

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

OCT 1 9 1989

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL	5. LEASE NUMBER SF-077652
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 HARPER COM
4. LOCATION OF WELL 1915'N 1625'E	9. WELL NO. 100
14. DISTANCE IN MILES FROM NEAREST TOWN 6 miles from Aztec	10. FIELD, POOL, OR WILDCAT BASIN FRUITLAND COAL
15. DISTANCE FROM PROPOSED LOCATION 1625' TO NEAREST PROPERTY OR LEASE LINE.	11. SEC. T. R. M OR BLK. SEC. 14 T31N R12W NMPM
16. ACRES IN LEASE 2560	12. COUNTY SAN JUAN
17. ACRES ASSIGNED TO WELL 309.70	13. STATE NM
18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL DR. 350' COMPL., OR APPLIED FOR ON THIS LEASE.	19. PROPOSED DEPTH 2726'
21. ELEVATIONS (DF, FT, GR, ETC.) 6228'GL	20. ROTARY OR CABLE TOOLS ROTARY
22. APPROX. DATE WORK WILL START	

This action is subject to technical and
procedural review pursuant to 43 CFR 3160.3
and appeal pursuant to 43 CFR 3160.5.

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

8-23-89
APPROVED
AS AMENDED

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

OCT 17 1989
[Signature]
AREA MANAGER

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

Hold 2-104 for CA

NMOCD

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, Artesia, NM 88210

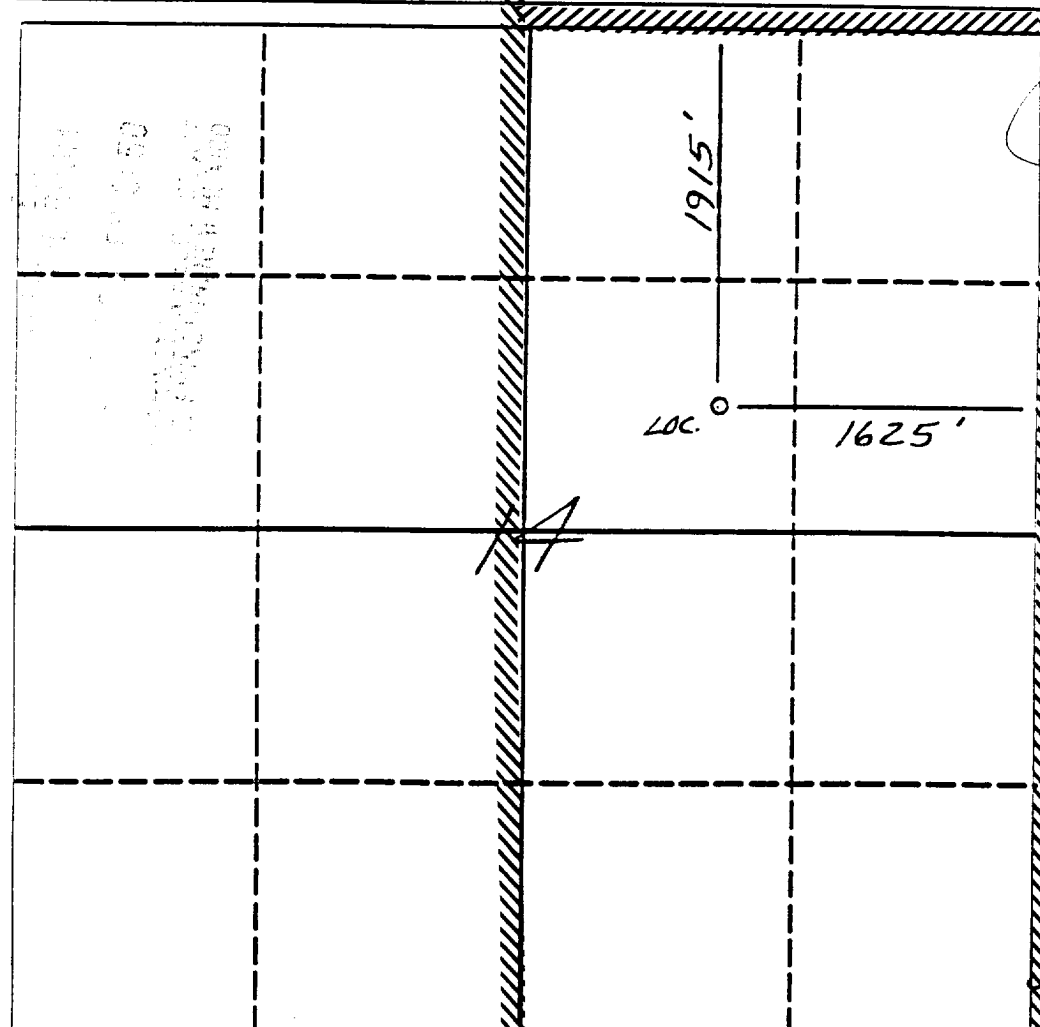
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Southland Royalty Company			Lease Harper Com (SF-077652)		Well No. 100
Unit Letter G	Section 14	Township 31 North	Range 12 West	County San Juan	
Actual Footage Location of Well: 1915 feet from the North line and 1625 feet from the East line					
Ground level Elev. 6228'	Producing Formation Fruitland Coal		Pool Basin	Dedicated Acreage: 309.70 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 communitization agreement will be obtained
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 best of my knowledge and belief.

