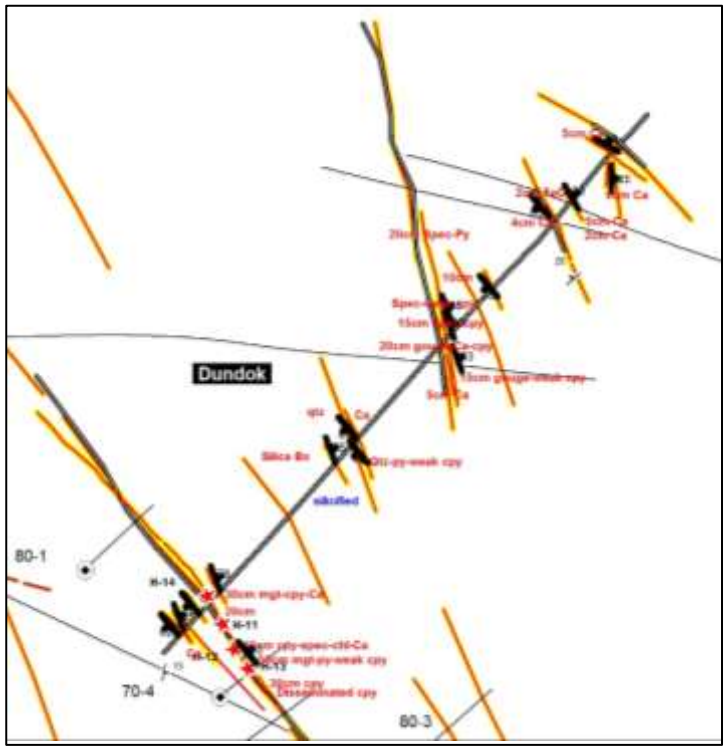
A field visit was made by KME personnel to the Haman project in October 2019 with the purpose of evaluating the mineralization of the minor workings, including **Dundok, Okbang, C Vein** and the **E Vein**.

Haman - Dundok Adit

Dundok Adit has a pad-locked entrance, but is still accessible. The Dundok adit was a crosscut adit driven approximately 450m across the strike of NNW several veins (bearing 045°) with thicknesses ranging from 2cm up to 170cm.

The NW striking **Dundok Vein** was encountered about 60m inside the adit and was then followed along strike by a development adit for 200m to the NW and also 500m to the SE, where it eventually connects up with the **Daedong-Minamidani Vein** and then the **E Vein**.

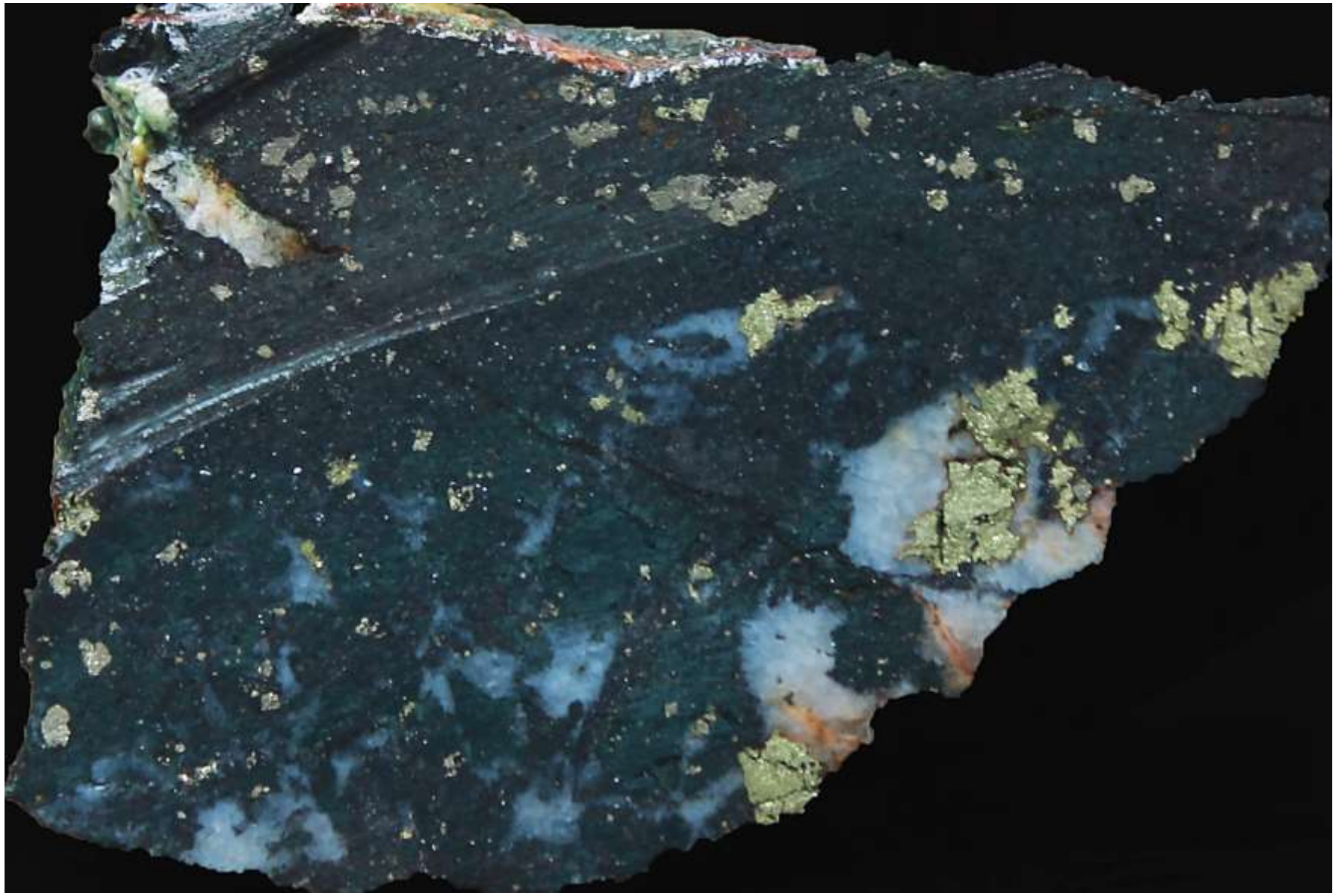


The historical adit dump at Dundok is still largely intact, although some material has been removed. Dump sampling indicates the presence of specularite-magnetite-quartz-sulphide breccias and magnetite-specularite skarn.

