

1' OCC COPY

SUBMIT IN TWO PARTS
(Other instructions on reverse side)Form approved.
Budget Bureau No. 42-R1425.UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

APR 12 1978

U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICOPLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☐GAS
WELL ☒OTHER ☐SINGLE
ZONE ☒MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Southland Royalty Company

3. ADDRESS OF OPERATOR

1100 Wall Towers West Bldg., Midland, Texas 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

1980' from North Line & 1980' from West Line

At proposed prod. zone

Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

14 miles north-northwest of Carlsbad.

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any)

1980'

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,

OR APPLIED FOR, ON THIS LEASE, FT.

3300' NE

(See Item 3A of

21. ELEVATIONS (Show whether DF, RT, GR, etc.) surface Use Plan)

3336.2 GR

16. NO. OF ACRES IN LEASE

1000

19. PROPOSED DEPTH

11,200

5. LEASE DESIGNATION AND SERIAL NO.

NM - 02295

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Trigg-Federal

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Undesignated (Morrow)

11. SEC., T., R., M., OR BLK.
AND SURVEY OR AREA

Sec. 31, T-20-S, R-27-E

12. COUNTY OR PARISH

Eddy

13. STATE

New Mexico

17. NO. OF DEEDS ASSIGNED
TO THIS WELL

320

18. REPAIR OR CABLE TOOLS

O.C.C.
ARTESIA, OFFICE

22. APPROX. DATE WORK WILL START*

5-4-78

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8"	48# H-40	420	420 sx - Circ
11"	8-5/8"	24# K-55 S-80	2600	900 sx - Circ
7-7/8"	4-1/2"	11.6# S-95 N-80	11,200	1250 sx - (See supplement)
		K-55 ST, LT & Buttress		

Propose to set 13-3/8" csg to 420', circ cement, set 8-5/8" csg into San Andres, circ cement. Drill to TD of 11,200' to test Morrow and intermediate horizons. If commercial will run 4-1/2" csg to TD. Cement w/sufficient cement to bring cement back above all productive horizons or to approximately 7000'. Will run cement staging tool @ 9900' if intermediate horizons productive to obtain better cement over intermediate zone. Perforate and stimulate Morrow for production.

Mud Program: 0-420' spud mud; 420-2600' brine water, paper for lost circ or seepage. 2600-7500' fresh water, 7500-9500' cut brine water and gel 9.3#/gal, vis 30; 9500-11,200 TD starch, gel, drispac 9.4 to 9.7#/gal, vis 36-40, WL 3-4 through Morrow. No abnormal pressures are expected.

BOP Program: BOP will be installed on 13-3/8": double 10" Ser 900. BOP will be installed on 8-5/8": double 10" Ser 900 plus 10" Ser 900 Hydril. BOP to be tested daily. See attached supplement for additional information.

GAS IS NOT DEDICATED.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

C. Harvey Can

TITLE District Engineer

DATE April 10, 1978

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

MAY 23 1978

APPROVED BY

Joe A. Lara

TITLE ACTING DISTRICT ENGINEER

DATE MAY 23 1978

CONDITIONS OF APPROVAL, IF ANY:

THIS APPROVAL IS RESCINDED IF OPERATIONS
ARE NOT COMMENCED WITHIN 3 MONTHS.
EXPIRES AUG 23 1978

*See Instructions On Reverse Side

N MEXICO OIL CONSERVATION COMMISS
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
 Supersedes C-128
 Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator Southland Royalty Company			Lease Trigg Federal		Well No. 1
Unit Letter F	Section 3	Township 20 South	Range 27 East	County Eddy	
Actual Footage Location of Well: 1980 feet from the North line and 2230 feet from the West line					
Ground Level Elev. 3341.0	Producing Formation Harrow		Pool Indesignated (Harrow)	Dedicated Acreage: 320 322.32 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 interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

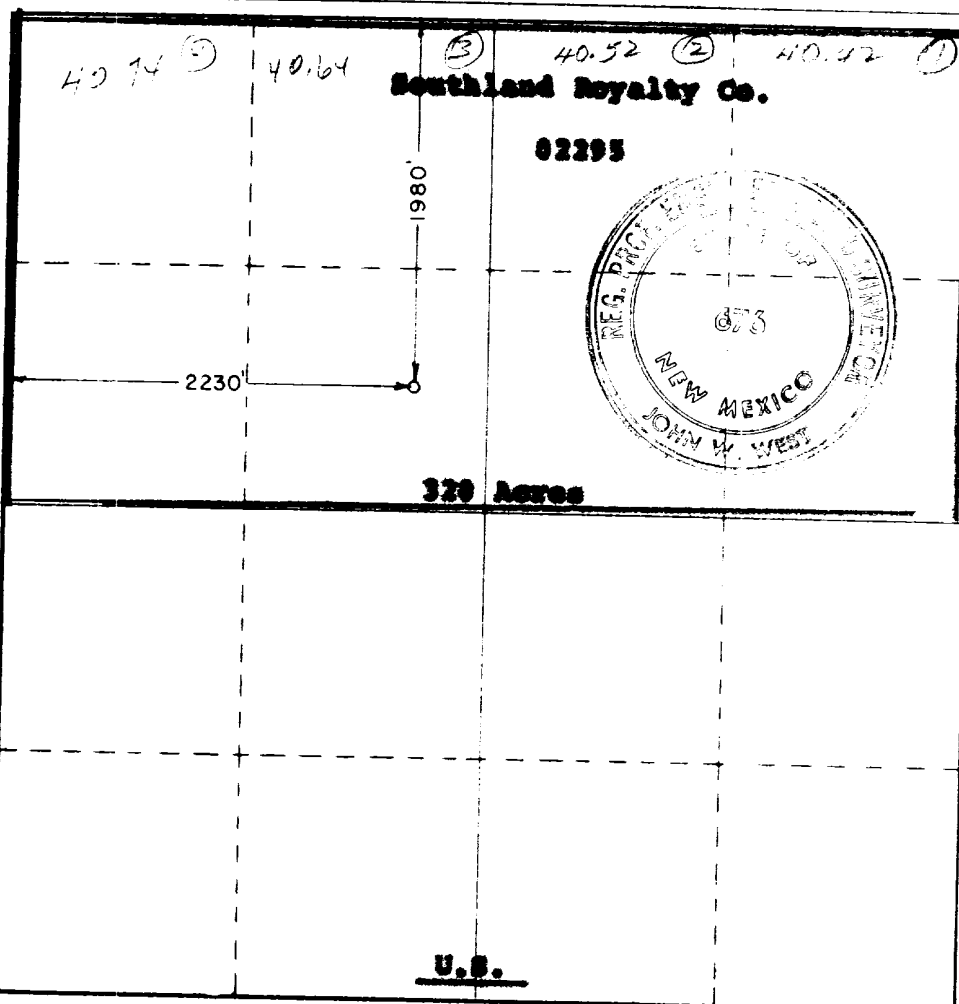
If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

