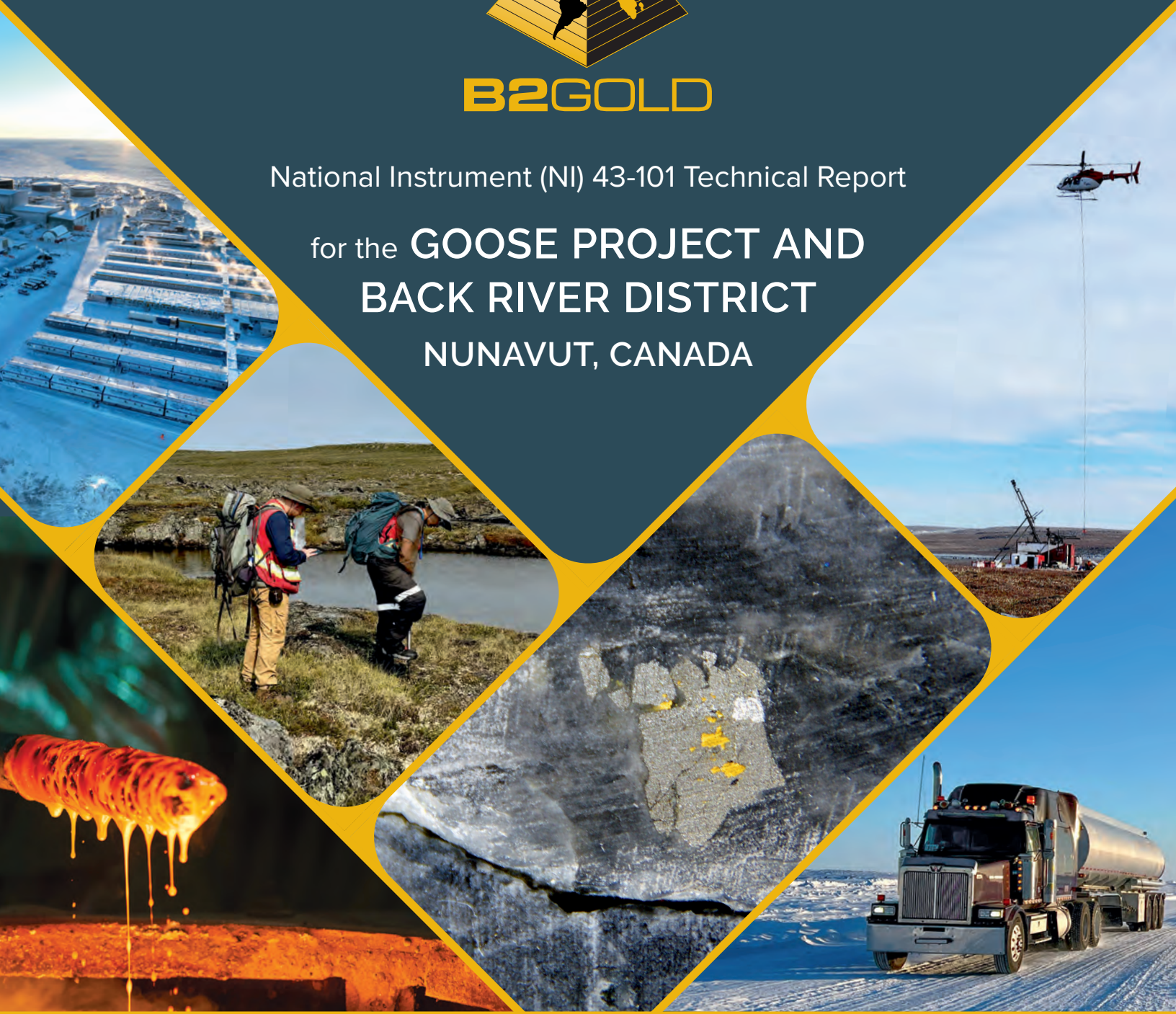




B2GOLD

National Instrument (NI) 43-101 Technical Report

for the **GOOSE PROJECT AND
BACK RIVER DISTRICT**
NUNAVUT, CANADA



PREPARED FOR
B2Gold Corp.

