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ANCHORAGE, ALASKA

MUKLUK PROJECT EXPLORATION PLAN  
SOHIO ALASKA PETROLEUM COMPANY  
OPERATOR FOR  
MOBIL OIL CORPORATION, BP ALASKA EXPLORATION, INC.,  
GULF OIL CORPORATION & ELF AQUITAINE  
FEDERAL LEASE OCS-Y-0334  
BEAUFORT SEA, ALASKA

Lease Operations and Exploration Plan  
For  
Mukluk Project (OCS-Y-0334)

TABLE OF CONTENTS

Introduction.....	1-2
Gravel Island Location.....	2
Description and Schedule of Proposed Activity.....	2-3
Island Description.....	4
Estimated Total Depth of Well.....	4-5
Geological & Geophysical Aspects of the Project.....	5
Geohazards Survey.....	5
Personnel.....	5-6
Transportation of Personnel and Supplies.....	6-7
Fuel Supplies for the Proposed Project.....	7-8
Oilspill Contingency Plan.....	8-9
Coastal Zone Consistency Certification.....	9
Rig Description.....	9-10
Hazardous Materials & Hydrogen Sulfide Contingency Plans.....	10
Waste Oil, Test Oil, and Natural Gas Disposal.....	10
Solid & Liquid Waste Disposal.....	10-11
Air Emissions.....	11
Drilling Mud Components.....	12
Mud Logging.....	12
Water Source.....	12-13
Environmental Training Program.....	13-14

TABLE OF CONTENTS - (continued)

Figures

Figure 1.....Mukluk Island Well Location  
Figure 2.....Proposed Mukluk Artificial Island  
Figure 3.....Mukluk Island - Preliminary Layout  
Figure 4.....Proposed Mukluk Ice Road

Tables

Table A.....Estimated Quantities of Waste Materials Per Well For  
Mukluk Area Exploration  
Table B.....Projected Air Emissions

Appendices

Appendix #1.....Platform Verification  
Appendix #2.....Confidential Geological & Geophysical Aspects  
of the Mukluk Prospect for MMS Use Only  
Appendix #3...Mukluk SPCC Plan and Oil Discharge Contingency Plan  
Appendix #4.....Rig Description and Blowout Preventers  
Appendix #5.....Application for Permit to Drill

MUKLUK PROJECT

LEASE OPERATIONS PLAN AND EXPLORATION PLAN

SOHIO ALASKA PETROLEUM COMPANY, OPERATOR FOR MOBIL OIL CORPORATION,  
BP ALASKA EXPLORATION INC., GULF OIL CORPORATION, AND ELF-AQUITAINE

FEDERAL LEASE OCS-Y-0334

BEAUFORT SEA, ALASKA

INTRODUCTION

Sohio Alaska Petroleum Company, as Operator for Mobil Oil Corporation, BP Alaska Exploration, Inc., Gulf Oil Corporation, and Elf-Aquitaine hereby submits this Exploration Plan for Federal lease OCS-Y-0334, in the OCS Beaufort Sea Sale No. 71 area, tract #191. Extensive geophysical surveys and geological investigations have been conducted in this lease area. These, along with subsurface geologic data obtained from wells drilled in the Oliktok Point area to the south, provide evidence that the potential for significant hydrocarbon accumulations exists for this lease. We propose to explore and evaluate this possibility according to the procedures outlined in this Exploration Plan.

Sohio intends to build an artificial island on the common corner of leases OCS-Y-0334, Y-0335, Y-0343, and Y-0344 in the summer of 1983, and to drill two exploration wells from the island in the winter of 1983-84. The lessees for OCS-Y-0334 are Sohio Alaska Petroleum Company, BP Alaska Exploration Inc., Mobil Oil Corporation, Gulf Oil Corporation and Elf-Aquitaine; lessees for OCS-Y-0343 are Sohio Alaska Petroleum Company, BP Alaska Exploration Inc., and Mobil Oil Corporation; lessees for OCS-Y-0335 are Shell Oil Company and Koch Industries Inc.; lessees for OCS-Y-0344 are Texaco USA Inc., Diamond Shamrock

Corporation, Placid Oil Company, and Amerada Hess Corporation.

GRAVEL ISLAND LOCATION (Figure 1)

Alaska State Zone 4 Coordinates

x = 388,589.07'

y = 6,100,360.88'

Latitude

70° 40' 59.260"N

Longitude

150° 55' 10.243"W

UTM Zone 5 Coordinates

x = 576,800 m

y = 7,843,200 m

DESCRIPTION AND SCHEDULE OF PROPOSED ACTIVITY

Sohio proposes to construct a gravel island in 48' (15m) of water. The working surface of the island will be a minimum of 350' (105m) in diameter.

Gravel has been extracted from an approved onshore source for which permits were issued by the appropriate agencies. Gravel was transported by trucks over onshore and offshore ice roads to a stockpile location on Thetis Island. Permits for the stockpile were also issued by the appropriate agencies.

