

UNITED STATES COAST GUARD

ADDRESS REPLY TO:
COMMANDANT
U. S. COAST GUARD
HEADQUARTERS
WASHINGTON 25, D. C.



MVI
(OFFSHORE PLATFORM
SOUTH TIMBALIER BLOCK
134-D1 a-8 Bd)

10 APR 1960

Commandant's Action

on

Marine Board of Investigation; explosion and fire
on board OFFSHORE PLATFORM SOUTH TIMBALIER BLOCK
134-D1, Gulf of Mexico, 26 July 1959 with loss
of life

1. The record of the Marine Board of Investigation convened to investigate subject casualty, together with its Findings of Fact, Conclusions and Recommendations has been reviewed.
2. At about 2330, 26 July 1959, an explosion and fire occurred on the OFFSHORE DRILLING PLATFORM SOUTH TIMBALIER BLOCK 134-D1, Gulf of Mexico when the well began to blow during the drilling operations. Of the 12 men on the platform, one drowned and two were seriously injured when they jumped from the upper level of the burning platform to the water. Five men suffered varying degrees of burns and four were unharmed. Damage to the rig was estimated to be \$300,000.
3. The OFFSHORE DRILLING PLATFORM 134-D1, owned by the Gulf Oil Corporation, is a rectangular structure approximately 120 feet by 50 feet having three decks. Atop the platform was SALT DOME OIL RIG NO. 10, a two-deck structure consisting of the drilling derrick and living quarters. The living quarters were on the uppermost deck approximately 80 feet above the water surface. The RIG NO. 10 had previously been inspected by the Coast Guard in another location as an unmanned platform because at that time the crew was accommodated on an attending vessel. At the time of this casualty 5 of the 12 man crew were being quartered and subsisted on the rig. RIG NO. 10 was owned by the Salt Dome Production Company who was under contract to the Gulf Oil Company to drill the well.
4. At about 2330 the crew was drilling at a depth of 4,880 feet when drilling mud began spilling over the top of the mud pit indicating that the well was about to blow. Attempts to contain the pressure were unsuccessful and within a matter of seconds an explosion occurred and the escaping gas torched off. As the flames enveloped the top deck of the platform and the lower deck of the RIG NO. 10 the crew began to abandon

the structure. Of the men actively engaged in the drilling operation at the time four were able to reach the ladders leading to the boat landing platform and three slid down a four inch rubber sanitary discharge hose to the water when the escape route was cut off by the flame. There were five men in their quarters at the time of the explosion whose escape was blocked when the fire engulfed the single ladder leading from the quarters level to the deck below. All five donned life jackets which were stowed in their quarters and one man threw two or three additional jackets into the water for use by the others. Three men then jumped from the quarters level and the other two slid down the sanitary discharge hose although one fell off part way down. The three who jumped suffered the most serious injuries. The 67 year old cook apparently landed flat and as a result was rendered unconscious and drowned despite his life jacket. The other two entered the water in more favorable attitudes. The injuries they sustained were primarily to the chest and back.

5. A radio report of the fire was intercepted by the MV RIG SERVICE which was approximately 9 miles away on rig standby for another company. Without awaiting orders the master immediately directed his vessel to the scene and recovered seven men from the water and removed three men from the landing platform of the burning structure. The 11th survivor was picked up from the water by a Coast Guard vessel.

REMARKS

1. The Board found that the explosion and fire resulted from the ignition of combustible gases escaping under pressure of the blowout. Although the source of ignition could not be determined sand abrasions in the bleeder line, hot exhaust lines from the diesel motors or an arc from the operating generators were suggested possibilities. In any event the cause is considered to have occurred solely within the scope of oil well drilling operations.
2. The Board's conclusion that the artificial island composed of the OFFSHORE PLATFORM SOUTH TIMBALIER BLOCK 134-D1 and the SALT DOME OIL RIG NO. 10 constituted a manned platform by virtue of the fact that five crew members were continuously living and being accommodated on board is concurred in. In accordance with the Board's recommendation the Commander, 8th Coast Guard District is hereby directed to refer the record in this case to the U. S. Attorney having jurisdiction for possible prosecution for the violations of the equipment requirements for manned platforms uncovered by this investigation.
3. The Board's recommendation for amendment to the regulations concerning the definition of artificial islands, (46 CFR 140.10-5); means of escape, (46 CFR 143.05-1); and the recommended promulgation of a new regulation to provide for additional emergency means of escape

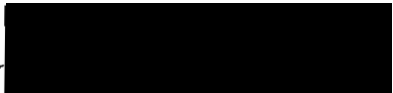
for artificial islands will be referred to the Merchant Marine Council for study.

