

April 30, 2012

File No.:VA101-290/6-A.01
Cont. No.:VA12-00744



Mr. Steve Wilbur
Victoria Gold Corp
Suite 584 – 1055 Dunsmuir Street
Vancouver, BV7X 1K8

Dear Steve,

Re: Eagle Gold Project – Water Balance Model Transitional Summary

1. INTRODUCTION

Knight Piésold Ltd. (KP) has been engaged by Victoria Gold Corporation (VIT) to provide a summary of the chronological progression of the site-wide water balance model that has been developed in support of the Eagle Gold Project (Project).

The original water balance model was prepared for the Project Proposal and Pre-Feasibility Study (PFS) and was based on a 66 million tonne heap leach facility mine plan. Subsequent to that, a Feasibility Study (FS) of the Project based on a 92 million tonne heap leach facility mine plan was developed.

The purpose of this letter is to highlight the refinements included in the FS water balance model, including a discussion of model assumptions and water management strategies, and the relative effects of the refinements as they pertain to the operations, closure and reclamation and post-closure monitoring phases of the Project.

2. WATER BALANCE MODEL OVERVIEW

Pre-Feasibility Study Surface Water Balance Model

The PFS Surface Water Balance Model (PFS SWBM) was an essential component of the Eagle Gold Project Proposal (Appendix 21 - Stantec, 2011a) for the 66 million tonne heap leach facility mine plan. The PFS SWBM was developed using a Microsoft Excel spreadsheet platform. This model utilizes a monthly time step and simulates the site-wide water balance as a flow-through model without the capacity to store water from one month to the next. The modeling timeline includes a baseline model simulation and an operational model simulation.

The operational model simulation is the primary focus of the comparison in this letter. The operational model timeline includes 1.7 years of construction, 7.3 years of operation, 7 years of closure/reclamation and 5 years for post-closure monitoring. The model incorporates the following major Project components:

- Open pit (OP)
- Eagle Pup waste rock storage area (EP WRSA and associated storage facilities)
- Platinum Gulch waste rock storage area (PG WRSA) and associated storage facilities
- Heap Leach Facility (HLF)
- Mine Water Treatment Plant (MWTP) and associated storage facilities
- Events Ponds, and
- Dublin Gulch Diversion Channel (DGDC).

Streamflow and/or site runoff volumes were predicted at specific nodes within the model. Where possible, model nodes were located at established hydrometric stations. Three water balance flowsheets that were presented in the Project Proposal (Appendix 18 – Stantec, 2011c) are included in Appendix A. These flowsheets summarize the flow rates at specific nodes in the PFS SWBM. These flowsheets illustrate the annual predicted volumes at the major model nodes and provide the basis for comparison to the FS model. The calendar timeline for the model spans from January 2012 to January 2035. The Project timelines and key milestones are listed in Table 1 and model assumptions are summarized in Table 2.

An updated version of the PFS SWBM was subsequently provided as part of the “Eagle Gold Project Response to Request for Supplementary Information” report (Stantec, 2011e). The updated PFS SWBM was simulated using the GoldSim software and included a number of refinements to address water management issues identified during the YESAB adequacy review process. The water routing assumptions, Project components and model timeline of the updated Goldsim model are identical to the Excel model, with the GoldSim model platform providing enhanced capabilities for water storage routing and probabilistic modeling of precipitation conditions (stochastic analysis). The GoldSim PFS SWBM provided an intermediate step between the Excel water balance and the FS water balance model. For the purpose of this letter, the main focus of the study will be to compare the results of the PFS SWBM Excel version and those from the FS water balance model, with the results of the updated GoldSim PFS SWBM shown for information only.

Feasibility Study Water Balance Model

The FS Water Balance Model (FS WBM) was included as part of the Feasibility Water Management Plan (KP, 2012) in support of the Eagle Gold Project Feasibility Study for the 92 million tonne heap leach facility mine plan. The Project components and model nodes of the updated FS WBM are essentially the same as those outlined for the PFS SWBM, with the following refinements:

- An updated mine plan and Project schedule for a 92 million tonne heap leach facility, including 9 years of operations and 10 years of closure/reclamation.
- A revised water management plan and water routing for the mine site, based on the updated 92 million tonne heap leach facility mine plan and Project footprint (KP, 2012).
- The updated FS WBM is simulated using the modeling software GoldSim, which is a dynamic modeling tool that provides enhanced capabilities for water storage routing and probabilistic modeling of precipitation conditions (stochastic analysis).
- The FS WBM utilizes an optimized water management scenario to simulate the recycling of excess discharge from the HLF back to the HLF or events ponds under the following conditions:
 - When the inflow to the MWTP in any month exceeds the design capacity of the mine water treatment of 600 m³/hr, and/or
 - When the dilution ratio in Haggart Creek is less than 10:1 for a given discharge from the MWTP (i.e., in this case defined as 10 parts Haggart Creek plus 1 part MWTP discharge to 1 part MWTP discharge).

The water balance modeling effort for the Project is constantly being refined to optimize the water management plan for the site and minimize potential effects to the downstream environment. The FS WBM results presented in this letter include a few modifications from the version presented in the Feasibility Water Management Plan (KP, 2012):

- For simplicity, the management of the excess water from the LDSP is sent directly to the MWTP, instead of being routed through the Events Ponds, as presented in the Feasibility Water Management Plan (KP, 2012). This helps to minimize the potential requirement for cyanide detoxification of this water, however it does

result in more water being sent to the MWTP earlier in the mine life, as well as increase the makeup water requirement from groundwater. Moving forward, additional refinements to the model will include utilization of additional pond capacities (i.e. temporary storage in Events Ponds and/or the Eagle Pup WRSA collection pond) within the mine site in order to minimize the water sent to treatment and groundwater makeup water requirement.

- The construction and post-closure monitoring phases of the mine life were not originally modeled in the FS WBM, which more focused on the phases with mine-related water demands and when the mine water treatment plant is operational. Water management for disturbed areas during construction is outlined in the erosion and sediment control section of the Water Management Plan (KP, 2012). Subsequently, in order to provide a basis for comparison to the PFS SWBM, the FS WBM has been revised to include post-closure monitoring by assuming that engineered soil covers capable of reducing net infiltration to 20% are applied to the HLF and WRSAs for their respective closure/reclamation phases.

Figures 1 through 3 schematically illustrate the water routing and predicted annual volumes at key nodes in the model for operations, closure and post-closure mine phases. For modeling purposes, the arbitrary calendar timeline spans from January 2013 to January 2035. The Project timelines and key milestones are listed in Table 1 and model assumptions are summarized in Table 2.

Details of the water routing assumptions for each mine facility through the modelling time frames for both the PFS SWBM and FS WBM are summarized in the following sections of this letter.

3. MODEL ASSUMPTIONS

Average Hydrometeorological Conditions

The average climatic and streamflow inputs developed for the PFS water balance model, as well as the runoff coefficients for the undisturbed basins, were based on the analyses completed by Stantec. This information is included in Appendix 7 (Stantec, 2011b) and Appendix 21 (Stantec, 2011a) of the Project Proposal. The average conditions were also adopted for the base case (deterministic) scenario of the FS WBM. Derivation of the precipitation and streamflow inputs are described further, below.

Annual Precipitation and Evaporation

The annual precipitation for each Project area sub-catchment was based on a regional linear regression equation relating elevation to annual precipitation, plus site specific factors. Development of the regional precipitation-elevation regression equation and site precipitation factors are discussed in Appendix 21 of the Project Proposal (Stantec, 2011a). The equation for annual precipitation is as follows:

$$\text{Annual Precipitation}(mm) = [0.173x + 203] * \text{precipitation factor}$$

Where:

x = reference catchment area elevation (m)

precipitation factor = 1.4 for median conditions.

A similar approach was used to determine the annual rainfall amount for each Project sub-catchment. The regional linear regression equation relating elevation to annual rainfall developed by Stantec (2011a) is as follows:

$$\text{Annual rainfall (mm)} = [-0.00010x + 0.7043] * \text{Annual precipitation}$$

Where:

x = reference catchment area elevation (m)

The median annual precipitation for the Dublin Gulch catchment was estimated to be 577 mm (elevation 1,210 m) with 337 mm falling as rain and the remainder as snow. The monthly rainfall and snowfall amounts were based on the observed monthly distributions from the regional historical record for Keno Hill (Stantec, 2011a).

Table 2 includes a summary of the primary hydrometeorological parameters for the Project. Various methods for estimating potential evapotranspiration and actual evapotranspiration were used for the water balance model, depending on the reference surface of the mine facility. Potential evapotranspiration (PET) is defined as the amount of evapotranspiration that would occur given an infinite supply of water from a crop surface and is often used to provide estimates of lake evaporation. For the PFS, mean annual lake evaporation was estimated to be 439 mm, based on an empirical equation for potential evapotranspiration, as described in Appendix 21 (Stantec, 2011a). For the FS, the mean annual evaporation was kept as 439 mm, which is likely higher than actual conditions, but this value has very little influence on the water balance as the pond surfaces are minimal and the balance is primarily driven by the heap leach facility. Actual evapotranspiration (AET) values for the heap leach facility and waste rock storage areas were based on empirical relationships for potential evapotranspiration (PET) and then adjusted to account for evaporation off a bare surface with a limited supply of water, as described in Appendix 21 (Stantec, 2011a).

For the heap leach facility, the AET was estimated using an equation that relates precipitation to PET (Stantec 2011a). The annual actual evapotranspiration was estimated to be 225 mm for the PFS (Stantec, 2011a), while a higher value of a 299 mm was used for the FS, as defined in Tetrattech's technical memo "Eagle Gold Heap Leach Facility Water Balance – Revision 1" (Tetrattech, 2012). This higher value is believed to better represent the losses from the surface of the heap leach facility.

For waste rock piles and open pit, AET was estimated using a relationship which relates potential evapotranspiration to elevation and then adjusted by a coefficient to account for the reduced amount of water available for evaporation from a bare rock surface. For the PFS, the AET values range from 150 mm to 285 mm, depending on elevation, while for the FS a value of 115 mm was used to better reflect the limited the availability of water. This difference is reflected in the runoff coefficient values presented for various mine facilities in Table 2. The runoff coefficients represent the ratio of net precipitation to the total annual precipitation, with the ratio varying from 0.46 to 0.71 for the PFS, but held constant at 0.80 for the FS based on experience with typical values used for similar Projects in the Yukon. This ratio is effectively the annual runoff coefficient. The effect of higher runoff coefficients is higher predicted flow volumes for the mine facilities in the FS model.

Baseline Monthly Streamflow

For both the PFS and the FS, the average monthly streamflow values for natural catchment areas in the Project area were modelled with two components: (1) direct surface runoff due to precipitation inputs and (2) baseflow supplied by groundwater discharge. The main downstream receiving water body in the model is the reach of Haggart Creek that runs from upstream of the confluence with Dublin Gulch at W22 to downstream of the confluence with Platinum Gulch at W29. The baseline monthly surface water component of the streamflow for various locations on Haggart Creek (W4 and W29), Gil Gulch (W33), Dublin Gulch (W1) and

Stewart Gulch (W36) was estimated based on applying a monthly runoff coefficient to the monthly rainfall plus snowmelt values (note that the runoff coefficients used were lower than what would be used if the baseflow component was not added). The monthly baseflow component of the total streamflow at each location was derived based on the unit area baseflow values from the baseline calibration model (Stantec, 2011a), multiplied by the assumed contributing catchment area for each location of interest.

Climatic Variability

PFS SWBM - The potential variability of climatic conditions was addressed by varying annual precipitation values, as well as varying monthly runoff coefficients and monthly unit area baseflow values for the natural sub-catchments. The different climatic scenarios modeled in the PFS SWBM were defined as 'hydroclimatic' scenarios, and include scenarios for the 'wet', 'average' (median) and 'dry' conditions.

- *Precipitation variability* – Annual precipitation values for each hydroclimatic scenario were calculated by varying the site precipitation factor in the annual precipitation formula. Factors of 1.55, 1.4 and 1.0 were selected for wet, median and dry conditions, respectively. The precipitation factors were applied to the regionally derived annual precipitation value for each natural catchment and/or mine facility within the Project footprint. The monthly distribution of the rainfall and snowfall was based on regional precipitation patterns, adjusted for the elevation of the Project site area. The description of the hydroclimatic scenarios, as defined by Stantec (2011a), are:
 - The median scenario represents the annual precipitation value with a two year return interval, or a 50% chance of exceedance in any given year.
 - The wet year scenario represents the annual precipitation value with a 20 year return period interval, or a 5% chance of exceedance in any given year.
 - The dry year scenario represents the annual precipitation value with a 1.055 year return period interval, or a 95% chance of exceedance in any given year.
- *Monthly runoff coefficients* – Different runoff coefficients for each hydroclimatic scenario were used to simulate anticipated variations in hydrologic response to different climatic conditions. Similarly, different runoff coefficients were used for different months within a hydroclimatic scenario. Larger runoff coefficients correspond to increasing precipitation.
- *Monthly unit area baseflow values* – Monthly unit area baseflow values were varied for each hydroclimatic scenario to simulate the monthly variability in baseflow. As with the runoff coefficients, higher baseflows corresponded to wetter conditions.

The development of the precipitation factors, monthly runoff coefficients, and unit area baseflow values for each hydroclimatic scenario were derived as part of the baseline calibration model and validation described in Appendix 21 (Stantec, 2011a). The variability of the precipitation factors and the hydrologic variables results in substantial variability in predicted streamflow volumes, and accordingly the estimates of wet and dry conditions are likely very conservative from a water management perspective.

FS WBM - The potential variability of precipitation conditions was addressed by integrating stochastic functionality into the FS WBM. A Monte Carlo-type simulation was used to model monthly precipitation values as probability distributions rather than simply as mean values.

- *Precipitation variability* - Monthly precipitation values were modeled using an underlying Gamma distribution. Monte Carlo simulations were run with 10,000 iterations, enabling a very large combination of wet, dry, and median months and years of precipitation to be considered. The results were then compiled as distributions for each month in each year, from which probabilities of occurrence were assessed for each model node of

interest. The probabilities of occurrence presented for the water balance results represent the following conditions:

- Median scenario – 50% chance of being equaled or exceeded in any given month or year
- 95th percentile wet scenario – 5% chance of being equaled or exceeded in any given month or year, and
- 5th percentile dry scenario – 95% chance of being equaled or exceeded in any given month or year.

The model was run with varying precipitation inputs but with constant runoff coefficients and monthly baseflow components. This contrasts with the PFS approach, and not surprisingly, results in much lower estimates of streamflow volume variability for the natural basins.

A comparison of the variability of the predicted natural flow values for both the PFS and FS with measured regional flow data indicates that the PFS values show a higher variation compared to measured data, while the FS values are much less variable than the measured data. Accordingly, for future water balance modelling it is intended that natural flows will be simulated on the basis of flow inputs, as well as precipitation inputs, so that the variability of flows will more accurately reflect actual conditions.

