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UNITED STATES
DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY
Area Geothermal Supervisor's Office
Conservation Division, MS 92
345 Middlefield Road
Menlo Park, CA 94025

HR ✓
→ String fellow
FEB 11 1980

AREA
NM
Dona Ana
Radium Spgs
Po-HEC

FEB 8 1980

Memorandum

To: INTERESTED PARTIES

From: Acting Area Geothermal Supervisor

Subject: Plan of Operation, Hunt Energy Corporation, Federal Leases
NM-25526, 25552, 25554, 25557 & 20779, Radium Springs Area
of Dona Ana County, New Mexico
Ref: 2403-01 NM-20779 (POO for EA #147-80)

UNIVERSITY OF UTAH
RESEARCH INSTITUTE
EARTH SCIENCE LAB.

Hunt Energy Corporation, Designated Operator for the lessees of the subject leases, has submitted part of a Plan of Operation, in accordance with 30 CFR 270.34 to drill one or more deep (max. 3,000m) wells within the lease area to test for commercial geothermal resource. The remainder of the Plan will be distributed when it is received by the Area Geothermal Supervisor. This incomplete plan is being distributed at this time so that a field inspection may be scheduled in a timely manner. A copy of the Plan of Operations is enclosed for your review and files.

An Environmental Assessment (EA #147-80) will be prepared by the office of the Area Geothermal Supervisor for the proposed action.

You are invited to participate in a field inspection led by Mr. Ken Bull, Salt Lake City District Geothermal Supervisor, USGS, Administration Bldg., Room 2006, 1745 West 1700 South, Salt Lake City, UT 84104, Tel: 801-524-4575, FTS 588-4575, on February 26, 1980. Participants are asked to meet at 8:30am at the Bureau of Land Management, Las Cruces District office, 1705 N. Valley Dr., Las Cruces, NM 88001, Tel: 505-523-5571, FTS 572-0257.

Parties planning to attend should notify the Salt Lake City District Geothermal Supervisor by February 21, 1980.

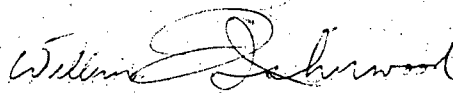
We urge you to send written commentary and will appreciate hearing from you even if you are of the opinion that the existing regulations, lease terms, and operational orders provide adequate environmental protection.

All comments concerning the proposed action should be received no later than March 28, 1980 by:

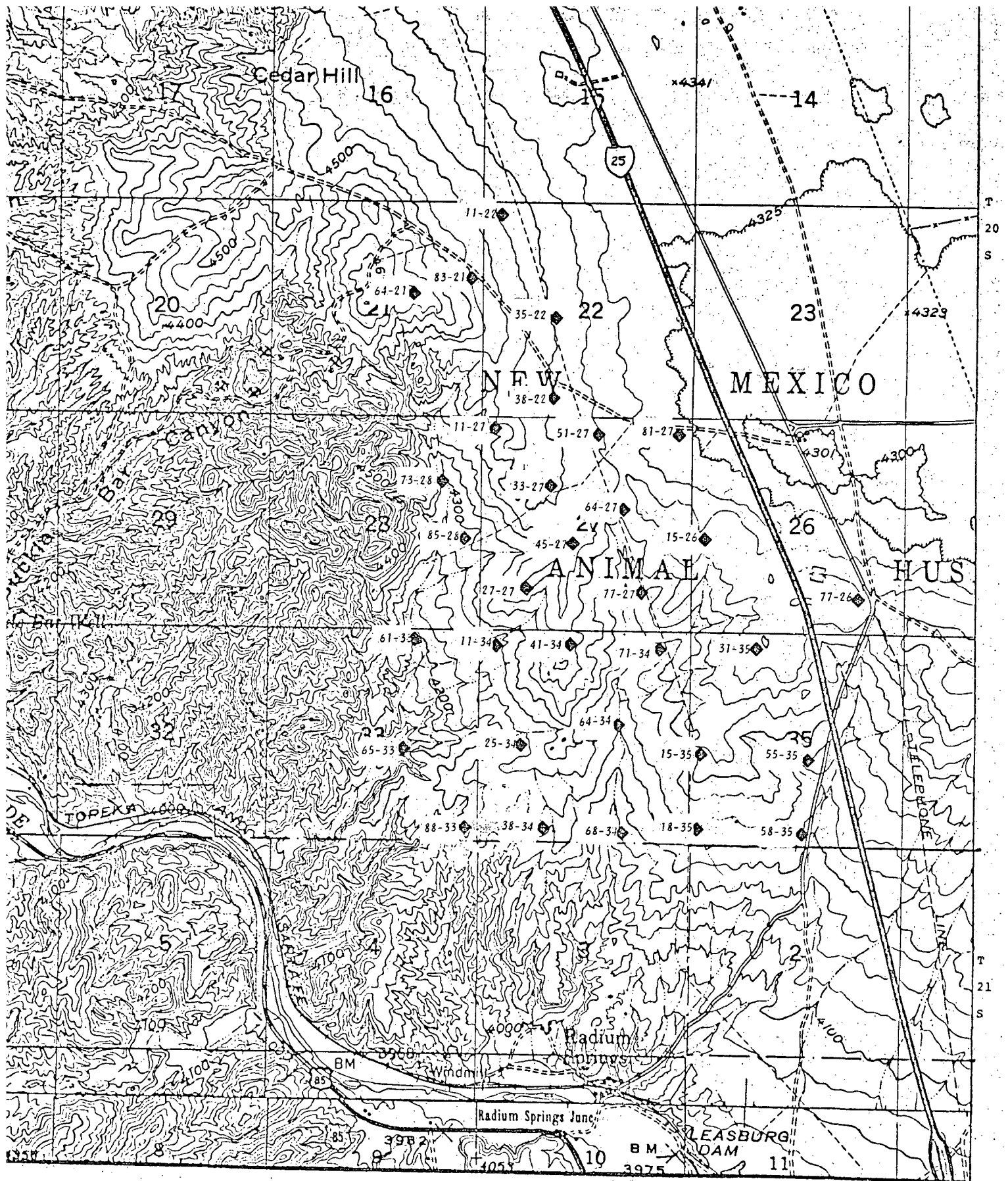
Area Geothermal Supervisor
U.S. Geological Survey
Conservation Division
345 Middlefield Road - MS 92
Menlo Park, CA 94025
415-323-8111 x2848; FTS 467-2848

All comments will be given serious consideration in the preparation of the Environmental Assessment and any subsequent conditions of approval.