4. The recommendation that the Coast Guard seek legislation to authorize administrative penalties for violations of the Outer Continental Shelf Lands Act (43 USC 1333) and regulations issued thereunder will be taken under consideration as a possible means of facilitating enforcement.

5. Appropriate recognition of the commendable action on the part of Junius J. LeBlanc, master of the tug MV RIG SERVICE, for his part in recovering the survivors will be given.

6. As further recommended by the Board, a copy of the record in this case will be forwarded to the Department of Interior for information.

7. Subject to the foregoing remarks, the record of the Marine Board of Investigation is approved.


A. C. RICHMOND
Vice Admiral, U. S. Coast Guard
Commandant

UNITED STATES COAST GUARD

ADDRESS REPLY TO

Commander
Eighth Coast Guard District
New Orleans, Louisiana



SEP 4 - 1959

From: Marine Board of Investigation
To: Commandant (MVI)
Via: Commander, 8th Coast Guard District

Subj: Explosion and fire on board Offshore Platform South Timbalier Block 134-D1, Gulf of Mexico, on 26 July, 1959, resulting in loss of life of Claude F. Bulliard, and injury to seven offshore oil rig workers

Findings of Fact:

1. At about 11:30 P.M., 26 July 1959, an explosion and fire occurred on board Offshore Platform South Timbalier Block 134-D1, Gulf of Mexico, resulting in the loss of life of Claude F. Bulliard and injuries to seven other personnel of the rig.
2. Offshore Platform South Timbalier Block 134-D1 is owned by Gulf Oil Corporation. This platform is located at 28 degrees, 37 minutes, 35.5 seconds North and 90 degrees, 14 minutes, 20.3 seconds West and had been placed in this location on 25 June 1959. A well was being drilled at this location for Gulf Oil Corporation by Salt Dome Production Company. Salt Dome had placed Salt Dome Oil Rig No. 10 atop Platform 134-D1 on about 5 July 1959 and commenced drilling operations on 13 July 1959. Neither the rig nor the platform had ever been inspected by the Coast Guard in its present location. The rig portion had been aboard Platform 132-A during November 1958 at which time an inspection had been made of that artificial island. At the time of that inspection (November 1958), the island was considered as an unmanned platform inasmuch as rig tender PELICAN furnished accommodations for personnel. In its present location, Platform 134-D did not have rig tender PELICAN alongside but instead did have persons aboard the rig who, actually and continuously, were living and accommodated thereon.
3. Lateral dimensions of the platform were approximately 120 feet by 50 feet. A general outline of the various levels of this island is shown in Exhibit A to the record. The uppermost level or quarters level is approximately eighty feet above the surface of the water.
4. Weather conditions at the time of this casualty were as follows: wind southeasterly, 15 to 20 miles per hour; clear, dark night, good visibility

with seas 4 to 6 feet. Weather conditions had no bearing on this casualty.

5. As a result of this casualty, Claude F. Bulliard, [REDACTED], male, [REDACTED] years of age, lost his life. Mr. Bulliard had been employed by General Marine Catering Service and was assigned to Platform 134-D1 as the cook. Next of kin is Mrs. [REDACTED], widow, residing at above address. Notification to next of kin was made by employers. At the time of his death Bulliard was apparently in good health.

6. Injured as a result of this casualty were the following men:

- [REDACTED] - burns on arm, back and foot.
- [REDACTED] - burns on face and arms.
- [REDACTED] - burns on face and arms.
- [REDACTED] - nausea due to swallowing sea water and minor burns.
- [REDACTED] - minor burns to face and eyes.
- [REDACTED] - back and chest injury.
- [REDACTED] - back, leg and chest injuries.

