Ministry of Energy, Mines and Petroleum Resources

Geological Survey Branch

OPEN FILE 1993-12

(Sheet 1 of 5: Legend)

YAKUTAT MAP AREA, NORTH-WESTERN BRITISH COLUMBIA

NTS 114O/ 9, 10, 14, 15 & 16

By M.G. Mihalynuk, M.T. Smith, D.G. MacIntyre, J. Timmerman, M. Deschênes and P. Schiarizza

Authorship of individual mapsheets is as follows:

- Battle Glacier map area geology (114O/9&10): M.G. Mihalynuk, M.T. Smith, J. Timmerman and M. Deschênes
- Mount Aylesworth map area geology (114O/14 & 15): M.T. Smith, M.G. Mihalynuk, J. Timmerman and M. Deschênes
- Super Cub Lake map area geology (114O/16): M.G. Mihalynuk, M.T. Smith, J. Timmerman, M. Deschênes and P. Schiarizza
- Yakutat map area lithogeochemistry (114O): D.G. MacIntyre, M.G. Mihalynuk, M.T. Smith, J. Timmerman, M. Deschênes and P. Schiarizza

SCALE 1:50 000

0 1 2 3 4 5

kilometres

A contribution to the Corporate Resource Inventory Initiative

LEGEND

LAYERED ROCKS

QUATERNARY

Qg — Unconsolidated glacial till

Qal — Unconsolidated reworked glacial deposits and poorly sorted alluvium

PALEOZOIC TO CRETACEOUS

SHEARED MAFIC VOLCANIC AND MARINE CLASTIC STRATA

PK — UNDIVIDED: (1140/9) interpreted as part of an accretionary and/or an accretionary melange (Tarr Inlet suture zone, Brew and Morrell, 1979; Dodds and Campbell, 1992), including fragments of Wrangellia and possibly Chugach Terrane.

PKw — WACKE: tan to olive green, meta-greywacke and phyllite. Similar to unit PMw, but generally finer grained. Locally it is interlayered with PKs.

PKs — CONTORTED GRAPHITIC SILTSTONE: (114O/9&14) dark grey to black, variably metamorphosed to upper greenschist grade, locally pyritic and rusty, thinly laminated, commonly phyllitic. As mapped includes intercalated intermediate ash to lapilli tuff and chert.

PKv — MAFIC TO INTERMEDIATE VOLCANICS: dark green to rust weathering, mainly massive (flows?), but also displaying clastic textures. Includes synkinematic, feldspar porphyritic, hypabyssal intrusives of probable Cretaceous age and minor black chert.

PALEOZOIC OR MESOZOIC

GREENSTONE CARBONATE COMPLEX

PMvm — UNDIVIDED: variably foliated submarine basalt and tuff interlayered with strongly foliated carbonate metamoorphosed to greenschist grade.Sparse evidence suggests that this unit is conformable with Lower Paleozoic strata, but it is lithologically most similar to Upper Triassic strata.

PMv — METABASALT: dark green to black with patches of epidote-chlorite colouration; commonly foliated, aphanitic to bladed feldspar porphyry flows, locally with remnant pillows?; elsewhere massive, to calcite-chlorite amygdaloidal. As mapped includes minor tuff breccia and clastic sediments.

PMm — CARBONATE-DOMINATED METAMORPHOSED MARINE SEDIMENTS: includes brown to white-weathering marble up to several hundred metres thick, lesser volcanic sharpstone conglomerate with calcareous matrix, and dark grey chert(?).

PMw — CALCAREOUS METAMORPHOSED WACKE AND ARGILLITE: thin to medium-interbedded, and red-brown to greenish weathering. Lithologically similar to SPsw in 114P/14NW.

PALEOZOIC

Pm — UNDIVIDED METAMORPHOSED SEDIMENTARY AND VOLCANIC ROCKS (equivalent to SPs? OR lPzc?, protolith textures are not preserved)

Pma — AMPHIBOLITE: gneissic, medium-grained, green-grey weathering, dark green on fresh surface. Commonly epidote-feldspar±quartz veined (may be reticulate). Interlayered with Pmp and Pmc. Protoliths may be intrusive in part (see below).

Pmb — METABASITE, HORNBLENDE OR ACTINOLITE AND PLAGIOCLASE SCHIST: medium-grained and strongly foliated with minor epidote and quartz. Protolith may be SPsb or SPst. Includes low-grade chlorite-epidote-actinolite schist equivalent.

Pmc — MARBLE: ranges from coarse-grained, white, pure marble to buff or rusty calcsilicate-rich gneiss or skarn. Skarn mineralization commonly includes epidote, diopside, wollastonite and grossular in bands. Protolith may be in part SPsc1 or SPsc2

Pmd — DIORITIC ORTHOGNEISS: strongly to weakly foliated, medium to coarse-grained, hornblende meta-diorite. Protoliths may be a variety of ages ranging from probable Pennsylvanian to Cretaceous (JKd, JKgd). Locally includes much more felsic, but minor phases such as garnetiferous alaskite.

