TECHNICAL REPORT ON THE AQUARIUS PROJECT, TIMMINS, ONTARIO, CANADA PREPARED FOR ST ANDREW GOLDFIELDS LTD.

Report for NI 43-101

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SCOTT WILSON ROSCOE POSTLE ASSOCIATES INC.

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1 SUMMARY

EXECUTIVE SUMMARY

INTRODUCTION

Scott Wilson Roscoe Postle Associates Inc. (Scott Wilson RPA) was retained by St Andrew Goldfields Ltd. (St Andrew) to review the mineral resource estimates prepared by AMEC E&C Services Ltd. (AMEC) in 2003 for Kinross Gold Corporation (Kinross) and prepare an independent Technical Report on the Aquarius Project near Timmins, Ontario, Canada. The purpose of this report is to provide St Andrew with a mineral resource statement for the Aquarius property, to provide supporting documentation for the mineral resource estimates, to recommend further work on the project, and to submit a technical report to the company that conforms to NI 43-101 Standards for Disclosure for Mineral Deposits.

The Aquarius Project site is located 35 km east of Timmins in Northeastern Ontario, Canada, and can be readily accessed by way of highway 101. The Aquarius Project is an advanced exploration project. The exploration drilling has been completed and a number of feasibility assessments have been conducted. The planned scope of the project has been changed and St Andrew intends to conduct further feasibility assessments based on a new conceptual production plan.

Scott Wilson RPA visited the property on September 11 and 12, 2006.

CONCLUSIONS

The Aquarius deposit has been extensively explored and delineated with surface exploration core drilling at 25 m centres, four sets of twinned holes, detailed drilling from underground locations, underground mapping and sampling, and test mining. In general, the drilling is of good quality and the logging has been carried out to a standard sufficient to interpret and construct the geological model for resource estimation. All borehole collars have been surveyed. Although not all of the surface boreholes have been surveyed down-hole, the deviation has been minimal in the holes that were surveyed and the relatively shallow depth of the holes provide confidence that their location plots are acceptable for modeling purposes. Although core recovery was not recorded, a review of the borehole logs and the core did not show any holes with missing core intervals. Although there are some deficiencies in the QA/QC program for the sampling and assaying, the check analyses program for the ASARCO pulps and the results of the QA/QC program conducted by Echo Bay on their drill program demonstrate that the gold analyses are acceptable for resource estimation. The variation observed in the analyses from the core splits and twin holes is attributed to the very high nugget effect demonstrated by the gold mineralization.

The Aquarius gold mineralization is primarily hosted within a carbonate unit formed by the alteration of the regional talc-chlorite schist unit. Gold mineralization also occurs within the mixed, or transition, zone between the carbonate unit and the underlying talcchlorite schist and extends into the talc-chlorite schist. Gold mineralization also occurs within small felsic intrusions that are found within the carbonate, mixed, and talc-chlorite schist zones. These four lithological units form the Aquarius mineral deposit.

The gold occurs as free gold primarily within quartz veins that form a stockwork within the carbonate, the felsic intrusions, and the mixed units. Gold also occurs within very narrow shear zones in all units, and it is the primary control within the talc-chlorite schist. The lithological zones - carbonate, mixed and talc-chlorite schist - are continuous between the drill sections on the nominal grid spacing of 25 m. The felsic-albite intrusions are narrow, with widths significantly less than the drill spacing, and they exhibit a more limited extent than the other mineralized units. On average, these intrusions contain higher gold grades than the other zones,

Although the gold mineralization is pervasive throughout the deposit, the gold grade is extremely variable within and between the holes in all zones. The high variability is demonstrated by the high coefficient of variation in the assays, a very high nugget effect shown in the variograms, the lack of correlation between assays on samples taken from portions of the same core and the complete lack of grade correlation between the twinned holes drilled at a 3 m separation. The histograms of the sample grades exhibit a strong positive skewness. The feasibility study carried out by M3 Engineering & Technology Corp. (M3) in 2000 stated that 47% of the gold is contained in 1.6% of the tonnes in the NW carbonate zone and 49% of the metal is contained within 7% of the tonnes in the SE carbonate zone.

Scott Wilson RPA is of the opinion that the geological model used by AMEC to estimate the mineral resource is reasonable and adequately represents the overall shape, extent, and volume of the mineral deposit. The selection and division of the deposit into the lithological zones as separate domains is reasonable and improves the grade model and provides additional detail for mine planning and mineral processing. Sample compositing and the construction of the block model have been carried out using accepted industry standards. Because of the extreme range in the gold grades and the very high coefficient of variation, AMEC capped the grades for the interpolation methods. Capping of the grades for deposits that exhibit a very high coefficient of correlation in the samples is normal industry practice and Scott Wilson RPA agrees that the grades capping should be applied. AMEC used kriging (ordinary and indicator) for interpolating the gold grades in the carbonate units. An inverse distance model was used as the basis for estimating the gold grades in the blocks for the mixed, talc and intrusive units. The interpolation methods are suitable. AMEC conducted a very thorough validation check on the model. Scott Wilson RPA agrees that the block model is suitable for estimating the mineral resource for the Aquarius deposit.

The deposit is located at the bedrock surface and is only amenable to open pit mining. The mineral resource estimate reported from the block model is constrained by the location of the freeze wall and the slope of the walls of the ultimate pit. The pit slope angles were determined based on extensive geotechnical studies. AMEC reported a mineral resource that includes the mineralization within the entire main carbonate unit, the mixed zone adjacent to the carbonate zone, a portion of the talc-chlorite schist immediately adjacent to the mixed and carbonate zones and the intrusions that are contained within these zones that are contained within the ultimate pit limit. Scott Wilson RPA agrees with this approach.

Because of the very high variability in the gold grades and the short range in the spatial correlation there is a very high uncertainty in the estimates of the individual block grades. AMEC were of the opinion that the application of a cut-off grade would not provide a meaningful model for grade control purposes and that selection of ore and waste based on blast hole sampling would result in a very high risk. AMEC reported the mineral resource to a 0 g/t Au cutoff. Scott Wilson RPA agrees with this approach for mineral resource estimation given the absence of a demonstrated method of effective grade control. However, Scott Wilson RPA recommends that further investigations be conducted to establish a reliable grade control method. AMEC classified the mineral resource on the basis of the number of samples used to estimate the grade within each block. Scott Wilson RPA agrees with the classification of the major portion of the resource as indicated on the basis that the primary carbonate host rock and the mixed zone exhibit good continuity between sections, but the gold grades show poor spatial correlation and cannot be extended between sections. Scott Wilson RPA suggests that the inferred resource classification be reviewed in the next stage of project evaluation

Based on the analysis of the exploration data and review of the technical reports made available to Scott Wilson RPA and the site visit and checks carried out on the data, Scott Wilson RPA agrees with the mineral resource estimates and classifications used by AMEC. In Scott Wilson RPA's opinion, the indicated mineral resource estimate of 23.1 million tonnes grading 1.49 g/t Au has reasonable prospects for economic extraction and warrants further evaluation.

RECOMMENDATIONS Feasibility Study Update

The feasibility study for the Aquarius Project was last updated in 2003 by Kinross. St Andrew acquired the property in 2006 with the intent of processing any future production from Aquarius at their Stock Mill which is located approximately 10 km by road from the Aquarius deposit. Processing the ore through an expanded Stock Mill would preclude the requirement to construct a new mill and the associated tailings facilities at the Aquarius site. St Andrew has submitted a plan to prepare a full feasibility study on the project based on updated costs and current gold prices. Included in the project feasibility would be a complete review of previous investigations and analyses conducted on the project, particularly the freeze wall system and planning of necessary modifications, if any; the development of a revised mining plan and project cost estimate; review and modification, if needed, of the environmental permits; preparation of preliminary and detailed design of the ore crushing/grinding, transportation and milling facilities required to process the ore in the modified Stock Milling Facility; and the normal economic analyses accompanying such a feasibility study.

Scott Wilson RPA agrees that the project warrants these technical evaluations and emphasize the importance of carrying out all work necessary to ensure the freeze wall can be established and maintained over the life of the mine. As recommended by Kinross, the finite element model of the groundwater flow should be reviewed and the calculations updated by appropriate technical consultants.

Scott Wilson RPA agrees that the complete review of the previous investigations conducted on the property with particular emphasis on the freeze wall system. Scott Wilson RPA suggests that an investigation into and development of a grade control program to improve the production grade be carried out prior to or in conjunction with the review of the mining plan and the design of the mill modifications and expansion at the Stock Mill. A review of the previous metallurgical sampling and testing program is also recommended.

Assessment of Grade Control Methods for Selective Mining

Kinross expressed confidence that the additional data density resulting from production grade control programs during mining would be sufficient to allow the Aquarius mineralization to be successfully mined using selective mining methods. They cited the experience from the Dome mine and Troilus Mine as examples where a grade control program was effectively implemented to separate low-grade gold mineralization in gold deposits with similar sampling issues and similar statistical and geostatistical properties. However, in Scott Wilson RPA's opinion, a methodology with the supporting detailed technical analyses were not developed and presented in the 2003 feasibility study update.

AMEC, however, believed that there was a high risk that forecast tonnage and grade would not be recovered if a cutoff grade is applied. They cited the opinions of other consultants stated in previous feasibility studies conducted on the Aquarius deposit. However, AMEC also indicated that the potential to effectively mine to a cutoff grade may be possible. AMEC recommended that a better understanding of the controls responsible for the zonation that occurs within the main carbonate unit may improve local grade interpolation and could potentially help define areas where selective mining could be applied.

Scott Wilson RPA is of the opinion that if an effective grade control can be developed, validated, and incorporated into the mining plan, a cutoff grade can be used to estimate the mineral reserves. Scott Wilson RPA considers the effective selection and application of a cutoff grade to increase the production grade to be an important factor both to improving the economic viability of the deposit and to the design of the mining and processing plan in the next stage of feasibility. The average gold grades in the lithological zones suggest that the production grade could be increased by reducing the quantity of material mined from the mixed zone and the talc-chlorite schist.

In the opinion of Scott Wilson RPA, the development of an effective grade control system requires three steps.

- Assessing the amount of material that can be effectively separated during mining,
- Determining an effective production drilling and blasting program that can separate the sub-economic material from the ore, and
- Establish methods to identify the mineralization above and below the cutoff grade.

Scott Wilson RPA recommends the following assessments be carried out as part of the proposed feasibility study with the objective of improving the mine production grade:

- Construct a conditional simulation model of the gold grades for the deposit. The drilling data from the twin holes and the closely-spaced underground drilling can be used to model the short range variation. The simulation model will provide a more realistic assessment of the variation in the block grades and more clearly illustrate if there is continuity in the low-grade blocks.
- Use the simulation model to assess potential production drilling and blasting strategies that could be incorporated to effectively separate material deemed to be sub-economic. The separation of sub-economic material may result in revisions to the mining equipment selected and potentially the processing capacities required.
- Conduct a thorough review of the deposit geology with the objective of recognizing structures, lithologies, associated minerals or elements, alteration patterns, physical properties or other parameters that can be used to recognize and outline zones hosting the high-grade gold during mining. The geological information available from the borehole logs and the geological reports in the feasibility studies indicate an number of relationships that should be investigated further. These include, but are not limited to, the concentration of the higher-grade mineralizaton in the intrusives, the concentration of mineralization at lithological contacts, the concentration of mineralization in shears, the presence of sulphide minerals such as pyrite and chalcopyrite in certain zones and the apparent general concentration of the mineralization in the harder, more competent rock units.
- Assess the benefits of including a program of close-spaced core drilling or non-core drilling from the benches. The underground drilling program was effective in outlining higher-grade zones for mining.
- Consider incorporating a bulk sampling system during mining to continuously monitor production grade and validate the grade control program.

St Andrew may also want to consider a staged approach to mining to reduce the capital cost and demonstrate that the open pit can be mined and processed successfully using more selective mining methods.

Geological Model

The geological interpretation and model is reasonable and certainly acceptable for resource estimation, however, Scott Wilson RPA recommends that the interpretation of the intrusive units be reviewed. These intrusions have a consistently higher average gold grade than the other units and it is important that these units be identified and recovered during mining. Scott Wilson RPA suggests that St Andrew may want to consider using down-hole tools in the surface boreholes to acquire more data on the intrusions. St Andrew may want to consider using a down-hole televiewer to measure the orientation of the contacts to assess and possibly improve the current wireframe interpretation. The televiewer information may also be useful in mapping shears and faults. The televiewer could be run in conjunction with a gamma tool. A gamma tool may be useful in identifying the exact location of these units within the hole. Scott Wilson RPA would suggest that the pulps from a number of holes that have intersected these intrusions be submitted for whole-rock analysis to assess the viability of using a gamma tool.

Metallurgical Testing

The information derived from the metallurgical samples tested to develop a flow sheet for a new mill to be constructed at the Aquarius site may not be applicable for determining gold recovery of the Aquarius ore at the Stock Mill. If the production from Aquarius is to be processed at the existing Stock Mill, or a major extension to the Stock Mill, the test results need to be reviewed by a metallurgist to determine the applicability of the results to the current or proposed milling circuits at the Stock Mill. Depending on the results of the technical review of the previous test work, new samples may have to be collected and metallurgical tests conducted to verify the gold recovery estimates and process design.

Estimated Cost

St Andrew has estimated that the study is planned to commence in 2007 and is estimated to take approximately 18 months to complete at a cost of C\$1.5 million. St Andrew estimates that an additional C\$1.0 million will be required for ongoing care and maintenance for the Aquarius site and for a technical review of the freeze wall system followed by pressure testing, circulation of refrigerant through the piping and wells and permit modification.

In order to carry out the additional investigations outlined by Scott Wilson RPA, it is estimated that the budget would have to be increased by about C\$400,000. This estimate is based on assigning a geologist full time to the project, conducting additional analyses on the sample pulps or rejects, consulting fees and travel to operating sites to observe grade control methods used at similar deposits. The estimate also includes a review of the previous metallurgical test work and conducting a limited number of bench scale tests. If further pilot scale metallurgical test work is required, these costs would be in addition.

Upon completion of this program, a decision could be made to proceed with the construction of the project or carry out additional investigations if required.

TECHNICAL SUMMARY

PROPERTY DESCRIPTION AND LOCATION

The Aquarius Project is located 35 km east of Timmins in Northeastern Ontario, Canada. The site falls within the eastern boundary of the City of Timmins Municipal limits. The deposit is located approximately at UTM coordinates 5375000 North and 510800 East, NAD27, Zone 17. The property consists of 35 unpatented mining claims, 41 patented mining claims and 9 mineral leases covering an area of 5,341 ha.

LAND TENURE

St Andrew acquired the Aquarius property in 2006 from Kinross Gold Corporation (Kinross). All of the claims and mineral leases have been surveyed. There are no royalties on the claims containing the Aquarius mineral resource. St Andrew confirmed that there are no back-in-rights on any portion of the property.

The property is subject to the normal conditions of the Ontario Public Lands Act and the Ontario Mining Act. The leasehold properties are subject to the terms and conditions of the leases.

The property is located within the eastern limits of the Corporation of the City of Timmins and there is permitted encumbrances with respect to by-laws. St Andrew stated that these encumbrances are not material to any future development of the project or the operation of the mine.

SITE INFRASTRUCTURE

Currently, the major assets and facilities associated with the Project are:

- A mineral deposit for which a number of economic assessments based on a plan for the construction of an open pit mine and mill located at the project site have been conducted.
- A freeze wall consisting of 2,240 wells over a length of 3.66 km located on the south and east margins of the proposed open pit, a three-line refrigerant loop connecting the well system, approximately 90 ground temperature monitoring wells and two 1,250 ton compressor.
- A secure site with 24 hour security
- The freeze wall and associated compressor equipment are maintained on an ongoing basis. The maintenance program consists of a yearly pressure test of the individual surface and down-the-hole well loops and/or circuits.
- A 115 KV circuit power line and a 115/13.8KV substation which is owned by St Andrew.
- An access road to highway 101
- A small office for maintenance and security personnel

HISTORY

Early exploration on the Aquarius property was undertaken by Lac D'Amiante du Quebec Ltee, a wholly owned subsidiary of ASARCO. The deposit was discovered in 1979 and surface drilling identified and outlined the main carbonate zone hosting the gold-bearing quartz veins. Due to the thickness of the overburden and the erratic nature of the gold mineralization, ASARCO decided to conduct further exploration from underground and sunk an exploration shaft in 1981.

Underground development commenced in 1981 with a 174 m underground shaft and several exploration drifts. The shaft was deepened to 213 m in 1983. Drilling was carried out from underground to outline stopes for mining and about 127,000 tonnes of ore grading 6.9 g/t Au were extracted and processed at a mill at site. Production was

curtailed in 1989 due to erratic gold in the underground operation. The mine was allowed to flood in 1991. From 1990 through to 1994, ASARCO conducted additional exploration diamond drill programs on the property in areas peripheral to the main Aquarius deposit.

The deposit was acquired by Echo Bay Mines Ltd. (Echo Bay) in 1995. Echo Bay initiated an extensive surface drilling program with the objective of identifying the bulk tonnage, open pit potential of the deposit. In 1995 and 1996, Echo Bay completed 390 surface drill holes (70,247 m). Echo Bay evaluated the project with a "Level II Feasibility Study" prepared by Kilborn International Inc. in 1996. This study determined a proven and probable reserve estimate of 19.7 Mt at an average grade of 2.02 g/t Au. The study recommended the installation of the installation of an engineered frozen earth barrier to reduce ground water inflows into the proposed pit and minimize the affect of the pit de-watering on the ground water table and surrounding lake levels.

In January 1997, Echo Bay announced the construction of the project and contracted Layne Christianson, Geotechnical Construction Group to install the freeze wall. The freeze wall and two refrigeration buildings were installed and built in 1997. In late 1997, the project was deferred due to lower gold prices, but the construction of the freeze wall and associated infrastructure continued and completed by March 1998.

In September 1999, Echo Bay undertook a Level I feasibility Study based on using open pit mining equipment from Echo Bay's McCoy-Cove operation in Nevada and a revised extraction flow sheet incorporating grinding equipment from a company-owned mill. Based on the results of this study, Echo Bay commissioned M3 Engineering & Technology Corporation (M3) to prepare a Level II study. M3 completed their study in May 2000. Echo Bay reported a proven and probable mineral reserve estimate of 15.9 Mt grading 2.33 g/t Au. However, Echo Bay did not proceed with the project citing the low gold price.

In January 2003, Kinross Gold Corporation, Echo Bay, and TVX Gold Inc. merged under the name of Kinross Gold Inc. Kinross retained AMEC E&C Services (AMEC) to review and update the geological and mining components of the previous M3 Feasibility Study.

AMEC reported the mineral resource estimate based on the mineralization enclosed within an ultimate open pit design constrained by the location of the freeze wall. Due to the high nugget component of the gold mineralization, AMEC concluded that there was a high risk that the forecast tonnage and grade could be recovered using a cut-off grade. AMEC reported all of the material contained within the ultimate pit to a 0 g/t cut-off grade. AMEC did not classify any portion of the mineral resource as measured due to uncertainties in the bore-hole surveys, sample assays and geology data. AMEC also capped the gold grades used in the grade interpolation methods in the block model. AMEC reported an indicated mineral resource estimate of 23.1 Mt grading 1.49% Au and an additional inferred mineral resource estimate of 0.5 Mt grading 0.8 g/t Au. However, AMEC also provided a block model to Kinross using uncapped grades.

Kinross requested M3 to update the M3 2000 feasibility study and they submitted the results of the study to Kinross in the fall of 2003 with an update on the construction and equipment costs. A detailed section was included on the condition and operational procedures for the freeze wall because Kinross regarded the freeze wall as a novel technology for an open pit mine. Kinross selected AMEC's uncapped model as the basis for the mine planning and reserve reporting. Kinross elected to report the mineral reserve estimates for the project assuming selective mining to a cut off grade of 0.5 g/t Au. Kinross applied a 5% dilution factor and 95% recovery factor. Kinross reported a mineral reserve of 15.0 MT tonnes grading 2.16 g/t Au. The mineral resource estimate was based on a mine production plan of 7,500 tpd and processing at a mill constructed at the Aquarius Site and a gold price of US\$325/oz.

In December 2005, Kinross announced that it had entered into a definitive agreement with St Andrew Goldfields Ltd. to exchange Kinross' Aquarius Project for 100 million common shares of St Andrew plus 25 million two year warrants on St Andrew common shares. St Andrew completed the acquisition in May 2005. St Andrew completed a conceptual plan to integrate the Aquarius Project into their existing Stock Gold Mining Complex. The conceptual plan is based on the Kinross mine plan, but the production would be processed at the Stock Mill, located approximately 10 km by road from the Aquarius deposit. St Andrew plans to conduct a new feasibility assessment on the deposit.

