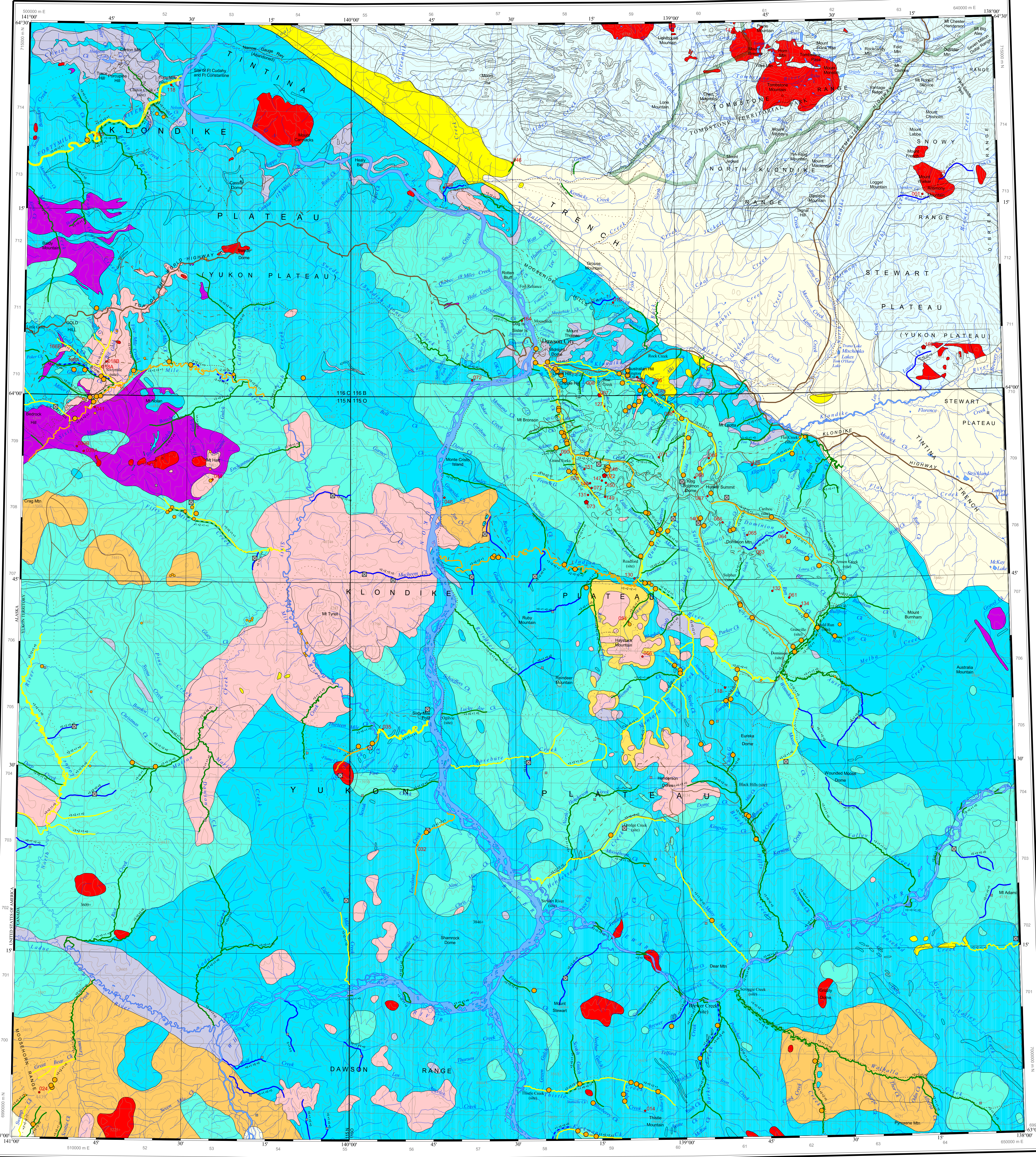


STEWART RIVER PLACER PROJECT RESOURCE APPRAISAL MAP FOR PLACER GOLD IN THE STEWART RIVER (115 N/O) AND PART OF THE DAWSON (116 B/C) MAP AREAS, YUKON (1:250 000 Scale)



- BASEMAP FEATURES: Highway, 2 Wheel Drive, 4 Wheel Drive, Trail, Winter Trail, Other, Territorial Boundary, Mining District Boundary, Tombstone Territorial Park Boundary

RESOURCE APPRAISAL: This map presents the results of a geologic appraisal for undiscovered placer gold resources in the Stewart River and part of the Dawson map areas. The procedure used in the appraisal is based on Harrison et al. (1998). The appraisal begins by describing an 'occurrence model' for placer gold deposits...

