

N.M. Oil Cons. DIV-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

AUG 29 2005

APPLICATION FOR PERMIT TO DRILL OR REENTER

0

OMB No. 1004-0136  
Expires November 30, 2000

5. Lease Serial No.

NM-81592 81952

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No. 15601  
Llama ALL Federal #5

9. API Well No.

30-015-34298

10. Field and Pool, or Exploratory

Wildcat Bone Spring

11. Sec., T., R., M., or Blk. and Survey or Area

Section 7, T22S-R31E

12. County or Parish

Eddy County

13. State

NM

Type of Work: ☒ DRILL ☐ REENTER R-111-POTASH

Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

Name of Operator

Yates Petroleum Corporation 25575

Address 105 South Fourth Street

Artesia, New Mexico 88210

3b. Phone No. (include area code)

(505) 748-1471

Location of Well (Report location clearly and in accordance with any State requirements. \*)

surface

330' FSL and 1650' FEL

proposed prod. Zone

Same

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

approximately 25 miles northeast of Loving, New Mexico.

Distance from proposed\*

location to nearest

property or lease line, ft.

(Also to nearest drig. unit line, if any)

330'

Distance from proposed location\*

to nearest well, drilling, completed,

applied for, on this lease, ft.

1900'

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

3368' GL

16. No. of Acres in lease

1078.96

17. Spacing Unit dedicated to this well

SW/SE

19. Proposed Depth

7850'

20. BLM/BIA Bond No. on file

NM-2811

22. Approximate date work will start\*

ASAP

23. Estimated duration

45 days

24. Attachments

CARLSBAD CONTROLLED WATER BASIN

Following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

Well plat certified by a registered surveyor.

A Drilling Plan.

A Surface Use Plan (if the location is on National Forest System Lands, the

SUPO 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.

Signature

Regulatory Agent

Regulatory Agent

Approved by (Signature)

/s/ Linda S. C. Rundell

STATE DIRECTOR

Name (Printed/Typed)

Cy Cowan

Date

12/14/04

Name (Printed/Typed)

/s/ Linda S. C. Rundell

Office

NM STATE OFFICE

Date

AUG 18 2005

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 1 YEAR

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.

Instructions on reverse)

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

Witness Surface &  
Intermediate Casing

**DISTRICT IV**  
2040 South Pacheco, Santa Fe, NM 87505

STATE OF NEW MEXICO  
Energy, Minerals and Natural Resources Department

Revised March 17, 1989  
Instruction on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

# OIL CONSERVATION DIVISION

**P.O. Box 2088**  
**Santa Fe, New Mexico 87504-2088**

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code 96053	Pool Name Wildcat Bone Spring
Property Code	Property Name LLAMA "ALL" FEDERAL		Well Number 5
OGRID No. 025575	Operator Name YATES PETROLEUM CORPORATION		Elevation 3368

### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	7	22S	31E		330	SOUTH	1650	EAST	EDDY

### Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>N.32°23'59.0" W.103°48'49.8" N.509478.5 E.660496.7 (NAD-27)</p>	<div style="border: 2px solid black; padding: 10px; display: inline-block;"> <p style="font-size: 1.2em; margin: 0;">Nm- 81592</p> <div style="display: flex; align-items: center; justify-content: center; margin-top: 20px;"> <div style="text-align: center;"> <p>3363</p> <p>3300</p> <p>3364</p> </div> <div style="margin: 0 10px;"> <p>3367</p> <p>1650'</p> <p>3366</p> </div> </div> </div>		

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

**YATES PETROLEUM CORPORATION**

**Llama "ALL" Federal #5**

**330' FSL & 1650' FEL**

**Section 7, T22S-R31E**

**Eddy County, New Mexico**

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

Rustler	480'
Top of Salt	836'
Base of Salt	3820'
Bell Canyon	3920'
Cherry Canyon	4830'
Brushy Canyon	6120'
Bone Spring Lime	7740'
TD	7850'

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

Water:	Approx 150'
Oil or Gas:	4830'-7850'

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	0-750'	750'	WITNESS
11"	8 5/8"	32#	J-55	ST&C	0-3900'	3900'	WITNESS
7 7/8"	5 1/2"	17#	J-55	LT&C	0-100'	100'	
7 7/8"	5 1/2"	15.5#	J-55	LT&C	100'-7500'	7400'	
7 7/8"	5 1/2"	17#	J-55	LT&C	7500'-7850'	350'	

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 preventor.