DEPOSIT GEOLOGY

The geology of the Aquarius Project area consists predominantly of a 1,000 m thick band of variably altered ultramafic volcanics of the Tisdale Group that strikes eastsoutheast parallel to the regional trend. The ultramafics have been metamorphosed to talc-chlorite schist. The talc-chlorite schist is separated from the overlying Timiskaming sediments to the north by the Porcupine-Destor Fault Zone, a regional structure that extends about 200 km from west of Timmins to the Destor area of Quebec. Many of the gold deposits in the region are closely associated with this structure and related structures. To the south of the property, the talc-chlorite schist is separated from a zone of altered mafic volcanics by the Gold Island Fault. The trend of the major rock units and regional foliation parallel the DPFZ and GIF east-northeast strike directions. The sediments, talc-chlorite schist and the mafic volcanics have all been intruded by numerous dykes and plutons. There are three main varieties of intrusive rocks in the immediate deposit area, namely; albitite dikes, altered and unaltered mafic intrusives, and feldspar and quartz-feldspar porphyries.

The predominant east-northeast structural fabric is crosscut by major northwesttrending fault systems which offset the older formations; interpretation is difficult because of a lack of recognizable markers from which to measure displacements.

The Aquarius deposit is an Archean lode gold vein deposit. It is hosted within a broad zone of carbonate-altered ultramafics within the talc-chlorite schist. This main carbonate unit has a strike length of approximately 800 m and varying in width from 300 m to 150 m. The deposit extends to a depth of about 100 m below the bedrock surface. The

carbonate alteration zone varies from 30 to 80 m in thickness and forms an open antiform with the limbs striking parallel to the regional structure. This carbonate alteration zone is located proximal to the Gold Island Fault and it forms a gradational contact with the talc-chlorite schist. This unit is referred to as the "mixed" zone and it is typically less than five metres thick.

The Aquarius deposit contains a complex assemblage of both auriferous and nonauriferous quartz veins; the amount of quartz vein material is not a direct indicator of gold grade. The carbonate zone hosts the preponderance of quartz veining. The main-stage vein sets hosting the gold mineralization are interpreted as extension veins. Although the gold mineralization is predominantly hosted by the carbonate rocks, gold also occurs within the mixed zone and within the talc-chlorite schist. Quartz veins and associated gold mineralization also gradually diminish through the mixed alteration zone, occasionally continuing one metre to two metres into the talc-chlorite schist. The gold mineralization is also present within the intrusive units; the gold grade in the intrusive units is generally higher than in the other lithologies. This is attributed to the stiffness of the intrusions making them more amenable to fracturing.

Gold mineralization occurs as free gold within all of the units. Gold within the carbonates occurs in many different mineralogical associations and vein types:

- Coarse, free gold is often found associated with and sometimes embayed on, disseminated pyrite within quartz-albite veins.
- Coarse, free gold is often associated with, and embayed within, chalcopyrite grains.
- Very fine free gold is often located proximal to vein margins in association with minor amounts of wispy chlorite and trace amounts of very finely disseminated pyrite. These occurrences are commonly located within very narrow (millimeter-scale) veinlets of smoky-gray quartz which appear to branch off the main-stage veins of quartz-carbonate ± albite.
- Coarse, erratically distributed, free gold is often found isolated from other mineral associations in quartz-carbonate veins which would otherwise appear to be barren (i.e., lacking in sulphides).

- High gold values are associated with fault zones, and fault planes within certain parts of the deposit. These zones may, or may not, include veining or albitite dikes, both of which would logically channel into structural zones.
- Coarse, visible gold is often found in narrow (less than 5 mm) clear (or smoky grey) quartz veins which postdate the main-stage quartz/carbonate ± albite veins, and also postdate the albitite dikes.

Although the gold mineralization commonly occurs in these structures and veins and exhibits a number of associations, these associations are not definitive signs of the presence of high-grade gold mineralization.

The Aquarius property is covered by 35 m to 200 m of Pleistocene glacial overburden dominated by glacio-lacustrine clay, silt, and sand deposits, with a thin horizon of till resting on the bedrock surface.

MINERAL RESOURCE ESTIMATE

The mineral resource estimate for the Aquarius deposit reported by AMEC to Kinross is based on open pit mining. The mineral resource at the Aquarius property is constrained by the location of the freeze wall. The freeze wall limits the resource in that the ultimate pit cannot expand past the freeze wall without incurring very significant expenditures. The ultimate pit is also constrained by the designed pit slope angle. Golders Associates, geotechnical engineering consultants, provided recommendations for the wall angles for the overburden and the intact rock. The mineral resource is reported at a 0 g/t Au cutoff grade and the gold grades have been capped. The mineral resource is contained within the ultimate pit is reported in the mineral resource. Scott Wilson RPA reviewed the data and AMEC's procedures and accept the mineral resource estimate based on their KG20 block model. The mineral resource estimates are listed in Table 1-1.

TABLE 1-1 MINERAL RESOURCES

St Andrew Goldfields Ltd. – Aquarius Project

Classification	Kt (000)	g/t Au	Kozs (000)
Indicated	23,112	1.49	1,106
Inferred	502	0.83	14

Notes:

1. CIM definitions were followed for mineral resources.

2. Mineral resources are estimated at cutoff grades of 0 g/t Au.

3. Mineral resources are estimated using current gold price of \$500 per ounce and a US\$/C\$ exchange rate of C\$:US\$ of 0.90:1.0

4. No minimum mining width was used as all mineralization within the ultimate pit limit is reported.

5. Indicated mineral resources are inclusive of mineral reserves.

ENVIRONMENTAL CONSIDERATIONS

The permitting process was initiated by Echo Bay Mines based on the construction of a 7,500 tpd open pit mine and mill at the Aquarius site. The environmental impact study required under the Canadian Environmental Assessment Act process, including the public consultation process, was successfully completed by Echo Bay Mines in 2000 and they received a permit contingent on conditions contained in a Memorandum of Understanding between Echo Bay and the Department of Fisheries. A closure plan was filed with the Ministry of Northern Development and Mines and accepted in June 2000. A surety bond for C\$627,243 was posted with the Ministry of Northern Development and Mines. Echo Bay was advised that they further financial assurance to bring the total up to C\$9,417,000 must be received prior to initiating any construction at the site. The ministry did advise Echo Bay, the mine owner at that time, they would also be required to provide public notice prior to commencing mine production.

St Andrew notified the Ministry of Northern Development and Mines in April 2006 that they had acquired the Aquarius property and filed an amendment to the previous closure plan accepting responsibility for the permit conditions. St Andrew intend to review the previous feasibility studies and develop a new feasibility study based on an open pit mine and transporting the Aquarius production to their Stock Mill rather than

SCOTT WILSON RPA

construct a mill on site on site. These scope changes to the project plan, and the length of time that has elapsed since the submission of the previous closure plan may affect the total amount of the surety bond.

St Andrew has scheduled Gochnom & Associates to conduct an environmental review of the site for October 2006.

Additional permits from the provincial and municipal governments will be required before proceeding to construct a mine.

2 INTRODUCTION AND TERMS OF REFERENCE

Scott Wilson Roscoe Postle Associates Inc. (Scott Wilson RPA) was retained by St Andrew Goldfields Ltd. (St Andrew) to review the mineral resource estimates prepared by AMEC E&C Services Ltd (AMEC) in 2003 for Kinross Gold Corporation (Kinross) and prepare an independent Technical Report on the Aquarius Project near Timmins, Ontario, Canada. The purpose of this report is to provide St Andrew with a mineral resource statement for the Aquarius property, to provide supporting documentation for the mineral resource estimates, to recommend further work on the project and to submit a technical report to the company that conforms to NI 43-101 Standards for Disclosure for Mineral Deposits.

The Aquarius Project site is located 35 km east of Timmins in Northeastern Ontario, Canada and can be readily accessed by way of highway 101. Scott Wilson RPA visited the property on September 11 and 12, 2006.

St Andrew Goldfields Ltd. is a gold mining and exploration company. Its corporate office is located at 1540 Cornwall Road, Suite 212 in Oakville, Ontario. St Andrew controls a large land position in the Timmins Mining Camp, at Eskay Creek in northern British Columbia, and a significant property in the Nixon Fork area of Alaska. St Andrew commenced gold production at the beginning of January 2006 from the Clavos Mine in the Timmins area with the objective of building production to a rate of 225,000 tonnes per annum. The mine production is processed at the Stock Mill which utilizes the Carbon-In-Pulp process to recover gold. The design capacity of the mill is currently about 1,300 tpd.

St Andrew announced the acquisition of the Aquarius property from Kinross Gold Corporation in December 2005 for 100 million common shares of St Andrew plus 25 million two-year warrants of St Andrew common shares with an exercise price of 17 cents. The sale closed on May 10, 2006. Conceptually, St Andrew is planning the development of a 7,500 tpd open pit mine within the confines of the existing freeze wall. The mine would require the handling of approximately 35,000 tonnes of combined ore-waste material per day. The ore would be crushed on site and either transported by conveyor or, alternately, ground in an on-site Sag Mill and pumped in slurry form to the Stock Mill for further treatment. The Stock Mill would require expansion to 10,000 tpd capacity.

Currently, the major assets and facilities associated with the Project are:

- A mineral deposit for which a number of economic assessments based on a plan for the construction of an open pit mine and mill located at the project site have been conducted.
- A freeze wall consisting of 2,240 wells over a length of 3.66 km located on the south and east margins of the proposed open pit, a three-line refrigerant loop connecting the well system, approximately 90 ground temperature monitoring wells and two 1,250 ton compressor.
- A secure site with 24 hour security
- The freeze wall and associated compressor equipment are maintained on an ongoing basis. The maintenance program consists of a yearly pressure test of the individual surface and down-the-hole well loops and/or circuits.
- A 115 KV circuit power line and a 115/13.8KV substation which is owned by St Andrew.
- An access road to highway 101
- A small office for maintenance and security personnel

A site map of the project showing the current infrastructure and access road is shown in Figure 4-3.

Scott Wilson RPA has not conducted any previous investigation or prepared any reports on the Aquarius deposit. Scott Wilson RPA have carried out a number of investigations on mining and exploration projects in the Timmins camp and in some cases submitted technical reports for those projects to the owners.

SOURCES OF INFORMATION

A site visit was carried out by William Roscoe, P Eng., Neil Gow, P. Eng., and Lawrence Cochrane, P. Eng., from Scott Wilson RPA on September 11 and 12, 2006, accompanied by Paul C. Jones, Executive Vice President with St Andrew Goldfields Limited. While on site, discussions were held with Warren Bates, Vice President Exploration, and Paul Degagne, Chief Geologist with St Andrew. The site review consisted of:

- Examination of drilling sections and plans,
- Review of underground mapping and drilling,
- Examination of the split core from several holes drilled through the deposit and the diamond drill logs,
- Viewing the pulp storage facility,
- Collection of samples from the core storage and sample pulps for check assays,
- Review of several assay certificates and drill logs,
- Tour of the Aquarius Project site including the refrigeration plant, freeze line and ground temperature monitoring wells,
- Discussions with St Andrew personnel, and
- A tour of the Stock Mill Complex.

St Andrew provided Scott Wilson RPA with copies of previous reports, including feasibility studies, and several other documents pertaining to the Aquarius Project. The documentation reviewed, and other sources of information, are listed below. A complete list of the references is provided at the end of this report in Item 21 "References".

- Kinross Gold Corporation (December 2003): Technical Report on the Aquarius Gold Project, Timmins Ontario, Canada
- AMEC E&C Services Limited (September 2003): Aquarius Project Review and Update. Prepared for Kinross Gold Corporation
- M3 Engineering & Technology Corp. (2003): Update on the Aquarius Project Bankable Feasibility Study. Prepared for Kinross Gold Corporation
- M3 Engineering & Technology Corp. (May 2000): Aquarius Project Bankable Feasibility Study. Prepared for Echo Bay Mines Ltd.
- Echo Bay borehole logs (1995-96): Aquarius Project
- GEMCOM database 2004
- AMEC 2003 Model Data
- Aquarius underground drawings
- Pit Limits in GEMCOM
- Assay reports from Swastika Laboratories

This technical report has been prepared by Lawrence Cochrane, P.Eng., and reviewed by Neil Gow, B.Sc. (honours) P. Geo., and William Roscoe, Ph.D., P.Eng. The report conforms to NI 43-101 Standards for Disclosure for Mineral Deposits.

LIST OF ABBREVIATIONS

Units of measurement used in this report conform to the SI (metric) system. All currency in this report is Canadian dollars (US\$) unless otherwise noted.

TABLE 2-1LIST OF ABBREVIATIONSSt Andrew Goldfields Ltd. – Aquarius Project

Abbreviation	Meaning	Abbreviation	Meaning
Au	Gold	°C	degrees centigrade
g	grams	kV	kilovolts
g/t	grams per tonne	kVA	1000 volt-amperes
OZ	ounce (31.1035 grams)	Ма	Million years old
ppm	parts per million, g/t	Kt	thousands of tonnes
ppb	parts per billion	Koz	thousands of ounces
tonnes or t	metric tonnes	C.V.	Coefficient of Variation
tons	short ton (0.9072 t)	AQ	Drill core (diameter approx. 27 mm)
tpd	tonnes per day	BQ	Drill core (diameter approx. 36 mm)
kg	kilograms	NQ	Drill core (diameter approx. 48 mm)
ha	hectare (2.471 acres)	EXT	Drill core (diameter approx. 21.5 mm)
km	kilometres		
m	metres		
m³	cubic metres		
\$ or US\$ C\$	United States \$ (all costs) Canadian \$		

3 RELIANCE ON OTHER EXPERTS

This report has been prepared by Scott Wilson Roscoe Postle Associates Inc. (Scott Wilson RPA) for St Andrew Goldfield Ltd. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to Scott Wilson RPA at the time of preparation of this report,
- Assumptions, conditions, and qualifications as set forth in this report, and
- Data, reports, and other information supplied by St Andrew Goldfield Ltd. and other third party sources.

For the purpose of this report, Scott Wilson RPA has relied on ownership information provided by St Andrew Goldfield. Scott Wilson RPA has not researched property title or mineral rights or surface rights for the Aquarius Project and expresses no legal opinion as to the ownership status of the property.

4 PROPERTY DESCRIPTION AND LOCATION

The Aquarius Project site is located 35 km east of Timmins in Northeastern Ontario, Canada. The site falls within the eastern boundary of the City of Timmins Municipal limits. The property location map is shown in Figure 4-1. The deposit is located approximately at UTM coordinates 5375000 North and 510800 East.

LAND TENURE

St Andrew acquired the Aquarius property in 2006 from Kinross Gold Corporation (Kinross). The property covers 5,341 hectares of land consisting of 35 unpatented mining claims, 41 patented mining claims, and 9 mineral leases. The claims and mineral leases comprising the property are shown in Figure 4-2 and the claim numbers, area, type of mineral tenure, and expiration dates are shown in Table 4-1 for the claims and leases that contain the mineral deposit and immediately adjacent to the deposit. A complete list of the claims and leases covering the property acquired by St Andrew from Kinross are included in Appendix 1. All of the claims and mineral leases have been surveyed.

TABLE 4-1 LAND TENURE

St Andrew Goldfields Ltd. – Aquarius Project

 Claim No	Patented (p) Leased (L)	Rights	Township	Area	Expiry Date
 Claims Immediately Over and Adjacent to the Deposit (Project Site)					ite)
CLM293	L	mro	Macklem	253.66	Aug 31/06
CLM291	L	msr	Macklem	241.72	Aug 31/06
CLM290	L	msr	Macklem	332.16	May 31/07
CLM292	L	msr	Macklem	183.45	Aug 31/06
512801-02	Р	msr	Macklem	NA	None
512829	Р	msr	Macklem	NA	None
51898-99	Р	msr	Macklem	NA	None
512816	Р	msr	Macklem	NA	None
52791-92	Р	msr	Macklem	NA	None
512826	Р	msr	Macklem	NA	None
512784-85	Р	msr	Macklem	NA	None
512816	Р	msr	Macklem	NA	None
512807-10	L	mro	German	63.94	Aug 31/06
1189759	UP	mro	German	32	Mar 25/07
512811	L	mro	German		May 31/12
512781	L	mro	German		May 31/12
512782-83	L	mro	German	60.73 total	May 31/12
663441-42	L	mro	German		May 31/12
663443-44	L	mro	German		May 31/12

Note: msr – mining and surface rights; mro – mining rights only; P – patented mining claim; UP – unpatented mining claim; L mining lease

The leases that are shown as expiring on August 31, 2006 are under renewal and St Andrew informed Scott Wilson RPA that these leases will be renewed.

ROYALTIES, OBLIGATIONS AND ENCUMBRANCES

In respect of claim 292, there is a 2 ¹/₂ gross proceeds royalty up to \$25,000 per year pursuant to an option to purchase agreement. Scott Wilson RPA assessed the location of this claim with respect to the location of the mineral deposit and the portion of the

mineral deposit that is reported as a mineral resource in this report is not located on claim 292.

In respect of patented claims 27259 to 27269 inclusive, there is a 0.25% NSR pursuant to sale agreement. These claims are located approximately two kilometres east of the deposit and do not contain any portion of the mineral resource.

St Andrew confirmed that there are no back-in-rights on any portion of the property.

The property is subject to the normal conditions of the Ontario Public Lands Act and the Ontario Mining Act. The leasehold properties are subject to the terms and conditions of the leases.

The property is located within the eastern limits of the Corporation of the City of Timmins. There are permitted encumbrances with respect to municipal by-laws. St Andrew stated that these encumbrances are not material to any future development or the operation of the mine.

ENVIRONMENTAL LIABILITIES

St Andrew has stated that there are no known environmental liabilities on the property. There is a small mill tailing impoundments on the property remaining from previous underground mining and milling activities. There are no environmental liabilities associated with these tailing impoundments and they would be removed with the development of an open pit mine. Cyanidation was not used for ore processing at the site.

MINE WORKINGS

An underground mine was developed and operated at the site from 1980 though 1989. Mine openings consist of a 212 m shaft and development and mine openings on several levels. Approximately 2,300 m of drifting and raising were completed and approximately 127,000 tonnes of ore mined. The underground workings were allowed to flood in 1991. All mine and mill facilities were removed from the site in 1999 and the shaft was capped.

PERMITTING STATUS

The permitting process was initiated by Echo Bay Mines based on the construction of a 7,500 tpd open pit mine and mill located adjacent to the mine at the Aquarius site. The environmental impact study required under the Canadian Environmental Assessment Act process, including the public consultation process, was successfully completed by Echo Bay Mines in 2000 and they received a permit contingent on conditions contained in a Memorandum of Understanding between Echo Bay and the Department of Fisheries. A closure plan was filed with the Ministry of Northern Development and Mines and accepted in June, 2000. A surety bond for C\$627,243 was posted with the Ministry of Northern Development and Mines. Echo Bay was advised that further financial assurance would be required to bring the total up to C\$9,417,000 prior to initiating any construction at the site. The ministry did advise Echo Bay, the mine owner at that time, they would also be required to provide public notice prior to commencing mine production.

St Andrew notified the Ministry of Northern Development and Mines in April 2006 that they had acquired the Aquarius property and they filed an amendment to the previous closure plan. St Andrew intend to review the previous feasibility studies and develop a new feasibility study based on an open pit mine and transport the Aquarius production to their Stock Mill rather than construct a mill on site on site. These changes to the proposed plan and the amount of time that has elapsed since the submission of the previous closure plan may change the total amount of the surety bond.

Additional permits from the provincial and municipal governments will be required before proceeding to construct a mine.



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5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

ACCESSIBILITY

The Aquarius Project is located in Macklem Township approximately 35 km east of the City of Timmins, Ontario. The City of Timmins is located in northeastern Ontario approximately 700 kilometers by road north of Toronto. Rail freight service to Timmins is provided by Ontario Northland Railway. A regional airport is located 12 km north of Timmins and daily flight services are available to Toronto and other centers. The City of Timmins has a population of about 50,000 and it is a major mining center. The project site is accessed by Highway 101 from Timmins which is located along the northern boundary of the property. A gravel road, approximately 1.5 km long, connects the project site to highway 101.

CLIMATE

The climate is typical of northern Ontario with cold winters, warm summers and moderate precipitation. Climatic conditions have been described based on meteorological information from Timmins during the period from 1955 to 1990 (St Andrew, 1998). The average daily temperature in the Timmins area is recorded as 1.2°C with a mean low of -17.2°C in the month of January, and a mean high of 17.3°C in the month of July. An extreme low of -45.6°C was recorded in February 1962 and the extreme high of 38.9°C occurred on July 31, 1975. The yearly average precipitation for the Timmins area is 874 mm with approximately 60% as rain and 40% as snow. The record daily amount of rainfall, 86 mm, occurred on July 29, 1990. The month of July has the most thunderstorms. Snow can start to fall in October and last until May. The mean annual frost free period is 92 days and typically extends from early June to early September. The climatic conditions are not expected to cause any major disruption to any future production and the operating season is expected to be 365 days per year.

