



## Appendix 1

# AN OVERVIEW OF CANADIAN GRANULAR RESOURCE MANAGEMENT

## Abstract

### Granular Resource Management – An Overview of Canadian Examples

By Doug Vanderveer, PGeo and Tim Hayward  
AggMapR Inc.

AggMapR Inc. conducted a review of Canadian Geological Surveys to determine the style and where possible the details of the various surficial and aggregate related surveys that would provide information on the location and quality of granular / aggregate resource materials.

This presentation will review the legislative basis and the style of mapping conducted in each province and territory to the extent that there is a legislative responsibility. While most provinces have legislation governing extraction of granular materials, the terminology varies from province to province. This individual terminology is then frequently incorporated into the aggregate mapping programs.

The granular (aggregate) mapping programs in some provinces form a component of other mapping programs, typically surficial and glacial (Quaternary) mapping programs. While a number of provinces had former aggregate mapping programs it now appears that only a few provinces have retained a dedicated aggregate mapping program.

The majority of the information collected for this study was gleaned from the provincial websites. An overview of each of these websites is undertaken in the presentation with the objective of showing the diversity of both terminology and availability of data – whether it is geological or aggregates mapping. One common element to all websites was use of the term “geology” as a key to getting a start in the websites. Often the word aggregates would not appear during a search however would appear later in the website suggesting the word was not a listed “key word”.

The website pathways used in this endeavour have been compiled for each province and the web links are listed for each step in the process. Selected provincial website downloads will be reviewed to the extent of time permitting.

Prepared for the NWT GRANULAR USERS FORUM, Sept. 27-28, 2006





## Appendix 1

# AN OVERVIEW OF CANADIAN GRANULAR RESOURCE MANAGEMENT

Granular Resource  
Management in Canada

## AN OVERVIEW OF GRANULAR RESOURCE MANAGEMENT IN CANADIAN PROVINCES

By

**Doug Vanderveer and Tim Hayward**  
**AggMapR Inc.**

**Sept. 27, 2006**

## Presentation Overview

1. What are Aggregates
  - Legislation
  - Terminology
  - Commonly used Terms
  - Sampling of Legislation
2. Geological Mapping of Aggregates
3. Aggregate Production
4. Websites

3

Appendix 1

Sept. 17, 2006

## Provinces and Territories of Canada



4

Appendix 1

Sept. 17, 2006

## WHAT ARE AGGREGATES

- **Terminology is derived from:**
  - **Legislation (Legal Definitions)**
  - **Geological and Mapping**
  - **Statistical Summaries**
- **Other Commonly Used Terms**

5

Appendix 1

Sept. 17, 2006

## WHAT ARE AGGREGATES

- **Terminology Used in Legislation**
  - **Mineral Aggregates**
  - **Quarry Materials**
  - **Quarriable Substances**
  - **Quarry Mineral**
  - **Beach Materials**
  - **Sand, Gravel and Rock**

6

Appendix 1

Sept. 17, 2006

## WHAT ARE AGGREGATES

- **Terminology Used in Mapping**
  - Sand, Gravel, Clay etc.
  - Fluvial, Glaciofluvial, Outwash, Lacustrine, Beach strand
  - Bedrock (limestone, shale etc.)
  - Aggregates / Aggregate Materials
  - Granular Resources

7

Appendix 1

Sept. 17, 2006

## WHAT ARE AGGREGATES

- **Terminology Used in Statistic Updates**
- **In Federal Compilations (Stats Can.)**
  - **Construction Materials**
    - Sand and gravel
    - Stone (limestone, shale)
    - Cement

8

Appendix 1

Sept. 17, 2006

## WHAT ARE AGGREGATES

- **Most commonly used terms:**

- Aggregate or Aggregates
- Beach Material / Beach Aggregate
- Granular Resource
- Mineral Aggregate
- Sand and Gravel / Bedrock Resource

List in Alphabetical order

## Sampling of Legislation Definitions

**Newfoundland:**

Extraction of Mineral Aggregates are administered under the Quarry Materials Act

“Quarry Material” means: a substance used in its natural form for civil construction or agricultural purposes and includes clay, sand, gravel, rock, soil, peat and slag

But does not include slate, marble, granite and similar stone used as dimension stone

Where :

- (a) slate, marble, granite or other similar stone used as dimension stone; and
  - (b) dolomite, limestone, silica and other similar product
- is mined or quarried under a lease issued under the Mineral Act.

In Labrador quarry material includes: a mineral rock or stone capable of being cut or polished for use as an ornament, personal adornment or decoration.

## Sampling of Legislation Definitions

### Nova Scotia

**Mineral** means a natural solid inorganic or fossilized organic substance and a substance prescribed to be a mineral, but does not include:

- (i) ordinary stone, building stone or construction stone,
- (ii) sand, gravel, peat, peat moss or ordinary soil,
- (iii) gypsum,
- (iv) limestone, except that which is vested in the Crown, and
- (v) oil or natural gas

**Mineral Resources Act:** All Minerals are deemed reserved to the Crown in all grants post April 1910

A few deposits of the latter commodity have specifically been declared a mineral under the Act.

Otherwise the rights to most gypsum and limestone and all stone, sand, gravel, peat and soil are attached to the ownership of the surface (private or Crown) and are administered under other statutes.

11

Appendix 1

Sept. 17, 2006

## Sampling of Legislation Definitions

### Nova Scotia

#### Crown Lands - Inland Aggregate Removal Permits:

1. Less than 5,000 cubic metres, or 7,000 metric tonnes:  
Anyone who wants to remove, for commercial sale, inland aggregate (fill, gravel, class 'A' gravel, sand, riprap stone, armour stone and marble chips) requires a permit
2. More than 5,000 cubic metres, or 7,000 metric tonnes:  
Anyone who wants to remove, for commercial sale, more than 5,000 cubic metres, or 7,000 metric tonnes, of inland aggregate (fill, gravel, class 'A' gravel, sand, riprap stone, armour stone, and marble chips) from Crown Lands in Nova Scotia.

#### Beach Aggregate Permit:

3. Anyone who wants to remove not more than 10 cubic yards (7.6 cubic metres) of aggregate (gravel, sand, armour stone, and riprap stone) from a beach.

12

Appendix 1

Sept. 17, 2006

## Sampling of Legislation Definitions

### Prince Edward Island

#### *Mineral Act:*

- “Mineral” means any natural solid inorganic or fossilized organic substance and such other substance as is declared to be a mineral under section 3, but does not include:
  - (i) ordinary stone, building or construction stone,
  - (ii) sand, gravel, peat, peat moss or ordinary soil,
  - (iii) gypsum or limestone,
  - (iv) oil or natural gas, or
  - (v) bituminous shale, oil shale or intimately associated products or substances derived therefrom;

#### *Environmental Protection Act: Excavation Pit Regulations*

- A system for tracking & regulating the establishment and operation of excavation pits to obtain sand, gravel, stone, shale, etc.
- It is necessary to submit an application to open or operate an excavation pit.

13

Appendix 1

Sept. 17, 2006

## Sampling of Legislation Definitions

### New Brunswick

#### *Quarry Substances Act:*

- “Quarriable substance” means ordinary stone, building or construction stone, sand, gravel, peat, clay and soil;
- “Quarry” means a pit or excavation in the ground created by the removal or taking of a “quarriable substance” from it and includes the works, machinery, plant, buildings and premises located below and above ground used in connection with the quarry
- The Lieutenant-Governor in Council may, by regulation, designate a shore area lying outside Crown Lands to be subject to this Act.
- No person shall remove or take a “quarriable substance” from a shore area designated under subsection (1) unless the person has been issued a quarry permit.

#### *Mineral Act:* does not include:

- (a) sand, gravel, ordinary stone, clay or soil unless it is to be used for its chemical or special physical properties, or both, or where it is taken for contained minerals,
- (b) ordinary stone used for building or construction,
- (c) peat, peat moss, bituminous materials, oil or natural gas etc.

14

Appendix 1

Sept. 17, 2006

## Sampling of Legislation Definitions

Quebec

**Mining Act:**

“minerals” or “mineral substances” mean: all natural solid, liquid or gaseous mineral substances, and all fossilized organic matter  
“mine”: any opening or excavation made for the purpose of discovering or obtaining any mineral substance ... or of any industrial product or residue, including a quarry, a sand-pit or a well ...and the ways, works, machinery, mills, buildings and furnaces below or above the surface of lands which form part of a mining operation;

- After the 1st of January 1921, all minerals shall belong to the Crown under the soil of land which, on the 24th of July 1880, had not yet been patented except for on land that all the conditions of the location ticket land had been fulfilled on the 24th of July 1880.
- On lands granted or alienated by the Crown after the 1st of January 1966, otherwise than by mining concession or mining lease, mineral rights other than those of the tilth are reserved to the Crown.

15

Appendix 1

Sept. 17, 2006

## Sampling of Legislation Definitions

Ontario:

The Aggregate Resources Act and its regulations apply to the excavation of:

- All aggregate and topsoil on Crown land and all Crown-owned aggregate;
- All aggregate from land under natural water bodies; and
- All aggregate on private land in designated areas of the province.

‘Aggregate’ is defined as: gravel, sand, clay, earth, shale, stone, limestone, dolostone, sandstone, marble, granite, and rock .

‘Rock’ does not include metallic ores, andalusite, asbestos, barite, coal, diamond, graphite, gypsum, kaolin, kyanite, lepidolite, magnesite, mica, nepheline syenite, petalite, phosphate rock, salt, sillimanite, spodumene, talc, or wollastonite.

Mining Act: Underground aggregate mining and materials are exempted from the definition of ‘rock’ and are regulated by the Ministry of Northern Development and Mines under the Mining Act.

16

Appendix 1

Sept. 17, 2006



## Sampling of Legislation Definitions

### Manitoba:

#### The Mines and Minerals Act

- "aggregate" means a quarry mineral that is used solely for construction purposes or as a constituent of concrete other than in the manufacture of cement and includes sand, gravel, clay, crushed stone and crushed rock
- "aggregate quarry" means a quarry from which aggregate is produced
- "quarry mineral" means a mineral, other than a diamond, ruby, sapphire or emerald, that is obtained from a quarry, and includes:
  - (a) sand, gravel, clay, shale, kaolin, bentonite, gypsum, salt, peat, peat moss, coal and amber,
  - (b) rock or stone that is used for a purpose other than as a source of metal, metalloid or asbestos, and
  - (c) a mineral that is prescribed as a quarry mineral.
- "mineral access rights" means, in respect of a lease or mineral disposition, the right to enter, use and occupy the surface of land to prospect or explore for or develop, mine and produce minerals, but does not include surface rights

17

Appendix 1

Sept. 17, 2006

## Sampling of Legislation Definitions

### Saskatchewan:

**Sand and Gravel Ownership:** The owner of the surface of any land is and shall be deemed to have always been the owner of and entitled to all sand and gravel on the surface of the land and all sand and gravel obtainable by stripping off the overburden, excavating from the surface or other surface operation.

#### The Quarrying Regulations, 1957

- Regulations under *The Mineral Resources Act* that Govern the disposal of quarriable substances on Crown Property
- These regulations shall be construed with reference to the terms and
- interpretation of *The Mineral Resources Act* and *The Sand and Gravel Act* as they are amended from time to time.

"Quarriable Substance" means any mineral substance, the property of the Crown in the right of Saskatchewan, which is capable of being quarried and includes bentonite, building stone, clay, granite, gravel, gypsum, limestone, marble, marl, sand, slate, volcanic ash, and any other substance which may from time to time be declared by the Lieutenant Governor in Council to be a "quarriable substance" within the meaning of these regulations.

18

Appendix 1

Sept. 17, 2006

## Sampling of Legislation Definitions

### Alberta:

- “mine” means any opening or excavation in, or working of, the surface or subsurface for the purpose of working, recovering, opening up or proving any mineral or mineral-bearing substance, and includes works and machinery at or below the surface belonging to or used in connection with the mine;
- minerals” means all naturally occurring minerals including:
  - (i) gold, silver, uranium, platinum, pitchblende, radium, precious stones, copper, iron, tin, zinc, asbestos, salts, sulphur, petroleum, oil, asphalt, bituminous sands, oil sands, natural gas, coal, anhydrite, barite, bauxite, bentonite, diatomite, dolomite, epsomite, granite, gypsum, limestone, marble, mica, mirabilite, potash, quartz rock, rock phosphate, sandstone, serpentine, shale, slate, talc, thenardite, trona, volcanic ash, sand, gravel, clay and marl, but does not include:
  - (ii) sand and gravel, clay and marl that belong to the owner of the surface of land under section 57, 58 of the *Law of Property Act*, or peat on the surface of land and peat obtained by stripping off the overburden, excavating from the surface, or otherwise recovered by surface operations.

19

Appendix 1

Sept. 17, 2006

## Sampling of Legislation Definitions

### British Columbia:

#### Mines Act

- Pits and quarries are defined as mines and are regulated under the *Mines Act*.
- "mine" includes: a place where mechanical disturbance of the ground or any excavation is made to explore for or to produce coal, mineral bearing substances, placer minerals, rock, limestone, earth, clay, sand or gravel
- "mining activity" means any activity related to:
  - (a) the exploration and development of a mineral, a placer mineral, coal, sand, gravel or rock, or
  - (b) the production of a mineral, a placer mineral, coal, sand, gravel or rock,
- and includes the reclamation of a mine

20

Appendix 1

Sept. 17, 2006

## Sampling of Legislation Definitions

### Inuvialuit:

Ownership of most of the accessible granular deposits in the Western Arctic Region was transferred to the Inuvialuit, under the Inuvialuit Final Agreement [IFA], signed between the Government of Canada and the Inuvialuit in 1984.

Management of this resource is now the responsibility of the Inuvialuit Land Administration [ILA] in consultation with local groups such as the Community Corporations and Hunters and Trappers Associations.

A granular materials project designated as Task 7 - Sand and Gravel Inventories was set up by the Government of Canada to implement the requirements of the IFA and provide for more efficient development of the resource.

The objectives of this project are to determine the 20 year demands for granular material, provide an inventory of potential sources, determine the quality and quantity at the more promising deposits and form a plan for reservation and development of the granular material.

## Sampling of Legislation Definitions

### Yukon

#### Placer Mining Act:

- “mine” means any natural stratum or bed of earth, soil, gravel, or cement that is mined for gold or other precious minerals or stones;
- “mining” or “placer mining” includes every mode and method of working whatever whereby earth, soil, gravel, or cement may be removed, washed, shifted, or refined or otherwise dealt with, for the purpose of obtaining gold or other precious minerals or stones, but does not include the working of rock on the site
- Unclear what legislation controls other extraction activities

## GRANULAR RESOURCE INVENTORY

### Province of Newfoundland and Labrador



23

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY

### Newfoundland and Labrador:

- **Surficial Geology Mapping by the GSC late 60's - early 70's**
- **Surficial Mapping by Province began in early 1970's**
  - Airphoto Landform Classification @1:50,000 scale,
  - Ground-truthing (roads, railway, forest access roads and tracks, shorelines)
  - Mapping of glacial transport indicators (glacial striae and landform features)
  - Sampling of glacial till materials
- **Aggregate Resource Inventories @1:50,000 scale, started in 1974**
  - Identification of potential sand and gravel related landforms from Airphoto interpretation or from previous Surficial mapping programs
  - Focused on 30km corridor around major urban centres and 3km corridor along all roads and highways on both the island and Labrador
  - Sampling of outwash (sand and gravel) and potential bedrock formations
  - Sampling from natural or man-made exposures, shallow hand dug or backhoe test pits
  - Field Screening (32, 16, 8, 4mm); Petrographic Value (modified ASTM)
  - Laboratory 2mm to 0.063mm

24

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY Newfoundland and Labrador:

### Surficial Geology Maps

Surficial geology maps provide data on the types of material and landforms found at the surface. These maps are largely derived from aerial photograph interpretation with a variable amount of field checking. On some maps a reliability diagram is attached which outlines the amount of field checking. Each map has a detailed legend attached that describes the characteristic of each sediment type and feature encountered. The legend has a genetic category that defines the sediment type (e.g., glacial, fluvial, aeolian), and a morphology category that describes the surface expression (e.g., veneer, blanket, hummocky, fan). Most mapped units contain more than one genetic and/or morphological type. To accommodate this, units are subdivided by decreasing dominance (e.g., Tv/Rc means that the area is dominantly a veneer of glacial sediment, with a lesser area of bedrock concealed by a mat of vegetation). Up to three genetic or morphological categories can be accommodated on the maps, with a combination of slashes (/ or //) and hyphens (-) being used to indicated relative proportions. The maps provide only a general indication of sediment characteristics and some variability in sediment is to be expected across a map area. A till, for instance, may have a silty texture in one part of the area, and be sandier elsewhere, although both areas will have the T designation. Similarly, overburden thickness can only be inferred from these maps.

### Aggregate Geology Maps

These maps provide data on granular or bedrock aggregates within an area. Granular aggregate maps outline sand and gravel deposits, and categorise each deposit by their potential as an aggregate producing area, with Zone 1 having the highest potential. Recent maps commonly include grain size and petrographic data. Sample data, including grain size and petrographic analyses, related to other map areas can be obtained from the Terrain Sciences Section, Geological Survey Branch, Telephone (709) 729-3888. Potential reserves of material are approximated based on the aerial extent and depth of natural or man-made exposures. Detailed descriptions are commonly provided in associated Current Research articles.

Bedrock aggregate maps define rock types suitable for construction aggregate uses, including class A and B material, rip-rap, asphalt and concrete. The suitability of individual rock types is defined on the basis of physical characteristics (e.g., hardness, grain size, fractures, mineral constituents), petrographical properties (e.g., petrographic number) and chemical/mechanical properties (e.g., abrasion, soundness, alkali reactivity). Some maps include this data. Data for other areas may be found in associated Current Research articles or may be obtained from the Terrain Sciences Section, Geological Survey Branch, Telephone (709) 729-5634.

25

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY Newfoundland and Labrador:



**Geological Survey  
of Newfoundland and Labrador**

### 110/14

Surficial and glacial geology and gravel resource inventory of southwestern Newfoundland. By D.G. Vanderveer, 1977. 10-page report and 10 maps, including Stephenville-Port aux Basques (12B-110), Main Gut (12B/6), Flat Bay (12B/7), Little Friars Cove (12B/3), St. Fintans (12B/2), Rose Blanche (110/10), Port aux Basques (110/11), and Codroy (110/14). Nfld0959

### Aggregate Geology

Inventory of aggregate resources in Newfoundland and Labrador, by F.T. Kirby, R.J. Ricketts and D.G. Vanderveer. Scale 1:250,000. Nfld. 1287 and Lab. 602. Plus Report 83-2. Map 83-03 Port aux Basques, 110.

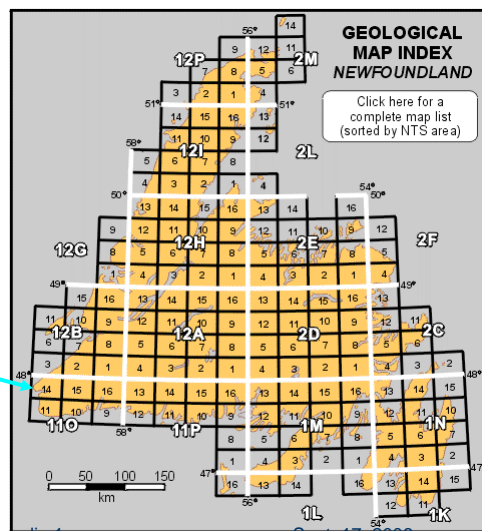
MAP 01-07 2001: Granular aggregate resource of the Codroy map sheet (NTS 110/14), by M.J. Ricketts. Scale: 1:50 000. Newfoundland Department of Mines and Energy, Geological Survey. Open File 0110/14/0352.

### CONTACTS

**For publications and general information:**  
Norman Mercer  
Geological Survey of Newfoundland and Labrador  
(709) 729-6193

[nm@zeppo.geosurv.gov.nf.ca](mailto:nm@zeppo.geosurv.gov.nf.ca)

### Index of Surficial Geology and Aggregate maps for Newfoundland



26

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY Newfoundland and Labrador:

### Aggregate Geology

### Index of Surficial Geology and Aggregate maps for Newfoundland

Flat Bay Aggregate Resource Map (NTS 12B/7),  
by M.J. Ricketts, 1992. Scale 1:50,000.  
Newfoundland Department of Mines and Energy.  
Map 90-12. 012B/0318.  
Inventory of aggregate resources in  
Newfoundland and Labrador, by F.T. Kirby, R.J.  
Ricketts and D.G. Vanderveer. Scale 1:250,000.  
Nfld. 1287 and Lab. 602. Plus Report 83-2. Map  
83-10 Stephenville, 12B.

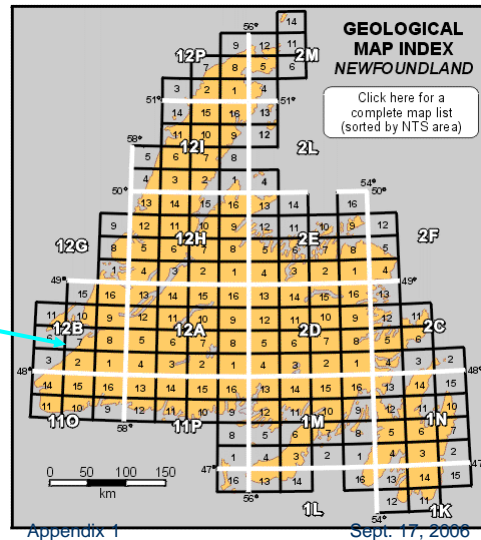
MAP 82-158 1982: Surficial aggregates of the  
Flat Bay map area (NTS 12B/07), by F.T. Kirby,  
R.J. Ricketts and D.G. Vanderveer. Scale: 1:50  
000. Newfoundland Department of Mines and  
Energy, Mineral Development Division. Open File  
NFLD/1300.

MAP 87-088 1987: Shallop Cove - Flat Bay  
aggregate resource map (sample type and  
location map (NTS 12B/07- A), by F.T. Kirby.  
Scale: 1:16 666. Newfoundland Department of  
Mines and Energy, Mineral Development  
Division. Open File 012B/07/0396.

### CONTACTS

#### For publications and general information:

Norman Mercer  
Geological Survey of Newfoundland and Labrador  
(709) 729-6193  
[njm@zeppo.geosurv.gov.nf.ca](mailto:njm@zeppo.geosurv.gov.nf.ca)

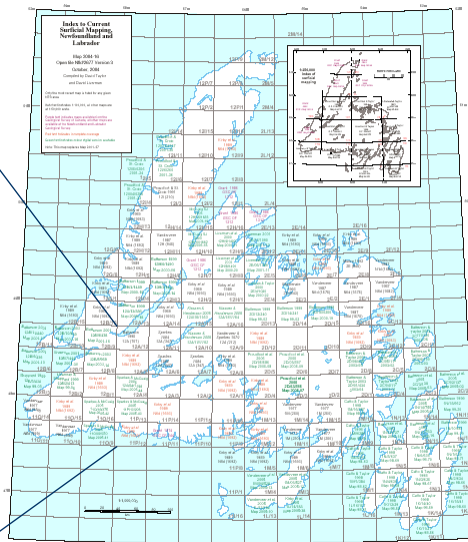


Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY Newfoundland and Labrador:

Batterson 2001 12B/11/440 Map 2001-17	Batterson 2001 12B/10/439 Map 2001-16	Batterson 2001 12B/9/438 Map 2001-15
Batterson 2001 12B/6/436 Map 2001-13	Liveman 2001 12B/7/444 Map 2001-31	Batterson 2001 12B/8/959 Map 2001-14
Sheppard 1999 12B/3/414 Map 99-06	Liveman & Sheppard 1999 12B/2/413 Map 99-05	Kirby et al. 1989 Nfld (1693)
Vanderveer 1977 Nfld (959)	Kirby et al. 1989 Nfld (1693)	Sparkes & McCuaig 2005 11O/16/375 Map 2005-42
Vanderveer 1977 Nfld (959)	Vanderveer Nfld (959)	Sparkes & McCuaig 2005 11O/09/370 Map 2005-41
11O/14	11O/15	11O/16
11O/11	11O/10	11O/9



Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY

### Province of Nova Scotia



29

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY

### Province of Nova Scotia

Program based on Surficial Mapping Program at various scales:

- Provincial Scale (1:500,000 or greater)
- Regional Scale (1:500,000 to less than 1:100,000)
- Detailed Scale (less than 100,000)

30

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY

### Province of Nova Scotia

#### Ministry of Natural Resources

#### Mineral Resources Branch Maps For Sale

##### Table of Contents

###### [Bedrock Geology Maps](#)

- [Provincial Scale](#) (1:500 000 or greater)
- [Regional Scale](#) (1:100 000 to less than 1:500 000)
- [Detailed Scale](#) (less than 1:100 000)

###### [Glacial/Surficial Geology Maps](#)

- [Provincial Scale](#) (1:500 000 or greater)
- [Regional Scale](#) (1:100 000 to less than 1:500 000)
- [Detailed Scale](#) (less than 1:100 000)

###### [Structure/Tectonic Maps](#)

- [Provincial Scale](#) (1:500 000 or greater)

###### [Mineral Deposits Maps](#)

- [Provincial Scale](#) (1:500 000 or greater)
- [Regional Scale](#) (1:100 000 to less than 1:500 000)
- [Detailed Scale](#) (less than 1:100 000)

## GRANULAR RESOURCE INVENTORY

### Province of Nova Scotia

#### Provincial Scale Digital Maps (1:500 000 or greater)

[DP ME 36](#), Version 2, 2006. Digital Version of Nova Scotia Department of Natural Resources Map ME 1992-3, **Surficial Geology Map of the Province of Nova Scotia**, 1:500 000, by R. R. Stea, H. Conley and Y. Brown, 1992. Digital product compiled by B. E. Fisher. (Formerly DP ME D92-03)

[Format, Size and Projection Information](#)

FREE  
DOWNLOAD

#### Detailed Scale Digital Maps (less than 1:100 000)

[DP ME 59](#), Version 2, 2006. Digital Version of Nova Scotia Department of Natural Resources Open File Map ME 2003-1, **Surficial Geology Map of the Whycomagh Area**, (NTS 11F/14), Inverness County, Nova Scotia, scale 1:50 000, by R. R. Stea and M. Feetham, 2003. Digital product compiled by B. E. Fisher, J. D. MacNeil and J. A. Beaumont.

[Format, Size and Projection Information](#)

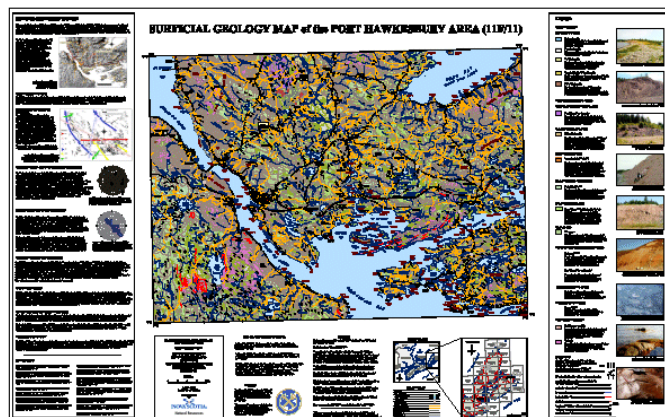
FREE  
DOWNLOAD



## GRANULAR RESOURCE INVENTORY

A Sample Image of the Surficial Geology Map of the Port Hawkesbury Area,  
OFM ME 2004-2

(Sample image - [Click to view an enlargement from this image](#))



### Format and Projection

33

**Format** PDF, ArcInfo Export (E00), DXF/DBF, ArcView shape files (SHP) and TXT files compressed in self-extracting EXE/ZIP files ([more information on data formats](#))

## GRANULAR RESOURCE INVENTORY

### Province of Nova Scotia

### Ministry of Natural Resources



### NovaScan

- NovaScan is the provincial database of geoscience maps and publications for Nova Scotia, and is produced and maintained by the Mineral Resources Branch of the Nova Scotia Department of Natural Resources. It currently contains over 14,000 records
- NovaScan contains geologically indexed records of all the geoscience documents produced by or collected by the Mineral Resources Branch (and its predecessors), such as:
  - maps (geology, geochemistry, geophysics, mineral deposits, mineral rights, etc.)
  - publications (bulletins, economic geology series, memoirs, papers, reports, etc.)
  - open files (illustrations, maps, reports)
  - university theses (B. Sc., M. Sc., Ph. D.)
  - mineral exploration assessment reports and mining property reports
- NovaScan can be searched by Title, Author/Organization, Subject, Area, Map Sheet (NTS), Map Type, Document Type, Document Number, Year and Scale.
- NovaScan is updated monthly as new geoscience maps, publications, open files, theses, mineral exploration assessment reports and mining property reports become available
- Note that NovaScan contains only records of maps and publications produced by or collected by the Mineral Resources Branch (and its predecessors). NovaScan **does not** contain any records of Geological Survey of Canada (GSC) maps or publications. GSC records on Nova Scotia can be searched in the [GEOSCAN](#) database

34

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY

### Province of Nova Scotia

#### Ministry of Natural Resources

- **Mineral Deposits Map Series**
- **Provincial Scale 1:2,000,000 and 1:1,000,000**
- **Regional Scale 1:250,000**
- **Sub-Regional Scales 1:125,000 and 1:100,000**
  - **Map ME 1985-6 (Map C) Aggregate Resources Map, Northern Cape Breton Island, by W. J. Wright, 1985, scale 1:125 000.**
  - **1:100 000**
  - **OFM ME 2001-1 Map of Bedrock Aggregate Potential in the Halifax-Dartmouth Metropolitan Area Nova Scotia, by G. Prime, 2001, scale 1:100 000.**
- **Detailed Mapping 1:50 000**
  - **OFM ME 1991-5 to OFM ME 1991-18 Aggregate Potential of Cumberland and Colchester Counties (14 preliminary map sheets), (11E/02, 11E/03, 11E/05, 11E/06, 11E/07, 11E/11, 11E/12, 11E/13, 11E/14, 21H/07, 21H/08, 21H/09, 21H/10, 21H/16), by G. Prime, 1991, scale 1:50 000. \$3.00 per NTS Map Sheet**

## GRANULAR RESOURCE INVENTORY

### Province of Prince Edward Island



## GRANULAR RESOURCE INVENTORY Province of Prince Edward Island No Known Aggregate Deposits

InfoPEI Search

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- [Maps](#)
- [Address Locator](#)
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- [Registered Users](#)
- [Help](#)

News Releases  
Feedback  
Printer Friendly View  
Site Map

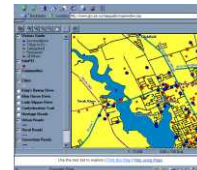
### Island Maps

Printer  
Friendly

[HOME](#) /

WELCOME TO OUR interactive mapping system. We are always in the process of maintaining our original interactive mapping system, [MapGuide](#) (which requires the download of a plug-in), but we have also recently introduced a faster and more flexible system, [MapServer](#), which works instantly with all modern web browsers.

Over the course of the next few months, we'll be migrating some of our mapping applications to this new system; watch this page for updated information as this process continues.



### Start Exploring

Most of the maps are available using the original MapGuide plugin. To view a MapGuide map, click on the appropriate MapGuide link.

Only some of our maps have been converted to the new MapServer system. To view a new MapServer map click on the appropriate MapServer link.

#### Explore PEI

Interactive vacation planner. Plan your entire vacation online.

[MapServer](#)

#### Visitor Map

Accommodations, campgrounds, activities, and other services for visitors.

[MapGuide](#)

#### Real Estate Map

Up to date information on residential and business properties for sale.

[MapGuide](#)

[MapServer](#)

#### Electoral Map

District and poll boundaries for provincial and municipal elections.

[MapGuide](#)

Appendix 1

Sept. 17, 2006

37

## GRANULAR RESOURCE INVENTORY Province of New Brunswick



38

Appendix 1

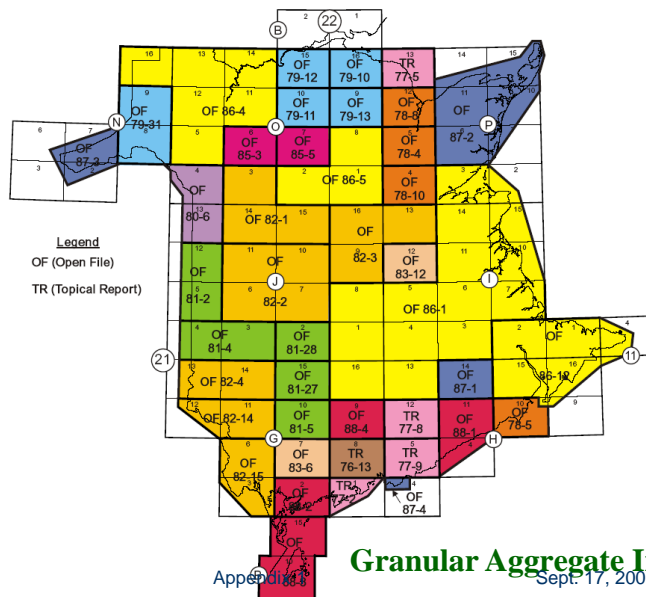
Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY Province of New Brunswick

### New Brunswick:

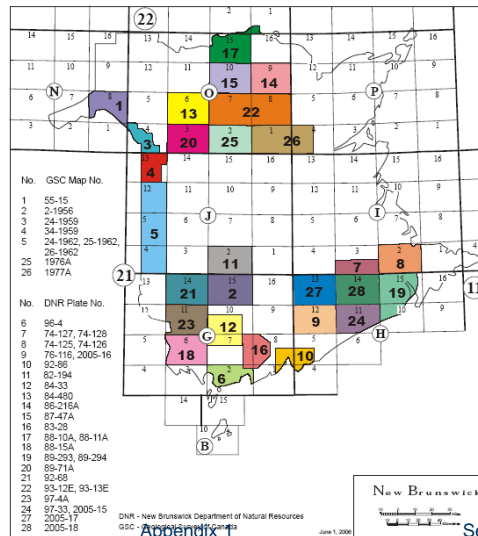
- An extensive aggregate resources program has been developed for the province
- Near 100% coverage at one scale or another
- Most of the Surficial geological mapping has been completed to date by the Geological Survey of Canada i.e. at 1:250,000 scale or smaller
- Limited detailed Surficial geological mapping
- Bedrock Mapping much more comprehensive

## GRANULAR RESOURCE INVENTORY Province of New Brunswick



## GRANULAR RESOURCE INVENTORY Province of New Brunswick

Available Surficial Geology Maps  
1:50 000 or 1:63 360

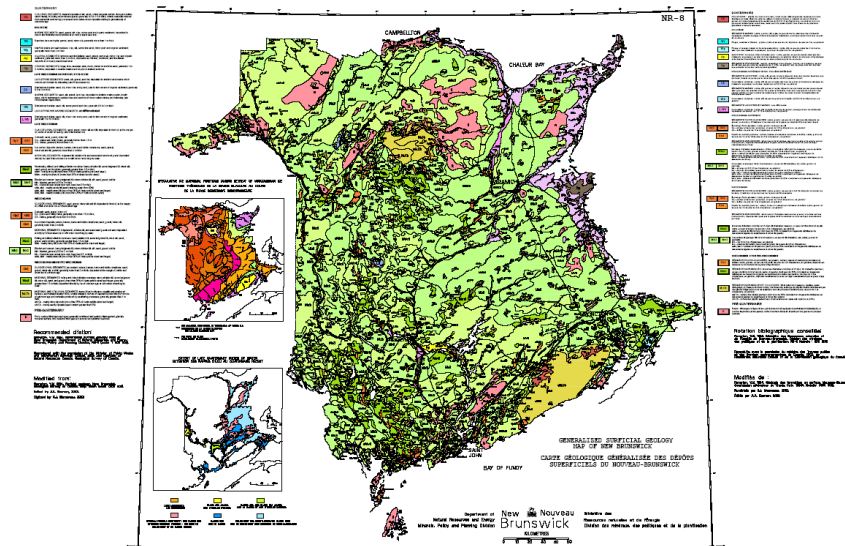


41

Appendix 1

Sept. 17, 2006

## Surficial Geology Map - New Brunswick

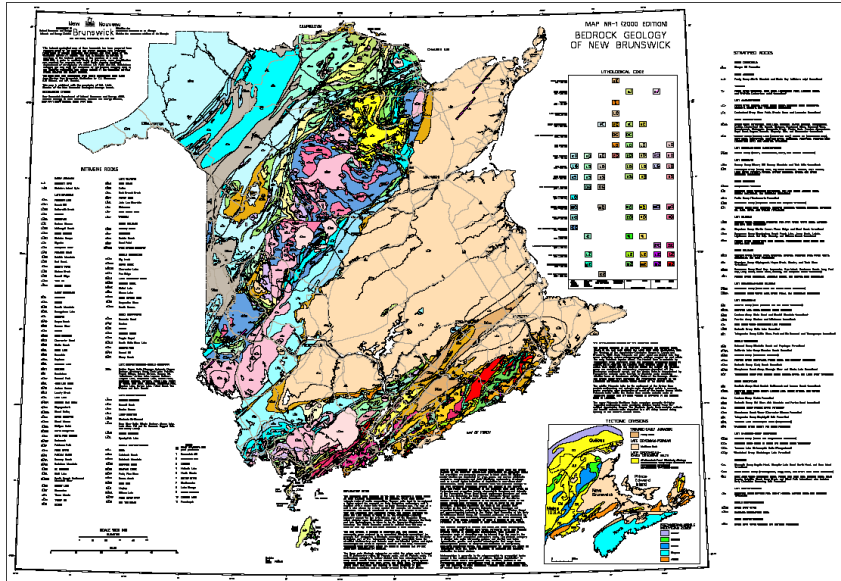


42

Appendix 1

Sept. 17, 2006

## Bedrock Geology Map - New Brunswick



43

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY Province of Quebec



44

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY Province of Quebec

### Quebec:

- Granular surveys cover 10% of Province, mainly in the south
- Work has focused on population centres (60-70% covered)
- Mapping mainly at a 1:50,000 scale
- Database (sigeom) includes coverage of construction materials and industrial stone, including architectural and ornamental stone
- Information includes location of deposits and quarries

#### INTRODUCTION TO THE GUIDE

##### Building the query

- Options
- Search criteria
- Tips and tricks
- Search operators
- List of values
- NTS map-sheets list of values

##### Results of the query

- Sorting
- Format
- Options

##### History of the queries

- Combine query
- Options

##### View Examine report

##### Order Query Results

##### Order Examine Reports

##### Checkout

##### Browsing Tips

##### Mining titles terms of use

##### To contact us

#### CHARACTERISTICS OF THE DESCRIPTIVE AND GEOMETRIC DATA

- Diamond drilling
- Rock sample
- Examine document (and surveys)
- Isograd
- Erratic boulder
- Ridge and furrow
- Hydrogeological Information
- Mining titles
- Construction materials and industrial stones
- Electromagnetic anomaly
- Sediment sample
- Geological area
- Glacial striation
- Access small scale maps
- Contour

#### CHARACTERISTICS OF THE DESCRIPTIVE AND GEOMETRIC DATA

##### CONSTRUCTION MATERIALS AND INDUSTRIAL STONES

This product includes deposits or quarries of architectural stone, crushed stone and industrial stone. Architectural stone includes construction stone and ornamental stone. Crushed stone includes all forms of aggregates. Industrial stone includes all stone exploited for industrial purposes which requires no (or little) transformation.

##### NTS map-sheet number

Two main standard map scales are available from the National Topographic System of Canada (NTS). One being the 1:50 000 scale, which can be identified as 32D06, 22B01, etc. In SIGÉOM à la carte, the map scales to which all the data is georeferenced are the 1:50 000 and 1:250 000 scales. Whenever data was symbolised in the SIGÉOM at the 1:20 000 scale, it is now available at 1:50 000 scale.

As for Examine documents (and surveys), reports are generally linked to a 1:50 000 NTS map-sheet. In cases, where a document covers a large part of the province, no link will be made to a NTS map-sheet as the list of NTS maps would be too long. It is therefore recommended to use the «NTS map-sheet number» field instead of the «Township/seigneurie» or «Location note» fields.

##### Name of deposit or quarry

Designates the name of a deposit or quarry for construction materials and industrial stone.

##### Commercial name given to architectural stone

Designates the commercial name(s) of a deposit or quarry for architectural stone.

##### Cogite number

This item of data refers to the ministère's former database for metallic deposits.

##### Deposit or quarry status

This item of data allows one to distinguish the development status of a deposit or a quarry according to a specific codification.

##### Zone

The zone specifies the zone number of the Mercator projection for which the coordinates of a graphic element are specified.

## GRANULAR RESOURCE INVENTORY Province of Ontario



47

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY Province of Ontario

### Ontario:

- **Responsibility of Aggregates split across 2 Ministries**
- **Ministry of Northern Development and Mines:**
  - Ontario Geological Survey is responsible for geological mapping (bedrock, surficial and aggregate inventories)
  - Extensive mapping program throughout S. Ontario and in populated areas of N. Ontario.
- **Ministry of Natural Resources:**
  - Takes on the responsibility of regulating the extraction industry in designated areas of the province and on all Crown Land under the Aggregate Resources Act.
  - MNR District offices responsible for protection of aggregate deposits as a commenting agency on land use plans (e.g. municipal plan amendments)
  - Intent to enlarge the areas designated under the Aggregate Resources Act i.e. extend the coverage of enforcement further north.

48

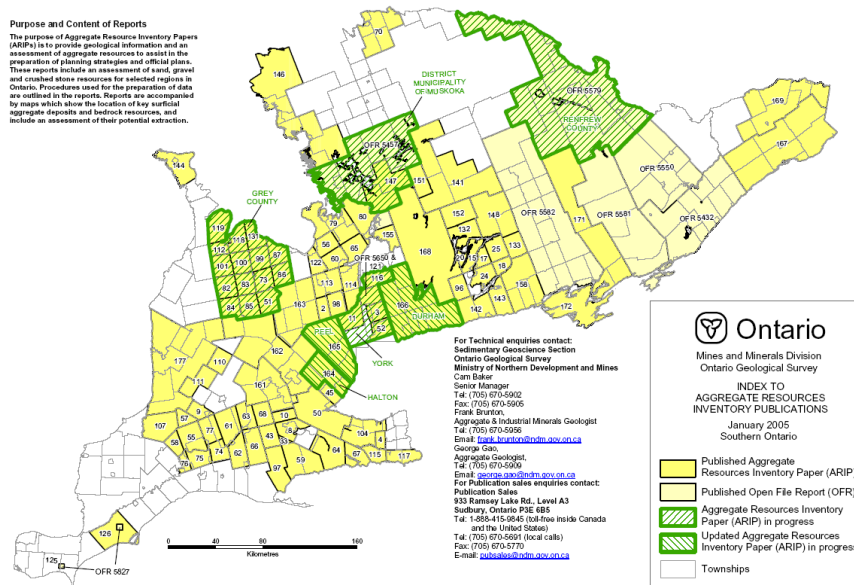
Appendix 1

Sept. 17, 2006



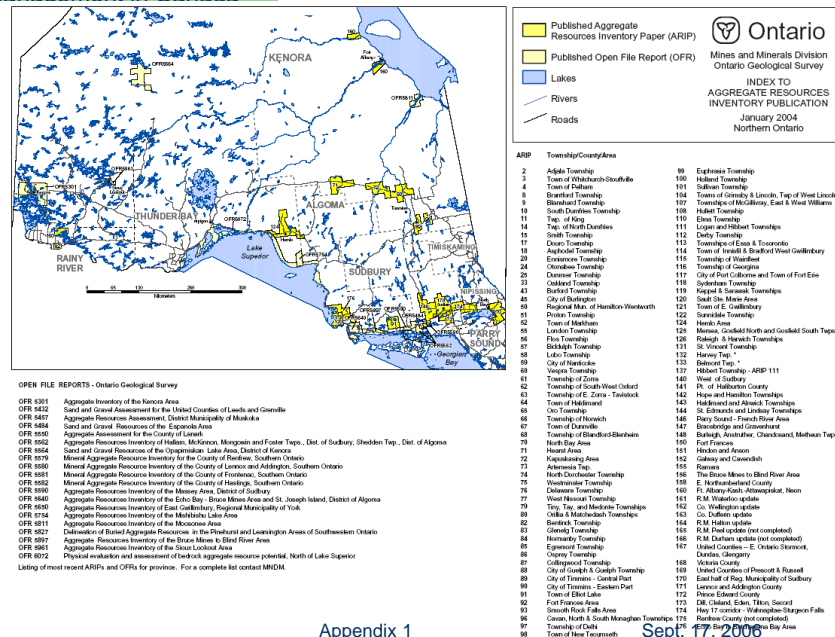
## Purpose and Content of Reports

The purpose of Aggregate Resource Inventory Papers (ARIPs) is to provide geological information and an assessment of aggregate resources to assist in the preparation of planning strategies and official plans. These reports include an assessment of sand, gravel and crushed stone resources for selected regions in Ontario. Procedures used for the preparation of data are outlined in the reports. Reports are accompanied by maps which show the location of key surficial aggregate deposits and bedrock resources, and include an assessment of their potential extraction.



Appendix 1

Sept. 17, 2006



Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY

### Province of Manitoba



51

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY

### Province of Manitoba

- Aggregate and Surficial Mapping concentration in the south half of the province
- An integrated map of Manitoba surficial geology has been prepared based on Geological Survey and Manitoba Geological Survey programs

52

Appendix 1

Sept. 17, 2006

AGGREGATE AND REGIONAL SURFICIAL GEOLOGY REPORTS OF MANITOBA  
PRODUCED BY MANITOBA ENERGY AND MINES

SCALE 1 : 2 000 000



53

## Appendix 1

Sept. 17, 2006

## Province of Saskatchewan



54

## Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY Province of Saskatchewan

### Saskatchewan Research Council:

- **Quaternary Geology Section (under the Research and Technology Branch conducts surficial mapping and aggregate resource evaluations**

## GRANULAR RESOURCE INVENTORY Province of Saskatchewan

The screenshot displays the SRC website interface. At the top, a navigation bar includes links for 'WHAT'S NEW', 'PUBLICATIONS', 'CONTACT US', 'SEARCH', 'SUSTAINABILITY', and 'FOR KIDS'. Below this, a secondary menu lists 'About SRC', 'Research & Technology', 'Labs/Facilities', 'Partnering', 'Our People', and 'Careers'. The left sidebar features a vertical list of research areas, with 'Quaternary Geology/Drift Prospecting' highlighted. The main content area is titled 'Quaternary Geology/Drift Prospecting' and includes a 'Printer Friendly' link. The text describes the evaluation of geological stratigraphy and material conditions, and lists services such as drift prospecting, which is effective for exploring for diamonds, gold, uranium, and base metals. A bulleted list details the Quaternary Geology section's work, including mapping surface deposits, delineating aggregate resources, and developing new investigation techniques. Another bulleted list outlines drift prospecting services, such as air photo interpretations and mapping surface deposits. The page concludes with a statement on the expertise in tracing anomalies and a section on the benefits of the Quaternary geological frameworks.

**Quaternary Geology/Drift Prospecting**

We evaluate geological stratigraphy, geomorphological features, and material conditions. We also advise clients on how to meet environmental regulations and guidelines.

Our drift prospecting services are effective and inexpensive ways of exploring for diamonds, gold, uranium, and base metals in glaciated terrain. They have been used successfully by many Canadian mining companies.

