

Guillemot North-West Field: Seismic Interpretation versus Ultra-Deep Resistivity Inversion on a Successful Late Life Infill Producer

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Thanks to the Triton area JV partner Serica Energy for supporting this talk

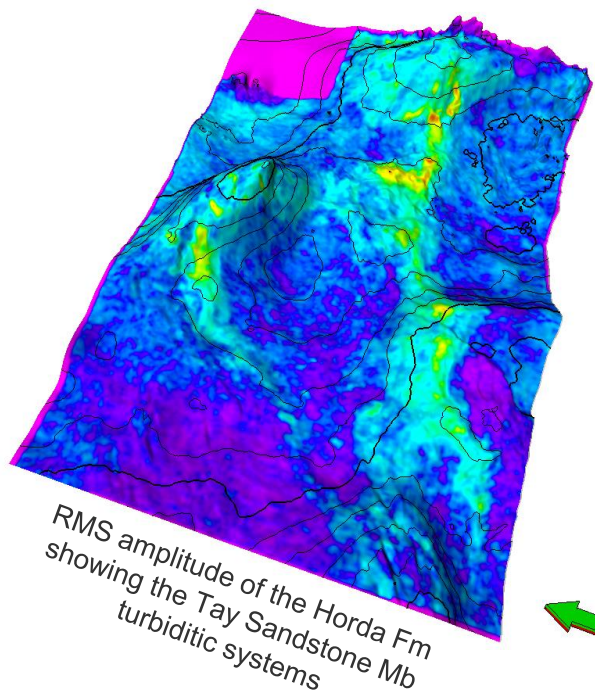
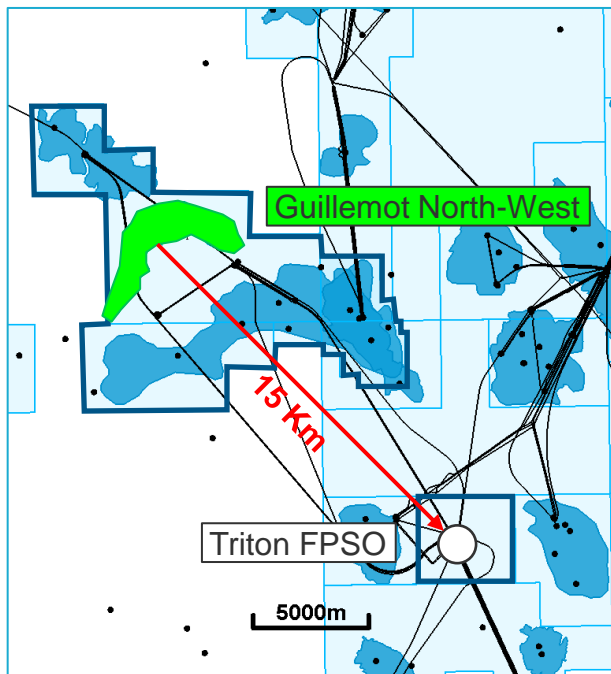
Thanks to the Sperry Drilling Geosteering team in Halliburton

Acknowledgements to TGS for the Polarcus 2012 Catcher data

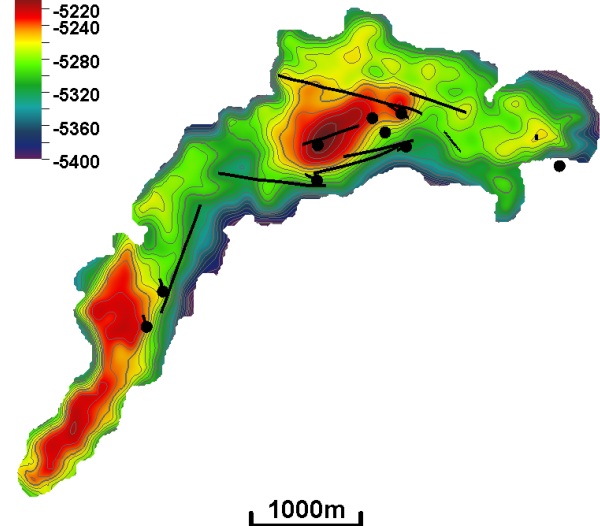
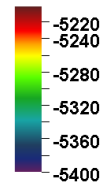