The Area Geothermal Supervisor's office will routinely distribute copies of the completed final EA to the surface managing agency, the lessee, the Geothermal Environmental Advisory Panel (GEAP) and the U.S. Fish and Wildlife Service. Other interested parties may receive a copy of the final EA upon request. Copies of EA's will also be available for inspection during normal business hours at the Area Geothermal Supervisor's office, the District Geothermal Supervisor's office, Salt Lake City, Utah and the BLM, Las Cruces, NM, District Manager's office, and BLM, Santa Fe, NM, State Director's office.

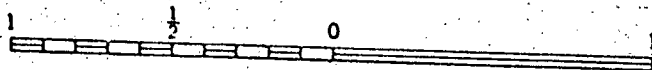

for Henry L. Cullins

Enclosure



R 1 W

Miles



Kilometers

NEW MEXICO

Radium Springs

PROPOSED WELL LOCATIONS

INTERESTED PARTIES EA #147

Hunt Energy Corporation
Plan for Exploration

NM-20779
Madison Springs KGRA

A * A * A *

District Geothermal Supervisor
USGS, Conservation Division
Admin. Bldg., Room 200b
1745 West 1700 South St.
Salt Lake City, Utah 84104
*FIS 588-4575/4575

Conservation Manager, Central Region
ATTN: Don Libbey
U. S. Geological Survey
7200 West Alameda Avenue
Denver, Colorado 80225

Area Geologist, Southern Rocky
Mountain Region
U.S.G.S., Conservation Division
Central Region
Post Office Drawer 1857
Roswell, New Mexico 88201

Dr. G. D. Robinson, Chairman
Geothermal Environmental Advisory
Panel
345 Middlefield Road, MS 19
Menlo Park, California 94025
*FIS 467-2671 415-323-8111 x2871

Mr. Theodore W. Holland
U.S. Bureau of Land Management
550 W. Fort St., Box 042
Boise, Idaho 83724

New Mexico State Director
Bureau of Land Management
Federal Building, S. Federal Place
Post Office Box 1449
Santa Fe, New Mexico 87501
ATTN: Jim Querry

Las Cruces District Manager
Bureau of Land Management
1705 North Valley Drive
Post Office Box 1420
Las Cruces, New Mexico 88001

Area Manager, nLM
Las Cruces-Lordsburg Resource Area
ATTN: Gary A. McVicker
P.O. Box 1420
Las Cruces, New Mexico 88001
*FIS 572-0257 505-523-5571

Regional Director, Region Two
Fish and Wildlife Service
Post Office Box 1306
Albuquerque, New Mexico 87103
*FIS: 474-2321 (505)-766-2321

U. S. Fish and Wildlife Service
Ecological Services
ATTN: Robert Bridges, F.S.
P.O. Box 1306
Albuquerque, New Mexico 87103

Department of Energy, Geothermal
ATTN: Bennie DiBona
20 Massachusetts Avenue, NW
Washington, D.C. 20545
*FIS 376-1690 Comm: 202-376-1690

U.S. Environmental Protection Agency,
Environmental Monitoring &
Support Laboratory
ATTN: Michael O'Connell
P.O. Box 15027 Las Vegas, Nv 89114
*FIS: 595-2969 Comm: 702-736-2969

New Mexico Energy Resources Board
ATTN: Dennis Fedora
P.O. Box 2770
Santa Fe, New Mexico 87501

New Mexico State Engineers Office
ATTN: S.E. Reynolds
Gataan Memorial Building
State Capitol
Santa Fe, New Mexico 87503
*Tel: 505-827-2526

Environmental Improvement Agency
ATTN: Thomas Saca
P.O. Box 2348
Crown Building
Santa Fe, New Mexico 87503
*Tel: 505-827-2271

New Mexico Department of Fish & Game
ATTN: William S. Ruey, Director
Villalba Building
Santa Fe, New Mexico 87503
*FIS 476-2143 505-827-2143

INTERESTED PARTIES for EA #147

New Mexico State Land Office
ATTN: Mr. Jack Kennedy
P.O. Box 1148
Santa Fe, New Mexico 87501

State of New Mexico
New Mexico Bureau of Mines
Socorro, New Mexico

Oil Conservation Commission
ATTN: Carl Ulvog
P.O. Box 2088
Santa Fe, New Mexico 87501
*Tel: 505-827-2434

New Mexico State Planning Office
ATTN: Tom Marlan, ShPU
505 Don Gastan Avenue
Santa Fe, New Mexico 87501

Reldon Beck
Dept. of Animal and Range Science
Box 3-1
New Mexico State University
Las Cruces, New Mexico 88003

Dona Ana County Planning Committee
Room 207 County Court House
Las Cruces, New Mexico 88001

Lorina Spitler
Southern Rio Grande Council of
Government
575 South Alameda
Las Cruces, New Mexico 88001

Earth Science Laboratory
Univ of Utah Research Institute
ATTN: Phillip M. Wright
420 Chipeta Way, Suite 120
Salt Lake City, Utah 84108
*Tel (801) 581-5283

Amax Exploration, Incorporated
ATTN: Mr. Larry Hall
7100 West 44th Avenue
Wheatridge, Colorado 80033
*FIS 254-3131 (303-420-3100)

Chevron USA, Inc.
ATTN: J.G. Turner
Post Office Box 3722
San Francisco, California 94119
*Tel: (415) 894-2726

Mogobar Division
Dresser Industries, Incorporated
ATTN: Don Walters
10960 Wilshire Blvd., Suite 1422
Los Angeles, California 90024

H. C. Hemis
Fluid Energy Corporation
Hamden East Building, Suite 315
8000 East Girard Avenue
Denver, Colorado 80231

GeothermEx, Inc.
Attn: James B. Koenig
901 Mendocino Avenue
Berkeley, California 94707
*Comm: 415-524-9242

Geothermal Power Corporation
ATTN: Mr. Frank Metcalfe
1127 Grant Avenue, Suite 6
P.O. Box 1186
Novato, California 94947
*Comm: 415-897-7833

Getty Oil Company
ATTN: Mr. Dan W. Sparks
Post Office Box 5237
Bakersfield, California 93388
*Tel: (805) 399-2961

Gulf Mineral Resources Company
Exploration Department
ATTN: Mr. Glen Campbell
1720 South Delaire Street
Denver, Colorado 80222
*FIS Ops: 327-0111 303-758-1700

INTERESTED PARTIES for EA #147

Hunt Oil Company
Minerals Division
717 Seventeenth Street - Suite 2820
Denver, Colorado 80202
*FTS 327-0111 (303-554-1010)

W. F. Bates
Mc Culloch Geothermal Corporation
10880 Wilshire Blvd.
Los Angeles, California 90024

Occidental Geothermal, Inc.
ATTN: b.J. Wyant
5000 Stockdale Highway
Bakersfield, California 93309
*Tel: (805) 327-7351

Phillips Petroleum Company
Geothermal Operations
ATTN: Bob Wright
Post Office Box 239
Salt Lake City, Utah 84110
*Comm: 801-364-2083

