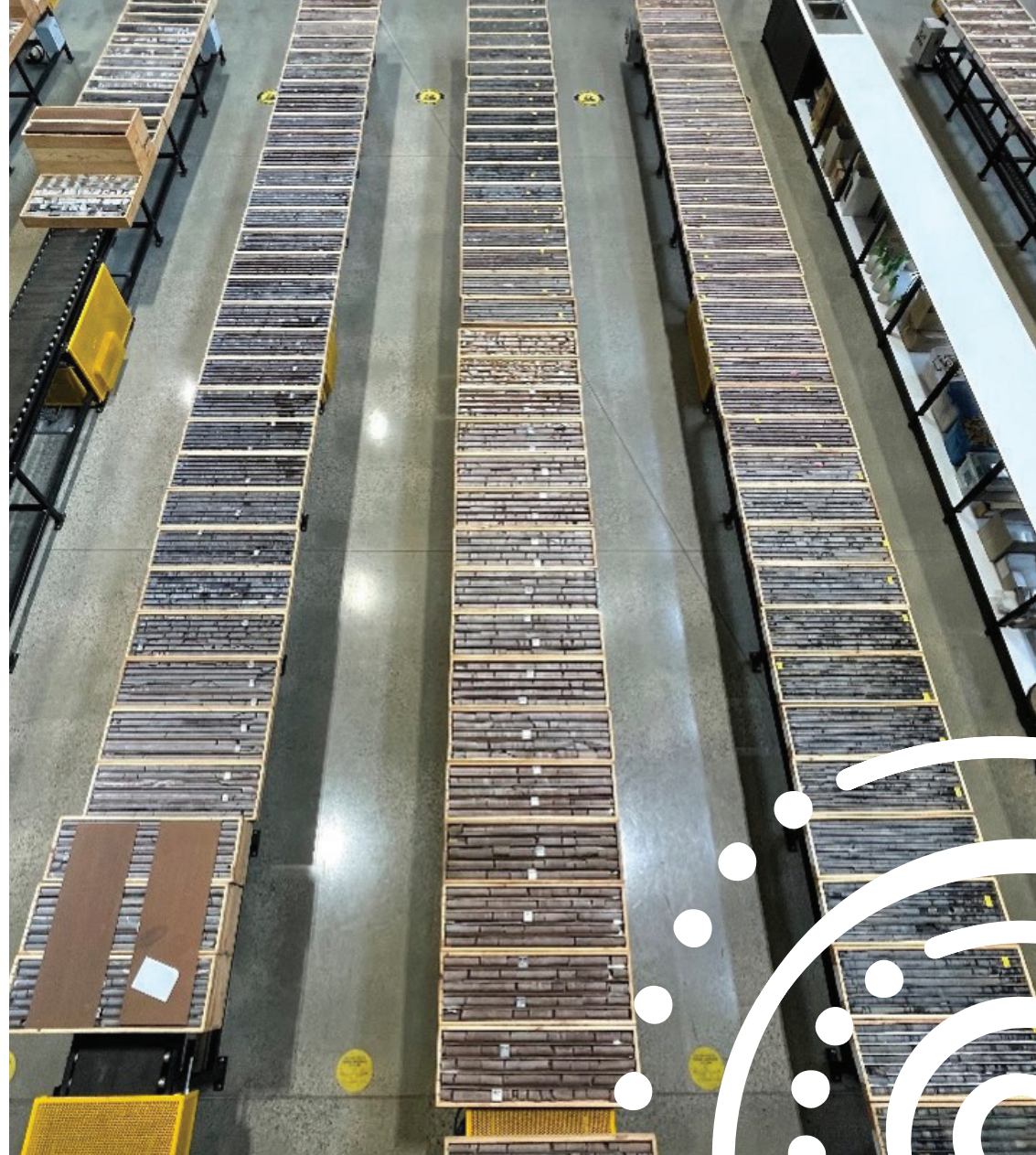




SLT 103 (DH 25362) drillhole report

Sedimentary Copper Mineral Systems of the Stuart Shelf
GSSA–CSIRO project

C Krapf, M Bockmann, A Fabris, G Gordon,
S Schmid and V Crombez



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C Krapf¹, M Bockmann¹, A Fabris¹, G Gordon¹,
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¹ Geological Survey of South Australia,
Department for Energy and Mining

² CSIRO

April 2023

Report Book 2023/00020



Department for Energy and Mining

Level 4, 11 Waymouth Street, Adelaide

GPO Box 320, Adelaide SA 5001

Phone +61 8 8463 3000

Email dem.minerals@sa.gov.au

dem.petroleum@sa.gov.au

www.energymining.sa.gov.au

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Acknowledgement of Country

As guests on Aboriginal land, the Department for Energy and Mining (DEM) acknowledges everything this department does impacts on Aboriginal country, the sea, the sky, its people, and the spiritual and cultural connections which have existed since the first sunrise. Our responsibility is to share our collective knowledge, recognise a difficult history, respect the relationships made over time, and create a stronger future. We are ready to walk, learn and work together.

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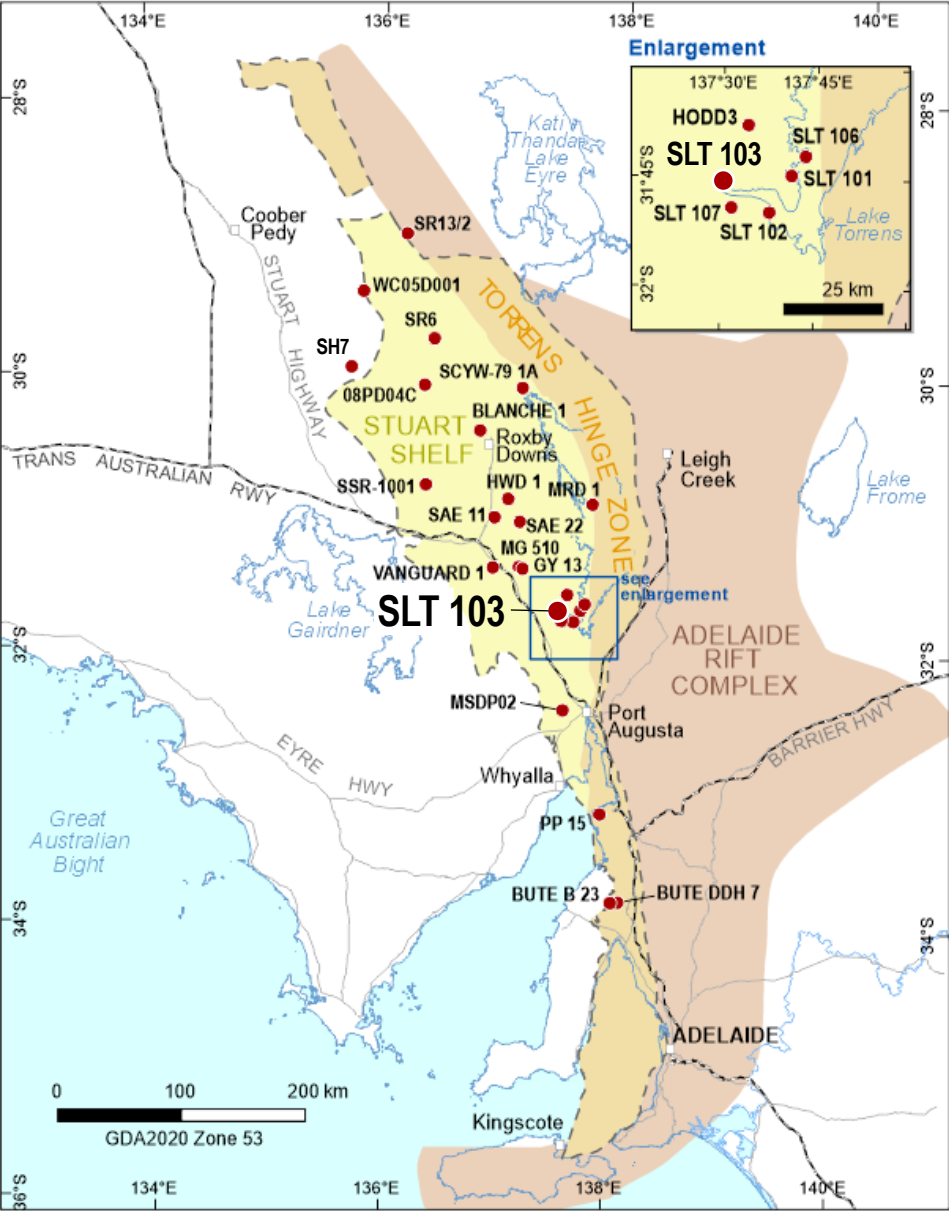
Drillhole information

