In Reply Refer To: RP-2-1

OCT 15 1984

Getty Oil Company
Attention: Mr. Walter D. Cornelius
Post Office Box 53386
New Orleans, Louisiana 70153

Gentlemen:

Reference is made to your Initial Plan of Exploration and Environmental Report received September 28, 1984, for Lease OCS-G 6848, Block 869, Mobile Area. This plan includes the activities proposed for Well A.

In accordance with 30 CFR 250.34, revised December 13, 1979, and our letter dated January 29, 1979, this plan has been determined to be complete as of October 15, 1984, and is now being considered for approval.

Your plan control number is N-1844 and should be referenced in your communication and correspondence concerning this plan.

Sincerely yours,

(Orig. Sgd.) D.W. Solanas

D. W. Solanas
Regional Supervisor
Rules and Production

bcc: Lease OCS-G 6848 (OPS-2-3) (FILE ROOM)
OPS-2-5 w/Publ/c Info. Copy of the plan and ER (PUBLIC RECORDS ROOM)
DO-5

ADGobert:gcw:10/2/84 Disk 3b

NON-PROPRIETARY COPY

PLAN OF EXPLORATION

FOR

MOBILE AREA BLOCK 869 (OCS-G-6848)

SUBMITTED TO:

VINCE COTTONE
OCS ENVIRONMENTAL AFFAIRS COORDINATOR

GETTY OIL COMPANY
P. O. BOX 53386
NEW ORLEANS, LOUISIANA 70153
(504) 524-4861

Prepared by:
JOHN E. CHANCE & ASSOCIATES, INC.
Regulatory & Environmental Division
Project #84-8204

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NON-PROPRIETARY COPY

GETTY OIL COMPANY

PLAN OF EXPLORATION

MOBILE AREA BLOCK 869 (OCS-G-6848)

OFFSHORE ALABAMA

1. GENERAL INFORMATION

In accordance with 30 CFR 250.34-1 (b)(2), herewith is submitted a Plan of Exploration for the following locations:

Well #	Area	Surface Location	Bottomhole Location	TVD
A	Mobile Block 869	14000' FSL 3500 FEL Mobile Block 868	PROPRIETARY INFORMATION	

Due to the fact that Mobile Area Block 869 exists entirely within a fairway, the proposed exploratory well will be directional with a surface location in the adjacent block--Mobile 868.

Mobile Area Block 869 is located approximately fifteen (15) miles from the coast of Alabama. Mobile and Dauphin Island bases will be utilized as operations bases, where a dispatcher will be stationed twenty-four (24) hours per day. Water depths in this block range from thirty-six (36) to fifty-four (54) feet.

2. SCHEDULE OF ACTIVITIES

Drilling activity will commence on or about December 01, 1984. It is anticipated that it will take three hundred (300) days to drill, test and complete the proposed well. It is anticipated that the well will be drilled in two hundred ten (210) days. As proposed, drilling will be conducted on a continuous basis.

The fabrication and installation of any permanent structures, production facilities, and/or pipelines is contingent upon the success or failure of these wells. Should the wells indicate the presence of commercially producible reserves, a well protector may be installed to facilitate production of the well at a later date. The installation of a well protector would be conducted in accordance with OCS order No. 8 and would be marked in accordance with all Coast Guard regulations. An application showing the well protector, plan of installation, and location would be submitted to the Department of the Interior, Minerals Management Service prior to any installation.

3. DRILLING RIG AND SAFETY EQUIPMENT

The proposed exploratory well will be drilled using a typical jack-up or submersible drilling rig. The drilling rig used to drill the proposed well will be equipped with all appropriate safety equipment, such as a diverter system blowout preventers, mud testing and monitoring equipment, and auxilliary equipment, as required by OCS Order No. 2. Drip pans are installed, where practical, under all equipment that might be a source of

pollution. A typical diagram of the drilling rig is included as an attachment to this Plan.

4. PROJECTED DISCHARGES AND AIR EMISSIONS

Discharges anticipated as a result of the proposed activities will include domestic wastes which are treated in sanitation facilities on the drilling rig, water-based drilling fluids, drill cuttings, formation waters, and drill waters. No oil-based mud or waste products which might contain oil will be disposed of at the drilling site. Maximum projected air emissions related to the proposed activities can be found in the Air Quality Review Report attachment to this Plan. All projected emissions are well within allowable levels as established by the Department of the Interior and the Environmental Protection Agency.

5. SUPPORT BASE

The Mobile and Dauphin Island, Alabama, support bases which will be utilized by Getty Oil Company will serve the following purposes:

1. Personnel and equipment transportation base; and
2. Storage space for materials and equipment.

The Mobile shorebase is located on the west side of the Mobile River and consists of docking facilities, crane, and twenty-four hour communications.

The Dauphin Island shorebase is located on Dauphin Island one block

west of Dauphin Island Parkway and consists of docking facilities, heliport, crew quarters, small crane, and twenty-four hour communications.