Republic Geothermal, Incorporated
ATTN: Mr. Dwight Carey,
and Ms. Tawna Nicholas
Post Office Box 3388
Santa Fe Springs, California 90670
*Tel: (213) 945-3881

Republic Geothermal, Incorporated
Northern California Office
ATTN: J. L. Sheidenberger
1011 College Avenue, Suite 220
Santa Rosa, California 95404
*Comm: 707-527-7755

SAYWRIGHT Corporation
ATTN: Mr. Wayne L. Saver
Post Office Box 229
Fairfield, California 94533
*Tel: 707-429-5777

Sunoco Energy Development Company
ATTN: Mr. John Williams
Suite 1500 -- Box 9
12700 Park Central Place
Dallas, Texas 75251
*FTS 729-4011 214-253-2600

Thermal Power Company
ATTN: Mr. Richard Miller
601 California Street, Suite 1302
San Francisco, California 94108
*415-961-5700

Union Oil Company
ATTN: Don Ash and Henry I. Snow
Post Office Box 6854
Santa Rosa, California 95406

Union Oil Company of California
Geothermal Division
ATTN: Neil Stefanides
Union Oil Center, PO Box 7500
Los Angeles, California 90051
*213-486-7740

Mr. James E. Benedict
Suite 1200 Standard Plaza
1100 S.W. Sixth Avenue
Portland, Oregon 97204

Mr. Jack McNamara
10650 Wilshire Blvd, Suite 790
Los Angeles, California 90024
*Tel: (213) 475-8933

Mr. Clyde E. Kuhn
Calif Cultural Heritage Foundation
Post Office Box 69
Davis, California 95616

PLAN OF EXPLORATION OPERATION
FOR
DEEP DRILLING

RADIUM SPRINGS AREA, RIO GRANDE RIFT ZONE
DONA ANA COUNTY, NEW MEXICO

PRELIMINARY DATA SUBMITTAL

Hunt Energy Corporation
Geothermal Department
2500 1st National Bank Bldg.
Dallas, Texas

January 1980

PLAN OF DRILLING-OPERATION

CONTENTS

Submitted
January 1980

I. GENERAL INFORMATION

- A. Lessees-leases x
- B. Land description x
- C. Operators, contractors, supervisors x
- D. Objectives x
- E. Estimated dates x

II. MAPS

- A. Topographic maps x
 - 1. Well locations x
 - 2. Access roads x
 - 3. Water supplies, road building materials x
 - 4. Support facilities x
 - 5. Topographic features, drainage patterns x
 - 6. Critical environmental and cultural resources x
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- B. Site of operations layout
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 - 1. Large scale detail
 - 2. Detailed engineering: wellsite
 - 3. Detailed engineering: roads

III. ENVIRONMENTAL PROTECTION MEASURES

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 - 6. Public health and safety
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 - 1. Waste disposal
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- D. Crew size and facilities

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- A. Regional and local geology
- B. Potential geological engineering hazards
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- G. Recreational areas
- H. Cultural resources
- I. Land uses and local economy
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 - 1. Introduction
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 - 3. Plan for clean-up and abatement.
- B. Hydrogen sulphide and other toxic gases
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 - 2. General information
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- D. Injuries
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1. GENERAL INFORMATION

PLAN OF EXPLORATION OPERATION
FOR
DEEP DRILLING

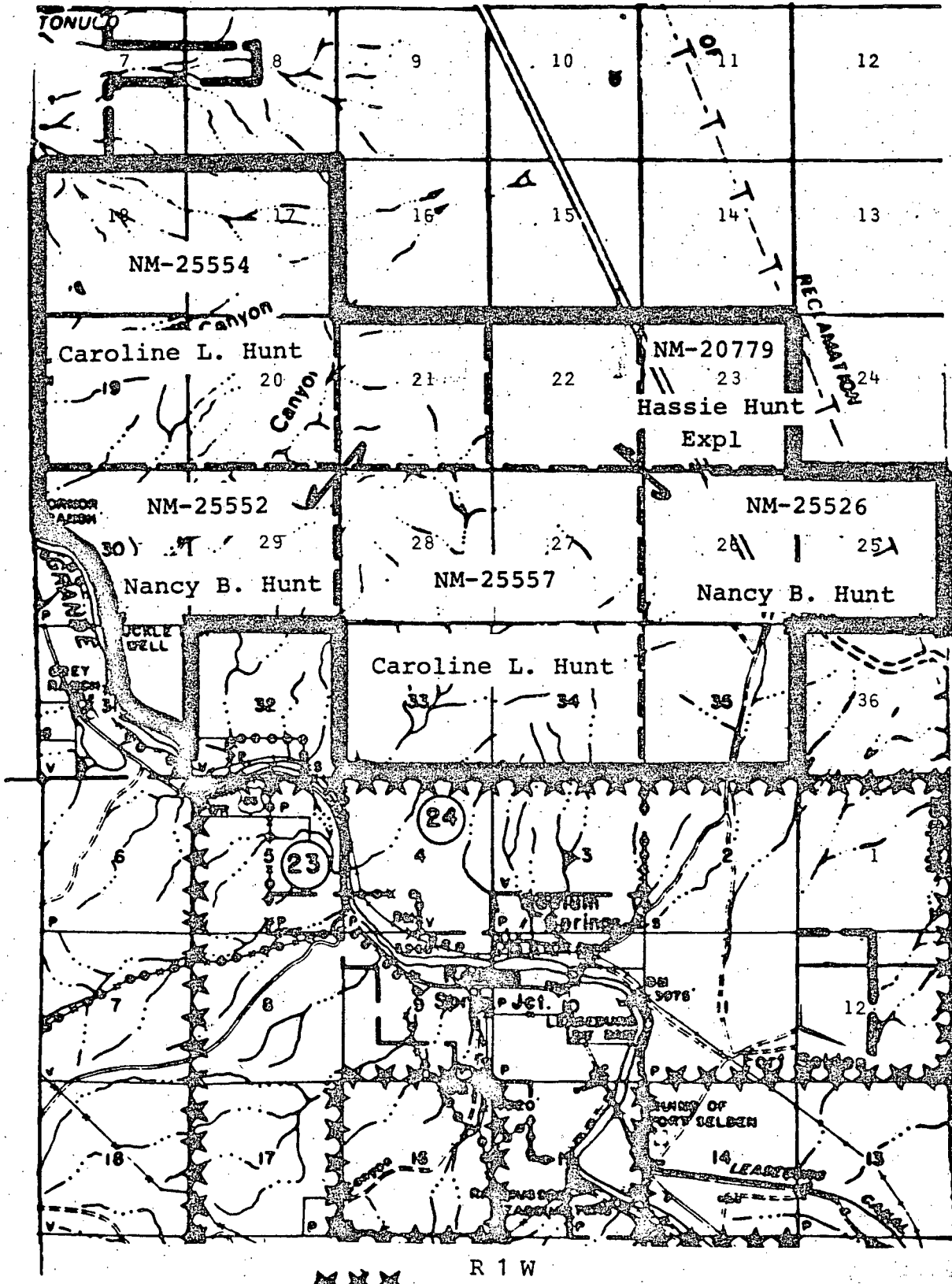
RADIUM SPRINGS AREA, RIO GRANDE RIFT ZONE
DOÑA ANA COUNTY, NEW MEXICO

Lessee:	Federal Lease Number:
Caroline L. Hunt	NM-25554 NM-25557
Nancy B. Hunt	NM-25552 NM-25526
Hassie Hunt Exploration Co.	NM-20779

