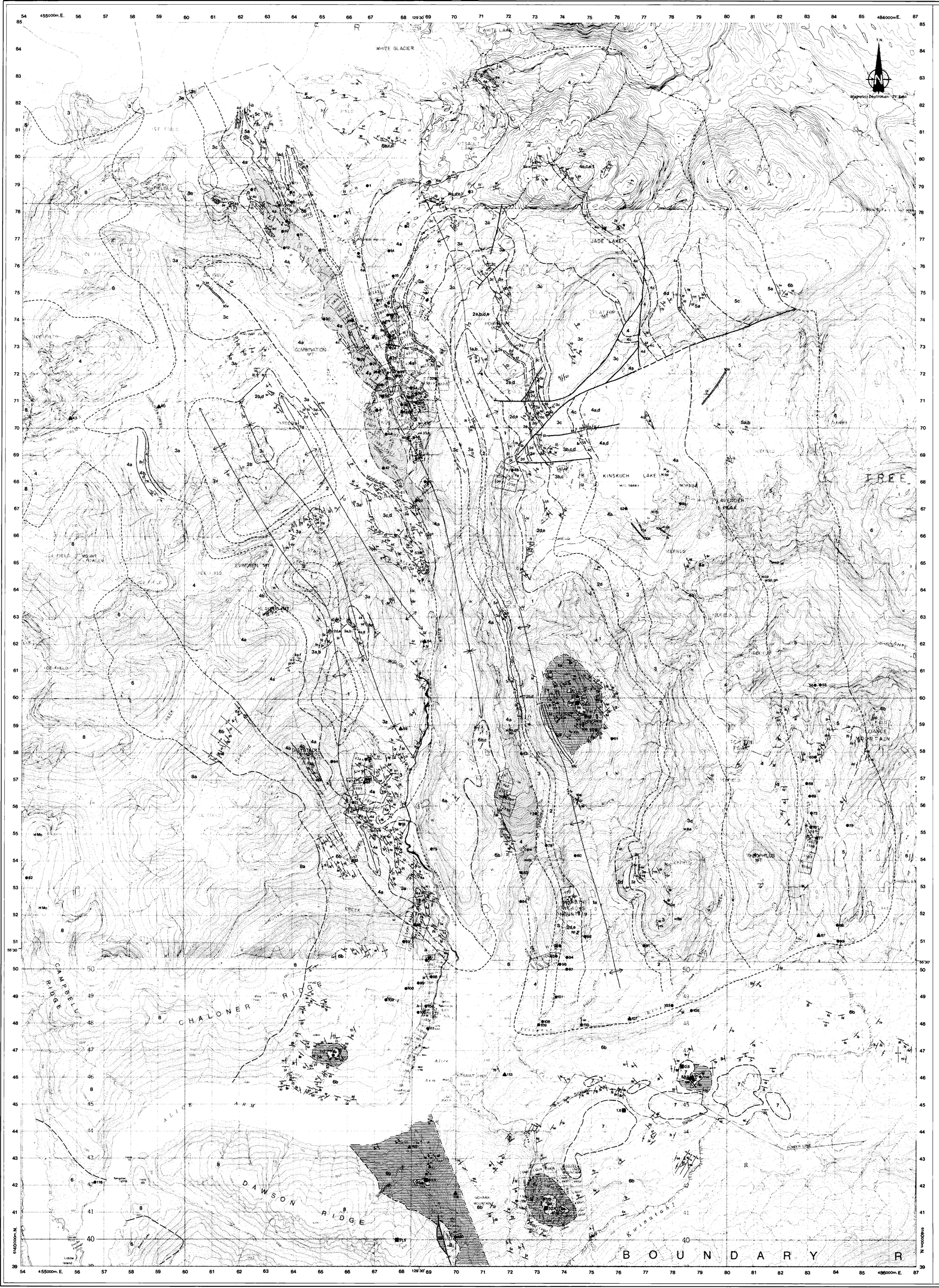


PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

OPEN FILE MAP 1986/2

GEOLOGY OF THE KITSAULT RIVER AREA
NTS 103P

Geology by D. J. Alldrick, G. L. Dawson, J. A. Bosher, and I.C.L. Webster

Compilation and drafting by G. L. Dawson

LEGEND

INTRUSIVE ROCKS

TERTIARY
EOCENE AND YOUNGER

10 (a, b, c): DYKES: diorite, microdiorite (a); lamprophyre (b); diorite, sill phase (c)

EARLY TO MIDDLE EOCENE

9 (a, b, c): ALICE ARM INTRUSIONS: quartz monzonite (a); biotite quartz monzonite porphyry (b); sericite quartz monzonite porphyry (c)

8 (a, b): COAST RANGE BATHOLITH: quartz monzonite (a); granodiorite (b)

VOLCANIC AND SEDIMENTARY ROCKS

QUATERNARY
PLEISTOCENE

7: MAFIC VOLCANICS: olivine basalt flows

JURASSIC
MIDDLE TO UPPER JURASSIC

6 (a, b, c, d): UPPER SEDIMENTARY UNIT: basal fossiliferous wacke (a), siltstone, shale, and minor sandstone (b); intraformational conglomerate (c); limestone (d)

LOWER TO MIDDLE JURASSIC

5 (a, b, c): EPICLASTIC AND FELSIC VOLCANIC UNIT: maroon and green volcanic conglomerate, breccia, and minor sandstone (a); black siltstone, argillite, wacke, and limestone (b); greenish grey dacitic pyroclastic rocks and feldspar porphyritic flows (c)

4 (a, b, c, d, e, f): INTERMEDIATE VOLCANIC UNIT: green and minor maroon andesite pyroclastic rocks (a); feldspar ± hornblende andesite porphyry (b), black siltstone (c); maroon siltstone, sandstone, and conglomerate (d); limestone and fossiliferous limestone (e); chert (f)

