

# MAYO LAKE MINERALS INC

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# **Nine Priority Gold Anomalies Identified on Yukon Claims**

OTTAWA, ONTARIO, December 12, 2012: Mayo Lake Minerals ("MLM") is pleased to announce results from its 2012 geochemical field program. This program was completed over its seven whollyowned claim groups (the "Properties") near Mayo, Yukon Territory (**Figure 1**). The properties cover approximately 355km² of highly prospective ground in the Tombstone Belt of the Tintina Gold Province and were originally acquired because of the existence of local placer operations, highly prospective geology and numerous stream sediment anomalies from government programs in the 1960s that were never followed up with serious exploration. Mayo Lake Minerals commissioned an airborne magnetic survey in early 2012; the interpretation of the collected magnetic data plus compilation of earlier geological and geochemical surveys delineated a number of areas of interest, including 9 primary targets and more than 15 secondary areas on which to focus exploration. A summary of results by claim block follows:

Claim Block	Primary Targets	Anomaly Size
Anderson	Α	>10km
Davidson	В	>2km
Cascade	С	>2km
Roop	D	>5km
Carlin	D,E	>5km, >1km
Edmonton	F	>2km
Trail Minto	G,H	>10km, >1km

Areas showing discontinuous gold (Au) values were consistently anomalous for arsenic (As) and antimony (Sb); these two elements are abundant in many gold deposits and have detection limits that make them excellent vectors for mineralization. Between, and within, claim blocks there will be significant differences between values considered anomalous due to variable background imparted by glacial cover and differences within the geology itself. See the appendices for Au, As and Sb values from soil and silt samples.

#### **Anderson Claim Block** (Figure 2)

• Primary Target A consists of several large anomalies distributed for more than 10km along the slopes on the eastern half of the property. These anomalies parallel magnetic highs. Infill lines will be required to determine the continuity of anomalies between sample lines. The 800m wide

zone shows consistent anomalous Au values in both soils and silt samples. A rock sample from the periphery of one of these anomalies yielded 0.2g/t Au, 7.4g/t silver (Ag), 0.9% copper (Cu) and >1% lead (Pb). Primary Target A showed consistent Au values up to 69 ppb, very high As values up to 457ppm and Sb values up to 39.5ppm; these values extend the anomalies defined by high gold values. Secondary target areas had discontinuous Au anomalies in areas showing values for As up to 1290ppm, Sb up to 230ppm and discontinuous zinc (Zn) values; often these targets occur at intersections of geophysical structures. A secondary anomaly was located coincident with an unmapped intrusive in the center of the block with up to 329ppm As and up to 246ppm Sb; a third anomaly in the western end of the block with discontinuous Au values and geochemical anomalies up to 237ppm As and 7ppm Sb is present above a mineralized vein, which ran 0.1% Cu.

#### **Davidson Claim Block** (Figure 2)

• Primary Target B is an Au-Sb-Zn soil anomaly, approximately 2km long. It was located on the highlands in the southwest part of the block where outcrop was especially sparse, so further exploration of this primary target will require prospecting and closer spaced soil sampling. Secondary targets include an anomaly that crosses both a structural intersection and a geophysically-defined alteration zone or perhaps shallow intrusive with values up to 100ppm As, up to 5ppm Sb and discontinuous Au values; also skarn mineralization is located in cliffs above Davidson Creek, where a rock sample assayed 0.1%Cu, 0.3%Pb and was anomalous for Au. Several As, Sb and Au anomalies were delineated nearby and likely also correspond to skarn mineralization. Due to swampy terrain, it is difficult to obtain good samples on some of the highlands adjacent to placer operations and historic anomalous silt samples.

### **Cascade Claim Block** (Figure 2)

• The Cascade Claim Block, formerly part of the Edmonton Claim Group, has been separated for assessment purposes. Located 7km to the south of the Edmonton Block, this block straddles the nose of the Mayo Lake Antiform and covers the highlands between historical placer workings on Cascade and Nelson creeks. Primary Target C near the head of Cascade Creek yielded samples highly anomalous for Au, one sample returning 2.2g/t Au. Geochemical samples also yielded anomalous values of up to 228ppm As, and 2.1ppm Sb. Anomalous zones for As, Sb and Au are not coincident, although they do overlap. Prospecting and mapping noted skarn alteration in the area. This primary target appears to be on strike with a structure to the north where alteration in a cliff can be viewed from the air.

#### **Roop Claim Block** (Figure 3)

• Primary Target D consists of a large anomaly in the center of the claim; it is marked by discontinuous anomalous gold with values up to 59ppb Au within continuous high As and Sb anomalies, yielding up to 26ppm As and 2ppm Sb. It is on trend with the northern Sugar

Showing; this trend is parallel to both geophysical structures and geology in the area and is most likely an extension of an anomaly seen on the Carlin Block. This anomaly does not appear to extend into the valley at the southern end of the block where thick glacial overburden is likely responsible for masking geochemical signatures. Several gossans and stock works in or near this anomaly show evidence of post metamorphic flow of fluids, however samples failed to yield anomalous results; this is not unexpected as investigations at the Sugar Showing indicate near-surface bedrock may have been leached of its metals. Secondary targets include a large zone of sulfide mineralization within the north part of the block; assays returned modest results and follow up soil sampling needs to be undertaken to more clearly define mineralization and variations thereof. Values over most of the northern portion of the Roop Block are lower due to thickness of glacial overburden; soil samples yielded up to 11ppm As, 1.6ppm Sb and 5ppb Au.

