

Mineral Production in 2023 and Exploration in 2024



Windsor Salt Ltds Underground Salt Mine – Pugwash, Cumberland County

Information Circular ME 83

Mineral Management Division



Natural Resources

Halifax, Nova Scotia

February 2025

Note

Publications can be obtained through the Geoscience and Mines Branch's online NovaScan database or through the Natural Sciences Library. NovaScan (<https://gesner.novascotia.ca/novascan/DocumentQuery.faces>) can be searched by title, author, document type and document number. Click on the blue 'More' button to get the full document record, and then click on the green 'Free Download' button to view or download the publication. For more information or assistance, contact the Natural Sciences Library:

1701 Hollis Street, 3rd Floor, Founders' Square
Halifax, Nova Scotia
B3J 2T9
phone: 902-424-8633
email: natural.sciences@novascotia.ca

Nova Scotia Department of Natural Resources

Honourable Tory Rushton
Minister

Karen M. Gatien
Deputy Minister

Message from the Director of Mineral Management

This Mineral Production and Exploration report offers an overview of recent trends in Nova Scotia's exploration and mining industry. It includes 2024 exploration statistics, 2023 mineral production data, and a summary of reclamation securities. The report also highlights ongoing efforts to address the risks posed by abandoned mine openings across the province. The data presented was developed in collaboration with industry stakeholders, with contributions from the companies surveyed. I extend my thanks to Nova Scotia's exploration and mining industry for their support in preparing this report.

In a highly competitive global mineral investment market, Nova Scotia acknowledges the challenges facing the mining sector. The Mineral Management Division of the Nova Scotia Department of Natural Resources is focused on making the province a leading investment destination by implementing clear, effective policies and laws that promote sustainable mineral resource development.

In 2024, Nova Scotia's mineral industry saw continued strong exploration activity, with notable advancements in both grassroots and advanced exploration projects. The total number of claims under licence increased from 2023 to 2024, however total exploration field expenditures decreased in the same year, this is still ~15% above the average over the past decade.

The landscape of active mines in the province is evolving. The gypsum market is experiencing a resurgence, with several projects in development. The salt sector is also showing strong recovery after several years of challenging market conditions. While the gold sector, which had previously reached record-high production values, is currently transitioning as the Touquoy site enters reclamation, exciting new projects are on track to drive future growth and success. Similarly, the coal sector is winding down, with operations either transitioning to reclamation or remaining in care and maintenance.

Employment at active mine sites remained stable, with gold, salt, and coal operations each making up about 25% of the workforce in the sector during the report period.

For those interested in contributing to a sustainable future through mineral resource development, further information can be obtained by contacting GMB@novascotia.ca.



Tim Bourque
Director, Mineral Management
Geoscience and Mines Division
Tim.Bourque@novascotia.ca

2024 Exploration Highlights

Mineral rights activity in Nova Scotia increased in 2024, relative to 2023. The total number of claims held in exploration licences increased to 50,700 from 45,000 (Figure 1). The number of claims held in exploration licences in 2024 continues to represent a trend of increased activity. Notably, the trend began with the proclamation of the new *Mineral Resources Act* in 2018, (exploration licences issued or renewed after December 18, 2018, are for two-year terms).

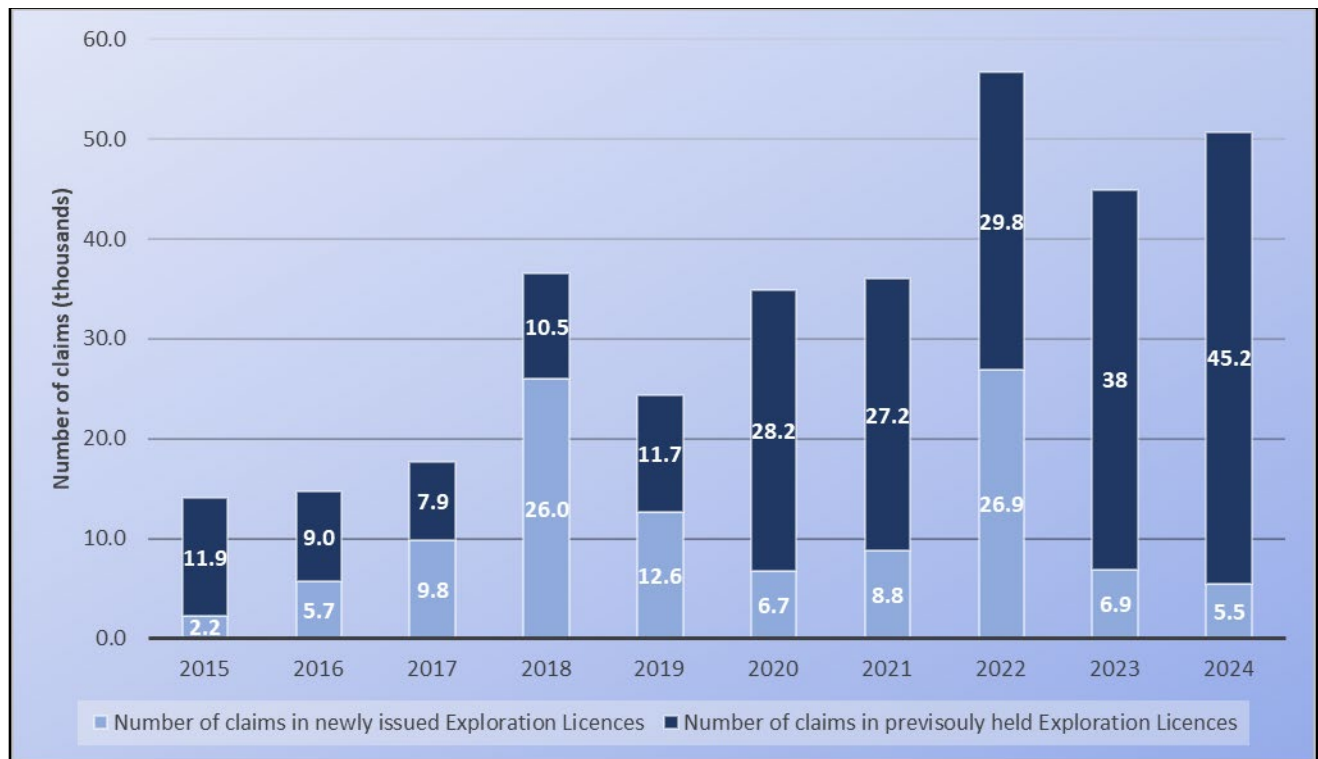


Figure 1. Number of claims under licence by year, 2015 – 2024.

