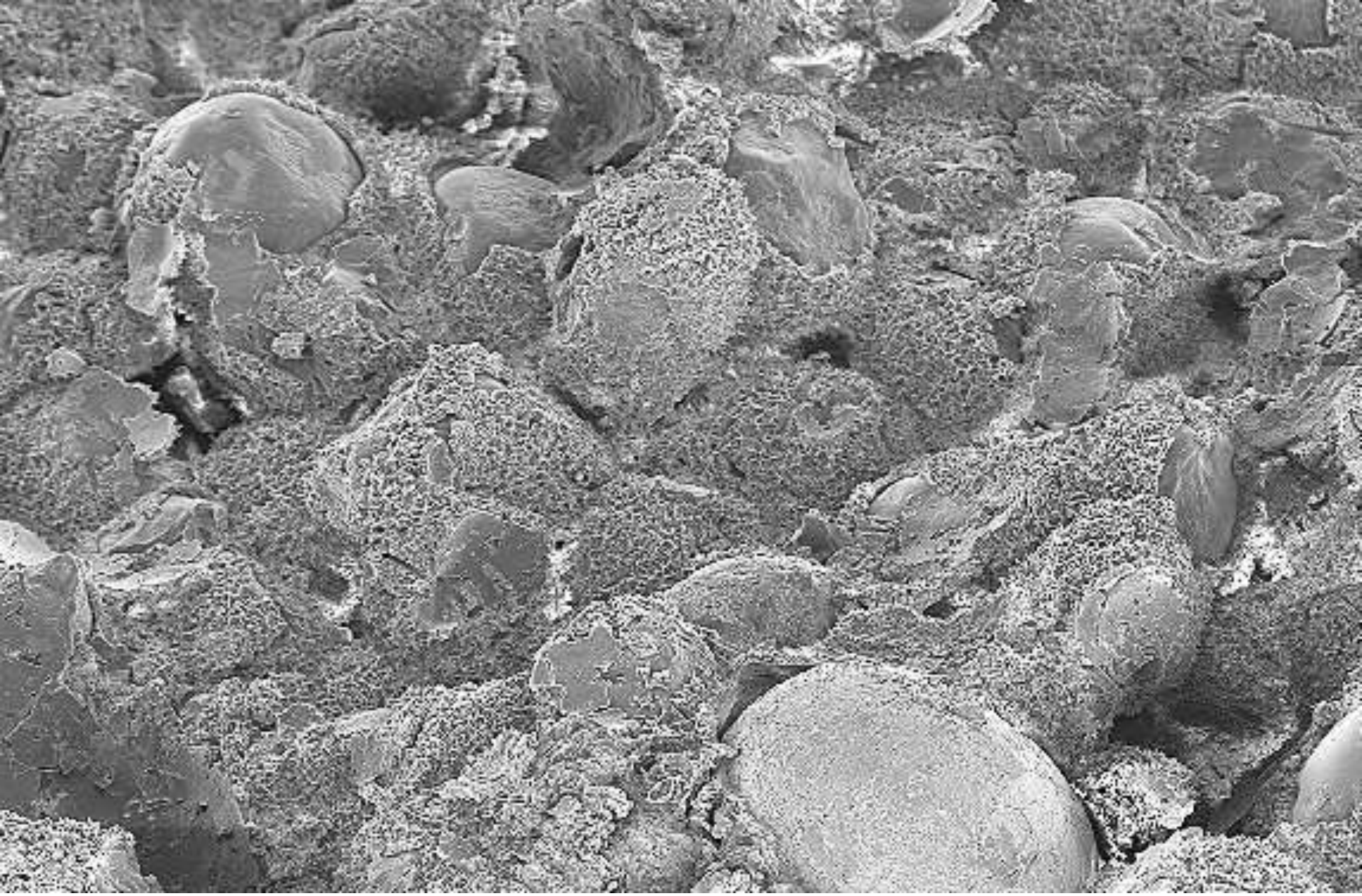
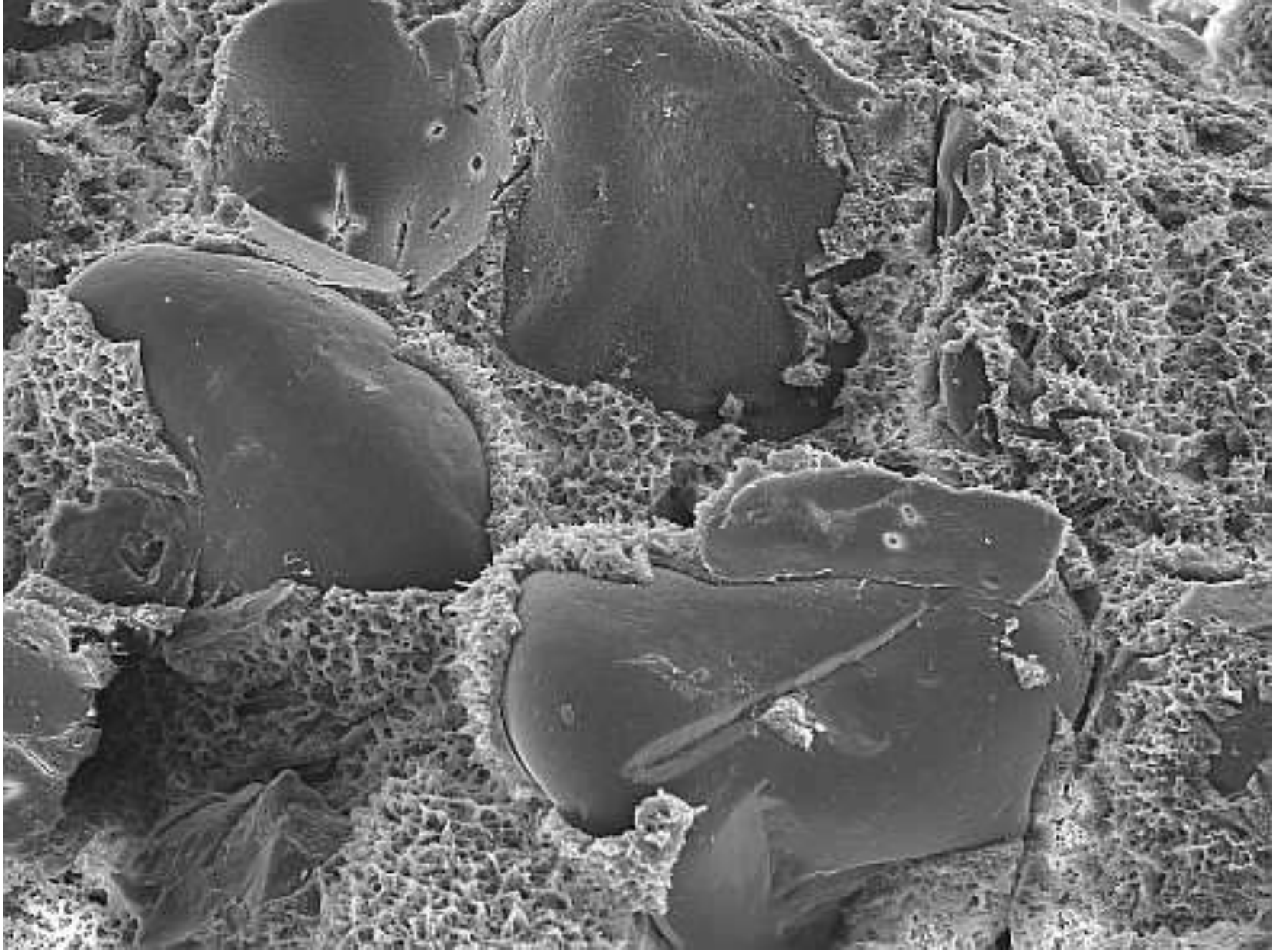
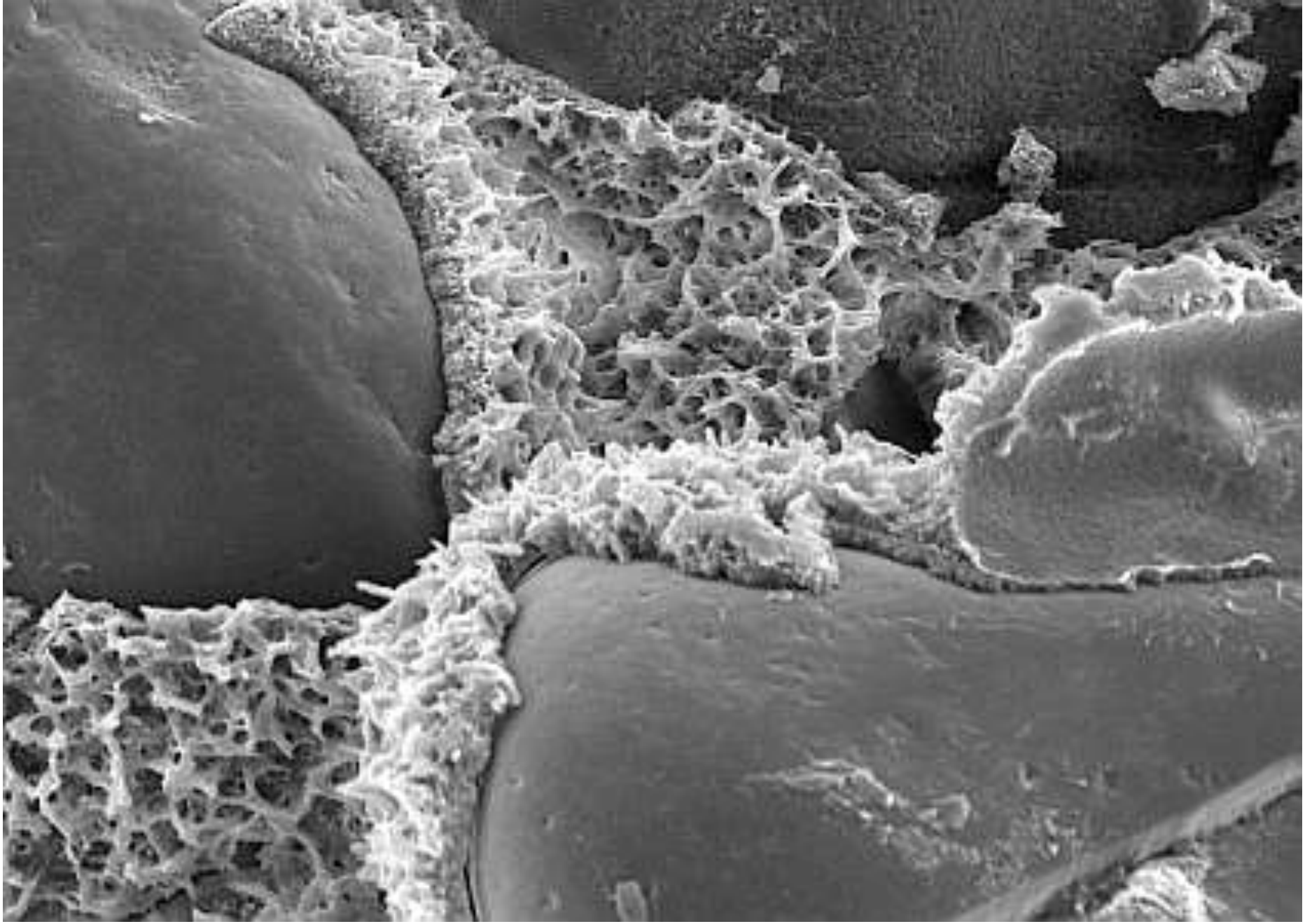


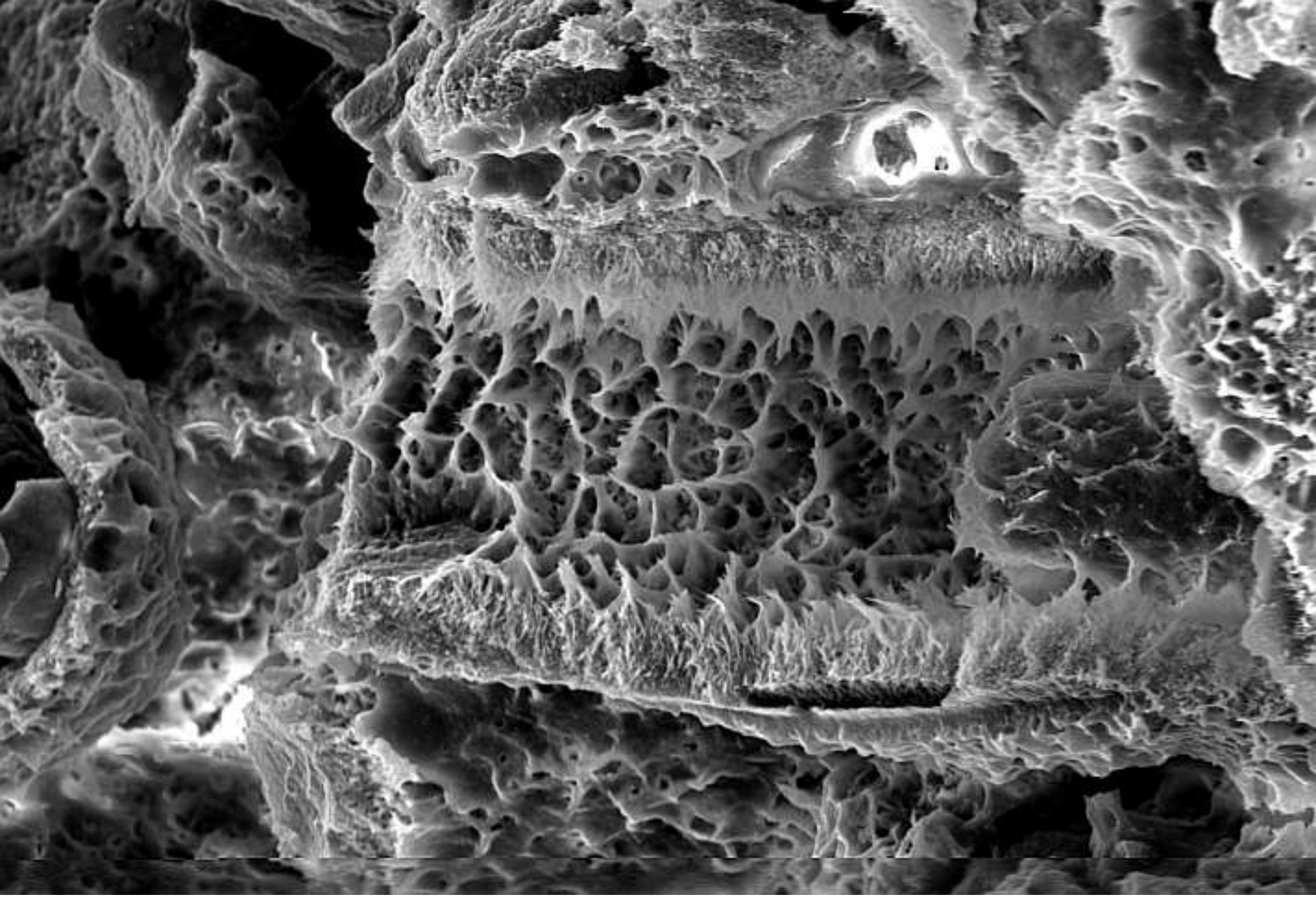
Glaucony rims - Sth Maslin Sand



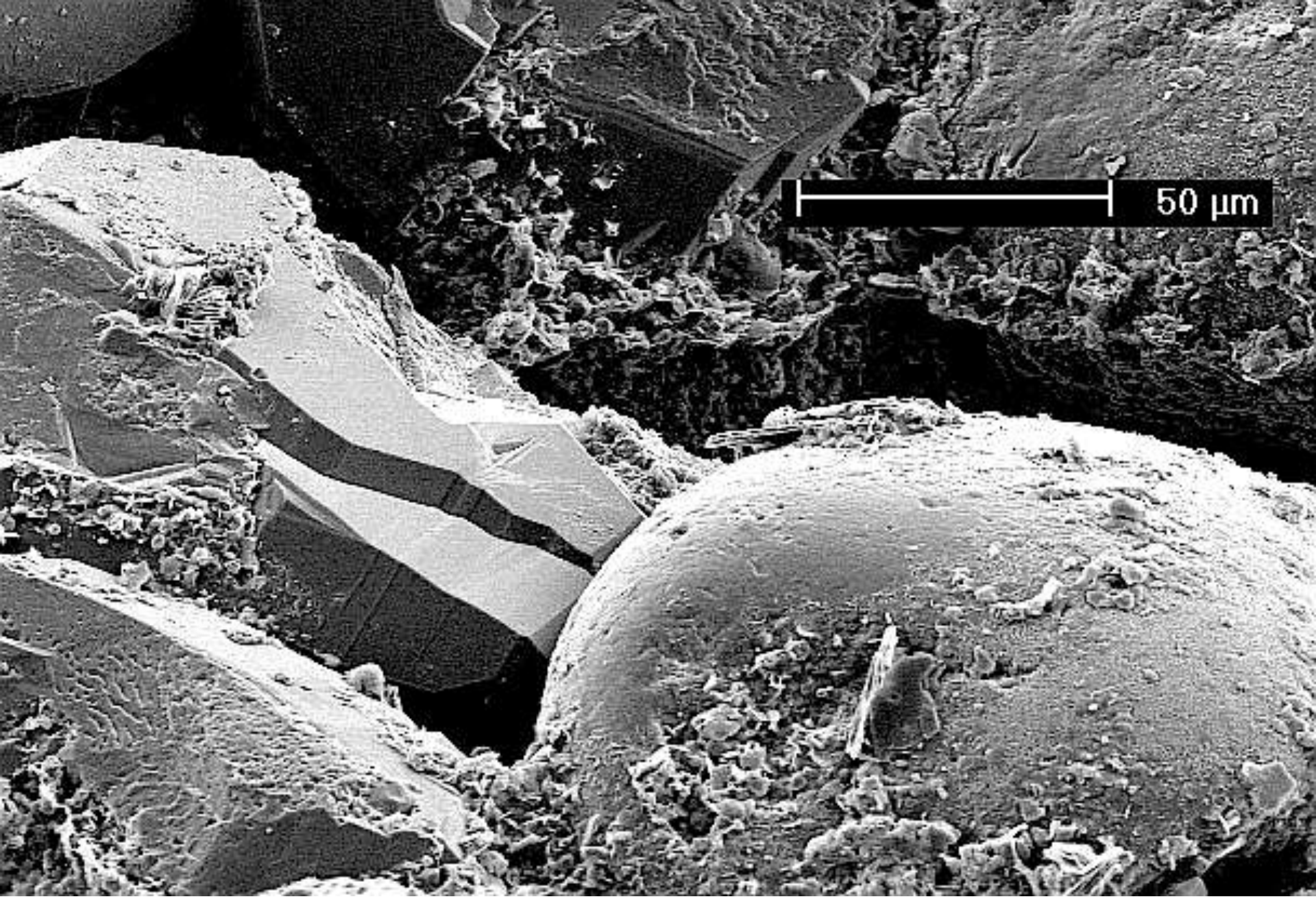
Glaucony rims - Sth Maslin Sand



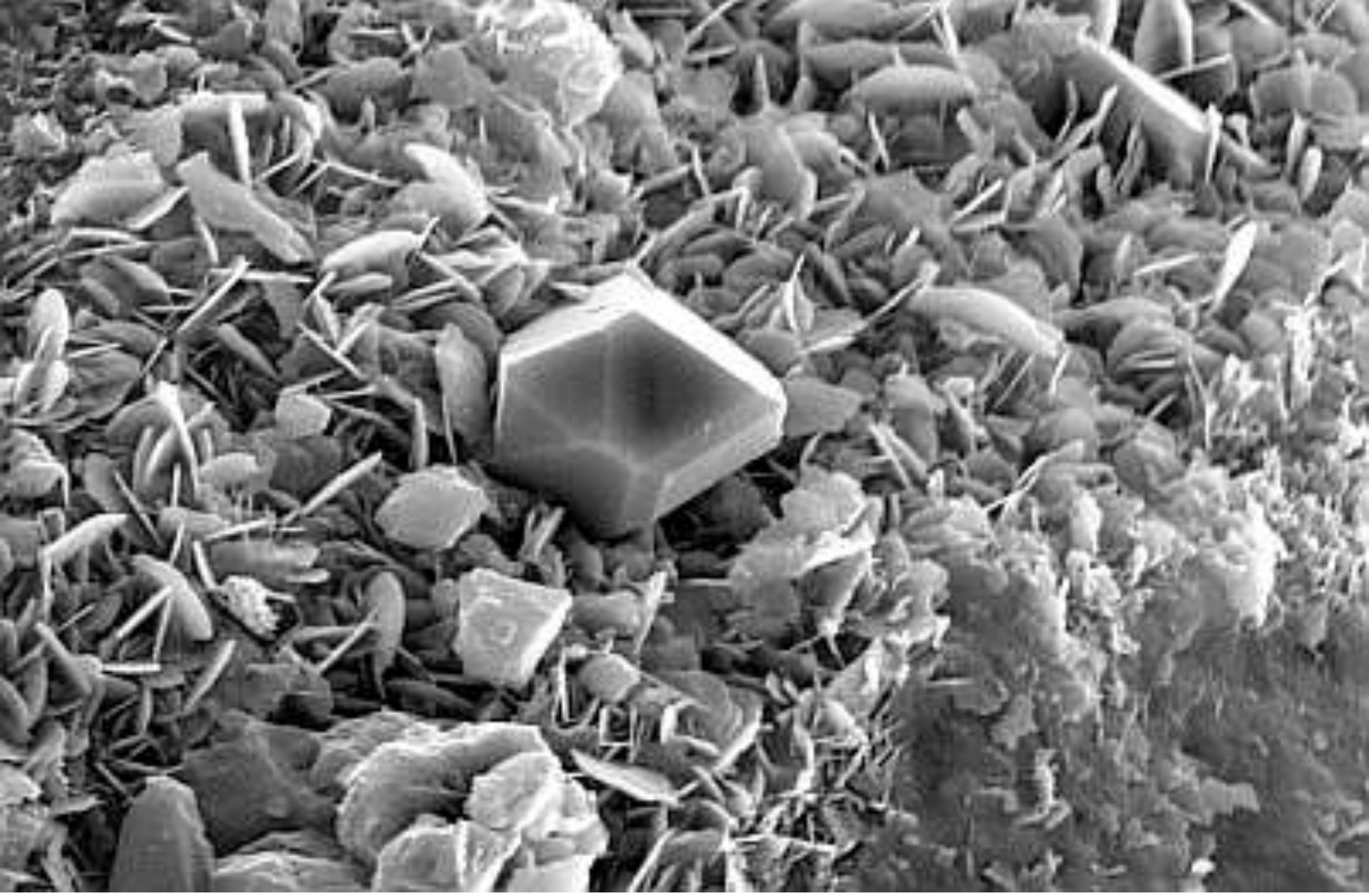
Glaucony rims - Sth Maslin Sand



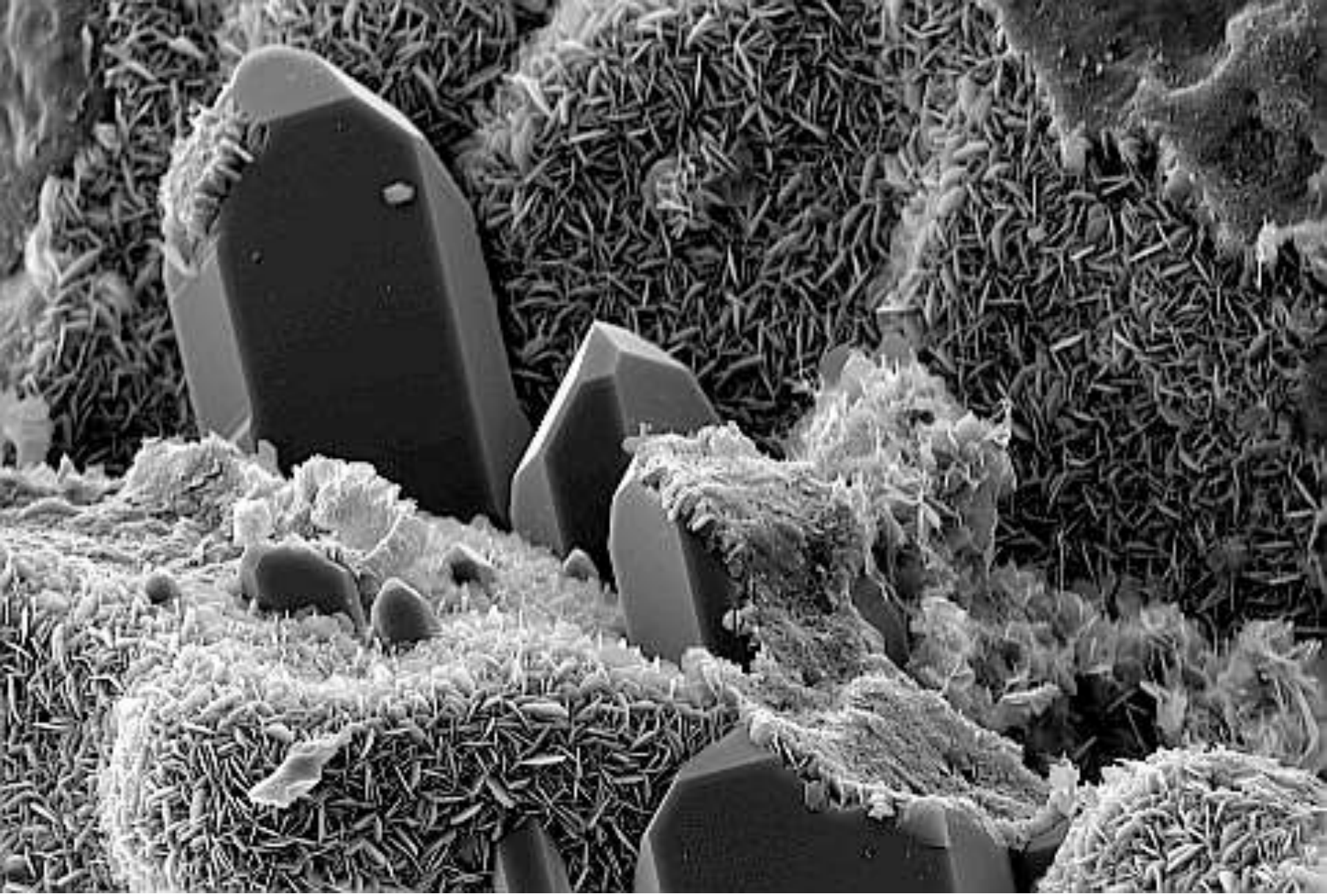
Micropores in glaucony - Sth Maslin Sand



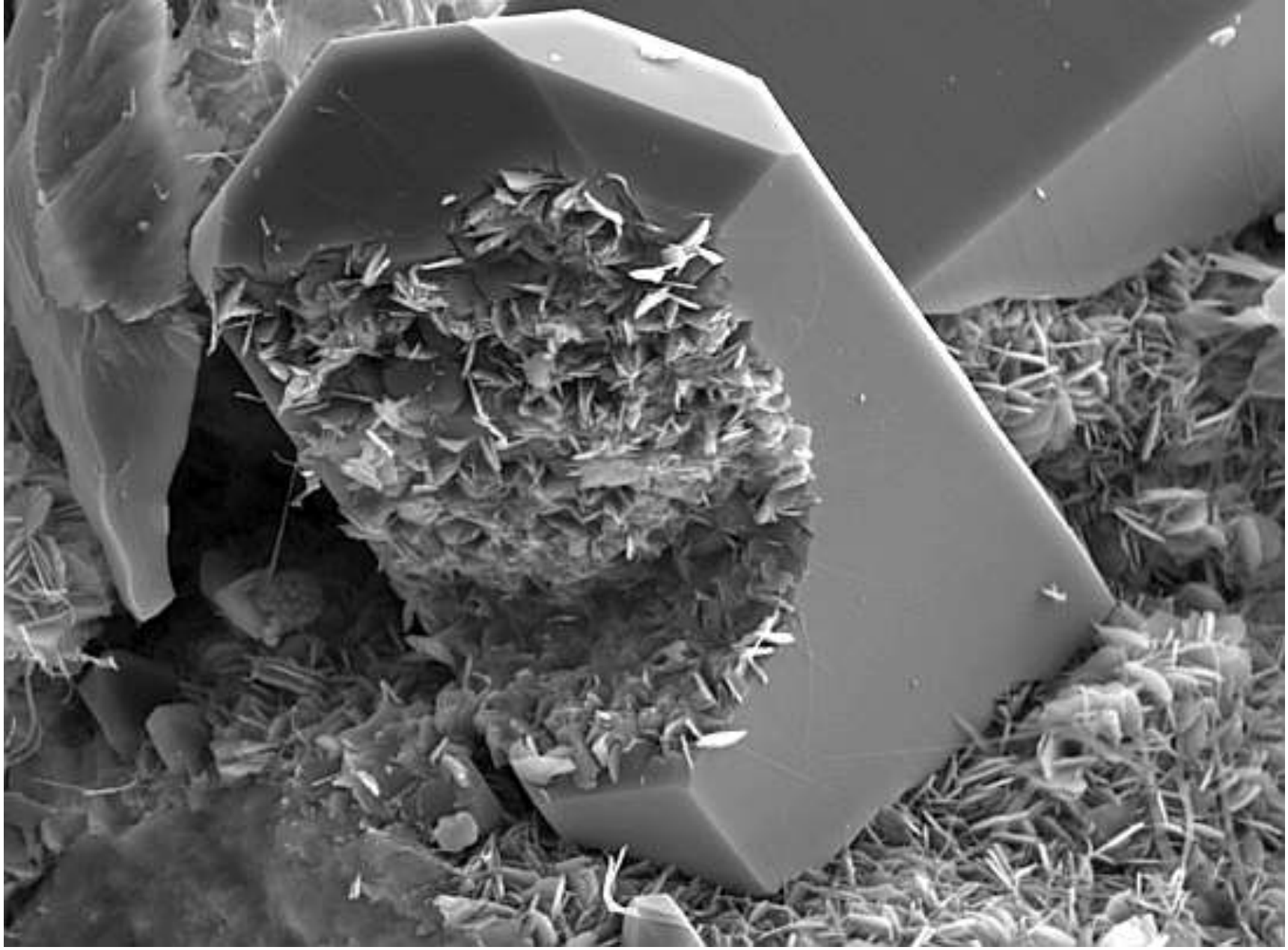
Rounded glaucony grain, overgrowth on quartz, later kaolin



