Yukon Bedrock Geology - Legend 2016

Yukon Geological Survey

Yukon — Energy, Mines and Resources

SOUTHWEST — NORTHEAST — NORTH

A

QUATERNARY

Q — **QUATERNARY**: *unconsolidated glacial, glaciofluvial and glaciolacustrine deposits; fluviatile silt, sand, and gravel, and local volcanic ash, in part with cover of soil and organic deposits*

MIOCENE TO PLIOCENE AND(?) YOUNGER

NW — **WRANGELL LAVAS:** *mafic to felsic volcanic rocks (1) with local conglomerate (2)*
1, rusty red-brown, physic and non-physic basaltic andesite flows (minor pillow lave), interbedded with felsic tuff, volcanic sandstone and conglomerate; acid pyroclastics related to intra-Wrangell intrusions; thin basaltic andesite and andesite flows **(Wrangell Lavas)**
2, volcanic conglomerate; clasts all Wrangell derived **(Wrangell Lavas)**

MID TO LATE MIOCENE

MW — **WRANGELL SUITE (16-6 Ma):** *fine to medium-grained, hornblende ± biotite granodiorite and porphyritic (K-feldspar) hornblende granodiorite; medium-grained, uniform biotite diorite and pyroxene gabbro; subvolcanic hornblende ± biotite rhyolite, rhyodacite, dacite*

OLIGOCENE

OT — **TKOPE SUITE (34-23 Ma):** *light pinkish-grey, medium to coarse-grained, homogeneous, biotite and/or hornblende granite (locally miarolitic); lesser light creamy-grey biotite hornblende granodiorite, dark grey biotite hornblende quartz diorite and gabbro-diorite* **(Tkope Suite)**

PALEOCENE TO OLIGOCENE

OA — **AMPHITHEATRE:** *yellow-buff to grey-buff sandstone, pebbly sandstone, polymictic conglomerate, siltstone, mudstone; minor brown-grey carbonaceous shale and thin lignitic coal; minor tuffaceous and subvolcaniclastic deposits, local debris-flow deposits; some shallow marine* **(Amphitheatre Fm; Kulthieth)**

EOCENE

ES — **SEWARD SUITE (62-41 Ma):** *non to weakly foliated, light to mid-brownish-grey, medium-grained, biotite and hornblende-biotite tonalite and granodiorite; rarer granite and quartz diorite* **(Seward Suite)**

LATE EARLY CRETACEOUS

EKK — **KLUANE RANGES SUITE (124-115 Ma):** *mid-grey, medium to coarse-grained, biotite hornblende granodiorite, quartz diorite, quartz monzonite, and hornblende diorite* **(Kluane Ranges Plutonic Suite)**

EKP — **PYROXENITE CREEK SUITE (124-113 Ma):** *medium-grained hornblende pyroxene gabbro and hornblende diorite; olivine and hornblende clinopyroxenite* **(Pyroxenite Creek Ultramafic)**

UPPER JURASSIC TO LOWER CRETACEOUS

JKD — **DEZADEASH:** *clastic succession (1) but locally including undifferentiated younger mafic (2)*
1, **interbedded light to dark buff-grey lithic greywacke, sandstone, siltstone, thin dark grey shale, argillite, pebbly argillite and conglomerate; rare tuff (Dezadeash Fm)**
2, **sandstone, conglomerate, shale, siliceous tuff; shallow marine shelf deposits**

LATE JURASSIC TO EARLIEST CRETACEOUS

JKS — **SAINT ELIAS SUITE (164-143 Ma):** *nonporphyritic and porphyritic (K-feldspar), biotite hornblende granodiorite; lesser nonporphyritic biotite and/or hornblende tonalite; locally includes biotite hornblende quartz monzodiorite, quartz diorite, granite, and quartz monzonite* **(Saint Elias Suite)**