OCURRENCE MODEL FOR PLACER GOLD REGIONAL SETTING: The Tintina Fault (Tintina Trench on map) is a major right-lateral strike slip fault along which approximately 450 km of displacement occurred since the mid-Cretaceous (Gabrielse, 1985). This fault transects the northeast corner of the map area...

- BEDROCK GEOLOGY - TERRANE UNIT: POST-TERRANE AMALGAMATION/ACCRETION UNITS: PLUTONIC: Pp - Paleogene post-accretion plutons, Lkp - Late Cretaceous and Early Tertiary post-accretion plutons, mKp - mid-Cretaceous post-accretion plutons, Eajp - post-amalgamation plutons characteristic of Stikinia...

REFERENCES: Mining Inspection Division, 1998. Yukon Placer Industry 1995-1997. Mineral Resources Directorate, Yukon Region, Indian and Northern Affairs Canada, 173 p.

EXPLANATION FOR RESOURCE APPRAISAL: LOSE GOLD (Yukon map number): Lode deposit from which gold has been produced, Prospected or occurrence of lode gold. PLACERS: Producer, Prospect, No Gold. GEOCHEM: 21 - 132g Stream Sediment Gold concentration (ppb), 14 - 20 Regional Geochemical reconnaissance map (100 - 1998).

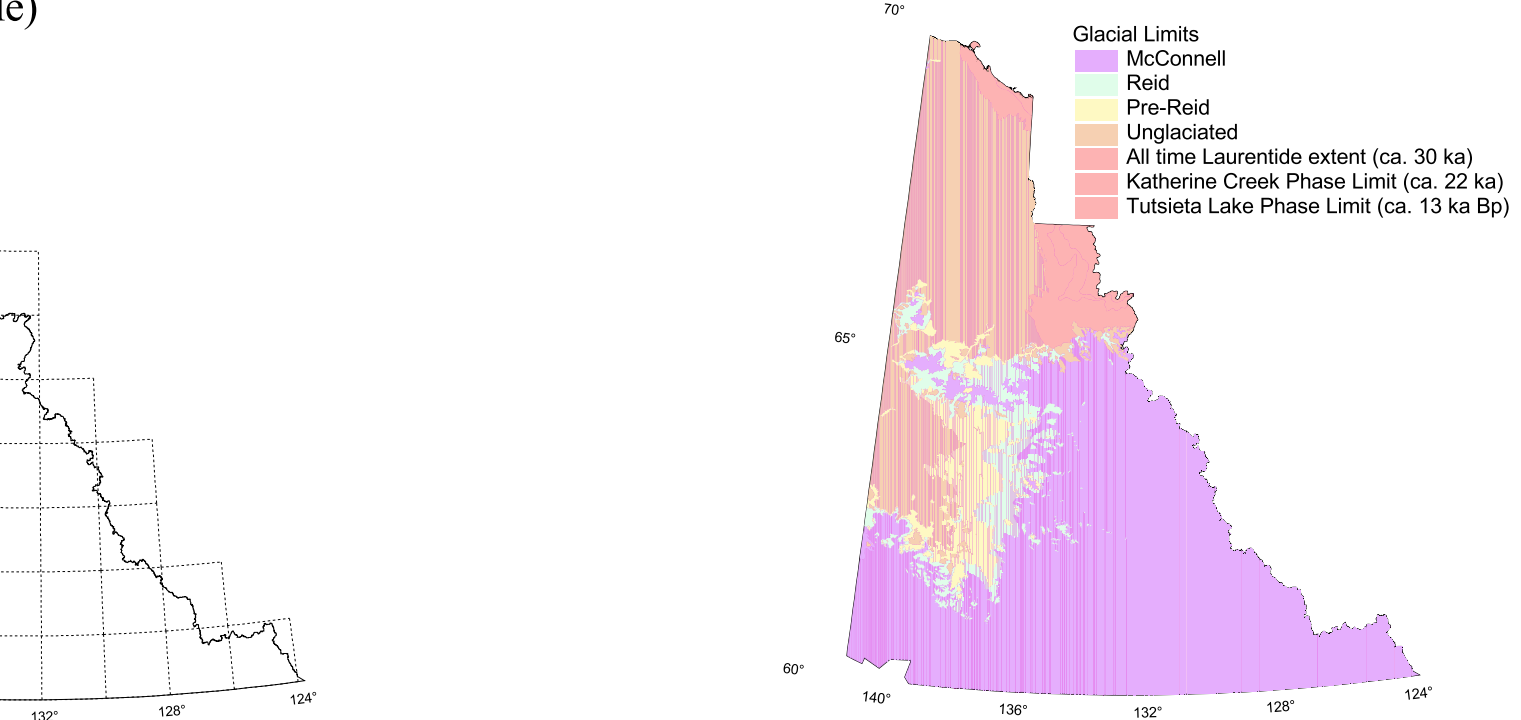
DEPOSIT CHARACTERISTICS: Bench and creek placers are the primary type of placer deposits in the map area. These deposits are mainly fluvial in origin and range from Pliocene to Holocene in age. Historically, they have been classified into three levels of gravel with four main units (Cairnes, 1917; Cockfield, 1921; McConnell, 1905, 1907)...