Chlorite then quartz - Hyland Bay Fm



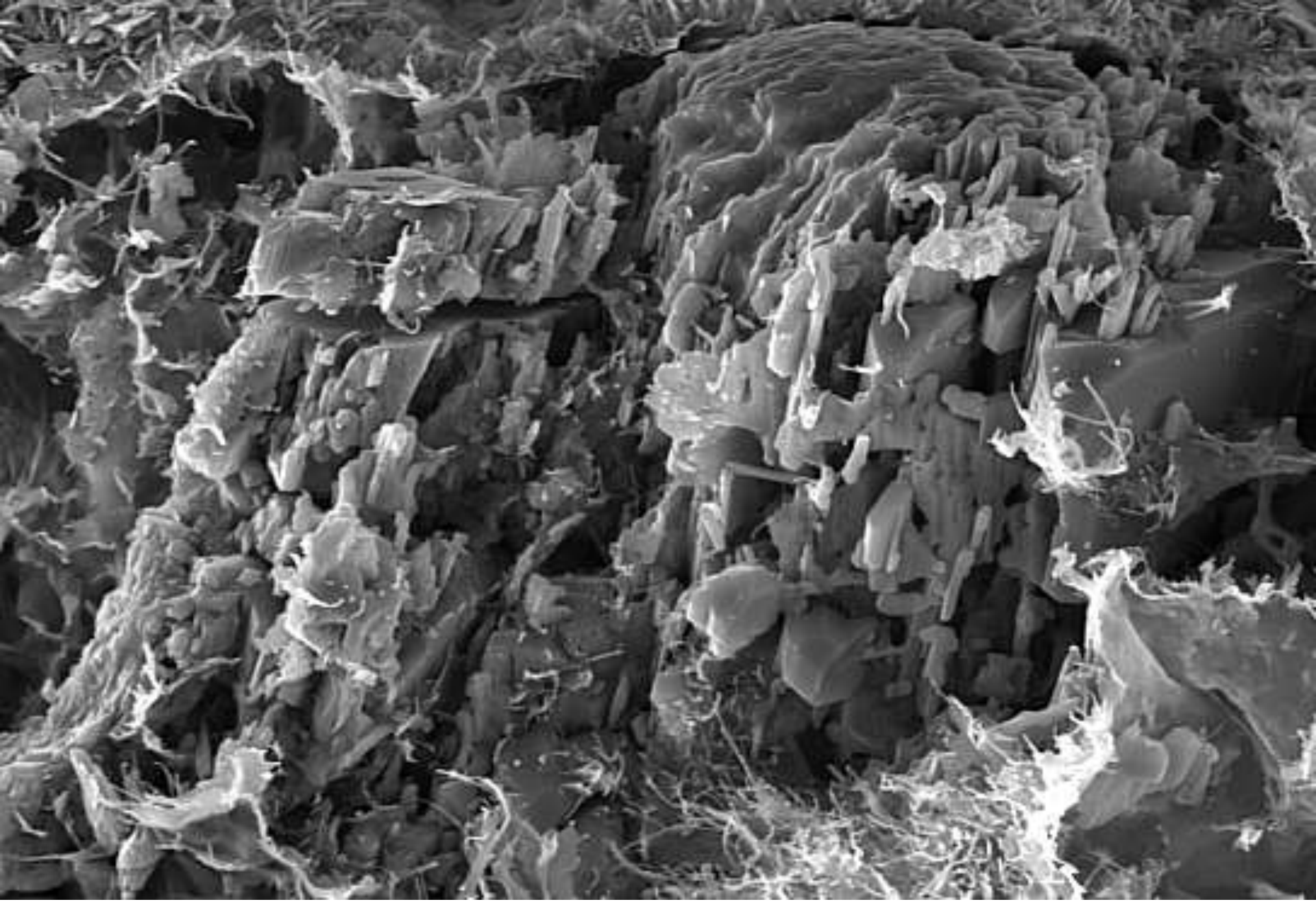
Quartz on chlorite - Hyland Bay Fm



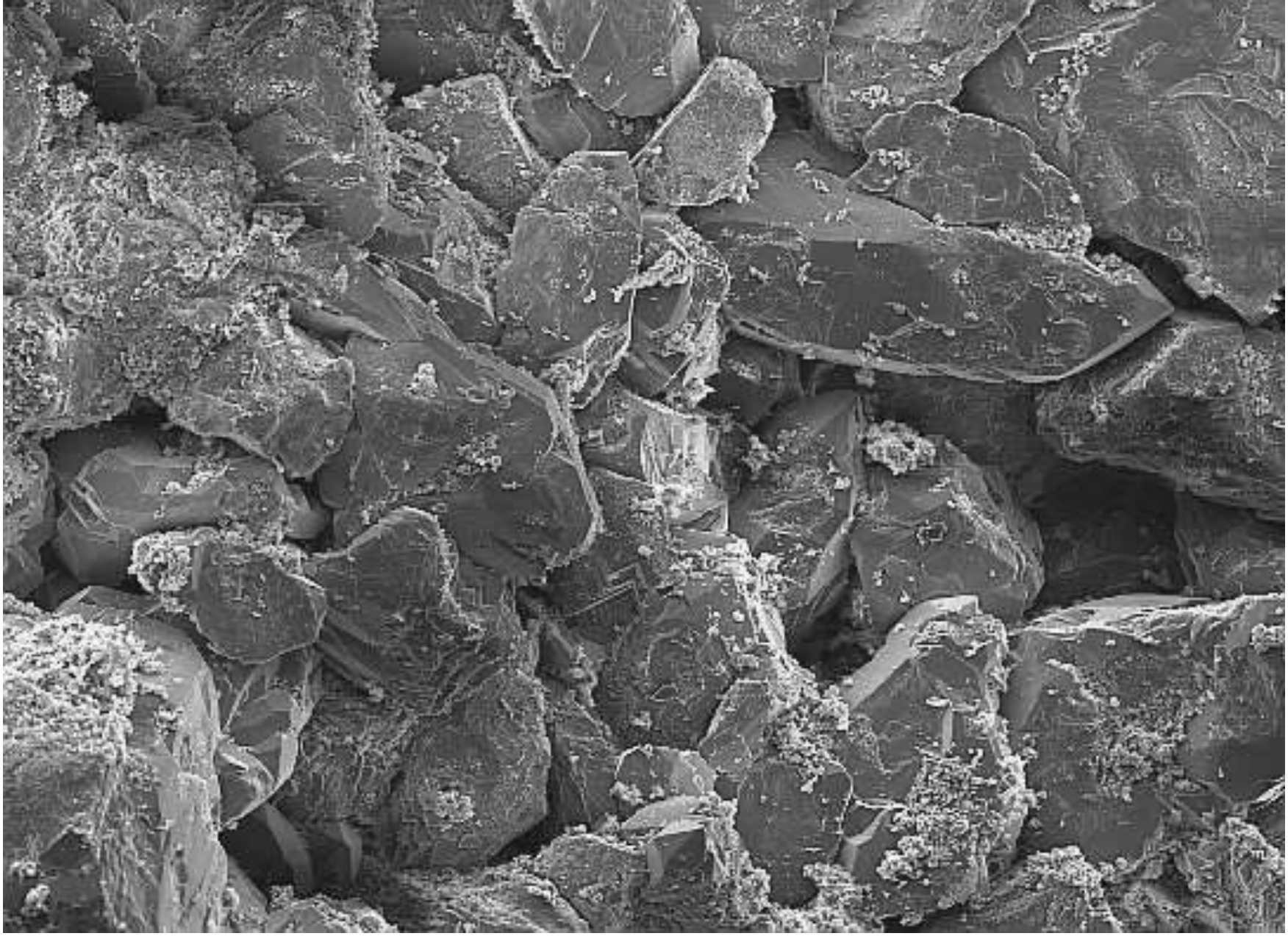
Quartz incorporating earlier chlorite - Hyland Bay Fm

Quartz on chlorite - Hyland Bay Fm

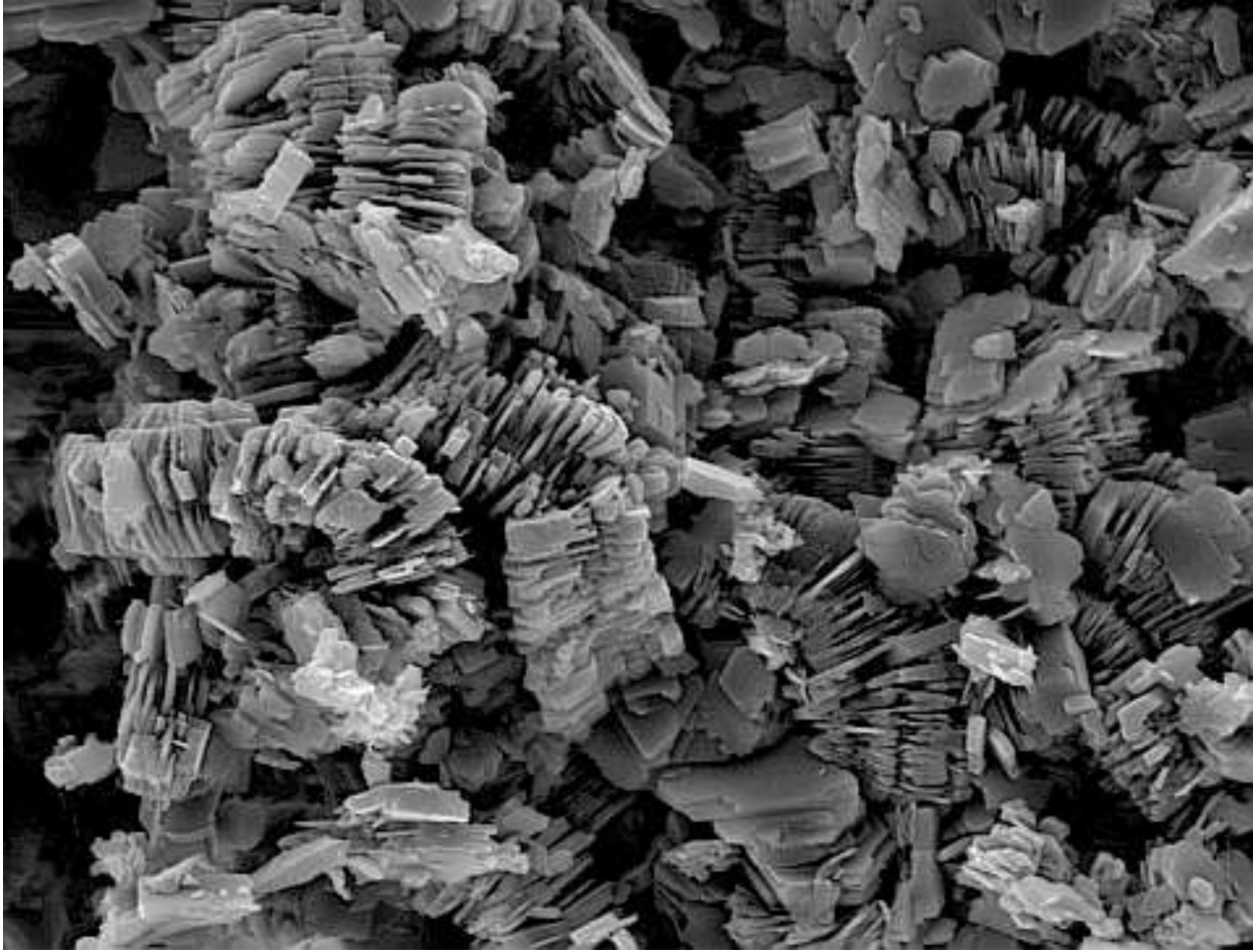
Chlorite as plates and rosettes - Hyland Bay Fm



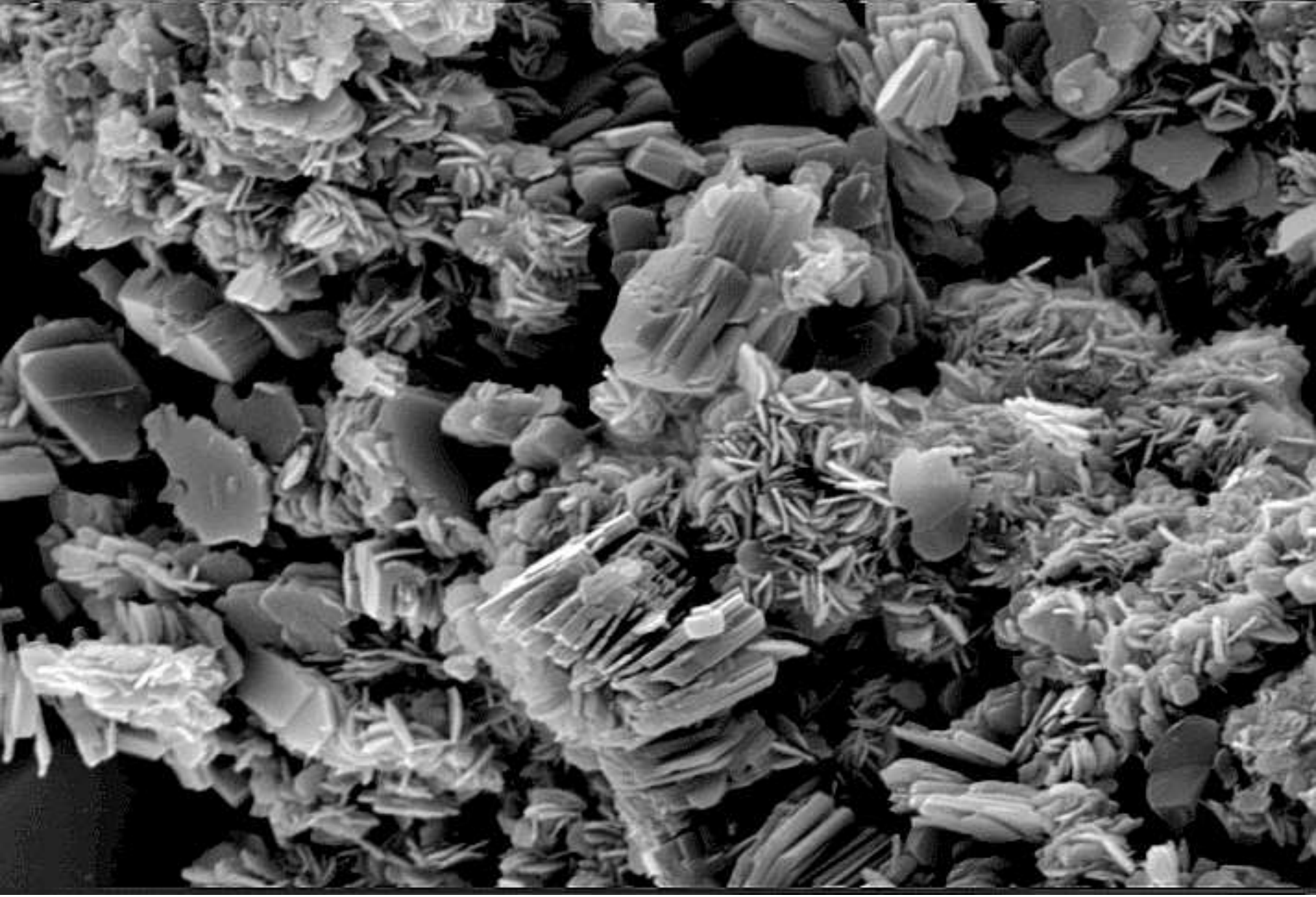
Dissolved feldspar with kaolin plates and illite fibres - Hyland Bay Fm



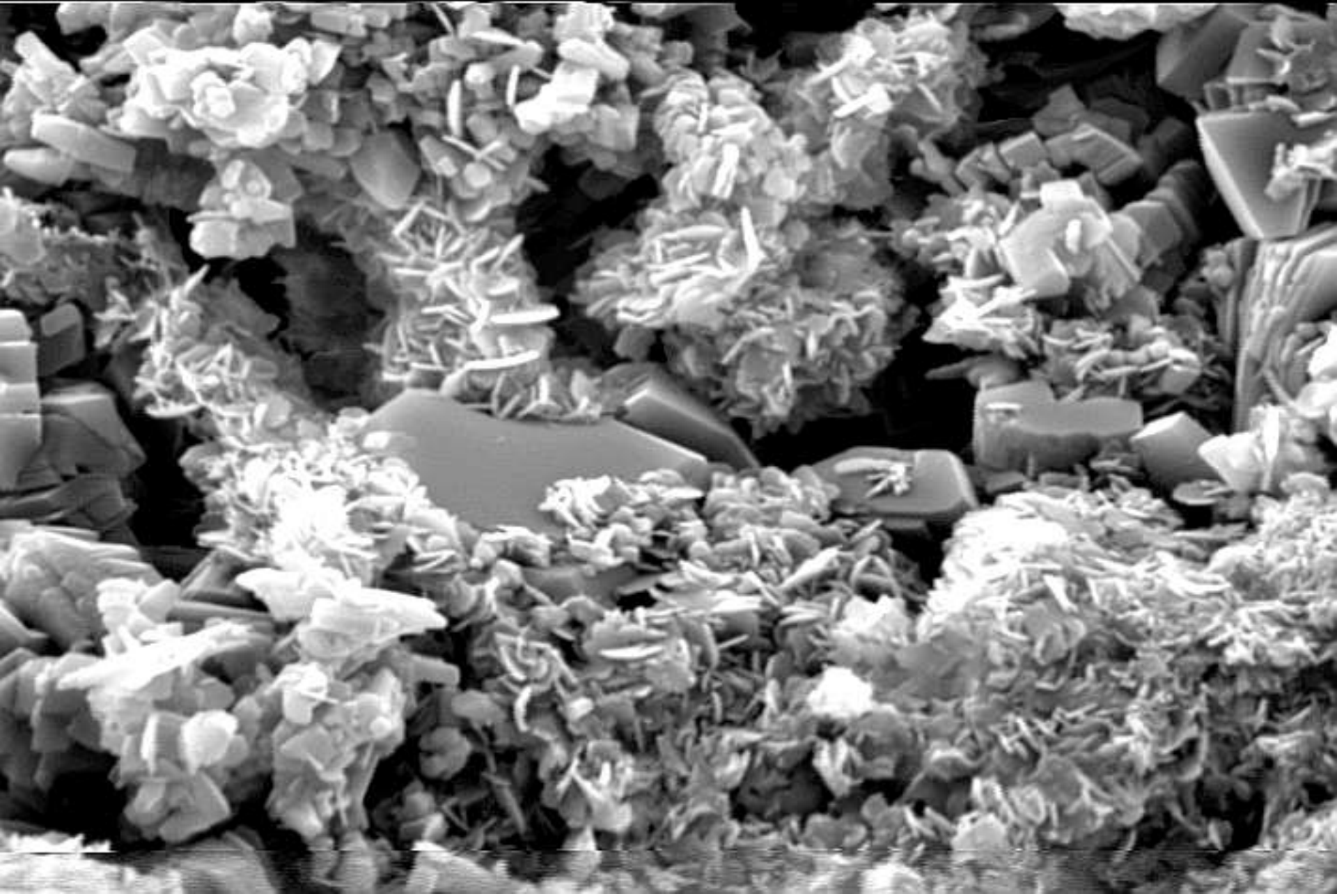
Quartz overgrowths - Perth Basin



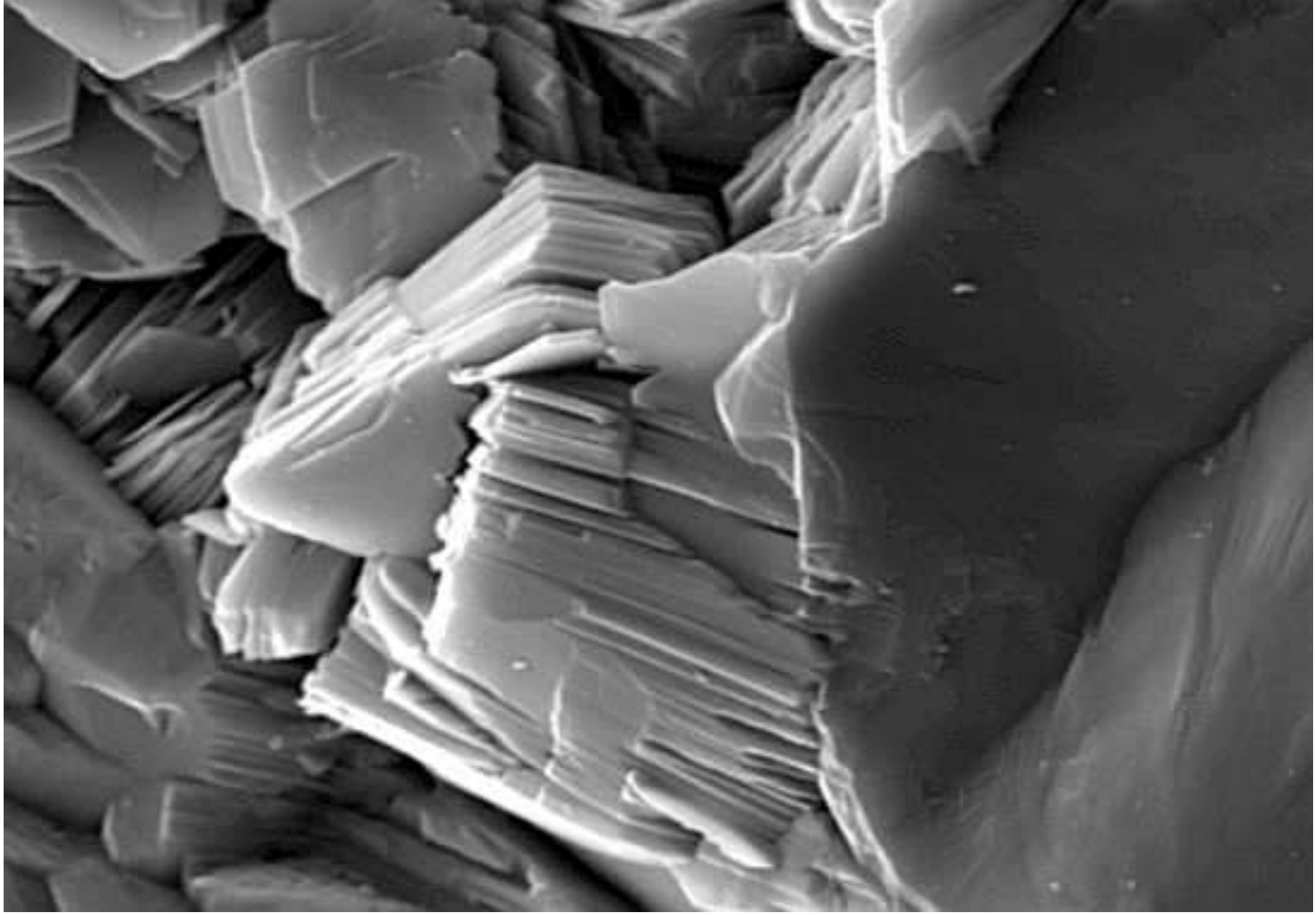
Kaolin booklets - Perth Basin



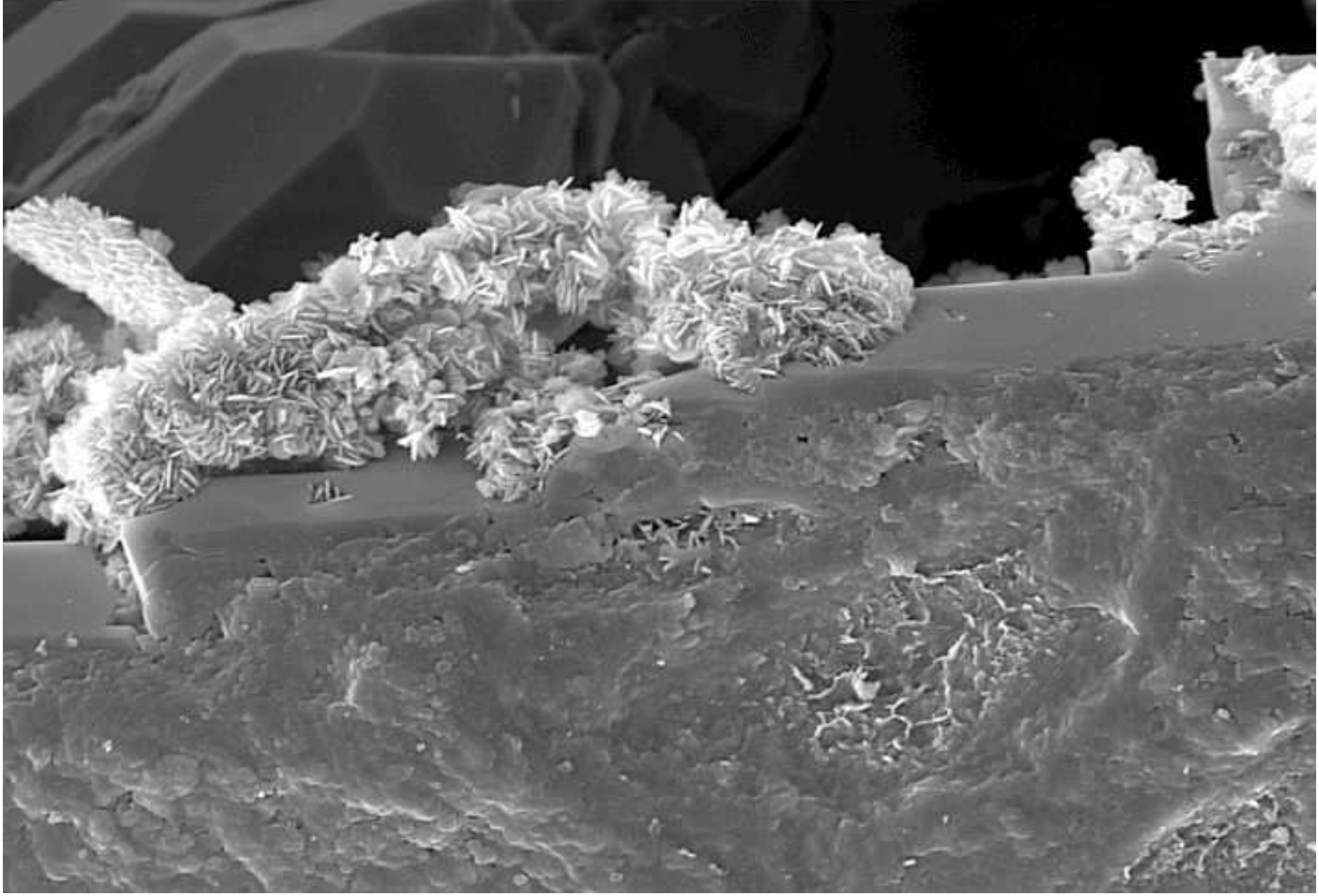
Kaolin and chlorite - Perth Basin



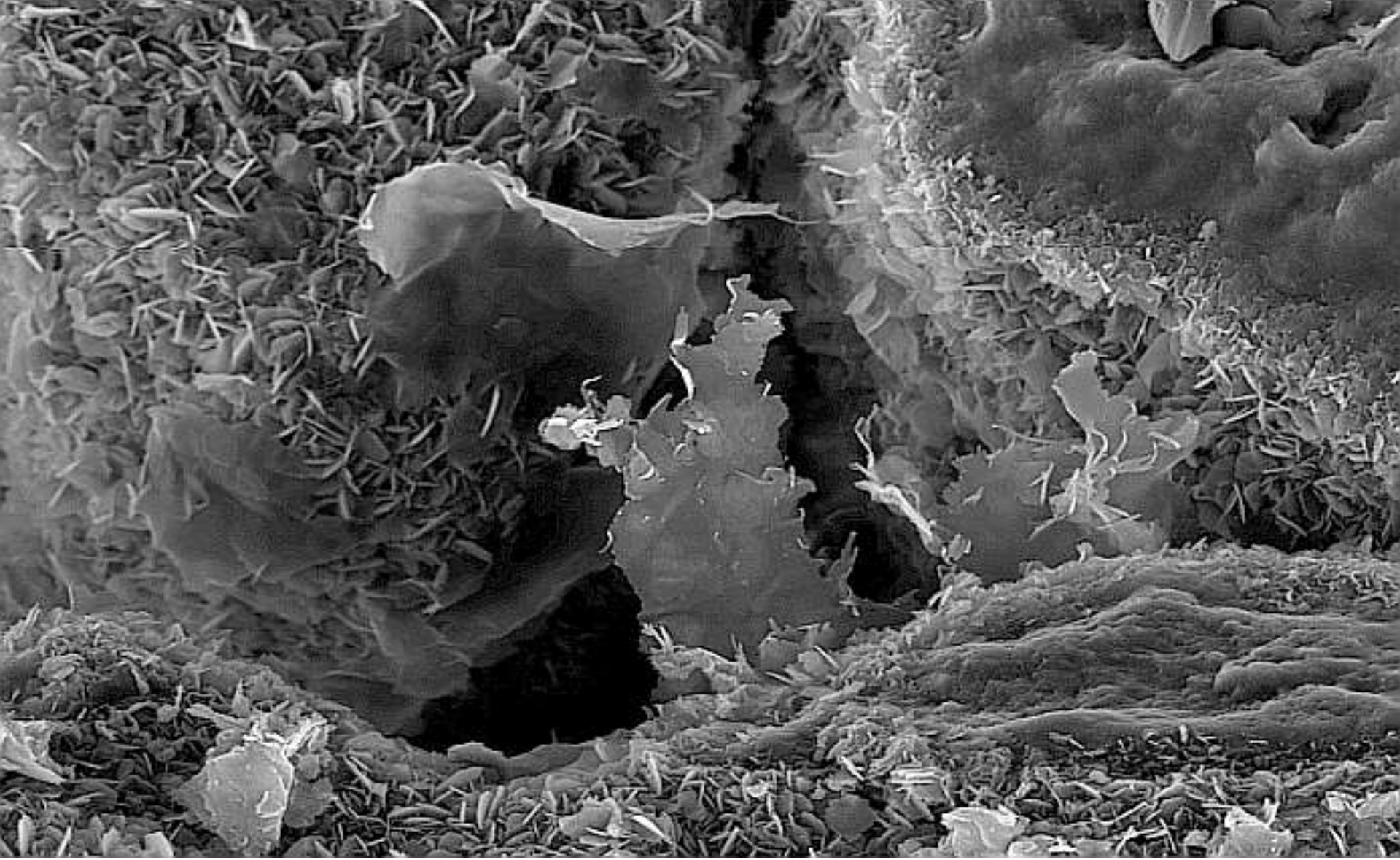
Chlorite on kaolin - Perth Basin



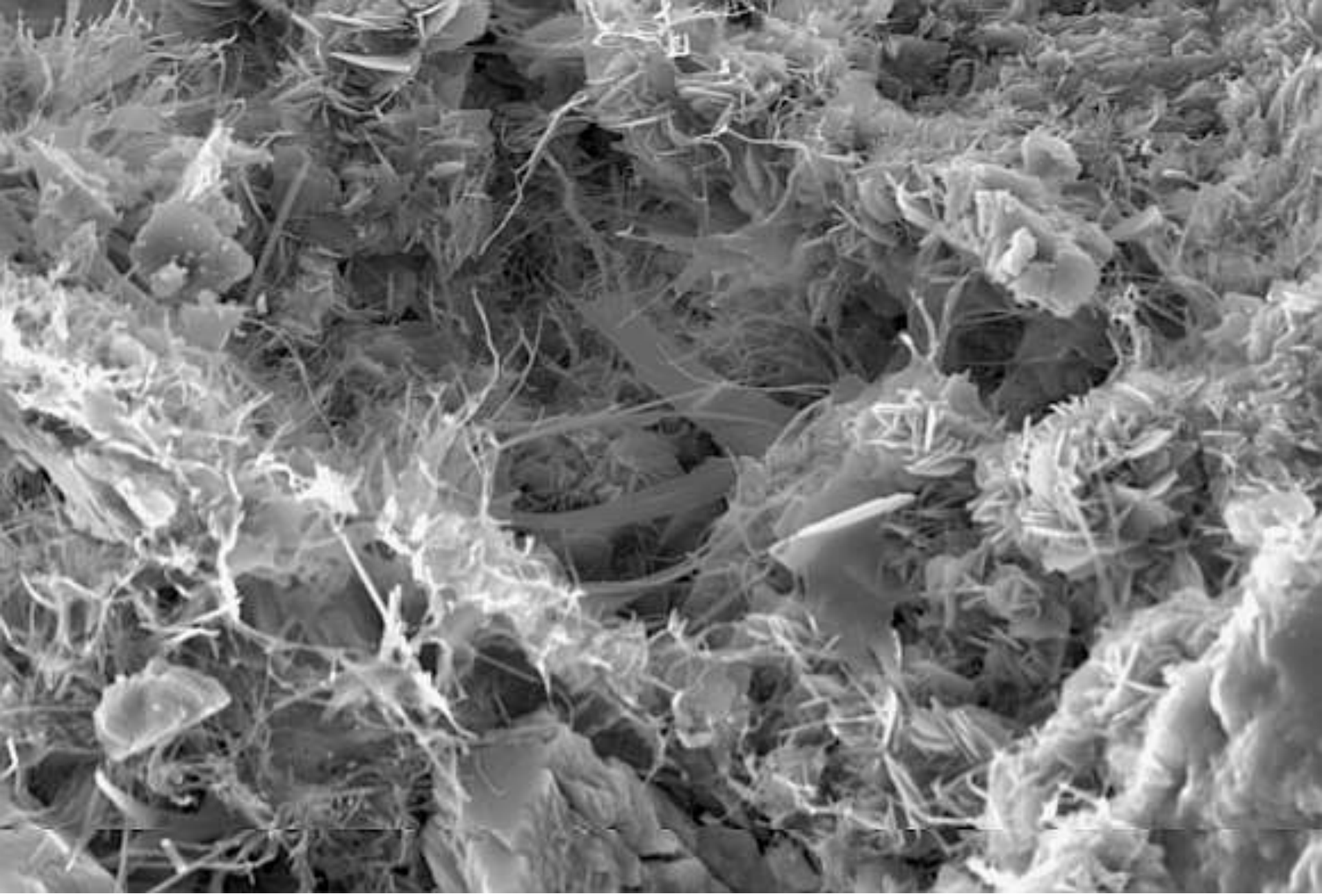
Cogenetic quartz and kaolin - Perth Basin



