

Preliminary Economic Assessment of a Pb-Zn-Ag SEDEX Deposit in Sparrow Lake, NWT

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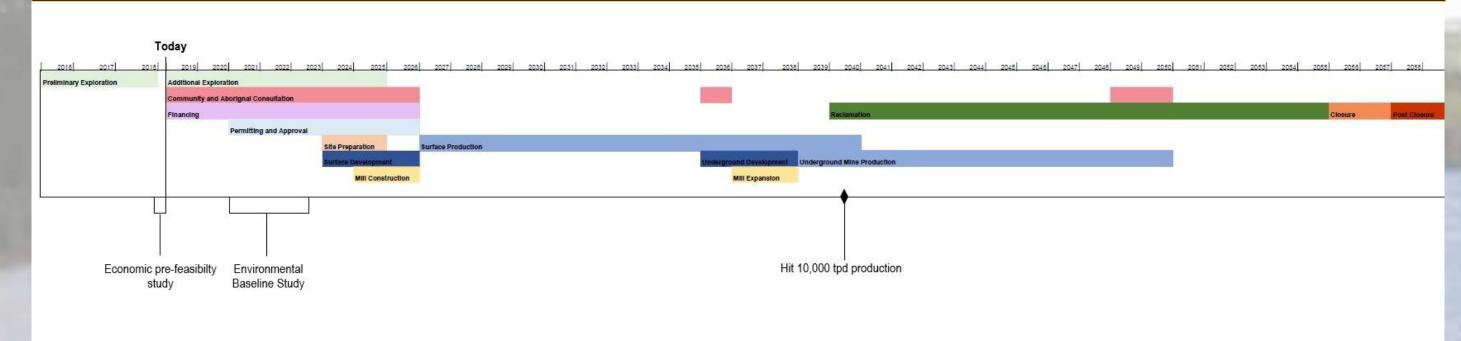
Project Description

The intention of this project is to provide site characteristics, preliminary mine design, economic viability, potential socio-economic and environmental impacts of mining a lead-zincsilver deposit in Sparrow Lake, NWT.

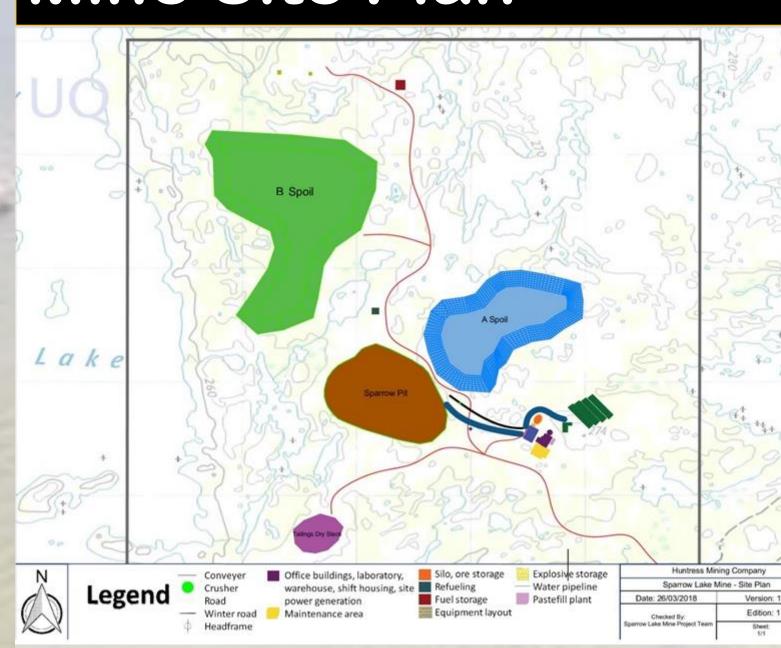
Information Provided

25 km² claim block 36 Drill Holes 2 Exploration Trenches Geological Site Map with Contours Geological Hand Samples Location in UTM

Proposed Project Schedule



Mine Site Plan



NAG rock to A Spoil PAG rock to B Spoil Tailings are dry stacked due to

climate conditions A 30 m pushback from Sparrow Pit for all surface infrastructure

