Environmental Baseline Data

Compilation Report

Attachment B

to accompany the

2001 Nunavut Water License Application

for the

Kinross Gold Corporation Goose Lake Project

As submitted November 1, 1997

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Qualifying Statement *– This information is provided for the Application for Renewal of the License issued by the Nunavut Water Board for the Kinross Gold Corporation Goose Lake Project. This information was provided for the application for this project by Kit Resources in 1997. Since that time, Kinross has entered into a joint venture agreement with Wheaton River Resources, the successor company to Kit Resources. The information provided in this attachment compilation report has not been changed or updated since the submittal by Kit Resources, except the additional information provided on water quality. Kinross makes no representation of the information provided by Kit Resources, but includes it for completeness. Kinross includes only information provided by Kit Resources, and any information not included or missing was not provided to Kinross.*

1.0 Project Introduction

Goose Lake is located at 65° 33' North latitude and 106° 25' West longitude, approximately 400 kilometres southwest of the community of Cambridge Bay, near the headwaters of the Ellice River. The Goose Lake Property consists of seven mineral claims staked in 1987 which are currently pending applications for mining lease under the Canadian Mining Regulations.

On February 28, 1997 Kit Resources NWT Ltd. (formerly Arauco NWT Ltd.) purchased 100% of the George and Goose Lake properties from Homestake Canada Inc. and their partners in the Back River Joint Venture.

Between 1987 and 1994, the BRJV conducted geological, geophysical and geochemical surveys, diamond drilling and environmental baseline studies. In 1997, Kit Resources continued to expand the geological and environmental database at Goose Lake. Approximately $5.5 million has been spent on the Goose Lake property to date, to delineate the current geological resource of 1.4 million tonnes which grades 13.80 gram per tonne of gold. Several other attractive gold anomalies exist on the property and will be further explored during the coming years.

During 1998, Kit Resources NWT Ltd. plans to conduct a four-phased exploration program which will include: (i) diamond drilling, (ii) trenching, (iii) bulk sampling, and (iv) environmental monitoring. Diamond drilling will consist of an infill program to further delineate the known mineralization at the Goose Deposit, as well as testing several other exploration targets elsewhere on the property. A bulk sample will be collected from a small trench at the Goose Deposit. The sample will be stockpiled at site until it is hauled over a winter road to a mill for pilot scale tests. Environmental baseline studies will be ongoing to ensure an adequate database is available to protect the environment.

To facilitate the proposed 1998 exploration program, Kit Resources plans to pump a maximum of 28.3 cubic metres of water daily from Goose Lake, for camp potable water consumption and diamond drilling. This compilation report was prepared by Kit Resources NWT Ltd. to accompany the Nunavut Water License Application.

The company is confident that due to the short seasonal nature of the proposed 1998 exploration program and the ongoing environmental monitoring programs there will be no negative effects to the environment. Kit Resources hopes that the proposed 1998 exploration program will confirm the grade and continuity of mineralization at Goose Lake, bringing the company one step closer to potentially developing the first new gold mine in the new Territory of Nunavut.

2.0 Scope of Environmental Baseline Monitoring

Site specific environmental baseline data collection commenced in 1993 and continued in 1994 under the operation of Homestake Canada Inc. and their joint venture partners. In 1997, Kit Resources NWT Ltd. continued to build upon the studies implemented by Homestake, and also commenced additional environmental monitoring activities. In addition to the site specific studies conducted at Goose Lake, the former and current owners have collected considerable amounts of baseline data for other areas within the region. Some of these data are included in this compilation to provide greater detail and/or corroborate the Goose Lake data (i.e. climatic data and acid leach test results from the George Lake project).

Norecol Dames & Moore, Inc. (NDM) was contracted to manage the environmental and socio-economic program for the George and Goose Lake Projects. Prior to commencement of the 1997 field season, NDM prepared a comprehensive report entitled Environmental Baseline and Effect Studies Terms of Reference. This report detailed the studies and methodologies which would be undertaken. The Terms of Reference Report was submitted in May and June 1997 to the following organizations for review and comments:

- Nunavut Water Board
- Kitikmeot Inuit Association
- Nunavut Impact Review Board
- Kitikmeot Hunters and Trappers Association
- Burnside Hunters and Trappers Association
- Nunavut Tunngavik Incorporated
- Kitikmeot Corporation, and
- Nunavut Planning Commission

Verbal comments were received from all organizations, and a written response was received from the Nunavut Impact Review Board. The Terms of Reference Report is included in Appendix 1 of this compilation report.

With respect to the Proponent's planned development as outlined in the Terms of Reference, the Proponent has recently determined that the timeframe identified for mine production at George Lake and Goose Lake will be unlikely given the current financial market conditions. As a result of this decision, the focus of the 1997 environmental studies shifted from the George Lake Project to the Goose Lake Project to ensure that adequate studies would be completed at Goose Lake to permit a 1998 exploration program which would include trenching and a collection of a small bulk sample.

3.0 Compilation of Environmental Baseline Data

The purpose of this report is to compile all available baseline data for the Goose Lake Project area into one document. This compilation report is not intended to represent a comprehensive effect assessment report with regard to future development, and as such only preliminary work has been completed regarding the interpretation of results, the identification and assessment of potential environmental effects, and the identification of potential mitigative techniques.

In each of the following sections, a summary of the work completed and the highlights of this work are presented. Complete details regarding the study results and methodologies can be found in the individual reports, analytical results or the Terms of Reference included in Appendices.

The reports and data presented in this compilation include all results available as of October 30, 1997. Table 3.0.1 lists all of the studies conducted at Goose Lake and the consultants who completed the work. Nearly all of the tabulated data and reports are included in the appendices to this report. Three reports are not appended to this compilation: 1997 Naonayoatit Traditional Knowledge Study, the 1997 Fisheries, Periphyton and Benthic Invertebrates study, and the September and November 1997 water quality results. These reports and data will be submitted as an addendum report when they become available.

Many of the environmental baseline studies will be ongoing, with further sampling and analyses to be completed during the coming years. In addition to ongoing monitoring of water quality, hydrology, climate, and wildlife studies, the Proponent plans to initiate the following studies during the coming years: ecotourism, vegetation and wildlife habitat, acid leach tests, reclamation and abandonment, plus effect and mitigation studies

Table 3.0.1 Summary of Environmental Baseline Studies at the Goose Lake Project.

Study	Year	Report Title	Author/Consultant	Appendix
Weather	1993	Daily logs	Camp personnel	2
Weather	1994	Daily logs	Camp personnel	3
Weather	1997	Graphical log	Camp personnel and Norecol Dames & Moore	4
Water Quality Analysis	1993	Analytical Data (two sets)	Analytical Services Laboratory	7
Review of Water Quality Results	1993	*Letter Report entitled:* 1993 Water Quality Report for Goose Lake	Norecol Dames & Moore	8
Water Quality Analysis	1994	Analytical Data (two sets)	Analytical Services Laboratory	9
Review of Water Quality Results	1994	*in* Environmental Pilot Survey, Goose Lake 1994 Report	Bion Research and Hubert & Associates	10
Water Quality Analysis	1997	Analytical Data (four sets, two sets pending)	Vista Engineering Ltd.	11 incomplete
Preliminary Hydrology	1993	1993 Stream Discharge Tables	Norecol Dames & Moore	12
Bathymetry, Watershed Runoff, Precipitation.	1994	*in* Environmental Pilot Survey, Goose Lake 1994 Report.	Bion Research and Hubert & Associates	10
Hydrology	1997	1997 Stream Discharge Tables	Norecol Dames & Moore	13
Depth to Permafrost	1997	Summary of 1997 Results	A&M Consultants	14
Water Balance	1997	*Letter Report entitled:* Water Balance Estimates for Water License Application	Norecol Dames & Moore	15
Wildlife-casual sightings	1993	Tabulated data	Camp personnel	16
Wildlife-casual sightings	1994	Tabulated data	Camp personnel	17
Preliminary Wildlife Review	1994	*in* Environmental Pilot Survey, Goose Lake 1994.	Bion Research and Hubert & Associates	10
Wildlife-casual sightings	1997	Tabulated data	Camp personnel	18
Wildlife Aerial Study	1997	Wildlife Observations in the area around George Lake, Nunavut.	Hubert and Associates, June 1997	19
Preliminary Fish Study	1994	*in* Environmental Pilot Survey, Goose Lake 1994.	Bion Research and Hubert & Associates	10
Fisheries Habitat, Benthos and Periphyton	1997	Taxonomy, Metal and Age data pending	Norecol Dames & Moore	20 incomplete
Acid Base Accounting	1994	Analytical Data	Process Research Associates	21
Acid Base Accounting	1997	Analytical Data	BC Research	22
Acid Base Accounting	1997	*Letter Report entitled* Goose Lake ABA Results	Norecol Dames & Moore	23
Preliminary notes on Inuit Land Use	1994	*in* Environmental Pilot Survey, Goose Lake 1994 Report.	Bion Research and Hubert & Associates	10
Archaeology		Heritage Resources Effect Assessment	Fedirchuk McCullough & Associates Ltd.	25
Socio-Economic	1997	Socio-Economic Evaluation of the Development of the George Lake Properties	Hornal Consultants Ltd.	26
Traditional Knowledge	1997	Study In Progress	Kugluktuk Angoniatit Association	incomplete

