

Environmental Assessment: Aquatic Resources

Existing Environment

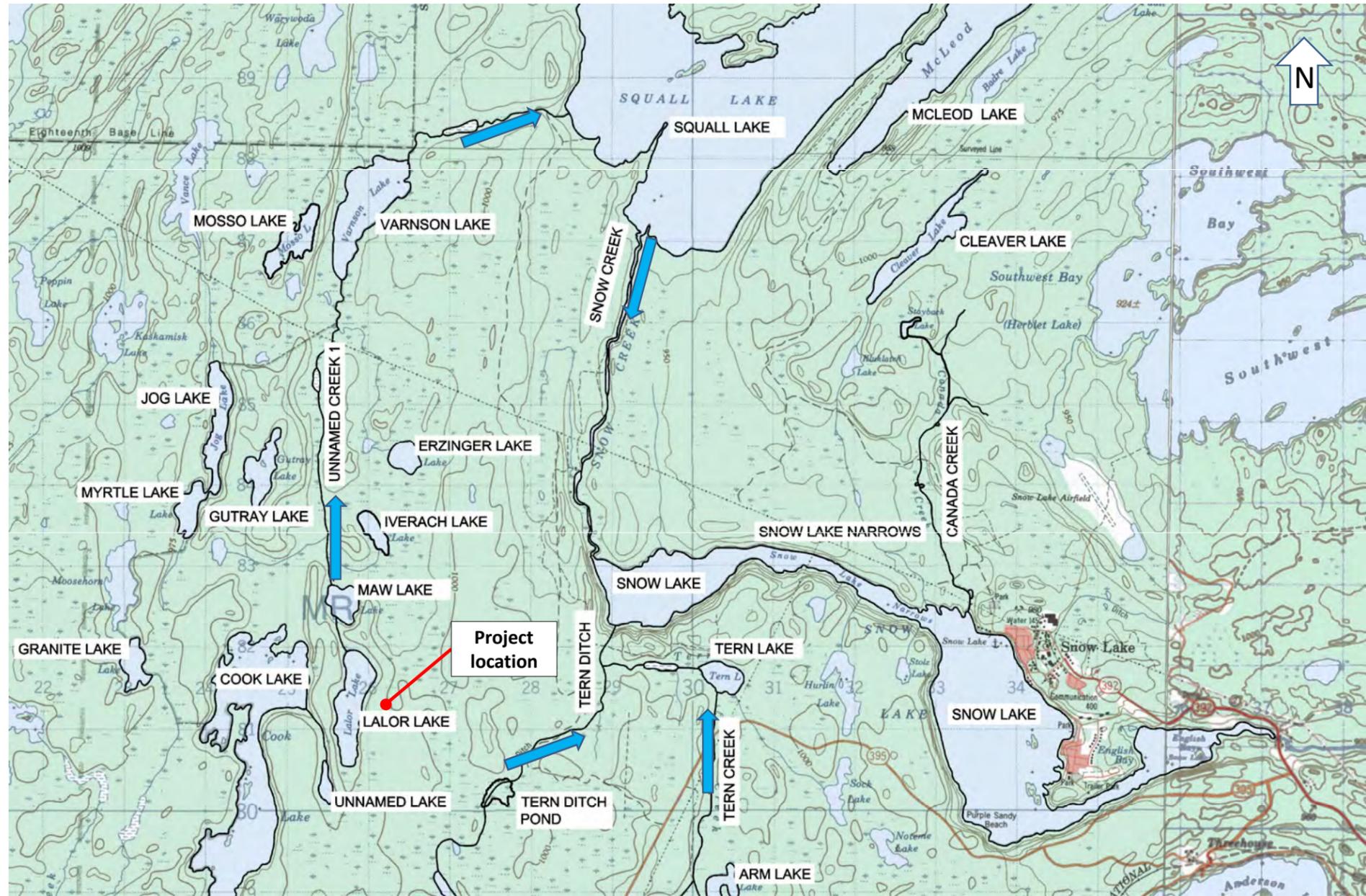
- Baseline study conducted in potentially affected waterbodies in 2007 and 2010
 - fish and fish habitat, metal residuals in fish, phytoplankton and zooplankton and benthic invertebrates
- Squall, Cook and Snow Lake support a variety of fish species throughout the year
- Unnamed Creek 1, Lalor Lake, Maw Lake, Varnson Lake and Tern Lake determined not to support significant fish populations

