

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

P. O. Drawer 570, Farmington, NM 87401

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

At surface

1060' FSL & 1720' FEL

At proposed prod. zone

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

1 mile south of Bloomfield, NM

15. DISTANCE FROM PROPOSED*

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

260'

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

600'

16. NO. OF ACRES IN LEASE

280 1088.20

19. PROPOSED DEPTH

6385'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

320

20. ROTARY OR CABLE TOOLS

Rotary

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

5495' GR

22. APPROX. DATE WORK WILL START*

March 15, 1980

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8"	24#	200'	140 Sacks
7 7/8"	4 1/2"	10.5#	6385'	270 Sacks (Stage One)
				320 Sacks (Stage Two)
				325 Sacks (Stage Three)

ADDITIONAL WELL PERMIT FOR NEW MEXICO ORDER R-1670-V.
U.S.G.S. RATIFICATION DATED JUNE 8, 1979.

Surface formation is Nacimiento.

Top of Ojo Alamo sand is at 835'.

Top of Mesa Verde sand is at 3215'.

Fresh water mud will be used to drill from surface to Total Depth.

It is anticipated that an IES & GR-Density log will be run at Total Depth.

No abnormal pressures or poisonous gases are anticipated in this well.

It is expected that this well will be drilled before August 31, 1980. This depends
on time required for approval, rig availability and the weather.

Gas is dedicated.

ADDITIONAL WELL PERMIT FOR NEW MEXICO ORDER R-1670-V.
U.S.G.S. RATIFICATION DATED JUNE 8, 1979.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present production 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. C. Parsons

TITLE

District Engineer

DATE

12-4-79

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

ok Brink

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENTP. O. BOX 2088
SANTA FE, NEW MEXICO 87501Form C-102
Revised 10-1-78

All distances must be from the outer boundaries of the Section.

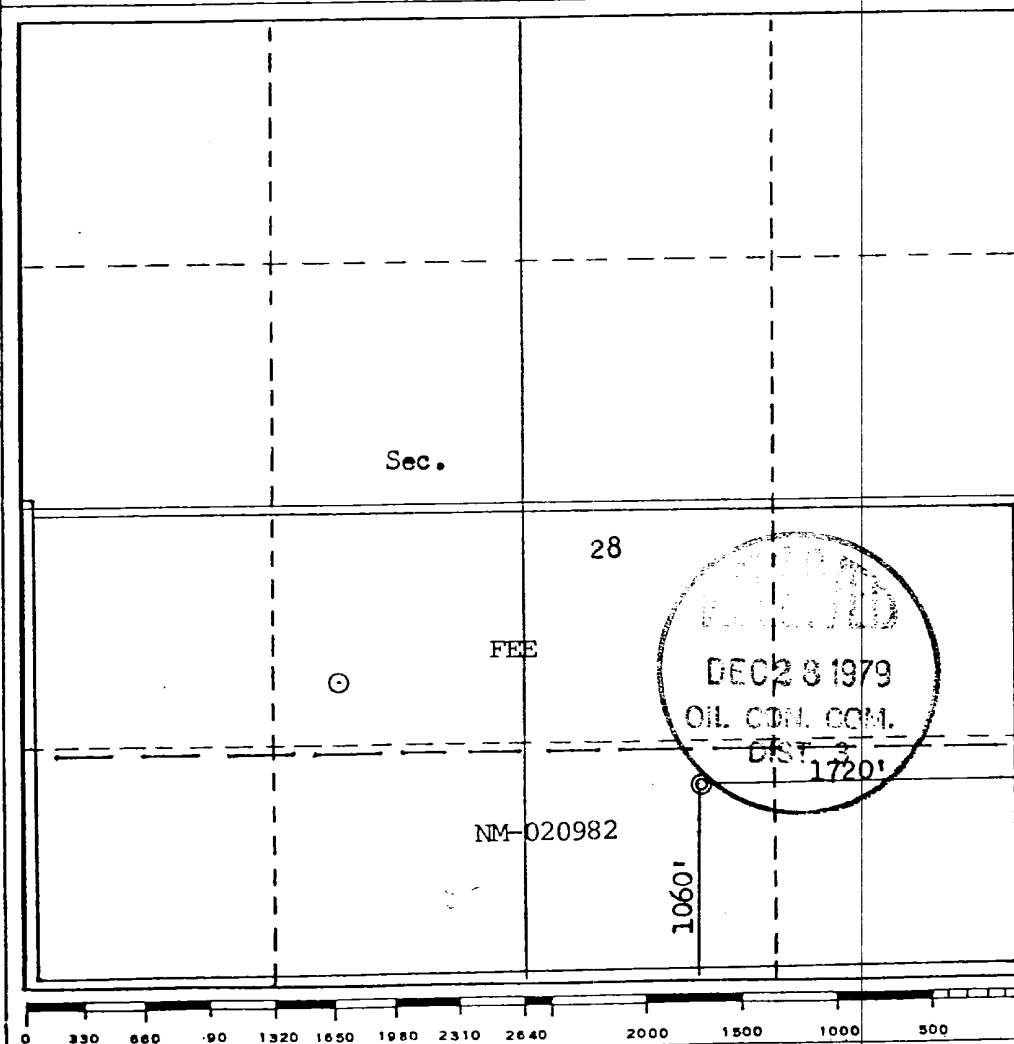
Operator SOUTHLAND ROYALTY COMPANY			Lease MANGUM		Well No. 4-E
Unit Letter 0	Section 28	Township 29N	Range 11W	County San Juan	
Actual Footage Location of Well: 1060 feet from the South line and 1720 feet from the East line					
Ground Level Elev. 5495	Producing Formation Dakota		Pool Basin Dakota		Dedicated 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 owners been consolidated by communitization, unitization, force-pooling, etc?

