



National Energy  
Board

Office national  
de l'énergie

# Oil & Gas Activity in the Canadian Arctic and Eastern Canada Activity

**Keith Landra - Chief Safety Officer**

with contributions by:

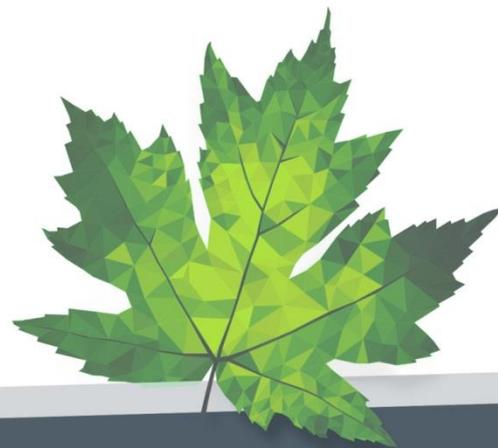
Paul Alexander, Chief Safety Officer,



Robert Normore, Chief Safety Officer, CNSOPB



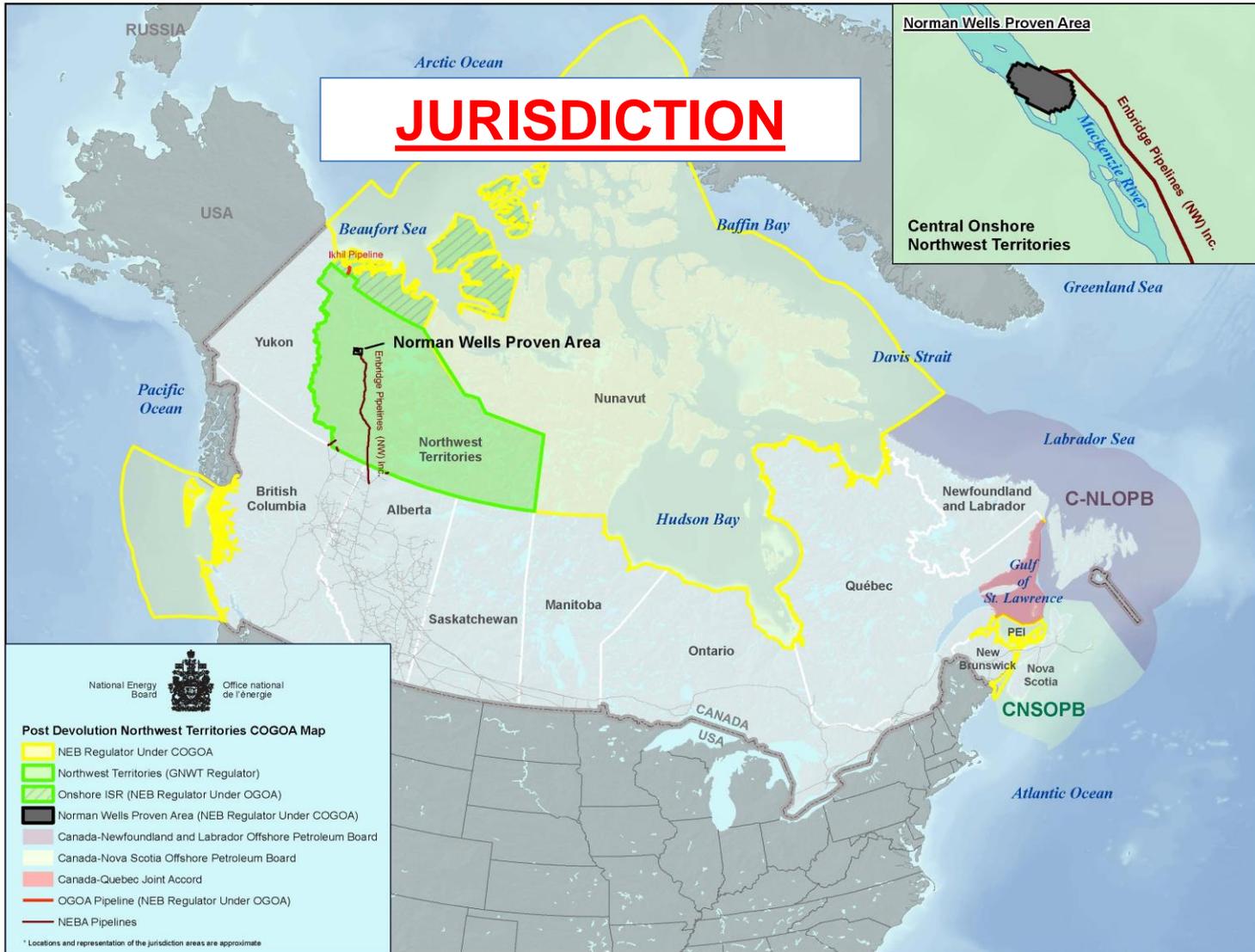
CANADA-NOVA SCOTIA  
OFFSHORE PETROLEUM BOARD



# Outline

- Jurisdiction Overview
- Activity Overview
  - Licences and Activity
  - Arctic Moratorium
- “Arctic Review” and Regulatory Reform
  - Same Season Relief Wells
  - Framework Regulations
- Research and Development
- Questions

