CANADA
DEPARTMENT OF MINES AND TECHNICAL SURVEYS
GEOLOGICAL SURVEY OF CANADA

GEOLOGICAL SERIES

SHEET 92 I

CANADA
DEPARTMENT OF MINES AND RESOURCES
MINES AND GEOLOGY BRANCH
BUREAU OF GEOLOGY AND TOPOGRAPHY

886A-NICOLA

SHEET 92 I (East Half)

Sections along lines A-B C-D, E-F and G-H

1059A-VERNON

SHEET 82 L

LEGEND

CENOZOIC

TERTIARY
MIOCENE OR EARLIER
KAMLOOPS GROUP (23,24)

24 — *Basalt, andesite, and rhyolite; associated tuffs and breccias*

23 — *COLDWATER BEDS (?): sandstone, shale, and conglomerate; coal*

EOCENE

22 — *Conglomerate, breccia, arkose, and shale; basaltic lava and breccia (relations to Kamloops group unknown)*

MESOZOIC

CRETACEOUS OR TERTIARY

21 — *Conglomerate, sandstone, and shale*

CRETACEOUS
LOWER CRETACEOUS
KINGSVALE GROUP

19, 20 — 19. *Arkose, conglomerate, shale, and greywacke*
20. *Basalt and andesite; agglomerate, tuff, and breccia*

SPENCES BRIDGE GROUP

18 — *Andesite, dacite, basalt, and rhyolite; tuff, breccia, and agglomerate; conglomerate, sandstone, greywacke, and arkose*

JACKASS MOUNTAIN GROUP

15, 16, 17 — 15. *DIVISION A: greywacke, argillite, and siltstone; arkose and conglomerate*
16. *DIVISION B: conglomerate, greywacke, and argillite*
17. *DIVISION C: greywacke, argillite, conglomerate; arkose*

LILLOOET GROUP

14 — *Argillite, volcanic conglomerate, and tuffaceous sandstone*

BREW GROUP

13 — *Argillite, quartzite, and conglomerate*

JURASSIC
MIDDLE AND UPPER JURASSIC

12 — *Shale, conglomerate, and sandstone*

TRIASSIC
UPPER TRIASSIC
NICOLA GROUP

11 — *Basalt and andesite; tuff and agglomerate; limestone, quartzite, argillite, greywacke, and arkose*

TRIASSIC OR EARLIER

8-10 — 8. *Phyllite, quartzite, limestone; greenstone; schist*
9. *Argillite, slate, phyllite, quartzite, greywacke, chert, limestone; greenstone; schist*
10. *Phyllite, argillite, conglomerate, greywacke. May be in part of late Mesozoic age*

7 — *Schist and gneiss*

PALÆOZOIC

PERMIAN AND(?) EARLIER
CACHE CREEK GROUP

5, 6 — 5. *Greenstone; chert, argillite, minor limestone and quartzite; chlorite and quartz-mica schist*
6. *MARBLE CANYON FORMATION: limestone*

INTRUSIVE ROCKS

MESOZOIC

CRETACEOUS OR LATER
LOWER CRETACEOUS OR LATER

4 — *Quartz diorite, albite syenite*

CRETACEOUS
LOWER CRETACEOUS

3 — *Granodiorite*

JURASSIC OR CRETACEOUS
LOWER CRETACEOUS OR EARLIER

2 — *MOUNT LYTTON BATHOLITH: granodiorite, quartz diorite, and diorite*

JURASSIC
LOWER JURASSIC

1 — *GUICHON CREEK BATHOLITH: granite, granodiorite, quartz diorite, diorite*

COAST INTRUSIONS

JURASSIC (?)