Water Management Plan

The following section outlines the water routing assumption for each mine facility for the PFS and the FS water balance models. The year of mine life references the operational mine life (years) assigned to the model calendar time listed in Table 1, assuming mine start-up in September 2013 for the PFS and March 2013 for the FS. Although these start-up dates are arbitrary, the months are representative of plausible seasonal start-up scenarios and so are used for illustrative purposes.

PFS SWBM water routing assumptions:

- Eagle Pup WRSA
 - Operations/Closure - All contact (infiltration) and non-contact (runoff) water is collected in the Eagle Pup (EP) pond and routed to the MWTP feed pond. Excess water, that is not required for makeup to the HLF, is sent to the MWTP until Year 15 (corresponding to two years after initiation of the HLF drawdown).
 - Closure/Reclamation – The engineered cover system placed on the WRSA is assumed to be functional as of September Year 10, with combined contact and non-contact water routed to the DGDC following passive treatment as of Year 15.
- Platinum Gulch WRSA
 - Operations/Closure – Contact (infiltration) water is collected in the Platinum Gulch (PG) pond, with excess water sent to the MWTP feed pond via OP sump dewatering until Year 10. Non-contact water (runoff) is directed to PG sediment collection pond and then routed to the PG channel (environment) during all mine phases.
 - Closure/Reclamation – The engineered cover system placed on the WRSA is assumed to be functional as of September Year 5, with all contact water routed to the PG channel as of Year 10.
- Open Pit (OP)
 - Operations – OP contact and non-contact water, and contact water from the PG WRSA, is sent to the MWTP feed pond, with excess water sent to the MWTP via OP sump dewatering.
 - Closure/Reclamation – All OP water (contact and non-contact) and contact water from PG WRSA routed to PG channel as of Year 10.

- Heap Leach Facility (HLF)
 - Operations/Closure – All contact (infiltration) and non-contact (runoff) water is sent to cyanide detoxification facilities and then the MWTP. Treated water is discharged to Haggart Creek. Excess water is stored in the Events Ponds and sent to treatment until the HLF draindown is complete.
 - Closure/Reclamation – The engineered cover system is assumed to be functional at the initiation of the HLF draindown in Year 12. Contact (infiltration) water (20% of net precipitation) is sent for cyanide detoxification and treatment via the MWTP feed pond. Non-contact (runoff) water is routed to Haggart Creek.
 - Post-closure – All infiltration is routed to Haggart Creek via passive treatment systems.

FS WBM water routing assumptions:

- Eagle Pup WRSA
 - Operations/Closure – All contact (infiltration) and non-contact (runoff) water collected in the EP collection pond is pumped to the LDSP until Year 14 (two years following the initiation of HLF draindown).
 - Closure/Reclamation – The engineered cover system on the WRSA is assumed to be functional as of November Year 12, with combined contact and non-contact water routed to the DGDC via an in-line passive treatment system as of Year 14.
- Platinum Gulch WRSA
 - Operations/Closure – All contact (infiltration) and non-contact (runoff) water collected in the PG collection pond is pumped to the LDSP until Year 14 (two years following the initiation of HLF draindown).
 - Closure/Reclamation – The engineered cover system on the WRSA is assumed to be functional as of March Year 7, with combined contact and non-contact water routed to the PG channel via an in-line passive treatment system as of Year 14.
- Open Pit (OP)
 - Operations – All contact and non-contact (runoff) water is collected in the PG collection pond and sent to the LDSP until Year 14 (two years after initiation of HLF draindown).
 - Closure/Reclamation – All contact and non-contact water is routed to PG channel via the passive treatment system in Platinum Gulch as of Year 14.
- Lower Dublin Gulch South Pond (LDSP)
 - Operations – The LDSP is an operational storage pond that accumulates mine water routed from Eagle Pup, Platinum Gulch, and the OP. This water can then be dispatched to the HLF as makeup water, routed through the MWTP, or discharged to the DGDC, provided that the water meets discharge requirements. Process makeup water required for HLF operation is pumped to the process plant. Excess water from the LDSP, above the assumed operating storage capacity, will be sent to the MWTP.
 - Closure – The LDSP collects all contact (infiltration) and non-contact (runoff) water collected from the WRSAs and the OP. Excess discharge is sent to the MWTP until Year 14.
 - Closure/Reclamation – All water from the WRSAs is routed to locally-situated passive treatment systems and the LDSP is decommissioned as of Year 14.
- Heap Leach Facility (HLF)
 - Operations/Closure – All excess contact (infiltration) and non-contact (runoff) water is routed to the cyanide detoxification facility and the MWTP until the HLF cover system is assumed to be functional.
 - Closure/Reclamation – The engineered cover system is assumed to be functional in Year 14 (two years after the initiation of HLF draindown). Contact (infiltration) water (20% net precipitation) is sent to the cyanide detoxification facility and the MWTP. Non-contact (runoff) water is routed to Haggart Creek.

- Post-closure – All seepage is routed to Haggart Creek via the HLF passive treatment system. Runoff generated on the surface of the HLF is directed to the perimeter of the heap where drainage channels convey the non-contact water to environmental discharge points along the DGDC and Haggart Creek.

4. RESULTS

Inflow to the Mine Water Treatment Plant

A comparison of the predicted monthly inflow volumes to the MWTP for the median and wet scenarios is presented on Figures 4 and 5, respectively. The dry case was not shown as it is not as much of a concern in terms of inflow to the mine water treatment plant. The results shown for the FS WBM illustrate the 'managed' case, in which excess inflow to the MWTP is re-circulated back onto the HLF where it is temporarily delayed until there is sufficient capacity in the MWTP to treat it and/or there is sufficient flow in Haggart Creek to provide the required dilution.

Operations

During the Operations phase, the FS WBM predicts larger monthly flow volumes when compared to the PFS SWBM. This is likely due to the larger footprints and assumed higher runoff coefficients of the mine facilities, which generate more runoff on a monthly basis. This additional water will likely require treatment. Additionally, the FS model assumes that all water (contact and non-contact) generated from within each mine facility final footprint (i.e. open pit and WRSAs) is blended in the downstream collection ponds and sent to the LDSP, with any excess that is not required as makeup routed through the MWTP. Water management structures (i.e. water diversions and/or collection ponds) to convey and collect non-contact water from around or within the mine facilities were designed based on the maximum disturbed footprint without progressive reclamation factored in, which is a conservative approach from a water management perspective. The intent was to establish the water management structures prior to operations without the need for future relocation or modification (KP, 2012). This is notably different from the PFS SWBM, which assumes progressive reclamation to divert non-contact water generated from the undisturbed upslope areas or from within the final footprint and discharge directly to the environment. Note that the runoff coefficient values applied to the mine facilities for the median case of the PFS model are lower compared to analogous values in the FS model, resulting in less water being generated from a comparable footprint in the FS model.

Closure/Post-closure

For the Closure phase and into Post-Closure, Figures 4 and 5 indicate that the FS model predicts higher monthly inflow rates to the MWTP for the median and wet scenarios, respectively. The period of HLF draindown is an exception to this generalization. The increased flow in Years 10 and 11 of the FS model can be attributed to the net precipitation inputs to the heap exceeding the moisture losses to the ore. As ore production has ceased, this creates a larger positive water balance in the 92 Mt heap compared to the PFS 66 Mt heap. The higher monthly inflow rates for the PFS during draindown are likely a result of the following factors:

- The PFS SWBM demonstrates higher variability in the wet scenario due to the variation of the precipitation factors and the hydrologic variables. This results in a substantial variation in predicted monthly volumes. This is clearly illustrated on Figure 5, when comparing the wet scenarios for both models, in Years 8, 12 and 13, when wet years were run for both models.
- The FS WBM includes the 'optimized' water management strategy, which simulates the recycling of excess heap infiltrated runoff/seepage back onto the heap in the event that the predicted MWTP inflow volumes exceed the maximum treatment inflow rate, as defined by the water management objectives (discussed

previously). Therefore, the MWTP inflows for the FS WBM are controlled at the upper limits. This does result in treatment being required for a longer duration compared to the PFS model.

The monthly inflow rates reporting to the MWTP for each phase of the mine life for the PFS SWBM and FS SWBM are summarized in a Table B.1 (included as Appendix B). Similarly included in this appendix are Tables B.2, B.3, and B.4, which summarize the monthly volumes predicted from the EP WRSA, PG WRSA (including the open pit), and the HLF for the post-closure phase, respectively. Also included in these tables are the results for the GoldSim version PFS SWBM for information purposes only.

Annual Flow Volumes

Summaries of the annual flow volumes predicted at key nodes for the FS WBM, for the wet, median, and dry scenarios, are illustrated on Figures 1, 2, and 3 for operations, closure, and post-closure conditions, respectively. The values presented represent 95th percentile (wet), 50th percentile (median), and 5th percentile (dry) conditions as generated from the 10,000 iterations run in the Monte Carlo simulation of the stochastic model. It should be noted that because of the manner in which the values were generated, and understanding that although 10,000 iterations produces a very representative sample but does not cover every theoretically possible result, the addition of quantile values at two contributing nodes may not exactly equal the quantile value at the common downstream node (i.e. On Figure 1, the sum of the node 13 and node 14 values does not exactly equal the corresponding node 15 value). Additionally, the annual volumes presented at upstream nodes that are unaffected by the Project (i.e. Haggart Creek at W22 – nodes 14 on Figures 1 and 2, and node 8 on Figure 3) will not be exactly equal for each year of the model because the results are based on different model runs with 10,000 iterations; however for all intents and purposes the volumes can be considered the same.

The PFS SWBM flowsheets included in Appendix A can be compared to the FS WBM flow sheets (Figures 1 through 3). As expected, the amount of water generated over the life of the mine increases as the facility's total footprint increases over time. Consequently, the requirements for water treatment also increase. The median predicted annual volumes in Haggart Creek are comparable for both models. However, the predicted annual volumes for the wet and dry scenarios of the PFS SWBM demonstrate much greater variability in predicted streamflow, as discussed earlier. This is considered a functional artifact of the manner in which the precipitation and hydrologic parameters were modeled in the PFS SWBM.

REFERENCES

- Knight Piésold Ltd. (2012). Victoria Gold Corporation, Eagle Gold Project – Feasibility Water Management Plan (Ref no. VA101-290/5-1, Rev 2). April 18, 2012.
- Stantec Ltd. (2011a). Appendix 21: Eagle Gold Project – Surface Water Balance Model Report. June 2011.
- Stantec Ltd. (2011b). Appendix 7: Eagle Gold Project – Environmental Baseline Report: 2010 Update for Climate.
- Stantec Ltd. (2011c). Appendix 18: Eagle Gold Project – Water Management Plan. June 2011.
- Stantec Ltd. (2011d). Eagle Gold Project, Project Proposal for Executive Committee Review. Prepared for Victoria Gold Corp. June 2011.

Stantec Ltd. (2011e). Eagle Gold Project - Response to Request for Supplementary Information. December 2011.

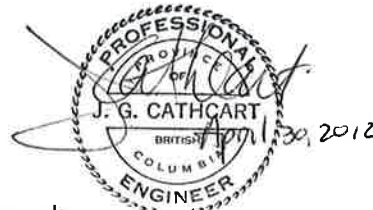
Tetrattech (2012a). Eagle Gold Heap Leach Facility Water Balance – Revision 1. February 1, 2012.

Please do not hesitate to contact the undersigned if you have any questions or comments.

Yours truly,
KNIGHT PIESOLD LTD.



Signed:
Erin Rainey, P.Eng.
Project Engineer



Reviewed:
Jaime Cathcart, Ph.D., P.Eng.
Specialist Hydrotechnical Engineer



Approved:
Ken Brouwer, P.Eng.
Managing Director

Attachments:

Table 1 Rev 0	Water Balance Model Project Schedule
Table 2 Rev 0	Water Balance Input Parameters
Figure 1 Rev 0	Annual Water Balance Schematic – Operations – Final Year (Year 8) – January to December
Figure 2 Rev 0	Annual Water Balance Schematic – Closure – First Year of HLF Draindown (Year 13) – January to December
Figure 3 Rev 0	Annual Water Balance Schematic – Post-closure – (Year 22) – January to December
Figure 4 Rev 0	Managed Monthly Inflow to the Mine Water Treatment Plant – Median Scenario
Figure 5 Rev 0	Managed Monthly Inflow to the Mine Water Treatment Plant – Wet Scenario
Appendix A	Pre-Feasibility Study Surface Water Balance Model Summary Flow Sheets
Appendix B	Feasibility Study Water Balance Summary Tables

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TABLE 1

**VICTORIA GOLD CORP.
EAGLE GOLD PROJECT**

WATER BALANCE MODEL PROJECT SCHEDULE

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Calendar time	Operational Mine Life (year) ¹	PFS SWBM 66 Mt			FS WBM 92 Mt				
		Mine Phase	Period	Details	Mine Phase	Period	Details		
01/01/2013	1	Operations	Mine start up in Sep 2013	MWTP online HLF ore stacking and irrigation starts EP WRSA and PG WRSA stacking starts	Operations	Mine start up in Mar 2013	MWTP online HLF ore stacking and irrigation starts EP WRSA and PG WRSA stacking starts		
01/01/2014	2								
01/01/2015	3								
01/01/2016	4			Reclamation for PG WRSA begins			Oct 2016 - PG WRSA closure cover construction begins		
01/01/2017	5						Sep 2017 - PG WRSA cover functional		
01/01/2018	6								
01/01/2019	7								
01/01/2020	8			End of ore production in Dec 2020			OP mining stops EP WRSA stacking		
01/01/2021	9	Closure	HLF Gold Recovery	Jan 2021 - HLF supplemental gold recovery starts EP WRSA closure cap construction	Operations/Closure	End of ore production Nov 2021 HLF Gold Recovery begins			
01/01/2022	10			HLF Rinse	Jan 2022 - HLF Rinse starts OP and PG WRSA water drain to PG channel Sep 2022 - EP WRSA cover functional	Closure	HLF Gold recovery/HLF Rinse	Nov 2022 - HLF rinse commences	
01/01/2023	11						HLF rinse		
01/01/2024	12			HLF Rinse/HLF Draindown	Jan 2024 - HLF draindown starts; all HLF runoff routed to MWTP HLF closure cover construction begins		HLF rinse/draindown	Nov 2024 - HLF draindown commences HLF closure cover construction begins EP WRSA closure cover functional	
01/01/2025	13			HLF Draindown			HLF draindown		
01/01/2026	14				Oct 2026 - EP WRSA and Suttle Gulch stockpile water routed to DGDC				Nov 2026 - Collection ponds (EP, PG, Lower Dublin South) discharge routed to passive treatment or DGDC
01/01/2027	15								
01/01/2028	16								
01/01/2029	17								
01/01/2030	18				Dec 2030 - HLF draindown complete				
01/01/2031	19	Post-closure monitoring		Jan 2031 - Events Ponds and MWTP decommissioned Reclaimed HLF runoff/infiltration directed to Haggart Creek via passive treatment systems	Post-closure monitoring			Jan 2034 - Events ponds and MWTP decommissioned Reclaimed HLF runoff/infiltration directed to Haggart Creek via passive treatment systems	
01/01/2032	20								
01/01/2033	21								
01/01/2034	22								
01/01/2035	23								

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NOTE:
1. THE OPERATIONAL MINE LIFE PRESENTED IS ARBITRARILY ASSIGNED FOR THE WATER BALANCE COMPARISON, WITH YEAR 1 ASSUMED TO BE THE FIRST YEAR IN WHICH MINING OPERATIONS COMMENCES AND THEN CONTINUING TO THE END OF THE MODEL SIMULATION IN YEAR 23.

