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NTS 104B/9,10,15,16; 104G/1,2

by D.J. Alldrick, J.L. Nelson and T. Barresi
Compilation and Cartography by Tim Hewett and Sen-Huy Tan

1 0 1 2 3 4
Kilometers

Scale 1:50,000

Fieldwork carried out in 2004 and 2005
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INTRUSIVE ROCKS

CENOZOIC
Eocene

- Eqp — Rhyolite; dikes, sills and stocks; white, quartz-phyric to aphanitic

MESOZOIC
Middle Jurassic

- MJd — Diorite
- MJMd — Diorite; fine grained, weakly foliated Melville Pluton and associated stocks (172 Ma)
- MJgb — Gabbro; age uncertain, correlated with Nickel Mountain intrusions
- MJpx — Pyroxenite

Early Jurassic

- EJf — Felsic dikes and stocks
- EJgp — Granodiorite: fine-grained, hornblende porphyritic, K-feldspar megacrystic. "Premier Porphyry" texture
- EJgd — Granodiorite; medium to coarse grained; hornblende porphyritic; K-feldspar megacrystic
- EJmz — Plagioclase (+/- K-feldspar) porphyritic hypabyssal monzonite (193Ma)

Late Triassic

- LTsy — Syenite porphyry, large zoned orthoclase phenocrysts, grey and pink

PALEOZOIC
Devono-Mississippian

- LD-EMg — Granite
- LD-EMd — Diorite

STRATIFIED ROCKS

CENOZOIC
Quaternary (Pleistocene to Recent)

- Qt — Talus; landslide debris fan (Holocene)
- Qal — Alluvium (Pleistocene)

Pliocene to Holocene

- PHk — Crater lake (Holocene). No lithologies preserved
- PHb — Basalt flows; massive, local pillows, cinder layers

Eocene

- Esd — Pebble conglomerate, white and green tuffaceous sandstone, black coaly mudstone; wood fragments; preserved along fault

MESOZOIC
Middle to Upper Jurassic

- muJs — Siltstone, sandstone, mudstone; rare chert pebble conglomerate
- muJcg — Chert pebble conglomerate with sandstone, wacke, or grit matrix

Lower to Middle Jurassic (Toarcian to Bajocian)