**The Quaternary Geology section has:**

- mapped surface deposits
- delineated aggregate resources
- characterized Quaternary sediments, particularly in Saskatchewan
- established the Quaternary geological framework for hydrogeological investigations, drift prospecting, and site characterization
- developed new investigation techniques
- done geochemical investigations of glacial sediments
- supervised test hole drilling using various overburden drilling methods
- developed drift prospecting techniques for Saskatchewan

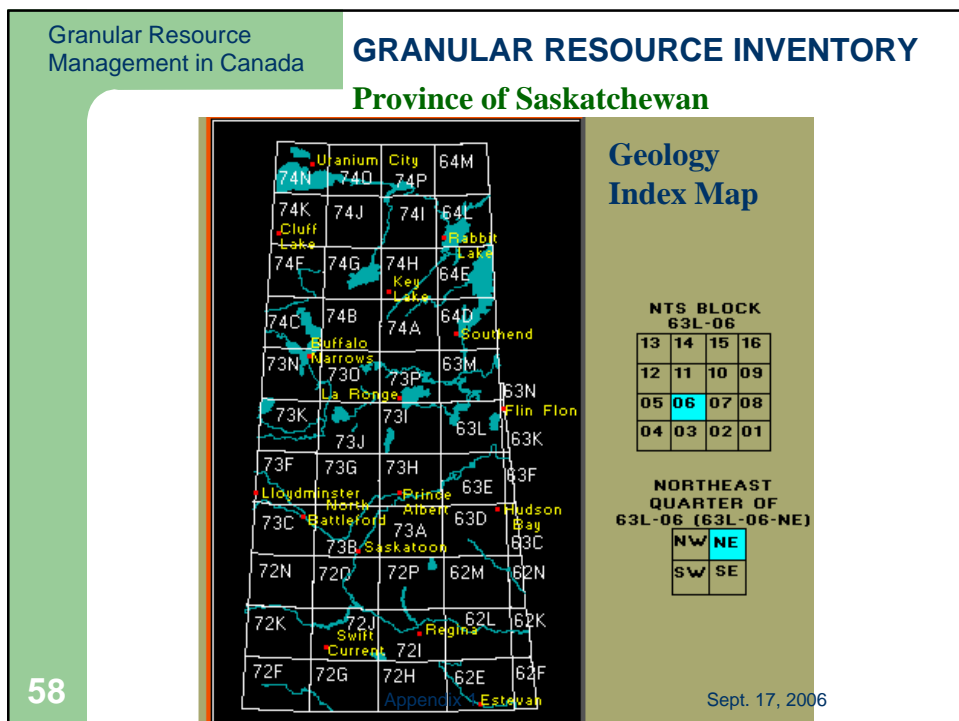
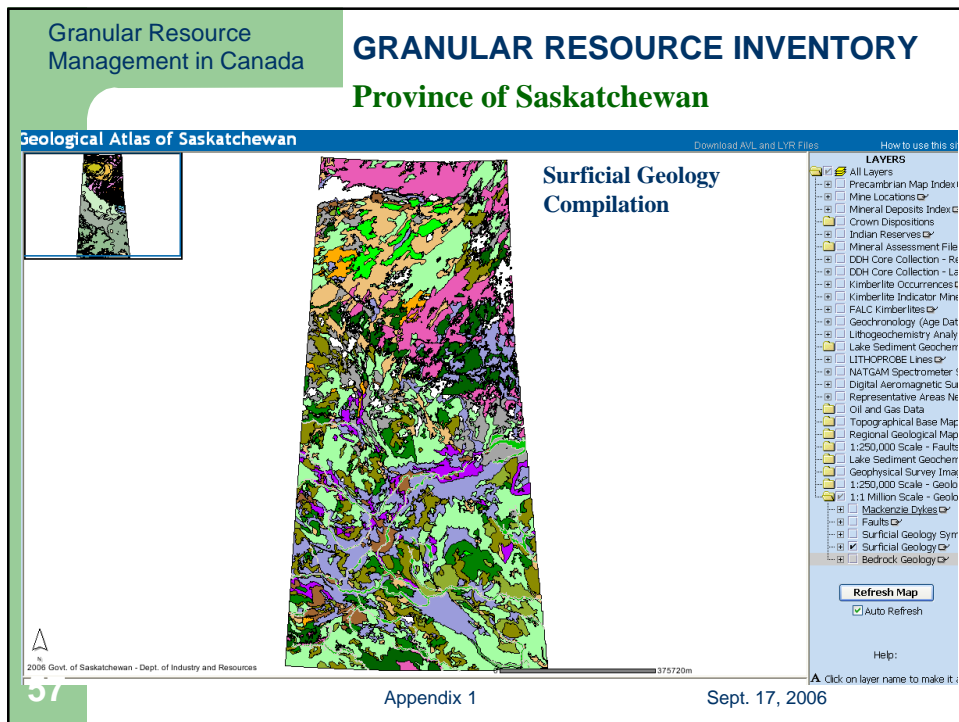
**Drift prospecting services include:**

- air photo interpretations
- mapping surface deposits
- designing and implementing drift prospecting programs
- orientation studies

Our expertise can help you trace anomalies in the surface environment back to their source.

**Benefits**

The Quaternary geological frameworks we provide are invaluable in mineral exploration, hydrogeological studies, and geotechnical investigations. Our understanding of Quaternary geological conditions contributes to sound resource management and environmental decisions.



## GRANULAR RESOURCE INVENTORY Province of Alberta



59

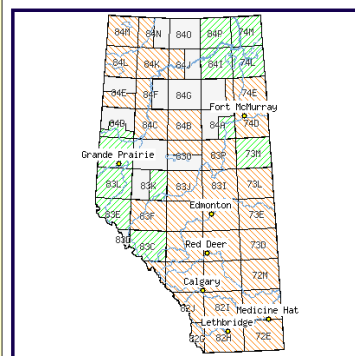
Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY Province of Alberta

- **Alberta Geological Survey responsible for Geological Mapping**
- **Mapping of sand and gravel deposit covers 50% plus of province**
- **Work in progress will increase coverage to +/- 75%**

Sand and gravel deposits with aggregate resource potential



© 2005 Alberta Geological Survey

0 144 km

Last modified: March 16, 2005

Click anywhere on the **orange** crosshatched parts of the map to see deposits and information for that area.

What are these map areas?

Help

### Legend

- △ Rivers & lakes
- Orange crosshatched Sand & gravel information available
- Green crosshatched Sand & gravel information available soon
- White No sand & gravel information

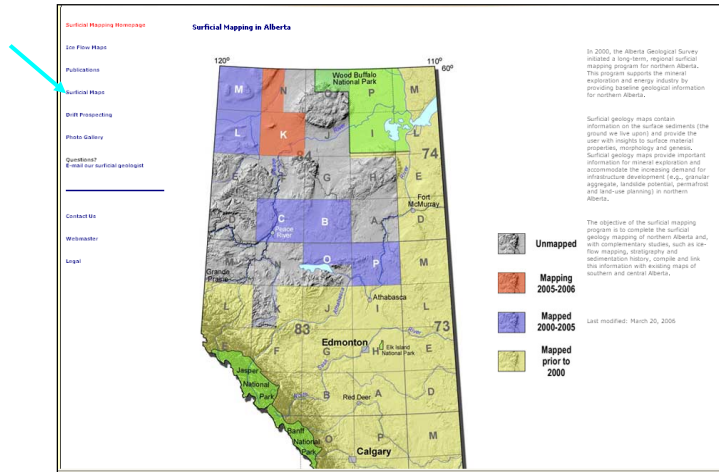
60

Appendix 1

Sept 17, 2006

## GRANULAR RESOURCE INVENTORY Province of Alberta

Alberta Energy and Utilities Board – Alberta Geological Survey



61

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY Province of British Columbia



62

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY Province of British Columbia

- The British Columbia Geological Survey is responsible for aggregate mapping
- In 1994 instituted the Aggregate Program with the objective of:
  - Inventory location of pits and quarries
  - Produce a series of Aggregate Potential Maps
  - Improve information transfer and data management between key provincial ministries

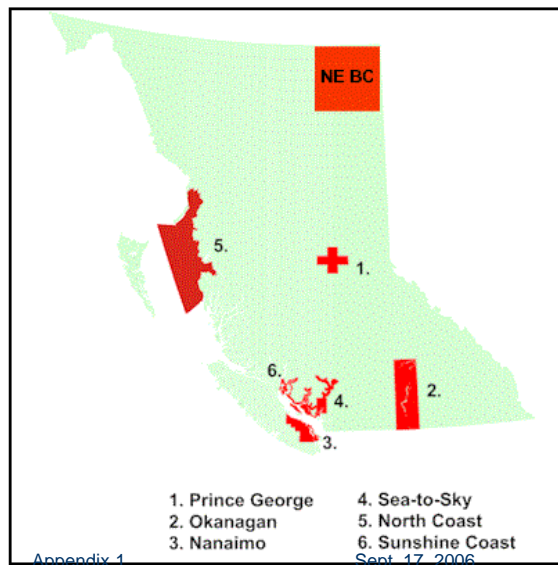
63

Appendix 1

Sept. 17, 2006

## GRANULAR RESOURCE INVENTORY Province of British Columbia

### Aggregate Index Map



64

Appendix 1

Sept. 17, 2006



**Aggregate Production Statistics**

**Move to separate Slide Show**

65

Appendix 1

Sept. 17, 2006

**Electronic Information and Websites**

- Newfoundland
- New Brunswick
- Ontario
- Alberta
- British Columbia
- Others available if time permits

66

Appendix 1

Sept. 17, 2006



## Appendix 2


# CANADIAN GRANULAR RESOURCE MANAGEMENT

## SUMMARY OF INFORMATION AVAILABLE FROM PROVINCIAL WEBSITES

Appendix 2: Summary of Provincial Website Information - British Columbia

### British Columbia

http://www.gov.bc.ca/bvprd/bc/home.do



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Environmental Management

Systems of Support

The New Relationship with Aboriginal People

2010 Olympic and Paralympic Winter Games

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Residents

Businesses

Visitors

RESOURCES

Quick access to topical, high level government information

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Statistics & Research

Reports & Publications

B.C. Government Contacts

GOVERNMENT

Quick access to information based on government's structure

B.C. Government

Legislative Assembly


Ministries & Organizations

Other Levels of Government



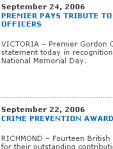
SFU SURREY CAMPUS OPENS

Premier Gordon Campbell, a Simon Fraser University alumnus, helped open the new SFU Surrey campus, which was made possible through \$78 million in funding from the Province.  
[\[More Photos\]](#)



SEPTEMBER 24, 2006  
PREMIER PAYS TRIBUTE TO FALLEN POLICE & PEACE OFFICERS

VICTORIA - Premier Gordon Campbell released the following statement today in recognition of Police and Peace Officers' National Memorial Day.  
[Read more >>](#)



SEPTEMBER 22, 2006  
CRIME PREVENTION AWARD RECIPIENTS HONOURED

RICHMOND - Fourteen British Columbians are being recognized for their outstanding contributions to community safety and crime prevention. Solicitor General John Leas announced today at the 28th Annual Community Safety and Crime Prevention Awards ceremony.  
[Read more >>](#)

Province of British Columbia

Key Initiatives

To apply for the federal government's Universal Child Care Benefit, Click Here!

For the Record

The Latest Facts on Current Issues in B.C.

Join the Premier's E-mail List

Premier Gordon Campbell

Video Gallery

Major Provincial Capital Projects Inventory

B.C.'s Spirit Bear

Our Premier Provincial Symbols

2010 COMMERCE CENTRE

Helping seniors live well.

ACHIEVE BC

BRINGING OUT THE BEST

March 2008

Appendix 2

1

### British Columbia, Ministries

http://www.gov.bc.ca/bvprd/bc/channel.do?action=govOrg&channelID=-8405&navId=NAV\_ID\_province&crumb=B.C.+Home&crumburl=%2Fhome.do



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Jobs and the Economy

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Systems of Support

The New Relationship with Aboriginal People

2010 Olympic and Paralympic Winter Games

Communities

Residents

Businesses

Visitors

RESOURCES

Quick access to topical, high level government information

News

Statistics & Research

Reports & Publications

B.C. Government Contacts

GOVERNMENT

Quick access to information based on government's structure

B.C. Government

Legislative Assembly

Ministries & Organizations

Other Levels of Government

B.C. Home > Ministries and Organizations

Print Version

Ministries and Organizations

Your government at a glance

Ministries

Aboriginal Relations and Reconciliation

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Agriculture and Lands

Attorney General

Children and Family Development

Community Services

Economic Development

Education

Employment and Income Assistance

Energy, Mines and Petroleum Resources

Environment

Finance

Forests and Range

Health

Labour and Citizens' Services

Public Safety and Solicitor General

Small Business and Revenue

Tourism, Sport and the Arts

Transportation

Central Agencies

B.C. Public Service Agency

Board Resource and Development Office

Crown Appointments Secretariat

Intergovernmental Relations Secretariat

Office of the Premier

Public Affairs Bureau

Crown Corporations

All Crown Corporations and Agencies

B.C. Assessment

B.C. Housing

B.C. Hydro and Power Authority

B.C. Rail

B.C. Transit

British Columbia Lottery Corporation

Community Living BC

Industry Training Authority

Insurance Corporation of British Columbia (ICBC)

Legal Services Society

Tourism British Columbia

Other Organizations, Agencies and Programs A-Z Index

A-D - E-J - K-O - P-S - T-Z

Auditor General

B.C. Archives

B.C. Arts Council

B.C. Assessment

B.C. Bure

B.C. Cultural Services

B.C. Ferry Services Inc.

B.C. Film Society

B.C. Games Society

[View All >>](#)

March 2008

Appendix 2

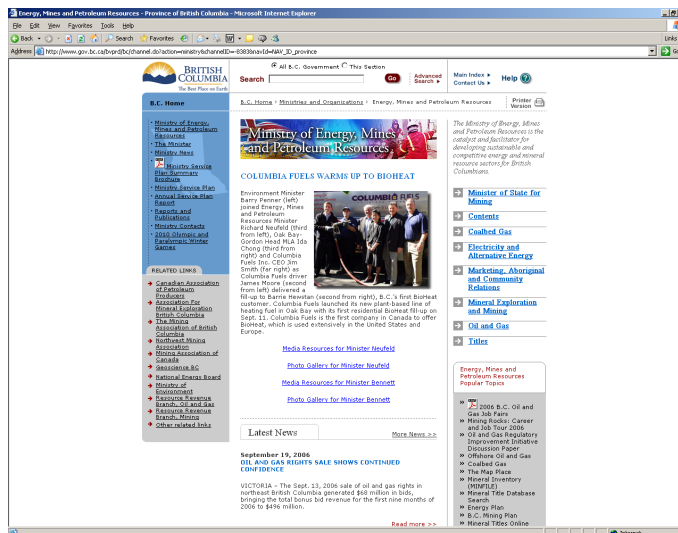
2

1

## Appendix 2: Summary of Provincial Website Information - British Columbia

### British Columbia Ministry of Energy, Mines & Petroleum Resources

[http://www.gov.bc.ca/bvpr/bc/channel.do?action=ministry&channelID=8383&navId=NAV\\_ID\\_province](http://www.gov.bc.ca/bvpr/bc/channel.do?action=ministry&channelID=8383&navId=NAV_ID_province)



March 2008

Appendix 2

3

### British Columbia Ministry of Energy, Mines & Petroleum Resources

<http://www.em.gov.bc.ca/Mining/GeolSurv/Minfile/>



March 2008

Appendix 2

4

## Appendix 2: Summary of Provincial Website Information - British Columbia

### British Columbia Ministry of Energy, Mines & Petroleum Resources

<http://www.em.gov.bc.ca/Mining/Geosurv/bedrock/default.htm>



#### Bedrock Mapping

##### Contents

[Geological Maps On-line](#)  
[Bedrock Mapping Index](#)

##### Other Links

[ARIS Assessment Reports](#)  
[Bedrock Mapping](#)  
[Coal](#)  
[Educational Resources](#)  
[Exploration & Mines](#)  
[Geochemistry](#)  
[Geophysical Data](#)  
[Industrial Minerals](#)  
[MapPlace](#)  
[MINFILE Mineral Inventory](#)  
[Mineral Properties Available](#)  
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[Mineral Deposit Profiles](#)  
[Mineral Potential](#)  
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[MEMPR/UVic Partnership](#)  
[Publications Catalogue](#)  
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[Terrain & Soil Maps](#)  
[What's New](#)

The BC Geological Survey conducts field based geological mapping and resource evaluation studies for a diverse client base, publicizes results, improves the Province's earth science database, and provides reliable information about the Province's mineral potential.

- [Field Projects](#)
- [Geological Maps On-Line](#)
- [Index to Bedrock Mapping in B.C.](#)
- [BC Digital Geology Maps](#)
- [Canadian Cordillera Geoscience \(GSC\)](#)
- [Specifications and Guidelines for Bedrock Mapping in BC](#)
- [Geological Time Scale \(2003 PDF\)](#)

For questions or more information on geology and minerals in British Columbia please contact [BC Geological Survey Mailbox](#) or use the [toll free number](#) (BC residents only).

This page last updated: June 08, 2006.

[BC Geological Survey Home Page](#)

March 2008

Appendix 2

5

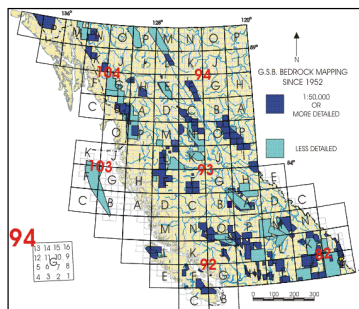
### British Columbia Ministry of Energy, Mines & Petroleum Resources

<http://www.em.gov.bc.ca/Mining/Geosurv/Minfile/>



#### Bedrock Mapping Index

Click on NTS Area of Interest  
 Click on RED NTS for 1:1M Area



- [Geological Maps On-Line](#)
- [Index to BC Geological Map Coverage \(Non-Digital\) requires MapGuide Viewer](#)
- [BC GSD Map Index and GSC Map Index requires MapGuide Viewer](#)
- [Index to Bedrock Mapping 1963](#)
- [Bedrock Mapping Home Page](#)
- [Neotectonic NATMAP Home Page](#)

For more information please contact the [BC Geological Survey](#).

Publications of the BC Geological Survey are available for purchase through [Cowan Publications Inc.](#) (and its agents).  
 For questions or more information on geology and minerals in British Columbia please contact [BC Geological Survey Mailbox](#) or use the [toll free number](#) (BC residents only).

March 2008

Appendix 2

6

## Appendix 2: Summary of Provincial Website Information - British Columbia

### British Columbia Ministry of Energy, Mines & Petroleum Resources

http://em.gov.bc.ca/Mining/Geosurv/Publications/catalog/bcgeolmap.htm


**Programs & Services**  
Ministry of Energy, Mines and Petroleum Resources  
Ministry News | Ministry Search | Reports & Publications | Site Map | Contacts

#### Digital Geology Maps

##### BC Digital Geology Maps (version 1.0 2005)

[Download Table below...](#)  
[Previous Digital Geology and Mineral Potential Maps 1999](#)

Digital regional compilations of the geology of B.C. at 1:250,000-scale were made by staff of the BC Geological Survey in 1992/96 in support of the [Mineral Potential Project](#). These were released as Open Files (see References) and digital downloads from the BC Geological Survey website (<http://www.em.gov.bc.ca/geology>). They were also used as the geology base for the Map Place (<http://www.mapplace.ca>).



However, numerous errors and inconsistencies were noted within these data sets. The **Digital Geology Map of British Columbia Project** was designed to address these problems and, in the process, try to produce a seamless digital map of the Province with consistent geological tagging. Where feasible, updates to the geology have also been incorporated during the editing process. However, some scratch lines remain in the data reflecting problems due to unresolved differences in geological designations in original sources.

Release of the recompilation is based on the same files as the Cordilleran GIS Map Library (Journay and Williams, 1995) which conforms to the International Map of the World standard used for indexing 1:1,000,000-scale topographic maps. This differs from the numbering convention used for the National Topographic System maps. NTS sheets contained within each tile are listed in the table below. Preliminary versions of the tiled data were released in 2003, with updates in 2004. This new province-wide version, and associated tiled data, supersedes the earlier files.

All data sets are in shape file format that should be readily usable by most GIS software. They are presented as either decimal degrees (suffix .ll) or [BC Albers](#) (suffix .alb). Tiled data are also available in UTM (suffix .utm) projections. All projections use NAD83 as the datum. The data sets are intended to be used at 1:250,000-scale and their use at greater scales is not recommended.

This data is also available in a cartographically correct rendition of the geology of British Columbia, in PDF format: Geoscience Map 2005-3: [Geology of British Columbia](#), compiled by N.W.D. Massey, D.G. MacIntyre, P.J. Desjardins and R.T. Cooney, cartography by Clover Point Cartographics Ltd.; Scale 1:1 000 000, 3 sheets

**NOTE: All GeoFile documents referenced on this page are only available as downloadable documents via this web site. No hardcopy data will be available. A DVD containing all data sets is also available as [Open File 2005-2](#) for purchase from [Crown Publications](#). The shape files include .AVI files suitable for symbolization by ArcView 3.x users. A style sheet ([BCDigitalMap.style](#)) for ArcMap 8.x users is also available for [download](#).**

##### BC Digital Geology Map (.SHP file format, zipped):

There are three downloadable versions of each preliminary file: decimal degrees (.ll), BC Albers (.alb) and UTM at the 1:250,000 scale:  
[Download Documentation](#) or view [Readme](#) file.

March 2008

Appendix 2

7

### British Columbia Ministry of Energy, Mines & Petroleum Resources

http://em.gov.bc.ca/Mining/Geosurv/Publications/InfoCirc/IC1997-03/toc.htm

**Programs & Services**  
Ministry of Energy, Mines and Petroleum Resources  
Ministry News | Ministry Search | Reports & Publications | Site Map | Contacts

#### Information Circular 1997-3

##### Specifications & Guidelines for Bedrock Mapping in British Columbia

[View Information Circular 1997-3](#) (PDF, 16.2 MB)  
[View HTML Document at RISQ](#)

This document, part of the provincial Resource Inventory Committee initiative, provides guidelines and is a step toward development of common standards and methodologies for bedrock mapping in British Columbia. It recommends methodology for the presentation of geological information and describes the types of data that must be collected for the production of geological maps. Implementing these guidelines will make significant progress toward the goal of making comparison and exchange of geological data in the province easier. These standards will be of interest to both specialists and non-specialists, and will help users understand the underlying bedrock data that is used to produce geologic maps and reports. It is important to note that geologic maps are NOT raw data, they are interpretations of the raw data.

Although the standards contain specific recommendations, they should be treated as guidelines. The guidelines are intended to be detailed enough to provide consistency, but not so restrictive that they cannot be easily implemented. They will not be usable in every circumstance, but will cover most applications. It is hoped that this flexible approach will ensure faster and wider acceptance for the recommended standards.

The conceptual design and content of this manual is based on recommendations made by the RIC Bedrock Geology Task Group of the Earth Sciences Task Force, which involved a multi-agency workshop and a client survey. The manual was compiled by W.J. McMillan, F. Fern and C. Rees with major input and desktop publishing by B. Grant. Comments on earlier drafts were received from many sources, in particular those by M. Mihajluk and J. Newell are gratefully acknowledged.

This document is broken into five parts:

Part 1 provides a general overview of bedrock mapping methodology.

Part 2 describes methodology involved in project planning and information about bedrock field surveys. It also describes both essential and desirable data that should be collected to produce geological maps using symbols outlined in Part 3. We strongly recommend that field data be collected on formatted field forms to facilitate digital data creation.

March 2008

Appendix 2

8

## British Columbia Ministry of Energy, Mines & Petroleum Resources

http://em.gov.bc.ca/Mining/Geosurv/bedrock/mapsonline/mapsonline.htm

Programs & Services

Ministry of Energy, Mines and Petroleum Resources

Ministry News | Ministry Search | Reports & Publications | Site Map | Contacts

Geological Maps On-line

Autodesk®DWG™ Viewer required

First time users, please read the INSTRUCTIONS below before proceeding. Previous users may want to go to the TABLE OF MAPS.

**INSTRUCTIONS:**

In order to properly view these maps you must first install the *Age Symbol Font1*, *Age Symbol Font2* font sets and the free [Autodesk®DWG™ Viewer](#), which has replaced the *WHIP1* Viewer. Download the fonts, [Age Symbol Font1](#) and [Age Symbol Font2](#) to a directory of your choice (right-click these links and "Save Target As...") and use the Fonts option in the Windows Control Panel under Settings to add the fonts to your system. When you have downloaded and installed the Viewer and the fonts select the map you want to see from the [list below](#).

**February 17, 2004:** Autodesk®Map® Express Viewer product name changed to Autodesk®DWG™ Viewer. Autodesk DWG Viewer is a small, free, downloadable application you can use to view and print files in DWG™ (Design Web Format™). The new download, which has the same functionality as Autodesk Express Viewer 4, is available at <http://www.autodesk.com/products>. For additional instructions visit the Help menu on the Viewer. Netscape users can still use the WHIP1 Viewer: [download WHIP1](#).

A [View Full Map](#) link is available on each page to load the map directly into the browser. It is useful if you are still using the WHIP1 Viewer or Auto View Express. This link can also be used to download the map (right click and "Save Target As...") to your computer. The DWG Viewer can then be used to view the maps without being online.

*These maps are also available in PDF format.*

See [BC Geological Survey Publications Catalogue](#) for additional maps.

Selecting the maps below will open a second window; it will take a few seconds to load.

NTS	Publication (DWG)	Title	Publication Link
82	<a href="#">Geoscience Map 2002-1</a>	Intrusion-Related Mineral Occurrences of the Cretaceous Magmatic Belt, Southeast British Columbia (NTS 82/E.F.G.J.K.L.M.N)	<a href="#">GM2002-1</a>
	<a href="#">Geoscience Map 1998-2</a>	Geological Compilation of the Yakh (East Half) and Yakh River (West Half) Map Areas, Southeastern British Columbia (NTS 82/F1E, 82G/4W)	<a href="#">GM1998-2</a>
	<a href="#">Open File 2000-8</a>	Geology and Mineralization of the Mount Skelly Pluton, Kootenay Lake, Southeastern British Columbia (NTS 82/F7E)	<a href="#">OF2000-8</a>
	<a href="#">Geoscience Map 1998-3</a>	Geological Compilation of Grassy Mountain (East Half) and Moyle Lake (West Half) Map Areas, Southeastern British Columbia (NTS 82/F8E, 82G/5W)	<a href="#">GM1998-3</a>
	<a href="#">Geoscience Map 1998-4</a>	Geological Compilation of the Dewar Creek and Findlay Creek Map Areas, Southeastern British Columbia (NTS 82/F16, 82K/1)	<a href="#">GM1998-4</a>

March 2008

Appendix 2

9

## British Columbia Ministry of Energy, Mines & Petroleum Resources

http://www.em.gov.bc.ca/Mining/Geosurv/Minfile/

Ministry Home

Government of British Columbia

Programs & Services

Ministry of Energy, Mines and Petroleum Resources

Ministry News | Ministry Search | Reports & Publications | Site Map | Contacts

MINFILE Mineral Inventory

Contents

MINFILE

MINFILE www SEARCH

MINFILE Version 5

MINFILE contains geological, location and economic information on over 12,250 metallic, industrial mineral and coal mines, deposits and occurrences in B.C.

Please quote original source, rather than MINFILE, when referencing resources/resource websites.

- New Occurrences & Updates in MINFILE
- NTS Areas and Mining Series Publication List
- MINFILE Database on CD-ROM
- Industry Web Links in MINFILE
- Mines Directory and Mines Maps
- BC Mining Information Sources (PDF)

Products & Information

Quick Links

Other Links

Related Links

For more information about MINFILE please contact the [MINFILE Unit](#)

*This page last updated: June 21, 2006.*

[BC Geological Survey Home Page](#)

Top

Copyright

Disclaimer

Privacy

Feedback

March 2008

Appendix 2

10

5

## Appendix 2: Summary of Provincial Website Information - British Columbia

### British Columbia Ministry of Energy, Mines & Petroleum Resources

<http://www.em.gov.bc.ca/Mining/Geolsurv/Surficial/default.htm>



#### Surficial Geology & Hazards

##### Contents

[Aggregate Project](#)  
[Landslides in BC](#)  
[Earthquakes in BC](#)  
[Victoria Earthquake Maps](#)

##### Other Links

[ARIS Assessment Reports](#)  
[Bedrock Mapping](#)  
[Coal](#)  
[Educational Resources](#)  
[Exploration & Mines](#)  
[Geochemistry](#)  
[Geophysical Data](#)  
[Industrial Minerals](#)  
[MapPlace](#)  
[MNFILE Mineral Inventory](#)  
[Mineral Properties Available](#)  
[Metallic Minerals](#)  
[Mineral Deposit Profiles](#)  
[Mineral Potential](#)  
[BCGS Partnership](#)  
[MCMSC Livv Partnership](#)  
[Publications Catalogue](#)  
[Staff Who Are We?](#)  
[Surficial Geology & Hazards](#)  
[Terrain & Soil Maps](#)  
[What's New](#)

#### Surficial Geology and Hazards Mapping

Surficial geology is concerned with the description of the types and distributions of unconsolidated sediments across the landscape. This information is collected and maintained primarily in maps and databases. It is useful to mineral explorationists, sand and gravel production, hazard assessment, and landuse planning.

- ◆ [Victoria Earthquake Hazard Maps](#)
- ◆ [Hazard Map on MapPlace](#)
- ◆ [Aggregate Project](#)
- ◆ [Surficial Geology Map Index](#)
- ◆ [Interactive and downloadable Terrain and Terrain Stability Maps](#)
- ◆ [Earthquake Hazard Mapping for Land Use and Emergency Planning - Summary of Conference Presentations](#)
- ◆ [Earthquakes Canada](#)
- ◆ [USGS Earthquake Hazards Program](#)



[Earthquakes in British Columbia](#)



[Landslides in British Columbia](#)

For questions or more information on geology and minerals in British Columbia please contact [GSB](#) [Mailbox](#) or use the [toll free number](#) (B.C. residents only).

This page last updated: July 04, 2006.

[Geological Survey Branch Home Page](#)

[Top](#) [Copyright](#) [Disclaimer](#) [Privacy](#)

[Feedback](#)

March 2008

Appendix 2

11

### British Columbia Ministry of Energy, Mines & Petroleum Resources

[http://www.em.gov.bc.ca/Mining/Geolsurv/MapPlace/MoreDetails/OF\\_13.htm](http://www.em.gov.bc.ca/Mining/Geolsurv/MapPlace/MoreDetails/OF_13.htm)



#### Surficial Geology Index

##### The MapPlace - Open File 1992-13



Digital Version of Geological Survey Branch  
Surficial Geology Map Index of British Columbia  
Open File 1992-13  
by P.T. Bobrowsky, T. Giles and W. Jackaman

**Details:** This published index provides a compilation of about 2400 data records pertaining to surficial geology/terrain maps of British Columbia. The database is presented both as a tabulated listing ([Excel table link](#)), and graphically on the MapPlace as a series of type indexes, linked to a summary report. The tabulated database contains map name, author, NTS area, scale, type of map, year, and agency involved. Click on the map below to view the data interactively. The hardcopy report is no longer available from [Crown Publications](#).

The link to the [Terrain Map Library](#) provides terrain and slope stability related maps in digital format. The digital maps may be constructed and viewed on-line or downloaded for use in a GIS or Desktop Mapping package.

**April 14, 2005** Added GSC Surficial Geology layer (1:5M) from [Surficial Materials of Canada](#), Fulton, R.J.; Geological Survey of Canada, "A" Series Map 1880A, 1995. Reproduced with the permission of the Minister of Public Works and Government Services Canada, 2005 and courtesy of Natural Resources Canada, [Geological Survey of Canada](#).

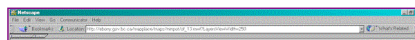
- ◆ [GSC Map 1880A from Mirage](#)
- ◆ [GSC Map 1880A Map Download](#)
- ◆ [GSC Map 1880A Metadata description from GeoConnections](#)

##### Links:

- ◆ [Open File 1992-13](#)
- ◆ [Open File 1992-13 Excel table](#)
- ◆ [Epi-Lett is the Quaternary Geology contact.](#)
- ◆ [Terrain Map Library](#)

[View Open File 1992-13 Map Index](#)

[MediaWiki:User:dragsuit](#)



March 2008

Appendix 2

12



## Appendix 2: Summary of Provincial Website Information - British Columbia

### British Columbia Ministry of Energy, Mines & Petroleum Resources

<http://www.em.gov.bc.ca/Mining/Geosurv/Terrain&Soils/default.htm>

**Programs & Services**

Ministry News Ministry Search Reports & Publications Site Map Contacts

**Terrain & Soil Maps**

**Contents**

[Introductory Map](#)  
[General Description](#)  
[Open File 1992-13](#)  
[Log of Changes](#)  
[Terrain Site Links](#)  
[Information Sources](#)

**Other Links**

[ARIS Assessment Reports](#)  
[Bedrock Mapping](#)  
[Coal](#)  
[Educational Resources](#)  
[Exploration & Mines](#)  
[Geochemistry](#)  
[Geophysical Data](#)  
[Industrial Minerals](#)  
[MapPlace](#)  
[MINFILE Mineral Inventory](#)  
[Mineral Prospects Available](#)  
[Metallic Minerals](#)  
[Mineral Deposit Profiles](#)  
[Mineral Potential](#)  
[BC-GS Partnerships](#)  
[MEMPR-UVic Partnership](#)  
[Publications Catalogue](#)  
[Staff Who Are Who](#)  
[Surficial Geology & Hazards](#)  
[Terrain & Soil Maps](#)  
[What's New](#)

[Top](#) [Copyright](#) [Disclaimer](#) [Privacy](#) [Feedback](#)

**FOREST RENEWAL BC**

The Digital Terrain Map Library provides terrain and slope stability related maps in digital format. The digital maps may be constructed and viewed on-line or downloaded for use in a GIS or Desktop Mapping package. The project is operated by the BC Geological Survey of the Ministry of Energy, Mines and Petroleum Resources and funded by Forest Renewal BC.

- General Project Description
- Surficial Geology Map Index of BC (GSB Open File 1992-13)
- Interactive and downloadable Terrain and Terrain Stability Maps
- Interactive Aggregate Potential Map requires [MapGuide Viewer](#)
- Listing of new additions or changes
- Related Terrain Site Links
- Terrain & Soils Information Sources

For more information contact [Terrain Mapping Support](#).

For questions or more information on geology and minerals in British Columbia please contact [BCGS Mailbox](#) or use the [toll free number](#) (B.C. residents only).

*This page last updated: March 07, 2006.* [BC Geological Survey Home Page](#)

March 2008

Appendix 2

13

[http://www.em.gov.bc.ca/Mining/Geosurv/MapPlace/MoreDetails/OF\\_13.htm](http://www.em.gov.bc.ca/Mining/Geosurv/MapPlace/MoreDetails/OF_13.htm)

**Surficial Geology Index**

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Digital Version of Geological Survey Branch  
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- GSC Map 1800A from Mirage
- GSC Map 1800A from OpenStreetMap
- GSC Map 1800A Metadata description from GeoConnections

**Links:**

- Open File 1992-13
- Open File 1992-13 Excel table
- Site List in the Quaternary Geology context
- Terrain Map Library

[View Open File 1992-13 Map Index](#)

[Bedrock theme record](#)

March 2008

Appendix 2

14

## Appendix 2: Summary of Provincial Website Information - British Columbia

**British Columbia Ministry of Energy, Mines & Petroleum Resources**  
<http://www.em.gov.bc.ca/Mining/Geolsurv/Surficial/default.htm>

**Programs & Services**  
 Ministry News | Ministry Search | Reports & Publications | Site Map | Contacts

**Surficial Geology & Hazards**

**Contents**

[Aggregate Project](#)  
[Landslides in BC](#)  
[Earthquakes in BC](#)  
[Victoria Earthquake Maps](#)

**Other Links**

[ARIS Assessment Reports](#)  
[Bedrock Mapping](#)  
[Coal](#)  
[Educational Resources](#)  
[Exploration & Mines](#)  
[Geochemistry](#)  
[Geophysical Data](#)  
[Industrial Minerals](#)  
[MapPlace](#)  
[MNFILE Mineral Inventory](#)  
[Mineral Properties Available](#)  
[Metals Minerals](#)  
[Mineral Deposit Profiles](#)  
[Mineral Potential](#)  
[BCGS Partnerships](#)  
[MCMR-UVic Partnership](#)  
[Publications Catalogue](#)  
[Staff Who Are We?](#)  
[Surficial Geology & Hazards](#)  
[Terrain & Soil Maps](#)  
[What's New](#)

**Surficial Geology and Hazards Mapping**

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- Hazards Map on MapPlace
- Aggregate Project
- Surficial Geology Map Index
- Interactive and downloadable Terrain and Terrain Stability Maps
- Earthquake Hazard Mapping for Land Use and Emergency Planning - Summary of Conference Presentations
- Earthquakes Canada
- USGS Earthquake Hazards Program

[Earthquakes in British Columbia](#)

[Landslides in British Columbia](#)

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This page last updated: July 04, 2006. [Geological Survey Branch Home Page](#)

Top | Copyright | Disclaimer | Privacy | Feedback

March 2008 Appendix 2 15

**British Columbia Ministry of Energy, Mines & Petroleum Resources**  
<http://www.em.gov.bc.ca/Mining/Geolsurv/Surficial/aggregate/default.htm>

**Programs & Services**  
 Ministry News | Ministry Search | Reports & Publications | Site Map | Contacts


**Aggregate Project**

**Contents**

[Aggregate Potential Maps](#)  
[Aggregate Downloads](#)  
[Aggregate Forum](#)  
[Aggregate Publications](#)  
[Aggregate Inventory](#)  
[Aggregate Review](#)

**Other Links**

[Aggregate Project](#)  
[Landslides in BC](#)  
[Earthquakes in BC](#)  
[Victoria Earthquake Maps](#)



- Lower Mainland Construction Aggregates Demand Study
- Aggregate Potential Maps
- Aggregate Map Downloads
- Aggregate Maps on The Map Place
- Aggregate Forum & Related Papers
- Aggregate Publications
- Aggregate Inventory
- Aggregate Operators BMP Handbook
- Aggregate Metadata
- Aggregate Review
- Northeast BC Aggregate Mapping Program with Interactive Aggregate Occurrence Map

Sand and gravel are finite, non-renewable resources that are essential in the construction of roads, railways, schools, etc., as well as for more specialized industrial uses such as sewage filtration, agriculture, erosion prevention, etc. In British Columbia there are about 2,600 active aggregate pit operations producing approximately 50 million tonnes of sand and gravel per year. This output is valued at over \$170 million annually and directly employs 4,000 to 5,000 people. However, many communities and municipalities are currently, or will shortly, experience aggregate shortages as local reserves are depleted or sterilized. Effective management of the aggregate resource represents a considerable challenge to both planners and the industry.

In 1994, the BC Geological Survey initiated the Aggregate Program in answer to this challenge. The goals of the program are:

- to establish an [Inventory](#) of natural and crushed aggregate pits in British Columbia
- to produce a series of [Aggregate Potential Maps](#) for key growth and development areas in the province
- to improve information transfer and data management between key provincial ministries.

The [Northeast BC Aggregate Mapping Program](#) is managed by the Oil and Gas Division, Resource Development and Geoscience Branch.

Back to [Surficial Geology](#)

March 2008 Appendix 2 16

British Columbia Ministry of Energy, Mines & Petroleum Resources

http://www.em.gov.bc.ca/Mining/Geolsurv/Surficial/aggregate/aggmap.htm



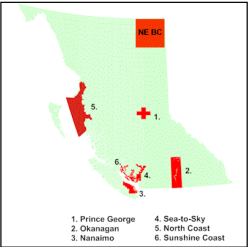
Aggregate Potential Maps

In 1995, the BC Geological Survey initiated a program of aggregate potential mapping in British Columbia in response to the need for data to be utilized in the management of aggregate resources and general land use planning at the regional and local levels.

An aggregate potential map typically outlines areas of aggregate resource potential as polygons on the map and qualitatively ranks the relative potential of the areas. Rankings assigned are Historic (which represent recent and present producing areas), Primary, Secondary, Tertiary (potential hosts to future aggregate deposits) and Unclassified. The parameters used in the derivation of the rankings, including landform type, quantity of sand versus gravel, volume estimate, thickness of deposit, etc., are also detailed on the map. On-site geotechnical evaluation is still required to quantitatively confirm the aggregate potential of any specific target. However, the maps provide a quick "first approximation" for alternative land use by also identifying areas which hold little or no potential for aggregate resources. Ultimately, such maps save those planners, developers and producers involved in aggregate considerable effort and cost by focusing attention on select areas.

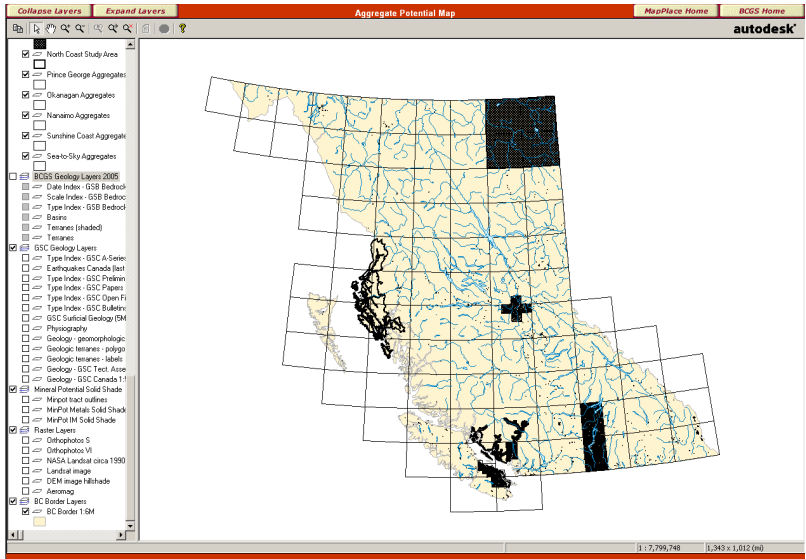
In 1996, the BC Geological Survey initiated a pilot study in the Prince George area of central B.C. This has been followed with a larger study in the Okanagan area of southeastern B.C. and, since 1999, studies of the Vanamo, Sea-to-Sky, Sunshine Coast and North Coast areas.

- View Aggregate Metadata
- Back to Aggregate Project
- Northwest BC Aggregate Mapping Program



British Columbia Ministry of Energy, Mines & Petroleum Resources

http://webmap.em.gov.bc.ca/mapplace/minpot/aggregate.cfm



## Appendix 2: Summary of Provincial Website Information - British Columbia

### British Columbia Ministry of Energy, Mines & Petroleum Resources

<http://www.em.gov.bc.ca/Mining/Geolsurv/Surficial/aggregate/aggdwn.htm>



#### Aggregate Downloads

#### Aggregate Resource Potential Maps Downloadable Digital Files

Data for the Aggregate Resource Potential Maps are available in shape file format for import into GIS software such as ArcInfo, ArcView, etc. These data can also be easily viewed using ESRI's free data browser program [Arc Explorer](#).

Projects available are:

PROJECT DESCRIPTION	DOWNLOAD FILE	SIZE MB	INFORMATION
Princa George	agaggpot.zip	1.0	Readme.txt, Legend.txt
Chanagan	chaggpot.zip	3.0	Readme.txt, Legend.txt
Nanaimo	nanaggpot.zip	0.5	Readme.txt, Legend.txt
Sunshine Coast	scaggpot.zip	123	Readme.txt
Sea to Sky	sskaggpot.zip	166	Readme.doc, Project Information
North Coast	ncaggpot.zip	11	Readme.doc, Metadata.txt, Project Information
Aggregate Inventory	OF1996-05data.zip	0.12	Open File 1996-05, OF96-05readme.txt
Construction Aggregate Operations in BC	BC-Aggregate.zip	0.09	Data in Shape format Compiled in April 2004

All files have been zipped to facilitate faster downloading. Details of the files are contained in the readme file. The legend.txt file documents the methodology used in determining the potential rankings.

Data can also be viewed, along with other geological data, on the [MapPlace Aggregate Potential Map](#).

View [Aggregate Metadata](#)

For more information contact: [Vic.Leyson@gov.bc.ca](mailto:Vic.Leyson@gov.bc.ca) or [Gib.McArthur@gov.bc.ca](mailto:Gib.McArthur@gov.bc.ca)

Back to [Aggregate Project](#)

This page last updated: June 22, 2006.

[BC Geological Survey Home Page](#)

[Top](#) [Copyright](#) [Disclaimer](#) [Privacy](#) [Feedback](#)

March 2008

Appendix 2

19

### British Columbia Ministry of Energy, Mines & Petroleum Resources

<http://www.em.gov.bc.ca/Mining/Geolsurv/Minfile/>



#### MINFILE Mineral Inventory

##### Contents

[MINFILE/View Searches](#)  
[The MINFILE FAQs](#)  
[Maps on this Data](#)  
[MINFILE/Doc](#)  
[MINFILE project](#)  
[Database Updates](#)  
[MINFILE Download Request](#)  
[History of MINFILE](#)  
[Products & Downloads](#)  
[Property File](#)  
[Recent Releases](#)  
[Site Map for MINFILE](#)

##### Other Links

[ARIS Assessment Reports](#)  
[Bedrock Mapping](#)  
[Coal](#)  
[Educational Resources](#)  
[Exploration & Mines](#)  
[Geochemistry](#)  
[Geophysical Data](#)  
[Industrial Minerals](#)  
[MapPlace](#)  
[MINFILE Mineral Inventory](#)  
[Mineral Properties Available](#)  
[Metallic Minerals](#)  
[Mineral Deposit Profiles](#)  
[Mineral Potential](#)  
[BCOS Partnerships](#)  
[MEMBERS/Link Partnerships](#)  
[Publications Catalogue](#)  
[Staff Who Are Away](#)  
[Surficial Geology & Hazards](#)  
[Terrain & Soil Maps](#)  
[What's New](#)



MINFILE contains geological, location and economic information on over 12,250 metallic, industrial mineral and coal mines, deposits and occurrences in B.C.  
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- NTS Areas and Mining Camps [Publication List](#)
- MINFILE Database on CD-ROM
- Industry Web Links in MINFILE
- Miners Directory and Mines Maps
- BC Mines Information Sources (PDF)

##### Products & Information

- MINFILE/Doc F.A.Q.
- MINFILE/Doc and Manuals
- Products & Downloads
- MINFILE Reports on CD
- Database, Disks & Maps
- The MINFILE Project
- Resources/Resourses

##### Quick Links

- MINFILE Name Index (1MB PDF)
- Download Page
- CDs / Silver Deposits
- Index / Natural Stone
- Guide to Mineral Information
- Conversion Factors
- Site Map for MINFILE

##### Related Links:

- [Falconbridge File](#) - index updated March 2004
- [Property File](#) - historical references to mineral occurrences/properties/NTS areas.
- [ARIS](#) - search and information on mineral exploration Assessment Reports.
- [Mineral Statistics](#) - metals, coal and industrial minerals.
- [Mineral Titles](#) - searching details on mineral features.
- [The MapPlace](#) - interactively view MINFILE and other USB databases.
- [Tour of the MapPlace](#)

For more information about MINFILE please contact the [MINFILE Unit](#).

This page last updated: June 21, 2006.

[BC Geological Survey Home Page](#)

[Top](#) [Copyright](#) [Disclaimer](#) [Privacy](#) [Feedback](#)

March 2008

Appendix 2

20

## Appendix 2: Summary of Provincial Website Information - British Columbia

### British Columbia Ministry of Energy, Mines & Petroleum Resources http://www.em.gov.bc.ca/Mining/Geolsurv/MapPlace/themeMaps.htm

**Programs & Services**  
Ministry News | Ministry Search | Reports & Publications | Site Map | Contacts

**Thematic Maps**  
Contents

**Thematic Maps**

- Main Maps
- Table of Maps
- General BC Map
- Mineral Activity
- Oil, Gas and Coal
- Geophysical
- Geology Indexes
- Surficial Geology & Hazards
- Detailed Geology

**Geology Map Indexes**

**BC Geology Map Index:** Displays BCGS Geology Map Index, MINFILE coverage, Regional Geochemical Survey coverage and Surficial Mapping coverage. [Map with Publications Search](#) ... [more details](#)

**GSC & GSB Geology Map Indexes:** Displays for Geological Survey of Canada (GSC) and BC Geological Survey (GSB) map indexes on a map of the World, zoomed into Canada. ... [more details](#)

**Surficial Geology Map Index:** This map is the digital equivalent of GSB Open File 1992.13 Surficial Geology Map Index of British Columbia by P.T. Bibrowsky, T. Giles and W. Jackman. ... [more details](#)

**Surficial Geology and Hazard Maps**

**Aggregate Potential Mapping:** Map displays the results of six aggregate potential studies: Prince George, Okanagan, Nanaimo, Sea-to-Sky, Sunshine Coast and North Coast. [Digital Data Downloads](#) are available for these studies. ... [more details](#)

**Digital Terrain & Soils Map Library:** The Introductory Map acts as a graphical index to the Digital Terrain Map Library, which provides terrain and slope stability related maps in digital format, interactive viewing and raster downloads. ... [more details](#)

**Hazards Map:** This map displays Relative Earthquake Hazards and Outcrops of Greater Victoria. The map has a layer that shows USGS Realtime Earthquakes above Magnitude 2.5 for the past 7 days. ... [more details](#)

**Other Links**

- Main Maps
- Thematic Maps
- Summary Data Available
- MapPlace Metadata
- Geospatial Downloads
- Online Help & Documents
- Updates on MapPlace

March 2008

Appendix 2

21

### British Columbia Ministry of Energy, Mines & Petroleum Resources

http://www.em.gov.bc.ca/Mining/Geolsurv/Minfile/

**Programs & Services**  
Ministry News | Ministry Search | Reports & Publications | Site Map | Contacts

**MINFILE Mineral Inventory**

**Contents**

- MINFILE/View Searches
- The MINFILE FAQs
- More on the Data
- MINFILE/Map
- MINFILE Project
- Database Updates
- MINFILE Download Request
- History of MINFILE
- Products & Downloads
- Property File
- Recent Releases
- Site Map for MINFILE

**Other Links**

- ARIS Assessment Reports
- Radrock Mapping
- Coal
- Educational Resources
- Exploration & Mines
- Geochemistry
- Geophysical Data
- Industrial Minerals
- MapPlace
- MINFILE Mineral Inventory
- Mineral Properties Available
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- Mineral Deposit Profiles
- Mineral Potential
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- MCER/LVLC Partnership
- Publications Catalogue
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- New Occurrences & Updates in MINFILE
- NTS Areas and Mining Camps [Publication List](#)
- MINFILE Database on CD-ROM
- Industry Web Links in MINFILE
- Mines Directory and Mines Map
- BC Mining Information Sources (PDF)

**Products & Information**

- MINFILE/pc F.A.Q.
- MINFILE/pc and Manuals
- Products & Downloads
- MINFILE Reports on CD
- Database, Maps & Maps
- The MINFILE Project
- Reserve Resources

**Quick Links**

- MINFILE Name Index (rmb PDF)
- Download Page
- PGEs / Silver Deposits
- Jade / Natural Stone
- Guide to Mineral Information
- Conversion Factors
- Site Map for MINFILE

**Related Links**

- Falconbridge File - web, updated March 2004
- Property File - historical references to mineral occurrences/properties/NTS areas
- ARIS - search and information on mineral exploration Assessment Reports
- Mineral Statistics - metals, coal and industrial minerals
- Mineral Titles - searching details on mineral tenure
- The MapPlace - interactively view MINFILE and other GSB databases
- Tour of the MapPlace

For more information about MINFILE please contact the [MINFILE Unit](#).

