MIM Exploration Pty Ltd

Technical Memorandum 1997/005

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Date : April 30th, 1997 (Figures added from original workspaces in Oct 2015)
Subject: Groundwater Chemistry

Plots of Drillhole Groundwater Assays: Ernest Henry Area

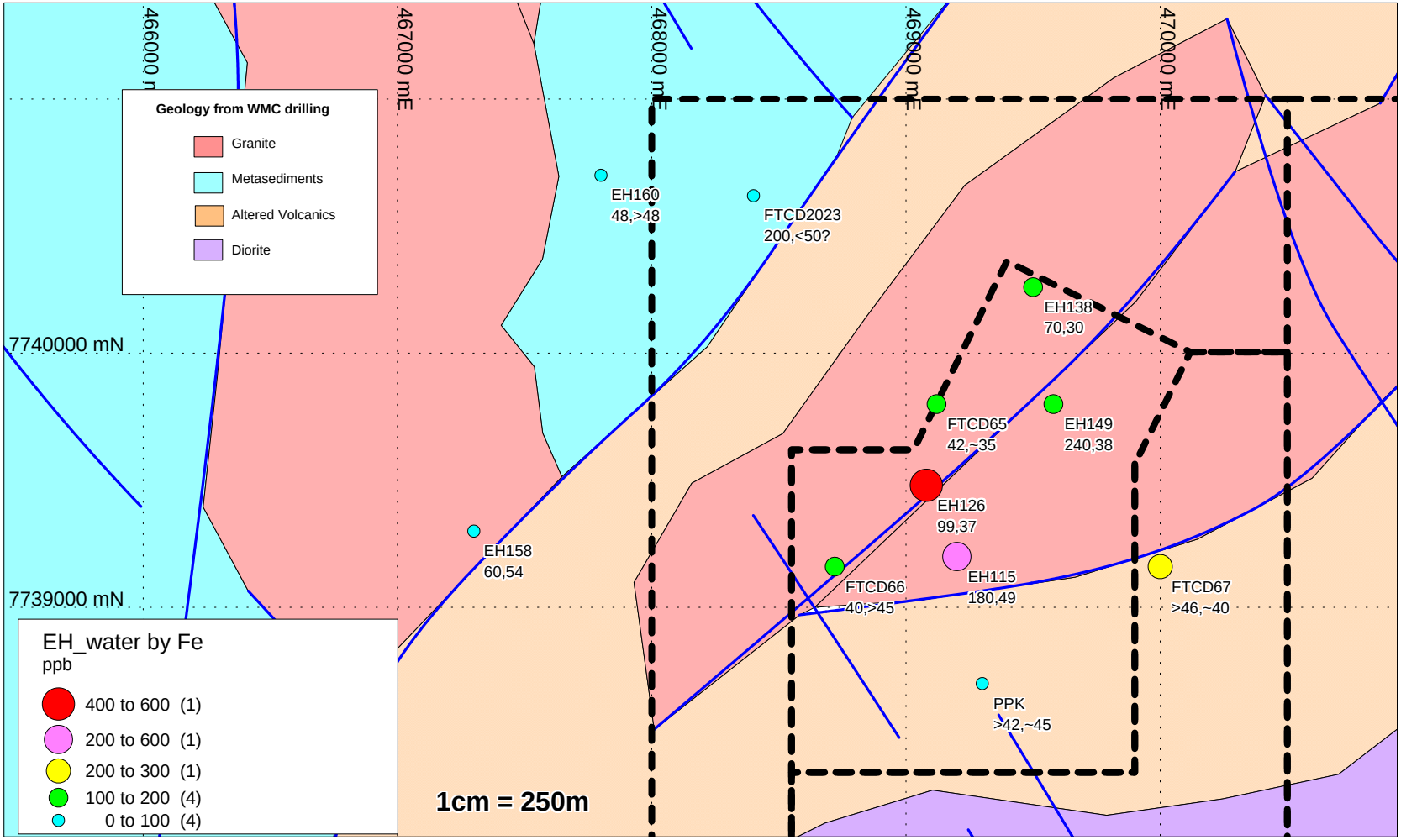
This memorandum complements a previous evaluation of groundwater chemistry as a vector to the Ernest Henry Cu-Au deposit (Tech Memo 1994/016). Since then, the analyses of water acquired by Western Mining Corp. during the drilling programme of the Mount Fort Constantine Joint Venture have been made available to us. The plots of this report are intended to provide a summary of the Ernest Henry data for rapid comparison with the new district data, as well as a spatial context for the main conclusions and recommendations of the 1994 survey.

A list of selected observations from the plots follows:

1. Fe and Ba display reasonably coherent concentration gradients centred on the Ernest Henry supergene resource.
2. Mo and As levels are elevated in groundwater sampled directly above the supergene resource, but drop to background levels in samples less than 400m beyond.
3. A groundwater anomaly in the combined and weighted components, Ba, Fe, As and Mo appears to extend more than 1000m beyond the supergene resource.
4. Groundwater Cu values are possibly controlled by rock Cu levels in the immediate vicinity of each drillhole. For example, the deep hole, FTCD2023, is situated beyond the Fe-Ba 'anomaly', but transects Proterozoic rocks with patchy copper mineralisation. A discernible Cu response, relative to Ba, Fe, As and Mo, is noted.
5. All water samples from drill holes that penetrate a significant interval of the Proterozoic basement have elevated W levels. W is therefore difficult to relate to mineralisation.