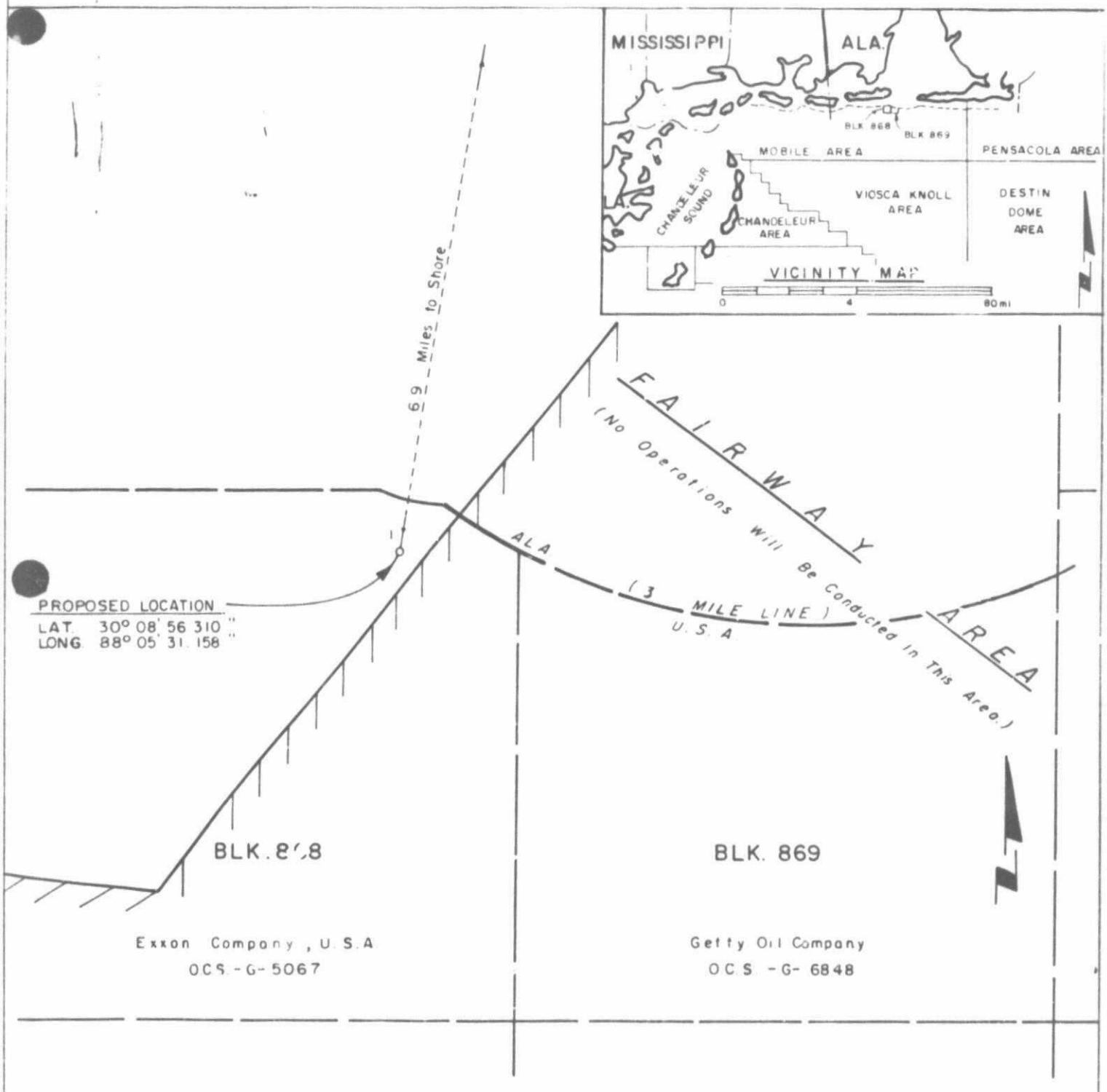
6. SAFETY IN OPERATIONS

Safety in drilling operations will be accomplished by Getty Oil Company through the use of trained operational personnel and employing all appropriate and available safety and pollution control mechanisms. The use of adequately designed casing programs, blowout preventers (and associated well equipment of sufficient pressure rating to contain anticipated pressures), and appropriate mud volumes and monitoring equipment are standard procedure for operations conducted by Getty Oil Company. Additionally, all shipboard safety requirements pursuant to Coast Guard regulations will be utilized and/or conducted by Getty Oil Company.

Getty Oil Company is a member of Clean Gulf Associates (CGA). Clean Gulf Associates is a cooperative organization formed to own and maintain a stockpile of oil spill clean-up equipment. This equipment, and supervisory personnel to advise member companies in the event of a spill incident, are available on a twenty-four (24) hour per day, seven (7) day per week basis. Oil spill equipment deployment time to the proposed activity site is approximately ten (10) hours from the nearest CGA base (Venice, LA). Information on the equipment maintained by CGA can be found in the Getty Oil Company, New Orleans District, Oil Spill Contingency Plan which has been approved effective August 1, 1984.

APPENDIX A

VICINITY MAP



VICINITY PLAT

0 2000 4000 FT

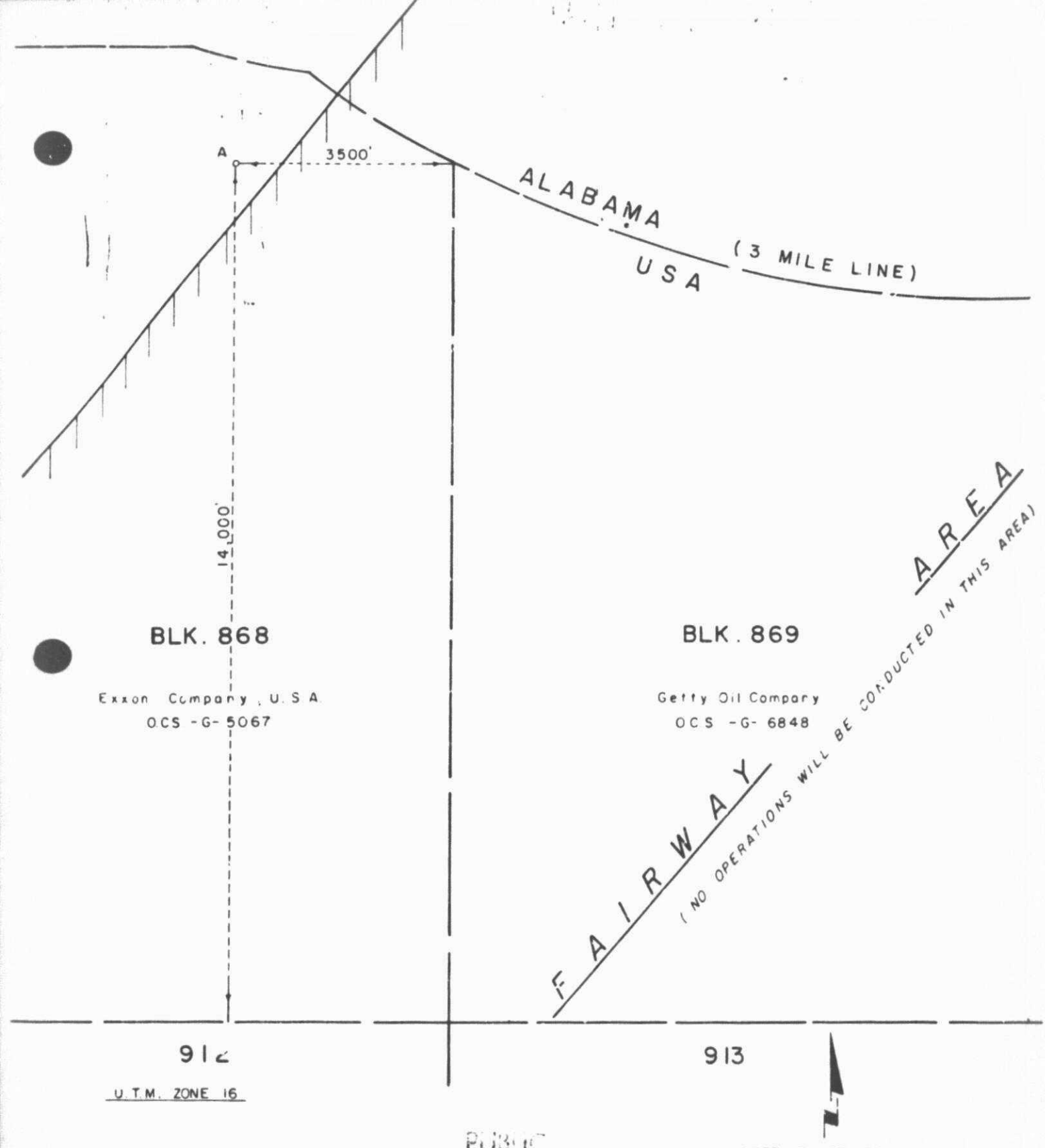
SCALE

PROPOSED MINERAL DEVELOPMENT
MOBILE AREA (NH 16-4)
GULF OF MEXICO

APPLICATION BY GETTY OIL COMPANY
SEPTEMBER 20, 1984 NEW ORLEANS, LOUISIANA

APPENDIX B

PROPOSED LOCATION PLAT



PUBLIC INFORMATION PLAT

GETTY OIL COMPANY

PLAN OF EXPLORATION
PROPOSED LOCATION

MOBILE AREA
(NH 16 - 4)

SCALE: 1" = 2000'

9/20/84

Prepared By:
John E. Chance Asscciates, Inc.