CRETACEOUS AND (?) OLDER

KV — **YAKUTAT:** *greywacke and conglomerate in thick members or interbedded with siltstone, argillite, or slate; mélange with blocks (to several km) of greenstone, limestone, marble, granitic rocks, chert, and greywacke in a matrix of cherty and tuffaceous pelite* **(Yakutat Gp)**

KV — **VALDEZ:** *dark grey argillite and greywacke: includes granitoid dikes, sills, and locally plugs, green pillow lava, breccia, and tuff; metamorphosed equivalents include brown schist, granitoid gneiss and dark green amphibolite* **(Valdez Gp)**

UPPER TRIASSIC TO (?) CRETACEOUS

uTKT — **TATAMAGOUCHE:** *dark to light grey pitvfille, medium to coarse-grained sandstone, minor greywacke and pebble conglomerate, may include upper parts of McCarthy Fm*

LATE TRIASSIC

LTB — **MT. BEATON SUITE (ca. 217 Ma):** *medium to coarse-grained, unfoliated, hornblende diorite to hornblende-biotite quartz diorite, salt and pepper appearance; locally abundant dark grey fine-grained gabbro; may include parts of the Early Cretaceous Kluane Ranges Suite*

UPPER TRIASSIC

uTM — **MCCARTHY:** *light to dark grey calcareous to carbonaceous mudstone and shale; locally interbedded with buff-coloured limestone giving the rock as striped appearance*

UPPER TRIASSIC

uTC — **CHITISTONE:** *thin interbedded light to dark grey calcareous limestone and dark grey argillite; massive light grey limestone, limestone breccia and darker grey, well-bedded limestone; white to creamy-white gypsum and anhydrite* **(McCarthy, Chitistone and Nizina limestones)**

uTN — **NIKOLAI:** *basalt, andesite (2), basal conglomerate (1) and minor limestone (3)*
1, volcanic breccia, pillow lava and conglomerate at base
2, amygdaloidal basaltic and basaltic andesite flows, with local tuff, breccia, shale and thin-bedded bioclastic limestone **(Nikolai Greenstone)**
3, locally includes dark grey phyllite and minor thin grey Middle Triassic limestone

LATE TRIASSIC

LTKK — **KLUANE ULTRAMAFIC SUITE (232-228 Ma):** *mafic to ultramafic intrusions including peridotite, dunite (1) and gabbro (2)*
1, sheeny black serpentinite, rare dunite **(Kluane-type Mafic-Ultramafics Gabbro-Diabase Sills)**
2, medium grey-green, massive, medium-grained, pyroxene gabbro and greenstone sills **(Maple Creek gabbro)**

MIDDLE TRIASSIC

mTH — **KING CREEK:** *dark grey to black siltstone and mudstone; locally limy; grey, thinly-bedded limestone* **(Hoge Creek Fm)**; *difficult to distinguish from parts of the Lower Jurassic Creek Fm*

LOWER PERMIAN

CPH — **SKOLAI - HASEN CREEK:** *fine-grained clastic rocks (1) and carbonate (2)*
1, **interbedded dark grey and brown-weathered siltstone, mudstone and medium to coarse-grained sandstone; lesser interbedded light grey to black, fine-grained limestone and rare basaltic flows; rare dark grey to black chert beds and chert-pebble conglomerate** (Hasen Creek Fm)
2, **light to medium grey, massive to bedded limestone; locally fossiliferous; fossils include corals and crinoids - CPhc**

