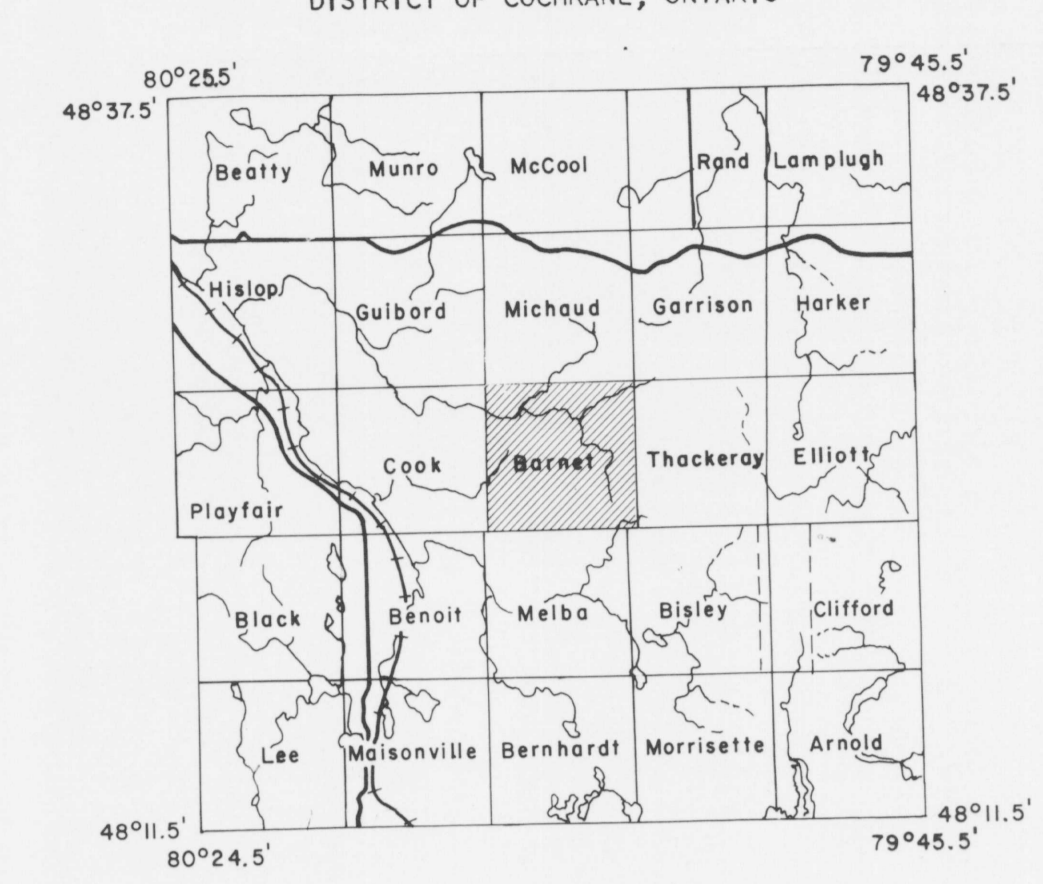