Safety
Respect
Integrity

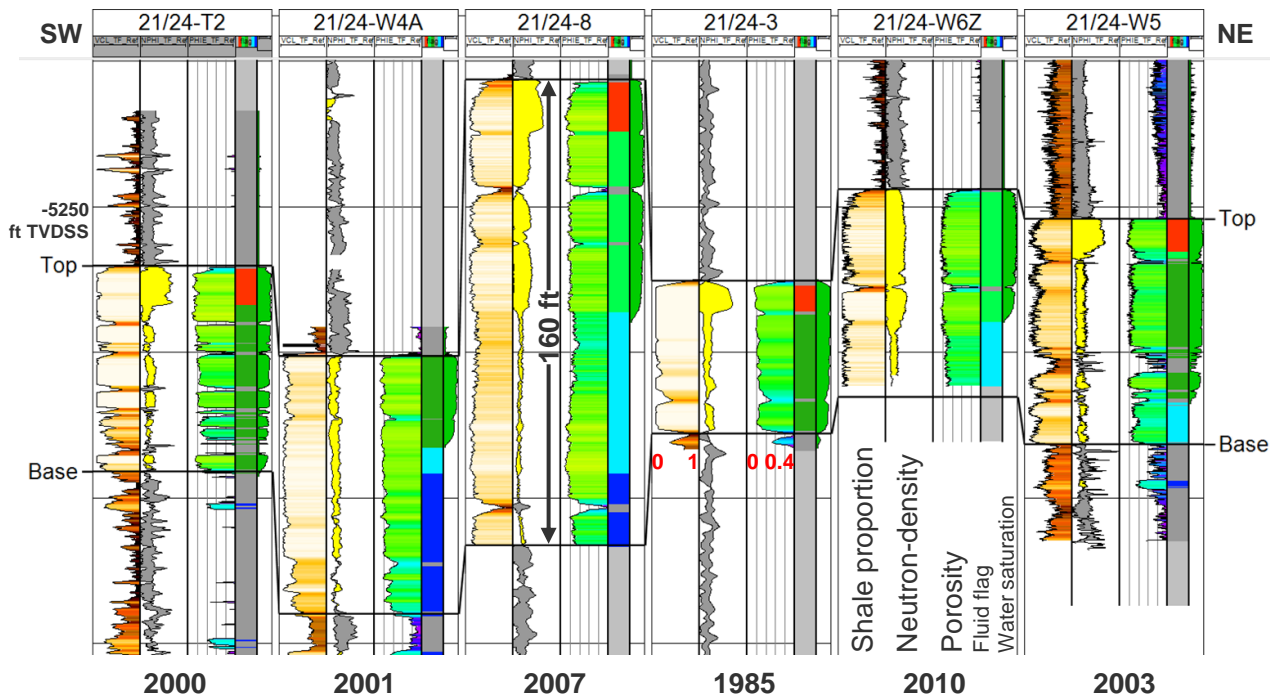
Guillemot North-West Overview



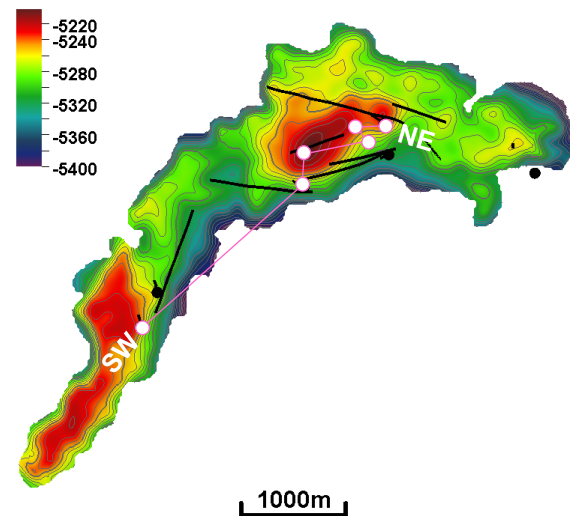
Upper Tay Reservoir
Elevation depth [ft]