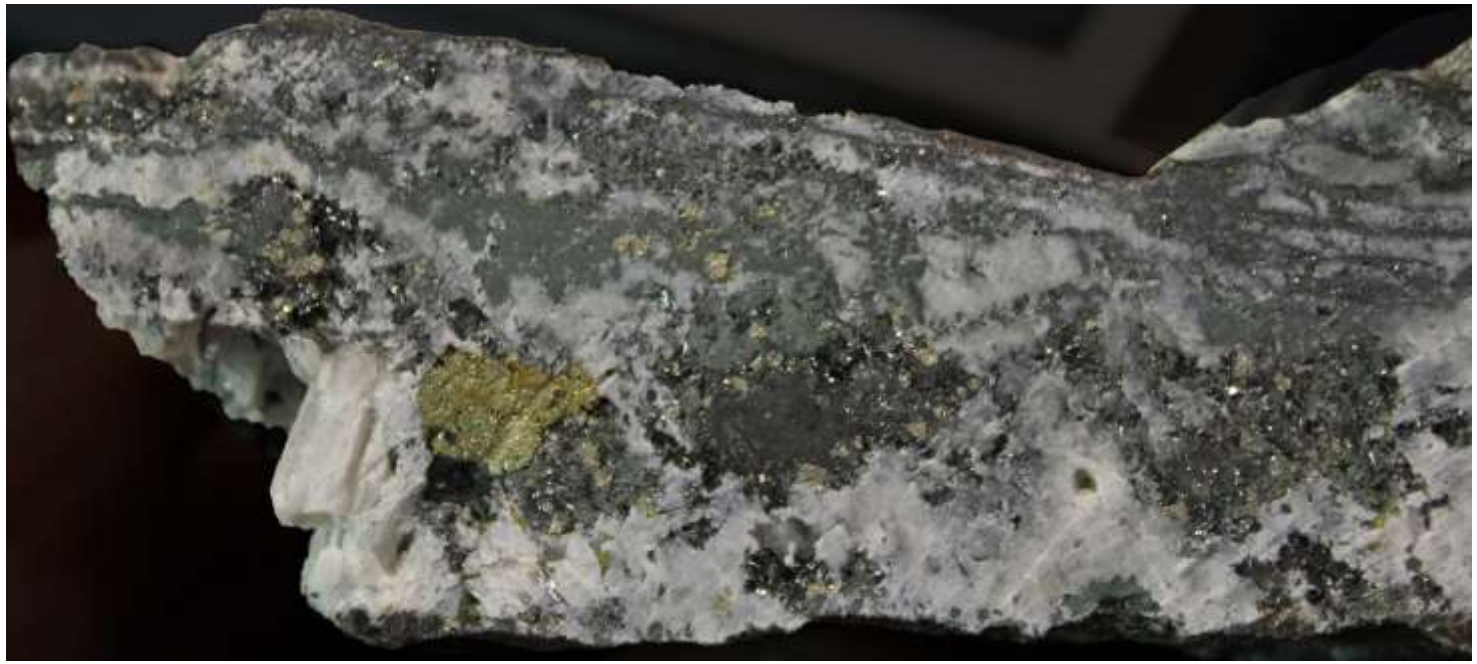
Jaeilgunbuk workings. Dundok Adit

Dundok No 1 Adit. Lower level adit with pad-locked gate entrance to the portal. The adit is still accessible to exploration.

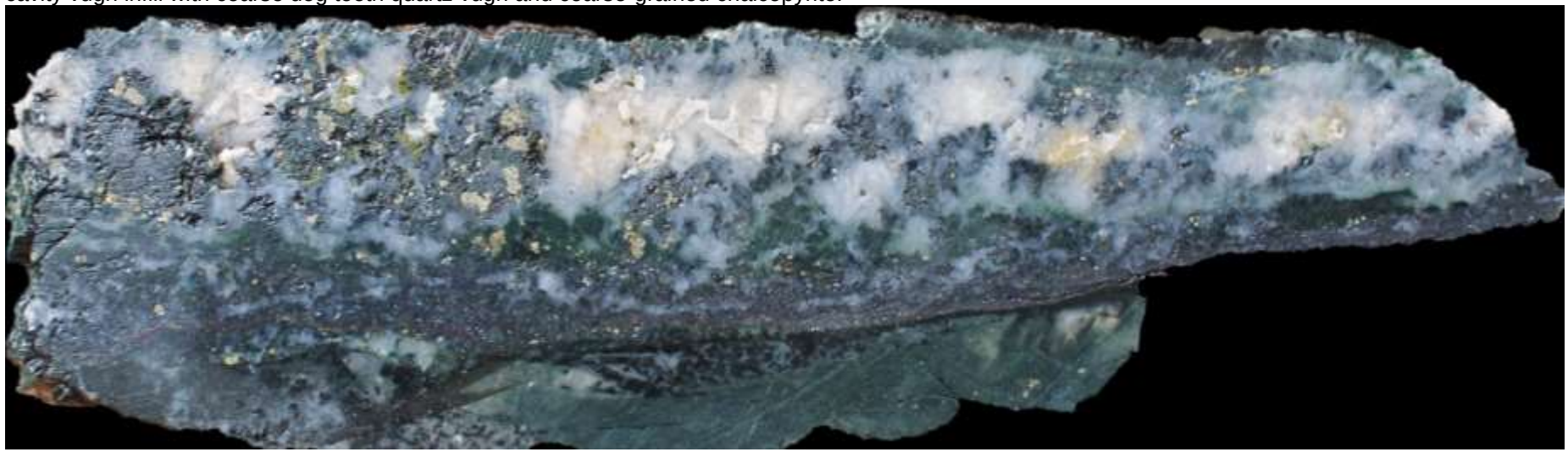
Upper level of the Dundok No 2 Adit with partially collapsed roof into the stope.



Dundok No 1 Adit Dump. Sample 155896: 0.21g/t Au, 6g/t Ag, 40ppm Ga, 0.54% Cu, >500ppm Ce, 0.16% La, 470ppm Mo, 206ppm Co, 25.6% Fe, 158ppm V. Magnetite-actinolite-specularite-chlorite-pyrite altered breccia with disseminated pyrrhotite, pyrite and white jigsaw-textured quartz (evidence of recrystallization) and coarse-grained chalcopyrite.



