Pontifex & Associates Pty Ltd

MINERALOGY – PETROLOGY · SECTION PREPARATION

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MINERALOGICAL REPORT No. 9456

by Ian R. Pontifex MSc.

December 15th, 2008

TO : Mr Andrej K. Karpinski
Korab Resources Ltd
PO Box 195
SOUTH PERTH WA 6951

COPY TO : Mr John Earthrowl
Consultant to Korab Resources
PO Box 219
BATCHELOR NT 0845

YOUR REFERENCE : Letter from John Earthrowl 29/10/08 and following email 23/11/08

MATERIAL : Weathered (?basic) rock samples, Mount Deane Volcanics, NT

IDENTIFICATION : 110950, 110951, 119052

WORK REQUESTED : Polished thin section preparation, description and report with comments as specified.

SAMPLES & SECTIONS : Returned to John Earthrowl with hard copy of this report.

DIGITAL COPY : Emailed 15/8/08 to:
<akk@korabresources. com.au>
<jae@octa4.net.au>

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SUMMARY/CONCLUSIONS

Three oxidised and partly leached, ferruginised, massive and medium grained ex-crystalline rocks, numbered 110950, 951, 952 were examined in polished thin sections for this report. The results are presented as the following summary and conclusions collectively on the three samples, together with appended photomicrographs with individual captions.

Preliminary petrological comments on this examination were emailed to jae@octa4.net.au 25/11/08. This follow-up report with photomicrographs, basically confirms the previous assessment as extensively altered and weathered original mafic rocks, (micro-doleritic or coarse basaltic), at least for the two samples **110950** and **110951**. All samples however are extensively pervasively altered/weathered to porous, massive limonite and sericite mixtures. This precursor interpretation for these two samples is based on mainly two diagnostic petrographic characteristics.

① relicts of limonite-leucoxene pseudomorphs after scattered, skeletal original Fe-It oxide (titaniferous magnetite), see Figures 1 and 2.

② interstitial residual infills of late magmatic quartz carrying minute inclusions of apatite crystals, see Fig Nos. 3 and 4.

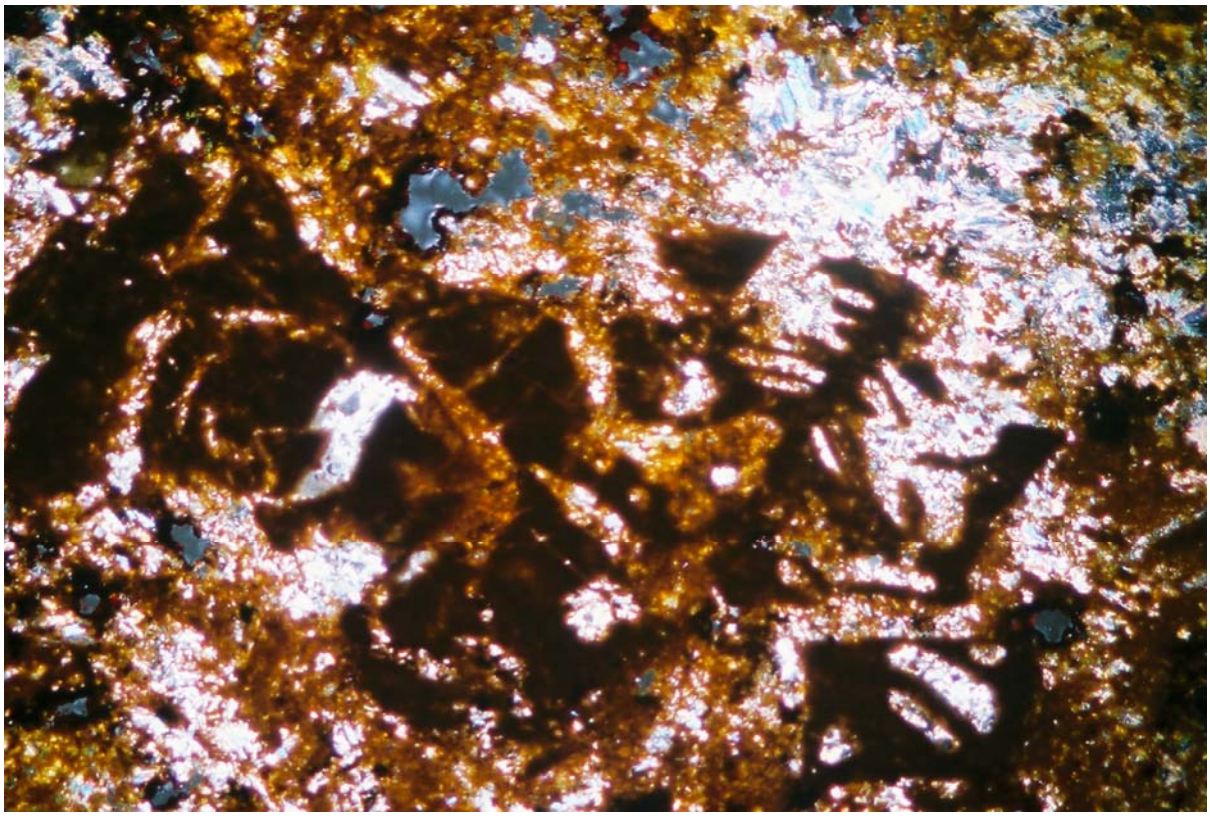
The whole rock matrix of mixed sericite and goethitic alteration/weathering products, also shows a vaguely preserved fine crystalline doleritic texture.

