

Some Thoughts From South of 60⁰

Current Issues in Mine Reclamation Security and the Challenges of Launching An Internet-Based Mineral Tenure Application

*Nunavut Mining Symposium 2017
Reflecting on the Past
Looking to the Future*

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Natural Resources
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Current Issues in Mine Reclamation Security

- Perspectives from Nova Scotia
- Provincial/Territorial review
- Practical challenges and options
- Transparency Reporting
- Mine reclamation securities and public confidence

Launching an Internet-Based Mineral Tenure Application


- Managing Change

It's impossible to jump over a chasm in 2 leaps.

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Mine Reclamation Securities: Backgrounder

- Before development, and along with other required approvals, companies submit a mine reclamation (closure) and long-term monitoring plan. The cost of the plan is calculated.
 - Companies place a reclamation security with the Prov/Ter to ensure reclamation obligations are met.
 - Protecting tax payers: There's a risk that the company may not carry out the reclamation plan, and that the Prov/Ter may have to reclaim and monitor the site.
 - A reclamation security does not cover unintended, catastrophic events.
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Mine Reclamation: Shared Outcomes

Point Aconi coal mine.
Cape Breton (2012)

To ensure that land, watercourses and other resources are returned to a safe and environmentally stable, sound state.



Mine Reclamation Securities: Shared Outcomes

To protect tax payers.



*National Post,
December 25, 2016*

> \$350 M of public money spent on the Faro mine remediation project.

Reclamation Securities and the Auditor General

- The department should develop guidelines to assist staff in calculation of reclamation cost estimates.
- The department should document its rationale and obtain approval from senior management when less than 100% of the estimated cost is obtained.
- The department should assess the estimated cost against the security held and complete an assessment of the risk to the Province.
- The department should regularly require updated cost estimates and ensure adequate security is held.

Report of the Auditor General to the Nova Scotia House of Assembly. May 2014



Across Canada (IGWG Mines, 2016) ¹.

- ❖ Policy gaps: Consistency and fairness of process
- ❖ Governance issues
- ❖ Capacity challenges

- Addressing the (apparent) security gaps
 - Estimated 4600 secured projects in Canada (2015), including oil sands and quarries (not all jurisdictions reported)
 - Estimated current value of security held by Prov/Ter: > \$5.77 B
 - Estimated value of mine reclamation liability for active and closed site: \$8.08 B
 - Estimated liability for “Abandoned and Orphaned Mines”: \$2.73 B

¹. *Inter-Governmental Working Group (IGWG, Mines)*




Mine Reclamation Security: BC Jurisdictional Review

“... considerable variability in the financial security programs of similar mining jurisdictions, revealing that there are few easy answers in dealing with the challenge of securing for reclamation activities.”

*Ernst and Young report & recommendations
for BC's mine reclamation financial security
policy, February 2017*



Policy Gaps: Consistency and Fairness of Process


- Government to provide industry with consistent guidelines on preparing the reclamation plan and cost estimate
 - Proponent to present the plan and cost estimate to regulators / departments / agencies for review
 - Obtain an independent, external review of the cost estimate
 - Aboriginal Consultation and public participation in the review?
 - Consistent, structured progressive security plan
 - Final approval of the plan and cost estimate should be with the department tasked with carrying out the reclamation plan, should the company not meet its obligations.
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Policy Gaps: Persistent Challenges