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MAY 8 1978

**U.S. GEOLOGICAL SURVEY
 ARTESIA, NEW MEXICO**



CERTIFICATION

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

C. Harvey Chan
 District Engineer

Company
Southland Royalty Co.

Date
May 4, 1978

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
April 28, 1978

Registered Professional Engineer and Land Surveyor

John W. West
 Certificate No. **John W. West**

676
 Ronald J. Edwards

NMCCC COPY
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIPPLICATE*
(Other instructions on re-
verse side)Form approved.
Budget Bureau No. 42-R1424.
5. LEASE DESIGNATION AND SERIAL NO.

NM-02295

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

-

7. UNIT AGREEMENT NAME

-

8. FARM OR LEASE NAME

Trigg-Federal

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Undesignated (Morrow)

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 3, T-20-S, R-27-E

12. COUNTY OR PARISH

Eddy

13. STATE

New Mexico

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)1. OIL WELL ☐ GAS WELL ☒ OTHER ☐

2. NAME OF OPERATOR

Southland Royalty Company ✓

3. ADDRESS OF OPERATOR

1100 Wall Towers West Bldg., Midland, TX 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

1980' FNL & 2230' FWL

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14. PERMIT NO.

--

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

3341.0 GR

16. Check Appropriate Box To Indicate Nature of Work, Repair, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐FRACTURE TREAT ☐SHOOT OR ACIDIZE ☐REPAIR WELL ☐(Other) Amend surface location ☒PULL OR ALTER CASING ☐MULTIPLE COMPLETE ☐ABANDON* ☐CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐FRACTURE TREATMENT ☐SHOOTING OR ACIDIZING ☐(Other) ☐REPAIRING WELL ☐ALTERING CASING ☐ABANDONMENT* ☐(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any
proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones perti-
nent to this work.)*

Form 9-331-C Application to Drill was filed April 10, 1978, at location 1980' FNL & 1980' FWL of Sec. 3, T-20-S, R-27-E. Archaeological reconnaissance by Eastern New Mexico University reports artifacts at original location. It is requested that Application to Drill be amended to reflect that the surface location is moved 250' eastward. New revised location is as follows:

1980' from north line and 2230' from west line
Sec. 3, T-20-S, R-27-E, Eddy County, New Mexico

Please find attached (1) new C-102 showing revised location and elevation and (2) copy of Archaeological Clearance Report at revised location by New Mexico University.

Planned access Road as outlined in Item 2 of Surface Use Plan will be extended 250' eastward to reach the amended location.

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U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

18. I hereby certify that the foregoing is true and correct

SIGNED

C. Harney Can

TITLE District Engineer

DATE

5-4-78

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

See J. Lara

TITLE ACTING DISTRICT ENGINEER

DATE

MAY 23 1978

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator Southland Royalty Co.			Lease Trigg-Federal		Well No. 1
Section Letter F	Section 3	Township 20 South	Range 27 East	County Eddy	
Actual Footage Location of Well: 1980 feet from the North line and 2230 feet from the West line					
Ground Level Elev. 3336.2	Producing Formation Morrow	Pool Undesignated (Morrow)		Estimated Acreage 320 Acres	

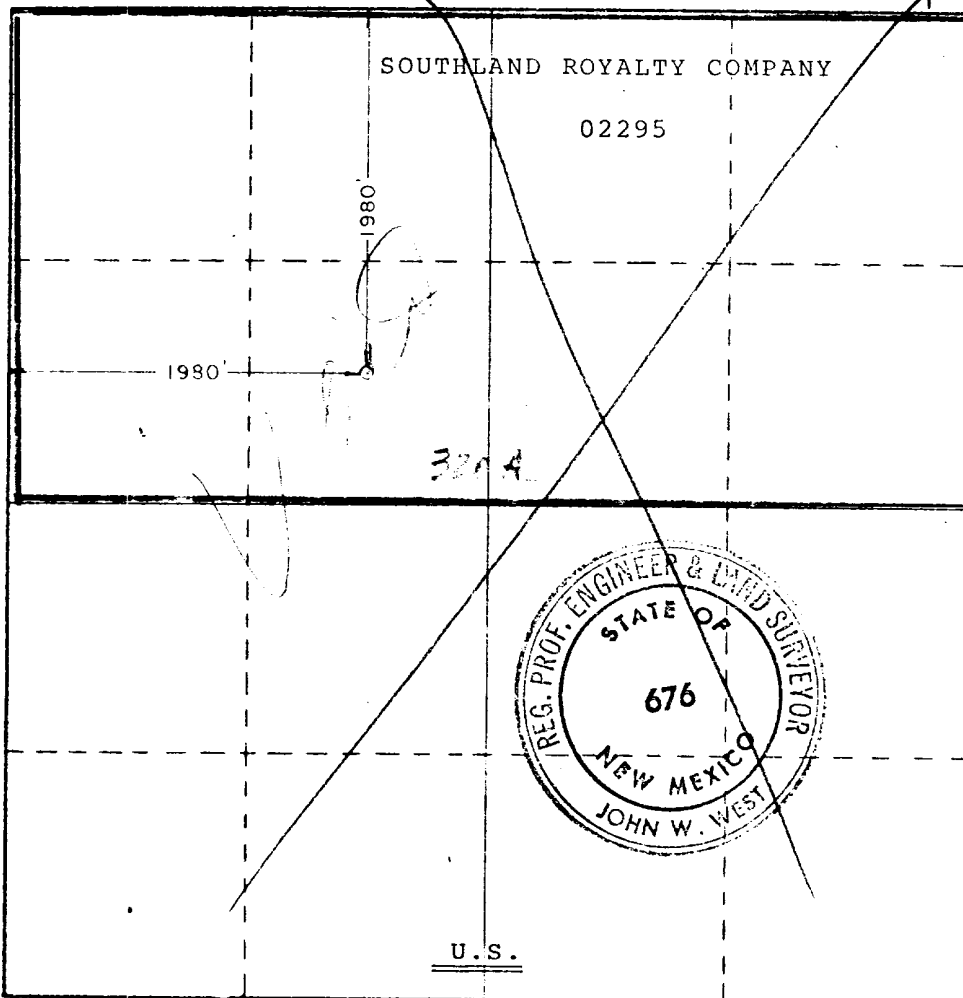
1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all 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 interests, has been approved by the Commission.

