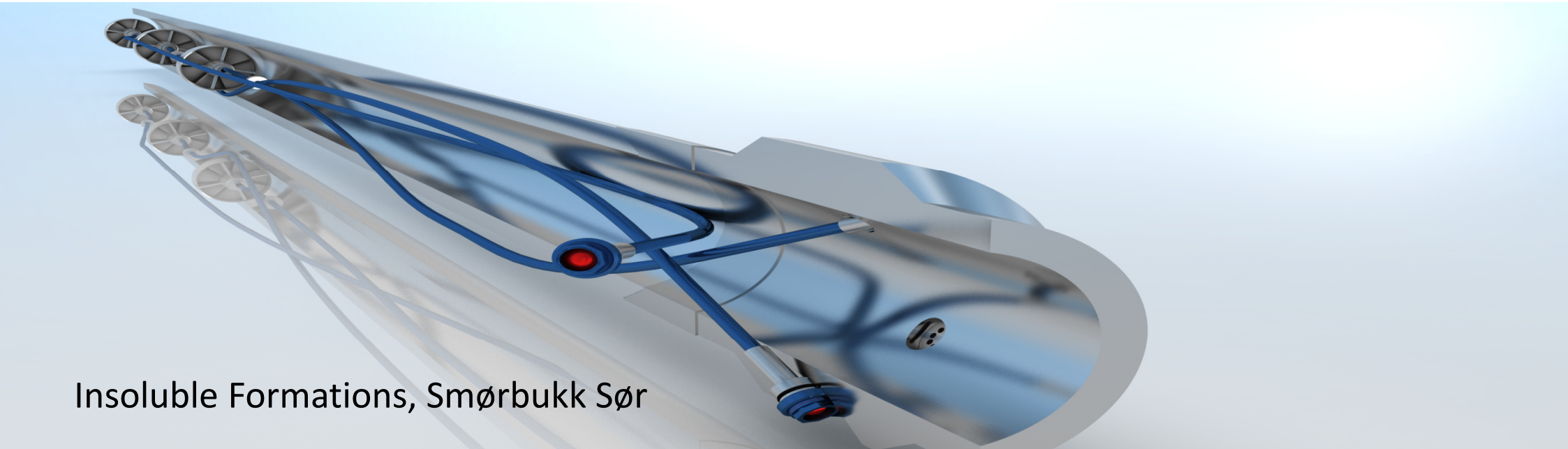




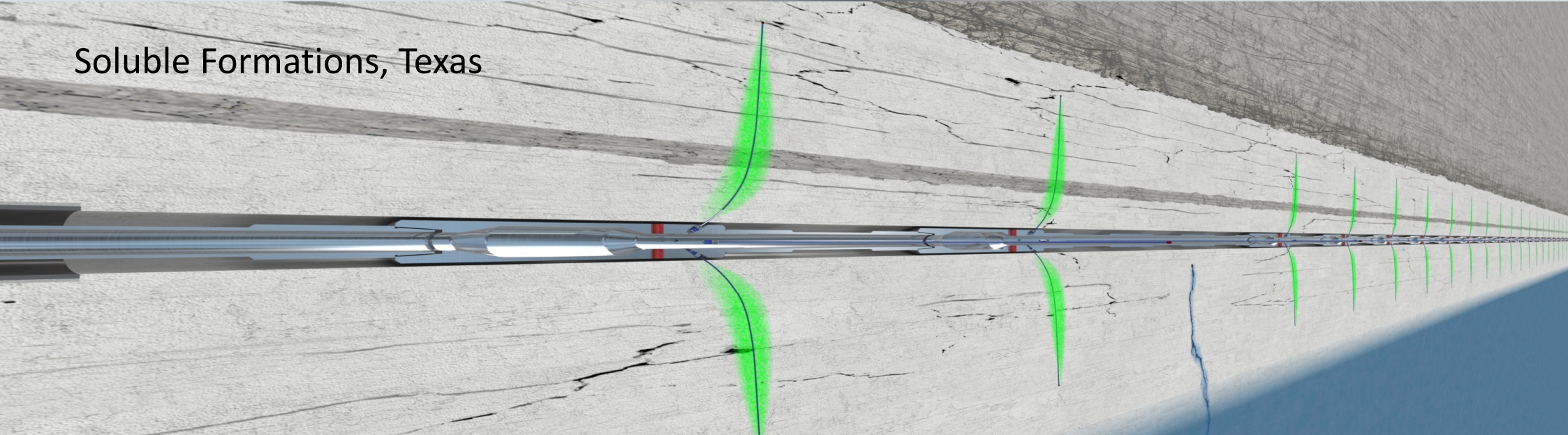
Connect your reservoir with accuracy simplicity and efficiency