LOCAL RESOURCES

The major mining centres of Timmins, Kirkland Lake and Rouyn-Noranda are located in the region and can provide all supplies, services and labour needed in the operation of a gold mine. The city of Timmins, about 35 km from the Aquarius Project, has a population of approximately 50,000 and is the main centre in the area. It offers modern housing, as well as educational, medical, recreational, shopping facilities, and rail transport infrastructure.

Operating mines and processing plants that are in the vicinity include the Holt McDermot and Harker-Holloway gold mines in the Holloway area, the Porcupine Joint Venture's operations (Dome and Hoyle Pond Mines) in Timmins and the Pamour open pit. The area has been primarily developed for logging, mining and farming. As well, there are a number of gold mining operations in the area that are in the advanced exploration to development stages including, the Glimmer (Black Fox) Mine in Hislop Township and the Macassa Mine in Kirkland Lake. The Aquarius project is located 10 km by road from St Andrew's Stock gold mill and Stock Mine project and approximately 15 km south of their Clavos Mine.

The extent of the mining activity within the immediate area of the Aquarius Project provides a reasonable source of skilled labour within commuting distance of the proposed mine.

SITE INFRASTRUCTURE

The site infrastructure is listed in Item 2 and shown on the site map in Figure 4-3. Figure 4-3 also shows the proposed locations of the overburden and rock storage piles. St Andrew owns sufficient surface rights, or can acquire the surface rights over the mineral leases for the associated mining activities (offices, maintenance facilities, fuel and explosive storage). The current development plan is based on shipping the ore to the Stock Mill and there is no requirement for the acquisition of additional property in the vicinity of the mine for a mill and associated tailings facilities. There is an adequate source of potable water and process water at the site. Power supply to the site is available
by way of a transmission line that ties to the regional grid near Charland Lake located 9 km north-northwest of the project site. The last 6 km of this 115 KV circuit and the 115/13.8 KV substation is the property of St Andrew. An existing primary 15/20 MVA substation is currently located on the property and two additional 1.5 kVA substations have been installed as part of the preparatory work related to the freeze wall. Currently, however, power to the two compressor-refrigeration stations is supplied by rental diesel powered generators.

PHYSIOGRAPHY

Continental ice sheets glaciated Northern Ontario at least four times during the Pleistocene. Following the most recent glaciation, the Laurentide of Wisconsinan age, ice receded northeast through the area and deposited a variety of surficial materials including extensive till. Glaciolacustrine sediments were deposited over the till. The area was probably ice-free some 9,000 years ago. Recent organic terrain developed mainly in poorly drained depressions. Overburden depths generally range from less than 3 m to well over 60 m, however, in the immediate area of the Aquarius deposit, the overburden depths range from 40 m up to 200 m.

The topography in the area is flat lying to gently rolling terrain with little topographic relief. Elevations range from approximately 250 m to 300 m above sea level. The region is predominantly comprised of boreal forest, muskeg and lakes. The deposit is located on the western flank of the Frederick House Esker. The esker is aligned in a south-southeast direction and a 12 km segment of the esker passes through the project site. This large regional esker functions as a major groundwater aquifer and is locally connected to several small kettle lakes. Kettle Lakes Provincial Park is located approximately 2 km north of the deposit.

6 HISTORY

Early exploration on the Aquarius property was undertaken by Lac D'Amiante du Quebec Ltee a wholly owned subsidiary of ASARCO. The deposit was discovered in 1979 while conducting a reverse circulation reconnaissance exploration program. Following the discovery ASARCO drilled 23 (check table shows 27) BQ and AQ-size core holes which identified and outlined the main carbonate zone hosting the gold-bearing quartz veins. Due to the thickness of the overburden and the erratic nature of the gold mineralization, ASARCO decided to conduct further exploration from underground and sunk an exploration shaft in 1981. Underground diamond drilling programs, complemented by surface drilling campaigns were carried out.

Underground development commenced in 1981 with a 174 m underground shaft and several exploration drifts. Ore from this development work was processed with a 90 tonne per day test plant. A second phase of development took place in 1983 when the shaft was deepened to 213 m below surface, the 187 m level was established, and a 300 ton per day mill erected. The mine was operated on a trial basis in 1984, producing 29,660 tonnes at 7.75 g/t Au, and 2,300 m of drifting and raising were completed. From 1984 to 1987, the mill operated on a toll basis. Late in 1987, the Aquarius mine was reactivated and operated at 272 tonnes per day until August of 1989, producing 97,490 tonnes at 6.58 g/t Au. An additional 3,000 m of horizontal development was completed during this period. The mining methods used were cut and fill and shrinkage. Production ceased due to erratic gold in the underground operation. The production from the underground workings is summarized in Table 6-1.

Year	Tonnes	Grade (g/t Au)	% Recovery	Gold Production (ounces)
1984	29,724	7.75	94.0	6,945
1988	61,635	5.86	93.3	10,816
1989	36,031	7.82	95.5	8,629
Total	127,390	6.86	94.1	26,390

TABLE 6-1SUMMARY OF PRODUCTIONSt Andrew Goldfields Ltd. – Aquarius Project

Exploration in the south portion of the mine outlined a reserve of approximately 193,000 tonnes grading 15.7 g/t Au, however, a decision was made to close the mine. The methods and parameters used to estimate this reserve cannot be located and no comments can be made on the quality of the estimate. The mine was allowed to flood in 1991. From 1990 through to 1994, ASARCO conducted additional exploration diamond drill programs on the property in areas peripheral to the main portion of the Aquarius deposit explored from underground. The aim of the program was to find new mineral zones. ASARCO did consider a bulk mining open pit option and carried out resource estimates on this option.

In November 1995, ASARCO entered into an option agreement with Echo Bay Mines Ltd (Echo Bay) whereby Echo Bay acquired 50% of the project for US \$7.75 million and a US \$8.8 million in exploration commitment. Later in 1995, Echo Bay bought Asarco's remaining interest.

Echo Bay Minerals

Echo Bay initiated an extensive surface drilling program with the objective of identifying the bulk tonnage, open pit potential of the deposit. In 1995 and 1996, Echo Bay completed 390 surface drill holes (70,247 m) and from 1995 through to 2000 completed several engineering studies examining various mining and processing options.

Echo Bay evaluated the project with a "Level II Feasibility Study" prepared by Kilborn International Inc. in 1996. This study determined a proven and probable reserve

estimate of 19.7 Mt at an average grade of 2.02 g/t Au. The estimate used multiple indicator kriging to interpolate the grades into the model blocks. Scott Wilson RPA was not able to determine the gold price or the cutoff grade used for this estimate. The feasibility study recommended the installation of the installation of an engineered frozen earth barrier to reduce ground water inflows into the proposed pit and minimize the affect of the pit de-watering on the ground water table and surrounding lake levels which are hydraulically connected by the Frederick House Esker.

In January 1997, Echo Bay announced the construction of the project and contracted Layne Christianson, Geotechnical Construction Group to install the freeze wall. The freeze wall and two refrigeration buildings were built in 1997. In late 1997, the project was deferred due to lower gold prices but the construction of the freeze wall and associated infrastructure continued and completed by March 1998.

In September 1999, Echo Bay undertook a Level I Feasibility Study based on using open pit mining equipment from Echo Bay's McCoy-Cove operation in Nevada and on a revised extraction flow sheet incorporating grinding equipment from a company-owned mill. Based on the results of this study, Echo Bay commissioned M3 Engineering & Technology Corporation (M3) to prepare a Level II study. M3 completed their report in May 2000. The mineral resources and mineral reserves estimated by M3 in their study are listed in Tables 6-2 and 6-3. These are considered historical estimates.

Classification	(Kt)	g/t Au	Contained Gold (Koz)
Measured	5.974	1.94	372
Indicated	22,226	1.40	998
Total	28,200	1.51	1.370
Inferred	6,245	0.91	182

TABLE 6-2 IN-SITU MINERAL RESOURCE ESTIMATES (May 2000 M3 Feasibility Study prepared for Echo Bay Mining) St Andrew Goldfields Ltd. – Aquarius Project

The mineral resource estimate covered the zone of mineralization amenable to open pit mining, but also include a number of low-grade mineral zones peripheral to, and deeper than the open pit material.

The mineral reserve was estimated based on an open pit mining design and construction of a mill and associated tailings facilities dedicated to processing the Aquarius ore production. The estimated mineral reserve is shown in Table 6-3. The estimate was based on a gold price of US\$300/oz. The breakout of the proven and probable categories was not provided. This estimate is considered historical.

TABLE 6-3MINERAL RESERVE ESTIMATES(May 2000 M3 Feasibility Study prepared for Echo Bay Mining)St Andrew Goldfields Ltd. – Aquarius Project

Classification	(Kt)	g/t Au	Contained Gold (Koz)
Proven and Probable	15.9	2,33	1,191

Kinross Gold Corporation

In June, 2002, Kinross, Echo Bay, and TVX Gold Inc. announced their intent to merge. The merger was completed on January 31, 2003 under the name of Kinross Gold Inc. Kinross retained AMEC to review and update the geological and mining components of the M3 Feasibility Study. The scope of work consisted of reviews of the geological block model and associated information, previous resource and reserve estimates, and to develop a new block model and mineral resource estimate and develop a detailed mine plan for the Aquarius Project. AMEC submitted their report in September 2003.

AMEC reported the mineral resource estimate based on the inclusion of the mineralization enclosed within an ultimate open pit design only with the pit brow located no closer than 25 m to the freeze wall. Due to the high nugget component of the gold mineralization, AMEC concluded that there was a high risk that the forecast tonnage and grade could be recovered using a cut-off grade. For this reason, they reported all of the material contained within the ultimate pit at a 0 g/t cut-off grade. AMEC developed two

block models from their geology model. The gold grades are capped in the model (KG20 model) they recommend for reporting and uncapped in a second model (KGMN model) which they provided to Kinross for comparative purposes only. AMEC also separated the resource model based on mining stages and recommended that the Phase D, (the deepest stage) resources be reported separately because of the depth and lower grade of the zone. The previous underground development and stoping was concentrated in this Phase D zone. They recommended reporting stage D resources separately because they considered the resource in stage D to be potentially economic at a gold price of US\$375/oz whereas the resources in stages A, B and C were considered to by potentially economic at a gold price of US\$350/oz. AMEC did not classify any portion of the mineral resource as measured due to uncertainties in the bore-hole surveys, sample assays and geology data. The AMEC mineral resource estimates, taken from the Aquarius Project Review and Update (2003) are shown in Tables 6-4 and 6-5.

 TABLE 6-4
 AMEC ESTIMATE OF INDICATED MINERAL RESOURCE

 St Andrew Goldfields Ltd. – Aquarius Project

Pit Stage	Kt	KG20 (g/t Au)	Koz	KGMN (g/t Au)	Koz
Stages A-C	18,323	1.59	939	1.75	840
Stage D	4,788	1.09	168	1.19	183
Total	23,111	1.49	1,107	1.60	1,023

TABLE 6-5 AMEC ESTIMATE OF INFERRED MINERAL RESOURCE St Andrew Goldfields Ltd. – Aquarius Project

Pit Stage	Kt	KG20 (g/t Au)	Koz	KGMN (g/t Au)	Koz
Stages A-C	471	0.83	13	0.84	13
Stage D	30	0.49	0	0.60	0
Total	501	0.81	13	0.83	1,023

AMEC's scope included mining considerations only and they did not provide an estimate of a mineral reserve. They did provide a production schedule based on non-selective mining of the mineral resource using diluted KG20 grades. This production

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estimate is designated as "mineable resources" within the pit walls. AMEC added a 2.5% dilution factor at 0 g/t Au. The inferred resource was reported as waste. The AMEC estimates of the potentially "mineable resource" are shown in Table 6-6.

TABLE 6-6AMEC ESTIMATE OF "MINEABLE MINERAL
RESOURCES"

St Andrew Goldfields Ltd. – Aquarius Project

Pit Stage	Kt	KG20 (g/t Au)	Koz
Total Pit	22,666	1.47	1,068

Following their review of the AMEC report and block models, Kinross requested M3 to update the 2000 feasibility study and M3 submitted their report to Kinross in the fall of 2003. The construction and equipment cost estimates were updated and a section was added on the condition and operational procedures for the freeze wall because Kinross regarded the freeze wall as a novel technology for an open pit mine. Kinross did not agree with AMEC's recommendation to use the capped grade model (KG20) and selected the KGMN model as the basis for the mine production planning. The mineral resource estimate used by Kinross for each of the rock types included in the model is shown in Table 6-7.

Classification	Rock Type	Kt	Grade g/t Au	Koz
Indicated	Carbonate	17,545	1.71	963
	Mixed	3,229	1.18	123
	Intrusive	622	3.20	64
	Talc Schist	1,716	0.65	36
Total		23,112	1.60	1,186
Inferred	Carbonate	322	1.19	12
	Mixed	68	0.37	1
	Intrusive	67	0.07	0
	Talc Schist	45	0.43	1
Total		502	0.83	14

TABLE 6-7 KINROSS ESTIMATE OF MINERAL RESOURCES St Andrew Goldfields Ltd. – Aquarius Project

Kinross elected to report the mineral reserve estimates for the project, assuming selective mining to a cut off grade of 0.5 g/t Au using AMEC's KGMN model (uncapped). Kinross applied a 5% dilution factor and 95% recovery factor. Kinross reported a probable mineral resource which is documented in an internal technical report dated December 2003. Kinross reported a mineral reserve in their 2003 and 2004 Annual Report to Shareholders of 15,017,000 tonnes grading 2.16 g/t Au but did not report any mineral reserve estimate or mineral resource estimate for the Aquarius Project in their 2005 Annual Report. The mineral resource estimate was based on a mine production plan of 7,500 tpd and processing at a mill constructed at the Aquarius Site.

St Andrew Goldfields Ltd

In December 2005, Kinross announced that it had entered into a definitive agreement with St Andrew Goldfields Ltd. to exchange Kinross' Aquarius Project for 100 million common shares of St Andrew plus 25 million two-year warrants on St Andrew common shares with an exercise price of 17 cents. St Andrew completed the acquisition in May 2005. St Andrew has developed a conceptual plan to integrate the Aquarius Project into their existing Stock Gold Mining Complex. The conceptual plan is based on the Kinross mine plan but the ore would be processed at the Stock Mill, located approximately 15 km from the Aquarius deposit.

7 GEOLOGICAL SETTING

REGIONAL GEOLOGY

The Aquarius Project is located in the western part of the Abitibi greenstone belt in the Superior Province of the Canadian Shield. It is a 750 km long by 250 km wide belt of deformed and metamorphosed volcanic and sedimentary rocks and granitoid batholiths ranging in age from approximately 2,745 to 2,680 Ma.

The Abitibi Belt in Ontario has been interpreted to contain at least nine lithostratigraphic assemblages (Table 7-1) identified on the basis of geochronological and lithological criteria (Ayer et al., 1999).

Assemblage	Age (Ma)	Rock Types
Timiskaming	2685-2680	Conglomerates, sandstones, alkaline and calc- alkaline volcanic rocks.
Porcupine	2698-2690	Turbidites and minor conglomerates.
Blake River	2701-2698	Calc-alkaline and tholeiitic volcanic rocks.
Kinojevis	2703-2701	Tholeiitic and minor felsic volcanic rocks.
Tisdale	2708-2703	Tholeiites, komatiites, calc-alkaline felsic to intermediate volcanic rocks, and iron formations.
Kidd-Munro	2717-2712	Tholeiites, komatiites, calc-alkaline felsic to intermediate volcanic rocks.
Stoughton-Roquemaure	2722-2720	Tholeiitic, komatiitic, and minor calc-alkaline felsic volcanic rocks.
Deloro	2730-2725	Calc-alkaline mafic to intermediate volcanic rocks, tholeiites and iron formations.
Pacaud	2745-2730	Calc-alkaline mafic to intermediate volcanic and tholeiitic rocks.

TABLE 7-1 ABITIBI BELT LITHOSTRATIGRAPHIC ASSEMBLAGES (FROM AYER ET AL., 1999) St Andrew Goldfields Ltd. – Aquarius Project

The oldest assemblages (2,745 to 2,700 Ma) are predominantly felsic to mafic metavolcanic rocks with local minor oxide, silicate and sulphide chemical sedimentary rocks and clastic sedimentary rocks, intruded by ultramafic to granodioritic bodies. Widespread felsic plutonism comprising granodiorites, granites, quartz feldspar porphyries, and syenite bodies took place between 2,700 and 2,680 Ma. The younger

sedimentary rocks are in the Porcupine assemblages dated at 2,698 Ma and the Timiskaming assemblage at 2,685 Ma. The metamorphic grades within the supracrustal rocks are generally sub-greenschist to greenschist facies and to amphibolite facies near intrusive bodies.

A number of major, steeply dipping, east-west striking, brittle to ductile deformation zones transgress these supracrustal rocks with the Porcupine-Destor Fault Zone (PDFZ) being the most significant in the eastern Abitibi area. Gold deposits are commonly localized within and adjacent to the PDFZ or related structures along its 200 km length from west of Timmins through the Matheson area and eastward beyond the Destor area of Québec. The fault zone was recognized in the early 1900s with the discovery of the gold deposits of the Timmins area. The PDFZ was active relatively late in the history of the belt and many of the gold deposits are closely associated with it and Timiskaming sediments found along its strike length. The Gold Island Fault (GIF), also referred to as the Night Hawk Break (shown as the Night Hawk Break in Figure 7-1) is a splay of the PDFZ. The Aquarius deposit is located adjacent to the GIF. The regional geology is shown in Figure 7-1.



LOCAL GEOLOGY

The Aquarius deposit is situated within the Night Hawk Lake area of the Timmins-Porcupine camp. The DPFZ is located 1.8 km north of the deposit. The DPFZ marks the contact between Timiskaming-type clastic sediments to the north and layered komatiitic ultramafic rocks of the Tisdale Group to the south. The Tisdale ultramafic volcanics are located directly south of the DPFZ and the unit averages 1.8 km in width. The greenschist ultrmafic units are variably altered to talc-chlorite schists and phyllites. The ultramafic sequence is intruded by a quartz-feldspar porphyry pluton at the northwest corner of the Aquarius deposit and a second located approximately one km east-northeast of Legare Lake. The GIF trends 070° and forms a moderately to steeply dipping contact with the Tisdale ultramafics with Deloro mafic volcanics to the south.

Gold mineralization in the Night Hawk Lake area is spatially associated with the GIF. This association extends approximately 12 km from the Porcupine Peninsula Mine on the West to the Pominex deposit on the east, located at the intersection of the GIF with the DPFZ and includes the Gold Island, Ronnoco, and Old Aquarius deposits. Mineralization is frequently hosted in zones of moderate to intense carbonate alteration that strike parallel to the 0700 trend of the GIF, such as the Aquarius and old Aquarius deposits or as stockworks in felsic intrusives such as the Pominex and Ronnoco deposits. To a lesser extent, gold is also hosted by other lithological units in the Night Hawk Lake area, including sheared ultramafic volcanics and altered mafic dykes.

The gold deposits in the area exhibit many common characteristics including: close proximity to the GIF, within or proximal to zones of carbonate alteration, mineralization not restricted by rock type, and close spatial association with felsic intrusions.

A map of the local geology is shown in Figure 7-2.



PROPERTY GEOLOGY

The property geology is shown in plan in Figure 7-3 and in section in Figure 7-4.

The geology of the project area is composed predominantly of variably altered ultramafic volcanics of the Tisdale Group. Numerous intrusive rocks occur within the ultramafic host rock. The Aquarius deposit is hosted within a broad zone (approximately 500 m by 1,000 m) of carbonate-altered ultramafics. The carbonate alteration zone varies from 30 m to 80 m in thickness and forms an open antiform with limbs parallel to the regional structure. The ultramafics have been metamorphosed to talc-chlorite schists. Spinifex textures and chemical compositions suggest that both the carbonate host rock and the talc chlorite schist are derived from a komatilitic protolith. The ultramafic rocks overlie mafic volcanic rocks which in turn are intruded by feldspar porphyry bodies. The trend of the major rock units and regional foliation parallel the DPFZ and GIF east-northeast strike directions. The GIF marks the contact between the ultramafics and the mafic volcanics to the South and southeast of the deposit. Approximately 800 m of talc-chlorite schist separates the carbonate alteration zone from the Timiskaming sediments to the north.

