



SCOTT M. MATHESON  
Governor

GORDON E. HARMSTON  
Executive Director,  
NATURAL RESOURCES

CLEON B. FEIGHT  
Director

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS, AND MINING  
1588 West North Temple  
Salt Lake City, Utah 84116  
(801) 533-5771

OIL, GAS AND MINING BOARD

DANIEL STEWART  
Chairman

CHARLES R. HENDERSON  
JOHN L. BELL  
THADIS W. BOX  
RAY JUVELIN

January 8, 1978

Mr. J. F. Wirth  
Drilling Superintendent  
Marathon Oil Company  
P. O. Box 2659  
Casper, Wyoming 82601

Re: South Eden Canyon  
Well No. 1  
Sec. 15, T. 13N., R. 6E.  
Rich County, Utah

Dear Mr. Wirth:

I've received a copy of your letter to Mr. Ed Gynn relative to the physical material you intend to have on hand if, in the event, hydrogen sulfide is encountered during drilling of this well.

Normally, (albeit the State has not yet adopted formal regulations), a visit from this Division is made shortly after rigging-up is completed. At that time, we usually discuss the preventative equipment required. However, as this well is on public owned land, I realize the obligation incurred by the presentation of the suggested plan to the U.S.G.S.

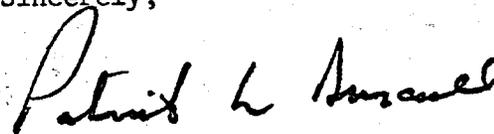
Whether or not this suggested plan is acceptable by the U.S.G.S., I feel I must inform you that it falls short of suggested State recommendations. Namely:

1. Installation of three wind sacks is the minimum number acceptable.
2. A designated "safe" area must be marked and located in such a manner as to be readily accessible to all personnel who might be on location; this area must be pointed out to all personnel and crew members during safety briefings.
3. A self-contained breathing apparatus must be placed in the mud logging unit, plus a minimum number of two must be available for each occupied trailer.

4. Well marked, highly visible warning signs to be located no closer than  $\frac{1}{2}$  of a mile from the drilling location, and placed along any and/or all possible access locations.
5. An approved contingency plan on hand, prior to starting any actual operations.
6. A combination of audible and visible H<sub>2</sub>S warning systems.
7. Tacit, but firm rules relative to the amount of visitors wishing to visit the rig.
8. Prior to drilling into a known gas bearing formation-- in this case, the Phosphoria -- notification will be given to the County Sheriff's Office; the District Highway Patrol Office; and medical personnel of the nearest medical facility that might be utilized in the event an emergency occurs.
9. Prior to drilling into known H<sub>2</sub>S formations, a minimum of two "bug fans" will be set immediately outside of the cellar and blowing in the opposite direction from the previously designated "safe or crew assembly" areas.
10. A posted notice indicating the date and names of personnel given a safety briefing on possible dangers and instructions in the use of available equipment.

If there should be any questions relative to this, please do not hesitate to call or write this Division.

Sincerely,



PATRICK L. DRISCOLL  
CHIEF PETROLEUM ENGINEER

PLD/ksw

Appendix 2

UNUSUAL ENVIRONMENTAL IMPACT ANALYSIS

Application for Permit to Drill

Marathon Oil Company, Operator

Well Number 1-15      Federal Lease U-25458

South Eden Canyon Area

Rich County, Utah

District Geologist Office  
Salt Lake City, Utah

Prepared by:

Eileen M. Pera, Geologist  
Allen A. Aigen, Geologist

Reviewed by:

John T. Evans, 6/22/78  
Environmental Scientist, SLC

EA #1057

CIT 1031

I. Proposed Action

This unusual environmental impact analysis is intended to cover impacts from proposed application to drill one wildcat well by the designated operator, Marathon Oil Company. This well will be drilled to a proposed depth of 15,400 feet, in Section 15, T. 13 N., R. 6 E., SLM, Rich County, approximately 4.5 miles northeast of Laketown, Utah. The company estimates approximately 6 months of drill time to complete hole, commencing end of June (fig. 1).

The purpose of this drilling project is to explore for gas deposits in a promising geologic structural area called the Thrust Belt.

On Wednesday, May 31, 1978, an on-site inspection was made of the proposed drilling location. The site lies on privately owned surface, under which rests a federal mineral estate.

Those people present at the on-site inspection include John Evans, Eileen Pera, and Allen Aigen - U.S. Geological Survey; Jim Wirth, Walt West, and Bill moomey - Marathon Oil Company; Marvin Kennedy and Howard Davidson - D & E Construction; John Hanson - surface owner; and Clair Quilter and Kenn Frye - BLM.

It was agreed that the proposed hole location was preferred by all involved.

To drill this well a large sectional drill rig would be trucked to the location. The rig is transposed in numerous pieces and assembled and erected on-site. To accommodate the rig and ancillary facilities the following construction will be necessary.

1. A drill pad 200' x 300' (1.4 acre) would be cleared of vegetation and graded to a feat surface. Adjacent to the pad a 150' x 150' x 8' deep reserve pit (0.3 acre) would be constructed.

2. Approximately 0.5 mile, to extend the existing dirt road to the well site, of new road construction is required. The proposed road standard is 16 feet running surface and would have cut bar ditches. The road would have a maximum grade of 3%. There would not be any turnouts, major cuts, culverts or fills. A cattle guard and a swinging gate is also planned (as shown on fig. 2). There would be a constant use of this road during the drilling period by water haul trucks, and mineral and supply vehicles.

The proposed action would involve Federal Oil and Gas Lease U-25458 issued to A. A. McGregor on April 1, 1976. On June 1, 1976, McGregor assigned W. R. Grace and Company 25%; Patrick Petroleum Corp. 50%; and American Quasar Petroleum Company of New Mexico for 25%. Then on July 1, 1976, Patrick Petroleum Corp. assigned to Gulf Oil Corp. 25% and Arkla Exploration Company 12½% leaving Patrick Petroleum Corp. with 12½% of the lease. Marathon Oil is the planned operator but has not been designated as such at this time. (fig. 3).

II. Location and Natural Setting:

A. Location

The proposed wildcat well site known as South Eden Canyon Well No. 1-15 is situated in the upper reaches of Pine Canyon and resides on a bench along the north side of the drainage. This well would be approximately 2 miles east of the southeastern shore of Bear Lake in Rich County, Utah. This lease embraces the following described lands:

Sec. 14: N $\frac{1}{2}$ , NW $\frac{1}{4}$ SW $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$

Sec. 15: N $\frac{1}{2}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ , W $\frac{1}{2}$ NW $\frac{1}{4}$ , S $\frac{1}{2}$

Sec. 17: Lot 1, NE $\frac{1}{4}$ , E $\frac{1}{2}$ SE $\frac{1}{4}$

Sec. 20: E $\frac{1}{2}$ SE $\frac{1}{4}$

Sec. 23: E $\frac{1}{2}$ NW $\frac{1}{4}$ , SW $\frac{1}{4}$ NW $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ , E $\frac{1}{2}$

Sec. 24: E $\frac{1}{2}$ NE $\frac{1}{4}$ , SW $\frac{1}{4}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ , S $\frac{1}{2}$

in Township 13 North, Range 6 East, SLM, Rich County, Utah, for a total of 2,458.86 acres.

The Federal government owns the mineral rights while the surface is privately owned. The Geological Survey is charged with the responsibility of coordinating this activity and recommending surface protection stipulations as necessary. The subject area should be planned in such a way for protection of the soil and watershed resources, big game winter range, and spring sheep and cattle grazing. There are no other ownerships, easements, withdrawals or right-of-way involved. Agreement has been reached with the surface owner on use of the surface for the proposal.

The BLM determined that no archaeological clearance would be needed on the private surface. In Allred vs. Biegel, 219 SW 2d 665, Mo 1949, it was decided that the private land owner owns the bones, fossils and artifacts as well as sites of any historic event. Additionally, the Antiquities Act of 1906, the foundation for the archaeological requirement, has been declared unconstitutional by the Federal District Court of Arizona in April, 1978.

B. Geographic Description

As staked, the well is approximately 5 miles northeast of Laketown, Utah and State Highway 16 on the southeastern side of Bear Lake in Pine Canyon. Elevations for the following lake shore towns are as follows:

Garden City 5981'; Pickelville 5940'; and Laketown 5988' above sea level. The well site is above the intersection of 3 intermittent drainages and near the head of Pine Canyon at an elevation of 7197 feet. Current access is within a 1/2 mile from proposed site (fig. 4) (BLM, 1975).

### C. Geologic Description

The site is located on the thrust belt, a strip of intensely folded and faulted rock from northern Utah through Idaho and Wyoming into Montana. The style of tectonics is dominated by large sheets of rock thrust from the west breaching into multiple repeated layers and folding into often overturned anticlines with a north-south orientation. Normal faulting is superimposed on this. The Bear Lake Fault, which forms the steep eastern edge of the Lake basin is a normal fault, dropping the basin down. The rocks affected by the thrust faulting expected to be penetrated by the drilling are Devonian through Cretaceous sandstone, limestone, siltstone shales and chert (fig. 5 and Richardson, 1941). The site is overlain by the Tertiary Knight conglomerate (also known as the Wasatch Formation) which conceals the underlying structure.

The geological basis for the well is seismic reflection suggesting a structural trap similar to that of the Hogback Ridge Field, about 5 miles east. There gas was discovered in the Dinwoody (22,400 MCFGPD from 9468-9630 feet) and sour gas in the Phosphoria (9967 MCFGPD from 10,070-10,234 feet).

Non-commercial phosphate rock from the Phosphoria was prospected in SWNE Sec. 32, T. 13 N., R. 6 E., but there is no possible value at the site due to its expected depth of 11,000 feet.

#### D. Climate

Dominant precipitation within this area occurs during the winter months as a result of active frontal storms. Also the area has summer thunderstorms which bring a minor amount of annual precipitation. Average precipitation in this area is 11.5 inches. Laketown receives about 13.40 inches and Randolph receives about 10.23 inches per year. Average temperature in Laketown is at 42.0 degrees F. while at Woodruff 38.8 degrees F.

Cloudburst flooding frequently results in mud or debris flow. In 18 years only two have occurred. Care must be exercised to insure that drainage gullies, ravines and canyons are not clogged by new construction and that their courses are not altered without careful hydrologic investigations (Kaliser, 1972).

#### E. Hydrology

Springs draining into the six mile creek, east of the Pine Canyon drainage, flow from a probable <sup>perched</sup> water table in the Knight Conglomerate Formation. The aquiclude on which the water flows dips at less than three degrees eastward, and falls above the drill site when projected westward. Water from the drill site would not enter that drainage basin, but would remain in the Pine Canyon Basin, where there are no springs.

The only other aquifer used in the area is the <sup>N</sup>Hugget Sandstone. Wells on the Lakeshore just west and southwest of the site (Kaliser, 1972, fig 8) are isolated from possible contamination by the Bear Lake Fault.

#### F. Atmosphere (Air Quality)

Quantitative data for the area is not available, but judged to be good. There are very few local sources of pollutants. Tourist traffic, recreational vehicles and outboard motors on the lake probably produce most of the pollutants (other than those produced by natural vegetation). Air-borne dust, both from dirt roads and overgrazed land can temporarily be an important pollutant in the area.

G. SOILS

The soils of this area are part of the Aridic Calcixerolls-Xerollic Calciorthids Soil group. The Soil Conservation Service Mapping Unit descriptions for this area are, FbE and DhC (fig 6). The FbE soil at the proposed site, is a shallow gravelly loam and somewhat excessively drained. This soil formed in colluvium and residuum derived mainly from sandstone and conglomerate bed rock. A layer of calcium carbonate accumulation occurs at a depth between 10 and 17 inches. Permeability is moderate. Organic matter content in the surface layer is moderate. The soil is used for range and wildlife habitat, and is a non-irrigated and Upland Shallow Loam. The proposed access road will be on a DhC soil that is a dark reddish-brown to a yellowish-red, very gravelly loam, and is deep and well drained. This soil formed in alluvium and colluvium derived mostly from sandstone and quartzite in a conglomerate. Permeability is moderate and the organic matter content in the surface is also moderate. This soil is used for range and wildlife habitat. It is in a non-irrigated, Upland Stony Loam range site.

Surface runoff on both soil types is rapid and erosion hazard is moderate, under natural vegetation and high if vegetation is removed and the soil is left bare (fig. 6). Soil properties and interpretations are shown on figures 7 and 8 (U.S. Soil Conservation Service, 1976, and Wilson, 1975).

H. Vegetation

The principal native vegetation growing on the site includes, big sagebrush, bluebunch wheatgrass, antelope bitterbrush, shadbrush, black sagebrush, shadscale, yellow brush, arrow leaf, balsamroot, poa, larkspur, and death camas. No threatened or endangered floral species were observed on this proposed well site.

Should the land owner fail to specify a seeding mixture for surface reclamation, the Bureau of Land Management recommends the following:

- 4 lbs./acre Western Wheatgrass
- 4 lbs./acre Mountain Brome

#### I. Wildlife

Animals in the area are typical of the Upper Sonoran-Canadian transition zone, Big Sage environment. The drill site and access road, lacking trees and water and being exposed on a ridge, have few nesting or den sites, generally only of rodents, rabbits and a few species of small birds. Most larger mammals and birds are more mobile and use the area only part-time, as a small part of their territory. Birds nest on the site during the spring, and will not be severely impacted by the drilling. The site is on the edge of a critical deer wintering area and would restrict them to a small extent, temporarily.

Mammals common to the area include mule deer, various rodents, rabbits and hares, skunks, badgers and coyotes.

Birds common to the area include turkey, vulture, red-tail hawks, ferruginous hawk, golden eagle, prairie falcon, \*Mourning dove, \*horned lark, \*sage thrasher, \*loggerhead shrike, \*sage sparrow, \*green tailed towhee, \*vesper sparrow and \*lark sparrow. The starred (\*) birds may nest on the site.

No endangered or threatened species of plants or animals are known or suspected to occur in the area.

#### J. Cultural Resources

In the immediate area there are no known dwellings, archaeological, historical or cultural sites. A complete BLM survey was not conducted, but there was no evidence of prior land-use visible during the on-site inspection.

There are no fossils known on the site and little possibility of any being exposed during site and road preparation.

K. Land Use

The site is on private surface, with restricted grazing and hunting the only use. The general area has the same usage. The site is approximately 2 miles east of Bear Lake, a major recreation area. The site is not visible from the lake or surrounding communities. The lake is important for fishing, boating, sailing, water fowl and scenic value. The surrounding towns are supported by tourists and ranching.

Effects on the Environment

A. Surface Effects

Impact on the area would be light. Site and access road preparation will denude less than 4 acres of land. This would destroy the vegetation, displace the animals and increase erosion and dust. If erosion became serious, drainage systems such as water bars and dikes would be installed to minimize the problem.

Should the well site be abandoned, surface rehabilitation would be done according to the surface owner'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 area receives sufficient rainfall for rehabilitation to be successful. No endangered or threatened species of plant or animal is known to be present. Traffic will be kept to a minimum and only necessary people will be allowed on or near the site, with housing off the site for all the drill crew except the foreman and geologist.

Traffic and drilling operations would increase air and noise pollution, and be aesthetically objectionable. 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.

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.

The possibility of a blow-out, due to the depth and unknown geologic conditions, and the probable presence of hydrogen sulfide gas in the Phosphoria Formation require detailed blow-out prevention and hydrogen sulfide contingency plans approved by the District Engineer, Salt Lake City, and by the State of Utah Department of Natural Resources (see attachment). Inspections by the USGS and other agencies would be conducted to assure compliance.

If a blow-out should occur, only gas is expected. This may include hydrogen sulfide which is harmful to most animals and plants in greater than 0.01% concentration. The concentration expected in the gas is approximately 0.2%. A blow-out of gas might burn, which may be visible from the lake, but a burn would be of short duration. If a blow-out of oil occurs, oil can be easily cleaned up before entering Bear Lake.

The operator has stated that they have a general spill prevention control and countermeasure plan.

B. Subsurface Effects

There are no mineable minerals expected to be penetrated. Aquifers are not expected but normal engineering practices prevent contamination by drilling fluids. The engineering program would be approved by state and federal engineers and abandonment would be regulated.

C. Geologic Hazards

The Bear Lake fault, on the east edge of the lake (Keliser, 1972) can be considered active. Seismic risk is moderately high with a very damaging intensity VIII quake in 1884 and a moderate quake in 1959 (intensity V). The soil and rock exposed in site preparation should be carefully tested for bearing strength as they may yield during an earthquake. Silt or mud layers, if present, greatly increase the chance of landslide. Water saturation of such layers must be prevented, which may require lining of the mud pit.

Socioeconomics

The local area is dependant on tourism and grazing. Drillers would employ some local people (drivers and helpers) as well as buying goods locally. This increase in the local economy is temporary but welcome by the populace. The proposed action would not strain facilities as the area is tuned to transients already. The surface owner would be recompensated for any loss from damage and grazing and hunting restrictions on his land.

There would be no impact on tourism as the site is not visible from and should not affect the lake. 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.

Adverse Environmental Effects Which Cannot Be Avoided:

Surface disturbance and removal of vegetation from approximately 4 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, leaks, spills of gas, oil or 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. The potential for pollution to Bear Lake would exist through leaks and spills, but the hazard is judged to be low. Possible release of toxic or noxious gases that could result in loss of life or serious injury is a possible hazard. Adequate procedures will be taken for the containment of toxic hydrogen sulfide and the protection of personnel and the area. (See appendix for program.)

Alternatives to the Proposed Action

The drill site and access road have small impact which cannot be reduced by moving them. The only other alternative would be to deny the operator his rights under the federal oil and gas lease.

Controversial Issues

A Notice of Appeal, issued December 2, 1977, by the Sierra Club

against Ed Gynn, U.S. Geological Survey, and others, seeks to prevent any further oil and gas activity on National Forest land in the overthrust belt. Although this well site is in the overthrust belt, it is not in or near a National Forest and so is not affected by the appeal.

The proximity of the well site to Bear Lake could have an adverse impact on tourism only in the unlikely event of a blow-out. As detailed above, it is not visible from nor likely to appreciably degrade the environment of the lake.

The possible of hydrogen sulfide gas, while uncommon in Utah, is well understood and has been planned for, with an approved contingency plan.

Public comments were not solicited or received.

Determination

In my opinion, the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment in the sense of NEPA, Section 102 (2) (C), and the environmental impacts of the proposed action are not likely to be highly controversial.

*Ed Gynn*

6/28/78

District Engineer

Date

I concur

Area Supervisor

Date

I determine that preparation of an environmental impact statement is not required:

Conservation Manager

Date



SCOTT M. MATHESON  
Governor

GORDON E. HARMSTON  
*Executive Director,*  
NATURAL RESOURCES

CLEON B. FEIGHT  
*Director*

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January 8, 1978

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Drilling Superintendent  
Marathon Oil Company  
P. O. Box 2659  
Casper, Wyoming 82601

**RECEIVED**

JUN 14 1978

CASPER DISTRICT  
OPERATIONS

Re: South Eden Canyon  
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Rich County, Utah

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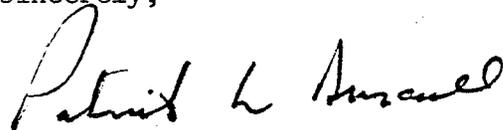
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Sincerely,



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PLD/ksw

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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

5. LEASE DESIGNATION AND SERIAL NO.  
**U-25458**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
**South Eden Canyon**

9. WELL NO.  
**1-15**

10. FIELD AND POOL, OR WILDCAT  
**Wildcat**

11. SEC., T., R., M., OR BLK.  
AND SURVEY OR AREA  
**Sec. 15, T13N, R6E**

12. COUNTY OR PARISH  
**Rich**

13. STATE  
**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   
Unknown

2. NAME OF OPERATOR  
**Marathon Oil Company**

3. ADDRESS OF OPERATOR  
**P. O. Box 2659, Casper, WY 82602**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
At surface  
**1820' FNL & 2072' FWL, Sec. 15, T13N, R6E of S.L. P.M.**  
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
**4 1/2 miles northeast of Laketown, Utah**

10. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)  
**1820'**

16. NO. OF ACRES IN LEASE  
**2,458.86**

17. NO. OF ACRES ASSIGNED TO THIS WELL  
**640**

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
**None**

19. PROPOSED DEPTH  
**15,400'**

20. ROTARY OR CABLE TOOLS  
**Rotary**

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**7197' GL**

22. APPROX. DATE WORK WILL START\*  
**June 20, 1978**

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
Driven	20"	Conductor	50'	None
9-7/8" Reamed to 17 1/4"	13-3/8"	54.5#	1500'	1500 sacks
12 1/4"	9-5/8"	40.0 & 53.5#	* - See Item 2 on 10-point program.	
8-3/8"	7"	29, 32 & 35#		

Please see the following attachments:

1. Surveyor's plat
2. Ten-point Drilling Program
3. BOP Schematic
4. Thirteen Point NTL-6
5. Maps

NOTICE OF APPROVAL

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 **Acting District Operations Manager** DATE **5-2-78**

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
APPROVED BY *[Signature]* TITLE **DISTRICT ENGINEER** DATE **JUN 30 1978**

CONDITIONS OF APPROVAL, IF ANY:

*operator*

CONDITIONS OF APPROVAL ATTACHED

NECESSARY FLARING OF GAS DURING DRILLING AND COMPLETION APPROVED SUBJECT TO ROYALTY (NTL-4)

\*See Instructions On Reverse Side

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK  
 DRILL       DEEPEN       PLUG BACK   
 b. TYPE OF WELL  
 OIL WELL       GAS WELL       OTHER       SINGLE ZONE       MULTIPLE ZONE       Unknown

2. NAME OF OPERATOR  
 Marathon Oil Company

3. ADDRESS OF OPERATOR  
 P. O. Box 2659, Casper, WY 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface 1820' FNL & 2072' FWL, Sec. 15, T13N, R6E of S.L. P.M.  
 At proposed prod. zone SE NW

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 4 1/2 miles northeast of Laketown, Utah

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1820'

16. NO. OF ACRES IN LEASE 2,458.86

17. NO. OF ACRES ASSIGNED TO THIS WELL 640

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. None

19. PROPOSED DEPTH 15,400' DEEPEN

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 7197' GL

22. APPROX. DATE WORK WILL START\* June 20, 1978

5. LEASE DESIGNATION AND SERIAL NO.  
 U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
 South Eden Canyon

9. WELL NO.  
 1-15

10. FIELD AND POOL, OR WILDCAT  
 Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 Sec. 15, T13N, R6E

12. COUNTY OR PARISH  
 Rich

13. STATE  
 Utah

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
Driven	20"	Conductor	50'	None
9-7/8" Reamed to	13-3/8"	54.5#	1500'	1500 sacks
17 1/4"				
12 1/2"	9-5/8"	40.0 & 53.5#	* - See Item 2 on 10-point program	
8-3/8"	7"	29, 32 & 35#		

Please see the following attachments:

1. Surveyor's plat
2. Ten-point Drilling Program
3. BOP Schematic
4. Thirteen Point NTL-6
5. Maps

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 Acting District Operations Manager DATE 5-2-78

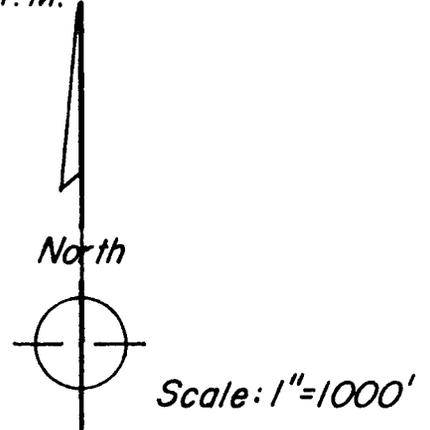
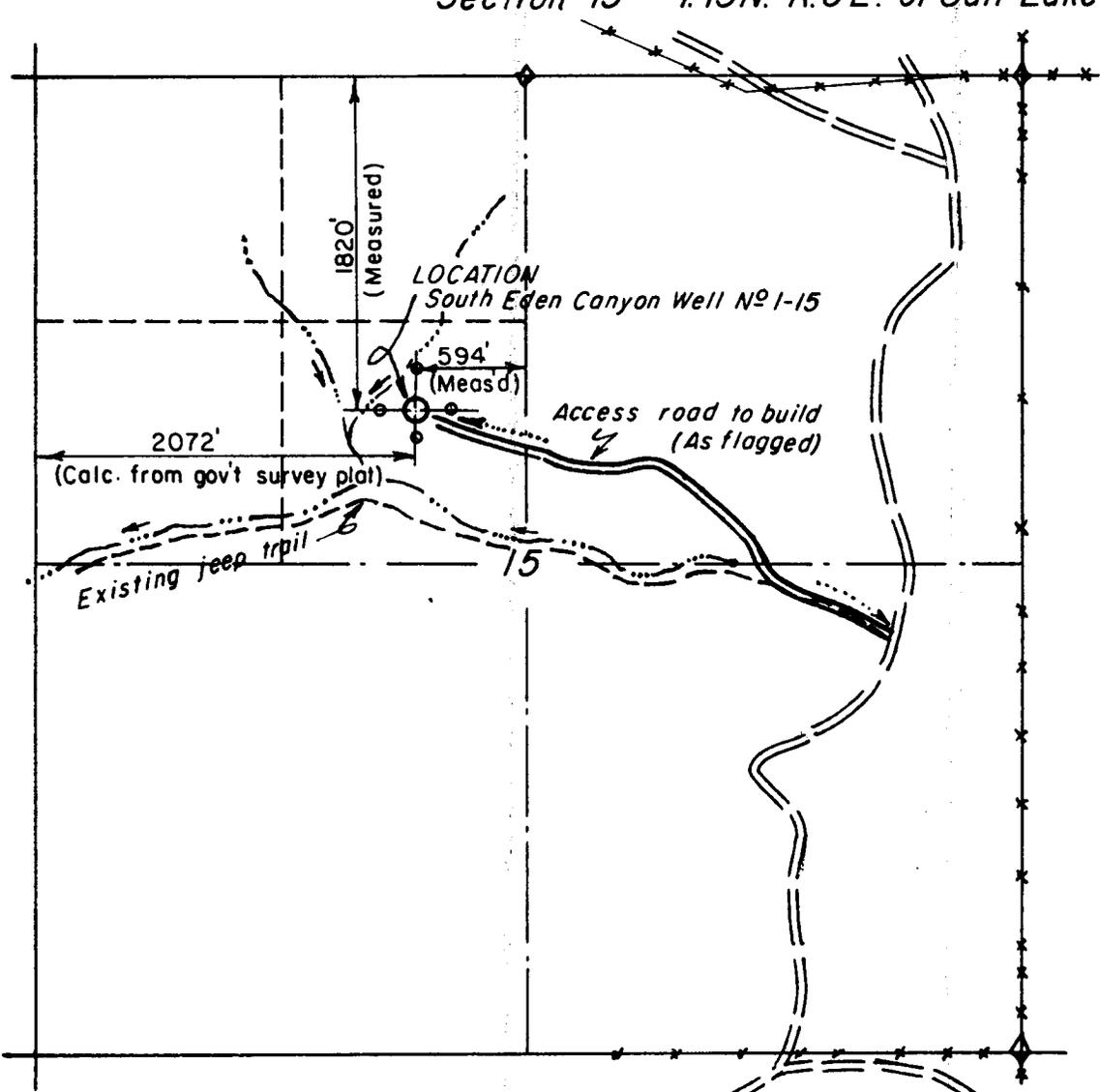
(This space for Federal or State office use)

PERMIT NO. 43-C33-30014 APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

PART of SURVEY NOTES  
for  
WELL LOCATION  
Section 15 T.13N. R.6E. of Salt Lake P.M.



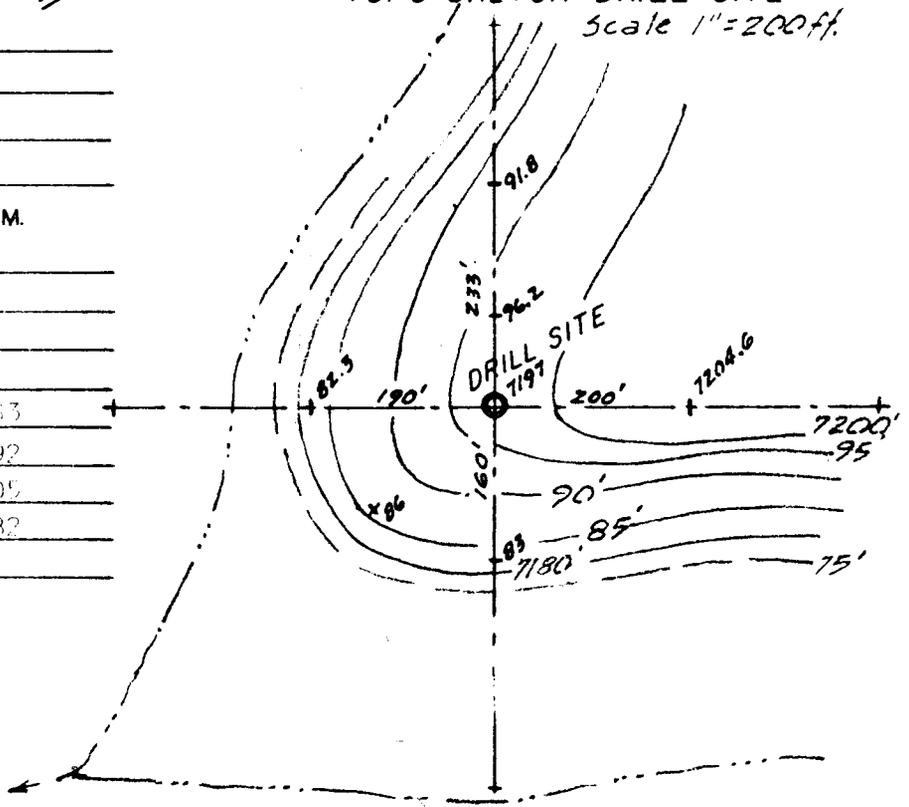
Bearing Basis:  
Eq. of North Line  
Sec. 15 - East, from  
Gov't. survey plat.

Elevation Reference:  
Grd. elev. at radio  
facility NW of loc'n.  
7573 from topo.  
sheet.

Company: Marathon Oil Company  
 Area: South Eden Canyon  
 State: Utah County: Rich  
 Lease: So. Eden Canyon Well No: 1-15  
 Section 15 T. 13N R. 6E of S.L. P.M.  
 Location: 1820 ft. from North Line  
2072 ft. from West Line

Elevations: Drill Site: 7197 Ground  
 (Before Grading) Ref. Pts.: 160' South 7133  
233' North 7192  
200' East 7205  
190' West 7132

TOPO SKETCH-DRILL SITE  
Scale 1"=200ft.



SURVEYOR'S CERTIFICATE

State of WYOMING ss  
 County of NATRONA

I, R. W. Steinle of Casper, Wyoming, hereby certify that this map was made from notes taken during an actual survey made by me ~~or under my supervision~~ on the 18th day of April 1978 and that it correctly shows the location of the drilling site as staked on the ground, to the best of my knowledge and belief.

*R. W. Steinle*  
 R. W. Steinle Wyoming Land Surveyor Reg. No 237

- LEGEND —
- U.S. Gov't Brass Cap, survey corner
  - Original survey, stone corner, recovered in place, properly mkd.
  - Local corner, established by others, as noted.
  - Existing Fence Lines.
  - Existing roadway

R. 6 E.

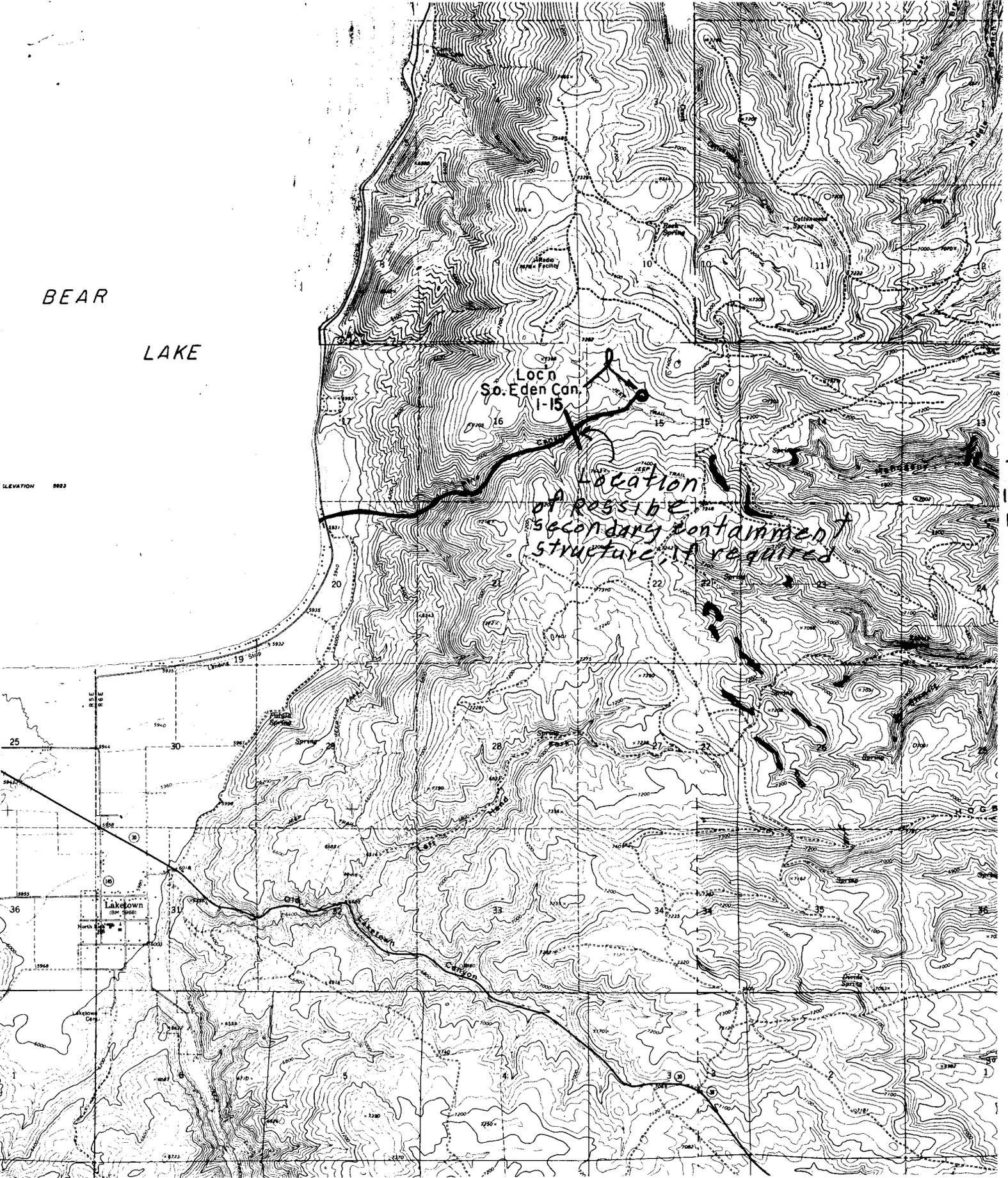
BEAR  
LAKE

ELEVATION 9923

T. 13 N.

Loc'n  
So. Eden Can.  
I-15

*Location  
of possible  
secondary containment  
structure if required*



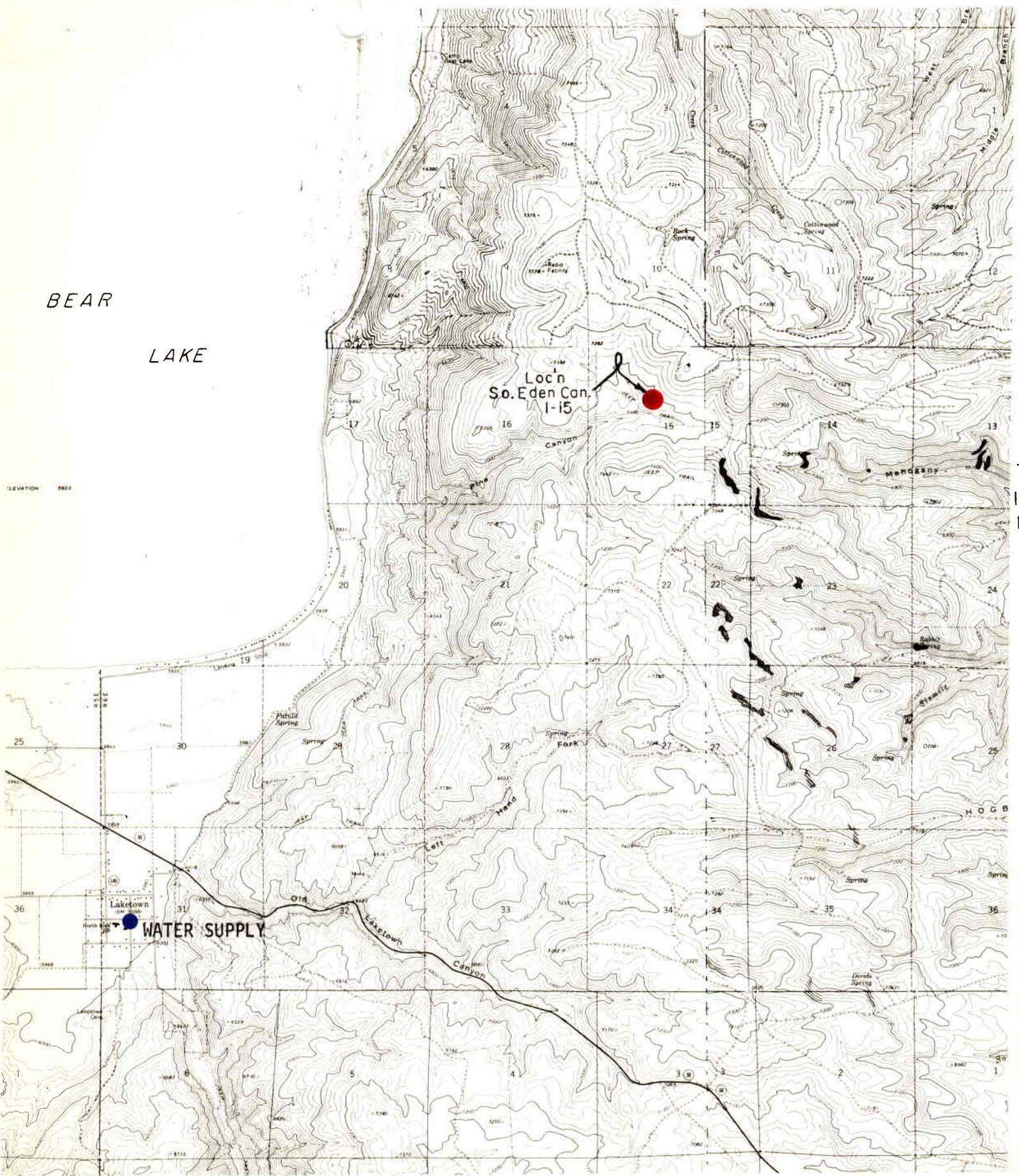
TOPO MAP  
 To Accompany Drilling Permit Application for  
 SOUTH EDAN CANYON WELL N<sup>o</sup> I-15  
 Rich County, Utah

Applicant:  
 MARATHON OIL CO.  
 Casper, Wya.

