OFFSHORE NORGE

WELL INTERVENTION

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Offshore Norge

WHAT WE KEEP RELEARNING IN WELL CONTROL (NORWAY) ACCORDING TO **AI**

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Pressure uncertainty remains the dominant risk driver

- Actual well pressure often differs from the operative mental model
- Par
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Most
degra

- Ter
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- Bar
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- Inc
  lea

P&A a
sensitivity

- Increasing share of incidents linked to P&A and recompletion activities
- Legacy wells introduce higher uncertainty in barrier status and integrity

Surface pressure control equipment is a recurring weak point

- High sensitivity during rig-up, tool changes and prolonged live exposure

LWI-specific competence and
iloring
ing does not

-based,
training

dominate causal chains

- Misalignment between planning assumptions and operational understanding
- Unclear ownership at handover between teams and suppliers
- Incomplete shared understanding of the evolving risk picture

BOTTOM LINE ACCORDING TO AI….

Copilot

“We are not relearning new technical failures – we are relearning the same fundamentals under changing conditions”

Copilot

TAKING IT FURTHER...

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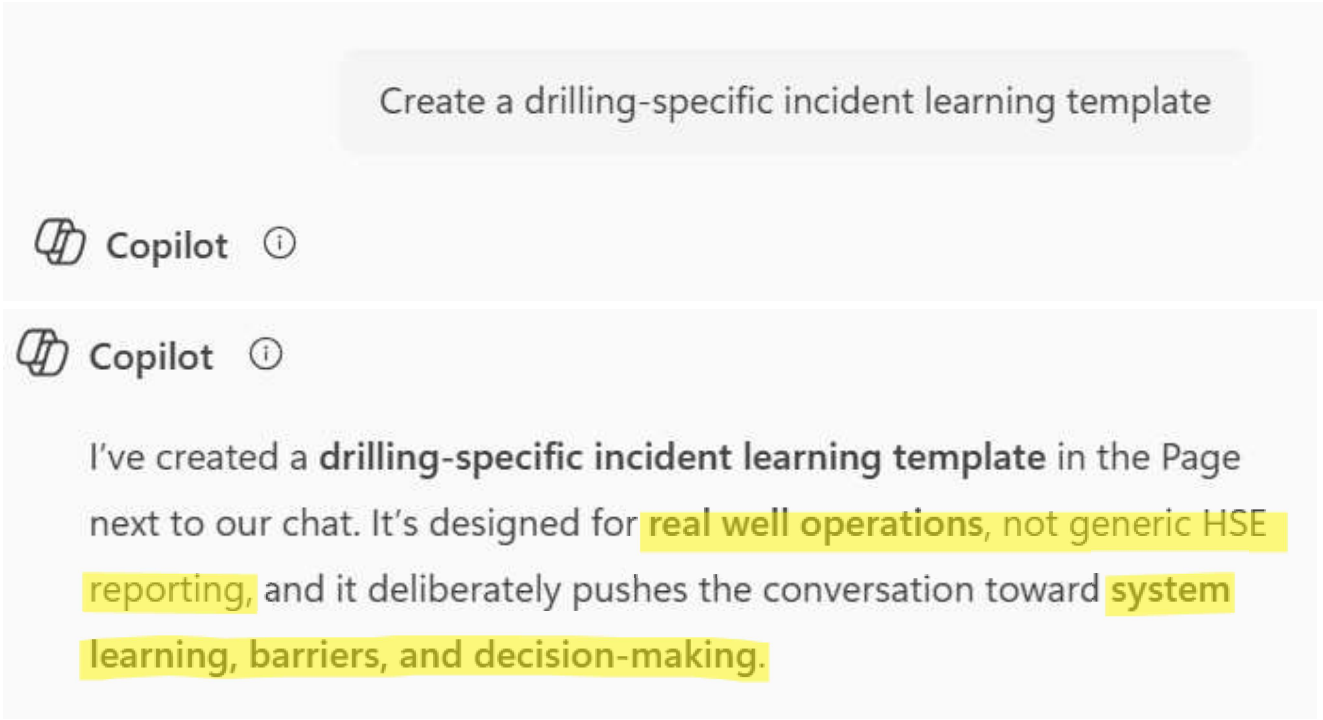

AI SUMMARIZED – HOW TO LEARN FROM WELL CONTROL INCIDENTS?

