

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL	5. LEASE NUMBER SF-077651
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 RICHARDSON
4. LOCATION OF WELL 1070'N 1355'E	9. WELL NO. 100
10. FIELD, POOL, OR WILDCAT BASIN FRUITLAND COAL	11. SEC. T. R. M OR BLK. B SEC. 15 T31N R12W NMPM
12. COUNTY SAN JUAN	13. STATE NM
14. DISTANCE IN MILES FROM NEAREST TOWN 6 MILES FROM AZTEC	15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE. 1070'
16. ACRES IN LEASE 2400	17. ACRES ASSIGNED TO WELL 309.59
18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL DR. COMPL., OR APPLIED FOR ON THIS LEASE. 500'	19. PROPOSED DEPTH 2680'
20. ROTARY OR CABLE TOOLS ROTARY	
21. ELEVATIONS (DF, FT, GR, ETC.) 6225'GL	22. APPROX. DATE WORK WILL START
23. PROPOSED CASING AND CEMENTING PROGRAM	
*SEE OPERATIONS PLAN	

24. AUTHORIZED BY: James B. Haddfield
REGULATORY AFFAIRS

6-9-89
DATE

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

APPROVED
AS AMENDED

JUN 22 1989

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

AREA MANAGER

NMOC

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, Artesia, NM 88210

DISTRICT III

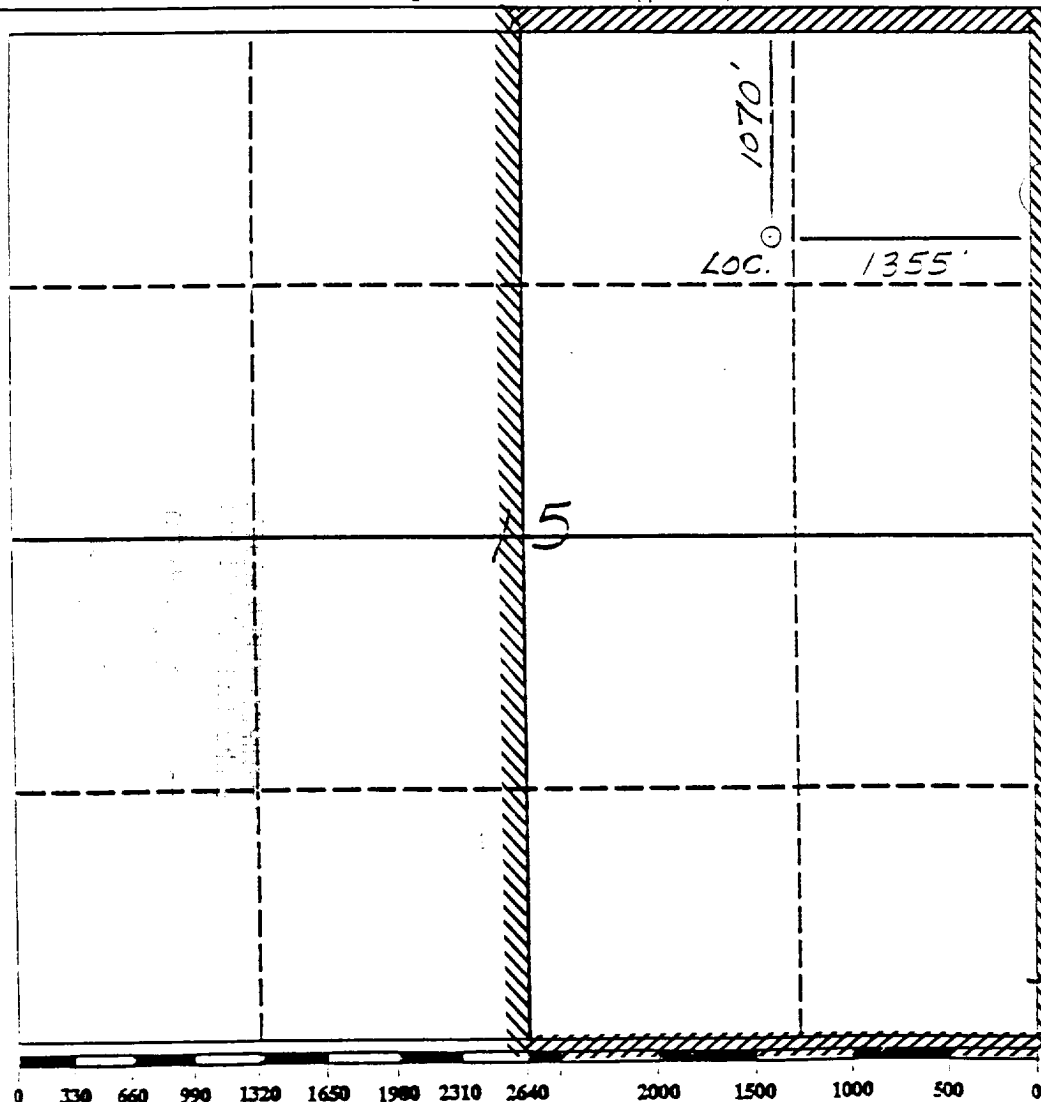
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Southland Royalty Company			Lease Richardson (SF-077651)		Well No. 100
Unit Letter B	Section 15	Township 31 North	Range 12 West	County San Juan	
Actual Footage Location of Well: 1070 feet from the North line and 1355 feet from the East line					
Ground level Elev. 6225	Producing Formation Fruitland Coal		Pool Basin	Dedicated Acreage: 309.59 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- 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, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

