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NEW GOLD INC.

TECHNICAL REPORT ON THE NEW AFTON MINE, BRITISH COLUMBIA, CANADA

NI 43-101 Report

Qualified Persons:

Normand L. Lecuyer, P.Eng.

David W. Rennie, P.Eng.

Holger Krutzelmann, P.Eng.

Luis Vasquez, M.Sc., P.Eng.

February 28, 2020



Report Control Form

Document Title

Technical Report on the New Afton Mine, British Columbia, Canada

Client Name & Address

New Gold Inc., New Afton Mine
4050 West Trans-Canada Highway
Kamloops, BC V1S 2A9, Tel: 250-377-2700

Document Reference

Project # 3179

**Status &
Issue No.**

FINAL
Version

Issue Date

February 28, 2020

Lead Author

Normand L. Lecuyer

(Signed)

Peer Reviewer

Richard J. Lambert
Wayne W. Valliant

(Signed)
(Signed)

Project Manager Approval

Normand L. Lecuyer

(Signed)

Project Director Approval

Richard J. Lambert

(Signed)

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Roscoe Postle Associates Inc.

55 University Avenue, Suite 501
Toronto, ON M5J 2H7
Canada

Tel: +1 416 947 0907

Fax: +1 416 947 0395

mining@rpacan.com

CAUTIONARY NOTE WITH RESPECT TO FORWARD LOOKING INFORMATION

Certain information and statements contained in this report are “forward looking” in nature. All information and statements in this report, other than statements of historical fact, that address events, results, outcomes or developments that New Gold and/or the Qualified Persons who authored this report expect to occur are “forward-looking statements”. Forward-looking statements are statements that are not historical facts and are generally, but not always, identified by the use of forward-looking terminology such as “plans”, “expects”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates”, “projects”, “potential”, “believes” or variations of such words and phrases or statements that certain actions, events or results “may”, “could”, “would”, “should”, “might” or “will be taken”, “occur” or “be achieved” or the negative connotation of such terms. Forward-looking statements include, but are not limited to, statements with respect to the future operation of the New Afton mine and the development and operation of the B3 and C Zones; the life of mine plan; expected costs and expenditures; the outcome of the mill expansion project; the subsidence area related to future activities; and estimates of mineral reserves and resources.

All forward-looking statements in this report are necessarily based on opinions and estimates made as of the date such statements are made and are subject to important risk factors and uncertainties, many of which cannot be controlled or predicted. Material assumptions regarding forward-looking statements are discussed in this report, where applicable. In addition to, and subject to, such specific assumptions discussed in more detail elsewhere in this report, the forward-looking statements in this report are subject to the following assumptions: (1) there being no significant disruptions affecting the development and operation of the New Afton mine; (2) the exchange rate between the Canadian dollar and U.S. dollar being approximately consistent with current levels; (3) the availability of certain consumables and services and the prices for diesel, natural gas, fuel oil, electricity and other key supplies being approximately consistent with current levels; (4) labour and materials costs increasing on a basis consistent with current expectations; (5) that all environmental approvals, required permits, licences and authorizations will be obtained from the relevant governments and other relevant stakeholders within the expected timelines; (6) certain tax rates, including the allocation of certain tax attributes; (7) the availability of capital resources; and (8) assumptions made in mineral resource and reserve estimates, including geological interpretation grade, recovery rates, gold, copper and silver price assumptions, and capital and operational costs, and general business and economic conditions.

Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements to be materially different from any of the future results, performance or achievements expressed or implied by forward-looking statements. These risks, uncertainties and other factors include, but are not limited to, the assumptions and parameters discussed herein not being realized; decreases in gold, copper or silver prices; cost of labour, supplies, fuel and equipment rising; actual results of current exploration; discrepancies between actual and estimated production, reserves, resources and recoveries; exchange rate fluctuations; title risks; regulatory risks, and political or economic developments in Canada; changes to tax rates; risks and uncertainties with respect to obtaining any required land use rights or other tenure; risks associated with obtaining, maintaining, amending and renewing permits and complying with permitting requirements; and other risks involved in the gold exploration, development and mining industry; as well as those risk factors discussed elsewhere in this report, in New Gold’s latest Annual Information Form, Management’s Discussion and Analysis and its other SEDAR filings from time to time. All forward-looking statements herein are qualified by this cautionary statement. Accordingly, readers should not place undue reliance on forward-looking statements. New Gold and the Qualified Persons who authored of this report undertake no obligation to update publicly or otherwise revise any forward-looking statements whether as a result of new information or future events or otherwise, except as may be required by law.

CAUTIONARY NOTE TO U.S. READERS CONCERNING ESTIMATES OF MINERAL RESERVES AND MINERAL RESOURCES

Information concerning New Afton has been prepared in accordance with Canadian standards under applicable Canadian securities laws, and may not be comparable to similar information for United States companies. The terms “Mineral Resource”, “Measured Mineral Resource”, “Indicated Mineral Resource” and “Inferred Mineral Resource” used in this report are Canadian mining terms as defined in the CIM Definition Standards for Mineral Resources and Mineral Reserves adopted by CIM Council on May 10, 2014 and incorporated by reference in National Instrument 43-101. While the terms “Mineral Resource”, “Measured Mineral Resource”, “Indicated Mineral Resource” and “Inferred Mineral Resource” are recognized and required by Canadian securities regulations, they are not defined terms under standards of the United States Securities and Exchange Commission. As such, certain information contained in this report concerning descriptions of mineralization and resources under Canadian standards is not comparable to similar information made public by United States companies subject to the reporting and disclosure requirements of the United States Securities and Exchange Commission.

An “Inferred Mineral Resource” has a great amount of uncertainty as to its existence and as to its economic and legal feasibility. Under Canadian rules, estimates of Inferred Mineral Resources may not form the basis of feasibility or pre-feasibility studies. It cannot be assumed that all or any part of an “Inferred Mineral Resource” will ever be upgraded to a higher confidence category. Readers are cautioned not to assume that all or any part of an “Inferred Mineral Resource” exists or is economically or legally mineable.

Under United States standards, mineralization may not be classified as a “Reserve” unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the Reserve estimation is made. Readers are cautioned not to assume that all or any part of the Measured or Indicated Mineral Resources that are not Mineral Reserves will ever be converted into Mineral Reserves. In addition, the definitions of “Proven Mineral Reserves” and “Probable Mineral Reserves” under CIM standards differ in certain respects from the standards of the United States Securities and Exchange Commission.

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1 SUMMARY

EXECUTIVE SUMMARY

Roscoe Postle Associates Inc. (RPA) was retained by New Gold Inc. (New Gold) to prepare an independent Technical Report on the New Afton copper-gold mine (New Afton or the Mine), located in British Columbia, Canada. The purpose of this report is to support the disclosure of the most recent estimates of Mineral Resources and Mineral Reserves for the Mine. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). RPA visited the property on October 1 and 2 and November 4 to 6, 2019. All currency in this report is US dollars (US\$ or \$) unless otherwise noted.

The Mine is located 10 km from Kamloops, British Columbia. The operation occupies the site of the Historic Afton Open Pit (HAOP) mine, which operated from 1977 until 1997. The present mine and concentrator facility commenced production in July 2012. The Mine is a block caving operation currently mining the B1 and B2 Blocks.

In 2019, the Mine produced 69 thousand ounces (koz) of gold and 79 million pounds (Mlb) of copper. The current life of mine (LOM) includes mining approximately 48 million tonnes (Mt) of ore grading an average of 0.68 g/t Au, 1.9 g/t Ag, and 0.77% Cu until the year 2029. At December 31, 2019, New Gold reported Measured and Indicated Mineral Resources of 57.0 Mt at grades of 0.61 g/t Au, 2.1 g/t Ag, and 0.74% Cu and Inferred Mineral Resources of 14.0 Mt at grades of 0.38 g/t Au, 1.3 g/t Ag, and 0.42% Cu. Mineral Resources were exclusive of Mineral Reserves and were estimated using a cut-off grade of 0.40% copper equivalent (CuEq). Proven and Probable Mineral Reserves at December 31, 2019 were reported to be 47.3 Mt at grades of 0.66 g/t Au, 1.9 g/t Ag, and 0.77% Cu. Mineral Reserves were estimated using Net Smelter Return (NSR) cut-off values of US\$21.00/t for the Main Zone B1 and B2 Blocks and US\$24.00/t for the B3 Block and C Zone. Mineral Reserves listed above include material recovered from the sub-level caving (SLC) beneath the Lift 1 East Cave of approximately 1.3 Mt.

In addition to the current operation at New Afton, New Gold has completed a Feasibility Study (FS) for the exploitation of the C Zone using block cave mining. The C Zone is a continuation

of the New Afton copper-gold deposit, extending along strike and down plunge from the zones being mined. Production from the C Zone is expected to start in 2023.

The December 31, 2019 Mineral Resource and Mineral Reserve estimates completed by New Afton personnel were reviewed by RPA. In RPA's opinion, the estimation methodology, assumptions, and parameters used are reasonable and the estimates are consistent with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM (2014) definitions) as incorporated by reference into NI 43-101.

The December 31, 2019 Mineral Resource estimate, exclusive of Mineral Reserves, is summarized in Table 1-1.

TABLE 1-1 MINERAL RESOURCE ESTIMATE AS OF DECEMBER 31, 2019
New Gold Inc. - New Afton Mine

Zone	Category	Tonnage (Mt)	Gold (g/t)	Grade Silver (g/t)	Copper (%)	Contained Metal		
						Gold (koz)	Silver (koz)	Copper (Mlb)
A&B Zones	Measured	17.0	0.63	1.7	0.83	346	940	312
	Indicated	9.8	0.44	2.6	0.71	138	825	154
	M&I	26.8	0.56	2.1	0.79	484	1,765	466
	Inferred	6.4	0.34	1.3	0.35	70	272	49
C Zone	Measured	6.1	0.78	2.0	0.94	154	401	126
	Indicated	12.7	0.71	2.1	0.83	292	852	233
	M+I	18.8	0.74	2.1	0.86	446	1,254	359
	Inferred	7.7	0.41	1.3	0.47	101	316	71
HW Zones	Measured							
	Indicated	11.4	0.51	2.0	0.44	187	738	109
	M+I	11.4	0.51	2.0	0.44	187	738	109
	Inferred	0.003	0.49	0.6	0.19	0	0	0
Total	Measured	23.1	0.67	1.8	0.86	500	1,345	438
	Indicated	33.8	0.57	2.2	0.66	617	2,409	495
	M+I	57.0	0.61	2.1	0.74	1,118	3,754	933
	Inferred	14.0	0.38	1.3	0.42	172	589	121

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.

2. Mineral Resources are estimated at a cut-off grade of 0.40% CuEq.
3. Mineral Resources are estimated using long term metal prices of US\$3.25/lb Cu, US\$1,350/oz Au, and US\$18.00/oz Ag.
4. Mineral Resources are exclusive of Mineral Reserves.
5. Provision has been made for depletion to the end of 2019.
6. Numbers may not add due to rounding.
7. M+I - Measured plus Indicated.
8. Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.

Additional diamond drilling and improved metal prices both contributed to updated resources in 2019.

The 2019 Mineral Reserve estimate was completed by New Afton personnel using the PCBC block cave modelling software (PCBC) and the sub-level cave modelling software (PCSLC). It is based on the December 2019 Mineral Resource estimate, production records, and mine plans. New Afton has been preparing the Mineral Reserve estimates since 2012 and RPA has been reviewing the estimates since the Technical Report completed in 2009.

The Mineral Reserves were estimated for the current West and East Caves (B1 and B2 Zones) and the planned B3 and C Zones. The Mineral Reserve estimate is summarized in Table 1-2.

TABLE 1-2 MINERAL RESERVE ESTIMATE AS OF DECEMBER 31, 2019
New Gold Inc. – New Afton Mine

Category/Zone	Tonnes (Mt)	Grade			Contained Metal		
		Gold (g/t)	Silver (g/t)	Copper (%)	Gold (koz)	Silver (koz)	Copper (Mlb)
Probable							
B Zones	20.2	0.55	1.9	0.73	357	1,234	323
C Zone	27.1	0.74	1.8	0.80	648	1,610	478
Total Probable	47.3	0.66	1.9	0.77	1,005	2,844	802

Notes:

1. CIM (2014) definitions were followed for Mineral Reserves.
2. Mineral Reserves are estimated at an NSR cut-off value of US\$21.00/t for the 5070 West Cave and 5070 East Cave and US\$24.00/t for the B3 and C Zones. The East Cave SLC zone NSR cut-off value is US\$25.00/t.
3. Mineral Reserves are estimated at US\$3.00/lb Cu, US\$1,275/oz Au, and \$17.00/oz Ag, and a C\$/US\$ exchange rate of 1.30:1.
4. Metallurgical recoveries for copper average 89% and vary from 69% to 94% depending on ore type; recoveries for gold and silver average 86% and 74% respectively for all ore types.
5. Numbers may not add due to rounding.

RPA is not aware of any environmental, permitting, legal, title, taxation, socio-political, marketing, and other relevant facts that would affect the Mineral Resource and Mineral Reserve estimates.

CONCLUSIONS

RPA makes the following conclusions:

GEOLOGY AND MINERAL RESOURCES

- There is an opportunity for discovery of more Mineral Resources at New Afton, and further exploration work is warranted.
- The current drilling, core handling, logging, and core storage protocols in place at New Afton meet or exceed common industry standards.
- The analytical procedures are appropriate and consistent with common industry practice.
- The database management, validation, and assay quality assurance/quality control (QA/QC) protocols are consistent with common industry practices.
- The database is acceptable for use in Mineral Resource estimation.
- The geological setting of New Afton is well understood, and the geological model used for the Mineral Resource estimate is reasonable and coherent.
- The parameters, assumptions, and methodologies applied in generating the Mineral Resource estimate are reasonable and appropriate.
- The classification criteria are appropriate and have been applied in a reasonable manner. The classification is consistent with the terminology specified by the CIM (2014) definitions as incorporated by reference into NI 43-101.
- There is a good reconciliation between the mine production and the Mineral Resource estimate.

MINING AND MINERAL RESERVES

- The 2019 Mineral Reserve estimate was completed by New Afton personnel using PCBC and PCSLC and is based on the December 31, 2019 Mineral Resource estimate, production records, and mine plans.
- RPA has reviewed the assumptions and results of the estimation process and is of the opinion that the estimate has been prepared by competent qualified professionals and is consistent with the CIM (2014) definitions.
- The estimated Probable Mineral Reserves as at December 31, 2019 are 47.3 Mt grading 0.66 g/t Au, 1.9 g/t Ag and 0.77% Cu. The Mineral Reserves are in the B and C Zones of the deposit.
- The New Afton deposit is being successfully exploited using block caving methods. Development towards the B3 and C Zone caves is underway.
- The block caving will be supplemented by retreat pillar recovery in the West and East Caves, and SLC mining below the East Cave (East Cave Recovery zone).
- Approximately 10% of the total Mineral Reserves will come from East Cave Recovery zone, which will be mined by SLC.
- The LOM mining rate is projected to fall below the rated plant capacity between 2021 and 2025 due to the previous decision to defer the development of the B3 and C Zones.

- New Afton is using automated load haul dump (LHD) loaders to increase productivity and enhance operator safety.
- There is the potential for future mudrushes from the drawpoints from water inflow. New Afton has a system for monitoring and assessing mudrush potential and has developed procedures for the remote operation of wet drawpoints. The system has functioned as expected.
- Mine development is forecast to be in excess of five kilometres per year for the next four years compared to no mine development in 2018. Development advance was behind plan for 2019, however, the Mine has in the past achieved higher development rates. RPA is of the opinion that meeting the development forecast will require ongoing effort and management attention.
- Plans have been developed and tested for the stabilization of the historic Afton tailings, to mitigate the potential for material to flow from the tailings to the mine, in the event that the cave subsidence from the B3 or C Zones extends into the tailings area.

PROCESSING

- The choice, amount, and quality of test work met industry standards. The modifications to the flowsheet fall within normal operating scenarios.
- The mill is operating efficiently, and the optimization of the flowsheet to deal with supergene and hypogene ores is being continued, as the ore constituents change.

ENVIRONMENT

- No known environmental issues were identified from the site visit and documentation review. The Mine operation complies with applicable permitting requirements in British Columbia. The approved permits address the authority's requirements for operation of the underground mine, tailings storage facilities (TSF), waste rock dumps, mill, and water usage. There is no discharge of industrial water or other effluent to the environment at the mine site.
- Environmental management plans have been developed for spill prevention, site water management, Acid Rock Drainage (ARD) and Metal Leaching (ML), general and hazardous waste, and oil, vegetation, and dust monitoring. Monitoring programs are in place for surface water quality, groundwater quality, and air quality. New Afton reports the results of the monitoring program through the Ministry of Environment Annual Report and the Annual Reclamation Report. No compliance issues have been raised by the authorities.
- Annual dam safety inspections are undertaken for the Historic Afton TSF (HATSF) (Knight Piésold Ltd. as the Engineer of Record [EoR]), and New Afton TSF (NATSF) and Pothook TSF (BGC Engineering Inc. [BGC] as the EoR). An Independent Tailings Review Board (ITRB) has been established, which currently meets twice each year for technical review of the tailings facilities. BGC also provides support on subsidence zone predictions for the underground block cave. Subsidence modelling is conducted and will continue to be updated and calibrated over the LOM.
- Block cave mining operations pose a risk to the NATSF and HATSF by inducing movement in the foundations and potentially resulting in tailings and water moving into the muck pile above the underground mine. This would dilute the ore and increase the risk of mudrush, posing a potential threat to workers and operations. Currently, the

TSFs are outside of the subsidence zone, however, mine expansion of the B3 and C Zones could result in cracks progressing to beneath the TSF dams and foundations creating potential pathways for transmission of water to the underground, leading to an increase in mudrush risk, impacting safety and ore dilution. Mitigation is provided by stabilization measures to make the tailings non-flowable, full-time monitoring of the TSFs and subsidence zones, and a subsidence numerical model used to predict subsidence development. The current action plan in the event that cracks reach the downstream toe of a NATSF dam is to suspend block cave mining until the tailings are stabilized.

- Tailings deposited in the NATSF have had a settled dry density that is less than originally anticipated and has decreased over time. As a result, more water is retained in the deposited tailings and the impoundment has filled up faster than expected. The original design was for the LOM tailings (i.e., Lift 1 and B3) to be stored in the NATSF and Pothook TSF. However, the design was amended in 2018 to raise the ultimate NATSF elevation by 11 m to contain the tailings produced by Lift 1 and approximately 2 Mt from B3. The remaining tailings from the expansion of the B3 and C Zones are currently planned to be deposited in the HAOP and potentially the HATSF. The subsidence model predicts that cracks will extend to the toe of the HATSF when B3 Zone extraction commences.
- Tailings in the HATSF are actively being stabilized by dewatering and densifying the tailings so that they are non-flowable. Dewatering wells have successfully lowered the water level in the tailings and the remnant pond was pumped to the NATSF with upgrades to the upstream diversion to prevent the development of future runoff ponds. Additional stabilization works including wick drain installation and consolidation loading are subject to the mine plan and resulting progression of subsidence.
- The Mine is characterized as having a net negative water balance, relying on water pumped from Kamloops Lake to offset the water balance deficit. Surface runoff and seepage from the NATSF, Pothook TSF, and concentrator building is captured in seepage collection ponds, containment ponds, or the HAOP, either through natural flow paths or engineered works designed to capture and transport water to these facilities. Water from the underground mine workings is pumped to the NATSF. Water is continuously recycled from the NATSF to the mill for ore processing.
- New Gold has had to temporarily reduce the production rate to maintain sufficient tailings settling and water reclaim to the mill. New Gold pumps the maximum volume of freshwater authorized for withdrawal from Kamloops Lake. The additional water retained in tailings has compounded the issue of water availability. The Mine is pursuing tailings thickening to recover more water to the mill and reduce water losses to evaporation at the pond, and is currently looking to advance a new water licence to de-risk available water supply.
- The TSF dams and subsidence zone are subject to an ongoing monitoring program to evaluate the effect of block cave mining on dam stability. Monitoring data is reviewed by the EoR and summarized in reports every six weeks. The monitoring data is used to calibrate a subsidence numerical model used to predict subsidence for future mining expansion. Threshold limits and trigger response action plans are established for all instruments and are reviewed on an annual basis. The monitoring program indicates that the facilities have performed as expected to date and no threshold limits have been exceeded.
- New Gold engages in a number of best practices for dam safety management systems, including:

- an ITRB, which meet twice annually to review current operations,
 - use of the Towards Sustainable Mining (TSM) initiative with performance assessments rated AA to A, and
 - use of an Operation, Maintenance, and Surveillance (OMS) manual and Emergency Procedures and Response Plan (EPRP) that are current and up to date.
- The majority of ponded water from the tailings beach of the HATSF was removed. The current pond volume is negligible and is controlled by direct precipitation and evaporation. A network of dewatering wells is being used to dewater the tailings profile and consolidate the tailings. The water is pumped to the mill for ore processing.
 - A Mine Reclamation and Closure Plan has been developed for all the Mine components within the context of British Columbia legislation and gets periodically updated.
 - The social due diligence review indicates that New Gold's current programs at the mine site provide a positive contribution to sustainability and community well-being.
 - New Gold has established and continues to implement its various corporate policies, procedures, and practices in a manner consistent with relevant International Finance Corporation (IFC) performance standards.
 - New Gold continues to make a positive contribution to Indigenous and non-Indigenous communities and strives to be a good corporate citizen through community investments in training and safety programs and open communication.
 - New Gold has taken positive steps to ensure worker health and safety, including a Joint Health and Safety Committee to provide employees with the opportunity to raise questions or concerns. New Gold's ongoing plans to explore new opportunities for employees to raise concerns about employment issues will improve this even further.

RECOMMENDATIONS

RPA makes the following recommendations:

GEOLOGY AND MINERAL RESOURCES

- Exploration drilling should continue in order to increase the Mineral Resources at New Afton. As New Afton is an operating mine and is not generally required to disclose specific exploration plans on the property, RPA will not make more detailed recommendations in this regard.
- RPA notes that SIM Geological Inc. (SIM) recommendations in 2014 and 2019 included continued observation of the actual mined grades of mercury and particularly arsenic in order to determine if revisions to the estimation methodology were warranted. RPA concurs with this recommendation.

MINING AND MINERAL RESERVES

- Continue caving operations in the B1 and B2 Zones.
- Complete more detailed reconciliation between production (mine and mill) and the PCBC model to confirm the Mineral Reserve estimation parameters.

- Continue the reconciliation process and monitor the pillar recovery operations to provide a reconciliation of that production to the Mineral Reserve estimate.
- Carry out development of B3 and C Zones for the exploitation of the Mineral Reserves.
- Monitor development advance rates and take appropriate action to meet the planned development.
- Assess the stability of the overburden overlying the bedrock to determine potential impacts on the NATSF.

PROCESSING

- Continue to optimize recoveries of copper and gold from supergene and hypogene ores.

ENVIRONMENT

- The dams and subsidence monitoring program appear to be sufficiently robust to identify stability issues early in order to implement timely measures to stabilize the facility and protect workers. RPA recommends that this program continue throughout operations in consultation with the EoRs for each facility.
- Tailings stabilization measures are being undertaken at the HATSF and are planned for the NATSF. These should continue until the tailings are stable and non-flowable in order to minimize the risk of a mudrush to underground workers.
- Track and update the site wide water balance on a regular basis to support ongoing operations. The water balance is an important tool to track trends and conduct short-term predictions through simulation of variable operating and/or climatic scenarios to support decision making associated with pond operation (e.g., understanding pond volumes and water availability for ore processing, and maintaining adequate freeboard in the TSFs at all times).
- Conditions during the operating phase should continue to be carefully monitored so the viability of the basis for the closure plan can continually be checked and the plans can be changed if necessary long before closure actually commences. Cost estimates for closure should continue to be updated as the concepts continue to be refined and the design of closure components advances.
- New Gold should continue its excellent relationships with Communities of Interest and continue to document and monitor any concerns or issues that might arise in the future.

ECONOMIC ANALYSIS

Under NI 43-101 rules, producing issuers may exclude the information required in Section 22 – Economic Analysis on properties currently in production, unless the Technical Report includes a material expansion of current production. RPA notes that New Gold is a producing issuer, the Mine is currently in production, and a material expansion is not being planned. RPA has performed an economic analysis of the Mine using the estimates presented in this report

and confirms that the outcome is a positive cash flow that supports the statement of Mineral Reserves.

TECHNICAL SUMMARY

PROPERTY DESCRIPTION AND LOCATION

The Mine is located at Latitude 50°39' north and Longitude 120°31' west, approximately 350 km northeast of Vancouver and 10 km west of the City of Kamloops, in the South-Central Interior of British Columbia. Trans-Canada Highway No. 1 passes through the middle of the Afton Mine Lease several kilometres west of its junction with Coquihalla Highway No. 5. Access to the mine site is by a mine road located off the Trans-Canada Highway.

LAND TENURE

New Gold holds surface rights for approximately 2,274.54 ha within and adjacent to the Mine Lease, most of which were purchased from Teck Resources Limited (Teck), and its subsidiary, on October 25, 2007.

Under-surface tenures encompassing and contiguous with the New Afton property comprise 84 mineral claims and one mining lease totalling approximately 20,353 ha.

HISTORY

Teck operated the Afton open pit mine from 1977 until 1997. DRC Resources Corporation (DRC), a predecessor company of New Gold, acquired an option on the property in 1999 and conducted exploration drilling on what is now the New Afton deposit. New Gold constructed a new mine and mill facility (New Afton) and officially commenced operations in July 2012. Since operations began, New Afton has produced 613 Mlb of copper and 664 koz of gold from 39.0 Mt with grades averaging 0.86% Cu and 0.64 g/t Au.

GEOLOGY AND MINERALIZATION

New Afton is a silica-saturated, copper-gold alkalic porphyry-style deposit; this type of deposits is found throughout British Columbia. Mineralization results from late stage hydrothermal activity driven by remnant heat from the porphyry intrusion. Thermal gradients within these systems give rise to broadly concentric, although often complexly intermingled, zones of alteration and mineralization. The distribution of alteration and mineral facies are largely

influenced by dikes, veins, and fracture systems which concentrate and control fluid flow. Late epithermal processes have overprinted the porphyry system and introduced mercury, antimony, and arsenic in geochemically significant concentrations.

The Mine area is underlain primarily by rocks of the Upper to Lower Palaeozoic Quesnel Terrane, an island-arc assemblage that was accreted onto the North American continent during the Early to Mid-Jurassic. Quesnellia forms part of the Intermontane Belt, along with rocks of the Stikine, Kootenay, Slide Mountain, and Cache Creek Terranes. The Intermontane encompasses much of central BC and extends in a north-south band from the US border into the Yukon. It is host to many porphyry deposits including Copper Mountain, Afton, Highland Valley, Mount Polley, Gibraltar, Kemess, and Galore Creek.

In the immediate Mine area, the Quesnel Terrane comprises Late Triassic to Early Jurassic Nicola Group island-arc volcanic and sedimentary rocks, and coeval alkaline intrusions of the Iron Mask Batholith. The Nicola Group consists of sub-marine volcanic, volcanoclastic, and sedimentary rocks. Volcanic components are intermediate to basic flows with associated polyolithic volcanic breccias and crystal tuffs. The Nicola Group rocks have been regionally metamorphosed to lower greenschist facies.

The Nicola Group has been intruded by the Iron Mask Batholith, a multi-phase composite pluton suite exposed in a northwest-southeast elongated trend. Four principal phases of the Iron Mask Batholith have been identified listed from oldest to youngest; the Pothook diorite, the Pothook phase agmatite intrusive breccia (Hybrid), Cherry Creek monzonite, and Sugarloaf diorite. Post-mineralization Middle Eocene volcanic and sedimentary rocks of the Kamloops Group unconformably overlie the Nicola and Iron Mask units.

The principal host rock for the New Afton deposit comprises crystalline and polymictic fragmental volcanic rocks belonging to the Triassic Nicola Formation and lesser monolithic intrusive breccias. These rocks have been altered and mineralized by a monzonite intrusive consisting of a fault-controlled elongated stock and related dike swarm. The monzonite is generally weakly mineralized to unmineralized and is interpreted as the causative intrusive phase that is less susceptible to the introduction of sulphide mineralization. Its geometry is best described as a narrow elongated stock that remains open at depth and pinches down plunge to the west.

Six principal alteration facies have been noted at New Afton, occurring in roughly concentric zones. The alteration domains include: calcic (PI), potassic/calc-potassic separated into biotite dominant and potassium feldspar dominant, propylitic, phyllic, and argillic.

Copper-gold-silver mineralization occurs as disseminations and fracture-filling sulphide grains in three roughly tabular east-west striking, steeply dipping zones, the Main Zone and two smaller Hanging Wall Zones. Present mining operations are located within the Main Zone.

MINERAL RESOURCES

The 2019 Mineral Resource estimate was completed by Robert Sim, P.Geo., of SIM Geological Inc. (SIM). It is based on the Mineral Resource model prepared in June 2019 and accounts for production to December 31, 2019. The only change to the resource model since June 2019 has been a revision of the copper equivalence (CuEq) calculation. RPA audited the 2019 Mineral Resource estimate and considers the approach taken in preparing the block model to be reasonable and consistent with best practice.

The Mineral Resource estimate was generated using a block model method, with grades interpolated by ordinary kriging (OK). Grades were estimated for the economic components copper, gold, silver, and palladium, as well as for the deleterious elements mercury, arsenic, and antimony. The block models were constrained by 3D wireframes encompassing the zones of mineralization. The models were constructed using MinePlan software, which is a commercial package used commonly within the mining industry.

The database comprises diamond drill sample results collected by New Gold from 2000 to 2019.

The December 31, 2019 Mineral Resource estimate, exclusive of Mineral Reserves, is summarized in Table 1-1.

MINERAL RESERVES

The 2019 Mineral Reserve estimate was completed by New Afton personnel using PCBC and PCSLC and is based on the June 2019 Mineral Resource model, production records, and mine plans. RPA has reviewed the assumptions and results of the estimation process and is of the

opinion that the estimate is consistent with the CIM (2014) definitions. The Mineral Reserve estimate is 47.3 Mt grading 0.66 g/t Au, 1.9 g/t Ag, and 0.77% Cu (Table 1-2).

The Mineral Reserves are based upon the mining of the current West and East Caves (B1 and B2), recovery level SLC mining below the East Cave, the planned B3 and C Zone Caves, and pillar recovery in the West, East, B3 and C Zone Caves.

Mineral Reserves in the B1 and B2 Zones were estimated using an NSR cut-off value of \$21.00/t. Mineral Reserves in the B3 and C Zones were estimated using an NSR cut-off value of \$24.00/t. Mineral Reserves for pillar recovery zone and the East Cave SLC mining were estimated using an NSR cut-off value of \$25.00/t. The increased cut-off values are based on higher estimated mining costs.

Mineral Reserves include a total of 18% dilution for top-of-column and side wall dilution due to material mixing and fines migration. This figure includes internal dilution of 3.6% by way of Inferred Mineral Resources and unclassified material (carried at zero grade). Waste at the bottom of the C Zone is excluded from the Mineral Reserve as it is to be segregated as waste.

Mine Reserve performance review is completed by comparing monthly weighted copper, gold, silver, and arsenic grades against modelled grades estimated by PCBC for each drawpoint. RPA is of the opinion that the generally favourable reconciliation between the mill production and the PCBC model supports the validity of the Mineral Reserve estimate.

MINING METHOD

New Afton is an operating block cave mine. The mine was developed between 2007 and 2012, and mill production commenced in 2012 with ore from the West Cave. In 2019, the mine production rate to the end of December averaged 15,600 tpd. Ore is transported from the drawpoints, on the extraction level, by a load haul dump loader (LHD) to an ore pass. The ore is then re-handled on the haulage level by an LHD and loaded into a haul truck. The haul truck transports the ore to the underground gyratory crusher and the crushed ore is conveyed to surface.

There are three general zones at the mine, located beneath and to the west of the Afton open pit. Production is coming from the B1 and B2 Zones (Lift 1) where there are two panel caves (west and east) in operation. Production commenced in the west panel, which is 130 m wide

and 250 m long. The east panel is separated from the west panel by a 50 m to 60 m thick waste zone. The east zone is 110 m to 130 m wide by 310 m long. The Lift 1 extraction level is at the 5,070 m level. The east block commenced production in 2014, starting from the central pillar and moving to the east.

The Lift 1 extraction level has six parallel drives named B to G from north to south. During 2019, there was an intensive push on rehabilitation in the G and F drives and also checker-board draw from the drawpoints was carried out in an effort to reduce the deterioration of the drawpoints. The drawpoints were observed to be generally in good condition and while the rock fragmentation is fine, there is oversize which must be either broken with a hydraulic rock breaker or by secondary blasting.

The West Cave area is nearing completion with only 21 active drawpoints. The majority of the production comes from the East Cave drawpoints. The West Cave area was the focus of the pillar recovery efforts during 2019, continuing into 2020. Closed drawpoints are generally filled with muck as a bulkhead and then shotcreted.

Pillar recovery by retreat mining is underway for material in the G drive apex pillars of the West Cave. The mining is retreating from east to west along the orientation of the strike drive. It is early in the process currently, results are proving to be good in terms of grade and fragmentation. Future pillar mining will include pillar recovery from above the other drives. A SLC operation is planned for extraction of the remaining ore in an area of the East Cave, and other ore beneath the East Cave. This SLC operation will extend 100 m (five sub-levels) beneath the extraction level and will be mined across the zone from south to north to decrease the potential impact of the picrite in the south wall.

The B3 Block is located 160 m below and immediately to the west of Lift 1. The B3 Zone is approximately 100 m to 110 m wide by 210 m long. The extraction level of B3 will be the 4,910 m level. Ore from B3 will be hauled by truck to the gyratory crusher. Development of the B3 zone restarted in Q1 2019.

The C Zone is located 550 m below and to the west of Lift 1. The C Zone is approximately 100 m wide by 430 m long. The extraction level of C Zone will be the 4,520 m level. The C Zone is planned as a block cave operation with layouts similar to those in use for the Lift 1.

Ore from the C Zone will be hauled by LHD from the drawpoints to the ore passes. Development towards the C Zone restarted in Q1 2019.

New Afton has adjusted the design of the C Zone haulage levels using a “split level” design with the haulage levels located at the 4,496 m and 4,471 m elevations, to improve ground conditions by shifting the wrap around stresses away from the main extraction level. LHDs will haul the ore from the ore passes to a new gyratory crusher to be installed for the C Zone. Haul trucks have been eliminated from the material handling flow on the C Zone level. The ore will then be conveyed from the crusher to a junction with the existing conveyor for movement to surface. Waste from the C Zone will be handled in the same manner.

The use of SLC was assessed for the C Zone. The amount of development was considered to be excessive compared to the block cave approach which has worked effectively in the Lift 1 mining horizon.

During 2017, New Afton introduced automated Sandvik LH410 scooptrams on the 5070 extraction level, which improved productivity through lower downtime and higher utilization. This system had to be operated from the underground until 2019, when a surface control room was commissioned.

New Afton has multiple draw control strategies with fundamental focus on achieving proper cave health and control of metal production to the mill. These strategy options include average grades, even draw, higher gold or copper grades, and lower arsenic grades.

New Afton also segregates waste in order to improve mill feed grades. Material located in the lower portion of the draw columns having an NSR value less than \$7.00/t can be segregated from ore material. A belt plow on surface removes the material from the conveyor before it reaches the mill feeder pile.

Lateral development is advanced using standard hard-rock development techniques. There are approximately 24 km of mine development in the LOM plan including development of the C Zone. Development is scheduled to average approximately 5.2 km per year from 2020 to 2023 compared to the complete deferral of development in 2018.

The most significant issue in the design has been the potential for the cave subsidence to extend to surface in the area beneath the historic New Afton tailings and impact the tailings storage facilities. Plans for the dewatering and stabilization of the tailings material have been developed and were completed in 2018. Review of the potential impact of subsidence on the current tailings area is also being reviewed.

The plant processed up to 18,000 tpd during 2019 and averaged approximately 15,300 tpd to the end of December 2019. The LOM production plan is shown in Table 1-3. There is a dip in the future production as compared to the past due to the 2017/2018 deferral of development towards the B3 and C Zones.

TABLE 1-3 LOM PRODUCTION SCHEDULE
New Gold Inc. – New Afton Mine

Year	Ore Milled		Au Grade	Ag Grade	Cu Grade	Au Recovery	Ag Recovery	Cu Recovery	Cu Con Grade
	(000 t)	(tpd)	(g/t)	(%)	(g/t)	(g/t)	(%)	(%)	(% Cu)
2020	5,560	15,191	0.53	2.5	0.81%	82.1%	75.7%	83.4%	30.97%
2021	4,577	12,539	0.59	2.1	0.75%	87.0%	72.0%	87.3%	25.56%
2022	4,614	12,641	0.63	1.8	0.75%	87.3%	73.3%	91.2%	24.25%
2023	4,740	12,987	0.62	1.8	0.70%	86.4%	70.5%	89.7%	24.27%
2024	4,679	12,785	0.53	1.6	0.62%	81.5%	71.9%	88.6%	24.75%
2025	4,637	12,705	0.73	2.0	0.76%	88.3%	76.6%	91.5%	24.57%
2026	5,122	14,034	0.89	2.3	0.93%	87.7%	77.1%	91.0%	24.40%
2027	5,121	14,029	0.92	2.3	1.01%	87.9%	79.1%	91.4%	24.47%
2028	4,911	13,417	0.78	1.8	0.83%	87.9%	77.2%	91.8%	24.20%
2029	4,655	12,753	0.47	1.3	0.50%	85.6%	71.1%	88.2%	24.52%
2030	956	11,851	0.40	1.1	0.41%	85.9%	73.4%	89.8%	24.65%
Total	49,572		0.67	1.9	0.76%	86.5%	74.9%	89.5%	

METALLURGICAL TEST WORK AND MINERAL PROCESSING

SUPERGENE METALLURGICAL TEST WORK

Supergene Background

Supergene ore, characterized by the presence of native copper and chalcocite, contains 6% of the remaining LOM copper (2020 LOM). Based on monthly mineralogy of mill streams and East Cave drill core logs, approximately 40% to 50% of the copper is expected to be as native copper with the remainder as chalcocite. Approximately 89% of this copper will be processed in 2020 with smaller amounts being processed from the low grade stockpile from 2021 to 2025.

No supergene ore is forecast when processing B3 or C Zone ore, which will be primarily hypogene ore with minor amounts of mesogene.

Supergene Ore Processing

A metallurgical test program was conducted in 2015-2016 to determine what flowsheet changes would improve native copper recovery once processing of supergene ore commenced in 2019.

A pilot plant was set up at ALS Metallurgy (Kamloops) in 2015 to process hypogene, mixed hypogene-supergene I (high native copper), supergene I (high native copper), and supergene II (high chalcocite) ores. The pilot circuit was run with and without gravity recovery in the grinding circuit. The main findings were that the supergene II (high chalcocite) ore had copper and gold recoveries comparable to the hypogene baseline. Recoveries for supergene I (high native copper) were lower. Also noted for the supergene I sample run:

- The froth was brittle due to the lack of sulphides to coat the bubbles, requiring a strong frother. This might be more of an issue in the full-scale New Afton tank cells than in the pilot-scale cells which used paddles to help froth movement.
- Steady-state was not achieved for the circulating load of copper in the grinding circuit after two shifts of operation. This indicated that the circulating load of native copper could build up enough to be problematic for materials handling in the full-scale grinding circuits. The native copper flakes could also start to lose fines to attrition and fine native copper had relatively poor recovery in flotation. Adding a gravity recovery stage in the pilot grinding circuit reduced and stabilized this circulating load of copper.

Based on the pilot study, and to mitigate potential risk of low native copper recoveries at full scale, several options were evaluated for recovering native copper from the New Afton grinding circuits:

- Continuous variable discharge Knelson concentrators.
- Inline pressure jigs.
- Heavy Liquid Separation.
- Eriez Hydrofloat.
- Shaking tables were considered but footprint restrictions made this option impractical. Similar mass flow limitations precluded the use of spiral classifiers.

PROCESSING

The process plant has been in operation since 2012. Throughput in the process plant has been averaging above the nameplate of 11,000 tpd since early 2013. A mill expansion was completed in 2015 to add a tertiary stage of grinding and additional flotation cleaning capacity.

This allowed throughput to increase to a peak average of 16,420 tpd in 2017. Throughput for 2019 averaged approximately 15,300 tpd.

Gravity recovery capacity was added to the ball mill circuit and increased in each of the tertiary and regrind circuits. In the ball mill circuit, two Gekko inline pressure jigs (one rougher and one cleaner) were installed along with a Gekko MagScreen magnetic separator for removal of magnetite and a portion of the hematite from the cleaner jig concentrate. The non-magnetic separator product reports to the thickener. The jigs were selected for the ball mill circuit primarily due to their ability to process a coarse feed compared to flotation or centrifugal concentrators. In the tertiary circuit, the existing batch XD40 Knelson concentrator (XD40) was removed and a continuous CVD42 Knelson concentrator (CVD) was installed to increase the upper limit of concentrate mass pull. The concentrate from the CVD reports to the cleaner jig feed. The XD40 was relocated to the regrind circuit to operate in parallel with another existing XD40 on the regrind cyclone underflow (each being fed by one cyclone underflow). The flowsheet changes were made primarily to recover native copper, however, the jigs have also recovered native gold associated with the supergene ore based on trace mineral QEMSCAN. In January 2020, a vibrating screen was installed on the non-magnetic jig concentrate stream currently feeding the thickener. This screens out the high copper grade +2 mm fraction for storage and separate sale. Coarse particles like this are unlikely to be captured in shipment samples, resulting in being paid for their mass but not the full value of metal which generally exceeds 95% Cu. The cut size was selected as the concentrate grade decreases below 2 mm, resulting in higher costs associated with selling a separate concentrate. The screen undersize will continue to report to the concentrate thickener.

PROJECT INFRASTRUCTURE

The surface infrastructure associated with the Mine includes:

- Administration and operating/technical offices
- Security posts and a first aid room and ambulance
- Mine rescue equipment and facilities
- Fresh water supply
- Concrete batch plant and a shotcrete batch plant on surface near the mine portal
- Sub-station and connection to the BC Hydro grid for power
- Surface maintenance shop
- Main mine fans

- Surface warehouse
- Compressor building
- Fuel storage facility
- Control room for automated tramming on the extraction level (5,070 m elevation)

The mine infrastructure includes:

- Ore and waste passes to the haulage level
- Gyratory crusher in the mine
- Back up jaw crusher in the mine
- Conveyor system from gyratory crusher to surface
- Belt plow on conveyor at surface for segregation of waste
- Refuge stations
- Alimak elevator as emergency exit
- Mine dewatering system
- Mine communication system including telephone, radio network, asset tracking system, and video monitoring systems
- PLC system for monitoring and control of pumps fans ore pass conveyors
- Control room for automated tramming on the extraction level (5,070 m elevation)
- Electrical power distribution system
- Explosives magazines
- Underground maintenance shop
- Underground fuel station
- Auxiliary mine ventilation fans

MARKET STUDIES

The principal commodities at New Afton are copper and gold in copper concentrates. Copper concentrates can be sold to a number of copper smelters or metal traders on a worldwide basis. Smelting and refining terms are generally similar and include treatment charges and smelting charges that are generally known and penalty charges for contaminants such as arsenic and mercury in the concentrates.

ENVIRONMENTAL, PERMITTING AND SOCIAL CONSIDERATIONS

Baseline studies and environmental impact assessment were completed in 2007 as part of the application for a Permit Approving the Mine Plan and Reclamation Program pursuant to the

Mines Act R.S.B.C. 1996, for the New Afton Mine. Environmental management plans were developed at the time for air quality, water, waste, waste rock and tailings, ecosystems and vegetation, wildlife, aquatic resources, and surface subsidence zone. Environmental management plans recently updated address spill prevention, water, waste, geochemistry, soil, vegetation, and dust. The environmental performance is documented annually in two reports: the Ministry of Environment Annual Report and the Annual Reclamation Report.

New Afton complies with applicable Canadian permitting requirements at the federal and provincial level. New Afton is in the process of securing the necessary permit amendments required for mining of B3 which will involve amendment of the Mines Act and Environmental Management Act permits. The permitting of C Zone is not yet initiated, however, applications are scheduled to follow the conclusion of the B3 permitting process. In addition to these permitting applications, New Afton is seeking licences to increase water withdrawal rates from Kamloops Lake to support future mining operations.

The future block cave mining operations could pose a risk to some dams of the TSF. Currently, these facilities are outside of the subsidence zone, however, mine expansion could result in cracks progressing to beneath dams creating potential pathways for transmission water to the underground mine. Various mitigation measures have been implemented including automated monitoring and numerical modelling to predict subsidence development.

The Mine is characterized as having a net negative water balance, relying on water pumped from Kamloops Lake to meet the water demands of the operation. Local runoff water and industrial water are collected and used in operation activities without discharge of water to the environment. The majority of the groundwater from the New Afton operation footprint reports to the HAOP with the exception of a portion at the northwest corner of the mine site.

New Afton maintains strong relationships with Communities of Interest including the Stk'emlupsemc te Secwépemc Nation and close neighbours from the City of Kamloops.

CAPITAL AND OPERATING COST ESTIMATES

The Mine is in operation and the current LOM plan covers the mining of the B and C Zones. The current LOM capital is forecast to be \$635 million, including the C Zone. The capital plan is summarized in Table 1-4.

TABLE 1-4 CAPITAL COST ESTIMATE
New Gold Inc. – New Afton Mine

Year	Lift 1 – Sustaining (US\$M)	B3 – Sustaining (US\$M)	Tailings – Sustaining (US\$M)	C Zone – Sustaining (US\$M)	Exploration – Sustaining (US\$M)	C Zone - Non- Sustaining ¹ (US\$M)	Total Capital (US\$M)
2020	29.6	29.7	1.0	-	-	95.5	155.9
2021	4.8	27.4	0.2	-	-	98.7	131.2
2022	3.5	3.5	0.2	-	-	136.0	143.1
2023	0.7	0.5	-	-	-	104.4	105.6
2024	-	-	-	19.5	-	25.6	45.1
2025	-	-	-	32.6	-	-	32.6
2026	-	-	-	18.7	-	-	18.7
2027	-	-	-	1.1	-	-	1.1
2028	-	-	-	0.5	-	-	0.5
2029	-	-	-	0.5	-	-	0.5
2030	-	-	-	0.6	-	-	0.6
LOM	38.7	61.2	1.4	73.5	-	460.2	635.0

Note. ¹ The C Zone non-sustaining costs include preproduction development, mine equipment purchases, TSF stabilization, and crushing and conveyance systems.

Capital cost estimates are based upon operating experience and current costs for mine development and engineering studies. Capital costs are based upon an exchange rate of 1.30:1 (C\$:US\$).

The New Afton operating costs for the 12 months ending October 2019 total \$18.02/t of ore milled. The LOM average operating cost is estimated to be \$24.21/t milled with the cost increases attributed to the longer material handling distance in the B3 and C Zones and higher unit cost pillar mining and SLC recovery.

2 INTRODUCTION

Roscoe Postle Associates Inc. (RPA) was retained by New Gold Inc. (New Gold) to prepare an independent Technical Report on the New Afton copper-gold mine (New Afton or the Mine), located in British Columbia, Canada. The purpose of this report is to support the disclosure of the most recent estimates of Mineral Resources and Mineral Reserves for the Mine. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects (NI 43-101).

New Gold is a Canadian mining company, with a portfolio of two operating mines and a development project in Canada. New Gold's shares trade on the Toronto Stock Exchange and the New York Stock Exchange under the symbol NGD.

The Mine is located 10 km from Kamloops, British Columbia. The operation occupies the site of the Historic Afton Open Pit (HAOP) mine, which operated from 1977 until 1997. The present mine and concentrator facility commenced production in July 2012. The Mine is a block caving operation currently mining the B1 and B2 Blocks.

SOURCES OF INFORMATION

Site visits were carried out by Normand L. Lecuyer, P.Eng., RPA Principal Mining Engineer, and David W. Rennie, P.Eng., RPA Associate Principal Geologist, on October 1 and 2, 2019, Holger Krutzemann, P.Eng., RPA Associate Principal Metallurgist, on November 4 to 6, 2019, and Luis Vasquez, M.Sc., P.Eng., Senior Hydrotechnical Engineer with SLR Consulting (Canada) Ltd., on November 5, 2019.

Discussions were held with personnel:

- Mr. Josh Parsons, P.Eng., Senior Mining Engineer, New Gold
- Mr. Corey Kamp, Senior Geotechnical Engineer, New Gold
- Mr. Tyler Roberts, Mine Superintendent, New Gold
- Ms. Jane McCaw, Permitting and Land Specialist, New Gold
- Mr. Devin Wade, Chief Exploration Geologist, New Gold
- Mr. Dave Hamilton, P. Geo., Mine Geologist, New Gold
- Mr. Robert Sim, P. Geo., Consulting Geologist, SIM Geological Inc.

This Technical Report was prepared by Messrs. Lecuyer, Rennie, Krutzelmann, and Vasquez, who are independent Qualified Persons (QP) for this Technical Report. Mr. Lecuyer is responsible for Sections 2, 3, 15, 16, 18, 19, 21, 22, and 24; Mr. Rennie is responsible for Sections 4 to 12, 14, and 23; Mr. Krutzelmann is responsible for Sections 13 and 17; and Mr. Vasquez is responsible for Section 20. All authors share responsibility for Sections 1, 25, 26, and 27 of this Technical Report.

The documentation reviewed, and other sources of information, are listed at the end of this report in Section 27 References.

LIST OF ABBREVIATIONS

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

μ	micron	kVA	kilovolt-amperes
μg	microgram	kW	kilowatt
a	annum	kWh	kilowatt-hour
A	ampere	L	litre
bbl	barrels	lb	pound
Btu	British thermal units	L/s	litres per second
°C	degree Celsius	m	metre
C\$	Canadian dollars	M	mega (million); molar
cal	calorie	m ²	square metre
cfm	cubic feet per minute	m ³	cubic metre
cm	centimetre	MASL	metres above sea level
cm ²	square centimetre	m ³ /hr	cubic metres per hour
d	day	mi	mile
dia	diameter	min	minute
dmt	dry metric tonne	μm	micrometre
dwt	dead-weight ton	mm	millimetre
°F	degree Fahrenheit	mph	miles per hour
ft	foot	MVA	megavolt-amperes
ft ²	square foot	MW	megawatt
ft ³	cubic foot	MWh	megawatt-hour
ft/s	foot per second	oz	Troy ounce (31.1035g)
g	gram	oz/st, opt	ounce per short ton
G	giga (billion)	ppb	part per billion
Gal	Imperial gallon	ppm	part per million
g/L	gram per litre	psia	pound per square inch absolute
Gpm	Imperial gallons per minute	psig	pound per square inch gauge
g/t	gram per tonne	RL	relative elevation
gr/ft ³	grain per cubic foot	s	second
gr/m ³	grain per cubic metre	st	short ton
ha	hectare	stpa	short ton per year
hp	horsepower	stpd	short ton per day
hr	hour	t	metric tonne
Hz	hertz	tpa	metric tonne per year
in.	inch	tpd	metric tonne per day
in ²	square inch	US\$	United States dollar
J	joule	USg	United States gallon
k	kilo (thousand)	USgpm	US gallon per minute
kcal	kilocalorie	V	volt
kg	kilogram	W	watt
km	kilometre	wmt	wet metric tonne
km ²	square kilometre	wt%	weight percent
km/h	kilometre per hour	yd ³	cubic yard
kPa	kilopascal	yr	year

3 RELIANCE ON OTHER EXPERTS

This report has been prepared by RPA for New Gold. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to RPA at the time of preparation of this report, and
- Assumptions, conditions, and qualifications as set forth in this report.

For the purpose of this report, RPA has relied on ownership information provided by New Gold. RPA has not researched property title or mineral rights for the New Afton Mine and expresses no opinion as to the ownership status of the property.

RPA has relied on New Gold for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from the Mine.

Except for the purposes legislated under provincial securities laws, any use of this report by any third party is at that party's sole risk.

4 PROPERTY DESCRIPTION AND LOCATION

The Mine is located at Latitude 50°39' north and Longitude 120°31' west, approximately 350 km northeast of Vancouver and 10 km west of the City of Kamloops, in the South-Central Interior of British Columbia (Figure 4-1).

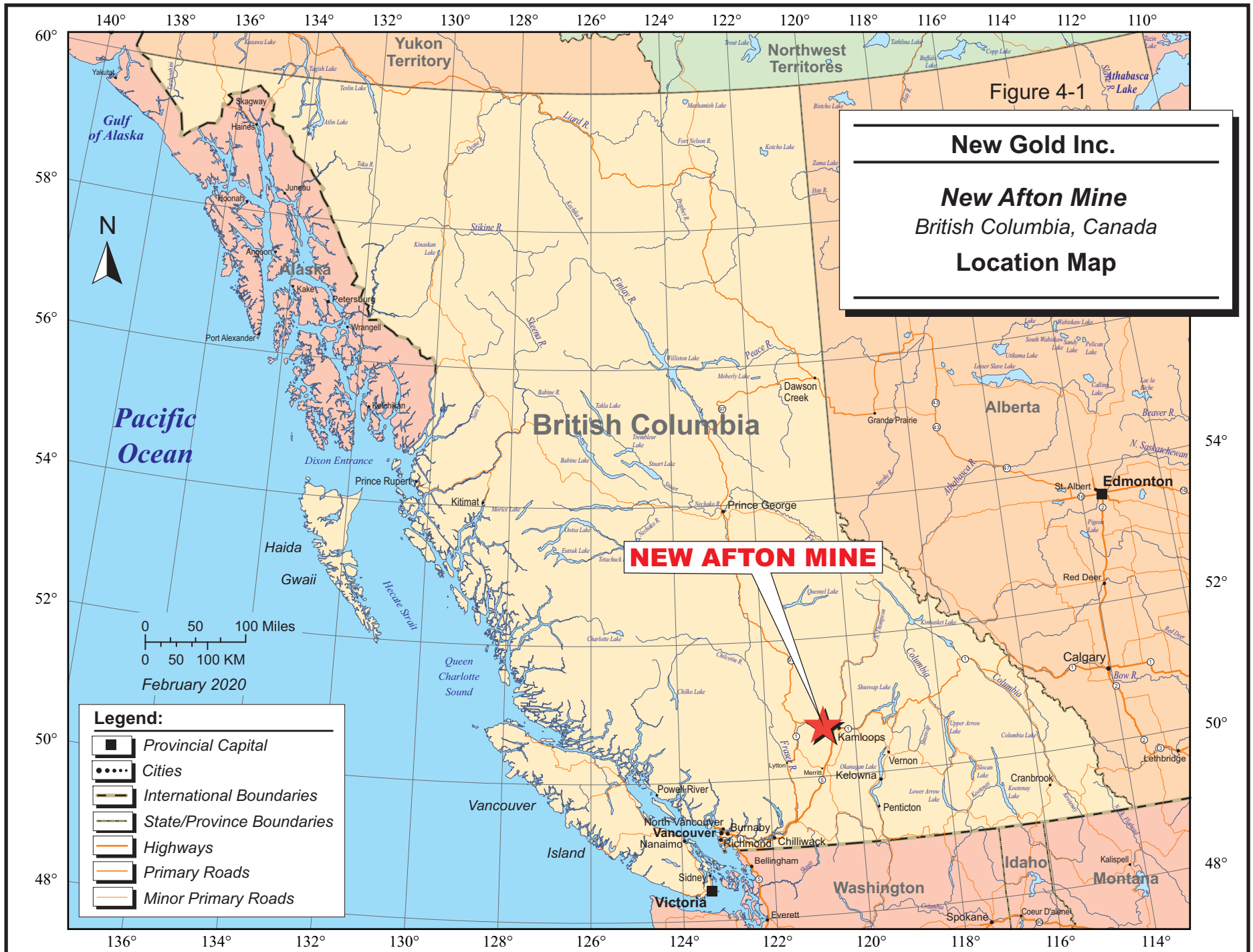
The project survey control is based on the Universal Transverse Mercator (UTM) coordinate system. It is based on the Zone 10 North projection, using the World Geodetic System 1984 (WGS'84) datum. The UTM coordinates place New Afton at 5,614,800N and 675,500E at a surface elevation of 700 MASL.

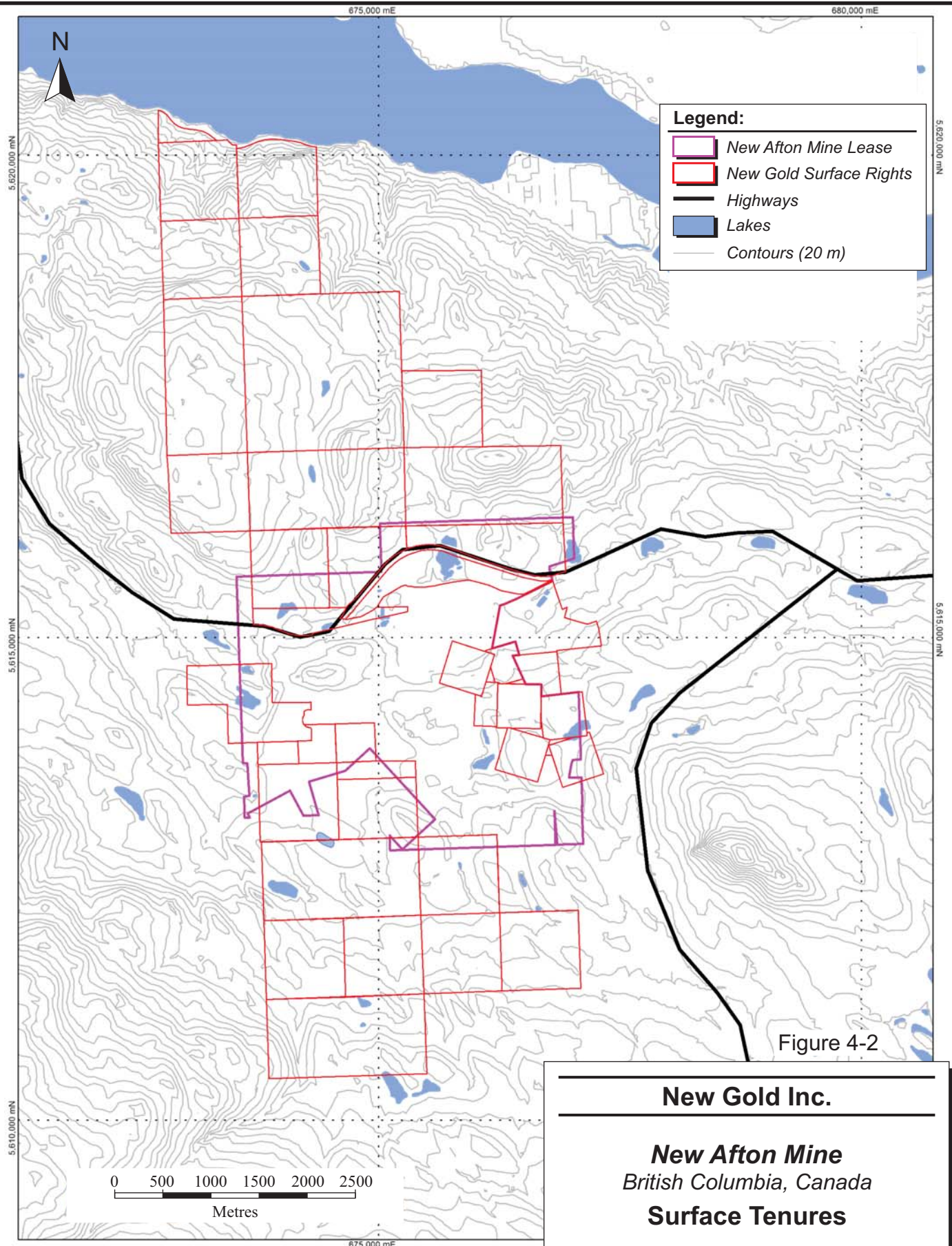
LAND TENURE

RPA has relied on land tenure information supplied by New Gold.

SURFACE RIGHTS

New Gold holds surface rights for approximately 2,274.54 ha within and adjacent to the Mine Lease. The majority of the surface lands adjoin the Mine Lease and extend to the north and south (Figure 4-2). Most of the surface holdings were obtained from Teck Resources Limited (Teck) and its subsidiary when New Afton was first acquired on October 25, 2007. Other parcels have since been added via option and purchase agreements with several parties. A list of fee simple surface tenures are provided in Appendix 1.





February 2020

Source: New Gold, 2019.

MINERAL RIGHTS

Most mineral properties in British Columbia are managed by the Mineral Titles Branch of the Ministry of Energy and Mines (the Ministry). Mineral claims for exploration work can be acquired on eligible land by means of an online staking registry. The ground is staked on a web-based mapping application by selecting “cells” within a province-wide grid which parallels the lines of latitude and longitude. Since the longitude lines converge with an increase in latitude, the cells vary in size from 21 ha in the south of the province to 16 ha in the north. Individual cell claims, as they are known, can consist of up to 100 contiguous cells.

Exploration activity on cell claims can include a modest amount of production, up to 1,000 t per unit per year, or a 10,000 t bulk sample up to once every five years. For production exceeding that amount, all or part of a mineral claim must be converted to a mining lease. This is done by application to the Ministry, payment of a fee, posting of a notice of the application in the required form and manner, and, if required by the Chief Gold Commissioner, completion of a legal survey of the area to be covered by the lease. A mining lease requires an annual payment of C\$20/ha to maintain.

Claims that were located or acquired under the Mineral Tenure Act, or predecessor legislation, prior to the 2005 implementation of the present-day online filing system are termed legacy claims. Legacy claims can include two-post claims and Modified Grid Claims. Ownership of legacy claims can continue as long as they are kept in good standing by conducting and filing assessment work or payments in lieu of work. They may be converted to cell claims at any time if the overlapped cells are available for registration, however, there are often circumstances which make this impractical or could result in the loss of ground already overlapped by existing cell claims. As a result, legacy claims continue to exist, and comprise part of the New Afton mineral title holdings.

New Gold’s mineral tenures in the Mine area comprise cell claims, legacy claims, and a mining lease. Mineral claims total 19,451 ha in area, and the Mine Lease has an area of 902.3 ha. The extent of mineral tenures which underlie the New Afton property is shown in Figure 4-3. A list of these tenures is provided in Appendix 1. New Gold owns a 100% interest in these tenures, some of which are subject to certain royalties (see below).

In addition to the mineral tenures, a portion of the property is covered by a mining permit (Permit M-229) which gives New Gold the right to establish surface works and to mine. The

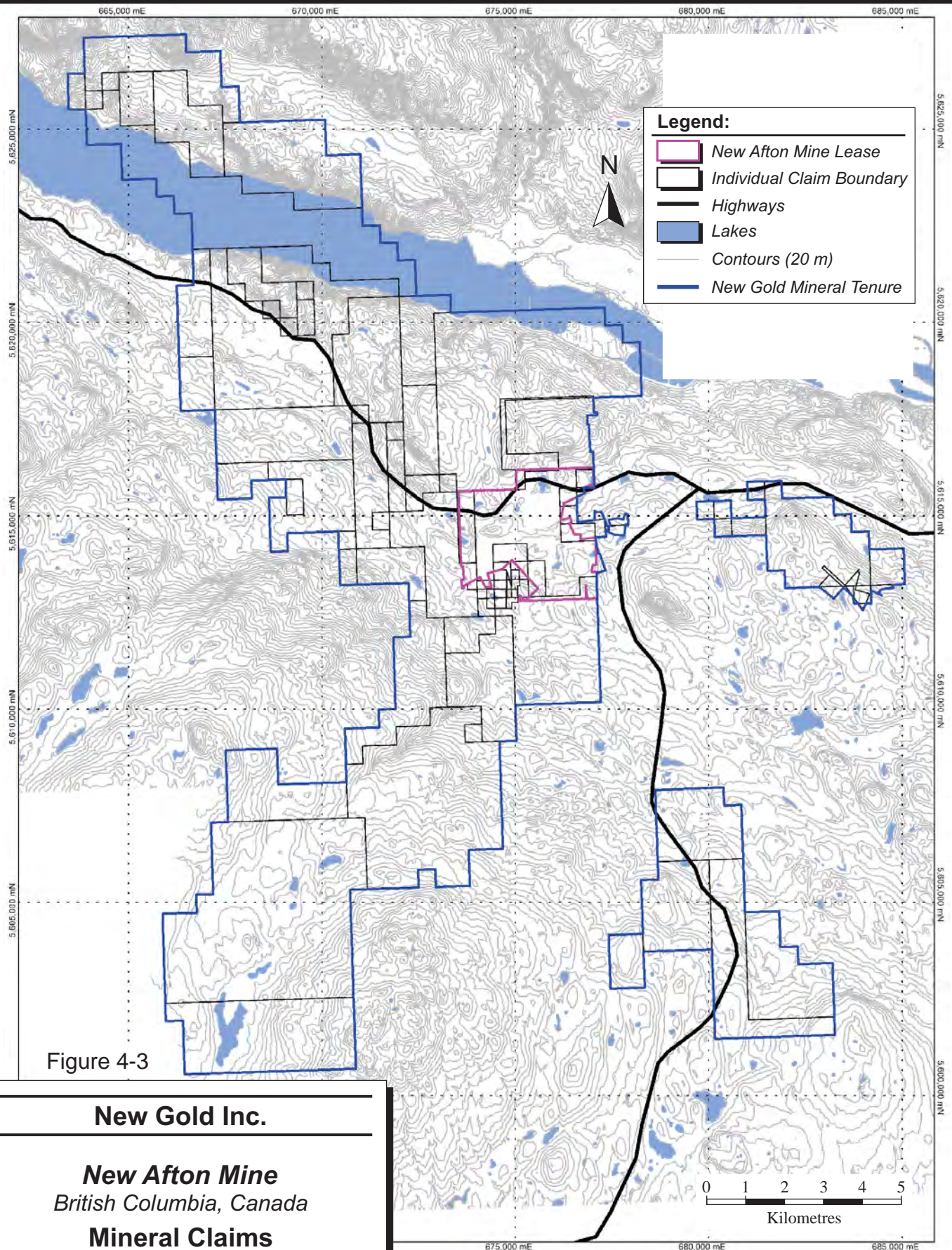
permit area is shown in Figure 4-3 and encompasses most, but not all, of the mining lease area, as well as a portion of several mineral claims. Among other things, the terms of the permit require that New Gold maintain a reclamation bond which is currently under review. New Gold reports that in the recently submitted 2019 Reclamation and Closure Plan, a bond of C\$24,839,355 has been recommended, up from the previous amount of C\$9,500,000.

ROYALTIES

There are a number of royalty agreements between New Gold and various third parties on relatively small parcels within the overall property. New Gold reports that none of these agreements currently cover the Mineral Reserves.

In addition to the above noted NSRs, New Gold is party to a Participation Agreement with the Tk'emlúps te Secwépemc and the Skeetchestn Indian Band (together SSN). The Participation Agreement provides that for each year in which commercial production occurs at the mine, New Gold must pay a percentage of NSR dependent on the price of copper and on whether New Gold has recovered its development and construction costs, subject to an annual minimum amount. RPA has reviewed the royalties and considers them to be within industry standards.