A 50 m offset from water courses was avoided

Stage Dewatering Stage

—Slurry Pipe→

Mill Circuit

Mill feed rate begins at 5,000 tpd

& is expanded to 10,000 tpd after year 13 of mining

2 Product Floatation:

66 %wt Pb Pb concentrate: 2.5 %wt Zn 394 g/t Ag

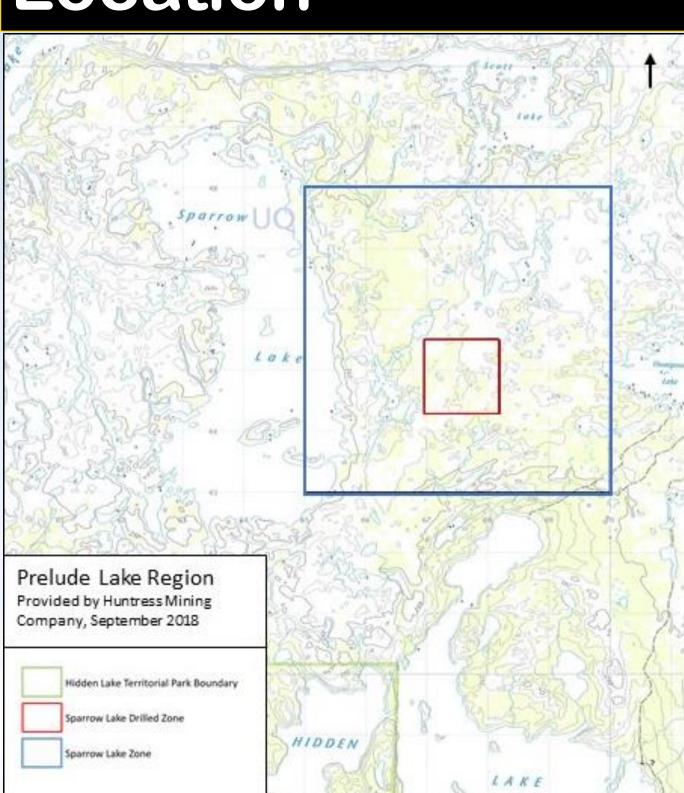
Zn concentrate: 61 %wt Zn

0.72 %wt Pb 59 g/t Ag

Pb Zn Ag

% Recovery 93.8 81.9 70.9

Location



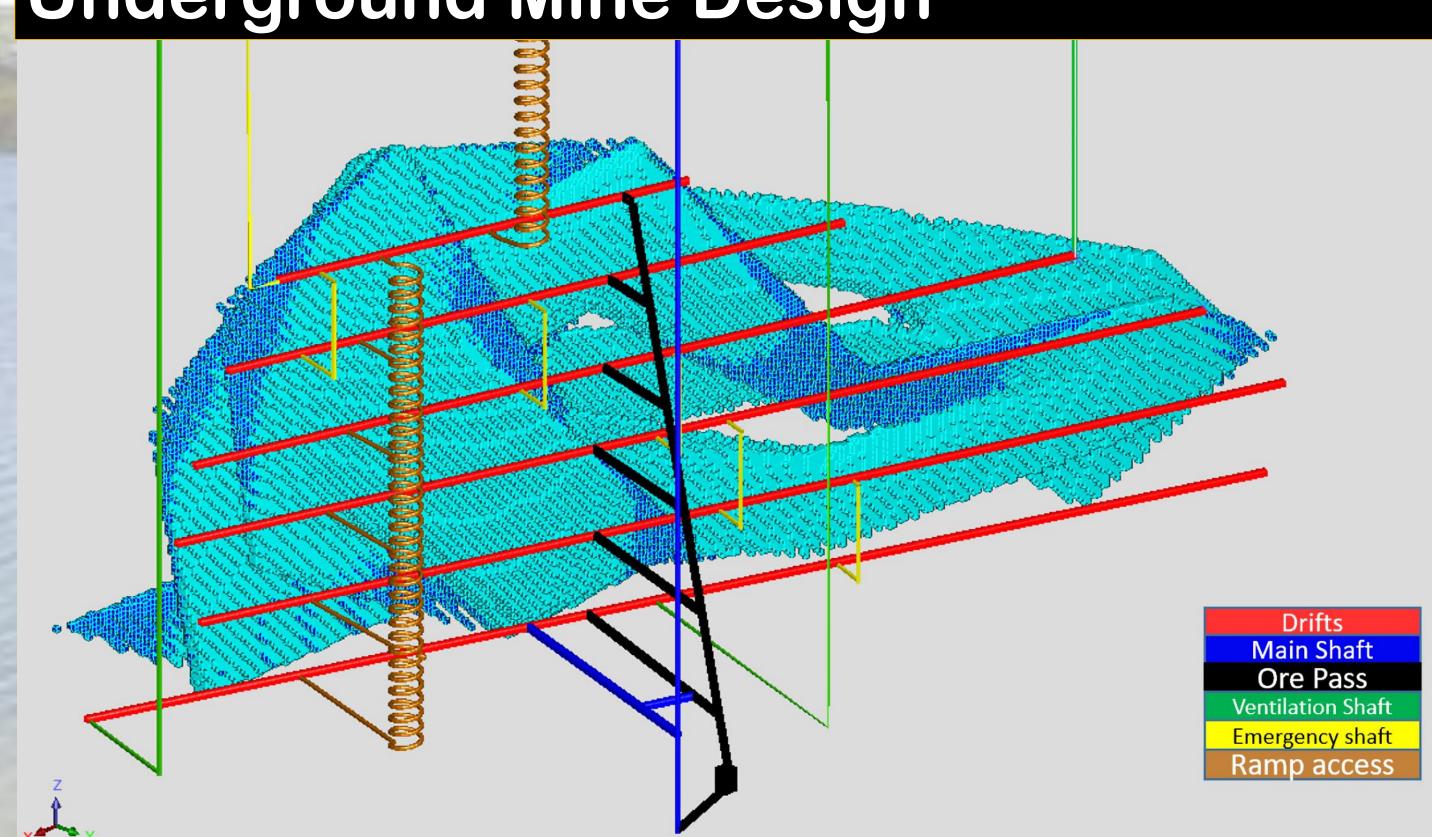
77 km north-west of Yellowknife, NWT.

Area is dominated by lakes and wetlands.

