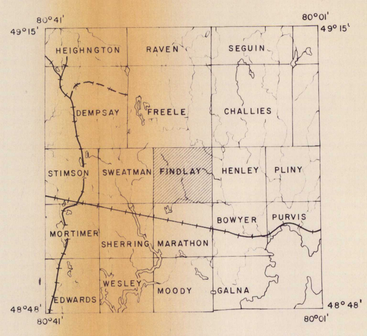
FINDLAY TOWNSHIP

DISTRICT OF COCHRANE, ONTARIO



TYPES OF LITHOLOGICAL UNITS
KIRKLAND LAKE DATA SERIES

CENOZOIC
PLEISTOCENE AND RECENT
18e ORGANIC DEPOSITS
Open and semi-open bogs
18b COCHRANE DEPOSITS
Clay till
18c BARLOW-OJIBWAY DEPOSITS
Varved sediments
Sand and gravel deposits
18d GLACIO-FLUVIAL DEPOSITS
Esker complexes; associated outwash sand and gravel deposits
18e GROUND MORAINE DEPOSITS
Sandy grey boulder till, with minor contained stratified drift, resting on bedrock.

INTRUSIVE CONTACT

PALEOZOIC
LOWER AND MIDDLE SILURIAN
16a Clinton (Thornloe) Formation: limestone, dolomite, sandstone
16b Wash Formation: limestone, shale

MIDDLE AND UPPER ORDOVICIAN
15a Dawson Point Formation: shale
15b Farr Formation: limestone
15c Rucke Formation: limestone, shale
15d Guibes Formation: sandstone

UNCONFORMITY

PRECAMBRIAN
LATE PRECAMBRIAN (PROTEROZOIC)
MAFIC INTRUSIVE ROCKS[f]
14 Diabase dikes

INTRUSIVE CONTACT

MIDDLE PRECAMBRIAN (PROTEROZOIC)
ALKALIC INTRUSIVE ROCKS[g]
13 Syenite, nepheline syenite, lamprophyre

MAFIC INTRUSIVE ROCKS[f]
12 Diabase, transition rock, and granophyre sheets and dikes

INTRUSIVE CONTACT

COBALT GROUP
11 Lorrain Formation: quartzite, arkose
10 Gowganda Formation:
10 Undifferentiated
10a Firstbrook Member: quartzite, siltstone, greywacke, arkose
10b Coleman Member: conglomerate, greywacke, quartzite, arkose, argillite

UNCONFORMITY

EARLY PRECAMBRIAN (ARCHEAN)
MAFIC INTRUSIVE ROCKS[f]
9 Diabase dikes

INTRUSIVE CONTACT

ALKALIC INTRUSIVE ROCKS[g]
8 Syenite, monzonite, lamprophyre[h]

INTRUSIVE CONTACT

ALKALIC METAVOLCANICS[b]
7 Trachyte, leucitic trachyte flows, tuff, breccia

METASEDIMENTS[j]
6 Conglomerate, greywacke, siltstone, slate, argillite, iron formation[c]
5 Greywacke, siltstone, slate, iron formation[a]

FELSIC INTRUSIVE ROCKS[d]
4 Granitic intrusive rocks
4a Quartz porphyry, quartz-feldspar porphyry, feldspar porphyry, granophyre, felsite[h]
4b Trondhjemite, granodiorite, quartz monzonite; simple batholiths and stocks[h]
4c Trondhjemite, granodiorite, quartz monzonite, quartz diorite, aplite, pegmatite, migmatite; complex batholiths

INTRUSIVE CONTACT

FELSIC METAVOLCANICS AND VOLCANICS[e]
3 Undifferentiated, rhyolite
3a Iron formation and ferruginous chert
3b Flows
3c Pyroclastic rocks

INTRUSIVE CONTACT

METAMORPHOSED MAFIC AND ULTRAMAFIC INTRUSIVE ROCKS[i]
2 Undifferentiated
2a Gabbro, diorite
2b Peridotite, dunite, pyroxenite, serpentinite

