SWRX Spill

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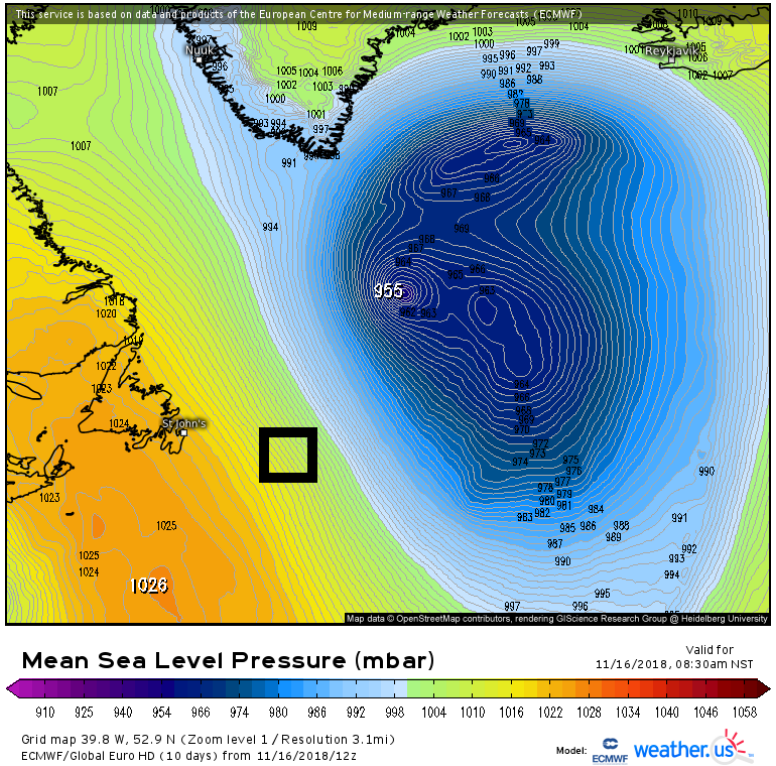
Agenda

- Oil spill
- Continuous monitoring
- Investigation and root causes
- Basis to resume production operations
- Lessons learned

Oil Spill From South White Rose Extension (SWRX)

Release during field start up

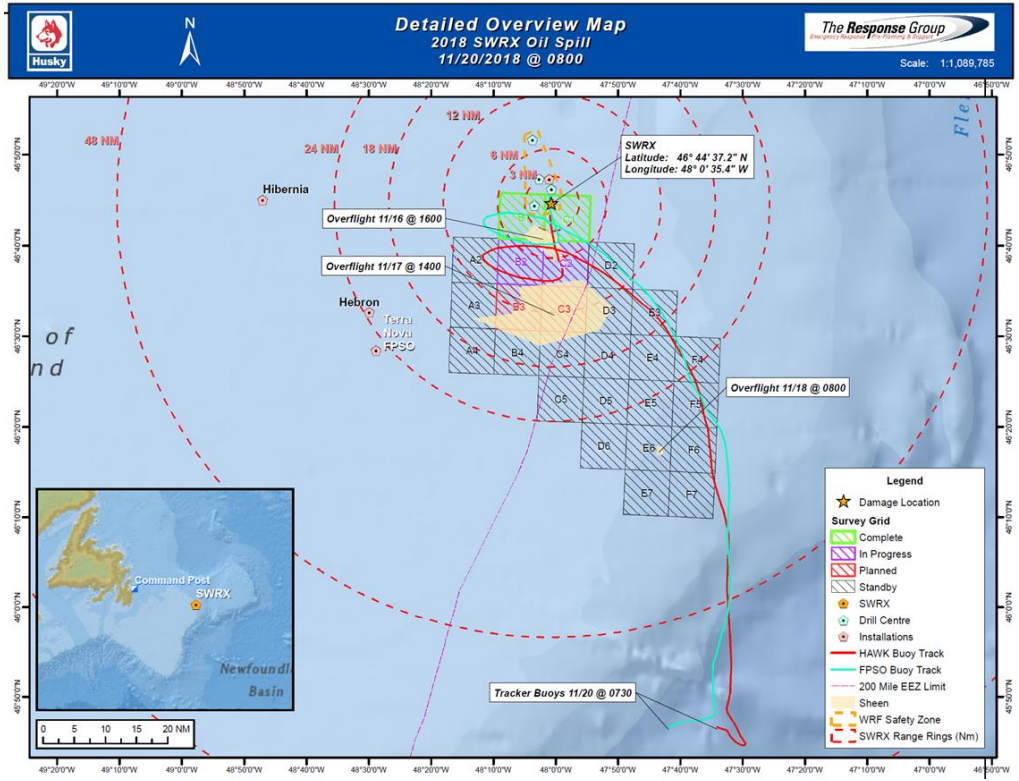
- Nov 15, 2018 - SeaRose FPSO shuts in production
- Nov 16, 2018 - Storm subsides and SeaRose prepares to resume operations
  - Loss of pressure in subsea flowline
  - Oil detected on water near SWRX
- Oil Spill Response Plan activated