RESOURCE POTENTIAL: Nearly 300,000 ounces (9330 kg) of gold were produced from placers in the map area during 1995-97 (approximately 85% of the Yukon's placer gold production), with over 300 metric tonnes produced since the discovery of placer gold in the Klondike in 1896.

SEDIMENTARY/VOLCANIC: Qs - Quaternary cover beneath which terrane boundaries can be extended with confidence, TQv - largely basalt (Tertiary?) and Quaternary, Tvs - Tertiary felsic to mafic volcanic rocks and interbedded terrestrial sedimentary rocks, ukv - Upper Cretaceous mafic and lesser felsic volcanic rocks, mostly Carmacks Group, Jks - Jurassic and Lower Cretaceous sedimentary rocks overlapping Wrangellia and Alexander terranes (Dezadash); minor Cretaceous fluvial sedimentary rocks above Stikinia (Tantulus).

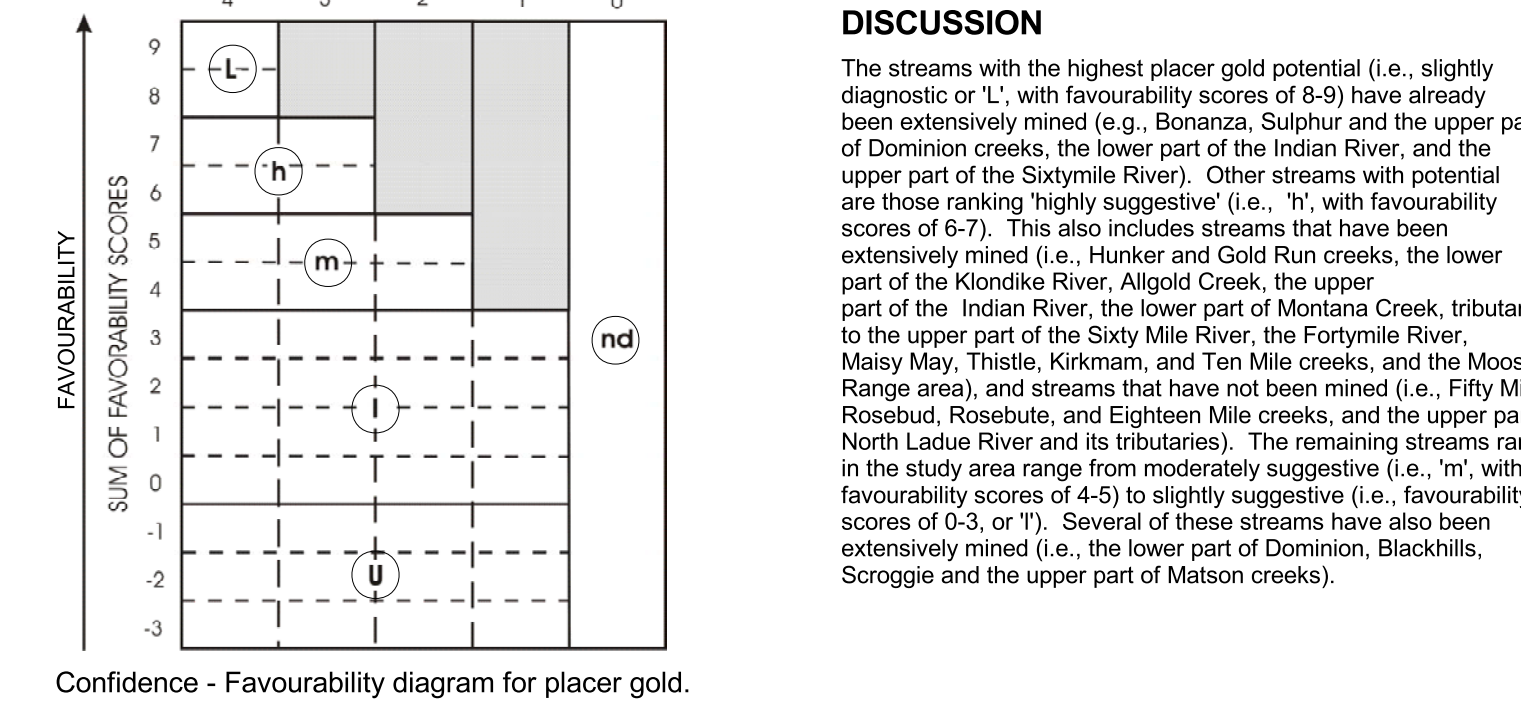
TERRANES: PERICRATONIC: rocks possess elements of passive margin sedimentation but differ in stratigraphic or structural characteristics from the ancestral North American margin. YTNa - NASINA SUBTERRANE: Metamorphosed early(?) to mid-Paleozoic continental margin with superposed Late Devonian and Early Mississippian arc volcanic (=Nasina assemblage) and (YTp) plutonic rocks.

