

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

## 1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

## b. TYPE OF WELL

OIL  
WELL ☐GAS  
WELL ☒

AMENDED

OTHER

SINGLE  
ZONE ☐MULTIPLE  
ZONE ☐

## 2. NAME OF OPERATOR

Yates Petroleum Corporation

## 3. ADDRESS OF OPERATOR

207 S. 4th, St., Artesia, New Mexico 88210

## 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

2030' FNL &amp; 660' FWL

At proposed prod. zone

same

## 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

Approximately 24 miles SE of Artesia, NM.

## 15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

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

600'

## 18. DISTANCE FROM PROPOSED LOCATION\*

TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

## 16. NO. OF ACRES IN LEASE

640

## 19. PROPOSED DEPTH

12100'

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

320

## 20. ROTARY OR CABLE TOOLS

Rotary

## 21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3458.5 GL

## 22. APPROX. DATE WORK WILL START\*

ASAP

## 23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8" J-55	48#	500'	450 sx circulated
12 1/2"	8 5/8" J-55	32#-24#-32#	3300'	2200 sx circulated
7 7/8"	5 1/2" N-80	20#-17#-20#	TD	425 sx
OR	4 1/2" N-80	13.5#-11.6#-13.5#	TD	475 sx

We propose to drill and test the Morrow and intermediate formations. Will set approximately 600' of surface casing to shut off gravel and caving and set the intermediate casing at approximately 3300'. Both strings will be circulated. If commercial, will run 5 1/2" or 4 1/2" and cement with at least 600' of cover.

MUD PROGRAM: 8.3# gel and LCM to 3300'; 8.6# water to 9500'; 9.3# - 10# brine, starch-driskpak to 11000'; 9.5# - 10.5# brine gel-driskpak-KCL to TD.

BOP PROGRAM: BOP's and hydril in 8 5/8" casing and tested, pipe rams tested daily, blind rams on trips, yellow jacket, pit level control and flow sensors on prior to Wolfcamp.

CASING DESIGN FACTOR: Minimum collapse - 1.125 for 9.6ppg mud; minimum tension - 1.8.  
CAS NOT DEDICATED.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

TITLE Regulatory Manager

DATE 1/6/82

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
South Central Region  
P.O. Box 26124  
Albuquerque, New Mexico 87125

JAN 18 1982

RECEIVED

JAN 19 1982

O. C. D.  
ARTESIA, OFFICE

Yates Petroleum Corporation  
207 South Fourth Street  
Artesia, New Mexico 88210

Gentlemen:

Your application for Permit to Drill well No. 2-Benson Deep Unit in the SW 1/4 sec. 34, T. 18 S., R. 30 E., Eddy County, New Mexico, lease LC-028978-b, to a depth of 12,100 feet to test the Morrow formation in the oil-potash area, is hereby approved as amended by stipulations attached to the application.

One copy of the application is returned herewith. Please notify the District Supervisor, Geological Survey, Roswell, New Mexico, in sufficient time for a representative to witness all cementing operations.

Sincerely yours,

(ORIG. SCD.) MICHAEL F. REITZ

FOR

Gene F. Daniel  
Deputy Conservation Manager  
Oil and Gas

Enclosure

cc:

NMOCD (2)

BLM - Carlsbad

CM, SCR

DCM - Mining (2)

Regional Files

Roswell District Files

Artesia Sub-district

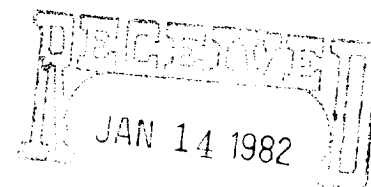
Suspense File

ARF

RCF

RAChapman:mvd:12/28/81

YATES PETROLEUM CORPORATION  
 BENSON DEEP UNIT #2  
 2030' FNL & 660' FWL  
 SECTION 34-T18S-R30E  
 EDDY COUNTY, NEW MEXICO



ON A GAS  
 U.S. GEOLOGICAL SURVEY  
 ROSWELL, NEW MEX CO

The proposed casing program is as follows:

SIZE	GRADE	THREAD	WEIGHT	TOP	BOTTOM	LENGTH
20"	H-40		94#	Surface	80'	80'
13 3/8"	J-55		48#	Surface	500'	500'
8 5/8"	J-55		32#	Surface	40'	40'
8 5/8"	J-55		24#	40'	2500'	2460'
8 5/8"	J-55		32#	2500'	3300'	800'
5 1/2"	N-80	8rd/LT&C	20#	Surface	1000'	1000'
5 1/2"	N-80	LT&C	17#	1000'	10800'	9800'
5 1/2"	N-80		20#	10800'	12100'	1300'

