

Chapter 9

More questions

As seen in the previous chapters, this discussion has raised new questions. We can also expect that the Documentation Project and the work at UiS to search various archives will also lead to several new issues being addressed.

The 89 questions from the bereaved and survivors that this book examines were asked in 2019. The aim has been to find as many answers as possible. The process of finding answers to as many questions as possible is and must be dynamic. New questions will be asked and the search for more answers must continue. A digital version of this book will hopefully be published by the Documentation Project at the Oil Museum. There, my preliminary answers can be supplemented and corrected, and new questions and answers entered.

In this chapter, I content myself with presenting an outline of a new theory that several people have worked on in 2022 and 2023:

Did the DE brace brake off first - before the D6 brace?

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Why is the question important?

The discussion of the 89 questions clearly shows that a great many bereaved and survivors are concerned as to the causes of the disaster on 27 March 1980. If a hypothesis about an initial break in a brace other than the D6 brace should turn out to be true, this will radically change the official story about the reasons for the collapse of Kielland. Those affected - and many others - seek truth and facts. These questions must therefore be asked.

The DE brace

Diver Jim Rune Pettersen and maritime engineer and Pentagon veteran Nils Gunnar Gundersen have worked on a new theory about the first triggering cause of the Kielland disaster. In two seminars in collaboration with the Documentation Project in 2022 and 2023, they presented their findings and analysis. Their working hypothesis is: the DE brace broke before any other braces, and well before the 27 March 1980 accident.

By studying the shape of the fracture surfaces on both sides of the DE brace there are elements that may indicate that the fracture took place ahead of the fracture in the D6 brace. After the breach near the E leg, the brace may have been bent down to the top of the pontoon of the E leg - and may have been in this position for some time. By studying the paint on the outer part of the brace it may seem that this theory has something to it. The DE brace was the longest and heaviest brace that was connected to the D leg, which broke off the rig on 27 March. The DE brace was one of two horizontal underwater braces attached to the torn-off D leg, it was 40 meters long and 60 tons heavy, and was welded to the D and E legs.



The DE brace

Nils Gunnar Gundersen links the break in the DE brace to the almost constant incorrect anchoring, where eight instead of ten anchors were used. The D1 anchor was almost in line with the DE brace. Since the anchors on the B and D legs also had to compensate for the two missing anchors from the C leg, the tensile forces became far stronger than what the rig was designed for.

Jim Rune Pettersen does not attach importance to the anchoring. He believes that the main cause of the breach in the DE brace was a welding fault in the brace near the E leg. Both assess the fracture surfaces on part 8 (closest to the E leg) as a pure tensile fracture with smooth surfaces. In a report from the Norwegian Institute of Naval Research dated 30 July 1980 it is stated:

*"The break in part 8 was very likely a pure tensile break. The initiation point for the fracture may have been approximately position 510 or approximately position 720 in/at the weld between the internal struts and brace."*¹³³

The fracture has, with great probability, first occurred near the E leg in section 8. The break itself may have occurred in connection with very bad weather, during anchor handling where, according to the procedure, all the anchor wires must be tested to 100 tons each, or when pulling in towards the Edda platform after bad weather. When pulling in towards the Edda platform, the D1 anchor has undoubtedly been the dominant anchor in use so that the platform could return to a position where the footbridge could be used again.

In an interview with one of the control room operators, he says that the tension in the anchor wires was often up to 150 to 200 tons. The mechanical brakes were designed to withstand 300 tons. Traction power when using the hydraulic motors was, however, limited to 130 tons. "Max pull" may have been used when pulling in towards the Edda Platform, since neither the C1 nor C2 anchors were available. The large tensile forces in the D1 anchor would then naturally create large tensile stresses in the entire DE brace, and at the same time bending stresses in the D6 brace. In addition, there are the stresses in the anchors D2, E1 and E2, which also involve tensile and bending stresses. As is known, Kielland was with few exceptions anchored with only 8 anchors in the Ekofisk field during the almost four years it was engaged there by Phillips.

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At what point did the DE brace, at section 8, break in two?

Jim Rune Pettersen is quite sure that it happened after it left *Albuskjell 2/4 F 24* in May 1979 and during the anchorage at the Edda platform a few days later. People with relevant experience in interpreting fracture surfaces will be needed to determine both the type of fracture and why the fracture occurred. The timing of this breach in relation to other breaches becomes a key question here. Unfortunately, the images taken by the Statoil laboratory are of poor quality. In addition, the cut-off for the quarry, at section 8, was sent

¹³³ NSFI report, July 1980, p 373

as scrap metal to the Iron Works in Mo i Rana (north of Norway) already in the summer of 1980.