PREPARED BY
Mr. Andrew Brown, P.Geo.
Mr. Peter Montano, P.E.
Mr. John Rajala, P.E.
Mr. Ken Jones, P.E.
Mr. Michael Meyers, P.Eng.
Mr. William (Bill) Lytle, P.E.
Mr. Ali El Takch, P.Eng.

EFFECTIVE DATE
December 31, 2024



CERTIFICATE OF QUALIFIED PERSON

I, Andrew Brown, P.Geo, am employed as the Vice President, Exploration with B2Gold Corp. ("B2Gold"), which has its head offices at 666 Burrard St #3400, Vancouver, BC V6C 2X8, Canada.

This certificate applies to the technical report titled "Goose Project and Back River District, Nunavut, NI 43-101 Technical Report", that has an effective date of December 31, 2024 (the "technical report").

I am a member of the Engineers and Geoscientists of British Columbia (#145411) and of the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists #L5626. I graduated from Laurentian University with a Bachelor of Science, Geology in 1997 and Master of Science, Geology in 2002.

I have practiced my profession for 27 years. In this time, I have been directly involved in generating and managing exploration activities, and in the collection, supervision and review of geological, mineralization, exploration and drilling data; geological models; sampling, sample preparation, assaying and other resource-estimation related analyses; assessment of quality assurance-quality control data and databases; and supervision of Mineral Resource estimates.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (NI 43-101).

I most recently visited the Goose Project from September 16-20, 2024, a duration of five days.

I am responsible for Sections 1.1, 1.2, 1.4, 1.5, 1.6, 1.7, 1.8, 1.10, 1.11, 1.23.1, 1.24.1; Sections 2.1, 2.2, 2.3, 2.4.1, 2.5, 2.6, 2.7; Section 3; Section 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.12; Section 6; Section 7; Section 8; Section 9; Section 10; Section 11; Sections 12.1, 12.2, 12.3.1; Section 14; Section 23; Sections 25.1, 25.2, 25.3, 25.4, 25.6; 25.16.1, 25.17.1; and Section 27 of the technical report.

I am not independent of B2Gold as independence is described by Section 1.5 of NI 43-101.

I have been involved with the Goose Project since 2024.

I have read NI 43-101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated: March 28, 2025

(Signed) "Andrew Brown"

Andrew Brown, P.Geo.



CERTIFICATE OF QUALIFIED PERSON

I, Peter Montano, P.E., am employed as the Vice President of Projects with B2Gold Corp. ("B2Gold"), which has its head offices at 666 Burrard St #3400, Vancouver, BC V6C 2X8, Canada.

This certificate applies to the technical report titled "Goose Project and Back River District, Nunavut, NI 43-101 Technical Report", that has an effective date of December 31, 2024 (the "technical report").

I am a registered Professional Engineer (#42745, Colorado, USA). I graduated from the Colorado School of Mines in 2004 with a B.Sc. in engineering and a B.Sc. in economics.

I have been directly involved in the design, construction, and operation of gold mines in Nicaragua, Namibia, Mali and have participated in and contributed to projects and studies of gold and coal projects in Venezuela, El Salvador, Australia, and the Philippines. I have participated in long term and strategic mine planning, Mineral Reserve estimation, and economic analyses of mining projects and mining operations, including from development to closure.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (NI 43-101).

I visited the Goose Project most recently from September 17–October 3, 2024, a duration of 17 days.