RPA is not aware of any environmental liabilities on the property. New Gold has all required permits to conduct the proposed work on the property. RPA is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the property.



February 2020

Source: New Gold, 2019.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

ACCESSIBILITY

The Mine is located 350 km northeast of Vancouver and 10 km west of Kamloops, British Columbia, in the South-Central Interior of British Columbia. The Mine is located on the south side of the Thompson River Valley, on the site of the past producing Afton Mine. Trans-Canada Highway No. 1 passes several kilometres west of its junction with Coquihalla Highway No. 5, through the middle of the Afton Mine Lease. Access to the site is by a mine road located off the Trans-Canada Highway.

CLIMATE

The Kamloops area is in the rain shadow of the Coast Mountains. Precipitation is relatively modest, averaging approximately 257 mm annually (of which 175 mm is rainfall), with light winter snow and infrequent rain in the spring and fall. The area has warm summers, where temperatures can reach 38°C, and cool winters, during which temperatures tend to hover around the freezing mark. During the winter, short periods of cold weather can occur where temperatures drop to as low as -29°C.

LOCAL RESOURCES

Kamloops is a major transportation hub for highway, air, and railroad. Forestry, ranching, mining, and tourism are the most important economic activities in the area. The city has an airport with daily air service from Vancouver, British Columbia, and Calgary, Alberta, and is serviced by both Canadian National and Canadian Pacific Railways. Kamloops is a natural resource-based city of 90,000 people. The area has a ready supply of trained workers and professionals and has suppliers and contractors to support heavy industry.

INFRASTRUCTURE

BC Hydro transmission lines, a Fortis BC (formerly Terasen) natural gas pipeline, and a Pembina oil pipeline traverse the mining lease north of the Afton pit. A water pipeline approximately four kilometres in length can deliver fresh water from Kamloops Lake to the mine site. New Gold purchased the pipeline and pump house facilities from Teck as part of the purchase agreement in 2007. New Gold has a water permit to withdraw water from Kamloops Lake for mining and milling operations.

The surface infrastructure associated with the Mine includes:

- Administration and operating/technical offices
- Security posts and a first aid room and ambulance
- Mine rescue gear
- Fresh water supply
- Concrete batch plant and a shotcrete batch plant on surface near the mine portal
- Sub-station and connection to the BC Hydro grid for power
- Surface maintenance shop
- Main mine fans
- Surface warehouse
- Compressor building
- Fuel storage facility
- Control room for automated tramming on the extraction level (5070 m elevation)

The mine infrastructure includes:

- Ore and waste passes
- Gyratory crusher in the mine
- Back up jaw crusher in the mine
- Conveyor system from gyratory crusher to surface
- Belt plow on conveyor at surface for segregation of waste
- Refuge stations
- Alimak elevator as emergency exit
- Mine dewatering system
- Mine communication system including telephone, radio network, asset tracking system, and video monitoring systems
- PLC system for monitoring and control of pumps fans ore pass conveyors

- Electrical power distribution system
- Explosives magazines
- Underground maintenance shop
- Underground fuel station
- Auxiliary mine ventilation fans

New Afton owns the old Afton Mine plant area and acquired the Historic Afton tailings storage area from KGHM Ajax Mining Inc. in 2017.

PHYSIOGRAPHY

The landscape is characterized by hilly, till-covered, drumlinoidal terrain and dispersed, small, alkaline water bodies. Relief adjacent to Kamloops Lake is a few hundred metres or more, with the elevation of the mine site at approximately 750 MASL. The most significant topographic features within the mining lease are the Afton and Pothook open pits and the reclaimed waste rock dumps of the Afton Operating Corporation, the former operator. Kamloops Lake is located north of the Mine Lease and bisects the Afton mineral tenure. Due to the continental, semi-arid climate, vegetation consists of open grasslands and sparse pine forests. Higher elevations are more densely forested.

6 HISTORY

EXPLORATION, PRIOR OWNERSHIP, AND DEVELOPMENT HISTORY

Exploration in the Afton area began in the mid-1800s, as prospectors pushed into the interior of British Columbia following the Fraser and Caribou gold rushes. The Iron Mask property, staked in 1896, was the first in the Kamloops district. A 100 ft shaft was sunk on the Pothook deposit in 1898. Mining was carried out from the turn of the century through until 1927 at several gold, copper, and silver mines including the Pothook, Iron King, Copper King, and Iron Mask. The Afton property claims were staked over the Pothook workings in 1949 by Axel Bergland. This was followed by sporadic, and largely unsuccessful, exploration work by a number of parties through the 1950s and 1960s.

Mr. Chester Millar acquired the property in the mid-1960s and formed a private company called Afton Mines Ltd. (Afton Mines) to carry out exploration work. In 1970, Afton Mines obtained a drill intersection of 170 ft of 0.4% Cu from what ultimately became the Afton deposit. For the next three years, over 150,000 ft of drilling was carried out by a number of operators. Duval Corporation and Quintana Minerals Corporation took options on the property in 1970 but dropped them in 1971. They were followed in 1972 by Canex Placer. Also in 1972, Teck Corporation and Iso Mines Ltd. (Iso) purchased an equity interest in Afton Mines.

Teck and Iso bought Canex Placer's interest for C\$4.0 million in 1973, and initiated engineering and metallurgical studies. A production decision was taken in October 1975, with production commencing at the Afton open pit mine in late 1977. At the start of production, the reserves were 34 million tons grading 1% Cu, 0.016 oz/ton Au, and 0.12 oz/ton Ag (30.8 million tonnes (Mt) grading 1% Cu, 0.58 g/t Au, and 4.2 g/t Ag). RPA notes that this estimate pre-dates NI 43-101, cannot be relied upon, and is quoted for historical purposes only. A qualified person has not completed sufficient work to classify the historical estimate as a current Mineral Resource or Mineral Reserve and New Gold is not treating the historical estimates as current Mineral Resources or Mineral Reserves.

Mining took place on the property at the Afton, Crescent, Pothook, and Ajax pits. The mine closed in 1991, reopened again in 1994, closing finally in 1997.

Five deep diamond drill holes, drilled in 1980 below and to the southwest of the Afton pit, intersected what is now referred to as the New Afton deposit. Teck carried out a study to determine the feasibility of mining this zone from underground, however, they did not proceed after the study was completed.

In 1999, the Afton mining leases expired and the ground was staked by Westridge Ltd. and Indogold Development Ltd. DRC Resources Corporation (DRC) acquired an option on the property and surrounded it with additional staking. The following year, DRC began exploration work with 9,320 m of surface diamond drilling in 21 NQ holes in the New Afton deposit.

In February 2001, DRC completed a Scoping Study based on drilling results to date. The Scoping Study indicated that the New Afton deposit could be profitably exploited, and this led to further definition drilling to confirm the continuity of the mineralization. The successful conclusion of this phase of exploration led to the commissioning of an Advanced Scoping Study in 2003, which was completed in February 2004 (Behre Dolbear, 2004). The study contemplated an underground mine, using a block caving method, feeding a conventional flotation mill operating at a rate of 9,000 tpd. Measured and Indicated Mineral Resources were 68.7 Mt grading 1.08% Cu, 0.85 g/t Au, and 2.6 g/t Ag. The report estimated an after-tax internal rate of return (IRR) for the Mine of 19.9%, with a payback of capital in 3.7 years.

In late 2004, a portal was collared on the south wall of the Afton pit, and 1,915 m of decline and drift were driven to provide access for definition drilling and bulk sampling of the deposit. The drifting was completed by September 2005. Diamond drilling, from both surface and underground, has been carried out more or less continuously up to present day.

DRC underwent a name change to New Gold Inc. in May 2005. Total exploration expenditures on the New Afton Mine by DRC and New Gold to the end of the third quarter of 2006 were C\$37.2 million. New Gold commissioned a Feasibility Study (FS) for the Mine at the end of 2005, and the results of this study were released in April 2007 (Hatch, 2007). The study contemplated a block cave mine and conventional grinding/flotation mill operation with a daily throughput of 11,000 t. Mineral Reserves comprised 44.4 Mt in the Probable category grading 0.98% Cu, 0.72 g/t Au, and 2.3 g/t Ag. Mine life was estimated to be 12 years, with preproduction capital costs of \$268 million and life of mine (LOM) sustaining capital of \$215 million. Pre-tax internal rate of return (IRR), using base-case metal prices of US\$2.01/lb Cu, US\$487/oz Au, and US\$8.54/oz Ag, was estimated to be 13.6%.

Also during the period 2006 to 2007, exploration drilling resulted in the discovery of the C Zone located below the main body of mineralization. Further drilling, conducted from 2012 to 2016, confirmed and delineated the zone. In January 2016, New Gold completed an FS which indicated that the C Zone was economically viable, adding an additional 25.0 Mt of Probable Mineral Reserves grading 0.78% Cu and 0.72 g/t Au. At the time of writing, New Gold was in the process of developing the C Zone, with production scheduled to begin in 2023. Exploration work was also underway on the D Zone, which is the down-plunge extension of the C Zone.

All Mineral Resource and Mineral Reserve estimates quoted in this section are superseded by the current estimates reported in Sections 14 and 15 of this Technical Report.

PAST PRODUCTION

The Mine officially began commercial production in July 2012. Since 2015, after completion of the mill expansion project, the plant has operated at 15,500 tpd. Historical production is summarized in Table 6-1.

TABLE 6-1 NEW AFTON MINE PRODUCTION
New Gold Inc. - New Afton Mine

Year	Tonnes Milled (Mt)	Cu (%)	Au (g/t)	Cu (000 lb)	Au (oz)
2012	2.0	0.79	0.73	28,459	36,807
2013	4.1	0.93	0.78	71,972	87,177
2014	4.8	0.94	0.81	84,515	104,587
2015	5.1	0.90	0.78	85,942	105,487
2016	5.8	0.81	0.61	87,300	98,098
2017	6.0	0.85	0.56	90,600	86,163
2018	5.4	0.87	0.53	85,100	77,329
2019	5.6	0.78	0.47	79,439	68,786
Total	38.8	0.86	0.64	613,327	664,434

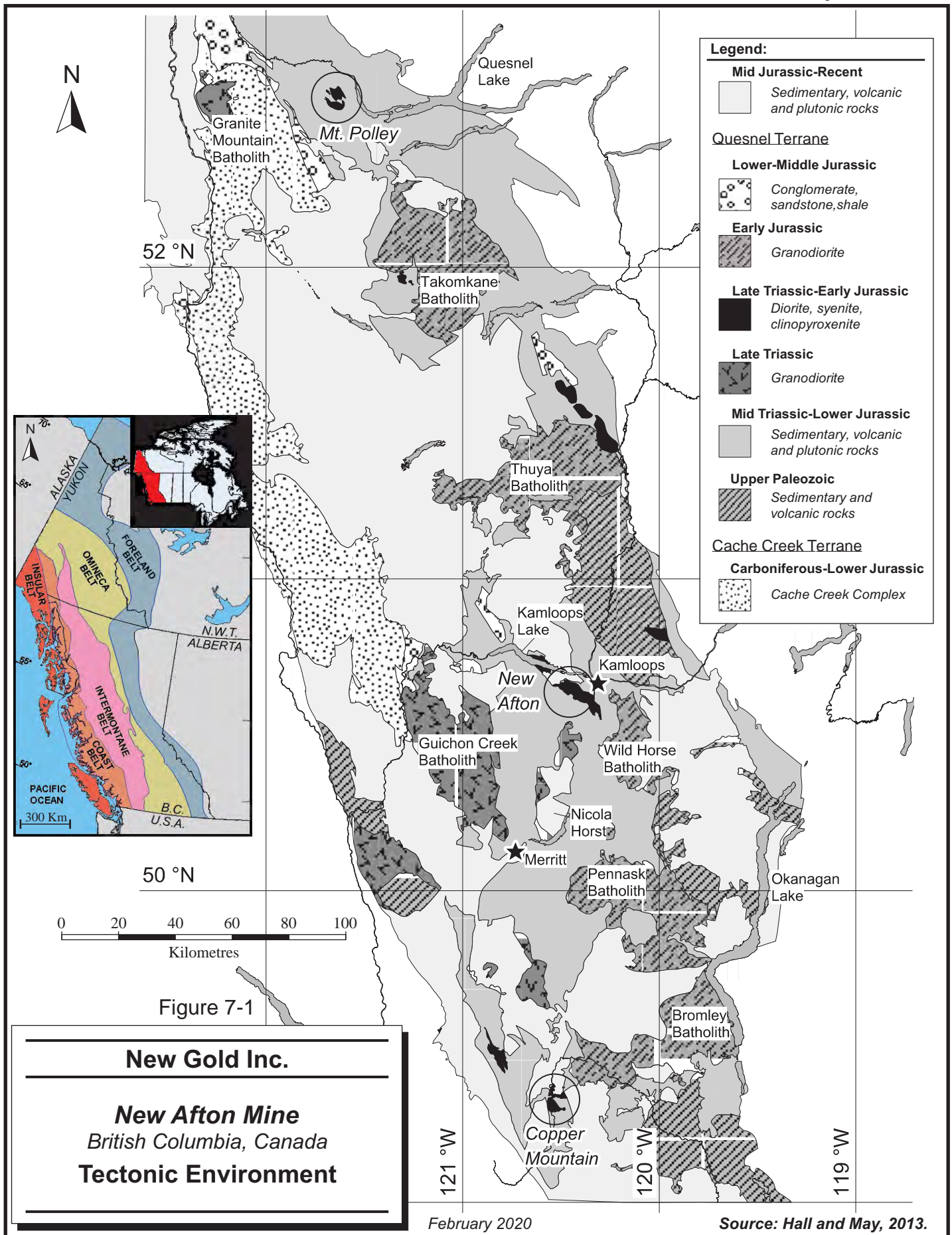
7 GEOLOGICAL SETTING AND MINERALIZATION

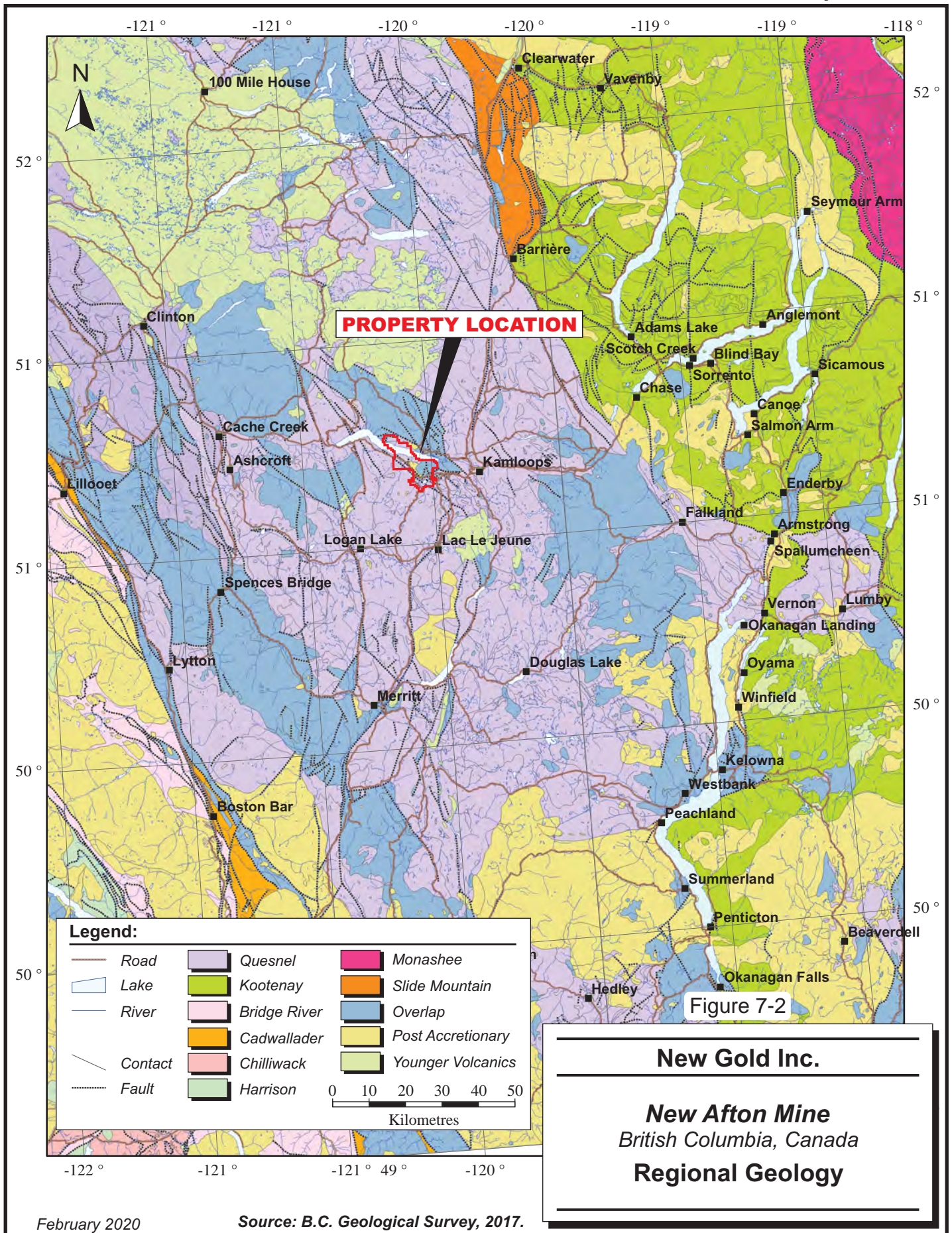
REGIONAL GEOLOGY

The geologic history of the Canadian Cordillera has been largely driven by collisional plate tectonics. Much of the Cordillera comprises allochthonous terranes which have been detached from the underlying basement at the subducting margin and accreted in an easterly to north-easterly direction onto the North American plate. These assemblages typically consist of intact and coherent bodies which have been overthrust onto or interleaved with pre-existing western continental margin rocks via a system of northeast and southwest verging thrust faults (Price, 2012).

The mine area is underlain primarily by rocks of the Upper to Lower Paleozoic Quesnel Terrane, an island-arc assemblage that was accreted onto the North American continent during the Early to Mid-Jurassic (Figure 7-1). The Quesnellia forms part of the Intermontane Belt, along with rocks of the Stikine, Kootenay, Slide Mountain, and Cache Creek Terranes. The Intermontane encompasses much of central British Columbia and extends in a north-south band from the US border into the Yukon. It is host to many porphyry deposits including Copper Mountain, Afton, Highland Valley, Mount Polley, Gibraltar, Kemess, and Galore Creek.

In southern British Columbia, the Quesnel Terrane is bounded on the west by the Fraser Fault zone, a major right-lateral fault which developed in the Cretaceous along with other major structures such as the Tintina-Rocky Mountain Trench. To the east, Quesnellia rocks are bounded by Kootenay Terrane (Figure 7-2). The region is overlain by Tertiary sedimentary and volcanic rocks as well as unconsolidated Quaternary sediments of largely glacio-fluvial origin.





The mine area is traversed by regional scale fault zones which are interpreted to be the principal control for the intrusion of the batholithic rocks, and by extension, for the mineralization processes. Northwest trending steeply dipping fault zones are primary controlling structures for emplacement of the Iron Mask intrusives. East to northeast trending faults are important controls to hydrothermal alteration and mineralization. The faulting and associated fracturing also provided conduits for meteoric waters, which gave rise to weathering and produced the supergene alteration of the primary sulphide mineralization.

LOCAL GEOLOGY

This section is mostly taken from RPA (2009).

In the immediate Mine area, the Quesnel Terrane comprises Late Triassic to Early Jurassic Nicola Group island-arc volcanic and sedimentary rocks, and coeval alkaline intrusions of the Iron Mask Batholith (Figure 7-3). The Nicola Group consists of sub-marine volcanic, volcanoclastic, and sedimentary rocks. Volcanic components are intermediate to picritic basic flows with associated polyolithic volcanic breccias and crystal tuffs. The Nicola Group rocks have been regionally metamorphosed to lower greenschist facies.

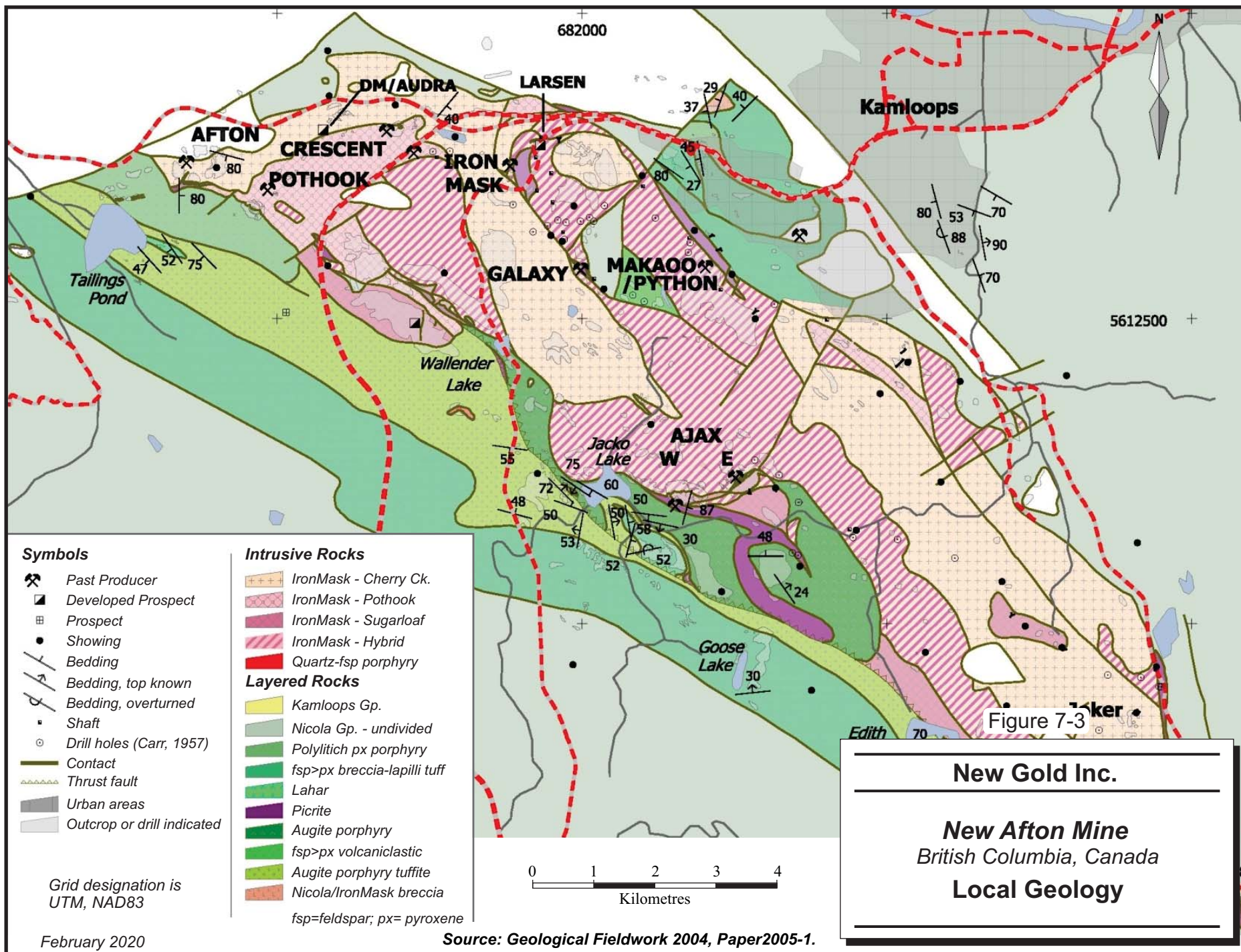
The Nicola Group has been intruded by the Iron Mask Batholith, a multi-phase composite pluton suit exposed in a northwest-southeast elongated trend. Four principal phases of the Iron Mask Batholith have been identified listed from oldest to youngest; the Pothook diorite, the Pothook phase agmatite intrusive breccia (Hybrid), Cherry Creek monzonite, and Sugarloaf diorite. Near the margins of the Iron Mask batholith, Nicola Group rocks have been thermally metamorphosed to hornfels. The Nicola Group volcanic rocks adjacent to Cherry Creek monzonite are the principal hosts for copper-gold-silver mineralization at New Afton.

Post-mineralization fine grained sandstone and clast-supported pebble conglomerate of the Jurassic Ashcroft formation are preserved in local basins along the Cherry Creek fault system. Middle Eocene volcanic and sedimentary rocks of the Kamloops Group unconformably overlie the Nicola and intrusive rocks of the Iron Mask Batholith. These rocks were partially responsible for shielding the New Afton deposit from removal by erosion and glaciation.

The New Afton deposit is hosted within the Nicola Group volcanics adjacent to the Cherry Creek monzonite, member of the Iron Mask Batholith complex (Figure 7-3). The Iron Mask

complex is a multi-phase plutonic body exposed in a southeast trending belt measuring 34 km long by 5 km wide. The Cherry Creek phase is the interpreted causative source of heat and metals for the New Afton deposit. It is a partially fault bounded body trending east-northeast through the deposit area, bending to the east side of the property to a more southeasterly trend (Figure 7-3). At New Afton, the Cherry Creek intrusive is a variably and multiply brecciated assemblage of fine to medium grained, equigranular to sub-trachytic biotite monzonite to monzodiorite. The principal phase of the Cherry Creek monzonite comprises subhedral to euhedral orthoclase, plagioclase and biotite with accessory magnetite, hornblende, apatite, titanite and rare zircon. Several distinct textures within the monzonite have been observed, ranging from fine-grained equigranular to trachytic interpreted as derived from multiple magmatic pulses that span a time range from syn-mineral to inter-mineral. The monzonite appears to narrow down plunge to the southwest and splits into several thinner dikes near surface. The monzonite body is in contact to the west and southwest with Nicola Group volcanic rocks and to the east and southeast with the Pothook diorite.

The area is transected by series of northwesterly trending fault structures along with related east-west and northeast-southwest oriented structures that served as a principal control to the deposition and distribution of mineralization in the Crescent, DM, and Audra occurrences that extend along the northern margin of the Iron Mask Batholith (Figure 7-3).



PROPERTY GEOLOGY

This section is mostly taken from Lipske and Wade (2014).

The principal host rock for the New Afton deposit comprises crystalline and polymictic fragmental volcanics belonging to the Triassic Nicola Formation and lesser monolithic intrusive breccias. These rocks have been altered and mineralized by a monzonite intrusive consisting of a fault controlled elongated stock and related dike swarm. The monzonite is generally weakly mineralized to unmineralized and is interpreted as the causative intrusive phase that is less susceptible to the introduction of sulphide mineralization. Its geometry is best described as a narrow, elongated stock that remains open at depth and pinches down plunge to the west.

The primary mine site host lithologies are described by New Afton geologists as follows:

Polymictic Fragmental Volcanic Breccia: Comprising poorly sorted, variably coloured, massive to phyrlic, angular to sub-rounded, lapilli to block sized clasts of porphyritic diorite, andesite, basalt, picrite, and aphyric volcanics within coarse-grained crystal-rich matrix. Clast rock types are commonly porphyritic diorite, andesitic flows, mafic volcanics, picrite and aphyric volcanics within ash to coarse grained crystal dominated matrices.

Monomictic Volcanic Breccia: Contains subangular crystal-rich clasts of diorite or monzonite or Nicola Group volcanic rocks and are commonly located on the margins of intrusive bodies.

Crystalline Volcanic Rocks: Crystal tuffs and andesite flows dominated by very fine and fine to medium grained subhedral to anhedral, broken and or embayed phenocrysts of plagioclase \pm pyroxene \pm hornblende. Contains less than five percent by volume of coarse ash to lapilli sized lithic fragments within a variably altered fine grained to ash matrix.

Although these rock types are readily identified in core and exposures underground, attempts to discriminate them into distinct units for interpretive and modelling purposes have been determined to be impractical owing to their complex inter-relationships. There does not appear to be any relationship between these individual lithologies and the intensity of mineralization. Consequently, they are grouped together as a single unit called volcanic fragmental breccia (BXF). Surface exposures of the BXF in and around the Mine Lease are shown in Figure 7-4.

Principal intrusive phases are monzonite and diorite. The monzonite, as described above, is thought to be the primary source which drove the initial hypogene mineralizing processes. On the eastern half of the deposit, the BXF is intruded by a coeval diorite sill. The diorite (DI) is grey-green, fine to medium grained, with an equigranular “salt and pepper” or seriate texture. Phenocrysts comprise subhedral to euhedral plagioclase \pm biotite \pm pyroxene, with medium to dark green, fine to coarse grained mafic xenoliths. Poikilitic biotite is diagnostic though challenging to recognize when the diorite is moderately to strongly altered. Magnetite commonly occurs as disseminations or as aggregates, replacing mafic crystals and filling fractures and massive veins with epidote \pm actinolite \pm apatite selvages.

The monzonite (MO) is light to dark orange-pink, locally green and fine to medium grained. Textures vary from porphyritic to fine grained equigranular and trachytic. It is primarily composed of subhedral to euhedral K-feldspar, plagioclase, biotite, and hornblende \pm fine grained disseminated magnetite. It is variably altered to pervasive or patchy K-feldspar and patchy to vein controlled epidote and magnetite \pm actinolite. Jigsaw crackle and fault breccias containing specularite and magnetite \pm chlorite commonly occur along margins within the main mineralized zone.

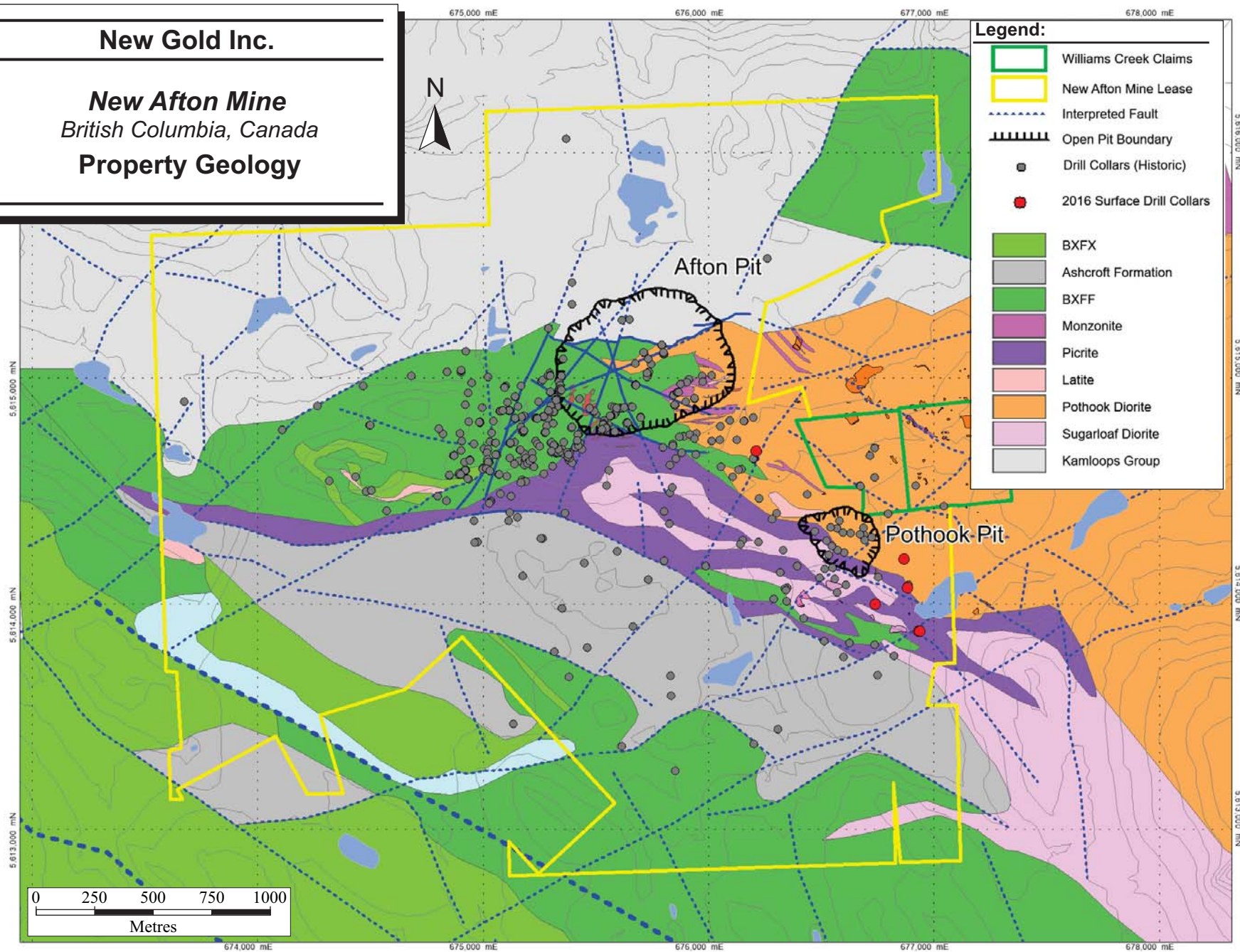
Several post-mineral dyke swarms of basalt, syenite, and latite cross-cut the BXF, diorite, and monzonite but are discontinuous and volumetrically insignificant.

The Triassic rocks (BXF, diorite, monzonite, and latite) are juxtaposed upon younger sedimentary rocks to the east and southwest by late north-northwest trending high angle faults along the margins of the deposit (Figure 7-4). The sedimentary package to the west is separated by the “SW Seds Fault” and thought of as belonging to the Jurassic Ashcroft Formation (Figures 7-4 and 7-5). Sedimentary rocks to the east of and separated from the deposit by the “M Fault” are assigned to the Eocene Kamloops Group.

Figure 7-4

New Gold Inc.

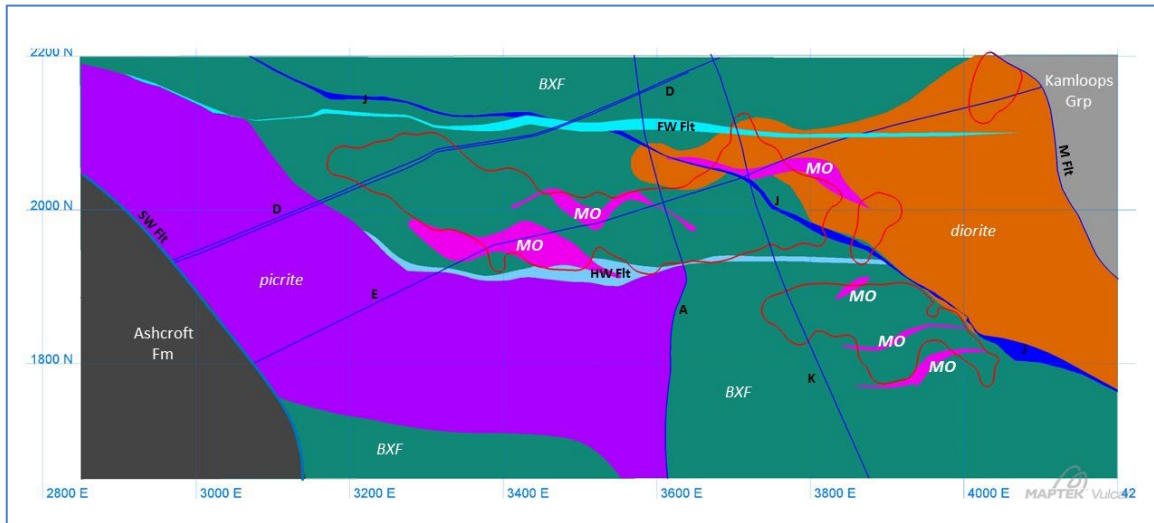
New Afton Mine
British Columbia, Canada
Property Geology



February 2020

Source: New Gold, 2019.

FIGURE 7-5 LEVEL PLAN OF THE GEOLOGY AT THE 5,150 M ELEVATION



Source: Lipske and Wade, 2014.

Kamloops Group sedimentary rocks are pale to medium grey-brown varying in composition from mudstone to conglomerate. Pebble conglomerates are moderately sorted, clast or matrix supported and are rounded to sub-angular. Pebbles comprise chert, mudstone, and volcanics intercalated with sedimentary horizons. Bedded siltstone, mudstones, and sandstone are locally interbedded with juvenile coal seams. Contacts are undulating, and sharp to gradational, commonly with graded bedding between layers of mudstone, siltstone, and sandstone.

The basalt is grey, fine to medium grained, amygdaloidal, and varies from basalt to andesite composition. The sedimentary rocks are likely derived from a proximal volcanic protolith of Eocene age.

A rheological discontinuity occurs through the central and western parts of the deposit between an ultramafic picritic flow (picrite) and the BXF (Figures 7-4 and 7-5). The picrite is dark bluish-green to black and strongly magnetic. It is composed of fine to coarse grained, subhedral to euhedral chlorite and serpentine altered mafic phenocrysts mingled at times with magnetite-altered olivine crystals within a moderately to strongly serpentine \pm chlorite \pm magnetite-altered groundmass. The texture ranges from massive to fine grained, medium to coarse grained, and porphyritic to autoclastic. Contacts are commonly sheared with chlorite or dolomite \pm calcite. The rock mass has a high magnetic susceptibility, and its dark colour and soft talc feel

are diagnostic. The picrite is distinctly less competent than other rock types and this impacts ground conditions within the mine. The picrite unit bounds the ore body to the south. The rheological contrast between the less competent picrite and brittle Nicola volcanic rocks was exploited by mineralizing fluids during ore forming processes.

STRUCTURE

Structure is recognized as a principal control to the genesis of the Afton deposits. A regional northwest/southeast trending fault zone is observed to have influenced the distribution of host lithologies and was responsible for emplacement of the Iron Mask Intrusive Complex (Figure 7-3). The intersection of this fabric trend with east and northeast striking faults created dilatant zones which allowed intrusion of the monzonite. New Afton geologists interpret the structural regime to have resulted from sinistral transpression along that northwest striking Cherry Creek trend, with development of conjugate dextral structures (Figure 7-6). Later post-mineralization extensional tectonism resulted in dextral reactivation along the same structures, along with development of horsts and grabens (Figure 7-6). Figure 7-6 shows the orientation and sense of movement of these conjugate structures during the compressive and tensional phases.

The deposit is transected by numerous faults in a range of orientations. New Afton geology personnel have mapped, logged, and interpreted many of these faults, some of which appear to affect the mineralization. In 2013, New Afton geologists prepared a comprehensive structural model to support mining and geotechnical interpretation. Starting in 2017 and extending into 2018, an update to this model was conducted, focussing on the B3 and C Zone areas. One of the principal changes to the structural model that resulted was the truncation of many faults by the Hanging Wall and Footwall Faults. The previous model had allowed most structures to span these faults, though this was found to be inaccurate. Several secondary faults were either added or modified, as well. The differences between the current and earlier structural model is shown in Figure 7-7. This diagram shows the structures at the extraction level of the B Zone.

Table 7-1 lists the major faults and some of their characteristics. Figure 7-7 is a level plan view showing many of the faults listed in Table 7-1.

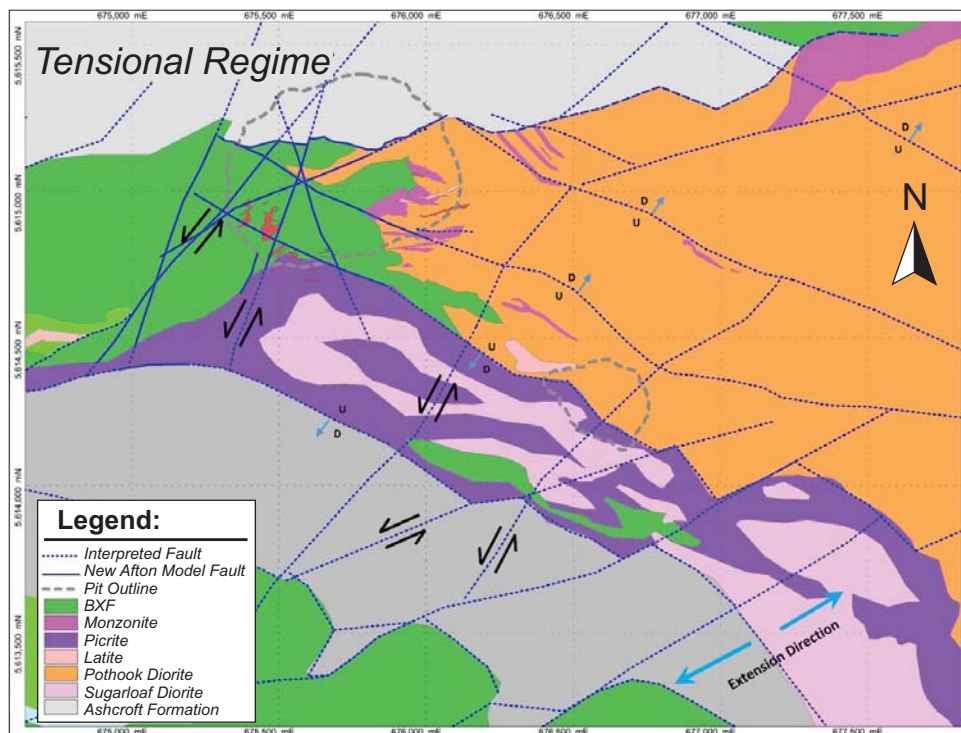
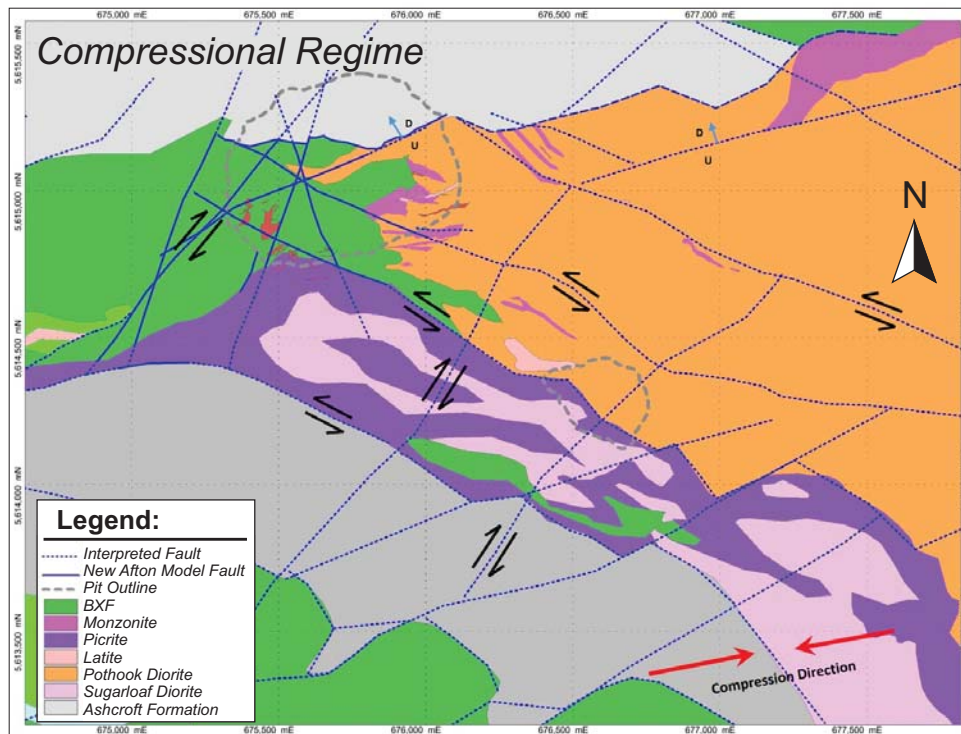
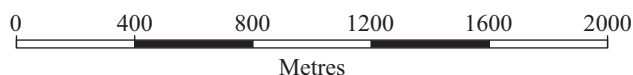


Figure 7-6



New Gold Inc.

New Afton Mine
British Columbia, Canada
Structural Regime

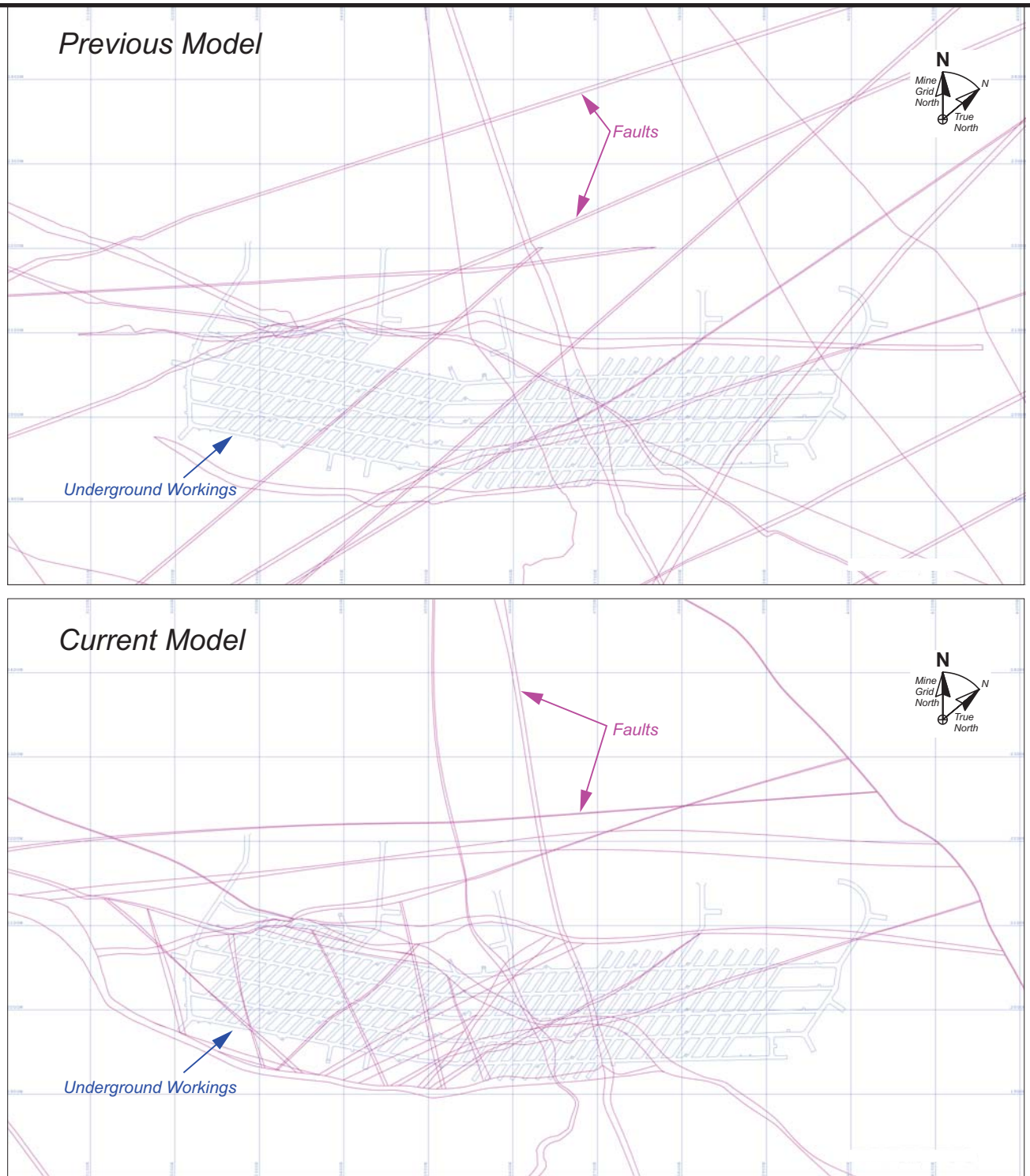


Figure 7-7

0 100 200 300 400 500
Metres

February 2020

Source: New Gold, 2019.

New Gold Inc.

New Afton Mine

British Columbia, Canada

**Level Plan Showing Changes
to the Structural Model**

TABLE 7-1 FAULT ZONES
New Gold Inc. - New Afton Mine

Name	Description
East-West Trending	
Hanging Wall	East-west striking sigmoidal shaped fault zone bound to the area north of the picrite/BXF contact and cut by monzonite. Defined by carbonate healed faults along the picrite/BXF contact including rubble zones near carbonate healed faults. Fault zone includes blocks of BXF, picrite, diorite, and monzonite. Location near the Apex level is based on measured structures. Location between the A and J Faults is based on the presence of carbonate healed faults and a major structure mapped in the pit.
Footwall	East-west striking fault with a strike, dip, and plunge similar to the Hanging Wall Fault. The location and thickness of this fault is based on underground mapping. The fault is smoothed and adjusted at drill intercepts.
Southeast Trending	
J	Is a sharp rubbly boundary between diorite and BXF in the east and is represented by a thick zone of carbonate healed and rubbly faults west of the A Fault. It is discontinuous and likely dissected in the fault corridor between the A and K Faults. This fault is supported by the pit mapping on the eastern side of the pit, but not on the west. It is well supported by the drilling in the northwest and southeast corners of the deposit and acts as a major mineralization, alteration, and sometimes lithological boundary. It also appears to control the westward plunge of the mineralization in long section.
North-Northwest to South-Southeast Trending	
A	Is a major structure mapped in the historic pit. Defined by shear zones, and rubbly and carbonate healed faults. The fault bounds and/or is the eastern extent of the picrite in the centre of the model. The CuEq was used to guide the interpolation of mapped faults in south, especially where intercalating picrite and BXF is present. The A Fault is the western edge of a thick fault zone postulated to be long lived that comprises a corridor with the K Fault.
K	Eastern edge of intense rubbly deformation zone east of the A Fault does include carbonate healed faults. It is a major structure mapped in the pit and historically portions were mapped underground as the "Pit Portal and JM faults". Monzonite blocks are deflected, displaced, or are bound by this fault in the east. Underground mapping and drill hole data indicate that the K Fault locally controls oxidation and supergene ore.
M	Is the western contact between the BXF-diorite-monzonite and the Kamloops Group. Contacts were used to project this fault where any fault data was absent from the core logs. The "M Fault" is sub-parallel to the major A, K, and F Faults mapped in the eastern portion of the pit.
SW-SED	This fault marks the contact between BXF and sedimentary rocks on the southwest margin of the picrite. Drilling in this area is sparse and several historical AS01-series drill holes intersect the fault north of the block model extents. It is supported by regional geophysics.

Name	Description
Northeast-Southwest Trending	
D	Primarily based on faults logged in drill core, rubble east of the K Fault and both carbonate healed and rubble zones in the west. It is a major fault mapped in the western portion of the pit and historically called the “N dipping FWF splay”. Isolated lenses of secondary hypogene mineralization are located along the D Fault at depth.
E	Primarily based on recent underground mapping and supported by drilling. Characterized by rubble east of the K Fault and carbonate healed west of Fault K. Isolated lenses of secondary hypogene mineralization are located along the E fault when it cross-cuts the hypogene domain. Prominent control on oxidation and supergene ore.

ALTERATION

Alteration assemblages at New Afton are divided into early, main, and late states and have been modelled into six principal alteration domains. The alteration domains include: calcic (PI), potassic/calc-potassic separated into biotite dominant (KB) and potassium feldspar dominant (KK), propylitic (PO), phyllic (PH) and argillic. Alteration assemblages are described as follows according to their paragenetic sequence:

Calcic: The calcic alteration assemblage is characterized by an early magnetite vein swarm along the margins of the Pothook diorite and Cherry Creek monzonite phases. Accessory minerals include apatite, actinolite and traces of pyrite and chalcopyrite.

Biotite-Dominant Potassic: Biotite occurrences range from selective mafic mineral replacement to pervasive and texturally destructive, containing accessory K-feldspar ± magnetite. It is most commonly hosted within BXF and intimately associated with copper sulphides and hypogene mineralization. Biotite alteration is present in the monzonite but is strongest immediately adjacent to its contacts. Biotite is variably overprinted by chlorite or fracture-controlled to patchy inner propylitic alteration.

Potassium Feldspar-Dominant Potassic: K-feldspar is dominant as vein selvages to pervasive and texture-destructive containing accessory biotite ± magnetite. It has been observed in all rock types except picrite and late dykes. Commonly seen along selvages of specularite ± epidote veins, potassium feldspar alteration intensity increases within proximity to the monzonite contacts and is strongest within the monzonite. Weakly anomalous copper grades are common, but not always present within the K-feldspar alteration envelope. Bornite

and increased copper grade occur within patchy K-spar altered BXF throughout the mineralized zones.

Upper portions of the monzonite are dominated by calc-potassic alteration characterized by patchy-pervasive epidote, magnetite, and actinolite commonly with K-feldspar selvages.

Propylitic: Typified by pervasive and selective chlorite; patchy, selective to fracture- controlled epidote \pm calcite replacing mafic crystals, pyrite, and magnetite throughout. Commonly seen in fragmental and crystalline BXF where epidote is selective to fragments and crystals. Propylitic alteration forms the outer periphery to the potassic core and the outer limit of this alteration is unknown.

Phyllic: The phyllic alteration assemblage is dominantly patchy to pervasive sericite \pm dolomite \pm ankerite \pm anhydrite, pyrite, tourmaline, and quartz. It is structurally controlled and commonly within, but not restricted to, the margins of many carbonate-healed faults. Phyllic alteration overprints earlier potassic and propylitic alteration at the periphery of the ore zone and flares outward and upward along structures.

The alteration paragenesis comprises a complex sequence of potassic to calc-potassic and propylitic alteration that was in turn overprinted outward and upward by fault- controlled phyllic assemblages followed by localized argillic alteration. Moving sequentially from the monzonite stock outward, early magnetite flooding with apatite \pm actinolite (PI) is preserved close to the southern margin of the stock at depth. Strong to intense texture-destructive KB alteration is developed closest to the northern margin of the stock in the main body of mineralization and as discontinuous haloes to monzonite dykes in the Hanging Wall (HW) Zones. Copper and gold mineralization is directly related to KB alteration.

The potassic core is haloed by propylitic alteration (PO) dominated by chlorite. Retrograde chlorite is commonly observed as a late overprint of biotite alteration but does not appear to significantly affect grade in hypogene mineralization.

The potassium feldspar-dominant potassic alteration (KK) occurs as discontinuous patches mixed with outer propylitic and inner biotitic alteration but is ubiquitous throughout the system. Pervasive KK alteration is mainly hosted within and adjacent to monzonite intrusions. Upper

portions of the monzonite in the Main Zone and HW Zones are dominated by a mixture of calcic and potassium feldspar alteration that makes up the calc-potassic assemblage.

Structurally-controlled phyllic (PH) alteration assemblages overprint potassic and propylitic alteration at the periphery of the ore zone and flares outward and upwards along high-angle structures.

Late stage structurally-controlled argillic alteration that exploits faults within the ore body is responsible for both an addition of copper and partially to completely replaces primary ore hypogene minerals with sulphosalts.

MINERALIZATION

Copper-gold-silver mineralization occurs as disseminations and fracture-filling sulphide grains occurring in three roughly tabular east-west striking, steeply dipping bodies. The Main Zone, as its name suggests, is the principal zone of mineralization. Present mining operations are located within the Main Zone. It is flanked to the east and south by two smaller bodies called the HW Zones.

The mineralization at New Afton is grouped into three broad categories: hypogene, secondary hypogene, and supergene. The term describing secondary hypogene mineralization has changed over time from mesogene to secondary hypogene and is now thought of as late hypogene/epithermal assemblage. Secondary hypogene has been retained for consistency in order to minimize confusion. Hypogene was originally ascribed to primary copper sulphide mineralization that had not undergone significant oxidation. Presently, hypogene refers to chalcopyrite and accessory bornite mineralization which forms the core of the deposit and is dominated by biotite alteration. This is noted to typically occur along the northern margins of the monzonite stock in the Main Zone and discontinuous monzonite dykes in the HW Zones. For logging purposes, hypogene mineralization is defined as having greater than 1% sulphides, or 0.5% sulphides in bornite-dominant zones.

Secondary hypogene is a later overprint of mineralization upon primary sulphide mineralization by tennantite-enargite + tetrahedrite with possible bornite and chalcocite. The secondary overprint is associated with pervasive kaolinite-rich argillic alteration localized along narrow fault zones and is responsible for the introduction of the deleterious elements: arsenic,

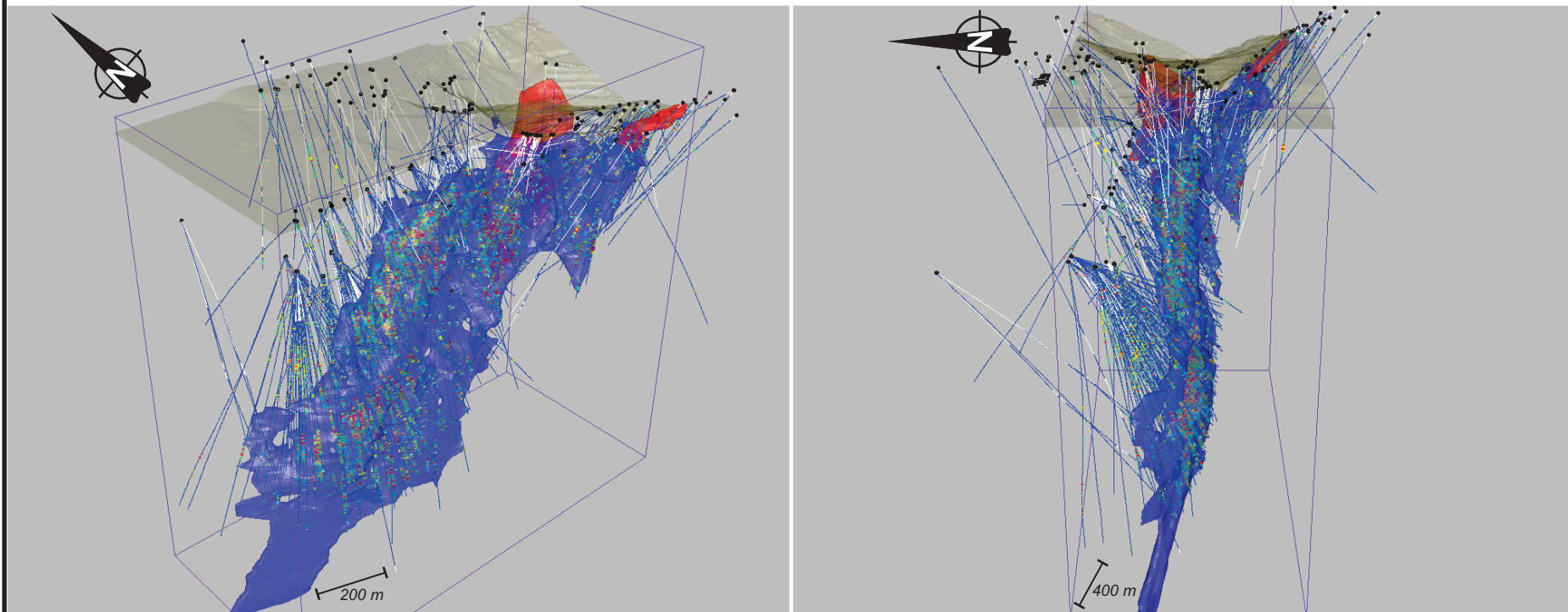
antimony, and mercury. It is thought to be related to late-stage, lower temperature low-pH fluids that ascended along high-angle structures and remobilized copper from primary sulphides to form sulphosalts and high-sulphidation state sulphide minerals. Secondary hypogene mineralization appears as sooty steel grey to bluish grey reaction rims on chalcopyrite blebs and stringer fractures. The distribution of secondary hypogene mineralization is very narrow and discontinuous and commonly restricted to faults such as the HW, J, E and D faults, particularly where they intersect.








The supergene mineralization type consists of native copper and chalcocite that formed through oxidation of primary sulfides within the uppermost portion of the deposit that were exposed to weathering and erosion during the Eocene to Quaternary. The domain is roughly conical in shape and centered below the New Afton pit, limited to the east by the M fault. The supergene domain is defined for logging purposes as having 0.5% or greater native copper, or, in the absence of native copper, intervals of strong oxidation with a threshold assay of 0.2% Cu. Recent mapping by New Afton Mine geologists indicates the spatial distribution of supergene mineralization at the apex level of the block cave is also controlled by the A, E and K Faults.

The isometric views of supergene and hypogene mineralization are shown in Figure 7-8.

The mineralized zone, as it is delineated to date, is a sub-vertically dipping, generally continuous, tabular body extending downwards from the base of the existing pit. The body plunges to the southwest at an angle of 50°, extending 1,570 m from surface to the lowest drill hole intercept. The Main Zone measures approximately 220 m across strike at its widest point, and it tapers with depth and along strike. Two smaller satellite bodies are located on the hanging wall side of the Main Zone, bringing the maximum width of mineralization subtended by all bodies to just over 470 m.

For mine planning purposes, the Main Zone is currently subdivided into the A, B, C, and D Zones. These divisions are based on mine design criteria and do not reflect differences in mineralization characteristics. The A and B Zones were developed first and mining is underway in the B Zones at this time. The C Zone, which is down-plunge of the B Zones, is being developed, with production planned for 2023. Further down-plunge is the D Zone, which has recently been the target of confirmation drilling and may be developed in the future. The Main Zone is flanked to the east and south by two smaller bodies called the HW Zones.


Au Grade (g/t):

	No Sample
	> 0
	0.4 - 0.8
	0.8 - 1.2
	1.2 - 1.6
	1.6 - 2.0
	> 2.0

February 2020

Source: Sim and Davis, 2019.

Figure 7-8

New Gold Inc.
New Afton Mine
British Columbia, Canada
**3D Isometric Views of the
Supergene and Hypogene Zones**

8 DEPOSIT TYPES

The New Afton deposit is a silica-saturated, copper-gold alkalic porphyry-style deposit. As stated in Section 7, this type of deposits is found throughout British Columbia. Other deposits of note within this family include Galore Creek, Mount Milligan, Mount Polley, and Copper Mountain. All of these deposits share with New Afton similar chemical affinities and host rock provenance. They are described by Carter (1981) as being associated with plutons of Late Cretaceous to Tertiary age intruding Mesozoic volcanic and sedimentary rocks of the Intermontane Belt. The porphyry intrusive bodies can comprise stocks, plugs, dikes, and dike swarms with a footprint of typically less than one square mile in area.

Mineralization results from late stage hydrothermal activity driven by remnant heat from the porphyry intrusion. Thermal gradients within these systems give rise to broadly concentric, although often complexly intermingled, zones of alteration and mineralization. The distribution of alteration and mineral facies are largely influenced by dikes, veins, and fracture systems which concentrate and control fluid flow.

Late epithermal processes have overprinted the porphyry system and introduced mercury, antimony, and arsenic in geochemically significant concentrations. Weathering from percolation of meteoric water has resulted in the oxidation of the hypogene sulphide mineralization in a portion of the deposit to chalcocite and native copper.

9 EXPLORATION

Prior to New Gold's involvement, the only work that had been done on what was then called the deep resource at Afton was the seven holes drilled by Afton Mines in 1973 (two holes) and 1980 (five holes). New Gold commenced exploration work in 2000, with mapping and sampling of the pit (as well as any available outcrop surrounding the pit) and drilling of 96 surface diamond core holes totalling 42,450 m.

In November 2004, an adit was collared in the former Afton open pit at 512 MASL. A ramp was driven from this portal to provide access for underground sampling, infill drilling to confirm the Mineral Resources, and further exploration drilling to determine the full extent of the mineralization. The total underground development was 2,200 m.

The bulk of exploration work undertaken by New Gold has been in diamond drilling. This is described in more detail in Section 10 of this report.

In late 2005, New Gold contracted Fugro Airborne Surveys Corp. (Fugro) to complete 1,323 line-km of airborne electromagnetic surveying (DIGHEM) of the Afton and Ajax claims. Quantec Geoscience Ltd. was retained in 2008 to carry out Titan-24 Tensor Magnetotelluric (MT) and DC Resistivity and Induced Polarization (DC/IP) surveys totalling 34.5 line-km.

A 70 sample petrographic study was carried out in June 2006 by Jeff Harris of Vancouver Petrographics Limited. The suite comprised samples collected from 2005 diamond drilling representing various mineralisation and alteration styles encountered.

In addition to the work at New Afton, New Gold has carried out relatively small programs on the Ajax Group, which is located just over seven kilometres to the southeast of the Afton pit. Drilling on the Ajax in 2004 and 2006 totalled 4,635 m in ten holes. During the period from 2006 to 2008, New Gold drilled another 16 holes totalling 6,820 m. A radiometric survey, consisting of 44.73 line-km, was carried out in 2007, along with collection of 2,040 geochemical soil samples.

In 2010, several chargeability anomalies coincident with and peripheral to the Pothook pit were identified as a result of the Titan-24 survey completed in 2008. Follow-up on the anomalies resulted in a total of 1,780 m drilled in three surface holes on the margins of the Pothook pit.

In 2011, New Gold completed an airborne geophysical survey of its mineral claim holdings extending northwest from the Mine. The survey was carried out by Fugro and consisted of 1,905 line-km of DIGHEM, magnetometer, and radiometric surveys. The results of this work are being used to support ongoing exploration of the New Afton district.

Surface mapping and re-logging of core was conducted in 2012 to 2013 in support of the new geological model for the Mineral Resource estimate.

A 34 sample petrographic study was carried out in May 2013, followed up by a 22 sample petrographic study carried out in December 2013. Both studies were carried out by Craig Leitch of Vancouver Petrographics. The suite comprised samples collected from 2012 diamond drilling with a majority of the samples having been strongly potassically altered.

A 51 sample feldspar staining study was carried out during the 2013 drilling campaign. Samples selected for the study were stained by sodium cobalt nitrate and amaranth to determine whether or not the samples had been altered by secondary potassium feldspar. The study continued during the 2014 campaign with samples occasionally submitted for analysis.

Exploration work conducted in 2016 comprised both near-mine drilling done primarily to expand and confirm Mineral Resources, and regional targets with the intention of discovering new deposits. Near-mine drilling consisted of 13,094 m of diamond drilling in 26 holes. This work focussed on the strike and dip extensions of the C Zone, expansion of the HW Lens, as well as delineation of the Gold Zone, a satellite body of mineralization located just north of the main New Afton orebody.

Other near-mine exploration work encompassed detailed surface mapping, surface diamond drilling, and geophysical surveys. A total of 10 surface holes totalling 5,126 m were drilled on targets lying within the Mining Lease, in the area of the Pothook pit. Geophysical surveys comprised ground-based gravity and magnetics, along with a Volterra 3D IP survey.

During 2017, exploration work comprised infill diamond drilling on the C Zone, as well as on five other targets within the Mine Lease. The C Zone drilling is described in more detail in Section 10 of this report.

Exploration work in 2018 focussed on regional targets outside of the Mine Lease. Work was primarily carried out on the Cherry Creek prospects located just west of the Mine Lease, and included:

- Soil geochemical surveys, including X-Ray Florescence (XRF) and eH/pH studies
- Geological mapping and prospecting
- U-Pb geochronology
- TerraSpec test work for alteration minerals
- Drone photogrammetry
- Re-processing of the data from a 2012 DIGHEM Fugro geophysical survey (magnetic, resistivity, and radiometrics) over the Iron Mask Batholith.

EXPLORATION POTENTIAL

In RPA's opinion, there is still exploration potential down dip and down plunge of the known mineralization as well as throughout New Gold's property holdings. New Afton exploration personnel have developed several porphyry and epithermal targets via a wide array of techniques. Exploration work is ongoing, and RPA considers this to be an appropriate course of action.

