

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, New Mexico

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
At surface 1530' FSL & 1120' FWL
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
9 miles northwest of Aztec, New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 1120'

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 400'

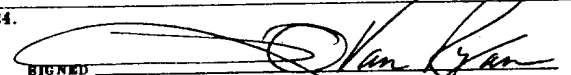
21. ELEVATIONS (Show whether DF, RT, GR, etc.)
6231'

23. 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'	106 sxs (125 cu. ft.)
8-3/4"	7"	20#	4965'	7" 107 sxs (160 cu. ft.) 1st stg
6-1/4"	4-1/2"	10.5#	4815'-7000'	7" 153 sxs (311 cu. ft.) 2nd stg
	4-1/2"	11.6#	7000'-7415'	304 sxs (454 cu. ft.)
	2-3/8"	4.7#	7415'	
	1-1/4"	2.3#	2350'	

Surface formation is Nacimientó.
Top of Ojo Alamo sand is at 1459'.
Top of Pictured Cliffs sand is at 2637'.
Top of Cliff House sand is at 4255'.
Fresh water mud will be used to drill from surface to intermediate total depth.
An air system will be used to drill from intermediate to total depth.
It is anticipated that an IES and a GR-Density log will be run at intermediate depth.
It is anticipated that a GR-Density and a GR-Induction log will be run at total depth.
It is expected that this well will be drilled before September 31, 1979. This depends on time required for approvals, rig availability 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 subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.  TITLE District Production Manager DATE September 27, 1979

(This space for Federal or State office use)

PERMIT NO. APPROVED BY

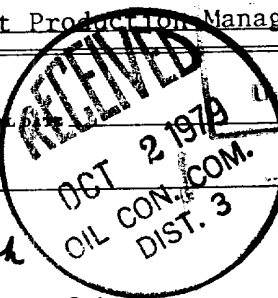
APPROVED BY TITLE DATE

CONDITIONS OF APPROVAL, IF ANY:

Additional well needed pursuant to New Mexico order R-170-1, D.L.L. ratification effective July 1, 1979.

*See Instructions On Reverse Side

NMOCC



30-045-23872
5. LEASE DESIGNATION AND SERIAL NO.
SF-077651
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME
Richardson
9. WELL NO.
#10E
10. FIELD AND POOL, OR WILDCAT
Undesignated Fruitland Basin Dakota
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 10-31N-12W
12. COUNTY OR PARISH
San Juan
13. STATE
New Mexico

17. NO. OF ACRES ASSIGNED TO THIS WELL
160.4/320
20. ROTARY OR CABLE TOOLS
Rotary
22. APPROX. DATE WORK WILL START*
August 31, 1979