3.1 Climate

Background:

During 1993 and 1994, climatic data was manually recorded daily using a maximum/minimum thermometer. These data are tabulated in Appendices 2 and 3. In 1997, a Stephenson Screen with maximum/minimum thermometers inside and a manual rain gauge on the outside was set up at the Goose Lake camp. The results of the 1997 climate data collection are summarized graphically in Appendix 4. Separate figures show the average minimum daily temperature and the total daily precipitation for Goose Lake.

In addition to the Goose Lake data, an automated weather station has also recorded climatic conditions at the George Lake site, located approximately 70 kilometres to the northwest of the Goose Lake camp. Information on climate conditions in the George Lake project area were collected every summer between 1988 and 1991. During 1988, the maximum/minimum air temperature, wind speed and direction, percentage cloud cover, ceiling height, visibility, and barometric pressure were recorded daily. In 1989, precipitation measurements were added to the climate monitoring program. A summary of the 1988 to 1991 George Lake data is provided in Appendix 5. Figures included in Appendix 6 show the average daily solar radiation, daily precipitation, average daily relative humidity, average maximum/minimum daily temperatures and average wind velocity for George Lake in 1997. We believe that the climatic conditions at the two sites can be considered nearly identical.

Unfortunately, due to the seasonal nature of mineral exploration, none of the climatic data sets are complete for any calendar year. As a result, for the purpose of water balance calculations, data must be utilized from other weather stations which operate on a year-round basis.

Results:

Climate in the Goose Lake region is characterized by cool summers, severe winters, large annual ranges of temperature, and modest precipitation. Weather patterns recorded during 1997 are generally consistent with previous data, although the wind velocity did not reach the maximum velocity recorded during the late 1980s, of about 65 kilometres per hour. The maximum wind velocity recorded at George Lake during 1997 was less than 40 kilometres per hour.

The automated weather station records information every 15 minutes, as such the detailed weather logs are not included in this compilation due to the excessive quantity and repetitive nature of the data. The complete printout of these weather logs are available upon request.

3.2 Water Quality

Background:

Water quality samples were collected during the open water season in 1993, 1994 and 1997. During 1993 and 1994, water quality samples were collected in late June and again in late August at seven stations. One trip duplicate for each sample suite was included for quality assurance and quality control in the data analyses. The original 1993 and 1994 analytical data are included in Appendices 7 and 9. Following the 1993 water quality sample program, Norecol Dames & Moore provided a summary of the results, this letter report is included in Appendix 8.

During 1994, Bion Research Inc. collected a hydrocast sample from the deepest point of Goose Lake to assess lake stratification. Bion also documented biophysical observations (dissolved oxygen, dissolved solids, temperature, pH, depth, wet width, substrate, and stream flow) at each of the seven water quality sites. These results are tabulated in the water quality section of the report entitled 1994 Environmental Pilot Survey, Goose Lake which is included in Appendix 10.

Prior to commencement of the 1997 program, the previous years' data were reviewed. The results indicated that two of the water quality stations were located at isolated, small, intermittent streams which would not likely be affected by any potential future development at Goose, it was also determined that previous sampling did not sufficiently represent water quality over a full year-cycle: prior to break-up, during freshet, during summer and autumn, and post-freeze-up conditions. The 1997 water quality study was therefore expanded to incorporate greater sample frequency, at fewer stations. An extensive quality control and quality assurance program was established with further duplicate sampling during 1997. The 1997 analytical data as well as the quality control results are tabulated in Appendix 11. This appendix includes the results for samples obtained during May, July, and August of 1997. Analytical results are pending for the water quality samples collected in September, 1997. Additional samples will also be collected during December, 1997. The results from these latter two sample periods will be submitted as an addendum to this report.

Figure 3.2.1 identifies the seven samples sites utilized during 1993-94 and 1997 water quality sampling programs.

Results:

Results indicate that the water in the Goose Lake watershed is typical of Canadian Shield streams throughout the Northwest Territories. The water is soft, with low conductivity, slightly alkaline, with low nutrients and very low metal levels (usually below detection limits).

Table 3.2.1 summaries the water quality data collected to date at Goose Lake and includes selected guidelines for the protection of aquatic life, as published by the Canadian Council of Resource and Environment Minister (CCREM).

Table 3.2.2 Summary of Water Quality Results and Comparison to CCREM Guidelines for Protection of Freshwater Aquatic Life.

Parameter	Unit	1993 Range Min	1993 Range Max	1994 Range Min	1994 Range Max	1997 Range Min	1997 Range Max	CCREM Guidelines
Conductance	umhos/cm	10.5	29.3	3.0	43.2	13.0	37.0	
Hardness	CaCO3	3.63	9.23	0.25	15.1	5.3	14.5	
PH		4.81	6.33	5.12	6.66	6.3	6.9	6.5 - 9.0
Aluminum	mg/L	<0.005	0.073	<0.020	0.013	0.022	0.090	0.005 (pH < 6.5) 0.1 (pH >= 6.5)
Arsenic	mg/L	<0.0001	<0.0001	<0.0001	0.0001	<0.00005	0.00029	0.05
Cadmium	mg/L	<0.0002	<0.0002	<0.002	0.010	0.00001	0.00005	0.0002 (for Hardness 0-60)
Chromium	mg/L	<0.001	0.004	<0.001	<0.015	0.0005	0.001	0.002
Copper	mg/L	0.001	0.006	<0.001	0.002	0.0017	0.0045	0.002 (for Hardness 0-60)
Iron	mg/L	<0.030	0.23	<0.030	0.264	0.017	0.20	0.3
Lead	mg/L	<0.001	<0.001	<0.001	0.002	<0.0001	<0.0003	0.001 (for Hardness 0-60)
Mercury	mg/L	<0.00005	<0.0005	<0.00001	<0.00005	<0.00001	0.00029	0.0001
Nickel	mg/L	0.001	0.004	0.002	<0.020	0.003	0.01	0.025 (for Hardness 0-60)
Nitrogen								
Ammonia (total)	mg/L	<0.005	0.018	<0.005	0.031	0.005	0.021	2.2 (pH 6.5, temperature 10 C)
Nitrite	mg/L	0.001	0.005	<0.001	0.002	<0.005	<0.005	0.06
Selenium	mg/L	<0.0005	<0.0005	<0.0005	<0.020	<0.00005	0.00051	0.001
Silver	mg/L	<0.0001	<0.0001	<0.0001	<0.015	<0.00001	0.00008	0.0001
Zinc	mg/L	<0.005	0.015	<0.005	0.019	0.002	0.021	0.03

3.3 Hydrology

Background:

In 1993, preliminary stream discharge flow measurements were collected for four streams in the Goose Lake watershed. These data are tabulated in Appendix 12.

