

A close-up photograph of a dark, crystalline rock sample with a rough, fractured surface, resting on a light-colored wooden surface. The rock is the central focus of the background image.

PINE POINT PROJECT
NORTHWEST TERRITORIES
COMMUNITY SCOPING SESSIONS

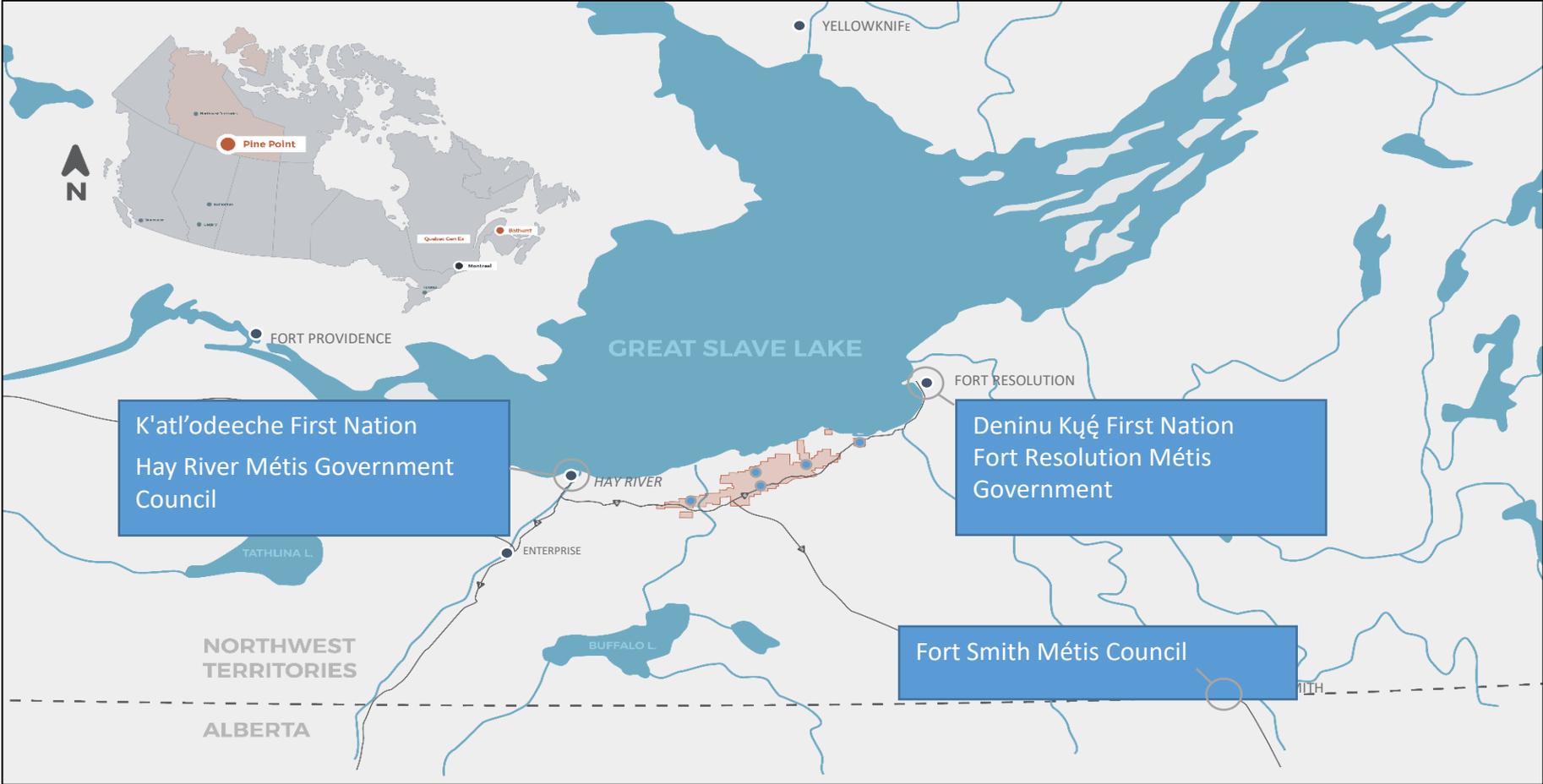
June 2021

The Pine Point Project



- Pine Point Mining Limited (PPML) is a wholly owned subsidiary of Osisko Metals (TSX V: OM) and was acquired from Darnley Bay Resources in February 2018.
- PPML is proposing to build a zinc/lead mine on the site of the old Cominco Pine Point Mine.
- This presentation describes what the proposed future mine will be like and asks for your input into the project and the environmental assessment process.

Local Communities



Location of the Project



- Hay River Airport and CN Rail Head From Edmonton
- Close to several communities

- Paved Highway Access
- Low-Cost Hydroelectric Power Available On Site From Taltson Dam
- Brownfield site with existing disturbances

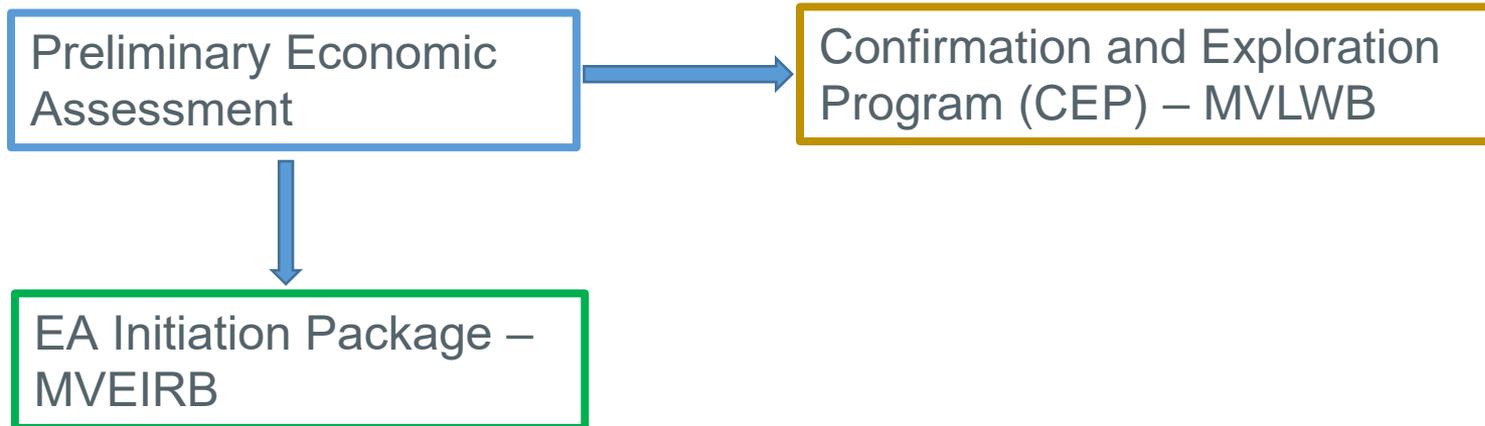
Google Earth view of Pine Point



Google Maps Air Photo View



Brownfield Site: Plan is to use the previously disturbed areas as much as possible: roads, pads, waste rock dumps, cut lines.