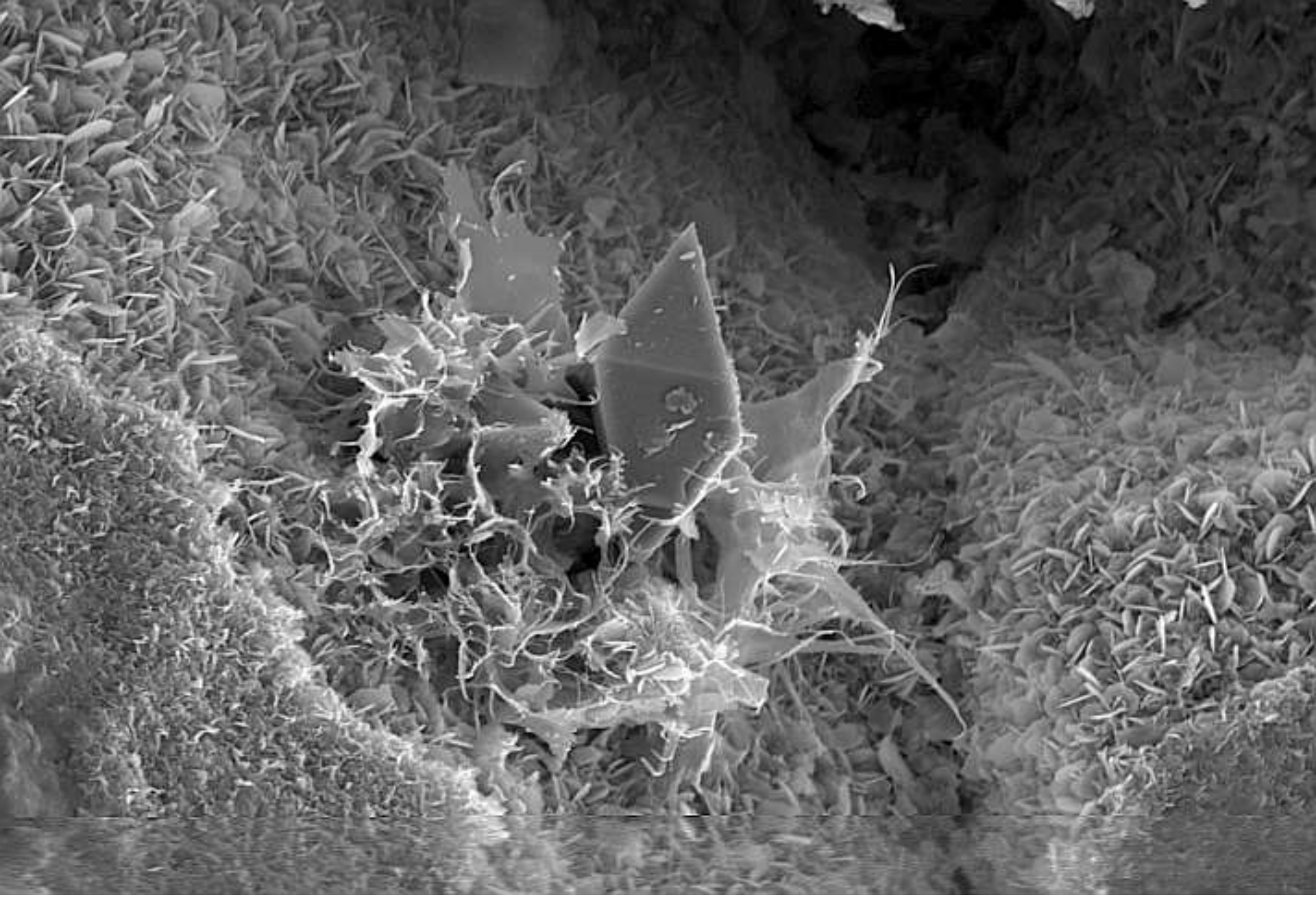
Chlorite intergrown with quartz - Perth Basin



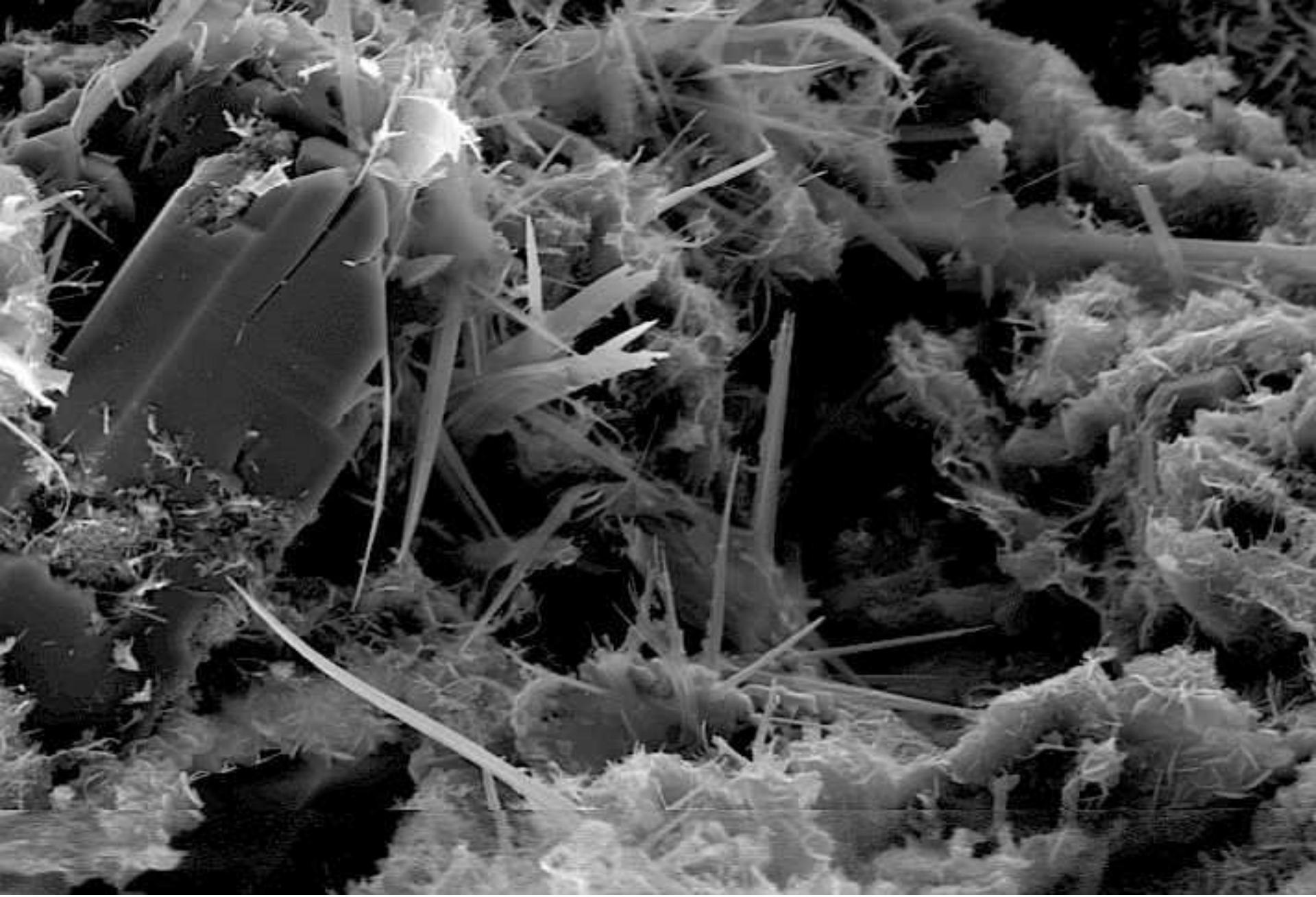
Illite flakes on chlorite - Hyland Bay Fm



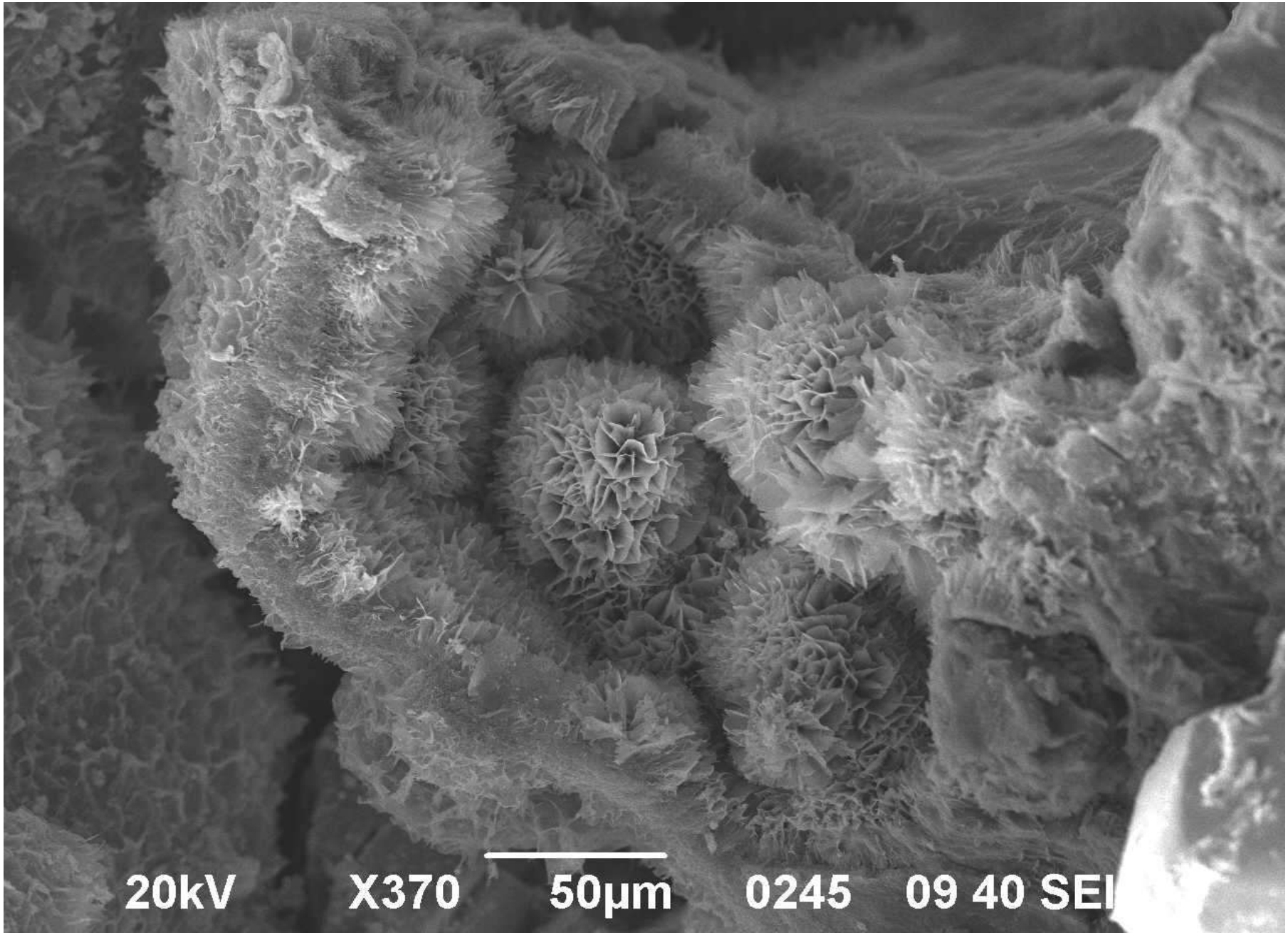
Bridging fibrous illite on chlorite and kaolin - Hyland Bay Fm



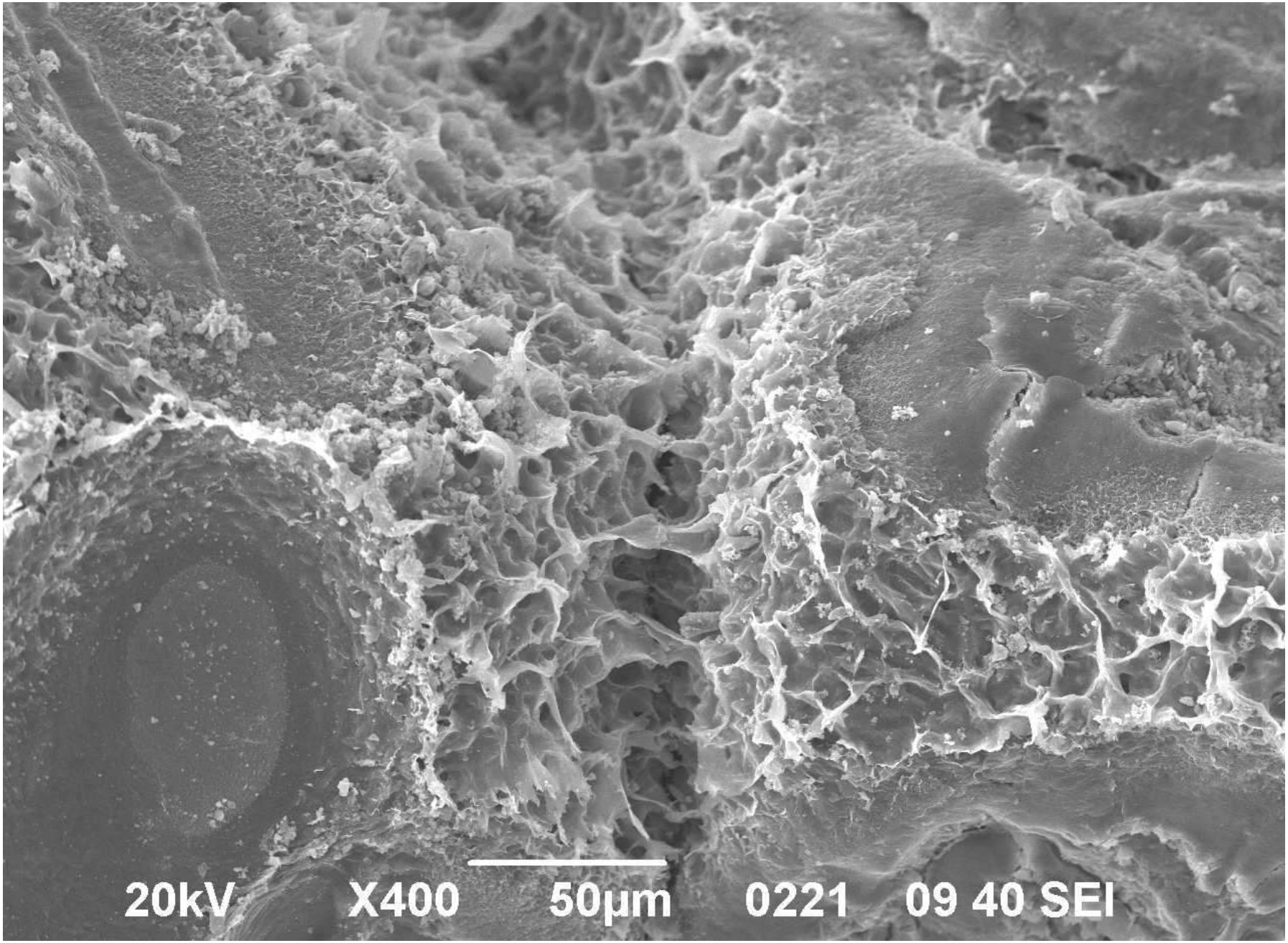
Anatase in nest of illite on chlorite - Hyland Bay Fm



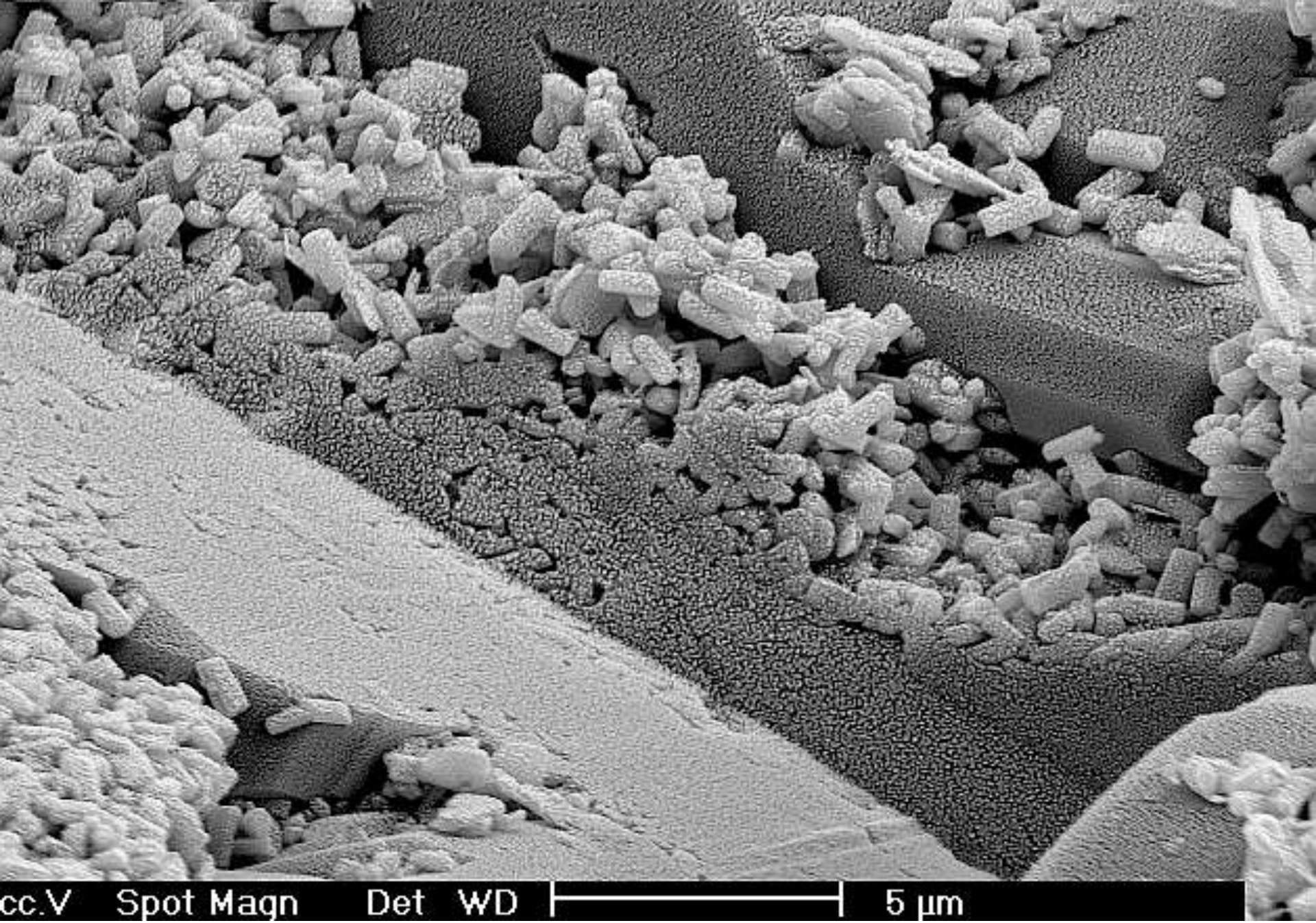
Illite fibres (small fibres have collapsed on drying) - Hyland Bay Fm



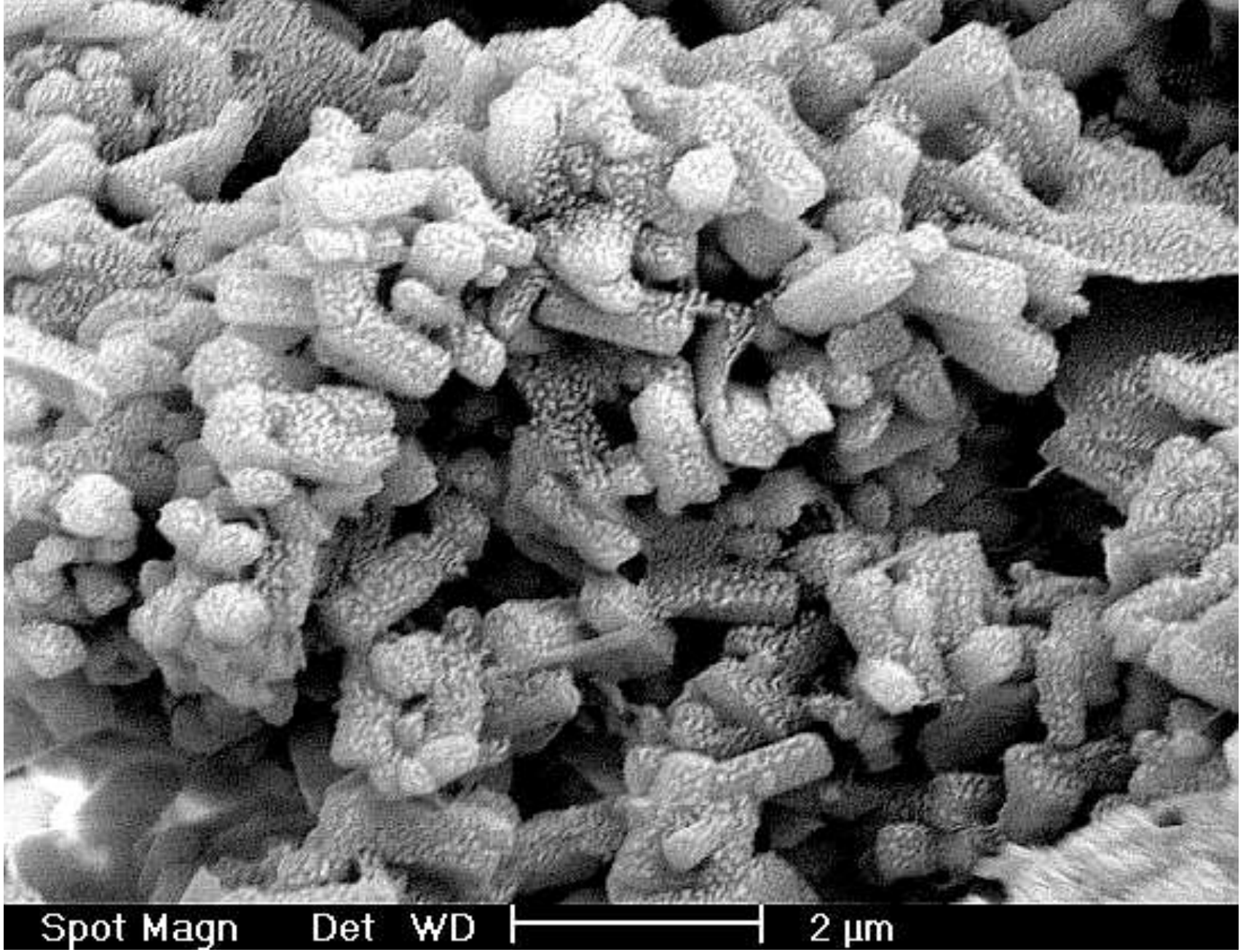
Smectite grows on dissolved grains



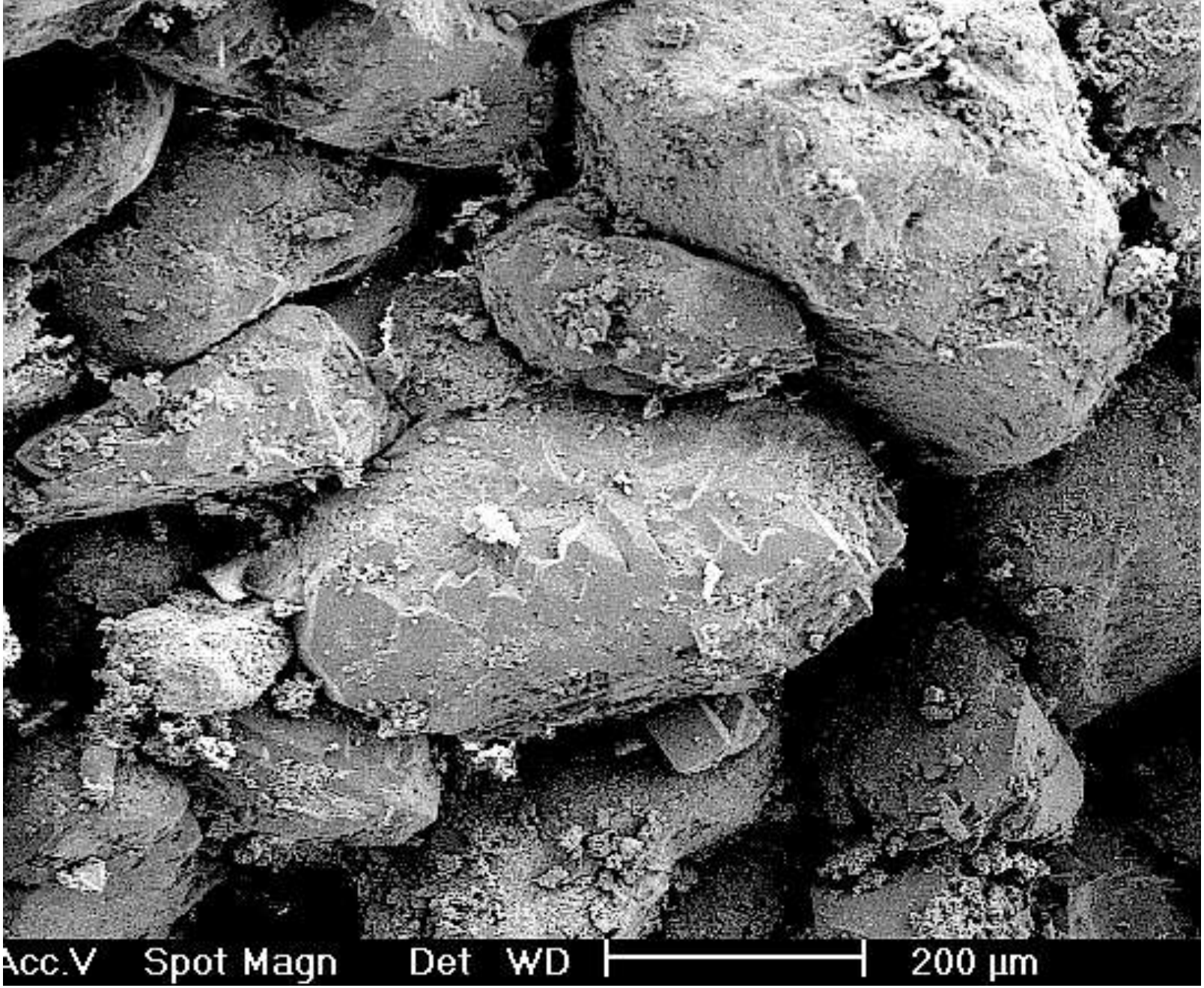
Pore-bridging smectite



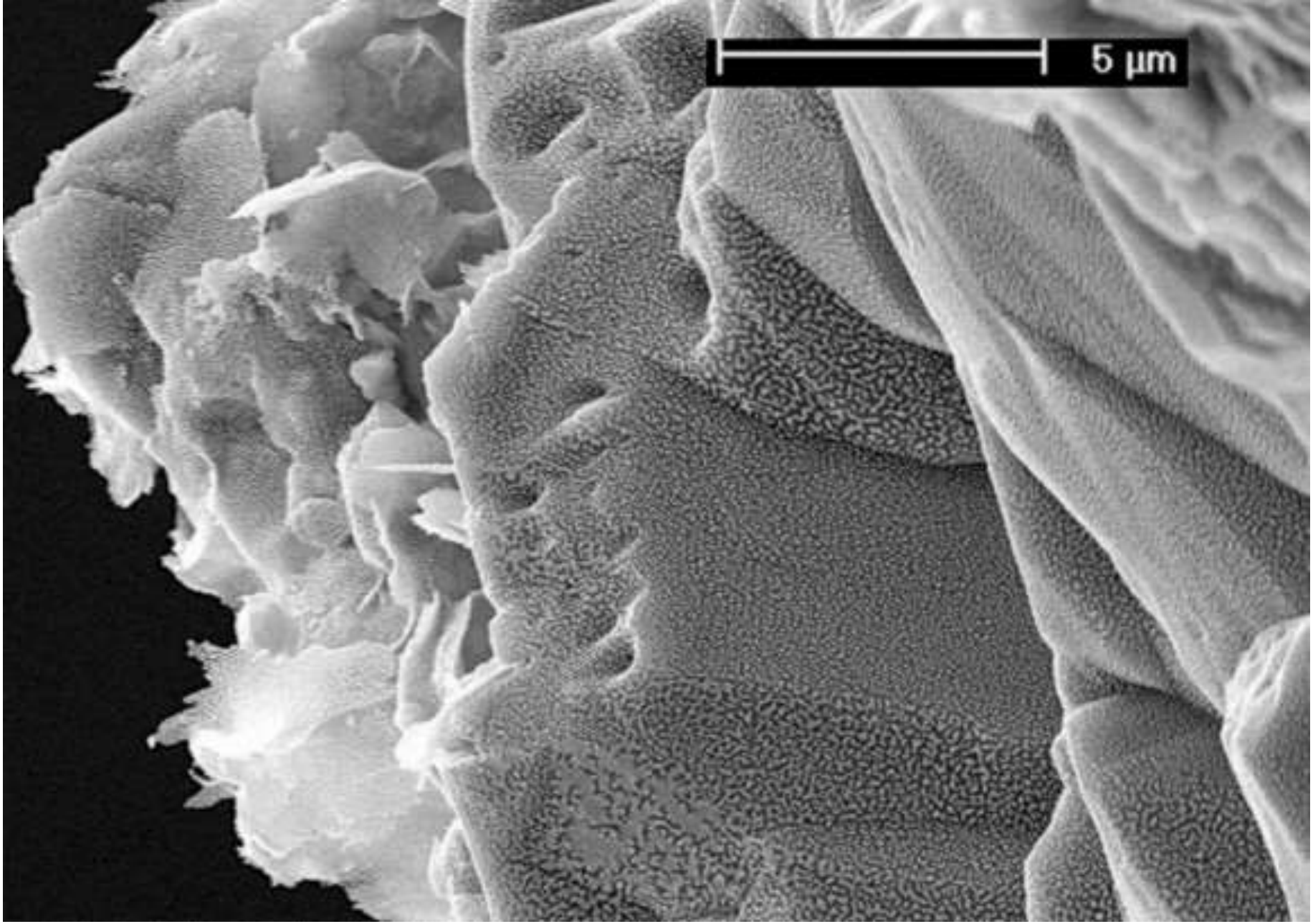
Prisms of Ca zeolite molded around pyrite