# JURISDICTION



**NEB**

**Exploration Licences**

15 licences  
2 dormant  
13 active (2019 to 2023)  
~ 2.7 million ha (27,000 km2)

**Significant Discovery Licences**

48 SDLs, ~ 225,000 ha

**Production Licences**

none

# ACTIVE LICENCES

March 2018

**C-NLOPB**

**Exploration Licences**  
28 ELs, ~ 5.2 million ha

**Significant Discovery Licences**  
56 SDLs, ~ 214,000 ha

**Production Licences**  
12 PLs, ~ 65,000 ha

**CNSOPB**

**Exploration Licences**  
6 ELs, ~ 2.1 million ha

**Significant Discovery Licences**  
33 SDLs, ~ 77,000 ha

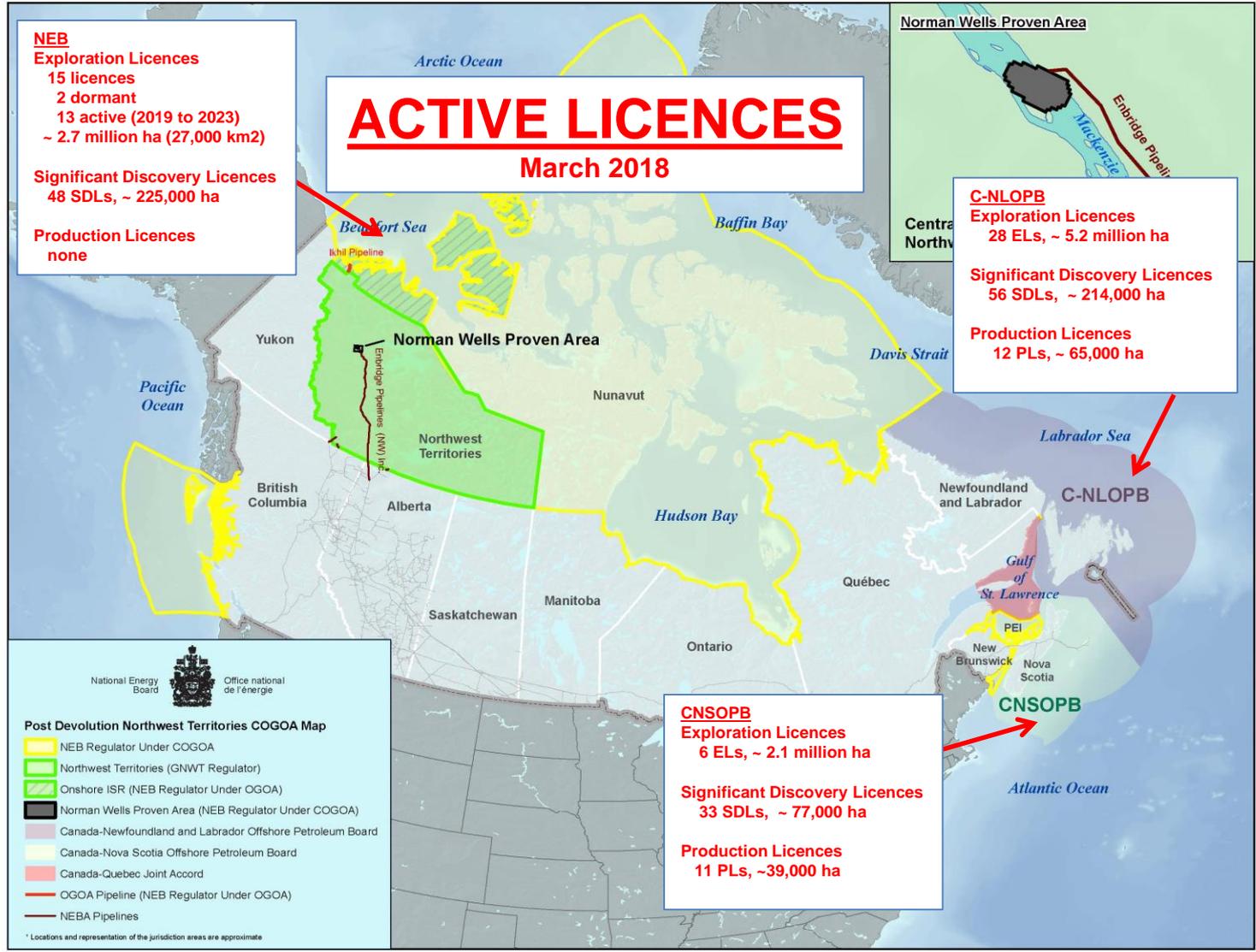
**Production Licences**  
11 PLs, ~39,000 ha

