Stratigraphic framework and sedimentary environments of the East Shetland Platform in the Paleocene – Preliminary Results

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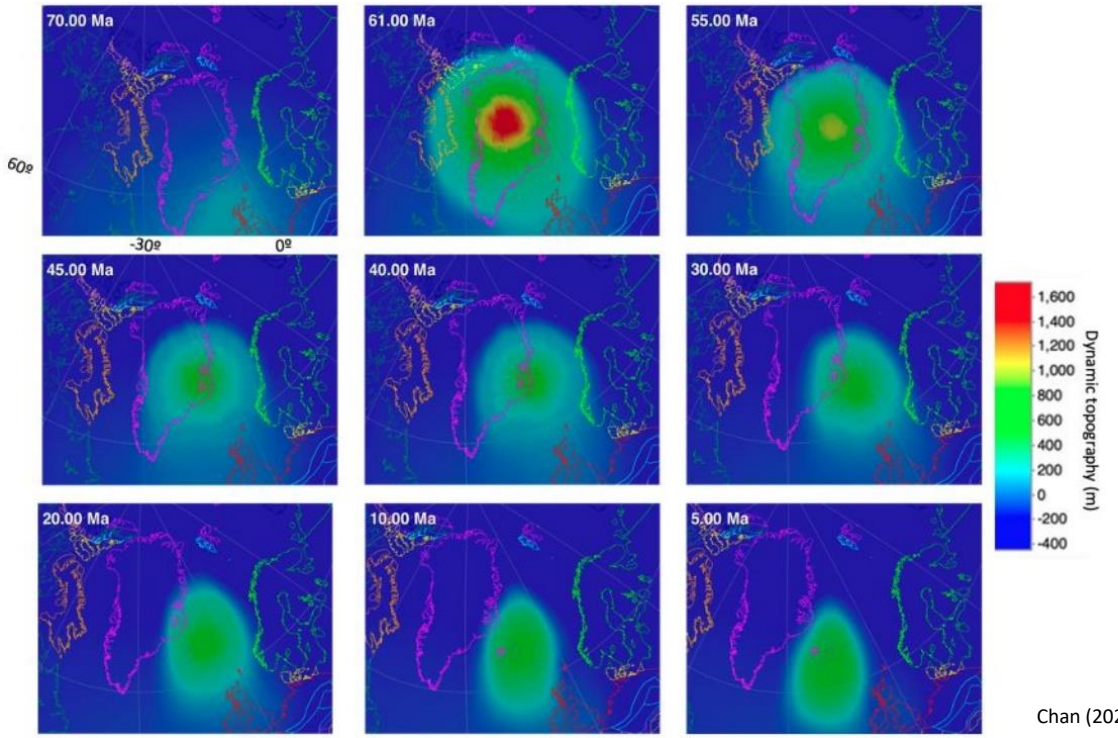
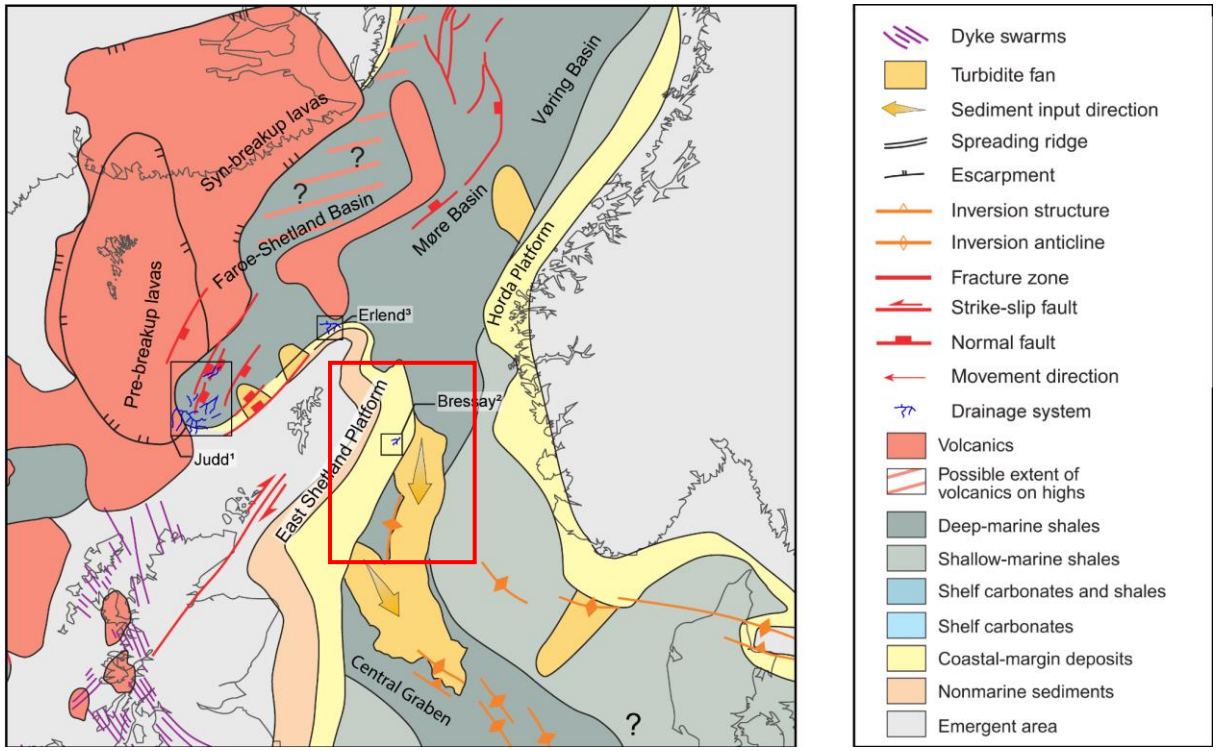
Research questions

HOW DOES MAGMATIC UPLIFT INFLUENCE SOURCE-TO-SINK SYSTEMS?