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

**B. CEMENTING PROGRAM:**

Surface casing: Lead with 550 sx Lite (YLD 1.98 WT.12.5) Tail in w/ 200 sx Class "C" + 2% CaCl<sub>2</sub> (YLD 1.34 WT 14.8).

Intermediate Casing: Lead with 1000 sx Premium Plus (YLD 1.98 WT 12.5); Tail in w/ 200 sx Premium Plus + 2% CaCl<sub>2</sub> (YLD 1.34 WT. 14.8)

Production Casing: TOC 4800' Stage I; 625 sx Super "H" (YLD 1.72 WT. 13.0). DV Tool @3850'. Tail in w/ 100 sx Thixset (YLD 1.42 WT 14.4)  
Stage II: Lead w/ 600 sx Interfill 'C' (YLD 2.41 WT 12.0) Tail in w/ 100 sx Class 'C' Neat (YLD 1.34 Wt 14.8).

5. Mud Program and Auxiliary Equipment:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-750'	FW/Native Mud	8.4-8.6	30-32	N/C
750'-3900'	Brine	10.0-10.2	28-30	N/C
3900'-7700'	Cut Brine	8.4-8.6	28	N/C
7700'-7850'	Cut Brine/Starch	8.6-9.0	28-30	<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: 10 samples out from under surface casing.

Logging: DLL TD to casing; CNL/FDC TD to casing; CMR TD to casing GR TD to Surface; DLL w/RXO TD to casing.

Coring: None Anticipated.

DST's: As warranted.

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

Anticipated BHP:

From: O	TO: 500'	Anticipated Max.	BHP: 400	PSI
From: 500'	TO: 3900'	Anticipated Max.	BHP: 2075	PSI
From: 3900'	TO: 7850'	Anticipated Max.	BHP: 3675	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: 162 F

8. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 20 days to drill the well with completion taking another 15 days.

**YATES PETROLEUM CORPORATION**  
**Llama "ALL" Federal #5**  
330' FSL & 1650' FEL  
Section 7, T22S-R31E  
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 25 miles northeast of Loving, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

Go east of Carlsbad on Highway 285 to Highway 31. Go east on Highway 31 to Highway 128 (Jal Highway). Go approximately 10.7 miles to County Road 802 Wipp Road. Turn north on CR-802 and go approximately 3.5 miles to Louis Whitlock Road. Turn north on Louis Whitlock Road and go north for approx. 1.1 miles. Turn west on existing pipeline road and go approx. 1.5 miles to compressor site on right. Turn right here and follow existing lease road for approx. 1.5 miles to the Llama All Federal #1. The new road will start here going east for approximately .5 of a mile to the southwest corner of the proposed Llama ALL Federal #5 well location.

2. PLANNED ACCESS ROAD.

- A. The proposed new access will be approximately .5 of a mile in length from the point of origin to the southwest corner of the drilling pad. The road will lie in a west to east direction.
- B. The new road will be 14 feet in width (driving surface) and will be adequately drained to control runoff and soil erosion.
- C. The new road will be bladed with drainage on one side. Traffic turnouts may be built.
- D. The route of the road is visible.
- E. Existing roads will be maintained in the same or better condition.

3. LOCATION OF EXISTING WELL

- A. There is drilling activity within a one-mile radius of the wellsite.
- B. Exhibit D shows existing wells within a one-mile radius of the proposed wellsite.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

- A. There are production facilities on this lease at the present time.
- B. In the event that the well is productive, the necessary production facilities will be installed on the drilling pad. If the well is productive oil, a gas or diesel self-contained unit will be used to provide the necessary power. No power will be required if the well is productive of gas.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. It is planned to drill the proposed well with a fresh water system. The fresh water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit A.

