

51-1411-1-3-7

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

|                                                                                                          |                                                             |                                                     |
|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------|
| 1a. TYPE OF WORK<br>DRILL                                                                                | <b>RECEIVED</b><br>JUN 1 4 1989<br>OIL CON. DIV.<br>DIST. 3 | 5. LEASE NUMBER<br>SF-077652                        |
| 1b. TYPE OF WELL<br>GAS                                                                                  |                                                             | 6. IF INDIAN, ALL. OR TRIBE NAME                    |
| 2. OPERATOR<br>SOUTHLAND ROYALTY CO.                                                                     |                                                             | 7. UNIT AGREEMENT NAME                              |
| 3. ADDRESS & PHONE NO. OF OPERATOR<br>P O BOX 4289<br>FARMINGTON, NM 87499                               |                                                             | 8. FARM OR LEASE NAME<br>EAST                       |
| 4. LOCATION OF WELL<br>790'S 1410'W                                                                      |                                                             | 9. WELL NO.<br>100                                  |
| 14. DISTANCE IN MILES FROM NEAREST TOWN<br>5 MILES FROM AZTEC                                            |                                                             | 10. FIELD, POOL, OR WILDCAT<br>BASIN FRUITLAND COAL |
| 15. DISTANCE FROM<br>PROPOSED LOCATION TO NEAREST PROPERTY<br>OR LEASE LINE. 790'                        |                                                             | 11. SEC. T. R. M OR BLK.<br>SEC. 26 T31N R12W NMPM  |
| 16. ACRES IN LEASE 17. ACRES ASSIGNED TO WELL<br>320.00                                                  |                                                             | 12. COUNTY 13. STATE<br>SAN JUAN NM                 |
| 18. DISTANCE FROM<br>PROPOSED LOCATION TO NEAREST WELL DR.<br>COMPL., OR APPLIED FOR ON THIS LEASE. 300' |                                                             | 20. ROTARY OR CABLE TOOLS<br>ROTARY                 |
| 21. ELEVATIONS (DF, FT, GR, ETC.)<br>6030'GL                                                             |                                                             | 22. APPROX. DATE WORK WILL START                    |

PROPOSED CASING AND CEMENTING PROGRAM

\*SEE OPERATIONS PLAN

This action is subject to technical and  
procedural review pursuant to 43 CFR 3165.3  
and appeal pursuant to 43 CFR 3165.4.

24. AUTHORIZED BY: [Signature] 6-7-89  
REGULATORY AFFAIRS DATE

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_ APPROVED  
APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_ AS AME TO

NOTE: THIS FORMAT IS ISSUED IN LIEU OF US BLM FORM 3160-3. [Signature] JUN 09 1989  
AREA MANAGER

Well Name: 100 EAST  
 Sec. 26 T31N R12W  
 BASIN FRUITLAND COAL

790'S 1410'W  
 SAN JUAN NEW MEXICO  
 Elevation 6030'GL

Formation tops: Surface- NACIMIENTO  
 Ojo Alamo- 745  
 Kirtland- 791  
 Fruitland- 2099  
 Fruitland Coal Top- 2354  
 Fruitland Coal Base- 2432  
 Intermediate TD- 2334  
 Total Depth- 2432  
 Pictured Cliffs- 2434

Logging Program: Mud logs from intermediate to total depth.

| Mud Program: | Interval    | Type            | Weight    | Visc. | Fl. Loss   |
|--------------|-------------|-----------------|-----------|-------|------------|
|              | 0 - 200     | Spud            | 8.4 - 8.9 | 40-50 | no control |
|              | 200 - 2334  | Non-dispersed   | 8.4 - 9.1 | 30-60 | no control |
|              | 2334 - 2432 | Formation Water | 8.4       |       | no control |

| Casing Program: | Hole Size | Depth Interval | Csg. Size | Weight | Grade |
|-----------------|-----------|----------------|-----------|--------|-------|
|                 | 12 1/4"   | 0 - 200        | 9 5/8"    | 32.3#  | H-40  |
|                 | 8 3/4"    | 0 - 2334       | 7"        | 20.0#  | K-55  |
|                 | 6 1/4"    | 2284 - 2432    | 5 1/2"    | 15.5#  | K-55  |
| Tubing Program: |           | 0 - 2432       | 2 7/8"    | 6.5#   | J-55  |

Float Equipment: 9 5/8" surface casing - saw tooth guide shoe.

7" intermediate casing - guide shoe and self-fill insert float valve. Three centralizers run every other joint above shoe. Run insert float one joint above the guide shoe.

5 1/2" production casing - float shoe on bottom and a pre-drilled liner run to the 7" casing with a minimum 50' overlap. Liner hanger is a double slip grip type.

Wellhead Equipment: 9 5/8" x 7" x 2 7/8" x 11" 3000 psi xmas tree assembly.