This page last updated: June 21, 2006. B.C. Geological Survey Home Page

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March 2008

Appendix 2

22

## Appendix 2: Summary of Provincial Website Information - British Columbia

### British Columbia Ministry of Energy, Mines & Petroleum Resources

<http://www.em.gov.bc.ca/Mining/Geosurv/ARIS/>

Ministry Home

**Programs & Services**

Ministry News | Ministry Search | Reports & Publications | Site Map | Contacts

ARIS Assessment Reports

Contents

[Search ARIS Data](#)  
[More on ARIS](#)  
[Assessment Reports On-Line!](#)  
[Recently Released Reports](#)  
[Assessment Report Contacts](#)  
[FAME/Evalora BC Reports](#)  
[ARIS Data Download Request](#)  
[Review of Operations 1947-1997](#)  
[Assessment Report Distribution](#)  
[Summary & Regulations Checklist](#)  
[Products & Order Information](#)  
[Where to View Report Products](#)  
[View ARIS Index Maps](#)

**Other Links**

[ARIS Assessment Reports](#)  
[Bedrock Mapping](#)  
[Coal](#)  
[Educational Resources](#)  
[Exploration & Mines](#)  
[Geochemistry](#)  
[Geophysical Data](#)  
[Industrial Minerals](#)  
[MapPlace](#)  
[MINEFILE Mineral Inventory](#)  
[Mineral Properties Available](#)  
[Metallic Minerals](#)  
[Mineral Deposit Profiles](#)  
[Mineral Potential](#)  
[BCGS Partnerships](#)  
[MCMPC/IVIC Partnership](#)  
[Publications Catalogue](#)  
[Staff: Who Are We?](#)  
[Surface Geology & Hazards](#)  
[Terrain & Soil Maps](#)  
[What's New](#)

**ARIS**

**Assessment Report Indexing System**

**SEARCH**

[Reports On Line by Month](#)  
[Scanning Partnership Reports](#)  
[Download Products and Ordering](#)  
[Viewing Locations](#)  
[View ARIS Index Maps](#)  
[Contact Us](#)

[NEW! ARIS Map Builder](#)  
[Title Summary Form and Checklist](#)  
[Review of Operations \(1947-1997\)](#)  
[Coal Assessment Reports](#)  
[Mineral Tenure Act & Regs. Coal Act](#)

The British Columbia Geological Survey has over 26,000 approved mineral exploration assessment reports filed by the exploration and mining industry since 1947. These reports provide information on geological, geophysical, geochemical, drilling and other exploration-related activities [throughout B.C.](#)

ARIS (Assessment Report Indexing System) greatly assists users in locating specific assessment reports for viewing or downloading, and provides brief report summaries ([see ARIS Searches](#)), including the ability to import text files containing assessment report numbers.

The [MapPlace](#) also shows locations of assessment reports and provides links to the ARIS website and the original report PDF file. Visit the [MINEFILE](#) site for searching and information on mineral occurrences in BC.

For questions or more information on geology and minerals in British Columbia please contact [BC Geological Survey Mailbox](#) or use the [toll free number](#) (BC residents only).

Google

Assessment Reports

☒ Assessment Reports

☐ ARIS Database

Scanning Reports  
**96.0%**  
Completed

March 2008

Appendix 2

23

## Appendix 2: Summary of Provincial Website Information - Alberta

http://www.gov.ab.ca/home/index.cfm

Alberta

March 2008

Appendix 2

1

http://search.gov.ab.ca/query.html?col=gov&charset=iso-8859-1&ht=0&qt=geology&q=&qc=gov&pw=

Alberta

March 2008

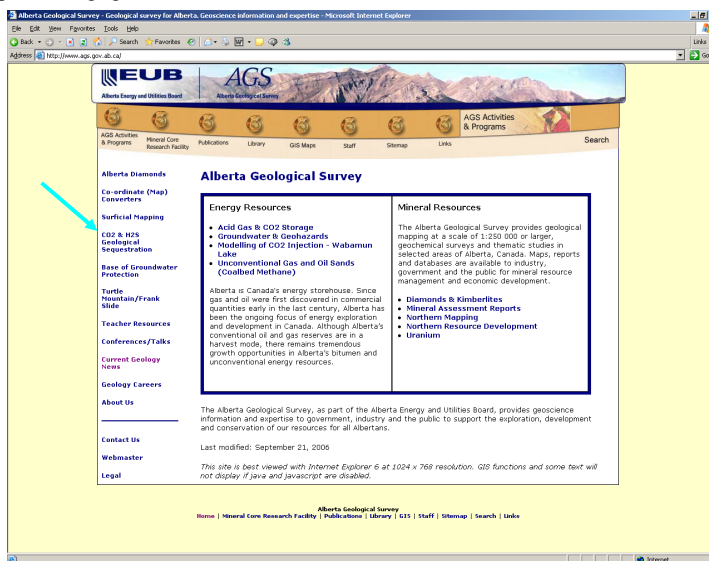
Appendix 2

2

## Appendix 2: Summary of Provincial Website Information - Alberta

### Alberta Energy and Utilities Board – Alberta Geological Survey

<http://www.ags.gov.ab.ca/>



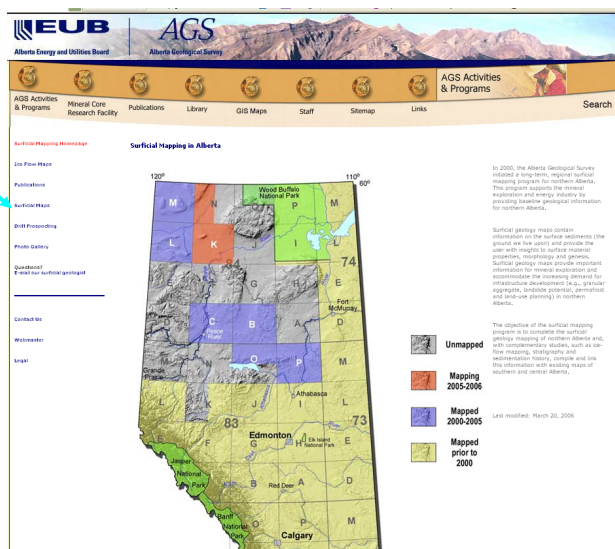
March 2008

Appendix 2

3

### Alberta Energy and Utilities Board – Alberta Geological Survey

[http://www.ags.gov.ab.ca/activities/surficial\\_mapping/surficial\\_mapping.html](http://www.ags.gov.ab.ca/activities/surficial_mapping/surficial_mapping.html)



March 2008

Appendix 2

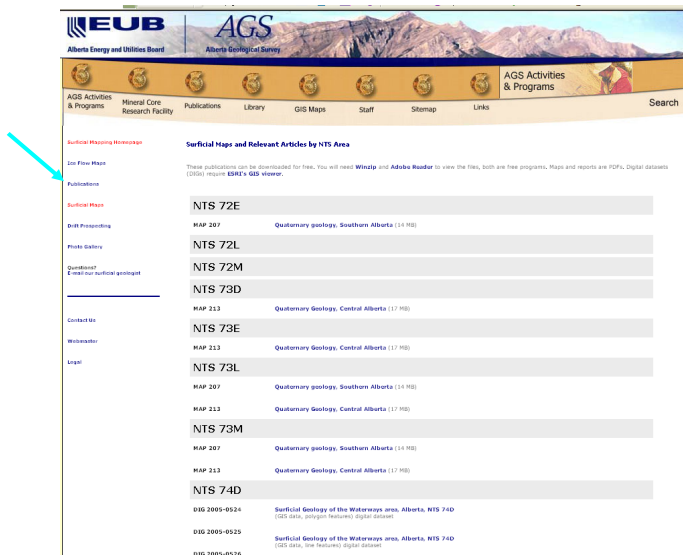
4



## Appendix 2: Summary of Provincial Website Information - Alberta

### Alberta Energy and Utilities Board – Alberta Geological Survey

[http://www.ags.gov.ab.ca/activities/surficial\\_mapping/surficial\\_maps.html](http://www.ags.gov.ab.ca/activities/surficial_mapping/surficial_maps.html)



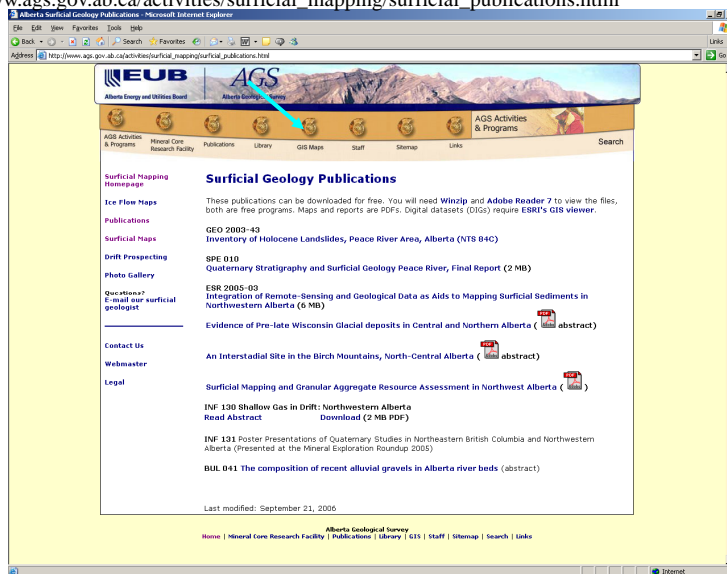
March 2008

Appendix 2

5

### Alberta Energy and Utilities Board – Alberta Geological Survey

[http://www.ags.gov.ab.ca/activities/surficial\\_mapping/surficial\\_publications.html](http://www.ags.gov.ab.ca/activities/surficial_mapping/surficial_publications.html)



March 2008

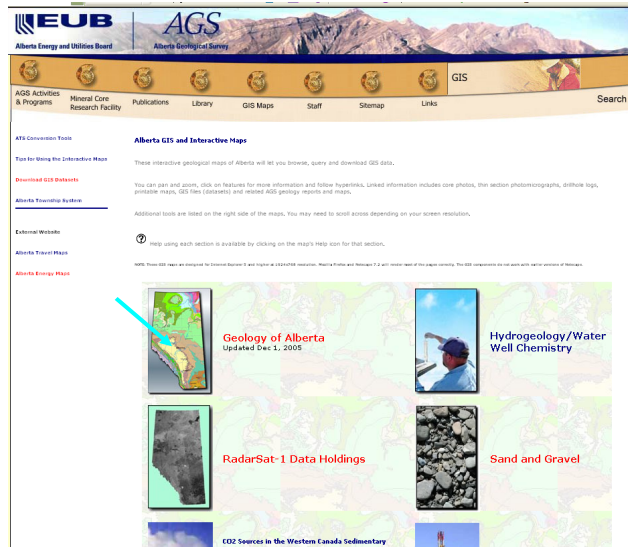
Appendix 2

6

## Appendix 2: Summary of Provincial Website Information - Alberta

### Alberta Energy and Utilities Board – Alberta Geological Survey

[http://www.ags.gov.ab.ca/GIS/gis\\_and\\_mapping.shtml](http://www.ags.gov.ab.ca/GIS/gis_and_mapping.shtml)



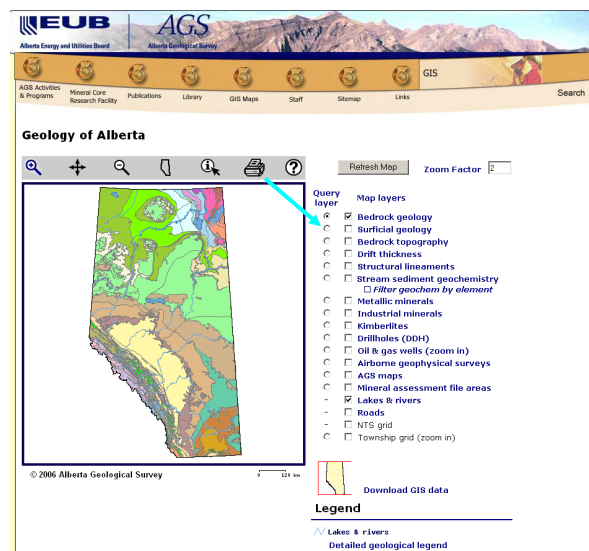
March 2008

Appendix 2

7

### Alberta Energy and Utilities Board – Alberta Geological Survey

[http://www.ags.gov.ab.ca/GIS/gis\\_and\\_mapping.shtml](http://www.ags.gov.ab.ca/GIS/gis_and_mapping.shtml)



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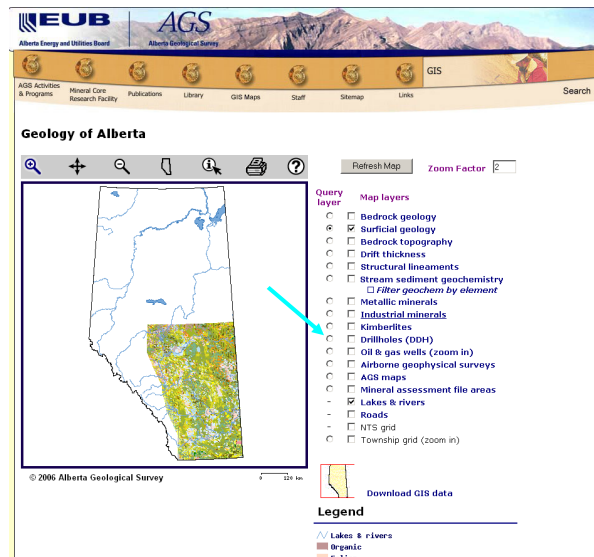
Appendix 2

8

## Appendix 2: Summary of Provincial Website Information - Alberta

### Alberta Energy and Utilities Board – Alberta Geological Survey

[http://www.ags.gov.ab.ca/GIS/gis\\_and\\_mapping.shtml](http://www.ags.gov.ab.ca/GIS/gis_and_mapping.shtml)



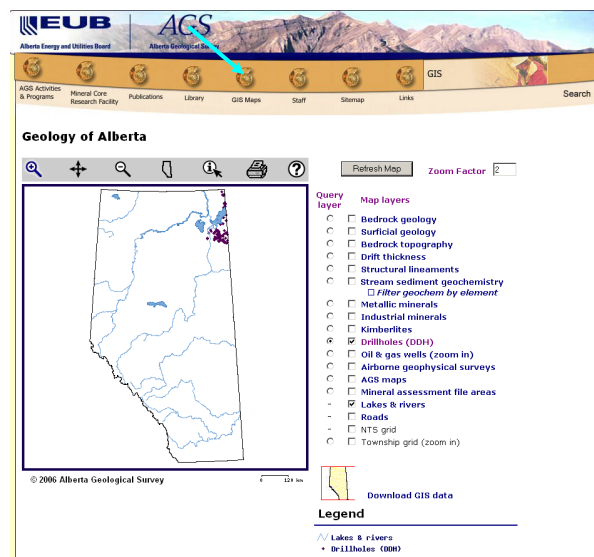
March 2008

Appendix 2

9

### Alberta Energy and Utilities Board – Alberta Geological Survey

[http://www.ags.gov.ab.ca/GIS/gis\\_and\\_mapping.shtml](http://www.ags.gov.ab.ca/GIS/gis_and_mapping.shtml)



March 2008

Appendix 2

10

## Appendix 2: Summary of Provincial Website Information - Alberta

### Alberta Energy and Utilities Board – Alberta Geological Survey

[http://www.ags.gov.ab.ca/GIS/gis\\_and\\_mapping.shtml](http://www.ags.gov.ab.ca/GIS/gis_and_mapping.shtml)



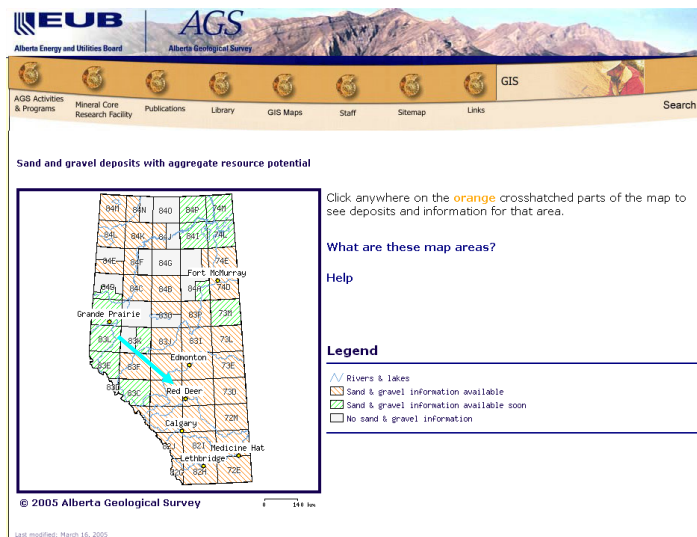
March 2008

Appendix 2

11

### Alberta Energy and Utilities Board – Alberta Geological Survey

[http://www.ags.gov.ab.ca/GIS/gis\\_and\\_mapping.shtml](http://www.ags.gov.ab.ca/GIS/gis_and_mapping.shtml)



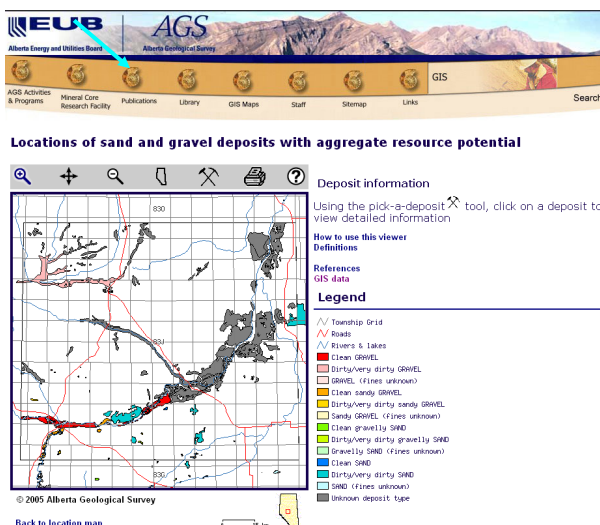
March 2008

Appendix 2

12

## Alberta Energy and Utilities Board – Alberta Geological Survey

[http://www.ags.gov.ab.ca/GIS/gis\\_and\\_mapping.shtml](http://www.ags.gov.ab.ca/GIS/gis_and_mapping.shtml)



March 2008

Appendix 2

13

## Alberta Energy and Utilities Board – Alberta Geological Survey

[http://www.ags.gov.ab.ca/publications/publications\\_alberta\\_geological\\_survey.shtml](http://www.ags.gov.ab.ca/publications/publications_alberta_geological_survey.shtml)

The screenshot shows the Alberta Geological Survey (AGS) Publications website. The top navigation bar includes links for AGS Activities & Programs, Mineral Core Research Facility, Publications, Library, GIS Maps, Staff, Storemap, and Links. A search bar is on the right. The main content area is titled "Alberta Geological Survey Publications". It includes a "New Publications" section, a "FAQs" section, and a "Contact Us" section. The "Publications" section is highlighted, showing a list of publication types: "Atlas of the Western Canada Sedimentary Basin", "Bulletins", "Digital Datasets", "Economic Geology Reports", "Earth Sciences Reports", "Geo-Note Reports", "Information Series", "Maps", "Memoirs", "Mineral Assessment Reports", "Open File Reports", "Reports", and "Special Reports". A "Search Publications By NTS" section is also present, with options for "Text Index (1:250 000 Map Area)" and "Graphical Index (1:250 000 Map Area)". A note at the bottom states: "Many of our reports can be downloaded for free." Below this, a section titled "Utilities You Will Need" lists "WinZip for the zip files" and "Adobe Reader 7 for the PDFs".

March 2008

Appendix 2

14

## Appendix 2: Summary of Provincial Website Information - Alberta

### Alberta Energy and Utilities Board – Alberta Geological Survey

[http://www.ags.gov.ab.ca/publications/publications\\_alberta\\_geological\\_survey.shtml](http://www.ags.gov.ab.ca/publications/publications_alberta_geological_survey.shtml)



#### Digital Datasets

DIG 2006-0050	Surficial geology of the Bitumount area, Alberta, NTS 74E (GIS data, polygon outline features) Alberta Research Council; Alberta Geological Survey; Bayrock, L.A., 2006.	Get ZIP (0.28 MB)
DIG 2006-0049	Surficial geology of the Bitumount area, Alberta, NTS 74E (GIS data, drumlins) Bayrock, L.A., 2006.	Get ZIP (0.10 MB)
DIG 2006-0048	Surficial geology of the Bitumount area, Alberta, NTS 74E (GIS data, point features) Bayrock, L.A., 2006.	Get ZIP (0.01 MB)
DIG 2006-0047	Surficial geology of the Bitumount area, Alberta, NTS 74E (GIS data, line features) Alberta Geological Survey; Alberta Energy and Utilities Board; Bayrock, L.A., 2006.	Get ZIP (0.05 MB)
DIG 2006-0046	Surficial geology of the Bitumount area, Alberta, NTS 74E (GIS data, polygon features) Alberta Research Council; Alberta Geological Survey; Bayrock, L.A., 2006.	Get ZIP (0.40 MB)
DIG 2006-0041	Quaternary geology and bedrock subcrop of the Cold Lake to Ft. McMurray area, Alberta - Subcrop edge of the McMurray Fm. - (1:250,000 scale gridded data) Andriashchik, L., 2006.	Get ZIP (0.02 MB)
DIG 2006-0040	Quaternary geology and bedrock subcrop of the Cold Lake to Ft. McMurray area, Alberta - Subcrop edge of the Clearwater Fm. - (1:250,000 scale gridded data) Andriashchik, L., 2006.	Get ZIP (0.02 MB)
DIG 2006-0039	Quaternary geology and bedrock subcrop of the Cold Lake to Ft. McMurray area, Alberta - Subcrop edge of the Grand Rapids Fm. - (1:250,000 scale gridded data) Andriashchik, L., 2006.	Get ZIP (0.03 MB)
DIG 2006-0038	Quaternary geology and bedrock subcrop of the Cold Lake to Ft. McMurray area, Alberta - Subcrop edge of the Joli Fou Fm. - (1:250,000 scale gridded data) Andriashchik, L., 2006.	Get ZIP (0.03 MB)
DIG 2006-0037	Quaternary geology and bedrock subcrop of the Cold Lake to Ft. McMurray area, Alberta - Subcrop edge of the Viking Fm. - (1:250,000 scale gridded data) Andriashchik, L., 2006.	Get ZIP (0.03 MB)
DIG 2006-0036	Quaternary geology and bedrock subcrop of the Cold Lake to Ft. McMurray area, Alberta - Subcrop edge of the Base of Fish Scales - (1:250,000 scale gridded data) Andriashchik, L., 2006.	Get ZIP (0.03 MB)
DIG 2006-0035	Quaternary geology and bedrock subcrop of the Cold Lake to Ft. McMurray area, Alberta - Subcrop edge of the Second White Specks Fm. - (1:250,000 scale gridded data) Andriashchik, L., 2006.	Get ZIP (0.03 MB)

March 2008

Appendix 2

15

## Appendix 2: Summary of Provincial Website Information - Saskatchewan





## Appendix 2: Summary of Provincial Website Information - Saskatchewan

**Saskatchewan**  
<http://www.gov.sk.ca/deptsorgs/>

Location: [Home](#) > Departments & Organizations

**Departments & Agencies**

All Departments & Organizations | [Departments Only](#)  
[Agencies, Boards, and Commissions Only](#) | [Crown Corporations Only](#)

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

**Department / Agency**

**A** [return to top](#)

Aboriginal Affairs - see [First Nations and Métis Relations](#)  
ACRE - see [Action Committee on the Rural Economy](#)  
[Action Committee on the Rural Economy](#)  
[Advanced Education and Employment](#)  
[Agri-Food Council](#)  
[Agricultural Credit Corporation Of Saskatchewan](#)

**I** [return to top](#)

Immigration - see [Advanced Education and Employment](#)  
[Industry and Resources](#)  
[Information and Privacy Commissioner](#)  
[Information Services Corporation of Saskatchewan \(ISC\)](#)  
[Information Technology Office](#)  
[Investment Saskatchewan Inc.](#)  
ISC - see [Information Services Corporation of Saskatchewan \(ISC\)](#)

March 2008 Appendix 2 3

**Industry & Resources of Saskatchewan**  
<http://www.ir.gov.sk.ca/>

 **Industry and Resources**

[Search](#)  
[Who Does What?](#)  
[Telephone Book](#)  
[Did You Find It?](#)

**News & Archives**  
Tuesday, September 26, 2006

**BizPaL**  
Your source for online  
Business Permits and Licences

- Business and Co-operative Development
- Investing In Saskatchewan
- Community Economic Development
- Promoting Saskatchewan
- Programs and Services
- Department Databases

  
Some of the lowest land and rent costs in Canada

- Saskatchewan Facts
- Key Economic Sectors
- Saskatchewan's Oil & Gas Resources
- Saskatchewan's Mineral Resources
- Publications and Forms
- Department Information

 **2006-2007 Saskatchewan Provincial Budget**  
Performance Plan  
Industry and Resources

March 2008 Appendix 2 4



## Appendix 2: Summary of Provincial Website Information - Saskatchewan

### Industry and Resources of Saskatchewan

<http://search.gov.sk.ca/query.html?charset=iso-8859-1&ht=0&q=&q=&pw=100%25&ws=0&qm=0&st=1&nh=25&lk=1&rf=0&rq=0&si=0&qt=Sand+%26+Gravel+Act&qp=site%3Awww.qp.gov.sk.ca&col=actsregs&col=govsites&col=store>



Location: [Home](#) > [Search](#)

#### Results for 'Sand & Gravel Act'

[Start new search](#) [Search these results](#)

Search for:

In:

Or, limit your search to documents of the following types:  
☒ Acts & Regulations ☒ General Information & Documents ☐ News Releases ☒ Publications

[Help](#) [Advanced](#)

Results for: Sand & Gravel Act

Results 1 - 25 for: Sand & Gravel Act 7210 results found, top 500 sorted by relevance

[score using date](#) [hide summaries](#)

[G1200143 p65](#)  
... COUNCIL ... 1216 The Government Organization **Act** ... 1216 The Provincial Lands **Act** ... 1223 MINISTER'S ORDERS ... 1225 ...  
<http://www.qp.gov.sk.ca/documents/gazette/part1/2001/g1200143.pdf> - 212.5KB - Acts & Regulations, Publications

March 2008

Appendix 2

5

### Industry and Resources of Saskatchewan

<http://search.gov.sk.ca/query.html?charset=iso-8859-1&ht=0&q=&q=&pw=100%25&ws=0&qm=0&st=1&nh=25&lk=1&rf=0&rq=0&si=0&qt=Sand+%26+Gravel+Act&qp=&col=actsregs&col=govsites&col=store>

#### Results for 'Sand & Gravel Act'

[Start new search](#) [Search these results](#)

Search for:

In:

Or, limit your search to documents of the following types:  
☒ Acts & Regulations ☒ General Information & Documents ☐ News Releases ☒ Publications

[Help](#) [Advanced](#)

Results for: Sand & Gravel Act

Results 1 - 25 for: Sand & Gravel Act 29630 results found, top 500 sorted by relevance

[score using date](#) [hide summaries](#)

**S-5 - Sand and Gravel Act**  
... Location: Home > Publications Centre > Queen's Printer > S-5 - **Sand and Gravel Act** ... S-5 - **Sand and Gravel Act** ...  
<http://www.publications.gov.sk.ca/details.cfm?p=874> - 10.5KB - Publications

[Sand and Gravel Policy](#)  
... **Sand and Gravel** Policy ... Procedures and Charges for **Sand and Gravel** Leases ...  
[http://www.agr.gov.sk.ca/docs/CrownLandsPastures/Municipal\\_government\\_and\\_Crown\\_Lands/Sand&Gravel.asp?printversion=1](http://www.agr.gov.sk.ca/docs/CrownLandsPastures/Municipal_government_and_Crown_Lands/Sand&Gravel.asp?printversion=1) - 24.7KB - General Information & Documents

March 2008

Appendix 2

6

## Mineral Resources of Saskatchewan

<http://www.publications.gov.sk.ca/details.cfm?p=874>

Location: [Home](#) > [Publications Centre](#) > [Queen's Printer](#) > S-5 - Sand and Gravel Act

**Publications Centre** – central access to government and other Saskatchewan publications

---

### S-5 - Sand and Gravel Act

**Description:**

An Act respecting Sand and Gravel and Certain other Minerals  
  
 Chapter S-5 of The Revised Statutes of Saskatchewan, 1978 (effective February 26, 1979).

[Open Document](#)

**Document ID:** 874  
**Language:** EN  
**Department SKU:** S-5

**Queen's Printer**  
 B19, 3085 Albert Street  
 Regina, SK  
 S4S0B1, Canada  
 Tel: (306) 787-6884  
 Toll Free: (800) 226-7302  
 Fax: (306) 798-0835  
 Web Site: <http://www.qp.gov.sk.ca/>

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Format	Price	Purchase
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The following are some but certainly not all subjects related to the currently displayed product

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  - [View Related Documents](#)
  - [View Related Legislation](#)
- **Sand**
  - [View All Related Publications](#)
  - [View Related Documents](#)
  - [View Related Legislation](#)

March 2008
Appendix 2
7

## Mineral Resources of Saskatchewan

<http://www.qp.gov.sk.ca/documents/English/Statutes/Statutes/S5.pdf>

# The Sand and Gravel Act

being

Chapter S-5 of *The Revised Statutes of Saskatchewan, 1978*  
(effective February 26, 1979).

March 2008
Appendix 2
8

Appendix 2: Summary of Provincial Website Information - Saskatchewan

### Industry and Resources of Saskatchewan

http://search.gov.sk.ca/query.html?charset=iso-8859-1&ht=0&q=Sand+Gravel+Act&qp=&col=actsregs&col=govsites&col=store

location Home Search

Results for 'Sand & Gravel Act'

Start new search Search these results

Search for:  
Sand & Gravel Act Go!

In:  
All Government of Saskatchewan Websites

Or, limit your search to documents of the following types:  
☒ Acts & Regulations ☒ General Information & Documents ☐ News Releases ☒ Publications

Help Advanced

Results for: Sand & Gravel Act

Document count: Sand (3853) Gravel (474) Act (28736) Sand &... (71)

Results 1 - 25 for: Sand & Gravel Act

29630 results found, top 500 sorted by relevance

score using date hide summaries

Result Pages: 1 2

S-5 - Sand and Gravel Act

... Location: Home > Publications Centre > Queen's Printer > S-5 - Sand and Gravel Act ... S-5 - Sand and Gravel Act ...

http://www.publications.gov.sk.ca/details.cfm?p=874 - 10.5KB - Publications

88%

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Sand and Gravel Policy

... Sand and Gravel Policy ... Procedures and Charges for Sand and Gravel Leases ...

March 2008

Appendix 2

9

62%

11.4 KB

### Mineral Resources of Saskatchewan

http://www.agr.gov.sk.ca/docs/CrownLandsPastures/Municipal\_government\_and%20\_Crown\_land/Sand&Gravel.asp?prnterversion=1

Sand and Gravel Policy

Effective: November 1, 1999  
Revised: November 20, 2001

Overview of Policy Objectives

The sand and gravel policy establishes the priority rights that Saskatchewan Highways and Transportation and rural municipalities are given to explore for and develop sand and gravel deposits under Crown lands. Commercial and private development of sand and gravel is accommodated when Saskatchewan Highways and Transportation and rural municipalities have declined their respective priority to utilize the deposits.

Proposals to develop deposits will take into account environmental or other unique conditions pertaining to the site. Reclamation plans to restore the site to an acceptable condition are a requirement.

The policy encourages the commercial development of sand and gravel on an as needed basis including requirements for the ongoing use of the quarriable area.

The policy stipulates the record keeping and reporting requirements of lessees.

Eligibility

Individuals, partnerships, corporations, municipalities or agencies who wish to conduct exploration activities for sand and gravel deposits on Crown land or who wish to develop sand and gravel deposits for commercial or public purposes are eligible to apply for exploration permits and sand and gravel leases.

Applicants must have all accounts with the Department in acceptable standing before a permit or lease is issued and must have complied with the terms and conditions of previous permits and leases eligible for an agreement.

Procedures and Charges for Exploration Permits

- With each application, a proposal is required that includes the legal description of the lands involved, the scope of the operation and a reclamation plan for the land disturbed by the exploration.
- If the land is subject to an agricultural lease, the applicant is required to obtain the consent and conditions of entry from the agricultural lessee of the land. Conditions of entry should include roadways, fencing and gates. The applicant is responsible for negotiating compensation for any damages directly with the agricultural lessee.

March 2008

Appendix 2

10

5

Appendix 2: Summary of Provincial Website Information - Saskatchewan

Industry & Resources of Saskatchewan

http://search.gov.sk.ca/query.html?charset=iso-8859-1&ht=0&q=&qc=&pw=100%25&ws=0&qm=0&st=1&nh=25&lk=1&rf=0&rq=0&si=0&qt=Sand+%26+Gravel+Act&qp=&col=actsregs&col=govsites&col=store

Location Home Search

Results for 'Sand & Gravel Act'

Start new search Search these results

Search for:  
Sand & Gravel Act  
Go!

In:  
All Government of Saskatchewan Websites

Or, limit your search to documents of the following types:  
☒ Acts & Regulations ☒ General Information & Documents ☐ News Releases ☒ Publications

Help Advanced

Results for: Sand & Gravel Act

Document count: Sand (3853) Gravel (474) Act (28736) Sand &... (71)

Results 1 - 25 for: Sand & Gravel Act 29630 results found, top 500 sorted by relevance

score using date hide summaries

Result Pages: 1 2

S-5: Sand and Gravel Act

... Location: Home > Publications Centre > Queen's Printer > S-5 - Sand and Gravel Act ... S-5 - Sand and Gravel Act ...  
http://www.publications.gov.sk.ca/details.cfm?p=874 - 10.5KB - Publications

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Sand and Gravel Policy

... Sand and Gravel Policy ... Procedures and Charges for Sand and Gravel Leases ...  
March 2008

62%  
11 Jul 08

Appendix 211

Industry & Resources of Saskatchewan

http://www.gov.sk.ca/whodoeswhat/

Location Home Who Does What A

Who Does What "A"

Subjects are listed alphabetically. Select a letter below to move through the list.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

A

Aboriginal

Aboriginal Affairs

Aboriginal Justice Review Committee

Access to Information

accessibility and building standards

accreditation

acid rain

Acts and publications

Addiction

Addictions Awareness Week

Administrator of Estates (Public Trustee)

adoption

adult

Adult Basic Education

Adult Day Care Program

Advisory Committee on Saskatchewan - Ukraine Relations

advisory services

aerial photography

aerial photos

Affirmative Action

Agri - Food Council

Agribusiness Development

agricultural

agricultural biotechnology

agricultural implements

Agricultural Implements Board

Agricultural Land Lease disputes

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March 2008Appendix 212

6

## Appendix 2: Summary of Provincial Website Information - Saskatchewan

### Industry & Resources of Saskatchewan

<http://www.gov.sk.ca/whodoeswhat/?r>

[registration / investments](#)  
[registration / stock brokers](#)  
[regulations](#)  
[regulatory reform](#)  
[Rehabilitation Programs](#)  
[reliability and maintainability reports](#)  
[remedies / investments](#)  
[rent](#)  
[rental information \(residential\)](#)  
[Rentalsman, landlord / tenant information](#)  
[repair](#)  
[repayment of debt](#)  
[reporting issuer](#)  
[research](#)  
[research and development](#)  
[research and development housing grant](#)  
[research and testing](#)  
[research parks](#)  
[reserve a campsite](#)  
[reserves](#)  
[reservoir maps](#)  
[reservoirs](#)  
[Resident Artist Program](#)  
[Residential Recovery Homes](#)  
[Residential Rehabilitation Assistance Program \(RRAP and RRAP\)](#)  
[Residential Services](#)  
[Residential Tenancies Act](#)  
[resource data / Forestry](#)  
[resource lands](#)

March 2008
Appendix 2
13

### Industry & Resources of Saskatchewan

[http://www.gov.sk.ca/whodoeswhat/subject.html?r/\\_research](http://www.gov.sk.ca/whodoeswhat/subject.html?r/_research)

Location: [Home](#) > [Who Does What](#) > [research](#)

**Who Does What "research"**

Organizations Responsible for research

Subject	Organization	Contact	Email
	<a href="#">Saskatchewan Research Council</a>	(306) 933-5400	<a href="#">Email Saskatchewan Research Council</a>
agbiotech	<a href="#">Agriculture and Food</a>	(306) 787-5140	<a href="#">Email Agriculture and Food</a>
biotechnology	<a href="#">Industry and Resources</a>	Toll-free: (866) 727-5427	<a href="#">Email Industry and Resources</a>
environmental	<a href="#">Environment</a>	Toll-free: (800) 567-4224	<a href="#">Email Environment</a>
soil, crop, pests	<a href="#">Agriculture and Food</a>	(306) 787-5140	<a href="#">Email Agriculture and Food</a>
transportation	<a href="#">Highways and Transportation</a>	(306) 787-4800	<a href="#">Email Highways and Transportation</a>

March 2008
Appendix 2
14

## Appendix 2: Summary of Provincial Website Information - Saskatchewan

### Industry & Resources of Saskatchewan

<http://www.gov.sk.ca/deptsorgs/overviews/?38>

location: Home > Departments & Agencies > Saskatchewan Research Council Overview

#### Saskatchewan Research Council Overview

Take me to the website of [Saskatchewan Research Council](#).

Saskatchewan Research Council is a Saskatchewan-based technology corporation, owned by the province. It provides contract research, technology transfer and analytical services to companies in Saskatchewan and around the world. To carry out its activities, the Corporation provides services in the areas of Analytical Services, Environment, Fermentation Technologies, Genetics, Mineral Exploration, Petroleum, Process Development and Small Industry Services.

**Mandate**

Saskatchewan Research Council supports applied research and assists clients in the private and public sectors in the transfer and commercialization of technology to support economic development.

SRC's mission is to help the people of Saskatchewan strengthen the economy with quality jobs and a secure environment. We do this through research, development, and the transfer of innovative scientific and technological solutions, applications and services.

SRC creates wealth through the responsible application of science and technology to assist Saskatchewan industry to be globally competitive.

March 2008

Appendix 2

15

### Saskatchewan Research Council

<http://www.src.sk.ca/>

**SRC**  
smart science solutions

Saskatchewan Research Council gives the people of Saskatchewan a competitive edge in the global economy by leading in researching, developing and commercializing technological solutions, applications and services.

WHAT'S NEW | PUBLICATIONS | CONTACT US | SEARCH | SUSTAINABILITY | FOR KIDS

About SRC | Research & Technology | Labs/Facilities | Partnering | Our People | Careers

Agriculture, Biotechnology & Food  
Energy  
Environment and Forestry  
Information Technology  
Manufacturing/Value-Added Processing  
Mining and Minerals

**SRC WHAT'S NEW**

**North America's Newest Biofuels Test Centre Opens**  
The Saskatchewan Research Council (SRC) officially opened its Biofuels Test Centre in Regina today... [more](#)

**SRC Newsclips**  
The Fall, 2006 issue of SRC Newsclips is now available... [more](#)

**SRC Develops Ethanol-Fuelled Tractor**  
The Saskatchewan Research Council (SRC) has announced its development of a 7110 Deutz tractor modified to operate on 100% hydrated ethanol... [more](#)

**Slurry Pipeline Design and Operation Courses - October 2-5, 2006**  
The Saskatchewan Research Council (SRC) and Paterson and Cooke Consulting Engineers (PCC) have joined forces to offer a comprehensive course in slurry pipeline design and operation... [more](#)

**2005/06 Annual Report**  
The 2005/06 SRC Annual Report is now available... [more](#)

March 2008

Appendix 2

16

## Appendix 2: Summary of Provincial Website Information - Saskatchewan

### Saskatchewan Research Council

[http://www.src.sk.ca/html/research\\_technology/environment/index.cfm](http://www.src.sk.ca/html/research_technology/environment/index.cfm)



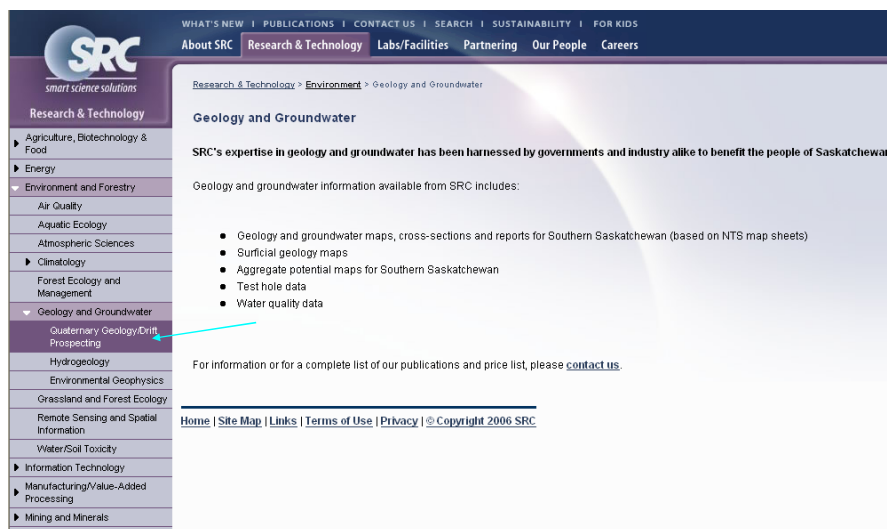
March 2008

Appendix 2

17

### Saskatchewan Research Council

[http://www.src.sk.ca/html/research\\_technology/environment/geo\\_groundwater/index.cfm](http://www.src.sk.ca/html/research_technology/environment/geo_groundwater/index.cfm)



March 2008

Appendix 2

18





## Appendix 2: Summary of Provincial Website Information - Saskatchewan

**Mineral Resources of Saskatchewan**

<http://www.ir.gov.sk.ca/Default.aspx?DN=3541,3538,3385,2936,Documents>

Home / Mineral Resources / Geological Info / Resources

### Mineral Resources of Saskatchewan

**Metals:**

- Base Metals (Copper, Zinc, Lead and Nickel)
- Gold
- Iron
- Uranium

**Industrial Minerals:**

- Bentonite
- Building Stone
- Brines
- Clays
- Kovulin
- Potash
- Salt
- Silica Sands
- Sodium Sulphate
- Sylvite

**Fuel:**

- Coal
- Oil
- Natural Gas

**Other:**

- Diamonds
- Rare Earth Elements

Open the [Mineral Resource Map of Saskatchewan](#).

Link to the [Geological Atlas of Saskatchewan](#).

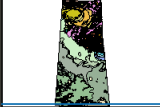
March 2008 Appendix 2 21

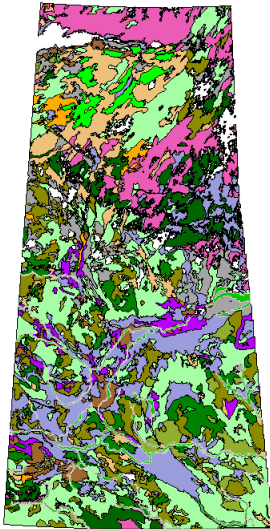
**Mineral Resources of Saskatchewan**

<http://www.infomaps.gov.sk.ca/website/SIR%5FGeological%5FAtlas/viewer.htm>

Geological Atlas of Saskatchewan

Download AVL and LVR Files    How to use this site





**LAYERS**

- ☒ All Layers
- ☐ Precambrian Map Index
- ☐ Mine Locations
- ☐ Mineral Deposits Index
- ☐ Crown Dispositions
- ☐ Indian Reserves
- ☐ Mineral Assessment File
- ☐ DDH Core Collection - R
- ☐ DDH Core Collection - L
- ☐ Kimberlite Occurrences
- ☐ Kimberlite Indicator Min
- ☐ FALC Kimberlites
- ☐ Geochronology (Age Da
- ☐ Lithogeochemistry Anal
- ☐ Lake Sediment Geocher
- ☐ LITHOPROBE Lines
- ☐ NATGAM Spectrometer
- ☐ Digital Aeromagnetic Su
- ☐ Representative Areas N
- ☐ Oil and Gas Data
- ☐ Topographical Base Map
- ☐ Regional Geological Map
- ☐ 1:250,000 Scale - Faults
- ☐ Lake Sediment Geocher
- ☐ Geophysical Survey Im
- ☐ 1:250,000 Scale - Geol
- ☒ 1:1 Million Scale - Geol
- ☐ Mackenzie Dykes
- ☐ Faults
- ☐ Surficial Geology Syn
- ☐ Surficial Geology
- ☐ Bedrock Geology

**Refresh Map**

☒ Auto Refresh

Help:

Click on layer name to make it

2006 Gov. of Saskatchewan - Dept. of Industry and Resources 375720m

March 2008 Appendix 2 22

## Appendix 2: Summary of Provincial Website Information - Saskatchewan

### Mineral Resources of Saskatchewan

<http://www.ir.gov.sk.ca/Default.aspx?DN=3541,3538,3385,2936,Documents>

HOME | Industry and Resources

#### Geological Services and Mineral Resource Information

Inside...

Home / Mineral Resources / Geological Info / Resources

#### Mineral Resources of Saskatchewan

**Metals:**

- Base Metals (Copper, Zinc, Lead and Nickel)
- Gold
- Iron
- Uranium

**Industrial Minerals:**

- Bentonite
- Building Stone
- Brines
- Clays
- Gypsum
- Potash
- Salt
- Silica Sands
- Sodium Sulphate
- Sulfate

**Fuel:**

- Coal
- Oil
- Natural Gas

**Other:**

- Diamonds
- Rare Earth Elements

Open the [Mineral Resource Map of Saskatchewan](#).

Link to the [Geological Atlas of Saskatchewan](#).

March 2008

Appendix 2

23

### Mineral Resources of Saskatchewan

<http://www.ir.gov.sk.ca/Default.aspx?DN=3385,2936,Documents>

HOME | Industry and Resources

#### Saskatchewan's Mineral Resources

Inside...

News & Archive  
Tuesday, September 1, 2009

What's New  
Click here for the latest mining news

Home / Mineral Resources

The Exploration and Geological Services Division promotes mineral exploration and development by maintaining a geoscience database, and administering the disposition of metallic and industrial mineral claims on Crown lands.

Saskatchewan Industry and Resources also manages its mineral resources through the administration of royalty and tax systems, and collecting and maintaining production and sales information.

**Plan to attend the 37th annual Saskatchewan Geological Survey Open House November 27th to 29th, 2006 in Saskatoon, Saskatchewan.**

#### Contents

**What's New**  
Latest news, information and product updates.

**Geological Services and Mineral Resource Information**  
Department information and educational source on Saskatchewan's geology and mineral resources.

**Geoscience and Mineral Exploration Publications and Products**  
**On-line Publications Centre**, mineral exploration information, digital data, lapsed mineral dispositions, mines list, and more...

**Geological Atlas of Saskatchewan**  
Link to the [Geological Atlas](#) website to access maps and data on economic and general geology of Saskatchewan.

**Guidelines, Forms & Regulations**  
This section contains guidelines, circulars, forms and regulations related to mineral regulations and taxation and exploration incentives.

**Mineral Disposition Maps and Database**  
Active mineral disposition maps and database available for viewing and download.

**Royalty and Tax Information**  
In this section, you will find a variety of information circulars pertaining to coal, metallic/industrial minerals, potash and uranium royalties and taxes in Saskatchewan.

March 2008

Appendix 2

24

### Mineral Resources of Saskatchewan

http://www.ir.gov.sk.ca/Default.aspx?DN=3572,3385,2936,Documents

HOME

Industry and Resources

News & Archive

Tuesday, September 2, 2008

## Saskatchewan's Mineral Resources

Inside

Home / Mineral Resources / Dispositions

### Mineral Disposition Maps and Database

**Disclaimer**

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Proceeding beyond this point constitutes an acknowledgement that you have read the contents of the Disclaimer above and agree to the terms and conditions set out therein.

The attached Saskatchewan Mineral Disposition Maps feature active mineral dispositions as administered by [The Mineral Disposition Regulations, 1986](#).

You may view and/or print The Saskatchewan Mineral Disposition Maps by individual 1:250,000 scale map sheets (Provincial Map), or by the regional north (unsurveyed) and south (surveyed) compilation map sheets. Regional north and south compilation sheets provide true co-ordinates for dispositions. The datum used for all maps are in UTM NAD83 Extended Zone 13.

You may view and/or download the Search Book in Excel format or in TXT or Zip format. Disposition number is a unique number and usually has 6 digits "S-135372". For those having on digits, a space is added in front of the number, "S- 96905".

To view the maps, click on the Autodesk Express icon to download the viewer. This is a one time download. If you have the viewer downloaded before, you don't need to download it again.

To view and/or print individual 1:250,000 Mineral Disposition map sheets, please go to the provincial [Saskatchewan map](#), which has been overlain with the 1:250,000 NTS grid for reference and select your area of interest by clicking on the desired NTS map sheet. The desired NTS map sheet will be displayed on the screen, right-click the mouse to get the drawn-down menu and select your choices for zoom or pan...etc. The Print option is under the File command at the top of the screen.

To view and/or print selected areas from the regional north and south compilation maps please select [north](#) or [south](#). Again, right-click the mouse to get the drawn-down menu and select your choices. The Print option is under the File command at the top of the screen.

Business and Co-operative Development

Investing in Saskatchewan

Community Economic Development

Promoting Saskatchewan

Programs and Services

Department Databases

Saskatchewan Facts

Key Economic Sectors

Saskatchewan's Oil & Gas Resources

Saskatchewan's Mineral Resources

Publications and Forms

Department Information

Did You Know?

Saskatchewan has the lowest land and rent costs in Canada.