UNDERGROUND DRAWPOINT SAMPLING

Although not directly related to resource estimation or exploration, sampling of the drawpoints is an important function that has wide ranging use. Drawpoint sampling results are used to reconcile production with the mill and resource model, to support grade planning, and to calibrate the model generated using PCBC block cave modelling software (the PCBC model) and is, therefore, related to validation of the Mineral Resource estimates. The sampling is carried out by the miners under the direction and supervision of the Mine Technical Services staff.

Production samples comprise four to six kilograms of material collected from either the drawpoint muck pile or scoop bucket. Sample material is restricted to fragments measuring

less than 10 cm in size selected from across the muck pile or bucket. Technical Services personnel provide numbered cloth sample bags to the production crew each day, and the filled bags are delivered to the site Metallurgical Laboratory at the end of each shift.

Sample frequency varies widely and is determined by a number of factors. Drawpoints located in the middle of a cave footprint, where grades are less variable, are sampled less frequently than those on the periphery. Newer drawpoints, still in waste but expected to start producing ore, are also sampled more often as are drawpoints nearing the end of their expected life.

Table 9-1 lists the sample frequencies employed at New Afton. The frequency is expressed as one sample every set number of buckets. Lower sampling frequencies mean that a given sample represents a larger tonnage produce, and a higher height of draw (HOD) at that drawpoint.

TABLE 9-1 DRAWPOINT SAMPLE FREQUENCY
New Gold Inc. - New Afton Mine

Frequency	HOD (m)	Tonnes
1:30	0.5	240
1:60	1.0	480
1:90	1.5	724
1:120	2.0	965

The number of samples taken each month for a particular drawpoint range between five and 20. The nature of these samples is such that they are highly variable and so the results are averaged on a monthly basis to moderate the variability. Sample frequencies are reviewed either biweekly or monthly and adjusted according to the characteristics of each drawpoint.

10 DRILLING

Drilling on the New Afton deposit has been conducted in a series of programs over a period spanning 2000 to the present. Most of the drilling has been for exploration and resource definition, however, many holes have been drilled for a variety of other purposes. These include water monitoring, geotechnical test work, and installation of instrumentation for ground monitoring. Some of these “other” holes have also been logged, and the data collected from them has been used in resource modelling.

Some of the drilling has been conducted on targets distant from the mine operations, and as such, will not affect the Mineral Resource estimate. The database used for the resource estimate had a cut-off date of May 25, 2019. This database contained records for 287,125 m of drilling completed in 691 holes. Of these, 143 were excluded from the resource estimation process because they were too far away. The drilling is summarized by year in Table 10-1.

TABLE 10-1 DRILLING BY YEAR
New Gold Inc. - New Afton Mine

Year	Number	Metres
2000	22	9,481.13
2001	28	14,448.41
2002	27	14,431.18
2003	16	8,702.92
2005	69	27,286.38
2006	42	23,140.24
2007	32	18,381.74
2008	33	9,457.04
2009	22	5,107.73
2010	9	2,459.27
2011	46	7,920.81
2012	57	18,888.03
2013	118	46,399.20
2014	74	46,207.29
2015	1	361.49
2016	27	13,791.18
2017	19	9,207.10
2019	49	11,453.99
Total	691	287,125.13

The majority of the drilling, particularly for exploration and resource definition, has been diamond core drilled either from surface or, more commonly, from underground. Of the 691 holes in the database, 680 were diamond core (Table 10-2). Core sizes have been largely NQ (4.76 cm dia.), NQ2 (5.06 cm dia.), or BQ (3.64 cm), often with holes collared in HQ (6.35 cm dia.) and reduced downhole.

Two reverse circulation (RC) holes were drilled in 2010 and 2011.

TABLE 10-2 SUMMARY OF DRILLING BY DIAMETER
New Gold Inc. - New Afton Mine

Core Size	Number	Metres
Non-Core	2	105.00
BQ	5	161.60
EX	9	108.53
HQ	350	147,549.76
HQ/NQ	33	20,037.84
HQ/NQ2	8	4,032.82
NQ	133	62,542.07
NQ/BQ	10	5,112.02
NQ/NQ	1	608.69
NQ2	139	46,601.93
NQ2/BQ	1	264.87
Total	691	287,125.13

The locations of the drill holes in the immediate vicinity of the Mineral Resources are shown in Figures 10-1 and 10-2.

The drilling has historically been carried out by contractors. The bulk of the holes have been drilled by Atlas Drilling Company (Atlas) of Kamloops, British Columbia. Other companies engaged in the past for exploration holes include Boisvenu Drilling Ltd. (Boisvenu) of Vancouver, British Columbia; Western Exploration Drilling Ltd. (Western) of Kamloops; FORACO Drilling Ltd. (FORACO) of Kamloops; and Connors Drilling Ltd. (Connors) of Kamloops.

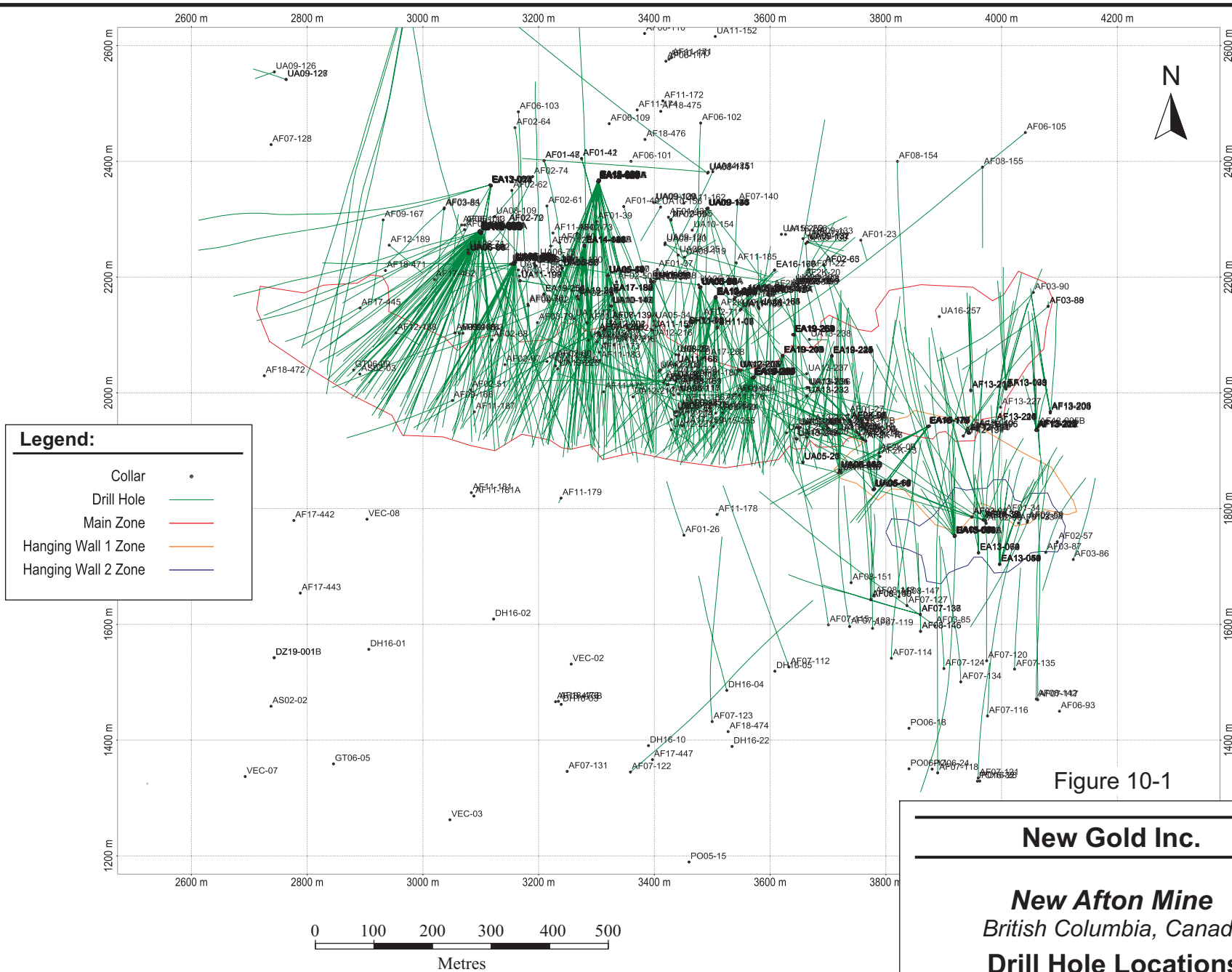
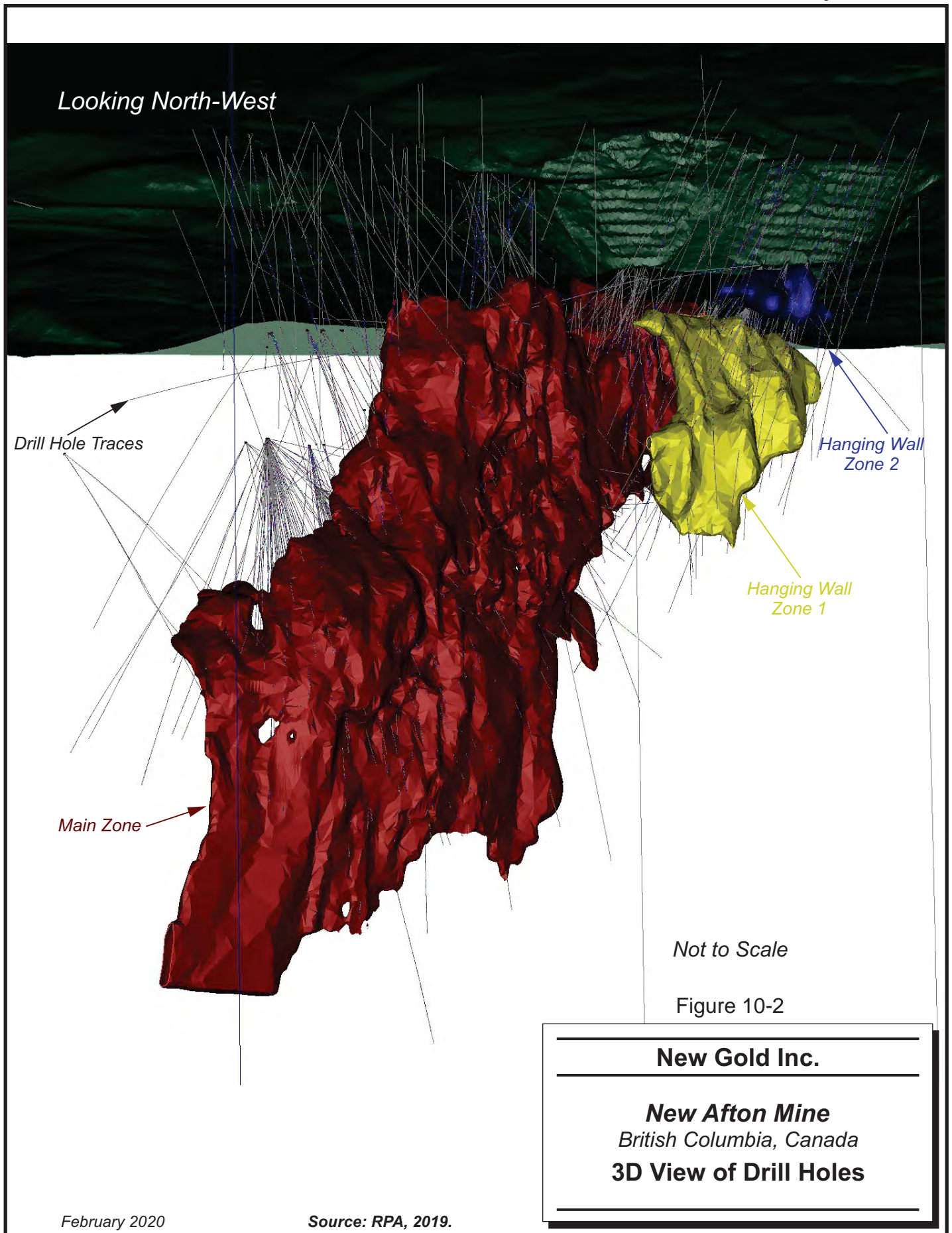


Figure 10-1

New Gold Inc.

New Afton Mine
British Columbia, Canada

Drill Hole Locations



2000 – 2003

All drilling for the period was conducted under contract to Atlas. A total of 93 surface diamond drill holes were collared for an aggregate length of 47,064 m. Three of these holes were for installation of piezometers. The target for this drilling was the Main Zone.

Surface drill collars were surveyed by transit and Brunton compass. In 2000, orientations of holes drilled after hole 2K-12 were measured using a Pajari Bore Hole Survey Instrument, and in 2001 and 2002, a Reflex Easy-Shot Survey Instrument, which records dip and azimuth, was used. Drilling is discussed in further detail in reports prepared by Behre Dolbear (2003, 2004).

2005 – 2006

A 2005 underground drilling program was carried out by Boisvenu using NQ2 equipment. All drill holes were surveyed using a Photo-Bore single-shot instrument for dip and azimuth changes downhole, with collar surveys done by transit. Underground exploration drilling for the 2005 to 2006 period totalled 43,553 m in 103 holes. Two holes (474 m) were drilled for piezometer installation, and nine holes, totalling 1,897 m, for geotechnical purposes. The geotechnical program comprised five underground and four surface holes. Atlas drilled another two exploration holes from surface (2,871 m), targeting the C Zone.

The 2005 program focussed on definition drilling of the known mineralization in the Main Zone. The pattern was configured to fill in sections halfway between the existing surface holes, bringing the nominal section spacing to 40 m. In 2006, the principal target area was the C Zone.

Core was delivered by the drillers on a daily basis to the core shack where it was placed on a pallet and covered until placed in the temporary racks. The core was logged for rock type, mineralization, and alteration, and also for geotechnical data including percent recovery, rock quality designation (RQD), character, and number of fractures. The core was photographed prior to being sampled. RPA noted in the site visits conducted in 2005 and 2006 that the core recovery was generally excellent.

2007

Drilling in 2007 was carried out by FORACO and Atlas. Core sizes were PQ (8.51 cm dia.), HQ, NQ2, and BQTK (4.07 cm dia.). A total of 20,180 m of drilling was completed in 36 holes. Core handling protocols in 2007 were similar to those applied in 2005-2006. Downhole surveys were carried out using either a Reflex EZ-Shot or Maxibor instrument. The Reflex measurements were made every 50 m for holes greater than 100 m depth. For shorter holes, measurements were made at the mid-point and bottom of the hole. The Maxibor provided readings every three metres downhole.

2008

Drilling in 2008 comprised 9,457 m of diamond core in 33 holes, five of which were for geotechnical purposes. Drilling contractors were Atlas and Western, and exploration holes targeted the Main, C, and HW Zones.

For that program, New Gold instituted a formal protocol for locating, monitoring, surveying, and logging the drill holes. Planned holes were plotted in plan and section to confirm the target and collar location. A geologist then inspected the collar site, and the surveyors marked both the collar location and line. Once the drill had been set up, the geologist conducted an inspection, checked the orientation of the rig, and confirmed with the driller. Daily site inspections were conducted by a geologist as the holes were being drilled.

Following completion, a downhole survey was carried out by a technician using the Reflex instrument (as described under 2007 Program). Use of the Maxibor was discontinued as New Gold personnel had concerns regarding its mechanical reliability.

On completion of the hole, a request was made to the surveyors for collar pick-up. In practice, some underground collars were not actually surveyed, but were located relative to the drift survey. Once the survey was complete, site reclamation of both the pad and the sump was carried out.

Core was delivered at the end of each shift to the logging facility housed in a Quonset hut on site. Depending on the backlog, the core was either laid out for processing or stored for later logging. Processed core was laid out, washed, checked for correct depth measurements, and

marked with start and end measurements. Any incorrect depth blocks were corrected at that time. Aluminum tags, denoting hole and box numbers, were affixed to each box. The core was then marked for sampling on two-metre intervals. Geotechnical logging was carried out, followed by the geological logging. Geological logging included lithology, alteration, and mineralization. The logs were transcribed into spreadsheets, which were then sent to a database manager along with the core imagery and sample lists.

Sample tags were prepared for the marked intervals as well as the quality assurance/quality control (QA/QC) samples, and this was all recorded in a spreadsheet. The core was then photographed and placed in racks to await sampling. On completion of the logging, the core was sampled by splitting with a diamond saw. The remaining half-core was placed back in the boxes for long term storage.

2009 – 2011

In this period, leading up to commencement of production, 50 exploration holes were drilled totalling 13,073 m. The holes were all drilled under contract to Atlas, and most of the drilling was on targets outside of the present resource volume. Nine holes, in two fans from underground, were drilled to test the Main Zone at about the 5,050 m level. Two others were drilled along strike of what is now the HW1 Zone, however, they did not intersect significant mineralization.

Protocols for siting, surveying, logging, and sampling the holes were similar to those established in 2009.

2012 – PRESENT

In July 2012, New Gold embarked on a program of underground drilling to better define and expand the C Zone. Over time the drilling encompassed the HW Zones, A and B portions of the Main Zone, and the East Extension. This was one of the more intensive drilling periods in the history of the Mine. A total of 249 holes were completed to the end of 2014, for an aggregate length of 111,464.52 m.

Drilling was paused in 2015 but resumed in 2016. Holes were targeted at the C Zone, Gold Zone, and HW Lens, with the intention of increasing the Mineral Resources. Fourteen holes

were drilled in the C Zone for a total of 8,450 m. These holes were successful in expanding and upgrading the resources along strike and down plunge of the known C Zone occurrence. Similarly, drilling down dip on the HW Lens was successful in extending the known mineralized body. A total of 2,294 m were drilled in this area in eight holes.

The Gold Zone is a series of lenses occurring in a vertically dipping tabular volume located approximately 100 m to 150 m northwest of the Main Zone, near the base of the currently operating block caves. Mineralization tends to be proportionally higher in gold versus copper compared to the rest of the deposit, hence the name, Gold Zone. Overall grades are somewhat low, however, and to date there are no Mineral Resources in this area. Drilling conducted on this target in 2016 totalled 2,257 m in four holes.

During 2017, resource definition drilling was carried out on the C Zone. A total of 17 holes were drilled, totalling 8,934 m, and approximately 40% of the C Zone Mineral Resources were upgraded to the Measured category. A further 1,086 m in four holes were drilled in the West B3 area, which encountered Gold Zone-type mineralization.

Exploration focus switched in 2018 to regional targets outside the Mine Lease, so no resource/definition drilling was done in that year. In 2019, drilling took place on the D-Zone, as well as the sub-level cave (SLC) area located just below the current stoping blocks and to the east of the B3 area. At the time of writing of this report, the drilling had been completed but the assay results had not been fully received and validated. There were records for 11,454 m of diamond drilling in 49 holes contained within the database provided to RPA.

All drilling since 2012 has been conducted under contract by Atlas.

During this period, a number of procedures were developed and/or refined into a comprehensive set of formal protocols. These protocols have been documented in a series of manuals and remain in place to the present day. RPA has reviewed these documents and protocols and considers them to be comprehensive and consistent with current industry best practice.

Mine surveyors locate the collars, provide fore-sight and back-site markers, and survey the completed collars afterward. Hole positioning and surveying was carried out in the same manner as for the previous years. The orientation of the drill head is measured using a Reflex

TN14 gyrocompass. Until fairly recently, drillers conducted downhole surveys using the Reflex EZ-Shot, taking measurements every 25 m. Currently, the standard is to take measurements every five metres using a Reflex EZ-Gyro instrument. The EZ-Gyro was introduced in 2019 to replace the Reflex EZ-Shot.

The logging and sampling facilities, along with the core storage yard, were expanded and enhanced after 2011. The basic work flow remained similar to past years in that core was logged for lithology, alteration, mineralization, and geotechnical data, and then sampled. Current practice is for the core boxes to be transported to the logging building, laid out on racks, and washed with water to remove drilling mud. The core is pieced together to consolidate it, and the footage blocks are converted to metres. Core lengths are measured forward and backward from each block to check for missing intervals. Boxes are then marked with hole ID, box number, and from and to depths.

Core logging is done directly into laptop computers using Maxwell Geoservices LogChief software, which links directly into a DataShed database. Logging computers are backed up daily to the New Afton server and synchronized to DataShed once a hole is complete.

Geotechnical logging includes magnetic susceptibility, RQD, recovery, total number of joints, rock strength, joint filling, joint set angle, joint alteration, number of joint sets, joint aperture (gap separation), and joint roughness. Each characteristic has been assigned a range of valid entries which must be chosen by the logger for entry into the computer. For oriented core, the core is assembled in a tray and aligned with the orientation marks. Structural orientation measurements are collected and fed into LogChief along with depth and some descriptive comments.

Magnetic susceptibility is read directly into LogChief via a hand-held sensor. Five measurements are taken every 30 cm to 50 cm along the core between the wooden depth markers. These values are then averaged for the block-to-block interval.

Once in every 50 m of core, a representative core specimen is taken for point load testing. The tests are conducted using a hand-operated PIL-7 point load tester. Pieces of broken core are collected after the test and returned to the box.

The wet core is photographed while on the logging benches, with the boxes arranged in groups of three per image.

The core is logged for lithology, texture, alteration, and mineralogy along with structural data. As with the geotechnical logging, LogChief has been configured with templates restricting the range of entries to improve consistency. Only certain codes are permitted to be entered in some fields. This forces the logging to conform to the defined standards for the property. The various types of faults in the deposit have been characterized and there are codes to permit logging these features. This provides the ability to collate intercepts and better interpret the fault orientations.

Specimens for bulk density measurements were collected every 10 m through the ore, starting at 50 m above the start of the zone. The samples consist of intact pieces of core measuring 10 cm to 15 cm in length.

Sample intervals are marked on the core using coloured pencils, with sample tags stapled in the box alongside. Sampling is done on two-metre intervals, split using an Almonte mechanized saw. The core is placed in specialized “boats” which are fed automatically to an enclosed saw blade, advancing at a preset speed to maximize sample quality and minimize blade wear. When the boats emerge at the other end of the machine one half of the core is collected and bagged, with the other half placed back in the core box.

A backup manual diamond saw is also available for use when necessary.

In RPA’s opinion, the current drilling, core handling, logging, sampling, and core storage protocols in place at New Afton meet or exceed common industry standards, and RPA is not aware of any drilling, sampling, or recovery factors that could materially impact the accuracy and reliability of the results. There is no evidence of sampling bias and the samples have been taken such that they should be representative of the mineralization.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

2000 - 2003

All core drilled by New Gold in the 2000 to 2003 programs was assayed by Eco Tech Laboratories Limited (Eco Tech) of Kamloops, British Columbia. Sample preparation and analysis were as follows:

- All samples were sorted, documented, dried (if necessary), roll crushed to -10 mesh, split into 250 g sub-samples, and pulverized to 95% -140 mesh.
- Samples for Cu metallica assay (when requested) were split and pulverized into additional 250 g sub-samples of -10 mesh material. The entire pulp was screened to -140 mesh.
- Au and Pd were sub-sampled to 30 g aliquots and analyzed with conventional fire assay using atomic absorption (AA) and/or Inductively Coupled Plasma (ICP) finish. Minimum reported detection for Au and Pd was 0.005 g/t.
- Cu was determined by AA using aqua regia digestion. "Metallic" Cu (when required) included two Cu assays per sample.
- Ag geochemical analysis was by aqua regia digestion and AA.
- All equipment was flushed with barren material and blasted with compressed air between each sampling procedure.

The New Afton property was fenced and gated, and reasonably secure. It was reported that after the core was logged and sawn, tied sample bags were locked in New Gold's field office until picked up by personnel from Eco Tech for transport to their facilities. Drill core was stored in core racks at the locked, secure core shack. Rejects were kept at Eco Tech's office, and pulps were securely stored at New Gold's field office.

2005 - 2011

All analytical work was also performed by Eco Tech. Copper and silver assays were determined using standard acid digestion followed by AA. Gold and palladium were determined using fire assay followed by an AA finish. Pulps for one in five samples were run by ICP for deleterious elements, which included arsenic, antimony, and mercury. Internal checks consisted of a minimum two repeats, one blank, two re-splits, and two or three

reference standards, one for copper, one for silver, or one combined copper/silver and one for gold/palladium. If native copper was reported on the sample sheets, a metallic screen analysis was run in addition to the regular assay.

Bulk density measurements were made at Eco Tech, using a water immersion method.

Mr. Stewart Wallis of RPA visited the Eco Tech Kamloops facility on June 7, 2005, for an inspection, and discussed the assaying methodology and QA/QC protocols with Eco Tech president, Jutta Jealouse. Assay results and internal check results were checked and batches rerun if problems were observed. Sample transport and handling protocols were essentially the same as with previous programs. There were no concerns noted from the visit.

The laboratory has since been acquired by Stewart Group Ltd., of the United Kingdom. At the time that the analytical work was carried out for New Gold, Eco Tech was ISO 9001-2000 accredited, and independent of New Gold.

2012 – PRESENT

In 2012, the primary laboratory was changed to Activation Laboratories Ltd. (Actlabs), located in Kamloops, British Columbia. The Kamloops Actlabs facility has ISO 9001:2008 and ISO/IEC 17025:2005 accreditation and is independent of New Gold. Assaying protocols are similar to those of past programs. All samples are now analyzed for antimony, arsenic, and mercury.

Samples are dried and crushed to 90% minus two millimetres, then riffle-split to obtain a 250 g sub-sample. The sub-sample is pulverized to 95% minus 106 µm. A 50 g aliquot is run for gold, platinum, and palladium by fire assay with ICP finish. Samples are also assayed using 36-element geochemical Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES) following four-acid digestion. If the copper assay is greater than 5,000 ppm Cu, the sample is rerun using a four-acid digestion and ore grade ICP-OES.

In RPA's opinion, the analytical procedures are appropriate and consistent with common industry practice. The laboratory is a recognized accredited commercial assayer. The sampling is carried out by trained technical staff in a manner that is appropriate for the mineralization style. Samples are properly identified and recorded in a secure database. The samples are stored in a secure location and always in the custody of New Gold personnel or

their designates. Transport of the samples from the site to the laboratory is done on a frequent basis and in a secure manner.

ASSAY QA/QC

2000 - 2003

New Gold's QA/QC protocols were as follows:

- Assay standards were routinely used to control assay precision.
- One in nine pulp samples were re-assayed by Eco Tech.
- One in 25 reject samples were re-split and re-assayed by Eco Tech.
- Pulp samples were randomly selected for duplicate assaying by different laboratories.

2005 - 2006

New Gold's protocols were somewhat modified from the ones used prior to 2005. A blank, standard, or duplicate was inserted into the sample stream at a frequency of one every eight samples. Sample QA/QC data from the underground drilling program was analyzed by Ron Konst, P.Geo., an independent consultant retained by New Gold. Mr. Konst noted that there were 53 blank assays and 18 standard assays with results outside of an acceptable error limit. These samples comprised 7% and 2% of the total blank and standard assays, respectively, although it was reported that several of these "outliers" were the result of improper labelling (i.e., standards sent as blanks, and vice versa). The Konst report recommended that the batches with out-of-specification (OOS) QA/QC data be investigated and re-assayed, if appropriate. This work was carried out and no material changes to the assay database resulted. Several of the OOS blanks were found to be misidentified in the database and did not represent improper assay results. The duplicate data were analyzed using scatter diagrams and Thompson-Howarth plots to determine if any biases were present and to define the assay precision. The precision for copper at a 0.6% grade was $\pm 9\%$, and for gold at a 0.5 g/t grade, $\pm 20\%$. No biases were detected.

RPA reviewed the Konst report and the QA/QC data and conducted independent analyses of the QA/QC assays. No concerns were indicated by this analysis. RPA concurred with the principal conclusion of the Konst report and considered the assay data suitable for use in Mineral Resource estimation.

2007 – 2011

New Gold consultant, Bruce Davis, reviewed the QA/QC data in October 2008 and found that QA/QC results were showing significant deficiencies and that remedial measures had not been taken. The recommendation was made to select approximately 300 sample pulps for re-assay of copper and gold, both at the principal laboratory, Eco Tech, as well as at another laboratory. The results of this re-assay program did not indicate that there were any concerns with respect to bias, however, the data did display a somewhat high level of scatter for pulp duplicates.

2012 – PRESENT

Assay QA/QC consists of the addition of standards and blanks into the sample stream, along with duplicates of both pulp and reject material. Every 50th pulp is sent to SGS Canada Inc., in Burnaby, British Columbia, for an outside check assay. In 2014, 11 commercially prepared standards were used, five for gold and six for copper. Currently, there are 15 standards and blanks in use. These are listed in Table 11-1 below.

TABLE 11-1 STANDARDS AND BLANKS - 2019 PROGRAM
New Gold Inc. - New Afton Mine

Standard	Element	Expected Value (ppm)	Lower Value (ppm)	Upper Value (ppm)	Calculated Std Dev	Calculated Mean
G316-4	Au	0.24	0.22	0.26	0.010	0.232
G907-1	Au	0.79	0.69	0.89	0.027	0.78
G909-1	Au	1.02	0.90	1.14	0.032	1.03
G997-6	Au	1.68	1.52	1.84	0.031	1.78
G311-2	Au	4.93	4.57	5.29	0.078	4.92
CDN Labs BL-10	Au	BDL	BDL	10*LDL	0.002	0.002
Cleaning_Blank	Au	BDL	BDL	10*LDL	0.001	0.001
Oyama Blank	Au	BDL	BDL	10*LDL	0.020	0.002
GBM302-9	Cu	12,720	11,782	13,658	100	12,700
CDN Labs CM-27	Cu	5,920	5,320	6,520	192.51	5,810
CDN Labs CM-31	Cu	840	720	960	32.03	808.2
CDN Labs CM-37	Cu	2,120	1,880	2,360	91.99	2,137.2
CDN Labs BL-10	Cu	BDL	BDL	100*LDL	19.38	56.07
Cleaning_Blank	Cu	BDL	BDL	100*LDL	4.7	5.1
Oyama Blank	Cu	BDL	BDL	100*LDL	8.26	7.95

Notes:

1. Std Dev – Standard Deviation
2. BDL = Below Detection Limit.
3. LDL = Lower Detection Limit.

The standards results are plotted against the confidence limits which are defined as two standard deviations from the nominated best value. Failures are checked to confirm that there was no misidentification of QA/QC sample material. Once confirmed, failures are re-assayed along with five shoulder samples on either side in the sample stream until the standard is within the error limits.

Blanks comprise barren rock that has been confirmed to be zero grade. Both pulp and coarse blanks are added to the sample stream immediately following a high grade core interval. Where no high grade intervals are noted, blanks are added every 40 samples. Failures for blanks, are defined as results greater than ten times the DL, and are treated in the same way as standards.

The current practice is for a QA/QC report to be generated at the conclusion of a drill program. Standards and blanks are plotted on Performance Charts, in chronological order. For standards, lines are also plotted which represent the expected value, upper limit (+ two

standard deviations), and lower limit (- two standard deviations). Pulp, reject, and external duplicate results are plotted on scatter diagrams to check for bias and on coefficient of variation diagrams to estimate the precision.

RPA reviewed the QA/QC reports for 2013 and 2014 for earlier Technical Reports. There did not appear to be any persistent bias in the pulp and reject duplicate results. External duplicates showed a minor bias in 2013 but no bias in 2014.

For this report, RPA reviewed the 2019 QA/QC report, even though the results of this program will not affect the current resource models. The review did, however, provide confirmation that the protocols New Gold has in place are being observed. Only four standards/blanks failures were returned in 2019, all on standard G316-4. New Afton personnel acknowledge that this standard is not performing well and are monitoring the results to determine if some remedial action is warranted.

Historically, the duplicate gold analyses at New Afton have shown a high degree of scatter. A study compiled by New Afton personnel on assays from the pre-2012 era show extreme scatter in the gold analyses. The reason for this apparent lack of precision is unknown. The most recent duplicate results do not show the degree of scatter seen in earlier programs. The 2019 duplicates, both pulps and rejects, for gold were well within an acceptable level, so it would appear that this is no longer an issue.

In RPA's opinion, it does not appear as though the gold assays are biased, and consequently, the global resource grades should not be adversely affected. The accuracy of local block grades may be impacted, although with the mining method used at New Afton, this may not really have any relevance. Production results to date appear to show that the block model is performing reasonably well, and as such, there are no critical concerns with the assay database.

RPA considers the assay QA/QC protocols employed at New Afton to be consistent with industry best practice. Standards and blanks results are within an acceptable failure rate, and appropriate steps have been taken when failures occurred.

12 DATA VERIFICATION

2000 - 2003

Technical reports by consultants Behre Dolbear (2003, 2004) described validation of the assays from the surface drilling program. Behre Dolbear (2004) concluded that the assay and survey database used for the Afton mineral resource estimation was sufficiently free of error to be adequate for resource estimation.

2005 - 2006

In the course of preparing a Mineral Resource estimate in this period, RPA found a number of database errors, which were brought to the attention of New Gold personnel and corrected. These errors were often observed to persist in subsequent versions of the database, indicating that the validation process was not robust. Eventually, these errors were expunged, however, concerns regarding the data handling remained. RPA carried out a check of approximately 10% of the drilling database against the original assay and survey records. Drill holes were selected on a more or less random basis, spanning the entire life of the Mine to date. No errors were found.

2007 - 2011

For a Mineral Resource estimate in 2009, RPA selected approximately 10% of the holes drilled since the resource estimate in 2006. No errors were found. In addition, the entire database was checked using the Gemcom validation utility. One or two very minor discrepancies were found with respect to the header information, however, none that would impact resource estimation (RPA, 2009).

A proprietary database system, called DrillView, was established with automated functions for importing, validating, and exporting the drill data. Data handling protocols were introduced which provided for the establishment of a single master database, with one person responsible for its maintenance.

Assay data was sent from the laboratory via email and hard copy to the database manager at site, where it was converted to comma-delimited files and imported into the master database

for validation. The validated data was then exported to various users for specific applications such as geological interpretation, plotting, and resource estimation.

In 2011, RPA reviewed the data handling protocols for data acquisition and management and considered them to be reasonable and consistent with common industry standards.

2012 – PRESENT

In 2012, in order to bring New Afton's practices in line with corporate standards, New Gold personnel transferred the DrillView database to Maxwell DataShed, a commercial drill data management program. In the course of this process, the database was checked for errors and corrected where necessary. The pre-2012 assay data was compared to the assay certificates and it was found that 11 certificates from the 2006 drilling had been improperly imported. Columns of data in the assay spreadsheets had been misidentified resulting in these columns being imported to the wrong fields in the database. This resulted in minor underestimation of gold and copper grades in some blocks in the model. New Gold reviewed the resource model and found that it had little impact on the Mineral Reserves estimate.

Other errors found included overlapping intervals in some areas where re-assays had been carried out, and inconsistent downhole survey data, particularly where there were changes from one instrument to another. These inconsistencies were corrected. A fairly significant error was discovered with conversion of azimuths of downhole surveys from magnetic to true. Declination, or the difference in direction between magnetic north and true north, varies due to a continual drift of the north magnetic pole. The declination correction applied to the surveys had been kept constant throughout the history of the Mine which had resulted in some fairly significant errors in the orientation of recent holes. These were corrected in the database.

Until 2019, the database was maintained and updated by a Database Administrator in Vancouver. In 2019, database management was transferred to New Afton. The database itself is resident in the Toronto corporate office, where it is backed up hourly. Weekly backups are stored off site.

Assay results are sent via email and then imported into DataShed. Geologists log the core using LogChief, which has templates to limit the input to appropriate entries. When a hole is completed DataShed validation routines are run to capture errors in data entry. DataShed checks for improper FROM-TO intervals, gaps in the data, depths in excess of the hole lengths,

invalid angular measurements, and percentage entries greater than 100%. The collar coordinates are compared to the planned and surveyed locations and the downhole surveys are checked for abrupt changes in direction. Once all assay data has been imported, including re-assays and final QA/QC results, the validated database is exported to comma-delimited files and sent back to site. These files are imported into Vulcan for geological interpretation and wireframe modeling.

In RPA's opinion, the database management and validation protocols employed by New Gold are consistent with common industry practices. The database and its contents are acceptable for use in Mineral Resource estimation.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

PREVIOUS METALLURGICAL TEST WORK

RPA reported on previous test work in RPA, 2009 and RPA, 2016. This test work is summarized below.

A metallurgical test program was developed by Hatch in conjunction with New Gold and SGS Mineral Services (SGS). The primary test work was completed by SGS from March to October 2006, while secondary programs were completed by Pocock Industrial Inc. (Pocock) and Knelson. Mineralogy was completed by Advanced Mineral Technology Laboratory (Amtel) and Vancouver Petrographics Ltd. (VPL). Hatch reviewed and interpreted the results from the various test programs to develop the process design criteria and flowsheets.

In 2014, as part of the C Zone extension project, metallurgical testing was carried out on C Zone material to determine the amenability of this material to the unit operations in the processing plant. The work was completed by ALS Laboratories (ALS), in Kamloops, British Columbia.

Quarter and half core samples of C Zone, totalling 875 kg, was used to construct nine sub-composites and one Master Composite.

The principal objectives of this laboratory test work, as requested by New Afton, were to:

- Assess the chemical and mineralogical characteristics of the composites.
- Conduct semi-autogenous (SAG) mill comminution (SMC), Bond rod, and ball mill work index tests and SAG Power Index (SPI) tests on each of the composites.
- Evaluate metallurgical performance of the composites through a series of rougher and cleaner tests on the variability samples and Master Composite.
- Perform gravity gold recovery and locked cycle testing on the Master Composite.

Using standard chemical assaying techniques, the chemical compositions of the Master Composite (MC1) and sub-composite samples were determined.

The Master Composite graded approximately 0.86% copper, slightly lower than the typical New Afton rougher feed of approximately 1.0%. Sulphur assayed approximately 1.6%. Arsenic in the feed, measured at approximately 0.015%. The precious metals assayed 1.7 g/t Ag and 0.9 g/t Au.

Copper feed grades in the variability sub-composites ranged from approximately 0.2% to 2.0% and sulphur grades ranged from 0.87% to 3.0%. Arsenic grades ranged from 0.005% to 0.049%. Silver grades ranged from 0.4 g/t to 3.7 g/t, while gold grades ranged from 0.2 g/t to 1.6 g/t. Mercury levels in the feed measured between 1 ppm and 2 ppm for Hypogene 3, 4, 5 and Mesogene 1 samples.

The mineral content data was generated by conducting a Particle Mineral Analysis (PMA) on the Master Composite (MC1) and Bulk Mineral Analysis with liberation estimate on the sub-composites, both via QEMSCAN.

The following comments were made, regarding the chemical and mineralogical properties of the samples:

- Chalcopyrite was the dominant sulphide mineral in most of the samples, followed by pyrite. The secondary copper sulphide bornite was also present in some samples in minor amounts.
- Tennantite/enargite was present in most of the samples. Since no arsenopyrite was measured, this indicates that most of the arsenic in the samples would be associated with the copper sulphide minerals tennantite/enargite.
- The majority of the non-sulphide gangue in all of the samples occurred as feldspars, representing approximately 23% to 52% by weight of the feed in the composites.
- Arsenic in the feed, measured at approximately 0.015%, may be of concern. Mercury may be a concern, if upgraded in the copper concentrate.

The comminution test results were as summarized below:

- For the SMC tests, the derived A x b values ranged from approximately 29 to 41, giving an average of approximately 36. In terms of SAG milling, these values span categories from medium to hard.
- Bond rod and ball mill work indices ranged from approximately 17 kWh/t to 20 kWh/t, and 17 kWh/t to 19 kWh/t, respectively. The Bond work indices indicate a moderately hard to hard feed material for rod or ball milling.

Recovery for the sub-composite samples was generally excellent, averaging approximately 94% for copper and 95% for gold. Gold recovery for the sub-composites samples generally tended to follow copper recovery trends.

Copper recoveries of approximately 94% and 95% were achieved in repeat rougher testing.

Gold recovery to the copper rougher concentrate ranged from 90% to 94% for the two repeat tests. A higher mass recovery corresponded to a higher gold recovery of approximately 4% in the rougher concentrate.

Kinetic cleaner tests were carried out on the Master and sub-composites, with the following conclusions:

Master Composite:

- The three-stage dilution cleaning test measured a copper recovery of approximately 85% at a copper grade of approximately 23%. Gold was approximately 76% recovered to the copper concentrate, which graded approximately 17.8 g/t Au.

Sub-composite:

- The three stage dilution cleaning tests measured an average copper recovery of approximately 87% at an average copper grade of 23%. Similar to the kinetic cleaner tests, samples with the lower copper grades performed poorly, while samples with higher copper grades performed relatively better. Gold performance generally mirrored copper performance.

A single locked cycle flotation test was performed on the Master Composite sample, with the following results:

- Re grind size was slightly finer, at approximately K₈₀ 31 µm.
- Copper and gold recoveries increased,
- Copper concentrate graded 25%, while copper recovered to the copper concentrate measured approximately 90%.
- Gold recovery measured 86%, while the gold grade in the copper concentrate measured approximately 19 g/t Au.
- The arsenic in the copper concentrate graded approximately 0.4%, which may exceed the threshold at which smelter penalties are imposed.

ALS made the following recommendations:

- A minor elements analysis including mercury for the final concentrate is recommended. Some of the sub-composite samples measured mercury levels greater than 1 ppm in

the feed. If the mercury was upgraded to the copper concentrate, there may be difficulties in marketing this final concentrate.

- Consult a copper marketing professional to provide guidance to arsenic penalties, which may be charged by smelters.
- Cleaner testing at finer regrind sizes were recommended as well as assessing copper performance for the Master Composite and sub-composites.

RECENT METALLURGICAL TEST WORK

The major metallurgical test work since the RPA (2016) report has been carried out on supergene ore and is summarized below.

SUPERGENE METALLURGICAL TEST WORK

SUPERGENE BACKGROUND

Supergene ore, characterized by the presence of native copper and chalcocite, contains 6% of the remaining LOM copper (2020 LOM). Based on monthly mineralogy of mill streams and East Cave drill core logs, approximately 40% to 50% of the copper is expected to be as native copper with the remainder as chalcocite. Approximately 89% of this copper will be processed in 2020 with smaller amounts being processed from the low grade stockpile from 2021 to 2025. No supergene ore is forecast when processing B3 or C Zone ore, which will be primarily hypogene ore with minor amounts of mesogene ore.

SUPERGENE PROCESSING

A metallurgical test program was conducted in 2015-2016 to determine what flowsheet changes would improve native copper recovery once processing of supergene ore commenced in 2019.

A pilot plant was set up at ALS, in Kamloops, in 2015 to process hypogene, mixed hypogene-supergene I (high native copper), supergene I (high native copper), and supergene II (high chalcocite) ores. The pilot circuit was run with and without gravity recovery in the grinding circuit. This pilot program is detailed in ALS (2015). The main findings were that the supergene II (high chalcocite) ore had copper and gold recoveries comparable to the hypogene baseline. Recoveries for supergene I (high native copper) were lower. Also noted for the supergene I sample run:

- The froth was brittle due to the lack of sulphides to coat the bubbles, requiring a strong frother. This might be more of an issue in the full-scale New Afton tank cells than in the pilot-scale cells which used paddles to help froth movement.
- Steady-state was not achieved for the circulating load of copper in the grinding circuit after two shifts of operation. This indicated that the circulating load of native copper could build up enough to be problematic for materials handling in the full-scale grinding circuits. The native copper flakes could also start to lose fines to attrition and fine native copper had relatively poor recovery in flotation. Adding a gravity recovery stage in the pilot grinding circuit reduced and stabilized this circulating load of copper.

Based on the pilot study, and to mitigate potential risk of low native copper recoveries at full scale, several options were evaluated for recovering native copper from the New Afton grinding circuits:

- Continuous variable discharge Knelson concentrators (ALS, 2014).
- Inline pressure jigs (Gekko, 2015 and Gekko, 2016).
- Heavy Liquid Separation (MetSolve Laboratories Inc., 2015).
- Eriez Hydrofloat (Eriez Manufacturing Co., 2015).
- Shaking tables were considered, but footprint restrictions made this option impractical. Similarly, mass flow limitations precluded the use of spiral classifiers.

MODIFIED FLOWSHEET

Gravity recovery capacity was added to the ball mill circuit and increased in each of the tertiary and regrind circuits. In the ball mill circuit, two Gekko inline pressure jigs (one rougher and one cleaner) were installed along with a Gekko MagScreen magnetic separator for removal of magnetite and a portion of the hematite from the cleaner jig concentrate. The non-magnetic separator product reports to the concentrate thickener. The jigs were selected for the ball mill circuit primarily due to their ability to process a coarse feed compared to flotation or centrifugal concentrators. In the tertiary circuit, the existing batch XD40 Knelson concentrator (XD40) was removed and a continuous CVD42 Knelson concentrator (CVD) was installed to increase the upper limit of concentrate mass pull. The concentrate from the CVD reports to the Gekko cleaner jig feed. The XD40 was relocated to the regrind circuit to operate in parallel with another existing XD40 on the regrind cyclone underflow (each being fed by one cyclone underflow). The flowsheet changes were made primarily to recover native copper, however, the jigs have also recovered native gold associated with the supergene ore based on trace mineral QEMSCAN searches (SGS, 2019). In January 2020, a vibrating screen was installed on the non-magnetic jig concentrate stream currently feeding the concentrate thickener. This screens out the high copper grade +2 mm fraction for storage and separate sale. Coarse particles like this are unlikely to be captured in shipment samples, resulting in payment for their

mass but not the full value of metal, which generally exceeds 95% Cu (Lyman, 2019). This cut size was selected as the concentrate grade drops off below 2 mm, resulting in higher costs associated with selling a separate concentrate. The screen undersize reports to the concentrate thickener.

CONCLUSIONS

RPA concurs that the choice, amount, and quality of test work meet industry standards. The modifications to the flowsheet fall within normal operating scenarios.

RPA is not aware of any processing factors or deleterious elements that could have a significant effect on potential economic extraction.

14 MINERAL RESOURCE ESTIMATE

This section of the report is largely taken from Sim and Davis (2019).

INTRODUCTION

The current Mineral Resource estimate was prepared under the direction of Robert Sim, P.Geo., of SIM Geological Inc. (SIM), assisted by Bruce Davis, PhD, FAusIMM, of BD Resource Consulting, Inc. (BDRC). The effective date of the estimate is December 31, 2019, although the estimation work was completed in June 2019, and the cut-off date for the database was May 25, 2019. Both SIM and BDRC are Qualified Persons (QP) and independent of New Gold according to the definitions in NI 43-101.

The Mineral Resource estimate was generated using a block model method, with grades interpolated by ordinary kriging (OK). The primary economic components estimated into the blocks are copper, gold, and silver. For internal tracking purposes, palladium, as well as the deleterious elements mercury, antimony, and arsenic are also estimated, however, these elements do not impact on the Mineral Resource estimate. The block models were constrained by three dimensional (3D) wireframes encompassing the zones of mineralization. Block size is 10 m x 10 m x 10 m, in an array oriented parallel to the Mine Grid (i.e., no rotation). The Mine Grid is rotated 50° west of UTM north. The models were constructed using MinePlan v15.4 software (formerly MineSight, which is a commercial package used commonly within the mining industry).

The database comprises diamond drill sample results collected by New Gold from 2000 to 2019.

The Mineral Resource estimate, exclusive of Mineral Reserves, is summarized in Table 14-1. Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM (2014) definitions) as incorporated into NI 43-101.

TABLE 14-1 MINERAL RESOURCE ESTIMATE AS OF DECEMBER 31, 2019
New Gold Inc. - New Afton Mine

Zone	Category	Tonnage (Mt)	Gold (g/t)	Grade Silver (g/t)	Copper (%)	Contained Metal		
						Gold (koz)	Silver (koz)	Copper (Mlb)
A&B Zones	Measured	17.0	0.63	1.7	0.83	346	940	312
	Indicated	9.8	0.44	2.6	0.71	138	825	154
	M+I	26.8	0.56	2.1	0.79	484	1,765	466
	Inferred	6.4	0.34	1.3	0.35	70	272	49
C Zone	Measured	6.1	0.78	2.0	0.94	154	401	126
	Indicated	12.7	0.71	2.1	0.83	292	852	233
	M+I	18.8	0.74	2.1	0.86	446	1,254	359
	Inferred	7.7	0.41	1.3	0.47	101	316	71
HW Zones	Measured							
	Indicated	11.4	0.51	2.0	0.44	187	738	109
	M+I	11.4	0.51	2.0	0.44	187	738	109
	Inferred	0.003	0.49	0.6	0.19	0	0	0
Total								
	Measured	23.1	0.67	1.8	0.86	500	1,345	438
	Indicated	33.8	0.57	2.2	0.66	617	2,409	495
	M+I	57.0	0.61	2.1	0.74	1,118	3,754	933
	Inferred	14.0	0.38	1.3	0.42	172	589	121

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are estimated at a cut-off grade of 0.40% CuEq.
3. Mineral Resources are estimated using long term metal prices of US\$3.25/lb Cu, US\$1,350/oz Au, and US\$18.00/oz Ag.
4. Mineral Resources are exclusive of Mineral Reserves.
5. Provision has been made for depletion to the end of 2019.
6. Numbers may not add due to rounding.
7. M+I - Measured plus Indicated.
8. Mineral Resources, which are not Mineral Reserves do not have demonstrated economic viability.

The cut-off grade used was 0.40% CuEq, which was derived by combining the estimated value of gold and silver with copper. The parameters and calculation methodology for copper equivalence is provided in the section of this report entitled Cut-off Grade.

The estimate in Table 14-1 was derived from the global resource block model for the deposit as it was prior to production. From this model, the estimated production to year-end (both actual and forecast where appropriate) and the PCBC estimate of the Mineral Reserves remaining within the cave were subtracted. The depletion was derived from production records

to date plus the forecast of what was expected to be mined for the balance of the year. A provision was made for approximately 14% dilution at zero grade entrained within the mined material.

As it is not possible to know what specific portions of the block model have actually been removed, the subtraction was done by means of a global weighted average. The tonnes and calculated metal contents were subtracted, and following this, the grades of the remaining material were derived by dividing the metal content of the depleted resource by the depleted tonnage. This calculation was conducted only on the Mineral Resources for the A and B Zones, above the 4,900 m level, as they are the only zones which have been mined thus far.

RPA is not aware of any environmental, permitting, legal, title, taxation, socio-political, marketing, and other relevant facts that would affect the Mineral Resource estimate.

DATABASE

The database used to generate the estimate comprised drill results from 691 underground and surface diamond drill holes, totalling 287,125 m. This same database was provided to RPA for this audit. Not all of these holes are close enough to the mining area to have an impact on the Mineral Resource estimate. In addition, 143 holes do not have sample data and do not contribute to the estimate. These are reported to be geotechnical holes, metallurgical holes, or abandoned and re-drilled sections.

The database was provided to RPA as spreadsheets, which contained the following tables:

- Header
- Survey
- Alteration
- Alteration Model
- Assays
- Core Recovery
- Faults
- Faults Model
- Lithology
- Lithology Model

- Mineralization
- Mineralization Model
- Point Load
- Specific Gravity

The assay table contained analyses for copper, gold, silver, arsenic, mercury, antimony, sulphur, platinum, and palladium. There were a total of 111,823 assay records in the database, although not all elements were run in all the samples. Non-sampled, or apparently non-sampled intervals, tend to be located on the periphery of the deposit in areas of weak or no mineralization, or in wedged holes where intervals have been re-drilled. In the case of the re-drilled intervals, the primary hole was typically sampled and the re-drilled portion of the wedge, not sampled.

Sample statistics are provided in Table 14-2.

TABLE 14-2 SAMPLE STATISTICS
New Gold Inc. - New Afton Mine

Element	Number of Samples	Total Length (m)	Min	Max	Mean	Standard Deviation	Coefficient of Variation
Copper (%)	111,484	227,095	0.000	13.7	0.24	0.588	2.43
Gold (g/t)	111,457	227,065	0.001	48.9	0.232	0.598	2.58
Silver (g/t)	111,199	226,531	0.000	1,880.0	0.86	6.13	7.15
Palladium (g/t)	111,426	226,987	0.000	14.1	0.037	0.116	3.108
Antimony (ppm)	73,172	147,514	0.000	2,010.0	6.71	36.35	5.42
Arsenic (ppm)	73,174	147,514	0.100	10,000.0	43.9	255.29	5.82
Mercury (ppm)	73,074	147,315	0.001	107.1	0.35	1.783	5.05

Notes:

1. Taken from Sim and Davis (November 2019).
2. MinePlan splits intervals at geology contacts, so the number of samples may not agree with the totals in the original data set.
3. Sample statistics are weighted by length.

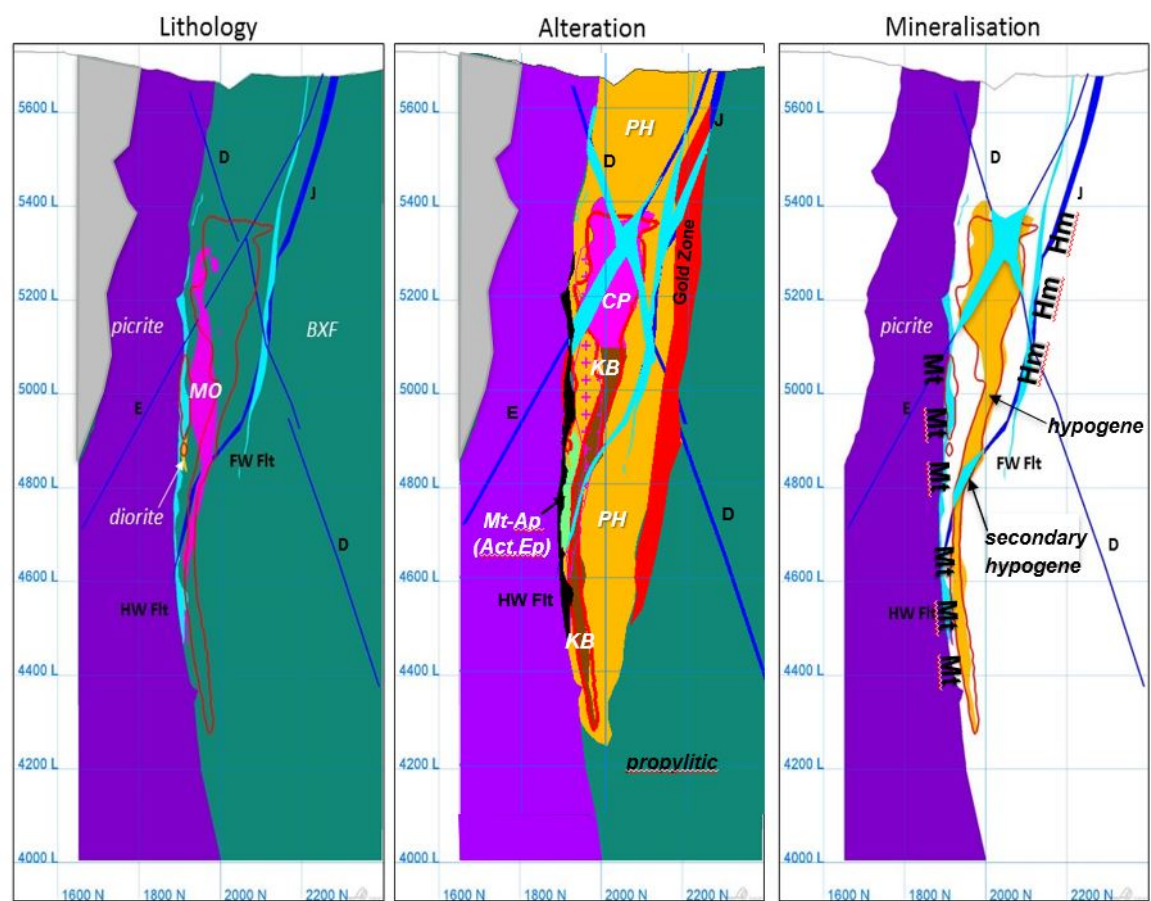
RPA compiled the header, survey, assay, lithology, and specific gravity (SG) data into GEMS, which is a commercial mining and exploration software package. The GEMS validation utility was run on the tables and no errors were found. RPA conducted a statistical analysis of the assay data and confirmed the results obtained by SIM.

SIM reports that core recovery in the holes used for the estimate averages 98%, and that there is no apparent relationship between recovery and grade.

ESTIMATION DOMAINS AND WIREFRAMES

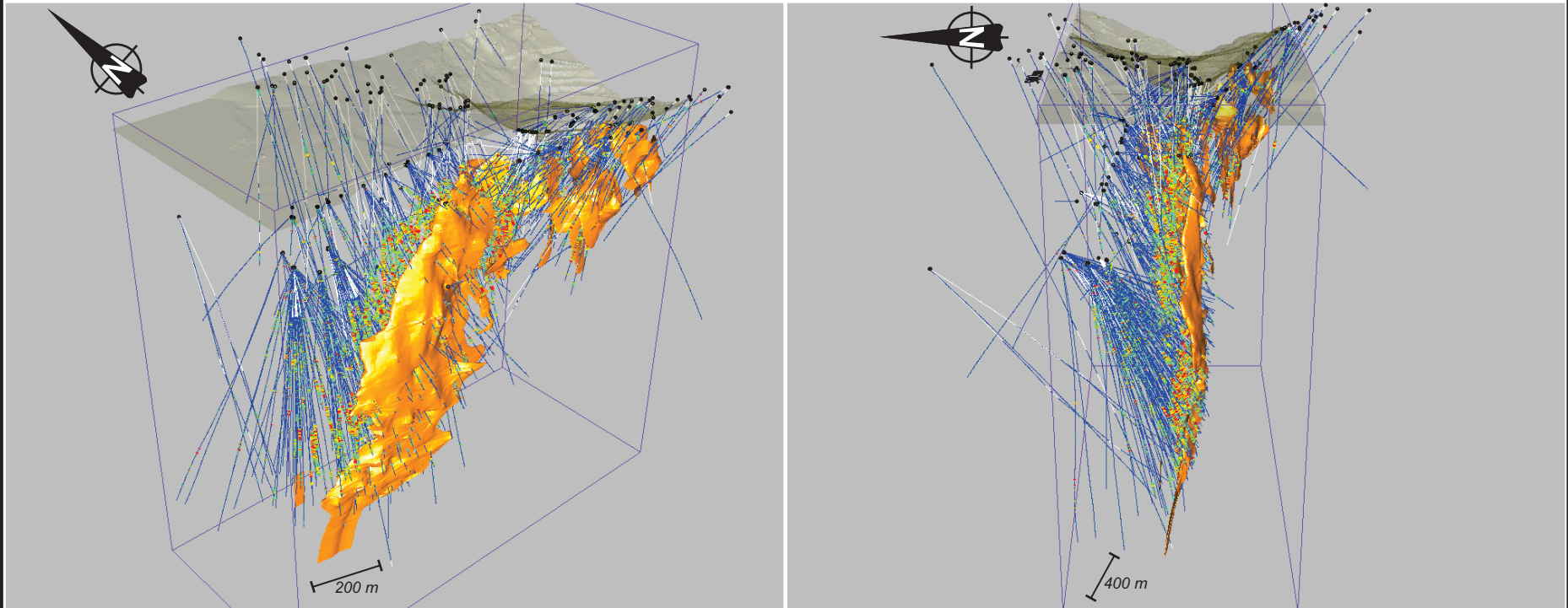
As discussed in the Geology section of this report, New Afton is interpreted to be an alkalic porphyry copper-gold deposit associated with a monzonite stock which has intruded and mineralized Nicola Formation intermediate to mafic volcanic rocks (Lipske and Wade, 2014). The mineralization comprises discontinuous copper sulphide stringer veinlets and disseminations, primarily, but not exclusively, confined to the wall rocks of the monzonite intrusions. The principal host lithologies for the mineralization are crystalline and polymictic fragmental rocks and monomictic intrusive breccias, grouped together as BXF (Figure 14-1).

FIGURE 14-1 CROSS SECTION VIEWS OF THE LITHOLOGY, ALTERATION, AND MINERALIZATION MODELS










Modified from Lipske and Wade (August 2014).

In the eastern half of the deposit, the BXF is intruded by a coeval diorite sill, termed DI, and is bounded on the east by younger basalts and sedimentary rocks. Through the central and western portions of the deposit, the mineralization is bounded by an ultramafic picritic flow (PI). The monzonite (MO) bodies encompass both dike swarms and a tabular stock with a near-vertical dip, open at depth, and narrowing down-plunge towards the west. The stock intrudes the south-central part of the deposit. It is interpreted to be a causative intrusive phase for mineralization, but is itself only weakly mineralized. The monzonite is shown in Figure 14-2.



Au Grade (g/t):

	No Sample
	> 0
	0.4 - 0.8
	0.8 - 1.2
	1.2 - 1.6
	1.6 - 2.0
	> 2.0

February 2020

Source: Sim and Davis, 2019.

Figure 14-2

New Gold Inc.

New Afton Mine

British Columbia, Canada

**3D Isometric Views of the
Monzonite Intrusive**

Principal lithological host rocks for the model are listed in Table 14-3.

TABLE 14-3 GEOLOGIC MODEL LITHOLOGY CODES
New Gold Inc. - New Afton Mine

Lithology	Description
BXFF*	Monomictic and polymictic breccias
BXFX*	Trachytic flows and crystalline tuffs
BA	Basalt
DI	Diorite
FA	Fault – when primary lithology is unrecognizable due to deformation
LA	Latite
MO	Monzonite
PI	Picrite, peridotite, wehrlite
SY	Syenite
SED	Mudstone, siltstone, sandstone and conglomerate

Note:

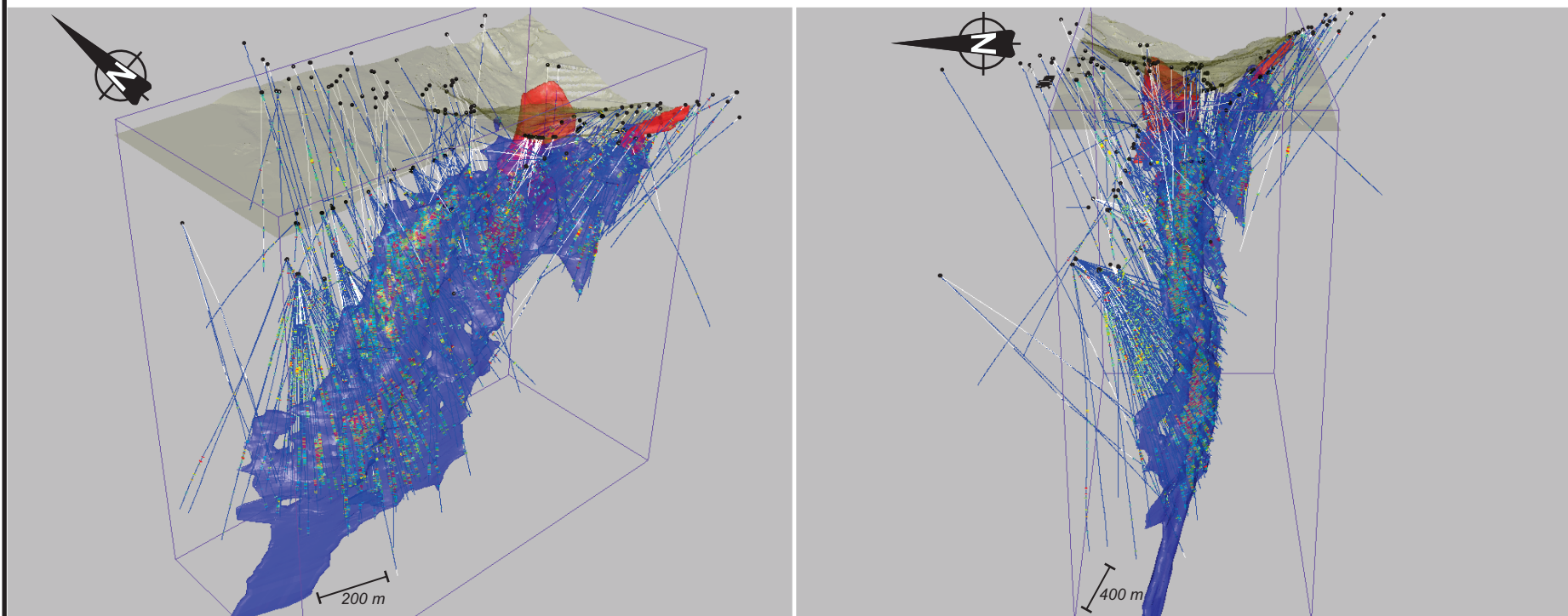
1. *Consolidated as BXF for interpretive purposes.

SIM and New Afton geologists conducted an analysis to devise an optimal domaining scheme for the deposit. Individual wireframe models were created for the various lithological, alteration, and mineralization domains.

Primary hypogene mineralization (Hypogene Zone) comprises the majority of the deposit and consists of near-vertical tabular zone of disseminated chalcopyrite and minor bornite. Limited post-depositional remobilization of the mineralization has occurred near surface and extends to depth along structures. This mineralization is referred to as the Supergene Zone and is characterized by secondary native copper. Below the Supergene Zone, there is a small volume of mixed primary and secondary mineralization which is termed the Mesogene Zone. Sulphide mineralization occurs as primary chalcopyrite, along with secondary tennantite-tetrahedrite, chalcocite, and covellite. For the purposes of modelling, the Mesogene Zone has been combined with the Hypogene Zone.

The extents of the Hypogene and Supergene Zones are shown in Figure 14-3. Hypogene mineralization is coloured blue, and Supergene red.

The majority of the mineralization is accompanied by a biotite-dominant potassic alteration assemblage. Figures 14-1 and 14-4 show the extent of this alteration zone.

