

UTAH DIVISION OF OIL, GAS AND MINING

REMARKS: WELL LOG _____ ELECTRIC LOGS _____ FILE X WATER SANDS _____ LOCATION INSPECTED _____ SUB. REPORT/ABD _____

** 11-21-83 Location Abandoned - Application rescinded due to time*

DATE FILED 10-22-79

LAND: FEE & PATENTED STATE LEASE NO. PUBLIC LEASE NO. U-38769 INDIAN

DRILLING APPROVED: 10-19-79

SPUDED IN:

COMPLETED: PUT TO PRODUCING:

INITIAL PRODUCTION:

GRAVITY A.P.I.

GOR:

PRODUCING ZONES:

TOTAL DEPTH:

WELL ELEVATION:

DATE ABANDONED:

FIELD: Wildcat 3/86

UNIT:

COUNTY: Garfield

WELL NO. Marinus Canyon #1 API NO: 43-017-30079

LOCATION 2020' FT. FROM ~~XX~~ (S) LINE. 365' FT. FROM ~~XX~~ (W) LINE. NE SE 1/4-1/4 SEC. 33

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
2S	13E	33	SOUTHLAND ROYALTY CO.				

FILE NOTATIONS

Entered in NID File *J*.....
Location Map Pinned *J*.....
Card Indexed *J*.....

Checked by Chief
Approval Letter
Disapproval Letter

COMPLETION DATA:

ate Well Completed
..... WW..... TA.....
W..... OS..... PA.....

Location Inspected
Bond released
State or Fee Land

LOGS FILED

Driller's Log.....
Electric logs (No.)
E..... I..... Dual I Lat..... GR-N..... Micro.....
PHC Sonic GR..... Lat..... MI-L..... Sonic.....
..... CCLog..... Others.....

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DUPLICATE COPY
7-38769

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 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
At surface 2020' FSL & 365' FWL
At proposed prod. zone same as above

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
32 miles Southeast of Hanksville, Utah

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
365'

16. NO. OF ACRES IN LEASE
2540

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
6000'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
4160' GR

22. APPROX. DATE WORK WILL START*
November 1, 1979

23. PROPOSED CASING AND CEMENTING PROGRAM

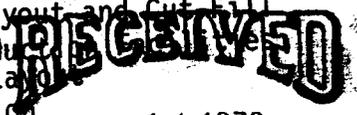
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8", new	48#, H-40, ST&C	30'	35sxs C1 B w/3% CaCl ₂ (41 cu.ft.)
12-1/4"	8-5/8", new	24#, K-55, ST&C	1700'	720sxs C1 B w/additives (1051 cu.ft.)
7-7/8"	5-1/2", new	14#, K-55, ST&C	6000'	670sxs C1 50/50 Poz w/additives (998 cu.ft.)

1. Drill 12-1/4" surface hole and set 13-3/8" surface casing at 30' with good returns.
2. Log B.O.P. checks in daily drill reports and drill 12-1/4" hole to 1700' with air.
3. Run Logs and run 8-5/8" casing to 1700'
4. Log B.O.P. checks in daily drill reports and drill 7-7/8" hole to 6000' with fresh water mud.
5. Run Logs and run 5-1/2" casing to 6000'.
6. Run other logs as needed and perforate and stimulate as needed.

EXHIBITS ATTACHED

- "A" Location and Elevation Plot
- "B" The Ten-Point Compliance Program
- "C" The Blowout Preventer Diagram
- "D" The Multi-Point Requirements for A.P.D.
- "E" & "E" Access Road Map into Location
- "F" Radius Map of Field

- "G" Drill Pad Layout and Cut Fill
- "H" Rehabilitation



DEC 11 1979

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 estimated depths. Give blowout preventer program, if any.

24. SIGNED [Signature] TITLE District Production Manager DATE October 10, 1979

DIVISION OF
OIL, GAS & MINING

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY [Signature] TITLE ACTING DISTRICT ENGINEER DATE DEC 07 1979

CONDITIONS OF APPROVAL, IF ANY:

State of Utah, Department of Natural Resources

Division of Oil, Gas, and Mining
15680 West State Street, Temple

Salt Lake City, Utah 84116

NOTICE OF APPROVAL

ut state ovc

*See Instructions on Reverse Side

CONDITIONS OF APPROVAL ATTACHED TO OPERATOR'S COPY

FROM: DISTRICT GEOLOGIST, ME, SALT LAKE CITY, UTAH

TO: DISTRICT ENGINEER, O&G, SALT LAKE CITY, UTAH

SUBJECT: APD MINERAL EVALUATION REPORT

LEASE NO. 11 38764

OPERATOR: Southland Royalty Co. WELL NO. 1

LOCATION: 1/2 NW 1/4 SW 1/4 sec. 33, T. 32S, R. 13E, 11th

Garfield County, Utah

1. Stratigraphy: Wingate Sandstone - surface.
- | | | | |
|-----------|-------|-----------------|--------|
| Chinle | - 100 | Pinkerton Trail | - 4000 |
| Shinarump | 400 | Molas | - 4300 |
| Moenkopi | 450 | Mississippian | 4400 |
| Curtler | 850 | Permian | 5100 |
| Pico | 1750 | Cambrian? | 5700 |
| Herrerosa | 2300 | TD | 6000 |
| Paradox | 3550 | | |

2. Fresh Water: none probable

3. Leasable Minerals: Salt, but probably no potash salt, in Paradox

4. Additional Logs Needed: adequate

5. Potential Geologic Hazards: none expected

6. References and Remarks: Bull 751, I 170, ~~...~~

Signature: [Handwritten Signature]

Date: 11 - 13 - 79

Oil and Gas Drilling

EA #027-80

United States Department of the Interior
Geological Survey
2000 Administration Bldg.
1745 West 1700 South
Salt Lake City, Utah 84104

Usual Environmental Analysis

Lease No.: U-38769

Operator: Southland Royalty Company

Well No.: 1

Location: 2020' FSL & 365' FWL

Sec.: 33

T.: 32S. R.: 13E.

County: Garfield

State: Utah

Field: Wildcat

Status: Surface Ownership: Public

Minerals: Federal

Joint Field Inspection Date: October 25, 1979

Participants and Organizations:

Don Englishman
Larry Gearhart
Don Fieldler
Ken Kramer
Jim Boulden

USGS, Durango, Colorado
BLM, Hanksville, Utah
Southland Royalty Co.
Archaeologist, Century Resources
Boulder Contractors

Related Environmental Analyses and References:

(1) Unit Resource Analysis, Henry Mountain Planning Unit, BLM, Hanksville, Ut

Analysis Prepared by: Don Englishman
Environmental Scientist
Durango, Colorado

& George Diwachak
Environmental Scientist
Salt Lake City, Utah

Date: November 13, 1979

*Pad 175 x 300
Pit 100 x 100
Pit 20 x 20
Stockpile topsoil
17/10 cc
Mitigation
A-D Pg 6
Noted - G. Diwachak*

Proposed Action:

On October 16, 1979, Southland Royalty Company filed an Application for Permit to Drill the No. 1 exploratory well, a 6000 ft. oil test of the Devonian Formation; located at an elevation of 4160 ft. in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 33, T. 32S., R. 13E. on Federal mineral lands and public surface; lease No. U-38769. There was no objection raised to the wellsite nor to the access road.

A rotary rig would be used for the drilling. An adequate casing and cementing program is proposed. Fresh-water sands and other mineral-bearing formations would be protected. A Blowout Preventor would be used during the drilling of the well. The proposed pressure rating should be adequate. Details of the operator's NTL-6 10-Point Subsurface Plan are on file in the USGS District Office in Salt Lake City, Utah and the USGS Northern Rocky Mountain Area Office in Casper, Wyoming. The 13-Point Surface Protection Plan is on file in the District Office in Salt Lake City.

