

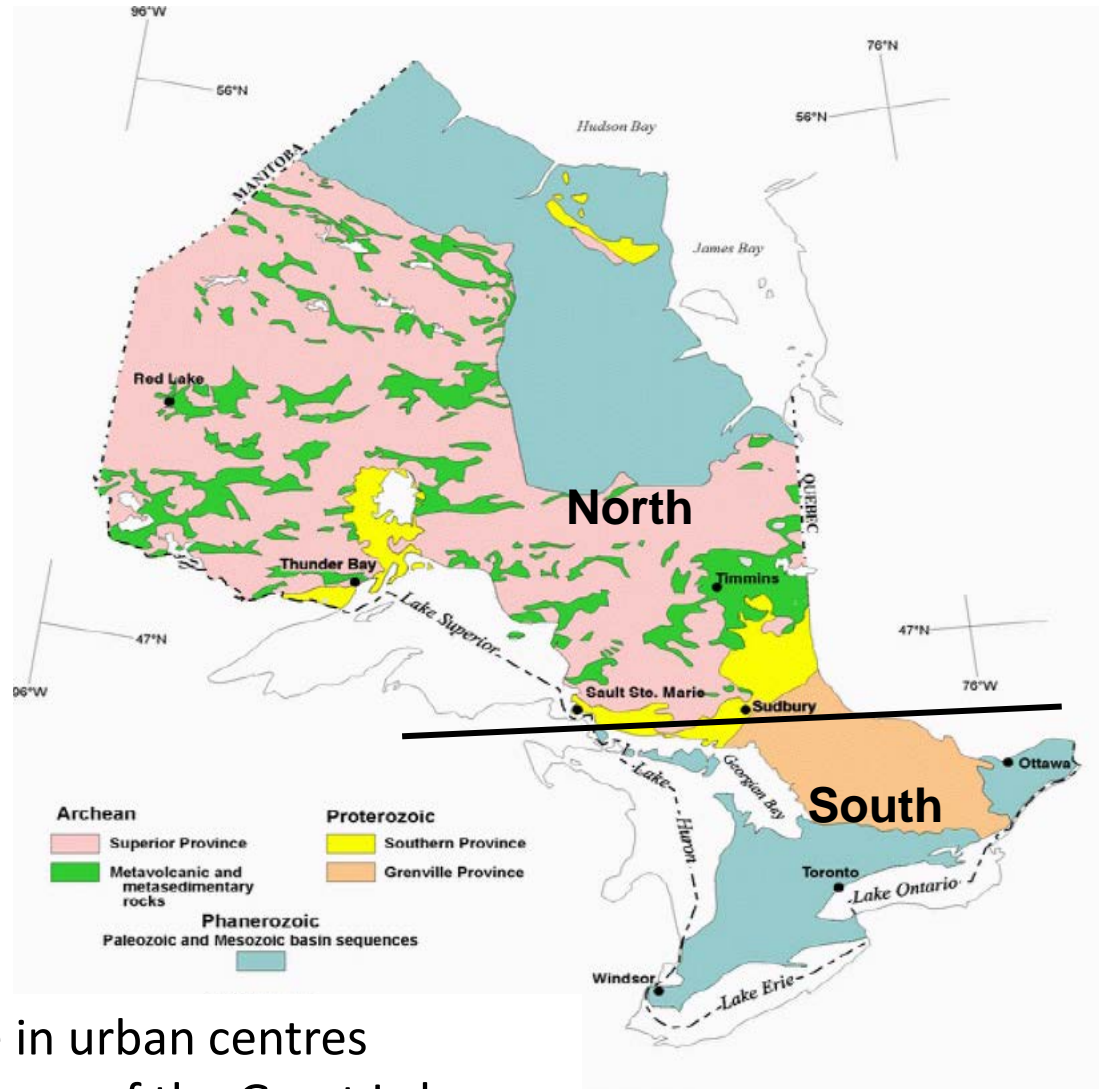
What's New in Southern Ontario?

2012 and beyond...