Assuming approval of Sohio's application to build a gravel island, gravel will be transported by barge from the Thetis Island stockpile to the artificial

island site, 22 miles (35 km) to the northwest, as soon as the breakup of sea ice conditions allow (approximately mid-July). Island construction operations will continue until early October, 1983. Gravel will be loaded onto the barges with a conveyor belt system operating on the south side of the west end of Thetis island. Ten to 12 barges and tugboats operating 24 hour/day for about 47 days including allowance for bad sea conditions, will be sufficient to transport the gravel necessary to build the artificial island. Barges will typically be 200 feet (61 m) long, 50 - 60 feet (15 - 18 m) wide. Tugboats (nominally 1000 hp motors with twin screws) will be capable of pushing the barges at 3 to 4 knots when the barges are loaded and 6 to 7 knots when empty.

Once at the Mukluk Island site, barges will be unloading using front-end loaders and draglines. Barges can be loaded in about two hours and a similar amount of time is required for unloading.

In the absence of ice, most barge traffic will be confined to a corridor one to two miles (1.5 km) wide between Thetis Island and the Mukluk Island site. Additional barge traffic between Oliktok Point and Prudhoe Bay (East Dock) and the two islands will be required intermittently to transfer construction equipment and material.

Prior to fall freeze-up, 1983, Alaska United Drilling Co. Rig #2, or its equivalent, and drilling supplies will be transported via barge to the island. The first well, Mukluk (Y-0334) #1, is planned to be spud on November 1, 1983. The second well (Mukluk #2) may be spud by January 15, 1984 and drilling operations completed by March 31, 1984. The drilling rig will then be transported back to the Prudhoe Bay Field by hovercraft or on existing ice roads and gravel roads.

ISLAND DESCRIPTION:

The proposed drilling platform is a circular, artificial gravel island constructed in a water depth of 48'. Seven hundred thousand cubic yards of gravel in place will be required to build the island. The island will have a surface diameter of a minimum of 350', 3:1 side slopes and a bottom diameter of approximately 770'. The top of the island will be 21' above mean sea level. Filter fabric and sandbags will be placed on the island slopes for the protection of the island against erosion from waves and scouring from ice motion. A sandbag berm on the northern perimeter of the island will be placed for protection from wave override. Figure 2 depicts the planned island. Various physical parameters of the island and adjacent ice will be monitored during drilling operations. Appendix 1 (to be submitted separately) is the Platform Verification for the planned island.

A self-contained 83 person rig camp, a drilling rig, fuel tanks and other equipment will be located on the island. Impermeable liners will be placed under all facilities or areas where fuel is used and where there is potential for an operational spill.

A lined reserve mud pit will be available for any emergency need to contain drilling or other fluids that cannot be discharged into the sea.

A typical layout of these facilities is shown in Figure 3.

ESTIMATED TOTAL DEPTH OF WELL

Estimated total depth of Mukluk (Y-0334) #1 is 9500' Subsea, assuming a 52'

K.B. elevation. Approval is requested for a maximum subsea depth of 12,000' for Mukluk #2.

#### GEOLOGICAL AND GEOPHYSICAL ASPECTS OF THE PROSPECT

Included in Appendix #2 is proprietary and confidential data for MMS use only. All documents have been stamped with the following notation: "PROPRIETARY AND CONFIDENTIAL, SOHIO ALASKA PETROLEUM COMPANY, to accompany Lease Operations and Exploration Plan for proposed wells Mukluk (Y-0334) #1 and Mukluk #2 submitted to the Minerals Management Service (MMS) for their exclusive use." Contents of Appendix #2 include a current structure map, cross sections, and well prognosis.

#### GEOHAZARDS SURVEY

Shallow biogenic gas has been identified on seismic records in Harrison Bay and was encountered in very small quantities during geotechnical drilling operations at the proposed well location. Gas hydrates also may exist within and beneath the permafrost zones. The results of the geohazards survey (submitted 4-15-82 as confidential and proprietary data for MMS use only) indicate that there are no hazards to exploration drilling from a gravel island at the proposed site. Safety precautions however, will be included in the drilling program and are described in the Application for Permit to Drill (Appendix #5 to be submitted separately).

#### PERSONNEL

A 250 person camp was required for the gravel-hauling operations. The camp was located at the Ugnuravik Pit gravel source which is five miles south of Oliktok Point. Gravel hauling activities took place between February and mid April of 1983, at which time the camp was demobilized. A 75 person



contractors' camp will be established on Thetis Island to support the construction of Mukluk Island this summer. Additionally, a 50 person camp barge will be located at the island site during the construction phase. Both of these camps will be demobilized prior to freeze-up, 1983.

During drilling operations, a maximum of 83 personnel will be housed in a portable camp on Mukluk Island. The staff and rig employees are expected to work in 7 to 14 day shifts. Contractor supervisory personnel and two or three Sohio supervisory personnel will be on location at all times.

A 20 person portable camp, located near Oliktok Point, will be maintained to accomodate personnel and provide reserve occupancy in the case of bad weather. The purpose of this camp is for support of drilling operations and maintenance of fuel stores.

#### TRANSPORTATION OF PERSONNEL AND SUPPLIES

The primary mode of personnel transport will be by helicopter. A heliport, elevated to the height of the island's work surface will be located on the island. Personnel will embark from Deadhorse Airport and occasionally from Oliktok Point Dock. Transport of equipment, materials and fuel will be provided initially by barge in open water, then by helicopter, hovercraft and truck over ice roads in winter.

