



Tapanappa Project

Review of Curtin Heavy Mineral Results

July 2024

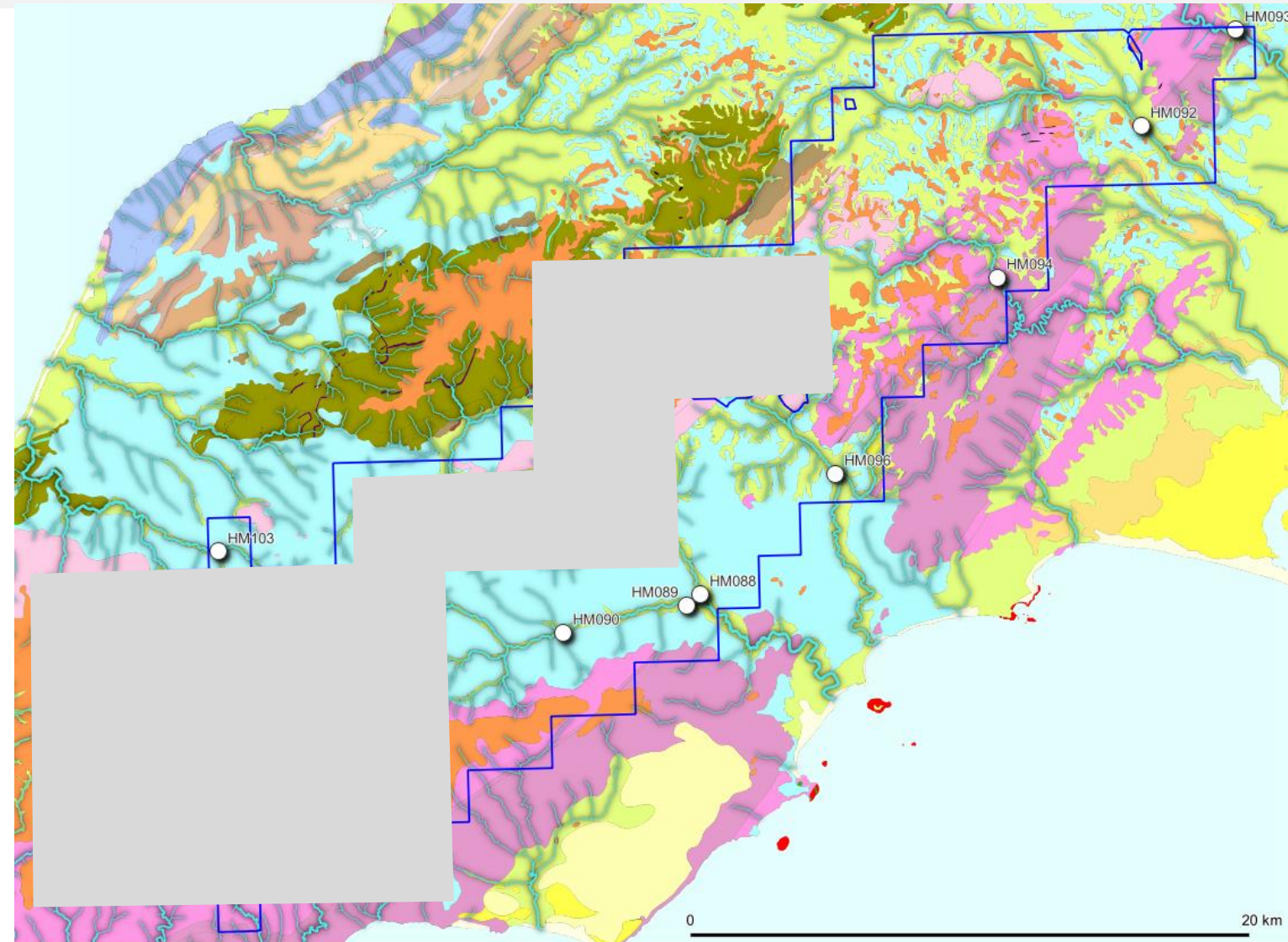


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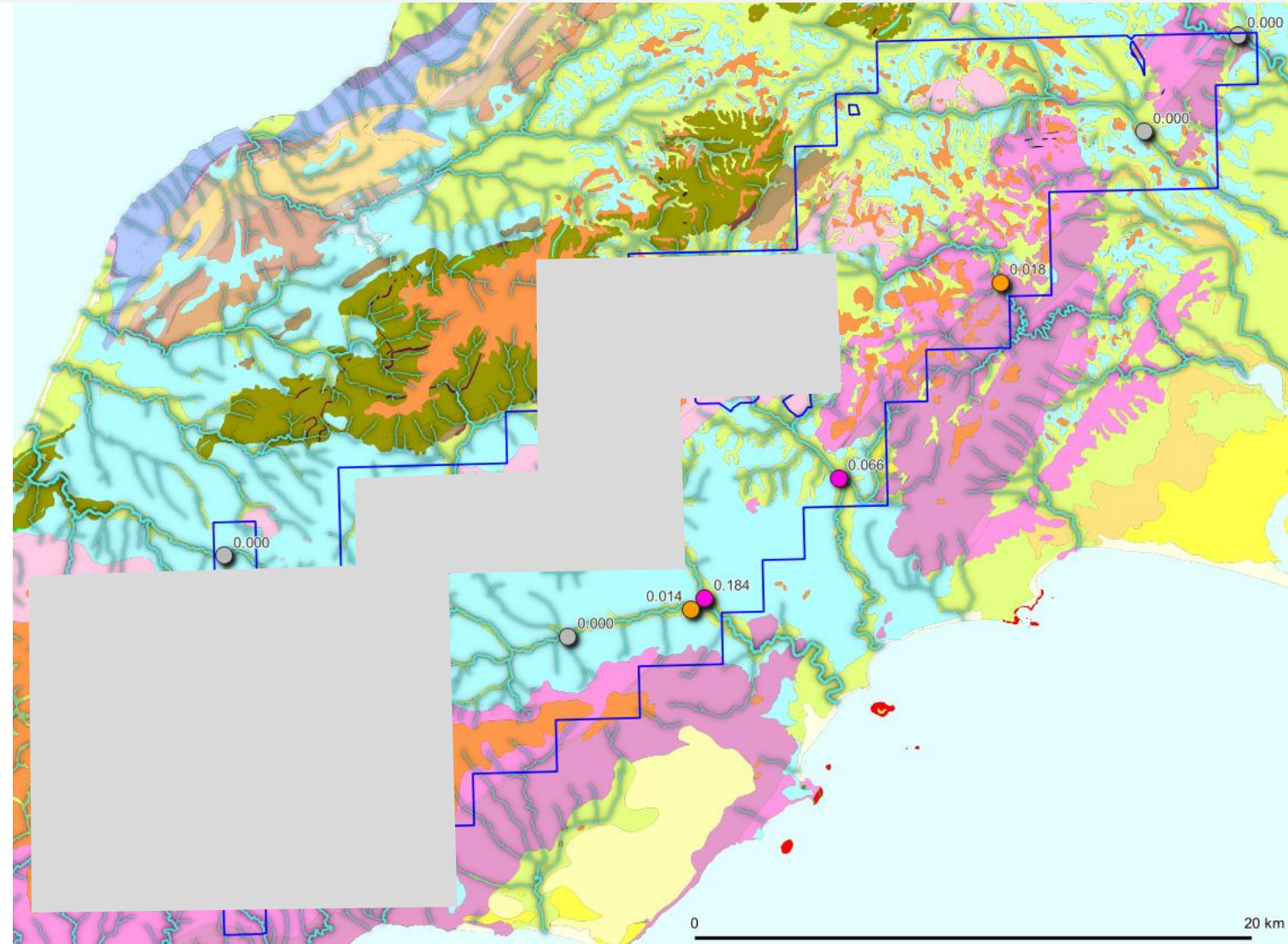
Heavy Mineral Samples

- 17 samples collected across project – 8 within surrendered area.
- Primarily targeting gahnite associated with metamorphosed sediment-hosted zinc deposits following up gahnite anomaly present in Inman River (from GA's HMMA release)
- Geology is dominated by:
 - Cambrian turbiditic meta-sediments (pinks) that host mineralisation
 - Permian glacial till (light blue) cover
 - Tertiary lateritic gravels (orange) cover
 - A small inlier of Paleoproterozoic gneiss (olive)
- Likely gravels and glacial tills have reworked resistive heavy minerals