3 (a, b, c, d): MIDDLE SEDIMENTARY UNIT: black siltstone (a); limestone and fossiliferous limestone (b); green and purple volcanic breccia with minor siltstone, sandstone, and conglomerate (c); interbedded siltstone, sandstone, wacke, and polymictic pebble conglomerate (d)

2 (a, b, c, d, e): MAFIC VOLCANIC UNIT: olivine porphyry basalt flows (a); augite porphyry basalt flows and pillowed flows (b); basaltic pyroclastic rocks (c); basaltic conglomerate (d); black siltstone, sandstone, wacke, and limestone (e)

1 (a, b): LOWER SEDIMENTARY UNIT: black siltstone, argillite, shale (a); black wacke, sandstone, limestone (b)

ALTERATION

BIOTITE HORNFELS

SILICIFICATION-SERICITIZATION-PYRITIZATION

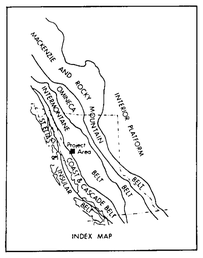
SYMBOLS

Adit
Anticline (normal, overturned)
Bedding, tops unknown (horizontal, inclined, vertical)
Bedding, tops known (inclined, overturned)
Contours (interval 500 feet) — 1500
Fault, arrows indicate sense of movement (defined, approximate)
Fossil locality — F
Geological contact (defined, approximate, assumed)
Height in feet above mean sea level — •5340'
Limit of alteration
Mineral occurrence, trench, or pit
Minfile location: accurate within 500 metres; accurate within 1 kilometre
Schistosity (horizontal, inclined, vertical)
Syncline (normal, overturned)
K-Ar Date (Ma) — 52.5

Abbreviations

Barite	Ba	Lead	Pb
Chalcopyrite	cp	Molybdenum	Mo
Chlorite	chl	Nickel	Ni
Cobalt	Co	Pyrite	py
Copper	Cu	Pyrrhotite	po
Epidote	ep	Silica	Si
Galena	gn	Silver	Ag
Gold	Au	Sphalerite	sp
Iron	Fe	Zinc	Zn
Jasper	ja		

MAP NO.	NAME	COMMODITIES	MINFILE NO.
1	COLUMBIA	Ag	219
2	BLUE RIBBON	Pb,Zn,Cu	217
3	KIT	Ag	245
4	HOMESTAKE	Au,Ag,Cu	216
5	TIP TOP	Cu	215
6	MATHILDA	Cu,Pb,Zn	255
7	BLACK DIAMOND	Ag	218
8	GOLD REEF, FOX	Au,Ba,Cu	213
9	YUKON, SUMMIT	Pb	247
10	LUCKY STRIKE	Au	214
11	VANGUARD GOLD	Au	210
12	CASCADE FALLS	Au	211
13	VANGUARD COPPER	Cu	210
14	GALENA, ACE, THEE	Ag,Pb	208
15	SECOND THOUGHT, SYNDICATE, B & C	Ag	209
16	VICTORY, LAST CHANCE, CHANCE	Ag	206
17	MOOSE	Ag	205
18	CLIMAX	Ag	204
19	SILVER HORDE	Ag	203
20	STARLIGHT	Ag	201
21	COPPER CLIFF	Cu	202
22	WOLF	Ag,Pb	196
23	SURPRISE, OURAY, VELVET	Ag	199
24	MITCHELL	Ag	-
25	MUSKETEER	Ag	195
26	OAK PATCH	Cu	200
27	ROAN ANTELOPE	Cu	197
28	RED POINT EXTENSION	Cu	-
29	SOUTH MUSKETEER	Ag	-
30	KITSOL	Ag	257
31	V VEIN	Cu	-
32	REGAL	Ag	192
33	RED POINT	Cu	190
34	TIGER	Ag	194
35	MOOSE, LAMB	Ag	205
36	MAUDE McPHEE	Cu	-
37	TORBRITT, TORIC	Ag,Pb	191
38	RUBY	Ag	190
39	NORTHSTAR	Ag,Pb	189
40	CARPENTER	Pb,Zn,Cu	109
41	SILVER TIP	Ag	187
42	DOLLY VARDEN	Ag,Pb	188
43	VIMY RIDGE	Cu,Au	108
44	ROYAL	Ag	186
45	DAVID COPPERFIELD	Cu,Ag,Pb	185
46	SURPRISE	Ag	184
47	E & Q, BOBCAT, WILDCAT, MEDALLION	Cu	183
48	SILVER BASIN, BASIN	Ag	181
49	CANYON	Ag,Pb	177
50	SILVER KING, EAGLE, REX	Pb,Zn,Ag	178
51	KINSKUCH	Cu	16
52	SEABEE	Cu	14
53	ZONKA	Cu	176
54	HENDERSON	Ag	175
55	YANKEE BOY	Ag,Pb	144
56	GLACIER, LEFT OVER	Ag,Au,Cu	145
57	AJAX	Mo	223
58	LEROY	Pb,Ag,Au	163
59	EAGLE	Fe	174
60	IDA	Pb,Zn,Ag	164
61	BUTTE	Pb,Zn,Ag	165
62	OBSERVER	Cu,Pb,Zn	162
63	MENARCH	Cu	15
64	DOLLAR BILL	Pb,Zn,Ag	229
65	LA ROSE	Ag,Pb	170
66	ST. ELOI	Ag	171
67	SPECULATOR 2	Ag	172
68	SILVER BAR	Ag,Ba	142
69	HORSECUT	Pb,Zn,Ag	-
70	RED BLUFF	Cu	160
71	BUNKER HILL	Ag,Pb	173
72	SILVER BELL	Ag,Cu,Pb,Zn	141
73	FOX	Cu,Zn	161
74	CAPE NOME	Zn	168
75	SILVER STAR	Ag	143
76	GREY GOOSE	Au,Pb,Zn	140
77	BELLEVUE	Ag,Pb,Zn	139
78	WAR DANCE, IXL	Cu,Zn,Ag	156
79	RIVERSIDE	Ag,Zn	166
80	SILVER CHORD, SILVER BAR	Pb,Zn,Ag	159
81	SILVER STAR, SILVER WING, SILVER CREST	Pb,Zn,Ag	169
82	OLH	Mo	-
83	SAN DIEGO	Cu	155
84	DEVLIN ZONE	Ag,Zn	-
85	PAY MASTER, ALICE	Ag	130
86	BEAVER EXTENSION	Au	137
87	IRON	Au,Ag	136
88	MAC, SUNRISE, SILVER BAND	Zn	147
89	ANNA MACK	Ag	129
90	GOLDEN CREST	Cu	138
91	HORSESHOE	Cu	146
92	SILVER STAR	Ag,Pb	169
93	STANDARD	Zn	148
94	KENT, MAPLE LEAF	Zn	151
95	LONE MAID	Zn	128
96	HIGHLAND	Zn	150
97	RILLY MAC	Zn	149
98	ESPERANZA	Ag,Cu,Pb,Zn	126
99	ACADIA	Ag,Zn	127
100	RILLY BARTON	Ag,Pb,Zn	123
101	LONE STAR, ALAMOZA	Zn	153
102	UTOPIA, LYON	Ag,Pb,Zn	122
103	INGRAHAM'S	Ag,Pb	134
104	WOLF	Ag	125
105	SILVER LEAF	Ag	135
106	INDEPENDENT	Ag,Pb,Zn	131
107	COPPER CREEK	Pb	251
108	SILVER BELL	Pb,Zn	154
109	CASEY, BROWN BEAR	Pb	132
110	THREE MILE	Ag,Pb,Zn,Au	133
111	CARIBOU FRACTION	Ag	124
112	TIDEWATER, MAYFLOWER	Mo	111
113	BEVERLY	Cu,Zn	121
114	MOLY, BELL MOLY	Mo	234
115	MACY MINE	Si	112
116	HAYWIRE, SEA OTTER, ANYOX EXTENSION	Ni,Cu,Co	110
117	ROUNDY CREEK	Mo	113
118	MOHAWK	Ag,Zn	114
119	B.C. MOLY, ALICE	Mo	120
120	KEYSTONE, SUNSET	Ag,Pb,Zn	115