SCALE: 1" = 4000'

BEAR

LAKE



ELEVATION 8923

T. 13 N

H O G B

TOPO MAP

To Accompany Drilling Permit Application for  
SOUTH EDAN CANYON WELL N<sup>o</sup> 1-15  
Rich County, Utah

Applicant:  
MARATHON OIL CO.  
Casper, Wyo.

SCALE: 1" = 4000'

ROAD MAP

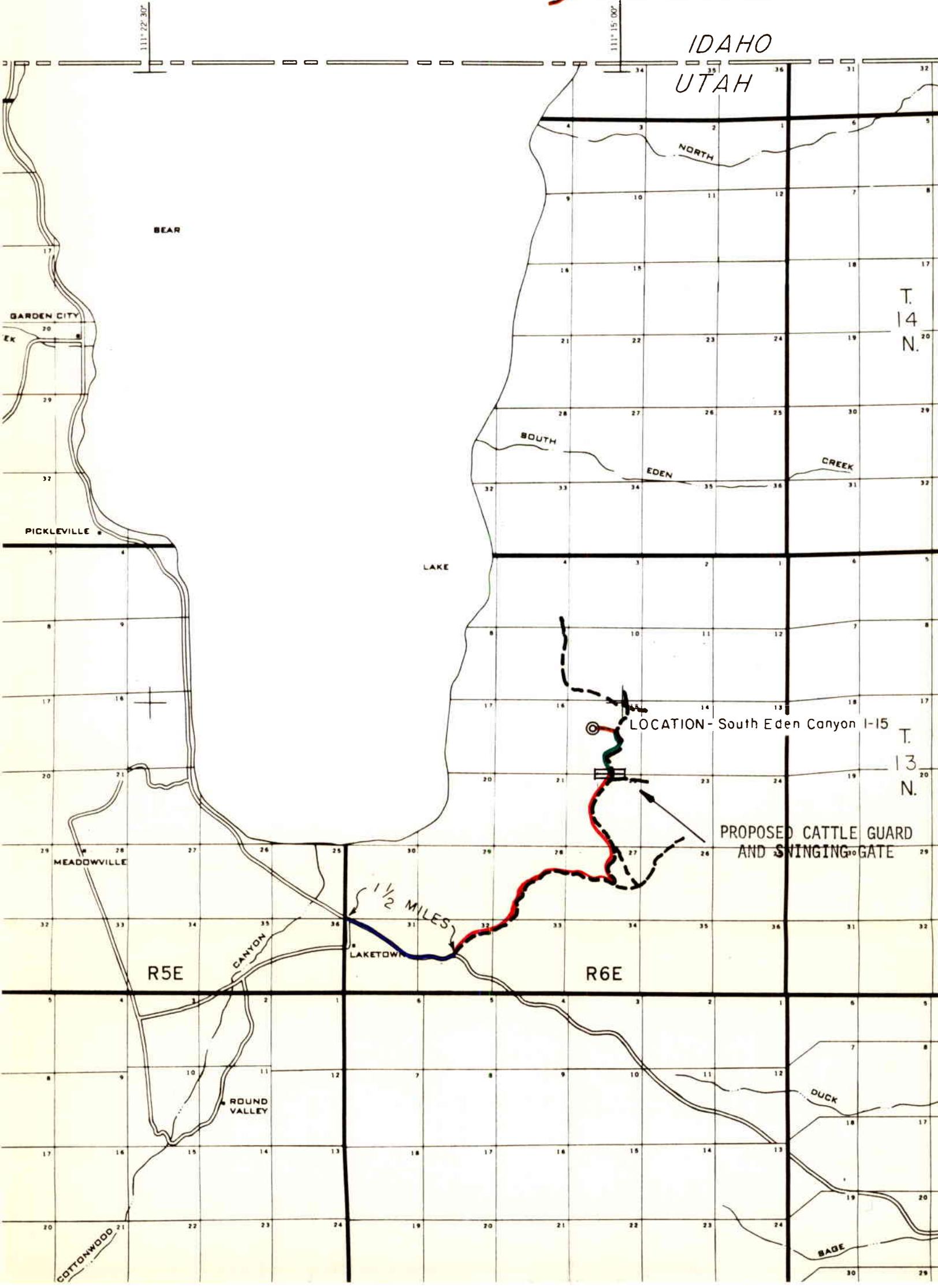
To Accompany Drilling Application for:

SOUTH EDEN CANYON WELL N° 1-15  
Rich County, Utah

APPLICANT:  
MARATHON OIL COMPANY

LEGEND

-  Highway
-  Bladed - County Road
-  Bladed - Private Road
-  Access road to be built



ROAD MAP

To Accompany Drilling Application for:

SOUTH EDEN CANYON WELL N° I-15  
Rich County, Utah

APPLICANT:

MARATHON OIL COMPANY

LEGEND

-  Highway
-  Bladed - County Road
-  Bladed - Private Road
-  Access road to be built

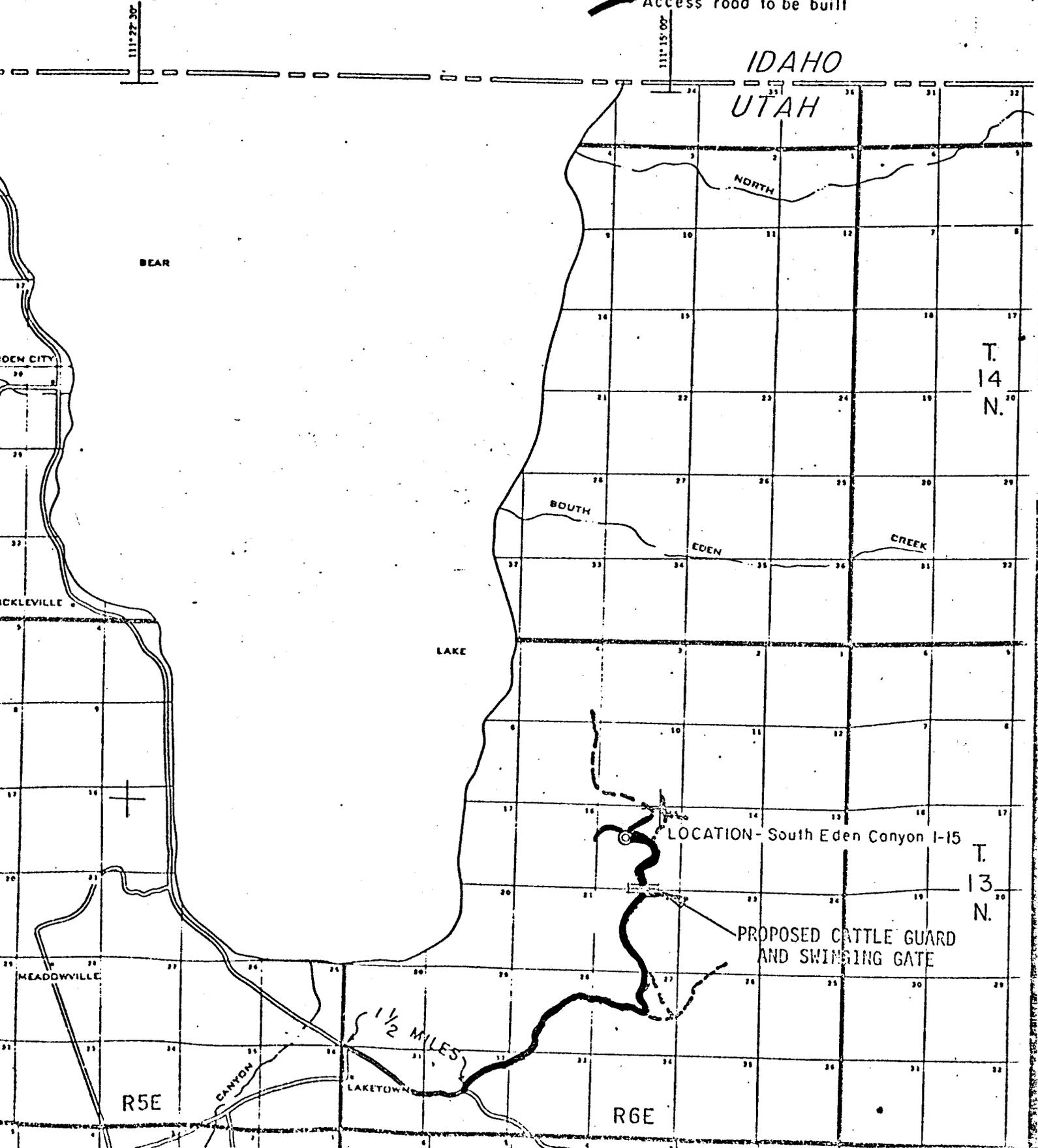
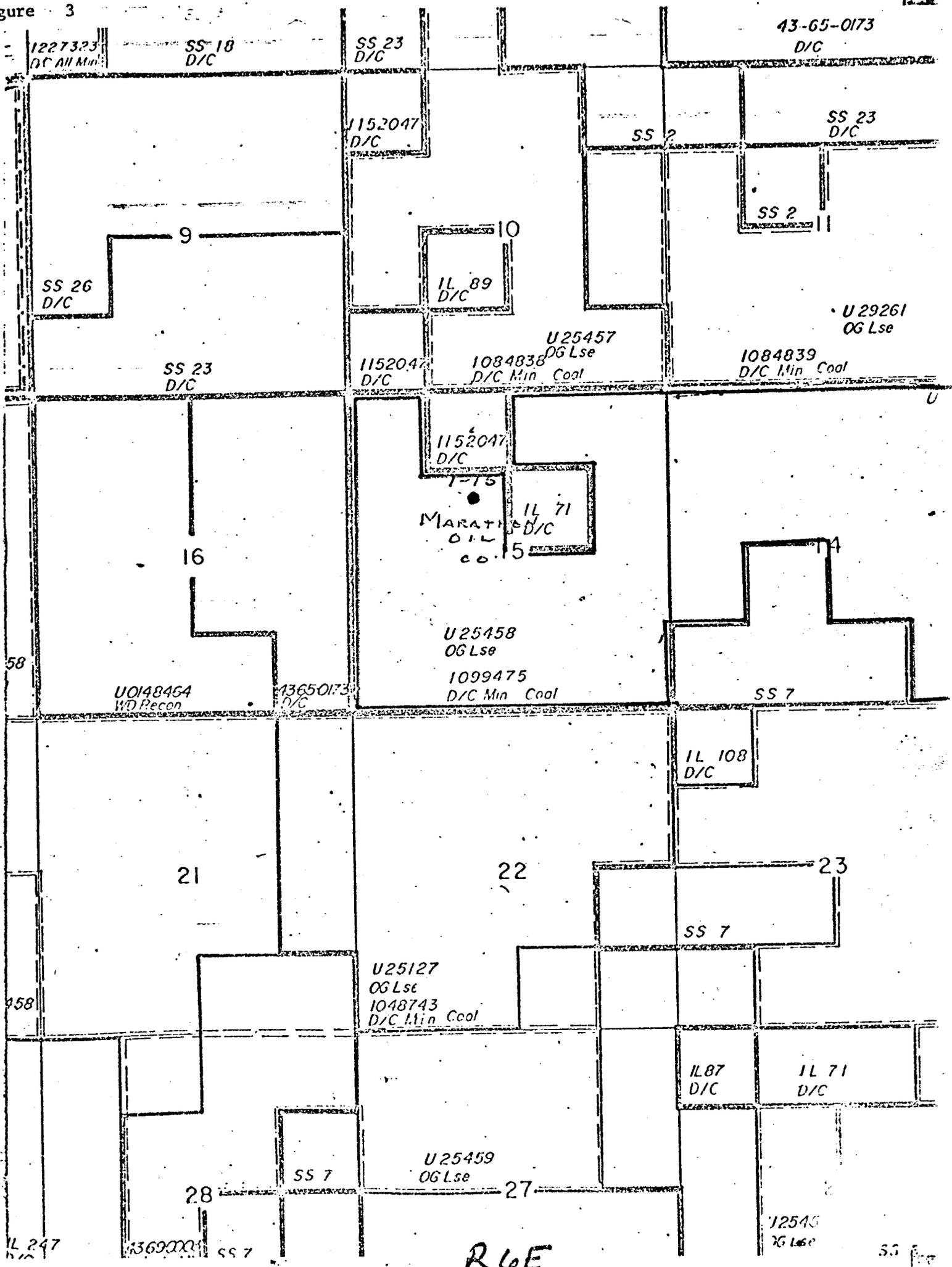


Figure 3



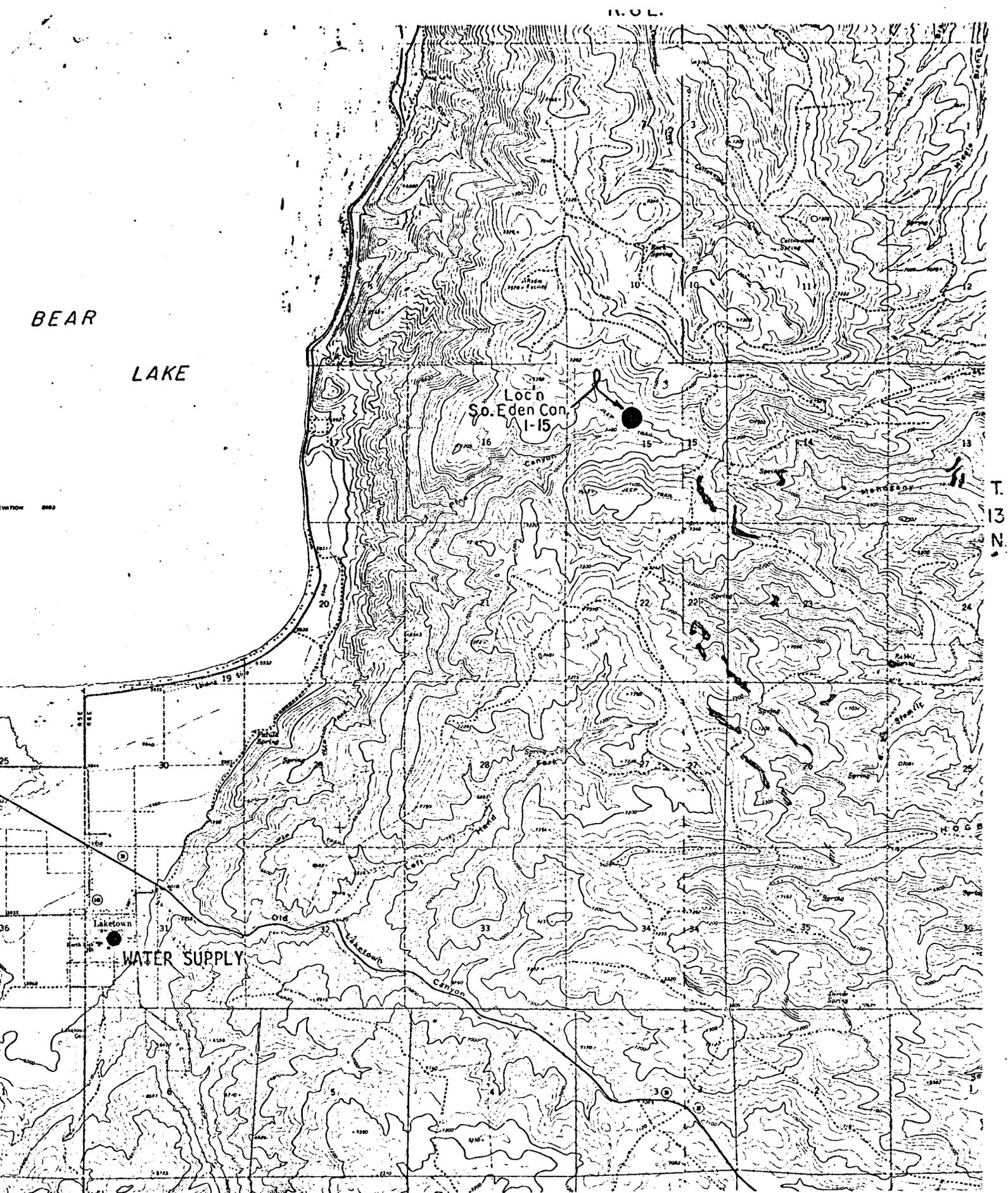


Figure 4-TOPO MAP  
 To Accompany Drilling Permit Application for  
 SOUTH EDAN CANYON WELL N° I-15  
 Rich County, Utah

Applicant:  
 MARATHON OIL CO.  
 Casper, Wya.

SCALE · 1" = 4000'

MARATHON OIL COMPANY

Drilling Operations Plan

South Eden Canyon #1-15  
 1,820' FNL & 2,072' FWL  
 Section 15, T13N, R6E  
 Rich County, Utah  
 Elevation: 7,197' G.L.  
 Estimated K.B. - 7,215'

1. Geologic name of surface:

Wasatch - Tertiary

2. Estimated tops of important geologic markers:

Twin Creek	3,000'	(+4,215')	Phosphoria	11,600'	(-4,385')
Nugget	6,000'	(+1,215')	Wells	12,200'	(-4,985')
Ankareh	7,100'	(+ 115')	Madison	13,200'	(-5,985')
Thaynes	8,500'	(-1,285')	Lodgepole	14,700'	(-7,485')
Dinwoody	11,000'	(-3,785')	Devonian	15,400'	(-8,185')

These tops are only "best guess" picks and may be very inaccurate. Poor seismic reflections, faulting, and overturned beds prevent accurate estimations of formation tops.

3. Estimated depths of anticipated water, oil, gas or other mineral bearing formations:

Twin Creek	3,000'	Gas
Nugget	6,000'	Gas
Thaynes	8,500'	Gas
Dinwoody	11,000'	Primary objectives - anticipate gas
Phosphoria	11,600'	
Wells	12,200'	Gas
Madison	13,200'	Gas

4a. The casing program including the size, grade, weight, whether new or used, and a setting depth of each string:

<u>Min. Hole Size</u>	<u>Casing O.D.</u>	<u>Grade</u>	<u>Weight</u>	<u>Setting Depth</u>	<u>New or Used</u>
-	20"			50'	New
9-7/8" Reamed to 17-1/4"	13-3/8"	K-55	54.5#	1,500'	New
12-1/4"	9-5/8"	N-80	40 - 53.5#	*	New
8-3/8"	7"	N-80	29 - 35#	15,400'	New

\*Depth of intermediate casing will depend on hole conditions, etc.

4b. The cementing program including type, amounts, and additives:

- 13-3/8" Casing - Run a guide shoe, float collar and 5 centralizers. Cement with 1,200 sacks of Light cement with 3% salt and 300 sacks of Class "G" with 2% CaCl<sub>2</sub>.
- 9-5/8" Casing - Run a guide shoe, differential fill collar and 10 centralizers. Cement with Light cement with 10% salt and tail with Class "G" with 18% salt. Add retarder and friction reducer as required. Cement volume will be determined when setting depth of intermediate string is chosen.
- 7" Casing - Run a differential fill shoe and collar with 20 centralizers. Cement with 350 sacks of Light cement with 10% salt and 500 sacks of Class "G" with 18% salt and 40% silica flour. Add retarder, friction reducer as required.

NOTE: Actual cement volumes and compositions will have to be tailored to the conditions encountered. Since setting depths of the casing strings are tentative, the cements will have to be tailored for temperature, lost circulation problems, etc.

5. B.O.P. specification and testing: (see the attached schematic diagram for size and pressure ratings):

5,000 psi WP hydraulic double ram preventer with blind rams, pipe rams, and Hydril. Operation to be checked daily.

BOP	Test Hydraulic Operations		Remarks
	Pressure	Time	
5,000 psi rated WP	5,000 psi	15 Minutes	Test monthly.
13-3/8" Casing	2,000 psi	15 Minutes	Test before
9-5/8" Casing	4,000 psi	15 Minutes	drilling out

*would prefer consideration of 10,000 psi B.O.P.*

6. Mud program and anticipated pressures:

From	To	Type Mud	Weight	% Oil	Water Loss
0'	1,500'	Low Solids	8.9	0	20
1,500'	T.D.	Non-dispersed gel	8.9	0	15

Mud to contain H<sub>2</sub>S scavengers and corrosion inhibitors.

Intermittent lost circulation zones may be encountered from surface to TD. Lost circulation material to be readily available.

Expected maximum gradient is 0.47 psi/ft. However, be prepared to weight up to +10.0 ppg, if significant show or kick is encountered.

7a. Type of drilling tools and auxiliary equipment:

Mud System: Desander, desilter, degasser, fine mesh shaker, gas buster and automatic pit level alarm.

H<sub>2</sub>S may be encountered. Necessary safety equipment for personnel will be available at all times. *2 visits*

H<sub>2</sub>S detection equipment to be in use at all times.

7b. Deviation Control:

<u>From</u>	<u>To</u>	<u>Maximum Deviation Between Surveys</u>	<u>Maximum Deviation From Vertical</u>	<u>Maximum Change Per 100' of Depth</u>
0'	1,500'	200'	*	1°
1,500'	T.D.	500'	*	1°

\*Deviation problems are anticipated due to high angle dips and overturned beds. Attempt to keep hole as vertical as required for safe drilling operation.

8. Sample, logging, testing, and coring program:

Drill cutting samples will be taken every ten (10) feet from surface casing to TD or as directed by well site geologist or engineer.

An SP/DIL, GR/Cal/CNL/FDC, GR/BHC, Dipmeter and Deviation survey will be run at the 9-5/8" casing point and again at TD. Logs will be run to surface.

Two-man mud logging unit with H2S detector to run continuously from surface to TD.

Drill stem tests will be run as required to evaluate hydrocarbon shows.

Anticipate taking three 60 foot cores. Core points will most likely be in the Thaynes, Dinwoody, and Phosphoria.

9. Anticipated abnormal pressures or temperatures:

Normal temperature and pressure gradients are expected.

Reservoir gradients are expected to be approximately 0.47 psi/ft., yielding a maximum BHP at TD of 7,200 psi.

Bottomhole temperature at 15,400' is expected to be approximately 295° F.

10. The anticipated starting date and duration of operation:

Starting Date: June 20, 1978

Duration: 6 Months

DISTRICT APPROVALS

Approved

Date

*Gregory King* 5/2/78  
*Michael* 5-1-78  
*M.E. D'Keefe* 5/2/78

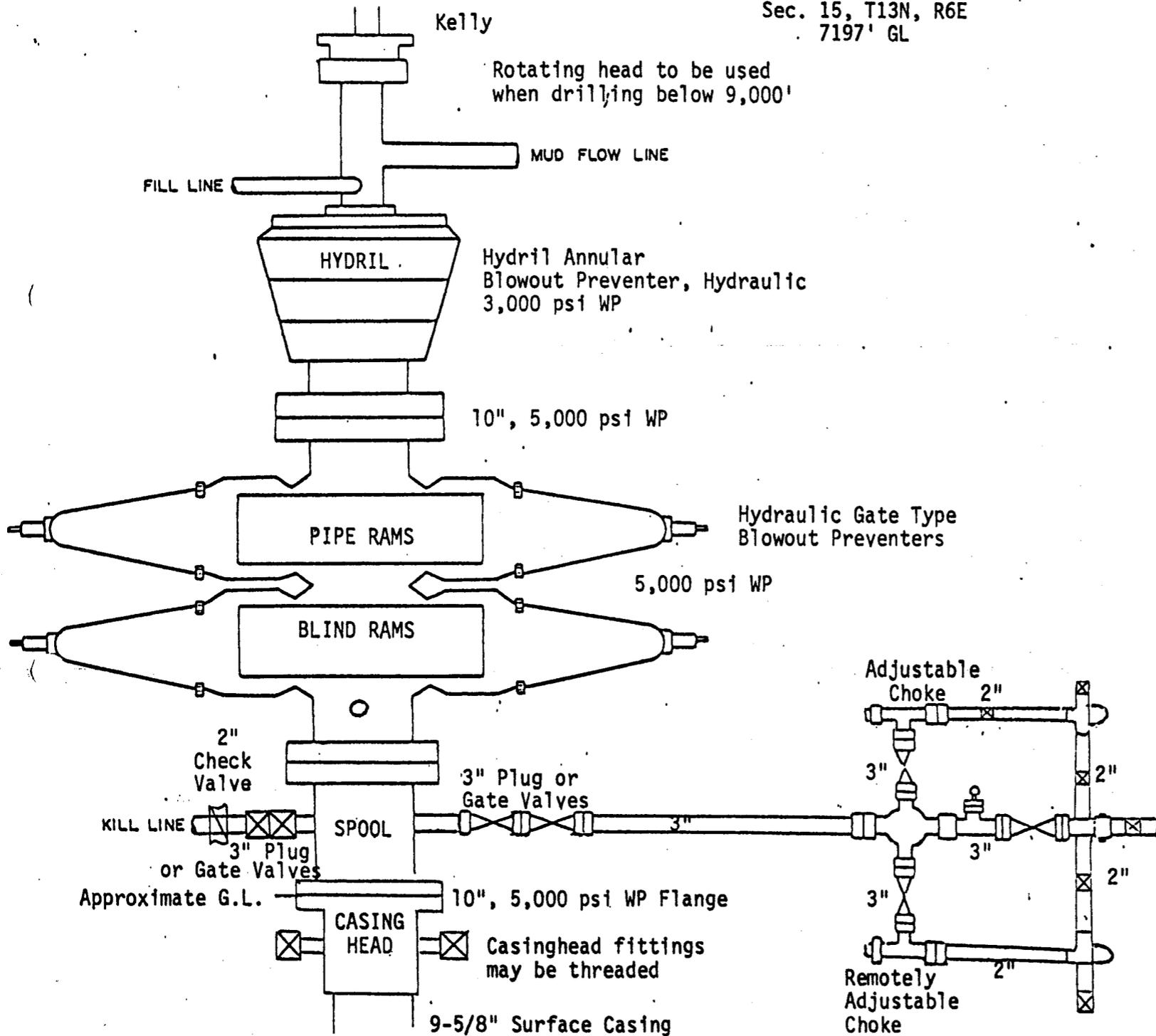
DIVISION APPROVALS

Approved

Date

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Marathon Oil Company  
 South Eden Canyon #1-15  
 Sec. 15, T13N, R6E  
 7197' GL



Rotating head to be used  
 when drilling below 9,000'

Hydril Annular  
 Blowout Preventer, Hydraulic  
 3,000 psi WP

10", 5,000 psi WP

Hydraulic Gate Type  
 Blowout Preventers

5,000 psi WP

2" Check Valve

3" Plug or Gate Valves

KILL LINE  
 3" Plug or Gate Valves

Approximate G.L.

10", 5,000 psi WP Flange

Casinghead fittings  
 may be threaded

9-5/8" Surface Casing

Adjustable Choke

2"

3"

3"

3"

3"

Remotely Adjustable Choke

2"

1. Blowout preventers, master valve, plug valve and all fittings must be in good condition. Use new API Sealing Rings.
2. All fittings (gates, valves, etc.) to have pressure rating equivalent to preventers. Valves to be flanged and at least 2" unless otherwise specified. Valves next to BOP to be nominal 3".
3. Equipment through which bit must pass shall be as large as the inside diameter of the casing that is being drilled through.
4. Safety valve must be available on rig floor at all times and with proper connections. The I.D. of safety valve should be as great as I.D. of tool joints of drill pipe.
5. Kelly safety valve installed, to have same working pressure as BOP's.
6. All lines and controls to preventers must be connected and tested before drilling out of surface pipe.
7. BOP's must be fluid operated, complete with accumulator. Controls may be either on the floor or ground near steps from rig floor.
8. Fillup line shall be tied to drilling nipple with connection below and approximately 90° to the flow line.
9. Gauge will be installed for testing but removed while drilling.
10. If spool is not used, the choke line can be connected to BOP side outlet, below bottom rams.
11. Casinghead and casinghead fittings to be furnished by Marathon Oil Company.
12. Chokes will be adjustable.
13. One side of casinghead may be bull plugged.

*Top  
 Sub  
 side*

*de*

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MARATHON OIL COMPANY

Surface Use and Operations Plan  
South Eden Canyon #1-15  
Section 15, T13N, R6E  
Rich County, Utah  
7,197' G. L.

1. Existing Roads:

The attached road and topographical map shows the roads in the area of the proposed well. Start at Laketown, Utah, go east for 1-1/2 mile on the highway, turn and go north on the bladed county road for approximately 8-1/2 miles, go straight ahead on bladed private road for 3/4 miles, then turn left on access road for 1/4 mile.

2. Access Road:

The last 1/4 mile to the location will be via a new road. Construction of this road will consist of blading the surface smooth to a width of 16' and cut bar ditches. The road will have a maximum grade of 3%. There will be no turnouts, no major cuts, no culverts, no fills. There will be a cattle guard and a swinging gate as shown on attached map.

3. Location of Existing Wells:

No wells are shown within a 2 mile radius.

4. Location of Production Facilities and Service Lines:

There are no existing facilities owned or controlled by the Lessee within a two mile radius of this well. All production facilities will be in the proposed location (see attached schematic). The dimensions of the facilities are shown on the attached schematic. Good engineering practices will be used in the construction of these facilities, and materials will be obtained through local vendors and contractors.

Any sumps or hazardous equipment will be fenced to keep livestock out. If any sumps need to be left open, they will be fenced on all four sides to keep wildlife out.

Those portions of the location not needed for production facilities will be rehabilitated by contouring and reseeding.

5. Location and Type of Water Supply:

Water supply for this project will be hauled from the town of Laketown, Utah, to the well site by a jobber.

6. Source of Construction Materials:

All construction materials for this location and the access road are to be materials accumulated during the construction of the location and access road. No additional construction materials from other sources are anticipated.

7. Waste Disposal Handling:

All liquid drilling water will be stored in the reserve pit at the drill site. All burnable trash will be burned in a suitable burn pit. All nonburnable refuse will be buried at a depth of 5' upon conclusion of the drilling and completion of the well. Drill cuttings will be covered after the reserve pit has dried up. There are no plans to line the reserve pit.

During completion, produced water and gas will be caught in a flare pit. A commercial, portable latrine will be used on the location.

Immediately upon the release of the rig, the area will be cleaned and the front side of the reserve pit will be fenced.

8. Ancillary Facilities:

There will be no ancillary facilities at this location.

There will be a house trailer for the drilling supervisor. This is shown on the attached location schematic.

9. Well Site Layout:

On the attached schematic are shown the relative positions of the various components of the drilling tools. The rig will face southeast with the reserve pit on the north. The reserve pit will be fenced on all three sides prior to drilling.

The location of the frac tanks and trucks are shown on a separate attached schematic. The trucks will be at least 125' from the well, and the tanks at least 125' from the trucks and the well head on all hydrocarbon fracturing.

Preparation of the location will require a maximum cut of 8', fill will be required to the south.

10. Plan for Restoration to Surface:

Topsoil will be stockpiled to the northeast side of the location. After the well is completed and the reserve pit dried out that portion of the location not required for production equipment will be recontoured, covered with stockpiled topsoil and reseeded to BLM specifications. Any portion of the access road not needed for vehicular traffic will also be reseeded. The rehabilitation operations will commence immediately after the completion of the well. Any oil on the pit will be removed at the time that the rig is removed from the well.

11. Other Information:

The area has a desert environment of gently rolling land with sparse vegetation and very little surface moisture. Vegetation consists mainly of sage and native grasses. Soils are of the Eocene Age, Tertiary Wasatch Formation.

In the immediate vicinity there are no known water, occupied dwellings, archeological, historical, or cultural sites.

