



University  
of Otago  
ŌTĀKOU WHAKAIHU WAKA

# Antimony Mineralization in the Carrick Range, Central Otago

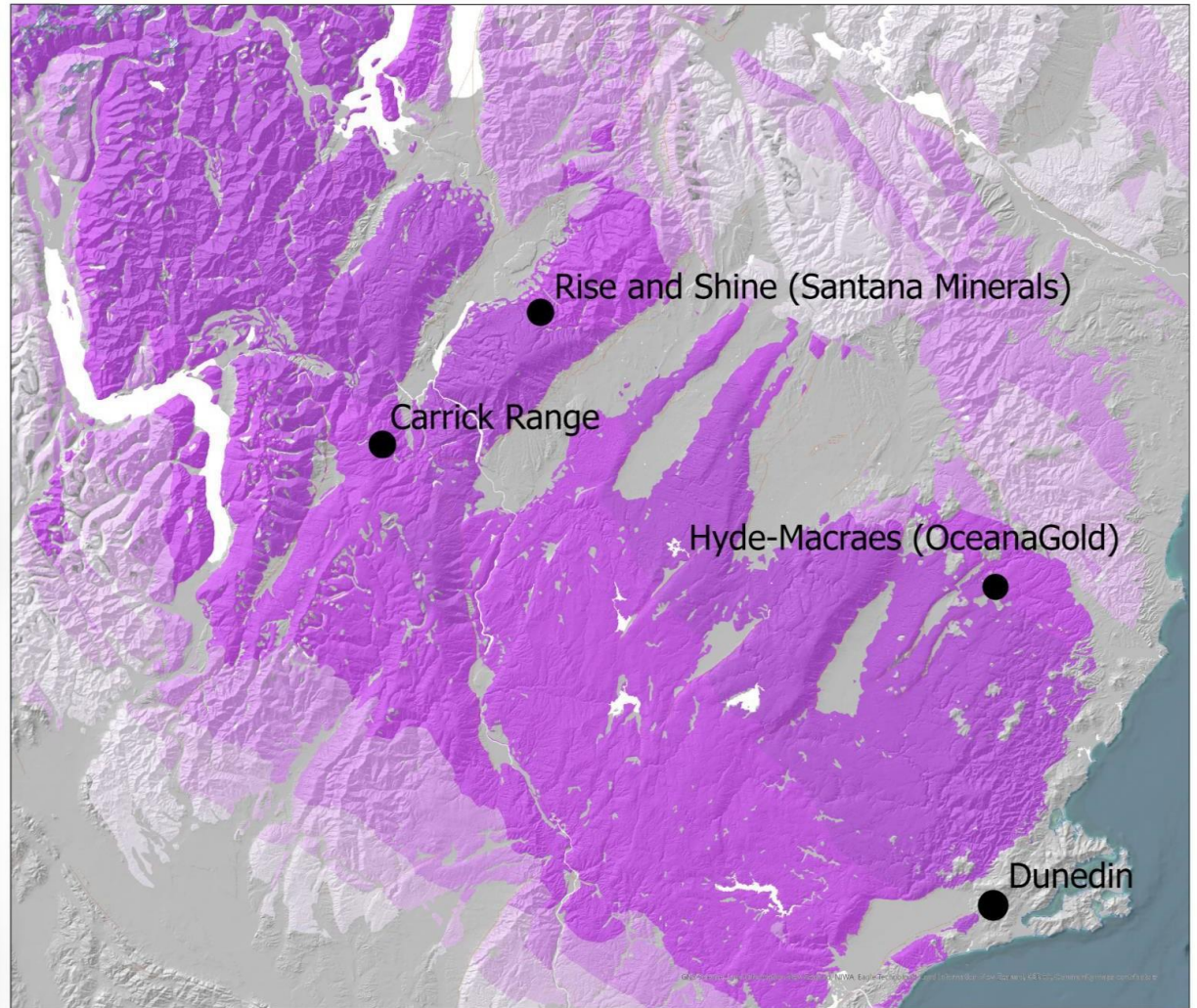
