

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY(Other instructions on
reverse side)

30-005-60786 File ✓

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. NM 16094		
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME		
2. NAME OF OPERATOR Southland Royalty Company			7. UNIT AGREEMENT NAME		
3. ADDRESS OF OPERATOR 1100 Wall Towers West, Midland, Texas 79701			8. FARM OR LEASE NAME Hagerman Federal "29" Comm.		
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 1780 1980' FSL & 1980' FEL, Sec. 29, T-14-S, R-27-E At proposed prod. zone Same			9. WELL NO. 1		
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE 5 miles south east of Hagerman, New Mexico			10. FIELD AND POOL, OR WILDCAT Wildcat		
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 660' west			11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA J Sec. 29, T-14-S, R-27-E		
16. NO. OF ACRES IN LEASE 320			12. COUNTY OR PARISH Chaves		
17. NO. OF ACRES ASSIGNED TO THIS WELL 320			13. STATE New Mexico		
18. DISTANCE FROM PROPOSED* LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. None			20. ROTARY OR CABLE TOOLS Rotary		
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3429' Gr.			22. APPROX. DATE WORK WILL START* Sept. 10, 1980		

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
11"	8 5/8"	24#	1300'	625 sxs
7 7/8"	4 1/2"	10.5 & 11.6#	7600'	650 sxs

Drill 15" hole to 225'. Set csg @ 225' T/salt; circ cmt. Drill 11" hole w/br wtr to prevent washout to depth of 1300'. Set csg @ 1300'; cmt circ. Drill 7 7/8" hole to 7600' w/fresh wtr; add brine wtr to raise mud wt. Drill to TD of 7600' to test Morrow & intermediate zones. If commercial, run 4 1/2" csg to TD. Cmt w/sufficient cmt to bring cmt above all prospective zones. Est top/cmt @ 4500'. If intermediate horizons are productive, will run stage tool @ 5800' + and use additional cmt vol. Perf & stimulate Morrow for production. Mud Program: 0 - 225', spud mud; 225' - 1300', 9.8 - 10# brine water; 1300' - 5400', fresh water; 5400' - 6300' cmt brine water; 6300' - TD, starch, gel, Flosal, & 3% KCL, Vis 40, 6cc fluid loss thru Morrow. BHP @ TD anticipated to be 3300 psi. No abnormal pressure expected.

BOP Program: BOP to be installed on 11 3/4" double 10" Ser 900. BOP to be installed on 8 5/8", double 10" Ser 900 & 10" Ser 900 Hydril & drilling head. Test w/Yellow Jacket Inc. Test BOP daily. GAS 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 Donald R. Craig TITLE District Operation Engineer DATE Aug. 8, 1980

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

GAS WELL GAS HAS BEEN DEDICATED, (BEST OF OUR KNOWLEDGE)

YES

NO

*See Instructions On Reverse Side



United States Department of the Interior

GEOLOGICAL SURVEY

SPECIAL APPROVAL STIPULATIONS

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN:

SOUTHLAND ROYALTY CO Hagerman FED 29 COMM No. 1	
OPERATOR 29145-27E	WELL DESIGNATION CHAYEC
S-T-R	COUNTY
NM 16094	
LEASE NO.	

THE SPECIAL STIPULATIONS CHECK MARKED BELOW ARE APPLICABLE TO THE ABOVE-DESCRIBED WELL AND APPROVAL OF THIS APPLICATION TO DRILL IS CONDITIONED UPON COMPLIANCE WITH SUCH STIPULATIONS. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE SPECIAL STIPULATIONS PURSUANT TO TITLE 30 CFR 290.

- ☒ A. 11 3/4" surface casing should be set in the Rustler Anhydrite formation and cement circulated to the surface. If surface casing is set at a lesser depth, the _____ casing must be cemented from the casing shoe to the surface or cemented to the surface through a stage tool set at least 50 feet below the top of the Rustler after cementing around the shoe with sufficient cement to fill to the base of the salt section.
- ☒ B. Before drilling below the 8 7/8" casing, the blowout preventer assembly will consist of a minimum of one annular type and two ram type preventers.
- ☐ C. Casing protectors will be run on drill pipe while drilling through the _____ casing. Protectors will be of sufficient number and of sufficient outside diameter to protect the casing.
- ☒ D. Minimum required fill of cement behind the 8 7/8" casing is to circulate to surface.
- ☒ E. After setting the 8 7/8" casing string and before drilling into the WOLF CAMP formation, the blowout preventers and related control equipment shall be pressure tested to rated working pressures by an independent service company. Any equipment failing to test satisfactorily shall be repaired or replaced. This office should be notified in sufficient time for a representative to witness the tests and shall be furnished a copy of the pressure test report.
- ☒ F. Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be installed and operating before drilling into the WOLF CAMP formation and used until production casing is run and cemented. Monitoring equipment shall consist of the following:
- (1) A recording pit level indicator to determine pit volume gains and losses.
 - (2) A mud volume measuring device for accurately determining mud volume necessary to fill the hole on trips.
 - (3) A flow sensor on the flow-line to warn of any abnormal mud returns from the well.
- ☒ G. All pits containing toxic liquids will be fenced and covered with a fine mesh netting, if necessary for the protection of livestock or wildlife.
- ☒ H. Above ground permanent structures and equipment shall be painted in accordance with the Painting Guidelines. The paint color is to simulate:
- ☒ Sandstone Brown, Fed. Std. 595-20318 or 30318
- OR ☒ Sagebrush Gray, Fed. Std. 595-26357 or 36357
- ☐

