Kirkland Lake Gold Inc.

REVIEW OF RESOURCES AND RESERVES
OF
MACASSA MINE
KIRKLAND LAKE, ONTARIO

At January 1, 2013

Photo courtesy Chris Evans

Macassa Mine, Mill Expansion Underway, June 24, 2013

Technical Report

Prepared by

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Glenn R. Clark & Associates Limited

June 24, 2013: Effective date January 1, 2013

TABLE OF CONTENTS

FIGURES

TABLES

PHOTO

REVIEW OF RESOURCES AND RESERVES
OF MACASSA MINE, KIRKLAND LAKE, ONTARIO
January 1, 2013

1: SUMMARY

Kirkland Lake Gold Inc. (KLG) engaged Glenn R. Clark & Associates Limited (GRCA) to review the Resources and Reserves of the Macassa Mine at Kirkland Lake, Ontario, Canada. The review was made by Glenn R. Clark, P.Eng., in compliance with the requirements of National Instrument 43-101 for technical reports. The property was visited April 15 – April 19, 2013. The Reserves and Resources estimates reflect the position at January 1, 2013.

1.1 Property:

The Macassa Mine is in the Municipality of Kirkland Lake within Teck Township, District of Timiskaming, in the eastern part of Northern Ontario, Canada. Macassa is at approximately 48°10′ N Latitude and 80°2′ W Longitude at an elevation of approximately 1000 feet (305 m). Kirkland Lake is approximately 370 miles (600 km) by road north of Toronto.

The Macassa Mine started production in 1933.

KLG holds title to 251 mining claims in Teck and Lebel Townships. There are 186 patented claims, 11 crown leases and 54 staked claims.

1.2 History:

The Kirkland Lake mining camp has been a prolific gold producer since mining began there in 1915. The Macassa Mine and the 4 former producers that KLG now owns have produced about 22 million ounces of gold since 1917. The production from these 5 mines accounts for about 90% of the historical production from the 7 mines in the Kirkland Lake mining camp.

The Macassa Mine started processing ore in October 1933. The first mill on the property began processing the ore at a rate of 200 tons per day. The milling rate increased over the years. In 1988 a new mill was built which could process 500 to 600 tons of rock and 750 tons of tailings per day. The current configuration can process about 1500 tons per day of mine ore.

In 1986, the No. 3 Shaft was sunk from surface to 7,300 ft. At that time, this shaft was the deepest single lift shaft in the Western Hemisphere.

Rock burst activity was quite common in the deeper sections of the mines in the Kirkland Lake camp. Macassa was not an exception and in November 1993 a rock burst collapsed 2 stopes at the 6700 level and in April 1997 another burst damaged the No. 3 shaft at the 5800 level. Both these occurrences created work stop interruptions at the mine otherwise it would have operated continuously from 1933 to 1999. The rock burst on April 12, 1997 limited mining to above the 5025 level. The restriction was changed in October 1998, allowing mining above the 5300 level.

Operations at Macassa were suspended in 1999 due to the declining price of gold. The workings were allowed to flood in 2000.

From 1933 to 1999, Macassa produced about 3.5 million ounces of gold from 7.9 million tons of ore. The head grade during that period averaged 0.47 oz Au/ton and the recovered grade was 0.45 oz Au/ton.

In May of 2002 the Macassa mill was restarted and processed Lake Shore tailings at a rate of 880 tons per day. An additional 45 thousand tons of surface rock from Lake Shore and the Teck-Hughes properties were also processed.

In December 2002 underground mining at Macassa recommenced.

1.3 Corporate History:

Macassa Mines Ltd. was incorporated in 1926 and evolved through a succession of mergers to become a division of Lac Minerals Ltd. in 1982. The merger consolidated the properties of the Little Long Lac group into one entity and the Macassa Mine and the other Kirkland Lake properties were included.

Lac Minerals was acquired by Barrick Gold Corporation in August 1994. After a short period of operation by Barrick the property was sold to Kinross in May 1995. Foxpoint purchased the Kirkland Lake properties of Kinross in December 2001. This purchase included the Macassa Mine and all of the plant.

Foxpoint changed its name to Kirkland Lake Gold Inc. in October 2002.

KLG purchased the mining assets that Kinross owned in and around Kirkland Lake for $5 million and the assumption of $2 million in reclamation bond obligations related to the closure plan for the properties. In addition, royalties must be paid to previous property holders. The royalty payable to Kinross was fully paid in October 2011.

1.4 Geology:

The Kirkland Lake mining camp is located in the west portion of the Archean Abitibi greenstone belt of the Abitibi Subprovince that forms part of the Superior Province in the Precambrian Shield.

The Timiskaming Group of rocks is the main feature of the Kirkland Lake area. It is up to 10,500 feet thick and extends for about 40 miles from Kenogami Lake in the west to the Quebec border in the east. In the Kirkland Lake area, the Timiskaming is predominantly conglomerates and sandstones, trachytic lava flows and pyroclastic tuffs. The Timiskaming trends N65°E and dips steeply south at Kirkland Lake. Immediately east of Kirkland Lake, the formations are warped to an east-southeast direction and then return to an east-northeast direction at Larder Lake and continue this way to the Québec border.

The Timiskaming sediments are intruded by syenite porphyries and lamprophyre dykes and sills. Alkali stocks have intruded the Timiskaming Group and the supracrustal assemblage along the south margin of the synclinorium. Matachewan diabase dykes trending north-northeast cut all rocks in the area.

At the Macassa Mine the Timiskaming tuffs, conglomerates and the syenite porphyries are encountered. The syenites are the preferential hosts of the gold mineralization. Most of the mine workings are also in the syenites.

The Kirkland Lake-Larder Lake Break, and its associated splay faults and fracture system, form a complex, major structural feature which transects and follows the trend of the Timiskaming Group at Kirkland Lake. This Break can be traced for about 200 miles from Matachewan west of Kirkland Lake all the way to the Grenville Front east of Louvicourt, Quebec. As well as Kirkland Lake, it passes through, or near, the important mining areas of Larder Lake, Rouyn-Noranda, Cadillac, Malartic, Val d'Or and Louvicourt. Numerous gold occurrences and gold mines are spatially related to this regional structure.

The fault or break system that hosts the Kirkland Lake gold deposits is north of the main Kirkland Lake-Larder Lake Break.

At Macassa, the Kirkland Lake structures have been mined from 2,175 ft. to 5,600 ft. (660 m to 1,700 m) with the Main Break being the most important zone in the eastern part of the mine. The '04' Break is in the western part of the property and is the main producing break at Macassa. It has been mined from the 4375 Level (1,330 m) to the bottom of the mine and it is known to continue deeper.

KLG has discovered the D zones and other very significant zones to the south of the historically productive main structures in the Kirkland Lake Camp. These zones are now considered the South Mine Complex (SMC). These significant new zones are flatter lying than the main zones. The Upper and Lower D zones strike to the NE, oblique to the main structures. The strike of the other zones in the SMC is parallel to the main structures.

The resources and reserves considered in this report include the traditional main structures as well as the zones in the South Mine Complex (SMC).

1.5 Mineralization:

The gold mineralization is located along the breaks and subordinate splays as individual fracture fill quartz veins from several inches to as much as 12 feet thick. Veins may be of single, sheeted or stacked morphology. Several generations of quartz deposition are evident from colour and textural variability and vein quartz is generally fractured.

The presence of a fault splay is often a prerequisite for gold deposition. Broader zones of mineralized, brecciated and fragmented quartz are found in the footwall and hanging wall of the major faults.

Gold is usually accompanied by 1% to 3% pyrite and sometimes is associated with molybdenite and/or tellurides. Silver is present, both amalgamated with the gold and in tellurides.

The presence of pyrite and silicification does not guarantee gold, however higher grade gold is almost always accompanied by increased percentages of pyrite and silica.

The new discoveries to the south (SMC) generally are of a different style of mineralization with wide sulphide systems rather than the quartz vein mineralization on the Main Break complex. These new, sometimes wide, zones are carbonate altered conglomerate, tuff and porphyry mineralized with up to 10% disseminated pyrite. Tellurides appear to be more prevalent in the SMC compared to the historical mineralized systems in particular the occurrence of the gold telluride mineral calaverite.

1.6 Resources and Reserves:

The resource and reserve estimations were completed by the Macassa geological staff, under the supervision of S. Carmichael, P.Geo.

The methods used and the classification of the resources and reserves meet the requirements of National Instrument (NI) 43-101.

The Proven and Probable Reserves were diluted depending on the mining method and the size and the width of the zone. The average dilution for these estimations was 31%. All the dilution was accounted for at a grade of 0.02 oz Au/ton.

The Proven and Probable Reserves are only 94.2% of the estimated size of the zones to allow for recovery losses due to pillars and other reasons.

The Proven and Probable Reserves are diluted and recoverable. There has been no dilution added to the Measured and Indicated Resources and no allowance for recovery has been made.

Table 1: Estimated Proven and Probable Reserves

ESTIMATED PROVEN AND PROBABLE RESERVES, JANUARY 1, 2013 (tons X 1000, grade oz Au/ton),(tonnes X 1000, grade g Au/t)						
Location	**Proven**		**Probable**		**Total P&P**	
	tons, t	**oz, g**	**tons, t**	**oz, g**	**tons, t**	**oz, g**
Main Zones	1,040 944	0.38 13.0	649 589	0.39 13.4	1,690 1,533	0.38 13.0
South Mine Complex	321 291	0.43 14.7	1,220 1,106	0.55 18.9	1,541 1,398	0.52 17.8
Total	**1,361** **1,235**	**0.39** **13.4**	**1,869** **1,696**	**0.49** **16.8**	**3,230** **2,931**	**0.45** **15.4**
Due to rounding there may be some small discrepancies in the numbers.						

The total of the Estimated Proven and Probable Reserves of Macassa Mine at January 1, 2013 is 3.2 million tons at a grade of 0.45 oz Au/ton, (2.9 million tonnes @ 15.4 g Au/t).

The total of the Estimated Measured and Indicated Resources of Macassa Mine at January 1, 2013 is 3.8 million tons at a grade of 0.49oz Au/ton (3.5 million tonnes @ 16.8 g Au/t).

In addition, there is an estimated 2.2 million tons at a grade of 0.52 oz Au/ton **(2.0 million tonnes @ 17.8 g Au/t)** that is classified as an Inferred Resource.

Of particular importance is the reserve in the South Mine Complex as shown in Table 1 above. The Proven and Probable Reserve is 1.5 million tons at a grade of 0.52 oz Au/ton **(1.4 million tonnes @ 17.8 g Au/t.**

1.7 Mining and Processing:

Mining and processing at Macassa has been carried out since 1933. The mineral extraction has been from underground stopes. The processing has been done on the property.

The Macassa Mine employs conventional drill and blast mining methods to extract the ore. Access to the mining areas is by shafts.

The ore is processed by conventional cyanide leaching with a carbon-in-pulp recovery system.

The KLG forecast is to mine and process 547 thousand tons in fiscal 2014. The head grade anticipated is 0.36 oz Au/ton (recovered grade of 0.36 oz Au/ton). The KLG guidance is that they will sell 150-180,000 ounces of gold in fiscal 2014 (May 1, 2013 to April 30, 2014).

The head grade is lower than the reserve grade due to the mining of some lower grade ores encountered through development. It is expected that the head grade will increase over the next few years. This will be accomplished as more of the production comes from the South Zones.

1.8 Mining Method:

Mining is mostly by the cut and fill method, however some long hole stoping is done where suitable. Level trains move the ore to the main ore passes for hoisting to surface.

All of the stopes are now being filled with paste backfill or rock fill capped by paste backfill. Previously the stopes were filled with cemented rock fill.

When the stopes are filled, the upper part of the fill has a higher content of cement to make a better floor for the next round of mining. This better floor cuts down on dilution while mucking the ore. The better floor allows a better clean-up of the gold bearing fines that are on the floor. Macassa now specifically cleans the fines from the floor prior to filling. This is important for the gold recovery from all of the stopes but it is be particularly important for the higher grade stopes in the SMC.

These mining methods recover about 94.2% of the ore.

1.9 Processing the Ore:

The company's mill was built in 1988 with a modern larger mill replacing the older mill. Some modifications have taken place since then and the mill capacity now is about 1500 tons of ore a day. However further modifications are underway and will be completed in 2014. This will allow the throughput tonnage to rise to 2200 tons per day.

The ore at Macassa is treated by conventional means. These are crushing and grinding followed by cyanidation, with the gold recovered from solution by the carbon-in-pulp technique. The bullion contains some silver.

Gold recovery has been good at Macassa. In the 20 year period from 1980 to 1999 the average recovery was 95.8%. Since 2006 KLG's gold recoveries have ranged from 97.4% to a low of 95.7%. It is anticipated that the gold recovery will be similar in 2014 and the forecast is based on a recovery of 96%.

The mill will be able to process all of the ore that can be delivered from the mine.

1.10 Operating Cost:

KLG has estimated the operating cost for the 12 month period from May 2013 to April 2014 (fiscal 2014). This plan calls for milling a total of 547 thousand tons for the period. The average head grade is forecast at 0.36 oz Au/ton and a total of approximately 188 thousand oz Au are estimated to be recovered.

The total cash operating cost per ton milled is forecast at $232 per ton. The total operating cash costs per ounce milled is forecast at approximately $670.

1.11 Capital and Exploration Costs:

The capital and exploration costs for the mine for the 12 month period ending April 2014 are estimated at $87.8 million. Included in this cost is $38.5 million for capital equipment and projects, $40.0 million for underground development and $9.4 million for exploration in the mine mostly directed at the SMC. This exploration cost includes diamond drilling as well as drifts and cross-cuts specifically driven to aid the exploration. An additional $1.2 million of exploration costs is included in the underground development capital costs.

1.12 Exploration:

The South Mine Complex has been a very significant new find as it has a different character than the main zones that have been mined historically at Macassa. Some of the veins within the complex have larger widths and much higher grades than the main zones. The SMC veins are some distance from the main zones and strike generally parallel to the main structures. The dips of the main zones are steep, however the dips of the SMC are flatter.

These new, wide, hydrothermally altered zones could represent a new plumbing system for a southern mineralized part of the Camp parallel to the Main Break, fed by a deep porphyry body.

There is great exploration potential as there is no drilling between surface and the new discoveries (a mile below). There is a strong possibility for additional parallel and stacked zones both above and below the new zones.

KLG's exploration program will be directed at expanding the potential of these zones along strike and dip. This will require drilling long holes from underground. To maximize the drilling, drifts and drill bays will be required to locate the drills properly.

In addition exploration of known nearer to the surface zones is being carried out.

1.13 Conclusions:

The Resources and Reserves estimates truly reflect the mineralization that is currently known. The estimates conform to the requirements of National Instrument 43-101. The SMC Resources and Reserves have been estimated using the same methodology as Macassa normally uses.

In general the aggressive development and exploration program initiated by KLG should continue.

Increased exploration and development underground is necessary to establish sufficient working faces to allow flexibility in the mining sequence. More working faces will allow the rate of production to rise without sacrificing the mill head grade.

Increased tonnage to the mill will allow it to operate at the optimum level.

1.14 Recommendations:

There are two parameters in the Resource estimation that need to be monitored and modified if indicated.

1: The first is the assay capping or cutting. This can have a larger effect on the resources than the density. The capping of assays is an important part of the Resource estimations. There are a number of ways to establish the cap method and the method used by Macassa appears to be sufficient at present. However, it is known that all zones are not the same and the cap for one zone may not be proper for another zone. Changing mineralization or even the size and distribution of the gold will affect the necessary capping level.

Macassa has been active in the pursuit of the proper capping levels and this work needs to be continued as more information becomes available. As mining progresses in the SMC the capping of assays should be considered along with the mining reconciliation.

2: The second is the dilution. Dilution affects the Reserves more than any change that one could foresee from the density or the assay capping. Every effort should be made to monitor the dilution. This monitoring is important so that the proper dilution can be applied to the Reserve estimations. The mining reconciliation studies should help determine the dilution.

More importantly, dilution is expensive and by monitoring the dilution it may be possible to recognize the reason and rectify it with a change in the mining practice.

In the past two years the minimum mining height or width has been increased necessitated by the mining method and the equipment. This increased the tonnage but lowered the grade of the Reserves and Resources. The larger minimums have not cut down on the mining dilution and the overall dilution is still high

This is a continuing challenge at Macassa, exemplifying the need for the geology department and the mining department to work together to mine with minimal dilution.

2: INTRODUCTION

2.1 General:

Kirkland Lake Gold Inc. (KLG) engaged Glenn R. Clark & Associates Limited (GRCA) to review the Resources and Reserves of the South Mine Complex, Macassa Mine, Kirkland Lake, Ontario, Canada. The review was made by Glenn R. Clark, P.Eng., in compliance with the requirements of National Instrument 43-101 for technical reports. The property was visited April 15 – April 19, 2013. The Reserves and Resources estimates reflect the position at January 1, 2013.

The intention from now on is to have the Resources and Reserves reviewed annually at the end of the calendar year rather than the fiscal year as was done prior to 2012.

There are a number of previous reports regarding the Macassa Mine. The information in these technical reports and the information supplied by KLG is relied upon for this review. The most recent reports were prepared by Glenn R. Clark & Associates Limited. The latest report is a "REVIEW OF RESOURCES AND RESERVES OF MACASSA MINE, KIRKLAND LAKE, ONTARIO" dated May 29, 2012. Previous reports by GRCA dated April, 2011; July 14, 2010; July 16, 2009; July 15, 2008; October 31, 2007; August 25, 2007; July 18, 2006 and September 9, 2005 and reports prepared by the Mine staff dated, April 30, 2004 and April 30, 2003 are available on KLG's web site (www.klgold.com). Most of the reports have been filed with Sedar (www.sedar.com). A list of references is available in section 27 of this report.

KLG periodically releases the results at the Macassa Mine including the on-going exploration at the mine site. This information can be accessed on their web site and on Sedar.

2.2 Terms and Definitions:

This report contains a number of acronyms and technical terms that may not be initially clear to the reader.

A list of these terms is available in Appendix A attached to this report.

2.3 Units of Measure:

All units are in Imperial measure unless otherwise noted.

Monetary values are in Canadian dollars unless otherwise noted.

3: RELIANCE ON OTHER EXPERTS

3.1 Resources and Reserves:

The Resources and Reserves were estimated by the Macassa Mine geology staff. The proposed resource and reserve blocks were reviewed and approved by the mining department. The estimation method and the application were audited by Glenn R. Clark, P.Eng.

The production results were supplied by the mine and mill divisions of the Macassa Mine.

3.2 Previous Reports:

The report utilizes the previous reports for the background information regarding the Macassa Mine.

3.3 Preparation of the Report:

The report has been prepared by Glenn R. Clark, P.Eng.