National Energy Board / Office national de l'énergie

**Post Devolution Northwest Territories COGOA Map**

- NEB Regulator Under COGOA
- Northwest Territories (GNWT Regulator)
- Onshore ISR (NEB Regulator Under OGOA)
- Norman Wells Proven Area (NEB Regulator Under COGOA)
- Canada-Newfoundland and Labrador Offshore Petroleum Board
- Canada-Nova Scotia Offshore Petroleum Board
- Canada-Quebec Joint Accord
- OGOA Pipeline (NEB Regulator Under OGOA)
- NEBA Pipelines

\* Locations and representation of the jurisdiction areas are approximate







Indigenous and Northern  
Affaires Canada  
Affaires autochtones et  
du Nord Canada

Oil & Gas Dispositions  
Sverdrup Basin  
September 2017

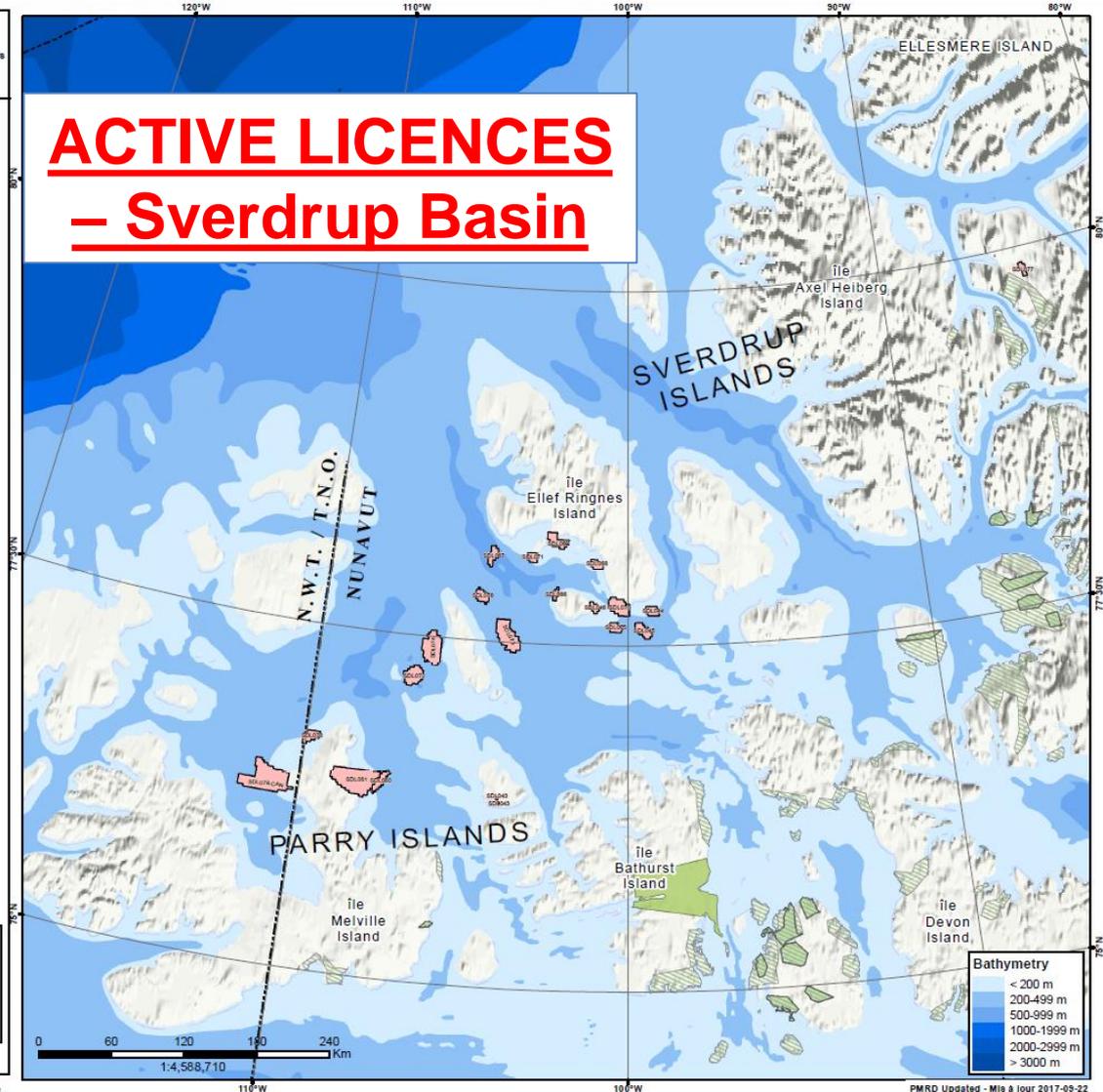
Dispositions des droits pétroliers et gaziers  
Bassin de Sverdrup  
Septembre 2017