Pmp — METAPELITE, META-CALCAREOUS PELITE AND META-ILTSTONE: generally buff or light to dark grey or brown-weathering. Probable protoliths are SPsa, SPss or SPsch, now metamorphosed to biotite-feldspar-quartz±garnet schist.

Pmph — PYRITIFEROUS PHYLLITE AND CALC-PHYLLITE: medium grey with thin to thick phyllitic carbonate interlayers.

Pmq — QUARTZ-RICH METASEDIMENTS: dominantly quartzite and quartz-mica schist, rusty and brown-weathering. As mapped, includes minor interlayered phyllite and carbonate.

MAINLY SILURIAN TO PERMIAN?

SPs — UNDIVIDED: mixed carbonate, clastic and volcanic sequence. Older marine strata are probably back-reef and lagoonal facies, while some younger, coarser clastic units were probably deposited in an intertidal or deltaic environment.

SPsc — UNDIVIDED LIMESTONE: includes well-bedded to irregularly-bedded carbonate, commonly with subordinate interbedded argillite

SPsa — ARGILLITE AND CALCAREOUS ARGILLITE: black, massive, with minor, thin, laminated limestone interbeds that weather buff to orange. May be sooty-weathering and mistaken for unit uTrTs.

SPsa2 — FISSILE BLACK LIMESTONE AND INTERBEDDED GRAPHITIC ARGILLITE: white and black-weathering argillite is gypsiferous and contains middle Devonian to middle Silurian (Norford, 1992b) graptolites in abundance above white-tan ash horizons with rare vesicular basalt bombs. Limestone interbeds are microlaminated and less than 25 cm thick.

SPscr — RUBBLY CARBONATE: orange-weathering, generally highly disrupted, veined and, at one locality, talcose.

SPsac — DISTINCTIVE SEDIMENTARY COUPLET OF SPsa2 OVERLAIN BY SPscr: mapped as such where it is not possible to represent individual units. Spatially associated with unit SPss, although contact relations are uncertain.

SPss — LITHIC SANDSTONE AND GRANULE TO PEBBLE CONGLOMERATE: medium to thick bedded, fine to coarse, generally interbedded with laminated to thin bedded, non-calcareous to calcareous black argillite (SPsa) or black limestone. May include rare ash and tuffaceous horizons. Coarse-grained beds are orange weathering. Pyrite layers up to several centimetres thick are sparse but conspicuous.

SPscg — CONGLOMERATE: similar to SPss but dominated by coarser lithologies. May be carbonaceous with abundant plant fossils of low diversity (swamp grass and fern fronds). Clasts are dominated by black chert, graphitic argillite and light grey to rusty pyritiferous volcanic(?) clasts. Spatially associated with SPsa, possibly Carboniferous. May be mistaken for eTAc

SPsc1 — BLUE-GREY LIMESTONE: thin to medium bedded with conspicuous horizons containing abundant crinoid, bryozoan, bivalve and rugose coral fossils of Silurian to Devonian age (W. Bamber, pers. comm. 1992)..

SPsc2 — MASSIVE TO MEDIUM-THIN BEDDED LIMESTONE: dark grey or brown to black, fine grained, relatively resistant. May represent at least two different units as both Lower to Middle Devonian (Norris, 1992) two-hole crinoids and probable Middle to Upper Mississippian corals (W. Bamber, pers. comm., 1992) have been identified.

SPsc3 — RHYTHMICALLY BEDDED LIMESTONE AND ARGILLITE: very well medium-bedded, buff weathering, (black on fresh surfaces) limestone with thinner recessive, black argillaceous interbeds. The limestone is commonly well laminated.

SPsch — CHERT AND SILICEOUS ARGILLITE: black to grey, thin-bedded, includes tan to white recrystallized chert and phyllitic quartzite in 114P/14.

SPst — ANDESITIC LAPILLI TUFF: includes lesser ash and block tuff and agglomerate. Clast composition ranges from basaltic to dacitic. Medium green weathering, and locally foliated. It is best exposed where it occurs between basalt (SPsb) and chert (SPsch) units, but may also be present at other stratigraphic intervals.

SPsb — VESICULAR BASALT FLOWS: massive, lensoidal, dark green, aphanitic, (may or may no be part of the section).

SPsw — METAGREYWACKE: brown-green, thinly bedded to massive, common in 114P/14NW where it is associated with tuff argillite and basalt flows. Chlorite and white mica outline a good cleavage, although adjacent gabbroic sills, chlorite-biotite-garnet grade may be attained.

