Dominion Diamond Mines

Independent Environmental Monitoring Agency AGM

WASTE ROCK WORKSHOP

January 18, 2018

Presentation Outline

- Waste Rock Storage Area (WRSA) Stages
- Summary of Waste Material Types
- Overview of Waste Rock Storage Areas at the Ekati Mine
- Seepage Reporting and Adaptive Management

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WRSA Stages

1. Planning and Approval

2. Construction (Operations)

Monitoring

3. Reclamation and Closure

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Planning and Approval

- Develop WRSA design based on project requirements (pit design and geology)
  - How much material will need to be stored ?
  - Where is the best place for the pile ?
  - How big and high will the pile be ?
  - What materials will go into pile ?
  - Will the materials be stable and not move ?
  - How quickly will the pile freeze ?
  - How will the pile be reclaimed ?
- Submit Waste Rock and Ore Management Plan (WROMP) update to WLWB for approval
- Stakeholder and regulatory review – formal comment and response process
- Wek'eezhii Land and Water Board decides on proposed design

DOMINION DIAMOND

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Document Owner: Environment Department
Date: October 2017

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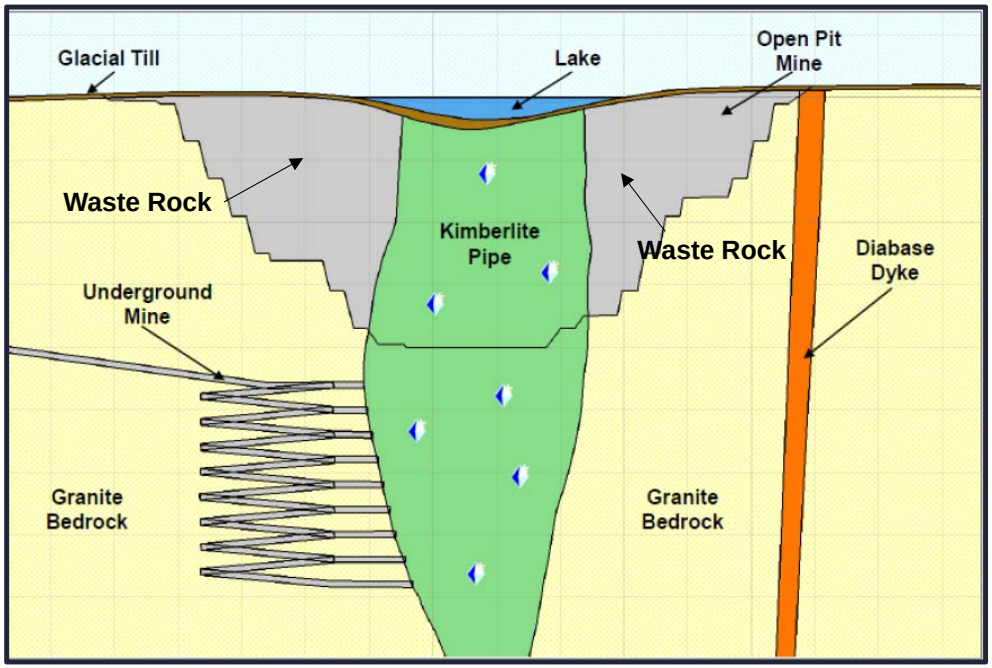
Construction - Drill and Blasting

- Waste materials are created by drilling and blasting inside the pit area to access kimberlite rock containing diamonds



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Construction - Drill and Blasting

- Waste material is loaded, hauled and placed in a waste rock storage area

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Reclamation and Closure

- If required, clean materials placed on top of the pile to encourage freezing or prevent interaction with wildlife and humans
- Construction of waste rock wildlife access ramps to allow wildlife egress

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Monitoring

Monitoring is completed during WRSA construction and reclamation

- Tonnes of waste rock placed in pile
- Construction progress
- Ensure pile is stable and not moving
- Sample seepage water and flow rate
- Sample excavated waste rock
- Rate of freezing in pile