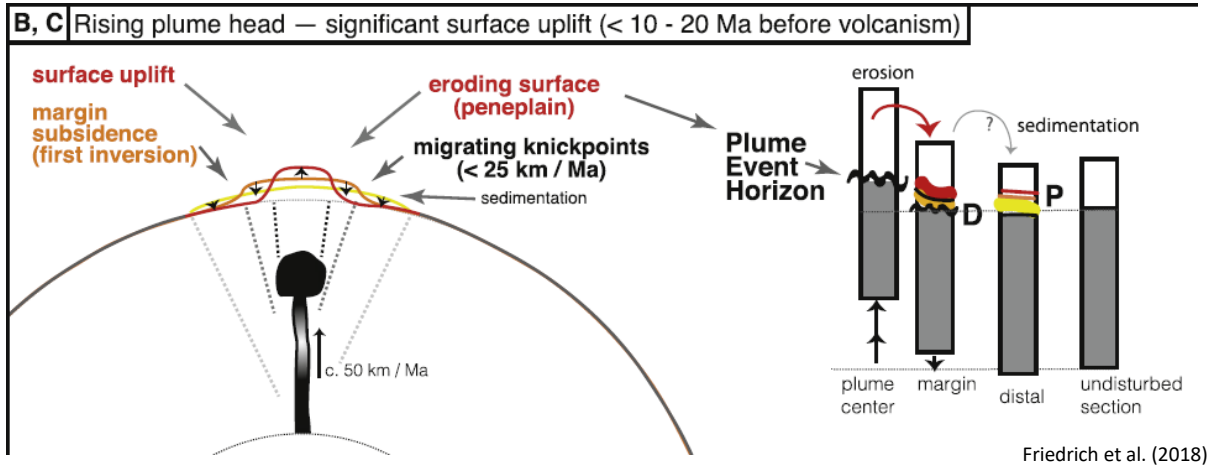
- Study area: **East Shetland Platform**, Paleocene – Eocene interval, or ~ **65 to 40 million years ago**
- Regional uplift due to **Icelandic Plume – not well understood**
- **Source-to-sink sedimentology** of LIP-influenced systems is not fully understood.



Chan (2020)

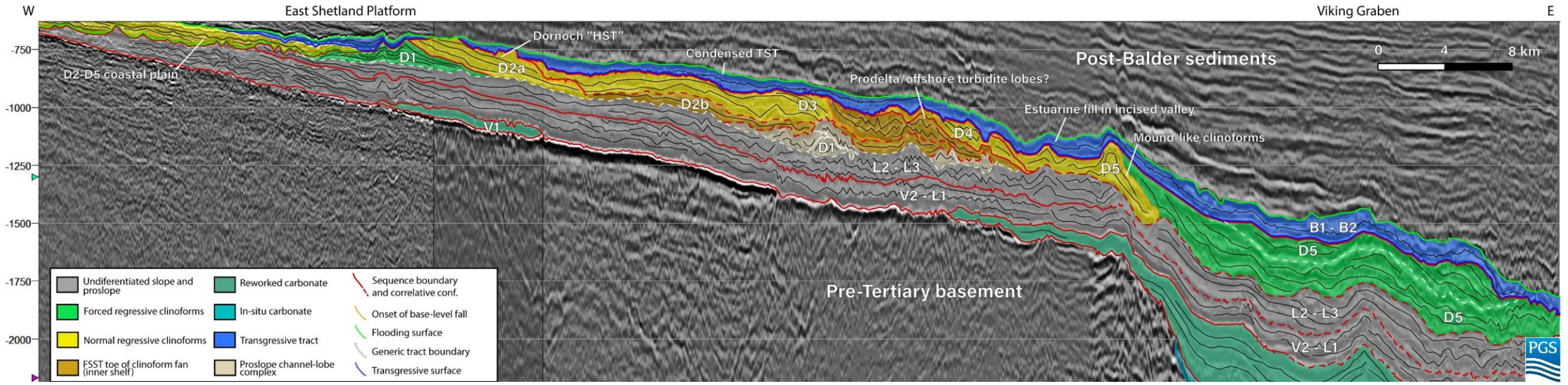


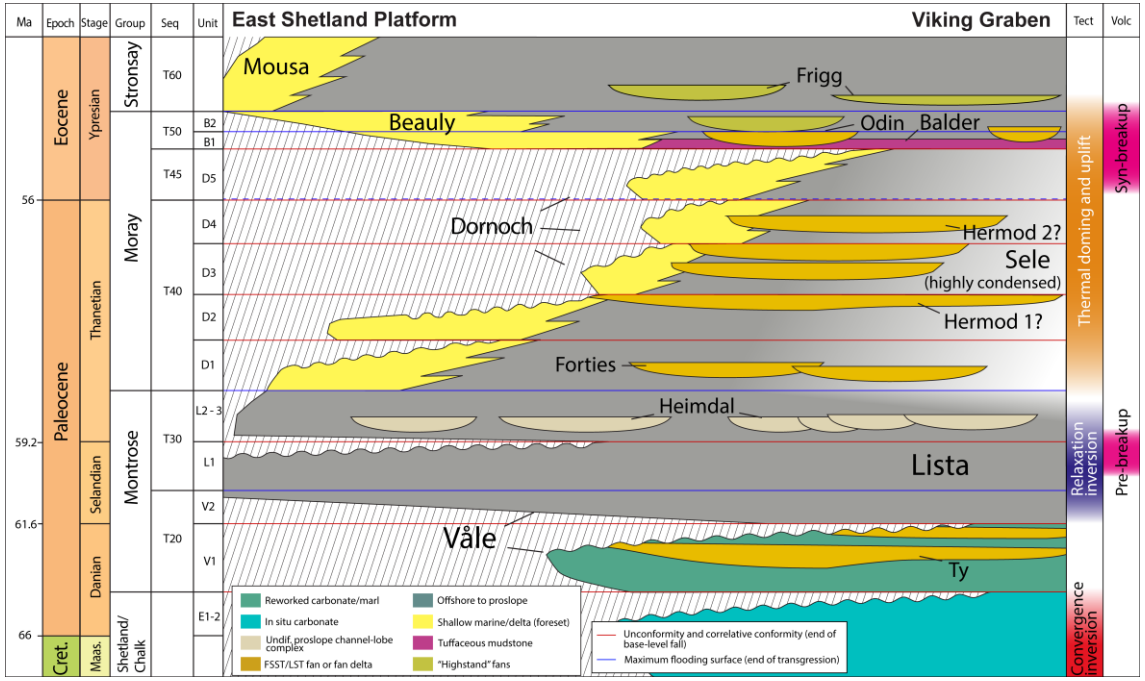
Modif. Coward et al. (2003)



Friedrich et al. (2018)