LOWER PALEOZOIC (ORDOVICIAN AND SILURIAN?)

lPzc — UNDIVIDED: carbonates and related rocks

lPzcm — MARBLE: mainly metamorphosed lPzc adjacent plutons. Includes alternating green, pink, buff and/or white calcsilicate layers.

lPzc0 — HETEROLITHIC LINSEN LIMESTONE: very well-bedded, medium to dark grey, tan-weathering calcareous mudstone in 1-3 cm beds with 1-2 cm thick discontinuous tan, silty linsen, commonly graded. Includes interlayered, cross-stratified calcarenite grading into micrite in 2-10 cm sets. Locally capped by limestone conglomerate.

lPzc1 — BLACK ARGILLACEOUS LIMESTONE: medium to thin bedded dark grey to , locally rusty; includes minor but distinct "scoraceous" limestone. Grades into unit previously mapped as Psp (Campbell and Dodds, 1983).

lPzc2a — TIGER STRIPE LIMESTONE: Cryptocrystalline to finely recrystallized, well bedded, with interlayered 1-5 cm medium grey beds and resistant 0.5-2 cm tan beds. Locally undeformed with preservation of very fine laminae, elsewhere the silty tan partings are lost, probably because of soft sediment deformation resulting from regularly spaced, elongate, cm-scale diapirs. May be interbedded with medium-bedded, buff siliceous layers.

lPzc2b — RECRYSTALLIZED lPzc2a: Light grey to white with mm-scale tan laminae outlining cm-scale parasitic chevron folds (well developed north of Tats Glacier toe).

lPzc3 — MASSIVE LIMESTONE: medium grey to tan, rubbly to hackley weathering. White weathering where adjacent intrusive contacts. Includes dark green waxy dykes which are discordant to totally transposed into the foliation.

lPzc4 — GREY FISSILE LIMESTONE: thin to thick bedded (5 cm to dm scale).

lPzc5 — THIN-BEDDED CHERTY ARGILLITE AND LIMESTONE: light to medium grey to reddish weathering, with distinctive alternating resistant cherty argillite and recessive limestone layers (<5 cm); commonly fissile.

lPzc6 — RIBBED LIMESTONE: buff weathering, light grey, silty limestone with thinly interbedded (0.5-2 cm), resistant, orange weathering, laminated, argillaceous layers, is a coarser variety of lPzc4 with which it is locally interlayered. May be injected with dikes like those of COzsb.

lPzcc — LIMESTONE-PEBBLE CONGLOMERATE: light grey, limestone chips to cobbles within a tan to medium grey carbonate matrix; commonly clast supported. Beds are commonly lensoidal and range from 0.5 m to, rarely, 30 m thick.

lPzcd — BOUDINAGED DIKE-CARBONATE COMPLEX: light to medium grey weathering, compositionally layered marble or limestone with abundant dark green boudinaged mafic dikes (up to 50% of the section). Accompanied by white weathering rinds of calcsilicate-altered marble. This unit is probably not restricted to a specific stratigraphic interval.

lPzct — CALCAREOUS TURBIDITES: brown to rust and grey weathering, well-bedded with cross well preserved laminations and graded bedding. Complete Bouma sequences are rare, with ABC±D(E) and ABC or distal CDE and AE sequences most common.

lPzcy — CARBONATE MEGACYCLE SUCCESSION: well developed depositional cycles consisting of brown, argillaceous limestone bases grading up into light to medium grey, massive to well-bedded, hackley-weathering limestone. Distinctive argillaceous bases weather with thin anastomosing ribs of dark brown cherty argillite spaced 1-4 cm and standing out 1-3 cm from yellow-brown limestone.

lPzcyp — SHALY MEGACYCLE SUCCESSION: mapable areas of buff-weathering, thin-bedded limestone with grey, phyllitic laminations and/of resistant argillaceous to phyllitic interlayers. Correlative with the "bases" of unit lPzcy. As mapped may include parts of lPzc2a.

lPzb — PILLOW BASALT: dark green, amygdaloidal pillow basalt is interbedded with the limestone sequence.

MAINLY LOWER TO MIDDLE ORDOVICIAN

ARGILLACEOUS DIVISION

Pza — UNDIVIDED ARGILLACEOUS STRATA: bears mainly Lower to Middle Ordovician graptolites (Norford, 1992a, b). May be confused with SPsa which sometimes can be distinguished by the presence of thin, limestone interlayers; or with uTrTs which is distinguished by the presence of buff to orange-weathering sills, overall calcareous composition, and prolific Norian conodont fauna.

Pza1 — SILTY ARGILLITE: black, grey to rusty, commonly well-laminated with a slatey cleavage, or phyllitic with a well developed microcrenulation.

Pza2 — SILVERFISH ARGILLITE: similar to Pza1 but interbedded with black to green or white chert, contains moderately well-preserved graptolites. This unit is potentially a useful marker horizon within the lower Paleozoic carbonate succession, particularly unit lPzc3.