RECOMMENDED CITATION: Lowy, G.W., Deforest, S., and Lipovsky, P., 2002. Stewart River Placer Project Resource Appraisal Map (1:250 000 scale). Yukon: Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Open File 2002-4.



- RATING SCALE: ALLUVIAL GEOLOGY: +3 Pleistocene - Holocene gravelly fluvial deposits commonly forming narrow zones within stream valleys, +2 Pleistocene-Holocene gravel commonly forming mid- to high-level terraces, 0 Placene (?) gravelly fluvial deposits other than the White Channel Gravel deposits, 0 Placene-Holocene gravelly deposits forming alluvial fans, pediments, etc., -1 Placene-Holocene deposits consisting primarily of sand, mud, and/or coal, -2 Placene-Pleistocene glaciofluvial, glaciolacustrine and till deposits (including Klondike gravel), -3 Bedrock outcrops (including thin colluvial blankets and veneer), and mass wasting deposits.

PROBABILITY OF OCCURRENCE OF PLACER GOLD: (L) Slightly diagnostic, (h) Highly suggestive, (m) Moderately suggestive, (I) Slightly suggestive, (U) Unfavourable - including bedrock geology -3 to +3. Resource appraisal based on Rating Scale (values are maximum for a stream or terrace and are listed in order of alluvial geology, geochemistry, placer occurrence (i.e., known resources) and lode occurrence (i.e., probable sources)).



DISCUSSION: The streams with the highest placer gold potential (i.e., slightly diagnostic or 'L', with favourability scores of 8-9) have already been extensively mined (e.g., Boranza, Sulphur and the upper part of Dominion creeks; the lower part of the Indian River; and the upper part of the Sixty Mile River). Other streams with potential are those ranked 'highly suggestive' (i.e., 'h', with favourability scores of 7). This also includes streams that have been extensively mined (i.e., Hunker and Gold Run creeks; the lower part of the Klondike River; Algod Creek; the upper part of the Indian River; the lower part of Montana Creek; tributaries to the upper part of the Sixty Mile River; the Forty Mile River; Massey May, Thistle, Kirkman, and Ten Mile creeks; and the Moose Horn Range area), and streams that have not been mined (i.e., Fifty Mile, Roadbed, Rosebush, and Eighteen Mile creeks; and the upper part of the North Lade River and its tributaries). The remaining streams ranked in the study area range from moderately suggestive (i.e., 'm', with favourability scores of 4-5) to slightly suggestive (i.e., 'I', with favourability scores of 3 or 'I'). Several of these streams have also been extensively mined (i.e., the lower part of Dominion, Blackfish, Scroggie and the upper part of Mason creeks).

ACCRETED, INTERMONTANE SUPER-TERRANE: SM - SLIDE MOUNTAIN: Oceanic and/or marginal basin volcanic and sedimentary rocks of Devonian to Late Triassic age including chert, argillite, sandstone, conglomerate, mafic intrusions, basalt, alpine-type ultramafic rocks, carbonate rocks and local blueschist and eclogite.

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