#### Cementing:

9 5/8" surface casing - cement with 106 sacks of class "B" cement with 1/4# flocele/sack and 3% calcium chloride (125 cu ft. of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 600 psi for 30 minutes.

7" intermediate casing - lead with 186 sacks of 65/35 class "B" poz with 6% gel, 2% calcium chloride and 1/2 cu ft. Perlite/sack (10.3 gallons of water/sack) tail with 100 sacks of class "B" with 2% calcium chloride. 478 cu ft. of slurry, 100% excess to cover the Ojo Alamo. Run temperature survey at 8 hours. WOC 12 hours. Test casing to 1500 psi for 30 minutes.

5 1/2" liner - do not cement.

Submit to Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

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

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II  
P.O. Drawer DD, Artesa, NM 88210

DISTRICT III  
1000 Rio Brizos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

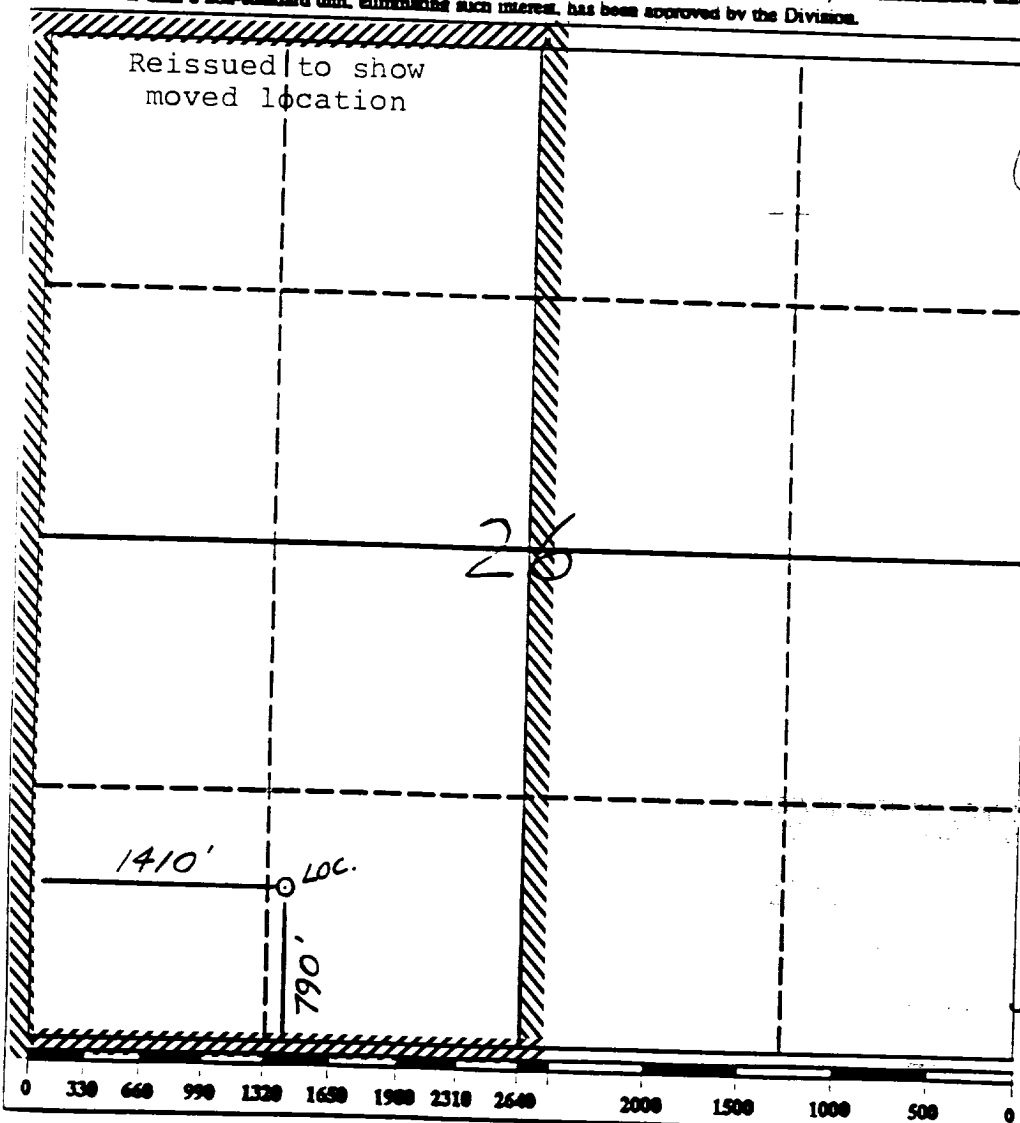
All Distances must be from the outer boundaries of the section

|                                                                                                   |                                       |                      |                                 |                    |
|---------------------------------------------------------------------------------------------------|---------------------------------------|----------------------|---------------------------------|--------------------|
| Operator<br>Southland Royalty Company                                                             |                                       |                      | Lease<br>East (SF-077652)       | Well No.<br>100    |
| Unit Letter<br>H                                                                                  | Section<br>26                         | Township<br>11 North | Range<br>12 West                | County<br>San Juan |
| Actual Footage Location of Well:<br>790 feet from the South line and 1410 feet from the West line |                                       |                      |                                 |                    |
| Ground level Elev.<br>6030'                                                                       | Producing Formation<br>Fruitland Coal | Pool<br>Basin        | Dedicated Acreage:<br>320 Acres |                    |

