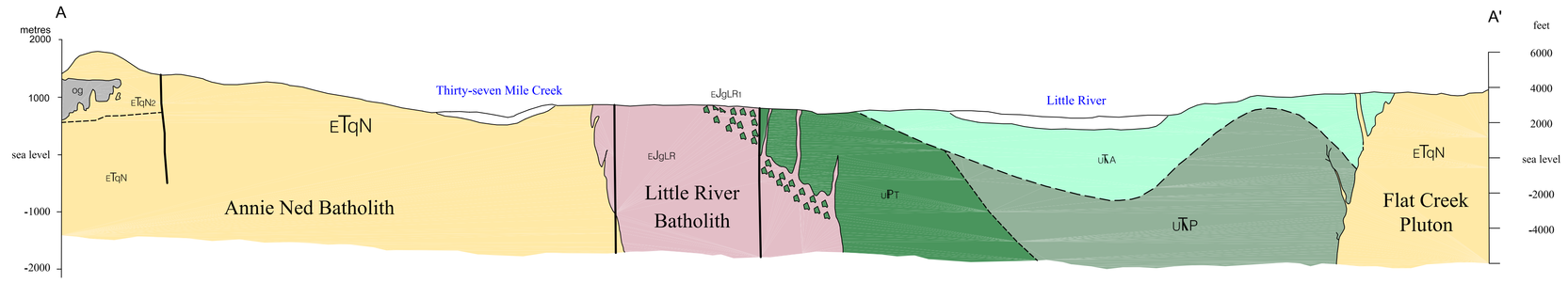

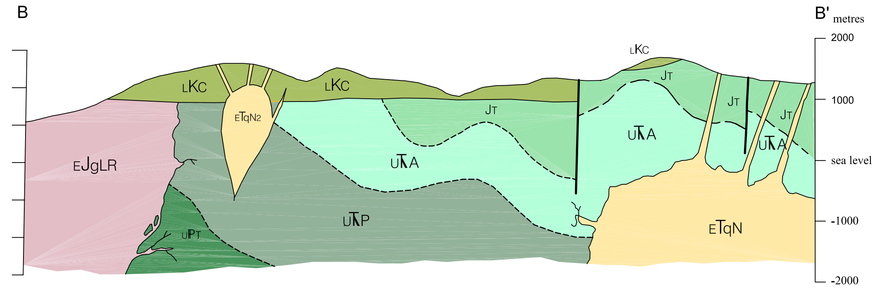

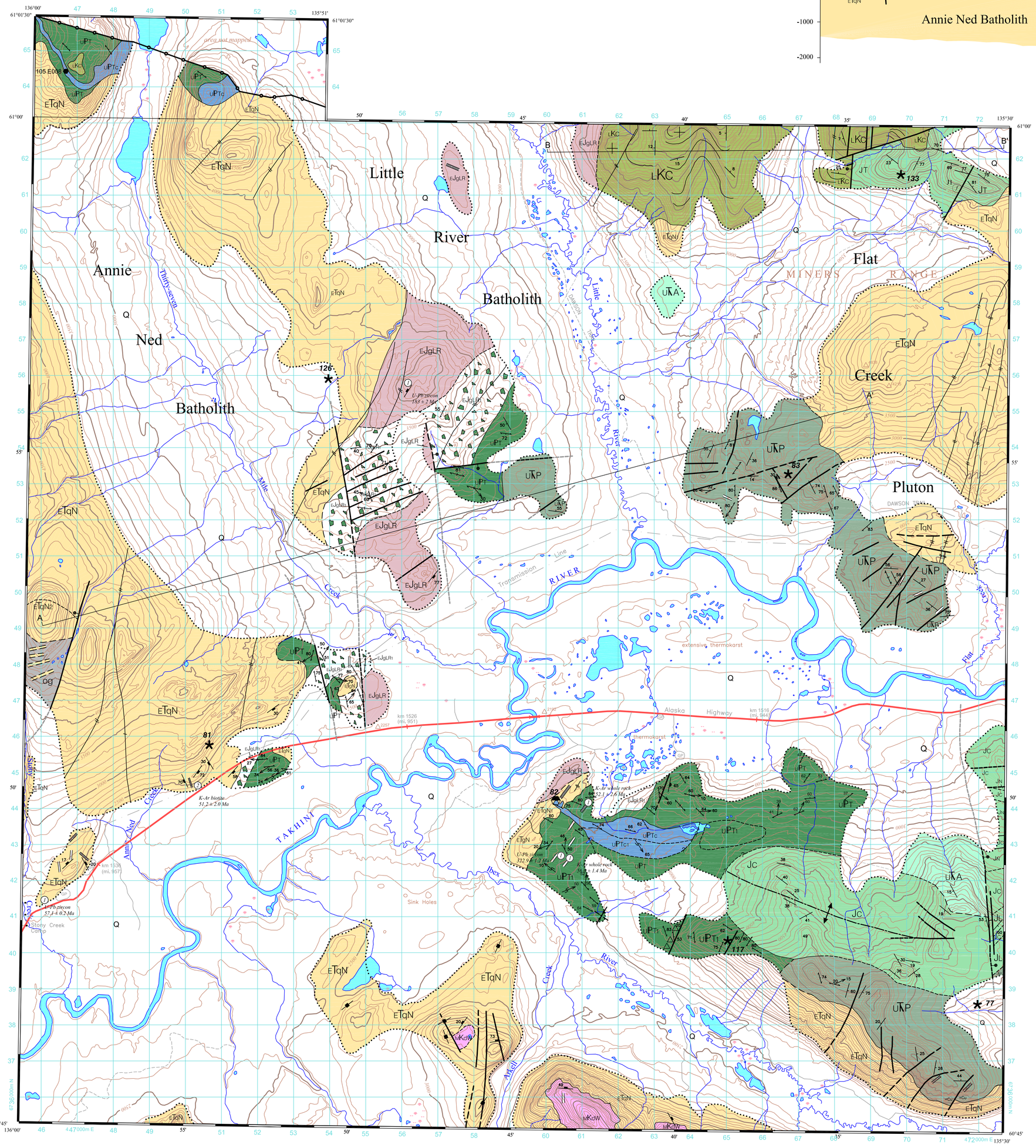

QUATERNARY

Q — Unconsolidated sand, gravel and silt deposits of alluvial, glacial lacustrine, fluvial and colluvial origin.

TERTIARY
EARLY EOCENE

Brown-weathering, resistant, feldspar- and hornblende-phyric andesite dykes, generally north-trending.

Orange-weathering, sucrosic rhyolite and dacite dykes, locally with orange feldspar phenocrysts.

LATE PALEOCENE
NISLING RANGE PLUTONIC SUITE

ETqN — Annie Ned Granite (57-54 Ma): orange- and crumbly weathering, recessive, locally miarolitic, coarse-grained, smoky quartz biotite granite with widely spaced and horizontal joints, includes Flat Creek Pluton.

ETqN1 — Light orange- and grey-weathering, flow banded rhyolite with feldspar phenocrysts. Locally contains schlieren of Little River granodiorite.

ETqN2 — Coarse-grained, orange feldspar and smoky quartz granite porphyry; crowded in a fine-grained felsic matrix.

ETqN — Salmon pink, medium-grained, biotite and hornblende quartz monzodiorite. Age is not constrained isotopically.

CRETACEOUS
LATE CRETACEOUS
CARMACKS GROUP

LKC — Dark purple-green and grey-green, massive and thickly bedded, well layered, locally brecciated, augite and plagioclase-phyric basaltic lava flows, lithic tuff and ash flows, with agglomerate and associated epiclastic rocks.