SaskNetWork

Discover how far you can go in Saskatchewan

March 2008

Appendix 2

25

### Mineral Resources of Saskatchewan

http://www.ir.gov.sk.ca/Default.aspx?DN=3716,3572,3385,2936,Documents

HOME

Industry and Resources

News & Archives

Friday, August 25, 2006

## Mineral Disposition Maps and Database

Home / Mineral Resources / Dispositions / SaskMap

### Saskatchewan Map

Business and Co-operative Development

Investing in Saskatchewan

Community Economic Development

Promoting Saskatchewan

Programs and Services

Department Databases

Saskatchewan Facts

Key Economic Sectors

Saskatchewan's Oil & Gas Resources

Saskatchewan's Mineral Resources

Publications and Forms

Department Information

Did You Know?

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Discover how far you can go in Saskatchewan

March 2008

Appendix 2

26

13

## Appendix 2: Summary of Provincial Website Information - Saskatchewan

### Mineral Resources of Saskatchewan

<http://www.ir.gov.sk.ca/Default.aspx?DN=3087,2936,Documents>

HOME Industry and Resources

Business and Co-operative Development  
Investing In Saskatchewan  
Community Economic Development  
Promoting Saskatchewan  
Programs and Services  
Department Databases

Saskatchewan Facts  
Key Economic Sectors  
Saskatchewan's Oil & Gas Resources  
Saskatchewan's Mineral Resources  
**Publications and Forms**  
Department Information

Did You Know?  
Saskatchewan has the lowest land and rent costs in Canada.

#### Publications and Forms

Home / Publications and Forms

##### Contents

**Saskatchewan Action Plan for the Economy**  
The *Saskatchewan Action Plan for the Economy* presents a broad vision that builds on our strengths and economic momentum to launch the province into a second century of opportunity.

**Department Publications**  
Many of the publications produced and/or distributed by the department are available to the public at no charge.

**Investor's Guide**  
These files provide an overview of the province and information about doing business in Saskatchewan's six key economic sectors.

**Fact Sheets**  
This section contains PDF files of our Saskatchewan Fact Sheets.

**Forms**  
This page contains a variety of forms that are available on this site.

**Geoscience and Mineral Exploration Publications and Products**  
Geological reports, maps, digital products available for viewing, downloading and ordering.

**Summary of Investigations**  
Results of geoscience field projects carried out by Saskatchewan Industry and Resources and other geoscience investigators who were active in Saskatchewan.

**Top 100 Companies**  
This is a list of Saskatchewan's Top 100 businesses (August 2005).

**Major Projects Inventory**  
This inventory lists major projects in Saskatchewan, valued at \$2 million or greater, that are in the planning, design or construction phases.

News & Archives  
Tuesday, September 25  
**Northern Overtim Exemption**  
Click here for more information

March 2008

Appendix 2

27

### Mineral Resources of Saskatchewan

<http://www.ir.gov.sk.ca/Default.aspx?DN=3440,3385,2936,Documents>

HOME Industry and Resources

Business and Co-operative Development  
Investing In Saskatchewan  
Community Economic Development  
Promoting Saskatchewan  
Programs and Services  
Department Databases

Saskatchewan Facts  
Key Economic Sectors  
Saskatchewan's Oil & Gas Resources  
Saskatchewan's Mineral Resources  
**Publications and Forms**  
Department Information

Did You Know?  
Saskatchewan has the lowest land and rent costs in Canada.

**SaskNetWork**  
Discover how far you can go in Saskatchewan

#### Saskatchewan's Mineral Resources

Home / Mineral Resources / Geoscience Pubs

##### Geoscience and Mineral Exploration Publications and Products

##### Contents

**Publications Centre**  
On-line search and order centre for geoscience publications.

**Digital Products**  
Digital geoscience reports and databases available for download and/or ordering.

**Summary of Investigations**  
Results of geoscience field projects carried out by Saskatchewan Industry and Resources and other geoscience investigators who were active in Saskatchewan.

**Geological Reports, Miscellaneous Reports and Maps**  
A collection of reports, miscellaneous reports and maps on the geology of Saskatchewan published by Saskatchewan Industry and Resources.

**Open File Reports and Maps**  
A collection of Open File reports and maps on the geology of Saskatchewan published by Saskatchewan Industry and Resources.

**Saskatchewan Exploration and Development Highlights**  
Most current information on what's happening in Saskatchewan mineral exploration and development.

**Proposal for Digital Assessment Work Submissions**  
The attached discussion paper outlines proposed changes to *The Mineral Disposition Regulations, 1986*, that would require assessment work reports to be submitted in digital, rtf paper format. Comments from industry on this proposal are requested.

**REOPENING of Mineral Dispositions**  
Notice of the areas that will become available under the Mineral Disposition Regulations, 1986.

**Saskatchewan Properties Available**  
Saskatchewan mineral properties available for option and/or joint venture

**Saskatchewan Mineral Exploration Permits**  
List of map sheets that are eligible for mineral prospecting permits.

**Saskatchewan Operating Mines List**  
List of operating mines in Saskatchewan including company contact information.

**Mineral Poster Series**  
Mineral posters available free of charge.

News & Archives  
Tuesday, September 25  
**A New Century of Opportunity**

March 2008

Appendix 2

28

## Appendix 2: Summary of Provincial Website Information - Saskatchewan


### Mineral Resources of Saskatchewan

<http://www.ir.gov.sk.ca/default.aspx?DN=4477,3440,3385,2936,Documents>

HOME

Industry and Resources

News & Archives



Business and Co-operative Development

Investing in Saskatchewan

Community Economic Development

Promoting Saskatchewan

Programs and Services

Department Databases

Saskatchewan Facts

Key Economic Sectors


Saskatchewan's Oil & Gas Resources

**Saskatchewan's Mineral Resources**


Publications and Forms

Department Information

Did You Know?



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Discover how far you can go in Saskatchewan

[Click here for more information](#)

Geoscience and Mineral Exploration Publications and Products

Inside

Home / Mineral Resources / Geoscience Publications / Geological Reports, Miscellaneous Reports and Maps

#### Geological Reports, Miscellaneous Reports and Maps

This collection of downloadable reports, miscellaneous reports and maps on the geology of Saskatchewan were produced by converting scanned original paper documents published by Saskatchewan Industry and Resources to PDF format. **(NOTE: some file sizes are large and may take an extended amount of time to download or display depending on your internet connection speed; file sizes are displayed beside each PDF attachment)**

Oversized figures, plates, and maps are included as separate PDF files.

Due to the scanning and PDF conversion process, photographs and some figures may be of lesser quality than the original paper documents.

To order the original paper documents go to the [online Publications Centre](#).

*(This site is a work in progress, more documents will be added as they become available)*

#### Contents

##### Miscellaneous Reports and Maps

Report 1

The Geology of the Waddy Lake Area by A.R. Byers - 1948

Report 2

Radioactive Occurrences in the Black Lake Area by M. E. Hriskevich - 1949

Report 3

The Geology of the Windrum Lake Area by M.L. Miller - 1949

Report 4

The Geology of the Stanley Area by J.B. Mawdsley and F.F. Groat - 1951

Report 5

The Geology of the Charlebois Lake Area by J.B. Mawdsley - 1950

Report 6

Natural Sodium Sulphate in Saskatchewan by R.V. Tomkins - 1954

Report 7

Clay Resources of Saskatchewan by W.G. Worcester - 1950

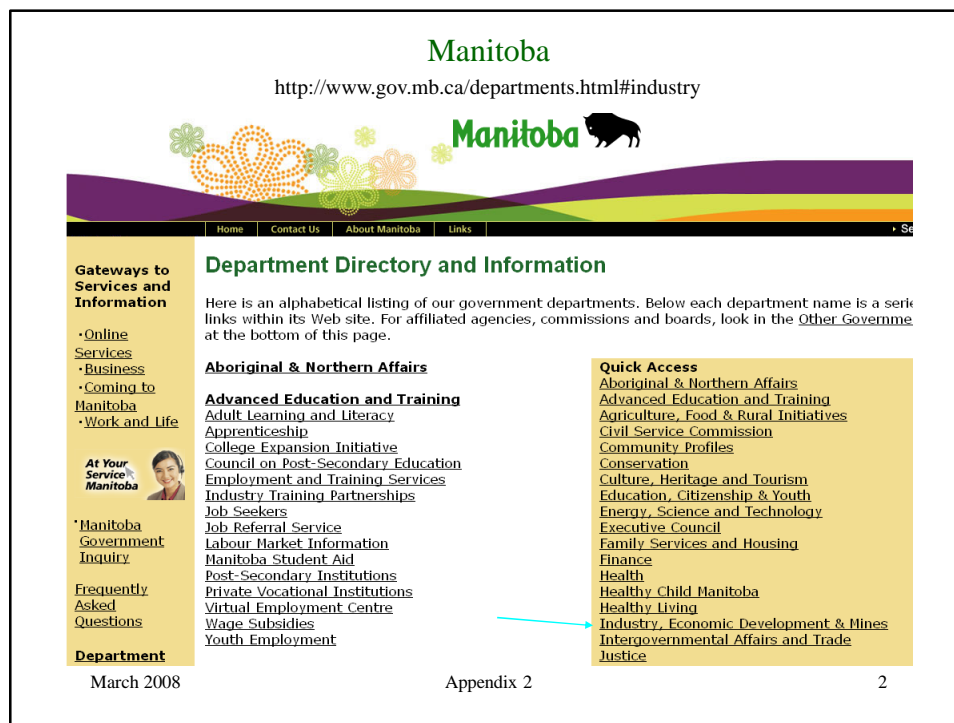
Report 8

March 2008

Appendix 2

29

## Appendix 2: Summary of Provincial Website Information- Manitoba



## Appendix 2: Summary of Provincial Website Information- Manitoba

### Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/departments.html#industry>

#### **Industry, Economic Development and Mines**

[Financial Services](#)

[Industry Consulting Services](#)

[Investing in Manitoba](#)

[Mineral Resources Division](#)

[Ota-Miska Publication](#)

[Petroleum Branch](#)

[Provincial Nominee Program for Business Immigration](#)

[Small Business Information](#)

#### **Intergovernmental Affairs and Trade**

[Canada-Manitoba Economic Partnership Agreement](#)

[Canada-Manitoba Infrastructure Programs](#)

[Capital Region](#)

[International Education](#)

[Land Use and Development](#)

[Manitoba Business Calendar](#)

[Manitoba Emergency Measures Organization](#)

[Manitoba Marketplace](#)

[Manitoba Trade and Investment](#)

[Municipal Financial and Advisory Services](#)

[Neighbourhoods Alive!](#)

[Property Assessment](#)

March 2008

Appendix 2

3

### Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/index.html>

[IEDM Home](#) | [Welcome](#) | [Site Maps](#) | [Contact Us](#) | [What's New](#)

Manitoba Industry, Economic Development and Mines

**Mineral Resources Division Links**

- [About MRD](#)
- [MRD Site Maps](#)
- [Contact MRD](#)

**Provincial Mining Week**

**Williston Basin TGI**

**Mining and Minerals Convention 2008**

**GIS Map Gallery & Other Databases**

**e-store**  
Publication Sales

**DIAMOND**  
EXPLORATION STRATEGY

**Related Links**

- [National Orphaned/Abandoned Mines Initiative \(NOAMI\)](#)
- [Mining Task Force](#)

E-mail Web Coordinator

**Mineral Resources Division**

**Manitoba Ranks High in Mining Survey**

**LATEST:**

- [Provincial Mining Week 2008 pictures now online](#)
- [Manitoba's geological database ranked third worldwide](#)
- [Manitoba rated third worldwide for mineral policies](#)
- [New publications released July 31, 2008](#)
- [Mines Branch notices](#) concerning [Exemption from Required Work](#) and [Extensions of Time](#)

**Business Development**

- [Activity Map](#)
- [Exploration & Development Highlights](#)
- [Exploration & Mining Guide/Application Forms](#)
- [Incentives](#)

**Client Services**

- [Contractors & Consultants](#)
- [Mining Communities](#)
- [MR Mining News/Releases](#)
- [Mineral Resources Library](#)
- [Staff Directory](#)

**Geological Survey**

- [Williston Basin TGI](#)
- [Geoscience Projects](#)
- [3-D Model](#)
- [Digital Elevation Model](#)
- [GIS Map Gallery](#)
- [Industrial Minerals](#)
- [Manitoba Geology](#)
- [Diamond Exploration Strategy](#)
- [Protected Areas Initiative/Mining Sector](#)

**Business Development**

- [Business Development](#)
- [Client Services](#)
- [Geological Survey](#)
- [Mining Advantages](#)
- [Petroleum Branch](#)
- [Boards & Commissions](#)
- [Mineral Education](#)

**Industrial Minerals**

- [Industrial Minerals](#)
- [Minerals Guideline](#)
- [Mining Advantages](#)
- [Mining & Minerals Convention](#)
- [Properties for Option](#)

**Exploration & Mining Companies**

- [Exploration & Mining Companies](#)
- [Publication Sales](#)
- [NTS Map of Manitoba](#)
- [Free Downloads](#)

**Fieldwork Discoveries**

- [Fieldwork Discoveries](#)
- [Mineral Potential Summaries](#)
- [Operation Superior](#)
- [Paleofloods in the Red River Basin](#)
- [Report of Activities](#)
- [Platinum-Group Elements](#)
- [Thompson Nickel Belt Compilation Maps](#)
- [Free Downloads](#)

March 2008

Appendix 2

4

# Manitoba Ministry of Industry, Economic Development & Mines

http://www.gov.mb.ca/iedm/mrd/info/libmin/ntsmap.html

**Mineral Resources Division Home**

- Mining Companies
- Mining Communities
- Mineral Resources Library
- Mining News
- Publication Sales
- Search the On-Line Publications Catalogue
- Publications Catalogue by series, including out-of-print
- Recent Releases
- Database Information
- Journal Article Reprints
- Assignment Reports
- Mineral Claims Maps GAC-MAC Order Form
- Staff Directory
- Free Downloads

GIS Map Gallery & Other Databases

Mining and Minerals Convention 2006

**e-store**  
Publication Sales

E-mail Web Coordinator


Mineral Resources Division

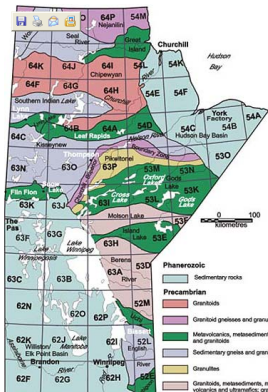
## Client Services

NTS Map and Principal Geological Domains

Click image for larger version

- Business Development
- Client Services
- Geological Survey
- Mines - Regulatory
- Petroleum Branch
- Boards & Commissions
- Mineral Education





# Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/geo/gis/databases.html>



**Mineral Resources Division Home**

**One-Search**

Search multiple databases with one query.

**Includes:**

- Mineral Resources
- Library Catalogue
- Bibliography of Manitoba Geology
- Mineral Inventory Cards
- Newsclippings

**GIS Map Gallery & Other Databases**

**Mining and Minerals Convention 2006**

**e-store**  
Publication Sales

E-mail Web Coordinator

[IEDM Home](#) | [Welcome](#) | [Site Maps](#) | [Contact Us](#) | [What's New](#)

**Manitoba Industry, Economic Development and Mines**

**Mineral Resources Division**

## Databases

**Geo-Spatial Databases**

- [GIS Map Gallery](#)

Use this interactive mapping tool to query and view mineral disposition and geoscientific data including:

- mining claims, exploration licences, quarry leases, mineral leases
- assessment files, disposition history
- drill hole locations
- geology, geophysics, geochronology, mineral occurrences, kimberlite indicator mineral data
- Crown oil and gas mineral ownership
- Crown oil and gas rights dispositions
- batteries/associated facilities
- wells
- oilfield boundaries
- orthophotos showing topography

**Geological Databases**

- [Kimberlite Indicator Mineral Database](#)
- [Geochronology](#)
- [Platinum-group Elements](#)



- Business Development
- Client Services
- Geological Survey
- Mines - Regulatory
- Petroleum Branch
- Boards & Commissions
- Mineral Education

March 2008

Appendix 2

6



## Appendix 2: Summary of Provincial Website Information- Manitoba

**Manitoba Ministry of Industry, Economic Development & Mines**  
<http://www.gov.mb.ca/iedm/mrd/geo/gis/index.html>

Manitoba Industry, Economic Development and Mines

**Mineral Resources Division**

**Geological Survey**

**GIS Map Gallery**  
Geographic Information System

**Windows XP Service Pack 2 users:**

To use the GIS Map Gallery, you must disable the Pop-up Blocker on your browser. [Click for Instructions](#)

**Notes:**

- To use this site you must agree to the terms in the [Map Gallery Disclaimer](#).
- All maps in the Map Gallery are in Universal Transverse Mercator projection, zone 14, North American Datum 1983.

If you encounter any problems, please contact the [GIS Administrator](#).

**Mineral Dispositions**  
 Maps portraying mineral dispositions, assessment & mineral disposition history and drill hole locations in Manitoba.

**Geoscientific Maps**  
 Maps at various scales portraying the geology, geophysics, geochronology and mineral occurrences for Manitoba. Includes new geophysical datasets.

**Petroleum Maps**  
 The map covers an area in southwest including Townships 1 to 22, Ranges 1! portrays provincial Crown oil and gas

March 2008

Appendix 2

**Manitoba Ministry of Industry, Economic Development & Mines**  
<http://www.gov.mb.ca/iedm/mrd/geo/gis/geoscimaps.html>

Manitoba Industry, Economic Development and Mines

**Mineral Resources Division**

**Geological Survey**

**GIS Map Gallery**  
Geographic Information System

**Geoscientific Maps**

All maps in the Map Gallery are in Universal Transverse Mercator projection, zone 14, North American Datum 1983.

If you encounter any problems, please contact Kevin Liu, the [GIS Administrator](#).

**Geological Map of Manitoba**  
 Geology, geophysics, geochronology & mineral occurrences maps for Manitoba.  
 Scale= 1:1 000 000  
[New - Downloadable Geophysics](#)

**HATMAP Shield Margin Project** Results of the Federal/Provincial 1:100 000 geological compilation program in the Fin Flon greenstone belt of Manitoba & Saskatchewan.

**Manitoba's Integrated Anomaly Map** Compilation of structural, topographic, potential field and geologic data focussed toward identifying deep crustal structures and occurrences of kimberlite.

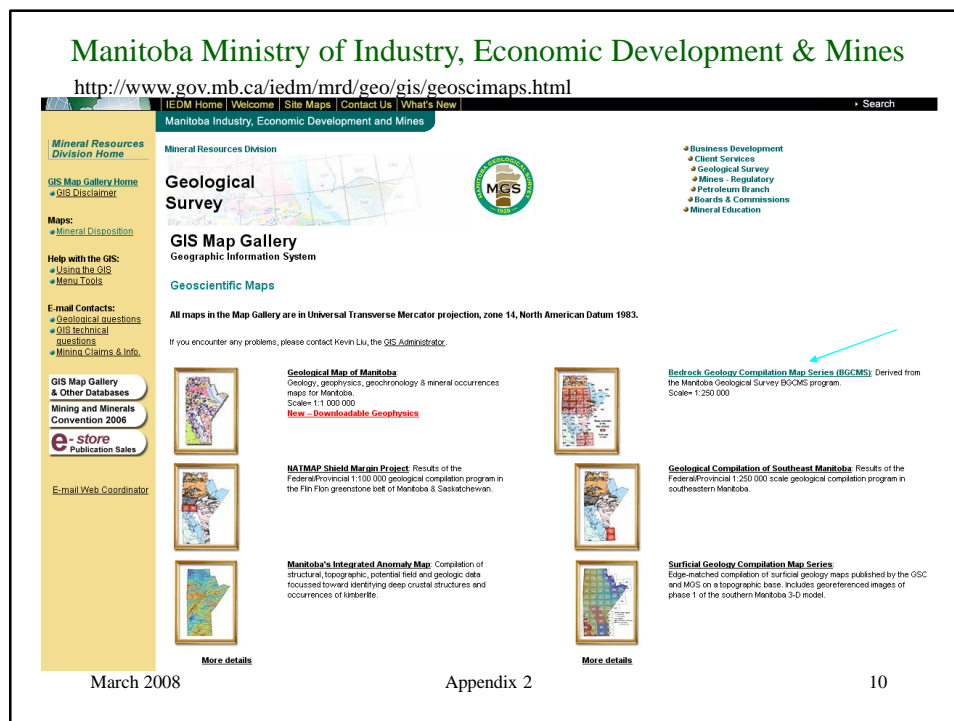
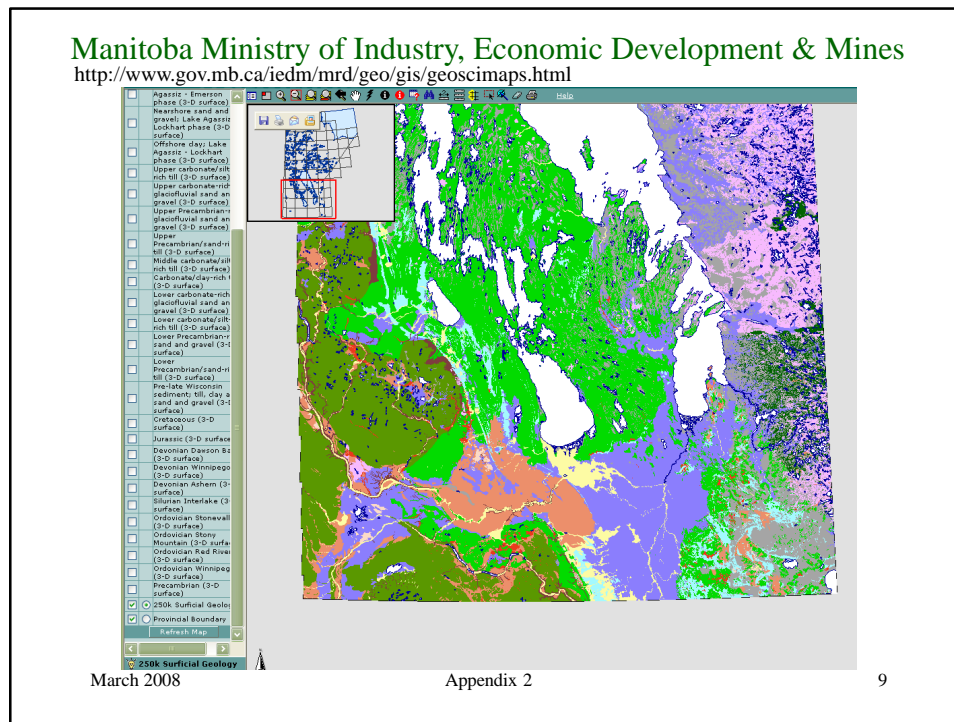
**Bedrock Geology Compilation Map Series (BGCMS)** Derived from the Manitoba Geological Survey BOGMS program.  
 Scale= 1:250 000

**Geological Compilation of Southeast Manitoba** Results of the Federal/Provincial 1:250 000 scale geological compilation program in southeastern Manitoba.

**Surficial Geology Compilation Map Series**  
 Edge-matched compilation of surficial geology maps published by the GSC and MGS on a topographic base. Includes georeferenced images of phase 1 of the southern Manitoba 3-D model.

March 2008

Appendix 2



## Appendix 2: Summary of Provincial Website Information- Manitoba

### Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/geo/gis/bgcms400.html>

#### GIS Map Gallery

Geographic Information System

Division Home

#### Geoscientific Maps

##### Bedrock Geology Compilation Map Series (BGCMS)

The BGCMS provides synoptic multi-coloured geological compilation maps at a scale of 1:250 000. These maps present a synthesis of all available geological data with a unified legend throughout the series. Mineral deposits and occurrences are shown and tabulated. Marginal notes accompany the map and a selected bibliography is included.

The BGCMS maps have been converted to digital format and are available for viewing on-line through the GIS Map Gallery. The sheets are not edge-matched and therefore presented as individual projects, including claim and lease data, geochronology, mineral deposits data and geophysical images.

To view the maps, select one of the NTS areas highlighted in red. Clicking on the NTS map sheet will display the map through the GIS Map Gallery

[Back to Geoscientific Maps](#)  
[GIS Map Gallery home](#)  
[E-mail contact for Geological Questions](#)

March 2008

Appendix 2

11

### Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/geo/gis/geoscimaps.html>

IEDM Home | Welcome | Site Maps | Contact Us | What's New | Search

Manitoba Industry, Economic Development and Mines

Mineral Resources Division

#### Geological Survey

Geological Survey of Canada

#### GIS Map Gallery

Geographic Information System

#### Geoscientific Maps

All maps in the Map Gallery are in Universal Transverse Mercator projection, zone 14, North American Datum 1983.

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**Geological Map of Manitoba**  
Geology, geophysics, geochronology & mineral occurrences maps for Manitoba.  
Scale= 1:1 000 000  
[View - Downloadable Geophysics](#)

**Bedrock Geology Compilation Map Series (BGCMS)** Derived from the Manitoba Geological Survey BGCMS program.  
Scale= 1:250 000

**Geological Compilation of Southeast Manitoba** Results of the Federal/Provincial 1:250 000 scale geological compilation program in southeastern Manitoba.

**Surficial Geology Compilation Map Series** Edge-matched compilation of surficial geology maps published by the OSC and MOS on a topographic base. Includes georeferenced images of phase 1 of the southern Manitoba 3-D model.

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**Manitoba's Integrated Anomaly Map** Compilation of structural, topographic, potential field and geologic data focused toward identifying deep crustal structures and occurrences of kimberlite.

[Business Development](#)  
[Client Services](#)  
[Geological Survey](#)  
[Mines - Regulatory](#)  
[Petroleum Branch](#)  
[Boards & Commissions](#)  
[Mineral Education](#)

[GIS Map Gallery Home](#)  
[GIS Disclaimer](#)

[Maps:](#)  
[Mineral Disposition](#)

[Help with the GIS:](#)  
[Using the GIS](#)  
[Menu Tools](#)

[E-mail Contacts:](#)  
[Geological questions](#)  
[GIS technical questions](#)  
[Mining Claims & Info.](#)

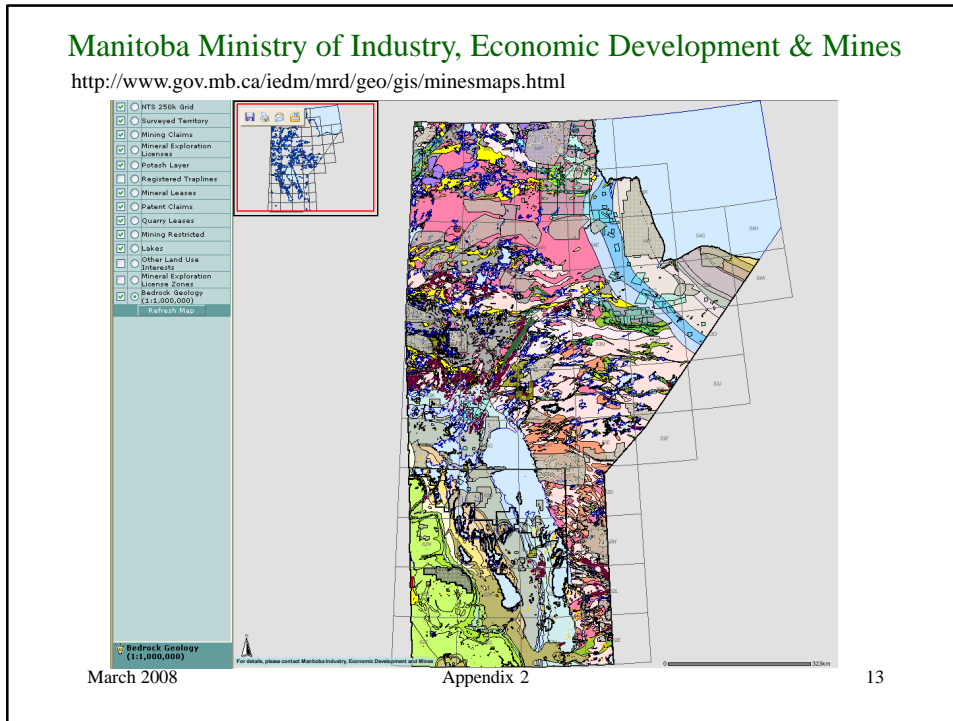
[GIS Map Gallery & Other Databases](#)  
[Mining and Minerals Convention 2006](#)  
[e-store](#)  
[Publication Sales](#)

E-mail Web Coordinator

March 2008

Appendix 2

12



## Appendix 2: Summary of Provincial Website Information- Manitoba

**Manitoba Ministry of Industry, Economic Development & Mines**  
<http://www.gov.mb.ca/iedm/mrd/info/index.html>

**Mineral Resources Division**

**Client Services**

**Contractors & Consultants**  
Contact information for contractors and consultants serving the Manitoba-based exploration industry.

**Mineral Resources Library**  
Search the Bibliography of Manitoba Geology or the library catalogue on-line; access to electronic journals on geology and other mineral and petroleum information sources.

**Manitoba Mining News**  
Industry-related government news releases and other news on Manitoba's exploration and mining industry.

**Mining Companies**  
Mining companies operating in Manitoba.

**Manitoba Mining Communities**  
Contact information, location and links to community web sites.

**Publication Sales/E-store**  
Check for new releases and ordering information; use the on-line catalogue to search geological reports and maps for sale.

**SECURE ON-LINE PURCHASING**

**Staff Directory**  
Use the searchable database, branch services listings or the organizational chart contact information for Mineral Resources Division staff.

**Free Downloads**  
Geological Survey reports and maps available to download free of charge.

**Government Links: Home | Contact Us | About Manitoba | Departments | Links**

March 2008

Appendix 2

15

**Manitoba Ministry of Industry, Economic Development & Mines**  
<http://www2.gov.mb.ca/itm-cat/freedownloads.htm>

**Publication Sales**  
Geological Reports & Maps

**Free Downloads**

Many Manitoba Geological Survey reports and maps are available to download free of charge. To download, click on the linked file in the record.

**Note:** Many of the files available are PDFs which require the [Adobe Acrobat Reader](#) for viewing.

To find publications to download:

- [Search Free Downloads](#)
- [All publications](#)
- Publications by series:
  - [Background Geology Compilation Map Series](#)
  - [Data Repository Item](#)
  - [Economic Geology Report](#)
  - [Exploration Report](#)
  - [Geoscientific Map](#)
  - [Geoscientific Paper](#)
  - [Geoscientific Report](#)
  - [Mineral Deposit Series](#)
  - [Open File Report](#)
  - [Preliminary Map](#)
  - [Preliminary Map \(Thompson Nickel Belt Compilation\)](#)
  - [Report of Activities \(Excluding Articles\)](#)
  - [Report of Activities 2005 \(Articles\)](#)
  - [Report of Activities 2006 \(Articles\)](#)
  - [Report of Activities 2007 \(Articles\)](#)
  - [Report of Activities 2008 \(Articles\)](#)
  - [Report of Activities 2009 \(Articles\)](#)
  - [Report of Activities 2010 \(Articles\)](#)
  - [Report of Activities 1999 \(Articles\)](#)
  - [Report of Activities 1998 \(Articles\)](#)
  - [Stratigraphic Map Series](#)
  - [Stratigraphic Map Series](#)

**Free Access to Other Data**

- [GIS Map Gallery](#)
- [3-D Geological Model of Manitoba](#)
- [3-D Topography of Manitoba](#)
- [Digital Elevation Model of Manitoba](#)

March 2008

Appendix 2

16

## Appendix 2: Summary of Provincial Website Information- Manitoba

### Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/mines/index.html>

**Mineral Resources Division**

**Mines Branch (Regulatory)**

**NOTICES**

**Exemption from Required Work (for claim holders only)**

The Mines Branch is aware of the poor conditions that existed for conducting exploration activities this past winter due to unreasonably warm temperatures. As a guide, criteria have been developed under which application for Exemption from Required Work on mining claims will be accepted. [Link to criteria](#)

**Extensions of Time (for licence holders)**

Application for an Extension of Time on Mineral Exploration Licences can be made under Subsection 15 of *The Mines and Minerals Act*. [Link to instructions](#)

Forward all applications to: Mines Branch, c/o Director of Mines, Unit 360 – 1395 Ellice Avenue, Winnipeg MB R3G 3P2

**Acts and Regulations**

The complete text for *The Mines and Minerals Act*, as well as other acts, and accompanying regulations.

**Assessment Information, Claims Maps**

Now available on-line, see the [GIS Map Gallery](#).

**Land Access & Sustainable Development**

To help plan your exploration program go to the [land access map](#) for basic land use and land tenure information affecting access for mineral exploration.

**Mineral Exploration Licence Map**

Map of current claims & mineral exploration licences in PDF. Please see the [GIS Map](#) for the most up to date information on mineral dispositions.

**Exploration & Mining Guide**

Don't know how to proceed with the next step in your exploration program? This document will help guide you through the various permits, [applications](#), permissions, etc. that are needed at each stage of exploration.

**GIS Map Gallery**

Examine interactive maps in our GIS Map Gallery, including Manitoba Mineral Disposition Assessment & Mineral Disposition History, and Geology.

**Related Links**

- National Orphaned/Abandoned Mines Initiative (NOAMI)
- Mining Task Force
- E-mail Web Coordinator

**Mineral Resources Division Links**

- MRD Home
- About MRD
- MRD Site Maps
- Contact MRD

**Manitoba Mining Advantage**

**GIS Map Gallery & Other Databases**

**Mining and Minerals Convention 2006**

**e-store**  
Publication Sales

**Business Development**

- Client Services
- Geological Survey
- Mines - Regulatory
- Petroleum Branch
- Boards & Commissions
- Mineral Education

March 2008

Appendix 2

17

### Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/info/ibmin/assess.html>

**Mineral Resources Division**

**Mines Branch (Regulatory)**

**Assessment Reports**

Now available on-line, see [GIS Map Gallery](#).

Manitoba assessment reports are the primary and most current source of detailed exploration data available to the public. The reports become available to the public three years after submission (five year work) or once all claims in a report have lapsed.

The Manitoba non-confidential assessment report collection consists of over 8,188 reports of work beginning in the late 1940s. This collection is held and maintained by the

Mines Branch  
360-1395 Ellice Ave.  
Winnipeg MB Canada  
R3G 3P2  
Phone: (204) 945-6537  
Fax: (204) 945-8427

Reports can be viewed on the [GIS Map Gallery](#), or at the Mines Branch where Assessment Library copies may be purchased during regular office hours (8:30 a.m. - 4:30 p.m. Monday to Friday).

Reports for the northern regions, i.e. Flin Flon, Snow Lake, Lynn Lake, Thompson, etc., are also available for inspection at the Recording Office in Flin Flon, telephone (204) 687-1630.

CDs, paper copies or diazo duplicates of microfiche of non-confidential reports can be obtained from the Winnipeg office.

The Winnipeg office also maintains the confidential assessment report files. These reports may be made available to the public only upon written consent of the holder of the mineral disposition.

**Mineral Resources Division Links**

- Acts & Regulations
- Exploration & Mining Guide
- GIS Map Gallery
- Land Access and Sustainable Dev.
- Manitoba Mining Board
- Mineral Exploration Licence Map
- Mineral Claims Maps
- Quarry Mineral Application Forms
- Staking Requirements

**Manitoba Mining Advantage**

**GIS Map Gallery & Other Databases**

**Mining and Minerals Convention 2006**

**e-store**  
Publication Sales

**Business Development**

- Client Services
- Geological Survey
- Mines - Regulatory
- Petroleum Branch
- Boards & Commissions
- Mineral Education

March 2008

Appendix 2

18

## Appendix 2: Summary of Provincial Website Information- Manitoba

# Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/geo/index.html>

IEDM Home | Welcome | Site Maps | Contact Us | What's New

Manitoba Industry, Economic Development and Mines

## Mineral Resources Division

[MRD Home](#)  
[About MRD](#)  
[MRD Site Maps](#)  
[Contact MRD](#)

**GIS Map Gallery & Other Databases**  
**Mining and Minerals Convention 2006**  
**e-store Publication Sales**

**Related Links**  
[Related Geology Links](#)  
[Geoscience Publications Directory](#)  
[Precambrian Division Newsletter \(Geological Association of Canada\)](#)  
[ESS Geoscience Data Repository](#)  
[E-mail Web Coordinator](#)

## Geological Survey

**LATEST:**  
[Overview of MGS Geoscience Projects for 2006](#)  
[New geophysical datasets available through the GIS Map Gallery](#)

**Williston Basin (WVB)**  
 Targeted Geoscience Initiative (TGI) on the architecture and hydrocarbon potential of the WVB. Includes stratigraphic maps, cross-sections and columns, a searchable bibliographic database and free downloads.

**Free Downloads**  
 Geological Survey reports and maps available to download free of charge.

**Digital Elevation Model of Southern Manitoba (DEM SM)**  
 Learn how glaciers have shaped the land and view three-dimensional images of major landscape elements in southern Manitoba.

**3-D Geological Model of Manitoba**  
 Features the first installment of the 3-D model with a video clip of Manitoba's geology from a 3-D perspective.

**Manitoba Geology**  
 Describes the bedrock and Quaternary geology of the province, with accompanying geological maps and detailed descriptions of the geology in major mineral-producing areas.

**Geological Databases**  
[Kimberlite Indicator Mineral Database](#)  
[Geochronology](#)  
[Platinum-group Elements](#)

**MGS Geoscience Projects 2006**  
 Overview of geoscientific investigations planned for 2006.

**Manitoba's Diamond Exploration Strategy**  
 Geoscientific support for diamond exploration, including the **Manitoba Indicator Mineral Database**.

**Report of Activities**  
 An annual summary of field investigations conducted by the Manitoba G (includes current and previous year's reports).

**GIS Map Gallery**  
 Manitoba's geology and mineral dispositions displayed in an interactive environment including mineral occurrence and geochronological data, a and drill hole locations.

**Business Development**  
[Client Services](#)  
[Geological Survey](#)  
[Mines - Regulatory](#)  
[Petroleum Branch](#)  
[Boards & Commissions](#)  
[Mineral Education](#)

March 2008

Appendix 2

19

# Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/geo/demsm/index.html>

Manitoba Industry, Economic Development and Mines

Mineral Resources Division

## Geological Survey

### Digital Elevation Model of Manitoba

Duck Mountain | Hodgson Plain | Ross River | Assiniboine Spillway | Darlingford Moraine |  
 Guntion Escarpment | Sandlands Moraine | Pas Moraine | Red River Valley

[Introduction](#)  
[Acknowledgements](#)  
[DEM Data Index](#)  
[Meta Data Text](#)  
[Specifications](#)

[Large DEM Map of Manitoba \(56 KB\)](#)  
[Smaller DEM Map of Southern Manitoba](#)  
[Downloads/Ordering](#)

The data contained on this web site has been recently upgraded. All images on this website have been derived from version 2.0 of the Manitoba Digital Elevation Model, the original version 1.0 data is available for \$10.00 on a CD-ROM which can be ordered from Manitoba Industry, Economic Development and Mines - Publication Sales.

**To Order**

**NOTE:**  
 New, higher resolution (90 metre), Shuttle Radar Topography Mission (SRTM) elevation data is now available for download. Please see the [introduction](#), and [downloads](#) pages for further information.

**Mineral Resources Division Home**  
[3-D Model](#)  
[Digital Elevation Model](#)  
[Introduction](#)  
[Acknowledgements](#)  
[DEM Data Index](#)  
[Meta Data Text](#)  
[Specifications](#)  
[Large DEM Map](#)  
[Smaller DEM Map](#)  
[Downloads/Ordering](#)  
[Fieldwork Discoveries](#)  
[GIS Map Gallery](#)  
[Industrial Minerals](#)  
[Manitoba Geology](#)  
[Manitoba's Diamond Exploration Strategy](#)  
[MGS Geoscience Projects](#)  
[Mineral Potential Summaries](#)  
[Operation Superior](#)  
[Paleogeography](#)  
[PCCs in Manitoba](#)  
[Protected Areas Mining](#)  
[Report of Activities](#)  
[Thompson Nickel Belt Compilation Maps](#)  
[Williston Basin](#)  
[Free Downloads](#)

**GIS Map Gallery & Other Databases**  
**Mining and Minerals Convention 2006**  
**e-store Publication Sales**

**E-mail Web Coordinator**

**Business Development**  
[Client Services](#)  
[Geological Survey](#)  
[Mines - Regulatory](#)  
[Petroleum Branch](#)  
[Boards & Commissions](#)  
[Mineral Education](#)

March 2008

Appendix 2

20



## Appendix 2: Summary of Provincial Website Information- Manitoba

# Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/geo/demsm/mbdem.html>

**Geological Survey**

**Digital Elevation Model of Manitoba**

Duck Mountain | Hodgson Plain | Ross River | Assiniboine Spillway | Darlingford Moraine | Gunton Escarpment | Sandilands Moraine | Pas Moraine | Red River Valley

**Large Digital Elevation Model (DEM) Map of Manitoba (Version 2.0 DEM)**

\*All images on this website have been derived from version 2.0 of the Manitoba Digital Elevation Model

Division Home

- Geological Survey
- Mines - Regulatory
- Petroleum Branch
- Boards & Commissions
- Mineral Education

D.E.M. of Manitoba Home

March 2008

Appendix 2

21

# Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/geo/3dmodel/index.html#hydrogeological>

**Geological Survey**

**Three-Dimensional (3-D) Geological Model of Manitoba**

**Introduction**

The Manitoba Geological Survey (MGS) is constructing a 3-D geological model of the province. The MGS is taking advantage of the latest developments in computer technology to create a model that has applications for groundwater modelling, oil and gas assessments and industrial mineral management.

The construction of the 3-D model required the compilation of digital topography, bathymetry, offshore seismic data (Lake Winnipeg), and seamless 1:250 000 surficial geology. Quaternary stratigraphy and some additional bedrock information was gleaned predominantly from the Manitoba Conservation waterwell database (QWDRILL).

The pre-Quaternary portion of the model is based on the [Manitoba Stratigraphic Map Series](#), which was constructed from the following drillhole databases:

- Manitoba Stratigraphic Database
- Manitoba Oil and Gas Well Information System
- the Western Canada Sedimentary Basin database

**2-D View**

Visit our [2-D View page](#) for a 2-D representation (stacked polygons) of the data that provided the foundation for the construction of the 3-D model.

**Video Clips (.avi)**

The following videos display a 2-D representation of the stacked polygons (Video 1), and a 3-D view of the first of six 2" by 3" tiles that comprise the 3-D model of Manitoba south of 55° (Video 2).

**Viewing Instructions**

To view the videos, you must install the **TSCC codec**, which can be downloaded free of charge from the [TechSmith Download Center](#).

The videos can be viewed using either the Windows Media Player, a standard with Windows operating systems, or, the Real Player available to [download](#) free of charge.

**Division Home**

- Digital Elevation Model
- Fieldwork Discoveries
- GIS Map Gallery
- Industrial Minerals
- Manitoba Geology
- Manitoba's Diamond Exploration Strategy
- MGS Licence Projects
- Mineral Potential Summaries
- Operation Superior
- Paleofloods
- PSCs in Manitoba
- Protected Areas Mining
- Report of Activities
- Thompson Nickel Ref. Compilation Maps
- Wollaston Basin
- Free Downloads

**GIS Map Gallery & Other Databases**

**Mining and Minerals Convention 2006**

**E-store**

Publication Sales

E-mail Web Coordinator

**Business Development**

- Client Services
- Geological Survey
- Mines - Regulatory
- Petroleum Branch
- Boards & Commissions
- Mineral Education

**Content Links:**

- Introduction
- 2-D View
- Video Clips (.avi)
- Hydrogeological Applications

March 2008

Appendix 2

22



## Appendix 2: Summary of Provincial Website Information- Manitoba

### Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/geo/3dmodel/stratseriesreference.html>

[3-D Model](#)  
[Digital Elevation Model](#)  
[Fieldwork Discoveries](#)  
[GIS Map Gallery](#)  
[Industrial Minerals](#)  
[Manitoba Geology](#)  
[Manitoba's Diamond Exploration Strategy](#)  
[MRS Capabilities](#)  
[Projects](#)  
[Mineral Potential](#)  
[Seminars](#)  
[Operation Superior](#)  
[Paleofloods](#)  
[PES in Manitoba](#)  
[Protected Areas-Mining](#)  
[Report of Activities](#)  
[Thompson Nickel Belt Correlation Maps](#)  
[Wollaston Basin](#)  
[Files Downloads](#)

[GIS Map Gallery & Other Databases](#)  
[Mining and Minerals Convention 2006](#)  
[e-store](#)  
[Publication Sales](#)

[E-mail Web Coordinator](#)

#### Geological Survey



[Geological Survey](#)  
[Mines - Regulatory](#)  
[Petroleum Branch](#)  
[Boards & Commissions](#)  
[Mineral Education](#)

#### Three-Dimensional (3-D) Geological Model of Manitoba

##### Manitoba Stratigraphic Map Series

K9-TM-1: Upper Cretaceous and Boisvein Formation/Tertiary Turtle Mountain Formation (contour and isopach map) (1:125 000)  
 KRM-2: Cretaceous Riding Mountain Formation - Odanah Member (contour and isopach map) (1:1 000 000)  
 KRM-1: Cretaceous Riding Mountain Formation - Millwood Member (contour and isopach map) (1:1 000 000)  
 KVR-2: Cretaceous Vermilion River Formation - top of Pembina Member to base of Boyne Member (contour and isopach map) (1:1 000 000)  
 KVR-1: Cretaceous Vermilion River Formation - Morden Member (contour and isopach map) (1:1 000 000)  
 KF-1: Cretaceous Favel Formation (contour and isopach map) (1:1 000 000)  
 KA-2: Cretaceous Upper Ashville (contour and isopach map) (1:1 000 000)  
 KA-1: Cretaceous Lower Ashville (contour and isopach map) (1:1 000 000)  
 PC-2: Pre-Mississippian Oil Show Map (1:1 000 000)  
 M-2: Mississippian Erosion Surface (contour and isopach map) (1:500 000)  
 M-1: Mississippian Madison Group (isopach map) (1:500 000)  
 D-M-1: Devonian-Mississippian Lyleton and Bakken formations (contour and isopach map) (1:500 000)  
 DN-1: Devonian Nisku Formation (n-Birdbeak) (contour and isopach map) (1:500 000)  
 DD-1: Devonian Duperow Formation (contour and isopach map) (1:1 000 000)  
 DD-2: Devonian Duperow Formation-Swan River Area (1:250 000)  
 DSR-1: Devonian Souris River Formation (contour and isopach map) (1:1 000 000)

PCB 3: Precambrian Basin Extension-Swan River Area (1:250 000)

March 2008

Appendix 2

23

### Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/geo/3dmodel/stratseriesreference.html>

DSR-2: Devonian Souris River Formation-Swan River Area (1:250 000)  
 DDB-1: Devonian Dawson Bay Formation (contour and isopach map) (1:1 000 000)  
 DEP-1: Devonian Elk Point Group (contour and isopach map) (1:1 000 000)  
 DPE-1: Devonian Prairie Evaporite Formation (contour and isopach map) (1:1 000 000)  
 DW-1: Devonian Winnipegosis Formation (contour and isopach map) (1:1 000 000)  
 DA-1: Devonian Ashern Formation (contour and isopach map) (1:1 000 000)  
 SI-1: Silurian Interlake Group (contour and isopach map) (1:2 000 000)  
 ORR-1: Ordovician Red River Formation (contour and isopach map) (1:2 000 000)  
 OSM-1: Ordovician Stony Mountain Formation (contour and isopach map) (1:2 000 000)  
 OS-1: Ordovician (and Silurian) Stonewall Formation (contour and isopach map) (1:2 000 000)  
 OW-1: Ordovician Winnipeg Formation (contour and isopach map) (1:2 000 000)  
 PC-1: Precambrian (structure contour map) (1:2 000 000)  
 P-2: Paleozoic Erosion Surface-Swan River Area (detailed subcrop-structure contour map) (1:250 000)  
 P-1: Paleozoic Erosion Surface (subcrop and outcrop structure contour map) (1:1 000 000)

##### The maps can be purchased for:

- \$5.00 each for print copies
- \$50.00 for the set of print maps
- \$10.00 for the entire set in digital format on CD-ROM, as part of Open File Report OF98-7, *Manitoba Stratigraphic Database and the Manitoba Stratigraphic Map Series*

##### To order maps contact:

Manitoba Industry, Economic Development and Mines  
 Mineral Resources Division  
 Publication Sales  
 360-1395 Ellice Avenue  
 Winnipeg MB R3G 3P2  
 Phone: (204) 945-4154  
 Fax: (204) 945-8427  
 E-mail: [mapsales@gov.mb.ca](mailto:mapsales@gov.mb.ca)

March 2008

Appendix 2

24

## Appendix 2: Summary of Provincial Website Information- Manitoba

### Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/geo/3dmodel/index.html#hydrogeological>

**Division Home**

- Digital Elevation Model
- Fieldwork Discoveries
- GIS Map Gallery
- Industrial Minerals
- Manitoba Geology
- Manitoba's Diamond Exploration Strategy
- MCS Geoscience Projects
- Mineral Potential Summaries
- Operation Superior
- Paleofloods
- Parks in Manitoba
- Protected Areas Mining
- Report of Activities
- Thompson Nickel Belt Compilation Maps
- Williston Basin
- Free Downloads

**GIS Map Gallery & Other Databases**

**Mining and Minerals Convention 2006**

**e-store**  
Publication Sales

E-mail Web Coordinator

**Mineral Resources Division**

## Geological Survey

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The construction of the 3-D model required the compilation of digital topography, bathymetry, offshore seismic data (Lake Winnipeg), and seamless 1:250 000 surficial geology, Quaternary stratigraphy and some additional bedrock information was gleaned predominantly from the Manitoba Conservation waterwell database (GWDRL).

The pre-Quaternary portion of the model is based on the [Manitoba Stratigraphic Map Series](#), which was constructed from the following drillhole databases:

- Manitoba Stratigraphic Database
- Manitoba Oil and Gas Well Information System
- the Western Canada Sedimentary Basin database

**2-D View**

Visit our [2-D View page](#) for a 2-D representation (stacked polygons) of the data that provided the foundation for the construction of the 3-D model.