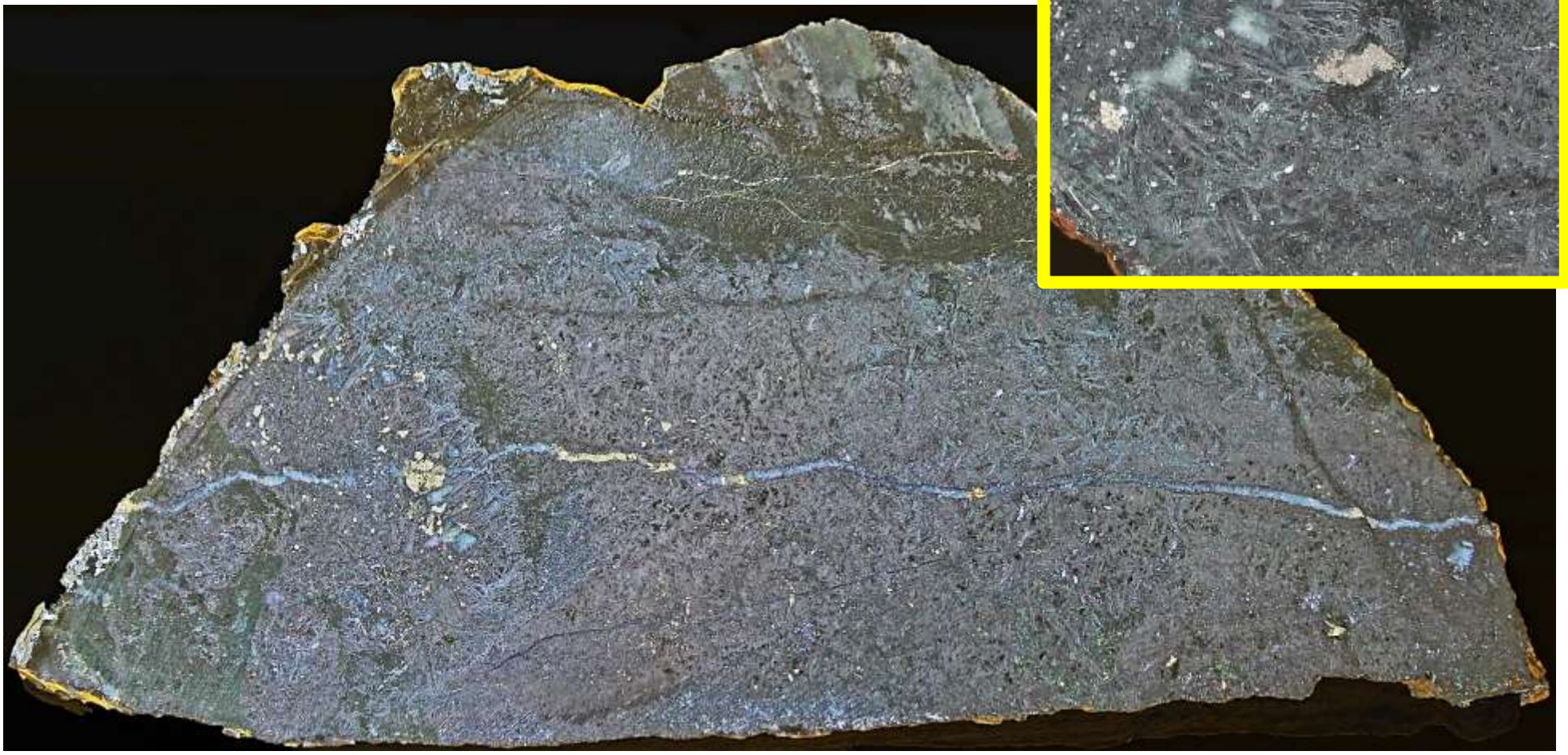
Dundok No 2 Adit Dump. Sample 155897. Banded magnetite-specularite-pyrite-pyrrhotite vein, with slabby shingle breccia vein wall margin and late-stage open cavity vugh infill with coarse dog tooth quartz vugh and coarse-grained chalcopyrite.