One factor I believe weakens Pettersen's and Gundersen's theory are the observations of two divers just a few days after the accident. On 29 June 2019, the following appears in an article in *Aftenbladet*:

*"Diver Magnar Liaskar, together with Wigulf Schøll, were the first two divers to inspect the seabed after the "Kielland" accident. When they dived on the wreck on the night of 30 March 1980, they were told to inspect and film a brace lying on the seabed. The surface of the fracture was very **smooth and clean, but part of it was covered with rust** that looked like it had been there for a very long time.*

A simple "debrief" or questioning afterwards could clarify whether our observations on the site had been interesting. None of us were ever contacted or asked about anything, says Schøll." (author's emphasis)

If the DE brace broke off completely already in the summer or autumn of 1979, one must expect that the surface of the break would be completely covered with rust. The observation nevertheless indicates that there was a far-advanced fracture - this explains that parts of the fracture surface were covered in rust.

The DE brace was found just below the position the platform had in relation to the Edda platform during normal operation. Would the 60-ton brace fall straight down and break free from the D leg - if it hadn't already split in two at section 8 and had two cracks near the D leg?

The NSFI report referenced above states that points 5 and 6 near the D leg have been significantly subjected to bending stresses. These two cracks have most likely been subject to bending stresses due to the large weight of the 60 tons DE brace, after the brace was split into two parts at section 8, as Pettersen and Gundersen see it.

If the brace broke off completely near the E leg in advance of the accident, the brace would have been stopped by the large pontoon on which the E leg rested. The wave forces would cause the end of the brace to be ground against the pontoon. This corresponds to pictures of the brace.

People on board believe they heard strong knocking sounds from the E leg during bad weather: the famous "Frenchman" that several of the crew joked about when they heard the recognizable sound. The seamen's story was that a French worker had been trapped inside the steel structure, and the ghost knocked on the steel wall in bad weather. However, the crew members also said that this sound had been heard on the rig ever since it left the yard. It is therefore no reason to believe that the sounds called the "Frenchman" can be linked to the breach in the DE brace.

With two pre-existing cracks at points 5 and 6 near the D leg, both Pettersen and Gundersen believe that the nearly 40-metre-long brace was exposed to an enormous bending force near the D leg, when the D leg suddenly frees itself from the rest of the structure. The DE brace was at that point around 10 meters below sea level. The pre-existing crack at point 7 widens further, and the DE brace drops straight to the bottom as the D leg quickly moves away from the rest of the structure.

With both the DE brace and the D6 brace broken off, the rest of the platform lacks structural integrity, and it is therefore logical that the two inclined braces D3 and D4 broke apart. This was due to extremely large bending stresses, which can be observed by looking at the D3 brace on display at the Oil Museum. Pettersen and Gundersen assume that loud noises occurred when these two inclined braces broke apart.

Their conclusion is that the DE brace split apart before the D6 brace.

There is also reason to maintain that the D6 brace split apart due to a fatigue fracture that occurred in the area around the position indicator (hydrophone), and which developed over time. This is in line with the findings of both the Norwegian and French Commissions.

Further investigations

Several recognized civil engineers participated in the two seminars where the above was presented, namely Ove Tobias Gudmestad, Bernt Sigve Aadnøy and Arne Enoksen. Their feedback was that fairly accurate calculations of the loads in the relevant area must be carried out by using weather data from the four years at Ekofisk. In addition, recognized

calculation methods must be used, in order to disprove or confirm the calculation results contained in the report to the Norwegian Commission.

This will help to clarify whether the loads in the two braces in question have, over time, exceeded the acceptable tension level specified by Forex Neptune and approved by the classification society.

A scientific presentation of this "combined device" – the DE breach and the anchorage conditions - should be prepared: The tensile loads, especially on the DE brace, as a result of incorrect anchoring over time, possible welding defects related to the struts in the DE brace, and the indications that the DE brace fully or partially collapsed first - and before 27 March 1980.

Is this a new and relevant theory? It has not been assessed by either the Norwegian or the French Commission. The two reports contain very little information about this particular DE brace.