Submission of the Environmental Assessment (EA) Initiation Package to the Review Board was the first step in beginning the EA process for the proposed future mine.

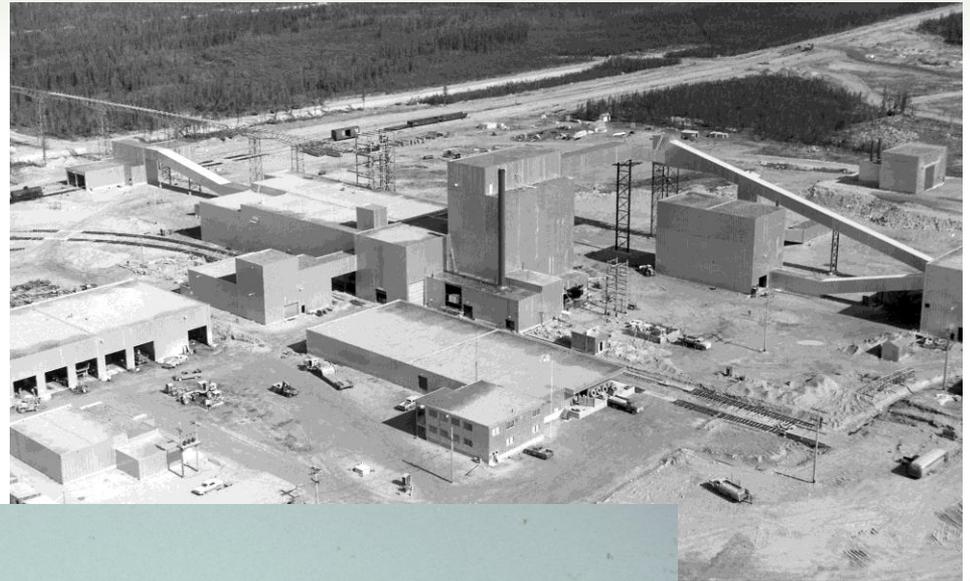
This presentation will review the Mining and Milling project that was described in the EA Initiation Package.

History of Pine Point Project.