- ☒ I. A kelly cock will be installed and maintained in operable condition.
- ☒ J. The ARTESIA Sub-District Office is to be notified in sufficient time for a representative to witness:
- (a) Spudding ☒
- (b) Cementing casing
- 8 5/8" inch ☒
- _____ inch
- _____ inch
- (c) ~~BOP tests~~
- ☐ K. A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the U. S. Geological Survey, P. O. Box 26124, Albuquerque, New Mexico 87125. The effective date of the agreement must be prior to any sales.
- ☐ L. A Gamma Ray-Compensated Neutron log is required from the base of the salt section to the surface with cable speed not to exceed 30 feet per minute.
- ☒ M. At least one working day prior to constructing the well pad, access roads and/or related facilities, the operator or dirt contractor shall notify the authorized officer (Bureau of Land Management, ~~Albuquerque~~ Roswell area). He shall also notify the Authorized Officer within two working days after completion of earth-moving activities.
- ☐ N. All access roads constructed in conjunction with the drilling permit (APD) will be limited to a 12 foot wide driving surface, excluding turn-arounds. Surface disturbance associated with construction and/or use of the road will be limited to 35 feet in width. If well is a producer, all roads will be adequately drained to control runoff and soil erosion. Drainage facilities may include ditches, water bars, culverts and/or any other measures deemed necessary by the authorized officer of the BLM. The following is a general guide for the spacing of water bars:
- % Slope
- | | |
|------------------------|---------|
| less than 2% | 200 ft. |
| 2% to 4% | 100 ft. |
| 4% to 5% | 75 ft. |
| more than 5% | 50 ft. |
- ☒ O. Other special stipulations

Any permanent pit containing waste oil must be fenced and covered with mesh wire.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIPLICATE*
(Other instructions on reverse side)Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

NM 16094

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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, Midland, Texas 79701

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

At surface

1980' FSL & 1780' FEL Sec 29, T-14-S, R-27-E

14. PERMIT NO.

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

3434.6' Gr

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec 29, T-14-S, R-27-E

12. COUNTY OR PARISH

Chaves

13. STATE

New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

FRACTURE TREAT

MULTIPLE COMPLETE

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANS

(Other)

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREATMENT

ALTERING CASING

SHOOTING OR ACIDIZING

ABANDONMENT*

(Other)

(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 pertinent to this work.)*

At request of Bureau of Land Management, we have moved the staked location 200'

to the east, putting the location at 1780' FEL & 1980' FSL of Sec. 29.

See attached Plat.

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

SIGNED

Don R Cray

TITLE District Operation Engineer DATE 9-18-80

(This space for Federal or State office use)

APPROVED BY

W. H. STEWART

ACTING DISTRICT ENGINEER

TITLE

DATE

SEP 25 1980

CONDITIONS OF APPROVAL, IF ANY:

R-F-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.

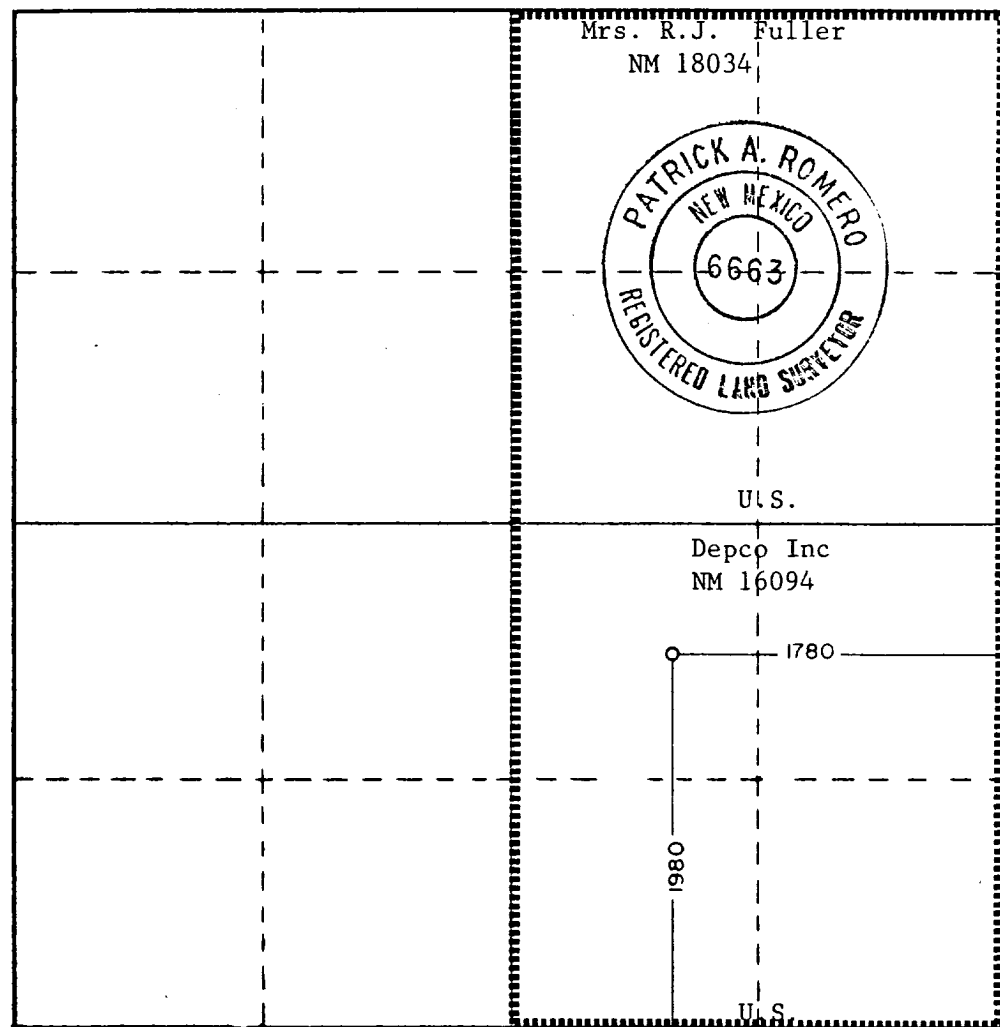
Operator Southland Royalty CO.			Lease Hagerman Fed. 29 Com.		Well No. 1
Unit Letter J	Section 29	Township 14 south	Range 27 east	County Chaves	
Actual Footage Location of Well: 1980 feet from the south line and 1780 feet from the east line					
Ground Level Elev. 3434.6	Producing Formation Wildcat	Pool 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.