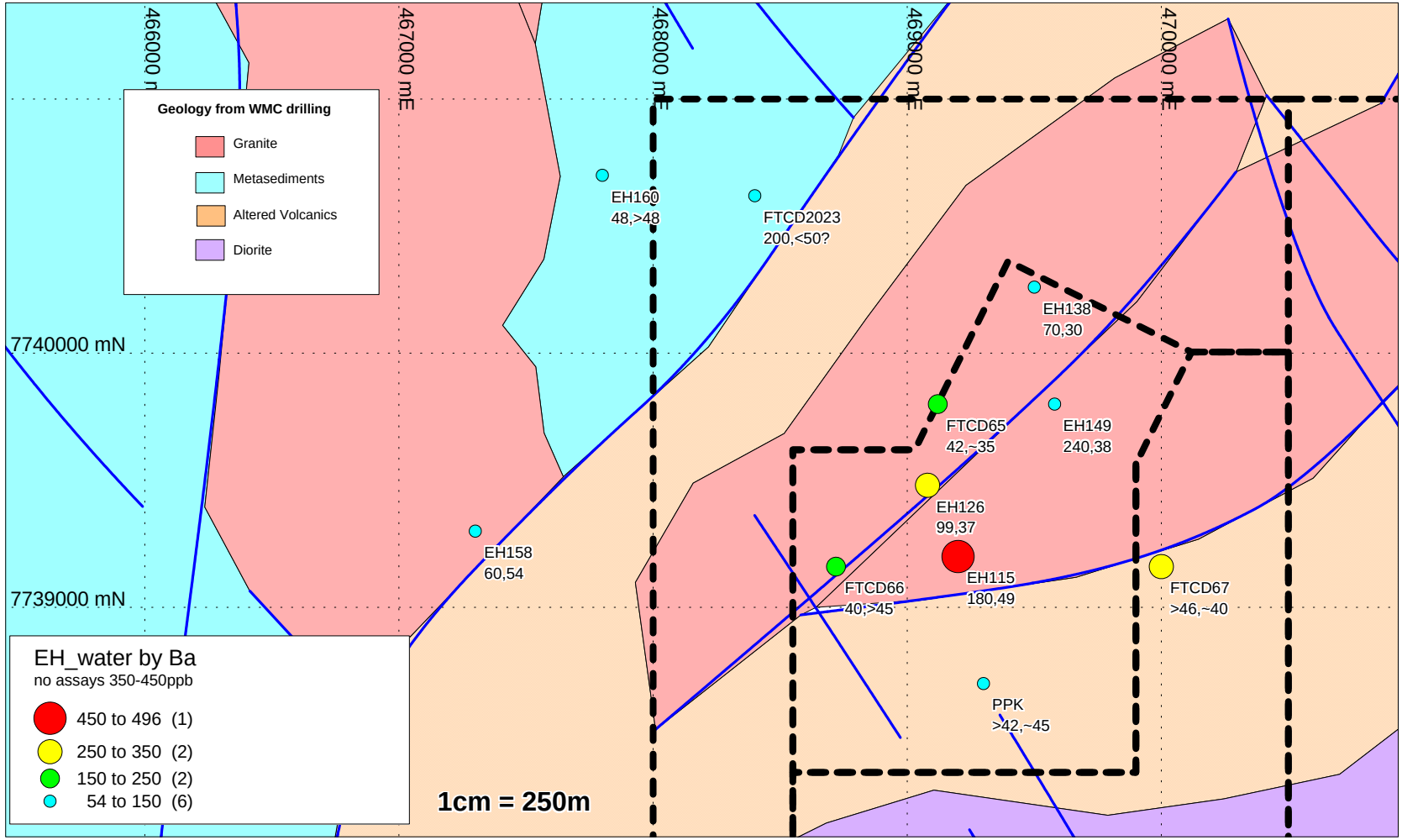
Evidently, groundwater in the vicinity of the unconformity near Ernest Henry has elevated abundances of several metals which also feature in the deposit's paragenesis. For example, Ernest Henry is also a magnetite deposit (Fe) with accessory baryte (Ba) and molybdenite (Mo). The Cretaceous and Tertiary alluvium above the deposit also contains zones of elevated As and Mo, probably due to groundwater-assisted dispersion away from the supergene resource (Hannan, 1995). These observations reaffirm the importance of systematic groundwater sampling and analysis as part of our drilling programme for the MFC Joint Venture.

Keith Hannan



Ernest Henry area groundwater assays (1994 data)