MISSISSIPPIAN TO PENNSYLVANIAN

CPS — **SKOLAI - STATION CREEK:** *volcanic rocks succeeded upward by clastic strata and including minor limestone*
1, undifferentiated Skolai Gp; includes variably metamorphosed and deformed Hasen Creek and Station Creek fms; meta-pelite, metavolcanic rocks and marble
2, dark green to black-weathering, fine-grained basaltic lava flows; commonly porphyritic and hyaloclastite; red, magnetite-rich jasper found locally as interstitial material between pillows and within pillow breccia, thick accumulations of laminated jasper rarely occur **(Station Creek Fm)**
3, thinly bedded, laminated to massive chert interbedded with crystal tuff; chert is mainly light to dark grey, but varies from white with local black and dark brown massive beds; tuff ranges from maroon to green, fine grained and laminated with phenocrysts of quartz ± plagioclase **(Station Creek Fm)**
4, interbedded volcanic breccia, agglomerate and volcaniclastic sandstone; dominated by pyroxene-phyric volcanic breccia; rare light grey-weathered, dark green to black, fresh, pyroxene-phyric lava flows **(Station Creek Fm)**
5, laminated to thinly bedded, light grey to light green volcanic tuff and volcaniclastic siltstone, local crystal-rich crystal tuff interbedded with fine-grained volcanic ash

PENNSYLVANIAN TO EARLY PERMIAN

CPI — **ICEFIELD RANGES SUITE (308-285 Ma):** *medium to dark greenish-grey, medium-grained, nonfoliated and foliated, biotite hornblende quartz monzodiorite, quartz diorite, monzonite and quartz monzodiorite; olivine and hornblende clinopyroxenite* **(Pyroxenite Creek Ultramafic)**

DEVONIAN TO UPPER TRIASSIC AND (?) OLDER

DTI — **FAIRCHILD:** *a heterogeneous group of diverse, dominantly upper Paleozoic partly equivalent strata subdivided into three dominant facies including pelitic rocks (1), carbonate (2) and volcanic rocks (3)*
1, thin to medium-bedded, fine to medium-grained, quartz-rich, micaceous, calcareous siltstone to sandstone, mica quartzite, or schist; minor interbedded phyllitic, argillite and schist; rare limestone, marble, basic volcanic rocks, and gypsum-anhydrite
2, white to creamy-white gypsum and anhydrite; thin-bedded to massive, light grey to dark bluish-grey limestone or marble; minor dark grey calcareous argillite, calcareous siltstone-sandstone, local buff-grey, crystal-rich crystal tuff
3, dark green (locally purple), porphyritic (augite) and non-porphyritic basaltic to andesitic flows, and subordinate volcaniclastic sediments, agglomerate, breccia, cherty tuff, grey limestone or marble, gypsum and basic intrusions

LATE DEVONIAN

DSC — **STEEL CREEK SUITE (ca. 364 Ma):** *massive medium to coarse-grained, rusty grey-green hornblende pyroxene gabbro, minor medium grained gabbro-diabase and gabbro-pegmatite intrusions; rare pods of black peridotite; screens of flows, volcaniclastic rocks; minor argillite, and rare chert* **(Mt. Cairnes Gabbro-Greenstone Complex; Steel Creek-Mt Constantine Gabbro Complex)**

SILURIAN AND DEVONIAN

SDB — **BULLION:** *a grouping of carbonate (1) and clastic (2) strata that may be in part equivalent*
1, massive to well-bedded light grey limestone or marble, thin-bedded dark grey limestone or marble; minor dark blue-grey calcareous argillite **(Bullion Creek Limestone)**
2, dark blue-grey argillite, phyllite, and minor greywacke siltstone-sandstone; upper part more calcareous, lower part more greywacke; locally may include massive limestone and greenstone

LOWER ORDOVICIAN TO DEVONIAN AND (?) OLDER

ODG — **GOATHERD:** *a grouping of clastic (1) and carbonate (2) strata that may be in part equivalent*
1, yellow to ochre-buff calcareous mudstone-siltstone, grey silty limestone and platy to massive-bedded, cryptocrystalline limestone; local well-bedded, limestone; thick to massive-bedded limestone in upper parts of unit probably equivalent to SDBl
(Goatherd Mbr, assemblage)
2, dull rusty-buff or green-grey greywacke siltstone-sandstone, and argillite or phyllite; minor grit; rarer limestone, pebble conglomerate, conglomerate; locally includes quartzite