Current results

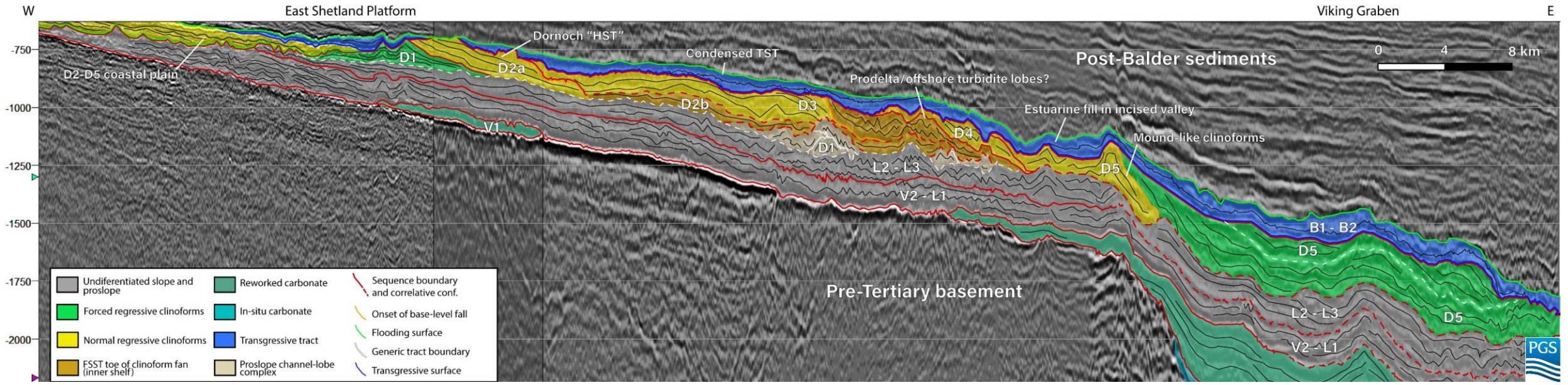


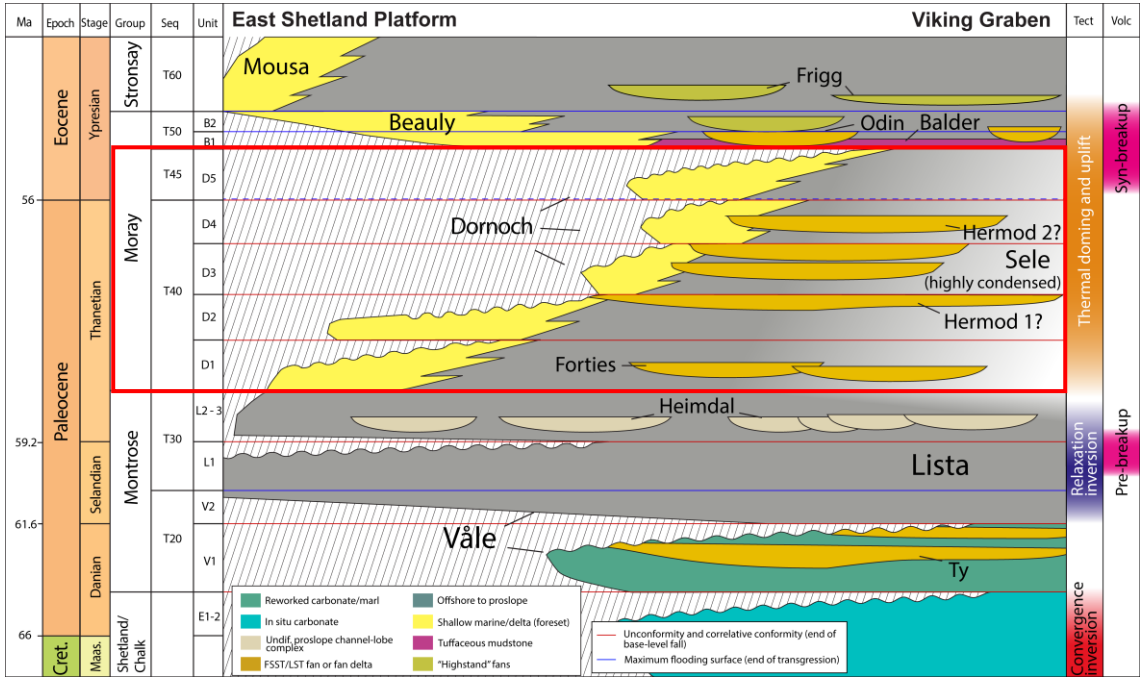


2D UKOGA ESP + 3D PGS15004 & PGS CNS Megasurvey

- Division based on **seismic stratigraphy** and later correlation to other schemes
- Subdivision of **Moray Group** based on ~4th-order unconformity bounded **depositional sequences** for **Dornoch/Sele Fm**
- Difference in **well log** analysis *versus* **seismic stratigraphy**
- Higher resolution than biostratigraphy?