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U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO



CERTIFICATION

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

C. Harney Carr
Name

District Engineer

Position

Southland Royalty Co.

Company

April 10, 1978

Date

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.

4/6/78

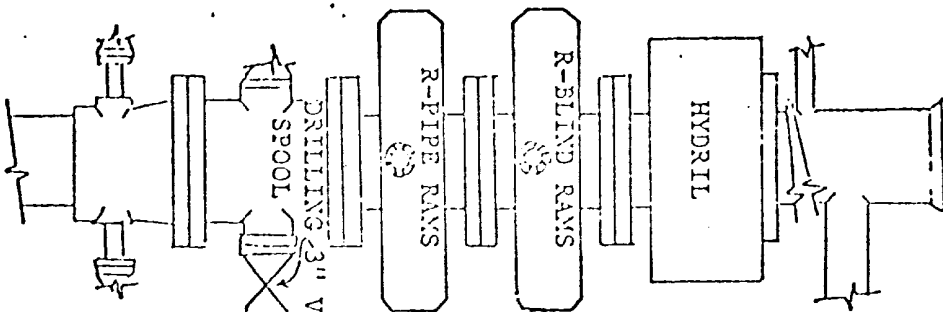
Date Surveyed

Registered Professional Engineer and/or Land Surveyor

John W. West

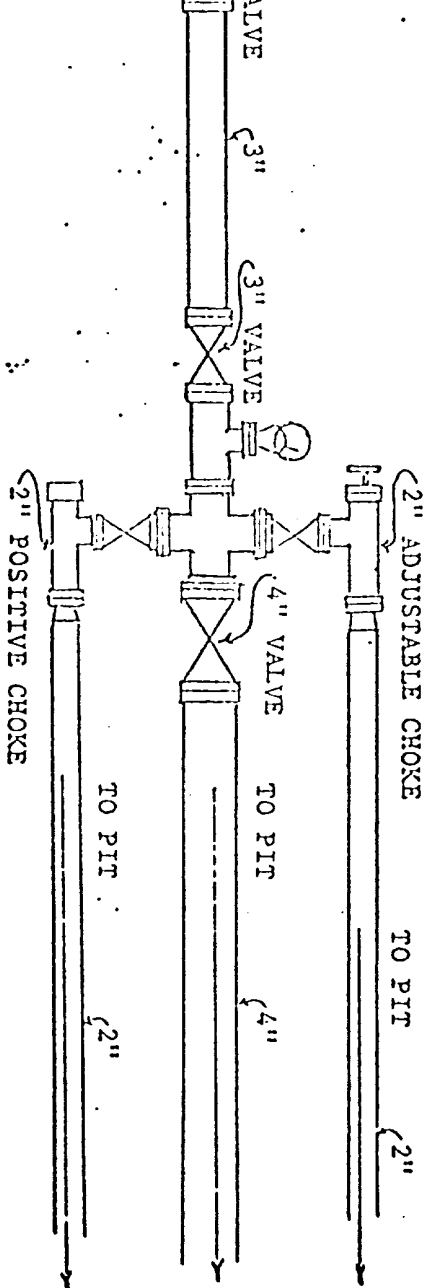
Certificate No. John W. West

676



BLOW OUT PREVENTION EQUIPMENT
 10" 900S ALL FLANGED CONNECTIONS
 3,000# WORKING PRESSURE - 6,000# TEST

Contractor: Honda Drilling Company, Rig No. 5



ATTACHMENT TO FORM C-101

SKETCH OF BOP EQUIPMENT
 Southland Royalty Company
 Trigg-Federal No. 1
 1980' FNL & 1980' FWL
 Sec. 3, T-20-S, R-27-E
 Eddy County, New Mexico

SOUTHLAND ROYALTY COMPANY

TRIGG-FEDERAL WELL NO. 1

NM - 02295

1980' FNL & 1980' FWL, Sec. 3 , T-20-S, R-27-E N.M.P.M.
Eddy County, New Mexico

To supplement USGS Form 9-331C, "Application to Drill",
the following additional information is submitted concerning
questions on page 5 of NTL-6"

1. See Form 9-331C
2. See Form 9-331C
3. The geologic name of surface formation is:
Guadalupian
4. See Form 9-331C
5. See Form 9-331C
6. The estimated tops of important geological markers
are:

Yates	286'
Queen	1176
Grayburg	1429
San Andres	1606
Delaware Sd.	2336
1st Bone Springs	3766
2nd " "	6674
3rd " "	7806
Wolfcamp	8226
Cisco	8709
Canyon	8974
Strawn	9224
Atoka	9826
Morrow	10,386

7. The estimated depths at which anticipated water,
oil, gas and other mineral bearing formations
are expected to be encountered are:

Cisco	8709'	(gas)
Strawn	9224	(gas)
Atoka	9827	(gas)
Morrow	10,900	(gas)