CAMBRIAN TO ORDOVICIAN AND (?) YOUNGER

COD — **DONJEK:** *greywacke-greenstone assemblage (1) with minor carbonate (2)*
1, massive to well-bedded, fine to medium-grained greywacke, minor siltstone-sandstone, argillite, phyllite or schist, and basic and intrusives; conglomeratic, basic flows (some pillowed), pyroclastic rocks(?), and volcanic breccia; greenstone, amphibolite **(N. Alsek Ranges Greywacke-Gabbro assemblage; Donjek Range Greywacke-Greenstone assemblage; Field Creek Volcanics)**
2, light grey to rusty brown laminated limestone and limy siltstone, and well-bedded limestone or marble; minor greenstone - CODc

TRIASSIC - JURASSIC

TJB — **BEAR CREEK:** *greenstone (1), metaclastic rocks (2) and local mélange unit (3)*
1, fine to medium-grained, strongly foliated to massive intermediate to mafic metavolcanic rocks; greenschist near fault zones; interlayered with metasedimentary rocks and thin carbonate horizons; locally pillowed
2, fine-grained meta-siltstone, mudstone and sandstone; phyllitic to schistose, locally more massive; abundant pyrite cubes observed in mudstone
3, foliated and faulted mélange-like assemblage of medium to dark green, medium to coarse-grained clastic or volcaniclastic rocks and lesser grey chert and mudstone, with local highly foliated, cm to dm scale, cream-coloured layers and lenses of more felsic

LATE TRIASSIC

LTD — **MT. BEATON SUITE (ca. 217 Ma):** *medium to coarse-grained, unfoliated, hornblende diorite to hornblende-biotite quartz diorite, salt and pepper appearance; locally abundant dark grey fine-grained gabbro; may include parts of the Early Cretaceous Kluane Ranges Suite*

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2, white to creamy-white gypsum and anhydrite; thin-bedded to massive, light grey to dark bluish-grey limestone or marble; minor dark grey calcareous argillite, calcareous siltstone-sandstone, local buff-grey, crystal-rich crystal tuff
3, dark green (locally purple), porphyritic (augite) and non-porphyritic basaltic to andesitic flows, and subordinate volcaniclastic sediments, agglomerate, breccia, cherty tuff, grey limestone or marble, gypsum and basic intrusions

LATE DEVONIAN

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2, light grey to rusty brown laminated limestone and limy siltstone, and well-bedded limestone or marble; minor greenstone - CODc

B

QUATERNARY

Q — **QUATERNARY**: *unconsolidated glacial, glaciofluvial and glaciolacustrine deposits; fluviatile silt, sand, and gravel, and local volcanic ash, in part with cover of soil and organic deposits*

UPPER CRETACEOUS

uKC — **CARMACKS (DONJEK):** *volcanic succession dominated by basic volcanic strata (1), but including intermediate volcanic rocks (2) dominantly at the base of the succession, and locally, basal clastic strata (4) (ca. 72-68 Ma)*
1, augite olivine basalt and basaltic andesite; hornblende feldspar porphyry andesite and dacite flows; vesicular, augite phyric andesite and trachyte; minor sandy tuff, granite boulder conglomerate, agglomeratic and autoclastic xyloclastic rocks **(Carmacks Gp, Little Ridge Volcanics, Casino Volcanics)** *- uKcv*
2, andesite, porphyry - uKca
4, medium-bedded, poorly sorted, coarse to fine-grained sandstone, pebble conglomerate, shale, tuff, and coal; massive to thick-bedded locally derived granite or quartzite pebble to boulder conglomerate **(Carmacks Gp, Colorado Creek conglomerate)** *- uKCa*

