

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

5. LEASE DESIGNATION AND SERIAL NO.

U-44211

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Westwater Creek

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Section 4, T38S, R22E

12. COUNTY OR PARISH 13. STATE

San Juan Utah

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 Wildcat SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR

Southland Royalty Company

3. ADDRESS OF OPERATOR

P.O. Drawer 570, Farmington, New Mexico 87499-0570

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

At surface
600' FSL & 1820' FEL SWSE

At proposed prod. zone
Same as above

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

8 miles South of Blanding, Utah

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

600'

16. NO. OF ACRES IN LEASE

2557.80

17. NO. OF ACRES ASSIGNED TO THIS WELL

80

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

n/a

19. PROPOSED DEPTH

6490'

20. ROTARY OR CABLE TOOLS

Rotary

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

5490' GL

22. APPROX. DATE WORK WILL START*

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13-1/2"	10-3/4"	32.75#	200'	125 sacks (148 cu.ft.)
7-7/8"	5-1/2"	15.50#	6490'	1st Stge: 240 sxs (336 cu.ft.) 2nd Stge: 365 sxs (528 cu.ft.)

- 1) Drill 13-1/2" surface hole to 200' and set 10-3/4" casing, cement to surface.
- 2) Drill 7-7/8" hole to Total Depth, Log BOP checks in Tour Report Book.
- 3) Core and run DST's as necessary for evaluation of the Pennsylvanian section.
- 4) Run logs and 5-1/2" casing if productive.
- 7) Run cased hole logs, perforate and stimulate as needed.

APPROVED BY THE DIVISION OF OIL, GAS, AND MINING

DATE: August 2, 1981
BY: M. J. Munder

RECEIVED
AUG 3 1981

DIVISION OF OIL, GAS & MINING

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 R. E. Fielder TITLE District Engineer DATE August 17, 1981

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

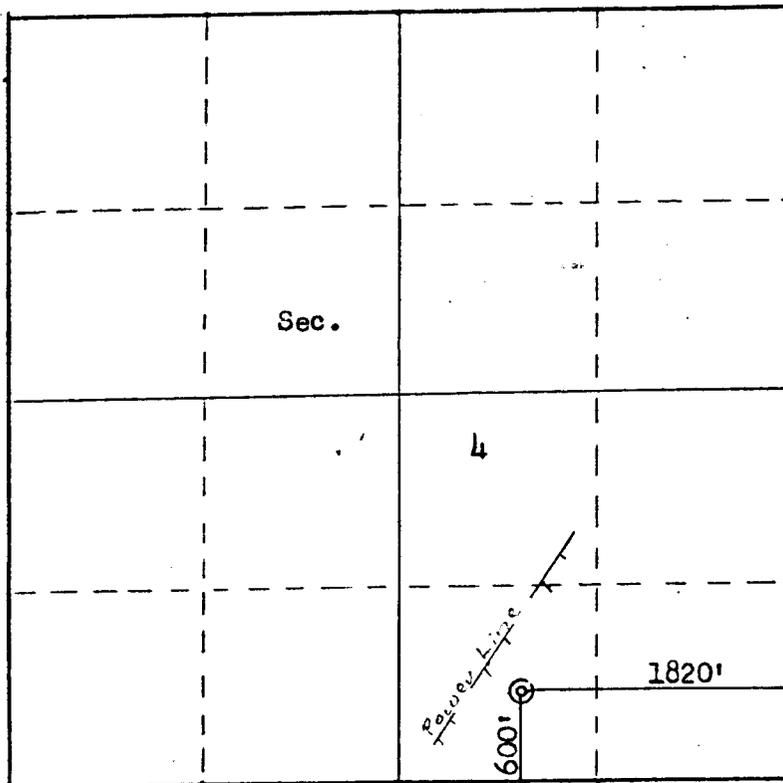
COMPANY SOUTHLAND ROYALTY COMPANY

LEASE WESTWATER CREEK WELL NO. 1

SEC. 4, T. 38S, R. 22E
SAN JUAN COUNTY, UTAH

LOCATION 600'FSL 1820'FEL

ELEVATION 5490 ungraded ground



SCALE—4 INCHES EQUALS 1 MILE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTE OF ACTUAL SURVEYS MADE BY ME UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Fred B. Kerr Jr.
Fred B. Kerr Jr.

SEAL:

Registered Land Surveyor.

#3950

SURVEYED October 3 1980

FARMINGTON, N. M.

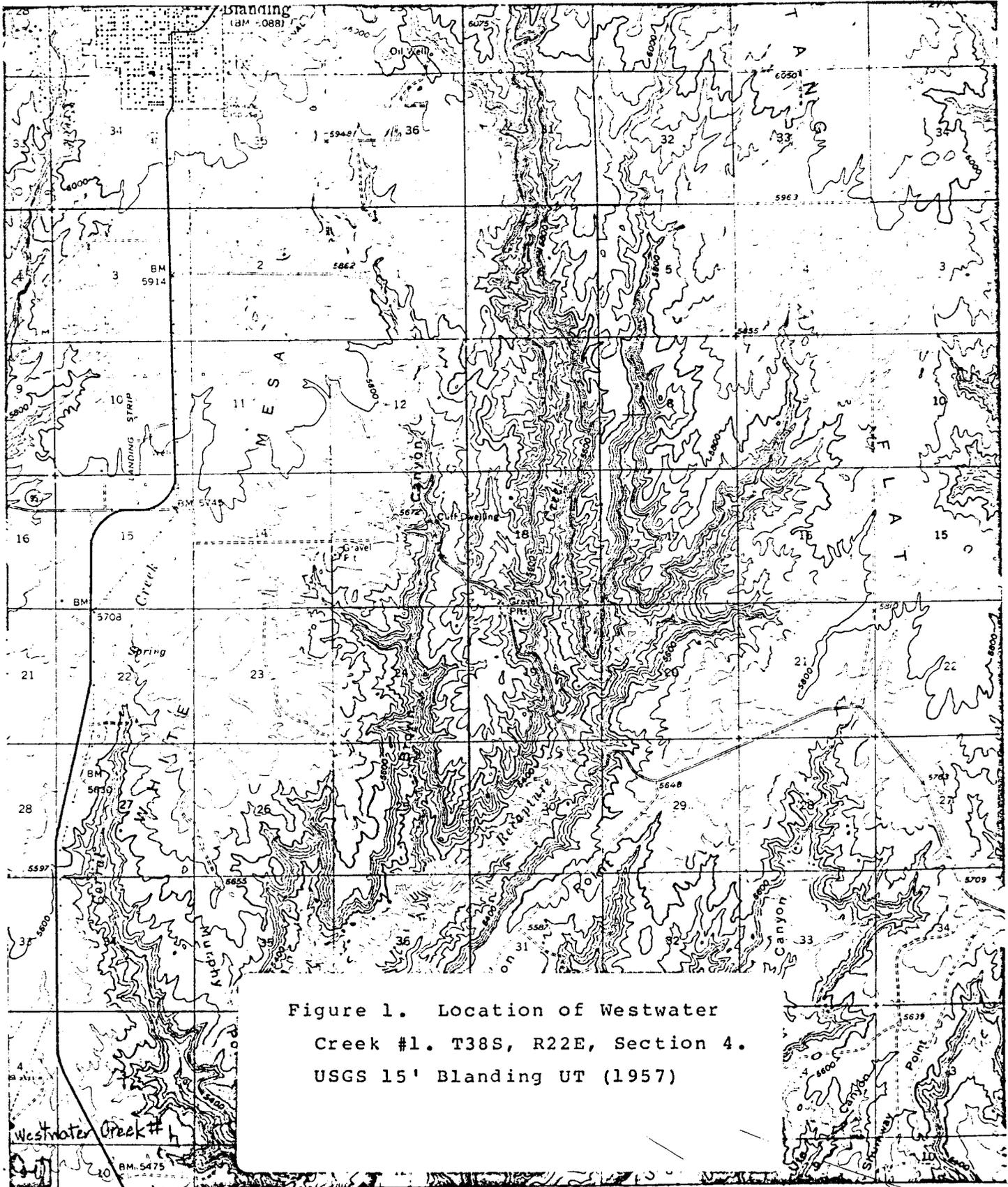


Figure 1. Location of Westwater
 Creek #1. T38S, R22E, Section 4.
 USGS 15' Blanding UT (1957)

