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**Appendix 2.2A-6**  
**Updated Water Balance Letter Report**  
**(23 December 2013)**

December 23, 2013

File No.:VA101-457/6-A.01  
Cont. No.:VA13-02400



Mr. Paul Hosford  
Feasibility Study Director  
New Gold Inc.  
Suite 1800, Two Bentall Centre  
555 Burrard Street  
Vancouver, BC V7X 1M9

Dear Paul,

**Re: Blackwater Project – Updated Feasibility Study Water Balance Model**

## 1. GENERAL

A monthly operational and closure water balance was developed by Knight Piesold Ltd. (KP) for the Blackwater Project using the GoldSim® software package. This letter provides updated results for the feasibility study monthly operational and closure water balance that was originally issued in September 2013 (KP, 2013a). The updated model reflects corrections to the closure embankment seepage routing and changes to the closure pit filling assumptions. Details of the model updates are further described in the KP memo VA13-02367 (2013b).

The intent of the modelling was to estimate the magnitude and extent of any water surplus and/or deficit conditions in the Tailings Storage Facility (TSF) based on a range of possible climatic conditions. The modelling timeline included one year of pre-production (Year -1) and 16.2 years of operations (Year 1 to 17.2) at a nominal milling rate of 60,000 dry metric tonnes per day, and 18 years of closure until the TSF discharges to Davidson Creek. The project layout and catchment areas assumed for the model are shown on Figure 1 and the water balance model is illustrated schematically on Figure 2. The model incorporates the following major project components:

- Open Pit
- Mill
- Low Grade Ore (LGO) stockpile
- Tailings Storage Facility (TSF) Site D
- Tailings Storage Facility (TSF) Site C, and
- Non-Acid Generating (NAG) waste rock and overburden dumps.

The model assumptions and parameters are discussed in the following sections and summarized in Table 1.

## 2. MODEL ASSUMPTIONS

### **Average Hydrometeorological Conditions**

The base case monthly operational water balance model was developed using average estimated values for runoff and precipitation. The mean annual unit runoff (MAUR) for undisturbed basins in the project area is estimated to be approximately 199 mm based on the long-term MAUR for the project site station H2 on Davidson Creek. The mean annual precipitation (MAP) is estimated to be approximately 636 mm, with 49% of the annual precipitation falling as rain and the remainder as snow. The annual average potential evapotranspiration (PET) for the project site is about 443 mm. PET was assumed to equal lake evaporation and was applied to the TSF pond surface to estimate evaporation losses. The mean monthly values for precipitation, runoff, and lake evaporation are summarized in Table 2. Complete details of the derivation of the

hydrometeorological parameters are included in the Engineering Hydrometeorology Report (Knight Piésold, 2013c).

**Table 1 Water Balance Input Parameters**

Component	Assumption
Freshwater requirement for mill (m <sup>3</sup> /hr)	120
Total Tailings Production (million tonnes)	345
Waste Rock (million tonnes of PAG / NAG3 stored in TSF C/D Years -1 to 17)	413
Mine Life (years)	16.2
Tailings slurry solids content (% by weight)	50%
Tailings dry density (tonnes/m <sup>3</sup> )	1.3
Bulk tailings specific gravity	2.79
Waste Rock dry density (t/m <sup>3</sup> )	2.2
Waste Rock specific gravity	2.7

**Table 2 Average Hydrometeorological Inputs**

Parameter	Monthly Value (mm)												Annual (mm)
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Precipitation	73	45	39	20	50	66	52	51	47	47	74	72	<b>636</b>
Rainfall	0	0	0	13	50	66	52	51	47	31	0	0	<b>310</b>
Snowfall	73	45	39	7	0	0	0	0	0	16	74	72	<b>326</b>
Sublimation	20	20	20	0	0	0	0	0	0	0	20	20	<b>100</b>
Snowmelt	0	0	0	104	51	71	0	0	0	0	0	0	<b>226</b>
Available Precipitation	<b>0</b>	<b>0</b>	<b>0</b>	<b>117</b>	<b>101</b>	<b>137</b>	<b>52</b>	<b>51</b>	<b>47</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>536</b>
Lake Evaporation	0	0	5	18	65	93	104	93	54	12	0	0	<b>443</b>
Available Runoff	<b>7</b>	<b>7</b>	<b>9</b>	<b>17</b>	<b>50</b>	<b>45</b>	<b>17</b>	<b>11</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>8</b>	<b>199</b>

**NOTES:**

1. THE PRECIPITATION VALUES WERE ESTIMATED FOR THE BLACKWATER CLIMATE STATION, WHICH IS AT AN APPROXIMATE ELEVATION OF 1470 m.
2. SURFACE RUNOFF WAS ESTIMATED BY MULTIPLYING THE AVAILABLE PRECIPITATION VALUES BY THE CORRESPONDING RUNOFF COEFFICIENT FOR EACH PROJECT AREA.
3. THE LAKE EVAPORATION VALUES WERE APPLIED TO THE TSF POND AREA TO ESTIMATE EVAPORATIVE LOSSES.
4. AVAILABLE RUNOFF VALUES WERE APPLIED TO UNDISTURBED AREAS WITHIN THE MINE FOOTPRINT TO ESTIMATE RUNOFF.

### **Disturbed Footprint Area Runoff**

Natural runoff values are not directly applicable for mine site disturbed areas because of the substantial changes in runoff caused by altering the ground cover. Therefore, the quantities of water (runoff/infiltration) generated from the mine affected areas (open pit, TSF embankments, waste rock dumps, and TSF beaches) and open water (TSF supernatant pond) were estimated by multiplying rainfall and snowmelt by a runoff coefficient. The monthly available precipitation values are summarized in Table 2. The assumed runoff coefficients for the mine site areas are summarized below.