-  Significant Discovery Licence  
attestation de découverte importante
-  Subsurface and surface  
owners are Aboriginal  
les autochtones sont propriétaires  
de la surface et du sous-sol
-  Surface owners are Aboriginal  
les autochtones sont  
propriétaires de la surface
-  Parks / Parcs

#	Rep	Ha
SDL043	Suncor Energy Inc.	612
SDL044	Suncor Energy Inc.	25,990
SDL045	Suncor Energy Inc.	18,797
SDL046	Suncor Energy Inc.	8,219
SDL066	BP Canada Energy Group ULC	3,548
SDL067 to SDL081	Suncor Energy Inc.	301,409

# ACTIVE LICENCES - Sverdrup Basin



Note: map is for illustrative purposes only. Note: carte présentée comme aide visuelle seulement.



Indigenous and Northern Affairs Canada  
Affaires autochtones et du Nord Canada

Oil & Gas Dispositions  
Eastern Arctic Offshore  
September 2017

Dispositions des droits pétroliers et gaziers  
Zone extra-côtière de l'Arctique de l'Est  
Septembre 2017

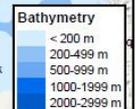
-  Significant Discovery Licence  
attestation de découverte importante
-  Line of administrative convenience with NRCan
-  Subsurface and surface owners are Aboriginal  
les autochtones sont propriétaires de la surface et du sous-sol
-  Surface owners are Aboriginal  
les autochtones sont propriétaires de la surface



#	Rep	Ha
SDL005	Husky Oil Operations Limited	11,184

Note: map is for illustrative purposes only. Note: carte présentée comme aide visuelle seulement.

# ACTIVE LICENCE - Eastern Arctic



Scale: 1:8,000,000. PMRD Updated - Mis à jour 2017-09-25

# Exploration and Production Activity - 2018

	NEB	C-NLOPB	CNSOPB
Exploration – Seismic	None	Multiple 2D and 3D programs anticipated*	None
Exploration - Drilling	None	Husky – White Rose A-24	BP – Scotian Basin*
Production**	None	ExxonMobil – Hebron HMDC – Hibernia Husky – North Amethyst Husky – White Rose Suncor – Terra Nova	EnCana – Deep Panuke ExxonMobil – Sable Offshore

\* Application filed, Authorization under consideration

\*\* Including development drilling and well operations

# Arctic Offshore Oil & Gas Moratorium

- On December 20, 2016, the Prime Minister issued an indefinite moratorium on new rights in the Arctic offshore, to be tested every five-years through a science-based review. *Existing rights were not affected by the moratorium.*
- Canada committed to a one-year consultation process with existing rights holders, and territorial and Northern Indigenous governments, on their longer-term oil and gas interests in Canada's Arctic waters.
  - Indigenous and Northern Affairs Canada (INAC) and Natural Resources Canada (NRCan) officials began the consultation process in April 2017.
- The consulted parties raised the notion of extending the current term for existing Exploration Licences in the Beaufort Sea.

# Moratorium – Key Messages

- Canada remains committed to ensuring that oil and gas activities planned for Canada's Arctic waters will only occur if the highest safety and environmental standards can be met.
- CIRNA officials are working with territorial governments and Arctic Indigenous groups to plan for implementation of regional strategic environmental assessments related to oil and gas activities in Canada's Arctic waters.
- CIRNA / NRCan will shortly be seeking policy direction from Cabinet on oil and gas development in the Arctic offshore, based on the comments received from key stakeholders.
- The moratorium will be reviewed every five years through a science-based review approach toward offshore development.