The overland access to Oliktok Point is a 30' wide, 5' thick gravel road with a 3:1 side slope which is maintained year round as part of the Kuparuk River Unit facilities. The proposed ice road access to Mukluk Island (Figure 4) will originate from the Oliktok Point Dock, follow the nearshore coastline westward across the mouth of the Colville Delta as far as the Nechelik

Channel. At that point, the ice road will turn due north toward Mukluk Island.

Next winter, the sea ice will thicken naturally until after the first of December when construction of the nearshore ice road portion will begin, lasting a few weeks into mid-December. At this time, the floating sea ice out to Mukluk will be stable and flooding of the 16+ mile route to form a 7' thick road can begin and continue until mid-January.

The nearshore ice road will be maintained at a minimum width of 75' and will be confined to shorefast grounded ice. The floating portion of the ice road will be maintained at a minimum width of 150' with a 7' thickness. It will be built by flooding the ice surface with seawater and allowing it to freeze in 1/2" - 1" layers between floodings.

Equipment and materials for the proposed drilling operations will be supplied from existing dock and supply areas at Oliktok Point, Deadhorse, Kuparuk and East Dock.

#### FUEL FOR THE PROPOSED PROJECT

Fuel for the proposed project will be transported by helicopter, hovercraft, or fuel barge (during open water) from ARCO's Prudhoe Bay Topping Plant.

During the Mukluk Island construction phase, fuel for operations at Thetis Island will be stored in five 30,000 gallon and one 10,000 gallon double walled fuel tanks, located in the northeast corner of the work area. The tanks will be located within an impermeable lined and bermed pit capable of containing 110 percent of the largest independent fuel storage container.

A USCG approved specially designed Crowley fuel barge will support the major contractor operations and camp at the Mukluk Island construction site. An additional barge, secured behind the Crowley camp barge will be dedicated as a heliport and emergency escape vessel, and will provide some fuel storage for support of equipment involved in the actual construction of the gravel island. This fuel will be stored in a 30,000 gallon double walled storage tank welded to the deck of the barge. All fuel transfer activity will be in accordance with appropriate USCG regulations and will be carried out with USCG approved equipment only.

The Investigator, Sohio's specially designed fuel barge, will be used during the open water construction period to resupply fuel for Thetis Island camp operations, Kodiak marine tugs, and to the fuel tank welded on the heliport barge. All fuel storage barges have approved SPCC Plans appropriate for their activity.

Fuel for drilling operations will be stored on Mukluk Island in four 30,000 gallon double walled tanks. The tanks will be located within a supported and impermeable lined pit capable of containing 110% of the total volume of stored fuel. (Further described in the Mukluk SPCC Plan and Oil Discharge Contingency Plan, Appendix #3).

#### OILSPILL CONTINGENCY PLAN

Attached, as Appendix #3, is the site specific Oilspill Contingency Plan for the Mukluk (Y-0334 #1) and #2 wells (Mukluk Project Spill Plan). This site specific document is further supported by the SAPC Spill Prevention Control and Countermeasure Plan (SPCC) and Oil Discharge Contingency Plan, revision #3.

This ADEC approved core document has been prepared in accordance with all appropriate State and Federal SPCC regulations and sets the policy and the guidelines for spill prevention (including fuel transfer activities), and response activities for all areas where Sohio is the primary operator.

Sohio is a member of Alaska Clean Seas, the statewide industry co-op umbrella organization which was formerly the Alaska Beaufort Sea Oilspill Response Body (ABSORB). ABSORB is now considered as one of the cost participation areas that belong under Alaska Clean Seas.

Sohio, as a member of ABSORB, has access to the large warehouse of spill response equipment located at Prudhoe Bay, in addition to participation in oil pollution control and spill response research. The ABSORB Contingency Plan, revision #6 1982 is utilized as a contingency planning source document by Sohio and is referenced as such in this plan along with the ABSORB Oil Spill Considerations Manual which is used as a guide in evaluating spill response concerns. In addition to ABSORB, during a large spill event emergency, other operators in the area would make facilities available for our use.

#### COASTAL ZONE CONSISTENCY CERTIFICATION

The proposed program outlined in this Exploration Plan is consistent with the appropriate portions of Alaska's Coastal Management Program. All activities will be conducted in a manner consistent with that program.

#### RIG DESCRIPTION

Alaska United Drilling Company's Rig #2, or its equivalent, will drill the Mukluk (Y-0334) #1 and Mukluk #2 wells. This rig is designed and built to withstand and remain operational in adverse arctic conditions in the Beaufort Sea. The rig, as modified, is capable of drilling to 20,000 feet.

Included as Appendix #4 is a description of the rig and equipment including the blowout preventer.

#### HAZARDOUS MATERIALS AND HYDROGEN SULFIDE CONTINGENCY PLANS

Company representatives working closely with this project have been extensively trained in hazardous materials handling and spill prevention. In the event of a hazardous material spill, it will be promptly reported and cleaned up. Reporting instructions for hazardous substances are contained in the SAPC/SPCC Plan and Oil Discharge Contingency Plan for Alaska. Hydrogen sulfide ( $H_2S$ ) is not expected to be present in any of the formations to be penetrated at this location; however, continuous monitoring equipment capable of detecting concentrations as low as 5 parts per million will be utilized. If concentrations exceed 10 ppm, protection and/or corrective measures will be undertaken. Additional monitoring and safety equipment will be available on location to provide personnel safety and to permit safe control of the well in the event  $H_2S$  is detected. A detailed  $H_2S$  Contingency Plan is included in the Application for Permit to Drill. (Appendix #5).