Drillhole name	SLT 103	
Drillhole number	25362	
Tenement	EL 370	
Location	137.5051456 Long -31.7580034 Lat	737277.74E 6483656N GDA2020, Zone 53
Date drilled	01/06/1978	
Drillhole depth	750.50 m	
Cored interval	729.50 m	
Azimuth/Dip	n. a.	-90
Reference	ENV03093	

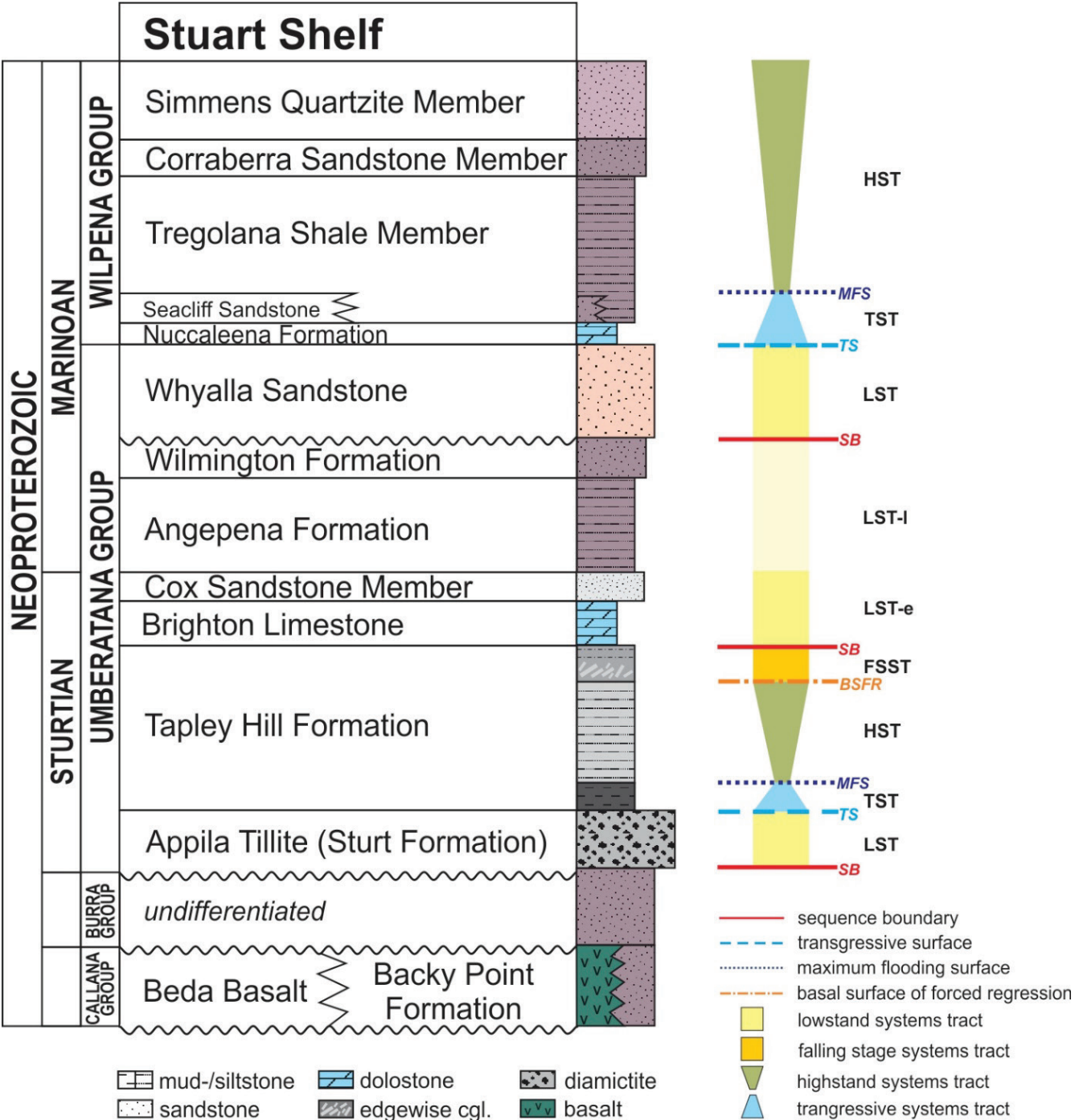
This drillhole report provides a summary of new logging and data collection undertaken as part of the Sedimentary Copper Mineral Systems of the Stuart Shelf GSSA-CSIRO project.

Associated newly collected handheld gamma, portable XRF and HyLogger™ data are available for download via the [blue hyperlinks](#) in this report.

Drillhole location



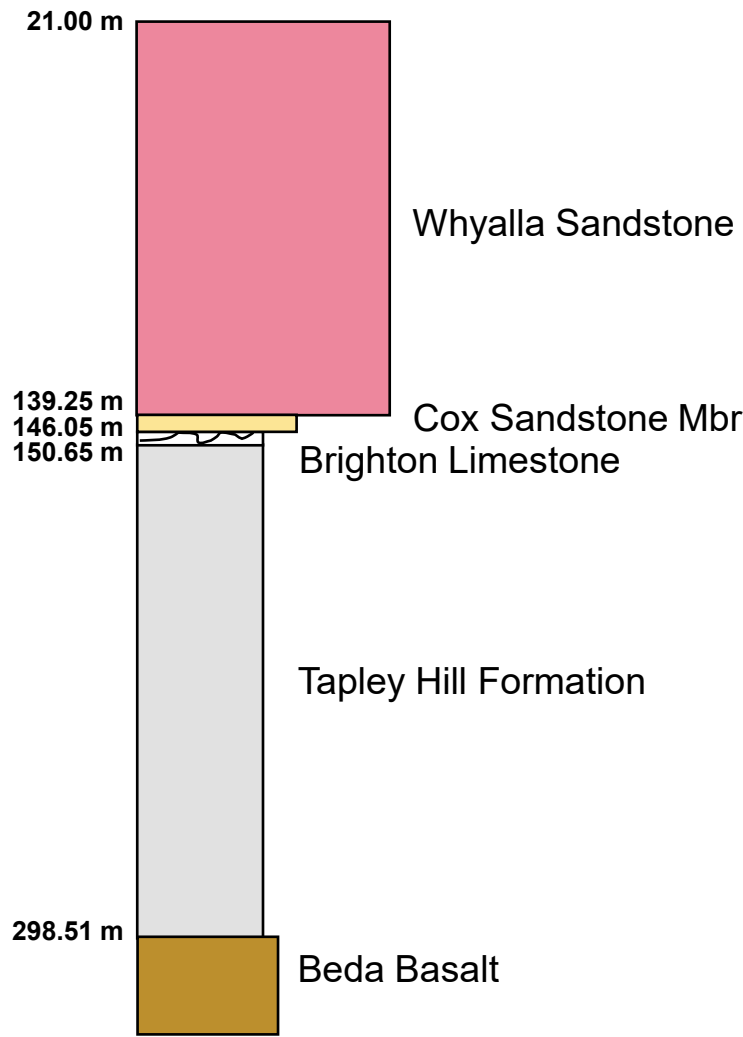
Generalised stratigraphy and sequence stratigraphy of the Stuart Shelf*