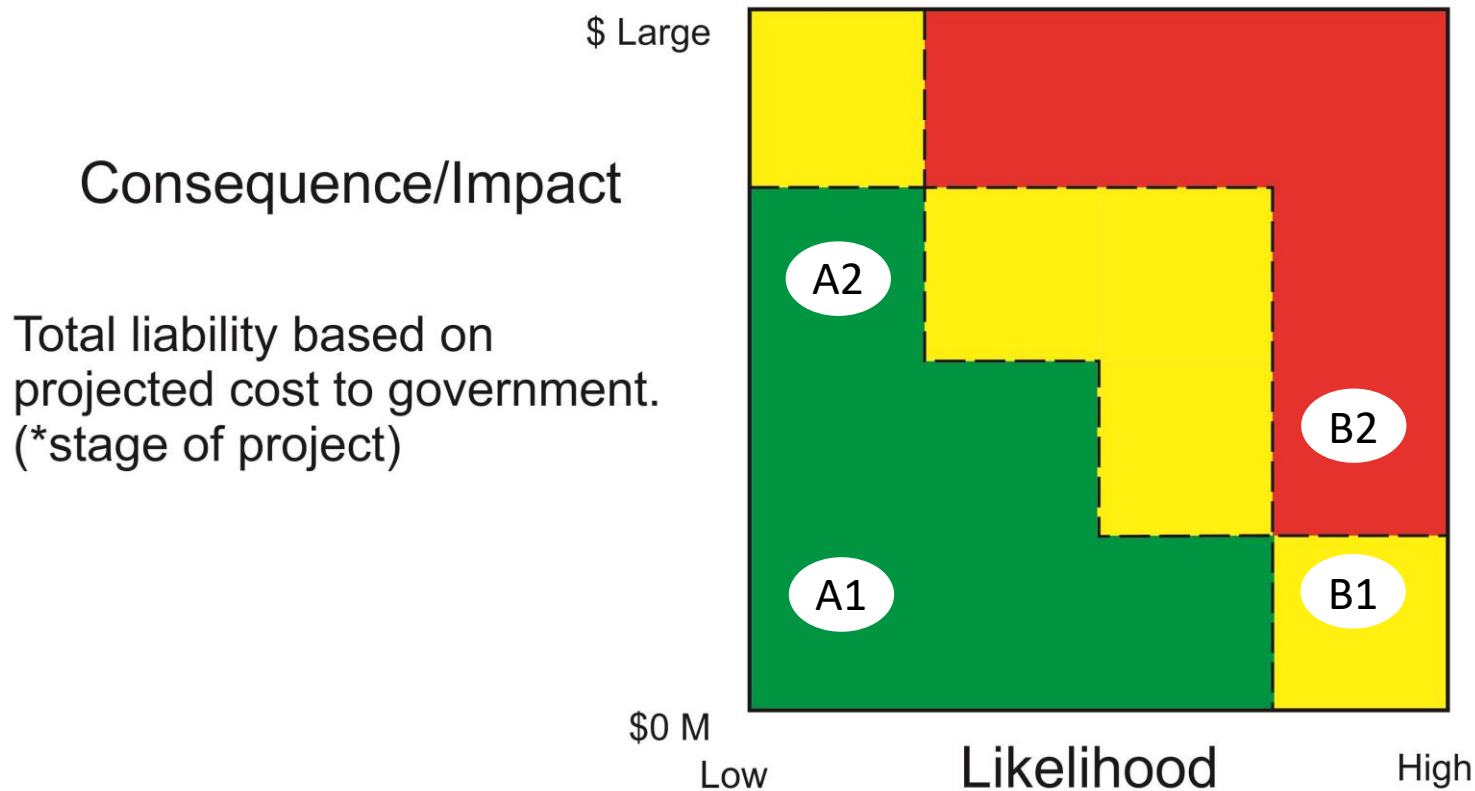
- For existing (operating) sites:
 - Some Nova Scotia mines pre-date modern regulatory processes, and lack up-to-date reclamation plans and adequate security.
- For new sites:
 - Reclamation securities are, at least initially, calculated for many years into the future (uncertainty in future costs)
 - The extent and type of remediation and monitoring might not be fully known at the permitting stage.
 - Trying to calculate securities and assess risk in the context of the cyclical nature of mining.

BC's, Ernst and Young report & recommendations (2017)

Policy Gaps: How much security is required?

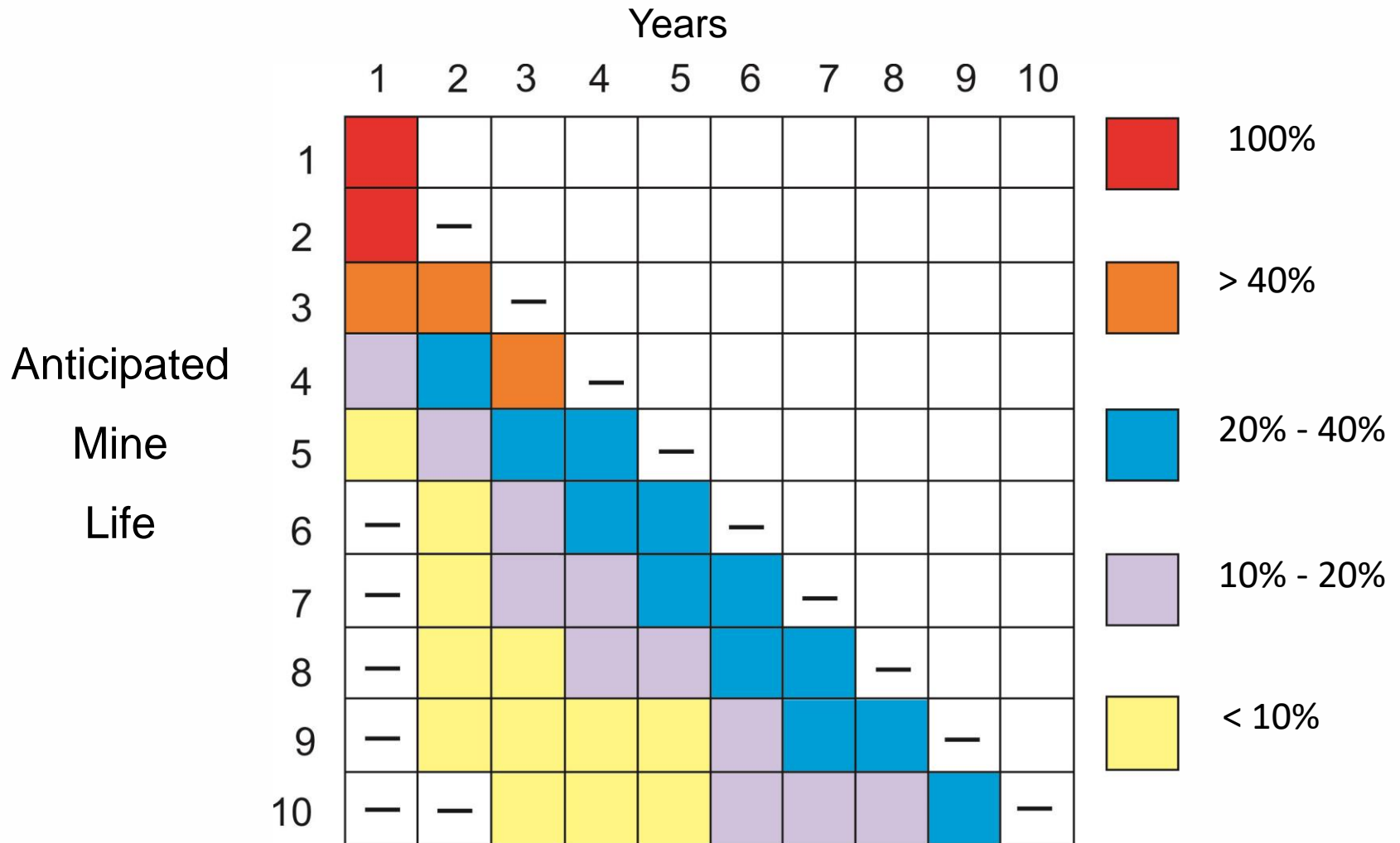
- In a perfect world, governments would hold 100% of the reclamation cost estimate as security.
 - It's common for Prov/Ter to accept a level of security which is less than the total liability (i.e., the cost estimate) – a perception of an “security gap”.
 - A Prov/Ter may be able to tolerate a “security gap” when the perceived risk to the Prov/Ter is low.
 - Prov/Ter may consider a risk-based management approach to establishing the security and better articulating risk tolerance.
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Risk-Based Management Approach