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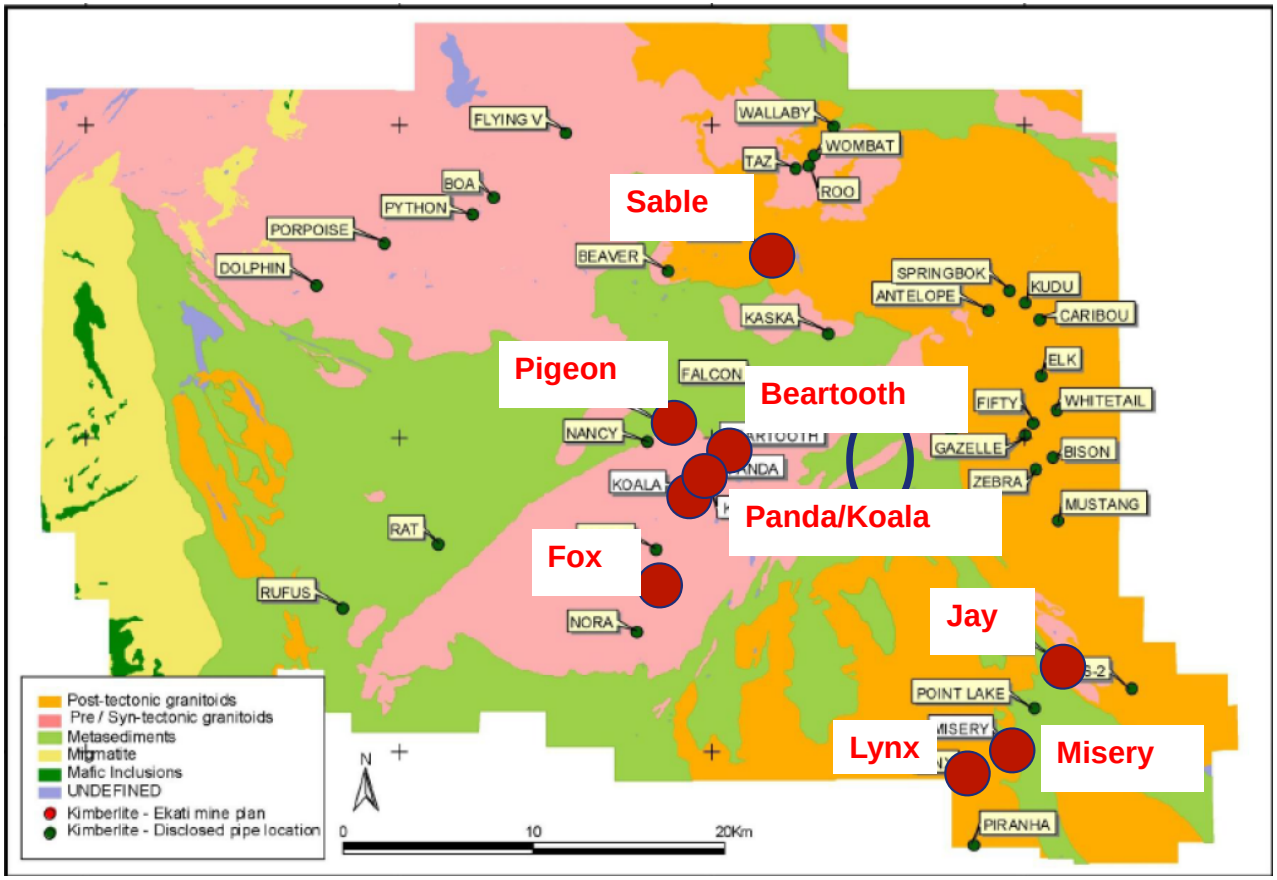
Ekati Geology Map

- Type of waste generated from pit area depended on geological formation



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Granite Rock

- Present in all of open pits at the Ekati mine
- Non-reactive, clean material
- Used for construction (e.g., roads) and for WRSA capping

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Diabase Rock

- Black dark color
- Present in limited quantities in various pits as a result of dyke formations
- Non-reactive, clean material
- Suitable for construction (e.g., roads) and WRSA capping

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Metasediment/Schist Rock

- Present in Misery, Pigeon, and Jay (future)
- Potentially geochemically reactive
- Capped to encourage freezing

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Kimberlite Rock

- Darker in color and contains diamonds
- Rejects from process plant
- Low quality ore not processed
- Potential to weather and erode
- Capped to limit interaction with wildlife and humans

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Surficial Soil Materials

- First materials excavated from pit area (lake bed sediments, organic material and till)
- Located below lakes or tundra
- Clean material stockpiled and utilized for vegetation reclamation when feasible