In 1994, a bathymetric study of Goose Lake was completed to estimate the lake volume and produce an isopach map of lake depths. Biophysical stream flow monitoring was conducted at the seven water quality sites identified in figure 3.2.1. Precipitation data were compiled from the Lupin/Contwoyto Lake weather stations, and together with discharge data compiled for the Back River and Gordon River were used to calculate discharge/runoff profiles for the Goose Lake watershed. The results from these studies are included in the report entitled, 1994 Environmental Pilot Study, Goose Lake by Bion Research Inc. reproduced in Appendix 10.

The 1997 hydrology program work included stream flow measurements, and the installation of a continuous height data-logger to record stream height data throughout the summer at the outlet of Goose Lake. The 1997 discharge tables are presented in Appendix 13. The data logger recorded stream heights at 15 minute intervals throughout the summer, and due to the extensive amount of information, these data are not included in the compilation, but are available upon request. These data will eventually be utilized to calculate stage-discharge relationships for the Goose Lake watershed.

Preliminary data were also collected to determine depth of permafrost. Thermistor strings were installed at 1.2 metre intervals to a depth of 7.5 metres in drill hole 97GO-014. The methodology and preliminary results are tabulated in Appendix 14.

A water balance estimation was completed by Norecol Dames & Moore in 1997. This study was designed to assist in the determination of the volumes required for potential containment areas required for the water license application. This letter report is included in Appendix 15.

Results:

Results from the bathymetric study indicate that Goose Lake has a total surface area of 3.04×10^6 square metres and a total volume of 9.27×10^6 cubic metres. The deepest point observed in the lake is 27 metres and is located near the "beak" of Goose Lake.

The Goose Lake watershed has a surface area of 92.85 square kilometres, and Goose Lake itself comprises 3.3% of the watershed. Elevations in the Goose Lake watershed range from 278 metres to 360 metres above sea level. Goose Lake occurs near the south-westerly height of land of the Ellice River watershed. The total mean annual runoff estimated for the Goose Lake watershed was 15,877 DAM^3 or 15.9×10^6 cubic metres and was extrapolated from data compiled from the Back and Gordon Rivers.

Field observations consistently indicate that many streams in the Goose Lake watershed contain very low water levels and/or dry stream beds during the late summer months. Prior to the effect assessment phase of the study, additional discharge measurements will be collected for the area streams and stage-discharge relationships will be developed for the principal streams which drain the area.

Preliminary results indicate that the depth of permafrost occurs at approximately 1.5 metres.

3.4 Wildlife

Background:

In 1993, 1994 and 1997, camp personnel maintained logs of casual wildlife sightings in the Goose Lake area. These logs are included in Appendices 16, 17 and 18. These logs include all mammals and fowl observed during the period each year when the Goose Lake exploration camp was in operation.

In 1997, Hubert & Associates were retained to conduct terrestrial wildlife and wildlife habitat studies in the region around Goose Lake, as well as along the corridor between George Lake and Bathurst Inlet. Due to a change in the 1997 project focus, the study was only partially completed. Two aerial surveys were flown during caribou calving period and ten days later during the post calving period to determine animal distributions in the George Lake – Goose Lake area and the George Lake - Bathurst Inlet corridor. This summary report is included in Appendix 19.

Results:

According to Hubert & Associates 1997 Wildlife Report, the land around Bathurst Inlet is known as calving grounds for the Bathurst herd of barren-ground caribou. Since 1965, the calving grounds have been identified by aerial survey and none of these surveys have showed the area around George Lake or the corridor to Bathurst Inlet to be in a high density calving area.

During the two 1997 aerial surveys, 24 caribou, one wolf and five muskoxen were noted. Ten caribou were spotted near George Lake during the second aerial reconnaissance trip. The large Bathurst herd was identified calving 125 kilometres northwest of George Lake along the Hood River. No evidence of caribou calving or post calving presence were observed in the George – Goose Lake vicinity. Preliminary observations of the area in general show no major issues regarding wildlife populations or wildlife habitat. The snow-covered landscape lacked the typical myriad of caribou trails along lake margins to indicate the presence of caribou in the area.

Results of the casual sighting logs maintained by camp personnel indicate that both caribou and muskoxen occur in the Goose Lake area. Caribou are typically noted in small groups scattered over the tundra, however a group of approximately a thousand caribou passed near Goose Lake during 1994. Muskoxen are commonly seen grazing in small groups. Grizzly bears have never been sighted in the Goose Lake area. Wolves, foxes and wolverines and other small carnivores have been identified infrequently in the area. The lack of eskers habitats for denning and hunting in the Goose Lake area may be a factor in the limited distribution of carnivores.

3.5 Fisheries & Periphyton

Background:

Preliminary fishery studies commenced in 1994, and included a log of all fish caught in the Goose Lake watershed. Six fish were caught and recorded, scales from five of the fish were collected and age dated by annulus counts. Fish size, angler effort data and average ages are tabulated in the 1994 Report entitled Environmental Pilot Survey, Goose Lake, NWT which is included in Appendix 10.

During 1997, Norecol Dames & Moore conducted an extensive fish, benthic invertebrates, periphyton, and sediment quality study in the Goose Lake area. Samples were collected from various areas within Goose Lake, and its' tributaries. Big Lake, approximately 9 kilometres upstream to the west of Goose Lake was identified as a control lake and sampled extensively. The methodology for this study is detailed in the Terms of Reference in Appendix 1.

Aquatic habitat characteristics were documented and are summarized in the interim report included in Appendix 20. Results are pending for species composition, abundance, size, condition, age, growth, maturity, reproduction, and metal content in fish tissues. Stream and lake benthic invertebrates were sampled, results of taxonomy is pending. Periphyton samples were also obtained from streams and lakes in the area, analyses are pending for these samples. Sediment quality samples from streams and lake bottoms were obtained from several sites, and results are pending.

Results:

Preliminary results indicate that lake trout, round whitefish, arctic grayling and burbot are the large fish species, while slimy sculpins and ninespine stickleback comprise the small fish species. Year round habitat available to fish is limited in both Goose and Big Lakes in the deepest portions of the lakes, and the lowermost reaches of a few small tributary streams. Many of the streams, including inlet and outlet streams of the Goose and Big Lakes are either frozen in winter and/or dry in late summer. Several of the small ponds near the headwaters of small tributaries provide limited fish habitat, as they tend to dry up completely during late summer and/or freeze solid during the winter.

Results from the fish, benthic invertebrates, and periphyton taxonomy and chemical analyses will be submitted separately as an addendum to this compilation report when the results are available.

3.6 Acid Base Accounting

Background:

In 1994, twelve drill core samples were submitted to Process Research Associates Ltd. for acid base accounting analysis. In 1997, fourteen additional samples were taken to confirm and complement the 1994 results. Static acid base accounting analytical tests were conducted on both sample suites. Each sample was analyzed for Paste pH, Inorganic CO_2%, Total Sulphur %, Sulphate Sulphur %, Sulphide Sulphur %(calculated), Maximum Potential Acidity (calculated), Neutralization Potential and Net Neutralization Potential (calculated). The samples were also sent to an independent assay laboratory to determine the content of 32 elements by Inductively Coupled Plasma (ICP) analysis: Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Au, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K, W, Tl, and Hg.

The laboratory assay certificates and sample descriptions for the 1994 and 1997 samples are included in Appendix 21 and 22. A letter report from Norecol Dames & Moore, which summarizes the results of both sets of data, is included in Appendix 23.