Pza3 — CALCAREOUS ARGILLITE: light to dark grey, commonly well-laminated.

INTRUSIVE ROCKS

JKg — JURA-CRETACEOUS GRANITOIDS: undivided (approx. 130-160 Ma, Campbell and Dodds, 1988)

JKd — DOMINANTLY DIORITIC BORDER PHASE: fine to very coarse, commonly, but not everywhere foliated, heterogeneous, polyphase intrusions dominantly hornblende, quartz-diorite with lesser hornblende leucogabbro,, granodiorite and alaskite. Displays at least four phases with the leucocratic phases being the latest and volumetrically least significant. Heterogeneous border phase varieties may in part be of Paleozoic age.

JKgd — GRANODIORITE TO QUARTZ MONZONITE: relatively homogenous, medium to coarse grained, weakly to rarely strongly foliated biotite-hornblende granodiorite to hornblende-biotite quartz monzonite. Near contacts with other lithologies contains up to 80% hornblende>biotite-rich xenoliths, both elongate and equidimensional. Commonly cuts unit JKd.

LATE PENNSYLVANIAN (?) TO PERMIAN

Pma — HORNBLENDITE TO ACTINOLITE-EPIDOTE GNEISS: (114O/14&15) black and green, medium-grained, dominantly hornblende and plagioclase (actinolite?) gneiss and lesser biotite schist. A greenschist facies overprint manifests as a reticulate network of epidote-plagioclase veins and later calcite chlorite-veining.

PMa — VERN RITCHIE AGMATITE: (114O/15) mainly comprised of unit Pma with cross-cutting granodioritic phase (probably unit JKd). Older phase may belong to the Icefield Ranges plutonic suite (270-290 Ma; Campbell and Dodds, 1983b, 1988)

ALTERATION

A — Alteration (not including regional metamorphism)

Aa — Dominantly argillic alteration due to hydrothermal alteration in fault zones

Ac — Chloritization

Asi — Silicification

Ask — Areas of rock visibly altered in the thermal aureole of plutons or plutonic complexes, particularly skarnification and rusty disseminated pyrite ± pyrrhotite.

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Dodds, C.J. and Campbell, R.B. (1988): Potassium-Argon Ages of Mainly Intrusive Rocks in the Saint Elias Mountains, Yukon and British Columbia; *Geological Survey of Canada*, Paper 87-16, 43 pages.

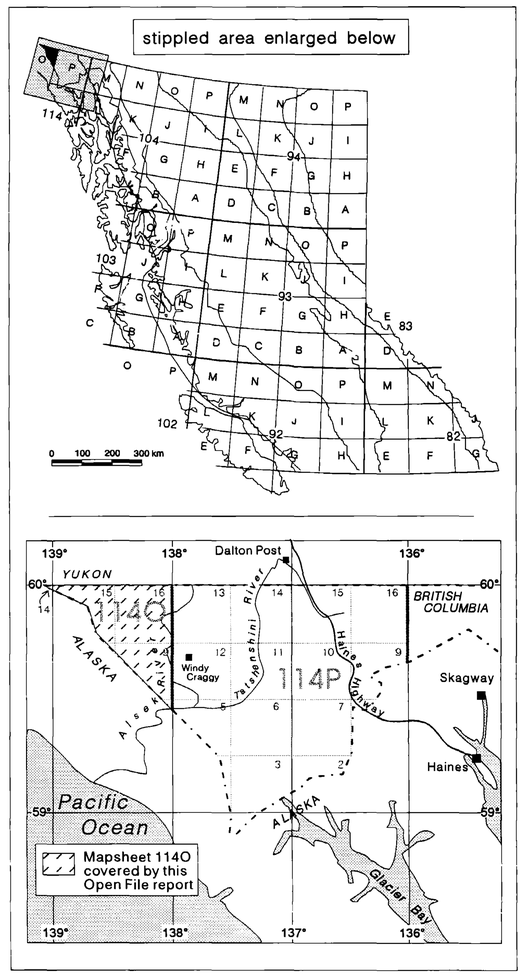
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Norford, B.S. (1992a): Report on one collection of fossils from the Tatshenshini River Map-areas, northwestern British Columbia; *Geological Survey of Canada*, Unpublished Report O-5 BSN 1992, 1 page.

Norford, B.S. (1992b): Report on five collections of fossils from the Tatshenshini River and Yakutat Map-areas, northwestern British Columbia; *Geological Survey of Canada*, Unpublished Report O-D 7 BSN 1992, 2 pages.

Norris, A.W. (1992): Report on one lot of fossils from lower section of Henshi Glacier (north side), British Columbia; *Geological Survey of Canada*, Unpublished Report 2-AWN-92, 2 pages.