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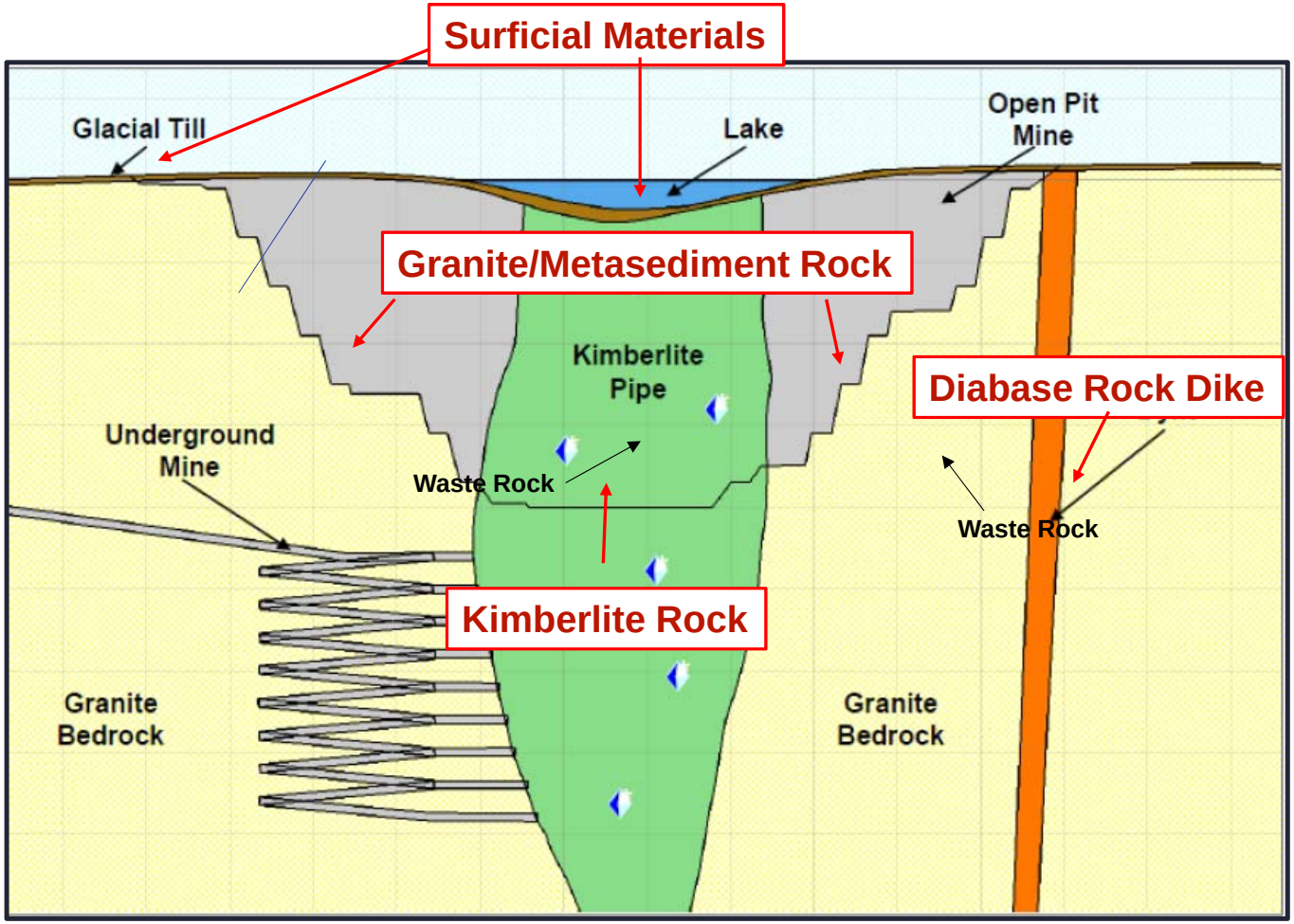
Waste Materials Overview



