

# Can old sidetracks represent a well-integrity challenge in producing wells ?

A discussion and group work related to well-integrity challenges caused by historical slot recovery



# Historical development on NCS 1970 - 2024

1971  
Start  
prod  
on Ekofisk



Gulftide

Statfjord A



Frigg

Statfjord

Valhall

Veslefrikk

Gullfaks

Oseberg

Snorre

Troll oil

Sleipner

Norne

Heidrun

Troll A

Njord

Åsgard

Ormen Lange

Visund

Grane

Macondo



53 year

1970 - 1980

1980 - 1990

1990 - 2000

2000 - 2010

2010 - 2020

2020 - 2030

Pioner era

Development era

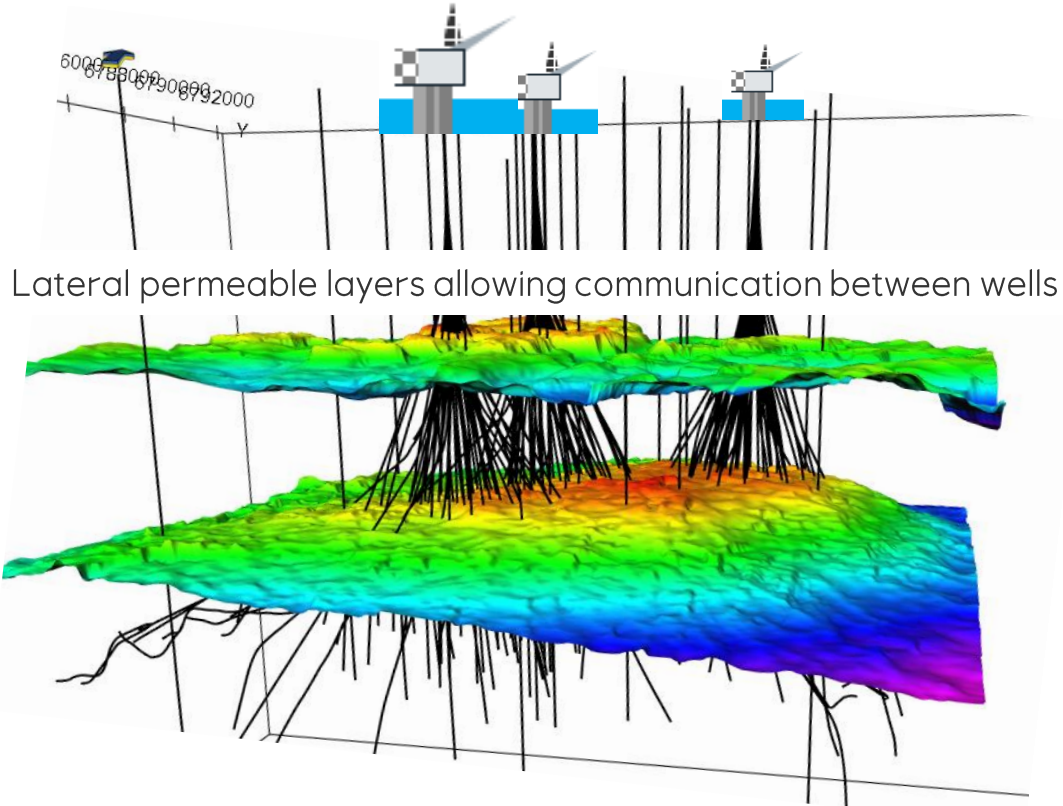
PP&A era



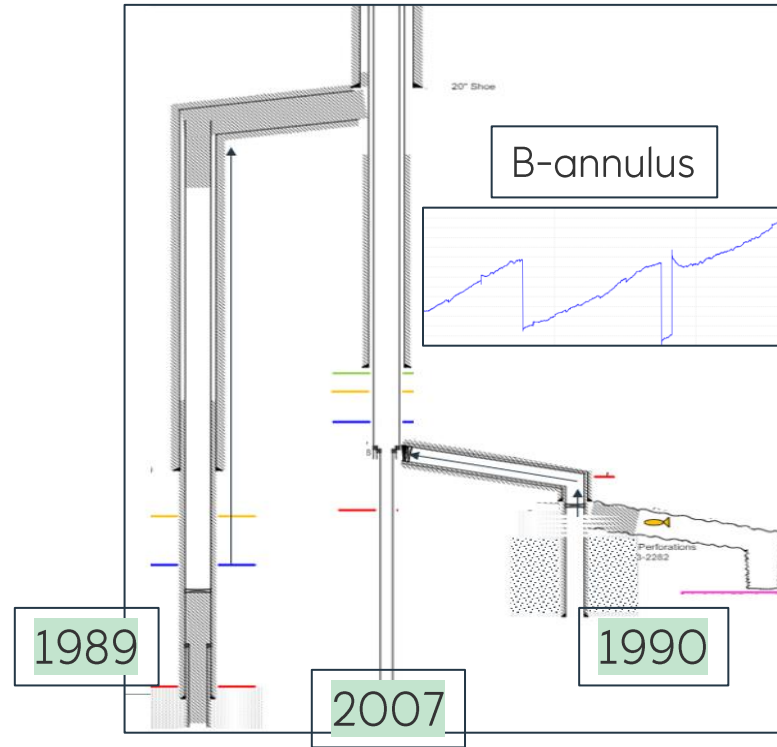
Increased Subsurface Knowledge - Technology Development - Increased Oil Recovery - Slot recovery



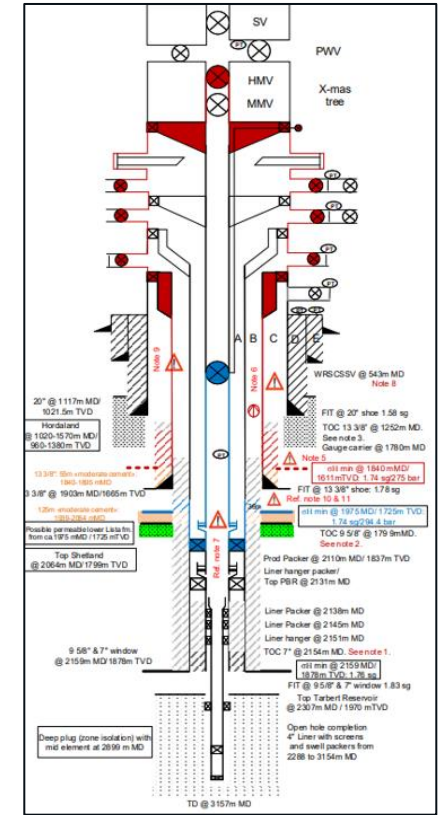
Proximity between wells increase as getting shallower  
 10m distance not uncommon at surface casing depths