Potential Sources of Impacts to Aquatic Resources

- Supply of fresh water (from existing licensed sources)
- Wastewater generated from mine operations (returned by pipeline to licensed treatment facilities)
- Surface runoff has potential to come in contact with fuels and PAG rock with potential to be transported to downstream waterbodies



Walleye caught on Cook Lake



Environmental Assessment: Aquatic Resources

Management and Mitigation Measures

- Water supply regulated under existing Environment Act Licences/Water Rights Licences
- Wastewater treatment at Chisel Lake Water Treatment Plant under existing Environment Act Licence
- Mine site contoured to reduce potential contact between surface runoff and contaminants
- Fuel storage areas to be equipped with secondary containment
- PAG rock to be transported to Chisel Open Pit or used as backfill to minimize the amount of PAG rock on surface
- Surface runoff from PAG rock piles and fuel storage areas to be diverted to polishing pond
- Monitoring of aquatic resources to continue to ensure the effectiveness of mitigation measures

Residual Impact

- No residual impact anticipated

Conclusion

- No significant impact to aquatic resources



Environmental Assessment: Terrestrial Resources

Existing Environment

- Terrestrial surveys undertaken in September 2007, July 2010 and June 2011
- Typical vegetation in Project Area includes: black spruce, jack pine and sphagnum moss
 - Dense forest canopy limits understory growth
- Wildlife diversity in Project Area is low due to density of forest canopy and limited diversity of vegetation
- Evidence of bear, coyote, fox, deer, timber wolf, otter, beavers, eagles, pelicans, crane, loons, frogs, moose and ravens observed in terrestrial surveys in the Project Area
- Woodland caribou known to occur in the Churchill River Ecoregion
- Project Site does not represent a unique or critical habitat for vegetation or wildlife species



Dense black spruce bog growth

Environmental Assessment: Terrestrial Resources

Potential Sources of Impacts to Terrestrial Resources

- Habitat fragmentation due to presence of infrastructure
- Improved predator access due to access road/clearing
- Vehicle collisions with wildlife
- Noise may deter wildlife from the Project Area
- Dust generation and deposition on vegetation



Typical mixed woods on rock outcrop environment

Management and Mitigation Measures

- Wildlife and vegetation monitoring program to be developed
 - HBMS is participating in Manitoba Conservation's ongoing large scale caribou study in northern Manitoba (which includes the Lalor Project Region)
- Site speed limits imposed to minimize animal strikes
- Traffic and Noise study currently underway
 - Mitigation measures will be developed to minimize noise and traffic impacts to wildlife
- Dust control as required

Residual Impact

- Preliminary conclusion: No residual impact anticipated (to be confirmed upon conclusion of noise/traffic study)

Conclusion

- No significant impact to terrestrial resources

Environmental Assessment: Groundwater

Existing Environment

- Shallow groundwater is at or near the ground surface
- Hydrogeological testing completed – no significant deep groundwater encountered at the site
- Water Resources Branch records indicate no domestic groundwater use in the Project Area
 - No wells recorded within 5 km of Lalor Lake

Potential Sources of Impacts to Groundwater

- Leaks from fuel storage areas
- Polishing pond or pipeline leaks
- Infiltration from PAG rock storage areas
- Chemical contaminants from blasting



Environmental Assessment: Groundwater

Management and Mitigation Measures

- Fuel storage to include spill containment and spill response kits
- Polishing pond is lined to prevent leaks
- Pipelines will be heat-traced and installed aboveground with sand mounded above the pipelines. Leaks will be apparent as both freshwater and wastewater are under pressure.
 - Repair of pipeline if there is evidence of leaks, remediation as required
- Waste rock pads are clay-lined to minimize infiltration and potential shallow groundwater impacts
- Deep groundwater collected and pumped to polishing pond for treatment