#### DISPOSAL OF TEST OIL AND NATURAL GAS

Any oil produced during well tests will either be reinjected into the well or backhauled to an approved onshore handling facility. Produced natural gas will be flared.

#### DISPOSAL OF SOLID AND LIQUID WASTE MATERIAL

Drill cuttings, drilling muds, wastewater and other wastes will be disposed of in accordance with approved NPDES permits. All cuttings and drilling mud will be analyzed for hydrocarbons and any contaminated effluents will be stored in the reserve pit before disposal at an approved onshore site.

Appropriate permits for disposal of all wastes will be acquired. Attached as Table A are the projected wastes and expected quantities thereof.

Solid wastes:

Burnable wastes will be incinerated using an approved incinerator. Non-burnable wastes and junk will be transported to an approved disposal site onshore.

Liquid wastes:

Effluents from the domestic waste treatment plant will be discharged onto the ice surface on the southeast side of the island. Waste drilling muds and cuttings mixed with sea water and effluents from the desalination plant will be flushed through pipes built into the island, discharging under the ice near the toe of the island's slope. An NPDES application to permit these discharges has been filed with the EPA.

AIR EMISSION

The nearest onshore area from the proposed location of activity is approximately 15 miles to the south, giving an exemption level E for hydrocarbon (VOC), total suspended particulates (TSP), nitrogen oxides (NOx) and sulfur dioxide (SO<sub>2</sub>) of 450 tons per year. The exemption level E for carbon monoxide (CO) would be 19,277 tons per year. Projected air pollutant emissions from drilling and support activities, attached as Table B, are below the exemption level. Since the resultant emissions are below the exemption level, no significant effect on the onshore air quality is expected and no further air quality review is required.

#### DRILLING MUD COMPONENTS

Included in the Application for Permit to Drill, Appendix #5, to be submitted separately, is a list of the common names of the drilling mud components planned to be used, as required by OCS Order Number 7. Results of toxicity testing on similar types of muds are also included in Appendix #5, together with a list of references. A seawater nondispersed mud using attipulgite and bentonite for gel and barium sulfate as weighting material will be used. With rapid dilution, as discussed in the Mukluk Project Environmental Report, impacts from the mud discharge will be minimal.

#### MUD LOGGING

A state-of-the-art mudlogging unit will be used on Mukluk (Y-0334) #1 and Mukluk #2 wells. The unit will incorporate hydrocarbon and H<sub>2</sub>S detection equipment and alarm systems for which the sensitivity can be pre-selected, in addition to routine monitoring of the drilling mud, drilling parameters, and drill cuttings. Alarm systems designed to warn of any sudden rise or fall of rig mud pit volumes will also be incorporated. A description of the mud logging unit is included in the Application for Permit to Drill, Appendix #5, to be submitted separately.

#### WATER SOURCE

Water for drilling mud and domestic use will be obtained from seawater around the island. A desalination plant will be used to treat the seawater needed for domestic use. This plant will discharge concentrated seawater, and will be covered by an EPA National Pollutant Discharge Elimination System Permit (NPDES), for which an application has been filed.

A sea water mud system will be used for drilling, minimizing the fresh water requirements on the island.

#### ENVIRONMENTAL TRAINING PROGRAM

All personnel directly involved with the exploratory activities described in this plan will receive environmental and sociocultural training in compliance with OCS Lease Sale 71 Stipulation 3. The program will be divided into two parts, a basic program for all personnel working at or visiting the site, and a second, more detailed program for supervisory personnel.

All employees, agents, contractors, and subcontractors will view an MMS approved twenty-eight minute program which will brief them on environmental considerations of everyday operations in the area. The program has been designed to provide information on the physical environment; the biological environment including a description of common flora and fauna and the importance of minimizing impacts on these resources; prevention of oil spills and reporting and response requirements should a spill occur; archeological and cultural resources which are found in the Arctic Coastal Plain and requirements for the protection of archeological sites.

The 28 minute program has been approved by Minerals Management Service for training all personnel working at and visiting OCS Sale #71 area. A continuing supervisory program is being developed for approval by Minerals Management Service. The program will be provided to all on-site supervisors and their front-line managers, including Sohio employees, agents, contractors, and subcontractors.