Current results





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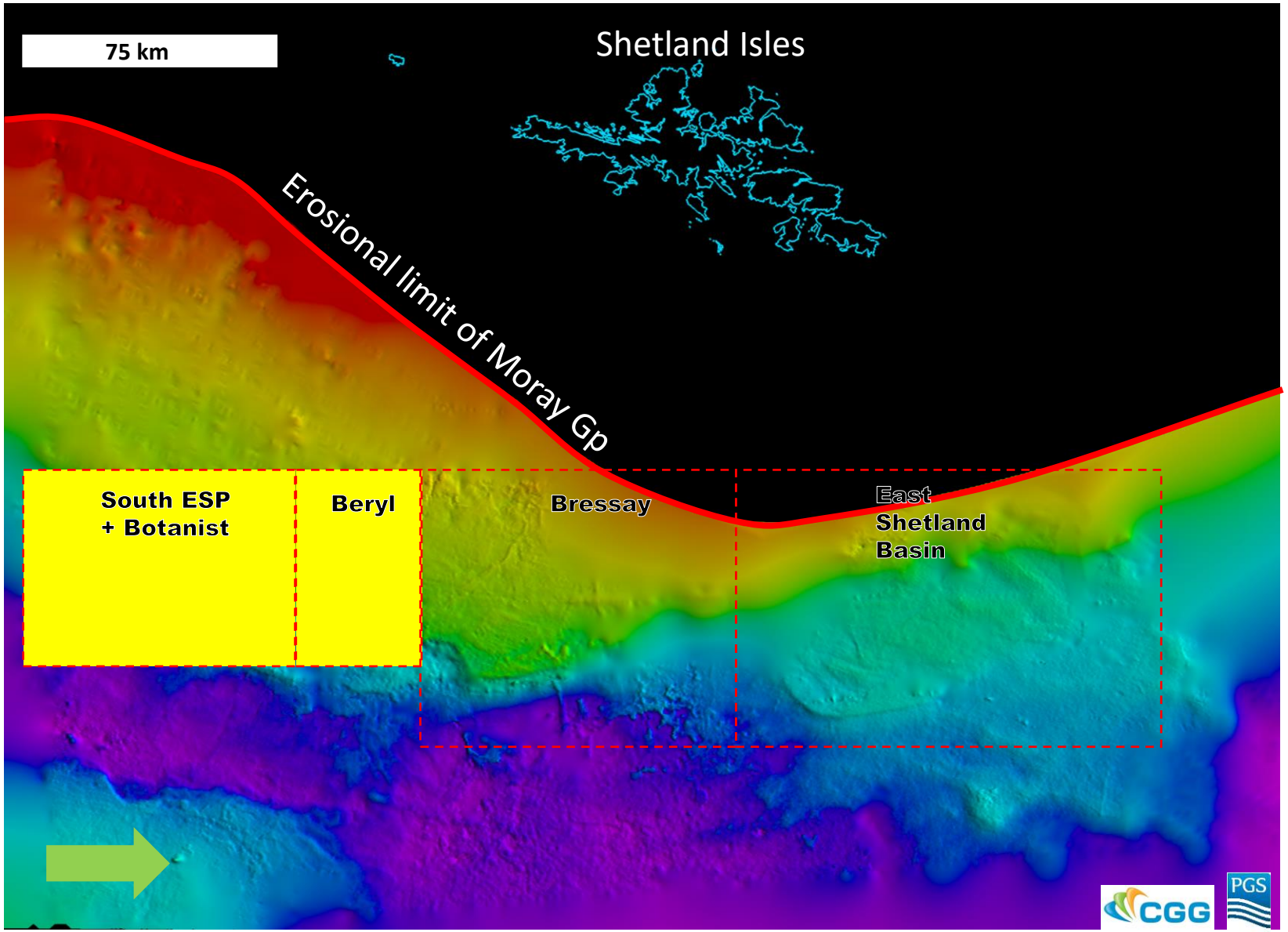
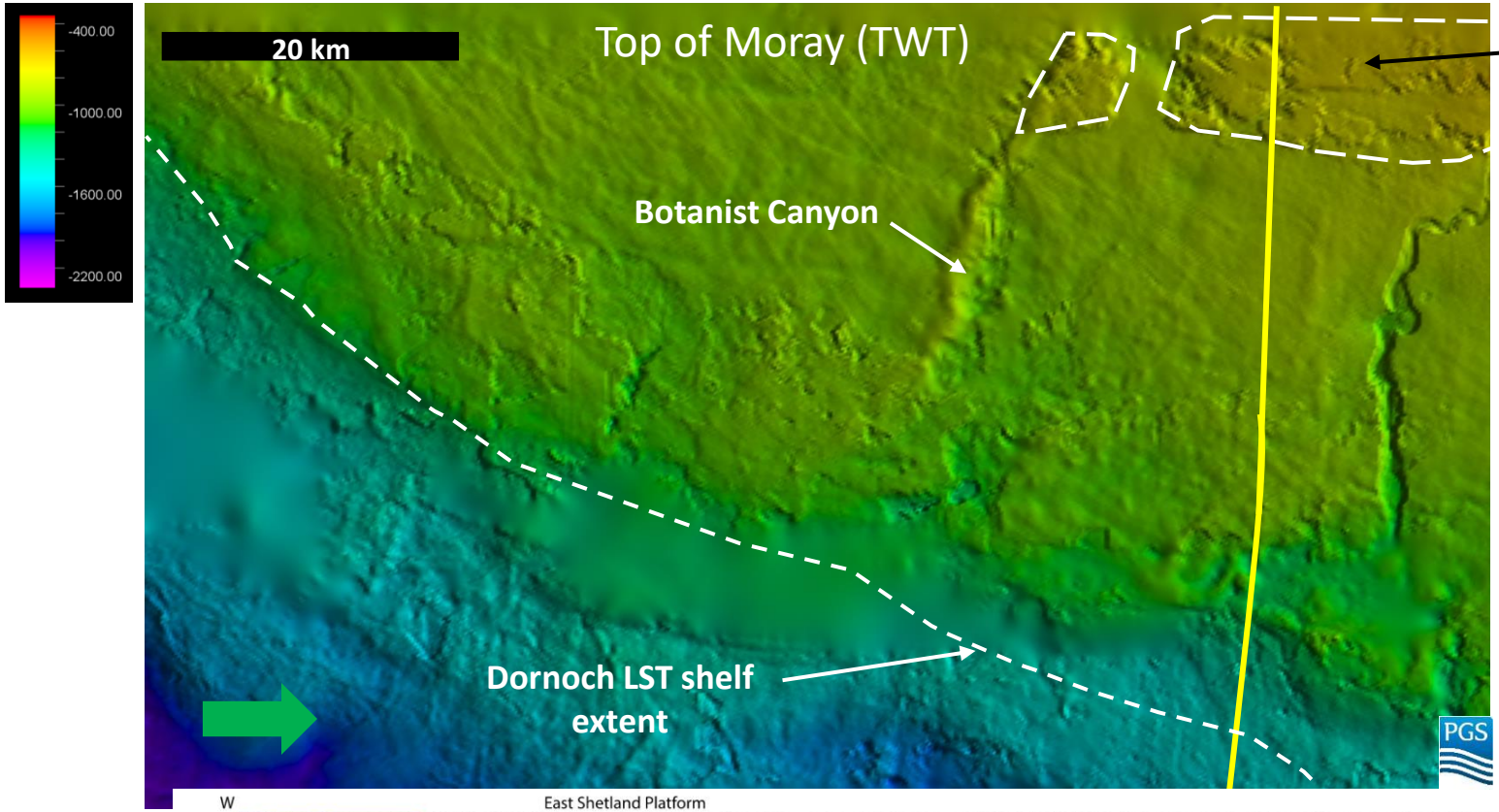
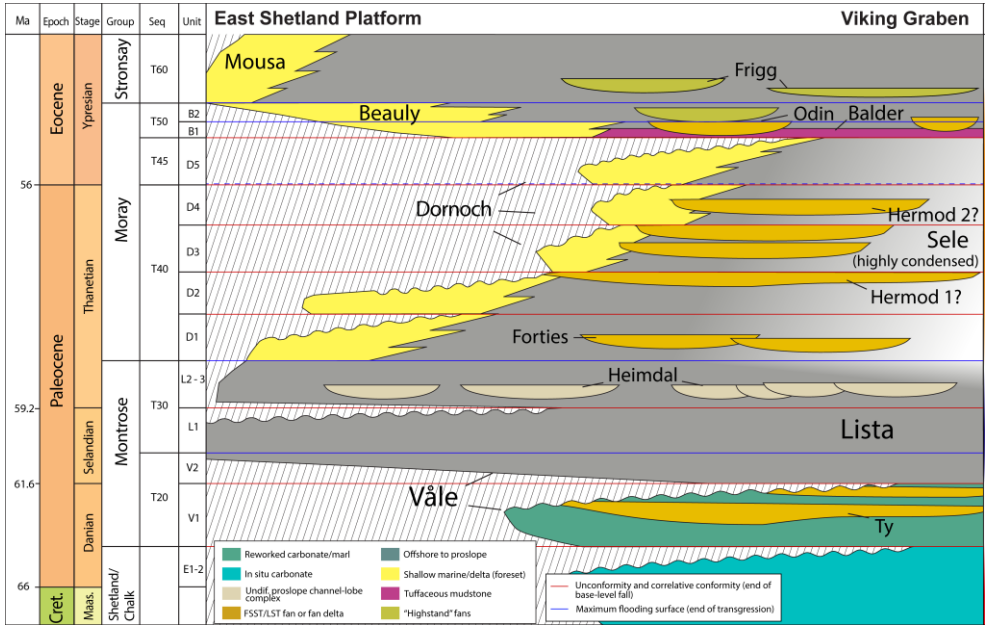
Division of study area