6. SOURCE OF CONSTRUCTION MATERIALS:

Dirt contractor will locate closest pit and obtain any permits and materials needed for construction.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cuttings will be disposed of in the reserve pits.
- B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.
- C. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
- D. Oil produced during operations will be stored in tanks until sold.
- E. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- F. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary land fill. Burial on site is not approved.

8. ANCILLARY FACILITIES: None.

9. WELLSITE LAYOUT:

- A. Exhibit C shows the relative location and dimensions of the well pad, the reserve pits, the location of the drilling equipment, rig orientation and access road approach.
- B. The reserve pits will be plastic lined and will face to the north.
- C. A 600' x 600' area has been staked and flagged.

10. PLANS FOR RESTORATION

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the wellsite in as aesthetically pleasing a condition as possible.
- B. Unguarded pits, if any, containing fluids will be fenced until they have dried and been leveled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible. All pits will be filled level after they have evaporated and dried.

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

12. OTHER INFORMATION:

- A. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.
- B. The primary surface use is for grazing.

13. OPERATOR'S REPRESENTATIVE

A. Through A.P.D. Approval:  
  
Cy Cowan, Regulatory Agent  
Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, New Mexico 88210  
Phone (505) 748-1471

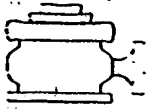
B. Through Drilling Operations,  
Completions and Production:  
Pinson McWhorter, Operations Manager  
Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, New Mexico 88210  
Phone (505) 748-1471

14. CERTIFICATION:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and , that the work associated with the operations proposed herein will be performed by Yates Petroleum Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

