

Tasmanian Tungsten Mines



Western Tasmanian Tin- Tungsten Fields, related to Devonian granites



Tungsten Resources

Deposit	Resource (Mt)	Grade (wt% WO ₃)
Mt Lindsay	43	0.1
Moina	26	0.1
Kara #1	10	0.4
Kara #2	16	0.1
Luina	4	0.4
Dolphin (KI)	19	0.8
Bold Head (KI)	1	0.9
Aberfoyle	2.1	0.3
Storeys Ck	1	1

MAJOR TYPES OF PRIMARY TIN DEPOSITS IN CORNWALL

(After K.F.G. Hosking)

The lodes proper. Structurally- and sometimes mineralogically- complex features may show marked zoning (e.g. Dolcoath main lode) or telescoping (eg. Nangiles/Wheel Jane 'main' lode). Metasediment hanging-walls may contain SnO_2 in fractures (e.g. Wheel Metal lode)

Ladder veins and stockworks in elvan dykes (e.g. Parbola, Royalton mines)

Swarms of narrow veins (stockworks) Each vein structurally fairly simple. A few (e.g. Wheel Fortune, Mulberry mine) or many (exogreisens e.g. Redmoor mine) minerals may be present.

Greisen-bordered veins and pipes. Structurally simple but of variable mineralogical complexity (eg. Cligga, St Michael's Mount).

Hydrothermal breccia pipes & associated stockworks and floors (e.g. Fatwork & Parka mines)

Elvan dyke with spacially related lodes on the footwall and hanging wall (e.g. Wheel Jane, Mount Wellington, Wheel Busy)

Limit of metamorphic aureole

Limit of metamorphic aureole

METASEDIMENTS/
METABASITES

CUSP+

METASEDIMENTS/
METABASITES

GRANITE

METASEDIMENTS/
METABASITES



Floors (e.g. Levant Mine)

Pyrometasomatic deposits in greenstones (e.g. Magdalen, mine; cassiterite/magnetite/hornblende)

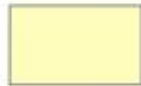
LATE PHASE
GRANITE

Carbonates (e.g. several mines of the St. Ives/Carbis Bay areas e.g. Trenwith mine & Wendron area .e.g. Wheel Level)

Early feldspathic veins either intersected by later Sn veins & lodes (e.g. CA, Band C zones of South Crofty mine) or actual sites of later SnO_2 deposition (e.g. Roskear complex lode of South Crofty)

Pyrometasomatic deposits in originally calcareous sediments (e.g. Mulberry Mine, replacements e.g. Treliver mine, Bunny Mine)