hole collars labelled with hole length and distance to Proterozoic basement



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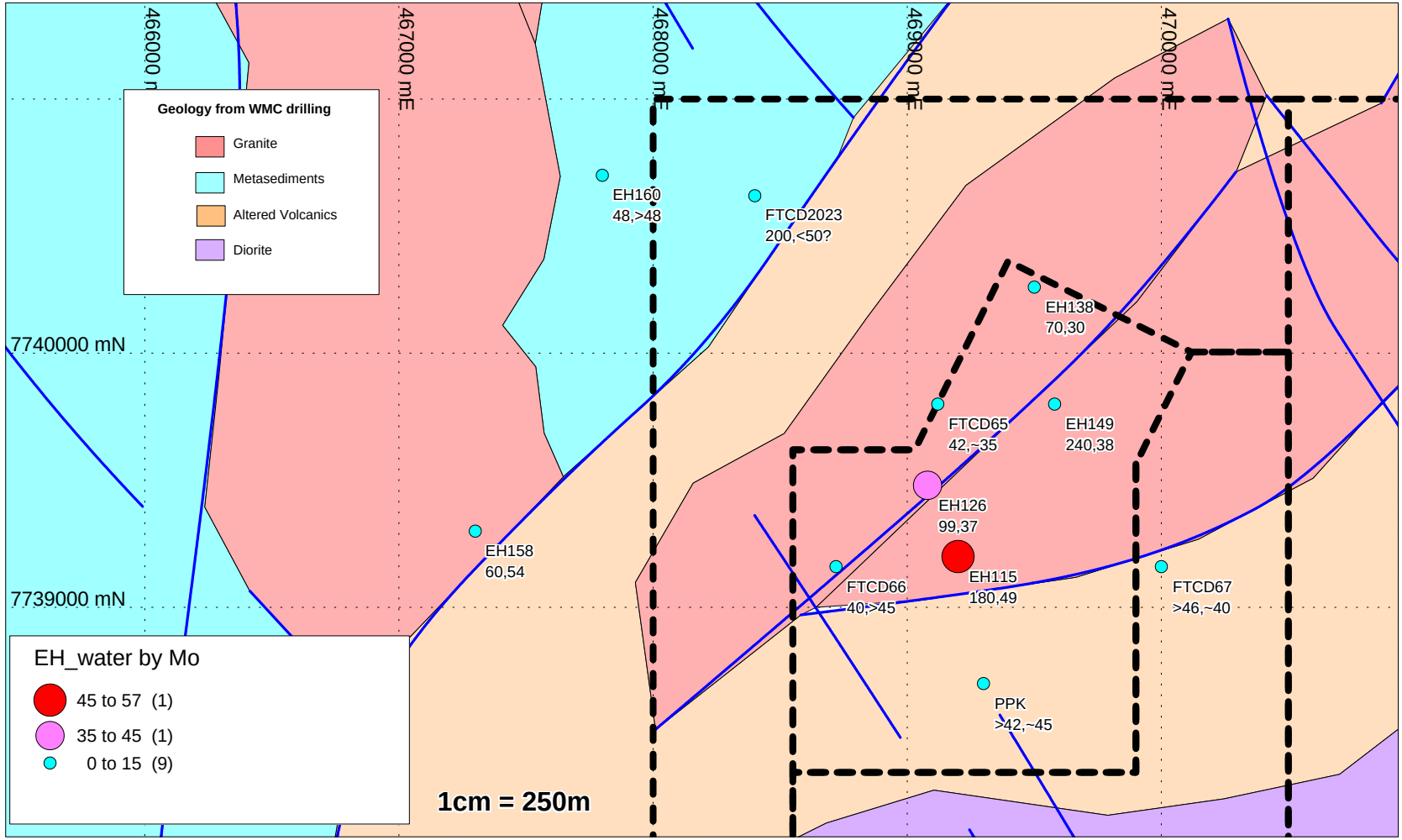