Ontario Facts

Area = 1 million km²
Population = 13 million



85% of people live in urban centres
most along the shores of the Great Lakes
in southern Ontario

Overview

- Production
- Advanced Exploration / Development
- Exploration
- Climate
- GeologyOntario / OGSEARTH
- Recommendations for Exploration



Production

100+ mines including:

- 14 industrial mineral mines
- 2 trap rock quarries
- 6 cement producers
- 7 brick shale quarries
- 64 dimension stone quarries

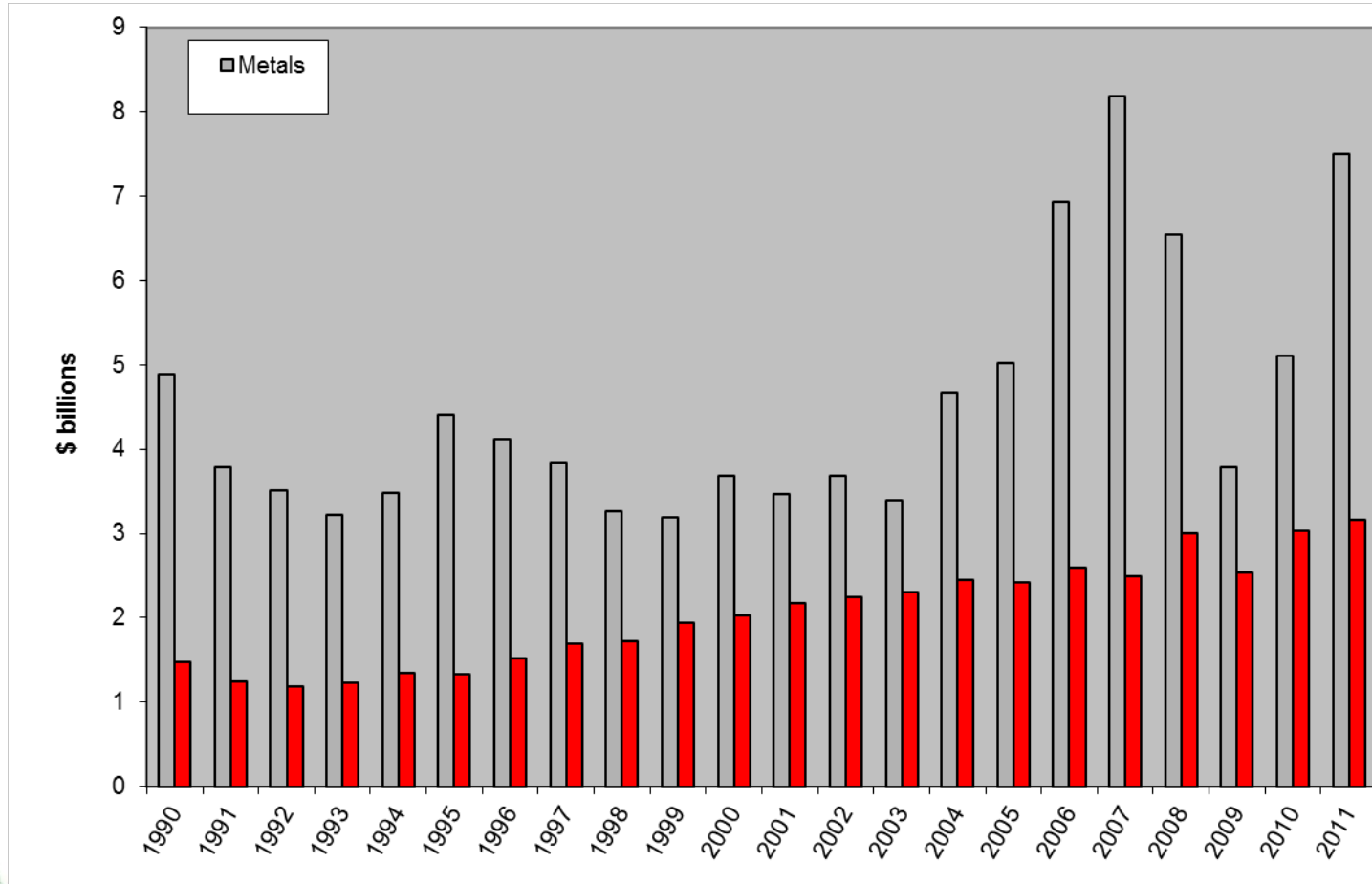
5000 people are directly employed in mineral extraction and on-site plants in southern Ontario