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

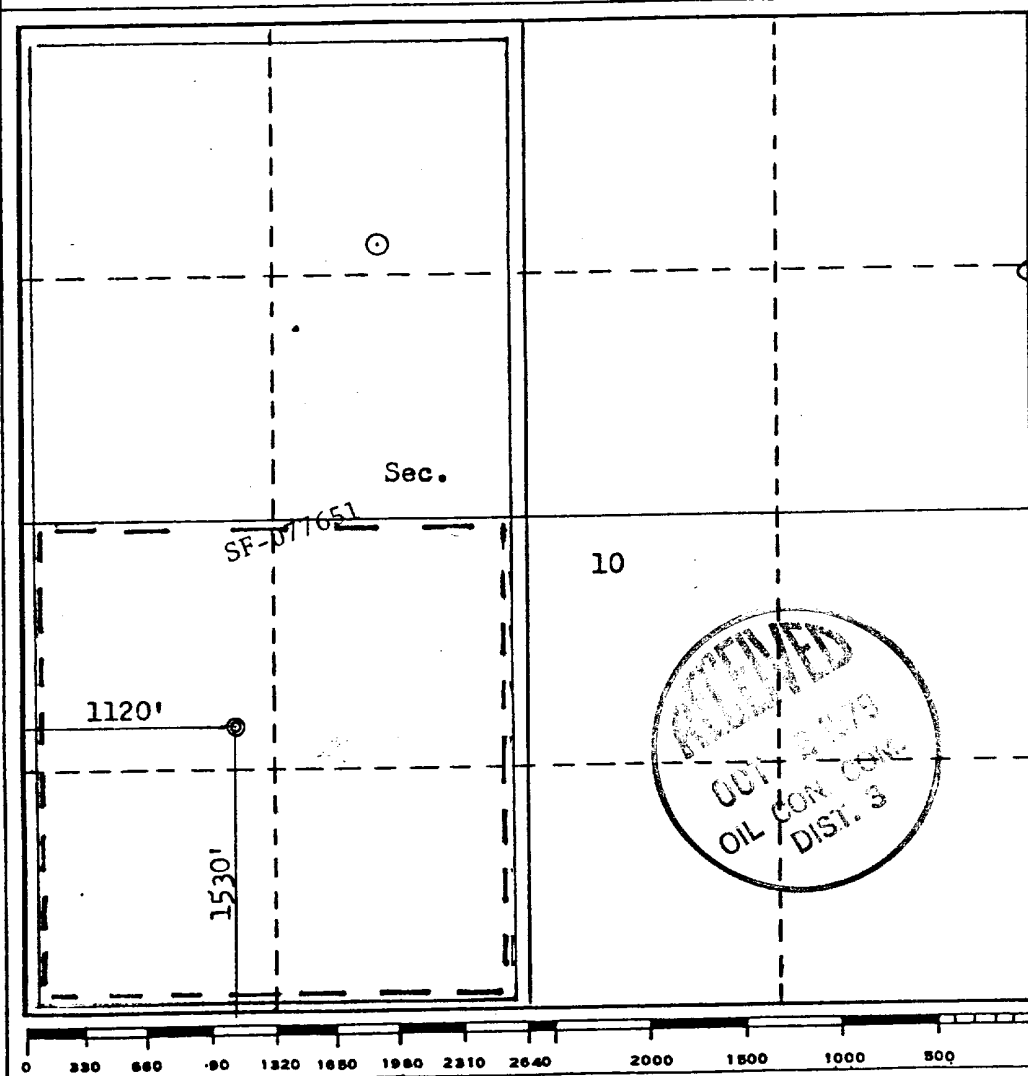
Operator SOUTHLAND ROYALTY COMPANY			Lease RICHARDSON		Well No. 10-E
Unit Letter L	Section 10	Township 31N	Range 12W	County San Juan	
Actual Footage Location of Well: 1530 feet from the South line and 1120 feet from the West line					
Ground Level Elev. 6231	Producing Formation Dakota-Fruitland	Pool Basin Dakota-Undesignated Fruitland		Dedicated Acreage: 320/160 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 _____

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 _____
Position
District Production Manager
Company
Southland Royalty Company
Date
September 27, 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 **SEPTEMBER 26, 1979**
Registered Professional Engineer and/or Land Surveyor
Fred B. Kennedy
Certificate No. **3950**

DRILLING SCHEDULE - RICHARDSON #10E

Location: 1530' FSL & 1120' FWL, Section 10, T31N, R12W, San Juan County, NM

Field: Basin Dakota/Fruitland

Elevation: 6231' GR

Geology: INTERMEDIATE AND TD DEPTHS ARE CRITICAL. ACCURATE PIPE STRAPS ON LOST BIT RUNS ARE NECESSARY.

Formation Tops:

Ojo Alamo	1459'	Intermediate	4965'	Graneros	7171'
Fruitland	2302'	Point Lookout	5015'	Dakota	7264'
Pictured Cliffs	2637'	Gallup	6370'	Total Depth	7415'
Cliff House	4255'	Greenhorn	7080'		

Logging Program: IES & GR-Density at Intermediate TD.
GR-Density and GR-Induction at total depth

Coring Program: None

Natural Gauges: Gauge at lost connection above Point Lookout, Dakota and at TD
Gauge any increase in gas flow.

Drilling:

Contractor:

Tool Pusher:

SRC Ans. Service: 325-1841

SRC Representative:

Dispatch Number: 325-7391

Mud Program:

Materials:

<u>Casing Program:</u>	<u>Hole Size</u>	<u>Depth</u>	<u>Casing Size</u>	<u>Wt. & Grade</u>	
	12-1/4"	200'	9-5/8"	36#	K-55
	8-3/4"	4965'	7"	20#	K-55
	6-1/4"	4815'-7000'	4-1/2"	10.5#	K-55
	6-1/4"	7000'-7415'	4-1/2"	11.6#	K-55

Float Equipment:

9-5/8" Surface Casing: Pathfinder Guide Shoe, type "A".

7" Intermediate Casing: Pathfinder, Type "A" guide shoe and self-fill insert float valve. Five Pathfinder rigid centralizers. Run float 2 jts above shoe. Run centralizers every other jt above shoe. Dowell stage tool at 2837". Run cement basket one joint below and five rigid centralizers above tool.

4-1/2" Liner: Liner hanger with neoprene pack-off.
Pathfinder type "AP" guide shoe and type "A" float collar.

Tubing:

Wellhead Equipment:

9-5/8" X 10", 2000#, casing head.
10" X 6", 2000#, tubing head.