A — *Hornblende diorite and related rocks*

B — *Serpentinized ultra-basic rocks*

Heavily drift-covered area
Bedding (horizontal, inclined, vertical, overturned)
Schistosity (inclined, vertical)
Foliation (inclined, vertical)
Glacial striæ (direction of ice-movement known, direction unknown)
Fault
Fossil locality
Mining property 23

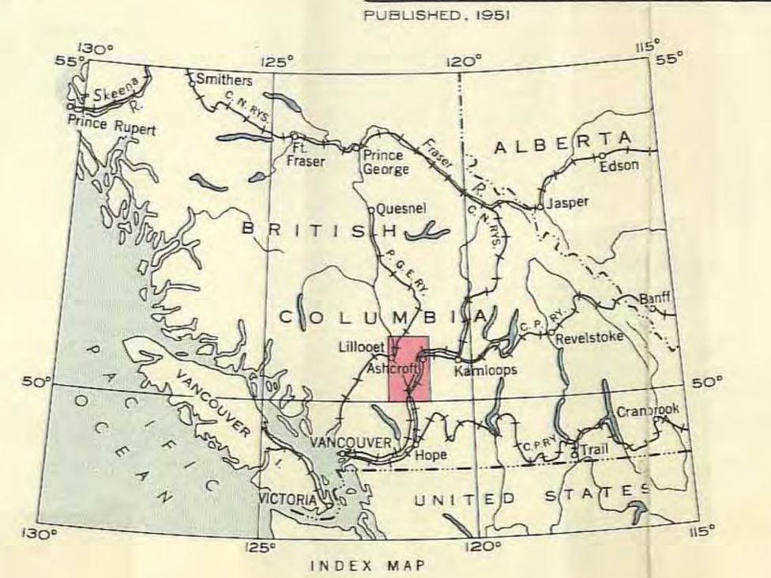
INDEX TO MINING PROPERTIES

1 Big Slide (Grange) mine (Gold, silver, copper)
2 Scottie Creek deposits (Chromium)
3 Ferguson Creek deposits (Chromium)
4 Maggie mine (Copper, silver, lead, zinc)
5 Hat Creek coal (Coal)
6 Cache Creek occurrence (Chromium)
7 Fairview group (Zinc)
8 Cornwall Creek (Chrome Pit) occurrence (Chromium)
9 Coronation group (Silver, lead, zinc)
10 Basque epsomite deposits (Magnesium sulphate)
11 Martel mine (Gold, molybdenum)
12 Glossy group (Copper)
13 Transvaal group (Copper)
14 Highland group (Copper)
15 Victory claim (Copper)
16 Toketic deposit (Iron)
17 O.K. mine (Chataway group) (Copper)
18 Spences Bridge coal (Coal)
19 Soap Lake deposit (Sodium Carbonate)
20 Kathleen claim (Copper)
21 Lytton Gold prospect (Gold)
22 Clarke prospect (Antimony)
23 Green Gold Jade claims (Vesuvianite)
24 Glacier group (Gold, silver)
25 Paystreak group (Silver)
26 Serpentine and Summit groups (Gold)

Geology by S. Duffell and K.C. McTaggart, 1945-46, and K.C. McTaggart, 1947

Cartography by the Geological Mapping Division, 1951

PUBLISHED, 1951



Joins Map 737A, "Hope"

MAP 1010A

ASHCROFT

KAMLOOPS, LILLOOET AND YALE DISTRICTS
BRITISH COLUMBIA

Scale: One Inch to Four Miles = 1/253,440
Miles
4 3 2 1 0 4 8 12

Approximate magnetic declination, 24° 15' East

CYPRUS MINES CORPORATION

Main highway
Other roads
Trail
Church
Post Office
Land District b
Forest Reserve
Indian Reserve
Intermittent str
Glacier
Contours (interval 500 feet)
Contours (position approximate)
Height in feet above mean sea-level 6030

Base-map compiled by the Bureau of Geology and Topography from surveys and from information supplied by the Department of Lands and Forests, British Columbia.

PUBLISHED, 1947. REPRINTED, 1961
COPIES OF THIS MAP MAY BE OBTAINED FROM THE DIRECTOR, GEOLOGICAL SURVEY OF CANADA, OTTAWA

Joins Map 888A, "Princeton."