Mineralisation styles


 Permo-Triassic sedimentary rocks, Jurassic dolerite and Cainozoic sediments


 Devonian granitoids

 Late Cambrian to Early Devonian sedimentary rocks; Mathinna Group


Figure 1

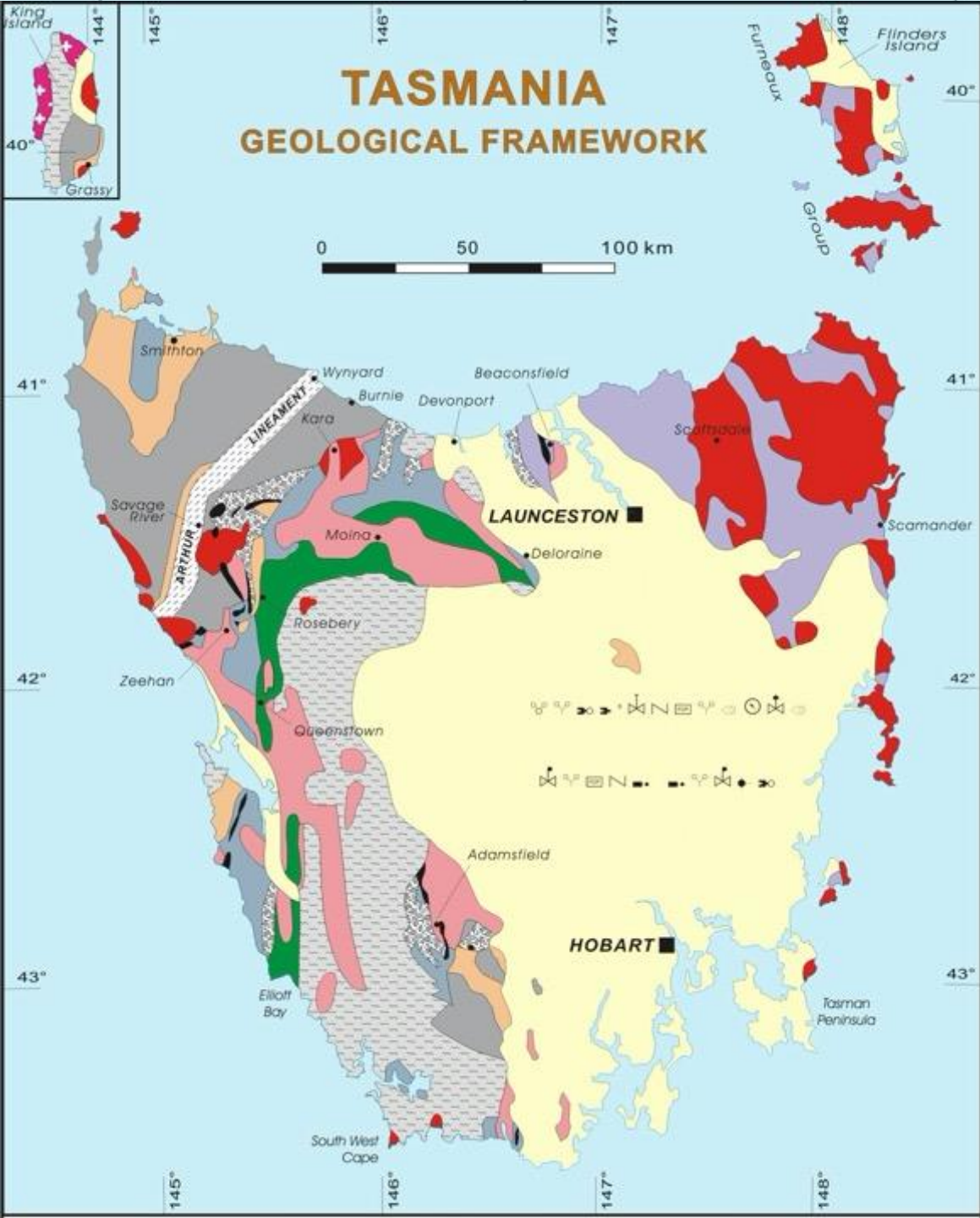
LEGEND

 Middle-Late Cambrian volcano-sedimentary sequences

 Middle-Late Cambrian Mt Read Volcanics

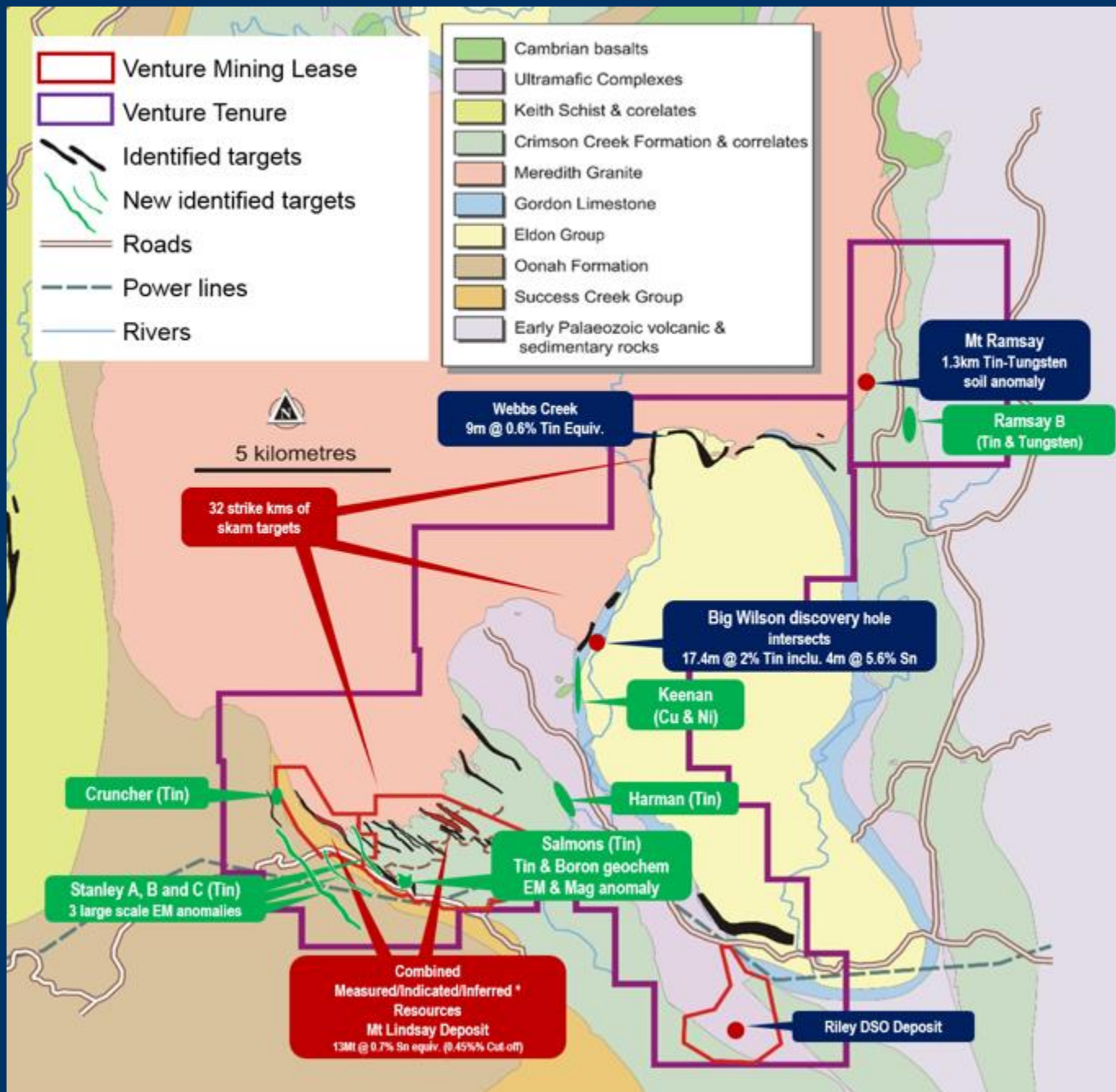
 Early Cambrian allochthons: Ultramafic-mafic complexes (black); sedimentary rocks and basalt