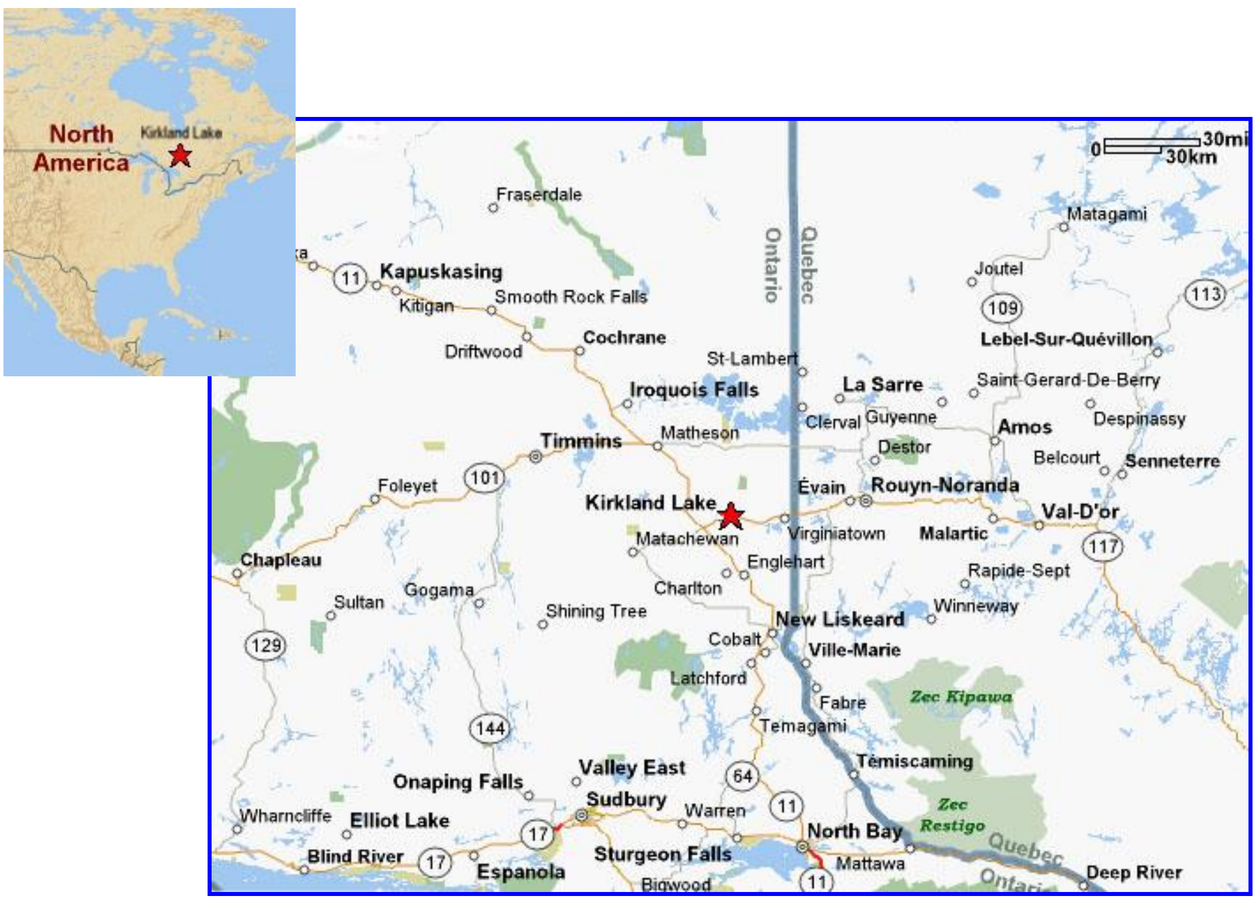
4: PROPERTY DESCRIPTION AND LOCATION

4.1 Description:

KLG holds title to 251 mining claims in Teck and Lebel Townships. There are 186 patented claims, 11 crown leases and 54 staked claims. Macassa Mine is the only currently active operating mine within these property groups.

4.2 Location:

The Macassa Mine is in the Municipality of Kirkland Lake within Teck Township, District of Timiskaming, in the eastern part of Northern Ontario, Canada. Macassa is at approximately 48°10′ N Latitude and 80°2′ W Longitude at an elevation of approximately 1000 feet (305 m).



Scale: 1:4,000,000 approx. Maps from Mapquest.com

Figure 1: Location of Macassa Mine

4.3 The Claims:

KLG holds title to 251 claims and Crown Leases in the Kirkland Lake area covering a total of approximately 9,849 acres of mineral rights in Teck and Lebel Townships. (Figure 2)

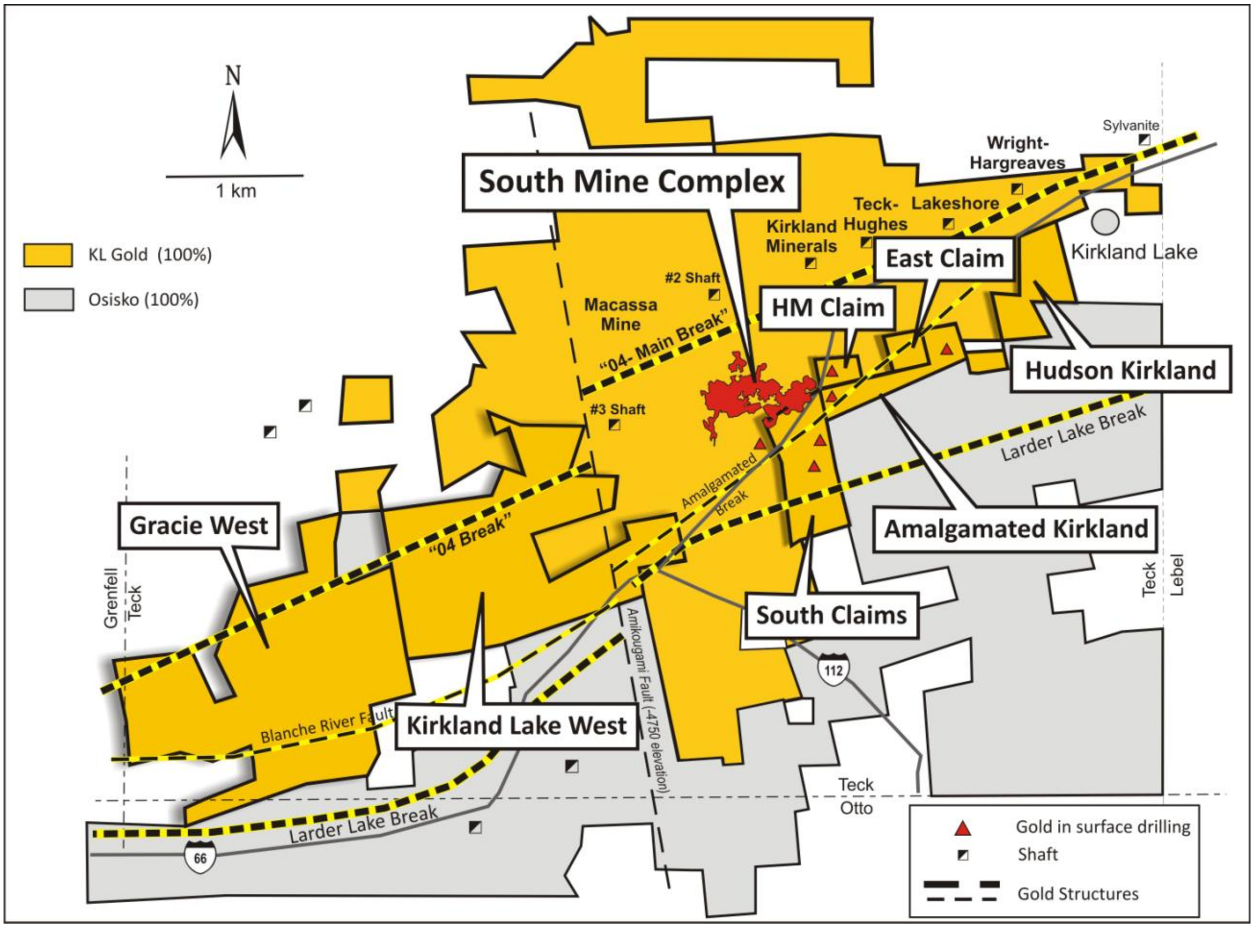
There are 161 patented claims covering 6,214 acres of mineral rights. These claims are surveyed and do not require assessment work to be done each year. Some of the patented claims (25) are only for surface rights. There are 11 Crown Leases covering 721 acres. These leases are surveyed and do not require assessment work each year. Taxes have to be paid on both the patented claims and the crown leases.

There are 54 staked claims. These claims are not surveyed and require a minimum assessment work to be done each year. In the second and all subsequent years, a minimum of $400 of assessment work per 16 ha (40 acres) claim unit per year is to be reported until a lease is applied for. The work does not have to be done on each claim as it can be spread over adjacent claims and excess work in a year can be used for later years. The staked claims will not require the $400 exploration expenditures as stated above until 2014. There are enough excess work credits to keep the claims in good standing for at least another 10 years.

All the claims are located in eastern Teck Township and western Lebel Township. They cover the properties of Macassa Mine including the Tegren property at the west end of the mine strip. To the east of Macassa the properties cover the past producing mines of Kirkland Lake Gold, Tech-Hughes, Lake Shore and Wright-Hargreaves. The Lebel claims are not contiguous with the main property. A list of all the claims and a plan showing the individual boundaries is available in Appendix C.

KLG had three separate agreements with Queenston Mining. On March 28, 2012, KLG purchased the joint venture properties from Queenston. The properties are now owned 100% by KLG.

The resources attributed to Queenston at January 1, 2012 now are included as part of the KLG resources on January 1, 2013.



Drawing supplied by KLG *Townships are 10 miles square*

Figure 2: Property Distribution

4.4 Maintaining the Claims:

To maintain these mining interests in good standing, taxes must be paid to MNDM, the town of Kirkland Lake and advance royalties paid to various royalty holders. In addition the staked claims need to have assessment work done as mentioned above.

In fiscal 2013, KLG reported that the Municipal taxes were \$938,295, Ontario Government mining taxes were \$8,383, Regional land taxes were \$300.

The required assessment work totals \$36,000 per year. All of the staked claims are in good standing until 2014. There is sufficient excess assessment work completed that can be applied to keep all of the claims in good standing for a further 10 years.

4.5 Royalties:

The net smelter return (NSR) royalty payable to Kinross until $15 million has been paid was discharged in October 2011.

Some of the mining claims are also subject to royalties payable to previous owners. The royalties differ depending on the claim and range from NSR royalties of 1% to 2%, production royalties of $0.10, $0.25, $1.50, $3.00 or $4.00 per ton mined or net profits royalties of 2% to 5%. Some claims have a royalty of 1% of gross proceeds from production or a net profit royalty of 20%.

The total royalties paid in fiscal 2013 were $112,078. In addition there is an advance royalty of $10,000 per year payable on certain claims if mining takes place on them. Mining is not currently being done on these claims.

5: ACCESSIBILITY, CLIMATE, LOCAL RESOURCES

5.1 Access:

The Macassa Mine is at the west end of the community of Kirkland Lake. The Mine is adjacent to Highway 66 just east of Highway 11. The area is serviced by railway and bus. Although there is a small airport at Kirkland Lake there currently is no scheduled service to the airport from southern Ontario.

Kirkland Lake is approximately 370 miles (600 km) by road north of Toronto.

5.2 Climate:

Climatic conditions are typical for the central Canadian Shield, with short, mild summers and long, cold winters. Mean temperatures range from –17°C (0°F) in January, to 18°C (64°F) in July, and mean annual precipitation throughout the region ranges from 812 to 876 mm (32-35 inches).

5.3 Local Resources:

The area is generally forested with the spruce and poplar that are typical for this part of the country. Logging for lumber and pulpwood is still carried out in the area.

There is adequate precipitation each year, rainfall and snow. The community and the mine always have sufficient water.

Farming is not carried out in the immediate area, however 30 miles south there is an area where farming is carried out.

5.4 Infrastructure:

Kirkland Lake has been a mining community since mining started at the Tough-Oakes Burnside Mine (later called the Toburn) in 1915.

Mining has been the major industry in the area. An experienced mining work force as well as mining services and equipment, are readily available in this area of northeastern Ontario and northwestern Quebéc that extends from Timmins to Val d’Or.

Power is supplied through the Ontario Hydro grid.

5.5 Topography:

The area is typical of the Canadian Shield, primarily covered by forest, swamps, and lakes, with relatively modest relief. Rock outcrops surrounded by glacial till are common. The till is generally not very thick but is in excess of 150 feet in some locations.

The area around the Mine is approximately 1000 feet above sea level.

6: HISTORY

6.1 Project History:

The Kirkland Lake mining camp has been a prolific gold producer since mining began there in 1915. The Macassa Mine and the 4 former producers that KLG now owns have produced about 22 million ounces of gold since 1917. The production from these 5 mines accounts for about 90% of the production from the 7 mines in the Kirkland Lake mining camp.

The Macassa Mine started in 1933. The first shaft was sunk in the main break zone in the late 1920's to a depth of 500 feet, however sufficient gold was not located and operations were halted. In 1931 the Macassa property was entered underground at the east end of the property from the adjacent Kirkland Lake Gold Mine from the 2475 level. This entry was successful in finding gold and in October 1933 the first mill on the property began processing the ore at a rate of 200 tons per day. The milling rate was increased to 425 tons per day in 1949 and to 525 tons per day in 1956. In August 1988 a new mill was built which could process 500 to 600 tons of rock and 750 tons of tailings per day. By 1996, modifications had increased capacity to 900 tons of rock per day and 1,000 tons of tailings per day. When mining was suspended in 1999, mill capacity was near 1,500 tons of rock per day.

In 1986, the No. 3 Shaft was sunk from surface to 7,300 ft. This shaft was the deepest single lift shaft in the Western Hemisphere.

Starting in 1988 and until October 1999, the tailings from the Lake Shore Mine were processed at Macassa. These tailings were recovered by either dry mining or by dredging.

Rock burst activity was quite common in the deeper sections of the mines in the Kirkland Lake camp. Macassa was not an exception and in November 1993 a rock burst collapsed 2 stopes at the 6700 level and in April 1997 damaged the No. 3 shaft at the 5800 level. Both of these occurrences created work stoppages, otherwise the mine would have operated continuously from 1933 to 1999. The rock burst on April 12, 1997 limited mining to above the 5025 level. The restriction was changed in October 1998, allowing mining above the 5300 level.

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Macassa Mines Ltd. was incorporated in 1926 and evolved through a succession of mergers to become Lac Minerals Ltd. in 1982. The merger consolidated the properties of the Little Long Lac group into one entity and the Macassa Mine and the other Kirkland Lake properties were included.

Lac Minerals was acquired by Barrick Gold Corporation in August 1994 and Barrick offered a number of Lac Minerals' mineral properties for sale. Macassa was included but then withdrawn. After a short period of operation by Barrick the property was sold to Kinross in May 1995. Foxpoint purchased the Kirkland Lake properties of Kinross in December 2001. This purchase included the Macassa Mine and all of the plant.

Foxpoint changed its name to Kirkland Lake Gold Inc. in October 2002.

Kirkland Lake Gold Inc. prior to December 14, 2001 had interests in other mining properties but these were all abandoned or otherwise disposed of.

KLG purchased the mining assets that Kinross owned in and around Kirkland Lake for $5 million and the assumption of $2 million in reclamation bond obligations related to the closure plan for the properties. In addition, Kinross will receive an NSR royalty from production. The purchase price was paid in installments and the purchase was completed in December 2003.

KLG restarted the Macassa mill in May 2002. The mill processed Lake Shore tailings at a rate of 880 tons per day. The grade of the tailings was 0.11 oz Au/ton and approximately 124 thousand tons were processed with gold recovery of 73%. An additional 45 thousand tons of surface rock from Lake Shore and the Teck-Hughes properties were also processed recovering 20,500 ounces of gold.

In December 2002 underground mining commenced.

6.3 Operational Period of the Mines:

Macassa	1933 – 1999	3,540,451 oz Au produced
Lake Shore	1918 – 1965	8,602,791 oz Au produced
Teck-Hughes	1917 – 1968	3,709,007 oz Au produced
Kirkland Lake Gold	1919 – 1960	1,172,955 oz Au produced
Wright-Hargreaves	1921 – 1965	4,821,296 oz Au produced
Total	**1917 – 1999**	**21,846,500 oz Au produced**

Note: During 1984 to 1988 there was some production from Lake Shore, Tech-Hughes and Wright-Hargreaves that was processed at the Macassa mill. This production has been included with the totals from each of these mines.

7: GEOLOGY AND MINERALIZATION

The geology of the area and the property has been described in previous reports. The most recent reports were by GRCA May 2012, April 2011, July 2010, July 2009, July 2008, October 2007 and Carmichael January 2007. The following brief geology descriptions are based on these and other previous reports and information gathered during the recent site visit.

More reports on the geology are referenced in Appendix B.

7.1 Regional Geology:

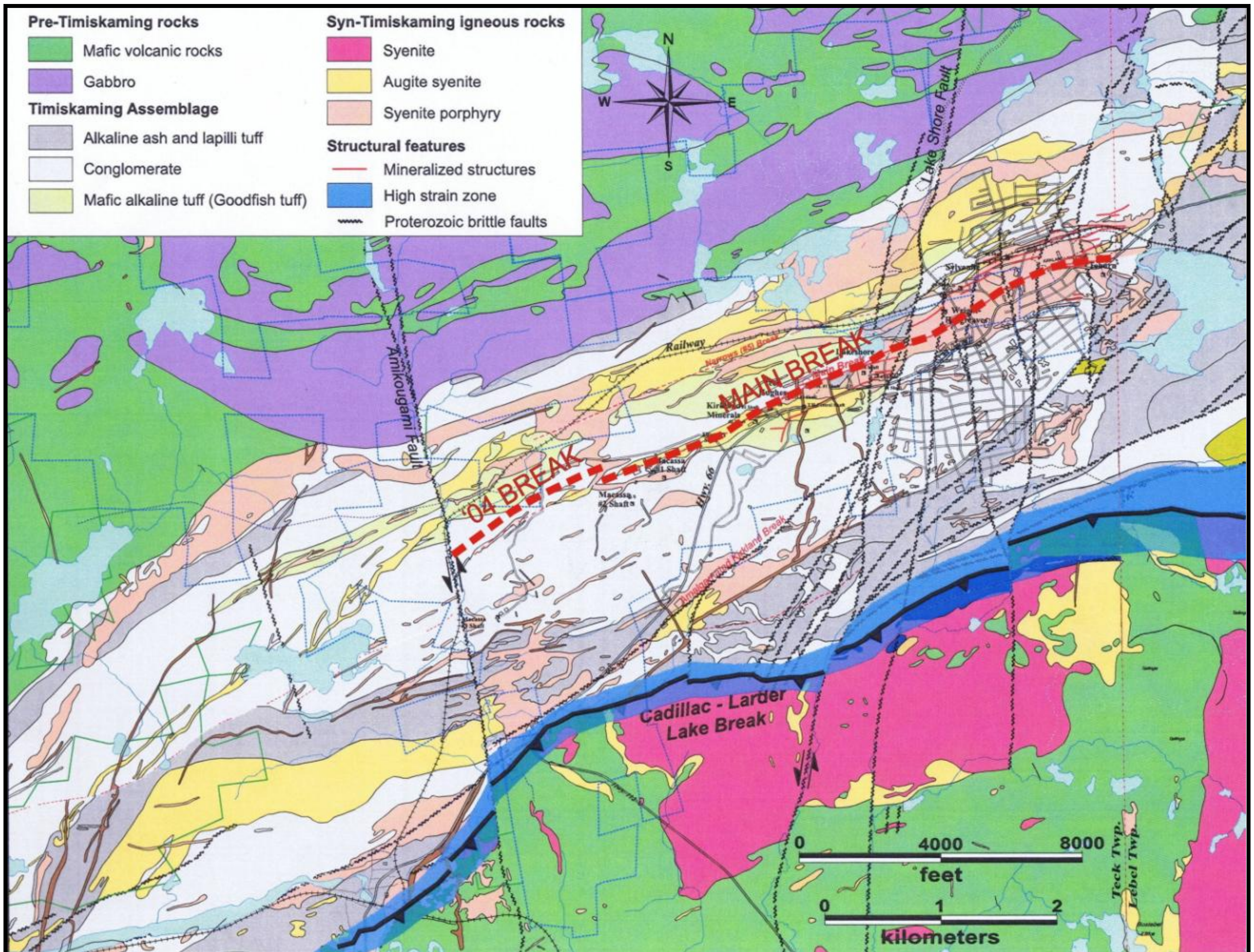
The Kirkland Lake mining camp is located in the west portion of the Archean Abitibi greenstone belt of the Abitibi Subprovince that forms part of the Superior Province in the Precambrian Shield.