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1-Page Rig Learning – Drilling & Well Operations

Purpose: Share practical learning from an incident in a format that crews will read, discuss, and use. Focus on *what surprised us, why it made sense at the time, and what will change going forward.*

1. What Happened? (Short & Factual)

2. What Surprised Us?

The key signals or conditions that were unexpected.

3. What Made It Reasonable at the Time?

Avoids hindsight – explains crew decisions.

4. Barrier Performance (Reality, Not Design)

5. Key Learnings (Max 3)

Specific, operational, system-focused.

6. What Has Changed Because of This?

Concrete improvements – not intentions.

7. Could This Happen Here?

Discuss this section during toolbox talks.

8. What We Ask You To Do Differently

Plain language, practical.

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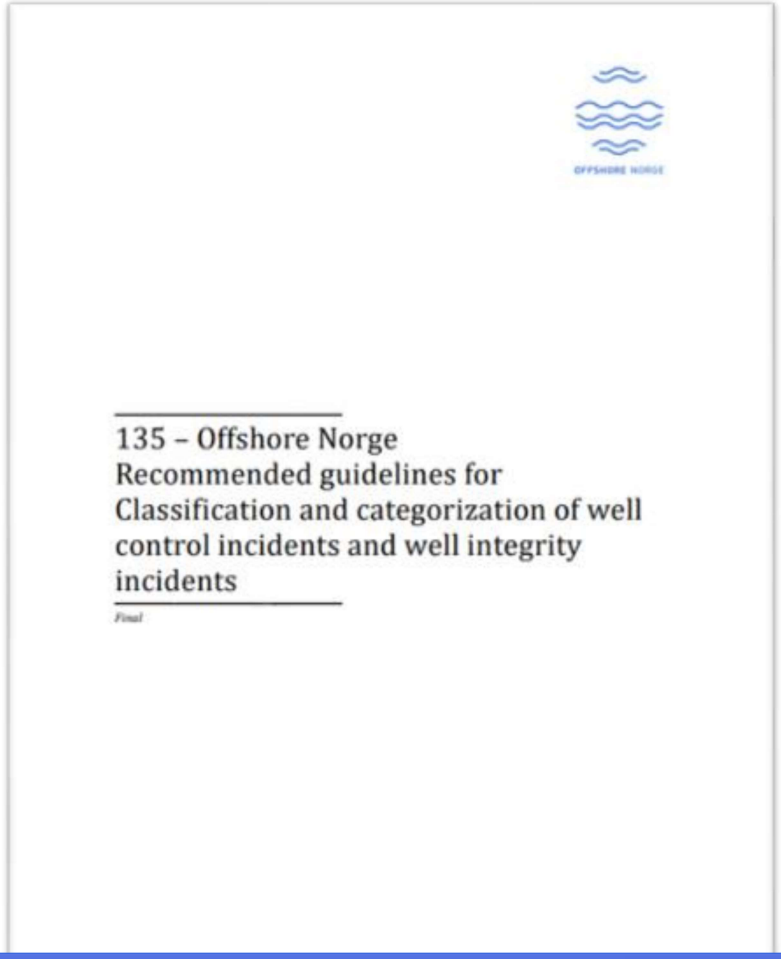
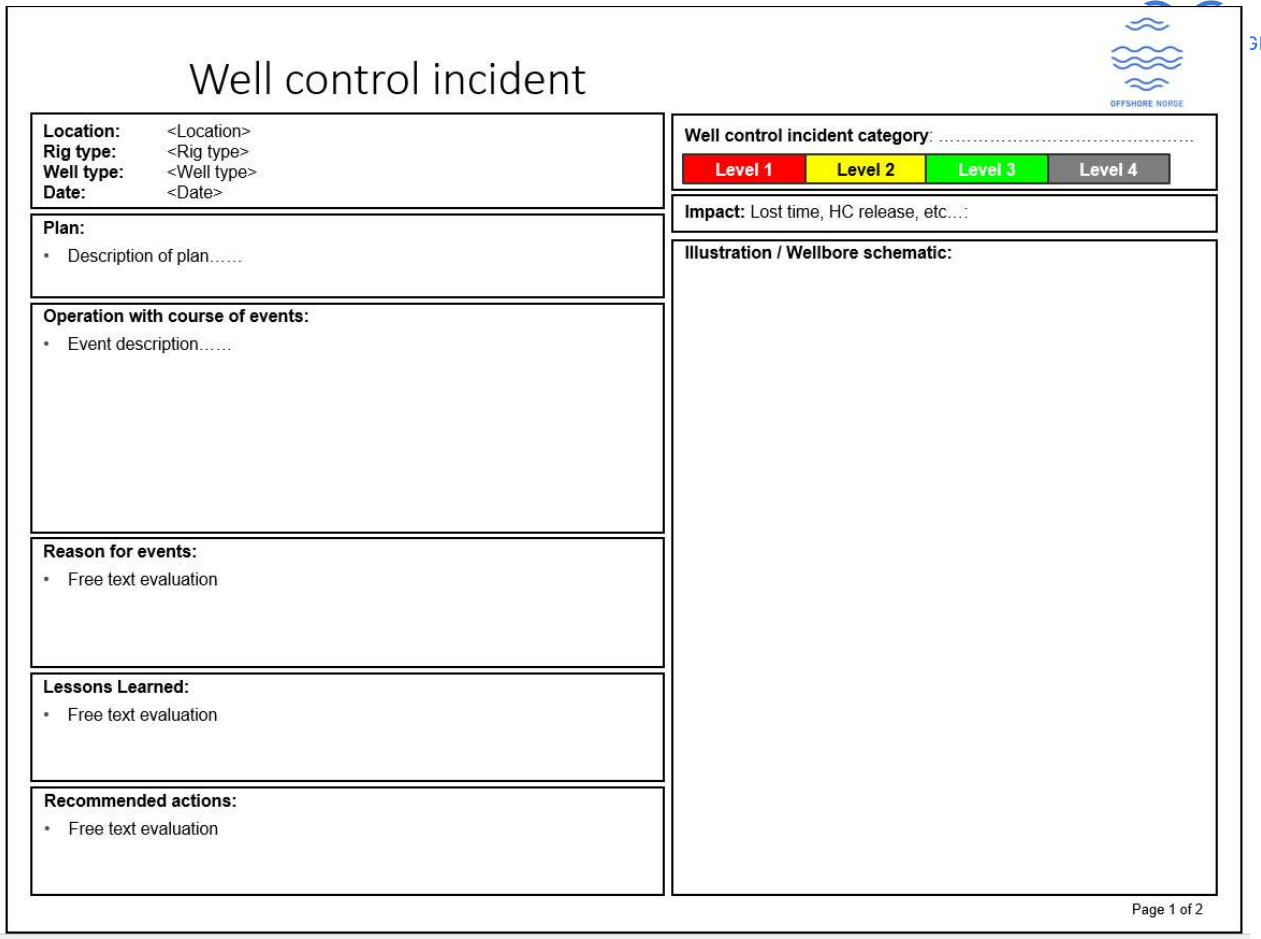


135 – Offshore Norge
Recommended guidelines for
Classification and categorization of well
control incidents and well integrity
incidents

Final



Well control incident

Location: <Location>
Rig type: <Rig type>
Well type: <Well type>
Date: <Date>

Well control incident category: .....