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

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

Curtis C. Parsons

Position

District Engineer

Company

Southland Royalty Company

Date

December 4, 1979

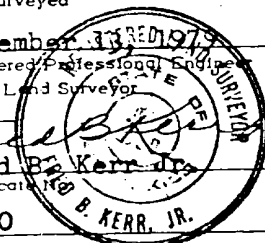
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

November 13, 1979
Registered Professional Engineer
and/or Land Surveyor

Fred B. Kerr, Jr.
Certificate No. 3950

3950



DRILLING SCHEDULE - MANGUM #4E

Location: 1060' FSL & 1720' FEL, Section 28, T29N, R11W, San Juan County, New Mexico

Field: Basin Dakota

Elevation: 5498' GR

Geology:

Formation Tops:	Ojo Alamo	835'	Point Lookout	3990'
	Fruitland	1320'	Gallup	5240'
	Pictured Cliffs	1650'	Graneros	6060'
	Cliff House	3215'	Dakota	6185'
			Total Depth	6385'

Logging Program: IES & GR-Density from TD to surface casing.

Coring Program : None

Natural Gauges : None

Drilling

Contractor:

Tool Pusher:

SRC Answering Service: 325-1841

Dispatch Number: 325-7391

SRC Representative:

Mud Program: Fresh water to 5200'. Mud up at 5200'. Maintain mud weight of 8.9 - 9.4; viscosity of 35 - 40 sec.; water loss of 10 - 12 cc. Anticipate losing some returns in the Gallup formation at approx. 5400'. Have LCM available on location.

Materials

Casing Program:	Hole Size	Depth	Casing Size	Wt. & Grade
	12 1/4"	200'	8 5/8"	24# K-55
	7 7/8"	6385'	4 1/2"	10.5# K-55

Float Equipment

8-5/8" Surface Casing: Pathfinder type "A" guide shoe.

4 1/2" Production Casing: Pathfinder type "A" guide shoe. Self-fill, flapper type float. Run 1 joint above shoe. 5 Pathfinder bow type stabilizers (run every other joint above shoe). Run Dowell stage tools at 4400' and 1850'. Run 1 cement basket below and 5 Pathfinder rigid stabilizers above each tool.

Wellhead Equipment: 8 5/8" X 10", 2000# casing head with 4 1/2" casing hanger 6", 2000# X 10", 2000# tubing head and tree

Cementing

8-5/8" Surface Casing: 140 sacks (165 cu. ft.) of Class "B" with 1/4# gel flake per sack and 3% CaCl_2 . WOC 12 hours. Test to 600# prior to drilling out. (Volume is 100% excess.)

4 1/2" Production Casing: STAGE ONE - 220 sacks (326 cu. ft.) of 50/50 Poz with 6% gel, 1/4# gel flake per sack, followed by 50 sacks of Neat with 2% CaCl_2 . (25% excess to cover top of Gallup.)

STAGE TWO - 270 sacks (405 cu. ft.) of 50/50 Poz with 6% gel, followed by 50 sacks of Neat with 2% CaCl_2 . (Volume is 50% excess to cover top of Cliff House.)

STAGE THREE - 325 sacks (347 cu. ft.) of 50/50 Poz with 6% gel. (Volume is 50% excess to cover top of Ojo Alamo.)

WOC and circulate between stages as required by well conditions.

