

NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

ISSUED: November 21, 1984

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Forwarded to:

Mr. Edward McGhee  
Executive Vice President  
International Association of  
Drilling Contractors  
Post Office Box 287  
Houston, Texas 77210

SAFETY RECOMMENDATION(S)

M-84-77 and -78

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About 2355 on October 25, 1983, the 400-foot-long United States drillship GLOMAR JAVA SEA capsized and sank during Typhoon LEX in the South China Sea about 65 nautical miles south-southwest of Hainan Island, People's Republic of China (PRC). Of the 81 persons who were aboard, 35 bodies have been located, and the remaining 46 persons are missing and presumed dead. The GLOMAR JAVA SEA currently is resting on the bottom of the sea in an inverted position in about 315 feet of water; its estimated value was \$35 million. 1/

Since 1976, the Safety Board has investigated two other major marine accidents with a large loss of life involving vessels engaged in offshore oil exploration. On April 15, 1976, the self-elevating rig OCEAN EXPRESS 2/ capsized and sank with the loss of 13 lives, and on February 15, 1982, the column-stabilized OCEAN RANGER 3/ capsized and sank with the loss of 84 lives. The OCEAN EXPRESS, the OCEAN RANGER, and the GLOMAR JAVA SEA accidents all occurred when there was a division of authority and responsibility in time of an emergency. At the time of the capsizing and sinking of the OCEAN EXPRESS, the bargemover (master) who worked for the Ocean Drilling and Exploration Company (ODECO), the owner and operator of the rig, was technically in command, but the ODECO toolpusher 4/ was the person normally in charge of the rig.

1/ For more detailed information, read Marine Accident Report—"Capsizing and Sinking of the United States Drillship GLOMAR JAVA SEA in the South China Sea, 65 Nautical Miles South-Southwest of Hainan Islands, People's Republic of China, October 25, 1983" (NTSB/MAR-84/08).

2/ Marine Accident Report—"Capsizing and Sinking of the Self-elevating Mobile Offshore Drilling Unit OCEAN EXPRESS, near Port O'Connor, Texas, April 15, 1976" (NTSB-MAR-79-5).

3/ 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, February 15, 1982" (NTSB-MAR-83-2).

4/ The industrial supervisor of drilling operations was the toolpusher.

The bargemover decided that there was no need to abandon the rig, but the toolpusher and the Marathon Oil Company drilling superintendent ordered the rig abandoned. Although there was a U.S Coast Guard (USCG) licensed master aboard the OCEAN RANGER, the person-in-charge (toolpusher), in accordance with USCG regulations, was an unlicensed, undocumented individual who was responsible for any decision to abandon the rig. Moreover, ODECO had designated another unlicensed, undocumented individual to conduct all drills, including fire and abandon ship drills. The Mobil Oil Company drilling foreman aboard the OCEAN RANGER, who had control of the helicopter and supply vessel and not the master, maintained contact with shoreside commands during the severe storm. On the GLOMAR JAVA SEA, although the operating manual recommended that the typhoon plan state that the master had absolute responsibility and authority for the safety of the crew and ship, the actual typhoon plan had no such statement. The "Critical Procedures" manual stated that the master had absolute responsibility and authority for the safety of the crew and ship but went on to say that the drilling superintendent was in charge until such time as the master was of the opinion that the ship and crew was or may become endangered. The Atlantic Richfield Company (ARCO) drilling supervisor had exclusive control of the helicopters and supply vessels needed in case of an evacuation.

The Safety Board recognizes that mobile offshore drilling units (MODU) operations are different from conventional vessels where the master is the person-in-charge during all operations and has both the authority and responsibility to insure his crew and vessel is safe at all times. On MODU's, the master or bargemover works for the person-in-charge, the toolpusher, or the drilling superintendent. In addition, the oil company representative controls the helicopters and supply vessels which would be used to evacuate the crew if necessary. However, these three accidents clearly show that both the USCG and the offshore oil industry need to require that qualified marine personnel be in charge of the safety of the MODU and crew at all times. The master should have the authority to stop drilling operations, evacuate crewmembers, and abandon the well site without consulting the drilling supervisor and with full cooperation of the oil company representative. In time of emergency, decisions cannot be made by a triumvirate; one person needs to be in charge and that person should be the master.

Global Marine reacted quickly in notifying the USCG of the GLOMAR JAVA SEA's situation; however, valuable time was lost because necessary vessel information was not available to the U.S. Air Force Rescue Coordination Center (RCC) in the GLOMAR JAVA SEA's operating area. The Safety Board believes that Global Marine in the PRC and ARCO China, Inc., a subsidiary of the Atlantic Richfield Company (ARCO), should have had a contingency plan to notify the RCC at Kadena Air Force Base, Okinawa, Japan, immediately of the vessel's moored position, description, number and types of lifeboats/liferafts, radio call sign, type of radios, and operating frequencies.

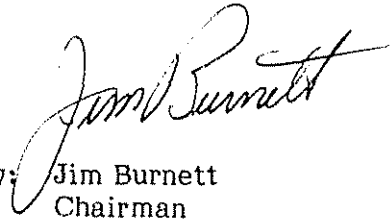
Therefore, the National Transportation Safety Board recommends that the International Association of Drilling Contractors:

Urge that member contractors review the chain of command aboard their mobile offshore drilling units to insure that the licensed master or bargemover can effectively exercise full authority over the unit during an emergency. (Class II, Priority Action) (M-84-77)

Urge that member contractors contact the cognizant rescue coordination center to preplan procedures for an emergency involving mobile offshore drilling units in remote locations. (Class II, Priority Action) (M-84-78)

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

BURNETT, Chairman, GOLDMAN, Vice Chairman, and BURSLEY, Member, concurred in these recommendations.

  
By: Jim Burnett  
Chairman