Results:

Preliminary results indicate that acid generation is a function of sulphur content. Rocks which contain greater than 3% combined sulphides have the potential to generate acid at some point in the future. Rocks which contain less than 3% combined sulphides appear to be potentially acid consuming or may be essentially inert due to their lack of sulphides. Mineralized rocks at Goose Lake typically contain between 1 and 10% sulphides, and average about 4 to 5% total sulphides by volume.

Humidity cell tests have not been conducted on the Goose Lake samples because these tests are unlikely to confirm the ABA results in a useful time-frame since the calcite content is generally quite high. However, results from acid leach tests conducted on a suite of similar rocks taken from mineralized iron formation at the Proponent's George Lake Project indicated that a high natural short term buffering capacity exists. The report by Norecol, Dames & Moore, concluded that in the short term, any acidic products which might be released from sulphidic iron formation should be neutralized by dissolution of magnesium and calcium-bearing carbonate, thereby buffering leachate pH at near neutral levels. A copy of the 1990 George Lake Rock Leach Results is included in Appendix 24 for reference.

The interpretation of ABA results requires review of other factors which may contribute to the net acidity. For example, the large crystalline sulphide grains which are present at Goose Lake may be less reactive than fine-grained, disseminated grains which are readily oxidized. The Proponent plans to conduct further testing in this regard.

3.7 Archaeology and Heritage Resources

Background:

During 1997, Fedirchuk McCullough & Associates conducted a heritage resources effect assessment on the Goose Lake Project. The study covered the areas identified as potential sites for future exploration or mining development in the vicinity of the existing camp and the existing esker airstrip. The study also reviewed most of the winter road access corridor between Tikiraq Lake, Beechey Lake and Goose Lake.

Results:

No archaeological sites were identified in the Goose Lake area or the Winter Road Corridor during the 1997 study. No further archaeological study relative to the proposed development, airstrip or proposed winter road was recommended.

Fedirchuk McCullough documented one new heritage site, located along the Western River at 65° 45.78' N latitude and 106° 59.76' W longitude, approximately 35 kilometres northwest of Goose Lake. This site is not associated with any proposed development by the Proponent.

The 1997 report entitled Heritage Resources Effect Assessment, prepared by Gloria Fedirchuk of Fedirchuk, McCullough & Associates is included in Appendix 25.

3.8 Socio-Economic Study

Background:

The purpose of the socio-economic study was to identify the social and economic effects of the proposed development of the George and Goose Lake gold deposits on the communities of the Kitikmeot Region. The communities described in the study include Cambridge Bay, Kugluktuk, Gjoa Haven, Taloyoak, Pelly Bay, Umingmaktok and Bathurst Inlet. The study focused on these communities because the potential for effect on these small communities is significant and because the George and Goose Lake projects lie within Inuit Owned Lands and any future development must be approved and monitored by Inuit agencies based in these communities.

Results:

The report entitled Socio-Economic Evaluation of the Development of the George Lake Properties, was prepared by Hornal Consultants Ltd. in August 1997 is included in Appendix 26. The study incorporated interviews with local, territorial, federal and Inuit representatives during June and July 1997, who provided much of the data and statistics documented in the report. The report details the population, demographics, employment, income, workforce, local economy and business organizations, cost of living, income support, transportation and communication, education, training, housing, health care and social services throughout the Kitikmeot Region.

Other aspects of the socio-economic study which are still in progress include the identification and assessment of potential negative and positive effects, recommendations for the mitigation of any negative effects, and a review of ecotourism in the vicinity of the projects. These portions of the study will be submitted as an addendum to this compilation report when they are completed.

3.9 Traditional Knowledge

Background:

Kit Resources NWT Ltd. has joined other industry partners in the sponsorship and support for the Naonayoatit Traditional Knowledge (NTK) Study which will be conducted by the Kugluktuk Angoniatit Association. The study is currently underway and is scheduled for completion early 1998.

The geographic scope of the NTK study is very large. It encompasses the traditional and modern land use areas on the mainland between Kugluktuk, Bathurst Inlet, Umingmaktok and Cambridge Bay. It extends from the western Nunavut boundary line eastward to the Perry River and south from the Arctic coast to the southern boundary of the Nunavut Territory. Within this large study area, particular emphasis will given to specific areas where potential mine sites have been proposed by BHP Diamonds Inc., BHP Minerals Canada Ltd., Diavik Diamond Mines, Echo Bay Mines Ltd., and Kit Resources NWT Ltd..

There has been little documentation of traditional knowledge in the Kitikmeot Region of Nunavut, and results from the NTK study will greatly assist in planning, monitoring and mitigating the effect of exploration and mining. The study will also provide the people of the Kitikmeot Region with a valuable tool to help plan and manage their lands. The study will also provide information to government agencies regarding grizzly bear distribution and the history of the Nunavut area.

Results:

A summary of the results of the Naonayoatit Traditional Knowledge Study which pertain to the Goose and George Lake areas will be forwarded as an addendum to this compilation report.

APPENDICES – *Appendices were provided with the original report in 1997, and are not attached here. They should still be in the files held by the NWB from the earlier application.*

1. Environmental Baseline and Effect Studies Terms of Reference, by Norecol Dames & Moore, 1997.
2. 1993 Weather Log - Goose Lake.
3. 1994 Weather Log - Goose Lake.
4. Graphic summaries of 1997 Weather at Goose Lake.
5. Summary of 1988 through 1991 Weather data at George Lake.
6. Graphic summary of 1997 Weather data at George Lake.
7. 1993 Water Quality Analytical Results - Goose Lake.
8. 1993 Water Quality Report for Goose Lake, Letter Report by Norecol Dames & Moore, 1993.
9. 1994 Water Quality Analytical Results – Goose Lake.
10. Environmental Pilot Study, Goose Lake 1994 Report, by Bion Research Inc.
11. 1997 Water Quality Results, 1997 Quality Control – Quality Assurance Results.
12. 1993 Preliminary Stream Discharge Tables – Goose Lake.
13. 1997 Stream Discharge Tables – Goose Lake.
14. Depth of Permafrost summary, by Norecol Dames & Moore, 1997.
15. Water Balance Estimation for Water License Application - Goose Lake, Letter Report by Norecol Dames & Moore, 1997.
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18. 1997 Wildlife Sighting Log – Goose Lake.
19. Wildlife Observations in the area around George Lake, Nunavut, by Hubert & Associates, 1997.
20. Fisheries Habitat, interim summary report by Norecol Dames & Moore, 1997.
21. 1994 Acid Base Accounting Analytical Data and Rock Descriptions.
22. 1997 Acid Base Accounting Analytical Data and Rock Descriptions.
23. Goose Lake Acid Base Accounting, Letter Report by Norecol Dames & Moore, 1997.

24. George Lake Rock Leach Test Results. Report by Norecol Dames & Moore. 1990.

25. Heritage Resources Effect Assessment, by Fedirchuk, McCullough & Associates Ltd, 1997.

26. Socio-Economic Evaluation of the Development of the George Lake Properties, by Hornal Consultants Ltd., 1997.

Final

REPORT OF ANALYSIS

Client:	**Kinross Gold Corp**
	Rod Thomas
Project:	Goose Lake Project
AAL Ref:	EV5419
Report Date:	06-12-00
Samples received by:	K. McCrea
Date Received:	05-02-00
Time Received:	12:30 p.m.
Conditions:	Samples picked-up by K. McCrea from America West Airlines. Samples were room temperature upon reception.