The mineralized units within the deposit include carbonate host rocks, mixed zones of carbonate and talc-chlorite alteration, various types of intrusives and talc-chlorite schist.

Carbonate Host Rock.

Aquarius deposit mineralization is hosted primarily within a zone of pervasive and intense carbonate alteration that contains auriferous quartz veins, albite veins, and intrusives. There are four primary carbonate subtypes that have been observed in the Aquarius deposit: grey, brecciated grey, fuchsitic, and brown/oxidized brown carbonate.

The *grey carbonate* is a coarse-grained unit with pervasive carbonate alteration. In some areas, the grey carbonate grades into carbonatized units with variable degrees of chloritization and foliation. The more chloritic carbonates probably represent a phase of less intense carbonate alteration and hence, responded to stress by ductile, rather than

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entirely brittle deformation. Thus, the more chloritic carbonates lack the intense quartz veining and mineralization characteristic of the other carbonate subtypes.

The *brecciated grey carbonate* unit is characterized by anastamosing stringy chlorite interstitial to carbonate \pm albitized breccia clasts that range from 5 mm to 2 cm in size. This unit appears to be a hydrothermal breccia, and is moderately to strongly quartz-veined and mineralized.

The *Emerald green fuchsitic carbonate* represents chromium-rich sericitic alteration. The intensely fuchsitic carbonate is often strongly quartz veined and is sometimes, but not always, ore grade. In fact, tens of meters of intensely fuchsitic carbonate drill core have returned disappointingly low gold grades. However, trace to minor amounts of fuchsite, associated with minor amounts of chlorite and pyrite in brecciated zones, usually indicate elevated gold values.

The *brown carbonate* unit is a magnesitic subtype with a light brown, medium-grained, equigranular texture. This unit often has a patchy distribution, and does not appear to be continuous from hole to hole. The oxidized brown carbonate subtype derives its color from iron staining due to groundwater percolation through fractures and faults.

Mixed Zone

The *mixed zone* is a gradational alteration contact, typically less than 5 metres thick, between the main body of carbonate alteration and the talc-chlorite country rock. Proceeding from the carbonate zone to the talc chlorite schist, the contact of the mixed zone is usually defined by blobs and inclusions of pale green talc and slivers of talc-chlorite wallrock, which gradually increase in abundance. The contact of the mixed zone with the talc-chlorite is defined by the disappearance of intense, pervasive carbonate alteration. Quartz veins and associated gold mineralization also gradually diminish through the mixed alteration zone, occasionally continuing 1 m to 2 m into the

talc-chlorite schist. Approximately 50 m of talc-chlorite schist separates the carbonate alteration zone from the underlying tholeiitic basalts.

Intrusions

There are three main varieties of intrusive rocks in the immediate deposit area, namely; albitite dikes, altered and unaltered mafic intrusives, and feldspar and quartz-feldspar porphyries.

Irregular, meter-scale *albitite* dikes occur throughout the carbonate alteration zone, although they are more frequent in the southeast portion of the deposit. These dikes are composed primarily of albite, with minor magnesite and dolomite, and visually appear similar to, and may grade into, areas of albitically altered carbonate. Typically, the albitite dikes contain 1% to 5% disseminated pyrite, with or without trace to minor chalcopyrite. Gold is intimately associated with the pyrite and the albitite unit is commonly higher grade and less erratic in gold distribution than the more common mineralization in quartz veins. Many of the high grade carbonate stopes mined by ASARCO included minor volumes of albitite dikes, indicating the importance of this ore type. Inspection of the geological model used by AMEC for their resource estimate by Scott Wilson RPA showed that these intrusive bodies occur as a number of zones throughout the carbonate unit, but they are also present in the mixed and the talc chlorite schists. In the 2000 feasibility study prepared by M3, they suggested that these bodies may be more numerous than indicated by the diamond drilling which was carried out on a nominal 25 m by 25 m grid since their width is generally less than 25 m.

Small, discrete bodies of carbonatized and albitized, strongly *altered* mafic intrusives occur within the main carbonate zone. These units have been variously defined as gabbro, hornblende syenite, diorite, chloritic albitite, and mafic dikes. They predate the carbonatization event, and as such have been subjected to a minimum of two stages of alteration, making determination of their protolith problematic. Significantly, the units can be particularly high grade (greater than 15 grams per tonne gold). On the other hand, unmineralized and *unaltered* mafic dikes are intersected in the ultramafic and mafic

volcanic country rocks. They appear to be of gabbroic or dioritic composition, and are usually difficult to distinguish from the volcanic rocks into which they intrude.

A massive *quartz-feldspar porphyry* (QFP) stock intrudes the ultramafic volcanics at the northwest corner of the deposit. The unit is medium grey or pinkish (i.e., due to hematitic staining) in color, medium grained, and equigranular. The overall dimensions are approximately 400 m by 500 m, and possibly elongate along the northwest direction. Although not completely defined by drilling, this porphyritic stock appears to be barren with some anomalous gold values occurring locally. At the southeast end of the deposit a continuous, narrow, felsic intrusive body, identified as the *Pominex felsite*, trends at 070° along the GIF contact of ultramafic and mafic volcanics. This cherty-looking unit has an aphanitic groundmass but locally contains approximately 5% white feldspar phenocrysts.

Structural Geology

As mentioned previously, the dominant structural features at the Aquarius deposit are the east-northeast striking DPFZ to the North and the GIF, which is interpreted as a splay of the DPFZ. These structures not only define the contacts between major lithologic packages, but their trends are paralleled by the orientation of regional foliation. The DPFZ and GIF are important regional geologic and metallogenic controls.

The predominant east-northeast structural fabric is crosscut by major northwest-trending fault systems; interpretation is difficult because of a lack of recognizable markers from which to measure displacements. Leahy (1971) suggests that the northwest faults may be contemporaneous with the east-northeast GIF. The intersection between the northwest-trending fault sets and the GIF may have localized smaller scale structures responsible for the mineralization at the Aquarius deposit. (Noteworthy is the fact that the main-stage quartz veins trend north-northwest).

There are also North-South trending faults bounding the West and East sides of the deposit. These North-South faults are considered by Leahy (1971) to be among the

youngest in the area. On the East side of the deposit, West of Legare Lake, at least one of these faults is coincident with a bedrock depression area, 60 m to 200 m wide.

The geometry of the carbonate alteration zone of the Aquarius deposit has been defined as a broad 070°-trending, open, upright, subhorizontal antiform. This antiformal interpretation is corroborated by foliations that strike east-northeast and dip North in the northwest limb, and South in the southeast limb. Thus, there seems to have been at least two episodes of ductile deformation; the first generated enough strain to create the preferred mineral alignment defining foliation, and a subsequent event folded this fabric into the observed antiformal configuration.

Alteration

Rocks in the deposit area have been subjected to several stages of alteration as indicated by overlapping mineral assemblages. The ultramafic flows have been subjected to talc+chlorite+carbonate alteration superimposed on a regional metamorphic assemblage of serpentine+tremolite+epidote. The most important alteration events related to mineralization are carbonatization, quartz veining, and later-stage albitization. Pervasive carbonatization of the ultramafics resulted in the 10 m to 100 m thick carbonate zone which serves as the primary host for gold mineralization. It is emphasized that this carbonate alteration predated gold mineralization, and served as a stratabound host controlling ore deposition. Since the carbonate alteration zone is structurally more competent than the enclosing talc-chlorite country rock, it deformed in a brittle manner, possibly increasing permeability for later-stage hydrothermal gold activity.

The second distinct alteration event is in the form of discrete centimeter to meter-scale alteration associated with the main stage auriferous quartz-carbonate-albite veins. This alteration is discussed in detail in the quartz veining section below.

The third and last significant alteration event is albitization (i.e., sodium metasomatism). Albitic alteration occurs as albite in veins, albitization of vein margins, or as a fine-grained replacement of pre-existing alteration assemblages. The extent to

which albitization develops is partially a function of host rock composition. In most early intrusive rocks, albitization is evident as distinctly altered vein salvages or pervasive alteration in association with disseminated pyrite and elevated gold values. In carbonate rocks, albite occurs mostly as a minor component in quartz-carbonate-albite veins. The areas of albitization are characterized by gradational contacts and probably represent the most intense phase of alteration within the deposit. In some areas, particularly the southwest corner of the deposit, there is extensive albitic alteration of the mixed zone with corresponding high gold values; this occurrence may be associated with faulting.

Quartz Veins

The Aquarius deposit contains a complex assemblage of both auriferous and nonauriferous quartz veins; the amount of quartz vein material is not a direct indicator of gold grade. The carbonate zone hosts the preponderance of quartz veining. The main-stage vein sets hosting gold mineralization are interpreted as extension veins.

The veins consist of quartz and carbonate \pm albite and typically occur as an oriented stockwork constituting up to 30% of the rock by volume. Individual veins are typically 1 cm to 15 cm wide and are rarely continuous for more than 10 m along strike or dip. The main-stage quartz-carbonate veins do not transect the albitite dikes, confirming that the dikes postdate the veins. These quartz veins do, however, postdate all other rock types in the deposit including an earlier set of narrow (less than one centimetre), coarse-grained carbonate (with clear quartz) veins. The veins are typically undeformed, but are locally boudinaged, brecciated, and gently folded. It has been observed that 10% to 70% of the material within these veins consist of centimeter to meter-size brecciated, angular fragments of wallrock.

The main-stage quartz-carbonate veins are often zoned with carbonate along vein margins and quartz or quartz-albite cores. The varying mineralogies may reflect different host rock compositions. For example, carbonate-hosted veins, without albitization or albitite dikes in the wallrock, are typically quartz-carbonate rich with minor albite. Coarse, erratic, visible gold occurs within and marginal to this vein type, with higher grades often associated with increased sulphide presence. In areas of sodium metasomatism, the veins consist of quartz+albite, and often have relatively high gold grades.

A late set of less than 5 mm, clear or smoky grey quartz veins postdate the main stage quartz-carbonate-albite veins and also postdates the albitite dikes. These late quartz veins occur mainly in the southeast limb of the deposit. The veins commonly contain coarse gold and are volumetrically less abundant than the other veins.

Pleistocene Deposits

The Aquarius property is covered by 35 m to 200 m of Pleistocene *glacial overburden*. The glacial stratigraphy is dominated by glacio-lacustrine clay, silt, and sand deposits, with a thin horizon of till resting on the bedrock surface. A major esker of the Kettle Lakes esker system is located at the eastern limit of the deposit, and trends in a North-South direction. The overburden stratigraphy overlying the bedrock is summarized below:

Silty clay	3 m	to	12 m
Clayey silt	3 m	to	30 m
Fine to coarse sand	20 m	to	80 m
Till	0 m	to	3 m



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8 DEPOSIT TYPES

Numerous gold deposits occur in the vicinity of the PDFZ and related structures such as the Gold Island Fault located directly adjacent to the Aquarius deposit. These include the major mines of the Timmins camp (Dome, Hollinger, McIntyre, Pamour) which have produced over 64 million ounces of gold since 1910. A number of gold deposits have been discovered in more recent years, including the Holt-McDermott Mine, Holloway Mine, Owl Creek Mine, Bell Creek Mine, Hoyle Pond Mine, Aquarius Mine, Maude Lake Deposit, Glimmer (Black Fox) Mine, Stroud Deposit, Fenn-Gib Deposit, Ludgate Deposit, Jonpol Mine and a number of other prospects. These deposits are designated as Archean Lode Gold Deposits and described in Roberts (1988).

Some of the PDFZ gold deposits extend from surface to over 1,000 m below surface, and some are blind deposits, in that they do not reach bedrock surface. The top of the Holloway deposit, for example, is over 300 m below surface.

The following description of potential gold deposit types on the St Andrew Timmins area claims is from Reid (2003). Deposit types and exploration models can generally be characterized as one of three main types, although they tend to merge with each other at times. The deposit types may have more to do with the different host rocks than a genetic difference. Proximity to the main break(s), associated splays, presence of hydrothermal alteration, Timiskaming sediments or high level porphyries are common to all. The three main types are as follows:

- Green Carbonate Hosted: Nighthawk Lake, Aquarius, Stock, West Porphyry and Glimmer all fall into this classification. Gold is generally present as free gold in quartz veins or with disseminated sulfides associated with small intrusive rocks or albitic alteration in completely carbonate altered ultramafic flows. Carbonate alteration is up to 200 m wide and can be traced for thousands of metres discontinuously on strike. The gold is often in cross cutting or conformable features. Timiskaming conglomerates are often proximal or part of the package.
- Felsic Intrusive Related: Ronnoco, Pominex, parts of the Taylor Shaft and Hislop are examples of this type. The intrusive rocks vary from feldspar (plus or minus quartz) porphyry in the west to more syenitic in the east.

Mineralization is characterized by both thin cross cutting to stockwork quartz veins to disseminated sulfides to more contact skarns or hornfels, depending on host rock. Carbonate alteration is still quite common in the host rocks with silica, sericite and hematite more within the intrusive.

• **Mafic Volcanic Hosted:** Harker-Holloway, Holt-McDermott and Hoyle Pond are examples. Ubiquitous carbonate alteration with iron carbonate, albite, silicification and sericite more proximal to ore. Quartz veins and/or albitized variolitic mafic flows are often central to the zone and often found near the mafic/ultramafic contact.

9 MINERALIZATION

Gold mineralization in the Aquarius deposit occurs as free gold within the carbonate, intrusive, and talc-chlorite units. Although occurrences of gold mineralization are found throughout the property, the main carbonate unit, which hosts the major portion of the gold mineralizaton has a strike length of approximately 800 m and varying in width from 300 m to 150 m. The deposit extends to a depth of about 100 metres below the bedrock surface.

Carbonate Hosted Gold

Gold within the carbonates occurs in many different mineralogical associations and vein types as outlined below primarily based on descriptions found in the M3 feasibility study report:

- Coarse, free gold is often found associated with and sometimes embayed on, disseminated pyrite within quartz-albite veins.
- Coarse, free gold is often associated with, and embayed within, chalcopyrite grains.
- Very fine free gold is often located proximal to vein margins in association with minor amounts of wispy chlorite and trace amounts of very finely disseminated pyrite. These occurrences are commonly located within very narrow (millimetre-scale) veinlets of smoky-gray quartz which appear to branch off the main-stage veins of quartz-carbonate ± albite.
- Coarse, erratically distributed, free gold is often found isolated from other mineral associations in quartz-carbonate veins which would otherwise appear to be barren (i.e., lacking in sulphides).
- High gold values are associated with fault zones, and fault planes within certain parts of the deposit. These zones may, or may not, include veining or albitite dikes, both of which would logically channel into structural zones.
- Coarse, visible gold is often found in narrow (less than 5 mm) clear (or smoky grey) quartz veins which postdate the main-stage quartz/carbonate ± albite veins, and also postdate the albitite dikes.

Scott Wilson RPA examined the geological mapping from the underground development and mining carried out by ASARCO. Occurrences of visible gold associated with northwest striking shears were noted in the mapping. The high-grade gold mineralization and associated shears could be traced for distances up to 15 m. The surveys of the underground stopes excavated by ASARCO are also oriented in the direction suggesting that a set of shears and associated quartz veins may be controlling some of the high-grade gold mineralization.

Mixed Zone

Quartz veins and associated gold mineralization gradually diminish through the mixed alteration zone, occasionally continuing one metre to two metres into the talcchlorite schist.

Talc-Chlorite Schists

Free gold, smeared along foliation planes of the talc-chlorite schists, has been observed where least expected. Also, routine sampling of the talc chlorite country rock through fault zones has sometimes resulted in very high gold values. Often these areas reveal no macroscopic features, such as quartz veins or felsic dikes, which would indicate the presence of gold mineralization. High gold values are also obtained in veined or albitized areas of the talc-chlorite unit, particularly within a few meters of the contact with the mixed and main carbonate zones of alteration.

Intrusives

Gold is encapsulated within and/or spatially associated with sulphides, principally pyrite, disseminated in albitite dikes, felsic dikes, feldspar and quartz-feldspar porphyry dikes, and mafic dikes. Within these units, free native gold may also be embayed on grains of pyrite and chalcopyrite. Coarse gold is also visible within these units in veins of quartz, quartz-carbonate \pm albite, and albite veins. These combined occurrences of gold within the intrusives yield generally higher gold values than found within the carbonate rock. Also, there is a more consistent grade of gold within the intrusives than within the

carbonate unit because of the intimate association of gold with relatively ubiquitous disseminated pyrite.

10 EXPLORATION

St Andrew has not conducted any exploration on the property. The exploration information available on the deposit was collected by previous owners.

Exploration work over the history of the property has primarily been conducted using diamond drilling, since there is very little outcrop and the overburden depths measure in the tens of metres. The mineralized zones do not outcrop. Following the discovery of the deposit in 1979 using reverse circulation drilling, the exploration program was conducted initially from the surface, followed by an underground development and core drilling program. Information was then collected with underground mapping and sampling and test mining. The initial surface drilling program confirmed the presence of gold mineralization and outlined the host carbonate zone. Due to the erratic nature of the mineralization, ASARCO decided to carry out further exploration from underground to define high-grade mineralization within the carbonate alteration zone.

Echo Bay exploration was carried out entirely with surface core drilling. The objective of the program was to outline the continuity and extent of the carbonate alteration zone and determine the amount and continuity of the gold mineralization for open pit mining as opposed to the selective mining approach used by ASARCO. The drill holes were oriented vertically or at 60 degrees. The Echo Bay drilling program was completed by the end of 1996 and since then, the investigations and assessments have focused on gathering geotechnical and hydrological data required for the feasibility studies.

11 DRILLING

The drilling is summarized in Table 11-1 and the location of the drill holes projected on a plan view of the main carbonate host rock is shown in Figure 11-1. Figure 11-1 also shows an outline of the pit rim from a previous pit design. This design has been changed. Figure 24-1, in Appendix 2, shows the traces of the drill holes in section.

Year	Operator	Drill Type	Location	Number of Holes	Meterage	Hole Numbers
1979	ASARCO	RC	Surface	2	150	AQ-01, AQ-03
1980	ASARCO	Core AQ/BQ	Surface	27	5,672	OA-5, DAQ-1 to 25
1982- 83	ASARCO	Core AQ	UG	101	8,640	1 to 100
1984	ASARCO	Core NQ/BQ	Surface	20	5,529	DAQ-26 to DAQ-46
1984	ASARCO	Core AQ/EXT	UG	412	7,608	101 - 503
1984	ASARCO	Core AQ	UG	7	510	187-1 to 187-7
1988	ASARCO	Core BQ	Surface	9	2,696	88-02 to 88-17
1988	ASARCO	Core NQ/BQ	UG	8	2,321	D-1 to D-8
1988	ASARCO	Core EXT	UG	35	886	P-1 to P-12, 100-1 to 100- 23
1989	ASARCO	Core BQ	Surface	3	420	89-17 to 89-19
1990	ASARCO	Core BQ	Surface	2	763	90-01, 90-02
1993	ASARCO	Core BQ	Surface	2	502	93-16, 93-17
1995	Echo Bay	Core NQ/BQ	Surface	130	21,643	95-1 to 95-130
1996	Echo Bay	Core NQ/BQ	Surface	260	48,784	96-001 to 96- 420
1996	Echo Bay	Rotosonic	Surface	10	819	H96-01 to H96- 11

TABLE 11-1DRILLING SUMMARYSt Andrew Goldfields Ltd. – Aquarius Project

FIGURE 11-1 DRILL HOLE LOCATION



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11-2

ASARCO DRILLING

ASARCO drilling in the area of the proposed open pit consists of 627 holes with a total length of approximately 52,000 m. These data include 563 underground core holes and 63 cored surface holes. The drill holes date from 1979 through various ASARCO drill campaigns ending in 1994. The earliest drilling in 1979 was part of a reverse circulation reconnaissance exploration program which led to the discovery of the Aquarius deposit. Following the discovery, a 23-hole diamond drill program identified the main carbonate zone and gold-bearing quartz veins. Because of the thick glacial overburden and the erratic nature of the gold mineralization, ASARCO decided to conduct further exploration from underground, sinking a shaft in 1981. Underground diamond drilling programs, complemented by small surface drilling campaigns, provided the drill information from 1981 until mine closure in 1989. From 1990-1994, exploration diamond drill programs were carried out on the property, but primarily in areas outside of the proposed pit after 1990; this peripheral drilling is not considered further in this report.

ASARCO's underground diamond drill holes were targeted for both exploration and production purposes, and range in length from 3 m to 375 m, averaging 64 m. The underground drilling was nominally centered on 25 m East-West sections in the South half of the mine, but there is no systematic pattern in the North half. Many of the holes are fanned out from an underground drill station yielding detailed information in areas of high grade mineralization for mining layouts, but only wide-spaced coverage within the carbonate alteration zone as a whole.