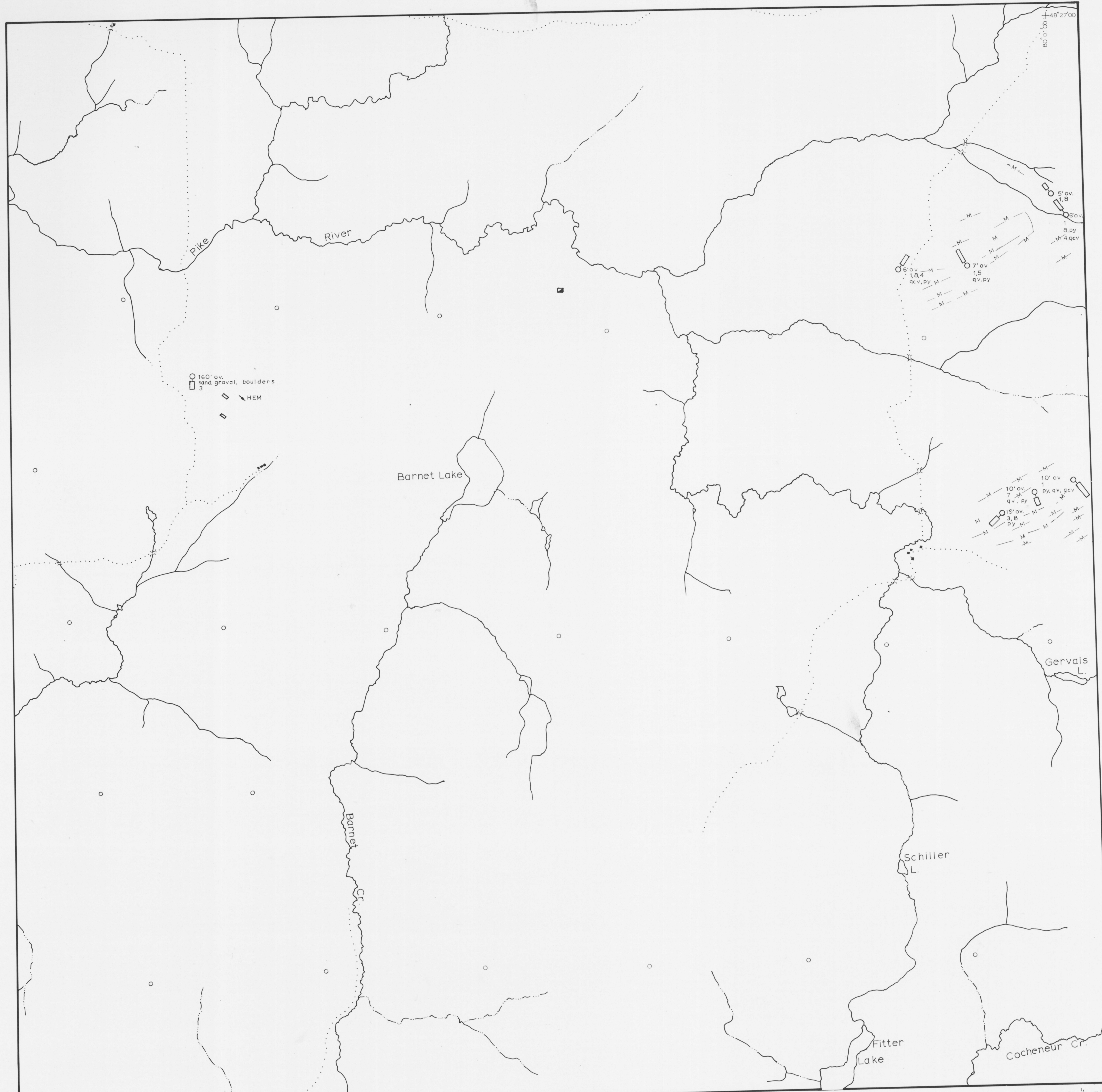