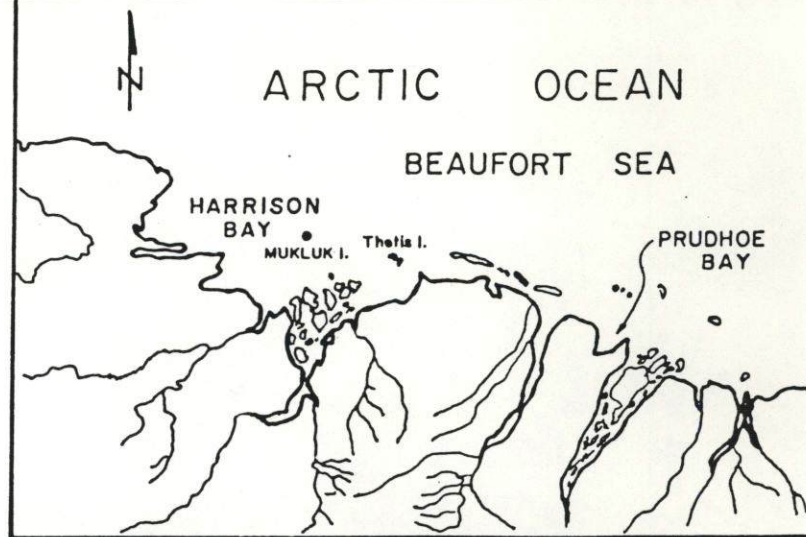
The program will provide information on the physical environment including descriptions of sea ice characteristics; the biological environment including descriptions of marine ecosystems, sensitive or highly productive ecosystems, and endangered and threatened species; the social environment including discussions of regional history, lifestyles (historic and present) and social organization (political, institutional, and community structures); and legal requirements for protection of historic and prehistoric sites and subsistence resources.

The text of the program will be presented to Minerals Management Service for approval.

Additional training in Arctic Survival will be given, and will consist of videotape presentations by a qualified instructor.

60k

THE SUBDIVISION BLOCK DRAWING BELOW IS FROM "OUTER CONTINENTAL SHELF OFFICIAL PROTRACTION DIAGRAM" NUMBER NR 5-4 DATED MAY 13, 1982 BY THE UNITED STATES DEPARTMENT OF THE INTERIOR - BUREAU OF LAND MANAGEMENT.



VICINITY MAP SCALE: 1" = 40 ml. ±

MUKLUK ISLAND WELL LOCATION

LAT = 70° 40' 59.260

LONG = 150° 55' 10.243

ALASKA STATE PLANE COORDINATES

ZONE 4

Y = 6,100,360.88'

X = 388,589.07'

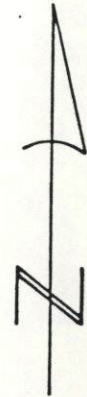
UNIVERSAL TRANSVERSE MERCATOR

COORDINATES ZONE 5

Y = 7,843,200 m.

X = 576,800 m.

	235	236	237	238	
					Y = 7,848,000
	279	280	281	282	
			MUKLUK ISLAND		Y = 7,843,200
	323	324	325	326	
					Y = 7,838,400
	367	368	369	370	
X = 572,000		X = 576,800		X = 581,600	



SCALE: 1" = 6,400 m.

INDICATES SUBDIVISION BLOCK NUMBERS (TYP.)  
BLOCK DIMENSIONS ARE 4800 METERS PER SIDE (TYP.)

