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Deposits Near Kutcho Creek, Northwestern British Columbia.

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Pyritic quartz-sericite schists approximately 100 kilometres east-southeast of the community of Dease Lake were found in 1972 to contain copper and zinc minerals and have since been extensively explored. The mineralized rocks occur in the Cassiar Mountains of northwestern British Columbia between Kutcho Creek on the west and Tucho River on the east. Pyritic beds have been traced for approximately 13 km along strike. A main zone of interest occurs at the western end of the pyritic zone, where disseminations and small lenses of other sulphide minerals are abundant over a distance of approximately 2 km. Strata favourable for this type of deposit are now known to extend to the west of Kutcho Creek.

The geological setting, stratigraphy, structural style and lithology of an approximate 3000-metre bedded succession that encloses the sulphide-bearing beds can be summarized as follows. The sequence is thought to be Paleozoic in age and consist of an underlying sodic volcanic unit, an intervening coarse-grained epiclastic or clastic unit containing quartz-bearing grits, and an overlying fine-grained clastic unit of thinly bedded siltstone and shale. The rocks are folded isoclinally, metamorphosed and have a well-developed axial planar foliation. The amount of volcanic component decreases upward in the bedded sequence. The mineralized horizon is in fine-grained sedimentary rocks enclosed in grits near the transition from mixed volcanic and sedimentary rocks to purely detrital sedimentary rocks of the middle map unit. The sulphide-bearing unit consists of siliceous and dolomitic pelitic members that have been metamorphosed to a lustrous siliceous mica schist.

The deposit formed in a predominantly sedimentary environment in a period of quiescence during generally coarse clastic sedimentation into the basin. There is no obvious association with volcanism, although the deposit is possibly a distal volcanic exhalative product. A comparison may be drawn with the bedded cupriferous iron sulphide deposits (Besshi-type deposits) of Japan.