

Acknowledgements: Dr Marco Brenna, Peter & Jane
Evans, Sara Rowling, Mark Dale, Ray Marx, Dr
Sophie Briggs, Alicia McKean, family & friends

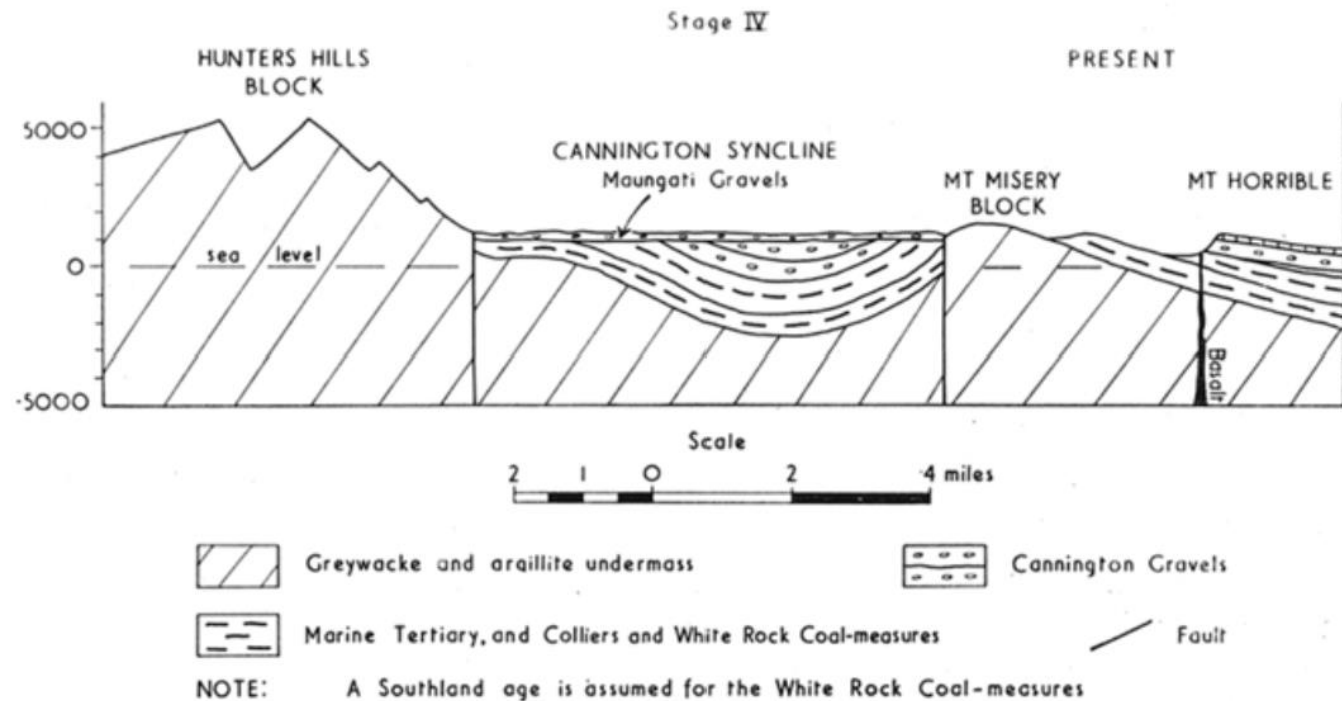
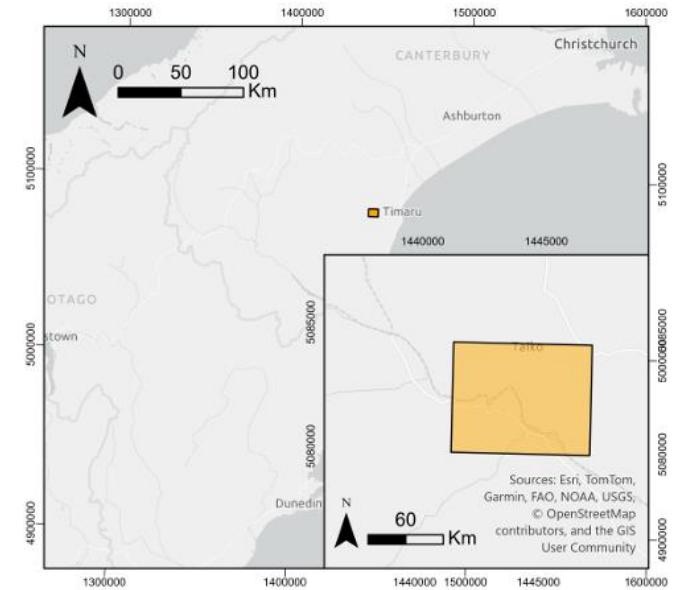
Exploring Mount Horrible