 Mesoproterozoic: Metasedimentary rocks; relatively unmetamorphosed sedimentary rocks; Arthur Metamorphic Complex

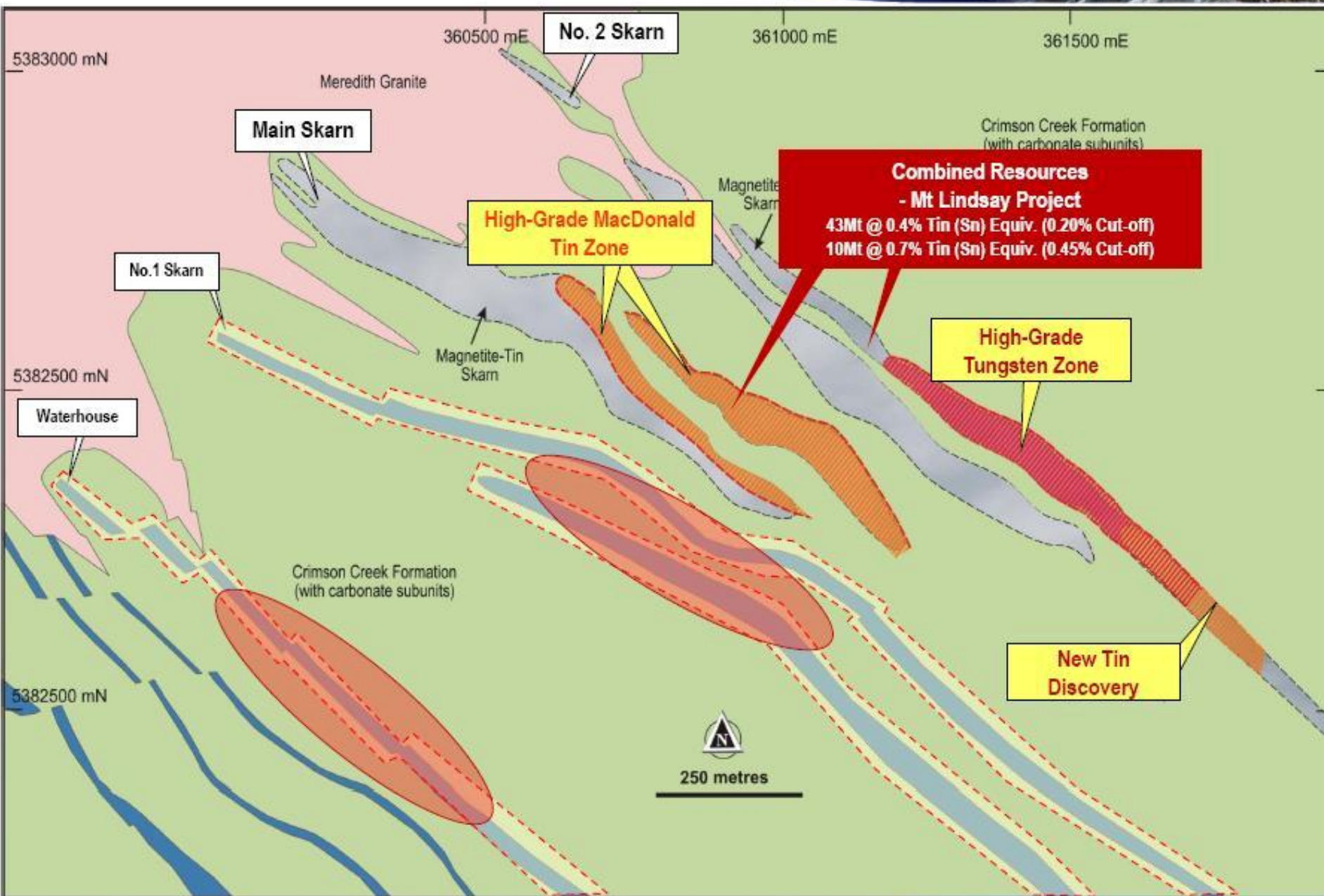


Mt Lindsay deposits

Mt Lindsay represents one of the largest tungsten reserves in Australia having estimated reserves of 43 million tonnes of ore grading 0.1% tungsten. The mine is owned by Venture Minerals.