12. Representatives:

Marathon Oil Company's representative who is responsible for compliance with the approved surface and operation plan is:

*JF Wirth*

James F. Wirth  
Drilling Superintendent  
Marathon Oil Company  
P. O. Box 2659  
Casper, Wyoming 82602  
(307) 265-7693

13. Certification:

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

5-2-78  
DATE

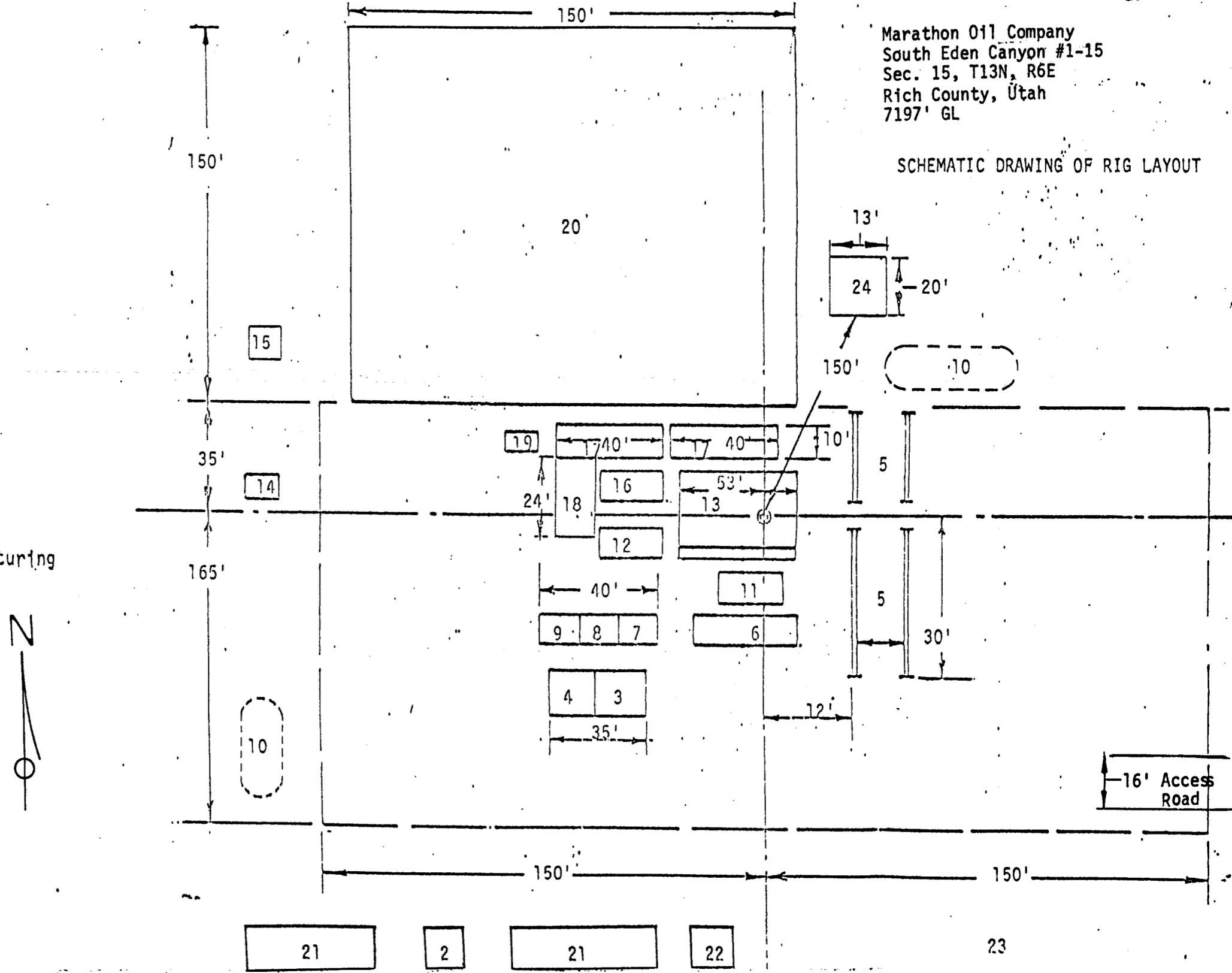
  
NAME

Acting District Operations Manager  
TITLE

1. Access Road
2. Trailer House
3. Fuel Tank
4. Water Tank
5. Pipe Racks
6. Storage Pad
7. Light Pad
8. Change House
9. Accumulator
10. Soil Stock Pile
11. Dog House on Top of Tool House
12. Mud Mixer
13. Substructure
14. Boiler
15. Burn & Trash Pit (Covered w/wire mesh)
16. Rig Engines
17. Shale Shaker & Mud Tank
18. Suction Mud Tank
19. Mud House on Stand
20. Sump (Reserve Pit)
21. Parking Area
22. Toilets
23. Additional area for fracturing
24. Flare Pit

Marathon Oil Company  
 South Eden Canyon #1-15  
 Sec. 15, T13N, R6E  
 Rich County, Utah  
 7197' GL

SCHEMATIC DRAWING OF RIG LAYOUT



Marathon Oil Company  
South Eden Canyon #1-15  
Sec. 15, T13N, R6E  
Rich County, Utah  
7197' GL



Reserve Pit

Flare Line

Well Head

125'  
Minimum

Well Head to Frac Tank

Completion  
Unit

Frac  
Pressure  
Line

125' Minimum  
Frac Trucks  
To Well Head

Hydrocarbon  
Line

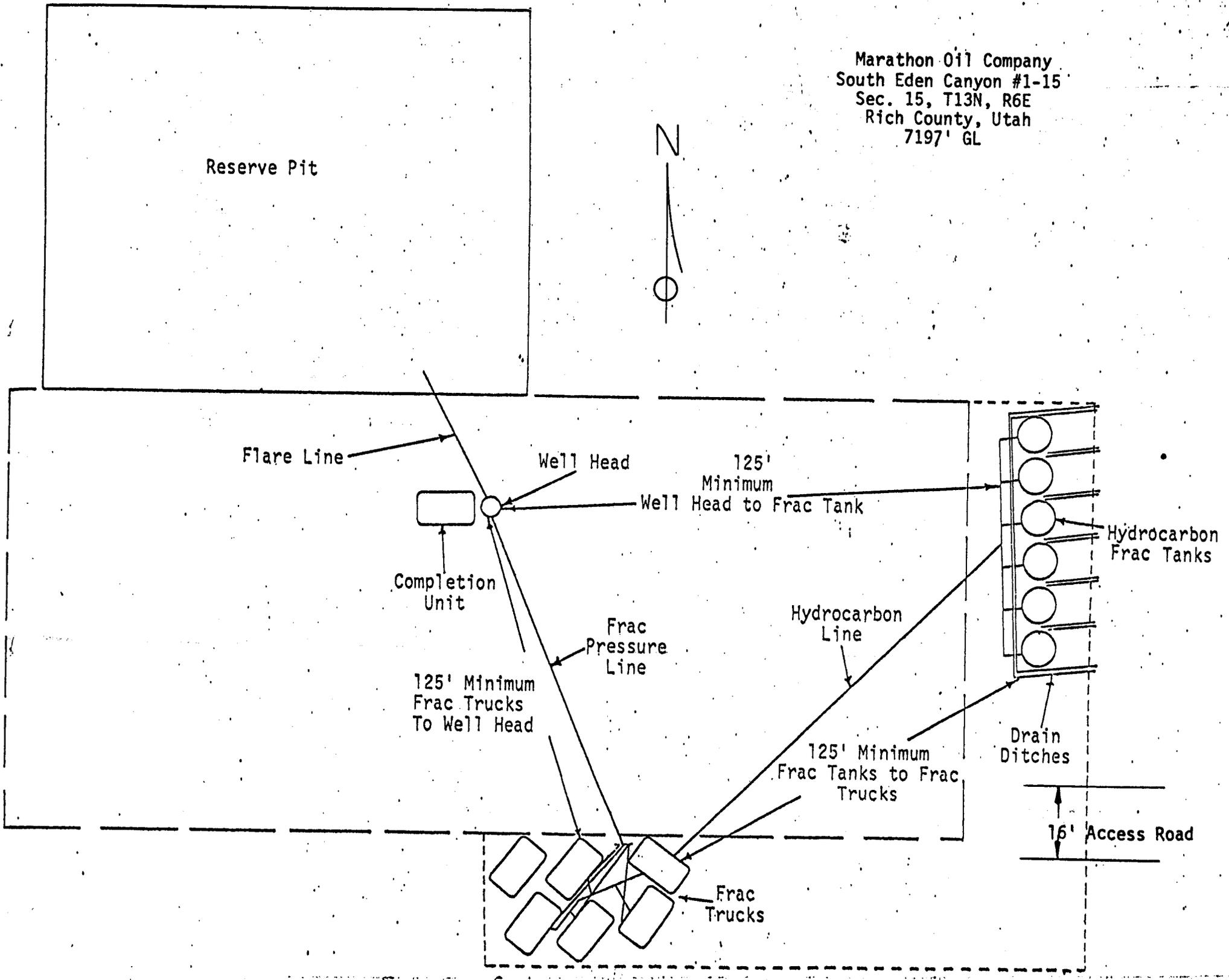
125' Minimum  
Frac Tanks to Frac  
Trucks

Hydrocarbon  
Frac Tanks

Drain  
Ditches

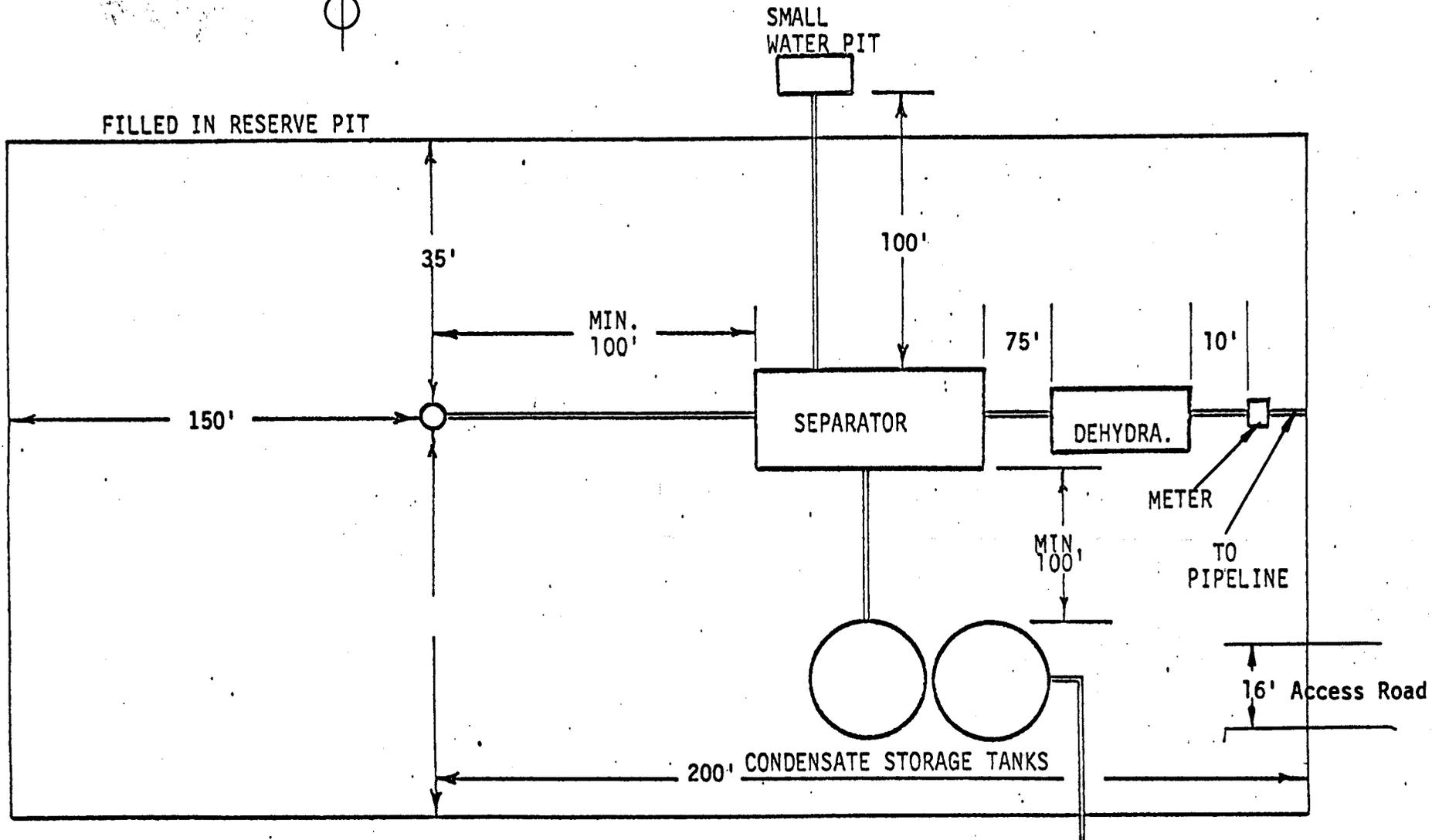
16' Access Road

Frac  
Trucks



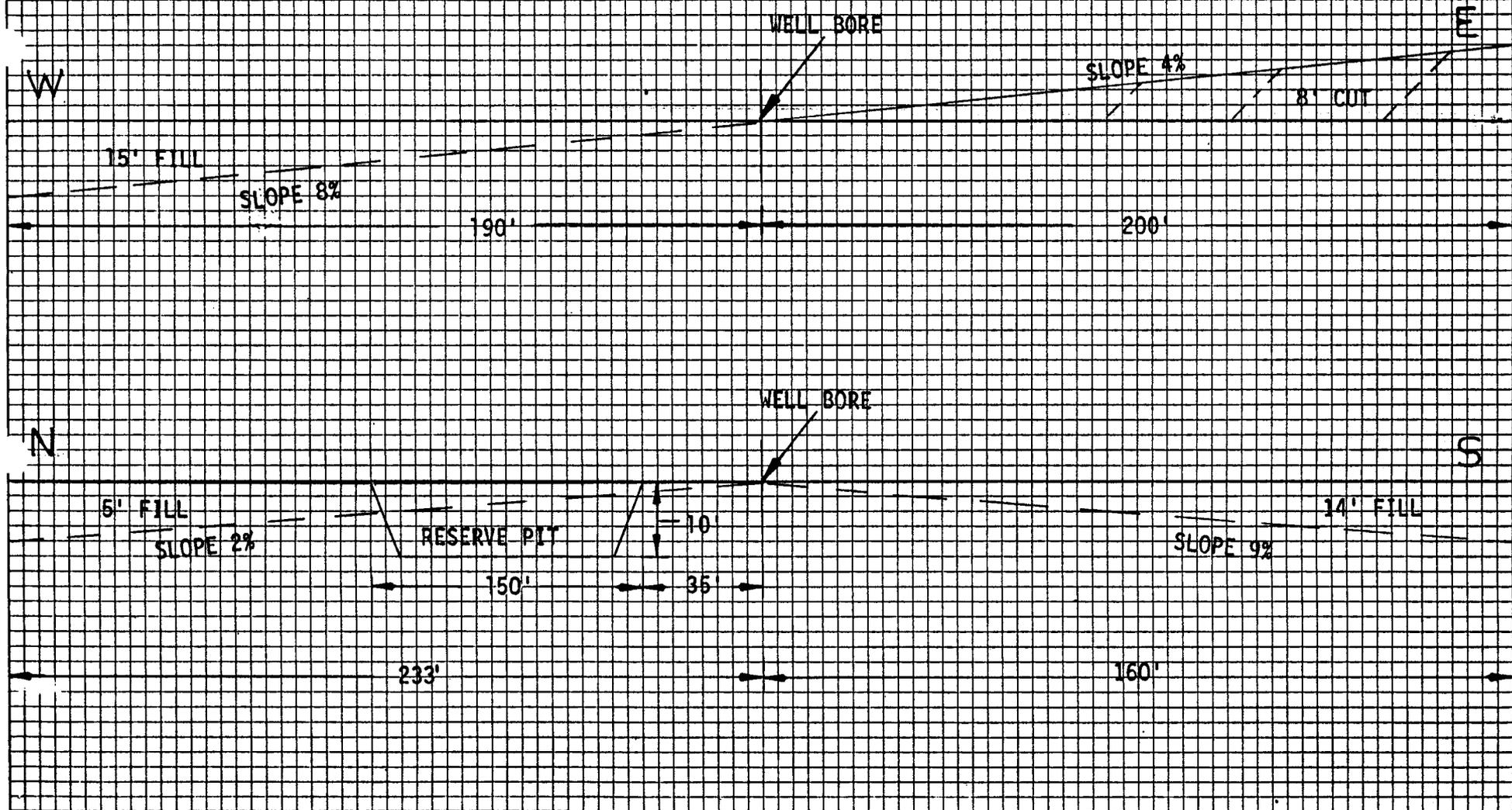
Marathon Oil Company  
South Eden Canyon #1-15  
Sec. 15, T13N, R6E  
Rich County, Utah  
7197' GL

PROPOSED PRODUCTION FACILITIES



Marathon Oil Company  
South Eden Canyon #1-15  
Sec 15, T13N, R6E  
Rich County, Utah  
7197' GL

CROSS SECTION OF LOCATION





STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

SE NW

\*\* FILE NOTATIONS \*\*

DeWanna

Date: May 5-

Operator: Marathon Oil Co.

Well No: South Eden Canyon 1-15

Location: Sec. 15 T. 13N R. 6E County: Lick

File Prepared:   
Card Indexed:

Entered on N.I.D.:   
Completion Sheet:

API NUMBER: 43-033-30014

CHECKED BY:

Administrative Assistant [Signature]

Remarks:

Petroleum Engineer [Signature]

Remarks:

Director 2

Remarks:

Note conditions upon attached letter - To be included in Permit approval. To Drilling

INCLUDE WITHIN APPROVAL LETTER:

Bond Required: [Signature]

Survey Plat Required:

Order No.

Surface Casing Change to

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

O.K. Rule C-3

O.K. In  Unit

Other:

Letter Written/Approved

May 9, 1978

Marathon Oil Company  
P.O. Box 2659  
Casper, Wyoming 82602

Re: Well No. South Eden Canyon 1-15  
Sec. 15, T. 13 N, R. 6 E,  
Rich County, Utah

Gentlemen:

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

However, said approval shall be contingent upon suggested changes in the permit as submitted. Two types of changes are noted; those being suggested and those being mandatory. If the suggested changes are acceptable, please notify this office at your convenience. Mandatory changes will be inspected by on-site visitations.

Suggested:

- 1) Consider a 10,000 psi blow-out preventor stack due to depth and unknown geological data.
- 2) Provide a surplus quantity of H<sub>2</sub>S safety equipment to compensate for visitors, salesmen, and auxiliary personnel beyond that of normal rig crew.

Mandatory:

- 1) Written report on the initial B.O.P. equipment that must be filed with this office.
- 2) The equipment, safety program, and general contingency relative to the potential existing if Hydrogen Sulphide is encountered, must be submitted in detail and approved by this office.
- 3) A deviation survey indicating that exact bottom-hole location of the well is to be submitted prior to any attempt to complete the well, or within a reasonable period of time after plugging and abandoning the well.

Marathon oil Company  
May 9, 1978  
Page Two

- 4) The general proposed production facilities are not approved under this permit.

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

PATRICK L. DRISCOLL - Chief Petroleum Engineer  
HOME: 582-7247  
OFFICE: 533-5771

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling.

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 43-033-30014.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT  
Director

cc: U.S. Geological Survey



SCOTT M. MATHESON  
Governor

GORDON E. HARMSTON  
*Executive Director,*  
NATURAL RESOURCES

CLEON B. FEIGHT  
*Director*

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS, AND MINING  
1588 West North Temple  
Salt Lake City, Utah 84116  
(801) 533-5771

OIL, GAS, AND MINING BOARD

I. DANIEL STEWART  
*Chairman*

CHARLES R. HENDERSON  
JOHN L. BELL  
THADIS W. BOX  
C. RAY JUVELIN

May 9, 1978

Marathon Oil Company  
P.O. Box 2659  
Casper, Wyoming 82602

Re: Well No. South Eden Canyon 1-15  
Sec. 15, T. 13 N, R. 6 E,  
Rich County, Utah

Gentlemen:

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

However, said approval shall be contingent upon suggested changes in the permit as submitted. Two types of changes are noted; those being suggested and those being mandatory. If the suggested changes are acceptable, please notify this office at your convenience. Mandatory changes will be inspected by on-site visitations.

Suggested:

- 1) Consider a 10,000 psi blow-out preventor stack due to depth and unknown geological data.
- 2) Provide a surplus quantity of H<sub>2</sub>S safety equipment to compensate for visitors, salesmen, and auxiliary personnel beyond that of normal rig crew.

Mandatory:

- 1) Written report on the initial B.O.P. equipment test must be filed with this office.
- 2) The equipment, safety program, and general contingency relative to the potential existing if Hydrogen Sulphide is encountered, must be submitted in detail and approved by this office.
- 3) A deviation survey indicating that exact bottom-hole location of the well is to be submitted prior to any attempt to complete the well, or within a reasonable period of time after plugging and abandoning the well.

Marathon oil Company  
May 9, 1978  
Page Two

- 4) The general proposed production facilities are not approved under this permit.

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

PATRICK L. DRISCOLL - Chief Petroleum Engineer  
HOME: 582-7247  
OFFICE: 533-5771

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling.

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 43-033-30014.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

  
CLEON B. FEIGHT

Director

cc: U.S. Geological Survey

FROM: District Geologist, Salt Lake City, Utah

TO: District Engineer Salt Lake City, Utah

Lease No. **U-25458**

SUBJECT: APD supplemental stipulations

Operator: **MARATHON OIL CO.** Location:

**SE 1/4 NW 1/4 sec. 15** T. **13N**, R. **6E**

Well: **1-15**

**Rich** Co., **UTAH**

1. Operator picked tops are adequate? Yes , No . If not: The following are estimated tops of important geologic markers:

Formation	Depth	Formation	Depth
-----------	-------	-----------	-------

**SURFACE KNIGHT CONG. SURFACE**

2. Fresh water aquifers likely to be present below surface casing? Yes , No . If yes: Surface casing program may require adjustment for protection of fresh water aquifers to a depth of approximately \_\_\_\_\_ feet in the \_\_\_\_\_ Formation.

3. Does operator note all prospectively valuable oil and gas horizons? Yes , No . If not: The following additional horizons will be adequately logged for hydrocarbons:

Unit	Depth	Unit	Depth
------	-------	------	-------

4. Any other leasable minerals present? Yes , No . If yes: 1. Logs (**SONIC and density** \*) will be run through the **Phosphoria** \*\* at approximate depths of **11500** to **12,200** feet to adequately locate and identify anticipated **phosphate** beds. 2. Logs ( \_\_\_\_\_ \*) will be run through the \_\_\_\_\_ \*\* at approximate depths of \_\_\_\_\_ to \_\_\_\_\_ feet to adequately locate and identify anticipated \_\_\_\_\_ beds. 3. Logs ( \_\_\_\_\_ \*) will be run through the \_\_\_\_\_ \*\* at approximate depths of \_\_\_\_\_ to \_\_\_\_\_ feet to adequately locate and identify anticipated \_\_\_\_\_ beds.

5. Any potential problems that should be brought to operators attention (e.g. abnormal temperature, pressure, incompetent beds, H<sub>2</sub>S)? Yes , No . If yes, what?

6. References and remarks:

\* From 10 pt or others as necessary. \*\* Members, Formations.

Date: **5-10-78**

Signed: **emp**

Marathon Oil Company  
Sec. 15-13N-6E  
Well 1-15  
U-25458

Additional Stipulations:

1. Should the land owner fail to specify a seeding mixture for surface reclamation, the Bureau of Land Management recommends the following:

4 lbs/acre Western Wheatgrass  
4 lbs/acre Mountain Brome

2. Construction and maintenance for surface use approved under this plan should be in accordance with the surface use standards as set forth in the BLM/GS Oil and Gas Brochure entitled, "Surface Operating Standards for Oil and Gas Exploration and Development". This includes, but is not limited to, such items as road construction and maintenance, handling of top soil, and rehabilitation.



**GEOLOGICAL SURVEY**  
 Conservation Division  
 8440 Federal Building  
 Salt Lake City, Utah 84138

May 22, 1978

Marathon Oil Company  
 P. O. Box 2659  
 Casper, Wyoming 82602

BEV \_\_\_\_\_  
 JBE \_\_\_\_\_  
 CEH \_\_\_\_\_  
 AWH \_\_\_\_\_  
 JEL \_\_\_\_\_  
 MEO \_\_\_\_\_  
 GEA \_\_\_\_\_  
 JFW \_\_\_\_\_  
 JNR \_\_\_\_\_  
 JL \_\_\_\_\_  
 DMC \_\_\_\_\_  
 LG \_\_\_\_\_

Re: Application for Permit to Drill  
 Well No. 1-15  
NE 1/4 sec. 15, 13N, R. 6E  
Rich County, Utah  
 Oil and Gas Lease U-25458  
 Surface Ownership public

Gentlemen:

This is to acknowledge receipt of the subject application on 5-4-78.

This office must prepare an environmental impact analysis which will require a joint on-site inspection by this office and the appropriate surface management agency. We would appreciate participation in the inspection by one of your employees and if possible by your dirt moving contractor. The date selected for the inspection is 5-31-78. We will meet at 11 a.m. at the service station in Laketown, Utah.

If it is determined that an environmental impact statement is not required, approval to drill the well will be granted upon receipt of the below noted items and upon concurrence by the surface managing agency that the surface use plan is adequate. If the surface managing agency has additional requirements concerning surface use, you will be advised of them when your approved permit is returned to you.

Please contact our USGS representative in ~~Vernal, UT~~, to coordinate an inspection date: Salt Lake City, Utah 801 524-5650  
~~Vernal Office Phone: 801-789-5236~~  
~~Alexander Mobile Phone: 789-6244~~  
~~Dennis Mobile Phone: 789-6225~~

Sincerely,

*E. W. Guynn*  
 E. W. Guynn  
 District Engineer

Additional Needs: LEASE EXPIRATION 3/31/86 HAVE YOUR LEASE RENTALS BEEN PAID  
 Bond from Arkla Exploration Company  
 Designation of Operator from Arkla Expl. Co., Patrick Petr. Co. Gulf Oil Corp.,  
 Designation of Agent under unit W. R. Grace Co., American Quasar Petr Co.  
 Survey plat \_\_\_\_\_  
 Surface use plan \_\_\_\_\_  
 Pressure Well Control/Resource Protection Data (10 Pt.) \_\_\_\_\_  
 Operator-Private Surface Owner letter/agreement \_\_\_\_\_

Copy Distribution:  
 Surface Management Agency \_\_\_\_\_  
 Reg. Mgr., Denver \_\_\_\_\_  
 Well File \_\_\_\_\_

REHABILITATION PLAN

Lease No.: V-25458 ; Well Name and No.: South Eden Canyon #1-15 ;  
Location: 1820' FNL and 2072' FWL , Sec. 15 , T. 13 N., R. 6E W.

Marathon Oil Company intends to drill a well and lay a flow line on (see attached map) surface owned by John K. Hansen . The lessee/operator agrees to complete the following rehabilitation work if the well is a producer:

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

Other requirements: Requirements listed below will apply to all pipelines and flowlines.

The following work will be completed when the well and/or flow line is abandoned.

- Yes  No Pit will be fenced until dry, then filled to conform to surrounding topography.
- Yes  No Water bars will be constructed as deemed necessary.
- Yes  No Site will require reshaping to conform to surrounding topography.
- Yes  No Entire disturbed area will be reseeded. If yes, the following seed mixture will be used:

All disturbed areas will be restored to the original and normal vegetation according to U.S. Forest and BLM requirements including grazing standards.

- Yes  No Access road will be closed, rehabilitated and reseeded using the same seed mixture as above.
- Yes  No Access road will remain for surface owner's use. Rehabilitation of any changes to the existing roads will be at the surface owners discretion.
- Yes  No Water bars will be constructed on the access road as deemed necessary.

Other requirements: Marathon Oil Company will furnish the surface owner all live stock water requirements during drilling and completion operations.

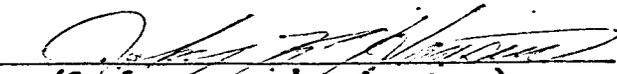
Surface Owner:

Name: John K. Hansen  
Address: \_\_\_\_\_  
City: Garden City  
State: Utah 84028  
Telephone: 801-946-3325  
Date: May 31, 1978

Operator/Lessee

Name: Marathon Oil Company  
Address: P. O. Box 2659  
City: Casper  
State: Wyoming  
Telephone: 307-265-7693  
Date: May 31, 1978

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.

*mailed 6-copies to USAF - 5/11/78  
1-copy to surface owner  
6-2-78  
J.K.H.  
6-2-78*



# United States Department of the Interior

IN REPLY REFER TO

3109  
(U-25458)

BUREAU OF LAND MANAGEMENT

Salt Lake District Office  
2370 South 2300 West  
Salt Lake City, Utah 84119

*Appendix 2*

*June 2, 1978*

Mr. John Evans  
U. S. Geological Survey  
Oil and Gas Branch  
125 South State  
Salt Lake City, Utah 84138

Dear Mr. Evans:

Enclosed is a staff report on the operation plan for Marathon Oil Company's South Eden Canyon #1-15 located in SE $\frac{1}{4}$ NW $\frac{1}{4}$ , Section 15, T. 13 N., R. 6 E., Salt Lake Meridian on Federal lease U-25458.

I concur with approval of the application for permit to drill and the surface development and plan of operation.

Sincerely,

*Evan W. Rudd*

Acting Wasatch Resource Area Manager

Enclosure



*Save Energy and You Serve America!*

## STAFF REPORT

### Marathon Oil Company's South Eden Canyon #1-15 (U-25458)

On Wednesday, May 31, 1978, an inspection was made of a proposed drilling location for Marathon Oil Company. The site lies on privately owned land under which rests federal mineral estate. The well site is located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ , Section 15, T. 13 N., R. 6 E., SLM.

Those people present at the on site inspection included John Evans, Eileen Pera, and Allen Again - U. S. Geological Survey; Jim Wirth, Walt West, and Bill Moomey - Marathon Oil Company; Marvin Kennedy and Howard Davidson - D & E Construction; John Hanson - surface owner; and Clair Quilter and Kenn Frye - BLM.

The proposed drill site is situated in the upper reaches of Pine Canyon and resides on a bench along the north side of the drainage. The land surface is approximately 7150 feet above mean sea level; the drainage slopes to the southwest with the stream flowing intermittently. Soils are of the Aridic Calcixeroll - Xerollic Calciorthids association which are moderately deep and strongly alkaline. Some 12-18 inches below the surface, a calcium carbonate layer can be found. These soils have developed atop the Tertiary Aged Knight Conglomerate.

The principal native vegetation growing on the site includes big sagebrush, Western wheatgrass, and poa. Lesser amounts of balsam root, larkspur, and death camas were also observed. This vegetation provides forage and habitat for deer, rabbits, ground squirrels, and sage grouse. Raptors overfly the land in search of prey from nests outside of the area. According to Bob Benton, Salt Lake District biologist, no threatened or endangered species - floral or fauna - have ever been sighted in Rich County. None were observed on this site.

It was determined that no archaeological clearance was needed on the private surface. In Allred vs Biegel, 219 SW 2d 665, Mo 1949, it was decided that the private land owner owns the bones, fossils and artifacts as well as sites of any historic event. Additionally, the Antiquities Act of 1906, the foundation for the archaeological requirement, has been declared unconstitutional by the Federal District Court of Arizona in April, 1978.

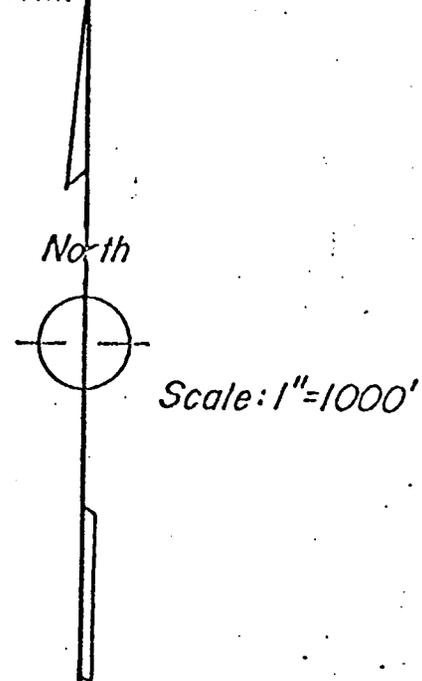
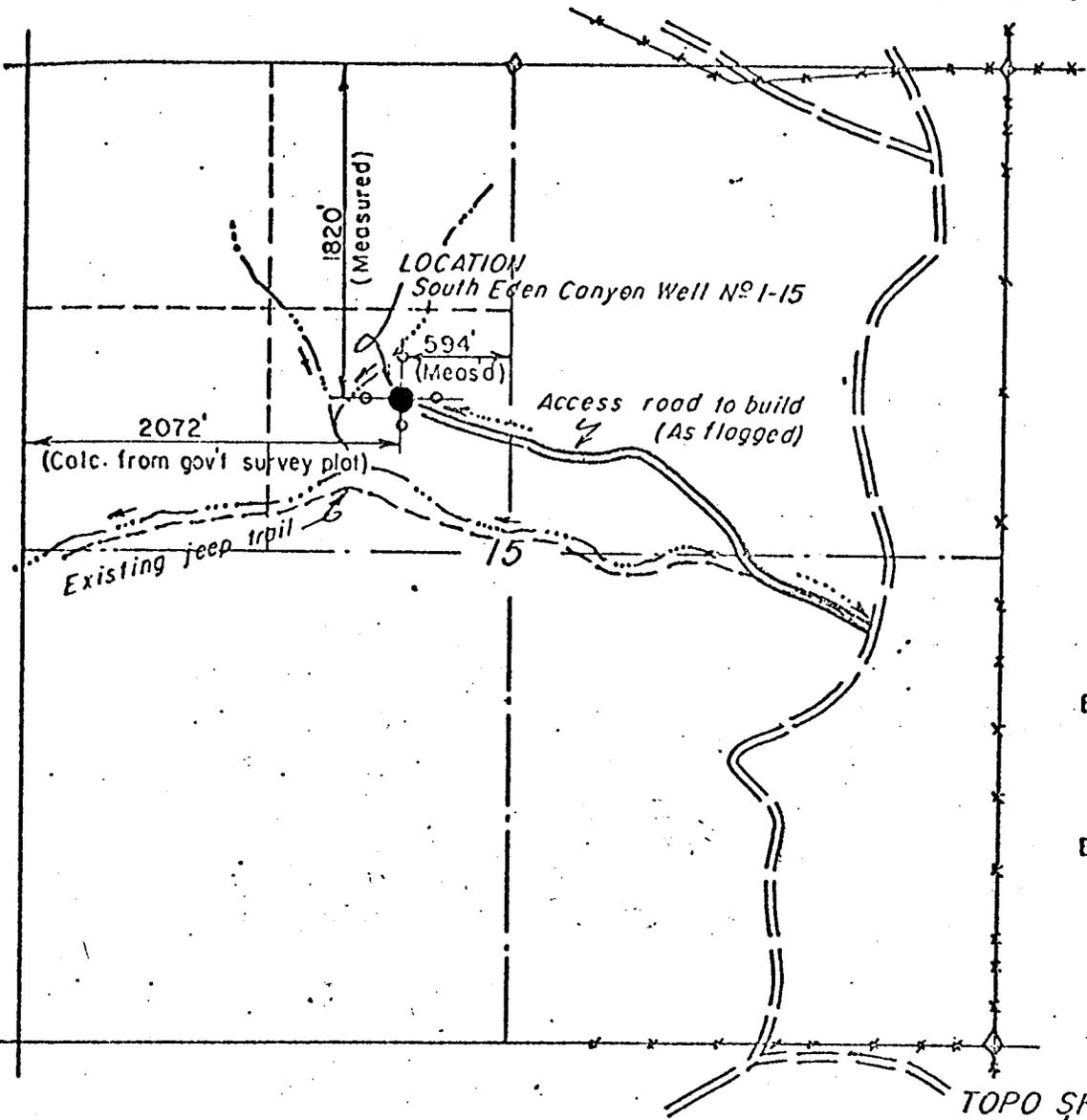
Should the land owner fail to specify a seeding mixture for surface reclamation, the Bureau of Land Management recommends the following:

- 4 lbs./acre Western Wheatgrass
- 4 lbs./acre Mountain Brome

Maps and Exhibits

Figure 1.

PLAT OF SURVEY NOTES  
for  
WELL LOCATION  
Section 15 T.13N. R.6E. of Salt Lake P.M.



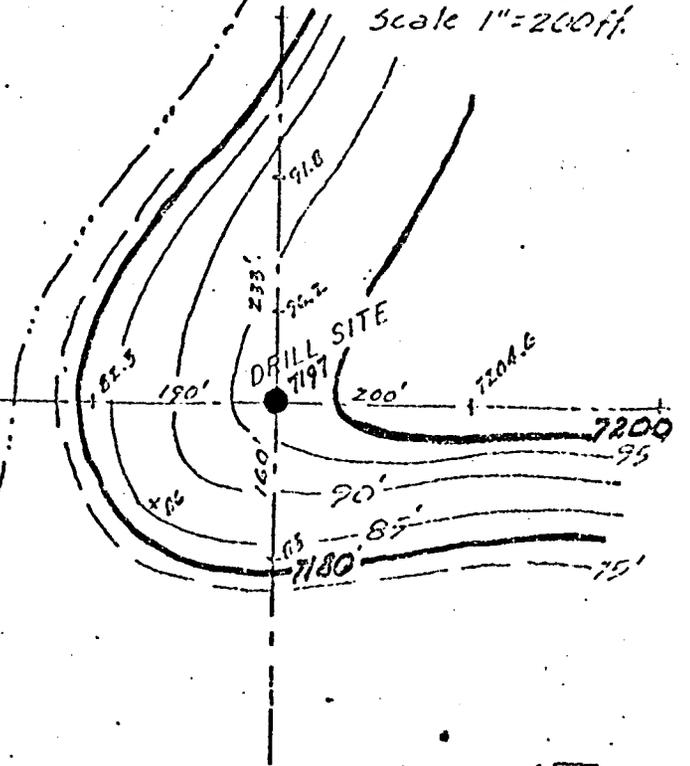
Bearing Basis:  
E 1/2 of North line  
Sec. 15 - East, from  
Gov't. survey plat.

Elevation Reference:  
Grd. elev. at radio  
facility NW of loc'n.  
7578 from topo.  
sheet.

Company: Marathon Oil Company  
Area: South Eden Canyon  
State: Utah County: Rich  
Lease: So. Eden Canyon Well No: 1-15  
Section 15 T. 13N R. 6E of S.L. P.M.  
Location: 1820 ft. from North line  
2072 ft. from West line

Elevations: Drill Site: 7197 Ground  
(Before Grading) Ref. Pts.: 160' South 7183  
235' North 7182  
200' East 7205  
190' West 7182

TOPO SKETCH-DRILL SITE  
Scale 1"=200ft.



— LEGEND —

- U.S. Gov't Brass Cap, survey corner
- Original survey, stone corner, recovered in place, properly mtd.

Figure 5 Generalized columnar section of the consolidated rocks of the Randolph Quadrangle (modified from Richardson, 1941, plate 6)

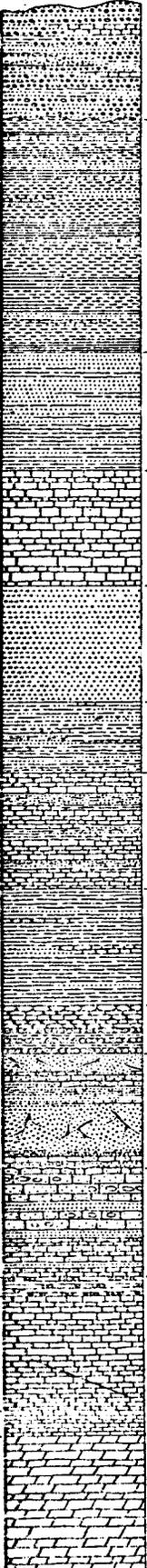
System	Series	Formation	Section	Approximate thickness (feet)	Character of rocks
Tertiary.	Eocene.	Wasatch formation.		1,000+	Varicolored conglomerate and sandstone with subordinate shale, limestone, and tuff.
Cretaceous.	Upper.	Bear River formation.		Complete section not exposed.	Finely dark clay and carbonaceous shale with interbedded thin gray limestone and buff sandstone.
Cretaceous (?).	Upper.	Beckwith formation.		Complete section not exposed.	Gray and buff sandstone and shale overlying varicolored shale and sandstone.
Jurassic.		Twin Creek limestone.		Complete section not exposed.	Thick and thin-bedded gray limestone; weathers in splintery fragments.
	Middle (?).	Nugget sandstone.		Complete section not exposed.	Thick-bedded, fine-textured red and white sandstone.
Triassic (?).		Ankareh shale.		600	Variegated red and drab sandy and clayey shale, red and gray calcareous sandstone and thin limestone.
Triassic.	Lower.	Thaynes limestone.		Complete section not exposed.	Limestone and calcareous sandstone, locally shaly.
		Woodside shale.		1,000	Varicolored red and green shale, subordinate sandstone and limestone.
Carboniferous.	Permian.	Rex chert member. Phosphoria formation.		400	Chert and limestone, Rex chert member, overlying clayey shale and oolitic phosphate rock.
	Pennsylvanian.	Wells formation.		1,000	Thick-bedded quartzite, calcareous sandstone, and sandy limestone.
	Mississippian.	Brazor limestone.		1,100	Massive gray siliceous limestone and sandstone; in places cherty, lower part thin-bedded and shaly, locally phosphatic.
		Madison limestone.		1,000	Medium- to thin-bedded dark limestone.
Devonian.	Upper.	Three Forks limestone.		200	Thin-bedded limestone, weathers red.
	Middle.	Jefferson dolomite.	1,200	Massive dark dolomite; weathers a characteristic brown tint.	