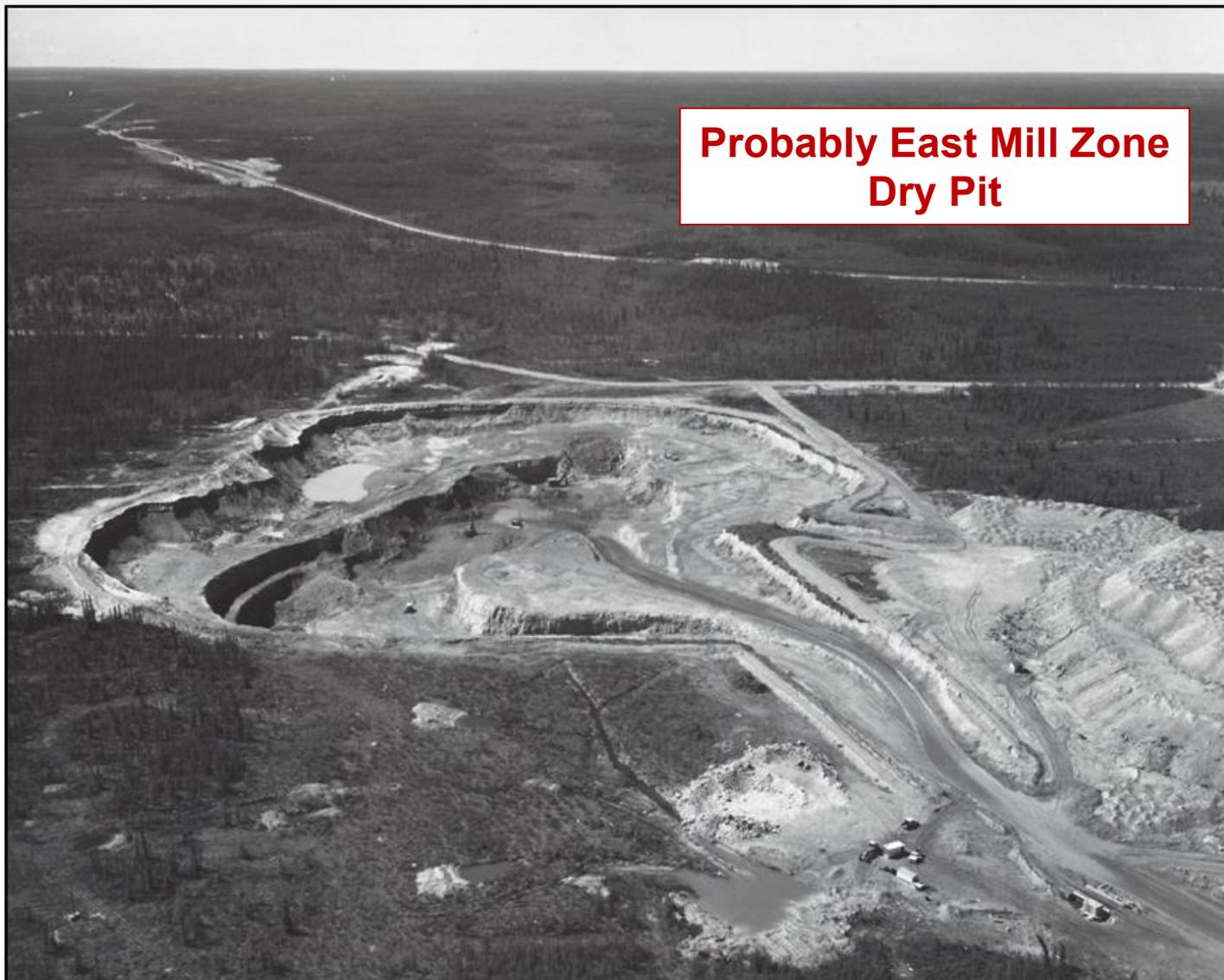


- **1964 to 1988:** Cominco produced 64 million tonnes from 50 shallow open pit mines and there were two underground mines.
- **Nov. 2016:** Darnley Bay Resources acquired the Pine Point Project from bankruptcy court... Prior to that the project was owned by **Tamerlane Ventures**
- **Aug 2017:** Darnley Bay Resources changed its name to **Pine Point Mining Ltd** also known as **PPML**.
- **Feb 2018:** Pine Point Mining Limited (PPML) is acquired by **Osisko Metals Inc.**
- **2018-2020** Exploration and drilling to establish Mineral Resource Estimate needed to plan for future mining and milling of the project.
- **June 2020:** Pine Point Preliminary Economic Assessment (PEA) was released concluding that the Project has technical and financial merit using the base case assumptions.

Historical Photos - Cominco



Cominco's Open Pit Mines



Former Town of Pine Point

OSISKO
METALS


PINEPOINT
MINING LIMITED



Environmental Studies to date

Data about the environment has been collected for many years.

- Older published information includes:
 - Geochemical characterization
 - Climate data (temperature, rainfall, snowfall, wind)
 - Air quality and noise
 - Groundwater quality and quantity
 - Surface water quality and quantity
 - Fish and fish habitat
 - Soils
 - Vegetation
 - Wildlife
 - Birds



More recent field studies undertaken by PPML include:

- Installation and operation of a meteorological station at the old Pine Point Mine Site
- Surface water quality
- Fish and fish habitat in the old pits and drainage ditches
- Vegetation and soils
- Air quality

Engagement to Date

- Engagement has been focused on building relationships and communicating re: Project development through meetings, calls, mail
- Project engagement transitioned from Darnley Bay (2016-2017) to PPML (2017); Osisko Metals acquired PPML and has continued engagement and is aware of the issues/concerns previously raised and will consider them moving forward
- Most involved to date include DKFN, KFN, NWTMN, the Town of Hay River and Hamlet of Fort Resolution
- We have been engaging with the community leadership and followed their direction on preferred method of engagement

Indigenous Groups Prioritized for Involvement
<p>Deninu Kue First Nation Katl'odeeche First Nation NWT Metis Nation</p> <ul style="list-style-type: none"> Fort Resolution Metis Council Hay River Metis Council Fort Smith Metis Council
Other Interested Parties
<ul style="list-style-type: none"> Cabin Owners Timberworks Inc. Teck Metals Avalon Advanced Metals

Other Indigenous Groups with an Interest in the Project
<ul style="list-style-type: none"> West Point First Nation Salt River First Nation Smith's Landing First Nation Yellowknives Dene First Nation Lutsel K'e Dene First Nation North Slave Metis Alliance

Other Parties Informed Outside the Formal Engagement Plan
<ul style="list-style-type: none"> Business Owners (Hay River and Fort Resolution) Town of Hay River Hamlet of Fort Resolution City of Yellowknife Schools (Hay River and Fort Resolution) Deh Cho Land Use Planning Committee NWT and Nunavut Chamber of Mines Government of the Northwest Territories MVEIRB MVLWB

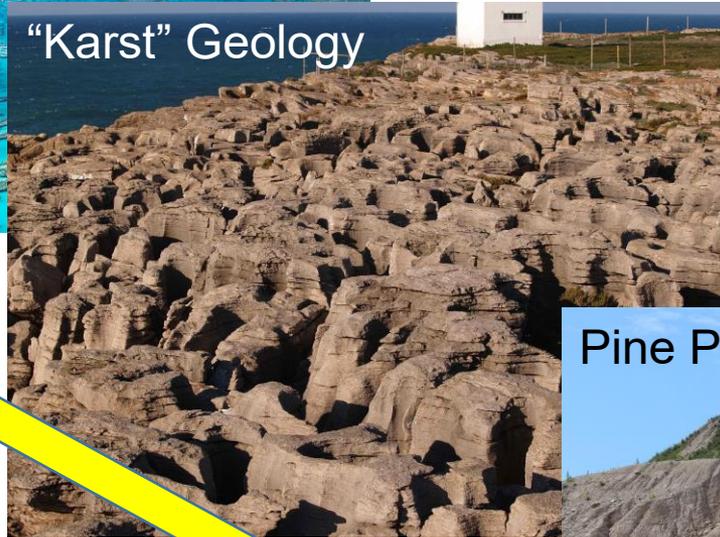


- **Upcoming engagement will include more emphasis on:**
 - Collecting and incorporating Indigenous Knowledge
 - Mitigation for potential Project effects on the environment and communities
 - Benefit enhancement measures to maximize local uptake of opportunities
 - Awareness of community priorities, goals, and economic opportunities