DRILLING SCHEDULE - RICHARDSON #10-E

Cementing Program:

9-5/8" Surface Casing: 106 sxs or (125 cu.ft.) of Class "B" with 1/4# gel flake per sx and 3% CaCl. WOC 12 hours. Test to 600# prior to drilling out. (Volume is 100% excess.)

7" Intermediate Casing: Stage 1: 107 sxs or (160 cu.ft.) of 50/50 Class "B" Poz with 6% gel (mixed with 7.2 gals water per sx, 50% excess to cover Cliff House.)

Stage 2: 153 sxs or (311 cu.ft.) or 50/50 Poz with 6% gel followed by 70 sxs of Class "B" with 2% CaCl. (50% excess to cover Ojo Alamo.)

WOC and circulate between stages as required by well conditions. WOC 12 hours. Test to 1000 psi before drilling out. Run temperature survey after 8 hours.

4-1/2" liner: 304 sxs or (454 cu.ft.) or 50/50 Poz with 6% gel, 1/4# gel flake per sx and 6% Halad 9 or equivalent. (70% excess.) If hole gets wet and mist drilling is required, use 358 sxs or (534 cu.ft.) for 100% excess to circulate liner.

Precede cement with 20 barrels gel water.



Southland Royalty Company

September 27, 1979

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

Attention:

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.

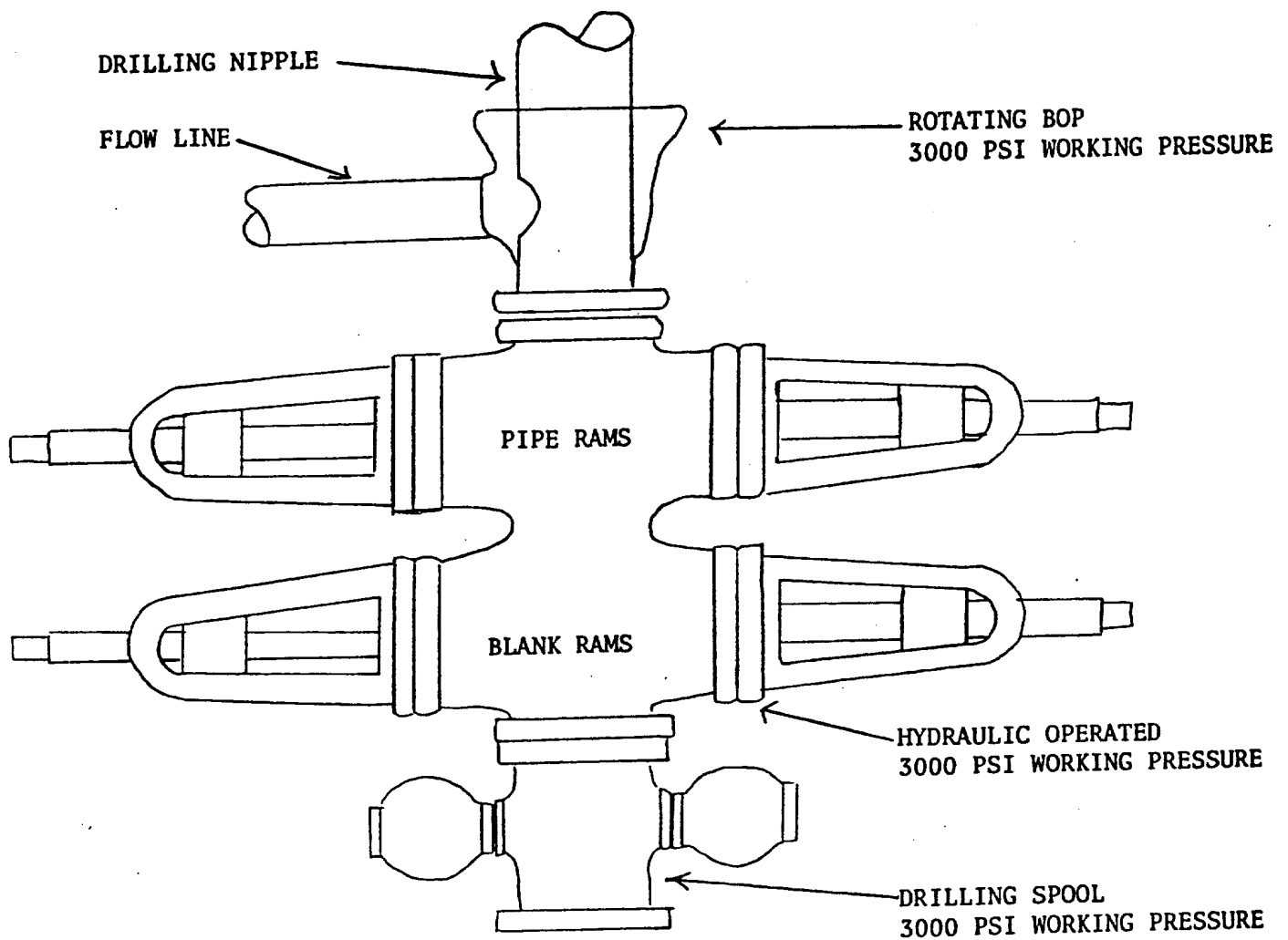
The preventer is 3000# working pressure and 6000# test.

