

Individual Emergency Plan - PEI





- Establishes responsibilities and actions to be taken immediately after an oil spill;
- Defines the procedures, teams and materials suitable for combating pollution in the unit.



Oil leak on deck



Communication
flow



SOPEP Kit



Cleaning
Response



Temporary
Storage



Temporary
Storage

ARE WE PREPARED TO RESPOND TO LARGE ACCIDENTS?



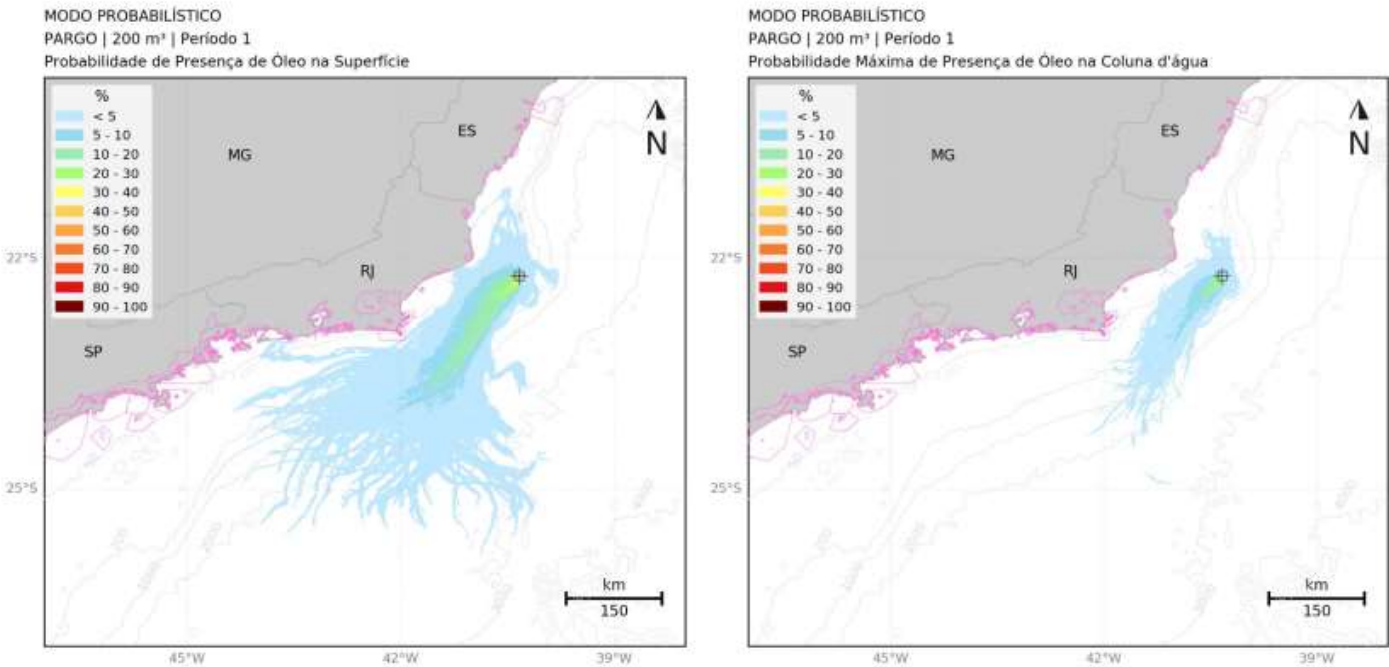
Also consider:

- Mature fields, low production
- With FSO
- No drilling activities
- The entire production system was taken into account

Leaks of 8m^3 , 200m^3 and the worst case $24,000\text{m}^3$ were simulated (Accidental hypothesis 23 FSO obtained from the volume resulting from the rupture of two adjacent tanks of the FSO during offloading operation due to the collision of the shuttle tanker with the side of the FSO Pargo, in two periods: September to February, and March to August.



