



**Final Inspection Report for Lalor Lake 3D
Field Inspection Conducted June 3, 4 and 5th 2013**





A final field Inspection has been completed on the Lalor Lake 3D project that was conducted for Natural Resources of Canada during February and March of 2013.

The program was acquired over Hudbay Minerals Lalor Lake deposit outside of Snow Lake Manitoba and was completed on time and on budget with zero recordable incidents.

The Final Inspection was conducted to assess the effectiveness of using Mulchers to produce lines, to ensure all garbage was properly removed, to address 2 unexploded charges and to close out any other Stake-holder concerns.

Final Inspection was completed by SAEExplorations Operations Manager Jeff Mackie, SAE HSE Advisor and certified blaster Tim Daigle and 1 SAE labourer. All three of these personnel had previously completed the Lalor Lake Mine Site Safety Orientation and were qualified to be on site. Contact was made with Tony Butt the general Foreman Lalor Project at the Lalor Lake mine site on Monday June 3rd and approval was given to begin any reclamation work required.

On Monday June 3 SAE personnel met with Jamie Davidson and Seth Cholodniuk at the Manitoba Conservation office in Snow Lake. Jamie Davidson mentioned a concern with the local Ski Doo Club's concern over possible damage to one of their bridges and Seth Cholodniuk mentioned the craters made from a few shot points that "blew" out and if they had been properly addressed. SAE indicated that both of these issues would be resolved and offered an inspection flight by helicopter for Wed. June 5th. An invite was offered by SAE to the Ski Doo clubs president through Seth Cholodniuk to join this inspection flight.

Unexploded Charges

Two loaded holes on the program did not detonate during recording operations. Multiple attempts were made to detonate Shot Point 102137 and Shot Point 118175 during recording operations.

Shot Point 118175: Jeff Mackie and Tim Daigle walked into this location as the lines are inaccessible in summer with UTV's. The shot point was located and the location confirmed with GPS coordinates. The hole was dug down to about 30 cm to exposed rock. The leads were then cut down and exposed. A Galvanometer indicated a dead cap. Three unsuccessful attempts were made with a portable blasting box to detonate this charge.

4 liters of water were poured down the hole to help accelerate the decay of the charge. 1 bag of cement was mixed and poured down the hole. A steel pin monument with a green fluorescent cap was placed in the concrete in the hole as well as a tin tag placed on a tree beside the hole indicating the location and shot hole number.

Shot Point 102137: Jeff Mackie and Tim Daigle walked approximately 2.4 km into this location as the lines were not accessible by UTV. The shot point was located and confirmed with GPS coordinates. This hole was dug down to about 28 cm. where rock and ice prevented digging down any further. No cap leads were located so no further attempt at detonation was possible. No water was poured down this hole as the hole was filled with frozen water. The dug out hole was filled back in with the drill cuttings, rock and bentonite. A ½ meter long steel pin monument was pounded down the hole with a fluorescent green cap. A tin tag was nailed to a tree beside the hole indicating shot point and location.

The explosive product used in both of these holes is ½ kg. Vibrogel paper NG with a No. 12 Electric Seismic blasting cap. The moisture present in both of these shot points locations will make the Sodium Nitrate go into solution which will take the oxygen component away thus eliminating the possibility of detonation. This process will be accelerated with the presence of moisture down both holes and it is anticipated that these charges will be inert within 24 months.

Shot Point 102147



Shot Point 118175



Garbage and clean-up

During recording operations the crew was monitored daily to ensure all flagging and debris from operations was being picked- up and disposed of. During our inspection we were not able to drive any of the lines as they were simply too rough to use UTV'S and were or are walk only. While walking into the two shot points we randomly chose different lines to walk and saw no discernible amounts of garbage or flagging. Random checks were conducted on the lines from different parts of the access roads. The main staging area was also inspected and found to be clean and free of debris. During a low level helicopter inspection flight with Seth Cholodniuk on Wed. June 5 2013 no garbage or flagging was spotted. Clean-up on this program was very good.

Ski-Doo Club's Bridge concern

Prior to this project commencing a scouting trip was conducted by Jeff Mackie (SAE) Dr. Gilles Bellefleur (NRC) and Tom Helgesen (HCL) in January 2013. During this trip we walked into some different areas to help make an assessment on how we would approach the cutting. One of these areas was the ski-doo trail. We crossed the Ski Doo clubs snow covered bridge and at the time did not notice any breaks or damage to the bridge (snow covered). During front end operations this bridge was deemed a no go for the heavier equipment (drills and mulchers) we did use the bridge for accessing with our UTV'S. On the last day of recording operations Jeff Mackie walked in and did an inspection of this bridge and found nothing different in appearance than the pre-commencement scout.



Here is a Picture of the bridge as we found it in June. The breaks are discolored and appeared to be older than a couple of months.

We decided that we had used this bridge so we should participate in its repair. We had two of our workers spend an afternoon replacing some broken decking and added a couple of supports below the structure





Craters from Blown Shot Points

During recording operations 7 craters were reported by the blasters that were caused by holes “blowing-out”. These craters were addressed at the time of recording in March of 2013. The crews filled them in with rocks, debris and bagged bentonite. During a helicopter inspection done on June 5th with Jeff Mackie and Seth Cholodnuik the coordinates of the craters were loaded into a GPS and an inspection of a few of the bigger ones was done. The craters appeared to be properly filled in to the satisfaction of Seth Cholodnuik, Resource Officer.

Line Clearing and Mulching

There was approximately 112 km of line produced on the Lalor Lake 3D project. We used 2.75m meter width on the Source line and 1.75m width on the Receiver lines. A hand slashing clean-up crew followed behind the mulchers. The mulchers are guided by GPS and were given quite a bit of latitude to meander the line and try to avoid any of the bigger timber. Where the timber is very thick a meandering technique is used to minimize a line of site. When using the mulchers to produce line we also try and keep the cutting head raised up off the ground to minimize ground disturbance.





Upon inspection by ground, all the cutting that was observed appeared to meet the expectation of avoidance of bigger timber, minimize a straight line of site and have minimal ground cover disturbance.

Inspection from the air (helicopter) also proved that the mulching achieved very little visible disturbance as the lines were hard to see and follow, even at low level and slow speed flight.

General Observations

During ground inspections of the receiver lines it was observed that the line crew was very consistent in following proper coupling techniques with the DSU 3 component sensors. This is one of the most important aspects of a successful acquisition. During the March recording the crew was instructed to dig through the snow move any debris, “scuff” down to solid ground, drill a hole, plant and orientate the sensor.

The pictures below shows the typical final product of a planted sensor on the Lalor Lake 3D.



These pictures below show the evidence of proper placement techniques for the DSU sensors used on the Lalor Lake 3D





This picture illustrates a hole that was drilled in using the hammer drill in solid rock





Conclusion

Overall SAE believes that the Lalor Lake 3D was successfully completed. The feedback from other stakeholders has been positive and all issues that we have been made aware of have been addressed.

Given a growing cycle or two the mulched lines should come back quite nicely, almost unnoticeable. Very little ground disturbance occurred during cutting operations. These lines are rough and largely inaccessible due to the mulched debris left on line and the meandering technique utilized. They may provide some access in the winter via snowmobile but they are rough and very narrow.

A detailed map with surveyed shot point locations of the two unexploded charges has been provided to Tony Butt at the Lalor Lake site and as an attachment provided with this report. SAE believes that these two unexploded charges pose no threat to the public and will be rendered inert with-in 24 months. They are both solidly capped and identified and are both in walk only areas.