JURASSIC

JLmr — **MACAULEY RIDGE:** *poorly sorted, medium-bedded to massive arkosic sandstone and minor shale with interbeds and thick members of resistant heterolithic pebble and boulder conglomerate; recessive, dark brown weathering, thin bedded, dark brown to greenish, silty shale* **(Macauley Ridge fm near Beaver Creek; probable equivalent of Laberge Gp)** *- JLmr*

MIDDLE TO UPPER TRIASSIC

TMC — **MIRROR CREEK:** *brown to buff weathering, calcareous fine-grained sandstone, argillite and shale; extensive ripple cross-lamination and bioturbation; massive, light grey weathering, fine crystalline, dark grey limestone; minor orange weathering platy limestone* **(correlated with Jones Lake Fm northeast of Tintina fault)**

TRIASSIC

TGS — **SNAG CREEK SUITE (232-226 Ma):** *massive, medium-grained hornblende gabbro and pyroxene sills* **(correlated with coeval sills of the Galena suite northeast of Tintina fault)**

DEVONIAN AND MISSISSIPPIAN

DMW — **WHITE RIVER:** *black carbonaceous and siliceous phyllite and schist (1), and interbedded felsic to mafic metavolcanic rocks (2); extensively intruded by gabbro of the Snag Creek suite (TGs)* **(correlative with Earn Gp northeast of Tintina fault (?) and Totatlatlia Lake schist in eastern Alaska)**
1, carbonaceous micaceous graphitic phyllite, grey psammitic schist, and quartzite - DMws
2, felsic to mafic metavolcanic schist; quartz and/or feldspar-augen felsic schist; mafic schist locally amygdaloidal - DMwv

MIDDLE DEVONIAN

LDMB — **MOUNT BAKER SUITE (ca. 365 Ma):** *metaplutonic suite dominated by orthogneiss of intermediate (a) to mafic (y) composition*
a, strongly foliated to gneissic granodiorite, diorite and monzogranite
y, strongly foliated to gneissic diorite, gabbro and minor pyroxenite

ORDOVICIAN TO DEVONIAN

ODS — **SCOTTIE CREEK:** *quartzose psammite, pelitic schist and minor marble (1); locally migmatized (2), north of Beaver Creek* **(correlative with Lake George assemblage in east-central Alaska)**
1, grey to white quartzite, micaceous quartzite and psammitic quartz-muscovite-biotite ± garnet schist; local metaconglomerate - ODs
2, layered pal ieg ni sss ww mica-rich melanosome and garnet-bearing quartzofeldspathic leucosome - ODsmm

C

QUATERNARY

Q — **QUATERNARY**: *unconsolidated glacial, glaciofluvial and glaciolacustrine deposits; fluviatile silt, sand, and gravel, and local volcanic ash, in part with cover of soil and organic deposits*

TERTIARY(?) AND QUATERNARY

TQS — **SELKIRK:** *resistant, brown weathering, columnar jointed, vesicular to massive basalt flows; minor pillow basalt; basaltic tuff and breccia* **(Selkirk Volcanics)**

PLIOCENE

PW — **WALSH:** *undivided felsic volcanic rocks (1) and conglomerate, sandstone, and mudstone (2)*
1, resistant, white weathering, massive rhyolite **(Walsh Creek fm)**
2, resistant, thick-bedded to massive, well-indurated conglomerate with minor interbedded sandstone; white mudstone with interbedded gritty sandstone and minor coal **(Walsh Creek fm)**

MIOCENE TO PLIOCENE

MPMC — **MILES CANYON:** *dark red to brown weathering, columnar jointed olivine basalt flows, commonly amygdaloidal and vesicular; ultramafic xenoliths* **(Miles Canyon Basalt)**

EOCENE

EH — **HAYDEN LAKE SUITE (54-48 Ma):** *salt and pepper, light and dark grey, hornblende ± biotite diorite to quartz diorite; massive, medium to coarse-grained; rare gabbro; garnet common as cystals 1-10 mm in size*