Insoluble Formations, Smørbukk Sør



Soluble Formations, Texas



Fishbones vant innovasjonsprisen på ONS



Fishbones har utviklet teknologi som erstatter hydraulisk fracking med en mer miljøvennlig metode. Utviklingen er delvis finansiert av Innovasjon Norge og Forskningsrådet.

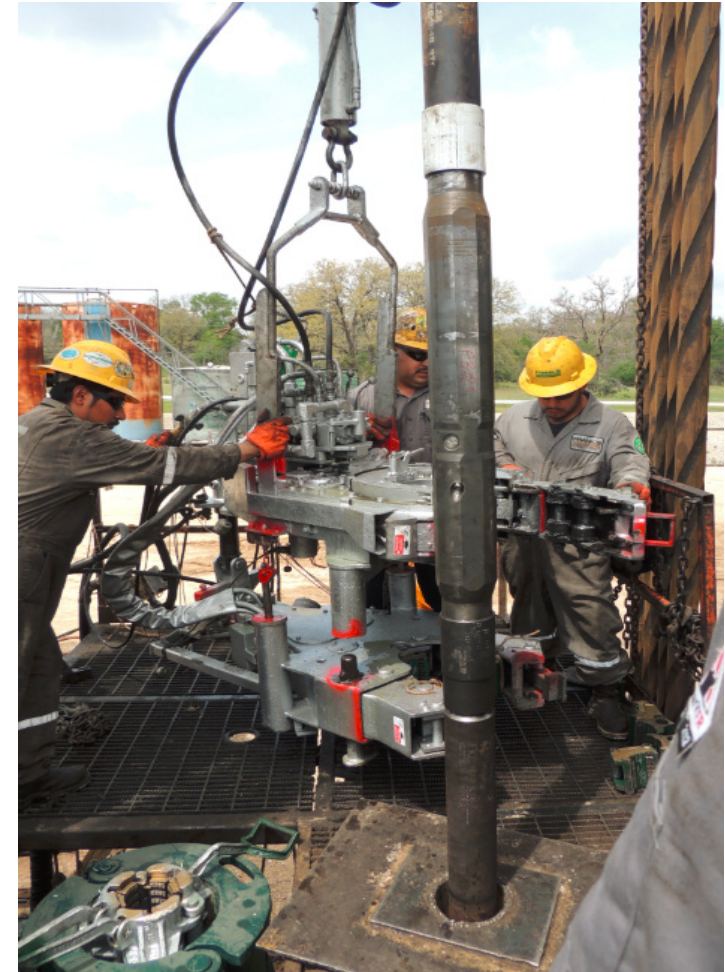
Fishbones AS mottok i går the SME Innovation Award på den store olje- og gasskonferansen ONS i Stavanger. Selskapet har også tidligere høstet utmerkelser for teknologien som gjør det mulig å bore mange små hull ut fra en brønn samtidig. Dermed kan oljeselskapene få ut mer olje uten å bruke den svært kontroversielle fracking-teknikken.