Guillemot North-West Reservoir

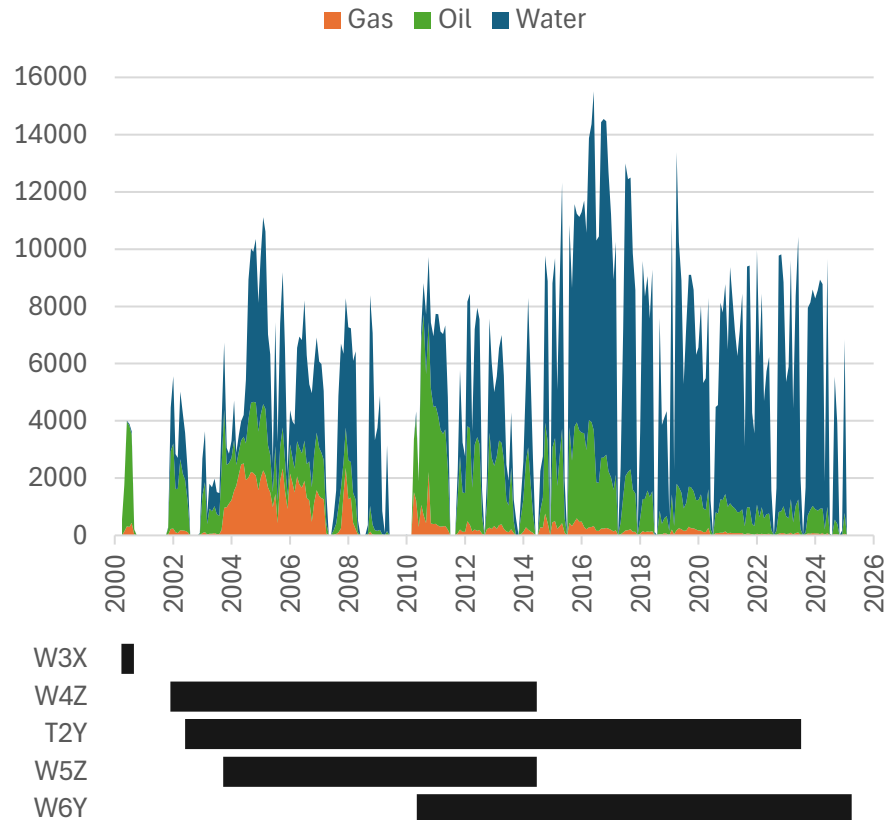
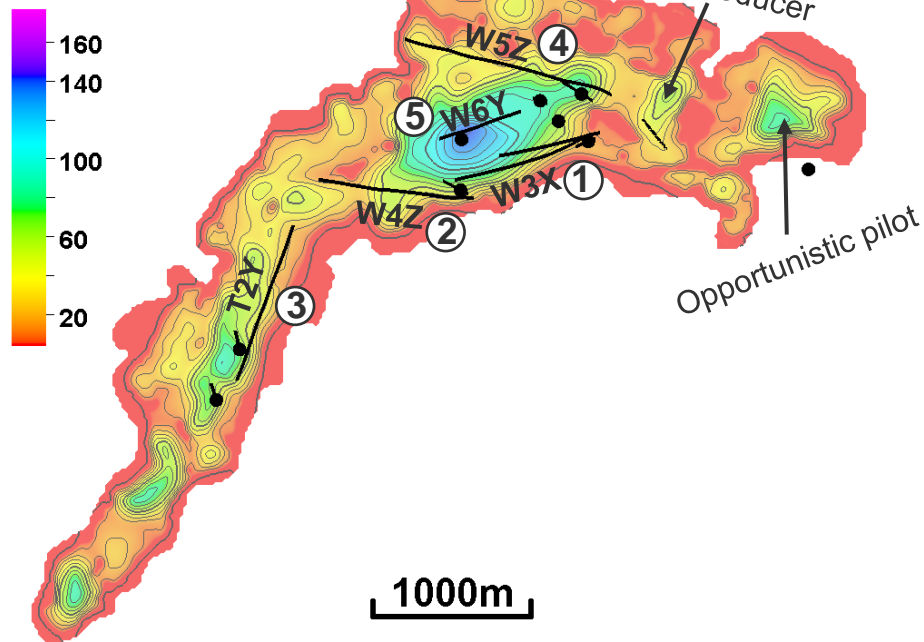


Upper Tay Reservoir
Elevation depth [ft]



Guillemot North-West History

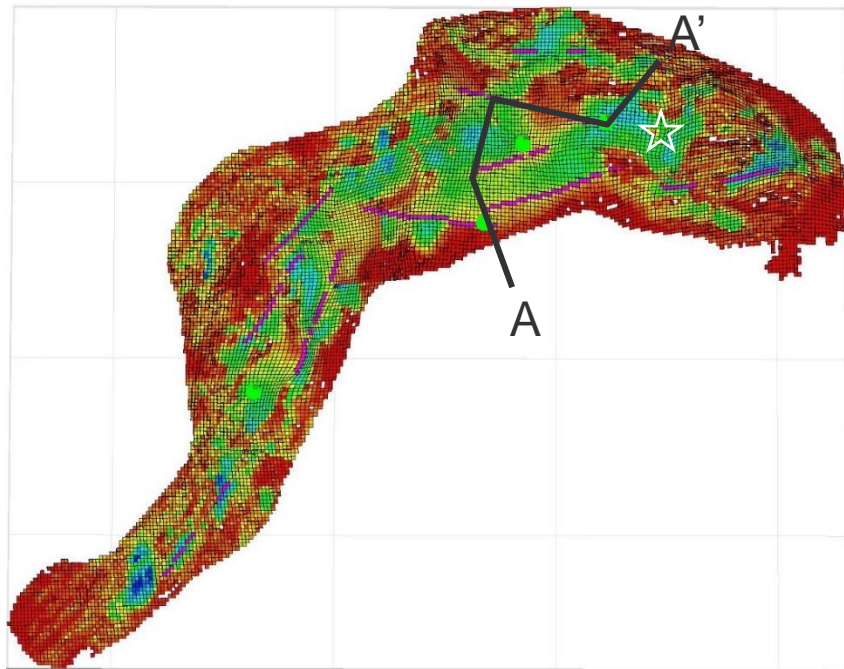
Hydrocarbon Thickness (original)
Thickness depth [ft]