A working agreement has been reached with the BLM, the controlling surface agency. Rehabilitation plans would be decided upon as the well neared completion; the Surface Management Agency would be consulted for technical expertise on those arrangements.

The operator proposes to construct a drill pad 175 ft. wide x 300 ft. long and a reserve pit 100 ft x 100 ft. A 20 ft. by 20 ft. blooie pit would also be constructed at the Northeast corner of the pad. No new access road would be constructed as the location is adjacent to Utah State Highway 95, the main road between Blanding and Hanksville, Utah. The operator proposes to construct production facilities on disturbed area of the proposed drill pad. The anticipated starting date is upon approval and duration of drilling activities would be about 30 days.

Location and Natural Setting:

The proposed drill site is approximately 28 miles Southeast of Hanksville, Utah, the nearest town. A good road runs to the location. This well is a Wildcat in an undefined pool.

Topography:

The location is located in the extreme western edge of the Paradox Basin of Southeastern Utah. The site is situated on a stabilized sand dune in the narrow canyon bottom of North Wash. It is boarded on the Northeast by Utah State Highway 95 and on the West by North Wash. The area was previously disturbed by construction of Highway 95.

Geology:

The surface geology is the Glen Canyon Group of Jurassic Age.

The soil is sand.

No geologic hazards are known near the drillsite.

Seismic risk for the area is minor. Anticipated geologic tops are filed with the 10-Point Subsurface Protection Plan.

Approval of the proposed action would be conditioned that adequate and sufficient electric/radioactive/density logging surveys would be made to locate and identify any potential mineral resources. Production casing and cementing would be adjusted to assure no influence of the hydro-carbon zones through the well bore on these minerals. In the event the well is abandoned, cement plugs would be placed with drilling fluid in the hole to assure protection of any mineral resources.

The potential for loss of circulation would exist. Loss of circulation may result in the lowering of the mud levels, which might permit exposed upper formations to blow out or to cause formation to slough and stick to drill pipe. A loss of circulation would result in contamination due to the introduction of drilling muds, mud chemicals, filler materials, and water deep in to the permeable zone, fissures, fractures, and caverns within the formation in which fluid loss is occurring. The use of special drilling techniques, drilling muds, and lost circulation materials may be effective in controlling lost circulation. Air would be used as a circulating medium during a portion of the drilling and would reduce the potential for lost circulation.

A geologic review of the proposed action has been furnished by the Area Geologist, U.S. Geological Survey, Salt Lake City, Utah.

The operator's drilling, cementing, casing and blowout prevention programs have been reviewed by the Geological Survey engineers and determined to be adequate.

Soils:

No detailed soil survey has been made of the project area. The top soils in the area are sandy. The soil is somewhat subject to runoff from rainfall and has a medium runoff potential and sediment production would be moderate. The soils are mildly to moderately alkaline and support a mixed riparian salt-desert shrub vegetative community.

Top soil would be removed from the surface and stockpiled. The soil would be spread over the surface of disturbed areas when abandoned to aid in rehabilitation of the surface. Rehabilitation is necessary to prevent erosion and encroachment of undesired species on the disturbed areas. The operator proposes to rehabilitate the location and access roads per the recommendations of the Bureau of Land Management.

Approximately 1.7 acres of land would be stripped of vegetation. This would increase the erosional potential. Proper construction practice, construction of water bars, reseeding of slope-cut area would minimize this impact.

Air:

No specific data on air quality is available at the proposed location. There would be a minor increase in air pollution due to emissions from rig and support traffic engines. Particulate matter would increase due to dust from travel over unpaved dirt roads. The potential for increased air pollution due to leaks, spills, and fire would be possible.

Relatively heavy traffic would be anticipated during the drilling-operations phase, increasing dust levels and exhaust pollutants in the area. If the well was to be completed for production, traffic would be reduced substantially to a maintenance schedule with a corresponding decrease of dust levels and exhaust pollutants to minor levels. If the project results in a dry hole, all operations and impact from vehicular traffic would cease after abandonment. Due to the limited number of service vehicles and limited time span of their operation, the air quality would not be substantially reduced.

Toxic or noxious gases would not be anticipated.

Precipitation:

Annual rain fall should range from about 6 to 8" at the proposed location. The majority of the numerous drainages in the surrounding area are of a non-perennial nature flowing only during early spring runoff and during extremely heavy rain storms. This type of storm is rather uncommon as the normal annual precipitation is around 7".

Winds are medium and gusty, occurring predominately from West-Southwest to East-Northeast. Air mass inversions are rare. The climate is semi-arid with abundant sunshine, hot summers and cold winters with temperature variations on a daily and seasonal basis.

Surface Water Hydrology:

The location is immediately adjacent to North Wash of the Colorado River Basin. There are no known live streams within 10 miles of the location. North Wash is deep and about 40 ft. wide in the vicinity of the test site. The reserve and blooie pits should be lined with and impervious material to retain fluids. A buffer zone of undisturbed ground at least 20 ft. wide should remain between the pits and wash.

Drainage would be directly to Lake Powell.
Some additional erosion would be expected in the area since surface vegetation would be removed. If erosion became serious, drainage systems such as water bars and dikes would be installed to minimize the problem. The proposed project should have minor impact on the surface water systems.

Ground Water Hydrology:

Some minor pollution of ground water systems would occur with the introduction of drilling fluids (filtrate) into the aquifer. This is normal and unavoidable during rotary drilling operations. The potential

for communication, contamination and comingling of formations via the well bore would be possible. The drilling program is designed to prevent this. There is need for more data on hydrologic systems in the area and the drilling of this well may provide some basic information as all shows of fresh water would be reported. Water production with the gas would require disposal of produced water per the requirements of NTL-2B. The depths of fresh water formations are listed in the 10-Point Subsurface Protection Plan. The pits would be lined. If fresh water should be available from the well, the owner or surface agency may request completion as a water well if given approval.

Vegetation:

Vegetation in the area consists mainly of Cottonwood trees, buckwheat, russian thistle, indian ricegrass, salt cedar (tamerisk), rabbit brush, snake weed, sand dropseed grass and numerous annuals.

Proposed action would remove about 1.7 acres of vegetation. Removal of vegetation would increase the erosional potential and there would be a minor decrease in the amount of vegetation available for grazing.

The operator proposes to rehabilitate the surface upon completion of operations.

Wildlife:

The fauna of the area consists predominantly of coyotes, rabbits, foxes, and varieties of small ground squirrels and other types of rodents and various types of reptiles. The area is used by man for limited grazing of domestic livestock. The birds of the area are raptors, finches, ground sparrows, magpies, crows, and jays.

An animal and plant inventory has been made by the BLM. No endangered plants or animals are known to inhabit the project area.

Social-Economic Effect:

An on the ground surface archaeological reconnaissance has been performed. Appropriate clearances must, however, be obtained from the surface managing agency. If a historic artifact, an archaeological feature or site is discovered during construction operations; activity would cease until the extent, the scientific importance, and the method of mitigating the adverse effects could be determined by a qualified cultural resource specialist.

There are no occupied dwellings or other facilities of this nature in the general area. Minor distractions from aesthetics would occur over the lifetime of the project. All permanent facilities placed on the location would be painted a color to blend in with the natural environment. Present use of the area is grazing, recreation, and oil and gas activities.

Noise from the drilling operation may temporarily disturb wildlife and people in the area. Noise levels would be moderately high during drilling and completion operations. Upon completion, noise levels would be infrequent and significantly less. If the area is abandoned, noise levels should return to pre-drilling levels.

The site is visible from a major road. After drilling operations, completion equipment would be visible to passersby of the area but should not present a major intrusion.

The economic effect on one well would be difficult to determine. The overall effect of oil and gas drilling and production activity are insignificant in Garfield County.