LOCATION



SYMBOLS

Geological boundaries (defined, approximate, assumed)

Intrusive contacts (defined, approximate, assumed)

Limit of Quaternary alluvium

NOTE: outcrop underlies most areas that are neither ice nor alluvium-covered

Major areas of vegetative or other cover are outlined

Bedding (horizontal, inclined, vertical)

Bedding with tops observed (inclined, vertical , overturned)

Bedding with estimated dips (inclined, vertical)

Pillow orientation

Igneous flow layering (inclined, vertical)

Schistosity or gneissosity in metamorphic rocks; cleavage in sedimentary rocks: (inclined, vertical; phase indicated by number of ticks)

Joint (inclined, vertical)

Dike (inclined, vertical)

Vein (inclined, vertical)

Anticline, antiform (defined, approximate, assumed)

Syncline, synform (defined, approximate, assumed)

Overturned anticline, syncline

Overturned antiform, synform

Fold axis of minor fold with style indicated as M, S, Z symmetry or unspecified (arrow indicates plunge)

Lineations (unspecified, m = mineral, s = intersection, d = deformed clast, i = igneous inclusion, a = metamorphic aggregate, r = rodding or mullion) ss = slickenside striae, c = crenulation

Small shear (inclined, vertical)

High angle fault (defined, approximate, assumed; teeth in direction of dip if known)

Thrust fault (defined, approximate, assumed; teeth in overlying plate)

Low angle normal fault (defined, approximate, assumed)

Lineament (from air photo)

Macrofossil locality (and GSC Catalog No.) F C-14567

Macrofossil locality (age indeterminate, and GSC Catalog No.) F C-23456

Microfossil locality (and GSC Catalog No.) f C-234

Isotopic age determination (Method, mineral(s) and age in Ma) A = Ar-Ar, K = K-Ar, R = Rb-Sr, Z = U-Pb H = hornblende, B = biotite, M = muscovite, W = whole rock, etc. K H130 GSC 567

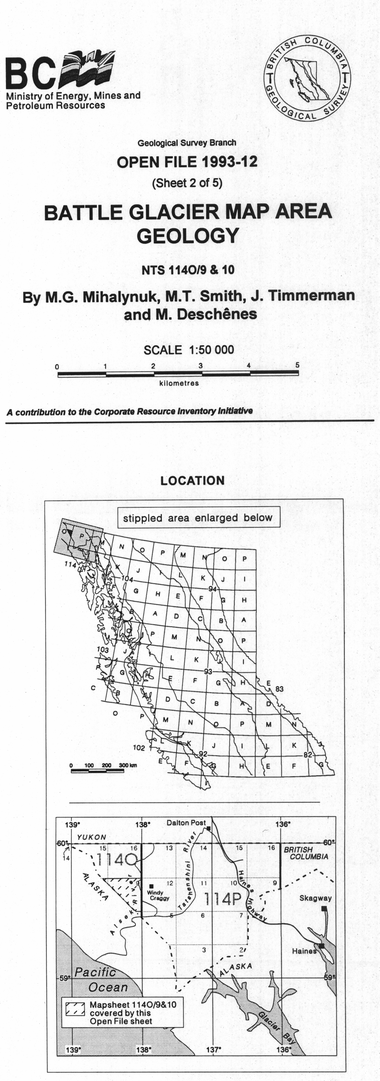
MINFILE occurrence (location of developed prospect, prospect, showing; number in circle; name and commodity) 67 High Jarvis Zn,Ag,Au

Adit, trench

Contour Interval.....40m

Recommended citation:
Mihalynuk, M.G., Smith, M.T., MacIntyre, D.G., Timmerman, J., Deschênes, M. and Schiarizza, P. (1992): Yakutat Map Area, North-western British Columbia (NTS 114O/ 9, 10, 14, 15 & 16); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1993-12, Sheet 1 of 5.





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BRITISH COLUMBIA GEOLOGICAL SURVEY

Geological Survey Branch

OPEN FILE 1993-12

(Sheet 2 of 5)

BATTLE GLACIER MAP AREA GEOLOGY

NTS 114O/9 & 10

By M.G. Mihalynuk, M.T. Smith, J. Timmerman and M. Deschênes

SCALE 1:50 000

0 1 2 3 4 5 kilometres

A contribution to the Corporate Resource Inventory Initiative

LOCATION

Topographic base map (Battle Glacier, 114O/9 & 114O/10) published by the Surveys and Mapping Branch, Department of Energy, Mines and Resources, 1987.

NORTH AMERICAN DATUM 1927
TRANSVERSE MERCATOR PROJECTION

Recommended citation:
Mihalynuk, M.G., Smith, M.T., Timmerman, J. and Deschênes M. (1992): Battle Glacier Map Area Geology (114O/9&10); *in* Mihalynuk, M.G., *et al.*; Yakutat Map Area, North-western British Columbia, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1993-12, Sheet 2 of 5.