In the Kirkland Lake area the Abitibi Subprovince is composed of komatiitic, tholeiitic and calc-alkaline volcanics, turbidite-dominated sedimentary lithologies, locally distributed alkaline metavolcanic rocks and associated fluvial sedimentary formations. These successions have been intruded by tonalite, trondhjemite and granodiorite batholiths.

Large scale structures and tectonic fabrics are distributed in domains with rock foliations generally paralleling the regional faults, intrusive contacts and domain boundaries. The regional shear zones, folding and steep reverse faults post-date the batholith emplacement. Metamorphism of the Abitibi rocks is generally very low greenschist facies however upper greenschist to hornblende facies may be attained in metamorphic aureoles surrounding intrusions.

7.2 Local Area Geology:

The Timiskaming Group of rocks is the main feature of the area. This Group forms part of a complex synclinorium that is flanked unconformably on the north and south by the mafic to felsic, massive to pillow volcanic rocks of the Kenojevis and Blake River groups. The Timiskaming Group is up to 10,500 feet thick and extends for about 40 miles from Kenogami Lake in the west to the Quebec border. In the Kirkland Lake area, the Timiskaming is predominantly conglomerates and sandstones, trachytic lava flows and pyroclastic tuffs. The Timiskaming trends N65°E and dips steeply south at Kirkland Lake. Immediately east of Kirkland Lake, the formations are warped to an east-southeast direction and then return to an east-northeast direction at Larder Lake and continue this way to the Québec border.



Geological setting of the Kirkland Lake gold system. Modified from Thomson (1945:OGS map 1945-1) and Ispolatov et al. (2005).

Drawing supplied by KLG

Figure 3: Geological Setting of the Kirkland Lake Gold System

The Timiskaming sediments are intruded by syenite porphyries and lamprophyre dykes and sills. Alkali stocks have intruded the Timiskaming Group and the supracrustal assemblage along the south margin of the synclinorium. Matachewan diabase dykes trending north-northeast cut all rocks in the area. (Figure 3)

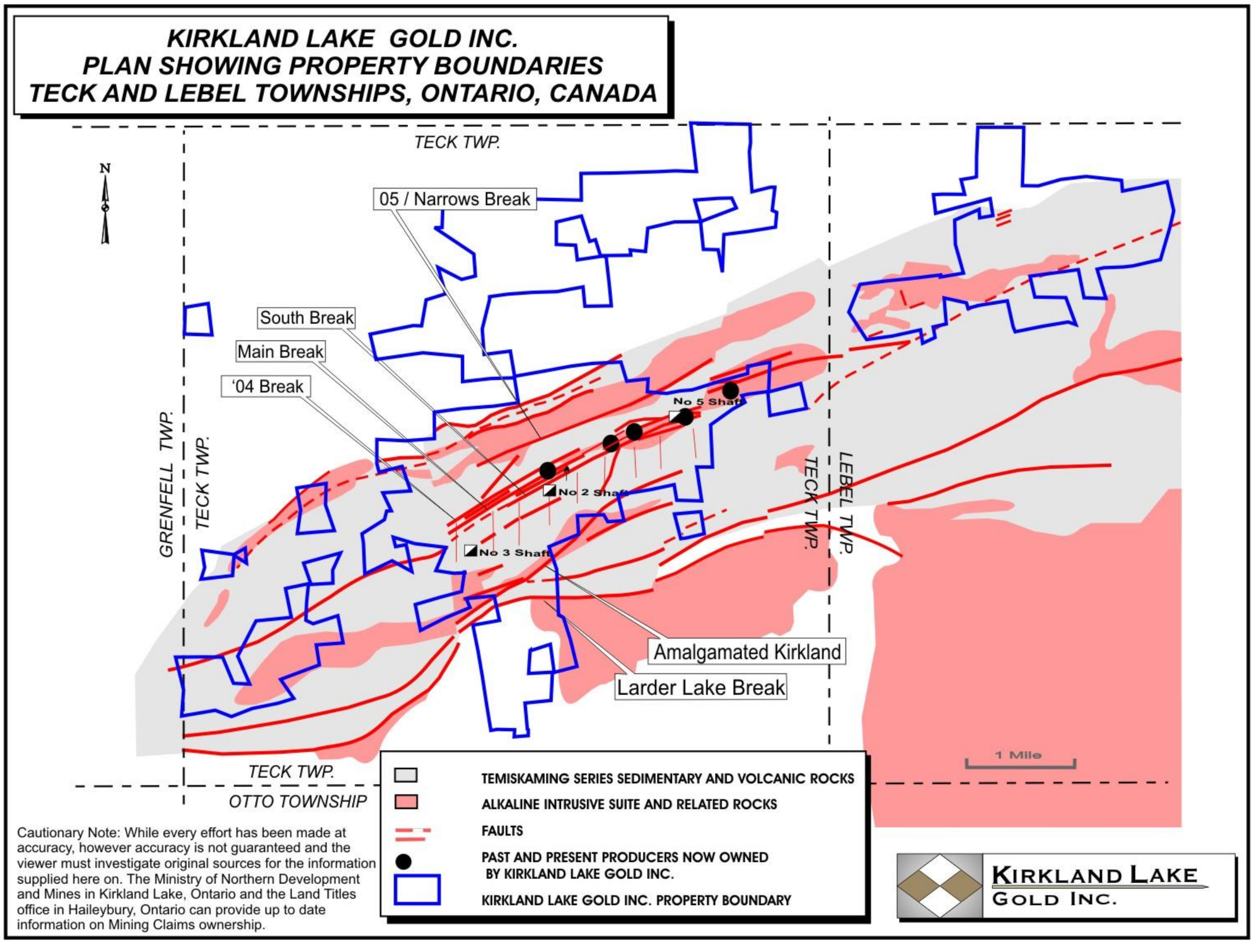
The Kirkland Lake-Larder Lake Break, and its associated splay faults and fracture system, form a complex, major structural feature which transects and follows the trend of the Timiskaming Group at Kirkland Lake. This Break can be traced for about 200 miles from Matachewan west of Kirkland Lake all the way to the Grenville Front east of Louvicourt, Quebec. As well as Kirkland Lake, it passes through or near the important mining areas of Larder Lake, Rouyn-Noranda, Cadillac, Malartic, Val d'Or and Louvicourt. Numerous gold occurrences and gold mines are spatially related to this regional structure.

The fault or break system that hosts the Kirkland Lake gold deposits is north of the main Kirkland Lake-Larder Lake Break.

Polyphase deformation has affected the Timiskaming rocks at Kirkland Lake. The fold axis and structural plunges, including gold ore shoots, generally trend west-southwest at -60°.

7.3 Property Geology:

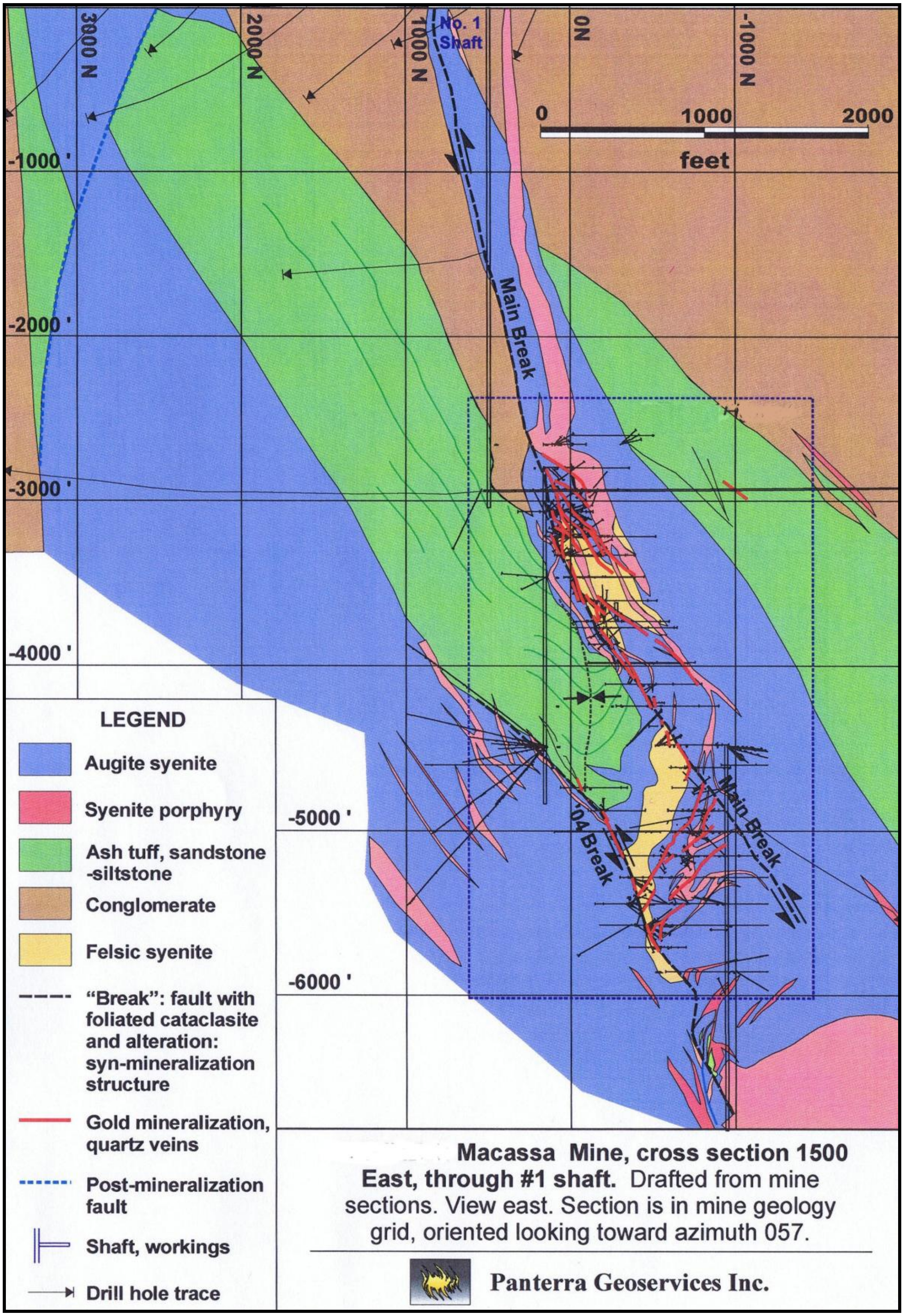
At the Macassa Mine the Timiskaming tuffs, conglomerates and syenites are encountered. The felsic syenites are the preferential hosts of the gold mineralization in the #1 and #2 shaft areas. The basic syenites are the preferential hosts in the bottom half of #3 shaft area and the tuffs in the upper portion of #3 shaft area.



Drawing supplied by KLG

Figure 4: Geology and Property Map

The Timiskaming age sediments are composed of pebble conglomerates, greywackes and finer inter-bedded wackes. Adjacent to and interlayered with these sediments are varied pyroclastic/lithic and volcanic ash tuffs. Both the sediments and volcanics are most commonly found on the north and south flanks of the elongated intrusive composite stock.



Drawing supplied by KLG

Figure 5: Macassa Cross Section

Augite or basic syenite is the oldest and most wide-spread of the intrusive types. Situated within this intrusive, there is a westerly plunging pipe-like mass of felsic syenite which enters the east end of the Macassa property at the 1300' sublevel elevation on the hanging wall side of the Main Break. Both the basic and felsic syenites are intruded by syenite porphyry. The porphyry unit exhibits sharply defined intrusive contacts while conforming fairly closely to the strike and dip of the regional formations. This composite stock dips steeply to the south and widens with depth.

The three main components of the syenitic stock and related dykes are augite syenite, felsic syenite, and syenite porphyry. These intrusive rocks are host to an important part of the ore at the Mine Complex.

North-south striking diabase dykes are known to intrude all sediments and intrusives as well as post-dating the ore forming structural breaks.

7.4 Mineralization:

The gold mineralization is located along the breaks and subordinate splays as individual fracture fill quartz veins, from several inches thick to as much as 12 ft. thick. Veins may be of single, sheeted or stacked morphology. Several generations of quartz deposition are evident from colour and textural variability and vein quartz is generally fractured.

The presence of a fault splay is often a prerequisite for gold deposition. Broader zones of mineralized, brecciated and fragmented quartz are found in the footwall and hanging wall of major faults.

Gold is usually accompanied by 1% to 3% pyrite and sometimes is associated with molybdenite and/or tellurides of lead, gold, gold-silver, silver, nickel and mercury (altaite, calaverite, petzite, hessite, melanite, coloradoite). Silver is present amalgamated with the gold and in the minerals petzite and hessite.

The presence of pyrite and silicification does not guarantee gold, however, higher grade gold is almost always accompanied by increased percentages of pyrite and silica.

Hematization or bleaching with carbonatization and silicification are commonly alterations of the wall rocks. Sericitization is a more local feature.

The alteration has enriched the rocks in K_2O and depleted them in Na_2O.

The new discoveries in the South Mine Complex (SMC) generally are of a different style of mineralization - wide sulphide systems rather than the quartz vein mineralization on the Main Break complex. Tellurides appear to be more prevalent in the SMC compared to the historical mineralized systems in particular the occurrence of the gold telluride mineral calaverite.

These new, wide, hydrothermally altered zones could represent a new plumbing system for a southern mineralized part of the Camp parallel to the Main Break, fed by a deep porphyry body. The gold mineralization is found in carbonate altered conglomerate, tuff and porphyry, mineralized with up to 10% disseminated pyrite. Hole 50-627 is an exception with the gold contained in porphyry-hosted quartz veining and silicification.

8: DEPOSIT TYPES

8.1 Gold Zones:

The gold mineralization at Macassa is found along breaks or faults, in veins as quartz filled fractures, as breccias and as sulphide (pyrite) zones.

There are a number of these breaks. They are named the ‘04’, ‘05’, No.6, Kirkland Lake Main and the Kirkland Lake North and South branches. The breaks trend about N60°E and dip steeply, 70° to 80° south in keeping with the Timiskaming trend.

At Macassa, the Kirkland Lake structures have been mined from 2,175 ft. to 6,955 ft. (660 m to 2,120 m) with the Main Break being the most important zone in the eastern part of the mine. The ‘04’ Break is in the western part of the property and recently was the main producing break at Macassa but this is changing. It has been mined from the 4375’ Level (1,330 m) to the bottom of the mine and it is known to continue deeper.

The ‘04’ Break is located about 600 ft. (185 m) north of the Main Break and connects to it by sigmoidal cross structures. The ‘04’ Break is a thrust or a reverse fault striking N65°E and dipping 80° to the south.

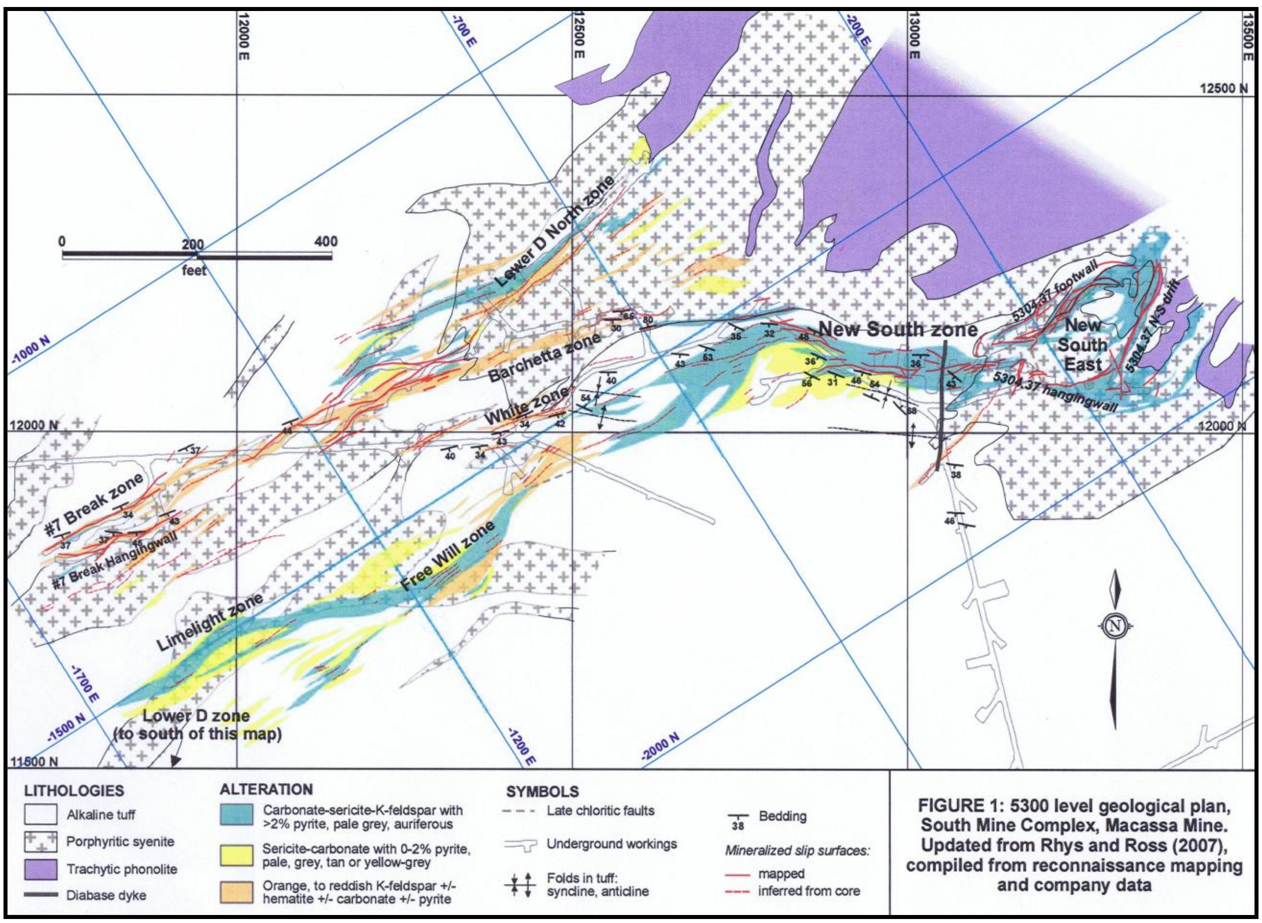
The ‘05’ Break is located some 1,400 ft. (425 m) north of the ‘04’ Break. It splays into north and south branches to the east. The South Branch, about 1,200 ft. (365 m) north of the ‘04’ Break, appears to correlate with the Narrows Break that extends to the east across the rest of the camp.