- lmJEb — Basalt; pillow basalt, pillow breccia, massive basalt flows, hyaloclastite. Basaltic sills and dikes, peperite. Minor intercalated mudstone horizons including basal "Contact Mudstone" (ore host)
- lmJEr — Rhyolite; flow-banded, flow lobes, breccias, hyaloclastite, perlite, spherulites. Multiple flow-dome complexes. (Eskay Rhyolite; Footwall Rhyolite)
- lmJEd — Dacite; fragmental tuff and amygdoloidal flow (Mount Dilworth Formation; Footwall Volcanic Unit; Datum Dacite)
- lmJDC — Undivided sedimentary and volcanic rocks; dominantly siltstone
- lmJDCsl — Dark to grey to black mudstone and siltstone with thin beds of silty limestone, sandstone, and rare pebble conglomerate
- lmJDCr — Rhyolite; white, aphanitic; black matrix breccia
- lmJDCb — Basalt, pillow basalt
- lmJIRm — Carbonaceous mudstone; black, lustrous, phyllitic
- lmJIRd — Dacite breccia; coarsely clastic to finely comminuted with rare exotic limestone clasts and olistoliths. Minor siltstone interbeds
- lmJIRsl — Black siltstone, mudstone, sandstone
- lmJIRsd — Sandstone, siltstone, mudstone, and dacitic volcaniclastic beds; dacite debris-flow breccias
- lmJIRcg — Felsic volcanic conglomerate to volcanic breccia, minor sandstone intervals
- lmJIRr — Rhyolite breccia. Sharply angular aphantic rhyolite clasts in sandy (hyaloclastite?) groundmass. White, grey, black color-mottling
- lmJSP — Undivided. Interbedded sandstone, mudstone, basalt
- lmJSPb — Basalt. Massive, aphanitic to fine-grained, equigranular to locally glomeroporphyritic. Multiple massive subaerial dacite and basalt flows up to 10 metres thick, exposed over a 200 m cliff face
- lmJSPsd — Sandstone. Well bedded with graded beds; incorporates minor pebble conglomerate
- lmJSPcg — Polymictic conglomerate and subordinate sedimentary breccia
- lmJSPbx — Talus breccia to sedimentary breccia, ranging from monolithologic to somewhat polymictic
- lmJFb — Basalt. Massive basalt flows, pillow basalt and pillow breccia. Rare flow-banded basalt flows and columnar-jointed basalt
- lmJFfcv — Rhyolite (Four Corners Complex). Massive rhyolite flows with interbedded siliceous, pyritic mudstone
- lmJFfcd — Subvolcanic dikes (Four Corners Complex); felsic dikes (rhyolite and lesser dacite) and mafic dikes (basalt and diabase).
- lmJPR — Undivided. Mostly basalt and pillow basalt with uncertain stratigraphic position relative to the Middle Unit.
- lmJPRsl — Upper sedimentary unit. Dark grey siltstone and lesser sandstone with pillow basalt interbeds near base.
- lmJPRub — Upper pillow basalt unit. Pillowed and massive basalt flows. Minor mudstone and rare rhyolite lenses and dikes. Includes siliceous mudstone (lmJPRm)
- lmJPRm — Siliceous mudstone with tuffaceous siltstone laminations
- lmJPRmu — Middle Unit. Siliceous mudstone and tuffaceous siltstone with interbedded to flow-banded rhyolite and massive brecciated rhyolite (lJPRr)
- lJPRr — Rhyolite. Massive to flow-banded; and brecciated flows (peperite)
- lJPRlb — Lower pillow basalt unit; pillowed basalt flows

Lower Jurassic (Sinemurian to Toarcian)

- lJf — Dacite; felsic flows and pyroclastic rocks; flow-banded to fragmental textures; local welded ash flows (Mount Dilworth Formation)
- lJb — Basalt; pillow basalt, fire-fountain deposits; mafic tuffs
- lJsl — Thin-bedded grey to black siltstone, calcareous siltstone, sandstone, sedimentary breccia
- lJr — Rhyolite on Logan Ridge. Resistant rhyolite flows; massive to brecciated, flow-banded and spheroidal
- lJp — Andesite; plagioclase porphyritic plugs and flows
- lJcg — Maroon-weathering volcanic conglomerate and breccia; epiclastic; polymictic. Lesser andesite to dacite flows. Rare basalt flows (lJb). Rare dikes and pods of plagioclase porphyritic andesite (lJp). Rare limestone. (Betty Creek Formation)
- lJsd — Sandstone; lesser wacke, siltstone, mudstone, conglomerate
- lJv — Andesite to dacite flows, massive; lesser maroon-weathering volcanic conglomerate and breccia.

Lower Jurassic (Hettangian to Sinemurian)

- lJs — Basal sedimentary unit: Undifferentiated clastic sedimentary rocks; includes sandstone, siltstone, mud-stone, granule to pebble conglomerate; local clast-supported granitoid pebble to boulder conglomerate
- Ucgs1 — Basal conglomerate marking unconformity. Granitoid cobbles to boulders. (Jack Formation in part)

Upper Triassic (Carnian to Rhaetian)