**Au Grade (g/t):**

	No Sample
	> 0
	0.4 - 0.8
	0.8 - 1.2
	1.2 - 1.6
	1.6 - 2.0
	> 2.0

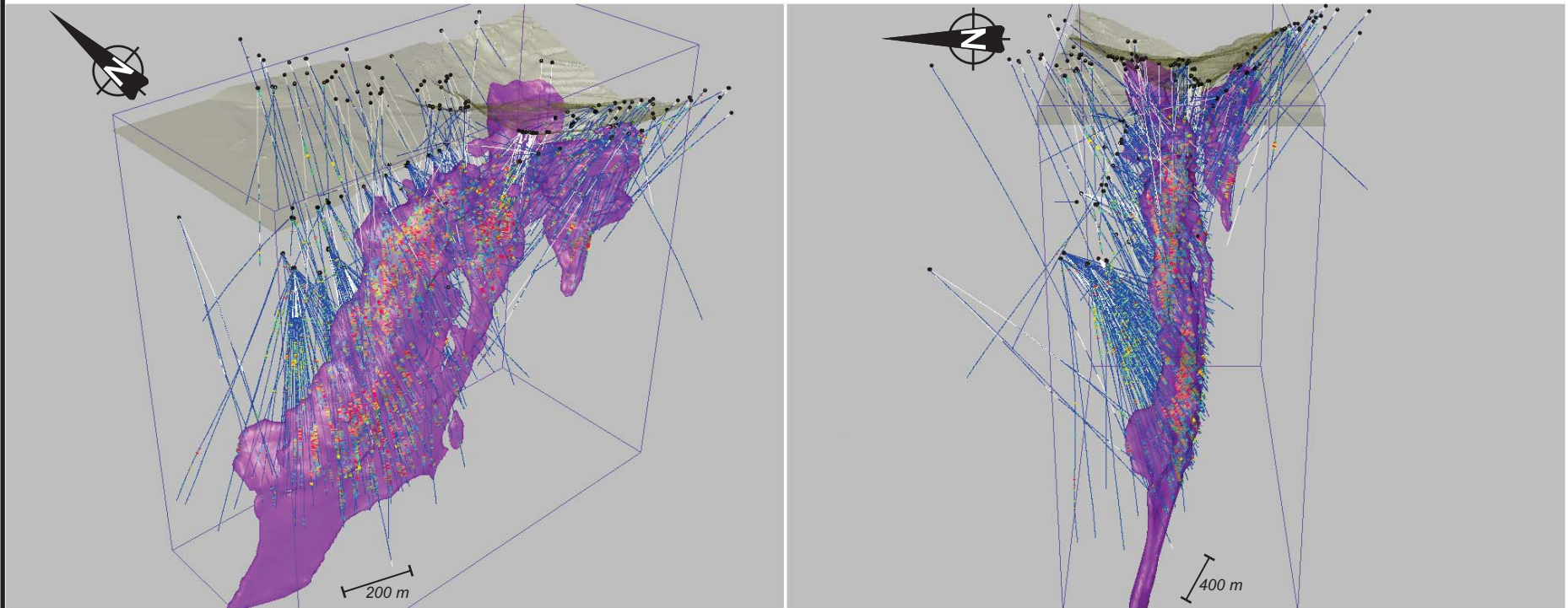
February 2020

Source: Sim and Davis, 2019.








Figure 14-3

New Gold Inc.***New Afton Mine****British Columbia, Canada***3D Isometric Views of the
Supergene and Hypogene Zones**

14-10



Au Grade (g/t):

	No Sample
	> 0
	0.4 - 0.8
	0.8 - 1.2
	1.2 - 1.6
	1.6 - 2.0
	> 2.0

February 2020

Source: Sim and Davis, 2019.

Figure 14-4

New Gold Inc.

New Afton Mine

British Columbia, Canada

**3D Isometric Views of the
Potassic Alteration Zone**

Several faults have been identified throughout the deposit, embracing a wide range of orientations. Some of these structures appear to have displaced portions of the deposit, although there does not appear to be any dominant structures that control the overall distribution of mineralization.

Wireframe models of the various lithological, alteration, and mineralization domains have been created and compared with one another. For the most part, elevated grades occur in the potassic alteration zone, however, there are localities where significant grades occur in holes extending beyond the potassic zone boundary. The Hypogene Zone tends to mimic the distribution of the potassic alteration and shows comparatively sharp boundaries.

The monzonite is generally barren of mineralization and represents a distinct low grade domain. Assay values typically fall off significantly across the transition from BXF to monzonite, although this boundary is observed to be somewhat gradational.

Palladium is observed to occur in both BXF and proximal monzonite, suggesting that it is not as strongly influenced by lithological constraints.

The PI unit is a post-mineral feature located along the southern edge of the deposit. It is entirely unmineralized and represents a well-defined waste domain.

In addition to the lithology and alteration models, a probability grade shell was generated using indicator kriging. A gold equivalence (AuEq) value was generated for each composite using the following equation:

$$\text{AuEq} = \text{g/t Au} + (1.432 \times \% \text{ Cu})$$

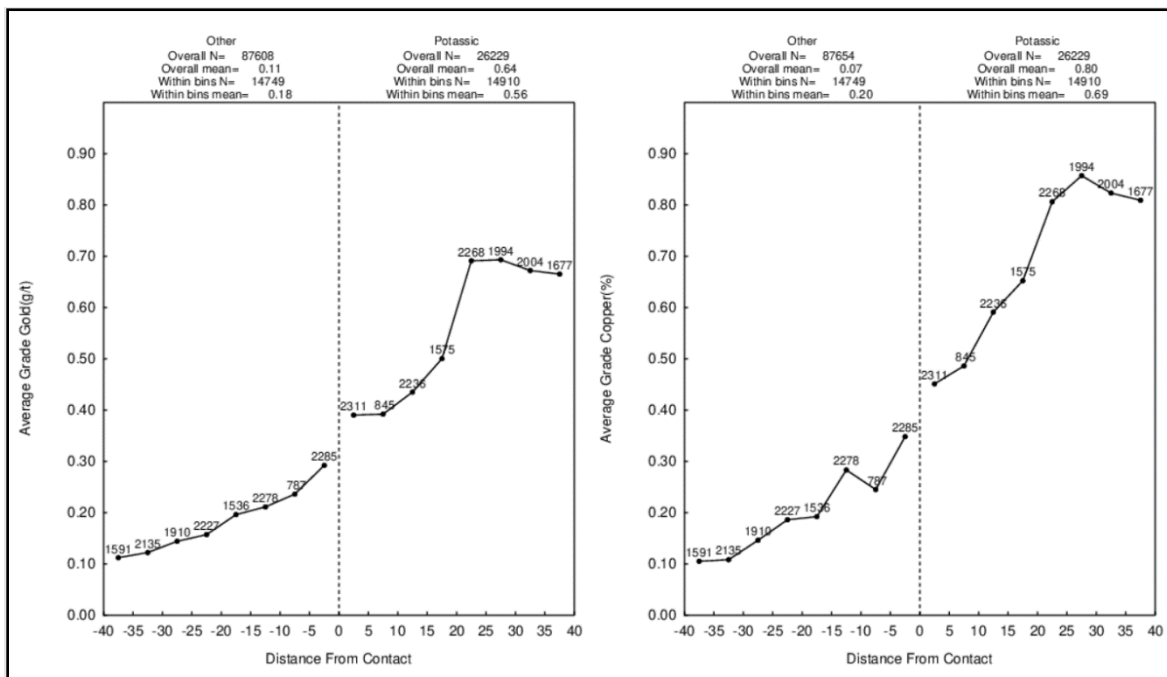
For the equivalence ratio between copper and gold, metal prices of US\$1,400/oz Au and US\$3.00/lb Cu were used. Note that these metal prices differ from those used in the copper equivalence calculation for application of a cut-off grade (see section of this report entitled Cut-off Grade). The model was run using an indicator cut-off grade of 0.25 g/t AuEq. The search ellipsoid measured 150 m x 150 m x 40 m, oriented along a vertical plane striking 110°. The estimate was run with the number of composites constrained to a minimum of 10, maximum of 54, and maximum per hole of nine. Blocks within 75 m of a drill hole with an estimated probability of greater than 50% were considered to be inside the mineralized body. An isoshell

wireframe was created from these blocks which was then used to assist in construction of the resource domain wireframes.

Contact plots were created across the boundaries of all domains to determine how the assay data set was sub-set and whether or not these sub-sets represented valid domains. Examples of these contact plots are shown in Figures 14-5, 14-6, and 14-7. They depict the average grade of composites with distance from a domain contact. If the mean grades do not change across the boundary, then that contact is not considered relevant for domaining purposes. Where grades show a distinct jump across this threshold, the domain boundary is probably a valid contact which should be applied to the data for the grade interpolations. In these circumstances, it is generally considered appropriate to constrain the estimate to not allow samples to exert an influence across the contact. This is termed a “hard” boundary to the grade interpolation.

If the grade variation across a contact is observed to be gradual, then the contact is considered less likely to be applicable for domaining the data. These are sometimes termed “soft” boundaries, and it is most common for grade interpolations using soft boundaries to allow the search to capture composites from either side of the contact. Sometimes the search can be configured to only extend for a specified distance across such a boundary.

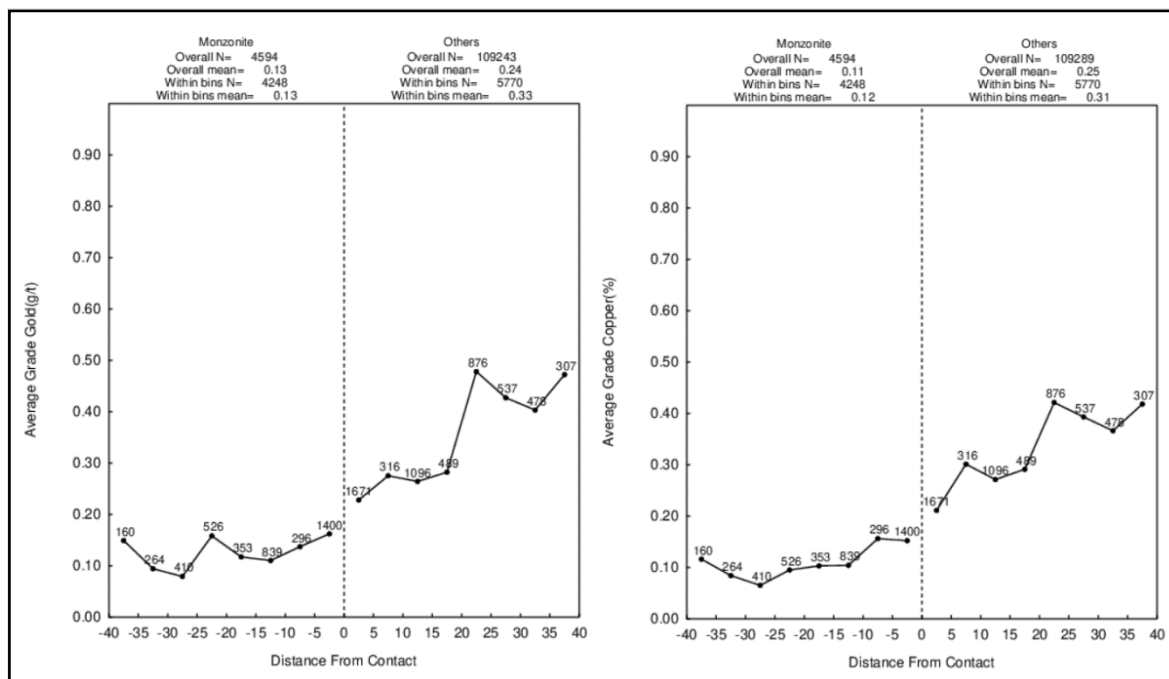
FIGURE 14-5 POTASSIC ALTERATION ZONE CONTACT PLOTS FOR GOLD AND COPPER



From Sim and Davis (2019).

The contact plot in Figure 14-5 shows how average gold and copper grades vary across the boundary of the biotite-dominant potassic alteration zone. The contact plot, however, suggests that the mineralization boundary is either gradual or not necessarily coincident with the alteration boundary. The transition from, for example, 0.15 g/t Au to 0.70 g/t Au appears to take place gradually over a distance of 25 m to 30 m. A similar gradational change in values is observed across the boundary of the MO intrusives (Figure 14-6).

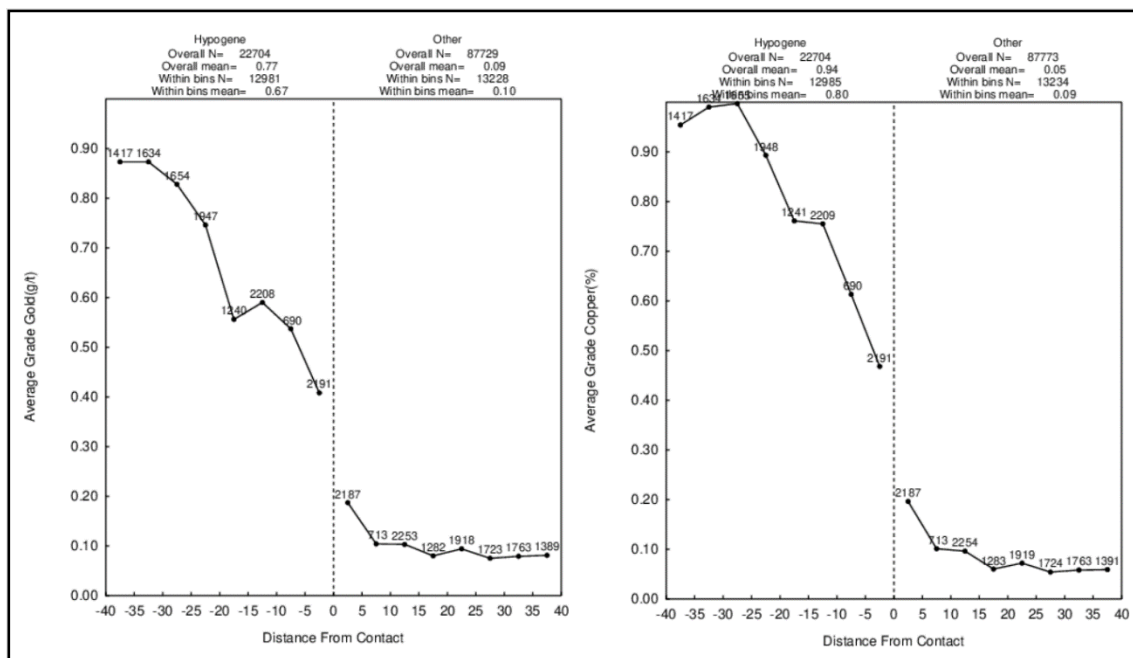
FIGURE 14-6 CONTACT PLOTS FOR GOLD AND COPPER IN THE MONZONITE



From Sim and Davis (2019).

Figure 14-7 is a similar plot across the boundary of the Hypogene Zone. It depicts a steeper curve than Figures 14-5 and 14-6 for both gold and copper, indicating that the grade transition occurs over a shorter interval. There is also a distinct step at the contact itself, which suggests that the boundary of this zone is a more abrupt transition from “ore” to “waste”, and one that is closer to what would be considered a hard boundary. It is still apparent, however, that this contact is not sharp, in that significant grades can occur on both sides.

FIGURE 14-7 HYPOGENE ZONE CONTACT PLOTS FOR GOLD AND COPPER

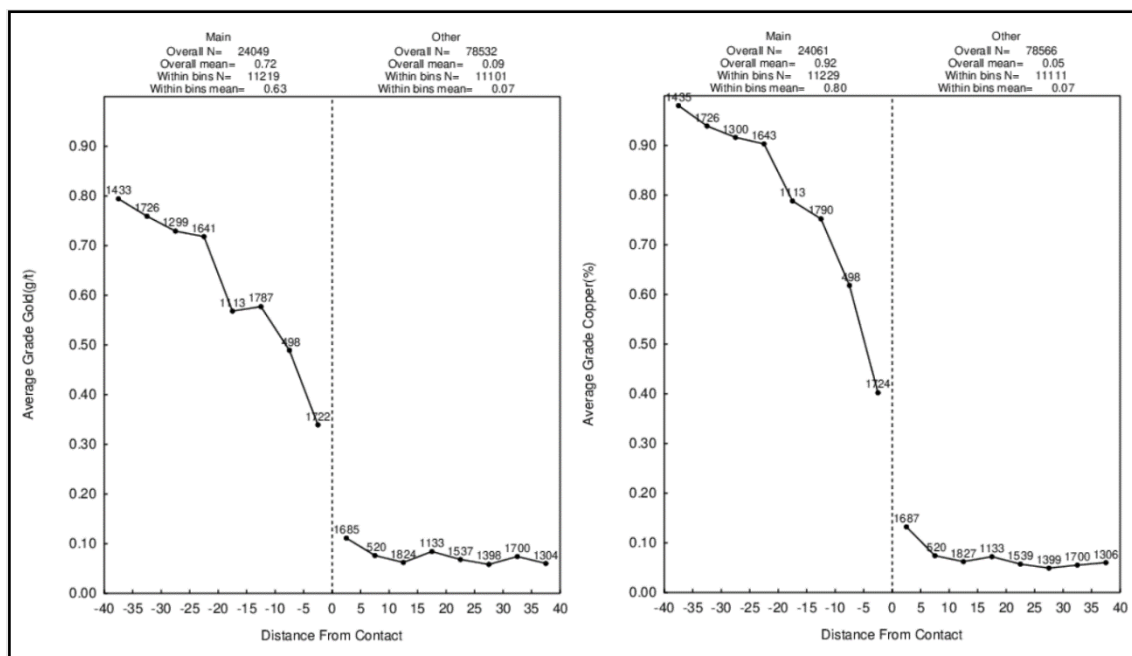


From Sim and Davis (2019).

Wireframe models were constructed in order to include the apparent influences of the alteration boundaries, mineralization contacts, lithology, and the probabilistic grade shell. The wireframe was built on section views by manually selecting the boundaries, taking into account the various influences, and smoothing complicated or ambiguous zones. The result was a domain which appears to have quite rigorously encompassed the mineralization, and produced a reasonable hard boundary for the grade interpolation. Wireframes of this type were constructed for the Main Zone, including the C Zone, as well as the two HW Zones.

Based on the derivation of these grade shells, and the observations regarding the general lack of mineralization in the MO and PI units, a total of six estimation domains were developed. They are the Main Zone, HW1, HW2, MO, PI, and "Other". The PI is observed to be unmineralized, and no grades were estimated for this domain. For the principal economic elements, these domains were considered to be hard boundaries. Palladium grade was observed to not be particularly affected by the MO contacts, and so this domain was made soft for the palladium interpolation. The deleterious elements did not appear to vary between domains so all boundaries were assigned to be soft for arsenic and mercury. Figure 14-8 shows the contact plot across the Main Zone domain wireframe boundary.

FIGURE 14-8 MAIN ZONE DOMAIN CONTACT PLOTS FOR GOLD AND COPPER



From Sim and Davis (2019).

SIM observed that the grade and geostatistical characteristics of the Main Zone underwent subtle variations in transition to depth into the C Zone. A soft boundary was established at the 4,900 m elevation of the mine, and separate estimation parameters were generated for the upper and lower (C Zone) portions of the deposit. Table 14-4 lists the estimation domains for each element along with the boundary conditions applied to the interpolations.

TABLE 14-4 ESTIMATION DOMAINS
New Gold Inc. - New Afton Mine

Element	Domains					
	Main	HW1	HW2	Other	Monzonite	Picrite
Gold	Hard	Hard	Hard	Hard	Hard	Hard
Copper	Hard	Hard	Hard	Hard	Hard	Hard
Silver	Hard	Hard	Hard	Hard	Hard	Hard
Palladium	Hard	Hard	Hard	Hard	Combined in grade shells	n/a
Arsenic	Combined					n/a
Mercury	Combined					n/a

In RPA's opinion, the approach used to create the estimation domains was rigorous and based on reasonable geological observations and inference.

COMPOSITES

The most commonly used sample interval was two metres, and 96% of the samples are two metres long. Based on this, the samples were composited to two metre downhole lengths. Statistics for the composites are shown in Table 14-5. Composites were generated down-the-hole, beginning at the collar, with no breaks at lithology contacts. RPA independently generated a set of composites and checked and confirmed the statistics. In RPA's opinion, the compositing is reasonable and appropriate.

TABLE 14-5 UNCUT COMPOSITE STATISTICS BY DOMAIN
New Gold Inc. - New Afton Mine

Copper (%)	Number	Mean	SD	CV	Median	Min	Max	No. Excl.
Main	24,061	0.9235	0.9567	1.0360	0.5900	0.0000	12.3900	0
HW1	2,456	0.3296	0.5450	1.6536	0.1200	0.0000	6.9500	0
HW2	1,632	0.1703	0.3249	1.9074	0.0400	0.0000	3.3800	0
Other	78,566	0.0455	0.1242	2.7307	0.0200	0.0000	7.2900	0
MO	4,595	0.1144	0.2848	2.4899	0.0300	0.0000	3.6600	0
PI	2,573	0.0300	0.1022	3.3345	0.0100	0.0000	3.7000	0
Gold (g/t)	Number	Mean	SD	CV	Median	Min	Max	No. Excl.
Main	24,049	0.7219	0.9905	1.3722	0.3700	0.0010	48.9000	12
HW1	2,456	0.4041	0.7818	1.9344	0.1320	0.0010	17.4000	0
HW2	1,632	0.2417	0.5237	2.1664	0.0560	0.0010	6.4600	0
Other	78,532	0.0878	0.2700	3.0741	0.0230	0.0010	25.7000	34
MO	4,595	0.1316	0.4618	3.5103	0.0300	0.0010	22.1000	0
PI	2,573	0.0546	0.1606	2.9426	0.0150	0.0010	4.5000	0
Silver (g/t)	Number	Mean	SD	CV	Median	Min	Max	No. Excl.
Main	24,029	2.3707	3.7216	1.5698	1.3000	0.0000	196.0000	32
HW1	2,452	1.5202	3.2818	2.1587	0.3000	0.1000	45.1000	0
HW2	1,632	1.3378	2.5800	1.9285	0.3000	0.0010	26.7000	0
Other	78,282	0.3996	6.8534	17.1502	0.2000	0.0010	1880.0000	284
MO	4,595	0.4710	5.1982	11.0373	0.2000	0.0000	345.0000	0
PI	2,872	0.2890	0.9952	3.4435	0.2000	0.1000	42.9000	1

Palladium (g/t)	Number	Mean	SD	CV	Median	Min	Max	No. Excl.
Main	24,032	0.0949	0.2047	2.1562	0.0300	0.0000	14.1000	29
HW1	2,456	0.0888	0.1853	2.0856	0.0400	0.0000	4.6600	0
HW2	1,611	0.0413	0.0753	1.8287	0.0200	0.0000	1.7200	21
Other	78,531	0.0173	0.0396	2.2875	0.0100	0.0000	3.0800	35
MO	4,595	0.0546	0.1432	2.6252	0.0200	0.0000	5.7000	0
PI	2,573	0.0208	0.0382	1.8324	0.0200	0.0000	1.2900	0
Arsenic (ppm)	Number	Mean	SD	CV	Median	Min	Max	No. Excl.
Main	15,559	158.9736	549.0676	3.4538	15.7759	0.1000	10000.0000	8,502
HW1	1,911	20.8263	91.6870	4.4025	6.0000	1.5000	2350.0000	545
HW2	1,066	13.7537	44.4608	3.2326	8.0000	1.5000	885.0000	566
Other	52,373	15.8873	62.6851	3.9456	7.9000	0.3000	9536.0000	26,193
MO	2,739	22.6502	122.5594	5.4110	7.0000	1.5000	3150.0000	1,856
PI	1,387	21.0339	43.2792	2.0576	10.0000	1.3000	614.0000	1,186
Mercury (ppm)	Number	Mean	SD	CV	Median	Min	Max	No. Excl.
Main	15,557	1.0413	3.6123	3.4691	0.1380	0.0010	107.1000	8,504
HW1	1,882	0.1604	0.7285	4.5432	0.0500	0.0010	16.9000	574
HW2	1,066	0.0771	0.3978	5.1614	0.0310	0.0010	10.0000	566
Other	52,306	0.1870	0.6827	3.6503	0.0410	0.0010	26.1000	26,260
MO	2,737	0.2079	1.0344	4.9745	0.0250	0.0010	22.2000	1,858
PI	1,387	0.1137	0.4805	4.2259	0.0240	0.0010	9.0000	1,186

Note:

1. "No. Excl." refers to composites not created due to lack of assay data.

TREATMENT OF HIGH ASSAYS

The grade distributions of the samples for all elements were inspected to identify outlier values in the composite database. On the basis of this review, top cut and search range constraints were placed on high grades to prevent inappropriate smearing of grade during the interpolations. The grades in the C Zone were observed to be somewhat lower and less variable than those in the upper portion of the mine. For this reason, the data were divided by elevation into those above and below the 4,900 m level of the mine, and different constraints were derived for each sub-population. Table 14-6 lists the constraints applied by element and domain.

TABLE 14-6 TOP CUTS/SEARCH RANGE LIMITS
New Gold Inc. - New Afton Mine

Element	Domains ¹					% Metal Loss in Model ²
	Main	HW1	HW2	Other	MO	
Above 4,900 m Elevation						
Gold	15/8	7/4	4/2	5/3	5/3	-0.5
Copper	10/7	5/3	2.5/1.5	3/2	2.5/1.5	-1.7
Silver	50/35	40/15	15/10	30/10	20/10	-2.5
Palladium	7/3 for all domains					-2.3
Arsenic	6,000/5,000					-8.9
Mercury	70/35					-13.1
Below 4,900 m Elevation						
Gold	8/5	-	-	6/4	2.5/1	-0.4
Copper	none/4	-	-	2/1	2.5/1.5	-0.7
Silver	30/15	-	-	20/7	none/4	-1.4
Palladium	3/2 for all domains					-2.0
Arsenic	4,000/2,500					-5.2
Mercury	25/20					-4.6

Notes:

1. Top-cut limit / Search range limit threshold in metres.
2. Loss in metal determined in Measured and Indicated class blocks in the model in Main+HW1+HW2.

In 2015, and again in 2019, RPA conducted statistical analyses of the un-composited sample data and confirmed that it was appropriate to place a limit, such as capping, on the highest grade samples. This conclusion was based on the presence of a relatively few extremely high grade samples among a lower grade population, and the fact that the sample distributions tended to be moderately to strongly positively skewed. RPA also carried out an analysis to determine at what thresholds top cuts should be applied, and how much metal would be

removed from the resource estimate by the application of those cuts. The estimated percent metal losses generally agreed with those listed in Table 14-6. In RPA's opinion, the application of constraints to the high grade samples, and the methods used to apply those constraints appear to be reasonable.

In conducting the statistical analyses, RPA reviewed the metal content of the top one percentile of each sample population. In RPA's opinion, data sets that have more than 10% of the total metal content contained within the highest grade one percent of samples are at a significant risk of biasing the grade interpolations. RPA notes that for the principal economic elements (copper, gold, and silver) in the Main Zone, the metal contents of the top percentile were less than 10% which indicates that the risk of bias is low for these metals in that domain. This was observed for the data both above and below the 4,900 m level.

It was further observed that on the basis of the metal content of the top percentile, the risk of overestimation and smearing for the deleterious components (mercury, antimony, and arsenic) was high. In RPA's opinion, the top cut/search constraint strategy applied in the resource estimate appears to be somewhat liberal and that there is still a risk of overestimation of these metals. This is viewed as a conservative influence on the resource estimate. Other characteristics noted for the deleterious elements were:

- Grades tended to be uniformly low grade except for a relatively small number of very high grade assays, often many orders of magnitude higher than the bulk of the samples.
- There are comparatively fewer samples for the deleterious elements compared to the economic elements.
- The differences in statistical characteristics between estimation domains tended to be less pronounced than for the economic elements.

These characteristics suggest that the block model grade estimates for the deleterious components will be less accurate than for the economic metals. RPA notes that SIM (2014 and 2019) recommends continued observation of the actual mined grades of mercury and particularly arsenic in order to determine if revisions to the estimation methodology are warranted. RPA concurs with this recommendation.

GEOSTATISTICAL ANALYSES

Correlograms were created from the composited data in order to assist with derivation of variogram models and search criteria for the grade interpolations. The models derived from this analysis are summarized in Appendix 2.

RPA conducted an independent geostatistical analysis for gold and copper in the Main Zone as a check on the variogram models, and the results were similar to those obtained by SIM. In RPA's opinion, the geostatistical analyses were carried out and interpreted in an appropriate fashion.

BULK DENSITY

A total of 1,665 bulk density determinations have been collected from core specimens over the life of the Mine. The measurements were conducted by the assay laboratory on intact pieces of core, using a water submersion method. The core was sealed in wax, weighed in air, and then weighed when fully submerged in water. The density was determined from the ratio of the dry weight to the difference between the wet and dry weights. The core was also weighed prior to sealing in order to account for the wax in the calculation.

SIM personnel reviewed the density data and noted that the values tended to fall within a fairly narrow range except for those taken in the near-surface Supergene Zone. Weathered rock tended to be lower in bulk density than the unweathered material. It was also noted that there were fewer measurements taken from holes above 4,900 m in elevation than those below. There are not enough measurements above 4,900 m elevation to allow interpolation of bulk density into the block model. Consequently, the density assignments were made by averaging the values for the deposit domains.

It was also noted that there was a general trend for increasing density with depth. The reason for this trend is unknown but it is noted that measurements taken earlier in the mine life were generally above the 5,000 m level, and those taken more recently are from below the 5,000 m level. In RPA's opinion, this may indicate that there is a bias between earlier and later sample regimes. RPA further notes, however, that there could also be properties of the rock mass that vary with depth which could account for the observed trend. As such, the evidence for bias in the data is not conclusive.

Table 14-7 summarizes the method derived by SIM for assignment of bulk density.

TABLE 14-7 BULK DENSITY
New Gold Inc. - New Afton Mine

Domain	Elevation	Bulk Density (t/m ³)
Supergene	n/a	2.55
Hypogene	>5,050 m	2.60
	4,950-5,050 m	2.65
	4,850-4,950 m	2.70
	4,750-4,850 m	2.74
	4,650-4,750 m	2.75
	4,450-4,650 m	2.76
	<4,450 m	2.78

In RPA's opinion, the bulk density measurement programs and the application of the data from these programs have been carried out in a reasonable and appropriate manner.

BLOCK MODEL

The block model was constructed using MinePlan software, which is a commercial mining package commonly used within the industry. The model comprised an array of 10 m x 10 m x 10 m blocks oriented parallel to the mine survey grid (i.e., no rotation). As previously noted, this survey grid is rotated 50° in a counter-clockwise direction from the UTM grid. Block model geometry parameters are provided in Table 14-8.

TABLE 14-8 BLOCK MODEL GEOMETRY
New Gold Inc. - New Afton Mine

Direction	Minimum	Maximum	Size (m)	No. of Blocks
East (Columns)	2600	4150	10	155
North (Rows)	1650	2350	10	70
Elevation (Levels)	4200	5750	10	155

The blocks contained variables for the following components:

- Domain Code – an integer code defining the estimation domain (i.e., Main, HW1, HW2, Other, MO, or PI). Assigned if >50% lies within the domain.
- Bulk Density

- Class – an integer code denoting the resource classification (1 = Measured, 2 = Indicated, 3 = Inferred)
- Copper – estimated copper grade in percent
- Gold – interpolated gold grade in g/t
- Silver – interpolated silver grade in g/t
- Palladium – interpolated silver grade in g/t
- Antimony – interpolated antimony grade in ppm
- Arsenic – interpolated arsenic grade in ppm
- Mercury – interpolated mercury grade in ppm
- CuEq – calculated copper equivalence grade in percent (used for application of a cut-off grade).
- Topo – proportion of the block below the topographic surface.

In RPA's opinion, the block size and the overall configuration of the model are reasonable and appropriate for the deposit characteristics and the data set.

INTERPOLATION PARAMETERS

The grades were interpolated into the blocks using OK. The gold, copper, and silver estimates were conducted in a single pass using a search ellipsoid measuring 150 m x 150 m x 40 m, oriented with the XY plane vertical and striking 100° relative to the mine grid. For palladium, antimony, arsenic, and mercury, the search ellipsoid measured 150 m x 150 m x 150 m to account for the relative lack of data for these components. The palladium estimates were not constrained by estimation domains. The antimony, arsenic, and mercury estimates were constrained only by the elevation domains (i.e., above or below 4,900 m level).

Estimation search parameters are summarized in Tables 14-9 and 14-10.

In RPA's opinion, the search parameters applied to the grade interpolations are reasonable.

TABLE 14-9 SEARCH PARAMETERS FOR GOLD, COPPER, AND SILVER
New Gold Inc. - New Afton Mine

Domain	Search Ellipse Range (m)			Number of Composites			Min. Holes Per Octant
	X	Y	Z	Min/block	Max/block	Max/hole	
Main >4,900 m	150	150	40	5	54 (36 for Ag)	9	1
Main <4,900 m	150	150	40	5	36	9	1
HW1	150	150	40	5	36	9	1
HW2	150	150	40	5	36	9	1
Other	150	150	40	5	36	9	1
Monzonite	150	150	40	5	36	9	1

TABLE 14-10 SEARCH PARAMETERS FOR PALLADIUM, ARSENIC, MERCURY, AND ANTIMONY
New Gold Inc. - New Afton Mine

Element	Search Ellipse Range (m)			Number of Composites			Min. Holes Per Octant
	X	Y	Z	Min/block	Max/block	Max/hole	
Palladium	150	150	150	5	21	7	1
Arsenic >4,900 m	150	150	150	5	21	7	1
Arsenic <4,900 m	150	150	150	5	36	9	1
Mercury >4,900 m	150	150	150	5	36	9	1
Mercury <4,900 m	150	150	150	5	36	9	1
Antimony >4,900 m	150	150	150	5	36	9	1
Antimony <4,900 m	150	150	150	5	36	9	1

BLOCK MODEL VALIDATION

The model grade interpolations were validated using the following techniques:

- Visual inspection
- Hermitian Polynomial Change of Support
- Comparison with alternative interpolation methods
- Swath plots

VISUAL INSPECTION

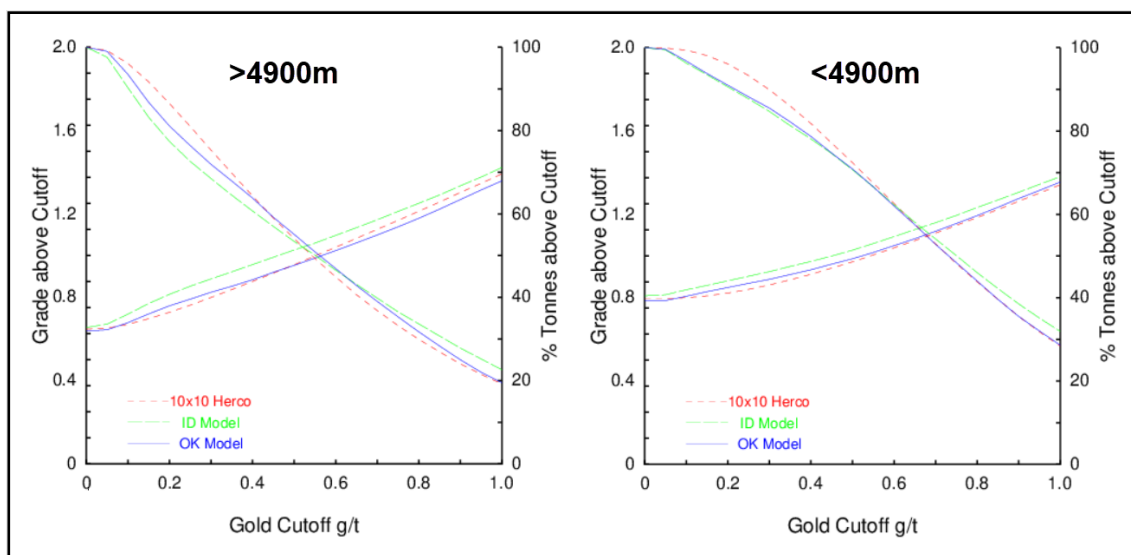
The block grades were reviewed in plan and section views and compared to the composited drill hole grades. No concerns were evident in the block grade distributions. RPA also conducted a visual inspection of the block grades and confirms that they appeared to honour the drill hole grades reasonably well.

HERMITIAN POLYNOMIAL CHANGE OF SUPPORT

The Hermitian Polynomial Change of Support or Hermitian Correction (HERCO) validation method compares the interpolated grade-tonnage curves with idealized curves generated from the declustered composite grades, which have been corrected for the change of support. The term “change of support” refers to the reduction in sample variance that occurs when the sample size goes from that of drill core to the model block size, which in this case, is 10 m x 10 m x 10 m. A correction is applied to the declustered composites that is derived from the variogram model, such that the mean remains the same but the variance changes.

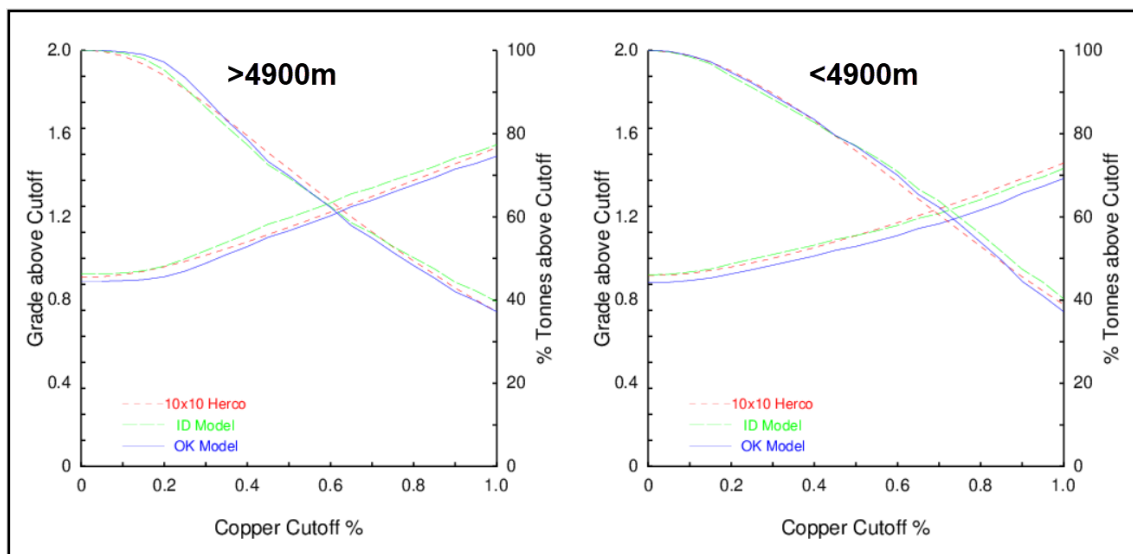
SIM reported that the HERCO analysis yielded reasonable results that showed that the grade interpolations were unbiased. RPA reviewed these results and concurs. Examples of HERCO comparisons for gold and copper in the Main Zone are provided in Figures 14-9 and 14-10. The OK model and an inverse distance (ID) interpolation are compared with HERCO-transformed data. The diagram shows that the OK model yielded a reasonably close comparison to the HERCO curves, superior to that attained by the ID model.

FIGURE 14-9 EXAMPLE HERCO PLOT FOR GOLD IN MAIN DOMAIN



From SIM (2019).

FIGURE 14-10 EXAMPLE HERCO PLOT FOR COPPER IN MAIN DOMAIN



From SIM (2019).

COMPARISON OF ALTERNATIVE METHODS

Tonnage-grade curves from the OK interpolations for gold and copper were compared to nearest neighbour (NN) and ID models. The NN models were generated using 10 m composites in order to take into account the change in support discussed above. Examples of these plots are provided in Figures 14-11 and 14-12. Note that these curves are derived from the global block model results with no provision for classification or depletion.

FIGURE 14-11 EXAMPLE COMPARISON OF ALTERNATIVE ESTIMATION METHODS – GOLD IN MAIN ZONE

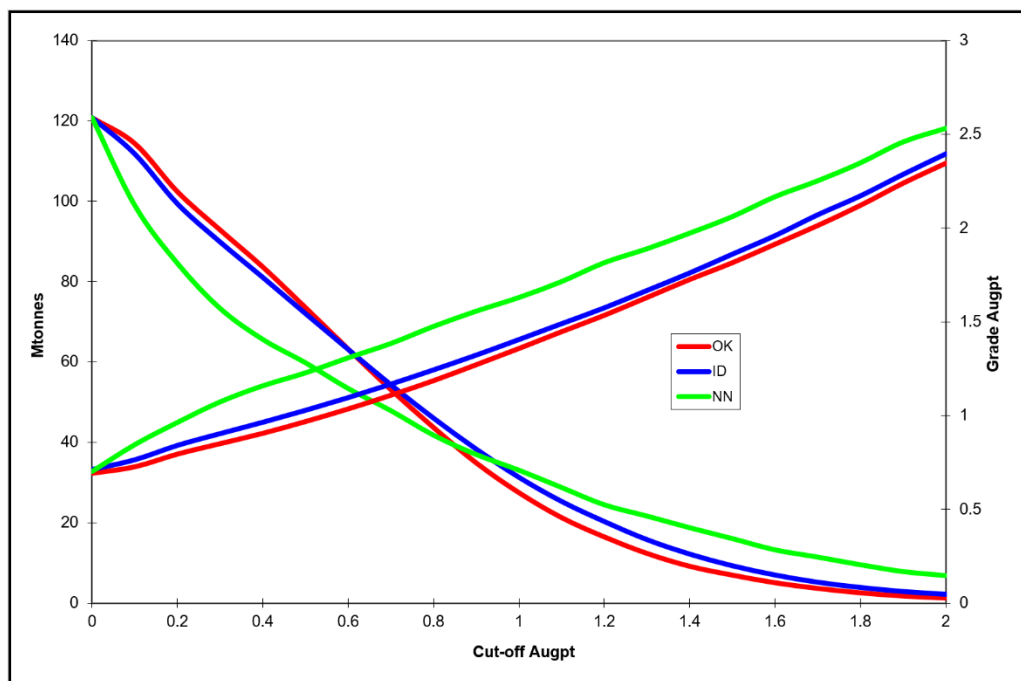
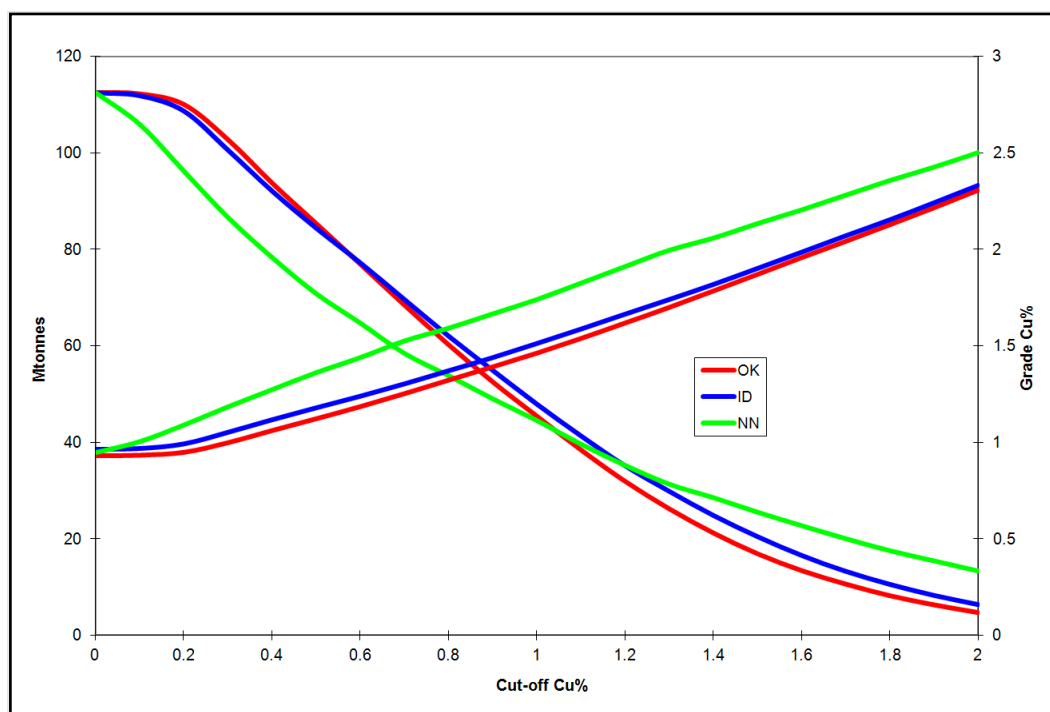


FIGURE 14-12 EXAMPLE COMPARISON OF ALTERNATIVE ESTIMATION METHODS – COPPER IN MAIN ZONE



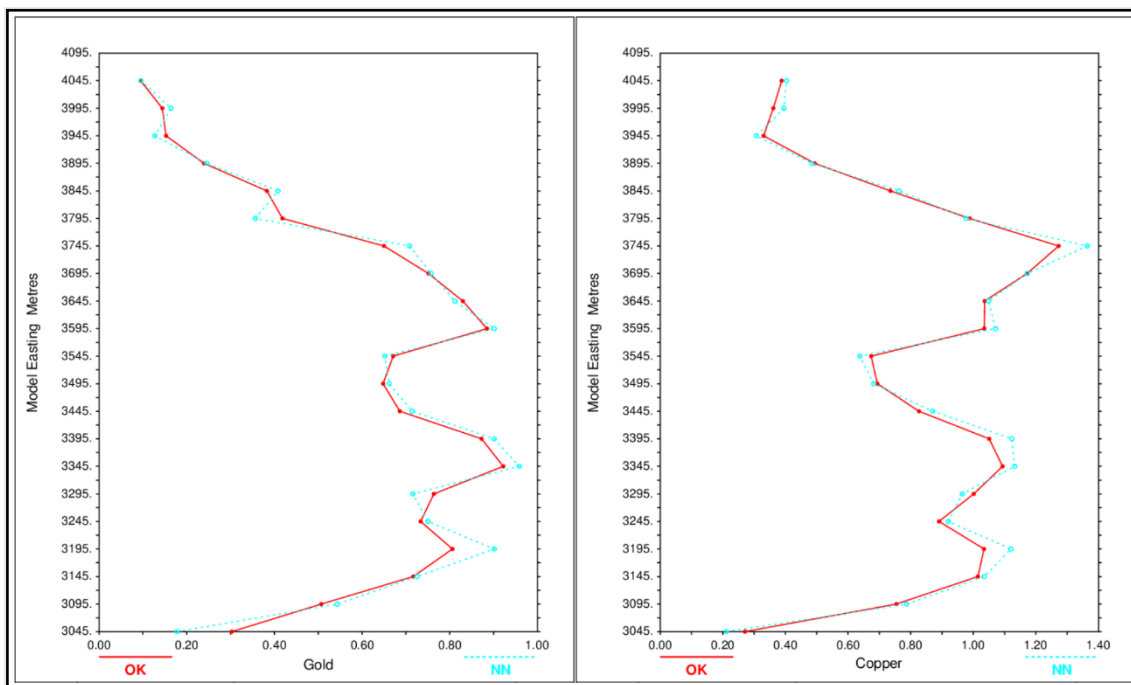
From SIM (2019).

The ID and OK estimates compared relatively closely, whereas the NN interpolation was quite different. In RPA's opinion, the large difference between the NN and the other two estimates is not surprising, as NN is considered to be an inferior estimation methodology. The relative agreement between the ID and OK models is considered to be significant in suggesting that the OK interpolations are reasonable.

SWATH PLOTS

Drift analysis or swath plots compare the grades between the OK model and the NN estimate along corridors or "swaths" through the deposit. They provide some indication of the local block grade trends as opposed to the tonnage-grade curves, which reflect the global block model results. Swath plots were generated for gold and copper along strike, across strike, and down dip through the entire deposit. An example of the swath plot for the on-strike direction is shown in Figure 14-13.

FIGURE 14-13 SWATH PLOTS FOR GOLD AND COPPER – MAIN ZONE ABOVE 4,900 M ELEVATION



From SIM (2019).

Overall, SIM concluded that the swath plots support the premise that the copper and gold interpolations are unbiased, and RPA concurs with this conclusion.

RECONCILIATION WITH PRODUCTION

RPA notes that there is now a reasonable production history that can provide a valuable metric for evaluating the block grade interpolations. The reconciliation work done to date is described in more detail in Section 15 Mineral Reserve Estimate. The block model is reported to be performing reasonably well compared to production.

CLASSIFICATION

Classification of the Mineral Resources was generally based on distance to the nearest composite and number of drill holes contributing to the block grade interpolations. These criteria were initially applied to the block model to identify volumes of reasonably contiguous resources of a particular classification. Wireframe models were then constructed around these volumes in order to create more coherent bodies of each particular class of resource and eliminate isolated blocks of one classification surrounded by blocks of another.

In general terms, the classification is based upon the following criteria:

- Measured - Model blocks with copper grades estimated by a minimum of three drill holes located within a maximum average distance of 30 m. This is achieved with drill holes at a nominal spacing of approximately 50 m.
- Indicated – Model blocks with copper grades estimated by a minimum of three drill holes located within a maximum average distance of 50 m. This is achieved with drill holes at a nominal spacing of approximately 80 m.
- Inferred – Model blocks which do not meet the criteria for Measured or Indicated Mineral Resources but are within a maximum distance of 50 m from a single drill hole.

In RPA's opinion, the classification criteria are appropriate and have been applied in a reasonable manner. The classification is consistent with CIM (2014). Figure 14-14 is a 3D view of the wireframe shells for Measured and Indicated Mineral Resources.

14-31

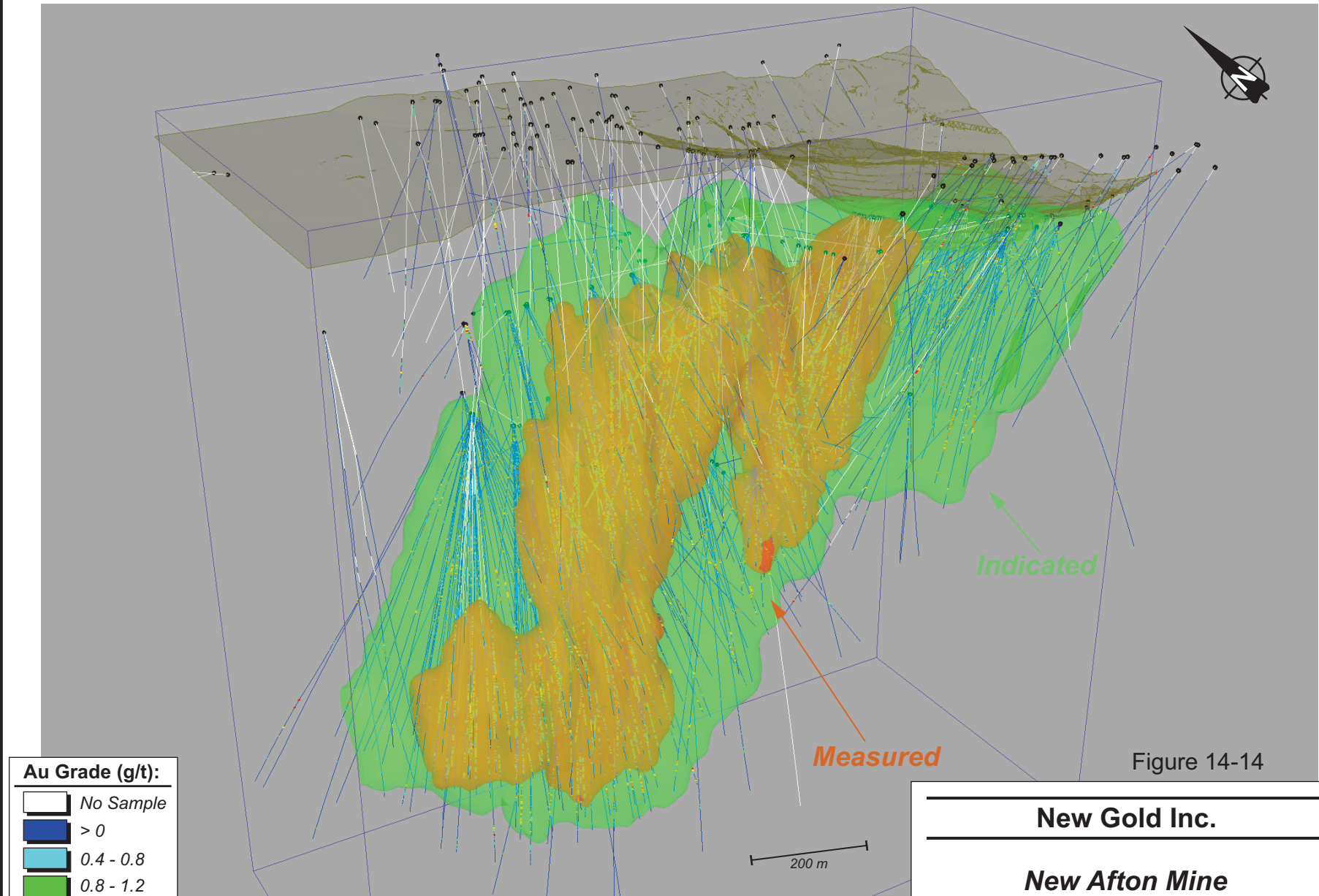


Figure 14-14

Au Grade (g/t):

	No Sample
	> 0
	0.4 - 0.8
	0.8 - 1.2
	1.2 - 1.6
	1.6 - 2.0
	> 2.0

February 2020

Source: Sim and Davis, 2019.

New Gold Inc.

New Afton Mine

British Columbia, Canada

Classification Domain Wireframes

CUT-OFF GRADE

A CuEq value has been derived for application of a cut-off grade for the Mineral Resources. RPA notes that this is consistent with past practice at New Afton. The block CuEq value was calculated using the following formulae and parameters:

$$\text{CuEq\%} = \text{Cu\%} + (\text{Au Value} + \text{Ag Value}) / \text{Cu Value per \% Cu}$$

where:

Au Value = Au grade X Au recovery X (Au price – refining)

Ag Value = Ag grade X Ag recovery X (Ag price – refining)

Cu Value per \% Cu = 2204.6 lb/t X Cu recovery X Cu payable X (Cu price – refining)/100%

Parameters:

- Metal prices: US\$1,350/oz Au, US\$3.25/lb Cu, US\$18/oz Ag
- Recoveries: gold 87.7%, copper 86.4%, silver 73.5%
- Smelter payable: gold 97%, copper 96.43%, silver 90%
- Refining charges: US\$6/oz Au, US\$0.075/lb Cu, US\$0.50/oz Ag

which yields:

$$\text{CuEq\%} = \text{Cu\%} + ((\text{Au g/t} \times 36.764) + (\text{Ag g/t} \times 0.372)) / 58.318$$

This formula was applied to the interpolated grades for each block. RPA carried out a similar calculation to confirm that the CuEq values had been estimated correctly.

The cut-off grade applied to the base case Mineral Resources was 0.4% CuEq. This is roughly equivalent to the economic cut-off for the operations and is consistent with past practice at New Afton. In RPA's opinion, the cut-off grade approach and parameters are reasonable.

Table 14-11 shows the sensitivity of the various resource classes to changes in cut-off grade. The tonnages and grades depicted represent the Mineral Resources inclusive of Mineral Reserves. Derivation of these values is described in more detail in the following section of this report.

TABLE 14-11 SENSITIVITY TO CUT-OFF GRADE
New Gold Inc. - New Afton Mine

Cut-Off Grade (CuEq%)	Tonnage (000)	CuEq (%)	Au (g/t)	Ag (g/t)	Cu (%)	Au (koz)	Ag (koz)	Cu (Mlb)
Measured								
0.2	63,207	1.31	0.72	2.1	0.87	1,461	4,193	1,209
0.3	57,997	1.41	0.77	2.2	0.93	1,437	4,122	1,192
0.4	55,219	1.46	0.80	2.3	0.97	1,420	4,068	1,179
0.5	52,795	1.51	0.83	2.4	1.00	1,401	4,009	1,163
0.6	50,111	1.56	0.85	2.4	1.03	1,375	3,940	1,142
0.7	47,234	1.62	0.88	2.5	1.07	1,343	3,841	1,116
0.8	43,978	1.68	0.92	2.6	1.12	1,300	3,696	1,081
0.9	40,714	1.75	0.96	2.7	1.16	1,253	3,554	1,041
1.0	37,096	1.83	1.00	2.8	1.21	1,193	3,379	993
Indicated								
0.2	96,056	0.62	0.35	1.3	0.39	1,070	4,068	833
0.3	60,543	0.84	0.46	1.8	0.55	889	3,437	728
0.4	44,627	1.02	0.55	2.1	0.67	783	3,024	655
0.5	34,413	1.19	0.64	2.4	0.78	703	2,677	592
0.6	27,860	1.34	0.71	2.7	0.88	640	2,411	542
0.7	22,902	1.50	0.79	2.9	0.98	585	2,163	497
0.8	19,231	1.64	0.87	3.2	1.08	538	1,973	458
0.9	15,982	1.80	0.95	3.5	1.19	490	1,777	419
1.0	13,113	1.99	1.05	3.8	1.31	443	1,594	380
Measured and Indicated								
0.2	159,264	0.89	0.49	1.6	0.58	2,531	8,254	2,039
0.3	118,541	1.12	0.61	2.0	0.73	2,326	7,529	1,918
0.4	99,846	1.26	0.69	2.2	0.83	2,203	7,077	1,834
0.5	87,209	1.38	0.75	2.4	0.91	2,104	6,690	1,755
0.6	77,971	1.48	0.80	2.5	0.98	2,015	6,331	1,685
0.7	70,136	1.58	0.86	2.7	1.04	1,928	5,996	1,613
0.8	63,209	1.67	0.90	2.8	1.10	1,839	5,663	1,539
0.9	56,696	1.76	0.96	2.9	1.17	1,743	5,328	1,460
1.0	50,210	1.87	1.01	3.1	1.24	1,636	4,982	1,373
Inferred								
0.2	54,276	0.37	0.25	0.8	0.20	441	1,309	243
0.3	23,782	0.54	0.33	1.1	0.32	252	818	168
0.4	14,018	0.67	0.38	1.4	0.43	171	608	132
0.5	9,730	0.78	0.42	1.5	0.50	131	479	108
0.6	6,574	0.89	0.47	1.7	0.59	99	357	85
0.7	4,544	1.00	0.53	1.9	0.66	77	273	66
0.8	3,130	1.12	0.59	2.1	0.73	59	207	50
0.9	2,336	1.21	0.64	2.2	0.79	48	165	41
1.0	1,747	1.30	0.69	2.4	0.85	39	132	33

ESTIMATION OF IN SITU MINERAL RESOURCES

The block model interpolations are done using a model that reflects the deposit as is was prior to commencement of production. In order to report the Mineral Resources Inclusive of Mineral Reserves, a provision is made for the material depleted from the deposit. The PCBC model was used to estimate the undiluted Mineral Resources contained within the ore stream, and therefore depleted from the Mineral Resources. Total production to the end of 2019 was 32,948,000 t grading 0.66 g/t Au, 2.2 g/t Ag, and 0.87% Cu. This includes an estimated 19.06% dilution that is assumed to be zero grade. From the PCBC model, an estimate has been made of the undiluted material depleted from the Mineral Resources. This is summarized in Table 14-12.

**TABLE 14-12 ESTIMATED DEPLETED MINERAL RESOURCES TO
DECEMBER 31, 2019
New Gold Inc. - New Afton Mine**

Class	Tonnage (000 t)	Gold (g/t)	Silver (g/t)	Copper (%)
Measured	22,608	0.93	3.5	1.26
Indicated	9,173	0.34	1.2	0.51
Total	31,781	0.76	2.8	1.04

Table 14-13 summarizes the Mineral Resources Inclusive of Mineral Reserves at a 0.4% CuEq cut-off grade. This represents the original undiluted global tonnage and grade minus depletion.

**TABLE 14-13 NEW AFTON MINERAL RESOURCES INCLUSIVE OF
MINERAL RESERVES TO DECEMBER 31, 2019
New Gold Inc. - New Afton Mine**

Category	Tonnage (Mt)	Gold (g/t)	Silver (g/t)	Copper (%)	Gold (koz)	Silver (koz)	Copper (Mlb)
Measured	52.3	0.81	2.2	0.96	1,360	3,650	1,110
Indicated	43.3	0.55	2.1	0.66	762	2,950	630
M+I	95.6	0.69	2.1	0.82	2,120	6,600	1,740
Inferred	14.0	0.38	1.3	0.42	172	589	121

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are estimated at a cut-off grade of 0.40% CuEq.
3. Mineral Resources are estimated using long term metal prices of US\$3.25/lb Cu, US\$1,350/oz Au, and US\$18.00/oz Ag.
4. All estimates are inclusive of Mineral Reserves.
5. Provision has been made for depletion to the end of 2019.

6. Numbers may not add due to rounding.
7. M+I - Measured plus Indicated.

The estimated undiluted Mineral Reserves from PCBC were then removed from the Mineral Resources to derive the estimate of Mineral Resources Exclusive of Mineral Reserves. Included within this material are Inferred Mineral Resources captured by the PCBC volumes. RPA notes that for estimates of Mineral Reserves, any included Inferred Mineral Resources must be assigned zero grade. In this case, however, the Inferred material is not actually being included in the Mineral Reserves statement. Further, inasmuch as the Inferred is being subtracted from the overall resources for this calculation, to assign zero grade to this material would result in a less conservative estimate. In RPA's opinion, including the grade of the Inferred material in this calculation is appropriate.

At New Afton, although there are Measured Mineral Resources, there are no Proven Mineral Reserves. The Measured and Indicated are combined together into Probable Mineral Reserves. The proportions of Measured and Indicated material captured in the reserves were calculated in order to deduct them separately from the corresponding resource categories. Table 14-14 summarizes the Mineral Resources Exclusive of Mineral Reserves.

**TABLE 14-14 MINERAL RESOURCES EXCLUSIVE OF MINERAL
RESERVES TO DECEMBER 31, 2019**
New Gold Inc. - New Afton Mine

Category	Tonnage (Mt)	Gold (g/t)	Silver (g/t)	Copper (%)	Gold (koz)	Silver (koz)	Copper (Mlb)
Measured	23.2	0.67	1.8	0.86	500	1,345	438
Indicated	33.8	0.57	2.2	0.66	617	2,409	495
M+I	57.0	0.61	2.1	0.74	1,118	3,754	933
Inferred	14.0	0.38	1.3	0.42	172	589	121

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are estimated at a cut-off grade of 0.40% CuEq.
3. Mineral Resources are estimated using long term metal prices of US\$3.25/lb Cu, US\$1,350/oz Au, and US\$18.00/oz Ag.
4. All estimates are exclusive of Mineral Reserves and include depletion to the date specified.
5. Provision has been made for depletion to the end of 2019.
6. Numbers may not add due to rounding.
7. M+I - Measured plus Indicated.

COMPARISON WITH PREVIOUS ESTIMATES

Table 14-15 compares the current Mineral Resources estimate with a previous estimate, estimated by Sim and Davis and dated July 31, 2017. The total tonnes and grade for both models reflect mine depletion to December 31, 2018 and are inclusive of Mineral Reserves. Consequently, any differences will be due to either additional data or changes to the estimation parameters or assumptions.

TABLE 14-15 COMPARISON OF 2019 AND 2017 MINERAL RESOURCE ESTIMATES
New Gold Inc. - New Afton Mine

Date	Tonnage (000 t)	CuEq (%)	Gold (g/t)	Silver (g/t)	Copper (%)	Gold (koz)	Silver (koz)	Copper (Mlb)
Measured								
Jun-19	55,219	1.46	0.8	2.3	0.97	1,420	4,068	1,179
Jun-17	52,301	1.45	0.81	2.3	0.99	1,365	3,898	1,145
Indicated								
Jun-19	44,627	1.02	0.55	2.1	0.67	783	3,024	655
Jun-17	42,593	1.03	0.56	2.2	0.69	772	2,993	647
Measured and Indicated								
Jun-19	99,846	1.26	0.69	2.2	0.83	2,203	7,077	1,834
Jun-17	94,894	1.27	0.70	2.3	0.86	2,137	6,906	1,792
Difference	4,952	-0.01	-0.01	-0.1	-0.03	66	171	42
% Difference	5.2%	-0.8%	-1.4%	-4.3%	-3.5%	3.1%	2.5%	2.3%
Inferred								
Jun-19	14,018	0.67	0.38	1.4	0.43	171	608	132
Jun-17	13,838	0.69	0.39	1.4	0.45	174	627	136
Difference	180	-0.02	-0.01	0.0	-0.02	-3	-19	-4
% Difference	1.3%	-2.9%	-2.6%	0.0%	-4.4%	-1.7%	-3.0%	-2.9%

Notes:

1. All estimates are inclusive of Mineral Reserves.
2. Mineral Resources are estimated at a cut-off grade of 0.40% CuEq.
3. Mineral Resources were estimated using long term metal prices of US\$3.25/lb Cu, US\$1,300/oz Au, and US\$20.00/oz Ag for 2017; and US\$3.25/lb Cu, US\$1,350/oz Au, and US\$18.00/oz Ag for 2019.
4. Mineral Resources are inclusive of Mineral Reserves.
5. Provision has been made for depletion.
6. Numbers may not add due to rounding.

Overall differences to the Mineral Resources are observed to be modest, with a 5% increase in Measured and Indicated, and virtually no change to the Inferred category. The differences observed in the two estimates are attributed to the following:

- Additions to resources via successful exploration drilling
- Adjustments to the metal prices used for the calculation of the CuEq

In RPA's opinion, the effect of changing the metal prices would be very small. The gold price was increased from US\$1,300/oz to US\$1,350/oz, which would have had the effect of slightly increasing the CuEq values resulting in an increase in blocks reporting above the cut-off grade.

ACCESSORY ELEMENT ESTIMATES

As previously stated, in addition to the main economic components, gold, copper, and silver, estimates are also made for mercury, arsenic, palladium, and antimony. At their current concentrations, these elements do not affect the operations and are only estimated for monitoring purposes. The Mineral Resources Inclusive of Mineral Reserves are summarized in Table 14-16.

TABLE 14-16 ACCESSORY ELEMENTS

Category	Tonnage (000 t)	CuEq (%)	New Gold Inc. - New Afton Mine				Arsenic (ppm)	Antimony (ppm)	Mercury (ppm)
			Gold (g/t)	Silver (g/t)	Copper (%)	Palladium (g/t)			
Measured	52,300	1.47	0.81	2.2	0.96	0.11	186	24.2	1.0
Indicated	43,300	1.02	0.55	2.1	0.66	0.08	80	13.0	0.6
M+I	95,600	1.27	0.69	2.1	0.82	0.10	143	19.5	0.8
Inferred	14,300	0.68	0.38	1.3	0.42	0.06	43	6.3	0.4

Note. M+I - Measured plus Indicated.

15 MINERAL RESERVE ESTIMATE

SUMMARY

The 2019 Mineral Reserve estimate was completed by New Afton personnel using the commercially available block cave modelling software (PCBC), sub-level cave modelling software (PCSLC), the June 2019 Mineral Resource model, production records, and mine plans. New Gold has prepared the New Afton Mineral Reserve estimates since 2012 and RPA has been reviewing the estimates annually since the previous Technical Reports completed in 2009 (RPA, 2009), 2014 (RPA, 2015), and 2015 (RPA, 2016).

RPA has reviewed the assumptions and results of the estimation process and is of the opinion that the estimate is consistent with the CIM (2014) definitions. The Mineral Reserve estimate is summarized in Table 15-1 and described in more detail in the following subsections.

