OCS Report
MMS 2001-042

Investigation of Fall and Fatality
Main Pass Block 140
May 19, 2000

Gulf of Mexico
Off the Louisiana Coast

MMS

U.S. Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Regional Office

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Frank Pausina
David Dykes
Randall Josey

U.S. Department of the Interior
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New Orleans
May 2001

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Investigation and Report

Authority

An accident that resulted in one fatality occurred on BP Amoco Corporation's (BP Amoco) Platform B, Main Pass Block 140, Lease OCS-G 2193 in the Gulf of Mexico, offshore the State of Louisiana, on May 19, 2000, at approximately 0815 hours. Pursuant to Section 208, Subsection 22 (d), (e), and (f), of the Outer Continental Shelf Act, as amended in 1978, and the Department of the Interior Regulations 30 CFR Part 250, the Minerals Management Service (MMS) is required to investigate and prepare a public report of this accident. By memorandum dated June 16, 2000, the following MMS personnel were named to the investigative panel (panel):

Frank Pausina, Office of Safety Management, New Orleans, Louisiana (Chairman)

David Dykes, Office of Safety Management, New Orleans, Louisiana

Randall Josey, District Office, New Orleans, Louisiana

Procedures

On May 19, 2000, inspectors from the New Orleans District Office visited the scene of the accident, took photographs, and received witness statements.

On June 5, 2000, MMS received BP Amoco's accident investigation report, which included witness statements.

The panel met at various times throughout the investigative effort and, after having considered all of the information available, produced this report.

Introduction

Background

Lease OCS-G 2193 covers approximately 5,000 acres and is located in Main Pass Block 140, Gulf of Mexico, off the Louisiana Coast**.** *For lease location, see Attachment 1.* The lease was issued effective October 1, 1972. BP Amoco became Designated Operator of the lease on August 6, 1996.

Brief Description of Accident

On the morning of May 19, 2000, a contract employee was using a portable winch (come-along) to a remove a section of removable guardrail for the purpose of accommodating the installation of the mounting beams of a temporary crane. One end of the come-along was attached to the section of guardrail to be removed, while the other end was attached to a section of fixed guardrail located approximately 5 feet above the guardrail to be removed. As tension was applied to the come-along, the upper guardrail failed at its base welds and detached from the deck. As a result of the detachment, the employee fell approximately 60 feet to the Plus 10 deck and sustained fatal injuries.

Findings

Preliminary Activities

BP Amoco was planning to conduct coiled tubing operations on Well A-15 sidetrack. The close proximity of the well to the platform crane precluded safe usage of the crane during the coiled tubing operations. It was therefore decided that a temporary crane would be installed in order to conduct the operation safely. Mar-Con, a contractor with whom BP Amoco has a standing contract, was contracted for the installation of the temporary crane.

Because the mounting beams of the temporary crane would extend beyond the west end of the platform, it was determined that a section of guardrail on the main deck would have to be removed to accommodate the installation of the crane.

On the morning of May 18, 2000, Mar-Con employees began arriving on Platform B to begin the crane installation operation. At 1300 hours, prior to beginning of the offloading of the crane components, a Safety/Job Safety Analysis (JSA) meeting was held. The Mar-Con on site supervisor (M-1) and the BP Amoco contracted representative (B-1) led the meeting. Attending the meeting also were four other Mar-Con employees (M-2 through M-5). Two other contractor employees attended the meeting. After the meeting, crane components were offloaded onto the platform. Work was suspended at 1700 hours because of inclement weather.

On the morning of May 19, 2000, at approximately 0630 hours, a Safety /JSA meeting was led by M-1 and B-1 and attended by M-2, M-3, M-4, and

M-5. The meeting, as did the previous day's meeting, centered on the activities of unloading the crane components and erecting the crane. Discussed also was the need to remove the guardrail as previously mentioned. Cold-cutting was, according to M-1, the decided method of removal. Fall protection was referred to only in the context of crane erection and seemingly not with reference to the removal of the guardrail. The meeting documentation is not detailed.

Accident

After the safety meetings and after surveying the platform with Mar-Con employees, B-1 left the deck to do office work.

