



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

IN REPLY REFER TO:

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DEC 30 1980

**U. S. GEOLOGICAL SURVEY
HOBBS, NEW MEXICO**

DEC 24 1980

Harvey E. Yates
P. O. Box 1933
Roswell, New Mexico 88201

Gentlemen:

Your Application for Permit to Drill well No. 2 West Lynch Federal in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ section 19, T. 20 S., R. 34 E., N.M.P.M., Lea County, New Mexico, lease NM 13276, to a depth of 3550 feet to test the Seven Rivers 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, Hobbs, New Mexico, in sufficient time for a representative to witness all cementing operations.

Sincerely yours,

~~(SIGNED) [Signature]~~

FOR

Deputy Conservation Manager
Oil and Gas

Enclosure

cc:

✓ NMOCD, Hobbs (2) (w/enclosures)
CM, SCR
DCM-Mining (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-025-27168

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 ☐OTHER ☐SINGLE ☐MULTIPLE ☐

2. NAME OF OPERATOR

Harvey E. Yates Company

3. ADDRESS OF OPERATOR

P. O. Box 1933, Roswell, New Mexico 88201

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

At surface

At proposed prod. zone

990' FEL & 430' FSL

Same

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

8 1/4 miles east of Halfway, N.M.

10. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

330'

16. NO. OF ACRES IN LEASE

1760.21

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

18. DISTANCE FROM PROPOSED LOCATION*

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

660'

19. PROPOSED DEPTH

3550'

20. ROTARY OR CABLE TOOLS

Rotary Rig/Cable Tool

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

3660.3 GL

22. APPROX. DATE WORK WILL START*

12-1-80

23.

PROPOSED CASING AND CEMENTING PROGRAM

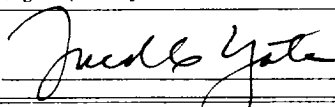
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	9 5/8"	36#	1550'	Circulate
7 7/8"	4 1/2"	9.5#	3550'	Circ. up to the Base of the Salt CIRCULATE TO SURFACE

Drilling Program: 1) Drill with rotary tools to 2900' and mud in 7" casing.
2) Move in cable tools and drill to 3550'.
3) Run 4 1/2" casing to TD and pull 7" casing.

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

Vice President

DATE

November 11, 1980

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

Instructions

General: This form is designed for submitting proposals to perform certain well operations, as indicated, on all types of lands and leases for appropriate action by either a Federal or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable State or Federal regulations concerning subsequent work proposals or reports on the well.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on this reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal or State agency offices.

Items 15 and 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective production zone.

Item 22: Consult applicable Federal or State regulations, or appropriate officials, concerning approval of the proposal before operations are started.

☆ U.S. GOVERNMENT PRINTING OFFICE : 1963-O-711-396

RECEIVED

JAN 6 1981

OIL CONSERVATION DIV

APPLICATION FOR DRILLING

Harvey E. Yates Company
West Lynch Federal #2
Section 19, T-20S, R-34E
990' FEL & 430' FSL
Lea County, New Mexico

In conjunction with Form 9-331C, Application for Permit to Drill the Subject well in Section 19, Township 20 South, Range 34 East, Lea County, New Mexico, Harvey E. Yates Company submits the following ten items of pertinent information in accordance with U.S.G.S. requirements:

1. The geologic surface formation is quaternary.
2. The estimated tops of geologic markers are as follows:

Rustler	1500'	Yates	3250'
Cowden Anhydrite	2900'	Seven Rivers	3500'
Base Salt	3100'		
3. Fresh water may be encountered down to about 250 feet with brackish water and/or salt water possible in zones to about 1,500 feet. Salt and accompanying Potash will be between 1,600 and 3,200 feet. Oil and gas might be encountered from 3,250 to 3,600 feet.
4. Proposed casing program: See Form 9-331C
5. Pressure control equipment: See Exhibit C
6. Mud program: Will drill with fresh native mud with a mud seal additive to prevent seepage to 1,500 feet. Drill out intermediate casing with 10#/gallon brine water using lime for pH control of 10-11 and salt gel if needed, maintaining 32-33 sec/1000 cc viscosity. From 3,300 to 3,550 feet increase addition of salt gel to bring mud weight to 10.2-10.4#/gallon, viscosity to 33-36 sec/1000 cc and water loss to 12-15 cc.
7. Auxilliary equipment: Blowout preventer
8. Testing, logging and coring programs: No DST's or coring are planned. Planned logs are Compensated Neutron-Density and Dual Induction Laterolog.
9. No abnormal pressures or temperatures are anticipated.
10. Anticipated starting date: As soon as possible after approval but no later than December 1, 1980.

NEW MEXICO LAND SURVEYORS' ASSOCIATION
WELL LOCATION AND ACRIATE DEDICATION PLAT

Supervised by
The State Engineer

Harvey E. Yates Co.

West Lynch Fed.

2

P 19 20 South 34 East Lea Co. N.M.

430 South 990 East

3660.3 Seven Rivers Teas-Yates, Sr. 40

Outline the acreage dedicated to the State as follows by section, corner or by other marks on the plat below

It is to be that the base is a straight line from the corner of the section to the corner of the section of the land as to working interest and location

It is to be that the base is a straight line from the corner of the section to the corner of the section of the land as to working interest and location

X

It is to be that the base is a straight line from the corner of the section to the corner of the section of the land as to working interest and location

CERTIFICATION

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

Fred G. Yates

Fred G. Yates

Vice President

Harvey E. Yates Company

November 11, 1980

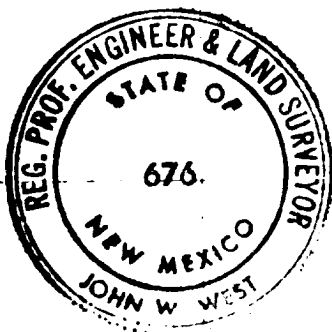
I hereby certify that the well location shown on this plat was plotted from field notes or actual surveys made by me or under my supervision and that the same is true and correct to the best of my knowledge and belief

11-6-80

Registered Professional Engineer
and Land Surveyor

John W. West

Certificate No. JOHN W. WEST 676
PATRICK A. ROMERO 6883
Ronald J. Eidson 3239



Cities Service
NM-13276

U.S.A.