1. Outline the acreage dedicated to the subject well by colored pencil or hachure 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 interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?  
☐ Yes ☐ No If answer is "yes" type of consolidation \_\_\_\_\_

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, force-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature

Peggy Bradfield

Printed Name

Regulatory Affairs

Position

Southland Royalty

Company

Date

SURVEYOR CERTIFICATION

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.

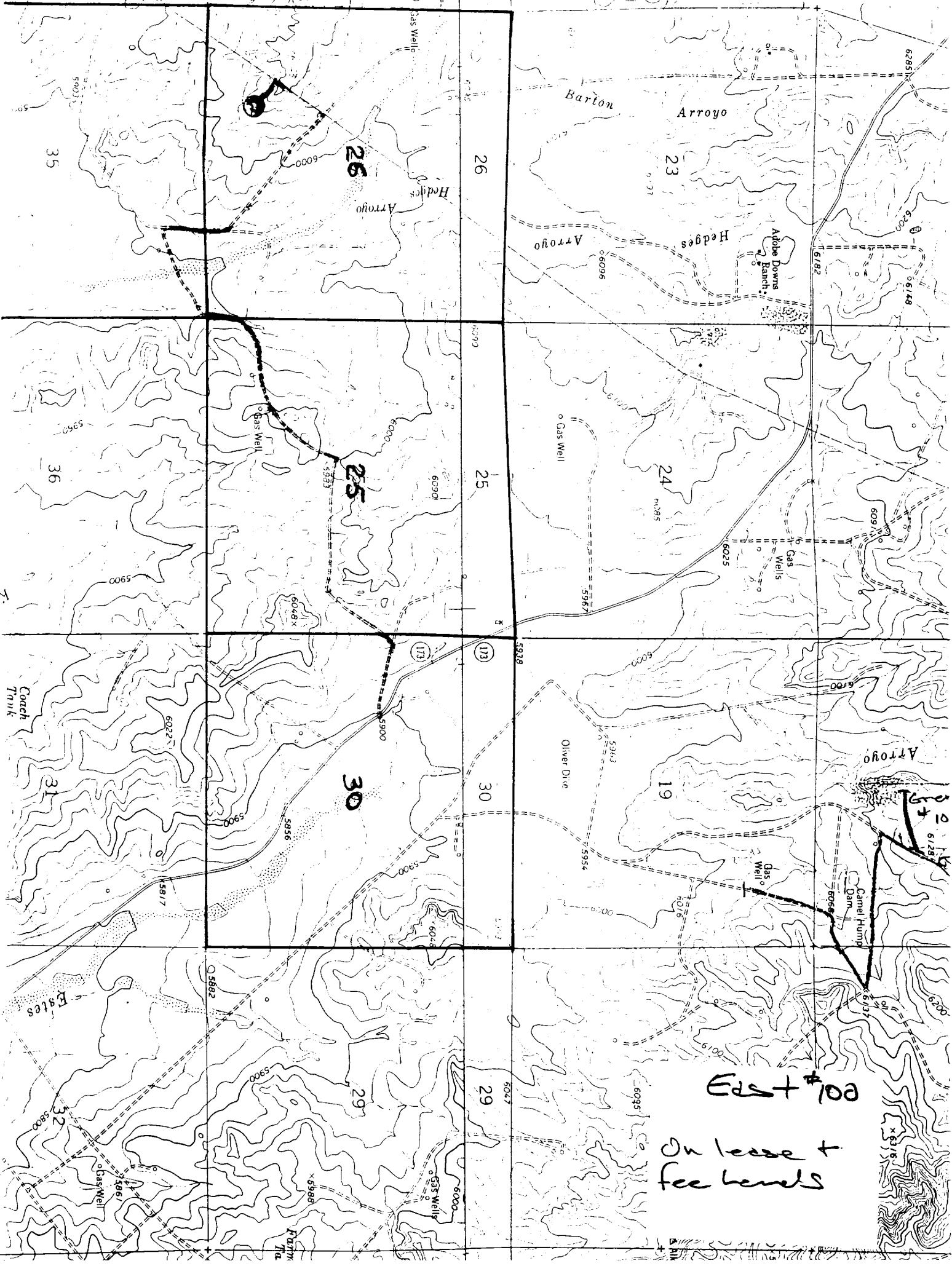
Date Surveyed

Neale C. Edwards

Signature and Seal of  
Professional Surveyor

Certificate No.

6857



East #100

On lease + fee lands