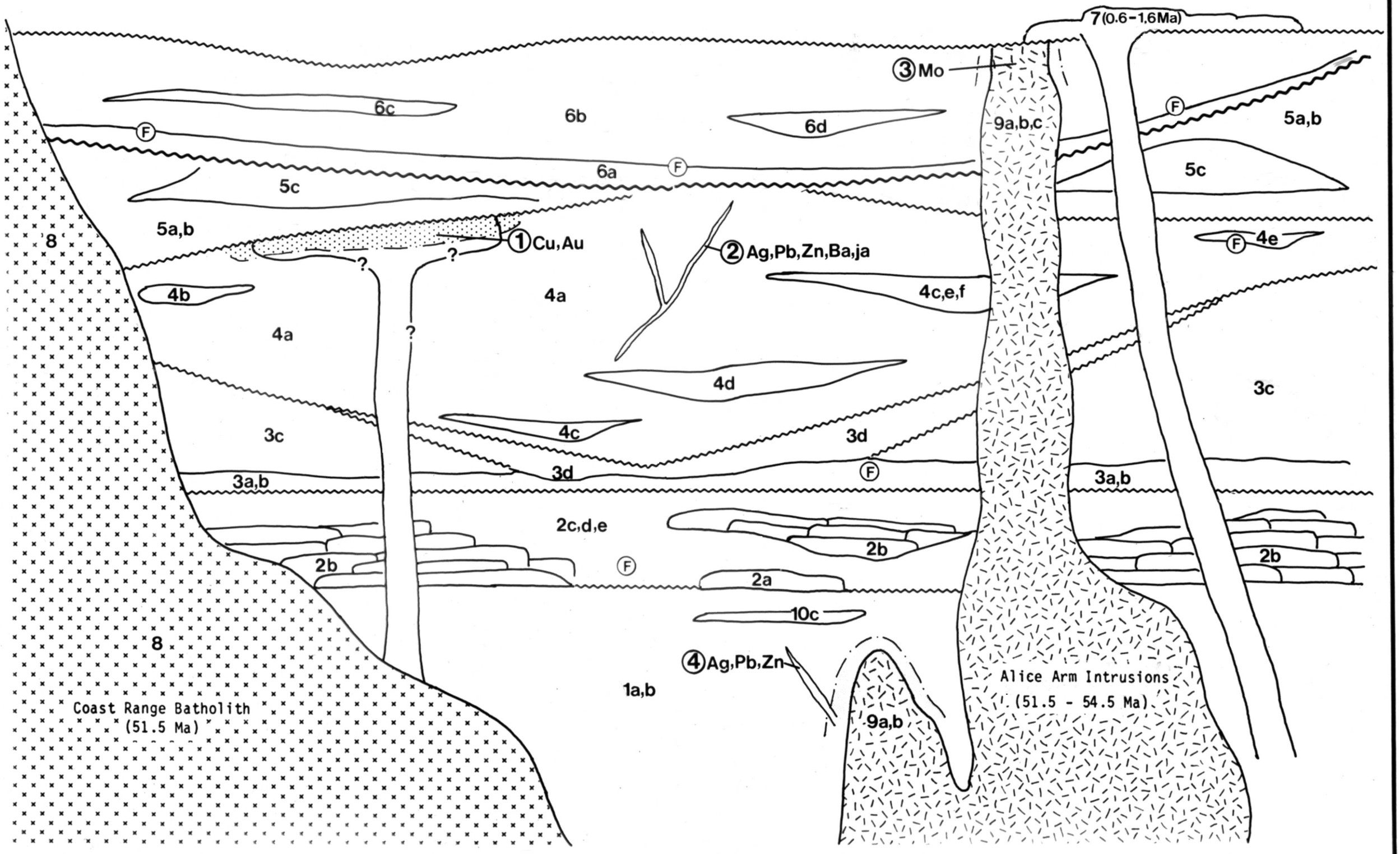


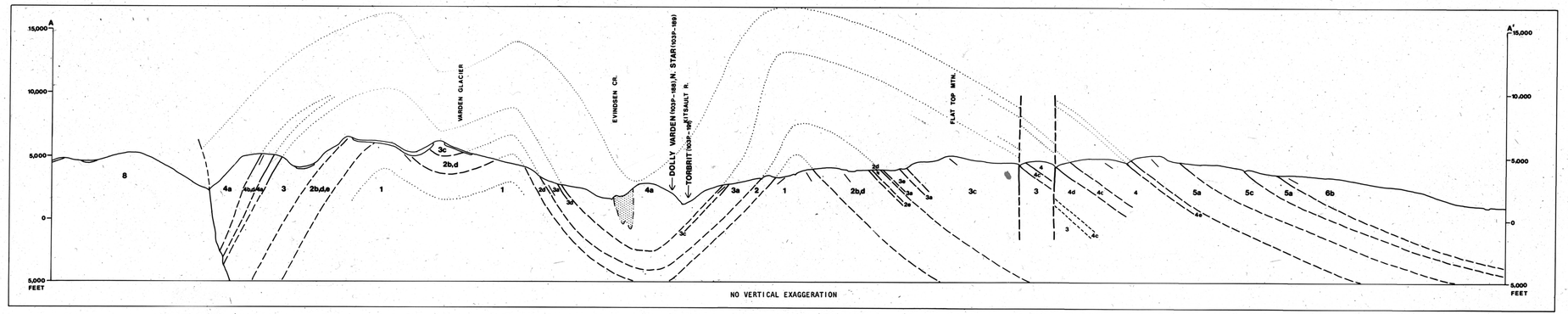
Scale 1:50,000 Échelle

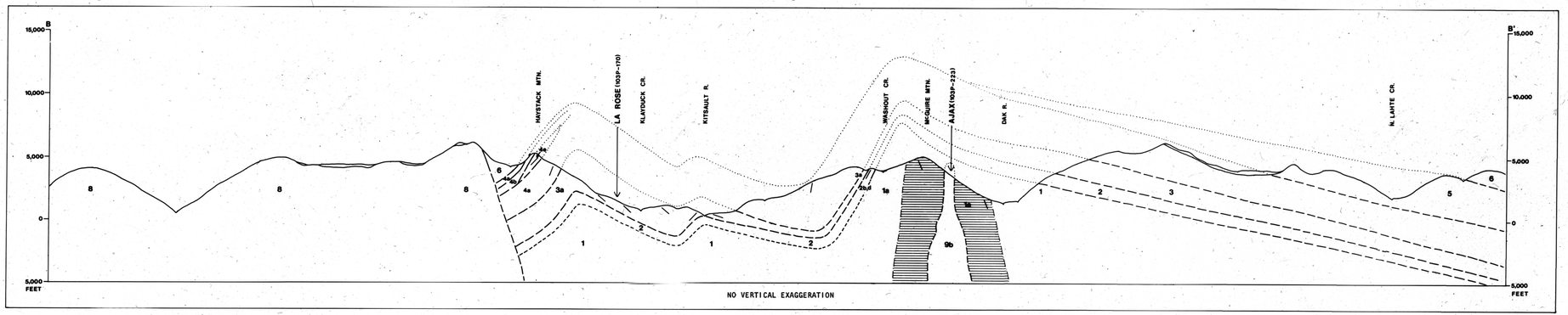
Miles 1 0 1 2 3 Miles
Metres 1000 0 1000 2000 3000 4000 Metres
Yards 1000 0 1000 2000 3000 4000 Yards

Includes geology from reports by N. C. Carter, P. Read, D. G. Allen, C. J. Hodgson, and V. Ryback-Hardy.

Schematic diagram showing stratigraphic, intrusive, and mineralization relationships, Kitsault Valley
(See Table 1 for deposit type classification)







Scale 1:50,000 Échelle

Miles 1 0 1 2 3 4

Metres 1000 0 1000 2000 3000 4000 Mètres

Yards 1000 0 1000 2000 3000 4000 Verges

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

OPEN FILE 1986-2b

GEOLOGICAL CROSS-SECTIONS OF THE KITSAULT RIVER AREA
NTS 103P

Geology by D. J. Alldrick, G. L. Dawson, J. A. Bosher, and I.C.L. Webster

Compilation and drafting by G. L. Dawson

LEGEND

INTRUSIVE ROCKS

TERTIARY
EOCENE AND YOUNGER

10 — DYKES: diorite, microdiorite (a); lamprophyre (b); diorite, sill phase (c)

EARLY TO MIDDLE EOCENE

9 — ALICE ARM INTRUSIONS: quartz monzonite (a); biotite quartz monzonite porphyry (b); sericite quartz monzonite porphyry (c)

8 — COAST RANGE BATHOLITH: quartz monzonite (a); granodiorite (b)

VOLCANIC AND SEDIMENTARY ROCKS

QUATERNARY
PLEISTOCENE

7 — MAFIC VOLCANICS: olivine basalt flows

JURASSIC
MIDDLE TO UPPER JURASSIC

6 — UPPER SEDIMENTARY UNIT: basal fossiliferous wacke (a); siltstone, shale, and minor sandstone (b); intraformational conglomerate (c); limestone (d)

LOWER TO MIDDLE JURASSIC

5 — EPICLASTIC AND FELSIC VOLCANIC UNIT: maroon and green volcanic conglomerate, breccia, and minor sandstone (a); black siltstone, argillite, wacke, and limestone (b); greenish grey dacitic pyroclastic rocks and feldspar porphyritic flows (c)

