

1967-Torrey Canyon Supertanker

(Reference: Professional Mariner)

Starting Date: Saturday, March 18, 1967

Type: supertanker run aground

Location: off western coast of Cornwall, England

Estimated Spillage: 857,600–872,300 barrels (35.7–38.6 million gallons)



Torrey Canyon alerted the world to the dangers that lay ahead

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On March 18, 1967, the oil tanker *Torrey Canyon* ran aground on Pollard's Rock of the Seven Stones reef that lies to the northeast of the Isles of Scilly off the coast of Great Britain.

It was the world's first major oil tanker disaster. In command was Capt. Pastrengo Rugiati. He had served as a ship's master since 1952 and had been master of *Torrey Canyon* for one year. The supertanker was carrying crude oil from Kuwait on its way to Milford Haven in Wales.



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Torrey Canyon was one of the largest ships afloat. At 974 feet long, the ship had been "jumboized" by Sasebo Heavy Industries in Japan during the oil boom of the 1960s. At that time, its capacity was nearly doubled, giving it a capacity of 120,000 tons of oil. When the accident occurred, the ship was carrying 100,000 tons, or approximately 730,000 barrels.

The supertanker cruised at 17 knots, took about one minute to turn through 20° and five miles to stop from cruising speed. The ship was the property of a U.S. company based in Bermuda, sailed under the Liberian flag with an Italian crew and was working for British Petroleum.

Because of its size, *Torrey Canyon* could not pass through the Suez Canal. Instead, the ship's route took it around Africa by way of the Cape of Good Hope. On March 14, it passed between Tenerife and Gran Canaria in the Canary Islands. From there Rugiati called the ship's agent and was informed that it was imperative that he arrive at his destination by high tide at 2300 on March 18. Otherwise it would be nearly a week before the tide would be high enough for the tanker to enter the harbor. The earliest the captain could hope to make the harbor was 1700 on March 18.

Rugiati set a course from the Canaries that should have taken *Torrey Canyon* five miles to the west of the Isles of Scilly. The ship was on autopilot. At noon on March 17, he checked his position and found that he was on course. When he went to bed that night, he left instructions to wake him at 0600, expecting to have the Scillies on radar, somewhere off the starboard bow by that time.

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Instead, the next morning the Scillies appeared off the port bow. During the night, strong currents had pushed *Torrey Canyon* to the north and east. Also, while the captain slept, the chief officer altered the course from 18° to 12°.



Upon awakening, Rugiati ordered a return to his original course of 18°. By now, *Torrey Canyon's* course placed the Seven Stones in its path. High tide would obscure the reef from sight. The captain was aware of the problem and planned to make adjustments to take the ship through a deep channel between the Scillies and the Seven Stones. Some fishing boats obstructed the way, however, causing a delay in his plans. Instead, he made two slight corrections of 3° and 2°, setting a new course of 13°, and left the supertanker on autopilot for a while.

A couple of hours later, Rugiati switched off the autopilot, brought the ship around to 0° and switched the autopilot back on. The officer on watch could clearly see that *Torrey Canyon* was already among the slightly submerged rocks of Seven Stones. He noted that it was 0848 on March 18. Informed of the problem, Rugiati, still groggy from only three hours sleep, ordered a hard swing to port. *Torrey Canyon* was not turning. Rugiati decided that there must

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be a problem, maybe blown fuses. A quick check revealed none. The autopilot had mistakenly been left on.

The captain now made a desperate attempt to clear the reef. Knowing the normally slow rate of turn, he must have sensed impending disaster. The order was immediately carried out, but with the autopilot still on, *Torrey Canyon* did not respond. Realizing the problem, the captain made a quick switch back to manual. This generated the desired reaction from the ship, but it was too late. *Torrey Canyon* hit Pollard's Rock at full speed. Initially, it was estimated that the collision had ripped open six of *Torrey Canyon*'s 18 cargo tanks. An order of full astern was obeyed but had no effect. The bottom was being torn out of *Torrey Canyon*.



A distress call brought a Dutch tug, *Utrecht*, but rough seas made it impossible for the tug to pull alongside. Plans were made to pull the stranded tanker off at the next high tide. In preparation, the crew began pumping cargo overboard to lighten the ship. Very quickly, a six-mile-long slick of crude oil developed. Two British Navy ships were sent with thousands of gallons of detergent to break up the slick. But *Torrey Canyon* was about to come apart and release 10 times the amount of oil ever spilled into British waters. Subsequent inspection



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revealed that 14 cargo tanks had been holed — a much more extensive catastrophe than originally thought.

After nightfall there was an attempt to move the ship. It failed and, by dawn, the ship had a list of 8° to starboard. In rough seas with 20-foot swells, the crew began to abandon ship. Rugiati was the last to be taken off.