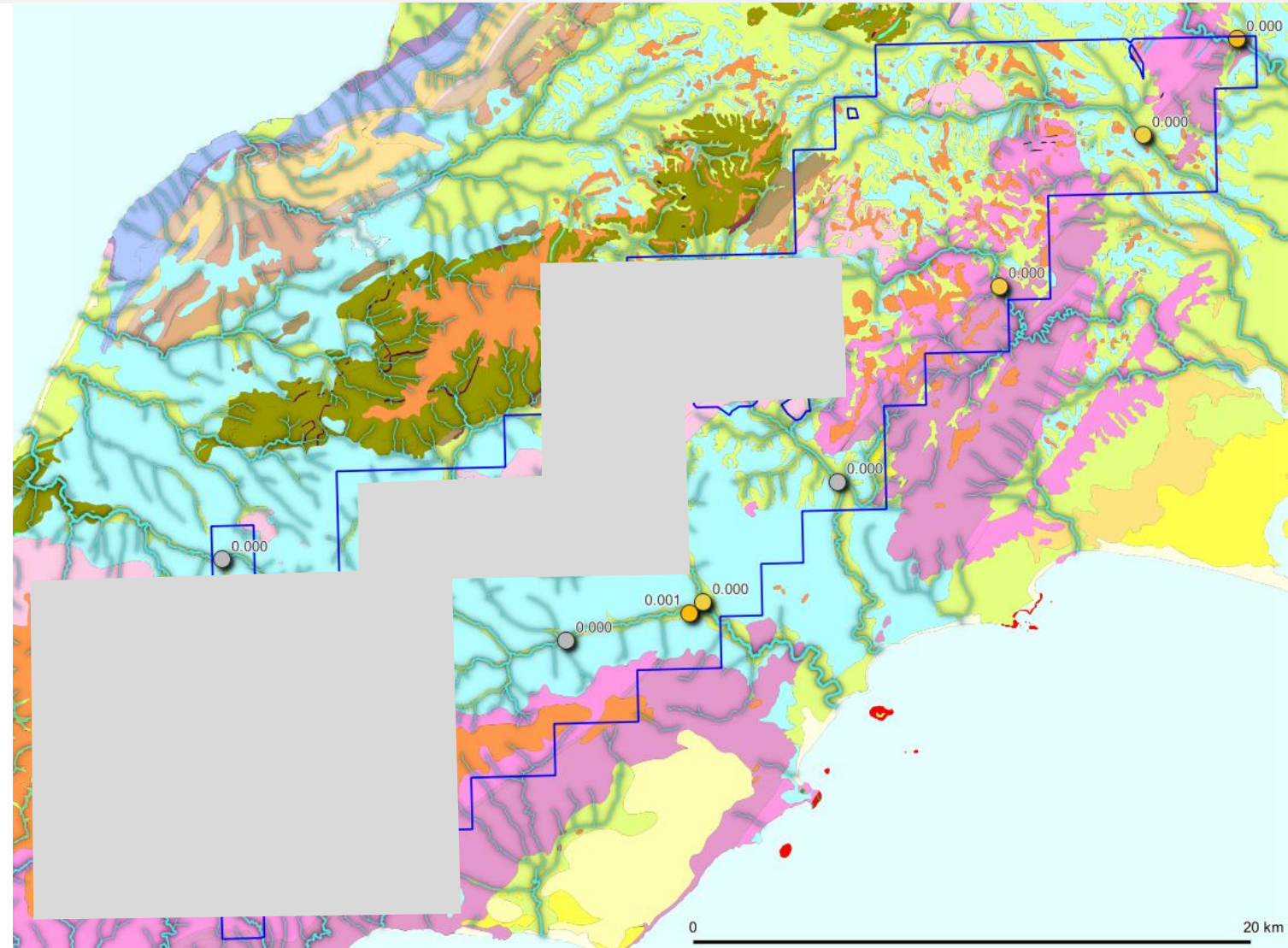
Gahnite

- Targeted horizon for zinc mineralisation with associated gahnite alteration is through middle of tenure
- Grains of gahnite are quite low with 4 grains in best sample (HM094)
- Gahnite appears to be associated with Permian glacial sediments (light blue)
 - Gahnite is probably been reworked in glacial sediments and could be originally sourced 10s of km away