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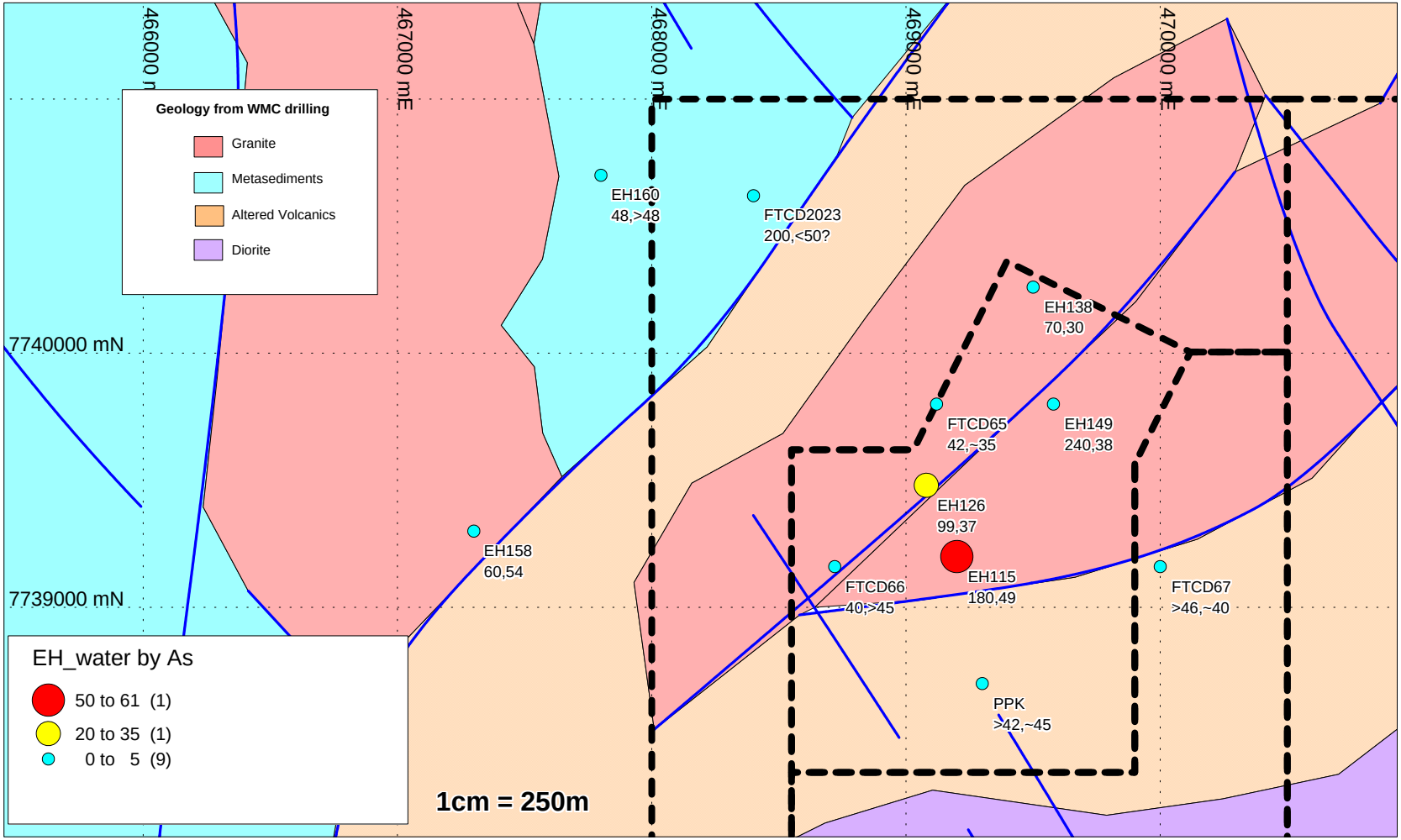
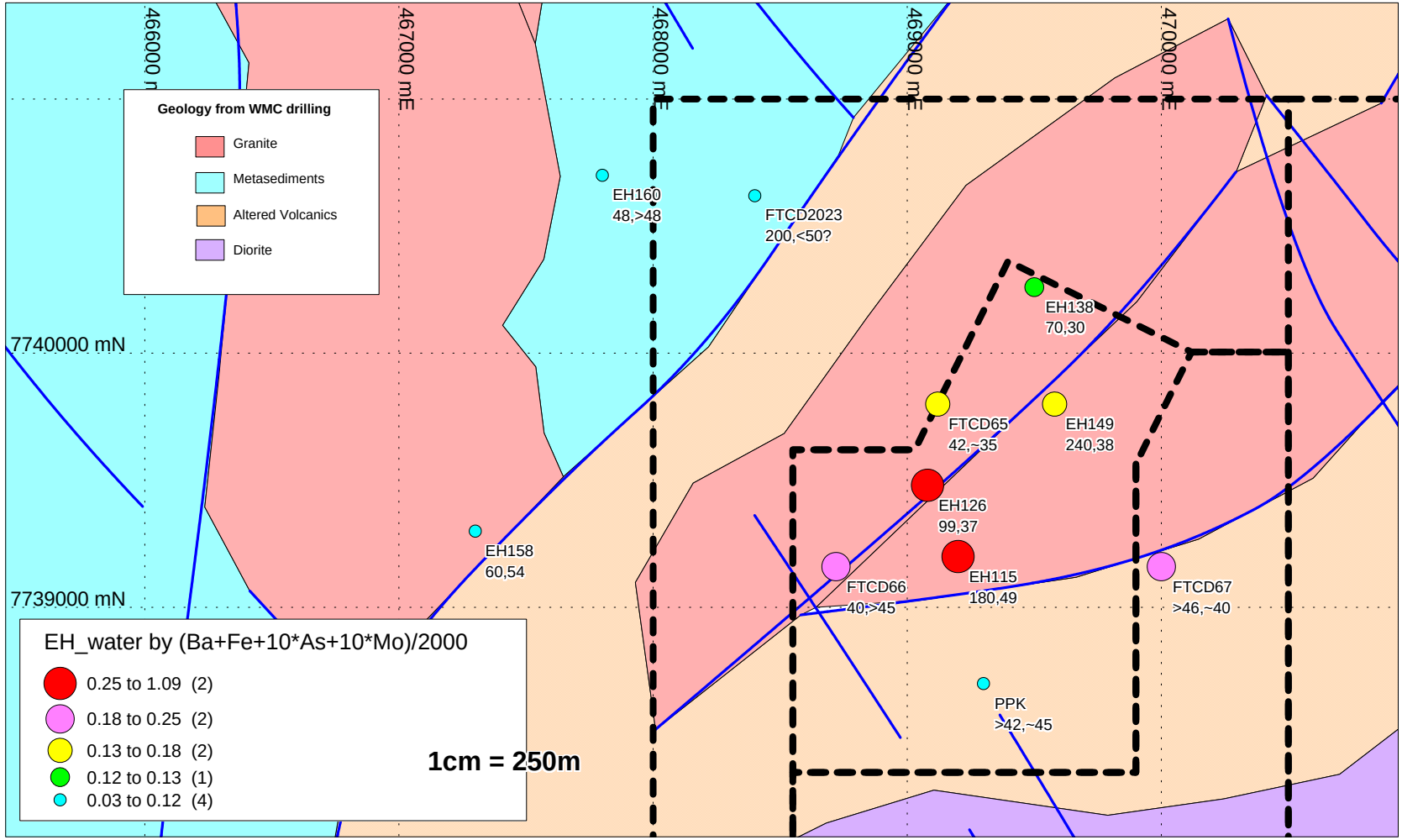