REV	DATE	ISSUED WITH LETTER VIA	DESCRIPTION	PREP'D	CHK'D	APP'D
0	25APR12	ISSUED WITH LETTER VIA 12-00744		ER	CA	KJB

TABLE 2

**VICTORIA GOLD CORP.
EAGLE GOLD PROJECT**

WATER BALANCE INPUT PARAMETERS

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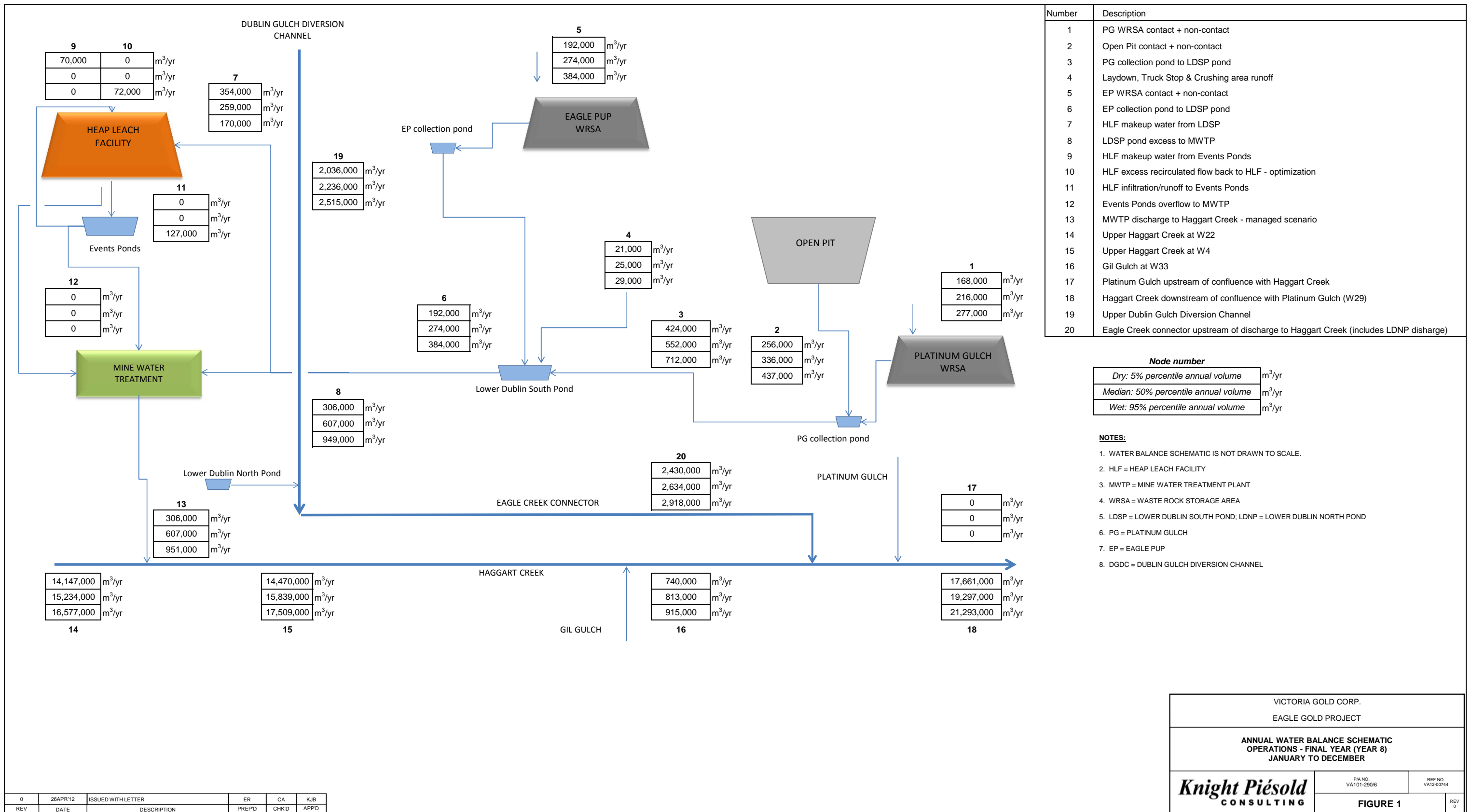
COMPONENT	UNITS	PFS SWBM 66 Mt	FS WBM 92 Mt
General			
Ore Production	tpd	26,000	29,500
Operational mine life	years	7.5	8.75
Physical and Hydrometeorological			
Project Site Median Elevation (reference)	m	1,210	1,210
Mean Annual Precipitation	mm	577	577
Mean Annual Rainfall	mm	337	337
Mean Annual Snowfall	mm	240	240
Sublimation	%	20	20
Mean Annual Pond Evaporation	mm	439	439
Annual Evaporation (bare surface - Heap, Ore Stockpile)	mm	225	299
Runoff coefficients (proportion of annual precipitation)			
EP Waste Rock Storage Area	-	0.56	0.80
PG Waste Rock Storage Area	-	0.46	0.80
Open Pit footprint	-	0.71	0.80
Laydown area, truck shop (disturbed)	-	-	0.80
Infiltration Rates			
Waste Rock Storage Areas	%	90	80
Heap Leach Facility during operations	%	100	100
Capped surfaces (closure)	%	20	20
Total Facilities Areas - final footprint			
Eagle Pup WRSA	m ²	800,000	980,000
Platinum Gulch WRSA	m ²	330,000	410,000
HLF	m ²	854,155	1,134,970
Open Pit	m ²	640,548	810,000
Pond Capacities (normal operating capacity)			
Eagle Pup Collection Pond	m ³	26,559	25,000
Platinum Gulch Sediment Collection Pond	m ³	37,546	-
Platinum Gulch Collection Pond	m ³	-	41,000
Lower Dublin North Pond	m ³	-	10,500
Lower Dublin South Pond	m ³	-	30,000
MWTP Feed Pond	m ³	13,449	-
HLF - Events Pond 1 (downstream)	m ³	87,500	92,153
HLF - Events Pond 2 (upstream)	m ³	87,500	90,693
HLF - Heap Pond (normal operating capacity)	m ³	200,000	200,000
Heap Leach Facility			
Water Demand			
Solution Application Rate	m ³ /hr	1950	2,770
Ore Moisture			
Initial moisture content	%	3 to 5	5
Leaching moisture content	%	13.3	13.3
Open Pit			
Drilling water requirements	m ³ /day	48.96	49
Sump capacity (operations)	m ³	48,375	48,375
Sump capacity (closure)	m ³	249,793	249,793
Waste Rock Storage Areas			
Waste rock dry density	tonnes/m ³	2	2
Waste rock moisture content	%	2	2

M:\1\01\00290\06\A\Data\200 YESAB REVIEW - PROJECT DESCRIPTION\220 Support Analysis\Water Balance\Water Licencing WBM - GoldSim\1_Results\Eagle Gold WBM_comparison_WBM_WL04.xlsx\Assumptions (2)

NOTES:

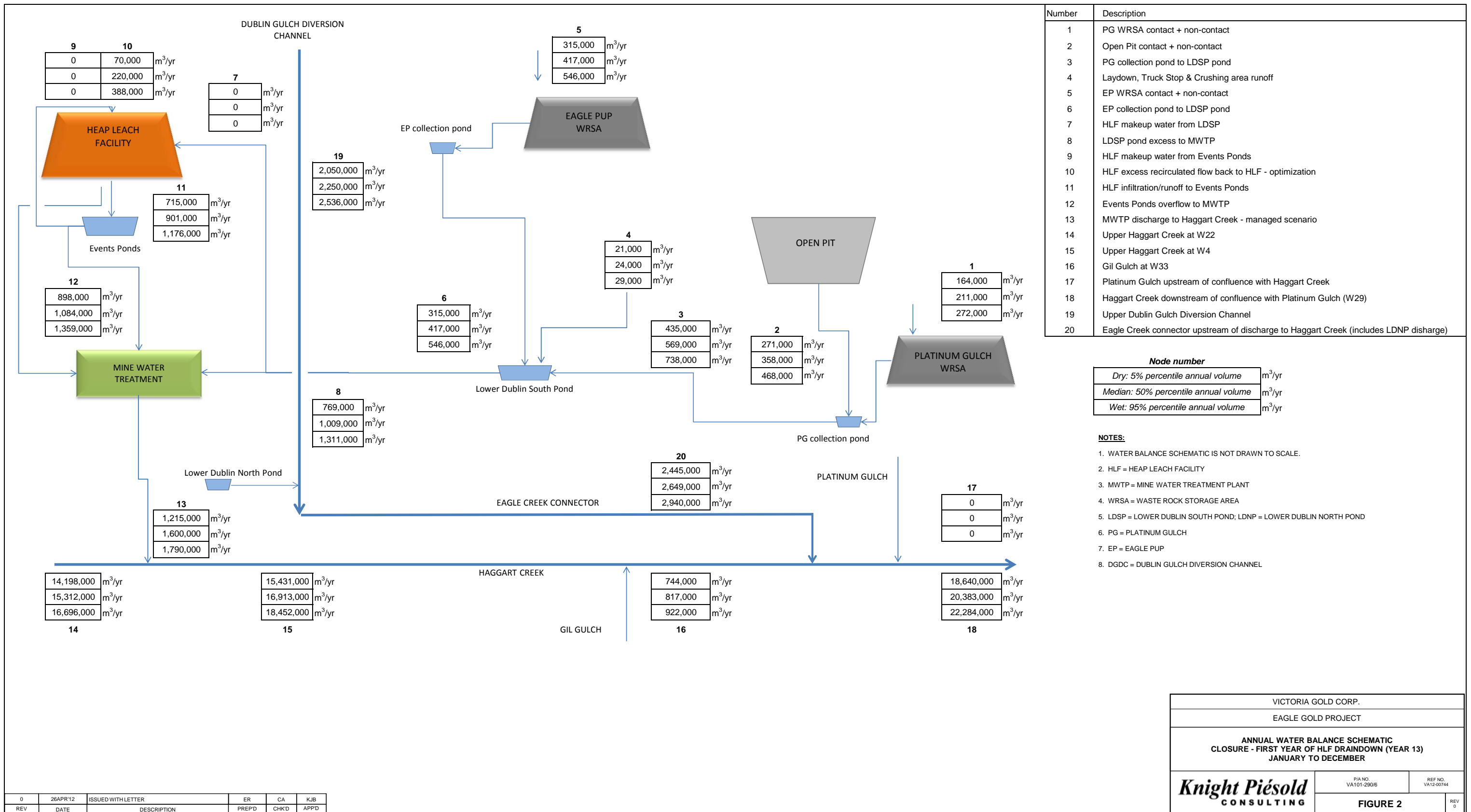
1. THE OPEN PIT SUMP CAPACITY AND DRILLING WATER REQUIREMENTS WERE BASED ON THE STANTEC (2011a) REPORT.
2. THE RUNOFF COEFFICIENTS SHOWN FOR THE MINE FACILITIES TAKE INTO ACCOUNT PRECIPITATION LOSSES DUE TO ACTUAL EVAPOTRANSPIRATION.
3. THE INFILTRATION RATES SHOWN FOR THE MINE FACILITIES IS DEFINED ARE THE PORTION OF NET PRECIPITATION THAT INFILTRATES THROUGH THE FACILITIES AND/OR COVER, WITH THE REMAINDER OF THE NET PRECIPITATION ASSUMED TO BE SURFACE RUNOFF.
4. THE INITIAL MOISTURE CONTENT OF ORE FOR THE PFS SWBM IS A FUNCTION OF NET PRECIPITATION (NET P): 3% FOR NET P = 0-35 MM; 4% FOR NET P = 35-50 MM AND 5% FOR NET P > 50 MM.
5. THE NORMAL OPERATING CAPACITY FOR THE PONDS SHOWN DOES NOT TAKE INTO ACCOUNT THE STORM WATER CAPACITY.

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REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



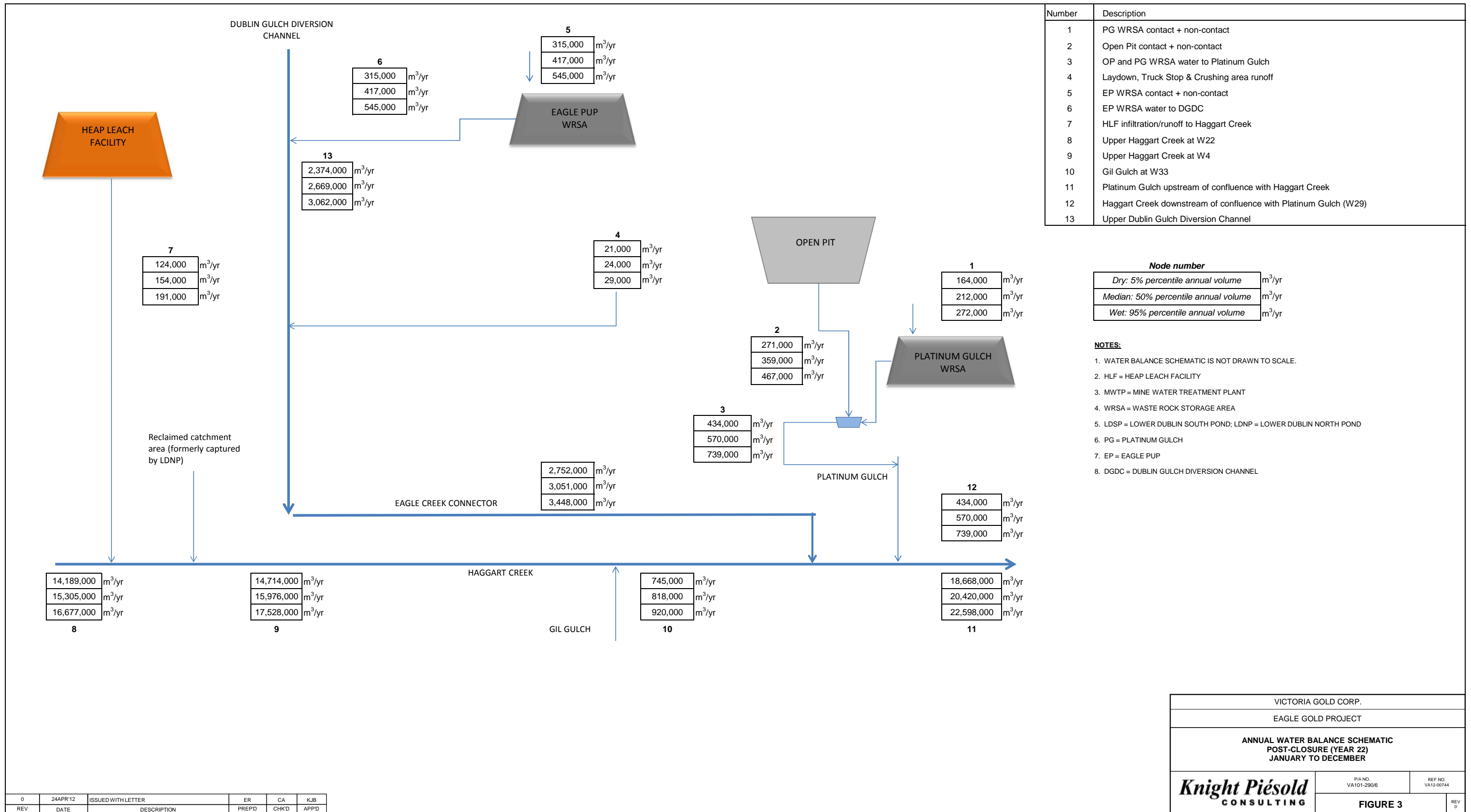
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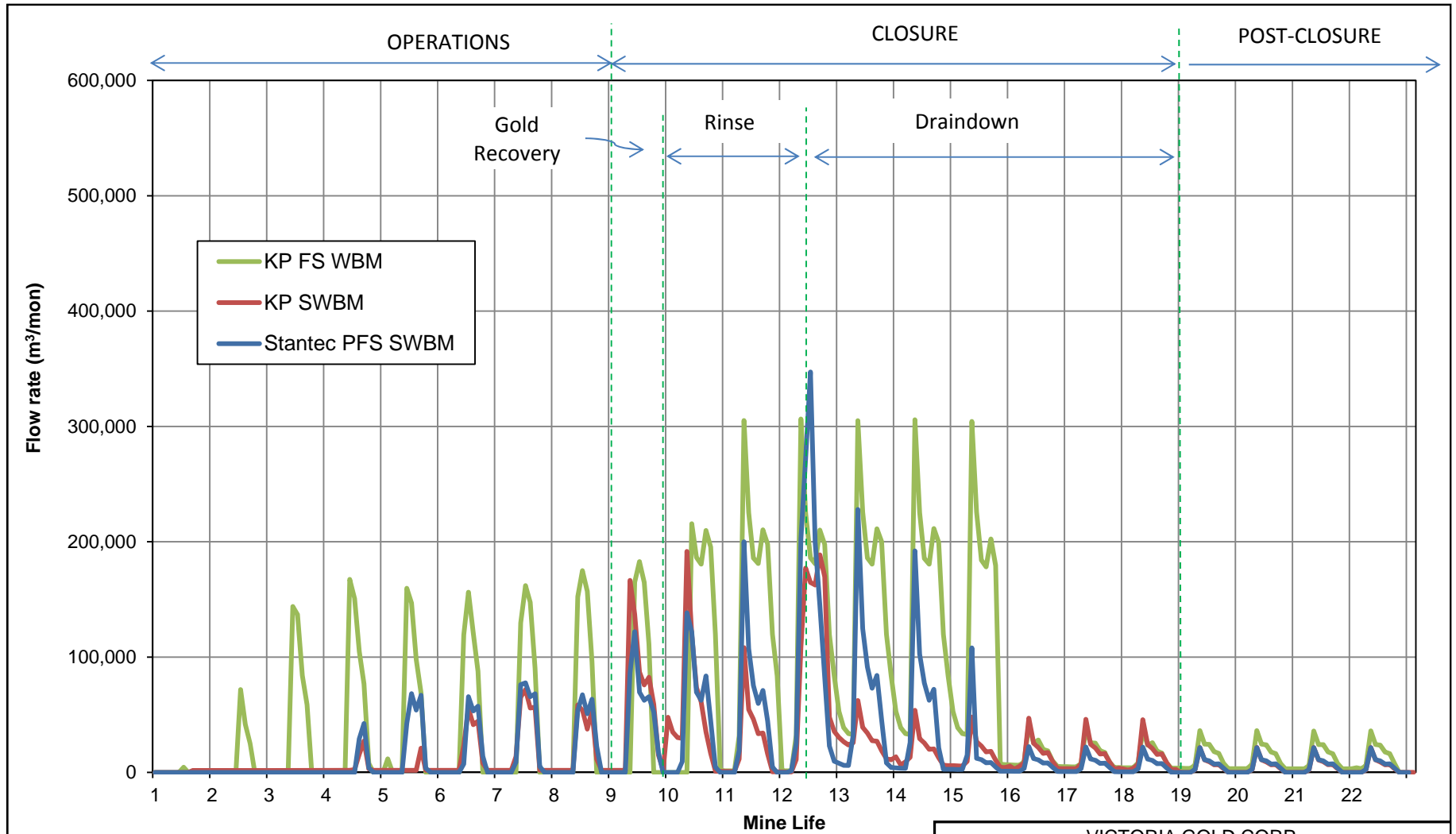
VICTORIA GOLD CORP.		
EAGLE GOLD PROJECT		
ANNUAL WATER BALANCE SCHEMATIC OPERATIONS - FINAL YEAR (YEAR 8) JANUARY TO DECEMBER		
	P/A NO. VA101-290/6	REF NO. VA12-00744
	FIGURE 1	
		REV 0



0	26APR'12	ISSUED WITH LETTER	ER	CA	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

VICTORIA GOLD CORP.		
EAGLE GOLD PROJECT		
ANNUAL WATER BALANCE SCHEMATIC CLOSURE - FIRST YEAR OF HLF DRAINDOWN (YEAR 13) JANUARY TO DECEMBER		
	PIA NO. VA101-290/6	REF NO. VA12-00744
	FIGURE 2	
		REV 0



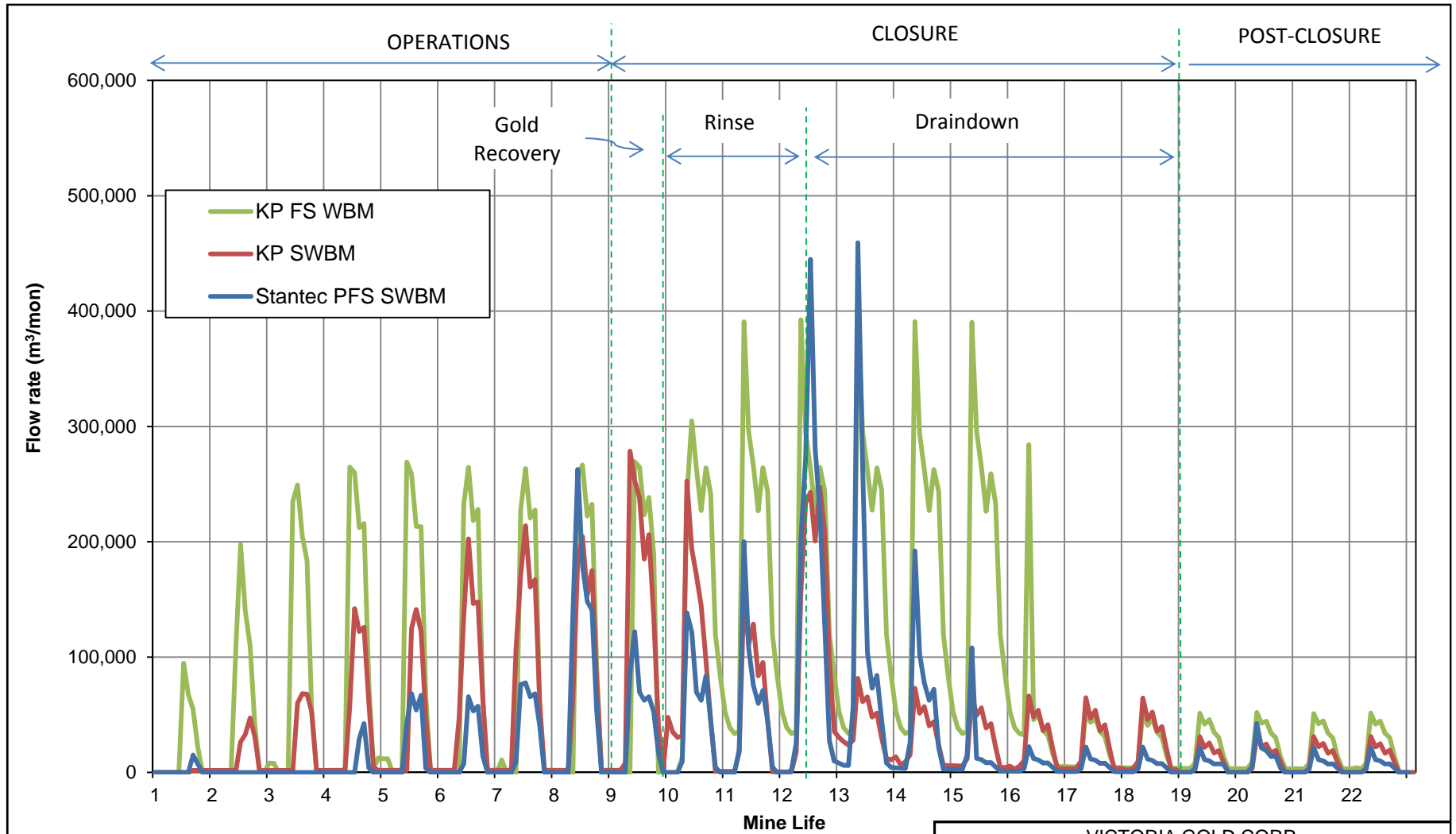


NOTE:

1. OPERATION, CLOSURE AND POST-CLOSURE SCHEDULE BASED ON THE PFS.

VICTORIA GOLD CORP.	
EAGLE GOLD PROJECT	
MANAGED MONTHLY INFLOW TO THE MINE WATER TREATMENT PLANT MEDIAN SCENARIO	
<i>Knight Piésold</i> CONSULTING	P/A NO. VA101-290/6
FIGURE 4	
REF NO VA12-00744	
REV 0	

0	27APR'12	ISSUED WITH LETTER	ER	CA	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTE:

1. OPERATION, CLOSURE AND POST-CLOSURE SCHEDULE BASED ON THE PFS.
2. THE STANTEC PFS SWBM ONLY MODELLED WET YEAR PRECIPITATION IN YEARS 8, 12-13 AND 19-20. THE REMAINING YEARS OF THE MODEL USE THE MEDIAN PRECIPITATION CONDITIONS.

VICTORIA GOLD CORP.	
EAGLE GOLD PROJECT	
MANAGED MONTHLY INFLOW TO THE MINE WATER TREATMENT PLANT WET SCENARIO	
<i>Knight Piésold</i> CONSULTING	P/A NO. VA101-290/6
FIGURE 5	
REF NO VA12-00744	
REV 0	

0	27APR'12	ISSUED WITH LETTER	ER	CA	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

APPENDIX A

PRE-FEASIBILITY STUDY SURFACE WATER BALANCE MODEL SUMMARY FLOW SHEETS

(Pages A-1 to A-3)

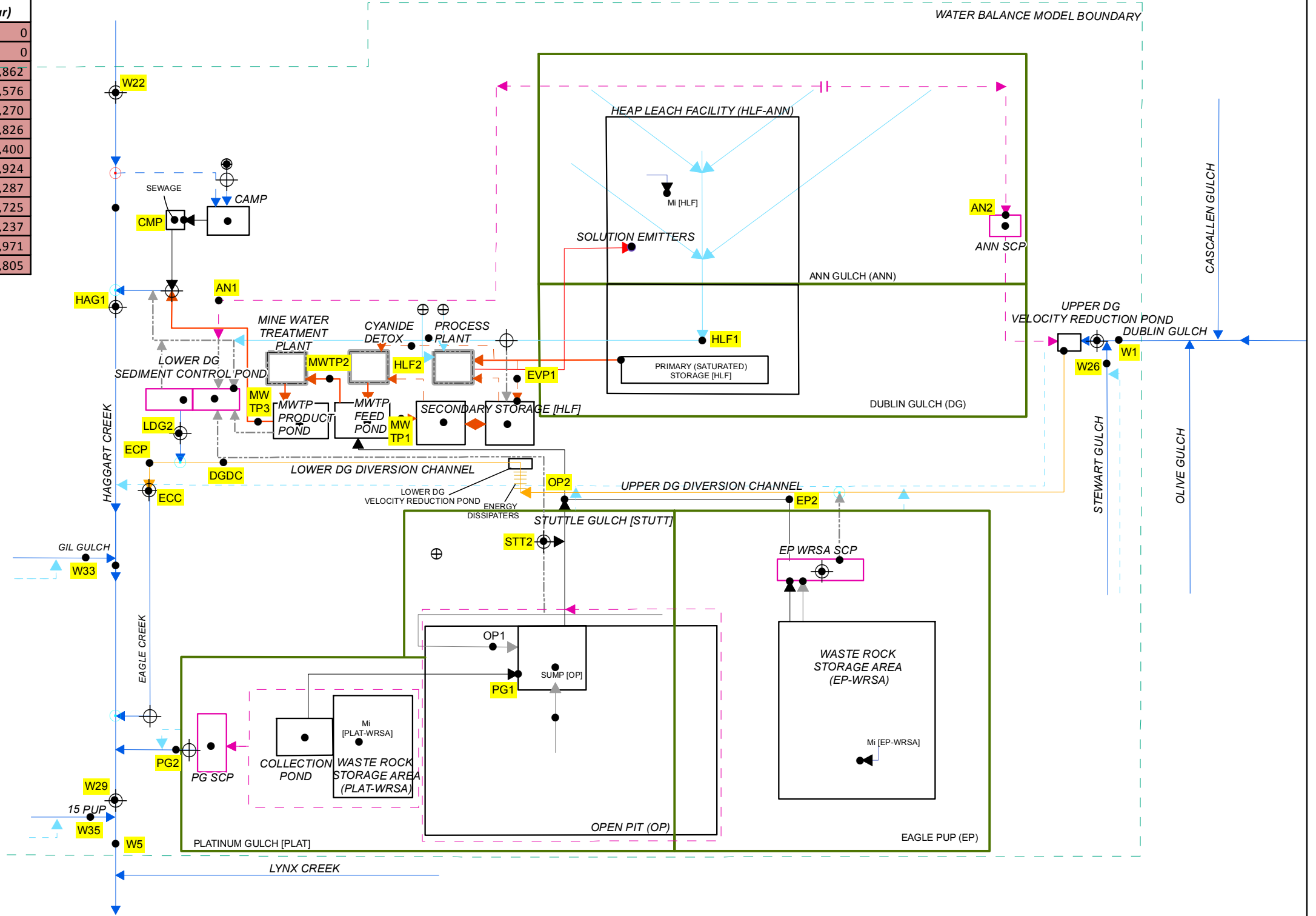
Annual Flows through Operation Nodes for Wet, Average and Dry Hydroclimatic Conditions