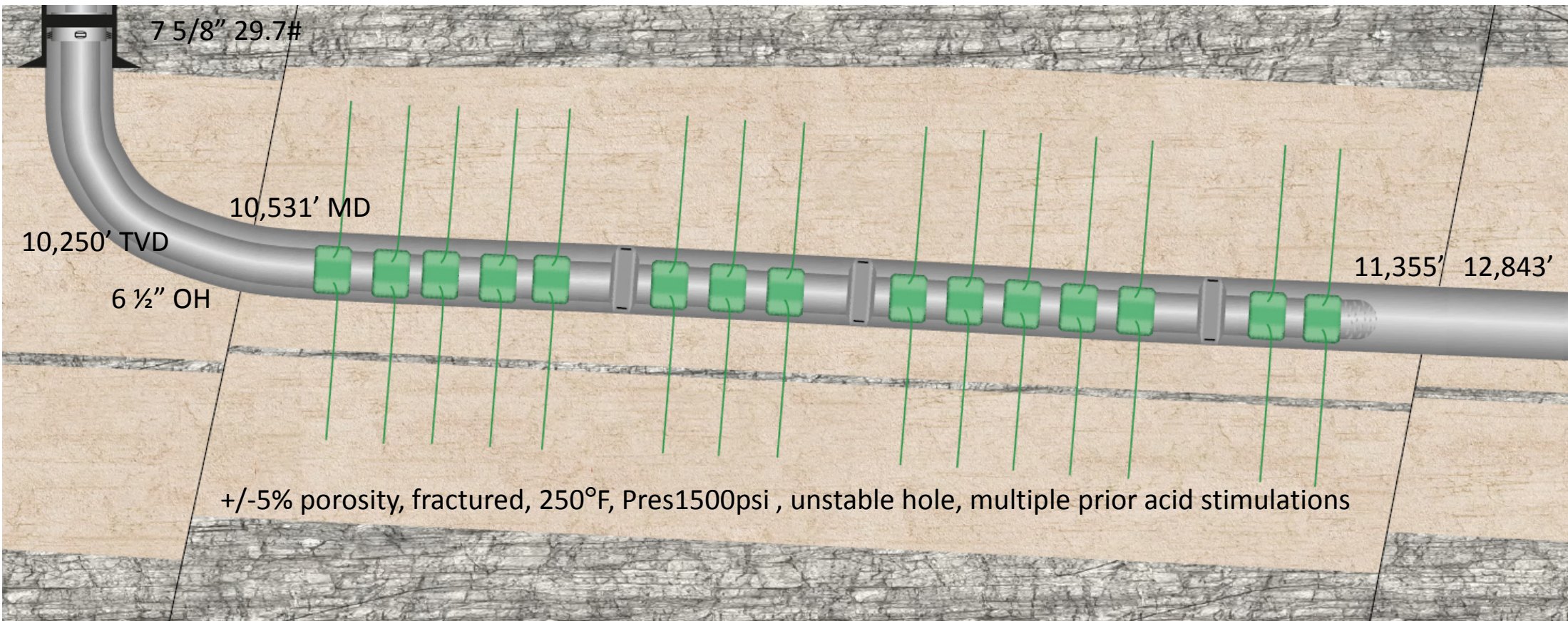
Animation

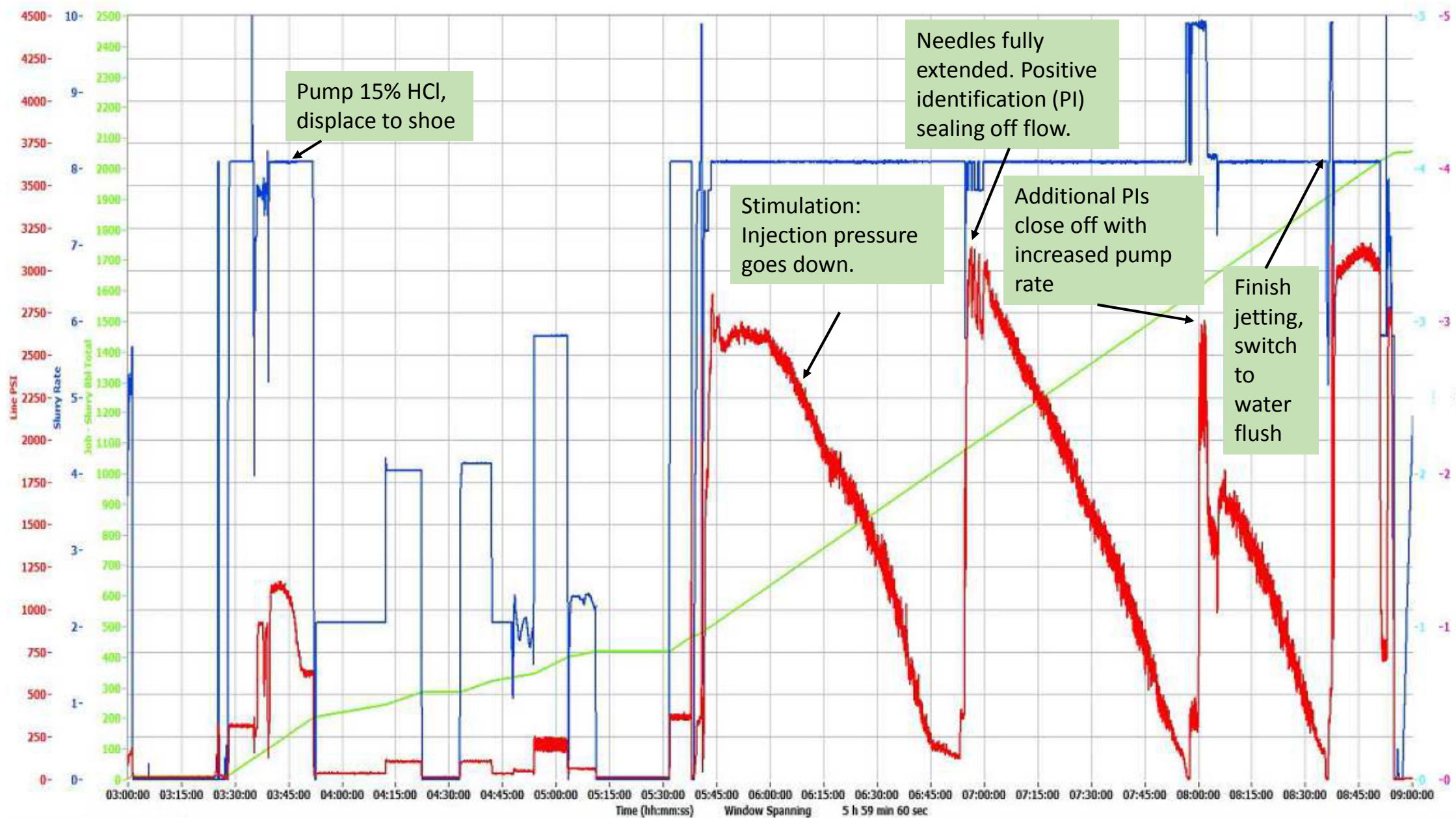
First carbonate installation - USA

- Tight limestone in Austin Chalk, Texas
- World record, 60 laterals
- Successful installation
- All verified
- 30X Productivity