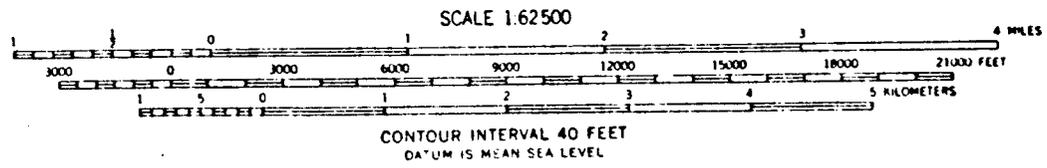
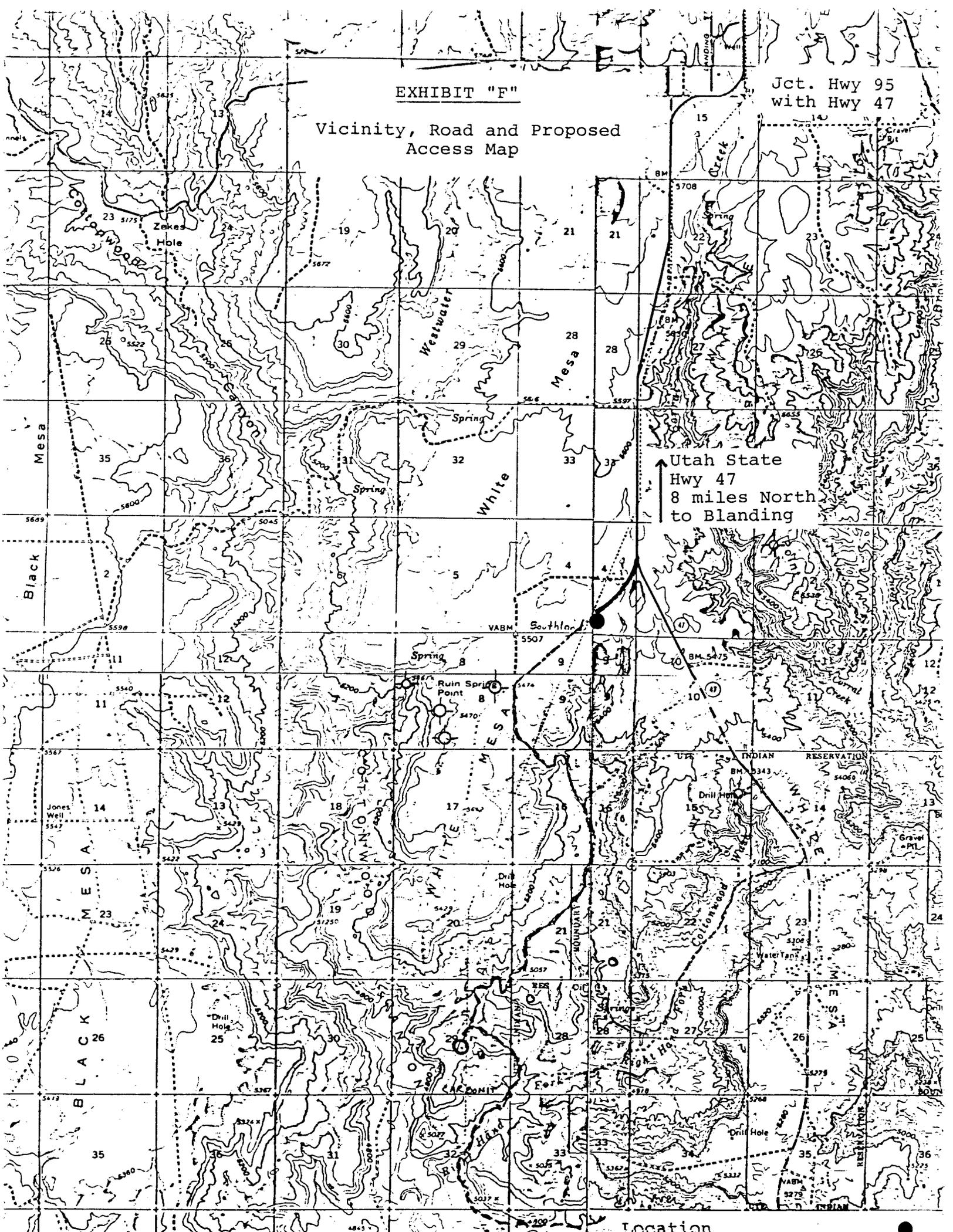


EXHIBIT "F"

Vicinity, Road and Proposed Access Map

Jct. Hwy 95
with Hwy 47

Utah State
Hwy 47
8 miles North
to Blanding



United States Department of the Interior
Geological Survey

NEPA CATEGORICAL EXCLUSION REVIEW

PROJECT IDENTIFICATION

Operator/Project Name Southland Royalty Company / 1 Westwater Creek
 Project Type single zone oil exploration well
 Project Location 600' FSL / 1020' FEL, sec. 4, T. 38 S., R. 22 E.
San Juan County, Utah
 Lease Number U-44211
 Date Project Submitted September 3, 1981

FIELD INSPECTION

Date June 10, 1981

Field Inspection
Participants

Max Larsen - Southland Royalty Co.
Peggy Powers - Salmon Ruins Museum - Archaeologist
Rob Turri / Opal Redshaw - Bureau of Land Management
Terry Galloway - U.S. Geological Survey

CATEGORICAL EXCLUSION REVIEW INFORMATION SOURCE

Criteria 516 DM 2.3.A.	Federal or State Agency			Local and Private Correspondence	Previous NEPA documents	Other Studies and Reports	Staff Expertise	Onsite Inspection (date)	Other
	Correspondence	Phone Calls	Meetings						
1. Public health and Safety						✓	✓		
2. Unique Characteristics							✓		
3. Environmentally Controversial							✓		
4. Uncertain and Unknown Risks							✓		
5. Establishes Precedent							✓		
6. Cumulatively Significant							✓		
7. National Register Historic Places	✓2								
8. Endangered or Threatened Species	✓2								
9. Violate Federal, State, Local or Tribal Laws						✓	✓		

August 28, 1981 / D.E.E.
Date Prepared

George Duwack / for DEE
Signature of Preparer

I have reviewed the proposal in accordance with the categorical exclusion review guidelines. This proposal would not involve any significant effects and, therefore, does not represent an exception to the categorical exclusions.

SEP 25 1981
Date

W. T. Mouton FOR E. W. GUYNN
DISTRICT OIL & GAS SUPERVISOR
District Supervisor

Well log should read:

Southland Royalty Company

U-44211

No. 1 Westwater Creek

SWSE 4-385-22E

San Juan County, Utah

The surface use plan is amended to include:

1. The low side of the reserve pit will be constructed in at least three to four feet of cut.
2. The seeding prescription will be:
 - 1 lb/acre Indian Ricegrass (Oryzopsis hymenoides)
 - 1 lb/acre Fourwing Saltbush (Atriplex canescens)
 - 2 lbs/acre Crested Wheatgrass (Agropyron desertorum)
 - 1 lb/acre Hilaria, if available



United States Department of the Interior

IN REPLY REFER TO

T38SR22E Sec. 4
(U-069)

BUREAU OF LAND MANAGEMENT

Moab District
San Juan Resource Area
P.O. Box 7
Monticello, Utah 84535

September 14, 1981

Memorandum

To: USGS, Durango, CO

From: Area Manager, San Juan

Subject: Southland Royalty Company, Westwater Creek #1

We concur with approval of the Application for Permit to Drill, provided the following amendments to the Surface Use Plan are included in the approval:

1. The low side of the reserve pit will be constructed in at least three to four feet of cut.
2. The seeding prescription will be:
 - 1 lb/acre Indian Ricegrass (Oryzopsis hymenoides)
 - 1 lb/acre Fourwing Saltbush (Atriplex canescens)
 - 2 lbs/acre Crested Wheatgrass (Agropyron desertorum)
 - 1 lb/acre Hilaria, if available

Edward L. Scheuch

RECEIVED

SEP 15 1981

**U. S. GEOLOGICAL SURVEY
DURANGO, COLO.**

EXHIBIT "B"

TEN POINT COMPLIANCE PROGRAM OF NTL-6 APPROVAL OF OPERATIONS

SOUTHLAND ROYALTY COMPANY

WESTWATER CREEK #1

600' FSL & 1820' FEL
Section 4, T38S, R22E
San Juan County, Utah

1) The Geologic Surface Formation:

The surface formation is Burro Canyon

2) Estimated Geologic Tops and Important Markers:

See Exhibit "C".

3) Estimated Depths of Anticipated Water, Oil, Gas or Minerals:

Navajo	1270'	Water
Hermosa	5210'	Oil and Gas

4) Proposed Casing Program:

See Exhibit "C".

5) Operators Minimum Specifications for Pressure Control:

Exhibit "D" is a schematic diagram of the blowout preventer equipment. The BOP's will be hydraulically tested to the full working pressure after nipping up and after any use under pressure. Pipe rams will be operationally checked each 24 hours. Blind rams and annular preventer will be operationally checked each time pipe is pulled out of the hole. All checks will be noted in the Tour Report Book.

Accessories to the BOP will include an upper and lower kelly cock, floor safety valve, drill string BOP and choke manifold with pressure rating equivalent to the BOP stack.

6) Type and Characteristics of the Proposed Circulating Muds:

See Exhibit "C". Materials will be on site to control any anticipated downhole problems as well as any possible fluid spills on the surface.

- 7) The Auxiliary Equipment to be used: ✓
- a) A kelly cock will be kept in the string at all times,
 - b) A string float will be used at the bit at all times,
 - c) A stabbing valve will be on the floor to be used at any time the kelly is not in the string,
 - d) A mud logging unit for gas detection will be monitoring the drilling.
- 8) Testing, Coring and Logging Program to be followed:
- See Exhibit "C".
- 9) Any Anticipated Abnormal Pressures or Temperatures: ✓
- No abnormal pressures or temperatures are expected in this well.
- No hydrogen sulfide or other hazardous fluids or gases are expected in this well.
- 10) Anticipated Starting Date and Duration of the Operations:
- The anticipated starting date is October 20, 1981.
Operations should be completed within 60 days of spud date.