PEI: Worst Case Scenario - check figure



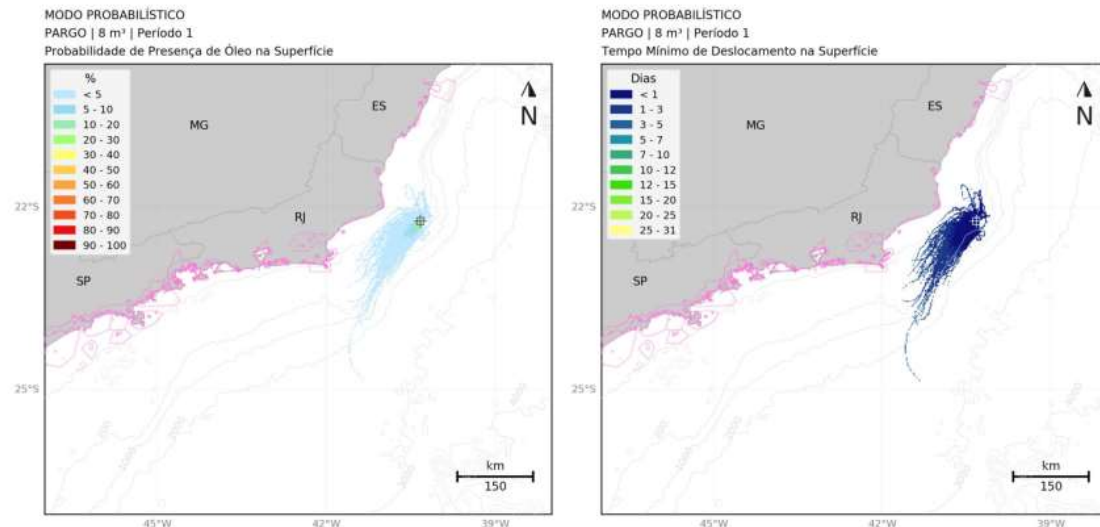
Map of probability of oil presence on the surface and maximum oil presence in the water column for a 200 m³ leak. Period 1 (September to February). Drill of 720 hours (30 days).



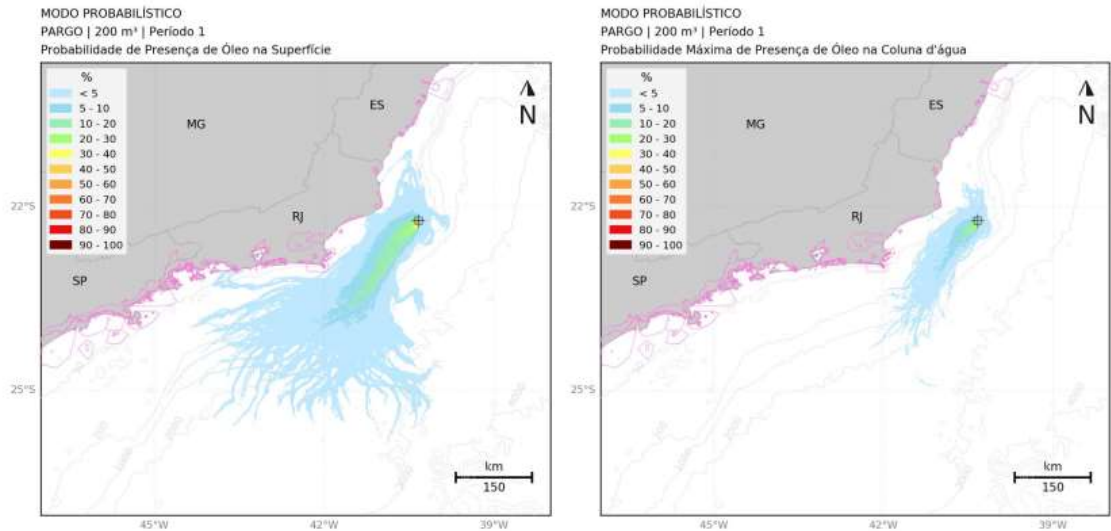
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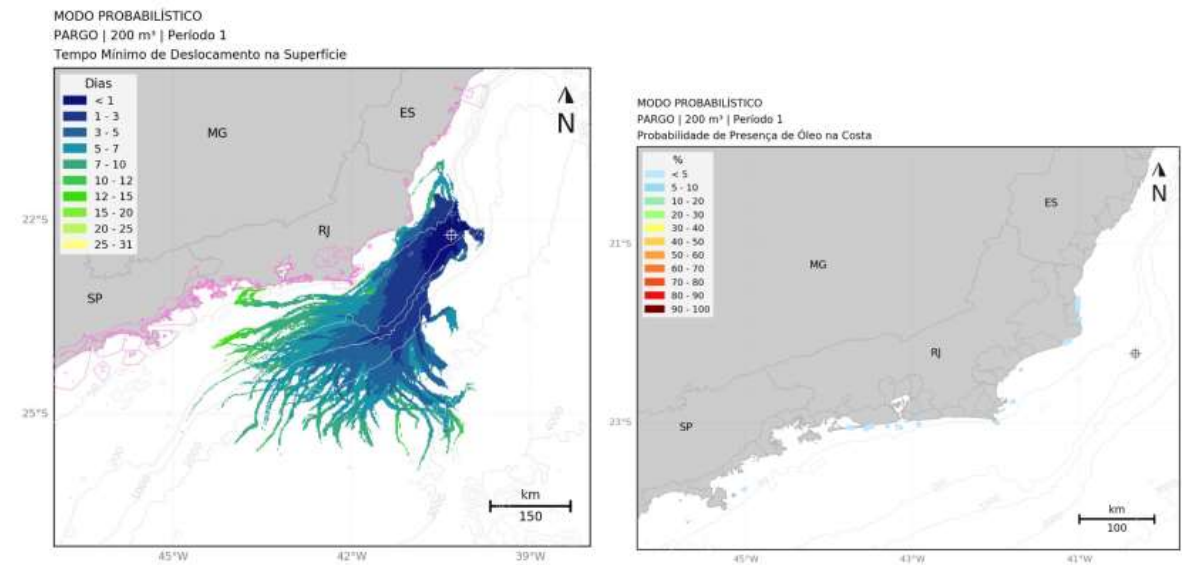
Leaks of 8m³, 200m³ and the worst case 24,000m³ were simulated, in two periods: September to February, and March to August.