7. Of the injured men, the most serious injuries were those suffered by [REDACTED]. These men were injured as a result of jumping from the quarters level of the island to the water, a distance of approximately 80 feet.

8. On the island at the time of the explosion and fire, there was a total of 12 men. Of these 12, one died, seven received injuries and four escaped unharmed.

9. At about 11:30 P.M., 26 July 1959, a drilling crew of six men employed by Salt Dome Production Company were drilling at a depth of 4,880 feet on the Salt Dome Rig No. 10 located on Platform 134-D. In charge of the drilling crew was [REDACTED]. Four of the drilling crew, including [REDACTED] were working on the rig floor, on which the drilling equipment is operated. Two men, [REDACTED] and [REDACTED] were working the level below the rig floor called the platform floor.

10. The first indication to any of the personnel of anything out of the ordinary drilling routine was when the drilling mud started to spill over the top of the mud pit. The derrick man, [REDACTED] who was working in

this area, proceeded up the ladder to notify the driller of this but saw that the driller was already aware that the well was "blowing" and was attempting to close the blow out preventers to control the blow. The driller was able to close the uppermost preventer called the hydril. This momentarily contained the pressure but within 2 or 3 seconds an explosion occurred on the platform level in the vicinity of the shell shaker and mud pit (indicated on Exhibit A). Immediately after this explosion the natural gas escaping was on fire and this fire covered most of the platform level and the rig floor. At about this time the driller was also attempting to close the other blowout preventers. The controls for these preventers are located on a single manifold and he succeeded in pulling the lever for one more preventer. However, this preventer, called the blind ram could not close as the drilling pipe in the casing was in its way. The ram did pinch the pipe but could not stop the pressure of the blowout.

11. As the fire enveloped the rig floor and platform level, all personnel on the rig started to abandon the island. Four men in the drilling crew were able to work their way down ladders at the back of the island to the landing platform. The back of the rig is the side on which the quarters are located. The two other men of the drilling crew were able to climb down a four inch rubber hose which was the toilet drain leading from the quarters to the water surface. The tool pusher, [REDACTED], who was the person in charge of the platform, had been asleep in the quarters when the well started to blow. He immediately dressed, grabbed a lifejacket and went down to the rig floor. By this time, however, the fire had started and he too, reached the water by climbing down the drain hose. Two other men who were in the quarters when the explosion occurred also used the drain hose as a means of escape.

12. The three remaining men, including the deceased, were also on the quarters level when the explosion occurred. Bulliard, who had been preparing food for the drilling crew when the casualty occurred, started to get some lifejackets out of the locker in the quarters. All persons who were in the quarters did manage to get life jackets on before they abandoned the rig. Bulliard did get a life jacket on himself and threw two or three additional jackets over the side for the men who he knew were below and unable to get one. Bulliard then proceeded to jump from the quarters level to the water. He was, however, unable to control himself during this fall of eighty feet and hit the water in a horizontal position, face down. He apparently never regained consciousness and as a result drowned with his life jacket on. The other two men who jumped managed to hit the water in a better attitude than Bulliard although both were injured as a result of the jump.

13. Six of the men who abandoned the rig worked their way in the water to a mooring buoy located 200 yards from the platform when they were able to

hang on until picked up by MV RIG SERVICE approximately two hours after the explosion. Three of the men did not have life jackets and were forced to stay on the landing platform of the rig, while it was burning, until they were picked up by MV RIG SERVICE. Two other men stayed in the water, floating free with life jackets on, until they were picked up. One of these was picked up by MV RIG SERVICE. The other was the last man to be picked up, after 3½ hours in the water, by CGC BLACKTHORN. The body of Claude F. Bulliard was picked up by MV SINCLAIR SERVICE and was later transferred to CGC BLACKTHORN.