INTRUSIVE CONTACT

INTERMEDIATE AND MAFIC METAVOLCANICS[a]
1 Undifferentiated rocks, andesite, and basalt
1a Intermediate flows
1b Intermediate pyroclastic rocks
1c Mafic flows
1d Mafic pyroclastic rocks

a Formerly classified as Keewatin
b Formerly classified as Timiskaming
c Formerly classified as Hailleybirian
d Formerly classified as Algoman
e Includes porphyritic dikes of Matachewan swarm
f Includes Nipissing and Sudbury sills
g Includes Fawcett Lawn
h Several large granitic units appear to be intrusive equivalents of volcanic formations whereas others postdate volcanism
j Rocks in these groups are subdivided lithologically; the order does not necessarily imply one or two periods within an epoch or group

GEOLOGICAL AND MINING SYMBOLS FOR KIRKLAND LAKE DATA SERIES

- Glacial striae.
- Esker, medial ridge.
- Small bedrock outcrop.
- Bedding, top unknown (inclined, vertical).
- Bedding, top (arrow) from grain gradation; (inclined, vertical, overturned).
- Bedding, top (arrow) from cross bedding; (inclined, vertical, overturned).
- Lava flow; top (arrow) from pillows shape and packing.
- Schistosity; (horizontal, inclined, vertical).
- Gneissosity, (horizontal, inclined, vertical).
- Layering, (horizontal, inclined, vertical).
- Lineation with plunge.
- Geological boundary, observed.
- Geological boundary, position interpreted.
- Geological boundary, deduced from geophysics.
- Fault; (observed, assumed). Spot indicates down throw side, arrows indicate horizontal movement.
- Lineament.
- Jointing; (horizontal, inclined, vertical).
- Drag folds with plunge.
- Anticline, syncline, with plunge.
- Drill hole; (projected vertically). Overburden shown.
- Drill hole in overburden only; (vertical or collar inclined). Overburden shown.
- Shaft; depth in feet.
- Mineral occurrence at surface.
- Airborne electromagnetic anomaly (Canadian Aero System).
- Airborne electromagnetic anomaly (Questor 6 Channel Input System).
- 2 channel response.
- 3 channel response.
- 4 channel response.
- 5 channel response.
- 6 channel response and coincident magnetic anomaly.
- Airborne magnetometer anomaly.
- Ground magnetometer anomaly.
- Ground electromagnetic conductor (VEM-Vert-loop; HEM-Horizontal loop; VLF-Very low freq.; Turam; JEM-Crone EM-16).
- Induced Polarization anomaly
- Spontaneous Polarization anomaly
- Gravity anomaly
- Radiometric anomaly
- Resistivity anomaly

METAL AND MINERAL REFERENCE

For Kirkland Lake Data Series

Ag ..... Silver	mo ..... Molybdenite
asb ..... Asbestos	Ni ..... Nickel
Au ..... Gold	Pb ..... Lead
Cd ..... Cadmium	Pd ..... Palladium
Co ..... Cobalt	pent .... Pentlandite
cp ..... Chalcopyrite	po ..... Pyrrhotite
Cr ..... Chromium	Pt ..... Platinum
Cu ..... Copper	py ..... Pyrite
ep ..... Epidote	qcv ..... Quartz-carbonate vein
Fe ..... Iron	QV ..... Quartz vein
fl ..... Fluorite	serp .... Serpentine
gF ..... Graphite	sp ..... Sphalerite
gn ..... Galena	spec .... Specularite
mag .... Magnetite	talc .... Talc
mar .... Marcasite	Sn ..... Tin
mi ..... Millerite	Zn ..... Zinc

Sources of Information

Compiled by the Geological Survey of Canada in co-operation with the Ontario Department of Mines and Northern Affairs from data on file with the Resident Geologist (Ontario Department of Mines and Northern Affairs), Kirkland Lake.

NTS Reference 42 A/16, 42 H/1
GSC-OMSC Aeromagnetic Maps 23550, 23560
GSC Geological Compilation Series Maps 2046, 2161
GSC Surficial Geology Map 46-1959