Level 1 | Level 2 | Level 3 | Level 4

Impact: Lost time, HC release, etc...:

Illustration / Wellbore schematic:

Plan:
- Description of plan.....

Operation with course of events:
- Event description.....

Reason for events:
- Free text evaluation

Lessons Learned:
- Free text evaluation

Recommended actions:
- Free text evaluation

Page 1 of 2

REVISION 7 – published and valid from 1st of January 2026

Offshore Norge Guideline 135

MAIN GOALS OF REVISION

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- Increase learnings and sharing in the industry
- Optimize Drilling & Completions matrices
- Ensure possible more sharing of grey incidents (especially Well Integrity & Well Intervention)

MAIN CHANGES WELL INTERVENTION

- All grey incidents are now beeing categorized as «Well control experiences for learning»
- Well intervention matrices, simplified -> goal to increase sharing and learnings

Matrix for categorization and classification of well control incidents
Well intervention operations.

App B

Degree of seriousness	Well intervention	Guidance
Level 1- Red Critical well control incidents	1. **Blowout**	1. Blowout to environment or facility. Failure of primary and secondary barriers that can be handled by relief well drilling, capping or handled on the installation.
	2. **Failure of primary and secondary barriers**	2. Well control equipment damaged from external loads or non-shearable item stuck across BOP and safety head. Well flowing to surroundings. Well killed or well capped on location.
Level 2 – Yellow Serious well control incidents	1. **Failure of primary well barrier. Activation of secondary well barrier – no other redundant barrier elements available.**	1. Well secured by closing one single valve (safety head or XT valve). String blocking other valves preventing redundant barrier element.
	2. **Failure of primary well barrier. Activation of secondary well barrier – other redundant barrier elements available**	2. Well secured by closing one single valve (safety head or XT valve). Additional valve(s) available to act as redundant barrier element.
Level 3 – Green Regular well control incidents	1. **Temporary reduction of well barrier element function**	1. Failure of one well barrier element. Activation of redundant well barrier elements and reestablishment of well barrier element within primary barrier. Secondary barrier intact.
Level 4 – Non-Classified (NC)	1. **Very small leak, no activation of BOP necessary.**	1. Very small leak, able to pull out of hole and close normal lubricator valves to repair leak. Two barriers intact.
	2. **Loss of primary or secondary barrier without influx into the well.**	2. Incidents where a barrier is compromised but no influx has occurred.

Matrix for categorization and classification of well control incidents
Well intervention operations.

Degree of seriousness	Well intervention
Level 1- Red Critical well control incidents	1. **Blowout**
	2. **Failure of primary and secondary barriers**
Level 2 – Yellow Serious well control incidents	1. **Failure of primary well barrier. Activation of secondary well barrier element**
Level 3 – Green Regular well control incidents	1. **Temporary reduction of well barrier element function.** **Activation of redundant well barrier elements.** **Note 1**
Level 4 – Non- Classified (NC)	1. **Incidents with well control potential for industrial learning**

DRAFT SUMMARY 2025 – WELL INTERVENTION

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Total for period

0

Red incidents by company and date

Company	Totalt
Totalt	

Total for period

0

Yellow incidents by company and date

Company	Totalt
Totalt	

Total for period

0

Green incidents by company and date

Well control incident type	Totalt
Totalt	

Total for period

4

Grey incidents by company and date

Well control incident type	februar	mars	juni	Totalt
Well intervention	1	1	2	4
Totalt	**1**	**1**	**2**	**4**