EXHIBIT "C"

SOUTHLAND ROYALTY COMPANY - DRILLING SCHEDULE

WESTWATER CREEK #1

600' FSL & 1820' FEL
Section 4, T38S, R22E
San Juan County, Utah

Field: Wildcat Elevation: 5490' GL

Geology:

Formation Tops:	Morrison	120'	Hermosa	5210'
	Bluff	820	Upper Ismay	6120'
	San Rafael	970'	Lower Ismay	6265'
	Navajo	1270'	Gothic Shale	6305'
	Kayenta	1900'	Desert Creek	6355'
	Wingate	2020'	Chimney Rock Shale	6430'
	Chinle	2315'	Akah	6460'
	Moenkopi	2965'	Salt	6485'
	Cutler	3220'	Total Depth	6490'

Logging Program: DIL/SFL run from Total Depth to Surface Casing.
GR-CNL/FDC with Caliper from Total Depth to 2200',
GR-BHC/Sonic with Caliper from Total Depth to 5100',
Dipmeter from Total Depth to 5100' (with Geologist's
consent). Mud logger and Wellsite Geologist to be
on location from 2200' to Total Depth.

Coring and Sampling Program:

30' samples from 2200' to 5100',
10' samples from 5100' to Total Depth.
Core points will be picked by the Wellsite Geologist.

Drill Stem Testing:

DST to be run on all shows below 5100'.

Drilling:

Contractor:

Tool Pusher:

SRC Rep:

SRC Answerg Service: 505-325-1841
Dispatch Number: 505-325-7391

Mud Program:

0'- 200' Spud Mud

200'-3000' Benex and water. Mud as necessary for lost circulation or tight hole conditions.

3000'-T.D. Fresh water low solids, mud should be treated for expected anhydrite from Hermosa to Total Depth.

Materials:

Casing Program:	Hole Size	Depth Set	Casing Size	Weight & Grade
	13-1/2"	200'	10-3/4"	32.75# H-40
	7-7/8"	6490'	5-1/2"	15.50# K-55

Float Equipment:

10-3/4" Surface Casing: B & W Guide Shoe (FC01).

5-1/2" Production Casing: B & W Guide Shoe (FC01). B & W self fill flapper float collar (FP01) run one joint off bottom. Five (5) B & W standard centralizers (AA02) run every other joint above shoe. Stage tool at + 3300' with a cement basket below and five (5) B & W standard centralizers (AA02) every other joint above tool.

Wellhead Equipment: 10-3/4" X 10", 2000# bradenhead.

Cement Program:

10-3/4" Surface Casing: 125 sacks (148 cu.ft.) of Class "B" with 1/4# gel flake per sack and 3% CaCl₂. WOC 12 hours. Test to 600 psi prior to drilling out. (100% excess to circulate cement to surface.)

5-1/2" Production Casing: STAGE ONE

170 sacks (253 cu.ft.) of Class "B" 50/50 Poz with 6% gel and 1/4# gel flake per sack, followed by 70 sacks (83 cu.ft.) of Class "B" with 2% CaCl₂. (50% excess to cover Hermosa.)

STAGE TWO

315 sacks (469 cu.ft.) of Class "B"
50/50 Poz with 6% gel and 1/4# gel flake
per sack, followed by 50 sacks (59 cu.ft.)
of Class "B" with 2% CaCl₂. (50% excess
to cover Navajo.)

WOC and circulate as necessary between
stages.

L. O. Van Ryan
District Production Manager

JAC/LOVR/eg

8/17/81



Southland Royalty Company

August 17, 1981

United States Geological Survey
Room 2000, Administration Building
1745 West 1700th South
Salt Lake City, Utah 84104

RE: 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.

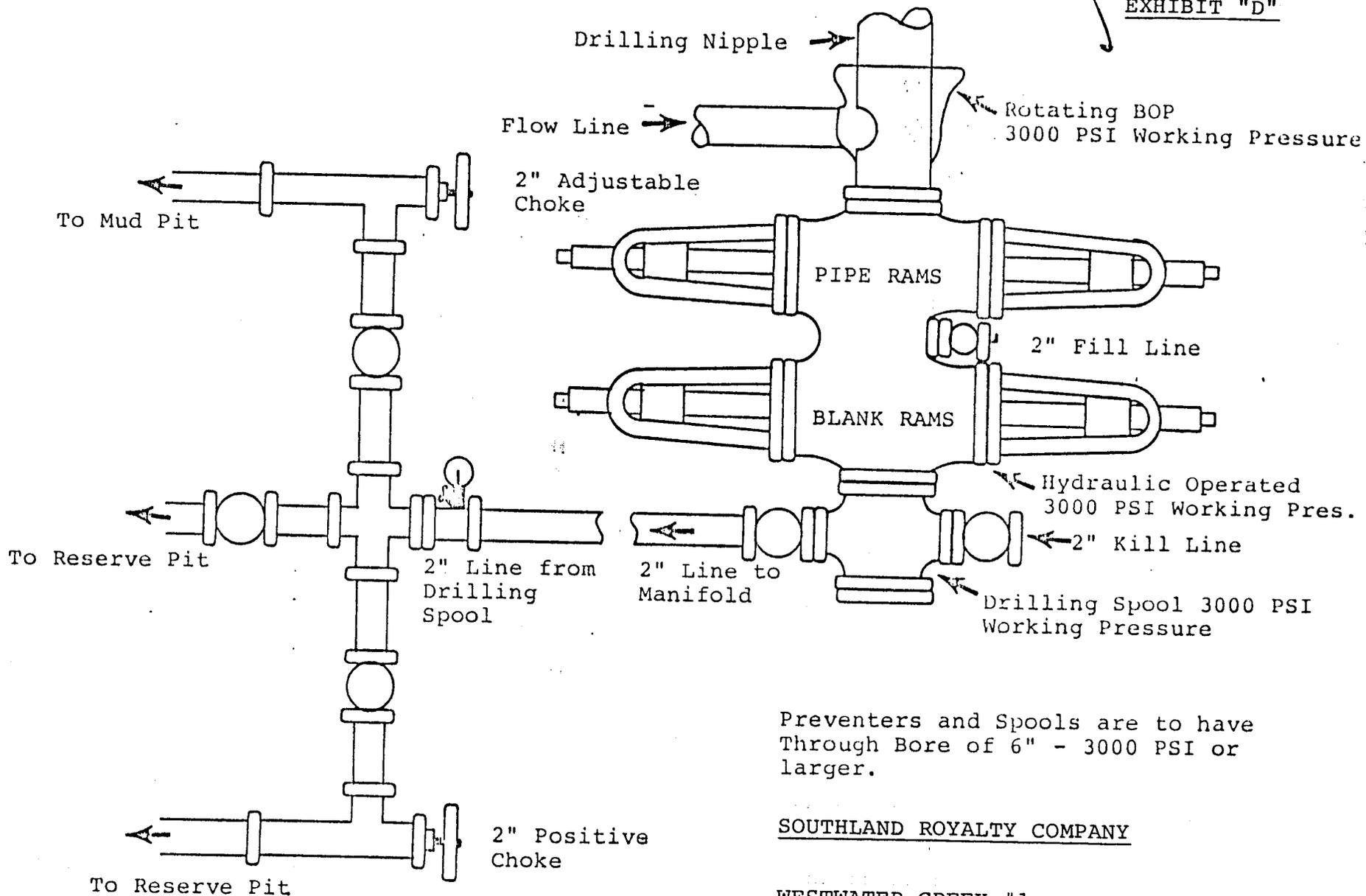
The preventer is 3000# working pressure and 6000# test pressure. All crews will be thoroughly trained in the operation of this preventer. The preventer will be tested frequently enough to ensure proper operation.

Sincerely,

SOUTHLAND ROYALTY COMPANY

R. E. Fielder
District Engineer

REF/eg



Preventers and Spools are to have Through Bore of 6" - 3000 PSI or larger.

SOUTHLAND ROYALTY COMPANY

WESTWATER CREEK #1

600' FSL & 1820' FEL
Section 4, T38S, R22E
San Juan County, Utah

EXHIBIT "E"

SOUTHLAND ROYALTY COMPANY

LEASE: WESTWATER CREEK #1

LEASE NO: U-44211

LOCATION: 600' FSL & 1820' FEL, Section 4, T38S, R22E

DATE: 8/17/81

SURFACE USE AND OPERATIONS PLAN

1. Existing Roads

A. See Exhibit "F".

B. Route and distance from nearest town: 8 miles South of Blanding, Utah

C. Access Roads to Location: See Exhibit "F"

D. Exploratory Well: See Exhibit "F"

E. Development Well: ----

F. Plans for Improvement and/or Maintenance:

See No. 2

2. Planned Access Roads - See Exhibit "F"

No Access Road will be necessary, pad will extend to the County Road.

