

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 ☒

OTHER

SINGLE
ZONE ☐MULTIPLE
ZONE ☒

2. NAME OF OPERATOR

Southern Union Production Company

3. ADDRESS OF OPERATOR

P. O. Box 808, Farmington, New Mexico 87401

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

At surface 790 ft. from the south line & 790 ft. from the east line

At proposed prod. zone same as above.

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

9 miles Northwest of Ojito, New Mexico.

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.

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

790 ft.

18. DISTANCE FROM PROPOSED LOCATION*

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

1680 ft.

16. NO. OF ACRES IN LEASE

2560

19. PROPOSED DEPTH

8010 ft.

17. NO. OF ACRES ASSIGNED
TO THIS WELL100 Pictured Cliffs
320 Acres

20. ROTARY OR CABLE TOOLS

Rotary

22. APPROX. DATE WORK WILL START*

October 16, 1967

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
15"	10-3/4"	32.75	300 ft.	150 cu. ft.
9-7/8"	7-5/8"	26.40	3825 ft.	320 cu. ft.
6-3/4"	4-1/2"	10.50	3675-8010	1000 cu. ft.

We propose to drill a well to be fully completed in the Dakota and Pictured Cliffs formations. Anticipated total depth 8010 ft.

- Casing Program: Surface: 10-3/4", 32.75#, 11-40 set at 300 ft. Cemented 1/250 grouts. Intermediate: 7-5/8", 26.40#, J-55 set at 3825 ft. Cemented w/300 cu. ft. cement. Liner: 4-1/2", 10.50#, J-55 set from 3675 ft. to T.D. of 8010 ft. and cemented with 1000 cu. ft. of cement.
- Well will be mud drilled from surface to 3825 ft. and gas drilled from 3825 ft. to T.D.
- Pictured Cliffs and Dakota sands will be sand fraced to stimulate production.
- Baker Model "D" 4-1/2" Production Packer will be set at approx. 7800 ft. I.K.B.
- 1-1/2", I.K.B., 2.90# tubing will be run to Dakota and landed at approx. 7800 ft. I.K.B.
- 1-1/2", Integral Joint, 2.75# tubing will be run to Pictured Cliffs and landed at approx. 3550 ft. I.K.B.

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. Original signed by

GILBERT D. NOLAND, JR.

Drilling Superintendent

DATE October 11, 1967

SIGNED Gilbert D. Noland, Jr.

TITLE

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY
CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

OCT 12 1967

U. S. GEOLOGICAL SURVEY

*See Instructions On Reverse Side

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.

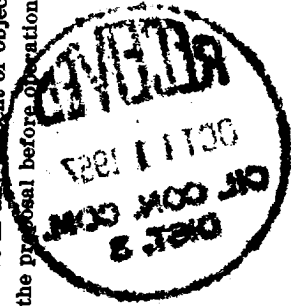
Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plate, 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



24. Similarly, we get from the above lemma that the function

CONFIDENTIAL

SECRET

...one of the things is, according to the

Future of the U.S. water supply

THE UNIVERSITY OF CHICAGO PRESS

...and the

100

100

Figure 6. The effect of the number of iterations on the accuracy of the proposed algorithm. The results are averaged over 10 trials.

THE UNIVERSITY OF CHICAGO

100

THE UNIVERSITY OF CHICAGO

RECEIVED