High Priority Drill Targets

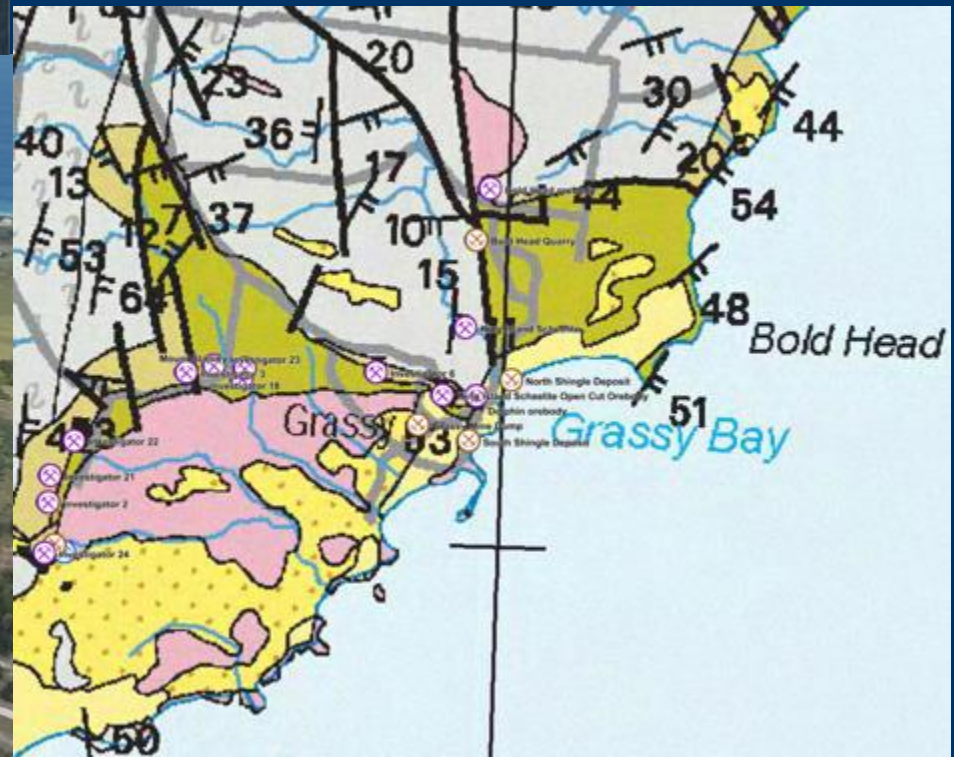


Cleveland mine, Luina

Scheelite (John Haupt photos)



