



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA



ICCL
international
committee on
contaminated
land

Partnering with Private Industry to Reduce Liability

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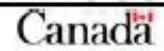
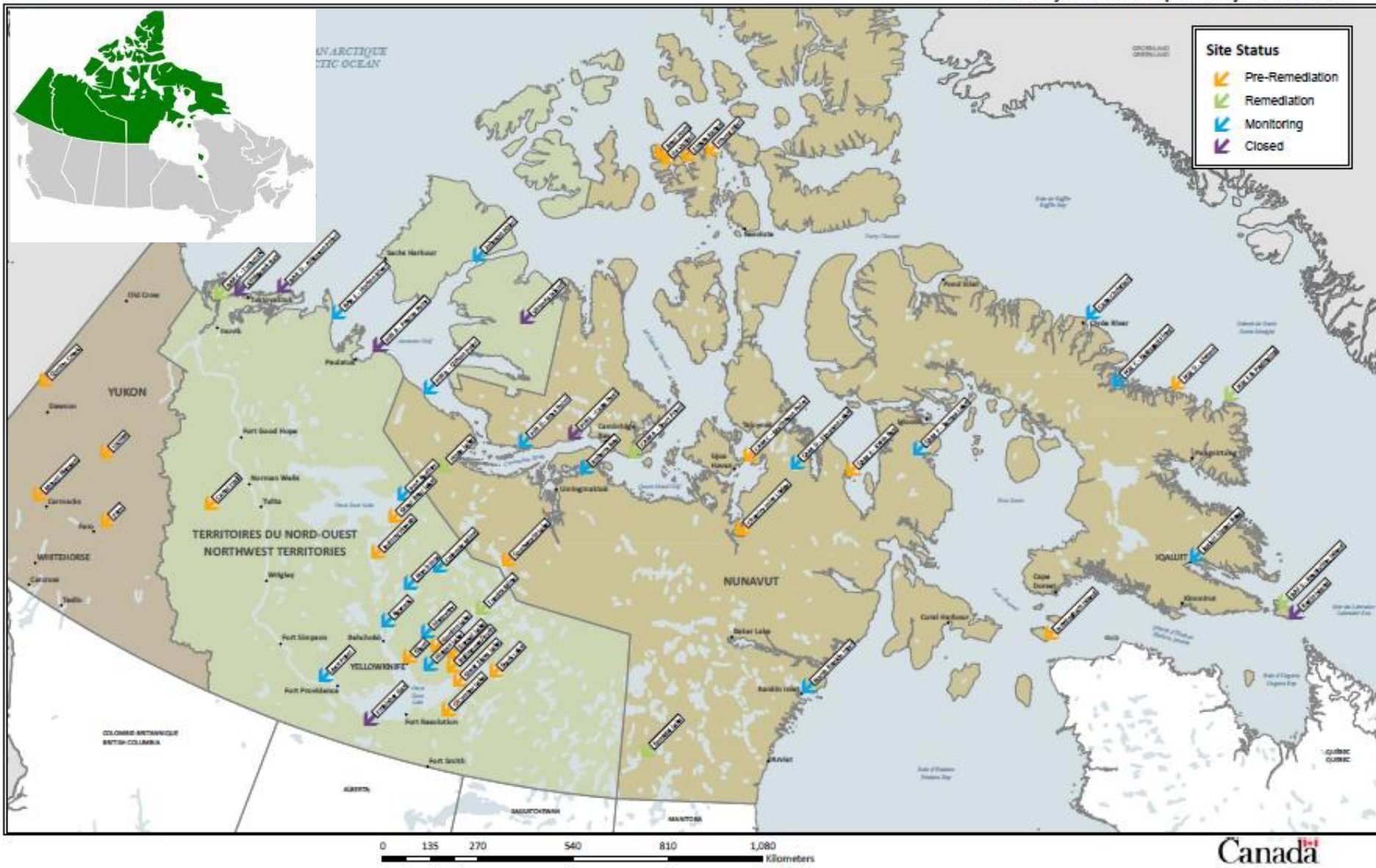
Introduction

- ◆ Contaminated sites in the portfolio originate from past government military activity or private sector resource extraction.
- ◆ Resource extraction is an important economic driver
 - Operated within historical legal frameworks when many environmental protection measures were less stringent.
- ◆ In the 1990's, the price of commodities dropped considerably and many mining companies filed for bankruptcy
 - These abandoned mines became the responsibility of the Canadian Government.
- ◆ A mine site reclamation policy has since been implemented to limit any future liability for new and/or existing mines.

Northern Contaminated Sites Program Mandate

“to manage contaminated sites in a cost-effective and consistent manner, to reduce and eliminate, where possible, risk to human and environmental health and liability associated with contaminated sites.”