APPENDIX C

DRILLING MUDS AND ADDITIVES

Drilling Mud Components That May Be Utilized Offshore

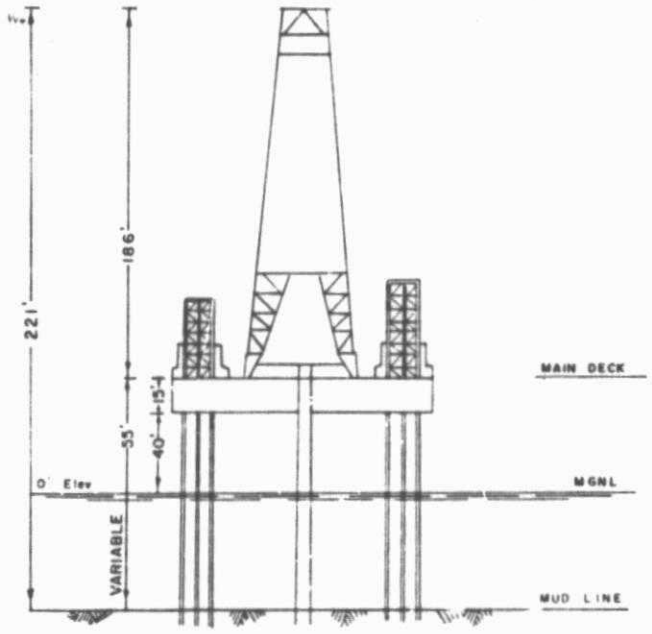
Product Trade Name	Common Name	Chemical Trade Name
I. Weight Materials and Viscosifiers		
MIL-BAR®	barite	barium sulfate
MILGEL®	bentonite	bentonite
SALT WATER GEL®	attapulgite	attapulgite clay
FLOSAL®	asbestos fiber	chrysotile asbestos
II. Dispersants (Thinners)		
UNI-CAL®	lignosulfonate	sodium lignosulfonate
DESCO®	modified tannin	sulso methylated tannin + sodium di chromate
III. Filtration Control Additives		
LIGCON®	causticized lignite	NaOH treated lignite
CHEMTROL®-X	polymer-treated lignite	polymer-treated lignite
DRISCOSE®	CMC	sodium carboxy methyl cellulose
DRISPAC®	PAC	polyanionic cellulose derivative
IV. Chemicals		
Caustic Soda	caustic	sodium hydroxide
Soda Ash	soda ash	sodium carbonate
Bicarb of Soda	bicarb	sodium bicarbonate
MIL-LIME	lime	calcium hydroxide

Drilling Mud Components That May Be Utilized Offshore (cont'd)

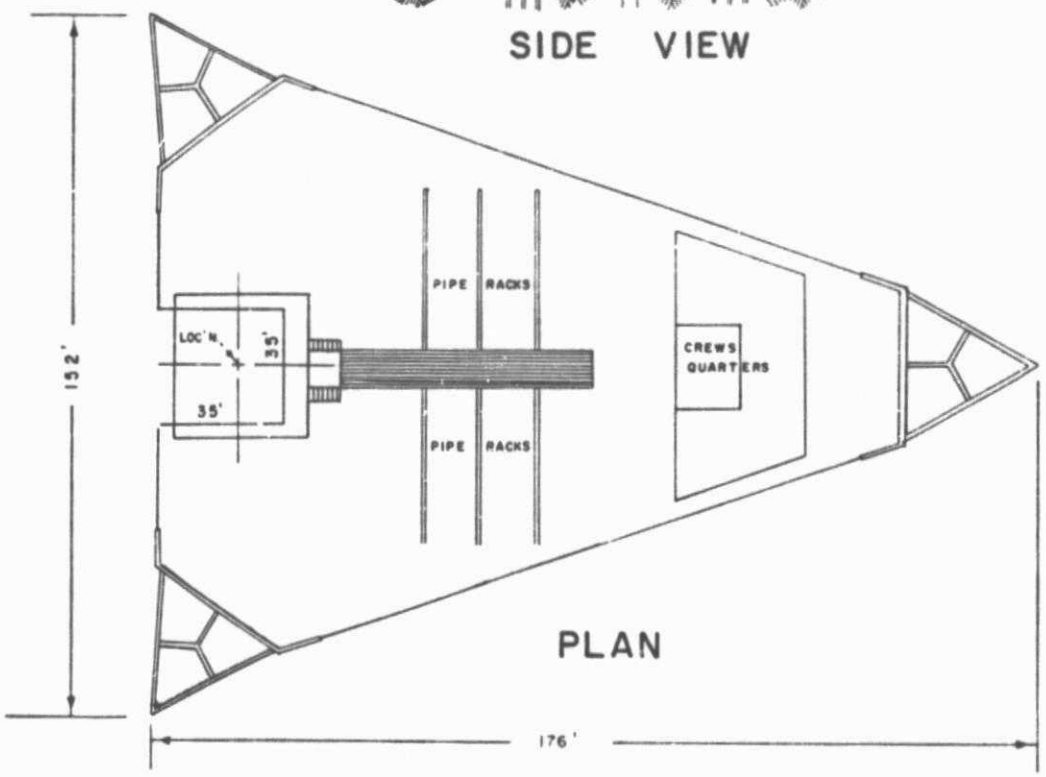
Product Trade Name	Common Name	Chemical Trade Name
V. Specialty Additives		
LD-8®	defoamer	non-hydrocarbon defoamer
Aluminum Stearate NOXYGEN™	defoamer oxygen scavenger	aluminum stearate catalyzed, sodium sulfite pwd
NOXYGEN™ L	oxygen scavenger	catalyzed ammonium bisulfite solution
LUBRI-SAL™	lubricant	biodegradable, non-polluting vegetable oil
SUPER SHALE-TROL® 202	Shale-Trol	Aluminum organic acid complex
MILCHEM® MD	drilling detergent	drilling fluid detergent
SOLTEX®	shale control additive	modified hydrocarbo (non polluting)
VI. Loss of Circulation Additives		
MIL-PLUG®	LCM	ground nut shells
MILMICA®	LCM	flake mica
KWIK-SEAL	LCM	combination of granules, flakes, and fibers
DIASEAL-M®	high water loss lost circulation squeeze material	non-hazardous diatomite blend