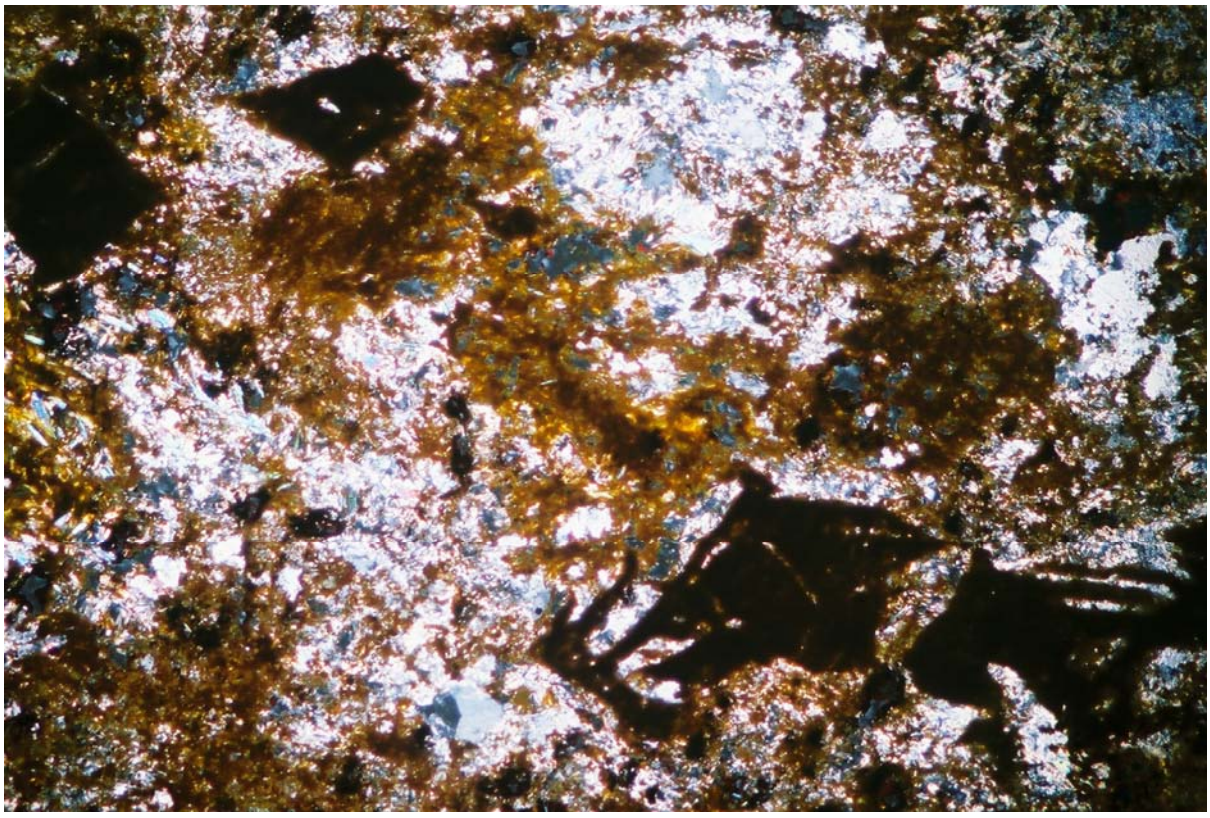
Genetic interpretation of sample **110952** is somewhat more ambiguous but this is interpreted as original basalt, assuming that this sample is related to/continuous with the two above samples i.e. essentially basic igneous. Even separately, the petrography shows vaguely layered basaltic relict textures (finer crystalline than in 110950, 951), poorly preserved within sericitic and goethitic alteration. (Weathering liesegang rings are superimposed on this primary texture). This sample also has small (0.2mm) leucoxene replicas after primary disseminated ex-magnetite crystals (5-8% of the rock), characteristic of basalts.

As previously noted, the reported anomalous Ti assays are accounted for by the identifiable leucoxene ex-titaniferous magnetite in all samples. It is also agreed that the reported anomalous Ni and Zn seem ‘high’ for “normal” mafic rocks. Indeed, these two elements would normally be regarded to derived from quite different primary source rocks. There is no petrographic evidence for a likely mineral source in these particular sections however.