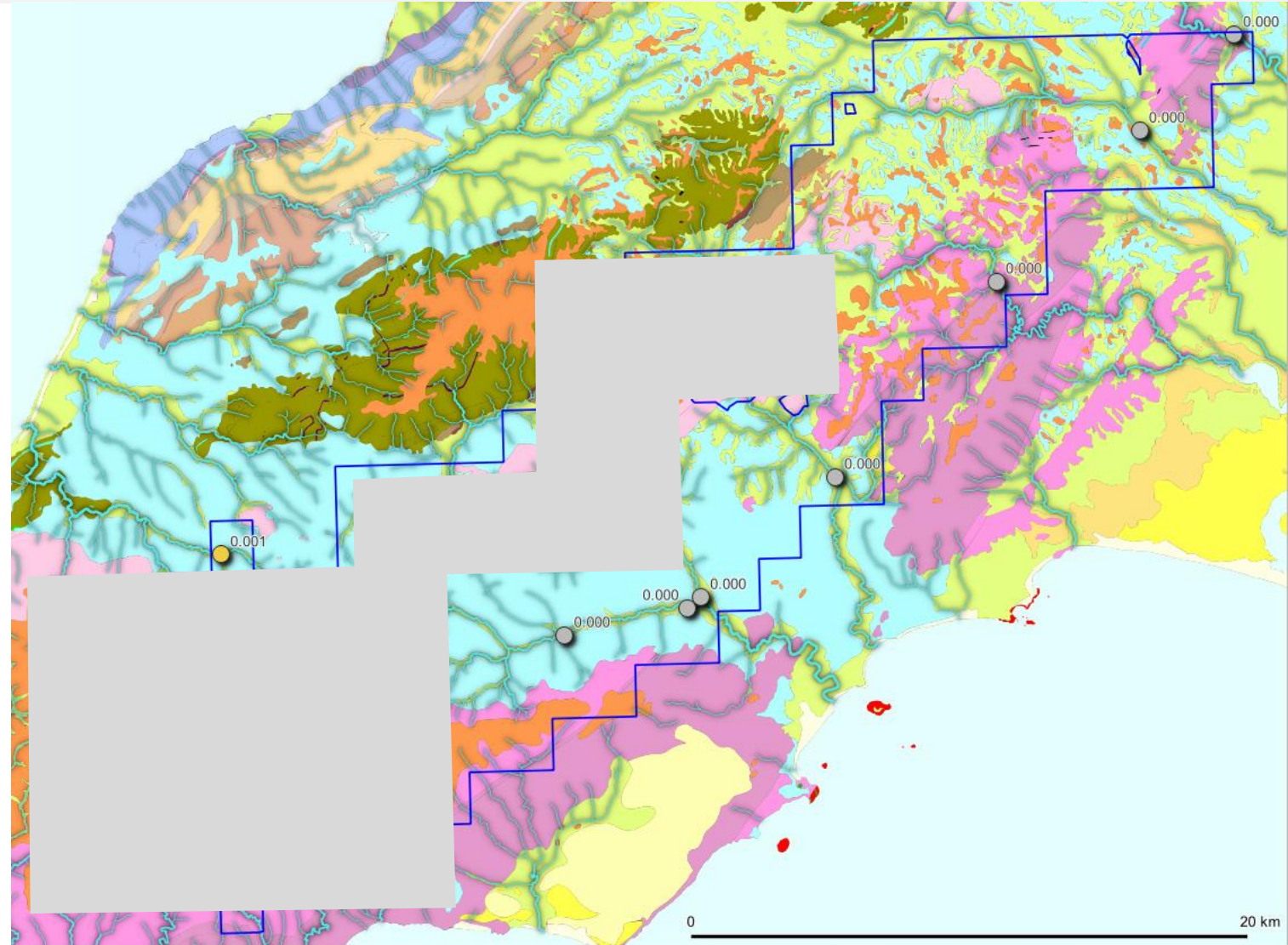
Hercynite

- Hercynite (Fe spinel) limited within samples in surrendered area.



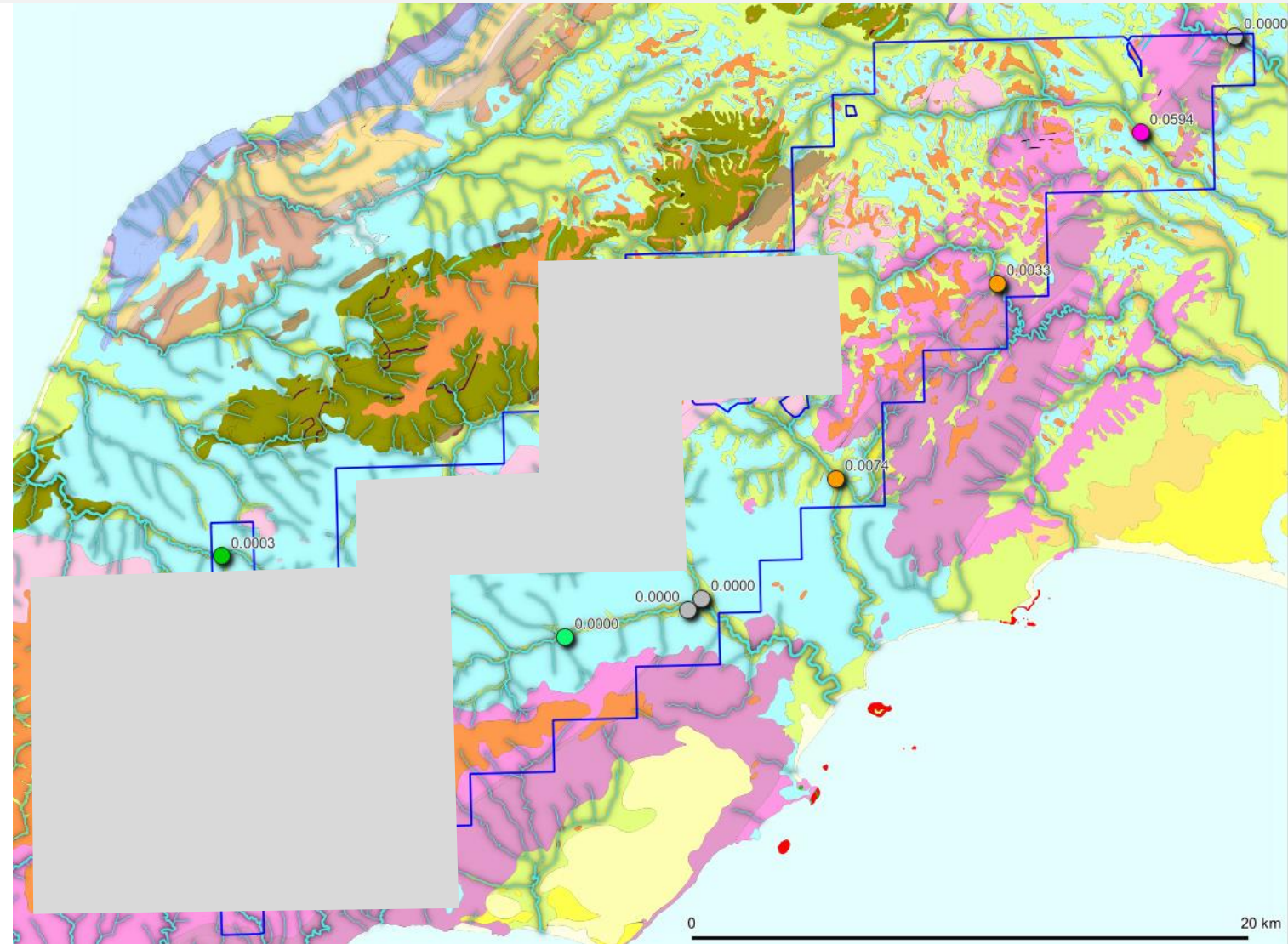
Tonqxinite

- Tonqxinite (Cu_2Zn) limited within samples in surrendered area.