In 2011, the value of non-metallic minerals produced in Ontario was \$3.2 billion or approximately 30% of the total value of minerals produced in the province



Production 1990 - 2011



All Ontario production of salt, gypsum/wallboard, natural gas and petroleum, shale/brick, lime/dolime, cement, nepheline and the majority of dimension stone, sand and gravel comes from Southern Ontario.



Top 5 commodities by value of production:

- Stone \$665M
- Cement \$582M
- Salt \$498M
- Sand/Gravel \$483M
- Lime \$119M



Advanced Exploration and Development

Advanced exploration and development projects in 2012 included:

Development of Canada's First
Wollastonite Deposit

Feasibility Canada's First Underground
Aggregate Mine

Graphite, Gold and Trap Rock projects



Wollastonite



Current Mining Locations:

- St. Lawrence Deposit

Mining Companies:

- Canadian Wollastonite

Past Mining Locations:

Primary Uses:

- Filler in plastics, ceramics, paint and rubber
- Friction materials, insulation

Production planned to begin 2013

Mineral Resource and/or Current Exploration Locations:

- Seeley's Bay
- Marmora
- Sharbot Lake



Underground Aggregate



St. Marys Cement proposes to evaluate the feasibility of underground mining of limestone adjacent to the company's current cement quarry and plant at Bowmanville.



The proposal envisages a multi-year off-shore drilling program to determine the existence of high-quality limestone aggregate.



Graphite



- Northern Graphite, Bissett Creek
- Ontario Graphite, Kearney deposit
- Mega Graphite, Bedford deposit

Mineral Resource and/or Current Exploration Locations:

- Mattawa, Kingston, Algonquin
- Westport, Albany Project

Primary Uses:

- Steel industry, ladles and crucibles, refractories, brake linings, gaskets and clutches, batteries, lubricants, fire retardants, reinforcements in plastics, lithium ion batteries, fuel cells, solar energy, semi-conductors, nuclear reactors, textiles, golf clubs, racquets, pencils, graphene



Trap Rock



Primary Uses:

- Railway ballast, aggregate
- Filter stone
- Roofing granules
- Rock wool

Danford Construction completed bulk sampling and testing of the Bridgewater trap rock deposit in Elzevir Township.



Gold

Upper Canada Gold resumed baseline environmental studies on Dingman Deposit.

NI-43-101 report, at a cut-off grade of 0.40 g/t Au, is:

Indicated mineral resource of 11.6 million tonnes averaging 0.97 g/t Au

Inferred mineral resources of 1.7 million tonnes averaging 0.73 g/t Au



Exploration

In 2012, exploration was focused on graphite, gold, copper / nickel / platinum, iron and selected industrial mineral prospects.



Graphite

- Valterra Resources optioned the Bobcaygeon Graphite Property in Cavendish Township. The project area covers over 5,500 ha. Graphite was discovered on the property in 2003.
- Standard Graphite Corp. (Terra Firma Resources Inc.) announced that ground prospecting and geological reconnaissance on the Little-Bryan property discovered a new graphite horizon.
- Big North Graphite Corp. completed 1, 187 line km high resolution EM airborne survey and identified high priority targets for follow-up on both the Griffith and Brougham properties. Flight lines 100m apart, allowed for detailed mapping of stratigraphy and conductive features.



Copper / Nickel / Platinum

First Nickel continued exploration of 2 Cu Ni Pt prospects, Raglan Hills and Belmont..

Belmont – mapping and sampling over targets defined by airborne survey. 101 samples sent for analysis from claims located in Marmora, Limerick and Wollaston.