The trend of the gold mineralization in the Kirkland Lake camp conforms to the 60° westerly plunge of the syenite intrusives. Locally the plunge of the gold mineralization depends on the intersection of the host splay structures and can be quite different from the camp trend.

According to an internal report by Michael Sutton the higher grade shoots constitute about 30% of the overall gold-mineralized structures cutting the syenites.

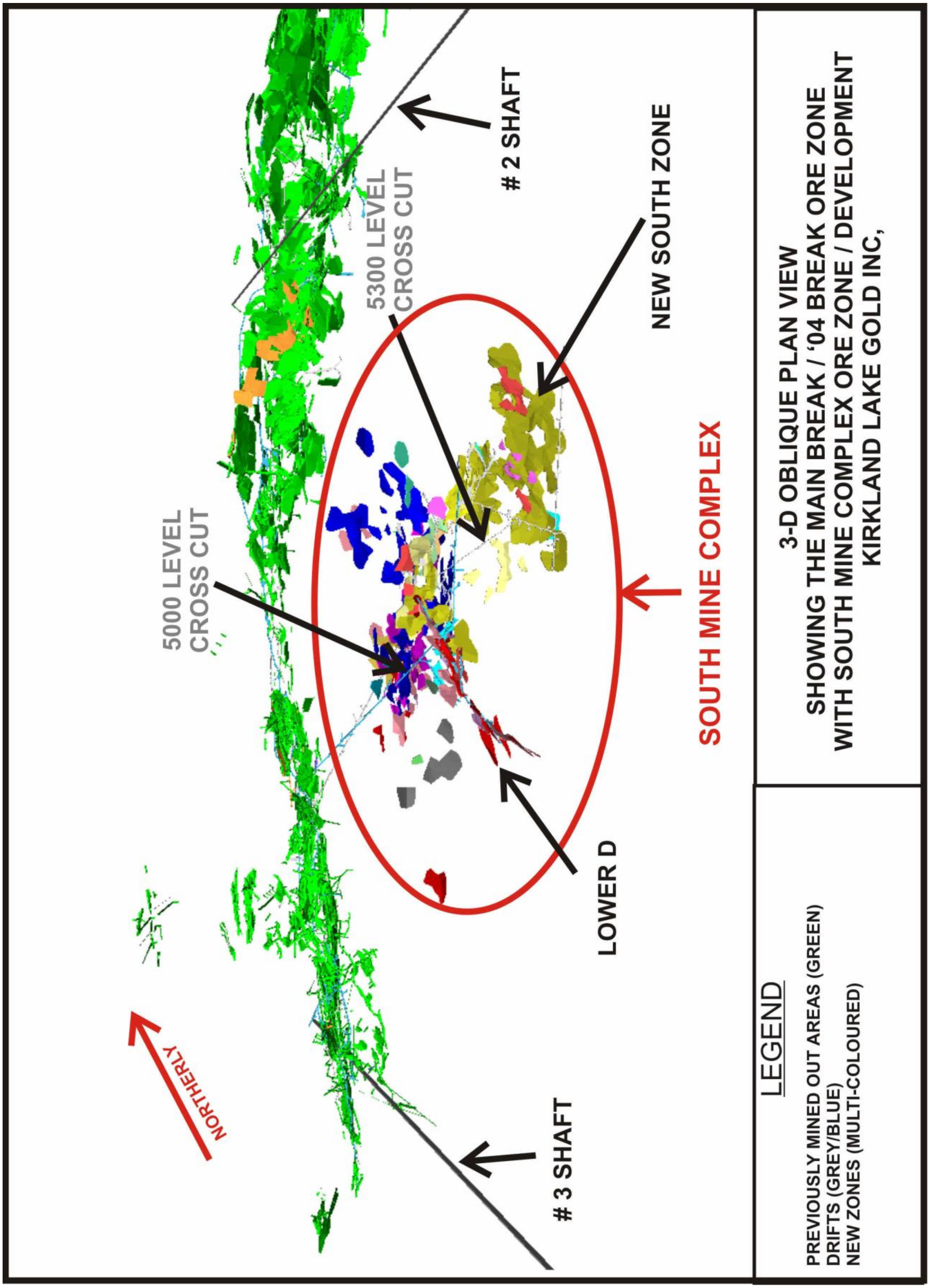
In addition to the mineral trends that have been historically productive, KLG has located significant mineralization in a number of zones to the south of these breaks. The Upper D Zone strikes N28° and dips 40° to the east. The other zones are all included in the area now called the South Mine Complex (SMC). The strike and dip of the zones in the SMC vary. The Lower D Zone strike varies from N5°E to N30°E and appears to dip 70-80° east, however this has not been confirmed by mining. It is possible that there is more than one ore structure/alteration halo giving the appearance of one steeply dipping structure. The Lower D North zones strike NE and dip 30-45° southeast. The other SMC zones (#7, White, YYZ, New South East and West, etc.) strike N60°E generally parallel to the main Kirkland Lake structures. All of these zones dip to the south and are generally flatter than the dip in the main structures. The #7 Zones dip 40-43° to the south. The White Zone and the YYZ Zone dip 50-60° to the south. The New South East and West zones dip 20-30° to the south. The relative position of these zones can be seen in Figures 6, 7 & 8.

Several strong northeasterly trending cross-faults offset the mine host rocks and mineralized zones with displacement usually to the south (dextral) and up on the west side. Major cross faults are the Lakeshore Cross Fault near the east end, the Tegren in the centre and the Amikougami Creek at the west end of the mine. The major gold bearing zones have not been found west of the Amikougami Creek Fault.



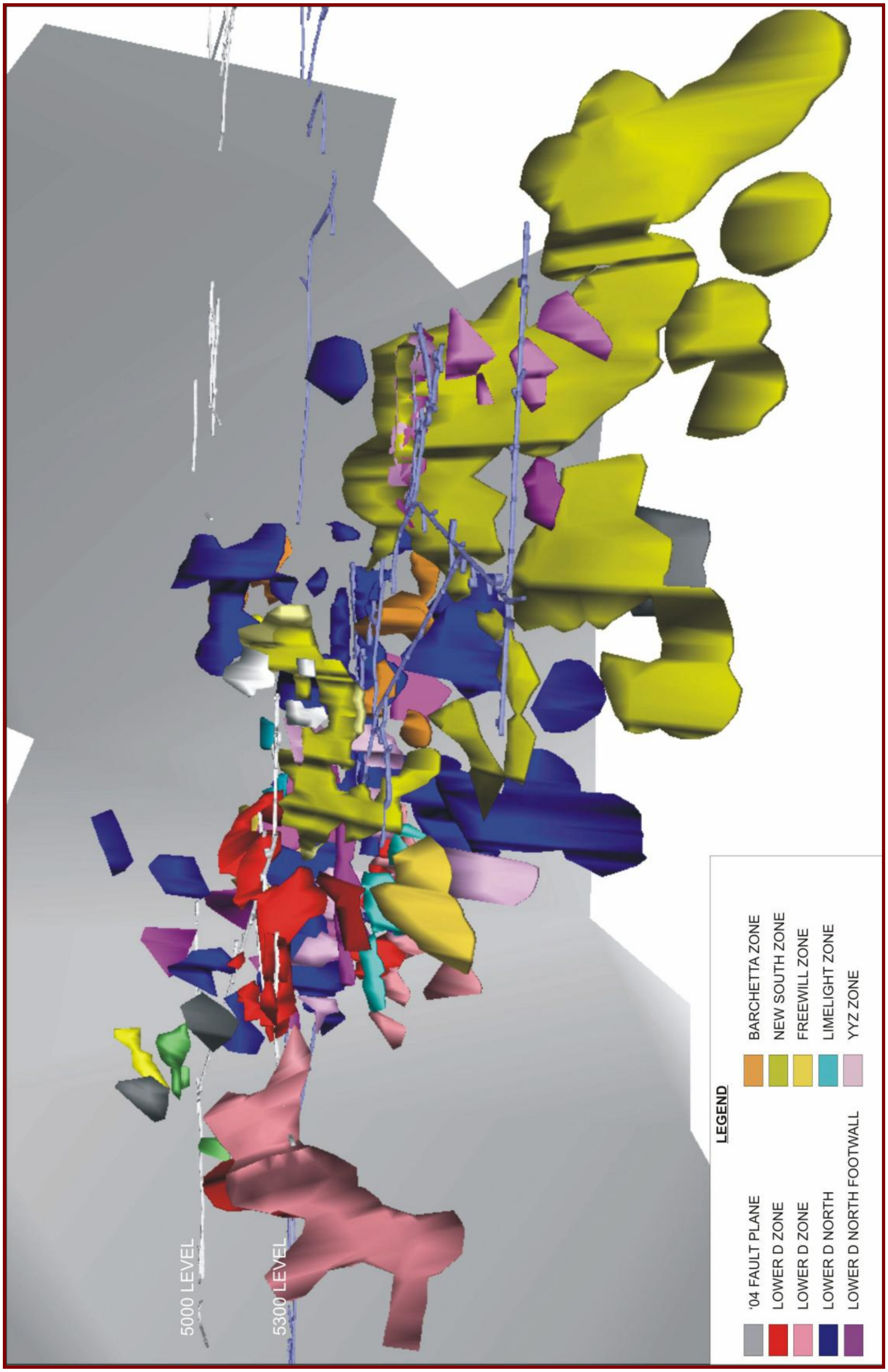
Drawing supplied by KLG

Figure 6: 5300 Level South Mine Complex Geology



Drawing supplied by KLG

Figure 7: Oblique View Showing Zone Locations



Drawing supplied by KLG *Oblique Longitudinal Section*

Figure 8: South Mine Complex Zones

9: EXPLORATION

KLG carries out a large exploration program on surface throughout their holdings in the Kirkland Lake Area and from underground from the Macassa Mine. Some of the exploration has been carried out jointly with a joint venture partner however at this time there is no exploration collaboration. In March 2012, KLG entered into a purchase agreement with Queenston to purchase their share of the joint venture. This purchase closed in August, 2012.

KLG is actively exploring the Kirkland Lake properties to extend the known zones and find new ones. This exploration is mostly being done by diamond drilling from underground. However, there is an active surface program of diamond drilling.

This program has been very successful, locating some very interesting gold zones. The target areas are the Main Break, Parallel Breaks and North South structures, such as the Lower D Zone and the newer South Mine Complex on the Company's land holdings. (Figures 6, 7, 8)

Development headings are driven to give properly located drilling stations. The development headings are also driven to access the mineralization that has been found and to confirm its nature.

The exploration program found "D" Zone and the south zones that are now referred to as the South Mine Complex. These zones are now part of the resource and reserve estimates however the full extent of these zones has not been established.

KLG will continue exploring their properties. These recent finds are very encouraging for further expansion of the resources and reserves by continuing exploration.

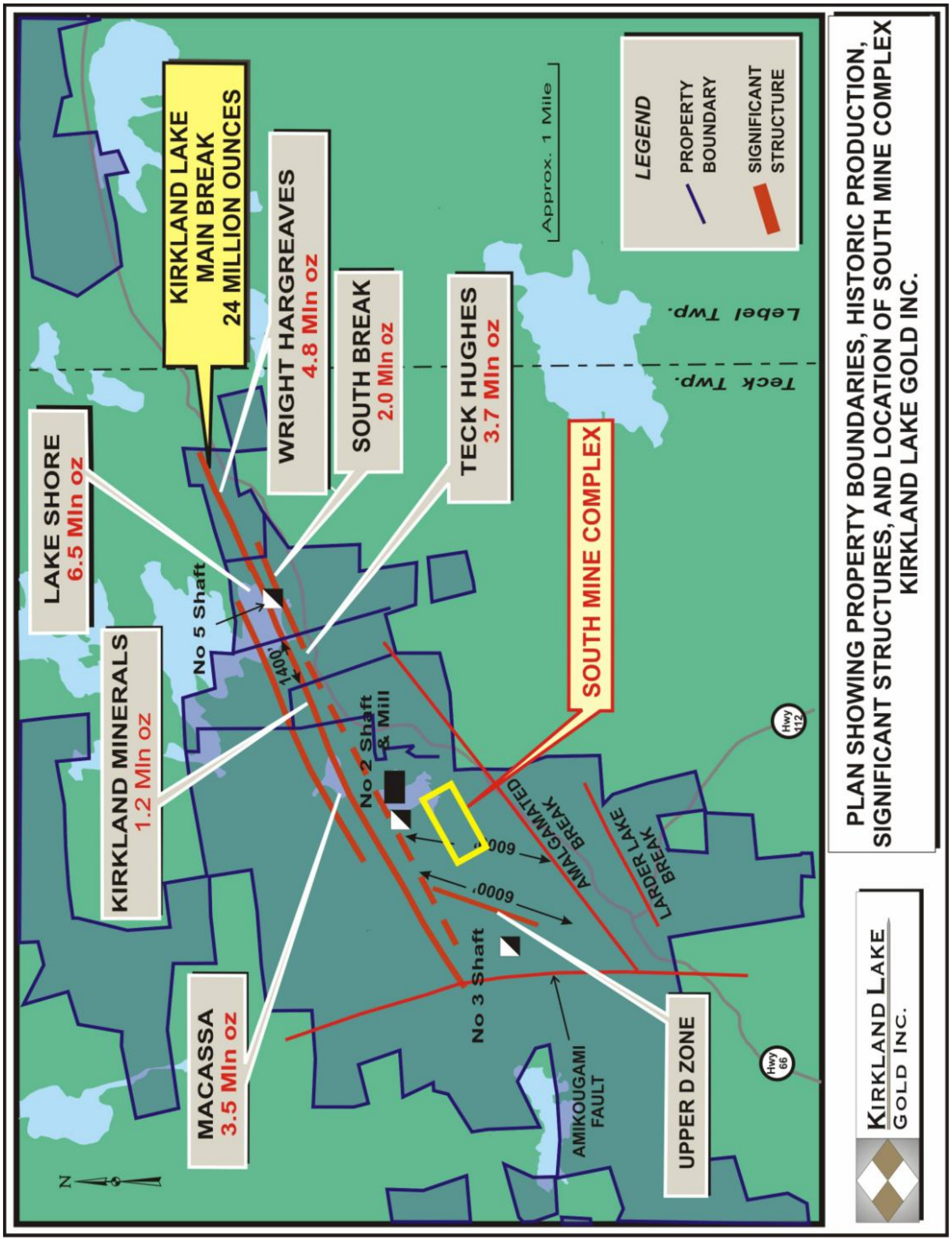
9.1 Significant New Finds:

The South Mine Complex (SMC) has been a very significant new find as it has a different character than the Main zones that have been mined historically at Macassa. Some of the systems within the complex have larger widths and much higher grades than the main zones. They are some distance from the main zones and strike generally parallel to the main structures but have a much flatter dip.

The first indication of these structures was highlighted in a press release on July 11, 2005. KLG reported an intersection of 90.4 feet assaying 2.3 ounces of gold (uncut) from Drill Hole 50-627.

Exploration of these zones is still continuing with continued expansion anticipated.

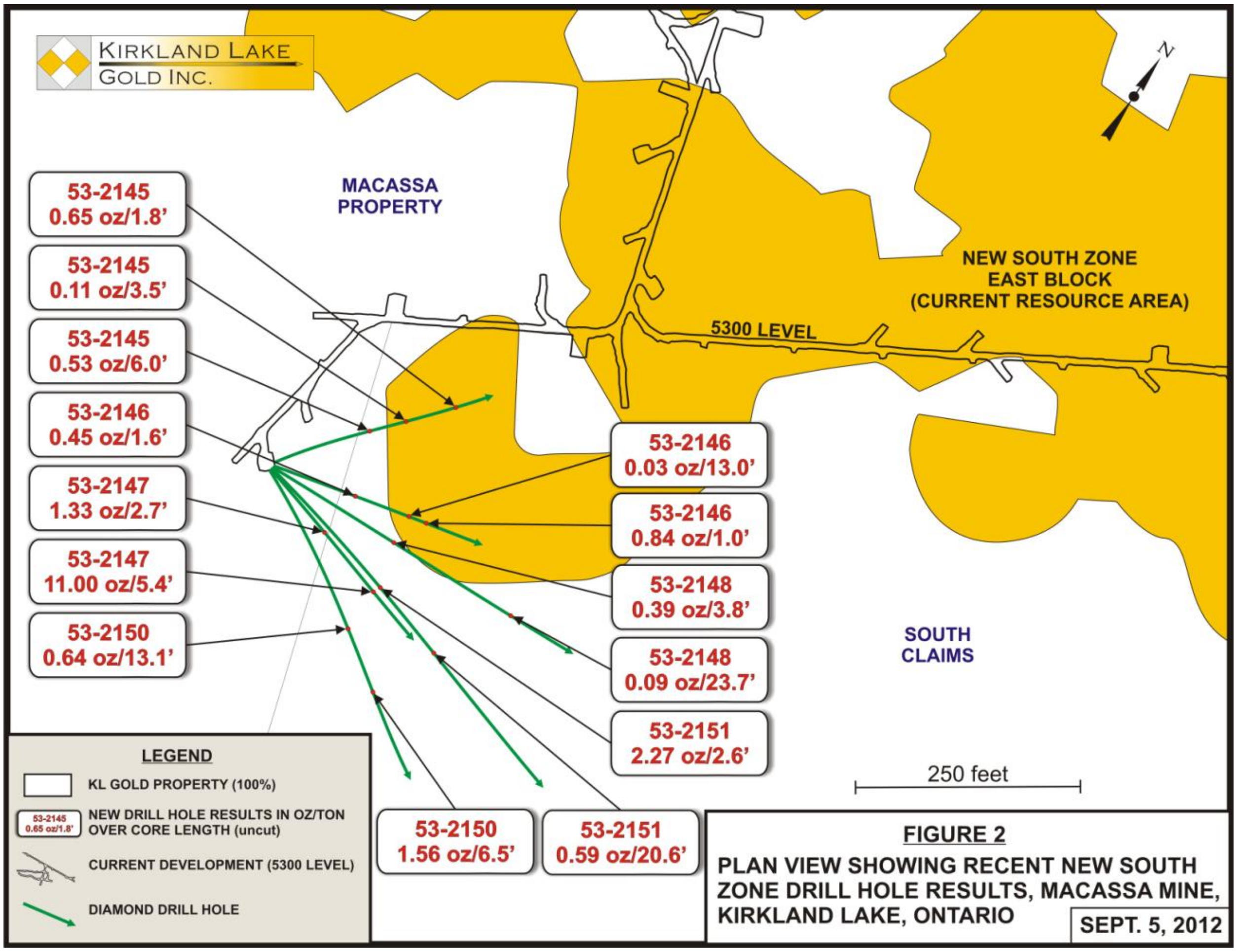
The SMC is now being mined and in fiscal 2013 it accounted for 53.0% of the tons mined and 69% of the ounces mined at Macassa.