PRINTED BY THE SURVEYS AND MAPPING BRANCH

MAP 886A

NICOLA

KAMLOOPS AND YALE DISTRICTS
BRITISH COLUMBIA

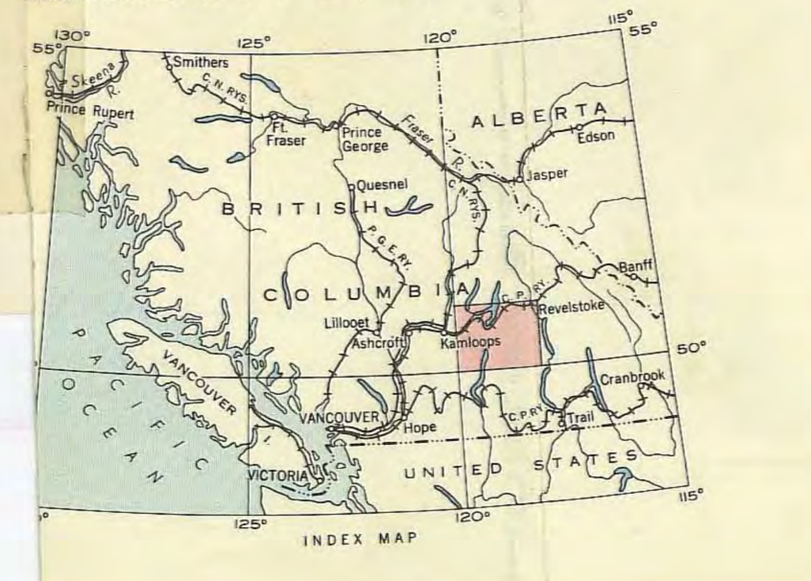
Scale, 1/253,440 or 1 Inch to 4 Miles
Miles
4 0 4 8 12

Approximate magnetic declination, 24° 30' to 27° East.

CYPRUS MINES CORPORATION

INDEX TO MINING PROPERTIES

1 Annex group gold
2 Bachelor group gold, copper
3 Beverley group gold, silver, lead, copper, antimony
4 Big Ledge zinc, lead
5 Black Hawk, (Peoitch) gold, silver, copper, lead
6 Bluebird gold, silver
7 Blue Hawk group gold, lead
8 Blue Jay gold, arsenic, lead, antimony
9 Bon Diable gold, silver
10 Bonnie Brae silver, lead, zinc
11 Brent copper, lead, silver, gold
12 British Empire gold, copper
13 Cartwright
14 Chrome-Vanadium group chromium, iron
15 Copper Chief copper
16 Copper Cup copper, lead, zinc
17 Copper Island copper
18 Copper King group copper
19 Densy group gold, copper
20 Eagle molybdenum
21 Falcon gold, copper, lead, arsenic
22 Goodenough group copper, lead, gold, silver
23 Grand Times and Hidden Treasure gold
24 Grandview group gold, silver, lead
25 I. O. U. group gold, copper
26 I. X. L.
27 Iron Cap copper
28 Iron Pot gold, lead, zinc
29 Jumbo gold
30 Kalamalka (Chance), gold, silver, lead, zinc
31 Kenallan and Yokahama molybdenum
32 Keystone copper, zinc, lead
33 Klondike copper, gold
34 Lake View gold, silver, copper
35 Last Chance gold
36 Little Duncan and Panorama gold, silver, copper, lead
37 May gold, silver, lead
38 Metal Crest lead, zinc
39 Milligan group gold
40 Mission Hill silver, gold, copper, lead
41 Mitchell and Cochrane group silver, lead, copper, zinc
42 Monashee group (St.Paul), gold, silver, lead, zinc, copper, antimony, arsenic
43 Morning Glory gold, copper
44 Mount Ida group silver, lead
45 Octagon group silver, copper, antimony, lead, zinc
46 Ophir copper, silver, lead, zinc, gold
47 Paladora group gold, silver, lead, zinc
48 Paradise and Renown gold, silver
49 Pay Roll silver, lead, gold
50 Polar Star
51 Rex (Three Tramps), gold, copper
52 Rita silver, copper, gold
53 Ruby Gold gold
54 Shuswap lead
55 Silver Creek silver
56 Silver Star group silver, lead, zinc, gold, molybdenum
57 Skookum silver, gold
58 Sugar Loaf gold, lead
59 Sunset silver, lead
60 Victory zinc
61 Vimy copper, gold, silver
62 White Elephant and Yellow Rose gold, silver, tungsten
63 Zion gold