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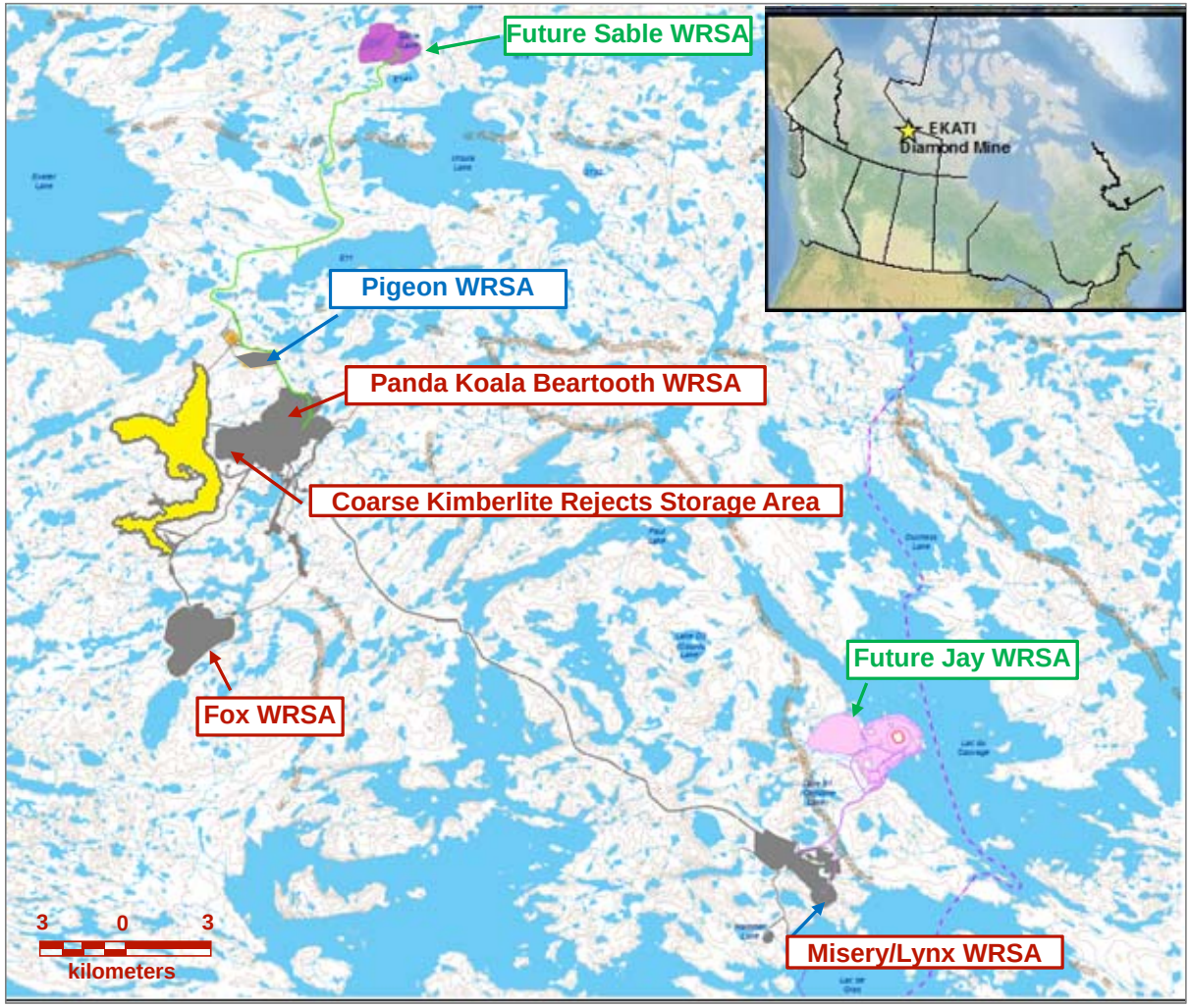
Ekati Diamond Mine Waste Rock Storage Areas



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Fox WRSA

- Fox WRSA completed & largest pile with 214 million tonnes placed
- Main waste materials are granite low grade waste kimberlite
- Granite reclamation capp for exposed waste kimberlite