### Single well visualization

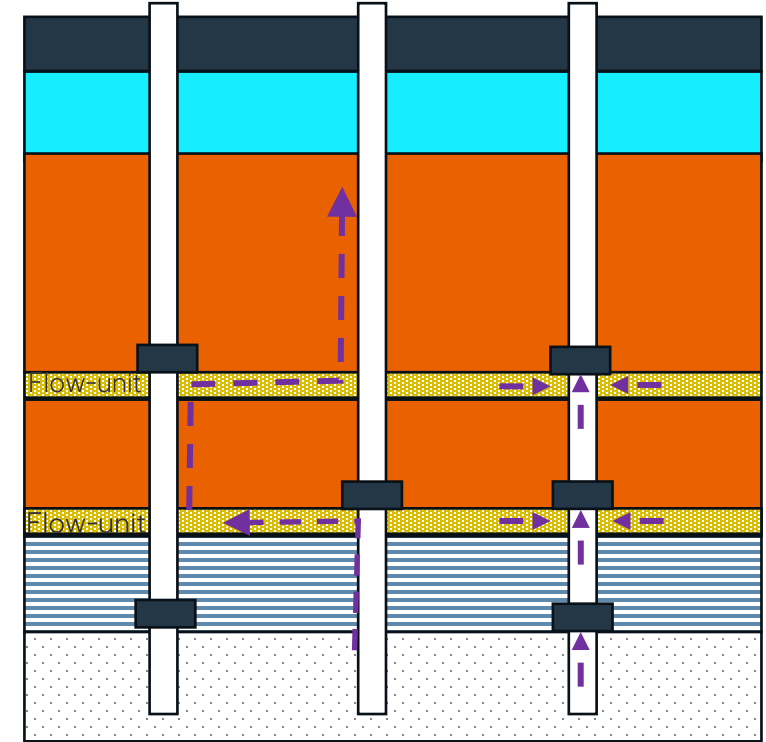
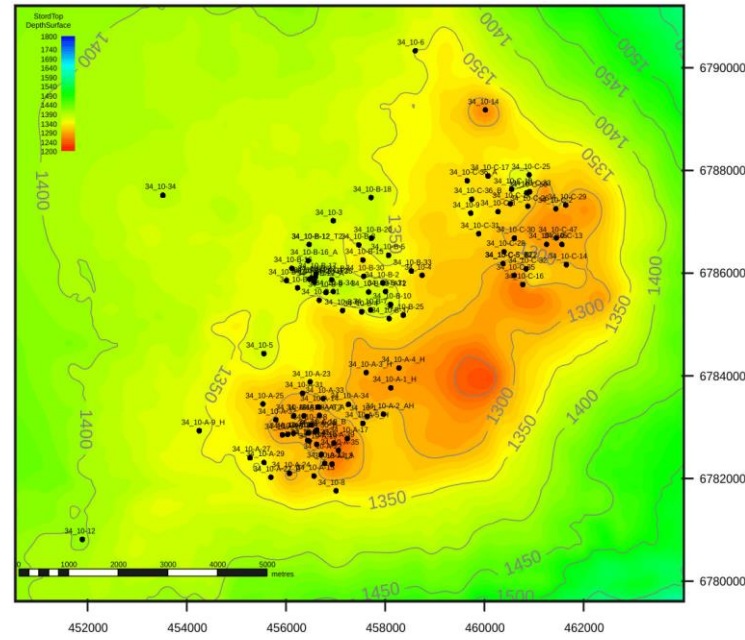
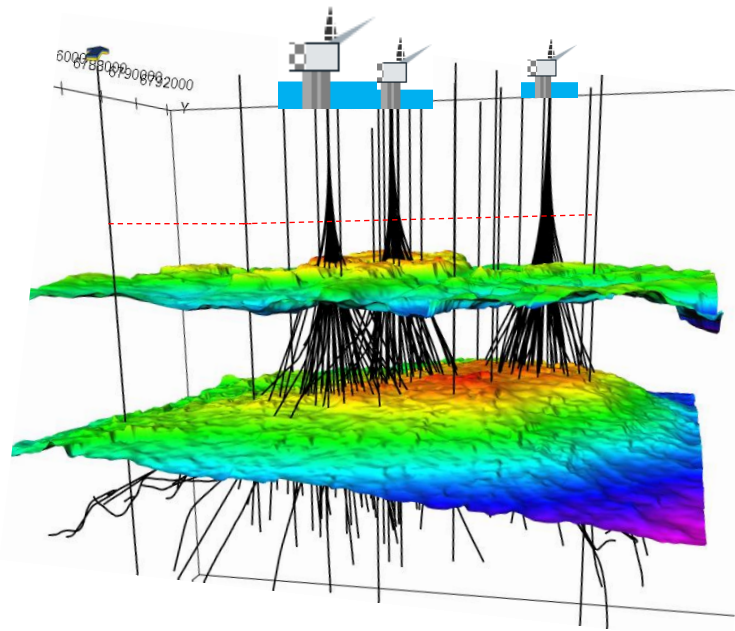