Figure 7

SOIL PROPERTIES AND INTERPRETATIONS.

USDA - SCS

MAP SYMBOLS: FbE		SOIL NAME Fb gravelly loam, 4 to 40 percent slopes													
ESTIMATED ENGINEERING PROPERTIES															
DEPTH (inches)	USDA TEXTURE		UNIFIED	AASHO	FRAGT. >3 in. (PCI)	PERCENT OF MATERIAL LESS THAN 3 IN. PASSING SIEVE				LIQUID LIMIT	PLASTICITY INDEX	PERMEABILITY (IN/HR)			
	4	10				40	200								
0-10	Gravelly loam		GM-GC	A-2, A-4	0-5	50-60	45-55	40-55	30-40	20-30	5-10	0.6-2.0			
10-17	Very gravelly loam		GM-GC	A-2	0	30-40	25-35	20-35	15-30	20-30	5-10	0.6-2.0			
17	Unweathered bedrock														
DEPTH (inches)	AVAILABLE WATER CAPACITY		SOIL REACTION (pH)	EXCH. SODIUM (PEP)	SALINITY (MEGOS/CM)	DIS-PERSION	SHRINK-SWELL POTENTIAL	WATER TABLE DEPTH (FT)	HYD GRP	POTENTIAL FROST ACTION	SETTLEMENT POTENTIAL	EROSION FACTORS		WIND EROSION GROUP	Land Capability Unit & Range
	(IN/IN)	(IN/PROFILE)										K	T		
0-10	0.09-0.11		5.1-8.4		<2		Low	>6.0	D	Moderate		.24	1	8	VIII-U5
10-17	0.02-0.09		7.4-8.4		<2		Low					.20			Upland Shallow Loam
17															
INTERPRETATIONS OF SOIL - LIMITATION RATINGS & DOMINANT SOIL FEATURES AFFECTING USE FOR															
SEPTIC TANK ABSORPTION FIELDS		SEWAGE LAGOONS		TRENCH TYPE SANITARY LANDFILLS		AREA TYPE SANITARY LANDFILL		COVER, AREA TYPE SANITARY LANDFILL		SHALLOW ENCAVATIONS					
4-15% slope: Severe - depth to rock 15+% slope: Severe - depth to rock and slope		4-7% slope: Severe - depth to rock 7+% slope: Severe - depth to rock and slope		4-25% slope: Severe - depth to rock 25+% slope: Severe - depth to rock and slope		4-8% slope: Slight 8-15% slope: Moderate - and slope 15+% slope: Severe - and slope		4-15% slope: Poor - thin layer, small stones 15+% slope: Poor - thin layer, small stones and slope		4-15% slope: Severe - depth to rock 15+% slope: Severe - depth to rock and slope					
DWELLINGS WITHOUT BASEMENTS		DWELLINGS WITH BASEMENTS		LOCAL ROADS AND STREETS		ROADFILL		SUITABILITY AS A SOURCE OF SAND AND GRAVEL		TOPSOIL					
4-15% slope: Severe - depth to rock 15+% slope: Severe - depth to rock and slope		4-15% slope: Severe - depth to rock 15+% slope: Severe - depth to rock and slope		4-15% slope: Severe - depth to rock 15+% slope: Severe - depth to rock and slope		4-25% slope: Poor - thin layer 25+% slope: Poor - thin layer and slope		Unsuited		4-15% slope: Poor - thin layer, small stones 15+% slope: Poor - thin layer, small stones, and slope					
CAMP AREAS		PICNIC AREAS		PLAYGROUNDS		PATHS AND TRAILS		POTENTIAL AS WILDLIFE HABITAT							
4-8% slope: Moderate - small stones 8-15% slope: Moderate - small stones and slope 15+% slope: Severe - slope		4-8% slope: Moderate - small stones 8-15% slope: Moderate - small stones and slope 15+% slope: Severe - slope		4-6% slope: Severe - depth to rock, small stones 6+% slope: Severe - depth to rock, small stones and slope		4-15% slope: Moderate - small stones 15-25% slope: Moderate - small stones and slope 25+% slope: Severe - slope		Openland Very poor		Woodland Poor		Barren Very poor		Revised Poor	

(taken from U. S. Soil Conservation Service, 1976, p. 78)

Figure 8

SOIL PROPERTIES AND INTERPRETATIONS

USDA - SCS

MAP SHEETS: DMC												SOIL NAME Dh gravelly loam, 4 to 15 percent slopes											
ESTIMATED ENGINEERING PROPERTIES																							
DEPTH (inches)	USDA TEXTURE											UNIFIED	AASHO	FRACT. >3 in. (PCT)	PERCENT OF MATERIAL LESS THAN 3 IN. PASSING SIEVE				LIQUID LIMIT	PLAS-TICITY INDEX	PERMEABILITY (IN/HR)		
	4	10	40	200																			
0-7	Gravelly loam											GM-GG	A-2	0-5	40-50	35-45	30-45	25-35	20-30	5-10	0.6-2.0		
7-13	Very gravelly loam											GM-GG, GM	A-2	5-20	30-40	25-35	20-35	15-25	20-35	5-10	0.6-2.0		
23-60	Very gravelly sandy loam, very gravelly fine sandy loam											GP-GM, GM	A-1, A-2	30-45	30-40	25-35	20-35	15-25	20-25	NP-10	2.0-6.0		
DEPTH (inches)	AVAILABLE WATER CAPACITY		SOIL REACTION (pH)	EXCH. SODIUM (PCT)	SALINITY (MG/CM)	DIS-PERSION	SHRINK-SWELL POTENTIAL	WATER TABLE DEPTH (FT)	HYD GRP	POTENTIAL FROST ACTION	SETTLEMENT POTENTIAL	EROSION FACTORS		WIND EROSION GROUP	Land Capability Unit & Range Size								
	(CM/CM)	(IN/PROFILE)										K	T										
0-7	0.29-0.11		7.9-8.4		<2		Low	25.0	B	Moderate		24	1	8	VIS-VL								
7-23	0.07-0.10		8.5-9.0		<2		Low					37			Upland Slope								
23-60	0.05-0.07		7.9-9.0		<2		Low					24			Loam								
INTERPRETATIONS OF SOIL - LIMITATION RATINGS & DOMINANT SOIL FEATURES AFFECTING USE FOR																							
SEPTIC TANK ABSORPTION FIELDS		SEWAGE LAGOONS		TRENCH TYPE SANITARY LANDFILLS		AREA TYPE SANITARY LANDFILL		COVER, AREA TYPE SANITARY LANDFILL		SHALLOW EXCAVATIONS													
4-8% slope: Slight 8+% slope: Moderate - and slope		4-7% slope: Severe small stones 7+% slope: Severe - slope, small stones		Moderate - small stones		4-8% slope: Slight 8+% slope: Moderate - and slope		4-8% slope: Poor - small stones 8+% slope: Poor - small stones		4-8+% slope: Severe - small stones													
DRELLINGS WITHOUT BASEMENTS		DRELLINGS WITH BASEMENTS		LOCAL ROADS AND STREETS		ROADFILL		SUITABILITY AS A SOURCE OF SAND AND GRAVEL		TOPSOIL													
4-8% slope: Moderate - frost action 8+% slope: Moderate - frost action and slope		4-8% slope: Slight 8+% slope: Moderate - slope		4-8% slope: Moderate - frost action 8+% slope: Moderate - frost action, slope		Fair - frost action, area reclaimed		Unsuited		4-8+% slopes: Poor - small stones													
RECREATION USE - LIMITATION FOR								POTENTIAL AS WILDLIFE HABITAT															
CAMP AREAS		PICNIC AREAS		PLAYGROUNDS		PATHS AND TRAILS		Openland	Woodland	Wetland	Rangeland												
4-8% slope: Moderate - small stones 8+% slope: Moderate - small stones, and slope		4-8% slope: Moderate - small stones 8+% slope: Moderate - small stones, slope		4-6% slope: Severe - small stones 6+% slope: Severe - small stones, and slope		Moderate - small stones		Poor	Fair	Very poor	Fair												

(taken from U. S. Soil Conservation Service, 1976, p. 69)

Copy of Proposed Plan

The Operator proposes to contract ESSE International, Inc., specialists in H<sub>2</sub>S Safety Services and Equipment Rental. The minimum equipment to be on site has been provided in letters dated June 5, 1978 and June 16, 1978 by Marathon Oil Co. In addition those guidelines of proposed USGS Conservation Division's NTL-10 will be used. (i.e. all personnel will undergo eardrum examination, etc.) The Division of Oil, Gas and Mining, State of Utah has made certain stipulations to the Operator by letter dated January 8, 1978.

Operations will be inspected by the U.S. Geological Survey and the State of Utah, Oil, Gas and Mining Division. Adequate warning signs will be posted warning of H<sub>2</sub>S potential. In addition, the Operator's Safety Supervisor will inspect the operations. The Operator states that all personnel employed by the drilling contractor have at least 5-years experience in the drilling rig to be used.

REHABILITATION PLAN

Lease No.: U-25458; Well Name and No.: South Eden Inyon #1-15;  
 Location: 1820' FNL and 2072' FWL, Sec. 15, T. 13 N., R. 6E W.

Marathon Oil Company intends to drill a well and lay a flow line on (see attached map) surface owned by John K. Hansen. The lessee/operator agrees to complete the following rehabilitation work if the well is a producer:

Yes  No Maintain access road and provide adequate drainage to road.

Yes  No Reshape and reseed any area not needed for maintenance of the pump and support facilities.

Other requirements: Requirements listed below will apply to all pipelines and flowlines.

The following work will be completed when the well and/or flow line is abandoned.

Yes  No Pit will be fenced until dry, then filled to conform to surrounding topography.

Yes  No Water bars will be constructed as deemed necessary.

Yes  No Site will require reshaping to conform to surrounding topography.

Yes  No Entire disturbed area will be reseeded. If yes, the following seed mixture will be used:

All disturbed areas will be restored to the original and normal vegetation according to U.S. Forest and BLM requirements including grazing standards.

Yes  No Access road will be closed, rehabilitated and reseeded using the same seed mixture as above.

Yes  No Access road will remain for surface owner's use. Rehabilitation of any changes to the existing roads will be at the surface owners discretion.

Yes  No Water bars will be constructed on the access road as deemed necessary.

Other requirements: Marathon Oil Company will furnish the surface owner all live stock water requirements during drilling and completion operations.

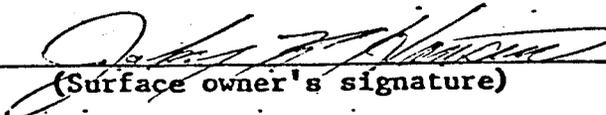
Surface Owner:

Name: John K. Hansen  
 Address: \_\_\_\_\_  
 City: Garden City  
 State: Utah 84028  
 Telephone: 801-946-3325  
 Date: May 31, 1978

Operator/Lessee

Name: Marathon Oil Company  
 Address: P. O. Box 2659  
 City: Casper  
 State: Wyoming  
 Telephone: 307-265-7693  
 Date: May 31, 1978

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.

*JKH*  
 6.2-78



**Marathon  
Oil Company**

PO Box 2659  
Casper Wyoming 82601  
Telephone 307/265 7693

June 5, 1978

State of Utah  
Department of Natural Resources  
Division of Oil, Gas, and Mining  
Attn: Mr. Cleon B. Feight, Director  
1588 West North Temple  
Salt Lake City, Utah 84116

U. S. Geological Survey  
Attn: Ed Guynn  
District Engineer  
8426 Federal Building  
125 South State Street  
Salt Lake City, Utah 84138

Gentlemen:

Re: South Eden Canyon Well #1-15  
Section 15, T13N, R6E,  
Rich County, Utah

The following proposal is submitted for your approval for the monitoring and control of any H<sub>2</sub>S gas during the drilling of our above referenced well.

From spudding until surface casing is set at approximately 1,500', we will have five (5) - 40 cubic foot self-contained breathing apparatus on the rig floor. From 8,500' or intermediate casing point to T.D. the following equipment will be on the rig floor and location. One (1) safety trailer complete with 10 - 380 cubic foot bottles of breathing air, with all equipment to rig up on our location with three manifolds on location, one (1) on the rig floor for at least nine (9) men, one (1) on shale shaker choke manifold for four (4) men, one (1) on hopper and mud pump for at least four (4) men. We will have five (5) - 40 cubic foot self-contained breathing apparatus and nine (9) - 7 cubic foot self-contained breathing apparatus complete with airline hose to work in a gas area making a total of 14 breathing apparatuses. One resuscitator complete with medical oxygen, one hand H<sub>2</sub>S gas detector on rig floor to check for H<sub>2</sub>S or SO<sub>2</sub>. All on 1/4" hose. There will be a 3/4" hose to connect the manifold together to have a complete closed air system from safety trailer to all points on rig location. Two wind socks and streamers on location visible at any point on location. 1 flare gun, 1 stretcher, 1 first aid kit, 36 count, 2 - H<sub>2</sub>S warning signals and 1 high stage air compressor suitable for recharging cylinders, 1 dual channel monitor complete with visual and audible alarm system, one head on bell nipple, one on shale shaker.

A mud logging unit will be on location from surface casing to total depth and will monitor for H<sub>2</sub>S gas. A safety supervisor will check the equipment once each week and at the same time train or re-train individuals as needed.

A complete contingency program will be posted and kept current on the rig and location at all times.

Page Two  
June 5, 1978

If you require any additional information, please do not hesitate to call on us.

Very truly yours,

MARATHON OIL COMPANY

A handwritten signature in cursive script, appearing to read "J. F. Wirth".

J. F. Wirth  
Drilling Superintendent

JFW:WEW:cfc



**Marathon  
Oil Company**

PO Box 2659  
Casper Wyoming 82601  
Telephone 307/265 7693

June 5, 1978

State of Utah  
Department of Natural Resources  
Division of Oil, Gas, and Mining  
Attn: Mr. Cleon B. Feight, Director  
1588 West North Temple  
Salt Lake City, Utah 84116

U. S. Geological Survey  
Attn: Ed Guynn  
District Engineer  
8426 Federal Building  
125 South State Street  
Salt Lake City, Utah 84138

Gentlemen:

Re: South Eden Canyon Well #1-15  
Section 15, T13N, R6E,  
Rich County, Utah

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A complete contingency program will be posted and kept current on the rig and location at all times.

*Mailed to: State of Utah  
+ USA/S  
6-6-78  
[Signature]*

Page Two  
June 5, 1978

If you require any additional information, please do not hesitate to call on us.

Very truly yours,

MARATHON OIL COMPANY

A handwritten signature in cursive script, appearing to read "J. F. Wirth".

J. F. Wirth  
Drilling Superintendent

JFW:WEW:cfc



P.O. Box 2659  
Casper, Wyoming 82601  
Telephone 307/265-7693

June 7, 1978

Mr. Ed Guynn  
District Engineer  
8426 Federal Building  
125 South State Street  
Salt Lake City, UT 84138

Re: Marathon Oil Company  
South Eden Canyon #1-15  
Section 15, T13N, R6E  
Rich County, Utah

Dear Mr. Guynn:

Attached are Designation of Operator forms executed each in triplicate,  
by the following:

1. W. R. Grace & Company
2. Patrick Petroleum Corporation of Michigan
3. Gulf Oil Corporation
4. American Quazar Petroleum Company
5. Arkla Exploration Company

A bond for Arkla Exploration Company will follow.

Yours truly,

MARATHON OIL COMPANY

A handwritten signature in cursive script that reads 'J. W. Wirth'.

J. W. Wirth  
Drilling Superintendent

JWW:kca  
Attachment

SUPERVISOR, OIL AND GAS OPERATIONS:

### DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of oil and gas lease

DISTRICT LAND OFFICE: Salt Lake City, UT  
SERIAL NO.: U-25458

and hereby designates

NAME: Marathon Oil Company  
ADDRESS: P.O. Box 120  
Casper, Wyoming 82602

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Oil and Gas Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 13 North, Range 6 East  
Section 15: N $\frac{1}{2}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ , W $\frac{1}{2}$ NW $\frac{1}{4}$ , S $\frac{1}{2}$

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Oil and Gas Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the oil and gas supervisor of any change in the designated operator.

WITNESS:

W. R. GRACE & CO.

*Doreen L. Deane*

BY *RW Cannon*  
(Signature of lessee)

2 June 1978  
(Date)

3400 First International Bldg.  
Dallas, TX (Address)  
75270

SUPERVISOR, OIL AND GAS OPERATIONS:

### DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of oil and gas lease

DISTRICT LAND OFFICE: Salt Lake City, UT  
SERIAL NO.: U-25458

and hereby designates

NAME: Marathon Oil Company  
ADDRESS: P.O. Box 120  
Casper, Wyoming 82602

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Oil and Gas Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 13 North, Range 6 East  
Section 15: N $\frac{1}{2}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NE $\frac{1}{4}$   
SE $\frac{1}{4}$ NW $\frac{1}{4}$ , W $\frac{1}{2}$ NW $\frac{1}{4}$ , S $\frac{1}{2}$

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Oil and Gas Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the oil and gas supervisor of any change in the designated operator.

ATTEST:

PATRICK PETROLEUM ~~COMPANY~~ Corporation  
of Michigan

BY



(Signature of lessee)

Richard A. Lindermanis  
Assistant to the President

Colorado National Bank Bldg., Suite 1655

950 Seventeenth Street  
Denver, Colorado 80202

(Date)

SUPERVISOR, OIL AND GAS OPERATIONS:

**DESIGNATION OF OPERATOR**

The undersigned is, on the records of the Bureau of Land Management, holder of oil and gas lease

DISTRICT LAND OFFICE: Salt Lake City, Utah  
SERIAL No.: U-25458

and hereby designates

NAME: Marathon Oil Company  
ADDRESS: P. O. Box 120  
Casper, Wyoming 82602

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Oil and Gas Operating Regulations with respect to (describe acreage to which this designation is applicable):

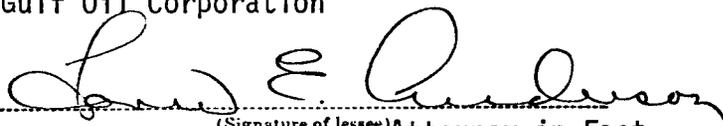
Township 13 North, Range 6 East  
Section 15: N/2 NE/4, SE/4 NE/4, SE/4 NW/4, W/2 NW/4, S/2  
Containing 560.00 acres more or less

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Oil and Gas Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the oil and gas supervisor of any change in the designated operator.

Gulf Oil Corporation

By:   
(Signature of lessee) Attorney-in-Fact

May 18, 1978  
(Date)

P. O. Box 2619  
Casper, Wyoming 82602  
(Address)

## DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE: Salt Lake City, Utah  
SERIAL NO.: U-25458

and hereby designates

NAME: Marathon Oil Company  
ADDRESS: P. O. Box 120  
Casper, WY 82602

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 13 North, Range 6 East  
Section 15: N/2NE/4, SE/4NE/4,  
SE/4NW/4, W/2NW/4, S/2

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

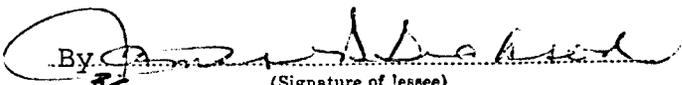
In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

ATTEST:

  
Assistant Secretary

AMERICAN QUASAR PETROLEUM CO.  
OF NEW MEXICO

By   
(Signature of lessee)

James H. Dickson, Vice President

April 14, 1978

(Date)

707 United Bank Tower, 1700 Broadway  
Denver, CO 80290  
(Address)

(Submit in Triplicate)

SUPERVISOR, OIL AND GAS OPERATIONS:

# DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of oil and gas lease

DISTRICT LAND OFFICE: Salt Lake City, UT  
SERIAL NO.: U-25458

and hereby designates

NAME: Marathon Oil Company  
ADDRESS: P. O. Box 120  
Casper, Wyoming 82602

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Oil and Gas Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 13 North, Range 6 East  
Section 15: N $\frac{1}{2}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ , W $\frac{1}{2}$ NW $\frac{1}{4}$ , S $\frac{1}{2}$

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Oil and Gas Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

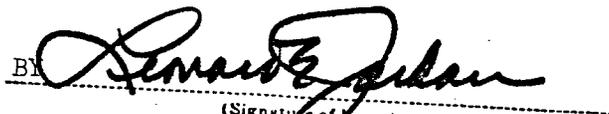
In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the oil and gas supervisor of any change in the designated operator.

ATTEST:

ARKLA EXPLORATION COMPANY

  
J. T. Shaffer, Secretary

BY   
(Signature of Lessee)  
Leonard E. Jordan, Vice President

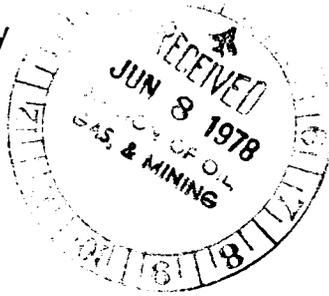
P.O. Box 21734  
Shreveport, LA (Address) 71151

(Date)



PO Box 2659  
Casper Wyoming 82601  
Telephone 307/265 7693

June 5, 1978



State of Utah  
Department of Natural Resources  
Division of Oil, Gas, and Mining  
Attn: Mr. Cleon B. Feight, Director  
1588 West North Temple  
Salt Lake City, Utah 84116

U. S. Geological Survey  
Attn: Ed Guynn  
District Engineer  
8426 Federal Building  
125 South State Street  
Salt Lake City, Utah 84138

Gentlemen:

Re: South Eden Canyon Well #1-15  
Section 15, T13N, R6E,  
Rich County, Utah

The following proposal is submitted for your approval for the monitoring and control of any H<sub>2</sub>S gas during the drilling of our above referenced well.

From spudding until surface casing is set at approximately 1,500', we will have five (5) - 40 cubic foot self-contained breathing apparatus on the rig floor. From 8,500' or intermediate casing point to T.D. the following equipment will be on the rig floor and location. One (1) safety trailer complete with 10 - 380 cubic foot bottles of breathing air, with all equipment to rig up on our location with three manifolds on location, one (1) on the rig floor for at least nine (9) men, one (1) on shale shaker choke manifold for four (4) men, one (1) on hopper and mud pump for at least four (4) men. We will have five (5) - 40 cubic foot self-contained breathing apparatus and nine (9) - 7 cubic foot self-contained breathing apparatus complete with airline hose to work in a gas area making a total of 14 breathing apparatuses. One resuscitator complete with medical oxygen, one hand H<sub>2</sub>S gas detector on rig floor to check for H<sub>2</sub>S or SO<sub>2</sub>. All on 1/4" hose. There will be a 3/4" hose to connect the manifold together to have a complete closed air system from safety trailer to all points on rig location. Two wind socks and streamers on location visible at any point on location. 1 flare gun, 1 stretcher, 1 first aid kit, 36 count, 2 - H<sub>2</sub>S warning signals and 1 high stage air compressor suitable for recharging cylinders, 1 dual channel monitor complete with visual and audible alarm system, one head on bell nipple, one on shale shaker.

A mud logging unit will be on location from surface casing to total depth and will monitor for H<sub>2</sub>S gas. A safety supervisor will check the equipment once each week and at the same time train or re-train individuals as needed.

A complete contingency program will be posted and kept current on the rig and location at all times.



**Marathon  
Oil Company**

P.O. Box 2659  
Casper, Wyoming 82602  
Telephone 307/265-7693

June 16, 1978

Mr. Patrick L. Driscoll  
Chief Petroleum Engineer  
State of Utah  
Division of Oil, Gas & Minerals  
1588 West North Temple  
Salt Lake City, Utah 84116

Re: South Eden Canyon  
Well No. 1  
Section 15, T13N, R6E  
Rich County, Utah

Dear Mr. Driscoll:

Submitted for your consideration is a list of equipment and procedures proposed for the monitoring and control of any H<sub>2</sub>S gas encountered during the drilling of the above referenced well.

From spud to 8,500' or intermediate casing point, the following equipment will be on location:

1. Sufficient 40 cubic feet self-contained breathing apparatus will be available and placed at critical locations to protect operating personnel on location.
2. Dual monitor complete with visual and audible alarm system. (One monitor will be located at the bell nipple and the other at the shale shaker.)
3. Three wind socks with streamers.
4. Marked locations of designated safe areas and escape routes.
5. Warning signs will be located no closer than ½ mile from the drilling site.
6. Personnel will be trained in the use of all safety equipment. (Names and dates of training will be posted on location.)

7. An approved contingency plan will be available and posted on location prior to starting operations.
8. Only authorized personnel will be allowed on drill site.
9. Initial contact will be made with local Sheriff's office, District Highway Patrol office, and area medical personnel.

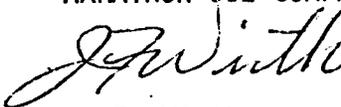
From 8,500' or intermediate casing point or prior to drilling into any known gas bearing formation the following equipment will be added:

1. Two bug fans.
2. Safety trailer with 10-380 C.F. cylinder cascade air supply system.
3. 1,000' low pressure air line hose with quick connects.
4. Two low pressure manifolds.
5. Eight air line masks with emergency escape cylinders.
6. Six 30-minute self-contained breathing apparatus.
7. First aid kit (36 unit).
8. Oxygen powered resuscitator with cylinder.
9. Flare gun with shells.
10. Gas detector (pump type).

If you require any additional information, please do not hesitate to call me.

Very truly yours,

MARATHON OIL COMPANY

  
J. F. Wirth  
Drilling Superintendent

JFW:WEW:kca

cc: Mr. Ed Guynn ✓  
District Engineer  
U.S.G.S  
8426 Federal Building  
125 South State Street  
Salt Lake City, Utah 84138

*Felt*



P.O. Box 2659  
Casper, Wyoming 82602  
Telephone 307/265-7693

June 16, 1978

Mr. Patrick L. Driscoll  
Chief Petroleum Engineer  
State of Utah  
Division of Oil, Gas & Minerals  
1588 West North Temple  
Salt Lake City, Utah 84116

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Section 15, T13N, R6E  
Rich County, Utah

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*State of Utah  
Mr. Driscoll  
Leave OK By Phone  
6-22-78  
Weg*

*Mailed  
6-16-78  
Weg*

7. An approved contingency plan will be available and posted on location prior to starting operations.
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If you require any additional information, please do not hesitate to call me.

Very truly yours,

MARATHON OIL COMPANY



J. F. Wirth  
Drilling Superintendent

JFW:WEW:kca

cc: Mr. Ed Guynn  
District Engineer  
U.S.G.S  
8426 Federal Building  
125 South State Street  
Salt Lake City, Utah 84138



P.O. Box 2659  
Casper, Wyoming 82602  
Telephone 307/265-7693

June 16, 1978

Mr. Patrick L. Driscoll  
Chief Petroleum Engineer  
State of Utah  
Division of Oil, Gas & Minerals  
1588 West North Temple  
Salt Lake City, Utah 84116

*File  
Plz. make copy  
for Utah Industrial  
Commission.*

Re: South Eden Canyon  
Well No. 1  
Section 15, T13N, R6E  
Rich County, Utah

Dear Mr. Driscoll:

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Mr. Patrick L. Driscoll  
June 16, 1978  
Page Two

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MARATHON OIL COMPANY



J. F. Wirth  
Drilling Superintendent

JFW:WEW:kca

cc: Mr. Ed Guynn  
District Engineer  
U.S.G.S  
8426 Federal Building  
125 South State Street  
Salt Lake City, Utah 84138



SCOTT M. MATHESON  
Governor

OIL, GAS, AND MINING BOARD

GORDON E. HARMSTON  
Executive Director,  
NATURAL RESOURCES

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS, AND MINING

1588 West North Temple

Salt Lake City, Utah 84116

(801) 533-5771

I. DANIEL STEWART  
Chairman

CHARLES R. HENDERSON  
JOHN L. BELL  
THADIS W. BOX  
C. RAY JUVELIN

CLEON B. FEIGHT  
Director

June 20, 1978

Mr. J. F. Wirth  
Drilling Superintendent  
Narathon Oil Company  
P. O. Box 2659  
Casper, Wyoming 82602

Re: South Eden Canyon Well #1  
Sec. 15, T. 13N., R. 16E.  
Rich County, Utah

Dear Mr. Wirth:

I've received your letter of June 20, 1978 relative to H<sub>2</sub>S safety equipment and training practices that you will employ during the drilling of this well.

I would like to thank you for your prompt reply and excellent spirit of cooperation regarding a potential problem in which no specific State Rules and Regulations are applicable.

The thoroughly positive attitude expressed by your company clearly indicates that responsible and prudent operators do not need specific rules, regulations, or laws to conduct their business to the mutual advantage of the state and private enterprise.

If, in the future, there is anything we may do to assist you in this venture, please do not hesitate to call upon us.

Sincerely,

PATRICK L. DRISCOLL  
CHIEF PETROLEUM ENGINEER

cc W. C. Sylvester

PLD/ksw

June 20, 1978

~~Mr. J. F. Wirth~~  
Drilling Superintendant  
Marathon Oil Company  
P. O. Box 2659  
Casper, Wyoming 82602

Re: South Eden Canyon Well #1  
Sec. 15, T. 13N., R. 16E.  
Rich County, Utah

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Sincerely,

PATRICK L. DRISCOLL  
CHIEF PETROLEUM ENGINEER

cc W. C. Sylvester

PLD/ksw



# United States Department of the Interior

GEOLOGICAL SURVEY  
Conservation Division  
8440 Federal Building  
Salt Lake City, Utah 84138

June 30, 1978

**From:** District Engineer, Salt Lake City, Utah  
**To:** Don Libby, Office of Regional Director, Denver  
Colorado  
**Subject:** Supplement to EIA-1057, Lease U-25458, Section  
15, T13N, R6E, Rich County, Utah

Neither the Utah State Department of Parks and Recreation nor the United States Park Service have jurisdiction over the subject drill-hole site nor objections to the placement thereof.

The site is approximately 9 miles north and east of the Wasatch-Cache National Forest, Utah, and greater than 10 miles south of the Bridger National Forest.

Inquiry to the Assistant to the Regional Director, Utah, for National Park Service discloses that National Park Service nearest jurisdiction is Fossil Butte and Golden Spike. The National Park Service has no jurisdiction over Bear Lake.

  
E. W. Guynn



IN REPLY REFER TO

*District Oil & Gas Engineer  
Salt Lake City* **ED GUINN**  
United States Department of the Interior

GEOLOGICAL SURVEY  
Box 25046  
Denver Federal Center  
Denver, Colorado 80225

June 30, 1978

Memorandum

To: District Engineer, Salt Lake City

Through: Area Oil and Gas Supervisor, NRMA

From: Conservation Manager, Central Region

Subject: Unusual Environmental Analysis and APD, Marathon Oil Company,  
Operator, Well Number 1-15, (Section 5, T. 13 N., R. 6 E.,  
SLM), Federal Lease U-25458, Rich County, Utah

This office has reviewed the enclosed subject unusual EA. We concur in the opinion of the District Engineer, Salt Lake City, and the Area Oil and Gas Supervisor, NRMA. We determine that the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment in the sense of NEPA Section 102(2)(C), and the environmental impacts of the proposed action are not likely to be highly controversial. Preparation of an environmental impact statement is not required.

You are authorized to proceed with whatever steps are appropriate to approve this requested action provided that the following stipulations are added as conditions of approval, in addition to your own requirements:

1. The operator must exercise all due care to ensure that drainage courses are not significantly altered or obstructed during construction of the access road to the well site.
2. The mud pit should be lined to prevent fluid loss and possible slope instability.
3. The operator must comply with the proposed provisions of NTL-10 (enclosed) and the H<sub>2</sub>S requirements outlined by the State of Utah Division of Oil, Gas, and Mining in their letter to Marathon dated January 8, 1978 (enclosed in EA). We suggest you make available a copy of the proposed NTL-10 to the lessee/operator so they will comply with our proposed standards in the control of H<sub>2</sub>S on this particular well operation.



4. In the event this well proves to be productive, the lessee/operator must submit a detailed lease development plan prior to drilling any additional wells on the lease. This plan should address location of well sites, pipelines, surface facilities, access roads, etc. The District Engineer (USGS) would be required to prepare an additional environmental analysis covering these actions.

*George B. Horn*  
George B. Horn

Enclosures - Unusual EA  
NTL-10

cc: Acting Chief, Conservation Division w/unusual EA

against Ed Gwynn, U.S. Geological Survey, and others, seeks to prevent any further oil and gas activity on National Forest land in the overthrust belt. Although this well site is in the overthrust belt, it is not in or near a National Forest and so is not affected by the appeal.

The proximity of the well site to Bear Lake could have an adverse impact on tourism only in the unlikely event of a blow-out. As detailed above, it is not visible from nor likely to appreciably degrade the environment of the lake.

The possible of hydrogen sulfide gas, while uncommon in Utah, is well understood and has been planned for, with an approved contingency plan.

Public comments were not solicited or received.

Determination

In my opinion, the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment in the sense of NEPA, Section 102 (2) (C), and the environmental impacts of the proposed action are not likely to be highly controversial.

Ed Gwynn  
District Engineer

6/28/78  
Date

I concur [Signature]  
Area Supervisor

6/29/78  
Date

I determine that preparation of an environmental impact statement is not required:

Gregory W. How  
Conservation Manager

6/30/78  
Date

Appendix 1

Appendix I

Unusual EA No. 1057

Marathon Oil Company  
South Eden Canyon Well No. 1-15  
NE/4 SE/4 Sec. 15-13N-6E, SLB&M  
Rich County, Utah

**Possible Hydrogen Sulfide Operations**

Marathon Oil Company, Operator, proposes a 15,400 ft. Devonian test at the captioned well and location. Hydrogen sulfide gas may be present in the Dinwoody and Phosphoria formations at 11,000 ft. and 11,600 ft. respectively.

The <sup>f</sup>first concern for safety of operations and personnel would be to contain the possible H<sub>2</sub>S gas at the source or in the formation.

The mud program proposed is for an 8.9 lb./gal. drilling mud with preparations to weight to 10.0 lb./gal. mud with any significant show or indication of lack of sufficient hydrostatic lead in the circulating media. A two-man mud logger with H<sub>2</sub>S detector will be utilized from surface to total depth. The drilling mud or circulating media will contain H<sub>2</sub>S scavengers and corrosion inhibitors. A desander, desilter, degasser, fine mesh shaker, gas buster and PVT equipment will be provided for the mud system.

The BOP stack consists of two hydraulic gate type preventers - one blind ram and one pipe ram - rated at 5000 psi WP, an annular preventer, rated at 3000 psi, and fill, kill and choke lines. A rotating head will also be used for drilling below 9000 ft.

The Operator has also proposed to install a 10,000 psi double gate BOP with the setting of an intermediate casing at about 8500 ft. (9000ft.) The proposed casing and cementing program appears adequate for the anticipated pressures in the formations to be penetrated. There are no abnormal pressures anticipated.

The formation tops are picked from poor seismic reflections due to faulting and overturned beds in the area. Drill cutting samples are proposed for every 10 ft. or as directed by the well site geologist or engineers. If necessary, adequate electric and radioactivity logs can be run to assure the identity of formations penetrated. H<sub>2</sub>S monitoring equipment will be utilized from surface to total depth. Some loss circulation zones are anticipated from surface to total depth. Provision is made to run and cement intermediate casing - proposed at about 8500 ft. in the event significant loss circulation problems or other down hole problems of well control are encountered.



IN REPLY REFER TO

*Salt Lake City*  
United States Department of the Interior

GEOLOGICAL SURVEY  
Box 25046  
Denver Federal Center  
Denver, Colorado 80225

**ED GUINN**

June 30, 1978

Memorandum

To: District Engineer, Salt Lake City

Through: Area Oil and Gas Supervisor, NRMA

From: Conservation Manager, Central Region

Subject: Unusual Environmental Analysis and APD, Marathon Oil Company, Operator, Well Number 1-15, (Section 5, T. 13 N., R. 6 E., SLM), Federal Lease U-25458, Rich County, Utah

This office has reviewed the enclosed subject unusual EA. We concur in the opinion of the District Engineer, Salt Lake City, and the Area Oil and Gas Supervisor, NRMA. We determine that the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment in the sense of NEPA Section 102(2)(C), and the environmental impacts of the proposed action are not likely to be highly controversial. Preparation of an environmental impact statement is not required.