MID-CRETACEOUS?

mKdW — Dark grey-weathering, resistant, strongly chloritized and locally sericitized, hornblende quartz diorite.

mKd — Dark grey-weathering, resistant, strongly chloritized and locally sericitized, hornblende quartz diorite.

JURASSIC
LOWER TO MIDDLE JURASSIC
LABERGE GROUP

JL — Undifferentiated Laberge Group sandstone, greywacke, argillite, siltstone, arkose, conglomerate and hornfels.

TANGLEFOOT FORMATION

JT — Dark tan- and buff-weathering, interbedded brown chert-rich sandstone, shale, pebble conglomerate and hornfels, with coaly plant fragments and lesser shell fragments.

CONGLOMERATE FORMATION

JC — Orange-weathering, thick-bedded to massive, well-rounded, polymictic, clast-supported cobble conglomerate with interbeds of pebbly sandstone, tuffaceous sandstone and greywacke. Clasts are derived from Lewes River Group volcanic and sedimentary rocks, as well as Late Triassic plutons.

JN — Nordenskiöld Member: blue, green and maroon, coarse- and medium-grained, massive, crystal-rich dacite tuff and arkosic greywacke.

EARLY JURASSIC

EJgLR — Little River Batholith (183 Ma): Moderately recessive, grey-weathering, coarse-grained hornblende-biotite granite and granodiorite with pink alkali feldspar megacrysts. Some localities are strongly saussertitized or contain notable epidote.

EJgLR1 — As above with schlieren and pendants of Takhini Assemblage meta-volcanic rocks.

TRIASSIC
UPPER TRIASSIC
LEWES RIVER GROUP
AKSALA FORMATION

UKA — Poorly bedded, heterolithic volcano-sedimentary assemblage of intercalated agglomerate, greywacke, volcanic flow rock and breccia, tuff conglomerate, lithic sandstone and argillite; locally maroon weathering.

POVOAS FORMATION

UKP — Resistant, massive, dark weathering, green to black, fine-grained locally feldspar-phyric, chloritized basaltic flow breccia, pillowed flows and agglomerate with massive dark green, medium- to coarse-grained augite porphyry basalt.

UPPER PALEOZOIC
TAKHINI ASSEMBLAGE

UPT — Weakly sheared to strongly foliated and metamorphosed, green-schist, chlorite gneiss, chlorite-augite-feldspar gneiss, amphibolite and amphibole gneiss. May include metamorphosed equivalents of Povoas Formation.

UPTi — As described above with light grey-weathering, felsic orthogneiss, meta-rhyolite and feldspar-quartz-muscovite schist.

UPTc — Recessive, light grey-weathering, coarsely crystalline, white sheared marble; minor calc-silicate rock and skarn.

UPTc1 — Recessive, yellow-weathering, coarsely crystalline, massive dolostone minor calc-silicate rock.

AGE UNCERTAIN

og — Dark grey-weathering, medium-grained, chloritized, cataclastic quartz diorite orthogneiss. Crosscut by numerous dykes of ETqN

SYMBOLS

- Limit of outcrop
- Geological boundary (defined, approximate, assumed or covered)
- Fault (dot on downthrown side) (defined, approximate, assumed or covered)
- Lineament
- Bedding (inclined, vertical, horizontal)
- Igneous flow banding (inclined, vertical)
- Pillow lavas
- Flow contacts
- Schistosity, gneissosity, foliation (inclined, veritcal)
- Shear band
- Lineation (mineral, stretching and rodding)
- Joints (inclined, vertical)
- Anticline, syncline
- Minor fold axis
- Cross-section line — A A'
- Breccia zone
- Isotopic age determinations
  - Details are in the accompanying Bulletin (Appendix 7)
  - Morrison et al, 1979
- Fossil locality
  - Details are in the accompanying Bulletin (Appendix 3) — J1