12/13/04

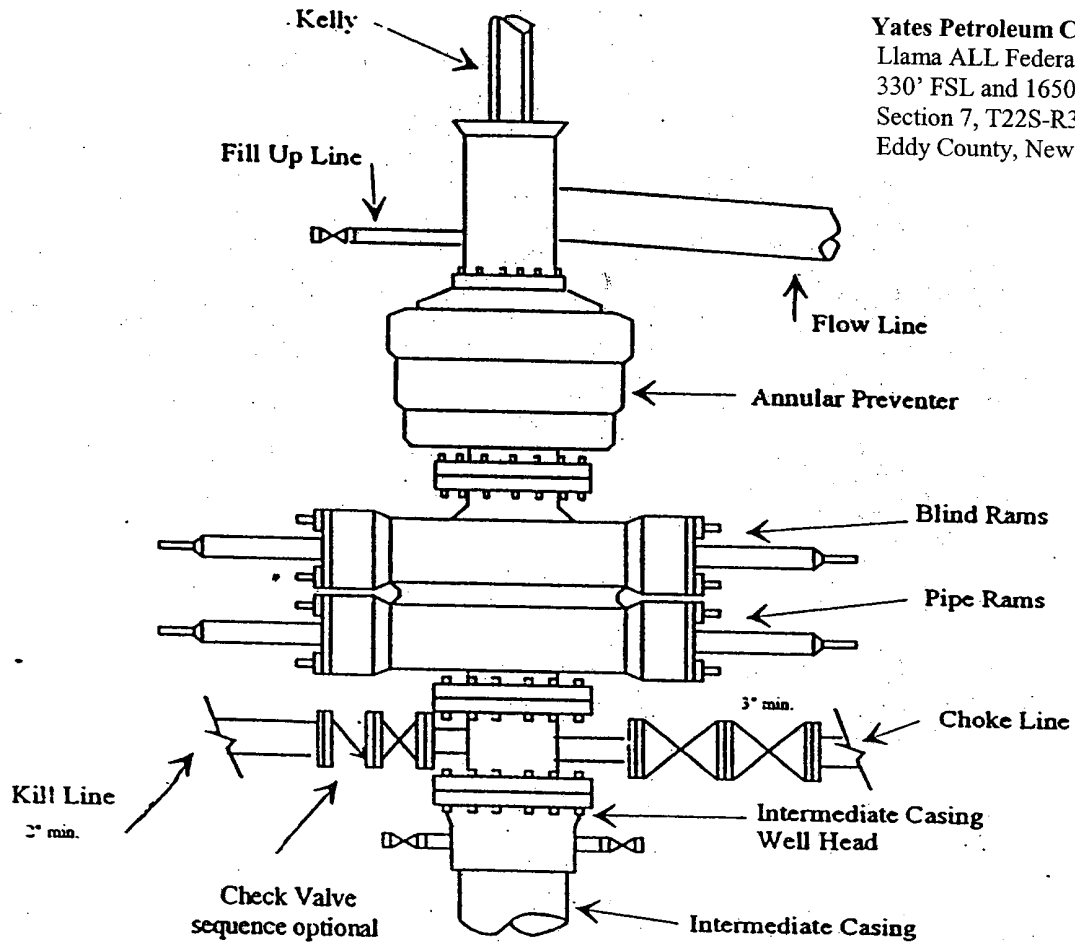
\_\_\_\_\_  
Regulatory Agent



# Yates Petroleum Corporation

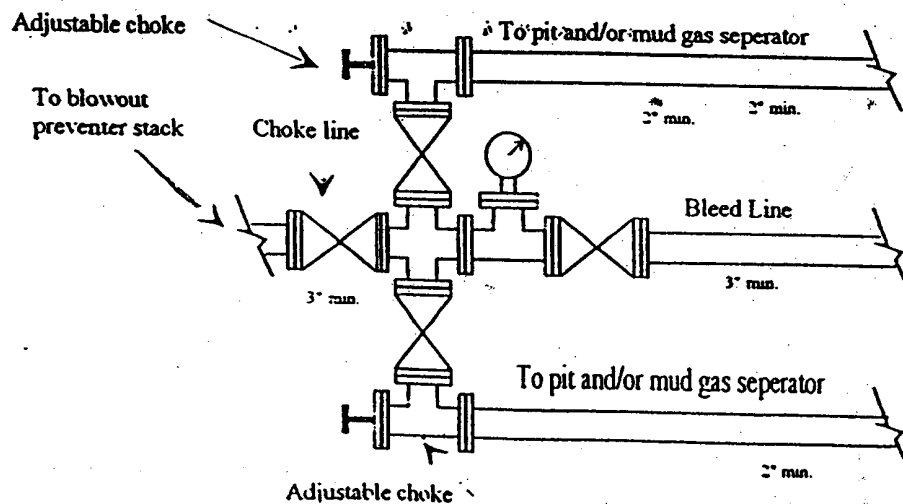
BOP-3

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



Yates Petroleum Corporation  
Llama ALL Federal #5  
330' FSL and 1650' FEL  
Section 7, T22S-R31E  
Eddy County, New Mexico