[As mentioned in your email, fresh (or fresher) rock should assist the cause.]

APPENDED SELECTED PHOTOMICROGRAPHS





Figs 1 & 2 **110950** **0.18 mm**

Thin section (TS), crossed nicols (Xnic), magnification (x50). Two examples of dark brown skeletal replicas of limonite-leucoxene after primary Fe-Ti oxide crystals, diagnostic of those commonly seen in microdolerites and (coarse) basalts. The host matrix shows intricately intergrown patches of bright sericite, interpreted to largely replace former random plagioclase laths, and of limonitic material, apparently representing oxidised ex-mafic silicate (pyroxene).

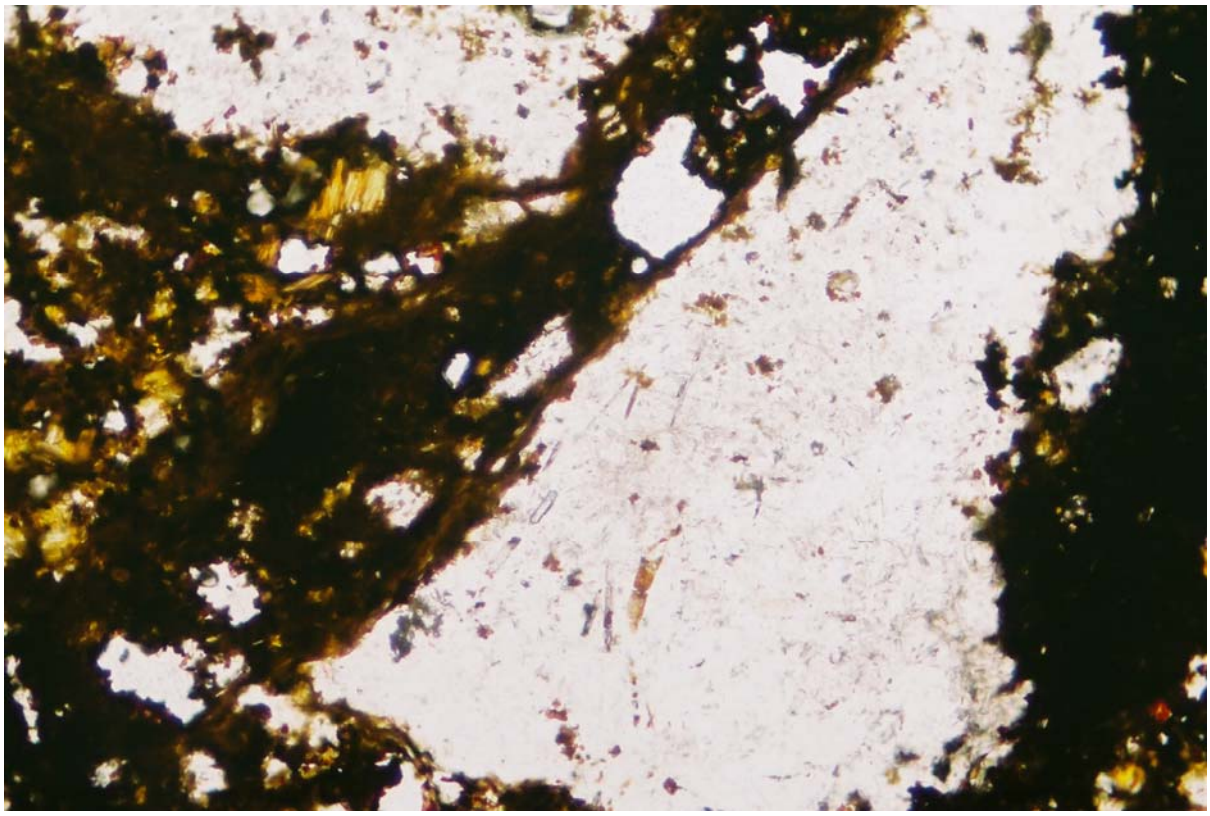


Fig 3 **110950** **0.09 mm**

TS. Xnic. (x100). Large white area is late magmatic quartz infill typically carrying numerous extremely small inclusions of apatite crystals. Dark brown surround limonite-oxidised ex-mafic silicate noted above.