King Island Scheelite mines





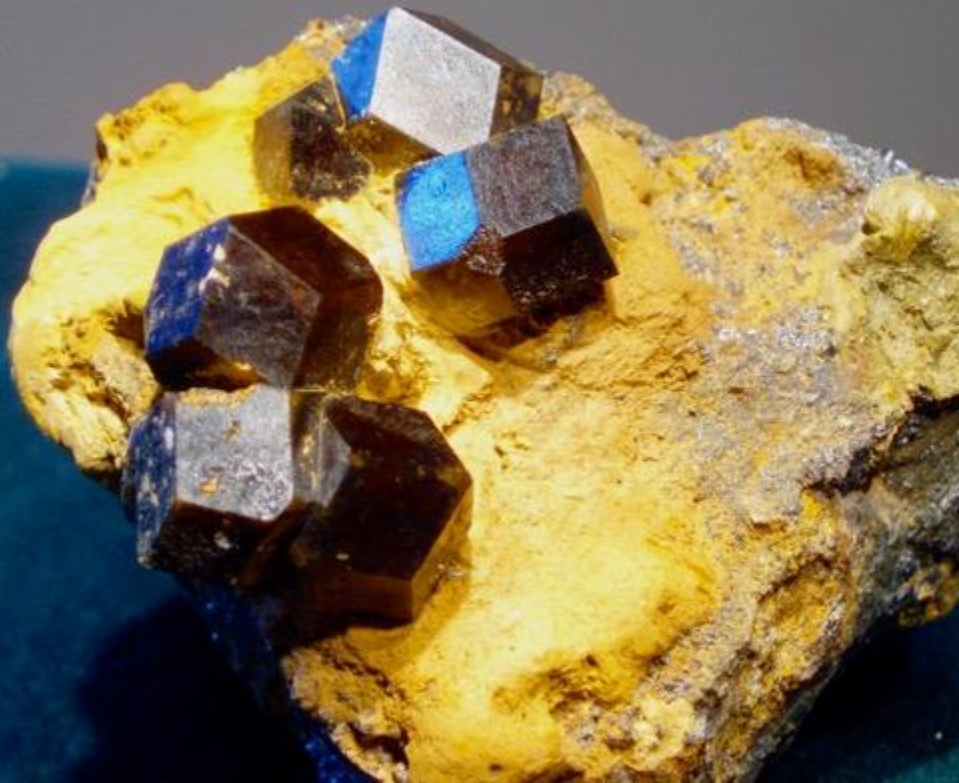




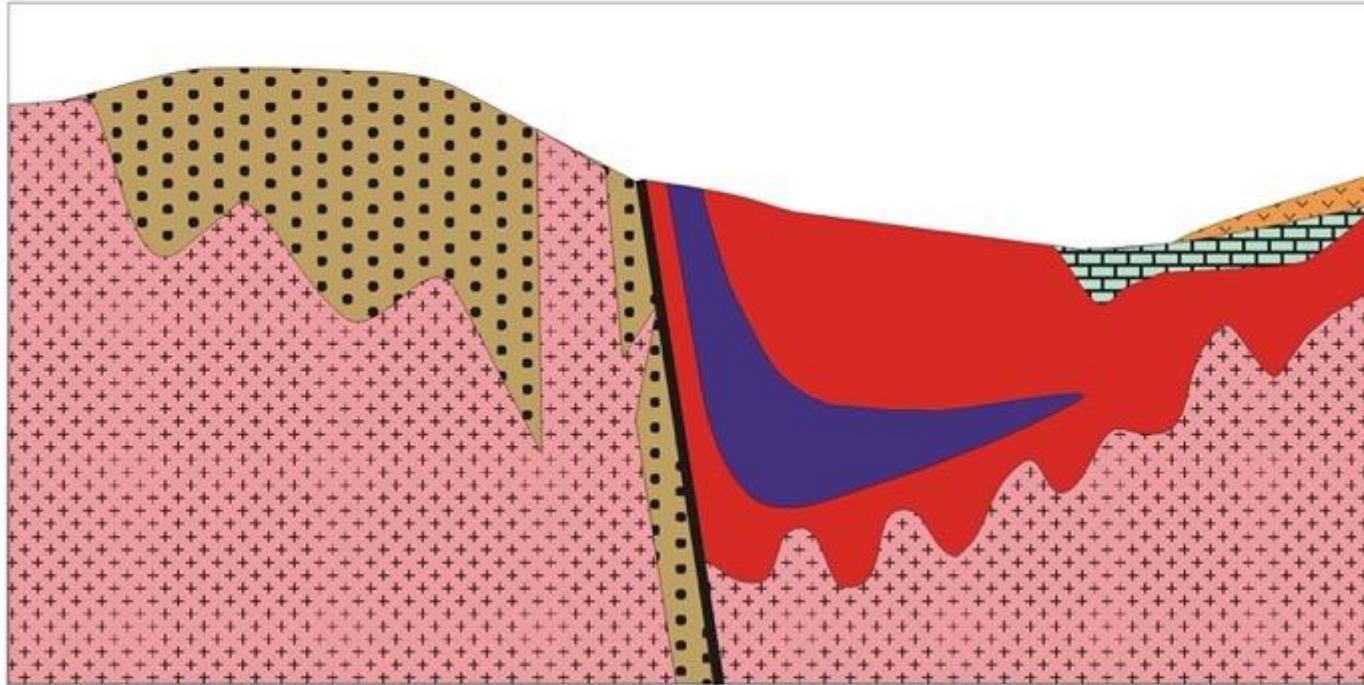








Kara mine

- Complex skarn assemblages with Be, B, W, Cu, Pb, Mn minerals etc



Schematic cross-section of the Kara 1 deposit, looking north.



-  Cainozoic basalt and sediments
-  Devonian granite
-  Magnetite-scheelite ore
-  Skarn
-  Ordovician Limestone
-  Ordovician sandstone and conglomerate