- TSF beach: 0.5
- TSF embankments, and waste rock/overburden stockpiles: 0.5
- Reclaimed TSF beaches and embankments: 0.37
- TSF pond: 1.0
- Open pit walls: 0.8

The portion of net precipitation that is assumed to infiltrate through the stockpiles was assumed to be 100% during operations and reduced to 50% in closure based on progressive reclamation with a soil cover being effective in closure. The TSF beach and embankments were also assumed to be reclaimed at closure and the reclaimed runoff coefficient of 0.37 was based on the ratio of the available runoff to available precipitation assumed for the natural catchment (199 mm/536 mm) areas, as shown in Table 2.

### **Stochastic Inputs**

The potential variability of climatic conditions was addressed by using a stochastic version of the water balance model that incorporates Monte Carlo type simulation techniques. The monthly climatic parameters were modelled as probability distributions rather than simply as mean values. The year-to-year variability of monthly runoff was quantified using coefficient of variation ( $C_v$ ) values that were derived using a long-term synthetic streamflow record developed for the open water months of April to October for the project site station H2 on Davidson Creek. The  $C_v$  values for the months of November to March were based on the WSC station at Van Tine Creek, due to lack of measured winter flow data at the project site stations. The monthly  $C_v$  values for runoff, along with the monthly mean and corresponding standard deviation values, are presented in Table 3. The monthly mean and standard deviation values were used to develop the monthly probability distributions that are required for a Monte Carlo simulation. The distributions of monthly precipitation were modelled assuming an underlying Gamma distribution.

**Table 3                      Stochastic Monthly Inputs**

<b>Parameter</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
Mean Runoff (mm)	7	7	9	17	50	45	17	11	9	10	11	8
Standard Deviation (mm)	6.7	5.9	7.7	10	39	37	14	7.9	5.8	4.0	11	6.3
Coefficient of Variation (C <sub>v</sub> )	0.9	0.9	0.9	0.6	0.8	0.8	0.8	0.7	0.7	0.4	1.1	0.8

**NOTES:**

1. COEFFICIENT OF VARIATION = STANDARD DEVIATION / MEAN.

**TSF and Open Pit Water Management Plan**

The water balance provides key inputs to the site wide water management plan, particularly with respect to anticipated start-up pond size, surface water diversions/collection systems, additional make-up water needs, and TSF operating criteria (supernatant pond volumes). Figure 1 illustrates the project catchment areas and the main mine facilities.

The TSF Site C Main Dam will be constructed in the upper Davidson Creek catchment and capture runoff from the upstream catchment A2, as shown on Figure 1. Catchment A3, upstream of the TSF Site C West Dam, will be redirected to the southwest away from TSF Site C by a cofferdam built in Year -2, permanently changing the natural catchment divide in this area. Catchment A3 does not contribute to the water balance for the mine site.

A cofferdam will be constructed on Davidson Creek within the TSF Site D Main Dam footprint as of Year -1 to capture runoff from catchments A1 and A14, as shown on Figure 1. The accumulated water behind the TSF Site D cofferdam will then be pumped to the TSF Site C start-up pond beginning in the second quarter of Year -1.

The starter dam for the TSF Site D Main Dam will be completed as of the start of operations in Year 1, and will begin to capture catchment runoff from the contributing areas of the West Dump (A4), East Dump (A6), and Low Grade Ore (LGO) Stockpile (A10), as well as the corresponding upstream catchment areas (A5, A9 and A11) and area downstream of the East Dump (A12). The Environmental Control Dam (ECD) will also be constructed in Year 1 to capture seepage and surface runoff (A13) from the TSF Site D Main Dam. The recoverable seepage and surface runoff will be collected at the ECD and pumped back to TSF Site D during mine operations and into closure until the open pit is full and TSF Site D spills to Davidson Creek via the closure spillway.

The water stored in the TSF Site C start-up pond will serve as the primary process water source at the start of mill operations until the end of Year 2, with additional water being drawn from the TSF Site D pond (via the pump system at the cofferdam), as necessary. Once tailings deposition in TSF Site D commences in Year 3, and until the end of mining operations in Year 17, the TSF Site D pond will be the primary source of process water. Additional make-up water, if required during this time, can be provided by the TSF Site C pond. The pond in TSF Site C, as of Year 3, will be allowed to accumulate naturally to the closure spillway elevation at or below 1343 m, and then overflow into the pond of TSF Site D in approximately Year 27. The fresh water required for the mill throughout mine operations and any additional process water that is required above what can be supplied by the TSF ponds and open pit dewatering will be sourced from the fresh water supply pipeline from Tatalkuz Lake.

Groundwater inflow and surface runoff to the open pit, including water from the vertical depressurization wells, will be collected and recycled for use in the milling process as of Year 1 to end of open pit mining in Year 15. It is noted that pit dewatering flows during operations may be directed to the TSF depending on water quality, and this detail should be addressed in subsequent design phases. The dewatering system will be decommissioned in Year 15 once open pit mining has ceased and the pit will begin to fill as low grade ore is being processed through the mill from Year 15 to 17. Once mill operations cease in Year 17, the surplus inflow to TSF Site D (inflow minus losses) will be pumped to the open pit to aid in pit filling. To aid in pit filling, once mill operations have ceased, the freshwater pipeline from Tatelkuz Lake will also be used to pump additional water to the open pit at a rate of 33 L/s (equal to the fresh water requirement of the mill at 120 m<sup>3</sup>/hr) until the pit is full. Once the open pit is full (predicted in Year 35), then it will overflow via a spillway to the TSF Site D pond. Subsequently, the TSF Site D pond will overflow via the closure spillway to a plunge pool in Davidson Creek downstream of the ECD.

### **Mill Requirements**

Water requirements at the mill were calculated based on the specified mill production rate and the expected solids content (% by weight) of the tailings. All of the process water was assumed to be supplied by the TSF reclaim system. A fresh water requirement for the mill was assumed to be 120 m<sup>3</sup>/hr based on information provided by the mill process designers. This fresh water requirement was assumed to be in addition to any process water make-up extracted from the TSF reclaim system.