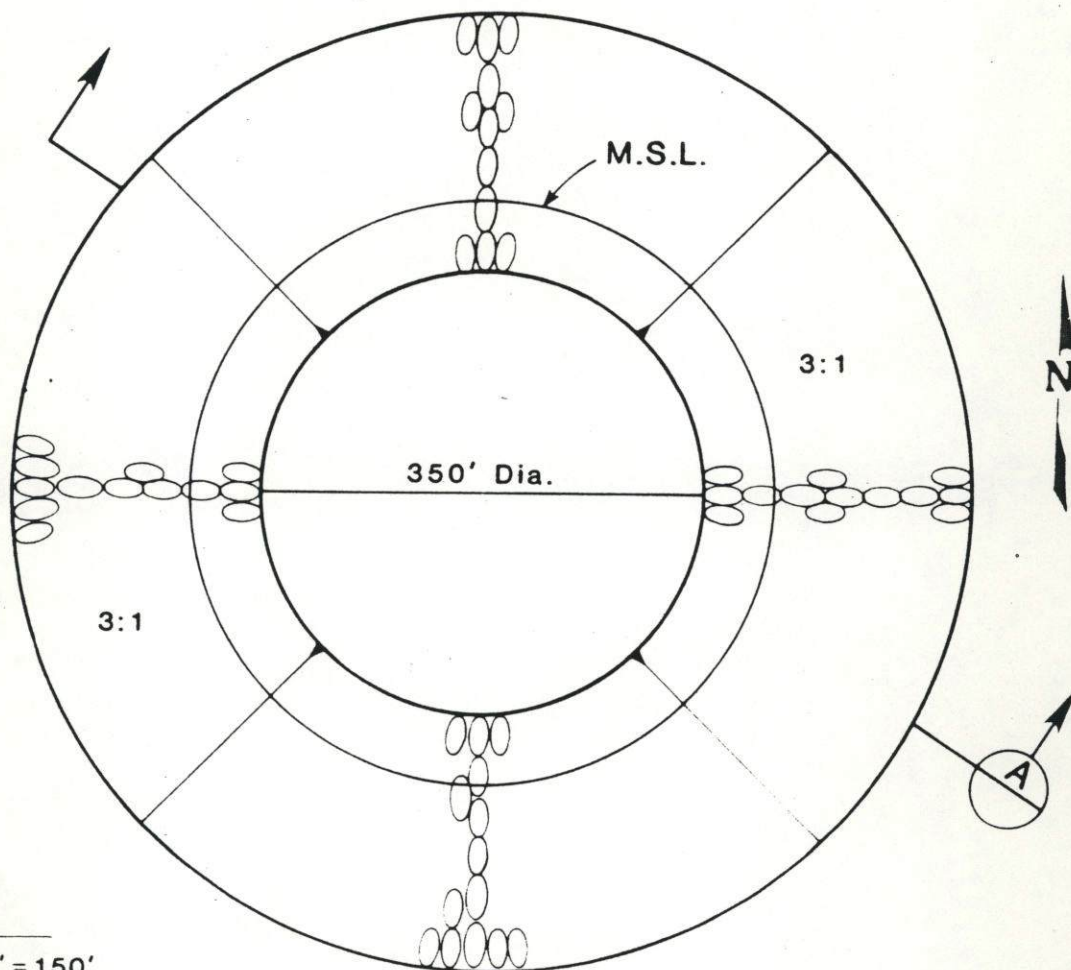
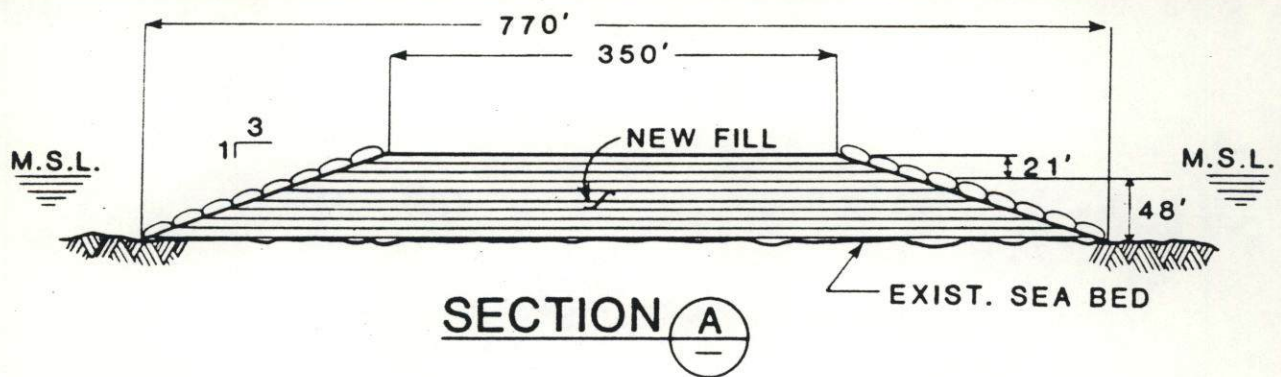
I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND LICENSED TO PRACTICE LAND SURVEYING IN THE STATE OF ALASKA AND THAT THIS PLAT REPRESENTS A COMPUTED LOCATION FOR THE PROPOSED MUKLUK ISLAND MADE BY ME OR UNDER MY SUPERVISION AND THAT ALL DIMENSIONS AND OTHER DETAILS ARE CORRECT.

APRIL 7, 1983

DATE:



PROPOSED <b>MUKLUK ISLAND</b> <b>WELL LOCATION</b>	
For <b>SOHIO CONSTRUCTION COMPANY</b> <b>FIGURE 1</b>	
PREPARED BY <b>NANA</b> <b>SURVEYING</b>	DATE: APRIL 7, 1983 SCALE: AS INDICATED CHKD. BY: BT




**PLAN**


SCALE: 1" = 150'