*Note: not all stratigraphic units were deposited or preserved throughout the Stuart Shelf

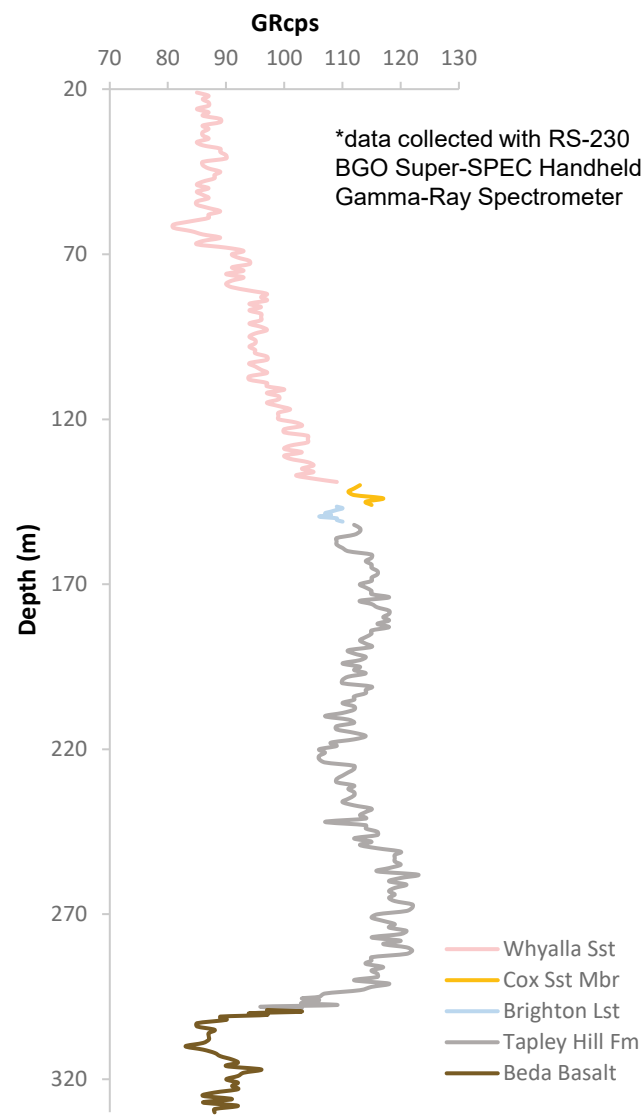
SLT 103

generalised stratigraphic log
(depth interval 21 – 330 m)



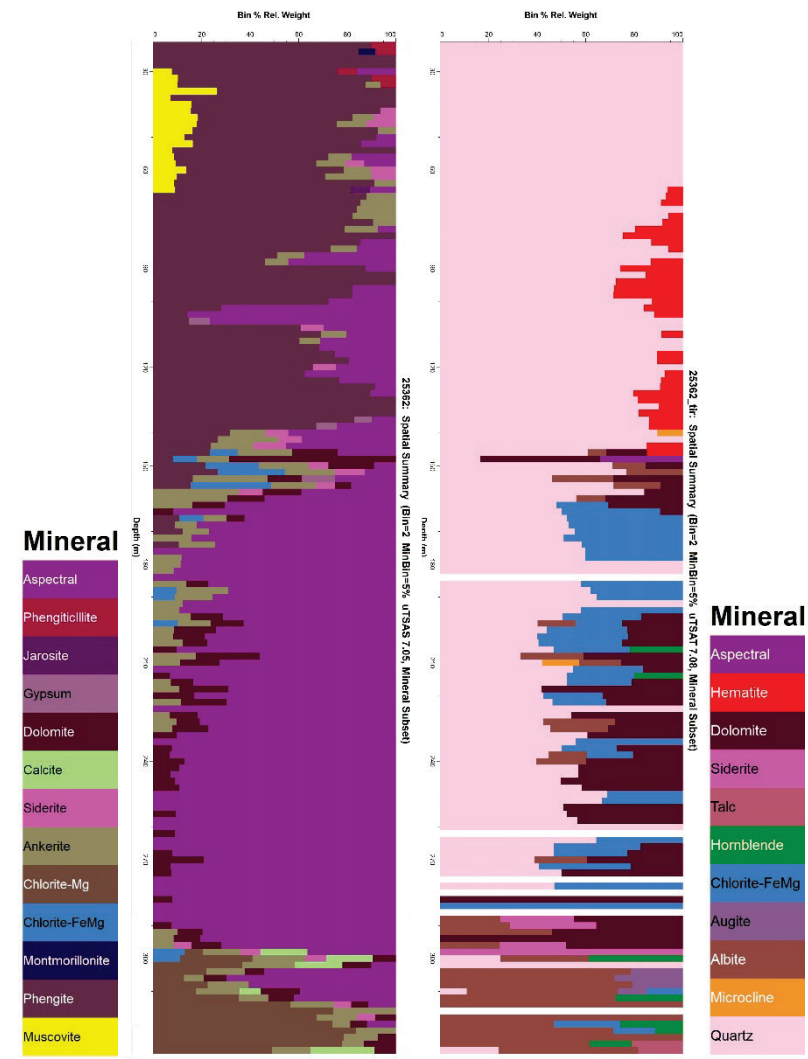
Handheld gamma*

[Download gamma data](#)



HyLogger™

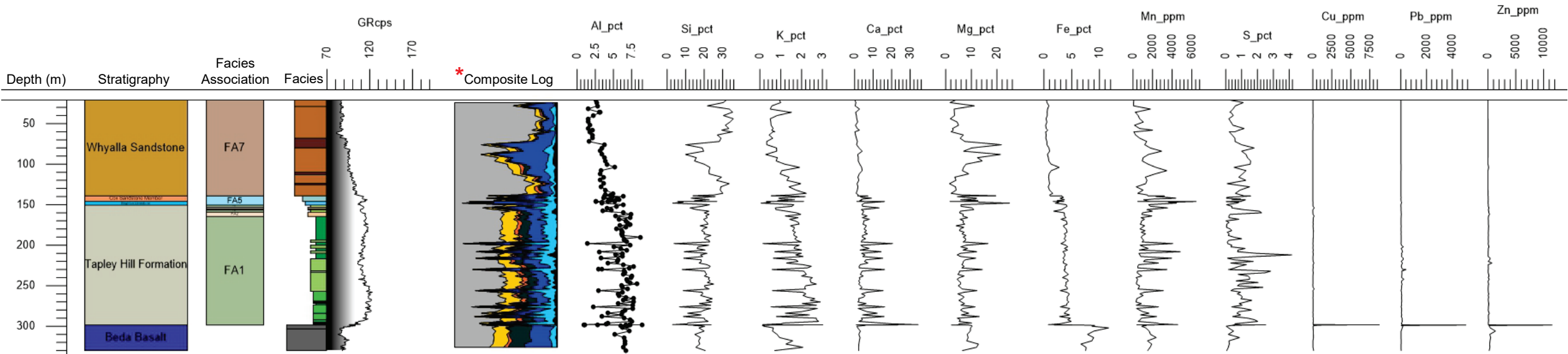
[Download HyLogger™ data](#)