#### **Carlin Claim Block** (Figure 3)

• Primary Target D shows highly anomalous discontinuous Au values parallel to interpreted geophysical structures running through the northern member of the previously identified Sugar Showing, a Carlin-like sediment-hosted disseminated Au occurrence. This primary target has discontinuous Au anomalies with values of up to 59ppb Au within high As and Sb anomalies that yielded up to 26ppm As and 2ppm Sb; Primary Target D continues on trend with an anomaly to the north in the Roop Claim Block; thicker till veneer in the valley separating the claim groups is likely responsible for masking geochemical signatures between the two primary targets. Primary Target E, a strong and consistent anomaly, is located at the west end of the block. Soil samples delineate a 1200m wide zone with values of up to 32ppm As, consistently above 15ppm As; values of up to 4.2ppm Sb, consistently above 1.3 ppm Sb; and Au values up to 59ppb. Float and outcrop in the vicinity of Primary Target E show abundant quartz veining; the chemistry of samples imparts an epithermal signature with anomalous Au and Ag; a rock sample taken nearby yielded 37g Ag/t. Two secondary anomalies were found parallel to Primary Target D and one was found east of Primary Target E.

#### **Edmonton Claim Block** (Figure 3)

• Edmonton Claim Block straddles the Robert Service Thrust Fault at two locations. The data indicates that there are different background levels for most elements on either side of this thrust. Primary Target F in the Edmonton Claim Block is a large Au-Sb-As anomaly on the edge of a large geophysically-defined alteration zone or shallow intrusion. Geochemical samples from Primary Target F yielded values as high as 346ppm As, 1.4ppm Sb and 16ppb Au. This anomaly is located above Edmonton Creek and could be the source of placer Au that was extracted from the creek in the past. Earlier stream sediment samples taken by the GSC from Edmonton Creek yielded anomalously high boron values, some of the highest in the Keno Area.

#### **Trail-Minto Claim Block** (Figure 4)

• Primary Target G is a 4km long, 400m wide Au anomaly with values up to 73ppb, which was delineated on the slopes parallel to the eastern edge of the block. This primary target also returned values of up to 22ppm As and 4.1ppm Sb; this target is discontinuous for an additional 2.5km to the north and can be traced a further 4km to the south and roughly parallels the perceived edge of the Roaring Forks Stock (the "Stock") in the center of the property. The target itself is longer than the stock; possibly implying that the Stock is buried at a shallow level beyond its exposed length. Secondary anomalies include areas where Au values of up to 52ppb are clustered around the edges of this Stock and, along with tungsten anomalies up to 5ppm, raise the possibility of mineralization similar to Dublin Gulch 30km to the north. These zones can also be anomalous for Zn and have values of up to 67ppm As and 4ppm Sb. Primary Target H in the steeply incised north part of the claim block contains skarn signatures with values up to 822ppm Sb, up to 164ppm As, tungsten (W) to 6ppm, Zn to 140ppm and intermittent Au values up to 79ppb. These anomalies are likely related to mineralized felsic dykes similar to the Sundown Showing just north of the claim block. One anomaly, particularly high in Sb, is also strongly anomalous for Zn, W and Au, indicating possible skarn mineralization.

"I am extremely pleased with the results from our initial geophysical and geochemical programs at Mayo" commented Dr. Vern Rampton, President of Mayo Lake Minerals Inc. "These results support geochemical and geological investigations completed by the GSC in the 1960s and 1970s that showed highly anomalous gold values in stream sediment samples; for example one heavy mineral sample on Dawn Gulch assayed 275,000 ppb. Fortunately for us, these results have never been followed up with any serious exploration. In combination with the presence of placer mining, both past and present, the results from our exploration and the previous findings point to the likely presence of significant lode mineralization within the MLM claims. Because of our land position and its favourable geology, it's my solid belief that we will be able to delineate minable precious metal deposits. A follow up exploration program, which should include some scout drilling, is planned for 2013."

This press release was prepared by Mr. Tyrell Sutherland, Project Geologist and Dr. V. N. Rampton, P. Eng. President and CEO. Dr. Rampton is a "qualified person" under the guidelines of N.I. 43-101.

Samples were submitted to Acme Laboratories prep lab in Whitehorse. Rock, soil and silt samples were assayed using neutron activation by Bacquerel Laboratories in Ontario for Au plus 34 elements. Additionally rock samples were assayed by Acme Laboratories in Vancouver using a 4-acid digestion for Au plus 40 elements. Duplicate soil samples were taken with every 50<sup>th</sup> sample; duplicate values were within acceptable threshold values. Plotted geochemical values can be found in the Appendix.

## **About Mayo Lake Minerals Inc.:**

Mayo Lake Minerals is a private company focussed on the rapid development of precious metal projects in the Mayo Mining District of the Yukon Territory. It has a 100% interest in 1758 claims in 7 claim groups, totalling 355 km², within the Tombstone Belt of the Tintina Gold Province (TGP) in the Yukon Territory and plans on adding to its portfolio in the near future. It currently has 11,512,500 common shares outstanding.

This press release contains certain forward-looking statements, which are based on the opinions and estimates of management at the date the statements are made, and are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected. MLM undertakes no obligation to update forward-looking statements if circumstances or management's estimates or opinions should change. The reader is cautioned not to place undue reliance on forward-looking statements.

#### For additional information contact:

Darrell Munro, BB.A, LL.B, Corporate Administration

E-mail: darrellmunro@rogers.com

Tel: (613) 836-0198

Vern Rampton Ph.D, P. Eng, President and CEO

E-mail: <a href="mailto:vrampton@rogers.com">vrampton@rogers.com</a>

Tel: (613) 836-2594

### Mayo Lake Minerals Inc.

107 Falldown Lane, P.O. Box 158, Carp, Ontario K0A 1L0 CANADA