8. See Form 9-331C. All casing will be new
9. See Form 9-331C for depth of strings.
Cement volumes and additives as follows:
 - (a.) 13-3/8" casing - cement w/420 sx
Class "C" cement with 2% Calcium Chloride.
 - (b.) 8-5/8" casing - cement w/700 sx
Class "C" Lite Wate cement w/2% Calcium
Chloride plus 200 sx Class "C" cement
w/2% Calcium Chloride. It is estimated
that this volume of cement will circulate
cement back to surface of ground.
 - (c.) 4-1/2" casing - if intermediate
horizons are productive of oil or gas,
will run "DV" tool @ 9900'. Will cement
first stage w/500 sx Class "H" cement,
0.5% Halad 22 (fluid loss additive), 0.3%
CFR-2 (friction reducer), 5# KCl/sx. Cem-
ent second stage via DV tool w/750 sx Class
"H" w/0.5% Halad-22, 0.3% CFR-2, 5# KCl/sx.
If no intermediate horizons productive, will
not run DV tool and cement Morrow formation
w/1300 sx Class "H" cement w/0.5% Halad-22
(fluid loss additive), 0.3% CFR-2 (friction
reducer), 5# KCl/sx. First half of cement-
ing volume to have 1/4#/sx Celloflake or loss
circulation additive if lost circulation or
seepage is suspected.
10. The pressure control diagram is attached to
Form 9-331C. The following additional infor-
mation is as follows:

Size: 10" Ser 900 - Double Hydraulic
Pipe and Blind Rams. Hydril 10" Ser 900

Pressure Rating: 3000# WP 6000# Test
(API Series 900)

Testing Procedure: Pressure up to 1000
psi for 30 min before drill out below
13-3/8" casing. Pressure up to 1500 psi
for 30 min before drilling out below 8-5/8"
casing. Yellow Jacket, Inc. to witness
testing of BOP on installation of BOP on
8-5/8" casing. Test BOP daily while drill-
ing, and on all trips.

11. See Form 9-331C
12. (a) DST Program - Probable DST if shows encountered on mud logger in Cisco, Strawn, Atoka. Objective Morrow will not be tested unless further evaluation necessary after logging.

(b) Coring - None

(c) Mud logging - Mud logger will be installed out from under surface casing

(d) Electric logging - all logging performed at TD prior to setting casing by Schlumberger.
420-2600' - Compensated Neutron/Gamma Ray
2600-TD - Compensated Neutron - Formation Density w/Gamma Ray and Caliper
2600-TD - Dual Laterolog w/RXO
13. No abnormal pressures expected with bottom hole pressure, at TD anticipated to be 4500 psi, known BHP two miles northeast. Bottom hole temperature at TD will be approximately 180° F. No hydrogen sulfide anticipated. No crooked hole or abnormal deviation problems expected.
14. Anticipated starting date to spud May 4, 1978. Previous drilling in area indicates 40 days from spud to setting 4-1/2" casing at TD or about June 13, 1978.
15. Southland Royalty Company has operations in this area. Our contractor, Hondo Drilling Company Rig No. 5 has been working in this area. Previous wells have used similar drilling programs as outlined above; the proposed procedure as outlined is optimum program to reach total depth successfully in safe, efficient manner.

SURFACE USE PLAN

SOUTHLAND ROYALTY COMPANY

TRIGG-FEDERAL WELL NO. 1

NM - 02295

1980' FNL & 1980' FWL Sec. 3, T-20-S, R-27-E, N.M.P.M.
Eddy County, New Mexico

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U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

This plan is submitted with application for Permit to drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the environmental effects associated with the operation.

1. Existing Roads:

- A. Exhibit "A" is portion of county map showing the route of the existing road off the New Mexico State Hwy 239 to the proposed well. Directions to well are: From downtown Carlsbad, go north on Hwy 239 a distance of 14 miles, turn westward on improved caliche road a distance of 1.5 miles to wire gate. (A cattle guard will be installed in roadway at this point). Proceed south on existing natural road a distance of 1.0 mile. Proceed westward, continuing on existing natural road, for a distance of 1.25 miles. Turn south 0.37 miles on existing natural road. The proposed well site will be 600 ft. due east of this point.
- B. Exhibit "B" is a plat showing all existing roads within a one mile radius of the well site and the planned 600' access road.
- C. The only alteration to existing roads will be the addition of cattle guard to replace wire gap located 1.5 miles west of State Hwy 239.

2. Planned Access Roads:

- A. Length and width: New road required will be 12 feet wide and 600 feet long. This new road is labeled and colored blue on Exhibit "B". The center line of the proposed new road from beginning to well site has been staked and flagged with stakes being visible from any one to the next.

- B. Turnouts: Due to shortness of proposed road there will not be any turnouts built.
 - C. Culverts: None necessary.
 - D. Cuts and Fills: None necessary.
 - E. Gates, Cattle guards: None necessary.
3. Location of Existing Wells:
- A. Existing wells within two mile radius are shown on Exhibit "C". The only active well within this radius is the John H. Trigg Federal TY No. 1 in Unit A Sec 3, T-20-S, R-27-E in the McMillan Seven Rivers, Queen East Field completed at a TD of 1419'.
4. Location of Proposed Facilities:
- A. Location of proposed tank battery and flow line are shown on Exhibit "D". The battery and flow lines will be located on the proposed well pad and no additional surface disturbance will occur.
5. Location and Type of Water Supply:
- A. Water for drilling will be hauled by truck from Carlsbad, no surface water lines will be constructed.
6. Source of Construction Materials:
- Caliche for surfacing the road and well pad will be obtained from existing pit located as shown in Exhibit "A" in NE/4 Section 36, T-19-S, R-27-E. The pit is located on State of New Mexico lands.
7. Methods of Handling Waste Disposal:
- A. Drill cuttings will be disposed of in the drilling pits.
 - B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.
 - C. Water produced during tests will be disposed in drilling pits until pits. Oil produced during tests will be stored in test tanks until sold.
 - D. Current laws and regulations pertaining to disposal of human waste will be complied with.