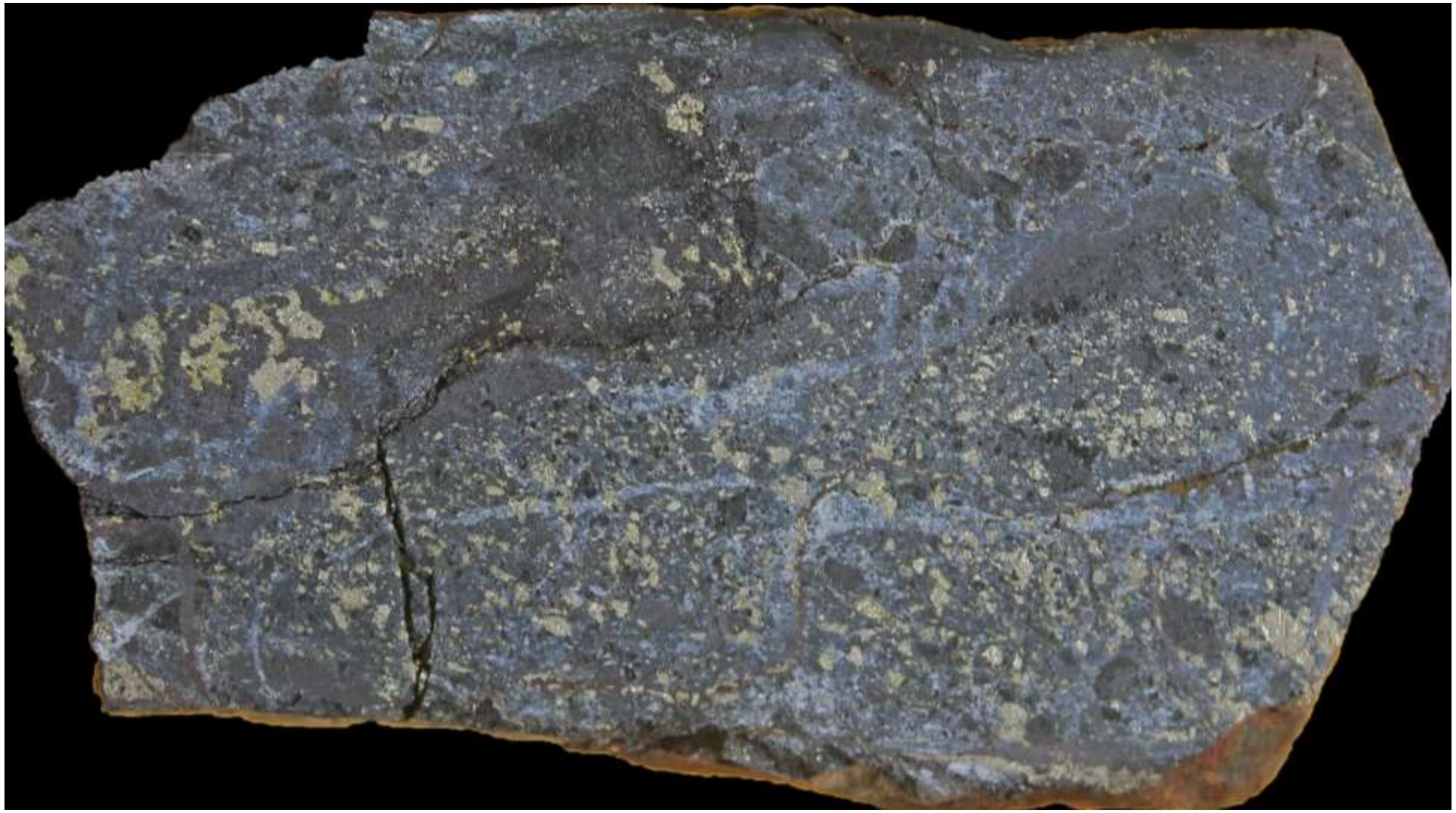


Haman Project - Dundok Adit dump. Sample 242733: 0.08g/t Au, 0.12% Cu, 0.11% WO_3, 3ppm Ga, 118ppm Mo, 109ppm V, >50% Fe. Very dense, heavy magnetite-specular hematite skarn/matrix breccia.

Early very fine brassy pyrite-arsenopyrite-pyrrhotite occurs with some colloidal quartz and is cut by late blue-grey colloidal jigsaw quartz veinlet with chalcopyrite. The quartz veinlet displays wavy anastomosing form, with small dilational jogs, and has been displaced by a micro-fault/fine sulphide seam, indicating contemporaneous tectonic activity during mineralization.

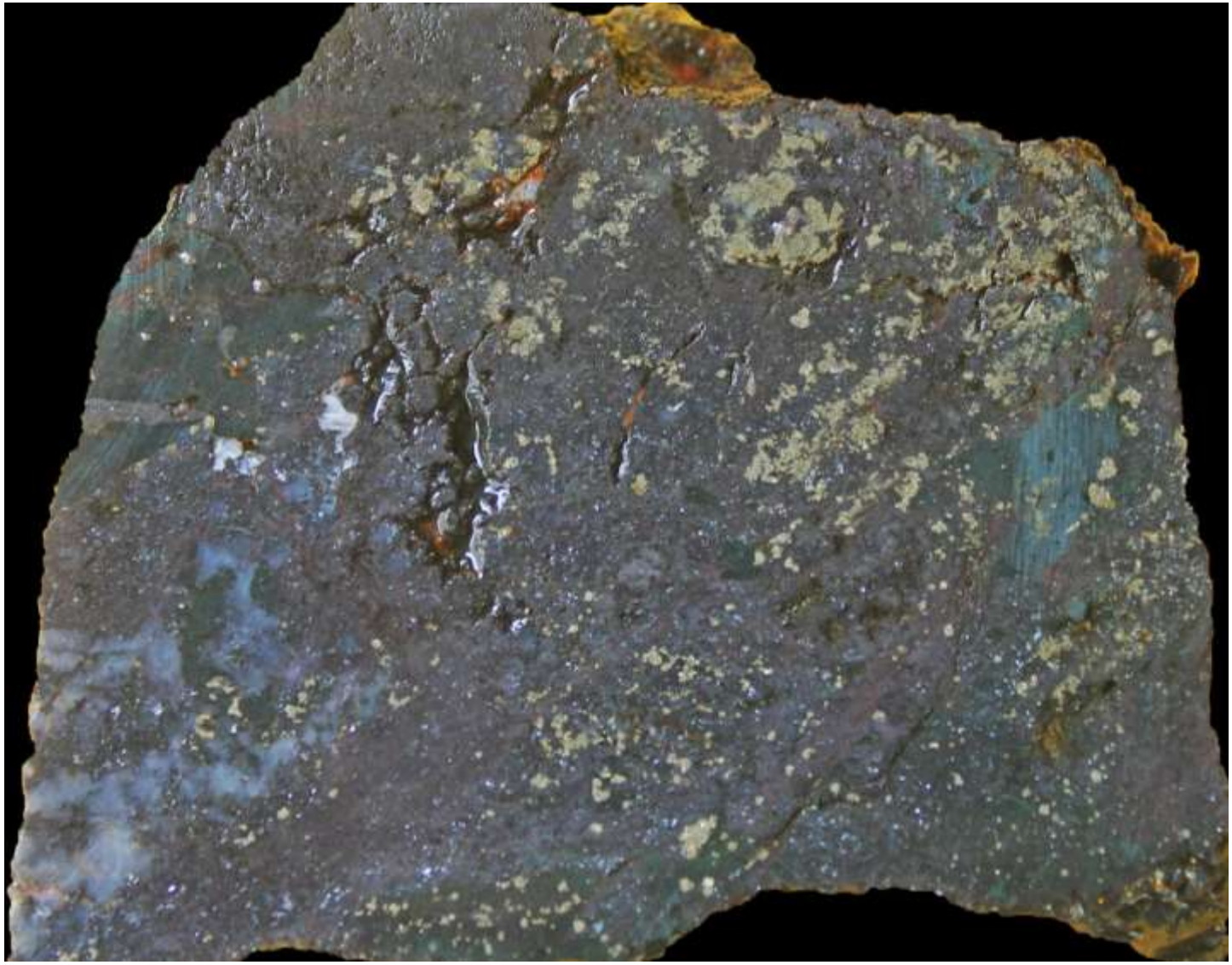
Inset photograph: Close-up image showing specular hematite needle crystals.





Haman Project - Dundok Adit dump. Sample 242734-1: 0.19g/t Au, 7g/t Ag, 250ppm As, 409ppm Co, 0.37% Cu, 14ppm Ga, 0.44ppm Ge, 63ppm Mo, 32.90% Fe. Very dense, heavy magnetite-specular hematite skarn with disseminated very fine sulphide matrix breccia. Enhancement of the image shows wispy, ghost-like blue-grey quartz/silica matrix indicating the early breccia is overprinted by a fluidizing colloidal quartz stage. Entrained breccia clasts-fragments are evident, along with chalcopyrite, pyrrhotite, pyrite and arsenopyrite grains.

Haman Project - Dundok Adit dump. Sample 242734-2: 0.19g/t Au, 7g/t Ag, 250ppm As, 409ppm Co, 0.37% Cu, 14ppm Ga, 0.44ppm Ge, 63ppm Mo, 32.90% Fe.