The above leases are located approximately 1½ km (1 mile) north of the town of Radium Springs, N. M. and cover an area of about 41 sq km (16 sq mi) in the southern New Mexico area of Doña Ana County.

Specifically:

T. 20 S., R. 1 W.
Secs: 17-23, 25-31, 33-35



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S

T
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KGRA
LEASE MAP

R 1 W

Scale 1"=1 mile

RADIUM SPRINGS
Dona Ana Co., New Mexico

Designated Operator for all leases:

Hunt Energy Corporation
Geothermal Department
2500 1st National Bank Building
Dallas, Texas 75219
Phone: (214) 748-1300

Supervisors:

Robert M. Sanford, Manager

Roger L. Bowers, Operations
Home phone: (817) 461-1038

Contractor: to be selected.

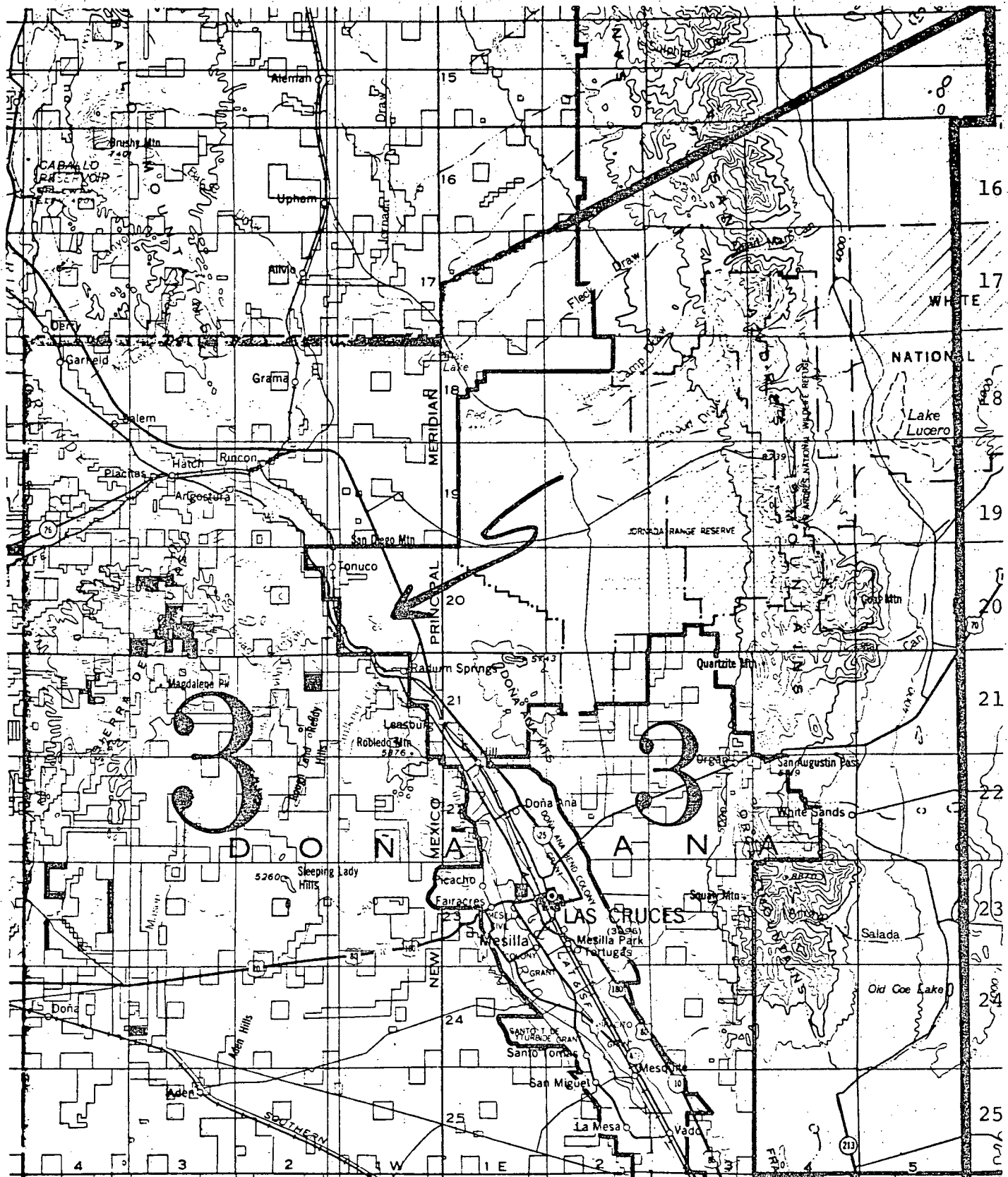
Field Supervisors: to be selected.

Names, addresses, and phone numbers for all contractors and supervisors will be provided before operations begin.

Objectives: to drill one or more deep (max. 3,000 m) wells within the lease area to test for a commercial geothermal resource. If a resource is found, development and production will follow. A full description of the proposed operation is detailed in the following sections.

Dates: The first wildcat is scheduled to start in June or July, 1980. It should be completed in about 90 days from the spud date unless testing procedures are lengthy. If a resource is found, confirmation wells would be drilled over a period of about two years. If no resource is found, operations would cease as soon as practical.