The underground drill holes ranged in size from AQ to NQ, with the majority of the drilling composed of AZ to AX diameter. Acid-etch tests for in-hole inclinations were recorded, but directional deviations were not surveyed. In the opinion of M3, most of the underground holes are relatively short and, as a result, hole deviation should be minimal.

AMEC reviewed the database and determined that of the 563 holes, seven were longer than 200 m, ranging in length from 200 m to 359 m. In AMEC's opinion, the lack

of deviation measurements for these holes does not pose a large risk as there are only seven holes longer than 200 m and these holes are located in areas of densely clustered drilling.

The ASARCO surface drilling was directed towards property-wide exploration, as well as to assist underground planning and development. Surface holes were drilled up to 414 m in length, averaging 251 m. About half the holes were drilled vertically. Collar locations were not surveyed and down-hole surveying was not carried out. M3 found that the intersections from the surface holes correlated well with interpretations based on Echo Bay's surveyed drill holes. Further, M3 compared collar elevations to surveyed topography and no significant discrepancies were found. M3 stated that these indirect checks, based upon internal consistency, suggested that there are no major problems with the location of surface drill holes in the area of the proposed pit.

AMEC compared all collar elevations to the surveyed topography and found the results to be within ± 1 m. AMEC also compared the interpretation in areas influenced by the surface holes and did not find any areas where the interpretation was poorly correlated with the geology compared to the surrounding surveyed holes.

ECHO BAY DRILLING

PHASE I

Echo Bay's initial diamond drill program was conducted from May to December 1995, and consisted of 128 holes for a total length of approximately 21,500 m. This Phase I drilling was designed to define the geometry, continuity and grade of the main carbonate zone crown pillar, delineate the lateral extent of the main carbonate zone, and confirm the grades and geologic interpretations from ASARCO's previous work.

The Phase I program focused on the main carbonate ore zone from sections 9800N to 10250N. The initial drill pattern consisted of holes at a nominal 25 m spacing along 50 m East-West panels, preferentially in areas where there was no previous ASARCO drilling.

This pattern was changed to a 50 m by 50 m five spot configuration in late August to maximize tonnage definition while minimizing costs. Holes were targeted to intercept the main carbonate zone, and were continued 20 m to 30 m into the talc-chlorite schist "footwall". Other carbonate zones identified by ASARCO, for example the lower carbonate, were not drilled.

Holes were generally drilled in an East-West direction (i.e., at 090° or 270° azimuths) to obtain approximately normal (i.e., 90°) intersections with the northwest-trending main set of gold-bearing quartz veins. Although the steeply dipping quartz veins would require that the holes be drilled as flat as possible, that is, at -45° inclination, Echo Bay decided that holes would be drilled at -60° inclinations to minimize costs and avoid problems drilling through the glacial overburden.

All collar locations were surveyed and down-hole inclinations measured by acid test only from May through mid August. Inclinations and deviations measured by down-hole Tropari survey started in late August. The Tropari readings were taken at the top and bottom of the carbonate zone; magnetite content precluded reliable readings in the talc zones. The Tropari data indicate very little deviation from the initial collar azimuths and inclinations. As a result, M3 concluded that for those holes with only acid dip data, their down-hole locations can be assumed as reasonably accurate. In the opinion of M3, this assumption, coupled with the surveyed collar locations yielded a fairly accurate database of Phase I down-hole sample locations.

The Phase I holes ranged in length from 100 m to 350 m, with an average depth of 168 m. The drilling consisted primarily of NQ core, with BQ core used when drilling problems were encountered.

PHASE II

The Phase II diamond drilling program consisted of 249 holes with approximately 45,000 m. The Phase II program consisted of drilling the main carbonate zone in a 25 m by 25 m in-fill drill pattern for ore classification. The drilling orientations (i.e., -60°

inclinations, East or West directed holes) and protocols (i.e., NQ core, etc.) were continued from the 1995 Phase I program. A few holes were drilled in a North-South direction to test interpreted faults and ensure that the main carbonate alteration zone was completely defined. As in 1995, holes were continued through the mixed zone into the underlying talc-chlorite. The Phase II holes ranged in length from 100 m to 325 m, averaging 182 m. Some holes were extended to test and define the lower carbonate and other deep targets.

In 2003, AMEC performed further analyses of the tropari survey data which demonstrated that the median difference for azimuth and dip is three degrees and one degree, respectively. AMEC concluded that the holes drilled without azimuth deviation measurements are unlikely to show a significant difference. Because the core diameter, drilling azimuth and dip are similar, AMEC were satisfied that the holes with acid dip data only will have reasonable down-hole intercept locations.

CORE RECOVERY

AMEC was unable to locate any information pertaining to core recovery measurements. Personal communications with personnel previously involved in the project indicated that the core recovery was good and that there is not likely to be significant risk associated with core recovery. Scott Wilson RPA examined the split core in the core boxes from a number of holes drilled by Echo Bay at the core storage facility and the core recovery in the holes examined was reasonable. There were no zones of "lost core" noted in the core with minor zones of "crushed core". Scott Wilson RPA did note some short intervals with "no core available" in some borehole logs and would recommend that a review be conducted of all the logs to assess and quantify the core recovery.

OVERBURDEN DRILLING

Echo Bay carried out two specific studies in 1996 to determine the stratigraphic character of the glacial overburden. Twelve Rotasonic holes were drilled to test and study the characteristics of the entire overburden sequence and 34 Pionjar/auger holes

were drilled to test the thickness of the clay and silt layers within the proposed pit area for engineering purposes. In addition, Golder Associates drilled sonic boreholes for geotechnical purposes and Hydrologic Consultants Inc. auger drilled for hydrologic studies. Overall overburden depths correlate relatively well with those determined from proximal diamond drill holes.

INTERPRETATION OF DRILLING RESULTS

The drilling demonstrates that the deposit is hosted within a broad zone (approximately 500 m by 1000 m) of carbonate-altered ultramafics. The carbonate alteration zone varies from 30 m to 80 m in thickness and forms an open antiform with limbs parallel to the regional structure. The gold occurs as free gold and it primarily is associated with a stockwork of quartz-carbonate veins and narrow shear zones that are present throughout the carbonate zone. The drilling also demonstrated that the quartz-carbonate veins and gold mineralization occurs within a zone of mixed carbonate altered ultramafic rocks and the talc-chlorite schist marginal to the carbonate zone. Gold mineralization extends for a short distance into the main talc-chlorite schist where it is generally found along shear planes. Small felsic intrusions and dykes occur throughout all of the main lithological units and these intrusions generally contain higher-grade gold than the host rocks. The gold mineralization is disseminated throughout the deposit and the true width of the mineralization is represented by the width of the carbonate and mixed zones and averages from 35 m to 85 m in thickness.
12 SAMPLING METHOD AND APPROACH

BOREHOLE LOGGING AND SAMPLING

Although there is no written documentation on sampling and assaying procedures available for the ASARCO drilling, their protocols have been reconstructed by Echo Bay The carbonate, mixed, and intrusive ore types were continuously sampled, with sampling routinely continued over a few metres into the talc-chlorite country rock. Generally, the drill core was split and samples taken at 0.5 m to 1.5 m intervals. One half of the split core sample was crushed and a 250 g portion was pulverized and sent for analysis.

The geologists broke out the geological units by lithology. The main units were broken out are glacial overburden, carbonate, intrusive, talc chlorite schist, and the mixed zone. In general, the geological description includes rock colour, texture, presence of quartz veining, presence of visible gold, presence of sulphide minerals, chlorite veining, alteration, and the orientation of quartz veins, foliation and shears.

For the Echo Bay core, all drill core within the carbonate host rock, intrusives, mixed alteration zone, and at least one metre to two metres into the talc-chlorite were routinely sampled at one metre intervals, except at lithologic breaks where samples of up to two metres were taken within a given rock type. Samples were sawn and one half was sent to the lab for assaying. The other half was retained in the core box and archived. Exceptions to these general procedures occurred as follows:

- From May to August 1995, samples with visible gold were taken at 0.5 m intervals. Subsequently in 1995, sample intervals with visible gold were taken at one metre intervals. The entire core for these samples was analyzed by pulp-metallic screening and fire assay. In 1996, the pulp-metallic screening/fire assay method of analysis for samples with visible gold was discontinued; halves of all samples were analyzed by standard fire assay method only.
- In 1995, every twentieth sample was quartered and assayed; this practice was discontinued in 1996. The average of the assay results obtained on both halves of quartered core was used in the database.

• Narrow mineralized dikes of less than one metre were sampled at less than one metre intervals.

The sample intervals were identified and marked during logging. Each sample was given a sample number which were recorded in the geological log. Sample slips were placed in the core boxes. The Echo Bay core was split prior to sampling. Shipments to the lab included a blank sample inserted every twenty-first sample. This sample, consisting of non-mineralized diabase or basalt, was assayed as a checking procedure on Swastika's sample preparation. Echo Bay reviewed blank sample analysis and noted no irregularities. The Echo Bay logs also include geotechnical logging.

In AMEC's opinion, the logging is adequate to support the geological model used to estimate the mineral resource. AMEC did indicate that the ASARCO logs do not contain sufficient information to support a more detailed geological model required to understand and model the geological controls on the mineralization and apply this information to improve local grade interpolation and potentially help define areas where selective mining could be applied.

In Scott Wilson RPA's opinion, the information from the drilling is sufficient to construct a geological model that is suitable for resource estimation for open pit mining.

Scott Wilson RPA also observed that the information provided on the logs prepared by Echo Bay does contain a significant amount of detailed information describing the character and orientation of the quartz-carbonate veins and shears that contain the gold mineralization. The logs also note the alteration patterns and the any minerals associated with the gold. However, no clear relationship has been established between the gold mineralization and the deposit geology that can currently be used to refine the geological model or the grade interpolation model. Further analysis of the data is warranted to improve the geological model and the grade estimation method.

SAMPLE SUMMARY

An example of the samples and gold assays on a drill hole log and the estimated true width of the intersections is shown in Table 12-1.

TABLE 12-1SAMPLE SUMMARY DRILL HOLE 96-151St Andrew Goldfields Ltd. – Aquarius Project

From	То	Core Length (m)	Rock	Spl No.	g/t Au	Est True Width (m)
0	75.85	75.8	Overburden			
75.85	77.00	1.15	Grey Carbonate	72632	0.124	
77.00	78.00	1.00	Grey Carbonate	72633	0.083	
78.00	79.00	1.00	Grey Carbonate	72634	0.127	
79.00	80.00	1.00	Grey Carbonate	72635	1.649	
80.00	81.70	1.70	Grey Carbonate	72636	0.382	
75.85	81.70	5.85	Grey Carbonate		0.487	5.1
81.70	83.00	1.30	Felsite/Albite	72637	2.580	
83.00	84.00	1.00	Felsite/Albite	72638	0.892	
84.00	85.40	1.40	Felsite/Albite	72639	1.801	
81.70	85.40	3.70	Felsite/Albite (Intrusive)		2.325	3.3
85.40	86.50	1.10	Grey Carbonate	72640	1.097	
86.50	88.00	1.50	Grey Carbonate	72642	3.043	
88.00	89.00	1.00	Grey Carbonate	72643	0.138	
89.00	90.00	1.00	Grey Carbonate	72644	0.050	
90.00	91.00	1.00	Grey Carbonate	72645	2.991	
91.00	92.00	1.00	Grey Carbonate	72646	0.930	
92.00	93.00	1.00	Grey Carbonate	72647	0.246	
93.00	94.00	1.00	Grey Carbonate	72648	0.307	
94.00	95.00	1.00	Grey Carbonate	72649	1.783	
95.00	96.00	1.00	Grey Carbonate	72650	0.065	
96.00	97.00	1.00	Grey Carbonate	72651	0.298	
97.00	98.00	1.00	Grey Carbonate	72652	0.317	
98.00	99.00	1.00	Grey Carbonate	72653	0.021	

Continuation of Table 12-1

130.60	132.00	1.40	Talc-Chlorite Schist	72687	0.046	
126.50	130.60	4.1	Mixed Zone		0.298	3.7
129.50	130.60	1.1	Mixed Zone	72686	0.020	
128.50	129.50	1.0	Mixed Zone	72685	0.122	
127.50	128.50	1.0	Mixed Zone	72684	0.459	
126.50	127.50	1.0	Mixed Zone	72683	0.461	
85.40	126.50	41.1	Grey Carbonate		0.598	36.2
125.00	126.50	1.50	Grey Carbonate	72682	0.793	
124.00	125.00	1.00	Grey Carbonate	72680	0.011	
123.00	124.00	1.00	Grey Carbonate	72679	0.330	
122.00	123.00	1.00	Grey Carbonate	72678	0.056	
121.00	122.00	1.00	Grey Carbonate	72677	0.095	
120.00	121.00	1.00	Grey Carbonate	72676	0.439	
119.00	120.00	1.00	Grey Carbonate	72675	0.168	
118.00	119.00	1.00	Grey Carbonate	72674	0.078	
117.00	118.00	1.00	Grey Carbonate	72673	0.008	
116.00	117.00	1.00	Grey Carbonate	72672	0.015	
115.00	116.00	1.00	Grey Carbonate	72671	0.039	
114.00	115.00	1.00	Grey Carbonate	72670	0.038	
113.00	114.00	1.00	Grey Carbonate	72669	0.036	
112.00	113.00	1.00	Grey Carbonate	72668	0.030	
111.00	112.00	1.00	Grey Carbonate	72667	0.016	
110.00	111.00	1.00	Grey Carbonate	72666	0.025	
109.00	110.00	1.00	Grey Carbonate	72665	0.002	
108.00	109.00	1.00	Grey Carbonate	72664	0.037	
107.00	108.00	1.00	Grey Carbonate	72663	4.149	
106.00	107.00	1.00	Grey Carbonate	72662	0.253	
105.00	106.00	1.00	Grey Carbonate	72660	0.104	
104.00	105.00	1.00	Grey Carbonate	72659	0.168	
103.00	104.00	1.00	Grey Carbonate	72658	0.078	
102.00	103.00	1.00	Grey Carbonate	72657	0.008	
101.00	102.00	1.00	Grey Carbonate	72656	0.029	
100.00	101.00	1.00	Grey Carbonate	72655	0.141	
99.00	100.00	1.00	Grey Carbonate	72654	0.243	

132.00	133.00	1.00	Talc-Chlorite Schist	72889	0.106
133.00	134.00	1.00	Talc-Chlorite Schist	72890	0.034
134.00	135.00	1.00	Talc-Chlorite Schist	72891	0.013
135.00	136.00	1.00	Talc-Chlorite Schist	72892	0.166
136.00	137.00	1.00	Talc-Chlorite Schist	72893	0.496
137.00	138.00	1.00	Talc-chlorite Schist	72894	0.047

Continuation of Table 12-1

DESCRIPTION OF ROCK TYPES

The rock types are described in Item 7 Property Geology.

ASSAY STATISTICS

The statistics from the assay database are shown in Table 12-2. The data is taken from M3 2000 Feasibility Study. The assay data is taken from all of the exploration drill samples and is not confined to the main deposit assessed for resource estimation. The main deposit primarily includes the NW carbonate lobe and the SE carbonate lobe.

Rock Type	Number	Mean	Std Dev	C.V.	Max
NW Carb	10,272	1.70	27.09	15.90	5,750.55
SE Carb	12,319	1.62	11.18	6.90	832.44
Other Carb	1,376	0.49	2.73	5.57	49.61
Mixed	4,421	1.22	16.37	13.45	1,058.13
Intrusive	2,897	2.56	15.76	6.16	1,367.04
Talc-Schist	9,138	0.48	6.74	14.02	617.96
QFP	208	0.01	0.05	3.22	0.49
Mafic Volc	717	0.13	1.05	8.30	21.53

TABLE 12-2 ASSAY STATISTICS St Andrew Goldfields Ltd. – Aquarius Project

The samples show a very high coefficient of correlation indicating there is large disparity in grade between adjacent samples. This is characteristic of deposits that have a very high nugget effect and this characteristic commonly translates into an abnormally high uncertainty in generating grade estimates for individual block estimates. (Dominy et al., 2002)

13 SAMPLE PREPARATION, ANALYSES AND SECURITY

All of the sampling and analyses was conducted prior to St Andrew's acquisition of the property and the no employee, officer, director or associate of the issuer was involved with the sampling or analytical programs.

ASARCO SAMPLE PREPARATION AND ASSAYING PROCEDURES

Documentation of ARSARCO's sample preparation procedures is not available. The information provided is based on a review conducted by Echo Bay in 1996.

A total of 25,509 samples were assayed from ASARCO's 1980-1990 drilling campaigns. Most analyses were carried out by commercial laboratories, except for 5,422 samples which were assayed by an ASARCO on-site lab during 1984, 1987 and 1988. For the period 1980-1983 a total of 7,176 samples were analyzed by three commercial labs, including Swastika Laboratories, Pamour Analytical Services, and Technical Services Laboratories. Occasional pulp and metallic finishes were done in 1981 but typically, the one assay-ton fire assaying technique was used in this period. From 1984 to 1987, 8,033 samples were analyzed by the ASARCO, Pamour, Swastika, and Min-En Laboratories. The ASARCO, Swastika, Wawa Assaying, and Timmins Analysis Laboratories generated 10,300 fire assays from 1988-1990. A search of historical documents for any of the subsequent feasibility studies did no find any information concerning the sample crush and pulverization specifications.

An exception to the procedures described above occurred in 1984 when 21 samples with significant amounts of visible gold were never sampled or assayed, but instead were arbitrarily assigned a value of one ounce per tonne (i.e., 34.29 g/t). Echo Bay decided to re-assay these intervals in 1996 but only eight of the samples were recovered. The results of these analyses varied from 14.4 g/t to 396.8 g/t, averaging 171 g/t. However, this included two very high results; the arithmetic average of the other six samples was 36.2

g/t. In M3's opinion the remaining assigned values for unassayed visible gold intervals (i.e., 13 samples) provide reasonable estimates of the true grade.

ECHO BAY SAMPLE PREPARATION AND ASSAYING PROCEDURES

All Phase I and II drill samples were sent to Swastika Labs in Swastika, Ontario, for one assay-fire assay analysis using the following protocols:

- The original samples were crushed to minus 20 mesh and 300 g portions, using a Jones riffle, were taken for further preparation; the remaining rejects were placed in plastic bags and packed in labeled boxes. One 300 g sample was taken and analyzed in 1995 and two 300 g samples were taken and two fire assays were performed in 1996.
- Samples were pulverized to approximately minus 150 mesh using a disc and/or ring-mill pulverizer; every thirtieth sample was tested by screening to verify particle size and the weight of plus 100 mesh material was reported.
- One assay-ton (29.166 g) splits were taken for analysis and the remaining pulps packaged for archiving.
- The samples were fused using a flux mixture of various reagents; an aliquot of silver was added as a final collection agent. The resulting lead button containing the precious metals was reduced to lead dioxide and absorbed into a cupel in a cupellation furnace.
- The silver of the dore bead was dissolved in nitric acid leaving the gold to be weighed on a micro-balance; smaller beads were analyzed by atomic absorption spectrometer.
- The assay results were reported on hardcopy assay certificates and digitally on floppy diskettes.
- Every tenth sample had an intra-lab check done internally by Swastika.
- For the Level I drilling, if the initial fire assay was greater than 1 grams per tonne, then an internal check assay was performed both on the initial pulp and on a second pulp from the coarse reject. In 1996, Swastika performed internal intra-pulp checks for samples returning an initial high gold value.

• Inter-lab check assays were performed by Chemex labs on pulp splits by one assay-ton fire assay analysis.

M3 were of the opinion that the Echo Bay procedures in place for the Phase I and II drilling provided a reasonable basis for representative assaying and quality control. Statistical analysis performed by the Echo Bay Timmins staff established excellent correlation between Swastika and Chemex assays, confirming the reliability of Swastika fire assay procedures and results. In addition, evaluation of the blank data indicated no discernible contamination from high grade smearing during sample preparation.

AMEC examined the datasets and agreed that there is a good correlation between the Swastika and Chemex laboratories. The correlation coefficients were greater than 90%. However, AMEC did not agree that the results from the analysis of the blank samples provided assurance that there was not contamination problem. Anomalous results from the analyses of the blank samples at the time were explained as "one-time aberrations."

SAMPLE SECURITY

Neither M3 nor AMEC commented on the sample security in place for their sampling procedures. Kinross indicated that during the period that the drilling and sampling was conducted there were no special precautions in place to ensure the samples were secure during storage or transportation. Scott Wilson RPA was not able to locate any documentation outlining any security measures in place to prevent tampering with the core or the submitted samples. Given the number of drilling campaigns carried out by two different companies and the record of gold production, it is very unlikely that the samples were intentionally altered in any way with foreign material.