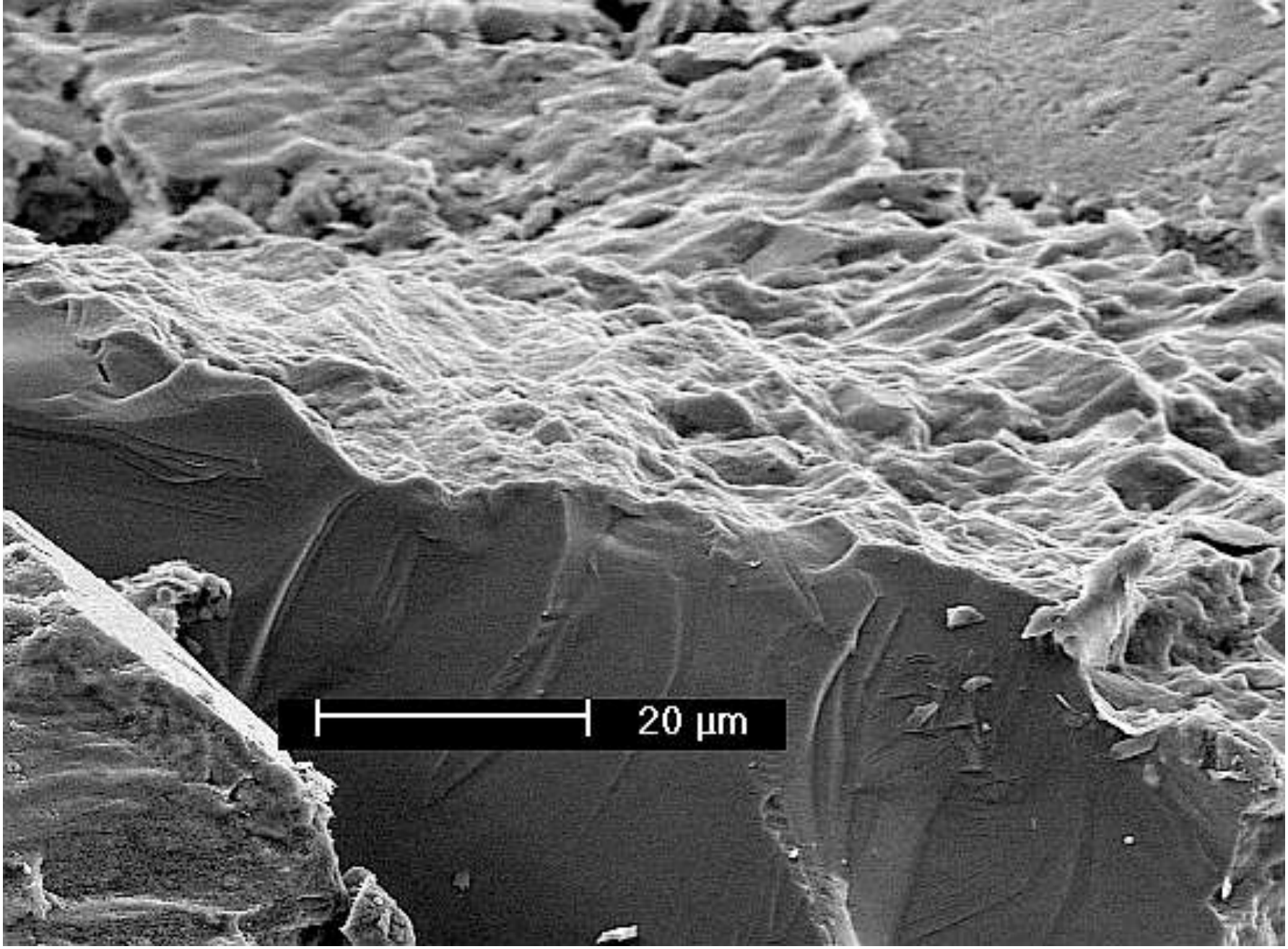
Prisms of Ca zeolite



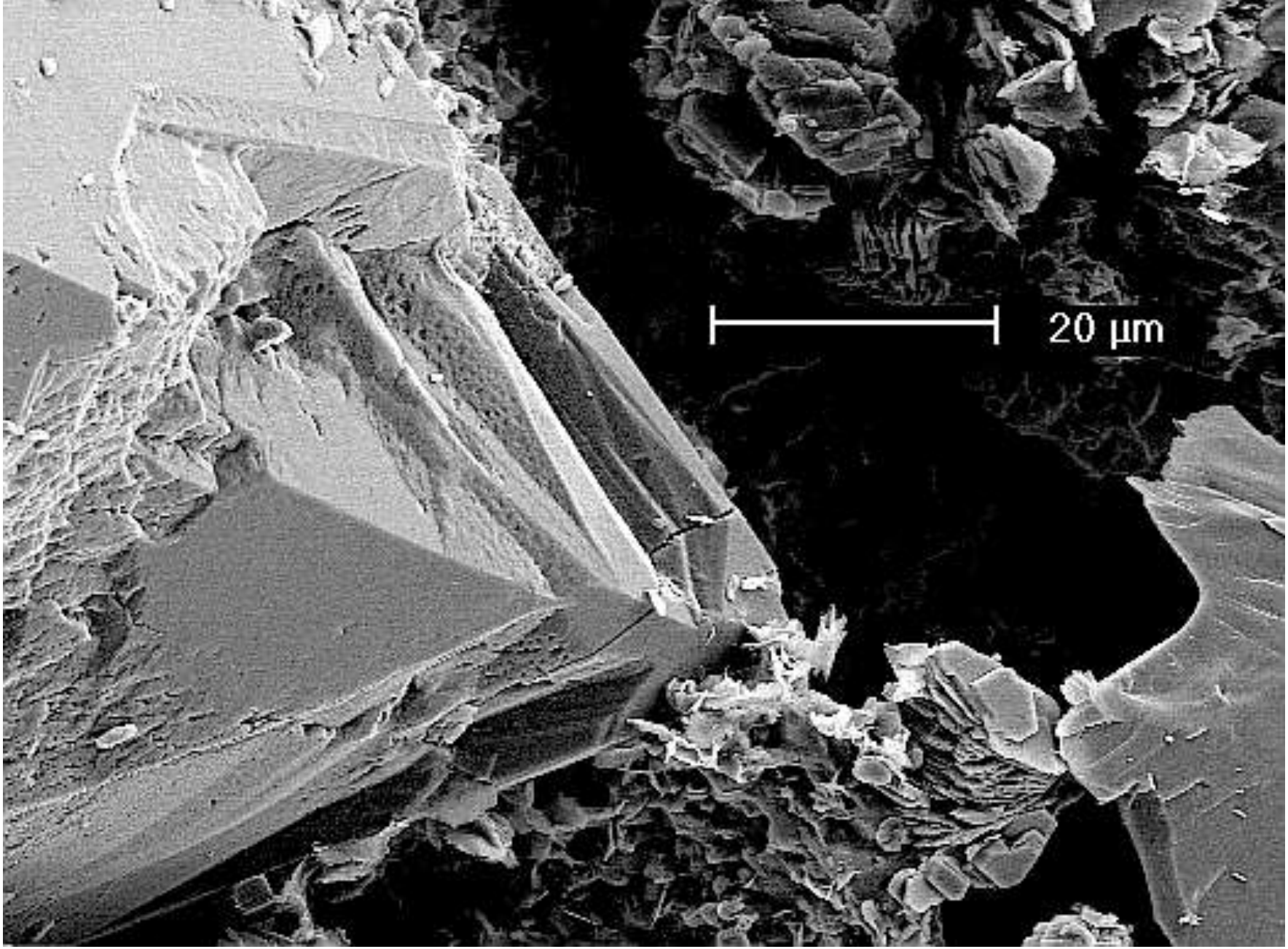
Quartz arenite with silica cement, pyrite and late zeolite



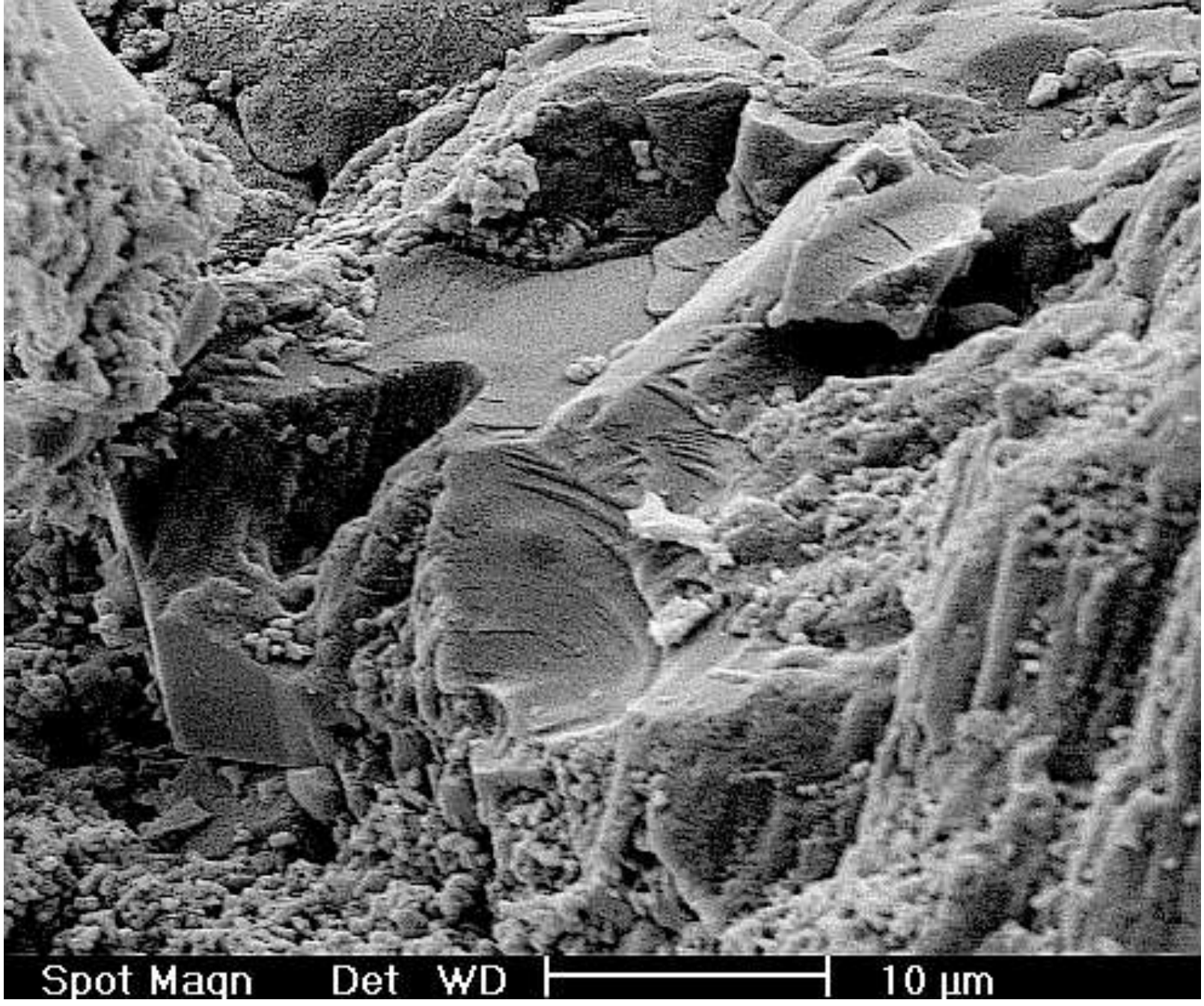
Triangular dissolution pits on quartz (irregular coated surface)



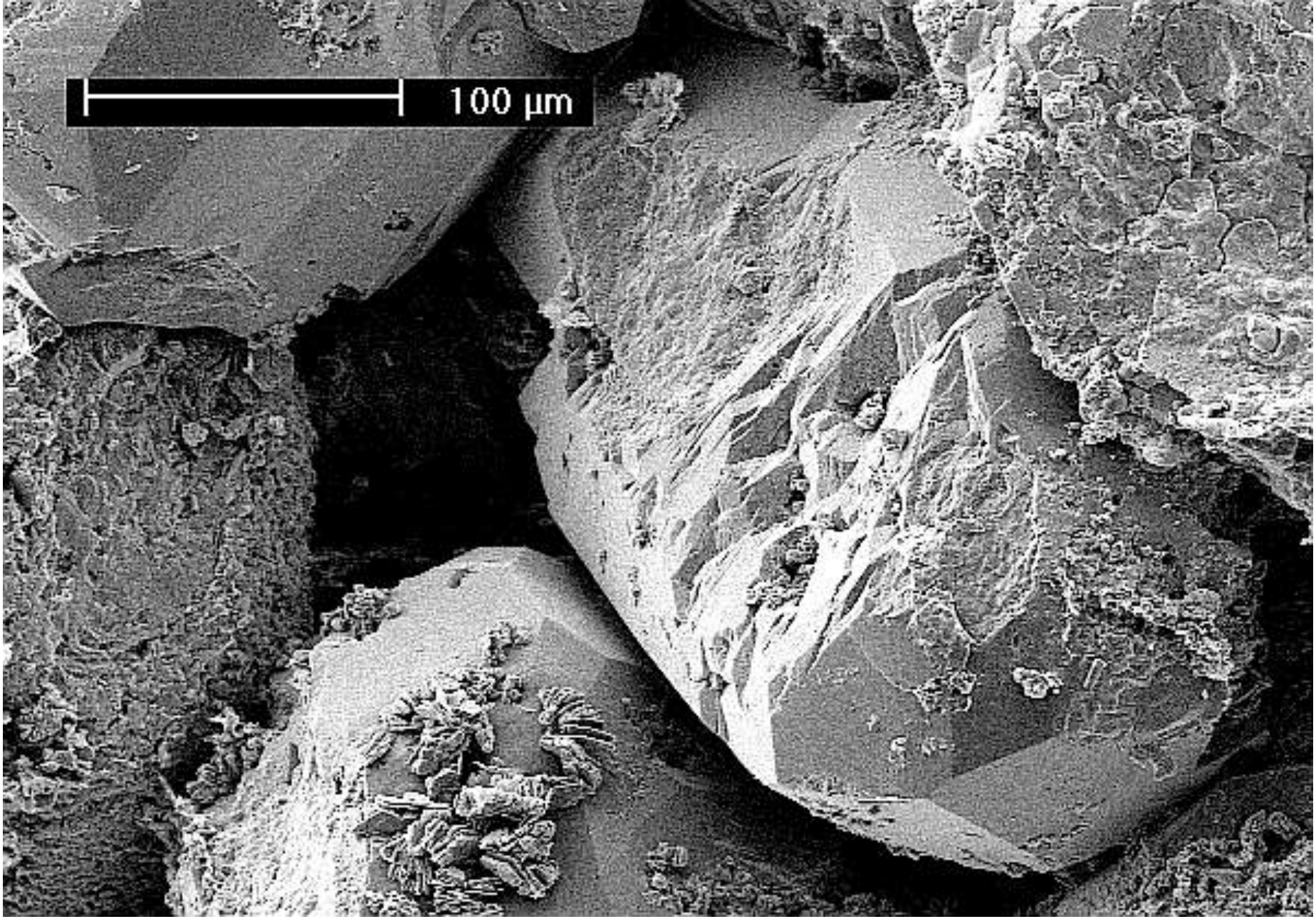
Deeply etched quartz surface (conchoidal fracture on side of grain)



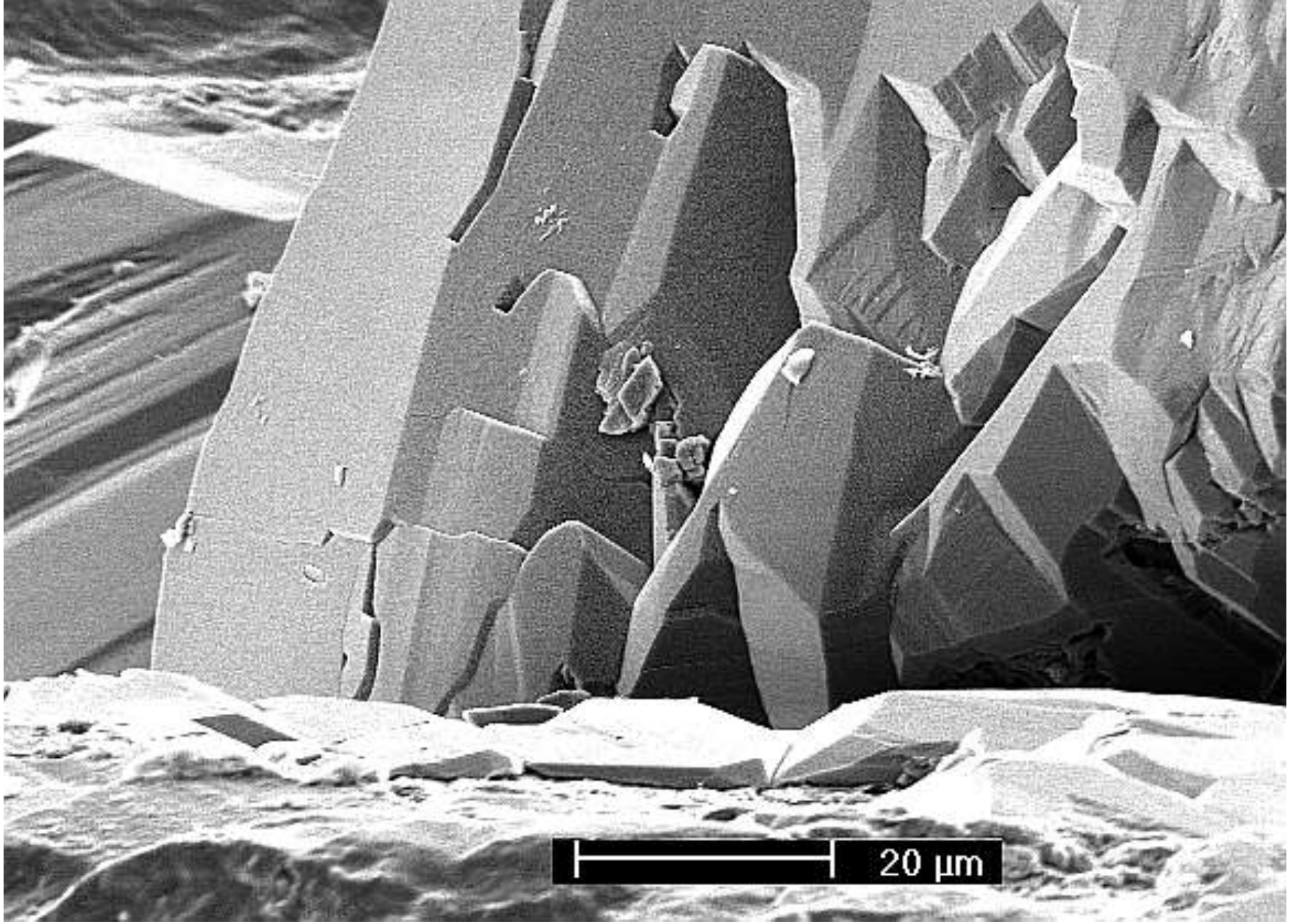
Triangular dissolution pits on quartz overgrowths, kaolin in pores



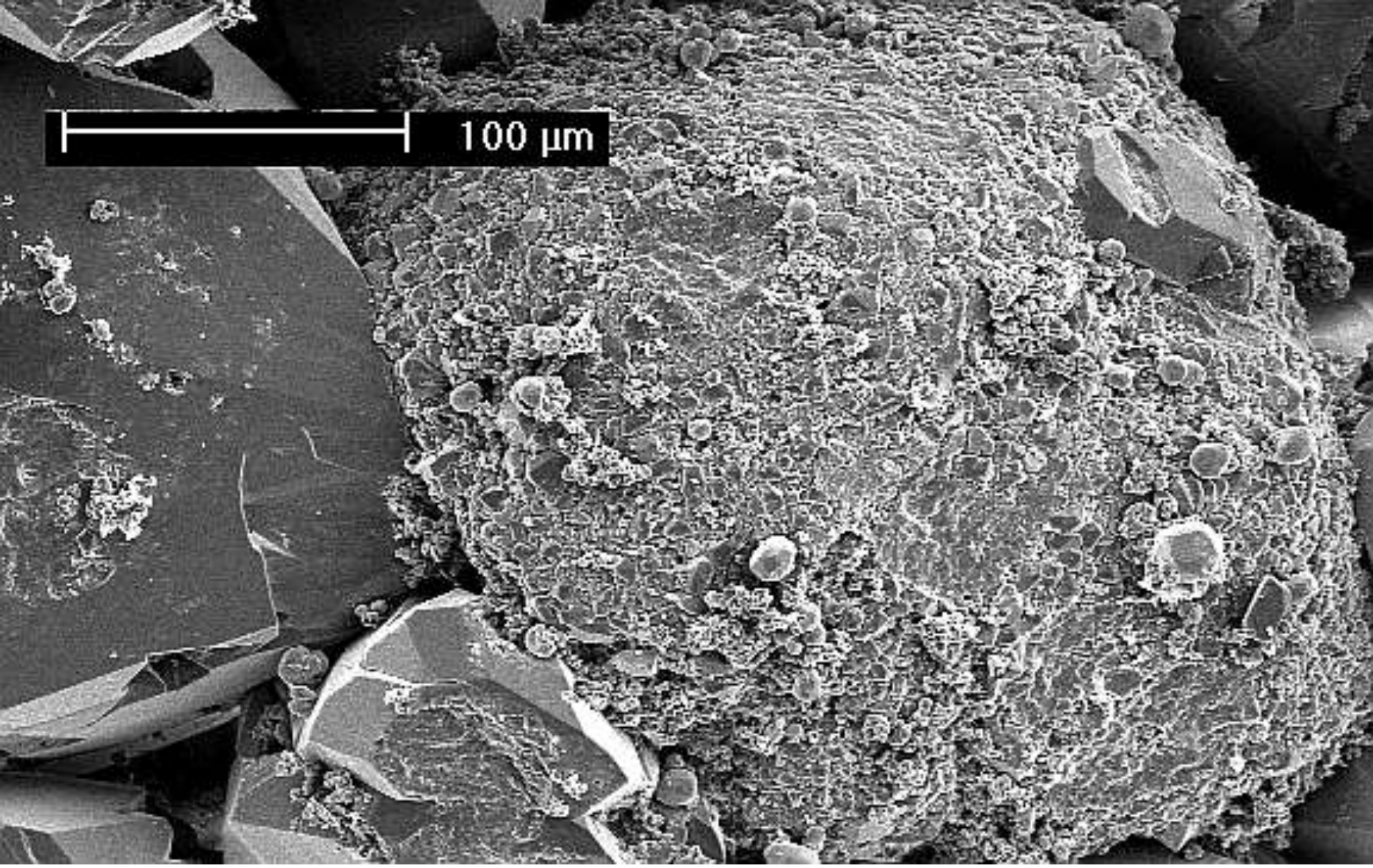
Deeply etched quartz with later coating of zeolite prisms



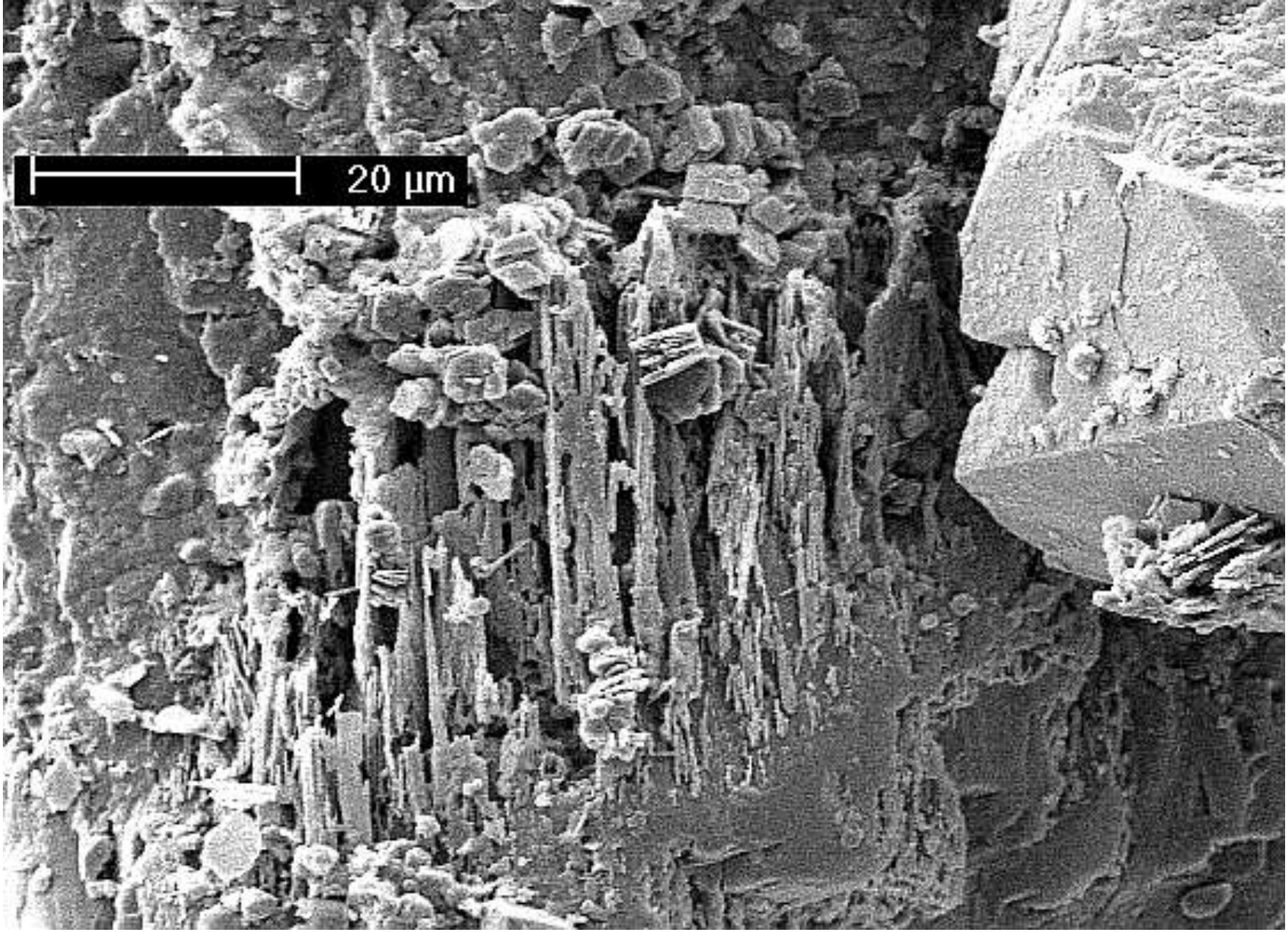
Quartz with overgrowth, dissolved feldspar (left) plus kaolin



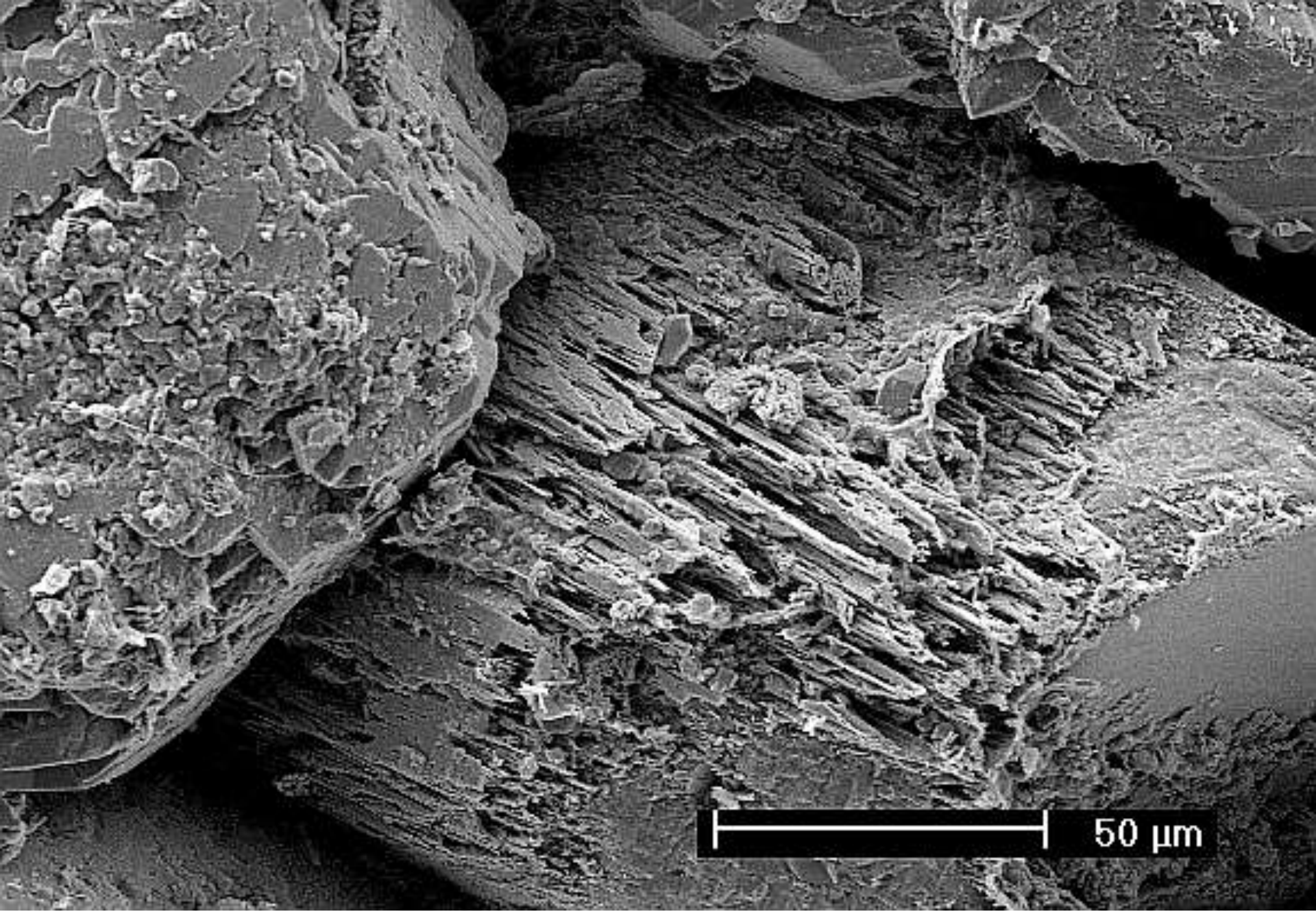
Irregular quartz overgrowths



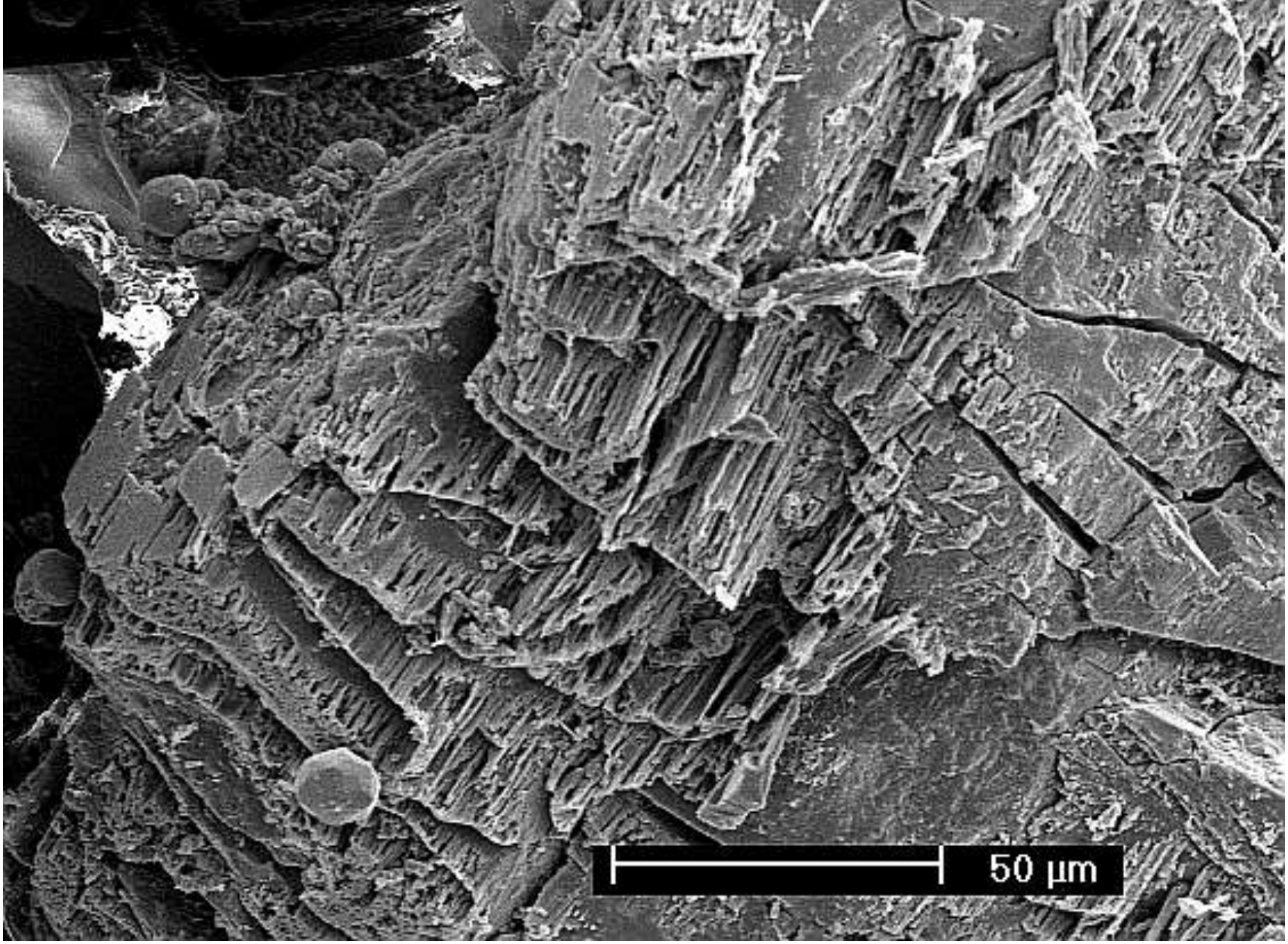
Chert grain with microcrystalline druse overgrowth



