BULLETIN 4
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Indian and Northern Affairs Canada
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Exploration and Geological Services Division, Yukon Region

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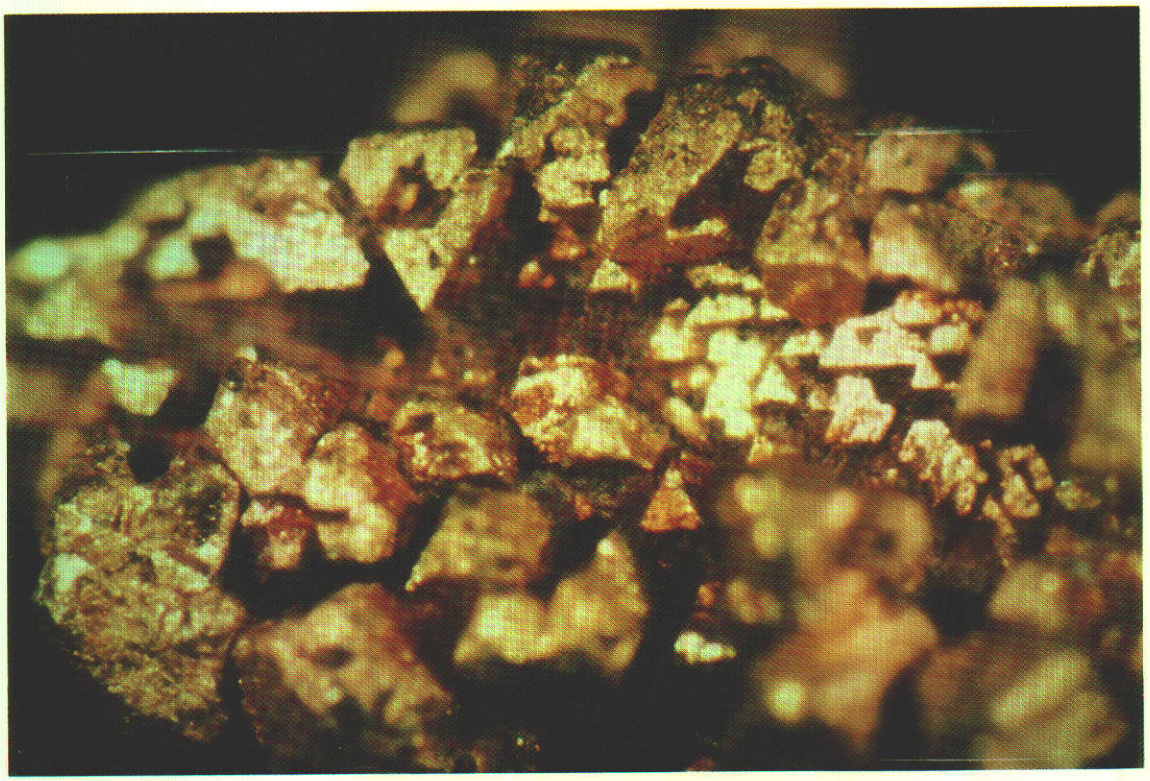
SEDIMENTOLOGY OF PLACER GRAVELS NEAR MT. NANSEN CENTRAL YUKON TERRITORY



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FACIES SCHEME

Introduction

The term "facies" has generally been used by various authors as the classification of a body of rock or sediment based on a unique set of characteristics that set it apart from other bodies of rock or sediment. Modern usage originated with de Raaf et al., (1965) who used "lithological, structural and organic aspects detectable in the field" to subdivide a group of formations into facies. Walker (1984) noted that this subdivision is essentially a classification procedure which depends on the objectives of the study as well as the time available and the abundance of physical and biological structures in the rocks. Middleton (1978) noted that although facies will ultimately be given an environmental interpretation, the facies definition must be quite objective and based on the total field aspect of the rocks themselves.

The facies scheme utilized in the study area was designed with the above in mind. It was revised throughout the field season and adjusted as new lithologies were encountered. The objectives of the study were constantly kept in mind so that the facies scheme would be neither too simplistic nor too complex to achieve the goals of the study in the amount of time available. Although several facies occurred in widely varying genetic settings, care was taken not to add environmental interpretation into the facies descriptions.

The main characteristics of each bed which were described in the field were: lithology (percent of gravel, sand, silt and clay), maximum grain size (based on ten largest clasts), clast angularity, sedimentary structures, clast support, sorting, contacts, and accessories. Gravel and sand units were described according to the modified Wentworth scale (Wentworth, 1922) and classified according to the AGI (American Geological Institute) classification scheme (Detrich et al., 1982). Table 6 summarizes the main aspects of each facies described.

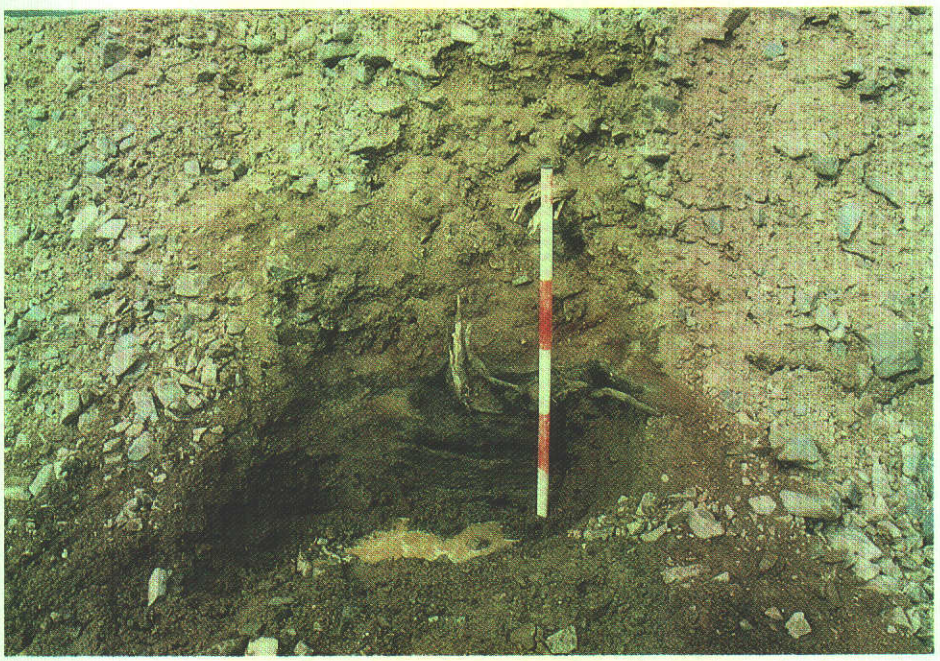

Figure 11 - Measured section K 1-3 shows one of several buried organic horizons (Facies 1) in the Klaza River locality. Note the stump in growth position, which has been radiocarbon dated at 4600a +/- 60 B.P.