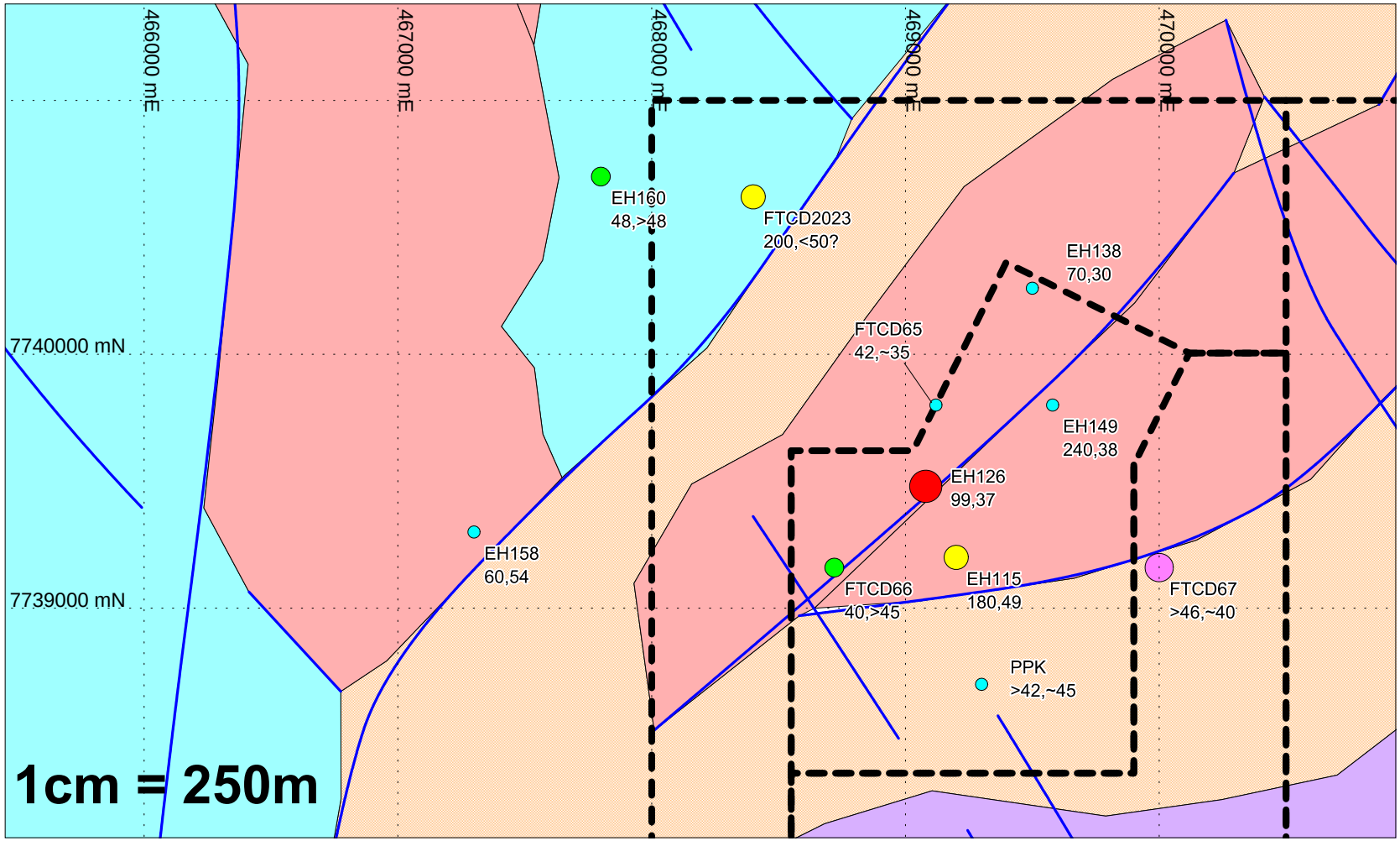
Ernest Henry area groundwater assays (1994 data)

hole collars labelled with hole length and distance to Proterozoic basement



Ernest Henry area groundwater assays (1994 data)

hole collars labelled with hole length and distance to Proterozoic basement



Geology from WMC drilling

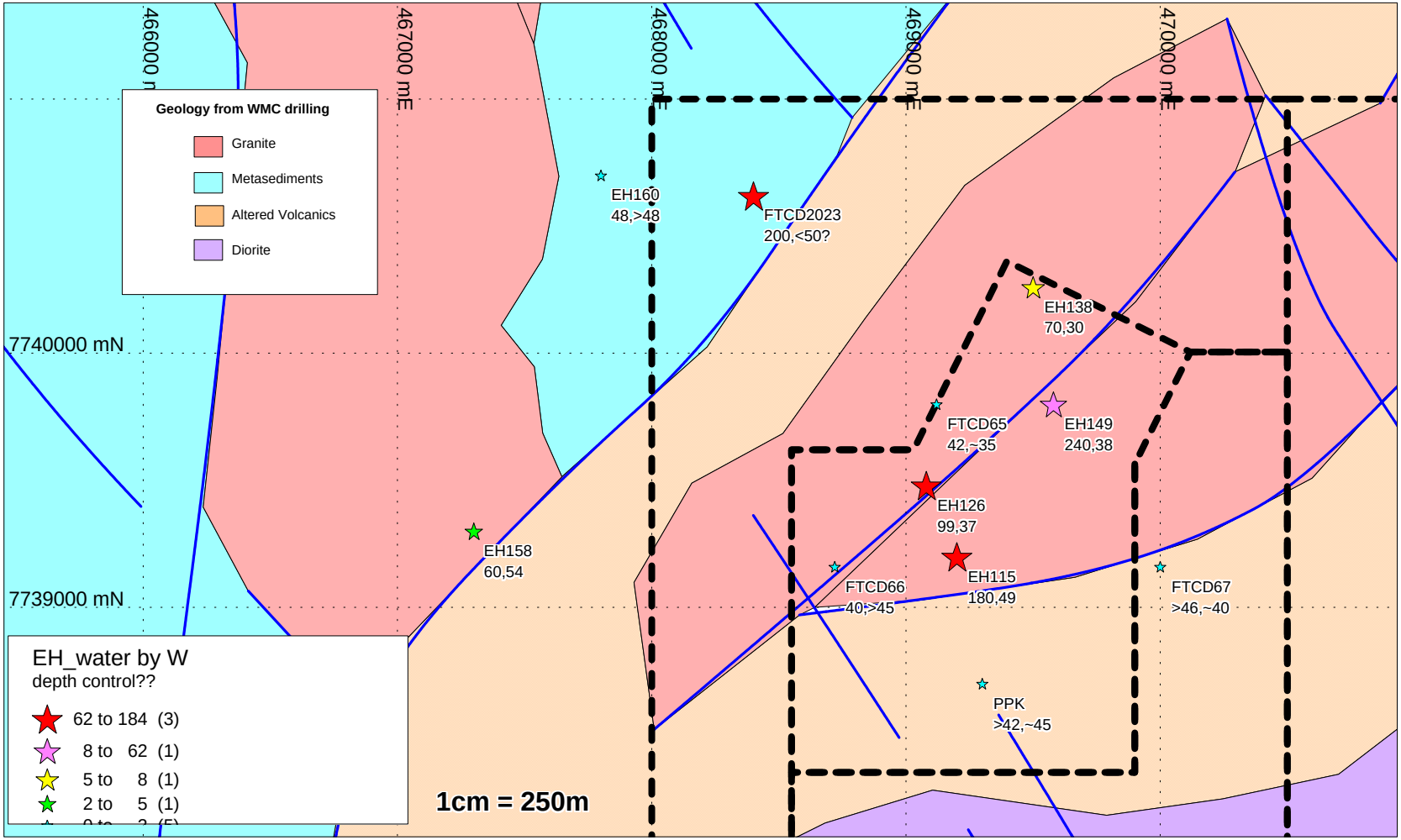
- Granite
- Metasediments
- Altered Volcanics
- Diorite