Specular hematite-fine sulphide matrix breccia, with blue-grey colloidal jigsaw-textured quartz (indicative of recrystallization), pyrrhotite, pyrite and chalcopyrite.

Minor carbonate infills cavity.

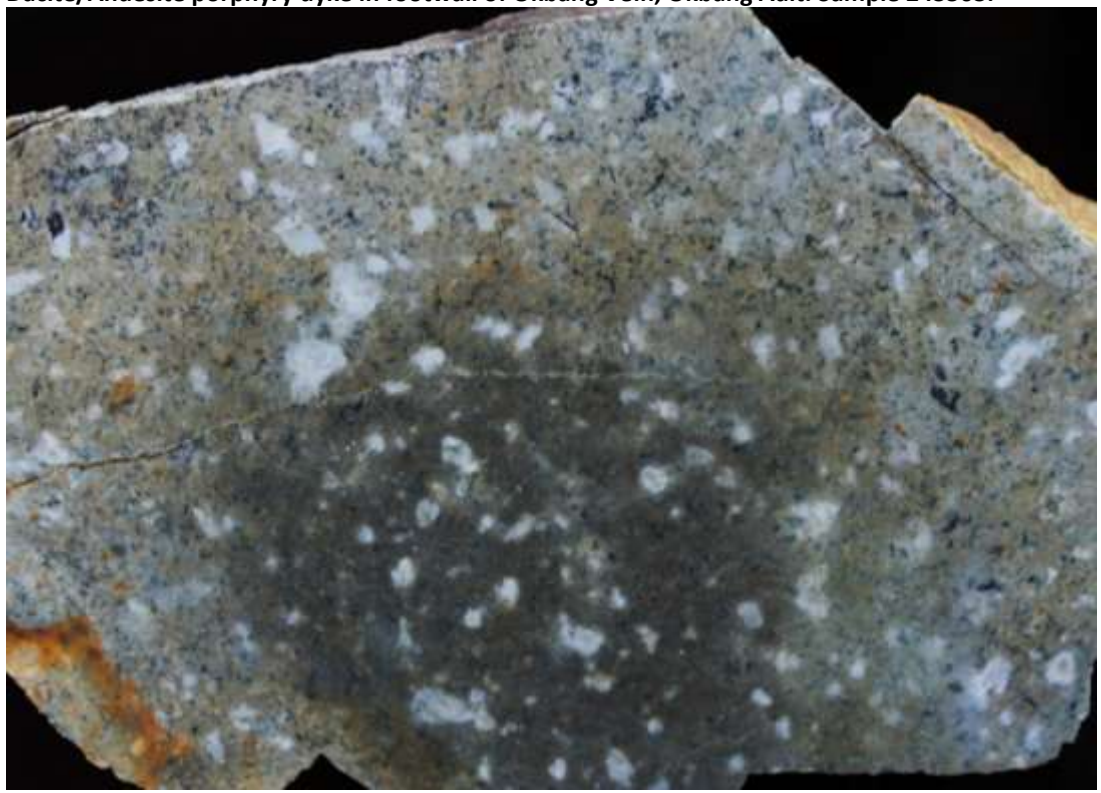
Cavities indicate the porous nature of the rock and some dissolution has occurred.

Haman - Okbang Adit

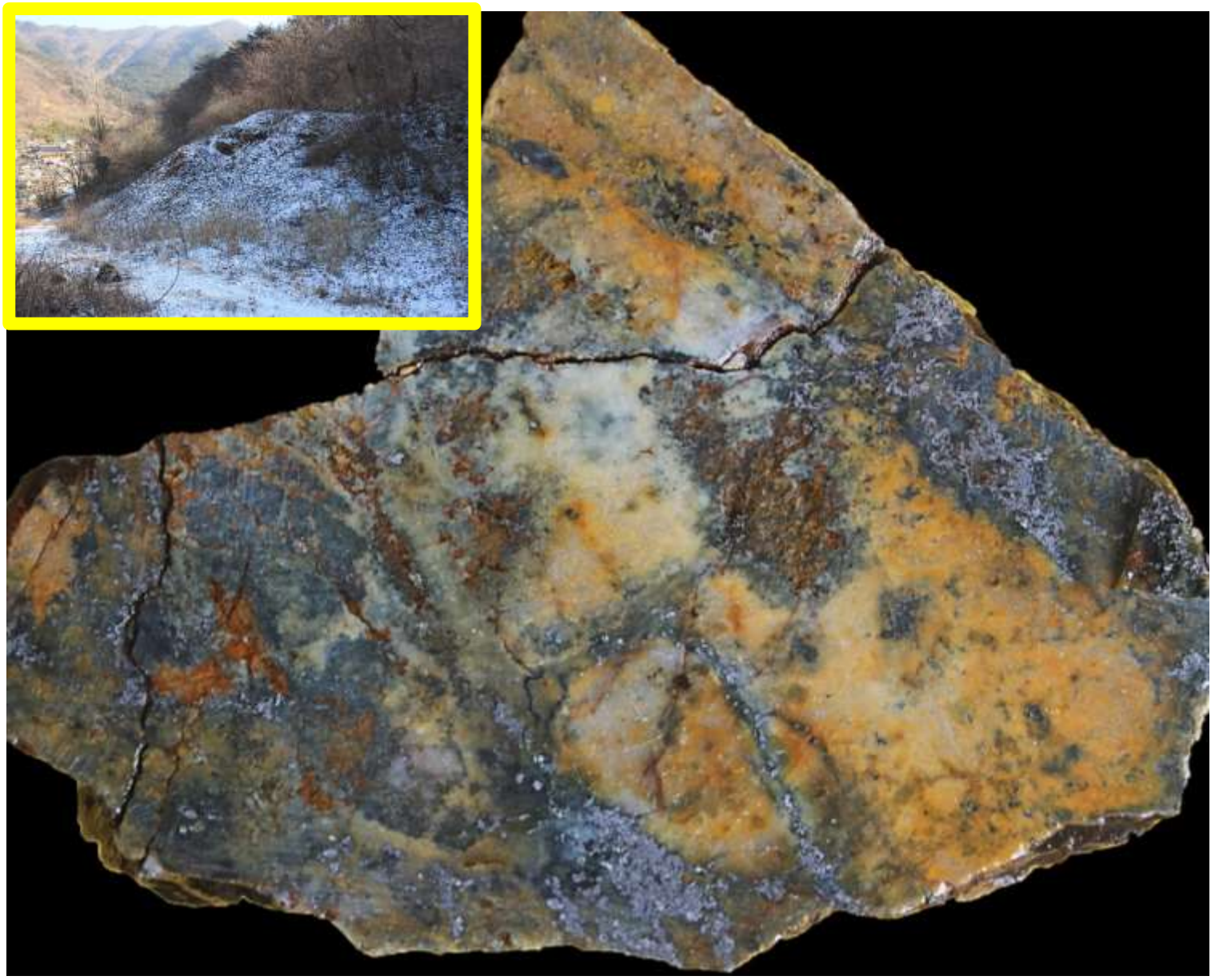
The Okbang Vein system consists of 4 subparallel, NNE striking, steep east dipping veins, hosted in hornfelsed siltstone-sandy sediments of the Jindong Formation. The Okbang Vein system is probably the southern extension of the Ebisu No 1 and No 2 Veins at Haman. The sediments have been intruded by tonalite-monzonite and several andesite porphyry dykes.