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BRITISH COLUMBIA GEOLOGICAL SURVEY

Geological Survey Branch

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(Sheet 3 of 5)

MOUNT AYLESWORTH MAP AREA GEOLOGY

NTS 114O/14 & 15

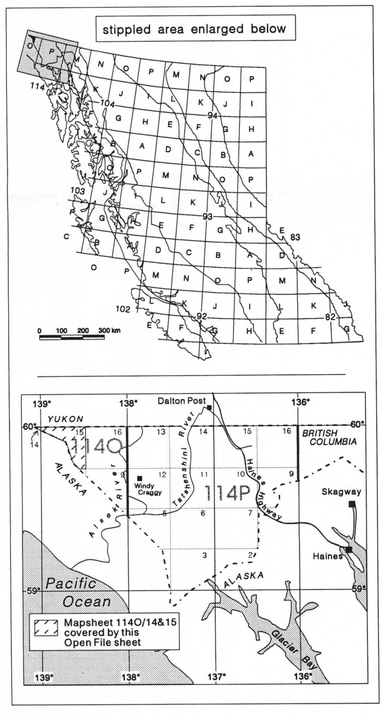
By M.T. Smith, M.G. Mihalynuk, J. Timmerman, and M. Deschênes

SCALE 1:50 000

0 1 2 3 4 5 kilometres

A contribution to the Corporate Resource Inventory Initiative

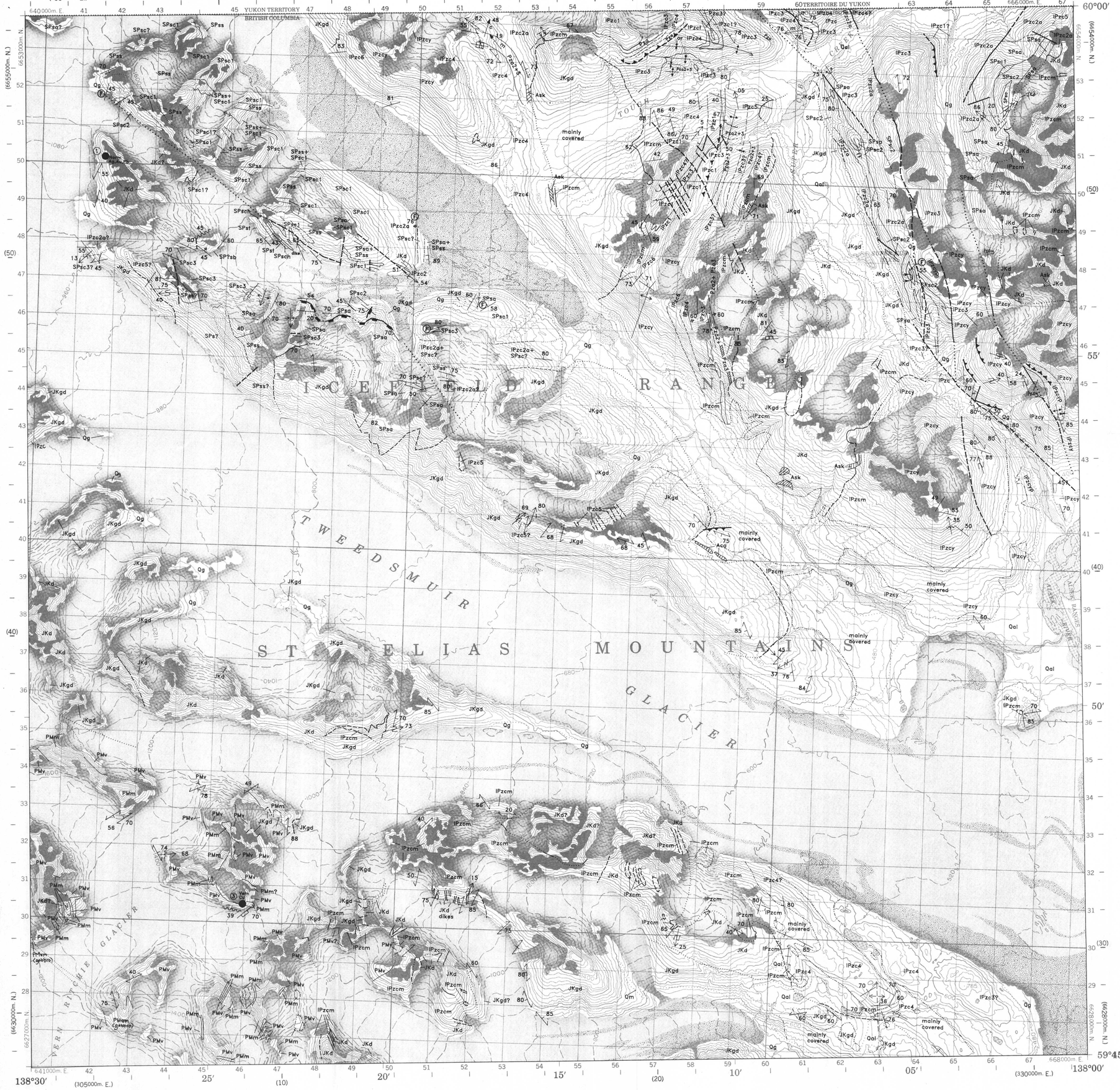
LOCATION



Topographic base map (Mount Aylesworth, 114O/15 & 114O/14) published by the Surveys and Mapping Branch, Department of Energy, Mines and Resources, 1987.

NORTH AMERICAN DATUM 1927
TRANSVERSE MERCATOR PROJECTION

Recommended citation:
Smith, M.T., Mihalynuk, M.G., Timmerman, J. and Deschênes M. (1992): Mount Aylesworth Map Area Geology (114O/14 & 15); *in* Mihalynuk, M.G., *et al.*; Yakutat Map Area, Northwestern British Columbia, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1993-12, Sheet 3 of 5.



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(Sheet 4 of 5)

SUPER CUB LAKE MAP AREA GEOLOGY

NTS 114O/16

By M.G. Mihalynuk, M.T. Smith, J. Timmerman, M. Deschênes and P. Schiarizza

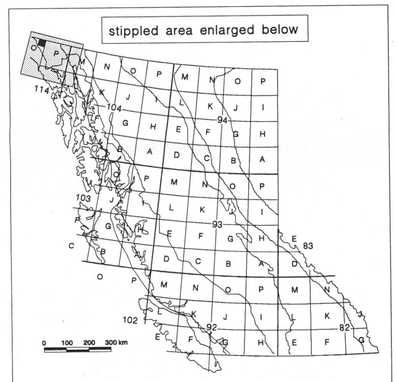