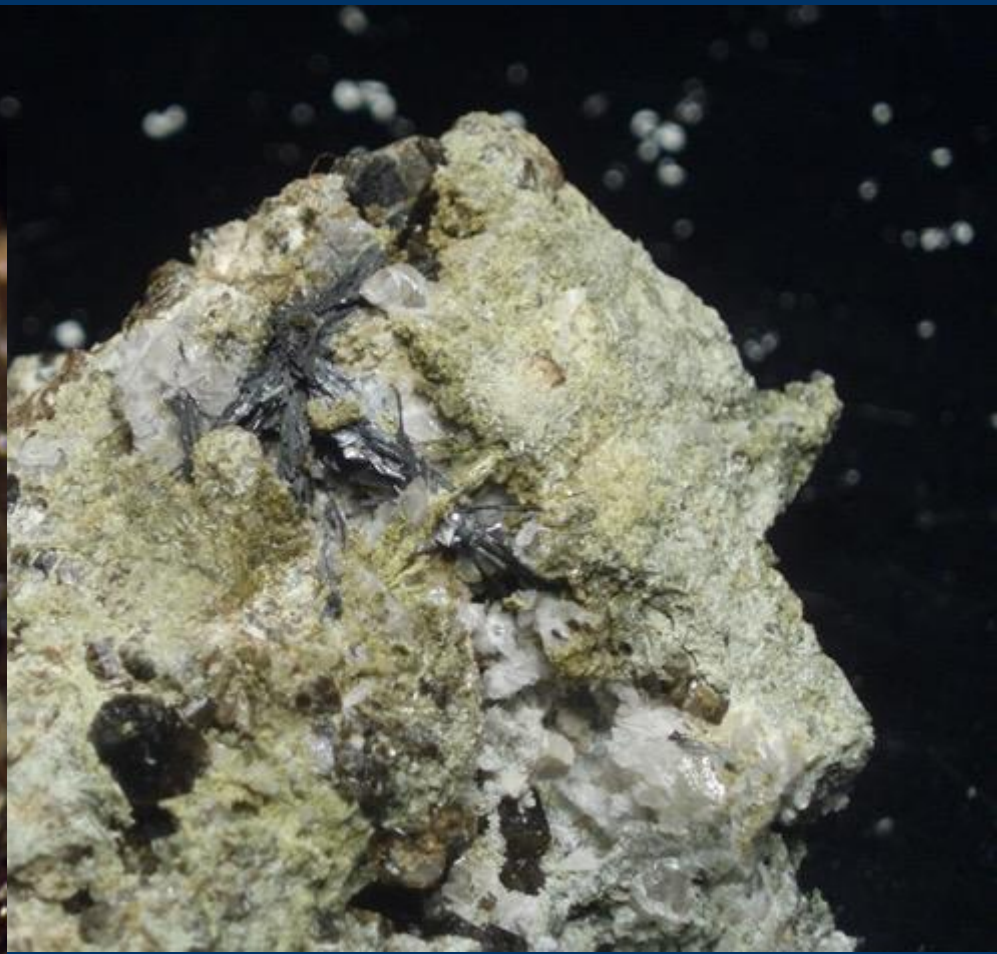
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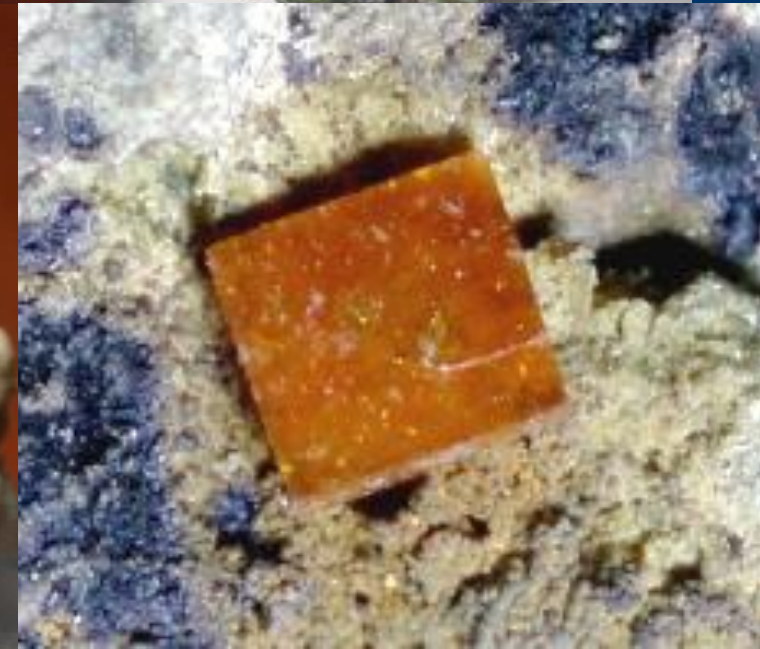
 Fault