3. Location of Existing Wells - See Exhibit "F"

4. Location of Existing and/or Proposed Facilities Owned and/or Controlled by Southland Royalty Company:

A. Existing Facilities: There are no existing facilities in the area.

B. New Production Facilities:

All new production facilities will be located on wellsite. The proposed production facility layout and dimensions are shown in Exhibit "G". Construction materials will be obtained from the location itself. Pits will be fenced and covered as soon as possible to protect wildlife and livestock.

C. Plans for Rehabilitation of Disturbed Area:

All surface not needed for operation will be recontoured to blend with existing topography and reseeded with the recommended seed mixture provided by the surface managing agency or land owner.

5. Location and Type of Water Supply:

A. Location: Energy Fuels

Supply: Water well

B. Method of Transportation: Truck

C. Water wells to be drilled: None

6. Source of Construction Materials:

Location construction materials will be obtained on the location itself.

7. Methods of Handling Water Disposal:

A&B. Cuttings and Drilling Fluids:

All returns will be put in the reserve pit and buried when the location is recontoured.

C. Produced Fluids:

Tanks will be used for storage of produced fluids during testing.

D. Sewage:

Sewage will be contained in a portable latrine or bored hole and suitable chemical will be used to decompose waste materials.

E. Garbage and Other Water Materials:

Garbage and other waste materials will be put in the burn pit and all flammable matter will be burned. Burn pits will be enclosed with small mesh wire to prevent littering. Burn pit will have steep sides and be dug at least 6' into solid undisturbed material.

F. Clean-up of Well-Site:

Upon completion of drilling, all trash and litter will be picked up and placed in the burn pit which will be buried. The reserve pits will be fenced on three sides during drilling and the fourth side will be fenced when drilling is completed. The pit(s) will remain fenced until dry, at which time they will be backfilled.

8. Ancillary Facilities:

There will be no camps or airstrips.

9. Wellsite Layout:

- A. Cuts and Fills: See Well-Site Layout (Exhibit "H").
- B. Location of Pits and Stockpiles: See Well-Site Layout (Exhibit "H")
- C. Pad Orientation: See Well-Site Layout (Exhibit "H").
- D. Lining of Pits: The reserve pits will be lined with 3-4 inches of Bentonite, steel mud tanks will be used during drilling operations.
- E. Safety: Safety will be of primary concern at all times and applicable safety regulations will be enforced at all times.

10. Plans for Restoration of Surface:

A. Backfilling, Leveling, Contouring and Water Disposal:

The top 8" of topsoil will be stripped from the location and stockpiled on west side of location for use after completion of contouring at which time it will be spread on the location. Backfilling of the reserve pits(s) will be done as soon as the pits are dry.

Contouring of the location will be done in such a manner as to blend into and with the existing topography. If production is encountered, all areas not directly needed for operation of the well, will be seeded according to the surface managing agency or land owner's stipulations.

Waste Disposal will begin immediately after completion of drilling operations. All trash and litter will be picked up, placed in the burn pit and buried with a minimum of three (3) feet.

B. Revegetation and Rehabilitation:

Revegetation of the location and access roads will begin with reseeded which will be done in the Spring or Fall of the year with the seed mix specified by the appropriate agency or owner. Rehabilitation of the location and access road will include contouring, replacement of topsoil and reseeded as noted above.

C. Prior to Rig Release:

The pits will be fenced on all four sides with a stock-tight fence. Fence will remain until pits are backfilled.

D. Oil on pit will be removed or overhead flagging will be installed for the protection of waterfowl

E. Timetable of Rehabilitation Operations:

Commencement of rehabilitation work will be upon completion of drilling. Completion of rehabilitation work will depend on weather conditions and time required for pits to dry.

11. Other Information Used:

A. Topography, Soil Characteristics, Geologic Features, Flora and Fauna:

The soil is sand, no distinguishing geological features are present. The area is covered with sparse grasses and sage brush.

B. Surface-Use and Ownership:

The primary surface use is grazing. Surface ownership is Federal.

C. Proximity of Water, Occupied Dwelling, Archaeological, Historical or Cultural Sites:

Nearest Water: Cottonwood Canyon 3 miles West of location

Nearest Dwelling: \pm 4 miles South of location

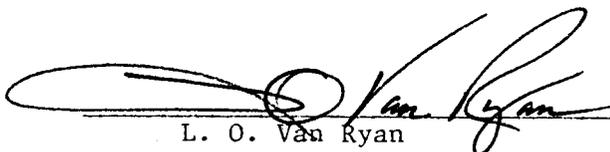
Archaeological: An archaeological report is enclosed.

12. Lessee or Operator's Field Representative:

Mr. Ross Lankford will be Southland Royalty Company's Field Representative supervising these operation. The Southland Royalty Company's Office Phone Number is 505-325-1841.

13. Certification:

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 as stated and in conformity with this plan and the terms and conditions under which it is approved.