Infill Opportunity Overview

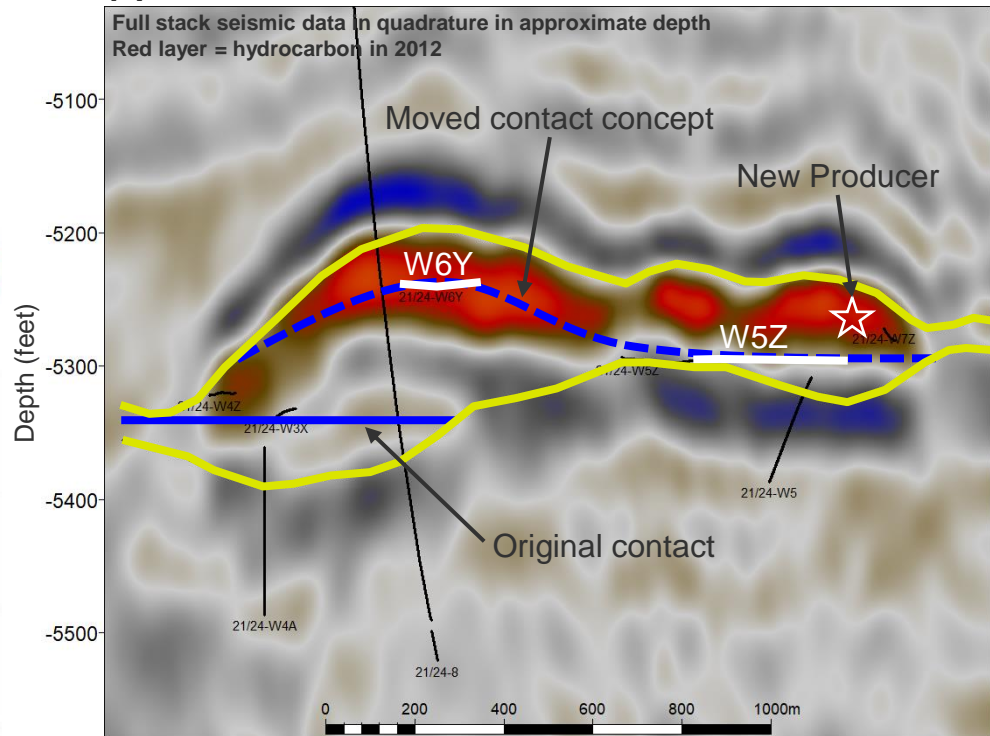
Remaining hydrocarbon map (2022)

0 ft 40 ft

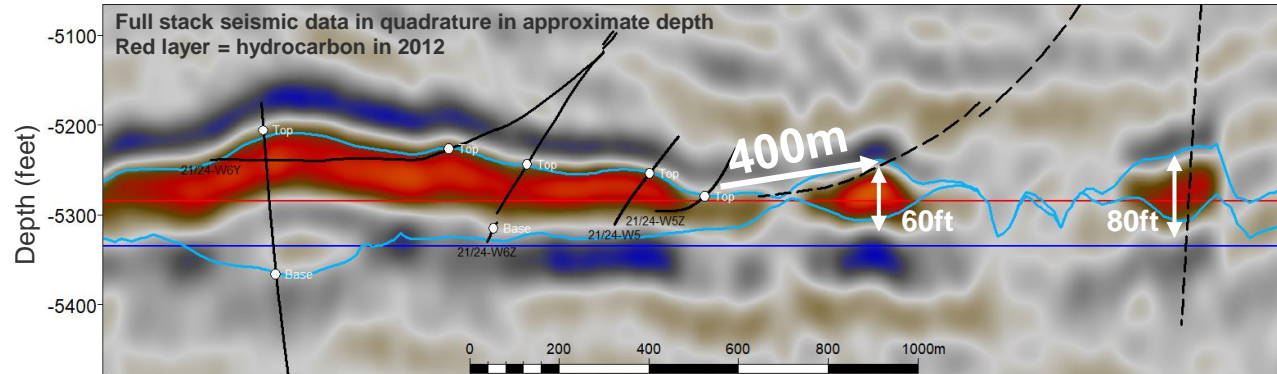


A

A'