- E. Trash, waste paper, garbage, and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind. Location of trash pit is shown on Exhibit "D".
- F. All trash and debris will be buried or removed from well site within 30 days after finishing drilling and/or completion operations.
- 8. Ancillary Facilities:
 - A. None required.
- 9. Well site Layout:
 - A. Exhibit "D" shows the relative location and demensions of the well pad, mud pits, reserve pits, trash pit, future tank battery.
 - B. Only minor levelling of the well site will be required. No significant cuts and fills will be necessary.
 - C. The reserve pit will be plastic lined.
 - D. The pad and pit area has been staked and flagged.
- 10. Plans for Restoration of the Surface:
 - A. After completion of drilling and/or completion operations all equipment and other material not needed for operations will be removed. Pits will be filled and location cleaned of all trash and junk to leave the well site in aesthetically pleasing a condition as possible.
 - B. Any unguarded pits containing fluids will be fenced until they are filled.
 - C. After abandonment of the well, surface restoration will be in accordance with Federal surface requirements. Any special rehabilitation and/or revegetation requirements of the surface management agency will be complied with and accomplished as expeditiously as possible.

11. Other Information:

- A. Topography: Land surface is undulating to gently rolling. The elevation of the well site is 3336.2 ft.
- B. Soil: Soil is sandy with small rocks underlain immediately under the surface by caliche.
- C. Flora and Fauna: The vegetative cover is generally sparse and consists of native range grass. Wildlife in area is typical of semi-arid desert land and include coyote, rabbits, rodents, reptiles, dove and quail.
- D. Ponds and streams: There are no lakes or ponds in area.
- E. Residences and other structures: There are no houses, barns or other structures within 2 miles. There is a water well and stock tank 0.5 miles north west of well site as shown on Exhibit "B".
- F. Land Use: Grazing and hunting in season. Surface is leased for grazing to Donald Fannang, Route 1, Box 79, Artesia, New Mexico 88210.
- G. Surface ownership: Well site is on Federal surface.

12. Operators Representative:

The field representative responsible for assuring compliance with the approved surface use and operation plan are as follows:

Southland Royalty Company
P. O. Box 837
Hobbs, New Mexico 88240
Office 505 + 393-5844

Donny Davis - Field Foreman
Hobbs, NM
(Home) 505 + 392-5746

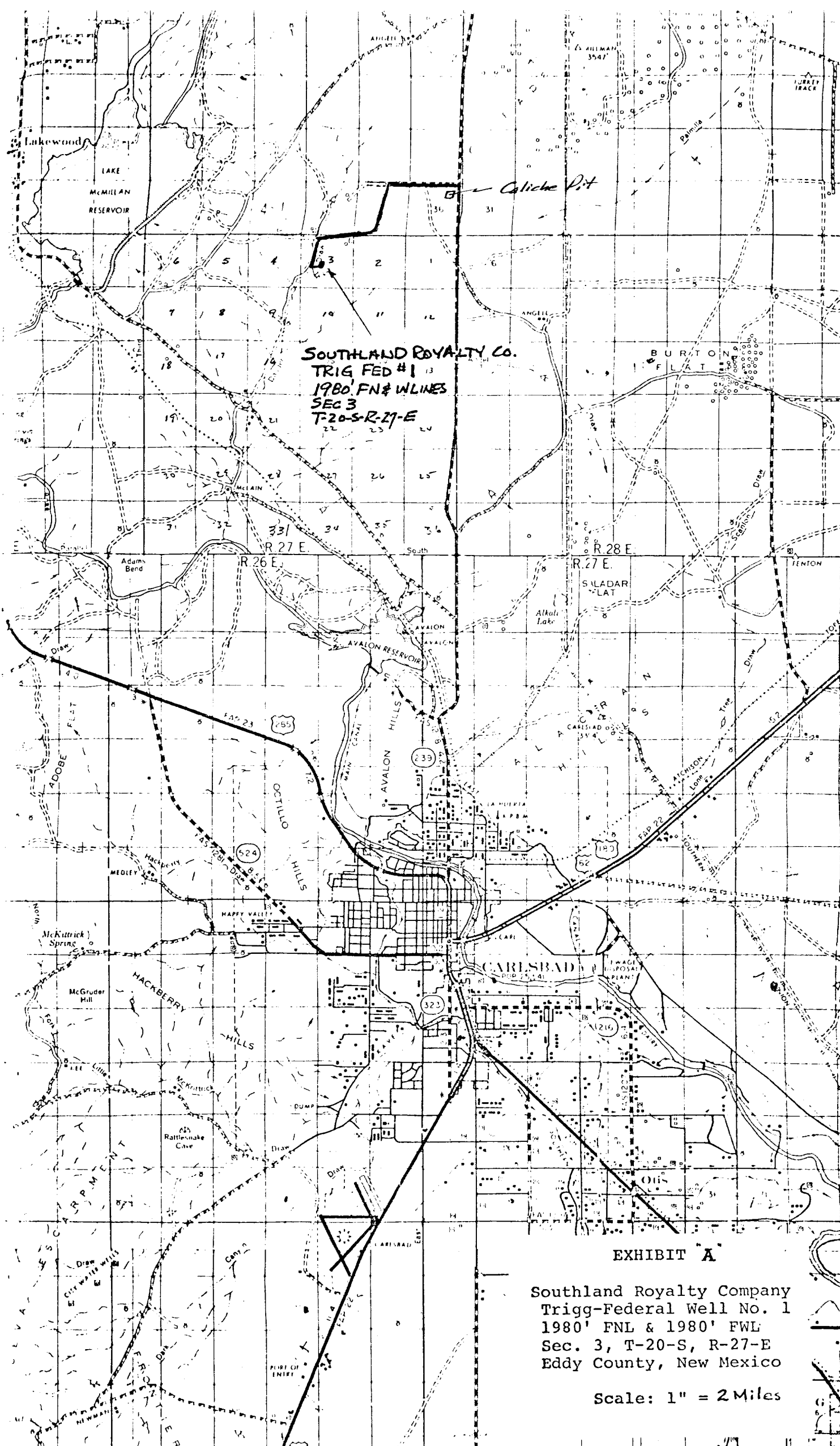
Bill Chrane - Production Supt.
Midland, Texas
(Office) 915 + 682-8641
(Home) 915 + 694-0730

13. Certification:

I hereby certify that I; or persons under my supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exists; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Southland Royalty Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

Date: April 11, 1978

C. Harvey Carr
C. Harvey Carr, District Engineer
Southland Royalty Company



SOUTHLAND ROYALTY CO.
TRIG FED #1
1980' FNL & W LINES
SEC 3
T-20-S-R-27-E

EXHIBIT "A"

Southland Royalty Company
Trigg-Federal Well No. 1
1980' FNL & 1980' FWL
Sec. 3, T-20-S, R-27-E
Eddy County, New Mexico

Scale: 1" = 2 Miles

LAKE MC MILLAN SOUTH QUADRANGLE

NEW MEXICO-EDDY CO.