II. MAPS



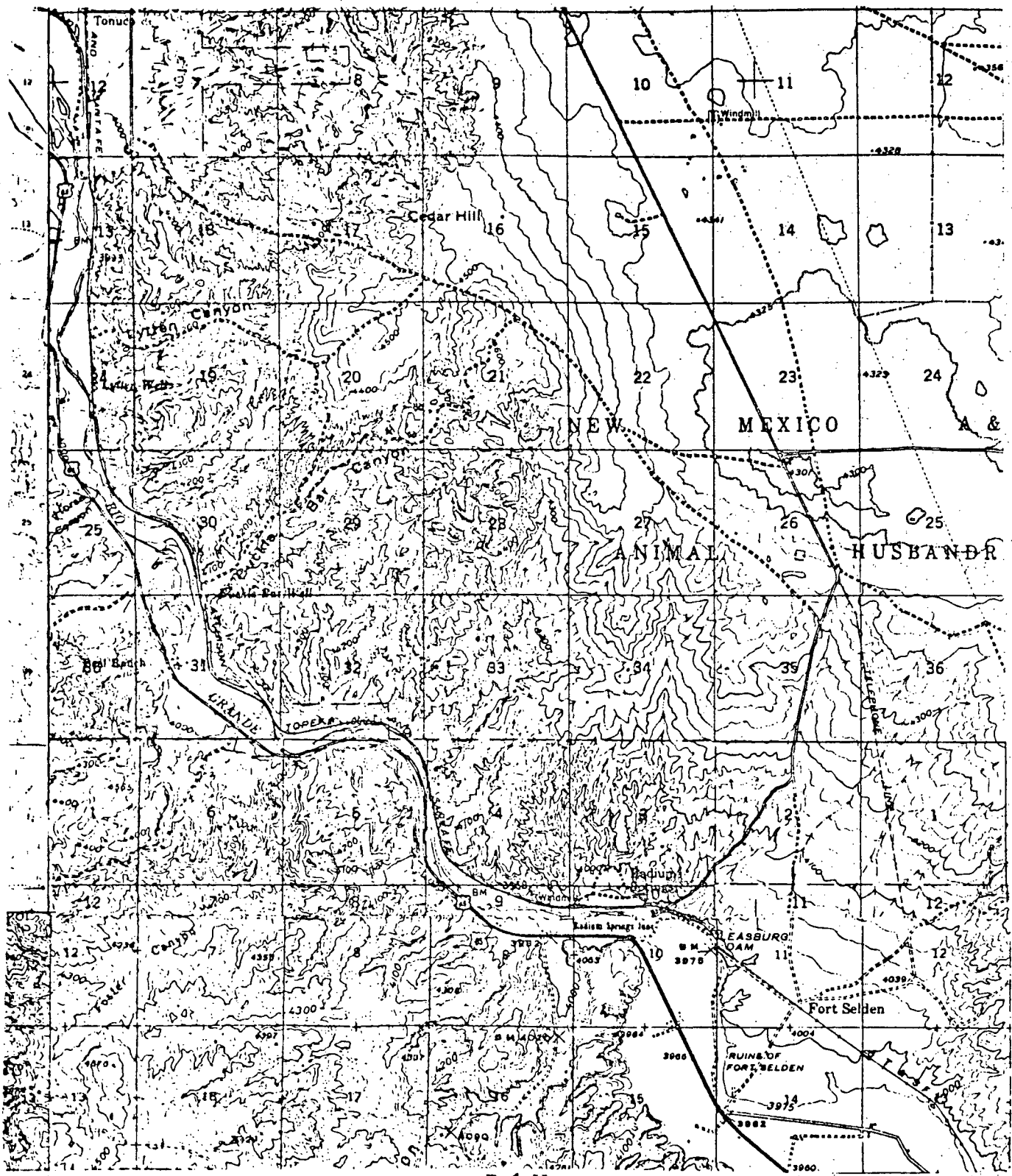
REGIONAL LOCATION MAP

RADIUM SPRINGS ANOMOLY
Doña Ana County, NM

Scale 1:500,000

A. Topographic maps

Two separate scale maps are submitted, one at 1"= 1 mile and the other at scale 1:24,000 (one inch equals 2000 ft.)



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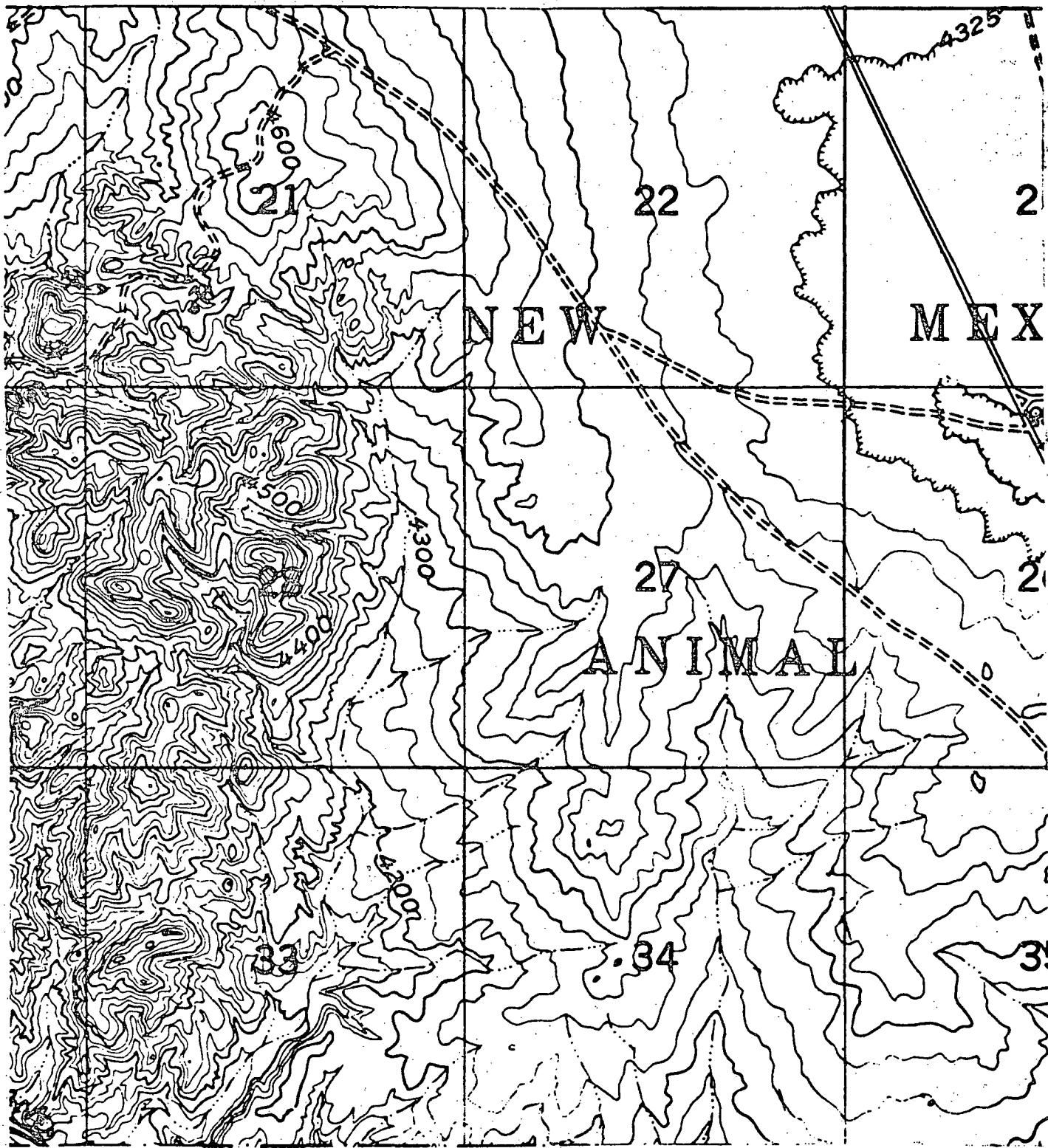
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TOPOGRAPHIC MAP