APPENDIX D

DIAGRAM OF TYPICAL JACK UP



SIDE VIEW



PLAN

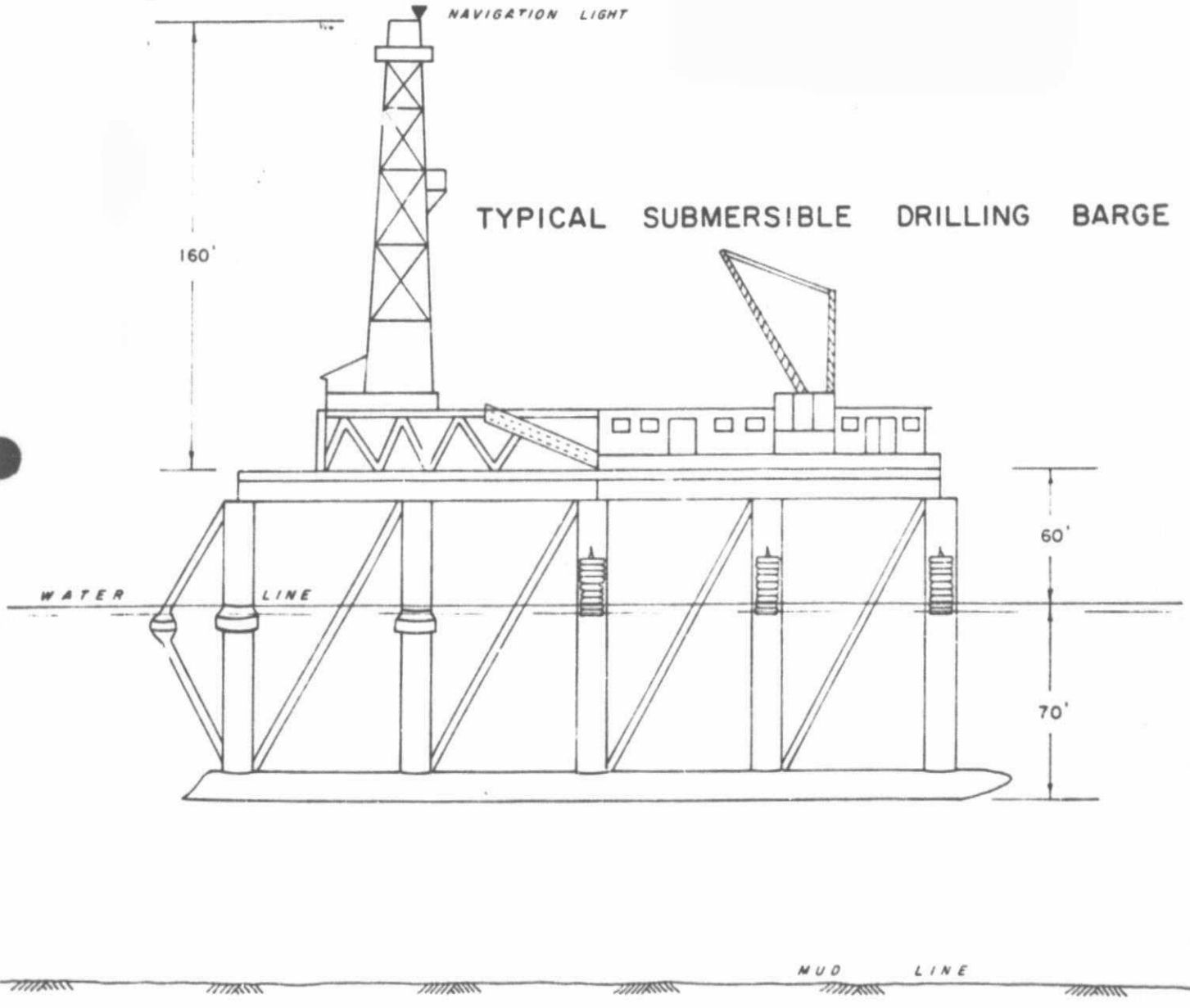
TYPICAL JACK-UP RIG & APPURTENANCES

PROPOSED MINERAL DEVELOPMENT
MOBILE AREA (NH 16-4)
GULF OF MEXICO

APPLICATION BY GETTY OIL COMPANY
SEPTEMBER 20, 1984 NEW ORLEANS, LOUISIANA

APPENDIX E

DIAGRAM OF TYPICAL SUBMERSIBLE



PROPOSED MINERAL DEVELOPMENT

MOBILE AREA (NH 16-4)

GULF OF MEXICO

APPLICATION BY GETTY OIL COMPANY

SEPTEMBER 20, 1984 NEW ORLEANS, LOUISIANA

APPENDIX F

SHALLOW HAZARD WELL SITE SUMMARY

September 19, 1984

TO: MR. J. H. DURRIE

FROM: J. D. COPE

SUBJECT: REVIEW OF NORTH CONCH SHALLOW HAZARDS SURVEY IN BLOCK 868 MOBILE AREA

On August 14 and 15, 1984, John E. Chance & Associates conducted a Potential Geologic Hazards and Cultural Resources Survey of Mobile Area Block 868 (northeast quarter). One exploratory well has been proposed for Block 869, with a surface location in Block 868 (Exxon's OCS-G-5067) due to a shipping fairway covering the former.

Chance utilized the following subsea remote sensing equipment during their operations: pinger profiler, proton magnetometer, side scan sonar, and watergun. The accompanying observations are based on a review of the data thus obtained.

The seafloor is dominated by sandwaves oriented so as to migrate to the south-southwest. Regional dip is to the southwest at near one-tenth (0.1) degree. Pinger profiler records indicate that this seafloor sand is twenty to fifty feet thick and is free from paleochanneling, as is the underlying unit. No near-surface faulting is apparent in the survey area.

MOBILE AREA BLOCK 868 LOCATION 14,000' FSL, 3,500' FEL

Water depth here is thirty-eight feet, with a local seafloor slope of about twenty-one hundredths (0.21) degree. A side scan sonar target is present nine hundred feet northeast of the location. On line three, it appears to be twenty feet long and two feet high, while on line eight, it appears to be about thirteen feet long with no visible height. This artifact should be avoided during rig positioning. The nearest magnetic anomaly is nineteen hundred feet to the southwest of the location, and has an intensity of one hundred thirty-six gammas. As this represents a very large ferrous artifact, this area, too, should be avoided during rig positioning. The nearest seismic amplitude anomaly is approximately twenty-three hundred feet southeast of the location. This anomaly appears to indicate the presence of biogenic gas at the following levels over portions of its extent: 1) 0.085 seconds, 2) 0.155 seconds, and 3) 0.235 seconds. Using velocity control from #1 OCS-G-5057, these times translate

to approximate depths of two hundred feet, four hundred twenty feet, and six hundred sixty feet, respectively. However, our drilling program calls for the borehole to pass a considerable distance below the lowest of these anomalies. Thus they should not affect our operations.