Or instead of 5 1/2" production casing, we may elect to run  
 4 1/2" production casing as follows:

4 1/2"	N-80	13.5#	Surface	1400'	1400'
4 1/2"	N-80	11.6#	1400'	10900'	9500'
4 1/2"	N-80	13.5#	10900'	12100'	1200'

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator <b>Yates Petroleum Corporation</b>			Lease <b>Benson Deep Unit</b>		Well No. <b>#2</b>
Unit Letter <b>E</b>	Section <b>34</b>	Township <b>18s</b>	Range <b>30e</b>	County <b>Eddy</b>	

Actual Footage Location of Well:

**2030** feet from the **North** line and **660** feet from the **West** line

Ground Level Elev. <b>3458.5</b>	Producing Formation <b>Morrow</b>	Pool <b>Wildcat Benson Deep Unit</b>	Dedicated Acreage <b>32.0</b>	Acres
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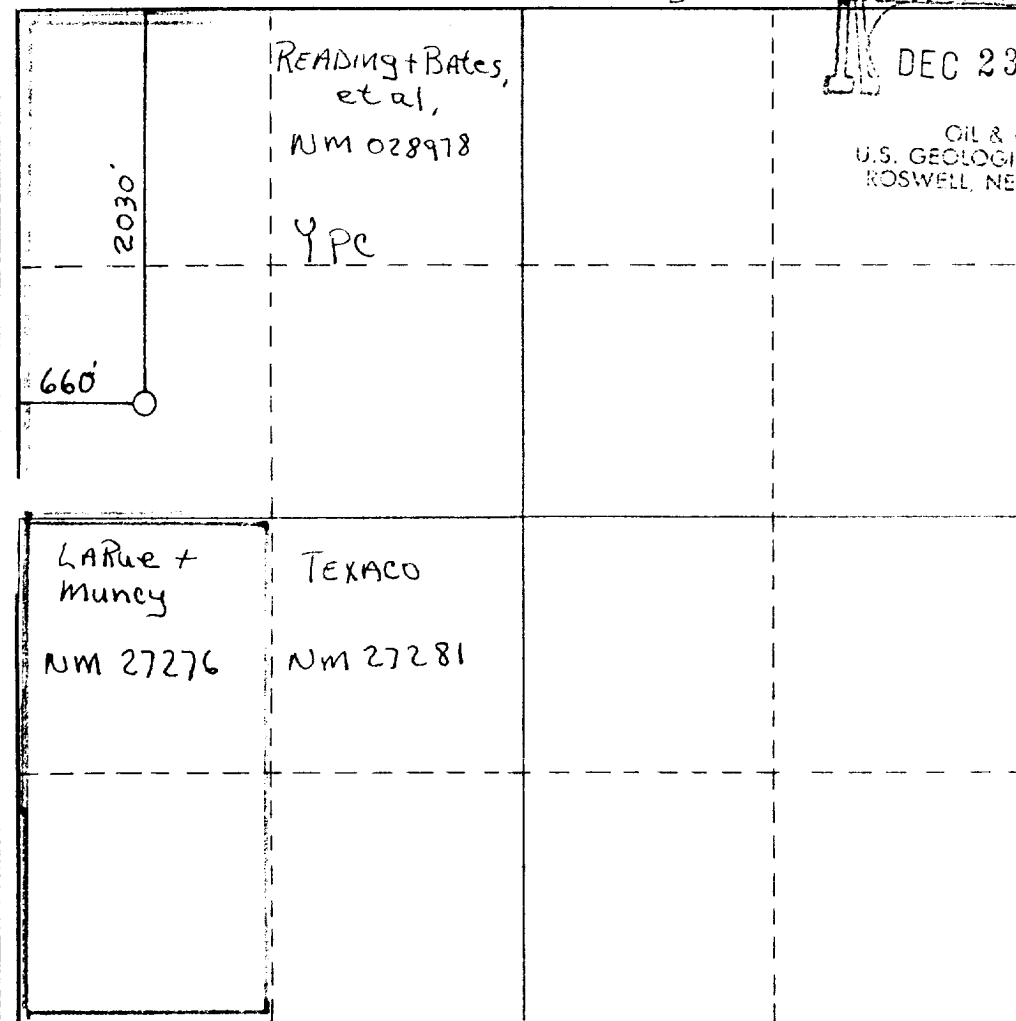
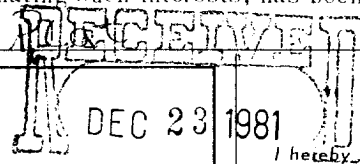
1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes    ☐ No    If answer is "yes," type of consolidation Unitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