Residual Impact

- No residual impact anticipated

Conclusion

- No significant impact to groundwater

Environmental Assessment: Heritage Resources

Existing Environment

- Provincial Historic Resources Branch records do not indicate any historic or heritage resources at the Project Site
- Project Site is within limits of existing approved development

Potential Sources of Impacts to Heritage Resources

- None, as no historic or heritage resources anticipated at the Project Site

Management and Mitigation Measures

- Not required

Residual Impact

- No residual impact anticipated

Conclusion

- No significant impact to heritage resources

Environmental Assessment: Resource Use

Existing Environment

- In addition to mining, extensive forestry operations have occurred in the Snow Lake Area
- Cottages observed on Squall Lake and Cook Lake
- 2 registered trap lines in the Project Area
- No Aboriginal communities located within the Project Region



Potential Sources of Impacts to Resource Use

- Noise effects on cottagers
- Noise effects on trap line
- Access to trap line
- Noise and access to hunting and fishing areas



Environmental Assessment: Resource Use

Management and Mitigation Measures

- Consultation with trap line owners to minimize potential impacts
- Noise and traffic study underway
 - Mitigation measures will be recommended to minimize noise and traffic impacts to wildlife and human receptors

Residual Impact

- Preliminary conclusion: No residual impact anticipated on trapping, fishing, hunting, camping or cottage use in the Project Region (to be confirmed upon conclusion of the assessment)

Conclusion

- No significant impact to resource use anticipated



Environmental Assessment: Traffic and Noise

Traffic

- Assessment of traffic volumes and potential impacts to existing transportation infrastructure currently underway

Noise

- Baseline noise study to occur June 10-15 at Lalor Mine
- Assessment currently underway and includes: crushing, blasting, generator, downcast/exhaust fans and vehicle noise
- Isolated nature of site and surrounding vegetation is expected to reduce impacts on human receptors
- Engineered controls will be installed at potential noise-producing structures
- Operational controls will be implemented as a mitigation measure if required

Environmental Assessment Conclusions

- Surface Water and Sediments
No significant impacts anticipated
- Aquatic Resources
No significant impacts anticipated
- Terrestrial Resources
No significant impacts anticipated
- Groundwater
No significant impacts anticipated
- Heritage Resources
No significant impacts anticipated
- Resource Use
No significant impacts anticipated
- Traffic and Noise
Study underway

Socio-Economic Benefits

- Town of Snow Lake located 18 km by road from Lalor Mine site
 - Population of 837 (2006 Census)
 - 355 private dwellings (325 single detached/semi detached and 30 apartments)
- No permanent camps will be located at the Lalor Mine site
 - Housing in Snow Lake will be required to support the project
- HBMS has committed \$2 million in funding to the upgrade of the Snow Lake sewage treatment plant
- Business activity expected to be sustained or augmented

Socio-Economic Benefits

- Up to 300 people could be employed at the site, and provide continued employment of Northern Manitoba residents
- The mining project and subsequent potential upgrades to supporting infrastructure enhances the potential for further mining in the Snow Lake Area
- Zinc concentrate produced in Snow Lake would be processed at the HBMS metallurgical complex in Flin Flon, providing additional socioeconomic benefit

Closure Planning

- HBMS has successfully completed reclamation on many mining operations across Canada, with several of these sites located in the Snow Lake region
- The area will be returned, to the extent possible, to its natural state following the procedures outlined in Manitoba *Mine Closure Regulation 67/99*



Spruce Point Mine
(During production - 1980's)



Spruce Point Mine
(Currently)

Closure Plan

Tasks to be included in the Lalor Mine Closure Plan:

- Removal of all buildings and foundations
- Removal and appropriate disposal of stockpiled NAG and PAG rock
- Removal and appropriate disposal of miscellaneous infrastructure (power lines, generators, transformers, pipelines, pumps, water storage tanks etc.)
- Removal and appropriate disposal of site refuse
- Access road scarified
- Removal of surface and underground mining equipment
- Removal of all fuel storage tanks
- Testing, removal and/or remediation of any contaminated soils
- Full decommissioning of all underground operations, including disposal of waste rock in the underground workings, and capping of all shafts and raises
- Stockpile pads, polishing pond, site roads, and parking area re-graded and contoured
- All disturbed areas will be re-vegetated in order to restore the landscapes, as much as possible, to their native appearance