The British Navy wanted to destroy the ship and ignite the oil. But *Torrey Canyon* was in international waters and there were questions about its legality. Meanwhile, at the next high tide the following day, there was a second attempt to pull the tanker from the rocks. By this time, vapors were building up within the ship. At noon on March 19, there was a terrific explosion. Five men left onboard were injured and two were blown into the sea. One died and one was rescued.

Salvage companies still wanted to tow the listing ship away but were in a quandary about where to take it. Great Britain, fearful of widespread pollution, refused entry at any port. Those fears were justified. Within a week of the accident, oil began coming ashore at Cornwall. As it turned out, salvage ships couldn't move *Torrey Canyon* anyway. Pollard's Rock had penetrated deep into the ship's hull and a final attempt failed.

On the afternoon of March 26, British Navy observers noted that *Torrey Canyon* had become "humped." The ship's back was broken. Oil was pouring into the sea. Ten days after the accident, salvage crews conceded that *Torrey Canyon* was lost. That day it broke into three parts and the balance of the oil poured into the water. The only solution left was to do what the British Navy



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originally wanted — set the oil on fire. The last of the salvage crews abandoned ship, the wreckage was bombed from the air and the RAF sprayed cans of aviation fuel on the slick to make sure the oil caught fire.

The wreckage burned as a result of an engine explosion, but seas were so rough and evaporation of the thin, flammable layer of the crude was so rapid that the slick would not ignite. The next day the RAF bombed the wreckage again and coated the slick with more aviation fuel. Even rockets were fired at the floating oil. More and more explosives were dropped, but to no avail. The Royal Navy made an inspection of the wreck and discovered that all the oil at the tanker site had indeed burned. They also determined that the slick was not going to ignite.

On Tuesday, March 28, 1967, the world's first major oil tanker disaster in history had done its immediate damage at massive cost to both economic and natural resources. Short-term, there was cataclysmic local pollution. 31 million gallons of oil leaked from the ship and spread along the sea between England and France. Most of the marine life in the area was killed from the south coast of Britain to the Normandy shores of France. The region was blighted for years thereafter. Over 25,000 birds perished. Oyster beds were polluted. Beaches in England and France were affected for up to five months.

There were no plans to combat the spill. It was the first of the big oil disasters, and what was attempted was either too late, too small in scope or made matters worse. But much was learned. It is clear now that dispersants laden with detergents exacerbated the damage. Nature does a better job alone.



Longer-term effects, financial and natural, can now be assessed. The severity of the disaster led to the creation of the Civil Liability Convention (CLC) in 1969 and the Fund Convention (1992). For the first time, ship owners became strictly liable, rather than liable only through proven negligence; and environmental protection laws requiring new ship designs were adopted. Initiatives involving ship design eventually culminated in double-hull requirements as well as new cleaning and maintenance procedures (MARPOL 73/78 and the Oil Pollution Act of 1990).

As a direct result of the *Torrey Canyon* disaster, the IMO called an extraordinary session of its council and decided to convene a conference (MARPOL 73) to prepare an international agreement establishing restraints on the contamination of the sea, land and air by ships. Deficiencies were identified in the existing system for providing compensation following accidents at sea, and it was clear that international action was needed to formulate tank vessel design and construction standards aimed at reducing oil outflow following accidents.

In 1973 the IMO recognized the "load on top" (LOT) system, which had been developed by the oil industry in the 1960s. This involved the fitting of appropriate equipment, including an oil discharge monitoring and control system, oily water separating equipment and a filtering system, slop tanks, sludge tanks, piping and pumping arrangements.

While short-term damage to beaches and larger wildlife was devastating, the longer-term effect on smaller sea organisms was even greater. The clinging



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crude destroyed colonies of fucus (a kind of brown seaweed) and barnacles for up to 15 years.

A Liberian board of enquiry blamed the wreck on Rugiati. It determined that his decision to steer the supertanker between the Scillies and the Seven Stones, instead of taking a wider channel to the west, was the proximate cause of the accident.

Disasters are usually caused by a confluence of events, each of which, by itself, would have no serious consequences. That was true of *Torrey Canyon*. A report by the Ergonomics and Safety Research Institute in Loughborough, England, listed the following reasons for the first major catastrophic oil spill:

- Ship design: *Torrey Canyon* had maneuverability problems, many as a result of being jumboized. In coastal waters it did not respond quickly enough to avoid impending disaster.
- Autopilot design: Lever placement on this particular model could be confusing and, in this particular case, led to the wrong control mode being selected.

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- Competence: The captain made a bad decision steering *Torrey Canyon* between the Scillies and the Seven Stones. The first officer made ill-advised course corrections while the captain slept.
- Time pressures: Safe course alternatives were discarded because of the pressure to arrive in port at Milford Haven by high tide on March 18.

While *Torrey Canyon* was the first oil tanker disaster to be cast into the spotlight of the world, it wouldn't be the last. At least 10 other supertankers spilled tons of oil into surrounding environments over the next few decades.

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