TABLE 15-1 MINERAL RESERVE ESTIMATE AS OF DECEMBER 31, 2019
New Gold Inc. – New Afton Mine

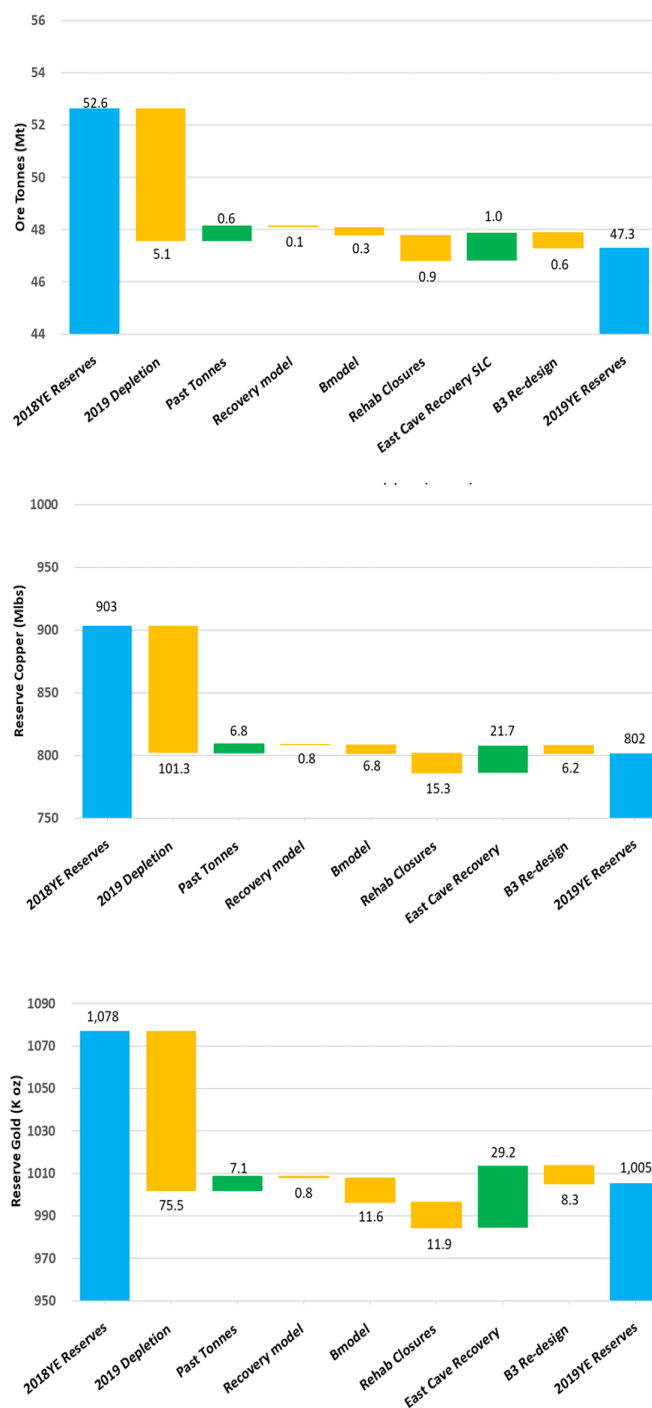
Category/Zone	Tonnes (Mt)	Grade			Contained Metal		
		Gold (g/t)	Silver (g/t)	Copper (%)	Gold (koz)	Silver (koz)	Copper (Mlb)
Probable							
B Zones	20.2	0.55	1.9	0.73	357	1,234	323
C Zone	27.1	0.74	1.8	0.80	648	1,610	478
Total Probable	47.3	0.66	1.9	0.77	1,005	2,844	802

Notes:

1. CIM (2014) definitions were followed for Mineral Reserves.
2. Mineral Reserves are estimated at an NSR cut-off value of US\$21.00/t for the 5070 West Cave and 5070 East Cave and US\$24.00/t for the B3 and C Zones. The East Cave SLC zone NSR cut-off value is US\$25.00/t.
3. Mineral Reserves are estimated at US\$3.00/lb Cu, US\$1,275/oz Au, and \$17.00/oz Ag, and a C\$/US\$ exchange rate of 1.30:1.
4. Metallurgical recoveries for copper average 89% and vary from 69% to 94% depending on ore type; recoveries for gold and silver average 86% and 74% respectively for all ore types.
5. Numbers may not add due to rounding.

The change in Mineral Reserves from year-end 2018 to year-end 2019 is shown in Figure 15-1 for tonnage, pounds of copper metal, and ounces of gold.

FIGURE 15-1 CHANGES TO MINERAL RESERVES YE 2018 TO YE 2019



The changes to the Mineral Reserves were driven by several factors including:

- 2019 Depletion: tonnage mined during the 2019, not including ore segregated as intermediate grade (IG), which was stockpiled.
- Past Tonnes: which addressed the impact of actual draw during 2019 versus modelled best practice, draw compliance.
- Recovery Model Update: the individual recovery models for each lift now better represent recoveries based on different material types in the B3 and C Zones.
- Rehab Closures: represents closures of drawpoints requiring rehabilitation work during the year.
- East Cave Recovery: The SLC method used to recover reserves in the East Cave rehabilitated closed drawpoints.
- B3 Redesign: changes due to redesign efforts on the B3 Zone.

As can be seen, 96% of the change is due to depletion of reserves during the year with 4% including all of the other adjustments.

The Mineral Reserves are based upon the mining of the current West and East Caves (5070 levels B1 and B2), sub-level cave mining of the pillar beneath the East Cave extraction level, the planned B3 cave (4910 level), and the planned C Zone cave (4520 level). Inferred Mineral Resources and unclassified material within the Mineral Reserves of the cave are included in the tonnage but are assigned zero grade. Mineral Reserves include waste dilution from the top of the cave.

The Mineral Reserves are generated from a combination of Measured and Indicated Mineral Resources. Due to the uncertainty associated with estimating material movement within the cave, RPA is of the opinion that the Probable Mineral Reserve category is appropriate for all of the Mineral Reserves.

Other than discussed in this report, RPA is not aware of any mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the Mineral Reserve estimate.

PCBC SOFTWARE

The PCBC software is used at New Afton for the block cave mine planning. PCBC is a mine design software program for mine design, mine planning, and production scheduling.

PCBC generates vertical (or inclined) columns above each drawpoint (slice files) from the Mineral Resource block model. Then, through the application of parameters based upon the assumed HOD, degree of fragmentation, drawpoint geometry, and mixing characteristics, the material is forecast for each drawpoint. The model incorporates waste dilution from the top of the slices as well as some side wall dilution depending upon the assumed mixing characteristics. There are a wide range of mixing options that can be modelled in PCBC.

PCSLC SOFTWARE

The planned sub-level cave (SLC) mining at New Afton is designed using the sub-level cave modelling software (PCSLC). PCSLC is a mine design software program for mine design, mine planning, and production scheduling.

PCSLC incorporates mine design parameters, rock conditions, and Mineral Resources and then uses fragmentation models and mixing models to simulate the sub-level cave mining to generate production schedules based on assumed production targets. The software can be used to find the optimum SLC footprint.

B1 AND B2 ZONE (EAST AND WEST CAVES) MINERAL RESERVE ESTIMATION

The B1 and B2 Mineral Reserves were estimated based upon the PCBC forecast for production from remaining drawpoints. Mineral Reserves include all material forecast by PCBC to be pulled from a drawpoint with an NSR per tonne value in excess of the cut-off value which is one of the block variables in the model. PCBC then uses historical production, the applied maximum HOD, and the mixing parameters to predict the production tonnage and grade. The model parameters for the 2019 Mineral Reserve estimates are listed in Table 15-2.

TABLE 15-2 B1/B2 PCBC PARAMETERS 2019
New Gold Inc. – New Afton Mine

Description	2019 Reserves
Drawpoints	345 (original total)
Drawpoint pillar spacing (m)	15 & 18
Inter-drawpoint Spacing (m)	11.7
Draw Cone Name	TM_INC (West)/Fine2 (East)
Minimum HOD (m)	50
Maximum HOD	350
Mixing Model	Template Mixing
5070 Drawpoint Layout	El Teniente/Straight-Through
Elevation (Mine Grid m elev.)	5072
Percent Fines (%)	60% (Picrite 90%)
Mixing Horizon (m)	75
Mixing Cycles	N/A

For 2019, the West and East Cave cut-off NSR values were set at \$21/t.

WEST CAVE PILLAR RECOVERY

Currently, pillar recovery is being carried out in the G drive of the West Cave. There is a recovery plan in the West Cave to develop and blast five new drawpoints along the northern edge, one of which was completed in 2019. A possibility to rehabilitate eight drawpoints in the C drive is being assessed. The West Cave currently has 21 active drawpoints and the overall draw is close to 100% with some drawpoints up to 135% drawn.

EAST CAVE PILLAR RECOVERY

Retreat mining of the pillars is planned in the E, F, and G drives of the East Cave using the same principles currently used in the West Cave.

EAST CAVE RECOVERY LEVELS

Mineralization below the East Cave, in the pillars between the drawpoints and in the cave above currently inaccessible drawpoints, is planned to be extracted in a front cave and SLC operation. Mining will take place from sub-levels on 20 m vertical intervals from the 5050 level down to the 4970 level, with the front caving taking place between the 5050 and 5030 levels. SLC is a top down mining method where ore is broken by drilling and blasting and then recovered on a retreat basis towards the access point. As the blasted rock is removed, the overlying waste will flow into the void to prevent large open spaces from developing. In the

recovery mining zone, mining is planned to progress from south to north. An offset pillar is left in place between the active face and the picrite contact, to avoid mobilization into the picrite. Flow of the picrite into the stope could create additional dilution issues, negatively impacting recovered grades.

SLC drives are planned on a 14.5 m spacing with subsequent sub-levels offset to be midway between the overlying drawpoints. Upholes are drilled from the developed headings with planned three metre ring burden. The SLC production is forecast to consist of 10% external dilution, 49% East Cave material, and 41% blasted material. Production was modelled based on a rate of 3,300 tpd, however, the goal is to attain 4,000 tpd after the West Cave is completed.

The East Cave Recovery levels have an estimated Mineral Reserve of 3.28 Mt grading 0.66 g/t Au, 2.6 g/t Ag, and 0.68% Cu based on a cut-off NSR value of \$25/t. Slot blasting is forecast to begin in early 2020 followed by production mucking of ore.

B3 MINERAL RESERVE ESTIMATION

The B3 Zone Mineral Reserves are determined in the same manner as the B1 and B2 Mineral Reserves. B3 Mineral Reserves include all material forecast by PCBC to be pulled from a drawpoint with an NSR in excess of the cut-off value of \$24.00/t. In 2019, the B3 level was re-designed based on updated geotechnical information and understanding. This included changes to drawpoint spacing, drawpoint orientation, drawpoint and undercut layout, and PCBC parameters. There were no material changes to the Mineral Reserve estimate from the 2018 estimate to the 2019 estimate other than the slight reduction due to the design adjustment. The model parameters for the 2019 Mineral Reserve estimates are listed in Table 15-3.

TABLE 15-3 B3 MINERAL RESERVE PARAMETERS 2019
New Gold Inc. – New Afton Mine

Description	2019 Reserve
Drawpoints	106
Drawpoint pillar spacing (m)	16.5
Inter-drawpoint Spacing (m)	11.7
Draw Cone Name	MED1
Min HOD (m)	50
Max HOD (m)	350
Mixing Model	Template
B3 Layout	El Teniente/Straight Through
Elevation (Mine Grid m elev.)	4910 flat with no drainage
Percent Fines (%)	60%
Mixing Horizon (m)	75
Mixing Cycles	N/A

B3 PILLAR RECOVERY

Retreat mining of the pillars is planned in J, K, and L drives of B3, using the same principles currently used in the West Cave.

C ZONE MINERAL RESERVE ESTIMATION

The C Zone Mineral Reserves are determined in the same manner as the B1, B2, and B3 Mineral Reserves. The footwall development will not commence until January 2022, therefore it will be possible to adjust the extraction level elevation to reflect changes in the resource model or to make changes to the number of drawpoints if desired. The C Zone Mineral Reserves are based upon a 2015 FS prepared by New Afton and its consultants as subsequently modified by New Afton in its annual Mineral Reserve estimation.

C Zone Mineral Reserves include all material forecast by PCBC to be pulled from a drawpoint with an NSR in excess of the cut-off value of \$24.00/t. The key PCBC design parameters are shown in Table 15-4.

New Afton is capable of segregating waste from the drawpoints which is removed using a belt plough on surface prior to reaching the ore stockpile area. The same approach is planned for the C Zone and approximately 1.3 Mt is planned to be removed from the C Zone and this material has been deducted from the Mineral Reserve estimate.

TABLE 15-4 C ZONE MINERAL RESERVE PARAMETERS 2019
New Gold Inc. – New Afton Mine

Description	2019 Reserve
Drawpoints	192
Drawpoint pillar spacing (m)	18
Inter-drawpoint Spacing (m)	11.7
Draw Cone Name	MED1
Min & Max HOD (m)	50
	350
Mixing Model	Template
B3 Layout	El Teniente/Straight Through
Elevation (Mine Grid m elev.)	4520 flat with no drainage
Percent Fines (%)	60%
Mixing Horizon (m)	75
Mixing Cycles	N/A

C ZONE PILLAR RECOVERY

Retreat mining of the pillars is planned in Q, R, and S drives of the C Zone, using the same principles currently used in the West Cave.

DILUTION

Dilution in the model is created dynamically within PCBC based on the geometry of the cave, mixing parameters, and mining sequence. The Mineral Reserves include a total of 18% dilution for top-of-column and side wall dilution due to material mixing and fines migration. This figure includes internal dilution of 3.6% by way of Inferred Mineral Resources and unclassified material (carried at zero grade).

CUT-OFF GRADE

The Mineral Reserves are determined using an NSR cut-off value. The NSR is calculated in the Mineral Resource block model software using formulae which include consideration of:

- Metal prices
- Metal recovery (a function of grade and ore type)
- Concentrate transportation and handling costs (with a blended freight rate)
- Smelter charges and penalties (with a blend of smelter terms)
- Refining charges

- Royalties

CHANGES FROM 2018 MINERAL RESERVE ESTIMATE

The changes in Mineral Reserves from 2018 to 2019 are summarized in Tables 15-5 and 15-6.

TABLE 15-5 MINERAL RESERVE CHANGES 2018 TO 2019
New Gold Inc. – New Afton Mine

Year	Tonnes (Mt)	Gold (g/t)	Copper (%)	Gold (Moz.)	Copper (Mlb)
YE 2018	52.64	0.64	0.78	1.08	903.43
YE 2019	47.30	0.66	0.77	1.01	801.60
Total Change	(5.34)	0.02	(0.01)	(0.07)	(101.82)
2019 Depletion	(5.60)	0.47	0.78	0.08	(96.41)
2019 Changes	0.26	0.45	0.79	0.01	(5.41)

TABLE 15-6 2019 VS. 2018 CHANGE IN MINERAL RESERVES BY ZONE
New Gold Inc. – New Afton Mine

Zone	Tonnes (Mt)	Gold (g/t)	Copper (%)	Gold (Moz.)	Copper (Mlb)
B1/B2					
2018	14.26	0.46	0.78	0.21	246.00
2019	9.51	0.51	0.75	0.16	157.16
YOY Change	4.75	(0.05)	0.03	0.05	88.84
Production	(5.60)	0.47	0.78	0.08	(96.41)
Net Change	0.85	0.52	0.75	0.03	7.57
B3					
2018	10.06	0.61	0.72	0.45	161.00
2019	9.43	0.63	0.74	0.19	154.30
YOY Change	0.62	(0.02)	(0.02)	0.26	6.70
C Zone					
2018	26.91	0.76	0.82	0.66	484.00
2019	27.09	0.74	0.80	0.65	478.16
YOY Change	(0.18)	0.02	0.02	0.01	5.84

CLASSIFICATION OF MINERAL RESERVES

There is a large volume of material within the planned cave that has a Measured Mineral Resource classification and could be converted to Proven Mineral Reserves. However, based

upon the uncertainty associated with estimating material movement within the cave, a Probable Mineral Reserve classification has been applied to all Mineral Reserves.

RECONCILIATION

Mineral Reserve performance is reviewed by comparing weighted copper, gold, and silver grades against modelled grades estimated by PCBC for each drawpoint. In addition to gold and copper grades compared to the PCBC model, the percent draw, month tonnage drawn, and the HOD are tallied for review.

Individual drawpoint performance is monitored and the plots for the individual drawpoints are posted in the mine offices. Drawpoint sampling procedures are discussed in Section 16 Mining Methods.

Mine production comparison versus PCBC performance is shown in Figures 15-2 and 15-3 for copper and gold, respectively. The plots have the three month rolling average mine, mill, and PCBC grades plotted together with a $\pm 15\%$ band to indicate whether the variance is more or less than 15%. The results of these analyses are used to assess the PCBC model estimates. The PCBC model used as the basis for the projections was the revised model compiled in 2015-2016; for this reason, there is a poorer reconciliation in the earlier years as shown in the figures.

RPA notes that the variation from the planned copper and gold grades, since early in the project, has generally been less than 15%. RPA is of the opinion that the good reconciliation over an extended operating period supports the Mineral Reserve estimation procedures.

RPA recommends that the reconciliation process be continued and that the pillar recovery operations be monitored to provide a reconciliation of the production to the Mineral Reserve estimate.

FIGURE 15-2 2011 – 2019 GOLD GRADE PLAN AND ACTUAL

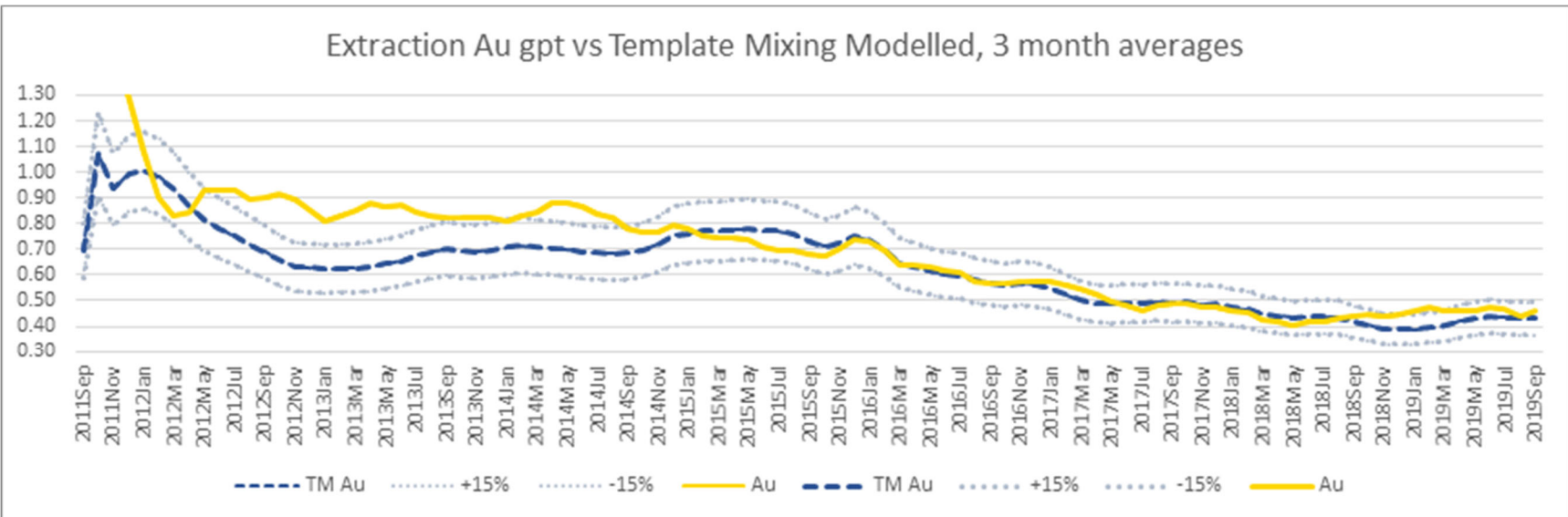
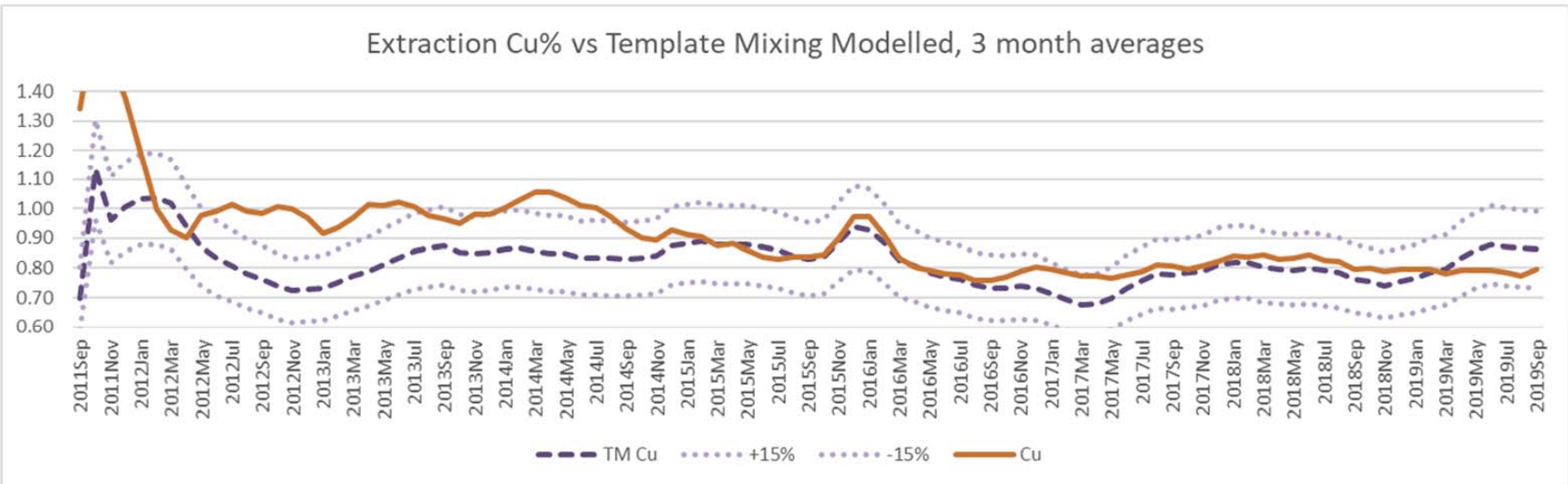


FIGURE 15-3 2011 – 2019 COPPER GRADE PLAN AND ACTUAL



RPA is of the opinion that the mining, metallurgical, infrastructure, permitting, and other relevant modifying factors related to the New Afton Mineral Reserve estimate are well known and understood and do not pose a material risk to the Mineral Reserves.

There are no known legal, political, environmental, or other risks that could affect the potential development of the Mineral Reserves.

16 MINING METHODS

New Afton is an operating block cave mine. The mine was developed between 2007 and 2012 and mill production commenced in 2012 with ore from the West Cave. As of the year-end 2019, the mine operated at a rate of approximately 15,600 tpd. Ore is all from the B1 and B2 Caves with development underway towards the B3 and C Zones. Ore is transported from the drawpoints on the extraction level, by a load haul dump unit (LHD), to an ore pass. The ore is then re-handled on the haulage level by an LHD and loaded into a haul truck for transport to the underground gyratory crusher. The crushed ore is conveyed to surface. The mine performance for the period 2014 to 2019 is shown in Table 16-1.

TABLE 16-1 NEW AFTON MINE HISTORICAL PERFORMANCE
New Gold Inc. – New Afton Mine

Period	Tonnes Mined (000 t) (tpd)		Tonnes Milled (000 t) (tpd)		Au (g/t)	Cu (%)
2019	5,701	15,620	5,584	15,299	0.47	0.78
2018	5,897	16,156	5,354	14,668	0.53	0.87
2017	6,580	18,027	5,993	16,420	0.56	0.85
2016	6,113	16,748	5,773	15,816	0.65	0.81
2015	5,255	14,397	5,097	13,964	0.78	0.90
2014	4,792	13,129	4,792	13,129	0.81	0.94

A schematic view of the mine in Figure 16-1 shows the Lift 1 development and associated infrastructure including conveyor legs and ventilation raises. The existing mine development and LOM mine development is shown in Figure 16-2 including the B3 and C Zones. Figure 16-3 is an isometric view of the underground zones.

MINE DESIGN

There are four general zones at the mine, located beneath and to the west of the Afton open pit. The dimensions of the zones are summarized in Table 16-2. Production is coming from the B1 and B2 Zones (Lift 1) where there are two panel caves (west and east) in operation. Production commenced in the west panel and is now nearing completion with the last planned West Cave production in February 2021. The east panel is separated from the west panel by a 50 m to 60 m thick waste zone.

A production area located beneath the East Cave has been identified for SLC extraction of the remaining cave material beneath the East Cave. The East Cave is to continue in production until mid 2021 with East Cave Recovery levels continuing until late in 2021.

The B3 Block is located 160 m below and immediately to the west of Lift 1. Ore from B3 will be hauled by truck to the existing gyratory crusher. Development of the B3 undercut and extraction levels is currently underway. Production is scheduled to commence in the B3 Zone with the first of 66 drawbells in January 2021 and production will continue until late 2024.

The C Zone block cave zone is located approximately 550 m below Lift 1. Development towards the C Zone is underway with production planned to commence with the first of 143 planned drawbells in July 2023.

TABLE 16-2 MINING ZONE DIMENSIONS
New Gold Inc. – New Afton Mine

Zone	Length (m)	Width (m)	Height (m)	Extraction Level
West Cave	130	250	350	5070
East Cave	110-130	310	350	5070
B3	110-110	210	160-280	4910
C	100	430	350	4520

Compared to the previous RPA 2016 Technical Report, production from the B3 and C Zones was delayed by New Gold's decision to delay the development to these zones. The Mineral Reserves, by zone, are shown in Table 16-3.

**TABLE 16-3 PROBABLE MINERAL RESERVE ESTIMATE BY ZONE AS OF
DECEMBER 31, 2019**
New Gold Inc. – New Afton Mine

Zone	Tonnes (Mt)	Gold (g/t)	Silver (g/t)	Copper (%)	Gold (k oz.)	Silver (k oz.)	Copper (M lb)
B1	0.93	0.58	1.26	0.70	18	38	14
B2	9.85	0.47	2.43	0.71	149	770	155
B3	9.43	0.63	1.40	0.74	191	426	154
C Zone	27.09	0.74	1.85	0.80	648	1,610	478
Total	47.30	0.66	1.87	0.77	1,005	2,844	802

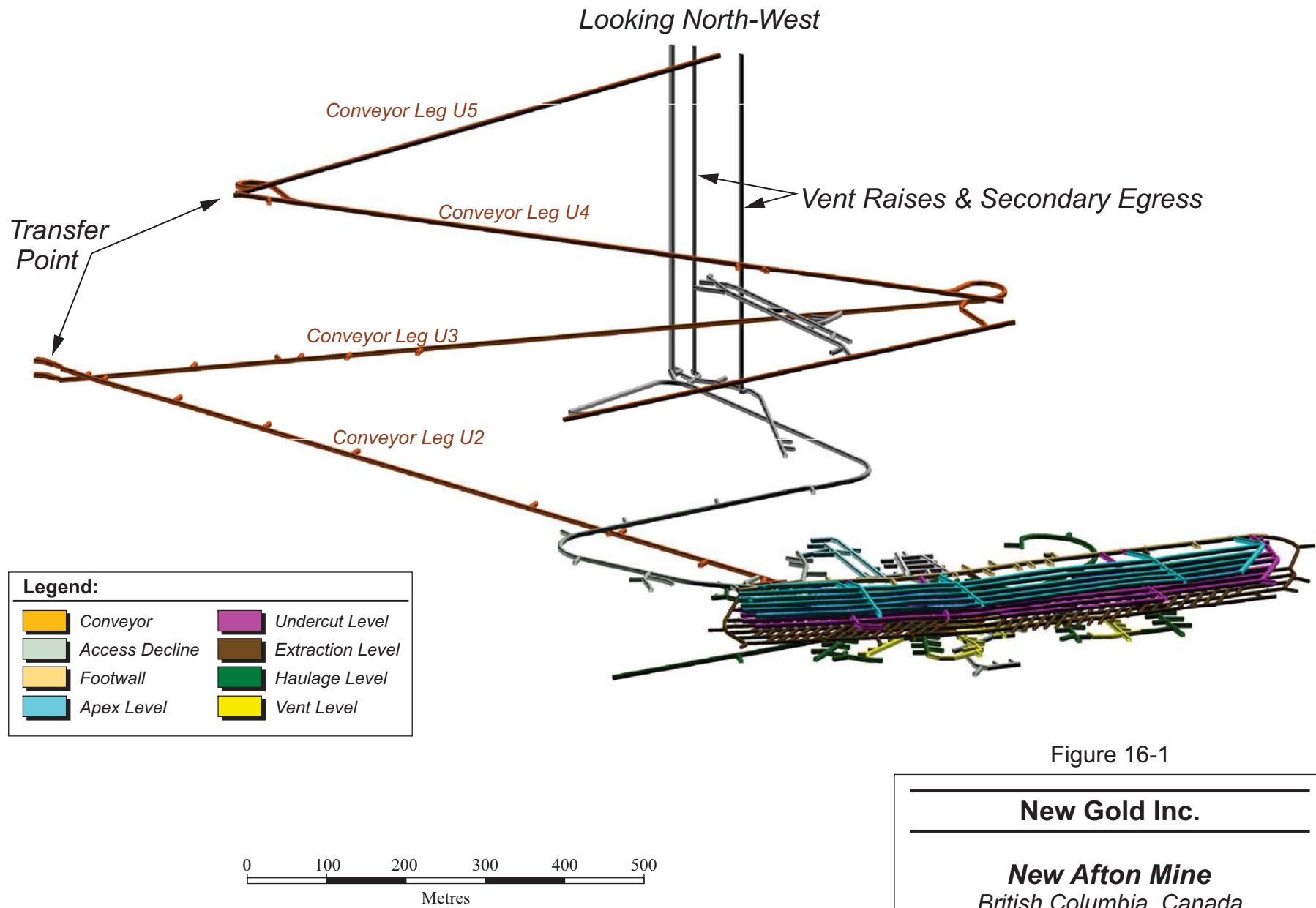


Figure 16-1

New Gold Inc.

New Afton Mine
British Columbia, Canada
Underground Infrastructure Lift 1

Looking West

Figure 16-2

New Gold Inc.

New Afton Mine
British Columbia, Canada
Mine Development

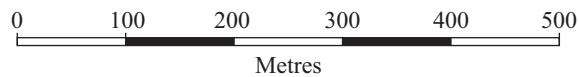
Lift 1

SLC Mining

B3 Zone

C Zone

Access Drifts & Conveyor Drifts



Legend:

Conveyor	Undercut Level
Access Decline	Extraction Level
Footwall	Haulage Level
Apex Level	Vent Level

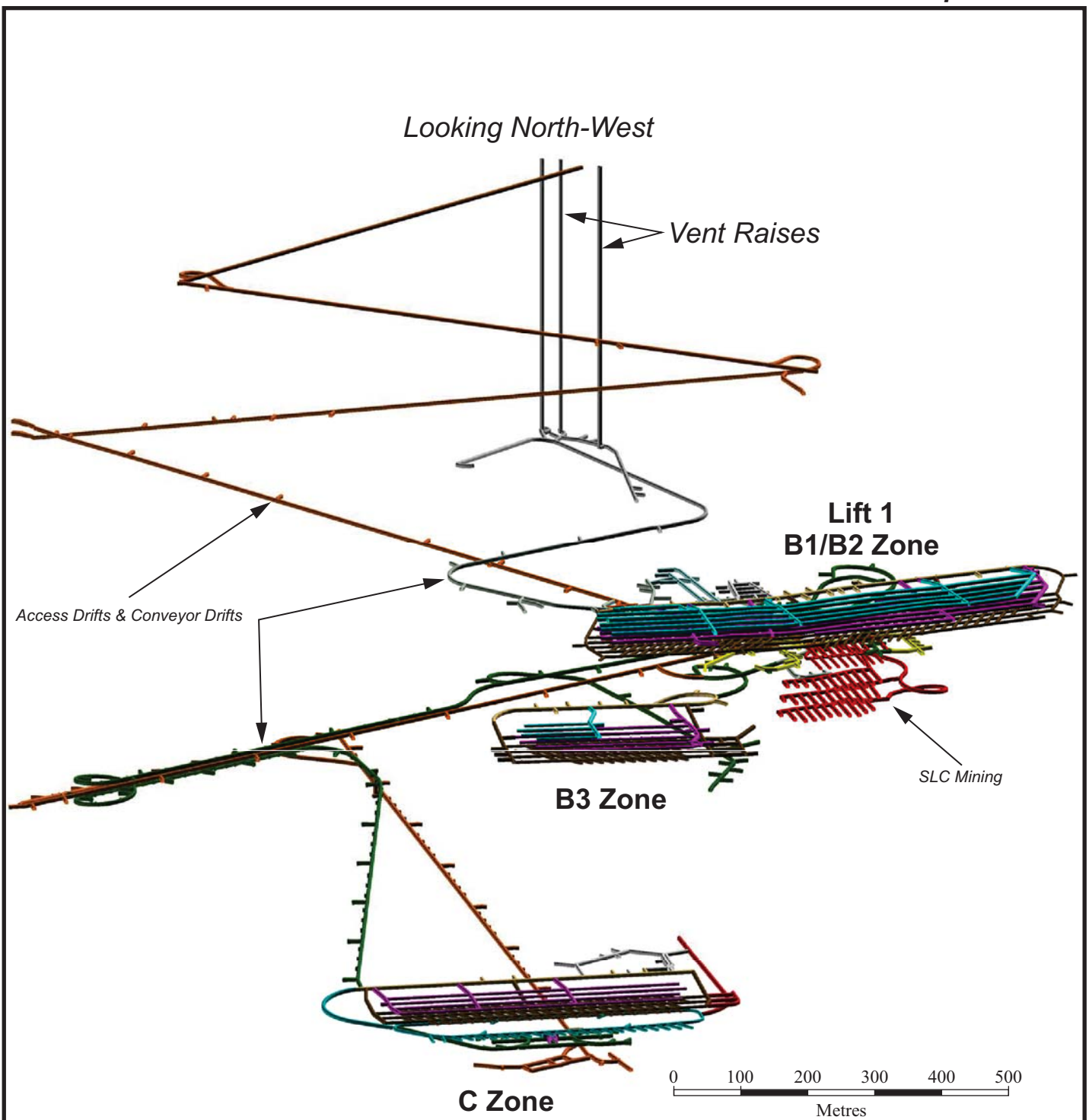










Figure 16-3

Legend:			
	Conveyor		Undercut Level
	Access Decline		Extraction Level
	Footwall		Haulage Level
	Apex Level		Vent Level

February 2020

Source: New Gold, 2020.

New Gold Inc.

New Afton Mine
British Columbia, Canada
New Afton Isometric View

MINING METHOD

New Afton is a block cave mine which utilized an undercut with an apex level and an undercut level for Lift 1. The Lift 1 extraction level at New Afton employs straight-through drawpoints. This layout was selected for simplicity, ease of development, geotechnical, ventilation, and access reasons. The extraction level consists of a west and east cave with six and five strike drives respectively separated by a central pillar. Ore is mucked from the drawpoints with 6 yd³ LHDs and dumped down ore passes to the haulage level.

The haulage level consists of four main legs below the extraction level connecting to the ore passes. LHDs load from the ore passes and fill 45 t haul trucks which haul the material to a centralized crusher. From the crusher, the material is conveyed to surface onto an ore feed stockpile. Intermediate grade material is plowed off the conveyor at surface and stockpiled to be milled later in the mine life.

The B3 apex design was reviewed in 2019 and, as a cost reduction measure, the design was modified to include only partial apex level development. The apex level will be developed in the initial area of the B3 cave to provide a large area with a suitable hydraulic radius to ensure the start of caving. Drawpoint orientation was also reviewed and revised considering geotechnical considerations. The B3 extraction level employs straight-through drawpoints, where ore will be loaded by LHDs to be dumped into ore passes to the haulage level. Automatic truck loading chutes will fill the haul trucks, which will transport the ore to the crusher.

The C Zone extraction will move from west to east over the full width of the zone. Drawbell development is scheduled to commence in 2023 and continue through 2026. Drawbell development is forecast at a rate of four per month through most of the drawbell construction period.

A schematic of cave levels and Lift 1 plan view are provided in Figures 16-4 and 16-5.

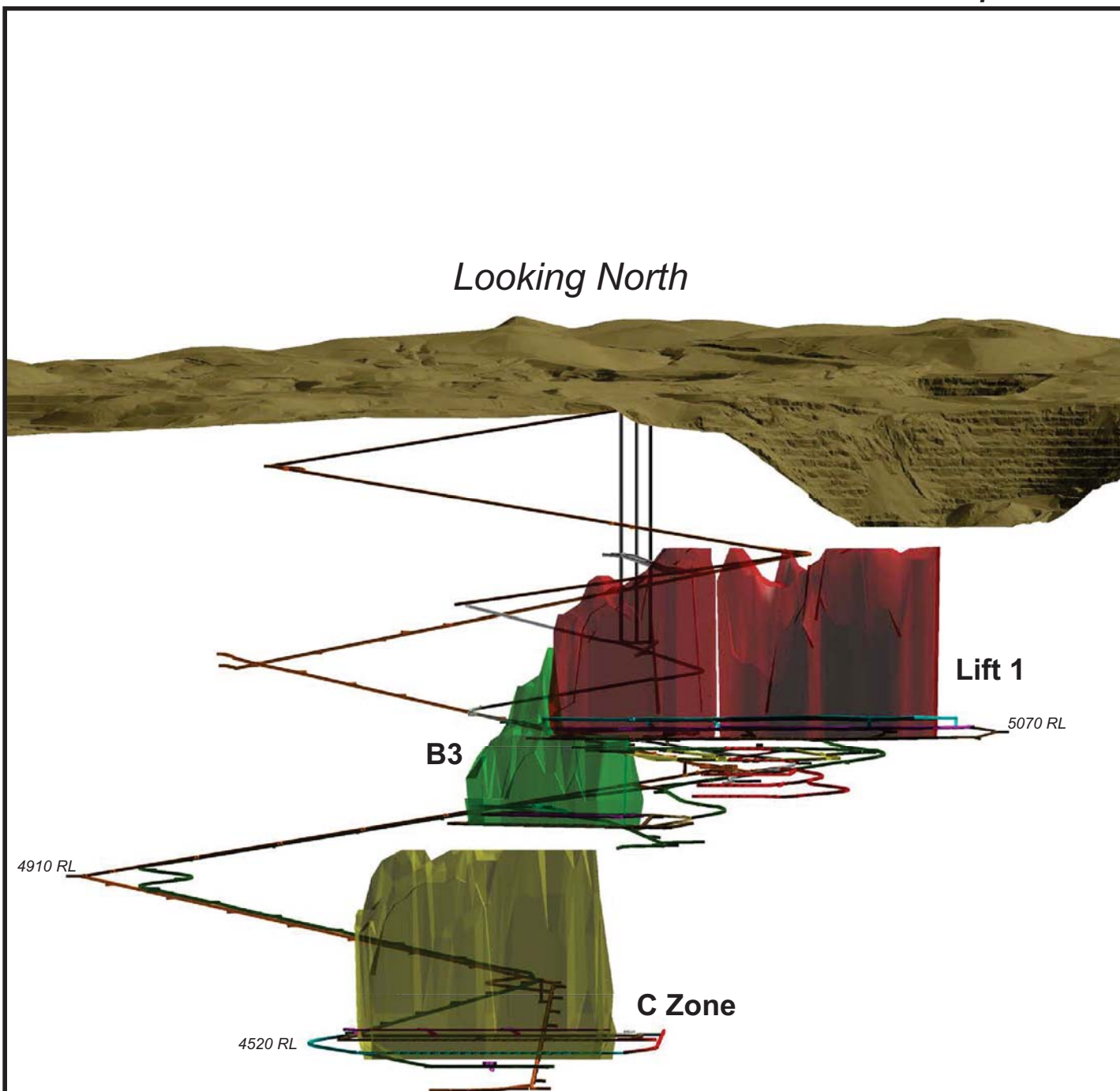


Figure 16-4

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British Columbia, Canada

Schematic of Cave Levels

Figure 16-5

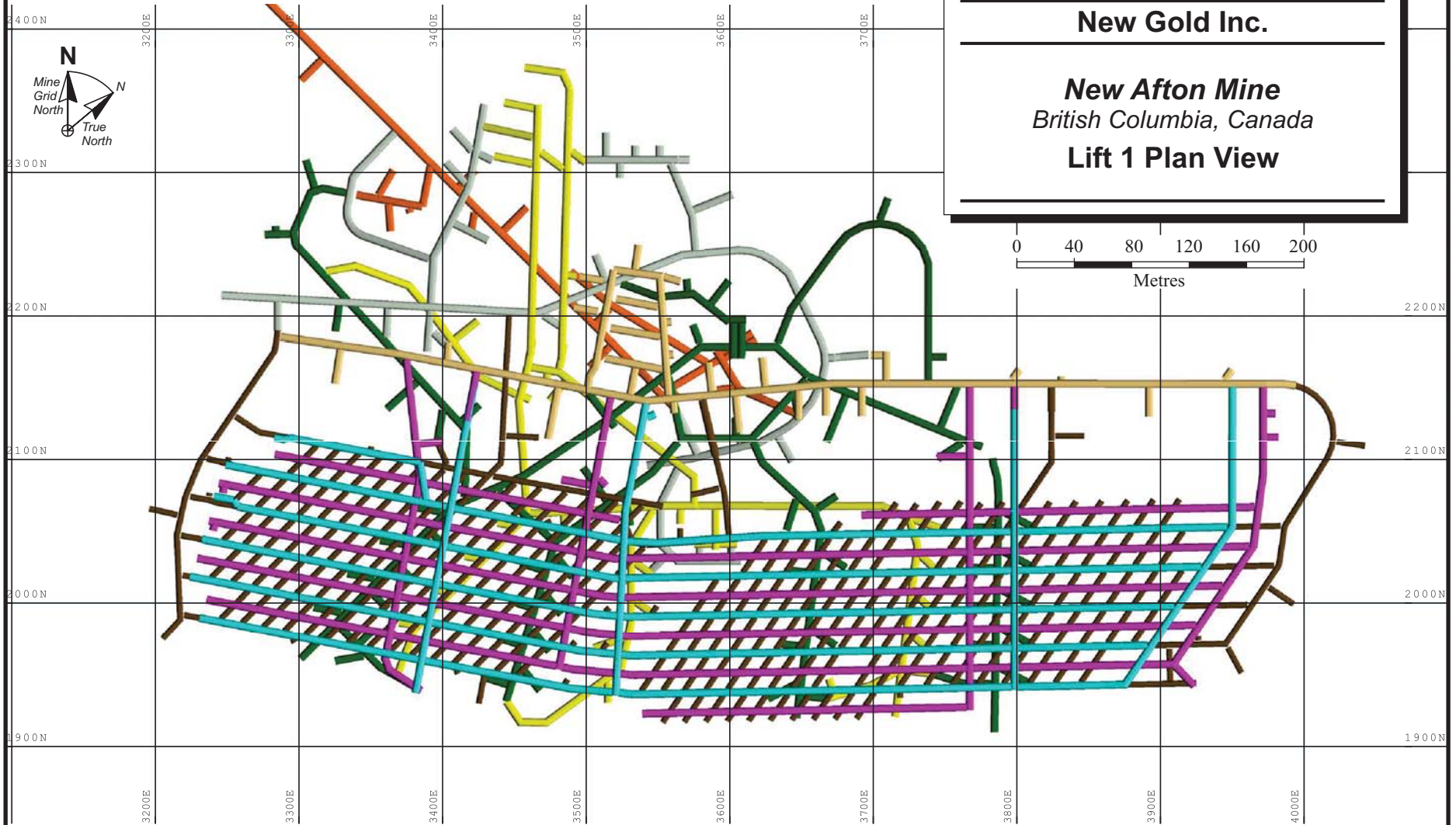
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Lift 1 Plan View

0 40 80 120 160 200
Metres

16-8



Legend:

 Conveyor	 Undercut Level
 Access Decline	 Extraction Level
 Footwall	 Haulage Level
 Apex Level	 Vent Level

February 2020

Source: New Gold, 2020.

UNDERCUT DESIGN

Undercutting is the process of creating a void beneath the material that is planned to be mined. The undercut provides a large area of unstable rock that promotes the caving of the overlying rock mass. When possible, undercuts are maintained ahead of drawbell development to provide a 45° angle between the development below and the undercut above. This creates a stress shadow that protects the development on the extraction level from the stresses induced from the undercut development.

DRAWBELL DESIGN AND CONSTRUCTION

Drawbells provide a funnel for the broken ore to flow into the drawpoints on the extraction level. There are drawpoints on both sides of the drawbell drive. Steel sets covered in shotcrete are used to help reduce the effects of wear from material being drawn out of the bells over time and concrete floors allow for equipment to easily draw the material from the bells. Drawbells are taken in a single blast.

Full-size drawbell drives are 28 m long, spaced 15 m to 18 m apart, and have two drawpoints. Half drawbells are located in some places on the north and south sides of the footprint. Half drawbell drives are 24 m long, and only have one drawpoint.

EXTRACTION SEQUENCE – WEST AND EAST CAVES - LIFT 1

All of the initial development for the East and West Caves has been completed. The Lift 1 activity is now centred on production, rehabilitation of drives and drawpoints, and development of headings to access the pillars beneath the extraction level and between the drawbells. Both the East and West Caves have broken through to the open pit. The Lift 1 extraction level plan is shown in Figures 16-6 and 16-7.

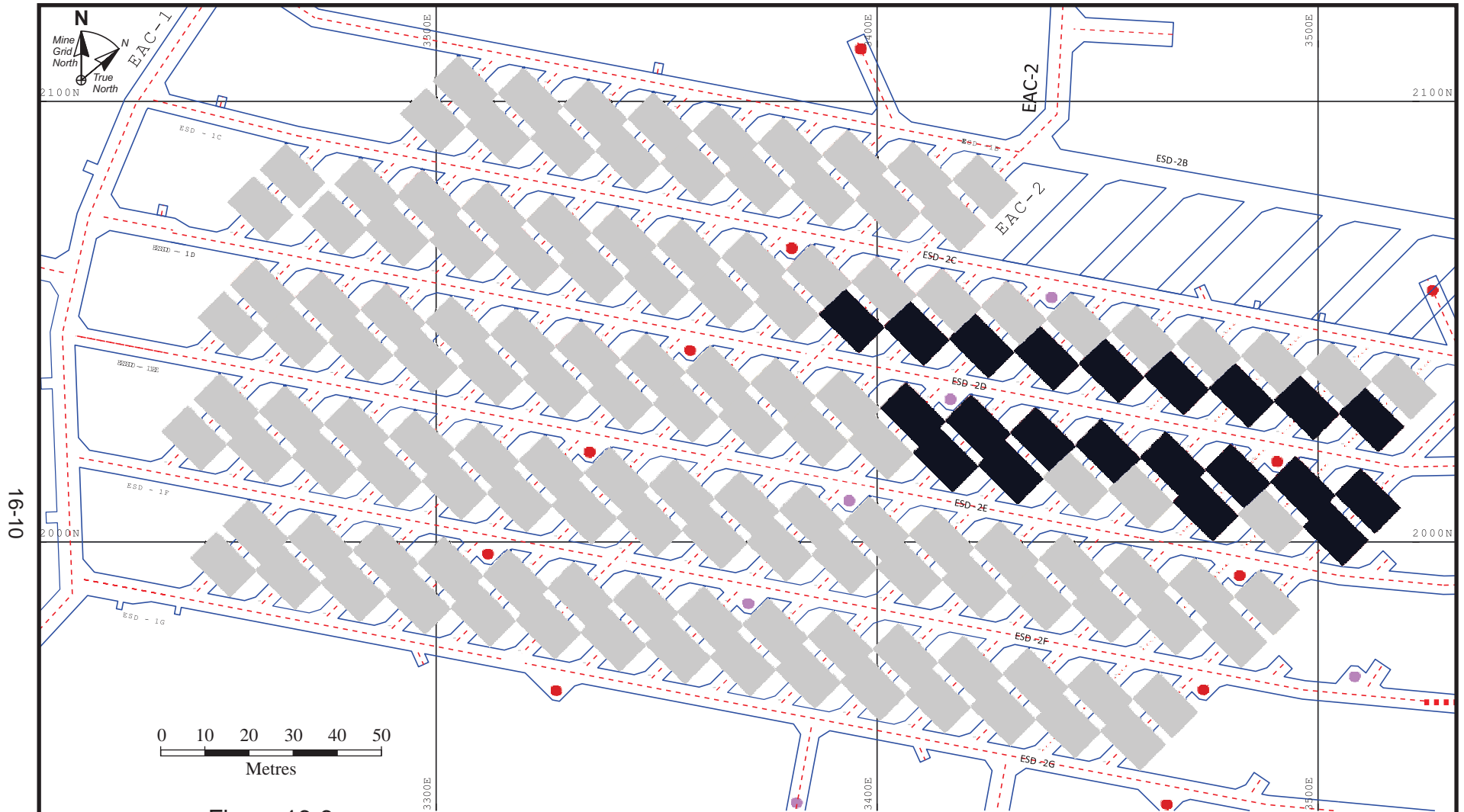


Figure 16-6

New Gold Inc.

New Afton Mine

British Columbia, Canada

**West Cave Extraction
- Level 5070**

Legend:

- | | | | |
|---|----------------------------|---|------------|
|  | Drift Design |  | Ore Pass |
|  | Open Drawbells |  | Vent Raise |
|  | Closed/Suspended Drawbells | | |

February 2020

Source: New Gold, 2020.

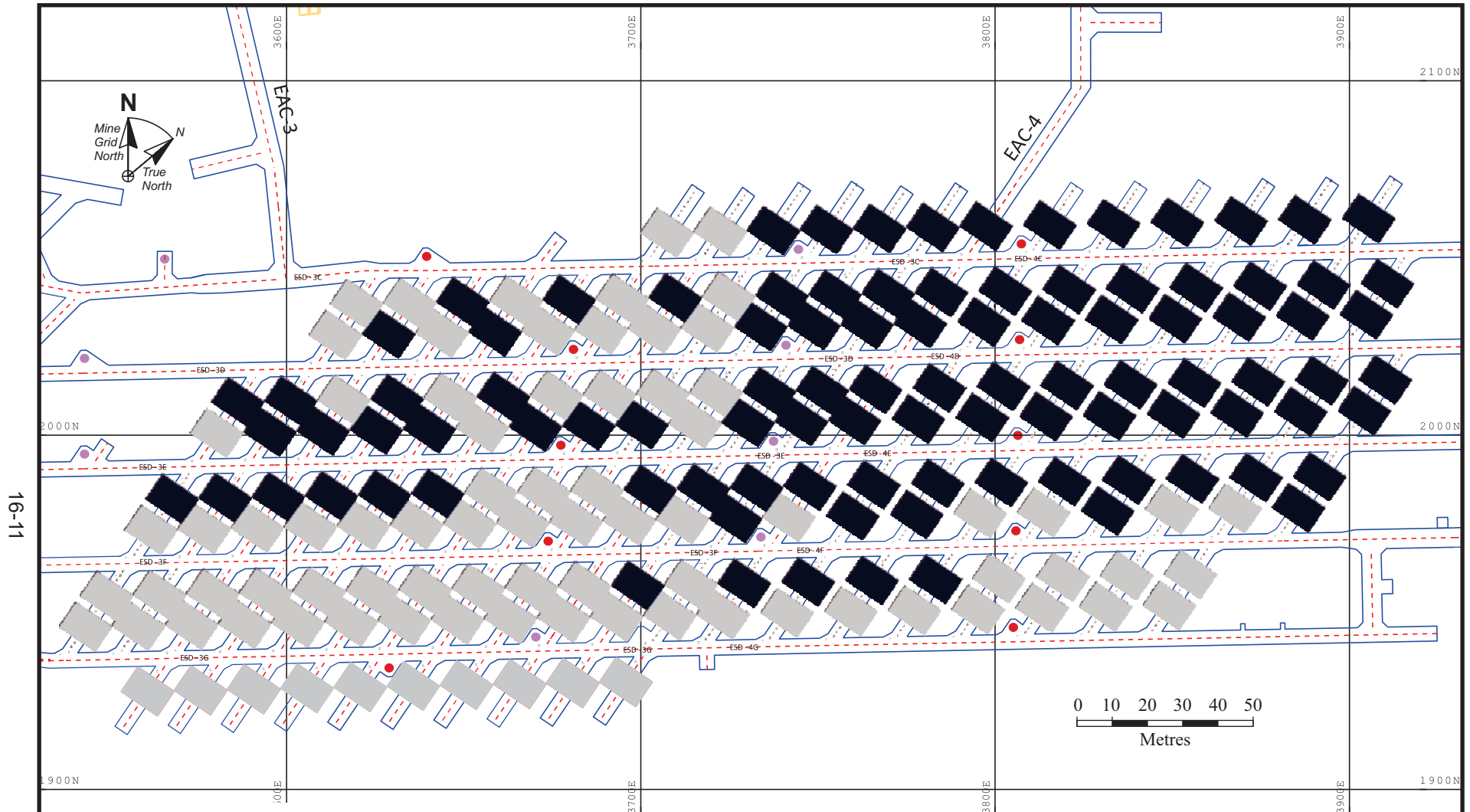


Figure 16-7

New Gold Inc.

New Afton Mine
British Columbia, Canada
East Cave Extraction
- Level 5070

Legend:

- | | | | |
|---|----------------------------|---|------------|
|  | Drift Design |  | Ore Pass |
|  | Open Drawbells |  | Vent Raise |
|  | Closed/Suspended Drawbells | | |

February 2020

Source: New Gold, 2020.

PILLAR RECOVERY IN WEST CAVE LIFT 1

Pillar recovery is underway at the western end of the F and G drives. Mining is carried out using a retreat pillar extraction method with the overlying cave material filling the void left by blasting and extracting the pillar. Rings of 102 mm diameter upholes are drilled with a 3.0 m to 3.2 m burden. Mining has been progressing at a rate of approximately two rings per month. The pillar recovery is oriented on strike along the line of the G extraction drift. The G drive pillar recovery progressed very well in 2019 and future pillars are planned to be mined in a similar manner.

RECOVERY LEVELS BELOW EAST CAVE LIFT 1

Beneath the East Cave, an area has been identified for SLC mining with the purpose of recovering reserves from inaccessible drawpoints above the 5070 extraction level. The plan is to mine five sub-levels spaced 20 m apart vertically from the 5050 level down to the 4970 level in the area beneath the majority of closed drawpoints. These drawpoints were closed due to heavy cave convergence, and many have been inaccessible since 2015-2016. For mining in this area, the orientation of drifts has been switched from longitudinal to transverse allowing for a retreat mining sequence away from the picrite waste material in the hanging wall. Drives were designed at 4.5 m wide by 4.5 m high and spaced at 14.5 m horizontal intervals. Drives on subsequent levels are offset to be between the overlying (and underlying) drives.

In SLC mining, the ore is all blasted and then, as the ore is mucked, the waste is allowed to flow in and provide support. Blasthole rings were designed with a three metre burden for the 102 mm diameter blast holes.

The East Cave Recovery zone Mineral Reserves are considered part of the East Cave, and are estimated to be 3.28 Mt grading 0.66 g/t Au, 2.6 g/t Ag, and 0.68% Cu. The East Cave Recovery production is estimated to be 41% from the blasted rings and 49% from the East Cave material. The East Cave Recovery zone reserve estimate includes 10% external dilution. The NSR cut-off value for the East Cave Recovery zone Mineral Reserves is \$25/t. This cut-off value is based on historical drill and blast costs on site, and 2019 indirect mining costs.

Mining in the East Cave Recovery zone is modelled based on a LOM production rate of 3,300 tpd, however, the target is to produce in excess of 4,000 tpd. Blasting of the first slot raises is planned for March 2020 and production from the zone will continue over a five-year period.

EXTRACTION SEQUENCE – B3 ZONE

The B3 extraction level plan is shown in Figure 16-8. The first three drawbells for B3 are scheduled to be blasted in January 2021, followed by up to three drawbells per month through 2021 and 2022. The final drawbells will be blasted in November 2022.

The B3 Zone has four extraction level strikedrives with drawpoints on each side of each drive. This is a smaller footprint than Lift 1 and the reduced number of drives increases the potential for production difficulties if access is lost due to poor ground conditions. Ore passes are located on the east side of the level where automated truck chutes will load trucks on the haulage level approximately 20 m below the extraction level.

In 2019, the B3 design was changed to re-orient the drawpoint drives to a northwest-southeast orientation based on geotechnical considerations. Additionally, the apex level was re-designed and reduced in size to provide an open space with a hydraulic radius sufficient to initiate caving as opposed to the previous design which included a full-size apex level. The reduction in the apex level development has reduced mine development requirements. The re-designed extraction level is shown in Figure 16-8.

The expected B3 cave projection is shown in Figure 16-10. The B3 cave planned performance was evaluated compared to the experience in the West Cave and there is good correlation between the two. From the comparison and Itasca Consulting Group Inc. (Itasca) model, the B3 cave is forecast to become self-sustaining in mid-2021 after 12 to 21 drawbells have been prepared. The B3 cave will break through to the base of the West Cave. This breakthrough is projected to occur in the fourth quarter of 2021 after 27 to 30 drawbells have been developed.

EXTRACTION SEQUENCE – C ZONE

The C Zone extraction level plan is shown in Figure 16-9. The extraction sequence will move from west to east over the full width of the zone. Drawbell development is scheduled to commence in mid-2023 and continue through to mid-2026. The extraction level will consist of three extraction level strikedrives with drawpoints on each side. Additionally, there will be drawbells blasted on the outer access drives of the haulage level. These drawbells will be utilized to assist stress movement to transfer below the cave, reducing convergence on the extraction level. An estimate of the progression of the cave profile was compiled by Itasca in

2015 and is shown in Figure 16-11. The progression shows the B1 and B2 caves, then the B3, and finally the C Zone caved area.

New Afton has adjusted the design of the C Zone haulage levels using a “split level” design with the haulage levels located at the 4,496 m and 4,471 m elevations, to improve ground conditions by shifting the wrap around stresses away from the main extraction level. LHDs will haul the ore from the ore passes to a new gyratory crusher to be installed for the C Zone. Haul trucks have been eliminated from the material handling flow on the C Zone level. The ore will then be conveyed from the crusher to a junction with the existing conveyor for movement to surface. Waste from the C Zone will be handled in the same manner. The design change is shown in Figure 16-12.

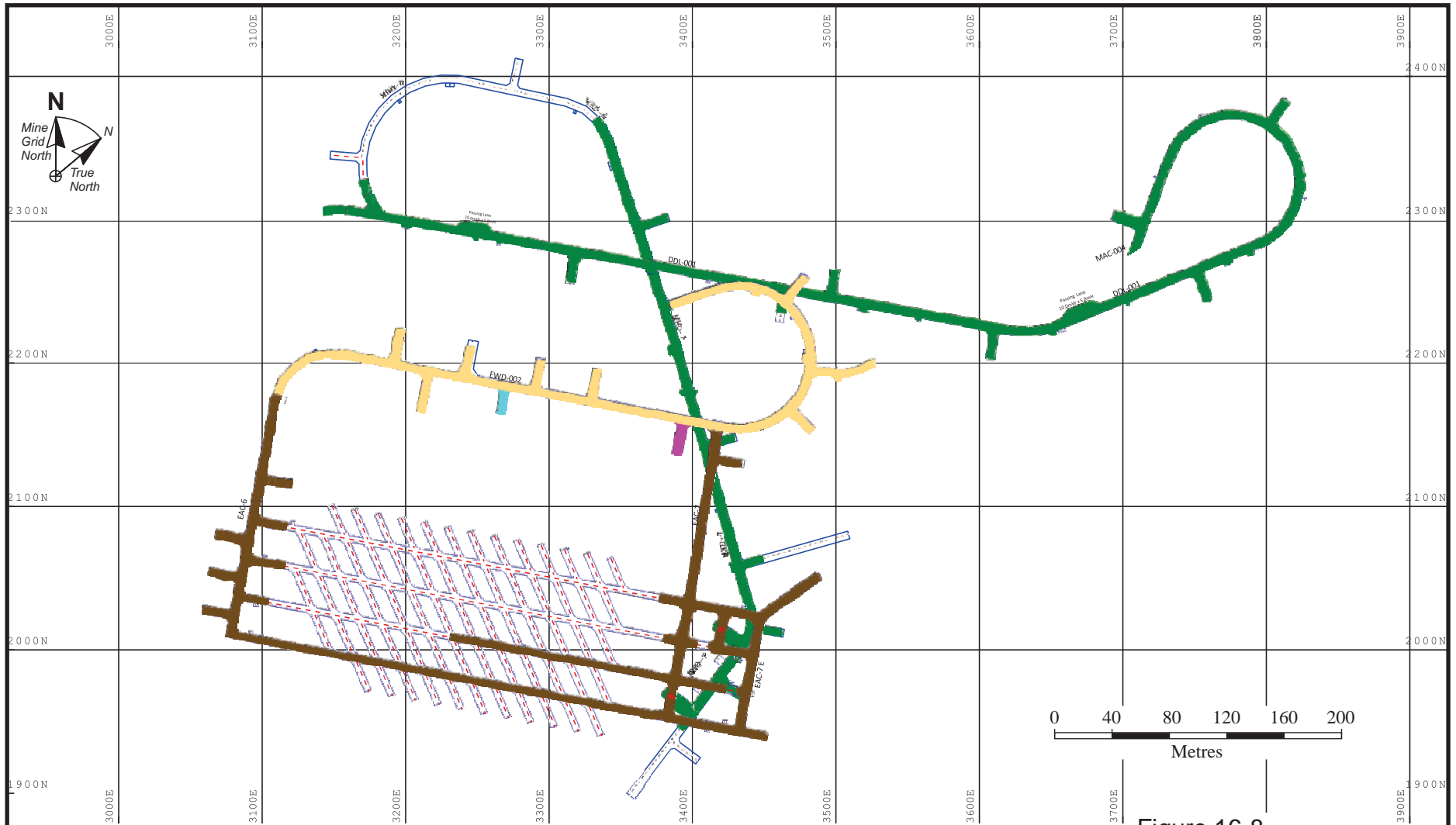


Figure 16-8

Legend:

	Conveyor		Undercut Level
	Access Decline		Extraction Level
	Footwall		Haulage Level
	Apex Level		Vent Level

February 2020

Source: New Gold, 2020.

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**B3 Revised Access
and Extraction Level**

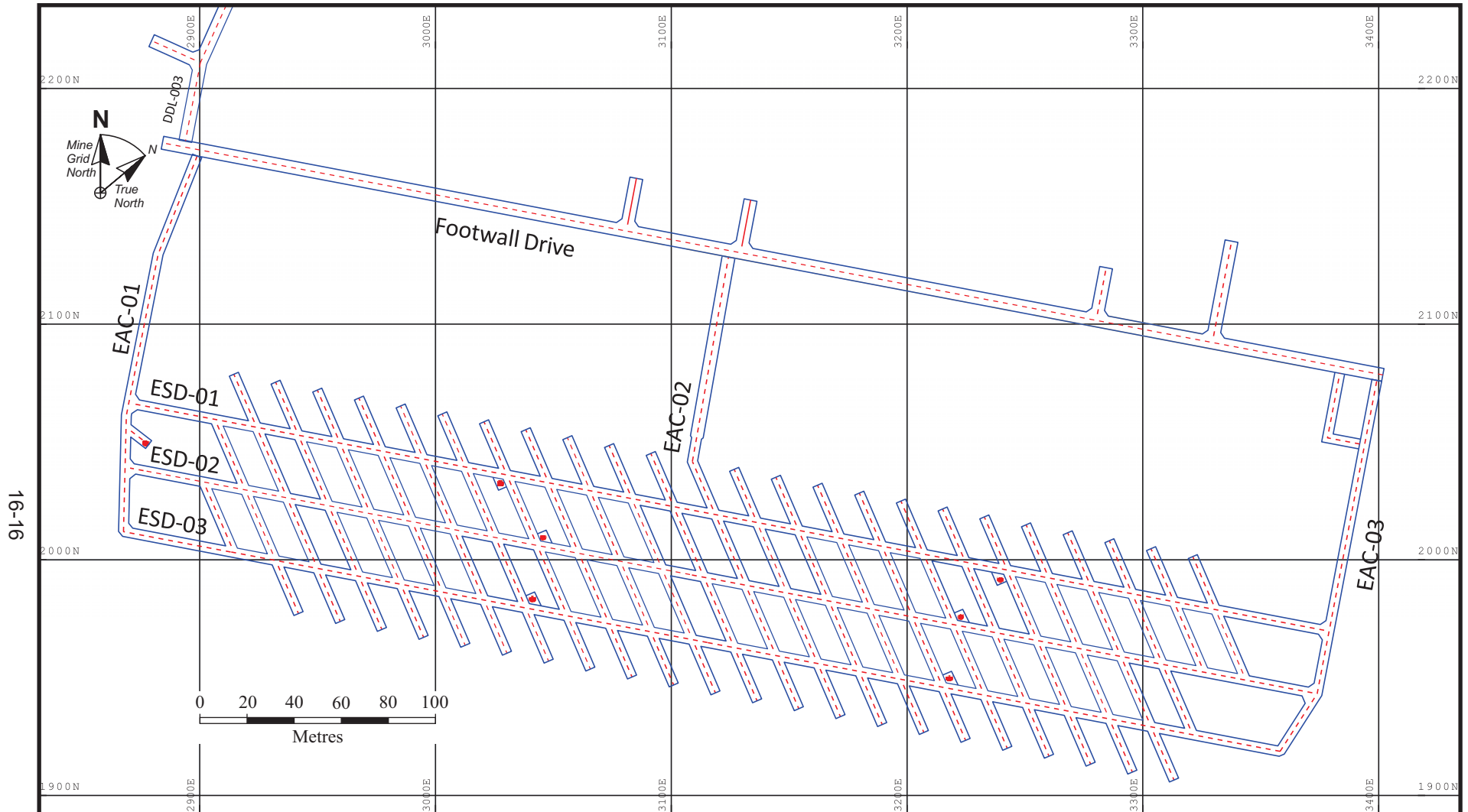







Figure 16-9

Legend:			
	Drift Design		Ore Pass
	Open Drawbells		Vent Raise
	Closed/Suspended Drawbells		

February 2020

Source: New Gold, 2020.

