

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG 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: Midland, Texas 79701

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

At surface 860' FSL & 2180' FEL, Sec. 21, T-18-S, R-29-E

At proposed prod. zone

same

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

7 miles SE of Artesia, New Mexico

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any) 860'

16. NO. OF ACRES IN LEASE

320

17. NO. OF ACRES ASSIGNED

TO THIS WELL 320

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT. None

19. PROPOSED DEPTH

11,750'

20. ROTARY OR CABLE TOOLS

Rotary

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

3473.8GR

22. APPROX. DATE WORK WILL START*

12-1-80

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
15"	11 3/4"	42#	225'	250 sxs - Circ
11"	8 5/8"	24#	3200'	1400 sxs - Circ
7 7/8"	4 1/2"	11.6# & 13.5#	11,750'	1100 sxs.

Propose to set 11 3/4" csg @ 225'. circ cmt. Set 8 5/8" csg @ 3200', circ cmt. Drill to TD of 11,750' to test Morrow & intermediate horizons having shows. Run 4 1/2" csg to TD. Cmt w/sufficient cmt. to cover all productive zones, 8500' if Morrow only productive. Perforate & stimulate Morrow for production. MUD PROGRAM: 0-225' spud mud; 225-3200' brine wtr; 3200-7500' fresh water; 7500-9500' cut brine water; 9500-TD starch & gel. No abnormal pressures anticipated w/BHP @ TD expected to be 4800 psi.

GAS IS NOT DEDICATED

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ARTESIA, NEW MEXICO

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

CC Parsons

TITLE District Operations Engineer DATE 11-25-80

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY (Orig. Sgd.) PETER W. CHESTER

TITLE ACTING DISTRICT ENGINEER

DATE DEC 5 1980

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

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.

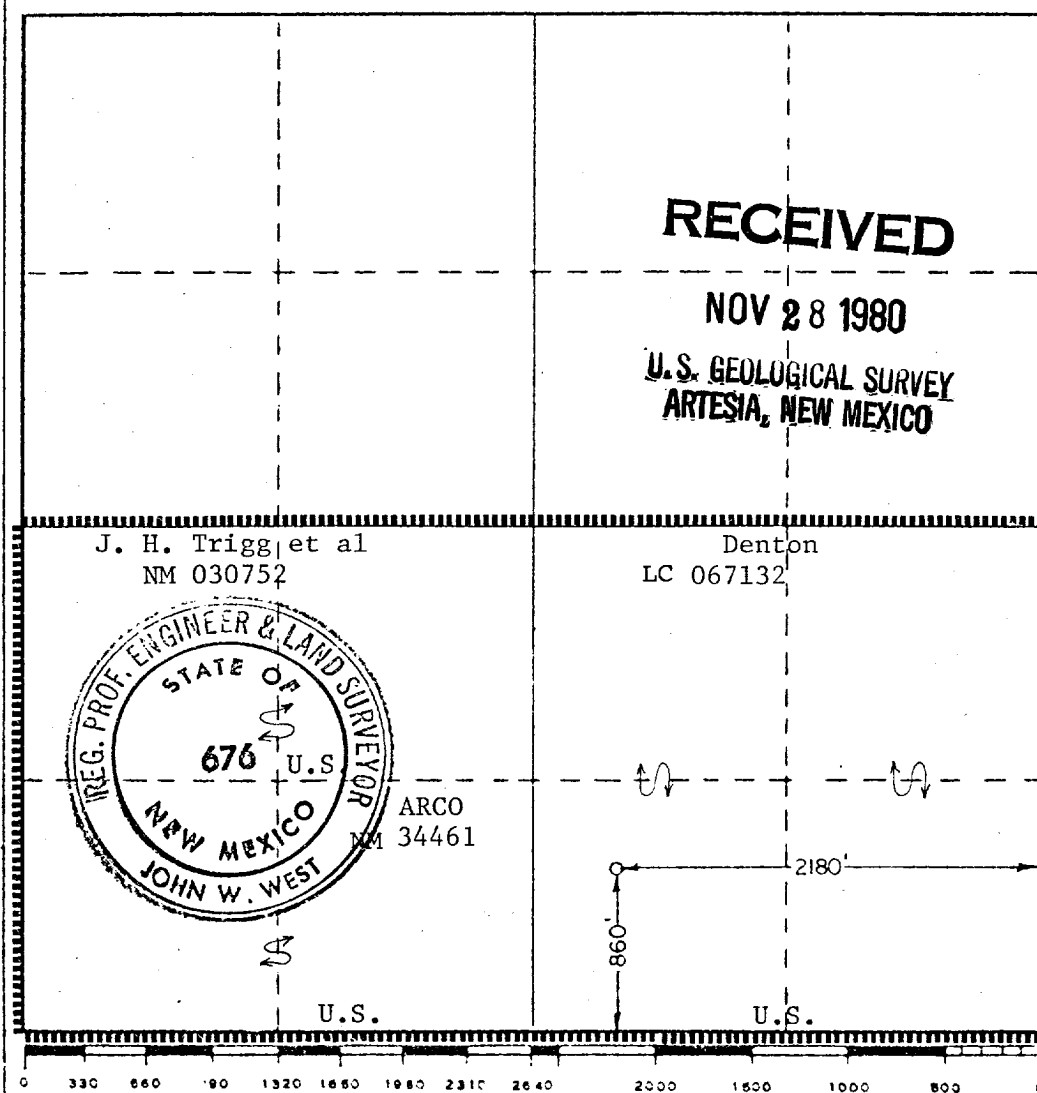
Operator Southland Royalty Co.			Lease Empire Federal 21 <i>Com</i>		Well No. 1
Unit Letter O	Section 21	Township 18 South	Range 29 East	County Eddy	
Actual Footage Location of Well: 860 feet from the South line and 2180 feet from the East line					
Ground Level Elev. 3473.8	Producing Formation Morrow		Pool <i>North Turke-Tack Morrow</i> Undesignated	Dedicated Acreage: 320 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 Communitization