MINERAL OCCURRENCES
Yukon MINFILE

Number	Name		Deposit type
105D 045	INGRAM		(on 105 D/12)
105D 077	LARSON	★	work target
105D 081	STONY	★	work target
105D 082	FARM	⬬	Zn skarn
105D 083	WAGON	★	work target
105D 087	CALVIN	★	work target
105D 117	TROT	★	work target
105D126	THIRTY-SEVEN	★	work target
105D 133	HYDE	★	work target
105E 008	RUTH	●	Cu skarn

REFERENCES

Hart, C.J.R., 1997. Geology of Upper Laberge map area, southern Yukon (NTS 105 D/14). Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Geoscience Map 1997-5, 1:50 000 scale.

Hart, C.J.R. and Radloff, J.K., 1990. Geology of the Carcross, Fenwick Creek, Alligator Lake, Whitehorse and part of Robinson map areas (105 D/2,3,6,7 & 11) Yukon. Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Open File 1990-4, 113 p.

Kindle, E.D., 1952. Dezadeash map-area, Geological Survey of Canada Memoir 268 (includes Map 1019A).

Morrison, G.W., Godwin, C.I. and Armstrong, R.L., 1979, Interpretation of isotopic ages and $^{87Sr}/^{86Sr}$ initial ratios for plutonic rocks in the Whitehorse map area, Yukon. Canadian Journal of Earth Sciences, vol. 16, p. 1988-1997.

Tempelman-Kluit, D.J., 1974. Reconnaissance geology of Aishihik Lake, Snag and part of Stewart River map-areas, west-central Yukon. Geological Survey of Canada Paper 73-41 (includes Map 17-1974).

Tempelman-Kluit, D.J., 1984. Maps of Laberge (105 E) and Carmacks (115 I) map sheets; with legends. Geological Survey of Canada Open File 1101.

Wheeler, J.O., 1961. Whitehorse map-area, Yukon Territory. Geological Survey of Canada Memoir 312, 156 p.

Yukon MINFILE, 2002. Whitehorse, NTS 105D. Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada.

RECOMMENDED CITATION

Hart, C.J.R., 2003. Geology of Thirty-seven Mile Creek map area (NTS 105D/13), southern Yukon (1:50 000 scale). Yukon Geological Survey, Energy, Mines and Resources, Yukon Government, Geoscience Map 2003-2.

This map was originally published by Exploration and Geological Services, Yukon Region, Indian and Northern Affairs Canada as Geoscience Map 1997-4. Geoscience Map 1997-4 accompanies Hart, C.J.R., 1997. A Transect Across Stikinia: Geology of the Northern Whitehorse Map Area (105D/13-16). Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Bulletin 8, 112 p.

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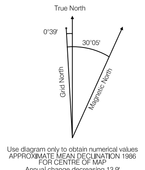
ONE THOUSAND METRE
Universal Transverse Mercator Grid
ZONE 8

THIRTY-SEVEN MILE CREEK
YUKON
SCALE 1:50 000

Miles 1 0 1 2 3 Miles

Metres 1000 0 1000 2000 3000 4000 feetres

CONTOUR INTERVAL 100 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1983
Transverse Mercator Projection



Use diagram only to obtain numerical values
APPROXIMATE MEAN DECLINATION 1996
FOR CENTRE OF MAP
Annual change decreasing 13.9'

115 I/I/1 Tempelman-Kluit 1974	105 E/4 Tempelman-Kluit 1984	105 E/3 Tempelman-Kluit 1984
115 A/16 Kindle 1952	105 D/13 This Map	105 D/14 Hart Geoscience Map 2003-3
115 A/9 Kindle 1952	105 D/12 Wheeler 1961	105 D/11 Hart and Radloff 1990

Yukon Geological Survey
Energy, Mines and Resources
Yukon Government

Geoscience Map 2003-2

Geology of Thirty-seven Mile Creek map area (105D/13) southern Yukon (1:50 000 scale)

by
Craig J.R. Hart