# Offshore Arctic Drilling Review - NEB

- In response to the Macondo incident in the Gulf of Mexico, the National Energy Board (NEB) initiated a review in 2010/11 of the safety and environmental requirements for offshore drilling in Canada's unique Arctic environment.
- Through the Arctic Offshore Drilling Review, the NEB examined the best information available on the hazards, risks and safety measures associated with offshore drilling in the Canadian Arctic. The Board invited those with an interest in these topics, including Northern residents, scientists, other regulators, representatives of environmental non-government organizations and industry, to share their information and knowledge.
- At the end of the Arctic Offshore Drilling Review, the Board prepared a report on safety and environmental protection requirements for offshore drilling in the Canadian Arctic. The NEB will use the results of the review to inform its decisions on future applications for offshore drilling in the Arctic.

# Arctic Review – Same Season Relief Wells

- The intended outcome of the Same Season Relief Well (SSRW) Policy is to kill an out-of-control well in the same season in order to minimize harmful impacts on the environment.
- The NEB will continue to require that any company applying for an offshore drilling authorization provide specific details as to how they will meet this policy.
- An applicant wishing to depart from NEB policy would have to demonstrate how they would meet or exceed the intended outcome of the NEB policy.
- It would be up to the NEB to determine, on a case-by-case basis, which tools are appropriate for meeting or exceeding the intended outcome of the SSRW Policy.
- (note that the SSRW Policy is non-statutory)

# Frontier and Offshore Regulatory Renewal Initiative

- FORRI is a partnership of the government departments responsible for frontier and offshore petroleum resources, as well as the regulators that ensure compliance with legislation and regulations.
- The objective of FORRI is to modernize the regulatory framework in order to maintain Canada's high standards for safety, environmental protection and management of resources.
- FORRI will also develop regulations on the use of spill treating agents.
- Formal consultation on the Framework Regulation is expected to be initiated in early 2019, when the draft regulation is published in the Canada Gazette Part 1.

# FORRI - Management System Changes

- Regulatory improvements include a new explicit reference to fostering a culture of safety, a shift to a safety critical element approach, and new requirements related to change management.
- Management system requirements were also strengthened for:
  - Goal-setting, performance measurement, and continual improvement
  - Hazard identification, risk assessment, and incident investigation
  - Internal and external communication and records management
- Improvements to the certification process for installations include:
  - New step to identify the design basis (certification plan) upon which the installations will be certified
  - A shift in focus towards identifying hazards that may lead to a major accidental event (safety case approach)
  - Updates to conflict of interest clauses

# FORRI - Well Containment and Control Changes

- Operators must be able to as promptly as possible deploy measures to stop the flow from an uncontrolled well as soon as the circumstances permit to minimize spill duration and environmental effects.
- Operators must demonstrate:
  - How this objective will be met in their contingency plan and throughout the authorization period, and
  - The adequacy of those measures.
- The operator must have access to and the ability to promptly deploy the source control and containment equipment.
- Detailed information on source control and containment capabilities is required in the Operator's Contingency Plan.

# FORRI - Well Containment and Control Changes; Contingency Plan

- The operator must submit a description of the source control and containment capabilities in their Contingency Plan including:
  - the type of subsea containment and capture equipment to be utilized in the event of a loss of well control;
  - the identification of suitable relief well rig arrangement;
  - details of the ownership of, and confirmation of any contractual arrangements for, the subsea containment and capture equipment and relief well rig, the arrangements for transport to, and mode of deployment at, the incident location;
  - the schedule and plan for the mobilization, deployment and operation of such equipment, including mitigation measures and actions to minimize deployment time and taking into consideration required regulatory approvals; and
  - the required support systems and equipment, such as vessels and remotely operated vehicles and necessary consumables (e.g. spare wellhead and casings and access to bulk additives required for a relief well).

# Projects / R&D Work – IRF Safety Culture Project

- AGM in late 2015 in Washington, DC confirmed culture as an area of interest for the International Regulators Forum (IRF)
- Culture working group (WG) established (Denmark, UK, Mexico, Brazil, The Netherlands, and Canada)
- WG goal is to identify key cultural elements/indicators that impact process safety performance and contribute to major hazard incidents
- Phased Approach...
  - Phase I - capture general IRF member perspectives on safety culture indicators
  - Phase II - review of indicators' validity by safety culture experts
  - Phase III – survey of industry associations on most important indicators (Mexico Canada, U.S., and The Netherlands)
- Final report and recommendations tabled at 2017 AGM
- Publication to the IRF website in February 2018 (<http://www.irfoffshoresafety.com/>)

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