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.



CERTIFICATION

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

Name *C. C. Parson*
Position
District Operations Engineer
Company
Southland Royalty Company
Date
November 19, 1980

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
10-10-80
Registered Professional Engineer and/or Land Surveyor

John W. West
Certificate No. **JOHN W. WEST 676**
PATRICK A. ROMERO 6663
Ronald J. Eidson 3239

SOUTHLAND ROYALTY COMPANY

Empire Federal "21" Com No. 1
860' FSL 2180' FEL Sec. 21, T-18-S, R-29-E
Eddy County, New Mexico
LC 067132

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 geological name of surface formation is: ~~Quaternary~~ *Quaternary Alluvium*
& Bolson deposits
4. See Form 9-331C
5. See Form 9-331C
6. The estimated tops of important geological markers are:

T/salt	250'	San Andres	2900'	Cisco	9750'
B/salt	800'	1st Bone Spring	6800'	Atoka	10,375'
Yates	1100'	2nd Bone Spring	7700'	Morrow	10,650'
Queen	2000'	3rd Bone Spring	8450'	Mississippian	11,400'
Grayburg	2400'	Wolfcamp	8650'		

7. The estimated depths at which anticipated water, oil, gas and mineral bearing strata are as follows:

San Andres (Oil)	2900'
Wolfcamp (Oil)	8650'
Cisco (Gas)	9750'
Atoka (Gas)	10,375'

8. See Form 9-331C. All casing will be new.
9. See Form 9-331C for depths of strings. Cement volumes and additions as follows:
 - a. 11 3/4" casing: Cement w/250 sx Class "C" cement w/2% CaCl. Cement to be circulated back to surface.
 - b. 8 5/8" casing: Cement w/1400 sx Class "C" Lite, 18% salt/sx, 10# Gilsonite/sx, 1/2# Flocele/sx plus 300 sx Class "C" w/3# salt/sx. Circulate cement back to surface. A caliper log will be run in conjunction with other logs prior to running casing to obtain exact hole volumes. It is estimated that the volumes used will circulate cement back to surface of ground.
 - c. 4 1/2" casing: Cement w/800 sx Class "C" Lite. .6% halad 9/sx, 3#KCl/sx plus 300 sx Class "H" 50-50 Pozmix A, 2% Gel/sx, .6% Halad 9/sx, .4% CFR-2/sx, 3# KCl/sx. Will run caliper in conjunction w/open hole logs prior to setting 4 1/2" casing to determine exact cementing volumes. Top cement estimated to be at 8500'. Cementing volumes could vary depending on development of intermediate horizons.

10. The pressure control diagram is attached to Form 9-331C. The following additional information is as follows:

11 3/4" casing installation; 10" 3000 psi double hydraulic (pipe and blind rams.)