Water Nodes	Wet (m ³ /year)	Avg (m ³ /year)	Dry (m ³ /year)	Water Nodes	Wet (m ³ /year)	Avg (m ³ /year)	Dry (m ³ /year)
W1	3,588,982	2,040,140	1,043,556	MWTP2	915,596	243,974	0
W26	406,840	239,158	75,993	MWTP3	915,596	243,974	0
EP2	425,423	149,541	38,489	CMP	20,862	20,862	20,862
AN1	4,786	2,113	562	LDG2	27,076	16,865	10,576
AN2	3,191	1,408	375	W22	24,558,664	15,272,822	8,667,270
HLF1	47,878	22,139	6,131	HAG1	25,547,786	15,561,909	8,694,826
STT2	27,076	16,865	10,576	W33	1,375,608	816,768	446,400
PG1	210,431	98,135	26,596	DGDC	3,999,013	2,280,706	1,119,924
OP2	704,417	336,318	111,667	ECC	4,597,041	2,653,025	1,353,287
ECP	570,952	355,454	222,787	PG2	88,815	43,393	12,725
MWTP1	214,244	246,269	350,099	W29	31,609,249	19,075,095	10,507,237
EVP1	184,964	216,989	320,819	W35	2,182,605	1,297,082	709,971
HLF2	0	0	0	W5	37,019,538	22,236,394	12,458,805

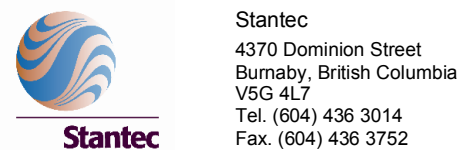
Note: Model nodes are listed roughly in an upstream to downstream order

Legend

- Model Node
- Discharge to Channel
- ⊖ Withdrawal from Channel
- ⊕ Environmental Monitoring Location
- ⊕ Groundwater Well
- Emitters
- Water Balance Model Boundary
- Drainage Basin
- Surface Water Storage
- Plant
- Mine Facility
- Sediment Control Pond
- Surface Water Intake
- Connection
- Optional Connection
- Contact Surface Water
- Contact Groundwater
- Optional Routing
- Diversion Channel (DC)
- Energy Dissipater
- Diverted Runoff (DRO)
- Non-Contact Surface Water (SW)
- Non-Contact Captured Groundwater (GW)
- Regional Groundwater
- Initial Moisture Content (Mi)
- Irrigation Water



1053550-198c



WATER MANAGEMENT FLOW SHEET FOR OPERATIONS
EAGLE GOLD PROPERTY
YUKON TERRITORY

A-1 of 3

PROJECTION	N/A	DRAWN BY	JB
DATUM	N/A	CHECKED BY	SW
DATE	06-May-2011	FIGURE NO.	7.10-1

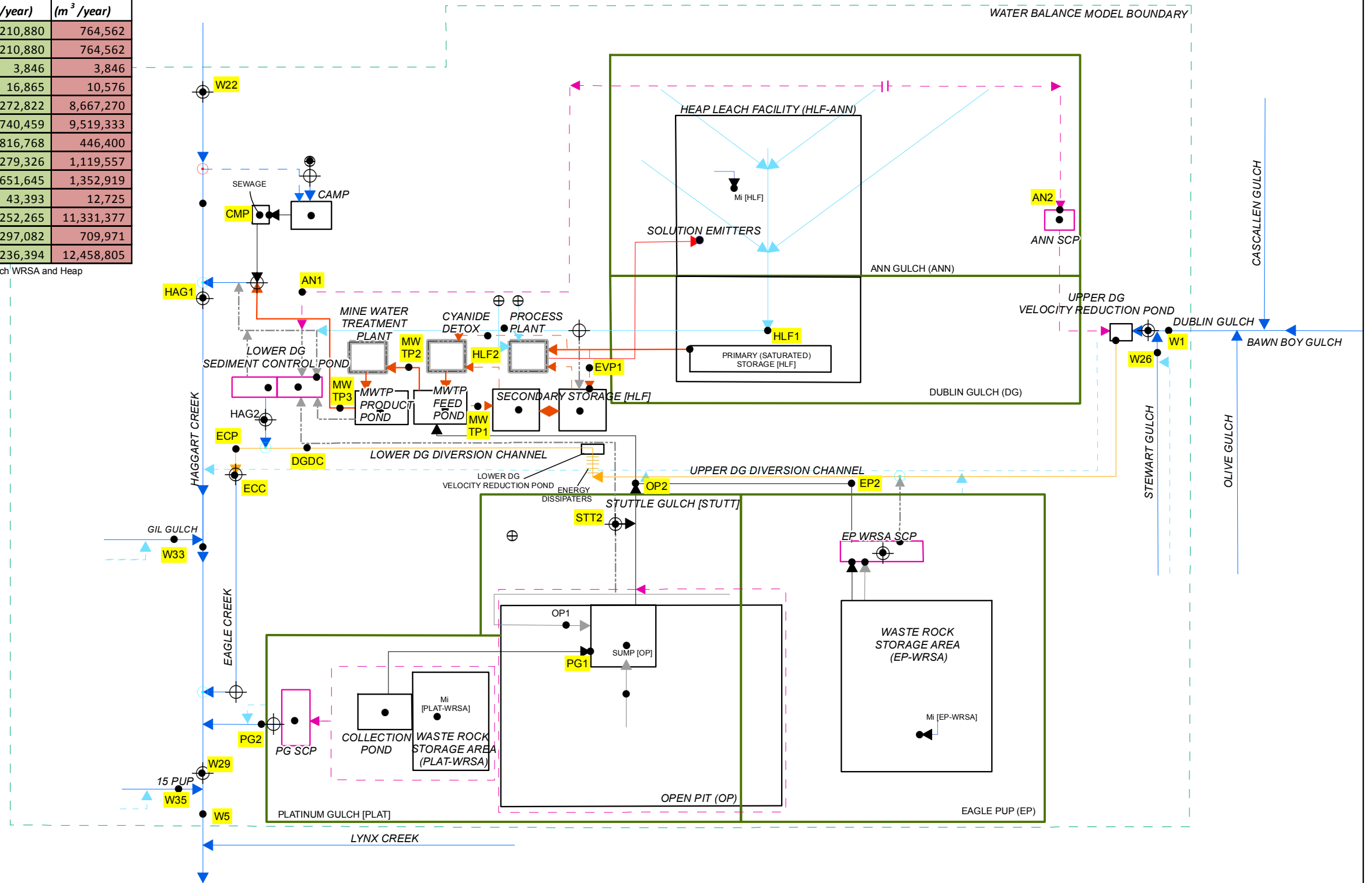
Annual Flows through Closure and Reclamation Nodes for Wet, Average and Dry Hydroclimatic Conditions

Water Nodes	Wet (m ³ /year)	Avg (m ³ /year)	Dry (m ³ /year)	Water Nodes	Wet (m ³ /year)	Avg (m ³ /year)	Dry (m ³ /year)
W1	3,588,982	2,040,140	1,043,556	MWTP2	1,917,268	1,210,880	764,562
W26	406,840	239,158	75,993	MWTP3	1,917,268	1,210,880	764,562
EP2	538,446	257,427	77,554	CMP	3,846	3,846	3,846
AN1	95	42	11	LDG2	27,076	16,865	10,576
AN2	63	28	7	W22	24,558,664	15,272,822	8,667,270
HLF1	1,005	463	119	HAG1	26,967,183	16,740,459	9,519,333
STT2	27,076	16,865	10,576	W33	1,375,608	816,768	446,400
PG1	209,226	98,135	27,021	DGDC	3,995,885	2,279,326	1,119,557
OP2	720,208	353,313	129,087	ECC	4,593,913	2,651,645	1,352,919
ECP	570,952	355,454	222,787	PG2	88,815	43,393	12,725
MWTP1	0	0	0	W29	33,025,518	20,252,265	11,331,377
EVP1	0	0	0	W35	2,182,605	1,297,082	709,971
HLF2	658,615	600,140	557,920	W5	37,019,538	22,236,394	12,458,805

Note: Annual water balance values represent 20% infiltration through Eagle Pup WRSA, Platinum Gulch WRSA and Heap Leach Facility covers.
 Note: Model nodes are listed roughly in an upstream to downstream order

Legend

- Model Node
- Discharge to Channel
- ⊖ Withdrawal from Channel
- ⊕ Environmental Monitoring Location
- ⊕ Groundwater Well
- Emitters
- Water Balance Model Boundary
- Drainage Basin
- Surface Water Storage
- Plant
- Mine Facility
- Sediment Control Pond
- Surface Water Intake
- Connection
- Optional Connection
- Contact Surface Water
- Contact Groundwater
- Optional Routing
- Diversion Channel (DC)
- Energy Dissipater
- Diverted Runoff (DRO)
- Non-Contact Surface Water (SW)
- Non-Contact Captured Groundwater (GW)
- Regional Groundwater
- Initial Moisture Content (Mi)
- Irrigation Water



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PROJECTION	N/A	DRAWN BY	TG
DATUM	N/A	CHECKED BY	SW
DATE	06-May-2011	FIGURE NO.	8.10-1

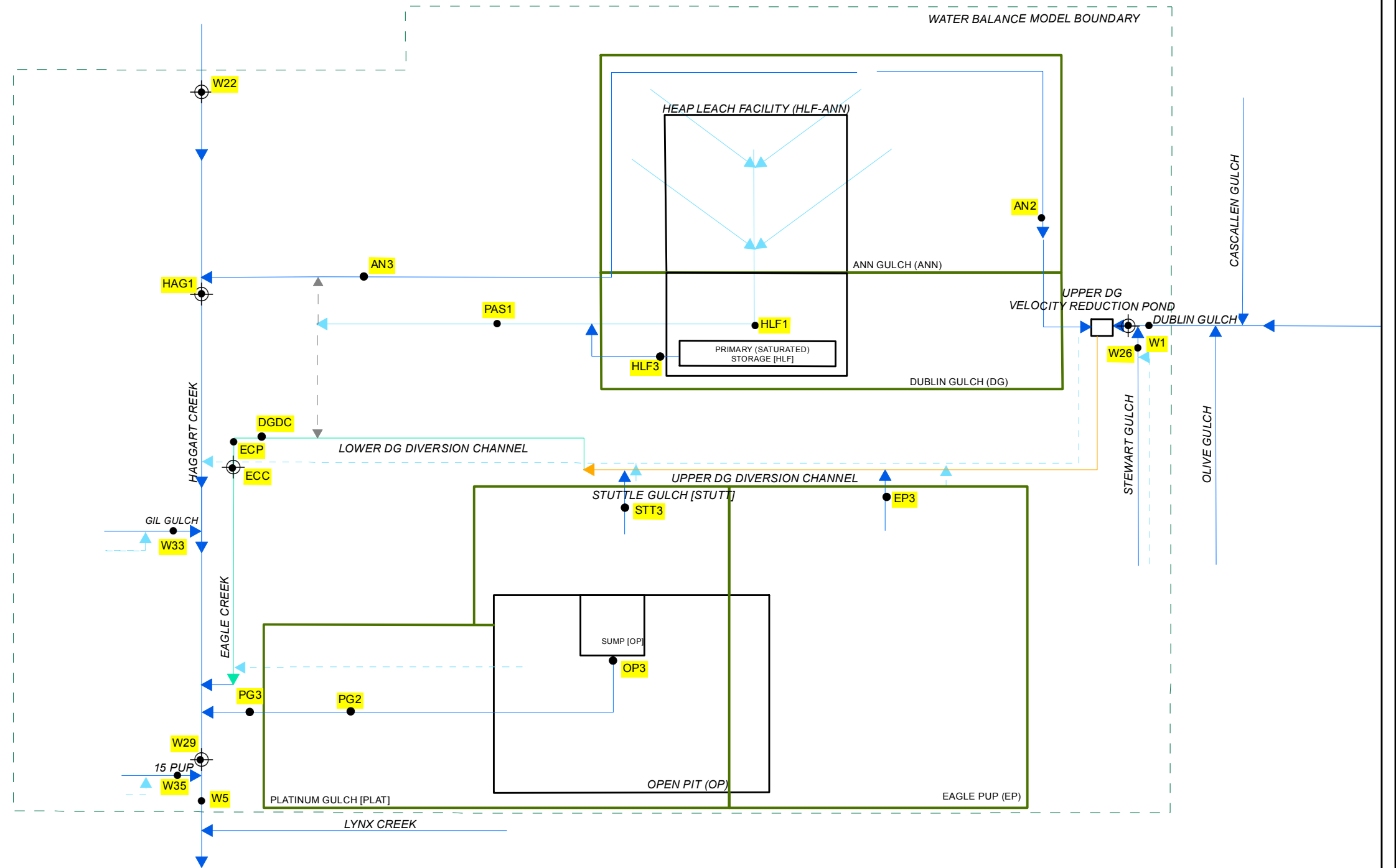
Annual Flows through Post Closure Monitoring Nodes for Wet, Average and Dry Hydroclimatic Conditions

Model Node	Wet (m ³ /year)	Avg (m ³ /year)	Dry (m ³ /year)
W1	3,588,982	2,040,140	1,043,556
W26	406,840	239,158	75,993
EP3	537,961	256,675	77,966
AN3	95	42	11
AN2	63	28	7
HLF1	1,005	463	119
STT3	27,076	16,865	10,576
PG2	39,941	19,627	6,887
OP3	511,023	255,220	102,107
ECP	570,952	355,454	222,787
HLF3	121,576	63,101	20,881
PAS1	121,576	63,101	20,881
W22	24,558,664	15,272,822	8,667,270
HAG1	25,167,645	15,588,834	8,771,807
W33	1,375,608	816,768	446,400
DGDC	4,533,846	2,536,001	1,197,523
ECC	5,104,798	2,891,455	1,420,309
PG3	805,904	395,702	143,211
W29	32,453,955	19,692,759	10,781,727
W35	2,182,605	1,297,082	709,971
W5	37,019,538	22,236,394	12,458,805

Note: Annual water balance values represent 20% infiltration through Eagle Pup WRSA, Platinum Gulch WRSA and Heap Leach Facility covers
 Note: Model nodes are listed roughly in an upstream to downstream order

Legend

- Model Node
- ⊕ Environmental Monitoring Location
- - - Water Balance Model Boundary
- Drainage Basin
- Mine Facility
- ▶ Non-Contact Surface Water (SW)
- ▶ Non-Contact Captured Groundwater (GW)
- ▶ Regional Groundwater
- optional routing
- ▶ Diversion Channel (DC)
- ▶ Reclaimed Habitat



1053550-206

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Victoria GOLD CORP

WATER MANAGEMENT FLOW SHEET FOR POST-CLOSURE MONITORING

EAGLE GOLD PROPERTY
 YUKON TERRITORY

A-3 of 3

PROJECTION	N/A	DRAWN BY	TG
DATUM	N/A	CHECKED BY	LS
DATE	06-May-2011	FIGURE NO.	9-1

APPENDIX B

FEASIBILITY STUDY WATER BALANCE SUMMARY TABLES

(Pages B-1 to B-8)

TABLE B.1

VICTORIA GOLD CORP.
EAGLE GOLD PROJECT

WATER BALANCE MODEL COMPARISON
MONTHLY DISCHARGE FROM MWTP (m³/mon)