Combined STRATER log (stratigraphy, facies, gamma and handheld pXRF* - corrected)



SLT 103 (depth interval 21 – 330 m)



Facies Association (FA)

FA1: offshore	FA5: shallow subtidal to subtidal
FA2: offshore transition	FA6: intertidal to supratidal
FA3: lower shoreface - prodelta	FA7: glacial to fluvio-glacial
FA4: shoreface to delta front	

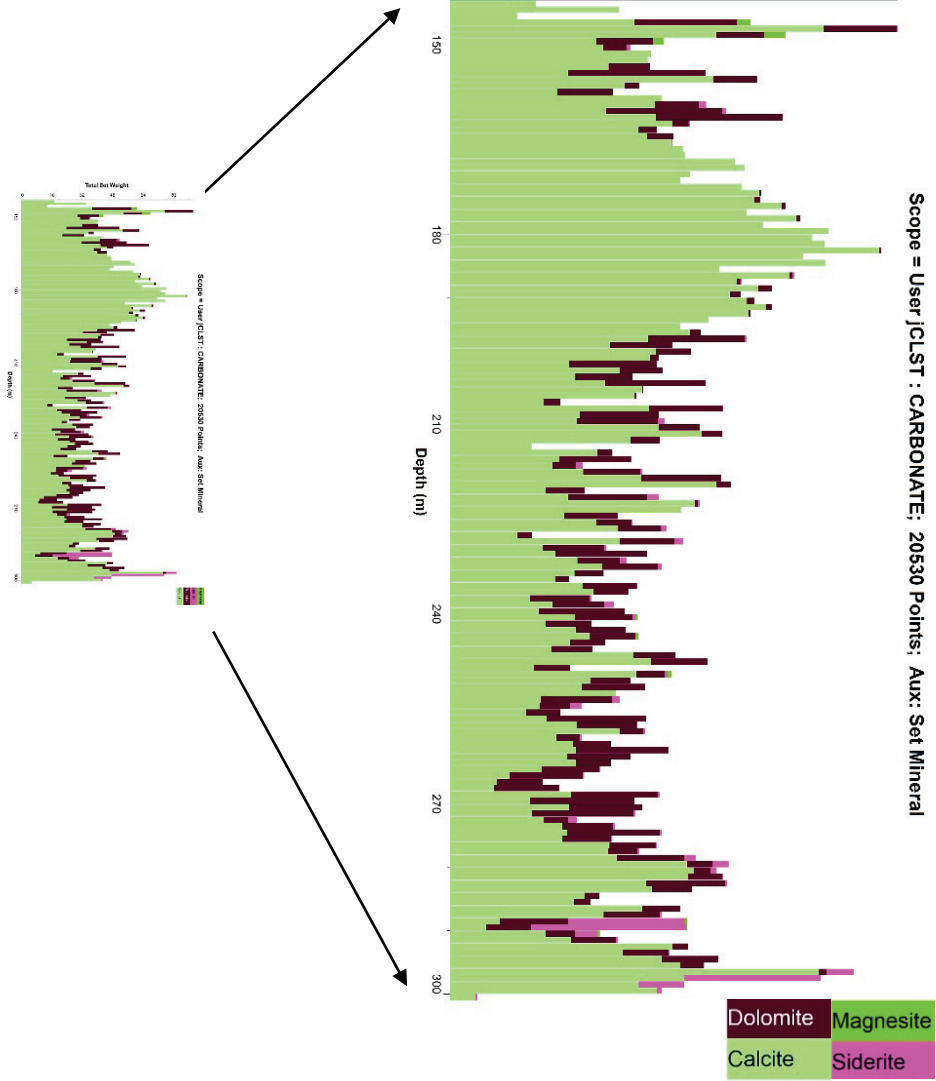
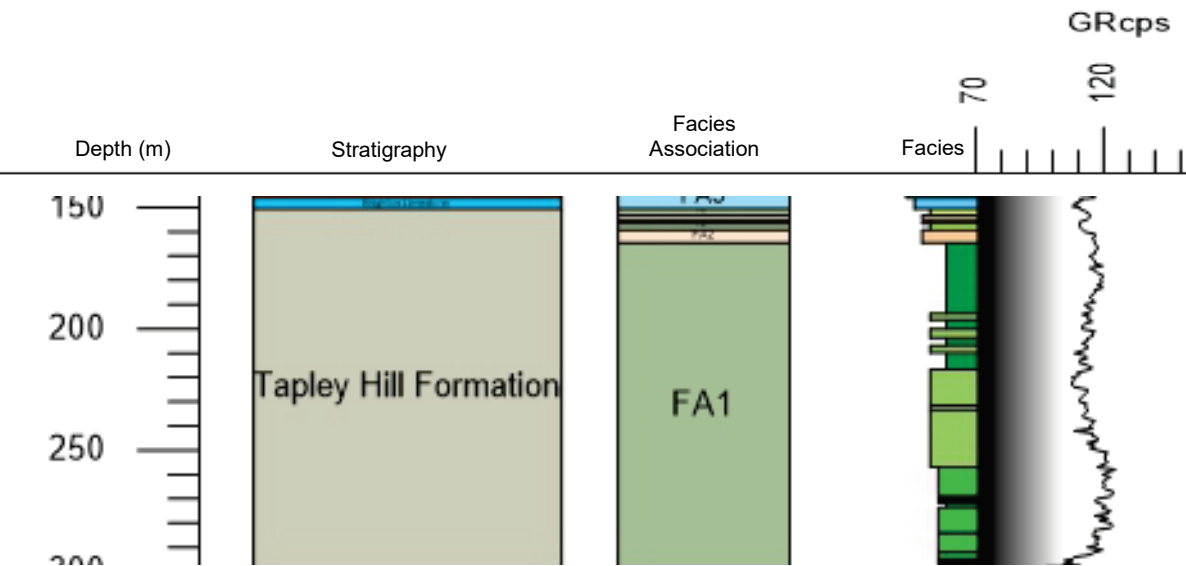
***Legend**