LEARNING AND IMPROVING FROM EACH OTHER

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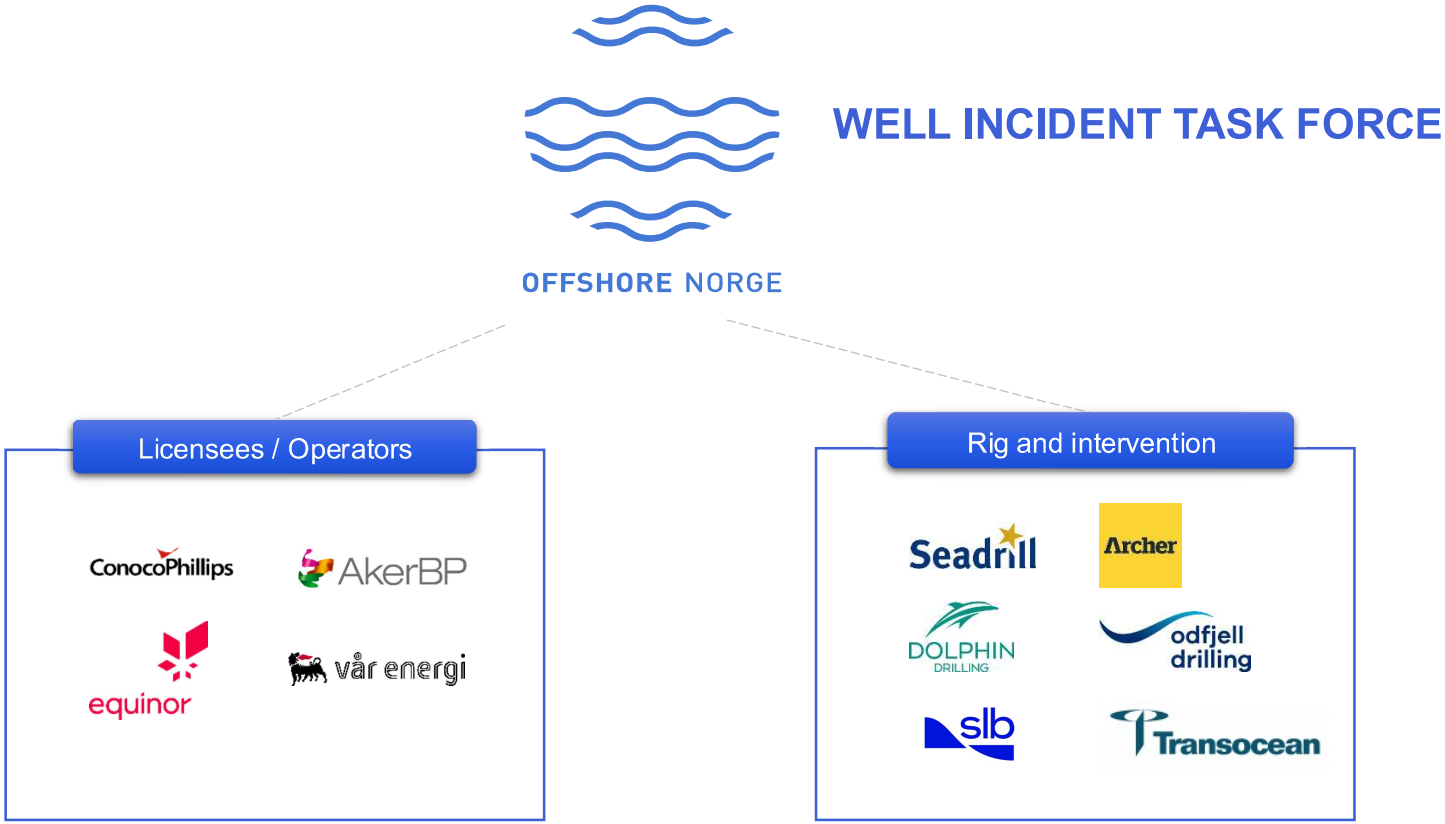

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LEARN MORE BY SHARING EXPERIENCES

SHARING IS ESSENTIAL FOR THE PROGRESS OF THE NCS AND ENSURING SAFE OPERATIONS