I am responsible for Sections 1.1, 1.2, 1.3, 1.8, 1.12, 1.13 (open pit and stockpiles only), 1.14.1, 1.14.3, 1.18, 1.19 (excepting process and underground), 1.20 (excepting process and underground), 1.21, 1.22, 1.23.2, 1.23.3, 1.24.2, 1.25, 1.26; Sections 2.1, 2.2, 2.3, 2.4.2, 2.5, 2.6; Section 3; Section 5; Section 12.3.2; Sections 15.1, 15.2, 15.3, 15.4, 15.6; Sections 16.1, 16.2, 16.4; Section 19; Sections 21.1, 21.2.1, 21.2.2, 21.2.3, 21.2.4 (excepting underground costs), 21.2.6, 21.2.7, 21.2.8, 21.2.9, 21.3.1, 21.3.2 (excepting underground costs), 21.3.4, 21.3.5, 21.3.6, 21.4; Section 22; Section 24; Sections 25.1, 25.7 (open pit and stockpiles only), 25.8 (open pit and stockpiles only), 25.12, 25.13 (excepting process and underground), 25.14 (excepting process and underground), 25.15, 25.16.2, 25.16.3, 25.17.2, 25.18; Section 26; and Section 27 of the technical report.

I am not independent of B2Gold as independence is described by Section 1.5 of NI 43-101.

I have been involved with the Goose Project since B2Gold acquired the project in 2023.

I have read NI 43-101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.



As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated: March 28, 2025

(Signed) "Peter Montano"

Peter Montano, P.E.



CERTIFICATE OF QUALIFIED PERSON

I, John Rajala, P.E., am employed as the Vice President, Metallurgy with B2Gold Corp. ("B2Gold"), which has its head offices at 666 Burrard St #3400, Vancouver, BC V6C 2X8, Canada.

This certificate applies to the technical report titled "Goose Project and Back River District, Nunavut, NI 43-101 Technical Report", that has an effective date of December 31, 2024 (the "technical report").

I am a registered professional engineer in the state of Washington (No. 43299) and have a B.Sc. and M.Sc. in Metallurgical Engineering from Michigan Technological University (1976) and the University of Nevada – Mackay School of Mines (1981), respectively. I received a M.E. in Mining Engineering from the University of Arizona in 2022.

I have practiced my profession for 47 years, during which I have been directly involved in the operations and management of mineral processing plants for gold and base metals, and in process plant design and commissioning of projects located in Africa, Asia, North, Central and South America.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* ("NI 43-101").

I visited the Goose Project most recently from December 5–10, 2024, a duration of six days.

I am responsible for Sections 1.1, 1.2, 1.8, 1.9, 1.15, 1.19 (process costs only), 1.20 (process costs only); Sections 2.1, 2.2, 2.3, 2.4.3; Section 12.3.3; Section 13; Section 17; Sections 21.2.5, 21.3.3; Sections 25.1, 25.5, 25.9, 25.13 (process costs only), 25.14 (process costs only); and Section 27 of the technical report.

I am not independent of B2Gold as independence is described by Section 1.5 of NI 43-101.

I have been involved with the Goose Project since B2Gold acquired the project in 2023.

I have read NI 43-101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated: March 28, 2025

(Signed) "John Rajala"

John Rajala, P.E.



CERTIFICATE OF QUALIFIED PERSON

I, Ken Jones, P.E., am employed as the Director, Sustainability, with B2Gold Corp. ("B2Gold"), which has its head offices at 666 Burrard St #3400, Vancouver, BC V6C 2X8, Canada.

This certificate applies to the technical report titled "Goose Project and Back River District, Nunavut, NI 43-101 Technical Report", that has an effective date of December 31, 2024 (the "technical report").

I am a registered Professional Engineer (#42718, Colorado, USA). I graduated from the University of Iowa in 2001 with a B. Sc. in Chemical Engineering.

I have practiced my profession for over 20 years. I have developed, conducted and/or directed environmental and social studies including baseline investigations; materials geochemical characterization; hydrologic, air and noise modeling; closure planning and costing; and environmental and social impact assessment for hard rock mining projects in over a dozen countries in North and South America, Africa and Asia. I have developed, implemented and maintained programs for engineering and administrative compliance regarding international environmental, health and safety regulations and best practices at gold projects in Canada, Nicaragua, Namibia, the Philippines, and Mali.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101).