Mg_pct	Ca_pct
Al_pct	Fe_pct
Si_pct	Cu_ppm
S_pct	Pb_ppm
K_pct	Zn_ppm

*data collected with Vanta™ Handheld XRF

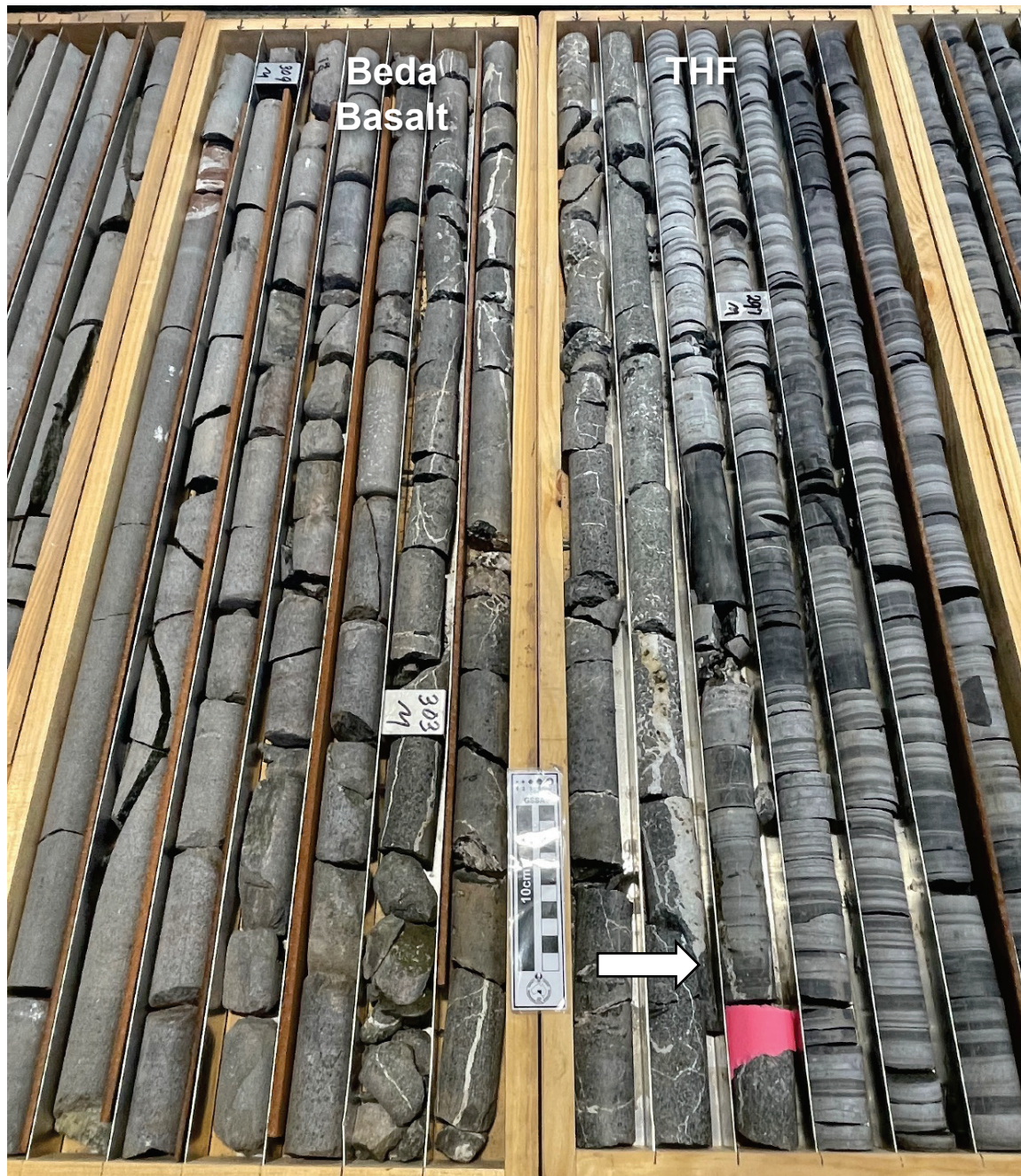
SLT 103 Carbonate Content Tapley Hill Formation and Brighton Limestone interval (145.05 – 298.51 m)

[Download HyLogger™ data](#)



- Facies Association (FA)**
- FA1: offshore
 - FA2: offshore transition
 - FA3: lower shoreface - prodelta
 - FA4: shoreface to delta front
 - FA5: shallow subtidal to subtidal
 - FA6: intertidal to supratidal
 - FA7: glacial to fluvio-glacial

Transition Beda Basalt – Tapley Hill Formation (THF)

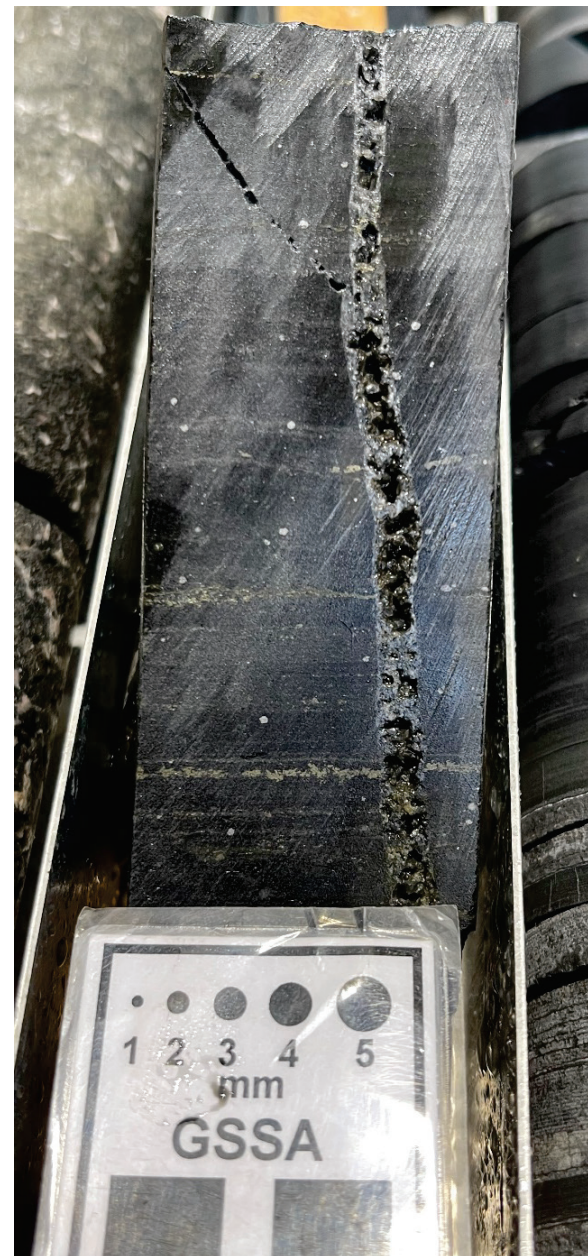


Transition Beda Basalt – Tapley Hill Formation (THF)



Tapley Hill Formation

intense veining at base



Tapley Hill Formation

offshore marine – below wave storm base

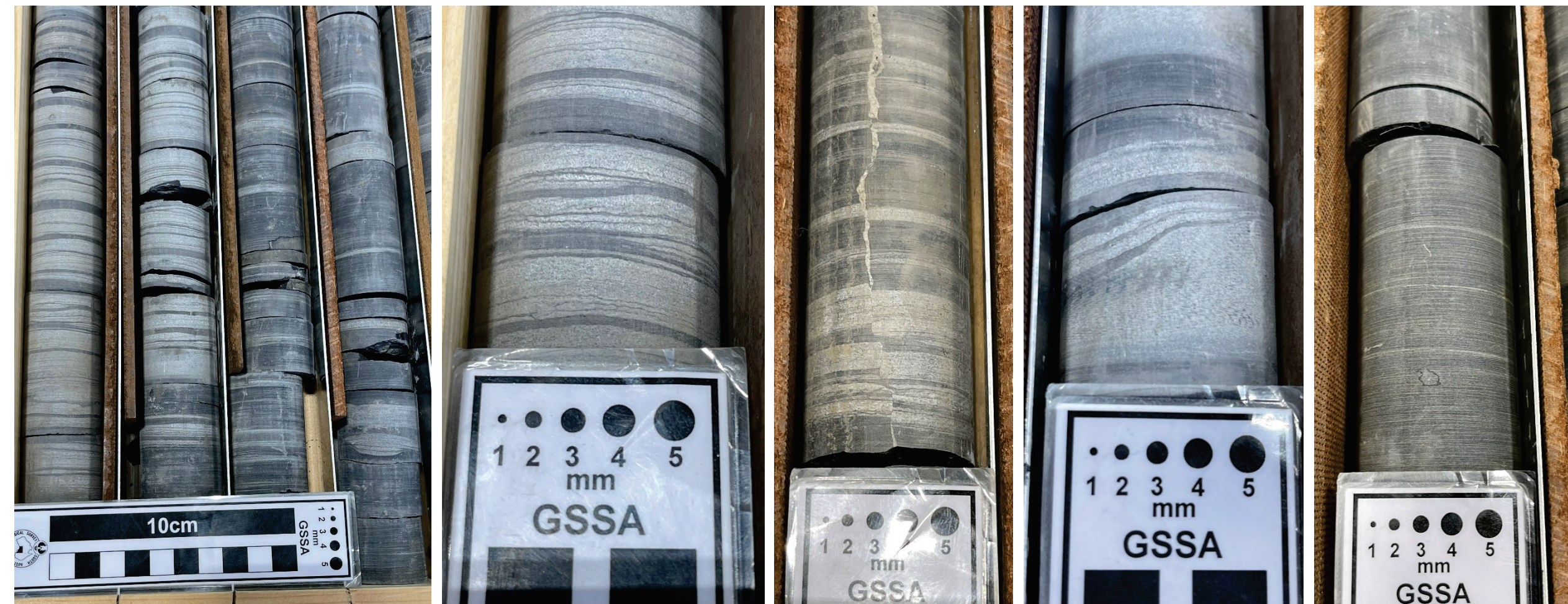
interbedded carbonaceous and dolomitic siltstones, laminated siltstone, carbonaceous mudstone