Signature
Peggy Bradfield

Printed Name
Regulatory Affairs

Position
Southland Royalty Co

Company
8-23-89

Date

SURVEYOR CERTIFICATION

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

Date Surveyed
Neal C. Edwards

Signature and Seal of
Professional Surveyor

REGISTERED LAND SURVEYOR

Certificate No.
6857

Well Name: 100 HARPER COM 1915'N 1625'E
 Sec. 14-T31N R12W SAN JUAN NEW MEXICO
 BASIN FRUITLAND COAL Elevation 6228'GL

Formation tops: Surface- NACIMIENTO
 Ojo Alamo- 1069
 Kirtland- 1096
 Fruitland- 2404
 Fruitland Coal Top- 2526
 Fruitland Coal Base- 2725
 Total Depth- 2726
 Pictured Cliffs- 2734

Logging Program: Mud logs from 2404 to total depth.

Mud Program:	Interval	Type	Weight	Visc.	Fl. Loss
	0 - 200	Spud	8.4 - 8.9	40-50	no control
	200 - 2726	Non-dispersed	8.4 - 9.5	30-60	no control

Casing Program:	Hole Size	Depth Interval	Csg. Size	Weight	Grade
	12 1/4"	0 - 200	8 5/8"	24.0#	K-40
	7 7/8"	0 - 2726	5 1/2"	15.5#	K-55
Tubing Program:		0 - 2726	2 3/8"	4.7#	J-55

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

5 1/2" production casing - float shoe on bottom.
 Three centralizers run every other joint above shoe.

Wellhead Equipment: 8 5/8" x 5 1/2" x 2 3/8" x 11" 3000 psi xmas tree assembl

Cementing:

8 5/8" surface casing - cement with 140 sacks of class "B" cement with 1/4# flocele/sack and 3% calcium chloride (165 cu ft. of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 600 psi for 30 minutes.

5 1/2" production casing - lead with 236 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. 574 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.



HARPER COM
100

(FLORA VISTA)
4357 1 SE

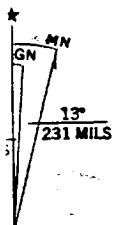
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R. 12 W.

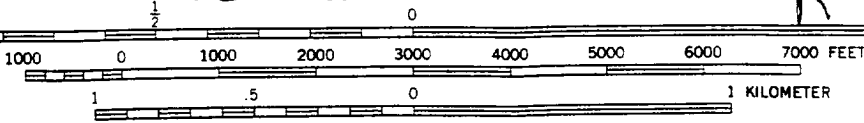
230'

ARTEC

R-12-W
1 MILE



79 MAGNETIC NORTH
CENTER OF SHEET



CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST