Parks Environmental Inc.

Appendix B

San Gold Corporation

Notice of Alteration

- **2009 Notice of Alteration (AECOM 2010)**

Environment

San Gold Corporation

Notice of Alteration for the Cartwright Mine, Bissett, Manitoba

Prepared by:

AECOM
99 Commerce Drive
Winnipeg, MB, Canada R3P 0Y7
www.aecom.com

204 477 5381 tel
204 284 2040 fax

Project Number:

60116437 (102844)

Date:

April, 2010

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This Statement of Qualifications and Limitations is attached to and forms part of the Report.

AECOM
99 Commerce Drive
Winnipeg, MB, Canada R3P 0Y7
www.aecom.com

204 477 5381 tel
204 284 2040 fax

April 30, 2010

Mr. Clem Moche
Manitoba Conservation
Environmental Assessment and Licensing Branch
123 Main Street Suite 160
Winnipeg, Manitoba
R3C 1A5

Dear Mr. Moche:

Project No: **60116437 (102844)**

Regarding: **San Gold Corporation**
Notice of Alteration for the Cartwright Mine, Bissett, Manitoba

On behalf of San Gold Corporation, AECOM is pleased to submit to Manitoba Conservation the "Notice of Alteration for the Cartwright Mine, Bissett, Manitoba," outlining the proposed alteration to Environment Act Licence 2628 R with respect to the Cartwright Mine and Hinge Zone bulk sample collection associated with the Rice Lake Gold project.

If you have any questions or concerns, please feel free to contact Scott Chapman M.Sc., P.Eng. at (204) 477-5381.

Sincerely,
AECOM Canada Ltd.

Ron Typliski, P.Eng.
Vice-President, Manitoba District
Canada West Region

SC :snb
Encl.

Distribution List

# of Hard Copies	PDF Required	Association / Company Name
1	Yes	Manitoba Conservation

Revision Log

Revision #	Revised By	Date	Issue / Revision Description
A	S.Chapman	July 7, 2009	Draft Report Issued for Client Review
B	S.Chapman	December 23, 2009	Draft Report Issued for Review by Manitoba Conservation
C	S.Chapman	April 30, 2010	Final Report Issued to Manitoba Conservation

AECOM Signatures

Report Prepared By:

Scott Chapman, M.Sc., P.Eng.
Environmental Project Manager

Report Reviewed By:

Stephen Biswanger, P.Eng.
Manager, Remediation, Impact Analysis & Approvals, Environment

Executive Summary

This Notice of Alteration (NOA) request includes proposed alterations to Environment Act Licence 2628 R for the revised operation of the Cartwright Mine associated with the Rice Lake Gold Mine. The subject NOA is a revision to the Cartwright NOA submitted in March 2008 and describes the potential environmental impacts related to the relocation of the Cartwright Mine portal approximately 183 m (600 ft) east of the originally proposed location as well as the impacts associated with the ramp development and mining of a 45,359 tonne (50,000 ton) bulk sample from the Hinge Zone mineralization accessible from the Cartwright Mine portal. This NOA also describes the potential environmental impacts related to the alternative use of waste rock from mining activities via the Cartwright Mine portal as infill for the development of a new baseball diamond west of the Rice Lake Mill.

This NOA also summarizes the waste rock and waste ore sampling completed to date as part of various EA Licences and proposes a revised waste rock and waste ore sampling frequency for mining activities at San Gold in Bissett. Based on previous results showing that all submitted waste rock samples are not acid-generating, San Gold is proposing a reduced frequency of waste rock acid-generation potential monitoring. It is proposed that one representative waste rock sample be collected on a quarterly basis and combined into a single composite sample for annual acid-generation potential assay. The waste rock streams from each of the Rice Lake, Cartwright and Hinge Zone developments would be sampled and assayed separately. Similarly, it is proposed that one representative waste ore sample be collected on a quarterly basis and combined into a single composite sample for annual acid-generation potential assay. The waste ore streams from each of the Rice Lake, Cartwright and Hinge Zone developments would be sampled and assayed separately.

Since all previous sampling results demonstrate that the waste rock is not acid-generating, it is also proposed that a portion of the Rice Lake, Cartwright and Hinge Zone waste rock be used to infill the wetland site west of the Rice Lake Mill. Based on the acid-generation potential assays conducted to date, the waste rock used to infill the wetland area underlying the proposed baseball diamond is not expected to be acid-generating. However, as confirmation, the waste rock moved to the wetland area will be sampled at a frequency of one (1) sample per 10,000 m^3 of waste rock. This NOA also proposes to collect runoff from the infilled wetland site for transfer to the Rice Lake Mill and tailings management area as necessary.

Based on the information presented herein, the change in residual environmental effects resulting from the relocation of the Cartwright portal, the collection and processing of a bulk sample from the Hinge Zone, and the use of waste rock to infill the wetland area for redevelopment as a recreational area are anticipated to be minor in nature.

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1. Introduction

This Notice of Alteration (NOA) request includes proposed alterations to Environment Act (EA) Licence 2628 R for the revised operation of the Cartwright Mine associated with the Rice Lake Gold Mine. The subject NOA describes the potential environmental impacts related to the relocation of the Cartwright Mine portal approximately 183 m (600 ft) east of the originally proposed location as well as the related residual impacts associated with the development of a ramp for the mining of a bulk sample from the Hinge Zone mineralization via the Cartwright Mine portal. This NOA also describes the potential environmental impacts related to the use of waste rock to infill the wetland area west of the Rice Lake Mill prior the development of a new baseball diamond for the Town of Bissett. This NOA has been prepared by AECOM Canada Ltd. (AECOM) on behalf of San Gold Corporation (San Gold).

There have been various owners and EA Licences in place since the beginning of mining operations in Bissett. The following summarizes the history of mining activities in Bissett and the various applicable licences up to the present day.

- **1932 – 1968:** Mine operated as the San Antonio Gold Mine.
- **1981 – 1983:** Mine operated by a joint venture of Brinco Mining Limited and New Forty-Four Mines Limited.
- **1989:** Rea Gold Corporation acquired the San Antonio Gold Mine production lease.
- **1993:** Bissett Gold Mining Company Limited (Bissett Gold), a wholly owned subsidiary of Rea Gold Corporation, undertook an extensive exploration of the San Antonio ore body.
- **June 1995:** Bissett Gold initiated an environmental review for the planned re-opening and expansion of the former San Antonio Gold Mine.
- **1996:** An application for the upgrade of the existing EA Licence (**No. 927**) was sought in two stages. Stage 1 of the EA License (**No. 2161 S1**), which was issued in March 1996, enabled Rea Gold Corporation to complete surface and underground mine development activities and set into operation a gold and silver mining, milling, and refining development known as the Bissett Gold Mine. The mine and mill were expanded and upgraded and a new Tailings Management Area (TMA) was developed. The only major restriction of the Stage 1 License was on provision for a regular water discharge from the TMA.
- **July 1997 to December 1997:** Rice Lake mill in operation.
- **April 1998:** Harmony Gold (Canada) Inc. (Harmony Gold) purchased the production lease, mill and supporting infrastructure and continued with the development of the project under the approved Stage 1 EA License.
- **August 1998:** Harmony Gold requested two variances of the existing Stage 1 EA License. The variances were requested to allow a one-time discharge from the TMA and allow for batch processing of ore in the mill.
- **September 1998:** Manitoba Conservation accepted the variance requests and issued an amended license (**No. 2161 S1 RR**).
- **October 2000 and April 2001:** Harmony Gold was granted permission from MB Conservation for a temporary release of treated water from the TMA to No Name Creek.
- **October 2001:** Stage 2 License Application was submitted by Harmony Gold for the long-term operation of the mine/mill operations. Included Project Description and Environmental Assessment Report dated August 2001.
- **November 2003:** Environment Act License (**No. 2628 R**) granted to Rice Lake Gold Corporation for the operation of the Development being a gold and silver mining, milling and refining operation, known as the “Bissett Gold Mine”, and including the tailings disposal facility with release of treated effluent towards the Winipigow River via No-Name Creek.
- **June 2006:** San Gold Corporation submitted a NOA to EA Licence No. 2628 R to include the operation of the San Gold No. 1 (SG-1) Mine.

- **March 2008:** San Gold Corporation submitted a NOA to EA Licence No. 2628 R to include the development and mining of the Cartwright Deposit.

1.1 Background

San Gold Corporation owns the Rice Lake Gold Mine located in Bissett, Manitoba which currently operates under Environment Act Licence 2628 R. Components of the Rice Lake Gold Project include; two underground gold mines (Rice Lake Mine and San Gold #1 [SG-1] Mine) and a future underground mine (Cartwright Mine), a mill complex and a tailings management area.

In March of 2008, a NOA request was submitted to Manitoba Conservation by Wardrop Engineering Inc. on behalf of San Gold for the development and operation of the Cartwright Mine in Bissett, Manitoba. The March 2008 NOA document is provided in Appendix A for reference purposes. The March 2008 NOA for the Cartwright Mine was approved by Manitoba Conservation on April 23, 2008 as a minor alteration to the existing licensed development. A draft updated and revised Environment Act licence which would reflect the NOA was to be provided to San Gold by Manitoba Conservation for review and comment before it was formally issued. To date, a draft licence has not been provided to San Gold for review. The draft licence was also to incorporate the SG-1 Mine which was approved on September 29, 2006 by Manitoba Conservation as a minor alteration and to date has not been included in a revised Environment Act licence.

The following paragraphs provide a brief summary of the previously submitted NOA.

The March 2008 Cartwright Mine NOA proposed the development mining of the Cartwright deposit at a depth of approximately 213 m (700 ft) below the ground surface. The development mining involved the establishment of a new portal and ramp to access the Cartwright deposit. Development of the Cartwright Mine beyond the 213 m (700 ft) level would intersect the underground openings of the existing Rice Lake Mine.

It was estimated that approximately 250,000 tonnes of waste rock would be generated by the underground development. Analysis of core samples from the area of the Cartwright development indicated that the waste rock was not anticipated to be acid-generating. It was proposed that waste rock be disposed of on the former tailings disposal area located to the south-east of the existing Rice Lake Mine. Prior to stockpiling waste rock in the old tailings disposal area, San Gold was to conduct permeability tests on the old tailings area to determine if the permeability was sufficiently low to be classified as impermeable to meet the requirements of Environment Act Licence 2628 R. In the event that the material did not meet the permeability requirements, an engineered clay liner or suitable alternative liner would be installed prior to waste rock stockpiling. Runoff from the waste rock stockpile area was to be collected in a ditch and directed to the Rice Lake Mill and subsequently the tailings management area. Once additions to the waste rock stockpile ceased and ammonia concentrations in the runoff had attenuated to a level that was not toxic to aquatic life or was otherwise compliant with the Manitoba Water Quality Standards, Objectives and Guidelines for ammonia, the runoff was to be directed to Rice Lake to the south of the waste rock disposal area.

Mine ventilation during initial development was to be provided by a fan at the portal. Once the Rice Lake Mine openings were intersected, ventilation would be provided by an existing ventilation raise equipped with two fans associated with the Rice Lake Mine.

Water required for drilling and dust suppression in the Cartwright Mine was to be drawn from the Rice Lake Mine supply.

Groundwater seepage and mine process water in the Cartwright Mine was to be collected in a sump and transferred by overland pipeline to the Rice Lake Mine ventilation raise. From the Rice Lake Mine ventilation raise, the Cartwright mine water was to be directed to the Rice Lake Mill and subsequently the tailings management area via the existing Rice Lake Mine water management system. Once the openings of the Rice Lake Mine were intersected, Cartwright mine water was to drain directly into the Rice Lake Mine water management system. According to the 2008 Cartwright NOA, the mine water encountered during the development and operation of the Cartwright Mine could be accommodated within the existing tailings management area. Further, the mine water from the Cartwright Mine was not anticipated to have an effect on the tailings management area water quality.

Once mining began at the Cartwright Mine, ore was to be hauled by truck and temporarily stockpiled at the Rice Lake Mill site. The Cartwright Mine ore stockpile would be drawn down at a rate of approximately 363 dry tonnes per day (400 short dry tons per day (sdtpd)). Ore from the Cartwright Mine would be processed at the Rice Lake Mill. As the ore from the Cartwright Mine is from the same geological formation as the Rice Lake Mine, no change to the milling process was proposed. The addition of the Cartwright Mine ore to the Rice Lake Mill feed was not anticipated to change the tailings properties or the tailings wastewater quality. Ore milling rates from the Rice Lake Mine, SG-1 Mine and Cartwright Mine were 363 dry tonnes per day (400 sdtpd) each or a total of 1,089 dry tonnes per day (1,200 sdtpd), which was within the capacity of the existing mill of 1,134 dry tonnes per day (1,250 sdtpd).

No additional environmental monitoring measures above the current monitoring requirements of Environment Act Licence 2628 R and the federal Metal Mining Effluent Regulations were proposed in the NOA as the addition of the Cartwright Mine was not anticipated to create any additional discharges to water or significant changes to the quality of the existing effluent streams.

According to the previous NOA, the environmental impacts associated with the development and operation of the Cartwright Mine were not anticipated to result in a significant change to the overall impact of the existing Rice Lake Gold project.

1.2 Objective

San Gold wishes to modify their previously submitted Cartwright NOA (March 2008 submission to Manitoba Conservation) to better suit their operational requirements for the Cartwright Mine and to reflect plans that have evolved since that time. The proposed changes include:

- The relocation of the Cartwright Mine portal approximately 183 m (600 ft) east from the originally proposed location.
- The addition of ramp development and underground tunnelling to the east using the Cartwright Mine portal to access the Hinge Zone formation for bulk sampling.
- The use of a portion of the Rice Lake, Cartwright and Hinge Zone waste rock from the existing stockpile to infill the wetland site west of the Rice Lake Mill, and subsequent development of the wetland site into a baseball diamond for the Town of Bissett.

This NOA describes in detail the changes to the previously submitted Cartwright Mine NOA as well as the environmental impacts and mitigation measures associated with the changes.

1.3 Regulatory Process

The environmental assessment and licensing of projects in Manitoba is legislated under The Environment Act (the Act) and its subsequent regulations and guidelines. The Act is administered by Manitoba Conservation. Under the Act, if alterations to a licensed development do not conform to the licence requirements or are likely to change the environmental impact, approval is required before the alteration can be implemented.

Alterations to a licensed development can be either minor or major. An alteration is considered minor if the potential negative environmental effects resulting from the alteration are insignificant and there is not an alteration to a licence condition amended by an appeal. If an alteration is not minor, the alteration is a major alteration and a new proposal is required for approval consideration.

1.4 NOA Document Structure

Section 2 of this NOA document describes the proposed alterations to Environment Act Licence 2628 R with reference to the Cartwright Mine NOA submitted to Manitoba Conservation in March 2008.

Section 3 of this document assesses the anticipated environmental impacts and mitigation measures from the proposed alterations.

Section 4 of this document provides a summary of the environmental monitoring proposed as part of the March 2008 Cartwright NOA. Also included is a description of the environmental monitoring and sampling proposed for waste rock generated as part of the Cartwright Mine and the Hinge Zone bulk sample collection.

2. Project Description

2.1 Project Location

The Rice Lake Gold project is located in eastern Manitoba in the community of Bissett, Manitoba. The general location of the existing Rice Lake Gold project facilities including the Rice Lake Mine, SG-1 Mine, the original and relocated Cartwright Mine portal locations, the Mill complex, the tailings management area and the wetland site are shown in Figure 1. As indicated in Figure 1, the Cartwright Mine portal has been relocated approximately 182 m (600 ft) to the east of the originally proposed location. The Cartwright Mine portal is located to the north of the existing mine access road as shown in Figure 2 and is included in San Gold's mineral lease ML63. The wetland site, intended for the deposition of waste rock and subsequent development into a baseball diamond, is located to the west of the Rice Lake Mill as shown in Figure 2.

2.2 Geology

According to the March 2008 NOA, the Cartwright deposit occurs in the Achaean Rice Lake-Beresford Lake Greenstone belt of the Superior Structural Province. The Rice Lake Greenstone Belt comprises volcanic and derived sedimentary rocks of the Rice Lake Group and overlying sedimentary rocks of the San Antonio Formation. Mafic dikes and sills and quartz diorite-granodirite batholiths intrude the Rice Lake Group. Mineralization in the Cartwright Deposit most commonly occurs in narrow, stockwork-type veins and stringers of quartz that occupy shears, faults and fractures within rocks of the Rice Lake Group and associated intrusions.

A new Hinge Zone gold deposit has been identified and lays between the Rice Lake Mine and the SG-1 mine. The Hinge Zone is made up of quartz and carbonate veins containing gold mineralization. The volcanic units which contain the new veins are located in a sequence of rocks which lie approximately 1,500 meters into the hanging wall

stratigraphically above and geographically to the north of the mineralized mine unit of the Rice Lake Gold Mine. (San Gold Corporation 2008) The Hinge Zone is in the same volcanic rock as the SG-1 project.

2.3 Resource Estimate

As indicated in the March 2008 NOA, the Cartwright Zone includes a total inferred resource of 1,761,200 tons grading 0.22 oz. Au/ton with 388,940 contained gold ounces. The resource comprises 136,200 tons indicated, 361,200 tons inferred within the area drilled and 1,400,000 tons inferred up and down dip and along strike toward the Rice Lake Mine.

San Gold is currently developing a ramp from the Cartwright portal to access the Hinge Zone deposit and obtain a bulk sample to confirm the grade and volume of the deposit as indicated by surface diamond drilling. A decision on whether to fully develop the Hinge Zone deposit will be made at a later date. Should full development of the Hinge Zone deposit proceed, a separate NOA request will be completed containing resource estimates and other details as necessary.

2.4 Mining Rate and Mining Life

As indicated in the March 2008 NOA, the Cartwright Mine had an expected mine life of 12 years at an ore extraction rate of 400 sdtpd.

2.5 Cartwright Mine Development to Date

San Gold began developing a portal and underground vehicle ramp on June 1, 2008 to provide access for the mining of a 45,359 tonne (50,000 ton) bulk ore sample from the Hinge Zone deposit. As of January 13, 2009 the portal was complete and the ramp common to both the Cartwright deposit and the Hinge Zone deposit had been completed to a depth of 53 to 61 m (175 to 200 ft) and a length of 26 m (87 ft). The ramp required for the collection of a bulk ore sample from the Hinge Zone has been developed to a length of 457 m (1,500 ft) with 640 m (2,100 ft) remaining to reach the target depth of 122 m (400 ft) at a scheduled rate of 7.3 m (24 ft) per day at a 16% grade. The bulk ore sample from the Hinge Zone deposit will be collected between the 46 m (150 ft) and 107 m (350 ft) level. As stated in the previous Cartwright NOA, the planned accessibility for the Cartwright deposit included the driving of a decline ramp to a depth of approximately 213 m (700 ft) to access the Cartwright ore zone. The ramp extension required to access the Cartwright deposit will be driven at a later date as discussed in Section 2.6.

2.6 Development Schedule

The collection of the Hinge Zone bulk sample is the current priority for San Gold. Should the bulk sample testing prove favourable, San Gold will develop a separate NOA request to proceed with development of the Hinge Zone deposit in the spring of 2010. It is possible that both the Cartwright and Hinge Zone deposits may be developed simultaneously in the future.

2.7 Surface Structures

No surface structures were planned for the originally proposed Cartwright Mine as support infrastructure was available from the adjacent Rice Lake Gold Mine site. A portable toilet was to be provided at the portal location.

With the relocation of the Cartwright Mine portal, no permanent surface structures will be required, although a portable site trailer and a portable self contained toilet may be provided. In addition, no permanent surface structures are required to collect the bulk sample from the Hinge Zone deposit.

With the redevelopment of the wetland site into a baseball diamond, typical permanent surface structures associated with this type of recreational area will be required, possibly including the backstop, grandstand, fence, players boxes and washrooms.

2.8 Support Infrastructure

2.8.1 Mine Ventilation

In the March 2008 Cartwright Mine NOA, mine ventilation during initial development was to be provided by a 100 hp, 48" fan (10,000 cfm) at the portal. Once the Rice Lake Mine openings were intersected, ventilation would be provided by an existing ventilation raise equipped with two 100 hp (10,000 cfm) fans associated with the Rice Lake Mine.

To access the Hinge Zone deposit for the collection of a bulk sample, mine ventilation during initial development will be the same as proposed in the March 2008 Cartwright NOA.

2.8.2 Supply Water

Supply water for drilling equipment and dust suppression was to be provided from the Rice Lake Mine supply for the original portal location. The source for supply water will remain the same for the new portal location and the Hinge Zone bulk sampling efforts.

2.8.3 Power

Power supply for the Cartwright development was to be provided by an above-ground/below-ground 12.5 KVA line from the Rice Lake Mine substation. The power supply line runs above ground from the Rice Lake Mine substation to the electrical pole closest to the proposed portal location. The power supply line will run below ground from the electrical pole to the portal running beneath the existing mine access road.

2.8.4 Heat

Heat will be provided through the portal by a portable eight million BTU propane burner feeding off the existing propane tank for the Rice Lake Mine ventilation raise.

2.8.5 Aboveground Diesel Fuel Tank

In the March 2008 Cartwright Mine NOA, diesel fuel storage was to occur at the currently approved Rice Lake fuel storage facility. Underground equipment would be brought to the surface and refuelled at the existing facility.

For the relocated Cartwright Mine portal, a double-walled aboveground diesel fuel storage tank will be installed to the south of the portal on the south side of the mine access road as shown in Figure 2. The tank will be 1,900 L (500 gal) in capacity and will be provided with traffic protection and secondary containment. The tank will not be located within 100 m of a shoreline of any water body. San Gold will comply with all requirements of the Manitoba Dangerous Goods Handling and Transportation Act and Manitoba Regulation 188/2001 (Storage and Handling of Petroleum Products and Allied Products Regulation).

2.8.6 Drainage

Once filled with waste rock, the former wetland area will be graded such that surface water will drain toward a ditch constructed along the access road existing immediately to the west of the wetland area.

2.9 Explosives

Explosives for use in the Cartwright Mine were to be stored on the surface in the existing Rice Lake powder magazine. Day boxes of explosives were to be used to transport small amounts of explosives underground as required with unused portions being returned to the magazines on a daily basis. The storage method for explosives will be the same for the revised portal location and the Hinge Zone deposit bulk sampling. No explosives are expected to be used in the relocation of waste rock from the existing waste rock stockpile to the wetland site, and subsequent covering, grading and redevelopment into a baseball diamond.

2.10 Equipment

The March 2008 NOA for the Cartwright Mine proposed the use of the following underground equipment;

- One 3-boom air-drill jumbo
- One 6.5 cu. yd. load haul dump
- Two 13 cu. yd. trucks
- One scissor lift truck
- Two Toyota service trucks

Based on the new portal location and the additional mining of the Hinge Zone, two 6.5 load haul dumps will be required compared to the one originally proposed and an electric hydraulic drill will be utilised instead of the 3-boom air drill jumbo.

The relocation of waste rock from the current stockpile to the wetland site and subsequent development into a baseball diamond will require equipment to perform loading, dumping, compacting and grading activities. It is proposed that the following equipment be used for this task;

- Excavator
- Dump / tandem truck
- Loader
- Dozer
- Skid Steer
- Vibratory Roller

2.11 Mining Method

The mining method for the Cartwright deposit will consist of shrinkage stoping. The mining method for the Hinge Zone deposit bulk sample will consist of both shrinkage stoping and longhole mining methods.

2.12 Ore and Waste Rock Management

Dating back to July 1998, ore and waste rock samples have been collected from various explorations and works at San Gold in Bissett. Most recently, core samples from the Hinge Zone deposit have been collected and analyzed for their acid-producing potential. The following paragraphs summarize the ore and waste rock sampling and analysis as well as the ore and waste rock management. Table 1 summarizes the waste rock and ore sampling frequencies required as part of each licence revision since 1998.

Tables 2, 3, and 4 of this NOA summarize the ore and waste rock acid-base accounting analytical results of 61 samples collected from the Rice Lake Gold Mine and the San Gold 1 (SG-1) Mine. As indicated in the 2008 Cartwright NOA, the Cartwright Mine was estimated to produce approximately 250,000 tonnes of waste rock which was to be stockpiled on the former tailings area to the south of the portal (as shown in Figure 2). It is proposed that this waste rock will be used to infill the wetland site west of the Rice Lake Mill prior to redevelopment as a recreational area. A total of 14 samples collected from the Cartwright Deposit ore and waste rock have been tested for their acid generating potential with the results summarized in Table 5. As typical for rock from the San Antonio Mine (SAM) group of rocks and as shown in the sample analyses summarized in Tables 2, 3 and 4, the waste rock associated with the Cartwright Deposit is not acid-generating.

The relocation of the Cartwright Mine portal is not anticipated to change the quantity of waste rock generated from the Cartwright deposit.

The additional waste rock and ore generated during collection of the bulk ore sample from the Hinge Zone deposit via the Cartwright Mine portal and ramp will likely produce an additional 100,000 tonnes of waste rock which will, in accordance with the 2008 Cartwright NOA, be stockpiled on the former tailings area to the south of the portal as shown in Figure 2. This represents a total increase of 29% in waste rock generation from the Cartwright portal. As of January 2009, approximately 37,195 tonnes (41,000 tons) of waste rock had been generated during ramp advancement to the Hinge Zone bulk sample level. It is proposed that a portion of the Cartwright and Hinge Zone waste rock be relocated to the nearby wetland area.

Ten (10) core samples, one (1) waste rock sample and one (1) waste ore sample from the Hinge Zone Deposit have also been tested for their acid generating potential as shown in Table 6. As indicated by the test results, no potentially acid-generating ore or waste rock is expected to be generated in association with the Hinge Zone Deposit.

Permeability testing has been conducted in the former tailings disposal area and in the wetland area designated for the placement of a portion of the waste rock and ore. The permeability tests were conducted in June 2009 to confirm that the permeability of the former tailings disposal area and the wetland area is sufficiently low to meet the requirements of Environment Act Licence 2628 R. The permeabilities associated with the soils in these areas were found to range between 6.766×10^{-6} m/s and 1.115×10^{-7} m/s. The results of the hydraulic conductivity tests are included in Appendix C. Given the test results, the area meets the permeability requirements of San Gold's Environment Act Licence. San Gold has begun spreading waste rock on the old tailings disposal area to provide a base for truck traffic.

The March 2008 Cartwright NOA proposed to haul and stockpile the ore extracted from the Cartwright Mine to a location north-west of the existing mill complex via the mine access road as shown in Figure 2 in accordance with Environment Act Licence 2628 R. Although there will be no change in ore hauling and stockpiling with the new Cartwright portal location or the additional mining of the Hinge Zone deposit, this NOA proposes that a portion of the waste rock present in the Cartwright Mine waste rock stockpile be placed into the wetland area prior to development into a baseball diamond.

Similar to the March 2008 Cartwright NOA, the larger stockpile of waste rock generated by the Cartwright Mine and the Hinge Zone bulk sample is expected to partially remain once mining is completed. On closure, the slopes of the remaining stockpile will be contoured and re-vegetated as part of the closure plan.

Prior to deposition in the wetland area, waste rock will be tested and confirmed to be non acid-generating. The waste rock will be tested at frequency of one (1) test per 10,000 m^3. Waste rock that has been deposited from the

former tailings disposal area to the wetland area will be covered, contoured and vegetated in the development of this site into the proposed baseball development.

2.13 Water Management

2.13.1 Mine Water

According to the March 2008 Cartwright Mine NOA, groundwater seepage and mine process water in the Cartwright Mine was to be collected in a sump and transferred by overland pipeline to the Rice Lake Mine ventilation raise. From the Rice Lake Mine ventilation raise, the Cartwright mine water was to be directed to the Rice Lake Mill and subsequently the tailings management area (TMA) via the existing Rice Lake Mine water management system. Once the openings of the Rice Lake Mine were intersected, the Cartwright mine water was to drain directly into the Rice Lake Mine water management system. According to the original Cartwright Mine NOA, the mine water encountered during the development and operation of the Cartwright Mine could be accommodated within the existing tailings management area. Further, the mine water from the Cartwright Mine was not anticipated to have an effect on the tailings management area water quality.

The mining of the Cartwright deposit and the Hinge Zone deposit bulk sample collection and processing will utilize the same mine water management plan as referenced in the March 2008 Cartwright NOA. As stated in the March 2008 Cartwright NOA, planned ore milling rates from the Rice Lake Mine, SG-1 Mine and Cartwright Mine were 363 dry tonnes per day (400 sdtpd) each for a total of 1,089 dry tonnes per day (1,200 sdtpd). The water balance used for TMA design was 2,390 m^3/month (Harmony Gold 2001) based upon capacity of the existing mill 1,134 dry tonnes per day (1,250 sdtpd). However, production at the SG-1 Mine (400 sdtpd) was stopped and the mine was placed into care and maintenance and allowed to flood in November 2008. Although there are no current plans to permanently close the SG-1 Mine, closure details for the mine can be found in the June 2006 NOA. However, as the ore milling rate for the Hinge Zone bulk sample is expected to be less than 363 dry tonnes per day (400 sdtpd), the resulting combined milling rate from the Rice Lake Mine, the Cartwright Mine, and the collection and processing of the Hinge Zone bulk sample will be approximately 1,088 dry tonnes per day (1,200 sdtpd). As mine water production is primarily a function of production, mine water generated from the Rice Lake Mine, the Cartwright Mine, and the collection and processing of the Hinge Zone bulk sample can be accommodated within the existing TMA water balance.

2.13.2 Surface Runoff

2.13.2.1 Revised Cartwright Portal Location

Site runoff from the original portal location was to be directed to the existing surface drainage system of the Rice Lake Mine. Runoff from the new portal location will also use the existing surface drainage system at the Rice Lake Mine. Surface runoff will flow into a ditch on the north side of the mine access road (between the portal and the road). This ditch extends eastward to an existing culvert which transfers surface runoff to the south side of the mine access road, on to the former tailings area and eventually to Rice Lake. The surface area of the revised Cartwright portal location is approximately equal to the surface area of the portal location indicated in the March 2008 Cartwright NOA.

2.13.2.2 Waste Rock Stockpile

Runoff from the waste rock stockpile area was to be collected in a ditch and directed to the Rice Lake Mill and subsequently the tailings management area. Once ammonia concentrations in the runoff had attenuated to a level that was not toxic to aquatic life or was otherwise compliant with the Manitoba Water Quality Standards, Objectives and Guidelines for ammonia, the runoff was to be directed to Rice Lake to the south of the waste rock disposal area.

No changes to waste rock surface runoff management are proposed as part of this revised NOA. The volume of surface water runoff collected from the waste rock stockpile area is not expected to contribute significantly to the TMA net water balance.

2.13.2.3 Redeveloped Wetland Area

Runoff from the redeveloped wetland area is to be drained from the site via site grading into a ditch to be constructed between the wetland area and the service road separating the wetland from Rice Lake. Elevated ammonia in the waste rock runoff is a relatively short-term concern, occurring during waste rock generation and then attenuating over a period of one to two years once waste rock placement has ceased. The collected runoff will be directed to the mill process and subsequently to the TMA as long as ammonia concentrations in the runoff have the potential to be acutely toxic to aquatic life. Once concentrations have attenuated to a level that in non-toxic and is otherwise compliant with the applicable provincial surface water quality guidelines for ammonia, the runoff may be directed to Rice Lake.

2.14 Mine Emissions

2.14.1 Emissions to Water

As stated in the March 2008 Cartwright NOA, emissions to water from routine operation will be limited to site run-off that will be directed to the existing surface drainage system of the Rice Lake Mine. Mine water will be directed to the TMA. Waste rock stockpile runoff for the stockpiles located south of the Cartwright portal and in the wetland area will be collected, tested, and directed to the TMA as required. Neither the mine water nor the collected runoff from the waste rock stockpiles is expected to materially alter the quality of any wastewater discharge from the TMA.

2.14.2 Emissions to Air

As stated in the previous Cartwright NOA, the following emissions to air are anticipated:

- Vehicle exhaust (ore and waste hauling)
- Road dust generated in ore and waste hauling
- Emissions from the mine ventilation system
- Noise from hauling equipment operation, ventilation system operation, and portal/ramp development drilling and blasting

2.15 Milling

As indicated in the March 2008 Cartwright NOA, the Cartwright Mine ore stockpile would be drawn down at a rate of approximately 363 dry tonnes per day (400 short dry tons per day (sdtpd)). Ore from the Cartwright Mine would be processed at the Rice Lake Mill. As the ore from the Cartwright Mine is from the same geological formation as the Rice Lake Mine and the SG-1 Mine, no change to the milling process was proposed. The addition of the Cartwright Mine ore to the Rice Lake Mill feed was not anticipated to change the tailings properties or the tailings wastewater quality. As stated in the March 2008 Cartwright NOA, ore milling rates from the Rice Lake Mine, SG-1 Mine and Cartwright Mine were 363 dry tonnes per day (400 sdtpd) each or a total of 1089 dry tonnes per day (1,200 sdtpd), which was within the capacity of the existing mill of 1,134 dry tonnes per day (1,250 sdtpd). The ore milling rate for the Hinge Zone bulk sample is also expected to be less than 363 dry tonnes per day (400 sdtpd). As the SG-1 Mine is no longer in production, the additional milling associated with the collection of the Hinge Zone bulk sample will not exceed the mill capacity of 1,134 dry tonnes per day (1,250 sdtpd). No changes in the milling process are

anticipated to be required for the milling of the Hinge Zone ore. The addition of the Hinge Zone ore to the Rice Lake Mill feed is not anticipated to change the tailings properties or the tailings wastewater quality.

2.16 Tailings Management and Disposal

According to the March 2008 NOA, the mine water encountered during the development and operation of the Cartwright Mine could be accommodated within the existing tailings management area. Furthermore, the mine water from the Cartwright Mine was not anticipated to have an effect on the tailings management area water quality. The tailings produced from the Cartwright Mine ore were not anticipated to change the tailings management area water quality.

As the SG-1 mine is no longer in production, the mine water encountered during the development of the Hinge Zone for bulk sample collection can also be accommodated within the existing tailings management area. As indicated in Section 2.12, no potentially acid-generating waste rock is expected to be generated in association with the Hinge Zone deposit. As such, the mine water from the Hinge Zone is not anticipated to have an effect on the tailings management area water quality. In addition, the tailings produced from the Hinge Zone bulk sample ore are not anticipated to change the tailings management area water quality.

2.17 Solid Waste and Sanitary Waste

In the March 2008 NOA for the Cartwright Mine, solid waste including drill steel, steel pipe, rubber hose and packaging from supplies was to be collected in a steel dumpster and periodically removed and transferred to the Rice Lake Mine for disposal with the mine and mill solid waste stream. Sewage disposal from a portable on-site toilet was to be provided by the toilet supplier.

No change to the solid or sanitary waste management will occur as a result of the mining of the Hinge Zone deposit from the Cartwright Mine portal.

Solid waste produced during the development of the wetland area into a baseball diamond will be collected in a steel dumpster on-site and transferred to the Rice Lake Mine for disposal with the mine and mill solid waste stream.

Washroom facilities will be provided on-site via a portable toilet / washroom with sewage connection / septic tank / field. The sewage and sanitary waste will be handled by sewage collection in a portable on-site toilet provided by the toilet supplier with disposal provided by the toilet supplier.

2.18 Decommissioning and Closure Plan

The decommissioning and closure plan for the revised Cartwright Mine NOA is similar to the original Cartwright decommissioning and closure plan. A summary of the plan is provided in the following sections.

2.18.1 Temporary Suspension

In the event of a temporary suspension of operations, the Cartwright Mine and the Hinge Zone bulk sample development will be kept dewatered as necessary and site security will be maintained to prevent unauthorized access to the mine site or the mine underground.

2.18.2 Mine Closure

Once a decision to close the mine portal for the Cartwright Mine and the Hinge Zone bulk sample ramp has been made, the portal will be capped. The first ten meters of the ramp will be filled with waste rock and an engineered concrete bulkhead installed to seal off the portal. The surrounding area will be refilled with waste rock, graded and

re-vegetated, using appropriate native species, as necessary. The vent raise will also be capped with an engineered concrete bulkhead.

At this time, it is anticipated that the waste rock stockpile generated from mine development will partially remain at the conclusion of mining activities. A portion of waste rock will be used to grade the wetland area northwest of the mill for redevelopment as a recreational area. The recreational area will be covered with grassed vegetation. Upon mine closure, the stockpile remaining south of the portal on the former tailings area will be contoured to ensure slopes are stable and seeded to promote a grassed vegetation cover.

No potentially acid-generating waste rock has been produced to date and none is expected. However, in the event that potentially acid-generating waste rock is identified during the scheduled monitoring program, that material will be segregated and will be returned to the Cartwright and Hinge Zone underground development upon site closure.

A summary of costs associated with the decommissioning and closure plan can be found in the March 2008 Cartwright NOA, included in Appendix A. No major changes to the decommissioning and closure plan costs are anticipated due to the addition of the Hinge Zone bulk sampling.

2.19 Description of the Environment

A description of the environment was included in the March 2008 Cartwright NOA submitted to Manitoba Conservation by Wardrop Engineering Inc. on behalf of San Gold. The March 2008 NOA document is provided in Appendix A for reference purposes.

Photographs of the completed Cartwright portal are included in Appendix B.

The wetland area and proposed baseball diamond site is located approximately 500 m northwest of the Rice Lake Mill as shown in Figure 2.

3. Potential Environmental Effects and Mitigation

The potential environmental effects and mitigation for the Cartwright Mine were detailed in the March 2008 Cartwright NOA document. The relocation of the Cartwright Mine portal is not expected to result in a significant change to the overall environmental impact of the project. As was the case for the originally proposed Cartwright portal location, the relocated Cartwright Mine portal site is a barren rock face immediately adjacent to the Rice Lake Mine site. No natural vegetation or wildlife habitat will be disturbed by mine development or operation. As activities related to the collection of a bulk ore sample from the Hinge Zone are generally similar in nature to the Cartwright Mine development activities, the alterations proposed are not expected to result in a significant change to the overall environmental impact of the project as described in the March 2008 Cartwright NOA. The environmental effects indicated in the March 2008 Cartwright NOA and related to the alterations proposed as part of this NOA are summarized in the following paragraphs.

The relocation of waste rock from the existing stockpile to the wetland area will not significantly impact natural vegetation and wildlife. The wetland site is predominantly covered in dense cattail growth with some open water areas that provide potential degraded habitat for fish and aquatic invertebrates. In addition, the wetland site may also serve as potential habitat for nesting bird species such as the red-winged blackbird. The open water areas are stagnant and no direct surface water exchange occurs between these areas and Rice Lake due to a road providing access to the float plane docking area which separates Rice Lake from the wetland. The maximum water depth in the wetland area is approximately 1.0 m (3.3 ft). Since the open water areas are both shallow and isolated from the

lake, it is unlikely that any fish stranded in these areas survive the winter season however tolerant aquatic invertebrates may inhabit these areas. To ensure nesting habitat is not affected, waste rock will be applied to the wetland area in winter months.

Further details of the wetland area and its proposed development are included in the completed Fisheries and Oceans Canada form entitled: “Request for Review under the Habitat Provisions of the Fisheries Act” included in Appendix D.

3.1 Air

Development and operation of the Cartwright Mine and the ramp to access the Hinge Zone deposit have the potential to cause increased road dust in the vicinity of the portal during the initial few rounds of blasting and then during waste rock and ore hauling. Dust production during the first few rounds of blasting is typically a short-term occurrence lasting a few minutes each day over the first 3 to 4 days of ramp development. In addition, blasting occurred on San Gold property at a minimum distance of approximately 350 m from the nearest residence. As a result, no specific dust controls were used during initial portal and ramp development. Any increases in fugitive road dust during ore or waste hauling can be effectively controlled with conventional methods such as water spraying as is currently used for other mine roads.

The Rice Lake Mill will remain within its currently permitted capacity so any emissions to air from the operation will remain within historic levels.

The relocation of waste rock from the existing stockpile to the wetland site will generate dust emissions from the loading, hauling and dumping activities. In addition, dumping, compaction and grading of fill and topsoil for the development of the baseball diamond will also contribute to emissions to the air although these are anticipated to be minor in nature.

3.2 Noise

Development of the mine portal and ramp(s) will cause some increase in ambient noise levels. Drilling noise will be a relatively short-term issue, with noise being effectively attenuated once development has progressed 3 or 4 rounds (i.e., 11 to 15 m (36 to 48 feet)).

Noise from daily blasting will progressively decrease as development progresses in depth. San Gold is committed to working with the community to develop a daily blasting schedule that minimizes community disruption.

Noise emissions during waste rock and ore hauling are anticipated to be typical of diesel vehicles and are anticipated to be negligible based on the activity in the area. Vehicles are to be well maintained to reduce the negative air impacts associated with vehicle exhaust.

Additional noise will be generated during the relocation of waste rock from the existing stockpile to the wetland site through loading, hauling and dumping activities. The operation of diesel vehicles and heavy equipment during the transport, compaction and grading of fill and top soil will also contribute to noise emissions during the development of the wetland site into a recreational area (baseball diamond). Construction of infrastructure related to the baseball diamond will also generate noise emissions, however these are expected to be temporary and negligible in comparison to the activity in the area.

3.3 Site Runoff and Wastewater

As presently planned, no new discharge to surface waters will be developed. The Cartwright portal is within the current catchment for the Rice Lake Mine site and any runoff from the portal area will be captured and handled along with the current Rice Lake Mine site runoff. The revised location of the Cartwright portal has approximately the same total surface area (840 m^2) as the portal location described in the March 2008 Cartwright NOA. Addition of the portal is not expected to significantly alter site runoff quality.

The waste rock stockpile located to south of the portal also will not affect surface runoff volumes or quality. Based on the acid-generation potential assays conducted to date for the Cartwright and Hinge Zone deposits, the waste rock is not expected to be acid-generating as detailed in Section 2.12 and Section 5.1. Based on previous monitoring of waste rock runoff quality at the site, parameters of potential concern in the runoff are limited to suspended solids and ammonia. The waste rock has been placed on the former tailings area. Runoff from the stockpile will be collected in a sump for settling of solids. Elevated ammonia in the waste rock runoff is a relatively short-term concern, occurring during waste rock generation and then attenuating over a period of one to two years once waste rock placement has ceased. The collected runoff will be directed to the mill process and subsequently to the TMA as long as ammonia concentrations in the runoff have the potential to be acutely toxic to aquatic life. Once concentrations have attenuated to a level that is non-toxic and is otherwise compliant with the applicable provincial surface water quality guidelines for ammonia, the runoff may be directed to Rice Lake.

Mine water from the Cartwright Mine and the Hinge Zone bulk sample collection will be directed to the Rice Lake Mine and then into the mill process and Tailings Management Area, with no significant effect on TMA wastewater quality.

Addition of the Hinge Zone ore, which is from the same rock formation as the SG-1 Mine, to the Rice Lake Mill feed is not expected to affect the mill process, the tailings properties, or the tailings wastewater quality based on acid-base accounting laboratory results from the Hinge Zone and SG-1. The proposed increase in mill throughput is within the permitted capacity for the operation and the tailings management area development and operation plan was based on operating at the currently approved mill capacity.

Site runoff from the proposed wetland redevelopment will be collected and directed to a ditch that will be installed to the west of the wetland area between the service road and the wetland area. Based on the acid-generation potential assays conducted thus far, the waste rock used to infill the wetland area underlying the proposed baseball diamond is not expected to be acid-generating. Elevated ammonia in the waste rock runoff is a relatively short-term concern, occurring during waste rock generation and then attenuating over a period of one to two years once waste rock placement has ceased. The collected runoff will be directed to the mill process and subsequently to the TMA as long as ammonia concentrations in the runoff have the potential to be acutely toxic to aquatic life. Once concentrations have attenuated to a level that is non-toxic and is otherwise compliant with the applicable provincial surface water quality guidelines for ammonia, the runoff may be directed to Rice Lake.

4. Public Support

The placement and grading of waste rock within the wetland area northwest of the mine followed by the application of topsoil and seed will provide recreational space for the Town of Bissett. The wetland is currently not used and, once redeveloped into a baseball diamond, would be a significant addition to the neighbouring lakeshore recreational developments already put in place by the Town of Bissett. A letter from the Bissett Community Council indicating the support of the Town of Bissett is included in Appendix E. As a result, no additional public consultation has not been conducted with the Town of Bissett.

5. Environmental Monitoring

Current monitoring obligations under Environment Act License No. 2628 R and the Metal Mining Effluent Regulations will be maintained. Additional water quality monitoring and sampling are proposed with respect to wetland area surface water runoff. It is proposed that surface water runoff from the wetland redevelopment be collected. Elevated ammonia in the waste rock runoff is a relatively short-term concern, occurring during waste rock generation and then attenuating over a period of one to two years once waste rock placement has ceased. The collected runoff will be directed to the mill process and subsequently to the TMA as long as ammonia concentrations in the runoff have the potential to be acutely toxic to aquatic life. Once concentrations have attenuated to a level that in non-toxic and is otherwise compliant with the applicable provincial surface water quality guidelines for ammonia, the runoff may be directed to Rice Lake.

Addition of the Hinge Zone bulk sample collection to the Cartwright development is not anticipated to result in discharges to water exceeding the designed net water balance of the TMA and no significant changes to the quality of the existing effluent streams are expected.

5.1 Waste Rock and Ore Sampling

5.1.1 Background

Since 1998, San Gold mining operations in Bissett, Manitoba have been subject to various waste rock and ore sampling requirements as required by several new and revised EA licenses. The following paragraphs detail past waste rock and ore sampling requirements and propose a revised sampling frequency for future operations. The waste rock and waste ore sampling requirements as set out in the new and revised EA licenses are also summarized in Table 1.

From September 1998 to November 2003, the Rice Lake Mine operated under EA Licence 2161 S1 RR. Under this licence, the licensee was required to collect bulk samples of waste rock every six (6) months during the first two (2) years, with one (1) bulk sample collected once every 12 months thereafter. The samples were to be analyzed for neutralization potential, acid generation potential and percent sulphur content, with the results reported to the Director upon availability.

The Rice Lake Mine currently operates under EA Licence 2628 R. Under this licence, San Gold is required to monitor various environmental components including waste rock and waste ore acid-generation potential. Under EA licence 2628 R, San Gold is required to collect a bulk sample of the new waste rock and new ore every three (3) months each year that new waste rock or new ore is added to the respective surface stockpile. Annually, the bulk samples collected over the previous year (12 months) must undergo acid-base accounting tests to determine the neutralization potential, acid generation potential, and percent sulphur content, with the results reported to the Director of Environmental Assessment and Licensing at Manitoba Conservation.

Since the issuance of EA Licence 2628 R, San Gold has submitted two (2) Notice of Alterations (NOAs). The first NOA was submitted in June 2006 to include the operation of the San Gold No. 1 (SG-1) Mine, while the second NOA was submitted in March 2008 to include development and mining of the Cartwright Deposit. According to the 2006 and 2008 NOAs and historical licence applications, the Rice Lake Gold Mine, SG-1 Mine and Cartwright deposits occur in the same geological formation, the Achaean Rice Lake-Beresford Lake Greenstone Belt of the Superior Structural Province, which is composed of volcanic and derived sedimentary rocks of the Rice Lake Group and overlying sedimentary rocks of the San Antonio Formation.

At the time of the June 2006 NOA submission, waste rock and ore at the SG-1 Mine was being brought to the surface with bulk samples collected every 5,000 tonnes and analyzed for acid-generation potential. The June 2006 NOA proposed to reduce the frequency for sampling and analyzing waste rock and waste ore to once every 10,000 tonnes of waste generated. A response from Manitoba Conservation in September 2006 approved the NOA as a minor alteration conditional on revisions to EA licence 2628 R incorporating the SG-1 deposit. The March 2008 NOA proposed to further reduce the sampling frequency to the collection of one representative waste rock sample on a quarterly basis to create an annual composite sample for acid-generation potential assay, with waste rock from the SG-1 and Cartwright mines collected and analyzed separately. A response from Manitoba Conservation in April 2008 approved the NOA as a minor alteration conditional on San Gold's acceptance of a revised (updated) EA licence that would reflect this NOA as well as the one previously submitted on June 19, 2006.

5.1.2 Analytical Results

A summary of the results of the waste rock and waste ore acid-base accounting analyses are provided in the attached tables, with Table 2 summarizing results from the Rice Lake Gold Mine, Tables 3 and 4 summarizing results from the SG-1 Mine, Table 5 summarizing core sample results from the Cartwright Mine deposit, and Table 6 summarizing core sample results from the Hinge Zone bulk sample area. All of the samples submitted and reported in the tables (a total of 87 samples) have been classified as having no acid-generating potential. Table 7 summarizes the acid-base accounting analyses completed to date based on sampling frequency, number of samples, sample type, and date sampled.

The results from the Rice Lake Gold Mine, Table 2, include the period between July 1998 and July 2000 and one (1) sample from December 2008. In this time frame, six (6) waste rock samples, six (6) waste ore samples and one (1) tailings sample were submitted for acid-base accounting tests. All 13 of the samples were classified as not acid-generating.

The results from the San Gold Mine (SG-1) shown in Tables 3 and 4 include 33 waste rock samples obtained in the period between February 2005 and December 2008 and 14 waste ore samples obtained in the period between December 2005 and December 2008. All 47 samples were classified as not acid-generating. Based on the reported dates, the majority of the samples were obtained within a three month period. For the waste rock samples, all the samples collected before October 2005 were acquired at intervals of approximately one sample per 1,000 tonnes of waste mined and the samples collected between October 2005 and March 2006 were acquired at approximate intervals of one (1) sample per 5,000 tonnes of waste mined. For the waste ore samples, sampling intervals ranged from one (1) sample per 200 to 5,000 tonnes of waste mined. Sample data obtained after March 2006 did not include the amount of waste mined since the last sample.

As shown in Table 5, fourteen (14) core samples from the Cartwright Mine were submitted for acid-base accounting in January 2007. All fourteen (14) samples were classified as not acid-generating.

As shown in Table 6, ten (10) core samples from the Hinge Zone were submitted for acid-base accounting in August 2008. All ten (10) samples were classified as not acid-generating. One (1) waste rock sample and one (1) waste

ore sample were collected from the Hinge Zone in December 2008. Both of these samples were found to be not acid-generating.

5.1.3 Proposed Waste Rock and Waste Ore Sampling

Based on previous results showing that all submitted samples are not acid-generating, San Gold is proposing a reduced frequency of waste rock acid-generation potential monitoring. It is proposed that one representative waste rock sample be collected on a quarterly basis and combined into a single composite sample for annual acid-generation potential assay. The waste rock streams from each of the Rice Lake, Cartwright and Hinge Zone developments would be sampled and assayed separately. Similarly, it is proposed that one representative waste ore sample be collected on a quarterly basis and combined into a single composite sample for annual acid-generation potential assay. The waste ore streams from each of the Rice Lake, Cartwright and Hinge Zone developments would be sampled and assayed separately.

5.2 Wetland Area – Waste Rock and Site Runoff Water Sampling

Site runoff from the proposed wetland redevelopment will be collected and directed to a ditch that will be installed to the west of the wetland area between the service road and the wetland area. Based on the acid-generation potential assays conducted thus far, the waste rock used to infill the wetland area underlying the proposed baseball diamond is not expected to be acid-generating. However, the waste rock moved to the wetland area will be sampled at a frequency of one (1) sample per 10,000 m^3 of waste rock. Elevated ammonia in the waste rock runoff is a relatively short-term concern, occurring during waste rock generation and then attenuating over a period of one to two years once waste rock placement has ceased. The collected runoff will be directed to the mill process and subsequently to the TMA as long as ammonia concentrations in the runoff have the potential to be acutely toxic to aquatic life. Once concentrations have attenuated to a level that in non-toxic and is otherwise compliant with the applicable provincial surface water quality guidelines for ammonia, the runoff may be directed to Rice. The analytical results will be reported to the Director of Environmental Assessment and Licensing at Manitoba Conservation.

6. Conclusion

In summary, based on the information presented above, it is concluded that the change in environmental effects resulting from the relocation of the Cartwright portal, the collection and processing of the Hinge Zone bulk sample, and the use of waste rock to infill the wetland area for redevelopment as a recreational area will be insignificant. Therefore, this NOA should be considered a minor alteration to the existing licensed development.

7. References

Wardrop Engineering Inc. March 2008. Cartwright Mine Notice of Alteration.

Harmony Gold. 2001. Stage II Environment Act License Application.

Tables

Table 1: Environment Act (EA) Licence Sampling Requirements

EA Licence or Notice of Alteration	Date of Issue	Required Sampling Frequency
2161 S1 RR	September 1998	Waste rock bulk sample collected every 6 months for the first 2 years, one bulk sample collected every 12 months thereafter. Samples must undergo tests for acid-generation potential.
2628R	November 2003	Waste rock and waste ore bulk sample collection every 3 months each year new waste rock or new ore is added to the respective surface stockpile. Annually, the bulk sample collected from the previous 12 months must undergo tests for acid-generation potential.
San Gold No. 1 Mine NOA	June 2006	Proposal to sample waste rock and waste ore once every 10,000 tonnes of waste generated for acid-generation potential was accepted by Manitoba Conservation.
Cartwright Mine NOA	March 2003	Proposal to collect one representative waste rock sample on a quarterly basis to create an annual composite sample for acid-generation potential assay. Waste rock from the SG-1 and Cartwright Mines collected and analyzed separately. Proposed sampling frequency was accepted by Manitoba Conservation.

Table 2: Rice Lake Gold Mine Acid-Base Accounting Test Results

Sample ID		Waste 1	Waste 2	Waste 3	Waste 1	Waste 2	Crushed Waste Rock	Rice Lake 053	Ore 1	Ore 2	Ore 1	Ore 2	Ore	Rice Lake 052	Final Tailings 1
Date		**July-29-98**	**July-29-98**	**Feb-25-99**	**Mar-29-00**	**Mar-29-00**	**July-25-00**	**Dec-29-08**	**July-29-98**	**July-29-98**	**Mar-29-00**	**Mar-29-00**	**July-25-00**	**Dec-29-08**	**July-25-00**
Rock Type	**units**	**Waste Rock**	**Waste Rock**	**Waste Rock**	**Waste Rock**	**Waste Rock**	**Waste Rock**	**Waste Rock**	**Ore**	**Ore**	**Ore**	**Ore**	**Ore**	**Ore**	**Tailings**
NP	**t $CaCO_3$/1,000 t**	81.0	77.3	68.4	157	68.4	149.0	131.0	182	180	176	108	141	176	150
AP	**t $CaCO_3$/1,000 t**	0.31	0.63	0.31	0.31	0.31	1.88	3.4	2,513	22.8	31.3	66.6	31.9	13.4	7.50
Net NP	**t $CaCO_3$/1,000 t**	80.7	76.7	68.1	157.0	68.1	147	128	157	157	145	41	109	162	143
NP/AP	**ratio**	261	123	221	506	221	79.3	38.5	7.19	7.89	5.62	1.62	4.42	13.1	20.0
S	**%**	0.02	0.02	0.02	0.04	0.02	0.31	0.164	0.86	0.78	1.8	8.25	1.39	0.775	0.50
Assessment		NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG

Note: NAG - not acid-generating
Results expressed as tonnes $CaCO_3$ equivalent/1,000 tonnes of material

Acid Generation Assessment Criteria

Net NP >20 - not acid-producing
Net NP between -20 and 20 - uncertain acid-producing potential
Net NP <-20 - potentially acid-producing

NP/AP >3 - not acid-producing
NP/AP between 1 and 3 - uncertain acid-producing potential
NP/AP <1 - potentially acid-producing

If sulphide, the main contributor to acid production, is not detected (<0.01%) and carbonate, the main contributor to neutralization potential, is present, rock is considered not acid-producing.

Table 3: San Gold No. 1 Mine Waste Rock Acid-Base Accounting Test Results

Sample ID		SG1-001	SG1-002	SG1-003	SG1-004	SG1-005	SG1-006	SG1-007	SG1-008	SG1-009	SG1-010	SG1-011	SG1-012	SG1-013	SG1-014	SG1-015	SG1-016	SG1-017
Date		Feb-22-05	Mar-31-05	June-9-05	July-18-05	Aug-9-05	Aug-14-05	Aug-19-05	Aug-24-05	Aug-30-05	Sept-07-05	Sept-12-05	Sept-15-05	Sept-18-05	Sept-26-05	Oct-18-05	Nov-09-05	Dec-08-05
Rock Type		ILT	ILT	ILT	ILT	ILT	ILT	ILT	ILT	ILT	ILT	ILT	ILT	ILT	ILT	ILT	ILT	MF
Waste Mined Since Last Sample (tonnes)		1,814	2,406	1,223	1,223	989	989	989	1,007	917	881	1,079	845	935	989	4,190	4,648	4,568
Total Waste Mined to Date (tonnes)	units	4,220	6,626	7,849	9,072	10,061	11,050	12,038	13,045	13,962	14,843	15,922	16,767	17,703	18,692	22,882	27,530	32,098
Paste pH	pH units	9.3	9.71	9.98	9.35	9.74	9.83	9.90	9.22	9.74	9.59	9.79	9.75	9.98	9.79	9.75	9.63	9.58
Fizz Rate		moderate	2	2	3	3	3	3	4	4	3	3	3	2	2	3	3	3
Sample weight	g		2.04	2.00	2.05	1.99	1.99	1.99	2.01	2.00	1.99	2.03	2.03	2.01	2.03	2.03	2.00	2.0
HCl added	mL		26.20	20.00	42.15	46.25	46.70	41.55	51.00	40.00	28.70	29.65	29.20	27.60	27.50	20.00	28.95	25.20
HCl	normality		0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH	normality		0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH = 8.3	mL		14.68	13.00	20.10	21.90	22.10	20.80	21.45	22.50	12.70	15.40	11.30	15.85	15.90	10.80	11.65	10.95
Final pH	pH units		1.43	1.52	1.57	1.61	1.80	1.58	1.76	1.58	1.71	1.80	1.98	1.85	1.77	1.69	1.81	1.69
NP	t $CaCO_3$/1,000 t	51.2	28.2	17.5	53.8	61.2	61.8	52.1	73.5	43.8	40.2	35.1	44.1	29.2	28.6	22.7	43.2	35.1
AP	t $CaCO_3$/1,000 t	<0.06	0.31	0.31	0.31	0.94	0.31	0.31	0.31	0.31	0.31	0.62	0.31	0.31	0.31	0.31	0.31	1.6
Net NP	t $CaCO_3$/1,000 t	51.2	27.9	17.2	53.5	60.3	61.5	51.8	73.2	43.5	39.9	34.5	43.8	28.9	28.3	22.4	42.9	33.5
NP/AP	ratio		91	56.4	174	65.1	199	168	237	141	130	56.6	142	7.1	92.2	73.2	139	21.9
S	%	<0.02	0.03	<0.01	0.04	0.06	0.01	<0.01	0.09	0.01	0.01	0.30	0.02	0.01	<0.01	0.02	0.05	0.09
Sulphide (S^{2-})	%	<0.02	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.05
SO_4	%	<0.01	<0.4	<0.8	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
C(t)	%		0.26	0.10	0.70	0.63	0.69	0.57	0.77	0.52	0.44	0.33	0.46	0.24	0.26	0.20	0.68	0.41
CO_3	%	8.90	1.05	0.44	0.44	2.71	2.83	2.40	3.44	1.99	1.89	1.32	2.09	0.94	1.01	0.80	1.54	1.67
CO_2	%	0.39	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Assessment		NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG

Table 3: San Gold No. 1 Mine Waste Rock Acid-Base Accounting Test Results (cont'd)

Sample ID		SG1-021	SG1-022*	SG1-023	SG1-024	SG1-025*	SG1-026	SG1-027*	SG1-028	SG1-031	SG1-032	SG1-034	SG1-035	SG1-036	SG1-038	SG1-041	SG1-049
Date		Mar-10-06	Mar-22-06	Mar-22-06	Apr-27-06	May-17-06	June-01-06	June-27-06	July-24-06	Sep-17-06	Oct-30-06	Dec-11-06	Jan-14-07	Feb-24-07	Apr-06-07	Apr-25-07	29-Dec-08
Rock Type		ILT	AR	ILT	MF	AR	MF	AR	MF	MF	MF	MF	MF	MF	MF	MF	MF
Waste Mined Since Last Sample (tonnes)		4,832.1	4,257.0	4,832.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Waste Mined to Date (tonnes)	units	36,930.1	41,187.1	46,019.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Paste pH	pH units	8.95	8.99	9.3	8.97	9.05	8.95	9.18	9.72	8.95	9.21	10.02	9.12	9.68	9.65	9.08	8.43
Fizz Rate		2	4	4	3	3	3	3	3	4	4	4	3	3	3	4	3
Sample weight	g	2.03	1.99	1.99	2	2.01	2.03	2.01	1.98	2.03	2.03	1.95	2	2	2	2.03	1.98
HCl added	mL	58.7	121.95	52.8	77.25	124.7	70.7	147.8	95.6	108.4	81.95	52.7	100	55.6	70.9	140	121
HCl	normality	0.1	0.1	0.1	0.1	0.1	0.1	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH	normality	0.1	0.1	0.1	0.1	0.1	0.1	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH = 8.3	mL	18.35	44.2	23.9	34.4	45.65	20.95	49.6	30.9	46	24.75	12.8	29.1	27.25	26	52.7	61.40
Final pH	pH units	1.81	1.66	1.69	1.67	1.68	1.99	1.89	1.79	1.63	1.69	1.93	1.65	1.61	1.95	1.76	1.66
NP	t $CaCO_3$/1,000 t	99.4	195	72.6	107	197	123	244	163	154	141	102	177	70.9	112	215	150
AP	t $CaCO_3$/1,000 t	0.31	1.21	0.68	2.2	5.8	2.41	8.2	0.62	2.9	1.78	0.62	0.62	0.31	0.31	0.31	16.2
Net NP	t $CaCO_3$/1,000 t	99.1	194	71.9	105	191	120	236	162	151	139	101	176	70.6	112	215	134
NP/AP	ratio	321	162	107	49	40	51	30	263	53	79	165	285	229	362	694	9.3
S	%	0.04	0.11	0.08	0.11	0.22	0.19	0.44	0.04	0.17	0.09	0.05	0.03	0.026	0.046	0.11	0.722
Sulphide (S^{2-})	%	<0.01	0.04	0.02	0.07	0.184	0.077	0.264	0.02	0.092	0.057	0.02	0.02	<0.01	<0.01	0.01	0.52
SO_4	%	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	< 0.1
C(t)	%	1.18	2.23	0.76	1.17	2.93	1.34	3.63	2.01	1.77	1.63	1.23	2.2	0.77	1.36	2.67	2.72
CO_3	%	5.54	10.4	3.49	5.22	10.8	6.29	15.2	9.2	8.12	7.69	5.66	9.17	3.61	5.95	12.4	10.2
CO_2	%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Assessment		NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG

Note: SG1-XXX* - these samples are low grade ore and would be placed in waste rock pile
ILT - intermediate lapilli-tuff
MF - mafic flow
AR - altered rock
NAG - not acid-generating
n/a - not available
Results expressed as tonnes $CaCO_3$ equivalent/1,000 tonnes of material

Acid Generation Assessment Criteria

Net NP >20 - not acid-producing
Net NP between -20 and 20 - uncertain acid-producing potential
Net NP <-20 - potentially acid-producing

NP/AP >3 - not acid-producing
NP/AP between 1 and 3 - uncertain acid-producing potential
NP/AP <1 - potentially acid-producing

If sulphide, the main contributor to acid production, is not detected (<0.01%) and carbonate, the main contributor to neutralization potential, is present, rock is considered not acid-producing.

Table 4: San Gold No. 1 Mine Waste Ore Acid-Base Accounting Test Results

Sample ID		SG1-018	SG1-019	SG1-020	SG1-022	SG1-025*	SG1-027*	SG1-029	SG1-030	SG1-033	SG1-037	SG1-039	SG1-040	SG1-042	SG1-048
Date		Dec-13-05	Jan-24-06	Mar-10-06	Mar-22-06	May-17-06	June-27-06	Aug-04-06	Aug-24-06	Nov-10-06	Feb-27-07	Mar-11-07	Apr-06-07	Apr-25-07	Dec-29-08
Rock Type		QV	AR	QV/AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
Waste Mined Since Last Sample (tonnes)		0	3,875	4,633	376	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Waste Mined to Date (tonnes)	units	212	4,088	8,720	9,096	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Paste pH	pH units	8.64	8.91	8.89	8.99	9.05	9.18	9.39	9.34	9.10	9.01	8.93	8.99	8.68	8.45
Fizz Rate		4	3	2	4	3	3	4	4	2	3	3	3	4	3
Sample weight	g	2.02	1.98	1.99	1.99	2.01	2.01	2.01	1.98	1.98	2	2.01	2	1.97	2.01
HCl added	mL	137.65	157.95	128.45	121.95	125	148	162	149	103	163	120	123	136	140
HCl	normality	0.10	0.10	0.10	0.10	0.1	0.1	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH	normality	0.10	0.10	0.10	0.10	0.1	0.1	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH = 8.3	mL	59.10	73.05	47.00	44.20	45.7	49.6	71.3	52.5	30.1	71.8	41.8	46	56.5	71.00
Final pH	pH units	1.58	1.60	1.96	1.66	1.68	1.89	1.76	1.7	1.99	1.72	1.93	1.87	1.83	1.61
NP	t $CaCO_3$/1,000 t	194	214	205	195	197	244	225	243	184	229	195	194	201	170
AP	t $CaCO_3$/1,000 t	21.9	13.8	3.1	1.21	5.80	8.2	47.3	16.4	34.1	17.3	42.9	10.6	45.6	21.6
Net NP	t $CaCO_3$/1,000 t	172	200	202	194	191	236	178	227	150	212	152	183	155	149
NP/AP	ratio	8.9	15.5	66.1	162	40	29.8	4.77	14.8	5.4	13.2	4.5	18.3	4.4	7.9
S	%	0.75	0.64	0.21	0.11	0.22	0.44	1.58	0.61	1.18	0.66	1.5	0.601	1.75	1.24
Sulphide (S^{2-})	%	0.70	0.44	0.10	0.04	0.184	0.264	1.51	0.526	1.09	0.56	1.37	0.34	1.46	0.69
SO_4	%	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	< 0.1
C(t)	%	3.15	3.46	3.25	2.23	2.93	3.63	3.88	3.13	3.11	3.63	3.13	3.13	3.59	3.04
CO_3	%	11.2	12.8	14.8	10.4	10.8	15.2	14.5	12	11.5	14.7	11.7	11.1	10.9	11.1
Assessment		NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG

Note: SG1-XXX* - these samples are low grade ore and would be placed in waste rock pile
QV - quartz vein
AR - altered rock
NAG - not acid-generating
n/a - not available
Results expressed as tonnes $CaCO_3$ equivalent/1,000 tonnes of material

Acid Generation Assessment Criteria

Net NP >20 - not acid-producing
Net NP between -20 and 20 - uncertain acid-producing potential
Net NP <-20 - potentially acid-producing

NP/AP >3 - not acid-producing
NP/AP between 1 and 3 - uncertain acid-producing potential
NP/AP <1 - potentially acid-producing

If sulphide, the main contributor to acid production, is not detected (<0.01%) and carbonate, the main contributor to neutralization potential, is present, rock is considered not acid-producing.

Table 5: Cartwright Deposit Core Sample Acid-Base Accounting Test Results

Sample ID		895801	895802	895803	895804	895805	895806	895807	895808	895809	895810	895811	895812	895813	895815
Date		Jan-31-07	Jan-31-07	Jan-31-07	Jan-31-07	Jan-31-07	Jan-31-07	Jan-31-07	Jan-31-07	Jan-31-07	Jan-31-07	Jan-31-07	Jan-31-07	Jan-31-07	Jan-31-07
Rock Type	units	DB	DB	ILT	DB	ILT	ILT	DB	ILT	QV	DB	ILT	ILT	DB	ILT
Paste pH	pH units	9.02	9.27	9.73	9.24	9.62	9.24	9.89	9.49	8.5	9.23	8.88	9.94	9.64	9.81
Fizz Rate		3	3	3	3	2	2	3	2	3	2	3	3	3	3
Sample weight	g	2	1.98	1.99	1.99	2	2	2.01	1.98	1.98	2	1.99	1.98	2.01	1.98
HCl added	mL	96.95	82.9	59.7	69.25	55.5	39.95	40	40	126.1	74.7	54.3	57.5	51.4	57.55
HCl	normality	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NaOH	normality	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NaOH to pH = 8.3	mL	43.7	26.3	21.6	40.7	22.5	26.5	14.2	22.5	63.35	31.45	28.45	22.9	25.6	24.5
Final pH	pH units	1.74	1.98	1.99	1.74	1.88	1.7	1.92	2.03	1.72	1.94	1.83	1.75	1.86	1.76
NP	t $CaCO_3$/1,000 t	133	143	95.7	71.7	82.5	33.6	64.2	44.2	158	108	64.9	87.4	64.2	83.5
AP	t $CaCO_3$/1,000 t	0.62	0.31	2.2	0.31	0.31	0.31	0.31	0.94	40	0.31	1.6	0.31	3.1	1.2
Net NP	t $CaCO_3$/1,000 t	132	143	93.5	71.4	82.2	33.3	63.9	43.3	118	108	63.3	87.1	61.1	82.3
NP/AP	ratio	215	461	43.5	231	266	108	207	47	3.96	349	40.6	282	20.7	69.5
S	%	0.063	0.027	0.089	0.017	0.011	0.01	0.01	0.035	1.36	0.029	0.113	0.013	0.145	0.041
Sulphide (S^{2-})	%	0.02	<0.01	0.07	<0.01	<0.01	<0.01	<0.01	0.03	1.28	<0.01	0.05	<0.01	0.1	0.04
SO_4	%	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
C(t)	%	1.83	1.64	1.11	0.765	0.903	0.318	0.743	0.41	2.11	1.32	0.723	1.05	0.706	1.004
Carbonate	%	7.84	7.5	4.87	3.2	3.94	1.26	3.35	1.54	7.75	5.5	3.11	4.85	3.00	4.54
Assessment		NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG

Note: DB - diabase
ILT - intermediate lapilli-tuff
QV - quartz vein
NAG - not acid-generating
Results expressed as tonnes $CaCO_3$ equivalent/1,000 tonnes of material

Acid Generation Assessment Criteria

Net NP >20 - not acid-producing
Net NP between -20 and 20 - uncertain acid-producing potential
Net NP <-20 - potentially acid-producing

NP/AP >3 - not acid-producing
NP/AP between 1 and 3 - uncertain acid-producing potential
NP/AP <1 - potentially acid-producing

If sulphide, the main contributor to acid production, is not detected (<0.01%) and carbonate, the main contributor to neutralization potential, is present, rock is considered not acid-producing.

Table 6: Hinge Zone Deposit Acid-Base Accounting Test Results

Sample ID		895816	895817	895818	895819	895820	895821	895822	895823	895824	895825	Hinge 051	Hinge 050
Date		Aug-28-08	Aug-28-08	Aug-28-08	Aug-28-08	Aug-28-08	Aug-28-08	Aug-28-08	Aug-28-08	Aug-28-08	Aug-28-08	Dec-29-08	Dec-29-08
Rock Type	units	Core Sample	Core Sample	Core Sample	Core Sample	Core Sample	Core Sample	Core Sample	Core Sample	Core Sample	Core Sample	Waste Rock	Ore
Paste pH	pH units	9.38	9.55	9.75	9.48	9.48	9.65	9.65	9.38	9.38	9.83	9.41	8.56
Fizz Rate		3	3	3	3	3	3	3	4	4	2	3	3
Sample weight	g	2.00	2.05	2.02	2.00	2.02	1.98	2.03	1.99	2.01	1.99	1.97	2.00
HCl added	mL	106	87.7	80.3	96.4	33.8	57.3	35.0	59.8	71.5	20.0	30.8	68.9
HCl	normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH	normality	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH = 8.3	mL	51.20	34.40	27.40	40.65	24.50	21.70	21.30	32.40	34.80	16.20	15.10	26.50
Final pH	pH units	1.61	1.78	1.87	1.74	1.45	1.97	1.55	1.61	1.53	1.65	1.83	1.68
NP	t $CaCO_3$/1,000 t	138	130	116	139	23.0	89.9	33.7	68.7	91.3	9.5	39.8	106
AP	t $CaCO_3$/1,000 t	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	7.2
Net NP	t $CaCO_3$/1,000 t	138	130	116	139	22.7	89.6	33.4	68.4	91.0	9.19	39.5	98.8
NP/AP	ratio	446	419	374	450	74.2	290	109	222	295	30.6	128	14.7
S	%	0.013	< 0.005	0.006	< 0.005	< 0.005	< 0.005	< 0.005	0.006	< 0.005	< 0.005	0.042	0.359
Sulphide (S^{2-})	%	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.23
SO_4	%	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
C(t)	%	2.01	1.85	1.67	2.04	0.206	1.15	0.334	0.785	1.09	0.072	0.513	1.51
Carbonate	%	9.67	8.72	8.03	9.83	0.931	5.55	1.49	3.78	5.00	0.238	2.15	6.33
Assessment		NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG	NAG

Note: NAG - not acid-generating
n/a - not available
Results expressed as tonnes $CaCO_3$ equivalent/1,000 tonnes of material

Acid Generation Assessment Criteria

Net NP >20 - not acid-producing
Net NP between -20 and 20 - uncertain acid-producing potential
Net NP <-20 - potentially acid-producing

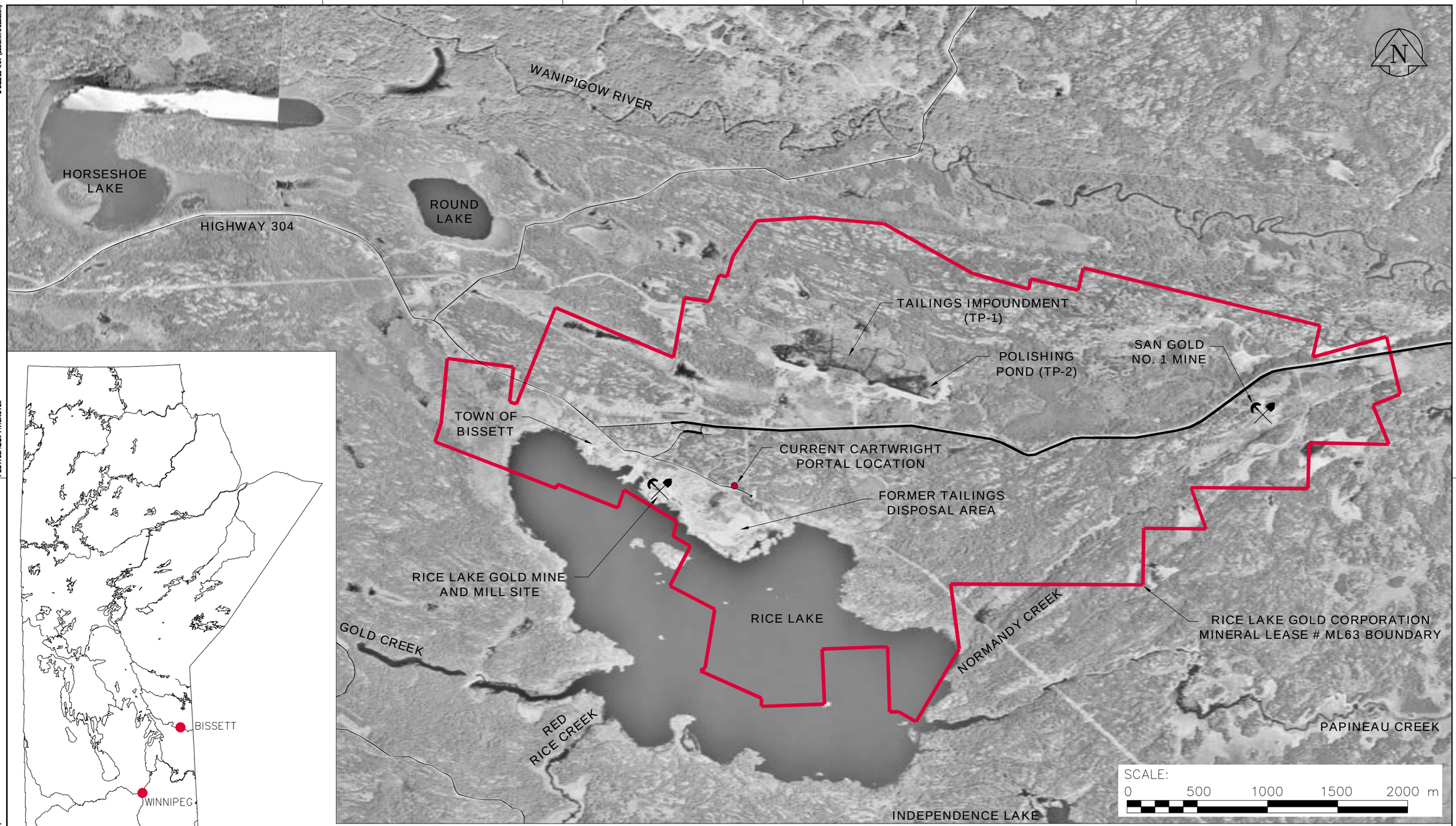
NP/AP >3 - not acid-producing
NP/AP between 1 and 3 - uncertain acid-producing potential
NP/AP <1 - potentially acid-producing

If sulphide, the main contributor to acid production, is not detected (<0.01%) and carbonate, the main contributor to neutralization potential, is present, rock is considered not acid-producing.

Table 7: Waste Rock and Waste Ore Sampling Summary

Source	Sample Type	Date	# of Samples	Sampling Frequency
Rice Lake Mine	Waste Rock	July 1998 - July 2000	6	not recorded
		December 2008	1	not recorded
	Waste Ore	July 1998 - July 2000	5	not recorded
		December 2008	1	not recorded
	Tailings	July 2000	1	not recorded
SG-1	Waste Rock	February 2005 - September 2005	14	every 1,000 tonnes
		October 2005 - March 2006	6	every 5,000 tonnes
		April 2006 - April 2007	12	not recorded
		December 2008	1	not recorded
	Waste Ore	December 2005 - April 2007	13	every 200 to 9,000 tonnes
		December 2008	1	not recorded
Cartwright Deposit	Core Samples	January 2007	14	once
Hinge Zone Deposit	Core Samples	August 2007	10	once
	Waste Rock	December 2008	1	not recorded
	Waste Ore	December 2008	1	not recorded

Figures



SOURCE: MANITOBA LAND INITIATIVE – DIGITAL IMAGERY FILES 7205650neg, 7205660seg, 7305650neg, 7305650nwg, 7305660seg, AND 7305660swg.

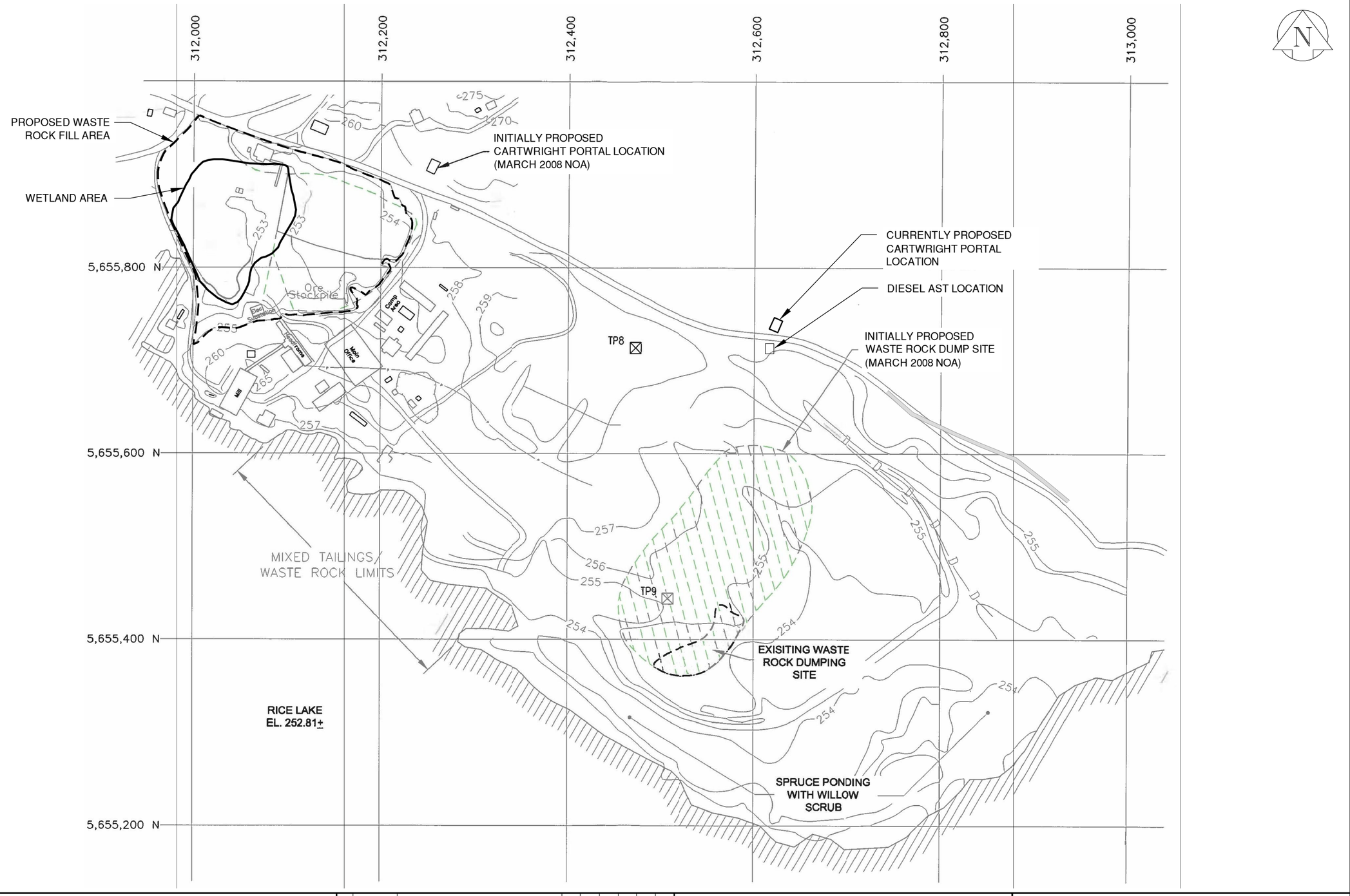
PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
B	09/12/18	DRAFT FOR MANITOBA CONSERVATION REVIEW	CLC	SC	.	.	.	.
A	09/04/06	DRAFT FOR CLIENT REVIEW	KP	SC	.	.	.	.

AECOM

SAN GOLD CORPORATION
CARTWRIGHT MINE, BISSETT, MANITOBA
CARTWRIGHT MINE DECEMBER 2009 NOA - DRAFT
SITE LOCATION

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60116437	FIGURE 1	B



D SIZE 22" x 34" (558.8mm x 863.6mm)

PLOT: 09/12/24 11:21:31 AM

BY:—

FILE NAME: SITE PLAN-RB.DWG

DO NOT SCALE THIS DOCUMENT. ALL MEASUREMENTS MUST BE OBTAINED FROM STATED DIMENSIONS.

PROFESSIONAL SEALS

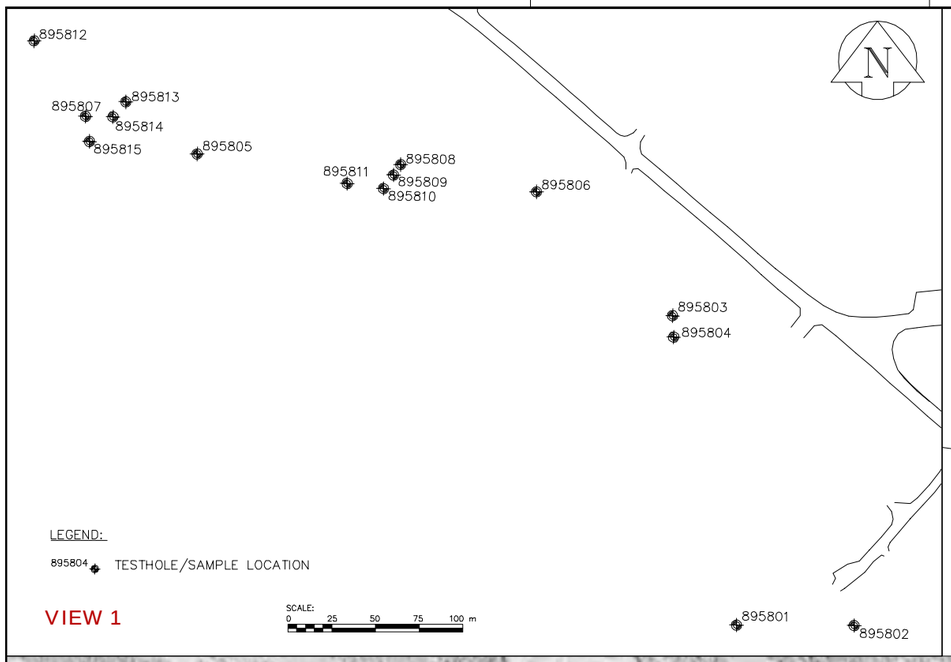
I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
B	09/12/18	DRAFT FOR MANITOBA CONSERVATION REVIEW	LJV	SC	.	.	.	.
A	09/04/06	DRAFT FOR CLIENT REVIEW	KP	SC		.	.	.

AECOM

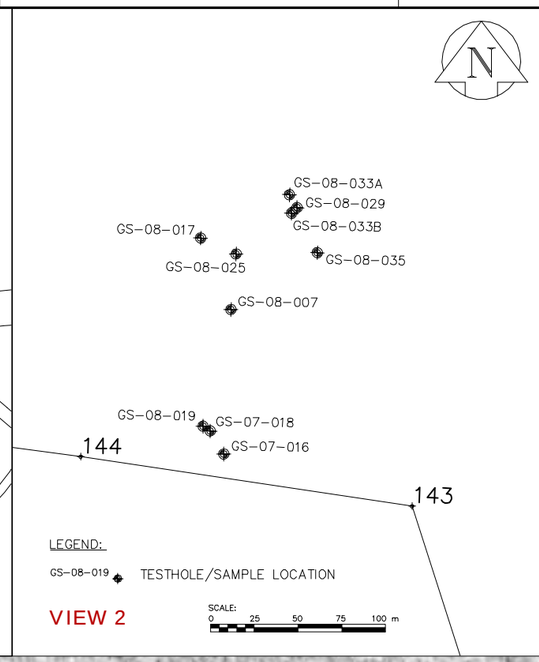
SAN GOLD CORPORATION
CARTWRIGHT MINE, BISSETT, MANITOBA
CARTWRIGHT MINE DECEMBER 2009 NOA - DRAFT
DETAILED SITE PLAN SHOWING CARTWRIGHT PORTAL AND PROPOSED WASTE ROCK DUMP SITES

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60116437	FIGURE 2	B

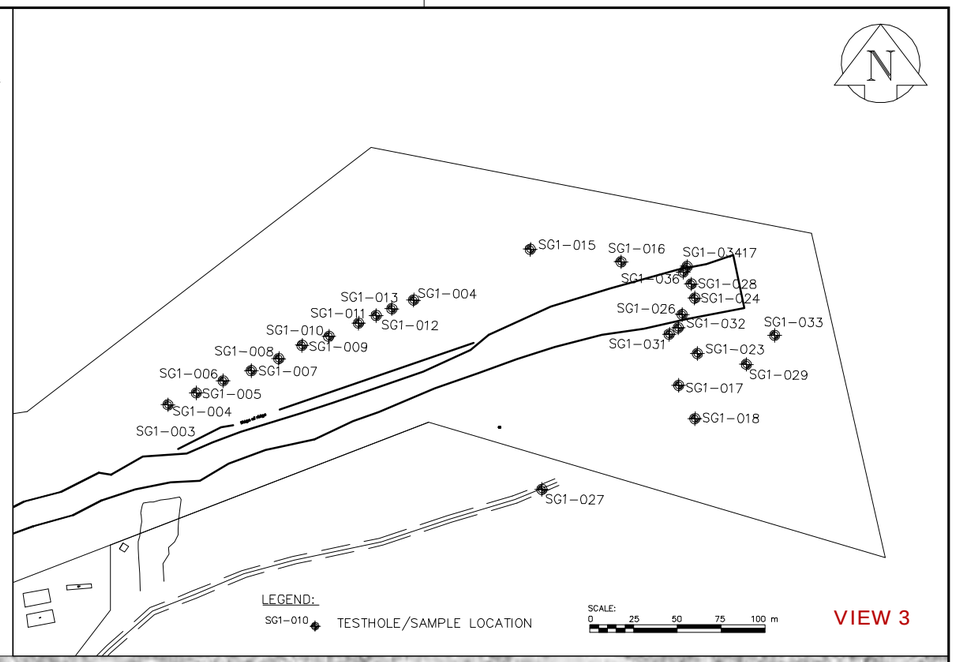
D SIZE 22" x 34" (558.8mm x 863.6mm)



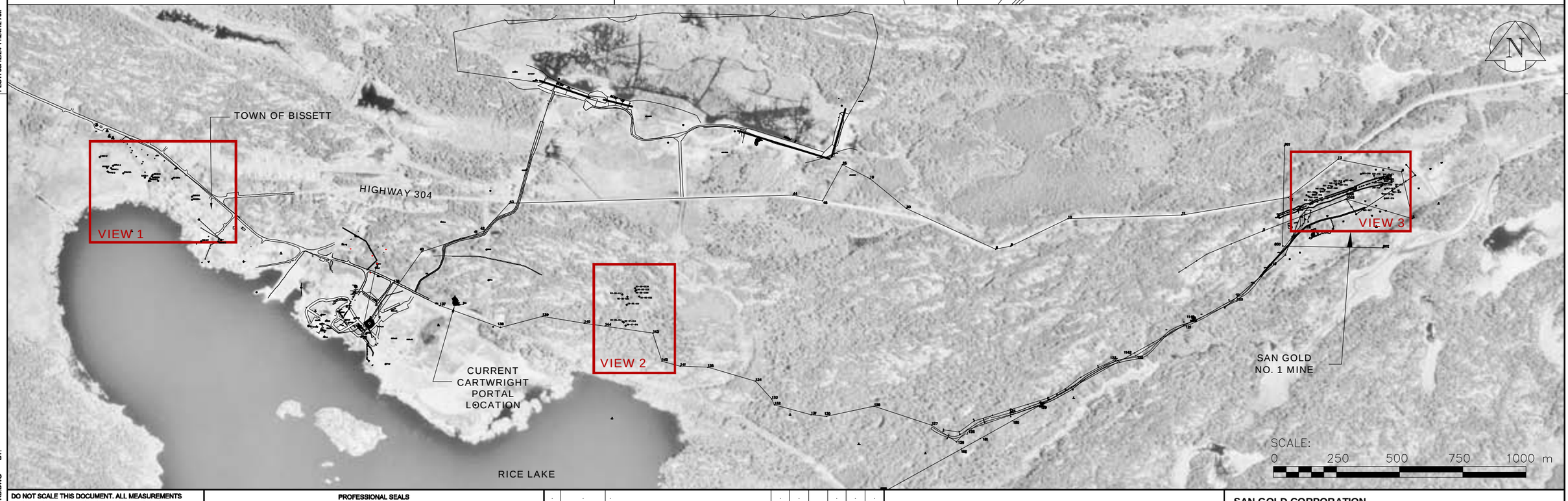
VIEW 1



VIEW 2



VIEW 3



PLOT: 09/12/24 11:24:12 AM BY:—

FILE NAME: SAMPLE LOCATIONS-RB.DWG

PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
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B	09/12/18	DRAFT FOR MANITOBA CONSERVATION REVIEW	LJV	SC	.	.	.	.
A	09/04/06	DRAFT FOR CLIENT REVIEW	KP	SC	.	.	.	.

AECOM

SAN GOLD CORPORATION
CARTWRIGHT MINE, BISSETT, MANITOBA

CARTWRIGHT MINE DECEMBER 2009 NOA - DRAFT

SAMPLE LOCATIONS

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60116437	FIGURE 3	B

SOURCE: MANITOBA LAND INITIATIVE – DIGITAL IMAGERY FILES 7205650neg, 7205660seg, 7305650neg, 7305650nwg, 7305660seg, AND 7305660swg.

PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
B	09/12/18	DRAFT FOR MANITOBA CONSERVATION REVIEW	CLC	SC	.	.	.	.
A	09/07/02	DRAFT FOR CLIENT REVIEW	KP	SC	.	.	.	.

AECOM

SAN GOLD CORPORATION
CARTWRIGHT MINE, BISSETT, MANITOBA
CARTWRIGHT MINE DECEMBER 2009 NOA - DRAFT
PROPOSED WASTE ROCK FILL AREA

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60116437	FIGURE 4	B