Findlay L

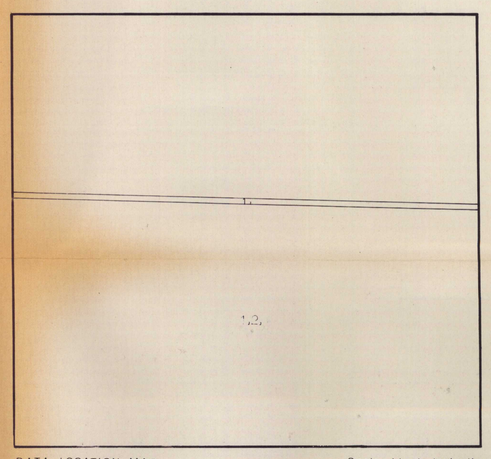
Bingle Creek

Scale: 1 inch to 1/4 mile

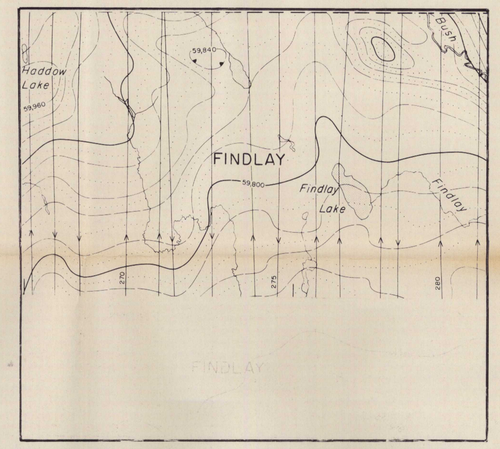
DATA FILED WITH THE ONTARIO DEPARTMENT OF MINES AND NORTHERN AFFAIRS RESIDENT GEOLOGIST AT KIRKLAND LAKE Through February 1972	GEOLOGICAL	DIAMOND DRILLING	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETOMETER	GROUND MAGNETOMETER	VERTICAL LOOP ELECTROMAGNETOMETER	HORIZONTAL LOOP ELECTROMAGNETOMETER	TURAM ELECTROMAGNETOMETER	JEM	INDUCED POLARIZATION	VLF	RESISTIVITY	GRAVITY	GEOCHEMICAL	OTHERS
1. Glen Lake Silver Mines Ltd.			63												
2. North American Rare Metals Ltd.			62	62											
No anomalies were reported from either survey															

Note: The numbers on the above list stand for the year when the work was done, e.g., 66 for 1966. On the accompanying DATA LOCATION MAP, only areas for which work was submitted to the Department are outlined, and thus a company may hold more ground than indicated here. The numbers on the DATA LOCATION MAP and any circled numbers refer to the company list above.

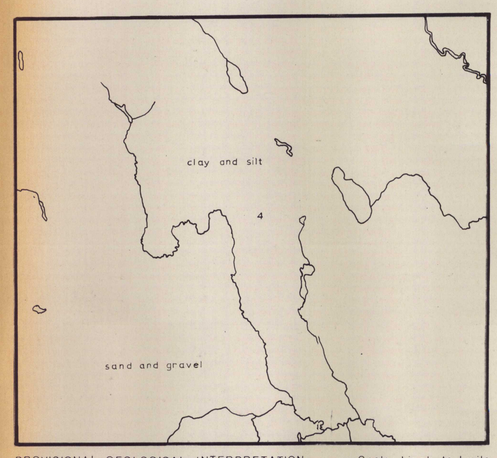
OPEN FILE
84
MAR 1972
GEOLOGICAL SURVEY, OTTAWA



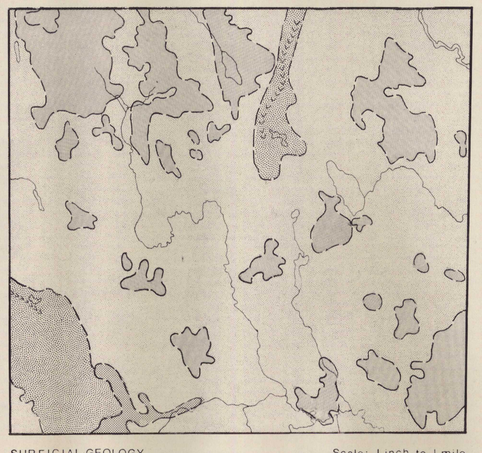
DATA LOCATION MAP Scale: 1 inch to 1 mile



AEROMAGNETIC MAP Scale: 1 inch to 1 mile



PROVISIONAL GEOLOGICAL INTERPRETATION Scale: 1 inch to 1 mile



SURFICIAL GEOLOGY Scale: 1 inch to 1 mile

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