### Well barrier schematic

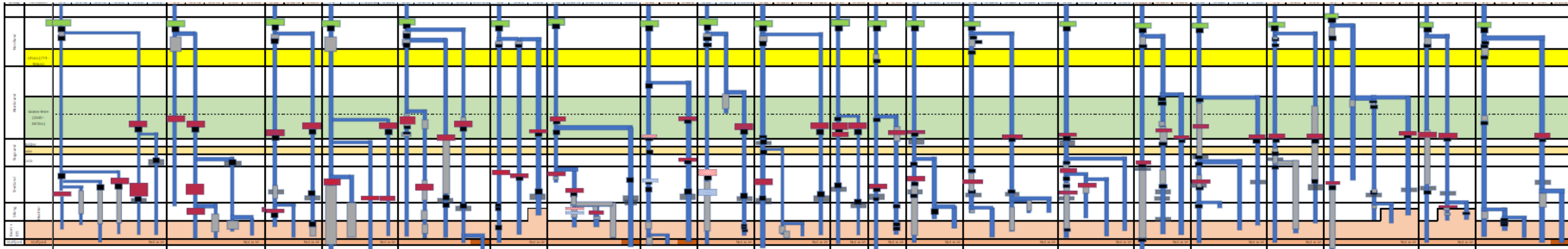


Current wellbore

Recommend to establish WBS for all well bores



Stragiotti plott – combines wells, barriers and formations

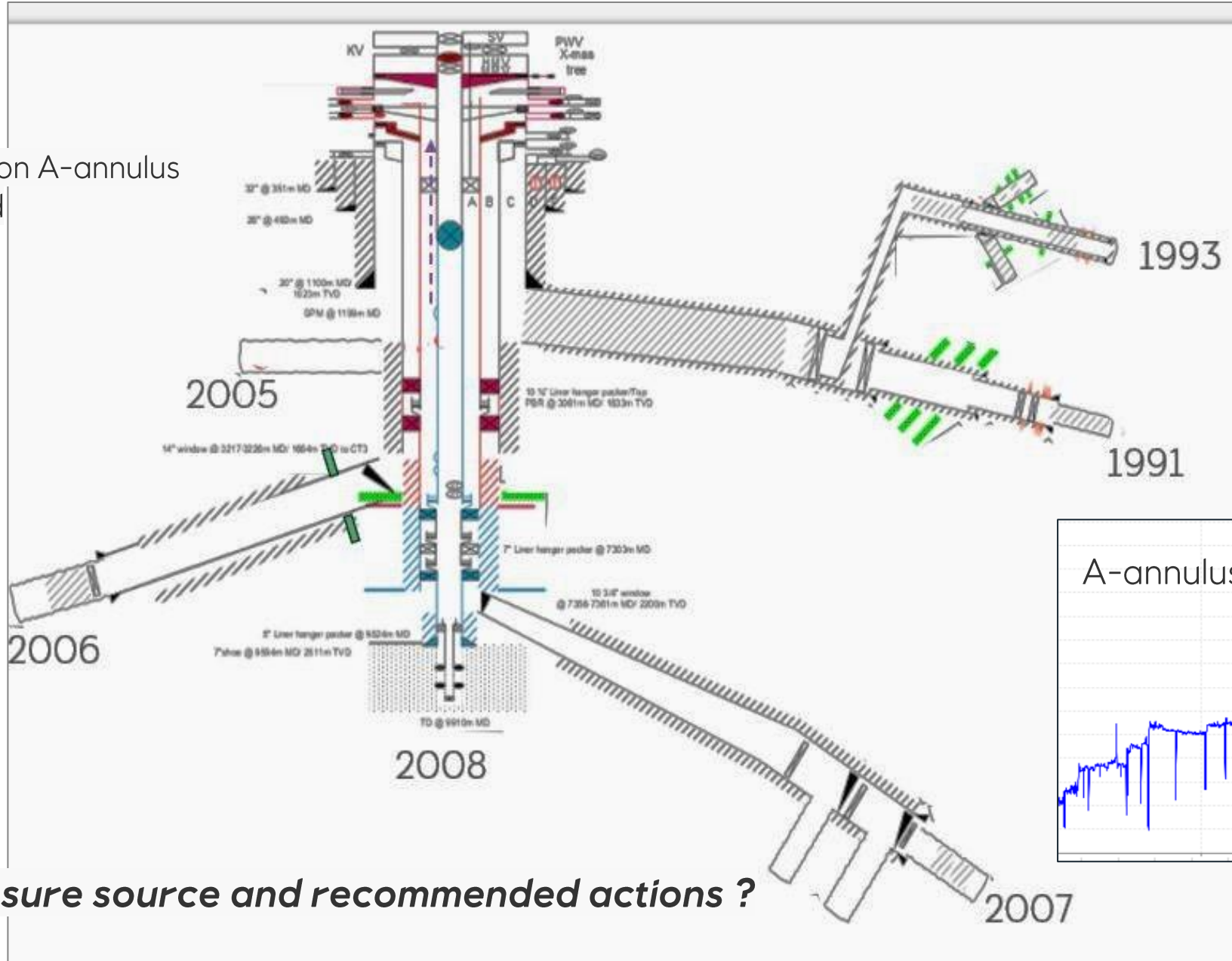


# Group work

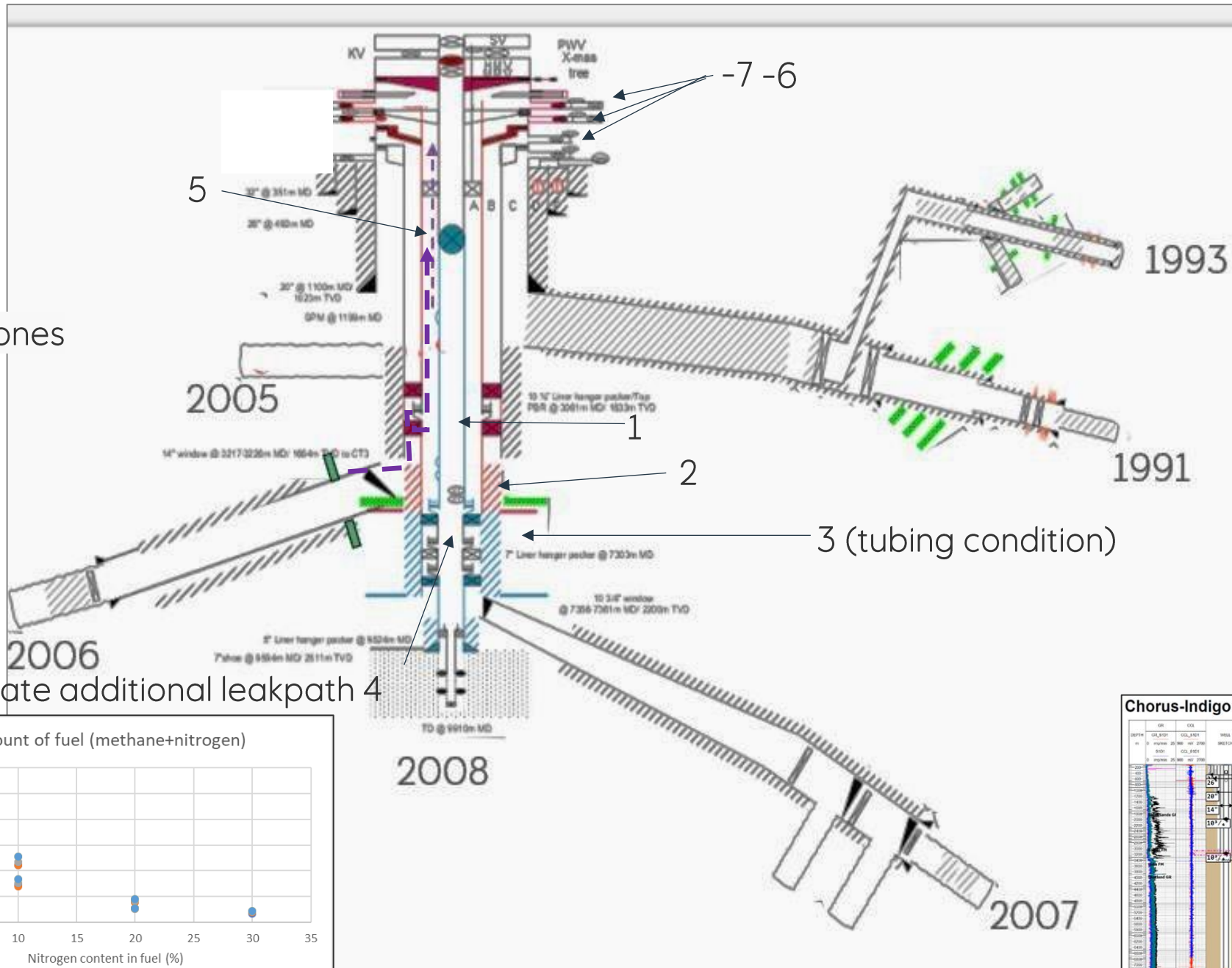