Low relief in the claim block. Hidden Lake Territorial Park is located to the south.

Site access by Hwy 4 extension.

Underground Mine Design



Blasthole Open Stoping at 10,000 tpd beginning in year 14 Stope dimensions: 30m x 30m x 85m 7 stopes will be in production to meet 10,000 tpd 30.4 Mt of ore produced by underground mine

Preliminary Project Financial Models

NPV: \$208,749,000 IRR: 19% Payback: Year 11 Cumulative cash flow:

\$3,454,000,000

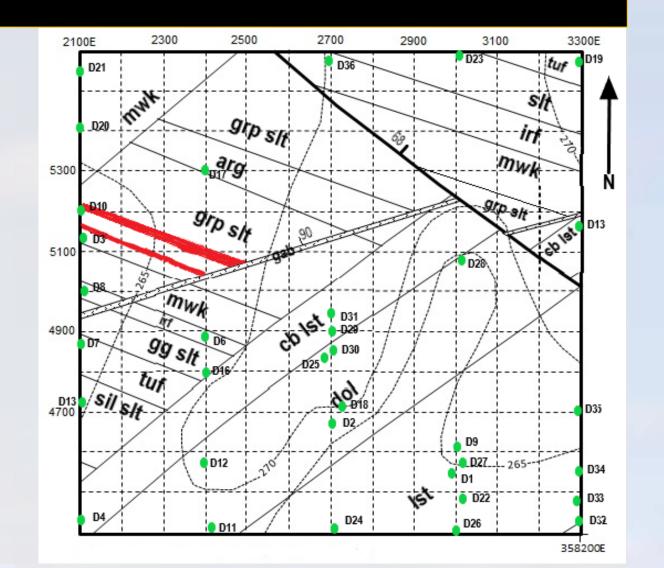


Geology

DDH's have shown mineralization in two zones.