7.5 MINUTE SERIES (TOPOGRAPHIC)

5149 II
1011 CITY
1:62500

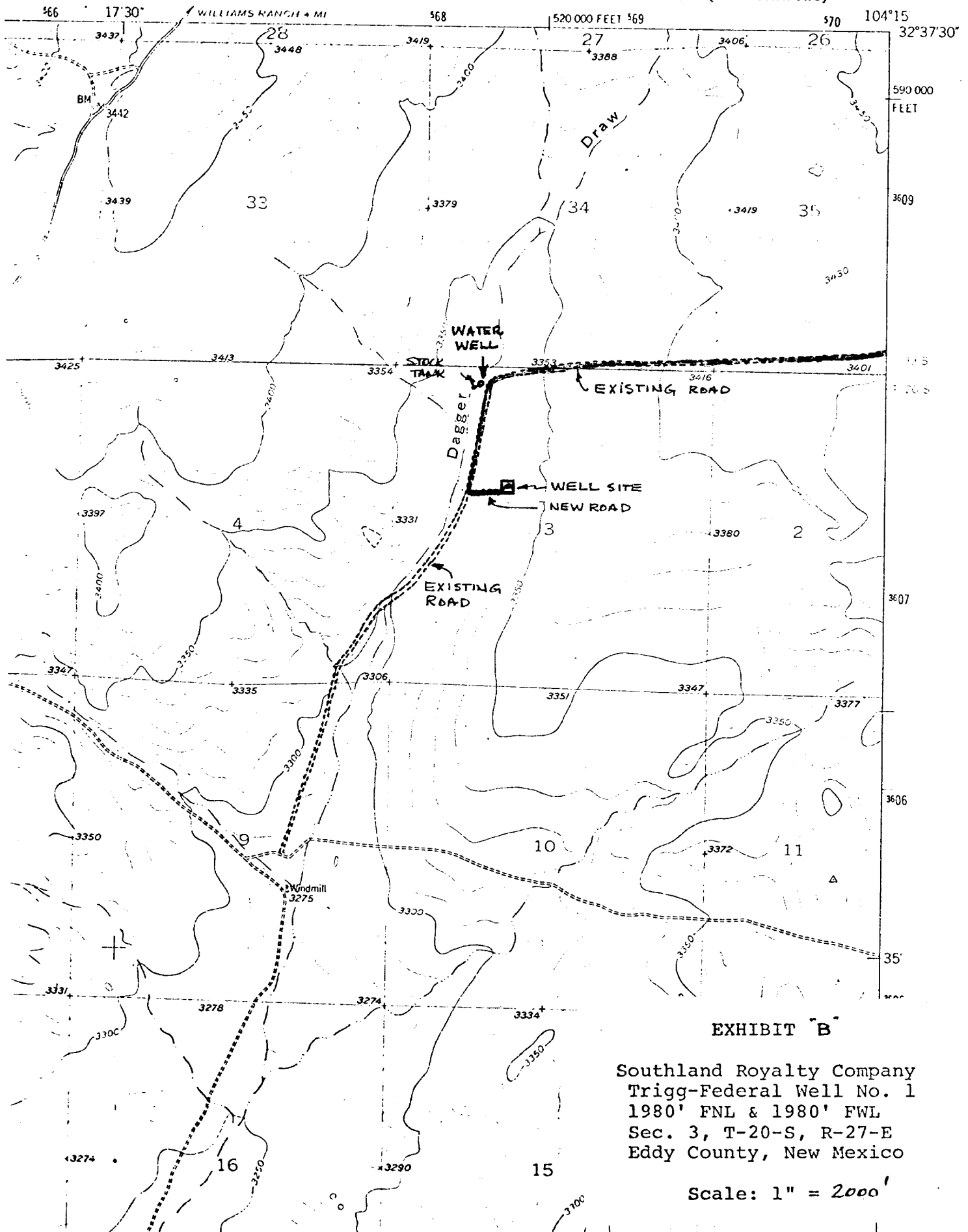


EXHIBIT "B"

Southland Royalty Company
Trigg-Federal Well No. 1
1980' FNL & 1980' FWL
Sec. 3, T-20-S, R-27-E
Eddy County, New Mexico

Scale: 1" = 2000'