Drawing supplied by KLG

Figure 9: Plan View Showing Exploration Targets

Since these initial holes in the South Zone KLG has continued drilling with good results. Some of the intersections are quite impressive. (Figures 10, 11)



Drawing supplied by KLG

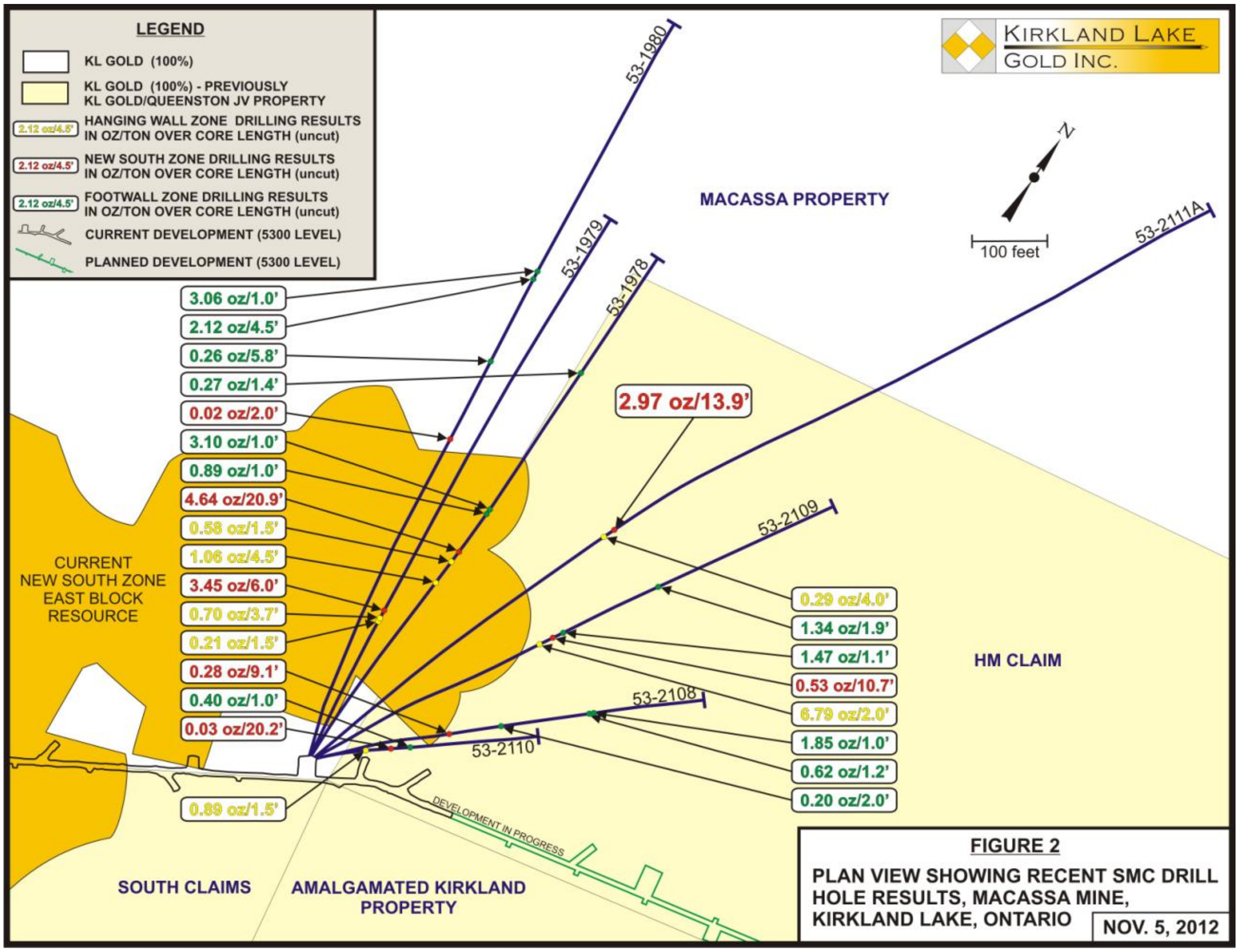
Figure 10: Plan View Showing Recent Drilling

The 5300 Exploration Drift, has intersected these zones and the sampling and mining results have confirmed their high grade nature.

The location of the South Zone relative to the other zones can be seen in the oblique view of the veins in Figures 7 and 8.

These new, wide, hydrothermally altered zones could represent a new plumbing system for a southern mineralized part of the Camp parallel to the Main Break, fed by a deep porphyry body.

There is great exploration potential as there is virtually no drilling between surface and the new discoveries (a mile below). There is a strong possibility for additional parallel and stacked zones both above and below the new zones.



Drawing supplied by KLG

Figure 11: Plan View Showing More Drilling Results

KLG’s exploration program will be directed at expanding the potential of these zones along strike and dip. This will require drilling long holes from underground. To maximize the drilling, drifts and drill bays will be required to locate the drills properly.

9.2 Exploration Proposed for Fiscal 2014:

Although reserves and resources for the Company will be based on a calendar year end, the exploration budget will continue to be based on the Company’s fiscal year end (April 30th). The Company’s [wholly/largely] discretionary exploration budget for fiscal 2014 includes C$4.8 million in underground exploration (approximately 94,000 feet of drilling) utilizing four rigs and C$4.5 million on surface exploration utilizing (approximately 145,000 feet of drilling) utilizing three rigs.

Surface exploration will continue to concentrate on the previous joint venture properties (South Claims), underground exploration will be divided equally between continued testing the HM and

North AK properties and other targets more closely associated with the `04 Break. Underground exploration development to facilitate underground drilling will include driving a 700 foot cross cut from the -5300 foot level, south on the South Claims to allow testing of the SMC which remains open to depth.

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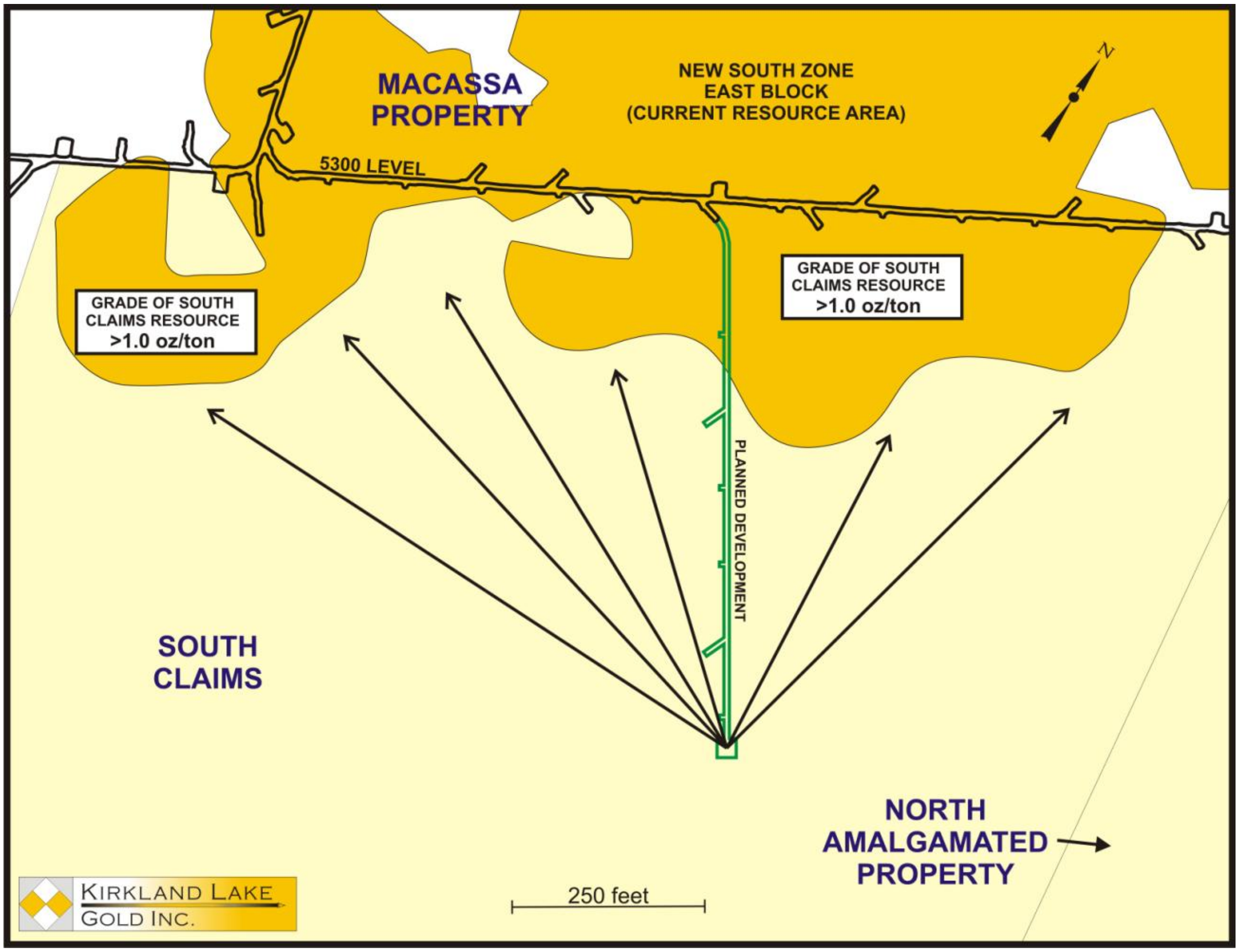

Drawing supplied by KLG

Figure 12: Planned Exploration and Development

10: DRILLING

All of the exploration drilling both from surface and underground is carried out by drilling contractors.

The drilling is all diamond drilling, recovering drill cores.

The cores are boxed at the drill site and transported by Macassa personnel to the Macassa core shack for logging and sampling.

A total of 13 diamond drills are being used at Macassa.

There are 3 surface rigs and 10 underground rigs. Four of the underground rigs are dedicated to exploration and six are used for underground production zone delineation.

The underground production drilling in fiscal 2014 will likely be the same as in fiscal 2013 at approximately 110,000 feet.

11: SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 Sampling and Assaying:

The Macassa Mine has an assay laboratory associated with the milling complex. This laboratory assays all of the mill samples, bullion and mine samples. The exploration samples from the drilling programs are sent to the Swastika Laboratory (Swastika) for analysis.

In the past other labs were used on a regular basis, however arrangements have been made with Swastika, the main lab used and the most consistent, to allow for timely analysis of the cores. From time to time samples are sent to other labs for convenience. Check assaying is done at each of the labs used.

The sampling, handling and assaying methods used at KLG are consistent with good exploration and operational practices.

11.2 Sampling:

Diamond drill core samples, chip samples and muck samples are all used at Macassa for mining control. Only the core samples and the chip samples are used for reserve and resource determination.

Diamond drill holes are used to locate the extensions of the veins or to find new veins. Drill holes are also used to provide sample data between the mine levels for resource and reserve determinations. The drill core is logged in Macassa’a facility at the mine site. The core is oriented and marked for sampling by the geologist. Individual samples are never greater than 3 feet in length and never less than 1 foot in length. For all exploration core (and some definition core), the intervals selected for sampling are cut in half by a diamond saw, by the designated core splitter. One half of the core is retained in the core box for further consideration and the other is placed in properly marked sample bags for shipment to the laboratory. In the case of the exploration samples they are sent to Swastika and Polymet. The collars of all diamond drill holes are surveyed and the holes are surveyed down the hole.

The chip samples are taken underground by a geologist or by a trained sampler. Each new exposure of the veins is sampled in all of the workings. This is done by chipping with a hammer across the sample length in a channel fashion. The sample lengths are set so that the individual veins and the waste sections within the veins are sampled separately. The wall rocks at the sides of the veins are sampled separately from the veins. The samples seldom exceed 3.5 feet in length. The samples are placed in appropriately marked bags and transported to the laboratory. The samples are marked and located using the survey markers for control.

The muck samples are taken at the blasted face by the mining or the mucking crews. A standard of 1 sample for every 10 tons in the blast are taken. These samples serve to gauge the mill feed and to confirm the chip sample results. Muck sampling is also carried out at long hole stopes where there is not any access for sampling between levels. Muck sampling of all the workings, development and stopes is now carried out for mining control and reconciliation purposes.

These samples are placed in appropriately marked sample bags and then transported to the Macassa laboratory. At the lab they are reduced in size by riffling before being treated by the normal assay procedures.

Many of the pulps and rejects are sent out for analysis at commercial labs for a check on the quality of the assaying. Some of the exploration samples that go directly to a commercial lab are sent to another commercial lab for verification.

As a standard procedure all exploration samples that assay above 0.30 oz Au/ton are subjected to multiple re-assaying as a check on the particular intersection.

The program to send the samples out for check analysis is under the direction of Mr. S. Carmichael, P.Geo. of KLG.

11.3 Assaying:

Macassa Assay Method

The Macassa assay laboratory follows standard protocols for sample preparation and assaying. The lab includes standard samples, barren samples and a duplicate with each batch so that they can control the quality.

At the Macassa Laboratory the samples are
- Crushed to 1/8 inch
- Riffle split to a 200-250 g sample
- Pulverized with 90-95% passing 200 mesh screens.

The pulverizer and crusher are cleaned by compressed air after each sample.

Normal fire assay procedures are employed, using either 1 assay ton for core or ½ assay ton for the other mine samples.

There are procedures in place for repeating the fusion if the button is too small or too large.

The silver is removed from the doré bead with nitric acid. The resulting gold prill is dissolved in aqua regia. MIBK extraction takes place before atomic absorption spectroscopy to determine the gold content. This is a fire assay with AA finish. If the grade is greater than 0.10 oz Au/ton then the fire assay is repeated and the gold prill is weighed on a microbalance giving the result as a fire assay with gravimetric finish.

Swastika Assay Method

The Swastika Lab uses the following procedure with the samples.

SAMPLE PREPARATION
1) Dry samples if required.
2) Crush total sample to ½ inch (Jaw Crusher)
3) Crush total sample to 10 mesh (Rolls Crusher)
4) Split approximately 350 grams using a Jones riffle.
5) The remaining reject is placed in a plastic bag, and packed in cartons with sample numbers listed on the outside.
6) Pulverize the 350g sample
7) Homogenize the pulp. It is then ready for assay.

GENERAL DESCRIPTION
Both gold assay and geochemical gold analysis begin with a fusion using a flux mixture of litharge (Pb02), sodium carbonate, borax, silica, fluorspar with further oxidants (nitre) or reductants (flour) added as required. The relative concentrations of the fluxing materials are adjusted to suit the type of sample being analyzed. An aliquot of silver is added as a final collection agent. The resultant lead button containing the precious metals is reduced to $Pb0^2$ and absorbed into a cupel in a cupellation furnace.

The precious metals collected in the silver aliquot are now ready for either geochemical analysis using an atomic absorption spectrometer or a gravimetric assay finish. The geochemical method involves dissolving the precious metal and analyzing by atomic absorption. Gravimetric assays are completed by dis-solving the silver of the dore bead in nitric acid and leaving the gold to be weighed on a micro balance.

Quality control consists of using in-house or Canmet standards, blanks and by re-assaying at least 10% of all samples.

12: DATA VERIFICATION

12.1 Data Entry Verification:

The validation system started with the basic information and worked up from there. Any discrepancies were corrected.

This was accomplished utilizing 3 persons in the geology department (including the chief geologist). After the geology department was sure of their entries the Engineering department checked all the reserve tabs. The formulas and values on the individual stope tab sheets were checked and compared to the values from the level sum sheets and the formulas and values level sum sheets were checked and compared to the formulas and values on the main sum spreadsheet. The main final spreadsheet formulas and values were then checked and verified.

The estimation procedures and the application of the procedures were reviewed by Glenn R. Clark, P.Eng. This involved reviewing the interpretation of many of the stopes and spot checking the calculations and the summaries. The classifications meet the requirement of National Instrument 43-101 classification of Resources and Reserves.

12.2 Check Assaying:

The mine assaying is done at the KLG lab with check analysis currently going to the AGAT laboratory. The exploration assaying is done at the Swastika and AGAT labs. Other labs (Polymet and SPJ) have been used in the past. Each of these labs carries out internal check assaying and KLG arranges for check analysis between the labs. This is the normal pattern for KLG and they have been carrying out this protocol for a number of years. The results in the previous years have been satisfactory as they are this year. KLG is pro-active and any indication of assays not being as expected results in re-assaying and other checking. KLG inserts blanks after samples that are obviously high grade and regularly inserts standards with the samples for assay. There are many results of this check assaying in the previous Resource and Reserve Reviews.

The samples that are the most critical to the estimation of the grade of the resources are the samples with the values between 0.20 and 3.5 oz Au/ton. In the previous years, KLG reduced all values over 3.5 oz Au/ton to 3.5 oz Au/ton so the wide variations that can exist in high grade samples is not important as far as the assaying is concerned. Starting in 2007, for some zones in the SMC, the grade cap has been raised. As this represents only a small portion of the total resource at present the irregularity of the higher grade samples is not a problem.

It is not good enough to just average all of the samples and compare them, as often there is an abundance of low grade samples which has a smoothing effect on the average of all the samples.

The values in the zones that are going to be mined are of great importance and the average results of the check assaying in the range from the cut-off up should be close if the sample size is sufficient.

The following are the averages for some of the check samples that have not previously been reported. This check assaying was done from May 1, 2012 to April 30, 2013.

The check analyses are assays of pulps from the same samples. The assays used in each table are specific to the group in the table. The results of re-assaying by the KLG laboratory are shown in Table 2. Swastika assayed the same samples and also re-assayed them. The comparisons of this assaying is also shown in Table 2. The comparisons between the other laboratories (Polymet and Agat) are shown below in Tables 3 and 4.

These are excellent results and give great confidence in the values that are used in the ore reserves and the day-to-day operation of the mine. The values in the critical range (shaded in blue) are very close even when the number of samples in the group is small. It can be expected that the higher values are more erratic and with a small number of samples in an assay group a wider variation would be expected.

Table 2: Check Assaying, KLG and Swastika

	KLG		**SWASTIKA**	
	121 samples		**121 samples**	
Oz Au/ton	Assay	Check	Assay	Check
All Samples	0.57	0.58	0.55	0.59
	121		121	
Samples +3.5	10.13	9.98	9.42	9.79
	2		2	
Samples 1.00-3.5	1.66	1.81	1.60	1.73
	16		11	
Samples 0.3-1.0	0.49	0.49	0.52	0.57
	33		35	
Samples to 0.10-0.30	0.17	0.18	0.17	0.17
	74		73	

Note: The values shown in green are the number of samples in the assay group. The grouping is based on the original assays of *the group. If the sample results were sorted on a different set of the assays then the results would be slightly different.*

Table 3: Check Assaying, Polymet and SWASTIKA

	Polymet	Poly Ch	Swastika
	168 samples		
Oz Au/ton	Assay	Assay	Assay
All Samples	1.22	1.28	1.26
	168		
Samples +3.5	9.71	10.33	10.05
	13		
Samples 1.00-3.5	1.86	2.02	2.04
	16		
Samples 0.3-1.0	0.55	0.57	0.57
	57		
Samples to 0.10-0.30	0.20	0.20	0.20
	82		

Note: There were 47 samples in the range 0.10 to 0.30 that were assayed by Polymet and Swastika but not check assayed by Polymet. If these 47 samples are averaged in the rest the Polymet and Swastika averages are 0.17 for that range.