The deposit is in lenses hosted in graphitic slate.

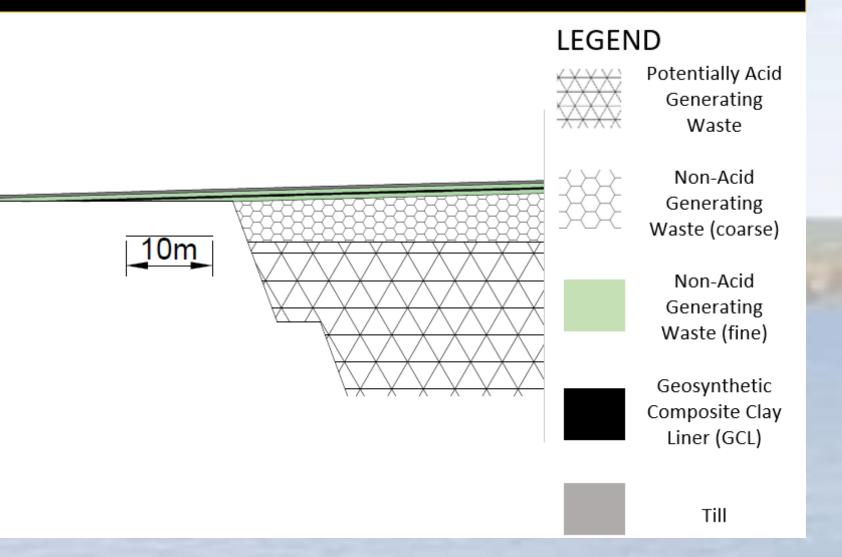
7 distinct lenses were identified, 3 near surface, and 4 deep. Grades of Pb, Zn, and Ag vary throughout the deposit, generally higher grade occurs at depth.



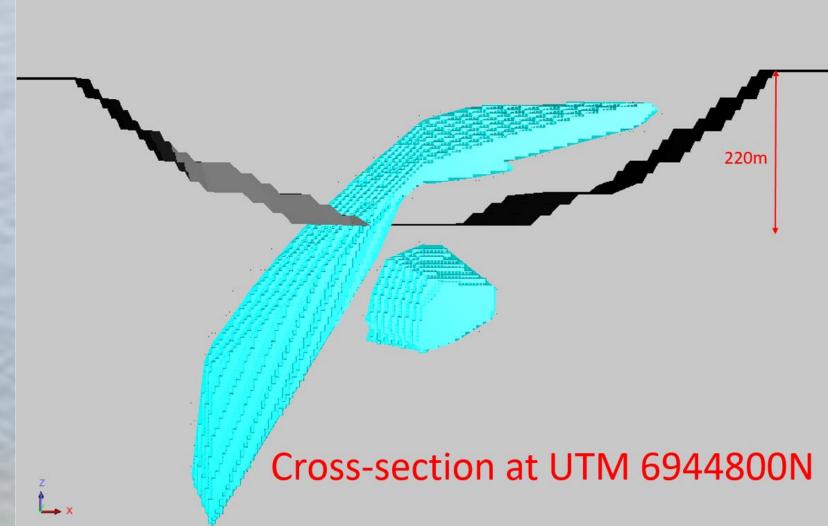
Reclamation and Closure

All PAG waste (including remaining tailings) are placed in pit with a dry cover.

Wetland present in the north-west of the claim is expanded.



Surface Mine Design



24.1 Mt of ore in Sparrow

231 Mt of waste from pit:

- 138.6 Mt of PAG waste rock.
- 92.4 Mt of NAG waste

Overall pit slope angle is 45°

Ultimate pit depth of 220m

Recommendations

- Expanded drilling and trenching program
- Bulk samples totalling 2000 tonnes
- Geophysical survey of potential mine site
- Explore acquisition of leases outside current claim
- Implement a pilot mill to determine optimum mill floatation
- Further consultation with Aboriginal groups
- Detailed design and costing of settling ponds
- Engage consultant with regards to permafrost centered design for shafts, raises and ramp