14. MV RIG SERVICE, with master [REDACTED] aboard was on rig standby duty for Sinclair Oil Company near a platform located approximately nine miles north of Block 134. Captain [REDACTED] heard the report of the casualty over the Sinclair radio circuit. He plotted the position of the casualty and proceeded immediately, without orders to the vicinity. Upon his arrival at the scene, Captain [REDACTED] took ten survivors aboard his vessel. To pick up three of these, it was necessary for Captain [REDACTED] to maneuver his vessel alongside the burning rig, with waves 4 to 6 feet present at the time.

15. The fire on the rig was extinguished on the day following the explosion. Monetary value of fire damage to the rig was estimated to be \$300,000.00. An inspection of the rig revealed that a bleeder line which led from between two of the blowout preventers to the mud pit had holes in it as a result of sand abrasion when the well was blowing. This line was also found to have all valves open in the line. Drilling operations are carried on normally with this line closed.

16. The blowout preventers had been tested on the rig approximately three days before the casualty and were found to be in satisfactory condition. In the testing of these preventers, it was necessary to open and close the valves on the previously mentioned bleeder line. The Board was unable to obtain any other testimony as to whether or not these valves were closed or opened at any other time since the test.

17. On the island, two means of escape were available from every level, except the top or quarters level, to the surface of the water. There was only one means of escape from the quarters level to the rig floor. In the usual terminology of the offshore oil industry, however, the quarters would be considered as being on the "rig" which sits atop the "platform" and not therefore a part of the platform.

18. There were no life floats of any type on the structure at the time of this casualty. There were a sufficient number of approved life rings with lights, and life preservers aboard.

19. There was no general alarm system on the structure.

20. There was no system of emergency signals established on the structure.
21. There was no station bill or muster list posted on the structure setting forth the special duties and duty stations of personnel for various emergencies.

Conclusions:

1. It is concluded that the cause of this casualty was the explosion and fire which resulted from the well blowing. The explosion had been caused by the ignition of combustible gases which escaped from the bleeder line under the pressure of the blowouts. The Board was unable to determine the exact cause of ignition but concludes that ignition probably resulted from one of the following causes (1) spark caused by sand abrasion in bleeder line as the well started to blow; (2) Hot exhaust lines from either the diesel engines or generators which were running at the time or (3) Arc or spark from the generators which were running at the time of the explosion and located on the same level as the mud pit.
2. It is concluded that Claude F. Bulliard died by drowning as a result of this casualty. It is further concluded that the primary cause of death must be considered to be the loss of consciousness as a result of falling 80 feet and striking the water in a horizontal attitude.
3. It is concluded that although the majority of injured personnel suffered burns of varying degrees, the most seriously injured personnel in this casualty were those men who jumped into the water from the quarters level.
4. It is concluded that, inasmuch as personnel were living and accommodated continuously on the island since its erection, this structure was a manned platform as defined by 33 CFR 140.10-25. Testimony of Gulf Oil Corporation area supervisor indicated that at some level of Gulf's organization it would have been known that personnel were living on the island. There is no question that Salt Dome Production Company was aware that personnel were living on the platform. Supervisory personnel from both companies indicated that it was their intention to eventually operate the platform with the rig tender PELICAN alongside. This intention, however, cannot alter the status of this island at the time of the casualty, i.e., a manned platform.
5. It is concluded that several violations of Rules and Regulations for Artificial Islands and Fixed Structures on The Outer Continental Shelf (33 CFR 140-146), were noted. These were:
 - a. There were no approved life floats on the manned platform in violation of 33 CFR 144.01-1.
 - b. There was no general alarm system on the manned platform in violation of 33 CFR 146.05-5.
 - c. No system of emergency signals had been established on the manned platform in violation of 33 CFR 146.05-10.
 - d. No station bill or muster list had been prepared and posted on the manned platform in violation of 33 CFR 146.05.

6. It is concluded that the above noted violations had no bearing on this casualty and none of the effects of the casualty can be considered as a result of any such violation.

7. It is concluded that no failure of any inspected material was involved in this casualty. It is concluded that inspected material, namely, the approved life preservers and life rings actually saved the lives of seven men who were in the water for periods varying from 2 to $3\frac{1}{2}$ hours.