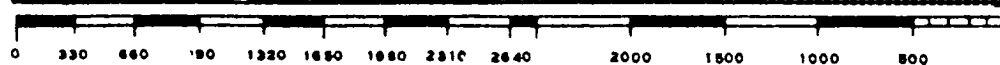
Name
Don R Cray
Position
District Operation Engineer
Company
Southland Royalty Company
Date
9-18-80

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
9-15-80

Registered Professional Engineer and/or Land Surveyor

Patrick A. Romero
Certificate No. JOHN W. WEST 676
PATRICK A. ROMERO 6663
Ronald J. Eideon 3239



NL 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.

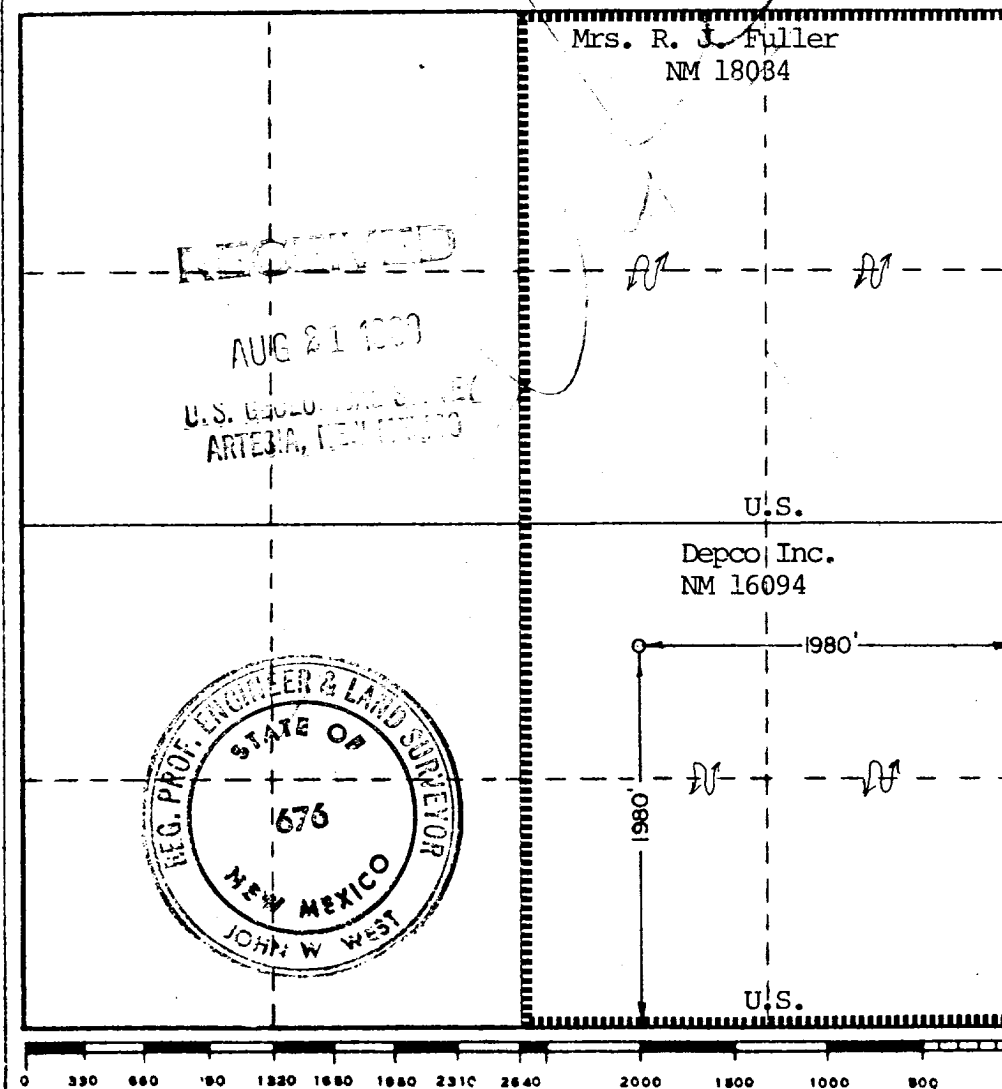
Operator Southland Royalty Co.			Lease Hagerman Federal "29" Comm.		Well No. 1
Unit Letter J	Section 29	Township 14 South	Range 27 East	County Chaves	
Actual Footage Location of Well: 1980 feet from the South line and 1980 feet from the East line					
Ground Level Elev. 3429.2	Producing Formation Wildcat		Pool 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
Donald R. Craig
Position
District Operation Engineer
Company
Southland Royalty Company
Date
August 8, 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
July 25, 1980
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

