New stratigraphic, sedimentologic and paleomagnetic data in upper Paleozoic rocks of the Wrangellia terrane, eastern Alaska range

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Southern Alaska is a collage of terranes that were mostly accreted to the continent by tectonic transport during the Mesozoic (Jones et al. 1987). Some of these terranes are well understood, but the boundaries of many remain poorly defined due essentially to a lack of detailed stratigraphic studies. The study area is located in the eastern part of the Alaska Range, and has been referred to the Wrangellia terrane by several authors. This research project provides new stratigraphic, sedimentologic and paleomagnetic data to help interpret the age and depositional history of these Upper Palaeozoic rocks. If paleomagnetic measurements have shown these rocks to be essentially remagnetized after folding, the stratigraphic and sedimentologic part of the project allowed comparison of different marine facies observed in two measured sections with previous work in the Chulitna terrane, south-central Alaska, and at a broader scale, all around the Arctic realm. Indeed, the biotic assemblage, the lack of non-skeletal grains, as well as specific diagenetic and compaction features allow to assess these rocks were deposited in a coll-water environment, although they were deposited at low-latitude. The facies observed in these two measured sections can be correlated to the autochthonous deposits from Northwest Pangea by Permian time.