8 5/8" casing installation: 10" 3000 psi double hydraulic (pipe and blind rams) plus 10" 3000 psi Hydril plus rotating Head.

Testing Procedure:

11 3/4" csg - pressure to 1000 psi for 30 min. before drilling below 11 3/4" csg.

8 5/8" csg - pressure to 1500 psi for 30 min. before drilling below 8 5/8" csg. Yellow Jacket, Inc. to test the 8 5/8" casing installation. Test BOP on all trips.

11. See Form 9-331C

12. A. DST Program - probably DST if shows encountered on mud log in San Andres, Bone Spring, Wolfcamp, Cisco, and Atoka. Objective Morrow will not be tested unless further evaluation is necessary after logging.

B. Cores - None

C. Mud logging - From 3500' - TD.

D. Wire line logs:

0-3200' - Gamma Ray only

3200'-TD - Compensated Neutron-Formation Density w/Gamma Ray Caliper. Dual laterolog/Gamma Ray w/RXO.

After setting 4 1/2" casing, temperature log.

13. No abnormal pressures anticipated with bottom hole pressure at TD expected to be 4800. Bottom hole temperature 190°F. No Hydrogen Sulfide expected in this known drilling area. No crooked hole or abnormal deviation problems.

14. Anticipated starting date to spud - December 1, 1980. Previous drilling in this area indicates 45 days from spud to setting 4 1/2" casing at TD or about January 15, 1981.

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U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

Surface Use Plan

Southland Royalty Company
Empire Federal "21" Com. No. 1
860' FSL, 2180' FEL, Sec 21, T-18-S, R-29-E
Eddy County, New Mexico

LC 067132

This plan is submitted with Application to Drill on above described well. The minerals are federal, and the surface is leased for grazing (See below for surface Lessee). The purpose of this plan is to describe the location, proposed construction activities and operations plan, magnitude of necessary surface disturbance and procedures to be followed in rehabilitating the surface after completion of the operation so that complete appraisal can be made of the environmental effects associated with the operation.

1. Existing Roads:

Exhibit "A" is a portion of a USGS Topographic map showing the location of the proposed well as staked.

Directions to the well are as follows: From downtown Artesia, go approximately 6.5 miles southeast on State Hwy 360. Turn southwest on paved road and go approximately 1/4 mi and then turn southeast on new access road and go 1/2 mile to location.

2. Planned Access Road:

a. One road will be built from the existing lease road to the proposed location. New road required will be 12 feet wide & 2500' long. The center line of the proposed new road from the beginning to the well site has been staked and flagged with the stakes being visible from any one to the next.

b. Surfacing Material: 6" of caliche, watered, compacted and graded.

3. Location of Existing Wells in Area:

See Exhibit "B"

4. Location of Proposed Facilities:

Location of proposed well site and tank battery is shown on Exhibit "C" The battery will be located on proposed well pad, no additional surface disturbances will be necessary.

5. Water Supply:

a. No available surface or sub-surface fresh water exists in the vicinity of the proposed well. Drilling water will be transported to the drill site from the nearest commercial source.

6. Source of Construction Material:

Caliche for surfacing access road and pad will be obtained from existing pit located as shown on Exhibit "A" in SE/4 NW/4, Sec. 34, T-18-S, R-29-E. The pit has been cleared by the agency for conservation archaeology. The report clearing the pit will be submitted as soon as it is received.

7. Handling water disposal:

- A. Drill cuttings - disposed into drilling pits.
 - B. Drill fluids - allowed to evaporate in drill pits until pits dry.
 - C. Produced water during testing - drill pits.
 - D. Produced oil during testing - storage tank until sold.
 - E. Current laws and regulations pertaining to disposal of human waste will be complied with.
 - F. Reserve pit will be plastic lined.
 - G. Waste paper, garbage, junk disposed of into special trash pit at location and covered with minimum of 24 inches of dirt upon completion of well. All waste material will be contained to prevent scattering by wind.
8. All trash and debris will be buried or removed from well site within 30 days after finishing drilling and/or completion operations.

9. Ancillary Facilities:

None

10. Plans for Restoration of Surface:

- A. After completion of drilling and/or completion of operations, all equipment and other material not needed for operations will be removed. Pits will be filled and locations cleaned of trash and junk to leave well site in as aesthetically pleasing a condition as possible.