PALEOCENE TO LOWER EOCENE

PRC — **RHYOLITE CREEK (ca. 57 Ma):** *felsic (1), intermediate (2) and minor mafic (3, 4) volcanic rocks, basal conglomerate (5)*
1, light grey, green, maroon, purple and black rhyolite and dacite; locally flow banded; commonly a breccia with clasts of rhyolite within a crystal-rich matrix; may include intrusive equivalents
2, massive to well-bedded purple (weathered and fresh), fine to very coarse grained sedimentary breccia, enriched in clasts of feldspar-rich andesite in a matrix of the same composition; locally includes feldspar porphyry dikes of andesitic composition
3, dark grey to black weathered, very fine grained basalt, geographically limited to areas east of Porphyry Peak
4, interbedded volcanic breccia, agglomerate and volcaniclastic sandstone; dominated by pyroxene-phyric volcanic breccia; rare light grey-weathered, dark green to black, fresh, pyroxene-phyric lava flows **(Rhyolite Creek Fm)**
5, laminated to thinly bedded, light grey to light green volcanic tuff and volcaniclastic siltstone, local crystal-rich crystal tuff interbedded with fine-grained volcanic ash

PENNSYLVANIAN TO EARLY PERMIAN

CPI — **ICEFIELD RANGES SUITE (308-285 Ma):** *medium to dark greenish-grey, medium-grained, nonfoliated and foliated, biotite hornblende quartz monzodiorite, quartz diorite, monzonite and quartz monzodiorite; olivine and hornblende clinopyroxenite* **(Pyroxenite Creek Ultramafic)**

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2, white to creamy-white gypsum and anhydrite; thin-bedded to massive, light grey to dark bluish-grey limestone or marble; minor dark grey calcareous argillite, calcareous siltstone-sandstone, local buff-grey, crystal-rich crystal tuff
3, dark green (locally purple), porphyritic (augite) and non-porphyritic basaltic to andesitic flows, and subordinate volcaniclastic sediments, agglomerate, breccia, cherty tuff, grey limestone or marble, gypsum and basic intrusions

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ODG — **GOATHERD:** *a grouping of clastic (1) and carbonate (2) strata that may be in part equivalent*
1, yellow to ochre-buff calcareous mudstone-siltstone, grey silty limestone and platy to massive-bedded limestone; cryptocrystalline limestone; local well-bedded, limestone; thick to massive-bedded limestone in upper parts of unit probably equivalent to SDBl
(Goatherd Mbr, assemblage)
2, dull rusty-buff or green-grey greywacke siltstone-sandstone, and argillite or phyllite; minor grit; rarer limestone, pebble conglomerate, conglomerate; locally includes quartzite

CAMBRIAN TO ORDOVICIAN AND (?) YOUNGER

COD — **DONJEK:** *greywacke-greenstone assemblage (1) with minor carbonate (2)*
1, massive to well-bedded, fine to medium-grained greywacke, minor siltstone-sandstone, argillite, phyllite or schist, and basic and intrusives; conglomeratic, basic flows (some pillowed), pyroclastic rocks(?), and volcanic breccia; greenstone, amphibolite **(N. Alsek Ranges Greywacke-Gabbro assemblage; Donjek Range Greywacke-Greenstone assemblage; Field Creek Volcanics)**
2, light grey to rusty brown laminated limestone and limy siltstone, and well-bedded limestone or marble; minor greenstone - CODc

TRIASSIC - JURASSIC

TJB — **BEAR CREEK:** *greenstone (1), metaclastic rocks (2) and local mélange unit (3)*
1, fine to medium-grained, strongly foliated to massive intermediate to mafic metavolcanic rocks; greenschist near fault zones; interlayered with metasedimentary rocks and thin carbonate horizons; locally pillowed
2, fine-grained meta-siltstone, mudstone and sandstone; phyllitic to schistose, locally more massive; abundant pyrite cubes observed in mudstone
3, foliated and faulted mélange-like assemblage of medium to dark green, medium to coarse-grained clastic or volcaniclastic rocks and lesser grey chert and mudstone, with local highly foliated, cm to dm scale, cream-coloured layers and lenses of more felsic

