

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## 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. SF-080781		
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <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 P. O. Drawer 570, Farmington, New Mexico			8. FARM OR LEASE NAME Cain		
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 1610' FSL & 810' FEL - At proposed prod. zone			9. WELL NO. #3-R		
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 10 Miles Southeast of Bloomfield, New Mexico			10. FIELD AND POOL, OR WILDCAT Blanco Mesa Verde		
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)			11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 30, T29N, R9W		
16. NO. OF ACRES IN LEASE			12. COUNTY OR PARISH San Juan		
17. NO. OF ACRES ASSIGNED TO THIS WELL S/ 268.42			13. STATE New Mexico		
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.			20. ROTARY OR CABLE TOOLS Rotary		
19. PROPOSED DEPTH 4670'			22. APPROX. DATE WORK WILL START* June 26, 1978		
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5701' GL					

## PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#	200'	110 sacks
8-3/4"	7"	20#	2292'	195 sacks
6-1/4"	4-1/2"	10.5#	2142'-4670'	270 sacks
	2-3/8"	4.7#	4650'	

Surface formation is Nacimiento.

Top of Ojo Alamo is at 1068'.

Top of Pictured Cliffs is at 2042'.

Fresh water mud will be used to drill from surface to intermediate total depth.

An air system will be used to drill from intermediate casing point to total depth.

It is anticipated that a Gamma Ray Induction Log and Gamma Ray Density Log be run at total depth.

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

It is expected that this well be drilled before August 31, 1978. This depends on rig availability, time required for approvals and the weather.

Gas is 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 sub-surface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. [Signature] TITLE District Production Manager DATE June 14, 1978

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions On Reverse Side

NW 11-40

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 COMPANY			Lease CAIN		Well No. 3-R
Unit Letter I	Section 30	Township 29N	Range 9W	County San Juan	
Actual Footage Location of Well: 1610 feet from the South line and 810 feet from the East line					
Ground Level Elev. 5701'	Producing Formation Mesa Verde	Pool Blanco	Dedicated Acreage: 268.42 Acres		

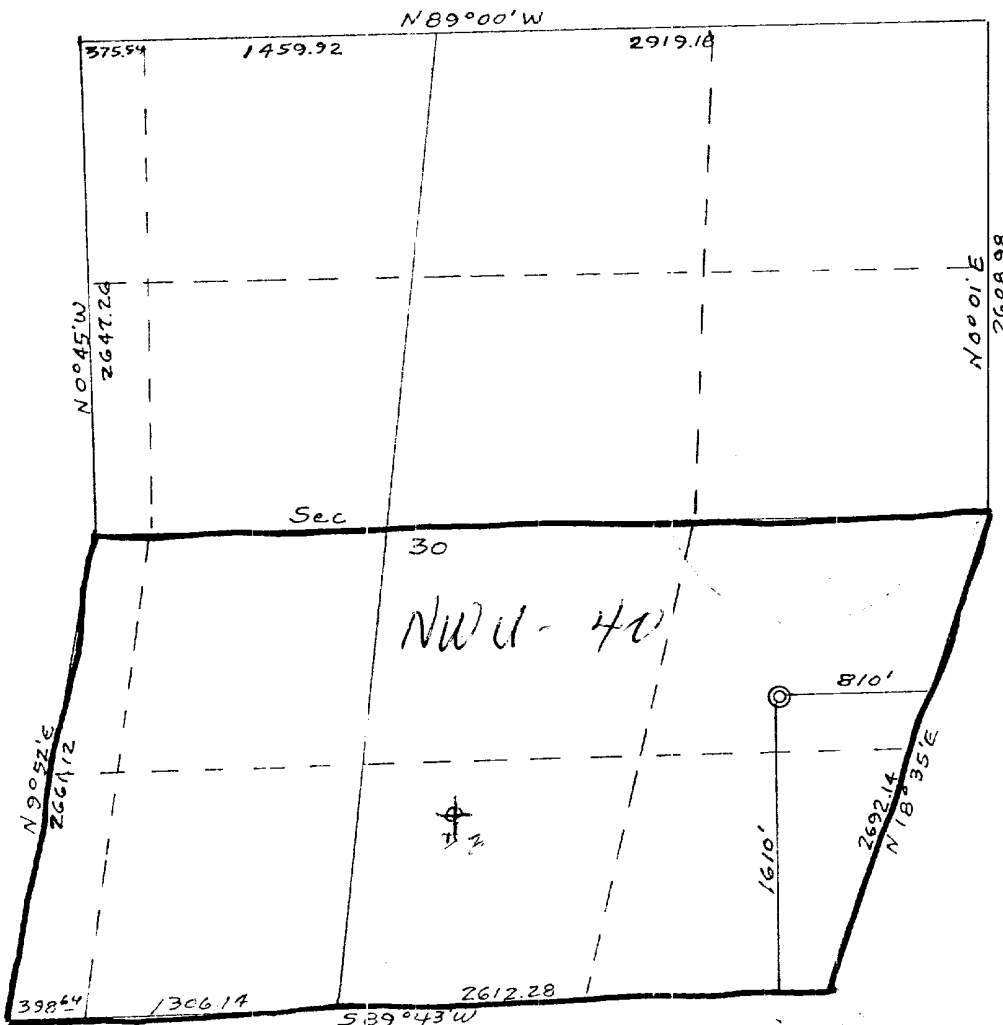
1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is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

