

RECEIVED

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT CON. DIV

JUN 29 1989

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL	5. LEASE NUMBER SF-076958
1b. TYPE OF WELL GAS	6. IF INDIAN, ALL. OR TRIBE NAME
2. OPERATOR SOUTHLAND ROYALTY CO.	7. UNIT AGREEMENT NAME
3. ADDRESS & PHONE NO. OF OPERATOR P O BOX 4289 FARMINGTON, NM 87499	8. FARM OR LEASE NAME HARE
4. LOCATION OF WELL 1480'N 790'E	9. WELL NO. 290
14. DISTANCE IN MILES FROM NEAREST TOWN 3 MILES FROM BLANCO	10. FIELD, POOL, OR WILDCAT BASIN FRUITLAND COAL
15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE. 790'	11. SEC. T. R. M OR BLK. H SEC. 3 T29N R10W NMPM
16. ACRES IN LEASE 2336.05	12. COUNTY SAN JUAN
17. ACRES ASSIGNED TO WELL #/269.11	13. STATE NM
18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL DR. COMPL., OR APPLIED FOR ON THIS LEASE. 250'	19. PROPOSED DEPTH 2418'
20. ROTARY OR CABLE TOOLS ROTARY	
21. ELEVATIONS (DF, FT, GR, ETC.) 5975'GL	22. APPROX. DATE WORK WILL START

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

23. PROPOSED CASING AND CEMENTING PROGRAM

\*SEE OPERATIONS PLAN

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

24. AUTHORIZED BY: [Signature]  
REGULATORY AFFAIRS

6-8-89  
DATE

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_

DATE

APPROVED  
AS AMENDED

JUN 28 1989

[Signature]

FOR AREA MANAGER

NOTE: THIS FORMAT IS ISSUED IN LIEU OF US BLM FORM 3160-3

[Handwritten mark]

MOOD

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

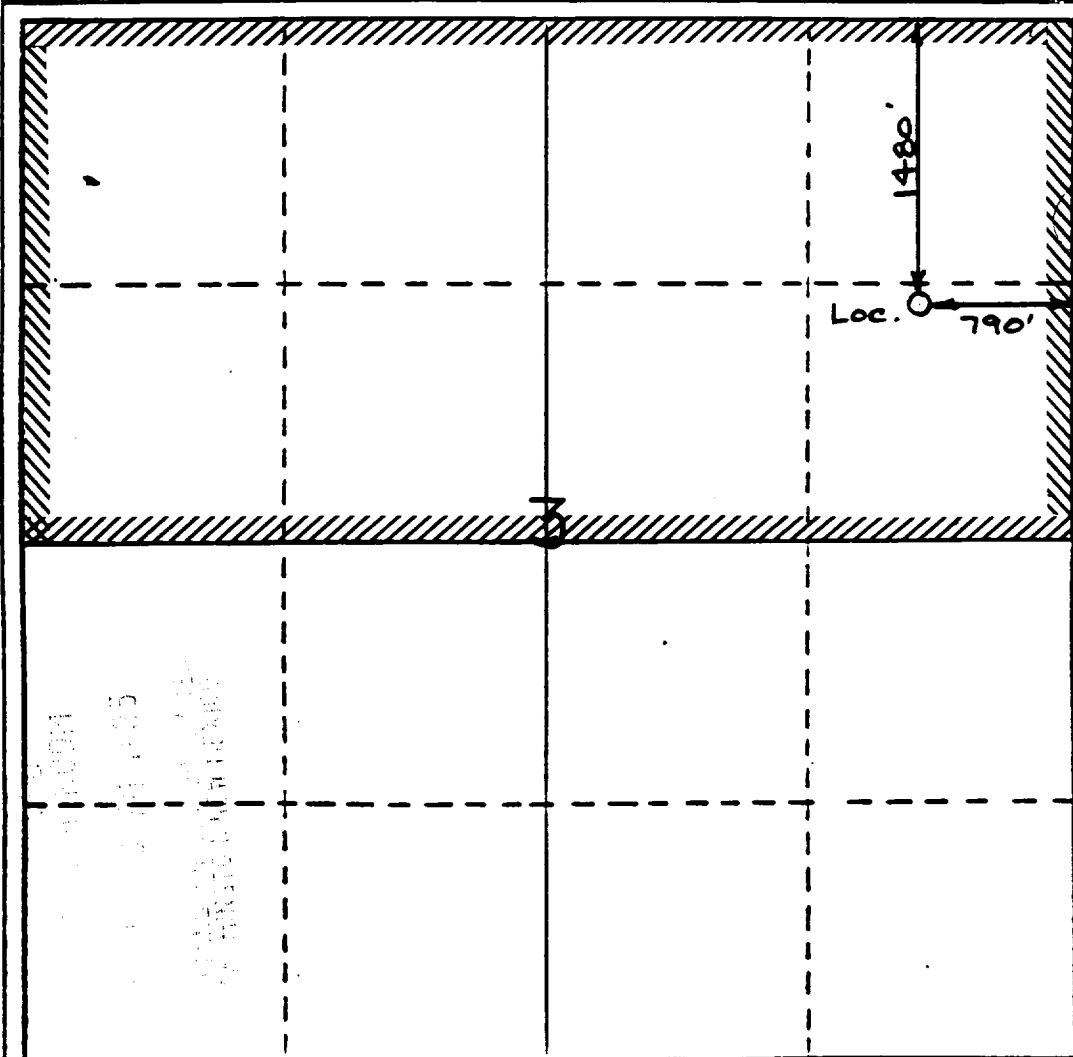
Operator Southland Royalty Co.		Lease Hare (SF-076958)		Well No. 290
Unit Letter H	Section 3	Township 29 North	Range 10 West	County San Juan
Actual Footage Location of Wells 1480 feet from the North line and 790 feet from the East line				
Ground Level Elev. 5975	Producing Formation Fruitland Coal	Pool Basin	Dedicated Acreage: 269.11	