4 — INTERMEDIATE VOLCANIC UNIT: green and minor maroon andesite pyroclastic rocks (a); feldspar ± hornblende andesite porphyry (b), black siltstone (c); maroon siltstone, sandstone, and conglomerate (d); limestone and fossiliferous limestone (e); chert (f)

3 — MIDDLE SEDIMENTARY UNIT: black siltstone (a); limestone and fossiliferous limestone (b); green and purple volcanic breccia with minor siltstone, sandstone, and conglomerate (c); interbedded siltstone, sandstone, wacke, and polymictic pebble conglomerate (d)

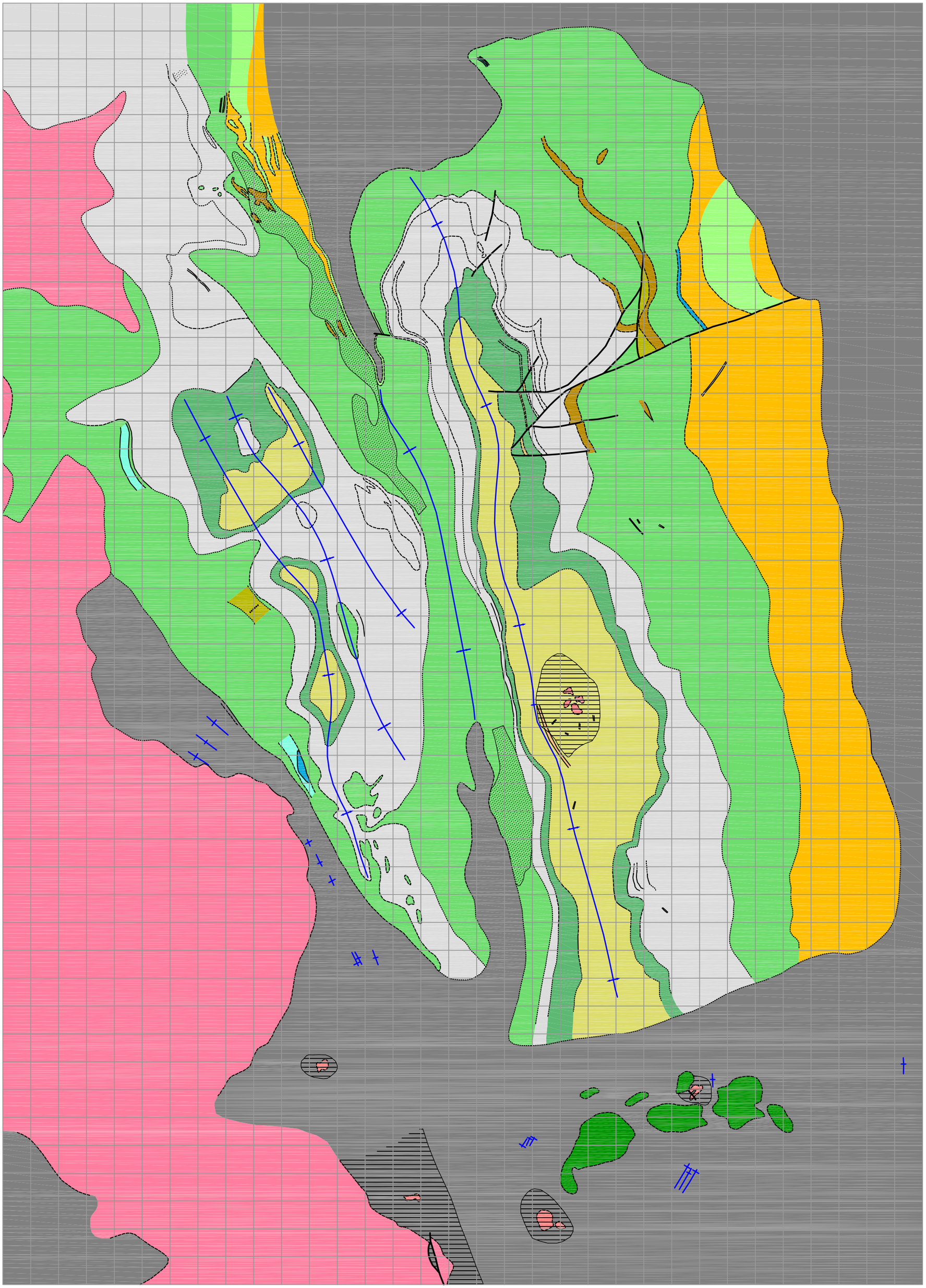
2 — MAFIC VOLCANIC UNIT: olivine porphyry basalt flows (a); augite porphyry basalt flows and pillowed flows (b); basaltic pyroclastic rocks (c); basaltic conglomerate (d); black siltstone, sandstone, wacke, and limestone (e)

1 — LOWER SEDIMENTARY UNIT: black siltstone, argillite, shale (a); black wacke, sandstone, limestone (b)

ALTERATION

BIOTITE HORNFELS

SILICIFICATION-SERICITIZATION-PYRITIZATION



Ministry of Energy and Mines
Mining and Minerals Division

Geological Survey and Development Branch
Open File 1986–2
(digitally remastered in 2004)

GEOLOGY OF THE KITSAULT RIVER AREA, BRITISH COLUMBIA

NTS 103P

Geology by D.J. Alldrick, G.L. Dawson, J.A. Bosher and I.C.L. Webster

Compilation and drafting by G.L. Dawson

LEGEND

INTRUSIVE ROCKS

TERTIARY

EOCENE TO YOUNGER

a b c — DYKES: diorite, microdiorite (a); lamprophyre (b); diorite, sill phase (c)

EARLY TO MIDDLE EOCENE

a b c — ALICE ARM INTRUSIONS: quartz monzonite (a); biotite quartz monzonite porphyry (b); sericite quartz monzonite porphyry (c)

a b c — COAST RANGE BATHOLITH: quartz monzonite (a); granodiorite (b)