Tapley Hill Formation

offshore marine – below wave storm base

cm-scale interbedded carbonaceous and dolomitic siltstones and laminated siltstone



Tapley Hill Formation

offshore marine – below wave storm base

cm- to dm-scale interbedded carbonaceous and dolomitic siltstones



Tapley Hill Formation

offshore transition – between storm wave base and fair-weather wave base

low angle cross bedded fine-grained sandstones



Tapley Hill Formation

offshore transition – between storm-wave base and fairweather-wave base
edgewise conglomerates (ewc)



microbiolaminite and laminated siltstone beds
are present within ewc unit towards top



Transition Tapley Hill Formation – Brighton Limestone – Cox Sandstone Member



Brighton Limestone (depth 146.05 – 150.65 m)
microbiolaminites and stromatolites

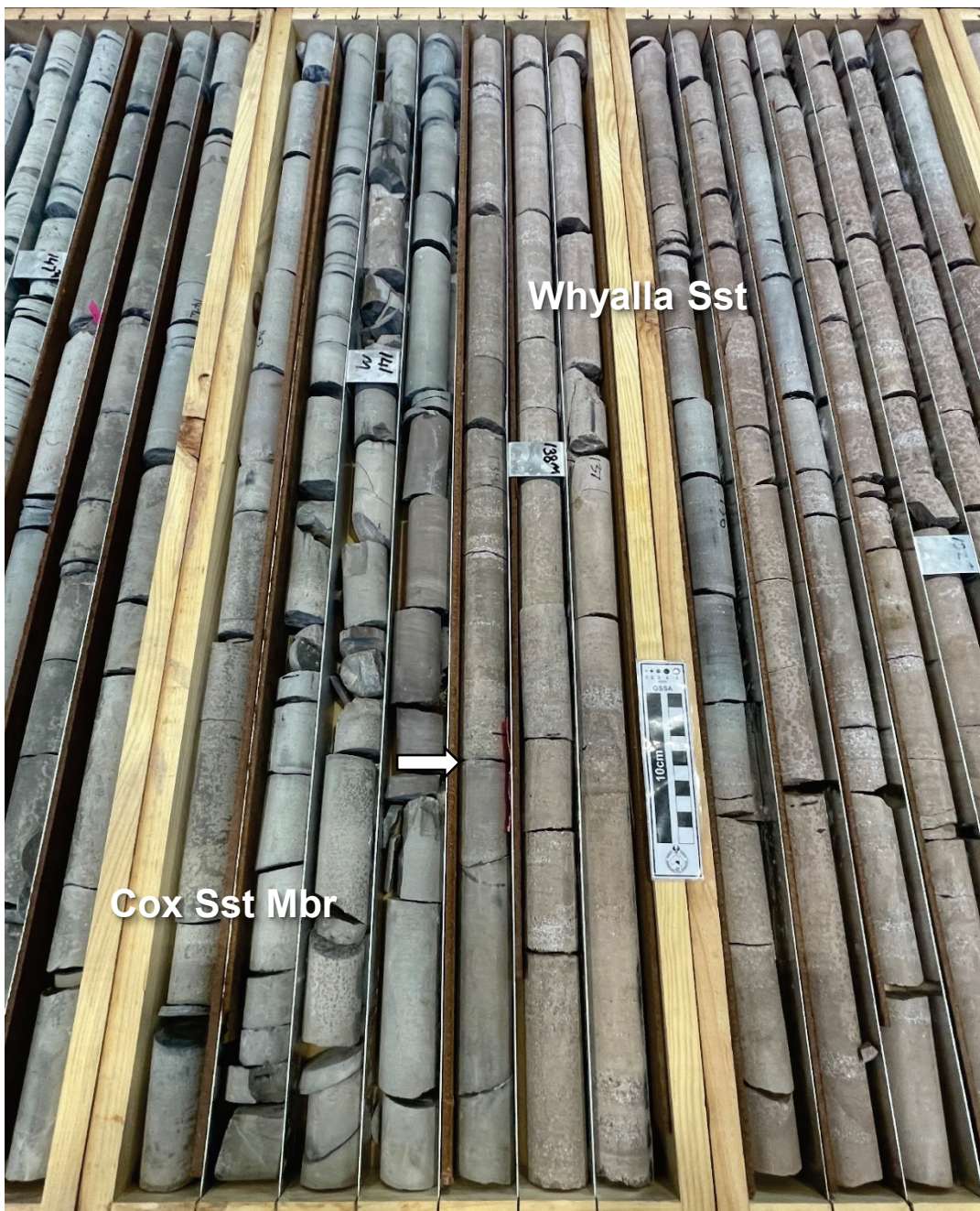


Cox Sandstone Member (depth 139.25 – 146.05 m)