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

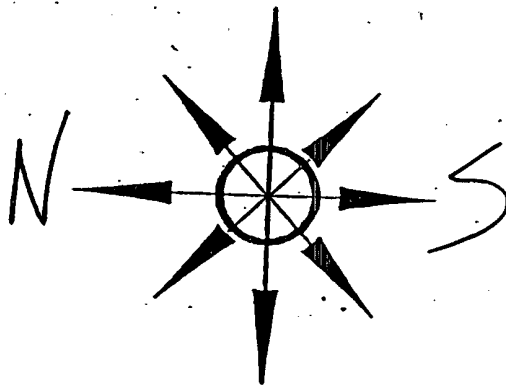




# Yates Petroleum Corporation

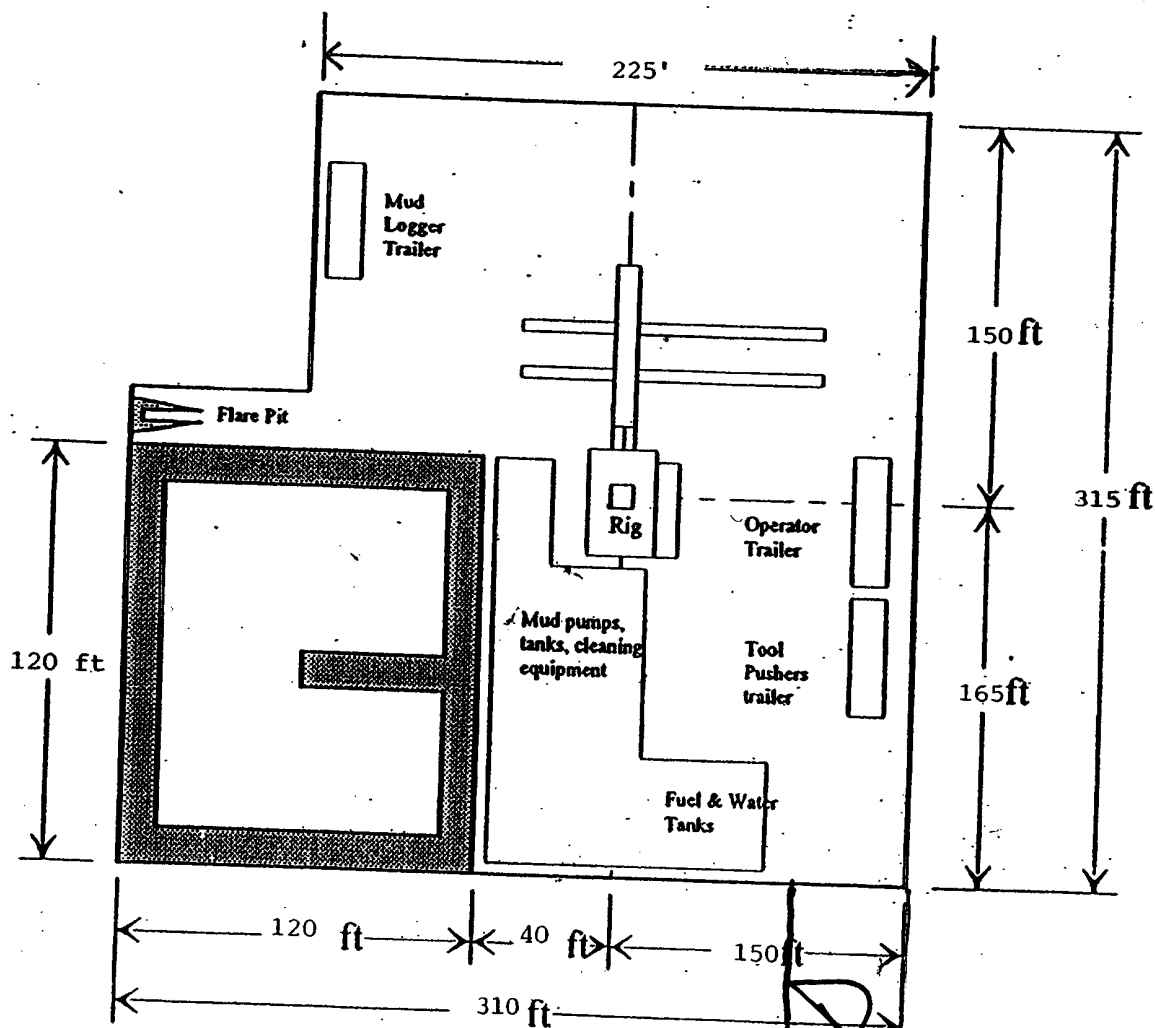
PB - LI

Location Layout for Permian Basin  
Up to 12,000'