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 work 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 \_\_\_\_\_

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 interests, has been approved by the Division.



CERTIFICATION

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

*Robert M. [Signature]*

Name

Regulatory Affairs

Position

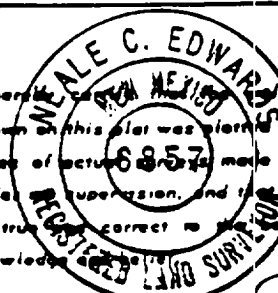
Southland Royalty Co.

Company

6-8-89

Date

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



*Neale C. Edwards*

Date Surveyed

11/19/88

Registered Professional Engineer and/or Land Surveyor

Neale C. Edwards

Certificate No. 6857



Well Name: 290 HARE 1480'N 790'E  
 Sec. 3 T29N R10W SAN JUAN NEW MEXICO  
 BASIN FRUITLAND COAL Elevation 5975'GL

Formation tops: Surface- NACIMIENTO  
 Ojo Alamo- 1218  
 Kirtland- 1332  
 Fruitland- 2097  
 Fruitland Coal Top- 2279  
 Fruitland Coal Base- 2417  
 Intermediate TD- 2259  
 Total Depth- 2418  
 Pictured Cliffs- 2433

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 - 2259	Non-dispersed	8.4 - 9.1	30-60	no control
	2259 - 2418	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 - 2259	7"	20.0#	K-55
	6 1/4"	2209 - 2418	5 1/2"	15.5#	K-55
Tubing Program:		0 - 2418	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 101 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. 313 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.

## BOP and Tests:

Surface to intermediate TD - 11" 3000 psi double gate BOP stack (Reference Figure #1). Prior to drilling out surface casing, test rams to 600 psi for 30 minutes.

Intermediate TD to TD - 7 1/16" 3000 psi double gate BOP stack (Reference Figure #2). Prior to drilling out intermediate casing, test rams to 2500 psi for 30 minutes.

Pipe rams will be actuated at least once each day and blind rams actuated once each trip to test proper functioning.

## Addition Information:

The Fruitland coal formation will be completed.  
This gas is dedicated.  
The N/2 of Section 3 is dedicated to this well.