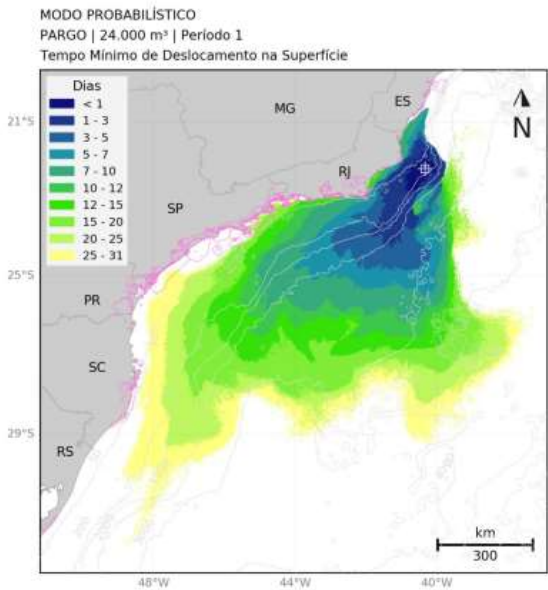
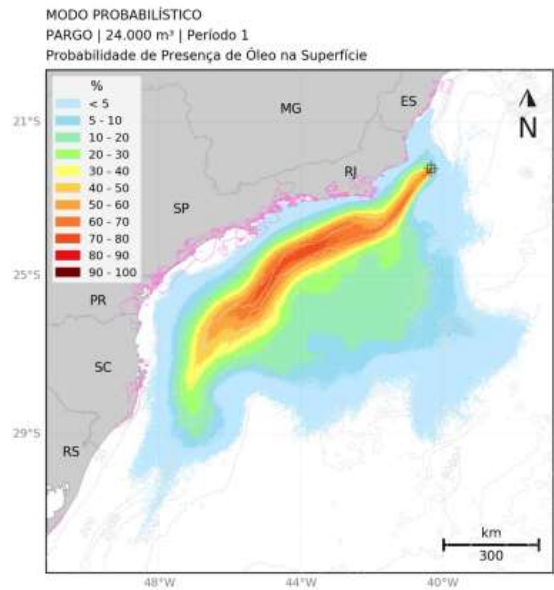
Map of probability of oil presence and minimum time of arrival of oil on the surface for a leak of 8 m³. Period 1 (September to February). Drill of 720 hours (30 days).