But should this well discover a significant new hydrocarbon source, local, state, and possible national economics might be improved. In this instance, other development wells would be anticipated, with substantially greater environmental and economic impacts.

Should the wellsite be abandoned, surface rehabilitation would be done according to the surface agency's requirements and to USGS's satisfaction. This would involve leveling, contouring, reseeding, etc., of the location and possibly the access road. If the well should produce hydrocarbons, measures would be undertaken to protect wildlife and domestic stock from the production equipment.

the location is about 4 miles northwest of Glenn Canyon National Recreation Area
There are no ^{other} national, state, or local parks, forests, wildlife refuges or ranges, grasslands, monuments, trails or other formally designated recreational facilities near the proposed location.

The proposed location is within the Henry Mountain Planning Unit. This Environmental Assessment Record was compiled by the Bureau of Land Management, the surface managing agency of the Federal surface in the area. The study includes additional information on the environmental impact of oil and gas operations in this area and gives land use recommendations. The E.A.R. is on file in the agency's State offices and is incorporated herein by reference.

Waste Disposal:

The mud and reserves pits would contain all fluids used during the drilling operations. A trash pit would be utilized for any solid wastes generated at the site and would be buried at the completion of the operations. Sewage would be handled according to State sanitary codes. For further information, see the 13-Point Surface Plan.

Alternative to the Proposed Action:

(1) Not approving the proposed permit-The oil and gas lease grants the lessee exclusive right to drill for, mine, extract, remove and dispose of all oil and gas deposits. Under leasing provisions, the Geological Survey has an obligation to allow mineral development if the environ-

mental consequences are not too severe or irreversible. Upon rehabilitation of the site, the environmental effects of this action would be substantially mitigated, if not totally annulled. Permanent damage to the surface and subsurface would be prevented as much as possible under USGS and other controlling agencies supervision with rehabilitation planning reversing almost all effects. Additionally, the growing scarcity of oil should be taken into consideration. Therefore, the alternative of not proceeding with the proposed action at this time is rejected.

(2) Minor relocation of the wellsite and access road would not significantly reduce the environmental impact. There are no severe vegetative, animal or archaeological-historical-cultural conflicts at the site. Since only a minor impact on the environment would be expected, the alternative of moving the location is rejected. At abandonment, normal rehabilitation of the area such as contouring, reseeding, etc., would be undertaken with an eventual return to the present status as outlined in the 13-Point Surface Plan.

Mitigative Measures & Stipulations:

Drilling should be allowed provided the following mitigative measures are incorporated into the proposed APD and adhered to by the operator. 

- A. Since the location is near a major highway, the operator should take all adequate precautions to insure the safety of travelers on Utah State Highway 95.
- B. To protect North Wash from potential contamination, the reserve and blooie pits would be lined with an impervious material to insure the retention of fluids.
- C. A buffer~~zone~~ zone of undisturbed ground 15-20 ft. wide should remain between the edge of the location (pit area) and North Wash.
- D. Any spills that might occur to North Wash should be immediately reported to the District Engineer and would be reclaimed from the Wash.

Adverse Environmental Effects Which Cannot Be Avoided:

Surface disturbance and removal of vegetation from approximately 1.7 acres of land surface for the lifetime of the project which would result in increased and accelerated erosional potential. Grazing would be eliminated in the disturbed areas and there would be a minor and temporary disturbance of wildlife and livestock. Minor induced air pollution due to exhaust emissions from rig engines of support traffic engines would occur. Minor increase in dust pollution would occur due to vehicular traffic associated with the operation. If the well is a gas producer, additional surface disturbance would be required to install production pipelines. The potential for fires, gas leaks, and

spills of oil and water would exist. During the construction and drilling phases of the project, noise levels would increase. Potential for sub-surface damage to fresh water aquifers and other geologic formations exists. Minor distractions from aesthetics during the lifetime of the project would exist. If the well is a producer, an irreplaceable and irretrievable commitment of resources would be made. Erosion from the site would eventually be carried as sediment in the Colorado River. The potential for pollution to North Wash would exist through leaks and spills.

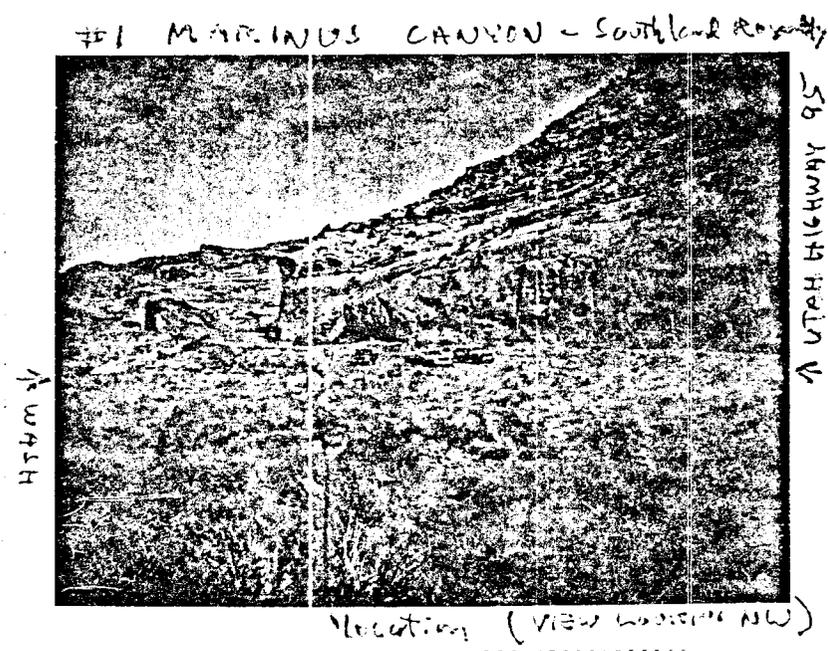
LAKE POWELL

Determination:

This requested action does not constitute a major Federal action significantly affecting the environment in the sense of NEPA, Section 102 (2) (C).

Date 11/27/79

EWS my
District Engineer
U.S. Geological Survey
Conservation Division
Oil and Gas Operations
Salt Lake City District



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

5. LEASE DESIGNATION AND SERIAL NO.
U-38769

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Marinus Canyon

9. WELL NO.
1

10. FIELD AND POOL OR WILDCAT
~~Wildcat~~
Unnamed Field

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 33, T32S, R13E

12. COUNTY OR PARISH | 13. STATE
Garfield | 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 SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
Southland Royalty Company

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

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- EXHIBITS ATTACHED
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 - "B" The Ten-Point Compliance Program
 - "C" The Blowout Preventer Diagram
 - "D" The Multi-Point Requirements for A.P.D.
 - "E" & "E" Access Road Map into Location
 - "F" Radius Map of Field
 - "G" Drill Pad Layout and Cut-Fill Section Production Facilities Fracturing Layout
 - "H" Rehabilitation

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 *[Signature]* TITLE District Production Manager DATE October 10, 1979

(This space for Federal or State office use)