Samples Received:

3 samples for Modified Profile II analysis with Total and Dissoved metals per request plus EC, TSS, Hardness, Acidity, SCN, TKN, TON, Total CN, Total N, NH3 and P(o~)

1 sample for WAD and Total CN, NO2 +NO3, NH3, P(t), TON, Total N and TKN

1 sample for Total and Dissolved metals per request plus Hardness and SCN

1 sample for Cl, F, SO4, TSS, TDS, pH, EC, Acidity, Akalinity, NO2, NO3, P(o~) and Total and Dissovled B and Si

Samples Labeled:

South of dock at camp
Near inflow of Goose Lake
Near outflow of Goose Lake
South of dock at camp (Dup)
Near inflow of Goose Lake (Dup)
Near outflow of Goose Lake (Dup)

NOTE: There was insufficient sample for TOC analysis

CLIENT: Kinross Gold Corp
AAL REF: Ev5419
ATTN: Rod Thomas
ANALYSIS PERFORMED BY AAL ENVIRONMENTAL LLC - NV00040

South of dock at camp

PARAMETER	D.F.	UNITS		TOTAL		DISSOLVED	DETECTION LIMITS	METHOD REFERENCE	SAMPLE DATE	ANALYSIS DATE
ACIDITY[2]	-----	mg/L		3		-----	1	APHA2310B	04-22-00	05-25-00
ALKALINITY, TOTAL[2]	-----	mg/L		5		-----	1	APHA2320B	04-22-00	05-16-00
BICARBONATE[2]	-----	mg/L		5		-----	1	APHA2320B	04-22-00	05-16-00
CARBONATE[2]	-----	mg/L		ND		-----	1	APHA2320B	04-22-00	05-16-00
HYDROXIDE[2]	-----	mg/L		ND		-----	1	APHA2320B	04-22-00	05-16-00
ALUMINUM	-----	mg/L		0.522		0.142	0.020	200.7	04-22-00	05-12-00
AMMONIA	-----	mg/L	<	0.05	<	0.05	0.05	APHA4500NH3-F	04-22-00	05-31-00
ANTIMONY	-----	mg/L	<	0.003		0.004	0.003	200.8	04-22-00	05-16-00
ARSENIC	-----	mg/L	<	0.005	<	0.005	0.005	200.8	04-22-00	05-16-00
BARIUM	-----	mg/L	<	0.020	<	0.020	0.020	200.7	04-22-00	05-12-00
BERYLLIUM	-----	mg/L	<	0.002	<	0.002	0.002	200.7	04-22-00	05-12-00
BISMUTH	-----	mg/L	<	0.020	<	0.020	0.020	200.7	04-22-00	05-12-00
BORON	-----	mg/L	<	0.010	<	0.010	0.010	200.7	04-22-00	05-17-00
CADMIUM	-----	mg/L	<	0.002	<	0.002	0.002	200.8	04-22-00	05-16-00
CALCIUM	-----	mg/L		4.56		3.96	0.50	200.7	04-22-00	05-12-00
CHLORIDE	-----	mg/L		1.3		-----	0.2	300.0	04-22-00	05-07-00
CHROMIUM	-----	mg/L	<	0.005	<	0.005	0.005	200.7	04-22-00	05-12-00
COBALT	-----	mg/L	<	0.020	<	0.020	0.020	200.8	04-22-00	05-16-00
CONDUCTIVITY	-----	uS/cm		46		-----	10	APHA2510B	04-22-00	05-16-00
COPPER	-----	mg/L		0.033	<	0.010*	0.010	200.7	04-22-00	05-12-00
FLUORIDE	-----	mg/L	<	0.1		-----	0.1	300.0	04-22-00	05-07-00
HARDNESS	-----	mg/L		22		20	20	APHA2340B	04-22-00	05-12-00
IRON	-----	mg/L		0.394		0.119**	0.020	200.7	04-22-00	05-12-00
LEAD	-----	mg/L	<	0.007	<	0.007	0.007	200.8	04-22-00	05-16-00
MAGNESIUM	-----	mg/L		2.61		2.38	0.10	200.7	04-22-00	05-12-00
MANGANESE	-----	mg/L		0.012		0.008	0.005	200.7	04-22-00	05-12-00
MERCURY	-----	mg/L	<	0.0005	<	0.0005	0.0005	245.1	04-22-00	05-17-00
MOLYBDENUM	-----	mg/L	<	0.020	<	0.020	0.020	200.8	04-22-00	05-16-00
NICKEL	-----	mg/L	<	0.020	<	0.020	0.020	200.8	04-22-00	05-16-00
NITRATE-N[2]	-----	mg/L		0.1		-----	0.1	300.0	04-22-00	05-07-00
NITRITE-N[2]	-----	mg/L	<	0.1		-----	0.1	300.0	04-22-00	05-07-00
NITRATE + NITRITE -N[3]	-----	mg/L	<	2.0		-----	2.0	300.0	04-22-00	05-08-00
pH[2]	-----	s.u.		6.32		-----	0.01	APHA4500H+B	04-22-00	05-16-00
PHOSPHOROUS	-----	mg/L	<	0.005	<	0.005	0.005	200.7	04-22-00	05-23-00
PHOSPHOROUS, (o-)	-----	mg/L	<	0.10		-----	0.10	APHA4500P+C	04-22-00	05-12-00
PHOSPHOROUS, (T)	-----	mg/L	<	0.20		-----	0.20	HACH8190	04-22-00	05-11-00
POTASSIUM	-----	mg/L		0.65		0.47	0.10	200.7	04-22-00	05-12-00
SELENIUM	-----	mg/L	<	0.010	<	0.010	0.010	200.8	04-22-00	05-16-00
SILICA	-----	mg/L		0.503		0.482	0.025	200.7	04-22-00	05-17-00
SILVER	-----	mg/L	<	0.010	<	0.010	0.010	200.8	04-22-00	05-16-00
SODIUM	-----	mg/L		0.81	<	0.50	0.50	200.7	04-22-00	05-12-00
STRONTIUM	-----	mg/L		0.018		0.018	0.010	200.7	04-22-00	05-12-00
SULFATE	-----	mg/L		10.1		-----	0.4	300.0	04-22-00	05-07-00
SULFUR	-----	mg/L		1.07		1.07	0.005	200.7	04-22-00	05-23-00
TELLURIUM	-----	mg/L	<	0.005	<	0.005	0.005	200.7	04-22-00	05-23-00
THALLIUM	-----	mg/L	<	0.001	<	0.001	0.001	200.8	04-22-00	05-16-00
THIOCYANATE	-----	mg/L	<	0.10		-----	0.10	APHA4500CN+M	04-22-00	05-11-00
TIN	-----	mg/L	<	0.050	<	0.050	0.050	200.8	04-22-00	05-16-00
TDS[2]	-----	mg/L		32		-----	10	APHA2540C	04-22-00	05-16-00
TKN[1]	-----	mg/L		0.27		-----	0.05	351.3	04-22-00	05-16-00
TITANIUM	-----	mg/L	<	0.005	<	0.005	0.005	200.7	04-22-00	05-12-00
TON	-----	mg/L		0.17		-----	0.10	APHA4500-N_{org}-A	04-22-00	05-16-00
TOTAL NITROGEN	-----	mg/L		0.37		-----	0.10	APHA4500-N	04-22-00	05-16-00
TSS[2]	-----	mg/L	<	2		-----	2	APHA2540D	04-22-00	05-16-00
VANADIUM	-----	mg/L	<	0.020	<	0.020	0.020	200.7	04-22-00	05-12-00
CYANIDE, TOTAL[2]	-----	mg/L	<	0.025		-----	0.025	APHA4500CN-C+E	04-22-00	05-12-00
CYANIDE, WAD[2]	-----	mg/L	<	0.025		-----	0.025	APHA4500CN-I+E	04-22-00	05-12-00
ZINC	-----	mg/L	<	0.050	<	0.050	0.050	200.7	04-22-00	05-12-00
ZIRCONIUM	-----	mg/L	<	0.005	<	0.005	0.005	200.7	04-22-00	05-23-00

[1]TKN sub-contracted to Acculabs, (NV00004)
[2]Analyzed past recommended hold time.
[3]Analyzed on Sulfuric acid preserved sample
*Analyzed on 6-6-00
**Failed QC parameters for duplicate analysis