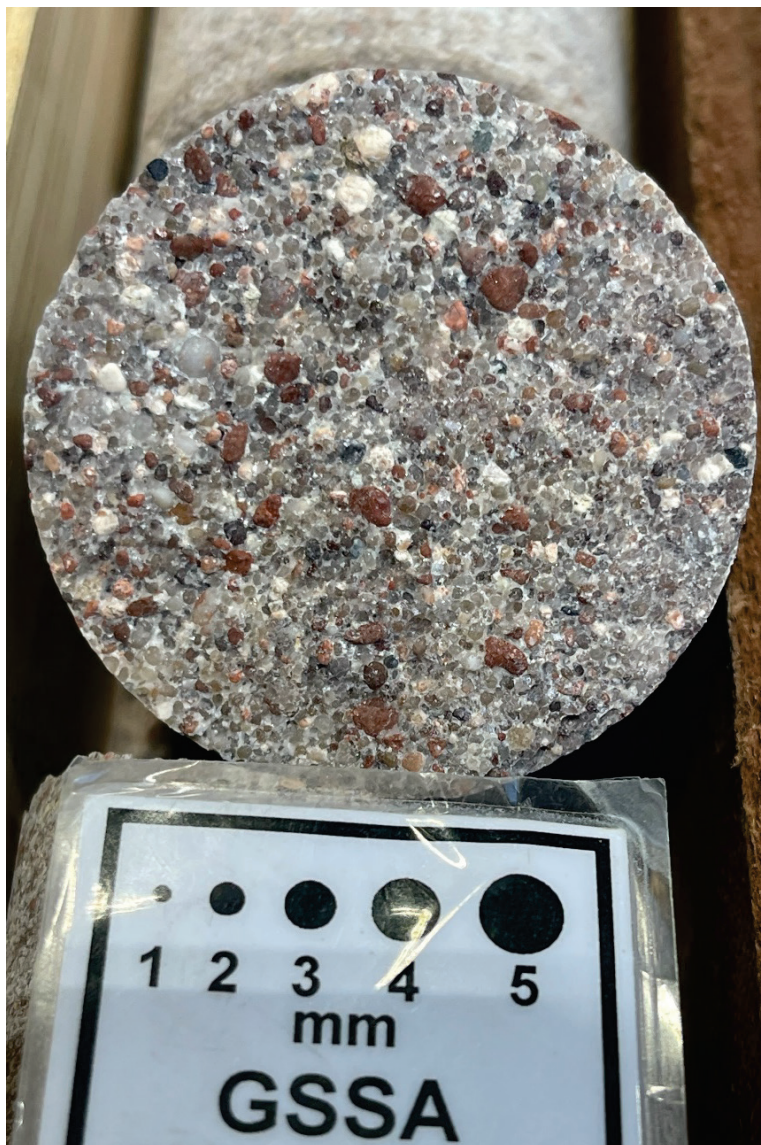
well sorted medium-grained shallow subtidal to subtidal sandstone



Transition Cox Sandstone Member – Whyalla Sandstone

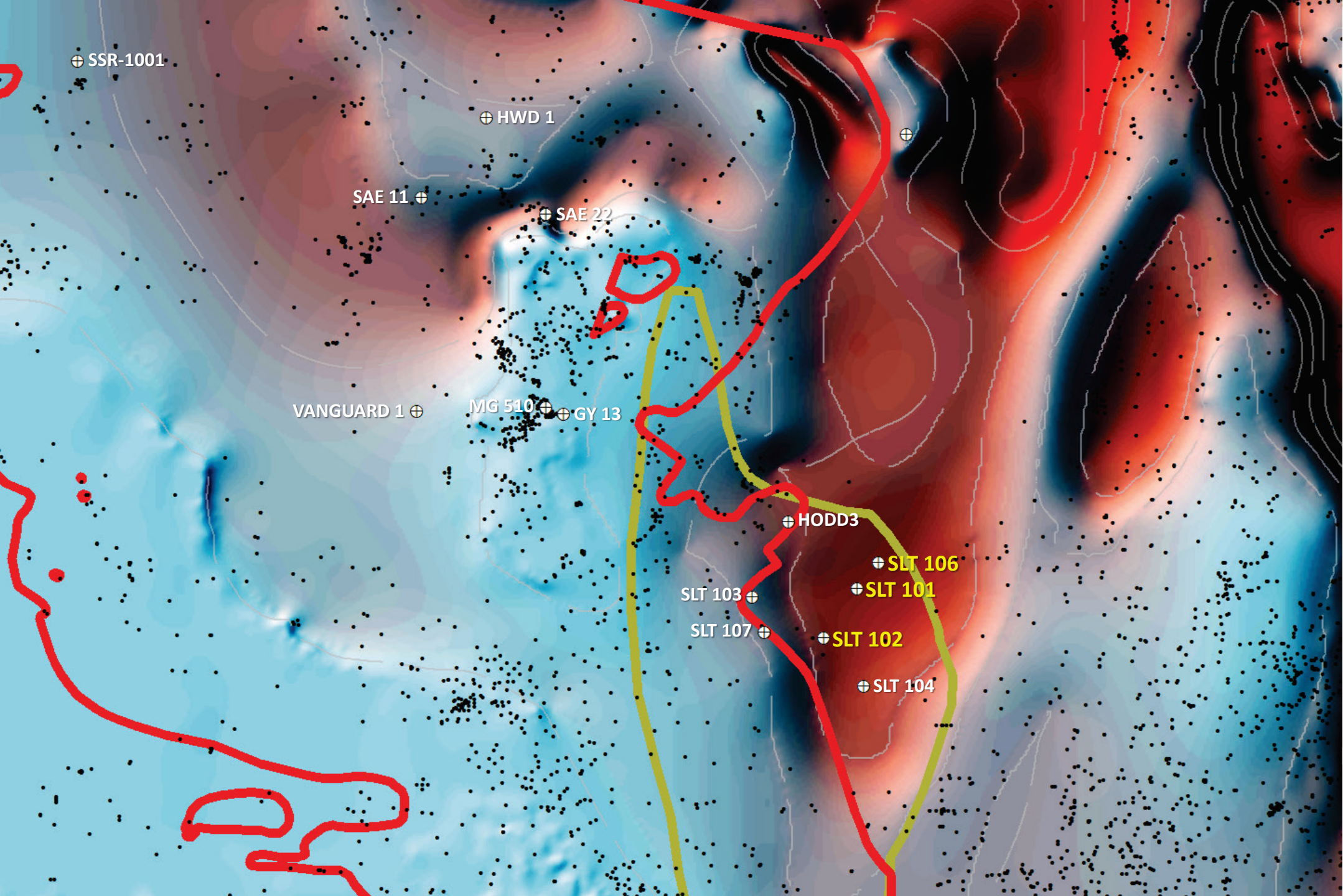


Whyalla Sandstone (depth 21 – 139.25 m)