Scale: 1" = 1000'



CERTIFICATION

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

Name \_\_\_\_\_  
Position \_\_\_\_\_  
District Production Manager  
Company \_\_\_\_\_  
Southland Royalty Company  
Date \_\_\_\_\_  
June 14, 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 \_\_\_\_\_  
May 5, 1978  
Registered Professional Engineer and Land Surveyor  
Fred B. Kerr Jr.  
Certificate No. \_\_\_\_\_  
3950



**Southland Royalty Company**

United States Geological Survey  
P. O. Box 959  
Farmington, New Mexico 87401

Attention: Mr. P. T. McGrath

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 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: June 14, 1978

Name: CC Parsons

Title: District Engineer



**Southland Royalty Company**

June 14, 1978

United States Geological Survey  
P. O. Box 959  
Farmington, New Mexico 87410

Attention: Mr. P. T. McGrath

Dear Sir:

Enclosed please find a map showing existing roads and planned access roads to Southland Royalty Company's Cain #3-R 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 air strips.

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

Water supply will be San Juan River.

The location will be restored to the land owner's satisfaction. If this is not satisfactory, please have the Bureau of Land Management contact the land owner. This work will begin when all related construction is finished.

Mr. Max Larson will be Southland Royalty Company's field representative supervising these operations.

Yours truly,

L. O. Van Ryan  
District Production Manager

LOVR/dg



**Southland Royalty Company**

June 14, 1978

United States Geological Survey  
P. O. Box 959  
Farmington, New Mexico

Attention: Blowout Preventer Plan

Dear Sir:

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

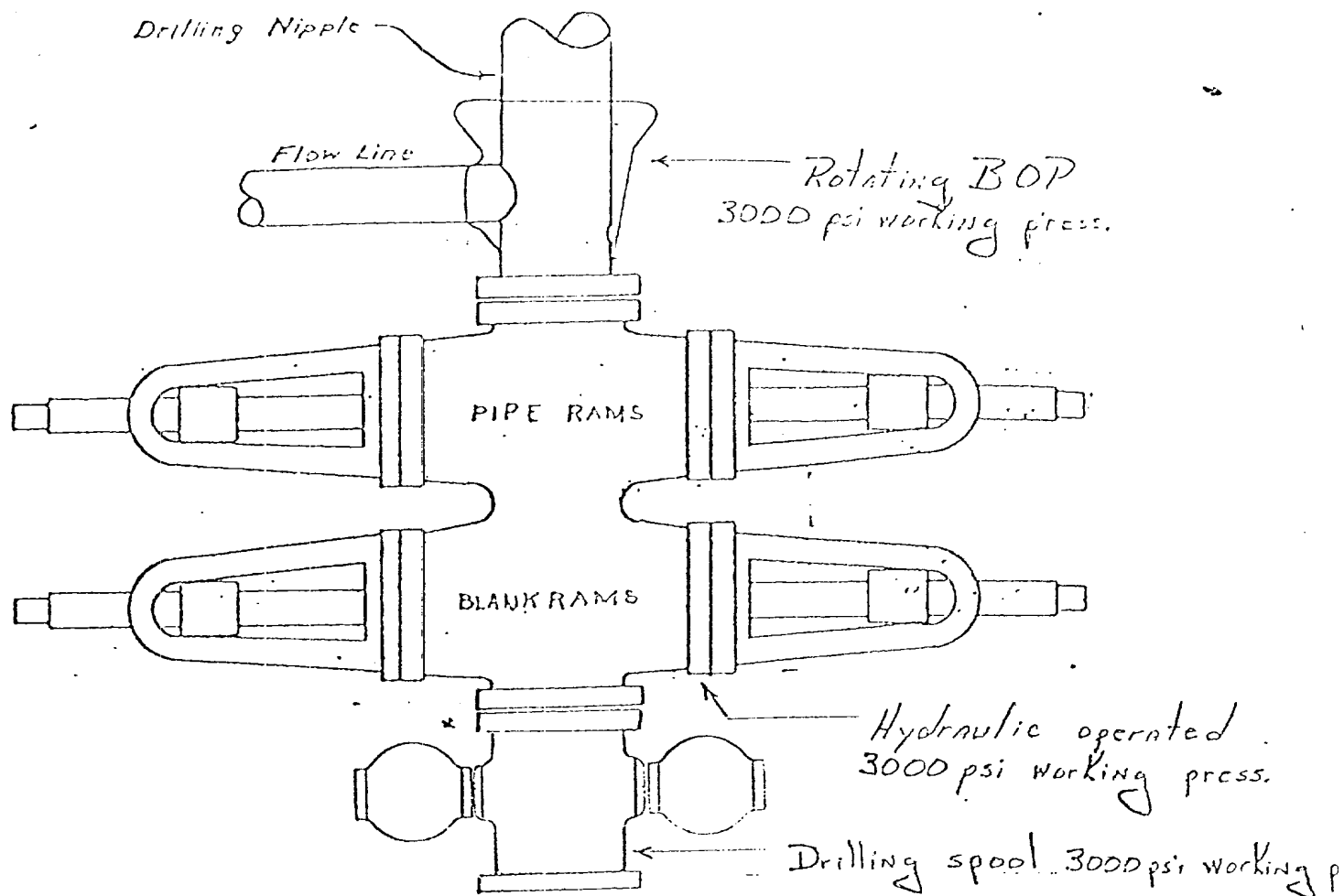
The preventer is 3000# working pressure and 6000# test.

