

**SUBJECT:      Abandoned Mine Sites Policy**



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## 1.0 Policy Section

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### 1.1. General Policy

It is the policy of the Department of Natural Resources (DNR) that abandoned mines are the responsibility of the landowner.

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### 1.2 Policy Statements

*DNR will:*

- Monitor and address abandoned mine risks on Crown lands on an as required basis.
  - Maintain an on-going inventory and database of known abandoned mines located on Crown lands and private lands.
  - Inform the public of possible locations of abandoned mines and will produce information and guidelines on how landowners can limit their liability from these hazards. (See Attachment C for additional information)
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### 1.3 Policy Background

New Brunswick has a long history of mining dating back to the 1600's. Historical records show that much of the early mining occurred in the southern part of the province and was mostly small-scale by modern standards. Even though small-scale, many of these mineral exploration sites or mines involved underground workings and openings to ground surface. Many of these mining sites would have had little government regulation to govern them during the time they were operated, and certainly no requirements for post-mining reclamation.

The modern mine sites in the province (post 1950's) are larger in scale but operate, or have operated under more progressive, modern regulations where some form of mine reclamation was considered, including provisions for addressing the closure or safety of mine openings (as in the current *Mining Act* and Regulations).

A paper inventory conducted by DNR in the year 2000 revealed that the majority of historical and modern mine sites occur on private land. A limited number of the historical sites on Crown lands and private land have been field investigated where safety concerns have been raised. Those concerns identified on Crown land sites have been addressed and reclamation options have been presented to landowners regarding the private land sites. Unfortunately, no records were kept of any early mine remedial work on either Crown land or private land and the status of each opening or shaft on record cannot be confirmed without actual inspection.

While it is the nature of excavations in the ground to naturally erode, collapse

and close over time, the rate at which this happens depends greatly on the type of rock or ground and the nature of the opening itself. Because many of the historical sites have not been inspected and are believed not to have sustained any remedial work to address closure and safety issues, they could a public safety hazard and concern for the environment and surrounding property.

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#### **1.4 Policy Objectives**

*The objectives of this policy are to:*

- Reduce the public safety hazards associated with abandoned mines and their open holes, unstable structures and collapse;
- Reduce property damage from collapsing abandoned mine structures;
- Reduce environmental contamination that could potentially result from an abandoned mine; and
- Generally reduce government liability in respect of abandoned mines.

In general, these objectives will be achieved through the policy statements and actions outlined in Section 1.2.

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## **2.0 Policy Application and Legal Considerations Section**

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#### **2.1 Legal Considerations**

*Section 263 of the Canadian Criminal Code* can be interpreted to deal with mine opening hazards. This section deals with legal duties concerning openings in ice and excavations on land and explains criminal liability for failure to perform either duty. *Subsection (2) of Section 263* states:

*“Everyone who leaves an excavation on land that he owns or of which he has charge or supervision is under a legal duty to guard it in a manner that is adequate to prevent persons from falling in by accident and is adequate to warn them that the excavation exists”.*

*Subsection (3) of Section 263* states:

*“Everyone who fails to perform a duty imposed by subsection (2) is guilty of*

- (a) manslaughter, if the death of any person results therefrom;*
  - (b) an offence under section 269, if bodily harm to any person results therefrom;*
  - (c) an offence punishable on summary conviction.”*
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**2.2 Policy Scope and Application** *This policy applies to:*

- abandoned mines located on Crown lands and on private lands, and
  - is limited in scope by the policy statements contained in Section 1.
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### **3.0 Definitions Section**

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**3.1 Abandoned Mine** Means an inactive mine site or mineral exploration site where there are no active mining claims or lease and where the mining company responsible for the mining no longer exists or cannot be found.

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### **4.0 References Section**

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- [NB Mining Act.](#)
  - [Section 263 of the Criminal Code of Canada.](#)
  - Department of Justice - Legal Services memo dated November 28, 2001.
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### **5.0 Policy Inquiries Section**

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**5.1 Minerals and Petroleum Development Branch** Department staff may direct inquiries specific to the interpretation of this policy to the Minerals and Petroleum Development Branch at 506-453-2206 or by Fax at 506-453-3671.

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### **6.0 Attachments Section**

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**6.1 Mine Inventory Table**

- Attachment A - Mine Opening Inventory Table.

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**6.2 Mine Inventory Map**

- Attachment B – Mine Opening Inventory Map

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**6.3 Mine Closure Guidelines**

- Attachment C – Abandoned Mine Closure Guidelines

**ATTACHMENT A – Mine Opening Inventory Table**

<i>Mine Opening Summary</i>	
<b>Total Number of Openings*</b> openings on crown land openings on private land	<b>377</b> 118 (31%) 259 (69%)
<b>Total Number of 'Sites'</b> Crown land sites Private land sites	<b>63</b> 8 (13%) 55 (87%)
<b>Abandoned Sites</b> Total Abandoned** Crown Abandoned Private Abandoned	<b>No. of sites (Openings)</b> 48(269) 6 (74) 43 (195)
<b>Crown Land Sites</b> Minto Coal Lake George Antimony Caribou Other	<b>Openings</b> 59 23 21 15
<b>Private Land Sites</b> Minto Coal Brunswick Mines No. 12 Heath Steele Mount Pleasant Others post-1950 Others pre-1950	<b>Openings</b> 83 30 27 5 15 99

**TABLE 1**

\* "Openings" indicates the ground was open at one time but may in fact now be fully capped, covered, caved or closed.

\*\* "Abandoned" indicates the party responsible for opening or maintaining a ground opening no longer exists or cannot be found. "Minto Coal" includes both private and Crown lands, both with abandoned shafts.

**ATTACHMENT B – Mine Opening Inventory Map**



## *ATTACHMENT C – Abandoned Mine Closure Guidelines*

### Temporary Safety Measures

If a landowner identifies a safety hazard from an unsecured mine opening some immediate measures can be taken to restrict access and minimize risk:

1. Entering old mine workings is extremely dangerous and should not be attempted except by a professional.
2. Warning signs can be erected at points of entry to the area or property to warn of the danger.
3. The ground around mine openings can be fragile and access to the perimeter of the opening should be restricted.
4. The mine opening can be cordoned off using warning tape, visible fencing, earthen berms, or other types of barricade material such as rocks, concrete blocks, steel grating, wire screen, timber, etc.
5. Inspect warning signs and barricades on a regular basis to ensure access continues to be restricted to the mine opening.

NOTE: Signs and temporary barricades do not eliminate the risk of someone accessing the mine opening. The only effective way of preventing access to a mine opening is physically sealing it off as a longer term solution.

### Closure of Unsecured Openings

There are several methods to secure or close off a mine opening for the long term or permanently. The feasibility of a closure method will require investigation for each individual case. Some of the suggested methods include:

1. Backfilling
2. Timber bulkheads (adits)
3. Concrete block bulkheads (adits)
4. Concrete caps (pre-cast, cast in place)
5. Blasting

Care must be taken to allow drainage to avoid backpressure buildup of water and also the environmental conditions need to be considered when designing long term closure solutions.

For permanent mine opening closures it is recommended that a durable monument be erected, such as a steel pipe set in a foundation, to indicate the location of the mine opening. There should be an inscription on the monument indicating the mine opening type, its name or ID if applicable, and the date of closure.