Raglan Hills – A total of 2,423 metres of diamond drilling were completed in 15 holes in Raglan and Lyndoch Townships. Drilling was focused on priority geophysical targets identified by airborne geophysical surveys completed by the company in 2011.



Gold

- Vanity Capital completed first phase of drilling on the Ore Chimney minesite in Barrie Twp. Results are pending.
- Results of bulk sampling completed on Cordova gold minesite by Insight Gold are also pending. The Cordova mine produced about 120,000 t of ore grading 0.19 opt (6.3 g/t) Au between 1892 and 1940.



Garnet



Algonquin Resources continued exploration of the company's garnet prospect in Maria Township.

Primary Uses:

- Abrasives, water jet cutting
- Filtration

Value of Production 2011:

- Confidential

Mineral Resource and/or Current Exploration Locations:

- Bancroft, Mattawa, River Valley



Climate

- Unimin Canada announced the closure of the company's Midland processing plant and cessation of operations at the Badgeley Island quarry effective June 30, 2012.



Unimin Canada Ltd. Badgeley Island quartzite quarry





Sherritt International
completed rehabilitation
of the Company's
Canada Talc property
near Madoc.



Algonquin Land Claim

- Surface and Mining rights of parts of 78 townships were withdrawn on May 31, 2012.
- Areas were withdrawn on a temporary basis while the MAA and MNR consider the status of certain lands within these areas that may have potential for future disposition as part of a settlement of the Algonquin Land Claim.
- Withdrawn lands not required for the purposes of settlement will be reopened on November 30, 2012.



Available Data

GeologyOntario provides access to all Ontario Geological Survey maps, reports and digital datasets.

Other data is also available, including:

- Client-submitted assessment files
- Mineral deposits
- Rock sample lithogeochemical analysis
- Drill hole records
- Mining hazards including abandoned mines



GeologyOntario



GeologyOntario is an online warehouse that contains all of the publically available digital data collected by the Mines and Minerals division. All data is available for download and can be discovered by using spatial and attribute-based search.



OGSEarth

- Why Google?
- Free
- Simple
- Accessible

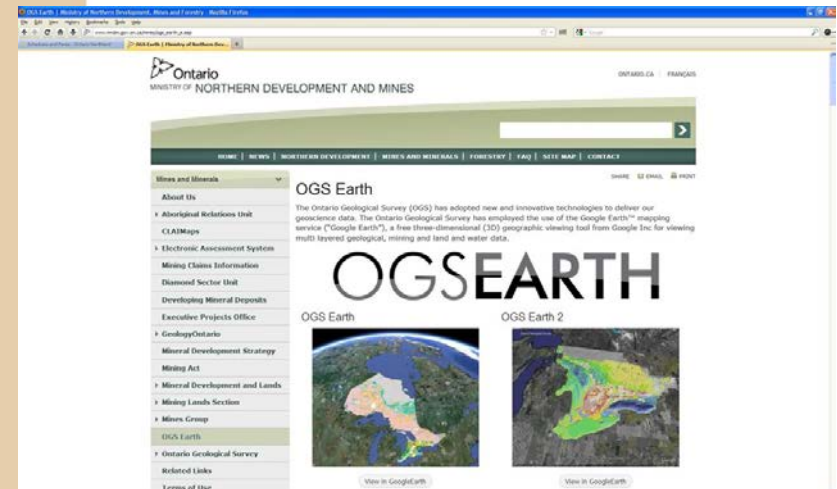
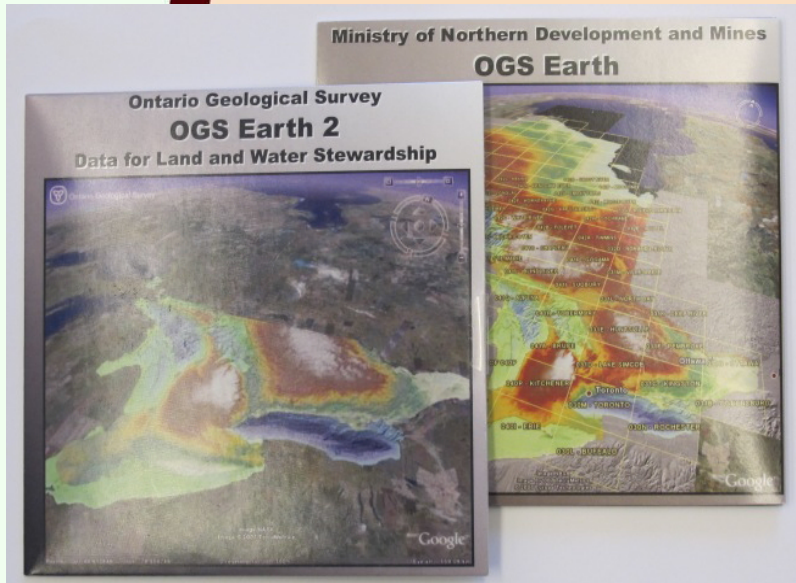