- Business Development
- Client Services
- Geological Survey
- Mines - Regulatory
- Petroleum Branch
- Boards & Commissions
- Mineral Education

March 2008

Appendix 2

25

### Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/busdev/index.html>

**Mineral Resources Division Links**

- MRD Home
- About MRD
- MRD Site Maps
- Contact MRD

**GIS Map Gallery & Other Databases**

**Mining and Minerals Convention 2006**

**e-store**  
Publication Sales

E-mail Web Coordinator

**Mineral Resources Division**

## Business Development

**Exploration & Development Highlights**

Annual overview of exploration and development activity in the province.

**Incentives**

Manitoba provides direct financial assistance for mineral exploration and tax reductions for mineral development in the province.

**Manitoba Mining and Minerals Convention**

Join the crowd at this year's Manitoba Mining and Minerals Convention and discover the opportunities available!

**Manitoba Minerals Guideline**

Provides the framework for relationship-building between First Nations, the Métis Nation, Northern Communities, Government and Minerals Industry of Manitoba.

**Properties Available for Option**

Showcases some of the many mineral properties available for option in Manitoba.

**Exploration Activity Map**

See where the all the exploration action is taking place.

**Manitoba Mining Advantage**

Learn more about Manitoba's vast geological potential, mining many other advantages.

**Industrial Minerals**

Manitoba has a strong industrial minerals sector and offers gre investment opportunities.

**Exploration & Mining Guide**

Provides the permit and regulatory information to help you move grassroots exploration to new mine development.

[Application Forms](#)

March 2008

Appendix 2

26

## Appendix 2: Summary of Provincial Website Information- Manitoba

### Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/busdev/incentives/index.html>

**Mineral Resources Division Home**

- Exploration & Development Highlights
- Exploration Activity Map
- Exploration and Mining Guide
- Industrial Minerals
- MB Minerals
- Manitoba Mining Advantage
- MB Mining and Minerals Convention
- Properties for Option

**GIS Map Gallery & Other Databases**

**Mining and Minerals Convention 2006**

**e-store**  
Publication Sales

**Related Links**

- Mining News
- MTS Map
- Mining Communities
- Mining Companies
- Contractors and Consultants

**IEDM Home | Welcome | Site Maps | Contact Us | What's New**

**Manitoba Industry, Economic Development and Mines**

**Mineral Resources Division**

## Business Development

### Incentives

Since 1995, Manitoba has offered over \$27 million in direct financial assistance for mineral exploration in the province through the Mineral Exploration Assistance Program (MEAP) and the Prospectors Assistance Program (MPAP). Information on these and other exploration and development incentives are provided below:

**Mineral Exploration Assistance Program (MEAP)**

- [MEAP - Fact Sheet](#)
- [MEAP - Program Details](#)

**Manitoba Prospector's Assistance Program (MPAP)**

- [MPAP - Fact Sheet](#)
- [MPAP - Program Details](#)

**Manitoba Mineral Exploration Tax Credit (MMETC)**

**Mining and Exploration Tax Incentives**

- Reductions in mining taxation
- Other Tax Reductions

**Related News Releases:**

**July 28, 2006**  
[Spring Minerals Exploration Offering Will Generate \\$22 Million, Rondeau](#)

**May 11, 2006**  
[More Assistance for Minerals Industry](#)

March 2008

Appendix 2

27

### Manitoba Ministry of Industry, Economic Development & Mines

<http://www.gov.mb.ca/iedm/mrd/busdev/incentives/meap-off.html>

**Mineral Resources Division Home**

- Exploration & Development Highlights
- Exploration Activity Map
- Exploration and Mining Guide
- Incentives
  - MEAP Details
  - MEAP Fact Sheet
  - MPAP Details
- Manitoba Mineral Exploration Tax Credit
- Tax Incentives
- Industrial Minerals
- MB Minerals Guideline
- Manitoba Mining Advantage
- MB Mining and Minerals Convention
- Properties for Option

**GIS Map Gallery & Other Databases**

**Mining and Minerals Convention 2006**

**e-store**  
Publication Sales

**Related Links**

- Mining News
- MTS Map
- Mining Communities
- Mining Companies
- Contractors and Consultants

**IEDM Home | Welcome | Site Maps | Contact Us | What's New**

**Manitoba Industry, Economic Development and Mines**

**Mineral Resources Division**

## Business Development

### Incentives

#### Mineral Exploration Assistance Program (MEAP) Available to Companies or Individuals

**Next Offering - November 1, 2006  
(Applicant Deadline - November 1, 2006, 4:30 p.m.)**

The **Mineral Exploration Assistance Program (MEAP)** provides financial assistance for non-fuel mineral exploration in Manitoba. The program is designed to increase exploration and to stimulate activities that could lead to the development of new mineral and industrial mineral deposits in Manitoba.

The program is available to companies or individuals proposing mineral exploration projects in Manitoba. The program provides assistance of up to 25% of approved eligible expenditures to a maximum of \$300,000 per recipient per fiscal year. A higher percentage is offered for projects conducted in the Northern Superior/Other Northern areas and Lynn Lake/Leaf Rapids and Bissett areas of Manitoba. In these areas, up to 35% of approved eligible expenditures to a maximum of \$400,000 per recipient per fiscal year is available.

For complete program details visit our [MEAP Details](#) page, or contact:

**MEAP Coordinator**  
Manitoba Industry, Economic Development and Mines  
360-1395 Ellice Avenue  
Winnipeg MB R3G 3P2  
Canada  
Telephone: (204) 945-6586  
Toll free: 1-800-223-5215  
Fax: (204) 945-9427  
E-mail: [meap@gov.mb.ca](mailto:meap@gov.mb.ca)

**Business Development**

- Client Services
- Geological Survey
- Mines - Regulatory
- Petroleum Branch
- Boards & Commissions
- Mineral Education



**MEAP**  
**April 8, 2006**

- [Approved Projects Listing](#)
- [Project Location Map](#)

March 2008

Appendix 2

28

14

## Appendix 2: Summary of Provincial Website Information- Ontario

**Ontario**

[http://www.gov.on.ca/ont/portal/!ut/p/cmd/cs/ce/7\\_0\\_A/s/7\\_0\\_252/\\_s.7\\_0\\_A/7\\_0\\_252/\\_1/en?docid=EC001030](http://www.gov.on.ca/ont/portal/!ut/p/cmd/cs/ce/7_0_A/s/7_0_252/_s.7_0_A/7_0_252/_1/en?docid=EC001030)

March 2008

Appendix 2

1

**Ontario Ministry of Natural Resources**

<http://www.mnr.gov.on.ca/MNR/>

March 2008

Appendix 2

2

## Appendix 2: Summary of Provincial Website Information- Ontario

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/>

Location: MNR Home > Lands & Waters > Aggregate Resources

#### Aggregate Resources

- Home
- The Program
- The Resources
- Rules & Regulations
- Rehabilitation
- Enforcement
- Useful Links
- Site Map



Photo courtesy: Nelson Aggregate Company

**LATEST NEWS:**

ATTENTION: Aggregate Operators within the Protected Countryside of the Greenbelt Plan Area

**Deadline for Maximum Disturbed Area Forms is September 30, 2006.**

[Find out more information.](#)

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A Decision Notice has been noted on the

**THE RESOURCES**

Aggregates are critical ingredients in a number of manufactured products like glass, coated paper, paint and pharmaceuticals. Find out more about [aggregate resources...](#)

**REHABILITATION**

**THE PROGRAM**

The Aggregate Resources Program is delivered through MNR's Natural Resource Management and Field Services Divisions, the Ministry of Transportation (MTO) and the Aggregate Resources Trust (TOARC). Find out more about [the Program...](#)

**ENFORCEMENT**

March 2008

Appendix 2

3

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/program.html>

Location: MNR Home > Lands & Waters > Aggregate Resources > The Program

#### The Program


- Home
- The Program
  - MNR
  - MTO
  - TOARC
- The Resources
- Rules & Regulations
- Rehabilitation
- Enforcement
- Useful Links
- Site Map

The Ministry of Natural Resources (MNR) is responsible for leading the management of aggregate resources in the province of Ontario. MNR regulates the extraction of mineral aggregates under the [Aggregate Resources Act](#). MNR's planning mandate is to protect and ensure the continued availability of the identified mineral aggregate resources.

The objectives of MNR's aggregate management program are:

- to minimize adverse impacts of aggregate operations on the environment and contribute to ecological sustainability by administering the Aggregate Resources Act;
- to participate in the municipal planning process under the Planning Act to ensure that aggregate resources are protected and made available, and that existing aggregate operations are protected from incompatible land uses;
- to ensure Ontarians receive a fair return for the use of Crown-owned aggregate resources;
- to promote [aggregate resource conservation](#) through substitution, reduction, re-using and recycling of aggregate.

The program is delivered in MNR through policy staff in our Natural Resource Management Division, Aggregate Inspectors in our Field Services Division, the Ministry of Transportation (MTO) and the Aggregate Resources Trust (TOARC).



March 2008

Appendix 2

4

## Appendix 2: Summary of Provincial Website Information- Ontario

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/mnrstaff.html>

Location: MNR Home > Lands & Waters > Aggregate Resources > The Program > MNR Role

- [Home](#)
- [The Program](#)
  - [MNR](#)
  - [MTO](#)
  - [TOARC](#)
- [The Resources](#)
- [Rules & Regulations](#)
- [Rehabilitation](#)
- [Enforcement](#)
- [Useful Links](#)
- [Site Map](#)

#### MNR Role

Role of Policy Staff in MNR's Natural Resource Management Division

- review, develop and implement policies, procedures and legislative changes governing the management of aggregate resources within the province of Ontario;
- provide direction and interpretation to field staff, industry, municipalities, government agencies, consultants, the public and senior management within MNR;
- provide education and training to MNR staff, industry, stakeholders and other ministries, boards and agencies; and
- liaise with other provincial and federal jurisdictions with respect to aggregate resource management.

Role of Staff in MNR's Field Services Division

#### Aggregate Inspectors

- process applications for licences, permits, transfers, site plan amendments, etc. and issue related documents;
- conduct inspections and audits of aggregate operations to ensure that licensees and permittees are in compliance with the Aggregate Resources Act and the site plan, and that rehabilitation is being carried out;
- enforce offences under the Aggregate Resources Act (e.g., suspension notices, rehabilitation orders, revocations);
- participate in hearings related to the Aggregate Resources Act (Ontario Municipal Board for private land or Mining and Lands Commission for Crown land); and
- administer other aspects of the aggregate program (e.g. complaint resolution, education and training, participation in municipal land-use planning).

#### Conservation Officers

March 2008
Appendix 2
5

### Ontario Ministry of Natural Resources

[http://www.mnr.gov.on.ca/MNR/aggregates/program\\_mto.html](http://www.mnr.gov.on.ca/MNR/aggregates/program_mto.html)


Location: MNR Home > Lands & Waters > Aggregate Resources > The Program > MTO Role

- [Home](#)
- [The Program](#)
  - [MNR](#)
  - [MTO](#)
  - [TOARC](#)
- [The Resources](#)
- [Rules & Regulations](#)
- [Rehabilitation](#)
- [Enforcement](#)
- [Useful Links](#)
- [Site Map](#)

#### MTO Role

MNR has given the [Ministry of Transportation \(MTO\)](#) the authority under the Aggregate Resources Act for the issuance and management of wayside permits and aggregate permits, where the aggregate is required for provincial road projects. MTO's role includes:

- processing applications for permits, site plan amendments, etc. and issue related documents;
- conducting inspections and audits of aggregate operations to ensure that they are in compliance with the Act, the site plan and the conditions of the permit, and that rehabilitation is being carried out; and
- enforce offences under the Aggregate Resources Act (e.g., suspension notices and rehabilitation orders).



March 2008
Appendix 2
6

## Appendix 2: Summary of Provincial Website Information- Ontario

### Ontario Ministry of Natural Resources

[http://www.mnr.gov.on.ca/MNR/aggregates/program\\_toarc.html](http://www.mnr.gov.on.ca/MNR/aggregates/program_toarc.html)

Location: MNR Home > Lands & Waters > Aggregate Resources > The Program > TOARC Role

- [Home](#)
- [The Program](#)
  - [MNR](#)
  - [MIQ](#)
  - [TOARC](#)
- [The Resources](#)
- [Rules & Regulations](#)
- [Rehabilitation](#)
- [Enforcement](#)
- [Useful Links](#)
- [Site Map](#)

#### TOARC Role

The **Ontario Aggregate Resources Corporation (TOARC)**, through an agreement with the Ministry of Natural Resources, acts as the Trustee for the **Aggregate Resources Trust**.

The Aggregate Resources Trust was established in 1997 to administer and direct certain portions of the aggregate resources program that were formerly administered by MNR, specifically:

- the management of the Abandoned Pits and Quarries Rehabilitation Fund;
- the collection and disbursement of aggregate fees and royalties;
- research and education on aggregate resource management issues, including rehabilitation;
- the rehabilitation of pits and quarries where licences or permits are revoked by MNR; and
- the publication of summarized annual production statistics for licences, aggregate permits and wayside permits.

The Aggregate Resources Act requires the submission of an annual report detailing the financial affairs of the Trust to the Minister of Natural Resources. The Minister of Natural Resources must submit the report to the Lieutenant Governor in Council and table the report in the Legislative Assembly. The report includes audited financial statements for both the Trust (Aggregate Resources Trust) and the trustee (The Ontario Aggregate Resources Corporation).

The Ontario Aggregate Resources Corporation (TOARC) was incorporated on February 20, 1997, with the Aggregate Producers' Association of Ontario (now the Ontario Stone, Sand & Gravel Association) as the single shareholder. The Corporation's sole purpose is to act as Trustee of the Aggregate Resources Trust.

**Representation on The Ontario Aggregate Resources Corporation Board**

The Board of Directors of TOARC represents a diverse interest group consisting of:

March 2008

Appendix 2

7

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/resources.html>

Location: MNR Home > Lands & Waters > Aggregate Resources > The Resources

- [Home](#)
- [The Program](#)
- [The Resources](#)
- [Rules & Regulations](#)
- [Rehabilitation](#)
- [Enforcement](#)
- [Useful Links](#)
- [Site Map](#)

#### The Resources

The Ministry of Natural Resources (MNR) is responsible for the management of aggregate resources in the province. MNR's planning mandate is to protect mineral aggregate resources and ensure the continued availability of these resources as close to markets as possible.

The **Ministry of Northern Development and Mines (MNDM)** is responsible for the identification and mapping of significant mineral aggregate resources. Through aggregate resources inventory papers (ARIPs), MNDM provides geological information and an assessment of aggregate resources to help prepare planning strategies and official plans. These reports include an assessment of sand, gravel and crushed stone resources for selected regions in Ontario.




Photo: Nelson Aggregate Company

**Aggregate resources** include any combination of sand, gravel, or crushed stone in a natural or processed state. Aggregates are essential contributors to the cement and asphalt industries, which are necessary for the construction of highways, dams and airports, as well as residential, industrial and institutional buildings.

The Ministry of Natural Resources (MNR) encourages the reduction, reuse, and recycling of aggregate materials.

Find out more about [aggregate resource conservation...](#)

March 2008

Appendix 2


8

4

## Appendix 2: Summary of Provincial Website Information- Ontario

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/links.html>



Ministry of  
Natural Resources

[central site](#) | [feedback](#) | [search](#) | [site map](#) | [français](#)

MNR Sites  
select a link

Go!

Search MNR Sites  
type keywords here

Search

Location: MNR Home > Lands & Waters > Aggregate Resources > Useful Links

[Home](#)  
[The Program](#)  
[The Resources](#)  
[Rules & Regulations](#)  
[Rehabilitation](#)  
[Enforcement](#)  
[Useful Links](#)  
[Site Map](#)

#### Useful Links

Contact us by email at [aggregates-mnr@mnr.gov.on.ca](mailto:aggregates-mnr@mnr.gov.on.ca)

or by postal service at:

Aggregate Resources,  
Lands & Waters Branch,  
Ministry of Natural Resources,  
300 Water Street, 5th Floor South Tower  
Peterborough, Ontario K9J 8M5

Addresses and phone numbers for MNR District offices are available at the [MNR Office page](#)

#### Other Agency links

- [The Ontario Aggregate Resources Corporation \(TOARC\)](#)
- [Environmental Registry](#)
- [Ontario Municipal Board](#)
- [Ministry of the Environment](#)
- [Ontario Stone, Sand & Gravel Association \(OSSGA\)](#)


March 2008

Appendix 2

9

### The Ontario Aggregate Resources Corporation MAAP PROGRAM

<http://www.toarc.com/publications.asp>



THE ONTARIO AGGREGATE RESOURCES CORPORATION

[Home](#) | [Corporate Information](#) | [Designated Areas](#) | [Publications](#) | [MAAP](#) | [Contact Us](#) | [Contact MNR](#) | [Important Links](#)

#### The Latest From TOARC

##### The MAAP Program Has Moved!

The MAAP Program has moved into the same office building as TOARC, Suite #206. Toll Free Number: 1-866-308-6272 Phone: (905) 319-1968 Fax: (905) 319-2467

#### Welcome to TOARC

Welcome to The Ontario Aggregate Resources Corporation (TOARC). We hope this web site will be informative to all those interested in matters related to the aggregate industry and within the scope of responsibility of the Aggregate Resources Trust (the Trust). TOARC was incorporated in 1997 to act as trustee of the Aggregate Resources Trust, a trust created under the authority of the Aggregate Resources Act and pursuant to a trust indenture between the Corporation and the Minister of Natural Resources for the Province of Ontario.

TOARC has assumed, in the public interest, the responsibilities provided for in an indenture between the Minister of Natural Resources and the Corporation as of the 27th day of June 1997. Those responsibilities include the collection and disbursement of aggregate fees, the rehabilitation of abandoned pits and quarries, the rehabilitation of sites where licenses or permits have been revoked, the collection and publication of production statistics and other information and the education and training of those in or interested in the aggregate industry.

We hope this site will be helpful to the holders of the more than 2,700 licenses and 2,900 permits across the Province, to the provincial and municipal governments who are the recipients of more than \$10 million annually in various licence, permit and royalty fees and to all others having an interest in the management of Ontario's aggregate resources.

March 2008

Appendix 2

10



## Appendix 2: Summary of Provincial Website Information- Ontario

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/rules.html>

Location: MNR Home > Lands & Waters > Aggregate Resources > Rules & Regulations

- Home
- The Program
- The Resources
- Rules & Regulations
  - The Application Process
  - Pit/Quarry Operations
  - Hearings & Appeals
  - Tribunals
  - Rehabilitation
  - Enforcement
  - Useful Links
  - Site Map

#### Rules & Regulations

##### The Aggregate Resources Act and regulations

The purposes of the Act are:

- to provide for the management of the aggregate resources of Ontario;
- to control and regulate aggregate operations on both Crown lands and private lands;
- to require the progressive and final rehabilitation of land from which aggregate has been excavated; and
- to minimize the adverse impact on the environment from aggregate operations.

The Act and the regulations apply to the excavation of:

- All aggregate and topsoil on Crown land and all Crown-owned aggregate;
- All aggregate from land under natural water bodies; and
- All aggregate on private land in designated areas of the province.

The Act and the regulations do not apply where:

- material is not defined as "aggregate" under the Act;
- material is excluded from the definition of "rock" under the Act; or
- material is being extracted through underground mining (i.e. not open pit).

The term 'aggregate' is defined by the Act as: gravel, sand, clay, earth, shale, stone, limestone, dolostone, sandstone, marble, granite, and rock .

'Rock' does not include metallic ores, andalusite, asbestos, barite, coal, diamond, graphite, gypsum, kaolin, kyanite, lepidolite, magnesite, mica, nepheline, syenite, petalite, phosphate rock, salt, sillimanite, spodumene, talc, or wollastonite.

Underground aggregate mining and materials exempted from the definition of 'rock'

March 2008

Appendix 2

11

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/application.html>

Location: MNR Home > Lands & Waters > Aggregate Resources > Rules & Regulations > The Application Process

- Home
- The Program
- The Resources
- Rules & Regulations
  - The Application Process
    - Licence Application
    - Aggregate Permit Application
    - Wayside Permit Application
    - Pit/Quarry Operations
    - Hearings & Appeals
    - Tribunals
    - Rehabilitation
    - Enforcement
    - Useful Links
    - Site Map

#### The Application Process

The Aggregate Resources Act application process is proponent-driven. The applicant is responsible for meeting all information requirements and undertaking public and agency notification as well as consultation. This process is designed to be open and transparent.

The Act regulates aggregate extraction through three types of instruments (approvals):

- aggregate permits are required for aggregate extraction on Crown land or where the Crown owns the aggregate, and all extraction from land under natural water bodies;
- A licence is required for aggregate extraction on private land in designated areas [areas that are identified in regulation]. A Class A licence is issued for operations that remove more than 20,000 tonnes of material from the site annually. A Class B licence is issued for operations that remove 20,000 tonnes or less annually.
- A wayside permit is issued for aggregate extraction on private land in designated areas, where the aggregate is to be used by a public authority (MTO, municipality) for temporary road construction or road maintenance projects.

The process for applications under the Act is laid out in the Aggregate Resources of Ontario, Provincial Standards. The Provincial Standards contain a set of standard application criteria for licence, aggregate permit and wayside permit applications.

These application categories were created to ensure that the appropriate information is provided to assess the application and to ensure that the applicant, municipal agencies and affected parties are aware of the up-front requirements. Each application category includes Site Plan Standards, Report Standards, Prescribed Conditions, and Notification and Consultation Standards.

It is important to note that the categories only relate to the application process, as the Aggregate Resources Act only recognizes four types of instruments (approvals): a Class 'A' licence; a Class 'B' licence; a wayside permit; and an aggregate permit. The licence or permit does not specify whether the operation is to be above or below the water table; this is controlled by the approved site plan.

There are 14\* different categories of applications outlined in the Provincial Standards, based on whether:

- the application is for a pit or a quarry;
- the extraction is to be above or below the water table; and

March 2008

Appendix 2

12

Ontario Ministry of Natural Resources

http://www.mnr.gov.on.ca/MNR/aggregates/operations.html

Location: MNR Home > Lands & Waters > Aggregate Resources > Rules & Regulations > Pit and Quarry Operations

Home

The Program

The Resources

Rules & Regulations

The Application Process

Pit/Quarry Operations

Hearings & Appeals

Tribunals

Rehabilitation

Enforcement

Useful Links

Site Map

Pit and Quarry Operations

Compliance


Every licensee and permittee is responsible for the day-to-day monitoring of their site to ensure that they are in compliance with the requirements of the Aggregate Resources Act, the regulations, the Aggregate Resources of Ontario Provincial Standards, the site plans and the conditions of their licence or permit.

Site Plan

The site plan is the primary tool that controls the operation and rehabilitation of all pits and quarries. The licensee or permittee is legally bound to operate and rehabilitate their site in accordance with the site plan.

The site plan includes information on:

- how the extraction of aggregate will occur on the site (e.g. which parts of the licence or permit area will be extracted first, how extraction will move across the site, how deep the extraction will be, what types of equipment will be used, what the hours of operation will be, etc.);
- how progressive rehabilitation will be carried out;
- what the final rehabilitation of the site will involve; and
- any required monitoring programs that were identified during the application process.



March 2008

Appendix 2

13

Ontario Ministry of Natural Resources

http://www.mnr.gov.on.ca/MNR/aggregates/hearings.html

Location: MNR Home > Lands & Waters > Aggregate Resources > Rules & Regulations > Hearings and Appeals

Home

The Program

The Resources

Rules & Regulations

The Application Process

Pit/Quarry Operations

Hearings & Appeals

Tribunals

Rehabilitation

Enforcement

Useful Links

Site Map

Hearings and Appeals

The following tables identify situations where decisions or proposals may be appealed:

Hearings under the Aggregate Resources Act

Proposal	When	Who	Tribunal
Licence Application	There are unresolved objections at the completion of the notification/consultation process	MNR refers the application	Ontario Municipal Board (OMB)

Appeals under the Aggregate Resources Act

Decision / Proposal	When	Who	Tribunal
Refusal to issue Licence	There was no OMB hearing during the licence application process	Applicant	Ontario Municipal Board (OMB)
Change to licence condition or site plan	MNR proposes to require a change in a licence condition or a licence site plan	Licensee	Ontario Municipal Board (OMB)
Transfer a Licence	MNR proposes to transfer a licence, where the licensee does not agree to the transfer	Licensee	Ontario Municipal Board (OMB)
Refusal to Transfer Licence	MNR proposes to refuse the transfer of a licence	Applicant and Licensee	Ontario Municipal Board (OMB)
Revocation of a Licence	A licence is revoked for any reason except for the non-payment of licence fees	Licensee	Ontario Municipal Board (OMB)
Refusal to issue an Aggregate Permit	The application was for an aggregate permit for private land under water (natural waterbody)	Applicant	Ontario Municipal Board (OMB)
Change to aggregate permit condition or site plan	MNR proposes to require a change in an aggregate permit condition or a site plan	Permittee	Mining and Lands Commissioner (MLC)
Revocation of an Aggregate Permit	An aggregate permit is revoked for any reason except non-payment of fees or royalties, or non-submission of a	Permittee	Mining and Lands Commissioner (MLC)

March 2008

Appendix 2

14

7

## Appendix 2: Summary of Provincial Website Information- Ontario

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/tribunals.html>

**Location:** MNR Home > Lands & Waters > Aggregate Resources > Rules & Regulations > Tribunals

- [Home](#)
- [The Program](#)
- [The Resources](#)
- [Rules & Regulations](#)
  - [The Application Process](#)
  - [R/C Quarry Operations](#)
  - [Hearings & Appeals](#)
  - [Tribunals](#)
  - [Rehabilitation](#)
  - [Enforcement](#)
  - [Useful Links](#)
  - [Site Map](#)

#### Tribunals

**Ontario Municipal Board**

The Ontario Municipal Board (OMB) is an independent adjudicative tribunal that hears appeals and applications and resolves land use disputes under a variety of legislation. The Ontario government appoints members to the OMB. Members include people from different areas of the province with diverse backgrounds such as lawyers, former elected officials, engineers, surveyors, planners and public administrators.

MNR sends documents and information about the hearings or appeals to the OMB. Because formal OMB hearings can be time-consuming and expensive, the OMB may try to settle disputes or reduce the number of issues at a hearing by bringing parties and participants together through pre-hearings or mediation meetings.

When licence applications are referred to the OMB, the Board may:

- Hold a hearing and direct the Minister of Natural Resources to issue the licence, subject to the Prescribed Conditions and any additional conditions specified; or
- Hold a hearing and direct the Minister to refuse to issue the licence.

The Minister of Natural Resources may refuse to impose an additional condition specified by the Board if he or she is of the opinion that it is not consistent with the purposes of the Aggregate Resources Act.

The OMB has the power to refuse to consider objections if they were not made in good faith, are frivolous or vexatious, or are made only for the purpose of delay. If the Board determines that all of the referred objections are of this nature, they are not required to hold a hearing.

In situations where licence applications are referred to the OMB under both the Aggregate Resources Act and the Planning Act, the Board may hold a hearing for both matters at the same time.

For more information on the Ontario Municipal Board and hearings, visit their website at:

<http://www.omb.gov.on.ca/>

**Joint Board**

Under the Consolidated Hearings Act, the Environmental Assessment Board holds

March 2008
Appendix 2
15

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/rehab.html>

**Location:** MNR Home > Lands & Waters > Aggregate Resources > Rehabilitation

- [Home](#)
- [The Program](#)
- [The Resources](#)
- [Rules & Regulations](#)
- [Rehabilitation](#)
- [Enforcement](#)
- [Useful Links](#)
- [Site Map](#)

#### Rehabilitation

The Aggregate Resources Act requires every licensee and permittee in the Province of Ontario to perform progressive and final rehabilitation on the site in accordance with the Act, the regulations, the site plan and the conditions of the licence/permit to the satisfaction of MNR.

Rehabilitation is the treatment of land from which aggregate has been excavated so that the use or condition of the land:

- is restored to its former use or condition, or
- is changed to another use or condition that is or will be compatible with the use of adjacent land.



March 2008
Appendix 2
16

## Appendix 2: Summary of Provincial Website Information- Ontario

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/enforcement.html>

- [Home](#)
- [The Program](#)
- [The Resources](#)
- [Rules & Regulations](#)
- [Rehabilitation](#)
- [Enforcement](#)
- [Useful Links](#)
- [Site Map](#)

#### Enforcement

One of the many roles that an Aggregate Inspector has in administering the Aggregate Resources Act is to ensure the industry complies with the Act, the regulations, the site plan, and the conditions of the licence/permit.

The chart below illustrates the types of charges laid in the last five years and the amount of fine levied through the courts.

**Convictions under the Aggregate Resources Act, 2000-2005**

YEAR	# OF CHARGES	INFRACTION	AMOUNT FINED
2005	1	Illegal Pit/Quarry ( Private Land, Designated Area)	\$9,460.00
2005	1	Illegal Pit/Quarry ( Crown Land)	\$250.00
2005	3	Tonnage Violation	\$33,000.00
2005	1	Fail To Submit Production Report & Non-Payment Of Fees	\$500.00
2005	1	Setback Violation	\$4,000.00
		<b>2005 YTD Totals</b>	<b>\$47,210.00</b>
2004	8	Illegal Pit/Quarry ( Private Land, Designated Area)	\$25,552.00
2004	2	Illegal Pit/Quarry ( Crown Land)	\$5,500.00
2004	2	Illegal Pit ( Crown Land) And Constructing A Road	\$4,500.00
2004	1	Tonnage Violation	\$2,000.00
2004	1	Fail To Submit Annual Compliance Assessment Report	\$500.00
2004	2	Non-Payment Of Fees	\$1,000.00
2004	1	Falsify Production Report & Tonnage Violation	\$3,500.00
		<b>2004 Totals</b>	<b>\$42,552.00</b>
2003	6	Illegal Pit/Quarry (Private Land, Designated Area)	\$14,000.00
2003	2	Illegal Pit/Quarry (Crown Land )	\$1,700.00
2003	2	Operating While Under Suspension	\$90,000.00
2003	1	Site Plan Violation	\$40,000.00
2003	2	Setback Violation	\$8,500.00
		<b>2003 Totals</b>	<b>\$154,200.00</b>
2002	6	Illegal Pit/Quarry (Private Land, Designated Area)	\$20,500.00

March 2008

Appendix 2

17

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/standards.html>

Ministry of Natural Resources

[central site](#) | [feedback](#) | [search](#) | [site map](#) | [français](#)

MNR Sites  
select a link

Search MNR Sites  
type keywords here

Location: MNR Home > Lands & Waters > Aggregate Resources > Site Map

#### Site Map

- [Home](#)
- [The Program](#)
- [The Resources](#)
- [Rules & Regulations](#)
- [Rehabilitation](#)
- [Enforcement](#)
- [Useful Links](#)
- [Site Map](#)

[Home](#) >

[The Program](#) >

- [MNR Role](#)
- [MTO Role](#)
- [TOARC Role](#)

[The Resources](#) >

- [Aggregate Resource Conservation](#)

[Rules & Regulations](#) >

- [The Application Process](#)
  - [Licence Applications](#)
  - [Aggregate Permit Applications](#)
  - [Wayside Permit Applications](#)
- [Pit/Quarry Operations](#)
- [The Provincial Standards](#)

[Rehabilitation](#) >

[Enforcement](#) >

[Useful Links](#) >

[Legislation affecting aggregate extraction](#) >

[Site Map](#) >

March 2008

Appendix 2

18

## Appendix 2: Summary of Provincial Website Information- Ontario

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/standards.html>

Location: MNR Home > Lands & Waters > Aggregate Resources > Rules & Regulations > Provincial Standards

#### Provincial Standards

The following Aggregate Resources of Ontario Provincial Standards documents are available for download in Adobe .pdf format. You will require Adobe Acrobat Reader, which you may download at no charge from [Adobe](#) if it is not already installed on your machine.

- [Provincial Standards of Ontario - Category 1 - Class A Pit Below Water](#)
- [Provincial Standards of Ontario - Category 2 - Class A Quarry Below Water](#)
- [Provincial Standards of Ontario - Category 3 - Class A Pit Above Water](#)
- [Provincial Standards of Ontario - Category 4 - Class A Quarry Above Water](#)
- [Provincial Standards of Ontario - Category 5 - Class B Pit Below Water](#)
- [Provincial Standards of Ontario - Category 6 - Class B Quarry Below Water](#)
- [Provincial Standards of Ontario - Category 7 - Class B Pit Above Water](#)
- [Provincial Standards of Ontario - Category 8 - Class B Quarry Above Water](#)
- [Provincial Standards of Ontario - Category 9 - Pit Above Water](#)
- [Provincial Standards of Ontario - Category 10 - Pit Below Water](#)
- [Provincial Standards of Ontario - Category 11 - Quarry Above Water](#)
- [Provincial Standards of Ontario - Category 12 - Quarry Below Water](#)
- [Provincial Standards of Ontario - Category 13 - Aggregate Permit Extraction for Land Under Water](#)
- [Provincial Standards of Ontario - Category 14 - Forest Industry](#)
- [Provincial Standards of Ontario - Category 15 - Wayside Permits for Public Authority Projects](#)

- [Home](#)
- [The Program](#)
- [The Resources](#)
- [Rules & Regulations](#)
  - [The Application Process](#)
  - [Pit/Quarry Operations](#)
  - [Hearings & Appeals](#)
  - [Tribunals](#)
- [Rehabilitation](#)
- [Enforcement](#)
- [Useful Links](#)
- [Site Map](#)

March 2008

Appendix 2

19

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/standards.html>

Ministry of Natural Resources

[central site](#) | [feedback](#) | [search](#) | [site map](#) | [français](#)

MNR Sites:   Search MNR Sites:

Location: MNR Home > Lands & Waters > Aggregate Resources > Site Map

#### Site Map

- [Home](#) >
- [The Program](#) >
  - [MNR Role](#)
  - [MTO Role](#)
  - [TOARC Role](#)
- [The Resources](#) >
  - [Aggregate Resource Conservation](#)
- [Rules & Regulations](#) >
  - [The Application Process](#)
    - [Licence Applications](#)
    - [Aggregate Permit Applications](#)
    - [Wayside Permit Applications](#)
  - [Pit/Quarry Operations](#)
  - [The Provincial Standards](#)
- [Rehabilitation](#) >
- [Enforcement](#) >
- [Useful Links](#) >
  - [Legislation affecting aggregate extraction](#)
- [Site Map](#) >

- [Home](#)
- [The Program](#)
- [The Resources](#)
- [Rules & Regulations](#)
- [Rehabilitation](#)
- [Enforcement](#)
- [Useful Links](#)
- [Site Map](#)

March 2008

Appendix 2

20

## Appendix 2: Summary of Provincial Website Information- Ontario

### Ontario Ministry of Natural Resources

<http://www.mnr.gov.on.ca/MNR/aggregates/legislation.html>

Location: MNR Home > Lands & Waters > Aggregate Resources > Provincial & Federal Legislation Affecting Aggregate Extraction

- [Home](#)
- [The Program](#)
- [The Resources](#)
- [Rules & Regulations](#)
- [Rehabilitation](#)
- [Enforcement](#)
- [Useful Links](#)
- [Site Map](#)

#### Provincial & Federal Legislation Affecting Aggregate Extraction

Legislation	Jurisdiction	Purpose	Effect on Aggregate Extraction Activities
<a href="#">Conservation Authorities Act</a>	Provincial	To establish a program to conserve, restore, develop and manage watersheds	<ul style="list-style-type: none"> <li>Restricts alterations to rivers, streams, and creeks through the Lakes and Rivers Improvement Act, administered by the Conservation Authority</li> </ul>
<a href="#">Endangered Species Act</a>	Provincial	Provide for the conservation, protection, restoration and propagation of species of fauna and flora that are threatened with extinction	<ul style="list-style-type: none"> <li>Approximately 1600 species have been catalogued as being at risk</li> <li>Some examples are (e.g. Loggerhead Shrike, Blue Racer Snake, Bald Eagle, Prickly Pear cactus, American Ginseng)</li> </ul>
<a href="#">Environmental Assessment Act</a>	Provincial	To provide for the protection, conservation and wise management of Ontario's environment	<ul style="list-style-type: none"> <li>Crown aggregate dispositions are reviewed subject to MNR's Class EA for Resource Stewardship and Facility Development Projects</li> <li>Proposals for aggregate extraction on private land must be designated by regulation</li> </ul>
<a href="#">Environmental Bill of Rights</a>	Provincial	To protect and restore the natural environment and to protect people's right to a healthy environment	<ul style="list-style-type: none"> <li>Requires posting of licensed aggregate extraction proposals and decisions on Ontario Environmental Bill of Rights Registry for at least 30 days</li> </ul>

March 2008

Appendix 2

21

## Appendix 2: Summary of Provincial Website Information- Quebec



Québec

Site Map Help Contact Us Français Español

Tuesday, September 26, 2006

Québec Portal  
Your governmental portal of services

Geology Search

Citizens  
Online services and information about programs and services for citizens, whether they are for example, parents, workers, students or retired persons

Companies  
Online services for new and established companies, information, forms, permits

International Clientele  
Online services and information for visitors, immigrants, foreign students and businesspeople outside Québec

Young People aged 15-29  
Tourism  
Regions  
Geography and maps

ABOUT QUÉBEC

Parliament and Government  
National Assembly  
Premier  
Departments, Agencies and Others  
and more...

Portrait of Québec  
Employment and Labour  
Economy  
A Modern and United Society  
and more...

GOVERNMENTAL NEWS

- Engagés dans l'action pour les aînés du Québec 2006-2007 program
- Gross domestic product (GDP) at basic prices by administrative region of Québec, 2000-2005
- New edition of the Répertoire de ressources culture-éducation and more...
- News Services  
Flu

Coming up

For more information  
Services Québec


Conseil du statut de la femme  
Québec

No more waiting for your cheque...

<http://www.gouv.qc.ca/portail/quebec/pgs?lang=en>  
March 2008

Appendix 2

1



Québec

Québec Portal Site Map Help Contact Us Français Español

Québec Portal  
Your Government Portal for Services

Home Parliament and Government Portrait of Québec Governmental news

You are here: Home > Search

Results summary Refine search Modify search Advanced search New search

Search results for: Geology  
Documents: 200 found 1-10 displayed

Sort by: Relevance Date

1- MRNF- Site Map 100% 2006-07-29  
Geology  
<http://www.mrnf.gouv.qc.ca/english/sitemap.jsp> (HTML) (44.1)kb  
Highlighted concepts  
Extracts of relevant concepts

2- Musée de la mer 100% 2006-09-10  
Some Information was found in the Meta and Alt tags of the document.  
<http://www.bonjourquebec.com/ca-en/fiches/en/attrails/1172925.html> (HTML) (25.0)kb  
Highlighted concepts

3- Site map: ROCK'N METAL: Musée de la civilisation 100% 2005-06-28  
1. Geology  
<http://www.mcq.org/roc/en/plan.html> (HTML) (28.2)kb  
Highlighted concepts

<http://recherched.gouv.qc.ca/internet/recherche.asp?query=Geology&chercher=Search&curl=http%3A%2F%2Fwww.xml.gouv.qc.ca%2Frecherche%2Fdelphe%2Fpgs%2F&int=P&GS&sCatList=root&lx=780&hx=210&fy=100&mo=n&rd=y&lang=en&adv=y&pagesize=10&cs=utf8>  
March 2008

Appendix 2

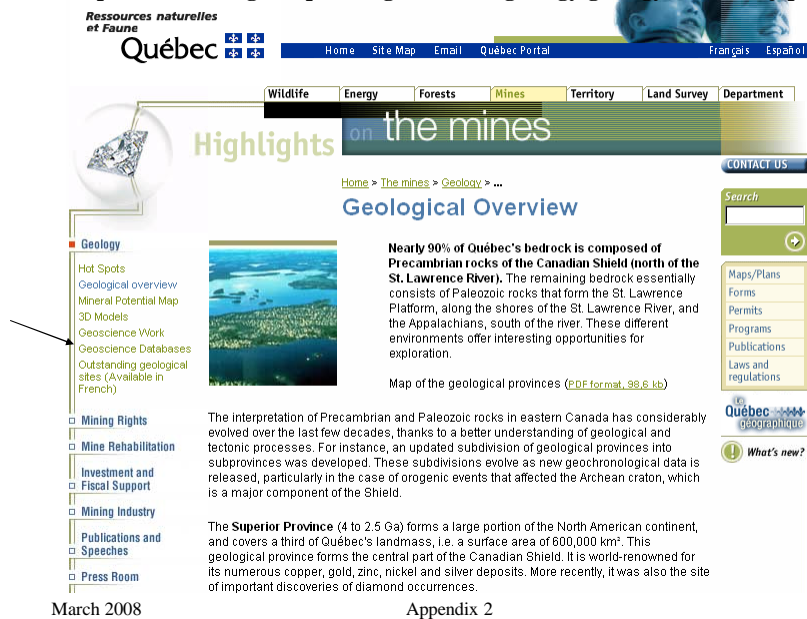
2

## Appendix 2: Summary of Provincial Website Information- Quebec

<http://www.mrnf.gouv.qc.ca/english/sitemap.jsp>



<http://www.mrnf.gouv.qc.ca/english/mines/geology/geology-overview.jsp>





## Appendix 2: Summary of Provincial Website Information- Quebec

<http://www.mrnf.gouv.qc.ca/english/mines/geology/geology-databases.jsp>

**Geology Databases**

You will now access SIGEOM, a unique spatially referenced geominning information system. This system contains all the geoscience data accumulated in Québec over the last 150 years. Each year, it is enriched with the results of prospecting and exploration work carried out by the Department, mining companies and universities.

**It encompasses:**

- e\_sigeom à la carte**, which provides access to all geoscience data. It allows users to search for data based on specific criteria, and to obtain customized maps in the desired format.
- e\_sigeom atlas**, which makes it easy to access all available GIS products. It lists all geological, geochemical or geophysical maps.

March 2008

Appendix 2

5

[http://sigeom.mrnfp.gouv.qc.ca/signet/classes/I1102\\_indexAccueil?l=a](http://sigeom.mrnfp.gouv.qc.ca/signet/classes/I1102_indexAccueil?l=a)

**Publication**

**Examine document (and surveys)**

**Access small scale maps**

**Geology**

**Geophysics**

**Geochemistry**

**Deposits**

**Glacial transport**

**Quaternary geology**

**Drilling**

**Hydrogeology**

March 2008

Appendix 2

6

## Appendix 2: Summary of Provincial Website Information- Quebec

[http://sigeom.mrnfp.gouv.qc.ca/signet/classes/I1102\\_indexAccueil?l=a](http://sigeom.mrnfp.gouv.qc.ca/signet/classes/I1102_indexAccueil?l=a)

Ressources naturelles  
et Faune  
Québec

e-sigeom  
à la carte

> español > français > confidentiality policy > Help

- Quaternary geology

<u>Ridge and furrow</u>	? Linear relief, ridge, hollow or furrow landforms produced by various erosion or sedimentation mechanisms.
<u>Contour</u>	? The perimeter corresponds to the limit between the various units of loose deposits.
<u>Delta</u>	? Used to indicate the position, altitude and direction of the water flow at the mouth of a paleolake or the sea.
<u>Scarp</u>	? Used to indicate the position, altitude and eventually the name of a landform whose terrace corresponds to a paleoshoreline.
<u>Paleogeographical position</u>	? Used to mark the limit of large paleogeographical manifestations such as postglacial seas, Glacial Great Lakes or morainic positions.
<u>Stratigraphical site</u>	? Used to indicate the position and provide the description of a stratigraphical section or drilling in loose deposits.
<u>Morphosedimentological zone</u>	? Landsurface delimited by a perimeter, whose lithological, morphological and stratigraphic features allow it to be a mappable unit.
<u>Paleontological site</u>	? Used to indicate the fossiliferous or palynologic position and content.
<u>Glacial landform site</u>	? Designates all landforms built by Quaternary glaciers.
<u>Meltwater landform</u>	? Designates all landforms built by circulation of glacial meltwater.
<u>Dating</u>	? Used to specify location, accuracy of measurement, dated material and method used.

March 2008

Appendix 2

7

[http://sigeom.mrnfp.gouv.qc.ca/signet/classes/I1102\\_indexAccueil?l=a](http://sigeom.mrnfp.gouv.qc.ca/signet/classes/I1102_indexAccueil?l=a)

Ressources naturelles  
et Faune  
Québec

e-sigeom  
à la carte

> español > français > confidentiality policy > Help

To create a map according to your own search criteria starting from the data of the SIGÉOM and of GESTIM.

- Publication

<u>Examine document (and surveys)</u>	? The Examine documents (and surveys) constitute the gateway to the Géologie Québec record holdings. They represent the overall available information describing the content of the report, in addition to locating the work perimeter.
<u>Access small scale maps</u>	? The projects of small scale maps are directed towards the creation of document of generalization on scales smaller than the 1: 250 000 supplied with the base given of the SIGÉOM. They are projects of synthesis or models geological. They can be also used for Promotion of the mineral potential and the geoscientific promotion of the inheritance like the exceptional geological sites.

+ Geology

+ Geophysics

+ Geochemistry

+ Deposits

+ Glacial transport

+ Quaternary geology

+ Drilling

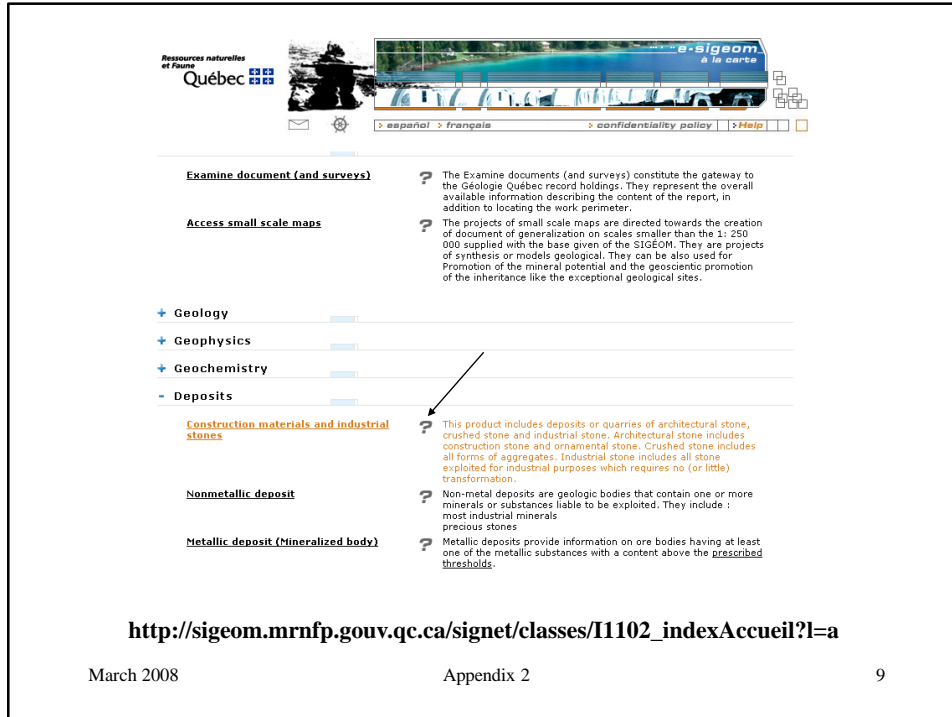
+ Hydrogeology

March 2008

Appendix 2

8

## Appendix 2: Summary of Provincial Website Information- Quebec



**Examine document (and surveys)** ? The Examine documents (and surveys) constitute the gateway to the Géologie Québec record holdings. They represent the overall available information describing the content of the report, in addition to locating the work perimeter.

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**+ Geology**

**+ Geophysics**

**+ Geochemistry**

**- Deposits**

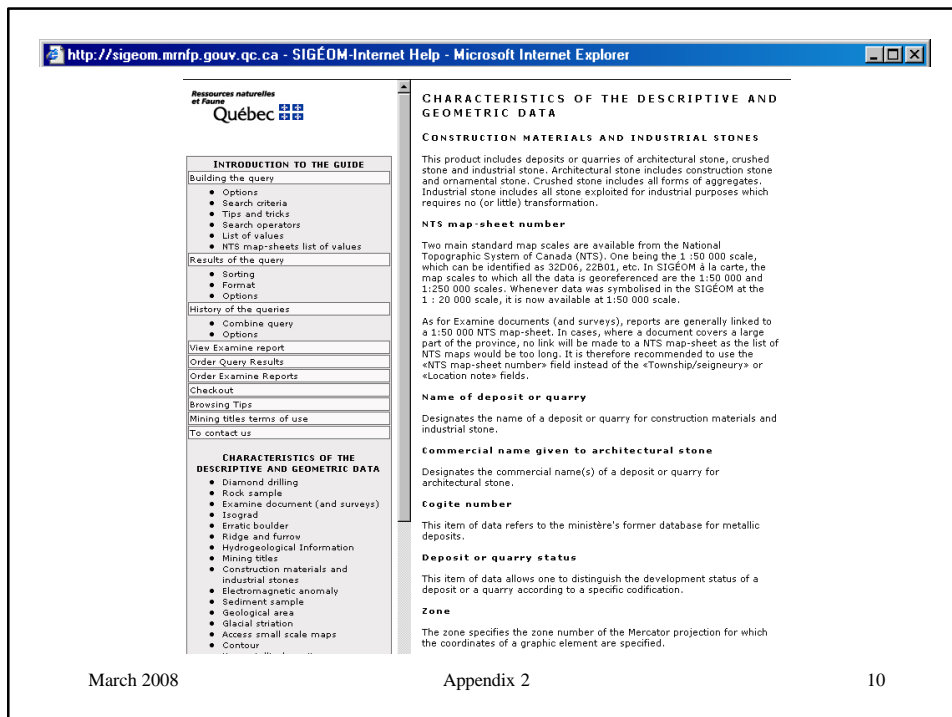
**Construction materials and industrial stones** ? This product includes deposits or quarries of architectural stone, crushed stone and industrial stone. Architectural stone includes construction stone and ornamental stone. Crushed stone includes all forms of aggregates. Industrial stone includes all stone exploited for industrial purposes which requires no (or little) transformation.