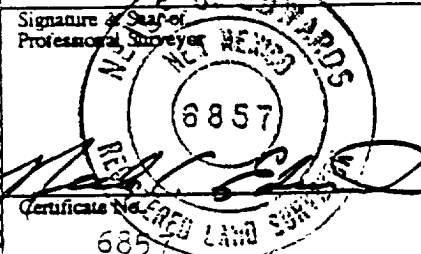
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature
Peggy Bradfield
Printed Name
Peggy Bradfield
Position
Regulatory Affairs
Company
Southland Royalty Co
Date
6-9-89

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
1-31-89
Neale J. Edwards
Signature of State of
Professional Surveyor



Well Name: 100 RICHARDSON
 Sec. 15 T31N R12W
 BASIN FRUITLAND COAL

1070'N 1355'E
 SAN JUAN NEW MEXICO
 Elevation 6225'GL

Formation tops: Surface- NACIMIENTO
 Ojo Alamo- 1000
 Kirtland- 1027
 Fruitland- 2291
 Fruitland Coal Top- 2437
 Fruitland Coal Base- 2674
 Intermediate TD- 2430
 Total Depth- 2680
 Pictured Cliffs- 2689

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 - 2430	Non-dispersed	8.4 - 9.1	30-60	no control
	2430 - 2680	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 - 2430	7"	20.0#	K-55
	6 1/4"	2380 - 2680	5 1/2"	15.5#	K-55
Tubing Program:		0 - 2680	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 162 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. 430 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.

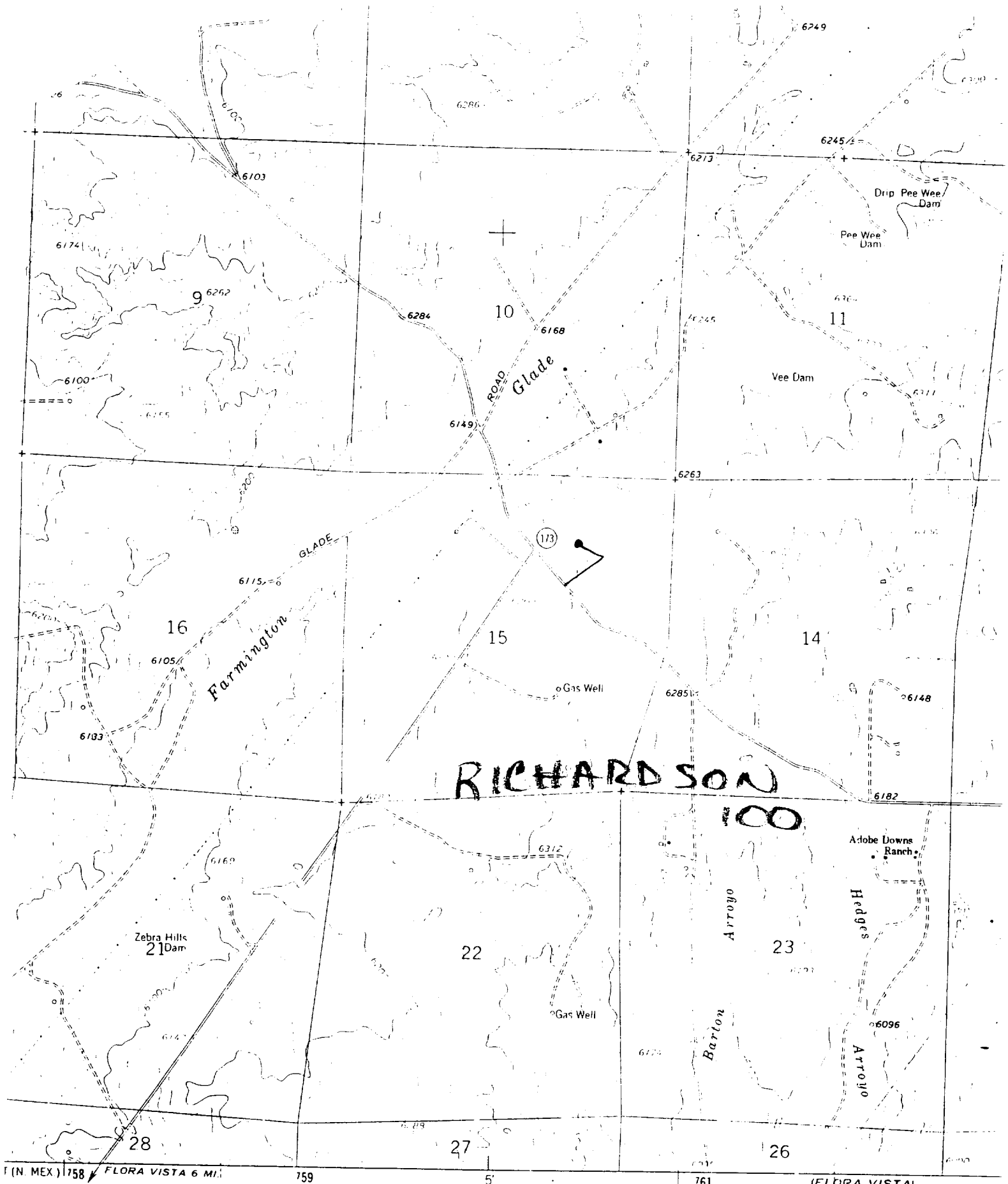
Pipe rams will be actuated at least once each day and blind rams actuated once each trip to test proper functioning.

Addition Information:

The Fruitland coal formation will be completed.

This gas is dedicated.

The E/2 of Section 15 is dedicated to this well.



(N. MEX.) 1758 FLORA VISTA 6 MI. 759 5 761 (FLORA VISTA) 4357 1 SE

Geological Survey
Bureau of Reclamation
Aerial photograph
dated 1963
Datum
State system, west zone