MAP 1059A

GEOLOGY

VERNON

KAMLOOPS, OSOYOOS, AND KOOTENAY DISTRICTS
BRITISH COLUMBIA

Scale: One Inch to Four Miles = 1/253,440
Miles
4 2 0 4 8 12

CYPRUS MINES CORPORATION

LEGEND

Main highway
Other roads
Trail
Power line
Post Office
District boundary
Indian Reserve boundary
Intermittent stream
Marsh
Contours (interval 500 feet)
Glacier
Height in feet above mean sea-level 1121

Base-map compiled by the Topographical Survey, 1958

LEGEND #1059A LEGEND

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

21 — *Glacial, lacustrine, and fluviatile gravel, sand, silt, and clay*

TERTIARY
OLIGOCENE OR MIOCENE
KAMLOOPS GROUP

20 — *Basaltic lava and flow breccia; minor rhyolitic lava and breccia; local sandstone, shale, conglomerate; coal*

CRETACEOUS OR TERTIARY

19 — *Pink to red syenite and quartz syenite; pink and white mottled granite*

MESOZOIC

JURASSIC AND/OR CRETACEOUS
COAST INTRUSIONS

18 — *Granite, granodiorite and allied rocks*

TRIASSIC
UPPER TRIASSIC
NICOLA GROUP

17 — *Andesite; minor basalt; some limestone and conglomerate*

(?) LOWER AND/OR UPPER TRIASSIC
SLOCAN GROUP

16 — *Slate, quartzite, limestone; phyllite, mica schist; may be in part equivalent to 17*

PALÆOZOIC

CARBONIFEROUS (?) AND PERMIAN
CACHE CREEK GROUP (13-15)

15 — *DIVISION C: mainly limestone; minor argillite, quartzite, and andesite lava, breccia, and tuff*

14 — *DIVISION B: mainly andesite lava and tuff; minor argillite, quartzite and limestone*

13 — *DIVISION A: mainly argillite*

PROTEROZOIC AND/OR PALÆOZOIC

WINDERMERE (?) OR EARLY PALÆOZOIC
LARDEAU SERIES

12 — *Argillite, phyllite, schist, quartzite, limestone, conglomerate*

WINDERMERE (?) OR CAMBRIAN

11 — *BADSHOT FORMATION: limestone and marble; minor argillite*

WINDERMERE OR (?) CAMBRIAN
HAMILL SERIES

10 — *Quartzite, staurolite schist, argillite, phyllite; minor limestone*

WINDERMERE OR EARLIER

9 — *OLD DAVE INTRUSIONS: serpentinized, ultramafic dykes*

ARCHÆAN OR LATER

SHUSWAP TERRANE

MOUNT IDA GROUP (1-7)

7 / 7A — *EAGLE BAY FORMATION: chlorite and sericite schist, slate, limestone, quartzite; minor conglomerate*
7A. *Predominantly limestone*

6 — *SICAMOUS FORMATION: flaggy limestone, sericite schist, graphite schist*

5 — *MARA FORMATION: argillite, slate, sericite and chlorite schist, limestone*

4 — *TSALKOM FORMATION: green andesite and agglomerate; chlorite schist; slate*

3 — *SILVER CREEK FORMATION: slate, sericite schist; garnetiferous quartz-mica schist*

2 — *CHASE FORMATION: quartzite calcareous quartzite; garnetiferous quartz-mica schist*

CHAPPERON GROUP

8 — *Argillite, chlorite schist, mica schist; quartzite, limestone. May be equivalent to Mount Ida group, in part*

MONASHEE GROUP

1 / 1A-C
1. *Granitoid gneiss, augen gneiss, mica-sillimanite-garnet schist; quartzite, marble, hornblende gneiss, slate phyllite*
1A. *Limestone*
1B. *Quartzite*
1C. *Hornblende gneiss*

Bedding (inclined, vertical, horizontal)
Foliation (inclined, vertical, horizontal)
Lineation (plunging and horizontal)