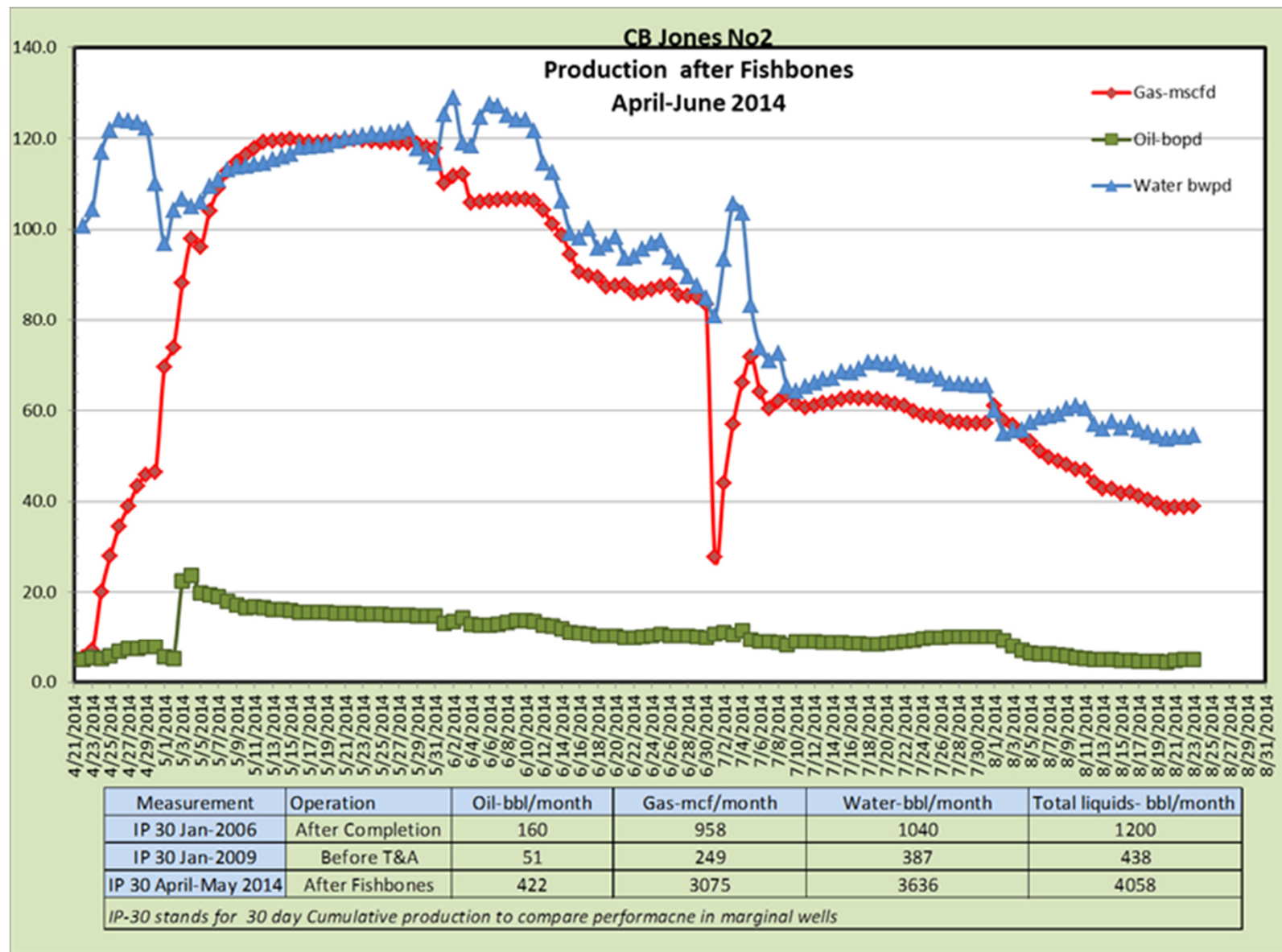


Jetting - USA



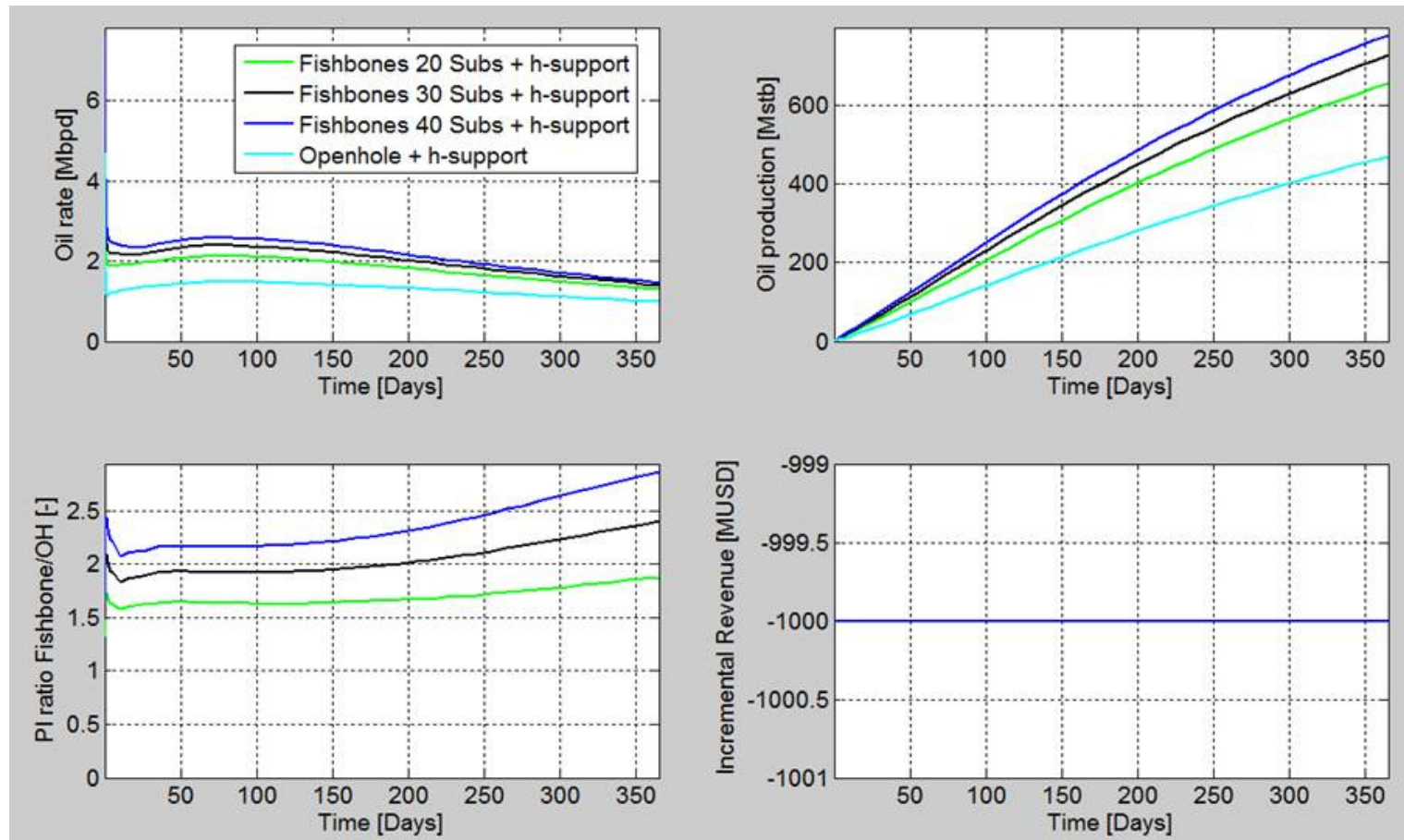


30XPI
2.6XInitial
Production
Pres 1500psi




Design

Reservoir optimization



Execution design



Units

Fluids

Materials

Wells

FishBones Projects

+

++

-

Name	Well	Fluid	Date
30 Dreamliner 13000 ft...	L-Well	Water Fresh 8...	9/24/2014 2:0...
Well 1	PB-1 YIH	LSOBM	10/1/2014 9:42...

30 Dreamliner 13000 ft L-Well

Project

Flow Diagram

Misc.