Preliminary field expenditures in Nova Scotia for the mineral exploration industry (exploration plus deposit appraisal) are estimated to be \$34.4 million. This represents a decrease from 2023 (\$49M) but is ~15% above the average of the past decade.

There were 244 companies and individuals holding exploration interests (licences or options) in the province in 2024. Interest holders were made up of 73 companies and 171 individuals. In addition, several mineral lease holders carried out exploration and development work on their leased areas and exploration work for commodities with differing licencing requirements (e.g., gypsum). Entities actively engaged in advanced exploration during 2024 included 12 companies, as well as 8 individuals. Prospecting and geological surveys were completed by 77 licensees.

Figures 2a and 2b indicate the locations of exploration licences and mineral leases within the province in 2024 and 2023, respectively.

For a current view of the number and distribution of mineral exploration licences in the province, the reader is referred to <https://novaroc.novascotia.ca>, where the map feature can be used to display current mineral rights held throughout the province.

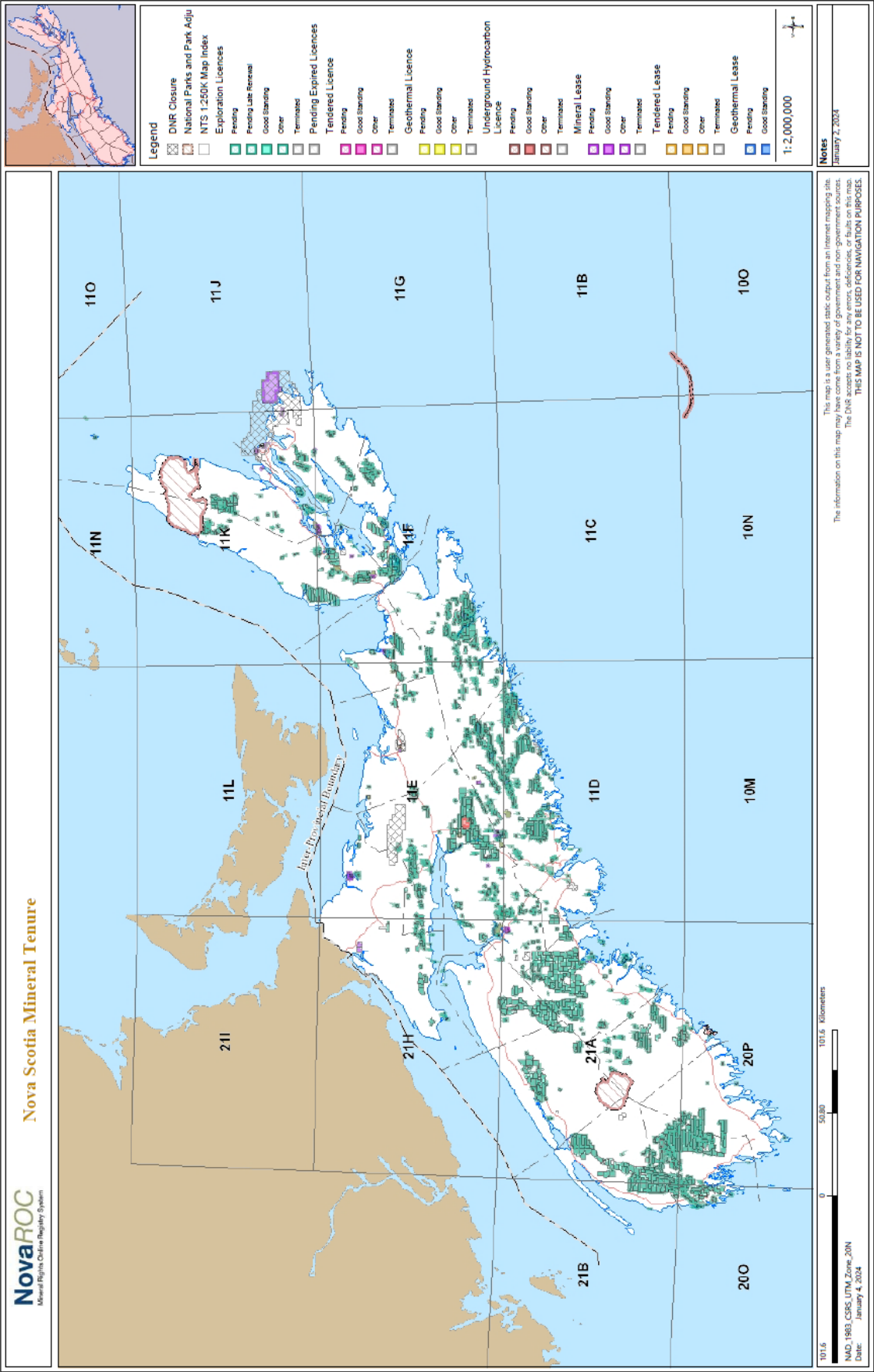


Figure 2a. Mineral exploration activities in 2024.