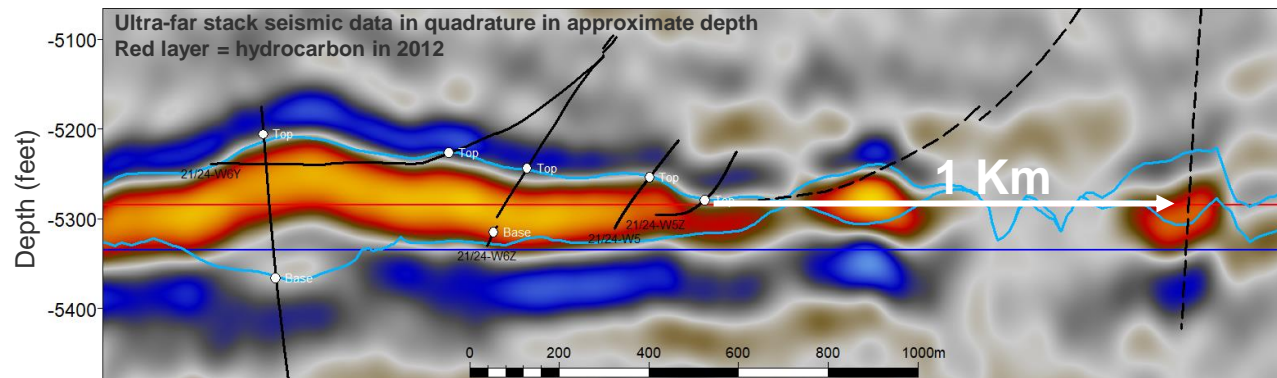


Mapping Uncertainties

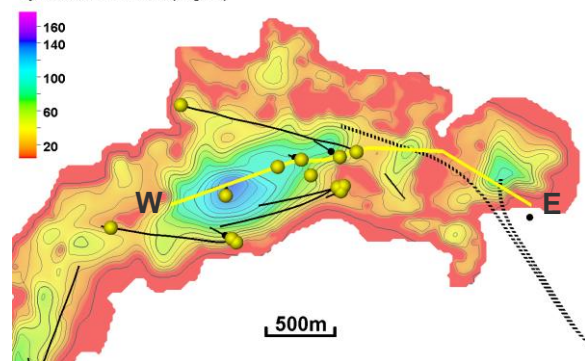


W

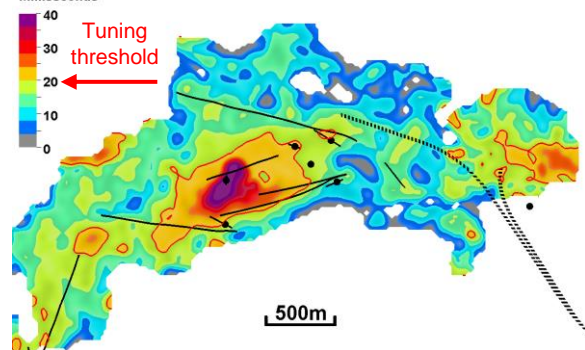