**BARNET TOWNSHIP**  
DISTRICT OF COCHRANE, ONTARIO



- TABLE OF LITHOLOGICAL UNITS**  
KIRKLAND LAKE DATA SERIES
- CENOZOIC**  
PLEISTOCENE AND RECENT  
18a ORGANIC DEPOSITS  
18b COCHRANE DEPOSITS  
18c BARLOW-DUBWAY DEPOSITS  
18d GLACIO-FLUVIAL DEPOSITS  
18e GROUND MORaine DEPOSITS
- MESOZOIC**  
17 Kimberlite
- INTRUSIVE CONTACT**
- PALEOZOIC**  
LOWER AND MIDDLE SILURIAN  
16a Clinton (Thornloe) Formation: limestone, dolomite, sandstone  
16b Wall Formation: limestone, shale
- MIDDLE AND UPPER ORDOVICIAN**  
15a Dawson Point Formation: shale  
15b Farr Formation: limestone  
15c Hucks Formation: limestone, shale  
15d Galgas Formation: sandstone
- PRECAMBRIAN**  
LATE PRECAMBRIAN (PROTEROZOIC)  
14 Diabase dikes
- MIDDLE PRECAMBRIAN (PROTEROZOIC)**  
13 Syenite, nepheline syenite, lamprophyre  
12 Diabase, transition rock, and granophyre sheets and dikes
- EARLY PRECAMBRIAN (ARCHEAN)**  
11 Lorrain Formation: quartzite, arkose  
10 Onondaga Formation: Undifferentiated  
9a Firstbrook Member: argillite, siltstone, greywacke, arkose  
9b Colborne Member: conglomerate, greywacke, quartzite, arkose, argillite
- ALKALIC INTRUSIVE ROCKS**  
8 Syenite, monzonite, lamprophyre
- ALKALIC METAVOLCANICS**  
7 Trachyte, leucitic trachyte; flows, tuff, breccia
- METASEDIMENTALS**  
6 Conglomerate, greywacke, siltstone, slate, argillite, iron formation  
5 Greywacke, siltstone, slate, iron formation
- FELSIC INTRUSIVE ROCKS**  
4 Granitic intrusive rocks  
3a Quartz porphyry, quartz-feldspar porphyry, calcic porphyry, granophyre, felsite  
3b Trondhjemite, granodiorite, quartz monzonite, gneiss, batholiths and stocks  
3c Trondhjemite, granodiorite, quartz monzonite, quartz diorite, gneiss, pegmatite, migmatite, complex batholiths
- FELSIC METAVOLCANICS AND VOLCANICS**  
2 Undifferentiated, rhyolite  
3a Iron formation and ferruginous chert  
3b Flows  
3c Pyroclastic rocks
- METAMORPHIC MAFIC AND ULTRAMAFIC INTRUSIVE ROCKS**  
2a Undifferentiated  
2b Sphene, diorite  
2c Peridotite, dunite, pyroxenite, serpentinite
- INTERMEDIATE AND MAFIC METAVOLCANICS**  
1a Undifferentiated diorite, andesite, and basalt  
1b Intermediate pyroclastic rocks  
1c Mafic flows  
1d Mafic pyroclastic rocks

- 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 pillow 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 (Quester 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-VLF low freq.; Turm, JEM-Cross 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	Per	Perlanite
Cu	Copper	Py	Pyrrhotite
Cr	Chalcocite	Qtz	Quartz
Ch	Chromite	Qc	Quartz-carbonate vein
Cu	Copper	Py	Pyrite
Fe	Iron	Sp	Sphalerite
Fl	Fluorite	Serp	Serpentine
Gr	Graphite	Sph	Sphalerite
Ga	Gallium	Soc	Sodicite
Mg	Magnetite	Talc	Talc
Mn	Manganese	Ti	Titanium
Ni	Nickel	Zn	Zinc

Sources of Information  
Compiled by the Geological Survey of Canada in cooperation 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/1  
GSC Geographical Compilation Series Map 2046  
GSC Surficial Geology Map 1-1950

**OPEN FILE**  
104  
JUN 1970  
GEOLOGICAL SURVEY  
OTTAWA

DATA FILED WITH THE ONTARIO DEPARTMENT OF MINES AND NORTHERN AFFAIRS RESIDENT GEOLOGIST AT KIRKLAND LAKE Through February 1972

	DIAMOND DRILLING	ALFREDINE MAGNETOMETER	ALFREDINE ELECTROMAGNETOMETER	GROUND MAGNETOMETER	VERTICAL LOOP ELECTROMAGNETOMETER	HORIZONTAL LOOP ELECTROMAGNETOMETER	TURMAY ELECTROMAGNETOMETER	JEM	INDUCED POLARIZATION	VLF	RESISTIVITY	GRAVITY	GEOCHEMICAL	OTHERS
1. Sonlha Mining Company Ltd. "Barnet Tp."				61										44*
2. Cooper, F.L. "Barnet Tp."														
3. Dominion Gulf Co. "Group 1" "Barnet and Thackeray Tps."		51		50										
4. Dominion Gulf Company "Group 2" "Thackeray and Barnet Tps."		50	50	50										
5. D'Aragon Mines Ltd. "Barnet & Cook Tps."													47**	
6. International Nickel Co. of Canada Ltd. "Barnet Tp."														

\* Old shaft assays  
\*\* Anomaly "A" to "M" No maps available

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.