11. Topography and Soil:

See attached Eastern New Mexico University Report by Dr. Colleen M. Beck.

12. Land Use:

Grazing and hunting - ~~Federal~~ Land

Surface Lessee -

Bogle Farms, Inc.
P.O. Box 358
Dexter, New Mexico
505/734-5442

13. Surface Ownership:

Bureau of Land Management

14. Operators Representative:

Field representatives (responsible for compliance with approved surface use and operations plan):

Southland Royalty Company
P.O. Box 65
Loco Hills, New Mexico
Office 505/677-2233

Mr. Wayne Grubbs, Drilling Foreman
Loco Hills, Home 505/677-2295

Mr. Bill Chrane, Prod. Supt.
Midland, Texas office 915/682-8641
Home 915/694-0730

15. Certification:

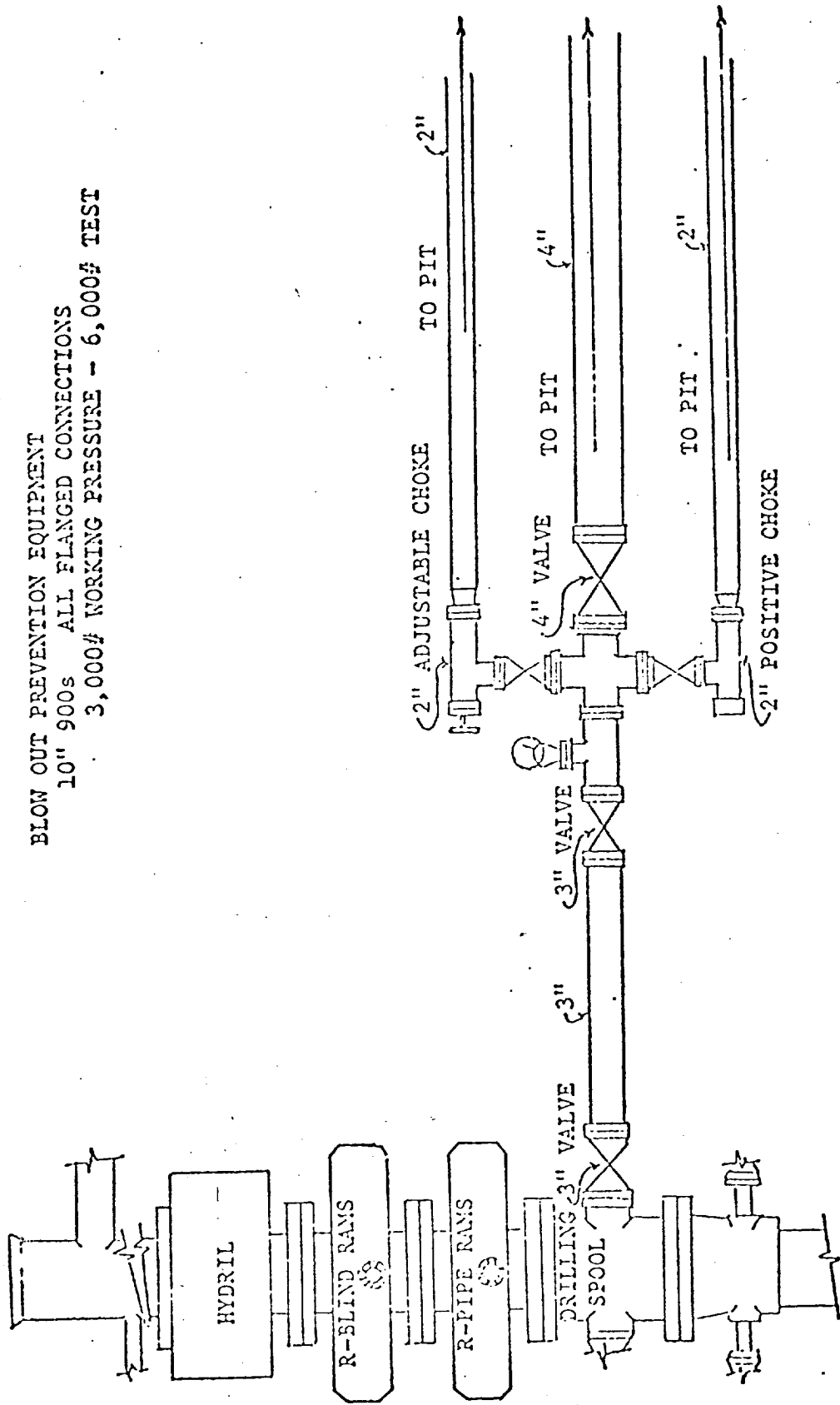
I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route; that I am familiar with conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations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