BJM/ke

CCP

Date

L. O. Van Ryan
District Production Manager



Southland Royalty Company

December 4, 1979

United States Geological Survey
Mr. James Sims
P. O. Box 959
Farmington, NM 87401

Dear Sir:

Enclosed please find a map showing existing roads and planned access roads to Southland Royalty Company's Mangum #4E well.

The locations of tank batteries and flow lines will be on location with well. A burn pit will be provided for disposal of trash. Cuttings, drilling fluid and produced fluids will be put into the reserve pit and properly disposed of depending on amount and type of fluids.

There will be no camps or airstrips.

Also, enclosed is a location layout showing approximate location of rig, pits and pipe racks.

Water supply will be the San Juan River.

The location will be restored according to Bureau of Land Management standards. This work will begin when all related construction is finished.

Mr. Ross Lankford will be Southland Royalty Company's field representative supervising these operations.

Yours truly,

Curtis C. Parsons
District Engineer

OCP/ke



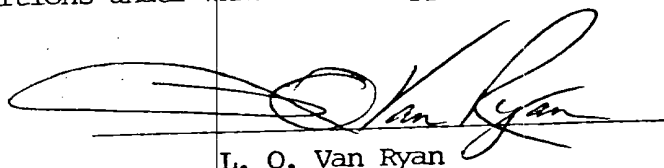
Southland Royalty Company

United States Geological Survey
Mr. James Sims
P. O. Box 595
Farmington, NM 87401

Dear Sir:

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

Date: December 4, 1979



L. O. Van Ryan
District Production Manager

LOVR/ke



Southland Royalty Company

December 4, 1979

United States Geological Survey
Mr. James Sims
P. O. Box 959
Farmington, NM 87401

RE: Blowout Preventer Plan

Dear Sir:

All drilling and completion rigs will be equipped with 6" or larger double hydraulic blowout preventers and a hydraulic closing unit with steel lines.

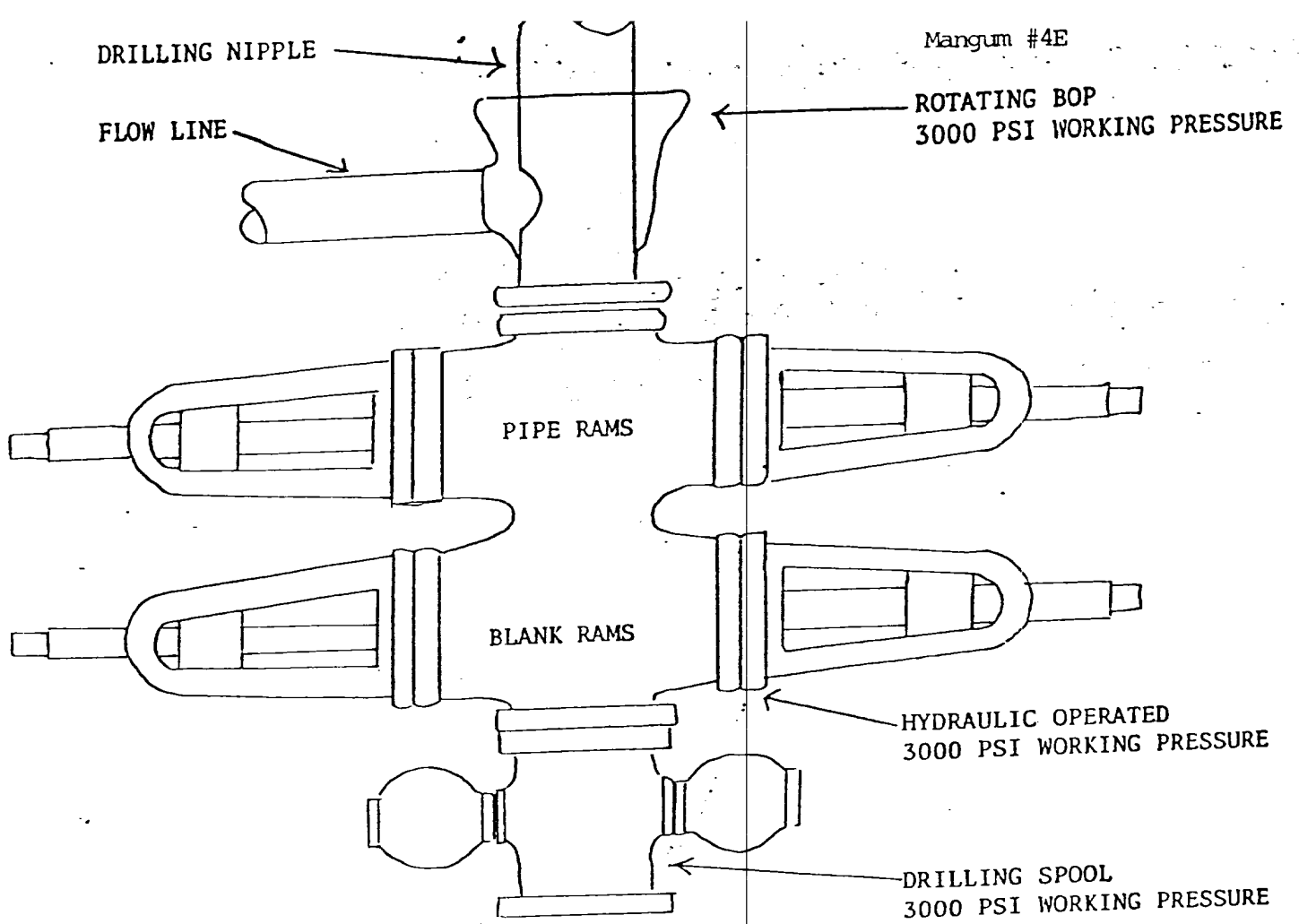
The preventer is 3000# working pressure and 6000# test pressure.