Access



- 17,976 publications
- 48,265 AFRI files
- 19,288 mineral deposits
- 30,804 lithogeochem
- 136,719 diamond drill holes
- 5,739 abandoned mines records





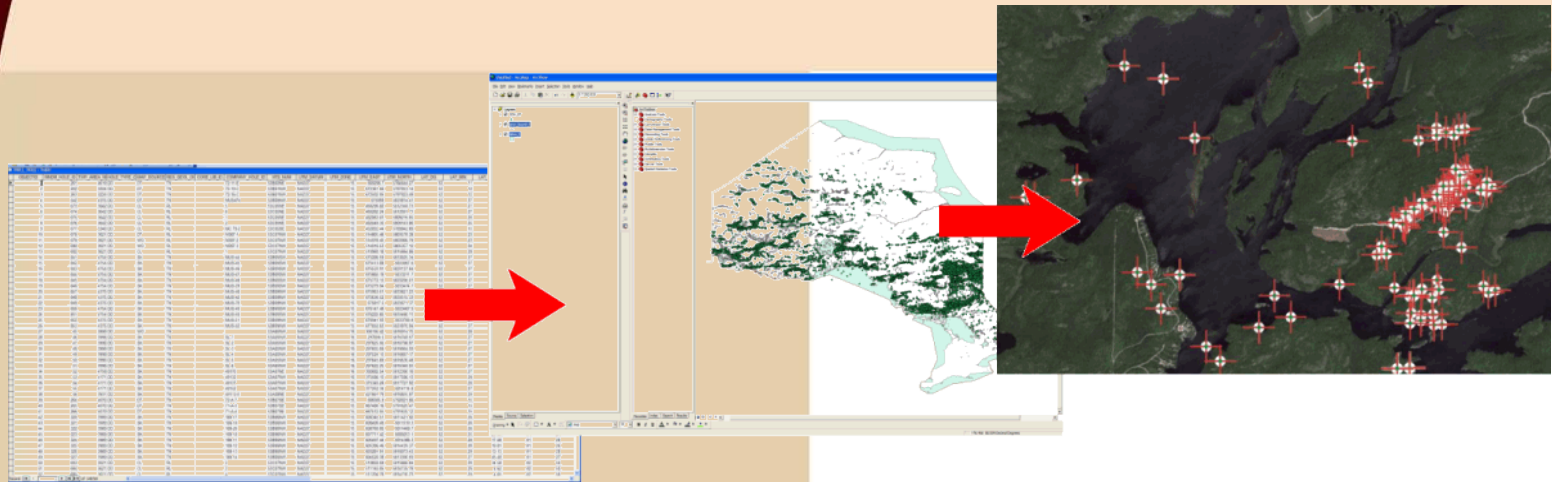
•Past

- CD Based Product
- Static data
- Poorly developed graphics of GIS datasets
- Links broken when website was overhauled

•Present

- Online
- Daily updates
- Multifaceted point line and polygon data
- Links to detailed attributes; full GIS datasets
- Loading and merging of multiple datasets