You are authorized to proceed with whatever steps are appropriate to approve this requested action provided that the following stipulations are added as conditions of approval, in addition to your own requirements:

1. The operator must exercise all due care to ensure that drainage courses are not significantly altered or obstructed during construction of the access road to the well site.
2. The mud pit should be lined to prevent fluid loss and possible slope instability.
3. The operator must comply with the proposed provisions of NTL-10 (enclosed) and the H<sub>2</sub>S requirements outlined by the State of Utah Division of Oil, Gas, and Mining in their letter to Marathon dated January 8, 1978 (enclosed in EA). We suggest you make available a copy of the proposed NTL-10 to the lessee/operator so they will comply with our proposed standards in the control of H<sub>2</sub>S on this particular well operation.



4. In the event this well proves to be productive, the lessee/operator must submit a detailed lease development plan prior to drilling any additional wells on the lease. This plan should address location of well sites, pipelines, surface facilities, access roads, etc. The District Engineer (USGS) would be required to prepare an additional environmental analysis covering these actions.

*George H. Horn*  
George H. Horn

Enclosures - Unusual EA  
NTL-10

cc: Acting Chief, Conservation Division w/unusual EA

NOTICE TO LESSEES AND OPERATORS OF  
FEDERAL AND INDIAN ONSHORE OIL AND GAS LEASES

(NTL-10)

**HYDROGEN SULFIDE OPERATIONS**

This notice is issued pursuant to the authority prescribed in 30 CFR 221.5, 221.9, and 221.18. Lessees and operators of onshore Federal and Indian (except Osage) oil and gas leases or of fee and state oil and gas leases committed to federally supervised cooperative agreements concerned with oil and gas operations shall comply with the following requirements for conducting operations involving sour oil or gas. Approval of operations shall be obtained from either the District Engineer for oil and gas or the Area Oil and Gas Supervisor as appropriate. In general, any applications hereunder should be filed with the same office with which Applications for Permit to Drill or Sundry Notices are filed. The requirements of this Notice will be administered by the Oil and Gas District Engineers except in Alaska where administration will be handled by the Area Oil and Gas Supervisor.

This Notice will be effective whenever drilling, workover, producing, injection, gathering, transportation, storage, and processing of hydrocarbons related to field operations may reasonably be expected to cause concentrations of hydrogen sulfide ( $H_2S$ ) gas to escape to the ambient air in excess of 10 ppm (0.65 grains/100 std. cu. ft.). Each application to conduct such operations must fully describe the manner in which requirements of this Notice will be implemented. Existing facilities not now meeting the requirements of this Notice must be brought up to conformance standards within 90 days of the effective date of this Notice.

All drilling wells shall have the hydrogen sulfide ( $H_2S$ ) monitoring equipment installed as detailed below, except when drilling in areas known to be free of  $H_2S$ . Upon encountering  $H_2S$ , the safety requirements shall be implemented to protect personnel from the toxic effect of the gas. When the  $H_2S$  concentration increases to 20 ppm, the remainder of the requirements shall be implemented to control the corrosive effects of  $H_2S$  on the drilling equipment. Alternative equipment or procedures that achieve the same or greater levels of safety may be approved by the District Engineer. When sulphur dioxide ( $SO_2$ ), a product of combustion of  $H_2S$ , is present, the procedures outlined in the approved contingency plan required by this Notice shall be followed.

The precautions outlined in American Petroleum Institute recommend practice for Safe Drilling of Wells Containing Hydrogen Sulfide (API RP 49) are supplemental to the requirements of this Notice. Nothing contained in this Notice is intended to supersede any applicable State or Federal requirements which may be more stringent.

## I. Drilling and Workover Operations

- For wildcat or exploratory wells, all safety equipment shall be installed and operative and safety procedures completely implemented immediately after setting of the intermediate casing string. For wells where H<sub>2</sub>S will be encountered in known reservoirs, all safety equipment shall be installed and operative and safety procedures completely implemented when drilling has reached a depth approximately 1500 feet above the reservoir.

All locations should be planned so as to obtain the maximum safety benefits consistent with the rig configuration, well depth, terrain, prevailing winds, etc. Note on map, the locations of houses, schools, roads, recreational areas, and other places within a three mile radius of the location where people may be present. The drilling rig should be situated so that prevailing winds blow across the rig toward the reserve pit. Where possible, two entry roads should be established, one at each end of the location or as prevailing winds dictate. Mud tanks should be located away from the derrick floor and monkey board when drilling approaches any zone which may contain Hydrogen Sulfide.

### A. Personnel Safety and Protection

All personnel shall undergo an eardrum examination before assignment to H<sub>2</sub>S prone areas. Personnel with perforated eardrums shall be prohibited from working in an H<sub>2</sub>S environment.

#### (1) Training program

- (a) All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, shall be informed as to the hazards of H<sub>2</sub>S and SO<sub>2</sub>. They shall also be instructed in the proper use of personnel safety equipment which they may be required to use, informed on H<sub>2</sub>S detectors and alarms, ventilation equipment, prevailing winds, briefing areas, warning systems, and evacuation procedures.
- (b) Information relating to these safety measures shall be prominently posted on the drilling facility.
- (c) To promote efficient safety procedures, an on-site H<sub>2</sub>S safety program, which includes a weekly drill and training session, shall be maintained on the drilling facility.

- (d) All personnel in the working crew shall have been indoctrinated in basic first aid procedures applicable to victims of H<sub>2</sub>S exposure.

During subsequent on-site training sessions and drills, emphasis shall be placed upon rescue and first aid for H<sub>2</sub>S victims. Each drilling facility shall have the following equipment, and each crew member shall be thoroughly familiar with the location and use of these items:

- (i) A first-aid kit approved by the District Engineer and sized for the normal working number of personnel.
  - (ii) Resuscitators, complete with face masks, oxygen bottles, and spare oxygen bottles.
  - (iii) A stokes litter or equivalent.
- (e) One person, who regularly performs duties on the drilling facility, shall be responsible for the overall operation of the on-site safety and training program.

(2) Visible warning system

Wind-direction equipment shall be installed at prominent locations to indicate to all personnel, on or in the immediate vicinity of the facility, the wind direction at all times for determining safe upwind areas in the event that H<sub>2</sub>S or SO<sub>2</sub> is present in the atmosphere. Operational danger signs shall be displayed on each side of the drilling rig, and a number of rectangular red flags shall be hoisted in a manner visible to personnel. Each sign shall have a minimum width of eight feet and a minimum height of four feet, and shall be painted a high-visibility yellow color with black lettering of a minimum of 12 inches in height, indicating:

"DANGER--HYDROGEN SULFIDE--H<sub>2</sub>S"

Each flag shall be of minimum width of three feet and a minimum height of two feet. All signs and flags shall be illuminated under conditions of poor visibility and at night when in use. These signs shall indicate the following operational conditions and requirements:

- (a) Moderate danger. When the threshold limit value of  $H_2S$  (10 parts per million) is reached, the signs will be displayed. If the concentration of  $H_2S$  reaches 20 parts per million, protective-breathing apparatus shall be worn by all working personnel, and all nonworking personnel shall proceed to the safe briefing areas.
- (b) Extreme danger. When  $H_2S$  is determined to have reached the injurious level (50 parts per million), the flags shall be hoisted in addition to the displayed signs. All nonessential personnel or all personnel, as appropriate, shall be evacuated at this time.

(3) Contingency plan

A contingency plan, providing details of action to alert and protect the public in the event of an accidental release of  $H_2S$ , shall be developed prior to the commencement of operations. The plan shall include the following:

- (a) General information and physiological responses to  $H_2S$  and  $SO_2$  exposure.
- (b) Safety procedures, equipment, training, and smoking rules.
- (c) Procedures for operating conditions.
  - (i) Moderate danger to life.
  - (ii) Extreme danger to life.
- (d) Responsibilities and duties of personnel for each operating condition.
- (e) Designation of briefing areas as locations for assembly of personnel during Extreme Danger condition. At least two briefing areas shall be established on each drilling facility. Of these two areas, the one upwind at any given time is the safe briefing area.
- (f) Evacuation plan.
- (g) Agencies to be notified in case of an emergency.
- (h) A list of medical personnel and facilities, including addresses and telephone numbers.

(4) H<sub>2</sub>S detection and monitoring equipment

Each facility shall have an H<sub>2</sub>S detection and monitoring system which activates audible and visible alarms before the concentration of H<sub>2</sub>S exceeds its threshold limit value of ten parts per million in air. This equipment shall be capable of sensing a minimum of five parts per million H<sub>2</sub>S in air, with sensing points located, as examples, at the bell nipple, shale shaker, mud pits, driller's stand, living quarters, and other areas where H<sub>2</sub>S might accumulate in hazardous quantities. H<sub>2</sub>S detection ampules shall be available for use by all working personnel. After H<sub>2</sub>S has been initially detected by any device, frequent inspections of all areas of poor ventilation shall be made with a portable H<sub>2</sub>S-detector instrument.

(5) Personnel protective equipment

(a) All personnel on a facility shall be equipped with proper personnel protective-breathing apparatus. The protective-breathing apparatus used in an H<sub>2</sub>S environment shall consist of pressure demand type apparatus supplying breathing quality air while maintaining a slight pressure inside the system which conforms to all applicable Occupational Safety and Health Administration regulations and American National Standards institute standards. Optional equipment such as nose cups and spectacle kits, shall be available for use as needed.

(b) The storage location of protective-breathing apparatus shall be such that they are quickly and easily available for drilling and workover operations, shall include the following:

- (i) Rig floor.
- (ii) Any working area above the rig floor.
- (iii) Mud-logging facility.
- (iv) Shale-shaker area.
- (v) Mud pit area.
- (vi) Mud storage area.
- (vii) Pump rooms (mud and cement).
- (viii) Crew doghouses.
- (ix) Each briefing area.

(c) A system of breathing-air manifolds, hoses, and masks shall be provided on the facility and in the briefing area. A cascade air-bottle system shall be provided to refill individual protective-breathing apparatus bottles. The cascade air-bottle system may be recharged by a high-pressure compressor suitable for providing breathing-quality air: Provided, the compressor suction is located in an uncontaminated atmosphere. All breathing-air-bottles shall be labeled as containing breathing-quality air fit for human usage.

(d) The following additional personnel safety equipment shall be available for use as needed:

- (i) Portable H<sub>2</sub>S detectors.
- (ii) Retrieval ropes with safety harnesses to retrieve incapacitated personnel from contaminated areas.
- (iii) Chalk boards and note pads located on the rig floor, in the shale-shaker area, and in the cement pump rooms for communication purposes.
- (iv) Bull horns and flashing lights.
- (v) Resuscitators.

(6) Ventilation equipment

All ventilation devices shall be explosion-proof and situated in areas where H<sub>2</sub>S or SO<sub>2</sub> may accumulate. Movable ventilation devices shall be provided in work areas and be multi-directional and capable of dispersing H<sub>2</sub>S or SO<sub>2</sub> vapors away from working personnel.

(7) Notification of regulatory agencies

In the event that H<sub>2</sub>S is encountered during drilling operations, the appropriate Area Oil and Gas Supervisor or District Engineer shall be promptly notified of: the location, the concentration of H<sub>2</sub>S, the depth or circumstances under which it was encountered, and any other pertinent information.

The following agencies shall be immediately notified whenever moderate or extreme operational conditions exist:

- (a) U.S. Geological Survey.
- (b) EPA and surface management agency.
- (c) Appropriate state agencies.

**B. Mud program**

- (1) Either water- or oil-base muds are suitable for use
- (2) A pH of 10.0 or above shall be maintained in a water-base mud system to control corrosion and prevent sulfide stress cracking.
- (3) Consideration shall also be given to the use of H<sub>2</sub>S scavengers in both water- and oil-base mud systems.
- (4) Sufficient quantities of additives shall be maintained on location for addition to the mud system as needed to neutralize H<sub>2</sub>S absorbed by the system when drilling in formations containing H<sub>2</sub>S.
- (5) The application of corrosion inhibitors to the drill pipe to afford a protective coating or their addition to the mud system may be used as an additional safeguard to the normal protection of the metal by pH control and the scavengers mentioned above.
- (6) Drilling mud containing H<sub>2</sub>S gas shall be degassed at the optimum location for the particular rig configuration employed. The gases so removed shall be piped into a closed flare system and burned at a suitable remote stack.
- (7) The mud should be maintained in an overbalanced condition to preclude the entry of formation fluids, containing H<sub>2</sub>S, into the wellbore.

**C. General operations**

All personnel in the working area shall utilize H<sub>2</sub>S protective-breathing apparatus when required, as specified in paragraph I.(2). The normal fixed-point monitor system outlined in paragraph I.(4) may be supplemented with portable H<sub>2</sub>S detectors as conditions warrant.

(1) Drill string trips of fishing operations.

Every effort shall be made to pull a dry drill string while maintaining well control. If it is necessary to pull the drill string wet after penetration of H<sub>2</sub>S bearing zones, increased monitoring of the working area shall be provided and protective-breathing apparatus shall be worn under conditions as outlined in paragraph I.(2)(a).

(2) Circulating bottoms-up from a drilling break, cementing operations, logging operations, or well circulation while not drilling.

After penetration of an H<sub>2</sub>S-bearing zone increased monitoring of the working area shall be provided and protective-breathing apparatus shall be worn by those personnel in working area at least 15 minutes before bottoms-up after a trip.

(3) Coring operations in H<sub>2</sub>S-Bearing Zones.

Personnel protective-breathing apparatus shall be worn 10-20 stands in advance of retrieving the core barrel. Cores to be transported shall be sealed and marked for the presence of H<sub>2</sub>S.

(4) If H<sub>2</sub>S-bearing zones are encountered while drilling with air or gas as the circulating medium, or with cable tools, the well should be killed with mud and drilling continued using mud as a circulating medium.

(5) Abandonment or temporary abandonment operations.

Internal well-abandonment shall be designed for H<sub>2</sub>S service.

(6) Logging operations after penetration of known or suspected H<sub>2</sub>S-Bearing Zones.

Mud in use for logging operations shall be conditioned and treated to minimize the effects of H<sub>2</sub>S on the logging equipment.

(7) Stripping operations.

Displaced mud returns shall be monitored and protective-breathing apparatus worn if H<sub>2</sub>S is detected at levels outlined for protective-breathing apparatus under paragraph I.(2).

(8) Gas-cut mud or well kick from H<sub>2</sub>S-Bearing Zones.

Protective-breathing apparatus shall be worn when an H<sub>2</sub>S concentration of 20 parts per million is detected. Should a decision be made to circulate out a kick, protective-breathing apparatus shall be worn prior to and subsequent to bottoms-up, and at any time during an extended kill operation that the concentration of H<sub>2</sub>S becomes hazardous to personnel as defined in paragraphs I.(2)(a).

(9) Drill string precautions.

Precautions shall be taken to minimize drill string stresses caused by conditions such as excessive dogleg severity, improper stiffness ratios, improper torque, whip, abrasive wear on tool joints, and joint imbalance. American Petroleum Institute Bulletin RP 7G shall be used as a guideline for drill string precautions. Tool-joint compounds containing free sulphur shall not be used. Proper handling techniques shall be employed to minimize notching, stress concentrations, and possible drill pipe failures.

(10) Flare system.

The flare system shall be designed to safely gather and burn H<sub>2</sub>S gas. Flare lines shall be located as far from the operating facility as feasible in a manner to compensate for wind changes. The flare system shall be equipped with a pilot and an automatic igniter. Backup ignition for each flare shall be provided.

D. Kick detection and well control

In addition to the requirements of paragraph 3 of this Notice, all efforts shall be made to prevent a well kick as a result of gas-cut mud, drilling breaks, lost circulation, or trips for bit change. Drilling rate changes shall be evaluated for the possibility of encountering abnormal pressures, and mud weights adjusted in an effort to compensate for any hydrostatic imbalance that might result in a well kick.

In the event of kick, the disposal of the well influx fluids shall be accomplished by one of the following alternatives, giving consideration to personnel safety, possible environmental damage, and possible facility well equipment damage:

(1) Alternative A.

To contain the well fluid influx by shutting in the well and pumping the fluids back into the formation.

(2) Alternative B.

To control the kick by using appropriate well-control techniques to prevent formation fracturing in open hole within the pressure limits of well equipment (drill pipe, casing, wellhead, blowout preventers, and related equipment). The disposal of  $H_2S$  and other gases shall be through pressured or atmospheric mud-gas separator equipment, depending on volume, pressure and concentration of  $H_2S$  gas. The equipment shall be designed to recover drilling mud and to vent to the atmosphere and burn the gases separated. The mud system shall be treated to neutralize  $H_2S$  and restore and maintain the proper mud quality.

E. Testing in an  $H_2S$  Environment

(1) Procedures.

- (a) Testing shall be performed with a minimum number of personnel in the immediate vicinity of the test using test equipment to safely and adequately perform the test and maintain related equipment and services. Drill-stem testing of  $H_2S$  zones will be conducted during daylight hours only.
- (b) Prior to initiation of the test, special safety meetings shall be conducted for all personnel who will be on or in the vicinity of the test, with particular emphasis on the use of personnel protective-breathing apparatus, first-aid procedures, and the  $H_2S$  Contingency Plan.

- (c) During the test, the use of H<sub>2</sub>S detection equipment shall be intensified. All produced gases shall be vented and burned through a flare system which meets the requirements of paragraph IV.(9). Gases from stored test fluids shall be vented into the flare system.
- (d) "No Smoking" rules in the approved Contingency Plan of paragraph I.(3) of this Notice shall be rigorously enforced.

(2) Equipment.

- (a) Drill-stem test tools, wellhead equipment, and other testing facilities shall be suitable for H<sub>2</sub>S service.
- (b) Tubing which meets the requirements for H<sub>2</sub>S service shall be used for drill stem testing. Drill pipe shall not be used for drill stem tests without the prior approval of the District Engineer. The water cushion shall be thoroughly inhibited in order to prevent H<sub>2</sub>S corrosion. The test string shall be flushed with treated fluid for the same purpose after completion of the test.
- (c) All surface test units and related equipment shall be designed for H<sub>2</sub>S service. Only competent personnel who are trained in and knowledgeable of the hazardous effects of the H<sub>2</sub>S shall be utilized in these tests.

II. Metallurgical Equipment Considerations

Equipment used when drilling zones bearing H<sub>2</sub>S or handling production containing H<sub>2</sub>S could be susceptible to the phenomena variously known as: Sulfide stress cracking, hydrogen embrittlement, stress corrosion cracking and/or H<sub>2</sub>S embrittlement. To resist or prevent these phenomena from occurring, the equipment shall be constructed of material whose metallurgical properties are chosen after considering both working environment and the anticipated stresses. The metallurgical properties include the grade of steel, the processing (as rolled, normalized, tempered and/or quenched) and its resulting strength properties. The working environment shall include the H<sub>2</sub>S and CO<sub>2</sub>, (carbon dioxide) concentrations, the well fluid pH and the well bore pressures and temperatures. For drilling and workover operations, such equipment includes the drill string, the casing, wellhead, blowout preventers, kill lines, choke manifold, valves, bolting, welding, and other related equipment. In regard to drilling and workover operations, each application for permit to drill and each Notice of intention to workover a well must describe precautions to be taken to protect equipment from H<sub>2</sub>S. The following general practices are required for acceptable performance:

(1) Drill string.

Drill strings shall be designed consistent with the anticipated depth, conditions of the hole, and reservoir environment to be encountered. Care shall be taken to minimize exposure of the drill string to high stresses as much as is practical and consistent with the anticipated hole conditions to be encountered.

(2) Casing.

Casing, couplings, flanges, and related equipment shall be designed for H<sub>2</sub>S service. Field welding on casing (except conductor and surface strings) is prohibited unless approved by the District Engineer.

(3) Wellhead, blowout preventers, and pressure control equipment.

The blowout preventer stack assembly shall be designed in accordance with criteria evolved through technology of the latest state-of-the art for H<sub>2</sub>S service. Surface equipment such as choke lines, choke manifold, kill lines, pressure gauges, bolting, weldments, and other related well-killing equipment shall be designed and fabricated utilizing the most advanced technology concerning sulfide stress cracking. Elastomers, packing, and similar inner parts exposed to H<sub>2</sub>S shall be resistant at the maximum anticipated temperature of exposure.

### III. Critical Operations and Curtailment Plans

Certain operations performed under drilling and workover conditions are more critical than others with respect to well control, fire, explosion, oil spills, and other discharge or emissions. These operations may occur during drilling, running casing, logging, drill-stem testing, well completion, or wireline operations.

Prior to commencement of critical operations, each operator shall file, with the District Engineer, for approval of a Critical Operations and Curtailment Plan for the lease, which shall contain:

- (1) A list or description of the more critical operations that are or are likely to be conducted on the lease. Such list or description shall specify the operations to be ceased, limited, or not to be commenced under given circumstances or conditions. The list shall include operations such as:

- (a) Drilling in close proximity to another producing well.
  - (b) Drill-stem testing.
  - (c) Running and cementing casing.
  - (d) Cutting and recovering casing.
  - (e) Logging or wireline operations.
  - (f) Well completion operations.
- (2) A list or description of circumstances or conditions under which such critical operations may occur, shall be circulated to all involved parties. This list or description shall be developed from all the factors and conditions relating to the conduct of operations on the lease, and shall consider but not necessarily be limited to the following:
- (a) The availability and capability of containment and cleanup equipment.
  - (b) Abnormal or unusual characteristics expected to be encountered during drilling operations.
  - (c) Spill control system response time.
  - (d) Known or anticipated meteorological conditions.
  - (e) Availability of personnel and equipment for the particular operation to be conducted.
  - (f) Other factors peculiar to the particular lease under consideration.
- (3) When any such circumstance or condition listed or described in the plan occurs or other operational limits are encountered, the operator shall notify the District Engineer and shall curtail the more critical operations as set forth under I. above. In the conduct of the more critical operations, full consideration shall be given to pertinent factors such as supply of well control materials, subsurface conditions, inventory of spill-containment equipment, weather conditions, particular esthetic conditions, fire hazards, available transportation equipment, spill-control response time, and nature of work planned.

- (4) Any departures in the plan shall require prior approval by the District Engineer.
- (5) The operator shall review the plan at least annually. Notification of the review and any amendments or modifications to the plan shall be filed with the office of the District Engineer. For existing operations, such plan shall initially be filed within 90 days from the effective date of this Notice.

#### IV. Producing and Processing Operations

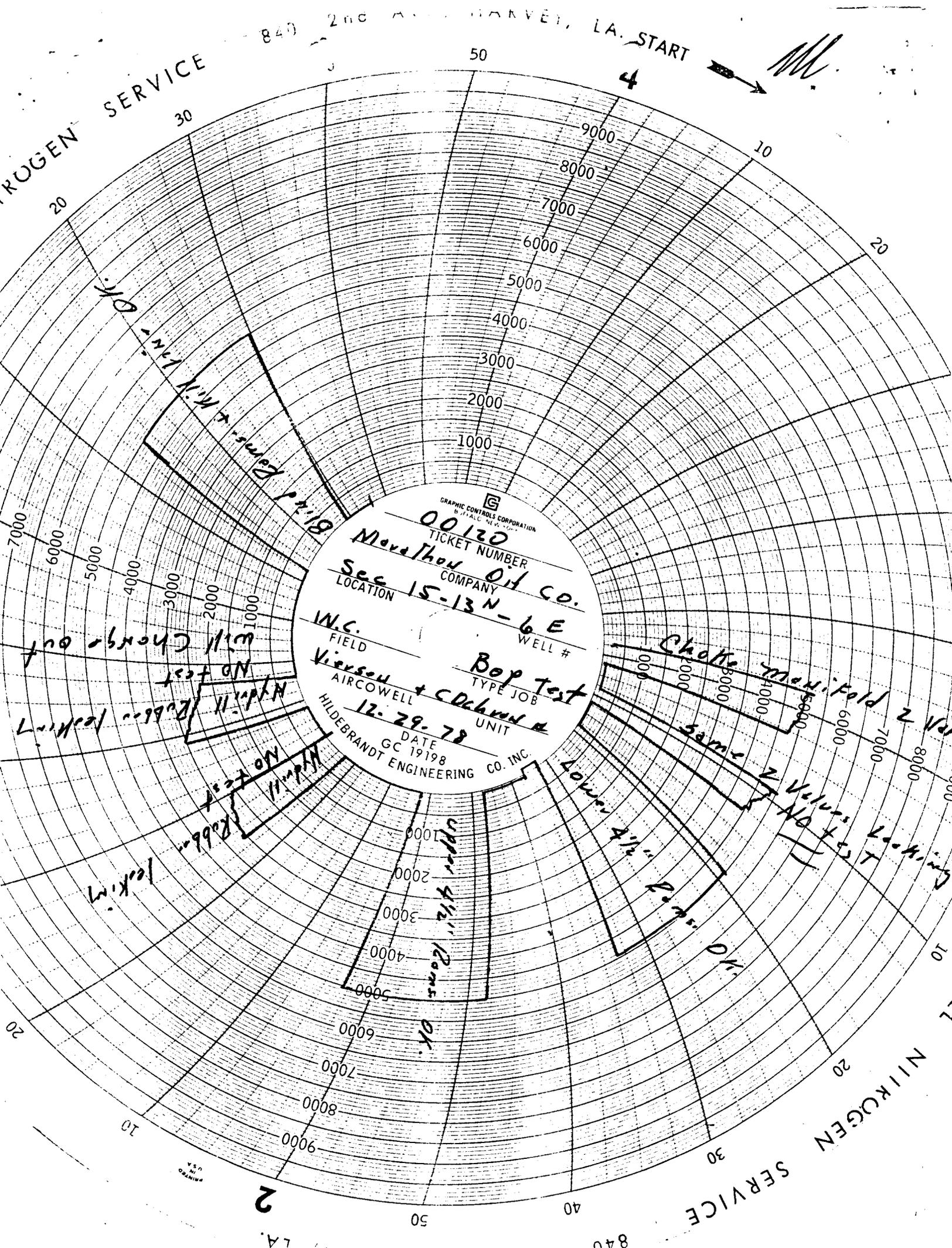
- (1) All producing or processing operations where concentrations of  $H_2S$  exceed 100 ppm must have warning signs posted within 50 feet of the facility. Each sign shall have a minimum width of eight feet and a minimum height of four feet, and shall be painted a high-visibility yellow color with black lettering of a minimum of <sup>12</sup>/<sub>12</sub> inches in height, indicating:

"DANGER--HYDROGEN SULFIDE-- $H_2S$ "

Those facilities which are within 1/4 mile of a town, community, public road, or other area where the public might reasonably be expected must be fenced and the gates kept locked.

- (2) Storage tanks that are used in production or testing operations, operated at or near atmospheric pressure, and have  $H_2S$  vapor accumulation shall be piped into a closed flare system and burned at a suitable remote stack. All openings on the tanks should be kept closed. This can be accomplished by equipping the tanks with some type of ground-level gauging and thermometers located in the tank shell. Gauges and temperatures can then be determined from the ground without opening the tank. These gauging devices usually require approval by the crude purchaser. Ground-level sampling can also be accomplished by installation of pipes extending into the tank at any desired level and to any desired distance. Valves are located at a convenient level to permit sampling on the ground without opening the tanks. Warning signs, within 50 feet of the tankage, are required.
- (3) Plants processing natural gas for  $H_2S$  removal should be equipped with  $H_2S$  monitors and control devices that can detect leaks and shutdown the operation.

- (4) In wells producing gas with over 5% H<sub>2</sub>S, unless produced by artificial lift, the well must have two master valves, a packer and protective packer fluid. Where flowline pressures exceed 200 psia an automatic wellhead control valve is required, and within 0.5 mile of a dwelling or within 5 miles of a town, a well with over 5 MMCFD potential requires a surface controlled subsurface safety valve below 100 feet that will prevent uncontrolled flow.
- (5) Corrosion coupons, to be used to monitor the rate of corrosion, should be installed in the flowline between the wellhead and production facilities and downstream of the production facilities. If prohibitive corrosion rates are detected in the production tubing and/or flowline these facilities should be detected by the periodic injection of a suitable corrosion inhibitor.
- (6) If a production operation does not have the volume capacity or sufficient H<sub>2</sub>S concentration to generate a 50-foot radius of exposure of 100 ppm, such operation is not subject to the above requirements. The equation for determining the 100 ppm radius of exposure in feet is the product of the mole fraction of H<sub>2</sub>S in the gas times the maximum volume determined to be available for escape in cubic feet per day, to the 0.6258 power, times 1.589.
- (7) The personnel safety and protection requirements contained in paragraph I.(A) of this Notice are also applicable to leasehold production and processing facilities.



840 2nd MARVEL, LA. START

HYDROGEN SERVICE

4 *M*

GRAPHIC CONTROLS CORPORATION  
 00120  
 TICKET NUMBER  
 Marathon Oil Co.  
 COMPANY  
 Sec 15-13N-6E  
 LOCATION WELL #  
 W.C.  
 FIELD  
 Bop Test  
 TYPE JOB  
 Viersen + C. Dahm  
 AIRCOWELL UNIT  
 12-29-78  
 DATE  
 GC 19198  
 HILDEBRANDT ENGINEERING CO. INC.

*Bridgman + Millman*

*No test  
Hyd. H. Rubben looking  
will change out*

*Choke manifold 2 Val  
same 2 Val's looking*

*No test  
Hyd. H. Rubben looking*

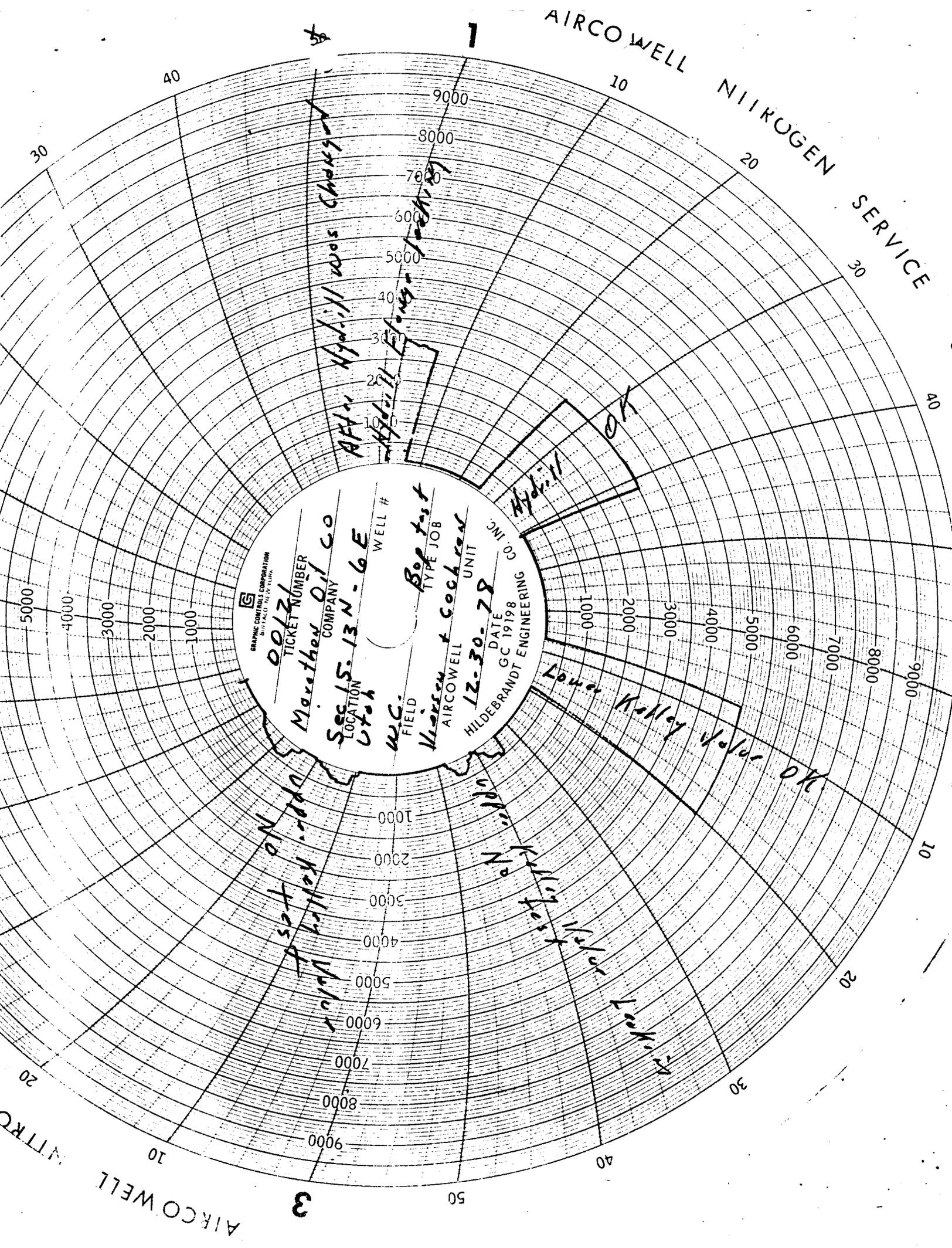
*Upper 4 1/2" lines OK*

*Lower 4 1/2" lines OK*

HYDROGEN SERVICE

2

840 LA.



AIRCO WELL  
 NITROGEN SERVICE

GRAPHIC CONTROL CORPORATION  
 BUFFALO, NEW YORK  
 TICKET NUMBER: 00121  
 COMPANY: Marathon Oil Co  
 LOCATION: Sec 15, T13N, R6E, Utah  
 WELL #: W.C.  
 FIELD: Marsden  
 TYPE JOB: Bop test  
 AIRCO WELL  
 UNIT: Marsden + Cochran  
 DATE: 12-30-78  
 HILDEBRANDT ENGINEERING CO INC

AFH Hydril was checked  
 Hydril OK

Hydril OK

Lower Kelly Water OK

Upper Kelly Water OK

Upper Kelly Water OK

AIRCO WELL

9000  
8000  
7000  
6000  
5000  
4000  
3000  
2000  
1000

10  
20  
30  
40

3



R. 6 E.

BEAR  
LAKE

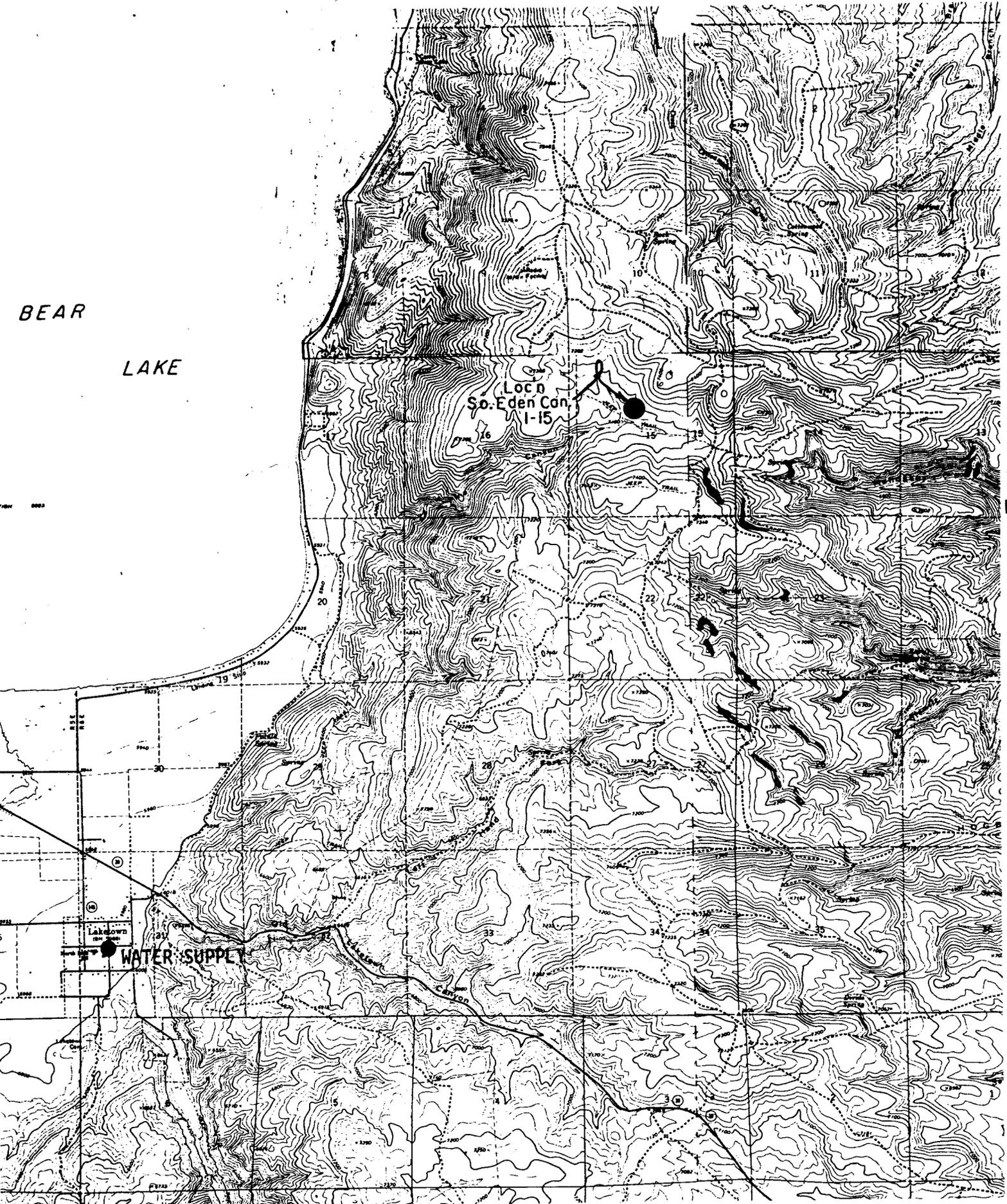
Loco  
So. Eden Can.  
I-15

T. 13 N.

WATER SUPPLY

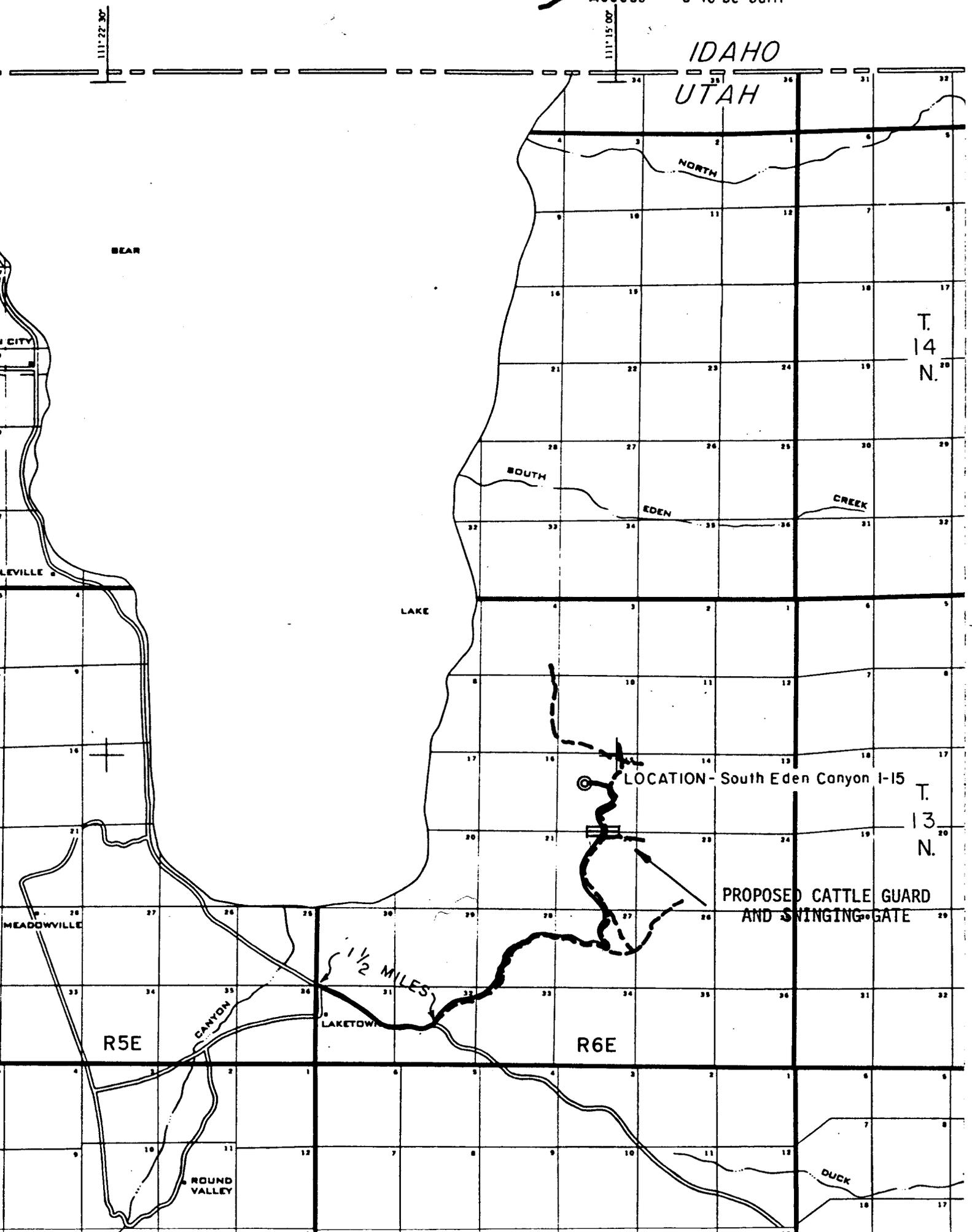
TOPO MAP  
To Accompany Drilling Permit Application for  
SOUTH EDAN CANYON WELL N° I-15

Applicant:  
MARATHON OIL CO.  
Casper, Wya.