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

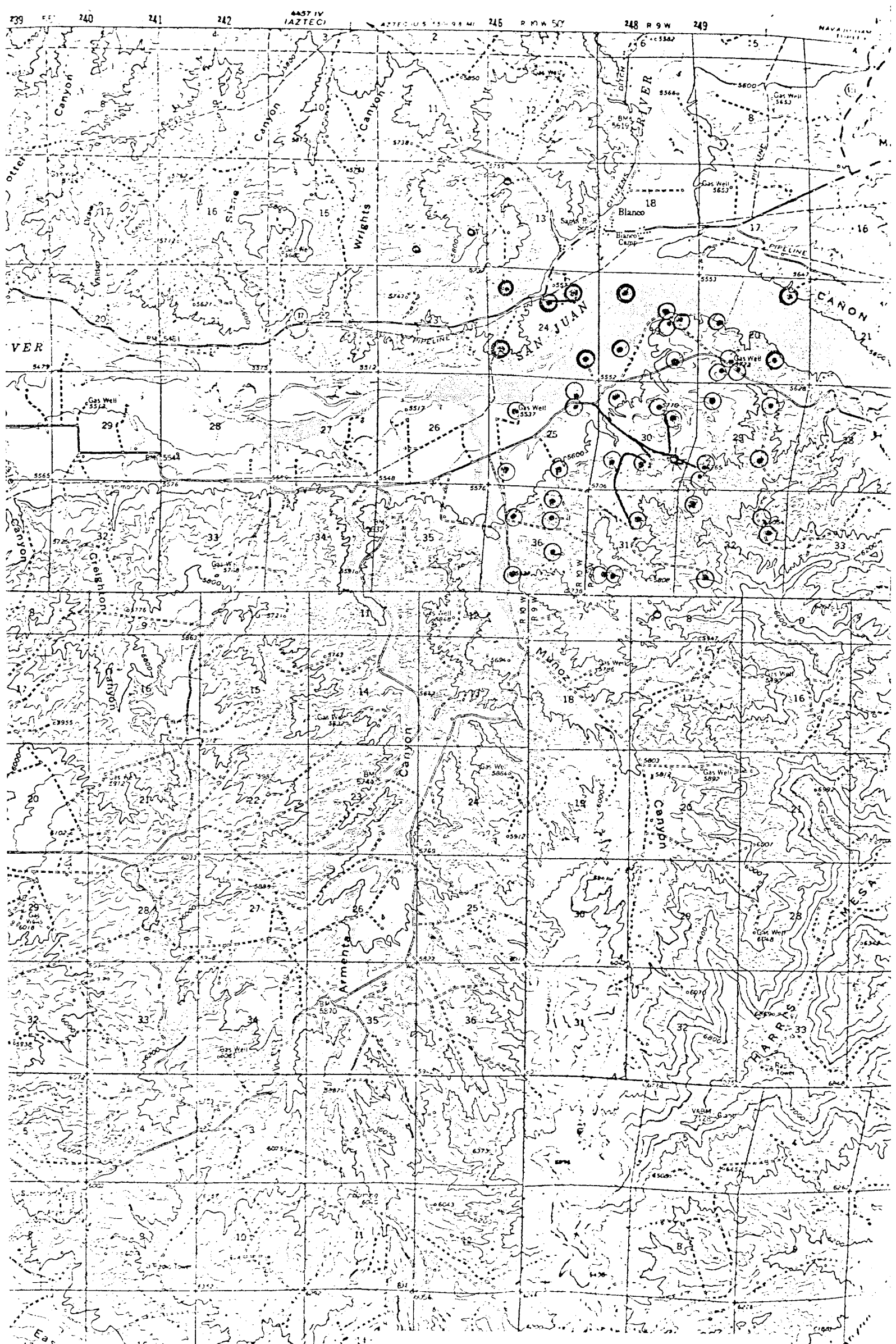
Yours truly,

L. O. Van Ryan  
District Production Manager

LOVR/dg



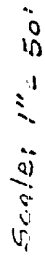
Preventers and spools are to have  
through bore of 6" - 3000# PSI or larger.



PROPOSED LOCATION  
 EXISTING LOCATIONS  
 EXISTING ROADS

Vicinity Map for  
 SOUTHLAND ROYALTY CO. #3-R Cain  
 1610'FSL 810'FEL Sec 30-T29N-R9W  
 San Juan County, New Mexico

**Location Profile for**  
SOUTHLAND ROYALTY CO. #3-R Cain  
1610'FSL 810'FEL Sec 30-T29N-R9W  
San Juan County, New Mexico


$$\text{Horiz: } 1'' = 100'$$

10-17

Horiz:  $1' = 100'$

2	
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KERR LAND SURVEYING

Date: May 5, 1978



DRILLING SCHEDULE - Cain #3R

Location: 1690' FSL - 810' FEL, Section 30, T29N, R9W, San Juan County, New Mexico

Field: Blanco Mesa Verde

Elevation: 5701' GL

Geology:

Formation Tops:	Ojo Alamo	1068	Cliff House	3628
	Fruitland	1758	Pt. Lookout	4320
	Pictured Cliffs	2042	Total Depth	4670
	Intermediate	2292		

Logging Program: GR-Induction & GR-Density @ Total Depth

Coring Program: None

Natural Gauges: Gauge at last connection above Cliff House, Pt. Lookout, and Total Depth. Gauge and record any increase in gas flow.

Drilling:

Contractor: Four Corners Drilling

Tool Pusher: Don Bettale

SRC Ans. Service: 325-1841

SRC Representative: Max Larson