VOLCANIC AND SEDIMENTARY ROCKS

QUATERNARY

PLEISTOCENE

a — MAFIC VOLCANICS: olivine basalt flows

JURASSIC

MIDDLE TO UPPER JURASSIC

a b c d — UPPER SEDIMENTARY UNIT: basal fossiliferous wacke (a); siltstone, shale, and minor sandstone (b); intraformational conglomerate (c); limestone (d)

LOWER TO MIDDLE JURASSIC

a b c — EPICLASTIC AND FELSIC VOLCANIC UNIT: maroon and green volcanic conglomerate, breccia, and minor sandstone (a); black siltstone, argillite, wacke, and limestone (b); greenish grey dacitic pyroclastic rocks and feldspar porphyritic flows (c)

a b c d e f — INTERMEDIATE VOLCANIC UNIT: green and minor maroon andesite pyroclastic rocks (a); feldspar + hornblende andesite porphyry (b), black siltstone (c); maroon siltstone, sandstone, and conglomerate (d); limestone and fossiliferous limestone (e); chert (f)

a b c d — MIDDLE SEDIMENTARY UNIT: black siltstone (a); limestone and fossiliferous limestone (b); green and purple volcanic breccia with minor siltstone, sandstone, and conglomerate (c); interbedded siltstone, sandstone, wacke, and polymictic pebble conglomerate (d)

a b c d e — MAFIC VOLCANIC UNIT: olivine porphyry basalt flows (a); augite porphyry basalt flows and pillowed flows (b); basaltic pyroclastic rocks (c); basaltic conglomerate (d); black siltstone, sandstone, wacke, and limestone (e)

a b — LOWER SEDIMENTARY UNIT: black siltstone, argillite, shale (a); black wacke, sandstone, limestone (b)

VOLCANIC AND SEDIMENTARY ROCKS

BIOTITE HORNFELS

SILICIFICATION - SERICITIZATION - PYRITIZATION

SYMBOLS

Geological contact (defined, approximate, assumed) . . . . . .

Fault, arrows indicate sense of movement (defined, approximate)

Bedding; tops unknown (inclined, vertical) . . . . . 55 . . . .

Bedding; tops known (inclined, overturned) . . . . . 70 . . . 60 . . . .

Foliation (inclined, vertical) . . . . . 85 . . . .

Lineation . . . . . 20 . . . .

Dike; r – rhyolite, d – dacite, b – basalt (inclined, vertical) . . . . . 75 . . . .

Fault (inclined, vertical) . . . . . 75 . . . .

Fold axis of minor fold (arrow indicates plunge) m and z asymmetry 30

Axial trace of upright antiform, synform 30

Fossil location (macrofossil, microfossil) . . . . . F M

Isotopic age location (U/Pb) . . . . . Z

Mapping station . . . . . .

Regional Geochemical Survey station . . . . . +

Mineral showing 8

Gossan . . . . . .

Topographic contour (100m interval) . . . . . .

River . . . . . .

Road . . . . . .

Park boundary . . . . . .

Lake cover . . . . . .

Glacier, permanent snowfield . . . . . .

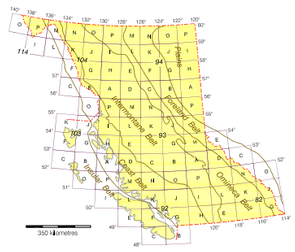
Cross Section . . . . . .

Abbreviations

Barite	Ba	Lead	Pb
Chalcopyrite	cp	Molybdenum	Mo
Chlorite	chl	Nickel	Ni
Cobalt	Co	Pyrite	py
Copper	Cu	Pyrrhotite	po
Epidote	ep	Silica	Si
Galena	gn	Silver	Ag
Gold	Au	Sphalerite	sp
Iron	Fe	Zinc	Zn
Jasper	Ja		