J. D. Cope

JDC/sh
cc: G. Greer Mogg
Vince Cottone

APPENDIX G

GEOLOGICAL STRUCTURE MAP

APPENDIX H

GEOLOGICAL CROSS-SECTION MAP

ENVIRONMENTAL REPORT

AND

AIR QUALITY REVIEW

FOR COASTAL MANAGEMENT CONSISTENCY DETERMINATION

PLAN OF EXPLORATION

GULF OF MEXICO

MOBILE AREA BLOCK 868 (OCS-G-5067)

FOR PROPOSED ACTIVITY IN
MOBILE AREA BLOCK 869 (OCS-G-6848)

SUBMITTED TO:
VINCE COTTONE
OCS ENVIRONMENTAL AFFAIRS COORDINATOR
P. O. BOX 53386
NEW ORLEANS, LOUISIANA 70153

(504-595-5904)

SEPTEMBER 21, 1984

Prepared by:
JOHN E. CHANCE & ASSOCIATES, INC.
Regulatory & Environmental Division
Project #84-8204

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ENVIRONMENTAL REPORT

LIST OF FIGURES

LIST OF TABLES

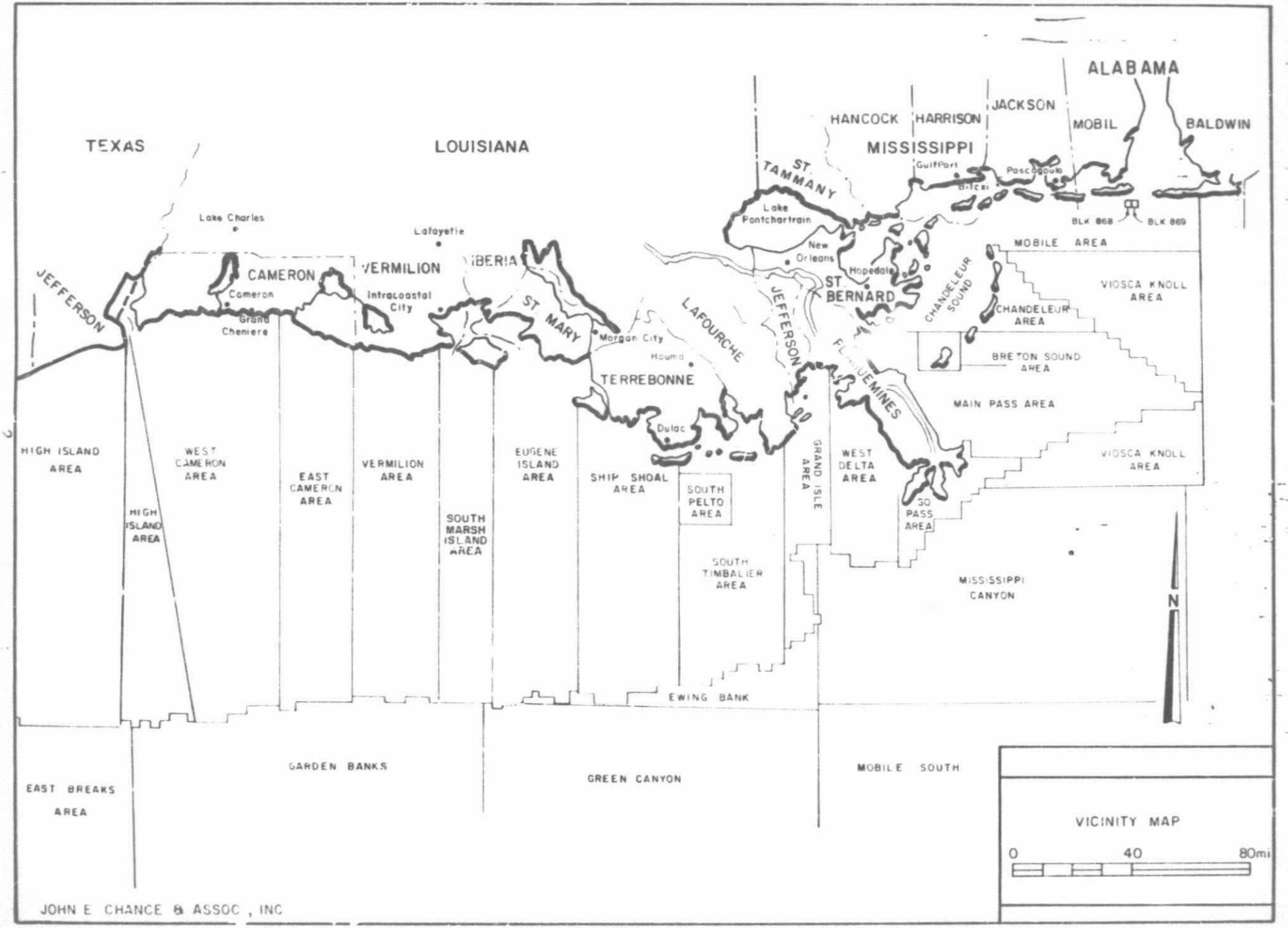
II. Description of the Proposed Action

This report addresses the activity proposed by Getty Oil Company for Mobile Area Block 868 (OCS-G-5067). The proposed surface location is in Mobile Area Block 868 and the proposed bottom hole location is in Mobile Area Block 869. The approximate location of the proposed activity is presented in Figure 1, a general vicinity map of the Outer Continental Shelf (OCS) lease areas off the coast of Alabama.

It is anticipated that a jack-up or submersible rig will be moved on location and one (1) exploratory well will be drilled. The surface location of the well and additional information regarding specific activities proposed by Getty Oil Company for this block are included in the attached Plan of Exploration.

The proposed activities will be carried out by Getty Oil Company with a guarantee of the following:

1. The best available and safest technologies will be utilized throughout the project. This includes meeting all applicable requirements for equipment types, general project layout, safety systems, equipment and monitoring systems.
2. All operations will be covered by M.M.S. approved Oil Spill Contingency Plan.
3. All applicable Federal, State, and local requirements regarding air emissions, water quality, and discharge for the proposed



JOHN E CHANCE & ASSOC , INC

activities, as well as any other permit conditions, will be complied with.

A. Travel Modes, Routes, and Frequencies

Getty Oil Company will operate out of their service base facilities established in Mobile and on Dauphin Island, Alabama. Getty Oil Company anticipates using two (2) helicopters, two (2) supply boats, and one (1) crew boat to support their Mobile Area activities.

The helicopters, operating from Dauphin Island, will travel to the location a total of fourteen (14) times per week, the crew boat will travel to the location a total of one (1) time per week, and the supply boats will travel to the location a total of seven (7) times per week.

It is anticipated that the transportation vessels will utilize the most direct route from the Mobile and Dauphin Island service bases. Because a vessel supporting Mobile Area Block 868 exploration activities, as outlined in the Plan of Exploration, may be scheduled for other stops in the area, the exact route for each vessel on each particular trip cannot be predetermined.

B. Support Base and New Personnel

Getty Oil Company will utilize support base facilities established

in Mobile and Dauphin Island. The Mobile base is approximately twenty-three (23) miles from the exploration activity site and the Dauphin Island base is located approximately nine (9) miles from the activity site.

Because helicopter and marine facilities are currently available at the service bases and are presently and continuously manned, no additional onshore employment is expected to be generated as a result of these activities.

The initial OCS Socio-Economic Data Base Report for the service base facilities utilized by Getty Oil Company will be prepared for submission pursuant to the specific parameters to be established by the DOI/MMS and scheduled to be issued at a later date.

C. New Support Facilities

The proposed exploration activities for Mobile Area Block 868 will not require the development of any new support facilities.

D. New or Unusual Technology

The exploration activities for Mobile Area Block 868 will not warrant utilizing any new or unusual technology that may affect coastal waters.