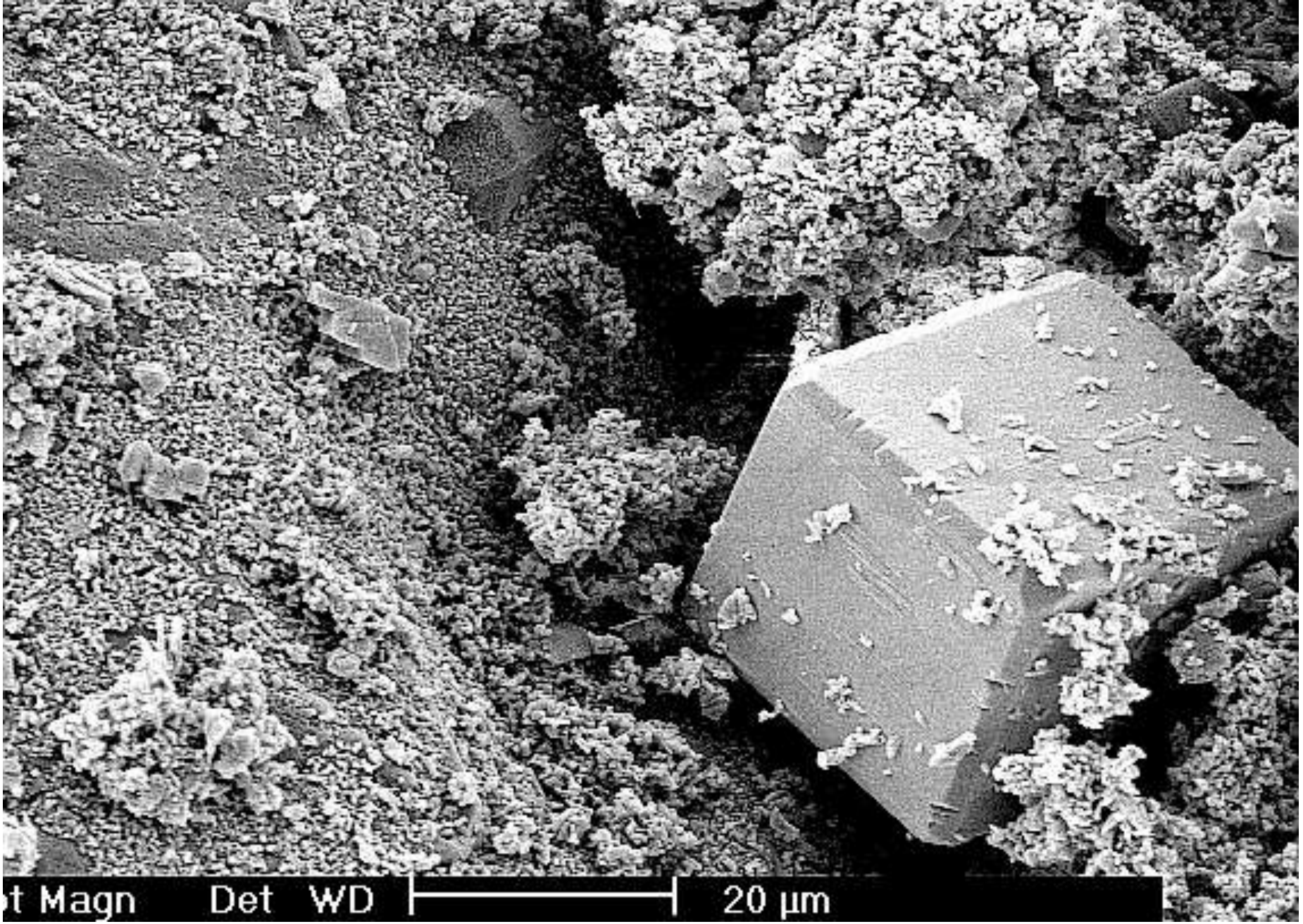
Dissolved feldspar altered to kaolin



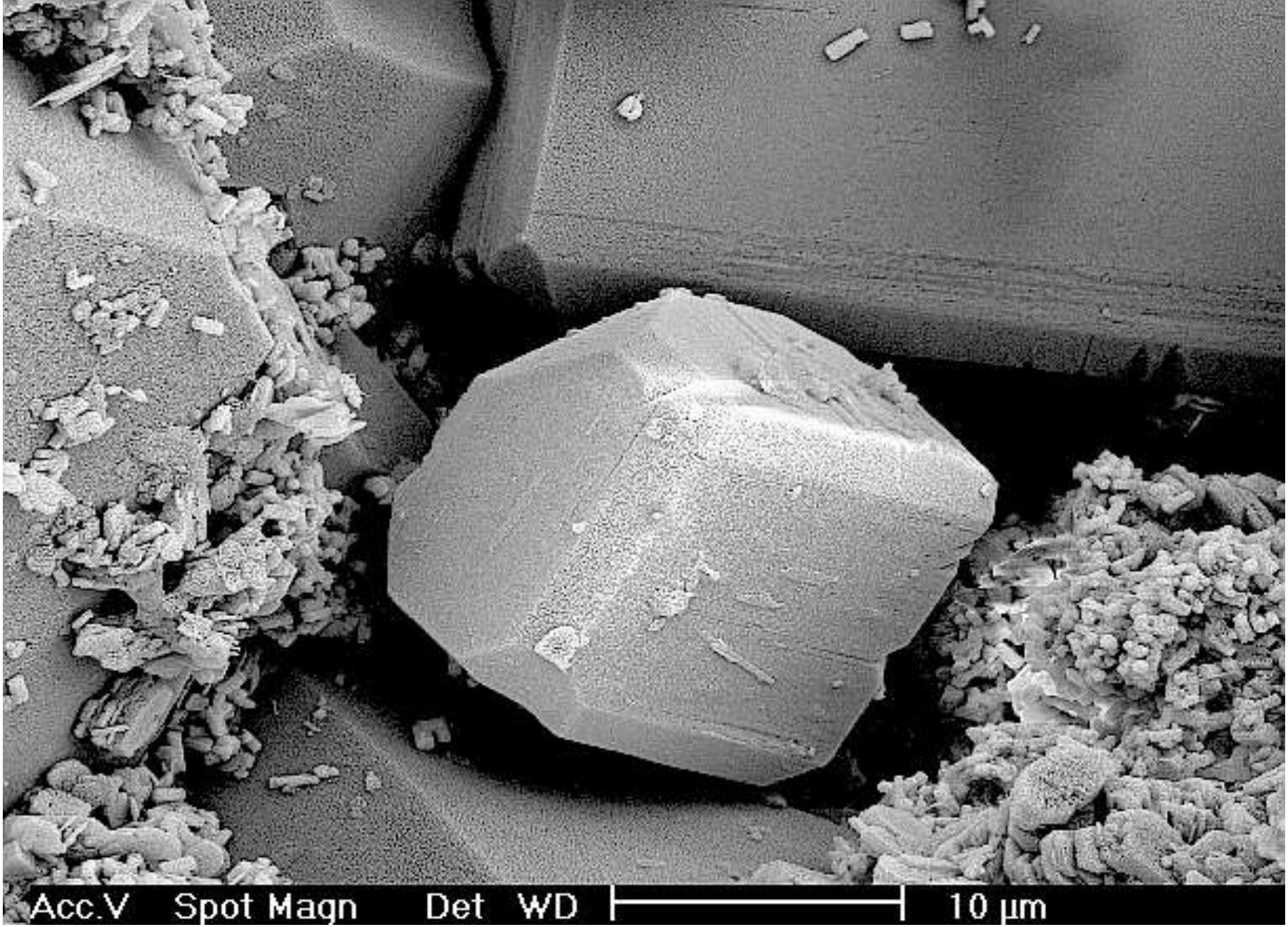
Dissolution of feldspar along crystal axes and cleavage



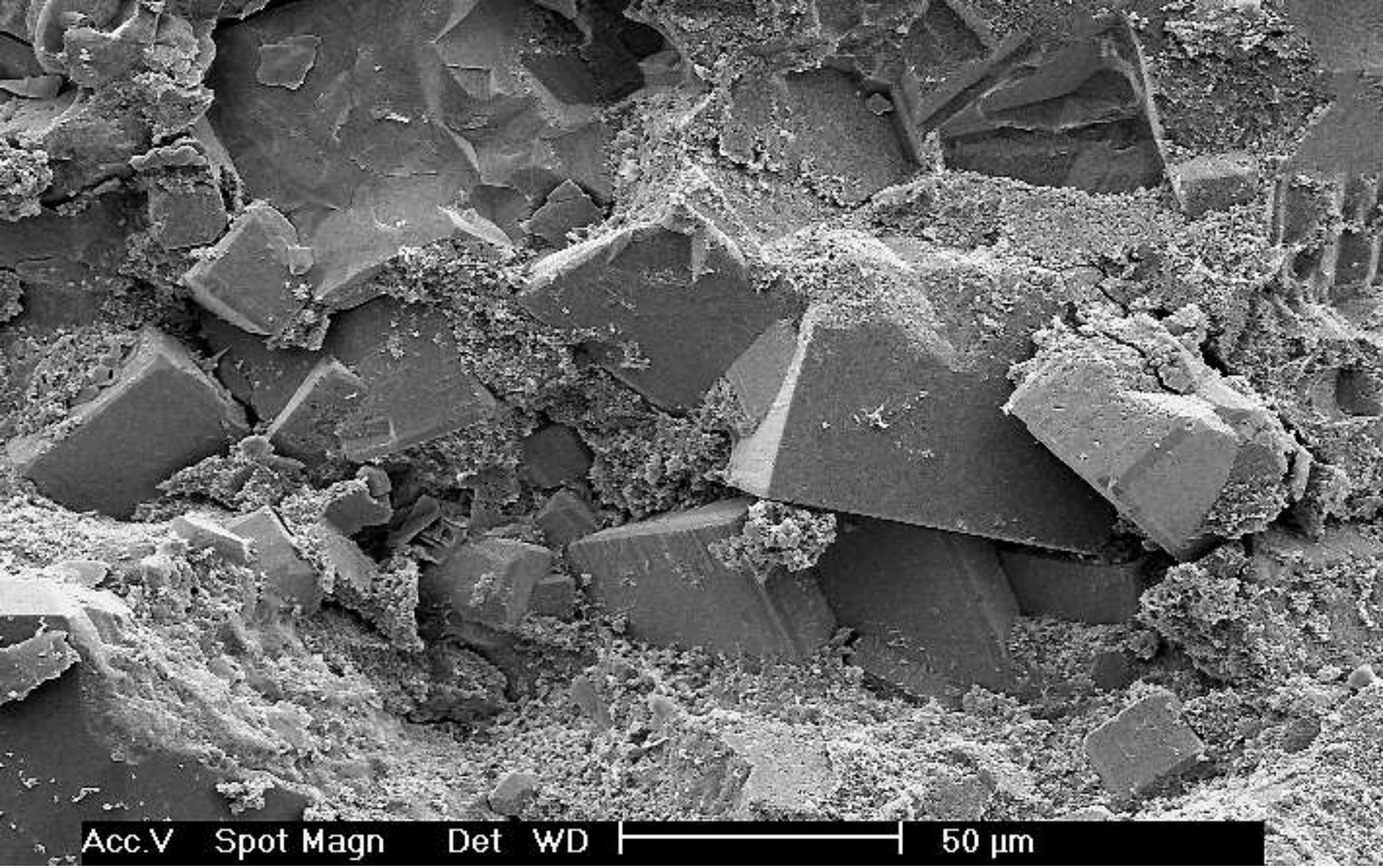
Dissolution of feldspar along crystallographic axes



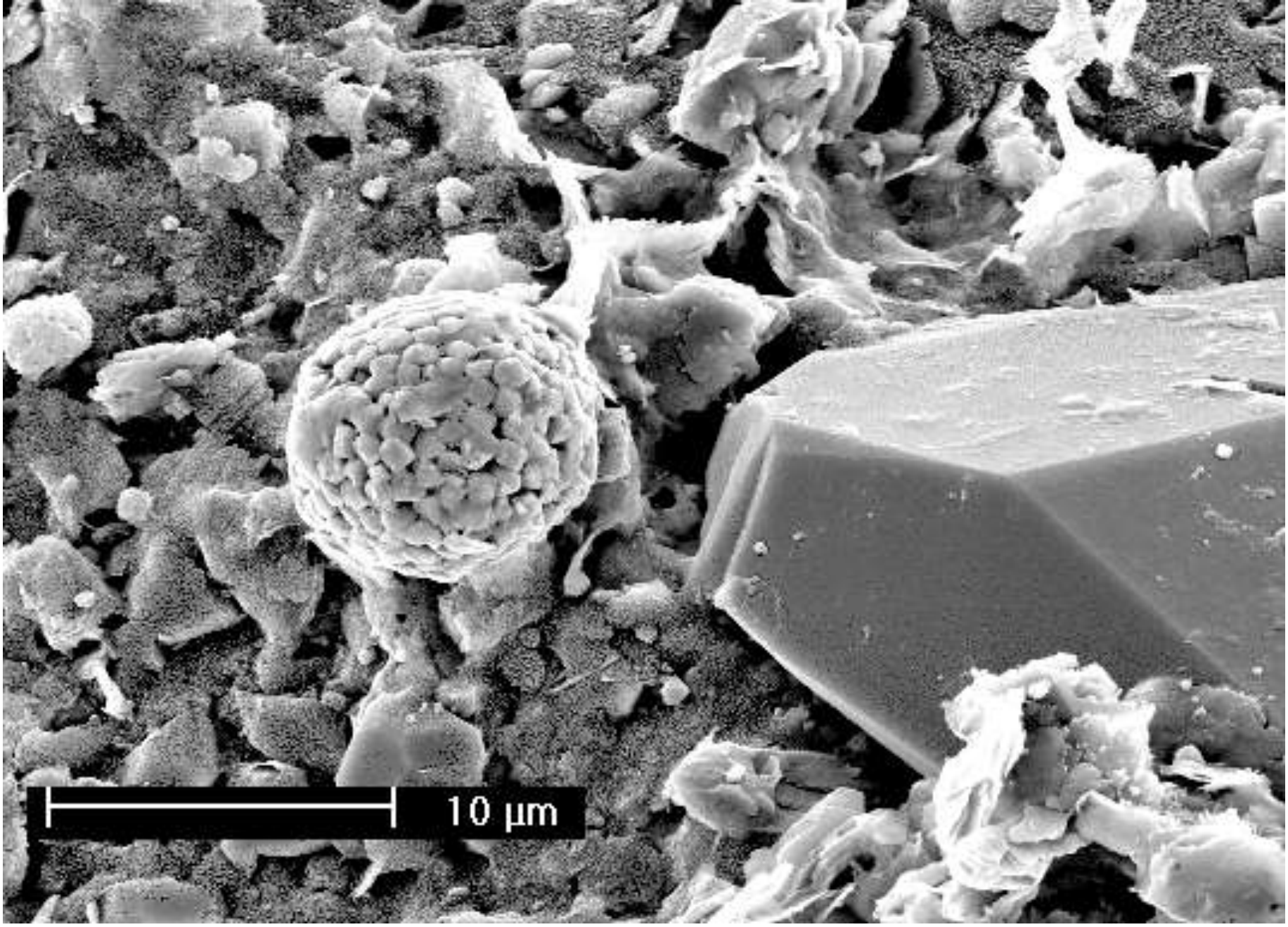
Cubic pyrite with later coating of Ca zeolite



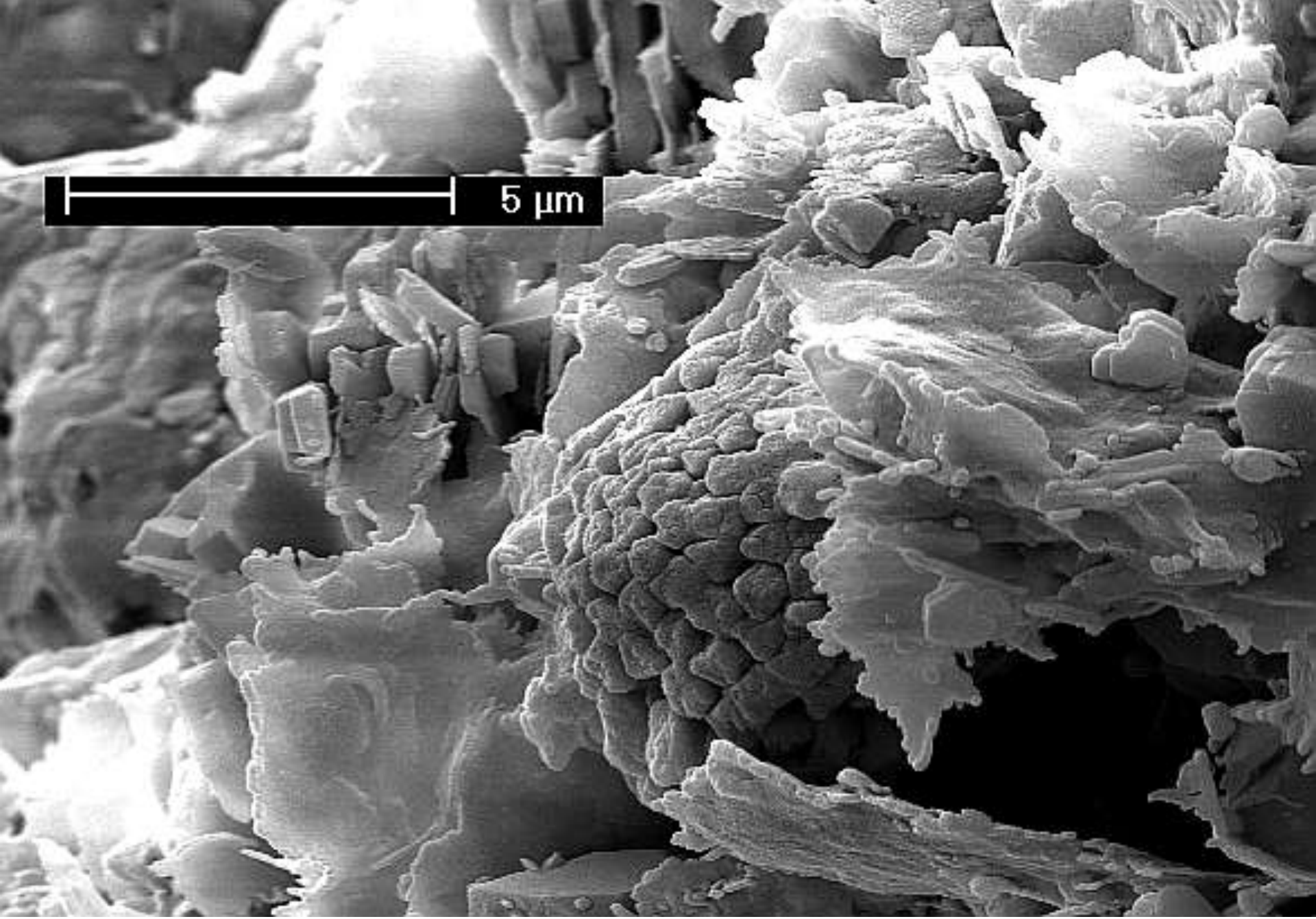
Cubic pyrite partly coated with Ca zeolite prisms



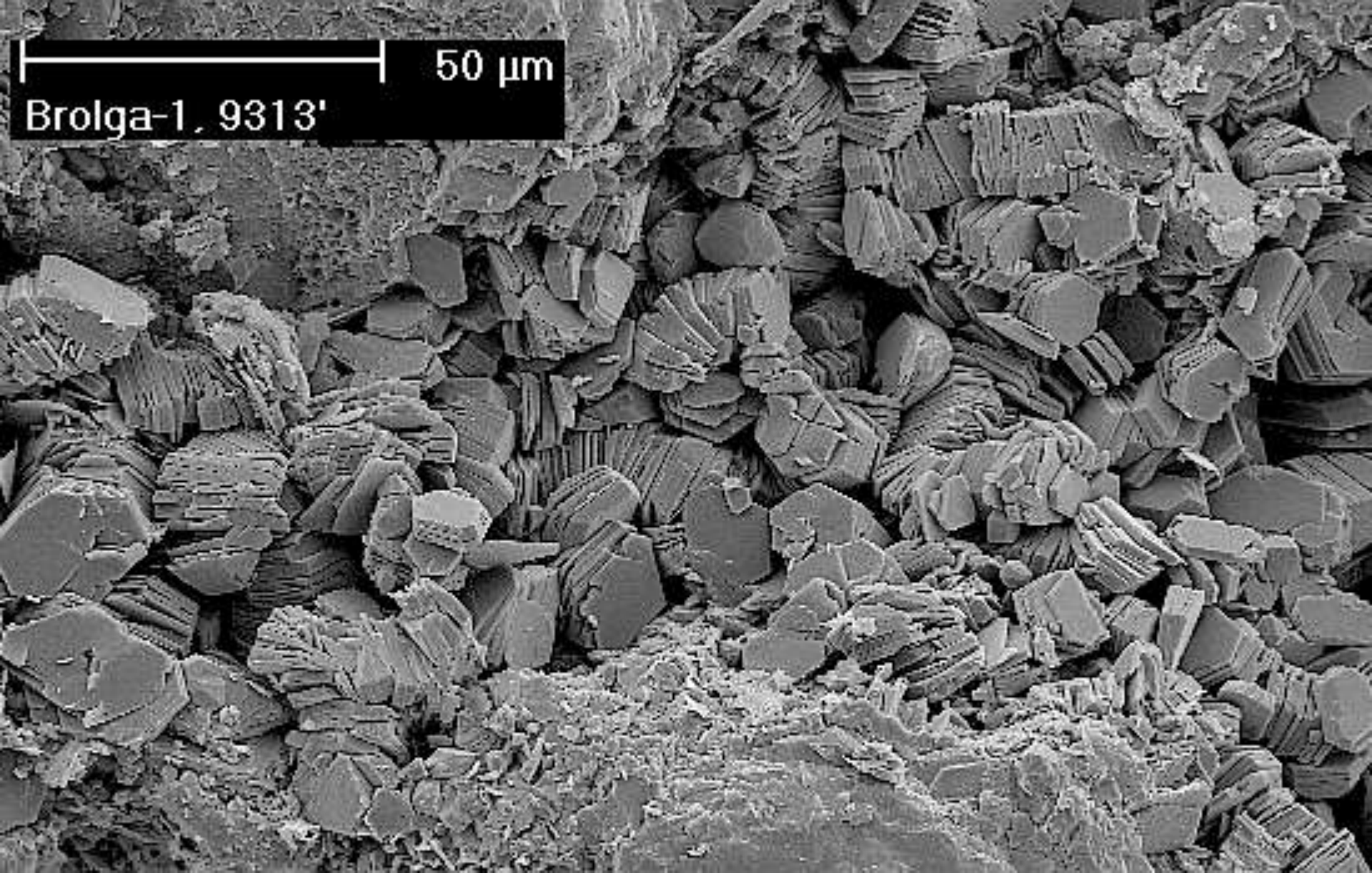
Cubic pyrite coated with Ca zeolite



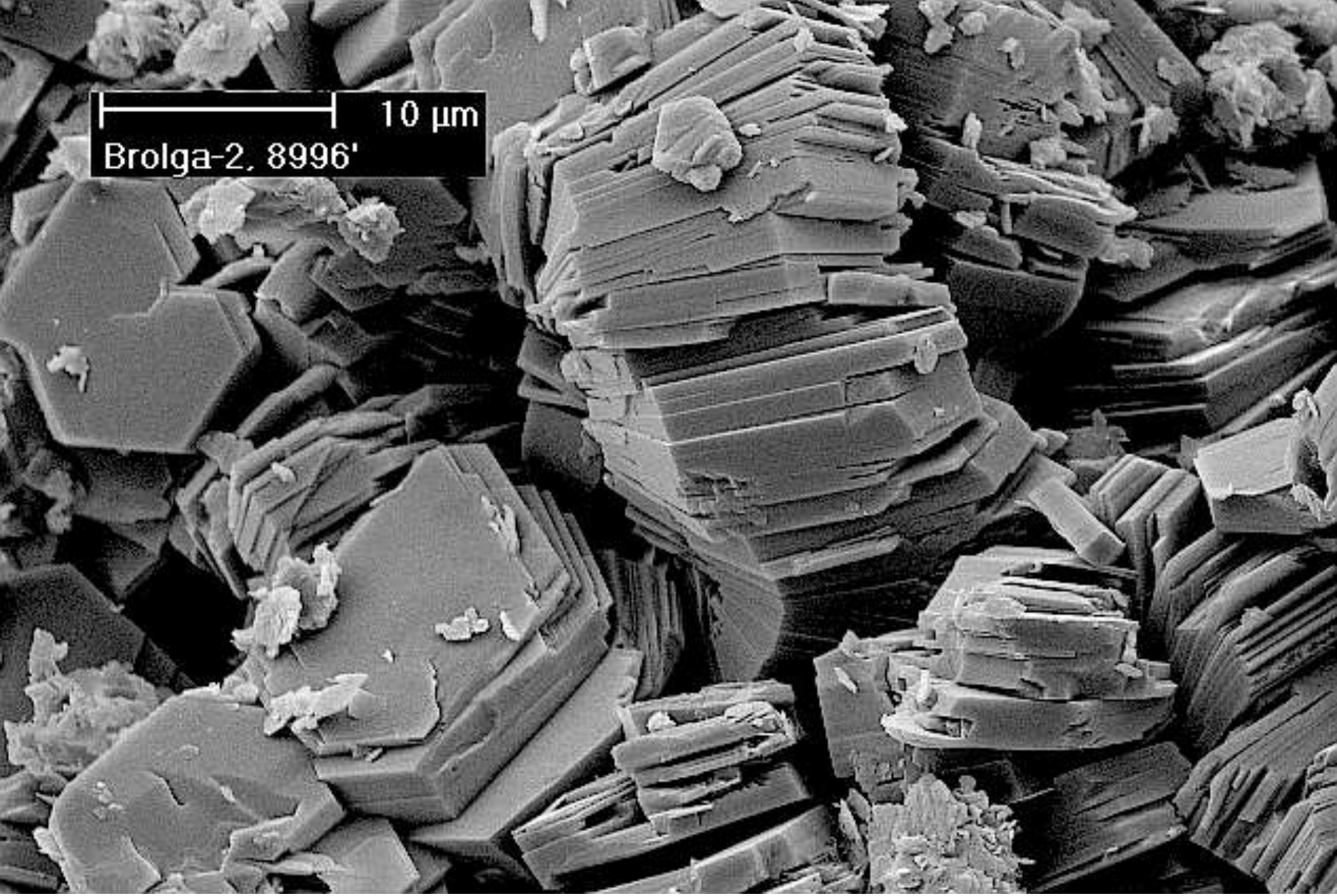
Pyrite framboid on illite and kaolin surface with late quartz overgrowth



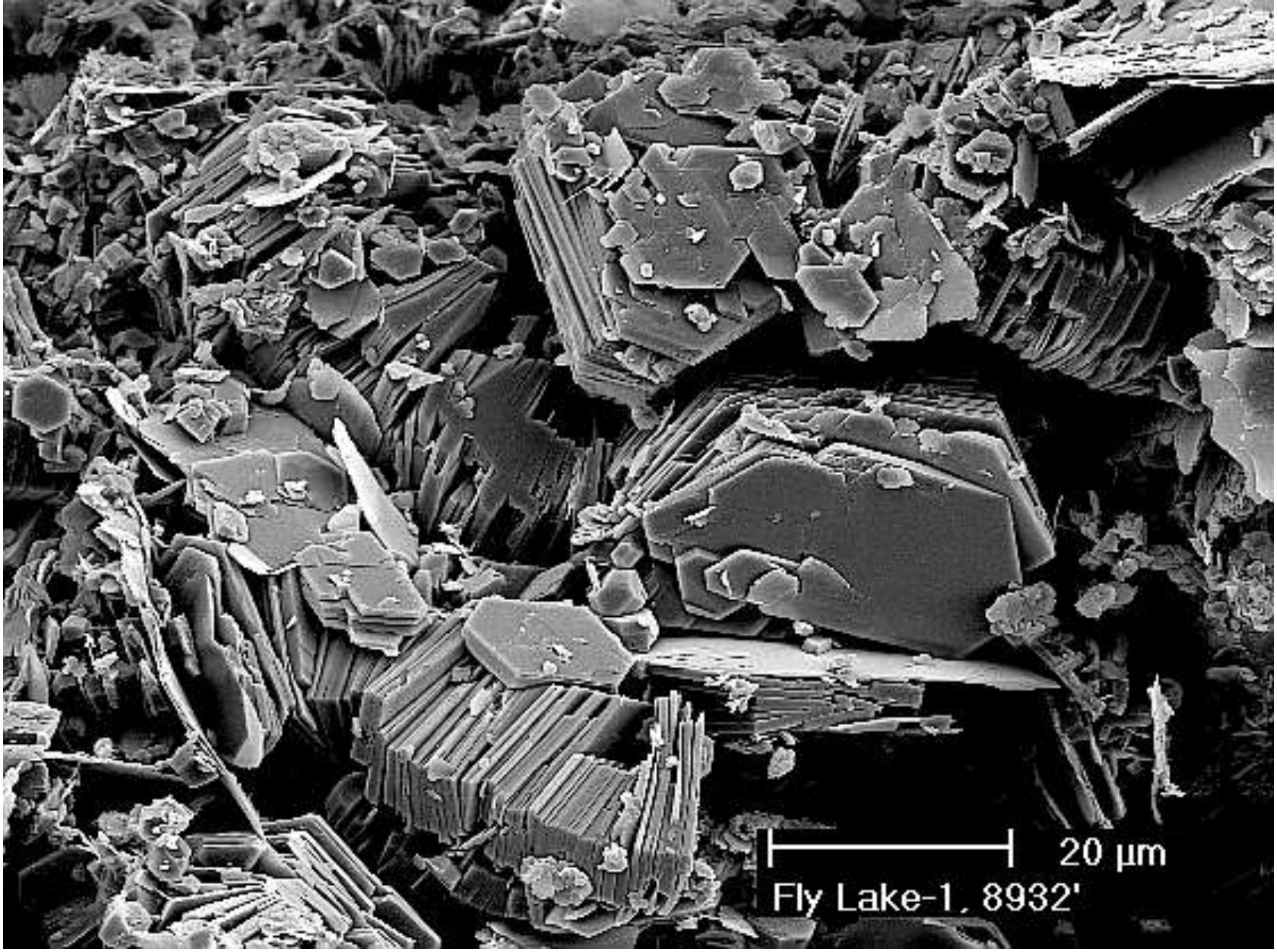
Pyrite framboid in dissolved feldspar with kaolin and illite flakes