PERMIT NO. 43-011-30079 APPROVAL DATE

APPROVED BY TITLE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side



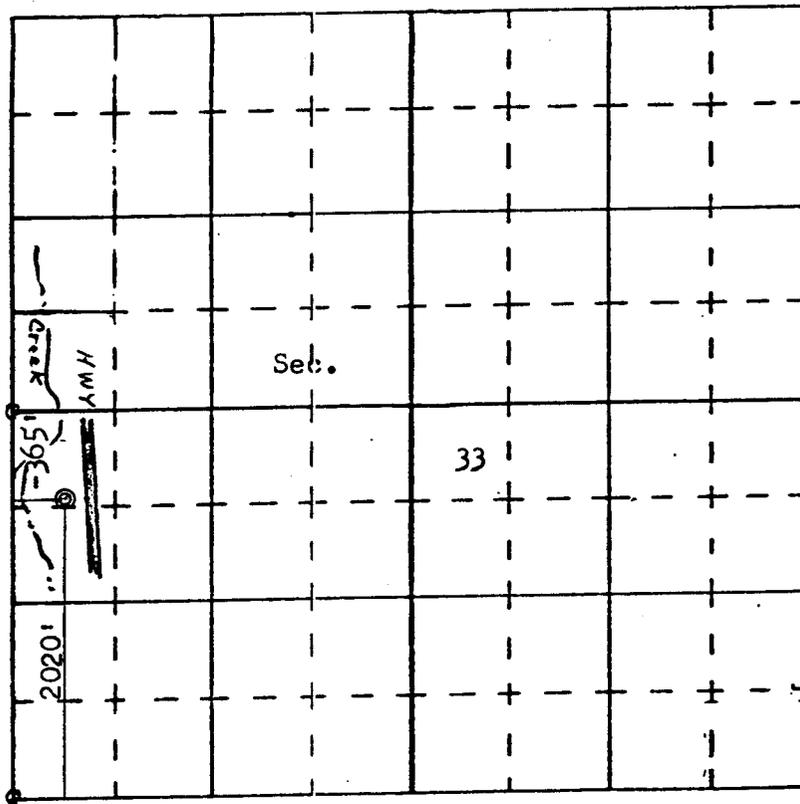
COMPANY SOUTHLAND ROYALTY COMPANY

LEASE MARINUS CANYON WELL NO. 1

SEC. 33, T. 32S, R. 13E
GARFIELD COUNTY, UTAH

LOCATION 2020' ESL 365' FWL

ELEVATION 4160 (est.) 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:

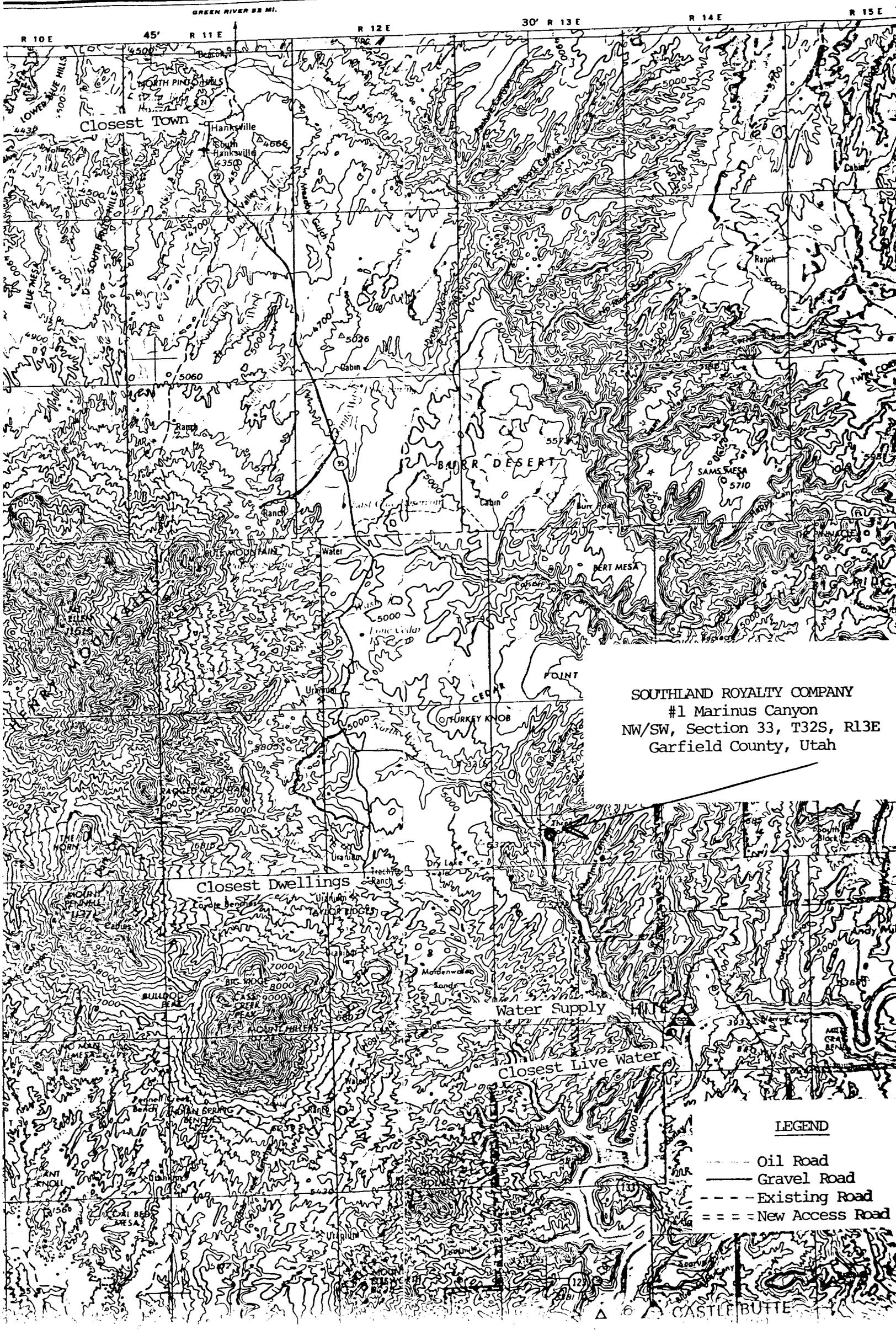
Registered Land Surveyor.

#3950

SURVEYED OCTOBER 5, 1979

FARMINGTON, N. M.

N NATIONAL RECREATION AREA



SOUTHLAND ROYALTY COMPANY
#1 Marinus Canyon
NW/SW, Section 33, T32S, R13E
Garfield County, Utah

Closest Town

Hanksville
South Hanksville
43500

Closest Dwellings

Corde Ranch
Taylor Ranch
Morden Ranch

Water Supply

Closest Live Water

LEGEND

- Oil Road
- Gravel Road
- - - - Existing Road
- == == New Access Road

CASTLE BUTTE

EXHIBIT "B"

TEN - POINT COMPLIANCE PROGRAM OF NTL-6 APPROVAL OF OPERATIONS

Attached to Form 9-331C

Southland Royalty Company
#1 Marinus Canyon
2020' FSL & 365' FWL, Section 33, T32S, R13E
Garfield County, Utah

1. The Geological Surface Formation

The surface formation is Moenkopi

2. The Estimated Tops Of Important Geologic Markers

White Rim	250'	Ismay	2865'
Organ Rock	600'	Paradox	3080'
Cedar Mesa	770'	Pink Trail	3540'
Halgaito	1635'	Molas	3800'
Ele Canyon	1730'	Mississippian	3900'
Pennsylvanian	2150'	Devonian	4550'
		Total Depth	6000'

3. Estimated Depth of Anticipated Water, Oil, Gas or Minerals

Pennsylvanian 2150' Oil and Gas

4. The Proposed Casing Program

- (a) Surface Casing: Set 13 3/8", new, H-40, 48#, ST & C at 30' in 17 1/2" surface hole; cement with 35 sacks of Class "B" with 3% CaCl₂ (100% excess to circulate cement to surface).
- (b) Intermediate Casing: Set 8 5/8", new, K-55, 24#, ST & C at 1700' in 12 1/4" hole; cement with 650 sacks of 50/50 Poz Class "B" cement with 6% gel. Tail in with 70 sacks of Class "B" cement with 2% CaCl₂ (50% excess to circulate cement to surface).
- (c) Production Casing: Set 5 1/2", new, K-55, 14#, ST & C at 6000' in 7 7/8" hole; cement with 670 sacks of 50/50 Poz Class "B" cement with 6% gel and .6% Halad 9 and 1/4# gel flake per sack (100% excess to circulate liner).