Ashleigh Prichard – Student at University of Otago
Supervisor: Dr Marco Brenna



Background/Location

- Thick marine Tertiary sediments
- Folded into anticlines and synclines (NE-SW)
- Shaped by Neogene tectonics



(Langdale & Stern, 1998)



Geological Map of Mount Horrible

Legend

Lithologies

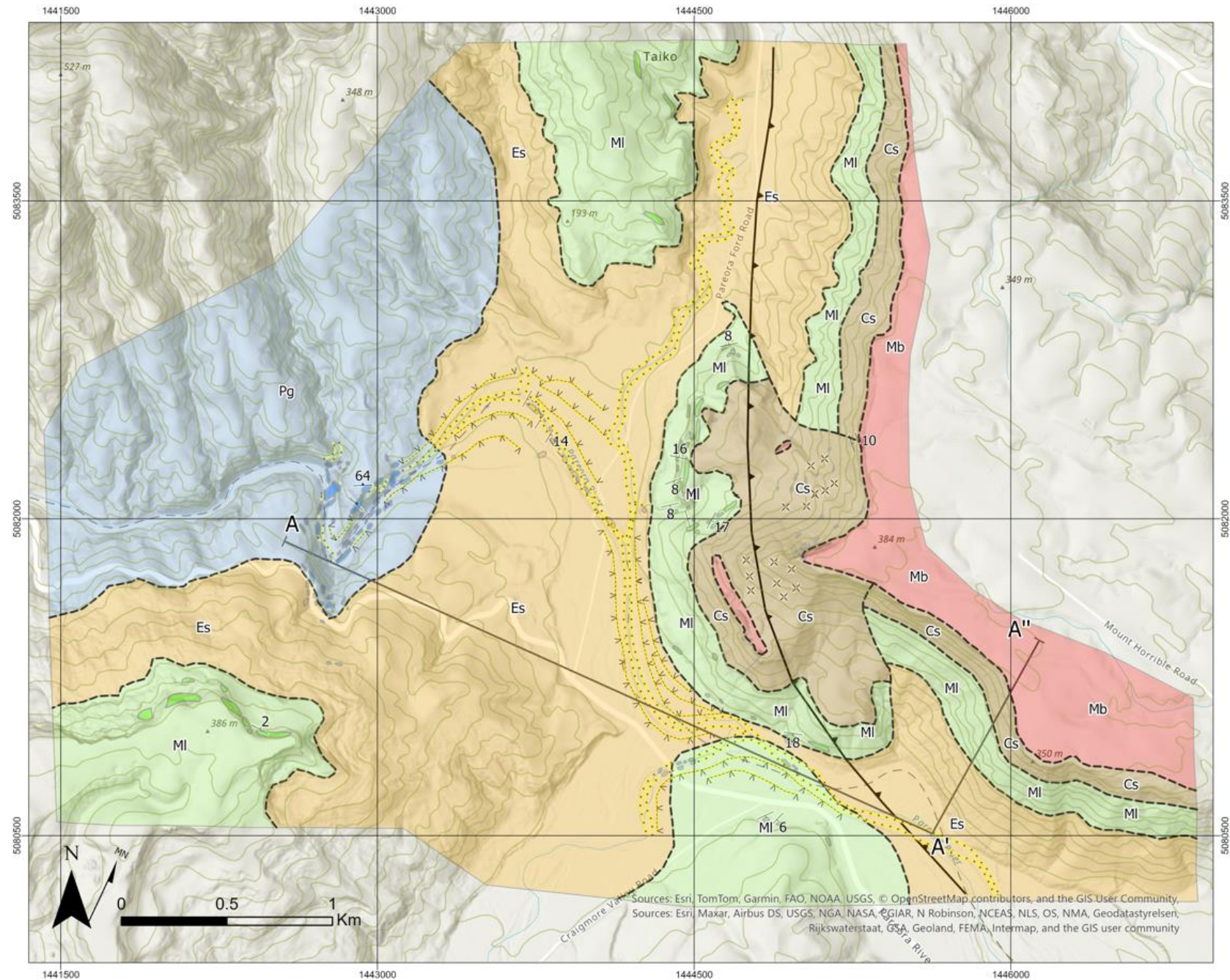
- <Null>, <Null>
- Claremont Bush Sandstone
- Claremont Bush Sandstone Outcrop
- Evans Crossing Sandstone Formation
- Evans Crossing Sandstone Formation Outcrop
- Maungati Limestone Formation
- Maungati Limestone Formation Outcrop
- Mount Horrible Basalt
- Mount Horrible Basalt Outcrop
- Pareora Gorge Greywacke
- Pareora Gorge Greywacke Outcrop