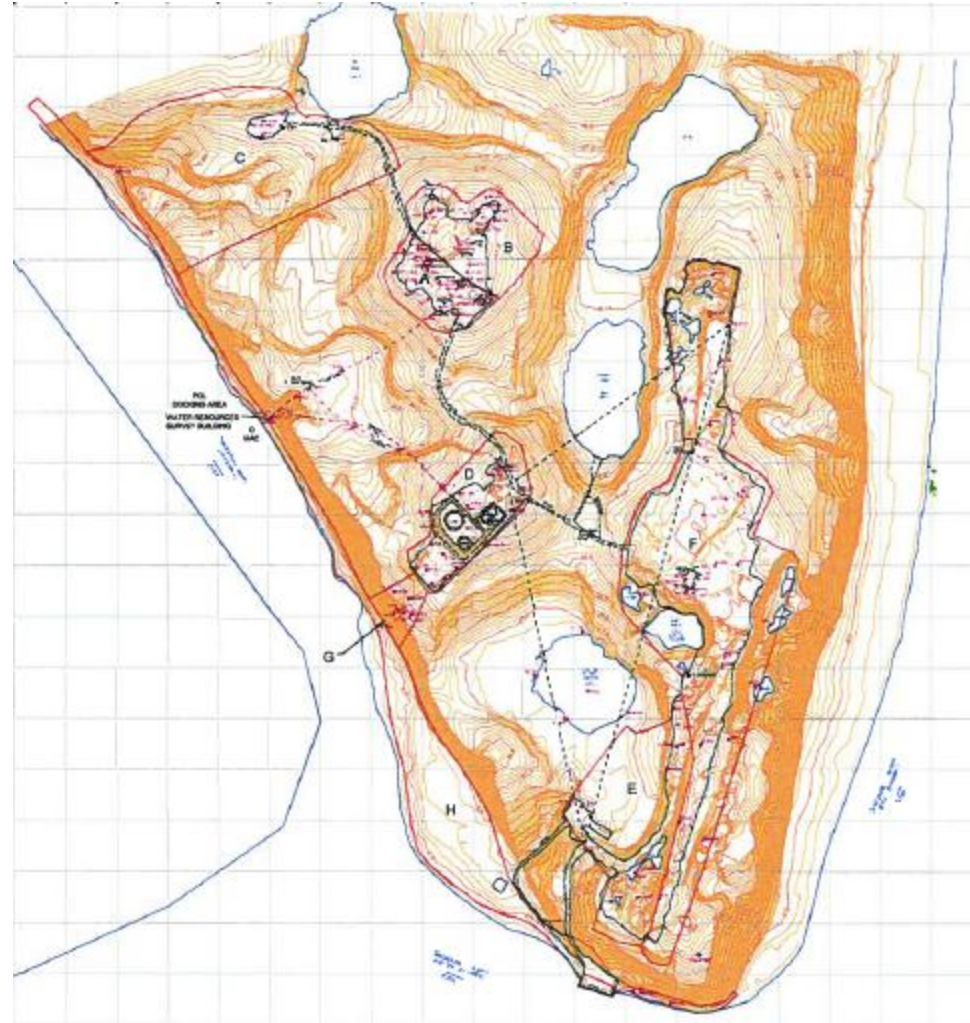
Challenges & Opportunities

- ◆ Challenges that the Program faces:
 - Limited availability of resources
 - Remote sites with high mobilization costs
 - Addressing the legacy of abandoned mine sites
- ◆ The Program is working with the private sector to:
 - Take advantage of existing labour and equipment
 - Align with work already occurring in the region
 - Leverage historical mine assets to encourage the redevelopment of land that is already impacted

Example #1

Abandoned Military Site

- ◆ Small site (remediation estimate of C\$5M):
 - Operated as a military site from 1945 to 1950's
 - Also operated by a private company as an Oil & Gas staging area from the 1970's until present
 - Government of Canada owns a portion of the liability



Example #1

Abandoned Military Site

- ◆ An agreement is currently being negotiated:
 - Proposed that Canada provide funds to the private company to address all contamination on the site at the same time