M-2 suggested to M-1 that, instead of removing the guardrail by cutting and then latter welding it back into place, the guardrail could be lifted out of the sockets into which its vertical posts were inserted. M-1 accepted the suggestion and ordered the crew to use a come-along to lift the guardrail. One end of the 1½ -ton come-along was attached by a chain to the top portion of the guardrail to be removed on the main deck and the other end by a strap to the top portion of the guardrail on the platform's crane access deck. The crane's access deck is approximately five feet above the main deck. While M-1 and M-2 were hammering on one end of the guardrail to be removed and another Mar-Con employee, M-3, was attempting to loosen the other end by using a pry bar, a fourth Mar-Con employee, M-4, was tensioning the come-along. After experiencing difficulty in loosening the guardrail, M-1 instructed M-4 to put further tension on the come-along. At that point, approximately 0815 hours, various employees heard a sound from

the access deck and saw that the guardrail on that deck had fallen from the deck. M-4 was then witnessed to have fallen from the access deck. After having rushed to the edge of the platform, crewmembers saw that M-4 had fallen to the Plus 10 deck, approximately 60 feet below the main deck. They also saw M-4 roll off the deck into the water.

For photographs of the accident scene that describe pertinent portions of the platform and certain activity at the time of the accident, see Attachments 2 and 3.

B-1 stated after the accident that, had he been present during the attempt to remove the guardrail, he would not have allowed the come-along to be tied-off to the upper guardrail.

M-1 jumped into the water and placed M-4, who had been floating face down, into a life ring. M-1 attempted to assist M-4 by applying CPR. The M/V *Ensco Master* arrived on site approximately 10 minutes later and pulled the men aboard where CPR attempts continued. Both men were then transferred to the platform. A defibrillator was used unsuccessfully in an attempt to revive M-4 who was then medivaced to West Jefferson Hospital in New Orleans. A preliminary medical evaluation revealed that the cause of death was a broken neck.

Material Analysis

A visual examination by a metallurgist of the base posts of the guardrail that failed revealed both incomplete and poor welding of the posts to the

platform's crane access deck. Paint and corrosion on the post surfaces indicated that portions of the posts were not welded, while flat weld metal surfaces indicated that some welded portions did not thoroughly fuse with the deck. Furthermore, where fusion did occur, the weld was very thin. It is the conclusion of the metallurgist that the failure was the result of all of the above.

BP Amoco stated that specifications did exist regarding such issues at the time the access deck had been built; however, the installation of the deck "originated from the field, and no specifications or engineering drawings were found by the investigative team."

Policies/Procedures At the time of the accident, there existed no policy on the part of BP Amoco regarding the use of come-alongs or guardrails.

Conclusions

Accident Cause

It is the conclusion of the panel that the tensioning of the come-along caused an excessive force to be exerted on the guardrail which, in conjunction with poor and incomplete welding, caused the existing welds between the guardrail posts and the access deck to fail. The Mar-Con employee who was using the come-along fell with the guardrail as a result of either leaning against the guardrail or holding onto the guardrail as he tensioned the come-along. The employee was fatally injured as a result of the fall.

Contributing Causes

- BP Amoco not ensuring, at the time of the guardrail placements on the access deck, that the guardrail posts were properly welded to the access deck in accordance with BP Amoco's existing standards.

- BP Amoco not having a policy detailing the prohibitions against certain uses of guardrails.

- The failure of the Safety/JSA meeting attendees (especially B-1 and M-1) to address fully the hazards associated with the removal of the guardrails.

- The failure of Mar-Con, once the method of guardrail removal had changed, to *formally* address the hazards associated with the new method.

- The failure of BP Amoco's onsite representative to observe the activities of the Mar-Con employees.