Chapter 10

The way forward

My goal has always been to obtain all the answers we can about what happened, why it happened - and why key information has been withheld. When I, together with survivor Anders Helliksen and surviving daughter Merete Haslund, established the Kielland Network in 2017, the purpose was formulated as follows:

"The Kielland Network will work for open hearings and a new investigation into the 1980 Kielland disaster."

How can we achieve it?

New Commission of Inquiry?

From day one we demanded a new investigation - but avoided the term "Commission".

There are several reasons for this.

Firstly, experiences from Scandinavian Commissions investigating accidents are extensive and not all good. As seen, there are many good reasons to criticize the Commission's work after Kielland, and the Office of the National Auditor has criticized a large number of matters and shortcomings in this investigation. In 1990, a fire on the car ferry "*Scandinavian Star*" killed 159 people. Commissions were set up both in Norway and Denmark, but here as well, we see extensive criticism of both the Police investigation and Commission reports. In 1994, "*Estonia*", a passenger ferry that ran between Sweden and Estonia, sunk. A total of 854 people died. Again, Commissions were in flux, and once again there was strong criticism. The criticism came primarily from bereaved and survivors.

What is it with Nordic accidents at sea?

And what is with these ad-hoc Commissions, which keep messing things up?

Secondly, public Commissions are strictly regulated. When we have demanded "open hearings", this is in violation of Norwegian regulations for Commissions, where the principle of "suspended publicity" applies. When the Office of the National Auditor's report was to be considered in the Storting in 2021, we believed that an inquiry committee could be set up

with different rules. We wanted transparency, we wanted to ensure that both bereaved, survivors and the trade unions movement had a place in such a committee. The Control Committee, with whom we had a good dialogue, informed us that this did not work. Should the disaster be re-examined, the strict regulations would have to be applied.

There is a good example of how it can be done. In 1988, 167 people died after an explosion and extensive fire on the platform "*Piper Alpha*" on the British continental shelf. In both cases - Kielland and Piper Alpha - national investigation Commissions were set up. The difference was that in Norway the Kielland Commission had a limited mandate, and kept the investigation closed. The British government, on the other hand, announced immediately after the "Piper Alpha" accident that a public hearing would be held to clarify the causes and circumstances surrounding the accident. The Norwegian approach was thus closed, while the British approach was open.

The British inquiry was led by the Scottish Judge William Cullen, and open hearings were a central method in the investigations.

While the Norwegian Kielland Commission was politically appointed, the Piper-Alpha Commission was appointed by the court. The same was the case with the French Expert Commission that investigated Kielland. While the closed Norwegian Kielland Commission leaked information along the way to the Norwegian parties, both the French Kielland Commission and the British Piper-Alpha Commission had a legal basis. This ensured the principle of contradiction, where all parties got off on an equal footing. The Piper Alpha Commission's openness through public hearings ensured that new issues and critical questions were dealt with thoroughly during the process. The American oil company and operator *Occidental* was thrown out of the North Sea after extensive and open criticism. And the result and conclusions were accepted by all parties, including by those left behind.

At a Kielland seminar in 2022, the well-known Franco-Norwegian lawyer Eva Joly stated that regulations and laws can be changed. And she is of course right. The Storting has the power and authority to amend laws and adopt new laws. This is actually the most important task of a parliament. The Storting could in principle decide to change current practices and regulations and use the Piper Alpha investigation as a model.

But we haven't come that far. To get there, new facts must first be uncovered. And that work is underway through the Documentation Project.

The Documentation Project

This project is described in chapter 2 and involves good opportunities to find more facts and more answers. The great advantage of this project is the openness and participation of bereaved and survivors through collaboration between the Oil Museum and the Kielland Network. The project will last until the end of 2024 and has a budget of NOK 8 million. The challenge for the Kielland Network is how the work can be continued once the project period ends.

The French Archives

In recent months, lawyer Eva Joly has traveled back and forth between Paris and Stavanger and spent most of her time on the Kielland disaster. She is engaged by the University in Stavanger, which carries out archival research in agreement with the Documentation Project at the Norwegian Oil Museum. Eva Joly's experience as a lawyer and judge with many decades of work in France gives her a good starting point searching for French archives related to Kielland.

As is well known, the lawsuit that Phillips and the Norwegian parties brought against the French constructors and the shipyard ended in a settlement. This settlement meant in practice that the Norwegian parties lost. But what was revealed in these closed settlement negotiations, which are sealed until 2051? Which documents were put on the table in these negotiations?