DATE

11-26-80

C.C. Parsons

C.C. Parsons
District Operations Engineer
Southland Royalty Company



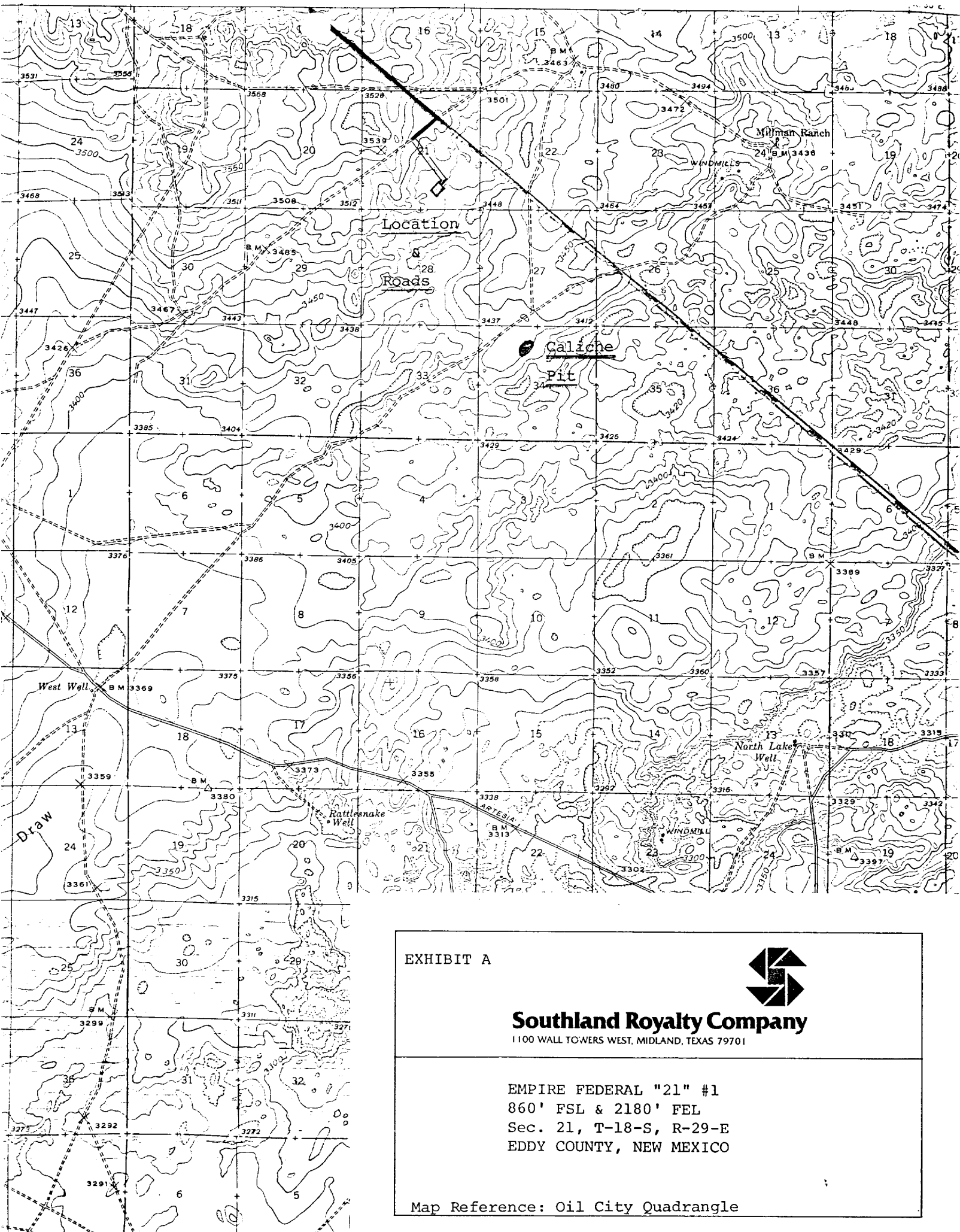


EXHIBIT A



Southland Royalty Company

1100 WALL TOWERS WEST, MIDLAND, TEXAS 79701

EMPIRE FEDERAL "21" #1
860' FSL & 2180' FEL
Sec. 21, T-18-S, R-29-E