Scale 1"=1 mile

RADIUM SPRINGS
Dona Ana Co., New Mexico

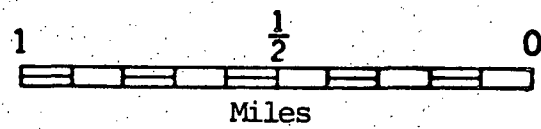
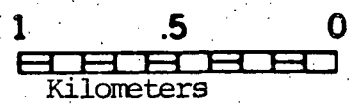


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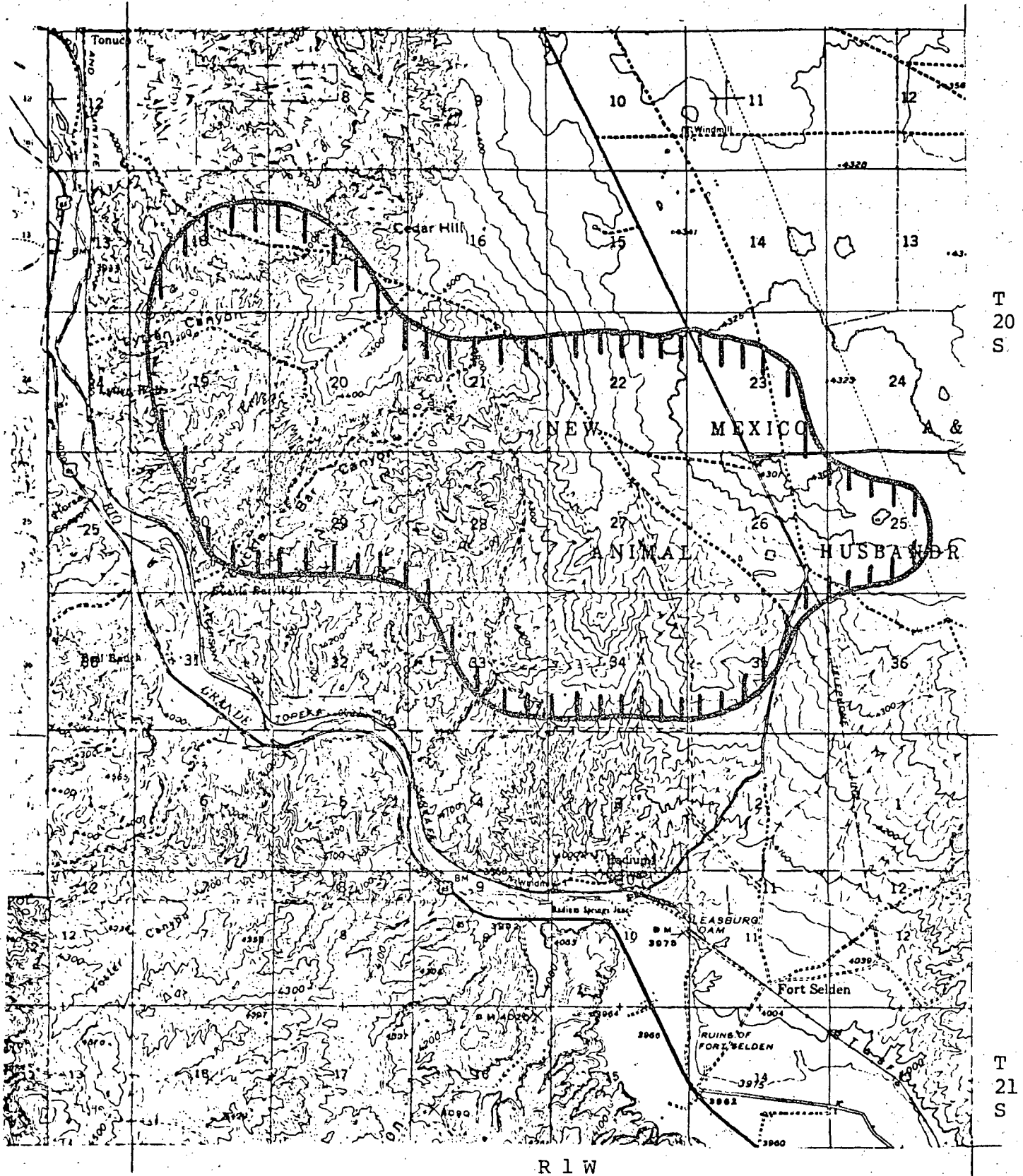
R 1 W

TOPOGRAPHIC MAP

RADIUM SPRINGS ANAMOLY
Doña Ana County, N. M.