E



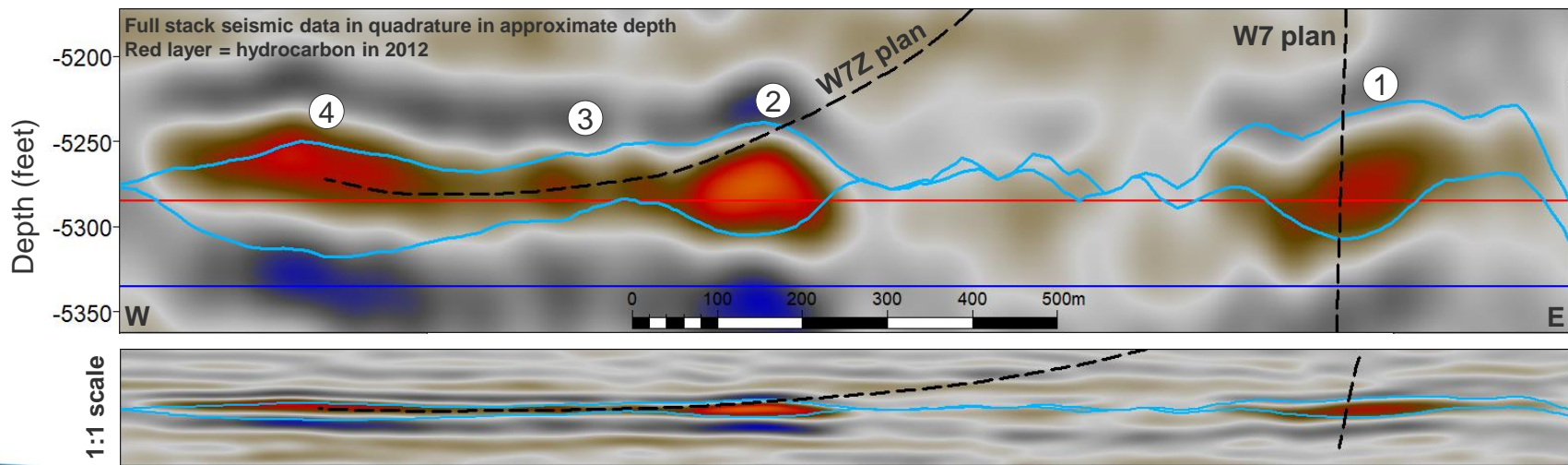
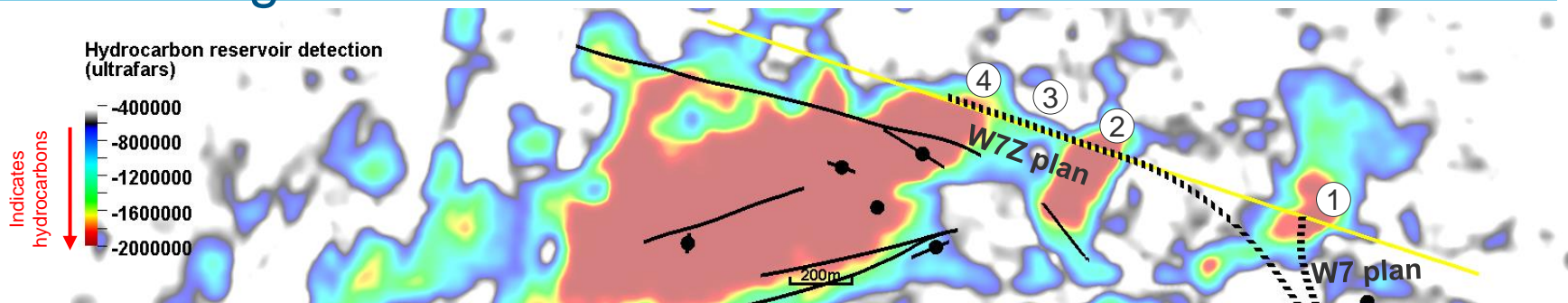
Hydrocarbon Thickness (original)