EDDY COUNTY, NEW MEXICO

Map Reference: Oil City Quadrangle

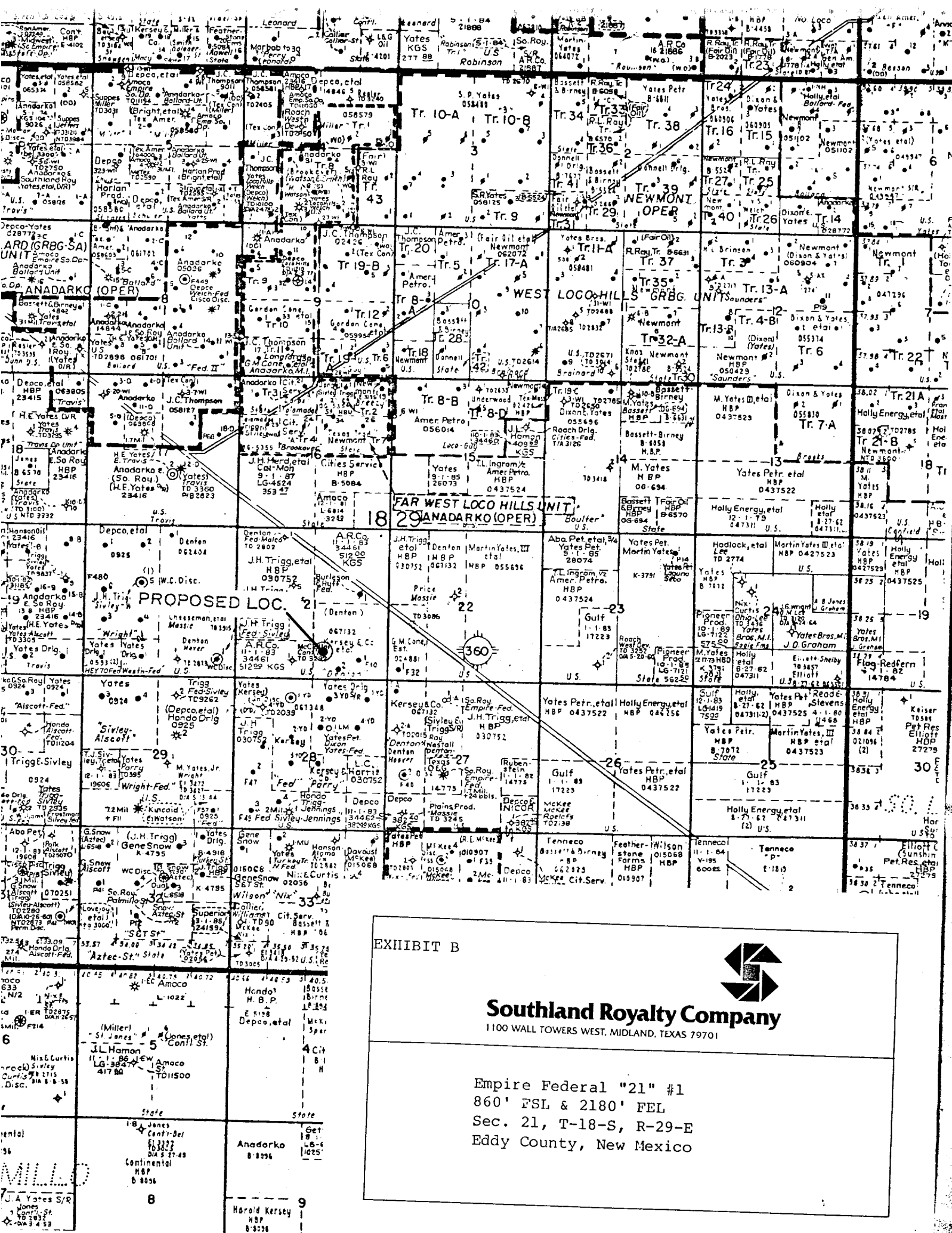


EXHIBIT B



Southland Royalty Company
1100 WALL TOWERS WEST, MIDLAND, TEXAS 79701

Empire Federal "21" #1
860' FSL & 2180' FEL
Sec. 21, T-18-S, R-29-E
Eddy County, New Mexico