Weather chart from November 16, 2018 showing storm system east of Jeanne d'Arc Basin area

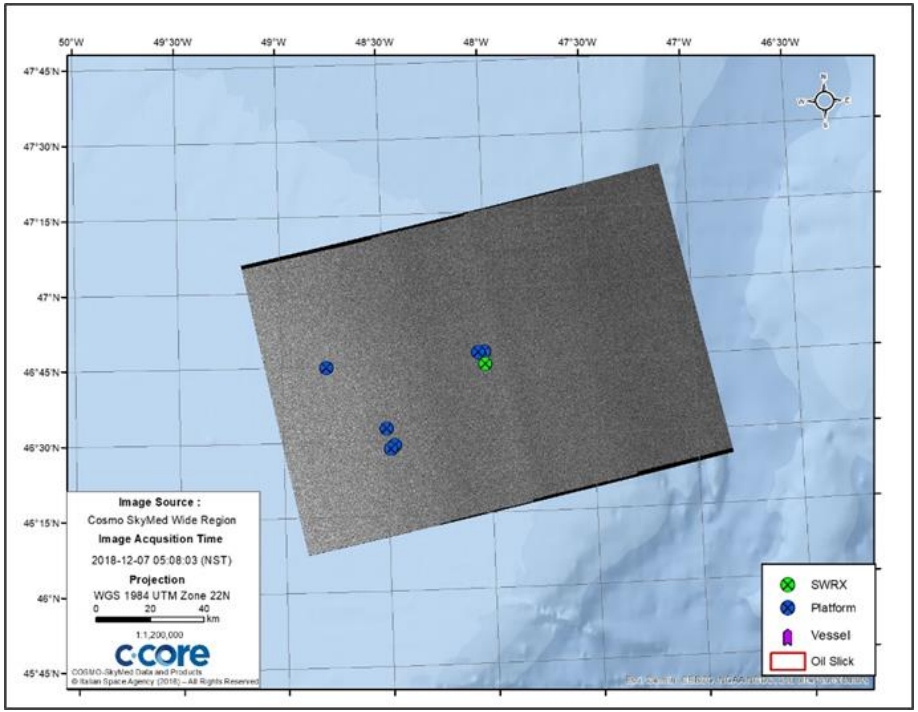
Map of Response Area

- Tracker buoys
- Sheen detections from surveillance flights
- Wildlife observation grid

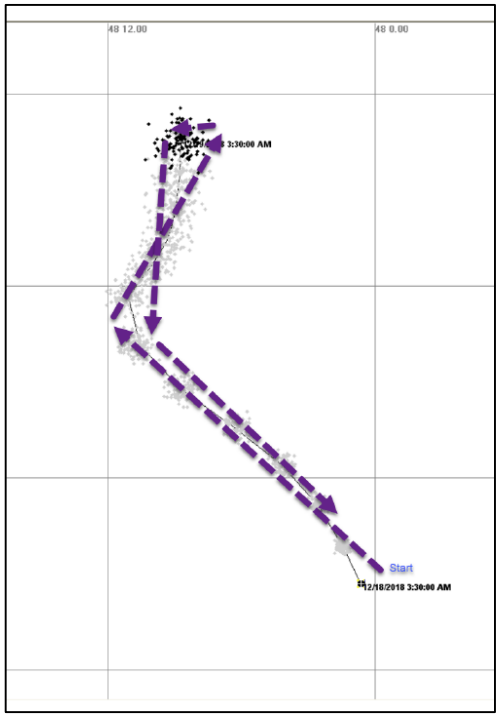


Continuous Monitoring and Secondary Spill Response

Daily monitoring – satellite, on water, subsea (Nov 2018-March 2019)