5. The Operator's Minimum Specifications for Pressure Control

EXHIBIT "C" is a schematic diagram of the blowout preventer equipment. The BOP's will be hydraulically tested to full working pressure after nipping up and after any use under pressure. Pipe rams will be operationally checked each 24-hour period, as will blind rams on annular preventer each time pipe is pulled out of the hole. Such checks of the BOP will be noted on daily drilling reports.

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

6. The Type and Characteristics of the Proposed Circulating Muds

This well will be drilled with air from under surface casing to intermediate TD. After casing has been set, well will be drilled to TD with fresh water low solids mud. Mufflers will be installed on all exhaust systems. Other materials will be on site to handle any anticipated downhole problems as well as possible spills of fluid 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 float will be used at the bit at all times.
- (c) A mud logging unit and gas detecting device will be monitoring the system.
- (d) A stabbing valve will be on the floor to be stabbed into the drill pipe when kelly is not in the string.

8. The Testing, Logging and Coring Program to be Followed

- (a) Four tests below 1800 are anticipated.
- (b) The logging program will consist of a GR Sonic, FDC/CNL with caliper and a SP/DIL. Other logs will be determined at well site to best evaluate any shows.
- (c) 180' of selective coring in the Paradox formation is anticipated.
- (d) Completion procedure will be determined after evaluation of test, log and core data. For a possible Fracturing Layout, see EXHIBIT "K".

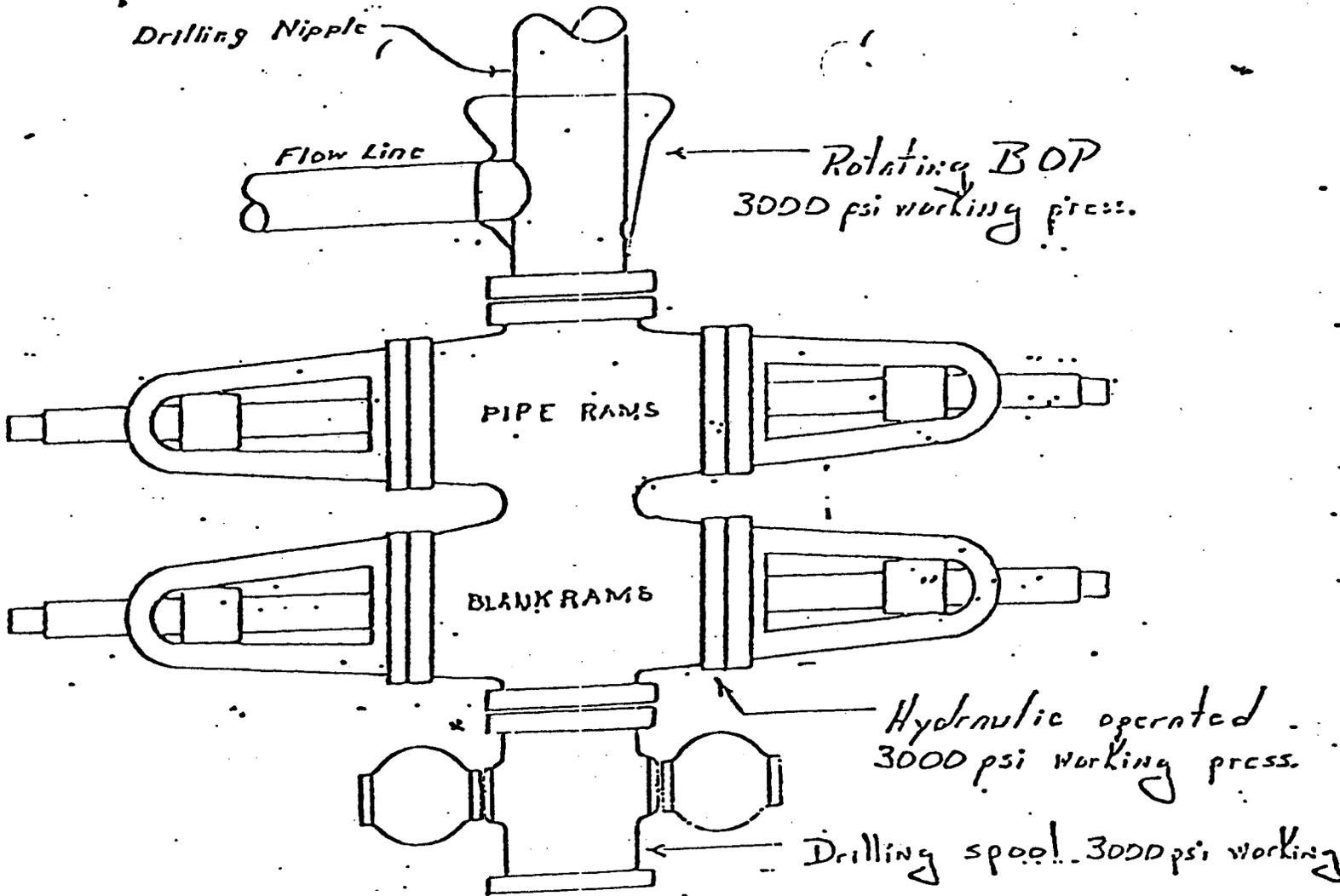
9. Any Anticipated Abnormal Pressures or Temperatures

No abnormal pressures or temperatures have been noted or reported in wells drilled in the area nor at these depths in the area.

10. Anticipated Starting Date and Duration of the Operations

The anticipated starting date is set for November 1, 1979, or as soon as possible after examination and approval of drilling requirements. Operations should be completed within 30 days after spudding the well and drilling to casing point.