Project Name:
30 Dreamliner 13000 ft L-Well

Inner Material & External Geometry Roughness

Wellhead

Pressure
0 bar

Associated Well:
L-Well

Associated Fluid:
Water Fresh 8.34 ppg Power-Law

Pipe

Outer Diameter
5.500 in

Inner Diameter
4.670 in

Pipe Material:
70 ksi steel

Needle

Length
12.000 m

Outer Diameter
0.315 in

Nozzle

Discharge Coeff.
1.0

Differential Pressure
24.99 bar

Diameter
0.752 in

Bottom Nozzle Depth
3,962.4 m

Dreamliner Configuration

Liner Length
9.51 m

Liner Outer Diameter
5.500 in

Liner Inner Diameter
4.670 in

Motors / Sub
3

Sub Length
0.46 m

Sub Outer Diameter
7.500 in

Sub Inner Diameter
4.670 in

Sub Material:
70 ksi steel

Liner Material:
70 ksi steel

Dreamliner subs & motor profile

BottomMidTopMotor Profile

Bottom number of Sections
10

Needle flow profile

Flow-Rate (L/min)	Pressure (bar)
2,000	35,000

Calculations

Run Fishient

Run Tripping

#/page 10 << < 1 of 1 > >> Refresh

Edit



Core testing







Technology development

Is it the right solution?
Reliability
Stretch to succeed



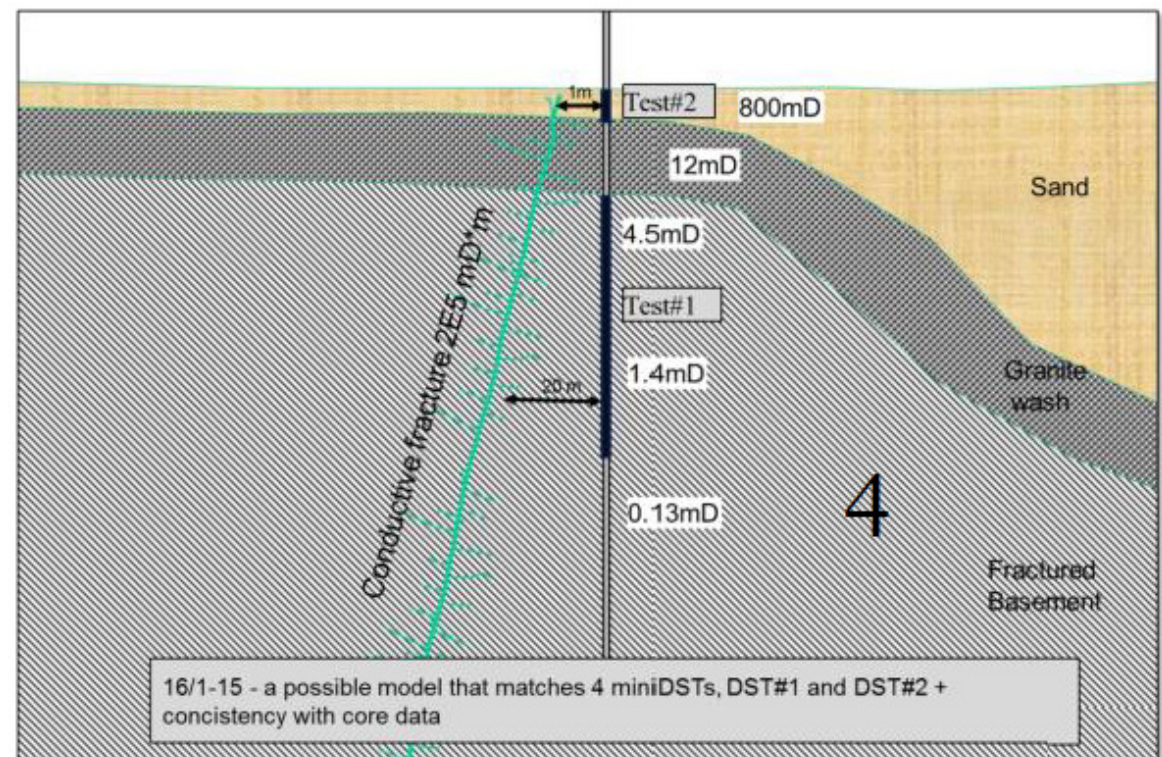
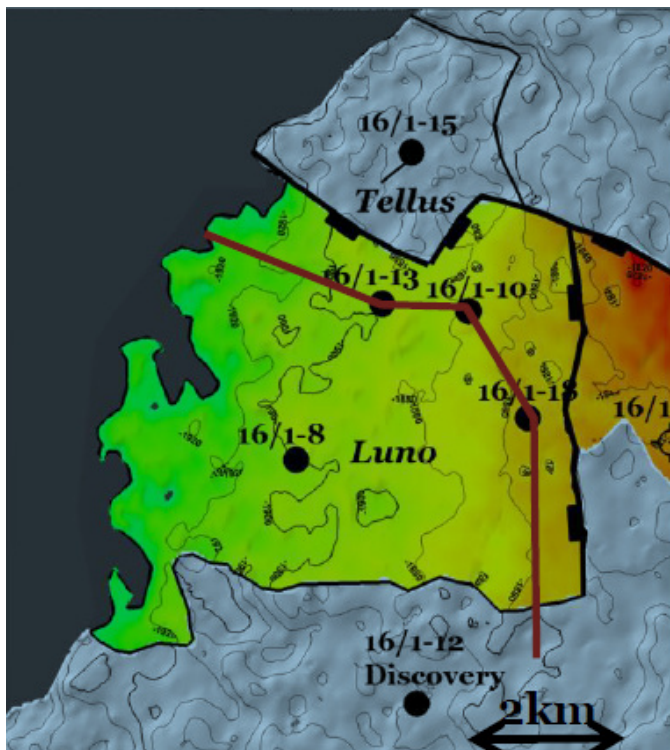
Thanks to people hard at work

Statoil Smørbukk

- Demanding qualification
- 4bnNOK
- No downside
- «What can new technology do for you»?



