead w/ 350 sx 'C' Lite (YLD 2.04 WT 12.5). TOC-3850' Tail in w/ 225 sx Class 'C' (YLD 1.33 WT 14.8) and 350 sx Acid Soluble Cement (YLD 2.6 WT 11.15). *4 1/2" cement - per operator.*

5. MUD PROGRAM AND AUXILIARY EQUIPMENT:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-1500'	Fresh Water	8.4	28	N/C
1500'-4500'	Cut Brine	8.6-9.2	28	N/C
	(Horizontal Section)			
3850'-8214'	Cut Brine	8.8-9.2	28	N/C

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. Rig personnel will check mud hourly.

6. EVALUATION PROGRAM:

Samples: 10' samples out from under intermediate casing.
 Logging: Platform Express/NGT/HALS, FMI, GR on MWD in lateral.
 Coring: None Anticipated.
 DST's: None Anticipated.

7. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE, AND POTENTIAL HAZARDS:

Anticipated BHP:

From: 0	TO: 1500'	TVD	Anticipated Max. BHP: 655 PSI
From: 1500'	TO: 4500'	TVD	Anticipated Max. BHP: 2150 PSI

Abnormal Pressures Anticipated: None
 Lost Circulation Zones Anticipated: None.
 H₂S Zones Anticipated: None Anticipated
 Maximum Bottom Hole Temperature: 168 F

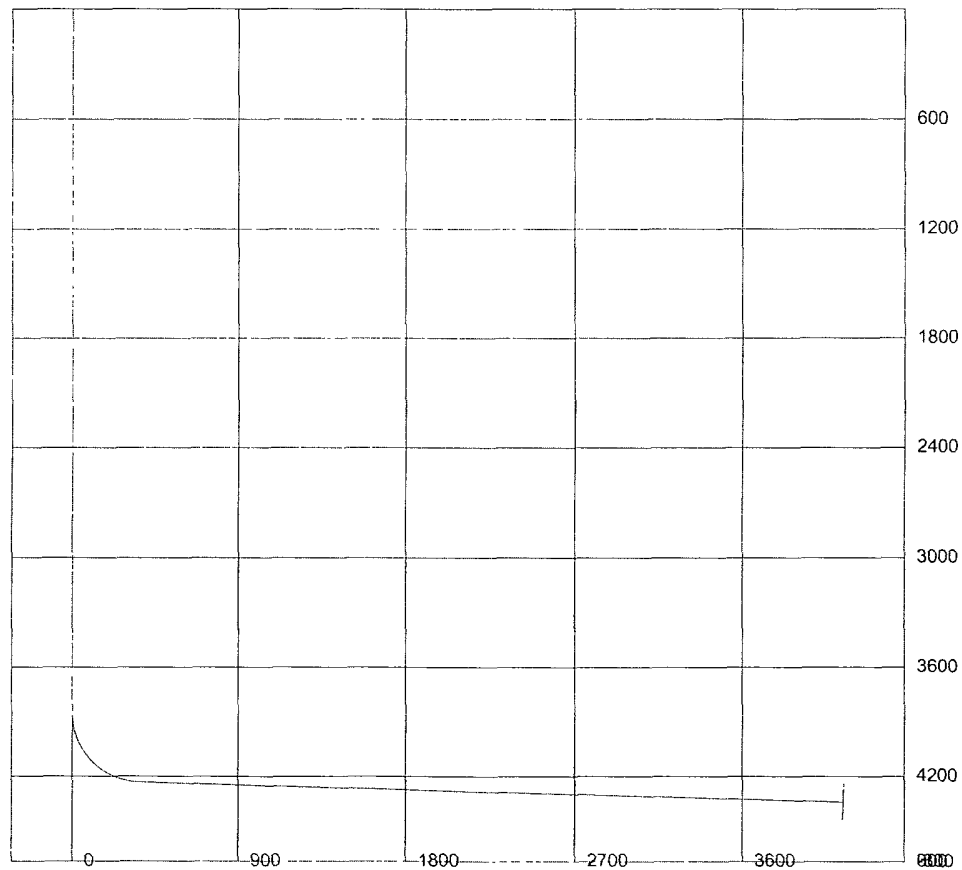
8. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 45 days to drill the well with completion taking another 40 days.