#1 MARINUS CANYON
EXHIBIT "C"
BLOWOUT PREVENTER DIAGRAM

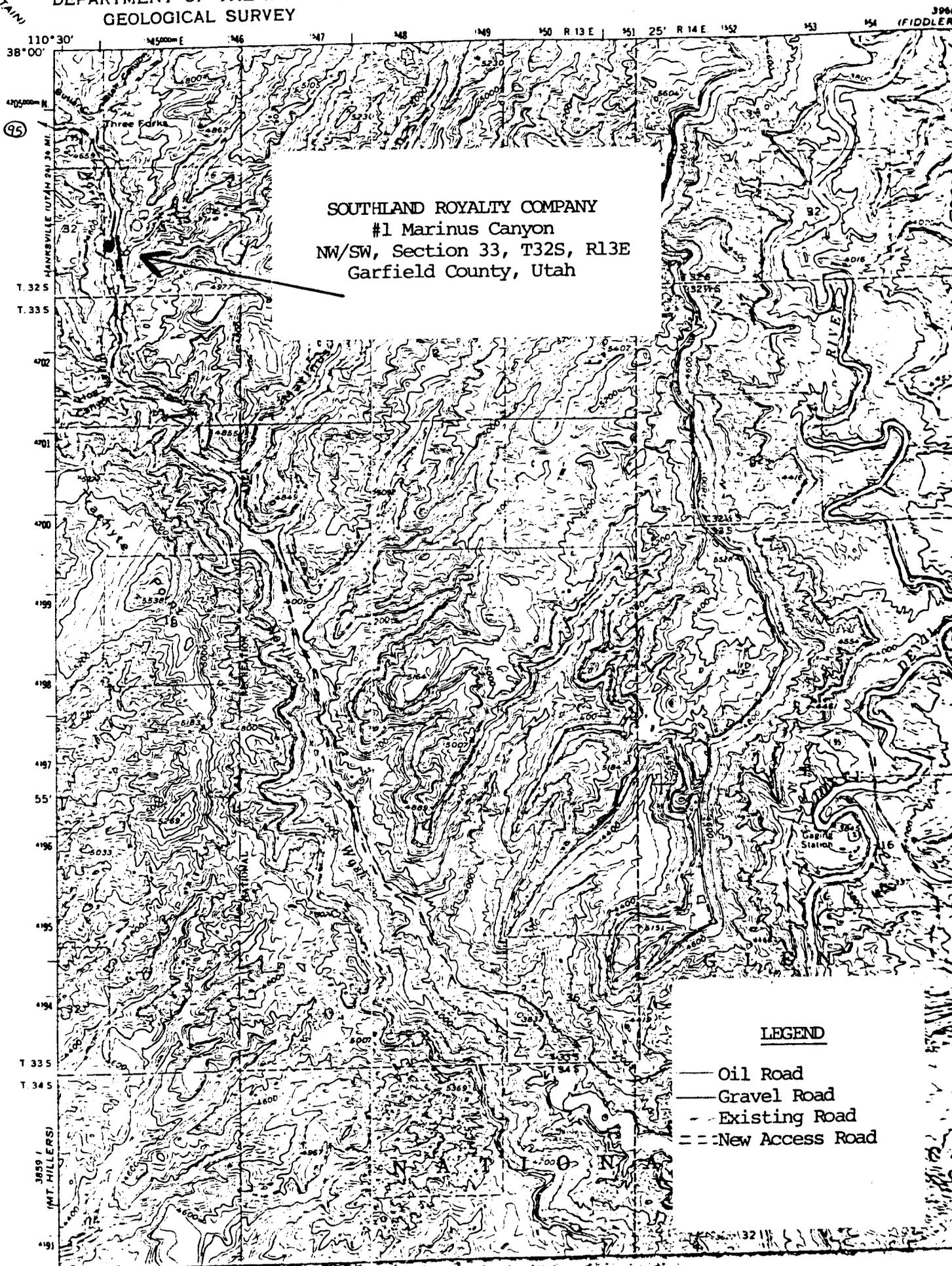


Preventers and spools are to have
through bore of 6" - 3000# PSI or larger.

3860 H
BULL MOUNTAIN

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

#1 MARINUS CANYON
EXHIBIT "E"
ACCESS ROAD TO LOCATION



SOUTHLAND ROYALTY COMPANY
#1 Marinus Canyon
NW/SW, Section 33, T32S, R13E
Garfield County, Utah

LEGEND

- Oil Road
- Gravel Road
- - Existing Road
- - - New Access Road

EXHIBIT "D"

MULTI-POINT REQUIREMENTS TO ACCOMPANY A. P. D.

Attached to From 9-331C

Southland Royalty Company
#1 Marinius Canyon
2020' FSL & 365' FWL, Section 33, T32S, R13E
Garfield County, Utah

1. Existing Roads

- (a) The proposed well site and elevation plat is shown as EXHIBIT "A".
- (b) The distance from Hanksville, Utah is 32 miles Southeast on Hiway 95 and will be located on the east side of the road right of way in the Canyon. Refer to EXHIBIT "E" and EXHIBIT "E"1.
- (c) All roads are color-coded into location. An access road 0.1 mile from the existing paved road will be required as shown on EXHIBIT "E"1.
- (d) Not Available.
- (e) This is an exploration well. All existing roads within a two-mile radius are shown on EXHIBIT "E".
- (f) The existing roads need no improvement. Maintenance of location site will be performed as required.

2. Planned Access Roads

- (a) No access road will be required because location is adjacent to Hiway 95, as shown on EXHIBIT "E"1.
- (b) Appropriate water bars will be constructed to assure drainage off location to conform with the natural drainage pattern.
- (c) No culverts will be needed.
- (d) Surfacing material will be native soil.
- (e) No gates, cattle guards, or fence cuts are needed.
- (f) The access to location have been staked and centerline is flagged as shown on EXHIBIT "E"1.

3. Location of Existing Wells

For all existing wells within a one mile radius of this exploration well, see EXHIBIT "F".

- (a) There are no water wells within a one mile radius of this location.
- (b) There are No Abandoned Wells within a one mile radius of this location.
- (c) There are No Temporarily Abandoned Wells within a one mile radius of this location.
- (d) There are No Disposal Wells within a one mile radius of this location.
- (e) There are No Wells presently being drilled within a one mile radius of this location.
- (f) There are no producing wells within a one mile radius of this location.
- (g) There are no shut-in wells within a one mile radius of this location.
- (h) There are no injection wells within a one mile radius of this location.
- (i) There are no monitoring or observation well for other uses.

4. Location of Existing and/or Proposed Facilities

- (a) Within a one mile radius of location the following existing facilities are owned or controlled by lessee/operator:
 - (1) Tank Batteries: None
 - (2) Production Facilities: None
 - (3) Oil Gathering Lines: None
 - (4) Gas Gathering Lines: None
 - (5) Injection Lines: None
 - (6) Disposal Lines: None

- (b) If Production is obtained, new facilities will be as follows:
- (1) Production facilities will be located on solid ground of cut area of Drill Pad, as shown on EXHIBIT "G".
 - (2) All well flow lines will be buried and will be on the well site and production site.
 - (3) Facilities will be 300 feet long and 150 feet wide.
 - (4) All construction materials for oil storage site and pad will be obtained from site. No additional material from outside sources is anticipated.
 - (5) Any necessary pits will be fenced and flagged to protect livestock and wildlife.
- (c) Rehabilitation, whether well is productive or dry, will be made on all unused areas in accordance with the restoration plans presented in Item #10 following.

5. Location and Type of Water Supply

- (a) The source of water will be Lake Powell, North Wash Access as shown on EXHIBIT "E".
- (b) Water will be transported by truck over existing roadways.
- (c) No water well is to be drilled on this lease.

6. Construction Materials

- (a) No construction materials are needed for drilling and access roads into the drilling location unless production is obtained. The surface soil materials will be sufficient or will be purchased from the dirt contractor as needed.
- (b) No construction materials will be taken off this Federal Land.
- (c) All surface soil materials for construction of access roads are sufficient.
- (d) All major access roads presently exist as shown on EXHIBIT "E".

7. Handling of Waste Materials and Disposal

- (a) Drill cuttings will be buried in the reserve pit and covered.
- (b) Drilling fluids will be handled in the reserve pit.
- (c) Any fluids produced during drilling test or while making production test will be collected in a test tank. If a test tank is not available during during, fluids will be handled in reserve pit. Any spills of oil, gas, salt waters or noxious fluids will be cleaned up and removed.
- (d) Chemical facilities will be provided for human waste..
- (e) Garbage and non-flammable waste and salts and other chemicals produced during drilling or testing will be handled in trash pits. Flammable waste will be disposed of in burn pit. Drill fluids, water, drilling mud and tailings will be kept in reserve pit, as shown on EXHIBIT "H".
- (f) After the rig moves out, all materials will be cleaned out and no adverse materials will be left on location. Any dangerous open pit will be fenced during drilling and kept closed until such time as the pit is leveled. Reserve pit will be fenced on three sides and the fourth side fenced upon removal of the rig. The trash and/or burn pit will be totally enclosed with small mesh wire.

8. Ancillary Facilities

No airstrip, camp or other facilities will be built during drilling of this well.

9. Well Site Layout

- (a) EXHIBIT "G" is the Drill Pad Layout as staked, with elevations, by Kerr Land Survey of Farmington, New Mexico. Cuts and fills have been drafted to visualize the planned cut across the location spot and to the deepest part of the pad. Topsoil will be stockpiled per BLM specifications determined at time of pre-drill inspection.
- (b) EXHIBIT "H" is a plan diagram of the proposed rig and equipment, reserve pit, burn and trash pit, pipe racks and mud tanks. No permanent living facilities are planned. There will be a trailer on site.

- (c) EXHIBIT "G" includes a diagram showing the proposed production facilities layout.
- (d) The reserve pits will be lined. Steel mud tanks may be used during drilling operations.

10. Plans for Restoration

The location will be rehabilitated according to BLM specifications as soon as drilling operations are concluded.