8. It is concluded that there was no actionable negligence on the part of any licensed or documented person, or of any Federal employee, involved in this casualty.

9. It is concluded that presence of only one means of escape from the quarters level to the rig floor cannot be considered a violation of 33 CFR 143.05. This requirement states "at least two means of escape shall be provided for each manned platform" and further that such means of escape ... "shall extend from the platform to the surface of the water...." The platform did have two fixed stairways from the rig floor to the surface of the water. As has been previously stated, the terminology of the oil industry defines the platform as the structure upon which the drilling rig and equipment are placed. Using this definition there is no question that there were two means of escape from the platform. Even if the Board were to conclude that the failure to provide two means of escape from the quarters level to the rig floor was a violation, it would also have to conclude that the presence of an additional means of escape would have had no bearing on this casualty.

10. It is concluded that the explosion and rapid spread of fire precluded the use of fire fighting equipment on the platform.

11. It is concluded that the actions of Captain [REDACTED], master of MV RIG SERVICE, were commendable in that he risked his life and vessel and contributed to the saving of lives. His actions were also commendable in that his actions were prompt and solely on his own initiative.

12. It is concluded that the enforcement of the regulations could be improved by the addition of civil or administrative penalties to the present possibility of criminal prosecution.

13. It is concluded that the violations noted in paragraph 5 must be considered to have been committed by both the Gulf Oil Corporation in the capacity of owner and for whom drilling operations were being conducted and also by Salt Dome Production Company inasmuch as that company was acting as an agent of Gulf Oil Corporation and did have immediate charge of the platform.

14. It is concluded that the presence of an additional emergency means of escape from the top of the island to the water, such as a knotted life line or a wire ladder extending from the platform might have prevented the death and serious injuries which were a result of this casualty. It is noted that in a similar casualty on Offshore Drilling Platform 45-E in the Gulf of Mexico, 15 October 1958, that the Marine Board of Investigation Report dated 4 December 1958 stated "many men received injuries from jumping into the water from a height of fifty or more feet." The possible value of such additional emergency means of escape was clearly shown in this instant casualty by the fact that five men did escape from the platform using a rubber drain hose in the same manner that a life line or wire ladder would be used.

Recommendations:

1. It is recommended that the matter of violations by Gulf Oil Corporation and Salt Dome Production Company be referred to the U. S. Attorney for possible action under the provisions of 43 USC 1333.
2. It is recommended that consideration be given to amending 33 CFR 143.05-1 to read "Means of escape shall be fixed stairways or fixed ladders. They shall be constructed of metal and shall extend from each level of the artificial island or fixed structure to the next lower level and from the lowest level to the surface of the water at the low range tidal mark."
3. It is recommended that consideration be given to amending 33 CFR 140.10-5 by adding the following sentence to the present wording "This also includes all fixed or mobile structures such as quarters, drilling rigs or derricks, etc., which are fixed to such building or platform."
4. It is recommended that the matter of additional emergency means of escape for artificial islands be made the subject of a study by the Merchant Marine Council.
5. It is recommended that consideration be given to the possibility of obtaining legislation to authorize administrative penalties for non-compliance with the safety regulations contained in 33 CFR 146.
6. It is recommended that recognition be given to the commendable actions of [REDACTED] master of MV RIG SERVICE, by a letter or other appropriate means.
7. It is recommended that a copy of this report be forwarded to the

Department of Interior for the information of that agency.

[REDACTED]
BRET H. BREMLER
Captain, U. S. Coast Guard
Chairman

[REDACTED]
JOHN F. KETTLER
Captain, U. S. Coast Guard
Member

[REDACTED]
Lieutenant, U. S. Coast Guard
Member and Recorder

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SEP 4 1959

FIRST ENDORSEMENT on Marine Board of Investigation report of 4 September 1959

From: Commander, 8th Coast Guard District
To: Commandant (MVI)

Subj: Explosion and fire on the SALT DOME PRODUCTION COMPANY DRILLING RIG
NO. 10, Gulf of Mexico, 26 July 1959, with loss of life

1. Forwarded.

[REDACTED]
CARL E. OLSEN