Gannet B Rejuvenation At last, seismic sees through the gas chimney

DEVEX 2020

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- Field Introduction
- The seismic problem
- The seismic solutions
 - Technology improvementsIntegration with other data
- Business impact





Gannet B (GB) Overview

- Forties, Gannet, Cromarty, Odin & Tay
- 4-way dip anticline above salt
- Discovered 1979

North

- 1 Exploration, 2 Appraisal Wells
- Production;
 GB01s1 Watered out
 GB02s1 Watered out, closed-in
 GB03s1 Producing
- Subsea tie-back to Gannet A





New Seismic

- Better imaging on the crest but still challenging
- Various scenarios considered using different geological models, seismic and well data.
- But we needed something to build confidence that the sands were present on the crest.



Optimising the Stack





Optimising the Stack





4D Water sweep around the field.

GB01s1 watered out

Fairly uniform contact rise and excellent connectivity
Odin thin in North, Tay thin in South but are connected
Shallowest 4D signal in Tay near GB01s1
Confident no 4D over crest
GBA03 water likely through Odin in South
GBA03s1 water likely through Forties from NE

Tay Odin and Gannet

No Tay Perf

Forties



Aprox. 3km long, 3x vert Exag.

EEI amplitude vs Net Pay



Summary

New seismic improved imaging but more confidence needed for crestal sand Optimising seismic stacks makes a big difference Integrating different data gave much greater insights and higher confidence EEI again effective for highlighting and quantifying reservoir presence. Impact: Infill well planned 2021 Remaining subsurface challenges Interpretation and depth conversion uncertainty Staying away from water What about the Forties?



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Questions and Answers