L. O. Van Ryan
District Production Manager

8/17/81

Date

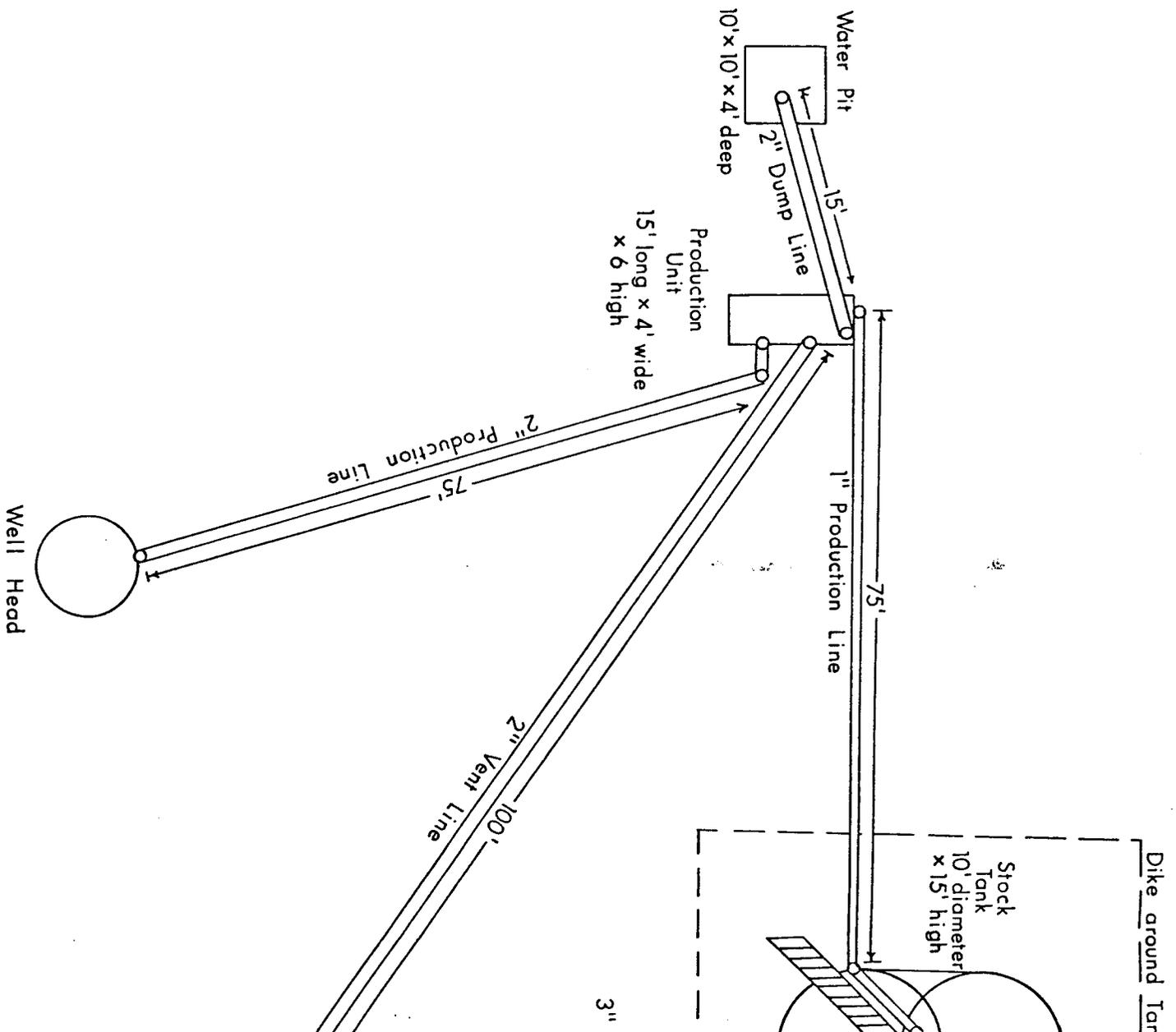


Southland Royalty Company
ROCKY MOUNTAIN DISTRICT
FARMINGTON NEW MEXICO

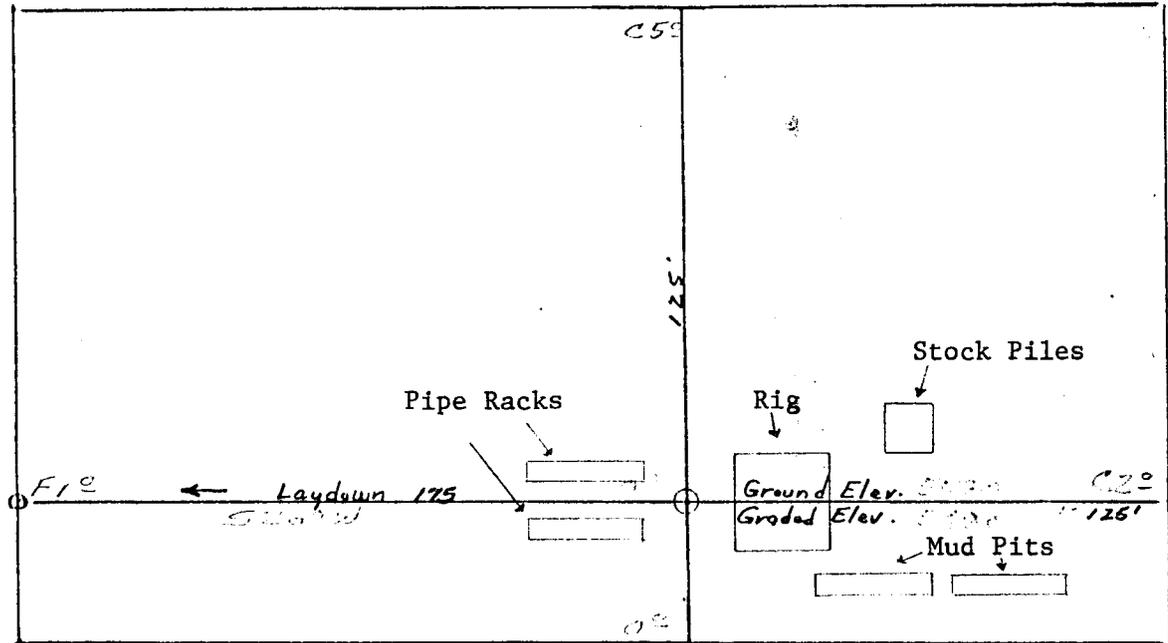
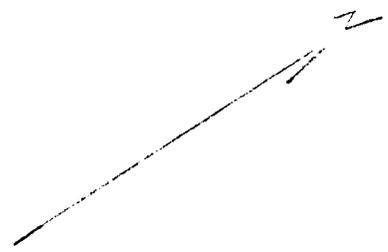
PROPOSED PRODUCTION FACILITY LAYOUT

WELL WESTWATER CREEK #1
600' FSL & 1820' FEL
Section 4, T38S, R22E
LOCATION San Juan County, Utah

NOTE: ALL PITS WILL BE FENCED AND
A DIKE WILL BE CONSTRUCTED
AROUND TANK BATTERY.



Vicinity Map for
 SOUTHLAND ROYALTY CO. #1 WESTWATER CREEK
 600' FSL 1820' FEL Sec. 4-T38S-R22E
 SAN JUAN COUNTY, UTAH



Vert. 1"=40'

A

ε

Horiz: 1"=100'

Reserve
Pit

Vert: 1"=40'

Project No. 43-81-C

Federal Antiquities
Permit No. 80-UT-186

An Archaeological Survey of
Westwater Creek Unit #1,
San Juan County, Utah

for

Southland Royalty

Prepared and Submitted by

Margaret A. Powers
Principal Investigator

DIVISION OF CONSERVATION ARCHAEOLOGY

Contributions to Anthropology Series, No. 371
San Juan County Archaeological Research Center and Library

June 17, 1981

ABSTRACT

On June 10, 1981, the Division of Conservation Archaeology of the San Juan County Museum Association completed an archaeological survey of Westwater Creek Unit #1 for Southland Royalty. The study area is located south of Blanding in San Juan County, Utah and is under the jurisdiction of the Bureau of Land Management.

Five isolated loci of artifacts were recorded adjacent to or on the proposed location. They apparently represent isolated artifact loss or use. Archaeological clearance is recommended with the stipulation that the equipment operators be alerted to the possibility that cultural remains might be uncovered during construction, and that they be informed of the appropriate notification procedures. A previously recorded site, 42SA3238, located east of the well pad, is not endangered by construction.

INTRODUCTION

On June 10, 1981, the Division of Conservation Archaeology (DCA) of the San Juan County Museum Association conducted an archaeological survey for Southland Royalty of Farmington, New Mexico. Mr. John Crum of Southland Royalty requested the survey on June 3, 1981. Margaret A. Powers administered the project for DCA; Mr. Crum administered the project for Southland Royalty.

In recognition of the limited, nonrenewable nature of archaeological remains, federal and state governments have enacted legislation that is designed to conserve and protect these resources. The principal federal legislation includes the Antiquities Act of 1906 (PL 52-209), the Historic Preservation Act of 1966 (PL 89-665), the National Environmental Policy Act of 1969 (PL 91-852), the 1971 Executive Order No. 11593, the Archaeological and Historical Conservation Act of 1974 (PL 93-291), and the Archaeological Resources Protection Act of 1979 (PL 96-95).

In addition, the states of Arizona, New Mexico, Utah, and Colorado have enacted laws to ensure compliance with federal legislation and to protect archaeological resources within their jurisdiction. Work undertaken in the course of this project is governed by the stipulations of Federal Antiquities Permit No. 80-UT-186 and is for purposes of compliance with these statutes.

Margaret A. Powers, DCA Archaeologist, surveyed the project area for cultural remains. The Moab District Manager of the Bureau of Land Management was notified of the survey schedule prior to beginning fieldwork. The following persons were present during the field inspection: Mr. Bob Turri and Ms. Opal Redshaw, BLM San Juan Resource Area office; Mr. Terry Galloway, United States Geological Survey, Durango office; and Mr. Max Larsen of Southland Royalty.

METHODS

The area was surveyed by walking zigzag transects radiating out from the well stake at 45° intervals. A buffer zone of approximately 40 feet was surveyed around the proposed well pad. The archaeologist recorded all cultural remains. Those whose information potential exceeded what could be extracted during the survey phase were assigned site status. Other cultural remains were documented as isolated loci (IL). Pertinent environmental data were also recorded.

In addition to field inspection, the archaeologist conducted a search of the records at the San Juan Resource Area office to determine if any sites had been previously recorded in the project area. Site and project records required by the Bureau of Land Management were completed.

METHODS

WESTWATER CREEK #1

Legal Description: 600' F/SL 1820' F/EL, Section 4, T38S, R22E,
S.L.M., San Juan County, Utah (Figure 1)

UTM Coordinates: Zone 12, 4151980N, 632625E (well stake)

Map Source: U.S.G.S. 15' Blanding, Utah (1957)

Land Jurisdiction: Bureau of Land Management

Project Area: 300' x 350' (pad) - No road required
(2.4 acres)

Description: The proposed well pad lies adjacent to an existing dirt road, approximately 0.5 miles from its junction with Utah 163. It is located in rolling terrain composed of sandy aeolian ridges. The vegetation is a sage grassland that covers approximately 60% of the ground surface.

Cultural Resources: One previously recorded site, 42SA3238, lies approximately 1,000 feet east of the proposed well pad. It will not be affected by the proposed construction. Five isolated artifact loci were noted (Figure 2).

IL #1 lies approximately 180' northeast of the well stake. It includes 2 small Mesa Verde whiteware sherds from the same vessel and one sandstone chunk.

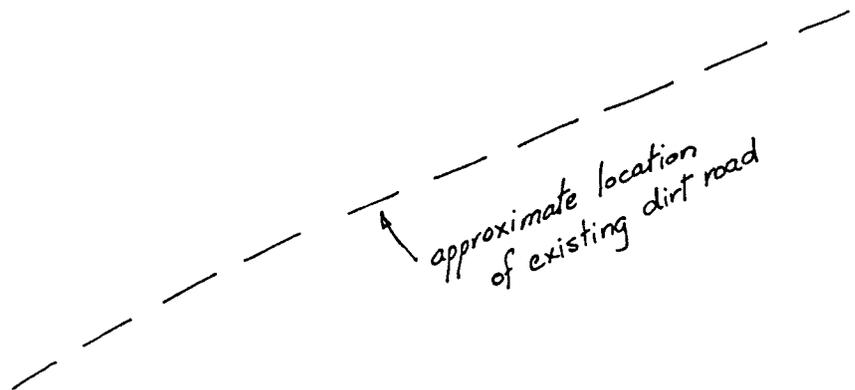
IL #2 lies 100 feet southwest of the well stake. It consists of one Mesa Verde B/W sherd (carbon painted) and one quartzite hammerstone with a flake detached from the hammerstone.

IL #3 lies 80 feet west southwest of the well stake. It consists of one sandstone slab. No artifacts are associated.

IL #4 lies 200 feet southeast of the stake. The locus consists of a fragmentary two-handed, bifacially worn basalt mano.

IL #5 lies 180 feet east of the well stake. It includes one quartzite slab metate fragment and a scatter of approximately five sandstone chunks within a 5 x 5 meter area.