Pits North

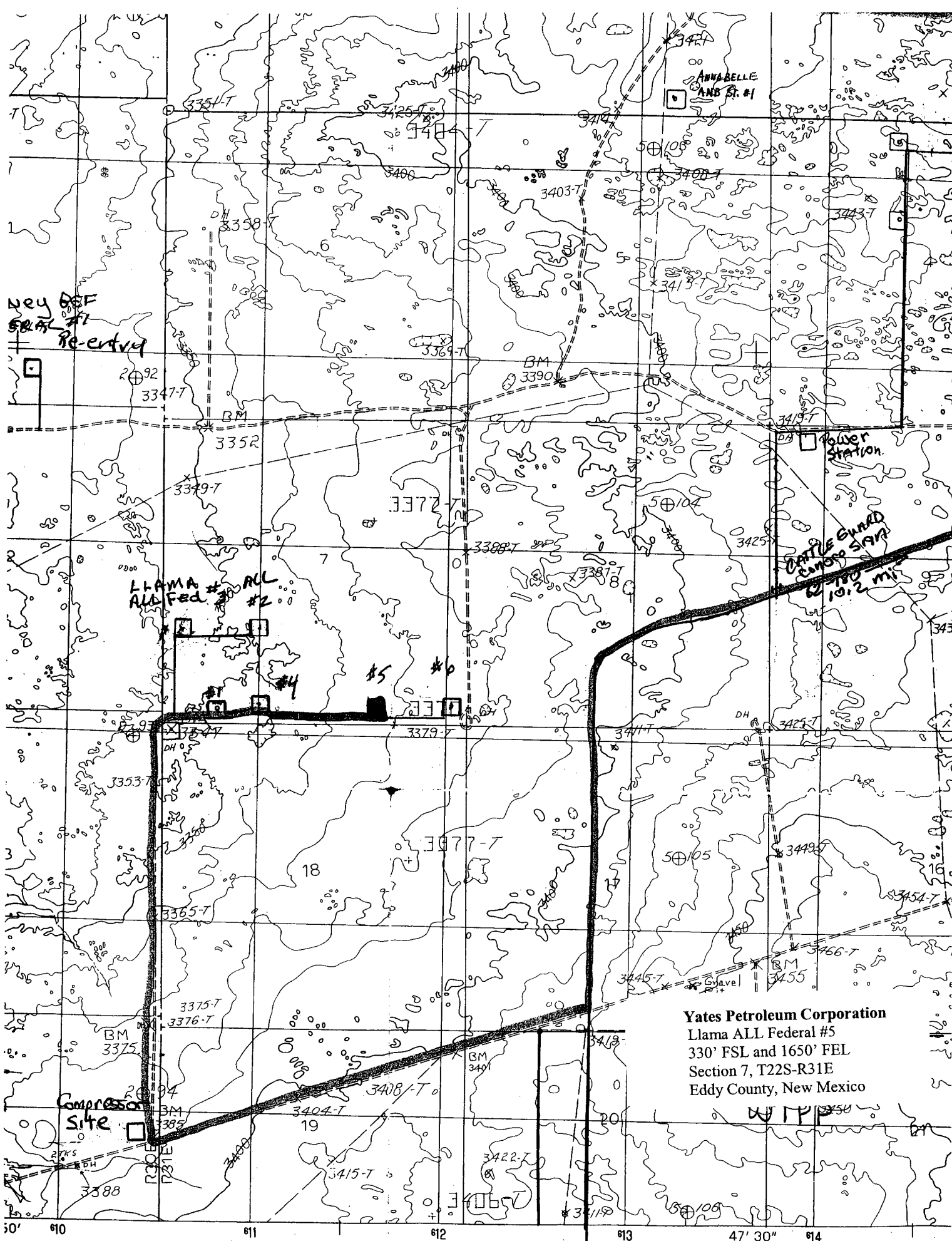
Yates Petroleum Corporation  
Llama ALL Federal #5  
330' FSL and 1650' FEL  
Section 7, T22S-R31E  
Eddy County, New Mexico



Distance from Well  
Head to Reserve Pit  
will vary between rigs

The above dimension  
should be a maximum

13094



Yates Petroleum Corporation  
Llama ALL Federal #5  
330' FSL and 1650' FEL  
Section 7, T22S-R31E  
Eddy County, New Mexico

SCALE 1:24,000

MARTIN YATES, III  
1912 - 1985  
FRANK W. YATES  
1936 - 1986



105 SOUTH FOURTH STREET  
ARTESIA, NEW MEXICO 88210-2118  
TELEPHONE (505) 748-1471

WF

S. P. YATES  
CHAIRMAN OF THE BOARD  
JOHN A. YATES  
PRESIDENT  
PEYTON YATES  
EXECUTIVE VICE PRESIDENT  
RANDY G. PATTERSON  
SECRETARY  
DENNIS G. KINSEY  
TREASURER