LATE TRIASSIC

LTD — **MT. BEATON SUITE (ca. 217 Ma):** *medium to coarse-grained, unfoliated, hornblende diorite to hornblende-biotite quartz diorite, salt and pepper appearance; locally abundant dark grey fine-grained gabbro; may include parts of the Early Cretaceous Kluane Ranges Suite*

UPPER TRIASSIC

uTM — **MCCARTHY:** *light to dark grey calcareous to carbonaceous mudstone and shale; locally interbedded with buff-coloured limestone giving the rock as striped appearance*

UPPER TRIASSIC

uTC — **CHITISTONE:** *thin interbedded light to dark grey calcareous limestone and dark grey argillite; massive light grey limestone, limestone breccia and darker grey, well-bedded limestone; white to creamy-white gypsum and anhydrite* **(McCarthy, Chitistone and Nizina limestones)**

uTN — **NIKOLAI:** *basalt, andesite (2), basal conglomerate (1) and minor limestone (3)*
1, volcanic breccia, pillow lava and conglomerate at base
2, amygdaloidal basaltic and basaltic andesite flows, with local tuff, breccia, shale and thin-bedded bioclastic limestone **(Nikolai Greenstone)**
3, locally includes dark grey phyllite and minor thin grey Middle Triassic limestone

LATE TRIASSIC

LTKK — **KLUANE ULTRAMAFIC SUITE (232-228 Ma):** *mafic to ultramafic intrusions including peridotite, dunite (1) and gabbro (2)*
1, sheeny black serpentinite, rare dunite **(Kluane-type Mafic-Ultramafics Gabbro-Diabase Sills)**
2, medium grey-green, massive, medium-grained, pyroxene gabbro and greenstone sills **(Maple Creek gabbro)**

MIDDLE TRIASSIC

mTH — **KING CREEK:** *dark grey to black siltstone and mudstone; locally limy; grey, thinly-bedded limestone* **(Hoge Creek Fm)**; *difficult to distinguish from parts of the Lower Jurassic Creek Fm*

LOWER PERMIAN

CPH — **SKOLAI - HASEN CREEK:** *fine-grained clastic rocks (1) and carbonate (2)*
1, **interbedded dark grey and brown-weathered siltstone, mudstone and medium to coarse-grained sandstone; lesser interbedded light grey to black, fine-grained limestone and rare basaltic flows; rare dark grey to black chert beds and chert-pebble conglomerate** (Hasen Creek Fm)
2, light to medium grey, massive to bedded limestone; locally fossiliferous; fossils include corals and crinoids - CPhc

MISSISSIPPIAN TO PENNSYLVANIAN

CPS — **SKOLAI - STATION CREEK:** *volcanic rocks succeeded upward by clastic strata and including minor limestone*
1, undifferentiated Skolai Gp; includes variably metamorphosed and deformed Hasen Creek and Station Creek fms; meta-pelite, metavolcanic rocks and marble
2, dark green to black-weathered, fine-grained basaltic lava flows; commonly porphyritic and hyaloclastite; red, magnetite-rich jasper found locally as interstitial material between pillows and within pillow breccia, thick accumulations of laminated jasper rarely occur **(Station Creek Fm)**
3, thinly bedded, laminated to massive chert interbedded with crystal tuff; chert is mainly light to dark grey, but varies from white with local black and dark brown massive beds; tuff ranges from maroon to green, fine grained and laminated with phenocrysts of quartz ± plagioclase **(Station Creek Fm)**
4, interbedded volcanic breccia, agglomerate and volcaniclastic sandstone; dominated by pyroxene-phyric volcanic breccia; rare light grey-weathered, dark green to black, fresh, pyroxene-phyric lava flows **(Station Creek Fm)**
5, laminated to thinly bedded, light grey to light green volcanic tuff and volcaniclastic siltstone, local crystal-rich crystal tuff interbedded with fine-grained volcanic ash