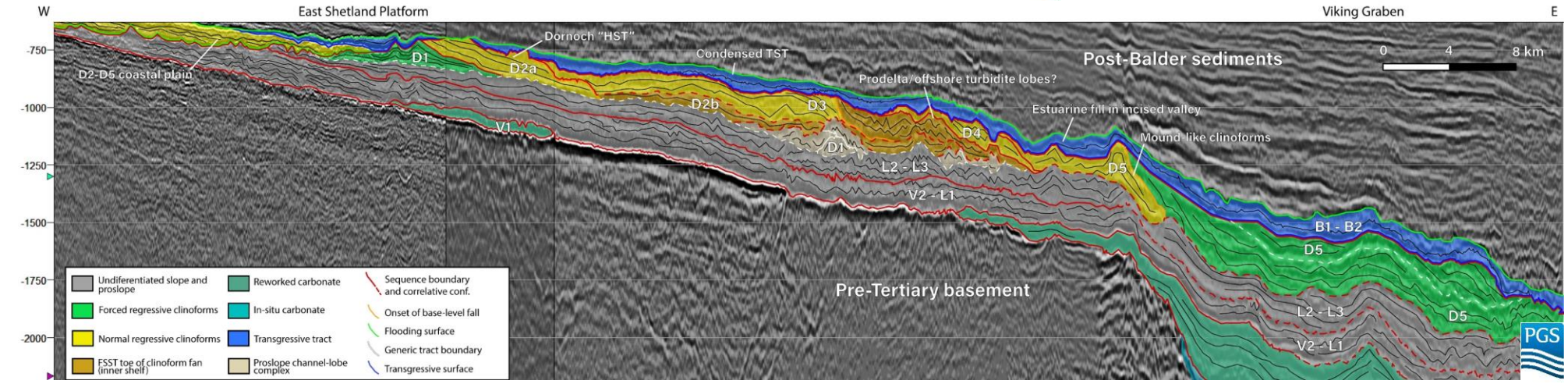


Beryl region composite



Dornoch «HST»





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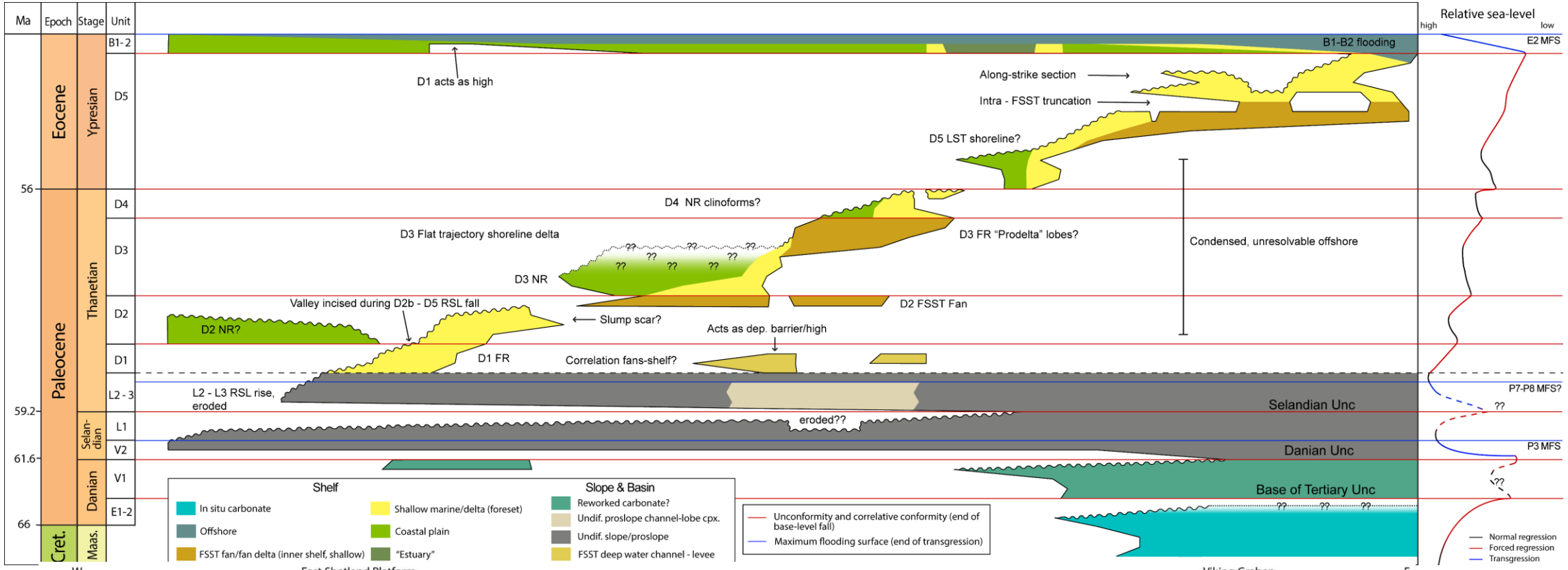