Table 4: Check Assaying, AGAT and Swastika

	AGAT	SWASTIKA
	145 samples	
Oz Au/ton	Assay	Assay
All Samples	0.60	0.65
	145	
Samples +3.5	5.15	5.90
	6	
Samples 1.0-3.5	1.97	2.07
	12	
Samples 0.30-1.0	0.55	0.59
	33	
Samples 0.10-0.3	0.24	0.24
	94	

Within the batch of assays there were 6 erratic results that have not been included in the above averages. KLG spent considerable time and effort to sort out the cause of the erratic results that appear to be caused by the sample preparation or the sample handling. KLG believes that this problem has been solved however they are continuing their vigilance by maintaining their active assay checking procedures.

13: MINERAL PROCESSING AND METALURGICAL TESTING

13.1 Macassa Processing:

Mining and processing at Macassa has been carried out since 1933. The mineral extraction has been from underground stopes. The processing has been done on the property.

The ore is processed by conventional cyanide leaching with a carbon-in-pulp recovery system.

The KLG forecast is to mine and process 547 thousand tons in fiscal 2014. The head grade anticipated is 0.36 oz Au/ton. Gold recovery is forecast at approximately 188 thousand ounces in the current year. The gold recovery at the mill is expected to be 95.72%.

13.2 Metallurgical Testing:

The mill is constantly testing to make sure the process as set up is optimum for the ores.

Prior to the mining of the SMC zones considerable in-house testing was carried out on the SMC zones ores. In general these tests indicated that overall good recoveries of the gold using the milling technique that was being employed.

The SMC has some sections that have higher than normal telluride content. There was some indication in the literature that the telluride interferes with the gold recovery. Lakefield Research was commissioned to do some testing on the higher telluride content ores. This testing indicated that an improvement in the recovery would be obtained if some oxygen was introduced to the process. This small modification has been put into place for all of the processing.

14: MINERAL RESOURCE ESTIMATES

14.1 Resources and Reserves:

Mining has been carried out at Macassa since 1933. The grade of the ore mined during that period is similar to the grade of the resources and reserves that are currently identified at Macassa. Approximately 90% are associated with the "04" Break and the SMC zones combined. The "04" and the SMC resource tons are close to being even in tons, however the SMC resource is considerably larger in contained ounces of gold.

During these many years of production the methods used for calculating the resources and reserves have evolved. The current method of calculation by KGL is quite similar to the methods employed for the last 25 years.

Each year the Macassa geology staff prepares a resource and reserve summary based on standard methods, with the criteria that have been developed over the years. The method of calculation and the results are discussed below. During the period that Lac Minerals was in control, most years the annual reserves were reviewed or audited by an independent engineer. This practice was not kept up under the guidance of Barrick and Kinross. A number of studies on grade capping and reserves and production reconciliation were carried out internally and by consultants for Lac Minerals and Kinross from the early 1990's to the suspension of mining in 1999. In 2002, RPA reviewed the resources and reserves for KLG. In 2003 and 2004 the reserves were monitored by M. Sutton the Qualified Person (QP) for KLG in keeping with the directives of National Instrument 43-101 for technical reports. The resources and reserves were reviewed by GRCA in 2005, 2006, 2007, 2008, 2009, 2010, 2011 and 2012. S. Carmichael reported on the resources and the reserves of the South Zone mineralization in January 2007. R. Routledge of Scott Wilson Roscoe Postle Associates Inc. reported on the possible grade capping of the South Zones, April 2007.

Resource and reserve calculations are based on chip sampling of the veins and diamond drill hole results.

The Macassa Mine has resources in the traditional structures at Macassa and other properties and the SMC structures at Macassa Mine. The resources and reserves have all been calculated by the Macassa Mine staff.

The resources and reserves have been classified to meet the requirements of NI 43-101.

14.2 National Instrument 43-101 Definition of Resources:

The Resource estimation classifications as prescribed in National Instrument 43-101 are given here for clarity.

14.2.1 Mineral Resource

Mineral Resources are sub-divided into 3 categories depending on the geological confidence. The highest level or the level with the most confidence is the 'Measured' category. The next level of confidence is the 'Indicated' category and the lowest level, or the resource with the least confidence, is the 'Inferred' category.

14.2.2 Inferred Mineral Resource

An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling, and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling, gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

14.2.3 Indicated Mineral Resource

An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities and shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

14.2.4 Measured Mineral Resource

A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities and shape and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

14.3 Macassa Mine Calculation Method and Parameters':

14.3.1 Basic Information

All of the assay data is plotted on plans and sections to be used for zone interpretations.

The ore reserves are calculated on 20 scale longitudinal sections or plan views in the case of veins dipping less than 45 degrees. Some calculations are done on 10 scale longitudinal sections using a modified polygon method of blocking. Most blocks are now in digital format.

Each stope area has a section or plan and a work sheet that is kept on file.

The calculated grade, zone width, area of influence and resource or reserve category for each data set (ie. drill hole or chip sample assays) is entered into a spread sheet. For reserves the expected dilution based on the assumed mining method is included. A separate page for each stope area is maintained.

14.3.2 Minimum Width

The minimum mining width for steep-dipping structures is 6 feet.

The minimum mining height for flat structures dipping less than 45˚ is 9.0 feet.

14.3.3 Minimum Strike Length

The minimum strike length for a block is 21 ft (3 sets of chip assays).

14.3.4 Areas of Influence

The radius of influence from a sampled heading is 30 feet for Measured Resource/Proven Reserve(MR/PV).

A MR/PV Block must be exposed by at least one drift and tested between drifts by drilling in a 25 to 30 foot pattern. Where continuity is proven with the drilling, the intervening polygons that are based on the 25 to 30 foot drill pattern may be considered as MR/PV blocks. Drill holes are only used for MR/PV blocks when the block is otherwise very well defined. This only occurs below the 57 level where there is development on all 4 sides of a massive sheet of continuous ore.

For an Indicated Resource/Probable Reserve (IR/PB) block the radius of influence is an additional 50 feet (30-80 feet from the data). This applies to blocks sampled on two sides by workings a maximum of 150 feet apart where no drilling exists, or above and below a drift where drill hole spacing is greater than 100 feet. For blocks with only drilling a 50 foot radius is used.

Inferred Resource blocks are an additional 50 feet from the IR/PB block (from 80 to 130 ft. from the data). This applies to blocks bounded on one side by a MR/PV or IR/PB. Blocks, on a proven mineralized trend, that are drilled on a spacing of greater than 100 feet but less than 200 feet are included as Inferred Resource.

Raises that have been bored are usually ignored in the calculations. Most of the raises are only 42-60” in diameter, and are not representative of the ore width.

Test hole and drift muck data is not used for resource or reserve calculations.

14.3.5 Density of Ore

The density or tonnage factor used to convert the volume of the blocks to tons is 11.7 cu ft/ton for all of the zones except the Lower D.

The Lower D Zone volumes were converted at a density of 11.5 cu ft/ton due to the additional sulphides that are present.

The density traditionally used in the camp was 12.0 cu ft/ton. There have been a number of studies that suggest that the traditional number was too high and consequently gave an understated tonnage. The difference in the tonnage estimate is only about 2.5% between the density used in the past and the current density being used. As this has been applied to all blocks the changed density does not affect the reserve grades.

In 2007 a total of 95 samples was used to measure the density of the SMC zones. These samples confirmed that the density used for the Lower D of 11.5 cu ft/ton was realistic. The other SMC zones varied and it appears that the 11.7 cu ft/ton used overall at Macassa is reasonable. The tonnage difference between 11.5

and 11.7 is less than 2%. This difference is well within the estimation accuracy of the resources and reserves.

The assays of the samples varied from 0.1 oz Au/ton to 42.6 oz Au/ton and the densities varied from 12.1 cu ft/ton to 10.5 cu ft/ton, however there was no correlation between the grade and the density.

14.3.6 Gold Price

The gold price used to establish the cut-off grades has been set at US$1,400.56. The exchange rate used was US$1.00=dn$1.0004.

14.3.7 Cut-Off Grade

Cut-off grades of 0.15 oz Au/ton for resources and 0.18 oz Au/ton for reserves are used in the calculations depending on the location and economics of the block. Generally a cut-off of 0.18 oz Au/ton is required on a whole-block basis to achieve profitability. This cut-off is based on the 3 year gold price and the operating cost forecast. For mining or geotechnical reasons some sub-blocks below the cut-off may be included in the reserves. Blocks that grade between 0.15 and the cut-off are classified as resource blocks.

In general the resources at the #2 Shaft are blocks greater than 0.25 oz/t.

14.3.8 Capping of Assays

Macassa used to use a more complex system for cutting assays than it does now. The capping system, currently in use, is based on a Kinross report by B. Davis (1995). It appears that this simpler single cap method gives much the same results as the old system. It is probably not the final answer. As new ore is found in different settings the capping procedure may need to be modified.

The effect of grade capping can only be truly examined when a large tonnage has been mined and the recovered gold can be compared with the forecast for that period.

Grade capping or cutting is necessary at Macassa. The capping practice for the main zones has also been used on some of the zones in the SMC. Assays higher than 3.5 oz Au/ton are cut to 3.5 oz. This capping practice appears to be reasonable.

Some of the zones in the SMC have increased grades much higher than has been normally found in the main zones. This increased grade is also associated with a different style of mineralization. Initial investigation by the Company's geological staff indicated that the historic cutting factor of 3.5 oz Au/ton was understating the grade of mineralization for the SMC.

The consulting firm of Scott Wilson Roscoe Postle Associates Inc. (SWRPA) was retained to investigate, by statistical analysis, 10 of the larger mineralized zones forming part of the SMC. They concluded that there were sufficient data points for a statistical analysis of seven of the 10 zones reviewed. As a result, the Company has implemented various higher grade cutting factors for four of the seven zones. These four zones are the New South Zone (7.2 oz Au/ton), Lower D North (9.3 oz Au/ton), Lower D North Footwall (4.8 oz Au/ton), the #7 and #7 HW Zones (6.4 oz Au/ton). These new capping levels are now being used on both drill hole assays and underground chip assays.

These revised cutting factors, based on the mean of the assays in the zone plus one standard deviation, are considered to be conservative and are lower than those recommended by SWRPA. Accordingly, the factors may be subject to upward revision as more data points are generated.

Revised factors for the other mineralized zones including the Lower D, White, YYZ, Freewill and Limelight will be implemented as more assay data are derived.

14.4 January 1, 2012 Resources:

Using the above method and criteria the Macassa geology staff has estimated the resources as shown in the following tables. The classifications are in keeping with the guidelines in the NI 43-101.

The resource estimates do not include the reserves.

The distribution of the SMC with regard to the main zones can be seen on Figures 7 and 8.

Table 5: Estimated Measured and Indicated Resources

ESTIMATED MEASURED AND INDICATED RESOURCES, JANUARY 1, 2013 (tons X 1000, grade oz Au/ton),(tonnes X 1000, grade g Au/t)						
Location	**Measured**		**Indicated**		**Total**	
	tons, t	**oz, g**	**tons, t**	**oz, g**	**tons, t**	**oz, g**
Main Zones	1,032 936	0.40 13.7	882 800	0.37 12.7	1,913 1,736	0.38 13.0
South Mine Complex (1)	23 21	0.25 8.6	1,435 1,302	0.67 23.0	1,458 1,323	0.66 22.6
Other	39 35	0.33 11.3	403 365	0.39 13.4	442 401	0.38 13.0
Total	**1,094 992**	**0.39 13.4**	**2,719 2,467**	**0.53 18.2**	**3,813 3,459**	**0.49 16.8**
Due to rounding there may be some small discrepancies in the numbers.						

The total of the Estimated Measured and Indicated Resources of Macassa Mine at January 1, 2013 is 3.8 million tons at a grade of 0.49 oz Au/ton (3.5 million tonnes @ 16.8 g Au/t).

In addition, there is an estimated 2.2 million tons at a grade of 0.52 oz Au/ton **(2.0 million tonnes @ 17.8 g Au/t)** that is classified as an Inferred Resource.

There has been no dilution added to the Measured, Indicated and Inferred Resources and no allowance for recovery has been made.

15: MINERAL RESERVE ESTIMATES

15.1 Reserves:

Mining has been carried out at Macassa since 1933. The grade of the ore mined during that period is similar to the grade of the resources and reserves that are currently identified at Macassa. The "04" break accounts for 52% of the tons in the reserve but the SMC accounts for 55% of ounces in the reserve.

Table 6: Historical Production

DECADE OF PRODUCTION	TONS X 1000	GRADE, oz Au/ton
1930's	564	0.48
1940's	1,087	0.45
1950's	1,440	0.40
1960's	1,290	0.48
1970's	943	0.56
1980's	1,314	0.49
1990's	1,294	0.47
2000's	984	0.35
2010's	711	**0.36**
1933 to 2013	**9,627**	**0.45**

Note: tons and grade to April 30, 2013

15.2 National Instrument 43-101 Definition of Reserves:

The Reserve estimation classifications as prescribed in National Instrument 43-101 are given here for clarity.

15.2.1 Mineral Reserve

Mineral Reserves are sub-divided into 2 categories. The highest level of Reserves or the level with the most confidence is the 'Proven' category and the lower level of confidence of the Reserves is the 'Probable' category. Reserves are distinguished from resources as all of the technical and economic parameters have been applied and the estimated grade and tonnage of the resources should closely approximate the actual results of mining. The guidelines state "Mineral Reserves are inclusive of diluting material that will be mined in conjunction with the Mineral Reserves and delivered to the treatment plant or equivalent facility." The guidelines also state that, "The term 'Mineral Reserve' need not necessarily signify that extraction facilities are in place or operative or that all government approvals have been received. It does signify that there are reasonable expectations of such approvals."

15.2.2 Probable Mineral Reserve

A 'Probable Mineral Reserve' is the economically mineable part of an Indicated and in some circumstances a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.

15.2.3 Proven Mineral Reserve

A 'Proven Mineral Reserve' is the economically mineable part of a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified.

15.2.4 Dilution of Reserves

The dilution applied to the reserves depends on the type of stope that is anticipated for the mining blocks. The dilution is added on a stope basis. All dilution is assigned a grade of 0.02 oz Au/ton.

Dilution has not been added to the resource blocks.

The average dilution included in the Reserves of January 1, 2013 is 31%.

Long-hole stopes are diluted by 50-100%, mostly 50%.

Cut-and-fill stopes are diluted 15-50%.

These dilution levels can be obtained with good mining plans and careful supervision of the miners.

The dilution factors have been modified based on the recent mining experience at Macassa.

It should be noted that although the average grade mined for the life of the mine has been very close to the reserve grade of the main zones at Macassa as shown in Table 6 that has not been the case since 1994. In 1994, long-hole stoping was introduced to the Macassa Mine and the head grade showed a noticeable drop at that time. From 1994 to May 2008 the head grade averaged only 0.38 oz Au/ton or about 80% of the average grade for the life of the mine to 1993. It is felt that this drop can be attributed to extra dilution that is happening while using the long-hole stoping method.

It should also be noted that there has been very little mining in the SMC and the dilution added to the SMC zones has been mostly based on the mining in the main zones. As mining in the SMC progresses the anticipated dilution may be modified.

For the January 1, 2012 for the reserve estimates the minimum mining widths were increased giving a slightly lower grade before the dilution was added.

15.2.4 Mining Recovery

The recovery of the ore blocks is anticipated at 94.2% of the diluted reserve.

This figure has been applied to all of the reserve blocks but not to the resource blocks.

15.3 January 1, 2012 Reserves:

Using the same method as the resources above plus the extra criteria for the reserves, the Macassa geology staff has estimated the reserves as shown in the following tables. The classifications are in keeping with the guidelines in the NI 43-101.

Table 7: Estimated Proven and Probable Reserves

ESTIMATED PROVEN AND PROBABLE RESERVES, JANUARY 1, 2013 (tons X 1000, grade oz Au/ton),(tonnes X 1000, grade g Au/t)						
Location	**Proven**		**Probable**		**Total P&P**	
	tons, t	**oz, g**	**tons, t**	**oz, g**	**tons, t**	**oz, g**
Main Zones	1,040 944	0.38 13.0	649 589	0.39 13.4	1,690 1,533	0.38 13.0
South Mine Complex	321 291	0.43 14.7	1,220 1,106	0.55 18.9	1,541 1,398	0.52 17.8
Total	**1,361** **1,235**	**0.39** **13.4**	**1,869** **1,696**	**0.49** **16.8**	**3,230** **2,931**	**0.45** **15.4**
Due to rounding there may be some small discrepancies in the numbers.						

The total of the Estimated Proven and Probable Reserves of Macassa Mine at January 1, 2013 is 3.2 million tons at a grade of 0.45 oz Au/ton, (2.9 million tonnes @ 15.4 g Au/t).

The Proven and Probable Reserves are insitu, diluted and recoverable.

The reserves are not included in the resources.

The distribution of the SMC with regard to the main zones can be seen on Figures 7 and 8.

15.4 South Mine Complex:

The new veins and structures that make up the SMC are known mostly from drilling, however they have been accessed now by drifts and cross cuts. Mining of the SMC in fiscal 2013 accounted for approximately 53% of the tonnage mined and processed at the mill.

Where the SMC has been accessed the quantity and grade of the mineralization has been confirmed. In general the SMC is of higher grade than the traditional Macassa zones. To illustrate this better grade the Proven, Probable, Measured, Indicated and Inferred categories of the SMC are shown in Table 8.

Table 8: South Mine Complex

SOUTH MINE COMPLEX ESTIMATED RESOURCES AND RESERVES, JANUARY 1, 2013				
	TONS X 1000	TONNES X 1000	GRADE oz Au/ton	GRADE g Au/t
Resources				
Measured	23	21	0.25	8.6
Indicated	1,435	1,302	0.67	23.0
Inferred	1,223	1,110	0.67	23.0
Reserves				
Proven	321	291	0.43	14.7
Probable	1,220	1,106	0.55	18.9

The Resources and Reserves shown in Table 8 are included in Tables 5 and 7 and are not additional.

15.5 Discussion of Resources and Reserves:

The resource and reserve estimation was completed by the Macassa geological staff, under the supervision of S. Carmichael, P.Geo.

The estimation procedures and the application of the procedures were reviewed by Glenn R. Clark. This involved reviewing the interpretation of many of the stopes and spot checking the calculations and the summaries. The classifications meet the requirement of National Instrument 43-101 classification of Resources and Reserves.

Mining of the South Mine Complex does not depend on the shaft being repaired. Mining of the deeper "04" break ore will not be dependent on the shaft being repaired.

The true test of a reserve estimate is whether the exploitation of the resource closely matches the estimate that was made.

The reserve and resource grades for the traditional mining areas at Macassa are similar to the grades that have been mined over the years. The average reserve grade has traditionally been close to the average head grade mined from 1933-2006 of 0.46 oz Au/ton. (Table 7) As noted previously the grade mined when long-hole stoping was being employed was considerably below this average. It is highly likely that with careful mining and proper grade control the production will match the reserves.