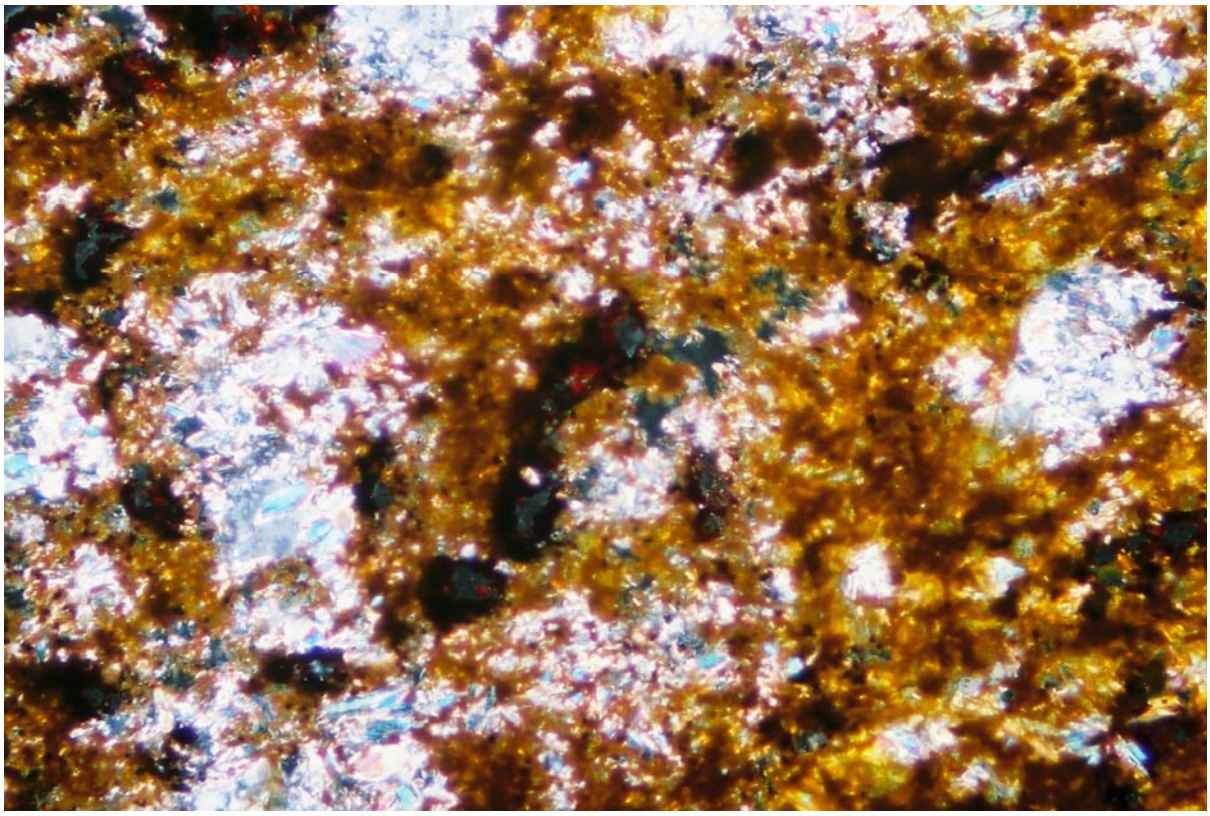


Fig 4 **110950** **0.09 mm**

TS. Xnic (x100). General field of view of massive intricately intergrown bright sericite (after plagioclase) and brownish limonite which seems to consist largely of limonitic micaceous weathering products of ex-mafic silicate. More intense dark brown replicas probably after small magnetites. (Chromites were not seen).