**Nonmetallic deposit** ? Non-metal deposits are geologic bodies that contain one or more minerals or substances liable to be exploited. They include : most industrial minerals precious stones

**Metallic deposit (Mineralized body)** ? Metallic deposits provide information on ore bodies having at least one of the metallic substances with a content above the prescribed thresholds.

[http://sigeom.mrnfp.gouv.qc.ca/signet/classes/I1102\\_indexAccueil?l=a](http://sigeom.mrnfp.gouv.qc.ca/signet/classes/I1102_indexAccueil?l=a)

March 2008 Appendix 2 9



<http://sigeom.mrnfp.gouv.qc.ca> - SIGEOM-Internet Help - Microsoft Internet Explorer

**INTRODUCTION TO THE GUIDE**

**Building the query**

- Options
- Search criteria
- Tips and tricks
- Search operators
- List of values
- NTS map-sheets list of values

**Results of the query**

- Sorting
- Format
- Options

**History of the queries**

- Combine query
- Options

**View Examine report**

**Order Query Results**

**Order Examine Reports**

**Checkout**

**Browsing Tips**

**Mining titles terms of use**

**To contact us**

**CHARACTERISTICS OF THE DESCRIPTIVE AND GEOMETRIC DATA**

- Diamond drilling
- Rock sample
- Examine document (and surveys)
- Isograd
- Erratic boulder
- Ridge and furrow
- Hydrogeological Information
- Mining titles
- Construction materials and industrial stones
- Electromagnetic anomaly
- Sediment sample
- Geological area
- Glacial striation
- Access small scale maps
- Contour

**CHARACTERISTICS OF THE DESCRIPTIVE AND GEOMETRIC DATA**

**CONSTRUCTION MATERIALS AND INDUSTRIAL STONES**

This product includes deposits or quarries of architectural stone, crushed stone and industrial stone. Architectural stone includes construction stone and ornamental stone. Crushed stone includes all forms of aggregates. Industrial stone includes all stone exploited for industrial purposes which requires no (or little) transformation.

**NTS map-sheet number**

Two main standard map scales are available from the National Topographic System of Canada (NTS). One being the 1:50 000 scale, which can be identified as 32006, 22501, etc. In SIGEOM à la carte, the map scales to which all the data is georeferenced are the 1:50 000 and 1:250 000 scales. Whenever data was symbolized in the SIGEOM at the 1: 20 000 scale, it is now available at 1:50 000 scale.

As for Examine documents (and surveys), reports are generally linked to a 1:50 000 NTS map-sheet. In cases, where a document covers a large part of the province, no link will be made to a NTS map-sheet as the list of NTS maps would be too long. It is therefore recommended to use the «NTS map-sheet numbers» field instead of the «Township/seigneurie» or «Location note» fields.

**Name of deposit or quarry**

Designates the name of a deposit or quarry for construction materials and industrial stone.

**Commercial name given to architectural stone**

Designates the commercial name(s) of a deposit or quarry for architectural stone.

**Cogite number**

This item of data refers to the ministère's former database for metallic deposits.

**Deposit or quarry status**

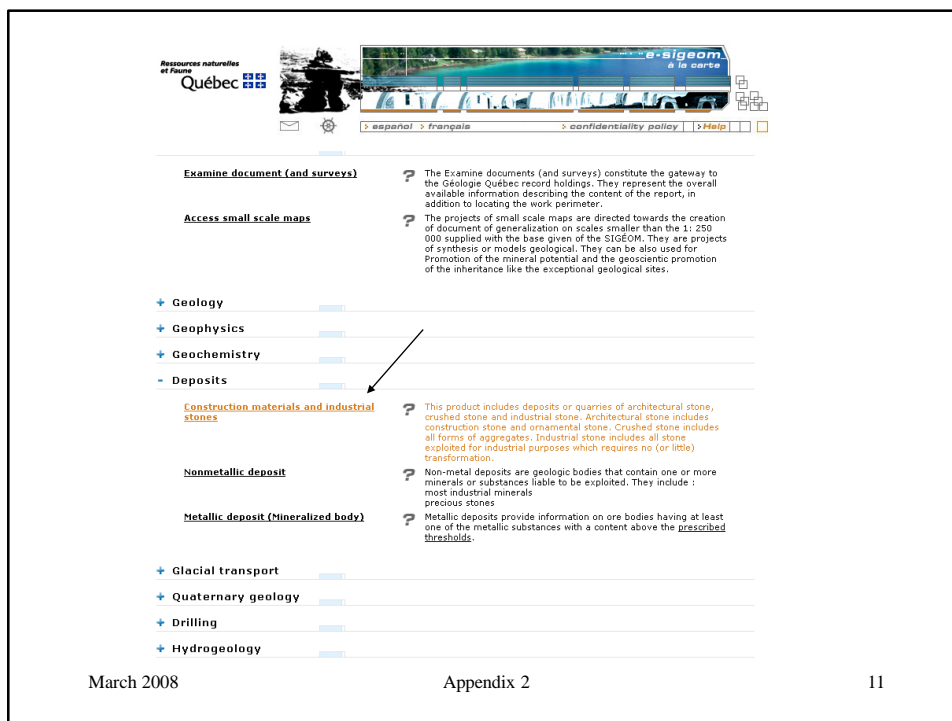
This item of data allows one to distinguish the development status of a deposit or a quarry according to a specific codification.

**Zone**

The zone specifies the zone number of the Mercator projection for which the coordinates of a graphic element are specified.

March 2008 Appendix 2 10

## Appendix 2: Summary of Provincial Website Information- Quebec



Resources naturelles Québec

e-sigeom

español français confidentiality policy Help

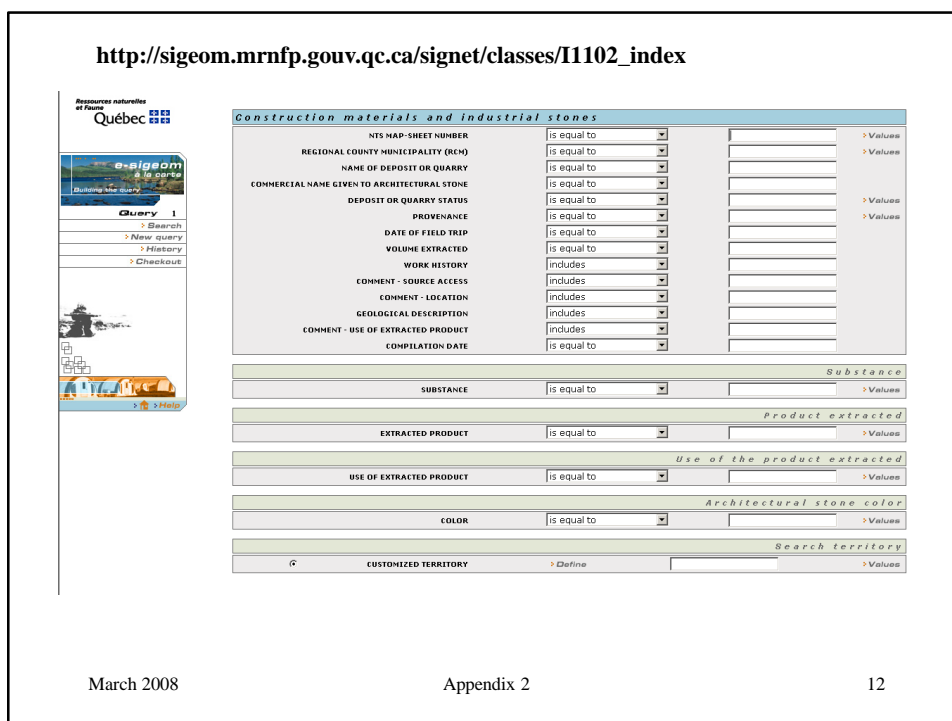
**Examine document (and surveys)** ? The Examine documents (and surveys) constitute the gateway to the Géologie Québec record holdings. They represent the overall available information describing the content of the report, in addition to locating the work perimeter.

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- + Geology
- + Geophysics
- + Geochemistry
- + Deposits
  - Construction materials and industrial stones** ? This product includes deposits or quarries of architectural stone, crushed stone and industrial stone. Architectural stone includes construction stone and ornamental stone. Crushed stone includes all forms of aggregates. Industrial stone includes all stone exploited for industrial purposes which requires no (or little) transformation.
  - Nonmetallic deposit** ? Non-metal deposits are geologic bodies that contain one or more minerals or substances liable to be exploited. They include : most industrial minerals precious stones
  - Metallic deposit (Mineralized body)** ? Metallic deposits provide information on ore bodies having at least one of the metallic substances with a content above the prescribed thresholds.
- + Glacial transport
- + Quaternary geology
- + Drilling
- + Hydrogeology

March 2008 Appendix 2 11

[http://sigeom.mrnfp.gouv.qc.ca/signet/classes/I1102\\_index](http://sigeom.mrnfp.gouv.qc.ca/signet/classes/I1102_index)



Resources naturelles Québec

e-sigeom

Query 1

Search New query History Checkout

**Construction materials and industrial stones**

NTS MAP-SHEET NUMBER	is equal to		> Values
REGIONAL COUNTY MUNICIPALITY (RCM)	is equal to		> Values
NAME OF DEPOSIT OR QUARRY	is equal to		
COMMERCIAL NAME GIVEN TO ARCHITECTURAL STONE	is equal to		
DEPOSIT OR QUARRY STATUS	is equal to		> Values
PROVENANCE	is equal to		> Values
DATE OF FIELD TRIP	is equal to		
VOLUME EXTRACTED	is equal to		
WORK HISTORY	includes		
COMMENT - SOURCE ACCESS	includes		
COMMENT - LOCATION	includes		
GEOLOGICAL DESCRIPTION	includes		
COMMENT - USE OF EXTRACTED PRODUCT	includes		
COMPILATION DATE	is equal to		

**Substance**

SUBSTANCE is equal to > Values

**Product extracted**

EXTRACTED PRODUCT is equal to > Values

**Use of the product extracted**

USE OF EXTRACTED PRODUCT is equal to > Values

**Architectural stone color**

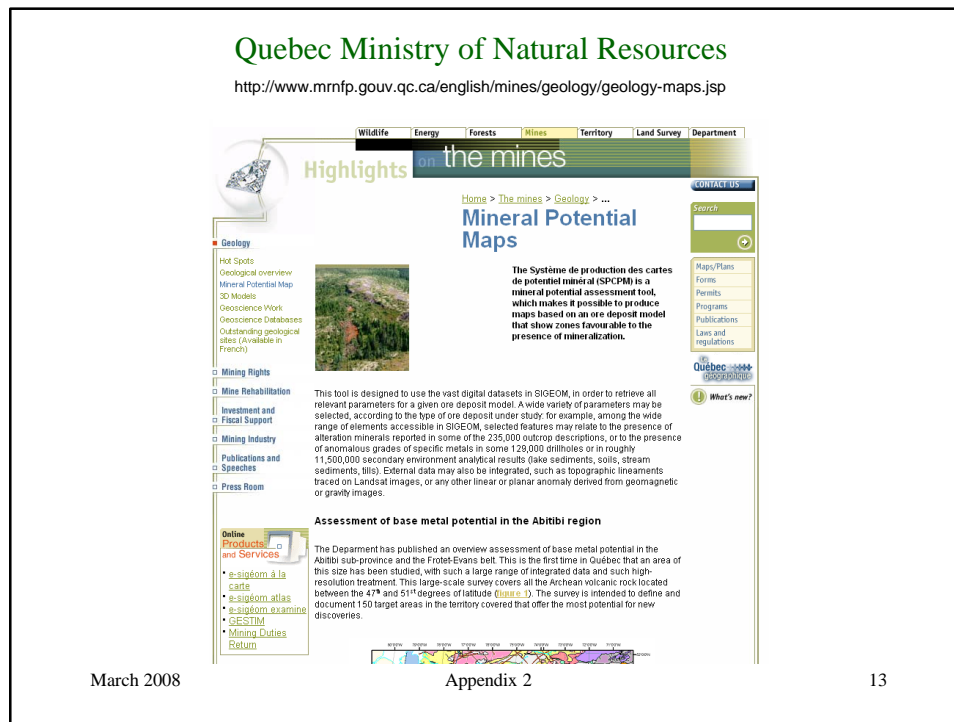
COLOR is equal to > Values

**Search territory**

CUSTOMIZED TERRITORY Define > Values

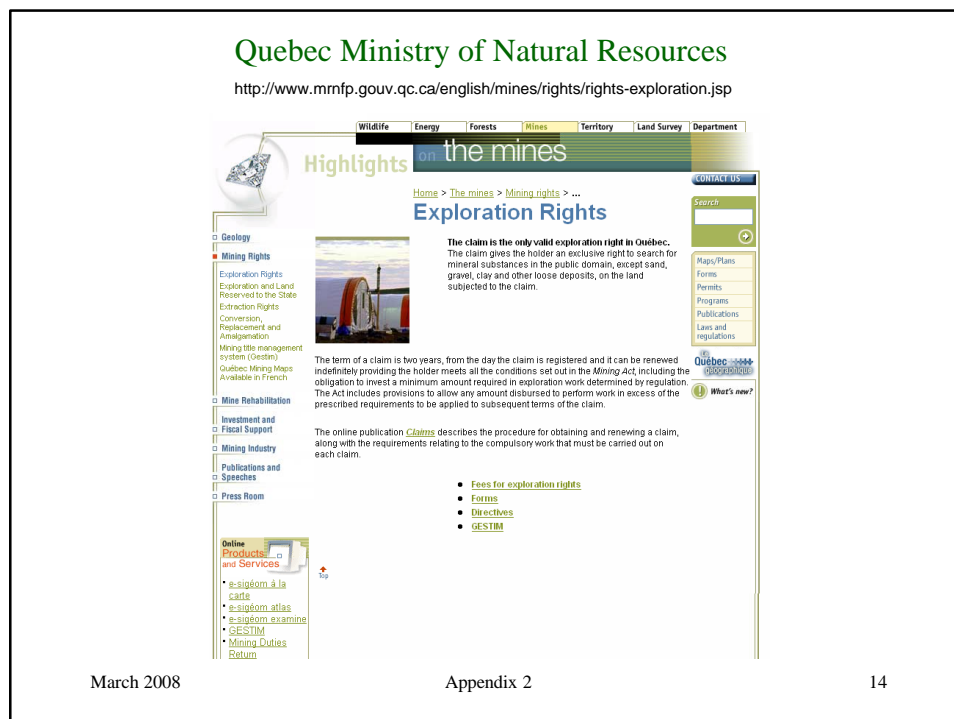
March 2008 Appendix 2 12

## Appendix 2: Summary of Provincial Website Information- Quebec



Appendix 2

13



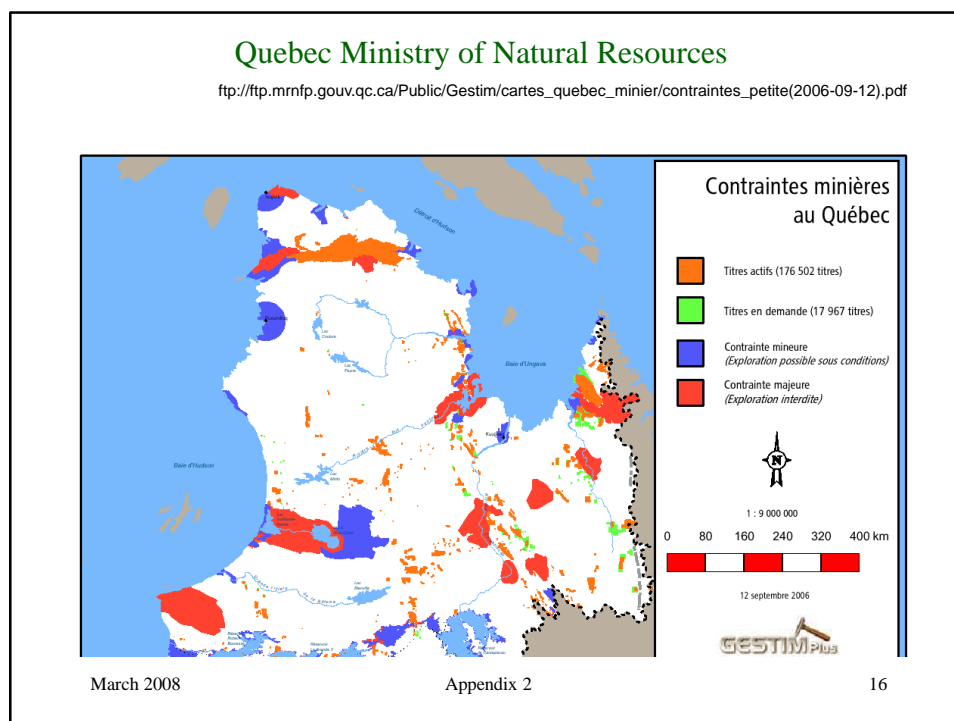
Appendix 2

14

## Appendix 2: Summary of Provincial Website Information- Quebec

**Quebec Ministry of Natural Resources**  
<http://www.mrnfp.gouv.qc.ca/english/mines/rights/index.jsp>

March 2008 Appendix 2 15



## Appendix 2: Summary of Provincial Website Information-New Brunswick

New Brunswick Home Page

<http://www.gnb.ca/index-e.asp>



March 2008

Appendix 2

1

New Brunswick Department of Natural Resources  
Minerals and Petroleum Resources

<http://www.gnb.ca/0078/index-e.asp>



March 2008

Appendix 2

2

## Appendix 2: Summary of Provincial Website Information-New Brunswick

New Brunswick Department of Natural Resources  
Minerals and Petroleum Resources  
<http://www.gnb.ca/0078/minerals/index-e.asp>

New Brunswick  
CANADA

Natural Resources Home Français

September 26, 2006

**Department**  
Minister  
Contacts  
Regions  
Home

**Services**  
A - Z  
Pay online  
Courses  
Leases  
Search

**About**  
Crown land  
Fishing  
Forest  
Forest fire  
Fur harvest  
Hunting  
Insect & disease  
Minerals & oil  
Mount Carleton  
Outdoor education  
Protected Areas  
Species at risk  
Other topics

**Mineral & Petroleum Resources**

- Geology & Exploration
- Minerals & Petroleum (Regulatory)
- Publications
- Databases

FAQ's

Mineral Wealth of New Brunswick

General Information

**What's New**  
Exploration and Mining New Brunswick 2006  
Call for Tenders #22 ONG 03-06  
Granite-Related Polymetallic Mineralization  
Forms  
Conferences  
Guidelines for Geoscience Publications  
New Publications  
September 2006  
General Notice  
Field Guide No. 2  
Clarence Stream Gold Deposit Notice

March 2008

Appendix 2

3

New Brunswick Department of Natural Resources  
Minerals and Petroleum Resources  
[http://www.gnb.ca/0078/minerals/Geology\\_Exploration-e.asp](http://www.gnb.ca/0078/minerals/Geology_Exploration-e.asp)

New Brunswick  
CANADA

Natural Resources Home Français

Home Search Situation Links Self Services Contact Us

**GEOLOGY & EXPLORATION**  
Bedrock Mapping  
Surficial Mapping  
Metallic Mineral Deposits  
Industrial Mineral Deposits  
Hydrocarbon Basin Analysis  
Geophysics  
Geochemistry  
Coastal Studies  
Oil Core & Cuttings  
MINERALS & PETROLEUM (REGULATORY)  
Legislation & Policy  
Mining Resources  
Petroleum Resources  
Peat  
Aggregate  
Prospecting  
Forms  
Calendar of Events  
Photo Gallery

**PUBLICATIONS**

**DATABASES**

Exploration Highlights  
Exploration Incentives  
Geological Investigations  
Current Field Activities  
Current Database Projects  
Partnership Programs  
About Us  
Calendar of Events  
Photo Gallery

Feedback

Contacts, Geology & Exploration:  
Director  
Regional Geologist North  
Regional Geologist South

March 2008

Appendix 2

4



## Appendix 2: Summary of Provincial Website Information-New Brunswick

# New Brunswick Department of Natural Resources Minerals and Petroleum Resources

[http://www.gnb.ca/0078/minerals/Bedrock\\_mapping-e.asp](http://www.gnb.ca/0078/minerals/Bedrock_mapping-e.asp)

**Natural Resources**  
Minerals & Petroleum Resources

Home | Français

Home Search Stamp Links Staff Services Contacts

**GEOLOGY & EXPLORATION**

Bedrock Mapping  
 Surficial Mapping  
 Metallic Mineral Deposits  
 Industrial Mineral Deposits  
 Hydrocarbon Basin Analysis  
 Geophysics  
 Geochemistry  
 Coastal Studies  
 Drill Core & Cuttings

**MINERALS & PETROLEUM (REGULATORY)**

Legislation & Policy  
 Mining Resources  
 Petroleum Resources  
     Peat  
     Aggregate  
     Prospecting  
     Forms  
 Calendar of Events  
 Photo Gallery

**PUBLICATIONS**

**DATABASES**

**BEDROCK MAPPING**

New Brunswick contains a diversity of bedrock types that range from 1 billion years to 200 million years old. Geology maps showing the regional distribution and structure of these rocks are produced by the Geological Surveys Branch (GSB) of the Department of Natural Resources. The maps play a crucial role in attracting mineral and hydrocarbon exploration to the province.

**Objective**

The GSB conducts and oversees the Government's bedrock mapping program. The program's key objective is to produce a set of standardized, high-quality digital maps covering all of New Brunswick at scales of 1:20 000 and 1:50 000.


**Applications**

Bedrock geology maps represent primary research data for the interpretation of New Brunswick's tectonic evolution within the Appalachian Orogen. The maps are also used:

- as essential tools in the exploration for mineral and hydrocarbon deposits; to evaluate groundwater resources;
- to evaluate groundwater resources;
- to help determine appropriate locations for highways, pipelines, and waste disposal and heavy industry sites; and
- as the geological framework for environmental assessments, land use plans, forest inventory databases, and similar applications.

Bedrock mapping is a dynamic and ongoing process. The GSB regularly updates maps and other components of its geoscientific databases to incorporate new geological information and recent mineral discoveries.

[Geological Zonation of New Brunswick](#)

[Bedrock Geology Map of New Brunswick](#)  File size is 6M

The *Bedrock Nomenclature of New Brunswick* includes detailed descriptions of all lithostratigraphic and intrusive units adopted by the Geological Surveys Branch to denote rock units in the Province. No attempt has been made to classify the units into formal and informal categories as defined in the North American Stratigraphic Code (1983).

March 2008

Appendix 2

5

# New Brunswick Department of Natural Resources Minerals and Petroleum Resources

[http://www.gnb.ca/0078/minerals/Geological\\_Zonation\\_NB-e.asp](http://www.gnb.ca/0078/minerals/Geological_Zonation_NB-e.asp)

**GEOLOGY & EXPLORATION**

Bedrock Mapping

Surficial Mapping

Metals: Mineral Deposits

Industrial Mineral Deposits

Hydro-carbon Basins Analysis

Geophysics

Geochemistry

Coastal Studies

Drill Core & Cuttings

**MINERALS & PETROLEUM (REGULATORY)**

Legislation & Policy

Mining Resources

Petroleum Resources

Pest

Aggregate

Prospecting

Forms

Calendar of Events

Photo Gallery

**PUBLICATIONS**

**DATABASES**

**BEDROCK MAPPING**

**Geological Zonation of New Brunswick**

The Appalachian Orogen of New Brunswick is divided into northeast-trending tectonostratigraphic zones recognized on the basis of their unique stratigraphy and deformational history.

The Caledonia Zone is underlain by a Middle Proterozoic quartzite-carbonate sequence and a succession of Late Proterozoic volcanic and associated intrusive rocks. A Cambrian to Early Ordovician platformal sequence unconformably overlies Precambrian rocks. The Caledonia Zone is generally considered to represent a crustal fragment rifted from the margin of Gondwana during opening of the Early Paleozoic Iapetus Ocean.

The St. Croix, Miramichi, and Elmtree zones contain volcanic assemblages with supra-subduction-zone chemical signatures. The St. Croix Zone is characterized by Late Cambrian to Early Ordovician volcanic rocks and Early to Middle Ordovician shales and wackes. The Miramichi Zone comprises Early to Middle Ordovician volcanic rocks built upon a thick substratum of Cambrian turbidites. The Elmtree Zone is underlain by a Middle Ordovician ophiolitic suite. The arc and back-arc terranes represented by the St. Croix, Miramichi, and Elmtree zones were accreted to the Gondwanan continental margin during contraction of the Iapetus Ocean in the Late Ordovician to Silurian.

The Fredericton and Restigouche zones contain thick successions of calcareous and siliciclastic turbidites ranging from Late Ordovician to Early Devonian. These deep-marine sedimentary sequences were likely deposited in foredeep basins developed in front of rising nappes during closure of the Iapetus Ocean and the subsequent collision of the Gondwanan (combined Africa and South America) and Laurentian (North America) continental margins.

The Maccanene and Tobique-Chaleux zones are underlain by Silurian to Early Devonian volcanic rocks interbedded with shallow-marine to fluvial sedimentary rocks. The volcanic rocks possess intraplate chemical signatures and were probably emplaced in transient basins formed as a result of oblique continental convergence. Thickening of continental crust generated broad batholithic suites that were emplaced between the Late Silurian and Middle Devonian.

The Maritimes Basin includes Late Devonian to Carboniferous fluvial conglomerate and sandstone sequences, shallow-marine limestone and evaporites, lacustrine oil shales, and subaerial volcanic rocks. These rocks were deposited in a successor basin within the uplifted Appalachian Orogen and are undeformed except along fault zones in southern New Brunswick.

March 2008

Appendix 2

6

## Appendix 2: Summary of Provincial Website Information-New Brunswick

# New Brunswick Department of Natural Resources Minerals and Petroleum Resources

[http://www.gnb.ca/0078/minerals/Bedrock\\_mapping-e.asp](http://www.gnb.ca/0078/minerals/Bedrock_mapping-e.asp)

**Natural Resources**  
Minerals & Petroleum Resources

Home | Français

Home Search Stamp Links Staff Services Contacts

**GEOLOGY & EXPLORATION**

Bedrock Mapping  
 Surficial Mapping  
 Metallic Mineral Deposits  
 Industrial Mineral Deposits  
 Hydrocarbon Basin Analysis  
 Geophysics  
 Geochemistry  
 Coastal Studies  
 Drill Core & Cuttings

**MINERALS & PETROLEUM (REGULATORY)**

Legislation & Policy  
 Mining Resources  
 Petroleum Resources  
 Peat  
 Aggregate  
 Prospecting  
 Forms  
 Calendar of Events  
 Photo Gallery

**PUBLICATIONS**

**DATABASES**

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March 2008

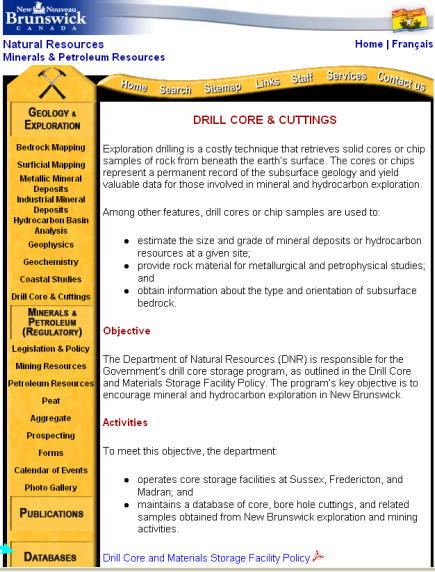
Appendix 2

7

[illegible]

## Appendix 2: Summary of Provincial Website Information-New Brunswick

New Brunswick Department of Natural Resources  
Minerals and Petroleum Resources  
[http://www.gnb.ca/0078/minerals/Drill\\_Core\\_Cuttings-e.asp](http://www.gnb.ca/0078/minerals/Drill_Core_Cuttings-e.asp)

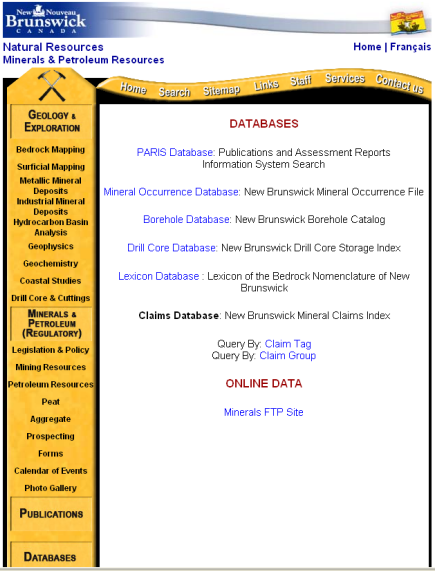


March 2008

Appendix 2

9

New Brunswick Department of Natural Resources  
Minerals and Petroleum Resources  
<http://www.gnb.ca/0078/minerals/Databases-e.asp>



March 2008

Appendix 2

10

## Appendix 2: Summary of Provincial Website Information-New Brunswick

### New Brunswick Department of Natural Resources Minerals and Petroleum Resources [http://www.gnb.ca/0078/minerals/Geology\\_Exploration-e.asp](http://www.gnb.ca/0078/minerals/Geology_Exploration-e.asp)

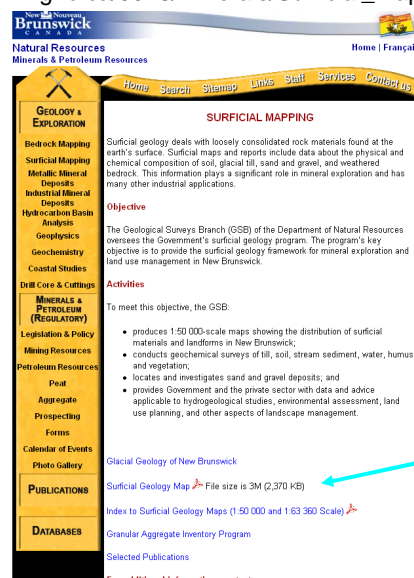


March 2008

Appendix 2

11

### New Brunswick Department of Natural Resources Minerals and Petroleum Resources [http://www.gnb.ca/0078/minerals/Surficial\\_mapping-e.asp](http://www.gnb.ca/0078/minerals/Surficial_mapping-e.asp)

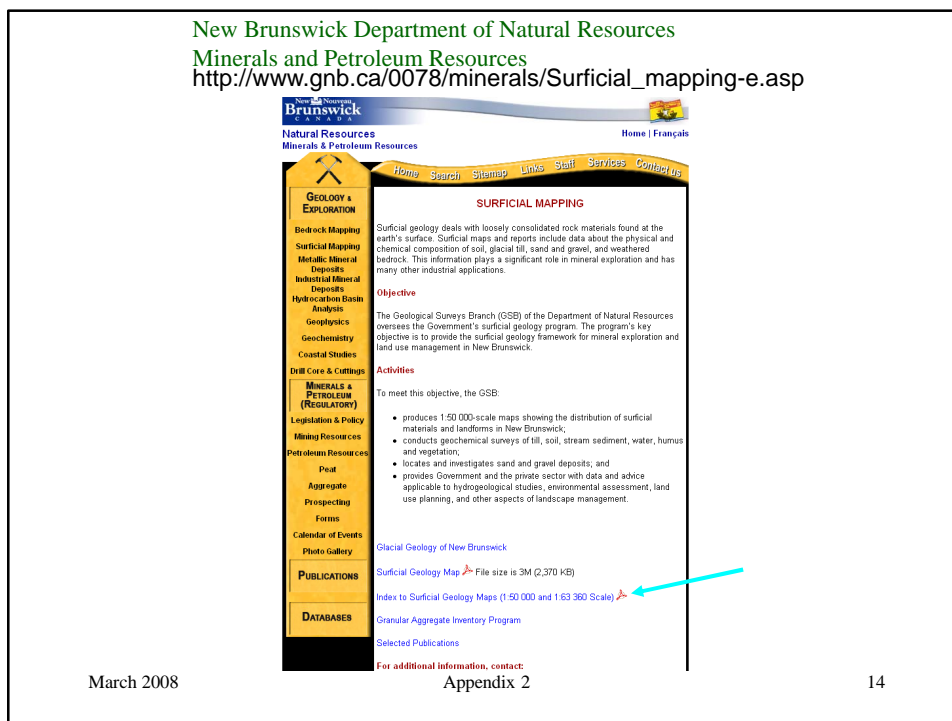
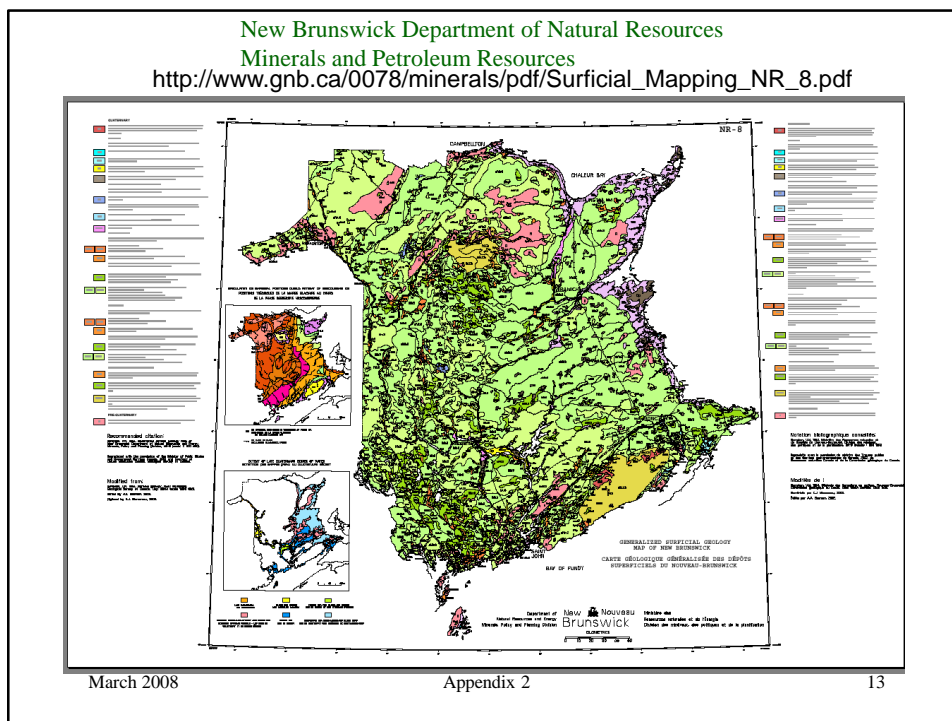


March 2008

Appendix 2

12

## Appendix 2: Summary of Provincial Website Information-New Brunswick



## Appendix 2: Summary of Provincial Website Information-New Brunswick

New Brunswick Department of Natural Resources  
Minerals and Petroleum Resources  
[http://www.gnb.ca/0078/minerals/pdf/Surficial\\_Geology\\_Index\\_Map-e.pdf](http://www.gnb.ca/0078/minerals/pdf/Surficial_Geology_Index_Map-e.pdf)

**Available Surficial Geology Maps**  
**1:50 000 or 1:63 360**

March 2008 Appendix 2 15

New Brunswick Department of Natural Resources  
Minerals and Petroleum Resources  
[http://www.gnb.ca/0078/minerals/Surficial\\_mapping-e.asp](http://www.gnb.ca/0078/minerals/Surficial_mapping-e.asp)

March 2008 Appendix 2 16

## Appendix 2: Summary of Provincial Website Information-New Brunswick

New Brunswick Department of Natural Resources  
Minerals and Petroleum Resources

http://www.gnb.ca/0078/minerals/Surficial\_Mapping\_Granular-e.asp

New Brunswick  
CANADA

Natural Resources  
Minerals & Petroleum Resources

Home | Français

Home Search Sitemap Links Staff Services Contact us

**GEOLOGY & EXPLORATION**

Bedrock Mapping

Surficial Mapping

Metallic Mineral Deposits

Industrial Mineral Deposits

Hydrocarbon Basin Analysis

Geophysics

Geochemistry

Coastal Studies

Drill Core & Cuttings

**MINERALS & PETROLEUM (REGULATORY)**

Legislation & Policy

Mining Resources

Petroleum Resources

Peat

**Granular**

The New Brunswick Granular Aggregate Inventory Program initiated in 1974 in order to alternative sources for construction in the Moncton area, which significantly impacted by the impending (April 1, 1975) provincial beaches to aggregate extraction activities. The program was then extended area, the Saint John River subsequently to the remainder part of the program was completed.

Initial funding for the Granular by the Government of New Economic Expansion through the Canada-New Brunswick of the program were funded budget of the Department Development Agreement 3 and Regional Development

**Aggregate**

Prospecting

Forms

Calendar of Events

Photo Gallery

**PUBLICATIONS**

**DATABASES**

During the course of the Granular Aggregate Inventory Program, [maps](#) and [reports](#) were released annually. Mapping was based on the federal 1:50 000 scale National Topographic System maps for the province. Reports, which commonly dealt with two or more map areas, presented: 1) a brief description of the bedrock and surficial geology of the study area, 2) a description of the types and general characteristics of the granular aggregate deposits present 3) appendices containing section descriptions, the results of mechanical grain-size and lithological analyses and, 4) estimated recoverable reserve volumes for specific deposits.

The "Atlas of Granular Aggregate Resources, New Brunswick" was published in 1987 following the completion of the Provincial aggregate inventory. This atlas comprises plates of specific aggregate maps at 1:100 000 scale. Each map plate corresponds to an individual NTS map, or to parts of two or more maps, and is cross-referenced to it's corresponding aggregate report and accompanying map. The atlas includes a reference list of all Granular-aggregate Inventory Reports.

**References:**

BARNETT, D.E. 1992. Aggregate resource management in New Brunswick. Canadian Institute of Mining and Metallurgy, Bulletin, 75: 103-109.

New Brunswick Department of Natural Resources. 1987. Atlas of granular aggregate resources, New Brunswick. Mineral Resources Division, Miscellaneous Report 6, 90 p.

March 2008

Appendix 2

17

New Brunswick Department of Natural Resources  
Minerals and Petroleum Resources

[http://www.gnb.ca/0078/minerals/pdf/Surficial\\_Mapping\\_Map\\_Coverage-e.pdf](http://www.gnb.ca/0078/minerals/pdf/Surficial_Mapping_Map_Coverage-e.pdf)

New Brunswick Granular Aggregate Inventory  
Map Coverage

Legend  
81-78 Plate number

March 2008

Appendix 2

18



## Appendix 2: Summary of Provincial Website Information-New Brunswick

New Brunswick Department of Natural Resources  
Minerals and Petroleum Resources

[http://www.gnb.ca/0078/minerals/Surficial\\_Mapping\\_Granular-e.asp](http://www.gnb.ca/0078/minerals/Surficial_Mapping_Granular-e.asp)

New Brunswick  
Brunswick  
CANADA

Natural Resources  
Minerals & Petroleum Resources

Home | Français

Home Search Sitemap Links Staff Services Contact us

**GEOLOGY & EXPLORATION**

- Bedrock Mapping
- Surficial Mapping
- Metallic Mineral Deposits
- Industrial Mineral Deposits
- Hydrocarbon Basin Analysis
- Geophysics
- Geochemistry
- Coastal Studies
- Drill Core & Cuttings

**MINERALS & PETROLEUM (REGULATORY)**

- Legislation & Policy
- Mining Resources
- Petroleum Resources
- Peat

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**Aggregate**

- Prospecting
- Forms
- Calendar of Events
- Photo Gallery

**PUBLICATIONS**

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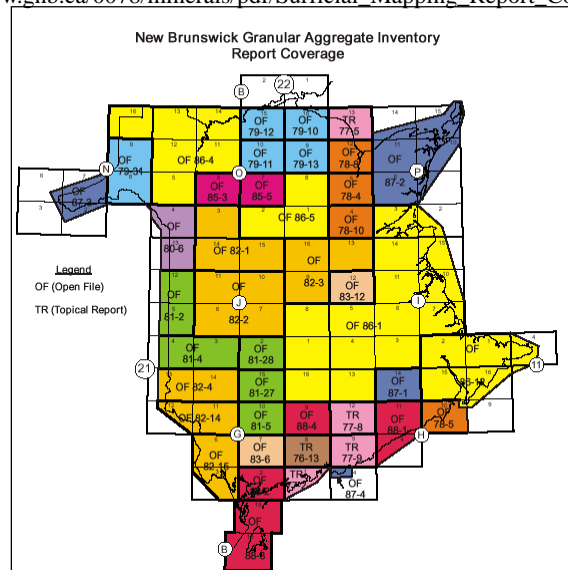
March 2008

## Appendix 2

19

New Brunswick Department of Natural Resources  
Minerals and Petroleum Resources

[http://www.gnb.ca/0078/minerals/pdf/Surficial\\_Mapping\\_Report\\_Coverage-e.pdf](http://www.gnb.ca/0078/minerals/pdf/Surficial_Mapping_Report_Coverage-e.pdf)



March 2008

## Appendix 2

20



## Appendix 2: Summary of Provincial Website Information-New Brunswick

New Brunswick Department of Natural Resources  
Minerals and Petroleum Resources

[http://www.gnb.ca/0078/minerals/Surficial\\_mapping-e.asp](http://www.gnb.ca/0078/minerals/Surficial_mapping-e.asp)

The screenshot shows the website's header with the department name and logo. The main navigation bar includes links like Home, Search, Status, Links, Staff, Services, and Contact Us. On the left, a vertical menu lists various topics, with 'GEOLOGY & EXPLORATION' expanded to show sub-topics like Bedrock Mapping, Surficial Mapping, and Pit. A red arrow points to the 'Pit' link. The main content area is titled 'SURFICIAL MAPPING' and contains sections for Objective, Activities, and Glacial Geology of New Brunswick.

## Natural Resources

### Minerals & Petroleum Resources

Home | Français

Home Search Status Links Staff Services Contact Us

#### GEOLOGY & EXPLORATION

- Bedrock Mapping
- Surficial Mapping
- Metallic Mineral Deposits
- Industrial Mineral Deposits
- Hydrocarbon Basins Analysis
- Geophysics
- Geochemistry
- Coastal Studies
- Drill Core & Cuttings
- MINERALS & PETROLEUM (REGULATORY)
- Legislation & Policy
- Mining Resources
- Petroleum Resources
  - Pit
  - Aggregate
  - Prospecting
  - Forms
- Calendar of Events
- Photo Gallery

#### PUBLICATIONS

#### DATABASES

### SURFICIAL MAPPING

Surficial geology deals with loosely consolidated rock materials found at the earth's surface. Surficial maps and reports include data about the physical and chemical composition of soil, glacial till, sand and gravel, and weathered bedrock. This information plays a significant role in mineral exploration and has many other industrial applications.

#### Objective

The Geological Surveys Branch (GSB) of the Department of Natural Resources oversees the Government's surficial geology program. The program's key objective is to provide the surficial geology framework for mineral exploration and land use management in New Brunswick.

#### Activities

To meet this objective, the GSB:

- produces 1:50 000-scale maps showing the distribution of surficial materials and landforms in New Brunswick;
- conducts geochemical surveys of till, soil, stream sediment, water, humus and vegetation;
- locates and investigates sand and gravel deposits; and
- provides Government and the private sector with data and advice applicable to hydrological studies, environmental assessment, land use planning, and other aspects of landscape management.

#### Glacial Geology of New Brunswick

Surficial Geology Map File size is 3M (2,370 KB)

Index to Surficial Geology Maps (1:50 000 and 1:63 360 Scale)

Granular Aggregate Inventory Program

Selected Publications

For additional information, contact:

New Brunswick Department of Natural Resources Minerals and Petroleum Resources

<http://www.gnb.ca/0078/minerals/Aggregate-e.asp>

**GEOLOGY & EXPLORATION**

- Bedrock Mapping
- Surficial Mapping
- Metallic Mineral Deposits
- Industrial Mineral Deposits
- Hydrocarbon Basin Analysis
- Geophysics
- Geochemistry
- Coastal Studies
- Drill Core & Cuttings

**MINERALS & PETROLEUM (REGULATORY)**

- Legislation & Policy
- Mining Resources
- Petroleum Resources
  - Peat
  - Aggregate
  - Prospecting
  - Forms
- Calendar of Events
- Photo Gallery

**PUBLICATIONS**

**DATABASES**

**Home Search Sitemap Links Staff Services Contact us**

## AGGREGATE

In New Brunswick, the Minister of the Department of Natural Resources, through the [Quariable Substances Act](#) and Regulation 93-92, controls the extraction of all quariable substances on Crown lands and that area of the shoreline that lies within 300 metres above and 300 metres below the ordinary high water mark.

### Application Process

Crown land aggregate materials in New Brunswick may be acquired by one of the following regulatory procedures:

- Written Authorization** - applies to extraction from existing pits and quarries for amounts less than 1000 tonnes for a period not exceeding 30 days.
- Quarry Permit** - applies to extraction from new or existing pits or quarries for a period ending on December 31st of the same year of issue.
- Quarry Lease** - a third procedure available to acquire the rights to Crown land quariable substances. It differs from the authorization and permitting process in that a lease will provide a company exclusive rights to a pit or quarry located on Crown land. The term of the lease can vary up to a maximum term of ten years. To secure a quarry lease, the company must be able to demonstrate the need for exclusive use (i.e., to secure their investment in equipment, etc.).

### Royalty Rates and Fees

Royalty on excavated material is at a rate established from time to time by subsection 25(1) of General Regulation 93-92 under the Quariable Substances Act. Currently, the rate is set at \$0.25 per tonne.

- Written Authorization fee - \$10.00
- Quarry permit application fee - \$10.00
- Quarry lease application fee - \$50.00
- Quarry lease reclamation fee - \$20.00/hectare or \$5000.00, whichever is greater
- Quarry lease annual land rental fee - \$50.00/hectare

## Appendix 2: Summary of Provincial Website Information-New Brunswick

**New Brunswick Department of Natural Resources Minerals and Petroleum Resources**

**GEOLOGY & EXPLORATION**

- Bedrock Mapping
- Surficial Mapping
- Metallic Mineral Deposits
- Industrial Mineral Deposits
- Hydrocarbon Basin Analysis
- Geophysics
- Geochemistry

**LEGISLATION AND POLICY**

The following list provides a brief explanation of the Acts, Regulations and Policies pertaining to mineral and petroleum resources that are administered by the New Brunswick Department of Natural Resources. The list is provided for general information only and should not be considered complete. For legal use, reference is to be made to the specific legislation.

<a href="#">Metallic Minerals, Industrial Minerals, Potash and Coal</a>	
<a href="#">Oil and Natural Gas</a>	<a href="#">Aggregate and Peat</a>
<a href="#">Underground Storage</a>	<a href="#">Bituminous Shale</a>
<a href="#">Related Legislation</a>	<a href="#">Pipelines</a>

**AGGREGATE AND PEAT**

[Quariable Substances Act Q-1.1](#) provides the Minister of Natural Resources with the authority to manage tenure, exploration, development and production of quariable substances on Crown Lands. Quariable substances include ordinary stone, building or construction stone, sand, gravel, peat, clay and soil. The Act also allows the Minister to designate shore areas lying outside Crown Lands to be subject to the Act.

[General Regulation 93-92](#) details the requirements that must be met to obtain permission to extract aggregate and peat resources from Crown Lands. [A Provincial Policy on Peat Mining \(2001\)](#) creates a framework to encourage and stimulate the development of secondary processing of peat resources in New Brunswick. It introduces the notion that abandoned mine sites must be reclaimed or fully restored to their natural peatland functions.

itions are available in hard copy from the office of the Queen's ent of Justice, and can be downloaded from the website of the Justice.

[http://www.gnb.ca/0078/minerals/Legislation\\_Policy-e.asp](http://www.gnb.ca/0078/minerals/Legislation_Policy-e.asp)


[http://www.gnb.ca/0078/minerals/Legislation\\_Policy-e.asp#Aggregate](http://www.gnb.ca/0078/minerals/Legislation_Policy-e.asp#Aggregate)

March 2008
Appendix 2
23

**New Brunswick Department of Natural Resources Minerals and Petroleum Resources**

[http://www.gnb.ca/0078/minerals/pdf/Mineral\\_Statistics-e.pdf](http://www.gnb.ca/0078/minerals/pdf/Mineral_Statistics-e.pdf)

# New Brunswick Minerals Statistics



Mineral Commodity	*Annual Production	*Value of Production (\$ Cdn)	No. of Employee
Structural Materials			
Sand and gravel	3,028,146 t	—	variable, seasonal
Crushed stone (includes limestone)	5,147,771 t	—	
<b>Subtotal</b>		50,023,387	

**Interesting Facts**

- The New Brunswick mineral industry directly employs more than 3000 people.
- The value of New Brunswick's mineral production is almost \$700 million.
- In all of Canada, New Brunswick mineral production ranks: 1st for lead, zinc, bismuth and antimony; 2nd for peat; 3rd for silver.