Recommendations: Considering the dispersed distribution of the observed artifacts, it is likely that they represent isolated activity areas or areas of deliberate discard or accidental loss. They do not appear to be related. They do not appear to be eroding from a central location and I do not believe they specify a site locus. The problems with inferring subsurface content from surface assemblages, however, especially in aeolian environments is well known. Consequently, I recommend archaeological clearance with the stipulation that equipment operators be specifically alerted to the possibility that subsurface remains may be present and that they be informed about the appropriate notification procedures should any be noted during construction.



IL #1
2 sherds
1 sandstone chunk

Westwater Creek
#1 Well stake

IL #3
1 sandstone slab

IL #5
1 metal fragment
5 sandstone chunks



IL #2
1 sherd
1 hammerstone

IL #4
1 mano

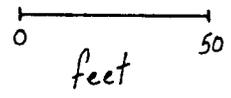


Figure 2. Location of Isolated Loci around Westwater Creek #1 Well Stake

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 Wildcat

2. NAME OF OPERATOR
 Southland Royalty Company

3. ADDRESS OF OPERATOR
 P.O. Drawer 570, Farmington, New Mexico 87499-0570

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface 600' FSL & 1820' FEL
 At proposed prod. zone Same as above

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 8 miles South of Blanding, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 600'

16. NO. OF ACRES IN LEASE 2557.80

17. NO. OF ACRES ASSIGNED TO THIS WELL 80

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

19. PROPOSED DEPTH 6490'

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5490' GL

22. APPROX. DATE WORK WILL START*

5. LEASE DESIGNATION AND SERIAL NO.
 U-44211

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
 Westwater Creek

9. WELL NO.
 1

10. FIELD AND POOL, OR WILDCAT
 Wildcat

11. SEC., T. R., N., OR BLK. AND SURVEY OR AREA
 Section 4, T38S, R22E

12. COUNTY OR PARISH 13. STATE
 San Juan Utah

RECEIVED
OCT 16 1981
DIVISION OF OIL, GAS & MINING

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13-1/2"	10-3/4"	32.75#	200'	125 sacks (148 cu.ft.)
7-7/8"	5-1/2"	15.50#	6490'	1st Stge: 240 sxs (336 cu.ft.) 2nd Stge: 365 sxs (528 cu.ft.)

- 1) Drill 13-1/2" surface hole to 200' and set 10-3/4" casing, cement to surface.
- 2) Drill 7-7/8" hole to Total Depth, Log BOP checks in Tour Report Book.
- 3) Core and run DST's as necessary for evaluation of the Pennsylvanian section.
- 4) Run logs and 5-1/2" casing if productive.
- 7) Run cased hole logs, perforate and stimulate as needed.

SEP 4 1981
U.S. GEOLOGICAL SURVEY

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.

SIGNED R. E. Fielder TITLE District Engineer DATE August 17, 1981

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY W.P. Martin FOR E.W. GUYNN TITLE DISTRICT OIL & GAS SUPERVISOR DATE OCT 16 1981

CONDITIONS OF APPROVAL, IF ANY:

NOTICE OF APPROVAL

CONDITIONS OF APPROVAL ATTACHED TO OPERATOR'S COPY

FLARING OR VENTING OF GAS IS SUBJECT TO NTL 4-A DATED 1/1/80

State of G



Southland Royalty Company

August 17, 1981

United States Geological Survey
Room 2000, Administration Building
1745 West 1700th South
Salt Lake City, Utah 84104

RE: 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 pressure.

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

Sincerely,

SOUTHLAND ROYALTY COMPANY

R. E. Fielder
District Engineer

REF/eg

September 2, 1981

Southland Royalty Company
P. O. Drawer 570
Framington, New Mexico 87499-0570

RE: Well No. Westwater Creek #1,
Sec. 4, T. 38S, R. 22E,
San Juan County, Utah

Insofar as this office is concerned, approval to drill the above referred to oil well is hereby granted in accordance with Rule C-3, General Rules and Regulations and Rules of Practice and Procedure.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

MICHAEL T. MINDER - Petroleum Engineer
Office: 533-3771
Home: 876-3001

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation in completing this form will be appreciated.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-037-30713.

Sincerely,

DIVISION OF OIL, GAS, AND MINING



Michael T. Minder
Petroleum Engineer

MTM/db
CC: BSGS

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

NAME OF COMPANY: Southland Royalty

WELL NAME: West Water Creek #1

SECTION SWSE 4 TOWNSHIP 38S RANGE 22E COUNTY San Juan

DRILLING CONTRACTOR Aztec Well Service

RIG # 171

SPUDDED: DATE 11-21-81

TIME 9:30 PM

HOW Rotary

DRILLING WILL COMMENCE _____

REPORTED BY Ester Greyeyes

TELEPHONE # (505) 324-1841

DATE November 23, 1981 SIGNED DB

NOTICE OF SPUD

Caller: Southland Royalty (Esther Greeyes)

Phone: _____

Well Number: #1

Location: 600' FSI & 1820' FFI 4-38S-22E

County: San Juan State: Utah

Lease Number: U-44211

Lease Expiration Date: _____

Unit Name (If Applicable): _____

Date & Time Spudded: 11-21-81 9:30 P.M.

Dry Hole Spudder/Rotary: _____

Details of Spud (Hole, Casing, Cement, etc.) 13 1/2" hole

Rotary Rig Name & Number: Aztec Oil Service #171

Approximate Date Rotary Moves In: _____

FOLLOW WITH SUNDRY NOTICE

Call Received By: KR

Date: 11-23-81

bcc: RAH
DD
Durango
file
MER
✓ STATE O&G

RECEIVED
NOV 27 1981

DIVISION OF
OIL, GAS & MINING

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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 Form 9-331-C for such proposals.)

1. oil well gas well other Wildcat

2. NAME OF OPERATOR
Southland Royalty Company

3. ADDRESS OF OPERATOR
P.O. Drawer 570, Farmington, NM 87499-0570

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 600' FSL & 1820' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

5. LEASE
U-44211

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Westwater Creek

9. WELL NO.
1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 4, T38S, R22E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

14. API NO.
43-037-30713

15. ELEVATIONS (SHOW DF, KDB, AND WD)
5490' GL

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF	<input type="checkbox"/>	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	<input type="checkbox"/>
CHANGE ZONES	<input type="checkbox"/>	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	<input type="checkbox"/>
(other) XSpud and Casing Report		

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

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.)*

- 11-20-81 MIRU Rotary Tools
- 11-21-81 Spudded 13-1/2" surface hole at 9:30 P.M. 11-21-81 and drilled to a total depth of 205'.
- 11-22-81 Ran 4 joints (186') of 10-3/4", 32.30#, H... Cemented with 125 sacks of Class "B" with 1/4" celloflake per sack and 3% CaCl₂. Plug down at 7:00 P.M. 11-22-81. Circulated 3 bbl cmt to surface.

RECEIVED
NOV 27 1981

**DIVISION OF
OIL, GAS & MINING**

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

SIGNED Catherine Grejka TITLE Drilling Clerk DATE November 23, 1981

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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 Form 9-331-C for such proposals.)

1. oil well gas well X other Wildcat

2. NAME OF OPERATOR
Southland Royalty Company

3. ADDRESS OF OPERATOR
P.O. Drawer 570, Farmington, New Mexico 87401

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 600' FSL & 1820' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF	<input type="checkbox"/>	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	<input type="checkbox"/>
CHANGE ZONES	<input type="checkbox"/>	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(other)		

5. LEASE
U-44211

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Westwater Creek

9. WELL NO.
1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 4, T38S, R22E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

14. API NO.
43-037-30713

15. ELEVATIONS (SHOW DF, KDB, AND WD)
5490' GL

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

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.)*

12-15-81 Spotted Plugs As Follows:

85 sacks Neat from 6490'-6290'

95 sacks Neat from 5392'-5192'

110 sacks Neat from 3353'-3153'

130 sacks Neat from 2549'-2349'

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

SIGNED R. E. Fields TITLE District Engineer DATE December 15, 1981

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

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 Form 9-331-C for such proposals.)

1. oil well gas well X other Wildcat

2. NAME OF OPERATOR
Southland Royalty Company

3. ADDRESS OF OPERATOR
P.O. Drawer 570, Farmington, New Mexico 87401

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 600' FSL & 1820' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

5. LEASE
U-44211

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Westwater Creek

9. WELL NO.
1

10. FIELD OR WILDCAT NAME
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 4, T38S, R22E

12. COUNTY OR PARISH | 13. STATE
San Juan | Utah

14. API NO.
43-037-30713

15. ELEVATIONS (SHOW DF, KDB, AND WD)
5490' GL

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF	<input type="checkbox"/>	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	<input type="checkbox"/>
CHANGE ZONES	<input type="checkbox"/>	<input type="checkbox"/>
ABANDON*	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(other)		

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

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.)*

10-3/4" casing set in 13-1/2" hole at 198'.
7-7/8" hole drilled to 6490'.