**NOTES:**

AMOUNT OF SEABED COVERED: 11 ACRES

QUANTITY OF GRAVEL REQUIRED: 700,000  
CUBIC YARDS

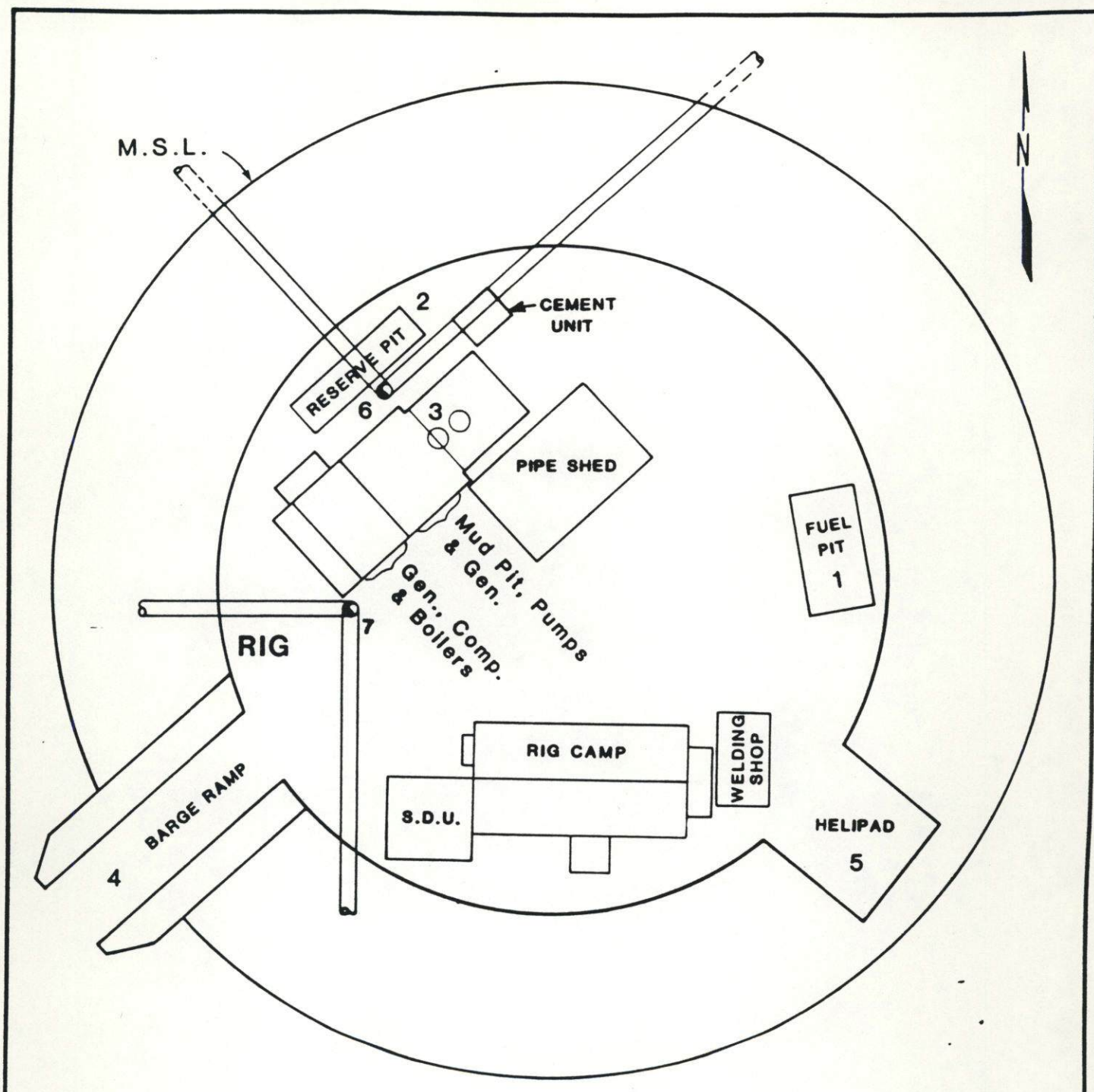
 NEW GRAVEL

 SOHIO ALASKA  
PETROLEUM COMPANY

**PROPOSED MUKLUK  
ARTIFICIAL ISLAND**

3/24/83

FIGURE 2



**LEGEND**

- 1 FUEL PIT
- 2 RESERVE PIT
- 3 DEEP CELLARS
- 4 BARGE RAMP
- 5 HELIPAD
- 6 CUTTINGS DISCHARGE LINES
- 7 WATER INTAKE CONDUIT

APPROXIMATE SCALE: 1" = 74'