M.D.	Inclination	Azimuth	T.V.D.	N/S	E/W	D.L.S.	ToolFace	T.F. Ref. (HS/GN)	
0	0	0	0	0	0	0			
500	0	0	500	0	0	0			SAN ANDRES
1350	0	0	1350	0	0	0			GLORIETTA
1500	0	0	1500	0	0	0			UPPER YESO
2710	0	0	2710	0	0	0			TUBB
2855	0	0	2855	0	0	0			LOWER YESO
3345	0	0	3345	0	0	0			ABO
3850	0	0	3850	0	0	15	90	GN	KOP
3850	0	0	3850	0	0	15	90	GN	
3875	3 75	90	3874.98	0	0 82	15	0	HS	
3900	7.5	90	3899.86	0	3.27	15	0	HS	
3925	11.25	90	3924.52	0	7 34	15	0	HS	
3950	15	90	3948.86	0	13.02	15	0	HS	
3975	18.75	90	3972.78	0	20 27	15	0	HS	
4000	22 5	90	3996.17	0	29 08	15	0	HS	
4025	26 25	90	4018.94	0	39.39	15	0	HS	
4050	30	90	4040.99	0	51.17	15	0	HS	
4075	33.75	90	4062.21	0	64.37	15	0	HS	
4100	37.5	90	4082.53	0	78.93	15	0	HS	
4125	41 25	90	4101.85	0	94 79	15	0	HS	
4150	45	90	4120.09	0	111.88	15	0	HS	
4175	48 75	90	4137.18	0	130 12	15	0	HS	
4200	52.5	90	4153.04	0	149 44	15	0	HS	
4225	56.25	90	4167.6	0	169 76	15	0	HS	
4250	60	90	4180.8	0	190 99	15	0	HS	
4275	63 75	90	4192.58	0	213 03	15	0	HS	
4300	67 5	90	4202.9	0	235 8	15	0	HS	
4325	71 25	90	4211.7	0	259 19	15	0	HS	
4350	75	90	4218.96	0	283 11	15	0	HS	WOLF CAMP PAY
4375	78.75	90	4224.63	0	307.45	15	0	HS	
4400	82 5	90	4228.7	0	332 11	15	0	HS	
4425	86 25	90	4231.15	0	356 99	15	0	HS	
4439 05	88 36	90	4231.82	0	371 03	15	0	HS	
8213:58	88:36	90	4340	0	4144	0			LATERAL TD

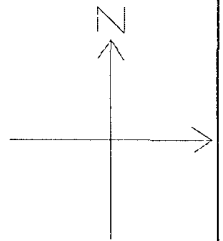
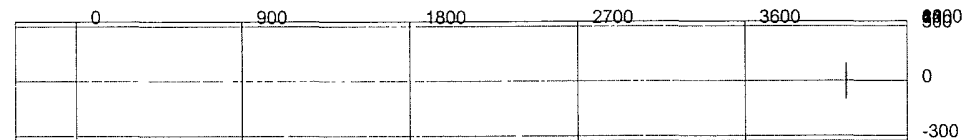
3D³ Directional Drilling Planner - 3D View

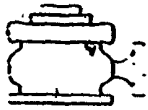
Company: Yates Petroleum Corporation
Well: Catwoman BBC Federal Com. #1H