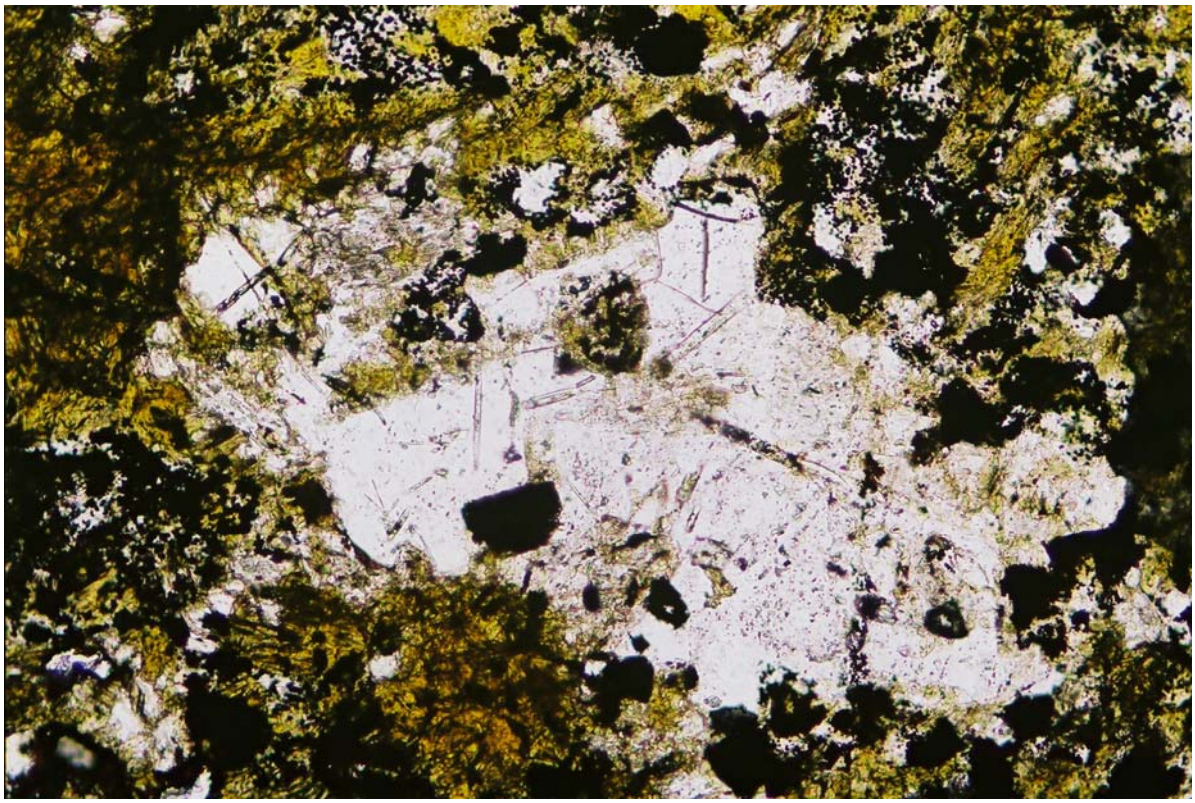


Fig 5 **110951** **0.09 mm**

TS. Ordinary light (OL). (x100). Central white area is interpreted as a residual of primary late magmatic quartz, distinctively containing numerous minute needle-like inclusions of apatite crystals. This occurs within a surround of altered-weathered ex-mafic silicate crystalline aggregate, with small limonite replicas after ex-magnetite crystals, representing basalt or microdolerite.

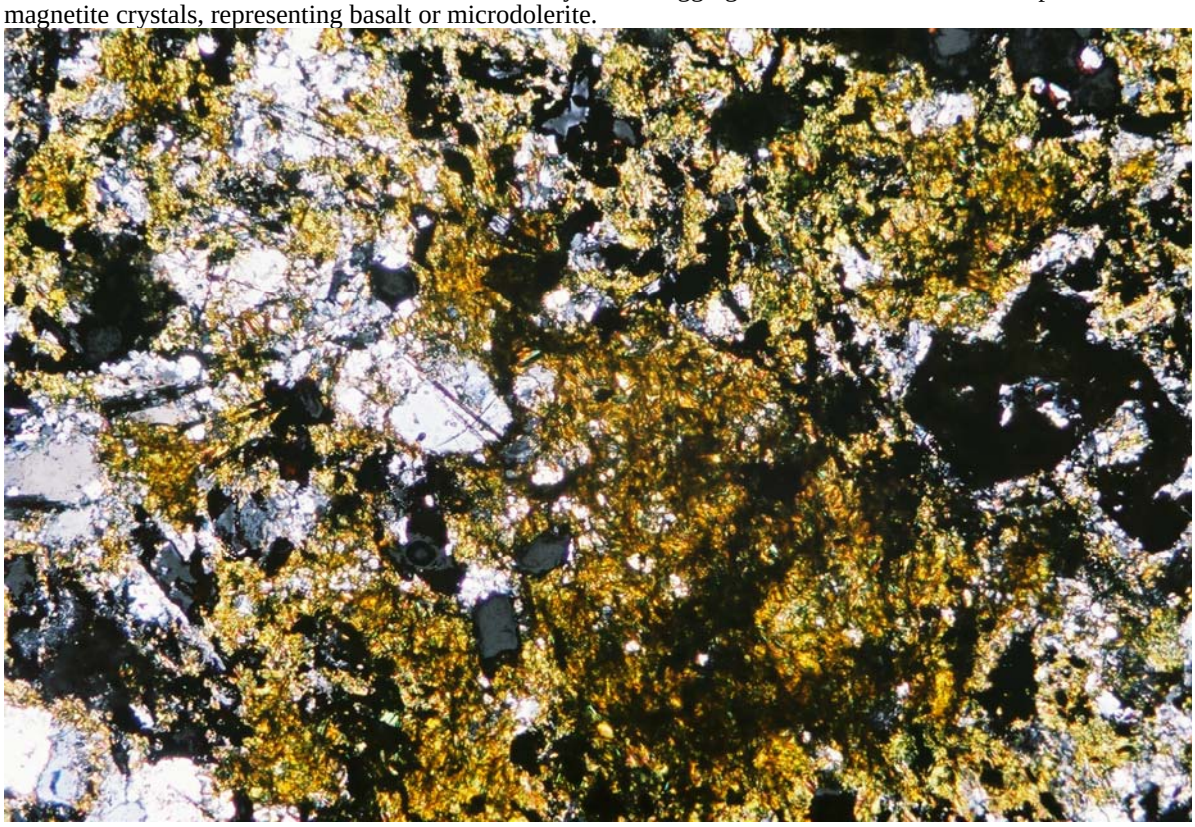


Fig 6 **110951** **0.18 mm**

TS. Xnic (x50). General field of view of host rock with 'coloured patches' of sericitic (?± biotitic) and subsequently limonitic alteration-weathering products interpreted to be after fine to medium crystalline mafic. Also locally abundant scattered patches of quartz, mostly late magmatic residual, as indicated by inclusion of apatite crystals as detailed in Fig 5. Coarse black-opaque oxidised sulphide grains.