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C Zone Layout

Looking Northwest

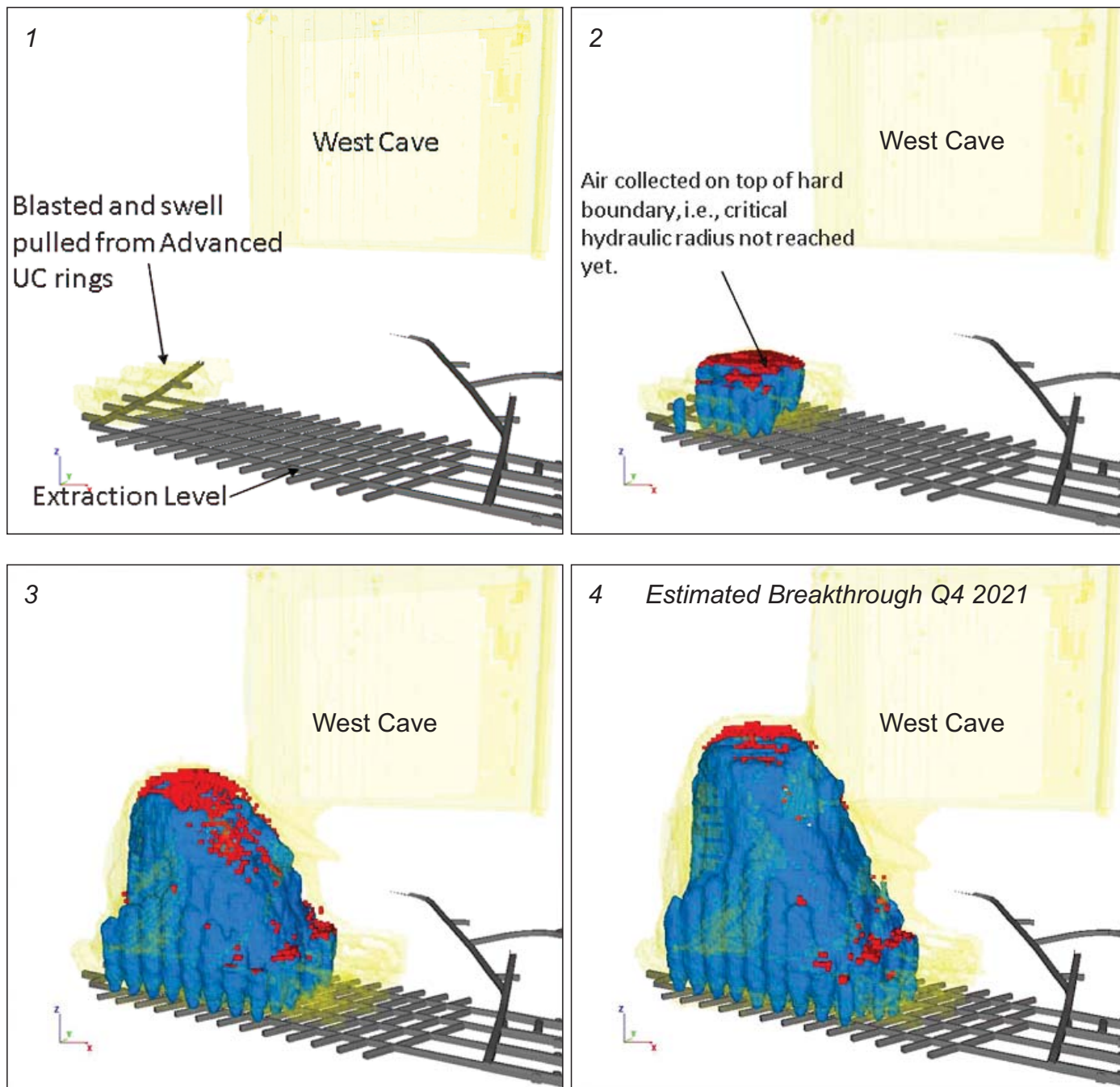


Figure 16-10

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B3 Cave Progression Forecast

Looking South-East

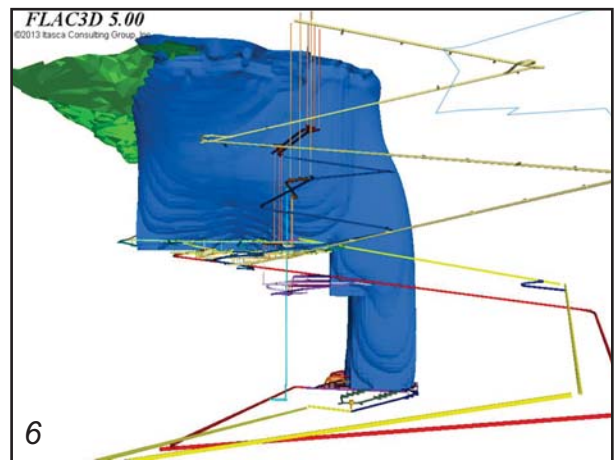
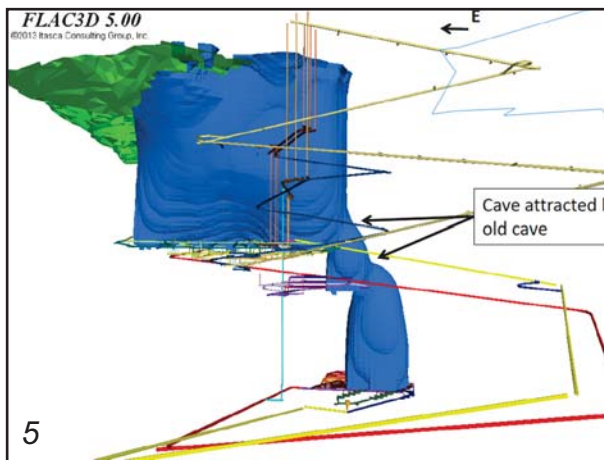
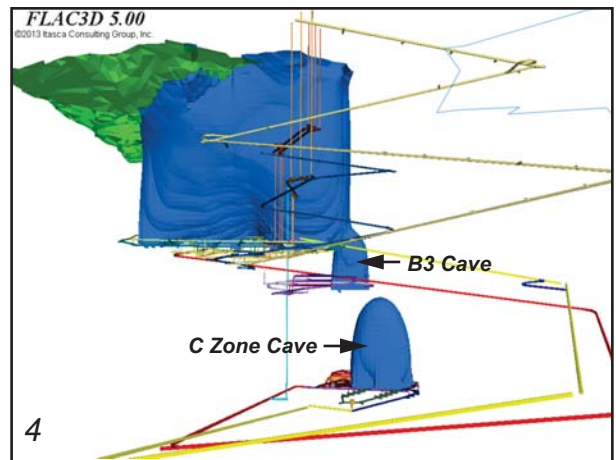
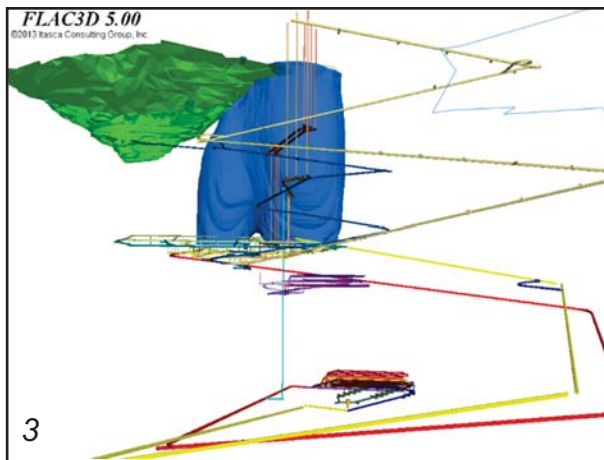
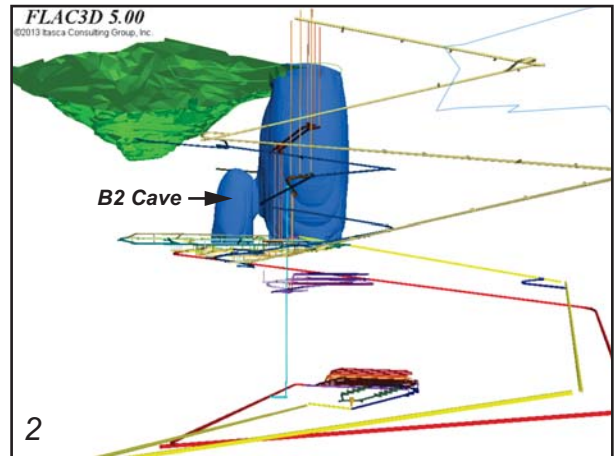
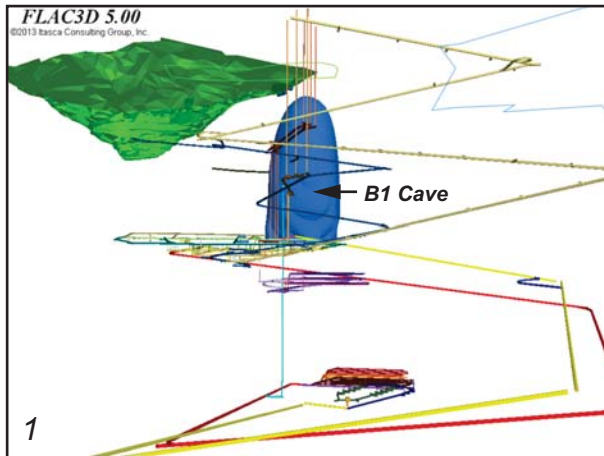


Figure 16-11

Estimated Drawbell Development
Completion is in Mid 2029

Not to Scale

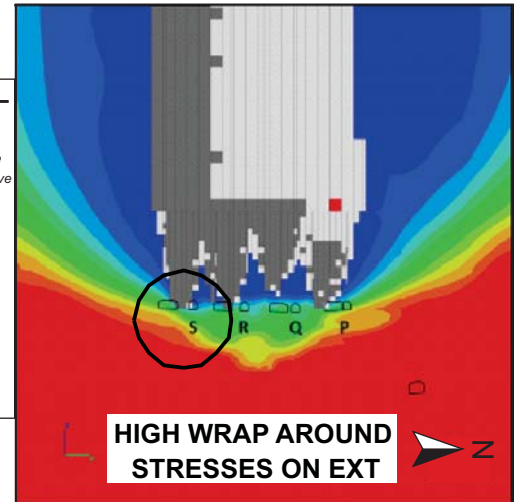
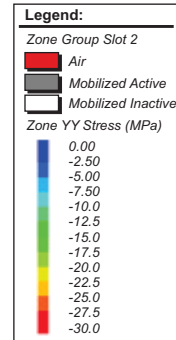
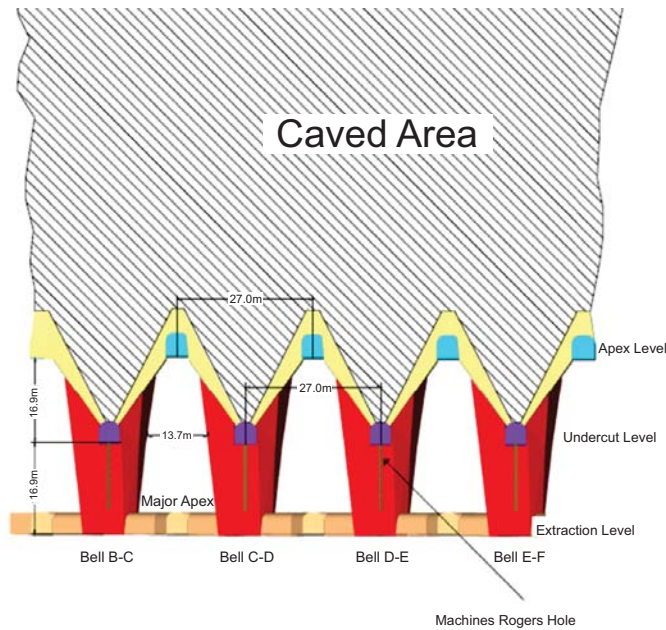
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Cave Progression from 2015 Work

Original Design



Split Level Design

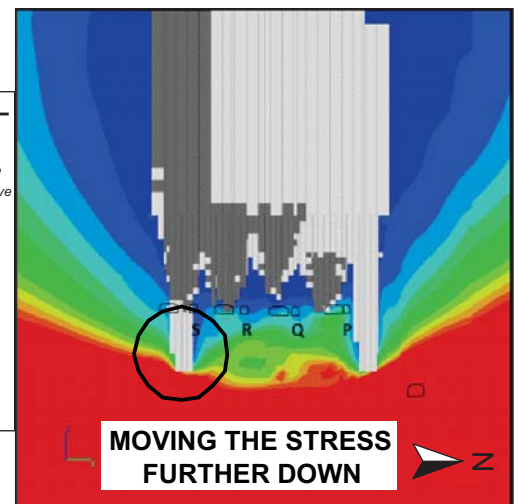
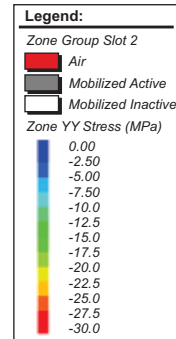
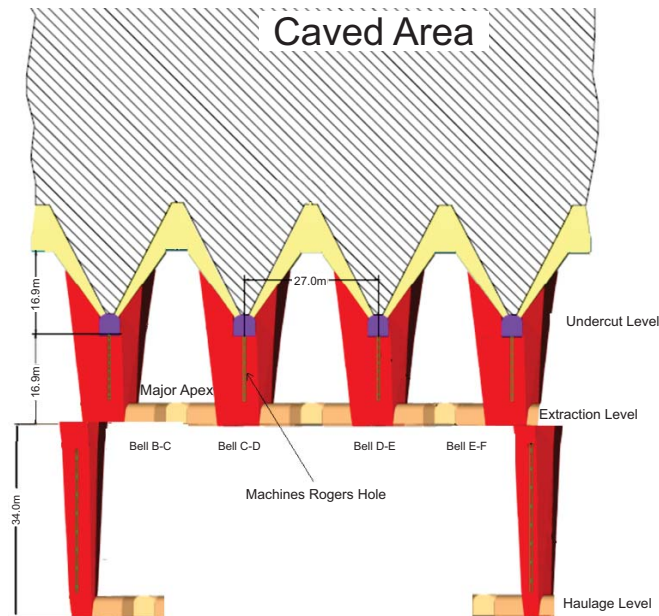


Figure 16-12

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British Columbia, Canada

**Schematic of Split Level
Design for C Zone**

GRADE CONTROL

DRAW CONTROL STRATEGIES

New Afton's draw strategy is focussed on maintaining proper cave health and controlling consistent metal production to the mill. When required, varying strategies are implemented such as: a low arsenic draw strategy, a high gold draw strategy, and a high copper draw strategy.

ASSAYING OF SAMPLES

Drawpoint samples are collected based upon pre-determined sample frequencies. Samples are assayed for copper, silver, gold, palladium, mercury, arsenic, and other metals. One in ten samples is a duplicate, and Certified Reference Material (CRM) is used as a confirmation of the copper and gold analyses.

Samples are collected by the production personnel with planning and oversight from the Technical Services group. Tagged sample bags are provided by geology. Samples are analyzed on-site and results are imported to the geology database.

One sample is required for every 60 to 120 buckets mucked in the central portion of the cave and one sample is taken every 30 to 60 buckets mucked around the perimeter. The production sample frequency is reviewed quarterly and updated locally when ore-waste boundaries are crossed.

PRODUCTION ORE-WASTE DETERMINATION

Geological information (lithology, mineralization, alteration, fragmentation, and moisture) is collected from routine drawpoint inspections and tracked within a central database. The draw control department issues a production progress map displaying the monthly weighted average copper and gold grades for each drawpoint; locations near lower column waste or top of column exhaustion cut-off grades trigger a higher frequency of geological inspection. Geological analyses paired with assay results enable the determination of ore-waste classification. If assay information is not current, an additional muck sample is taken and the on-site laboratory provides results within 24 hours.

DRAWPOINT OPERATIONS

EXTRACTION LEVEL CONDITIONS

The Lift 1 West Cave extraction level has six parallel drives named B to G from north to south. The remaining, currently active drawpoints are in the northeast corner of the West Cave. The drawpoints are generally in good condition. The G drawpoints had shown significant wear in 2014, but were repaired, mucked and closed when grades fell below the cut-off target. There are drawpoints on the extraction level that have been temporarily closed due to poor ground conditions, however, most closures are due to exhausting the available ore. The rock fragmentation is typically fine, however, there are occurrences of oversize which are either blasted or broken with a rockbreaker. Any oversize typically has no impact to scheduled production.

As convergences occur on the extraction level, a dedicated rehabilitation team is employed to excavate and install ground support to the drawbells and strike drives. Pillar recovery is currently underway in the West Cave F and G drives.

The Lift 1 East Cave has five parallel drives named C to G from north to south. The C and G drives have drawpoints on one side and/or both sides, depending on the location. With the breakthrough to the open pit, there have been occurrences of old surface material appearing in the cave. These occurrences are infrequent and when they do happen, production is moved away from the drawpoint until the material is safely removed.

Drawpoint and extraction level rehabilitation has been successful overall, however, it is an ongoing task and management have responded to the challenges by incorporating various monitoring and ground support techniques to complete the work.

CLOSED DRAWPOINTS

Drawpoints can be closed due to either exhaustion of ore or poor ground conditions leading to temporary or premature permanent closure. There is a total of 213 drawpoints that have been closed to date, with 133 in the West Cave and 80 in the East Cave. The majority of closed drawpoints in the West Cave are permanent closure as a result of depletion of ore. Of the 80 closed drawpoints in the East Cave, six are closed permanently due to depletion of ore, 16 are closed permanently due to ground conditions, 24 are closed temporarily awaiting rehabilitation,

and the remaining 34 are to be mined from the East Cave zone below, leaving 103 active drawpoints.

GEOMECHANICS

GEOTECHNICAL DOMAINS

Currently the geotechnical properties are generated from rock mass rating (RMR) and Q-Index using geotechnical core logging and face mapping of the development rounds. All geotechnical logging procedures allow for RMR 76', 89', GSI, or Q-Index rating systems.

The structural model is updated yearly. Information collected from historical core re-logging, current core logging, historical mapping, and current underground mapping is compiled and a 3D wireframe model is generated. During the underground mine development, structural mapping is used to calibrate the structural model.

IN-SITU ROCKMASS STRESS

The in-situ rockmass stresses have been determined using CSIRO Hollow Inclusions Cells (HI-Cell) and Sibra PTY LTD - IST, Rock Stress borehole testing. All stress measurements were taken during development, with a recent campaign in 2019. The stress data is used for underground and surface numerical modelling work and other geotechnical design criteria.

GROUND SUPPORT

The types of ground support used and installation arrangements are documented in New Afton Mine's Ground Control Management Plan (GCMP).

On the apex level, ground support consists mainly of screen and splitset rock bolts. The temporary use (typically less than six months) of this observation level along with minimal personnel occupancy allows for this type of ground support to be used safely and effectively.

On the undercut level, the higher occupancy rate and longer duration of use requires the use of fibre-reinforced shotcrete as the primary surface support along with rebar or splitset rock bolts and screen from shoulder to shoulder.

The extraction level, which is routinely occupied and used over a period of years, is the most likely to experience rockmass deformation and damage.

The extraction level support includes the use of fiber reinforced shotcrete, short bolting and screen, followed by long bolting and reinforced strapping, with an additional layer of mid to low wall shotcrete to protect against equipment damage.

STABILITY OF MAJOR EXCAVATIONS

All major, long-term infrastructure such as conveyor transfer chambers and crusher stations have been located outside of the footprint and orebody to minimize stress and strain effects from the caving process. The closest infrastructure is the FW Shop approximately 100 m north of the cave footprint. It has not experienced any significant damage to date due to caving activity. Given the larger excavation and significant span sizes (>6 m), long tendon support (cablebolts) have been used to reinforce the rockmass as well as the typical, nearer surface, primary bolts and area support.

CAVABILITY (ACTUAL VS. PREDICTED)

The cavability of a deposit is the ability of the orebody to cave freely and spontaneously under its own gravitational load. This is achieved once the orebody is sufficiently undercut to achieve an undercut hydraulic radius (HR) favourable for caving. Experience has shown that there is a relationship between the competence of a rock mass and the dimensions of the undercut required to initiate and sustain caving.

The West Cave monitoring system indicates that the transition into sustainable caving occurred when the undercutting hydraulic radius was 26 m with an undercut north-south span of approximately 133 m. This value is smaller than the value of HR = 30 m estimated in the AMC Consultants Pty Ltd (AMC) Afton FS Geotechnical Report from March 2007 (AMC, 2007). The East Cave monitoring system indicates that the transition into caving occurred at an undercut HR of 24 m with a north-south span of 105 m. This HR value is less than that of the West Cave as expected, given the significant geological faults and the high proportion of the slightly weaker mesogene rockmass within the East Cave volume, as stated in AMC (2007).

B3's geology is representative of the West Cave, and from the West Cave caving experience, it is estimated that the undercut HR required for B3 caving will be approximately 26 m. Itasca modelling work has also been completed, resulting in the same undercut HR estimate.

FRAGMENTATION

For fragmentation purposes, the rockmass within the orebody is classified into three types:

- Regular highly fractured rock – Moderate to low strength, a variable level of microfracturing and tight joint spacing. This is representative of the footprint with an anticipated higher intensity of fracturing in the far eastern side (>3760E).
- Moderately fractured rock – High strength, a more massive rockmass with wider joint spacing. This type of fracturing is associated and is spatially related with the monzonite.
- Fault Zones – Low strength and intense microfracturing with closely spaced joints. These are located throughout the footprint area.

There are five identified joint sets within the footprint from apex level mapping, with typically three to four joint surfaces locally present in any given area. These joints have a spacing range between 0.1 m and 0.8 m. The joint sets and the orientations are listed in Table 16-4.

TABLE 16-4 JOINT SET ORIENTATION
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Joint Set	Mean	Range
Main (East- West)	76/008	88/335 to 63/023
Moderate SW Dip	54/203	73/179 to 32/226
Moderate West Dip	52/255	70/236 to 34/279
Moderate East Dip	45/099	32/074 to 64/119

When a drawbell is initially developed, coarser fragmentation is observed. After the drawpoint has matured, the regular highly fractured rock is expected to have a broad distribution of finely fragmented ore with average block sizes of approximately 0.045 m³ and the moderately fractured rock is typically expected to have an average block size of 0.32 m³.

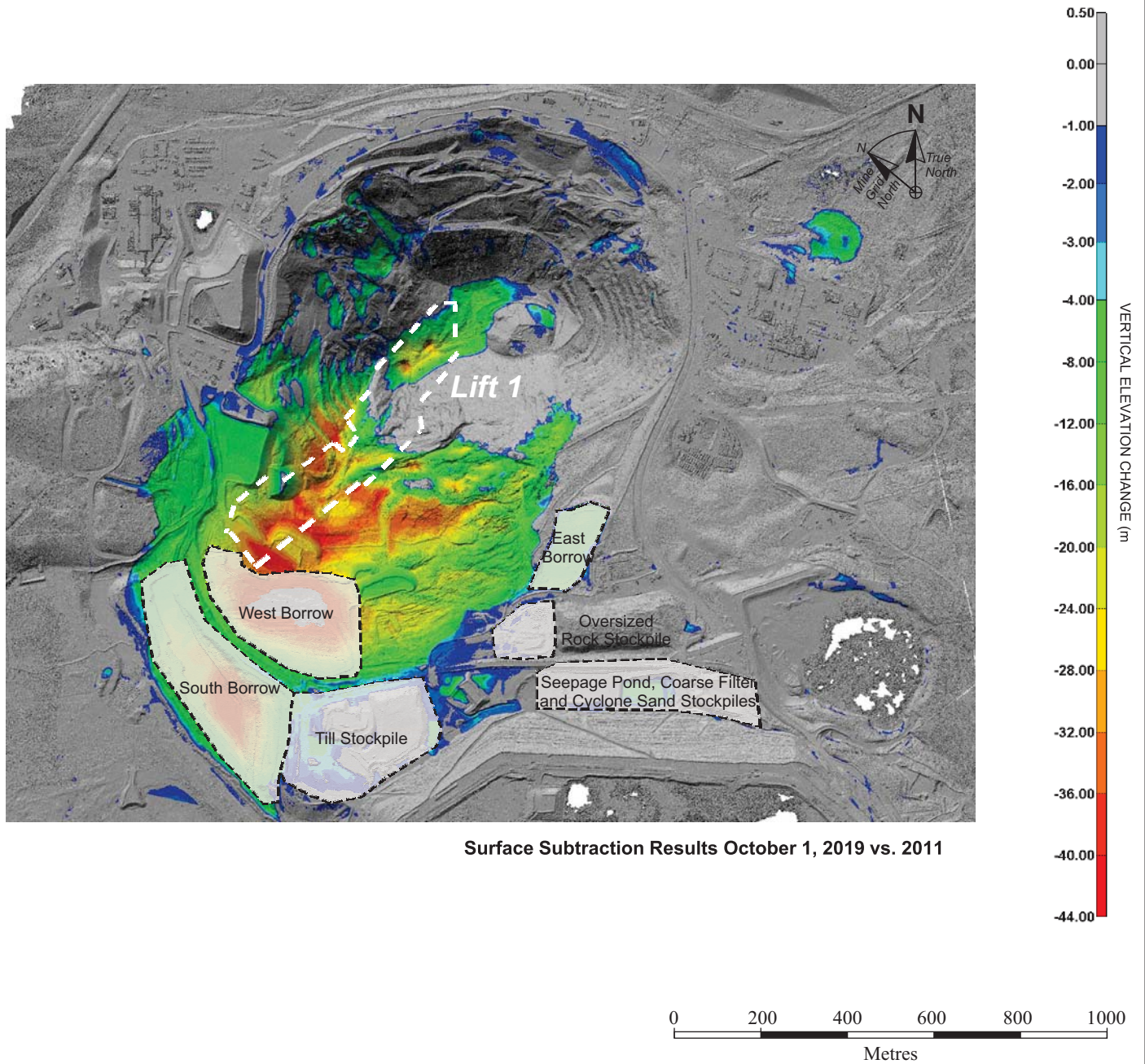
Typically, as the draw column matures, the rock fragmentation becomes finer due to secondary fragmentation. Hang-ups are still observed within drawpoints. The highest frequency of hang-ups occurs on the cave boundaries, and in early draw column height within the moderately fractured rock. As anticipated, there are also random hang-up occurrences within the regular highly fractured rock and mature drawbells.

SURFACE SUBSIDENCE

Surface subsidence was observed as the West Cave progressively migrated and broke through to the surface followed by the breakthrough of the East Cave into the open pit. The impact of the subsidence is recorded by instrumentation, visual observations, aerial photography (using drones), and has been estimated using empirical and numerical methods

Figure 16-13 shows the extent of the subsidence from 2011 to October, 2019. Subsidence contours are obtained through monthly flyovers by drone. An exclusion zone exists and is defined by safety inspections and used as a control for access around the subsidence area.

Figure 16-14 outlines the most recent numerical modelling work completed by Beck. The contours show the vertical displacements at the end of mining Lift 1 and B-3 (Beck, 2019).



Surface Subtraction Results October 1, 2019 vs. 2011

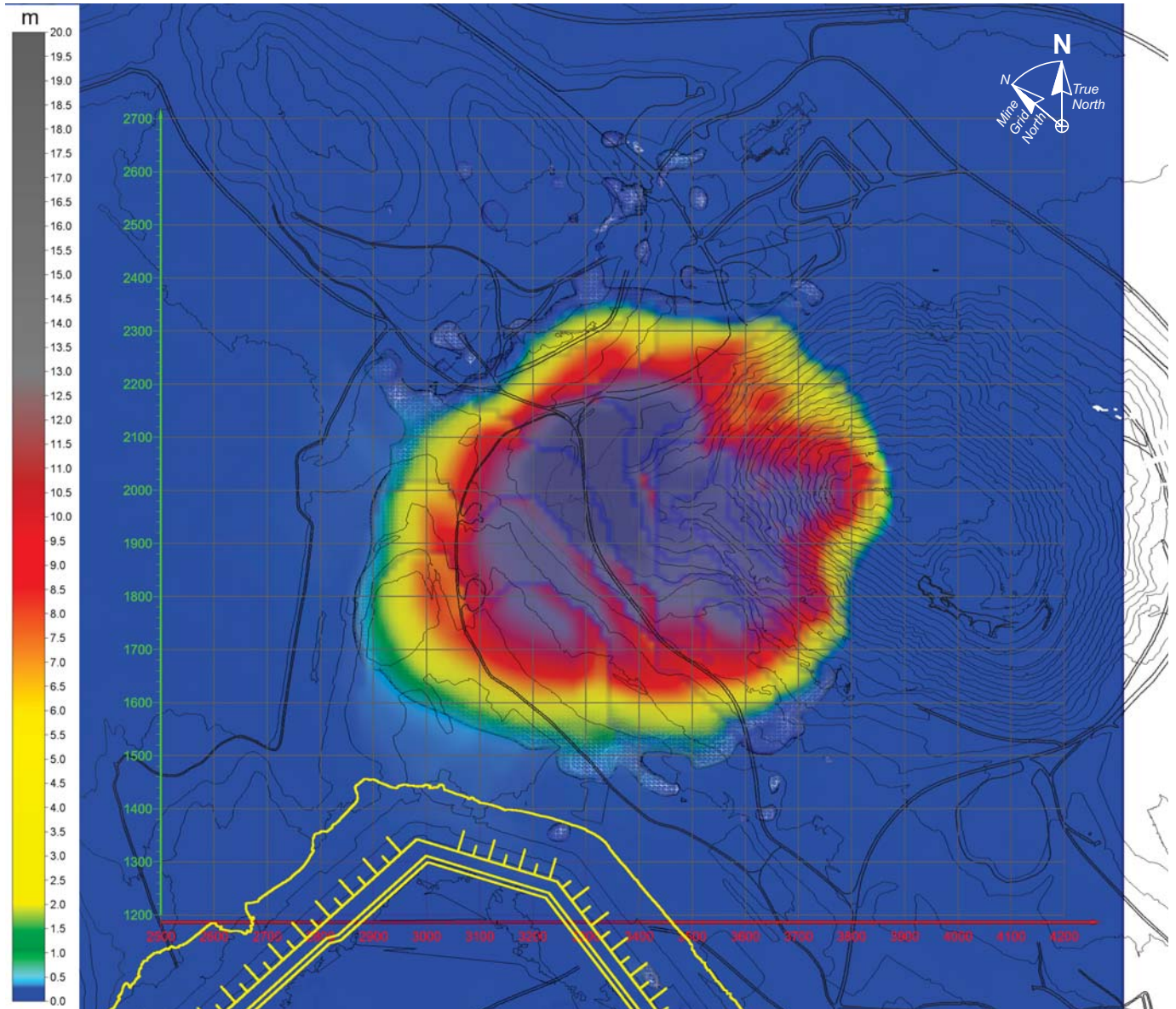
Figure 16-13

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**Surface Expression of
Subsidence**



**Forecast Surface Movement at the End of Lift 1
(West Cave [B1], East Cave [B2], Recovery Level and Pillar Mining)**

Figure 16-14

0 100 200 300 400 500
Metres

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New Afton Mine
British Columbia, Canada
BECK Cave Simulation

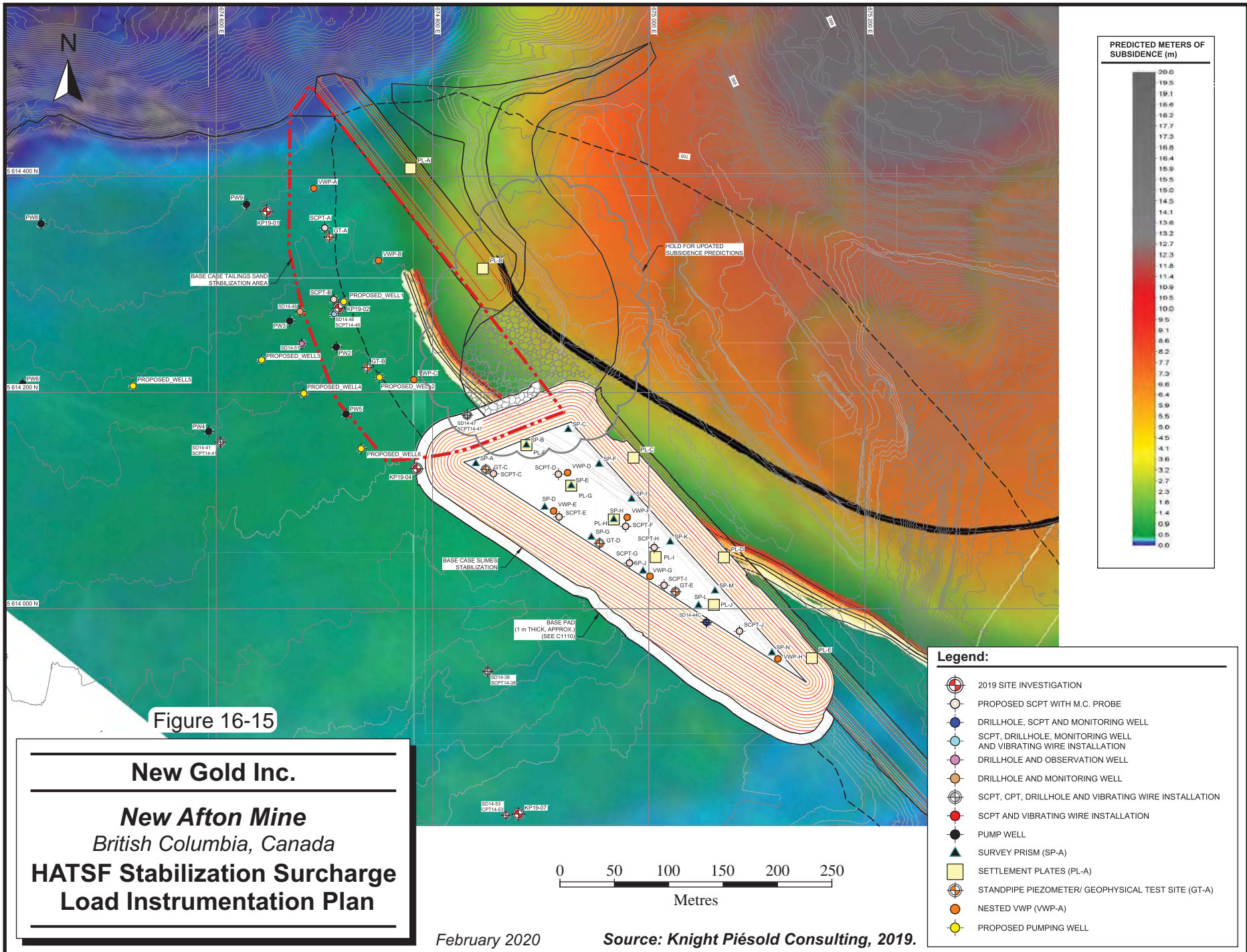
HISTORIC AFTON TAILINGS STORAGE FACILITY STABILIZATION

The objective of the Historic Afton Tailings Storage Facility (HATSF) and New Afton Tailings Storage Facility (NATSF) stabilization program is to stabilize areas of the facility by changing the material's physical state to that which is non-flowable. Achieving a non-flowable condition goes beyond what is required to prevent the rapid uncontrolled inflow of mobilized tailings and/or water into the mine workings. New Afton has implemented a stringent subsidence monitoring and adaptive management plan during the stabilization and mining period to effectively manage risk. The stabilization program involves NATSF and HATSF Engineers of Record (EoR), with additional consultant review, following best industry practices for worker safety and operations.

The mitigation of the mudrush potential from the historic Afton mill tailings could be achieved by removal of the source material or stabilization of the source material. The removal of the tailings was considered to be too costly and posed a number of issues. Therefore, an investigation program was initiated to outline the characteristics of the historic Afton mill tailings material and the HATSF itself.

The work outlined areas of sand and slimes, each with differing characteristics. After removing the surface pond, and the collection of data, a test program of surface dewatering, wick drains to drain the tailings, and preloading with an eleven metre high preload (including a one metre test pad base) was undertaken and the “stabilized” tailings were collected for testing.

The proposed HATSF stabilization plans are shown in Figure 16-15, including planned and existing monitoring wells and instrumentation, the sand and slime stabilization areas, and an overlay of the predicted final B3 subsidence profile. HATSF dewatering to stabilize the sandy tailings was initiated in 2016 and the well network has been expanded since then based on dewatering results. The stabilization is expected to be completed in 2021 for B3 and C Zone areas. Stabilization of the slimes will be conducted in 2020 and completed in 2021 for B3, with C Zone stabilization being completed in 2022



CAVE MONITORING (SURFACE AND UNDERGROUND)

SEISMIC SYSTEM

A microseismic system is used to capture mining induced seismicity. The system expands with the development of the mine, allowing for the microseismic events to be source located in response to ongoing caving activity. There are currently two active seismic stations with 15 geophones and 12 accelerometers.

TIME DOMAIN REFLECTOMETRY SYSTEM

The time domain reflectometry (TDR) system is used to track and monitor the cave profile as the mining front advances to surface and along the footprint. Seven TDR cables were installed to successfully monitor the West Cave to breakthrough, ten TDR cables have been installed to track the East Cave progression, and four TDR cables have been installed to monitor tailings dam infrastructure and help to provide early warning of possible mining interaction with the HATSF.

MULTI-POINT BOREHOLE EXTENSOMETER SYSTEM

Ground movement monitors, known as multi-point borehole extensometers (MPBX), are used to measure displacement of the rockmass near an opening. They are typically installed vertically in the back of a cablebolted intersection or cablebolted area of larger span. The area chosen for monitoring is based on the geology type, structural complexity, or expected high stress locations. The installed instruments are greater than eight metres long, extending further than the cablebolts (longest support type) to measure potential deformation of the rockmass within and two metres past the cablebolt. MPBX are also installed on surface to monitor subsidence related deformation and separate MPBX locations to assist with monitoring dam construction.

ELEXON NETWORKED SMART MARKERS

A wireless battery powered system for subsurface monitoring is used in challenging geotechnical environments where the use of cabled monitoring systems is impossible, or where cables are at high risk of being damaged by moving ground. The system provides a more robust and versatile alternative to other cave monitoring systems as the data is transmitted wirelessly through rock, and thus is not vulnerable to hole shearing/dislocation.

ELEXON CAVE TRACKERS

Cave Tracker provides real-time insight into cave flow and cave propagation which aids to mitigate the risks of block caving. Cave Tracker uses magnetic beacons which are embedded in the orebody. The technology within these trackers spin at a particular speed to generate a magnetic field. The system operates through a series of beacons that are embedded in the mine, which can be tracked in 3D as they move with the fragmented rock of the orebody. The ability to track beacon movement allows mine engineers to determine which parts of the cave are moving and which parts are not. These beacons are wireless and robust and can remain underground for years, withstanding the rigours of the underground cave environment.

DRONE FLYOVERS

Drone flyovers are conducted monthly or as needed and are dependent on weather conditions. These aerial surveys are used to generate point clouds and surfaces that can be compared to previous surveys. The comparison assists with the understanding of subsidence location and magnitude. In addition, the flyovers can provide information about construction workings and ore/waste stockpiles.

AIR GAP ANALYSIS

Air gap is the gap between the back of the cave and the top of the broken ore. The air gap occurs when ore material is extracted from the cave that caves from the back and walls. It is important to maintain a production rate that will provide a manageable air gap in the cave. A large air gap, over a large area, leads to the risk of an air blast. The risk of an air blast is gone once the cave has broken through to surface as the air gap no longer exists. At New Afton, the goal has been to maintain the average height of air gap less than 20 m in order to mitigate against the risk of air blast. The East and West Caves have broken through to surface and no longer pose an air gap risk. Air gap analysis will again be required when caving in B3 begins and then when C Zone caving begins.

MUDRUSH RISK PROCEDURE

A Drawpoint Classification Matrix (Figure 16-16) and Mudrush Risk Management Standard Operations Procedure (SOP) is in place to address the mudrush potential, as a result of the

cave groundwater interaction. Along with the classification matrix and SOP, other preventative measures include:

- Routine drawpoint inspections monitoring for moisture and fragmentation (i.e., coarse vs. fine material), performed by Geotechnical/Geology personnel.
- Establishing wet drawpoint tracking through Pitram; daily reports distributed to the Geotechnical, Geology, and Planning departments based on observations reported to dispatch by underground personnel.
- Publishing a weekly mudrush risk map that displays data collected from the past week's geology/geotechnical inspections.
- Regular discussions with underground personnel regarding location and risk categories.

The SOP was reviewed and revised in 2019 to include:

- Definition of "Extreme" now includes high risk drawpoints idle for more than 36 hours.
- Updated moisture definition of wet drawpoints.
- Updated berm requirements.
- Updated requirements for travelling in front of high risk drawpoints.
- Updated process for removing drawpoints from high risk.
- Added steps required for re-opening drawpoints closed as low risk, medium risk, or high risk.

MANAGEMENT OF CAVE BREAKTHROUGH INTO AFTON PIT

The cave has extended into the old Afton open pit. To mitigate against the potential inflows from the open pit when the cave breaks into the pit, the following actions have been taken:

- Interception of surface groundwater flow before the pit perimeter.
- Dewatering and stabilization of material and debris in pit bottom.
- Production level drawpoint monitoring and data recording.
- Communication of increased moisture levels recorded at the production level.
- Mudrush Risk Management SOP review and update as required.

Figure 16-17 shows the East and West Cave mudrush potential.

FIGURE 16-16 MUDRUSH RISK MATRIX

MUDRUSH RISK – DRAWPOINT CLASSIFICATION MATRIX

DRAWPOINT CLASSIFICATION - MUCK CONDITIONS

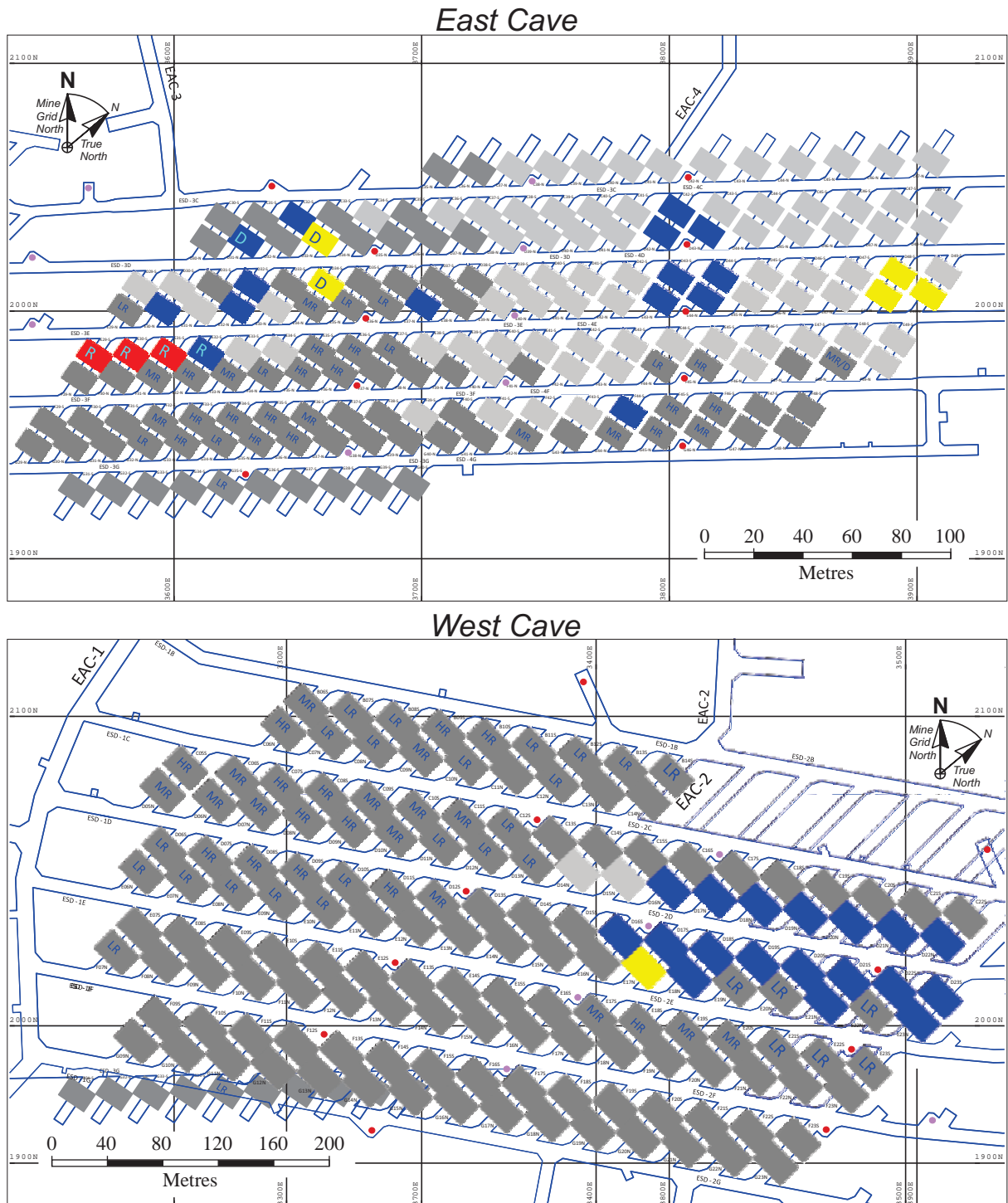
	COARSE MUCK 50mm < 30%	FINE MUCK 50mm > 30%
DRY No Risk	A Dry(<4% moisture)	B Dry(<4% moisture)
DAMP Low Risk	C Damp (4-7% moisture)	D Damp (4-6% moisture)
MODERATE Med Risk	E Damp (7-10% moisture)	F Damp (6-8% moisture)
WET High Risk	G Wet (>10% moisture)	H Wet (>8% moisture)

DRAWPOINT CLASSIFICATION - RISK

- NO RISK - DRAWPOINTS A, B
- LOW RISK - DRAWPOINTS C, D
- MEDIUM RISK - DRAWPOINTS E, F
- HIGH RISK - DRAWPOINTS G, H

DRAWPOINT CLASSIFICATION - ACCESS

- NO RISK DRAWPOINTS (A, B) – Unrestricted access; follow mud rush SOP
- LOW RISK DRAWPOINTS (C, D) – Unrestricted access; follow mud rush SOP
- MED RISK DRAWPOINTS (E, F) – Unrestricted access; follow mud rush SOP
- HIGH RISK DRAWPOINTS (G, H) – Restricted access. Remote mucking required (Follow Mud Rush Risk SOP)



Legend:

	Dry / No Risk		Risk at Time of Closure
	Damp / Low Risk (LR)		Draw Each Shift
	Wet / Moderate Risk (MR)		Remote Muck
	Wet / High Risk (HR)		Ore Pass
	Extreme Risk (ER)		Vent Raise
	Closed Drawpoint		

New Gold Inc.

New Afton Mine
British Columbia, Canada
West and East Cave
Mudrush Potential

February 2020

Source: New Gold, 2020.

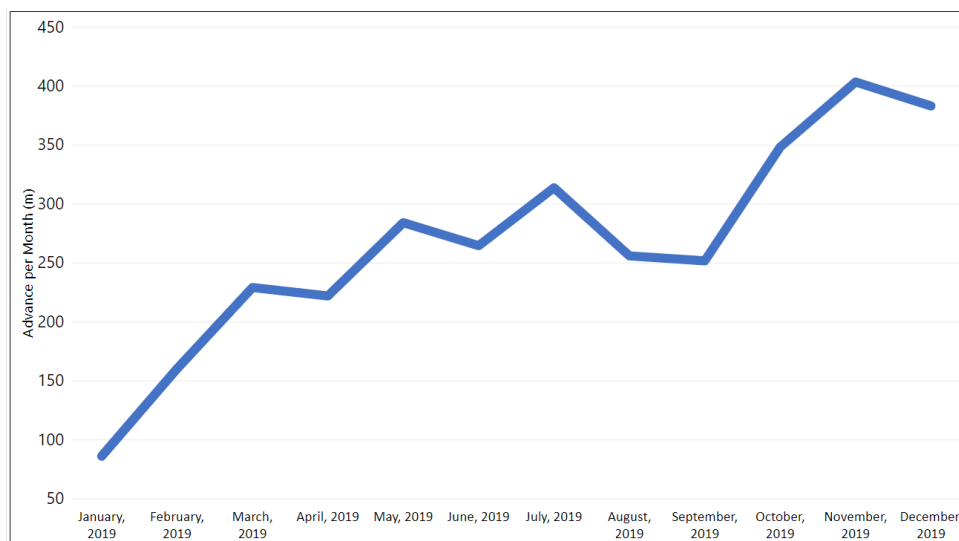
DEVELOPMENT SCHEDULE

LATERAL DEVELOPMENT

Lateral development is advanced using standard hard-rock development techniques. The LOM development is listed in Table 16-5. Mine development totalled 1,427 m in 2017, zero in 2018, and 3,203 m for year-end 2019. Development in 2018 was curtailed by New Gold as a cost saving measure. In 2019, development towards the B3 and C Zones was re-started.

The monthly advance for 2019 is shown in Figure 16-18. Development rates have generally increased through the year to an average of 12.3 m/d in the final three months. Development advance for 2020 to 2023 is required to be approximately 20% higher than the advance in the final three months of 2019, however, it is in line with company crew achievements in the development of Lift 1. RPA is of the opinion that meeting the development forecast will require ongoing effort and management attention.

FIGURE 16-18 2019 MONTHLY DEVELOPMENT ADVANCE



The advance rates used are 75 m per month for single headings and 110 m per month for the main ramps to the C Zone. Large heading sizes are 5.8 m to 6.0 m high by 5.8 m wide while small heading sizes are 4.3 m to 5.0 m high by 4.2 m to 4.5 m wide. RPA considers these advance rates to be achievable and within industry norms.

TABLE 16-5 LOM DEVELOPMENT FORECAST
New Gold Inc. – New Afton Mine

		2020	2021	2022	2023	2024	2025	2026
C Zone - Large	m	2,849	3,872	4,438	1,918	-	-	-
C Zone - Small	m	-	-	893	2,823	1,613	1,200	380
C Zone - Total	m	2,849	3,872	5,331	4,741	1,613	1,200	380
B3 - Large	m	490	40	40	-	-	-	-
B3 - Small	m	1,946	1,426	28	-	-	-	-
B3 - Total	m	2,436	1,466	68	-	-	-	-
Total Development	m	5,285	5,338	5,399	4,741	1,613	1,200	380
Daily Advance	m	14.5	14.6	14.8	13.0	4.4	3.3	1.0

VERTICAL DEVELOPMENT

Vertical raises are used as a means of ventilating between multiple levels and as ore passes between the extraction and undercut levels down to the haulage level. Vertical development has been completed with raise bore machines. Primary ventilation raises were bored to a 3.5 m diameter and secondary ventilation raises as well as ore passes were bored to 2.4 m diameter.

B3 development consists of two ventilation raises and two ore passes. The raises were completed in 2019, with the truck loading chutes to be installed in the ore passes in 2020.

The C Zone will consist of ten vent raises, with two intersecting up to Lift 1 and two providing ventilation to the declines. The extraction level will have six ore passes connecting to the haulage level and one connecting from the undercut level above. The split level will have four ore passes connecting to the haulage level.

Vertical development is typically supported by shotcrete unless there is significant wear or deterioration of the raises. Rehabilitation of compromised raises is done by lowering a steel form into the raises and pouring concrete between the form and the existing raise.

PRODUCTION

New Afton also segregates waste in order to improve mill feed grades. Material located in the lower portion of the draw columns having an NSR value less than \$7/t can be segregated from ore material. This material is stored in designated waste storage bays on the haulage level,

and then run through the crush and convey system in parcels. A belt plow on surface removes the material from the conveyor before it reaches the mill feed stockpile.

LIFE OF MINE PLAN

The current LOM includes mining approximately 48 Mt of ore averaging 0.68 g/t Au, 1.9 g/t Ag, and 0.77% Cu until the year 2029. This includes the B and C Zones. The intentional deferral of development through 2018 has reduced the mine production capacity, and the production is forecast to fall below the design capacity from 2021 to 2024. Milling continues into 2030 with a total of 49.6 Mt milled.

The LOM plan for the Mine is shown in Table 16-6.

TABLE 16-6 LOM PRODUCTION SCHEDULE
New Gold Inc. – New Afton Mine

Year	Ore Milled		Au Grade	Ag Grade	Cu Grade	Au Recovery	Ag Recovery	Cu Recovery	Cu Con Grade
	(000 t)	(tpd)	(g/t)	(%)	(g/t)	(g/t)	(%)	(%)	(% Cu)
2020	5,560	15,191	0.53	2.5	0.81%	82.1%	75.7%	83.4%	30.97%
2021	4,577	12,539	0.59	2.1	0.75%	87.0%	72.0%	87.3%	25.56%
2022	4,614	12,641	0.63	1.8	0.75%	87.3%	73.3%	91.2%	24.25%
2023	4,740	12,987	0.62	1.8	0.70%	86.4%	70.5%	89.7%	24.27%
2024	4,679	12,785	0.53	1.6	0.62%	81.5%	71.9%	88.6%	24.75%
2025	4,637	12,705	0.73	2.0	0.76%	88.3%	76.6%	91.5%	24.57%
2026	5,122	14,034	0.89	2.3	0.93%	87.7%	77.1%	91.0%	24.40%
2027	5,121	14,029	0.92	2.3	1.01%	87.9%	79.1%	91.4%	24.47%
2028	4,911	13,417	0.78	1.8	0.83%	87.9%	77.2%	91.8%	24.20%
2029	4,655	12,753	0.47	1.3	0.50%	85.6%	71.1%	88.2%	24.52%
2030	956	11,851	0.40	1.1	0.41%	85.9%	73.4%	89.8%	24.65%
Total	49,572		0.67	1.9	0.76%	86.5%	74.9%	89.5%	

As the mining in Lift 1 is being completed, the near surface mesogene and supergene ore types form an increased percentage of the mill feed in 2020 leading to the higher copper concentrate grade in 2020. The planned distribution of ore type over the LOM is shown in Table 16-7.

TABLE 16-7 ORE TYPE DISTRIBUTION
New Gold Inc. – New Afton Mine

Year	Hypogene (Lift 1)	Hypogene (B3 & C Zone)	Mesogene	Supergene	Background & Waste
2020	38%	0%	5%	35%	22%
2021	52%	15%	4%	5%	24%
2022	17%	53%	1%	1%	28%
2023	17%	55%	1%	0%	27%
2024	22%	39%	3%	1%	35%
2025	1%	66%	4%	0%	28%
2026	0%	83%	4%	0%	13%
2027	0%	80%	6%	0%	15%
2028	0%	70%	3%	0%	27%
2029	16%	27%	2%	0%	56%
2030	0%	17%	3%	0%	80%
Total	16%	48%	3%	5%	28%

MINE INFRASTRUCTURE

ORE AND WASTE PASSES

Ore passes at New Afton connect production levels with the haulage level. Each undercut access drive has a single ore pass. This ore pass handles the swell muck from undercutting activities. Ore passes are spaced such that the maximum tram distance from any drawpoint is less than 150 m. Lift 1 extraction level ore passes are short, with an average capacity of 250 tonnes. B3 ore passes are longer at 34.5 m and can hold up to 950 tonnes.

Waste is handled through the same production ore passes but kept separated using strict procedures and good communication between extraction and haulage level employees. Waste handling is a batch process. After the ore pass is pulled empty waste material is handled through the pass and placed into one of two waste storage bays in the haulage level.

CRUSHING AND CONVEYING

All ore and waste from B1 and B2 is moved to surface via the crusher and conveyor system. The system consists of a gyratory crusher located on the haulage level. Trucks and LHDs dump directly into the crusher. Below the crusher is an 800 tonne surge bin that feeds onto the first of five conveyor belts to surface. The conveyor system is hung off the back of the conveyor decline to allow vehicle traffic underneath it. The entire system is controlled by one

employee from a cab at the crusher and two employees to perform system checks and empty the tramp steel bin.

The gyratory crusher has two dump pockets to increase trucking efficiency and shorten tram times. No grizzly is present on the crusher as sizing is performed on the extraction level. Crushing is performed at its smallest gap, a 90 mm closed side setting, to increase efficiency in the mill.

The jaw crusher installed during mine development is available as a back-up crusher and has a capacity of 6,700 tpd.

The peak conveyor capacity is 1,200 tonnes per hour (tph). An average rate of 1,000 tph is typical. Through shift change, the conveyor system is run remotely from the mine control room providing an extra hour of conveying. Once the belts are emptied, the system is shut down to conserve energy.

Ore from the B3 area will be trucked up the ramp from the B3 haulage level to the existing gyratory crusher.

For the C Zone, a second crusher will be installed with the crusher feed dump at the 4490 level. The conveyor system will be extended to gather material from the crusher discharge. Ore and waste will be transported by conveyor to surface.

WASTE

Waste handling is an important part of the crushing and conveying system. Waste is stored in two waste holding areas on the haulage level. Each waste holding area has a truck dump capacity of 2,000 tonnes, for a total of 4,000 tonnes. Waste handling through the crush and convey system is a batch process. Once switched to waste, material is crushed and conveyed to surface where a belt plow diverts material to a separate stockpile.

EMERGENCY EGRESS (ALIMAK) AND REFUGE STATIONS

Refuge stations with fresh air, water, and supplies are spaced throughout the underground workings. Over 120 persons can find safety at New Afton's refuge stations at any given time.

In the event an emergency blocks the primary access to the mine (the conveyor decline), emergency egress is available through the VR5 fresh air raise. This raise is equipped with an Alimak elevator and a staging area to safely transfer all underground employees to surface.

UNDERGROUND DEWATERING SYSTEM

Underground dewatering at New Afton consists of two vertical sumps located at the bottom of the B1/B2 development. Each sump has a capacity of approximately 240 m³ and its outflow is connected to a single dewatering system of three booster stations arranged along a 200 mm dewatering line. Groundwater inflow and mining water consumption adds 20 m³/hr of water to the system. The system cycles three times every 24 hours and runs for approximately two hours each cycle. The dewatering system is fully automated. One of the two sumps is kept empty as 100% or 12-hour backup capacity, while the other handles incoming water. Maximum pumping rate of the system is approximately 150 m³/hr.

EXPLOSIVES HANDLING AND STORAGE

There are two explosives magazines on site, one on surface and one underground. The surface magazine holds ammonium nitrate fuel oil (ANFO), bulk emulsion, and boosters. Development mining explosives and production explosives are held in separate areas. The underground magazine has four separate bays, capable of holding all types of explosives. Deliveries are received weekly and placed in the appropriate storage area.

Additional explosives magazines to support the C Zone will be developed to provide efficient access to the explosives.

UNDERGROUND MAINTENANCE SHOPS

All maintenance work can be performed underground in the 2,500 m² maintenance shop. The shop consists of one high bay equipped with a 40-tonne overhead crane, three smaller bays, one welding bay, one parts storage bay, and an access drift. Up to six underground haul trucks can be simultaneously maintained in the large high bay. Oil and grease are stored in an adjacent bay equipped with a fire door and pumped throughout the shop to dispensing racks.

FUEL BAY

A single underground fuel bay is located adjacent to the haulage level, with two satellite fuel bays located on the Lift 1 and B3 footwall. The fuel bay contains two 5,000 L fuel tanks each mounted on a cassette style mobile platform. The fuel tanks are placed inside a containment area equipped with an automatic fire door. Once per day, the fuel cassette is loaded onto a multi-purpose cassette carrier and driven to surface to be filled. In addition to fuel, the fuel bay has grease, washer fluid, and other supplies for employees to maintain their equipment.

BATCH PLANT

All concrete and shotcrete products used underground at New Afton are produced at the on-site batch plant. The truck mix style plant is operated by two employees per shift and can produce over 80 m³ of product per shift. Control of the plant is through a dedicated system that has pre-programmed recipes for each product required. Shotcrete and concrete products are delivered via 4 m³ or 6 m³ underground transmixers.

COMPRESSED AIR AND ELECTRICITY

Compressed air is run throughout the mine and is supplied by compressors located near the portal. Electrical power is reticulated through the mine at 13.8 kV via a ring main system. The electrical system will be extended to service the C Zone.

COMMUNICATIONS

The mine site runs a very extensive communication system that comprises a Fibre Optic Network and a two way Tetra based radio system. This configuration enables New Afton to provide services such as Process Control, Business Data, Seismic Monitoring, CCTV, Security Access, and Fire Alarm Network, and two way voice communication to each person on the mine site. The Tetra system is secure and users can make private user to user calls, group calls, and duplex calls to a landline. Tetra is a multi-channel system that enables each work group/area to maintain a channel of their own.

VENTILATION SYSTEM

The current ventilation layout at New Afton is a push-pull system with six vent raises to surface, three intake, and three exhaust. The intake shafts: VR5 (emergency egress), VR6, and VR7 are fitted with horizontally positioned 800 HP axial fans. The exhaust shafts: VR2, VR3, and

VR4 are fitted with horizontally positioned 600 HP axial fans. The conveyor portal that is used as the primary egress of the mine also exhausts air from the mine.

The three parallel intake shafts supply approximately 1,150,000 cfm of air to the top of the access decline, where it is split into two sections. The air supplied by VR6 and VR7 (approximately 600,000 cfm) flows down the access decline and the air supplied by VR6 and VR5 (approximately 550,000 cfm) flows down to the fresh air intake. The conveyor decline exhausts approximately 200,000 cfm from the mine with the remainder flowing through the exhaust raises. Primary flows of the mine are monitored and tracked via the on-site distributed control system (DCS).

Development areas in the mine use auxiliary ventilation, while all major production areas are ventilated using flow through ventilation design. Temporary access areas such as apex and undercut levels use fans and vent ducting to ventilate while in use.

B3 VENTILATION CIRCUIT

The B3 ventilation circuit will feed from and exhaust into the existing mine ventilation circuit. B3 will have fresh air delivered to the working area via the B3 access ramp and the B3 haulage ramp. The lower portion of the haulage ramp where trucks are loaded will be fed from a fan and ducting. Apex and undercut strike drives will be fed from fans and ducting. The air will then flow into the footwall drive where it will meet the air coming down the B3 access ramp. Flow continues to the west side of the B3 footprint where it then flows east across the extraction strike drives. The air from the B3 extraction then exhausts up two vertical raises on the eastern side of the footprint to the existing mine return air circuit.

C ZONE VENTILATION

Ventilation to the C Zone will be supplied through a push-pull system, using the same main surface fans currently supplying air to Lift 1 and B3.

Fresh air will enter the footwall drive from the access decline, and a 3.5 m diameter vertical raise from the Lift 1 fresh air base. It will then flow through the extraction and split-level strike drives from west to east before entering the return air circuit. Fresh air will be provided to the undercut level using auxiliary fans and flexible ducting from the footwall drive. Fresh air to the haulage level will flow through each haulage leg and exhaust down to the conveyor drives via

vent raises in each haulage leg. The conveyor drives and a second 3.5 m diameter raise will exhaust all the air up to the Lift 1 return air circuit, which will exhaust the air out of the mine. (Figure 16-19).

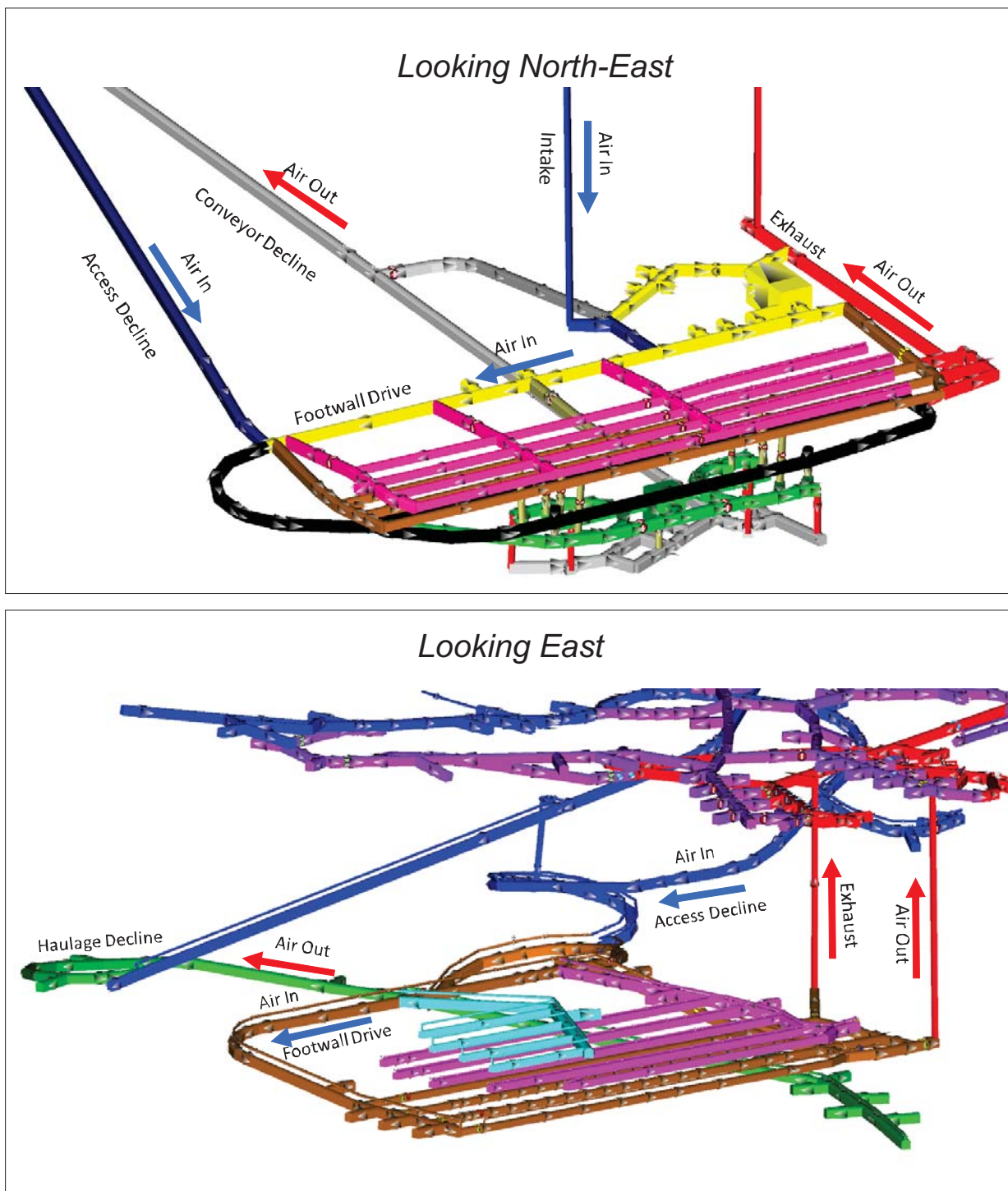


Figure 16-19

Not to Scale

New Gold Inc.
New Afton Mine
British Columbia, Canada
C and B3 Zone
Ventilation Schematic

GROUNDWATER MANAGEMENT

PIT DEWATERING AND DEBRIS STABILIZATION

There are well sites positioned upstream of the Afton pit to reduce the amount of water entering the pit and thus minimize water entering the underground workings via the breakthrough to the pit. The Afton pit has been drained of all significant water and the mud has been dewatered. Water entering the pit now flows down into the mine. All water recovered from the site dewatering systems is pumped to the NATSF.

The LOM water balance for the mine indicates that there is an average of 23 m³/hr of water discharged from the mine. There is 10 m³/hr (44 USgpm) discharged with the ventilation air and 13 m³/hr (57 USgpm) pumped from the mine.

MINE EQUIPMENT

The current mine equipment fleet started with the equipment brought into service for the development of the mine access. The equipment fleet has been expanded over time to meet the requirements of the operation. There are 123 pieces of mobile equipment as shown in Table 16-8.

New Afton has two LHDs capable of tele-remote operation and has the mine permit amendment for automated use of the units. The LHDs provide increased utilization as they can be operated from a control room on surface and reduce operator exposure to potential mudrush conditions.

TABLE 16-8 MAJOR MINE EQUIPMENT LIST
New Gold Inc. – New Afton Mine

Type	Model	Quantity
Drill jumbo	Sandvik two boom	4
Rock bolter	Tamrock/Sandvik Bolters	6
LHD	Sandvik LH410	2
LHD	CAT R1600	10
LHD	CAT R2900G	4
Truck	CAT AD45	7
Long hole drill	Sandvik DL 420 & 430	3
Explosives	Emulsion & ANFO Loaders	1
Concrete mixer	Transmixers	5
Shotcrete	Normet Sprayers	3
Utility	Scissor deck, boom truck & other	8
Utility	Maclean Blockholer	1
Utility	CAT Skid Steer	2
Utility	CAT 140 M Grader	2
Utility	CAT TH407 Telehandler	4
Utility	CAT 930G IT Loader	4
Utility	Kubota tractor/loader	2
Utility	Personnel vehicles	33

17 RECOVERY METHODS

The process plant has been in operation since mid-2012. Throughput in the process plant has been averaging above the nameplate of 11,000 tpd since early 2013. A mill expansion was completed in 2015 to add a tertiary stage of grinding and additional flotation cleaning capacity. This allowed throughput to increase to a peak average of 16,420 tpd in 2017. Throughput for 2019 averaged 15,300 tpd.