APPLICANT:  
MARATHON OIL COMPANY

Bladed - Private Road  
Access Road to be built



REHABILITATION PLAN

Lease No.: V-25458, Well Name and No.: South Eden Canyon #1-15;  
Location: 1820' FNL and 2072' FWL, Sec. 15, T. 13 N., R. 6E W.

Marathon Oil Company intends to drill a well and lay a flow line on (see attached map) surface owned by John K. Hansen. The lessee/operator agrees to complete the following rehabilitation work if the well is a producer:

Yes  No Maintain access road and provide adequate drainage to road.

Yes  No Reshape and reseed any area not needed for maintenance of the pump and support facilities.

Other requirements: Requirements listed below will apply to all pipelines and flowlines.

The following work will be completed when the well and/or flow line is abandoned.

Yes  No Pit will be fenced until dry, then filled to conform to surrounding topography.

Yes  No Water bars will be constructed as deemed necessary.

Yes  No Site will require reshaping to conform to surrounding topography.

Yes  No Entire disturbed area will be reseeded. If yes, the following seed mixture will be used:

All disturbed areas will be restored to the original and normal vegetation according to U.S. Forest and BLM requirements including grazing standards.

Yes  No Access road will be closed, rehabilitated and reseeded using the same seed mixture as above.

Yes  No Access road will remain for surface owner's use. Rehabilitation of any changes to the existing roads will be at the surface owners discretion.

Yes  No Water bars will be constructed on the access road as deemed necessary.

Other requirements: Marathon Oil Company will furnish the surface owner all live stock water requirements during drilling and completion operations.

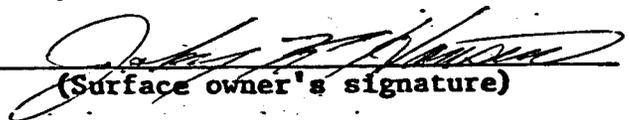
Surface Owner:

Name: John K. Hansen  
Address: \_\_\_\_\_  
City: Garden City  
State: Utah 84028  
Telephone: 801-946-3325  
Date: May 31, 1978

Operator/Lessee

Name: Marathon Oil Company  
Address: P. O. Box 2659  
City: Casper  
State: Wyoming  
Telephone: 307-265-7693  
Date: May 31, 1978

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.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK  
 DRILL  DEEPEN  PLUG BACK   
 b. TYPE OF WELL  
 OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE  Unknown

2. NAME OF OPERATOR  
 Marathon Oil Company

3. ADDRESS OF OPERATOR  
 P. O. Box 2659, Casper, WY 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface 1820' FNL & 2072' FWL, Sec. 15, T13N, R6E of S.L. P.M.  
 At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 4 1/2 miles northeast of Laketown, Utah

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)  
 1820'

16. NO. OF ACRES IN LEASE  
 2,458.86

17. NO. OF ACRES ASSIGNED TO THIS WELL  
 640

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
 None

19. PROPOSED DEPTH  
 15,400'

20. ROTARY OR CABLE TOOLS  
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 7197' GL

22. APPROX. DATE WORK WILL START\*  
 June 20, 1978

5. LEASE DESIGNATION AND SERIAL NO.  
 U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
 South Eden Canyon

9. WELL NO.  
 1-15

10. FIELD AND POOL, OR WILDCAT  
 Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 Sec. 15, T13N, R6E

12. COUNTY OR PARISH  
 Rich

13. STATE  
 Utah

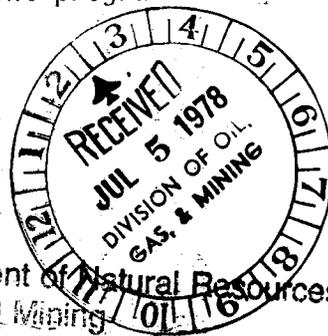
23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
Driven	20"	Conductor	50'	None
9-7/8" Reamed to 17 1/4"	13-3/8"	54.5#	1500'	1500 sacks
12 1/4"	9-5/8"	40.0 & 53.5#	* - See Item 2 on 10-point program	
8-3/8"	7"	29, 32 & 35#		

Please see the following attachments:

1. Surveyor's plat
2. Ten-point Drilling Program
3. BOP Schematic
4. Thirteen Point NTL-6
5. Maps

State of Utah, Department of Natural Resources  
 Division of Oil, Gas, and Mining  
 1588 West North Temple  
 Salt Lake City, Utah 84116



NOTICE OF APPROVAL

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 [Signature] TITLE Acting District Operations Manager DATE 5-2-78

(This space for Federal or State office use)

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

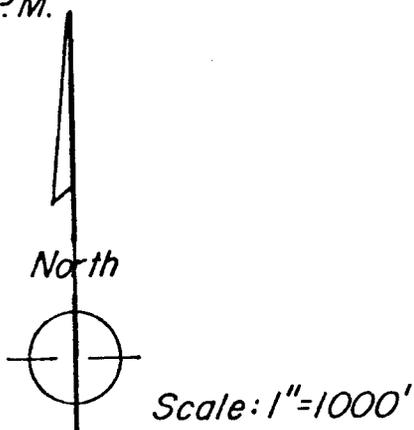
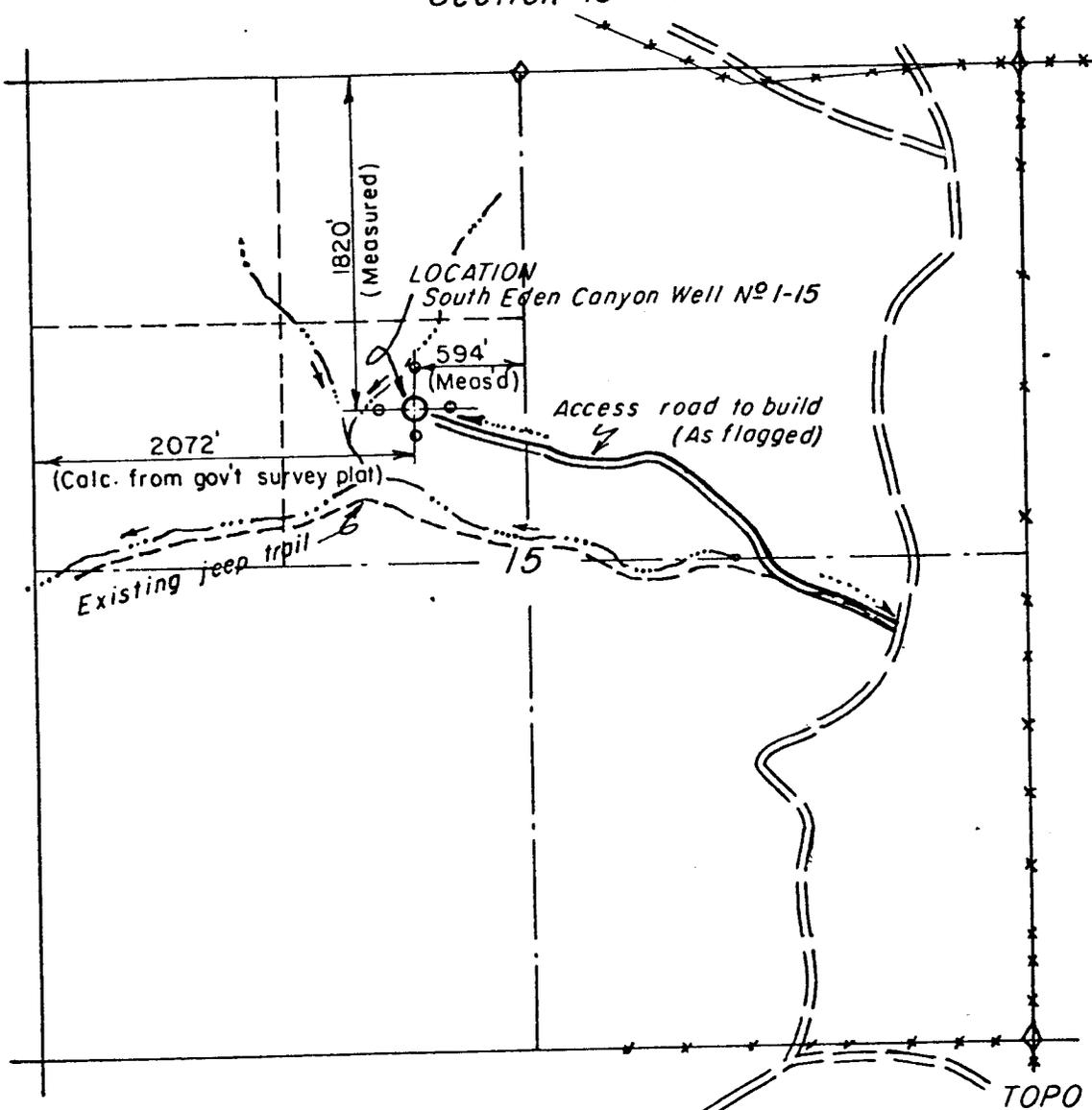
APPROVED BY (Eng. Sgd.) E. W. Guynn TITLE DISTRICT ENGINEER DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED TO OPERATOR'S COPY

NECESSARY FLARING OF GAS DURING DRILLING AND COMPLETION APPROVED SUBJECT TO ROYALTY (NTL-4)

PART of SURVEY NOTES  
for  
WELL LOCATION  
Section 15 T.13N. R.6E. of Salt Lake P.M.



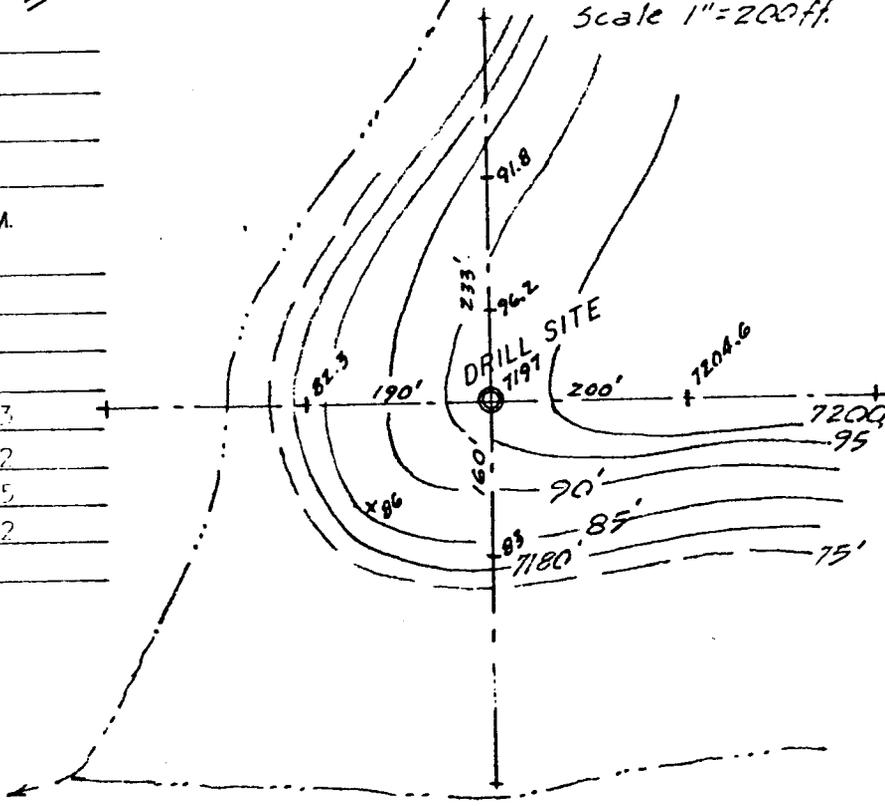
Bearing Basis:  
E of North Line  
Sec. 15 - East, from  
Gov't. survey plat.

Elevation Reference:  
Grd. elev. at radio  
facility NW of loc'n.  
7573 from topo.  
sheet.

Company: Marathon Oil Company  
 Area: South Eden Canyon  
 State: Utah County: Rich  
 Lease: So. Eden Canyon Well No: 1-15  
 Section 15 T. 13N R. 6E of S.L. P.M.  
 Location: 1820 ft. from North Line  
2072 ft. from West Line

Elevations: Drill Site:	7197 Ground
(Before Grading) Ref. Pts.:	160' South 7133
	233' North 7192
	200' East 7205
	190' West 7182

TOPO SKETCH-DRILL SITE  
Scale 1"=200'f.



- LEGEND —
- U.S. Gov't Brass Cap, survey corner
  - Original survey, stone corner, recovered in place, properly mkd.
  - Local corner, established by others, as noted.
  - Existing Fence Lines.
  - Existing roadway

SURVEYOR'S CERTIFICATE

State of WYOMING ss  
 County of NATRONA ss

I, R. W. Steinle of Casper, Wyoming, hereby certify that this map was made from notes taken during an actual survey made by me ~~or under my supervision~~ on the 19<sup>th</sup> day of April 19 78 and that it correctly shows the location of the drilling site as staked on the ground, to the best of my knowledge and belief.

*R. W. Steinle*

MARATHON OIL COMPANY

Drilling Operations Plan

South Eden Canyon #1-15  
 1,820' FNL & 2,072' FWL  
 Section 15, T13N, R6E  
 Rich County, Utah  
 Elevation: 7,197' G.L.  
 Estimated K.B. - 7,215'

1. Geologic name of surface:

Wasatch - Tertiary

2. Estimated tops of important geologic markers:

Twin Creek	3,000'	(+4,215')	Phosphoria	11,600'	(-4,385')
Nugget	6,000'	(+1,215')	Wells	12,200'	(-4,985')
Ankareh	7,100'	(+ 115')	Madison	13,200'	(-5,985')
Thaynes	8,500'	(-1,285')	Lodgepole	14,700'	(-7,485')
Dinwoody	11,000'	(-3,785')	Devonian	15,400'	(-8,185')

These tops are only "best guess" picks and may be very inaccurate. Poor seismic reflections, faulting, and overturned beds prevent accurate estimations of formation tops.

3. Estimated depths of anticipated water, oil, gas or other mineral bearing formations:

Twin Creek	3,000'	Gas
Nugget	6,000'	Gas
Thaynes	8,500'	Gas
Dinwoody	11,000')	) Primary objectives - anticipate gas
Phosphoria	11,600')	
Wells	12,200'	Gas
Madison	13,200'	Gas

4a. The casing program including the size, grade, weight, whether new or used, and a setting depth of each string:

<u>Min. Hole Size</u>	<u>Casing O.D.</u>	<u>Grade</u>	<u>Weight</u>	<u>Setting Depth</u>	<u>New or Used</u>
-	20"			50'	New
9-7/8" Reamed to 17-1/4"	13-3/8"	K-55	54.5#	1,500'	New
12-1/4"	9-5/8"	N-80	40 - 53.5#	*	New
8-3/8"	7"	N-80	29 - 35#	15,400'	New

\*Depth of intermediate casing will depend on hole conditions, etc.

4b. The cementing program including type, amounts, and additives:

13-3/8" Casing - Run a guide shoe, float collar and 5 centralizers. Cement with 1,200 sacks of Light cement with 3% salt and 300 sacks of Class "G" with 2% CaCl<sub>2</sub>.

9-5/8" Casing - Run a guide shoe, differential fill collar and 10 centralizers. Cement with Light cement with 10% salt and tail with Class "G" with 18% salt. Add retarder and friction reducer as required. Cement volume will be determined when setting depth of intermediate string is chosen.

7" Casing - Run a differential fill shoe and collar with 20 centralizers. Cement with 350 sacks of Light cement with 10% salt and 500 sacks of Class "G" with 18% salt and 40% silica flour. Add retarder, friction reducer as required.

NOTE: Actual cement volumes and compositions will have to be tailored to the conditions encountered. Since setting depths of the casing strings are tentative, the cements will have to be tailored for temperature, lost circulation problems, etc.

5. B.O.P. specification and testing: (see the attached schematic diagram for size and pressure ratings):

5,000 psi WP hydraulic double ram preventer with blind rams, pipe rams, and Hydril. Operation to be checked daily.

Test Hydraulic Operations

<u>BOP</u>	<u>Pressure</u>	<u>Time</u>	<u>Remarks</u>
5,000 psi rated WP	5,000 psi	15 Minutes	Test monthly.
13-3/8" Casing	2,000 psi	15 Minutes	Test before
9-5/8" Casing	4,000 psi	15 Minutes	drilling out

6. Mud program and anticipated pressures:

<u>From</u>	<u>To</u>	<u>Type Mud</u>	<u>Weight</u>	<u>% Oil</u>	<u>Water Loss</u>
0'	1,500'	Low Solids	8.9	0	20
1,500'	T.D.	Non-dispersed gel	8.9	0	15

Mud to contain H<sub>2</sub>S scavengers and corrosion inhibitors.

Intermittent lost circulation zones may be encountered from surface to TD. Lost circulation material to be readily available.

Expected maximum gradient is 0.47 psi/ft. However, be prepared to weight up to  $\pm 10.0$  ppg, if significant show or kick is encountered.

7a. Type of drilling tools and auxiliary equipment:

Mud System: Desander, desilter, degasser, fine mesh shaker, gas buster and automatic pit level alarm.

H<sub>2</sub>S may be encountered. Necessary safety equipment for personnel will be available at all times.

H<sub>2</sub>S detection equipment to be in use at all times.

7b. Deviation Control:

<u>From</u>	<u>To</u>	<u>Maximum Deviation Between Surveys</u>	<u>Maximum Deviation From Vertical</u>	<u>Maximum Change Per 100' of Depth</u>
0'	1,500'	200'	*	1°
1,500'	T.D.	500'	*	1°

\*Deviation problems are anticipated due to high angle dips and overturned beds. Attempt to keep hole as vertical as required for safe drilling operation.

8. Sample, logging, testing, and coring program:

Drill cutting samples will be taken every ten (10) feet from surface casing to TD or as directed by well site geologist or engineer.

An SP/DIL, GR/Cal/CNL/FDC, GR/BHC, Dipmeter and Deviation survey will be run at the 9-5/8" casing point and again at TD. Logs will be run to surface.

Two-man mud logging unit with H2S detector to run continuously from surface to TD.

Drill stem tests will be run as required to evaluate hydrocarbon shows.

Anticipate taking three 60 foot cores. Core points will most likely be in the Thaynes, Dinwoody, and Phosphoria.

9. Anticipated abnormal pressures or temperatures:

Normal temperature and pressure gradients are expected.

Reservoir gradients are expected to be approximately 0.47 psi/ft., yielding a maximum BHP at TD of 7,200 psi.

Bottomhole temperature at 15,400' is expected to be approximately 295° F.

10. The anticipated starting date and duration of operation:

Starting Date: June 20, 1978

Duration: 6 Months

DISTRICT APPROVALS

Approved

Date

*Ray King* 5/2/78  
*Michael* 5-1-78  
*M.E. Dike* 5/2/78

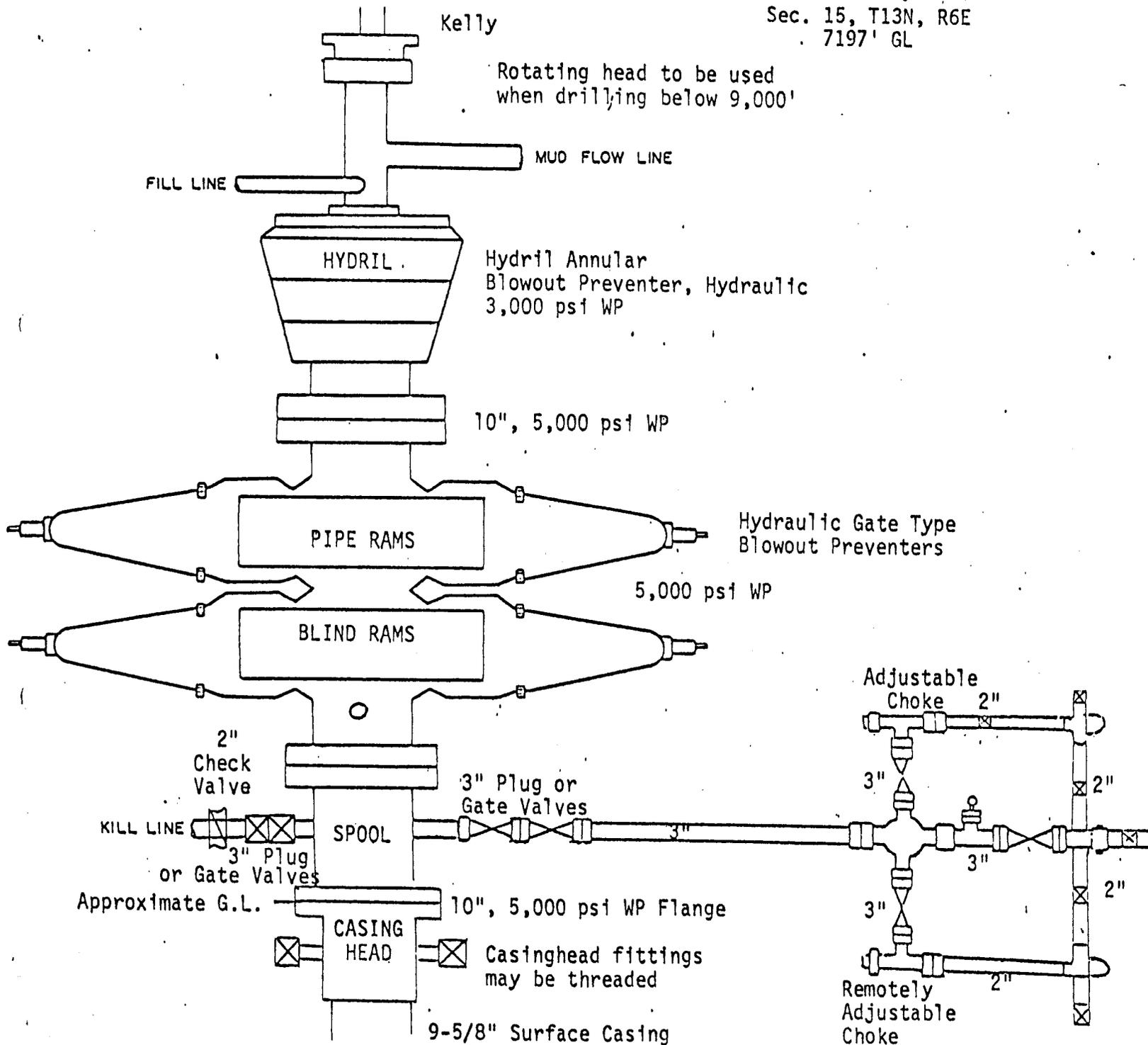
DIVISION APPROVALS

Approved

Date

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Marathon Oil Company  
 South Eden Canyon #1-15  
 Sec. 15, T13N, R6E  
 7197' GL

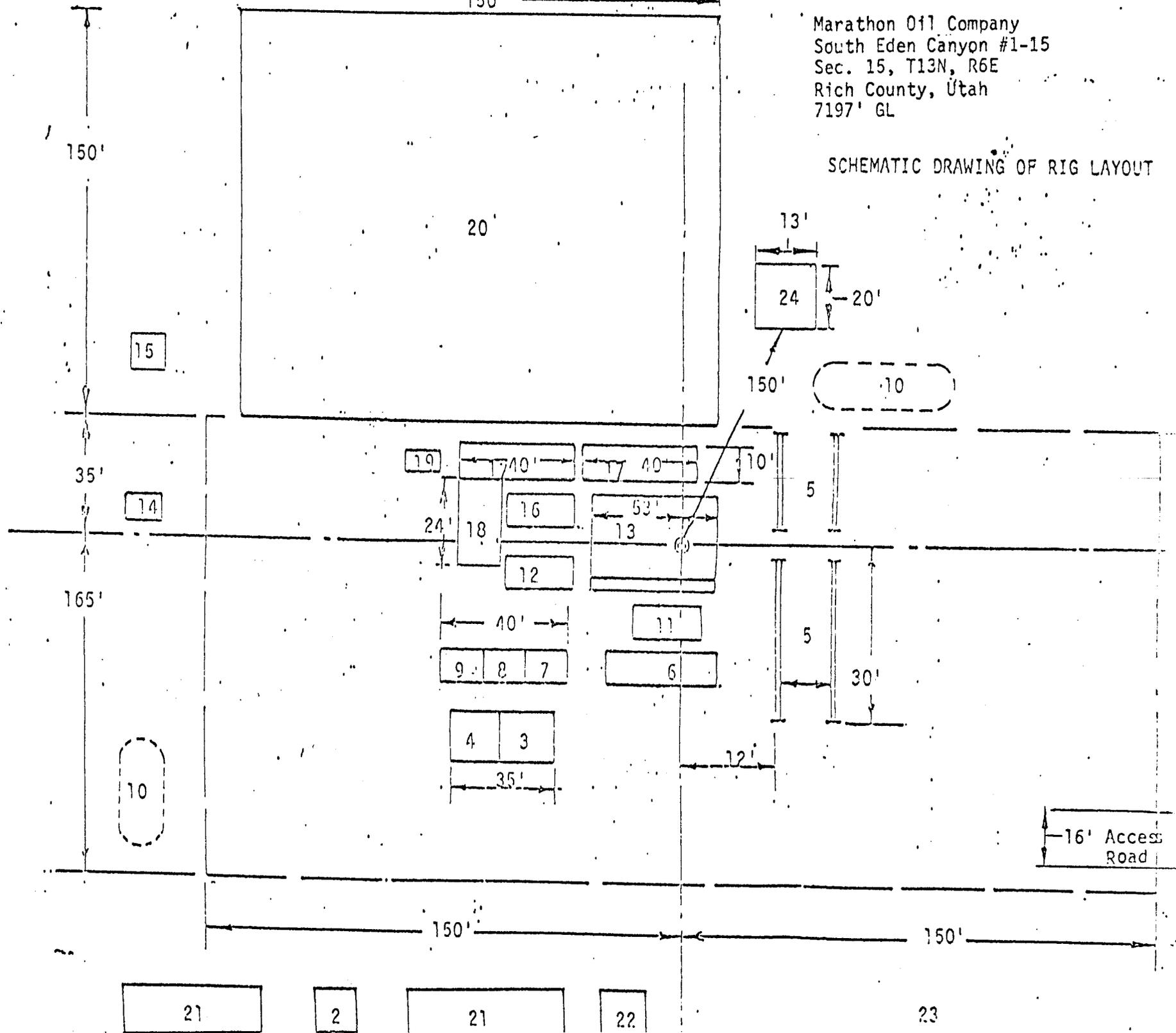


1. Blowout preventers, master valve, plug valve and all fittings must be in good condition. Use new API Sealing Rings.
2. All fittings (gates, valves, etc.) to have pressure rating equivalent to preventers. Valves to be flanged and at least 2" unless otherwise specified. Valves next to BOP to be nominal 3".
3. Equipment through which bit must pass shall be as large as the inside diameter of the casing that is being drilled through.
4. Safety valve must be available on rig floor at all times and with proper connections. The I.D. of safety valve should be as great as I.D. of tool joints of drill pipe.
5. Kelly safety valve installed, to have same working pressure as BOP's.
6. All lines and controls to preventers must be connected and tested before drilling out of surface pipe.
7. BOP's must be fluid operated, complete with accumulator. Controls may be either on the floor or ground near steps from rig floor.
8. Fillup line shall be tied to drilling nipple with connection below and approximately 90° to the flow line.
9. Gauge will be installed for testing but removed while drilling.
10. If spool is not used, the choke line can be connected to BOP side outlet, below bottom rams.
11. Casinghead and casinghead fittings to be furnished by Marathon Oil Company.
12. Chokes will be adjustable.
13. One side of casinghead may be bull plugged.

1. Access Road
2. Trailer House
3. Fuel Tank
4. Water Tank
5. Pipe Racks
6. Storage Pad
7. Light Pad
8. Change House
9. Accumulator
10. Soil Stock Pile
11. Dog House on Top of Tool House
12. Mud Mixer
13. Substructure
14. Boiler
15. Burn & Trash Pit (Covered w/wire mesh)
16. Rig Engines
17. Shale Shaker & Mud Tank
18. Suction Mud Tank
19. Mud House on Stand
20. Sump (Reserve Pit)
21. Parking Area
22. Toilets
23. Additional area for fracturing
24. Flare Pit

Marathon Oil Company  
 South Eden Canyon #1-15  
 Sec. 15, T13N, R6E  
 Rich County, Utah  
 7197' GL

SCHEMATIC DRAWING OF RIG LAYOUT



ROAD MAP

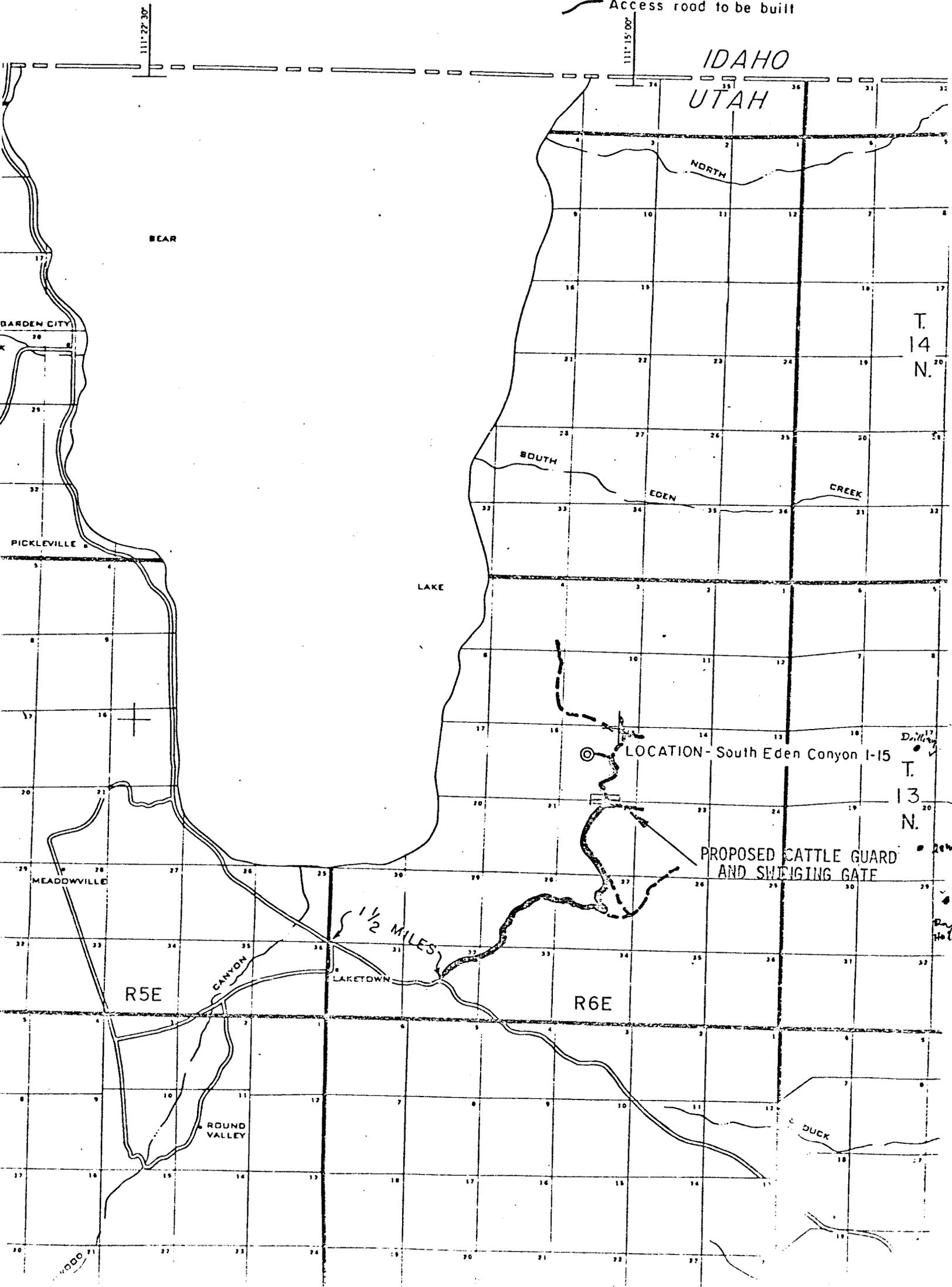
To Accompany Drilling Application for:

SOUTH EDEN CANYON WELL N° 1-15  
Rich County, Utah

APPLICANT:  
MARATHON OIL COMPANY

LEGEND

-  Highway
-  Bladed-County Road
-  Bladed-Private Road
-  Access road to be built



# SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN

## PART I GENERAL INFORMATION



1. Name of facility South Eden Canyon Well 1-15

2. Type of facility Drilling Well

3. Location of facility NE SE NW Section 15, Township 13 North, Range 6 East,  
Rich County, Utah

4. Name and address of owner or operator:

Name Marathon Oil Company

Address P. O. Box 120  
Casper, Wyoming 82602

5. Designated person accountable for oil spill prevention at facility:

Name and title J. F. Wirth, District Drilling Superintendent

6. Facility experienced a reportable oil spill event during the twelve months prior to Jan. 10, 1974 (effective date of 40 CFR, Part 112). (If YES, complete Attachment #1.) No

### MANAGEMENT APPROVAL

This SPCC Plan will be implemented as herein described.