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Mine Phase (PFS)	Mine Phase (FS)	Mine Life (yrs)	Month	Stantec PFS SWBM			KP GoldSim PFS WBM			KP GoldSim FS WBM		
				5th percentile	Median	95th percentile	5th percentile	Median	95th percentile	5th percentile	Median	95th percentile
-	Operations	1	3	-	-	-	-	-	-	0	0	0
-	Operations	1	4	-	-	-	-	-	-	0	0	0
-	Operations	1	5	-	-	-	-	-	-	0	0	0
-	Operations	1	6	-	-	-	-	-	-	0	0	0
-	Operations	1	7	-	-	-	-	-	-	0	4,420	94,644
-	Operations	1	8	-	-	-	-	-	-	0	0	67,475
Operations	Operations	1	9	1,710	1,710	16,785	1,735	1,735	1,735	0	0	54,792
Operations	Operations	1	10	1,767	1,767	9,027	1,736	1,736	1,736	0	0	21,350
Operations	Operations	1	11	1,710	1,710	1,710	1,737	1,737	1,737	0	0	0
Operations	Operations	1	12	1,767	1,767	1,767	1,738	1,738	1,738	0	0	0
Operations	Operations	2	1	1,767	1,767	1,767	1,739	1,739	1,739	0	0	0
Operations	Operations	2	2	1,596	1,596	1,596	1,740	1,740	1,740	0	0	0
Operations	Operations	2	3	1,767	1,767	1,767	1,741	1,741	1,741	0	0	0
Operations	Operations	2	4	1,710	1,710	1,710	1,742	1,742	1,742	0	0	0
Operations	Operations	2	5	1,767	1,767	1,767	1,743	1,743	1,743	0	0	0
Operations	Operations	2	6	1,710	1,710	1,710	1,744	1,744	1,744	0	0	108,219
Operations	Operations	2	7	1,767	1,767	1,767	1,745	1,745	26,464	0	71,741	197,457
Operations	Operations	2	8	1,767	1,767	1,767	1,746	1,746	32,904	0	41,693	140,052
Operations	Operations	2	9	1,710	1,710	1,710	1,747	1,747	47,175	0	25,097	109,679
Operations	Operations	2	10	1,767	1,767	1,767	1,748	1,748	30,733	0	0	41,223
Operations	Operations	2	11	1,710	1,710	1,710	1,749	1,749	1,749	0	0	0
Operations	Operations	2	12	1,767	1,767	1,767	1,750	1,750	1,750	0	0	0
Operations	Operations	3	1	1,767	1,767	1,767	1,752	1,752	1,752	0	0	8,047
Operations	Operations	3	2	1,596	1,596	1,596	1,753	1,753	1,753	0	0	7,880
Operations	Operations	3	3	1,767	1,767	1,767	1,754	1,754	1,754	0	0	0
Operations	Operations	3	4	1,710	1,710	1,710	1,755	1,755	1,755	0	0	0
Operations	Operations	3	5	1,767	1,767	1,767	1,756	1,756	1,756	0	0	0
Operations	Operations	3	6	1,710	1,710	1,710	1,757	1,757	1,757	0	143,880	234,842
Operations	Operations	3	7	1,767	1,767	1,767	1,758	1,758	59,972	25,065	136,922	249,217
Operations	Operations	3	8	1,767	1,767	1,767	1,759	1,759	68,318	0	83,874	204,473
Operations	Operations	3	9	1,710	1,710	1,710	1,760	1,760	67,827	0	58,668	183,397
Operations	Operations	3	10	1,767	1,767	1,767	1,761	1,761	52,165	0	0	50,828
Operations	Operations	3	11	1,710	1,710	1,710	1,762	1,762	1,762	0	0	0
Operations	Operations	3	12	1,767	1,767	1,767	1,763	1,763	1,763	0	0	0
Operations	Operations	4	1	1,767	1,767	1,767	1,764	1,764	1,764	0	0	0
Operations	Operations	4	2	1,653	1,653	1,653	1,765	1,765	1,765	0	0	0
Operations	Operations	4	3	1,767	1,767	1,767	1,766	1,766	1,766	0	0	0
Operations	Operations	4	4	1,710	1,710	1,710	1,767	1,767	1,767	0	0	0
Operations	Operations	4	5	1,767	1,767	1,767	1,768	1,768	1,768	0	0	0
Operations	Operations	4	6	1,710	1,710	1,710	1,769	1,769	57,506	46,184	167,334	264,693
Operations	Operations	4	7	1,767	1,767	1,767	1,770	2,499	141,952	37,943	150,947	259,813
Operations	Operations	4	8	30,982	30,982	30,982	1,771	15,731	122,129	0	104,849	212,333
Operations	Operations	4	9	44,091	44,091	44,091	1,772	27,269	125,727	0	76,804	215,654
Operations	Operations	4	10	5,654	5,654	5,654	1,773	3,043	60,350	0	7,764	77,451
Operations	Operations	4	11	1,710	1,710	1,710	1,774	1,774	4,381	0	0	3,264

Mine Phase (PFS)	Mine Phase (FS)	Mine Life (yrs)	Month	Stantec PFS SWBM			KP GoldSim PFS WBM			KP GoldSim FS WBM		
				5th percentile	Median	95th percentile	5th percentile	Median	95th percentile	5th percentile	Median	95th percentile
Operations	Operations	4	12	1,767	1,767	1,767	1,775	1,775	1,775	0	0	12,496
Operations	Operations	5	1	1,767	1,767	1,767	1,776	1,776	1,776	0	0	11,841
Operations	Operations	5	2	1,596	1,596	1,596	1,778	1,778	1,778	0	11,731	11,731
Operations	Operations	5	3	1,767	1,767	1,767	1,778	1,778	1,778	0	0	0
Operations	Operations	5	4	1,710	1,710	1,710	1,780	1,780	1,780	0	0	0
Operations	Operations	5	5	1,767	1,767	1,767	1,781	1,781	1,781	0	0	0
Operations	Operations	5	6	44,261	44,261	44,261	1,782	1,782	1,782	0	159,568	268,999
Operations	Operations	5	7	70,046	70,046	70,046	1,783	1,783	124,417	25,620	146,905	258,587
Operations	Operations	5	8	55,825	55,825	55,825	1,784	1,784	141,205	0	97,870	213,326
Operations	Operations	5	9	68,524	68,524	68,524	1,785	21,032	122,353	0	68,814	213,103
Operations	Operations	5	10	5,435	5,435	5,435	1,786	1,786	48,252	0	0	67,520
Operations	Operations	5	11	1,710	1,710	1,710	1,787	1,787	1,787	0	0	0
Operations	Operations	5	12	1,767	1,767	1,767	1,788	1,788	1,788	0	0	0
Operations	Operations	6	1	1,767	1,767	1,767	1,789	1,789	1,789	0	0	0
Operations	Operations	6	2	1,596	1,596	1,596	1,790	1,790	1,790	0	0	0
Operations	Operations	6	3	1,767	1,767	1,767	1,791	1,791	1,791	0	0	0
Operations	Operations	6	4	1,710	1,710	1,710	1,792	1,792	1,792	0	0	0
Operations	Operations	6	5	1,767	1,767	1,767	1,793	1,793	46,459	0	0	0
Operations	Operations	6	6	9,065	9,065	9,065	1,794	23,277	135,228	4,276	119,172	232,484
Operations	Operations	6	7	67,423	67,423	67,423	1,795	55,705	202,489	33,698	156,189	264,496
Operations	Operations	6	8	55,069	55,069	55,069	1,796	41,394	146,449	0	120,707	218,299
Operations	Operations	6	9	59,106	59,106	59,106	1,797	44,413	147,800	0	87,706	227,954
Operations	Operations	6	10	15,859	15,859	15,859	1,798	8,030	63,437	0	0	64,652
Operations	Operations	6	11	1,710	1,710	1,710	1,799	1,799	1,799	0	0	0
Operations	Operations	6	12	1,767	1,767	1,767	1,800	1,800	1,800	0	0	0
Operations	Operations	7	1	1,767	1,767	1,767	1,801	1,801	1,801	0	0	0
Operations	Operations	7	2	1,596	1,596	1,596	1,802	1,802	1,802	0	0	10,803
Operations	Operations	7	3	1,767	1,767	1,767	1,803	1,803	1,803	0	0	0
Operations	Operations	7	4	1,710	1,710	1,710	1,804	1,804	1,804	0	0	0
Operations	Operations	7	5	10,487	10,487	10,487	1,805	13,735	106,874	0	0	0
Operations	Operations	7	6	77,817	77,817	77,817	1,806	65,190	171,312	10,517	129,659	227,558
Operations	Operations	7	7	79,416	79,416	79,416	1,808	71,747	213,858	15,988	161,929	263,405
Operations	Operations	7	8	67,424	67,424	67,424	1,809	55,866	160,715	0	147,513	220,514
Operations	Operations	7	9	69,836	69,836	69,836	1,810	56,596	167,061	0	90,436	227,519
Operations	Operations	7	10	1,767	6,845	41,886	1,811	1,811	59,664	0	0	51,687
Operations	Operations	7	11	1,710	1,710	1,710	1,812	1,812	1,812	0	0	0
Operations	Operations	7	12	1,767	1,767	1,767	1,813	1,813	1,813	0	0	0
Operations	Operations	8	1	1,767	1,767	1,767	1,814	1,814	1,814	0	0	0
Operations	Operations	8	2	1,653	1,653	1,653	1,815	1,815	1,815	0	0	0
Operations	Operations	8	3	1,767	1,767	1,767	1,816	1,816	1,816	0	0	0
Operations	Operations	8	4	1,710	1,710	1,710	1,817	1,817	1,817	0	0	0
Operations	Operations	8	5	1,767	1,767	140,265	1,818	1,818	65,683	0	0	0
Operations	Operations	8	6	1,710	55,401	264,374	1,819	58,484	183,182	30,116	152,205	256,030
Operations	Operations	8	7	1,767	68,995	181,074	1,820	53,852	204,441	33,875	174,960	266,462
Operations	Operations	8	8	1,767	52,606	150,010	1,821	37,498	154,150	0	157,340	222,301
Operations	Operations	8	9	1,710	65,178	142,367	1,822	53,506	174,978	0	96,018	232,432
Operations	Operations	8	10	1,767	24,401	55,186	1,823	11,419	80,757	0	0	91,044
Operations	Operations	8	11	1,710	1,710	1,710	1,824	1,824	1,824	0	0	0
Operations	Operations	8	12	1,767	1,767	1,767	1,825	1,825	1,825	0	0	0
Closure - HLF Au Recovery	Operations	9	1	1,860	1,860	1,860	1,826	1,826	1,826	0	0	0
Closure - HLF Au Recovery	Operations	9	2	1,680	1,680	1,680	1,826	1,826	1,826	0	0	0
Closure - HLF Au Recovery	Operations	9	3	1,860	1,860	1,860	1,826	1,826	1,826	0	0	0
Closure - HLF Au Recovery	Operations	9	4	1,800	1,800	1,800	1,826	1,826	7,852	0	0	0
Closure - HLF Au Recovery	Operations	9	5	1,860	87,999	87,999	82,479	166,404	278,562	0	0	0
Closure - HLF Au Recovery	Operations	9	6	100,389	123,782	123,782	63,470	137,070	253,095	51,289	164,729	269,422
Closure - HLF Au Recovery	Operations	9	7	71,290	71,290	71,290	7,535	86,919	237,901	53,193	182,779	264,702
Closure - HLF Au Recovery	Operations	9	8	64,383	64,383	64,383	9,030	75,823	184,991	12,968	164,968	223,337