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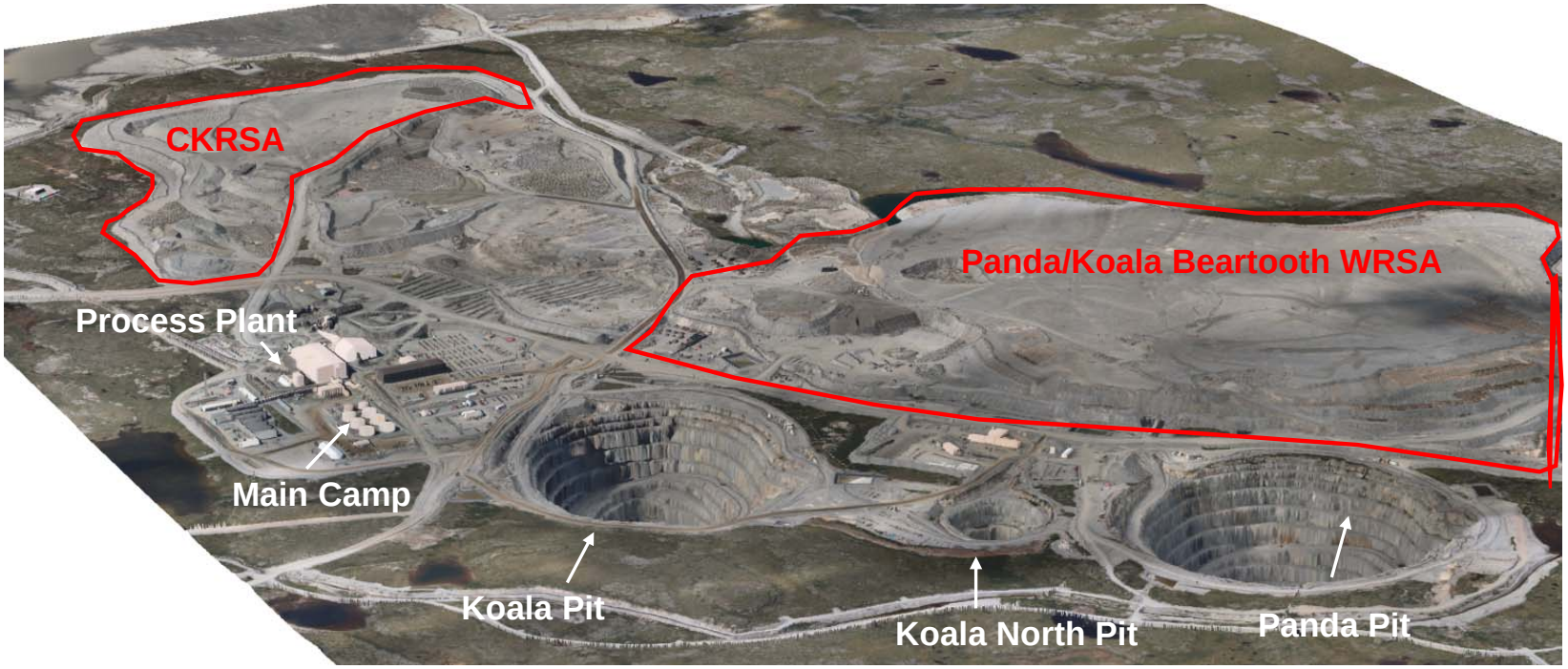
Panda/Koala, Beartooth and Coarse Kimberlite

- Panda/Koala WRSA **completed** and coarse kimberlite storage areas CKRSA **active**
- 2nd largest pile with 169 million tonnes placed at Panda/Koala and 37 million tonnes at CKRSA
- Main waste materials are granite for Panda/Koala WRSA & kimberlite for CKRSA
- Granite reclamation capp for kimberlite materials at CKRSA



Misery & Lynx WRSA

- Piles currently active and Misery WRSA planned to be completed in 2018 and Lynx WRSA in 2019
- 3rd largest with 97 million tonnes placed
- Main waste materials are metasediment and granite for Misery and granite and diabase for Lynx
- Granite reclamation capp for metasediment at Misery WRSA

Pigeon WRSA

- Pile currently active and planned for completion in 2020
- 25 million tonnes placed to date & additional 25 million tonnes planed
- Main waste materials are mixied granite and metasediments and surficial till
- Granite and till reclamation capp on metasediment materials

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Sable WRSA

- Pile construction started in late 2017
- 103 million tonnes planned to be placed
- Main waste materials will be granite with no capp required for reclamation