BEDDING AND FOLIATION WITH LINEATION

	Bedding	Foliation
Inclined (with plunging lineation)		
Inclined (with two plunging lineations)		
Inclined (with horizontal lineation)		
Vertical (with horizontal lineation)		
Inclined (with horizontal and plunging lineations)		
Horizontal (with one horizontal lineation)		
Horizontal (with two horizontal lineations)		
Inclined (lineation directly down dip)		

Fault (approximate, assumed)
Anticline (upright, overturned)
Syncline (upright, overturned)
Fossil locality — F6
Mining property — 16
Mineral occurrence — ×

Geology by H.M.A. Rice, 1945, 1946, and by A.G. Jones, 1947-1951

To accompany G.S.C. Memoir 296 by A.G. Jones

Cartography by the Geological Survey of Canada, 1959

Approximate magnetic declination, 23° 21' East

Air photographs covering this map-area may be obtained through the National Air Photographic Library, Topographical Survey, Ottawa, Ontario

LEGEND #886 A

LEGEND

CENOZOIC

TERTIARY

MIOCENE OR LATER

13 — *Valley basalt: mainly vesicular basalt*

MIOCENE OR EARLIER

KAMLOOPS GROUP

11 | 12 — 11. *Rhyolite, andesite, and basalt; associated tuffs, breccias and agglomerates. May include some younger basalts*
12. *TRANQUILLE BEDS: conglomerate, sandstone, shale, tuff; thin coal seams*

10 — *COLDWATER BEDS: conglomerate, sandstone, shale, and coal;* 10a, *similar to* 10, *but may include younger beds*

MESOZOIC OR CENOZOIC

CRETACEOUS OR TERTIARY

9 — *COPPER CREEK INTRUSIONS: granite, granodiorite, granite porphyry*

8 — *Andesite, basalt; picrite, agglomerate, breccia, and tuff; minor conglomerate and sandstone*

7 — *Conglomerate, sandstone, and shale*

MESOZOIC

CRETACEOUS

LOWER CRETACEOUS

KINGSVALE GROUP

6 — *Rhyolite, andesite, and basalt; associated tuffs, breccias, and agglomerates; arkose, conglomerate*

SPENCE BRIDGE GROUP

5 — *Hard, reddish lava*

JURASSIC AND(?) LATER

4 — *COAST INTRUSIONS: granite, granodiorite, gabbro;* 4a, *Iron Mask batholith; syenite, monzonite, diorite, gabbro;* 4b, *pyroxenite and peridotite. Probably not all of the same age, and may be in part post-Lower Cretaceous*

TRIASSIC

UPPER TRIASSIC

NICOLA GROUP

3 — *Greenstone; andesite, basalt; agglomerate, breccia, tuff; minor argillite, limestone, and conglomerate*

PALÆOZOIC

CARBONIFEROUS AND PERMIAN

CACHE CREEK GROUP (?)

2 — *Greenstone, generally slightly sheared. May include some Triassic rocks* (3)

1 | 1A — *Argillite, quartzite, hornstone, limestone, sheared conglomerate, breccia, greenstone, and serpentine;* 1A, *limestone*

A — *Chlorite schist, quartz-mica schist, amphibolite, and granitic intrusions; commonly gneissic and largely of Palæozoic age*

Heavily drift-covered area
Fault
Synclinal axis
Fossil locality (F)
Mineral occurrence ×

SYMBOLS FOR METALS

Silver	Ag
Gold	Au
Copper	Cu
Iron	Fe
Mercury	Hg
Lead	Pb
Tungsten	W

Road
Road (not well travelled)
Trail
Post Office
Forestry lookout
Land District boundary
Limit of Railway belt
Indian Reserve boundary
Intermittent lake and stream
Marsh
Sand bar
Contours (interval 500 feet) 2500
Depression contour
Height in feet above mean sea-level 3768'

Geology by W.E. Cockfield, 1939, 1940, 1941, 1943.

For Mineral Localities, see Map 887A, "Nicola"

Base-map compiled by the Topographical Survey, 1937, from information obtained from published Federal Government maps. Cartography by the Drafting and Reproducing Division, 1946.