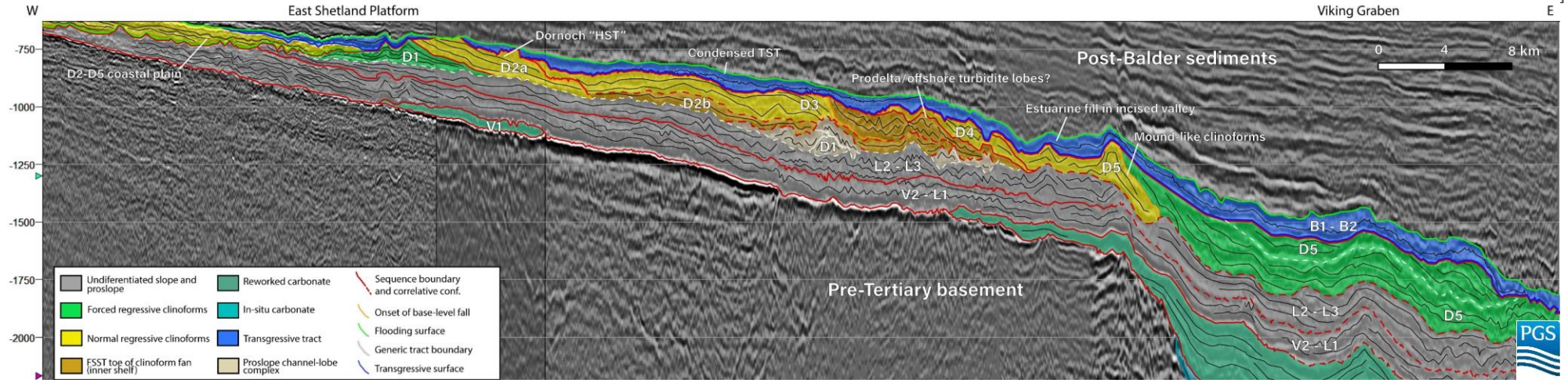

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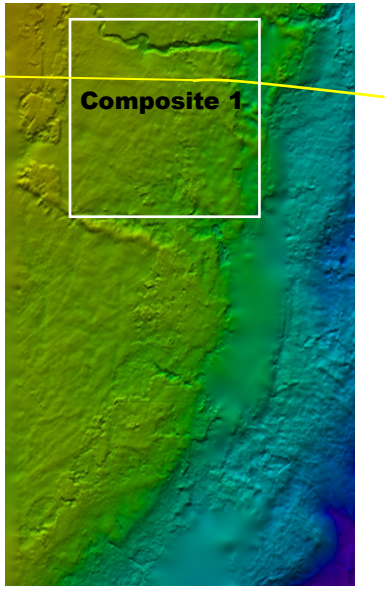
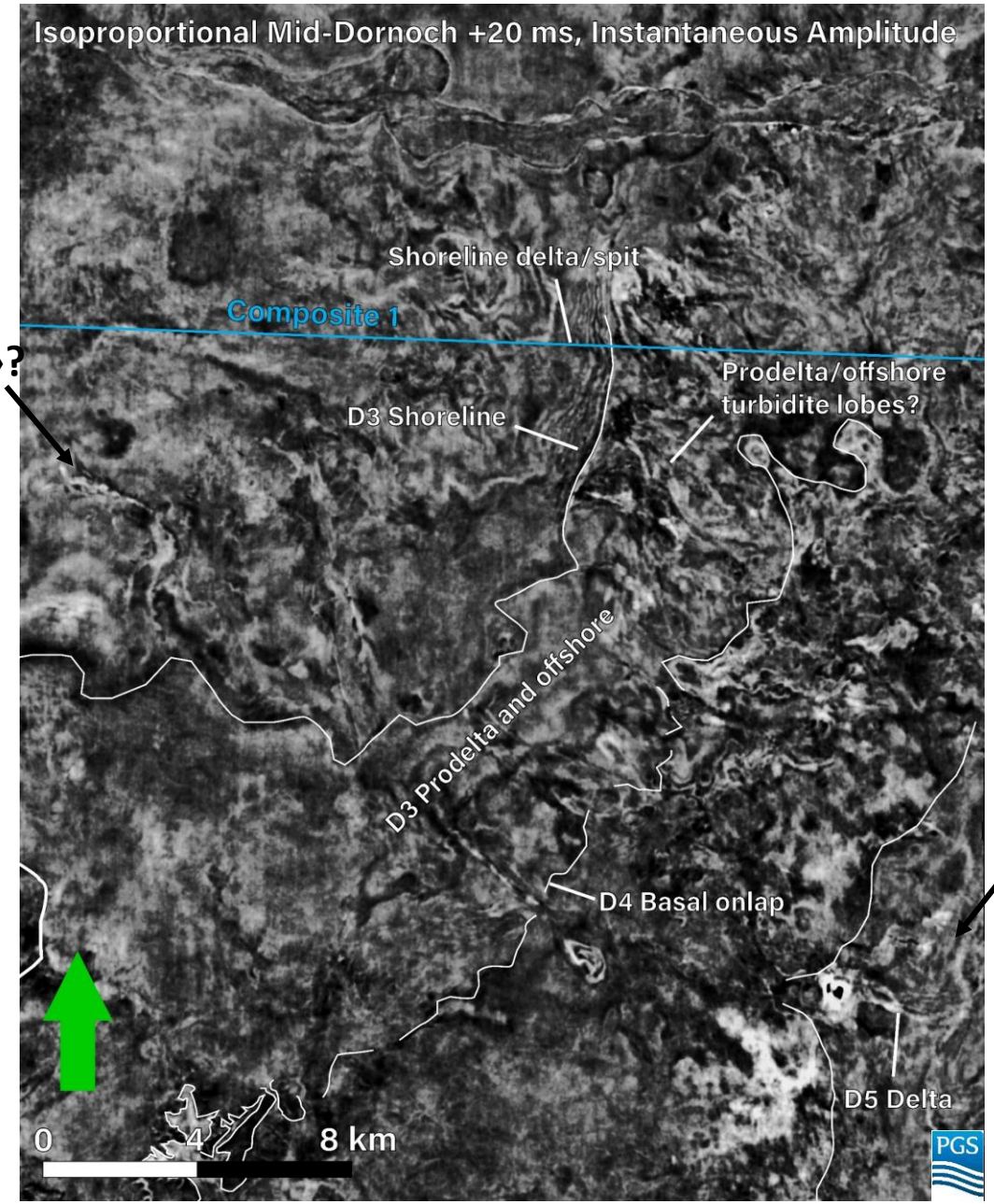
Beryl region composite

D3-D4 channel feeding into «estuary»?