CATIONS	0.49
ANIONS	0.51
% DIFFERENCE	0.6

Robert Potts
QA/QC Manager

CLIENT: Kinross Gold Corp
AAL REF: EV0419
ATTN: Rod Thomas
ANALYSIS PERFORMED BY AAL ENVIRONMENTAL LLC - NV00040

Near inflow of Goose Lake

PARAMETER	D.F.	UNITS	TOTAL	DISSOLVE	DETECTION LIMITS	METHOD REFERENCE	SAMPLE DATE	NALYSIS DATE
ACIDITY[2]	----	mg/L	8	-----	1	APHA2310B	04-22-00	05-25-00
ALKALINITY, TOTAL[2]	----	mg/L	4	-----	1	APHA2320B	04-22-00	05-16-00
BICARBONATE[2]	-----	mg/L	4	-----	1	APHA2320B	04-22-00	05-16-00
CARBONATE[2]	-----	mg/L	ND	-----	1	APHA2320B	04-22-00	05-16-00
HYDROXIDE[2]	-----	mg/L	ND	-----	1	APHA2320B	04-22-00	05-16-00
ALUMINUM	-----	mg/L	0.146	0.092	0.020	200.7	04-22-00	05-12-00
AMMONIA	-----	mg/L	< 0.05	< 0.05	0.05	APHA4500NH3-F	04-22-00	05-31-00
ANTIMONY	-----	mg/L	< 0.003	0.005	0.003	200.8	04-22-00	05-16-00
ARSENIC	-----	mg/L	< 0.005	0.006	0.005	200.8	04-22-00	05-16-00
BARIUM	-----	mg/L	< 0.020	< 0.020	0.020	200.7	04-22-00	05-12-00
BERYLLIUM	-----	mg/L	< 0.002	< 0.002	0.002	200.7	04-22-00	05-12-00
BISMUTH	-----	mg/L	< 0.020	< 0.020	0.020	200.7	04-22-00	05-12-00
BORON	-----	mg/L	< 0.010	< 0.010	0.010	200.7	04-22-00	05-17-00
CADMIUM	-----	mg/L	< 0.002	< 0.002	0.002	200.8	04-22-00	05-16-00
CALCIUM	-----	mg/L	4.13	4.17	0.50	200.7	04-22-00	05-12-00
CHLORIDE	-----	mg/L	1.2	----	0.2	300.0	04-22-00	05-07-00
CHROMIUM	-----	mg/L	< 0.005	< 0.005	0.005	200.7	04-22-00	05-12-00
COBALT	-----	mg/L	< 0.020	< 0.020	0.020	200.8	04-22-00	05-16-00
CONDUCTIVITY	-----	uS/cm	48	----	10	APHA2510B	04-22-00	05-16-00
COPPER	-----	mg/L	< 0.010	< 0.010	0.010	200.7	04-22-00	05-12-00
FLUORIDE	-----	mg/L	< 0.1	----	0.1	300.0	04-22-00	05-07-00
HARDNESS	-----	mg/L	20	20	20	APHA2340B	04-22-00	05-12-00
IRON	-----	mg/L	0.214	0.057	0.020	200.7	04-22-00	05-12-00
LEAD	-----	mg/L	0.038	0.021	0.007	200.8	04-22-00	05-16-00
MAGNESIUM	-----	mg/L	2.47	2.32	0.10	200.7	04-22-00	05-12-00
MANGANESE	-----	mg/L	0.009	0.006	0.005	200.7	04-22-00	05-12-00
MERCURY	-----	mg/L	< 0.0005	< 0.0005	0.0005	245.1	04-22-00	05-17-00
MOLYBDENUM	-----	mg/L	< 0.020	< 0.020	0.020	200.8	04-22-00	05-16-00
NICKEL	-----	mg/L	< 0.020	< 0.020	0.020	200.8	04-22-00	05-16-00
NITRATE-N[2]	-----	mg/L	0.1	-----	0.1	300.0	04-22-00	05-07-00
NITRITE-N[2]	-----	mg/L	< 0.1	-----	0.1	300.0	04-22-00	05-07-00
NITRATE + NITRITE -	-----	mg/L	< 2.0	-----	2.0	300.0	04-22-00	05-08-00
pH[2]	-----	s.u.	6.17	-----	0.01	APHA4500H+B	04-22-00	05-16-00
PHOSPHOROUS	-----	mg/L	< 0.005	< 0.005	0.005	200.7	04-22-00	05-23-00
PHOSPHOROUS, (o-)	-----	mg/L	< 0.10	-----	0.10	APHA4500P+C	04-22-00	05-12-00
PHOSPHOROUS, (T)	-----	mg/L	< 0.20	-----	0.20	HACH8190	04-22-00	05-11-00
POTASSIUM	-----	mg/L	0.476	0.436	0.10	200.7	04-22-00	05-12-00
SELENIUM	-----	mg/L	< 0.010	< 0.010	0.010	200.8	04-22-00	05-16-00
SILICA	-----	mg/L	1.17	1.15	0.025	200.7	04-22-00	05-17-00
SILVER	-----	mg/L	< 0.010	< 0.010	0.010	200.8	04-22-00	05-16-00
SODIUM	-----	mg/L	< 0.50	0.92	0.50	200.7	04-22-00	05-12-00
STRONTIUM	-----	mg/L	0.018	0.018	0.010	200.7	04-22-00	05-12-00
SULFATE	-----	mg/L	10.9	----	0.4	300.0	04-22-00	05-07-00
SULFUR	-----	mg/L	1.23	1.20	0.005	200.7	04-22-00	05-23-00
TELLURIUM	-----	mg/L	< 0.005	< 0.005	0.005	200.7	04-22-00	05-23-00
THALLIUM	-----	mg/L	< 0.001	< 0.001	0.001	200.8	04-22-00	05-16-00
THIOCYANATE	-----	mg/L	< 0.10	----	0.10	APHA4500CN+M	04-22-00	05-11-00
TIN	-----	mg/L	< 0.050	< 0.050	0.050	200.8	04-22-00	05-16-00
TDS[2]	-----	mg/L	34	-----	10	APHA2540C	04-22-00	05-16-00
TKN[1]	-----	mg/L	0.28	-----	0.05	351.3	04-22-00	05-16-00
TITANIUM	-----	mg/L	< 0.005	< 0.005	0.005	200.7	04-22-00	05-12-00
TON	-----	mg/L	0.18	-----	0.10	APHA4500-N_{org}-A	04-22-00	05-16-00
TOTAL NITROGEN	-----	mg/L	0.38	-----	0.10	APHA4500-N	04-22-00	05-16-00
TSS[2]	-----	mg/L	< 2	-----	2	APHA2540D	04-22-00	05-10-00
VANADIUM	-----	mg/L	< 0.020	< 0.020	0.020	200.7	04-22-00	05-12-00
CYANIDE, TOTAL[2]	-----	mg/L	< 0.025	-----	0.025	APHA4500CN-C+	04-22-00	05-23-00
CYANIDE, WAD[2]	-----	mg/L	< 0.025	-----	0.025	APHA4500CN-I+E	04-22-00	05-12-00
ZINC	-----	mg/L	< 0.050	< 0.050	0.050	200.7	04-22-00	05-12-00
ZIRCONIUM	-----	mg/L	< 0.005	< 0.005	0.005	200.7	04-22-00	05-23-00

[1] TKN sub-contracted to Acculabs, (NV00004)
[2] Analyzed past recommended hold time.
[3] Analyzed on Sulfuric acid preserved sample

CATIONS	0.44
ANIONS	0.50
% DIFFERENCE	3.0

Robert Potts
QA/QC Manager

CLIENT: Kinross Gold Corp
AAL REF: EV5418
ATTN: Rod Thomas
ANALYSIS PERFORMED BY AAL ENVIRONMENTAL LLC - NV00040