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



Southland Royalty Company

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

Attention: District Engineer

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: September 27, 1979

Name: 

Title: District Production Manager



Southland Royalty Company

September 27, 1979

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

Attention: District Engineer

Dear Sir:

Enclosed please find a map showing existing roads and planned access roads to Southland Royalty Company's Richardson #10E 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.

Contractor will furnish restroom facilities on location.

There will be no air strips or camps.

Also, enclosed is a location layout showing approximate location of rig, pits and pipe racks and cut required to build this location.

Water supply will be Farmer's Ditch.

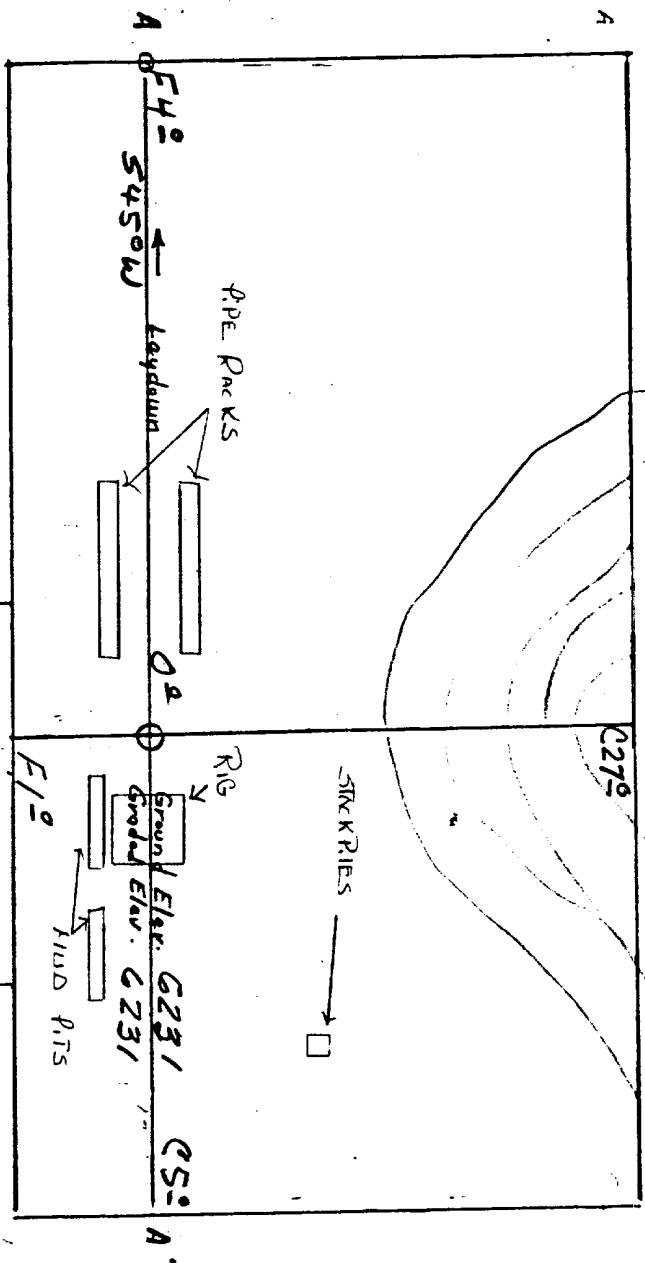
The location will be restored according to Bureau of Land Management standards. This work will begin when all related construction is finished.