The simplified flowsheet, including the expansion, is shown in Figure 17-1.

GRINDING

Run-of-mine (ROM) ore is crushed to minus 150 mm through a 1,100 mm x 1,800 mm FLSmidth gyratory crusher located at the cave extraction level. The ore is then transported to surface via five conveyor belts. The final conveyor belt has a plow, which allows waste and low-grade ore to be diverted from the mill feed. The remaining ore discharges onto a 120,000 wet metric tonne (wmt) live capacity stockpile. Underneath this stockpile, two 1.8 m x 11 m apron feeders regulate the flow of ore onto the SAG mill feed conveyor. The SAG mill is an 8.5 m diameter x 4 m long Farnell-Thompson mill, driven by a 5,220 kW GE motor with a variable speed drive. The SAG mill discharge is screened over a 2.4 m x 6.1 m Deister double-deck screen with 6 mm x 28 mm apertures on the lower deck. The screen-deck was upgraded from single to double deck in 2015 to allow for an increased milling rate. Both the upper and lower deck oversize are recycled to the SAG mill feed conveyor, with the option of crushing this recycle stream using an FLSmidth XL600 Raptor cone crusher.

Secondary grinding is accomplished using a 5.5 m diameter x 9.8 m long Farnell-Thompson fixed speed ball mill, driven by a 5,220 kW motor, in closed circuit with seven (five operating) Krebs GMax-26 hydrocyclones. Approximately 7% of the cyclone feed is diverted to a Gekko inline pressure jig and magnetic separation circuit for native copper and gold recovery and magnetite rejection, with concentrate reporting to the concentrate thickener. Approximately 15% of the secondary underflow feeds an Outotec Skim-Air 500 flash flotation cell with concentrate reporting to the rougher concentrate regrind circuit, and the tails reporting to the ball mill feed. The cyclone overflow reports to the tertiary circuit.

The tertiary grinding circuit was added as part of the 2015 mill expansion project. Prior to this, the ball mill cyclone overflow reported directly to rougher flotation. Tertiary grinding is accomplished using a Metso Vertimill 3000 in closed circuit with seven (five or six operating) Krebs GMax-26 hydrocyclones. The tertiary cyclone overflow reports to the rougher flotation cells. Approximately 15% of the tertiary cyclone underflow reports to a continuous CVD42 Knelson concentrator for native copper and gold recovery with concentrate reporting to the cleaner inline pressure jig feed. Both the SAG and ball mill circuit control is supported with an expert control system.

FLOTATION

The tertiary grinding cyclone overflow flows by gravity into the rougher flotation circuit, which consists of two staged flotation reactor (SFR) cells in series followed by six 100 m³ flotation tank cells in series. The two SFRs were commissioned in Q2 2017. The concentrate from the rougher flotation cells is collected in launders and flows by gravity to the regrind circuit; the tailings from the final rougher cell is discharged into the tailings pumpbox.

The regrind circuit grinds the rougher flotation concentrate, to decrease the particle size to 80% passing 35 µm to 40 µm, prior to it being processed in the cleaner flotation cells. The regrind circuit consists of a 932 kW Vertimill in closed circuit with the regrind cyclopac. The underflow stream from two of the operating regrind cyclones is processed through two XD-40 Knelson concentrators to recover liberated gold and native copper from the regrind circuit. The Knelson concentrate discharges to the 3rd cleaner concentrate pumpbox, where it is pumped to the concentrate thickener. The Knelson concentrator tailings are discharged back to the regrind cyclone feed pumpbox. The regrind cyclone overflow discharges into the cleaner flotation circuit and the tailings flow to cleaner scavenger flotation. Cleaner scavenger tailings report to the tailings pumpbox. Three SFR cells were added to the head of cleaner flotation as part of the mill expansion project in 2015 to increase cleaner flotation capacity. The concentrate from these three cells is combined with the inline pressure jig final concentrate, 3rd cleaner concentrate, and regrind Knelson concentrates to produce the final copper concentrate for dewatering.

DEWATERING

The final concentrate is pumped to the concentrate thickener, where the solids achieve an underflow slurry density of approximately 55% solids. The slurry is pumped to an agitated tank and subsequently pumped into one of the two filter presses, where the concentrate is dewatered to less than 9% moisture. The dewatered concentrate is discharged from the filter presses directly into the concentrate storage shed, before being loaded onto trucks and transported to the Port of Vancouver for shipping.

TAILINGS

Currently, tailings streams from the rougher flotation and cleaner-scavenger flotation circuits are discharged into the tailings pump box and pumped to the tailings storage facility (TSF). The tailings are cycloned at the TSF for use in internal tailings dam construction.

In 2021, a tailings thickener and associated auxiliary equipment will be integrated to process the combined rougher and cleaner-scavenger tailings. The thickened product will be placed into the TSF. Process water that is recovered from the dewatered tailings will be reused in the mill process. In 2022, the amendment system will be integrated to strengthen the tailings to facilitate deposition into the HAOP and HATSF.

TAILINGS STORAGE FACILITIES

NEW AFTON TSF AND POTHOOK TSF

The NATSF impoundment is contained by topography and five centreline raised dams, termed Dam A, Dam B, Dam C, South Dam, and West Dam. Currently dams A, B, and C are joined to form one continuous dam and will form one single ring dyke with the South and West dams when they are raised to their ultimate elevation. The TSF is founded on both native materials (bedrock and glacial sediments) and waste rock from historical mining (BGC, 2018). The waste rock underlying the TSF is up to 70 m thick where Dam B and C meet and covers approximately ¼ of the TSF footprint. The waste rock foundation of the TSF basin is lined with a 1.5 mm thick smooth linear low-density polyethylene (LLDPE) geomembrane liner that extends up through the dams.

The NATSF dams were initially constructed in 2011. The South and West dams were constructed to the ultimate elevation of 5,765 m, while Dams A, B, and C were constructed to

elevation 5,735 m and would be raised as the TSF is operated. The South and West dams are rockfill shell dams with a compacted till core and chimney filters on both sides of the core. In 2015, the upstream faces of these dams were lined with a LLDPE geomembrane, anchored to the till foundation and dam crest. Dams A, B, and C were initially constructed as compacted till starter dam and have been centreline raised with either a compacted till core or LLDPE geomembrane depending on the foundation material. Where the foundation was till, the dam consists of a central till core supported by cyclone sand on both sides. Where the foundation was waste rock, the dam consists of the LLDPE geomembrane liner and is supported by cyclone sand on both sides (BGC, 2018).

The NATSF design was amended in 2018 to raise the ultimate elevation of the facility from 5,765 m to 5,776 m. This expansion was required to provide adequate storage to contain the remaining Lift 1 tailings, which have had a lower than expected deposited density of 1.17 t/m³ and have filled up the TSF faster than expected. In addition, the design has been further amended to allow the substitution of downstream cyclone sand with rockfill for all of the NATSF dams. Where rockfill is used an additional filter zone is placed between the rockfill and sand shells (BGC, 2018).

Dam raises will be conducted annually until the ultimate elevation of 5,776 m is reached in 2021, with deposition continuing until the TSF is full in 2022. In 2021, the tailings material deposited into the NATSF will be thickened utilizing a paste tailings thickener. At that time, the reclaim water pond will be removed to implement an on-demand water strategy to supply water needs for the site. This strategy aims to minimize the need for water stored on site, which in turn reduces water losses to evaporation. In 2021, with the transition to thickened tailings, Pothook TSF will be utilized for surface water storage.

Five seepage ponds are located on the downstream sides of South Dam, West Dam, and dams A, B, and C, named the South Dam and West Dam seepage ponds and Seepage Ponds 1, 2, and 3, respectively. Seepage Pond 1 is used to collect seepage from Dam A and is pumped back into the NATSF tailings pond. Seepage no longer reports to Seepage Ponds 2 and 3 due to the permeability of the waste rock foundation in these areas. In the past, these ponds have primarily been used to collect decant water from downstream sand placement operations; however, with the switch to waste rock for the downstream shell, they are no longer utilized for this purpose. The South Dam and West Dam seepage ponds collect localized seepage and pump the water back to the NATSF.

The NATSF features the following instrumentation: 69 vibrating wire piezometers, six standpipe piezometers, eight vibrating wire liquid settlement plates, 15 survey monuments, one magnetic settlement system, and eight inclinometers. The vibrating wire piezometers and vibrating wire liquid settlement plates are automated with readings taken every six hours. The remaining instrumentation is manually read once a month.

The Pothook TSF impoundment is located at the site of the historical Pothook pit. Containment is provided by the Pothook Dam and natural topography. The Pothook Dam is a seven metre high rockfill dam that was constructed in 2008 to an elevation of 5,730 m. The dam foundation comprises glacial sediments over shallow bedrock and waste rock partially overlying the glacial sediments. The dam is a zoned rockfill dam with a low permeability central till core, filter zones, and upstream and downstream waste rock shells. The upstream face of the dam was lined with an LLDPE geomembrane in 2011 that is anchored into till foundation. The dam crest was re-established in 2017 after a survey showed that the dam was between 0.5 m to 0.8 m below design elevation presumed to be due to settlement of the waste rock shell.

The Pothook Dam features the following instrumentation: four vibrating wire piezometers, three standpipe piezometers, three vented settlement plates, four survey monuments, six magnetic settlement systems, and six inclinometers.

The NATSF and Pothook TSF do not currently have emergency spillways. The Pothook TSF formerly had an emergency spillway, however, it was removed in 2018 when poor soil conditions were encountered during spillway remediation. Overflow spillways have been designed for both TSFs with the Pothook TSF spillway planned to be constructed in 2020 and the NATSF spillway planned to be constructed at closure. The TSFs have been designed to contain the Inflow Design Flood (IDF) above the operating pond without overtopping. The IDF was defined as the Probable Maximum Flood (PMF) from a 72-hour Probable Maximum Precipitation (PMP) event. The capacity required to store the IDF at the NATSF is 0.56 Mm³ in the spring and 0.35 Mm³ in summer and autumn. At the Pothook TSF, the IDF storage capacity is 0.1 Mm³. The determination of IDF volumes are consistent with the Canadian Dam Association (CDA) guidelines published in 2013 (BGC, 2018).

The consequence classifications for the NATSF and Pothook TSF dams are Very High to Extreme. The NATSF South Dam, Dam C, and the Pothook Dam are all classified as Very High, while the NATSF West Dam, Dam A, and Dam B are classified as Extreme. The current

dam breach analysis indicates that a breach of the NATSF releasing water and tailings could cause overtopping failure of the HATSF West Dam and affect downstream communities. Since the HATSF West Dam is classified as Extreme, the classification of the West Dam, Dam A, and Dam B (all located upstream) was increased to Extreme in 2017, consistent with to the cascading failure rules outlined in the CDA (2013) guidelines (BGC, 2019a).

HATSF

The HATSF was used to store tailings produced by the historical Afton Mine between 1976 and 1997. The facility was designed as a zero water reclaim impoundment with tailings disposal via discharge points located at the northeast side of the facility. The HATSF has been under care and maintenance since operations ceased in 1997. Ownership was transferred to Abacus Mining Inc. in 2002, then to KGHM in 2011, and most recently to New Gold in 2017. The HATSF impoundment is located southwest of the mine. Containment is provided by two rockfill dams (the East and West Dams) and natural topography. The dams feature an engineered till core, filter zones, and rockfill shells. A portion of the East Dam toe is buttressed by a historic waste rock dump, however, a portion of the waste rock adjacent to the East Dam is currently being removed for use as construction material for the NATSF. This borrow is subject to the findings and recommendations of an overall HATSF East Dam stability assessment provided by the HATSF EoR. The HATSF was originally designed and permitted for an ultimate crest elevation of 5,731.5 m, however, the dams have only been constructed to elevation 5,706 m when operations ceased in 1997 (Knight Piésold, 2019).

Once the East Cave mining is complete, tailings that have been thickened and amended with cement (TAT) will be deposited into the HAOP, which will be utilized as a TSF through to the end of mine life. The HATSF is proposed as a placement location if an alternate location is required in the event that the NATSF is full and continued East Cave operations prevent placement in the HAOP. Thickening and amending the tailings will render the tailings non-flowable after deposition and reduce the amount of bleed water requiring management.

The HATSF includes a 50 m wide emergency spillway located near the north end of the East Dam. The emergency spillway was designed to safely discharge the PMF resulting from a 72-hour PMP event from the entire upstream catchment including the Alkali Creek drainage area to the HAOP.

The HATSF features the following instrumentation: 33 vibrating wire piezometers, six groundwater monitoring wells, nine slope inclinometers, 65 survey prisms, six, time domain reflectometry deformation sensors, and eight pumping wells. The instrumentation is used to support the tailings stabilization program of dewatering deposited tailings and monitor the dams for deformations related to block caving subsidence (Knight Piésold, 2019).

The consequence classifications of the HATSF dams are: Very High for the East Dam and Extreme for the West Dam. The East Dam consequence is based on the potential loss of life and economic losses, while the West Dam consequence is driven by the potential loss of life. There is a temporary housing settlement located approximately 1.4 km downstream of the West Dam and within the inundation zone of a hypothetical dam breach. The emergency spillway is sized to safely pass the PMF. The HATSF was designed to withstand the 1:10,000 year earthquake (Knight Piésold, 2019).

2019 PROCESS PLANT PRODUCTION AND COSTS

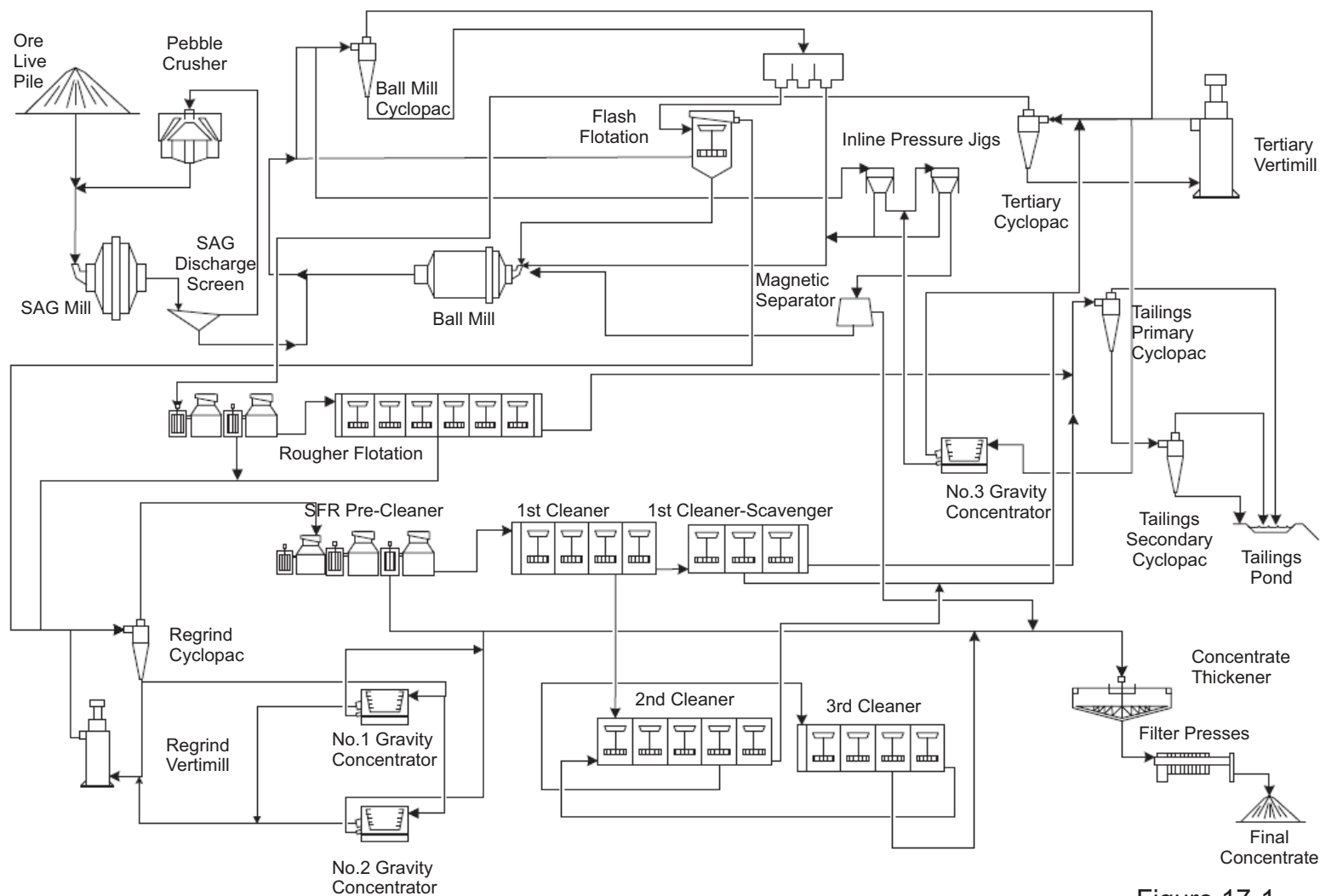
Production and costs for 2019 as reported by New Gold are summarized in Table 17-1.

Higher head grade, recovery, and throughput produced a positive production variance for gold. Low head grade and recovery produced a negative production variance for copper.

Processing costs were \$0.84 below budget for 2019.

TABLE 17-1 2019 PROCESS PLANT PRODUCTION AND COSTS
New Gold Inc. – New Afton Mine

Description	December Actual	December Budget	Variance	2019 Actual	2019 Budget	Variance
Ore Processed (000 t)	504	459	45	5,584	5,275	309
Gold						
Head Grade (g/t)	0.44	0.39	0.05	0.47	0.45	0.02
Concentrate Grade (g/t Au)	17.18	12.99	4.19	16.83	15.02	1.81
Recovery (%Au)	77.23	73.60	3.63	81.55	79.43	2.12
Gold Production (oz)	5,522	4,233	1,289	68,786	60,653	8,133
Copper						
Head Grade (% Cu)	0.69	0.86	(0.17)	0.78	0.86	(0.08)
Concentrate Grade (% Cu)	27.79	32.55	(4.76)	28.35	30.29	(1.94)
Recovery (%Cu)	79.44	83.12	(3.68)	82.68	83.47	(0.79)
Copper Production (000 lb)	6,124	7,271	(1,147)	79,439	83,894	(4,455)
Cost						
Processing Cost (US\$/t processed)	7.11	7.11	-	7.90	8.74	0.84



New Gold Inc.

New Afton Mine
British Columbia, Canada
Process Flow Sheet

18 PROJECT INFRASTRUCTURE

The Mine is in operation and has developed infrastructure to support the operations. The mine site is shown in Figure 18-1. The Mine is immediately adjacent to Highway One some 10 km from the city of Kamloops. There is a paved road from the highway to the mine offices with a manned security gate near the office. There is a network of roads on the site to service the various mine facilities.

SITE SERVICES

There are administration and operating/technical offices at the New Afton site. There are security and first aid personnel at the mine and a first aid room and ambulance. Mine rescue personnel are available at the Mine.

Potable water is brought in and fresh water is supplied from Kamloops Lake.

There is a concrete batch plant and a shotcrete batch plant on surface near the mine portal.

ELECTRICAL POWER

Currently, there is a 31.5 MW electrical power supply from BC Hydro. The power supply includes a connection to the Douglas substation. This consists of a 138 kV overhead line terminal at Douglas Street Substation and approximately 1.1 km of 138 kV transmission line. Initially, the line provided 10 MW capacity (May 2011) followed by an increase to 20 MW to 22 MW in September 2011 and lastly to 31.5 MW in April 2012.

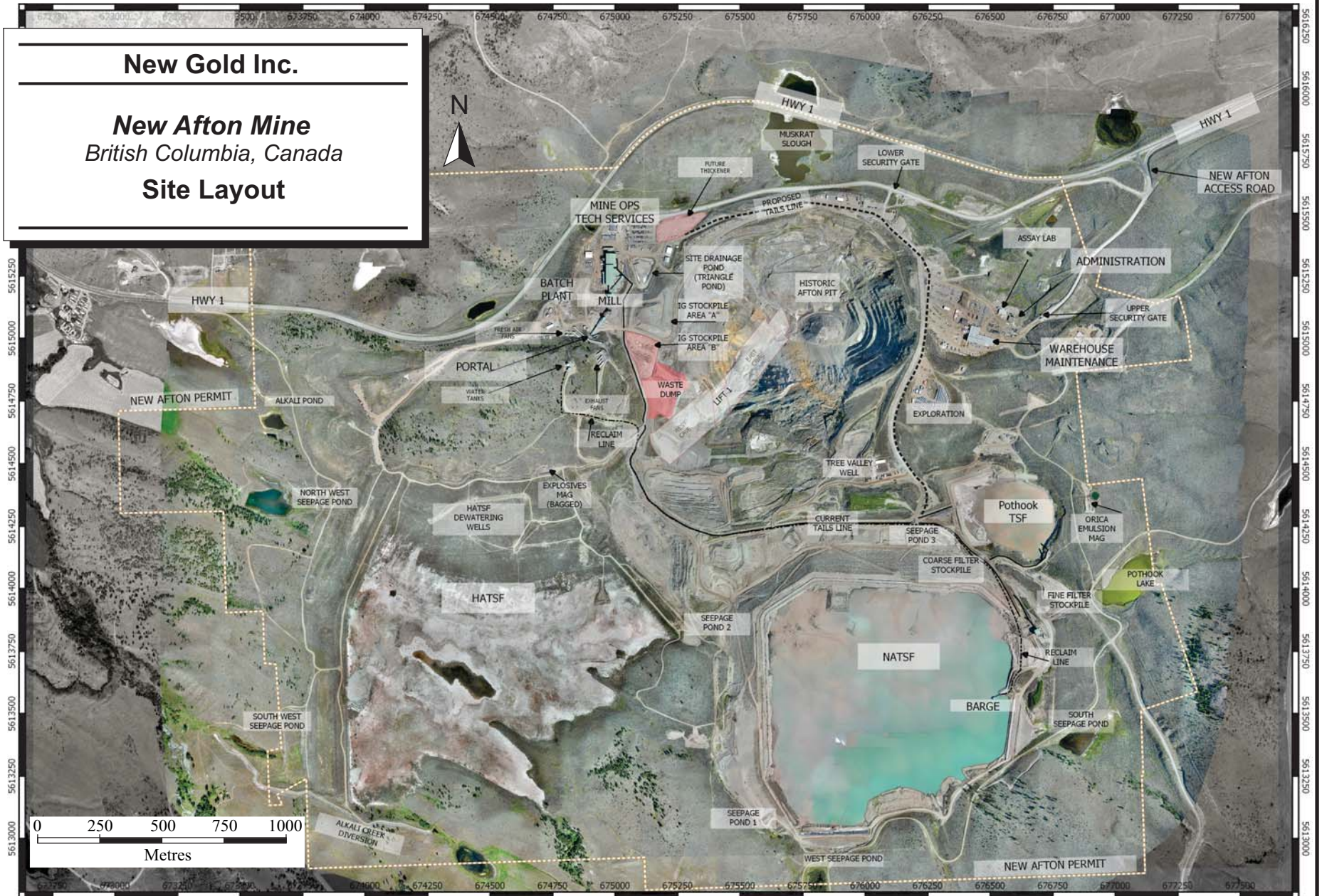
The mill expansion and B3 Block cave has increased the power use on site from the current average 27.5 MW to approximately 31.5 MW, and the increase required when the C Zone is in production in 2024 will be evaluated.

Figure 18-1

New Gold Inc.

New Afton Mine
British Columbia, Canada

Site Layout



19 MARKET STUDIES AND CONTRACTS

MARKETS

The principal commodities at New Afton are copper and gold in copper concentrates. Copper concentrates can be sold to a number of copper smelters or metal traders on a worldwide basis. Smelting and refining terms are generally similar and include treatment charges and smelting charges which are generally known and with penalty charges for contaminants such as arsenic and mercury in the concentrates. Penalty terms generally vary over a wider range than the treatment and smelting terms. Smelters enter into longer term frame contracts which cover a period of years. Concentrates from New Afton are sold to smelters in China, Japan, India, and the Philippines.

For the 2019 Mineral Reserve estimate, New Afton used metal prices of US\$1,275/oz for gold, US\$3.00/lb for copper, US\$17.00/oz for silver, and an exchange rate of C\$1.30:US\$1.00.

CONTRACTS

The Mine has a long list of contracts for goods and services required for the operation of the mine. The largest of those contracts cover the supply of tires, maintenance services, fuel, explosives, and concentrate haulage to the port at Vancouver.

New Afton has multiple contracts for the sale of concentrates so that concentrate sales can be managed to minimize penalties. The terms are consistent with typical smelter terms for copper concentrates. There are other contracts for the transportation of concentrates, port services in Vancouver, and representation services related to concentrate analysis at delivery. New Afton does not engage in forward metal sales or hedging.

New Afton had also entered into and maintains a participation agreement with the SSN First Nation.

RPA is of the opinion that the contracts are consistent with industry norms.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

ENVIRONMENTAL AND SOCIAL SETTING

The information presented in this section is based on documentation provided by New Gold for review and a meeting with Luke Holdstock, Environmental Superintendent for the New Afton Mine. A site visit was conducted in support of the preparation of Section 20 of this Technical Report on November 5, 2019.

OVERVIEW

New Afton is in the core traditional territory and ancestral lands of the Kamloops Division of the Secwépemc Nation (KDSN) or now recognized as the Stk'emlupsemc te Secwépemc Nation (the SSN), one of the seven historic “divisions” of the Secwépemc Nation. The SSN consists of the two remaining tribes of the Kamloops Division, the Tk'emlúps te Secwépemc (TteS) and Skeetchestn Indian Band (SIB).

The property is in an area that was historically part of the Agricultural Land Reserve. The amount of land to be disturbed fell below the Reviewable Project Regulation threshold for new disturbance, thus New Afton was reviewed and permitted as a major mine under the BC Mines Act.

The New Afton site includes HAOP features, including two open pits, waste rock dumps, and a closed TSF (the HATSF). The Afton pit was dewatered and used to access the underground operation for initial development. That pit portal has now been sealed off and dewatering has been discontinued as the cave has broken through. The Pothook pit has been used to store tailings and provide flexibility for the operations. The HATSF is currently a closed facility but was originally designed to store a significantly larger volume of tailings. The Alkali Creek Diversion Channel is a one kilometre riprap protected channel located to the south of the HATSF that diverts the course of the creek to the west of the HATSF. It was upgraded in 2014 to pass the peak flow resulting from the 1 in 200 year, 24 hour storm event.

EXISTING CONDITIONS

The summary of the baseline characterization presented below is based on the baseline information included in the B3 Permit Application draft report (New Gold, 2019a) and the description of site conditions at New Afton included in the Mine Reclamation and Closure Plan (New Gold, 2019b).

Air Quality. The primary air quality parameter of concern at the site is particulate matter (PM) from fugitive dust. The air quality monitoring program includes five dustfall collectors (i.e., Total Suspended Particulates) around the mine site as well as the voluntary measurement of PM_{2.5} and PM₁₀ using partisol samplers. Total dustfall quantities are typically higher on the downwind east side of the mine site. Monitoring of PM₁₀ and PM_{2.5} is conducted by New Afton voluntarily to help the mine site determine and manage potential dust sources. A vegetation and soils monitoring program is undertaken to measure fugitive dust from the mine site and potential pathways to receptors.

In 2014 and 2015, RWDI Consulting Engineers completed emissions surveys of mine exhaust air. The results showed that the average discharge air from exhaust fans and the conveyor portal was less than 5.0 mg/m³ total particulate matter, well below the permit level of 50 mg/m³.

Ambient Noise and Vibration. In general, noise generated at the mine site adds to the existing background noise sources related to natural and anthropogenic noise sources including the Trans-Canada Highway, road maintenance, farming machinery, residential construction, mine sources including the mill and machinery, and ambient noise from wind.

The primary noise receptors within three kilometres of the mine site include:

- Cherry Creek Estates trailer park, which is approximately 650 m from the western boundary of the mine site, along the Trans-Canada Highway.
- several private residences; the closest primary residence is approximately 450 m from the western boundary of the mine site.
- travellers on the Trans-Canada Highway, approximately 100 m from the process plant site.

Community complaints related to operational noise and/or vibration generated from the mine site are investigated and proactively managed. The mine site has conducted vibration monitoring at different locations in order to understand potential vibration effects. Vibration complaints were investigated in 2014 and were found to be below Environment Canada and

United States Bureau of Mines (USBM) standards for vibration. As all mining occurs underground, there are no effects from airblast overpressure.

Geochemistry. A range of geochemical programs have been implemented at New Afton. There are few Acid Rock Drainage (ARD) and Metal Leaching (ML) regulatory requirements contained within Permit M 229, however, New Afton is committed to proper environmental stewardship, which involves having a good understanding of potential risks in order to determine if mitigations may be required. The programs to determine possible geochemical risks use a range of tests, such as humidity cell testing (HCT) kinetic, field leach kinetic, weighted composite static, grab static, and water quality samples.

New Afton tailings and waste rock typically contain low sulphides and high carbonate levels which reduces the risk of ARD occurring. There is potential for ARD after some lag time, especially from some portions of the hypogene orebody and the high sulphide pyrite-zone waste rock. Kinetic tests on the varieties of New Afton ore and waste rock indicate that metal leaching may still occur under neutral to alkaline pH.

Although there is potential for New Afton ore types to have ARD potential, the milling process removes the majority (approximately 60%) of the sulphide, as it is associated with the copper minerals that are targeted. This is because the sulphide material is soft and readily floats in the flotation process, further reducing the sulphide concentration in the tailings. This is supported by results from the tailings HCTs and Final Mill Tailings static testing.

Surface Water Quality. Surface water quality monitoring is conducted at New Afton as part of Permit 100224 and is summarized in New Gold's Annual Reports to the Ministry of Environment. Eleven permitted stations are sampled quarterly or bi-annually, except for the stations at the NATSF and the Pothook pit where sampling is carried out monthly. Surface water monitoring is completed as per internal standard procedure, ENV-PRCD-G310 Surface Water Monitoring, which meets the standard described in the BC Field Sampling Manual.

As per Permit 100224, water samples are analyzed for general chemical parameters, anions, and nutrients, total and dissolved metals. ALS Environmental Services, a laboratory accredited by the Canadian Association for Laboratory Accreditation Inc., are utilized for all analytical work. Field blanks and duplicate samples are collected as part of the QA/QC program.

Surface water quality results are compared against the BC Approved Water Quality Guidelines for the Protection of Freshwater Aquatic Life (FWAL). If an approved standard is not available, the BC Working Water Quality Guidelines or CCME Water Quality Guidelines are used as a reference, where applicable.

With the exception of the Alkali Creek diversion channel and Cherry Creek, the surface water at New Afton is defined as very hard (>250 mg/L). Results from the 2018 surface water sampling indicate the following (New Gold, 2019c):

- Regionally, water is basic circum-neutral, very hard and high in sulphate.
- The upstream water quality site has elevated arsenic and sulphate, and water chemistry is seasonally variable being influenced by natural runoff (spring/fall) evaporative concentration and groundwater inputs.
- The water chemistry of the upstream water quality site is of a different type to the downstream receiving environment and other surface water quality sites south of the mine are different to those to the north.
- Selenium and sulphate are above FWAL guidelines at three monitoring stations. One of these stations also presented arsenic exceedances. (Two of these three stations receive water from historically mine impacted areas.)

Groundwater Quality. Baseline groundwater quality measurements prior to New Afton operations, derived from eleven groundwater samples collected in April 2006 and June 2006, indicated elevated concentrations of sulphate, sodium, iron, arsenic, selenium, lead, molybdenum, and zinc, which exceeded BC Ministry of Environment Freshwater Aquatic Water Quality Guidelines. For most of the groundwater samples, consistent alkaline pH values indicate neutrality of groundwater near the mine site and can be attributed to interactions between groundwater and the sedimentary rocks/overburden, or high carbonate content of volcanic rocks, which has the effect of developing alkaline groundwater.

The Afton pit is identified as a groundwater sink, with groundwater flow vectors converging on the pit from distances at least one kilometer away in all directions. The entire mine infrastructure is within this capture zone, with the exception of the western half of the inactive HATSF and the northwest waste rock storage location. The natural direction of groundwater flow at site is northwesterly.

Groundwater quality monitoring is currently conducted at New Afton as part of Permit 100224 and is summarized in New Gold's Annual Reports to the Ministry of Environment. Groundwater monitoring wells have been installed in overburden and bedrock horizons within the mine site

at various periods during, and previous to, the New Afton mining operations. Groundwater sampling is carried out as per the British Columbia Field Sampling Manual, the Ground Water Monitoring Plan from 2017, and internal environmental procedure ENV-PRCD-G311 Groundwater Monitoring. Groundwater samples are collected as grab samples and then submitted to ALS Laboratory for analysis. Fifteen permitted stations are sampled quarterly or bi-annually. Sampling frequency is outlined as quarterly in the Permit 100224 monitoring program table, however, the more detailed Groundwater Monitoring Plan indicates the current monitoring frequency and locations, as approved by the director. Given the low permeability of bedrock and till and a solid baseline of data, the frequency was reduced to bi-annually at some sites.

Results from 2018 groundwater sampling indicate the following (New Gold, 2019c):

- Groundwater quality and quantity predictions are confirmed by sampling results and appear to be within a normal range, with the exception of one upstream location (RES-05). RES-05 was impacted due to adjacent diamond drilling adding water to the bedrock formation.
- With the exception of background bedrock well RES-05, groundwater levels are stable and quarterly monitoring is deemed sufficient.
- Regionally, water is basic circum-neutral, very hard and high in sulphate.
- There are no indications of mine related influence on residential wells.
- Groundwater sampling conducted was generally consistent with the December 2017 Groundwater Monitoring Plan which is being updated in 2019 to reflect new monitoring well installations.
- Groundwater quality was compared to Contaminated Sites Regulations Schedule 6 Guidelines for Irrigation and Livestock Use, which indicated exceedances of aluminum, cobalt, fluoride, iron, manganese, molybdenum, selenium, sulphate, and uranium. Parameters such as manganese and sulphate are known to be regionally elevated and molybdenum and selenium are associated with local mineralization and historic waste rock.

Sediment Quality. Prior to New Afton operations, baseline sediments were assessed at two sites in Cherry Creek and four ponds/sloughs (North Seepage Pond, Russell Slough, Alga Pond, and Muskrat Slough) with samples analyzed for total metals, grain size distribution, organic content, and nutrients.

Grain size distribution data indicated that pond/slough sediments were predominantly clay and silt fractions, while in Cherry Creek, sand was the main sediment. Laboratory analyses indicated that the four pond/slough samples generally had higher pH, nitrate, total nitrogen, and Total Organic Carbon (TOC) concentrations than the two creek sites. Total metal

concentrations showed significant variability between sampling sites. Concentrations of the following metals were noted to exceed BC freshwater aquatic water quality guidelines in one or all of the creek and pond/slough sites: arsenic, chromium, copper, iron, manganese, nickel, and selenium (Rescan, 2007).

Aquatic Flora and Fauna. Natural waterbodies are shallow (less than 3.5 m deep) with water conditions in summer being characterized by high temperatures (e.g., 17.6°C to 20.6°C) and anoxic conditions (e.g., 0.84 mg/L to 3.35 mg/L dissolved oxygen). Many of the smaller ponds in the region are alkali in nature due to the high evaporation and minimal freshwater inflows leading to a saline aquatic environment.

Baseline aquatic studies were completed in 2006, which involved establishing monitoring stations at two locations within Cherry Creek (outside the mine site) and at six ponds and/or sloughs within the mine site. The baseline investigation included sediment quality, physical limnology (including primary and secondary productivity), fisheries inventory, and wetlands. Knight Piésold Ltd. (Knight Piésold) has completed an updated assessment of Cherry Creek aquatics in 2019.

Aquatic vegetation includes marshes, which contained great bulrush (*Scirpus lacustris*), sharp bulrush (*Scirpus* spp.), and Baltic rush (*Juncus balticus*) and shallow open water wetlands dominated by glasswort (*Salicornia virginica*), which is a salt-tolerant species.

The mine site does not contain any fish populations or suitable fish habitat. Fish have been noted in Cherry Creek, west of the mine site. A barrier exists downstream of the Trans-Canada highway that limit fish upstream. Lakes within the upper Cherry Creek watershed (i.e., upstream of the Alkali Creek Diversion channel) are likely the source of fish lower in the system.

Terrestrial Flora and Fauna. Wildlife presence within the mine site was determined by reviewing New Afton baseline wildlife inventories conducted in 2006, and ongoing mine site observations documented within annual reclamation reporting.

Although significant areas of the mine site have been impacted by historic mining, agricultural, and other development, both terrestrial and wetland habitats are present and provide important habitat for wildlife. Terrestrial habitats include remnant ponderosa pine forest, big sage grassland, dry grassland, mesic/moist grassland, and exposed/excavated areas.

The 2006 baseline wildlife surveys identified 69 species within the mine site including 10 species of mammal, 22 species of waterfowl, 27 species of perching birds, four raptor species, four herptile species, and two bat species. Wildlife identified as important to the First Nations bands and local community include the following:

- Mule deer (*Odocoileus hemionus*), occupy the surrounding land in small numbers using open forest stands and nearby alfalfa fields for cover and forage, respectively.
- Furbearers including red fox (*Vulpes vulpes*), coyote (*Canis latrans*), black bear (*Ursus americanus*), weasel (*Mustela* sp.), bobcat (*Lynx rufus*), beaver (*Castor canadensis*), and muskrat (*Ondatra zibethicus*) periodically utilize available habitat within the mine site.
- Both marsh and open-water wetlands within the mine site provide habitat for various life-stages of waterbirds.
- Ponderosa pine-open-grasslands and non-alkaline wetlands provide important habitat for amphibian species-at-risk including the western toad (*Bufo boreas*) and great basin spadefoot toad (*Spea intermontana*) which have been recorded at the mine site.

Wildlife protection initiatives have also been developed by New Afton to minimize further effects to species at risk and to enhance the habitat suitability in the Mine area for certain wildlife groups. One of these programs was the implementation of the Spadefoot and Western Toad Management Plan, which was developed based on research conducted by Thompson Rivers University. A bat habitat enhancement project has been initiated with the development of an artificial bat hibernaculum.

In accordance with New Afton's Wildlife Management Plan, wildlife sightings are routinely recorded and are reported in New Gold's Annual Reclamation reports. Although habitat on-site has been severely modified through past land use, adjacent areas still support habitat that may be occupied by wildlife including species at risk. Four amphibian species have been confirmed by New Afton as present on the site: Great Basin Spadefoot (BC listed ~ blue, Federal Species at Risk Act [SARA] ~ threatened), Western Toad (BC listed ~ yellow, SARA ~ special concern), Columbia Spotted Frog (BC listed ~ yellow [not at risk]), and the Pacific Tree Frog (BC listed ~ yellow [not at risk]).

Social and Heritage Considerations. The mine site is located in the core traditional territory and ancestral lands of the KDSN (now recognized as the SSN), one of the seven historic "divisions" of the Secwepemc Nation.

MINE WASTE MANAGEMENT

TAILINGS MANAGEMENT

A description of the TSFs is provided in Section 17. There are two active TSFs on the property. The NATSF is the primary TSF, while the Pothook TSF provides contingency water and tailings storage. The containment dams are shown in Figure 20-1.

FIGURE 20-1 TAILINGS STORAGE FACILITIES LAYOUT



Site plan retrieved from BGC 2019a

A third TSF, the HATSF, contains tailings generated by the former Afton Mine and deposited between 1977 and 1997. The historic tailings in the HATSF are currently being stabilized by dewatering and consolidation. Dewatering wells were installed to pump pore water from the tailings and the upstream diversion was upgraded to reduce runoff from the upstream catchment on the surface of the TSF.

The combined NATSF and Pothook TSF were originally sized to store the Mine's 51.9 Mt LOM tailings, including Lift 1, B3 Block, and C Zone. However, the tailings deposited in the NATSF have had a lower than anticipated density which has been decreasing over time. The NATSF design was updated in 2018 (BGC, 2018) and the permit amended to raise the facility by 11 m in order to store the remaining tailings from Lift 1 and approximately 2 Mt of tailings from the B3 Block. The tailings from extraction of the B3 and C Zones, if approved, would be stored in the HAOP and potentially the HATSF.

Tailings leaving the mill have an average of 29% solids by weight and undergo two cycles of cycloning before being deposited at the NATSF. From the mill, the tailings are pumped to the tailings cyclone plant located east of the NATSF for primary cycloning. Overflow from the primary cyclone is pumped and discharged from spigots around the NATSF. Underflow from the primary cyclone, with the addition of water, is pumped to one of four secondary cyclone headers situated around the NATSF for sand cell construction. Overflow from the secondary cyclone is deposited on tailings beach and the underflow is used for dam construction. Both the fine filter (<10% fines) and upstream sand shells (<20% fines) are produced. A floating reclaim barge reclaims pond water for reuse in the mill.

The sand material produced from the secondary cyclone underflow is placed by dozer and compacted until it reaches the density specification. Sand placement occurs year-round in order to raise the containment and provide adequate freeboard. The design of the NATSF dams was recently amended to construct the downstream shell with rockfill, with an additional filter zone placed between the rockfill and sand shells (BGC, 2018). Five seepage collection ponds named South Dam, West Dam, 1, 2, and 3 were built downstream of the dams to collect runoff from cyclone sand production plus any other seepage and pump it back into the impoundment (New Gold, 2019d). New Gold indicated that seepage no longer reports to Seepage Ponds 2 and 3 due to the permeability of the waste rock foundation in these areas.

The cyclone overflow discharged from spigots into the NATSF impoundment area forms a wet tailings beach with a slope that is generally less than 0.5% (BGC, 2019a)

Tailings have been deposited in the Pothook TSF since 2012 in two main periods of deposition: prior to March 2015 and between April and September 2018, with relatively small amounts deposited outside of these times (BGC, 2019b). Originally the Pothook TSF was planned to be used in the early mine life but has since changed to be a contingency TSF for the NATSF.

A plan to dredge the tailings and redeposit in the NATSF was abandoned, so this facility is no longer planned for contingency operations.

As of January 13, 2020, approximately 27.5 Mt and 4.29 Mt of tailings were stored in the NATSF and Pothook TSF, respectively, with average settled densities of 1.17 t/m³ and 1.64 t/m³ respectively. As of January 2020, the lowest point on the crest of the NATSF is 5,765.4 m (Mine Datum). The planned 2020 dam raises will bring the crest elevation to 5,772 m (Mine Datum).

An estimated 37.0 Mt of tailings produced during the operation of the Afton Mine between 1976 and 1997 are stored in the HATSF (KPC 2019).

Studies undertaken in accordance with the Provincial guidelines for assessment and prediction of ML and ARD potential have determined that the TSFs are highly unlikely to generate ARD. Kinetic and field leach programs have been established to monitor the ML/ARD potential of materials, including tailings. At closure, the NATSF will be covered with a mix of inert fill and topsoil with growth medium. The cover design incorporates ML/ARD considerations and will inhibit ARD (New Gold, 2019d).

BLOCK CAVE INDUCED SUBSIDENCE

Subsidence from block cave mining poses a risk of undermining the TSF dams, particularly the HATSF East Dam and the NATSF dams B and C, which are nearest to the block cave subsidence area. Subsidence has developed in a manner that is generally controlled by the location of underground ore extraction and the properties of the overlying bedrock and surficial geology (BGC, 2018). The risks of subsidence induced connections between the TSFs and the underground workings were studied and subsequently reported in June 2019 (SRK, 2019).

For the NATSF, the most likely connectivity mechanism is a rupture in the foundation liner caused by movement of the underlying bedrock resulting in release of tailings and water into the muck pile overlying the underground workings. Water would then migrate through the muck pile to the underground workings but would not flow fast enough to cause a hazard to workers. However, the addition of tailings and water to the muck pile would increase the risk of mudrush and dilution for future mining.

For the HATSF, the most likely connectivity mechanisms are release of tailings and water through the foundation caused by bedrock movement (similar to the NATSF, described above), 'Rat-holing' in the bedrock foundation, or ground movement leading to a loss of the containment dam. The most significant risk would be from rat-holing, where the rock unit above the C Zone has a tendency to form a near-vertical chimney above the drawpoint. As the C Zone extends to directly below the East Dam, a rat-hole could extend vertically to the dam foundation and form a connection to the HATSF.

To mitigate the effects of subsidence to the TSF dams, New Gold is actively involved with the following:

- Stabilization of the historic tailings in the HATSF. Dewatering wells are pumped to remove pore water and lower the phreatic level. In 2015, the Alkali Creek Diversion Channel was upgraded to divert precipitation runoff from up to the 1:200-year storm event and the existing pond was pumped to the NATSF. The surface ponding at the HATSF has been significantly reduced. Dewatering is planned to encourage consolidation and reduce the flowability of the tailings.
- Full-time instrumentation monitoring including:
 - monthly drone flyovers to generate topography data for the TSFs, subsidence zone, and Afton pit;
 - monthly GPS crack mapping and semi-monthly monument monitoring that provide displacement data;
 - automated surveys approximately every two hours of prisms located on the open pit slopes, Afton TSF East Dam, and subsidence zone that provide displacement data;
 - automated daily and manual bi-weekly readings of inclinometers, TDRs, multi-point borehole extensometers (MPBX), elexon smart markers and downhole magnetic settlement rings;
 - readings every six hours from automated horizontal extensometers installed within the footprint of future NATSF dam raises.
- Instrument threshold limits have been developed to protect the TSFs. An alarm system would be triggered if a threshold limit is exceeded. Threshold limits are reviewed annually in conjunction with subsidence model and monitoring data.
- Reviews every six weeks of all the subsidence monitoring instrumentation is completed by BGC and Knight Piésold, and externally reviewed by SRK.
- A subsidence model has been developed by Beck Engineering and is continually calibrated using the above monitoring data.
- Monthly crack mapping is conducted to look for any crack progression towards the HATSF or the NATSF.

Subsidence related cracking has been observed along the HATSF emergency spillway on the downstream side of the East Dam crest. The subsidence model suggests that bedrock cracking from future mining of B3 and C Zone would intersect the base of the HATSF (Knight Piésold, 2019). For the HATSF, the EoR has developed a Quantifiable Performance Objective (QPO) related to crack progression on the East Dam. It states: “Subsidence-induced cracking does not advance past the upstream edge of the East Dam crest, which generally corresponds with the western edge of the road on either side of the overflow spillway.”

Subsidence related cracking has progressed towards the NATSF and the NATSF EoR has developed a QPO related to crack progression that states that “subsidence-induced cracking should not occur on the ground surface within 130 m of the Dam Reference line (equivalent to within 35 m of the 2019 Dam Toe for the planned crest elevation of 5767 m).” In the event that cracks intersect the NATSF dam toe, deposition into the TSF would cease and block cave mining would be halted until the tailings are stabilized and an alternative TSF is ready to receive tailings (BGC, 2018).

At both facilities, the current plan is to stabilize tailings through dewatering and consolidation to render the tailings non-flowable. The stabilization works have defined tailings properties that are intended to be achieved prior to subsidence cracking reaching the toe of the TSF dam so that mining may continue.

WASTE ROCK DUMPS

Waste rock produced by block cave mining at New Afton is stored in the HAOP or the block cave subsidence area. The Afton pit and subsidence zone are designated Potentially Acid Generating (PAG) storage areas.

There are three historic waste rock dumps that were developed between 1974 and 1977 from the Afton pit. These are termed Waste Rock Dump No. 1, Waste Rock Dump No. 2, and Waste Rock Dump No. 3 and are located to the south and west of the Afton pit. These historic waste rock dumps were covered when the original Afton Mine closed in 1997. The cover was generally comprised of 0.2 m to 0.45 m of glacial till and topsoil material and revegetated. Portions of the historic waste rock dumps have been covered by the NATSF (Dams B and C), the Pothook Dam, and the HATSF East Dam.

Historic Afton waste rock from the dump downstream of the HATSF East Dam is being reused for construction activities at all dams in the NATSF. Excavated waste rock is subject to geochemical characterization as part of the site ML/ARD management plan. Any waste rock identified to have a net potential ratio (NPR) of less than 2.0 is deposited within the subsidence zone adjacent to the Afton pit. Testing to date has identified two out of 103 tests that had an NPR of less than 2.0 (New Gold 2019d).

CLOSURE PLAN FOR TAILINGS MANAGEMENT FACILITIES

The Mine is scheduled to continue processing operations through 2030, after which the site will be reclaimed. The currently permitted Lift 1 extraction will be completed in 2022. The Closure Plan is updated at least every five years or sooner if there is a major change to the mine plan. The latest Closure Plan provided for review was issued on October 15, 2019 (New Gold, 2019b).

At the completion of operations, the NATSF and Pothook TSF will be reclaimed as native grasslands and wildlife habitat. The closure plan consists of three phases of development: preparation, construction, and monitoring and maintenance. Preparation involves terraforming and constructing a trafficable surface. The trafficable surface may include either waste rock placement or targeted placement of whole tailings. Construction involves installing closure spillways, pumping the remaining pond water to the Afton pit, contouring the surface to provide positive drainage to the spillways, and placing a cover with growth medium. Monitoring and maintenance involve regular inspections of the dams, spillways, and subsidence areas, and carrying out any maintenance identified during those inspections. Inspections will be frequent during the first five years, then will be re-evaluated for the period after that (BGC, 2018).

At closure, spillways will be installed at the NATSF and Pothook TSF. Both spillways are sized to pass the IDF (defined as the PMF associated with the 24-hour PMP event). The NATSF spillway will be located on the right abutment of the South Dam and would discharge to the Unnamed Creek catchment and then flow to the Pothook TSF catchment. The Pothook closure spillway will be located at the northeast side of the impoundment and will discharge to the Afton pit catchment. Groundwater seepage from both TSFs is expected to flow downgradient to the Afton pit.

WATER MANAGEMENT

The climate of the mine site is typical of the dry BC Interior with generally low total precipitation and high evaporation (annual average potential evaporation could be as high as twice the average annual precipitation). Accordingly, the Mine is characterized as having a net negative water balance (even in wet years), relying on water pumped from Kamloops Lake to offset the water balance deficit. Surface runoff and seepage from the NATSF, Pothook TSF, and concentrator building is captured in seepage collection ponds, containment ponds, or the HAOP, either through natural flow paths or engineered works designed to capture and transport water to these facilities. Water from the underground mine workings (dewatered through the mine dewatering system), dewatering wells in the sandy tailings portion of the HATSF, and interceptions wells between the NATSF and mine, is pumped to the NATSF. Water is continuously recycled from the NATSF to the mill for processing.

Kamloops Lake is the source of freshwater primarily used for ore processing make-up water, road dust suppressant, vehicle wash-down, fire control, and drilling. Three water licences authorize a maximum freshwater withdrawal of approximately 292.5 m³/hr from Kamloops Lake as follows:

- 2010 authorization (123886) for 139 m³/hr, plus 50 m³/day (2.1 m³/hr) for potable water purposes
- 2011 authorization (126715, with date of precedence extending back to 1973) for 0.38 m³/hr for use at DL2017
- 2015 authorization (132319) for 151 m³/hr

New Afton is working towards implementing an on-demand water strategy with the installation of a tailings thickener. The thickener overflow will recycle water to supply the majority of water required to support operations, however, make-up water is necessary to supplement the water needs. In the short term, an increase to water withdrawal from Kamloops Lake is being sought for a period of two years to a rate of 360 m³/hr to address current shortfalls in water supply needs. A permanent water licence is also being developed to increase the rate to 420 m³/hr.

The mine site potable water treatment plant provides water to washrooms, kitchens, change room showers and sinks across the site. Bottled potable water is brought on-site for drinking purposes and is dispensed through water coolers.

Underground mine water is either collected in the mine workings or via the Interception Wells (TVW 4 & 5), prior to entering the underground workings. The underground water collected in the mine workings is pumped to the tailings pump box in the mill where it joins the tailings stream. The water from the Interception Wells is pumped into the Pothook TSF, where it becomes a component of process water.

The tailings are pumped to the NATSF at approximately 30% solids, 70% water. Available water is reclaimed through a barge pump system and recycled back to the mill for processing, which reduces the requirement for Kamloops Lake water, however, the volume of water available for recycle is impacted by the high evaporation rate as well as the low settled tailings density in the TSF. The installation of a paste tailings thickener, expected to be operational in mid-2021, will produce tailings at 55% to 65% solids. This will allow for water to be recovered from the tailings stream for immediate reuse in the mill.

The NATSF is used as a water storage facility and managed as a zero discharge facility. The facility is constructed in a series of lifts, with the dam raises occurring every year. The design is intended to provide storage to the end of the subsequent construction season plus allow for six-month contingency storage. It is designed to accommodate the inflow design flood resulting from the PMP event of 225 mm. There is no large watershed or water body that flows into the NATSF so there is minimal run-on water. New Gold maintains a freeboard in the NATSF of 1.2 m from June through February, and 1.4 m from March through May plus an additional operational freeboard of 0.5 m to allow for additional monitoring when the water is within this level. Seepage from the NATSF is captured in four perimeter seepage collection ponds and pumped back to the NATSF.

The Pothook pit is used for storage of tailings in addition to the NATSF. Pothook TSF receives very low runoff and precipitation contribution with the majority of the water in the facility coming from stored tailings. In the case of a severe weather event, the Pothook TSF can be used for water storage.

As part of management of the HATSF, the majority of ponded water on the surface of the facility was removed. The current pond volume is negligible and is controlled by direct precipitation and evaporation. Future tailings deposition into the HATSF will be amended with cement to achieve a non-flowable state and reduce the amount of bleed water requiring management. A network of dewatering wells is being used to dewater the tailings profile and

consolidate the tailings, and will remain operational during future mining. The water is pumped to the process water tank for use within the mill process and volumes are tracked through the water balance. Seepage water flows west from the northwestern portion to a seepage collection pond, which maintains control of the water through evaporation.

Hydrogeological models show that the Afton pit groundwater capture zone includes the operational areas, meaning all groundwater from the active processing site, maintenance shops, NATSF, and Pothook TSF (through overburden and bedrock) reports to the Afton pit. This also includes approximately half of the HATSF and all historic waste rock except for the portion at the northwest corner of the mine site.

New Gold has developed a Site Water Management and Monitoring Plan (ENV-PLAN-G306) with the most recent update completed in September 30, 2019. This management plan covers both surface water and groundwater management on site, as well as surface water monitoring to assist in data analysis for identification of potential offsite impacts or variation from predicted water quality values. The management plan addresses how water is managed during operation and closure. The water management objectives set for New Afton are as follows:

- Maintain zero-discharge of operational contact water during operations and after closure.
- Reuse and efficiently utilize water where possible during operations and minimize the requirements of off-site water supply.
- Ensure the water balance is always updated and relevant.
- Ensure New Afton is within its water licence requirements with respect to withdrawal from Kamloops Lake.
- Define monitoring requirements to ensure any impacts are measured, potential pollution is minimized and there is adequate information to model operational and post closure water quantity and quality.
- Conduct inspections of water management infrastructure to maintain operational efficiency.

Water balance modelling is used to track the inventory of water on site, water consumptions and water losses. Water losses include evaporation, sewage disposal (off-site), moisture in concentrate and tailings pore-water void losses. Annual average flows based on site-wide water balance calculations are included in the two annual reports prepared for New Afton (see Environmental Studies section below).

According to the Dam Safety Review of the NATSF (Knight Piésold, 2018), BGC Engineering Inc. (BGC) is actively involved in developing and reviewing the operational water balance model for the NATSF, which is calibrated using monthly bathymetric surveys. The water balance is also formally calibrated two to three times using the measured site water flows and stored volumes. Based on the data provided in support of the Dam Safety Review, the normal volume of water stored in the tailings impoundment is approximately 600,000 m³, but can fluctuate seasonally and with changes to the operation. The efforts being made to actively track and predict the water balance conditions in the NATSF with respect to managing the associated hazards were considered appropriate in the Dam Safety Review.

According to the Dam Safety Review of the HATSF (BGC, 2019), water losses from this facility are associated with evaporation and seepage, and not all seepage is collected in the constructed seepage ponds. The Dam Safety Review report mentions an annual net loss of 30,000 m³, resulting in no water discharge under normal conditions.

ENVIRONMENTAL STUDIES

Baseline studies and environmental impact assessment were completed by New Gold and Rescan Environmental Services in 2007 as part of the application for a Permit Approving the Mine Plan and Reclamation Program pursuant to the Mines Act R.S.B.C. 1996, C. 293 for the New Afton mine (Rescan, 2007). Environmental management plans were developed at the time for air quality, water, waste, waste rock and tailings, ecosystems and vegetation, wildlife, aquatic resources, and surface subsidence zone.

New Gold is applying for an amendment to BC Mines Act Permit M-229 and BC Environmental Management Act (EMA) permit to extend the mine life an additional two years through the mining and processing of ore from Block 3 (referred to as B3). The application report includes a summary of baseline characterization and documents the recent numerical modelling work and mitigation methods developed in support of the B3 expansion. An evaluation of the potential residual environmental effects and risks in the context of the B3 Project has been completed for aquatic and terrestrial resources. Changes to the existing environmental monitoring program as a result of activities proposed in the application are outlined in the document.

The following mine environmental management plans were recently submitted to the BC Minister of Energy and Mines and Petroleum Resources (MEMPR):

- Spill Prevention and Management Plan
- Site Water Management and Monitoring Plan
- Waste Management Plan
- ARD and ML Management Plan
- Soil, Vegetation and Dust Monitoring Plan

New Afton maintains an Environmental Management System (EMS) composed of a series of impact specific management plans rather than a single Environmental Management Plan document. The EMS of New Afton is formed with a series of best practice environmental management plans and a comprehensive environmental monitoring program to ensure compliance with all legislation and permits. ISO 14001:2004 certification was obtained in 2013, and the EMS was certified to the new 14001:2015 standard after the upgrade audit in December 2017. Certification was maintained through a surveillance audit in December 2018. The mine site has adopted the Towards Sustainable Mining Standards as required by the Mining Association of Canada.

New Gold prepares two annual reports for New Afton operations as follows:

- Ministry of Environment Annual Report, which provides a summary of recorded spill incidents, the results of the monitoring programs for surface water quality, groundwater quality and air quality, and a discussion includes discussion of compliance with applicable permits. The report is written in accordance with requirements set in Air Emission Permit 100223, Effluent Discharge Permit 100224, and annual reporting under the EMA.
- Annual Reclamation Report, which describes all of the environmental management activities carried out during the calendar year within the concept of progressive and ongoing reclamation. The report is written in accordance with the Mines Act Permit M-229.

According to the 2018 Ministry of Environment Annual Report (New Gold, 2019c) and the 2018 Annual Reclamation Report (New Gold, 2019e), New Afton maintained compliance with effluent and air discharge limits in 2018 as per Permit M-229 requirements.

PROJECT PERMITTING

New Afton complies with applicable Canadian permitting requirements at federal and provincial level. The approved permits address the authority's requirements for operation of the underground mine, TSF, waste rock dumps, process plant, water usage, and effluents discharge. The summary of current and required authorizations presented below is taken from the B3 Permit Application draft report (New Gold, 2019a).

CURRENT PERMITS, LICENCES, AND AUTHORIZED WORKS

PERMIT M-229

The site's operational and closure obligations and commitments are regulated by Permit M-229. Since approval was granted in 2007 to commence operations, various amendments to Permit M-229 have occurred to reflect the current mine plan and regulatory standard. Amendments to Permit M-229 include:

- October 7, 2007: approval granted for construction, operation, and closure of the mine site.
- September 3, 2008: approval granted for extension to the permitted lease boundary.
- September 25, 2008: approval granted for construction of the Pothook Dam.
- December 11, 2008: approval granted to construct the NATSF.
- June 18, 2010: approval granted for extension to the permitted lease boundary.
- March 25, 2014: approved granted to increase Mill throughout.
- March 31, 2017: approval granted to amend Permit M-229 for the transfer of the HATSF to New Gold, which was previously under Permit M-112.
- June 7, 2018: approval granted to use Rockfill in Construction of NATSF Dam.
- April 15, 2019 approval to use autonomous mining equipment.
- July 2, 2019: approval of NATSF Dam A Early Works.
- October 4, 2019: approval of NATSF Design Update to Elevation 5,769 m and conditional approval to elevation 5,776 m.

PERMIT 100223 (AIR EMISSIONS)

BC Ministry of Environment and Climate Change Strategy (MoE) issued Air Emission Permit 100223 (Permit 100223) on June 3, 2010 under the provision of the Environmental Management Act. This permit quantifies several authorized discharges, including: the ore pile reclaim system, pebble crusher and surface conveyors, underground materials handling, primary and development crushing and miscellaneous sources, which covers the flotation circuit, laboratory facilities, natural gas heaters on the mine air intake fans, concentrate

preparation and load-out, batch plant, and general maintenance activities and building exhausts.

Permit 100223 was amended on November 10, 2015 and again on December 20, 2016. The latest amendment incorporates the HATSF into the permit area.

PERMIT 100224 (EFFLUENT DISCHARGE)

MoE issued Permit 100224 on June 2, 2010 under the provision of the Environmental Management Act. This permit was reviewed, updated and amended throughout 2013, with the final minor amendment being issued on October 10, 2013. Permit 100224 allows two authorized discharges, concentrator tailings and sewage treatment plant effluent, both of which report to the NATSF.

The authorized works are a mill concentrator, tailings storage impoundment, Pothook pit, tailings dam seepage pond and interception well recovery works, tailings supernatant reclaim system, tailings pipelines, cyclone separation units, mine groundwater collection system, tailings pump box overflow pipeline, site drainage pond, storm water storage pond, oil-water separation units, maintenance facilities, and related appurtenances.

Permit 100224 was amended on December 22, 2016 to reflect inclusion of the HATSF into the permit.

PERMIT 123886 (CONDITIONAL WATER LICENCE)

MoE issued Permit 123886 on April 12, 2010 under the provision of the Water Sustainability Act (formally the Water Act). Permit 123886 authorizes the diversion of freshwater from Kamloops Lake to the mine site. Authorized works are a screened intake, pumps, pipe, and tank at the mine site.

PERMIT 126715 (WATER LICENCE AMENDMENT)

MoE issued Permit 126715 on November 7, 2011 under the provision of the Water Sustainability Act (formally the Water Act). Permit 126715 substitutes the conditional water licence (Permit 123886) and authorizes the diversion of freshwater from Kamloops Lake to the mine site for a maximum quantity of water of 9.09 m³/day (2,000 gal/day). Authorized works are a screened intake, pumps, pipe, and tank at the mine site. The licence authorizes the use of water for industrial purpose in three buildings located at the mine site.

PERMIT C132319 (CONDITIONAL WATER LICENCE)

BC Forests, Lands, Natural Resource Operations and Rural Development (MFLNRO) issued a conditional water licence on May 22, 2015 under the provision of the Water Sustainability Act. Permit C132319 includes use of water from Kamloops Lake for use in mining-processing ore for a maximum quantity of water of 1,322,400 m³/year with a maximum drawdown rate of 6,960 m³/day. Authorized works are a screened intake, pumps, pipe, and tank at the mine site.

REQUIRED AUTHORIZATIONS FOR DEVELOPMENT

New Afton is currently seeking the following authorizations:

- Permit application for thickener and intermediate grade stockpile expansion – approval will trigger amendment to Mines Act Permit M 229 and amendment to Permit 100224 (Effluent Discharge)
- Permit application for mining and processing of ore from Block 3 – approval will trigger amendment to Mines Act Permit M 229, amendment to EMA Permit 100223 (Air Emissions), and amendment to EMA Permit 100224 (Effluent Discharge)
- Licence application for a Short Term Water Use Authorization to increase withdrawal rates from Kamloops Lake by an additional 70 m³/hr. This licence would be issued as a new water licence with a term of two years.

Future authorizations that will be required for New Afton include:

- Permit amendment for mining and processing of ore from C Zone – approval will trigger amendment to Mines Act Permit M 229. Amendments to EMA Permit 100223 (Air Emissions), and amendment to EMA Permit 100224 (Effluent Discharge) may not be required as there will be no new infrastructure or tailings deposition locations.
- Licence application for a permanent Water Use Licence to increase withdrawal rates from Kamloops Lake by 130 m³/hr. This permanent licence would replace the short term licence described above and be issued as a new licence with no expiry date.

The activities related to the mine site are subject to the following overarching regulations:

- BC Mines Act and Health, Safety, and Reclamation Code 2017
The BC Mines Act, 1996, and the accompanying Health, Safety and Reclamation Code (HSRC) for Mines in BC, are administered by the MEMPR and contain the relevant legislative framework in BC.
- BC Environmental Management Act 2003
The EMA, administered by MoE, identifies requirements for environmental assessment, monitoring, reporting, and mitigation measures required for environmental protection. The goal for reclamation with respect to the EMA is to prevent introduction of deleterious substances to the receiving environment. Under the Contaminated Sites, Hazardous Waste, and Spill Reporting Regulations, appropriate remediation of contaminated or hazardous materials is required.

- BC Water Sustainability Act 2016

The BC Water Sustainability Act (WSA), administered by BC Forests, Lands, Natural Resource Operations and Rural Development was brought into force on February 29, 2016 for managing the diversion and use of water resources including groundwater. The WSA regulates approval for water use licences and includes specific details of how groundwater wells are to be decommissioned if no longer in use.

SOCIAL OR COMMUNITY REQUIREMENTS

GENERAL CONTEXT

The Mine is located approximately 10 km outside of Kamloops. Kamloops has a growing population of approximately 90,000. New Gold describes the New Afton side as located in the traditional territory and central lands of the KDSN (the SSN), one of the seven historic “divisions” of the Secwépemc Nation. The SSN consists of the two bands of the Kamloops Division, the TteS and the SIB.

This section presents the results of the social review based on a review of New Gold’s policies, programs, social risk management systems, and/or social performance against relevant International Finance Corporation (IFC) Performance Standards (PS). This social review does not represent a detailed audit of New Gold’s compliance with IFC Performance Standards.

New Gold’s social performance is benchmarked against the following IFC 2012 PS:

- **PS1: Social and Environmental Assessment and Management Systems** requires that companies identify, assess and mitigate the social and environmental impacts and risks they generate throughout the lifecycle of their projects and operations. From a social perspective, the requirement includes: a comprehensive social assessment; identification of critical social impacts and risks; community consultation and engagement; information disclosure; mitigation plans to address impacts and risks; and development of an organizational structure with qualified staff and budgets to manage the overall social management system.
- **PS2: Labor and Working Conditions** incorporates the International Labour Organization conventions that seek to protect basic worker rights and promote effective worker/management relations.
- **PS4: Community Health and Safety** declares the project’s duty to avoid or minimize risks and impacts to community health and safety and addresses priorities and measures to avoid and mitigate project related impacts and risks that might generate community exposure to risks of accidents and diseases.
- **PS5: Land Acquisition & Involuntary Resettlement** considers the need for land acquisition or involuntary resettlement of any individual, family or group; including the potential for economic displacement.