Near outflow of Goose Lake

PARAMETER	D.F.	UNITS	TOTAL		DISSOLVE	DETECTION LIMITS	METHOD REFERENCE	SAMPLE DATE	NALYSIS DATE
ACIDITY[2]	-----	mg/L	7		-----	1	APHA2310B	04-23-00	05-25-00
ALKALINITY, TOTAL[2]	-----	mg/L	6		-----	1	APHA2320B	04-23-00	05-16-00
BICARBONATE[2]	-----	mg/L	6		-----	1	APHA2320B	04-23-00	05-16-00
CARBONATE[2]	-----	mg/L	ND		-----	1	APHA2320B	04-23-00	05-16-00
HYDROXIDE[2]	-----	mg/L	ND		-----	1	APHA2320B	04-23-00	05-16-00
ALUMINUM	-----	mg/L	0.179		0.064	0.020	200.7	04-23-00	05-12-00
AMMONIA	-----	mg/L	< 0.05	<	0.05	0.05	APHA4500NH3-F	04-23-00	05-31-00
ANTIMONY	-----	mg/L	0.004		0.004	0.003	200.8	04-23-00	05-16-00
ARSENIC	-----	mg/L	< 0.005	<	0.005	0.005	200.8	04-23-00	05-16-00
BARIUM	-----	mg/L	< 0.020	<	0.020	0.020	200.7	04-23-00	05-12-00
BERYLLIUM	-----	mg/L	< 0.002	<	0.002	0.002	200.7	04-23-00	05-12-00
BISMUTH	-----	mg/L	< 0.020	<	0.020	0.020	200.7	04-23-00	05-12-00
BORON	-----	mg/L	< 0.010	<	0.010	0.010	200.7	04-23-00	05-17-00
CADMIUM	-----	mg/L	0.004		0.002	0.002	200.8	04-23-00	05-16-00
CALCIUM	-----	mg/L	4.98		4.90	0.50	200.7	04-23-00	05-12-00
CHLORIDE	-----	mg/L	1.7		-----	0.2	300.0	04-23-00	05-07-00
CHROMIUM	-----	mg/L	< 0.005	<	0.005	0.005	200.7	04-23-00	05-12-00
COBALT	-----	mg/L	< 0.020	<	0.020	0.020	200.8	04-23-00	05-16-00
CONDUCTIVITY	-----	uS/cm	59		-----	10	APHA2510B	04-23-00	05-16-00
COPPER	-----	mg/L	< 0.010	<	0.010	0.010	200.7	04-23-00	05-12-00
FLUORIDE	-----	mg/L	< 0.1		-----	0.1	300.0	04-23-00	05-07-00
HARDNESS	-----	mg/L	25		25	20	APHA2340B	04-23-00	05-12-00
IRON	-----	mg/L	0.357		0.028	0.020	200.7	04-23-00	05-12-00
LEAD	-----	mg/L	< 0.007	<	0.007	0.007	200.8	04-23-00	05-16-00
MAGNESIUM	-----	mg/L	3.11		3.03	0.10	200.7	04-23-00	05-12-00
MANGANESE	-----	mg/L	0.018	<	0.005	0.005	200.7	04-23-00	05-12-00
MERCURY	-----	mg/L	< 0.0005	<	0.0005	0.0005	245.1	04-23-00	05-17-00
MOLYBDENUM	-----	mg/L	< 0.020	<	0.020	0.020	200.8	04-23-00	05-16-00
NICKEL	-----	mg/L	< 0.020	<	0.020	0.020	200.8	04-23-00	05-16-00
NITRATE-N[2]	-----	mg/L	< 0.1		-----	0.1	300.0	04-23-00	05-07-00
NITRITE-N[2]	-----	mg/L	< 0.1		-----	0.1	300.0	04-23-00	05-07-00
NITRATE + NITRITE -N	-----	mg/L	< 2.0		-----	2.0	300.0	04-23-00	05-08-00
pH[2]	-----	s.u.	6.77		-----	0.01	APHA4500H+B	04-23-00	05-16-00
PHOSPHOROUS	-----	mg/L	< 0.005	<	0.005	0.005	200.7	04-23-00	05-23-00
PHOSPHOROUS, (o-)	-----	mg/L	< 0.10		-----	0.10	APHA4500P+C	04-23-00	05-12-00
PHOSPHOROUS, (T)	-----	mg/L	< 0.20		-----	0.20	HACH8190	04-23-00	05-11-00
POTASSIUM	-----	mg/L	0.64		0.60	0.10	200.7	04-23-00	05-12-00
SELENIUM	-----	mg/L	< 0.010	<	0.010	0.010	200.8	04-23-00	05-16-00
SILICA	-----	mg/L	0.661		0.289	0.025	200.7	04-23-00	05-17-00
SILVER	-----	mg/L	< 0.010	<	0.010	0.010	200.8	04-23-00	05-16-00
SODIUM	-----	mg/L	0.84		0.71	0.50	200.7	04-23-00	05-12-00
STRONTIUM	-----	mg/L	0.022		0.022	0.010	200.7	04-23-00	05-12-00
SULFATE	-----	mg/L	13.2		-----	0.4	300.0	04-23-00	05-07-00
SULFUR[4]	-----	mg/L	1.43		1.44	0.005	200.7	04-23-00	05-23-00
TELLURIUM	-----	mg/L	< 0.005	<	0.005	0.005	200.7	04-23-00	05-23-00
THALLIUM	-----	mg/L	< 0.001	<	0.001	0.001	200.8	04-23-00	05-16-00
THIOCYANATE	-----	mg/L	< 0.10		-----	0.10	APHA4500CN+M	04-23-00	05-11-00
TIN	-----	mg/L	< 0.050	<	0.050	0.050	200.8	04-23-00	05-16-00
TDS[2]	-----	mg/L	43		-----	10	APHA2540C	04-23-00	05-16-00
TKN[1]	-----	mg/L	0.30		-----	0.05	351.3	04-23-00	05-16-00
TITANIUM	-----	mg/L	< 0.005	<	0.005	0.005	200.7	04-23-00	05-12-00
TON	-----	mg/L	0.30		-----	0.10	APHA4500-N_{org}-A	04-23-00	05-16-00
TOTAL NITROGEN	-----	mg/L	0.30		-----	0.10	APHA4500-N	04-23-00	05-16-00
TSS[2]	-----	mg/L	6		-----	2	APHA2540D	04-23-00	05-10-00
VANADIUM	-----	mg/L	< 0.020	<	0.020	0.020	200.7	04-23-00	05-12-00
CYANIDE, TOTAL[2]	-----	mg/L	< 0.025		-----	0.025	APHA4500CN-C+	04-23-00	05-23-00
CYANIDE, WAD[2]	-----	mg/L	< 0.025		-----	0.025	APHA4500CN-I+E	04-23-00	05-12-00
ZINC	-----	mg/L	0.064		0.060	0.050	200.7	04-23-00	05-12-00
ZIRCONIUM	-----	mg/L	< 0.005	<	0.005	0.005	200.7	04-23-00	05-23-00

[1]TKN sub-contracted to Acculabs, (NV00004)
[2]Analyzed past recommended hold time
[3]Analyzed on Sulfuric acid preserved sample
[4]Failed QC parameters for initial calibrat on varification.