\* Natural Resources Canada (2003 preliminary figures)

March 2008
Appendix 2
24

## Appendix 2: Summary of Provincial Website Information- Nova Scotia

### Nova Scotia Ministry of Natural Resources

<http://www.gov.ns.ca/>

gov.ns.ca Government of Nova Scotia

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ONLINE SERVICES

March 2008

Appendix 2

1

### Nova Scotia Ministry of Natural Resources

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NOVA SCOTIA NOUVELLE-ÉCOSSE

CANADA

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Searched for **Natural Resources** Results 1 - 10 of about 15500 Search took 0.3 seconds

[Sort by date](#) / Sort by relevance

[Nova Scotia Department of Natural Resources](#) <http://gov.ns.ca/natr> KeyMatch

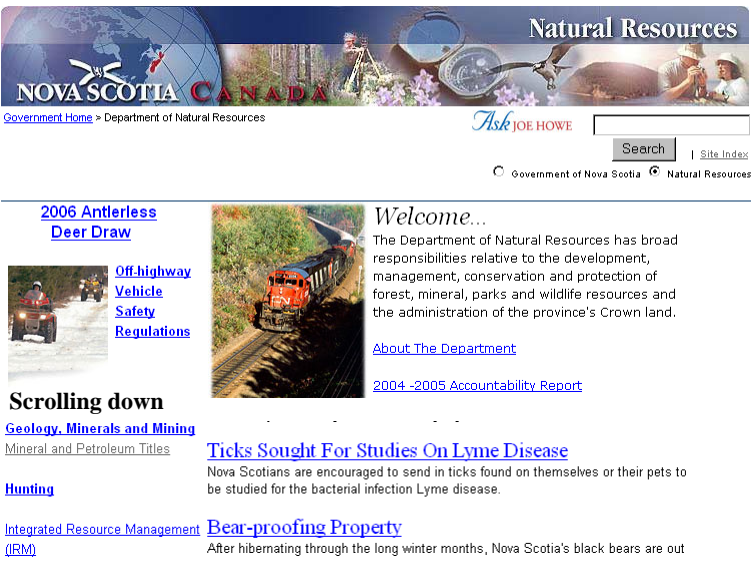
March 2008

Appendix 2

2

## Appendix 2: Summary of Provincial Website Information- Nova Scotia

<http://gov.ns.ca/natr/>



**2006 Antlerless Deer Draw**

**Off-highway Vehicle Safety Regulations**

**Scrolling down**

**Geology, Minerals and Mining**

**Hunting**

**Integrated Resource Management (IRM)**

**Ticks Sought For Studies On Lyme Disease**

**Bear-proofing Property**

March 2008

Appendix 2

3

**Nova Scotia Ministry of Natural Resources**

<http://www.gov.ns.ca/natr/meb/index.htm>



**Mineral Resources Branch**

*..... worth exploring!*

**Economic Impact Study**

**Publications, Maps and Digital Data**

**Publications Information**

**Publications Databases**

**Publications and Maps for Sale**

**Mineral Deposits Publications**

**Digital Products**

**Assessment Reports**

**Newsletter**

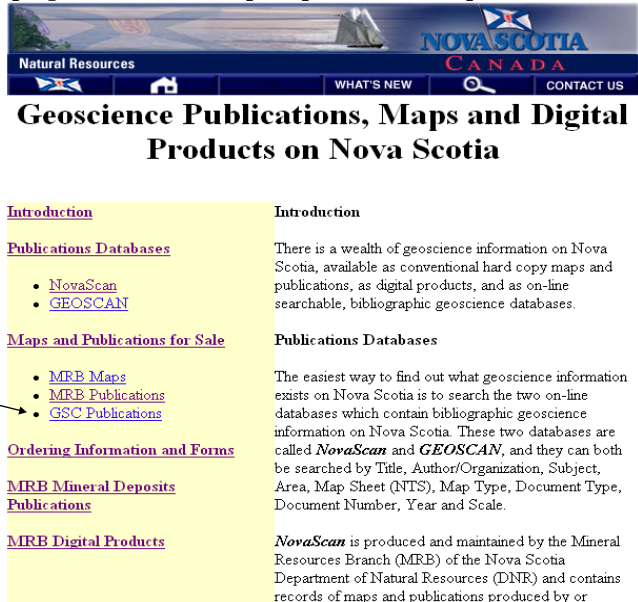
**Mineral Policy for Nova Scotia**

March 2008

Appendix 2

4

<http://gov.ns.ca/natr/meb/pubs/pubshome.htm#pubdb>



**Geoscience Publications, Maps and Digital Products on Nova Scotia**

**Introduction**

There is a wealth of geoscience information on Nova Scotia, available as conventional hard copy maps and publications, as digital products, and as on-line searchable, bibliographic geoscience databases.

**Publications Databases**

The easiest way to find out what geoscience information exists on Nova Scotia is to search the two on-line databases which contain bibliographic geoscience information on Nova Scotia. These two databases are called *NovaScan* and *GEOSCAN*, and they can both be searched by Title, Author/Organization, Subject, Area, Map Sheet (NTS), Map Type, Document Type, Document Number, Year and Scale.

*NovaScan* is produced and maintained by the Mineral Resources Branch (MRB) of the Nova Scotia Department of Natural Resources (DNR) and contains records of maps and publications produced by or

March 2008

Appendix 2

5

**Nova Scotia Ministry of Natural Resources**

<http://gov.ns.ca/natr/meb/pubs/pubshome.htm#mrbmindeppubs>

**Mineral Resources Branch Maps For Sale**

**Table of Contents**

**Bedrock Geology Maps**

- [Provincial Scale](#) (1:500 000 or greater)
- [Regional Scale](#) (1:100 000 to less than 1:500 000)
- [Detailed Scale](#) (less than 1:100 000)

**Glacial/Surficial Geology Maps**

- [Provincial Scale](#) (1:500 000 or greater)
- [Regional Scale](#) (1:100 000 to less than 1:500 000)
- [Detailed Scale](#) (less than 1:100 000)

**Structure/Tectonic Maps**

- [Provincial Scale](#) (1:500 000 or greater)

**Mineral Deposits Maps**

- [Provincial Scale](#) (1:500 000 or greater)
- [Regional Scale](#) (1:100 000 to less than 1:500 000)
- [Detailed Scale](#) (less than 1:100 000)

March 2008

Appendix 2

6

## Appendix 2: Summary of Provincial Website Information- Nova Scotia

### Nova Scotia Ministry of Natural Resources

<http://www.gov.ns.ca/natr/meb/pubs/pubs3sg.htm#detailed>

#### Provincial Scale Digital Maps (1:500 000 or greater)

[DP ME 36](#), Version 2, 2006. Digital Version of Nova Scotia Department of Natural Resources Map ME 1992-3, **Surficial Geology Map of the Province of Nova Scotia**, 1:500 000, by R. R. Stea, H. Conley and Y. Brown, 1992. Digital product compiled by B. E. Fisher. (Formerly DP ME D92-03)

[Format, Size and Projection Information](#) FREE  
DOWNLOAD

#### Detailed Scale Digital Maps (less than 1:100 000)

[DP ME 59](#), Version 2, 2006. Digital Version of Nova Scotia Department of Natural Resources Open File Map ME 2003-1, **Surficial Geology Map of the Whytecomagh Area**, (NTS 11F/14), Inverness County, Nova Scotia, scale 1:50 000, by R. R. Stea and M. Feetham, 2003. Digital product compiled by B. E. Fisher, J. D. MacNeil and J. A. Beaumont.

[Format, Size and Projection Information](#) FREE  
DOWNLOAD

[DP ME 60](#), Version 2, 2006. Digital Version of Nova Scotia Department of Natural Resources Open File Map ME 2004-2, **Surficial Geology Map of the Port Hawkesbury Area**, NTS 11F/11, Inverness, Richmond, Guysborough and Antigonish Counties, Nova Scotia, scale 1:50 000, by R. R. Stea, 2004. Digital product compiled by B. E. Fisher.

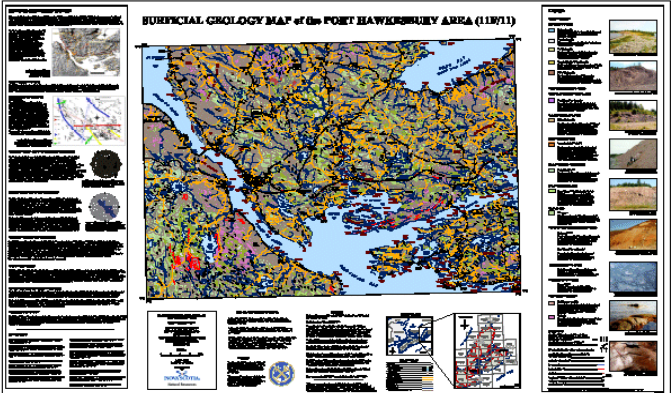
[Format, Size and Projection Information](#) FREE  
DOWNLOAD

March 2008
Appendix 2
7

<http://www.gov.ns.ca/natr/meb/download/dp060.htm>

**A Sample Image of the Surficial Geology Map of the Port Hawkesbury Area, OFM ME 2004-2**

*(Sample image - [Click to view an enlargement from this image](#))*



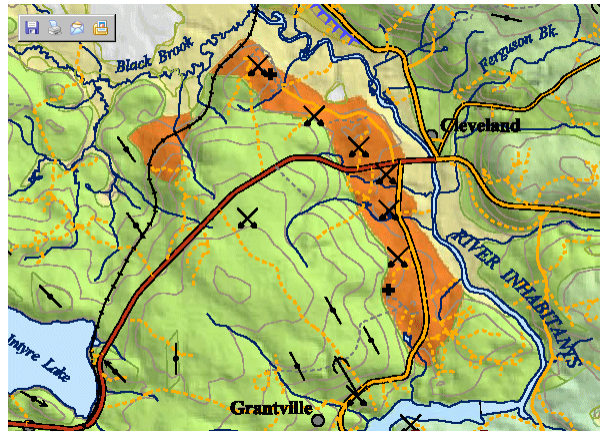
**Format and Projection**

**Format** PDF, ArcInfo Export (E00), DXF/DBF, ArcView shape files (SHP) and TXT files compressed in self-extracting EXE/ZIP files [\(more information on data formats\)](#)

March 2008
Appendix 2
8

## Appendix 2: Summary of Provincial Website Information- Nova Scotia

<http://www.gov.ns.ca/natr/meb/download/pictures/dp060dv.gif>



March 2008

Appendix 2

9

## Nova Scotia Ministry of Natural Resources

<http://www.gov.ns.ca/natr/meb/one/GMG-HOME.HTM>



### Geological Mapping and Geochemistry

Manager: Robert Naylor, B. Sc., Geologist, Phone: 902-424-8119, FAX: 902-424-0527,  
[rdnaylor@gov.ns.ca](mailto:rdnaylor@gov.ns.ca)  
Secretary: Hazel Lucas, Phone: 902-424-5019, FAX: 902-424-0527, [hmlucas@gov.ns.ca](mailto:hmlucas@gov.ns.ca)

#### Staff:

Rick Horne, M. Sc., Geologist, Phone: 902-424-2529, FAX: 902-424-0527, [rjhorne@gov.ns.ca](mailto:rjhorne@gov.ns.ca)  
Terry Goodwin, B. Sc., Geochemist, Phone: 902-424-2438, FAX: 902-424-0527, [goodwita@gov.ns.ca](mailto:goodwita@gov.ns.ca)  
Chris White, Ph. D., Geologist, Phone: 902-424-2519, FAX: 902-424-0527, [whitece@gov.ns.ca](mailto:whitece@gov.ns.ca)

#### Activities

- Provides bedrock and surficial geological mapping services
- Provides geochemical mapping services
- Undertakes specialized applied geological and geochemical research projects
- Provides basic and specialized geoscientific data and expertise for a variety of applications including:
  - Mineral and energy resource exploration and development
  - Resource potential assessment
  - Environmental protection and land use planning

The section staff comprises 5 professional geoscientists who:

- Conduct and supervise bedrock and surficial geological and geochemical mapping and survey projects
- Undertake research on specific geological, geochemical and mineral resource environments and
- Provide publication products, expertise, advice and information on the Province's bedrock and surficial geology, geochemistry, mineral resources and opportunities to clients including, environmental/geotechnical companies, mineral exploration companies and prospectors

March 2008

Appendix 2

10



## Appendix 2: Summary of Provincial Website Information- Nova Scotia

### Nova Scotia Ministry of Natural Resources

[http://www.gov.ns.ca/snsmr/land/free\\_maps.asp](http://www.gov.ns.ca/snsmr/land/free_maps.asp)

March 2008

Appendix 2

11

### Nova Scotia Ministry of Service and Municipal Relations

<http://www.gov.ns.ca/snsmr/land/>

March 2008

Appendix 2

12



## Appendix 2: Summary of Provincial Website Information- Nova Scotia

### Nova Scotia Ministry of Service and Municipal Relations

[http://www.gov.ns.ca/snsmr/land/free\\_maps.asp](http://www.gov.ns.ca/snsmr/land/free_maps.asp)

[Service NS Home](#)  
[Geographic Information](#)  
[What's New?](#)  
[Products](#)  
[Map Store](#)  
[GeoNova Online Map Services](#)  
[Land \(Property\)](#)  
[Registration](#)  
[NS Top Map Series](#)  
[Data Access](#)  
[Nova Scotia Place Names](#)  
[City Address Project](#)  
[Cooperative Projects](#)  
[Office Locations](#)  
[Retail Price List](#)  
[FAQs](#)  
[Related Links](#)  
[Free Maps](#)


#### Free Maps of Nova Scotia

The following map images have been made available for you to use and are intended for general reference or educational purposes. Click on thumbnail to see a larger version!

*If, when trying to download the .gif, your browser shows the image instead of downloading it, simply right click on the image (when viewing it) and choose "save picture/image as".*

**Please note:** Some of these maps are also available in Portable Document Format (PDF), which uses the Adobe® Acrobat® Reader. If you do not have the Reader, you can [download the program](#) free of charge.


Buy maps, atlases, charts and more online at the [Map Store](#).




**High Quality Map of Nova Scotia** (pdf). This map shows major roads, highways and placenames. The size of the file is 1.7MB - Could take up to 7 minutes to download on a dial up connection.



**Interactive Map of Nova Scotia**



**Nova Scotia Map (Coloured by County)**  
[PDF Version](#) [PDF](#)



[Printer Version](#)  
[Contact Us](#)  
[Email this page](#)

March 2008

Appendix 2

13

### Nova Scotia Ministry of Service and Municipal Relations

<http://ns.mapeze.com/map/map.asp>

#### Mapping Resources

[Map Home](#)
[Find a location](#)
[Routing](#)
[Help](#)
[Feedback](#)
[novascotia.com](#)



**Location Map**

**Search Tourism Operators**

Category:

Sub Category:

Choose Accommodations

Results:

[GO](#)



Centered At: 45°16'00" - 63°04'30"

**Map Functions**

Click Map To:

☒ Zoom In and recenter ☐ Zoom Out and recenter ☐ Re-Center the map ☐ Move Crosshairs ☐ Identify items on map

**Other Pages:**

[Find a new Location](#) [Driving Directions](#) [Print this Map](#) [Print Black & White Map](#) [Display Full Map](#)

**Map Legend**

- Communities
- Cities
- Airports
- NS Roads
- Highways
- Ferry Ramps
- Ferries
- water
- Provinces
- Arterial - Inland
- Trunk
- Trans-Canada
- Trunk

March 2008

Appendix 2

14

## Appendix 2: Summary of Provincial Website Information- Nova Scotia

### Nova Scotia Ministry of Service and Municipal Relations

<http://www.gov.ns.ca/snsmr/maps/>

Search

Go!

**Product Categories**

[Atlas NS](#)

[Books and Nature Guides](#)

[Charts and Tables](#)

[National Topographic Series](#)

[Recreational Maps](#)

[Wall and Poster Maps](#)

[Reports](#)

[Coastal Map Series for Nova Scotia](#)

[NSTDB 1:50 000 Topo Series](#)

[Nova Scotia Addressed Roads, Atlas and County Maps](#)

[Other Products](#)

Visit the [Service Nova Scotia website](#) for info on how and where to purchase ...

[aerial photography](#)

[control survey info](#)

[property maps & reports](#)

[digital data products](#)

[land and property registration information](#)

**Map Store Home**

**BUY MAPS, ATLASES AND CHARTS ONLINE**

Welcome to the Nova Scotia Geomatics Centre online store where you can purchase a range of map products. To add items to your shopping basket, please select from the **Product Categories** at the left. To find out more information about this site, please view our [Help file](#).

**Nova Scotia Atlas 2006**

[View this product in more detail >>](#)



This sixth edition of the Nova Scotia Atlas provides in-depth coverage of the entire province unavailable anywhere else. The maps include numbered and colour-coded highways with exit numbers, hiking trails and national parks. There are details ...

**Nova Scotia Coastal Map Series**

[View this product in more detail >>](#)



Content: 10k NSTDB accuracy with 10 meter contours, shaded depth polygons in salt water, forestry polygons, plus Canadian Hydrographic Service charts and symbology.  
Scale: 1:50,000 UTM  
NAD83 Zone 20  
(Not for navigation)

**National Topographic Map Series (1:50 000 Scale)**

[View this product in more detail >>](#)



To print a copy of the National Topographic Map Series index map for ordering purposes see below.

**Please note:** The index map is in Portable Document Format (PDF), which uses the Adobe® Acrobat® Reader. If you do not have the Reader, you...

**My Basket**

No of items: 0

your basket is empty

**Total: \$ 0.00**

[View Basket](#)

[Recover Basket](#)

Take our [Survey](#).

March 2008

Appendix 2

15

### Nova Scotia Ministry of Service and Municipal Relations

[http://gov.ns.ca/GeoNova/home/products/softpage/nova\\_scotia\\_property\\_online.asp](http://gov.ns.ca/GeoNova/home/products/softpage/nova_scotia_property_online.asp)

[Home](#) | [Citizen](#) | [Business](#) | [Government](#) | [Research & Education](#) | [About GeoNOVA](#)

Welcome Applications

**Featured Applications**

- Free Maps
- GeoNOVA Map Viewer
- Property Maps
- Map Store
- Coordinate Transformations
- Assessment Maps
- Hurricane-Juan Maps
- NSGC Data Locator
- Place Names
- Download NS Geoscience Data
- NS Geoscience Maps, Databases and Images
- Community Counts

...more applications (new)

**Developer's Corner**

- What are Web Services?
- Web Mapping Services in Geomatics
- Nova Scotia Web Map Services
- Nova Scotia Web Feature Services
- Nova Scotia City Address File Web Service
- Client Applications

**Did You Know?**

Nova Scotia is known as Canada's Ocean Playground, and for good reason. For many Nova Scotians the sea is their main source of livelihood and leisure.

**Top 5 Applications**

**Nova Scotia Property Online**

Property Online is an Internet browser application that provides online access to land-ownership and related information collected through the province's Land Registration Offices, Registries of Deeds and other sources. The Property Online database contains ownership information, including property maps, for more than 540,000 properties in Nova Scotia, and is available to [subscribers](#).

For more information about Nova Scotia Property Online, please click [here](#).

Enter Property Online

**Meta Data Search**

Search for Nova Scotia Geographic Information, i.e. elevation, soil conditions

[Meta Search](#) [Advanced Search](#)

**Sponsors**


March 2008

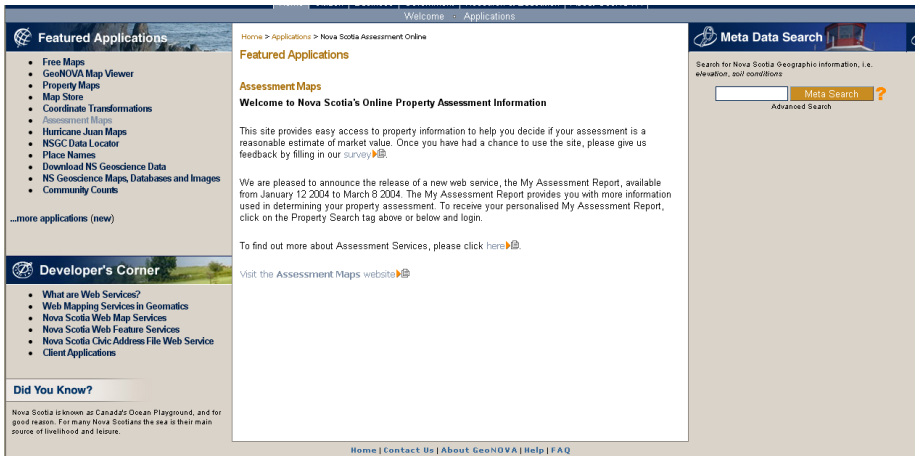
Appendix 2

16

Appendix 2: Summary of Provincial Website Information- Nova Scotia

Nova Scotia Ministry of Service and Municipal Relations

http://gov.ns.ca/GeoNova/home/products/softpage/nova\_scotia\_assessment\_online.asp



March 2008

Appendix 2

17

Nova Scotia - GeoNova

http://gov.ns.ca/GeoNova/home/products/softpage/ns\_geoscience.asp



March 2008

Appendix 2

18

## Appendix 2: Summary of Provincial Website Information- Nova Scotia

### Nova Scotia - Novascan

[http://www.gov.ns.ca/natr/MEB/pubs/pi\\_nvscn.htm](http://www.gov.ns.ca/natr/MEB/pubs/pi_nvscn.htm)



#### NovaScan

- NovaScan is the provincial database of geoscience maps and publications for Nova Scotia, and is produced and maintained by the Mineral Resources Branch of the Nova Scotia Department of Natural Resources. It currently contains over 14,000 records.
- NovaScan contains geologically indexed records of all the geoscience documents produced by or collected by the Mineral Resources Branch (and its predecessors), such as:
  - maps (Geology, geochemistry, geophysics, mineral deposits, mineral rights, etc.)
  - publications (bulletins, economic geology series, memoirs, papers, reports, etc.)
  - open files (illustrations, maps, reports)
  - university theses (B. Sc., M. Sc., Ph. D.)
  - mineral exploration assessment reports and mining property reports
- NovaScan can be searched by Title, Author/Organization, Subject, Area, Map Sheet (NTS), Map Type, Document Type, Document Number, Year and Scale.
- NovaScan is updated monthly as new geoscience maps, publications, open files, theses, mineral exploration assessment reports and mining property reports become available.
- Note that NovaScan contains only records of maps and publications produced by or collected by the Mineral Resources Branch (and its predecessors). NovaScan **does not** contain any records of Geological Survey of Canada (GSC) maps or publications. GSC records on Nova Scotia can be searched in the [GSCSCAN](#) database.

#### Search [NovaScan](#)



March 2008

Appendix 2

19

### Nova Scotia - Novascan

<http://gis2.gov.ns.ca:8008/novascan/DocumentQuery.faces>

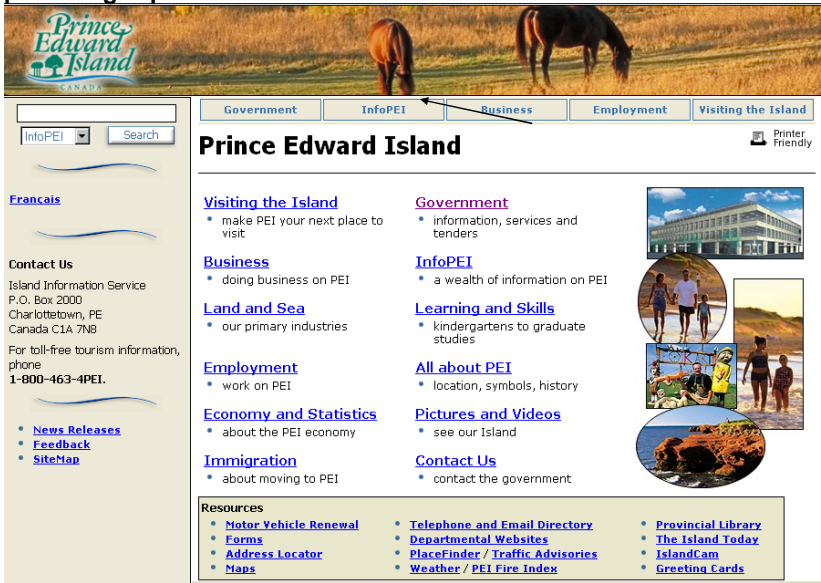
March 2008

Appendix 2

20

## Appendix 2: Summary of Provincial Website Information- PEI

**Prince Edward Island**  
<http://www.gov.pe.ca/>



**Prince Edward Island**

Government InfoPEI Business Employment Visiting the Island

InfoPEI Search

**Prince Edward Island**

Printer Friendly

**Visiting the Island**

- make PEI your next place to visit

**Government**

- information, services and tenders

**InfoPEI**

- a wealth of information on PEI

**Business**

- doing business on PEI

**Land and Sea**

- our primary industries

**Employment**

- work on PEI

**Economy and Statistics**

- about the PEI economy

**Immigration**

- about moving to PEI

**Learning and Skills**

- kindergartens to graduate studies

**All about PEI**

- location, symbols, history

**Pictures and Videos**

- see our Island

**Contact Us**

- contact the government

**Resources**

- [Motor Vehicle Renewal](#)
- [Forms](#)
- [Address Locator](#)
- [Maps](#)
- [Telephone and Email Directory](#)
- [Departmental Websites](#)
- [PlaceIndex / Traffic Advisories](#)
- [Weather / PEI Fire Index](#)
- [Provincial Library](#)
- [The Island Today](#)
- [IslandCam](#)
- [Greeting Cards](#)

**Contact Us**

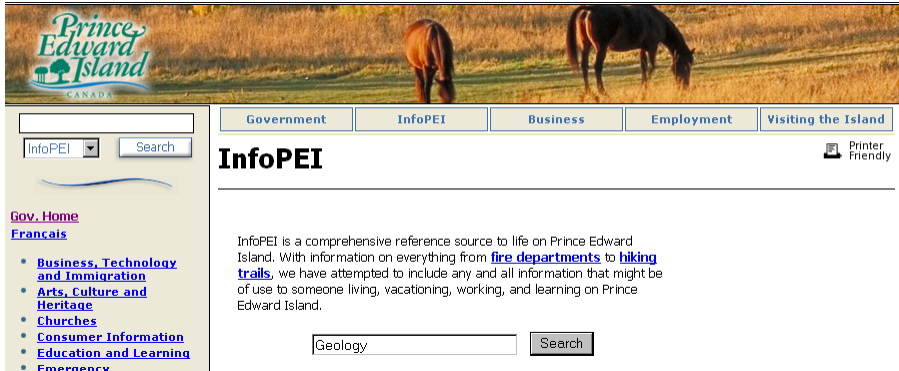
Island Information Service  
P.O. Box 2000  
Charlottetown, PE  
Canada C1A 7N8  
For toll-free tourism information, phone 1-800-463-4PEI.

[News Releases](#)  
[Feedback](#)  
[SiteMap](#)

[Francais](#)

March 2008 Appendix 2 1

**Prince Edward Island**



**Prince Edward Island**

Government InfoPEI Business Employment Visiting the Island

InfoPEI Search

**InfoPEI**

Printer Friendly

InfoPEI is a comprehensive reference source to life on Prince Edward Island. With information on everything from [fire departments](#) to [hiking trails](#), we have attempted to include any and all information that might be of use to someone living, vacationing, working, and learning on Prince Edward Island.

Geology Search

**Gov. Home**  
**Francais**

- [Business, Technology and Immigration](#)
- [Arts, Culture and Heritage](#)
- [Churches](#)
- [Consumer Information](#)
- [Education and Learning](#)
- [Emergency](#)

March 2008 Appendix 2 2

## Appendix 2: Summary of Provincial Website Information- PEI

**Prince Edward Island**  
<http://www.gov.pe.ca/search/index.php3?words=Geology&lang=E&number=search>

InfoPEI Search

Gov. Home

- Contact Us
- Government
- Business
- Employment
- Learning and Skills
- Land and Sea
- Pictures and Videos
- All About PEI
- Immigration
- Visiting the Island
- InfoPEI
- Economy and Statistics
- Maps
- Address Locator
- The Island Today
- Registered Users
- Help

- News Releases
- Feedback
- Printer Friendly View
- Site Map

Government InfoPEI Business Employment Visiting the Island

Search

Printer Friendly

HOME /

YOU CAN SEARCH many different sections of our website for specific words or phrases. To search for one or more words, simply enter the words; to search for a phrase, enclose the phrase in double quotation marks. For more details, consult the [search help page](#).

Word or phrase:  Search

InfoPEI People News Tourism Images Statutes Hansard

Searched InfoPEI for keyword **Geology**.

PREV Displaying results 1 to 9 (of 9 total). NEXT

[Agriculture, Fisheries & Aquaculture/Welcome/Annual Reports / Budgets/Department of Agriculture and Forestry Annual Report 2001-2002/Forestry and Resource Land Modelling Division](#)  
...ancy of the United States was initiated. The work involved the determination of Ecological Land Units (E.L.U.s) from bedrock **geology**, surficial geology and slope position. Seedling Production The Forestry Division continues to produce quality tree seedlings...

[Visitors Guide/Things to Do/Arts, Culture & Heritage/Experience Our Island/Life at the Beach](#)  
...hole family can play in the surf with their friends. We have beaches where you can follow an interpreter and learn about the **geology**, flora and fauna of the Island shore. To help you plan your Island beach vacation, here is a little primer on "Island beach ...

[Primary Resources/Oil and Natural Gas/Oil and Gas Exploration](#)  
...ales and conglomerates are informally termed the "Prince Edward Island Redbeds." Understanding of the surface and subsurface **geology** of the Prince Edward Island Redbeds may be enhanced by reading *Geology of Prince Edward Island* by H.W. van de Poll. Copies o...

March 2008 Appendix 2 3

**Prince Edward Island**  
<http://www.gov.pe.ca/maps/index.php3>

InfoPEI Search

Gov. Home

- Contact Us
- Government
- Business
- Employment
- Learning and Skills
- Land and Sea
- Pictures and Videos
- All About PEI
- Immigration
- Visiting the Island
- InfoPEI
- Economy and Statistics
- Maps
- Address Locator
- The Island Today
- Registered Users
- Help

- News Releases
- Feedback
- Printer Friendly View
- Site Map

Island Maps

Printer Friendly

HOME /

WELCOME TO OUR interactive mapping system. We are always in the process of maintaining our original interactive mapping system, [MapGuide](#) (which requires the download of a plug-in), but we have also recently introduced a faster and more flexible system, [MapServer](#), which works instantly with all modern web browsers.

Over the course of the next few months, we'll be migrating some of our mapping applications to this new system; watch this page for updated information as this process continues.

Start Exploring

Most of the maps are available using the original MapGuide plugin. To view a MapGuide map, click on the appropriate MapGuide link.


Only some of our maps have been converted to the new MapServer system. To view a new MapServer map click on the appropriate MapServer link.

**Explore PEI**  
Interactive vacation planner. Plan your entire vacation online.  
[MapServer](#)

**Visitor Map**  
Accommodations, campgrounds, activities, and other services for visitors.  
[MapGuide](#)

**Real Estate Map**  
Up to date information on residential and business properties for sale.  
[MapGuide](#)  
[MapServer](#)

**Electoral Map**  
District and poll boundaries for provincial and municipal elections.  
[MapGuide](#)



March 2008 Appendix 2 4

2

## Appendix 2: Summary of Provincial Website Information- PEI

### Prince Edward Island

<http://www.gov.pe.ca/maps/index.php3>

InfoPEI

Search

Gov. Home

- Contact Us
- Government
- Business
- Employment
- Learning and Skills
- Land and Sea
- Pictures and Videos
- All About PEI
- Immigration
- Visiting the Island
- InfoPEI
- Economy and Statistics
- Maps
- Address Locator

Island Maps

HOME /

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#### Address Locator

Detailed information on any civic address in the province.

[MapGuide](#)  
[MapServer](#)

#### Aerial Photos

Geographic access to complete aerial photo collections for PEI for 1935, 1958, 1974, 1990 and 2001.

[MapGuide](#)  
[MapServer](#)

#### Business Map

Electricity, telecommunications, industrial parks and other services for business.

[MapGuide](#)

#### Public Water Data Map


Find data by watershed basin or by searching in a online map system

[MapServer](#)

#### Help using our MapGuide Maps

We've prepared a [help screen](#) which gives more information about using the MapGuide plug-in. If you have any additional questions, or are having difficulties using our interactive maps, please fill out a [trouble report](#).

Printer Friendly



March 2008

Appendix 2

5

## Appendix 2: Summary of Provincial Website Information-Newfoundland & Labrador

Newfoundland & Labrador  
<http://www.gov.nl.ca/>

Government of Newfoundland & Labrador

Canada

Travel Guide

- Office of the Premier
- Doing Business
- Economy & Statistics
- News Releases
- Services Directory
- Publications
- Departments/Agencies
- House of Assembly
- Popular Links
- Telephone Directory

Search this Web site\*

GO

About the Province | Site Map | What's New? | Contact Us

March 2008

Appendix 2

1

Newfoundland & Labrador

<http://www.gov.nl.ca/deptnew.htm>

Departments/Agencies

Government Home | Search | Site Map | Contact Us

Government of Newfoundland & Labrador

Departments

- Business
- Education
- Environment and Conservation
- Executive Council
  - Cabinet Secretariat
  - Intergovernmental Affairs Secretariat
  - Public Service Secretariat
  - Office of the Chief Information Officer
  - Women's Policy Office
  - Rural Secretariat
- Finance
- Fisheries and Aquaculture
- Government Services
- Health and Community Services
- Human Resources, Labour and Employment
- Innovation, Trade and Rural Development
- Justice
- Labrador and Aboriginal Affairs
- Municipal Affairs
- Natural Resources
- Tourism, Culture and Recreation
- Transportation and Works

March 2008

Appendix 2

2



## Appendix 2: Summary of Provincial Website Information-Newfoundland & Labrador

### Newfoundland & Labrador Department of Natural Resources

<http://www.nr.gov.nl.ca>



March 2008

Appendix 2

3

### Newfoundland & Labrador Geological Survey

<http://www.nr.gov.nl.ca/mines%26en/geosurvey/>



March 2008

Appendix 2

4

## Newfoundland & Labrador Geological Survey

<http://www.nr.gov.nl.ca/mines&en/geosurvey/maps/>

**Geological Survey**  
Government of Newfoundland & Labrador

Branch Home | Home | Contact Us | FAQs  
About Us | Publications | Legislation | Maps

Search



Choose a topic...

**Related Information**

- [Maps & Databases](#)
- [Mineral Claims Maps](#)
- [Ordering Information](#)
- [Publications & Reports](#)
- [Topographic Maps](#)

[Download Adobe Acrobat Reader](#) to view pdf

### Geological Maps

Contains indices to maps on the bedrock and surficial geology of the province, simplified geological maps and prospecting environments.

- [Index of Bedrock Geology maps for Newfoundland](#)
- [Index of Bedrock Geology maps for Labrador](#)
- [Index of Surficial Geology and Aggregate maps for Newfoundland](#)
- [Prospecting Environments: Newfoundland](#) (pdf - 2mb)
- [Prospecting Environments: Labrador](#) (pdf - 11mb)
- [Simplified Geology Map \(page size\) of Newfoundland](#) (pdf - 366kb)
- [Simplified Geology Map \(page size\) of Labrador](#) (pdf - 20mb)
- [Labrador Map Legend](#) (pdf - 2mb)
- [Geoscience Resources Atlas](#)

March 2008
Appendix 2
5

## Newfoundland & Labrador Geological Survey

<http://www.nr.gov.nl.ca/mines&en/geosurvey/maps/nl/>

**Geological Survey**  
of Newfoundland and Labrador

**12B/07**  
Fong, C.C.K.  
1977: Flat Bay-Main Gut. Map 77-004. Scale: 1:50 000. Government of Newfoundland and Labrador, Department of Mines and Energy, Mineral Development Division, Open File 012B/0210. Blueline paper. GS#012B/0210

Knight, I.  
1983: Geology of the Carboniferous Bay St. George Subbasin. Map 82-001. Scale: 1:125 000. In Geology of the Carboniferous Bay St. George Subbasin, Western Newfoundland. Government of Newfoundland and Labrador, Department of Mines and Energy, Mineral Development Division, Memoir 1, 382 pages, (2 fold-outs); enclosures (map, table, 4 figures, 6 fold-outs). GS#NFLD/1314 [Preview Map](#)

**CONTACTS**  
For publications and general information:  
Norman Mercer  
Geological Survey of Newfoundland and Labrador  
(709) 729-6193  
[nlm@zeppo.geosurv.gov.nl.ca](mailto:nlm@zeppo.geosurv.gov.nl.ca)

**Bedrock Geology Maps For Newfoundland**

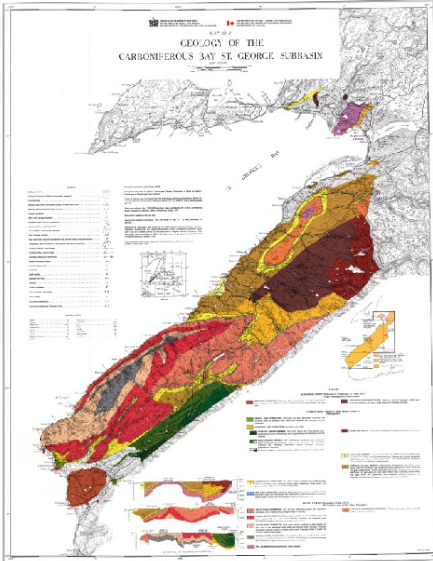
**GEOLOGICAL MAP INDEX NEWFOUNDLAND**

Click here for a complete map list (sorted by NTS area)

March 2008
Appendix 2
6

## Appendix 2: Summary of Provincial Website Information-Newfoundland & Labrador

**Bedrock Geology Maps For Newfoundland**



[http://www.nr.gov.nl.ca/mines/en/geosurvey/maps/nl/html\\_nf/images/NFLD\\_1314.jpg](http://www.nr.gov.nl.ca/mines/en/geosurvey/maps/nl/html_nf/images/NFLD_1314.jpg)


March 2008

Appendix 2

7

**Newfoundland & Labrador Geological Survey**

<http://www.nr.gov.nl.ca/mines&en/geosurvey/maps/surfmap/>

 **Geological Survey of Newfoundland and Labrador**

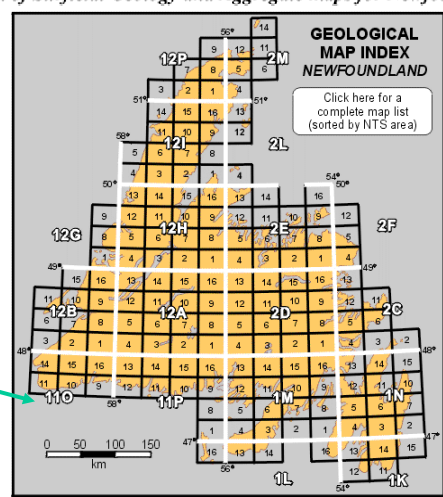
**Index of Surficial Geology and Aggregate maps for Newfoundland**

**110/14**  
Surficial and glacial geology and gravel resource inventory of southwestern Newfoundland. By D.G. Vanderveer, 1977. 10-page report and 10 maps, including Stephenville-Port aux Basques (12B-110), Main Gut (12B/5), Flat Bay (12B/7), Little Friars Cove (12B/3), St. Fintans (12B/2), Rose Blanche (110/10), Port aux Basques (110/11), and Codroy (110/14). NFLD/0959

**Aggregate Geology**  
Inventory of aggregate resources in Newfoundland and Labrador, by F.T. Kirby, R.J. Ricketts and D.G. Vanderveer. Scale 1:250,000. Nfld. 1267 and Lab. 602. Plus Report 83-2. Map 83-03 Port aux Basques, 110.

MAP 01-07 2001: Granular aggregate resource of the Codroy map sheet (NTS 110/14), by M.J. Ricketts. Scale: 1:50 000. Newfoundland Department of Mines and Energy, Geological Survey. Open File 0110/14/0352.

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Norman Mercer  
Geological Survey of Newfoundland and Labrador  
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0 50 100 150 km

March 2008

Appendix 2

8

## Newfoundland Surficial Geology and Aggregate Index Map

<http://www.nr.gov.nl.ca/mines&en/geosurvey/maps/surfmap/>

### Aggregate Geology

### Index of Surficial Geology and Aggregate maps for Newfoundland

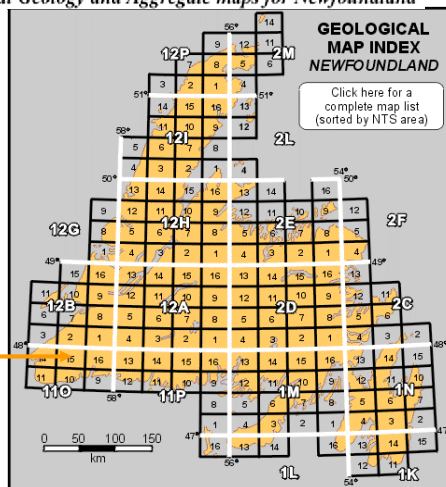
Flat Bay Aggregate Resource Map (NTS 12B/7), by M.J. Ricketts, 1992. Scale 1:50,000. Newfoundland Department of Mines and Energy. Map 90-12. 012B/0318. Inventory of aggregate resources in Newfoundland and Labrador, by F.T. Kirby, R.J. Ricketts and D.G. Vanderveer. Scale 1:250,000. Nfld. 1287 and Lab. 602. Plus Report 83-2. Map 83-10 Stephenville, 12B.

MAP 82-158 1982: Surficial aggregates of the Flat Bay map area (NTS 12B/07), by F.T. Kirby, R.J. Ricketts and D.G. Vanderveer. Scale: 1:50 000. Newfoundland Department of Mines and Energy, Mineral Development Division. Open File NFDL/1300.

MAP 87-086 1987: Shallow Cove - Flat Bay aggregate resource map (sample type and location map (NTS 12B/07- A), by F.T. Kirby. Scale: 1:16 666. Newfoundland Department of Mines and Energy, Mineral Development Division. Open File 012B/07/0396.

#### CONTACTS

**For publications and general information:**  
Norman Mercer  
Geological Survey of Newfoundland and Labrador  
(709) 729-6193  
[nfm@zeppo.geosurv.gov.nl.ca](mailto:nfm@zeppo.geosurv.gov.nl.ca)



March 2008

Appendix 2

9

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### Surficial Geology & Aggregate Publications

Open File: Nfld/2401, compiled by [M.J. Batterson](#) and published March 1994; revised in 2001.

This compilation provides a list of all currently available surficial and aggregate geology maps for Newfoundland and Labrador. The maps are listed by NTS map sheet, and are mostly at scales of 1:50,000 or 1:250,000. Maps are available as blue line, printed black line or colour maps, and digital on demand colour maps. For ease of searching, information is listed by 1:250,000 scale NTS map sheet, and is divided into 4 separate categories.

Maps are listed under the headings of Ice Flow, Surficial Geology and Aggregate Geology. A section of pertinent Current Research articles is also included because these reports commonly compliment the associated mapping.

#### Description of Map Types

- [Aggregate Geology Maps](#)
- [Ice Flow Maps](#)
- [Surficial Geology Maps](#)

For online surficial geology and aggregate publications, see [Surficial Geology & Aggregate Maps for Newfoundland](#), [Publications Catalogue](#) and [Geofiles](#).

March 2008

Appendix 2

10

Newfoundland & Labrador Geological Survey

Ice Flow Maps

These maps provide data used to reconstruct the directions and sequences of glacial advances during the Quaternary. Most of the data are from striations, and are presented as directional or non-directional indicators. A direction is assigned to a striation where features such as • • •

Surficial Geology Maps

Surficial geology maps provide data on the types of material and landforms found at the surface. These maps are largely derived from aerial photograph interpretation with a variable amount of field checking. On some maps a reliability diagram is attached which outlines the amount of field checking. Each map has a detailed legend attached that describes the characteristic of each sediment type and feature encountered. The legend has a genetic category that defines the sediment type (e.g., glacial, fluvial, aeolian), and a morphology category that describes the surface expression (e.g., veneer, blanket, hummocky, fan). Most mapped units contain more than one genetic and/or morphological type. To accommodate this, units are subdivided by decreasing dominance (e.g., TvRc means that the area is dominantly a veneer of glacial sediment, with a lesser area of bedrock concealed by a mat of vegetation). Up to three genetic or morphological categories can be accommodated on the maps, with a combination of slashes (/ or //) and hyphens (-) being used to indicated relative proportions. The maps provide only a general indication of sediment characteristics and some variability in sediment is to be expected across a map area. A till, for instance, may have a silty texture in one part of the area, and be sandier elsewhere, although both areas will have the T designation. Similarly, overburden thickness can only be inferred from these maps.

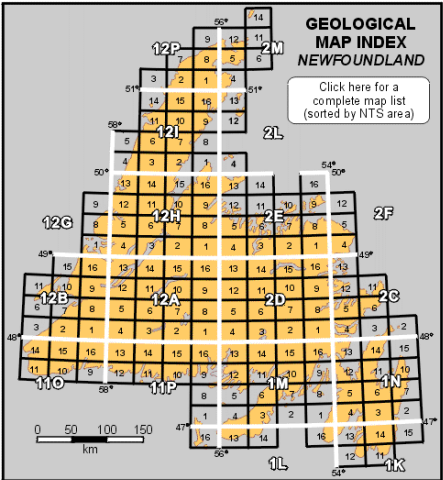
Aggregate Geology Maps

These maps provide data on granular or bedrock aggregates within an area. Granular aggregate maps outline sand and gravel deposits, and categorise each deposit by their potential as an aggregate producing area, with Zone 1 having the highest potential. Recent maps commonly include grain size and petrographic data. Sample data, including grain size and petrographic analyses, related to other map areas can be obtained from the Terrain Sciences Section, Geological Survey Branch, Telephone (709) 729-3688. Potential reserves of material are approximated based on the aerial extent and depth of natural or man-made exposures. Detailed descriptions are commonly provided in associated Current Research articles.

Bedrock aggregate maps define rock types suitable for construction aggregate uses, including class A and B material, rip-rap, asphalt and concrete. The suitability of individual rock types is defined on the basis of physical characteristics (e.g., hardness, grain size, fractures, mineral constituents), petrographical properties (e.g., petrographic number) and chemical/mechanical properties (e.g., abrasion, soundness, alkali reactivity). Some maps include this data. Data for other areas may be found in associated Current Research articles or may be obtained from the Terrain Sciences Section, Geological Survey Branch, Telephone (709) 729-5634.