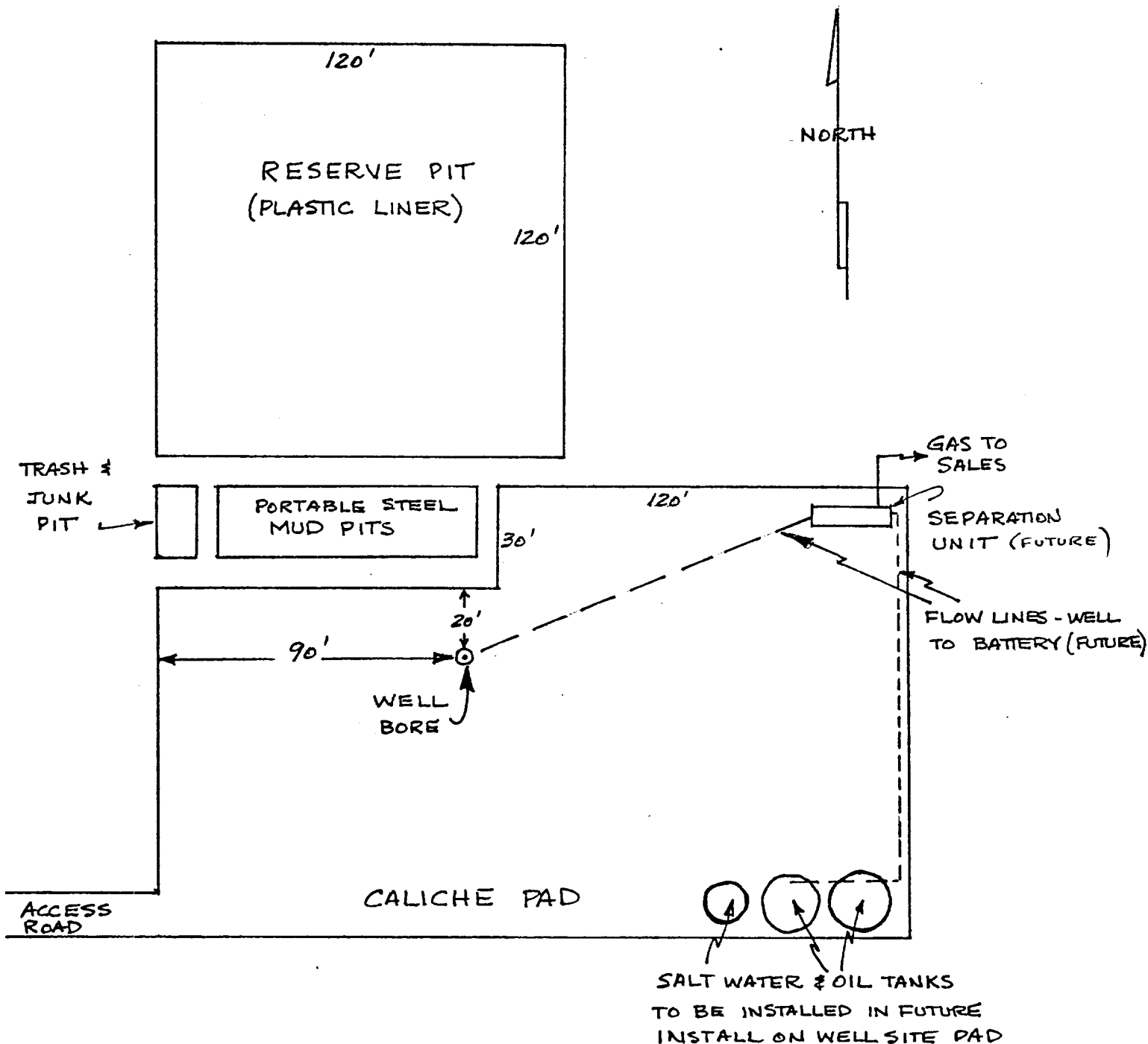
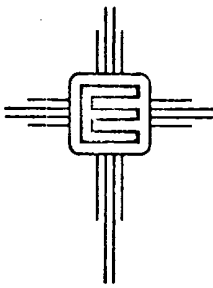


EXHIBIT "D"

Southland Royalty Company
 Trigg-Federal Well No. 1
 1980' FNL & 1980' FWL
 Sec. 3, T-20-S, R-27-E
 Eddy County, New Mexico



1 May 1978

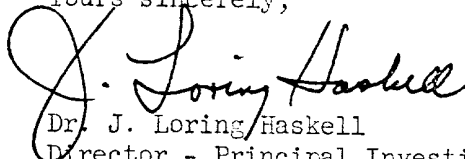
Mr. C.H. Carr
District Engineer
Southland Royalty Company
1100 Wall Towers West
Midland, TX 79701

Dear Mr. Carr:

Enclosed please find the Agency for Conservation Archaeology's clearance report for Southland Royalty Company. One site, ENM 339, was recorded during the course of this reconnaissance.

If I may be of further service to you, do not hesitate to call me at (505) 562-3332.

Yours sincerely,



Dr. J. Loring Haskell
Director - Principal Investigator

nem

Enclosure

Archaeological Clearance Report
for
Southland Royalty Company
Trigg Federal No. 1 Well

by
Scott C. Schermer

Edited and Submitted by
Dr. J. Loring Haskell
Director - Principal Investigator
Agency for Conservation Archaeology
Eastern New Mexico University
Portales

1 May 1978

INTRODUCTION

An archaeological reconnaissance was recently completed by the Agency for Conservation Archaeology, Eastern New Mexico University, Portales for Southland Royalty Company. The area will be impacted by the construction of a gas well and attendant facilities. This project was completed under Federal Antiquity Permit No. 78-NM-015. The project was administered by Mr. C. A. Carr, Southland Royalty Company, and Dr. J. Loring Haskell, Director - Principal Investigator, Agency for Conservation Archaeology, Eastern New Mexico University, Portales. Southland was represented in the field by Mr. Don Davis. The reconnaissance was completed by Scott C. Schermer on 25 April 1978.

SURVEY TECHNIQUE

The access road was walked in a 25 ft wide, close interval, zigzag pattern over its entire length. As for the location, it was walked in a series of 15 ft wide zigzag transects from south to north and thence north to south. In addition, it was walked east to west and west to east owing to a heavy ground cover of grasses in certain areas. These techniques combined ensured a maximum of visual coverage of this tract of land.

Trigg Federal No. 1

Location

The proposed location measures 400 x 400 ft and is situated on federal land east of Dagger Draw at a point 4 miles east of Lake McMillan. Trigg Federal No. 1 is situated 1980 ft from the north line and 2230 ft from the west line of the:

NW $\frac{1}{4}$, Section 3, T20S R27E, NMPM, Eddy County, New Mexico (BLM)

More specifically, it is located in the:

SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 3, T20S, R27E, NMPM, Eddy County, New Mexico (BLM)

Map Reference: USGS Lake McMillan South, Quadrangle, 7.5 Minute Series, 1955.

The proposed access road measures 12 x 800 ft and is situated in the:

SE¹₄NW¹₄, Section 3, T20S, R27E NMPM, Eddy County, New Mexico (BLM)

Map Reference: USGS Lake McMillan South Quadrangle, 7.5 Minute Series, 1955.

Terrain

The proposed location is situated on an undulating plain north of Burton Flats. The immediate area trends from east to west i.e., in the direction of Dagger Draw. Elevation of the drill pad varies from a minimum of 3330 ft to a maximum of 3340 ft above sea level. Gradient from east to west is .8% (.008) but is greatest at its eastern margin. Local soils are composed of strongly calcareous sandy clay loams overlying limestone. Selenite, calcite and gypsum occur in soil individuals. A low limestone eminence outcrops to the west.