SEABASE

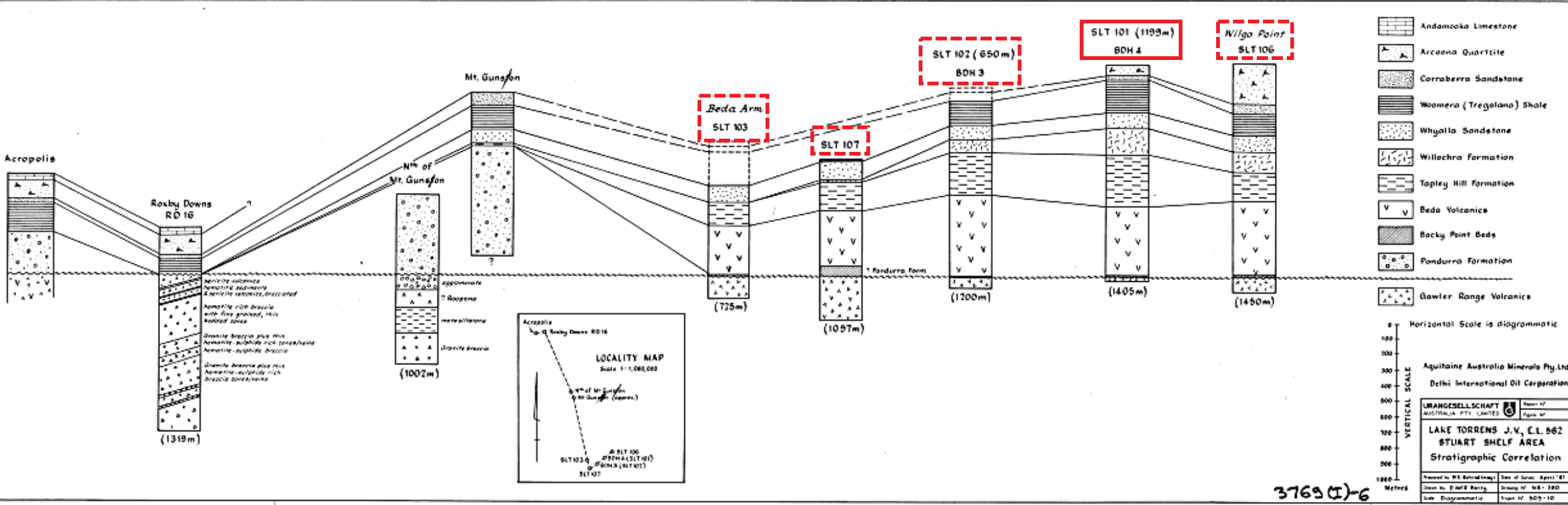
Pernatty Upward

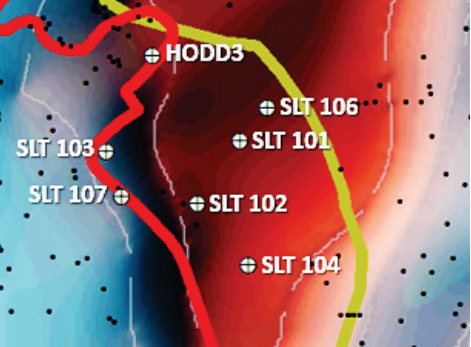


— Beda Basalt extent

— Pandurra Fm extent

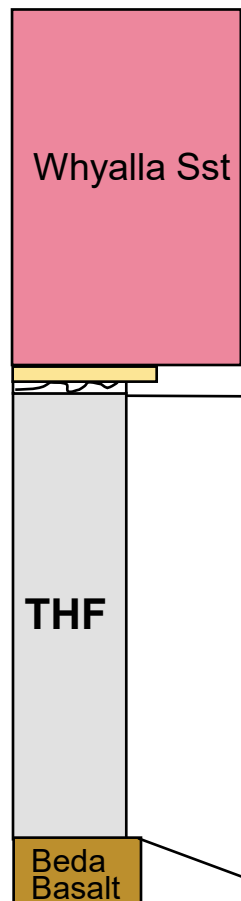
Original drillhole correlation from [ENV03769](#)



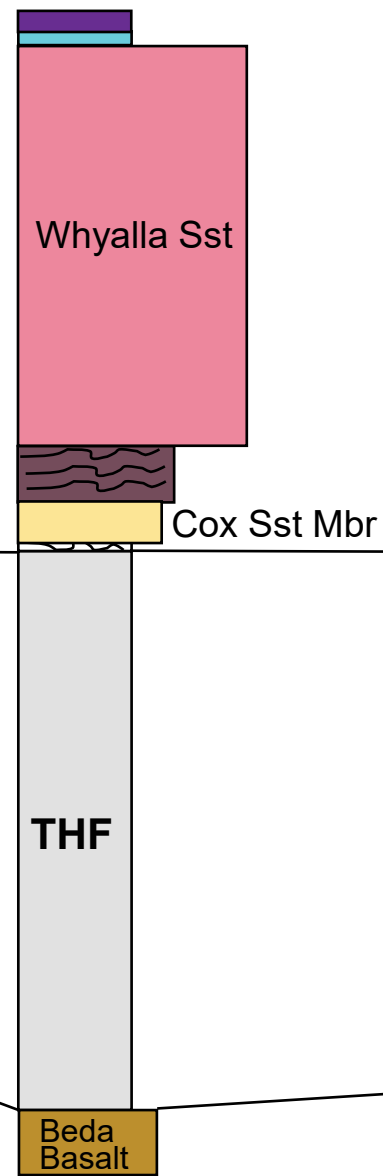


new correlation

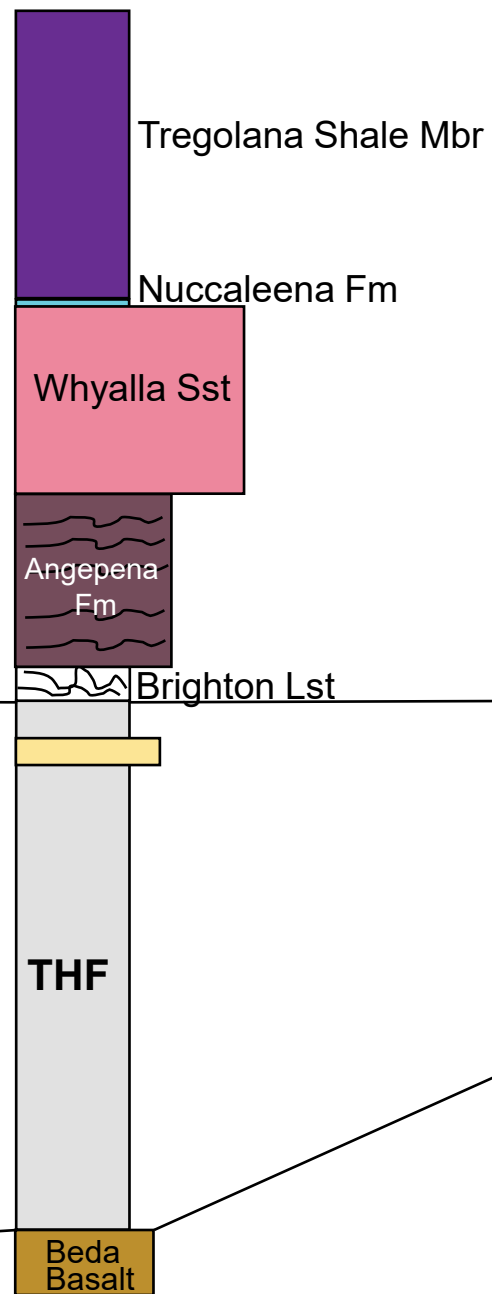
SLT 103



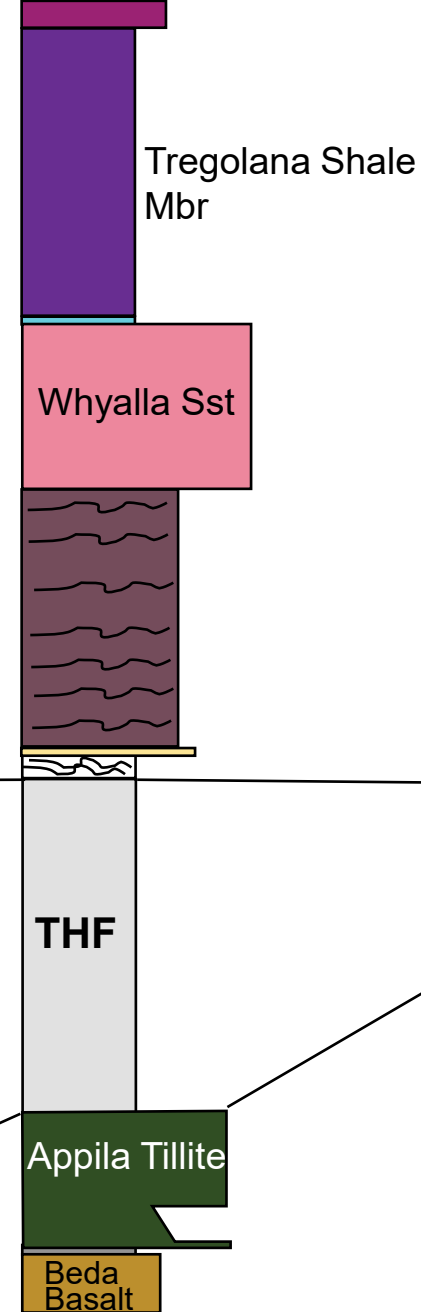
SLT 107



SLT 102



SLT 101



SLT 106