Signature R. W. Stewart

Name R. W. Stewart

Title Division Operations Manager

### CERTIFICATION

I hereby certify that I have examined the facility, and being familiar with the provisions of 40 CFR, Part 112, attest that this SPCC Plan has been prepared in accordance with good engineering practices.

Arthur W. Howard

Printed Name of Registered Professional Engineer

(Seal) Arthur W. Howard  
Signature of Registered Professional Engineer

Date 7-24-78

Registration No. 602 State Wyoming

PART I  
GENERAL INFORMATION

7. Potential Spills — Prediction & Control:

<u>Source</u>	<u>Major Type of Failure</u>	<u>Total Quantity (bbls)</u>	<u>Rate (bbls/hr)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
---------------	------------------------------	------------------------------	-----------------------	---------------------------	------------------------------

Reserve Pit - 150' x 200' x 12' - approximately 58,000 barrel capacity. Actual volume in pit should not exceed 25,000 barrels. Pit will be lined to prevent sloughing of banks. Possible major failure would be rupture of pit walls. Direction of flow from pit would be into Pine Canyon which leads to Bear Lake approximately 2 miles to Southwest.

Fuel Tanks - 2 - 10,000 gallon diesel tanks will be on location. All drainage from possible spill around tanks will be to reserve pit.

Discussion:

The reserve pit will be inspected once each 8-hour drilling tour. If failure should occur a secondary containment structure could be constructed as shown on attached map.

\*Attach map if appropriate.

Name of facility South Eden Canyon Well 1-15  
Operator Marathon Oil Company

**PART I  
GENERAL INFORMATION**

[Response to statements should be: YES, NO, or NA (Not Applicable).]

8. Containment or diversionary structures or equipment to prevent oil from reaching navigable waters are practicable. (If NO, complete Attachment #2.) Yes

9. Inspections and Records Yes

A. The required inspections follow written procedures. Yes

B. The written procedures and a record of inspections, signed by the appropriate supervisor or inspector, are attached. NA

Discussion: Reserve pit will be inspected during each drilling  
tour and recorded in drilling log.

10. Personnel, Training, and Spill Prevention Procedures

A. Personnel are properly instructed in the following: Yes

(1) operation and maintenance of equipment to prevent oil discharges, and Yes

(2) applicable pollution control laws, rules, and regulations.

Describe procedures employed for instruction: Supervisory personnel will be instructed in applicable pollution  
control laws and incident reporting procedures.

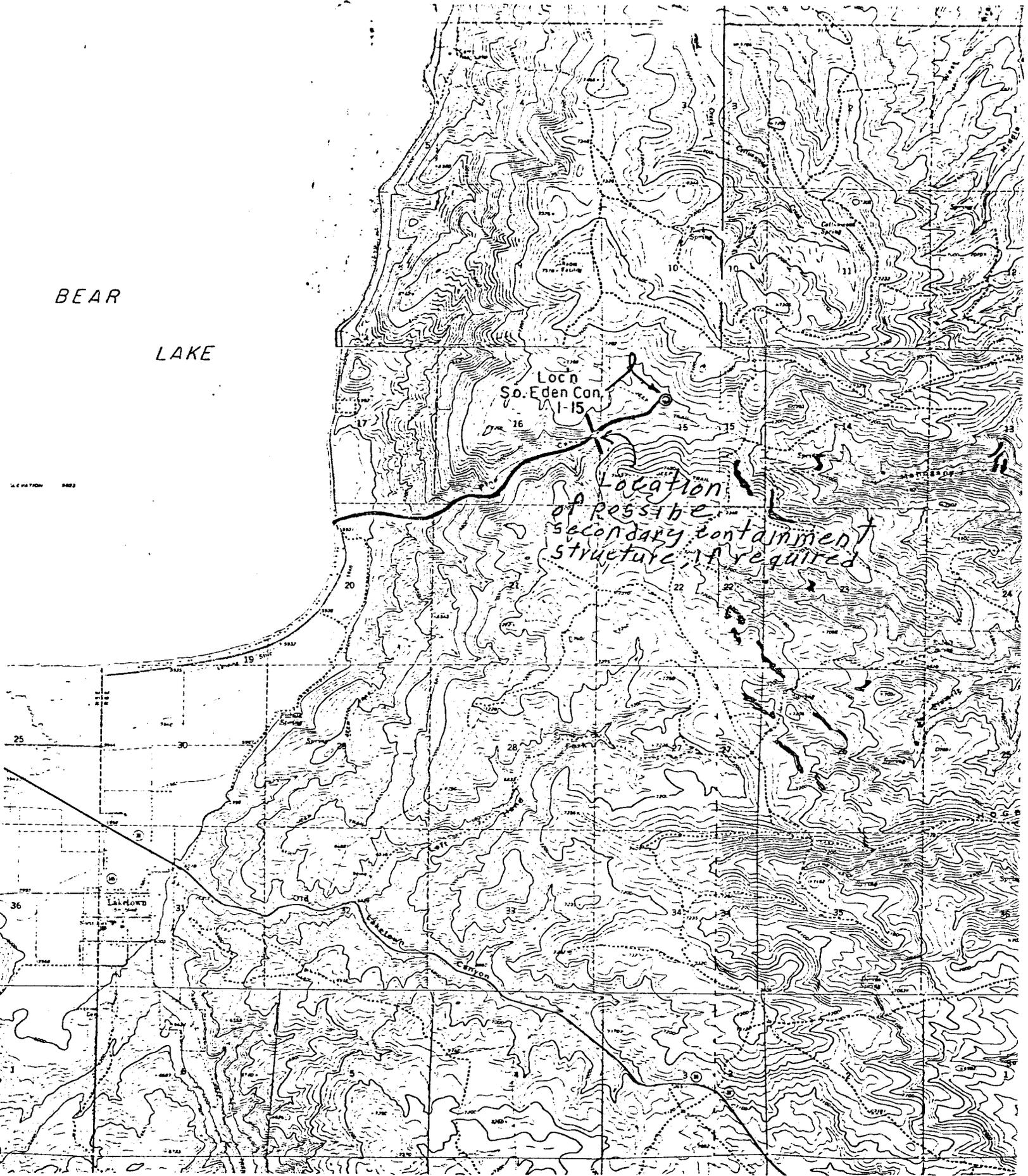
B. Scheduled prevention briefings for the operating personnel are conducted frequently enough to assure adequate understanding of the SPCC Plan. \_\_\_\_\_

Describe briefing program: Drilling personnel will be briefed weekly on inspection  
procedures by Marathon Drilling Foreman.

Name of facility South Eden Canyon Well 1-15

Operator Marathon Oil Company

BEAR  
LAKE



TOPO MAP  
 To Accompany Drilling Permit Application for  
 SOUTH EDAN CANYON WELL N° I-15  
 Rich County, Utah

Applicant:  
 MARATHON OIL CO.  
 Casper, Wyo.

Robert W. Stewart  
Manager, Casper Division  
Production Operations, U.S. & Canada



P.O. Box 120  
Casper, Wyoming 82602  
Telephone 307/235-2511

SOUTH EDEN CANYON

WELL #1-15

TO: ALL SUPERVISORS

This is your authority to expeditiously commit all manpower, equipment and materials necessary to contain and/or remove any harmful quantity of oil or hazardous substances discharged from this facility. This commitment includes the authority to utilize both company and contract personnel and equipment.

*R. W. Stewart*

SPILL NOTIFICATION DIRECTORY

REGULATORY AGENCIES

1. United States Coast Guard National Response Center  
(800) 424-8802
  
2. United States Geological Survey  
District Engineer-Edgar Gynn  
Office-(801) 524-5650  
Home -(801) 582-7042  
Assistant District Engineer-Willis Martens  
Office-(801) 524-5650  
Home -(801) 466-2780
  
3. Bureau of Land Management  
Evan N. Rudd (801) 524-5320
  
4. Utah State Division of Health  
Environmental Health-Bureau of Water Quality  
24-hour number (801) 533-6145
  
5. Department of Natural Resources,  
Oil, Gas and Mining Division  
Cleon Feight - Director  
Office-(801) 533-5771  
Home -(801) 582-7042

Directory of Marathon Personnel

1. Drilling Foreman-Will be living in trailer located at drill site.
  
2. J. F. Wirth-District Drilling Superintendent  
Office Phone - (307) 266-7693  
Home Phone - (307) 266-2165
  
3. A. W. Howard - District Engineer  
Office Phone - (307) 266-7693  
Home Phone - (307) 266-2657
  
4. E. L. Spieles-Environmental and Safety Coordinator  
Office Phone - (307) 235-2511  
Home Phone - (307) 234-5423

EQUIPMENT AND SERVICES DIRECTORY

EARTH AND MOVING EQUIPMENT

1. D and E Construction

Evanston, Wyoming (307) 789-3751

2. Searle Brothers

Evanston, Wyoming (307) 789-9464

VACUUM TRUCKS

1. Waters and Son

Big Piney, Wyoming

# SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN

## PART I GENERAL INFORMATION

1. Name of facility South Eden Canyon Well 1-15

2. Type of facility Drilling Well

3. Location of facility NE SE NW Section 15, Township 13 North, Range 6 East,  
Rich County, Utah

4. Name and address of owner or operator:

Name Marathon Oil Company

Address P. O. Box 120  
Casper, Wyoming 82602

5. Designated person accountable for oil spill prevention at facility:

Name and title J. F. Wirth, District Drilling Superintendent

6. Facility experienced a reportable oil spill event during the twelve months prior to Jan. 10, 1974 (effective date of 40 CFR, Part 112). (If YES, complete Attachment #1.) No

### MANAGEMENT APPROVAL

This SPCC Plan will be implemented as herein described.

Signature R. W. Stewart

Name R. W. Stewart

Title Division Operations Manager

### CERTIFICATION

I hereby certify that I have examined the facility, and being familiar with the provisions of 40 CFR, Part 112, attest that this SPCC Plan has been prepared in accordance with good engineering practices.

Arthur W. Howard

Printed Name of Registered Professional Engineer

Signature of Registered Professional Engineer

(Seal)

Date 7-24-78

Registration No. 602 State Wyoming

*3 copies to USGS  
2 copies to state of Utah  
Mailed 7-24-78  
WJH*

PART I  
GENERAL INFORMATION

7. Potential Spills — Prediction & Control:

<u>Source</u>	<u>Major Type of Failure</u>	<u>Total Quantity (bbls)</u>	<u>Rate (bbls/hr)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
<u>Reserve Pit</u>	- 150' x 200' x 12'	- approximately 58,000 barrel capacity. Actual volume in pit should not exceed 25,000 barrels. Pit will be lined to prevent sloughing of banks. Possible major failure would be rupture of pit walls. Direction of flow from pit would be into Pine Canyon which leads to Bear Lake approximately 2 miles to Southwest.			
<u>Fuel Tanks</u>	- 2 - 10,000 gallon diesel tanks will be on location. All drainage from possible spill around tanks will be to reserve pit.				

Discussion:

The reserve pit will be inspected once each 8-hour drilling tour. If failure should occur a secondary containment structure could be constructed as shown on attached map.

\*Attach map if appropriate.

Name of facility South Eden Canyon Well 1-15

Operator Marathon Oil Company

**PART I  
GENERAL INFORMATION**

[Response to statements should be: YES, NO, or NA (Not Applicable).]

8. Containment or diversionary structures or equipment to prevent oil from reaching navigable waters are practicable. (If NO, complete Attachment #2.) Yes

9. Inspections and Records Yes

A. The required inspections follow written procedures. Yes

B. The written procedures and a record of inspections, signed by the appropriate supervisor or inspector, are attached. NA

Discussion: Reserve pit will be inspected during each drilling  
tour and recorded in drilling log.

10. Personnel, Training, and Spill Prevention Procedures

A. Personnel are properly instructed in the following: Yes

(1) operation and maintenance of equipment to prevent oil discharges, and Yes

(2) applicable pollution control laws, rules, and regulations.

Describe procedures employed for instruction: \_\_\_\_\_

Supervisory personnel will be instructed in applicable pollution  
control laws and incident reporting procedures.

B. Scheduled prevention briefings for the operating personnel are conducted frequently enough to assure adequate understanding of the SPCC Plan. \_\_\_\_\_

Describe briefing program: \_\_\_\_\_

Drilling personnel will be briefed weekly on inspection  
procedures by Marathon Drilling Foreman.

Name of facility South Eden Canyon Well 1-15

Operator Marathon Oil Company

Robert Stewart  
Manager, Casper Division  
Production Operations, U.S. & Canada



P.O. Box 120  
Casper, Wyoming 82602  
Telephone 307/235-2511

SOUTH EDEN CANYON

WELL #1-15

TO: ALL SUPERVISORS

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*R. W. Stewart*

SPILL NOTIFICATION DIRECTORY

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2. United States Geological Survey  
  
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Assistant District Engineer-Willis Martens  
  
Office-(801) 524-5650  
Home -(801) 466-2780
  
3. Bureau of Land Management  
  
Evan N. Rudd (801) 524-5320
  
4. Utah State Division of Health  
  
Environmental Health-Bureau of Water Quality  
  
24-hour number (801) 533-6145
  
5. Department of Natural Resources,  
  
Oil, Gas and Mining Division  
  
Cleon Feight - Director  
  
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VACUUM TRUCKS

1. Waters and Son

Big Piney, Wyoming

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN  
(Other instr.  
reverse side)

CATE  
OD RE

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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 "APPLICATION FOR PERMIT—" for such proposals.)

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Section 15, T13N, R76E

12. COUNTY OR PARISH 13. STATE

Rich Utah

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659, Casper, Wyoming 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*  
See also space 17 below.)  
At surface

1820' FNL and 2072' FWL

14. PERMIT NO.

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

7197' GL

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREAT

MULTIPLE COMPLETE

FRACTURE TREATMENT

ALTERING CASING

SHOOT OR ACIDIZE

ABANDON\*

SHOOTING OR ACIDIZING

ABANDONMENT\*

REPAIR WELL

CHANGE PLANS

(Other)

(Other) Change in surface csg program

(NOTE: Report results of multiple completion on Well  
Completion or Recompletion Report and Log form.)

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.)\*

We propose to change our surface casing program from a setting depth of 1500' to a setting depth of 2000' and cement with 2600 sacks.

Verbal approval given by Mr. Ed Gynn, USGS, S.L., to Walt West of MOC 7-28-78.

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

SIGNED

TITLE

Acting District  
Operations Manager

DATE 7-28-78

(This space for Federal or State office use)

APPROVED BY

TITLE

DISTRICT ENGINEER

DATE

7/28/78  
AUG 01 1978

CONDITIONS OF APPROVAL, IF ANY:

Approved 10/17  
Jim Wright  
8-5-78

\*See Instructions on Reverse Side

Qpr [Signature]

August 8, 1978

MEMO TO FILE:

Re: *Marathon*  
~~Amoco Oil Co.~~  
South Eden Canyon #1  
Sec. 15, 13N, 6E  
Rich County

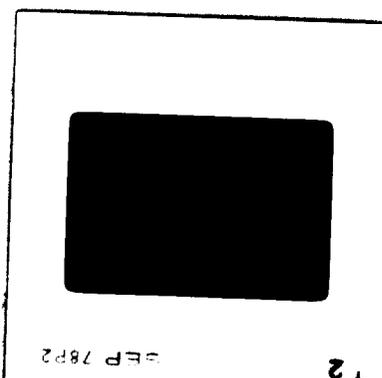
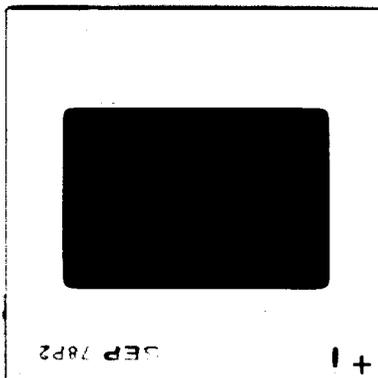
A call was received in this office from a Mr. Kelly Bolinder, Division Safety Engineer, to the effect that Marathon Oil Co. has already placed on location the following safeguard equipment for potential Hydrogen Sulfide that may be encountered.

- 10 - 30 minute self-contained breathing apparatus
- 2 - 5 minute self-contained escape packs
- 1 - Resuscitator
- 1 - Medical Oxygen breathing apparatus
- 3 - Hydron Sulfide detectors
- 3 - Wind Socks
- 2 - "Bug" fans

In addition, all crew members have been fully instructed in the use of equipment.

PATRICK L. DRISCOLL  
CHIEF PETROLEUM ENGINEER  
DIVISION OF OIL, GAS, & MINING

PLD/db  
cc: U.S.G.S.



February 5, 1979

MEMO TO FILE

Re: MARATHON OIL COMPANY  
Well No. South Eden Canyon 1-15  
Sec. 15, T. 13N, R. 6E  
NE SE NW  
Rich County, Utah

The Division was notified on February 2, 1979, that a failure had occurred in the reserve pit and that a substantial amount of liquid was released. I visited the well on Saturday, February 3, 1979 to observe the site and assess damages.

Upon reaching the site, I tried to contact the tool pusher or someone who could explain what had occurred. There was nobody available at this time.

The pit embankment had ruptured on the north side (about midway) allowing a large quantity of liquid to flow down the drainage; over the top of a small dam, and continue towards Bear Lake. The small dam contained a culvert (about 10") which drained most the flow that had not over topped the dam with initial flow. It should be raised or replaced by a spillway.

The reserve pit had been filled to within two or three feet of over topping the embankment and was certainly a contributing factor in the resulting failure. Large deep cracks were visible in the northwest corner of the pit embankment where it appeared to be sloughing into the pit. The point where failure occurred had been filled, but contained large 1-3' clods of frozen earth and was seeping water into the drainage. This appears to be a stop-gap measure and will be repaired properly in the near future.

*Michael T. Minder*

MICHAEL T. MINDER  
GEOLOGICAL ENGINEER

MTM/lw

cc: J. F. Wirth, Marathon Oil Co., Casper, WY  
Ray Rosenthal, Marathon Oil Co.  
Bob Morgan, Water Rights  
Steve McNeal, Water Pollution Control  
Ed Guynn, U. S. Geological Survey



P.O. Box 2659  
Casper, Wyoming 82602  
Telephone 307/265-7693

February 6, 1979



State of Utah  
Dept. of Natural Resources  
Division of Oil, Gas, & Mining  
Atten: Mike Minder  
1588 West North Temple  
Salt Lake City, UT 84116

Dear Mike:

The following is a complete list of materials used to make up the drilling fluid for the drilling of our South Eden Canyon Well in Rich County, Utah:

- Bentonite (Gel)
- Benex
- Drispac & Monpac
- Caustic Soda - to maintain drilling mud pH at 10.5
- Soltex - asphalt base material (very small amounts)
- Soda Ash
- Oxygen Scavenger - ammonium bisulfite
- Scale inhibitor - organic ammine
- Make up H<sub>2</sub>O - 200 to 300 PPM chlorides - pH - 8.3

Some wood fibers were used in the upper 10,000' of hole to combat lost circulation.

I sincerely hope this list of material will help you in your final analysis of the recent spill at this well.

If I can be of any further assistance, please don't hesitate to call.

Yours truly,

MARATHON OIL COMPANY

A handwritten signature in cursive script that reads 'J. F. Wirth'.

J. F. Wirth  
Drilling Superintendent

JFW:mbb

*Your Files*

February 7, 1979

**Memo to File:**

**RE: South Eden Canyon Well No. 1-15  
Marathon Oil Corporation**

On the afternoon of February 5, 1979, I visited this well site with Mike Minder, Geological Engineer, and Tom Suchoski, Reclamation Hydrologist, of the Division. The purpose was to inspect a break on the side of the reserve pit and any environmental damage resulting from it. Mr. Ray Rosenthal, Site Manager, accompanied us. He explained that the probable cause of the break was an overloading of the pit with warm mud which melted and undermined the pit corner which had consisted of frozen mud.

At the site of the break, new dirt had been graded over the site. Large chunks of frozen dirt still seemed to comprise part of the regraded reserve pit wall. The flow path of the mud was walked down to a retention pond where it had overflowed into the Eden Canyon drainage, which reaches Bear Lake some 2.5 miles downstream.

A snow cover of 2-4 feet presently exists at the site. The wash of warm fluid had cut a path through the snow, exposing soil and vegetation. Visible disturbance observed consisted of broken sage plants and frozen mud coverings on some of the vegetation. The length of visible damage was skied and found to be some 5 feet wide at the outset, dwindling to nothing, approximately  $\frac{1}{2}$  mile downstream.

Water samples were taken from the mud and water pits by the hydrologist to determine the composition of the escaped fluid. Until these samples are analyzed, it will be difficult to determine the full extent of impact on the environment and the direction of mitigative measures to be taken, if any.

MARY ANN WRIGHT  
RECLAMATION BIOLOGIST

*MAW*

MAW/te

File

February 9, 1979

Memo to File:

Re: Marathon Oil Company  
#1-15 South Eden Canyon  
NE SE NW, Sec. 15, T. 13N., R. 6E.  
Rich County, Utah

The drill rig was visited by Mike Minder, Mary Ann Wright, and Tom Suchoski, members of the Division Staff. The main concern was to continue the investigation into the breach of the reserve pit and subsequent spillage of drilling fluid.

Two samples were taken, one from the reserve pit, to act as a standard, and another from the secondary pond to check on the water that was lost due to the spillage. These samples were sent to be analyzed on the day following. Results should be included in the file, when available.

From observations of the soil and vegetation, as well as the snow cover present there appeared to be no oil or grease films visible. The same results from the water samples, no oil, or grease film visible.

Inspection of breach plugging work, revealed that mostly unconsolidated material free of frost was used. Along the outer bank some frost blocks were observed, though the supervisor advised us that only frost free materials were used.

Inspection of the rest of the dam showed that a crack did exist in an adjacent portion of the dam. The crack ran along the length of the dam for approximately 40 feet and averaged 3 inches in width. In some places the crack appeared to cut halfway into the dam. This would tend to indicate that some undermining or at least saturation of the dam has occurred and that subsequent use would lead to possible future failures or welding of the structure due to slumping. This crack was observed by Mike Minder and Tom Suchoski of the Division Staff.

THOMAS J. SUCHOSKI *TS*  
RECLAMATION HYDROLOGIST

TJS/sp



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF WATER RIGHTS

DEE C. HANSEN  
STATE ENGINEER

JOHN BENE  
DEPUTY

442 STATE CAPITOL  
SALT LAKE CITY, UTAH 84114  
(801) 533-6071

DIRECTING ENGINEERS  
HAROLD D. DONALDSON  
DONALD C. NORSETH  
STANLEY GREEN

February 22, 1979

Marathon Oil Company  
P. O. Box 2659  
Casper, Wyoming 82602

Dear Applicant:

RE: Application No. 51959 (23-3523)

Your proof for the above application was received from your engineer Mr. William H. Smith on November 20, 1978. It will be checked in the field by a representative of this office as part of routine processing. It will then be reviewed and returned to your engineer for any necessary corrections and signatures. The primary responsibility for its form and its accuracy lies with your engineer; however, you will receive copies of the letter or review and any other correspondence related to your proof.

Proofs are normally reviewed as groups from the various areas; therefore, they may be in our possession for several months before being checked and reviewed. During this time, no further action is required on the part of you or your engineer unless notified by this office.

Sincerely,

Nancy Hewitt  
PROOF DEPARTMENT

nh

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPL. - 10%  
(Other instructions on re-  
verse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.  
U-25458  
6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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 "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER		7. UNIT AGREEMENT NAME	
2. NAME OF OPERATOR Marathon Oil Company		8. FARM OR LEASE NAME South Eden Canyon	
3. ADDRESS OF OPERATOR P.O. Box 2659 Casper, WY 82602		9. WELL NO. 1-15	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 1820' FNL & 2072' FWL		10. FIELD AND POOL, OR WILDCAT Wildcat	
14. PERMIT NO.		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 15, T13, R6E	
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 7197' GL, 7229' KB		12. COUNTY OR PARISH Rich	13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	-CHANGE PLANS <input checked="" type="checkbox"/>
(Other) <input type="checkbox"/>	

SUBSEQUENT REPORT OF:

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
(Other) <input type="checkbox"/>	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

Our original proposed depth on this well was 15,400'. We request to extend our proposed depth from 15,400' to 19,500'.

The 10-3/4" casing is set at 12,002' and we are drilling ahead at 15,578' as of 2-22-79.

\* ORAL APPROVAL 2-22-79 Ed GUYNN TO WALT WEST JFW

NO ADDITIONAL SURFACE DISTURBANCE FOR THIS ACTIVITY

18. I hereby certify that the foregoing is true and correct  
SIGNED [Signature] TITLE Drilling Superintendent DATE 2-23-79

(This space for Federal or State office use)

APPROVED BY [Signature] TITLE PET. ENG. TECH. DATE MAR 7 1979  
CONDITIONS OF APPROVAL, IF ANY:

OPERATOR

\*See Instructions on Reverse Side

copy to D. 2-3-12-79  
WEST

DO NOT TACH

SUBMIT IN DUPLICATE\*

6

STATE OF UTAH

(See other instructions on reverse side)

OIL & GAS CONSERVATION COMMISSION

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 15, T13N, R6E

12. COUNTY OR PARISH Rich

13. STATE Utah

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 Temporarily Abandoned

2. NAME OF OPERATOR Marathon Oil Company

3. ADDRESS OF OPERATOR P. O. Box 2659; Casper, WY 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\* At surface 1,820' FNL & 2,072' FWL At top prod. interval reported below At total depth

14. PERMIT NO. 43-033-30014 DATE ISSUED 5-9-78

15. DATE SPUNDED 7-26-78 16. DATE T.D. REACHED 4-7-79 17. DATE COMPL. (Ready to prod.) Operations Suspended 6-2-79 18. ELEVATIONS (DF, REB, RT, GR, ETC.)\* 7,197' GL, 7,229' KB 19. ELEV. CASINGHEAD -

20. TOTAL DEPTH, MD & TVD 18,000' 21. PLUG, BACK T.D., MD & TVD See Plugging Attachment 22. IF MULTIPLE COMPL., HOW MANY\* - 23. INTERVALS DRILLED BY ROTARY TOOLS 0-18,000' CABLE TOOLS NONE

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\* NONE 25. WAS DIRECTIONAL SURVEY MADE

26. TYPE ELECTRIC AND OTHER LOGS RUN DIL-DLL, DIP METER, SFL, DCPL, BHC-sonic, FDC, CNL 27. WAS WELL CORED YES

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

Table with 6 columns: CASING SIZE, WEIGHT, LB./FT., DEPTH SET (MD), HOLE SIZE, CEMENTING RECORD, AMOUNT PULLED. Data includes 13-3/8" casing, 54.5# weight, 2,070' depth, 17-1/2" hole size, 2,400 sacks cement, and NONE amount pulled.

29. LINER RECORD

Table with 5 columns: SIZE, TOP (MD), BOTTOM (MD), SACKS CEMENT\*, SCREEN (MD). Data shows NONE for all fields.

30. TUBING RECORD

Table with 3 columns: SIZE, DEPTH SET (MD), PACKER SET (MD). Data shows NONE for all fields.

31. PERFORATION RECORD (Interval, size and number)

Table with 1 column: PERFORATION RECORD. Data shows NONE.

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

Table with 2 columns: DEPTH INTERVAL (MD), AMOUNT AND KIND OF MATERIAL USED. Data shows NONE.

33. PRODUCTION

Table with 8 columns: DATE FIRST PRODUCTION, PRODUCTION METHOD, WELL STATUS, DATE OF TEST, HOURS TESTED, CHOKE SIZE, PROD'N FOR TEST PERIOD, OIL-BBL., GAS-MCF., WATER-BBL., GAS-OIL RATIO, 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.) PLEASE SEE ATTACHED PLUGGING PROCEDURE TEST WITNESSED BY

CONFIDENTIAL

35. LIST OF ATTACHMENTS WE REQUEST INFORMATION PERTAINING TO THIS WELL BE HELD CONFIDENTIAL FOR THE TIME PERIOD PRESCRIBED BY STATE LAW.

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

SIGNED Dale Caddy TITLE District Operations Manager DATE

\*(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.)

South Eden #1-15

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
			DST's: see attached sheet
38.	<b>GEOLOGIC MARKERS</b>		
	MEAS. DEPTH	TOP	TRUE VERT. DEPTH
	Twin Creek Nugget Ankareh Nugget Ankareh Thaynes Woodside Dinwoody		303' 2,150' 4,450' 5,553' 10,362' 11,962' 15,576' 17,155'
			18,000 TD

Drill Stem Test Results  
South Eden Canyon #1-15

<u>DST#</u>	<u>FM</u>	<u>Interval</u>	<u>Recovery</u>	<u>Sampler</u>	<u>Pressures</u>	<u>Times</u>	<u>Temp.</u>	
1	Gypsum Spring	8900-8968	40' mud	2100cc mud	HP 3998-3990 IFP 57-47 FFP 58-58 ISIP 66 FSIP 70	10-60-30-60	185° F.	
2	Ankareh	11364-11386	10392' gas 992' SMC+GCWC GTS in 10 min.	3 cu. ft. gas	HP 5223-5212 IFP 650-579 FFP 601-603 ISIP 4222	10-60-360 no FSI	226° F.	
3	Thaynes	13450-13595	745 mcwc 1110' wc  GTS 88 min. TSTM	400cc mud	HP 6092-6096 IFP 858-820 ISIP 1651	310 min flow 152 min SI misrun - no FSI or FF obtained	-----	
4	Dinwoody	17370-17444	4000' wc 22' mud	.01 cu.ft.gas	HP 7860-7883 IFP 1783-1776	255 min. flow misrun-no SI obtained	-----	
5	Dinwoody	17446-17533	5970 HGCWC GTS 4hr15 min. after init. op.	1.81 cu.ft.gas	HP 7857-7867 IFP 2613-2588 ISIP 5130 2FP 2601-2606 2SIP 3454 3FP 2596-2596 3SIP 3655	10-60-91-120-45- 175	246° F.	
6	Thaynes	13600-13912	-----misrun-----					
7	Thaynes	13600-13886	-----misrun-----					
8	Thaynes	13564-13886	220'HGCM GTS 3hr.35 min. after init. op.	.06 cu.ft.gas 900cc mud	HP 6034-6005 IFP 108-81 ISIP 2384 FFP 84-100 FSIP 3109	69-125-177-362	187° F.	

**CONFIDENTIAL**

Field No.

TC       TM      Date Recd.: \_\_\_\_\_  
 PC       PM      Received By: \_\_\_\_\_

UTAH STATE DIVISION OF HEALTH  
 ENVIRONMENTAL HEALTH  
 WATER CHEMICAL ANALYSIS

Lab Sample No. **C 79 119**  
 701

Store No.  Date Collected  Time Collected  River Mile Code  Water Syst. No.  Source No.  Water Rights No.   
 Exact Description of sampling Point  Merd. Township  Range  Section  QTRSC  QTRQTR   
 Supply Owned by  Source  County  Current use  Proposed use   
 Sample Collected by

**SEND REPORT TO:**

Phone No.  Flow, GPM  Flow, CFS   
 Filtered     Unfiltered

CHEMICAL ANALYSIS

me/l	CATIONS	mg/l	ug/l	me/l	ANIONS	mg/l
	Ammonia as N				Bicarbonate	
	Arsenic				Carbon Dioxide	
	Barium		600	1.13	Carbonate	
	Boron				Chloride	40
	Cadmium				CO3 Solids	
	Calcium				Fluoride	
	Chromium				Hydroxide	
	Chromium, Hex. as Cr				Nitrate as N	
	Copper				Nitrite as N	
	Iron, dissolved				Phosphorus, Ortho as P	
	Lead				Silica, dissolved as SiO2	
	Magnesium			5.21	Sulfate	250
	Manganese					
	Mercury, Total					
	Nickel					
	Potassium					
	Selenium					
	Silver					
	Sodium					
	Zinc					
	<b>TOTAL CATIONS</b>				<b>TOTAL ANIONS</b>	
					<b>GRAND TOTAL</b>	
	Turbidity, as NTU		7500		pH, units	7.9
	Sampling Depth, m				TDS @ 180°C	955
	Specific Gravity				Tot. Phosphorus	
	Specific Cond. @ 25° C, μ mhos/cm		1230		Surfactant as MBAS	
					Total Alk. as CaCO3	
					Total Hardness as CaCO3	
					Iron, Total	
					Uranium, Total	

TOTAL METALS ANALYSIS

CATIONS	mg/l	ug/l	CATIONS	ug/l
Arsenic			Selenium	
Barium			Silver	
Cadmium			Zinc	
Chromium				
Copper			<b>SPECIAL</b>	
Iron			Aluminum	
Lead			Beryllium	
Manganese			Cobalt	
Mercury			Molybdenum	
Nickel			Vanadium	

ANALYSIS APPROVED BY: **REB**      DATE: **32679**





March 28, 1979

Marathon Oil Company  
P. O. Box 2659  
Casper, Wyoming 82602

Re: Well No. South Eden Canyon 1-15  
sec. 15, T. 13N, R. 6E,  
Rich County, Utah

Gentlemen:

In the process of filing the well data for the above referred to location, it has been noted that ~~the~~ entire file has been missing for the period of about two months.

It would be greatly appreciated by this Division if you could send copies of the well data including a copy of our approval letter, and Sundry Notices.

Thank you for your cooperation to the above.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

*Kathy Avila*

KATHY AVILA  
RECORDS CLERK

Casper Division  
Production, U.S. & Canada



P.O. Box 2659  
Casper, Wyoming 82602  
Telephone 307/265-7693

April 4, 1979

State of Utah  
Department of Natural Resources  
Division of Oil, Gas and Mining  
1588 West North Temple  
Salt Lake City, Utah 84116

Atten: Ms. Kathy Avila  
Records Clerk

Re: Well No. South Eden Canyon #1-15  
Sec. 15, T13N, R6E  
Rich County, Utah

Dear Ms. Avila:

Reference is made to your letter dated March 28, 1979 wherein you advised that you had been missing your file for the above referenced well. As per your request in that letter, I am enclosing herewith a copy of the well data and other pertinent information.

If after review you desire any other specific items that may be available, we will be happy to produce them upon request.

Yours very truly,

MARATHON OIL COMPANY

A handwritten signature in cursive script that reads 'Harry Maguss'.

Harry Maguss  
District Operations Manager

HM:elw  
Attachments

A circular ink stamp with a star at the top. The text inside the circle reads 'RECEIVED' at the top, 'APR 9 1979' in the center, and 'MARATHON OIL COMPANY' around the bottom edge.

DIVISION OF OIL, GAS, AND MINING

PLUGGING PROGRAM

NAME OF COMPANY: MARATHON OIL COMPANY

WELL NAME: 1-15

SECTION 15 TOWNSHIP 13 N RANGE 6 E, COUNTY Rich

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

TOTAL DEPTH: 18,000'

CASING PROGRAM:

20" at 50'  
10 3/4" at 12,002' (cemented to 10,000)  
open hole 18,000'

FORMATION TOPS:

Dinwoody 17,155'  
Thayne 11,962'

PLUGS SET AS FOLLOWS:

16,873'-17,273'

11,950'-12,050'

An 8.5 viscas mud will be spotted below plugs. A 5000# Blind flanged will be placed on well head and locked closed.

There was a twist-off at 17,273' and company ahd been fishing for almost a month without success and now wishes to temporarily abandon the well. At a later date may side track and test Phosporia.

DATE May 9, 1979 3:00p.m.

SIGNED *M. G. Minder*

cc: U. S. Geological Survey

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE  
(Other instructions on re-  
verse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 15, T13N, R6E

12. COUNTY OR PARISH

Rich

13. STATE

Utah

1.

OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR

Marathon Oil Company

3. ADDRESS OF OPERATOR

P. O. Box 2659, Casper, Wyoming

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*  
See also space 17 below.)