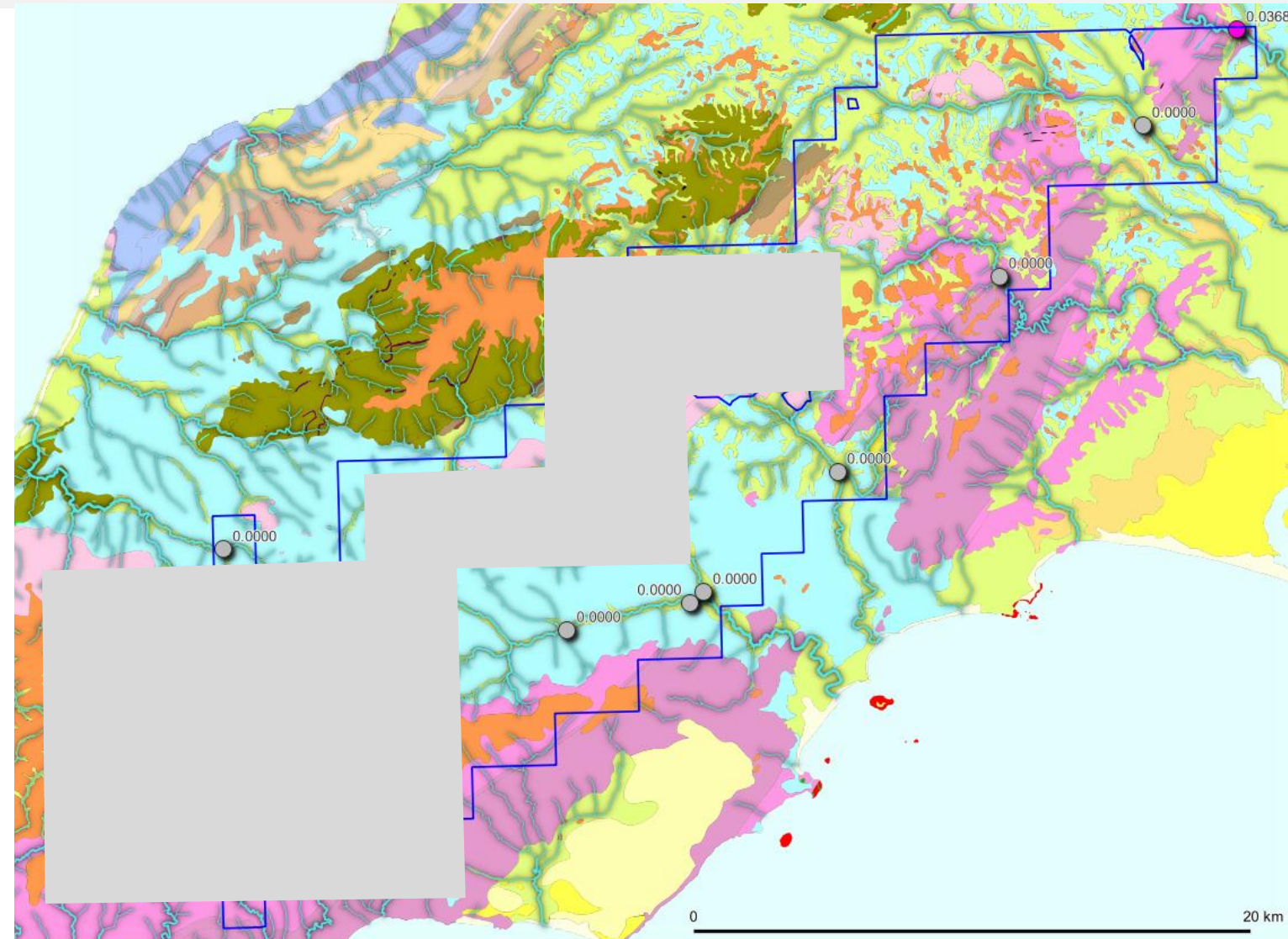
Cassiterite

- Cassiterite highest in NE - possibly sourced from:
 - Paleoproterozoic basement at head of drainage
 - Some pegmatites are mapped in area to west