Recommendations

Safety Alert

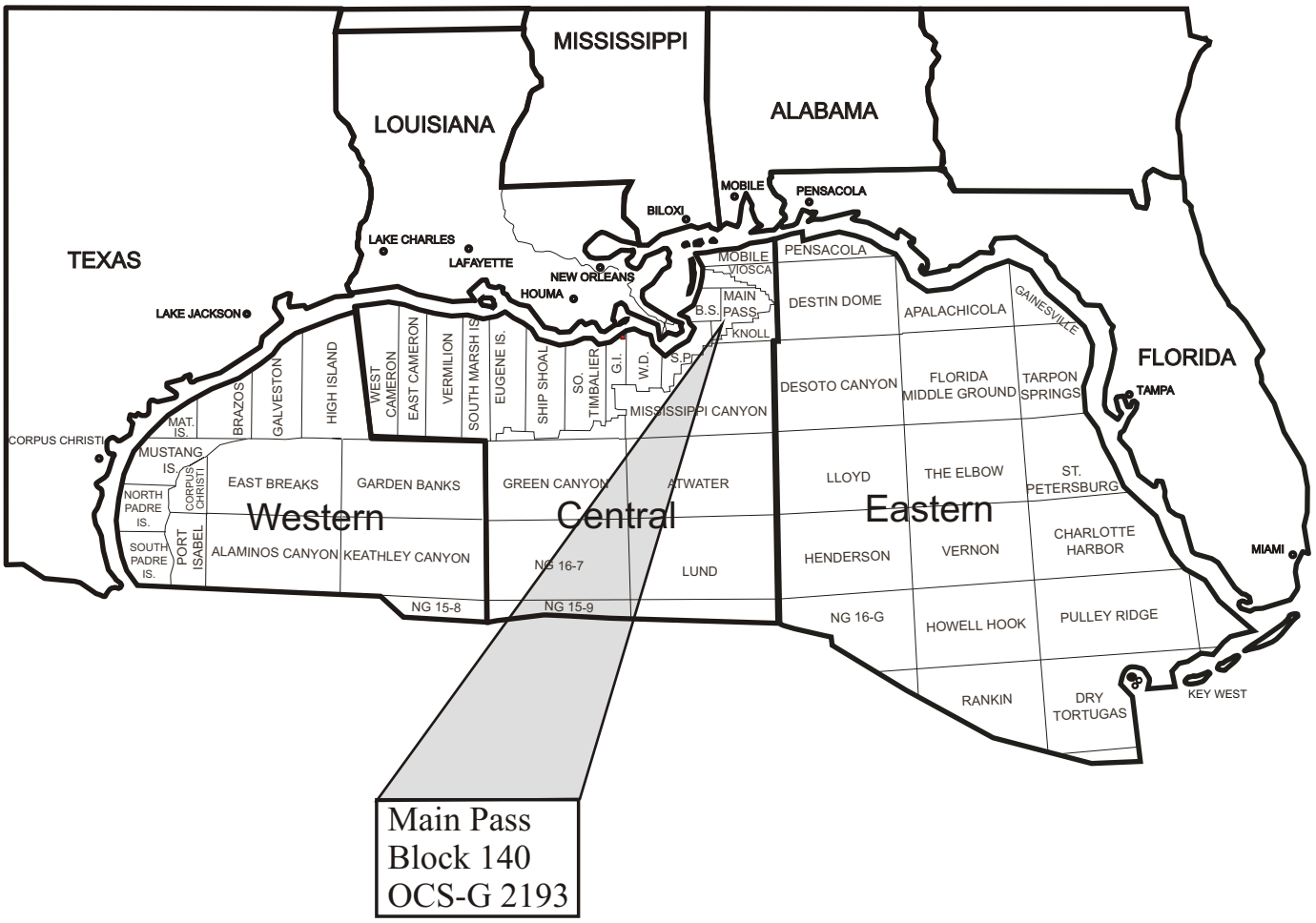
The MMS issued a Safety Alert (No. 189) on July 19, 2000, regarding the subject accident. The Safety Alert was issued prior to the completion of this report because of the fairly routine nature of the activity involving the accident and MMS's concern for the potential for similar such accidents. The panel has evaluated the recommendations of that Safety Alert as still being appropriate. However, the panel recommends that an additional Safety Alert be issued containing the following:

1. A summarization of the first Safety Alert for reference purposes.

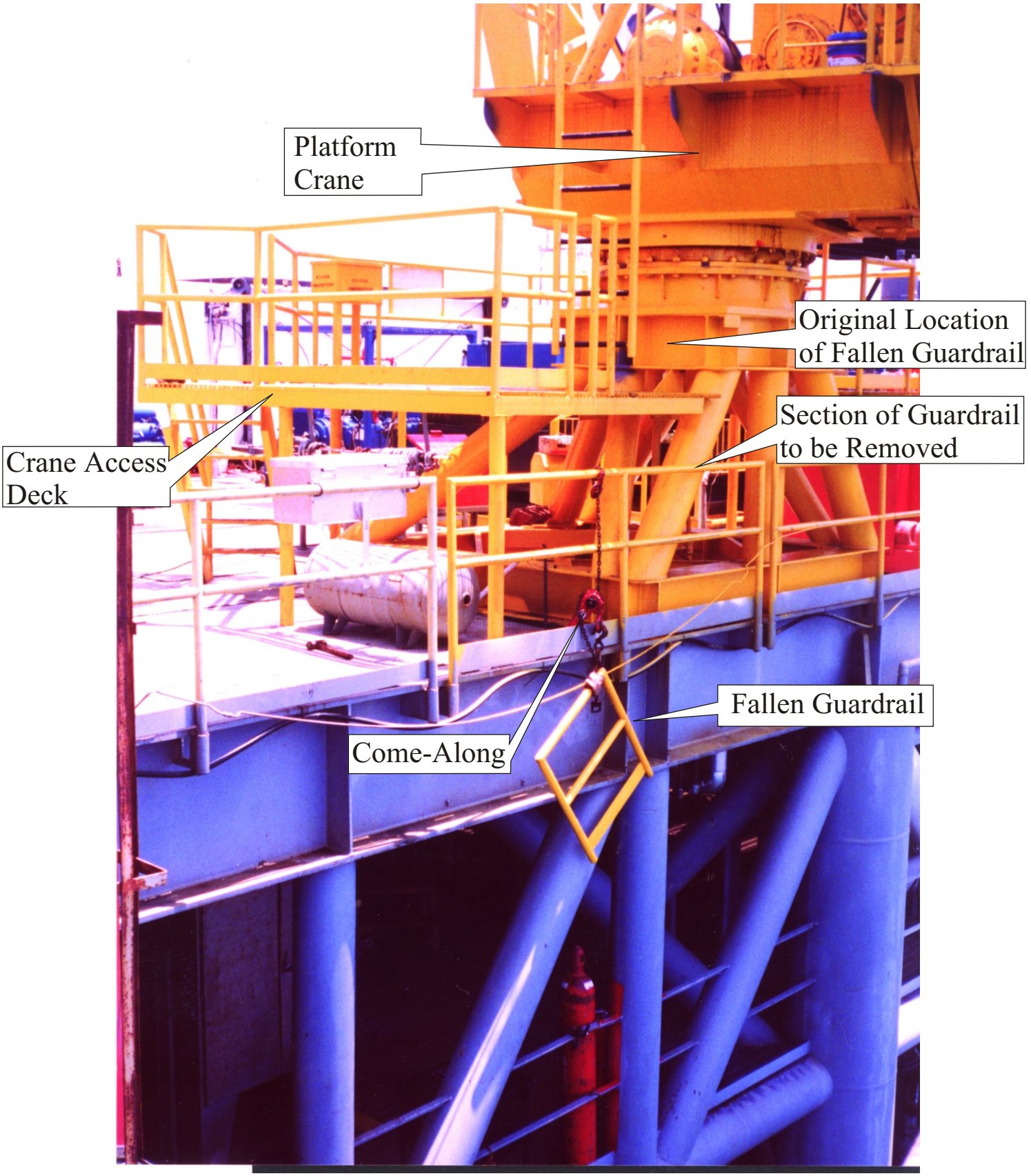
2. A recommendation that designated operators and their contractors perform a second JSA for any activity for which an initial JSA was performed and whose steps have been changed since the initial JSA was performed.

3. A recommendation that operators instruct both their representatives and contractors to communicate regarding any change in the steps of an activity that is to be performed, especially when a JSA has been performed prior to the change.

Attachment 1



Location of Lease OCS-G 2193,
Main Pass Block 140



Photograph of Post-Accident Scene

Attachment 3

Photograph Demonstrating Fall