Gross Reservoir Thickness in Milliseconds



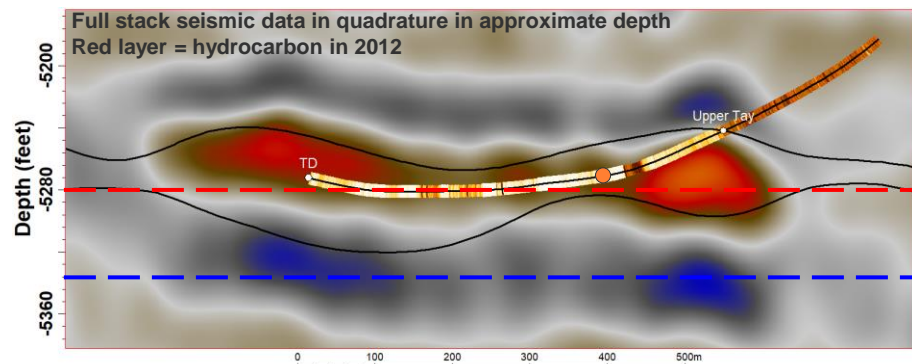
Well Planning



Well Outcome

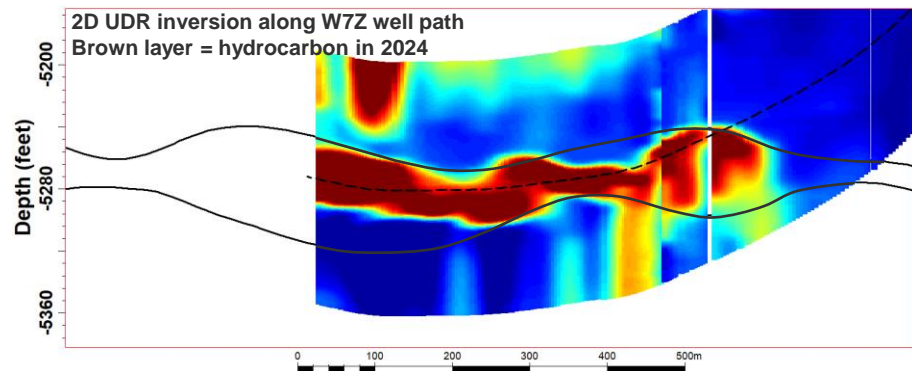
East

West



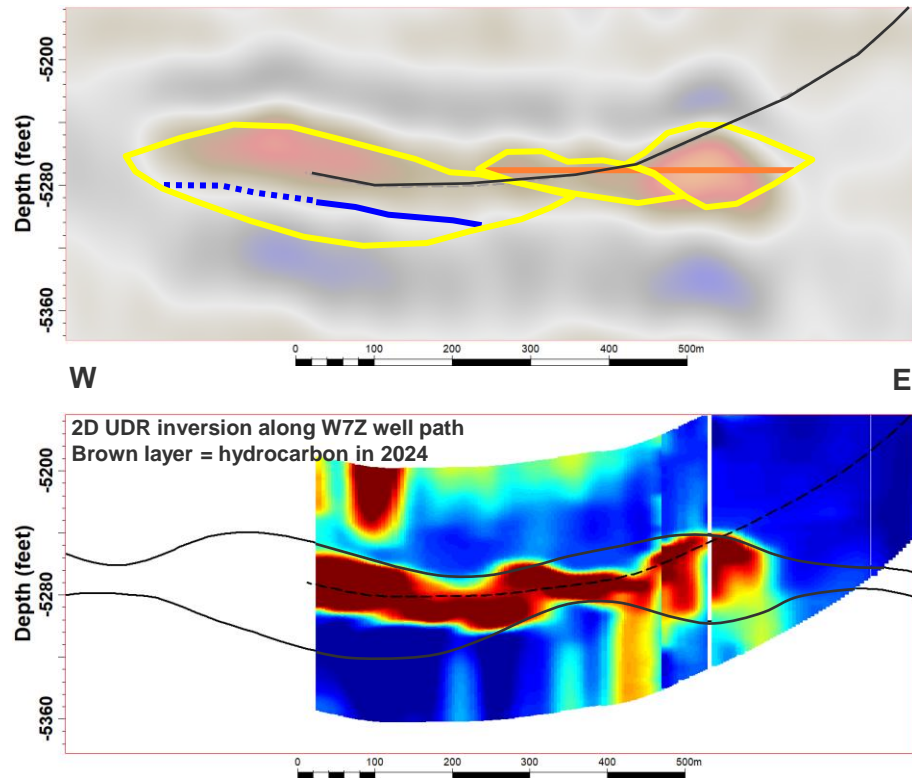
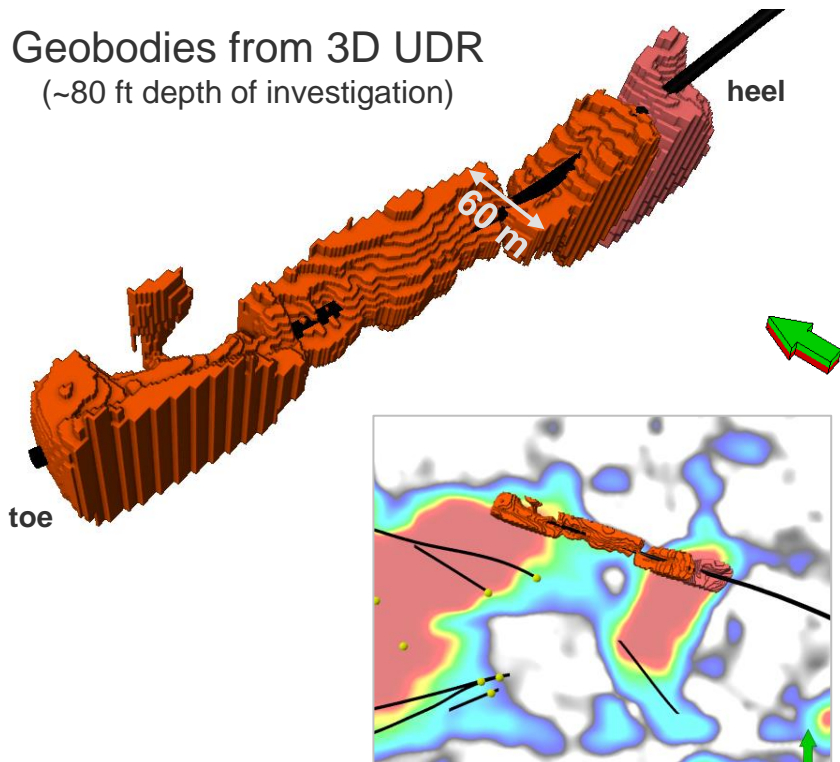
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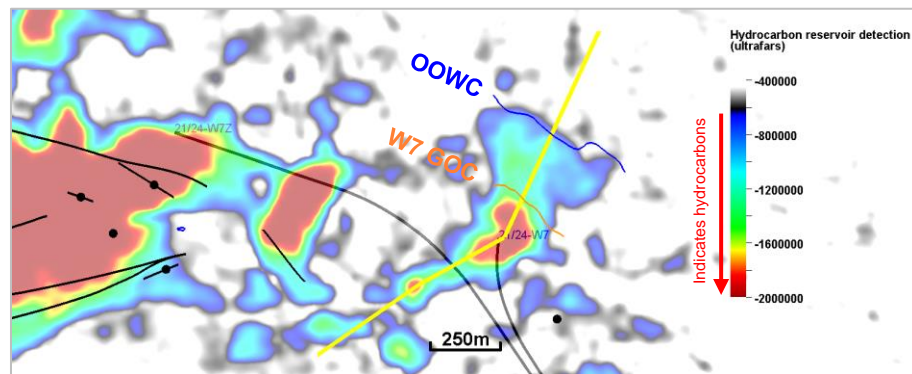
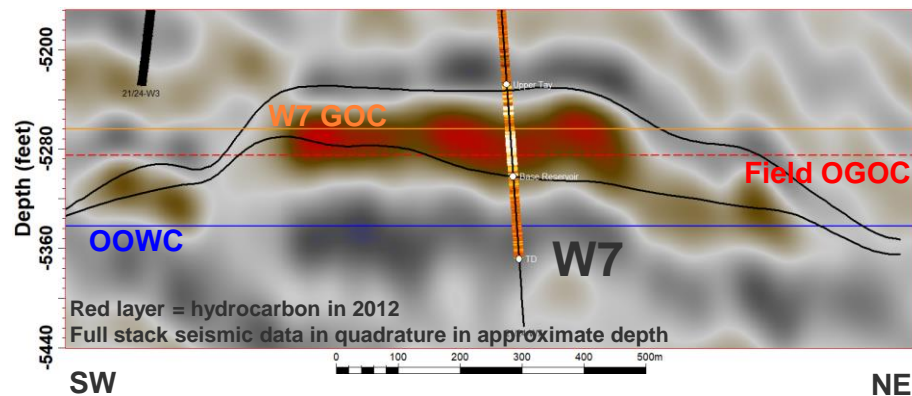
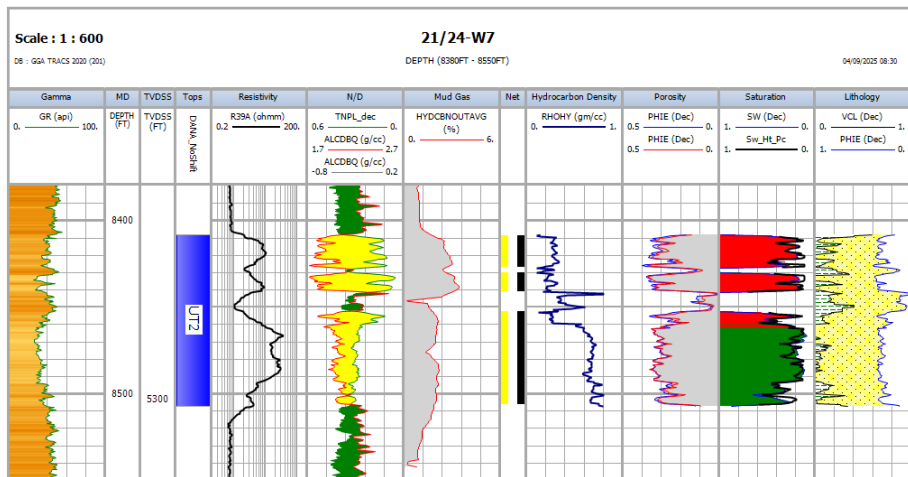


Well Interpretation

Geobodies from 3D UDR
(~80 ft depth of investigation)



Pilot Hole Results



Conclusion

- **Using UDR instead of landing pilot paid-off**
 - Typical small volumes made more economic by cheaper option
- **Real-time UDR imaged the reservoir before entry and kept the well in hydrocarbon after landing**
 - Typical geosteering
- **Post-drill UDR calibrated seismic responses, informed on internal architecture, and imaged present-day contact**
 - Seismic interpretation turned out correct despite cumulating uncertainties
 - Despite decades of data and interpretation, there are still (interesting) things to learn
- **Opportunistic pilot paid off and confirmed untapped pool of hydrocarbon**
 - Also unlocked other peripheral opportunities
 - Currently rebuilding the model and assessing further potential infill targets
- **We're still drilling wells in the North Sea**