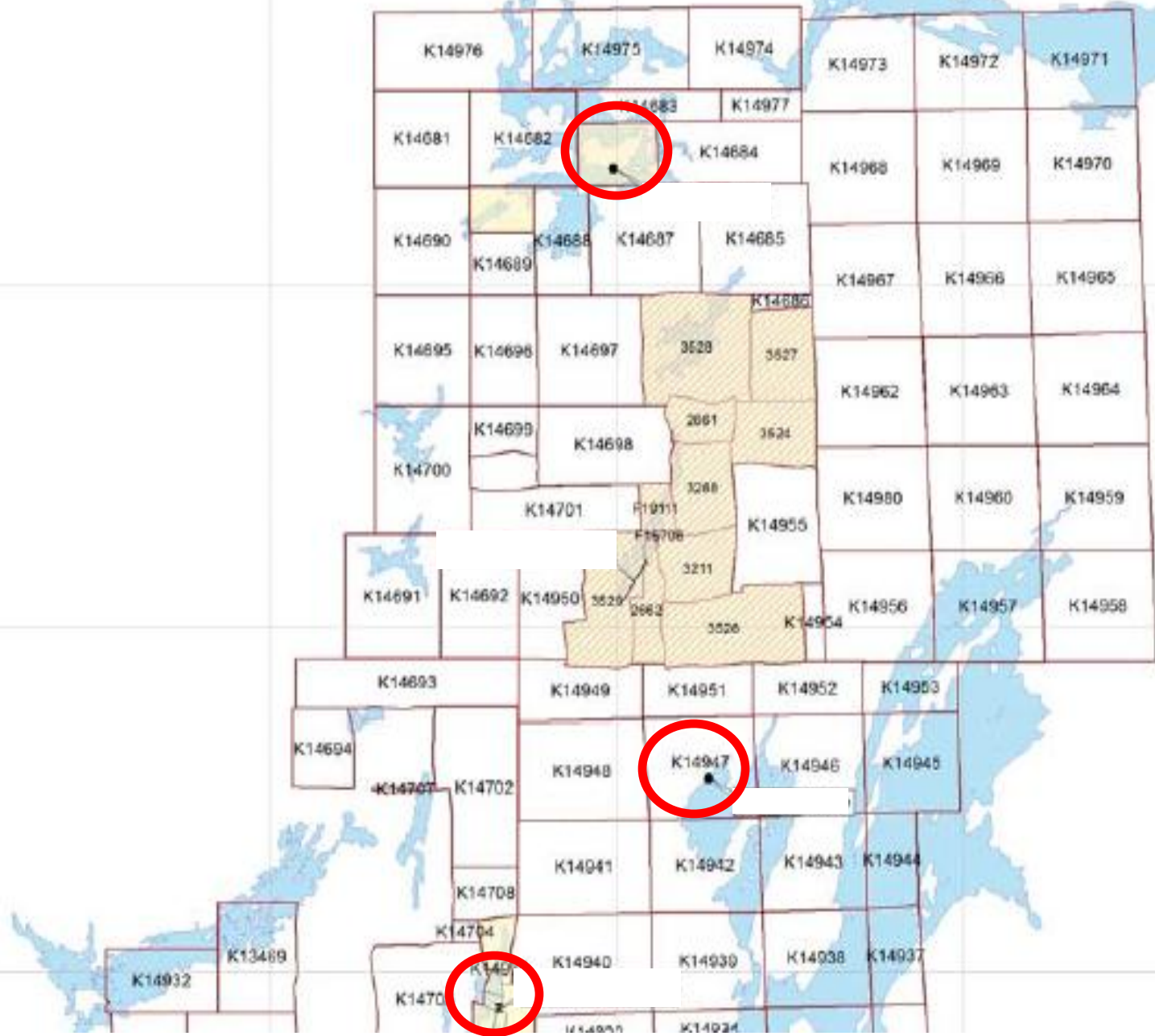
Estimated savings of C\$2-3M compared to the conventional approach used by Canada

Example #2

Abandoned Gold Exploration Sites

- ◆ 3 small sites (remediation estimate of C\$10M):
 - Advanced exploration and limited gold mining
 - Operated intermittently from approximately 1940 until 1990's
 - Previous owners abandoned the properties
 - Adjacent to a large former gold mine remediated by Canada
 - All properties surrounding former gold mine, including 3 sites, were recently re-staked





Example #2

Abandoned Gold Exploration Sites

- ◆ A Conveyance and Reclamation Agreement was negotiated in 2011:
 - Canada transfers a surplus piece of equipment to purchaser
 - Canada also provides mineral claims from former gold mine that can be redeveloped into a new mine
 - New company assumes responsibility for remediation of 3 small historical sites at no cost to Canada
 - Company posts letter of credit which will be returned once remediation work is complete

Example #2

Abandoned Gold Exploration Sites

Estimated savings of C\$10M compared to the conventional approach used by Canada



Example #3

Abandoned Silver Mine

- ◆ Large site (remediation estimate of C\$150M):
 - Former silver mine spread over 15,000 hectares
 - Operated intermittently from approximately 1910 until 1990's
 - Previous owner became insolvent and abandoned the mine
 - Government of Canada became owner of the property, including assets



Example #3

Abandoned Silver Mine

- ◆ A Subsidiary Agreement was completed in 2006:
 - Allows new Owner to redevelop portions of the mine
 - New owner assumes all historical liability associated with portions of the property they develop
 - Cost for ongoing care and maintenance is shared equally
 - The cost to develop the remediation plan is cost shared
 - New Owner financially contributes a portion of the overall remediation cost
 - New Owner completes the remediation work on behalf of Canada for less than what would be charged to other third parties
 - Provide Canada with a royalty payment for any portion of the mine that is in production

Example #3

Abandoned Silver Mine

Estimated savings of C\$25-30M compared to the conventional approach used by Canada



Conclusion

- ◆ Working with the private sector has allowed our Program to develop synergies and successfully reduce liability associated with contaminated sites
 - Additional abandoned mine sites are being investigated to take advantage of partnerships with industry
 - Large former silver mine
 - Large former lead-zinc mine
- ◆ Overall Results of the Program (8 years)
 - 120,000 hours of training provided to 3,400 employees
 - 3,000,000 person-hrs of employment
 - awarded over C\$400M worth of remediation contracts
 - 30 sites completed to-date