The average grade of the SMC is higher than the historical mining grades. At this time it appears that the grade will be considerably higher than the overall mine average grade when some of the SMC zones are mined.

Due to the higher gold prices the minimum economic grade is lower than it has been in the past. Subsequently lower grade mineralization has been included in the resources and the reserves. The inclusion of the lower grade mineralization has lowered the average grades for the resources and the reserves, while increasing the tonnages. When this lower grade material is mined it decreases the head grades while still being economical to mine.

The reserve grade has been lowered by the additional dilution that was been included in this year's estimation. This extra dilution was based on the results of mining using the current mining methods and the size of the mining equipment.

16: MINING METHODS

Mining at Macassa has been carried out since 1933. The mineral extraction has been from underground stopes.

The Macassa Mine employs conventional drill and blast mining methods to extract the ore. Mining is by mechanized cut and fill, normal cut and fill or long hole methods.

Access to the mining areas is by shafts.

The cut and fill is carried out using mechanized scoop trams, or conventionally with slushers in the stope.

The long-hole blocks are accessed by Alimak driven or bored raises or with sub-level drifts from ramps. The mucking is by remotely driven scoop trams.

Macassa has started to employ battery powered scoops and battery powered trucks for use in the SMC zones. The working conditions (heat and air) will be greatly improved by using this equipment.

Level trains move the ore to the main ore passes for hoisting to surface.

All of the stopes are now being filled with paste backfill. Previously the stopes were filled with cemented rock fill.

These mining methods recover about 94% of the ore.

The Corporation’s long-term projections are for the mining to be carried out on the basis of approximately 10% long-hole, 60% mechanized cut-and-fill, 20% conventional cut-and-fill and 10% development, although these percentages will vary as circumstances warrant.

Underground mining is carried out from the 3400, 3835, 4250, 4500, 4750, 4900, 5025, 5150 and 5300 Levels of the ’04 Break region and the 5000 and 5300 Levels of the SMC in the Macassa Mine.

The underground production is hoisted to surface by the No. 3 Shaft of the Macassa Mine.

Since Macassa Mine has seismic activity, micro seismic sensors are deployed throughout the mine. These sensors are monitored 24 hours a day each and every day of the year.

16.1 Mine Expansion:

Starting in January 2009 KLG embarked on a mine expansion program that would allow efficient mining of the SMC and increase the overall production tonnages and grade.

The current expansion projects are designed to increase the production to an average of about 1,500 tons per day level, increasing the gold production to 180,000+ ounces per year. This level is expected to be reached this year. The next phase of production increase to 1,800 to 2,200 tons per year with an equivalent increase in gold production is being evaluated.

Ore movement improvements were high on the list of expansion projects. Projects to increase the ultimate hoisting capacity at the #3 Shaft by over 300% to 3,600 tons per day have been planned. The capacity increase is being done in staged increments. The remaining hoisting improvements will be completed as required to ensure that hoisting capacity remains ahead of requirements. Construction of the underground haulage ramp between the #3 Shaft and the South Mine Complex ("SMC") mining area and the infrastructure to allow the separation of the ore and waste coming from the SMC is well underway and should be operating in the 4th quarter of 2013. This will be a very welcome improvement as the waste will not have to be mixed with the ore and processed through the mill.

A number of developments to the Mine Complex and Mill were on the list. They included but were not limited to the following:

- Underground improvements to the ventilation system.
- Rehabilitation and extension of several levels for exploration.
- Development of a main haulage ramp to serve the SMC and lower Macassa Mine.
- Improving the pastefill system, including improvements to the pastefill plant, extending the pastefill system and drilling back-up pastefill holes.
- Development to bring additional stoping areas on line.
- Construction and installations for related infrastructure for the foregoing.

16.2 Mine Production:

In the 12 month period ending April 2013, KLG processed 304,017 tons at a grade of 0.31 oz Au/ton. Production through the year increased as the improvements came on stream. The first quarter was only 70,201 tons increasing each quarter to 89,384 tons in the last quarter.

The KLG forecast is to mine and process 547 thousand tons in fiscal 2014. The head grade anticipated is 0.36 oz Au/ton. Gold recovery is forecast at approximately 188 thousand ounces in the current year. It is expected that the head grade will increase over the next few years. This will be accomplished as more of the production comes from South Zones.

At present the tons produced are fairly evenly split between the main part of the mine and the SMC. In fiscal 2013, 53% of the tonnage was mined from the SMC zones and those tons accounted for 69% of the gold ounces. The grades from these sections are quite different with the SMC head grade at 0.36 oz Au/ton and the Main Zones at 0.26 oz Au/ton.

17: RECOVERY METHODS

The ore is processed by conventional cyanide leaching with a carbon-in-pulp leaching system with a Merrill-Crowe recovery of the gold before refining to bullion.

17.1 Processing the Ore:

The company's mill was built in 1988 with a modern larger mill replacing the older mill. Some modifications have taken place since then and the mill capacity now is 1500 tons of ore a day. The mill is being expanded to handle an average throughput of 2,200 tons per day.

The ore at Macassa is treated by conventional means. These are crushing and grinding followed by cyanidation, with the gold recovered from solution by the carbon-in-pulp technique. The bullion contains some silver.

Gold recovery has been good at Macassa. In the 20 year period from 1980 to 1999 the average recovery was 95.8%. Since 2006 KLG's gold recoveries have ranged from 97.4% to a low of 95.9%. It is anticipated that the gold recovery will be similar in 2013 and the forecast is based on a recovery of 96%.

The mill will have to have sufficient ore to maintain the operation at the optimum levels if this high rate of recovery is to be attained. The mill will be able to process all of the ore that can be delivered from the mine.

It should be noted that the apparent increased telluride content that is observed in the SMC zones indicated that modifications to the processing may be required to keep the high gold recovery that has traditionally been experienced at Macassa.

Metallurgical testing in 2010 indicated that the addition of oxygen to the process appears to be sufficient to maintain the recoveries and this modification has been made. As the amount of the SMC zone ores increases, the effectiveness of this change will need to be monitored.

In the 12 month period ending April 2013, KLG processed 304,017 tons of ore at a grade of 0.31 oz Au/ton.

At present the tons produced are fairly evenly split between the main part of the mine and the SMC. In 2013 the SMC supplied 53% of the ore with 47% coming from the Main zones. The grades from these sections are different, with the main part grading 0.26 oz Au/ton and the SMC grading 0.36 oz Au/ton. Production from the SMC will be increasing relative to the main mine.

18: PROJECT INFRASTRUCTURE

Macassa has been operating since 1933.

It has 3 shafts from surface, a mill and refinery and a full compliment of office and other buildings.

The office and other buildings recently have been expanded to handle the increased work force needed for the increasing production.

The hoisting capacity of the shaft is undergoing renovations so that the production can be increased.

The tailings pond is expected to be sufficient for 16 years at the anticipated production levels.

The power is supplied to the mine and mill from the Ontario Hydro grid.

19: MARKET STUDIES AND CONTRACTS

The gold bullion produced at the mine is sent to Johnson Matthey for refining.

The gold and silver are credited to the KLG account and sold periodically.

The finance department watches the gold price trends.

There is a refining and sales contract with JM.

20: ENVIRONMENTAL STUDIES, PERMITTING AND IMPACT

20.1 Environmental Studies:

There are no active environmental studies underway, however the tailings effluents are always being monitored.

20.2 Permitting:

All of the necessary environmental permits are current at Macassa.

All of the necessary operating permits are current at Macassa.

20.3 Social and Community Impact:

The mine operation has a large social and community impact. It is the largest employer in this small town. Not only is it the largest employer, the average wage paid is greater than the average wage for the rest of the community.

The increasing number of employees will have an effect on the housing availability in the Town and surrounding areas.

Macassa does not run a camp for employees and they must find accommodations in the area.

21: CAPITAL AND OPERATING COSTS

21.1 Capital Costs:

The capital and exploration costs for the mine for the 12 month period ending April 2014 are estimated at $87.8 million. Included in this cost is $38.5 million for capital equipment and projects, $40.0 million for underground capital development and $9.4 million for exploration in the mine and from surface, mostly directed at the SMC. This exploration cost includes diamond drilling as well as drifts and cross-cuts specifically driven to aid the exploration. An additional $1.2 million dollars of the exploration budget is included in the underground capital development.

21.2 Operating Cost:

KLG has estimated the operating cost for fiscal 2014 (until April 30, 2014). This plan calls for mining and milling approximately 1500 tons per day totaling 547 thousand tons for the 12 month period. The average head grade is forecast at 0.36 oz Au/ton and a total of approximately 188 thousand oz Au will be recovered.

The total cash operating cost per ton milled is forecast at $232 per ton. The total operating cash costs per ounce milled is forecast at approximately $670.

Table 9: Estimated Forecast Cash Operating Cost
(12 months ending April 30, 2014)

Operation	Cost $/ton
Mining	128.71
Milling	29.63
Maintenance	27.26
Surface	6.43
Engineering	3.50
Geology	5.63
Administration	30.43
Total Cash Operating Cost	**231.59**

22: ECONOMIC ANALYSIS

For an economic analysis please see the KLG documents on their web site WWW.KLGOLD.COM or the KLG filings on Sedar WWW.SEDAR.COM.

23: ADJACENT PROPERTIES

There are no adjacent properties that influence the resources and the reserves of Macassa.

There are no adjacent properties that Macassa relies upon for their operation of the mine and mill complex.

24: OTHER RELEVANT DATA AND INFROMATION

All of the relevant data and information has been considered for this report.

Further information regarding Kirkland Lake Gold Inc. can be obtained from their web page, www.KLGold.com or from their filings on Sedar, www.sedar.com.

25: INTERPRETATION AND CONCLUSIONS

25.1 Interpretation

The exploration programs initiated by KLG have been very successful in locating new resources and reserves at Macassa.

The large land package that is held by KLG has many indications that further exploration will continue to locate more gold resources.

In general the development and exploration programs initiated by KLG should continue.

The Resources and Reserves estimates truly reflect the mineralization that is currently known. The estimates conform to the requirements of National Instrument 43-101. The SMC Resources and Reserves have been estimated using the same methodology as Macassa normally uses.

25.2 Conclusions

Increased exploration and development underground is necessary to establish sufficient working faces to allow flexibility in the mining sequence. More working faces will allow the rate of production to rise without sacrificing the mill head grade.

Increased tonnage to the mill will allow it to operate at the optimum level.

As always, since Macassa is a seismic active mine, it is extremely important to have the stopes filled as soon as possible. If the stopes cannot be filled in a timely matter production should cease until the filling can be caught up.

26: RECOMMENDATIONS

There are two parameters in the Resource estimation that need to be monitored and modified if indicated.

1: The first is the assay capping or cutting. This can have a larger effect on the resources than the density. The capping of assays is an important part of the Resource estimations. There are a number of ways to establish the cap method and the method used by Macassa appears to be sufficient at present. However, it is known that all zones are not the same and the cap for one zone may not be proper for another zone. Changing mineralization, or even the size and distribution of the gold, will affect the necessary capping level.

It may prove worthwhile to compare the mined tonnages and grades of the stopes with the basic data that the Resource estimate was made from.

For the new zones that have not been mined it will be important to consider the assays and the mineral distribution before a cutting factor is established.

Macassa has been active in the pursuit of the proper capping levels and this work needs to be continued as more information becomes available. A renewed statistical examination of the capping should be considered for fiscal 2014.

2: The second is the dilution. Dilution affects the Reserves more than any change that one could foresee from the density or the assay capping. Every effort should be made to monitor the dilution. This monitoring is important so the proper dilution can be applied to the Reserve estimations.

More importantly, dilution is expensive and by monitoring the dilution it may be possible to recognize the reason and rectify it with a change in the mining practice.

This year the minimum mining width has been increased and the cut-off grade has been decreased. Both of these factors have increased the zone sizes and it should be possible to reduce the overall dilution during mining.

This is a continuing challenge at Macassa, exemplifying the need for the geology department and the mining department to work together to mine with minimal dilution.

CERTIFICATE OF QUALIFICATIONS AND SIGNATURE

I, Glenn R. Clark, am a professional engineer and principal of Glenn R. Clark & Associates Limited, Cobourg, Ontario, Canada. I reside at 288 King Street East, Cobourg, Ontario.

This certificate applies to the report prepared for Kirkland Lake Gold Inc., "Review of Resources and Reserves, Macassa Mine, Kirkland Lake, Ontario at January 1, 2013" dated June 24, 2013.

1. I am a Professional Engineer, registered as a Consulting Engineer with the Association of Professional Engineers of the Province of Ontario, Canada. Registration number 8506016. I graduated from the University of Toronto in 1958 with the degree of Bachelor of Applied Science in Geology. I have been engaged in mineral exploration and mine development for more than 54 years.

2. As a result of my experience and education, I am a "Qualified Person" as defined in National Policy 43-101.

3. This report is based on the examination of the available data including previous reports. A site visit to the Macassa Mine Property was made from April 15-19, 2013 for the purpose of this report.

4. The sources of all information are noted in the report. The information provided by the various parties to the best of my knowledge and experience is correct.

5. I am independent from Kirkland Lake Gold Inc. in accordance with the application of Section 1.4 of National Instrument 43-101

6. I reported on the Resources and Reserves of the Macassa Mine for Kirkland Lake gold Inc. on May 29, 2012, April 4, 2011, July 14, 2010; July 16, 2009; July 14, 2008; October 31, 2007; July 18, 2006 and September 9, 2005. I had previously visited the property while it was under the ownership of Kirkland Lake Gold Inc. I reported on the Resources and Reserves at Macassa Mine for Lac Minerals annually from 1980 to 1990.

9. I have read National Instrument 43-101 and Forms 43-101F1. This report has been prepared in compliance with these documents.

10. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

12. I consent to the filing of this report with any stock exchange or other regulatory authority and any publication by them, including electronic publication of this report, in the public company files on their websites accessible to the public.

Glenn R Clark

Cobourg, Ontario
June 24, 2013

Glenn R. Clark, P.Eng.

Appendix A

TERMS AND DEFINITIONS

TERMS

The following acronyms and terms are common throughout this report.

Macassa is the operating property owned by Kirkland Lake Gold Inc.

KLG refers to Kirkland Lake Gold Inc.

GRCA refers to Glenn R. Clark & Associates Limited.

Ag refers to silver

Au refers to gold

UNITS

All units are Imperial unless otherwise noted.

Ton refers to an Imperial ton of 2000 pounds

oz/ton refers to ounces per dry imperial ton

ac refers to acres

1 mile = 1.609 km

1 acre = 0.405 hectares (ha)

1 ton = 0.907 t (metric tonne)

1 oz/ton = 34.286 g/t (grams per metric tonne)

1 g/t = 0.029167 oz/ton

MONETARY

All monetary values are given in Canadian dollars unless otherwise stated.

The Fiscal Year is the period May 1 to the following April 30.

Appendix B

REFERENCES

There are a number of previous reports regarding the Macassa Mine. The information in these technical reports and the information supplied by Kirkland Lake Gold was relied upon for this review.

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Kinross Gold Corporation (199?): #6 Break and related veins. Unpublished Kinross Gold Corporation longitudinal section.

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Kinross Gold Corporation (199?): Longitudinal section Main Break hanging wall subsidiary veins. Unpublished Kinross Gold Corporation map, scale 1”=400’.

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Appendix C
CLAIMS

Table 10: Kirkland Lake Gold property Holdings
(Sorted by Mine Properties)

Kirkland Lake Property Holdings (sorted by claim number and Mine property)

Completed June 19, 2012

Larder Lake Mining Division

2257 - Patented Mining Claim, mining rights and surface rights

1824 - Patented Mining Claim Mining Rights only

342832 et Al - Crown Lease, Mining Rights

4667 - Patented Claim, Surface rights

1014631- Staked Mining Claim

		Totals	AREAS			
	Type	Number of Claims	MRO Patent (Ha)	MRO Leased (Ha)	MRO Staked (Ha)	MR & SR, (Ha)
Patents	MRO	61	859.6			
Patents	MR & SR	100				1364.8
Leased	MRO	11		296.2		
Staked	MRO	54			1472.0	
Patents	SRO	25				

Project	Claim Type	Claim Number	MRO Patent (Ha)	MRO Leased (Ha)	MRO Staked (Ha)	MR & SR, (Ha)	SRO only (Ha)	Royalties See Notes
Lebel Township								
Lebel Twp. Property	Patent	L-2257				16.92		1
Lebel Twp. Property	Patent	L-2430				19.87		1
Lebel Twp. Property	Patent	L-2447				16.19		1
Lebel Twp. Property	Patent	L-2448				18.88		1
Lebel Twp. Property	Patent	L-2450				17.28		1
Lebel Twp. Property	Patent	L-2452				14.77		1
Lebel Twp. Property	Patent	L-2459				17.00		1
Lebel Twp. Property	Patent	L-2469				14.08		1
Lebel Twp. Property	Patent	L-2676				3.44		1
Lebel Twp. Property	Patent	L-2677				11.86		1
Lebel Twp. Property	Patent	L-2790				12.38		1
Lebel Twp. Property	Patent	L-2791				4.53		1
Lebel Twp. Property	Patent	L-2807				13.96		1
Lebel Twp. Property	Patent	L-2808				13.15		1
Lebel Twp. Property	Patent	L-2886				8.98		1
Lebel Twp. Property	Patent	L-2900				9.23		1
Lebel Twp. Property	Patent	L-2901				9.19		1
Lebel Twp. Property	Patent	L-2988				11.81		1
Lebel Twp. Property	Patent	L-3009				29.95		1
Lebel Twp. Property	Patent	L-3010				20.15		1
Lebel Twp. Property	Patent	L-3011				21.45		1