### **Pit Dewatering System**

The water pumped from the open pit by the dewatering system includes pit wall runoff, undisturbed pit catchment runoff entering the pit, and groundwater inflows. Groundwater inflows to the open pit were estimated to be approximately 80 L/s at the maximum extent of the pit in Year 15. The inflow rate was assumed to increase linearly during the 14 years of open pit mining, from 0 L/s in Year 1 up to 80 L/s in Year 15. For modelling purposes, it was assumed that pit dewatering flows will be pumped to the mill for use in the process until Year 15.

### **Tailings Embankment Seepage**

The total embankment seepage leaving TSF Site D was assumed to linearly increase from 0 L/s in Year -1 to 55 L/s in Year 17. The majority of the TSF D embankment seepage is assumed to be lost through the Main Embankment (53.5 L/s), with the remaining 1.5 L/s leaves TSF Site D through the north (1.3 L/s) and south (0.2 L/s) abutments and is unredcoverable. Approximately 53.3 L/s of the TSF D embankment seepage is captured by the ECD and recycled back to the TSF Site D pond until the open pit is full and TSF Site D is discharging downstream via the closure spillway (Year 35). The unrecoverable seepage from the TSF D embankment (0.2 L/s) is assumed to bypass the seepage collection system and be lost to Davidson Creek downstream. Therefore, the total unrecoverable seepage from TSF D is 1.7 L/s at the end of operations.

Embankment seepage (21 L/s as of Year 3) from TSF Site C for Years 1 and 2 will be captured and recycled back to the TSF Site C pond with the exception of 0.4 L/s of unrecoverable seepage that will be captured in TSF Site D. The TSF Site C embankment seepage recycle system will be decommissioned at Year 3 and all subsequent seepage is assumed to be captured by TSF Site D.

### **Water Retained in Voids in TSF**

The amount of water retained in the tailings and waste rock stored in the TSF is a function of the production schedule and the dry density and specific gravity of the solids. The dry density values for the tailings and waste rock are summarized in Table 1.

Potentially acid generating (PAG) and Non-acid generating (NAG3) waste rock will be stored in the TSF Site C and Site D. The co-disposed PAG and NAG3 waste rock will be stored and submerged in the TSF Site C

beginning during pit pre-stripping in Year -1 and continuing until the end of Year 1. Subsequently, all of the PAG and NAG3 waste rock will be stored in TSF Site D beginning in Year 2 and continuing until the end of the mine life, with some additional material being backfilled in the open pit at the end of the mine life. Initially all tailings will be deposited in TSF Site C. Starting in Year 3 and continuing to the end of operations, the tailings will be deposited in TSF Site D.

#### Reclaim Water

The volume of water available for reclaim to the mill was estimated using the TSF water balance.

The primary TSF inflows are:

- Water pumped to the TSF from the mill as part of the tailings slurry
- Direct precipitation on and runoff to the TSF, which includes runoff from the upslope catchments and embankments, and
- Runoff collected from the East and West Dumps and the LGO Stockpile.

The primary TSF water balance losses were:

- Unrecoverable TSF embankment/foundation seepage
- Water retained in the tailings and waste rock voids, and
- Evaporation.

The water available for process use was assumed to be the difference between these inflows and losses. Any shortfall in the water available for milling was assumed to be made up from an external source.

### 3. RESULTS

#### **Operations**

The water balance model was used to determine the likelihood of having a surplus or deficit of water in TSF Sites C and D, as illustrated on Figure 3. The water balance model assumed that a start-up pond of at least 6 Mm<sup>3</sup> (under average conditions) will accumulate in TSF Site C in the one year prior to mill start up, of which 1.0 Mm<sup>3</sup> is assumed to accumulate behind the TSF Site C Main Dam based on runoff from its contributing upslope catchment of A2 (7.1 km<sup>2</sup>), with the additional 5.0 Mm<sup>3</sup> generated from the TSF Site D undisturbed contributing catchments of A1 and A14 (25 km<sup>2</sup>), as shown on Figure 1. This runoff will be collected behind a cofferdam located at the TSF Site D Main Dam location and be pumped to the TSF Site C pond until the end of Year -1. The minimum operating pond volume for TSF Sites C and D were assumed to be 3.0 Mm<sup>3</sup> and 7.5 Mm<sup>3</sup>, respectively. Figure 3 presents the predicted pond volumes available throughout operations for both facilities, based on average precipitation conditions.

The facilities are in a balance or surplus condition throughout operations, as the water accumulated within the supernatant ponds in TSF Sites C and D as well as open pit dewatering will satisfy the process requirements under average precipitation conditions. However, there is a constant freshwater requirement for the mill, as summarized in Table 4, which is assumed to be supplied by the freshwater pipeline from Tatelkuz Lake. In Years 5 until Year 10 when tailings are being deposited in TSF Site D, reclaim water is withdrawn from both the supernatant pond of TSF Site D and TSF Site C to meet the process water requirement. The additional process water requirement from TSF Site C is largely needed during the winter months in each year when precipitation falls as snow, but with snowmelt occurring during the spring freshet period, excess water becomes available and the system then operates in a surplus condition. The amount of surplus increases over time due to increasing runoff from the expanding surface area of the mine facilities, and also from decreases in waste rock production and corresponding decreases of water storage in waste rock voids for the mine rock stored annually within TSF Site D.

**Table 4 Annual Average Volume of Makeup Water Requirement**

Mine Life	Annual volume of makeup water required to supplement TSF reclaim (m <sup>3</sup> /yr)	Annual volume of makeup water required from freshwater source (m <sup>3</sup> /yr)
-1	0	0
1	0	1,051,200
2	0	1,051,200
3	0	1,051,200
4	0	1,054,080
5	0	1,051,200
6	0	1,051,200
7	0	1,051,200
8	0	1,054,080
9	0	1,051,200
10	0	1,051,200
11	0	1,051,200
12	0	1,054,080
13	0	1,051,200
14	0	1,051,200
15	0	1,051,200
16	0	1,054,080
17	0	259,200
<b>TOTAL</b>	<b>0</b>	<b>17,089,920</b>
<b>TOTAL MAKEUP WATER REQUIRED (m<sup>3</sup>) =</b>		<b>17,089,920</b>

The maximum operating pond volume for TSF Site C was assumed to be 14.3 Mm<sup>3</sup> (corresponding to a spillway elevation of 1343 m), with any excess water being discharged to TSF D via the closure spillway. The maximum operating pond volume for TSF Site D was assumed to be based on a spillway elevation of 1336 m. However, as shown on Figure 3, TSF Site D is predicted to exceed its maximum operating pond volume in the last year of operations, which indicates that it may be beneficial to divert a portion of the upstream contributing catchment around the facility to Davidson Creek in the later years of mine life.