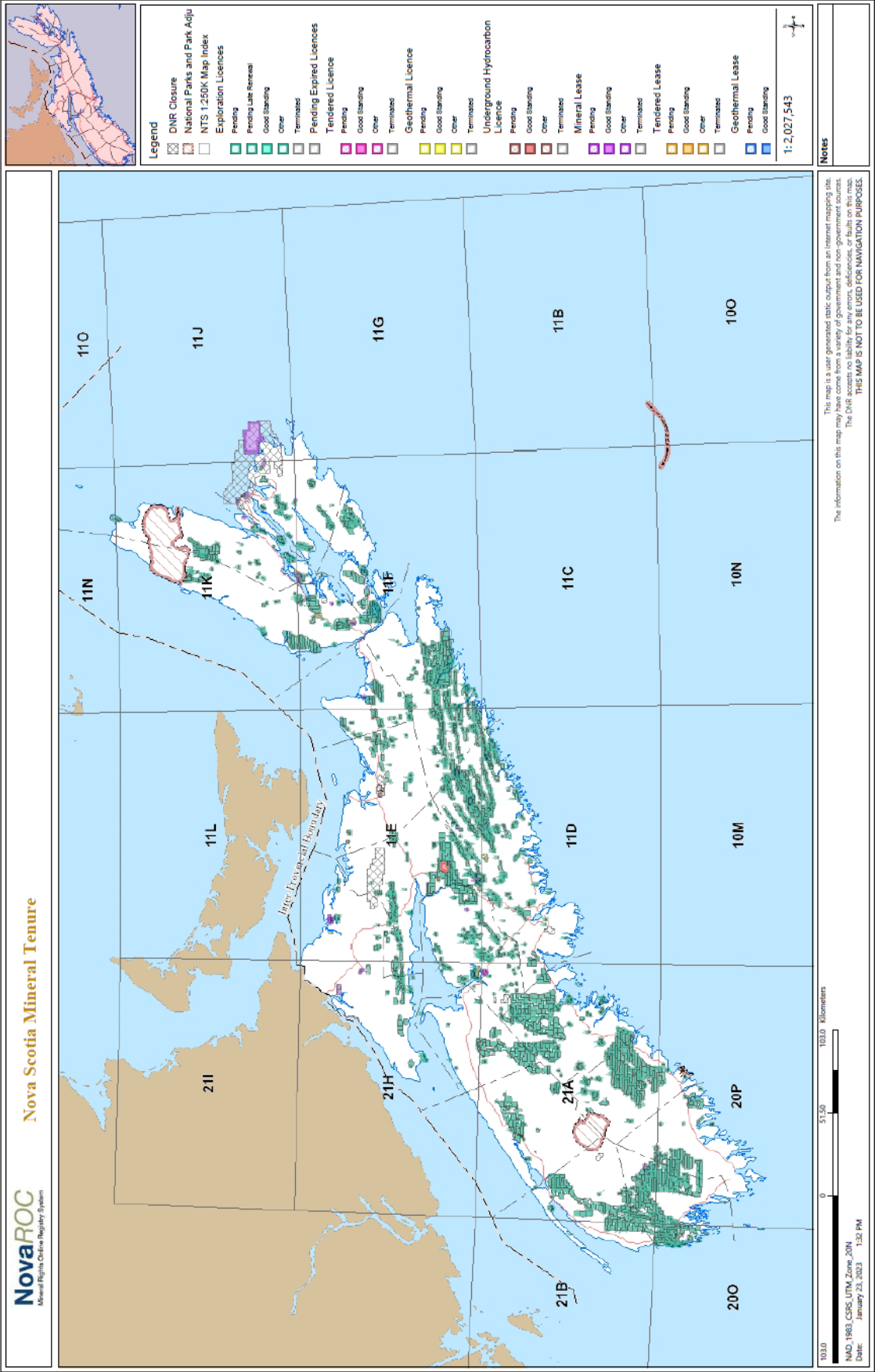


Figure 2b. Mineral exploration activities in 2023.

2023 Production Highlights

There were 13 producing mines in Nova Scotia in 2023 (Figure 3), which operated under the authority of the *Mineral Resources Act*. In addition, five operations were under care and maintenance, awaiting improved market conditions to support a restart in production.

In 2023, the market value of the province's mineral production was approximately \$251 million. This amount reflects an increase relative to 2022 and is reflective of increased production of salt and coal.