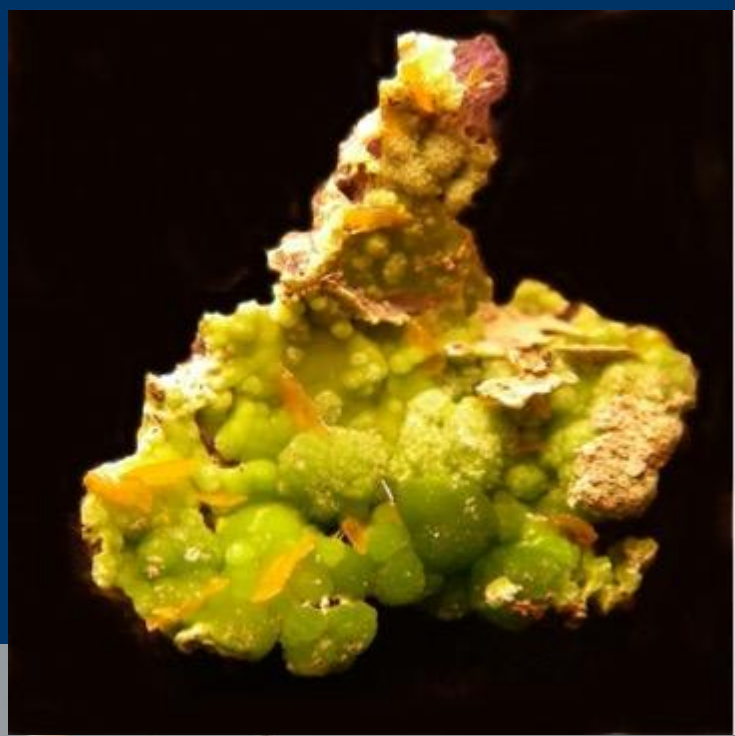




Primary sulphides: aikinite, sphalerite









Scheelite

Moina



Moina mines



Shepherd and Murphy



- Oakleigh Ck



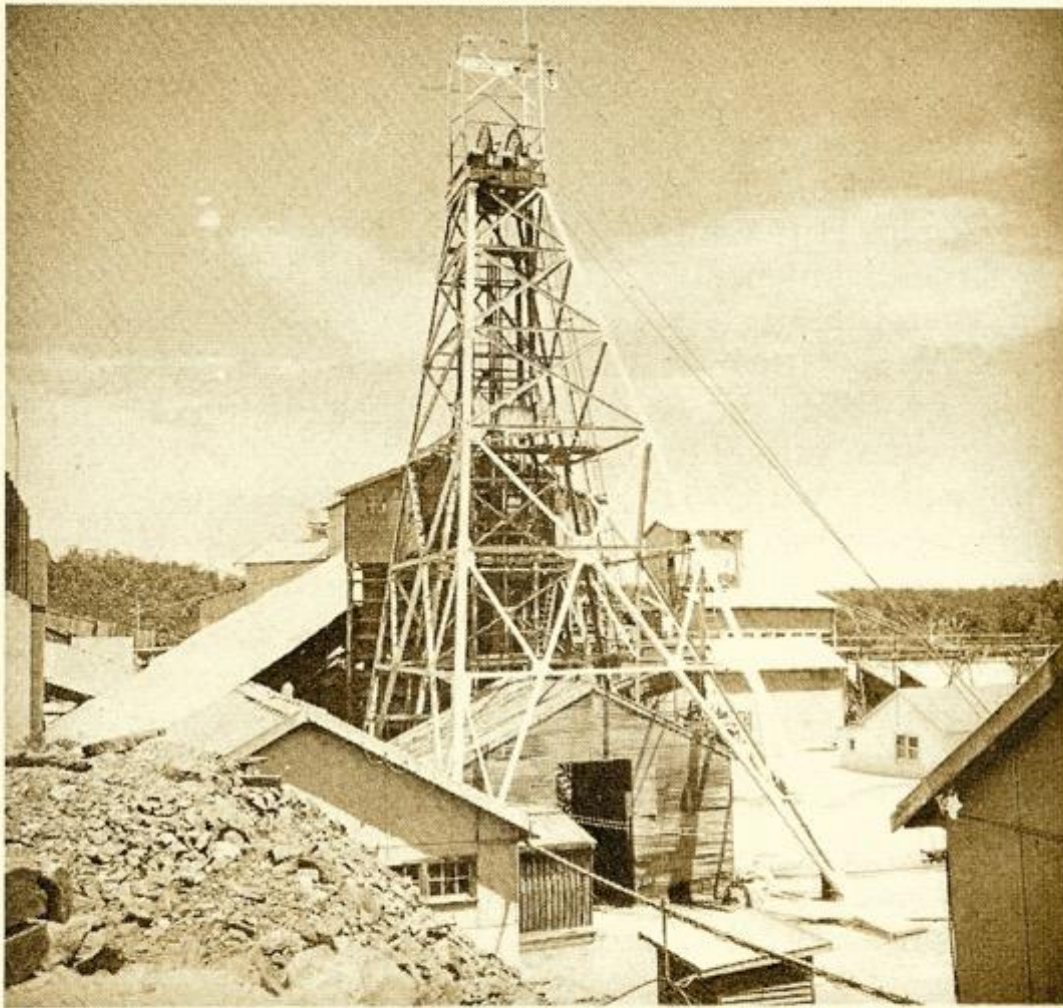


- Oakleigh Ck





Storeys Creek – Rossarden mines



*Figure 3a. The Aberfoyle Mine. Photo by
Roger Cameron.*

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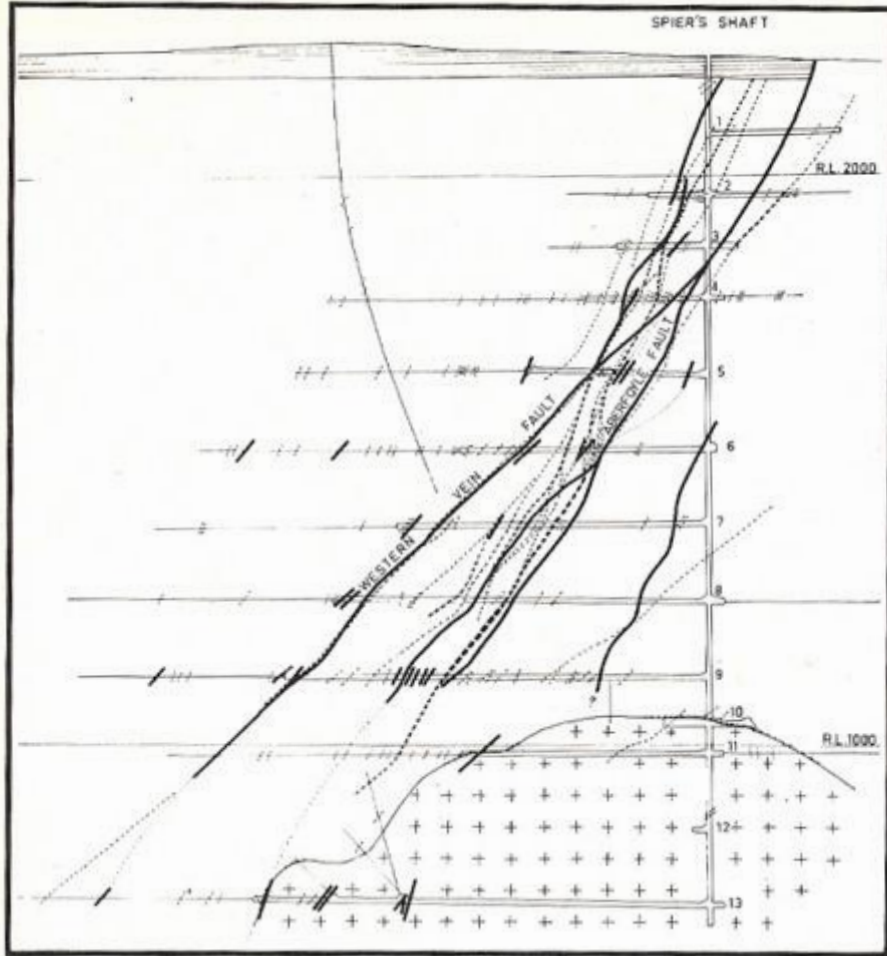


Figure 3. Cross section through the Aberfoyle Mine, looking north, showing relationship between faults and veins (from Kingsbury, 1965).



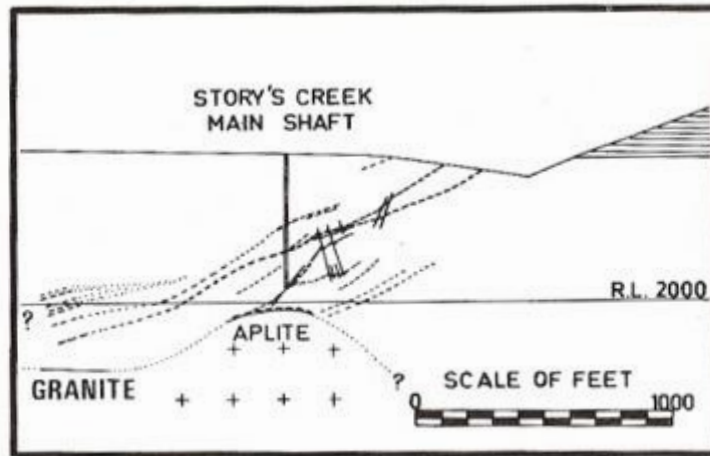
Figure 4. Cross section through the Storey's Creek Mine, looking north west (adapted from Kingsbury, 1965).

STOREY'S CREEK MINE

The mineralisation at the Storey's Creek Mine occurs in a slightly different mode to that in the Aberfoyle Mine.

The veins also occur in Mathinna group sediments but follow the general northwest trend of the sediments. They appear to occupy marginal low-angle thrusts and joints around the Devonian Ben Lomond Granite. The veins have a complex horsetail structure and many coalesce with depth, being about 2 m thick on the eight level and over 3 m wide on the 12 level. The vein system dips at about 30° to the south-west (Figure 4).

There is some suggestion that the mineralisation is zoned as in the Aberfoyle Mine, the proportion of wolfram increasing with depth. As in the Aberfoyle Mine the veins become barren as they approach an aplite cupola below the 12 level.











Secondary minerals:
Cuprotungstite, kankite



Rossarden
cassiterite, scheelite