**Closure**

The results of the closure pit filling model are shown on Figure 4. The open pit is assumed to begin filling in Year 15 when the dewatering system is decommissioned after open pit mining has ceased. At the end of mining operations in Year 17, the surplus inflow to TSF Site D (inflow minus losses) is assumed to be pumped to the open pit to aid in pit filling. The water balance shows this pit filling as a steady annual volume with peak monthly pumping rates in the summer. However, the TSF ponds will provide enough storage to minimize peak pumping needs during this closure phase to average monthly rates. TSF Site C is assumed to continue to naturally overflow into TSF Site D via a closure spillway in Year 27. The open pit takes approximately 18 years from the end of mining to fill based on average precipitation conditions, and was predicted to begin spilling in Year 35. TSF Site D was predicted to begin discharging via the closure spillway in that same year. Therefore it's



predicted that it will take a total of 18 years after the end of operations before the system will discharge to Davidson Creek.

**Stochastic results**

Figure 5 presents the range of possible cumulative pond volumes available in TSF Site C and TSF Site D over the mine life, as defined by the 95<sup>th</sup> percentile wet and dry values (5% and 95% chance of being equalled or exceeded in any month, respectively). This range of volumes also indicates possible active or live storage capacity in the TSF ponds for a reasonably large range of anticipated climatic conditions. The stochastic water balance highlights the sensitivity of the TSF pond volumes to the assumed climatic inputs and pond minimum/maximum operating capacities. The stochastic results indicate that for extreme conditions (5<sup>th</sup> percentile), the accumulated TSF ponds, open pit and associated contributing catchments are not able to supply enough water to meet the process water requirements until Year 11, and the system will operate in a deficit condition until that time, as indicated in Table 5.

**Table 5 Annual Stochastic Volume of Makeup Water Requirement**

Mine Life	Annual volume of makeup water required to supplement TSF reclaim (m <sup>3</sup> /yr)			Annual volume of makeup water required from freshwater source (m <sup>3</sup> /yr)
	5th Percentile	50th Percentile (Median)	95th Percentile	
-1	0	0	0	0
1	0	0	0	1,051,200
2	2,000,400	0	0	1,051,200
3	2,389,900	0	0	1,051,200
4	2,865,800	0	0	1,054,080
5	2,655,700	0	0	1,051,200
6	2,918,600	0	0	1,051,200
7	2,903,800	0	0	1,051,200
8	2,741,400	0	0	1,054,080
9	2,708,800	0	0	1,051,200
10	1,801,800	0	0	1,051,200
11	979,120	0	0	1,051,200
12	0	0	0	1,054,080
13	0	0	0	1,051,200
14	0	0	0	1,051,200
15	0	0	0	1,051,200
16	0	0	0	1,054,080
17	0	0	0	259,200

4. REFERENCES

Knight Piésold (2013a). *Blackwater Project – Feasibility Study Water Balance Model*, Ref. No. VA13-00972, September 19, 2013

Knight Piésold (2013b). *Blackwater – Site Water Balance Model update in GoldSim (WBM\_013)*. Ref. No. VA13-02367, December 13, 2013

Knight Piésold (2013c). *Engineering Hydrometeorology Report*, Ref. No. VA101-457/6-12 Rev 0, November 2013

We trust that this letter meets the current needs of the project team. Please contact the undersigned with any questions or comments.

Yours truly,

**KNIGHT PIESOLD LTD**



Signed:  
Erin Rainey, P.Eng.  
Project Engineer

A handwritten signature in blue ink, appearing to read "D Fontaine".

Reviewed:  
Daniel Fontaine, P.Eng.  
Project Engineer

A handwritten signature in blue ink, appearing to read "Ken Brouwer".