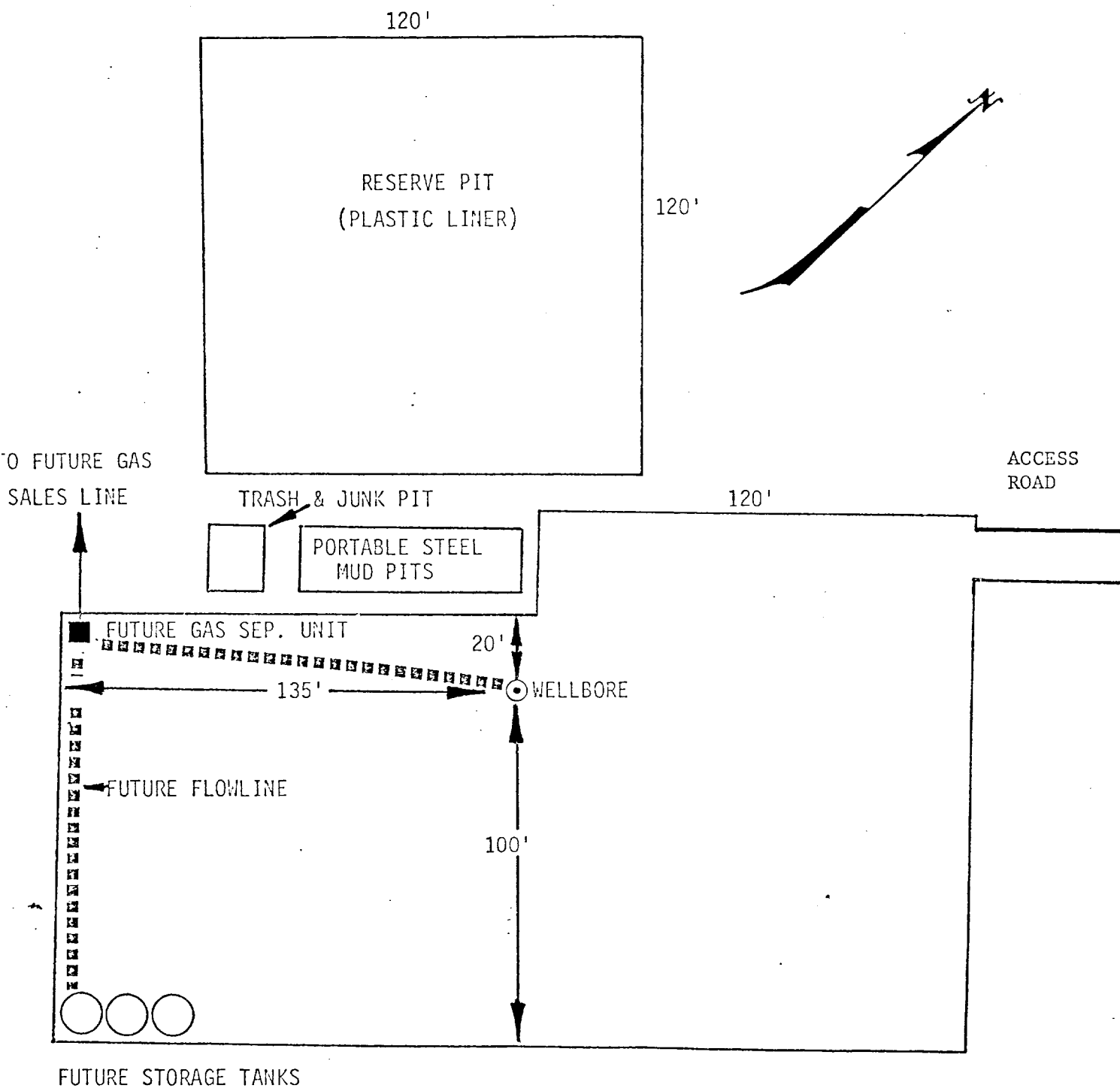


EXHIBIT C



Southland Royalty Company

1100 WALL TOWERS WEST, MIDLAND, TEXAS 79701

Empire Federal "21" #1
860' FSL & 2180' FEL
Sec. 21, T-18-S, R-29-E
Eddy County, New Mexico