All crews will be thoroughly trained in the operation of this preventer. The preventer will be tested frequently enough to insure proper operation.

Yours truly,

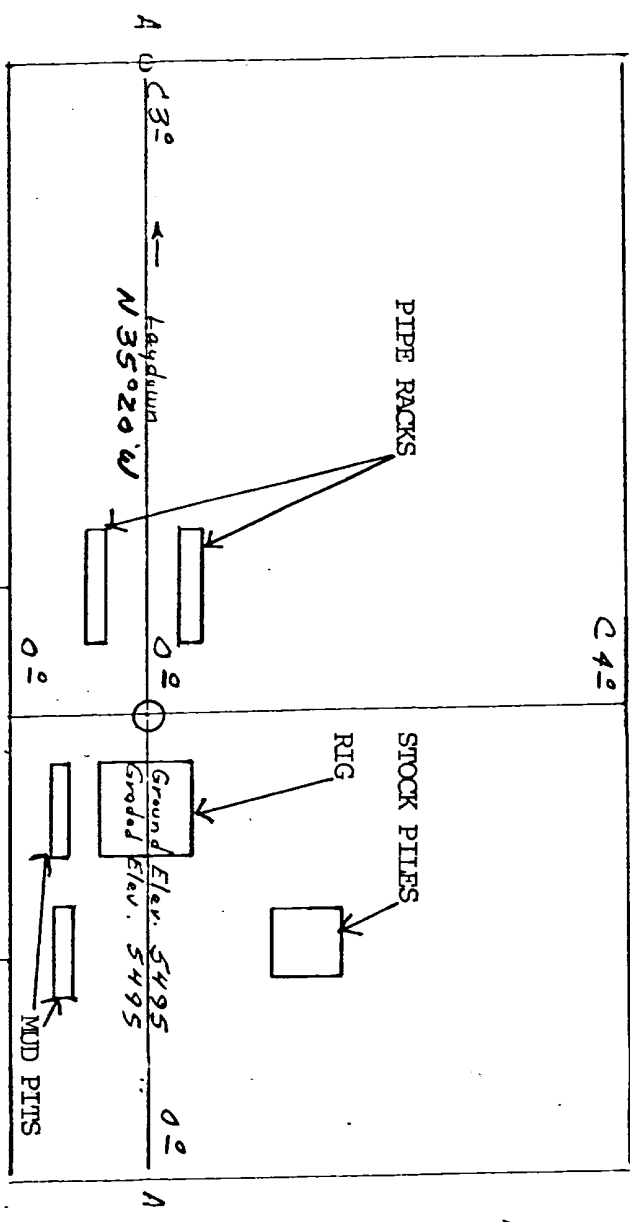
CC Parsons
Curtis C. Parsons
District Engineer

CCP/ke



PREVENTERS AND SPOOLS ARE TO HAVE
THROUGH BORE OF 6" - 3000 PSI OR LARGER

Location Profile for
 SOUTHLAND ROYALTY COMPANY #4-E MANGUM
 1060' FSL 1720' FEL Sec 28-T29N-R11W San Juan County, New Mexico



Vert. 1"=40'	A-A'	Horiz. 1"=100'
5500		
5490		
5480		

B-B'	
5500	
5490	
5480	

Vert. 1"=40'	C-C'

D-D'	

KERR LAND SURVEYING
 Date: 11/13/79