Konuto Lake Mine Closure

Next Steps

- AECOM to complete the Environmental Assessment report
 - Feedback from this Open House will be included
- HBMS will submit an Environment Act Proposal to Manitoba Conservation in summer 2011
- Manitoba Conservation will advertise and make the Environment Act Proposal and Environmental Assessment report available for public review
 - Environment Act Proposal and Environmental Assessment report will be available for review through Manitoba Conservation
- No production from the Lalor shaft until an Environment Act Licence has been issued by Manitoba Conservation



Future Project Planning

- New Lalor Concentrator or refurbish existing Concentrator

Option 1

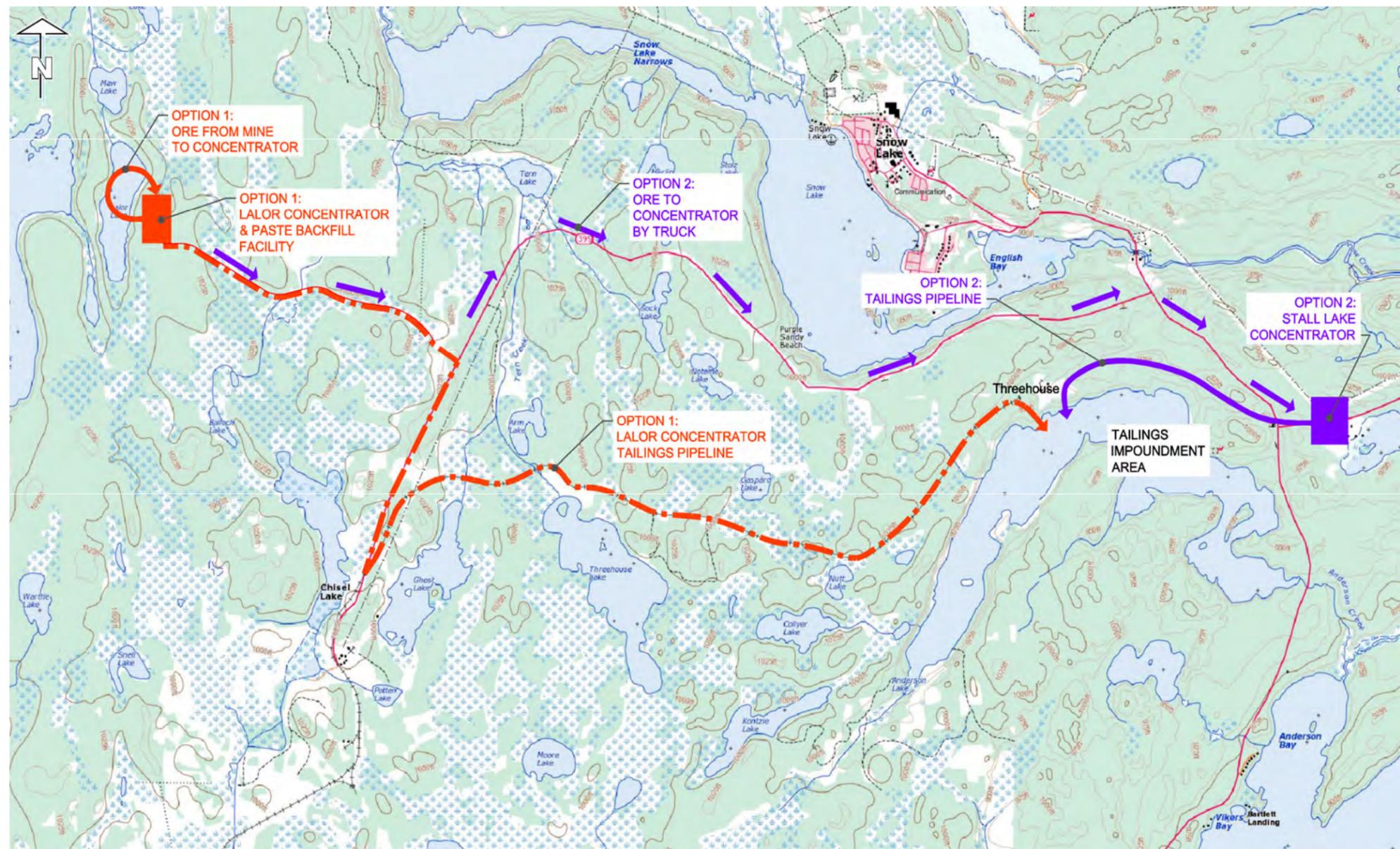
- New concentrator at Mine site
- Potential for paste backfill facility
- Improve water recirculation efficiency
- Reduce truck haulage on local highways
- New pipeline required to transport tailings to existing Tailings Impoundment Area