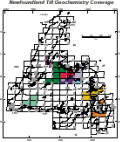
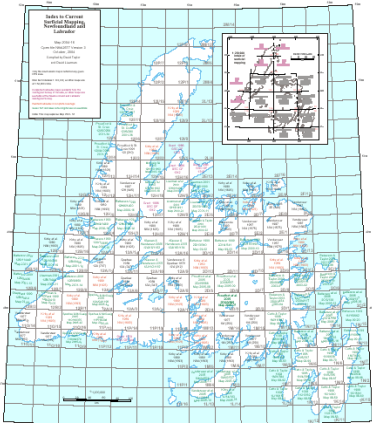

Newfoundland & Labrador Geological Survey

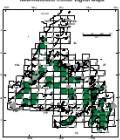
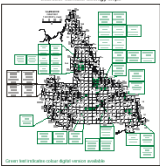
Index of Surficial Geology and Aggregate maps for Newfoundland



### Newfoundland & Labrador Geological Survey

<http://www.nr.gov.nl.ca/mines&en/geosurvey/maps/surficialindex.pdf>

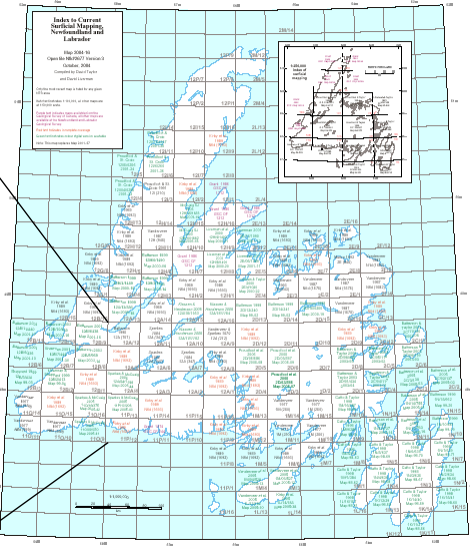



March 2008
Appendix 2
13

### Index to Surficial Mapping Newfoundland

<http://www.nr.gov.nl.ca/mines&en/geosurvey/maps/surficialindex.pdf>

12B/15			12B/16		
Batterson 2001 12B/11/440 Map 2001-17	Batterson 2001 12B/10/439 Map 2001-16	Batterson 2001 12B/9/438 Map 2001-15			
12B/11			12B/10		
Batterson 2001 12B/6/436 Map 2001-13	Liveman 2001 12B/7/444 Map 2001-31	Batterson 2001 12B/8/959 Map 2001-14			
12B/6			12B/7		
Sheppard 1999 12B/3/414 Map 99-06	Liveman & Sheppard 1999 12B/2/413 Map 99-05	Kirby et al. 1989 Nfld (1693)	12B/1		
12B/3			12B/2		
Vanderveer 1977 Nfld (959)	Kirby et al. 1989 Nfld (1693)	Sparkes & McCuaig 2005 11O/16/375 Map 2005-42			
11O/14			11O/15		
Vanderveer 1977 Nfld (959)	Vanderveer 1977 Nfld (959)	Sparkes & McCuaig 2005 11O/09/370 Map 2005-41			
11O/11			11O/10		
			11O/9		

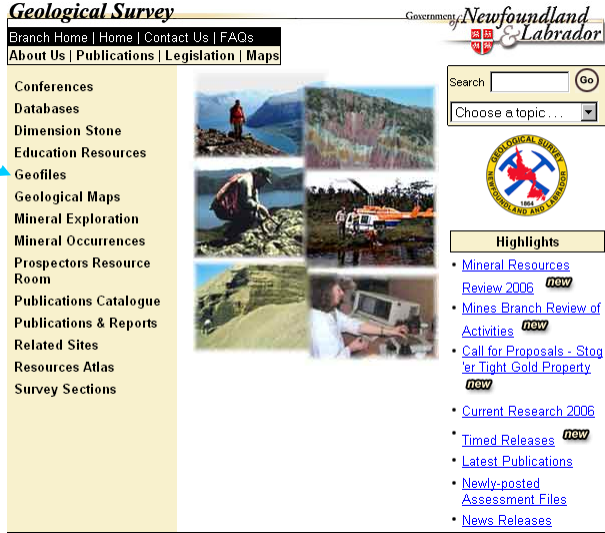


March 2008
Appendix 2
14

## Appendix 2: Summary of Provincial Website Information-Newfoundland & Labrador

**Newfoundland & Labrador Geological Survey**

<http://www.nr.gov.nl.ca/mines%26en/geosurvey/>




March 2008

Appendix 2

15

**Newfoundland & Labrador Geological Survey**

<http://gis.geosurv.gov.nf.ca/minesen/geofiles/>



March 2008

Appendix 2

16

## Appendix 2: Summary of Provincial Website Information-Newfoundland & Labrador

**Newfoundland & Labrador Geological Survey**

<http://gis.geosurv.gov.nf.ca/minesen/geofiles/browse.asp>

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March 2008
Appendix 2
17

<http://gis.geosurv.gov.nf.ca/minesen/geofiles/default.asp>

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Author <span></span> <span>Go</span>	
Keyword <span>aggregates</span> <span>Go</span>	<a href="#">aggregates</a>
Nomenclature <span></span> <span>Go</span>	

March 2008
Appendix 2
18




## Appendix 2: Summary of Provincial Website Information-Newfoundland & Labrador

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March 2008

Appendix 2

19

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  - [Surficial Geology & Aggregates Publications](#)
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March 2008

Appendix 2

20

## Appendix 2: Summary of Provincial Website Information-Newfoundland & Labrador

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March 2008

Appendix 2

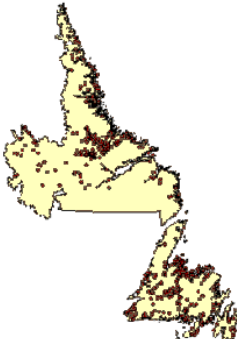
21

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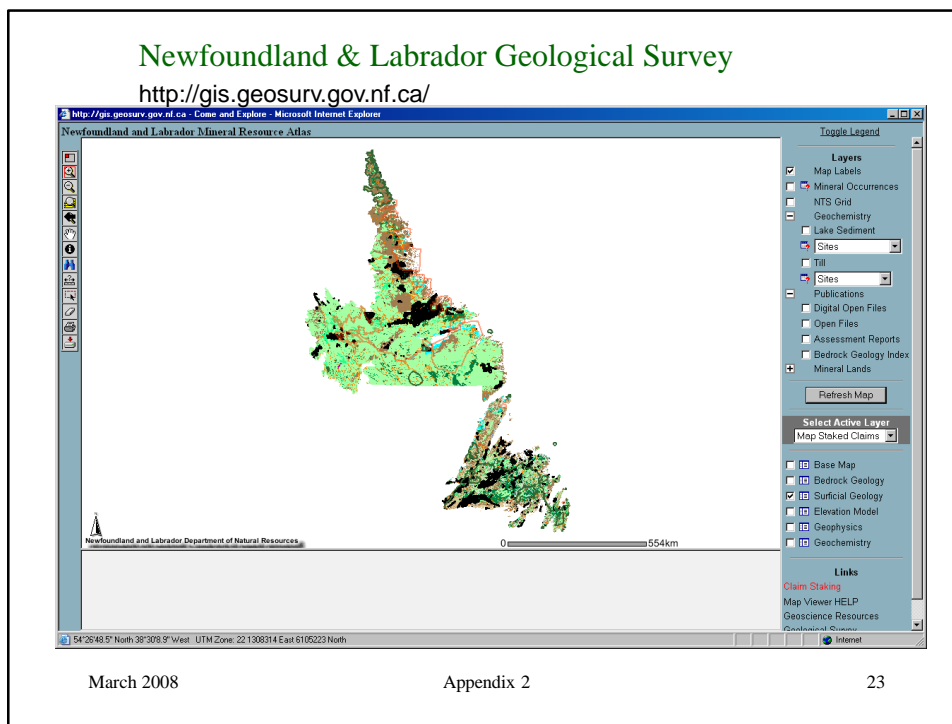
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<a href="#">Mineral Lands Claim Staking</a>
<a href="#">Geofiles Metadata Search</a>
<a href="#">Mineral Rights Inquiry Form</a>
<a href="#">Mineral Occurrence Data System (MODS)</a>
<a href="#">NRCan Geoscience Data Repository (GDR)</a>
<a href="#">Canadian Geoscience Knowledge Network (CGKN)</a>

March 2008

Appendix 2

22

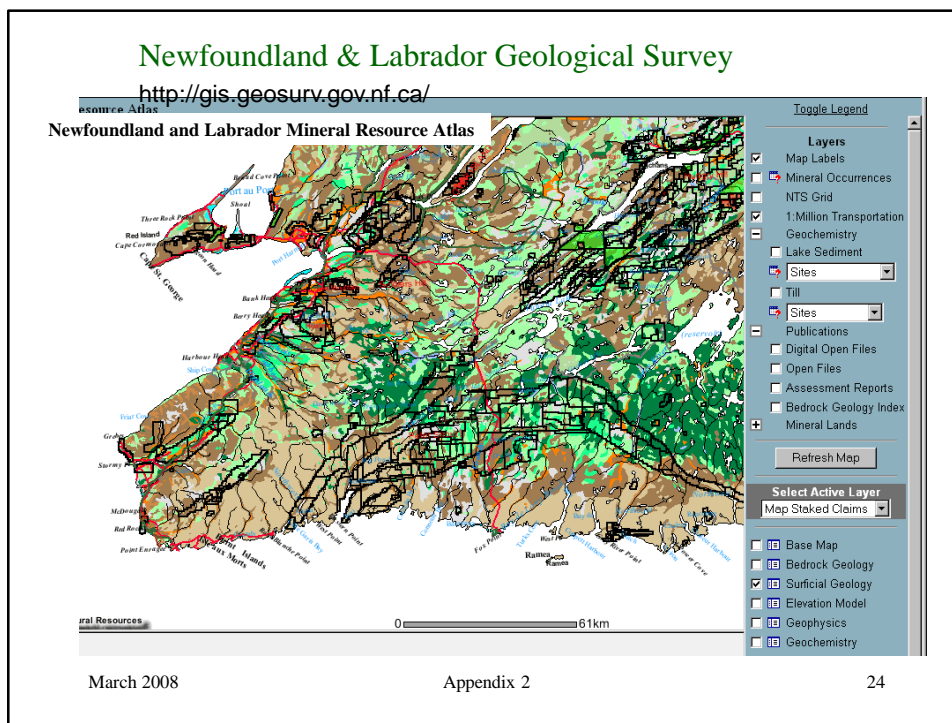
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March 2008

Appendix 2

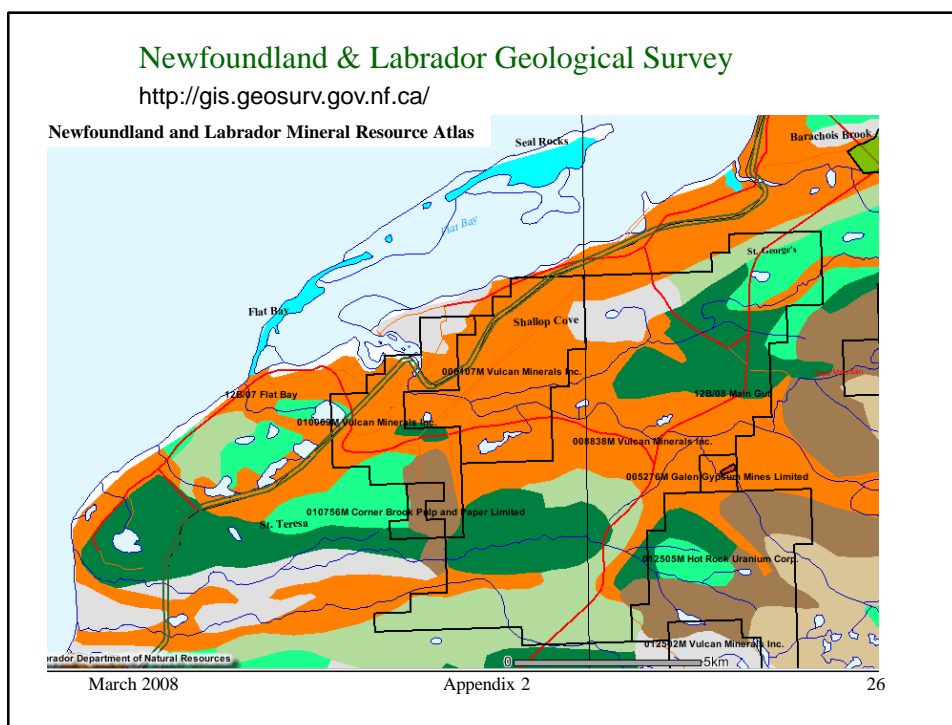
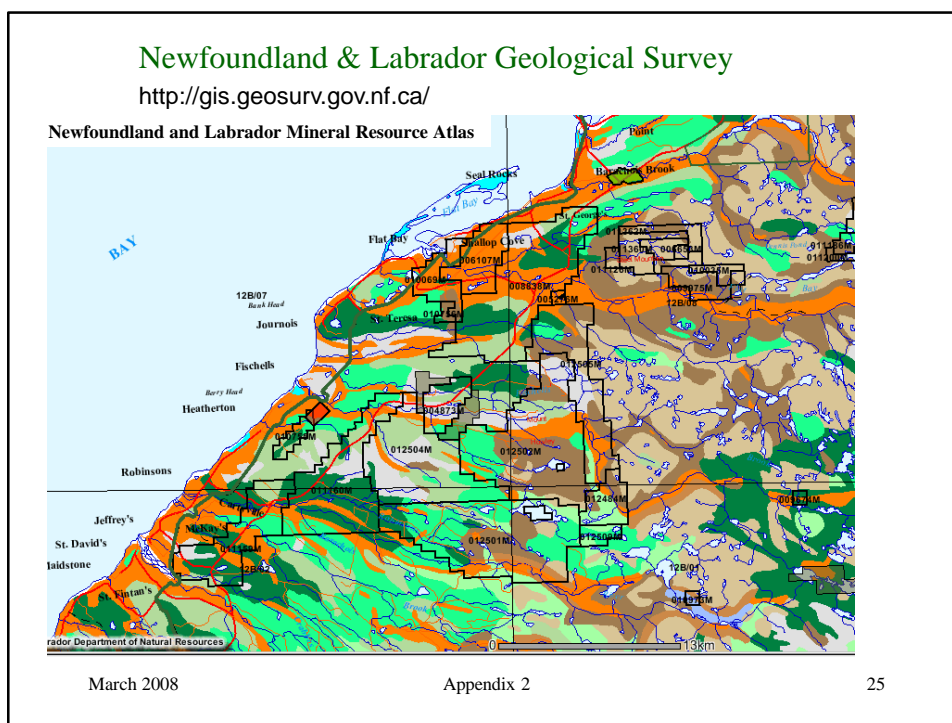
23



March 2008

Appendix 2

24





## Appendix 3

a) Provincial Stone and Sand & Gravel Production by Year

b) Annual Stone and Sand & Gravel Production by Province

## Appendix 3: Provincial Stone and Sand & Gravel Production

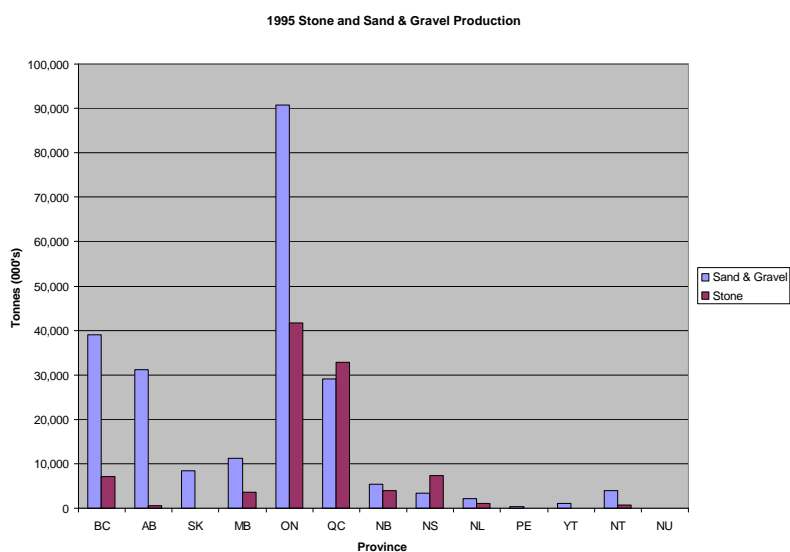


### Appendix 3

a) Provincial Stone and Sand & Gravel Production by Year

b) Annual Stone and Sand & Gravel Production by Province

### Provincial Stone and Sand & Gravel Production by Year



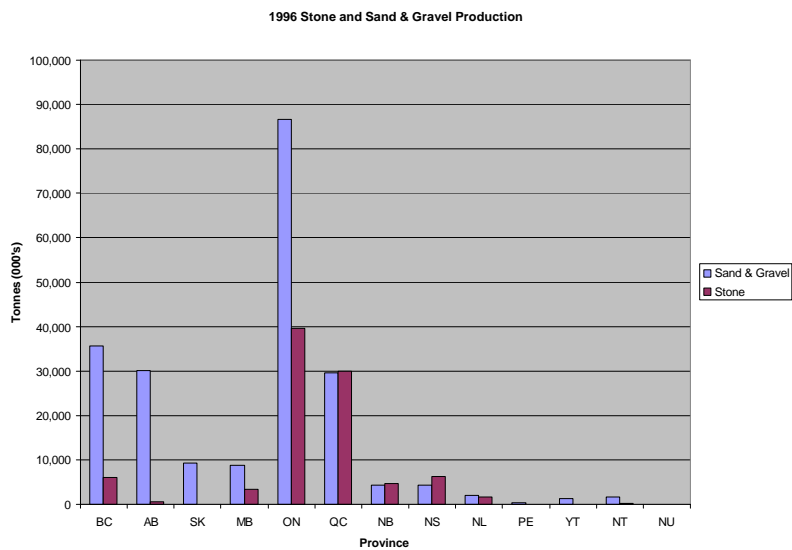
March 2008

Appendix 3

2

## Appendix 3: Provincial Stone and Sand & Gravel Production

### Provincial Stone and Sand & Gravel Production by Year

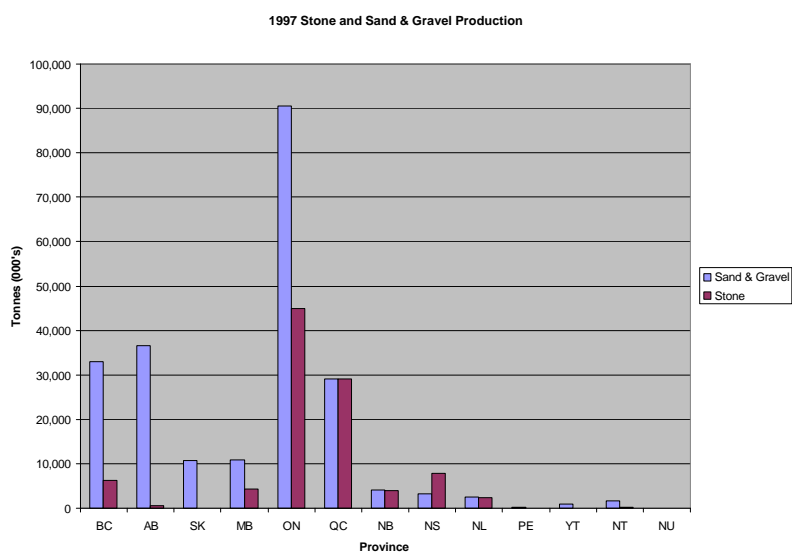


March 2008

Appendix 3

3

### Provincial Stone and Sand & Gravel Production by Year



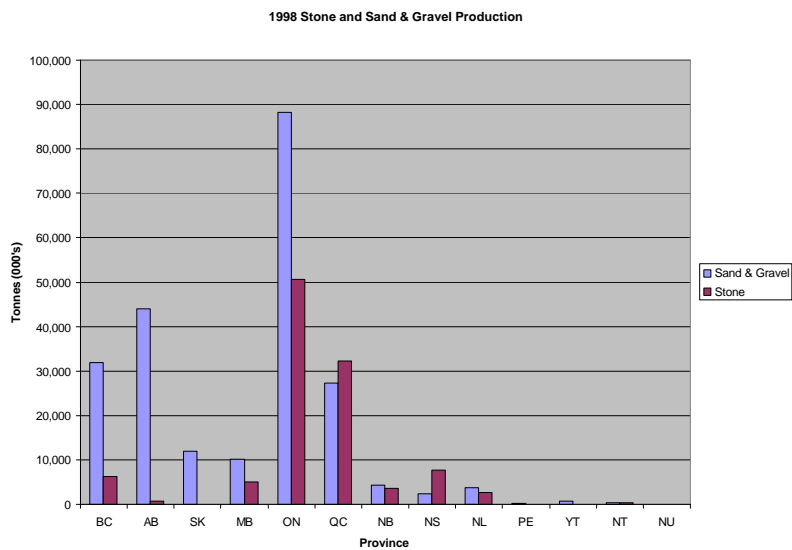
March 2008

Appendix 3

4

## Appendix 3: Provincial Stone and Sand & Gravel Production

### Provincial Stone and Sand & Gravel Production by Year

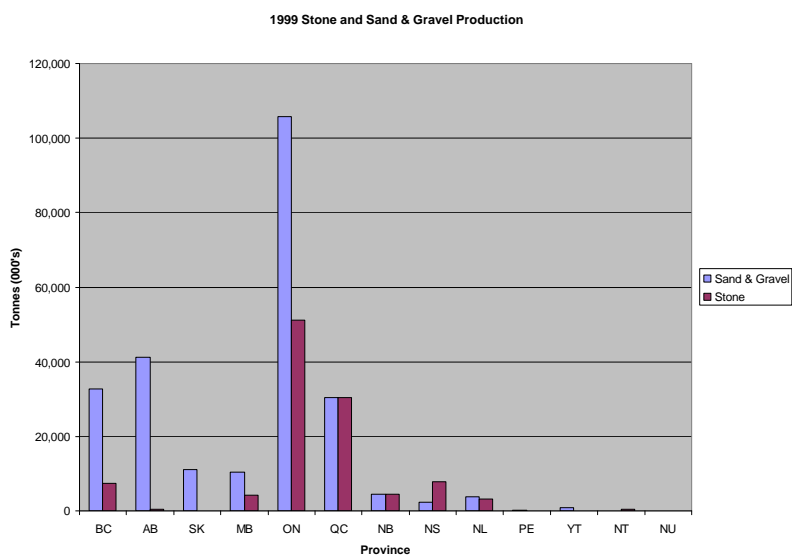


March 2008

Appendix 3

5

### Provincial Stone and Sand & Gravel Production by Year



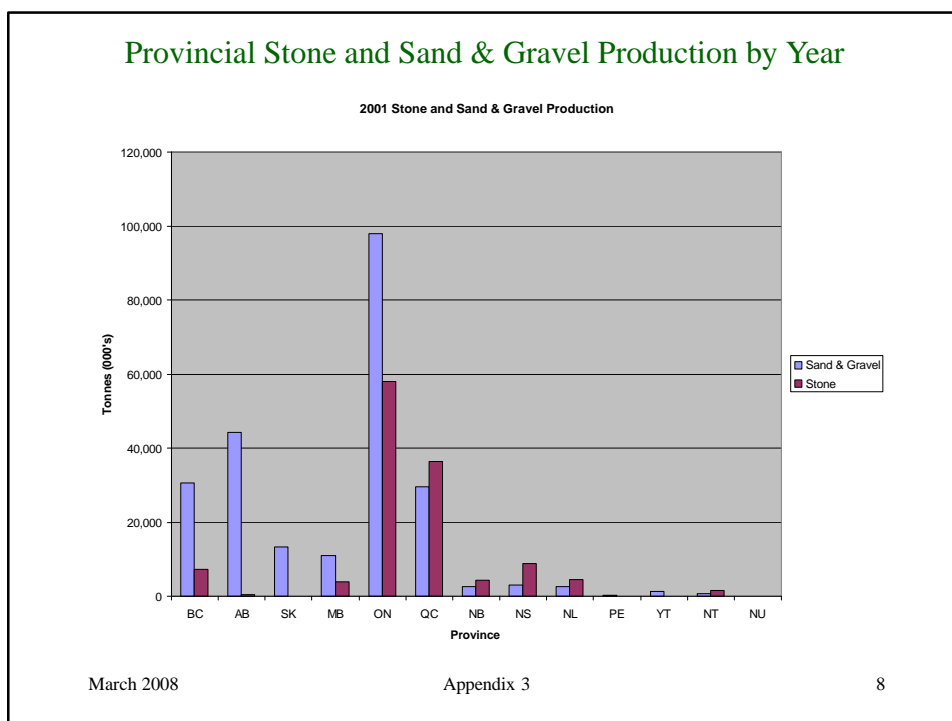
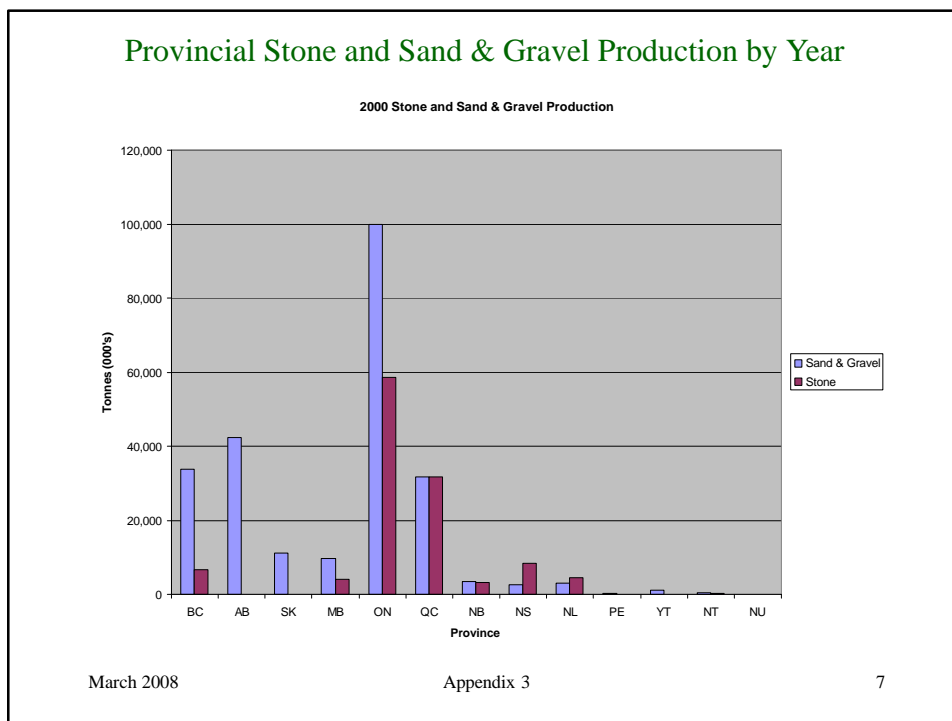
March 2008

Appendix 3

6

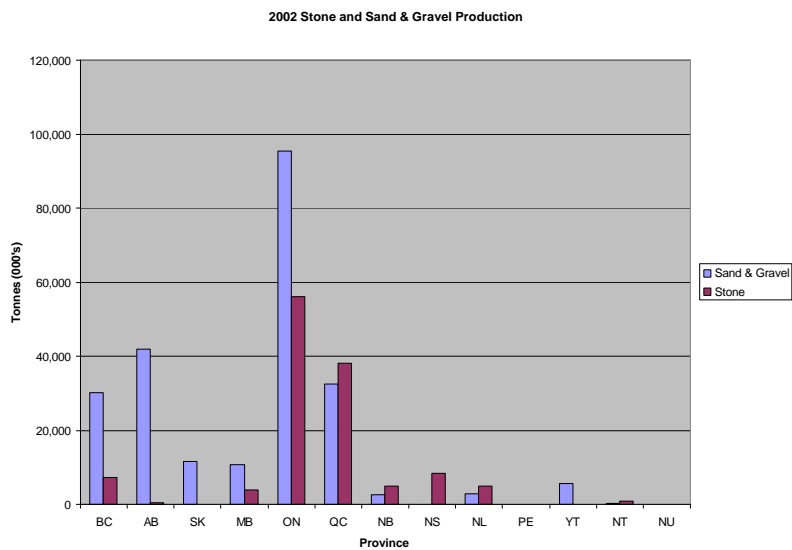


## Appendix 3: Provincial Stone and Sand & Gravel Production



## Appendix 3: Provincial Stone and Sand & Gravel Production

### Provincial Stone and Sand & Gravel Production by Year

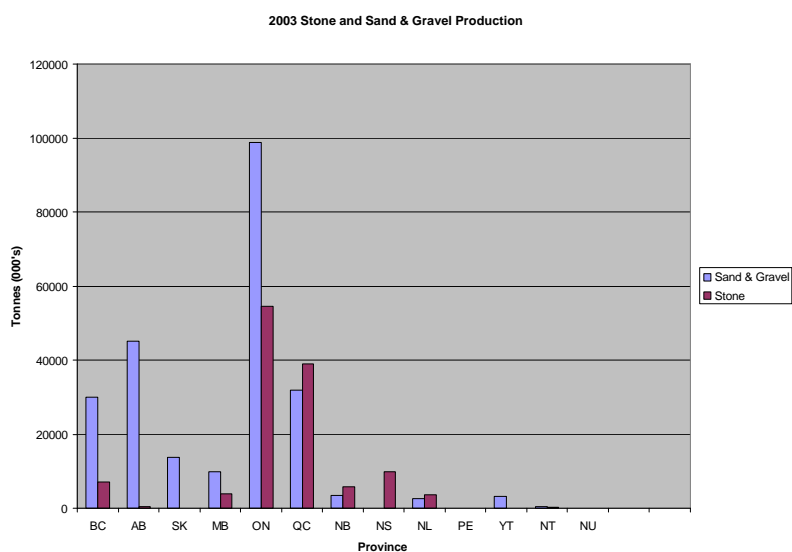


March 2008

Appendix 3

9

### Provincial Stone and Sand & Gravel Production by Year



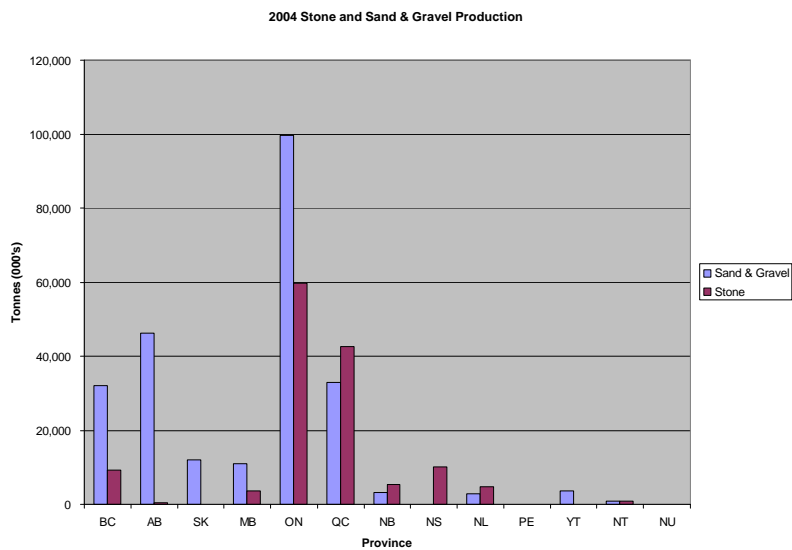
March 2008

Appendix 3

10

## Appendix 3: Provincial Stone and Sand & Gravel Production

### Provincial Stone and Sand & Gravel Production by Year

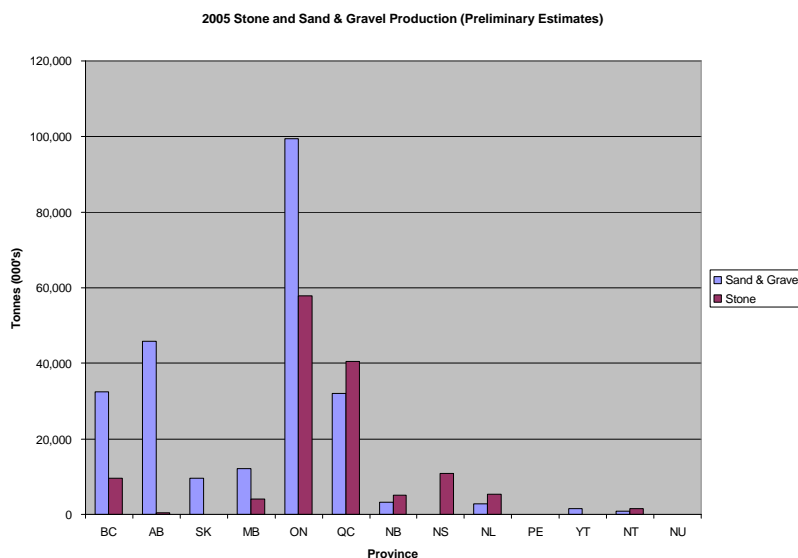


March 2008

Appendix 3

11

### Provincial Stone and Sand & Gravel Production by Year

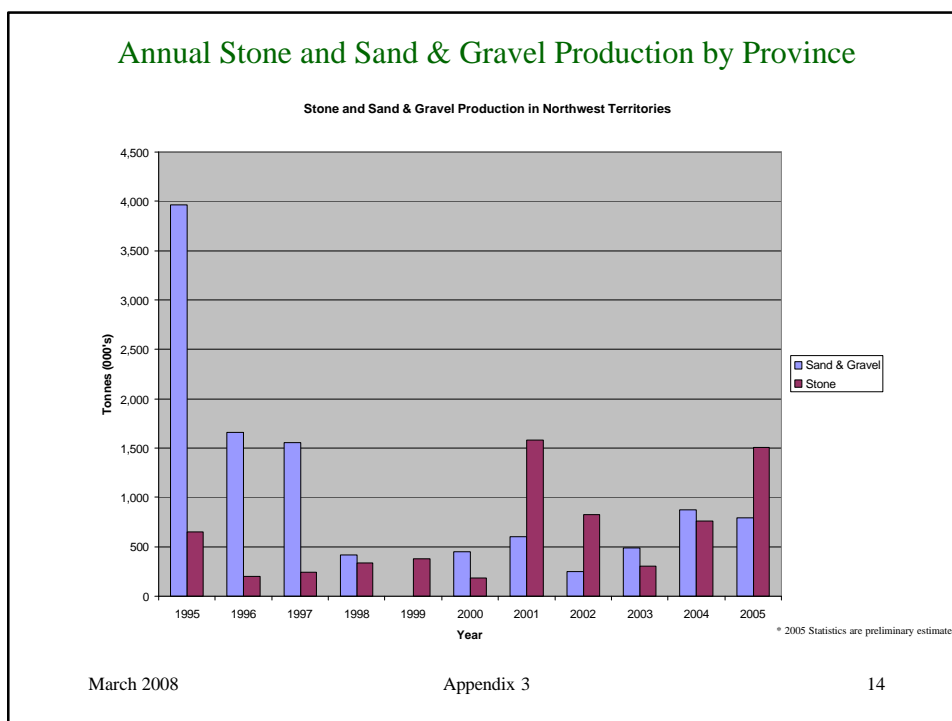
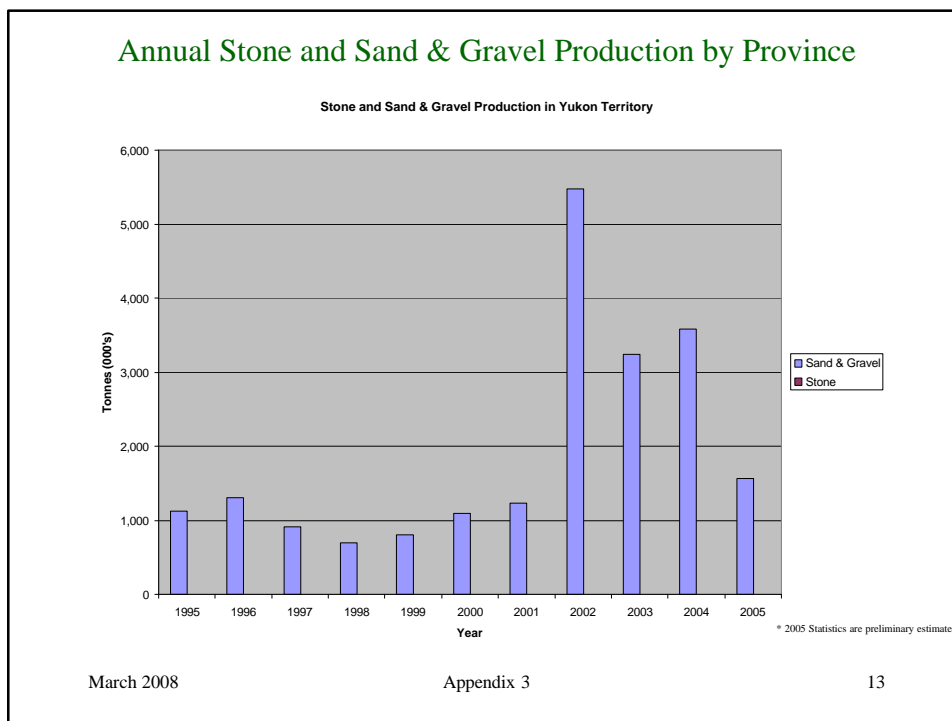


March 2008

Appendix 3

12

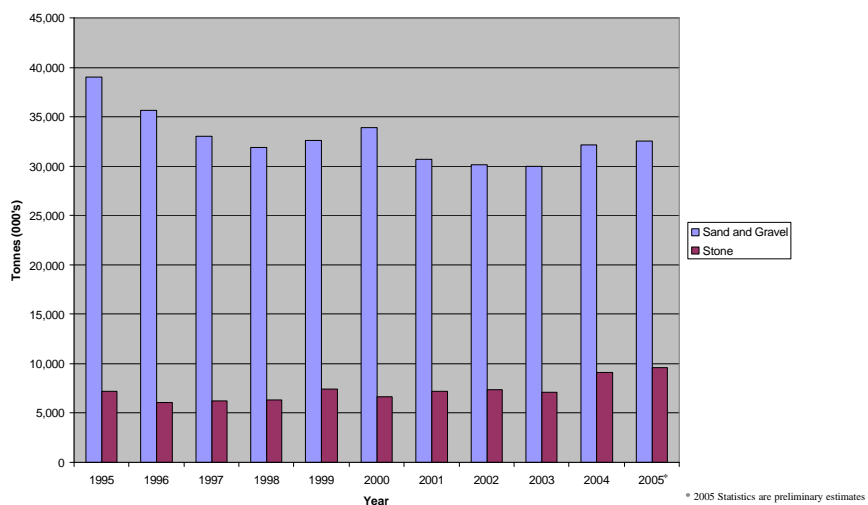
## Appendix 3: Provincial Stone and Sand & Gravel Production



## Appendix 3: Provincial Stone and Sand & Gravel Production

### Annual Stone and Sand & Gravel Production by Province

Stone and Sand & Gravel Production in British Columbia



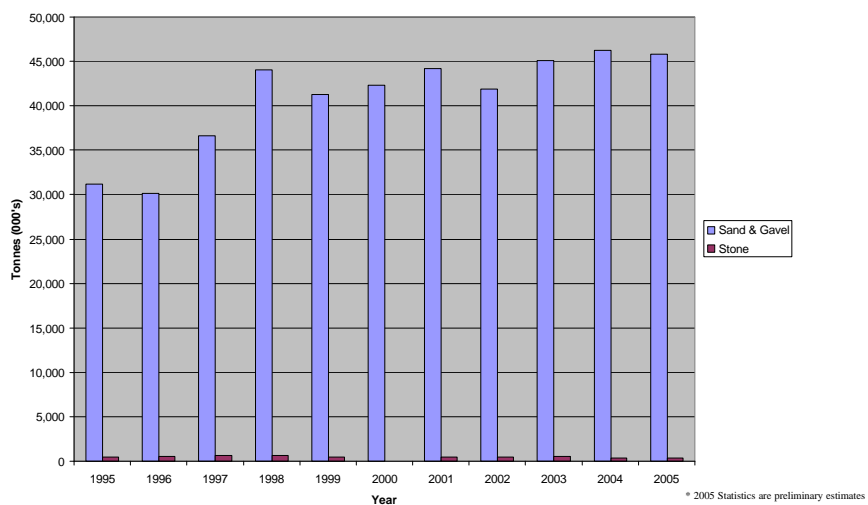
March 2008

Appendix 3

15

### Annual Stone and Sand & Gravel Production by Province

Stone and Sand & Gravel Production in Alberta

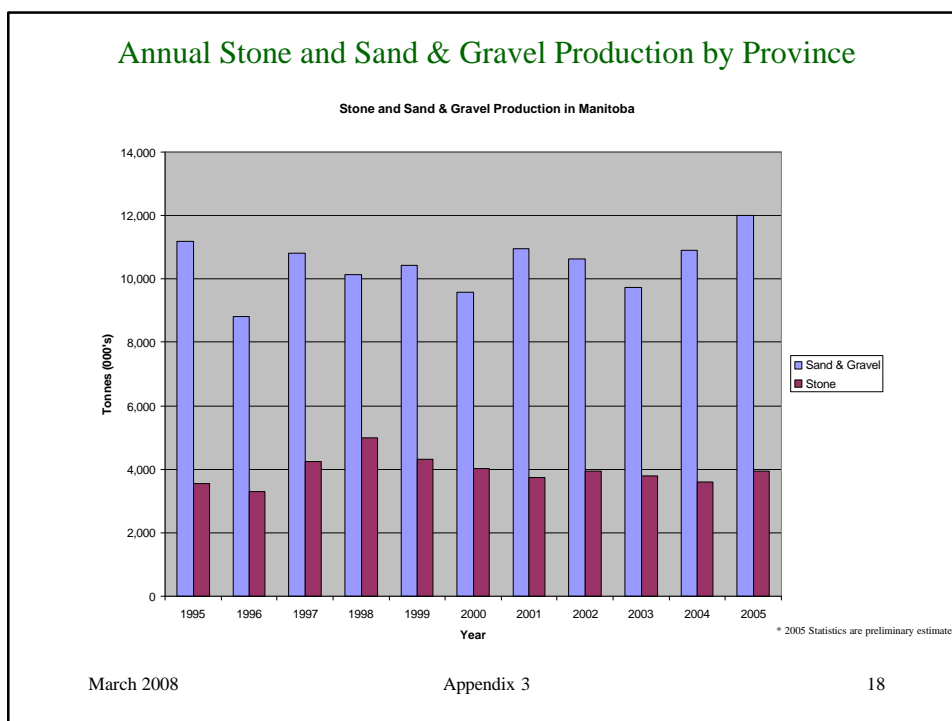
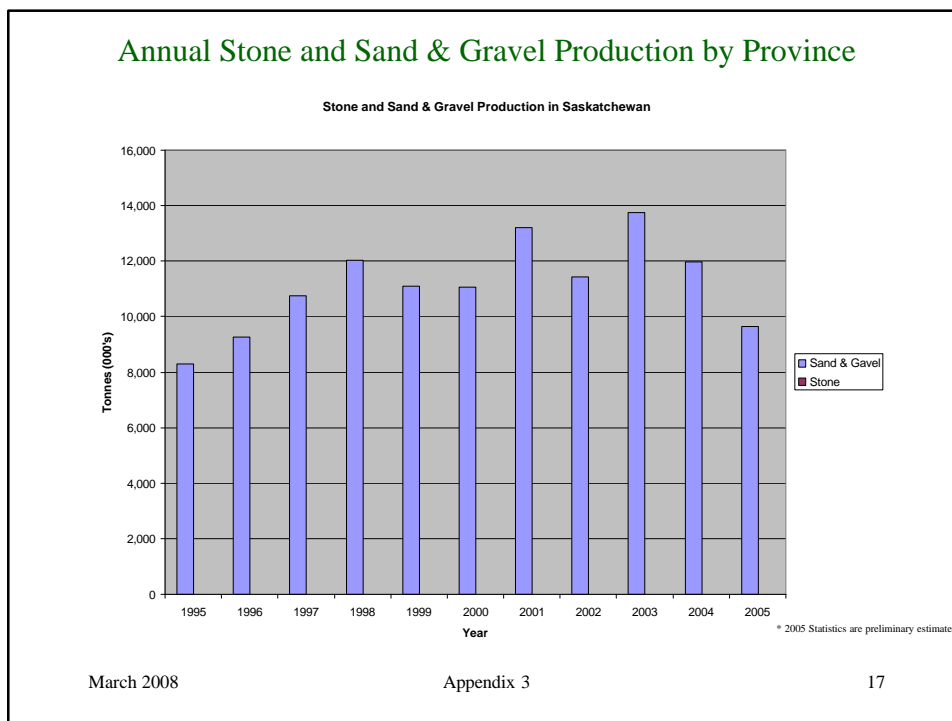


March 2008

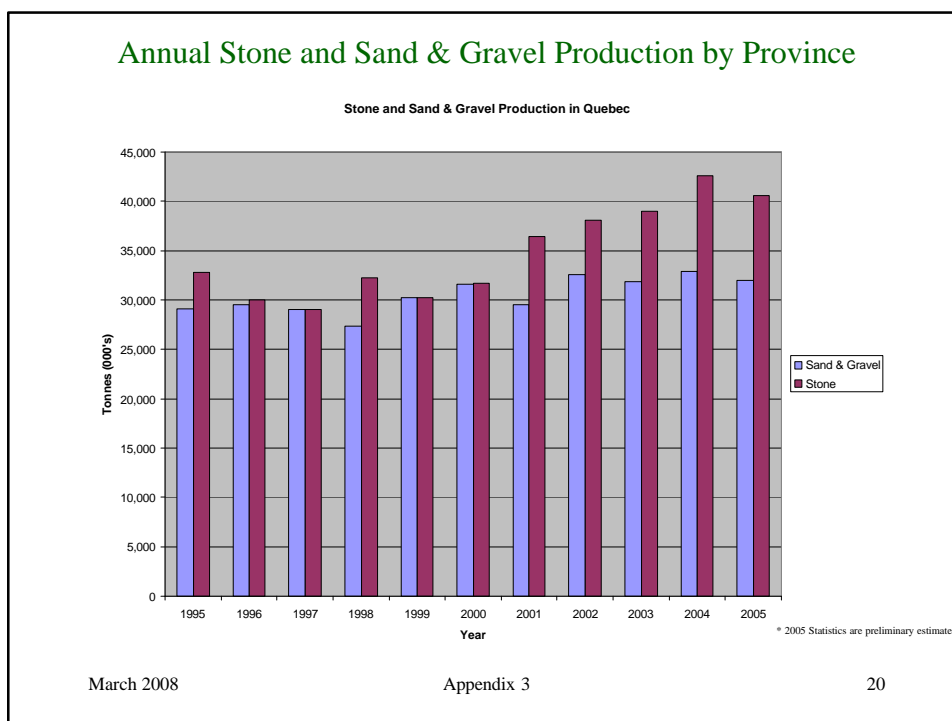
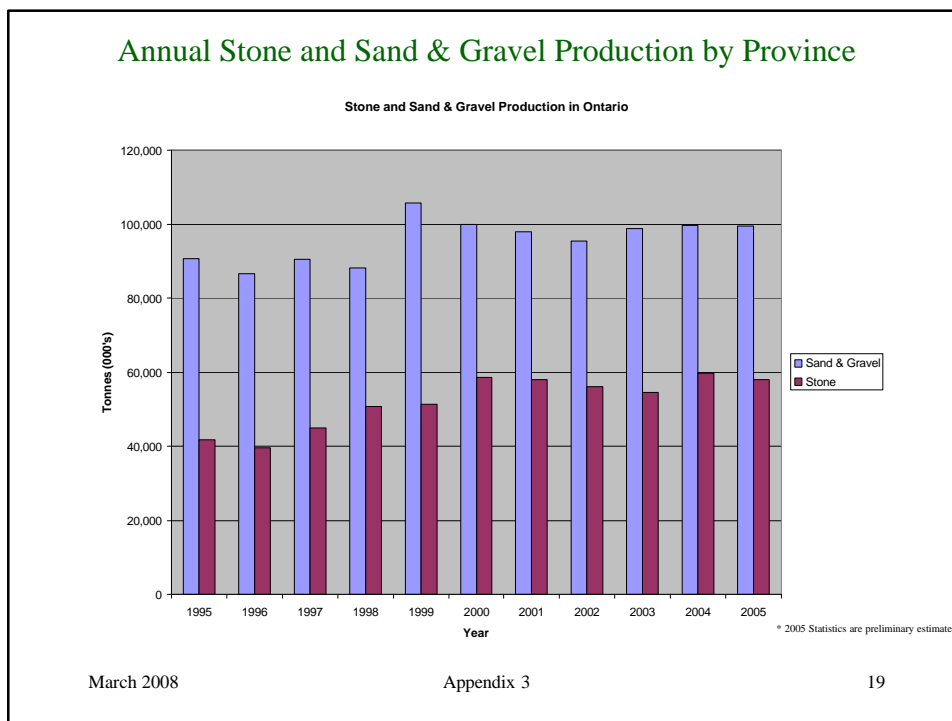
Appendix 3

16

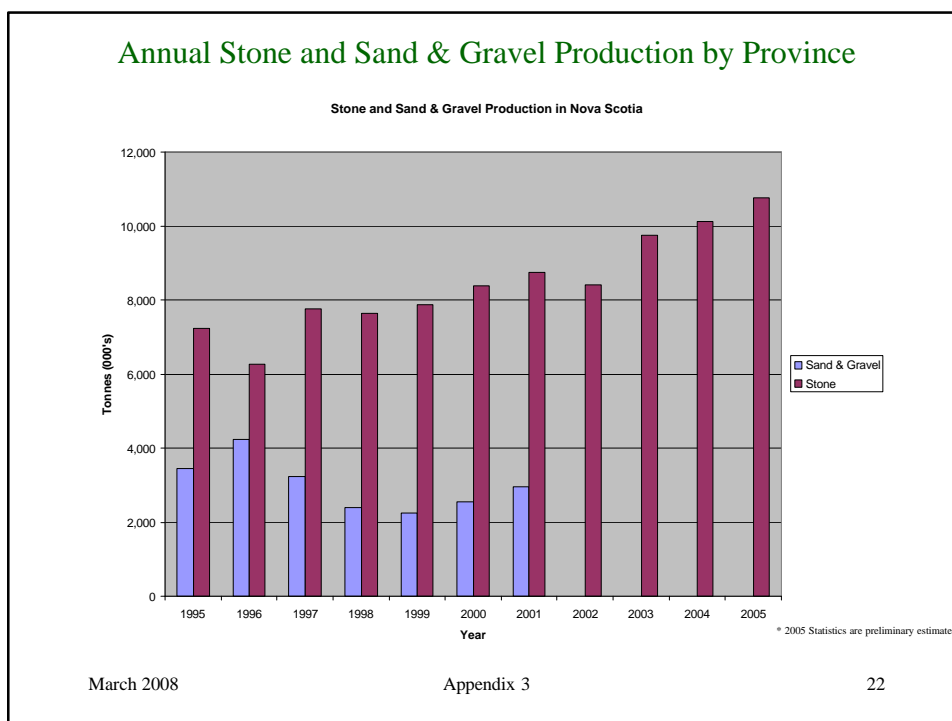
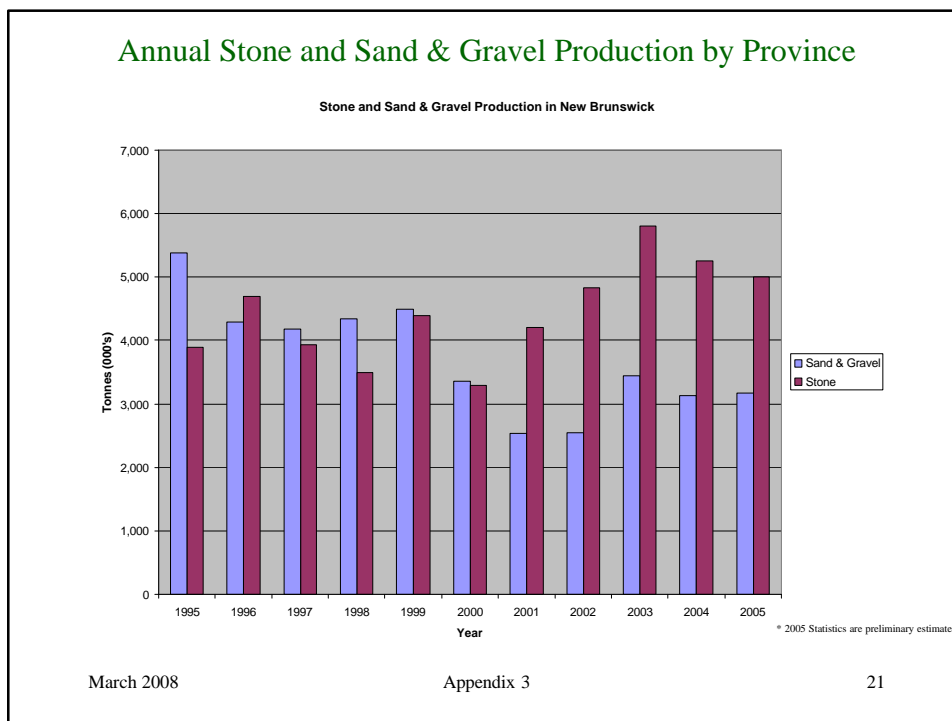
## Appendix 3: Provincial Stone and Sand & Gravel Production



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