Dispatch Number: 325-7391

Mud Program: Fresh water mud from surface to intermediate T.D. Air from intermediate to Total Depth.

Materials:

Casing Program:	<u>Hole Size</u>	<u>Depth</u>	<u>Casing Size</u>	<u>Wt. &amp; Grade</u>
	12 1/4	200'	9 5/8"	36#, K-55
	8 3/4	2292'	7 "	20#, K-55
	6 1/4	2142-4670'	4 1/2"	10.5#, K-55

Float Equipment:

9-5/8" Surface Casing: Pathfinder Type "A" Guide Shoe. Product #2003-1-012

7" Intermediate Casing: Pathfinder Type "A" Guide Shoe. Product #2003-1-007.

Howco self fill insert valve. 5-Pathfinder rigid centralizers.

Run float valve 2 joints above shoe. Run centralizers every other joint above shoe.

4-1/2" Liner: Pathfinder Type "A" Guide Shoe. Product #2017-1-050.

Pathfinder Type "A" Flapper Float Collar. Product #2008-2-000

Tubing:

Wellhead Equipment: 9 5/8" x 10" 2000 casing head, 10" 2000 x 6" 2000 tubing head.

Cementing:

9-5/8" surface casing: 110 sacks (130 cu.ft.) Class "B" w/ 1/4# gel flake per sack and 3%  $\text{CaCl}_2$ . WOC 12 hrs. Test to 600# prior to drilling out.

7" intermediate casing: 125 sacks 50/50 Class "B" Poz w/ 6% gel mixed with 7.87 gals water per sack followed by 70 sacks Class "B" w/ 2%  $\text{CaCl}_2$  (278 cu.ft.) WOC 12 hrs. Run temp survey 8 hrs. after plug down.

4-1/2" liner: Precede cement with 20 bbls. gel water. Cement with 270 sacks (442 cu.ft.) 50/50 Class "B" Poz w/ 6% gel, 1/4# gel flake per sack and 0.6% Halad 9 or equivalent.