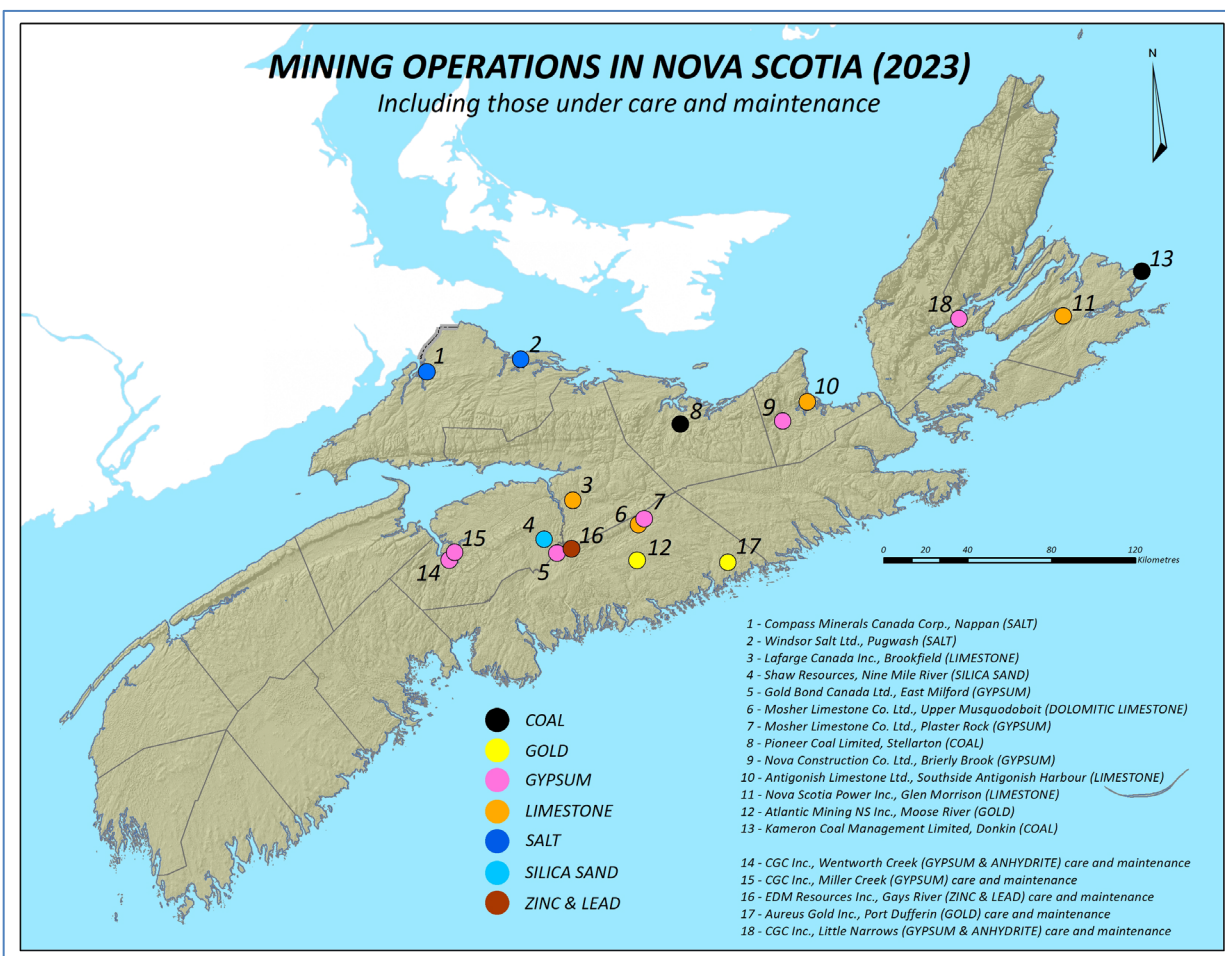


Figure 3. Active and care and maintenance mine sites.

Table 1. Nova Scotia mineral production in 2023*.

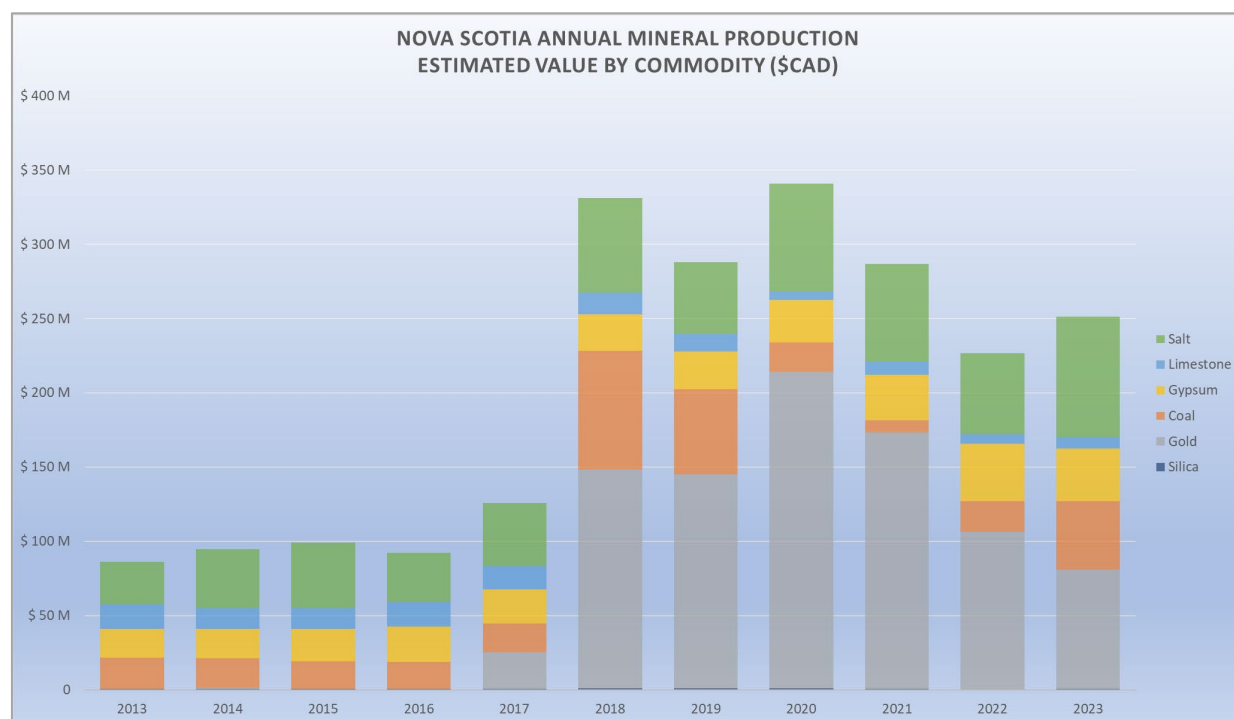
Commodity	Production (Tonnes**)	Market Value***	Percentage of Total Market Value
Coal	280,207	\$20,826,000	18.3%
Gold (ounces)	31,915	\$80,298,000	31.9%
Gypsum	2,288,994	\$35,750,000	14.2%
Limestone	310,263	\$7,568,000	3.0%
Salt	947,613	\$81,217,000	32.3%
Silica sand	8,828	\$530,000	0.2%
Total Mineral Production		\$251,391,000	100.0%

* Construction aggregates data are not included in Table 1

** Tonnes shipped, except gold (ounces)

*** Market value of shipped products

Historical prices for individual commodities are available from the [London Metal Exchange](#).

**Figure 4.** Value of Nova Scotia annual mineral production.

Salt

In 2023, Nova Scotia's two operating salt mines produced a combined total of 947,613 tonnes of salt, marking a 65% increase (372,029 tonnes) compared to 2022. Salt production generated \$81.2 million in value, accounting for 32% of the province's total mineral production value (see Figure 4; Table 1).

Since 1980, annual salt production in Nova Scotia has averaged approximately one million tonnes. Production levels often fluctuate based on winter weather conditions in the region, which influence the demand for road de-icing.