Approved:  
Ken Brouwer, P.Eng.  
President

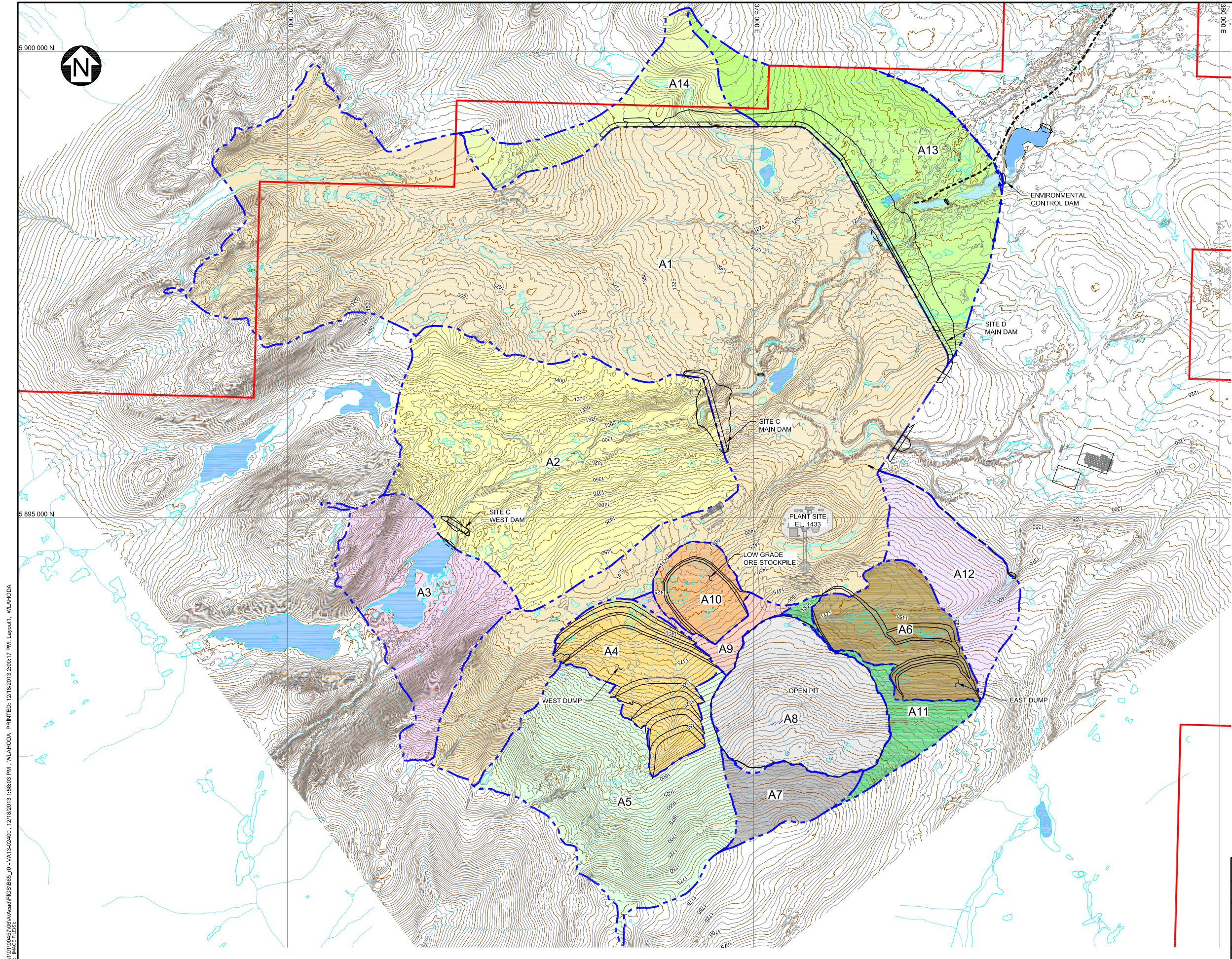
Attachments:

Figure 1 Rev 0	Catchment Area – Plan
Figure 2 Rev 0	Water Balance Schematic – During Operations Year 13
Figure 3 Rev 0	Monthly TSF Pond Volume Average
Figure 4 Rev 0	Closure Pit Filling Average
Figure 5 Rev 0	Monthly Pond Volume - Stochastic

Copy To: Nigel Fisher, Doug Moore, Keith Ferguson, Dave Hall

/er





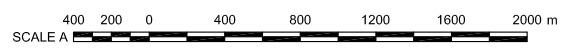
ID	CATCHMENT AREA (m <sup>2</sup> )
A1	23,493,258
A2	7,203,864
A3	2,745,670
A4	1,716,662
A5	4,041,717
A6	1,584,807
A7	778,163
A8	2,380,000
A9	308,576
A10	759,710
A11	701,996
A12	1,507,979
A13	4,143,515
A14	1,567,691

**LEGEND:**

- CATCHMENT AREA A1
- CATCHMENT AREA A2
- CATCHMENT AREA A3
- CATCHMENT AREA A4
- CATCHMENT AREA A5
- CATCHMENT AREA A6
- CATCHMENT AREA A7
- CATCHMENT AREA A8
- CATCHMENT AREA A9
- CATCHMENT AREA A10
- CATCHMENT AREA A11
- CATCHMENT AREA A12
- CATCHMENT AREA A13
- CATCHMENT AREA A14
- CATCHMENT BOUNDARY
- NEW GOLD PROPERTY BOUNDARY

**NOTES:**

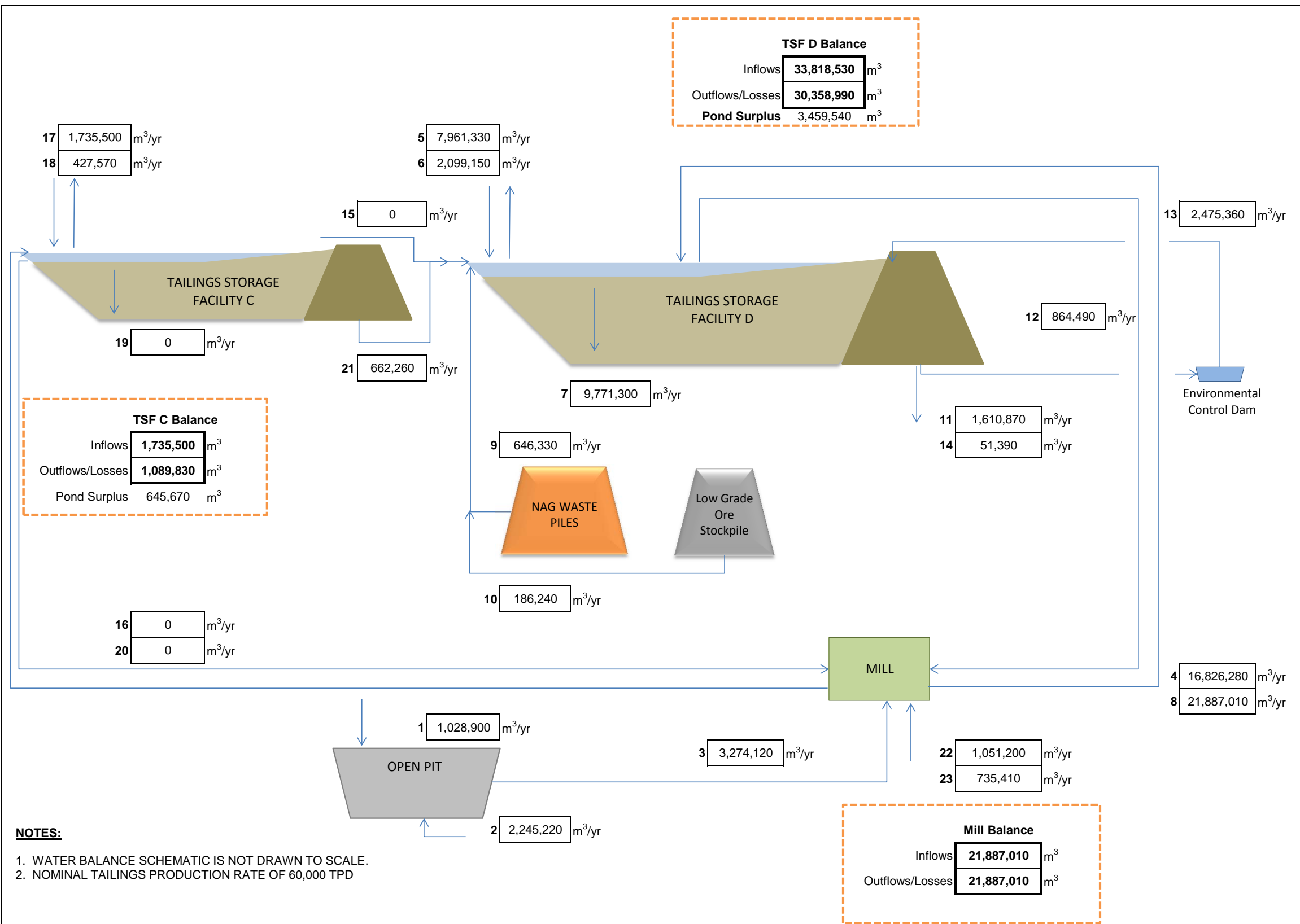
1. CONTOUR INTERVAL IS 5 METRES.
2. DIMENSIONS ARE IN MILLIMETRES AND ELEVATIONS ARE IN METRES, UNLESS NOTED OTHERWISE.