Hagerman Federal "29" Comm. No. 1
1980' FSL & 1980' FFL
Sec. 29, T-14-S, R-27-E
Chaves County, New Mexico NM 16094

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:
4. See Form 9-331C.
5. See Form 9-331C.
6. The estimated tops of important geological markers are:

T/Salt	300'	Tubb	3860'	Morrow	7200'
B/Salt	800'	Abo	4630'	Mississippian	7400'
San Andres	1250'	Wolfcamp	5820'		
Glorietta	2500'	Penn	6600'		
7. The estimated depths at which anticipated water, oil, gas and mineral bearing strata are as follows:

San Andres (Oil)	1250'	Wolfcamp (Oil or Gas)	5820'
Glorietta (Oil)	2500'	Penn (Oil or Gas)	6600'
Tubb (Oil)	3860'	Morrow (Gas)	7200'
Abo (Oil)	4630'	Mississippian (Gas)	7400'
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 sxs Class "C" w/2% CaCl. Cement to be circulated back to surface.
 - b. 8 5/8" casing: Cement w/425 sxs Class "C" Lite, 18% salt/sx, 10# Gilsonite/sx, 1/2# Flocele/sxs, plus 200 sxs 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/375 sxs Class "C" Lite .6% Halad 22/sx, 3# KCL/sx plus 275 sxs Class "H" 50-50 Pozmix A, 2% Gel/sx, .6% Halad 22/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 of cmt estimated to be at 3500'. 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" Ser 900 3000 psi double hydraulic pipe and blind rams.

8 5/8" casing installation: 10" Ser 900 3000 psi double hydraulic pipe and blind rams plus 10" Ser 900 3000 psi Hydril plus 10" Ser 900 3000 psi Rotating Head.

Testing Procedure:

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

8 5/8" casing - pressure to 1500 psi for 30 min. before drilling below 8 5/8" casing. Yellow Jacket, Inc. to test 8 5/8" casing installation.

Test BOP daily while drilling & on all trips.

11. See Form 9-331C.

12. A. DST Program - Probable DST if shows encountered on mud logger in Wolfcamp and Morrow E sand.

b. Cores - None

c. Mud Logging - To be installed from surface to TD.

d. Wire Line Logs:

225' - 1300' - Dual Laterolog/GR, Compensated Neutron/Compensated Density/GR-Caliper.

1300' - TD - Dual Laterolog/Micro SFL/GR, Compensated Neutron Compensated Density/GR-Caliper.

13. No abnormal pressures anticipated with bottom hole pressures at TD expected to be 3300 psi. Bottom hole temperature 150 F. No Hydrogen Sulfide expected in this known drilling area. No crooked hole or abnormal deviation problems.
14. Anticipated starting date to spud-September 10, 1980. Previous drilling in area indicates 45 days from spud to set 4 1/2" casing @ TD or about October 24, 1980.

13. Surface Ownership:

Bureau of Land Management (Federal)

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, New Mexico
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: 8/14/80

Donald R Craig
Don Craig
District Operation Engineer
Southland Royalty Company

Surface Use Plan

Southland Royalty Company

Hagerman Federal "29" Comm. No. 1
1980' FSL & 1980' FEL
Sec. 29, T-14-S, R-27-E
Chaves County, New Mexico
NM 16094

RECEIVED
AUG 21 1997
U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

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 leasee). 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 Hagerman go approximately 3.8 miles east on highway 31. Turn south on Buffalo Valley Road and go 2.5 miles, turn east and go .4 mile and turn northeast on new road and go approximately .3 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 15 feet wide & 2000' 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 disturbance 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 the NW/4 of NW/4 Sec. 29, T-14-S, R-27-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 Waste 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 finish 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 aesthetically pleasing a condition as possible.
- B. Any unguarded pits containing fluids will be fenced until filled.
- C. After abandonment of well, surface restoration will be in accordance with State of New Mexico Surface Requirements.