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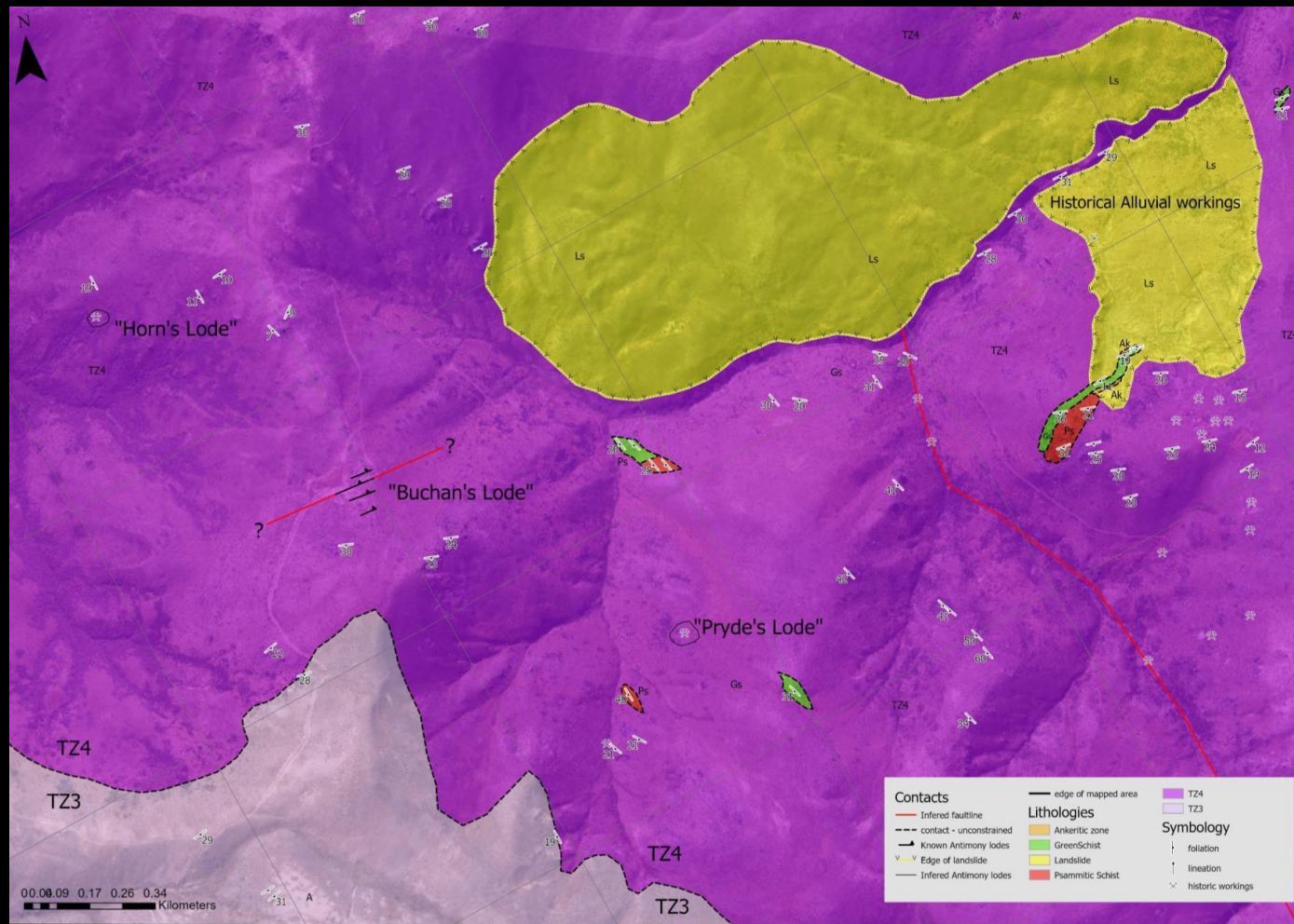
Supervisors: Doug Mackenzie and Marshall Palmer