NEW GOLD INC	
BLACKWATER GOLD PROJECT	
CATCHMENT AREA PLAN	
<b><i>Knight Piésold</i></b> CONSULTING	<small>P/A NO.</small> VA101-457/6  <small>REF NO.</small> VA13-02400  <b>FIGURE 1</b>
<small>REV</small> 0	<small>REV</small> 0

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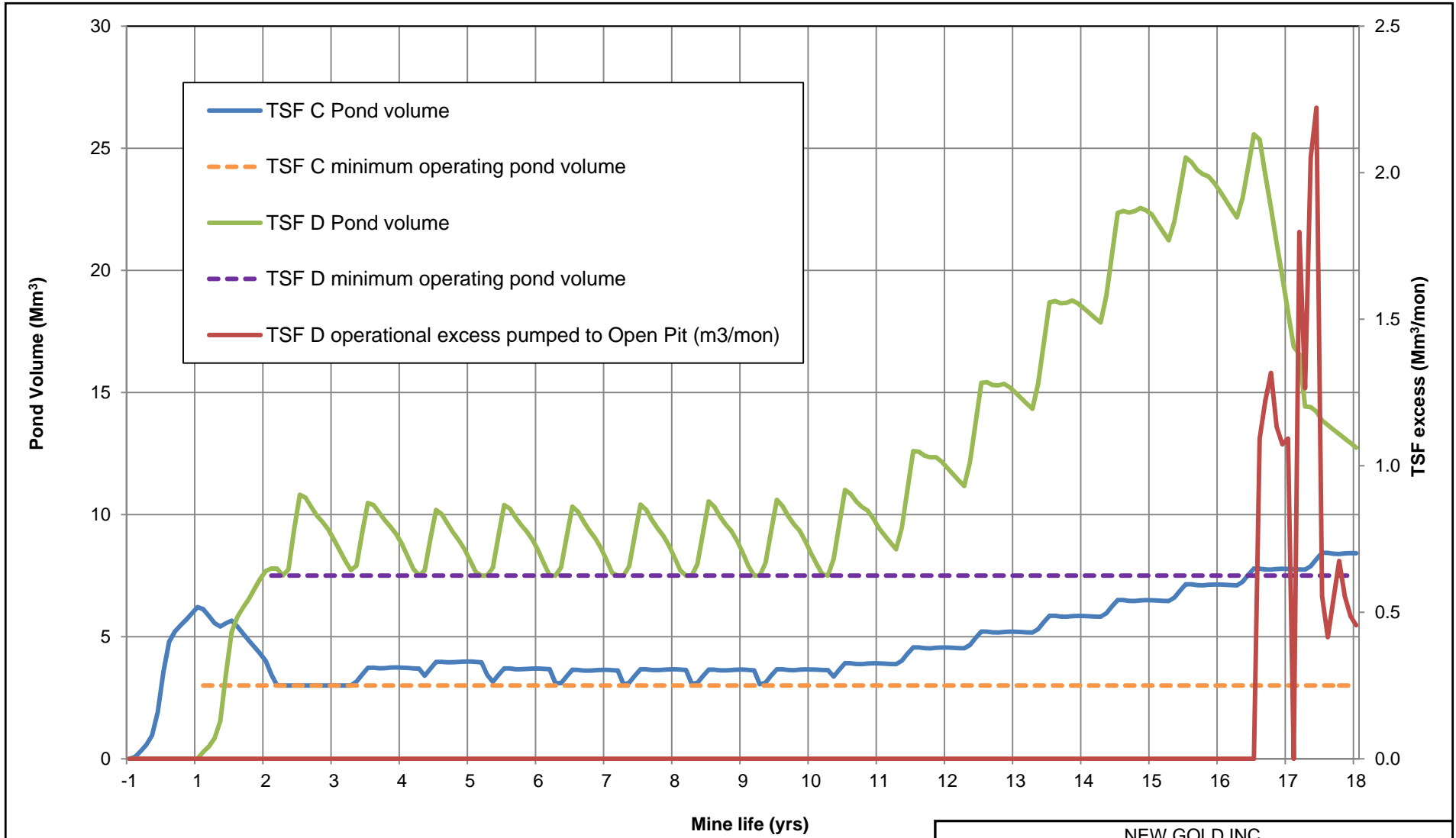
Number	Description
<b>Open Pit</b>	
1	Open Pit direct precipitation and catchment runoff
2	Open Pit groundwater inflows
3	Open Pit dewatering direct to mill
<b>Tailings Storage Facility D</b>	
4	TSF reclaim water
5	TSF catchment and beach runoff; direct precipitation on pond
6	TSF pond evaporation
7	Water trapped in tailings and waste rock void spaces
8	Water in slurry (50% solids content, by weight)
9	NAG waste piles runoff/infiltration
10	Low Grade ore stockpile runoff/infiltration
11	TSF embankment runoff/infiltration and total seepage to ECD
12	TSF embankment runoff/infiltration and catchment runoff to ECD
13	ECD recycle to TSF pond
14	TSF embankment/foundation unrecoverable seepage
15	Overflow from TSF C
<b>Tailings Storage Facility C</b>	
16	TSF reclaim water
17	TSF catchment and beach runoff; direct precipitation on pond
18	TSF pond evaporation
19	Water trapped in tailings and waste rock void spaces
20	Water in slurry (50% solids content, by weight)
21	TSF embankment/foundation seepage (collected in TSF D)
<b>Mill</b>	
22	Freshwater to mill
23	Water in Ore