*Refer to Original*



CERTIFICATION

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

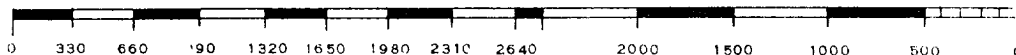
Name  
**Gliserio Rodriguez**  
Position  
**Regulatory Manager**  
Company  
**Yates Petroleum Corporation**  
Date  
**December 20, 1981**

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 knowledge and belief.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.



**N MEXICO OIL CONSERVATION COMM. N**  
**WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
 Supersedes C-128  
 Effective 1-1-65

All distances must be from the outer boundaries of the Section

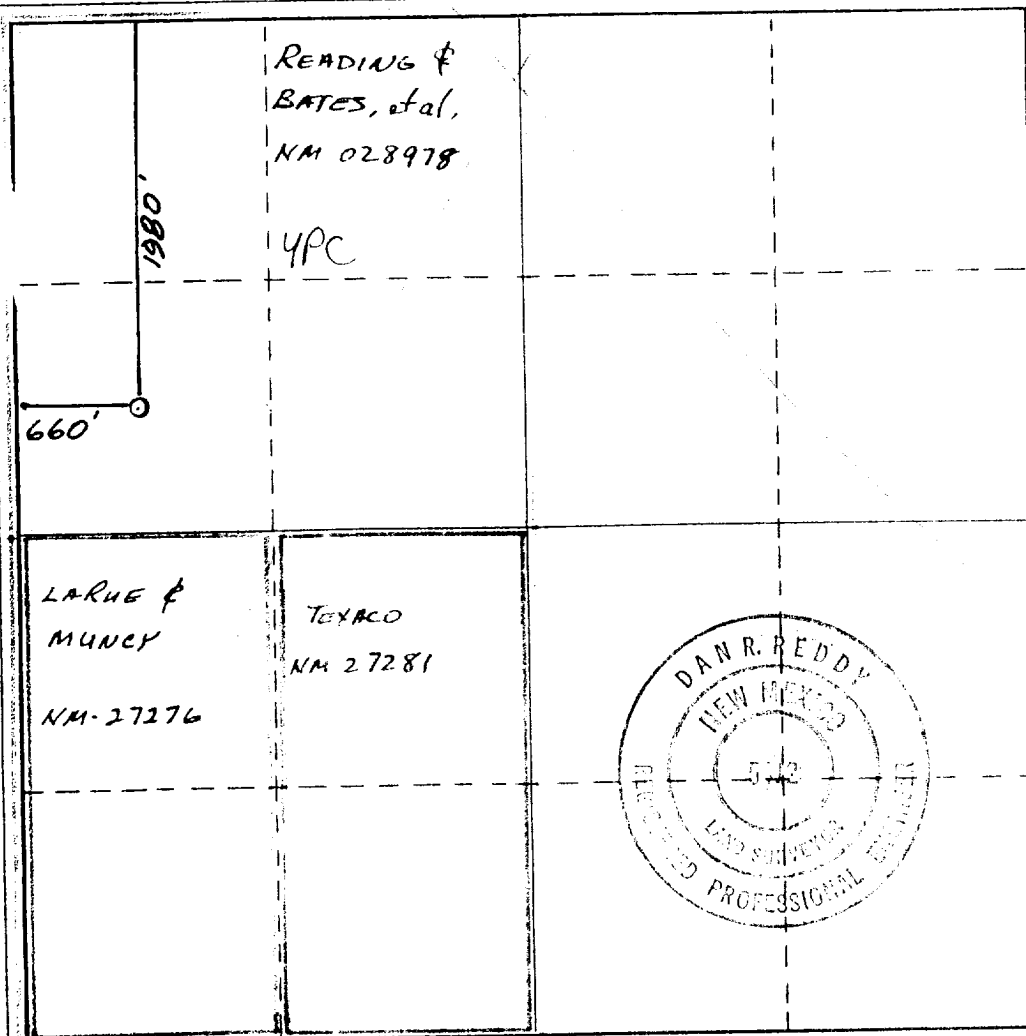
Operator <b>YATES PETROLEUM CORPORATION</b>			Lease <b>Benson Deep Unit</b>		Well No. <b>2</b>
Unit Letter <b>E</b>	Section <b>34</b>	Township <b>18 South</b>	Range <b>30 East</b>	County <b>Eddy</b>	
Actual Footage Location of Well: <b>1980</b> feet from the <b>North</b> line and <b>660</b> feet from the <b>West</b> line					
Ground Level Elev. <b>3458.</b>	Producing Formation <b>MORROW</b>		Pool <b>BENSON Deep Unit</b>	Dedicated Acreage: <b>3.0</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes    ☐ No    If answer is "yes," type of consolidation UNITIZED