11. Other Information

- (a) The soil is blow sand, with sparse scrub vegetation. Topography is rolling dunes dipping into the North Primary Wildlife is rabbits and coyotes.
- (b) The primary surface use is for grazing. The surface is owned by U. S. Government.
- (c) The closest live water is Lake Powell at Northwash, 5 miles southeast from location, as shown on EXHIBIT "E". The closest occupied dwelling are Trachyte Ranch 5.5 miles west of location as shown on EXHIBIT "E". There are no known archaeological, historical or cultural heritages that will be disturbed by this drilling.
- (d) There are no reported restrictions or reservations noted on the oil and gas lease.
- (e) Drilling is planned for on or about November 1, 1979. It is anticipated that the casing point will be reached within 30 days after commencement of drilling.

12. Lessee's or Operator's Representative

L. O. Van Ryan
Southland Royalty Company
P. O. Drawer 570
Farmington, New Mexico 87401
505 - 325-1841

13. Certification

See Next Page.

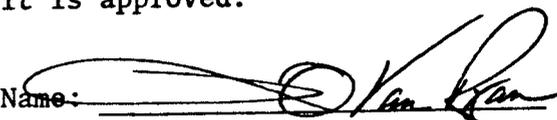


Southland Royalty Company

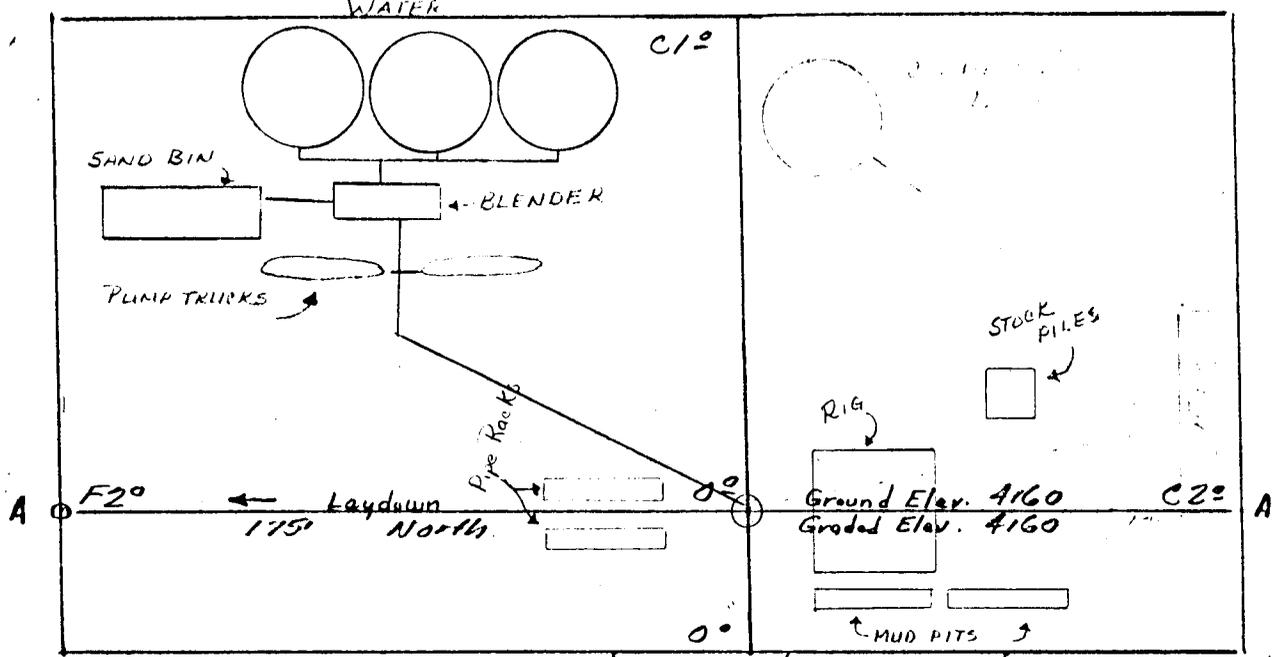
October 10, 1979

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.

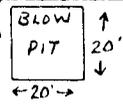
Date: October 10, 1979

Name: 

Title: District Production Manager



Drill Pad Layout and Cut Fill ———
 Section Production Facilities - - - -
 Fracturing Layout ———



Vert. 1"=40'

A-A' &

Horiz: 1"=100'

4170				
4160	—————			
4150				

Reserve
Pit

Vert: 1"=40'

C-C' &

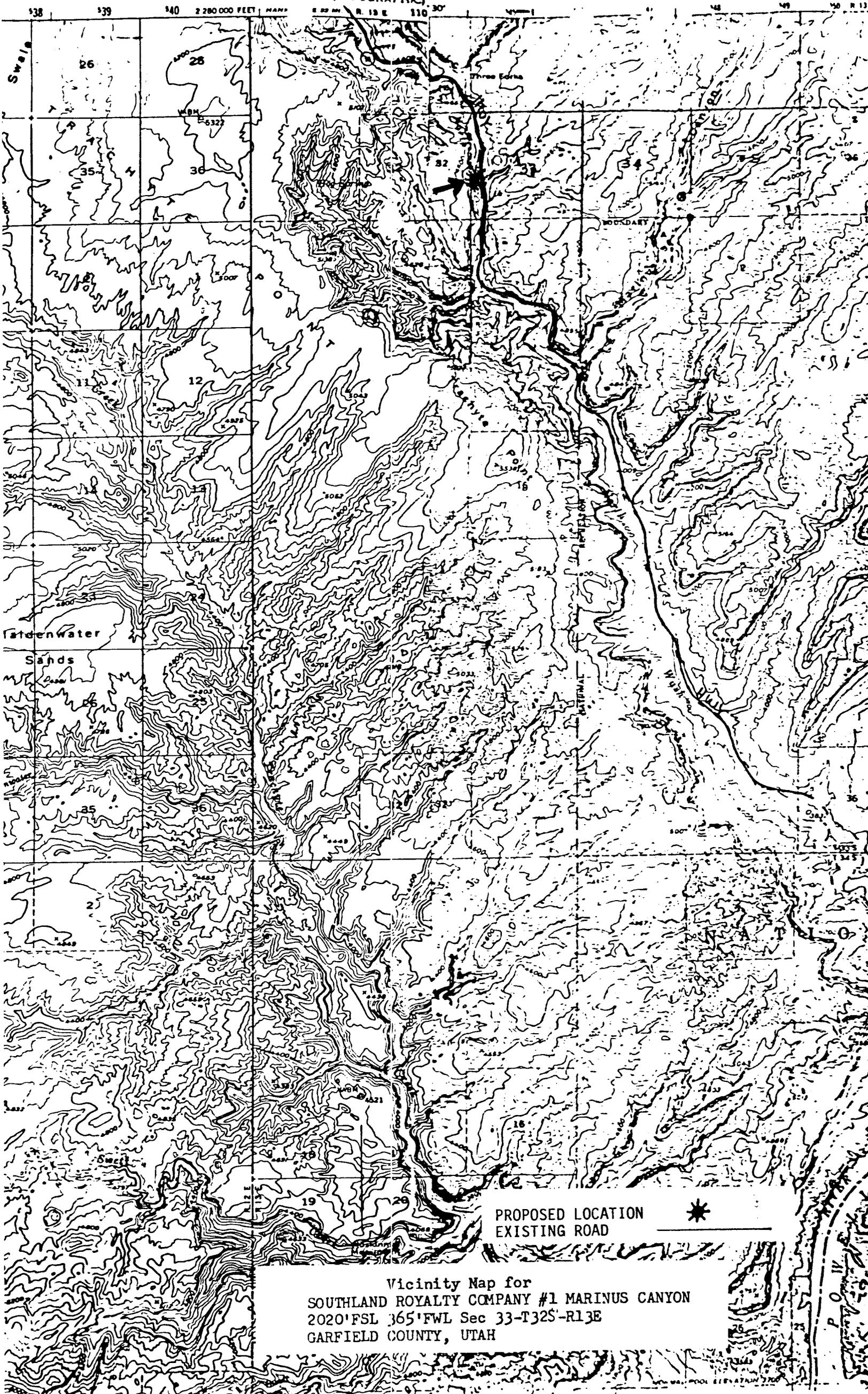
Horiz: 1"=100'