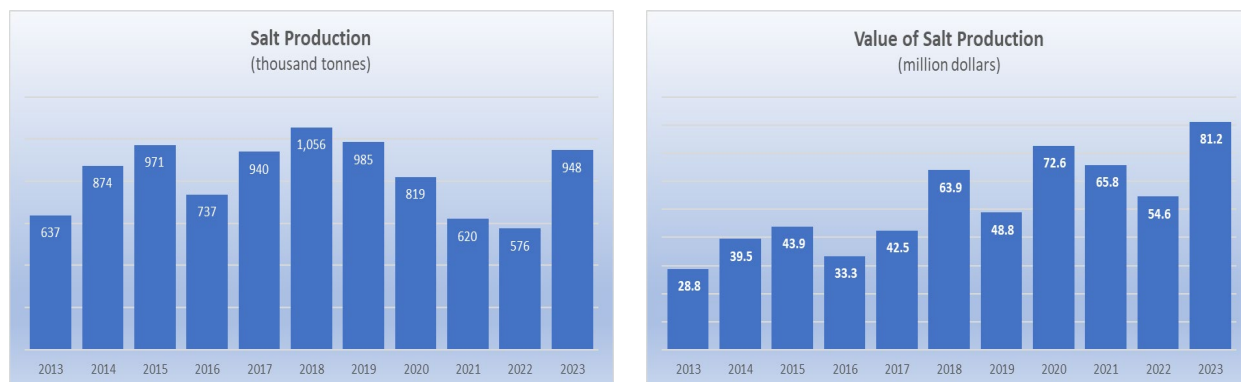


Figure 5. Salt production and market value of shipped salt and salt products.



Figure 6. Pugwash Mine, Cumberland County.

Pugwash, Cumberland County

The Pugwash underground salt mine, operated by Windsor Salt Ltd., has been in continuous production since 1959. The mine employs a room-and-pillar extraction method, where salt is undercut, drilled, blasted, and transported by trucks and conveyor belts to the production shaft for hoisting to the surface.

In 2023, the mine produced 732,764 tonnes of finished salt, with 838,990 tonnes shipped to market due to availability of additional stockpiled inventory. The finished rock salt, available in bulk and packaged forms, was distributed across eastern Canada by ships and trucks. The majority of the product was sold in Atlantic Canada, primarily for road de-icing.

Nappan, Cumberland County

The solution salt mine in Nappan, operated by Compass Minerals Canada Corp., has been in operation since 1947. The mining process involves drilling wells into salt formations, using water to create caverns and dissolve the salt into a brine solution. The brine is then brought to the surface and processed in a plant where water is evaporated to produce high-purity salt.

In 2023, 108,623 tonnes of salt were shipped from the Nappan operation. This salt is primarily used in the food processing industry and as table salt for domestic consumption. The plant also produces and packages salt for other applications, including water conditioning, agriculture, and de-icing. The product is distributed in both bulk and packaged forms to markets across Eastern Canada and the Northeastern United States.

Gold

There was a single gold mine in operation in 2023 – the Touquoy project which is in Halifax County. The Touquoy project is an open pit mine at Moose River Gold Mines. The mine has since ceased production and begun the transition into reclamation activities.

In total, 31,915 ounces of gold were shipped in 2023 representing \$80.3 million or 31.9 % of Nova Scotia's total value of mineral production (Figure 6; Table 1).

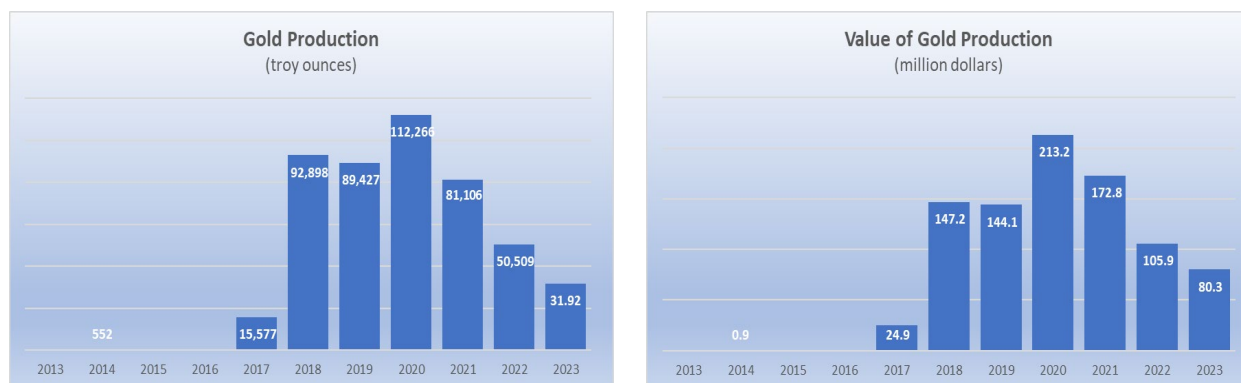


Figure 7. Gold production in Nova Scotia.



Figure 8. Touquoy Gold Mine, Halifax County

Touquoy, Halifax County

The Touquoy Mine, operated by Atlantic Mining NS Inc., a subsidiary of St. Barbara Limited, concluded production mining in early 2023. St. Barbara acquired the operation in 2019 through its purchase of Atlantic Gold Corporation. After completing mining activities at the open pit itself, the site continued processing stockpiled ore until September 2023. With ore processing now complete, the mine has transitioned to reclamation activities. These efforts include dismantling mining infrastructure, finalizing studies related to mine closure, and reshaping earthworks around the site.

In 2023, 158,000 tonnes of ore were mined from the Touquoy pit using a drill-and-blast method. Broken ore was loaded with hydraulic excavators into haul trucks and transported to the mill. An additional 1.8 million tonnes of stockpiled ore was processed resulting in a total of 28,933 gold ounces produced and 31,915 gold ounces sold in 2023.

Gypsum

In 2023, Nova Scotia produced 2.28 million tonnes of gypsum, valued at \$35.8 million, representing 14.2% of the province's total mineral production value (see Figure 8; Table 1). This marked a slight (~3%) decrease in production compared to 2022. Gypsum mining took place at two sites: a large quarry in East Milford, Halifax County, and a smaller quarry at Brierly Brook, Antigonish County. The East Milford Quarry primarily supplied gypsum for wallboard manufacturing, while the Brierly Brook Quarry served both the cement industry and wallboard production.