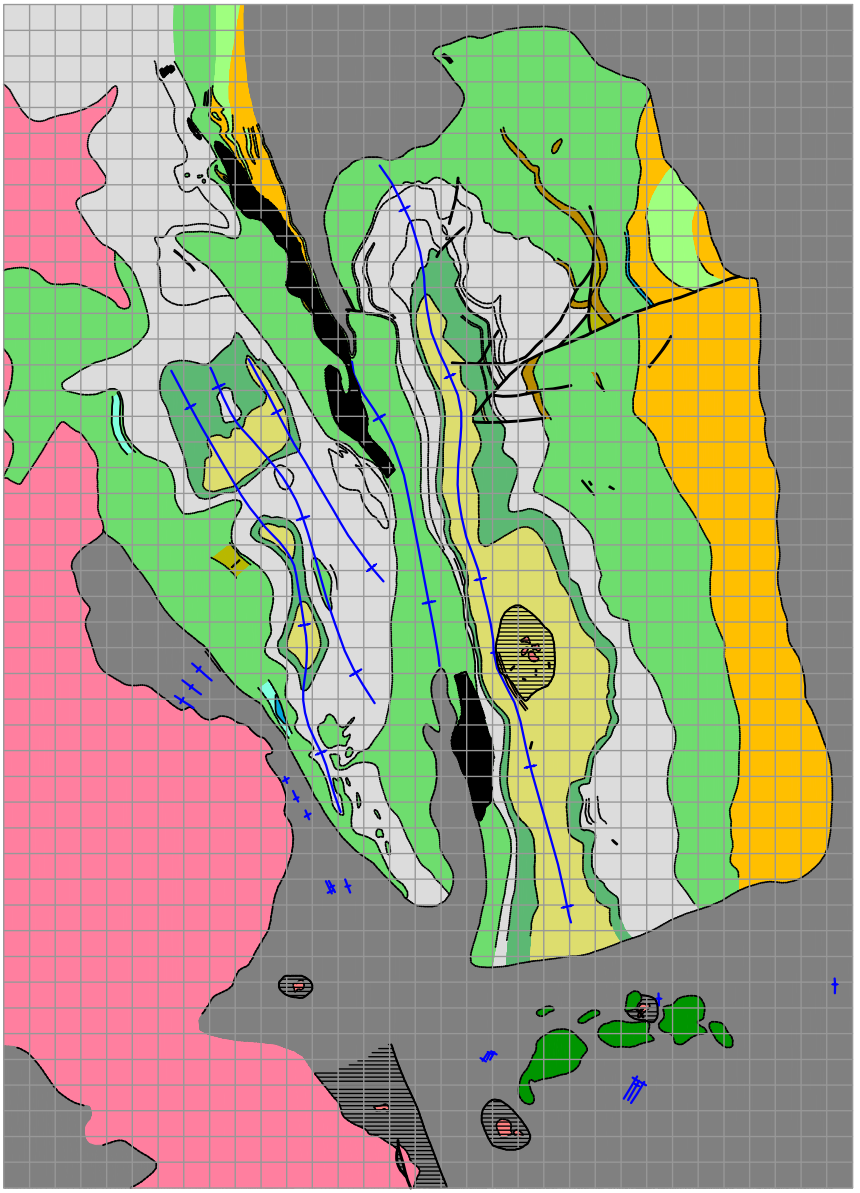
Map No.	NAME	COMMODITIES	MINFILE NO.
1	COLUMBIA	Ag	219
2	BLUE RIBBON	Pb,Zn,Cu	217
3	KET	Ag	245
4	HOMESTAKE	Au,Ag,Cu	216
5	TIP TOP	Cu	215
6	MATHILDA	Cu,Pb,Zn	255
7	BLACK DIAMOND	Ag	218
8	GOLD REEF, FOX	Au,Ba,Cu	213
9	YUKON, SUMMIT	Pb	247
10	LUCKY STRIKE	Au	214
11	VANGUARD GOLD	Au	210
12	CASCADE FALLS	Au	211
13	VANGUARD COPPER	Cu	210
14	GALENA, ACE, TYEE	Ag,Pb	208
15	SECOND THOUGHT, SYNDICATE, B & C	Ag	209
16	VICTORY, LAST CHANCE, CHANCE	Ag	206
17	MOOSE	Ag	205
18	CLIMAX	Ag	204
19	SILVER HORDE	Ag	203
20	STARLIGHT	Ag	201
21	COPPER CLIFF	Cu	202
22	WOLF	Ag,Pb	198
23	SURPRISE, OURAY, VELVET	Ag	199
24	MITCHELL	Ag	-
25	MUSKETEER	Ag	196
26	DAN PATCH	Cu	200
27	ROAN ANTELOPE	Cu	197
28	RED POINT EXTENSION	Cu	-
29	SOUTH MUSKETEER	Ag	-
30	KITSOL	Ag	257
31	V VEIN	Cu	-
32	REGAL	Ag	192
33	RED POINT	Cu	196
34	TIGER	Ag	194
35	MOOSE, LAMB	Ag	205
36	MAUDE McPHEE	Cu	-
37	TORBRIT, TORIC	Ag,Pb	191
38	RUBY	Ag	190
39	NORTHSTAR	Ag,Pb	189
40	CARPENTER	Pb,Zn,Cu	109
41	SILVER TIP	Ag	187
42	DOLLY VARDEN	Ag,Pb	188
43	VIMY RIDGE	Cu,Au	108
44	ROYAL	Ag	186
45	DAVID COPPERFIELD	Cu,Ag,Pb	185
46	SURPRISE	Ag	184
47	E & D BOBCAT, WILDCAT, MEDALLION	Cu	183
48	SILVER BASIN, BASIN	Ag	181
49	CANYON	Ag,Pb	177
50	SILVER KING, EAGLE, REX	Pb,Zn,Ag	178
51	KINSKUCH	Cu	16
52	SEABEE	Cu	14
53	ZORKA	Cu	176
54	HENDERSON	Ag	175
55	YANKEE BOY	Ag,Pb	144
56	GLACIER, LEFT OVER	Ag,Au,Cu	145
57	AJAX	Mo	223
58	LEROY	Pb,Ag,Au	163
59	EAGLE	Fe	174
60	IDA	Pb,Zn,Ag	164
61	BUTTE	Pb,Zn,Ag	165
62	OBSERVER	Cu,Pb,Zn	162
63	MONARCH	Cu	15
64	DOLLAR BILL	Pb,Zn,Ag	229
65	LA ROSE	Ag,Pb	170
66	ST. ELOI	Ag	171
67	SPECULATOR 2	Ag	172
68	SILVER BAR	Ag,Ba	142
69	HORSECUT	Pb,Zn,Ag	-
70	RED BLUFF	Cu	160
71	BUNKER HILL	Ag,Pb	173
72	SILVER BELL	Ag,Cu,Pb,Zn	141
73	FLY	Cu,Zn	161
74	CAPE NOME	Zn	168
75	SILVER STAR	Ag	143
76	GREY GOOSE	Ag,Pb,Zn	140