Grieg/Sverdrup Basement



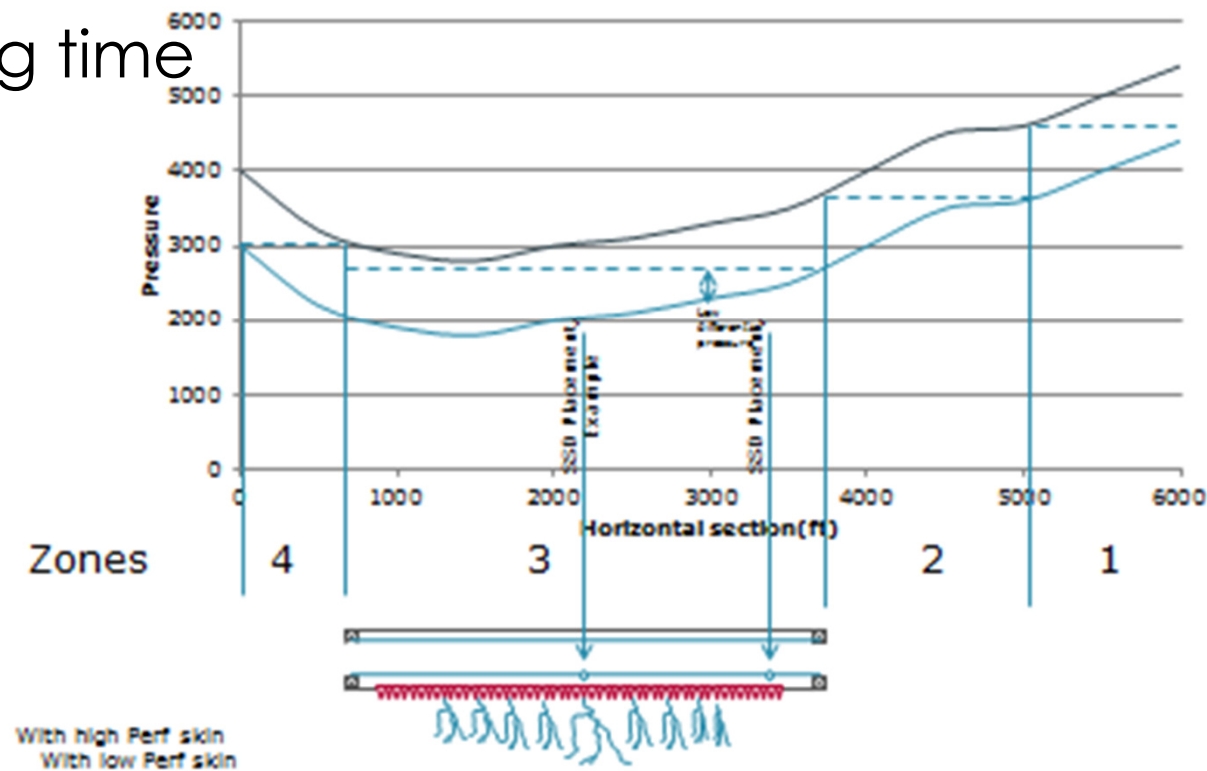


Thanks to operators who
are sticking their heads out

Easywell took 7 months,
Fishbones took 7 years

North Sea Chalk

- Do you want all that water?
- Save a couple of weeks rig time
- Is Skin the right metric?



We got time, you got watches

Procrastination - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Procrastination ▼ Oversett denne siden

While it is regarded as normal for people to **procrastinate** to some degree, it becomes a problem when it impedes normal functioning. Chronic procrastination ...

[African time](#) - [Impulsivity](#) - [Temporal motivation theory](#)

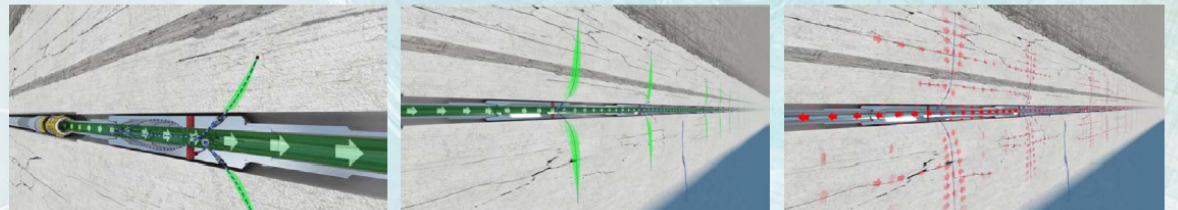
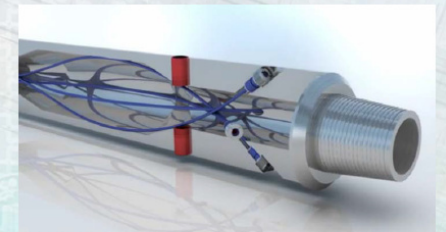
Middle East



Fishbones Stimulation System



- ☐ Conventional acid stimulation has limited penetration around well.
- ☐ Upto 40' penetration can be achieved with new Fishbones technology
- ☐ 4 laterals are installed at each depth
- ☐ Promises to enhance well productivity
- ☐ Will be tested in ZL-133 & ZL-181



Challenges

- Orienting laterals
- Sand Control
- HPHT
- Granite

Fishbones supporters

