NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

25 M-198B

ISSUED: February 28, 1983

Forwarded to:

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President
MOBIL Oil of Canada, Ltd.
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SAFETY RECOMMENDATION(S)

M-83-34 and -35

About 0300 on February 15, 1982, the U.S. mobile offshore drilling unit (MODU) OCEAN RANGER capsized and sank during a severe storm about 166 nautical miles east of St. John's, Newfoundland, Canada; 84 persons were aboard. Twenty-two bodies have been recovered, and the remaining 62 persons are missing and presumed dead. The OCEAN RANGER is currently resting on the bottom in an inverted position in about 260 feet of water; its estimated value was $125 million. 1/

Canadian government regulations require a standby vessel to be assigned to each drilling rig at all times as a vital part of the survival system of MODU's. Norway and the United Kingdom also have similar requirements. Standby boats are unable to remain close to their rigs in heavy weather because of the danger of drifting into the anchor cables or anchor buoys which, in the case of the OCEAN RANGER, were about 1 mile in scope. Due to the severe weather conditions during the night of February 14 and 15, the SEAFORTH HIGHLANDER, the BOLTENTOR, and the NORDERTOR ran upwind for several miles, turned, and then proceeded slowly downwind of their respective rigs for several miles before turning upwind again. At the time of the distress call, both the BOLTENTOR and the NORDERTOR were within 2 miles of their rigs. The SEAFORTH HIGHLANDER was 7 miles away from the OCEAN RANGER but was on scene within 1 hour after the first distress message was sent. The first Canadian Forces rescue helicopter, which was located about 125 nmi from St. John's, did not arrive in the area until over 8 hours later. The SEAFORTH HIGHLANDER, the BOLTENTOR, the NORDERTOR, the Mobil contracted helicopters, and the Canadian Forces Search and Rescue aircraft, in spite of severe wind and sea conditions, made every effort to save the crew of the OCEAN RANGER. Wind speeds were above 45 knots, the normal maximum takeoff velocity, when the MOBIL helicopters took off from St. John's about 0330 on February 15. Throughout the day on February 15 and the next day, rough sea conditions continued as vessels and aircraft searched for survivors.

1/ For more detailed information, read Marine Accident Report--"Capsizing and Sinking of the U.S. Mobile Offshore Drilling Unit OCEAN RANGER Off the East Coast of Canada, 166 Nautical Miles East of St. John's, Newfoundland, on February 15, 1982" (NTSB-MAR-83-2).

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MODU's, such as the OCEAN RANGER, require frequent replenishment of fuel, stores, and drilling materials while drilling. Supply boats provide this support in addition to periodically serving as standby vessels. Although the SEAFORTH HIGHLANDER was rigged for towing and setting anchors, it was not adequately equipped to recover persons from the sea in the storm conditions that existed during the night of February 14 and 15, 1982. Use of equipment, such as liferings, nets, and liferafts, that was aboard the SEAFORTH HIGHLANDER required the crewmembers of the standby boat to expose themselves to extremely hazardous conditions on open decks to effect any rescue and required participation by those being rescued if any attempt was to be successful. The testimony of the crewmembers of the SEAFORTH HIGHLANDER, in describing the events following the capsizing of the OCEAN RANGER's lifeboat, clearly showed that the effects of hypothermia quickly rendered the OCEAN RANGER's crewmembers helpless in the cold water. Several European marine equipment suppliers have developed rescue baskets that do not require the survivors to touch the hull of the rescue vessel and involves little or no participation by those being rescued. If the SEAFORTH HIGHLANDER had been equipped with such a device when its crewmembers attempted to recover the survivors from the OCEAN RANGER, some lives possibly could have been saved.

ODECO and MOBIL each had an emergency procedures manual for the OCEAN RANGER. ODECO's manual contained information to be followed by the toolpusher for the various types of emergencies that could occur aboard the drill rig, recognizing that each situation required a separate evaluation according to the prevailing conditions. The manual stated that, if a storm was forecast with winds of 100 mph or more (87 knots), evacuation of the rig should be considered. Although the toolpusher is described as having the responsibility for any decision to abandon the rig, the manual lists various steps he should follow to enable him to reach a decision -- contacting the shore based manager (MOBIL superintendent), requesting additional weather information, reviewing the past wind and sea conditions to see if they are increasing or decreasing. The manual also says that he and the shore manager should consult to devise evacuation if necessary. The NORDCO, Ltd., weather forecast predicted 75-knot (86 mph) winds, gusting to 90 knots (104 mph), which was above the suggested evacuation level. The maximum wind gust recorded on the OCEAN RANGER (at the height of the anemometer) was 88 knots (101 mph) at 1630 on February 14. However, at 2330, the wind had decreased to 58 knots (67 mph). The OCEAN RANGER's toolpusher hungoff the drill string and disconnected the marine riser in accordance with the ODECO emergency procedures manual. However, the toolpusher did not discuss evacuation with the MOBIL superintendent in St. John's.

As a result of its investigation, the National Transportation Safety Board recommends that MOBIL Oil of Canada, Ltd.:

> Require that vessels engaged as standby boats for mobile offshore drilling units be equipped with apparatus for recovering persons from the water under adverse sea conditions and that the crews of standby boats be provided with exposure suits designed for rescue operations. (Class II, Priority Action) (M-83-34)
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> Revise the Contingency Plans and Emergency Procedures Manual for mobile offshore drilling units to include a detailed disaster action plan for heavy weather damage similar to the disaster action plans for fire, explosion, or collision. (Class II, Priority Action) (M-83-35)

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility ". . . to promote transportation safety by conducting independent accident investigations" (P.L. 93-633). The Safety Board is vitally interested in any actions taken as a result of its safety recommendations. Therefore, we would appreciate a response from you regarding actions taken or contemplated with respect to the recommendations in this letter.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and McADAMS, BURSLEY, and ENGEN, Members, concurred in these recommendations.

By: Jim Burnett
Chairman