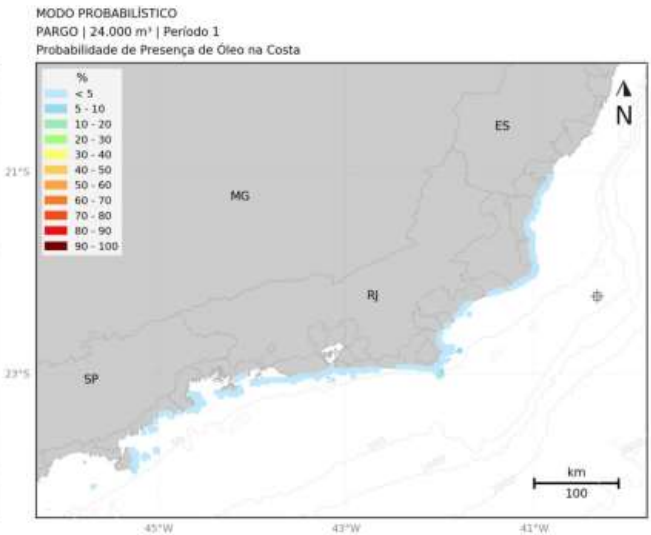
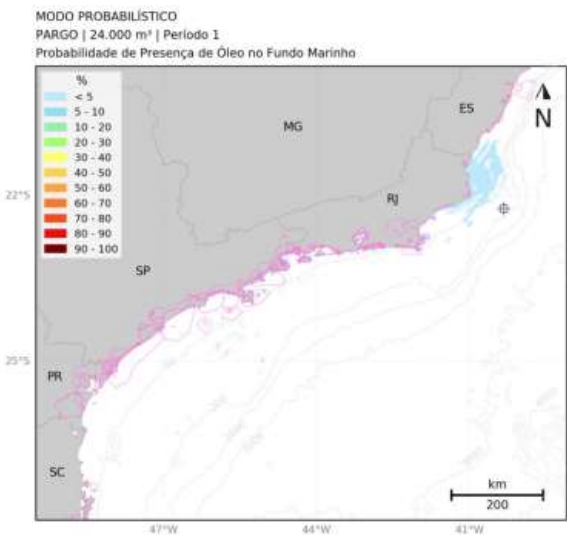
Map of probability of oil presence on the surface and maximum oil presence in the water column for a 200 m³ leak. Period 1 (September to February). Drill of 720 hours (30 days).



Map of minimum surface oil arrival time and probability of oil presence on the coast for a 200 m³ spill. Period 1 (September to February). Drill of 720 hours (30 days).



Probability map of surface oil presence and minimum surface oil displacement time for a worst-case leak (24,000m³). Period 1 (September to February). Drill of 744 hours (31 days).



Probability map of the presence of oil on the seabed and probability of the presence of oil on the coast for a worst-case spill (24,000 m³). Period 1 (September to February). Drill of 744 hours (31 days).