Mine Phase (PFS)	Mine Phase (FS)	Mine Life (yrs)	Month	Stantec PFS SWBM			KP GoldSim PFS WBM			KP GoldSim FS WBM		
				5th percentile	Median	95th percentile	5th percentile	Median	95th percentile	5th percentile	Median	95th percentile
Closure - HLF Au Recovery	Operations	9	9	67,412	67,412	67,412	17,503	82,514	206,104	0	111,293	238,441
Closure - HLF Au Recovery	Operations	9	10	54,125	54,125	54,125	20,490	58,911	133,956	0	0	188,674
Closure - HLF Au Recovery	Closure - HLF Au Recovery	9	11	18,901	18,901	18,901	5,532	14,940	40,287	0	0	0
Closure - HLF Au Recovery	Closure - HLF Au Recovery	9	12	1,860	1,860	1,860	1,826	1,826	1,826	0	0	0
Closure - HLF Rinse	Closure - HLF Au Recovery	10	1	1,860	1,860	1,860	47,786	47,786	47,786	0	0	0
Closure - HLF Rinse	Closure - HLF Au Recovery	10	2	1,680	1,680	1,680	34,998	34,998	34,998	0	0	0
Closure - HLF Rinse	Closure - HLF Au Recovery	10	3	1,860	1,860	1,860	30,287	30,287	30,287	0	0	0
Closure - HLF Rinse	Closure - HLF Au Recovery	10	4	11,155	11,155	11,155	28,119	29,514	31,614	0	0	13,375
Closure - HLF Rinse	Closure - HLF Au Recovery	10	5	140,260	140,260	140,260	149,273	191,603	252,472	0	0	240,319
Closure - HLF Rinse	Closure - HLF Au Recovery	10	6	123,782	123,782	123,782	69,254	119,766	193,829	90,273	215,554	304,742
Closure - HLF Rinse	Closure - HLF Au Recovery	10	7	71,290	71,290	71,290	23,755	73,769	170,663	134,459	186,378	263,046
Closure - HLF Rinse	Closure - HLF Au Recovery	10	8	64,383	64,383	64,383	17,892	60,959	144,682	151,904	180,512	227,108
Closure - HLF Rinse	Closure - HLF Au Recovery	10	9	85,426	85,426	85,426	9,485	35,065	96,814	170,594	209,738	264,125
Closure - HLF Rinse	Closure - HLF Au Recovery	10	10	46,384	46,384	46,384	5,792	16,512	44,922	47,488	195,469	241,409
Closure - HLF Rinse	Closure - HLF Rinse	10	11	6,348	6,348	6,348	1,066	1,066	1,066	3,353	119,652	119,652
Closure - HLF Rinse	Closure - HLF Rinse	10	12	1,860	1,860	1,860	991	991	991	1,930	1,930	83,756
Closure - HLF Rinse	Closure - HLF Rinse	11	1	930	930	930	913	913	913	1,421	1,421	53,095
Closure - HLF Rinse	Closure - HLF Rinse	11	2	840	840	840	874	874	874	1,367	1,367	38,887
Closure - HLF Rinse	Closure - HLF Rinse	11	3	930	930	930	839	839	839	1,346	1,346	33,652
Closure - HLF Rinse	Closure - HLF Rinse	11	4	19,923	19,923	19,923	7,866	11,604	17,301	20,184	31,586	35,271
Closure - HLF Rinse	Closure - HLF Rinse	11	5	200,860	200,860	200,860	75,915	108,190	155,674	212,596	305,080	390,730
Closure - HLF Rinse	Closure - HLF Rinse	11	6	108,255	108,255	108,255	28,517	54,503	110,942	180,212	225,174	295,147
Closure - HLF Rinse	Closure - HLF Rinse	11	7	76,243	76,243	76,243	14,719	46,143	128,491	138,353	185,878	265,760
Closure - HLF Rinse	Closure - HLF Rinse	11	8	60,739	60,739	60,739	11,558	33,571	83,666	153,555	181,127	226,798
Closure - HLF Rinse	Closure - HLF Rinse	11	9	71,937	71,937	71,937	8,949	34,076	95,357	177,787	210,349	264,065
Closure - HLF Rinse	Closure - HLF Rinse	11	10	45,454	45,454	45,454	5,225	16,124	44,966	100,569	197,932	243,340
Closure - HLF Rinse	Closure - HLF Rinse	11	11	5,448	5,448	5,448	533	533	533	11,036	119,652	119,652
Closure - HLF Rinse	Closure - HLF Rinse	11	12	930	930	930	495	495	495	1,930	83,756	83,756
Closure - HLF Rinse	Closure - HLF Rinse	12	1	465	465	465	457	457	457	1,421	1,421	53,095
Closure - HLF Rinse	Closure - HLF Rinse	12	2	435	435	435	433	433	433	1,367	1,367	38,887
Closure - HLF Rinse	Closure - HLF Rinse	12	3	1,863	1,863	1,863	412	412	412	1,346	1,346	33,652
Closure - HLF Rinse	Closure - HLF Rinse	12	4	25,725	25,725	25,725	7,466	11,216	16,999	20,443	32,236	35,321
Closure - HLF Rinse	Closure - HLF Rinse	12	5	202,875	202,875	202,875	75,235	108,371	156,160	213,499	306,391	392,479
Closure - HLF Rinse	Closure - HLF Rinse	12	6	272,638	272,638	272,638	151,366	177,163	233,701	180,805	225,041	294,848
Closure - HLF Draindown	Closure - HLF Rinse	12	7	292,599	347,667	445,313	122,164	164,635	242,918	137,969	186,093	263,163
Closure - HLF Draindown	Closure - HLF Rinse	12	8	153,564	199,706	281,041	140,727	162,443	200,609	153,864	180,896	227,110
Closure - HLF Draindown	Closure - HLF Rinse	12	9	80,314	145,145	227,217	160,539	188,632	247,180	177,958	210,110	264,435
Closure - HLF Draindown	Closure - HLF Rinse	12	10	50,937	83,051	128,607	130,757	169,889	208,550	102,012	197,794	244,169
Closure - HLF Draindown	Closure - HLF Draindown	12	11	19,988	23,364	28,014	42,867	48,041	97,473	11,628	119,652	119,652
Closure - HLF Draindown	Closure - HLF Draindown	12	12	9,988	10,091	10,193	35,587	35,587	35,587	83,756	83,756	83,756
Closure - HLF Draindown	Closure - HLF Draindown	13	1	7,983	8,061	8,139	30,379	30,379	30,379	53,095	53,095	53,095
Closure - HLF Draindown	Closure - HLF Draindown	13	2	6,222	6,258	6,293	26,621	26,621	26,621	38,887	38,887	38,887
Closure - HLF Draindown	Closure - HLF Draindown	13	3	6,142	6,152	6,162	23,770	23,770	23,770	33,652	33,652	33,652
Closure - HLF Draindown	Closure - HLF Draindown	13	4	15,658	32,246	57,627	24,241	25,734	28,047	31,047	32,812	35,329
Closure - HLF Draindown	Closure - HLF Draindown	13	5	77,363	228,129	459,451	49,284	62,312	81,495	242,470	305,015	392,972
Closure - HLF Draindown	Closure - HLF Draindown	13	6	47,649	124,857	263,057	28,475	39,079	61,369	183,255	225,713	294,768
Closure - HLF Draindown	Closure - HLF Draindown	13	7	83,599	91,620	104,699	21,525	34,095	65,492	139,306	185,997	262,454
Closure - HLF Draindown	Closure - HLF Draindown	13	8	73,162	73,162	73,162	18,932	27,520	48,036	154,493	180,592	227,354
Closure - HLF Draindown	Closure - HLF Draindown	13	9	84,248	84,248	84,248	16,982	27,045	51,367	180,635	211,213	263,937
Closure - HLF Draindown	Closure - HLF Draindown	13	10	45,650	45,650	45,650	14,372	18,749	30,055	176,640	200,110	244,744
Closure - HLF Draindown	Closure - HLF Draindown	13	11	8,421	8,421	8,421	11,717	11,717	11,717	119,652	119,652	119,652
Closure - HLF Draindown	Closure - HLF Draindown	13	12	4,456	4,456	4,456	10,939	10,939	10,939	83,756	83,756	83,756
Closure - HLF Draindown	Closure - HLF Draindown	14	1	4,136	4,136	4,136	13,531	13,531	13,531	53,095	53,095	53,095
Closure - HLF Draindown	Closure - HLF Draindown	14	2	3,763	3,763	3,763	6,403	6,403	6,403	38,887	38,887	38,887
Closure - HLF Draindown	Closure - HLF Draindown	14	3	3,713	3,713	3,713	9,125	9,125	9,125	33,652	33,652	33,652
Closure - HLF Draindown	Closure - HLF Draindown	14	4	25,807	25,807	25,807	11,552	13,050	15,348	31,069	32,823	35,306
Closure - HLF Draindown	Closure - HLF Draindown	14	5	192,168	192,168	192,168	40,786	53,822	72,909	241,499	305,701	390,768

Mine Phase (PFS)	Mine Phase (FS)	Mine Life (yrs)	Month	Stantec PFS SWBM			KP GoldSim PFS WBM			KP GoldSim FS WBM		
				5th percentile	Median	95th percentile	5th percentile	Median	95th percentile	5th percentile	Median	95th percentile
Closure - HLF Draindown	Closure - HLF Draindown	14	6	102,836	102,836	102,836	18,819	29,225	51,312	183,801	225,380	293,634
Closure - HLF Draindown	Closure - HLF Draindown	14	7	77,747	77,747	77,747	13,125	25,509	57,041	139,528	185,537	262,316
Closure - HLF Draindown	Closure - HLF Draindown	14	8	62,748	62,748	62,748	11,262	19,981	40,404	153,906	180,533	227,108
Closure - HLF Draindown	Closure - HLF Draindown	14	9	72,218	72,218	72,218	10,145	20,379	43,961	180,188	211,394	262,583
Closure - HLF Draindown	Closure - HLF Draindown	14	10	21,626	21,626	21,626	8,372	12,633	23,758	176,342	199,418	243,518
Closure - HLF Draindown	Closure - HLF Draindown	14	11	2,929	2,929	2,929	6,274	6,274	6,274	119,652	119,652	119,652
Closure - HLF Draindown	Closure - HLF Draindown	14	12	2,926	2,926	2,926	5,885	5,885	5,885	83,756	83,756	83,756
Closure - HLF Draindown	Closure - HLF Draindown	15	1	2,877	2,877	2,877	5,885	5,885	5,885	53,095	53,095	53,095
Closure - HLF Draindown	Closure - HLF Draindown	15	2	2,683	2,683	2,683	5,626	5,626	5,626	38,887	38,887	38,887
Closure - HLF Draindown	Closure - HLF Draindown	15	3	2,777	2,777	2,777	5,496	5,496	5,496	33,652	33,652	33,652
Closure - HLF Draindown	Closure - HLF Draindown	15	4	15,202	15,202	15,202	8,048	9,531	11,821	31,070	32,812	35,280
Closure - HLF Draindown	Closure - HLF Draindown	15	5	108,177	108,177	108,177	35,158	48,008	67,122	242,342	304,316	390,213
Closure - HLF Draindown	Closure - HLF Draindown	15	6	12,373	12,373	12,373	16,078	26,602	49,266	183,256	225,690	295,701
Closure - HLF Draindown	Closure - HLF Draindown	15	7	11,297	11,297	11,297	10,444	22,848	55,937	134,456	184,038	264,704
Closure - HLF Draindown	Closure - HLF Draindown	15	8	8,542	8,542	8,542	9,036	17,792	38,532	24,014	178,198	226,346
Closure - HLF Draindown	Closure - HLF Draindown	15	9	8,679	8,679	8,679	7,975	18,232	42,306	16,363	202,335	258,868
Closure - HLF Draindown	Closure - HLF Draindown	15	10	4,917	4,917	4,917	6,331	10,626	21,730	9,236	179,352	232,977
Closure - HLF Draindown	Closure - HLF Draindown	15	11	1,239	1,239	1,239	4,330	4,330	4,330	6,949	6,949	119,652
Closure - HLF Draindown	Closure - HLF Draindown	15	12	1,222	1,222	1,222	4,200	4,200	4,200	6,756	6,756	83,756
Closure - HLF Draindown	Closure - HLF Draindown	16	1	1,199	1,199	1,199	5,496	5,496	5,496	6,563	6,563	53,095
Closure - HLF Draindown	Closure - HLF Draindown	16	2	1,164	1,164	1,164	2,775	2,775	2,775	6,370	6,370	38,887
Closure - HLF Draindown	Closure - HLF Draindown	16	3	1,153	1,153	1,153	5,237	5,237	5,237	6,177	6,177	33,652
Closure - HLF Draindown	Closure - HLF Draindown	16	4	3,569	3,569	3,569	6,643	8,133	10,433	7,849	9,085	32,494
Closure - HLF Draindown	Closure - HLF Draindown	16	5	22,515	22,515	22,515	33,743	46,977	66,333	29,795	41,575	284,084
Closure - HLF Draindown	Closure - HLF Draindown	16	6	12,097	12,097	12,097	14,949	25,241	48,187	14,582	25,312	45,716
Closure - HLF Draindown	Closure - HLF Draindown	16	7	11,019	11,019	11,019	9,290	21,505	53,849	15,706	28,071	50,025
Closure - HLF Draindown	Closure - HLF Draindown	16	8	8,262	8,262	8,262	7,818	16,522	36,206	10,523	19,966	36,102
Closure - HLF Draindown	Closure - HLF Draindown	16	9	8,397	8,397	8,397	6,940	17,224	41,433	10,486	18,624	32,309
Closure - HLF Draindown	Closure - HLF Draindown	16	10	4,633	4,633	4,633	5,263	9,557	21,042	6,888	10,057	16,255
Closure - HLF Draindown	Closure - HLF Draindown	16	11	953	953	953	3,423	3,423	3,423	5,212	5,212	5,212
Closure - HLF Draindown	Closure - HLF Draindown	16	12	934	934	934	3,293	3,293	3,293	5,019	5,019	5,019
Closure - HLF Draindown	Closure - HLF Draindown	17	1	909	909	909	3,293	3,293	3,293	5,019	5,019	5,019
Closure - HLF Draindown	Closure - HLF Draindown	17	2	867	867	867	3,293	3,293	3,293	4,826	4,826	4,826
Closure - HLF Draindown	Closure - HLF Draindown	17	3	860	860	860	3,293	3,293	3,293	4,826	4,826	4,826
Closure - HLF Draindown	Closure - HLF Draindown	17	4	3,273	3,273	3,273	5,963	7,493	9,735	6,465	7,624	9,206
Closure - HLF Draindown	Closure - HLF Draindown	17	5	22,218	22,218	22,218	32,839	45,960	64,733	26,294	37,453	52,167
Closure - HLF Draindown	Closure - HLF Draindown	17	6	11,798	11,798	11,798	14,144	24,460	46,956	15,129	25,666	43,343
Closure - HLF Draindown	Closure - HLF Draindown	17	7	10,736	10,736	10,736	8,678	21,153	53,815	12,842	25,353	46,734
Closure - HLF Draindown	Closure - HLF Draindown	17	8	7,995	7,995	7,995	7,381	15,952	36,080	9,661	18,944	35,303
Closure - HLF Draindown	Closure - HLF Draindown	17	9	8,147	8,147	8,147	6,220	16,307	41,177	9,048	17,097	31,120
Closure - HLF Draindown	Closure - HLF Draindown	17	10	4,401	4,401	4,401	4,765	9,081	20,283	5,750	8,924	14,972
Closure - HLF Draindown	Closure - HLF Draindown	17	11	737	737	737	2,904	2,904	2,904	4,246	4,246	4,246
Closure - HLF Draindown	Closure - HLF Draindown	17	12	735	735	735	3,682	3,682	3,682	4,246	4,246	4,246
Closure - HLF Draindown	Closure - HLF Draindown	18	1	727	727	727	2,775	2,775	2,775	4,053	4,053	4,053
Closure - HLF Draindown	Closure - HLF Draindown	18	2	700	700	700	1,860	1,860	1,860	4,053	4,053	4,053
Closure - HLF Draindown	Closure - HLF Draindown	18	3	710	710	710	3,537	3,537	3,537	4,053	4,053	4,053
Closure - HLF Draindown	Closure - HLF Draindown	18	4	3,140	3,140	3,140	5,580	7,065	9,284	7,067	8,195	9,744
Closure - HLF Draindown	Closure - HLF Draindown	18	5	22,102	22,102	22,102	32,652	45,701	64,461	25,541	36,745	51,685
Closure - HLF Draindown	Closure - HLF Draindown	18	6	11,698	11,698	11,698	13,615	24,164	45,818	12,970	23,647	40,732
Closure - HLF Draindown	Closure - HLF Draindown	18	7	10,612	10,612	10,612	8,300	20,653	52,294	13,340	25,692	46,458
Closure - HLF Draindown	Closure - HLF Draindown	18	8	7,787	7,787	7,787	6,888	15,639	35,668	9,012	18,483	34,747
Closure - HLF Draindown	Closure - HLF Draindown	18	9	7,854	7,854	7,854	5,979	15,992	39,746	8,757	16,714	30,147
Closure - HLF Draindown	Closure - HLF Draindown	18	10	4,045	4,045	4,045	4,279	8,660	19,994	5,141	8,367	14,477
Closure - HLF Draindown	Closure - HLF Draindown	18	11	343	343	343	2,439	2,439	2,439	3,667	3,667	3,667
Closure - HLF Draindown	Closure - HLF Draindown	18	12	186	186	186	2,432	2,432	2,432	3,667	3,667	3,667
Post-closure Monitoring	Closure - HLF Draindown	19	1	93	93	93	91	91	91	3,667	3,667	3,667
Post-closure Monitoring	Closure - HLF Draindown	19	2	84	84	84	87	87	87	3,474	3,474	3,474