EH_water_mod by Cu
ppb

- 13 to 13 (1)
- 4 to 13 (1)
- 2 to 4 (2)
- 1 to 2 (2)
- 0 to 1 (5)

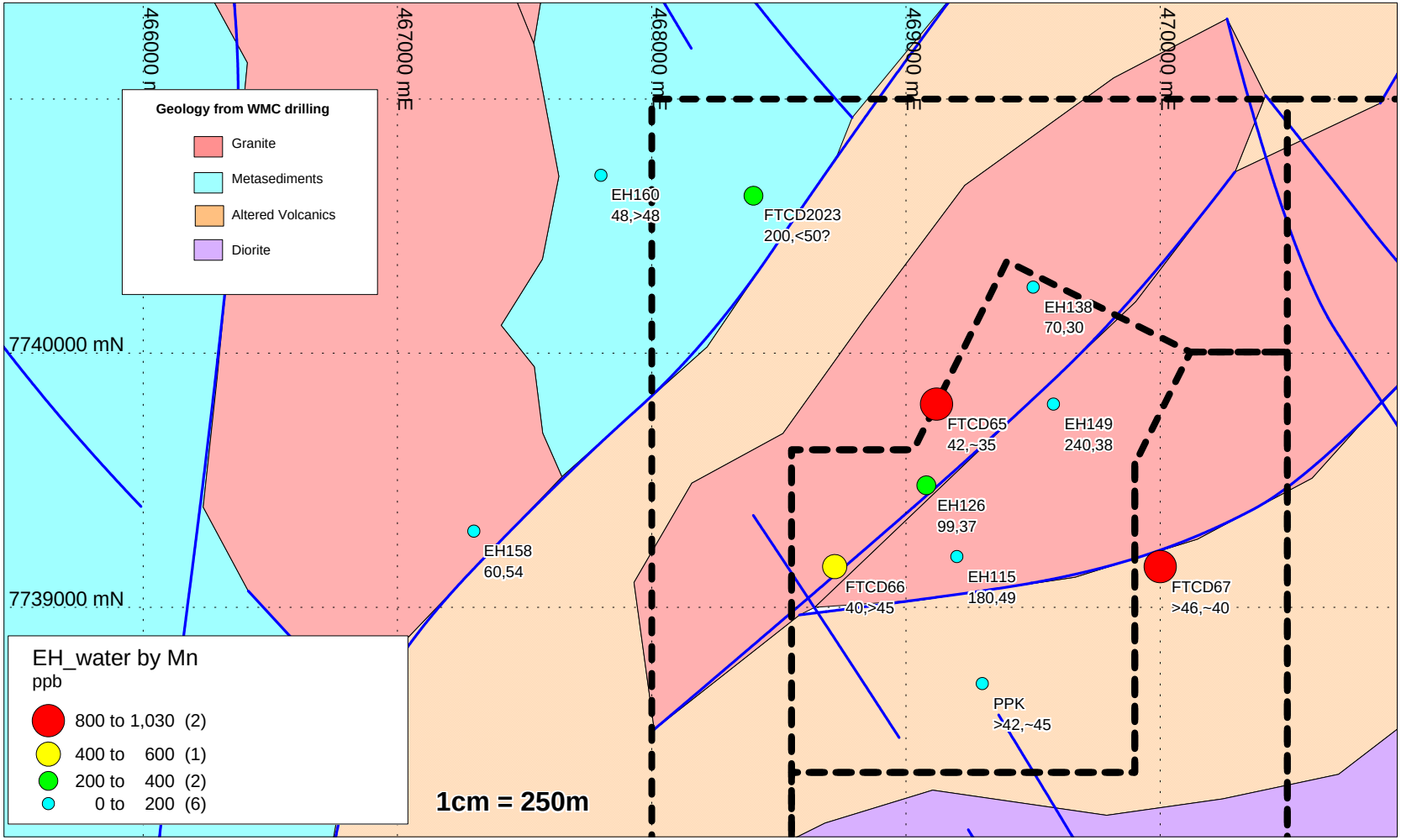
Ernest Henry area groundwater assays

(1994 data, labelled with depth to Proterozoic and hole length)