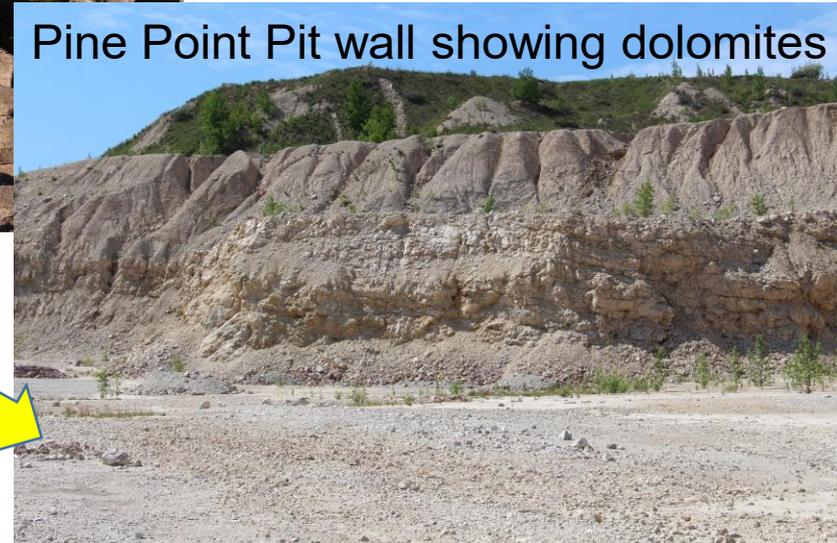
A modern barrier reef



“Karst” Geology



Pine Point Pit wall showing dolomites

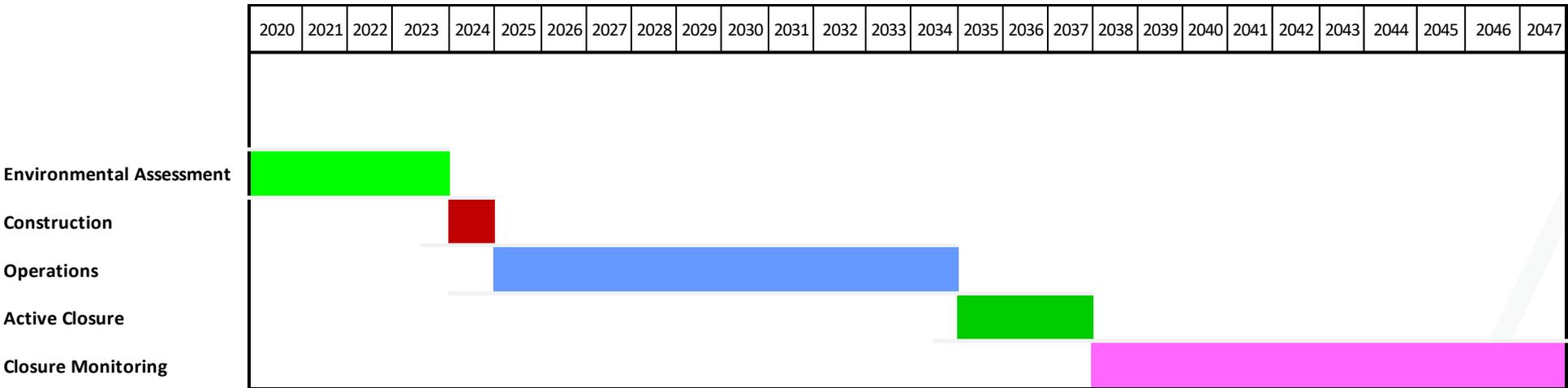


- Preliminary Economic Assessment (PEA) completed in 2020
(See News Release: June 15th, 2020)
 - 10 years of production at up to 11,250 tonnes per day treatment rate
 - Exploration and Delineation Drilling targets can extend mine life
 - Build a new plant on the site of the old plant.
 - Truck the zinc/lead concentrate to rail siding at Hay River
 - Manage ground water by putting in old pits or reinjecting back underground
- Pine Point Zinc concentrate is one of the cleanest concentrates in the world
 - Metal buyers and smelters want Pine Point concentrate to blend down impurities from other mines going to their smelters

Suggestions from earlier engagement

- Previous suggestions and concerns raised by community members
- ✓ use pits for waste rock storage and disposal
- use sump pumps in pits instead of perimeter wells (using both options)
- use a liner in the tailings pits
- use an upgradient freeze wall in Cluster Pit area (using grouting instead of freeze wall for open pits)
- use grouting at open pits
- ✓ use the old Cominco system for the supply of freshwater from lake to camp (the T-37 Road)
- ✓ use the previous water supply line from the lake
- ✓ decant water from in-pit tailings storage areas or move water from pit to pit if fines in tailings plug pit wall pores
- cap and seal all holes (this is current practice)
- plug the problematic former Cominco open well at **W-85 with H2S**
- ✓ avoid surface discharge of groundwater
- ✓ avoid Sulphur Creek as a receiving site for withdrawn groundwater
- avoid development near Buffalo River as caribou overwinter here
- widen the shoulders of the highway