Gypsum production has remained steady at approximately 2 million tonnes annually since 2010. Increased demand for natural gypsum has arisen due to the reduced availability of synthetic gypsum, a byproduct of coal-fired power plants. This demand has caused a renewed interest in Nova Scotia's gypsum resources. The Little Narrows gypsum mine is scheduled to reopen in 2025, and several other projects are in various stages of development.

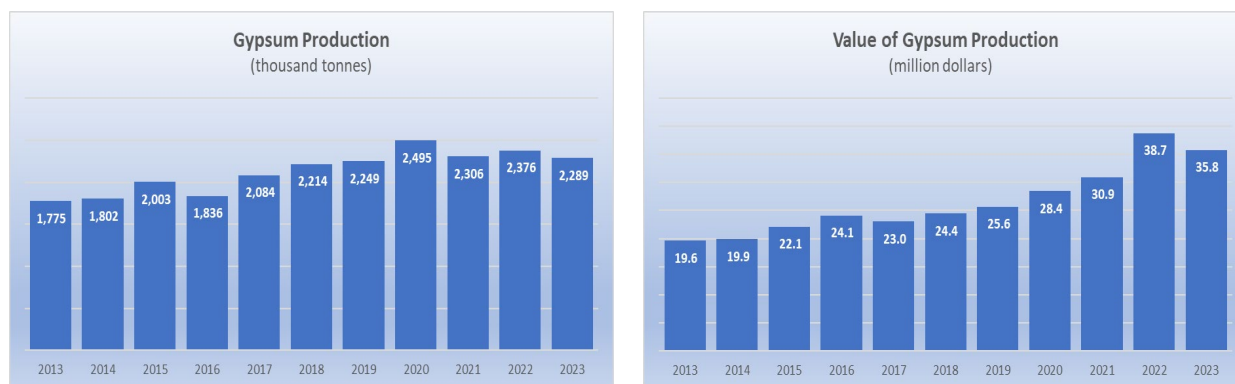


Figure 9. Gypsum production in Nova Scotia.



Figure 10. Brierly Brook Gypsum Quarry, Antigonish County.

East Milford, Halifax County

Gold Bond Canada, Ltd. operates a gypsum quarry in East Milford, Halifax County. In 2023, the mine produced 2.22 million tonnes of gypsum and has produced more than 140 million tonnes since it began continuous operation in 1954.

Mining at this operation involves drilling, blasting, and loading the gypsum onto trucks. It is then crushed and screened to remove fine particles and transported by train from East Milford to Wrights Cove, Dartmouth. Crushed rock is loaded on ships for wallboard manufacturing by its parent company in the United States and for customers in Canada and the United States. The mine also sells products within Nova Scotia for agricultural use.

Brierly Brook, Antigonish County

The Brierly Brook gypsum quarry is owned by Nova Construction Co. Ltd. and shipped 66,953 tonnes of gypsum in 2023. The quarry operated consistently throughout 2023 after ending a period of care and maintenance in 2019.

Operations at Brierly Brook include drilling, blasting, and loading the gypsum onto trucks. The gypsum is

then crushed, screened, and stockpiled for shipment. The mine supplies gypsum for the manufacturing of wallboard and cement in domestic markets.

Coal

In 2023, coal production in Nova Scotia reached 280,207 tonnes, valued at \$46.0 million, representing 18% of the province's total mineral production value (see Figure 10; Table 1). Production came from two sites: the Stellarton surface mine, Pictou County, and the Donkin underground mine in Cape Breton County.

Coal production in Nova Scotia has now ceased, with the Stellarton Mine transitioning to final site reclamation and the Donkin Mine returning to care and maintenance status. Coal from the Stellarton Mine was primarily used for electrical power generation within the province, while coal from the Donkin Mine was utilized for both power generation and various industrial applications.

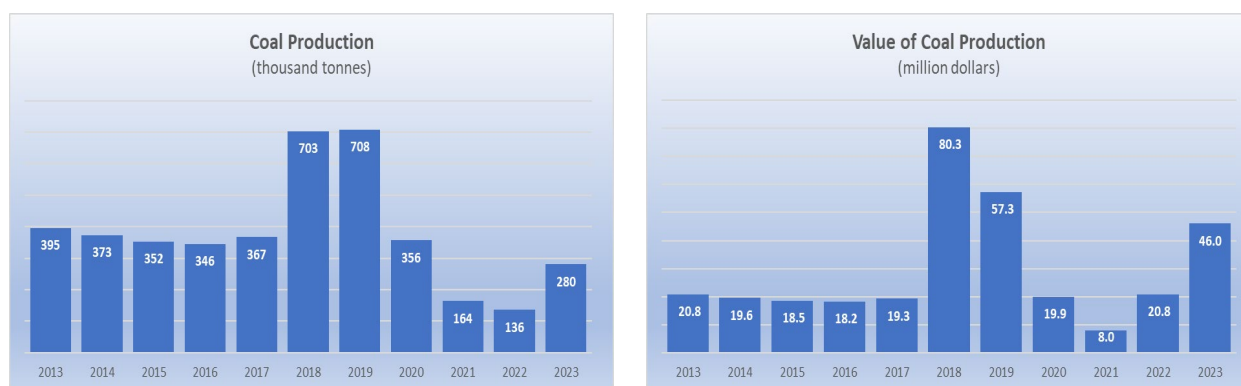


Figure 11. Coal production in Nova Scotia.



Figure 12. Donkin Mine, Cape Breton County

Stellarton, Pictou County

The Stellarton surface coal mine, operated by Pioneer Coal Limited since 1996, completed production in early 2023 and has transitioned to a reclamation phase. In 2023, the mine produced 11,905 tonnes of coal, which was supplied to Nova Scotia Power's generating station in Trenton.

Reclamation efforts at the site include removing mining-related infrastructure, reshaping and reseeding

embankments. Stockpiled material is available to be placed back into the open pit to create a safe gentle slope that aligns with natural topography in the area.