RESULTS OF THE RE-ASSAY PROGRAM OF ASARCO CORE AND PULPS

In September 1996, check assays were carried out on ASARCO's drill results. Assay labs used by ASARCO were identified from the archives and a random sequence representing 5% of the samples from the main deposit area were submitted to Chemex Laboratories in September and October 1996, for one assay-ton fire analysis. Core from ASARCO's 1979-1987 drill campaigns had been archived on the Aquarius property and the remaining halves were used for the 1996 check assay program. However, for ASARCO's drilling in 1988-1989 only the pulps were available for Echo Bay check assaying.

Check assays on ASARCO's core from the period 1979-1987 were carried out as follows by Echo Bay:

- A list of every twentieth sample interval was compiled including the original sample numbers and hole identification.
- The archived core and relevant interval were located. ASARCO had not identified the sample intervals in the boxes and the footage markers were illegible. However, all boxes had been labeled by aluminum tape with respect to the hole number and intersection. Therefore, assumptions and approximations were necessary in reconstructing the required interval to be reassayed; errors are believed to be minimal.
- Entirely new sample numbers were assigned and recorded.
- A total of 536 samples were sent to Chemex in Mississauga, Ontario. Samples were prepared following the same protocol used by Echo Bay in 1996; that is, a 250 g subsample was pulverized and fire assayed. Pulps and rejects were returned to Echo Bay in Timmins.

Check assays on ASARCO's archived pulps from 1988-1989 were carried out as follows:

- Pulp samples were selected based on date. A list of every tenth sample and a second list of every twentieth sample were prepared.
- The pulps stored on site were sorted and samples matching those numbers on either list were collected. Although 403 samples were required to obtain the target of 5 percent check assaying, only 288 samples were found.
- A third list of samples was, therefore, prepared by including the fifth sample in sequence from those samples retrieved. The target of 403 samples was obtained and shipped.
- Chemex Laboratories was instructed to re-roll all pulps before fire-assay analysis.

STATISTICAL ANALYSES OF CHECK ASSAYS

Statistical analysis of Echo Bay and ASARCO check assays was performed to establish the reproducibility of the original Swastika analysis. All assays were determined with one assay-ton fire assay analysis, with the original assay performed by Swastika and the check at Chemex. The datasets consisted of Echo Bay (i.e., 1995-1996 pulp re-assay), ASARCO pulp (i.e., 1988-1989 pulp re-assay), and ASARCO core (i.e., 1979-1987 split core re-assay). The results, taken from the M3 2000 feasibility study are summarized in Table 13-1.

TABLE 13-1 RESULTS OF CHECK ASSAY PROGRAM St Andrew Goldfields Ltd. – Aquarius Project

Check Assay	No.	Correlation	R not 0 95% C.I.	Paired 95% C.I.	F-Test 95% C.I.	T-test 95% C.I.
Echo Bay	788	0.997	Pass	Pass	Pass	Pass
ASARCO Pulp	639	0.927	Pass	Pass	Pass	Pass
ASARCO Core	530	0.429	Pass	Pass	Fail	N/A

The check assays for the Echo Bay and ASARCO pulp samples pass all of the statistical tests at the 95% confidence level. This substantiates the reproducibility of the original Swastika assays for these drill campaigns.

M3 noted that the ASARCO core check assays were done on new pulps from split core, and not only have a relatively low correlation, but they also failed the F-test. However, the samples do have a statistically significant positive correlation (i.e., $R \neq 0$ at 95% confidence interval) and pass the paired comparison test. Further, the population means are very close (i.e., 1.230 g/t versus 1.334 g/t), and the log-log scatter plot showed a clear linear trend. They suggested that the reduced correlation was primarily due to the high nugget effect of the mineralization and the size of the samples which were splits from AQ and AX core. M3 concluded that the Echo Bay and ASARCO pulp re-assays show excellent correlation with the original Swastika assays. The ASARCO core re-assays indicate that the original Swastika assays are relatively reproducible, especially considering nugget effect and subsampling issues. As a result, the check assay statistical analysis confirms the overall viability of the ASARCO and Echo Bay drill assay database.

AMEC examined the sample pulp datasets and agreed that there is an excellent correlation. AMEC performed further analysis of the data set from the core samples and noted that there is a substantial amount of scatter, confirming the poor correlation and that a bias exists if the original assays are not capped.

In Scott Wilson RPA's opinion, although the protocols and QA/QC methods are not available for the ASARCO drilling, the results of the check assay program and the mining results indicate that the sample assays are acceptable for resource estimation. The variability in the re-assay results from the core are attributed to the natural high disparity expected between closely-spaced samples in a vein gold deposit with a high nugget effect. The results from the QA/QC program conducted by Echo Bay has indicated good precision on the assaying as demonstrated by the check results of the pulps at the Swastika laboratory and the results of the checks at the Chemex laboratory. Scott Wilson RPA was not provided with the results from the analyses of the blank samples and can only refer to AMEC's comments that the potential that contamination occurred is not known. M3 indicated that there was no discernable contamination. Standard samples were not submitted by Echo Bay. The results from the laboratories analysis of the standards would be helpful in assessing their precision, but given the reasonable results from the repeat assays on the pulps the lack of standards is not considered material.

14 DATA VERIFICATION

The review of the reports made available to Scott Wilson RPA showed that Echo Bay performed a number of checks both on the Echo Bay drill database and the ASARCO drill database in 1996, including:

- Collars. All drill hole collars were checked against available surveyed locations. Otherwise, they were compared against the log entered coordinates. All holes were plotted and cross referenced as a final check.
- Surveys. All survey records were verified, and survey data judged as unreasonable was discarded. Unreasonable was defined as an azimuth difference greater than 10° between successive survey stations. These large directional variances probably are due to high magnetite content in the talc-chlorite rocks.
- Assays. The ASARCO assays had an exhaustive 100 percent check performed between the database records and the original assay certificates, with all errors corrected. The Echo Bay 1995 and 1996 assays had a nominal 10 percent check performed, with a less than 1 percent error rate. Again all spurious data were corrected.
- Geology. The lithologic entries were indirectly checked by plotting geologic sections and plans. Any inconsistencies were noted and corrected in the database. The alteration data have not been checked and, in fact, should be relogged in many cases because of logging inconsistencies between individual geologists.

Scott Wilson RPA carried out spot checks of the sample assays by comparing the assays provided on the analysis certificates with the assays shown in the drill-hole logs and the assays contained in the data file used for resource estimation. The assay certificates examined list the initial gold assay on the sample pulp and for higher-grade assays, a check assay was carried out on the pulp. The laboratory also prepared a second pulp from the sample reject and provided assays for the second pulp. Assay checks for the higher-grade assays on the second pulp were also provided. The average assay for each sample was entered onto the drill-logs. The spot checks on the sample assay data base used for mineral resource estimation demonstrated that the initial assay of the first pulp was entered into the assay data base. The checks indicated that this procedure was used consistently. There was no indication that the highest assay was used.

Based on reviews by other investigators and checks by Scott Wilson RPA, Scott Wilson RPA concludes from the validation and verification study that the quality of the database is good, and that very few transcription errors exist. In Scott Wilson RPA's opinion, the database appeared to be of acceptable quality for mineral resource estimation.

SCOTT WILSON RPA SAMPLE ASSAY CHECKS

Scott Wilson RPA carried out independent sampling of drill core from the Aquarius property. Unrestricted access was provided to the core, and the samples were taken under the sole supervision of Scott Wilson RPA personnel. Six 1 m long samples were taken of the half-core remnants from previously sampled holes. The core was split under the supervision of a Scott Wilson RPA representative and placed in the sample bags. The bags were sealed and were then placed in a locked suitcase that remained in the custody of a Scott Wilson RPA representative for the balance of the site visit. The samples were delivered to the SGS Mineral Services lab in Toronto, Ontario, where they were analyzed by fire assay for gold. Results of this sampling, along with the original assay values recorded in the database, are provided in Table 14-1.

Hole No. – Spl No.	Core Length (m)	Original Assay g/t Au	Scott Wilson RPA Check Assay g/t Au	Difference (g/t Au)	Difference
EB 96-181-1	1.0	0.786	1.050	+0.264	+33.5%
EB 96-181-2	1.0	1.406	1.530	+0.124	+8.8%
EB 96-151-3	1.0	4.97	0.503	-4.467	-89.8%
EB 96-151-4	1.0	1.71	0.078	-1.632	-95.4%
EB 96-077-5	1.0	0.491	1.550	+1.059	+315.7%
EB 96-077-6	1.1	1.670	0.764	-0.906	45.7%
Total	6.1	1.836	0.910	-0.926	-50.4%

TABLE 14-1 SCOTT WILSON RPA CHECK SAMPLING CORE St Andrew Goldfields Ltd. – Aquarius Project

The results of the check assays confirmed the presence of gold in the core from the Aquarius Property. Scott Wilson RPA notes that three of the check samples assayed lower than the originals and three of the samples assayed higher. A large number of check assays were performed on the split core as shown in Table 13-1 and these samples confirm the very high degree of variability in the assay results, which is common for deposits with coarse gold, such as those in the Timmins Camp. The sampling carried out by Scott Wilson RPA confirms both the presence of gold at Aquarius, the extreme variability of the gold distribution in the deposit.

In addition to the core samples, Scott Wilson RPA retrieved four pulps from St Andrew storage at their field exploration office adjacent to the Aquarius Project site. The pulps were also delivered to the SGS Mineral Services lab in Toronto, Ontario, where they were analyzed by fire assay for gold. The pulps were originally assayed at the Swastika laboratory. Results of this sampling, along with the original assay values are provided in Table 14-2. The pulps all returned low assays similar to the original pulps. Calculation of the percentage difference is not meaningful in this case because of the low grades. The results are consistent with the assay checks on the pulps shown in Table 13-1.

Original Sample No.	Scott Wilson RPA Sample No.	Assay on Data Base g/t Au	Scott Wilson RPA Check g/t Au
68387	109	0.002	0.022
70610	110	0.063	0.063
7609	107	0.034	0.000
7606	108	0.036	0.013

TABLE 14-2 SCOTT WILSON RPA SAMPLING CHECKS ON SAMPLE PULPS St Andrew Goldfields Ltd. – Aquarius Project

TWIN HOLE DRILLING

In September 1996, four holes were selected to be twinned on the basis of grade ranges within the southeast carbonate zone as follows:

- 95-96 (low grade)
- 95-98 (average grade)
- 95-99 (very high grade)
- 96-080 (below average grade)

The duplicate holes were located three metres northeast of the collars of holes to be twinned. The objective was to duplicate the original holes within the entirety of the host carbonate rock, through the mixed alteration zone, and some distance into the talcchlorite schist. The following paired-hole analyses show the weighted average grade for each rock type and the overall average grade of each hole (Table 14-3). The latter category becomes problematic in comparison because, in three cases, high-grade gold values were intersected in the talc-chlorite country rock.

Rock Unit	Length 1 (m)	Grade 1 (g/t Au)	Length 2 (m)	Grade 2 (g/t Au)						
	TWINNED) SET "A" - 96-080 (1)) to 96-248 (2)							
Carbonate	77.0	0.756	70.5	0.584						
Mixed	5.0	0.758	1.8	0.788						
Talc	6.0	0.513	11.7	13.690						
Total	88.0	0.739	84.0	2.414						
	TWINNED SET "B" - 95-99 (1) to 96-246 (2)									
Carbonate	81.4	11.170	64.5	0.587						
Mixed	2.0	0.350	16.2	3.410						
Talc	1.0	0.090	1.0	3.6						
Total	84.4	10.780	81.7	1.14						
	TWINNE	D SET "C" - 96-96 (1)	to 96-249 (2)							
Carbonate	75.0	0.375	78.0	0.320						
Mixed	2.3	0.366	2.0	0.070						
Dyke	1.9	0.568	N/R	N/A						
Mixed	1.2	0.125	2.0	N/A						
Talc	2.1	0.125	2.0	6.350						
Total	82.5	0.369	82.0	0.460						
	TWINNE	D SET "D" - 95-98 (1)	to 96-247 (2)							
Carbonate	42.0	1.700	40.8	0.530						
Mixed	1.0	72.640	1.0	13.00						
Dyke	7.0	1.220	8.0	2.39						
Mixed	4.0	2.200	3.3	2.060						
Talc	4.0	0.570	4.2	0.150						
Total	58.0	2.820	57.3	1.070						
Overall Total	312.9	3.73	305.0	1.29						

TABLE 14-3 TWIN HOLE COMPARISONS

St Andrew Goldfields Ltd. – Aquarius Project

M3's comments on the results are as follows: The carbonate intersections were duplicated reasonably well in holes 95-96, 95-98, and 96-80. Both the length and grade of the carbonate in the very high grade hole, 95-99, were poorly duplicated - the carbonate intersection was 16.9 m less in hole 96-246 and the grade was low (0.587 g/t). Although the mixed unit is longer with a higher grade (3.41 g/t) in drill hole 96-246, the

overall grade of the hole (1.14 g/t) is still rather low compared to the 10.78 g/t Au in drill hole 95-99. M3 suggested that evidence of faults was logged in both holes and this may explain the discrepancies. They also noted that the grades in the footwall talc-chlorite unit are considerably higher in three of the duplicating holes; 96-248, 96-246, and 96-249. M3 suggested that this is explained by auriferous quartz veins may extend through the mixed unit into the talc-chlorite unit over varying distances.

M3 concluded that the twin-hole effort confirmed the poor continuity of the deposit with regard to gold mineralization and also emphasizes the structural complexity of the deposit.

Scott Wilson RPA visually compared each set of drill holes to determine if "highergrade intervals" could be correlated between holes. There was no apparent correlation between intervals of higher-grade between each pair of twinned holes. In Scott Wilson RPA's opinion, the results of the twin hole drilling program confirm the poor grade continuity in the deposit and emphasize the potential difficulty in interpolating the grade over short distances. Although the variability in the thickness of the carbonate unit between boreholes 95-99 and 96-246 could be interpreted as structural complexity, there is an offsetting difference in the mixed zone and a more probable reason is the variability in the carbonate content of the mixed zone. The total thickness of the combined units is almost identical.

Analysis of Sample Variance

A study was carried out in 1996 to assess whether representative, homogenous subsamples can be prepared from rocks with coarse gold mineralization. Statistical analyses were conducted on intra-pulp (two splits from the same pulp), inter-pulp (two separate pulps from the same coarse reject), inter-sample (quarter cores samples) and twin-hole sample pairs. Standard statistical tests were used to provide a quantitative measure of the contribution that the subsampling had on the overall variance. The results of the tests are shown in Table 14-4.

TABLE 14-4 STATISTICAL ANALYSIS OF SUBSAMPLE VARIANCE St Andrew Goldfields Ltd. – Aquarius Project

Sample	Number	Correlation	F-test 95% C.I.	T-test 95% C.I.
Intra-pulp	517	0.998	Pass	Pass
Inter-pulp	304	0.916	Pass	Pass
Quarter Spl.	205	0.453	Fail	N/A
Twin hole	39	-0.093	Fail	N/A

The intra-pulp comparisons show excellent correlation and pass the F and T-tests at the 95% confidence level indicating that the Echo Bay sample preparation provided a homogenous sample. The inter-pulp comparisons are also good indicating that the assays were reproducible after crushing to -20 mesh, sampling and pulp preparation. In contrast, the quarter core sample indicates weak correlation and fails the F-test indicating the samples do not represent the same population at the 95% confidence level. The twin-hole samples show no correlation.

In Scott Wilson RPA's opinion, these results demonstrate that the gold assays are reliable, but there is an extreme sampling problem due to the coarse nature of the gold mineralization. These data clearly demonstrate the difficulty developing grade interpolation models and generating grade estimates for individual blocks within the deposit.

15 ADJACENT PROPERTIES

There are no data used from properties adjacent to the Aquarius Project.

16 MINERAL PROCESSING AND METALLURGICAL TESTING

METALLURGICAL SAMPLES

The first two series of metallurgical testwork were performed on five different composites of Aquarius ore. Each of these composites was selected to represent a particular gold grade and carbonate composition known to be prevalent in the orebody. These composites were identified as:

- Altered mafic and altered felsic instrusions
- Mixed carbonate/talc chlorite
- High grade carbonate
- Low grade carbonate
- Average grade carbonate

Further extensive testwork was performed on Composite 6, which was a composite of samples selected and blended to represent the entire orebody.

Gold recovery for each of these composites, using gravity separation and cyanidation, exceeded 95%.

Initial metallurgical testwork was executed by SGS Lakefield Research Limited, Lakefield, Ontario (Lakefield), and grindability testing was performed by both Lakefield and Hazen Research Inc., Golden, Colorado (Hazen). Further gravity concentration testing was carried out by RDI to investigate an alternative process flowsheet. Confirmatory testwork was performed by Lakefield in November 1996 and Hazen in February 2000.

Comminution testwork was performed on the original five composites by both Lakefield and Hazen. Rod and ball mill Bond Work Indices were developed for all five composites. The Bond Work Indices indicated that the hardness of the orebody is fairly consistent. The abrasion index was also determined for Composites 4 and 5. Composite 5 was also subjected to the MacPherson autogenous grindability test. The resulting specific power requirement was 13.8 kWh/tonne.

Flotation and gravity concentration testwork was conducted by both Lakefield and Hazen. The results of this testwork indicated that a gravity concentrate could be produced at a coarse grind size and flotation could be used to recover gold at a fine grind size. The testwork showed that because of the presence of coarse gold some form of gravity concentration is necessary with any selected processing option.

SCOTT WILSON RPA COMMENTS

No information could be found on the number of samples that were used for each of the metallurgical samples or the location of the samples within the deposit.

The samples were tested to develop a flow sheet for a new mill to be constructed at the Aquarius site. If the material is to be processed at the existing Stock Mill, or a major extension to the Stock Mill, the test results need to be reviewed by a metallurgist to determine the applicability of the results to the milling circuit at the Stock Mill. New tests may have to be conducted to verify the estimate of the gold recovery. The estimated gold recovery at 95% is higher than the recovery currently achieved at the Stock Mill. In addition, if a new mining sequence is developed, tests should be conducted on material that is representative of the portion of the deposit scheduled for initial production.

The establishment of an accurate estimate of the gold recovery and the accompanying documentation is an important part of the planned feasibility study.

17 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

BASIS OF ESTIMATE

The mineral resource estimate for the Aquarius deposit is based on open pit mining. The mineral resource at the Aquarius property is constrained by the location of the freeze wall. The freeze wall limits the resource in that the ultimate pit cannot expand past the freeze wall without incurring very significant expenditures. The ultimate pit is also constrained by the pit slope angle. As part of the M3 2000 feasibility study, Golders Associates, the geotechnical engineering consultants, provided recommendations for the wall angles for the overburden and the rock in a report provided to Echo Bay in 1996 (Appendix 4.3 of the M3 2000 feasibility study). The pit slope for the overburden is about 23 degrees and the pit slope for the rock is about 40 degrees.

Scott Wilson RPA reviewed the pit slope angles in the overburden and rock in the pit shell provided by St Andrew and found that the angles are consistent with the recommendations from Golder Associates.

GEOLOGICAL INTERPRETATION

AMEC received Echo Bay's geological interpretation on E-W cross sections. The geological interpretation was based on the 25 m spaced drilling. In addition, 25 m spaced N-S sections and level plans at 10 m intervals were constructed to ensure the correlation of the lithological units was consistent. The interpretations from the sections and the plans were used to construct 3D wireframes of the deposit geology. AMEC reviewed the geological wireframes against the original interpretations to confirm the 3D model was consistent and reasonable. The geological model contains the following lithological units; overburden, the main carbonate alteration zone, other zones of carbonate alteration, mixed zone, intrusives, quartz feldspar porphyry, talc-chlorite schist, and mafic volcanics.

AMEC found that the gold grade across domain boundaries in the deposit show distinct differences in the grade in the vicinity of the boundary. There do appear to be contact or boundary related effects which validates the use of grade interpolation domains in the block model.

Scott Wilson RPA reviewed the geological interpretation and wireframes and agree that the geological model is consistent and reasonable for the carbonate, mixed, talcchlorite schist, mafic volcanics and quartz feldspar porphyry units. The interpretation of the intrusives between the drill holes is more difficult because they are discontinuous. The interpretation is consistent and reasonable, but the confidence in the interpretation is lower than the other lithological units.