- How are the kml's Produced
- The kml's are produced using custom applications which were built with Microsoft Visual Basic
- Kml's for raster, polygon, line and point data are written to match existing publications.
- Colors and point symbology are created to match existing OGS standards



•Provincial Scale

- 1:250 000 bedrock geology
- Claims
- Mineral Deposit Inventory
- Diamond Drill Hole Database
- Abandoned Mines
- Assessment Work

•Regional

- Northern Ontario Geology Terrain
- Far North Predictive Mapping
- Bedrock Magnetic Susceptibility
- Northeastern Rhyolite Database

•Indexes

- Geological Published Maps 1890-2011
- Geophysical Atlas
- Aggregate Resource Inventory Papers

•Southern Ontario

- Surficial Geology
- Paleozoic Geology
- Karst of Southern Ontario and Manitoulin Island
- Physiography
- Bedrock Topography
- Overburden Thickness
- Ambient Groundwater Geochemistry - Southwest
- Geotechnical Boreholes

•Administration

- Aboriginal Lands in Ontario
- Conservation Authorities
- UTM Zones
- NTS 1:250 000 and 1:50 000 index
- Townships, Lots and Concessions





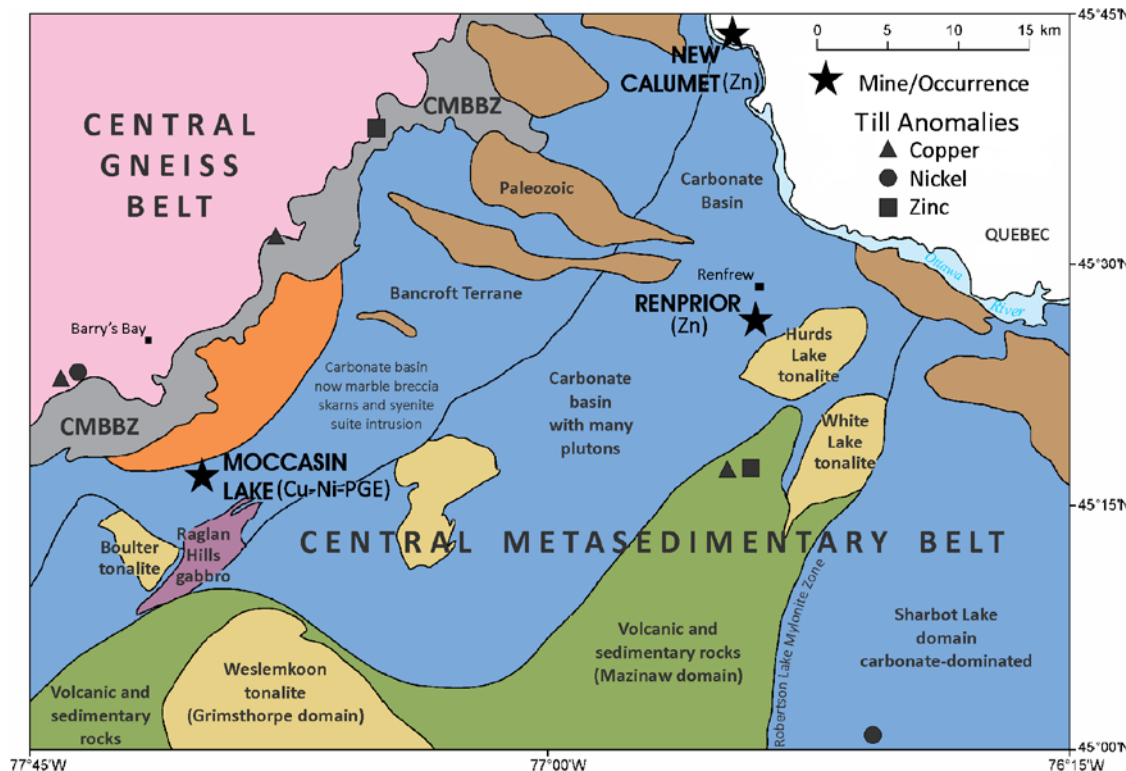
Uses for OGSEarth

- Research
- Due diligence
- Mineral exploration
- Resource planning
- Land use planning
- Source OGS products
- Teaching aid