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

Yours truly,

L. O. Van Ryan
District Production Manager

LOVR/dg

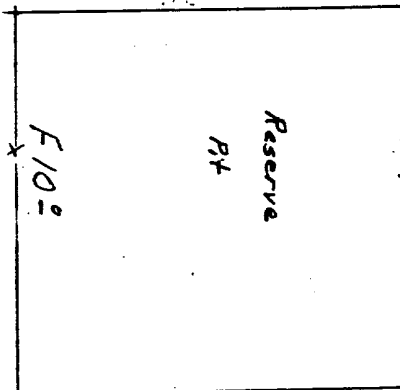


Vert. 1"=40' A-A' Horiz: 1"=100'

6250				
6240				
6230				
6220				

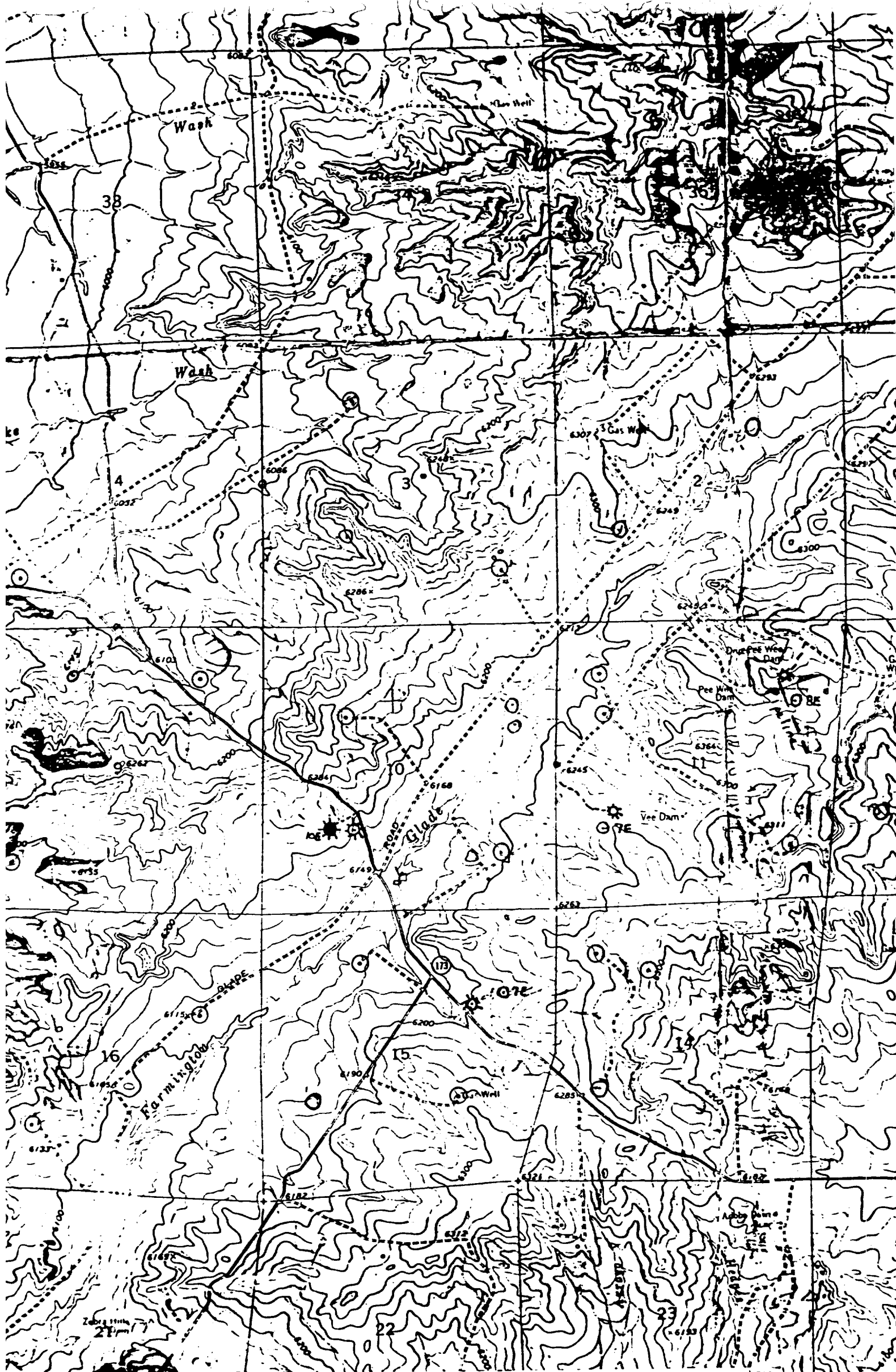
B-B'

6250				
6240				
6230				
6220				



Vert: 1"=40' C-C' Horiz: 1"=100'

D-D'



PROPOSED LOCATION ●
EXISTING LOCATIONS ○
PROPOSED ROAD - - -
EXISTING ROADS —

Vicinity Map for
SOUTHLAND ROYALTY COMPANY #10-E RICHARDSON
1530°FSL 1120°FWL Sec 10-T31N-R12W
SAN JUAN COUNTY, NEW MEXICO