Satellite monitoring for surface expression anomalies

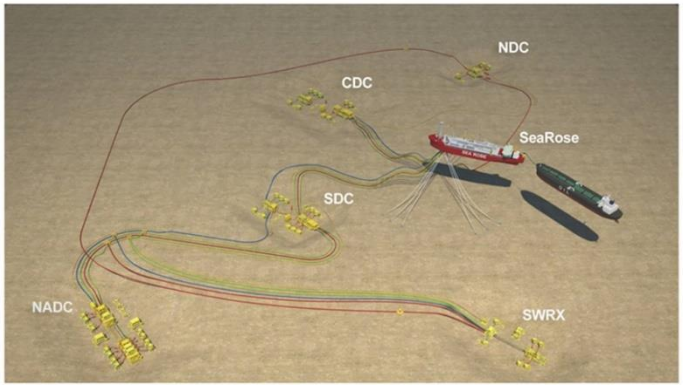


Daily monitoring by supply vessels

Investigation

Root causes

- Initial separation
  - Assessed over 60 possible causes
  - Categories: environment, materials, operation, measurement, installation
  - No evidence the unintended separation of the flowline connector was from environmental impacts from previous day's storm
  - Primary cause: hydrate development
- Detection and mitigation
  - SeaRose shut down and hot oiling system design
  - Pre-work planning and communication
  - Subsea system knowledge
  - Recognition of and response to abnormal conditions



How do we Know it is Safe to Operate?

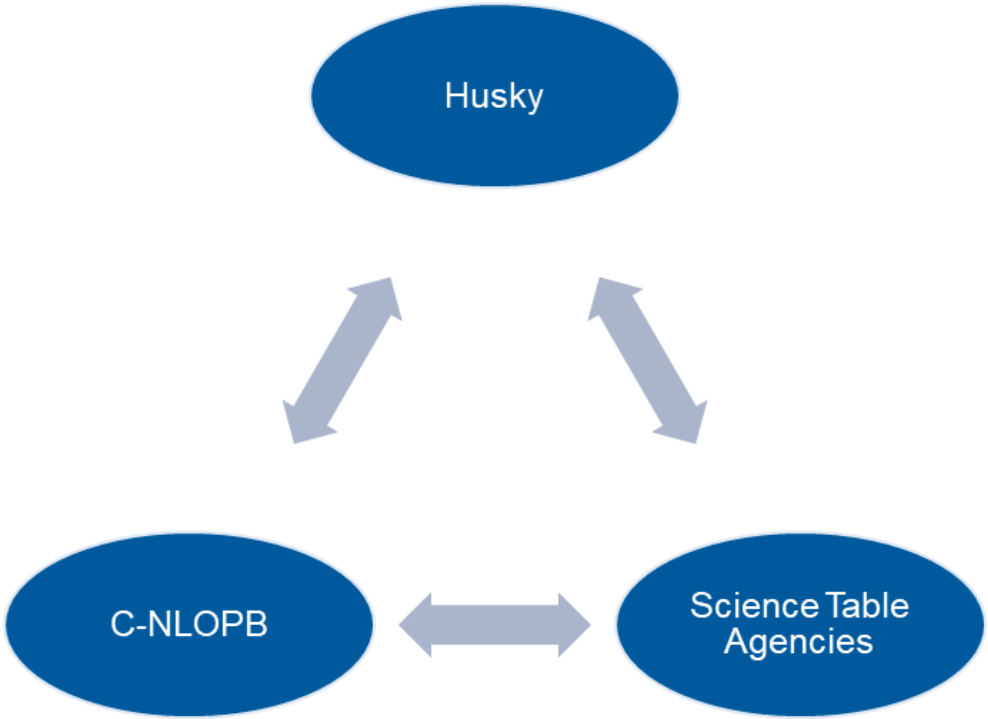
Basis of case

The basis of the Case for Resumption of Safe Operations (CRSO) is the demonstration that, prior to the resumption of production from the North Amethyst and South White Rose Extension drilling centres, Husky Energy Atlantic region:

- Restored and tested the integrity of the SWRX flowline and flowline connector, including replacement connector with higher tensile strength
- Understood the modes of failure of the flowline connectors within the Southern Drill Centre-North Amethyst Drill Centre (NADC) SDC-NADC and flow lines;
- Deployed the means to manage effectively these modes of failure during flowline flushing, hot oiling and production operations;
- Reinforced, in the event of future failure of a weak link, the means to detect and isolate the flowlines that have had weak link failures; and
- Presented evidence to satisfy ourselves, the certifying authority and the regulator that we can manage the risk of weak link failure during operations.

Lessons Learned

Communications



Thank you