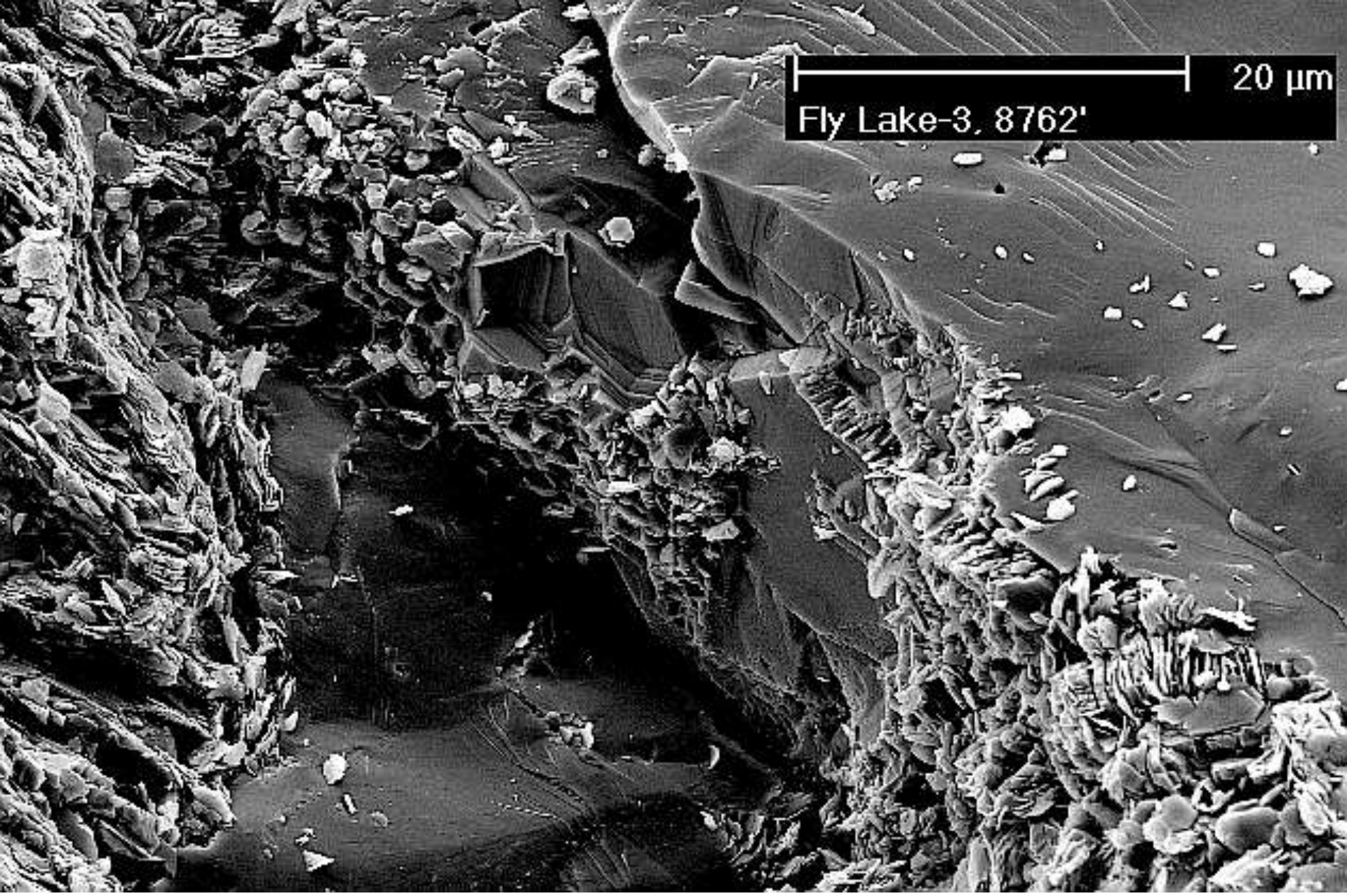
Dickite filling porosity with kaolinite rimming grains



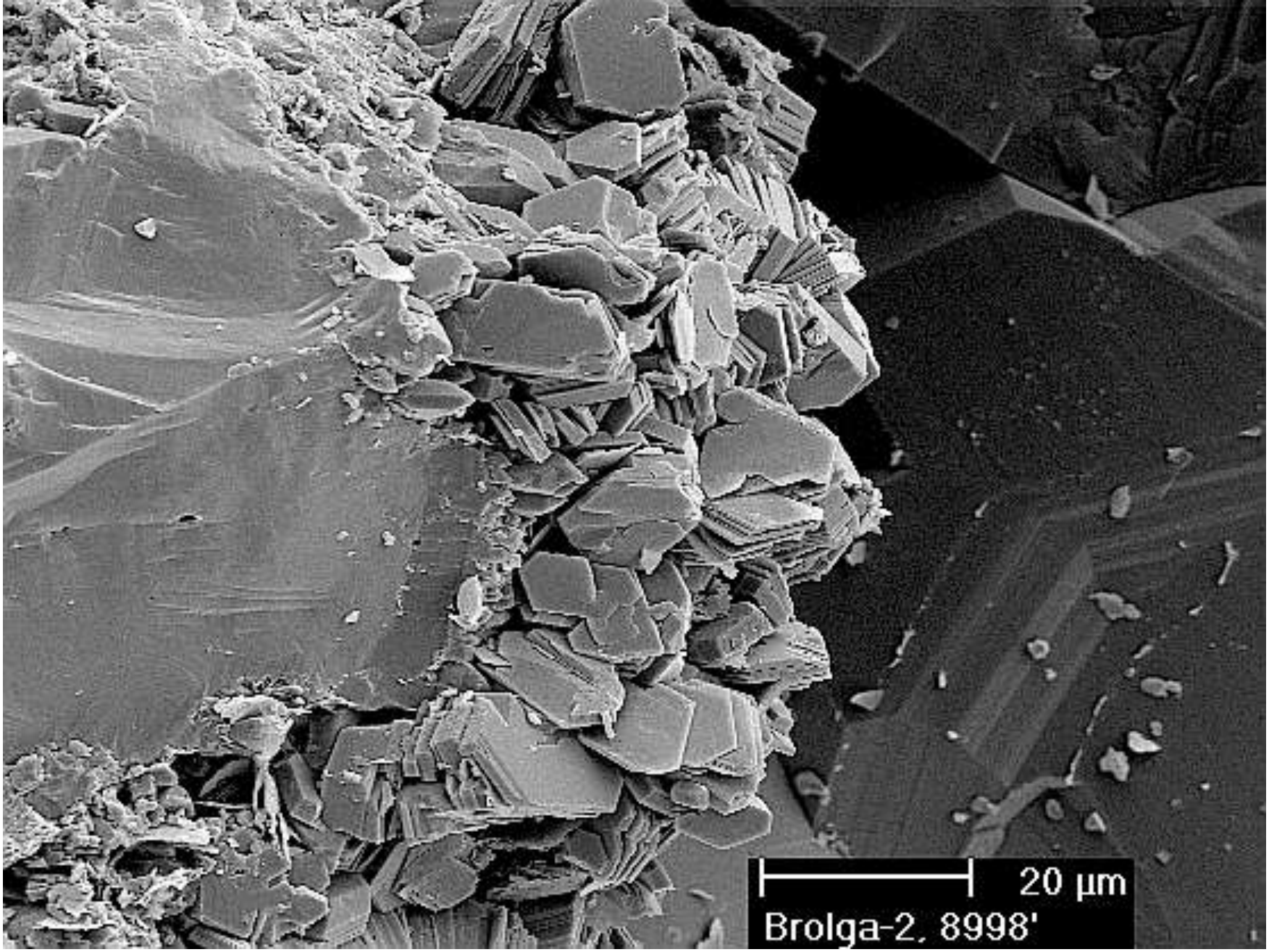
Pore-filling dickite, booklets and verms



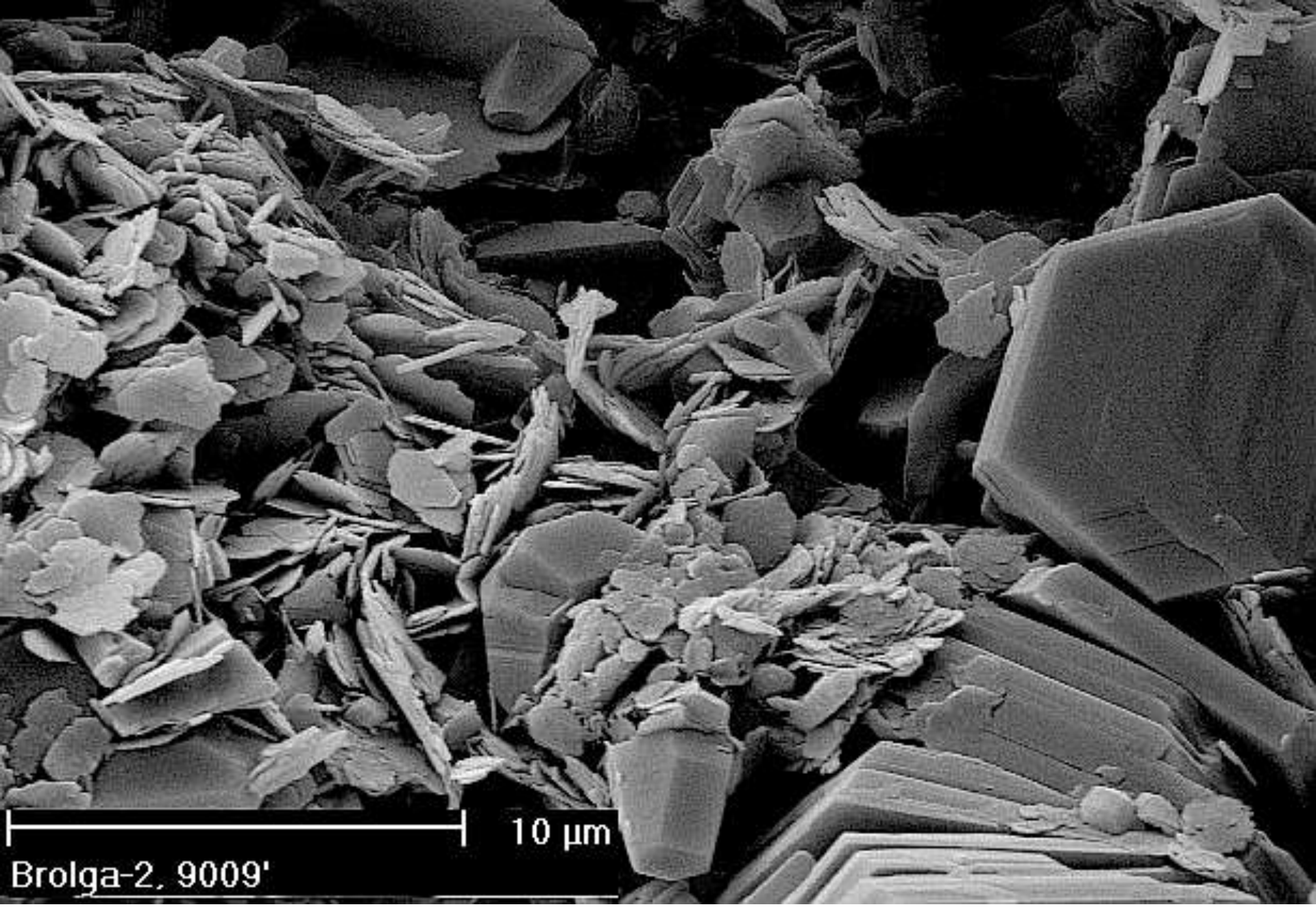
Pore-filling dickite (large crystals) with minor kaolinite (small crystals)



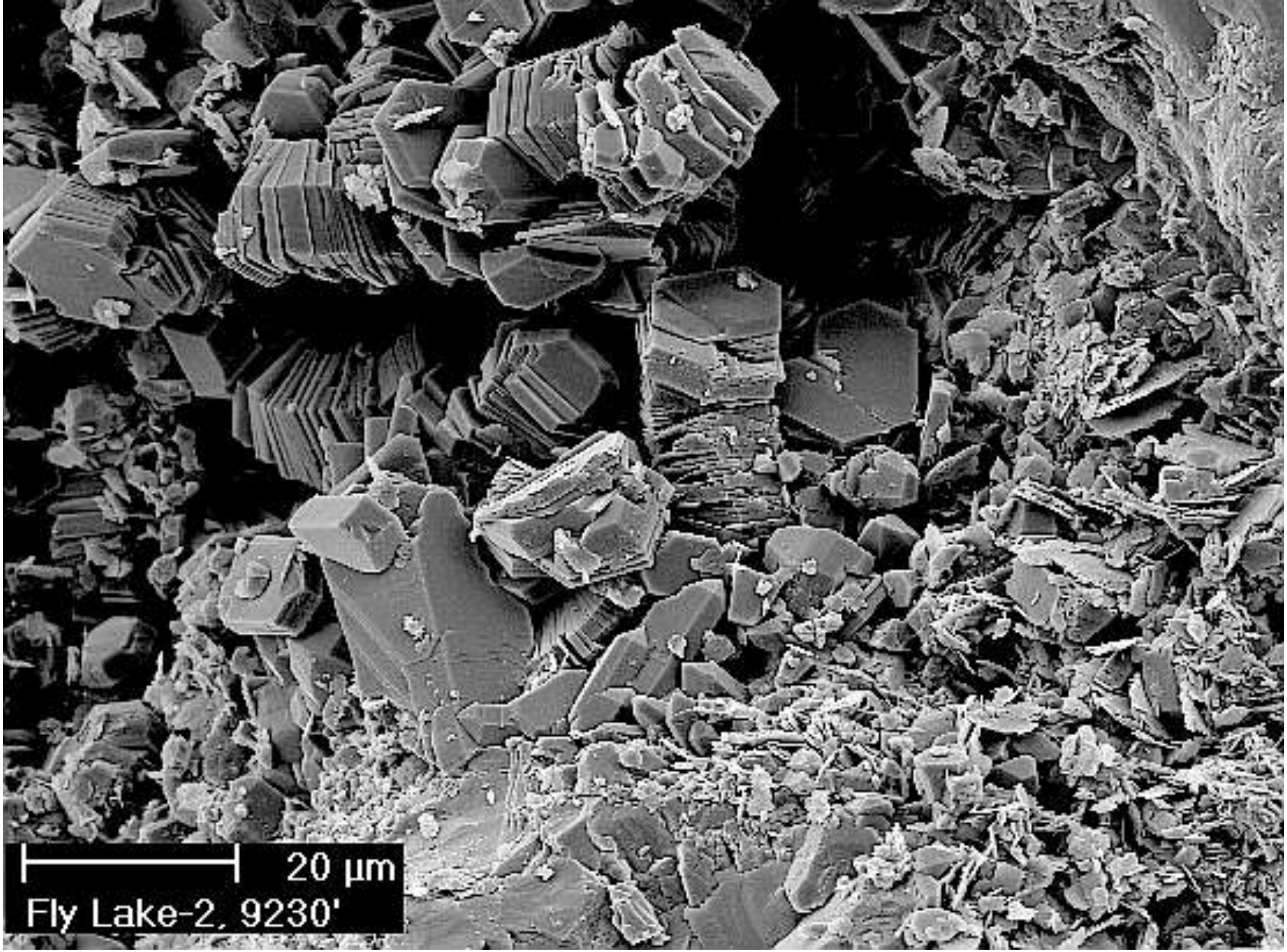
Kaolinite intergrown with quartz overgrowth



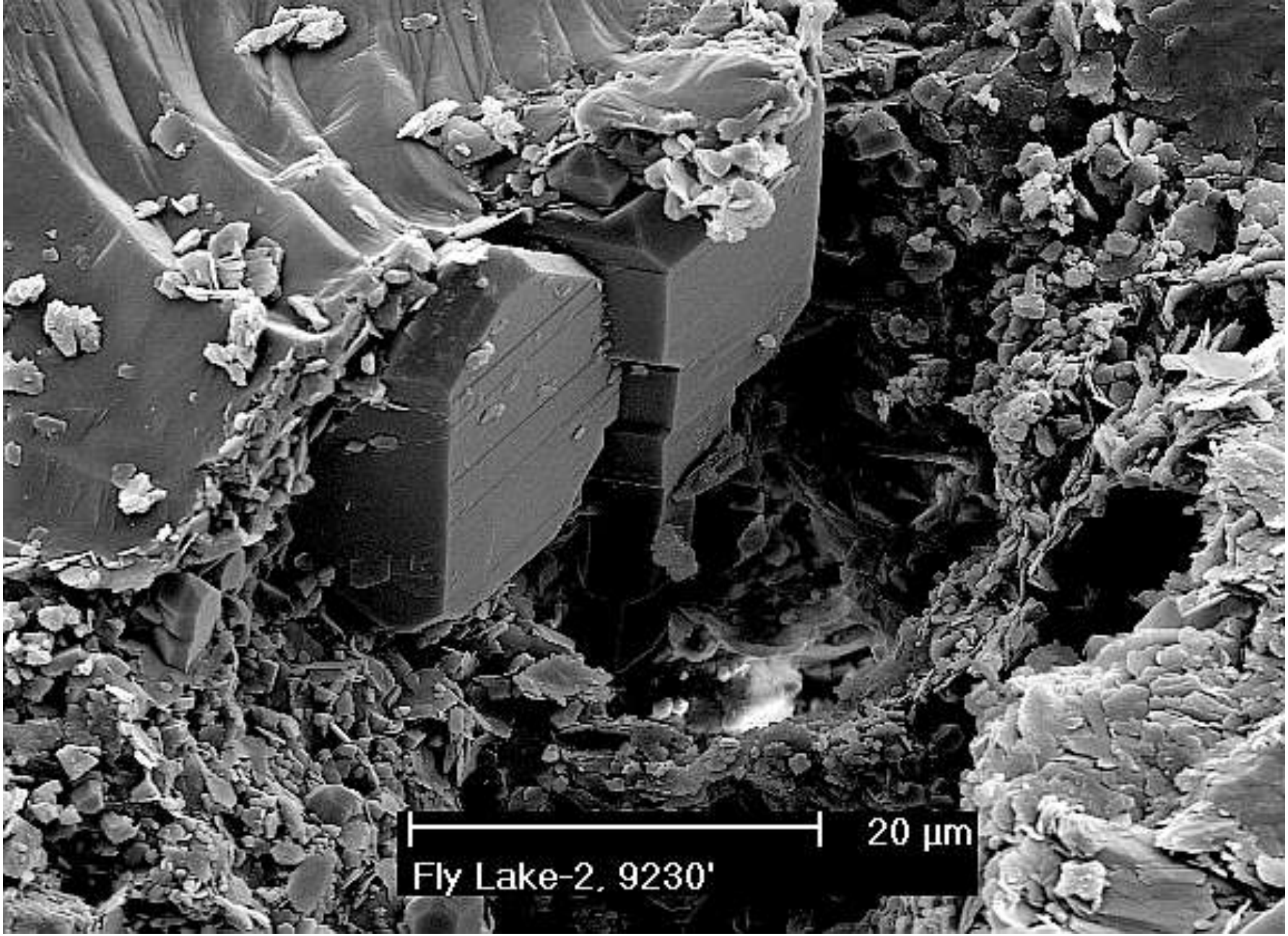
Kaolinite intergrown with quartz overgrowth then pore-fill dickite



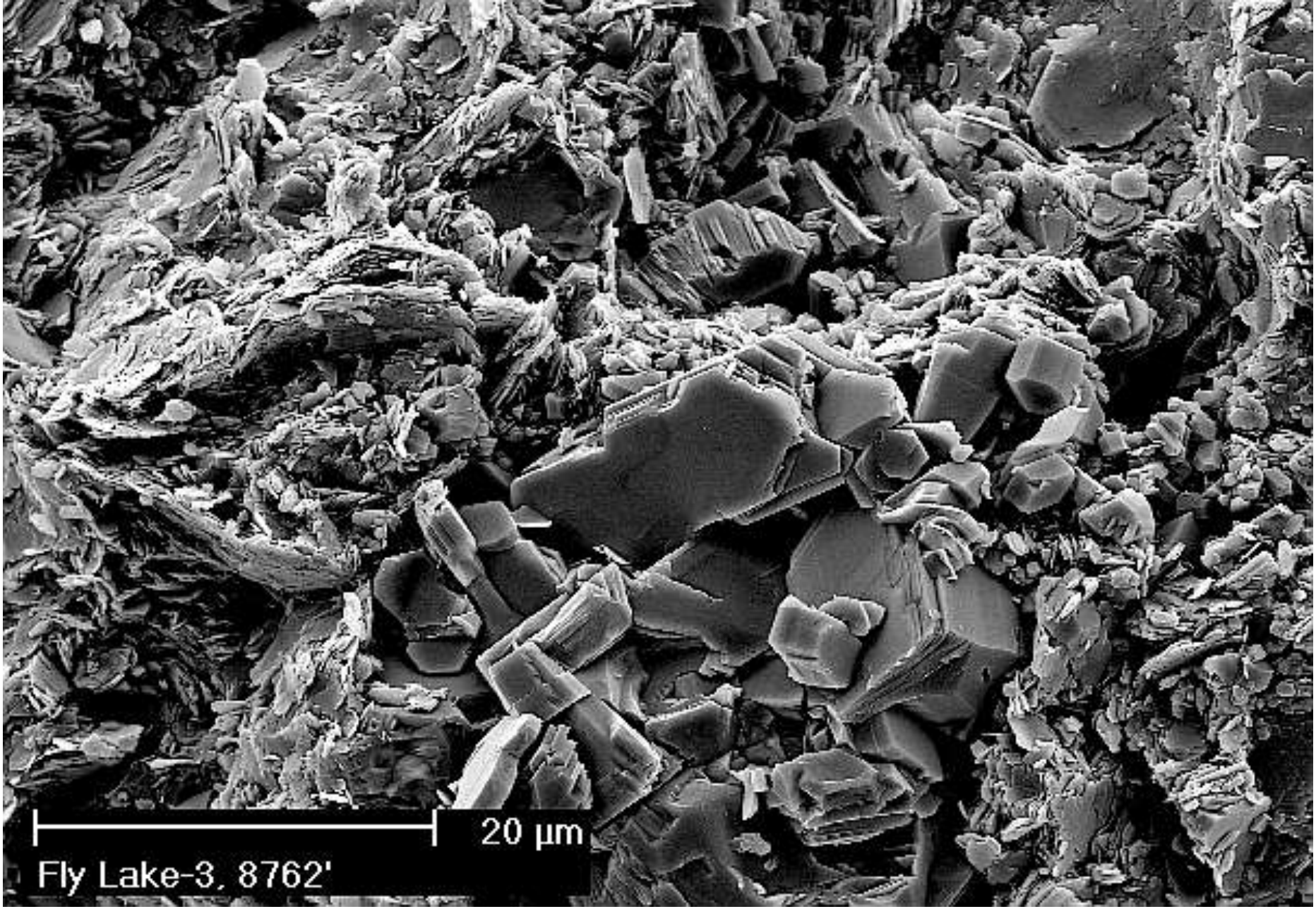
Kaolin types: kaolinite on left, dickite on right



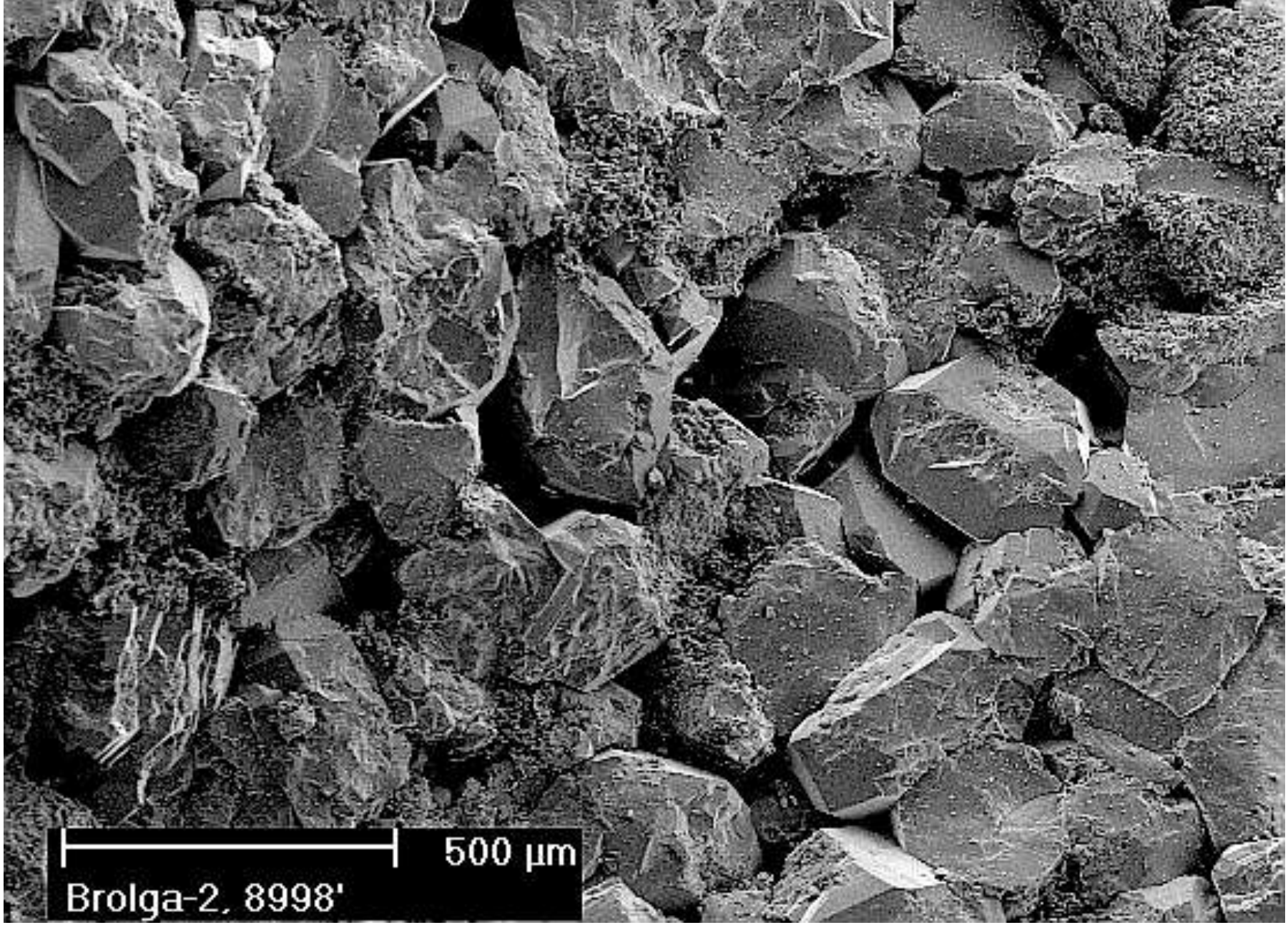
Grain-rimming kaolinite followed by loose-packed dickite



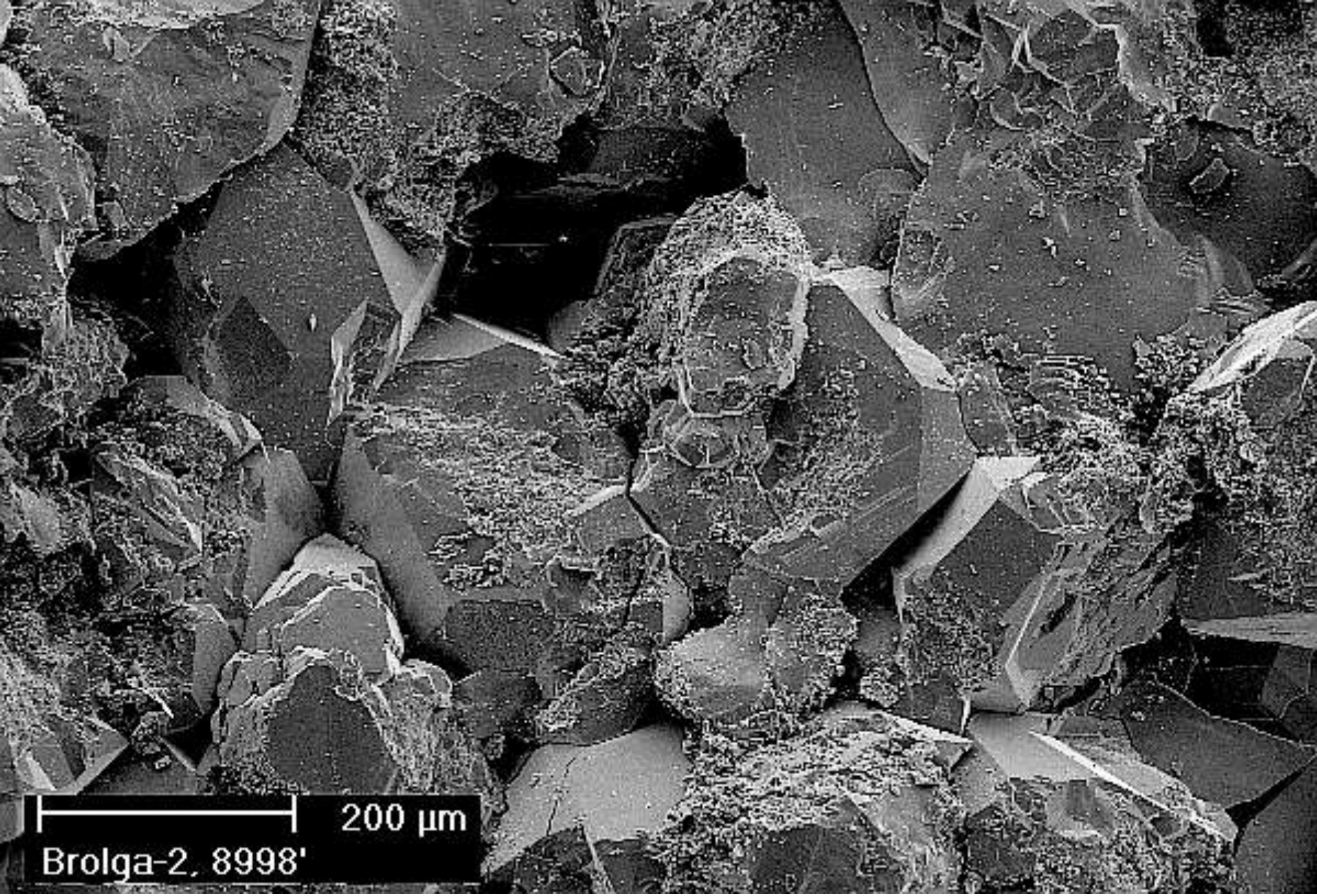
Kaolinite intergrown with quartz overgrowth then thick dickite books