WELL LOCATIONS

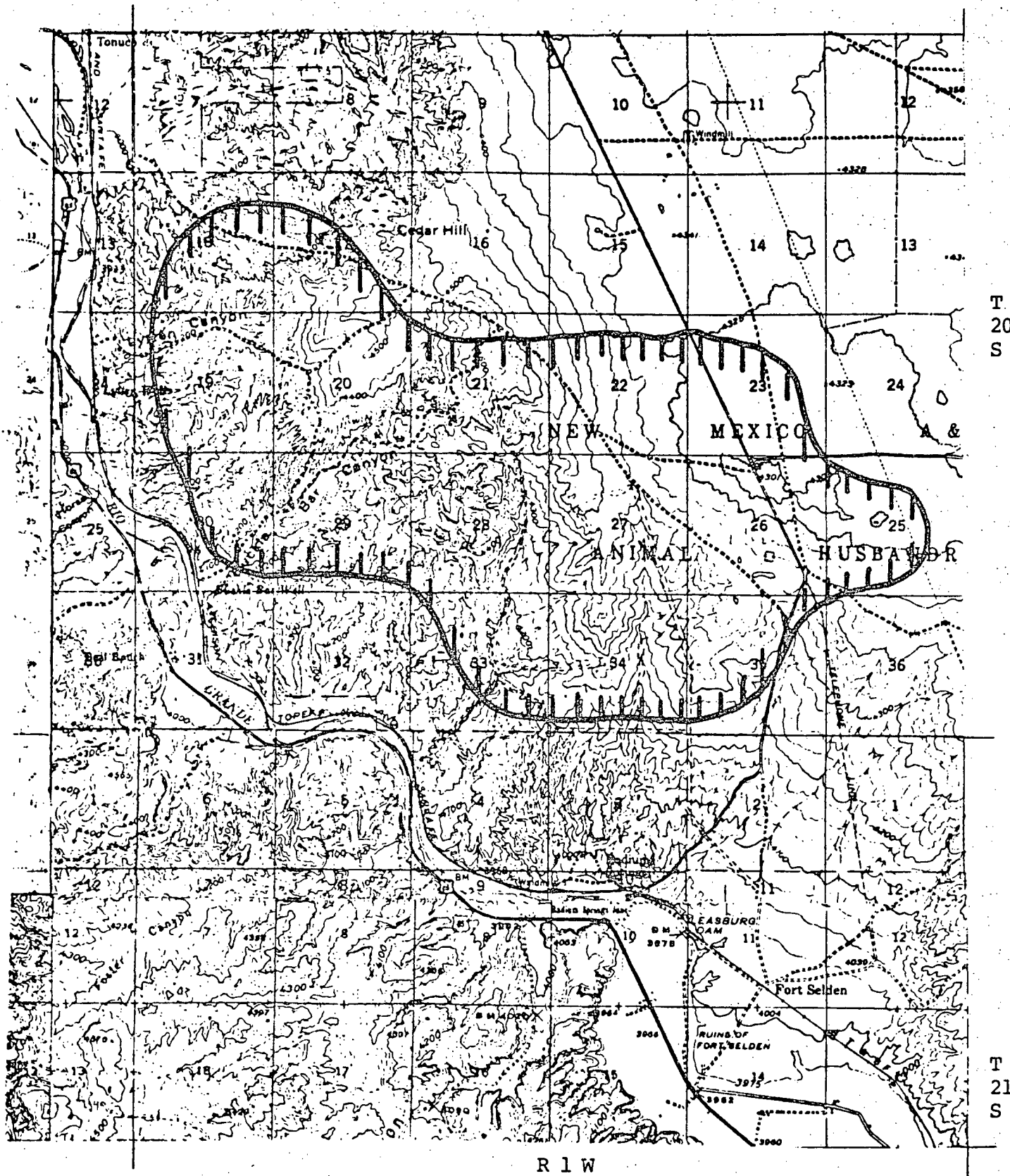


GENERAL LOCATION AREA RADIUM SPRINGS
Doña Ana Co., New Mexico

Scale 1"=1 mile

ACCESS ROADS

Most areas of the prospect are accessible by existing roads and trails as shown on the following map. Any new roads to specific drill sites would be constructed over the shortest practical distance.



ACCESS ROADS

PADIUM SPRINGS
Doña Ana Co., New Mexico

Scale 1"=1 mile

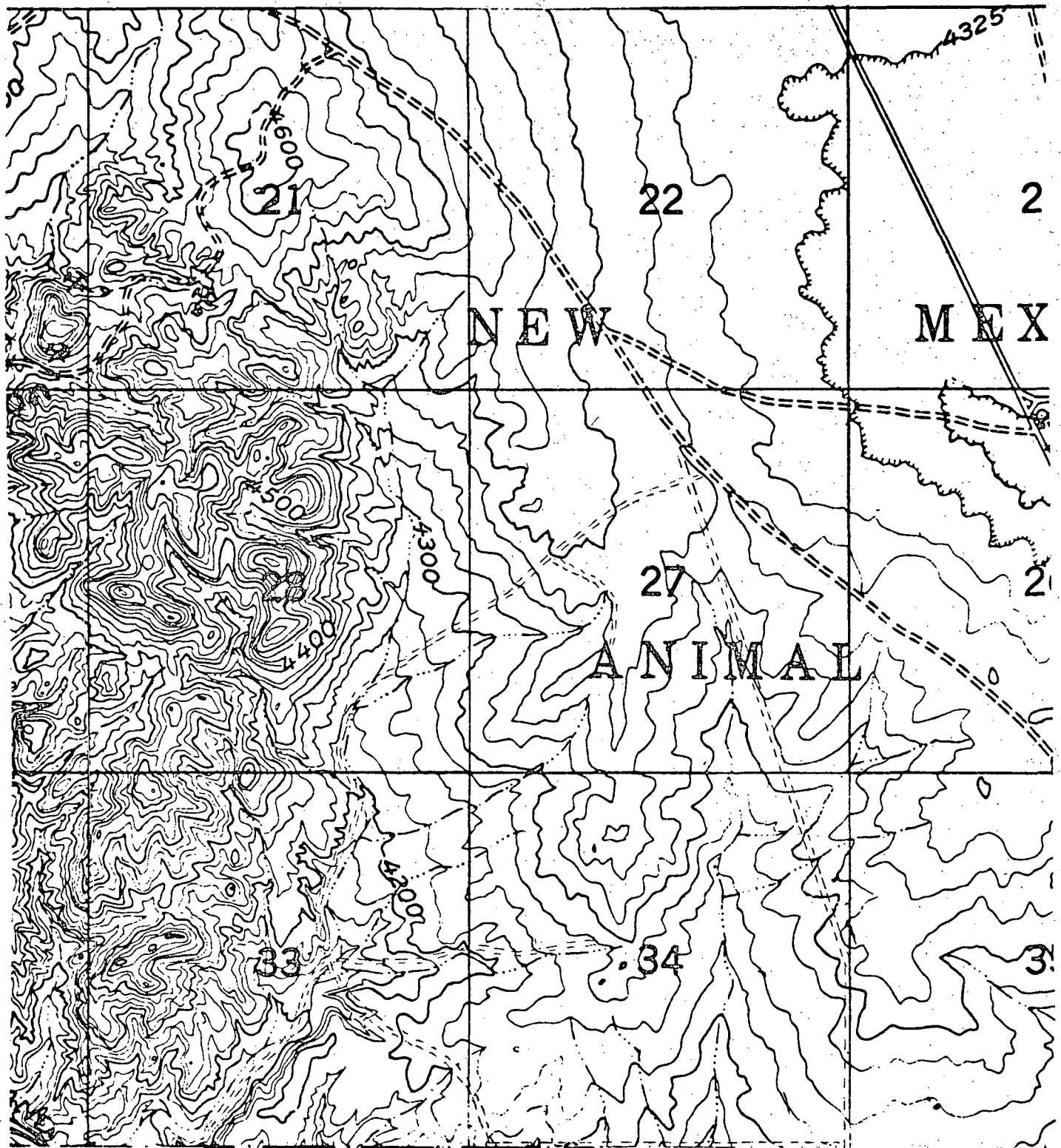
WATER SUPPLIES AND ROAD BUILDING MATERIALS

1. Location of supply sources to be selected and approved.

SUPPORT FACILITIES

1. Storage yard probably on site.
2. Most other support facilities at Las Cruces, New Mexico or El Paso, Texas.

TOPOGRAPHIC FEATURES, DRAINAGE PATTERNS

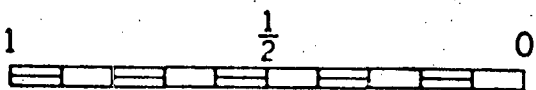
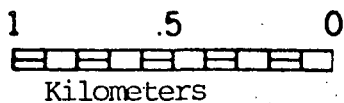