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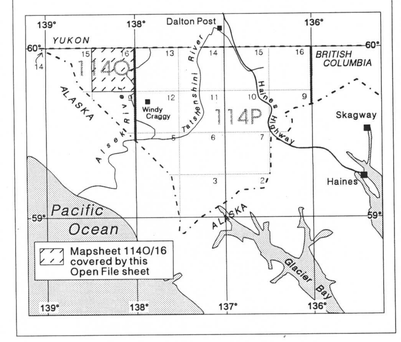
0 1 2 3 4 5

kilometres

A contribution to the Corporate Resource Inventory Initiative

LOCATION

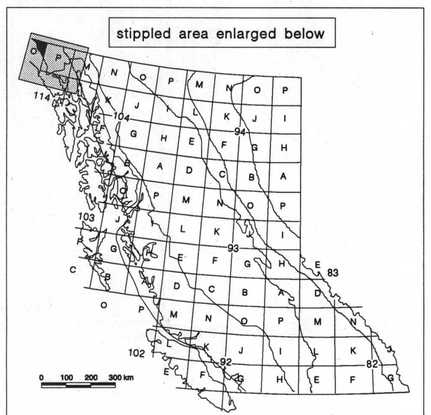


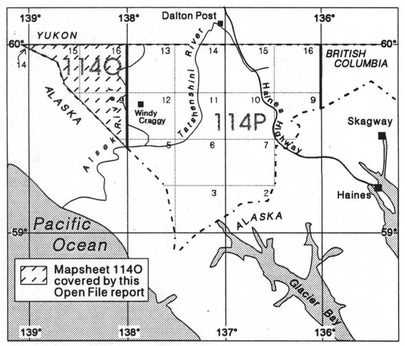


Topographic base map (Super Cub Lake 114O/16) published by the Surveys and Mapping Branch, Department of Energy, Mines and Resources, 1987.

NORTH AMERICAN DATUM 1927
TRANSVERSE MERCATOR PROJECTION

Recommended citation:
Mihalynuk, M.G., Smith, M.T., Timmerman, J., Deschênes M. and Schiarizza, P. (1992): Super Cub Lake Map Area Geology (114O/16); *in* Mihalynuk, M.G., *et al.*; Yakutat Map Area, North-western British Columbia, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1993-12, Sheet 4 of 5.





Topographic base map (Yakutat, 114O) published by the Canada Centre for Mapping, Department of Energy, Mines and Resources, 1990.

NORTH AMERICAN DATUM 1927
TRANSVERSE MERCATOR PROJECTION

Recommended citation:
MacIntyre, D.G., Mihalynuk, M.G., Smith, M.T., Timmerman, J., Deschênes M. and Schiarizza, P. (1992): Yakutat Map Area Lithogeochemistry (114O); *in* Mihalynuk, M.G., *et al.*; Yakutat Map Area, North-western British Columbia, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1993-12, Sheet 5 of 5.