Financial strength of the company, history/operating record, the project (*significant expenditures in research, development, capital expenditures).

Progressive Security: Manitoba Example



7-year schedule: 0%, .03%, .123%, .18%, .30%, .367%, 0%

Governance Issues and Capacity Challenges

- It's common for multiple departments/agencies to review reclamation plans and cost estimates.
 - Final approval of the plan and cost estimate should be with the department tasked with carrying out the reclamation plan, should the company not meet its obligations.
 - Having independent, external reviews of the cost estimate and the reclamation plan brings an added level expertise to the process, and can incorporate changes in technology/process.
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Transparency Reporting

- In 2016, Mines Ministers directed senior officials to explore Reclamation Security Transparency Reporting
- Options:
 - Regulators holding the securities to report the securities in an annual report
 - Active, temporarily closed, abandoned sites?
 - Report the reclamation plan, the cost estimate (total liability), calculation method and the security held?
 - Legislative requirements for industry reporting?
 - Voluntary reporting by industry?

Transparency reporting of mine-site reclamation securities is aligned with objectives of open government, and is intended to contribute to building trust.



Transparency Reporting: Security Tracker

Nova Scotia's Draft Security Tracker

Project	Company	Status	Commodity	Anticipated Mine Life	Reclamation Security Held (current year)	Form	Reclamation Plan and Cost Estimate	Next Review	Authority
ABC Mine	XYZ Corp.	Operating	gold	2030	\$12.5 M	LC	Reclamation plan approved by Department 123 in 2010. Cost estimate of \$12.5 M calculated by XYZ Corp., reviewed and approved by Department 123 in 2010. //www.link_to_ABC_mine_rec_plan.gov.PT	2020	Department 123
DEF Mine	UV Mining	Temporarily Closed	lead, zinc	NA	\$50 M	BO	Reclamation plan approved by Department 123 in 2007. Cost estimate of \$63 M calculated by UV Mining, reviewed and approved by Department 123 in 2008. //www.link_to_DEF_mine_rec_plan.gov.PT	2018	Department 123

Form: CA - cash/GIC, LC - letter of credit, BO - surety bond, SI - security interest, SB - self bonded, OT - other.

\$50 M held

\$63 M cost estimate



Launching an Internet-Based Mineral Tenure Application

- *Change Management*
 - Registry staff, industry, IT colleagues, senior management
 - Changes to staff, the budget, an Act/Regulations
- *Project Management*
 - IT Project Management
- *Design, Testing and Training*
 - Design and test with Registry Staff, IT colleagues, industry
 - Test, test, test
 - Making mid-stream changes isn't easy
- *Pick a date and LAUNCH*

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When You Go Live: You're now in the on-line retail business!

- *Any new application is likely to have a few issues when it's launched*
 - Mineral Tenure Help Desk (evenings and weekends)
 - Have a plan for the outages
 - Have a dispute resolution plan
 - Have a communication plan

- *Nova Scotia Perspectives*
 - Staff engagement
 - Relationship with the contractor
 - Relationship with industry (fees example)
 - Stability of the application (source?)
 - Certainty of financial transactions

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