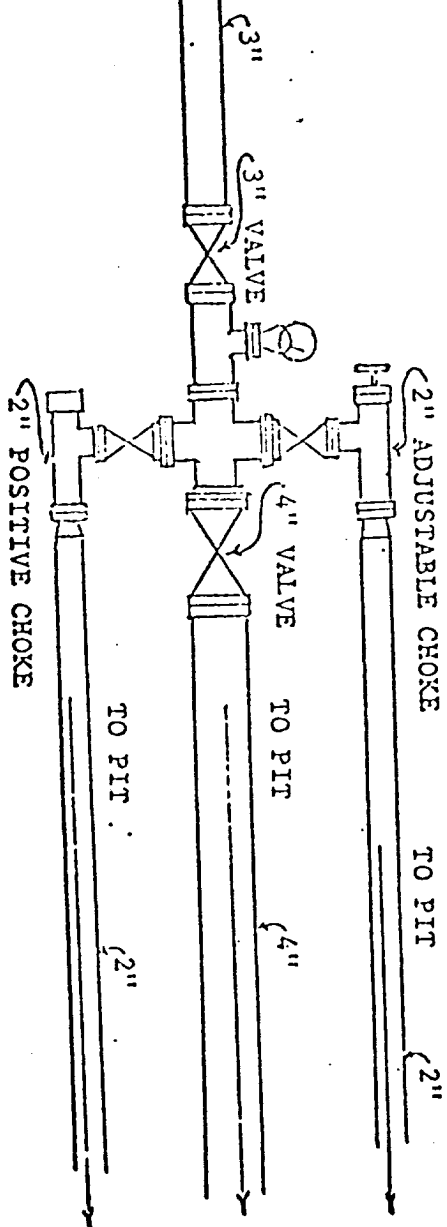
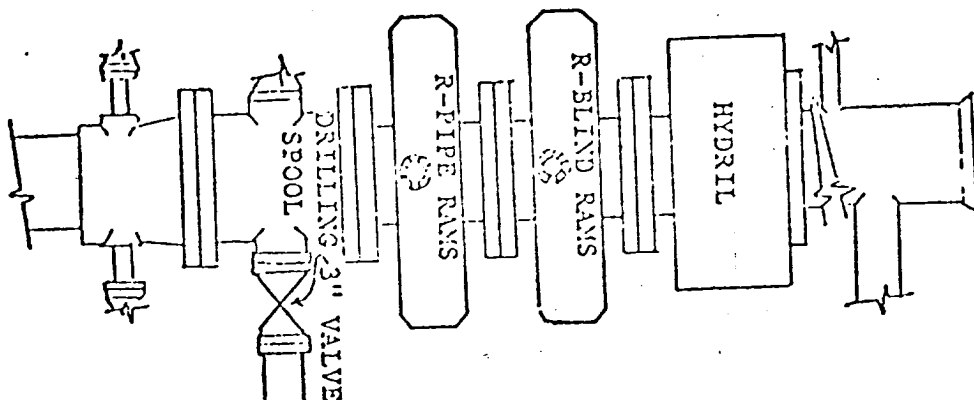
11. Topography and Soil:

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

12. Land Use:

Grazing and hunting - Federal

- Surface leasee is
Charles Wilson
P. O. Box 1266
Roswell, New Mexico 88201



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

ATTACHMENT TO FORM C-101

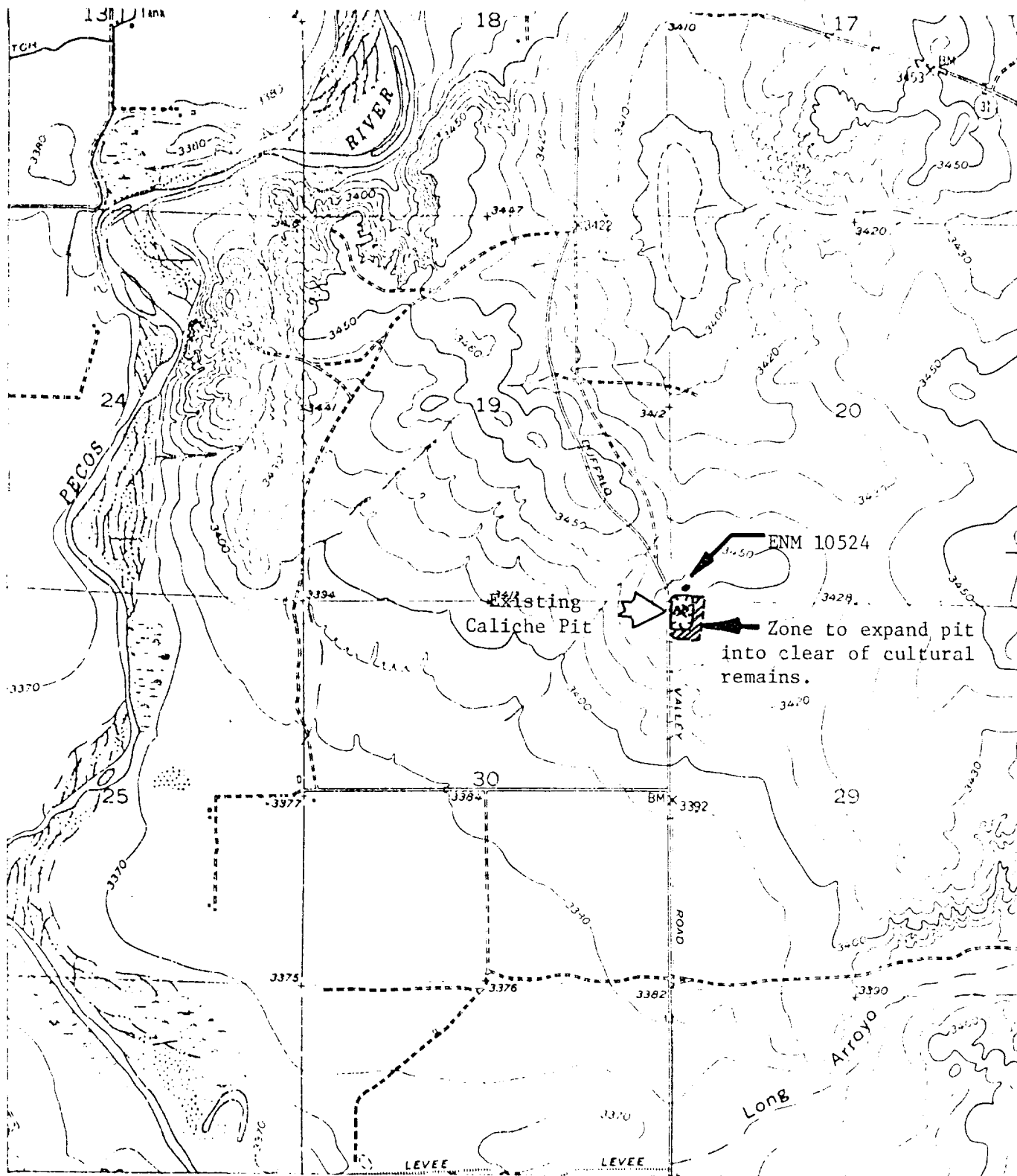
