

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 ☐		5. LEASE DESIGNATION AND SERIAL NO. CONTRACT #105	
b. TYPE OF WELL OIL WELL ☐ GAS WELL ☒ OTHER ☐ SINGLE ZONE ☐ MULTIPLE ZONE ☒		6. IF INDIAN, ALLOTTEE OR TRIBE NAME JICARILLA TRIBE	
2. NAME OF OPERATOR SOUTHERN UNION PRODUCTION COMPANY		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR P. O. Box 808, Farmington, New Mexico 87401		8. FARM OR LEASE NAME JICARILLA #1	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*) At surface 1890 FT. FROM NORTH LINE & 790 FT. FROM THE WEST LINE. At proposed prod. zone SAME AS ABOVE.		9. WELL NO. 13	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 12 MILES NORTHWEST OF QUITO, NEW MEXICO		10. FIELD AND POOL, OR WILDCAT UNDESIGNATED GALLUP DANIELA FORMATION	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1890 FT.		11. SEC., T., R., OR BLK. AND SURVEY OR AREA Sec. 13, T-28N, R-4W, N.M.P.M.	
16. NO. OF ACRES IN LEASE 2560		12. COUNTY OR PARISH RIO ARriba	
17. NO. OF ACRES ASSIGNED TO THIS WELL 160 GALLUP 320 DANIELA		13. STATE NEW MEXICO	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2,990 FT.		19. PROPOSED DEPTH 8013 FT.	
20. ROTARY OR CABLE TOOLS Rotary		21. APPROX. DATE WORK WILL START* JULY 26, 1971	
22. ELEVATIONS (Show whether DF, RT, GR, etc.) 6878 FT. UNGLAISED GROUND LEVEL.			

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13-3/4"	10-3/4"	32.75#	300 FT.	250 BAGS
9-5/8"	7-5/8"	26.40#	3780 FT.	800 CU. FT.
6-3/4"	5-1/2"	15.90#	3630 - 8013 FT.	600 CU. FT.

WE PROPOSE TO DRILL A WELL TO BE FINALLY COMPLETED IN THE GALLUP AND DANIELA FORMATIONS.
ANTICIPATED TOTAL DEPTH 8013 FT.

1. CASING PROGRAM

SURFACE: 10-3/4", 32.75#, H-40 SET AT 300 FT. CEMENTED w/250 BAGS.
INTERMEDIATE: 7-5/8", 26.40#, K-55 SET AT 3780 FT. CEMENTED w/800 CU. FT. CEMENT.
LINEAR: 5-1/2", 15.90#, K-55 SET AT 3630 - 8013 FT. CEMENTED w/600 CU. FT. CEMENT.

- WELL WILL BE 1200 DRILLED FROM SURFACE TO 3780 FT. AND GAS DRILLED FROM 3780 FT. TO T.D.
- GALLUP AND DANIELA ZONES WILL BE SAND FRACED TO STIMULATE PRODUCTION.
- BAKER 5-1/2" MODEL "D" PRODUCTION PATTERN WILL BE SET AT APPROX. 7700 FT. R.K.B.
- 1-1/2", E.U.E., 2.90#, YCO-55 TUBING WILL BE RUN TO DANIELA. SET APPROX. 7900 FT. R.K.B.
- 1-1/2", 2.79#, YCO-55 I.L. TUBING WILL BE RUN TO GALLUP. SET APPROX. 7250 FT. R.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.

Original signed by
24. **GILBERT D. NOLAND, JR.**
SIGNED **GILBERT D. NOLAND, JR.** TITLE **DRILLING SUPERINTENDENT** DATE **JUNE 28, 1971**

(This space for Federal or State office use)

PERMIT NO. _____ TITLE _____ DATE _____
APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY: _____

*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 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.

All distances must be from the outer boundaries of the Section

2000

CONFIDENTIAL - SECURITY INFORMATION

JIC WILLIAM "MAY"

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AS FORTI

Abstract

II. 22124

Aug 1941 - 1942

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GALLUP DAKOTA

**UNDESIGNATED GALLUP
BASIN DAKOTA**

NR/A
W/2

160
320

Our first observation is that the $\mathcal{L}_1$ norm is not a good measure of the likelihood

3. If more than one person is present, who will be responsible for the work? (The person responsible will be the one who will be responsible for the work.)

...the ...

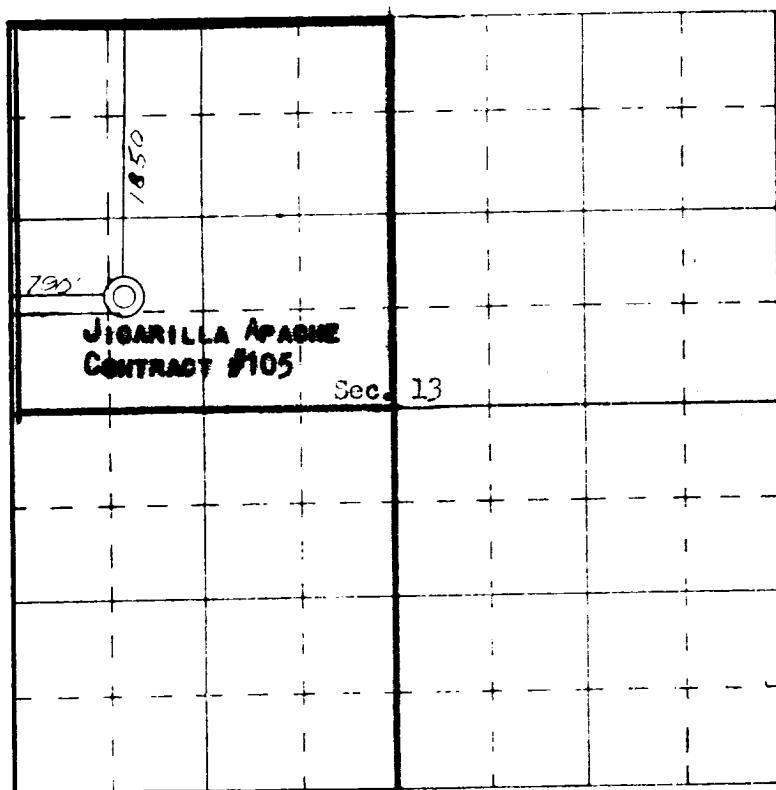
It was a surprise that the law was not put into effect until 1971, the reverse side of the coin.

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RECEIVED
JUL 1 1971
OIL CON. COM.
DIST. 3

DEDICATED GALLUP AVERAGE

DEDICATED DAKOTA AGERAGE



SCALE—4 INCHES EQUALS 1 MILE

SAN JUAN ENGINEERING COMPANY,

FARMINGTON, N. M.

CERTIFICATION

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

Original signed by

GILBERT D. NOLAND, JR.

GILBERT D. NOLAND, JR.

DRILLING SUPERINTENDENT

SOUTHERN UNION PRODUCTION

JUNE 28, 1971

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.

* 18 June, 1971

James P. Lense
 Civil and Mining Engineer
 and Land Surveyor
JAMES P. LENSE

JAMES P. LEASE

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Certificate No.