3D³ Directional Drilling Planner - 3D View

Company: **Yates Petroleum Corporation**
Well: **Catwoman BBC Federal Com. #1H**

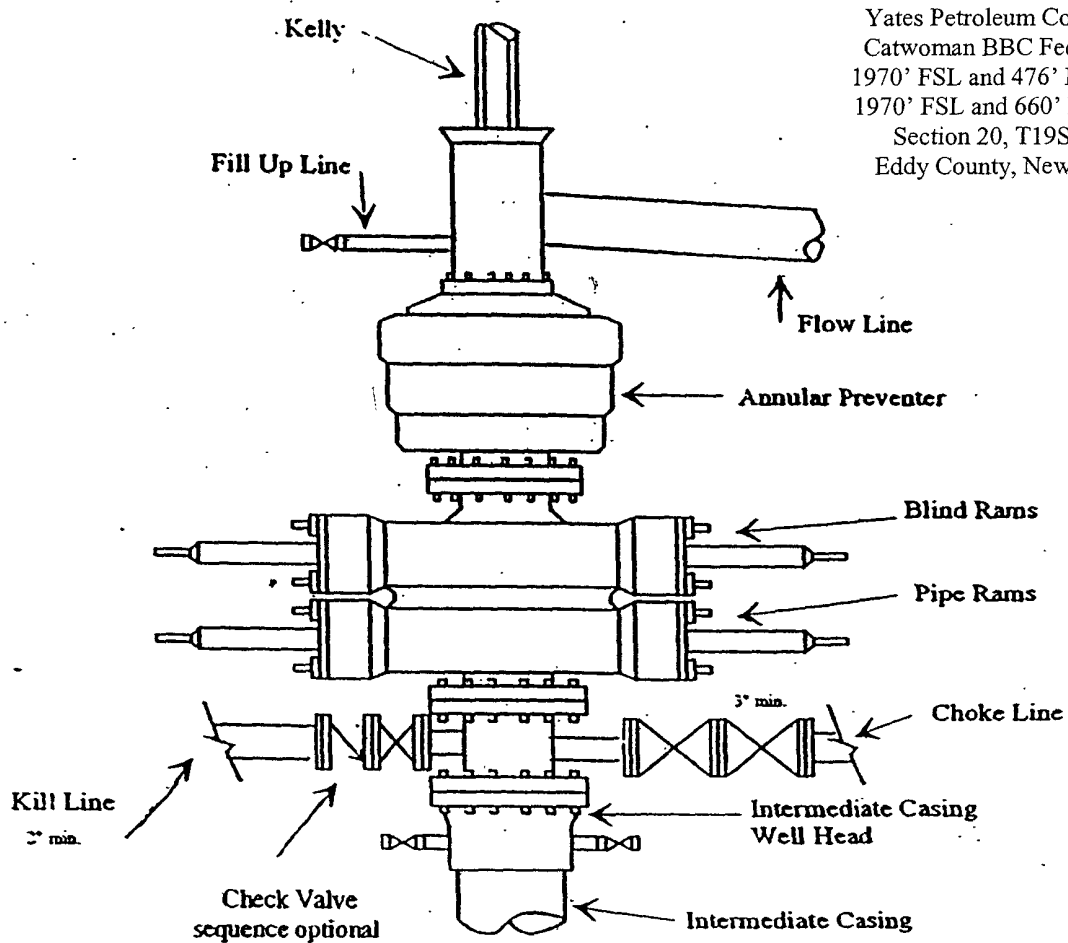




Yates Petroleum Corporation

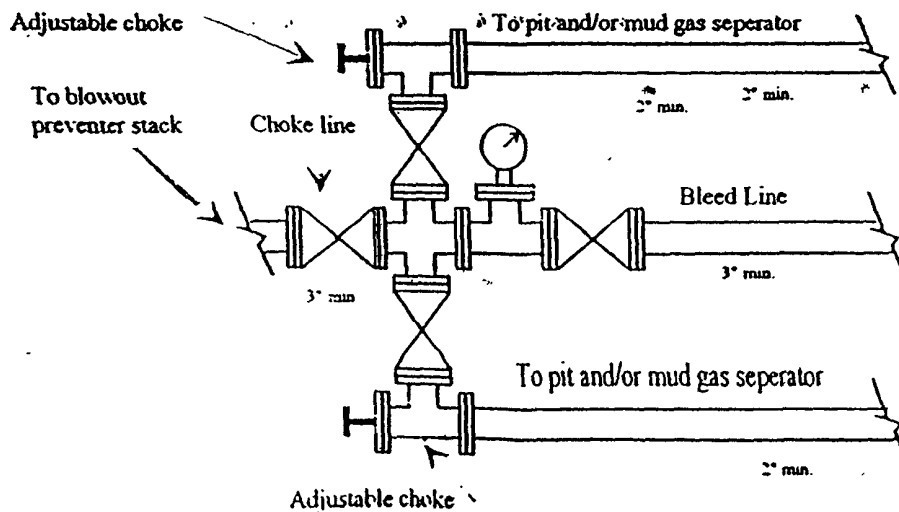
BOP-3

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



Yates Petroleum Corporation
Catwoman BBC Federal #1H
1970' FSL and 476' FWL SHL
1970' FSL and 660' FEL BHL
Section 20, T19S-R21E
Eddy County, New Mexico