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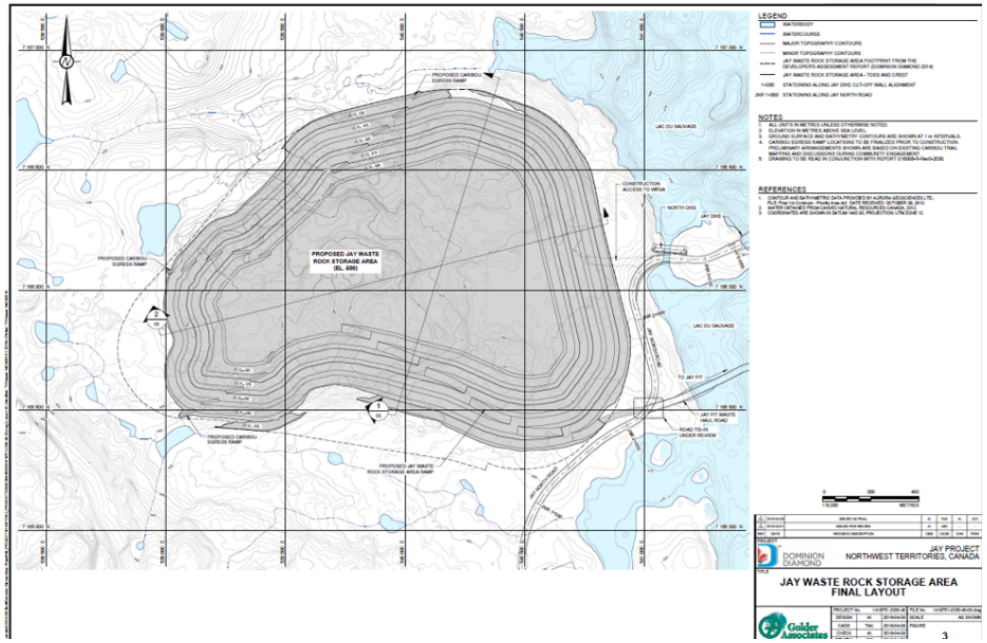
Jay WRSA

- Future pile planned to be begin construction in 2023 as part of the Jay Project
- 155 million tonnes planned to be placed
- Main waste materials will be granite and metasediment with a final granite capp for reclamation



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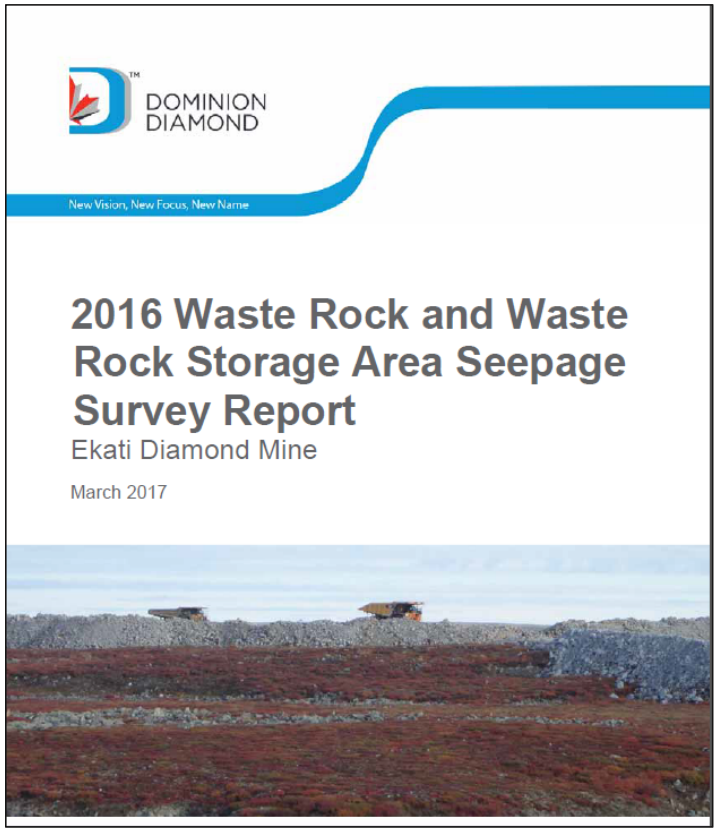
Seepage Monitoring and Reporting

Annual Report

- Waste Rock and Waste Rock Storage Area Seepage Survey Report.
- Included in this report are annual thermal monitoring results

Three Year Report

Interpretation Report of seepage data



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Seepage Adaptive Management

- Seepage Adaptive Management Actions are triggered by evaluation of annual seepage monitoring data
  - Increased sampling frequency of seepage and aquatic receiving water bodies
  - Installation of silt curtains

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