E. Location of the Proposed Activities

Mobile Area exploration activities are located approximately twenty-three (23) miles from Mobile, nine (9) miles from Dauphin Island and fifteen (15) miles from the Alabama coast of Mobile County. Figure 1 presents the location of the block in relation to the Alabama coast, as well as the geographic relationship between Mobile Area Block 868 and the other OCS lease areas.

III. DESCRIPTION OF THE AFFECTED ENVIRONMENT AND IMPACTS

A. Physical and Environmental

1. Commercial Fishing

Commercial fishing has traditionally provided an important economic base for a majority of the coastal communities along the Gulf of Mexico. In 1982, the Gulf coastal states landed 2.3 billion pounds of fish products representing a third of the nation's total, valued at over 600 million dollars. The five commercial fisheries of the greatest economic importance are the shrimp, menhaden, oyster, industrial bottom fish, and crab fisheries.

In 1982, Gulf fishermen landed over 209.9 million pounds of shrimp representing 75 percent of the nation's total and valued at over 425 million dollars. The northern Gulf shrimp fishery is comprised mainly of three species; the brown shrimp (Penaeus aztecus) , the white shrimp (P. setiferus) and the pink shrimp (P. duorarum). The smaller brown shrimp represent approximately 60 percent of the shrimp taken, the pink shrimp 10 percent, and the white shrimp account for a majority of the remainder. Three other species, the rock shrimp, royal reds, and the seabobs, are also taken commercially in the northern Gulf but together comprise less than 4 percent of the total shrimp landings.

Statistics compiled by the National Marine Fisheries Service indicate that 15,366,307 pounds of shrimp (heads on) valued at over 40 million dollars were landed at Alabama ports in 1983. It should be noted that catch statistics are recorded by the area landed and do not necessarily indicate that the species were actually caught in waters adjacent to the ports where they were landed.

Most shrimp are taken by trawl and are estuarine dependent in that they require estuaries during some stage of their life cycles. Mature shrimp leave the estuary for the open Gulf where they spawn (release eggs). The eggs and subsequent larval stages circulate freely in the currents of the OCS and can be found in virtually all OCS waters. Young juveniles then enter the estuary to feed, mature, and repeat the cycle.

The Mobile Area under consideration falls within the "high to moderate brown shrimp productivity area" (U.S.D.I., FREIS, Gulf of Mexico, 1983, Visual No. 4-I) wherein the possibility of shrimp fishing activity exists. Some documented impacts of petroleum exploration and production on the shrimp fishery include the removal of trawling space during the drilling and exploration phases and the possibility of fishing gear conflicts with existing well heads. These conflicts could result in loss of catch, loss of or damage to nets, vessel damage, and/or fishing downtime losses. Additional discussion of the impacts on the commercial fishing industry is contained in the Final Regional Environmental Impact Statement, Gulf of Mexico, Volume 1, pages 327 to 332 (U.S.D.I., 1983).

The Gulf oyster fishery provided over 40 [illegible]t of the oysters landed nationally in 1982 totaling 24.2 million pou[illegible]eat worth over 33 million dollars. Most Gulf oysters are take[illegible]ster dredging in estuarine and coastal waters within 5 miles of shore. Oyster landings at Alabama ports have fluctuated considerably over the last several years. Several environmental factors account for these fluctuations namely prolonged periods of reduced salinities, increased siltation resulting from dredging operations, closure of oyster bottoms to harvesting because of organic and inorganic wastes produced by municipal and industrial sources in northern Mobile Bay, and by biological factors (O'Neil and Mettee, 1982). According to National Marine Fisheries Service statistics 335,666 pounds of oysters valued at 417,153 dollars were landed at Alabama ports in 1983. The proposed activities in Mobile Area Block 868 are not expected to impact on the oyster fishery in Alabama.

In 1981 the Gulf States also landed 37.4 million pounds of blue crabs (Callinectes sapidus) valued at over 8 million dollars. Most were captured in "pots" (baited traps) in shallow estuarine or near shore waters. Blue crabs are also caught using "trotlines" (shallow, multibaited lines) and bottom trawls. These crabs are estuarine dependent with planktonic eggs and larval stages. Blue crab landings at Alabama ports totaled 1,411,629 pounds valued at 514,299 dollars in 1983, according to National Marine Fisheries Service statistics. The fishery for blue crabs is unlikely to be significantly affected by exploration activities in these blocks as it is

offshore of the coastal and estuarine waters in which this fishery operates.

Table 1 presents a list of commercially important shellfish found in this area of the Gulf.

The menhaden or "Pogy" fishery is the nation's second most valuable fishery accounting for 1.2 billion pounds valued at 47 million dollars or roughly half of the total 1981 fish poundage landed in the U. S. Spurred by a 55 percent increase in menhaden landings from the Gulf coast states, the U. S. had a record setting menhaden catch in 1982. Gulf landings were 1.9 billion pounds worth over 72 million dollars. Four species are said to comprise the menhaden fishery but the Gulf menhaden (Brevoortia patronus) accounts for most of the catch. Menhaden are processed into fish meal, fish oil, and fish solubles for industrial use. Menhaden are estuarine dependent with planktonic eggs. The activities as proposed are unlikely to have any adverse effect on the menhaden fishing as Mobile Area Block 868 lies outside the "Principal Menhaden Harvest Area" (U.S.D.I., FREIS, Gulf of Mexico, 1983, Visual No. 4-I).

Industrial bottomfishes make up a large fishery in the Gulf. Within this group are fishes taken on or very near the bottom by commercial trawlers. The following fishes generally account for 95 to 98 percent of the industrial bottomfish trawl fishery: croaker, spot, sand seatrout, silver seatrout, catfish, and longspine porgy (U.S.D.I., 1983).

TABLE 1
COMMERCIALLY IMPORTANT SHELLFISH
OF THE GULF OF MEXICO

COMMON NAME	SCIENTIFIC NAME	HARVEST METHOD
SHRIMP:		
Brown Shrimp	Penaeus aztecus	BT
White Shrimp	P. setiferus	BT
Pink Shrimp	P. duorarum	BT
Seabob	Xiphopenaeus kroyeri	BT
Royal Red Shrimp	Hymenopenaeus robustus	BT
Rock Shrimp	Sicyonia brevirostris	BT
Blue Crab	Callinectes sapidus	CT,BT,TL
Oysters	Crassostrea sp.	OD,OT

BT Bottom Trawl

CT Baited Crab Trap

OD Oyster Dredge

OT Oyster Tongs

TL "Trotline"

Many of the species taken in the industrial bottomfish category spawn in offshore waters, and it is possible that the eggs might be adversely affected by contact with drill cuttings and/or drilling mud if they were present near the rig during such releases. These discharges may also cause temporary relocation of adults due to inundation of feeding ground at the drill site. Fishing activity will be temporarily interrupted by the placement of the drilling rig but no long-term effects are anticipated as a result of this proposal. Industrial bottomfish are usually sold as industrial fishmeal and fish solubles, but this group also produces some foodfish, pet food, and FPC (fish protein concentrate).