**NOTES:**  
 1. WATER BALANCE SCHEMATIC IS NOT DRAWN TO SCALE.  
 2. NOMINAL TAILINGS PRODUCTION RATE OF 60,000 TPD

NEW GOLD INC.  
 BLACKWATER GOLD PROJECT  
**TAILINGS STORAGE FACILITY  
 WATER BALANCE SCHEMATIC  
 DURING OPERATIONS - YEAR 13**

<b>Knight Piésold</b> CONSULTING	P/A NO. VA101-457/6	REF NO. VA13-02400
	<b>FIGURE 2</b>	
		REV 0

0	19DEC'13	ISSUED WITH LETTER	ER	DDF	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

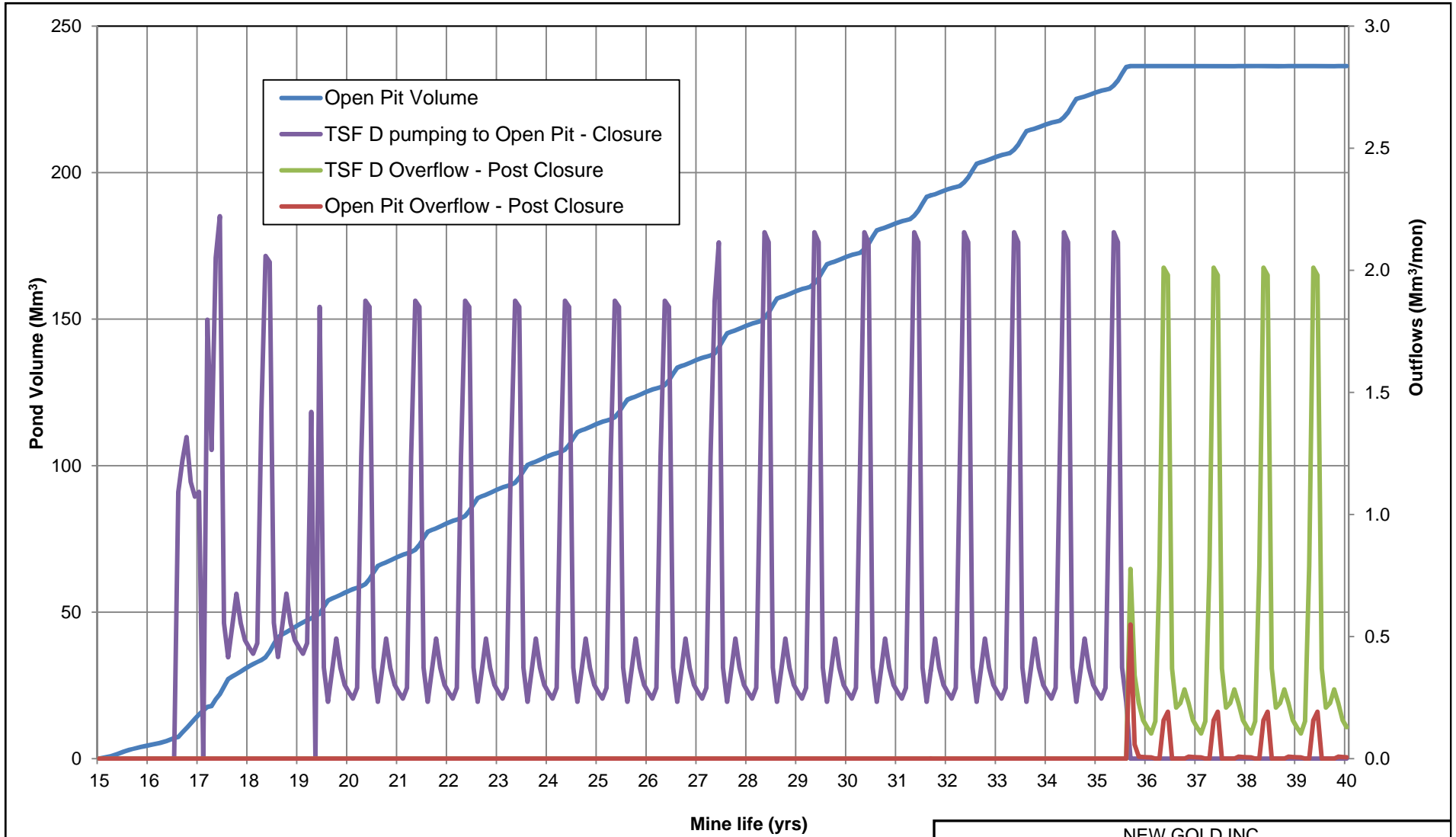


**NOTES:**

1. TSF C OPERATING POND VOLUME ASSUMED TO BE 3 Mm<sup>3</sup>.
2. TSF D OPERATING POND VOLUME ASSUMED TO BE EQUAL TO THREE MONTHS PROCESS WATER REQUIREMENT (7.5 Mm<sup>3</sup>).