December 14, 2004

Mosaic Potash Carlsbad Inc.  
P.O. Box 71  
Carlsbad, New Mexico 88221-0071

Attention: Mr. Dan Moorehouse, Chief Mining Engineer

RE: Llama ALL Federal #5  
Section 7: Township 22 South, Range 31 East  
330' FSL and 1650' FEL  
Eddy County, New Mexico

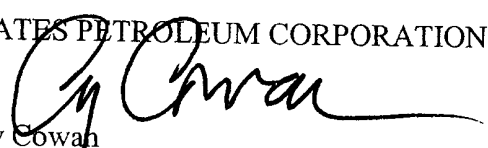
Dear Mr. Moorehouse:

Yates Petroleum Corporation wishes to place the captioned well on our list for future drilling operations. We are planning to drill this well to a total depth of 7,850' or 100' below the base of the Bone Spring Formation. We have been advised that your company is the owner of certain potash leases in this area. Therefore, we respectfully request that you waive any objections you may have to this proposed well location and so indicate by signing and returning one copy of this letter in the enclosed envelope.

Your favorable consideration of this request will be greatly appreciated. Thank you.

Very truly yours,

YATES PETROLEUM CORPORATION

  
Cy Cowan  
Regulatory Agent

☐ **NO OBJECTION OFFERED**  
Mosaic Potash Carlsbad Inc.

☐ **OBJECTION OFFERED**  
Mosaic Potash Carlsbad Inc.

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

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.
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Yates Petroleum Corporation  
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Artesia, New Mexico 88210  
Phone (505) 748-1471
  - B. Through Drilling Operations, Completions and Production:  
Pinson McWhorter, Operations Manager  
Yates Petroleum Corporation  
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12/13/04

  
Regulatory Agent

BLM Lease Number: NM-81952

Well Name & Number: Llama ALL Federal #5

Location: 330 FSL & 1650 FEL, Sec. 7, T. 22S., R. 31E.

Operator: Yates Petroleum Corporation

#### **SPECIAL CONDITION OF APPROVAL**

Your proposed well location falls within 330 feet of the Department of Energy's (DOE) Waste Isolation Pilot Plant (WIPP) boundary.

In accordance with 43 CFR 3162.4-2 and pursuant to a Memorandum of Understanding (MOU) between BLM & DOE, the operator is required to submit daily drilling reports (including borehole deviation survey results) by facsimile to Mr. Gene Valett of DOE's WIPP Office [FAX #: (505) 234-7113; Phone #: (505) 234-7553] and Mr. Harold Johnson DOE's WIPP Office [FAX #: (505) 234-7061; Phone #: (505) 234-7349].

The operator is also required to perform a directional survey to establish bottomhole location on wells that experience deviation averages of more than five degrees from vertical in any 500-foot interval.

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Yates Petroleum Corporation  
Well Name & No. Llama ALL Federal #5  
Location: 330' FSL, 1650' FEL, Section 7, T. 22 S., R. 31 E., Eddy County, New Mexico  
Lease: NM-81952

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:
  - A. Well spud
  - B. Cementing casing: 13-3/8 inch 8-5/8 inch 5-1/2 inch
  - C. BOP tests
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. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15-day time frame.
4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.
5. Gamma-Ray/Neutron logs shall be run from the base of the Salado formation to the surface; cable speed not to exceed 30 feet per minute.

### II. CASING:

1. The 13-3/8 inch surface casing shall be set at approximately 750 feet or 25 feet into the top of the Rustler Anhydrite and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.
2. The minimum required fill of cement behind the 8-5/8 inch intermediate casing is to be circulated to the surface.
3. The minimum required fill of cement behind the 5-1/2 inch production casing is to be circulated to the surface.

### III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13-3/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi. A variance to allow the use of a rotating head on the surface casing string is approved. Testing to 1000 psi with rig pumps is approved.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.