PSV Cobéia

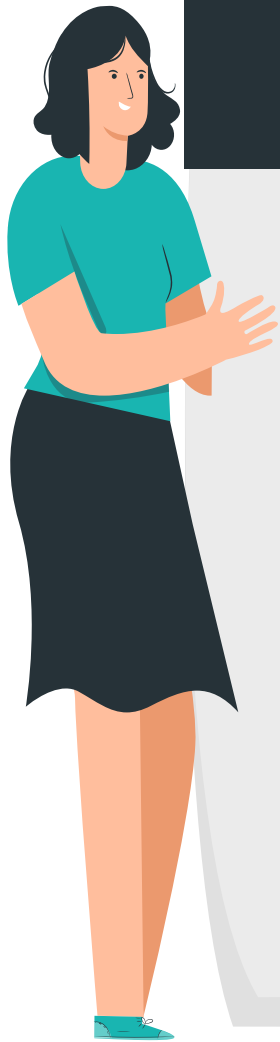
- ✓ Barreira de contenção Principal Oil Trawl NOT – 1000 – S (1 Carretel).
- ✓ Barreira de contenção secundária Oil Trawl NOT – 1000 – S (1 Carretel).
- ✓ Splitter Principal – bomba integrada TK 150 DHH56-A225 com capacidade de recolhimento de 180m³/h.
- ✓ Splitter Secundário – Bomba integrada TK DHH56-A225-S com capacidade de recolhimento de 180 m³/h.
- ✓ TD – Trawl Door (2 unidades).





OSRV – ML III

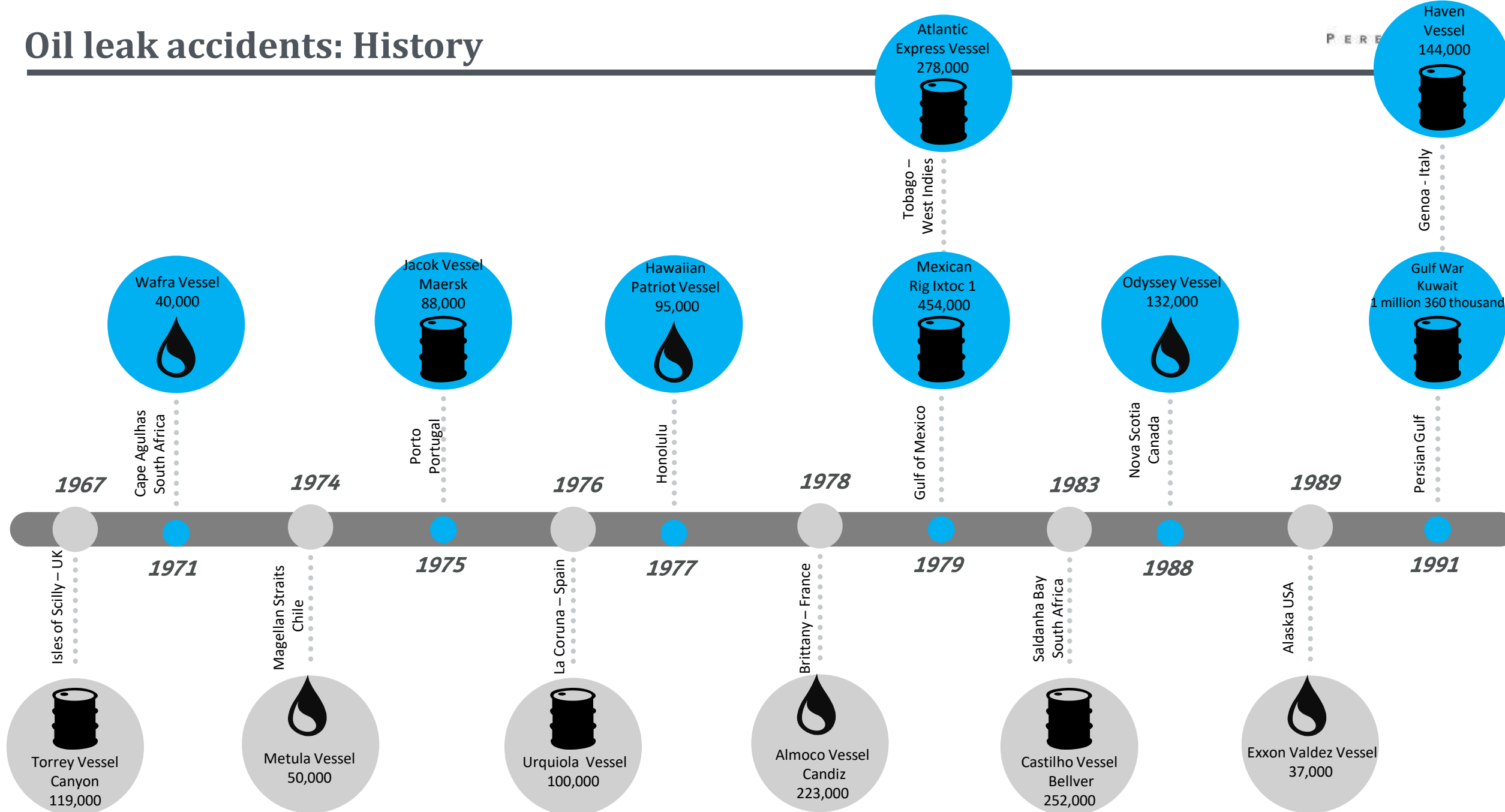
- ✓ **First OSRV approved to work with gangway in Brazil;**
- ✓ **First OSRV approved to work with logistical transport in Brazil;**
- ✓ **First OSRV approved to work with Oil Trawl in Brazil.**