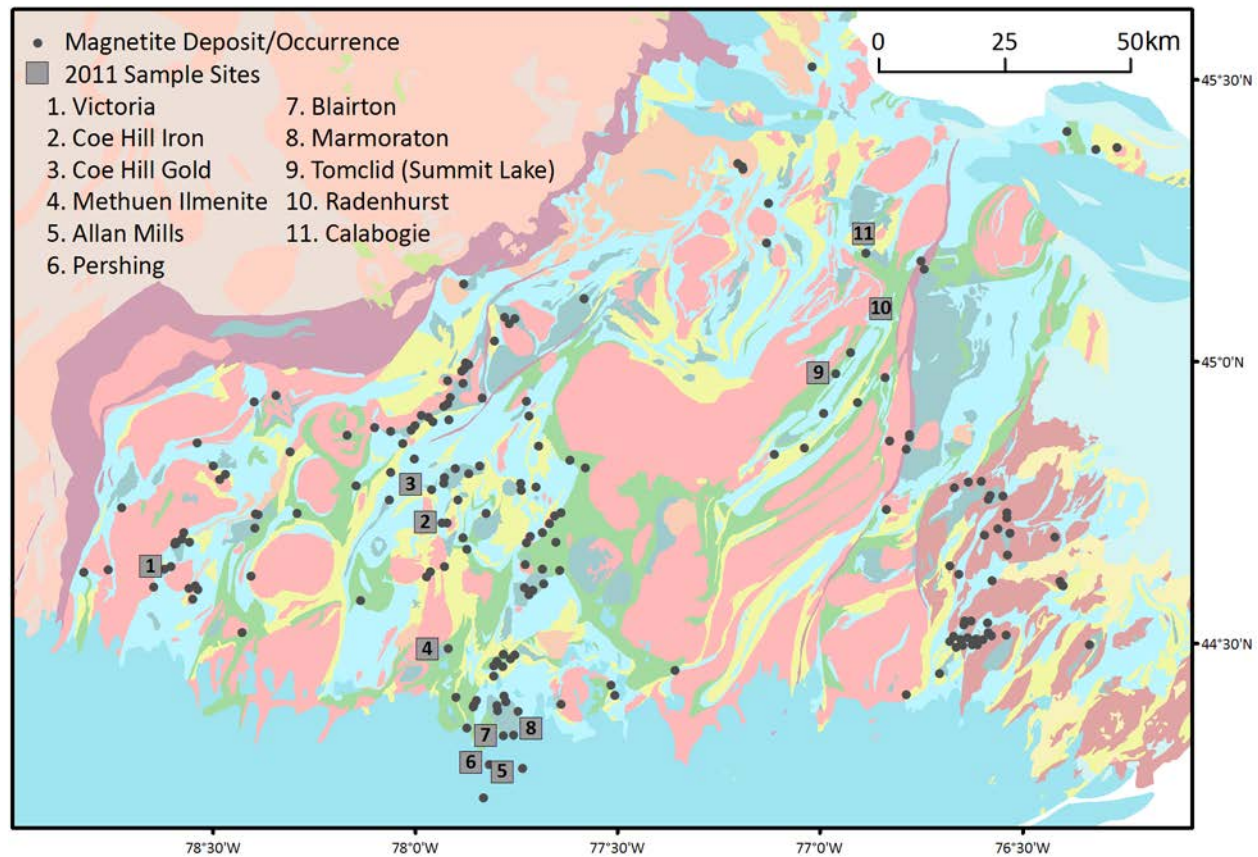
Recommendations

Zinc, Copper and Copper-Nickel Potential in the Vicinity of the Central Metasedimentary Belt Boundary Zone in Southeastern Ontario



Recommendations

Rare Earth Elements in Magnetite Skarns



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Thank You