F4' X

B-B' &

4170				
4160	ROAD ———			
4150				

D-D' &



Vicinity Map for
SOUTHLAND ROYALTY COMPANY #1 MARINUS CANYON
2020' FSL 365' FWL Sec 33-T32S-R13E
GARFIELD COUNTY, UTAH

PROPOSED LOCATION
EXISTING ROAD



EXHIBIT "J"

REHABILITATION PLAN

Lease No: U-38769 ; Well Name & No: Marinus Canyon #1
Location: 2020' FSL & 365' FWL , Sec. 33 , T32S , R 13E

Southland Royalty Company intends to drill a well on surface owned by U. S. Government. The lessee/operator agrees to complete the following rehabilitation work if the well is a producer:

- X Yes ___ No Maintain access road and provide adequate drainage to road.
X Yes ___ No Reshape and reseed any area not needed for maintenance of the pump and support facilities.

Other requirements:

The following work will be completed when the well is abandoned:

- X Yes ___ No Pit will be fenced until dry, then filled to conform to surrounding topography.
X Yes ___ No Water bars will be constructed as deemed necessary.
X Yes ___ No Site will require reshaping to conform to surrounding topography.
X Yes ___ No Entire disturbed area will be reseeded. If yes, the following seed mixture will be used:
X Yes ___ No Access road will be closed, rehabilitated and reseeded using the same seed mixture as above.
___ Yes X No Access road will remain for surface owner's use.
X Yes ___ No Water bars will be constructed on the access road as deemed necessary.

Other requirements:

Surface Owner: Name: BLM Henry Mountain Resource Area
Address: P. O. Box 99
City: Hanksville,
State: Utah 84734
Telephone:
Date:
Operator/Lessee: Name:
Address:
City:
State:
Telephone:
Date:

I CERTIFY rehabilitation has been discussed with me, the surface owner:
(Surface Owner's Signature)

This plan covers rehabilitation requirements only and does not affect any other agreements between the lessee/operator and surface owner.



Southland Royalty Company

October 10, 1979

Utah Division of Oil, Gas & Mining
1588 West North Temple
Salt Lake City, Utah 84116

RE: Marinus Canyon #1
2020' FSL & 365' FWL
Section 33, T32S, R13E
Garfield, Utah

why? look at info map

Gentlemen:

Southland Royalty Company applies for exception to Rule C-3 for the subject location. All leases within a 660' radius of the location are owned by Southland Royalty Company.

Yours Truly,

R. E. Fielder
Petroleum Engineer

REF/ejg

** FILE NOTATIONS **

DATE: October 16, 1979

Operator: Southland Royalty Company

Well No: Marinus Canyon #1

Location: Sec. 33 T. 32S R. 13E County: Marfield

File Prepared:

Entered on N.I.D.:

Card Indexed:

Completion Sheet:

API Number 43-017-30079

CHECKED BY:

Geological Engineer: _____

Petroleum Engineer: _____ *Held for decision from USGS 4/21/80 called R. Fielder*

Director: OIC Rule C-3 Topo Exception 7

APPROVAL LETTER:

Bond Required:

Survey Plat Required:

Order No. _____

O.K. Rule C-3

Rule C-3(c), Topographic Exception/company owns or controls acreage within a 660' radius of proposed site

#2 plus statement.

Lease Designation

Plotted on Map

Approval Letter Written

Wm

MI PI

October 19, 1979

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

Re: Well No. Marinus Canyon #1, Sec. 33, T. 32S, R. 13E., Garfield County, Utah
Well No. Fry Canyon #1, Sec. 28, T. 36S, R. 16E., San Juan County, Utah
Well No. Red Canyon #1, Sec. 3, T. 37S, R. 14E., San Juan County, Utah

Insofar as this office is concerned, approval to drill the above referred to wells on said unorthodox locations is hereby granted in accordance with Rule C-3(a), General Rules and Regulations and Rules of Practice and Procedure. However, this Division required that a letter be sent to this office stating that Southland Royalty Company owns or controls the acreage within a 660' radius of each proposed well site.

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

MICHAEL T. MINDER
Geological Engineer
Office: 533-5771
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 numbers assigned to these wells are Marinus - 43-077-30079;
Fry - 43-037-30507; Red - 43-037-30508.

Sincerely,

DIVISION OF OIL, GAS AND MINING

Michael T. Minder
Geological Engineer

/bzm

cc: USGS

Conservation Division
2000 Administration Building
1745 West 1700 South
Salt Lake City, Utah 84104

February 20, 1980

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. L. O. Van Ryan
Southland Royalty Company
P.O. Drawer 570
Farmington, New Mexico 87401

Re: Marinus Canyon Well No. 1
NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 33, T. 32S, R. 13E
Garfield County, Utah
Oil & Gas Lease U-38766
(Operator submittal U-38769)

Dear Mr. Ryan:

The Application for Permit to Drill for the referenced well was approved December 7, 1979. This approval is suspended effective immediately. No further activity is to be conducted under this approval on Oil and Gas Lease U-38766 (corrected).

In a conversation with your Mr. Bob Fielder, February 11, 1980, this suspension was discussed. It was my understanding that the location had been made but there had been no other activity.

The Application was approved with the concurrence of BLM, Hanksville, Utah by letter November 2, 1979. It appears, however, that this concurrence conflicts with the lease terms and stipulations. The lease stipulates "no surface occupancy" for the W $\frac{1}{2}$ W $\frac{1}{2}$ Sec. 33, T. 32S, R. 13E, SLB & M.

BLM, Hanksville, by letter February 12, 1980 proposed three (3) alternatives for your proposal and suggests a meeting with all interested parties to resolve the issues and answer questions. This meeting would involve representatives of Southland Royalty, the Department of Transportation,

Feb 28

Utah, BLM, Utah and this office. The meeting is proposed for 10:00 A.M. ~~March 4, 1980~~, Room 2000, Administration Building, 1745 West 1700 South, Salt Lake City, Utah 84104. Phone number is 801-524-4590 (contact Cindy). By copy of this letter we are requesting attendance by the recipients or their representative (s). Please RSVP for attendance.

Sincerely,

(ORIG. SGD.) E. W. GUYNN

E. W. Guynn
District Engineer

EWG/cl

cc: Oil and Gas Supervisor, NRMA, Casper
H. H. Richardson, Department of Transportation, Utah
S. L. Pollick, Minerals Section, BLM, Utah
Don Pendleton, BLM, Richfield, Utah
Lynn Jackson, BLM, Hanksville, Utah
Bob Fielder, Southland Royalty Company

2/21/80 Jack Feight, State Oil, Gas & Mining, Utah

FYI.

bcc: Well file
EA Lease file (U-38766, U-38769)



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

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

November 21, 1983

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

Attn: Mr. L. O. Van Ryan

RE: Well No. Marinus Canyon #1
API # 43-017-30079
Sec. 33, T. 32S, R. 13E.
Garfield County, Utah

Dear Mr. Van Ryan:

Our records indicate Federal approval to drill the subject well was suspended effective February 20, 1980, but that State approval was not withdrawn.

In concert with Federal action, the State of Utah hereby rescinds approval to drill the subject well, and this office should be notified immediately if drilling of the location was ever started.

Your patience with our oversight is appreciated.

Respectfully,

A handwritten signature in cursive script, appearing to read 'Norman C. Stout'.

Norman C. Stout
Administrative Assistant

NCS/cj