- **PS7: Indigenous Peoples considers** the presence of Indigenous groups, communities or lands in the area that may be directly or indirectly affected by projects or operations.
- **PS8: Cultural Heritage.** This standard is based on the Convention on the Protection of the World Cultural and Natural Heritage. The objectives are to preserve and protect irreplaceable cultural heritage during a project's operations, whether or not it is legally protected or previously disturbed and promote the equitable sharing of benefits from the use of cultural heritage in business activities.

It is noted that **PS3 Resource Efficiency and Pollution Prevention** and **PS6 Biodiversity Conservation** correspond to environmental performance standards. Environmental management and performance are discussed at the beginning of Chapter 20.

PS1: SOCIAL AND ENVIRONMENTAL ASSESSMENT AND MANAGEMENT SYSTEMS

New Gold's 2016-2021 Strategic Plan describes several corporate responsibility goals and targets including corporate governance, human health and safety, local communities, and environment. These were mapped against the United Nations (UN) Sustainable Development Goals (SDGs) to demonstrate how New Gold may contribute to these broader SDGs. New Gold's Environmental and Social Responsibility goals contribute to the following UN SDGs (Table 20-1).

TABLE 20-1 NEW GOLD'S ENVIRONMENTAL AND SOCIAL RESPONSIBILITY GOALS VERSUS UN SDGS
New Gold inc. – New Afton Mine

New Gold Environmental and Social Responsibility Goal	Relevant United Nations Sustainable Development Goals
Contribute to sustainable development by maximizing long-term benefits through strategic community investments, local procurement, development of sustainable businesses and local employment and training.	SDG 1: End poverty in all its forms everywhere SDG 4: Ensure inclusive and quality education for all and promote lifelong learning SDG 8: Promote inclusive and sustainable economic growth, employment, and decent work for all SDG 10: Reduce inequality within and among countries SDG 11: Make cities inclusive, safe, resilient and sustainable
Continue to develop, refine and implement management systems across our operations as the platform for continual environmental and social performance improvement.	SDG 6: Ensure access to clean water and sanitation for all SDG 13: Take urgent action to combat climate change and its impact SDG 15: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss
Continually increase transparency through engagement with stakeholders and public reporting	SDG 16: Promote just, peaceful and inclusive societies

At a corporate level, New Gold states that its policies and management systems are consistent with the following international best practice standards and frameworks:

- United Nations Global Compact
- World Council Conflict Free Gold Standard
- International Cyanide Management Code
- ISO 14001 (Environmental Management System)
- ISO 26000 (Social Responsibility Standard)
- OHAS 18001 (Occupational Health and Safety Management System)
- Mining Association of Canada's Toward Sustainable Mining Initiative

Together, these policies and frameworks were considered in the creation of New Gold's Community Engagement Development Management System Standard (CEDMS) for New Afton. The elements of the CEDMS are:

1. Management and Accountabilities

2. Impacts and Risks
3. Objectives and Targets
4. Legal and Other Requirements
5. Effective Engagement with Communities of Interest (COI)
6. Effective Complaint Mechanism
7. Community Development
8. Respect of Human Rights
9. Education, Training and Awareness
10. Documentation and Records
11. External Communications
12. CEDMS Monitoring, Investigation and Corrective Action
13. System Audit, Review and Improvement

Associated with these elements are plans, policies, and procedures that guide New Afton's activities. These include:

- Community Leadership Management and Accountabilities Procedure (ENV-PRCD-G318)
- Identification of Aspects and Impacts Procedure (ENV-PRCD-G301)
- New Gold Sustainability Report Preparation Procedure – Appendix B
- New Afton Business Plan
- Environment, Social Responsibility and Tailings Plan
- Legal and other Requirements Procedure (ENV-PRCD-G305)
- Communities of Interest Identification Procedure (ENV-PRCD-G319)
- Communication and Engagement Plan (ENV-PLAN-G310)
- External Feedback Procedure (ENV-PRCD-G303)
- Donations and Sponsorship Procedure (ADM-PRCD-G102)
- Training Plan
- Document Filing and Archiving Procedure (ADM-PRCD-G100)
- Environmental Incident and EPRP (ENV-PRCD-G308)
- Audit Plan Template
- Audit Protocols

As part of the Mines Permit Application in 2007 (Rescan, 2007), a socio-economic assessment was conducted which included a description of the existing conditions and expected project effects. The report included both Indigenous and non-Indigenous communities and found that,

overall, the New Afton site would provide a net benefit to the COI through job creation, training, and economic opportunities. Mitigation measures were recommended for any potential negative effects (i.e., perceptions of environmental effects, visual impacts of the mine site).

Now over a decade later, New Gold has identified the main social risks of the New Afton site. These have shifted from perceived physical project effects to maintaining stakeholder relationships. The current social risks as defined by New Gold include:

- Relationship with the Provincial Government
- Relationship with SSN
- Relationship with Closest Neighbours
- Engagement Requirements
- Loss of Social Licence to Operate

New Gold seeks to obtain feedback from COI near the New Afton site and monitor social risks and concerns through several methods. These include:

- Meetings with a Feedback Group at minimum once annually
- Maintenance of an Environmental and Community Risk Register
- Maintenance of a Feedback Line (telephone and email) to receive public feedback
- Stakeholder meetings and information sessions

The External Feedback Procedure (ENV-PRCD-G303) outlines the steps to review, assess, correct, follow up, report, and review all received complaints. Feedback is collected, assessed for level of potential risk, and plans are developed to address the feedback, as needed. Community feedback is also collected at meetings and through targeted feedback forms.

Feedback, concerns, and risks are tracked through several methods including:

- Maintenance of an Environmental and Community Risk Register
- Maintenance of a Stakeholder Database
- Participation in community-based organizations including the Kamloops Air Quality Roundtable and the Community Health Action Committee.

These tools allow New Gold to monitor and respond to community concerns at New Afton as needed.

New Afton's CEDMS was based largely on ISO 26000, ISO's standard for Social Responsibility. This includes standards for communication, engagement, response, and reporting. New Gold reported on New Afton's 2016, 2017, and 2018 Aboriginal and Community Outreach through both self-assessment and external verification in 2019. Specific criteria included:

- COI Identification
- Effective COI engagement and dialogue
- COI response mechanism
- Reporting

External verification reports for 2017 and 2018 demonstrate a clear methodology and documentation of findings. Both reports suggest some areas for improvement, including more documentation of communication with stakeholders and community members as well as targeted solicitation of feedback. New Gold's self-assessment and external verification reports confirm that New Afton's systems for Community and Aboriginal outreach are monitored and being improved. These outreach and monitoring activities are staffed by local community and First Nation employees. Overall, New Afton's performance against the above Aboriginal and Community Outreach criteria have scored well or achieved top scores over the past three years.

PS2: LABOUR AND WORKING CONDITIONS

New Afton employs most of its staff from the nearby communities. The employment distribution for 2019 is reported in Table 20-2.

TABLE 20-2 2019 EMPLOYMENT DISTRIBUTION
New Gold Inc. – New Afton Mine

New Afton Employment (as of June 30, 2019)	2019	
Total number of Employees on Payroll	499	100%
Employees hired from Kamloops region	396	79%
Employees hired from BC, outside of Kamloops	67	13%
Employees from BC	463	93%
Employees from outside BC	37	7%
First Nations Employees	110	22%
First Nations Employees from TteS and SIB	34	7%
Female Employees	76	15%
Male Employees	423	85%
Average age	40	

(Source: New Gold - New Afton Mine: Company Background Report, July 2019)

Workers are not covered under any collective bargaining agreement. In its Human Rights Policy (December 2018), New Gold states that it is a signatory to the UN Global Compact and seeks to observe the UN's Guiding Principles relating to human rights, labour, environment, and anti-corruption. The policy states that New Gold will:

- Respect worker's rights to freedom of association, equal opportunity, freedom from discrimination, peaceful protest and assembly and collective bargaining.
- Respect the rights and dignity of employees and will not allow forced, compulsory or child labour.

New Gold has a Joint Health and Safety Committee which provides opportunities for employees to raise concerns or questions regarding working conditions. Workers are provided with a range of benefits including overtime eligibility, health and dental benefits, life insurance, critical illness insurance, accidental dismemberment and death insurance, RRSP matching, and bonuses. These benefits vary based on the type of employment, though as of November 18, 2019, 494 of 495 employees were full time and only one employee was part time.

Shift and rotational schedules vary by job type and allow employees time to rest and recover following each work shift. These schedules are:

- 7 days on/ 7 days off, rotating days and nights – 11 hour shifts
- 7 days on/ 7 days off, rotating days and nights – 12 hour shifts
- 5 days on / 2 days off, 8 hour shifts
- 4 days on/3 days off, 10 hour shifts
- 14 days on/14 days off, 10 hour shifts (Exploration Geologists only)

In 2017 and 2018, New Gold underwent significant re-organization which resulted in downsizing at the corporate level. As a result of this, New Gold did not pass its self-assessment and verification for crisis management and communication, though New Afton did pass at the site level. Following this, New Gold developed an action plan to better align its systems with Towards Sustainable Mining Standards from the Mining Association of Canada.

At the facility level, New Afton reduced its workforce by 32 staff in January 2018. However, since early 2019, over 100 new employees have been hired and New Afton is actively recruiting new workers. New Afton remains a reliable source of employment for local community members, despite minor ebbs and flows.

New Afton is registered with the Province of British Columbia with a Certificate of Recognition, which is a safety program under WorkSafe BC. Worker health and safety is major priority for New Afton and New Gold. The Health, Safety, Environment and Corporate Social Responsibility (HSE CSR) Policy outlines corporate health and safety goals and objectives to put employees first, reduce risks, encourage the right to refuse unsafe work, and prepare for emergencies and crises. In its assessment of health and safety for 2016, 2017, and 2018 and its external verification, New Afton reported that it has met and exceeded health and safety standards in:

- Policy, commitment, and accountability
- Planning, implementation, and operation
- Training, behaviour, and culture
- Monitoring and reporting
- Performance

As part of its 2020 Business Plan, New Afton seeks to increase the number of employees accessing preventative healthcare.

New Afton maintains an excellent Health and Safety record for traffic-related issues and off-site, there have been no reports of vehicular related incidents due to workers travelling to and from work or for other project-related vehicle movements.

New Afton has policies to promote diversity and inclusion and prevent workplace harassment. The Human Rights Policy, HSE CSR, Respectful Workplace Policy, and Board Diversity Policy provides guidance to ensure respectful hiring and workplace policies and equal opportunities

for all staff. At the time of writing, there have been no reports of sexual harassment, discrimination, or other misconduct by site employees.

Due to its high proportion of local employment, New Afton participates and leads in several local projects to encourage skills development in the community. These include:

- Underground Mining Essentials Program in partnership with Thompson Rivers University
- Safety in Schools program to promote workplace safety

As with any mining project, the rise and fall of economic conditions can create instability in local communities. New Afton's training and safety programs can help address these issues by providing training for transferrable skills.

PS4: COMMUNITY HEALTH AND SAFETY

At the time of writing this report, there is no evidence to suggest that the New Afton site has any effects on community health and safety. Feedback and concerns from community members are largely positive, with some concerns arising over potential loss of jobs or future downscaling of mining activities. New Afton sponsors and participates in a Safety in Schools program to promote safe workplace practices. Additionally, New Afton representatives are members on several local interest groups:

1. The Kamloops Air Quality Roundtable – includes volunteers from industry, First Nations, health authorities, government representatives, special interest groups, educational institutions and others. Participation in this roundtable allows New Afton to understand community-based concerns and questions about air quality, airshed management, and other environmental issues which can inform New Afton policies and procedures.
2. Community Health Action Committee – includes community leaders, service providers, and government, and industry representatives to identify ways to improve access to healthcare.

As noted above, New Afton has processes and protocols to collect community feedback and track stakeholder issues to best understand and respond to community issues, which could include community health and safety.

PS5: LAND ACQUISITION & INVOLUNTARY RESETTLEMENT

At the time of writing, it is understood that New Afton will not require any resettlements of residents, land users, or other businesses. Furthermore, in the corporate Human Rights

Policy, New Gold affirms that they will make every effort to avoid involuntary resettlement when possible but if needed, a Resettlement Action Plan will be developed in accordance with IFC Standards.

PS7: INDIGENOUS PEOPLES

New Gold's Human Rights Policy states that they will respect the rights and traditions of Indigenous people where it operates by proactively seeking, engaging, and supporting meaningful dialogue regarding its operations. New Gold reports that the Indigenous groups in the area are the SSN, which consists of the two tribes of the Kamloops Division, the TteS and the SIB. New Gold has a signed participation agreement with the SSN, which was originally signed in 2008 and amended in 2011. At the time of writing, the agreement was under review again and New Gold was in the process of renegotiating the agreement with SSN. The agreement establishes a mutually beneficial relationship between the parties and considers:

- Environmental factors
- HR, Employment, and Training
- Education
- Business Opportunities
- Financial Considerations

As part of the 2020 Business Plan, New Gold plans to take on more proactive engagement and support to ensure an ongoing positive relationship with SSN. This includes a new engagement process and a Cultural Heritage Study.

Approximately 22% of New Afton employees are Indigenous. There is a non-binding target to have approximately 23% Indigenous employees. At the time of writing this report, there is no evidence (communication records or complaints) to indicate any negative relationship between New Gold and any Indigenous groups at the New Afton site.

PS8: CULTURAL HERITAGE

An archaeological survey was conducted for developments associated with the Mine in 2007 and 2008. In 2011, New Gold completed an assessment of four additional areas not covered as part of the previous assessment, including proposed expansions to an existing TSF, topsoil dump area, and road construction area. Four archaeological sites EdRd-8, EdRd-9, EdRd-10, and EdRc-24 were identified during this study.

Complete site avoidance through project redesign was recommended as the plan for these sites. If avoidance is not feasible, any ground disturbing activities within the boundaries of EdRd-9, EdRd-10, and EdRc-24 must be undertaken under a site alteration permit pursuant to S.12 of the Heritage Conservation Act. In addition to a site alteration permit, it was recommended that EdRd-10 be subject to further archaeological work if it cannot be avoided. No site alteration permit is considered necessary for EdRd-8.

Overall, no further archaeological investigations were recommended for areas examined during this survey (A, B, C, and D) that fall outside of recorded archaeological site boundaries. New Gold maintains ground disturbance permits and has completed the excavation of one site.

The archaeological study acknowledged that no archaeological assessment can completely eliminate the risk of encountering archaeological resources. If archaeological materials are encountered during any phase of development, all operations in the locality should be suspended until the Archaeology Branch, as well as the relevant First Nation(s), has been contacted for direction. Any cultural materials which pre-date A.D. 1846 are protected by the Heritage Conservation Act of British Columbia.

MINE CLOSURE REQUIREMENTS

A Mine Reclamation and Closure Plan was prepared in 2019 as an update of the previous 2017 Closure Plan. The summary of mine closure requirements presented below is based on the Mine Reclamation and Closure Plan (New Gold, 2019b).

Permit conditions and reclamation standards defined by the HSRC that are relevant to mine closure must be met in order to support planning towards release of obligations under the BC Mines Act. The BC Mines Act, 1996, and the accompanying HSRC (MEMPR 2017), are administered by the BC MEMPR, and contain the relevant legislative framework supporting mine closure in BC. The HSRC indicates that the primary objective of the Mine Plan and Reclamation Program is to return all areas disturbed by mining operations to pre-mining land use and capability. Closure measures and strategy for New Afton are also developed with consideration to the BC Environmental Management Act, 2003, and the BC Water Sustainability Act, 2016.

The 3Rs Working Group (formally the Closure Working Group), established in 2014, is a team made up of representatives from New Gold Site management, SSN, SIB, and TteS. This group's focus is to provide reclamation planning and implementation. Between 2014 and 2018, key meeting outcomes have focussed around closure objectives and criteria, changes to end land use prescriptions from grazing to native grasslands, reclamation research and development, controlling invasive species, and reviewing closure related risks particularly for tailings management.

A Failure Modes and Effects Assessment (FMEA) was conducted for the 2017 Closure Plan update as the tool for identifying closure risks and reviewing design and management control measures to prevent or reduce the inherent risk to a tolerable level. A multi-disciplinary FMEA workshop was carried out to facilitate this assessment. The workshop involved representatives from New Gold, First Nation Partners, and technical consultants. Key failure modes that were identified during the workshop which require active management included:

- Incorrect geochemical characterization and management of mine waste materials which has the potential to influence long-term water quality effects.
- Long-term geotechnical failure of structures including water drainage structures and TSFs due to various failure causes.
- Various chemical stability sources and potential post-closure effects on the receiving environment. Potential pathways include exposure from air, land and water. The predominant pathway is through surface water and groundwater.
- Factors which prevent achieving end land use objectives (e.g., growth medium), including required contingency measures for managing these limiting factors.

Previous land tenure owners have implemented numerous reclamation and research programs to progressively reclaim mined landforms and to improve uncertainties within reclamation programs. New Gold has supported various reclamation research projects since beginning operation including a Masters grasslands reclamation project with Thompson Rivers University, Masters Spadefoot Research project with Thompson Rivers University, and Barcode for Life research project with the University of Guelph.

Reclamation research projects are currently ongoing at Thompson Rivers University within their Natural Sciences and Engineering Research Council (NSERC) Industrial Research Chair in Ecosystem Reclamation whose purpose is to improve knowledge and certainty around closure-related risks and the effectiveness of reclamation prescriptions. This in combination

with various site programs and activities meet the requirements of M-229 permit condition C.13 Ongoing Reclamation Research.

PROGRESSIVE RECLAMATION

New Gold carries out progressive reclamation, conducts research activities for reclamation programs, and partners with the SSN to implement successful reclamation measures. Progressive reclamation activities are reported to MEMPR annually in the annual reclamation reports.

The main progressive reclamation activities that New Gold has conducted at New Afton are:

- Salvaging topsoil
- Erosion and sediment control planning to minimize surface erosion and sediment entering water bodies;
- Re-sloping, reseeding, hydroseeding, and native tree planting
- Delivering programme for wildlife protection, initiatives to build and locate artificial habitat structures to enhance site for wildlife
- Wetland rehabilitation project on lands owned north of the mine site

The development of the B3 and C Zone deposits will provide opportunity to progressively reclaim the NATSF during operations. Under this scenario, deposition into the NATSF will be completed before mining operations finish and this will allow the tailings to complete primary settlement. Once the settlement is complete and the surface becomes trafficable, access to the facility will be possible to begin recontouring the surface and constructing the closure overflow spillway.

CLOSURE STRATEGY AND ALTERNATIVES

PHYSICAL STABILITY

Physical stability considerations include the following:

- Design and construction of structures to ensure structures are stable and conform to the HSRC and New Gold requirements.
- Access to the Afton pit will be restricted.
- Access to underground structures, which include portal access and ventilation shafts, will be restricted by engineered design controls (e.g., monolithic plugs, gates, etc.).
- Using results of the subsidence modelling to inform the Closure Plan.

CHEMICAL STABILITY AND WATER MANAGEMENT

The water management strategy for the mine site is to target a passive drainage system of surface water and groundwater, while achieving receiving environment water quality requirements.

Key aspects of this strategy include contouring, removing temporary diversion systems and sediment control features, and reclaiming temporary surface water channels. Passive drainage does not include routing of contact water with potential contamination off site.

Post-closure surface water drainage infrastructure proposed as part of the post-closure drainage plan includes the following:

- Closure spillway for the NATSF and Pothook TSF to be located within the rock embankments
- Swales within the NATSF and Pothook TSF to directionally control water
- An armoured channel to route flood water from the NATSF to the Afton pit

The following modelling work has been developed in support of closure planning:

- A post-closure hydrogeological assessment was conducted to support the Closure Plan in order to predict groundwater flow patterns near the mine site after raising the NATSF to 5,776 m and to forecast post-closure groundwater conditions for the mine. The calibrated model was used to predict groundwater inflow and outflow rates at various stages of mine flooding and to assess groundwater flow patterns in the late stage of pit lake formation (post-closure conditions).
- A Source-Pathway-Receptor (SPR) model was developed to identify key sources of potential geochemical loading to the receiving environment for surface water and groundwater at the mine site during post-closure.
- A water quality prediction model was developed to: i) identify load sources that have the potential to affect water quality at closure; ii) predict surface water quality during operations, closure, and post-closure within the mine site facilities and potential points of discharge or compliance points for the mine; and iii) provide a management tool to support the planning of reclamation and closure activities.

New Gold informed RPA that post-closure water quality is predicted to be similar to other water bodies in the area of the mine and as such active water treatment is not currently contemplated for closure of the site. Pit lake treatment, if required, would be done through a periodic batch process. Modelling predictions should be confirmed near the closure phase using additional monitoring data available at the time to confirm the closure strategy to achieve chemical stability during post-closure.

RECLAMATION OF WATERCOURSES

Reclamation of watercourses will commence after mining operations cease. The NATSF seepage ponds, fire reservoir pond, and the grey water pond will be breached, recontoured, and revegetated at closure. The Site Drainage Pond is proposed to be converted to habitat suitable for wetland once remediated of contaminated materials.

The Afton pit's primary purpose at closure will be to maintain a sink for sediment control and contact water, however, it has no specific end land use objective. The predicted depth of water and long-lead time required for the water level to reach a steady state is unsuitable for productive ecological use.

EROSION AND SEDIMENT CONTROL

The guiding erosion prevention strategies incorporated into the reclamation prescriptions include:

- Limiting reclamation related ground disturbance activities during periods of precipitation
- Minimizing slope length and gradient (e.g., recontour, terrace benches)
- Ensuring directional control of water at the crest of the slopes (ditching/grading)
- Applying surface covers (e.g., erosion control blankets, rock armoring, vegetation, large woody debris, mulch)
- Increasing soil permeability (e.g., reduce compaction, use of track equipment)
- Preventing soil detachment (e.g., apply tackifier and/or other cover options)

OTHER CLOSURE ACTIVITIES

Other closure activities included in the Mine Reclamation and Closure Plan are as follows:

- Surface preparation and soil replacement
- Revegetation
- Biodiversity and wildlife enhancement
- Invasive plant management
- Groundwater well decommissioning
- Appropriate and safe disposal of hazardous materials, chemicals and reagents
- Contaminated site assessment and remediation

POST-CLOSURE MONITORING

The purpose of the post-closure monitoring and maintenance program is to determine if the site is safe, stable, and non-polluting in accordance with the identified mine closure objectives. Post-closure monitoring and maintenance will be conducted to assess performance of reclamation prescriptions against meeting reclamation end land use objectives. Post-closure monitoring activities involve the following:

- Physical – Visual inspection of the portal and vertical shafts/plugs by a qualified geotechnical engineer; visual inspection of gully and rill erosion and related sedimentation issues; visual inspection and review of monitoring instrumentation; and Dam Safety Inspections and Dam Safety Reviews performed by qualified professionals.
- Geochemical – Quarterly water flow measurement and water quality sampling; bi-annual groundwater depth and water quality sampling; quarterly (if possible) post-closure Afton pit water quality sampling; observed seepage from waste rock storage locations water quality sampling. Proposed monitoring locations for surface water and groundwater are based on the current understanding of source-pathway-receptors.
- Biological – Testing of fugitive (depositional) dust at vegetation monitoring locations; surface soil sampling and testing; plant tissue sampling and testing; evaluation of survival rate of revegetated areas; bats surveys.

CLOSURE COST ESTIMATE

The total estimated cost for demolition and reclamation of the Mine as of October 15, 2019 is C\$24,839,355. This estimate accounts for reclamation of master areas (C\$6,500,541), lump sum items and infrastructure removal (C\$6,666,314), and post-closure monitoring and maintenance for 100 years (C\$11,672,500).

The current bonding for the site is C\$13,896,900 as per the M-229 permit update on October 4, 2019 based on the cost estimate developed in 2018. The main changes are due to the closure channel design (from the NATSF to the Afton pit) including spillways and swales, and the changes to post-closure monitoring requirements including Dam Safety Inspections and Dam Safety Reviews for a period of 100 years.

21 CAPITAL AND OPERATING COSTS

CAPITAL COSTS

The Mine is in operation and the current LOM plan covers the mining of the B and C Zones. The current LOM capital is forecast to be \$635 million. The capital plan is summarized in Table 21-1.

TABLE 21-1 CAPITAL COST ESTIMATE
New Gold Inc. – New Afton Mine

Year	Lift 1 – Sustaining (US\$M)	B3 – Sustaining (US\$M)	Tailings – Sustaining (US\$M)	C Zone – Sustaining (US\$M)	Exploration – Sustaining (US\$M)	C Zone - Non- Sustaining ¹ (US\$M)	Total Capital (US\$M)
2020	29.6	29.7	1.0	-	-	95.5	155.9
2021	4.8	27.4	0.2	-	-	98.7	131.2
2022	3.5	3.5	0.2	-	-	136.0	143.1
2023	0.7	0.5	-	-	-	104.4	105.6
2024	-	-	-	19.5	-	25.6	45.1
2025	-	-	-	32.6	-	-	32.6
2026	-	-	-	18.7	-	-	18.7
2027	-	-	-	1.1	-	-	1.1
2028	-	-	-	0.5	-	-	0.5
2029	-	-	-	0.5	-	-	0.5
2030	-	-	-	0.6	-	-	0.6
LOM	38.7	61.2	1.4	73.5	-	460.2	635.0

Note. ¹ The C Zone non-sustaining costs include preproduction development, mine equipment purchases, TSF stabilization, and crushing and conveyance systems.

Capital cost estimates are based upon operating experience, current costs for mine development and engineering studies. Capital costs are based upon an exchange rate of 1.30:1 (C\$:US\$).

OPERATING COSTS

The New Afton operating costs for the 12 months ending October 2019 are shown in Table 21-2 and the LOM operating costs are shown in Table 21-3.

TABLE 21-2 12 MONTH OPERATING COSTS TO OCTOBER 2019
New Gold Inc. – New Afton Mine

Area	Units	12 Mos. to Oct 2019	Annual Total \$M
Mining	US\$/t mined	7.99	44.15
Processing	US\$/t milled	7.76	42.79
G&A	US\$/t milled	2.27	12.51
Total	US\$/t milled	18.02	99.45

TABLE 21-3 LOM OPERATING COST ESTIMATES
New Gold Inc. – New Afton Mine

Year	Units	Mine	Mill	G&A	Total
2020	US\$/t milled	10.06	8.21	2.88	21.16
2021	US\$/t milled	13.63	9.98	3.34	26.95
2022	US\$/t milled	12.30	11.38	3.20	26.89
2023	US\$/t milled	9.83	11.58	3.16	24.57
2024	US\$/t milled	10.06	11.18	3.19	24.44
2025	US\$/t milled	8.94	11.34	3.16	23.44
2026	US\$/t milled	8.54	10.54	2.85	21.92
2027	US\$/t milled	10.33	10.37	2.85	23.54
2028	US\$/t milled	10.25	11.03	2.93	24.21
2029	US\$/t milled	8.74	10.81	3.09	22.65
2030	US\$/t milled	9.81	20.29	8.61	38.71
LOM	US\$/t milled	10.23	10.79	3.19	24.21

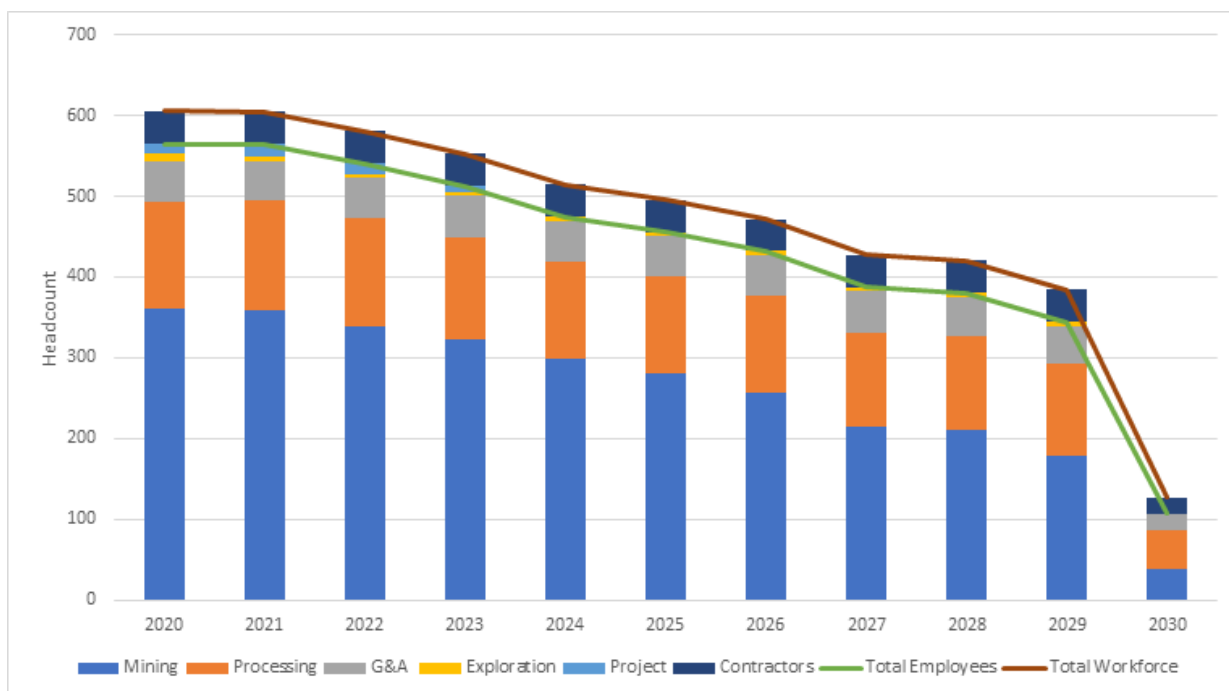
The LOM operating costs were estimated based on current site operating costs and escalated as necessary. Future mining costs are impacted by the longer ore hauls from the B3 and C Zones and by the drilling and blasting costs associated with the pillar recovery and SLC mining. The recovery level SLC mining cost increases are offset somewhat by the short haulage distance to the crusher.

The LOM process costs vary over the LOM as the mix of ore types changes from year to year and the mill will not be operated at its full nameplate capacity due to mining constraints. Increases for 2022-2025 are also driven by cement, flocculant, and coagulant costs as TAT comes online. The operating costs related to TAT were estimated based on engineering studies. There are opportunities to reduce cement requirements and operating costs through the use of a paste thickener and optimization of the in-pit tailings deposition design.

LABOUR

The LOM labour forecast is shown in Figure 21-1, including the labour for the C Zone development and operations. The mine development work is completed by New Afton crews and contractors are used for raise development, rehabilitation work, construction, and mine services work. The plant and underground crews are on a seven day on seven day off schedule while the maintenance crews on surface are on a four day on three day off rotation.

FIGURE 21-1 LOM LABOUR FORECAST



22 ECONOMIC ANALYSIS

Under NI 43-101 rules, producing issuers may exclude the information required in Section 22 – Economic Analysis on properties currently in production, unless the Technical Report includes a material expansion of current production. RPA notes that New Gold is a producing issuer, the New Afton Mine is currently in production, and a material expansion is not being planned. RPA has performed an economic analysis of the Mine using the estimates presented in this report and confirms that the outcome is a positive cash flow that supports the statement of Mineral Reserves.

23 ADJACENT PROPERTIES

Several properties have been mined within the Iron Mask batholith complex which is a multi-phase plutonic body exposed in a southeast trending belt measuring 34 km long by 5 km wide. The New Afton deposit is located approximately mid-way along this belt. Other properties that have been mined include the Galaxy underground mine and the Ajax East and Ajax West open pits, all three of which are located east of New Afton. The Ajax property is owned by KGHM International Ltd., which is currently working towards development of a new open pit mine and processing facility located on the historic Ajax mine site.

In RPA's opinion, New Afton is the principal mining project in the immediate district. RPA has not verified the information presented here on the adjacent properties. Information regarding mineralization at adjacent properties is not necessarily indicative of mineralization at New Afton.

24 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.

25 INTERPRETATION AND CONCLUSIONS

RPA makes the following conclusions:

GEOLOGY AND MINERAL RESOURCES

- There is an opportunity for discovery of more Mineral Resources at New Afton, and further exploration work is warranted.
- The current drilling, core handling, logging, and core storage protocols in place at New Afton meet or exceed common industry standards.
- The analytical procedures are appropriate and consistent with common industry practice.
- The database management, validation, and assay QA/QC protocols are consistent with common industry practices.
- The database is acceptable for use in Mineral Resource estimation.
- The geological setting of New Afton is well understood, and the geological model used for the Mineral Resource estimate is reasonable and coherent.
- The parameters, assumptions, and methodologies applied in generating the Mineral Resource estimate are reasonable and appropriate.
- The classification criteria are appropriate and have been applied in a reasonable manner. The classification is consistent with the terminology specified by the CIM (2014) definitions as incorporated by reference into NI 43-101.
- There is a good reconciliation between the mine production and the Mineral Resource estimate.

MINING AND MINERAL RESERVES

- The 2019 Mineral Reserve estimate was completed by New Afton personnel using PCBC and PCSLC and is based on the December 31, 2019 Mineral Resource estimate, production records, and mine plans.
- RPA has reviewed the assumptions and results of the estimation process and is of the opinion that the estimate has been prepared by competent qualified professionals and is consistent with the CIM (2014) definitions.
- The estimated Probable Mineral Reserves as at December 31, 2019 are 47.3 Mt grading 0.66 g/t Au, 1.9 g/t Ag and 0.77% Cu. The Mineral Reserves are in the B and C Zones of the deposit.
- The New Afton deposit is being successfully exploited using block caving methods. Development towards the B3 and C Zone caves is underway.
- The block caving will be supplemented by retreat pillar recovery in the West and East Caves, and SLC mining below the East Cave (East Cave Recovery zone).

- Approximately 10% of the total Mineral Reserves will come from East Cave Recovery zone, which will be mined by SLC.
- The LOM mining rate is projected to fall below the rated plant capacity between 2021 and 2025 due to the previous decision to defer the development of the B3 and C Zones.
- New Afton is using automated LHD loaders to increase productivity and enhance operator safety.
- There is the potential for future mudrushes from the drawpoints from water inflow. New Afton has a system for monitoring and assessing mudrush potential and has developed procedures for the remote operation of wet drawpoints. The system has functioned as expected.
- Mine development is forecast to be in excess of five kilometres per year for the next four years compared to no mine development in 2018. Development advance is behind plan for 2019, however, the Mine has in the past achieved higher development rates. RPA is of the opinion that meeting the development forecast will require ongoing effort and management attention.
- Plans have been developed and tested for the stabilization of the historic Afton tailings, to mitigate the potential for material to flow from the tailings to the mine, in the event that the cave subsidence from the B3 or C Zones extends into the tailings area.

PROCESSING

- The choice, amount, and quality of test work met industry standards. The modifications to the flowsheet fall within normal operating scenarios.
- The mill is operating efficiently, and the optimization of the flowsheet to deal with supergene and hypogene ores is being continued, as the ore constituents change.

ENVIRONMENT

- No known environmental issues were identified from the site visit and documentation review. The Mine operation complies with applicable permitting requirements in British Columbia. The approved permits address the authority's requirements for operation of the underground mine, TSF, waste rock dumps, mill, and water usage. There is no discharge of industrial water or other effluent to the environment at the mine site.
- Environmental management plans have been developed for spill prevention, site water management, ARD and ML, general and hazardous waste, and oil, vegetation, and dust monitoring. Monitoring programs are in place for surface water quality, groundwater quality, and air quality. New Afton reports the results of the monitoring program through the Ministry of Environment Annual Report and the Annual Reclamation Report. No compliance issues have been raised by the authorities.
- Annual dam safety inspections are undertaken for the HATSF (Knight Piésold as the EoR), and NATSF and Pothook TSF (BGC as the EoR). An Independent Tailings Review Board (ITRB) has been established, which currently meets twice each year for technical review of the tailings facilities. BGC also provides support on subsidence zone predictions for the underground block cave. Subsidence modelling is conducted and will continue to be updated and calibrated over the LOM.

- Block cave mining operations pose a risk to the NATSF and HATSF by inducing movement in the foundations and potentially resulting in tailings and water moving into the muck pile above the underground mine. This would dilute the ore and increase the risk of mudrush, posing a potential threat to workers and operations. Currently, the TSFs are outside of the subsidence zone, however, mine expansion of the B3 and C Zones could result in cracks progressing to beneath the TSF dams and foundations creating potential pathways for transmission of water to the underground, leading to an increase in mudrush risk, impacting safety and ore dilution. Mitigation is provided by stabilization measures to make the tailings non-flowable, full-time monitoring of the TSFs and subsidence zones, and a subsidence numerical model used to predict subsidence development. The current action plan in the event that cracks reach the downstream toe of a TSF dam is to suspend block cave mining until the tailings are stabilized.
- Tailings deposited in the NATSF have had a settled dry density that is less than originally anticipated and has decreased over time. As a result, more water is retained in the deposited tailings and the impoundment has filled up faster than expected. The original design was for the LOM tailings (i.e., Lift 1 and B3) to be stored in the NATSF and Pothook TSF. However, the design was amended in 2018 to raise the ultimate NATSF elevation by 11 m to contain the tailings produced by Lift 1 and approximately 2 Mt from B3. The remaining tailings from the expansion of the B3 and C Zones are currently planned to be deposited in the HAOP and potentially the HATSF. The subsidence model predicts that cracks will extend to the toe of the HATSF when B3 Zone extraction commences.
- Tailings in the HATSF are actively being stabilized by dewatering and densifying the tailings so that they are non-flowable. Dewatering wells have successfully lowered the water level in the tailings and the remnant pond was pumped to the NATSF with upgrades to the upstream diversion to prevent the development of future runoff ponds. Additional stabilization works including wick drain installation and consolidation loading are subject to the mine plan and resulting progression of subsidence.
- The Mine is characterized as having a net negative water balance, relying on water pumped from Kamloops Lake to offset the water balance deficit. Surface runoff and seepage from the NATSF, Pothook TSF, and concentrator building is captured in seepage collection ponds, containment ponds, or the HAOP, either through natural flow paths or engineered works designed to capture and transport water to these facilities. Water from the underground mine workings is pumped to the NATSF. Water is continuously recycled from the NATSF to the mill for ore processing.
- New Gold has had to temporarily reduce the production rate to maintain sufficient tailings settling and water reclaim to the mill. New Gold pumps the maximum volume of freshwater authorized for withdrawal from Kamloops Lake. The additional water retained in tailings has compounded the issue of water availability. The Mine is pursuing tailings thickening to recover more water to the mill and reduce water losses to evaporation at the pond, and is currently looking to advance a new water licence to de-risk available water supply.
- The TSF dams and subsidence zone are subject to an ongoing monitoring program to evaluate the effect of block cave mining on dam stability. Monitoring data is reviewed by the EoR and summarized in reports every six weeks. The monitoring data is used to calibrate a subsidence numerical model used to predict subsidence for future mining expansion. Threshold limits and trigger response action plans are established for all instruments and are reviewed on an annual basis. The monitoring program indicates

that the facilities have performed as expected to date and no threshold limits have been exceeded.

- New Gold engages in a number of best practices for dam safety management systems, including:
 - an ITRB, which meet twice annually to review current operations,
 - use of the TSM initiative with performance assessments rated AA to A, and
 - use of an OMS manual and EPRP that are current and up to date.
- The majority of ponded water from the tailings beach of the HATSF was removed. The current pond volume is negligible and is controlled by direct precipitation and evaporation. A network of dewatering wells is being used to dewater the tailings profile and consolidate the tailings. The water is pumped to the mill for ore processing.
- A Mine Reclamation and Closure Plan has been developed for all the Mine components within the context of British Columbia legislation and gets periodically updated.
- The social due diligence review indicates that New Gold's current programs at the mine site provide a positive contribution to sustainability and community well-being.
- New Gold has established and continues to implement its various corporate policies, procedures, and practices in a manner consistent with relevant IFC performance standards.
- New Gold continues to make a positive contribution to Indigenous and non-Indigenous communities and strives to be a good corporate citizen through community investments in training and safety programs and open communication.
- New Gold has taken positive steps to ensure worker health and safety, including a Joint Health and Safety Committee to provide employees with the opportunity to raise questions or concerns. New Gold's ongoing plans to explore new opportunities for employees to raise concerns about employment issues will improve this even further.

26 RECOMMENDATIONS

RPA makes the following recommendations:

GEOLOGY AND MINERAL RESOURCES

- Exploration drilling should continue in order to increase the Mineral Resources at New Afton. As New Afton is an operating mine and is not generally required to disclose specific exploration plans on the property, RPA will not make more detailed recommendations in this regard.
- RPA notes that SIM Geological Inc. (SIM) recommendations in 2014 and 2019 included continued observation of the actual mined grades of mercury and particularly arsenic in order to determine if revisions to the estimation methodology were warranted. RPA concurs with this recommendation.

MINING AND MINERAL RESERVES

- Continue caving operations in the B1 and B2 Zones.
- Complete more detailed reconciliation between production (mine and mill) and the PCBC model to confirm the Mineral Reserve estimation parameters.
- Continue the reconciliation process and monitor the pillar recovery operations to provide a reconciliation of that production to the Mineral Reserve estimate.
- Carry out development of B3 and C Zones for the exploitation of the Mineral Reserves.
- Monitor development advance rates and take appropriate action to meet the planned development.
- Assess the stability of the overburden overlying the bedrock to determine potential impacts on the NATSF.

PROCESSING

- Continue to optimize recoveries of copper and gold from supergene and hypogene ores.

ENVIRONMENT

- The dams and subsidence monitoring program appear to be sufficiently robust to identify stability issues early in order to implement timely measures to stabilize the facility and protect workers. RPA recommends that this program continue throughout operations in consultation with the EoRs for each facility.
- Tailings stabilization measures are being undertaken at the HATSF and are planned for the NATSF. These should continue until the tailings are stable and non-flowable in order to minimize the risk of a mudrush to underground workers.

- Track and update the site wide water balance on a regular basis to support ongoing operations. The water balance is an important tool to track trends and conduct short-term predictions through simulation of variable operating and/or climatic scenarios to support decision making associated with pond operation (e.g., understanding pond volumes and water availability for ore processing, and maintaining adequate freeboard in the TSFs at all times).
- Conditions during the operating phase should continue to be carefully monitored so the viability of the basis for the closure plan can continually be checked and the plans can be changed if necessary long before closure actually commences. Cost estimates for closure should continue to be updated as the concepts continue to be refined and the design of closure components advances.
- New Gold should continue its excellent relationships with Communities of Interest and continue to document and monitor any concerns or issues that might arise in the future.

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28 DATE AND SIGNATURE PAGE

This report titled “Technical Report on the New Afton Mine, British Columbia, Canada” and dated February 28, 2020 was prepared and signed by the following authors:

(Signed and Sealed) *Normand L. Lecuyer*

Dated at Toronto, ON
February 28, 2020

Normand L. Lecuyer, P.Eng.
Principal Mining Engineer

(Signed and Sealed) *David W. Rennie*

Dated at Toronto, ON
February 28, 2020

David W. Rennie, P.Eng.
Associate Principal Geologist

(Signed and Sealed) *Holger Krutzelmann*

Dated at Toronto, ON
February 28, 2020

Holger Krutzelmann, P.Eng.
Associate Principal Metallurgist

(Signed and Sealed) *Luis Vasquez*

Dated at Toronto, ON
February 28, 2020

Luis Vasquez, P.Eng.
Senior Hydrotechnical Engineer
SLR Consulting (Canada) Ltd.

29 CERTIFICATE OF QUALIFIED PERSON

NORMAND L. LECUYER

I, Normand L. Lecuyer, P.Eng., ing., as an author of this report entitled "Technical Report on the New Afton Mine, British Columbia, Canada", prepared for New Gold Inc. and dated February 28, 2020, do hereby certify that:

1. I am Principal Mining Engineer with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave., Toronto, ON M5J 2H7.
2. I am a graduate of Queen's University, Kingston, Canada, in 1976 with a B.Sc. (Hons.) degree in Mining Engineering.
3. I am registered as a Professional Engineer in the provinces of Ontario (Reg. #26055251) and Québec (Reg. #34914). I have worked as a mining engineer for a total of 43 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Review and report as a consultant on numerous exploration and mining projects around the world for due diligence and regulatory requirements.
 - Vice-President Operations for a number of mining companies.
 - Mine Manager at an underground gold mine in Northern Ontario, Canada.
 - Manager of Mining/Technical Services at a number of base-metal mines in Canada and North Africa.
 - Vice-President Engineering at two gold operations in the Abitibi area of Quebec, Canada.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I visited the New Afton Mine on November 4-6, 2019.
6. I am responsible for the overall preparation and in particular for Sections 2, 3, 15, 16, 18, 19, 21, 22, and 24 and related disclosure in Sections 1, 25, 26, and 27 of the Technical Report.
7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
8. I have had no prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 28th day of February, 2020

(Signed and Sealed) *Normand L. Lecuyer*

Normand L. Lecuyer, P.Eng., ing.

DAVID W. RENNIE

I, David W. Rennie, P.Eng., as an author of this report entitled "Technical Report on the New Afton Mine, British Columbia, Canada", prepared for New Gold Inc. and dated February 28, 2020, do hereby certify that:

1. I am an Associate Principal Geologist with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave., Toronto, ON M5J 2H7.
2. I am a graduate of the University of British Columbia in 1979 with a Bachelor of Applied Science degree in Geological Engineering.
3. I am registered as a Professional Engineer in the Province of British Columbia (Reg. #13572). I have worked as a geological engineer for over 38 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Review and report as a consultant on numerous exploration and mining projects around the world for due diligence and regulatory requirements.
 - Consultant Geologist to a number of major international mining companies providing expertise in conventional and geostatistical resource estimation for properties in North and South Americas, and Africa.
 - Chief Geologist and Chief Engineer at a gold-silver mine in southern B.C.
 - Exploration geologist in charge of exploration work and claim staking with two mining companies in British Columbia.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I visited the New Afton Mine on November 4-6, 2019.
6. I am responsible for Sections 4 to 12 and Section 14, and related disclosure in Sections 1, 25, 26, and 27 of the Technical Report.
7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
8. I have prepared Mineral Resource estimates, and participated in studies, resource audits, and Technical Reports for the Project in 2006, 2007, 2009, 2011, 2012, 2014, 2015, and 2016.
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 28th day of February, 2020

(Signed and Sealed) David W. Rennie

David W. Rennie, P.Eng.

HOLGER KRUTZELMANN

I, Holger Krutzelmann, P.Eng., as an author of this report entitled "Technical Report on the New Afton Mine, British Columbia, Canada", prepared for New Gold Inc. and dated February 28, 2020, do hereby certify that:

1. I am an Associate Principal Metallurgist with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON M5J 2H7.
2. I am a graduate of Queen's University, Kingston, Ontario, Canada in 1978 with a B.Sc. degree in Mining Engineering (Mineral Processing).
3. I am registered as a Professional Engineer with Professional Engineers Ontario (Reg. #90455304). I have worked in the mineral processing field, in operating, metallurgical, managerial; and engineering functions, for a total of 39 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Reviews and reports as a metallurgical consultant on a number of mining operations and projects for due diligence and financial monitoring requirements
 - Senior Metallurgist/Project Manager on numerous gold and base metal studies for a leading Canadian engineering company.
 - Management and operational experience at several Canadian and U.S. milling operations treating various metals, including copper, zinc, gold and silver.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I visited the New Afton Mine on November 4-6, 2019.
6. I am responsible for Sections 13 and 17 and related disclosure in Sections 1, 25, 26, and 27 of the Technical Report.
7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
8. I have had no prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 28th day of February, 2020

(Signed and Sealed) Holger Krutzelmann

Holger Krutzelmann, P.Eng.

LUIS VASQUEZ

I, Luis Vasquez, M.Sc., P.Eng., as an author of this report entitled "Technical Report on the New Afton Mine, British Columbia, Canada" prepared for New Gold Inc. and dated February 28, 2020, do hereby certify that:

1. I am a Senior Environmental Consultant and Hydrotechnical Engineer with SLR Consulting (Canada) Ltd. at 36 King St. East 4th Floor in Toronto, ON, M5C-1E5.
2. I am a graduate of Universidad de Los Andes, Bogotá, Colombia, in 1998 with a B.Sc. degree in Civil Engineering.
3. I am registered as a Professional Engineer in the Province of Ontario (Reg. #100210789). I have worked as a as a civil engineer on mining related projects for a total of 15 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Preparation of environmental impact assessments for mining projects located in Canada (Ontario and British Columbia) and South America for regulatory approval.
 - Preparation of mine closure plans for mining projects in Canada and South America.
 - Preparation of several scoping, prefeasibility, feasibility and detailed design level studies for projects located in North America, South America, the Caribbean and Asia with a focus on planning, design and safe operation of water management systems and waste disposal facilities.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I visited the New Afton Mine on November 5, 2019.
6. I am responsible for Section 20 and related disclosure in Sections 1, 25, 26, and 27 of the Technical Report.
7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
8. I have had no prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 28th day of February, 2020

(Signed and Sealed) Luis Vasquez

Luis Vasquez, M.Sc., P.Eng.

30 APPENDIX 1

LIST OF SURFACE AND UNDER-SURFACE TENURES

TABLE A1-1 SURFACE TENURES
 New Gold Inc. - New Afton Mine

Property Location	Class	Parcel Identifier	Account Number/Roll Number	Name	Acres	Hectares	Comments
Kamloops Rural		012-988-731	724 000740.000	DL 551	120.00	48.56	*NEW 2017, KGHM Ajax Lands, DL 551
Kamloops Rural	Major Industry	013-012-541	724 01005.000	DL 893/Pot Luck Mineral Claim (surface)	51.65	20.90	*2010, no longer in farm class
Kamloops Rural	Major Industry	013-012-550	724 01010.000	DL 894/Gold Mask MC (surface)	51.65	20.90	*2010, no longer in farm class
Kamloops Rural	Major Industry	013-012-568	724 01015.000	DL 895/Midnight MC (surface)	23.05	9.33	*2010, no longer in farm class
Kamloops Rural	Major Industry	013-012-576	724 01020.000	DL 896/Bonanza MC (surface)	50.20	20.32	*2009, no longer in farm class
Kamloops Rural	Major Industry	013-012-584	724 01025.000	DL 897/Boss MC (surface)	51.62	20.89	*2010, no longer in farm class
Kamloops Rural	Major Industry	013-012-592	724 01030.000	DL 898/Nighthawk MC (surface)	49.46	20.02	*2010, no longer in farm class
Kamloops Rural	Major Industry	013-012-614	724 01035.000	DL 899/Cliff MC (surface)	37.94	15.35	*2009, no longer in farm class
Kamloops Rural	Major Industry	013-012-622	724 01040.000	DL 900/Piper MC (surface)	25.81	10.44	*2010, no longer in farm class
Kamloops Rural		014-388-421	724 012573.005		123.64	50.04	*NEW 2017, KGHM Ajax Lands
Kamloops Rural		014-389-517	724 012573.010		36.36	14.71	*NEW 2017, KGHM Ajax Lands
Kamloops Rural		014-388-391	724 012573.020		160.00	64.75	*NEW 2017, KGHM Ajax Lands
Kamloops Rural		014-389-304	724 012582.055		38.00	15.38	*NEW 2017, KGHM Ajax Lands
Kamloops Rural		014-389-347	724 012582.060		30.80	12.46	*NEW 2017, KGHM Ajax Lands
Kamloops Rural		014-389-380	724 012582.065		22.86	9.25	*NEW 2017, KGHM Ajax Lands
Kamloops Rural	Business/Other	016-315-863	724 02075.000	DL 2017	124.14	50.24	*New in 2012, DL 2017
Kamloops Rural		No PID	724 02245.000	DL 2172	3.90	1.58	*DL 2172, Pumphouse Lease
Kamloops Rural	Major Industry	014-421-666	724 12582.000		45.24	18.31	*2012 no longer in farm class
Kamloops Rural	Farm	014-295-857	724 12585.000		320.00	129.50	*Farm class
Kamloops Rural	Farm	014-295-903	724 12585.010		128.90	52.16	*Farm class
Kamloops Rural	Major Industry	004-603-222	724 12585.050		133.58	54.06	*2009, no longer in farm class
Kamloops Rural	Business/Other	No PID, new in 2012	31 724 12585.051 1 1			0.00	*No Taxes to NGI: 2012, Fortis Gas Bldg, Taxes to Fortis
Kamloops Rural	Farm	014-296-331	724 12586.000		320.00	129.50	*Farm class
Kamloops Rural	Farm	014-296-543	724 12586.010		107.20	43.38	*Farm class
Kamloops Rural	Farm	014-296-349	724 12586.020		160.00	64.75	*Farm class

Property Location	Class	Parcel Identifier	Account Number/Roll Number	Name	Acres	Hectares	Comments
Kamloops Rural	Farm	014-297-230	724 12587.000	Mine Permit Area	160.00	64.75	*Farm class
Kamloops Rural	Farm	014-301-750	724 12593.000		320.00	129.50	*Farm class
Kamloops Rural	Farm	014-301-806	724 12594.000		640.00	259.00	*Farm class
Kamloops Rural	Farm	014-303-191	724 12595.000		160.00	64.75	*Farm class
Kamloops Rural	Farm	014-308-711	724 12597.010		160.00	64.75	*Farm class
Kamloops Rural	Farm	014-306-221	724 12597.030		143.50	58.07	*Farm class
Kamloops Rural	Farm	014-314-371	724 12598.000		197.00	79.72	*Farm class, 014-309-084 Part A in same section
Kamloops Rural	Farm	014-309-149	724 12598.020		160.00	64.75	*Farm class
Kamloops Rural	Major Industry	No PID, new in 2009	724 18517.000		5.00	2.02	*NEW in 2009, assessment for Mine Permit Area
Kamloops Rural	Farm	014-388-251	724 012570.000		164.00	66.37	*NEW June 2018, Old Roper Ranch Purchase
Kamloops Rural	Farm	014-388-260	724 012570.005		164.00	66.37	*NEW June 2018, Old Roper Ranch Purchase
Kamloops Rural	Farm	014-388-278	724 012570.015		328.00	132.74	*NEW June 2018, Old Roper Ranch Purchase
Kamloops Rural	Farm	014-388-294	724 012573.000		320.00	129.50	*NEW June 2018, Old Roper Ranch Purchase
Kamloops Rural	Farm	014-388-316	724 12572.030		163.00	65.96	*Sugarloaf Ranch Option, March 2019
Kamloops Rural	Farm	014-388-308	724 12571.010		160.00	64.75	*Sugarloaf Ranch Option, March 2019
Kamloops Rural	Farm	014-388-324	724 12571.000		160.00	64.75	*Sugarloaf Ranch Option, March 2019
Total Area					5,620.50	2,274.54	

TABLE A1-2 MINERAL TENURES
New Gold Inc. - New Afton Mine

Title Number	Claim Name	Owner	Title Type	Title Sub Type	Map Number	Expiry Date	Area (ha)
220090	PYTHON NO.16 FR.	282146 (100%)	Mineral	Claim	092I068	2022/SEP/26	25
220275	LINE NO.3	282146 (100%)	Mineral	Claim	092I068	2022/SEP/26	25
221488	FAY 1 FR	282146 (100%)	Mineral	Claim	092I068	2022/SEP/26	25
372644	AFTON 8	282146 (100%)	Mineral	Claim	092I068	2023/MAR/08	25
372645	AFTON 9	282146 (100%)	Mineral	Claim	092I068	2023/MAR/08	25
372646	AFTON 10	282146 (100%)	Mineral	Claim	092I068	2023/MAR/08	25
372647	AFTON 11	282146 (100%)	Mineral	Claim	092I068	2023/MAR/08	25
378688	AFTON 8	282146 (100%)	Mineral	Claim	092I068	2023/MAR/08	500
378918	HUGH 1	282146 (100%)	Mineral	Claim	092I068	2022/JUN/17	25
378919	HUGH 2	282146 (100%)	Mineral	Claim	092I068	2022/JUN/17	25
378920	HUGH 3	282146 (100%)	Mineral	Claim	092I068	2022/JUN/17	25
378921	HUGH 4	282146 (100%)	Mineral	Claim	092I068	2022/JUN/17	25
378922	HUGH 5	282146 (100%)	Mineral	Claim	092I068	2022/JUN/17	25
379304	AFTON 19	282146 (100%)	Mineral	Claim	092I068	2023/MAR/08	25
513980		282146 (100%)	Mineral	Claim	092I	2020/JUN/01	553.205
514167	AFTON	282146 (100%)	Mineral	Claim	092I	2022/MAR/08	225.139
514194		282146 (100%)	Mineral	Claim	092I	2020/MAR/08	1,637.76
517047	AFTON	282146 (100%)	Mineral	Claim	092I	2023/MAR/08	40.974
517157	AFTON	282146 (100%)	Mineral	Claim	092I	2023/MAR/08	204.764
517259	AJAX	282146 (100%)	Mineral	Claim	092I	2023/JUN/01	81.967
517263		282146 (100%)	Mineral	Claim	092I	2023/JUN/01	20.495
517360	NEW AFTON	282146 (100%)	Mineral	Claim	092I	2023/MAR/08	20.492
521727	AJAX	282146 (100%)	Mineral	Claim	092I	2023/JUN/01	451.696
521728		282146 (100%)	Mineral	Claim	092I	2023/JUN/01	513.26
521729	AJAX	282146 (100%)	Mineral	Claim	092I	2023/JUN/01	389.965
524303	AFTON DAM	282146 (100%)	Mineral	Claim	092I	2023/MAR/08	20.492
524304	AFTON DAM 1	282146 (100%)	Mineral	Claim	092I	2023/MAR/08	20.491
524305	AFTON DAM 2	282146 (100%)	Mineral	Claim	092I	2023/MAR/08	20.491
525508	AFTON DAM 3	282146 (100%)	Mineral	Claim	092I	2023/MAR/08	20.492
528243	SMELTER	282146 (100%)	Mineral	Claim	092I	2023/MAR/08	20.485
529020	COPPER LOAD	282146 (100%)	Mineral	Claim	092I	2020/FEB/27	20.485
534787	AF EXT 11	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	20.482
534788	AF EXT12	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	20.476
537230	AFTON DAM 3	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	40.983
537231	AFTON DAM 2	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	40.978
546063		282146 (100%)	Mineral	Lease	092I	2024/NOV/29	902.3
549226	AFTON NW 5	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	491.2601
549268	AFTON NW 6	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	20.4746
549270	AFTON NW 7	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	81.9232
552399	ML EXT 1	282146 (100%)	Mineral	Claim	092I	2020/FEB/20	20.4819
552400	ML EXT 2	282146 (100%)	Mineral	Claim	092I	2020/FEB/20	20.4834
594462	AFTON EEA	282146 (100%)	Mineral	Claim	092I	2019/NOV/18	184.4098
595819	AJ-W	282146 (100%)	Mineral	Claim	092I	2019/DEC/10	123.1781
606247	AFTON NW 8	282146 (100%)	Mineral	Claim	092I	2020/JUN/18	81.9442
642268	AFTON NW 9	282146 (100%)	Mineral	Claim	092I	2020/SEP/28	20.4656

Title Number	Claim Name	Owner	Title Type	Title Sub Type	Map Number	Expiry Date	Area (ha)
650330	PYTHON NW CELL	282146 (100%)	Mineral	Claim	092I	2019/OCT/10	20.4853
654890	IRON MASK 1	282146 (100%)	Mineral	Claim	092I	2019/OCT/19	20.4853
654891	IRON MASK 2	282146 (100%)	Mineral	Claim	092I	2019/OCT/19	20.487
765242	HUGH 6 REPL	282146 (100%)	Mineral	Claim	092I	2020/MAY/02	20.4942
830915	AFTON NW 11	282146 (100%)	Mineral	Claim	092I	2020/AUG/01	20.4639
830920	AFTON NW 12	282146 (100%)	Mineral	Claim	092I	2020/AUG/01	40.9295
830925	AFTON NW 13	282146 (100%)	Mineral	Claim	092I	2020/AUG/01	429.219
832096	AFTON NW 15	282146 (100%)	Mineral	Claim	092I	2020/AUG/25	20.487
835552	AJ MAGNUM W	282146 (100%)	Mineral	Claim	092I	2019/OCT/11	40.9742
837062	AFTON WEST	282146 (100%)	Mineral	Claim	092I	2019/OCT/31	430.2645
855837	AFTON NW 16	282146 (100%)	Mineral	Claim	092I	2020/MAY/27	20.4621
862155	AFTIN NW 17	282146 (100%)	Mineral	Claim	092I	2020/JUN/30	40.8821
1011918	AFTON NW 10	282146 (100%)	Mineral	Claim	092I	2020/AUG/10	122.8264
1016942	AFTON NW 18	282146 (100%)	Mineral	Claim	092I	2020/FEB/15	20.442
1023220	Bill1	282146 (100%)	Mineral	Claim	092I	2019/OCT/31	655.944
1025173	AFTON NW 19	282146 (100%)	Mineral	Claim	092I	2020/JAN/16	20.4402
1026061	DORADO	282146 (100%)	Mineral	Claim	092I	2020/SEP/20	102.4832
1036944		282146 (100%)	Mineral	Claim	092I	2020/JUN/29	20.4835
1038487	WOOD PROPERTY	282146 (100%)	Mineral	Claim	092I	2020/JAN/31	1,415.41
1038488	WOOD PROPERTY	282146 (100%)	Mineral	Claim	092I	2020/JAN/31	451.0337
1038489	WOOD PROPERTY	282146 (100%)	Mineral	Claim	092I	2020/JAN/31	389.5294
1042485	AJAX 2	282146 (100%)	Mineral	Claim	092I	2020/MAR/02	389.8131
1043793		282146 (100%)	Mineral	Claim	092I	2020/APR/29	40.9794
1049040		282146 (100%)	Mineral	Claim	092I	2020/JAN/08	491.4324
1049047		282146 (100%)	Mineral	Claim	092I	2020/JAN/08	102.4031
1050395	MAXINE 1	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	122.653
1050396	MAXINE 2	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	327.1183
1050397	COPPER JACK	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	163.688
1050398	AFTON NW 1	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	61.4472
1050400	AFTON NW 2	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	1,125.65
1050401	AFTON NW 3	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	1,206.76
1050403	AFTON NW 4	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	633.93
1050405	AFTON NW 5	282146 (100%)	Mineral	Claim	092I	2020/MAR/08	204.6374
1055302	AFTOM 1	282146 (100%)	Mineral	Claim	092I	2019/OCT/02	266.2583
1057595	AFTON SW 1	282146 (100%)	Mineral	Claim	092I	2020/JAN/11	20.5066
1061368		282146 (100%)	Mineral	Claim	092I	2020/JUN/22	368.6904
1069836		282146 (100%)	Mineral	Claim	092I	2020/JUL/24	2052.426
1069837		282146 (100%)	Mineral	Claim	092I	2020/JUL/24	841.9913
1069850		282146 (100%)	Mineral	Claim	092I	2020/JUL/24	410.2372
1071538	KAMLOOPS-BEATON	282146 (100%)	Mineral	Claim	092I	2020/SEP/09	40.965
							20,353.31

31 APPENDIX 2

VARIOGRAM MODELS

Parameters for the variogram models for each element summarized by domain. Note that all models are spherical unless otherwise noted.

TABLE A2-1 VARIOGRAM MODELS FOR GOLD
New Gold Inc. - New Afton Mine

Domain	Nugget	S1	S2	1st Structure			2nd Structure		
				Range (m)	AZ	Dip	Range (m)	AZ	Dip
Main	0.450	0.336	0.214	34	49	67	274	72	56
>4,900 m				33	215	23	208	76	-34
				17	307	5	83	345	-2
Main	0.497	0.268	0.235	87	88	41	398	98	12
<4,900 m				43	91	-49	305	82	-77
				20	359	-1	43	187	-3
	0.446	0.355	0.199	38	69	-1	452	116	49
HW1				12	342	70	124	319	39
				11	159	20	45	39	-12
	0.370	0.503	0.128	23	57	-21	203	242	46
HW2				17	137	24	72	118	28
				3	4	57	12	10	31
	0.730	0.200	0.069	70	68	-2	578	283	-1
Other				31	345	72	405	225	87
				6	158	18	152	193	-2
	0.293	0.502	0.205	78	276	79	350	61	-5
Monzonite				33	106	11	87	263	-85
				7	16	2	67	151	-2

TABLE A2-2 VARIOGRAM MODELS FOR COPPER
New Gold Inc. - New Afton Mine

Domain	Nugget	S1	S2	1st Structure			2nd Structure		
				Range (m)	AZ	Dip	Range (m)	AZ	Dip
Main >4,900 m	0.351	0.334	0.314	34	86	25	260	161	83
				29	268	65	228	71	0
				28	356	-1	73	341	7
Main <4,900 m	0.457	0.304	0.239	130	90	43	607	121	81
				52	317	37	181	97	-8
				31	26	-26	34	7	4
HW1	0.279	0.527	0.194	66	304	65	377	71	40
				24	119	25	171	308	33
				16	30	-2	61	13	-33
HW2	0.445	0.397	0.158	38	80	-4	646	284	40
				14	165	51	72	177	19
				6	173	-39	59	68	44
Other	0.450	0.452	0.098	49	353	-47	432	65	77
				14	47	29	262	66	-13
				13	299	28	121	336	0
Monzonite	0.298	0.483	0.219	116	91	34	393	190	19
				39	289	55	152	102	-5
				14	7	-9	151	27	71

TABLE A2-3 VARIOGRAM MODELS FOR SILVER
New Gold Inc. - New Afton Mine

Domain	Nugget	S1	S2	1st Structure			2nd Structure		
				Range (m)	AZ	Dip	Range (m)	AZ	Dip
Main	0.500	0.254	0.246	36	209	49	441	135	86
>4,900 m				27	29	41	237	72	-2
				21	299	0	79	342	4
Main	0.481	0.353	0.166	113	41	60	154	93	78
<4,900 m				28	325	-8	144	101	-12
				2	239	28	44	10	-2
	0.382	0.459	0.159	57	316	69	496	60	50
HW1				32	118	20	166	293	27
				10	30	-6	60	8	-27
	0.600	0.237	0.163	13	232	55	159	288	49
HW2				13	78	32	115	4	-12
				7	340	12	56	84	39
	0.600	0.336	0.064	20	184	-4	197	345	67
Other				18	276	-22	108	106	12
				7	264	68	60	21	-19
	0.408	0.348	0.244	44	310	68	815	192	36
Monzonite				17	342	-19	96	334	48
				4	69	11	31	87	20

**TABLE A2-4 VARIOGRAM MODELS FOR PALLADIUM, ANTIMONY,
ARSENIC, AND MERCURY
New Gold Inc. - New Afton Mine**

Element	Nugget	S1	S2	1st Structure			2nd Structure		
				Range (m)	AZ	Dip	Range (m)	AZ	Dip
Palladium	0.350	0.542	0.108	19	287	-38	399	99	55
				11	357	24	206	48	-23
				7	243	43	157	329	24
Arsenic	0.200	0.518	0.282	72	6	-59	359	225	73
				18	119	-13	237	67	16
				7	36	27	112	336	6
Mercury	0.300	0.508	0.192	63	12	-59	617	227	80
				20	303	12	271	69	9
				7	39	28	118	339	4
Antimony	0.284	0.544	0.172	46	212	63	394	227	77
				22	120	1	265	66	13
				7	30	27	127	335	4