Pressure increase on A-annulus  
Gas-lift never used

Res. zones



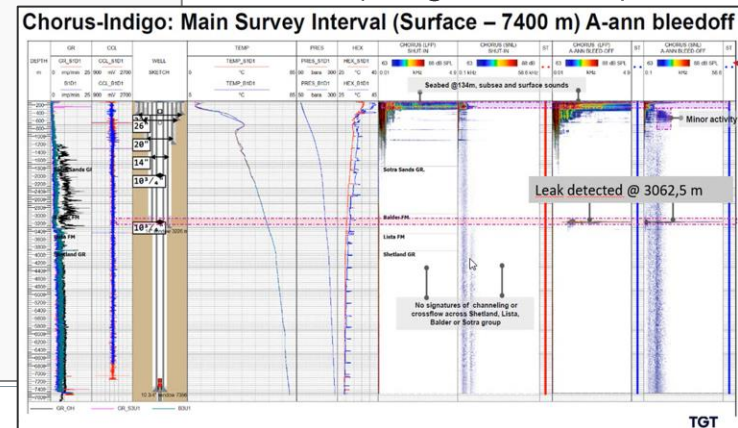
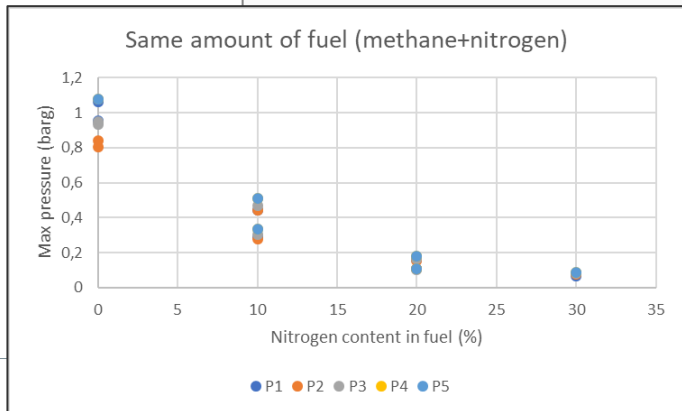
**Discussion; Pressure source and recommended actions ?**



1. Acoustic logging
2. Logging through 2 casings
3. Calliper logging whole well
4. Set plug and pressure test
5. Influx estimation
6. N2 on A annulus (all annulus)
7. Monitoring and trending
8. Sampling and compare

Res. zones

Eliminate additional leakpath 4



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Frank Skjerping Project leader Well integrity

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