Joly has now gained access to many thousands of pages of documents which may shed new light on the circumstances of responsibility and liability, but which were overlooked by both the Norwegian Police and the Commission of Inquiry.

"Very important documents are found in France. We cannot find this documentation in Norway," says historian and professor at the University in Stavanger Marie Smith-Solbakken.

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¹³⁴ The newspaper «Dagens Næringsliv» (Daily Business), 18.3.2023

Former corruption hunter Eva Joly hopes and believes that the archival discoveries in France will result in new knowledge and better insights. Joly believes the case is a wasp's nest of disclaimers, conflicting roles and other matters she believes have been swept under the rug, partly because many powerful parties had strong interests in certain matters never being disclosed.

"Someone has chosen the dollars over safety. And they have never been held accountable," says Joly.¹³⁵

The underlying French documents originate from the constructor of the platform, the *Confédération Française des Entreprises Métalliques* (CFEM). This French flagship company, which is a descendant of Eiffel himself, was nationalized by President Mitterand in 1982, before being reprivatized in 1986. The archives from this four-year period are thus public. Eva Joly has obtained access to these archives and continues to search after the closed archives up to 1991, when the settlement agreement was concluded.

The archival findings so far confirm that the disaster has several causes.

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In addition to archival research and involvement at UiS, Eva Joly has chosen to work as a lawyer for the Kielland network together with the law firm SANDS. Eva Joly believes the workers paid a high price for Norway's oil adventure to continue. She believes that the state should have compensated based on considerations of reasonableness, for acknowledged failure, omissions and negligence on the part of the authorities. The parallels between Kielland and the pioneer divers are clear, and the lawyers believe this should form the basis for a state compensation scheme for the Kielland case.

*"There are people who have paid with their lives, with their health, with endless suffering, with ruined lives. In a period where Norway each year earns an additional state budget from oil and gas, I believe they should have made this gesture towards those who made this possible."*¹³⁶

The Norwegian archives

¹³⁵ The newspaper «Dagens Næringsliv» (Daily Business), 18.3.2023

¹³⁶ Dagens Næringsliv 18.3.2023

In discussing the 89 questions, we have seen that lack of access to private archives is and still will be a major obstacle to uncovering more answers. Phillips, Veritas and Storebrand are all private businesses that have all chosen to refuse access to the archives.

The same applies to the shipyard CFEM and the constructor Forex Neptune. Eva Joly's efforts make it possible for the first time to view and investigate French archives. Eva Joly and her colleagues do not give up and continue the search for this material. We must be just as steadfast to ensure access to the closed Norwegian archives. It is obviously unreasonable for private companies to deny access to something that could help to clarify many questions related to our biggest industrial disaster ever.

Cold case and legal proceedings

KRIPOS (Criminal Police), Section for Serious and Unsolved Cases - also called the "Cold-case Unit" - has in recent years re-opened old cases. What is needed for the Kielland disaster to be considered by this unit? The Office of the National Auditor's criticism of the Norwegian Commission's work and the Police's investigation have obviously not been enough for KRIPOS to open the case on its own. Is it possible to imagine bereaved and survivors taking the state to court, based on the strong criticism of the authorities' handling of the Kielland accident? It may also be relevant to sue Veritas and several of the private actors in court, to ensure access to the archives.

So far, these possibilities have not been assessed by the Kielland Network, but should not be ignored as one of several possible strategies to move forward.

Research by the bereaved and survivors?

Bereaved and survivors have, via the Kielland Network, taken the initiative to negotiate with the Norwegian authorities on a compensation scheme similar to the scheme adopted and implemented for the Pioneer divers. The government has so far rejected this initiative, the reason being that the Storting has not adopted such an arrangement. We are now working further with the Storting parties to try to make this happen.

The Kielland Network has decided to create a separate Research Fund. If we achieve a compensation arrangement, a good number of those affected have expressed that they would like to transfer part of the compensation settlement to such a Research Fund - in order to continue the search for more answers. There may also be others who wish to

contribute to the Research Fund, allowing new research to be financed when the Documentation Project is at an end.

At the moment, these are tentative thoughts, which depend on many factors. Research and inquiries are closely related. If we are to get a new public inquiry in the future, we must be able to document both the realism of and the need for a new inquiry. At the same time, we must assess whether the case is best served by a new public inquiry - or a new investigation carried out directly by those affected.

Time will tell.

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