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BRITISH COLUMBIA GEOLOGICAL SURVEY

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YAKUTAT MAP AREA LITHOGEOCHEMISTRY

NTS 114O

By D.G. MacIntyre, M.G. Mihalynuk, M.T. Smith, J. Timmerman, M. Deschênes and P. Schiarizza

SCALE 1:250 000

0 1 2 3 4 5 kilometres

A contribution to the Corporate Resource Inventory Initiative

Yakutat Map Area (114O) - Assay Data

Map No.	Sample Number	NTS Map	Easting metres	Northing metres	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Co ppm	As ppm	Sb ppm
1	MMI92-11-4-1	114O/16	652850	6652100	<2	<0.2	560	11	58	8	2	0.6
2	MMI92-14-2-1	114O/9	645625	6620625	<2	<0.2	37	17	100	24	1.9	0.5
3	MMI92-17-3-1	114O/9	659800	6617450	<2	<0.2	7	2	4	2	0.6	0.4
4	MMI92-17-8-1	114O/9	664200	6617100	<2	<0.2	68	9	80	33	<0.5	0.7
5	MMI92-17-9-1	114O/9	664725	6616700	<2	0.4	87	11	58	26	<0.5	0.4
6	MMI92-40-6-1	114O/16	641975	6630475	82	13	2.57%	5	180	32	1.6	<0.1
7	MMI92-40-9-1	114O/16	644475	6631750	23	<0.3	77	4	63	21	73	36
8	MSM92-12-1-1	114O/16	657450	6630300	20	0.6	550	5	107	42	2.8	<0.1
9	MSM92-40-8-1	114O/16	647250	6633000	5	0.3	395	3	90	48	2.2	<0.1
10	MSM92-40-13-1	114O/9	660200	6604200	<2	0.3	96	8	103	27	<0.5	0.4
11	MDE92-11-4-1	114O/16	644000	6647800	<2	<0.2	36	12	182	31	26	1.6
12	MDE92-11-7-1	114O/16	646750	6647950	7	3	0.64%	9	96	22	11	0.5
13	MDE92-15-6-1	114O/16	641650	6650250	2070	540	196	10.50%	83	5	43000	490
14	MDE92-30-6-B	114O/9	664900	6623600	11	2.6	1.20%	5	163	120	1.3	0.2
15	MDE92-40-12-A	114O/9	665000	6602300	14	3.3	248	112	880	190	0.9	1.8
16	MDE92-40-13-A	114O/9	660200	6604300	<2	0.6	320	6	113	34	<0.5	0.4
17	MDE92-47-4-1	114O/9	657250	6609050	5	<0.3	78	4	91	17	3.4	0.8
18	JTI92-12-2-1	114O/16	659950	6645350	<2	0.2	56	12	64	11	4.6	0.8
19	JTI92-29-1-1	114O/14	610470	6652133	16	0.6	220	53	26	2	14	6.9
20	JTI92-41-3-1	114O/15	638681	6634453	623	0.3	216	5	116	45	0.9	0.4
21	JTI92-41-4-1	114O/16	642603	6627918	6	0.3	71	4	18	76	18	<0.1
22	JTI92-42-7-1	114O/16	661802	6642689	<2	0.3	1020	3	95	28	1.2	0.1
23	DMA92-3-13-2	114O/16	664650	6638800		0.5	167	4	8			
24	DMA92-4-14-1	114O/9	666750	6626250		0.3	15	20	40			
25	DMA92-4-15-2	114O/9	664150	6616900		<0.2	48	19	15			
26	PSC92-7-5-1	114O/9	649500	6623400		<0.2	13	5	94			
27	PSC92-8-4-1	114O/16	642257	6647110		0.2	42	6	75			
28	PSC92-8-5-3	114O/16	642885	6646937		0.3	13	6	58			
29	PSC92-8-6-2	114O/16	643083	6646691		1	157	7	132			
30	PSC92-8-6-3	114O/16	643083	6646691		2	443	91	53			

Yakutat Map Area (114O) - Mineral Occurrences

Minfile No.	Name	NTS Map	Easting metres	Northing metres	Status	Class	Commodities
1	NORM	114O/16	641650	6650250	showing	vein	Au,Ag,Pb
2	WOUNDED HEDGEHOG	114O/9	664900	6623600	showing	skarn	Cu
3	VERN	114O/16	641975	6630475	showing	VMS	Cu,Ag

Abbreviations: VMS = volcanogenic massive sulphide.

LEGEND

assay sample location & no. ..... △ 3

mineral showing & MINFILE no. ..... ● 2

prospect ..... ⊞

developed prospect ..... ■

past producer ..... ⊗