Project Overall Timeline



Overview of the Proposed Mining and Milling Project

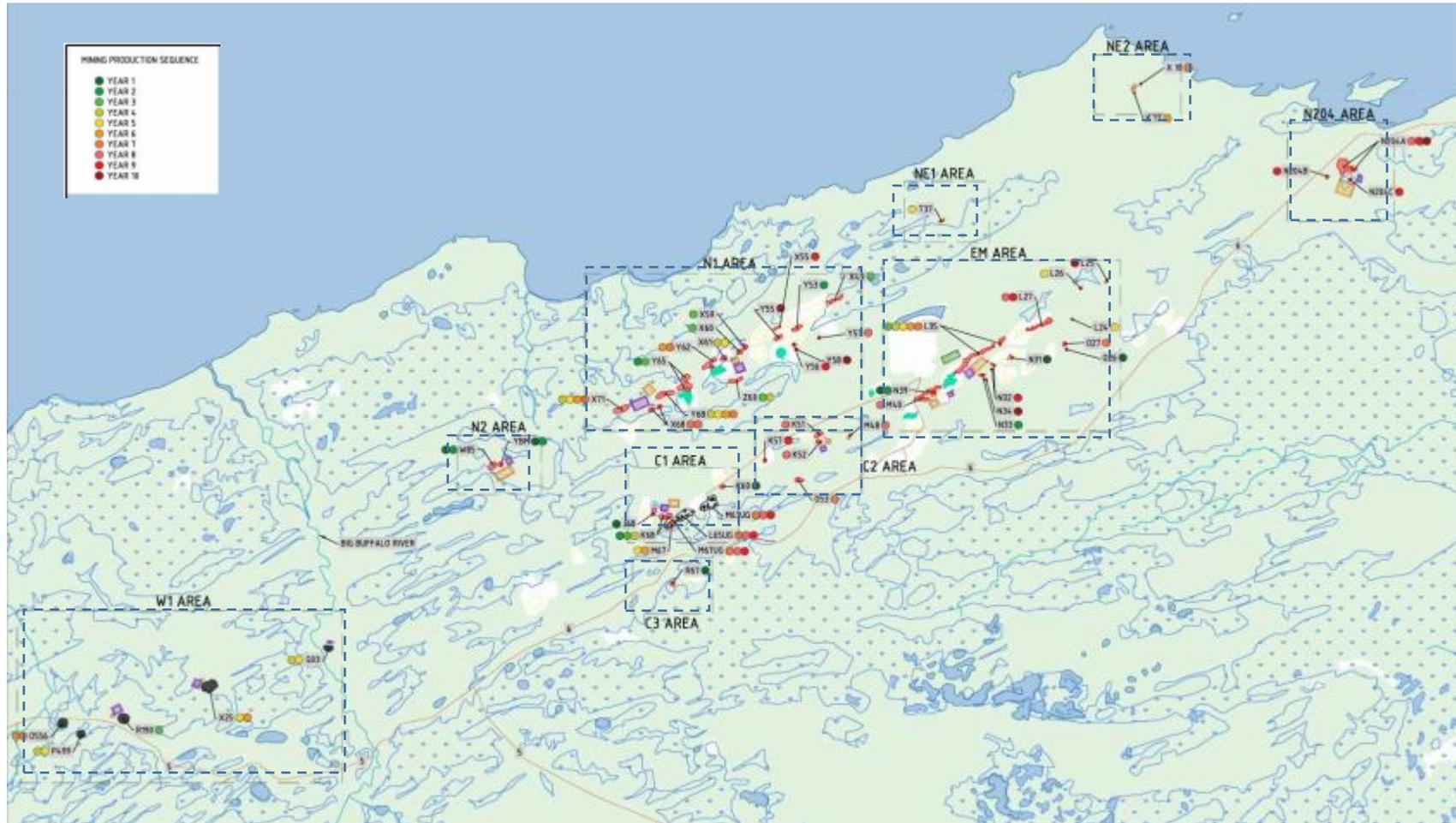


- **Life of Mine:** 10 years, mining 39.1 Mt of mineralization from 47 pits.
- **Brownfield Site:** Use previously disturbed areas as much as possible for access and infrastructure.
- **Open Pits (OP)** mainly located East of the Buffalo River will consist of several small pits and/or a series of pits grouped together as in the East Mill Zone.
- **Underground Mines (UG)** Located in the West (of the Buffalo River) and Central Zones. West Zone will use grout curtains around the mines to reduce water inflow.
- **Waste Rock:** Placed in piles adjacent to open pits or placed in historical pits where feasible. UG mines will have less waste rock produced. Acid rock drainage from the carbonate rocks is very minimal.
- **Water Influx:** Water from open pits and underground workings will be pumped into historical pits or new pits in which mining has been completed, or re-injected back into the underground aquifer via reinjection wells.

Alternatives Considered

- Using satellite material sorters located near pits
 - Currently proposing rock sorting
- Using freeze wall technology to limit groundwater inflows
 - A grout curtain is currently preferred
- Creating large central Waste Rock Storage Facilities
 - Where cost allows, place waste rock in nearest unused pit or create Waste Rock Storage Facilities near the open pit

Mining Clusters

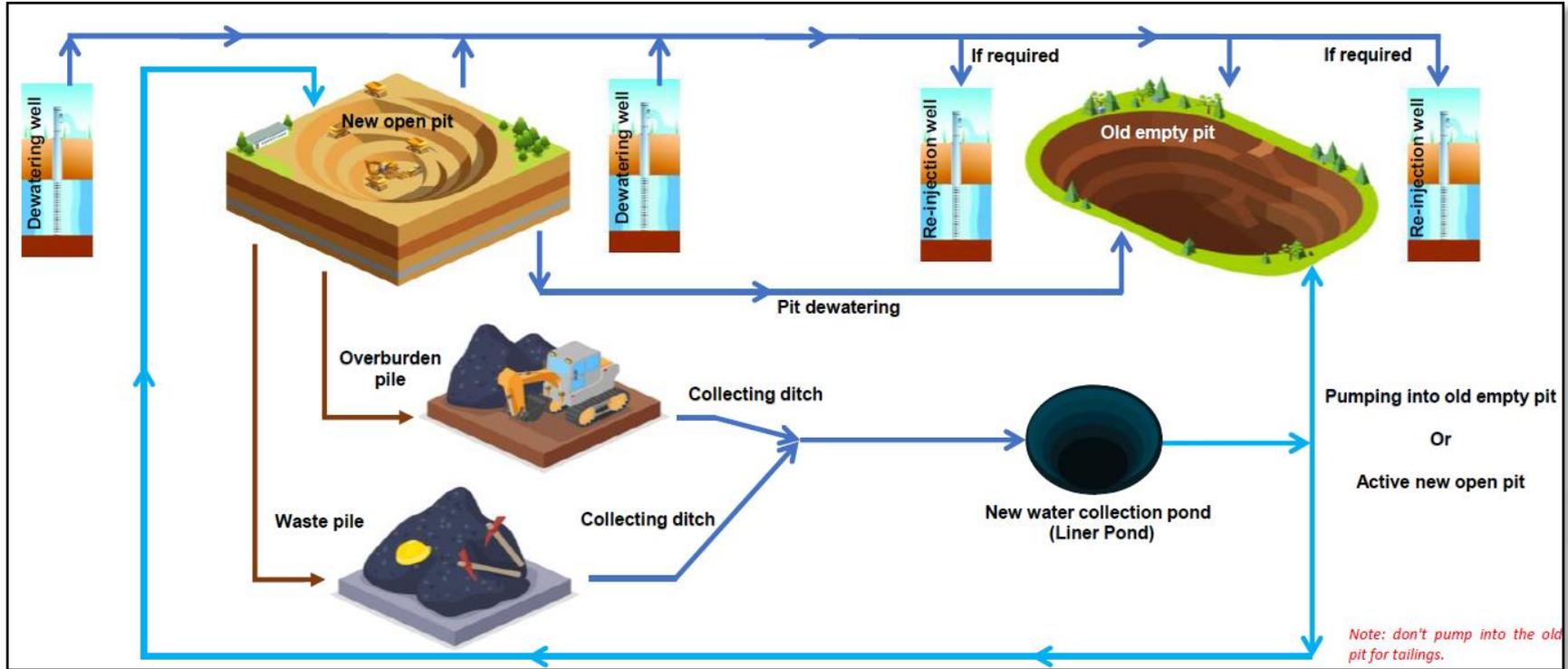


- A ring of up to 30 dewatering wells surrounding each pit (some pits will be dry and will not require dewatering wells)
- Water may be placed in a nearby pit, far enough away so that the water does not return to the original pit while mining is underway

OR

- The water may be reinjected back to its underground source using reinjection wells where a pit is too far away