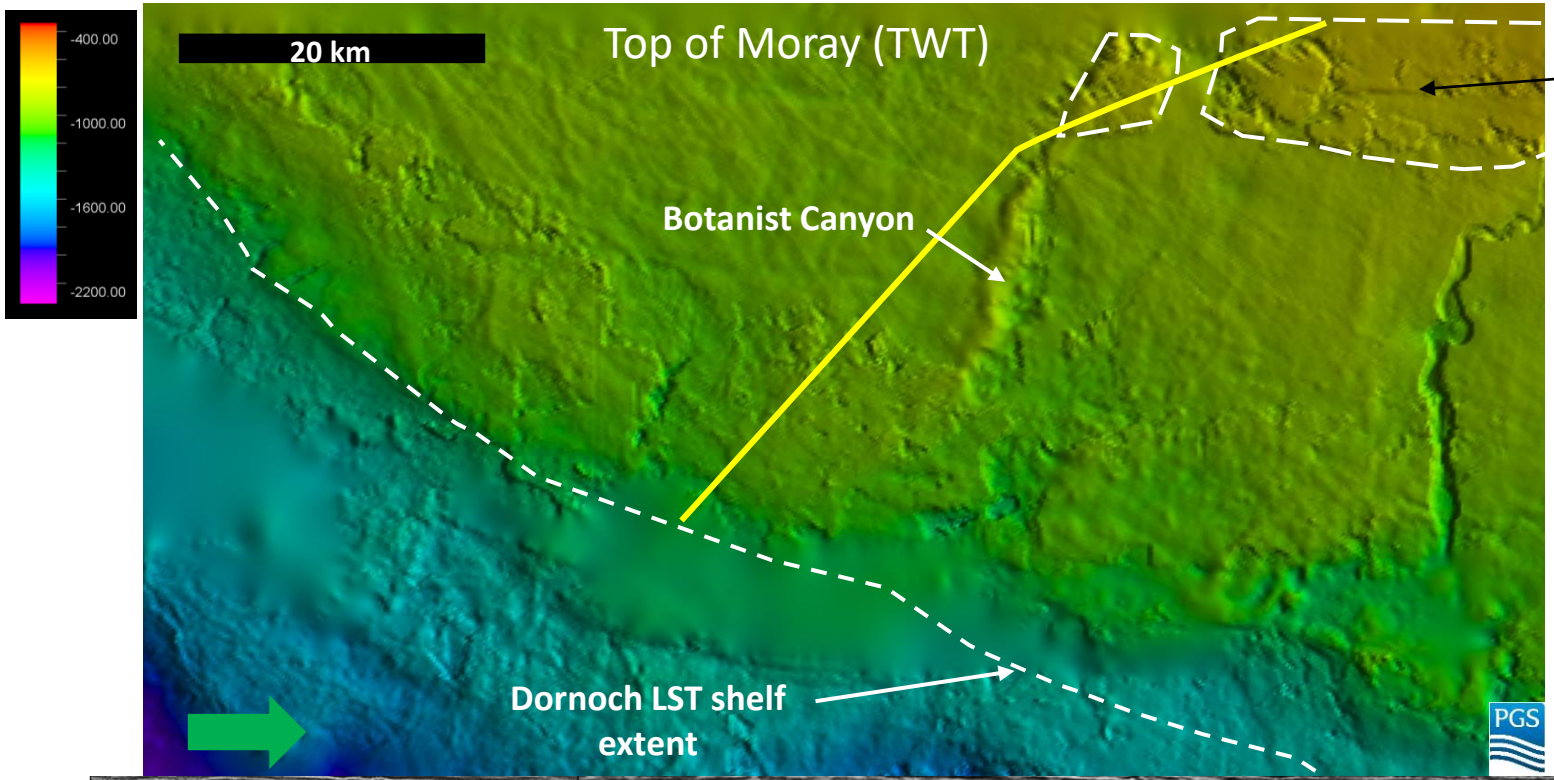




«Mounded» clinoforms

3D PGS15004

Botanist region composite



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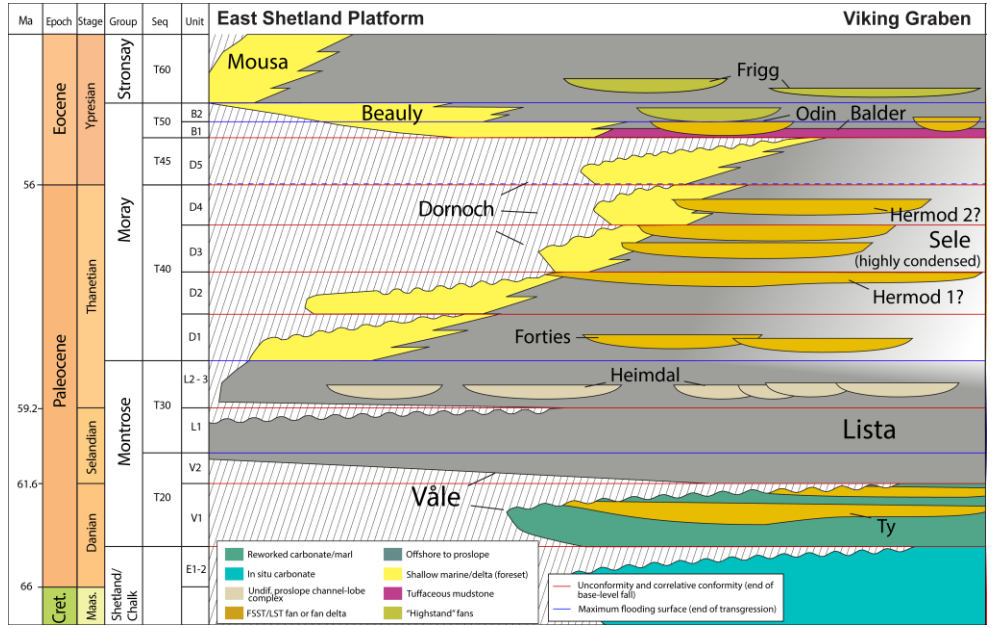