MAP NO.	NAME	COMMODITIES	MINFILE NO.
77	BELLEVUE	Ag,Pb,Zn	139
78	WAR DANCE, IXL	Cu,Ag,Zn	156
79	RIVERSIDE	Ag,Pb	166
80	SILVER CHORD, SILVER BAR	Pb,Zn,Ag	159
81	SILVER STAR, SILVER WING, SILVER CREST	Pb,Zn,Ag	169
82	OLH	Mo	-
83	SAN DIEGO	Cu	155
84	DEVILIN ZONE	Ag,Zn	-
85	PAY MASTER, ALICE	Ag	130
86	BEAVER EXTENSION	Au	137
87	IRON	Au,Ag	136
88	MAC, SUNRISE, SILVER BAND	Au	147
89	ANNA MACK	Ag	129
90	GOLDEN CREST	Cu	138
91	HORSESHOE	Cu	146
92	SILVER STAR	Ag,Pb	149
93	STANDARD	Zn	148
94	KENT, MAPLE LEAF	Zn	151
95	LONE MAID	Zn	128
96	HIGHLAND	Zn	150
97	BILLY MAC	Zn	149
98	ESPERANZA	Ag,Cu,Pb,Zn	126
99	ACADIA	Ag,Zn	127
100	BILLY BARTON	Ag,Pb,Zn	123
101	LONE STAR, ALAMOZA	Zn	153
102	UTOPIA, LYON	Ag,Pb,Zn	122
103	INGRAHAMS	Ag,Pb	134
104	WOLF	Ag	125
105	SILVER LEAF	Ag	135
106	INDEPENDENT	Ag,Pb,Zn	131
107	COPPER CREEK	Pb	251
108	SILVER BELL	Pb,Zn	154
109	CASEY, BROWN BEAR	Pb	132
110	THREE MILE	Ag,Pb,Zn,Au	133
111	CARIBOU FRACTION	Ag	124
112	TIDEWATER, MAYFLOWER	Mo	111
113	BEVERLY	Cu,Zn	121
114	MOLY, BELL MOLY	Mo	234
115	MACY MINE	Si	112
116	HAYWIRE, SEA OTTER, ANYOX EXTENSION	Ni,Cu,Co	110
117	ROUNDY CREEK	Mo	113
118	MOHAWK	Ag,Zn	114
119	B.C. MOLY, ALICE	Mo	120
120	KEYSTONE, SUNSET	Ag,Pb,Zn	115



1 0 1 2 3 4
Kilometres

Includes geology from reports by N.C. Carter, P. Read, D.G. Allen, C.J. Hodgson, and V. Ryback-Hardy



Geological Survey and Development Branch
Open File 1988-2
(Digitally remastered in 2004)

GEOLOGY OF THE KITSAULT RIVER AREA, BRITISH COLUMBIA

NTS 103P

Geology by D.J. Aldrick, G.L. Dawson, J.A. Busher and I.C.L. Webster

Compilation and drafting by G.L. Dawson

LEGEND

INTRUSIVE ROCKS

TERTIARY

EOCENE TO YOUNGER

DYKES: diorite, microdiorite (a); lamprophyre (b); diorite, sill phase (c)

EARLY TO MIDDLE EOCENE

ALICE ARM INTRUSIONS: quartz monzonite (a); biotite quartz monzonite porphyry (b); sericite quartz monzonite porphyry (c)

COAST RANGE BATHOLITH: quartz monzonite (a); granodiorite (b)

VOLCANIC AND SEDIMENTARY ROCKS

QUATERNARY

PLEISTOCENE

MAFIC VOLCANICS: olivine-basalt flows

JURASSIC

MIDDLE TO UPPER JURASSIC

UPPER SEDIMENTARY UNIT: basal fossiliferous wacke (a); siltstone, shale, and minor sandstone (b); intraformational conglomerate (c); limestone (d)

LOWER TO MIDDLE JURASSIC

EPICLASTIC AND FELSIC VOLCANIC UNIT: maroon and green volcanic conglomerate, breccia, and minor sandstone (a); black siltstone, argillite, wacke, and limestone (b); greenish gray dacite pyroclastic rocks and felsique porphyritic flows (c)

INTERMEDIATE VOLCANIC UNIT: green and minor maroon andesite pyroclastic rocks (a); feldspar + hornblende porphyritic flows (b); black siltstone (c); black siltstone, sandstone, wacke, and minor conglomerate (d); limestone and limestone breccia (e)

MIDDLE SEDIMENTARY UNIT: black siltstone (a); limestone and fossiliferous limestone (b); green and purple volcanic breccia with minor siltstone, sandstone, and conglomerate (c); interbedded siltstone, sandstone, wacke, and polymictic pebble-conglomerate (d)

MAFIC VOLCANIC UNIT: olivine porphyry basalt flows (a); augite porphyry basalt flows and minor tuff (b); black siltstone, sandstone, and limestone (c); basaltic conglomerate (d); black siltstone, sandstone, wacke, and limestone (e)

LOWER SEDIMENTARY UNIT: black siltstone, argillite, shale (a); black wacke, sandstone, limestone (b)

VOLCANIC AND SEDIMENTARY ROCKS

BIOTITE HORNFELS

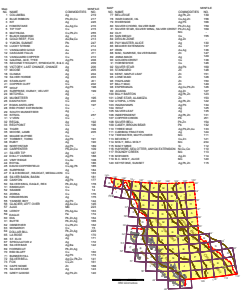
SILICIFICATION - SERICITIZATION - PYRITIZATION

SYMBOLS

Geological contact (defined, approximate, assumed)
Fault, arrows indicate sense of movement (defined, approximate, assumed)
Bedding: tops unknown (inclined, vertical)
Bedding: tops known (inclined, vertical)
Foliation (inclined, vertical)
Lineation
Shear + = dextral, - = sinistral, b = brittle, d = ductile
Fault (inclined, vertical)
Field sets of colour bldg (arrow indicates plunge) in plan
Adit trace of underground workings
Fault breccia (moonstone)
Isotopic age location
Mapping station
Regional Geochemical Survey station
Mineral showing
Geology
Topographic contour (100m interval)
River
Road
Park boundary
Lake
Glacier, permanent snowfield
Cross section

Abbreviations

Barite	Ba	Lead	Pb
Chalcopyrite	Cp	Molybdenite	Mo
Chlorite	Chl	Nickel	Ni
Cobalt	Co	Pyrite	Py
Copper	Cu	Pyrrhotite	Po
Epidote	Ep	Silica	Si
Galena	Gn	Silver	Ag
Gold	Au	Sphalerite	Sp
Iron	Fe	Tungsten	W
Magnetite	Mt	Zinc	Zn



Includes geology from reports by N.C. Carter, P. Read, D.G. Allen, C.J. Hodgson, and V. Ryback-Hardy