Floristics

A plains type floral community occurs at this locality. Plant density averages around 50%, but approaches 100% in some portions of the pad. The heaviest cover is found in several dense stands of Bouteloua gracilis. Graminae found at the pad includes Bouteloua eriopoda, Bouteloua hirsuta, Buchloe dactylorides, and Distichlis stricta. Other species include Yucca glauca, Condalia ericoides, Larrea tridentata, Prosopis juliflora, Opuntia imbricata, Opuntia leptocaulis, Senecio longilobus and circuim sp.

Cultural Resources

ENM 10339

Location: NW¹₄SW¹₄, Section 3, T20S, R27E, NMPM, Eddy County, New Mexico .

Map Reference: USGS Lake McMillan South Quadrangle, 7.5 Minute series, 1955.

Ownership: BLM

Type of site: Special Activity Zone

Size of Site: 10 X 109 m

Description of Site: ENM 10339 consists of a light lithic and ceramic scatter associated with five stone features. These features are situated on two low eminences. Of these, the southernmost three average 2.8 m in diameter and are constructed of limestone slabs which are arranged in a circular pattern. A light scatter of Lincoln Black-on-red occurs in the vicinity. This type establishes utilization of these features at sometime between A.D. 1300 and 1400. Eighty meters north-northeast of these three are two ovoid features constructed of limestone slabs which have been vertically placed in the ground. No artifacts were directly associated with these features; however, several Lincoln Black-on-red potsherds were noted between these features and those to the south. In addition to the aforementioned, several ferruginous quartzite scrapers, a chert core, a sandstone mano, and a number of chert flakes were noted. The actual function of these features is a moot point; however, others similar to it are known from elsewhere in the Pecos Valley, e.g., the area between Fort Sumner and Roswell. They did not function as pithouses owing to a complete absence of organic material. There is, however, a possibility that they may have functioned as temporary storage facilities.

Elsewhere, several secondary decortication flakes occur as isolated manifestations on the pad.

Recommendations

ACA recommends that the proposed location be shifted 250 ft east in order to avoid ENM 10339. This can be accomplished by moving the pad's center from its originally proposed position to 1980 ft FNL and 2230 ft FWL of Section 3. This area has been checked and contains several isolated manifestations consisting of flakes.

(The relationship of relocated Trigg-Federal #1 to ENM 10339 is illustrated in Fig. 1). ACA recommends clearance for the relocated well and its access road provided power equipment and field personnel are confined strictly to the relocated pad and its associated access road.

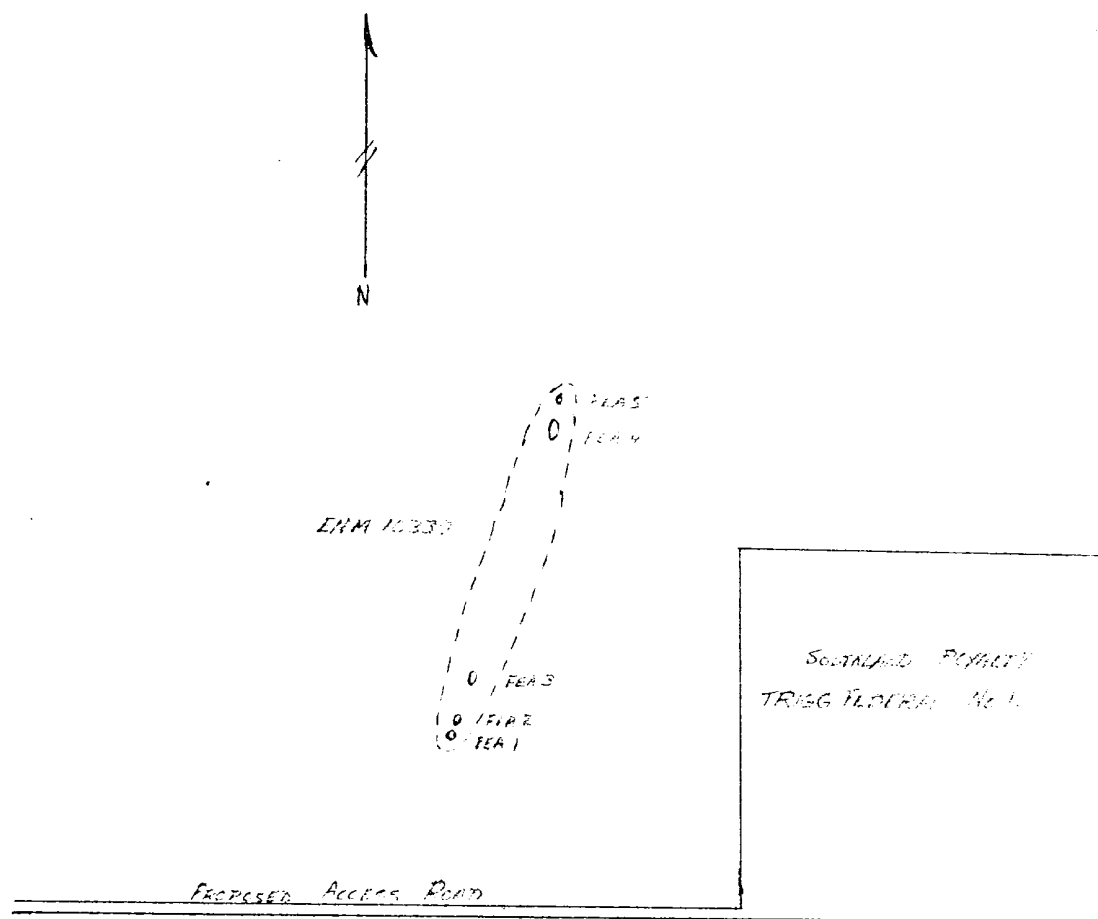


Fig. 1. Schematic drawing showing relative position ENM 10339 to Southland Royalty's proposed Trigg Federal No. 1 and access road.