Formation Tops:

Bluff	785'	Cutler	3355'
San Rafeal	960'	Hermosa	5230'
Navajo	1275'	Upper Ismay	6124'
Kayenta	1875'	Lower Ismay	6263'
Wingate	2045'	Gothic Shale	6323'
Chinle	2330'	Desert Creek	6365'
Moenkopi	3080'	Chimney Rock Shale	6423'
		Akah	6452'
		Salt	6485'

SEE BACKSIDE

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

SIGNED R. E. Fielder TITLE District Engineer DATE December 15, 1981

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____
CONDITIONS OF APPROVAL, IF ANY:

**APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING**

DATE: 12/13/81
BY: [Signature]

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 7: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

Spot Plugs as Follows:

#1 -	85 sacks	Neat	from	6490' - 6290'
#2 -	95 sacks	Neat	from	5392' - 5192'
#3 -	110 sacks	Neat	from	3353' - 3153'
#4 -	130 sacks	Neat	from	2549' - 2349'

Left 9.4#/gallon mud between all plugs. Circulated out mud from 2349' to surface, displaced with fresh water. Job complete at 7:00 A.M. 12-15-81.

(Verbal Approval From Ed Guynn to John Caldwell on 12/14/81 For Above)

DIVISION OF OIL, GAS AND MINING

PLUGGING PROGRAM

NAME OF COMPANY: Southland Royalty John Caldwell 505-325-1841

WELL NAME: Westwater Creek #1

SECTION SWSE 4 TOWNSHIP 38S RANGE 22E COUNTY San Juan

VERBAL APPROVAL GIVEN TO PLUG AND ABOVE REFERRED TO WELL IN THE FOLLOWING MANNER:

TOTAL DEPTH: 6490'

CASING PROGRAM:

- 10 3/4" @ 198' cemented to surface
- 7 7/8" openhole (average 10")

FORMATION TOPS:

Bluff	785
San Rafael	960
Navajo	1275
Wingate	2045
Chinle	2330
Moenkopi	3080
Cutler	3355
Hermosa	5230
U. Ismay	6124
L. Ismay	6263
Gothic Sh.	6323
Deseret Creek	6365
Chimney Rock	6423
Akah	6452
Salt	6485

PLUGS SET AS FOLLOWS:

- 1. 6490' - 6290' 85 sx.
- 2. 5200' - 5400' 95 sx.
- 3. 3340' - 3140' 110 sx.
- 4. 2330' - 2530' 130 sx.

6297', SSO; No DST, LCZ, or water encountered; cored: 6265' - 6323' LS

Place 9.2#, 50 vis. fresh water gel based abandonment mud between plugs; clean, restore and regrade site, erect regulation dryhole marker.

DATE December 14, 1981

SIGNED MTM

M. J. Munder

PRELIMINARY REPORT

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

PAGE NO. 1

SOUTHLAND ROYALTY COMPANY
WESTWATER CREEK NO. 1
WILDCAT
SAN JUAN COUNTYFORMATION : LOWER ISMAY
DRLG. FLJID: N.B.M.
LOCATION : SW SE SEC. 4-30S-22E
STATE : UTAHDATE : 12-12-81
FILE NO. : RP-3-3172
ANALYSTS : GGJDS
ELEVATION: 5502 KB

CONVENTIONAL CORE ANALYSIS

SAMP.	DEPTH	PERM. TO AIR (MD) HORZ. VERTICAL	POR. FLD.	FLJID OIL	SATS. WATER	GR. DNS.	DESCRIPTION
1	6265-66 6266-6270	<0.01	1.0	10.3	41.4		LM-GRY, VF XLN, SL/SHL LIMESTONE - NO ANALYSIS
2	6270-71 6271-6275	0.05	1.5	0.0	42.4		LM-GRY, VF XLN, SL/SHL LIMESTONE - NO ANALYSIS
3	6275-76 6276-6280	<0.01	1.7	0.0	73.6		LM-GRY, VF XLN, SL/SHL LIMESTONE - NO ANALYSIS
4	6280-81 6281-6285	<0.01	1.4	7.8	62.3		LM-GRY, VF XLN, SL/SHL LIMESTONE - NO ANALYSIS
5	6285-86 6286-6290	<0.01	2.1	5.1	61.3		LM-GRY, VF XLN, SL/SHL LIMESTONE - NO ANALYSIS
6	6290-91 6291-6295	<0.01	1.3	0.0	65.6		LM-GRY, VF XLN, SL/SHL LIMESTONE - NO ANALYSIS
7	6295-96 6296-6300	0.05	0.8	13.4	26.7		LM-GRY, VF XLN, SL/SHL LIMESTONE - NO ANALYSIS
8	6300-1 6301-6303 6303-6321	<0.01	1.0	10.6	21.3		LM-GRY, VF XLN, SL/SHL LIMESTONE - NO ANALYSIS SHALE - NO ANALYSIS

6265 - 6303 Non Productive.

CORE LABORATORIES, INC.



Petroleum Reservoir Engineering

COMPANY SOUTHLAND ROYALTY CO. FIELD Wildcat FILE RP-3-3172
WELL WESTWATER CREEK NO. 1 COUNTY San Juan DATE 12-12-81
LOCATION SW, SE SEC. 4-38S-22E STATE Utah ELEV. 5502 KB

CORE-GAMMA CORRELATION

These analyses, reports or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. All errors and omissions excepted. Core Laboratories, Inc. and its officers and employees assume no responsibility and make no warranty or representation as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or land in connection with which such report is used or relied upon.

VERTICAL SCALE: 5" = 100'

CORE-GAMMA SURFACE LOG (PATENT APPLIED FOR)

GAMMA RAY
RADIATION INCREASE →

COREGRAPH

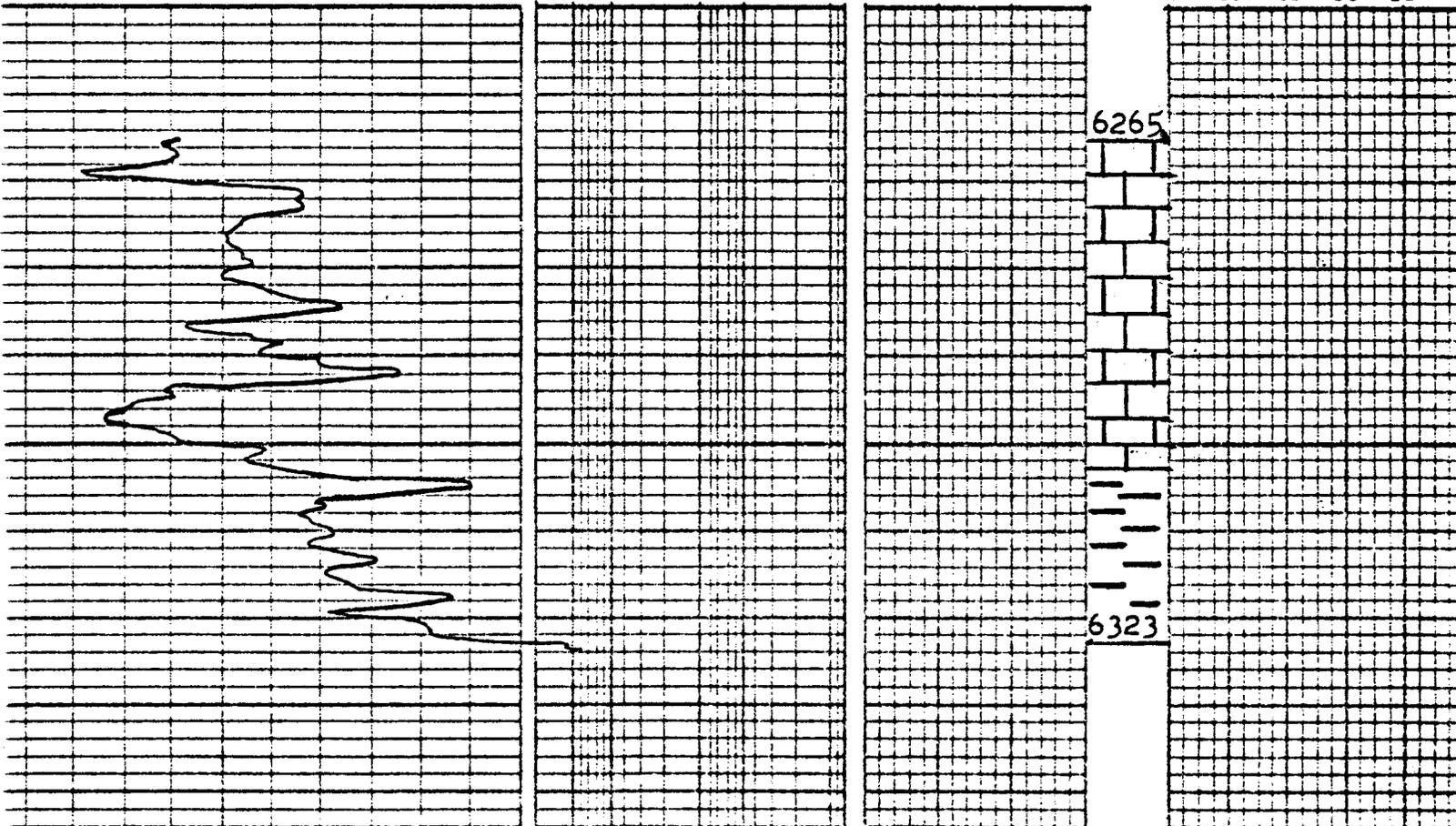
TOTAL WATER ———
PERCENT TOTAL WATER
80 60 40 20 0

LOWER ISMAY FORMATION

PERMEABILITY ———
MILLIDARCYs
100 50 10 5 1

POROSITY ———
PERCENT

OIL SATURATION -----
PERCENT PORE SPACE
0 20 40 60 80



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
(FORM 9-329)
(2/76)
OMB 42-RO 356

MONTHLY REPORT
OF
OPERATIONS

Lease No. 71-4211
Communitization Agreement No. _____
Field Name Wildcat
Unit Name _____
Participating Area _____
County San Juan State Utah
Operator Southland Royalty Company
 Amended Report Well Name Westwater Creek

The following is a correct report of operations and production (including status of all unplugged wells) for the month of November, 1981

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & ¼ of ¼	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
#1	4 SW/SE	38S	22E	DRG					11/21/81 Moved In & Rigged Up. Spudded Well. Drilling.