For the next stage of assessment, St Andrew may want to consider the use of downhole tools in the previous surface drill holes to gather more information on the location, shape and orientation of these felsic and albitic dykes and intrusions. Down-hole televiewers may be successful in measuring the orientation of the contacts as well as providing orientation data on gold-bearing shears and faults. Other tools such as a gamma tool may be useful in identifying and mapping these intrusions in the hole, providing checks on the interpretations using the televiewer. This information can then be used to develop a more robust wireframes of the intrusions.

COMPOSITING AND COMPOSITE STATISTICS

AMEC used a composite length of two metres, except where the sample crossed a lithological contact in which case the composite length was reduced to respect the geological contacts. The composite statistics are shown in Table 17-1.

Rock Type	Number	Mean	Std	C.V.	Minimum	Maximum
NW Carb	6,950	1.68	9.00	5.36	0.001	946.6
SE Carb	7,263	1.85	6.74	3.63	0.001	325.0
Mixed	2,729	1.28	5.66	4.43	0.001	293.5
Intrusive	2,384	3.12	7.34	2.39	0.001	343.8
Talc	6.113	0.41	1.81	4.47	0.001	75.23
Other Carb	843	0.46	1.97	4.27	0.001	34.94

TABLE 17-1 DECLUSTERED COMPOSITE STATISTICS St Andrew Goldfields Ltd. – Aquarius Project

VARIOGRAPHY

AMEC constructed indicator variograms for the northwest and southeast carbonate domains for the samples greater than 2 g/t Au and 5 g/t Au, respectively. The variogram models show a nugget effect and two nested structure variance contributions. The variograms show nugget effects that represent 60% to 70% of the total variation. They concluded that the mineralization is erratic and that the higher-grade gold mineralization may exist almost anywhere within these two domains. The spatial correlation tends to stop quickly resulting in the variogram model structure having ranges well less than the nominal horizontal hole spacing of 25 m. The first variance component accounts for the largest portion of the remaining variance and a second weaker component usually accounts for about 8% of the total variation. Typical variograms are shown in Figure 17-1.



DENSITY DETERMINATION

Density determinations were carried out on core samples at Lakefield Research Ltd. using the wax-coated method. The measurements for each rock type were averaged to determine the final assigned density values for each lithology. The density determinations are shown in Table 17-2.

Rock Type	No of Spls	Mean	Min	Max	Std. Dev
Carbonate	32	2.85	2.54	3.04	0.11
Intrusive	9	2.81	2.61	2.93	0.11
Mixed	11	2.84	2.80	2.90	0.03
Talc-Schist	39	2,81	2.66	2.95	0.05
Mafic Volc	16	2.81	2.64	2.94	0.07
QFP	12	2.71	2.64	2.84	0.07

TABLE 17-2DENSITY MEASUREMENTSSt Andrew Goldfields Ltd. – Aquarius Project

Scott Wilson RPA checked the specific gravities used in the block model for each rock type and found them to be consistent with the sample means listed in Table 17-2 except for the Talc Schist unit. The block model used a specific gravity of 2.82. This difference is not material to the estimate.

BLOCK MODEL

For the construction of the block model, AMEC incorporated the topographic surface and the bedrock surface. The surfaces were compared to the geology codes and collar positions and AMEC confirmed that the surfaces were reasonable. The geological model was constructed using MineSight software. A three-dimensional block model, aligned with the mine grid, was developed based on a block size of 10 m x 10 m x 5 m. The geology was coded to the model using the geological solids and the rock type was assigned to the blocks first. Solids of the underground workings were incorporated and set as mined out codes to ensure the volumes previously mined are excluded from the resource. The density was assigned based on rock type. The borehole composites were then incorporated.

GRADE INTERPOLATION

Grade interpolation for the AMEC model is based on statistical and geostatistical analyses of the data. The AMEC model divides the sample data into two groups; a low-grade population demonstrating reasonable continuity and a high-grade population in which the gold grades are considered to be spatially independent.

Block grades for the blocks are estimated by combining different types of estimates for the high and low grade. The proportion of low and high-grade in a block is estimated by kriging an indicator variable where the indicator is zero if the sample grade is less that the division threshold and one if it is greater than or equal to the threshold. The value of the low grade in the block is estimated by ordinary kriging using all the samples surrounding a block with grades less than the threshold. The high-grade part of the block is given by an estimate of the mean of the high-grade distribution.

The selection of the threshold was determined by plotting a graph of the coefficient of variation versus the mean of the samples over a range of possible thresholds. The threshold was selected at the point where the change in the coefficient of variation becomes non-linear.

Kriging (ordinary and indicator) was used for interpolating the gold grades in the carbonate units. A nearest neighbour model (NN) was used to compare and validate the kriged model. An inverse distance model was used as the basis for estimating the gold grades in the blocks for the mixed, talc and intrusive units. A NN model was again used for comparison and validaton.

To further limit the influence of the high-grade population on the estimate, AMEC examined the contribution from the high-grade population on the model using Monte

Carlo simulation methods. On the basis of this study, AMEC applied a capping factor on the high-grade population that limited its overall contribution to the annual production to the 80th percentile. Both the uncapped and the 80th percentile grades were stored in the final resource model. AMEC determined that this grade capping criteria reduces the average metal content within the carbonate host rock by 6%.

Histograms and natural logarithm cumulative probability plots of both the assays and the composites were made to identify extreme grades by rock type. AMEC determined the cap thresholds by using both the results of the risk analysis and by reviewing the "tail" of the population cumulative probability plots. Based on these analyses, the two meter composites were capped at 100 g/t Au for the mixed, talc, and intrusive units.

Scott Wilson RPA notes the high correlation coefficients and that the histograms display skewed distributions. In Scott Wilson RPA's opinion, grade estimates generated from highly skewed data can result in positively biased results and over estimation of the average grade of the deposit. Positively skewed data sets are common for gold deposits; however, the data from the Aquarius deposit can be described as extreme. It is standard industry practice to attempt to correct for this bias by cutting the high-grade assays. Scott Wilson RPA examined the histogram of the assays greater than 5.00 g/t. A range of top cuts were applied to the gold assays to determine what the effect of cutting would be. The capped grades were plotted against the cap values to determine the variation in the mean grade at various cuts. The cap grade was plotted on the horizontal axis and the mean grade on the vertical axis. Based on the plot, Scott Wilson RPA would suggest a cap of between 70 to 100 g/t Au. At a cap of 100 g/t Au, the mean grade of about 9% between AMEC's uncapped and capped estimates.

VALIDATION

To verify the actual procedures used and validate the resource model, AMEC carried out a number of checks:

• Geological interpretation, drill hole coding and geological model coding were verified with sections and plan plots.

AMEC confirmed a reasonable agreement.

• Drill hole orientation and location were checked for anomalies using collar plots and section plots.

AMEC found that all but three holes were noted to be within one metre of the topographic elevation. The three holes that did show a discrepancy greater than one metre were located outside the main carbonate area.

• An on-screen, visual inspection of the interpolated block values in plan and section.

Overall, AMEC found a reasonable agreement.

- A review of the "run files" from the modeling software.
- An on-screen check of data selection for kriging.

AMEC selected two blocks at random, viewed the samples selected for them and considered them reasonable when compared to the search parameters used.

• A check of density assignment.

AMEC found the density was correctly assigned.

• A comparison of the kriged model mean with nearest neighbour (NN) statistics.

Table 17-3 shows the results of the interpolated resource model grades with the NN estimates.

TABLE 17-3 COMPARISON OF RESOURCE GRADES TO NN MODEL (INDICATED AND INFERRED) St Andrew Goldfields Ltd. – Aquarius Project

Rock Type	Tonnage	g/t Au KG20	g/t Au NN
NW Carbonate	6,565,000	1.56	1.60
SE Carbonate	11,302,000	1.62	1.75
All Carbonate	17,867,000	1.60	1.69
Mixed	3,297,000	0.97	1.08
Intrusive	689,000	2.85	2.90
Talc Schist	1,761,000	0.66	0.57
Total	23,614,000	1.49	1,56

In AMEC's opinion, there is good agreement in the grades for the total carbonate unit and the mixed and intrusive units. The lower grade for the talc schist in the NN model compared to the KG20 model is difficult to explain, however, since this material is only reported in blocks adjacent to the carbonate unit, it will primarily be considered dilution during mining.

• Calculation of the change of support adjustment using AMEC software.

AMEC performed an independent check on the smoothing in the estimates in both Carbonate lobes using a change of support method. The method uses a grade-tonnage curve to compare the distribution of composite grades from a nearest neighbour or polygonal model and compares the block grades to the estimated grade distribution to check that the estimates overly "smooth" the grade. AMEC found that the grade-tonnage curves produced by the model show the grade and tonnage estimates are validated by the change of support calculation.

• A summation check.

The resource block model was extracted and imported into a new block model for the mining evaluation. The reblocked material was tabulated and confirmed to match the original resource model.

CUT-OFF GRADE SELECTION

AMEC reported the mineral resource using a 0 g/t Au, on the basis that there was a high risk of meeting forecast grade using a cutoff grade. In their opinion there is very low

confidence in the local estimates resulting in a very high risk in selecting blocks above cutoff during mining. This concern was based on the following points:

- There is a limited understanding of the geological controls on the high-grade mineralization and the nature of faulting.
- The high variation in the grades shown by the twin-hole analyses.
- The elevated coefficients of variation in the statistics confirm the erratic style of the mineralization.
- The high nugget effect illustrated by the variograms indicating that the occurrence of the high-grade gold is nearly random at the scale of sampling and projection of high-grade composites can be misleading.

CLASSIFICATION

AMEC classified the mineral resource based on the following criteria:

- No resources were classified as measured due to uncertainties in the hole surveys and assay data.
- Blocks, in which the grade estimates used three or more composites from different drill holes within 28 m and had at least one sample within 19 m were classified as indicated.
- All remaining blocks with grade estimates inside the allowable rock types having one composite within 50 m were classified as inferred.

AMEC also classified the resource model using statistical techniques that examined the variability of the annual production (tonnage and grade). AMEC's criteria for declaring an indicated resource is that the annual production must be known to a $\pm 15\%$ accuracy at a 90% confidence level. AMEC examined large blocks, equivalent to the proposed annual production using the kriging variance to examine the grade variation.

Scott Wilson RPA agrees with the indicated classification. The drill spacing is at a 25 m x 25 m grid and there is good continuity in the main carbonate host rock between the drill sections. The composite samples exhibit a very high coefficient of variation and the analysis of the variography indicates that the range of the spatial continuity in the grade is less than the drill spacing. The nugget effect represents from 50% to 70% of the total

SCOTT WILSON RPA

variation. These statistics demonstrate that the grade is not continuous over the nominal drill spacing and cannot be interpolated into the blocks in the model with sufficient a high enough confidence to classify the mineral resource as measured. The model exhibits high geological continuity but low grade continuity.

Scott Wilson RPA overlaid the interpolated gold grades in the blocks with the gold grade of the drill hole sample plots for several sections. There was reasonable agreement between the high-grade samples in the drill holes and the interpolated block grades.

Scott Wilson RPA reviewed the location of the blocks classified as inferred and found that the blocks are located throughout the model. Many of the blocks are located within the material classified as indicated and other blocks are located peripheral to the indicated resource. Scott Wilson RPA would recommend that in future assessments, the blocks classified as inferred that are located within the indicated resource be classified as indicated based on the 25 m spaced drilling and the continuity of the mineralized units. Scott Wilson RPA suggests that the blocks that are classified as inferred that are located peripheral to the indicated resource not be included in the mineral resource estimate. Note that these blocks are still located within the ultimate pit shell and would have to be removed as waste.

This suggestion is not considered to be a significant change to the mineral resource estimates reported by AMEC and can be reviewed and assessed in the next stage of evaluation.

MINERAL RESOURCES

SUMMARY

Classification	Rock Type	Kt	Grade g/t Au	Koz
Indicated	Carbonate	17,545	1.61	906
	Mixed	3,229	0.97	101
	Intrusive	622	3.15	63
	Talc Schist	1,716	0.65	36
Total		23,112	1.49	1,106
Inferred	Carbonate	322	1.20	12
	Mixed	68	0.35	1
	Intrusive	67	0.08	0
	Talc Schist	45	0.43	1
Total		502	0.83	14

TABLE 17-4 MINERAL RESOURCES BY ROCK TYPE St Andrew Goldfields Ltd. – Aquarius Project

TABLE 17-5 MINERAL RESOURCES BY CLASSIFICATION St Andrew Goldfields Ltd. – Aquarius Project

Location	Indicated Resources		Inferred Resources	
	Tonnes	g/t Au	Tonnes	g/t Au
Aquarius Pit	23,111	1.49	501	0.81

Notes:

- 1. CIM definitions were followed for mineral resources.
- 2. Mineral resources are estimated at cutoff grades of 0 g/t Au.
- 3. Mineral resources are estimated using an average long-term gold price of US\$500 per ounce, and a US\$/C\$ exchange rate of C\$:US\$ of 0.90
- 4. No minimum mining width was used as all mineralization within the ultimate pit is reported.
- 5. Indicated mineral resources are inclusive of mineral reserves.

Scott Wilson RPA reviewed the tonnage and grade estimates in the KG20 block model and checked the tonnage and grade estimates. There were very minor differences which are attributed to the treatment of partial blocks when converting to the Gemcom software.

COMPARISON TO OTHER ESTIMATES

The mineral resource estimate provided by M3 in the 2000 feasibility study is shown in Table 6-2 of Item 6 History of this report. The tonnage estimate is much higher than the current estimate. M3 included material outside of the ultimate pit boundaries and therefore the estimates are not directly comparable.

Kinross reported a proven and probable mineral reserve estimate of 15.0 Mt grading 2.16 g/t Au in their 2003 and 2004 annual reports based on the update of the feasibility study in 2003. In Scott Wilson RPA's opinion, this feasibility study is out of date and the scope is not the same as the concept proposed by St Andrew. Pending further feasibility studies, a mineral resource only can be reported for the Aquarius Project.

The Kinross mineral reserve was based on the mineral resource estimate from AMEC's KGMN block model (uncapped grades) listed in Table 6-4 of this report for all mining stages of the proposed pit, including stage D. However, AMEC had recommended the mineral resource estimate be reported based on their KG20 block model using capped grades. Scott Wilson RPA agrees with AMEC's recommendation. AMEC also recommended reporting mining stage D resource separately because of the lower grade. Scott Wilson RPA has included the stage D portion because of the higher gold price and to ensure all of the mineralization within the proposed pit is assessed for conversion to a mineral reserve.

The previous estimates and the proposed estimate are summarized in Table 17-6.

TABLE 17-6 COMPARISON OF MINERAL RESOURCE ESTIMATES St Andrew Goldfields Ltd. – Aquarius Project

Fatimata	Indicated Resources		Inferred Resources			
Estimate	Tonnes	g/t Au	Tonnes	g/t Au		
M3 – 2000 [*]	28,200	1.51	6,245	0.91	-	
AMEC Recommended – 2003	23,111	1.49	501	0.81		
Kinross – 2003	23,112	1.60	502	0.83		
Scott Wilson RPA - 2006	23,111	1.49	501	0.81		

* M3 estimate includes total measured and indicated.

DISCUSSION

Based on the review of the information provided by St Andrew to Scott Wilson RPA and their site visit, there are no known environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant issues that would materially affect the mineral resource.

A new feasibility study has not been completed for the project on the basis of the conceptual plan provided by St Andrew and outlined in the Introduction and Terms of Reference. At this stage of the project, there are no known mining, metallurgical, infrastructure, or other relevant factors that would materially affect the mineral resource. The mineral resource does not have demonstrated economic viability.

The establishment and operation of the freeze wall is an identified risk and this issue is discussed in more detail below.
18 OTHER RELEVANT DATA AND INFORMATION

ESTABLISHING AND OPERATING THE FREEZE WALL

Kinross included an additional section in the M3 2003 update of the feasibility study on the freeze wall. Kinross emphasized that the operation of a freeze ring is a novel technology for an open pit mine. While ground freezing has been used successfully on many projects, the Aquarius application is much larger in size, exceeding the refrigeration capacity of any ground freezing project to date. Kinross undertook a third program of overburden strata identification and commissioned Layne Christensen Company (Layne Christensen), with Headquarters in Kansas City, Missouri, to recalculate the time required to establish the freeze wall, and to determine the refrigeration requirements.

They indicated that the most significant risk to the successful application of the freeze wall at Aquarius is the presence of high groundwater flow rates that could interfere with the initial establishment of the freeze barrier.

Layne Christensen designed and installed the freeze wall. Their proposal for the work remaining to establish the freeze wall includes the modeling of groundwater flows near the freeze wall perimeter. Kinross indicated that technical remedies are available, however, at additional cost. They indicated that the project risk is not in the application of the freeze wall technology, but in cost and schedule. Kinross stated that high groundwater flows can be addressed by a number of approaches such as; bentonite injection, pumping to lower any upstream dammed-up head, lowering brine temperatures and adding freeze tubes.

In 2003, Layne Christensen recalculated the refrigeration requirements and the time required to establish the freeze wall, based on a new interpretation of freeze tube borehole data and an upgraded finite element model. Kinross indicated that as the project proceeds, it will be appropriate to review these calculations in detail.

EXPLORATION POTENTIAL

Scott Wilson RPA noted a number of small zones of higher grade mineralization below the current limit of the ultimate pit. When St Andrew has developed a more detailed understanding of the geological features controlling the high-grade gold mineralization, these zones may warrant further exploration with the potential of development and mining additional zones from the pit bottom.

19 INTERPRETATION AND CONCLUSIONS

The Aquarius deposit has been extensively explored and delineated with surface exploration core drilling at 25 m centres, four sets of twinned holes, detailed drilling from underground locations, underground mapping and sampling, and test mining. In general, the drilling is of good quality and the logging has been carried out to a standard sufficient to interpret and construct the geological model for resource estimation. All borehole collars have been surveyed. Although not all of the surface boreholes have been surveyed down-hole, the deviation has been minimal in the holes that were surveyed and the relatively shallow depth of the holes provide confidence that their location plots are acceptable for modeling purposes. Although core recovery was not recorded, a review of the borehole logs and the core did not show any holes with missing core intervals. Although there are some deficiencies in the QA/QC program for the sampling and assaying, the check analyses program for the ASARCO pulps and the results of the QA/QC program conducted by Echo Bay on their drill program demonstrate that the gold analyses are acceptable for resource estimation. The variation observed in the analyses from the core splits and twin holes is attributed to the very high nugget effect demonstrated by the gold mineralization.

The Aquarius gold mineralization is primarily hosted within a carbonate unit formed by the alteration of the regional talc-chlorite schist unit. Gold mineralization also occurs within the mixed, or transition, zone between the carbonate unit and the underlying talcchlorite schist and extends into the talc-chlorite schist. Gold mineralization also occurs within small felsic intrusions that are found within the carbonate, mixed, and talc-chlorite schist zones. These four lithological units form the Aquarius mineral deposit.

The gold occurs as free gold primarily within quartz veins that form a stockwork within the carbonate, felsic intrusions, and mixed units. Gold also occurs within very narrow shear zones in all units, and it is the primary control within the talc-chlorite schist. The lithological zones - carbonate, mixed and talc-chlorite schist - are continuous between the drill sections on the nominal grid spacing of 25 m. The felsic-albite

intrusions are narrow, with widths significantly less than the drill spacing, and they exhibit a more limited extent than the other mineralized units. On average, these intrusions contain higher gold grades than the other zones,

Although the gold mineralization is pervasive throughout the deposit, the gold grade is extremely variable within and between the holes in all zones. The high variability is demonstrated by the high coefficient of variation in the assays, a very high nugget effect shown in the variograms, the lack of correlation between assays on samples taken from portions of the same core and the complete lack of grade correlation between the twinned holes drilled at a 3 m separation. The histograms of the sample grades exhibit a strong positive skewness. The feasibility study carried out by M3 Engineering & Technology Corp. (M3) in 2000 stated that 47% of the gold is contained in 1.6% of the tonnes in the NW carbonate zone and 49% of the metal is contained within 7% of the tonnes in the SE carbonate zone.

Scott Wilson RPA is of the opinion that the geological model used by AMEC to estimate the mineral resource is reasonable and adequately represents the overall shape, extent and volume of the mineral deposit. The selection and division of the deposit into the lithological zones as separate domains is reasonable and improves the grade model and provides additional detail for mine planning and mineral processing. Sample compositing and the construction of the block model have been carried out using normal industry standards. Because of the extreme range in the gold grades and the very high coefficient of variation, AMEC capped the grades for the interpolation methods. Capping of the grades for deposits that exhibit a very high coefficient of correlation in the samples is normal industry practice and Scott Wilson RPA agrees that the grades capping should be applied. AMEC used kriging (ordinary and indicator) for interpolating the gold grades in the carbonate units. An inverse distance model was used as the basis for estimating the gold grades in the blocks for the mixed, talc and intrusive units. The interpolation methods are suitable. AMEC conducted a very thorough validation check on the model. Scott Wilson RPA agrees that the block model is suitable for estimating the mineral resource for the Aquarius deposit.