Pit Dewatering & Waste Rock Stockpile Water Management

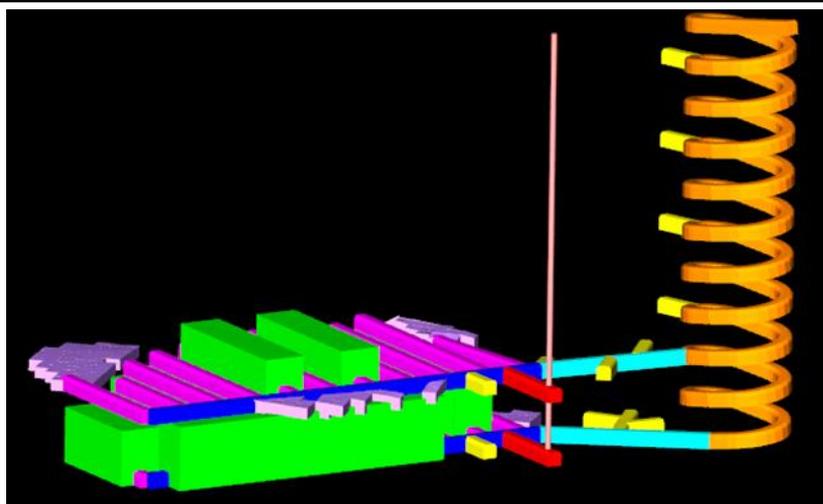
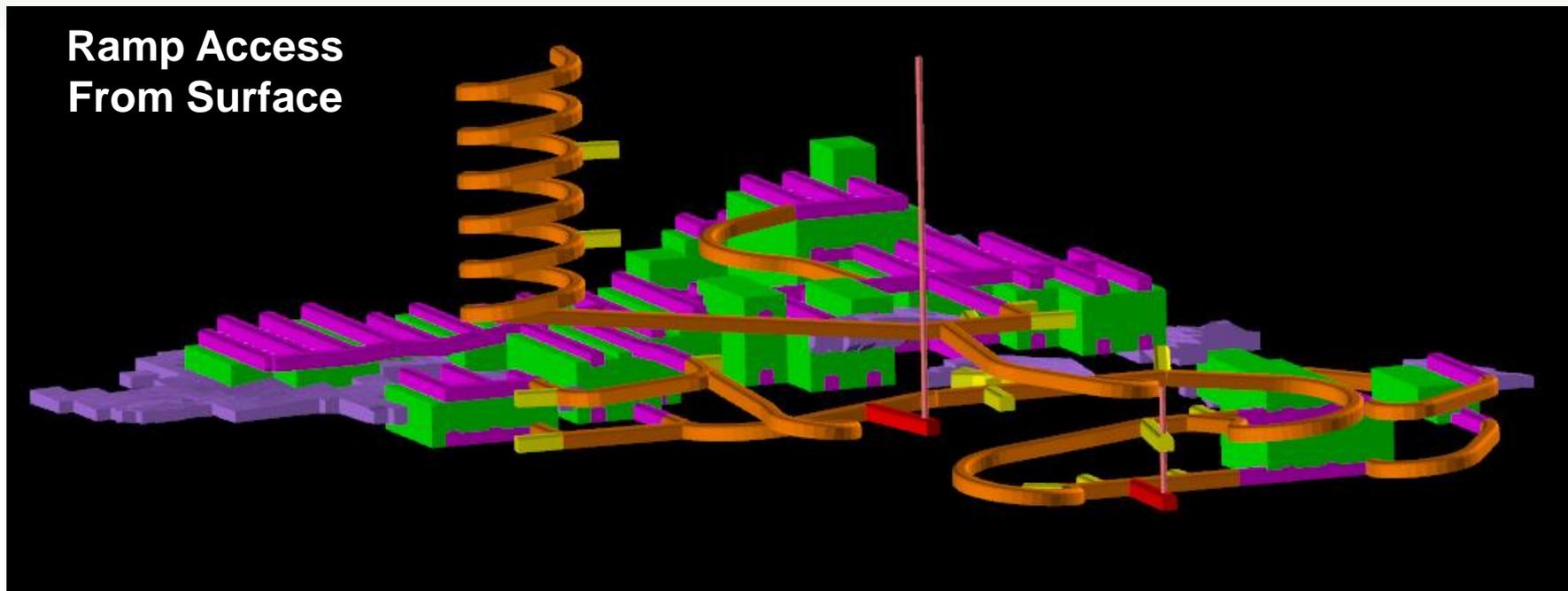


Waste Rock Management

- “Waste Rock” is Non-Economic Rock that will not be processed.
- Because the waste rock is carbonate there is minimal to no Metal Leaching or Acid Rock Drainage
- Existing or recently mined open pits will be used to store waste rock and overburden material (“Waste Rock Storage Facilities” – WRSF) where possible.
- New WRSFs above ground: 12 waste rock and 12 overburden storage facilities, the new WRSFs to be constructed near to pit
- The Mineral Sorter will reject rock with little to no mineralization (the “rejects”) and these rejects will be stored temporarily on 5 Mt stockpile near the process plant and then used to cover tailings deposition areas (TDAs)