# The Carrick Range

- Situated in the mineralised Otago Schist Belt
- Historical Au and Sb mining locality
- Multiple phases of mineralisation present in the Carrick Vein System
- Potentially hosting the southern textual zone boundary
- Estimated 24,000 Ounces were produced from the Carrick Range
- Estimated 11 tons of Sb were produced



Textual Metamorphism Map, GNS Science



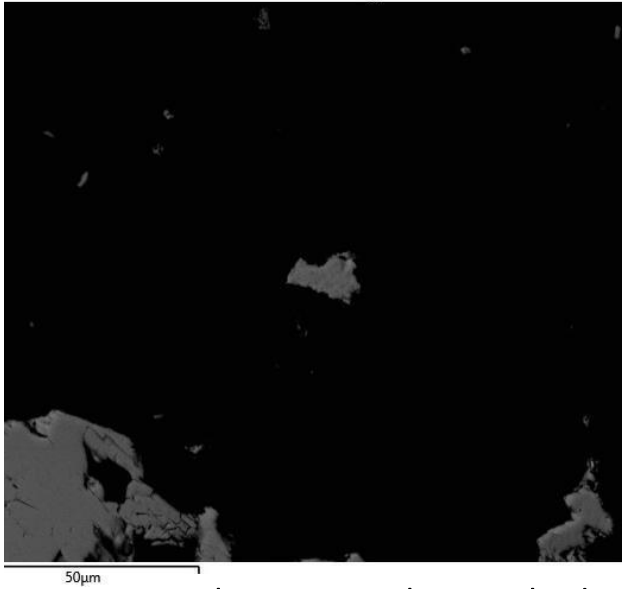
Pipeclay Gully - Geological Map



Buchan's Antimony Lode, Pipeclay Gully, Carrick Range

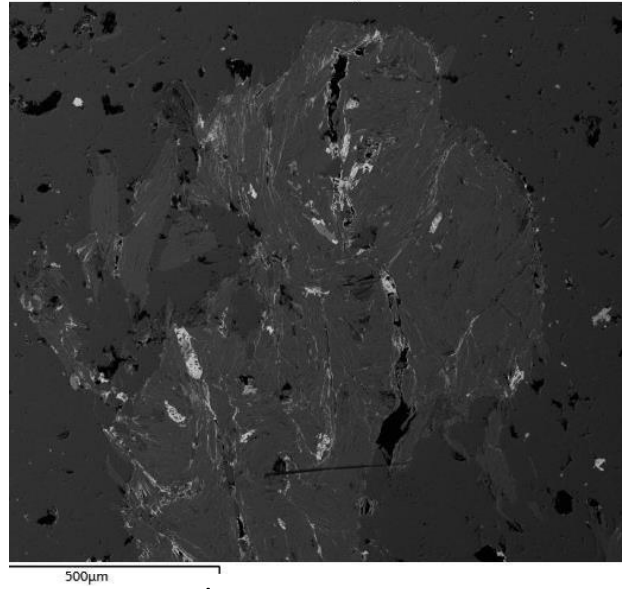
# Scanning Electron Microscope (SEM) Images

Electron Image 2



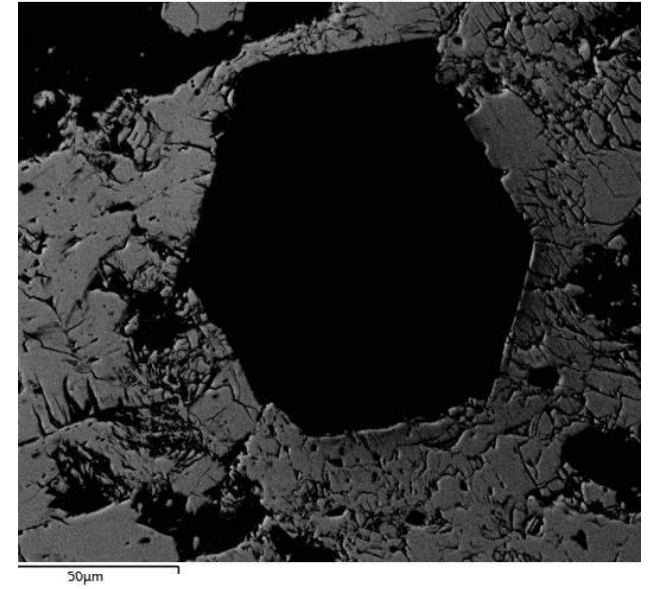
Stibnite Crystal

Electron Image 16



Euhedral Quartz Crystal  
Schist Clast in Stibnite Matrix

Electron Image 5



Two thin sections of Stibnite were analysed in the SEM. Seven minerals were identified. Stibnite, Arsenopyrite, Quartz and Mica were the primary minerals. Whereas Iron Oxide, Rutile and Ca/Fe Carbonates are the result of secondary alteration.

Thank  
you