Improvement of Tailings Impoundment Area

- Improvement required to handle long term increase in volume of tailings over life of mine

Option 2

- Haul ore from Mine site to Concentrator by truck
- Upgrade concentrator to include copper and gold processing
- Tailings disposed of in existing Tailings Impoundment Area via pipeline



Comments and Questions

- The project team wants to hear from you
- Please take the time to complete a questionnaire and submit any comments on the forms provided

AECOM - Clifton Samoiloff Phone: 204-477-5381
email: Cliff.Samoiloff@aecom.com

HBMS – Stephen West Phone: 204-687-2229
email: steph.west@hudbayminerals.com

HudBay/AECOM provide environmental assessment overview



(L): Alison Weiss AECOM's Lead Assessor on the Lalor Project, Lalor Project Manager, Kim Proctor, HudBay's Environmental Superintendent Steven West, and Cliff Samoiloff, AECOM's Environmental Lead on the Lalor Project. — photo by Marc Jackson



Hoist house and headframe over the Lalor ventilation shaft. — photo courtesy of HudBay Minerals

HudBay Minerals and environmental consulting firm AECOM held a somewhat sparsely attended information meeting at the Lawrie Marsh Hall on the evening of June 8th. Lalor Project Manager, Kim Proctor was on hand for it, as was HudBay's Environmental Superintendent Steven West, Alison Weiss AECOM's Lead Assessor on the Lalor Project, and Cliff Samoiloff, AECOM's Environmental Lead on the Project.

Samoiloff opened the session on a note of safety, pointing out the exits and fire extinguisher locations in the hall. This left a perfect opening to inform attendees that the Lalor Project has gone 547 days without a lost time accident. That said, he noted that the purpose of the Open House was to give additional information on the Lalor Project, as well as to furnish an overview of the environmental assessment process and allow residents the opportunity to provide input on that assessment.

What followed was a methodical and all encompassing explanation of the history of the Chisel Basin, the discovery and development (thus far) of Lalor, and all aspects of their vast environmental assessment.

Steven West followed Samoiloff and gave some history on the Chisel Basin. With the use of visuals, he showed the watersheds around Lalor and noted that the Lalor minesite was in the watershed

above the Chisel Basin and that they were taking care to move everything from water to wastewater back into their support facilities at Chisel. He then went back to 1958 and gave a summary of what had happened in the area since that time and how Lalor will tie in with it.

Kim Proctor approached the podium after West. She reprised some of what she presented to the community in early April. Proctor was, as with her April presentation, quite personable in her presentation. She is becoming a permanent fixture around Snow Lake and knows many people in the community through both her work with the company and from many years spent vacationing here in her youth. Even though much of what Proctor presented was repeat material, she did have some new info included in her talk.

"All of the site clearing, blasting and levelling is done at the Lalor site," said Proctor. "The road has been completed for a few months. We added a transformer to the current Chisel North transformer bank. So we have full power at site. This is sufficient power to get us through the entire construction phase, but not for the full production phase, so next spring we will construct a new substation near the Chisel North site. We are in the process of doing what I call the water infrastructure. It includes our fresh water discharge lines, an additional water treatment plant right

at the Lalor site and a polishing pond (that allows heavy particulate to settle out) for the water that is pumped up from underground when the shaft sinkers are sinking. The hoist house and headframe at the ventilation shaft, I'm proud to say, are completed. The hoist is installed, the winches are in place, and currently we are going through the commissioning phase. This is a huge milestone for us. We are on track. We are on budget, and we will start the first round of sinking on the 20th of June. So the whole plan of the ramp intersecting the ventilation shaft and in fact the entire project is on track."