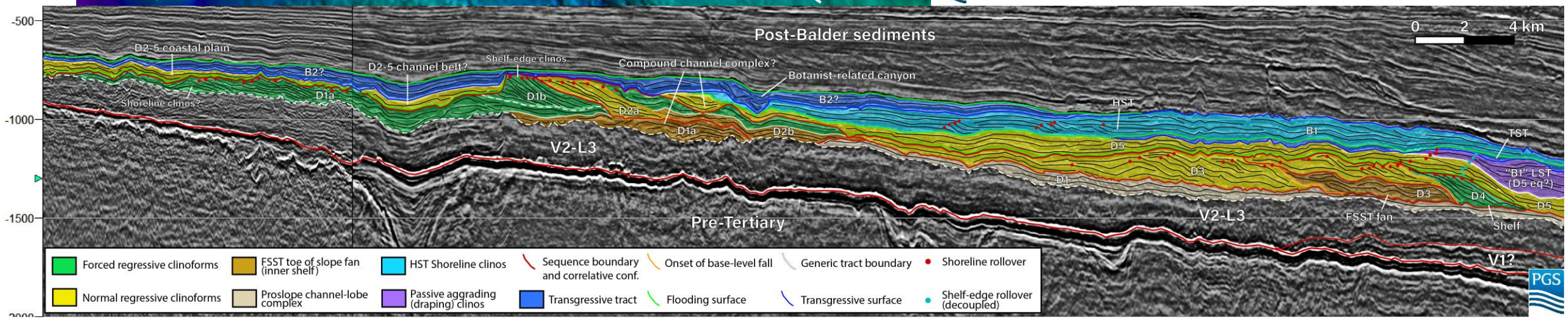

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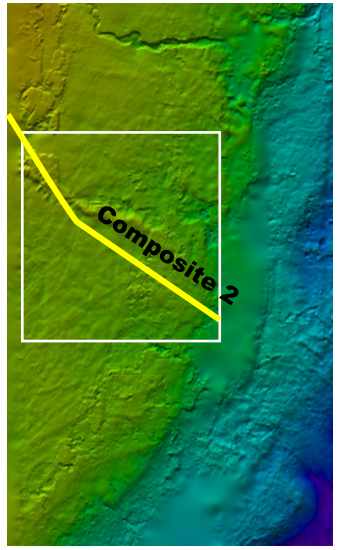
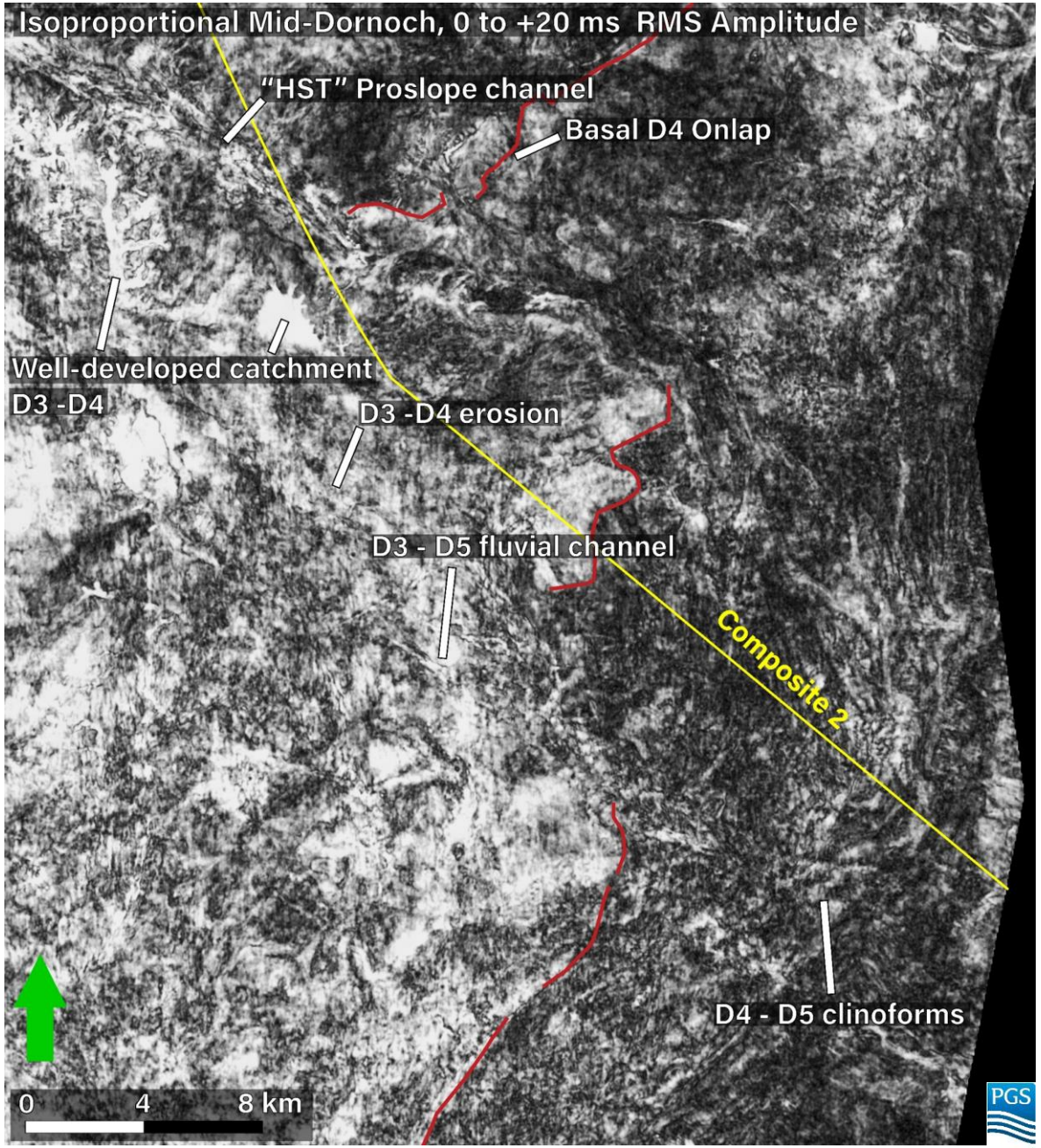
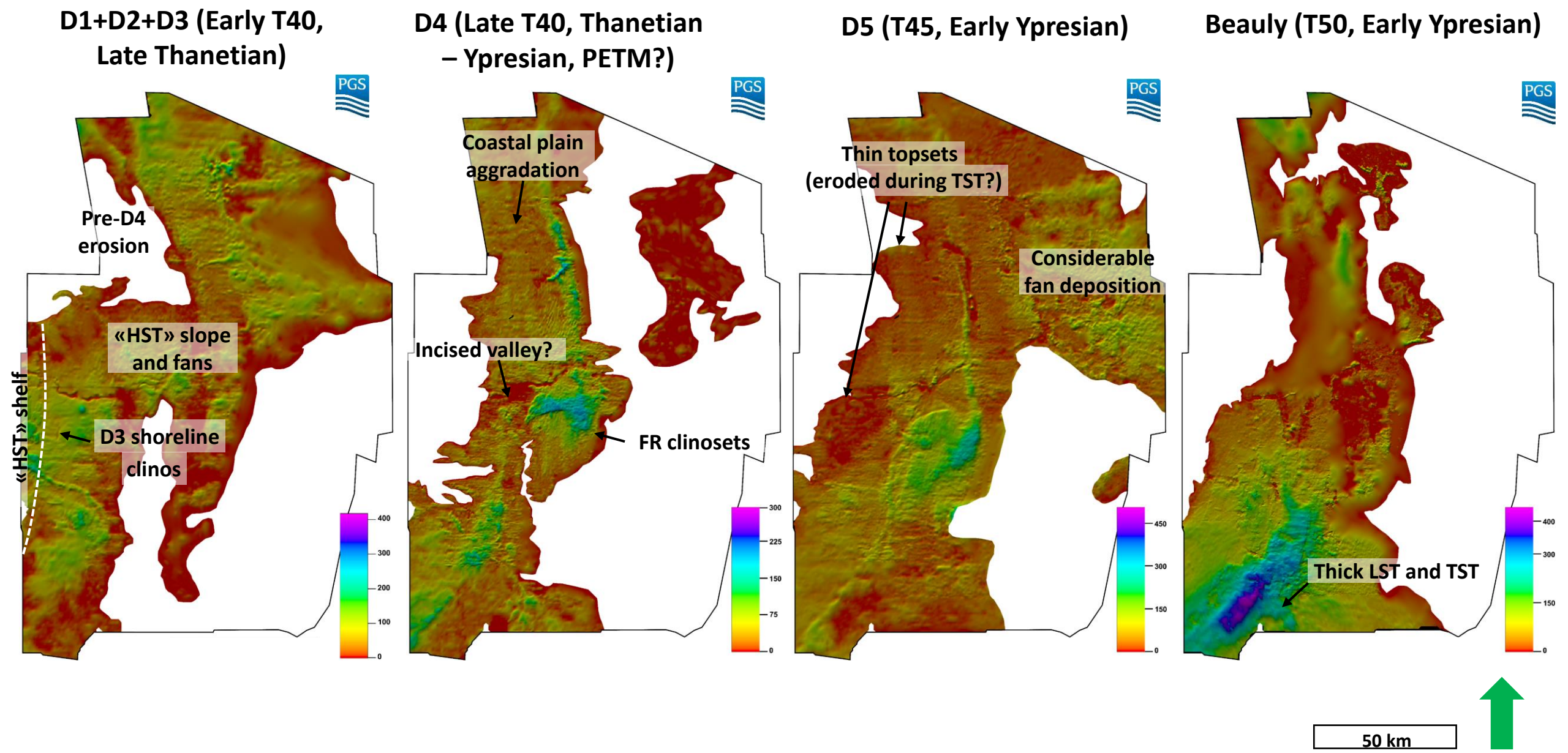
Botanist region composite





3D PGS15004

Time thickness maps – Beryl + Bressay



Thank you!

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Special thanks to..