Quartz vein breccia sulphide mineralization is developed in the hangingwall along the dyke contacts. KME samples (243304 & 243305) from this lode assayed 5.90-10.05g/t Au, 1-4g/t Ag, 6.98% As-7.63% As, 13-24ppm Bi, 837ppm Co-0.21% Co, 26-288ppm Cu, 17-20ppm Ga, 60ppm Sb, and 3ppm Te.

Dacite/Andesite porphyry dyke in footwall of Okbang Vein, Okbang Adit. Sample 243303.



Haman Project - Okbang Adit dump. Sample 242735: 3.77g/t Au, 2g/t Ag, >1.00% As, 17ppm Ga, 17ppm Sb, 2ppm Te, 13ppm Bi, 0.16% Co, 221ppm Cu, 9.47% Fe.



Jigsaw-textured colloidal quartz vein breccia. the brown matrix is hematite-siderite and the grey matrix is specular hematite.

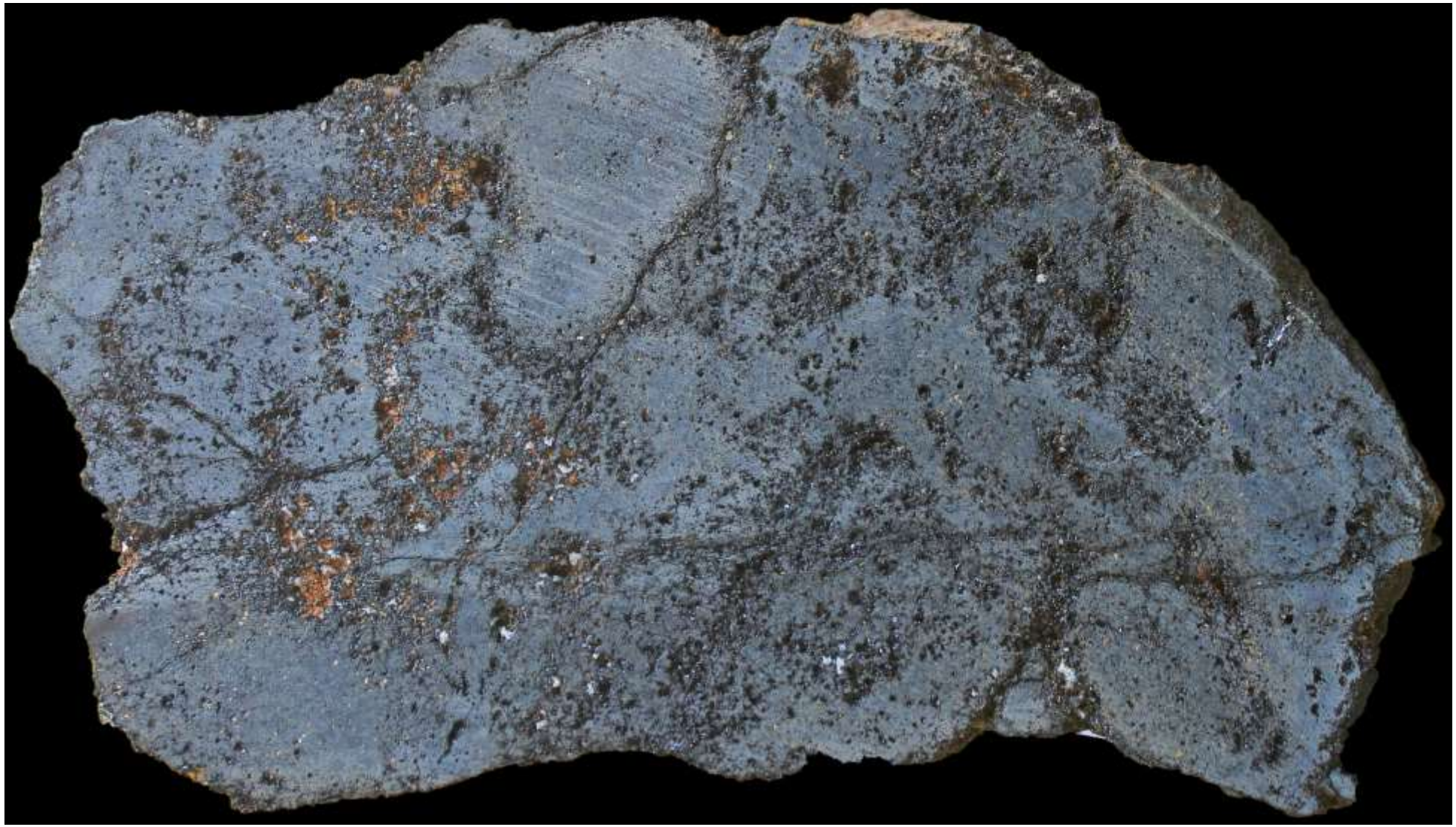
Yellow-orange “dusting” is unusual and may be calc-potassic altered feldspar.

The cloudy quartz has diffuse “jigsaw-textured” boundaries suggestive of recrystallization of colloidal silica and contains a bluish-silver sulphide (bismuth sulphosalt?).

Silvery arsenopyrite is present as a crosscutting phase overprinting the quartz.

Haman Project - Okbang Adit dump. Sample 242736: 0.05g/t Au, 0.30% As, 110ppm Cu, 0.12% Ba, 0.10% P. Dense, heavy, hard, fractured, siliceous mineralized acid-intermediate fine-grained dyke (Dacite?). Fine black sulphide grains (arsenopyrite ?) are disseminated in places. Oxidation appears to be occurring with contemporaneous with silicification, suggesting near-surface, oxidizing waters may have interacted with the dacite during emplacement of the intrusion. Fractures are abundant and lined with goethite after sulphide.