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TOPOGRAPHIC FEATURES,
DRAINAGE

RADIUM SPRINGS Anomaly
Doña Ana Co., New Mexico



CRITICAL ENVIRONMENTAL AND CULTURAL RESOURCES

1. No critical environmental resources known in prospect area (BLM EAR MN-030-77-9)
2. "Low or negligible residual impacts to all components of the environment may be expected if all appropriate mitigating measures are taken" (Section V summary conclusions, of above BLM EAR report)

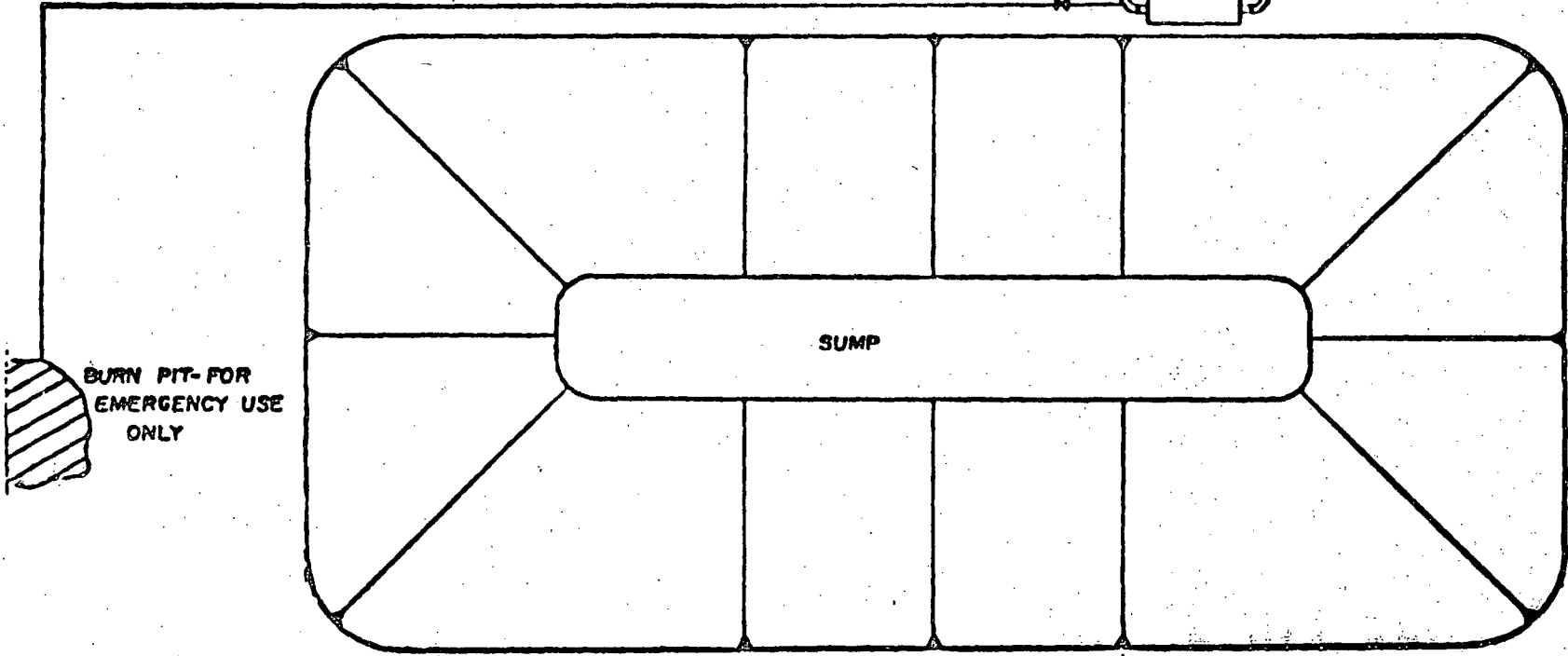
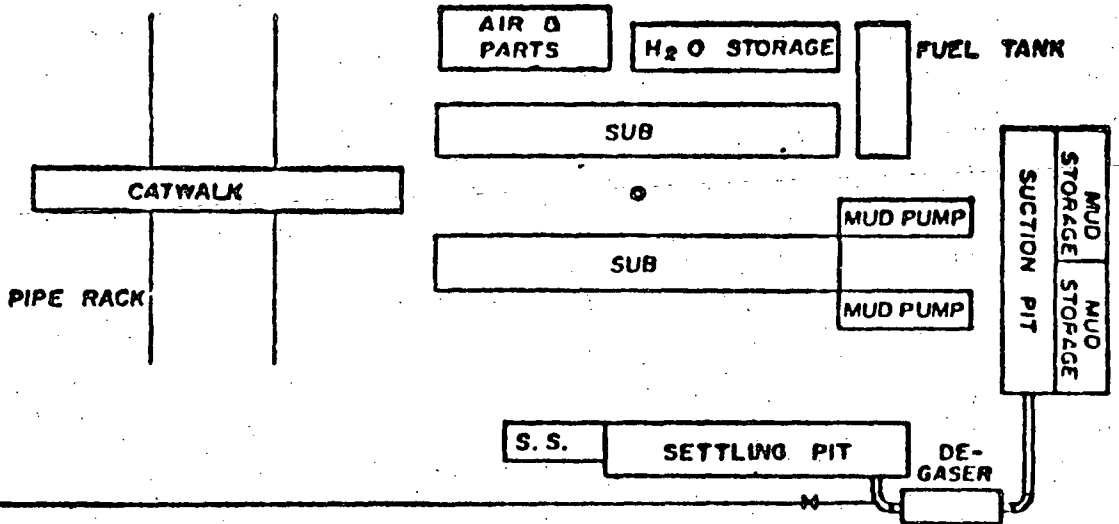
CRITICAL WILDLIFE AREAS

1. No critical areas known in prospect.

POTENTIAL SURFACE DISTURBANCE AREAS

1. None known at this time other than drill sites and access roads.

B. SITE OF OPERATIONS LAYOUT



TYPICAL RIG LAYOUT

SCALE: Approx. 1" = 30'

C. SPECIAL MAPS

1. Detailed plans will be submitted as an addendum once final drill site is selected.