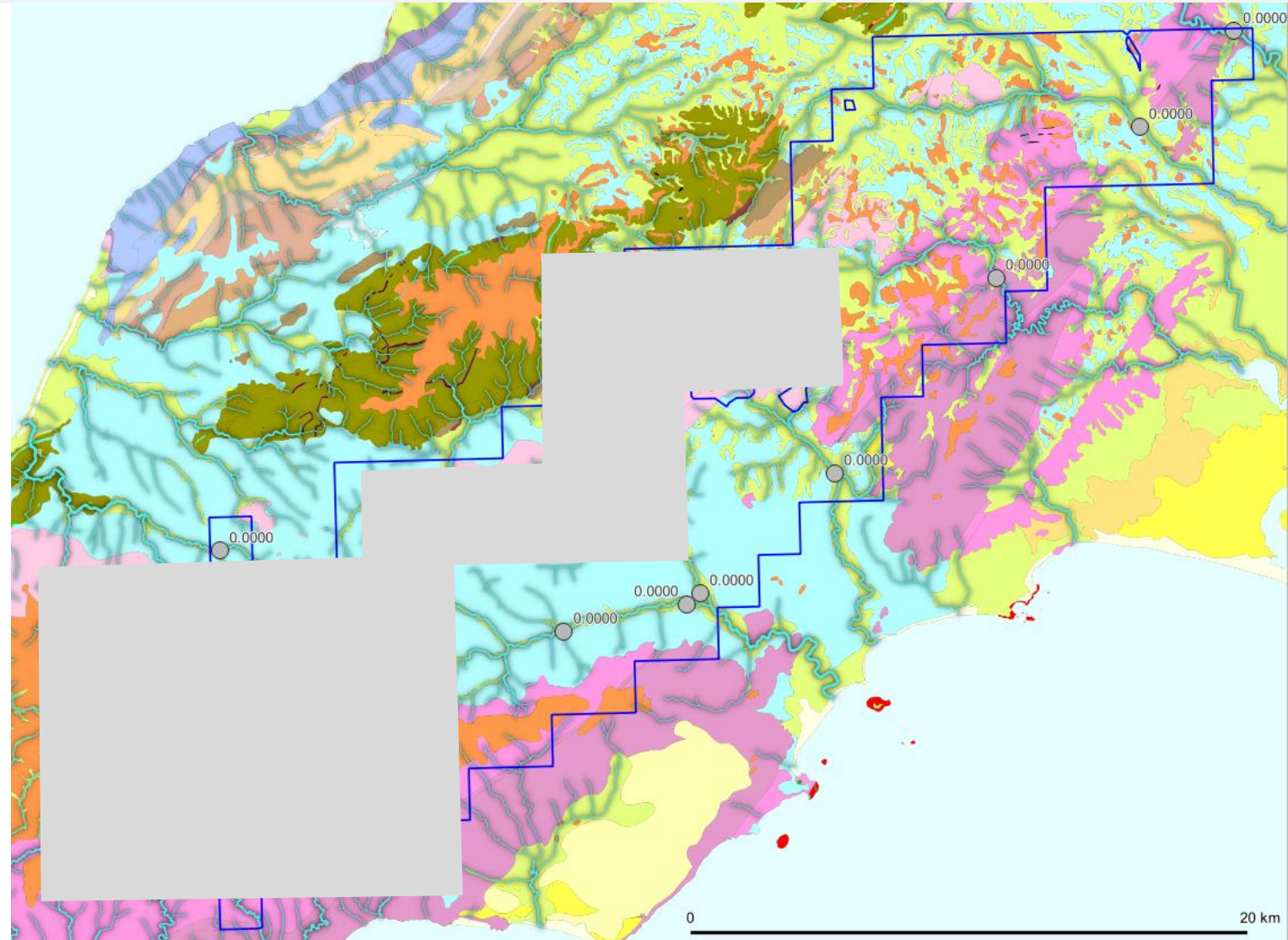
Ferberite

- Ferberite (FeWO_4) is highest in drainage in NE
 - Only 1 grain recorded
 - This drainage is fairly large from multiple geological domains