Proctor noted that the hoist house and headframe for Lalor's main production shaft will be larger than those in use at the 777 site in Flin Flon, and said that flying over the site now, takes her breath away. She stated that funding for the project hadn't come through until August of 2010 and to have come as far as they have in that time filled her with pride for the people who were, and are, involved in the great steps forward over the past year. Those in the audience were also impressed when Proctor began to show photos of the 'to date' development at Lalor. Explaining that there were now 160 construction workers on site, the Proctor stated that they too had much to do with the headway being made at the minesite, and she praised them for working safely to attain it.

Concluding her portion of the presentation, Proctor handed the floor back to Cliff Samoiloff, who advised that he wanted to speak about the environmental assessment process for the development. Samoiloff defined the area taken in by the assessment and what would be involved in carrying it out. He explained some of the impacts from the development and the plans to mitigate many of these by using existing facilities and sites - as is the case with waste rock. He said waste rock which is deemed to be acid generating will be disposed of at the old Chisel Open Pit, and any that isn't, could be used in road construction in the area. The assessment will cover the entire period of operation, which at this time is expected to be from 2013 to 2025; however, he said that this, of course, is subject to change. The assessment will be quite involved and speaking with some people after the Open House, they stated that it addressed every question they came prepared to ask. This was obvious, as the event ended without any questions from the floor. However, anyone who was shy, had ample opportunity to have apprehensions addressed, as the representatives from AECOM furnished all attendees with a questionnaire, which invited people to list concerns, and it assured them that they would be addressed in a timely manner. *MJ*

Local Elks mark a monumental milestone



(L): Brenda Forsyth-Flamand, Daren Longpre, Kirk Melnick, Rene Lamontange, Stuart Bridgeman, John Pishak, Orville Becking. (FRONT left): Sherri Longpre and Connie Bartlett. — photo by Marc Jackson

It's one of the first buildings a person notices when entering the community of Snow Lake. The big mauve or purple Quonset that nestles between the Town of Snow of Snow Lake's Brentwood lift station and the Bella Apartments. It's called the Elks' Hall and has sat at this prominent location for 44 years. However the building's inhabitants have been a part of the community a tad longer. Snow Lake's Benevolent and Protective Order of Elks celebrated 50 local years of existence on the evening of Friday June 10th, and a number of community members, both past and present, were there to help them do it up right!

The evening began at 5:30 p.m. with cocktails and hors d'oeuvres - organizers did well in enlisting a couple of very attentive Girl Guides (Holly McLaughlin and Angel Cann) to bring around the appetizers, tea, and coffee. They were never far from anyone's attention and seemed to almost sense who needed what and when!

With the pre-supper mingling winding down, Elks' Member and Mistress of Ceremonies, Brenda Forsyth-Flamand made her way to the microphone. "Fifty years, wow, I'm not even that old," Forsyth exclaimed as she introduced the head table. Starting with Stuart and Ellen Bridgeman, she made her way from one end to the other. "Stuart is one of our longest standing members, he has 38 years in the Elks," said the Emcee. "Next there was Cautline and Daryl Armsworthy. Cautline is the President of the local Legion Branch. Mayor Clarence Fisher and wife

see ELKS on page 16...

THOMPSON CITIZEN

Published July 15, 2011

COLUMNISTS

My Take on Snow Lake

HudBay/AECOM provide environmental assessment overview Marc Jackson

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It appears that the assessment will be quite involved and in speaking with some people after the open house, they stated that this portion addressed every question they came prepared to ask. The event ended without any questions from the floor. However, AECOM furnished all attendees with a questionnaire, which invited people to list concerns, and it assured them that they would be addressed in a timely manner.

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