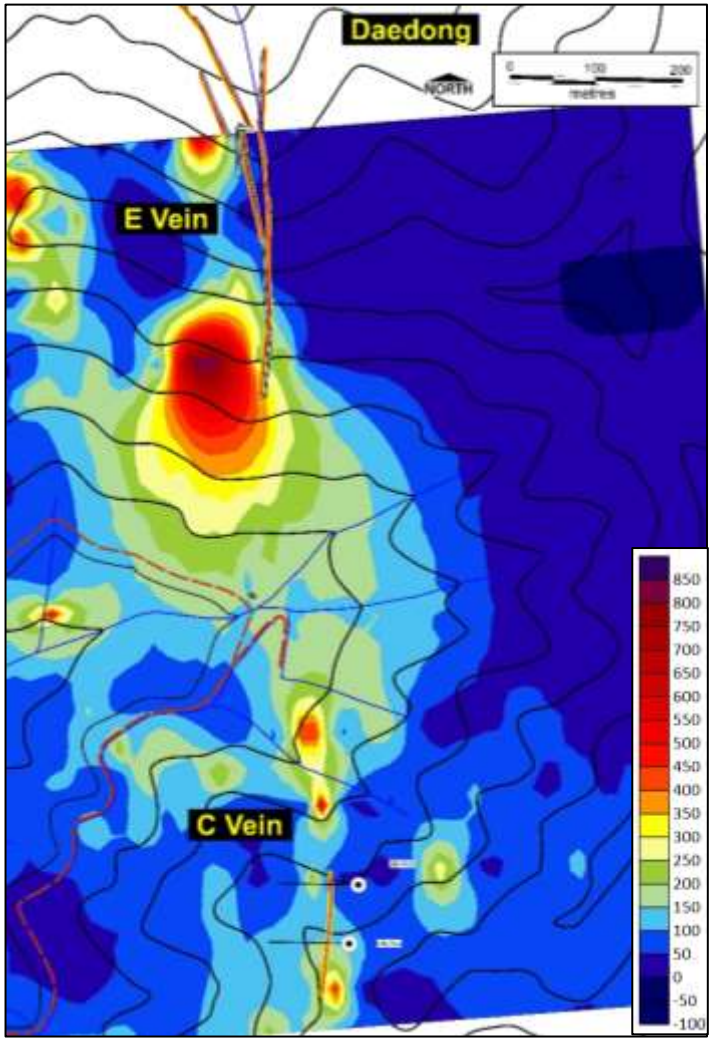
Haman – C Vein area

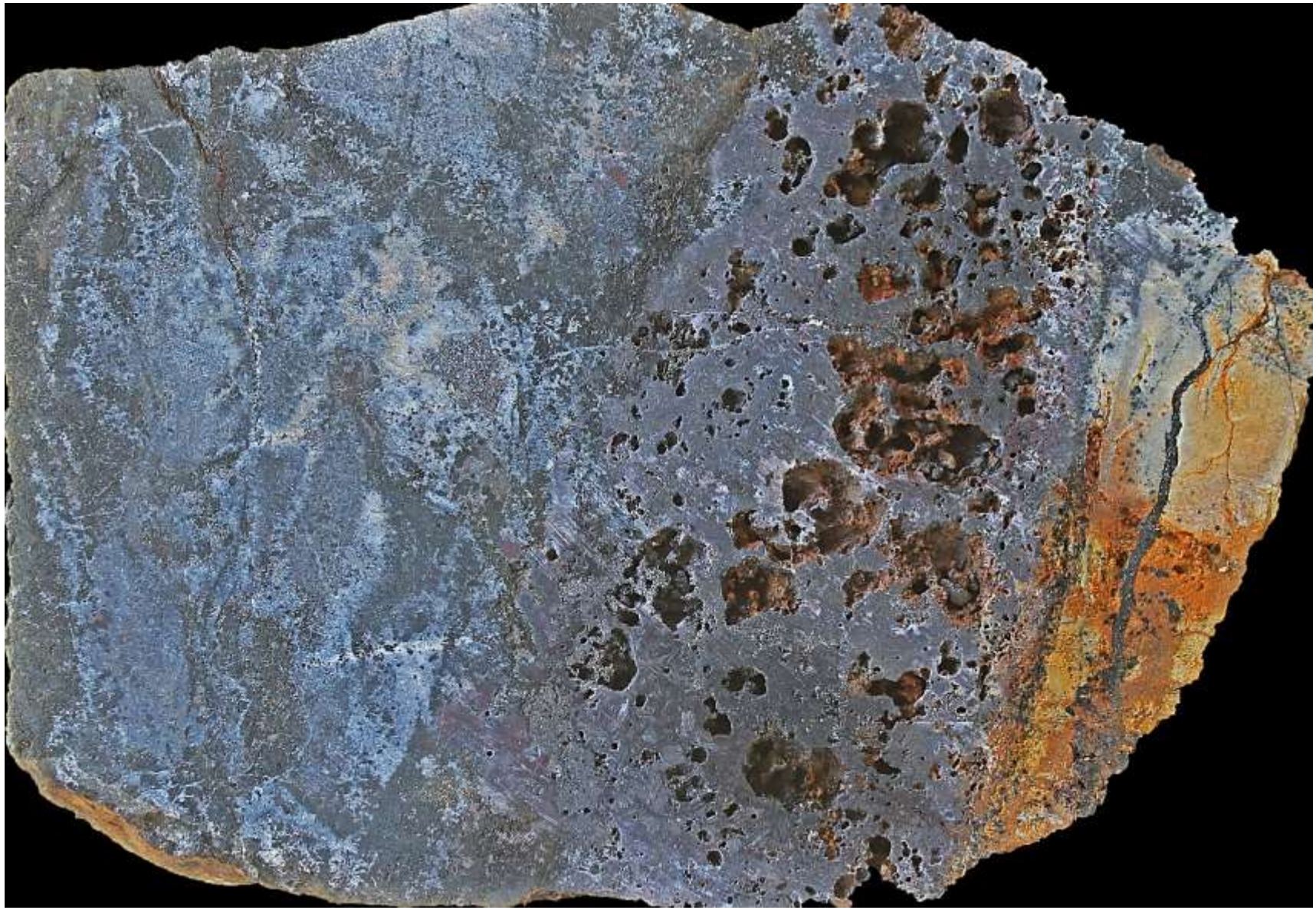


Haman Project – C Vein area. Tourmaline skarn. Sample 242737: 0.05g/t Au, 529ppm As, 38ppm Ga, 163ppm Cu, 182ppm V, 6.11% Fe. Dense, heavy, porous, tourmaline/actinolite skarn. Very porous textured rock. Fine pink-brown crystals and quartz occur scattered through the tourmaline skarn, but are concentrated in clusters with porous zones suggesting some dissolution and deposition.