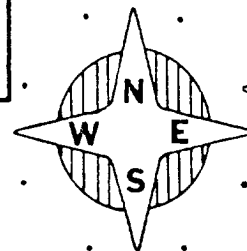


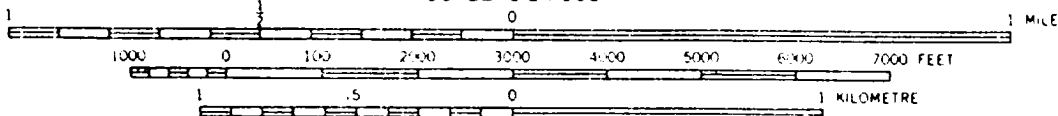
Figure 3: Proposed Expansion of an Existing Caliche Pit
Sections 20, 19, 30 & 29, T14S, R27E, Chaves County

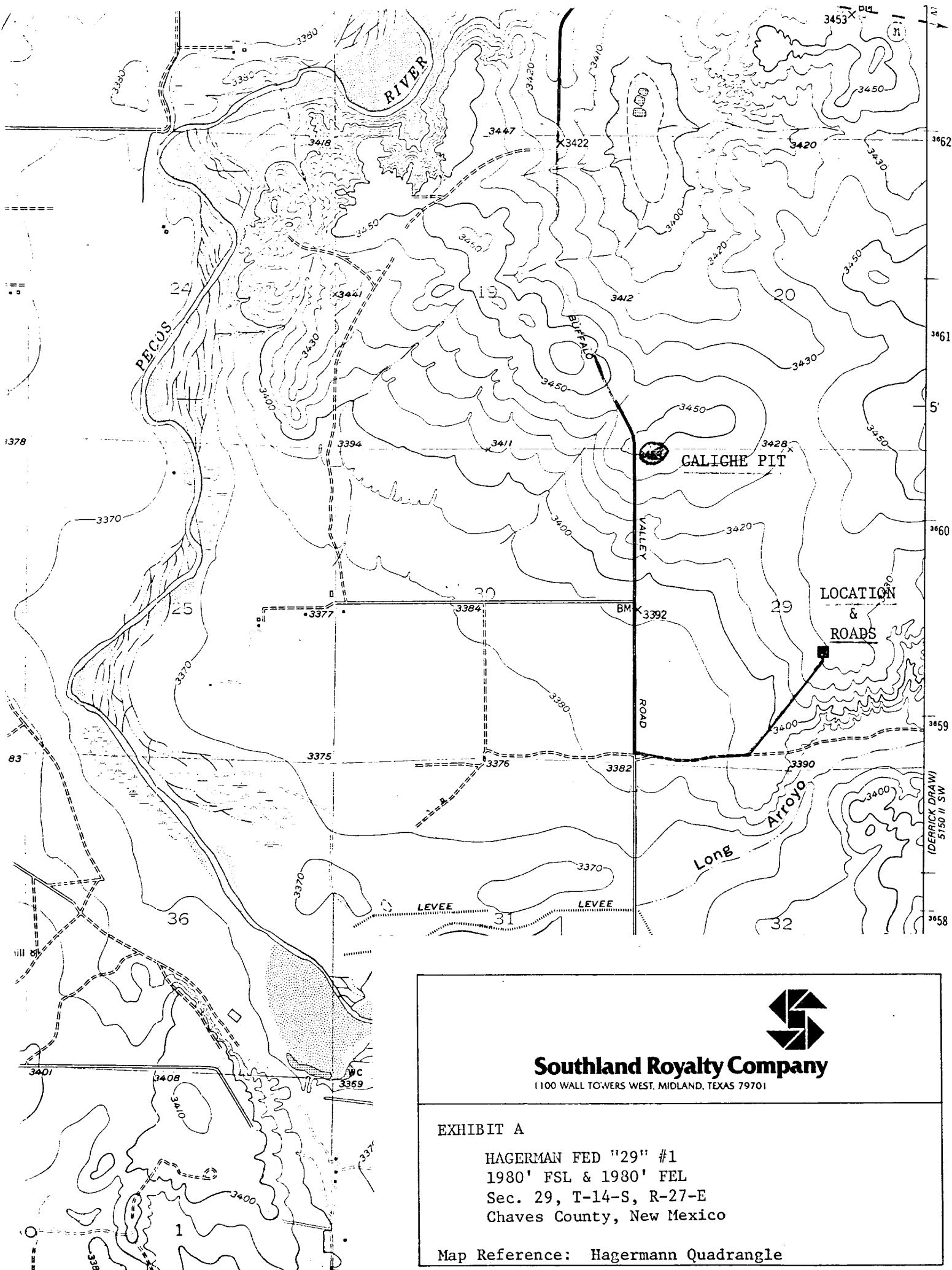
Map Reference: USGS Hagerman Quadrangle, 1951