*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Produced	_____	_____	_____
*Sold	_____	_____	XXXXXXXXXXXXXXXXXX
*Spilled or Lost	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXX	_____	XXXXXXXXXXXXXXXXXX
*Used on Lease	_____	_____	XXXXXXXXXXXXXXXXXX
*Injected	_____	_____	_____
*Surface Pits	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	_____
*Other (Identify)	_____	_____	_____
*On hand, End of Month	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	_____	_____	XXXXXXXXXXXXXXXXXX

Authorized Signature: [Signature] Address: P. O. Drawer 570, Farmington, N.M.
Title: District Production Manager

**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

SUBMIT IN DUPLICATE
(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R3555.

15

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL GAS WELL DRY Other _____

b. TYPE OF COMPLETION: NEW WELL WORK OVER DEEP-EN PLUG BACK DIFF. RESVR. Other PLUGGED & ABANDONED

2. NAME OF OPERATOR
Southland Royalty Company

3. ADDRESS OF OPERATOR
P.O. Drawer 570, Farmington, New Mexico 87499-0570

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface 600' FSL & 1820' FEL SWSE
At top prod. interval reported below
At total depth

5. LEASE DESIGNATION AND SERIAL NO.
U-44211

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Westwater Creek

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
Section 4, T38S, R22E

14. PERMIT NO. 43-037-30713 DATE ISSUED 9-2-81

12. COUNTY OR PARISH San Juan 13. STATE Utah

15. DATE SPUNDED 11-21-81 16. DATE T.D. REACHED 12-13-81 17. DATE COMPL. (Ready to prod.) P&A 12-15-81 18. ELEVATIONS (DF, R&B, RT, GR, ETC.)* 5490' GL 19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD 6490' 21. PLUG, BACK T.D., MD & TVD 22. IF MULTIPLE COMPL., HOW MANY* 23. INTERVALS DRILLED BY ROTARY TOOLS CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
No perforations

25. WAS DIRECTIONAL SURVEY MADE
Deviation

26. TYPE ELECTRIC AND OTHER LOGS RUN
DIL/SFL, FR-CNL/FDC w/Caliper, GR-BHC/Sonic w/Caliper

27. WAS WELL CORED
Yes

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
<u>10-3/4"</u>	<u>32.30#</u>	<u>198'</u>	<u>13-1/2"</u>	<u>125 sacks</u>	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number)
No Perforations

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33.* PRODUCTION

DATE FIRST PRODUCTION _____ PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) _____ WELL STATUS (Producing or shut-in)
PLUGGED & ABANDONED

DATE OF TEST	HOURS TESTED	CHOKER SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
<u>NO TEST</u>							

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) _____ TEST WITNESSED BY _____

35. LIST OF ATTACHMENTS _____

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED [Signature] TITLE Dist. Prod. Manager DATE 12/28/81

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. **Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool. **Item 33:** Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES		TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	38. GEOLOGIC MARKERS	
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAMES	MEAS. DEPTH	TRUE VERT. DEPTH
Morrison	120'		CORE INTERVALS - SEE ATTACHMENT			
Bluff	820'					
San Rafael	970'					
Navajo	1270'					
Kayenta	1900'					
Wingate	2020'					
Chinle	2315'					
Moenkopi	2965'					
Cutler	3220'					
Hermosa	5210'					
Upper Ismay	6120'					
Lower Ismay	6265'					
Gothic Shale	6305'					
Desert Creek	6355'					
Chinney Rock Shale	6430'					
Akah	6460'					
Salt	6485'					
Total Depth	6490'					

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 GEOLOGICAL SURVEY
 (FORM 9-329)
 (2/76)
 OMB 42-RO 356

MONTHLY REPORT
 OF
 OPERATIONS

Lease No. 71-0 211
 Communitization Agreement No. _____
 Field Name Wildcat
 Unit Name _____
 Participating Area _____
 County San Juan State Utah
 Operator Southland Royalty Company
 Amended Report Well Name Westwater Creek

The following is a correct report of operations and production (including status of all unplugged wells) for the month of December, 19 81

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
#1	4 SW/SE	38S	22E	D&A					Installed Dry Hole Marker 12/15/81

*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLS)	Gas (MCF)	Water (BBLS)
*On hand, Start of Month	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Produced	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Sold	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Spilled or Lost	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Used on Lease	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Injected	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Surface Pits	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Other (Identify)	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*On hand, End of Month	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX

Authorized Signature: [Signature]
 Title: District Production Manager

Address: P. O. Drawer 570, Farmington, N.M.
 Page 1 of 1 87401

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

REPORT OF WATER ENCOUNTERED DURING DRILLING

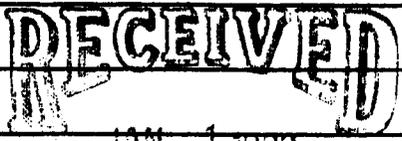
Well Name & Number Westwater Creek #1

Operator Southland Royalty Company Address P.O. Drawer 570, Farmington, NM 87499-0570

Contractor Aztec Well Service Address P.O. Box "B", Aztec, NM 87410

Location SW 1/4 SE 1/4 Sec. 4 T: 38S R. 22E County San Juan

Water Sands

	<u>Depth</u>		<u>Volume</u>	<u>Quality</u>
	From	To	Flow Rate or Head	Fresh or Salty
1.	** NO WATER ENCOUNTERED SHOWN**			
2.	<div style="text-align: center;">  JAN 1 1982 DIVISION OF OIL, GAS & MINING </div>			
3.				
4.				
5.				
5.				

(Continue of reverse side if necessary)

Formation Tops

SEE OTHER SIDE

Remarks

Plugged and abandoned on 12-15-81

- NOTE: (a) Report on this form as provided for in Rule C-20, General Rules and Regulations and Rules of Practice and Procedure.
- (b) If a water analysis has been made of the above reported zone, please forward a copy along with this form.



STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

January 4, 1982

Southland Royalty Company
P. O. Box Drawer 570
Farmington, New Mexico 87499-0570

Re: Well No. Westwater Creek #1
Sec. 4, T. 38S, R. 22E
San Juan County, Utah

Well No. Burr Desert #2
Sec. 21, T. 30S, R. 12E
Wayne County, Utah

Gentlemen:

This letter is to advise you that the Well Completion or Recompletion Report and Log for the above mentioned wells is due and has not been filed with this office as required by our rules and regulations.

Please complete the enclosed Form OGC-3, in duplicate, and forward them to this office as soon as possible.

Thank you for your cooperation relative to the above.

Very truly yours,

DIVISION OF OIL, GAS AND MINING

A handwritten signature in cursive script that reads "Cari Furse".

Cari Furse
Clerk Typist



STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

January 22, 1982

Southland Royalty Company
P. O. Drawer 570
Farmington, New Mexico 87401

Re: Well No. Westwater Creek #1
Sec. 4, T. 38S, R. 22E
San Juan County, Utah

Gentlemen:

This letter is to advise you that the Well Completion or Recompletion Report and Log for the above mentioned well is due and has not been filed with this office as required by our rules and regulations.

Please complete the enclosed Form OGC-3, in duplicate, and also all drilling information on this well is needed to be forwarded to this office as soon as possible.

Thank you for your cooperation relative to the above.

Very truly yours,

DIVISION OF OIL, GAS AND MINING

A handwritten signature in cursive script that reads "Cari Furse".

Cari Furse
Clerk Typist



STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

February 23, 1982

Southland Royalty Company
P. O. Drawer 570
Farmington, New Mexico 87499-0570

Re: Well No. Westwater Creek #1
Sec. 4, T. 38S, R. 22E
San Juan County, Utah

Gentlemen:

According to our records, a "Well Completion Report" filed with this office December 28, 1981, from above referred to well, indicates the following electric logs were run: DIL/SFL, FR-CNL/FDC w/Caliper, GR-BHC/Sonic w/Caliper. As of todays date, this office has not received these logs.

Rule C-5, General Rules and Regulations and Rules of Practice and proceure, requires that a well log shall be filed with the Commission together with a copy of the electric and radioactivity logs.

Your prompt attention to the above will be greatly appreciated.

Sincerely,

DIVISION OF OIL, GAS AND MINING

A handwritten signature in cursive script that reads "Cari Furse".

Cari Furse
Clerk Typist