Project	Claim Type	Claim Number	MRO Patent (Ha)	MRO Leased (Ha)	MRO Staked (Ha)	MR & SR, (Ha)	SRO only (Ha)	Royalties See Notes
Lebel Twp. Property	Patent	L-5940				19.51		1
Lebel Twp. Property	Patent	L-7798				14.69		1
Lebel Twp. Property	Patent	L-7799				16.75		1
Lebel Twp. Property	Patent	L-8819				19.14		1
Lebel Twp. Property	Patent	L-8820				15.01		1
Lebel Twp. Property	Patent	L-8821				18.86		1
Lebel Twp. Property	Patent	L-8822				22.14		1
Lebel Twp. Property	Patent	L-8823				15.70		1
Lebel Twp. Property	Patent	L-8824				13.88		1
Lebel Twp. Property	Patent	L-16514				16.55		2
Lebel Twp. Property	Patent	L-16515				10.93		2
Lebel Twp. Property	Patent	L-20176				2.90		2
Lebel Twp. Property	Staked	L-893443			16.00			
Lebel Twp. Property	Staked	L-1014631			16.00			
Lebel Twp. Property	Staked	L-1014632			16.00			
Lebel Twp. Property	Staked	L-1014633			16.00			
Lebel Twp. Property	Staked	L-1014634			16.00			
Lebel Twp. Property	Staked	L-1014644			16.00			
Lebel Twp. Property	Staked	L-1014645			16.00			
Lebel Twp. Property	Staked	L-1221678			16.00			
Lebel Twp. Property	Staked	L-1221680			64.00			
Lebel Twp. Property	Staked	L-1221778			16.00			
Lebel Twp. Property	Staked	L-1221779			16.00			
TECK TOWNSHIP								
Wright Hargreaves	Patent	T.C. 708				16.43		
Wright Hargreaves	Patent	T.C. 709				10.12		
Wright Hargreaves	Patent	T.C. 710				15.39		
Wright Hargreaves	Patent	T.C. 711				19.95		
Teck Hughes	Patent	L-1824				5.46		
Teck Hughes	Patent	L-1825				9.55		
Teck Hughes	Patent	L-2242				1.90		
Teck Hughes	Patent	L-16625				10.97		
Teck Hughes	Patent	L-16626				10.60		
Teck Hughes	Patent	L-16624				12.91		
Kirkland Minerals	Patent	L-2643	17.00					
Kirkland Minerals	Patent	L-1236				14.41		
Kirkland Minerals	Patent	L-1238				14.97		
Kirkland Minerals	Patent	L-1239				15.90		
Kirkland Minerals	Patent	L-1240				15.46		
Kirkland Minerals	Patent	L-1643	11.24					
Kirkland Minerals	Patent	L-1850				13.01		
Lake Shore Property	Patent	1223						
Lake Shore Property	Patent	1340						
Lake Shore Property	Patent	1342						
Lake Shore Property	Patent	1343						
Lake Shore Property	Patent	1432						3
Lake Shore Property	Patent	L-1557				13.09		
Lake Shore Property	Patent	1748						
Lake Shore Property	Patent	1754						
Lake Shore Property	Patent	L-2243				4.99		
Lake Shore Property	Patent	L-2605				3.34		
Lake Shore Property	Patent	L-2606				14.47		

Project	Claim Type	Claim Number	MRO Patent (Ha)	MRO Leased (Ha)	MRO Staked (Ha)	MR & SR, (Ha)	SRO only (Ha)	Royalties See Notes
Lake Shore Property	Patent	L-2645				17.85		
Lake Shore Property	Patent	2967						
Lake Shore Property	Patent	3018						
Lake Shore Property	Patent	3019						
Lake Shore Property	Patent	3034						
Lake Shore Property	Patent	L-3601				1.82		
Lake Shore Property	Patent	6013						
Lake Shore Property	Patent	6804						
Lake Shore Property	Patent	6805						
Lake Shore Property	Patent	7811						
Lake Shore Property	Patent	8128						
Lake Shore Property	Patent	8880						
Lake Shore Property	Patent	9107						
Lake Shore Property	Patent	9467						
Lake Shore Property	Patent	9468						
Lake Shore Property	Patent	9821						
Lake Shore Property	Patent	9822						
Lake Shore Property	Patent	11384						
Lake Shore Property	Patent	L-16633	15.39					
Lake Shore Property	Patent	L-16634	10.32					
Lake Shore Property	Patent	L-16635				11.47		
Lake Shore Property	Patent	L-16726				6.27		
Newfield transfer	Patent	L-2604	13.88					
Newfield transfer	Patent	L-2644	9.35					
Newfield transfer	Patent	L-2755	15.99					
Newfield transfer	Patent	L-2771	6.48					
Newfield transfer	Patent	L-2788	1.38					
Newfield transfer	Patent	L-2823				11.53		
Newfield transfer	Patent	L-2848	16.19					
Spark Gold	Lease	342832 +		100.50				4
Macassa Mine Property	Patent	H.R. 546				18.86		
Macassa Mine Property	Patent	HR 547				9.35		5
Macassa Mine Property	Patent	HR 548				7.20		5
Macassa Mine Property	Patent	HR 732	17.93					
Macassa Mine Property	Patent	HS 1166				12.42		6
Macassa Mine Property	Patent	HS 1171	11.09					
Macassa, St. Joseph	Patent	L-1224				10.62		7
Macassa, St. Joseph	Patent	L-1225				14.75		7
Macassa St. Joseph	Patent	HR1426				13.40		7
Macassa Mine Property	Patent	L-1525				7.45		
Macassa Mine Property	Patent	L-1616				16.14		
Macassa Mine Property	Patent	L-1617				18.19		
Macassa Mine Property	Patent	L-2634				17.28		8
Macassa Mine Property	Patent	L-2635	13.40					8
Macassa Mine Property	Patent	L-2636	17.36					8
Macassa Mine Property	Patent	L-2637	13.66					8
Macassa Mine Property	Patent	L-2638	9.83					8
Macassa Mine Property	Patent	L-2639	12.99					8
Macassa Mine Property	Patent	L-2640				9.31		
Macass Mine Property	Patent	L-2641	13.05					
Macassa Mine Property	Patent	L-2642				15.90		
Macassa Mine Property	Patent	L-2762	19.63					
Macassa Mine Property	Patent	L-2763	19.22					

Project	Claim Type	Claim Number	MRO Patent (Ha)	MRO Leased (Ha)	MRO Staked (Ha)	MR & SR, (Ha)	SRO only (Ha)	Royalties See Notes
Macassa Mine Property	Patent	L-2764	20.36					
Macassa Mine Property	Patent	L-2830				21.49		
Macassa Mine Property	Patent	L-2831				21.25		9
Macassa Mine Property	Patent	L-2837				16.39		
Macassa Mine Property	Patent	L-2838				18.49		
Macassa Mine Property	Patent	L-2947	16.92					
Macassa Mine Property	Patent	L-2948	14.08					
Macassa Mine Property	Patent	L-3044				3.56		
Macassa Mine Property	Patent	L-3468	15.05					
Macassa Mine Property	Patent	L-4185				9.11		
Macassa Mine Property	Patent	L-4186				9.83		
Macassa Mine Property	Patent	L-4755				8.85		10
Macassa Mine Property	Patent	L-5045	11.61					
Macassa Mine Property	Patent	L-5049	15.14					
Macassa Mine Property	Patent	L-5688	15.34					11
Macassa Mine Property	Patent	L-5689				8.92		11
Macassa Mine Property	Patent	L-5692				18.62		12
Macassa Mine Property	Patent	L-5693				19.43		12
Macassa Mine Property	Patent	L-5926	18.05					
Macassa Mine Property	Patent	L-5927	15.99					
Macassa Mine Property	Patent	L-5928	16.96					
Macassa Mine Property	Patent	L-5929	20.96					
Macassa Mine Property	Patent	L-5967				13.96		
Macassa Mine Property	Patent	L-5980				22.30		13
Macassa, St. Joseph	Patent	L-6432				6.35		7
Macassa Mine Property	Patent	L-8628				2.27		
Macassa Mine Property	Patent	L-8629				17.40		
Macassa Mine Property	Patent	HR 781	14.93					14
Macassa Mine Property	Patent	L-16478	16.09					14
Macassa Mine Property	Patent	26123						
Macassa Mine Property	Patent	26125						
Macassa Mine Property	Lease	L-545717		19.96				14
Macassa Mine Property	Lease	L-620179		6.22				16
Macassa Mine Property	Lease	L-856962		12.30				3
Macassa Mine Property	Lease	L-859820		5.61				15
Macassa Mine Property	Lease	L-842970		13.52				
Kirkland West	Lease	L-496561+		43.26				17
Kirkland West	Patent	L-1385	8.50					17
Kirkland West	Patent	L-16480	16.09					17
Kirkland West	Patent	L-16477	15.78					17
Kirkland West	Patent	L-7711				8.61		17
Kirkland West	Patent	L-6822				18.49		17
Kirkland West	Patent	L-16513				18.29		17
Kirkland West	Patent	L-16514				16.83		17
Kirkland West	Patent	L-16515				18.41		17
Kirkland West	Patent	L-16543				14.41		17
Kirkland West	Patent	L-16546				12.95		17
Kirkland West	Patent	L-16507				7.49		17
Kirkland West	Patent	L-16509				15.22		17
Kirkland West	Patent	L-16510				16.15		17
Kirkland West	Patent	L-16511				16.29		17
Kirkland West	Patent	L-16512				15.38		17
Gracie West	Patent	L-16680				16.88		
Gracie West	Patent	L-4230	14.77					

Project	Claim Type	Claim Number	MRO Patent (Ha)	MRO Leased (Ha)	MRO Staked (Ha)	MR & SR, (Ha)	SRO only (Ha)	Royalties See Notes
Gracie West	Patent	L-4869	15.18					
Gracie West	Patent	L-6842	17.20					
Gracie West	Patent	L-6843	26.99					
Gracie West	Patent	L-6863	24.56					
Gracie West	Patent	L-9809	13.19					
Gracie West	Patent	L-9810	12.95					18
Gracie West	Patent	L-9811	4.25					
Gracie West	Patent	L-9812	15.46					
Gracie West	Patent	L-9813	22.50					
Gracie West	Patent	L-9814	10.52					
Gracie West	Patent	L-16614				17.32		
Gracie West	Lease	L-476845		10.65				19
Gracie West	Lease	L-476846,47		34.41				19
Gracie West	Staked	L-892088			16.00			20
Gracie West	Staked	L-927914			16.00			20
Gracie West	Staked	L-927927			16.00			20
Gracie West	Staked	L-927921			16.00			20
Gracie West	Staked	L-892085			16.00			20
Gracie West	Staked	L-4240384			16.00			
Gracie West	Patent	L-5873	14.25					21
(Axcell Claim)								
Trudel	Patent	L-5433	18.13					22
Morgan	Patent	L-5686	19.10					23
Morgan	Patent	L-5687	0.74					23
Morgan	Patent	L-6687	16.16					23
Morgan	Patent	L-6768	16.36					23
Hurd/Mistango	Lease	L-225112		10.18				24
/McCauley								
Hudson	Patent	L-2672	8.80					25
Hudson	Patent	L-2757	5.50					25
Hudson	RSC	RSC270	12.80					26
Hudson	RSC	RSC271	3.50					26
Hudson	Patent	L-1404	10.20					25
Hudson	Patent	L-2566	18.40					25
Hudson	Patent	L-2553	12.20					25
Hudson	Patent	L-1403	8.70					25
North Amalgamated	Pt Lease	CLM 328		39.60				27
Macassa Explor	Staked	L-859695			16.00			14
Macassa Explor	Staked	L-983045			16.00			3
Macassa Explor	Staked	L-1045619			16.00			3
Macassa Explor	Staked	L-1045623			16.00			3
Macassa Explor	Staked	L-1049049			16.00			
Macassa Explor	Staked	L-4210208			16.00			
Macassa Explor	Staked	L-1213913			16.00			
Macassa Explor	Staked	L-1213914			48.00			
Macassa Explor	Staked	L-1214100			16.00			
Macassa Explor	Staked	L-1214365			32.00			
Macassa Explor	Staked	L-1214366			16.00			

Project	Claim Type	Claim Number	MRO Patent (Ha)	MRO Leased (Ha)	MRO Staked (Ha)	MR & SR, (Ha)	SRO only (Ha)	Royalties See Notes
Macassa Explor	Staked	L-1214367			32.00			
Macassa Explor	Staked	L-1214368			16.00			
Macassa Explor	Staked	L-1214369			48.00			
Macassa Explor	Staked	L-1214370			16.00			
Macassa Explor	Staked	L-1214371			32.00			
Macassa Explor	Staked	L-1214372			32.00			
Macassa Explor	Staked	L-1214373			64.00			
Macassa Explor	Staked	L-1214374			32.00			
Macassa Explor	Staked	L-1217446			16.00			
Macassa Explor	Staked	L-1217447			48.00			
Macassa Explor	Staked	L-1217448			64.00			
Macassa Explor	Staked	L-1217450			64.00			
Macassa Explor	Staked	L-1217451			64.00			
Macassa Explor	Staked	L-1217452			16.00			
Macassa Explor	Staked	L-1217455			16.00			
Macassa Explor	Staked	L-1217479			64.00			
Macassa Explor	Staked	L-1217759			64.00			
Macassa Explor	Staked	L-1219980			16.00			
Macassa Explor	Staked	L-1219981			96.00			
Macassa Explor	Staked	L-3011230			16.00			
Macassa Explor	Staked	L-1221710			32.00			
Macassa Explor	Staked	L-1222104			16.00			
Macassa Explor	Staked	L-1222105			16.00			
Macassa Explor	Staked	L-4245807			16.00			
Macassa Explor	Staked	L-4252740			16.00			
Macassa Explor	Staked	L-4252741			16.00			

The purchase of Queenston's share of the joint venture has been completed however there are some conditions regarding further payment if the production from the claims purchased exceeds 1,300,000 million ounces of gold.

The claims that are affected include the Morgan, HM, Trudel, North AK, Hudson, Kirkland West, Gracie West and Axcell claims.

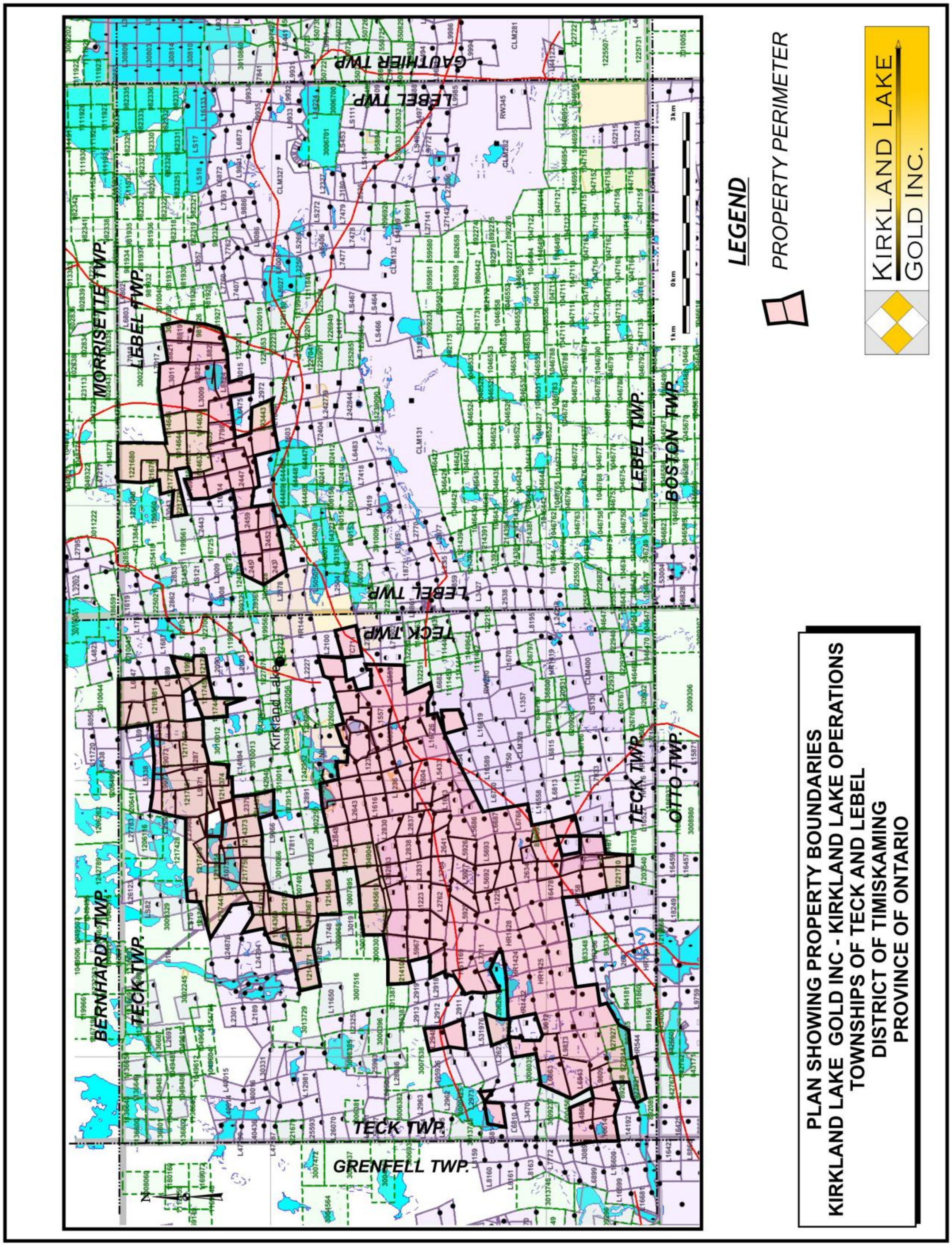
In the event that production from these claims exceeds 1,300,000 ounces of gold KLG will pay Queenston $15 per ounce for the first 1,000,000 ounces produced above the threshold and will pay $20 per ounce for any ounces above 2,300,000.

Some of the other claims have royalty agreements as part of the purchase price. The royalties are summarized in the Notes below.

ROYALTY NOTES

1	SIS 1.5% NSR
2	Mallpacks Development - 1.5% NSR
3	2% NSR to Condie
4	Spark Gold Mines 1%net proceeds
5	KGI 1/4 share, A.H. Seguian to 2/4 share, Thomas Wood to 1/4 share
6	Thompson/Pollock(Millyard) 5% NPI
7	Boisvert $3000 annual, .25/ton milled, 20% NPI to Franco-Nevada, min. $10,000 annual.
8	PEARL WILLIAMS $8/T if Au> $1,000.00 CDN
9	KGI 450/500 share, W.P. St. Charles to 25/500 share, James W. McFadden to 11/500 share, James Cowan to 7/500 share, G.A. Slaught to 7/500 share
10	DAVIS (WILLROY) ROYALTY $1.5/TON. Still to be transferred from Barrick
11	$8/T if Au>$1,000.00 CDN to Karl Gerber/Gord St. Jean
12	Gracie-$10,000 when mining on claim, 20%NPR to Franco-Nevada, $10,000 Min annual, part of St. Joseph royalty
13	KGI 2/3 interest, John McIvor to 1/3 interest
14	Town of KL, 3%NSR
15	Dyment/Kidston 1.5% NSR
16	Condie $4/ton milled
17	3% NSR Royalty to Franco-Nevada if Au>$US1,000.00
18	47.5% INTEREST HELD BY ARTHUR LILLICO, 5% INTEREST TO JOHN McB
19	2% NSR to Franco-Nevada, 4.75% NPR to Forbes Estate, 3.75% NPR to Mike Leany, 1.5% NPR to J. Forbes
20	2% NSR to Franco-Nevada, 3.5% NPR to Premier Explorations, 0.8% to Ron Crichton, 3.5% NPR to Mike Leany, 2.2% NPR
21	2% NSR to Axcell
22	100% Ownership, 2% NSR To Trudel, Buyback 50% For $1,000,000.00 C
23	100% Ownership, 1.5-3% NSR, Advance Royalty Of $50,000.00/year commencing Feb. 2011
24	100% Ownership, 2% NSR to Mistango River Resources, 1% to Hurd/McCauley
25	2% NSR to Aurico Gold (previous Northgate
26	2% NSR to Daniel Belshaw
27	2% NSR to Franco-Nevada, 0.33% NSR to Michael Leahy, 0.12% NSR to Ron Chrichton, 0.16% NSR to James Forbes

Note: Lines 5, 9, 13 and 18 refer to ownership of the claim not royalties



Drawing supplied by KLG *Townships are 10 miles square*

Figure 13: Claim Locations and Boundaries