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



MULTI-POINT SURFACE USE AND OPERATIONS PLAN
YATES PETROLEUM CORPORATION
Catwoman BBC Federal #1H
1970' FSL & 476' FWL (Pilot Hole)
1970' FSL & 660' FEL (Bottom Hole)
Section 20-T19S-R21E
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 well site is located approximately 16 miles southwest of Hope, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

From Hope, New Mexico go south on Armstrong road for approximately 7 miles to Bronc Road. Turn right on Bronc Road and go approximately 7 miles to an existing lease road on the right side of the road. Turn right here and follow the lease road for approximately 1.9 miles. The well location will be on the right side of the lease road.

2. PLANNED ACCESS ROAD:

- A. There will not be any access road to this well
- B. There will not be any new access road to this well.
- C. N/A
- D. The route of the road is visible.
- E. Existing roads will be maintained in the same or better condition.

3. LOCATION OF EXISTING WELL:

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

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. There are no 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 a producing gas well.

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 be responsible for finding a source of material for construction of road and pad and will obtain any permits that may be required.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cuttings will be disposed of in the reserve pits.
- B. The reserve pits will be constructed and reclamation done according to NMOCD guidelines.
- C. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.
- D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
- E. Oil produced during operations will be stored in tanks until sold.
- F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- G. 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. An exhibit 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. 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 well site 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 plugged and abandoned, 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 reclaimed as required by the Oil Conservation Division.

11. SURFACE OWNERSHIP:

Surface is managed 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, and historical and cultural sites.
- B. The primary surface use is for grazing.

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Yates Petroleum Corporation
Well Name & No. 1H-Catwoman BBC Federal
Location (SHL): 1970' FSL, 0476' FWL, Sec. 20, T-19-S, R-21-E, Eddy County, NM
Location (BHL): 1970' FSL, 0660' FEL, Sec. 20, T-19-S, R-21-E, Eddy County, NM
Lease: NM-104620

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I. DRILLING OPERATIONS REQUIREMENTS:

- A. The Bureau of Land Management (BLM) is to be notified a minimum of 4 hours in advance for a representative to witness:
1. Spudding well
 2. Setting and/or Cementing of all casing strings
 3. BOPE tests
- Eddy County call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822
- B. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard.**
- C. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
- D. If floor controls are required, (3M or Greater) controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

II. CASING:

- A. The 9-5/8 inch surface casing shall be set at 1500 feet and cemented to the surface.
1. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
 2. Wait on cement (WOC) time for a primary cement job will be a minimum of 12 hours for a non-water basin, 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compression strength, whichever is greater. (This is to include the lead cement)
 3. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.
 4. If cement falls back, remedial action will be done prior to drilling out that string.

Possible lost circulation in the San Andres, Glorieta, and Wolfcamp formations.

Possible high pressure gas kicks in the Wolfcamp formation.

Medium potential for cave/karst features.

- B. The minimum required fill of cement behind the 7 inch intermediate casing (**which will be set if hole conditions warrant**) is cement shall extend 500' inside the surface casing. If 7 inch casing is set, the production casing will be a 4-1/2 inch liner and will be cemented to top of liner.
- C. The minimum required fill of cement behind the 5-1/2 inch production casing is cement shall circulate to surface. If cement does not circulate see A.1 thru 4.
- D. If hardband drill pipe is rotated inside casing; returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool I joints of the drill pipe will be installed prior to continuing drilling operations.

III. PRESSURE CONTROL:

- A. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Section 17.
- B. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - 1. The tests shall be done by an independent service company.
 - 2. The results of the test shall be reported to the appropriate BLM office.
 - 3. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
 - 4. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. 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.

IV. DRILLING MUD:

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

- 1. Recording pit level indicator to indicate volume gains and losses.
- 2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
- 3. Flow-sensor on the flow line to warn of abnormal mud returns from the well

Engineer on call phone: 505-706-2779

WWI 062007