UG Preliminary Designs

Ramp Access From Surface



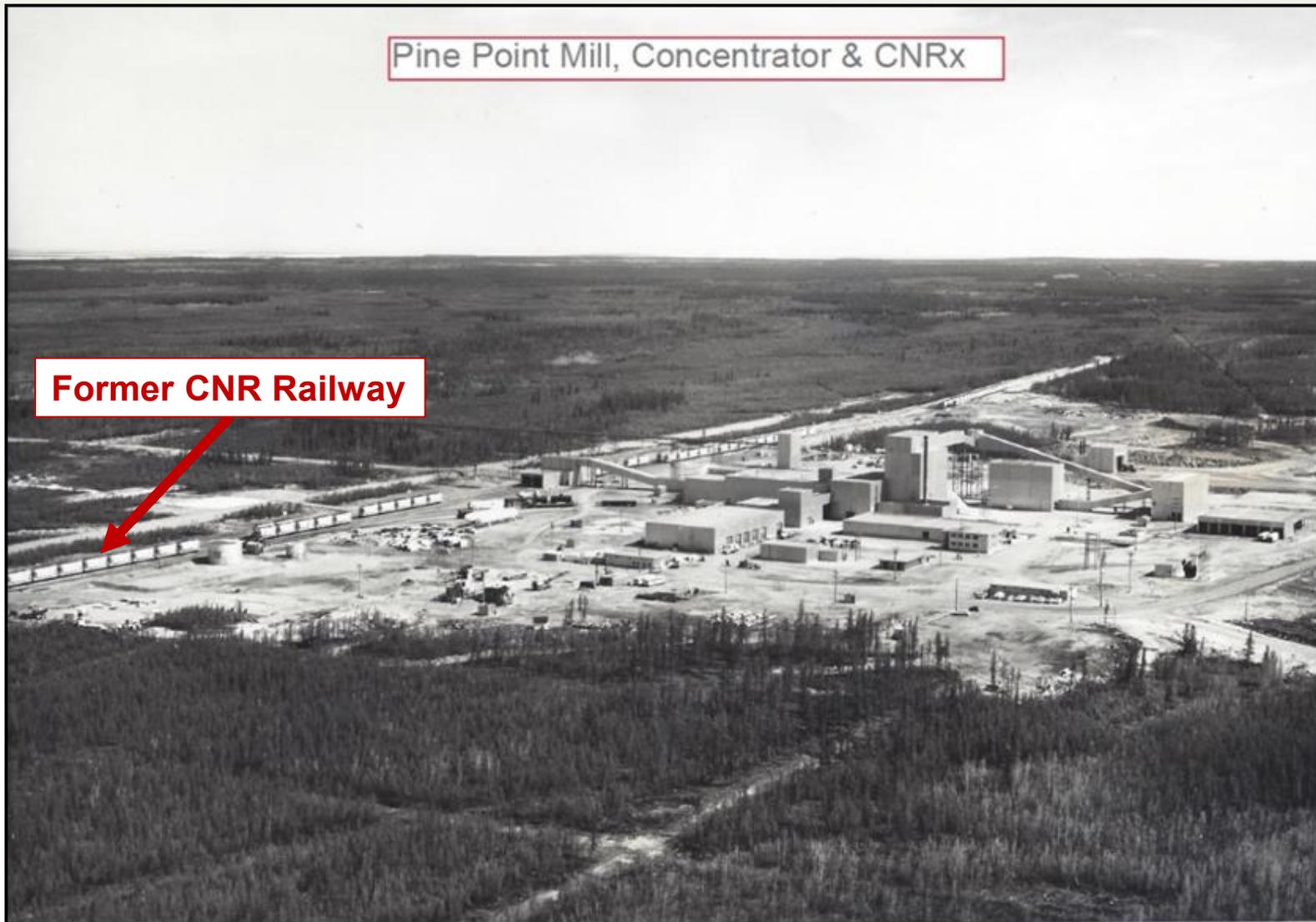
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Overview of the Proposed Mineral Processing

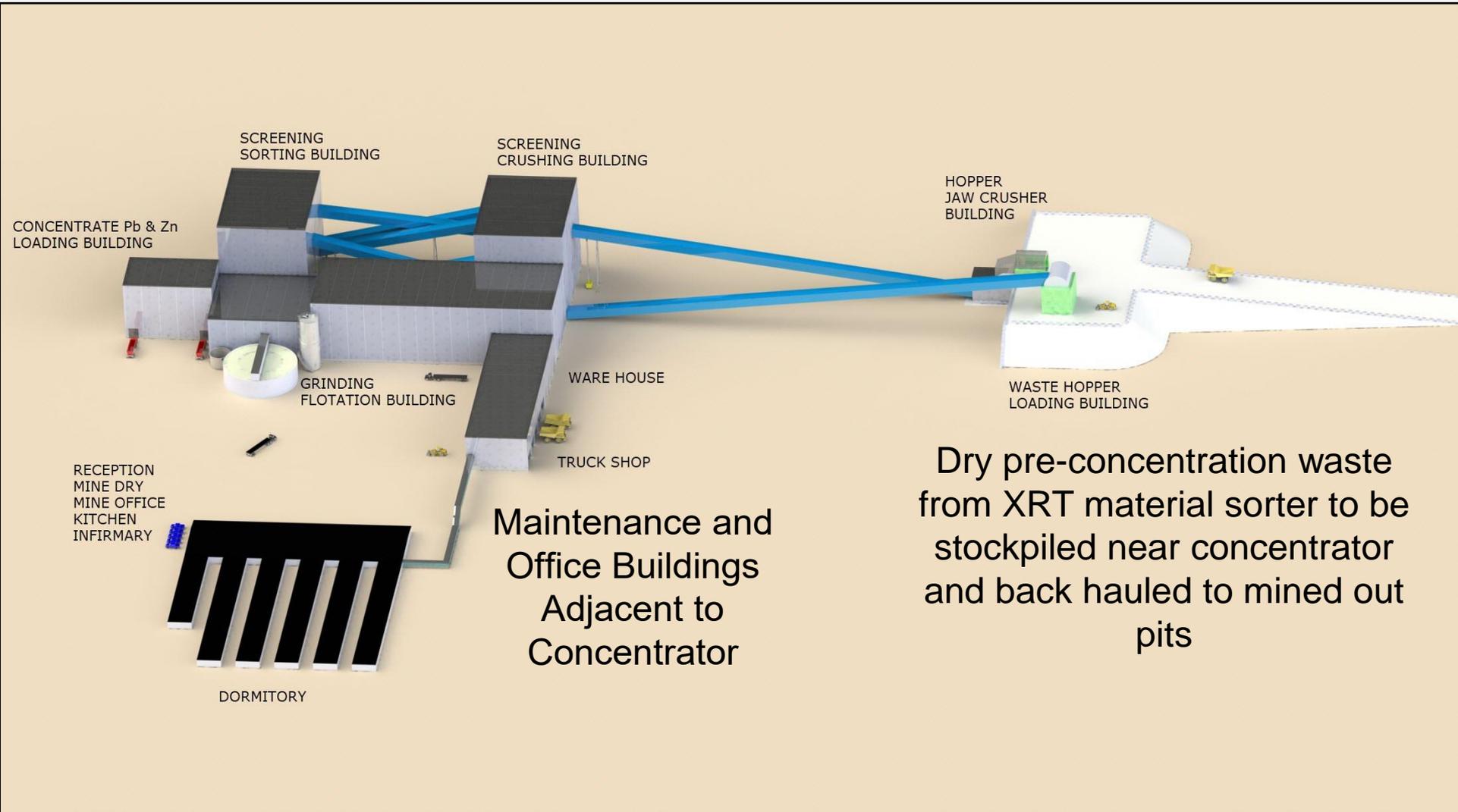


- **Process Plant:** Located on previously disturbed ground in the area of the old Cominco Plant.
- **Concentrates:** Transported by road to rail connection at Hay River.
- **Tailings:** Disposal in selected historical and mined out open pits.
- **Concentrator Water:** Will be recycled using a nearby pit as a water reservoir.
- **Concentrator Processing Capacity:** Planning up to 11,250 tonnes per day.
- **Auxiliary Infrastructure:** Camp, truck shop, workshops, warehouse, and administration offices will be connected to the Concentrator building. Laydown areas will be located near the plant and workshops.