At surface

1820' FNL & 2072' FWL

14. PERMIT NO.

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

7,197' GL

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT

From 6-8-79 to 7-25-79

Well temporarily abandoned

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

SIGNED

*[Signature]*

TITLE Drilling Superintendent

DATE 7-25-79

(This space for Federal or State office use)

APPROVED BY

CONNECTIONS OR APPROVAL, IF ANY:

TITLE

DATE

SEP 26 1979

*open*

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 15, T13N, R6E

14. PERMIT NO.

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

7,197' GL

12. COUNTY OR PARISH

Rich

13. STATE

Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT

From 7-25-79 to 8-15-79

Well temporarily abandoned

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

SIGNED

*[Signature]*

TITLE Drilling Superintendent

DATE 8-15-79

(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**

**SUBMIT IN TRIPPLICATE\***  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 15, T13N, R6E

12. COUNTY OR PARISH

Rich

13. STATE

Utah

1.  OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659, Casper, Wyoming

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface

1820' FNL & 2072' FWL

14. PERMIT NO.

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

7,197' GL

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT

From 8-16-79 to 9-17-79

Well Temporarily Abandoned

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

SIGNED Art. Guthrie

TITLE Drilling Superintendent

DATE 9-17-79

(This space for Federal or State office use)

APPROVED BY [Signature]  
COMMISSIONER OF APPROVAL, IF ANY:

TITLE \_\_\_\_\_

DATE SEP 26 1979

\*See Instructions on Reverse Side

*Open*

REF 12

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE (Other instructions on reverse side)

Form approved. Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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 "APPLICATION FOR PERMIT" for such proposals.)

7. UNIT AGREEMENT NAME

OIL WELL [ ] GAS WELL [ ] OTHER Temporarily Abandon Well

8. FARM OR LEASE NAME

Marathon Oil Company

South Eden Canyon

9. WELL NO.

P. O. Box 2659, Casper, Wyoming 82602

1-15

10. FIELD AND POOL, OR WILDCAT

LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface

Wildcat

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

1820' FNL and 2072' FWL

Sec. 15, T13N, R6E

12. COUNTY OR PARISH 13. STATE

Rich

Utah

15. ELEVATIONS (Show whether DF, ST, GR, etc.)

7197' GL 7229' KB

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF [ ]

PULL OR ALTER CASING [ ]

WATER SHUT-OFF [ ]

REPAIRING WELL [ ]

FRACTURE TREAT [ ]

MULTIPLE COMPLETE [ ]

FRACTURE TREATMENT [ ]

ALTERING CASING [ ]

SHOOT OR ACIDIZE [ ]

ABANDON [ ]

SHOOTING OR ACIDIZING [ ]

ABANDONMENT [ ]

REPAIR WELL [ ]

CHANGE PLANS [ ]

(Other) Temporarily Abandon Well [ ]

(Other)

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)

This well was plugged and temporarily abandoned in accordance with Oral approval of the USGS, Mr. W. P. Martines, at 3:15 pm, 5-9-79, in the following manner: The first plug was set on top of the fish from 17,273' to 17,023' with 100 sacks of cement. The second plug was set from 14,150' to 13,870' with 120 sacks of cement. This plug was drilled to 14,035' and a third plug was set on top of it from 14,035' to 13,886' with 80 sacks of cement. A drill stem test was run off of the plug from 13,886' to 13,565'. A fourth plug was set in the bottom of the 10 3/4" casing from 12,102' to 11,914' with 100 sacks of cement. The bottom of the 10 3/4" casing is of 12,002' KB. The following fish is left in the hole: A 9 1/2" bit, 5 stabilizers, 1 shock sub, 1 3 pt reamer, 1 set of drilling jars, 1 short drill collar, 21 drill collars, and 1 screw-in sub. Total length of the fish is 727'. All debris on the location will be picked up and disposed of. The entire location will be fenced. Pits will be pumped and the mud disposed of. A Marathon location sign will be placed on the location fence. Marathon wishes to retain this hole and perhaps, re-enter, deviate, and drill deeper after further study and evaluation.

CONFIDENTIAL

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

SIGNED [Signature]

TITLE Drilling Superintendent

DATE 9-19-79

(This space for Federal or State office use)

APPROVED BY [Signature]

TITLE

DATE SEP 26 1979

Open

REF 12

100-521  
(2-1963)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPPLICATE\*  
(Other instructions on re-verse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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 "APPLICATION FOR PERMIT—" for such proposals.)

OIL WELL  GAS WELL  OTHER  Temporarily Abandon Well

NAME OF OPERATOR  
Marathon Oil Company

8. FARM OR LEASE NAME  
South Eden Canyon

ADDRESS OF OPERATOR  
P. O. Box 2659, Casper, Wyoming 82602

9. WELL NO.  
1-15

LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*  
See also space 17 below.)  
At surface

10. FIELD AND POOL, OR WILDCAT  
Wildcat

1820' FNL and 2072' FWL

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec. 15, T13N, R6E

14. PERMIT NO.

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

7197' GL 7229' KB

12. COUNTY OR PARISH  
Rich

13. STATE  
Utah

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF   
FRACTURE TREAT   
SHOOT OR ACIDIZE   
REPAIR WELL   
(Other)

PULL OR ALTER CASING   
MULTIPLE COMPLETE   
ABANDON\*   
CHANGE PLANS

WATER SHUT-OFF   
FRACTURE TREATMENT   
SHOOTING OR ACIDIZING   
(Other) Temporarily Abandon Well

REPAIRING WELL   
ALTERING CASING   
ABANDONMENT\*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

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

SIGNED [Signature]

TITLE Drilling Superintendent

DATE

(This space for Federal or State office use)

APPROVED BY [Signature]  
AGENTS OF APPROVAL, IF ANY:

TITLE

DATE

SEP 8 6 1979

Open

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 15, T13N, R6E

12. COUNTY OR PARISH

Rich

13. STATE

Utah

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 "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659, Casper, Wyoming

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface

1820' FNL & 2072' FWL

14. PERMIT NO.

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

7,197' GL

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT  
See Attachment

From 9-18-79 to 11-5-79

Well Temporarily Abandoned

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

SIGNED

*A. Thoma*

TITLE

Drilling Superintendent

DATE

11-5-79

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-E1424.

**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 "APPLICATION FOR PERMIT—" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO.  
**U-25458**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
**South Eden Canyon**

9. WELL NO.  
**1-15**

10. FIELD AND POOL, OR WILDCAT  
**Wildcat**

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
**Sec. 15, T13N, R6E**

12. COUNTY OR PARISH  
**Rich**

13. STATE  
**Utah**

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
**Marathon Oil Company**

3. ADDRESS OF OPERATOR  
**P. O. Box 2659, Casper, Wyoming**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface  
**1820' FNL & 2072' FWL**

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**7,197' GL**

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETION <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) _____	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT

From 11-6-79 to 11-30-79

Well Temporarily Abandoned

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

SIGNED

*[Signature]*

TITLE

Drilling Superintendent

DATE

11-30-79

(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

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME.

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 15, T13N, R6E

12. COUNTY OR PARISH

Rich

13. STATE

Utah

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659, Casper, Wyoming

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface

1820' FNL & 2072' FWL

14. PERMIT NO.

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

7,197' GL

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF   
FRACTURE TREAT   
SHOOT OR ACIDIZE   
REPAIR WELL   
(Other)

PULL OR ALTER CASING   
MULTIPLE COMPLETE   
ABANDON\*   
CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF   
FRACTURE TREATMENT   
SHOOTING OR ACIDIZING   
(Other)

REPAIRING WELL   
ALTERING CASING   
ABANDONMENT\*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT

From 11-31-79 to 1-21-80

Well Temporarily Abandoned

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

SIGNED A. Thomas

TITLE Drilling Superintendent

DATE 1-21-80

(This space for Federal or State office use)

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

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIP DATE  
(Other instructions reverse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 15, T13N, R6E

12. COUNTY OR PARISH

Rich

13. STATE

Utah

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659, Casper, Wyoming

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*  
See also space 17 below.)  
At surface

1820' FNL & 2072' FWL

14. PERMIT NO.

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

7,197' GL

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF   
FRACTURE TREAT   
SHOOT OR ACIDIZE   
REPAIR WELL   
(Other)

PULL OR ALTER CASING   
MULTIPLE COMPLETE   
ABANDON\*   
CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF   
FRACTURE TREATMENT   
SHOOTING OR ACIDIZING   
(Other)

REPAIRING WELL   
ALTERING CASING   
ABANDONMENT\*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT

From 1-22-80 to 1-31-80

Well Temporarily Abandoned

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

SIGNED Hal Guthrie

TITLE Drilling Superintendent

DATE January 31, 1980

(This space for Federal or State office use)

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

TITLE \_\_\_\_\_

DATE \_\_\_\_\_



SCOTT M. MATHESON  
Governor

GORDON E. HARMSTON  
Executive Director,  
NATURAL RESOURCES

CLEON B. FEIGHT  
Director

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS, AND MINING  
1588 West North Temple  
Salt Lake City, Utah 84116  
(801) 533-5771

OIL, GAS, AND MINING BOARD

CHARLES R. HENDERSON  
Chairman

JOHN L. BELL  
C. RAY JUVELIN  
THADIS W. BOX  
CONSTANCE K. LUNDBERG  
EDWARD T. BECK  
E. STEELE McINTYRE

February 5, 1980

Marathon Oil Company  
P.O. Box 2659  
Casper, Wyoming 82602

RE: Well No. South Eden Canyon #1-15  
Sec. 15, T. 13N, R. 6E,  
Rich County, Utah

Gentlemen:

This letter is to advise you that the Well Completion or Recompletion Report and Log for the above mentioned well (s) 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

DEBBIE BEAUREGARD  
CLERK-TYPIST



SCOTT M. MATHESON  
Governor

GORDON E. HARMSTON  
Executive Director,  
NATURAL RESOURCES

CLEON B. FEIGHT  
Director

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS, AND MINING  
1588 West North Temple  
Salt Lake City, Utah 84116  
(801) 533-5771

Dist. Mgr. \_\_\_\_\_  
Dist. Engr. \_\_\_\_\_  
Acctg. Supr. \_\_\_\_\_  
Drig. Supt. \_\_\_\_\_  
Prod. Supt. \_\_\_\_\_  
Res. Engr. \_\_\_\_\_  
OIL, GAS, AND MINING BOARD  
Proc. Engr. \_\_\_\_\_  
Geologist \_\_\_\_\_  
CHARLES \_\_\_\_\_  
Fileman \_\_\_\_\_

JOHN L. BELL  
C. RAY JUVELIN  
THADIS W. BOX  
CONSTANCE K. LUNDBERG  
EDWARD T. BECK  
E. STEELE McINTYRE

February 5, 1980

Marathon Oil Company **D**  
P.O. Box 2659  
Casper, Wyoming 82602

RE: Well No. South Eden Canyon #1-15  
Sec. 15, T. 13N, R. 6E,  
Rich County, Utah

**RECEIVED**  
FEB 19 1980

DIVISION OF  
OIL, GAS & MINING

Gentlemen:

This letter is to advise you that the Well Completion or Recompletion Report and Log for the above mentioned well (s) 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

*Debbie Beauregard*  
DEBBIE BEAUREGARD  
CLERK-TYPIST

**RECEIVED**  
FEB 11 1980  
CASPER DISTRICT  
OPERATIONS

*Debbie:  
Attached are copies  
of our Report to USGS  
to Date  
Walt West  
MCC  
2-14-80*

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 15, T13N, R6E

12. COUNTY OR PARISH

Rich

13. STATE

Utah

**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 "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659, Casper, Wyoming

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface

1820' FNL & 2072' FWL

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, CR, etc.)

7,197' GL

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT

From 2-1-80 to 3-7-80

Well Temporarily Abandoned

**RECEIVED**

MAR 14 1980

DIVISION OF  
OIL, GAS & MINING

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

SIGNED H. A. Thome / S.S.

TITLE Drilling Superintendent

DATE March 7, 1980

(This space for Federal or State office use)

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

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

*M*

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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 "APPLICATION FOR PERMIT—" for such proposals.)

1.

OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR

Marathon Oil Company

3. ADDRESS OF OPERATOR

P. O. Box 2659, Casper, Wyoming

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*  
See also space 17 below.)  
At surface

1820' FNL & 2072' FWL

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 15, T13N, R6E

14. PERMIT NO.

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

7,197' GL

12. COUNTY OR PARISH

Rich

13. STATE

Utah

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT

From 3-8-80 to 3-31-80

Well temporarily abandoned.

**RECEIVED**

APR 02 1980

DIVISION OF  
OIL, GAS & MINING

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

SIGNED K. A. Thomas / H. G.

TITLE Drilling Superintendent

DATE 3-31-80

(This space for Federal or State office use)

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

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIP  
(Other instructions  
verse side)

FE\*  
re-

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 15, T13N, R6E

12. COUNTY OR PARISH 13. STATE

Rich

Utah

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659, Casper, Wyoming

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*  
See also space 17 below.)  
At surface

1820' FNL & 2072' FWL

14. PERMIT NO.

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

7,197' GL

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT

From 4-1-80 to 4-30-80

**RECEIVED**  
MAY 7 1980

DIVISION OF  
OIL, GAS & MINING

Well temporarily abandoned

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

SIGNED

*H. L. Keith*

TITLE

Drilling Superintendent

DATE

May 2, 1980

(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

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1424.

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)		5. LEASE DESIGNATION AND SERIAL NO. <b>U-25458</b>
1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR <b>Marathon Oil Company</b>		7. UNIT AGREEMENT NAME
3. ADDRESS OF OPERATOR <b>P. O. Box 2659, Casper, Wyoming</b>		8. FARM OR LEASE NAME <b>South Eden Canyon</b>
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface  <b>1820' FNL &amp; 2072' FWL</b>		9. WELL NO. <b>1-15</b>
14. PERMIT NO.		10. FIELD AND POOL, OR WILDCAT <b>Wildcat</b>
15. ELEVATIONS (Show whether DF, RT, GR, etc.) <b>7,197' GL</b>		11. SEC., T., E., M., OR BLK. AND SURVEY OR AREA  <b>Sec. 15, T13N, R6E</b>
12. COUNTY OR PARISH <b>Rich</b>		13. STATE <b>Utah</b>

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	
(Other) <input type="checkbox"/>		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

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.)\*

PROGRESS REPORT

From 5-1-80 to 5-31-80

Well temporarily abandoned.

**RECEIVED**  
JUN 11 1980

DIVISION OF  
OIL, GAS & MINING

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

SIGNED K. A. Thomas / A.G. TITLE Drilling Superintendent DATE 6-9-80

(This space for Federal or State office use)

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

\*See Instructions on Reverse Side

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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 "APPLICATION FOR PERMIT—" for such proposals.)

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 15, T13N, R6E

12. COUNTY OR PARISH

Rich

13. STATE

Utah

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659, Casper, Wyoming

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface

1820' FNL & 2072' FWL

14. PERMIT NO.

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

7,197' GL

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREAT

MULTIPLE COMPLETE

FRACTURE TREATMENT

ALTERING CASING

SHOOT OR ACIDIZE

ABANDON\*

SHOOTING OR ACIDIZING

ABANDONMENT\*

REPAIR WELL

CHANGE PLANS

(Other)

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT  
See Attachment

From 6-1-80 to 6-30-80

Well temporarily abandoned.

RECEIVED  
JUL 10 1980

DIVISION OF  
OIL, GAS & MINING

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

SIGNED K.A. Thomas

TITLE Drilling Superintendent

DATE 7-15-80

(This space for Federal or State office use)

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

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE  
(Other instructions on reverse side)

Form approved:  
Budget Bureau No. 42-1174

5. LEASE DESIGNATION AND SERIAL NO.  
Acctg. Supr. 1215  
U-25458  
6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
Oper. Supt. \_\_\_\_\_  
Res. Engr. \_\_\_\_\_  
Prod. Engr. \_\_\_\_\_  
7. UNIT AGREEMENT NAME  
Gov't Comp. 1215  
Geologists \_\_\_\_\_  
8. FARM OR LEASE NAME  
South Eden Canyon

**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 "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL  GAS WELL  OTHER \_\_\_\_\_

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659, Casper, Wyoming

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface  
1820' FNL & 2072' FWL

14. PERMIT NO. \_\_\_\_\_ 15. ELEVATIONS (Show whether DF, RT, GR, etc.)  
7,197' GL

9. WELL NO.  
1-15

10. FIELD AND POOL, OR WILDCAT  
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec. 15, T13N, R6E

12. COUNTY OR PARISH  
Rich

13. STATE  
Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	FULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) _____	(Other) _____

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT

From 7-1-80 to 10-31-80

Well Temporarily Abandoned

**RECEIVED**  
OCT 30 1980  
CASPER DISTRICT  
OPERATIONS

Sirs:

We had good gas shows in this well. The current plans are to drill a well to the north of this well during 1981. In the event this new well is productive, Marathon may desire to reenter South Eden Canyon #1-15.

*Jesse E. O'Neal*  
Jesse E. O'Neal  
District Engineer

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

SIGNED D. P. Pruski TITLE Acting Drilling Superintendent DATE 10-16-80

(This space for Federal or State office use)

APPROVED BY [Signature] FOR E. W. GUYNN TITLE DISTRICT ENGINEER DATE OCT 28 1980

CONDITIONS OF APPROVAL, IF ANY \_\_\_\_\_

*open*

\*See Instructions on Reverse Side

**CONFIDENTIAL**

November 20, 1980

Marathon Oil Co.  
P. O. Box 2659  
Casper, Wyoming 32602

RE: Well No. South Eden Canyon #1-15  
Sec. 15, T. 13N, R. 6E,  
Rich County, Utah

Gentlemen:

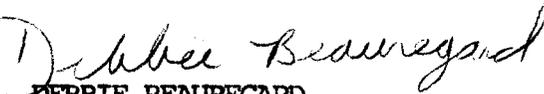
This letter is to advise you that the Well Completion ~~Report~~ Recompletion Report and Log for the above mentioned well is due and has not been filed with this office as required by our rules and regulation. Referring to Rule C-5, General Rules and Regulations and Rules of Practice and Procedure, "within ninety (90) days after the suspension of operation on, abandonment of, or the completion of any well drilled for the production of oil, and/or gas, and within ninety (90) days after the completion of any further operations of the well, if such operations involved drilling deeper or drilling or redrilling any formation, a well log shall be filed with the commission on a form prescribed by the Commission, together with a copy of the electric and radioactivity logs, if run."

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

Thank you for your cooperation relative to the above.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

  
—DEBBIE BEAUREGARD  
CLERK TYPIST

Casper Division  
Production, U.S. & Canada



P.O. Box 2659  
Casper, Wyoming 82602  
Telephone 307/235-2511

November 26, 1980

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

RE: South Eden Canyon #1-15  
Sec. 15, T13N, R6E  
Rich County, Utah  
(Well status - Temp. abandoned)

Dear Ms. Debbie Beauregard:

In regard to your letter of November 20, 1980, this wells status is temporarily abandoned. Before we dropped the drill pipe in the hole, we had good gas shows. The current plans are to drill a well to the north of this well during 1981. In the event this new well is productive, Marathon may re-enter South Eden Canyon #1-15. Please see attached copy of U.S.G.S. approval.

Due to our current plans, all logs, etc. on South Eden Canyon are considered Confidential.

Thank you for your time and consideration on this matter.

Very truly yours,

*Dale T. Caddy*  
*by J. O'Neal*

Dale T. Caddy  
District Operations Manager

DTC/WW/kr

Enclosure

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

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 15, T13N, R6E

12. COUNTY OR PARISH

Rich

13. STATE

Utah

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659, Casper, Wyoming

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*  
See also space 17 below.)  
At surface

1820' FNL & 2072' FWL

14. PERMIT NO.

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

7,197' GL

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT  
See Attachment

From 11-1-80 to 12-10-80

Well Temporarily Abandoned

**RECEIVED**

DEC 11 1980

DIVISION OF  
OIL, GAS & MINING

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

SIGNED M. E. King

TITLE Drilling Superintendent

DATE 12-9-80

(This space for Federal or State office use)

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

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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 "APPLICATION FOR PERMIT—" for such proposals.)

*Confidential*

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER		7. UNIT AGREEMENT NAME
2. NAME OF OPERATOR Marathon Oil Company		8. FARM OR LEASE NAME South Eden Canyon
3. ADDRESS OF OPERATOR P. O. Box 2659, Casper, Wyoming		9. WELL NO. 1-15
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface  1820' FNL & 2072' FWL		10. FIELD AND POOL, OR WILDCAT Wildcat
14. PERMIT NO.		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 15, T13N, R6E
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 7,197' GL		12. COUNTY OR PARISH Rich
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) _____	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT  
See Attachment

*→ NO attachment*

From 12-11-80 to 1-29-81



FEB 2 1981

DIVISION OF  
OIL, GAS & MINING

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

SIGNED Mike E. Knugh TITLE Drilling Superintendent DATE 1-29-81

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY: \_\_\_\_\_

*5.4 million costs*

\*See Instructions on Reverse Side

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved:  
Budget Bureau No. 42-1174

5. LEASE DESIGNATION AND SERIAL NO.  
Acctg. Supr. 1215  
U-25458  
6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
Oper. Supt. \_\_\_\_\_  
Res. Engr. \_\_\_\_\_  
Prod. Engr. \_\_\_\_\_  
7. UNIT AGREEMENT NAME  
Gov't Comp. \_\_\_\_\_  
Geologists \_\_\_\_\_  
8. FARM OR LEASE NAME  
File  
South Eden Canyon

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 "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL  GAS WELL  OTHER \_\_\_\_\_

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659, Casper, Wyoming

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface  
1820' FNL & 2072' FWL

14. PERMIT NO. \_\_\_\_\_ 15. ELEVATIONS (Show whether DF, RT, GR, etc.)  
7,197' GL

9. WELL NO.  
1-15

10. FIELD AND POOL, OR WILDCAT  
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec. 15, T13N, R6E

12. COUNTY OR PARISH  
Rich 13. STATE  
Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) _____	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)\*

PROGRESS REPORT

From: 7-1-80 to 10-31-80 MAY 4 1981

RECEIVED  
OCT 30 1980  
DIVISION OF OIL, GAS & MINING  
CASPER DISTRICT OPERATIONS

Well Temporarily Abandoned

Sirs:

We had good gas shows in this well. The current plans are to drill a well to the north of this well during 1981. In the event this new well is productive, Marathon may desire to reenter South Eden Canyon #1-15.

*Jesse E. O'Neal*  
Jesse E. O'Neal  
District Engineer

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

SIGNED D. Paszowski TITLE Acting Drilling Superintendent DATE 10-16-80

(This space for Federal or State office use)

APPROVED BY [Signature] FOR E. W. GUYNN DISTRICT ENGINEER DATE OCT 28 1980

CONDITIONS OF APPROVAL, IF ANY.

*open*

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN REVERSE SIDE  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-21424.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

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 "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL  GAS WELL  OTHER

7. UNIT AGREEMENT NAME

2. NAME OF OPERATOR  
Marathon Oil Company

8. FARM OR LEASE NAME  
South Eden Canyon

3. ADDRESS OF OPERATOR  
P. O. Box 2659, Casper, Wyoming

9. WELL NO.  
1-15

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)  
At surface

10. FIELD AND POOL, OR WILDCAT  
Wildcat

1820' FNL & 2072' FWL

11. SEC. T., R., M., OR BLK. AND SURVEY OR AREA  
Sec. 15, T13N, R6E

14. PERMIT NO.

15. ELEVATIONS (Show whether OF, ST. OR, etc.)  
7,197' GL

12. COUNTY OR PARISH 13. STATE  
Rich Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

FULL OR ALTER CASING

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREAT

MULTIPLE COMPLETE

FRACTURE TREATMENT

ALTERING CASING

SHOOT OR ACIDIZE

ABANDON\*

SHOOTING OR ACIDIZING

ABANDONMENT\*

REPAIR WELL

CHANGE PLANS

(Other)

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)

PROGRESS REPORT  
See Attachment

From 1-30-81 to 3-31-81

MAY 4 1981

No change DIVISION OF OIL, GAS & MINING

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

SIGNED [Signature]

TITLE Drilling Superintendent

DATE 5/4/81

(This space for Federal or State office use)

FOR E. W. GUYNN  
DISTRICT ENGINEER

DATE 5/4/81

APPROVED BY [Signature]  
CONDITIONS OF APPROVAL, IF ANY:

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

ACCEPTED

June 17, 1981

Marathon Oil Company  
P. O. Box 2659  
Casper, Wyoming 82602

Re: South Eden Canyon 1-15  
Sec. 15, T. 13N, R6E  
Rich County, Utah

Gentlemen:

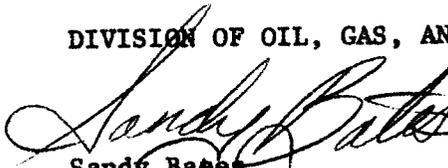
According to our records, a "Well Completion Report" filed with this office May 22, 1981, from above referred to well indicates the following electric logs were run: DIL-DLL, DIP METER, SFL, DCPL, BHC-sonic, FDC, CNL. As of today's date this office has not received these logs: DIL-DLL, DIP METER, SFL, DCPL, FDC, CNL.

Rule C-5, General Rules and Regulations and Rules of Practice and Procedure, 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



Sandy Baees  
Clerk-Typist

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

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659; Casper, WY 82602

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 1,820' FNL & 2,072' FWL  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH:

5. LEASE  
U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
South Eden Canyon

9. WELL NO.  
1-15

10. FIELD OR WILDCAT NAME  
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec. 15, T13N, R6E

12. COUNTY OR PARISH Rich | 13. STATE Utah

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
7,197' 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)	<input type="checkbox"/>	<input type="checkbox"/>

(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.)\*

PROGRESS REPORT

From 4-1-81 To 5-31-81

Well Temporarily Abandoned

JUN 7 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 [Signature] TITLE Drilling Superintendent DATE 6-9-81

(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  other

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659; Casper, WY 82602

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 1,820' FNL & 2,072' FWL  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH:

5. LEASE  
U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
South Eden Canyon

9. WELL NO.  
1-15

10. FIELD OR WILDCAT NAME  
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec. 15, T13N, R6E

12. COUNTY OR PARISH  
Rich

13. STATE  
Utah

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
7,197' 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)	<input type="checkbox"/>	<input type="checkbox"/>

(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.)\*

PROGRESS REPORT

From 6-1-81 To 7-17-81

Well Temporarily Abandoned

DIVISION OF  
OIL, GAS & MINING

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

18. I hereby certify that the foregoing is true and correct Drilling  
SIGNED M E Kaugh / H.S.L. TITLE Superintendent DATE 7-16-81

(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  other

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659; Casper, WY 82602

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 1,820' FNL & 2,072' FWL  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH:

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

REQUEST FOR APPROVAL TO:  
TEST WATER SHUT-OFF   
FRACTURE TREAT   
SHOOT OR ACIDIZE   
REPAIR WELL   
PULL OR ALTER CASING   
MULTIPLE COMPLETE   
CHANGE ZONES   
ABANDON\*   
(other)

SUBSEQUENT REPORT OF:

5. LEASE U-25458
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME South Eden Canyon
9. WELL NO. 1-15
10. FIELD OR WILDCAT NAME Wildcat
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 15, T13N, R6E
12. COUNTY OR PARISH Rich
13. STATE Utah
14. API NO.
15. ELEVATIONS (SHOW DF, KDB, AND WD) 7,197' GL

NOV 19 1981

(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.)\*

PROGRESS REPORT

From 7-18-81 To 11-5-81

Well Temporarily Abandoned

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

18. I hereby certify that the foregoing is true and correct  
SIGNED M. C. Kung / H.H. TITLE Drilling Superintendent DATE 11-5-81

(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  other

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 2659; Casper, WY 82602

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 1,820' FNL & 2,072' FWL  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH:

5. LEASE  
U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
South Eden Canyon

9. WELL NO.  
1-15

10. FIELD OR WILDCAT NAME  
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec. 15, T13N, R6E

12. COUNTY OR PARISH  
Rich

13. STATE  
Utah

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
7,197' 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* (other)	<input type="checkbox"/>		<input type="checkbox"/>

RECEIVED  
FEB 16 1982

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

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directly drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

PROGRESS REPORT

From 11-6-81 To 2-5-82

Well Temporarily Abandoned

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

18. I hereby certify that the foregoing is true and correct  
SIGNED ME Kugh TITLE Drilling Superintendent DATE 2/4/82

(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

SUBMIT IN DUPLICATE\*

(See instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R855.5.

5. LEASE DESIGNATION AND SERIAL NO.

U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

South Eden Canyon

9. WELL NO.

1-15

10. FIELD AND POOL, OR WILDCAT

Wildcat

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

Sec. 15, T13N, R6E

12. COUNTY OR PARISH

Rich

18. STATE

Utah

**RECEIVED**  
APR 13 1982

DIVISION OF

OIL, GAS & MINING

14. PERMIT NO. DATE

43-033-30014

5-9-78

WELL COMPLETION OR RECOMPLETION REPORT AND LOG \*

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

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

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P.O. Box 2659, Casper, WY 82602

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

At surface 1,820' FWL & 2,072' FWL

At top prod. interval reported below

At total depth

15. DATE SPUDDED 7-26-78 16. DATE T.D. REACHED 4-7-79 17. DATE COMPL. (Ready to prod.) Operations Suspended 6-2-79 18. ELEVATIONS (DF, REB, RT, GR, ETC.)\* 7,197' GL, 7,229' KB 19. ELEV. CASINGHEAD --

20. TOTAL DEPTH, MD & TVD 18,000' 21. PLUG, BACK T.D., MD & TVD See Plugging Attach. 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)\* None 25. WAS DIRECTIONAL SURVEY MADE No

26. TYPE ELECTRIC AND OTHER LOGS RUN DIL-DLL, DIP Meter, SFL, DCPL, BHC-Sonic, FDL, CNL 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
13-3/8"	54.5#	2,070'	17-1/2"	2,400 Sacks	None
10-3/4"	55.5#, 60.7#	12,003'	12-1/4"	1,010 Sacks	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
		None		

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
	None	

31. PERFORATION RECORD (Interval, size and number)

NONE

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
	None

33.\* PRODUCTION

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

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO

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.) Dry Hole Marker will be set TEST WITNESSED BY

35. LIST OF ATTACHMENTS  
TWO - Approved Plugging Procedure and Drill Stem Test Results

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

SIGNED Dale T. Caddy by MEK TITLE District Operations Manager DATE March 29, 1982

\*(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.)

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	STRT. DEPTH	TOP	TRUE VERT. DEPTH
<p><b>37. SUMMARY OF POROUS ZONES:</b>            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</p>							
			DST's  Please see Attached Sheet				
				Twins Creek	303'		
				Nugget	150'		
				Ankareh	450'		
				Nugget	5,553'		
				Ankareh	10,362'		
				Thaynes	11,962'		
				Woodside	15,576'		
				Dinwoody	17,155'		18,000'

Drill Stem Test Results  
South Eden Canyon #1-15

<u>DST#</u>	<u>FM</u>	<u>Interval</u>	<u>Recovery</u>	<u>Sampler</u>	<u>Pressures</u>	<u>Times</u>	<u>Temp.</u>	
1	Gypsum Spring	8900-8968	40' mud	2100cc mud	HP 3998-3990 IFP 57-47 FFP 58-58 ISIP 66 FSIP 70	10-60-30-60	185° F.	
2	Ankareh	11364-11386	10392' gas 992' SMC+GCWC GTS in 10 min.	3 cu. ft. gas	HP 5223-5212 IFP 650-579 FFP 601-603 ISIP 4222	10-60-360 no FSI	226° F.	
3	Thaynes	13450-13595	745 mcwc 1110' wc  GTS 88 min. TSTM	400cc mud	HP 6092-6096 IFP 858-820 ISIP 1651	310 min flow 152 min SI misrun - no FSI or FF obtained	-----	
4	Dinwoody	17370-17444	4000' wc 22' mud	.01 cu.ft.gas	HP 7860-7883 IFP 1783-1776	255 min. flow misrun-no SI obtained	-----	
5	Dinwoody	17446-17533	5970 HGCWC GTS 4hr15 min. after init. op.	1.81 cu.ft.gas	HP 7857-7867 IFP 2613-2588 ISIP 5130 2FP 2601-2606 2SIP 3454 3FP 2596-2596 3SIP 3655	10-60-91-120-45- 175	246° F.	
6	Thaynes	13600-13912	-----misrun-----					-----
7	Thaynes	13600-13886	-----misrun-----					-----
8	Thaynes	13564-13886	220'HGCM GTS 3hr.35 min. after init. op.	.06 cu.ft.gas 900cc mud	HP 6034-6005 IFP 108-81 ISIP 2384 FFP 84-100 FSIP 3109	69-125-177-362	187° F.	

**CONFIDENTIAL**

PEA

Casper Division  
Production, U.S. & Canada



P.O. Box 2659  
Casper, Wyoming 82602  
Telephone 307/235-2511

July 9, 1982

~~Mr. John Hansen  
Garden City,  
Utah 84028~~

Dear Mr. Hansen:

Re: Well Site Reclamation  
T13N-R6E, Rich County, Utah  
Sec. 15: 1820' from North Line  
2072' from West Line

In reference to our recent telephone conversation covering the above-described lands we discussed the following terms to restore your land:

1. Leave intact the existing fence around the <sup>Location north of</sup> lower pit. ~~pit.~~
2. Leave the road in its present condition.
3. Leave the lower pit.
4. Leave the existing water well.
5. Seed the well site with Grenare wheat and smooth Brome.

Please sign below to acknowledge your acceptance and agreement to the above terms. Thank you.

Sincerely,

*Christina J. Hunt*

Christina J. Hunt  
Landman

CJH/mm

**RECEIVED**

JUL 22 1982

**DIVISION OF  
OIL, GAS & MINING**

ACCEPTED AND AGREED TO THIS

15 DAY OF July, 1982

*John Hansen*  
John Hansen

**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 Plugged & Abandoned

2. NAME OF OPERATOR  
Marathon Oil Company

3. ADDRESS OF OPERATOR  
P.O. Box 2659, Casper, WY 82602

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 1,820' FNL & 2,072' FWL  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH:

5. LEASE  
U-25458

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
South Eden Canyon

9. WELL NO.  
1-15

10. FIELD OR WILDCAT NAME  
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Section 15, T13N, R6E

12. COUNTY OR PARISH  
Rich

13. STATE  
Utah

14. API NO.  
43-033-30014

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
7,197' GL, 7,229' KB

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) <u>Plugging Procedure</u>		

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

Plugging Procedure confirmed between Assad Raffoul, MMS, and M.E. Krugh, MOC, March 30, 1982, 9:20 a.m.

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.)\*

The attached is the abandonment procedure that was used for South Eden Canyon #1-15.

PLEASE SEE ATTACHMENTS

**RECEIVED**  
OCT 01 1982

**DIVISION OF  
OIL, GAS & MINING**

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_

18. I hereby certify that the foregoing is true and correct District MEK 9-28-82

SIGNED Pat Corbett TITLE Operations Manager DATE September 28, 1982

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

The following is the abandonment procedure that was used for South Eden Canyon #1-15:

1. A cement plug was set in open hole at the top of a 727' fish on 5-14-79. This plug was set from 17,271' to 17,023' (248') and consisted of 100 sacks Class "G" cement with 40% 20-40 frac sand and 35% silica flour.
2. A cement plug was set in open hole from 14,150' to 13,870'. This plug of 120 sacks of Class "G" was set on 5-16-79.
3. The cement plug set on 5-16-79 was drilled out to 14,035'. A cement plug was set in open hole from 14,035' to 13,886'. This plug of 80 sacks of Class "G" with 20% 20-40 mesh frac sand was set on 5-24-79.
4. A cement plug was set across the 10-3/4" casing shoe from 12,102' to 11,914'. This plug consisted of 100 sacks Class "G" cement and was set on 5-29-79.

At this point the drilling rig was released. On June 30, 1982, a completion rig was moved on and the well was permanently abandoned using the following procedure:

5. Set plug of 100 sacks Class "G" cement in 10-3/4" casing from 8,216'-7,997' on 7-2-82.
6. Shot 10-3/4" casing with 4 holes per foot from 5,002'-5,000' on 7-3-82.
7. Set cement retainer at 4,900'. Stabbed into retainer and pumped approximately 8,200 barrels of reserve pit water into perforations. Maximum injection pressure was 1,300 psi. Injection dates were July 3, 4, and 6, 1982.
8. Squeezed 150 sacks of Class "G" below retainer with 500 psi squeeze pressure. A 300' cement plug (135 sacks Class "G") was then set above the retainer from 4,900'-4,600'. This work was done on July 6, 1982.
9. Shot 10-3/4" casing with 4 holes per foot from 2,101'-2,100'. Set cement retainer at 2,000'. Stabbed into retainer and squeezed perms to 2,000 psi with 75 sacks Class "G" cement. A 300' cement plug (150 sacks Class "G") was set on top of the retainer from 2,000'-1,700'. The wellhead was cut off and a 50' cement plug (25 sacks Class "G") was set in the top of the 10-3/4" casing. Ten sacks of cement were then pumped between the 10-3/4" casing and the 13-3/8" casing at the top of the hole to form a 50' plug in this annulus. The dry hole marker was set. This work was done on July 7, 1982.

Fish - 727' Top @ 17,273' - Stuck @ 18,000'

Screw in Sub	2.54'
5 Drill Collars	154.08'
Drilling Jars	33.38'
15 Drill Collars	461.96'
Stabilizer	4.30'
Drill Collar	30.40'
Stabilizer	4.81'
Reamer	5.20'
Short Drill Collar	9.67'
Stabilizer	4.68'
Shock Sub	5.43'
Stabilizer	4.20'
Stabilizer	5.50'
Bit	<u>.85'</u>
	727.00'