- uTb4 — Basalt; dark grey massive plagioclase porphyritic flows and coarse-bladed plagioclase and pyroxene porphyry dikes
- uTs3 — Clastic sedimentary rocks. (lower Jack Formation)
- uTd2 — Dacite. Felsic fragmental unit; lapilli, ash and crystal tuff.
- uTI3 — Intermediate volcanic rocks; andesite flows and breccias
- uTb3 — Mafic volcanic fragmental. Lapilli to block tuff. Augite phenocrysts, highly vesicular. Dark olive weathering. May include mafic volcanic flows and dikes, sedimentary rocks, and volcanic conglomerate
- uTs3 — Dark grey siltstone, carbonaceous, calcerous mudstone, muddy and silty limestone; fossilliferous
- uTvcg2 — Mafic volcanic conglomerate with minor interbedded mudstone. Mafic fragmental with tiny augite and feldspar phenocrysts. Dark olive weathering
- uTI2 — Intermediate volcanic rocks; andesite flows and breccias
- uTsd2 — Sandstone. Dominantly volcanic sandstone with lesser mudstone and conglomerate. Conglomerate shows angular to rounded pebble to cobble sized clasts.
- uTb4 — Basalt; dark grey massive plagioclase porphyritic flows and coarse-bladed plagioclase and pyroxene porphyry dikes
- uTw2 — Sedimentary and volcanic rocks. Well-bedded augite-plagioclase-bearing volcanic sandstone, mudstone; lesser volcanic breccia
- uTvs — Volcanic and sedimentary rocks: predominantly coarse green to maroon augite-plagioclase porphyritic volcanic breccia
- uTs2 — Dark grey siltstone, carbonaceous, calcareous mudstone, muddy and silty limestone; fossilliferous
- uTb2 — Mafic volcanic fragmental. Lapilli to block tuff. Augite phenocrysts, highly vesicular. Dark olive weathering. May include mafic volcanic flows and dikes, sedimentary rocks and volcanic conglomerate
- uTb1 — Mafic volcanic fragmental. Lapilli to block tuff. Augite phenocrysts, highly vesicular. Dark olive weathering. May include mafic volcanic flows and dikes, sedimentary rocks and volcanic conglomerate
- uTc2 — Limestone; white, bedded, may be fossilliferous (corals); grades laterally into fossilliferous siltstone (belemnites, pelecypods)
- uTsd1 — Sandstone. Dominantly volcanic sandstone with lesser mudstone and conglomerate. Conglomerate shows angular to rounded pebble to cobble sized clasts.
- uTr — Rhyolite. Black, flow banded, flow layered, pyritic; locally resembles black ribbon chert
- uTc1 — Limestone; massive, white, recrystallized; olistolith slabs within volcaniclastic units
- uTsn — Lower volcanics and sandstone; epiclastic conglomerate

- uTb1 — Mafic volcanic fragmental. Lapilli to block tuff. Augite phenocrysts, highly vesicular. Dark olive weathering. May include mafic volcanic flows and dikes, sedimentary rocks and volcanic conglomerate
- uTs1 — Dark grey siltstone, carbonaceous, calcareous mudstone, muddy and silty limestone; fossilliferous
- uTsv1 — Sedimentary and volcanic rocks. Well-bedded augite-plagioclase-bearing volcanic sandstone, mudstone; lesser volcanic breccia
- uTsn — Lower volcanics and sandstone; epiclastic conglomerate
- uTsl — Black and brown siltstone; orange sandstone
- muTsl — Black siltstone, carbonaceous, calcareous mudstone, muddy and silty limestone; minor chert

PALEOZOIC
Permian

- P — Undivided.
- Pc3 — Limestone slabs within volcaniclastic rocks
- Pv — Volcanic rocks. Basalt, andesite, rhyolite; variable chloritised, strongly foliated
- Psl — Phyllite, siliceous siltstone, minor chert and wacke
- Pc2 — Limestone slabs within clastic rocks
- Pc1 — Limestone olistolith within Iskut River facies dacite breccia

Carboniferous

- Csl — Grey to light green phyllitic siltstone, graphitic argillite, siliceous phyllite/tuff and thin lenses of dark brown limestone. Fetid dolomitic limestone, and minor interbeds of maroon and green tuff and cherty siltstone

Devono-Mississippian

- DM — Undivided. Basalt and andesite; hyaloclastite, pillowed and flow breccia rocks. Minor foliated clastic sedimentary rocks, including siltstone, sandstone, chert, tuff, and recrystallized limestone. Massive to grey bioclastic limestone with silty dolomitic layers

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