PENNSYLVANIAN TO EARLY PERMIAN

CPI — **ICEFIELD RANGES SUITE (308-285 Ma):** *medium to dark greenish-grey, medium-grained, nonfoliated and foliated, biotite hornblende quartz monzodiorite, quartz diorite, monzonite and quartz monzodiorite; olivine and hornblende clinopyroxenite* **(Pyroxenite Creek Ultramafic)**

DEVONIAN TO UPPER TRIASSIC AND (?) OLDER

DTI — **FAIRCHILD:** *a heterogeneous group of diverse, dominantly upper Paleozoic partly equivalent strata subdivided into three dominant facies including pelitic rocks (1), carbonate (2) and volcanic rocks (3)*
1, thin to medium-bedded, fine to medium-grained, quartz-rich, micaceous, calcareous siltstone to sandstone, mica quartzite, or schist; minor interbedded phyllitic, argillite and schist; rare limestone, marble, basic volcanic rocks, and gypsum-anhydrite
2, white to creamy-white gypsum and anhydrite; thin-bedded to massive, light grey to dark bluish-grey limestone or marble; minor dark grey calcareous argillite, calcareous siltstone-sandstone, local buff-grey, crystal-rich crystal tuff
3, dark green (locally purple), porphyritic (augite) and non-porphyritic basaltic to andesitic flows, and subordinate volcaniclastic sediments, agglomerate, breccia, cherty tuff, grey limestone or marble, gypsum and basic intrusions

LATE DEVONIAN

DSC — **STEEL CREEK SUITE (ca. 364 Ma):** *massive medium to coarse-grained, rusty grey-green hornblende pyroxene gabbro, minor medium grained gabbro-diabase and gabbro-pegmatite intrusions; rare pods of black peridotite; screens of flows, volcaniclastic rocks; minor argillite, and rare chert* **(Mt. Cairnes Gabbro-Greenstone Complex; Steel Creek-Mt Constantine Gabbro Complex)**

SILURIAN AND DEVONIAN

SDB — **BULLION:** *a grouping of carbonate (1) and clastic (2) strata that may be in part equivalent*
1, massive to well-bedded light grey limestone or marble, thin-bedded dark grey limestone or marble; minor dark blue-grey calcareous argillite **(Bullion Creek Limestone)**
2, dark blue-grey argillite, phyllite, and minor greywacke siltstone-sandstone; upper part more calcareous, lower part more greywacke; locally may include massive limestone and greenstone

LOWER ORDOVICIAN TO DEVONIAN AND (?) OLDER

ODG — **GOATHERD:** *a grouping of clastic (1) and carbonate (2) strata that may be in part equivalent*
1, yellow to ochre-buff calcareous mudstone-siltstone, grey silty limestone and platy to massive-bedded limestone; cryptocrystalline limestone; local well-bedded, limestone; thick to massive-bedded limestone in upper parts of unit probably equivalent to SDBl
(Goatherd Mbr, assemblage)
2, dull rusty-buff or green-grey greywacke siltstone-sandstone, and argillite or phyllite; minor grit; rarer limestone, pebble conglomerate, conglomerate; locally includes quartzite

CAMBRIAN TO ORDOVICIAN AND (?) YOUNGER

COD — **DONJEK:** *greywacke-greenstone assemblage (1) with minor carbonate (2)*
1, massive to well-bedded, fine to medium-grained greywacke, minor siltstone-sandstone, argillite, phyllite or schist, and basic and intrusives; conglomeratic, basic flows (some pillowed), pyroclastic rocks(?), and volcanic breccia; greenstone, amphibolite **(N. Alsek Ranges Greywacke-Gabbro assemblage; Donjek Range Greywacke-Greenstone assemblage; Field Creek Volcanics)**
*2, light grey