Cominco's Mill Site Looking West – Southwest



Proposed Plant Site Layout

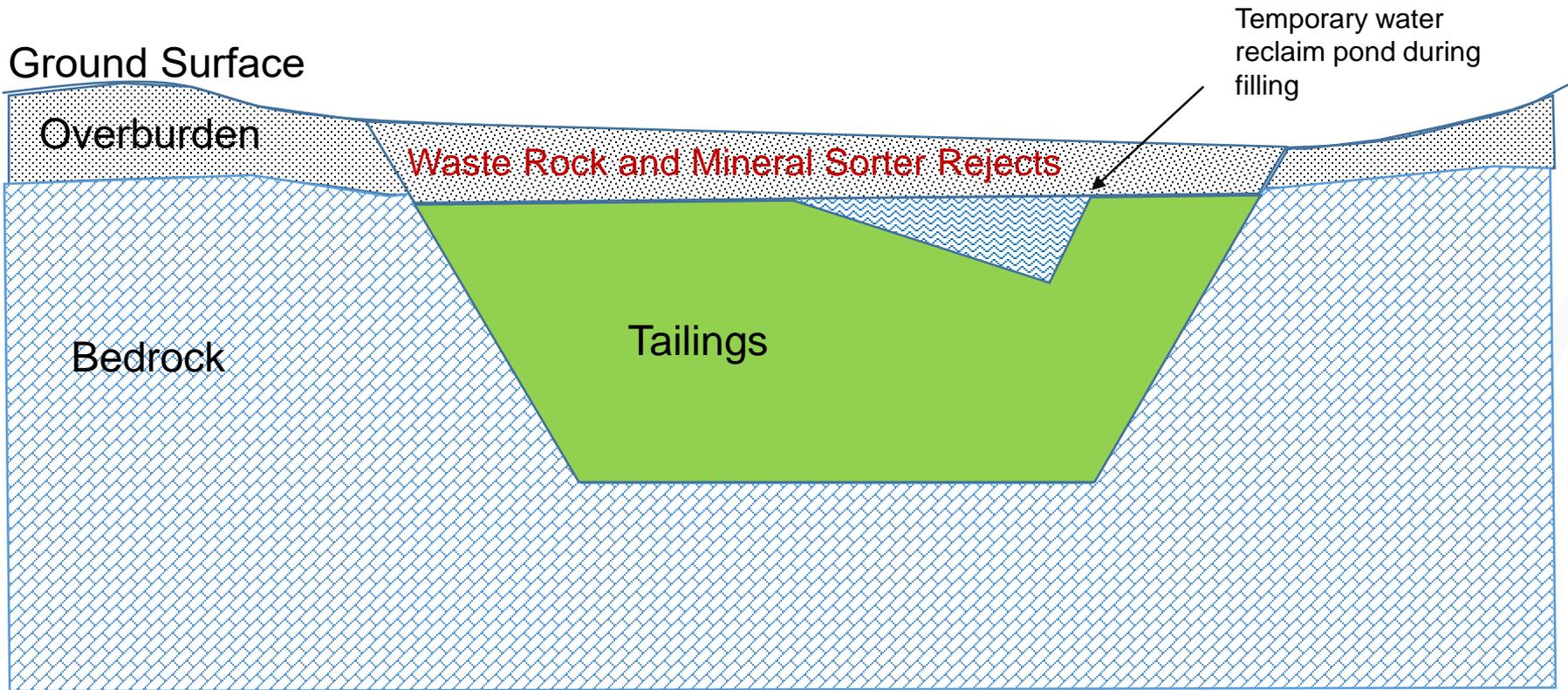


Dry pre-concentration waste from XRT material sorter to be stockpiled near concentrator and back hauled to mined out pits

Process Plant Tailings

- The tailings will be deposited in mined out pits (Tailings Deposition Areas or TDAs). Seven or more old pits will be put to use as TDAs.
- Tailings water content will be reduced to 60% and pumped via HDPE piping to the TDAs.
- Process water removed from tailings will be reused in the process plant to supplement the water requirement.
- Process plant is expected to require 40-45 m³ per hour of water to be sourced from Great Slave Lake.
- The tailings in the TDAs will be covered by Mineral Sorter rejects and then waste rock and finally available overburden.

Tailings Deposition Area in Old Pit



Plant Site Infrastructure

- Waste Management Facility – on site Landfill (inert solid waste disposal) and off-site hazardous waste disposal
- Mine dry (male and female facilities)
- Water supply from Great Slave Lake pumphouse
- Camp located near concentrator for 230 people
- Roads
- Excess Taltson hydroelectric power will be used, potential to increase by 4 MW
 - Additional power supplied with Liquid Natural Gas generators
- Diesel storage tanks will be mainly for mobile equipment
- Sewage septic tank and leaching field

Accommodation

- Capacity for 230 employees
- Single rooms with some space reserved for couples
- TVs in each room and common areas, WiFi access points throughout, microwave link
- Laundry rooms, fitness room, common area lounge, foosball, etc.
- Kitchen with a capacity for 180 persons
- Admin block and mine dry

- Local workforce as much as possible. Total of 450 employees during operations and average of 230 for construction.
- Centralized camp rather than people commuting because of 12 hour shifts.
- Shift rotations were not finalized during PEA. A number of different rotation options will be considered for the feasibility study.
- Opportunities will exist for local employment and entrepreneurial contracting for further development of community capacities.

- Brownfield sites will be returned to same condition that they are currently in.
- Greenfield areas will be returned to similar ecologically productive state as present.
- Progressive reclamation details will be developed further during Environmental Assessment and will be ongoing during operations
 - Several old pits will be used to store tailings and some waste rock (the non-mineralized rock we mine)
 - Above ground storage piles for overburden and waste rock will be re-sloped and dust mitigation measures will be applied. Runoff will be directed back to the pits.
- Closure plan to be developed with regulators and communities during the Environmental Assessment and Permitting.

Over to you!



- We would be happy to answer your questions and we will take note of all your concerns raised in this meeting.
- Board staff will be using your comments and concerns to develop the Terms of Reference for the Environmental Assessment.
- Thank You for attending and listening to our Project update.

Questions....