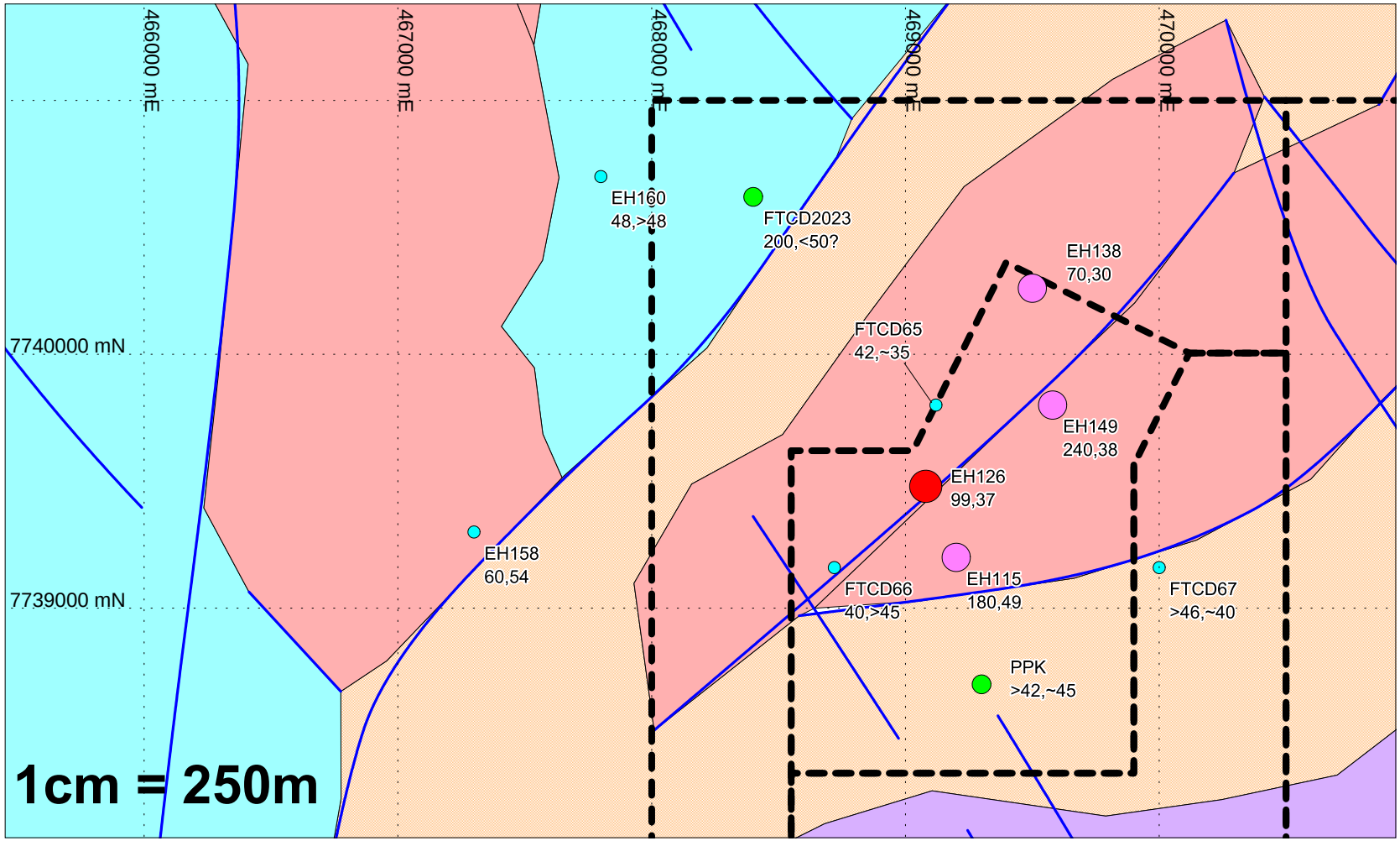
Ernest Henry area groundwater assays (1994 data)

hole collars labelled with hole length and distance to Proterozoic basement



Ernest Henry area groundwater assays (1994 data)

hole collars labelled with hole length and distance to Proterozoic basement



Geology from WMC drilling

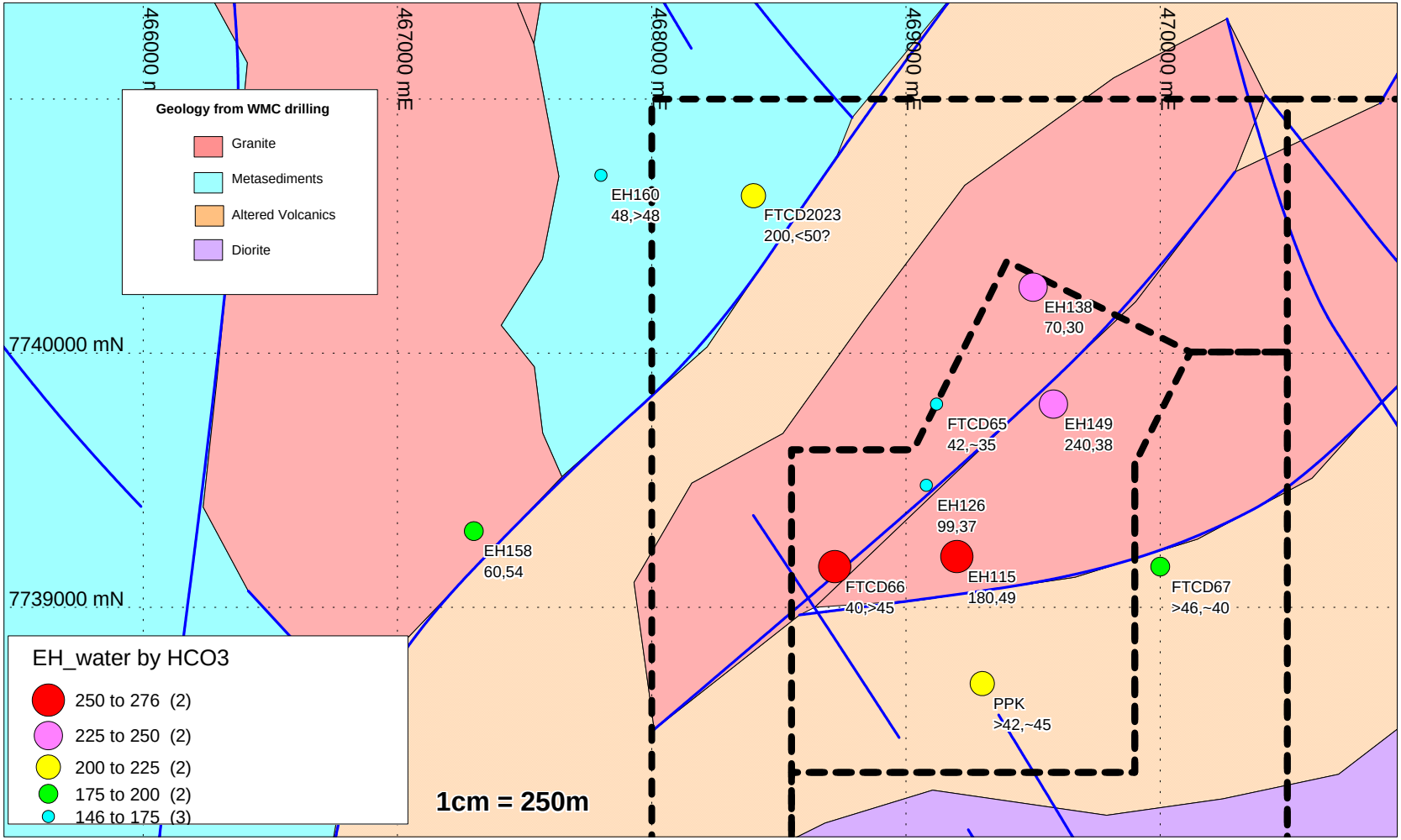
- Granite
- Metasediments
- Altered Volcanics
- Diorite