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



**CERTIFICATION**

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

*Glicerio Rodriguez*  
 Name

*Glicerio Rodriguez*  
 Position

*Reg. Mgr.*  
 Company

*Yates Petroleum Corp*  
 Date

*11-2-81*

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 knowledge and belief.

Date Surveyed  
**October 8, 1981**

Registered Professional Engineer and/or Land Surveyor

*Dan R. Reddy*  
 Certificate No.

**NM PE&LS #5412**

Yates Petroleum Corporation  
Benson Deep Unit #2  
1980' FNL and 660' FWL  
Section 34-T18S-R30E  
Eddy County, New Mexico

In conjunction with Form 9-331C, Application for Permit to Drill subject well Yates Petroleum Corporation submits the following ten items of pertinent information in accordance with USGS requirements:

1. The geologic surface formation is sandy alluvium.

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

T SALT	485'		
B SALT	1525'		
Yates	1735'	Strawn	10690'
Queen	2840'	Atoka	11020'
Grayburg	3260'	Morrow Clastics	11620'
San Andres	3700'	Lower Morrow	11790'
Bone Springs Limestone	4350'	Chester	12000'
3rd Bone Springs Sand	9165'	TD	12100'
Wolfcamp	9595'		

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

Water: Approximately 200'-240'.

Oil or Gas:	S.A.	3720'-3800'	Atoka	11040'
	Wolfcamp	9620'	Morrow	11650'

\* 4. Proposed Casing Program: See Form 9-331C.

5. Pressure Control Equipment: See Form 9-331C and Exhibit B.

6. Mud Program: See Form 9-331C.

7. Auxiliary Equipment: Kelly Cock; Pit level indicators and flow sensor equipment; sub with full-opening valve on floor, drill pipe connection.

8. Testing, Logging and Coring Program:

Samples: 10' samples caught out from under surface casing to TD  
DST's: As warranted, possible in Wolfcamp, Cisco, Atoka and Morrow  
Logging: 2 runs; shallow run: CNL-FDC TD to surface casing with GR-CNL on to surface. DLL, TD to surface casing. Deep run: CNL-RDC, TD to casing, DLL TD to casing with R.O from TD to 8400'.  
Mudlogging: One man unit on out from under surface casing to TD.

9. No abnormal pressures or temperatures are anticipated.

10. Anticipated starting date: As soon as possible after approval.

\* IF COMMERCIAL, THE 5 1/2" CASING STRING WILL BE NEW N-80 LT&C WITH THE FIRST 1000' BEING 20#; AND 17# FROM 1000'-10,800'; WITH 20# ONTO T.D. (10,800'-12,100').

AR

Rotating head if necessary  
Fill up Line

ROTATING  
BOP  
2000 psi

Flowline

ANNULAR BOP

(Hydrill)

Exhibit B

900

PIPE RAMS

Shaffer 10" Series 900

900

Hydraulically Operated B.O.P.'s

BLIND  
RAMS

900

Check Valve

Steel  
Valve

4" Inch Line

1/2" Kill  
Line

900

Choke  
Manifold

Choke  
Manifold

Drillinghead or Bradenhead

THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

1. All preventers to be hydraulically operated with secondary manual controls installed prior to drilling out from under casing.
2. Choke outlet to be a minimum of 4" diameter.
3. Kill line to be of all steel construction of 2" minimum diameter.
4. All connections from operating manifolds to preventers to be all steel, hole or tube a minimum of one inch in diameter.
5. The available closing pressure shall be at least 15% in excess of that required with sufficient volume to operate the B.O.P.'s.
6. All connections to and from preventer to have a pressure rating equivalent to that of the B.O.P.'s.
7. Inside blowout preventer to be available on rig floor.
8. Operating controls located a safe distance from the rig floor.
9. Hole must be kept filled on trips below intermediate casing. Operator not responsible for blowouts resulting from not keeping hole full.
10. D. P. float must be installed and used below zone of first gas intrusion.