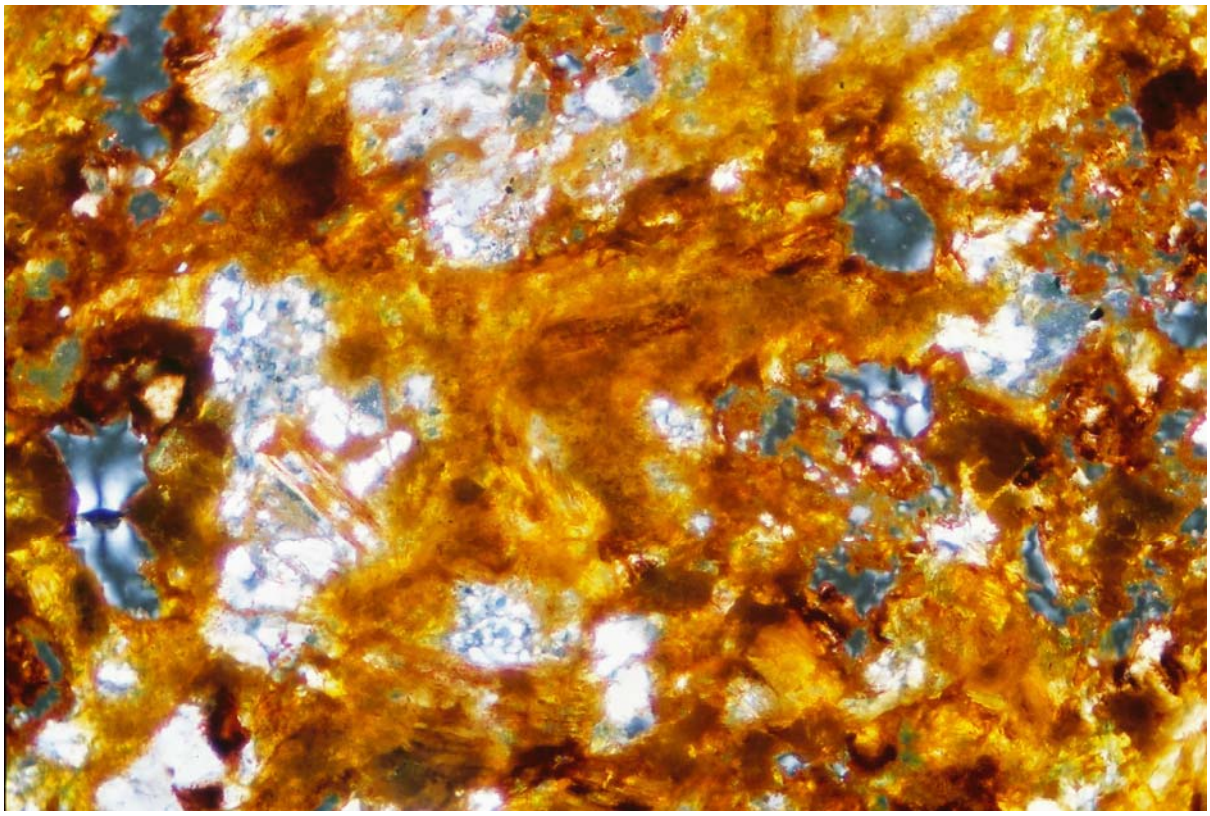


Fig 7 **110952** **0.18 mm**

TS. Xnic. (x50). General field of view, quite low magnification, interpreted to represent altered/weathered basalt, somewhat finer crystalline than 110950 and 951. Yellowish-brown limonitised "micas" presumably after ex-pyroxene, the brighter interstitial sericite after ex-plagioclase laths.