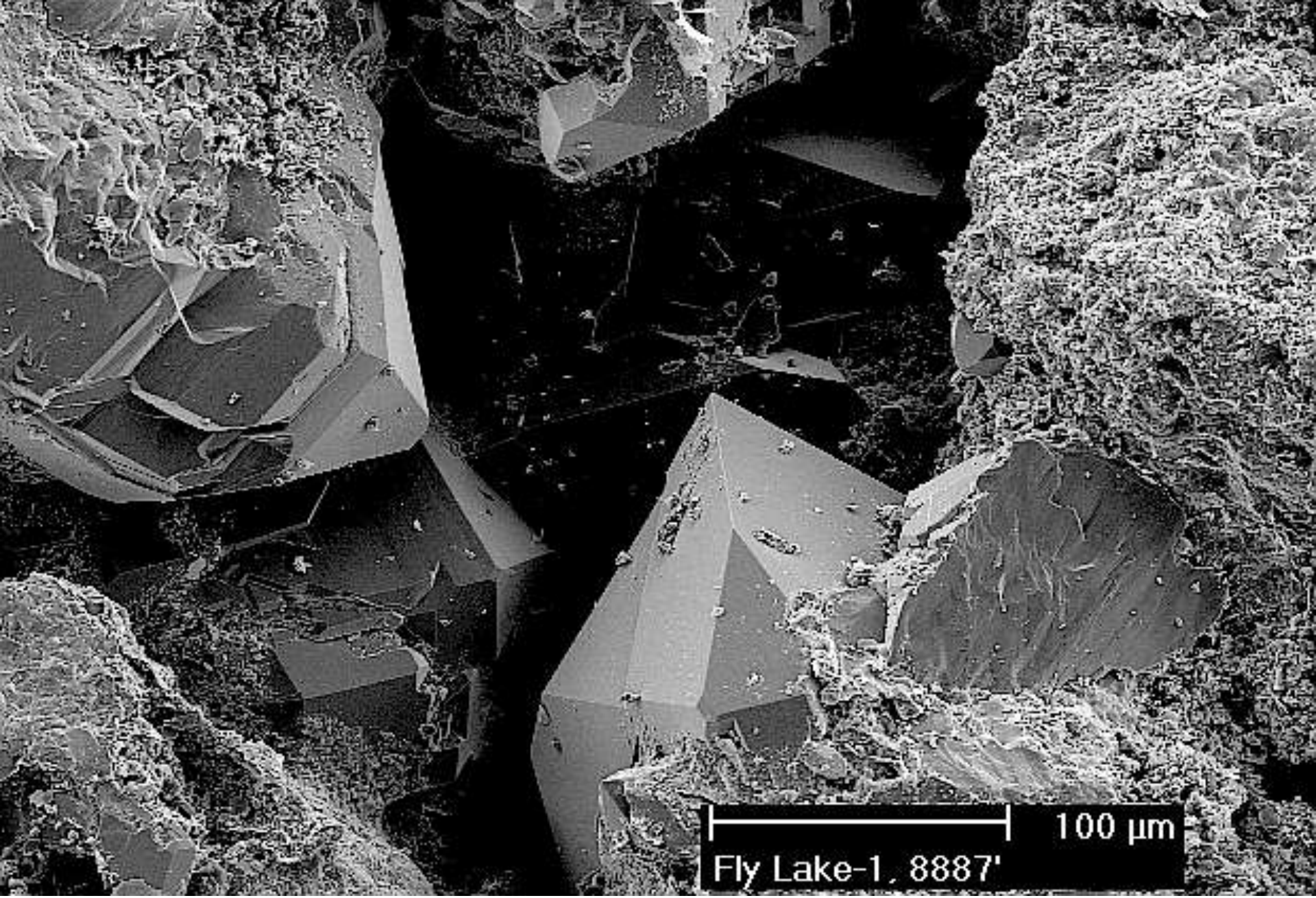
Matrix recrystallised to kaolinite (left) followed by dickite



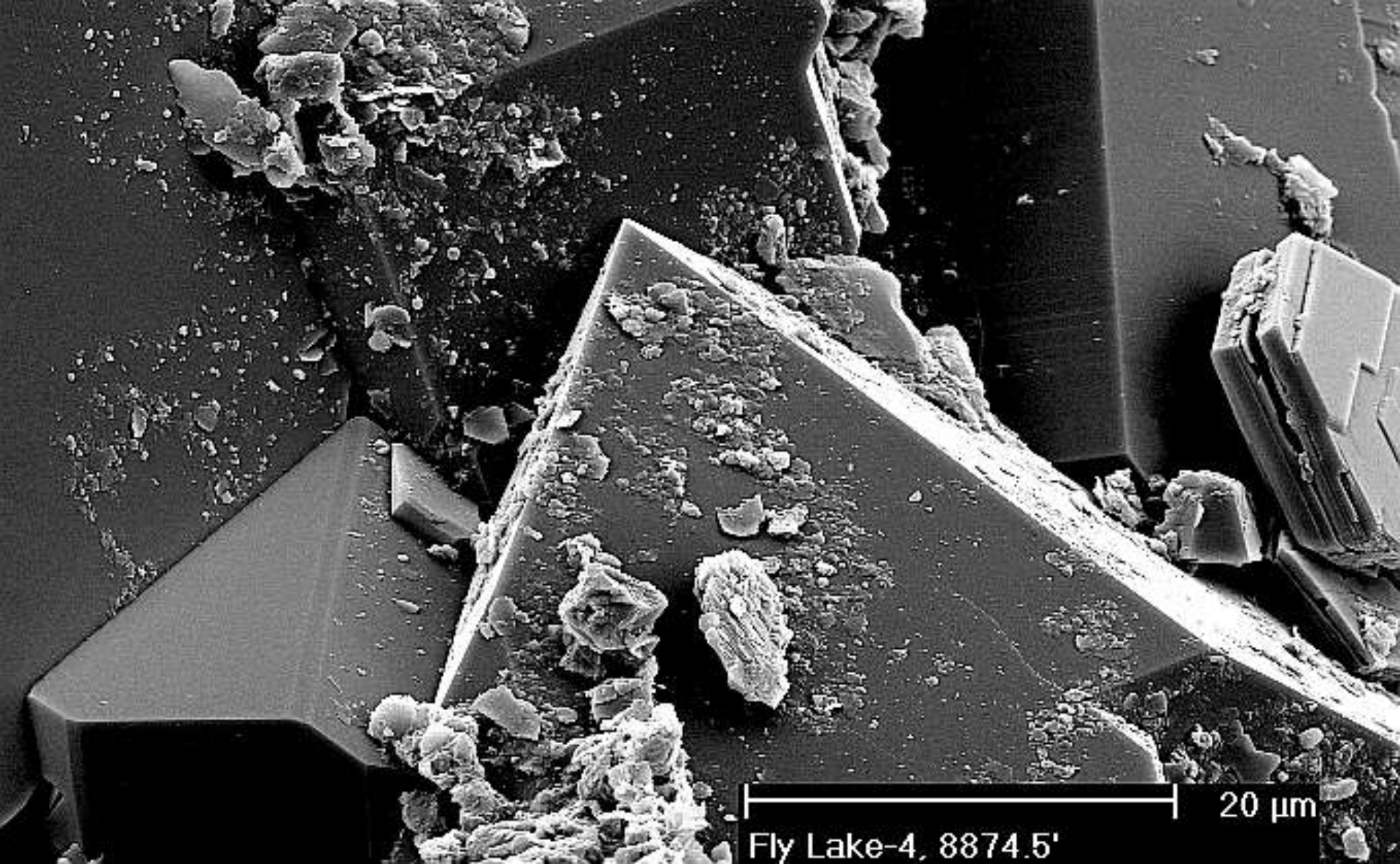
Clean pores between quartz overgrowths



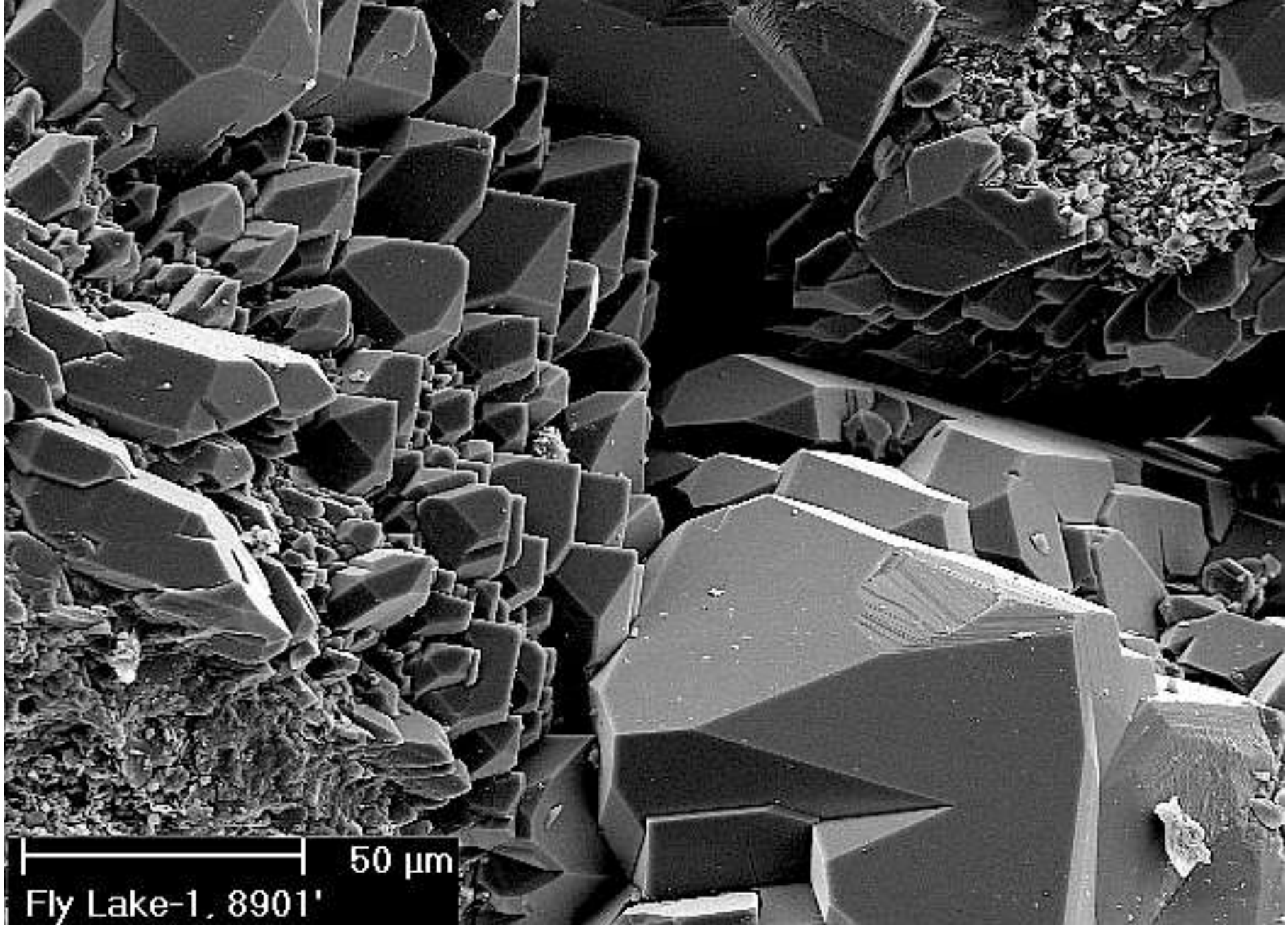
Pores protected by quartz overgrowth, some later kaolinite



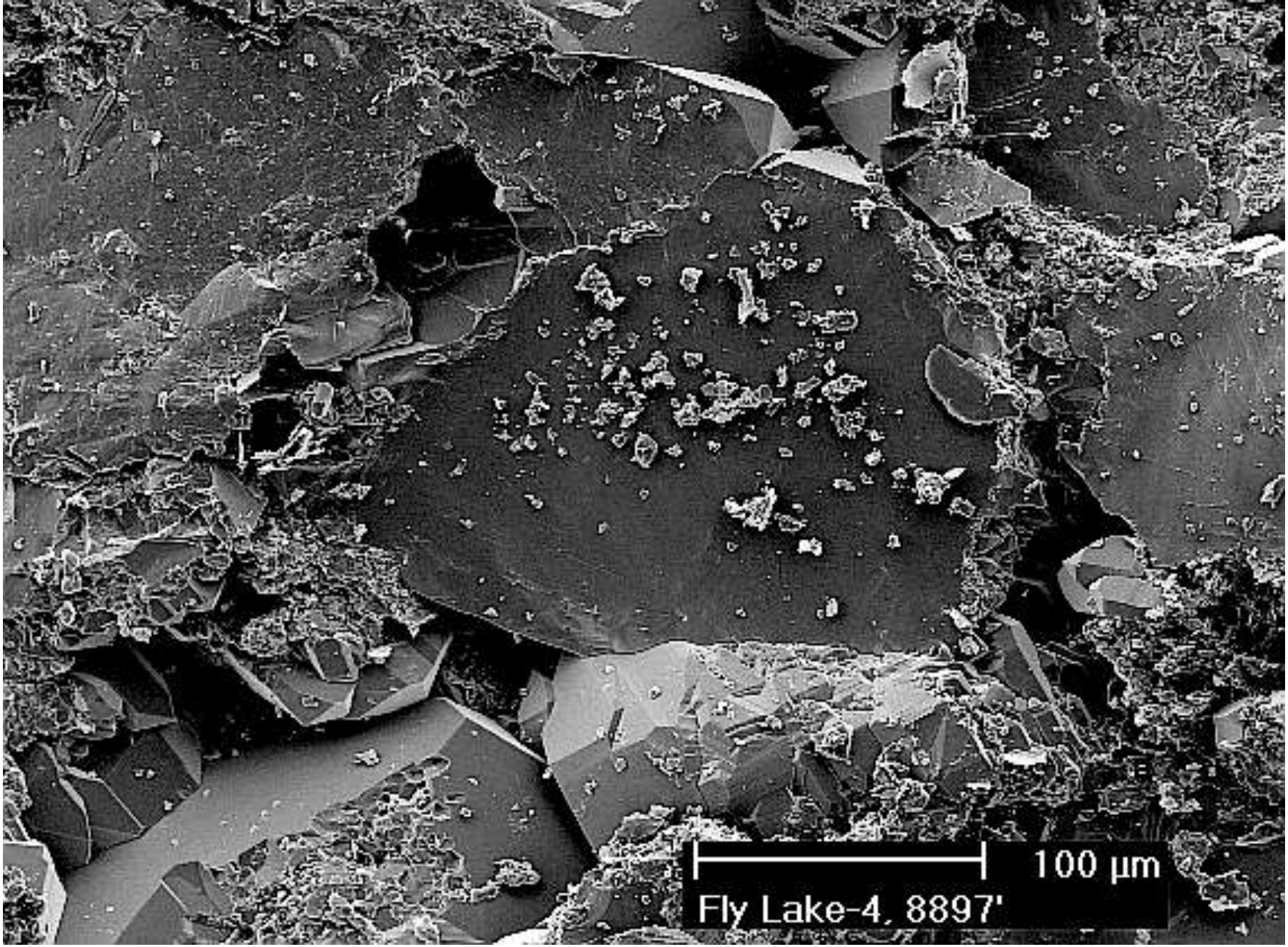
Authigenic quartz plus alteration of feldspar? to kaolin



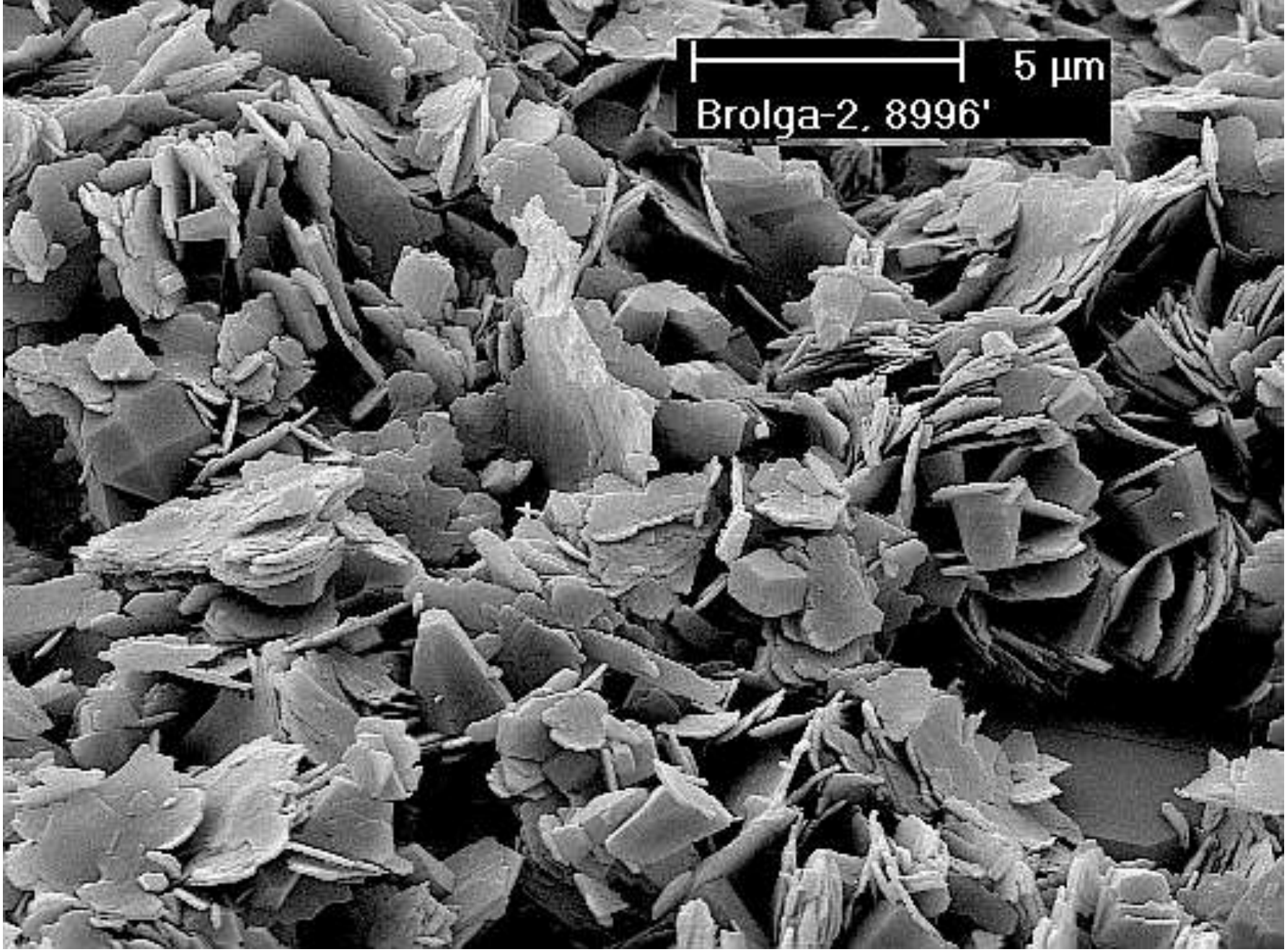
Authigenic quartz overgrowths showing good crystal outlines occluding some pores, later dickite in pore to right



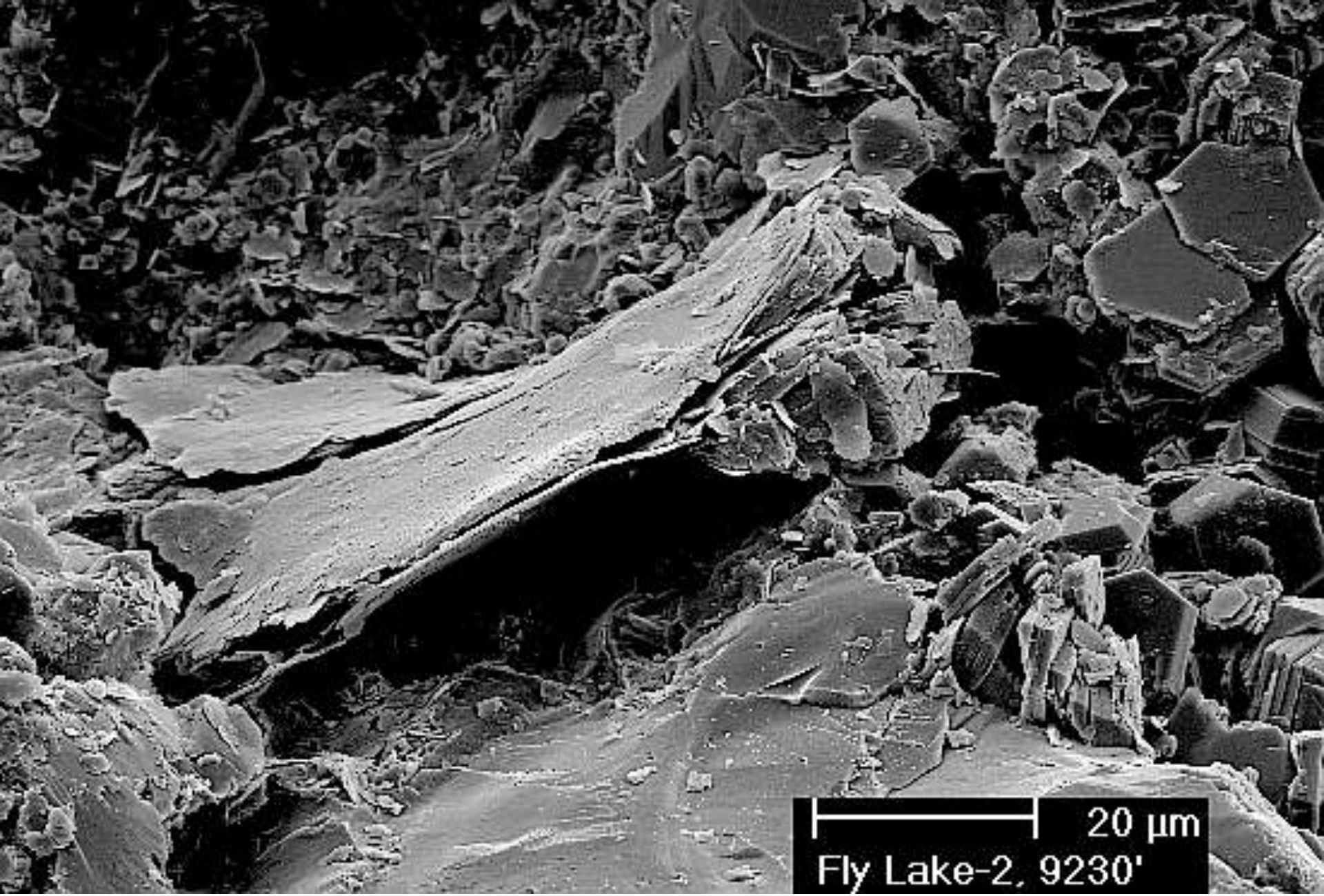
Quartz cement: druse (left) and syntaxial overgrowth (right)



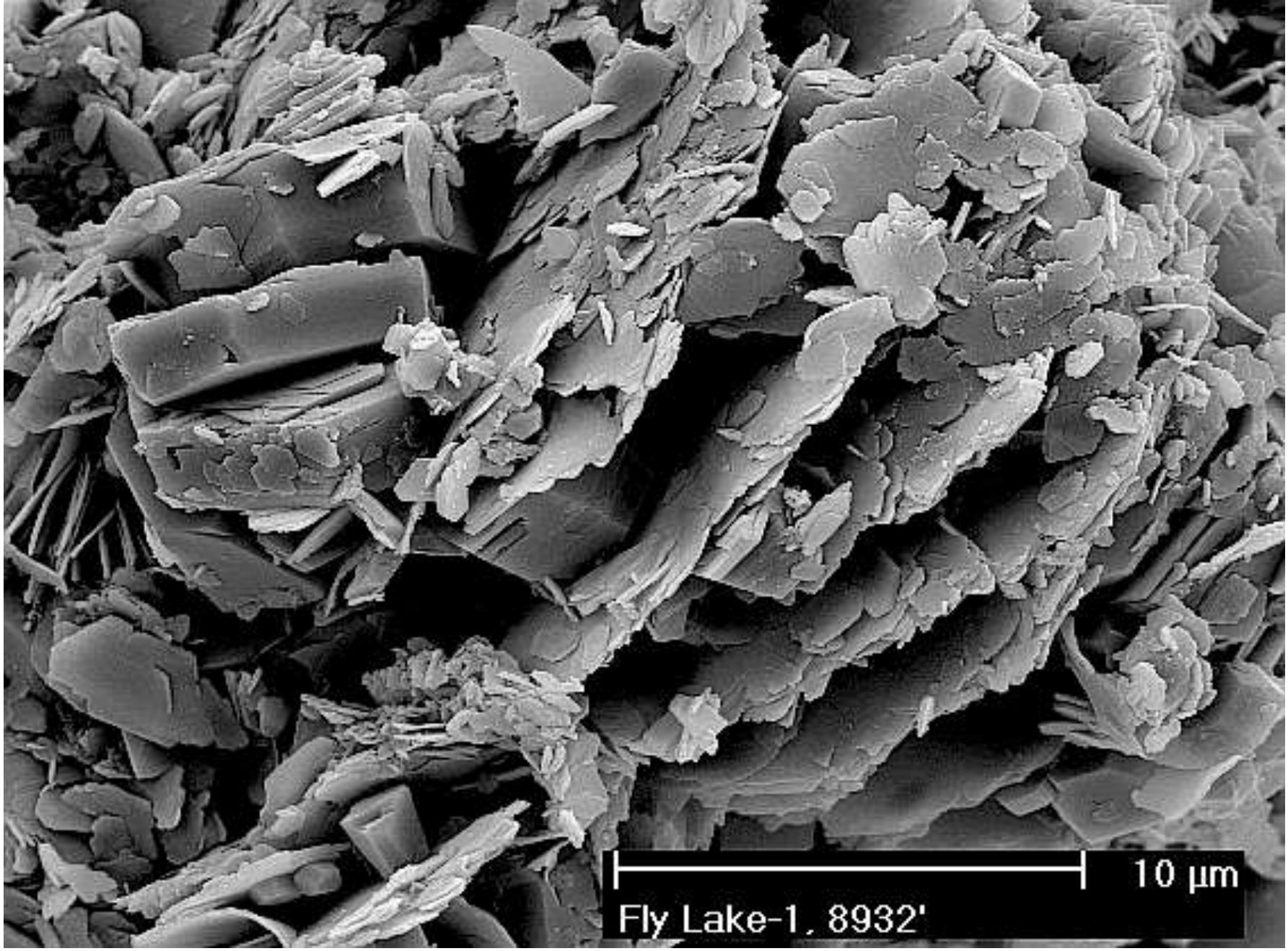
Overgrowth on some quartz grains, sutured contacts along others



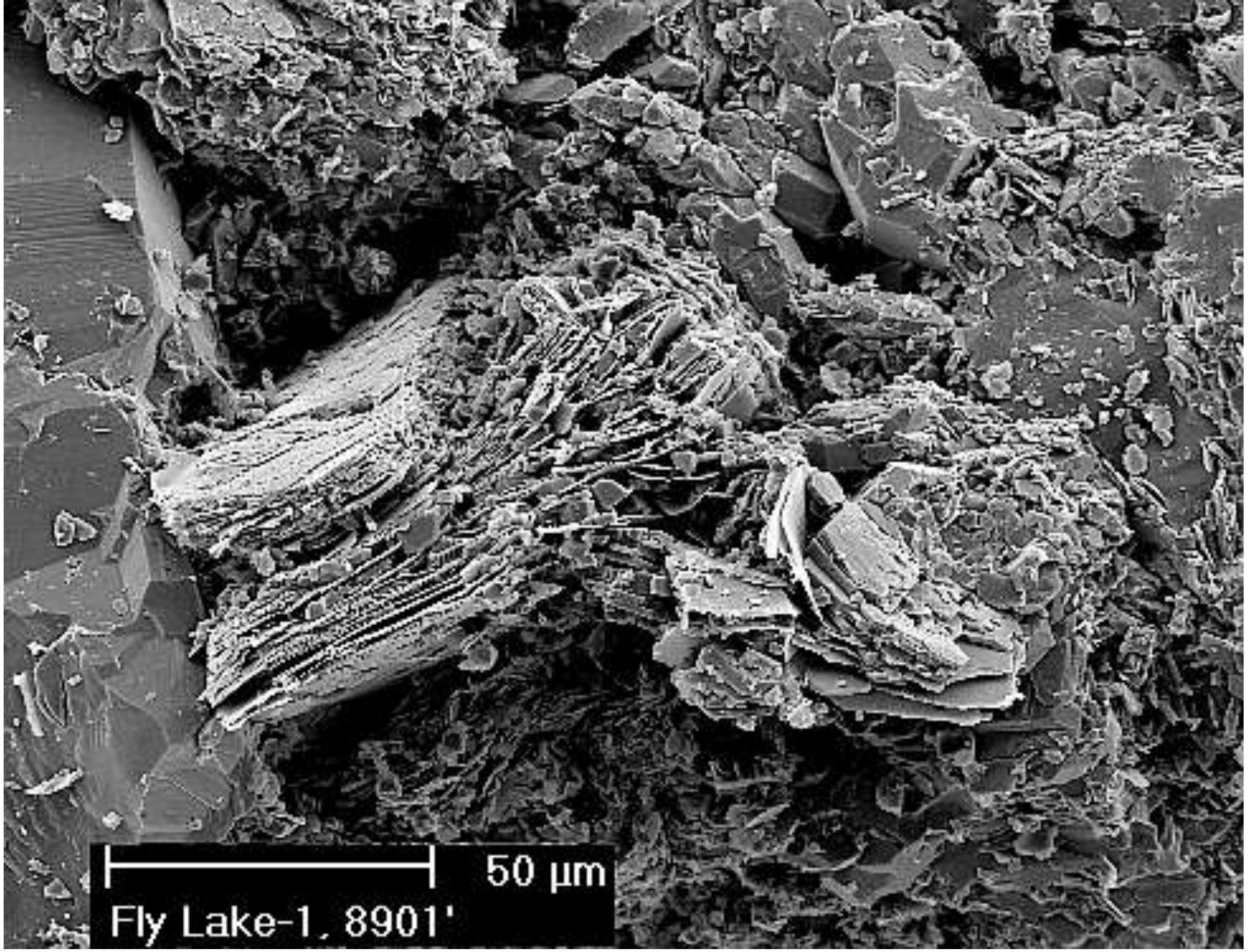
Kaolin and illite flakes with late quartz (recrystallized matrix?)