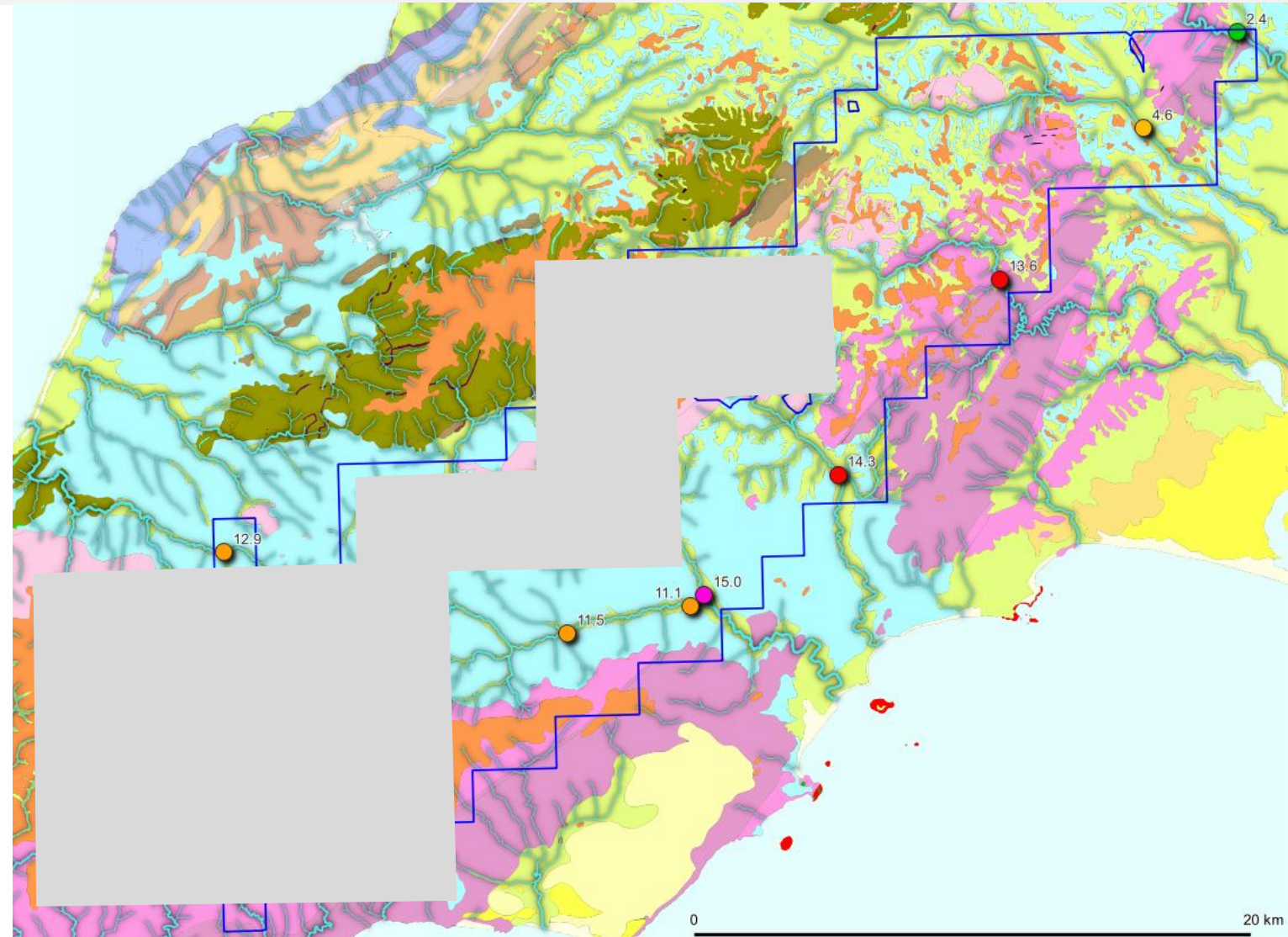
Ilmenorutile

- Ilmenorutile (Nb rutile) none within samples in surrendered area.