Mine Phase (PFS)	Mine Phase (FS)	Mine Life (yrs)	Month	Stantec PFS SWBM			KP GoldSim PFS WBM			KP GoldSim FS WBM		
				5th percentile	Median	95th percentile	5th percentile	Median	95th percentile	5th percentile	Median	95th percentile
Post-closure Monitoring	Closure - HLF Draindown	19	3	93	93	93	84	84	84	3,474	3,474	3,474
Post-closure Monitoring	Closure - HLF Draindown	19	4	2,535	2,535	2,535	1,483	2,233	3,342	5,308	6,450	8,014
Post-closure Monitoring	Closure - HLF Draindown	19	5	21,501	21,501	21,501	15,085	21,543	30,867	25,066	36,196	51,307
Post-closure Monitoring	Closure - HLF Draindown	19	6	11,109	11,109	11,109	5,595	10,820	21,744	13,884	24,500	41,794
Post-closure Monitoring	Closure - HLF Draindown	19	7	10,053	10,053	10,053	2,905	9,188	25,551	11,737	24,293	45,630
Post-closure Monitoring	Closure - HLF Draindown	19	8	7,320	7,320	7,320	2,191	6,554	16,859	8,566	18,034	34,750
Post-closure Monitoring	Closure - HLF Draindown	19	9	7,484	7,484	7,484	1,710	6,719	18,897	8,449	16,462	30,224
Post-closure Monitoring	Closure - HLF Draindown	19	10	1,488	3,742	6,937	985	3,139	8,815	4,780	7,951	14,075
Post-closure Monitoring	Closure - HLF Draindown	19	11	90	90	90	53	53	53	3,281	3,281	3,281
Post-closure Monitoring	Closure - HLF Draindown	19	12	93	93	93	50	50	50	3,281	3,281	3,281
Post-closure Monitoring	Closure - HLF Draindown	20	1	47	47	47	46	46	46	3,281	3,281	3,281
Post-closure Monitoring	Closure - HLF Draindown	20	2	44	44	44	46	46	46	3,281	3,281	3,281
Post-closure Monitoring	Closure - HLF Draindown	20	3	47	47	47	46	46	46	3,281	3,281	3,281
Post-closure Monitoring	Closure - HLF Draindown	20	4	979	2,490	4,833	1,458	2,215	3,381	6,095	7,249	8,886
Post-closure Monitoring	Closure - HLF Draindown	20	5	8,103	21,455	42,259	15,087	21,673	31,448	25,034	36,250	51,998
Post-closure Monitoring	Closure - HLF Draindown	20	6	3,511	11,064	21,190	5,536	10,897	22,421	13,555	24,520	42,648
Post-closure Monitoring	Closure - HLF Draindown	20	7	2,957	10,006	18,840	2,865	9,006	24,518	11,458	23,854	44,302
Post-closure Monitoring	Closure - HLF Draindown	20	8	2,162	7,274	13,725	2,220	6,538	16,672	8,313	17,654	34,109
Post-closure Monitoring	Closure - HLF Draindown	20	9	2,050	7,439	14,160	1,742	6,831	19,057	8,175	16,239	30,022
Post-closure Monitoring	Closure - HLF Draindown	20	10	3,696	3,696	3,696	985	3,098	8,773	4,610	7,720	13,851
Post-closure Monitoring	Closure - HLF Draindown	20	11	45	45	45	46	46	46	3,088	3,088	3,088
Post-closure Monitoring	Closure - HLF Draindown	20	12	47	47	47	46	46	46	3,088	3,088	3,088
Post-closure Monitoring	Closure - HLF Draindown	21	1	47	47	47	46	46	46	3,088	3,088	3,088
Post-closure Monitoring	Closure - HLF Draindown	21	2	42	42	42	46	46	46	3,088	3,088	3,088
Post-closure Monitoring	Closure - HLF Draindown	21	3	47	47	47	46	46	46	3,088	3,088	3,088
Post-closure Monitoring	Closure - HLF Draindown	21	4	2,490	2,490	2,490	1,452	2,199	3,328	4,921	6,068	7,632
Post-closure Monitoring	Closure - HLF Draindown	21	5	21,455	21,455	21,455	15,005	21,543	31,048	24,678	35,912	50,964
Post-closure Monitoring	Closure - HLF Draindown	21	6	11,064	11,064	11,064	5,558	10,758	22,249	13,525	24,121	42,141
Post-closure Monitoring	Closure - HLF Draindown	21	7	10,006	10,006	10,006	2,977	9,262	25,048	11,597	24,061	44,681
Post-closure Monitoring	Closure - HLF Draindown	21	8	7,274	7,274	7,274	2,189	6,617	16,633	8,228	17,799	34,049
Post-closure Monitoring	Closure - HLF Draindown	21	9	7,439	7,439	7,439	1,728	6,736	18,931	8,141	16,117	29,889
Post-closure Monitoring	Closure - HLF Draindown	21	10	3,696	3,696	3,696	981	3,184	8,877	4,601	7,827	13,955
Post-closure Monitoring	Closure - HLF Draindown	21	11	45	45	45	46	46	46	3,088	3,088	3,088
Post-closure Monitoring	Closure - HLF Draindown	21	12	47	47	47	46	46	46	3,088	3,088	3,088
Post-closure Monitoring	Closure - HLF Draindown	22	1	47	47	47	46	46	46	3,088	3,088	3,088
Post-closure Monitoring	Closure - HLF Draindown	22	2	42	42	42	46	46	46	4,053	4,053	4,053
Post-closure Monitoring	Closure - HLF Draindown	22	3	47	47	47	46	46	46	3,088	3,088	3,088
Post-closure Monitoring	Closure - HLF Draindown	22	4	2,490	2,490	2,490	1,453	2,201	3,337	4,926	6,073	7,661
Post-closure Monitoring	Closure - HLF Draindown	22	5	21,455	21,455	21,455	14,972	21,576	31,087	24,708	35,950	51,391
Post-closure Monitoring	Closure - HLF Draindown	22	6	11,064	11,064	11,064	5,534	10,818	22,053	13,370	24,213	41,856
Post-closure Monitoring	Closure - HLF Draindown	22	7	10,006	10,006	10,006	2,887	8,993	24,865	11,394	23,635	44,472
Post-closure Monitoring	Closure - HLF Draindown	22	8	7,274	7,274	7,274	2,216	6,543	16,533	8,301	17,664	33,898
Post-closure Monitoring	Closure - HLF Draindown	22	9	7,439	7,439	7,439	1,761	6,829	19,179	8,220	16,236	30,151
Post-closure Monitoring	Closure - HLF Draindown	22	10	3,696	3,696	3,696	977	3,070	8,662	4,594	7,686	13,741
Post-closure Monitoring	Closure - HLF Draindown	22	11	45	45	45	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	22	12	47	47	47	46	46	46	0	0	0

M:\1\01100290\06\A\Data\200 YESAB REVIEW - PROJECT DESCRIPTION\220 Support Analysis\Water Balance\Water Licencing WBM - GoldSim\1_Results\Eagle Gold WBM_comparison_WBM_WL04.xlsx\Summary table

NOTES:

1. PFS = PRE-FEASIBILITY STUDY; FS = FEASIBILITY STUDY
2. SWBM = SURFACE WATER BALANCE MODEL; WBM = WATER BALANCE MODEL
3. PFS WATER BALANCE MODEL ASSUMES CAMP GREY WATER IS ROUTED THROUGH MWTP DURING ALL MONTHS OF SIMULATION.

0	27APR'12	ISSUED WITH LETTER VA12-00744	ER	CA	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

TABLE B.4

VICTORIA GOLD CORP.
EAGLE GOLD PROJECT

WATER BALANCE MODEL COMPARISON
MONTHLY DISCHARGE FROM HEAP LEACH FACILITY TO PASSIVE TREATMENT (m³/mon)

Print Apr/30/12 15:02:04

Mine Phase (PFS)	Mine Phase (FS)	Mine Life (yrs)	Month	Stantec PFS SWBM			KP GoldSim PFS WBM			KP GoldSim FS WBM		
				5th percentile	Median	95th percentile	5th percentile	Median	95th percentile	5th percentile	Median	95th percentile
Post-closure Monitoring	Closure - HLF Draindown	19	1	93	93	93	91	91	91	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	19	2	84	84	84	87	87	87	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	19	3	93	93	93	84	84	84	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	19	4	2,535	2,535	2,535	1,483	2,233	3,342	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	19	5	21,501	21,501	21,501	15,085	21,543	30,867	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	19	6	11,109	11,109	11,109	5,595	10,820	21,744	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	19	7	10,053	10,053	10,053	2,905	9,188	25,551	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	19	8	7,320	7,320	7,320	2,191	6,554	16,859	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	19	9	7,484	7,484	7,484	1,710	6,719	18,897	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	19	10	1,488	3,742	6,937	985	3,139	8,815	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	19	11	90	90	90	53	53	53	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	19	12	93	93	93	50	50	50	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	20	1	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	20	2	44	44	44	46	46	46	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	20	3	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	20	4	979	2,490	4,833	1,458	2,215	3,381	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	20	5	8,103	21,455	42,259	15,087	21,673	31,448	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	20	6	3,511	11,064	21,190	5,536	10,897	22,421	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	20	7	2,957	10,006	18,840	2,865	9,006	24,518	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	20	8	2,162	7,274	13,725	2,220	6,538	16,672	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	20	9	2,050	7,439	14,160	1,742	6,831	19,057	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	20	10	3,696	3,696	3,696	985	3,098	8,773	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	20	11	45	45	45	46	46	46	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	20	12	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	21	1	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	21	2	42	42	42	46	46	46	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	21	3	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	21	4	2,490	2,490	2,490	1,452	2,199	3,328	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	21	5	21,455	21,455	21,455	15,005	21,543	31,048	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	21	6	11,064	11,064	11,064	5,558	10,758	22,249	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	21	7	10,006	10,006	10,006	2,977	9,262	25,048	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	21	8	7,274	7,274	7,274	2,189	6,617	16,633	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	21	9	7,439	7,439	7,439	1,728	6,736	18,931	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	21	10	3,696	3,696	3,696	981	3,184	8,877	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	21	11	45	45	45	46	46	46	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	21	12	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	22	1	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	22	2	42	42	42	46	46	46	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	22	3	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	22	4	2,490	2,490	2,490	1,453	2,201	3,337	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	22	5	21,455	21,455	21,455	14,972	21,576	31,087	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	22	6	11,064	11,064	11,064	5,534	10,818	22,053	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	22	7	10,006	10,006	10,006	2,887	8,993	24,865	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	22	8	7,274	7,274	7,274	2,216	6,543	16,533	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	22	9	7,439	7,439	7,439	1,761	6,829	19,179	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	22	10	3,696	3,696	3,696	977	3,070	8,662	0	0	0
Post-closure Monitoring	Closure - HLF Draindown	22	11	45	45	45	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	22	12	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	23	1	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	23	2	42	42	42	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	23	3	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	23	4	2,490	2,490	2,490	1,453	2,201	3,337	1,822	2,972	4,544
Post-closure Monitoring	Post-closure Monitoring	23	5	21,455	21,455	21,455	14,972	21,576	31,087	21,478	32,693	47,797
Post-closure Monitoring	Post-closure Monitoring	23	6	11,064	11,064	11,064	5,534	10,818	22,053	10,590	20,976	39,321
Post-closure Monitoring	Post-closure Monitoring	23	7	10,006	10,006	10,006	2,887	8,993	24,865	8,336	20,773	41,282
Post-closure Monitoring	Post-closure Monitoring	23	8	7,274	7,274	7,274	2,216	6,543	16,533	5,257	14,662	31,107
Post-closure Monitoring	Post-closure Monitoring	23	9	7,439	7,439	7,439	1,761	6,829	19,179	5,030	12,953	26,432
Post-closure Monitoring	Post-closure Monitoring	23	10	3,696	3,696	3,696	977	3,070	8,662	1,487	4,710	10,768
Post-closure Monitoring	Post-closure Monitoring	23	11	45	45	45	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	23	12	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	24	1	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	24	2	42	42	42	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	24	3	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	24	4	2,490	2,490	2,490	1,453	2,201	3,337	1,865	3,005	4,562
Post-closure Monitoring	Post-closure Monitoring	24	5	21,455	21,455	21,455	14,972	21,576	31,087	21,832	32,897	48,241
Post-closure Monitoring	Post-closure Monitoring	24	6	11,064	11,064	11,064	5,534	10,818	22,053	10,643	21,030	39,315
Post-closure Monitoring	Post-closure Monitoring	24	7	10,006	10,006	10,006	2,887	8,993	24,865	8,280	20,966	42,000
Post-closure Monitoring	Post-closure Monitoring	24	8	7,274	7,274	7,274	2,216	6,543	16,533	5,189	14,635	31,685
Post-closure Monitoring	Post-closure Monitoring	24	9	7,439	7,439	7,439	1,761	6,829	19,179	5,113	13,135	27,127
Post-closure Monitoring	Post-closure Monitoring	24	10	3,696	3,696	3,696	977	3,070	8,662	1,507	4,677	10,930
Post-closure Monitoring	Post-closure Monitoring	24	11	45	45	45	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	24	12	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	25	1	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	25	2	42	42	42	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	25	3	47	47	47	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	25	4	2,490	2,490	2,490	1,453	2,201	3,337	1,837	2,979	4,574
Post-closure Monitoring	Post-closure Monitoring	25	5	21,455	21,455	21,455	14,972	21,576	31,087	21,518	32,972	48,079
Post-closure Monitoring	Post-closure Monitoring	25	6	11,064	11,064	11,064	5,534	10,818	22,053	10,583	21,204	38,689
Post-closure Monitoring	Post-closure Monitoring	25	7	10,006	10,006	10,006	2,887	8,993	24,865	8,273	20,766	41,998
Post-closure Monitoring	Post-closure Monitoring	25	8	7,274	7,274	7,274	2,216	6,543	16,533	5,082	14,518	31,199
Post-closure Monitoring	Post-closure Monitoring	25	9	7,439	7,439	7,439	1,761	6,829	19,179	5,163	13,241	26,717
Post-closure Monitoring	Post-closure Monitoring	25	10	3,696	3,696	3,696	977	3,070	8,662	1,492	4,710	10,679
Post-closure Monitoring	Post-closure Monitoring	25	11	45	45	45	46	46	46	0	0	0
Post-closure Monitoring	Post-closure Monitoring	25	12	47	47	47	46	46	46	0	0	0

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- NOTES:
 1. PFS = PRE-FEASIBILITY STUDY; FS = FEASIBILITY STUDY
 2. SWBM = SURFACE WATER BALANCE MODEL; WBM = WATER BALANCE MODEL
 3. PFS WATER BALANCE MODELS, BOTH STANTEC AND KP, INCLUDES CAMP GREY WATER IN ALL MONTHS OF SIMULATION.
 4. THE STANTEC PFS SWBM MEDIAN SCENARIO REPRESENTS AN ANNUAL PRECIPITATION WITH A 2-YR RETURN PERIOD (FOR ALL YEARS OF SIMULATION), WHILE THE 5TH (DRY) AND 95TH (WET) SCENARIOS REPRESENT AN ANNUAL PRECIPITATION WITH A 20-YR RETURN PERIOD (SELECT YEARS SHADED IN GREY).
 5. THE KP WBM (PFS AND FS) VARIES THE MONTHLY PRECIPITATION VALUES WITH MONTHLY PROBABILITY DISTRIBUTIONS USING A MONTE CARLO SIMULATION IN THE GOLDSIM SOFTWARE.

0	27APR12	ISSUED WITH LETTER VA12-00744	ER	CA	KB
REV	DATE	DESCRIPTION	PREPD	CHKD	APPD