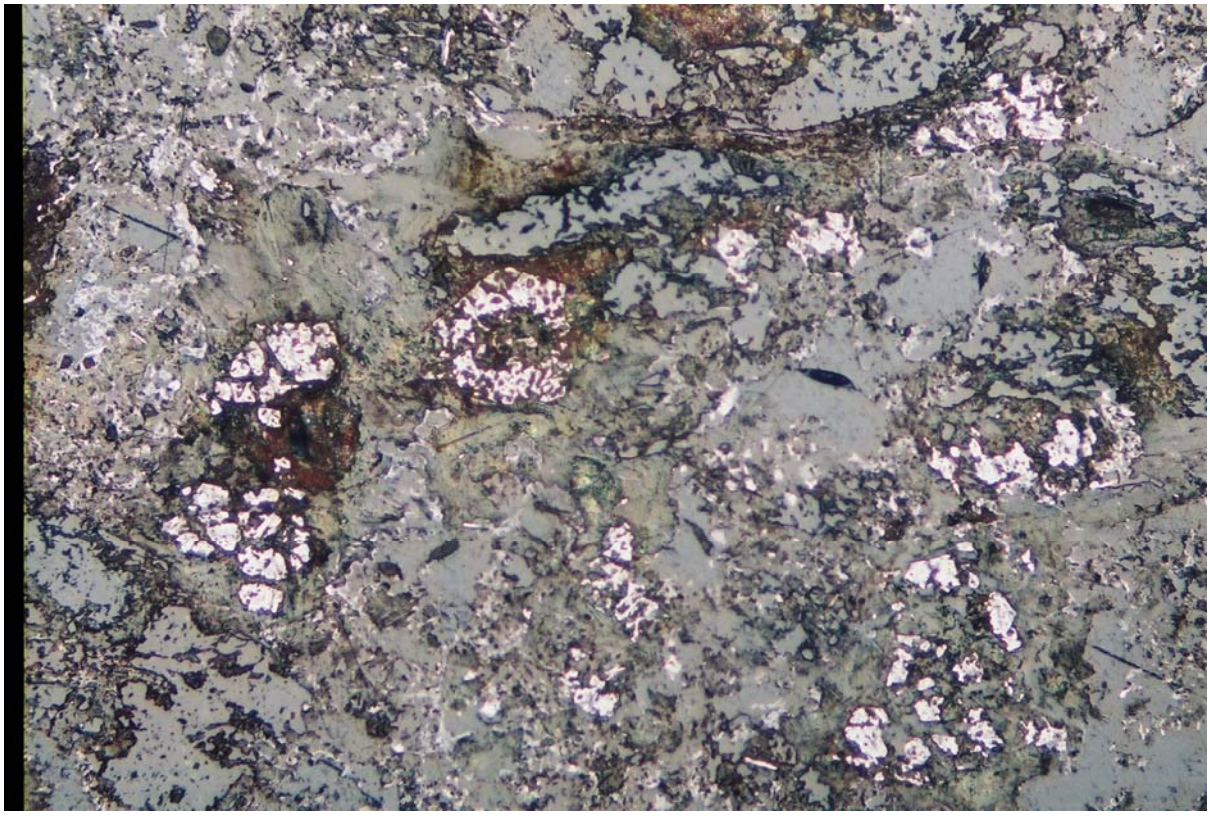
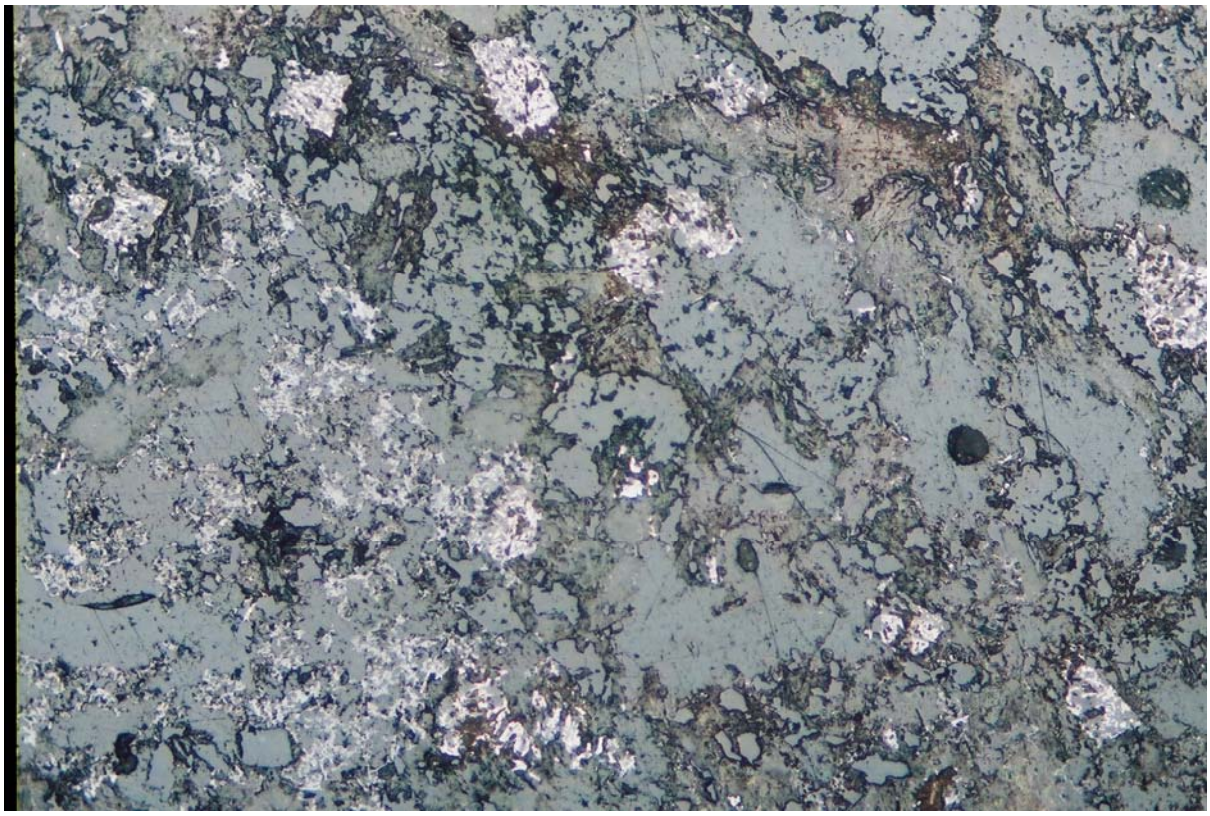
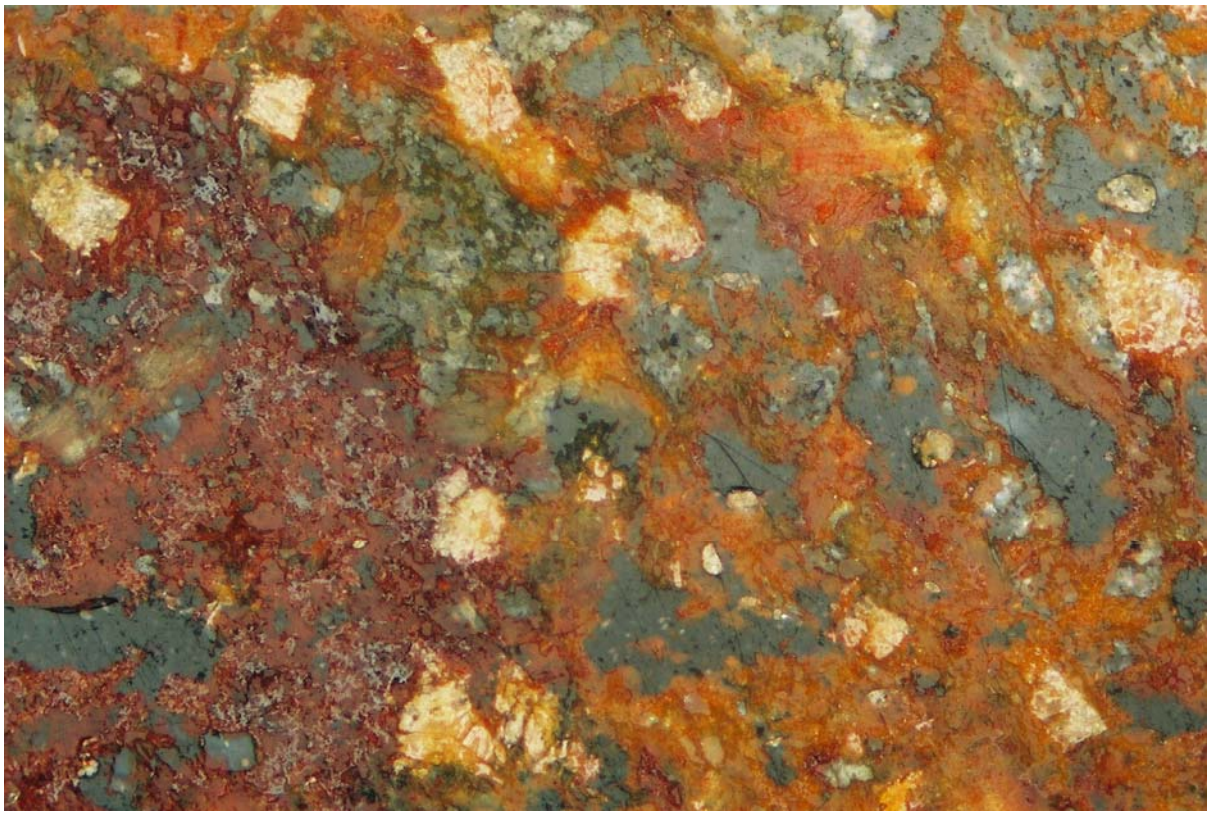


Fig 8 **110952** **0.09 mm**

Polished section (x100). This reflected light photo residual of primary disseminated brightish opaque oxide crystals (seen below as brighter leucoxenised primary magnetites), within altered mafic host rock including patchy (?secondary) quartz.





Figs 9 & 10 **110952** **0.09 mm**

Fig 9, reflected ordinary light (x100), scattered ex-magnetites within altered basalt. Fig 10, same field, with ex-magnetites showing bright internal reflection of scattered leucoxene pseudomorphs after the magnetites. Also varying degrees of internal reflection of limonitic-goethitic alteration of oxidised groundmass with scattered small irregular patches of quartz.