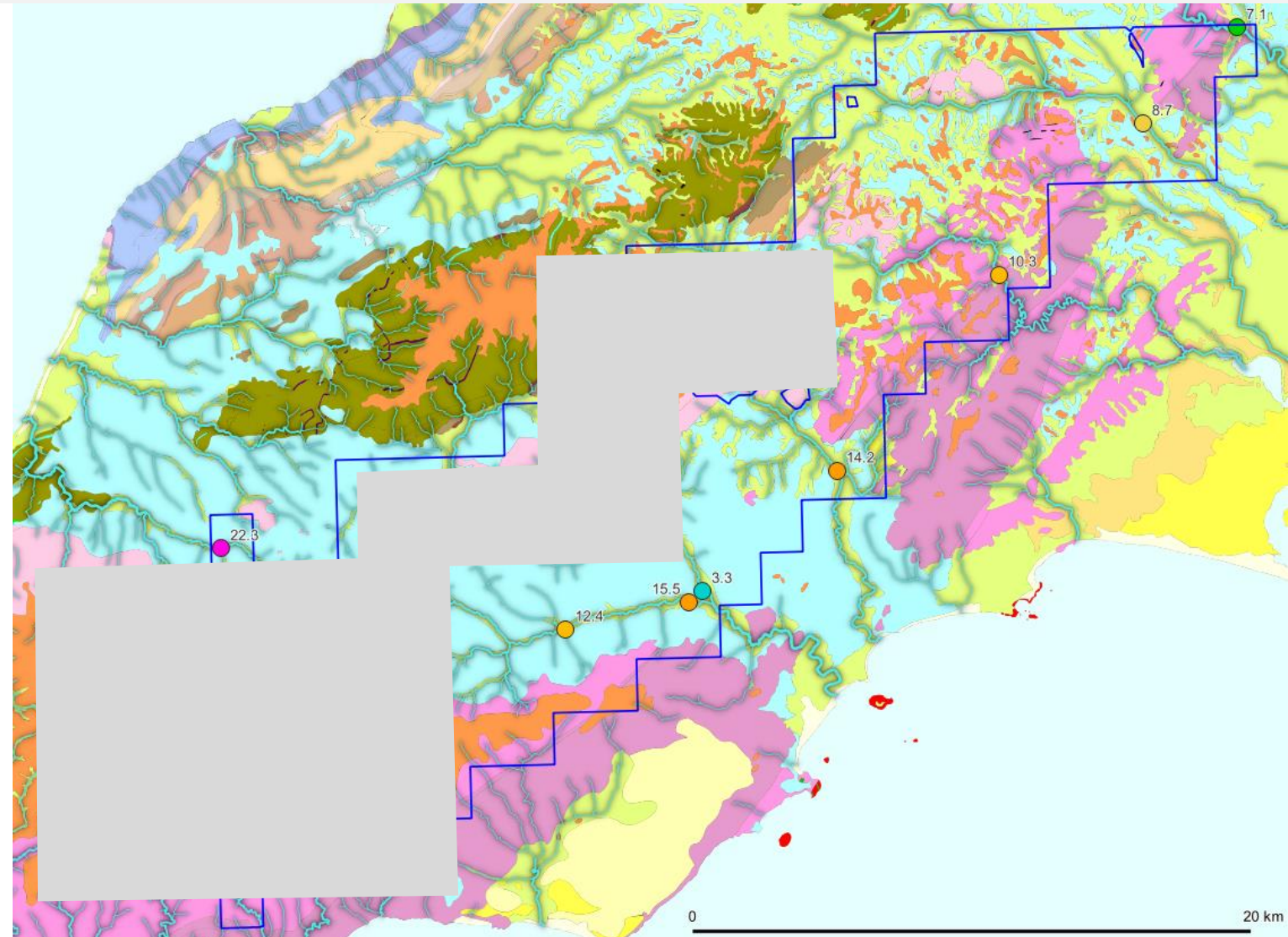
Garnet

- Garnet is a common alteration mineral in metamorphic zinc deposits (primarily spessartine)
- Garnet most common in drainages sourced from Permian glacials (light blue) – likely these garnets are reworked from distal source
 - Supports gahnite are also distally reworked
- Mn was noted in some garnets, indicating spessartine



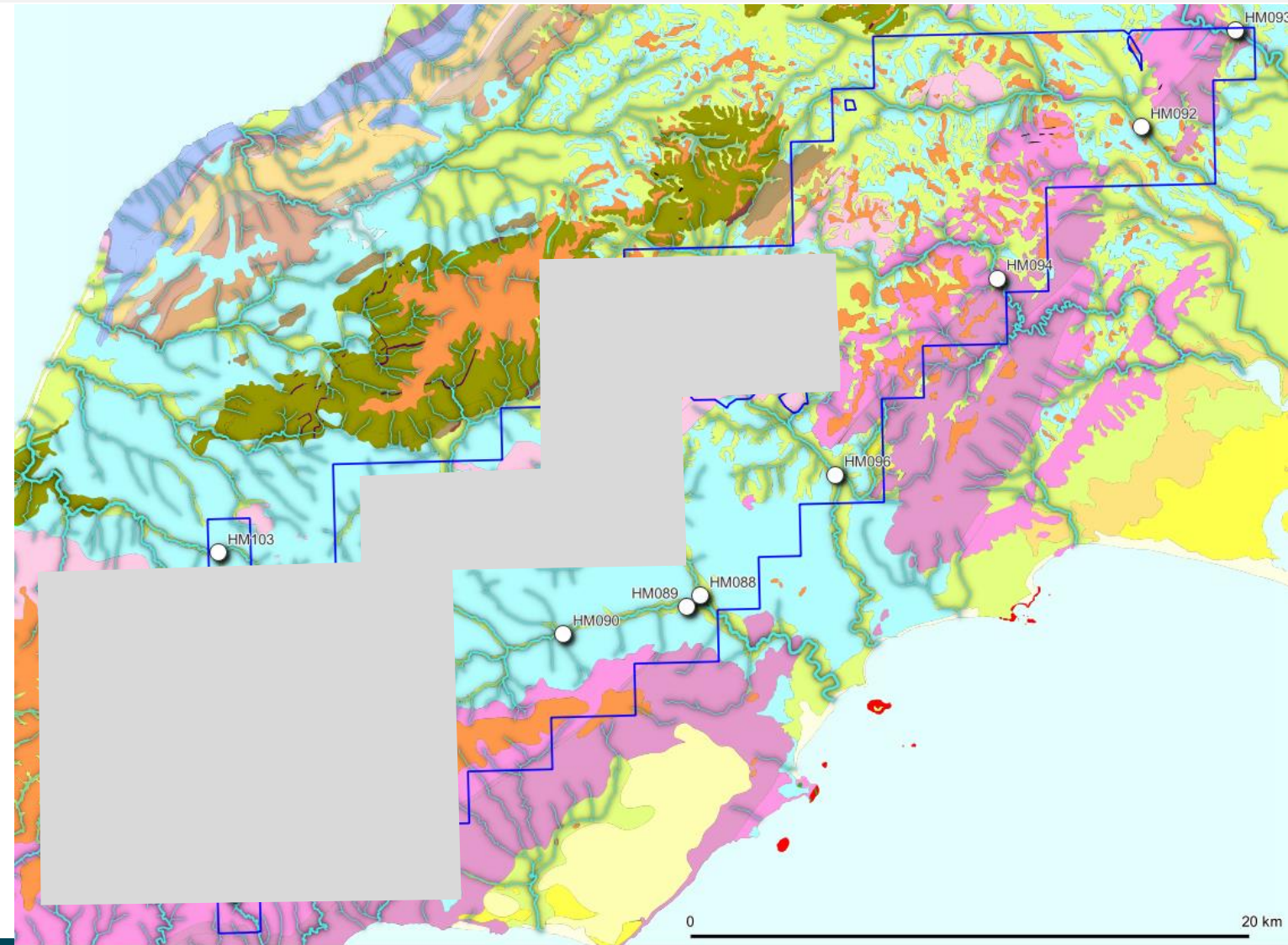
Tourmaline

- General background of tourmaline of 5-15%
- A couple samples in SW are more elevated
- Elbaite occurrences are noted in same rocks to SW on Kangaroo Island – can technique distinguish elbaite from dravite, schorl, etc?



Other

- Sample HM093 is high in muscovite. 093 has large catchment with variety of rocks.



Summary

- Likely the Inman River gahnite anomaly identified by the GA HMMA map is sourced from reworked gahnites in glacial till, possibly originally from the Angas mine area