Geology

- Cross Section

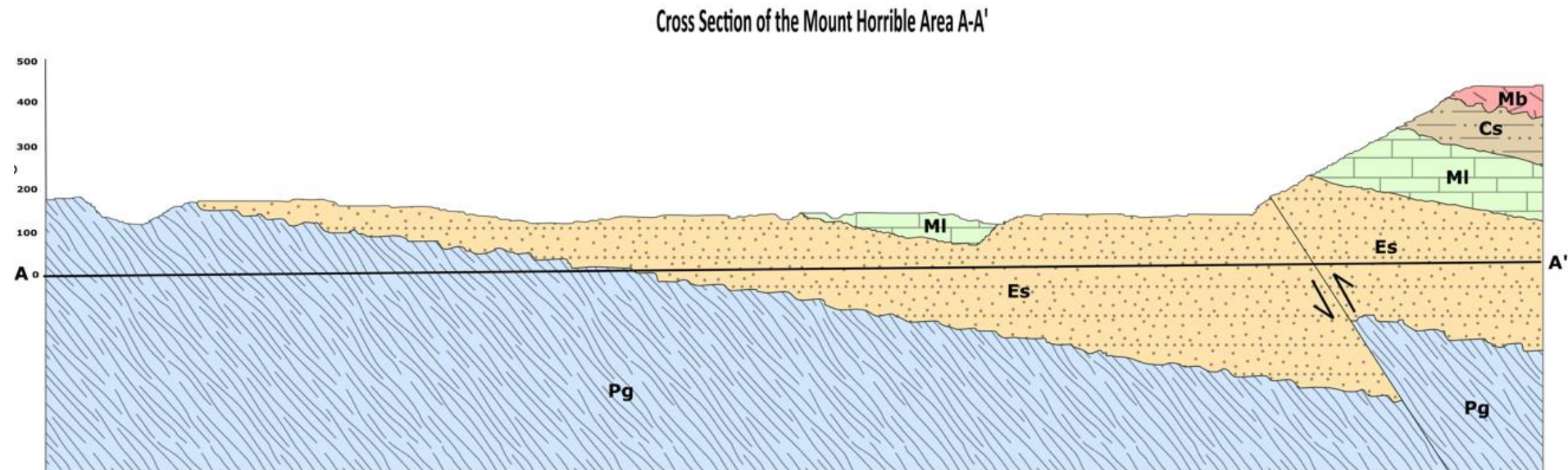
Structural Measurements

- bedding
- foliation
- outcrop
- contact (unconstrained)
- fault
- terrace top
- drift boundary



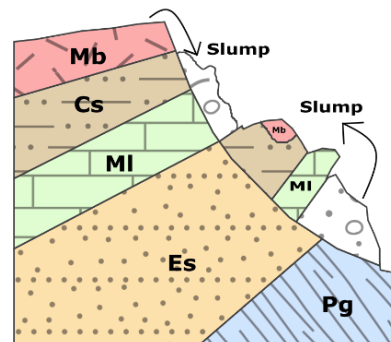
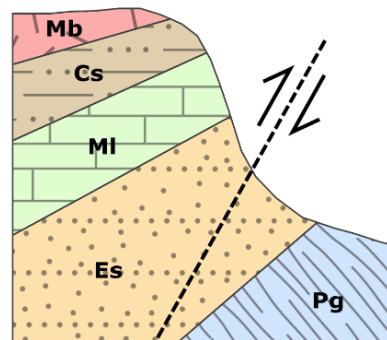
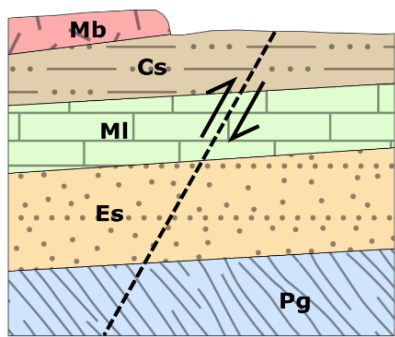
Why a fault?

- Offset in limestone formation between river (in situ) and slopes of Mount Horrible
- Limestone on slopes represents the location where formation is displaced from expected position prior to slump



Why a slump?

- Strike/dip changes within in situ limestone and non-in situ layers
- Steep head scarp and hummocky terrain



(not to scale)



Conclusions



Analysing lithological units under the microscope to assist in interpretations of geological history



Currently in the process of making my final conclusions



References

Langdale, S., & Stern, T. A. (1998). Late Tertiary deformation in Cannington Basin, South Canterbury, New Zealand: Evidence from seismic and gravity data. *New Zealand Journal of Geology and Geophysics*, 41(3), 247–257.
<https://doi.org/10.1080/00288306.1998.9514808>