Donkin, Cape Breton County

The Donkin underground mine, operated by Kameron Coal Management Limited, operated intermittently during 2023 as efforts were made to bring the site into steady operation. The mine is currently under a care and maintenance program, awaiting improved conditions that could enable a restart of operations.

In 2023, the Donkin Mine shipped 268,182 tonnes of coal, with the product distributed to both domestic and international markets.

Limestone

In 2023, Nova Scotia's limestone production totaled 310,263 tonnes across four operations, with a total value of \$7.6 million, accounting for 3.0% of the province's total mineral production value (see Fig. 12; Table 1). The largest portion of the limestone produced (~54%) was used as a feedstock for Portland cement production. Approximately 33% was utilized for managing combustion gas emissions at a coal-fired power station. The remaining limestone was sold for agricultural soil amendments, pulp and paper manufacturing, and other miscellaneous applications.

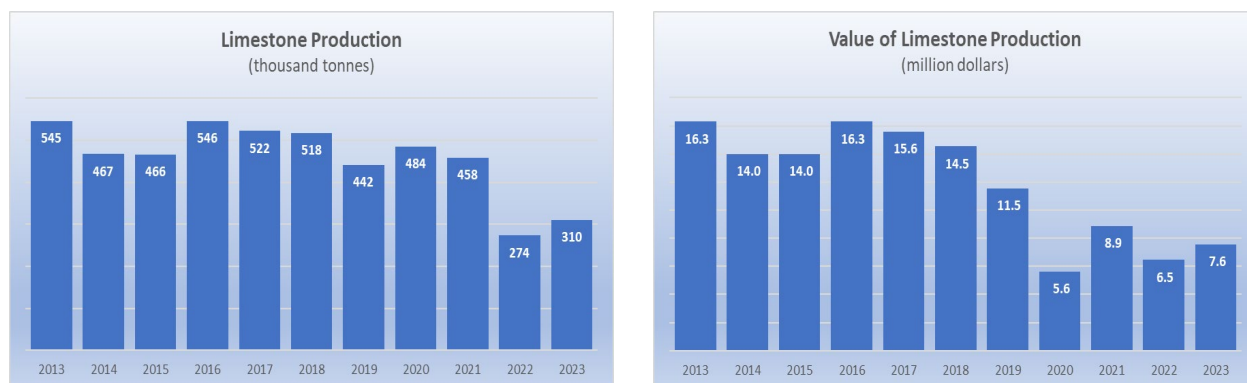


Figure 13. Limestone production in Nova Scotia.



Figure 14. Upper Musquodoboit Quarry, Halifax County.

Brookfield, Colchester County

Since 1965, Lafarge Canada Inc. has operated a limestone quarry and cement manufacturing plant in Pleasant Valley, located 5 km west of Brookfield in Colchester County.

In 2023, the Brookfield Quarry produced 396,393 tonnes of limestone, with approximately 170,330 tonnes of calcium oxide equivalent sold during the year. The mining process involves removing till and cap rock overburden, followed by drilling, blasting, and loading the rock onto trucks for transport to a crushing plant. All limestone extracted from Brookfield is used exclusively in the production of cement products.

Glen Morrison, Cape Breton County

The limestone quarry at Glen Morrison in Cape Breton County, owned by Nova Scotia Power Incorporated, has been in operation since 1993. In 2023, Northern Contracting Limited managed quarry operations. The mining process involves removing overburden, drilling and blasting the limestone, and then hauling it with a front-end loader to a primary crusher. The limestone is further processed at an on-site crushing and screening facility.

In 2023, 103,094 tonnes of limestone were produced and shipped to Nova Scotia Power's generating station in Point Aconi, where it is used to help reduce stack emissions from coal and pet-coke combustion.

Upper Musquodoboit, Halifax County

Mosher Limestone Company Limited operates multiple quarries near Upper Musquodoboit. In 2023, the company processed and sold around 27,000 tonnes of limestone, sourced from both quarry production and drawdown of existing stockpiles.

At its grinding plant in Upper Musquodoboit, the company produces agricultural-grade dolomite and limestone, available in both ground and pelletized forms. These products are sold throughout the Atlantic provinces in bagged or bulk format.

Southside Antigonish Harbour, Antigonish County

Antigonish Limestone Ltd. operates a small quarry at Southside Antigonish Harbour. In 2023, all limestone production was sourced from existing stockpiles. The limestone is crushed and sorted into three distinct sizes, each tailored to specific applications and markets. The company also runs a cage mill to produce finely ground limestone for the agricultural sector. In 2023, 9,839 tonnes of limestone products were sold, with a significant portion used in agriculture.

Silica Sand

In 2023, all of Nova Scotia's silica sand production originated from the West Indian Road Silica Pit in Nine Mile River, Hants County. Shipments from this site totaled 8,828 tonnes, with an estimated value of \$0.5 million. This represented 0.2% of the total value of Nova Scotia’s mineral production for the year (see Fig. 14; Table 1).



Figure 15. Silica sand production in Nova Scotia.



Figure 16. Nine Mile River Silica Quarry, Hants County.

Nine Mile River, Hants County

Shaw Resources, a subsidiary of The Shaw Group Limited, extracts silica sand from a deposit on West Indian Road in Nine Mile River. The sand is mined from the pit and either stockpiled or transported to the company’s wash plant, where it is washed and screened into a range of products. These products are then distributed across the Atlantic provinces and Quebec.

In 2023, 8,828 tonnes of silica sand were processed and shipped from an existing stockpile at the Nine Mile River site.

Reclamation Security Table for Operating Mines.

Reclamation securities for recent years are summarized in the figure below, categorized by producing and non-producing site statuses for each year. While the figure does not provide an exact accounting of reclamation securities, it offers a generally accurate representation.

These securities, managed by either the Department of Natural Resources or the Department of Environment and Climate Change, may take the form of cash, letters of credit, surety bonds, or combinations of these. Through regular reclamation plan reviews, the province ensures that security amounts held accurately reflect the peak disturbance liabilities of mine sites, updating them as new information becomes available.

For details on tax and royalty data, please refer to the Natural Resources Canada website under the "Access ESTMA reports and data" section.