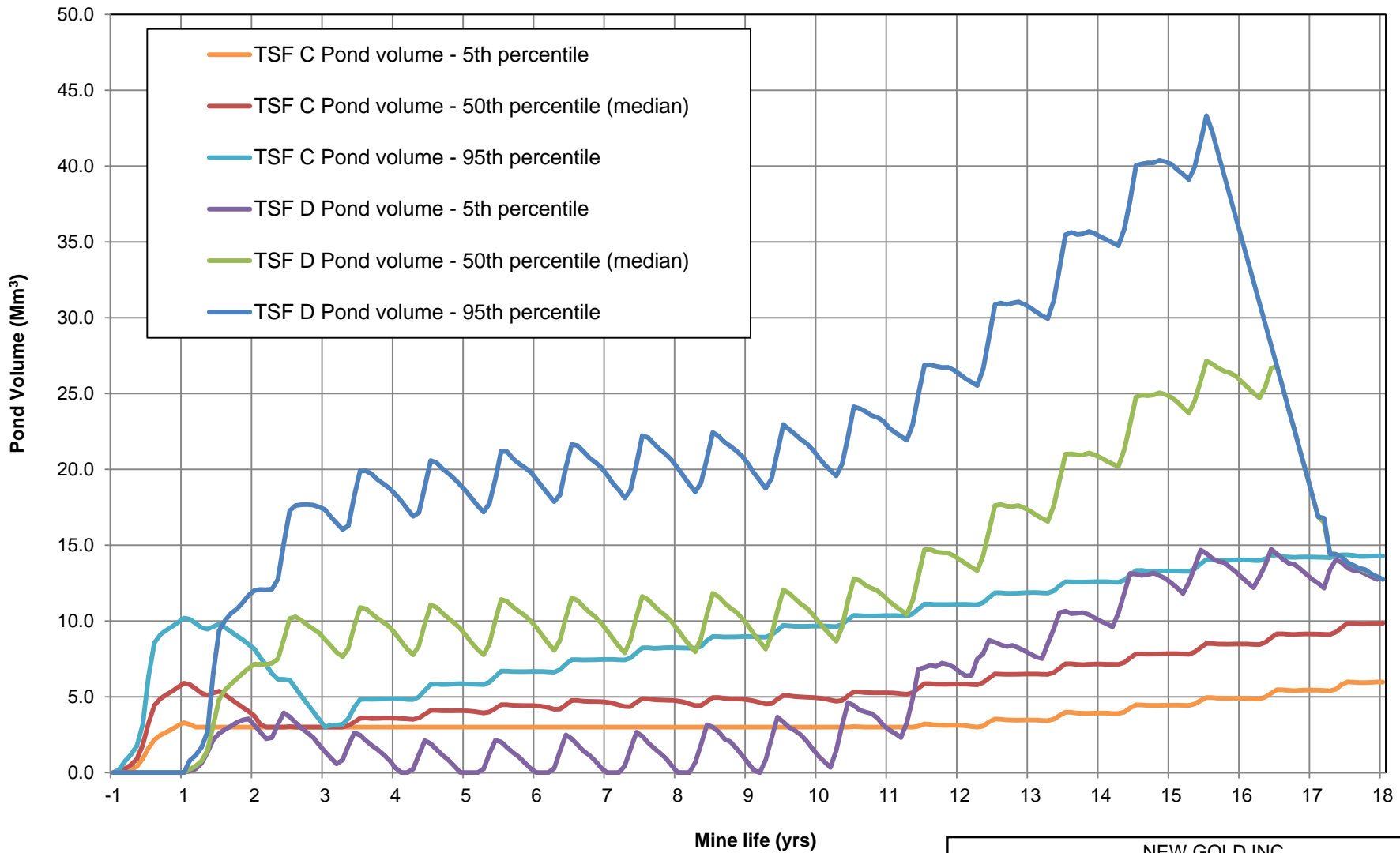
NEW GOLD INC.	
BLACKWATER GOLD PROJECT	
TAILINGS STORAGE FACILITY C/D MONTHLY TSF POND VOLUME AVERAGE	
<i><b>Knight Piésold</b></i> CONSULTING	P/A NO. VA101-457/6  REF NO VA13-02400
<b>FIGURE 3</b>	
	REV 0

0	19DEC'13	ISSUED WITH LETTER	ER	DDF	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NEW GOLD INC.	
BLACKWATER GOLD PROJECT	
<b>TAILINGS STORAGE FACILITY C/D CLOSURE PIT FILLING AVERAGE</b>	
<b><i>Knight Piésold</i></b> CONSULTING	P/A NO. VA101-457/6
	REF NO VA13-02400
<b>FIGURE 4</b>	
REV 0	

0	19DEC'13	ISSUED WITH LETTER	ER	DDF	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



**NOTES:**

1. TSF C OPERATING POND VOLUME ASSUMED TO BE 3 Mm<sup>3</sup>.
2. TSF D OPERATING POND VOLUME ASSUMED TO BE EQUAL TO THREE MONTHS PROCESS WATER REQUIREMENT (7.5 Mm<sup>3</sup>).

NEW GOLD INC.	
BLACKWATER GOLD PROJECT	
TAILINGS STORAGE FACILITY C/D MONTHLY POND VOLUME STOCHASTIC	
<i><b>Knight Piésold</b></i> CONSULTING	P/A NO. VA101-457/6
	REF NO VA13-02400
<b>FIGURE 5</b>	
	REV 0

0	19DEC'13	ISSUED WITH LETTER	ER	DDF	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