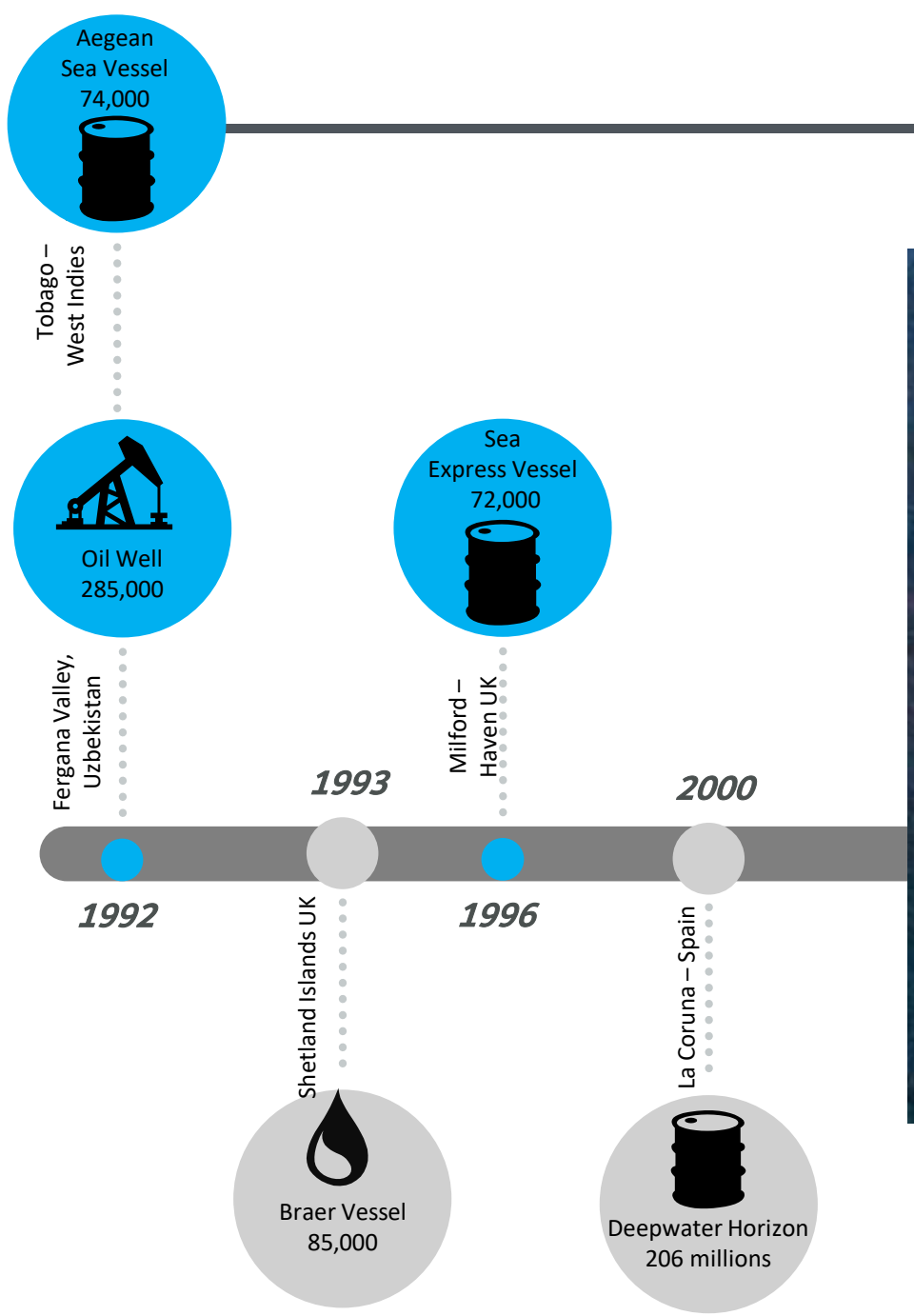




Oil leak accidents: History



Source of graph and table: ITOPF



Deepwater Horizon

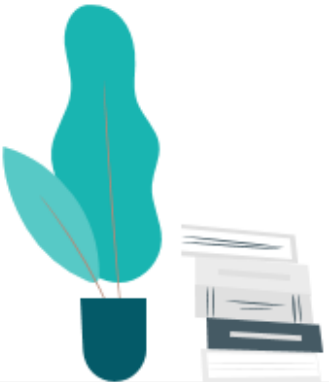
Deepwater Horizon Accident

- Semi-Submersible Drilling Unit
 - Dynamic Positioning
 - Ultra-Deep Waters
- Explosion and Fire
 - 11 people dead
 - 17 people injured
- Rig Sinking
- 700,000 m³ of Oil Leaked in the Gulf of Mexico
- Cost of \$30 billion in liability
- It reached 5 US states, from Texas to Florida.



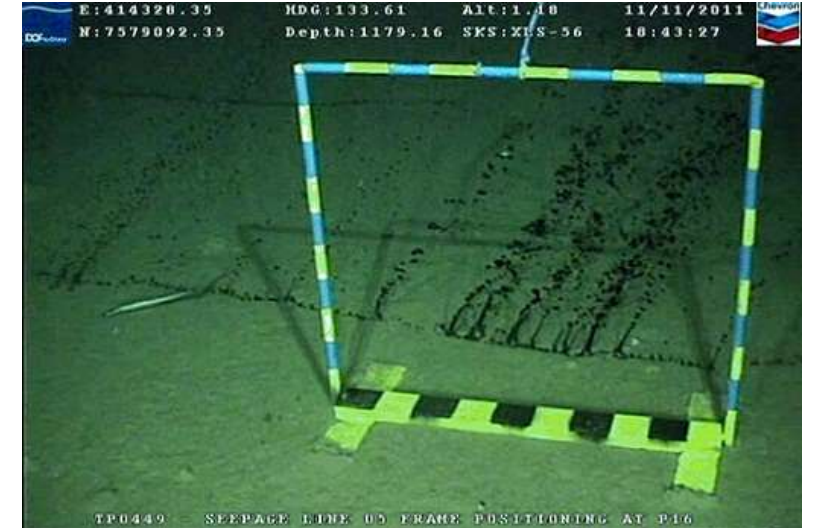
Deepwater Horizon Accident

- Resources and People Involved
 - 45,000 People Mobilized
 - 6,400 Vessels Mobilized
 - 830 Skimmers
 - 490 barges
 - 97 Aircraft Mobilized
 - 1,000 km of Launched Barriers (300,000 meters available)



Chevron Accident

- Semi-Submersible Drilling Unit
 - Transocean Sedco 706 (1976)
- Location
 - Campo de Frade | Campos Basin
 - Distance of 370 km from Rio de Janeiro
 - 1,200 m water depth
- Leakage Estimate
 - 2,400 barrels or 381.6 m³ of oil





IMPORTANT NOTICE:

Now, you must access the evaluation form for this course through the link:

https://docs.google.com/forms/d/e/1FAIpQLScDnqVfGHpZjldU6SScVPG0xGFEDWpCIAvluNhYZwFSstCDqg/viewform?usp=sf_link

Then, you must complete the proof of participation, here on MyDrake, to complete the course and issue your Participation Certificate.

P E R E N C O



Thank you