CATIONS	0.56
ANIONS	0.61
% DIFFERENCE	2.1

Robert Potts
QA/QC Manager

CLIENT: Kinross Gold Corp
AAL REF: EV5419
ATTN: Rod Thomas

ANALYSIS PERFORMED BY AAL ENVIRONMENTAL LLC - NV00040

South of dock at camp (Dup)

PARAMETER	D.F.	UNITS		TOTAL	DISSOLVED	DETECTION LIMITS	METHOD REFERENCE	SAMPLE DATE	ANALYSIS DATE
AMMONIA	----	mg/L	<	0.05	----	0.05	APHA4500NH3-F	04-22-00	05-31-00
CYANIDE, TOTAL[3]	----	mg/L	<	0.025	----	0.025	APHA4500CN-C+E	04-22-00	05-23-00
CYANIDE, WAD[3]	----	mg/L	<	0.025	----	0.025	APHA4500-CN-I+E	04-22-00	05-12-00
NITRATE + NITRITE -N[2]	----	mg/L	<	2.0	----	2.0	300.0	04-22-00	05-08-00
PHOSPHOROUS, (T)	----	mg/L	<	0.20	----	0.20	HACH8190	04-22-00	05-11-00
TKN[1]	----	mg/L		0.26	----	0.05	351.3	04-22-00	05-16-00
TON	----	mg/L		0.26	----	0.10	APHA4500-N_{org}-A	04-22-00	05-16-00
TOTAL NITROGEN	----	mg/L		0.26	----	0.10	APHA4500-N	04-22-00	05-16-00

[1]TKN sub-contracted to Acculabs, (NV00004)
[2]Analyzed on Sulfuric acid preserved sample
[3]Analyzed past recommended hold time

Robert Potts
QA/QC Manager

CLIENT: Kinross Gold Corp
AAL REF: EV5419
ATTN: Rod Thomas
ANALYSIS PERFORMED BY AAL ENVIRONMENTAL LLC - NV00040

Near inflow of Goose Lake (Dup)

PARAMETER	D.F.	UNITS		TOTAL		DISSOLVED	DETECTION LIMITS	METHOD REFERENCE	SAMPLE DATE	ANALYSIS DATE
ACIDITY[1]	-----	mg/L		8		-----	1	APHA2310B	04-22-00	05-25-00
ALKALINITY, TOTAL[1]	-----	mg/L		4		-----	1	APHA2320B	04-22-00	05-16-00
BICARBONATE[1]	-----	mg/L		4		-----	1	APHA2320B	04-22-00	05-16-00
CARBONATE[1]	-----	mg/L		ND		-----	1	APHA2320B	04-22-00	05-16-00
HYDROXIDE[1]	-----	mg/L		ND		-----	1	APHA2320B	04-22-00	05-16-00
BORON	-----	mg/L	<	0.010	<	0.010	0.010	200.7	04-22-00	05-17-00
CHLORIDE	-----	mg/L		1.4		-----	0.2	300.0	04-22-00	05-07-00
CONDUCTIVITY	-----	uS/cm		48		-----	10	APHA2510B	04-22-00	05-16-00
FLUORIDE	-----	mg/L	<	0.1		-----	0.1	300.0	04-22-00	05-07-00
NITRATE-N[1]	-----	mg/L		0.1		-----	0.1	300.0	04-22-00	05-07-00
NITRITE-N[1]	-----	mg/L	<	0.1		-----	0.1	300.0	04-22-00	05-07-00
pH[1]	-----	s.u.		6.33		-----	0.01	APHA4500H+B	04-22-00	05-16-00
PHOSPHOROUS, (o~)	-----	mg/L	<	0.10		-----	0.10	APHA4500P+C	04-22-00	05-12-00
SILICA	-----	mg/L		0.740		0.696	0.025	200.7	04-22-00	05-17-00
SULFATE	-----	mg/L		11.5		-----	0.4	300.0	04-22-00	05-07-00
TDS[1]	-----	mg/L		34		-----	10	APHA2540C	04-22-00	05-16-00
TSS[1]	-----	mg/L	<	2		-----	4	APHA2540D	04-22-00	05-10-00

[1]Analyzed past recommended hold time

Robert Potts
QA/QC Manager

CLIENT: Kinross Gold Corp
AAL REF: EV5419
ATTN: Rod Thomas
ANALYSIS PERFORMED BY AAL ENVIRONMENTAL LLC - NV00040

Near outflow of Goose Lake (Dup)

PARAMETER	D.F.	UNITS		TOTAL		DISSOLVED	DETECTION LIMITS	METHOD REFERENCE	SAMPLE DATE	ANALYSIS DATE
ALUMINUM	---	mg/L		0.171		0.054	0.020	200.7	04-23-00	05-12-00
ANTIMONY	---	mg/L	<	0.003	<	0.003	0.003	200.8	04-23-00	05-16-00
ARSENIC	---	mg/L	<	0.005	<	0.005	0.005	200.8	04-23-00	05-16-00
BARIUM	---	mg/L	<	0.020	<	0.020	0.020	200.7	04-23-00	05-12-00
BERYLLIUM	---	mg/L	<	0.002	<	0.002	0.002	200.7	04-23-00	05-12-00
BISMUTH	---	mg/L	<	0.020	<	0.020	0.020	200.7	04-23-00	05-12-00
CADMIUM	---	mg/L	<	0.002	<	0.002	0.002	200.8	04-23-00	05-12-00
CALCIUM	---	mg/L		5.24		3.99	0.50	200.7	04-23-00	05-12-00
CHROMIUM	---	mg/L	<	0.005	<	0.005	0.005	200.7	04-23-00	05-12-00
COBALT	---	mg/L	<	0.020	<	0.020	0.020	200.8	04-23-00	05-16-00
COPPER	---	mg/L	<	0.010	<	0.010	0.010	200.7	04-23-00	05-12-00
HARDNESS	---	mg/L		26		20	20	APHA2340B	04-23-00	05-12-00
IRON	---	mg/L		0.384	<	0.020	0.020	200.7	04-23-00	05-12-00
LEAD	---	mg/L	<	0.007	<	0.007	0.007	200.8	04-23-00	05-16-00
MAGNESIUM	---	mg/L		3.15		2.37	0.10	200.7	04-23-00	05-12-00
MANGANESE	---	mg/L		0.008	<	0.005	0.005	200.7	04-23-00	05-12-00
MERCURY	---	mg/L	<	0.0005	<	0.0005	0.0005	245.1	04-23-00	05-17-00
MOLYBDENUM	---	mg/L	<	0.020	<	0.020	0.020	200.8	04-23-00	05-16-00
NICKEL	---	mg/L	<	0.020	<	0.020	0.020	200.8	04-23-00	05-16-00
PHOSPHOROUS	---	mg/L	<	0.005	<	0.005	0.005	200.7	04-23-00	05-23-00
POTASSIUM	---	mg/L		0.66		0.43	0.10	200.7	04-23-00	05-12-00
SELENIUM	---	mg/L	<	0.010	<	0.010	0.010	200.8	04-23-00	05-16-00
SILVER	---	mg/L	<	0.010	<	0.010	0.010	200.8	04-23-00	05-16-00
SODIUM	---	mg/L		0.62		0.70	0.50	200.7	04-23-00	05-12-00
STRONTIUM	---	mg/L		0.023		0.017	0.010	200.7	04-23-00	05-12-00
SULFUR	---	mg/L		1.43		1.16	0.005	200.7	04-23-00	05-23-00
TELLURIUM	---	mg/L	<	0.005	<	0.005	0.005	200.7	04-23-00	05-23-00
THALLIUM	---	mg/L	<	0.001	<	0.001	0.001	200.8	04-23-00	05-16-00
THIOCYANATE	---	mg/L	<	0.10		---	0.10	APHA4500CN+M	04-23-00	05-11-00
TIN	---	mg/L	<	0.050	<	0.050	0.050	200.8	04-23-00	05-16-00
TITANIUM	---	mg/L	<	0.005	<	0.005	0.005	200.7	04-23-00	05-12-00
VANADIUM	---	mg/L	<	0.020	<	0.020	0.020	200.7	04-23-00	05-12-00
ZINC	---	mg/L		0.058		0.040	0.050	200.7	04-23-00	05-12-00
ZIRCONIUM	---	mg/L	<	0.005	<	0.005	0.005	200.7	04-23-00	05-23-00

Robert Potts
QA/QC Manager