EH_water_mod by Cl

- 139 to 170 (1)
- 100 to 125 (3)
- 50 to 75 (2)
- 23 to 50 (5)

Ernest Henry area groundwater assays

(1994 data, labelled with hole length and depth to Proterozoic)



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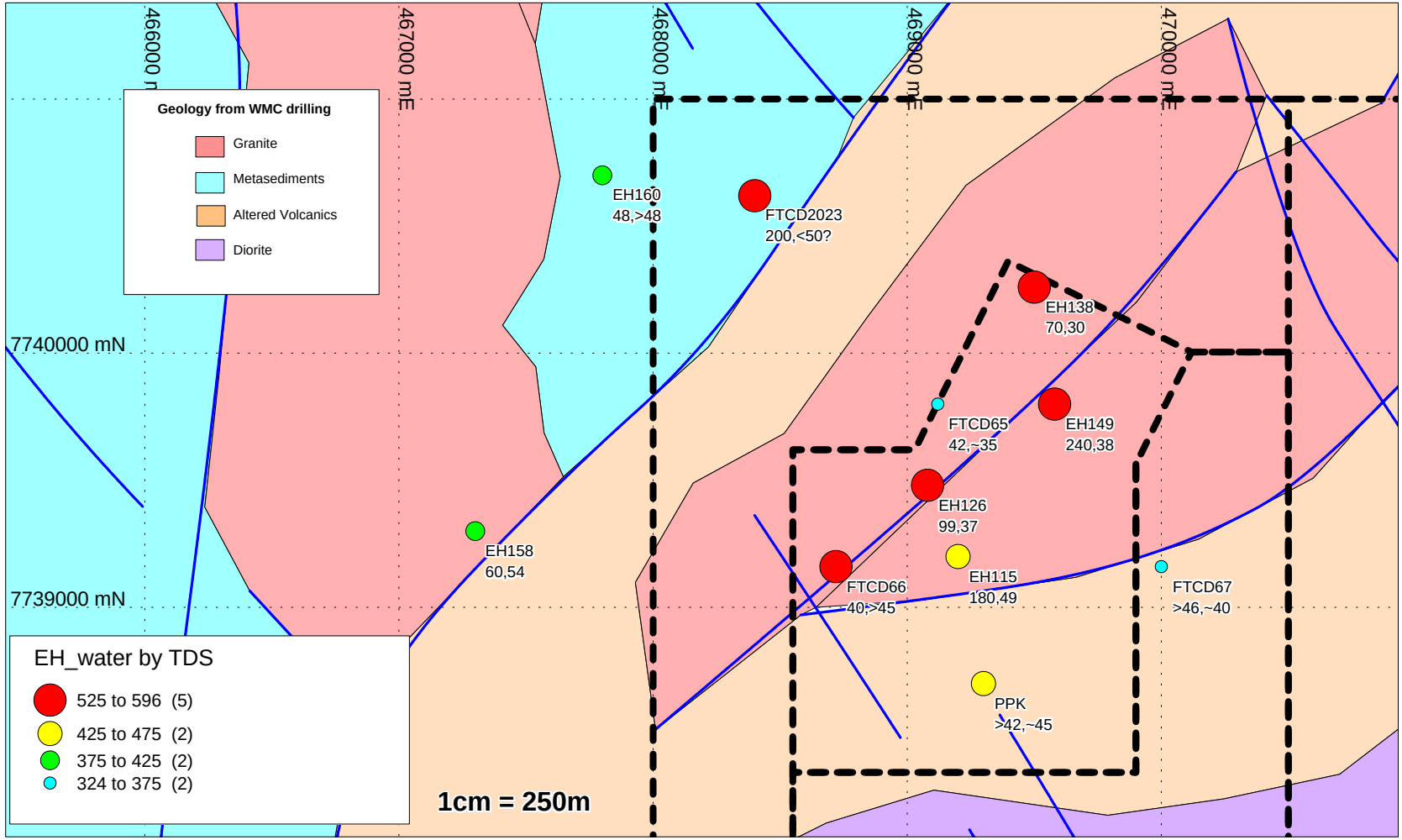

Ernest Henry area groundwater assays (1994 data)

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