Haman Project – C Vein area. Sample 242738: 0.17g/t Au, 352ppm As, 25ppm Ga, 261ppm Mo, 11ppm Sb, 1.3ppm Te, 20.80% Fe. Magnetite-sulphide skarn, jarosite-goethite stained with cavities.

The **C Vein** area is located about 400m south and along strike from the **Daedong – E Vein**. The map below, shows the anomalous copper soil geochemistry linking these systems.





Haman Project – C Vein area. Sample 242738: 0.17g/t Au, 352ppm As, 25ppm Ga, 261ppm Mo, 11ppm Sb, 1.3ppm Te, 20.80% Fe. Very dense, heavy, banded magnetite-specular hematite vein/skarn in contact with acid-intermediate dyke (at right). There are abundant dissolution cavities in specular hematite lined with goethite, but it is uncertain what original mineral has been dissolved. The acid-intermediate dyke contains disseminated magnetite and is “dusted” by orange-yellow calc-potassic alteration of feldspar.

Haman Project – C Vein area. Sample 242739-1: 0.04g/t Au, 0.11% Cu, 22ppm Ga, 11.00% Fe.

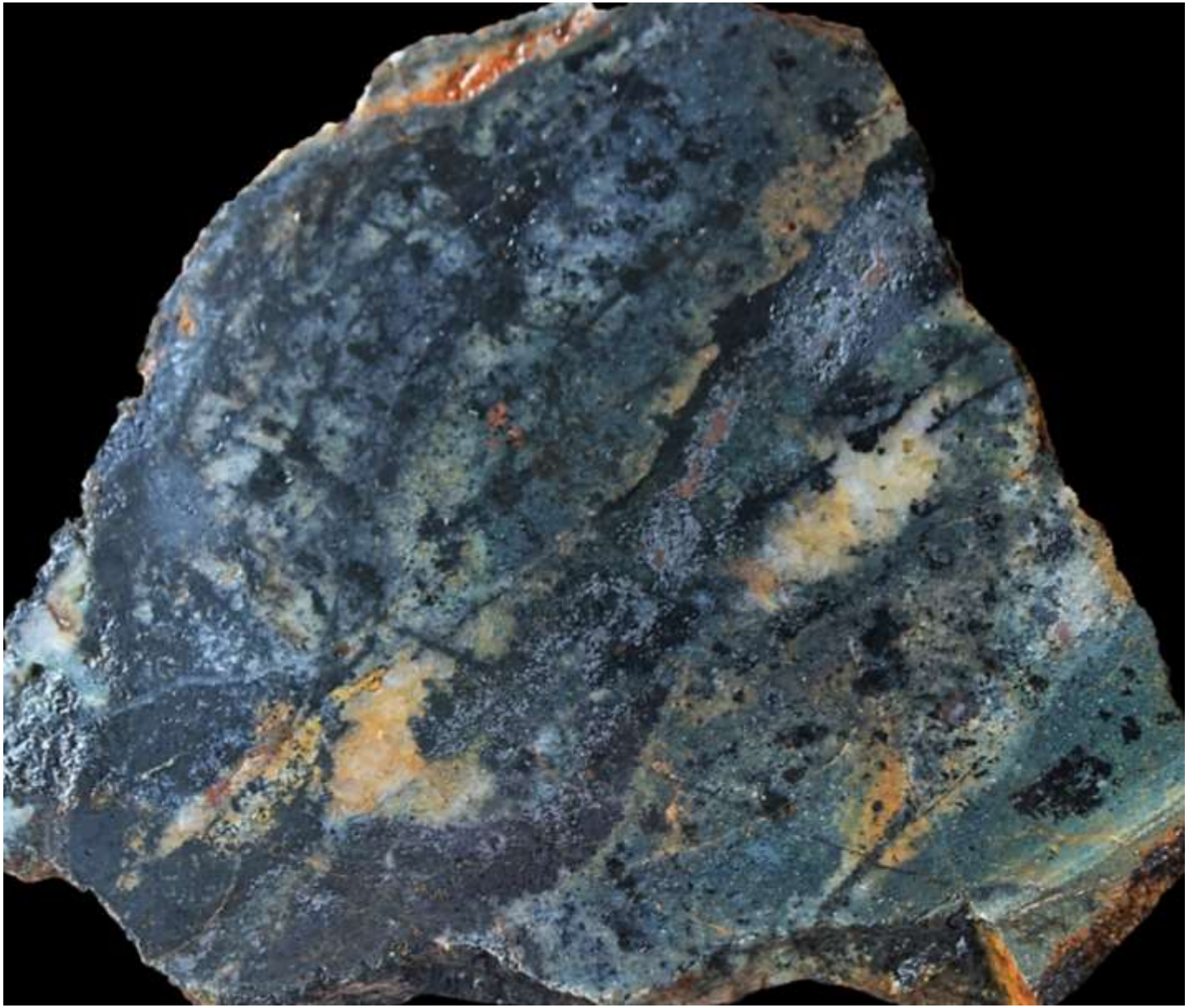
Quartz-magnetite vein stockwork cutting fine-grained magnetite-sulphide-quartz matrix and acid-intermediate dyke clast at right.

The dyke clast? or contact? contains some feldspar grains suggestive of original dacitic composition. The dyke is heavily fractured and displays overprinting orange-yellow “dusting”, consistent with calc-potassic alteration of feldspar.

Haman – E Vein area

Haman Project – E Vein area. Sample 242739-2: 0.04g/t Au, 0.11% Cu, 22ppm Ga, 11.00% Fe.

Quartz-magnetite-specular hematite vein-breccia with fine-grained sulphide-quartz matrix. Quartz displays jigsaw-textures suggesting recrystallization after original colloidal deposition.



Haman Project – E Vein area. Sample 242739-5: 0.04g/t Au, 0.11% Cu, 22ppm Ga, 11.00% Fe. Quartz-specular hematite-magnetite vein at contact of acid-intermediate dyke with diffuse, uneven boundary in siltstone. Vein quartz is zonal with abundant cavities lined with goethite. The dyke contains 1-3mm size feldspar phenocrysts set in a finer grained matrix of feldspars, suggesting the dyke was dacitic in composition. Magnetite infills fractures in the dacite, with “dusting” suggesting calc-potassic alteration.