Other species for which significant commercial fisheries exist include striped mullet, groupers, snappers, and flounders. Mullet are taken near shore and in estuarine waters in seine nets, gill nets, and cast nets. Snappers and groupers are taken by hook and line throughout the OCS wherever naturally occurring or man-made benthic features provide sufficient habitat. Flounders are also caught commercially by hook and line and are taken seasonally in very shallow estuarine water by gig (barbless spear). Weakfishes, croakers, and drums are also taken commercially by hook and line as foodfishes. Table 2 presents a list of commercially important industrial bottomfishes and sport fishes found in the Gulf of Mexico.

Overall, commercial fishermen have benefited from the growth of the petroleum industry in the OCS water of the Gulf of Mexico. While technological improvements have enabled commercial fishermen to increase

TABLE 2

A CHECK LIST OF COMMERCIAL & SPORT FISHES
OF THE NORTHERN GULF OF MEXICO[1]

COMMON NAME	SCIENTIFIC NAME[2]
Gulf Menhaden	Brevoortia patronus
Sea Catfish	Arius felis
Gafftopsail Catfish	Bagre marinus
Warsaw Grouper	Epinephelus nigritus
Jewfish	Epinephelus itajara
Red Grouper	Epinephelus morio
Rock Hind	Epinephelus adscensionis
Florida Pompano	Trachinotus carolinus
Red Snapper	Lutjanus campechanus
Sheepshead	Archosargus probatocephalus
King Whiting	Menticirrhus saxatilis
Black Drum	Pogonias cromis
Atlantic Croaker	Micropogonias undulatus
Spotted Seatrout	Cynoscion nebulosus
Sand Seatrout	Cynoscion arenarius
Red Drum	Sciaenops ocellata
Spot	Leiostomus xanthurus
Striped Mullet	Mugil cephalus
King Mackerel	Scomberomorus cavalla

TABLE 2 (cont'd)

Spanish Mackerel	*Scomberomorus maculatus*
Unclassified Flounders	*Paralichthys* spp.

1. Based on landing statistics compiled by the National Marine Fisheries Service, New Orleans, Louisiana and Bayou La Batre, Alabama.
2. Scientific nomenclature generally from Hoese and Moore (1977).

the volume of landings, development of the petroleum industry has also had a positive impact on fishing. Because OCS petroleum development is dependent on extensive marine vessel utilization, harbors and ports have been improved, port access waterways have been expanded and improved, and the availability and quality of marine vessel maintenance and repair facilities have increased significantly. These improvements have definitely had a positive effect on fishermen (Lassiter, 1980).

2. Shipping

A designated shipping fairway covers all of Block 869. For this reason Getty Oil Company will directional drill from Block 868. A shipping fairway is also located in Block 868, covering six-tenths (6/10) of the block. It is likely that the marine vessels supporting these blocks will utilize the shipping fairway located north of the block to gain access to the support bases; however, it is unlikely that the marine vessels will have a significant effect on fairway traffic. The drilling rig and each of the marine vessels will be equipped with all U. S. Coast Guard required navigational safety aids.

3. Recreation

The open Gulf encompasses a broad expanse of saltwater which is utilized by numerous sports fishermen and a small but rapidly increasing number of SCUBA divers. Many fishermen charter boats to deep-sea fish and sport dive in the northern Gulf. The states of Alabama, Mississippi, and

Louisiana support approximately 120 charter boats which conduct a majority of their fishing activities in the waters of the OCS (U.S.D.I., 1983). Petroleum platforms in the northern Gulf provide recreation for fishermen and scuba divers because they act as artificial reefs attracting and establishing aquatic communities including highly sought after food and sport fishes. The reef effect created by petroleum platforms is well known and is evidenced by the numerous private boat owners who regularly visit offshore facilities to harvest food and sport fishes.

Frequently, offshore rigs and platforms serve as navigation points for small commercial and recreational marine craft. Manned drilling rigs and platforms can also provide a haven for small craft operators forced to abandon their vessels during storms or following boat accidents. The installation and use of navigational aids, lifesaving equipment, and other safety requirements pursuant to Coast Guard regulations are standard procedure for drilling rigs and marine vessels utilized by Getty Oil Company.

4. Cultural Resources

Visual No. 11 from the Regional Environmental Impact Statement (U.S.D.I, 1985) indicates that Mobile Area Block 868 falls within the zone designated as an area with a high probability of occurrence of historical cultural resources. John E. Chance & Associates, Inc. conducted a cultural resources survey of the area. A copy of that report is included as an attachment to the Plan of Exploration. Several known shipwrecks have

been recorded in the area, however, it is unlikely that there will be any significant impacts upon culturally significant resources.

5. Ecologically Sensitive Features

Mobile Area Block 868 is located approximately nine (9) miles from the Bon Secour National Wildlife Refuge and thirteen (13) miles from the Gulf Islands National Seashore. There are no other known ecologically sensitive areas near Mobile Area Block 868.

The Mobile and Dauphin Island support bases, which will be utilized as operations bases for Mobile Area Block 868 exploration activities, are located approximately twenty (20) miles from Gulf Island National Seashore, twenty-two (22) miles from the Bon Secour National Wildlife Refuge and forty-eight (48) miles from Fort Pickens (U.S.D.I. FREIS, Gulf of Mexico, 1983 Visual No. 3).

In general if all activities are executed as planned, encountering no unusual circumstances, the environmentally sensitive areas will not be affected.

6. Existing Pipelines and Cables

The shallow hazards survey performed for Getty Oil Company by John E. Chance & Associates, Inc. and included as an attachment to the Plan of Exploration indicates that the near-surface sediments are presently stable.

The bottom topography is fairly irregular characterized by gentle ridge and sand wave formations. There were no subsurface deformational features such as slumps or faults observed within the area. Bottom sediments are predominantly sand which may be subject to scour under storm conditions. Possible sedimentary gas within the upper 40 feet of deposits are anticipated to be low volume, low pressure accumulations. Deeper zones of trapped gas in the southeast corner of the survey area, are expected to exhibit increased in situ pressures. Magnetic anomalies, which represent unknown forms of debris should be avoided when considering potential drilling sites. Getty Oil Company is aware of these potential hazards and has taken the necessary precautinary measures.

There are no known pipelines or man made structures in Mobile Area Block 868.

7. Other Mineral Uses

There are no other known mineral resources located in or near Mobile Area Block 868.

8. Ocean Dumping

The major sources of ocean dumping related to OCS petroleum exploration activity are drilling fluids, or "muds," and drill cuttings. After the exploratory drilling in Mobile Area Block 868 is completed, Getty Oil Company anticipates dumping their excess water-based drilling fluids

(approximately 800 - 1,200 bbls). If any oil-based mud is used in the drilling operations, it will be transported to shore for proper disposal.

Drill cuttings are brought up by the drilling mud and range in size from grains of sand to pebbles. These cuttings are separated and sifted and then disposed overboard. Treated domestic wastes and drill waters will also be disposed at the proposed drilling site. There will be no intentional discharge of any oily or hazardous materials in violation of DOI or EPA regulations.

9. Endangered or Threatened Species

Endangered or threatened species which might occur in Mobile Block 868 are blue whale (Balaenoptera musculus), finback whale (Balaenoptera physalus), humpback whale (Megaptera novaeangliae), sei whale (Balaenoptera borealis), sperm whale (Physeter catodon), Kemp's ridley turtle (Lepidochelys kempii), green turtle (Chelonia mydas), hawksbill turtle (Eretmochelys imbricata), leatherback turtle (Dermochelys coriacea) and loggerhead turtle (Caretta caretta) (U.S.D.I., Region IV Endangered Species Notebook).