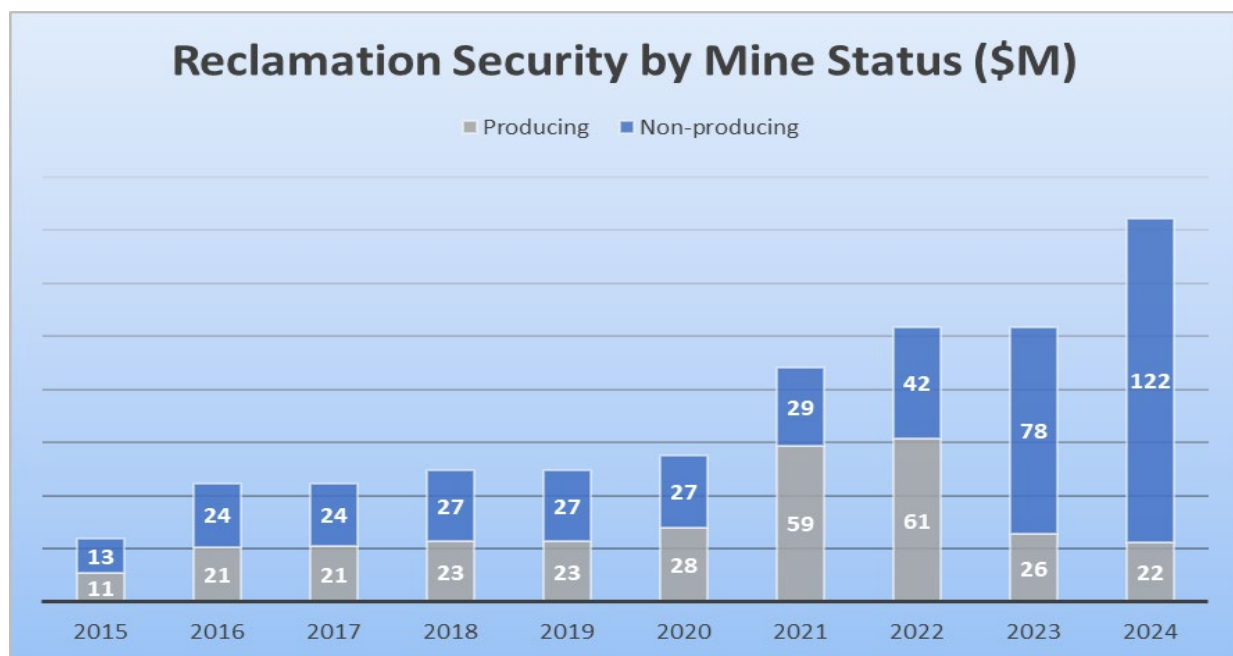


Figure 17. Reclamation Security by Mine Status

2023 Abandoned Mine Opening Update

There are more than 8,500 abandoned mine openings in the province of Nova Scotia, spread across approximately 800 current and former mining and exploration sites. These openings pose hazards to people, wildlife, and the environment. In 2001 the Abandoned Mines Opening Remediation Program was initiated with the primary goal of reducing the risk associated with abandoned mine openings. In 2023, expanding foam closures were utilized for the first time to eliminate the hazard posed by the repeated collapse of backfill within 3 deep mine shafts located in well-traveled and easily accessible locations. The table below describes the location and type of work performed in 2023.

Table 2. Summary of Abandoned Mine Opening work performed in 2023.

Central Region	Work performed in 2023
Coalburn	A foam closure was put in place overtop a 70-metre-deep former coal production shaft located along a well-used trail. Backfill within the shaft has repeatedly collapsed over the past 20 years.
Oldham East	A foam closure was put in place overtop an easily accessible, 155-metre deep, mine opening within which fill has repeatedly collapsed over the past 20 years. Three other mine openings were backfilled.
Oldham West	Two hazardous mine openings were backfilled by a local contractor. In response to complaints from a neighboring private landowner, approximately 40 tonnes of industrial and domestic waste, within and adjacent to the mine openings, was removed and trucked to a landfill.
Stellarton	A foam closure was put in place overtop a 135-metre-deep former coal production shaft located in a residential area. Backfill within the shaft has repeatedly collapsed over the past 50 years.
Eastern Region	
Tobin Road (Sydney Mines)	Several prospect pits and or subsidence features and one mine opening were excavated and backfilled in conjunction with repairs made to a well-used ATV and walking trail impacted by subsidence related to shallow underground mine workings. Reflective metal warning signs will be put in place in 2024 to advise of the potential hazards to trail users.

Contact Us

Geoscience and Mines Branch

Mineral Management Division

Director: Tim Bourque
Phone: 1 902 424 5618
E-mail: Tim.Bourque@novascotia.ca

Registry of Mineral and Petroleum Titles Section

Registrar: Andrew Pike
Phone: 1 902 456 0582
E-mail: Andrew.Pike@novascotia.ca

Mineral Development and Policy Section

Manager: Scott Hearn
Phone: 1 902 424 7199
E-mail: Scott.Hearn@novascotia.ca

Geological Survey Division

Director: Diane Webber
Phone: 1 902 424 3053
E-mail: Diane.Webber@novascotia.ca

Critical Minerals and Resources Section

Manager: Rebecca Scholtysik
Phone: 1 902 223 3614
E-mail: Rebecca.Scholtysik@novascotia.ca

Coastal and Geohazard Geoscience Section

Manager: John Dickie
Phone: 1 902 499 2951
E-mail: John.Dickie@novascotia.ca

Strategic Projects Section

Manager: Andrew Russell
Phone: 1 902 399 4294
E-mail: Andrew.Russell3@novascotia.ca

Geoscience and Mines Branch

Executive Director Janice Zinck
Phone: 1 902 222 1623
E-mail: Janice.Zinck@novascotia.ca

General inquiries: GMB@novascotia.ca

Website: <https://novascotia.ca/natr/meb/>

Nova Scotia Department of Natural Resources
Mineral Management Division
1701 Hollis Street
PO Box 698
Halifax, Nova Scotia
B3J 2T9