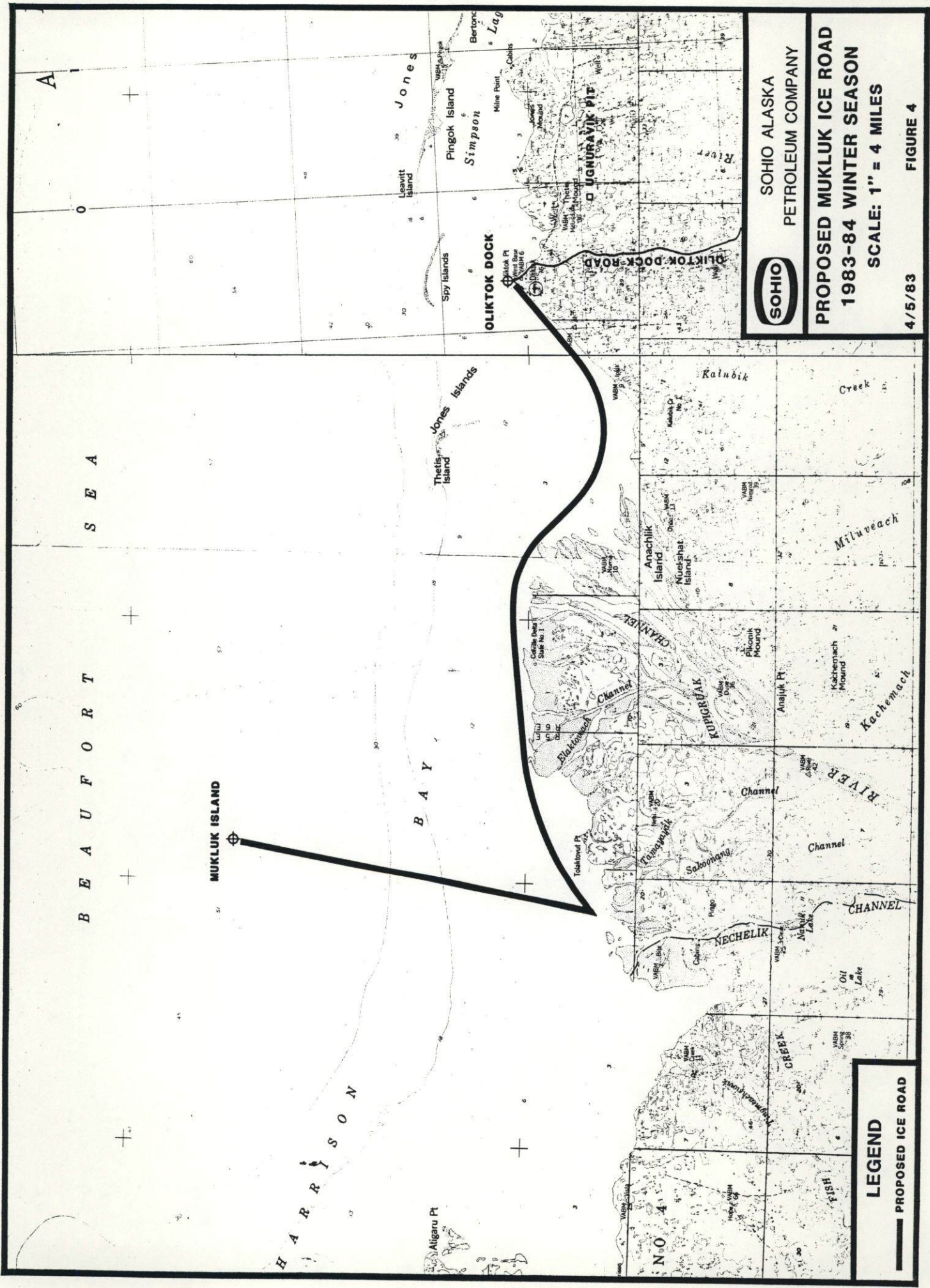


SOHIO ALASKA  
PETROLEUM COMPANY

**MUKLUK ISLAND -  
PRELIMINARY LAYOUT**

3/24/83

FIGURE 3



SOHIO ALASKA  
PETROLEUM COMPANY

**PROPOSED MUKLUK ICE ROAD  
1983-84 WINTER SEASON**

SCALE: 1" = 4 MILES

4/5/83

FIGURE 4

**LEGEND**

— PROPOSED ICE ROAD

TABLE A

## ESTIMATED QUANTITIES OF WASTE MATERIALS PER WELL FOR MUKLUK AREA EXPLORATION

<u>WASTE</u>	<u>QUANTITIES</u>		<u>Disposal</u>
	<u>Per Day</u>	<u>Per Well</u>	
Drilling Mud	54 bbl <sup>(1)</sup>	4,000 bbl <sup>(2) (3)</sup>	Discharge into Beaufort Sea in accord with NPDES permit. If oil-contaminated inject into the subsurface disposal zone or transport to approved onshore disposal site.
Cuttings	40 bbl <sup>(1)</sup>	3,000 bbl <sup>(3)</sup>	Discharge into Beaufort Sea in accord with NPDES permit. Remove any oil contamination prior to discharge or transport to an approved onshore disposal site
Well Completion Fluids Deslamination Unit Discharge		500 bbl	
	31,000 gal <sup>(6)</sup>		Discharge into Beaufort Sea in accord with NPDES permit.
Sewage and Gray Water	6,000 gal <sup>(4)</sup>		
Trash	1,000 lb <sup>(5)</sup>	90,000 lb <sup>(1)</sup>	Incinerate at site in approved incinerator.
Combustible materials; wood boxes, paper, kitchen wastes, etc.			
Junk Noncombustible items, such as oil drums, junk, tires, batteries, etc.	500-1,000 lb	45,000-90,000 <sup>(1)</sup>	Transport to an approved onshore disposal site.

(1) Based on 75 day drilling operation.

(2) Includes approximately 1,000 bbl of mud to be discharged or injected if oil contaminated upon completion of well.

(3) Estimated well depth, 9,442' subsea.

(4) Approximately 80 gal/day/person average consumption for 65 person camp.

(5) AP-42--Solid Waste Disposal--10 lb/trash/day/person plus drilling rig operation wastes.

TABLE B  
 PROJECTED AIR EMISSION  
 MUKLUK WELL #1 - ALASKA

SOURCE	SOX		TSP		NOX		VOC		CO	
	lb/day	Tns/2 Wls	lb/day	Tns/2 Wls	lb/day	Tns/2 Wls	lb/day	Tns/2 Wls	lb/day	Tns/2 Wls
Camp at Location										
Power Generation	39 (1)	3.5	18.9 (2)	1.7	160 (3)	15	8.5 (3)	.76	56 (3)	5
400 HP										
550 gpd										
Drilling Rig										
Power Generation	213 (1)	16	400 (2)	29.9	1,620 (3)	120	89 (3)	6.7	306 (3)	23
4 Each										
1400 Continuous										
HP ea.										
2250 gpd										
Steam Heaters	144 (1)	11	4 (4)	.3	44 (4)	3.3	2 (4)	.15	10.4	.75
2 @ 100HP										
2000 gpd										
Hot Air Heaters	124 (1)	9.3	3.5 (4)	.3	38 (4)	2.8	1.7 (4)	.1	8.6 (4)	.6
2 @ 3.5MM										
BTU/hr										
Incinerators (5)		.1		.3		.1		.7		.2
12 Tons/Total										
Incinerator (6)		.1	30	2.7	1.8	.2	4.5	.4	negative	.1
SDU Type	.3									
2 @ Loaders										
(1) Crane (7)	4.6	.5	4.4	.5	65	5.9	4.8	.5	13.8	1.25
(2) @ 400 amp										
Welder										
TOTAL	40.5		35.7		147.0		9.3		33.00	