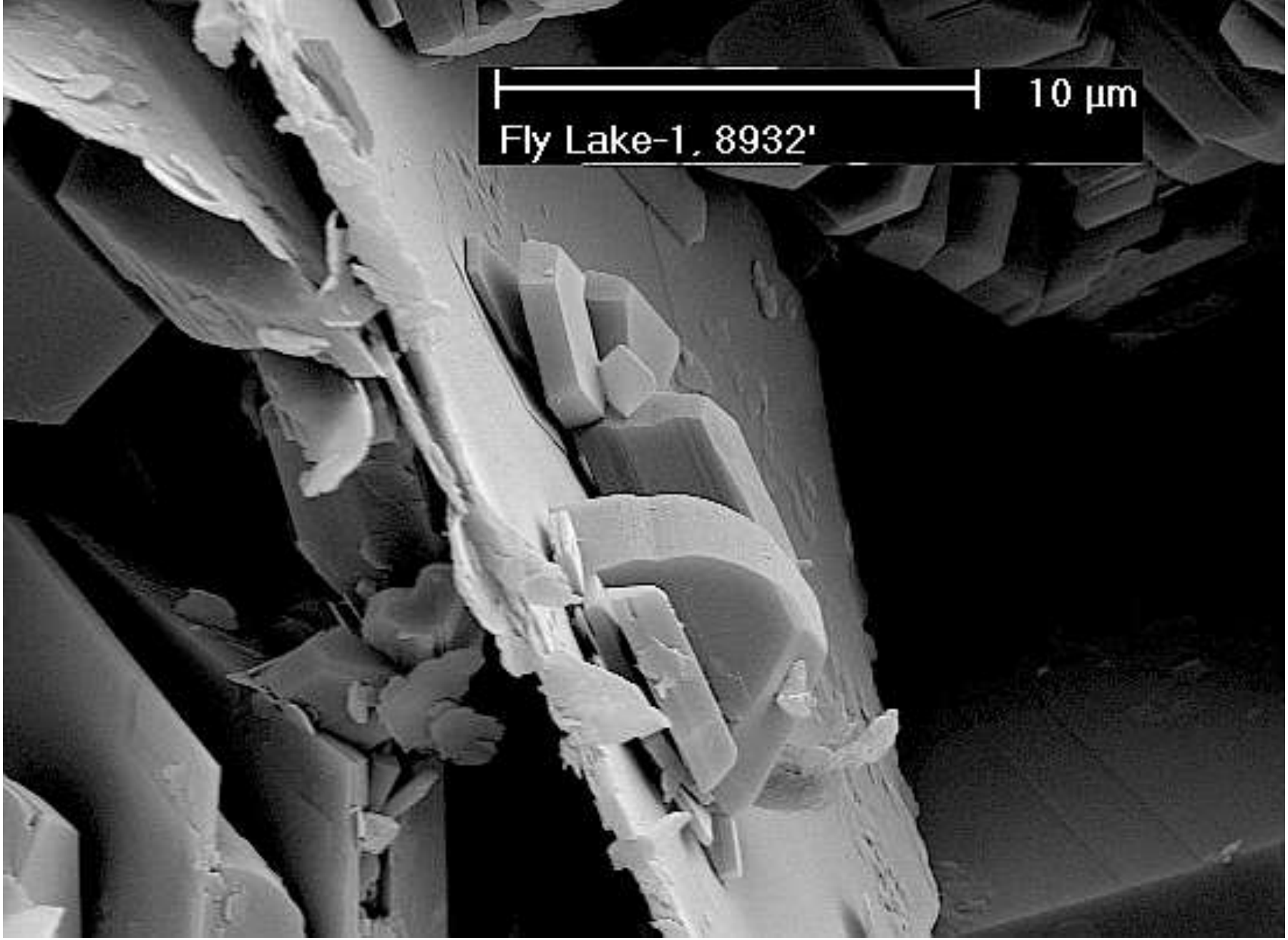
Muscovite altering to kaolinite which then spreads the mica flakes



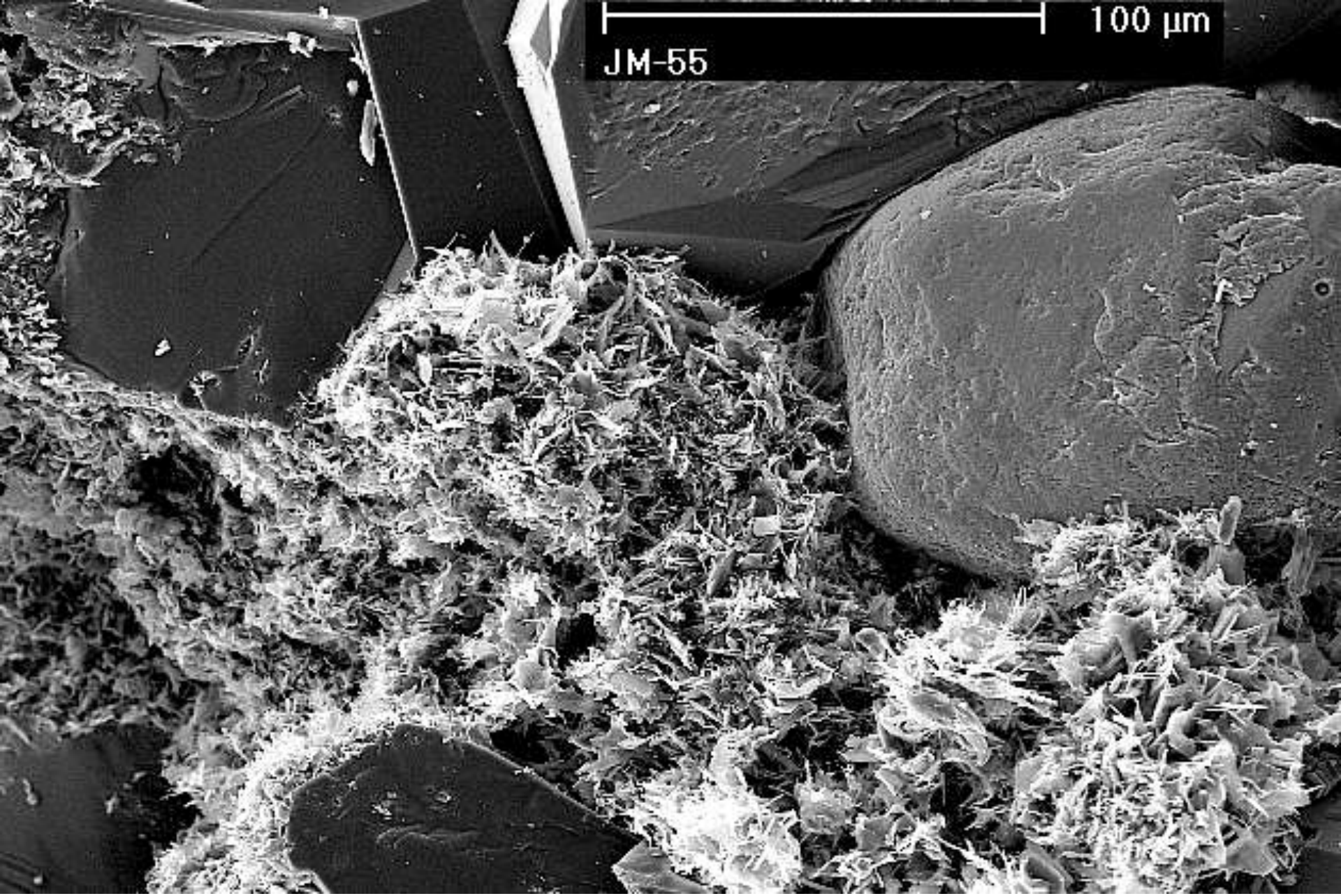
Kaolin forming as alteration of muscovite



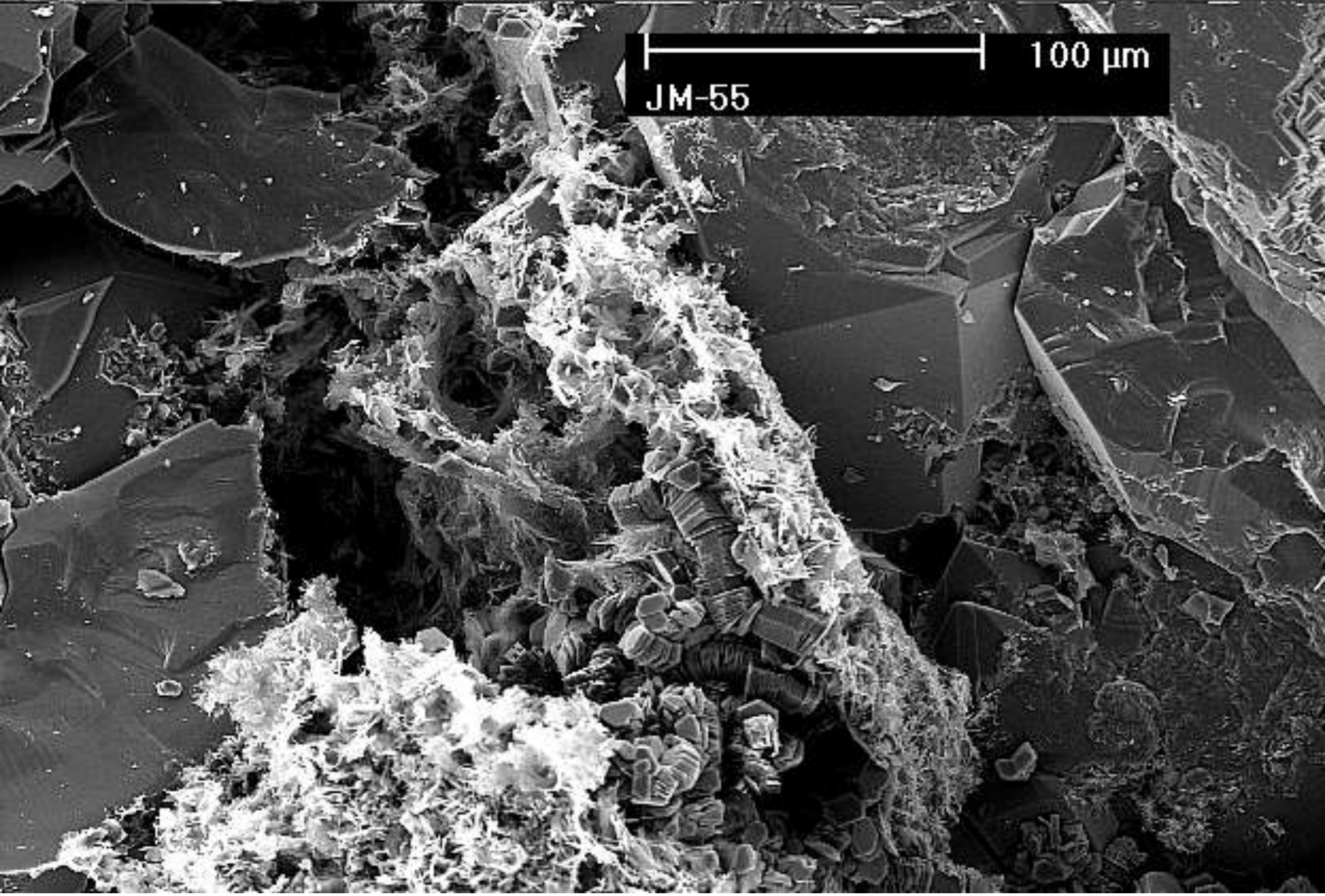
Kaolinite spreading muscovite flakes during alteration



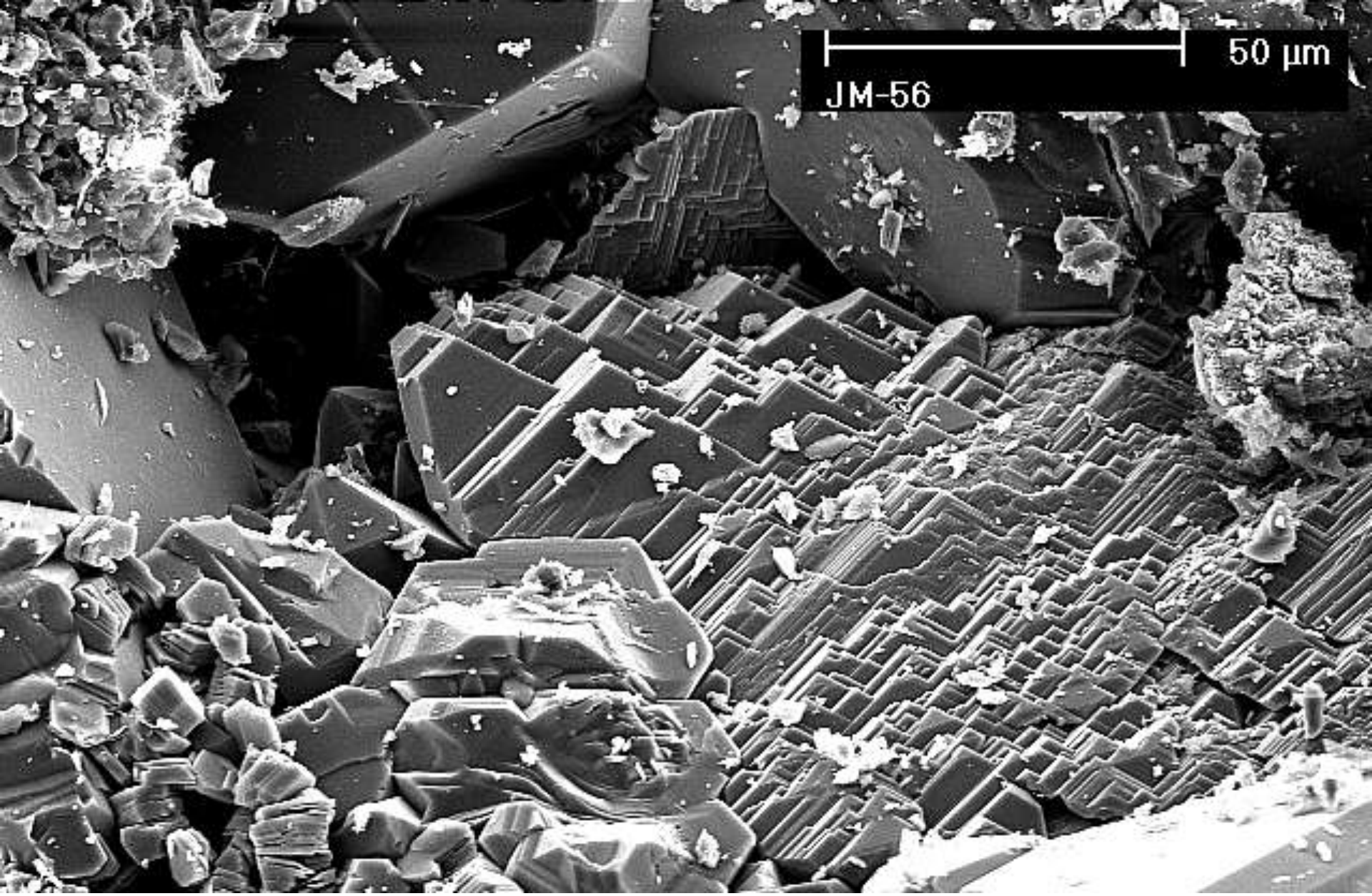
Kaolin growing on a muscovite flake



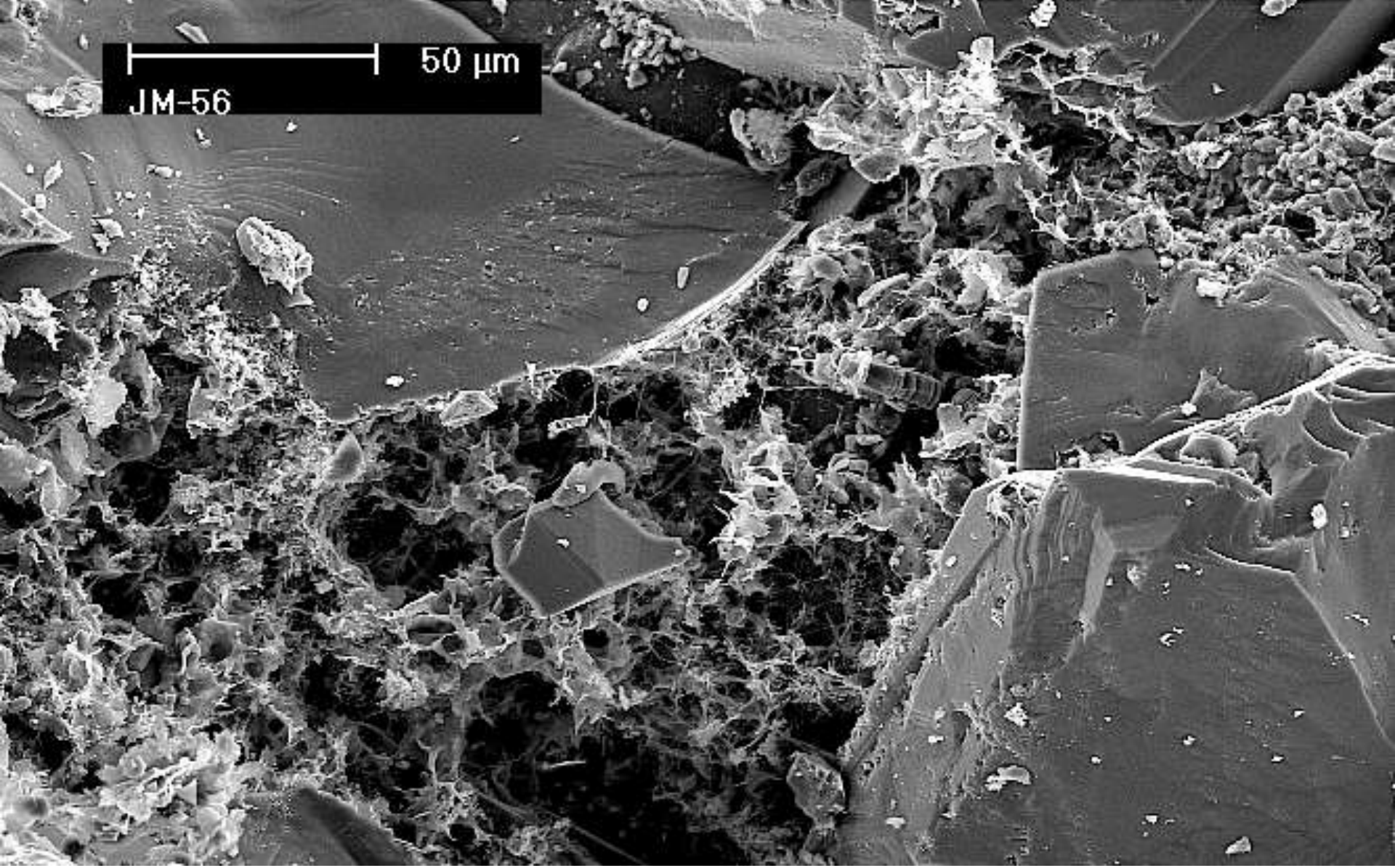
Rock fragments altered to illite and kaolin, quartz overgrowth controlled substrate (occurs on igneous Q, not on metamorphic Q)



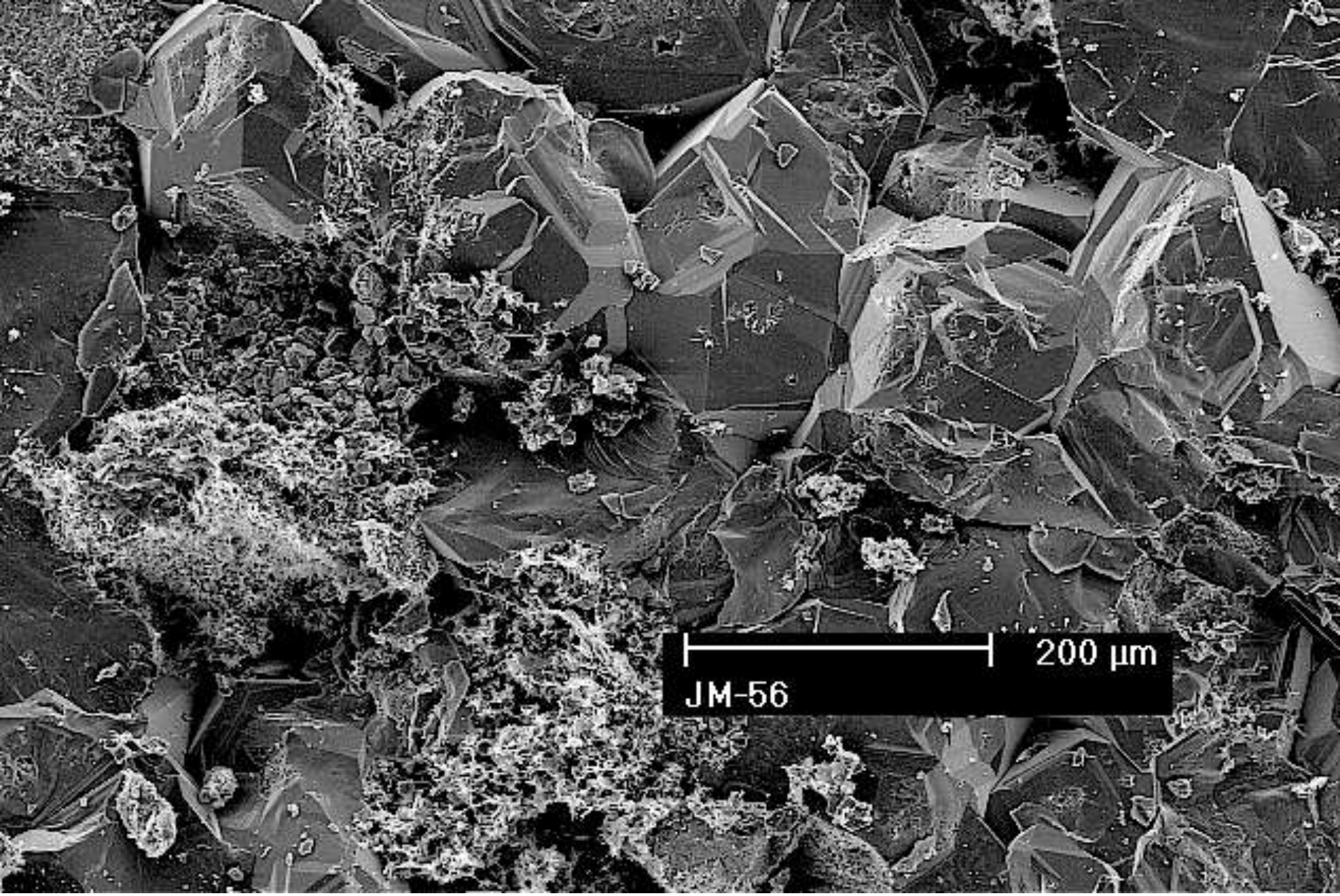
Feldspar? dissolution and alteration to kaolin with later illite, good porosity still preserved by Q overgrowths and between loose kaolin



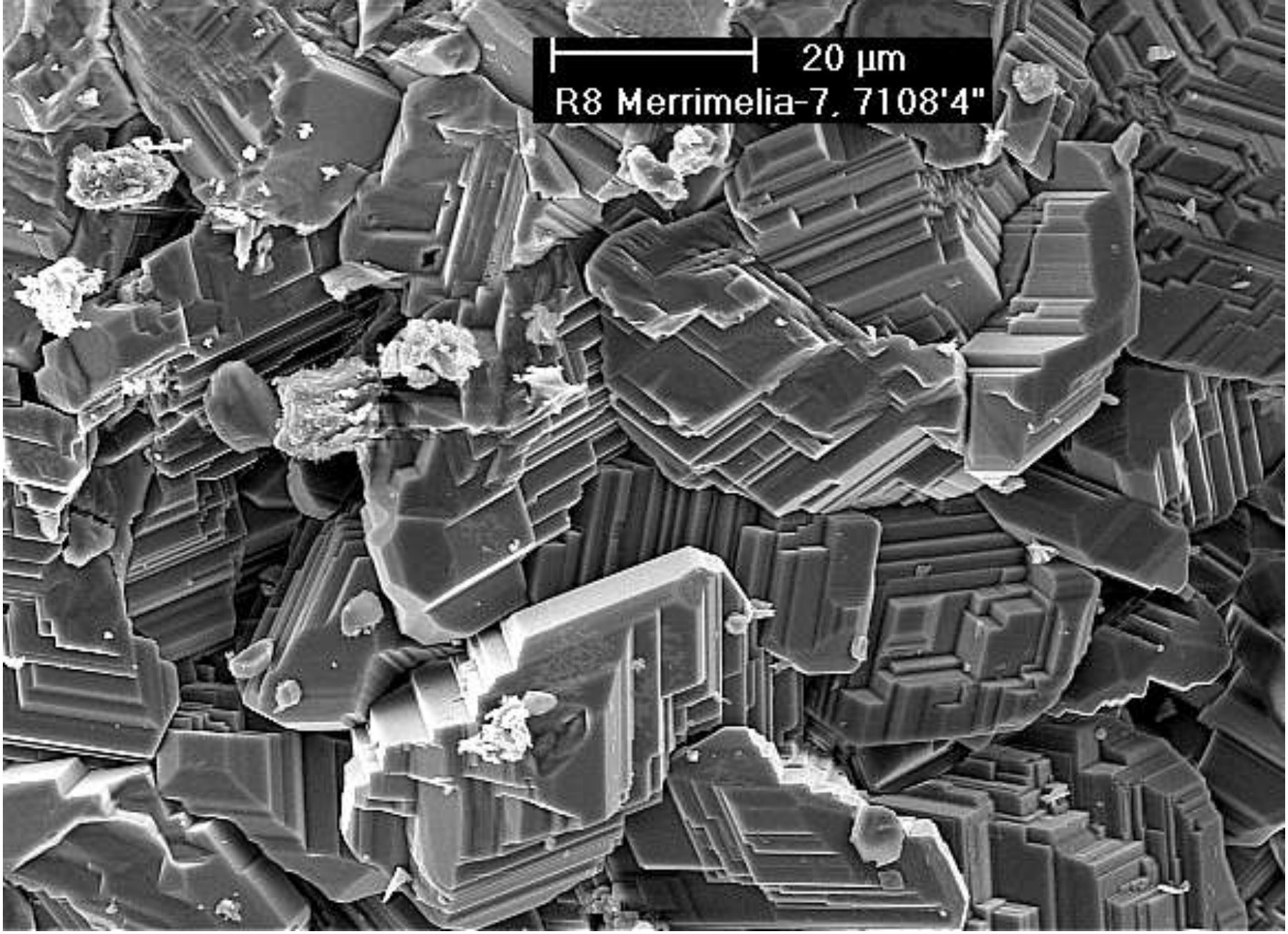
Late stage sparry siderite fills pores and pore throats



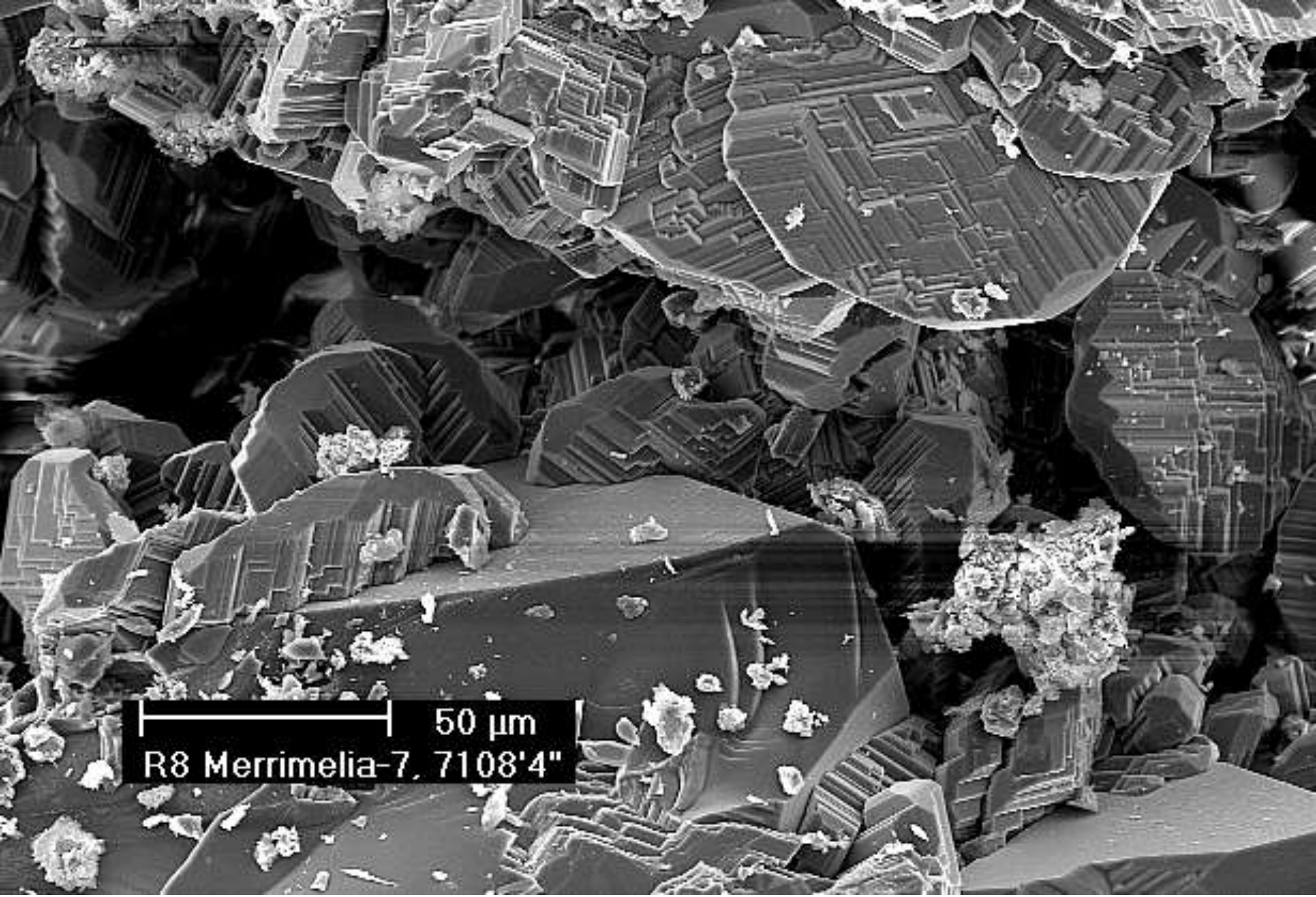
Illite grows on, and recrystallises from, matrix clays. The network of plates and fibres does not fill porosity but destroys permeability



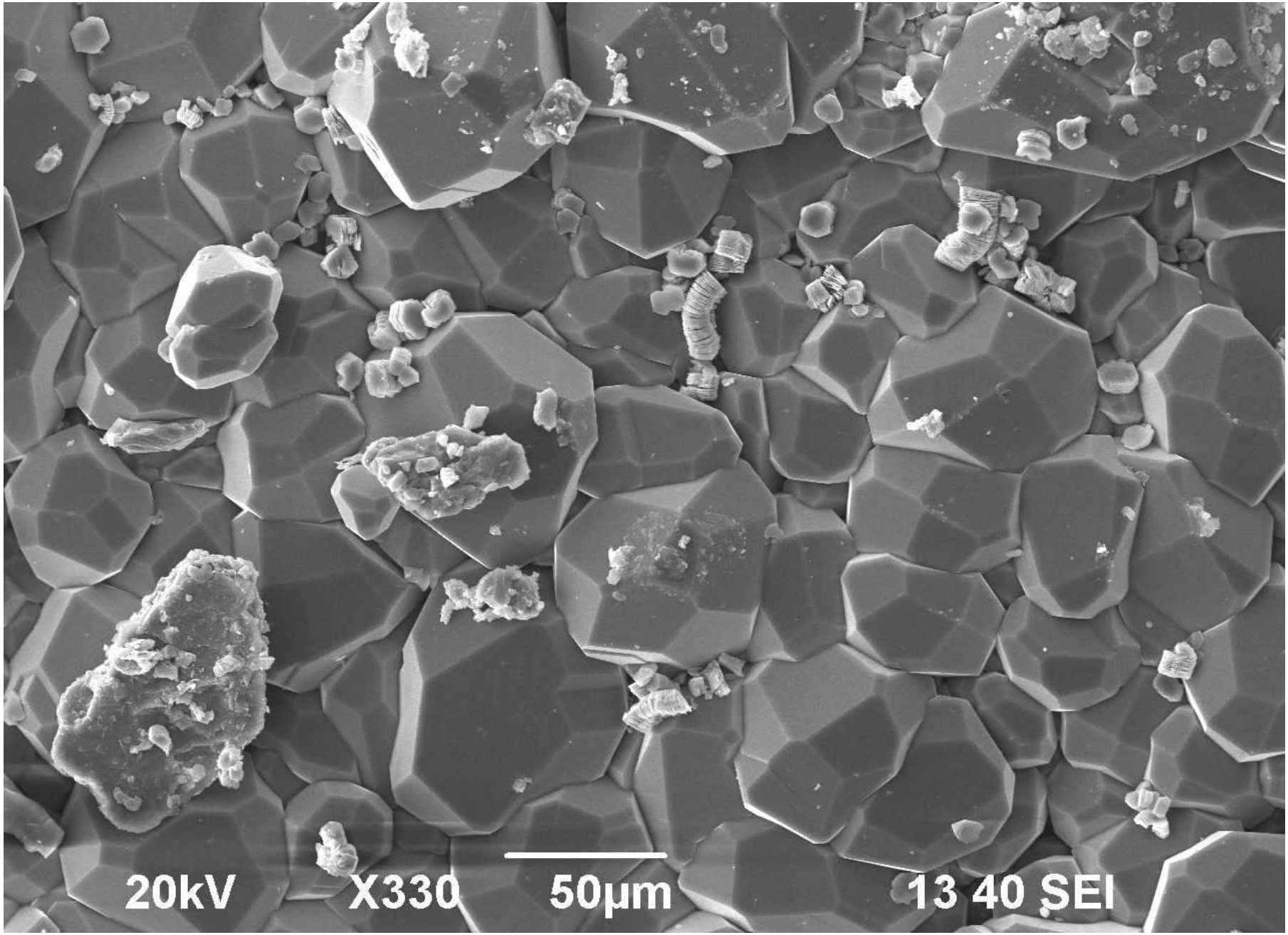
Quartz overgrowths protect pores from compaction, rock fragments and feldspars alter to illite and kaolin, loose packed kaolin grows into adjacent pores



Interlocking siderite crystals (dust on surface)



Siderite growing on surface of quartz overgrowth



Kaolinite occupies analcime