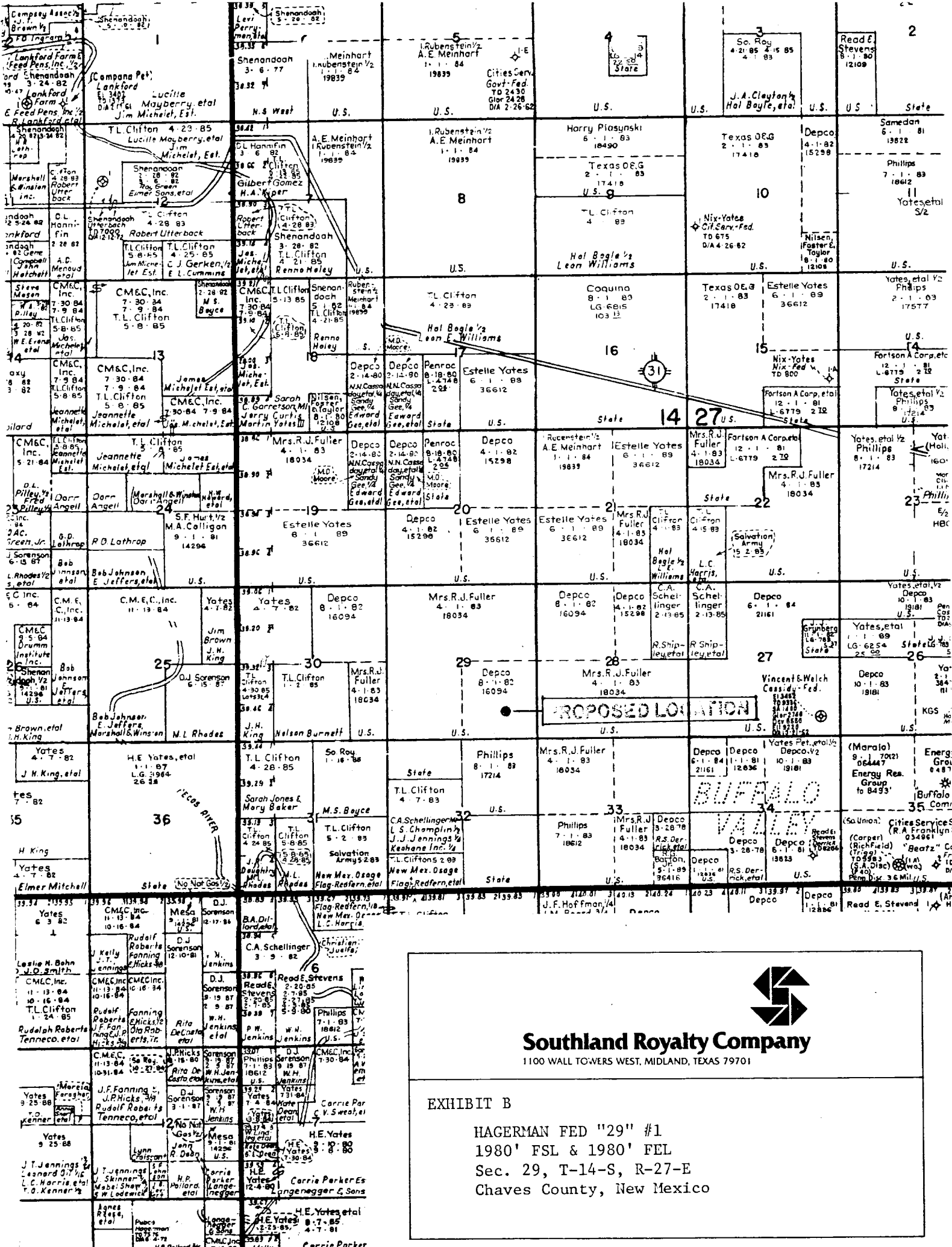
7.5 MINUTE
SERIES



SCALE 1:24,000



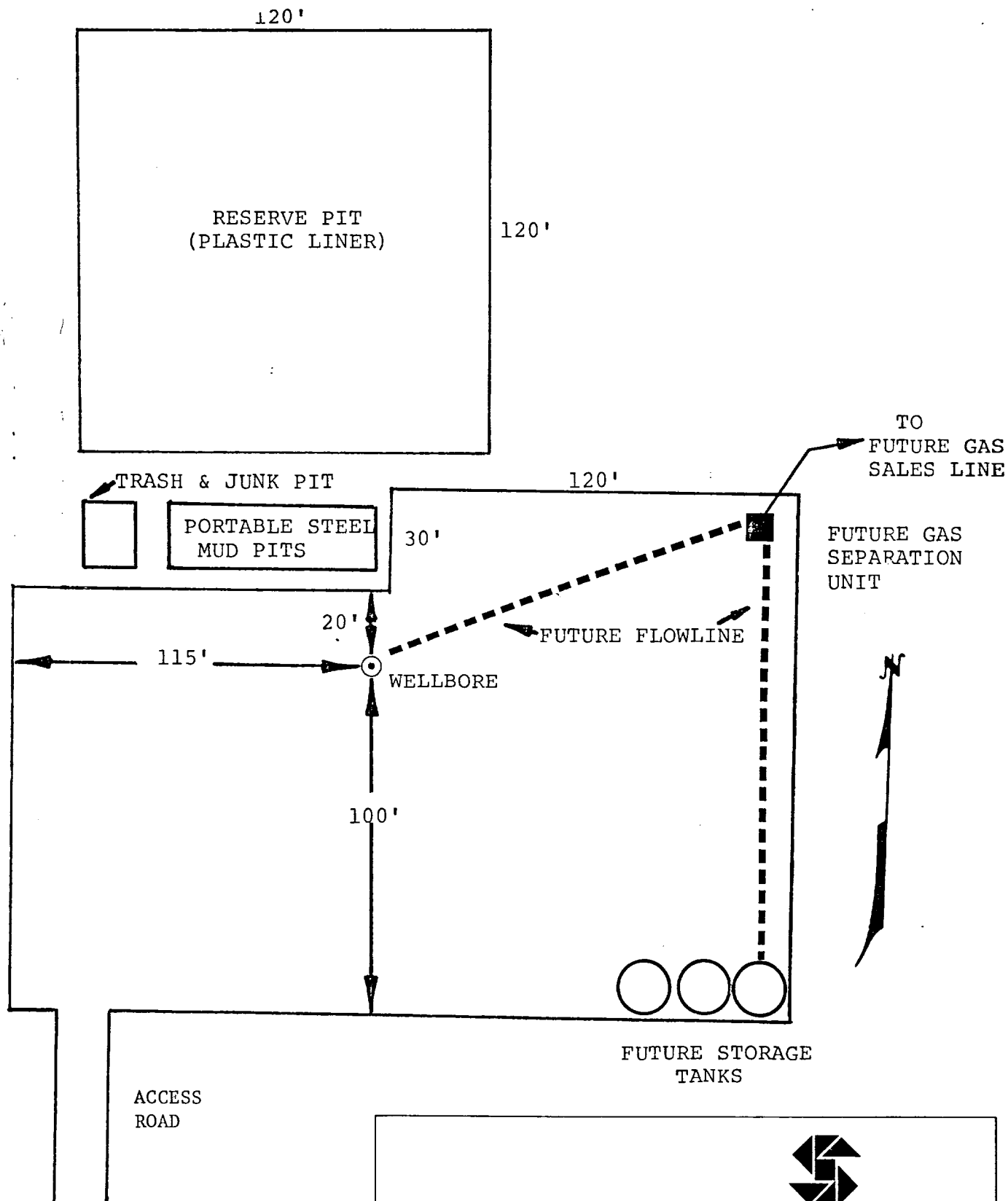




Southland Royalty Company
1100 WALL TOWERS WEST, MIDLAND, TEXAS 79701

EXHIBIT B

HAGERMAN FED "29" #1
1980' FSL & 1980' FEL
Sec. 29, T-14-S, R-27-E
Chaves County, New Mexico



Southland Royalty Company

1100 WALL TOWERS WEST, MIDLAND, TEXAS 79701

EXHIBIT C

HAGERMAN FED "29" #1
1980' FSL & 1980' FEL
Sec. 29, T-14-S, R-27-E
Chaves County, New Mexico

Scale 1" = 40'