Endangered and threatened species expected to occur in the vicinity of the onshore bases are Florida manatee (Trichechus manatus), bald eagle (Haliaeetus leucocephalus), Arctic peregrine falcon (Falco peregrinus tundrius), and brown pelican (Pelecanus occidentalis) (U.S.D.I., Region IV Endangered Species Notebook). No designated bald eagle nesting or feeding

habitat occurs in Alabama (U.S.D.I., FREIS, Gulf of Mexico, 1983, Visual No. 3); however, bald eagles can be expected to feed on fish or dead animals along the coast (O'Neil and Mettee, 1982). The brown pelican was a common resident of Alabama but this species has experienced a sharp population decline since 1956 (O'Neil and Mettee, 1982). Arctic peregrine falcons are migrants through the area and are not considered an important component of the resident bird population (O'Neil and Mettee, 1982). The loggerhead turtle is known to have nested on Dauphin Island and Fort Morgan Peninsula (Jackson and Jackson, 1970 and Mount, 1975 both cited in O'Neil and Mettee, 1982). Caldwell and Caldwell (1973 cited in O'Neil and Mettee 1982) have reported the Florida Manatee from coastal Alabama. The presence of marine mammals in coastal Alabama is considered sporadic and probably no resident populations exist (O'Neil and Mettee, 1982). It is unlikely that the offshore or onshore activities related to Mobile Area Block 868 exploratory drilling will have any effect on the previously named species.

B. Socio-Economic Impacts

In accordance with DOI/MMS guidelines (OS-7-01), dated November 20, 1980, the initial OCS Data Base Report will be developed for submission on or before the prescribed due date. Subsequent Environmental Reports

provided by Getty Oil Company will address this data and related activity impacts as required.

IV. UNAVOIDABLE ADVERSE IMPACTS

The greatest threat to the natural environment is caused by inadequate operational safeguards that may cause or contribute to an oil spill or well blowout. These accidents can be greatly reduced in number by utilizing trained operational personnel and employing all available safety and pollution control systems. These measures are standard operating procedure for Getty Oil Company. Getty Oil Company has an approved Oil Spill Contingency Plan.

It should be noted that most large crude oil and refined products spills have occurred during transportation and not during drilling or production operations. Furthermore, the probability of an oil spill occurring during exploratory drilling operations is low (Danenberger, 1976). Transportation and river runoff contribute an estimated 34.9 percent and 26.2 percent, respectively, to the hydrocarbon contamination of the world's oceans while offshore production activities account for only 1.3 percent (National Academy of Sciences, 1975). Natural seeps of petroleum and natural gas, which occur throughout the northern Gulf of Mexico (Zo Bell, 1954; Geyer, 1979), contribute an estimated 9.8 percent to the contamination of the world's oceans (National Academy of Sciences, 1975). Additionally, it was noted in the executive summary of a recent study of petroleum production platforms in the central Gulf of Mexico (Bedinger, 1981), that natural disturbances (i.e. river flooding and storms) can more greatly affect normal biological communities that the current industrial development of the Louisiana OCS. The preceding

discussion is not intended to minimize the significance of major oil spills resulting from petroleum exploration and production activities but is provided to establish a perspective relative to their probable occurrence.

Thirteen of the forty-six blow-outs on the OCS between 1971 and 1978 were associated with exploratory drilling activities, none of which released any oil to the marine environment (Danenberger, 1980). The IXTOC I spill of 1979, however, demonstrates that advanced drilling technology and available safety and pollution control systems are not infallible. Most spills are subjected to immediate containment and cleanup efforts. The ultimate fate of oil spilled in the marine environment is generally considered to be one or a combination of the following: evaporation and decomposition in the atmosphere, dispersal in the water column, incorporation into sediments, and oxidation by chemical or biological means (National Academy of Sciences, 1975).

The unavoidable adverse impacts that will occur as a result of the exploratory drilling and discharging of drilling fluids, and treated sewage will be few in number and temporary in nature. The primary adverse impacts include a localized degradation of water and air quality in the vicinity of the drilling site, the potential obstruction to commercial and recreational fishing vessels, and the disruption and/or killing of benthic and/or pelagic organisms during location of the drilling rig and during disposal of muds, cuttings, and domestic wastes and sewage.

Discharging from the drill site is inevitable during OCS operations, particularly during exploration. Any materials that may contain oil or other hazardous materials, and therefore would have a much greater adverse impact on the environment, will not be discharged intentionally. Any discharging will be done pursuant to all DOI and EPA regulations. The discharges to be disposed overboard as a result of the exploration activity will include domestic waste and sewage that is treated on the rig before discharging, drill cuttings, and excess water-based mud.

The environmental fate and effects of drilling muds and cuttings has been extensively addressed in a recent symposium (See Ayers et al., 1980 for detailed discussions). The discharging of drill cuttings and water-based mud will result in an increase in water turbidity, burial of benthic organisms, and possible toxic effects on marine organisms in the immediate vicinity of the drilling rig. A reduction in photosynthetic activity and plankton populations can also be expected as a result of discharging. It is expected, however, that pelagic and benthic organisms will repopulate the area rapidly after discharging if the effects are minimal and intermittent as expected.

Offshore activities generate a small but significant amount of air pollutants due to the emissions of diesel engines; therefore, the deterioration of air quality is unavoidable in an OCS operation area. In most instances, these emissions affect only the immediate exploration activity site and are rapidly dissipated by the atmosphere depending upon climatic conditions. An Air Quality Review Report has been performed for

Mobile Area Block 868 and is included as an attachment to this Environmental Report.

Commercial and recreational fishing would be affected by OCS development, but primarily in terms of inconvenience and interference. Although the unavoidable adverse impacts could include some smothering of shellfish, snagging of trawl nets, reduction of area presently used for unrestricted fishing, and minimal finfish killing, commercial fishing activities would not be significantly effected, except in the unlikely event of an oil spill. An oil spill would result in serious economic losses due to the contamination of commercial fish species over a large area.

There is a remote possibility that offshore areas of historical, cultural, or biological significance could be damaged or destroyed by OCS exploration operations. Visual No. 11 from the Regional Environmental Impact Statement (U.S.D.I., 1983) indicates that no archeological, cultural, or historic areas are in the vicinity of Mobile Area Block 868. John E. Chance and Associates, Inc.'s cultural resources report also did not identify any known archeological, cultural, or historic resources. Getty Oil Company will make every effort to avoid disturbing any historically, culturally, or biologically significant feature.

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APPENDIX I

COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATE

COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

EXPLORATION •
Type of Plan

MOBILE AREA BLOCK 868 (OCS-G-5067)
Area and Block

The proposed activities described in detail in the attached Plan comply with Alabama's approved Coastal Management program and will be conducted in a manner consistent with such Program.

GETTY OIL COMPANY
Lessee or Operator

Certifying Official

Sept. 28, 1984
Date