The deposit is located at the bedrock surface and is only amenable to open pit mining. The mineral resource estimate reported from the block model is constrained by the location of the freeze wall and the slope of the walls of the ultimate pit. The pit slope angles were determined based on extensive geotechnical studies. AMEC reported a mineral resource that includes the mineralization within the entire main carbonate unit, the mixed zone adjacent to the carbonate zone, a portion of the talc-chlorite schist immediately adjacent to the mixed and carbonate zones and the intrusions that are contained within these zones that are contained within the ultimate pit limit. Scott Wilson RPA agrees with this approach.

Because of the very high variability in the gold grades and the short range in the spatial correlation there is a very high uncertainty in the estimates of the individual block grades. AMEC were of the opinion that the application of a cut-off grade would not provide a meaningful model for grade control purposes and that selection of ore and waste based on blast hole sampling would result in a very high risk. AMEC reported the mineral resource to a 0 g/t Au cutoff. Scott Wilson RPA agrees with this approach for mineral resource estimation given the absence of a demonstrated method of effective grade control. However, Scott Wilson RPA recommends that further investigations be conducted to establish a reliable grade control method. AMEC classified the mineral resource on the basis of the number of samples used to estimate the grade within each block. Scott Wilson RPA agrees with the classification of the major portion of the resource as indicated on the basis that the primary carbonate host rock and the mixed zone exhibit good continuity between sections, but the gold grades show poor spatial correlation and cannot be extended between sections. Scott Wilson RPA suggest that the inferred resource classification be reviewed in the next stage of project evaluation

Based on the review of the exploration data and review of the technical reports made available to Scott Wilson RPA and the site visit and checks carried out on the data, Scott Wilson RPA agrees with the mineral resource estimates and classifications used by AMEC. In Scott Wilson RPA's opinion, the indicated mineral resource estimate of 23.1 million tonnes grading 1.49 g/t Au has reasonable prospects for economic extraction and warrants further evaluation.

20 RECOMMENDATIONS

Feasibility Study Update

The feasibility study for the Aquarius Project was last updated in 2003 by Kinross. St Andrew acquired the property in 2006 with the intent of processing any future production from Aquarius at their Stock Mill which is located approximately 10 km by road from the Aquarius deposit. Processing the ore through an expanded Stock Mill would preclude the requirement to construct a new mill and the associated tailings facilities at the Aquarius site.

St Andrew has submitted a plan to prepare a full feasibility study on the project based on updated costs and current gold prices. Included in the project feasibility would be a complete review of previous investigations and analyses conducted on the project, particularly the freeze wall system and planning of necessary modifications, if any; the development of a revised mining plan and project cost estimate; review and modification, if needed, of the environmental permits; preparation of preliminary and detailed design of the ore crushing/grinding, transportation and milling facilities required to process the ore in the modified Stock Milling Facility; and the normal economic analyses accompanying such a feasibility study.

Scott Wilson RPA agrees that the project warrants these technical evaluations and emphasize the importance of carrying out all work necessary to ensure the freeze wall can be established and maintained over the life of the mine. As recommended by Kinross, the finite element model of the groundwater flow should be reviewed and the calculations updated by appropriate technical consultants.

Scott Wilson RPA agrees that the complete review of the previous investigations conducted on the property with particular emphasis on the freeze wall system. Scott Wilson RPA suggest that an investigation into and development of a grade control program to improve the production grade be carried out prior to or in conjunction with the review of the mining plan and the design of the mill modifications and expansion at the Stock Mill. A review of the previous metallurgical sampling and testing program is also recommended.

Assessment of Grade Control Methods for Selective Mining

Kinross expressed confidence that the additional data density resulting from production grade control programs during mining would be sufficient to allow the Aquarius mineralization to be successfully mined using selective mining methods. They cited the experience from the Dome mine and Troilus Mine as examples where a grade control program was effectively implemented to separate low-grade gold mineralization in gold deposits with similar sampling issues and similar statistical and geostatistical properties. However, in Scott Wilson RPA's opinion, a methodology with the supporting detailed technical analyses were not developed and presented in the 2003 feasibility study update.

AMEC, however, considered that there was a high risk that forecast tonnage and grade would not be recovered if a cutoff grade is applied. They cited the opinions of other consultants stated in previous feasibility studies conducted on the Aquarius deposit. However, AMEC also indicated that the potential to effectively mine to a cutoff grade may be possible. AMEC recommended that a better understanding of the controls responsible for the zonation that occurs within the main carbonate unit may improve local grade interpolation and could potentially help define areas where selective mining could be applied.

Scott Wilson RPA is of the opinion that if an effective grade control can be developed, validated, and incorporated into the mining plan, a cutoff grade can be used to estimate the mineral reserves. Scott Wilson RPA considers the effective selection and application of a cutoff grade to increase the production grade to be an important factor both to improving the economic viability of the deposit and to the design of the mining and processing plan in the next stage of feasibility. The average gold grades in the lithological zones suggest that the production grade could be increased by reducing the quantity of material mined from the mixed zone and the talc-chlorite schist.

In the opinion of Scott Wilson RPA, the development of an effective grade control system requires three steps.

- Assessing the amount of material that can be effectively separated during mining,
- Determining an effective production drilling and blasting program that can separate the sub-economic material from the ore, and
- Establish methods to identify the mineralization above and below the cutoff grade.

Scott Wilson RPA recommends the following assessments be carried out as part of the proposed feasibility study with the objective of improving the mine production grade:

- Construct a conditional simulation model of the gold grades for the deposit. The drilling data from the twin holes and the closely-spaced underground drilling can be used to model the short range variation. The simulation model will provide a more realistic assessment of the variation in the block grades and more clearly illustrate if there is continuity in the low-grade blocks.
- Use the simulation model to assess potential production drilling and blasting strategies that could be incorporated to effectively separate material deemed to be sub-economic. The separation of sub-economic material may result in revisions to the mining equipment selected and potentially the processing capacities required.
- Conduct a thorough review of the deposit geology with the objective of recognizing structures, lithologies, associated minerals or elements, alteration patterns, physical properties or other parameters that can be used to recognize and outline zones hosting the high-grade gold during mining. The geological information available from the borehole logs and the geological reports in the feasibility studies indicate a number of relationships that should be investigated further. These include, but are not limited to, the concentration of the higher-grade mineralizaton in the intrusives, the concentration of mineralization at lithological contacts, the concentration of mineralization in shears, the presence of sulphide minerals such as pyrite and chalcopyrite in certain zones and the apparent general concentration of the mineralization in the harder, more competent rock units.
- Assess the benefits of including a program of close-spaced core drilling or non-core drilling from the benches. The underground drilling program was effective in outlining higher-grade zones for mining.
- Consider incorporating a bulk sampling system during mining to continuously monitor production grade and validate the grade control program.

St Andrew may also want to consider a staged approach to mining to reduce the capital cost and demonstrate that the open pit can be mined and processed successfully using more selective mining methods.

Geological Model

The geological interpretation and model is reasonable and certainly acceptable for resource estimation, however, Scott Wilson RPA recommends that the interpretation of the intrusive units be reviewed. These intrusions have a consistently higher average gold grade than the other units and it is important that these units be identified and recovered during mining. Scott Wilson RPA suggests that St Andrew may want to consider using down-hole tools in the surface boreholes to acquire more data on the intrusions. St Andrew may want to consider using a down-hole televiewer to measure the orientation of the contacts to assess and possibly improve the current wireframe interpretation. The televiewer information may also be useful in mapping shears and faults. The televiewer could be run in conjunction with a gamma tool. A gamma tool may be useful in identifying the exact location of these units within the hole. Scott Wilson RPA would suggest that the pulps from a number of holes that have intersected these intrusions be submitted for whole-rock analysis to assess the viability of using a gamma tool.

Metallurgical Testing

The information derived from the metallurgical samples tested to develop a flow sheet for a new mill to be constructed at the Aquarius site may not be applicable for determining gold recovery of the Aquarius ore at the Stock Mill. If the production from Aquarius is to be processed at the existing Stock Mill, or a major extension to the Stock Mill, the test results need to be reviewed by a metallurgist to determine the applicability of the results to the current or proposed milling circuits at the Stock Mill. Depending on the results of the technical review of the previous test work, new samples may have to be collected and metallurgical tests conducted to verify the gold recovery estimates and process design.

Estimated Cost

St Andrew has estimated that the study is planned to commence in 2007 and is estimated to take approximately 18 months to complete at a cost of C\$1.5 million. St Andrew estimate that an additional C\$1.0 million will be required for ongoing care and maintenance for the Aquarius site and a technical review of the freeze wall system followed by pressure testing, circulation of refrigerant through the piping and wells and permit modification.

In order to carry out the additional investigations outlined by Scott Wilson RPA, it is estimated that the budget would have to be increased by about C\$400,000. This estimate is based on assigning a geologist full time to the project, conducting additional analyses on the sample pulps or rejects, consulting fees and travel to operating sites to observe grade control methods used at similar deposits. The estimate also includes a review of the previous metallurgical test work and conducting a limited number of bench scale tests. If further pilot scale metallurgical test work is required, these costs would be in addition.

Upon completion of this program, a decision could be made to proceed with the construction of the project or carry out additional investigations if required.

21 REFERENCES

- Kinross Gold Corporation (December 2003): Technical Report on the Aquarius Gold Project, Timmins Ontario, Canada.
- AMEC E&C Services Limited (September 2003): Aquarius Project Review and Update. Prepared for Kinross Gold Corporation.
- M3 Engineering & Technology Corp. (2003): Update on the Aquarius Project Bankable Feasibility Study. Prepared for Kinross Gold Corporation.
- M3 Engineering & Technology Corp. (May 2000): Aquarius Project Bankable Feasibility Study. Prepared for Echo Bay Mines Ltd.
- Roberts, R.G., (1988): Archean Lode Gold Deposits, Geoscience Canada, Reprint Series 3, pp 1-19.
- Ayer, J.A., Trowell, N.F., Madon, Z., Kamo, S., Kwok, Y.Y., and Amelin, Y.: (1999), Compilation of the Abitibi Greenstone Belt in the Timmins-Kirkland Lake Area: Revisions to the Stratigraphy and new Geochronological Results: in Summary of Field Work and other activities 1999, Ontario Geological Survey, Open File Report 6000, p 4-1 to 4-13.
- Reid, W. (2003): Central Timmins Project Proposed Surface Exploration, Internal St Andrew Report dated September 11, 2003.
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- St Andrew Goldfields Ltd. 2005 Annual Report.

22 SIGNATURE PAGE

The effective date of this report is October 1, 2006. This report titled "Technical Report on the Aquarius Project, Timmins, Ontario, Canada", prepared for St Andrew Goldfields Ltd. and dated October 2, 2006, was prepared and signed by the following author:

(Signed and Sealed)

Dated at Toronto, Ontario October 2, 2006

Lawrence B. Cochrane, Ph.D., P.Eng. Consulting Geological Engineer

23 CERTIFICATE OF QUALIFICATIONS

LAWRENCE B. COCHRANE

I, Lawrence B. Cochrane, P.Eng., as an author of this report entitled "Technical Report on the Aquarius Project, Timmins, Ontario, Canada" prepared for St Andrew Goldfields Ltd. and dated October 2, 2006, do hereby certify that:

- 1. I am Principal Geologist with Scott Wilson Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON, M5J 2H7.
- 2. I am a graduate of Queen's University at Kingston in 1969 and 1991 with a BSc in Applied Science and a PhD in Geological Sciences respectively.
- 3. I am registered as a Professional Engineer in the Province of Ontario, registration number 8801011. I have worked as a mining geologist for a total of 36 since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Director of Mines Exploration and Qualified Person for Inco Limited, from 2001 to 2006
 - Superintendent of Mine Planning and Exploration for Inco Ontario Division, from 1991 to 1997.
- 4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI43-101.
- 5. I visited the Aquarius Project on September 11 and 12, 2006.
- 6. I am responsible for the overall preparation of the Technical Report.
- 7. I am independent of the Issuer applying the test set out in Section 1.4 of National Instrument 43-101.
- 8. I have had no prior involvement with the property that is the subject of the Technical Report.
- 9. I have read National Instrument 43-101F1, and the Technical Report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.

SCOTT WILSON RPA

10. 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.

Dated 2nd day of October, 2006

(Signed and Sealed)

Lawrence B. Cochrane, PhD, P.Eng.

24 APPENDICES

APPENDIX 1 AQUARIUS MINING CLAIMS

	St Andrew Goldfields Ltd Aquarius Project										
					msr / mro		Patented/ Leased	Mining		Core Claims =	
Claim #	PIN / UPC	Parcel #	Township	Tenure	/ sro	Third Party Royalty	Claim	Claim	Expiry Date	1	Hectares
177460			German			N/A		х	May. 23/07		16.0
1177461			German			N/A		х	May. 23/07		16.0
1177462			German			N/A		х	May. 23/07		16.0
1177463			German			N/A		х	May. 23/07		16.0
1181458			German			N/A		х	Aug. 16/07		32.0
1182607			Macklem			N/A		х	Aug. 04/07		48.0
1182608			Macklem			N/A		х	Nov. 23/07		64.0
1182609			Macklem			N/A		х	Nov. 23/07		16.0
1182610			Macklem			N/A		х	Nov. 23/07		16.0
1182611			Macklem			N/A		х	Nov. 23/07		16.0
1182612			Macklem			N/A		х	Feb. 16/07		48.0
1189759			German			N/A		х	Mar. 25/07		32.0
1190337			Cody			N/A		х	Feb. 26/07		144.0
1193377			Cody			N/A		х	Feb. 26/07		16.0
1193379			Cody			N/A		х	Feb. 26/07		96.
1193380			Cody			N/A		х	Feb. 26/07		16.
1193381			Cody			N/A		х	Feb. 26/07		96.0
1198866			Macklem			N/A		х	Mar. 07/07		48.0
1198867			Macklem			N/A		х	Mar. 07/07		192.
1198868			Macklem			N/A		х	Mar. 07/07		144.
1203897			Macklem			N/A		х	May. 18/07		64.0
1203900			Macklem			N/A		х	May. 18/07		16.
1203983			Macklem			N/A		х	Mar. 28/07		16.
1206613			German			N/A		х	Aug. 16/07		32.0
1206782			Bond			N/A		х	Sept. 14/10		128.0
1207245			Bond			N/A		х	Apr. 24/08		96.0
1207340			Macklem			N/A		х	Oct. 16/07		16.
1207344			Macklem			N/A		х	Oct. 16/07		96.
1207345			Bond			N/A		х	Oct. 16/08		96.
1207693			Macklem			N/A		х	Mar. 07/07		16.0
1212644			German			N/A		х	Oct. 20/08		64.0
1212645			German			N/A		х	Oct. 20/07		64.0
3002900			Macklem			N/A		х	Jul. 12/07		256.0
3002901			Macklem			N/A		х	Jul. 12/07		128.0
3002904			Bond			N/A		х	Jul. 12/07		64.0
18248	65384-0012 LT	9991 SEC	Macklem		msr	N/A	х		n/a		18.9
18249	65384-0011 LT	9992 SEC	Macklem		msr	N/A	х		n/a		18.
18250	65384-0010 LT	9370 SEC	Macklem		msr	N/A	х		n/a		14.1
18251	65384-0009 LT	9371 SEC	Macklem		msr	N/A	х		n/a		10.8
18252	65384-0016 LT	9372 SEC	Macklem		msr	N/A	х		n/a		21.2
18261	65384-0015 LT	9993 SEC	Macklem		msr	N/A	х		n/a		15.3
18262	65384-0014 LT	9994 SEC	Macklem		msr	N/A	х		n/a		16.
18263	65384-0013 LT	9995 SEC	Macklem		msr	N/A	х		n/a		17.6
22977	65384-0040 LT	23572 SEC	Macklem		msr	N/A	х		n/a		41.3
22978	65384-0040 LT	23572 SEC	Macklem		msr	N/A	х		n/a		35.2
22979	65384-0040 LT	23572 SEC	Macklem		msr	N/A	х		n/a		46.2

TABLE 24-1 AQUARIUS MINING CLAIMS

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Continuation of Table 24-1 Aquarius Mining Claims

23050	65384-0040 LT	23572 SEC	Macklem	msr	N/A	Y		n/a		54 82
23050	65384-0040 LT	23572 SEC	Macklem	 msr	N/A N/A	× ×		n/a		35.25
23052	65384-0040 LT	23572 SEC	Macklem	 msr	N/A	x		n/a		33.25
23053	65384-0040 LT	23572 SEC	Macklem	 msr	N/A	x		n/a		51.00
23054	65384-0040 LT	23572 SEC	Macklem	 msr	N/A N/A	× ×		n/a		46.35
23055	65384-0040 LT	23572 SEC	Macklem	 msr	Ν/Α	X		n/a		45.03
25560	65384-0020 LT	9996 SEC	Macklem	 msr	N/A	x		n/a		15 64
27259	65384-0031 LT	17880 SEC	Macklem	mro	25% NSR - Crow Geological	x	1	n/a		34 92
27260	65384-0030 LT	17881 SEC	Macklem	 mro	25% NSR - Crow Geological	x		n/a		40.66
27261	65384-0029 LT	17882 SEC	Macklem	mro	25% NSR - Crow Geological	x		n/a		53.66
27262	65384-0033 LT	17883 SEC	Macklem	mro	25% NSR - Crow Geological	x		n/a		38.76
27263	65384-0034 LT	17884 SEC	Macklem	mro	25% NSR - Crow Geological	x		n/a		41 12
27264	65384-0035 LT	17885 SEC	Macklem	mro	.25% NSR - Crow Geological	x		n/a		40.94
27265	65384-0032 LT	17886 SEC	Macklem	mro	.25% NSR - Crow Geological	x		n/a		43.25
27266	65384-0039 LT	17887 SEC	Macklem	 mro	.25% NSR - Crow Geological	X		n/a		42.17
27267	65384-0038 LT	17888 SEC	Macklem	 mro	.25% NSR - Crow Geological	X	1	n/a		40.49
27268	65384-0037 LT	17889 SEC	Macklem	mro	.25% NSR - Crow Geological	x		n/a		31.07
27269	65384-0036 LT	17890 SEC	Macklem	mro	.25% NSR - Crow Geological	х		n/a		41.38
2784-85	65384-0005 LT	23527 SEC	Macklem	msr	N/A	X		n/a	1	200.13
2791-92	65384-0005 LT	23527 SEC	Macklem	 msr	N/A	х		n/a	1	
2798-99	65384-0005 LT	23527 SEC	Macklem	 msr	N/A	х		n/a	1	
2801-02	65384-0005 LT	23527 SEC	Macklem	 msr	N/A	х		n/a	1	
512816	65384-0005 LT	23527 SEC	Macklem	 msr	N/A	х		n/a	1	
512821	65384-0005 LT	23527 SEC	Macklem	 msr	N/A	х		n/a	1	
512826	65384-0005 LT	23527 SEC	Macklem	msr	N/A	х	1	n/a	1	
512829	65384-0005 LT	23527 SEC	Macklem	msr	N/A	х	1	n/a	1	
291	65384-0007 LT	1429 SEC LC (104123)	Macklem	msr	N/A		х	Exp. Aug. 31/06 (under renewal)	1	241.72
293	65384-0004 LT	1433 SEC LC (104125)	Macklem	msr	N/A		х	Exp. Aug. 31/06 (under renewal)	1	253.66
2807-810	65362-0570 LT	1431 SEC LC (104127)	German	mro	N/A		х	Exp. Aug. 31/06 (under renewal)	1	63.94
292	65384-0008 LT	1430 SEC LC (104274)	Macklem	msr	2.5% gross - Allerston		х	Exp. Aug. 31/06 (under renewal)	1	183.45
5426-431	65385-0127 LT	1474 SEC LC (104284)	Macklem	mro	N/A		х	Exp. Jan. 1/07		75.31
290	65384-0006 LT	1488 SEC LC (104418)	Macklem	msr	N/A		х	May 31/07	1	332.16
294	65384-0065 LT	1504 SEC LC (104781)	Macklem	mro	N/A		х	Jan. 31/08		639.24
3443-4 & 2782-3	65362-0566 LT	1811 SEC LC	German	mro	N/A		x	May 31/12		64.55
03441-2 &										
1∠011 & 10704		1911 05010	Cormon	m	NI/A			Mov 24/40		60.70
12781	65362-0566 L1	1811 SEC LC	German	mio	IN/A		X	Iviay 31/12		60.70

APPENDIX 2 TYPICAL CROSS SECTION THROUGH THE BLOCK MODEL



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