I visited the Goose Project most recently from June 24-26, 2024, a duration of three days.

I am responsible for Sections 1.1, 1.2, 1.8, 1.17, 1.23.4, 1.23.5; Sections 2.1, 2.2, 2.3, 2.4.4; Sections 4.9, 4.10, 4.11, 4.12; Section 12.3.4; Section 20; Sections 25.1, 25.11, 25.16.4, 25.16.5; and Section 27 of the technical report.

I am not independent of B2Gold as independence is described by Section 1.5 of NI 43-101.

I have been involved with the Goose Project since B2Gold acquired the project in 2023. I

I have read NI 43-101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated: March 28, 2025.

(Signed) "Ken Jones"

Ken Jones, P.E.



CERTIFICATE OF QUALIFIED PERSON

I, Michael Meyers, P.Eng., am employed as the Manager, Projects with B2Gold Corp. ("B2Gold"), which has its head offices at 666 Burrard St #3400, Vancouver, BC V6C 2X8, Canada.

This certificate applies to the technical report titled "Goose Project and Back River District, Nunavut, NI 43-101 Technical Report", that has an effective date of December 31, 2024 (the "technical report").

I am a Professional Engineer with Engineers & Geoscientists British Columbia (EGBC) License Number 49038, and with Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG) Registrant #L5587. I graduated from the University of British Columbia in 2012 with a Bachelor of Applied Science in Mining Engineering.

I have 12 years of Canadian and international experience in the gold mining industry, both in operational and corporate positions. Relevant experience includes underground mine operations using different mining methods, mine design, planning, and scheduling, cost estimation, and project evaluation.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (NI 43-101).

I visited the Goose Project most recently from September 24–October 3, 2024, a duration of 10 days.

I am responsible for Sections 1.1, 1.2, 1.8, 1.12 (underground only), 1.13 (underground only), 1.14.2, 1.14.3, 1.19 (underground only), 1.20 (underground only), 1.23.2, 1.23.3, 1.24.2, 1.26; Sections 2.1, 2.2, 2.3, 2.4.5, 2.5, 2.6; Section 3; Section 12.3.5; Sections 15.1, 15.2, 15.3, 15.5, 15.6; Sections 16.1, 16.3, 16.4; Sections 21.1, 21.2.1, 21.2.4 (underground only), 21.3.1, 21.3.2, 21.4 (underground only), Sections 25.1, 25.7 (underground only), 25.8 (underground only), 25.13 (underground only), 25.14 (underground only), 25.16.2, 25.16.3, 25.17.2, Section 26; and Section 27 of the technical report.

I am not independent of B2Gold as independence is described by Section 1.5 of NI 43-101.

I have been involved with the Goose Project since B2Gold acquired the project in 2023.

I have read NI 43-101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated: March 28, 2025

(Signed) "Michael Meyers"

Michael Meyers, P.Eng.



CERTIFICATE OF QUALIFIED PERSON

I, William (Bill), Lytle, P.E., am employed as the Senior Vice President and Chief Operating Officer with B2Gold Corp. ("B2Gold"), which has its head offices at 666 Burrard St #3400, Vancouver, BC V6C 2X8, Canada.

This certificate applies to the technical report titled "Goose Project and Back River District, Nunavut, NI 43-101 Technical Report", that has an effective date of December 31, 2024 (the "technical report").

I am a member of the American Society of Civil Engineers (membership #: 0000009134979). I graduated from Colorado State University in 1995 with a Bachelor of Science degree in Chemical Engineering, and in 2010 with a Master of Science degree in Civil Engineering.

I have practiced my profession for 30 years. I have been directly involved in various technical studies for mining projects throughout the world including in Canada, Namibia, Mali, and Russia. I have also been directly involved in mine and mine infrastructure construction, and have overseen mine operations from development to closure.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (NI 43-101).

I visited the Goose Project most recently from December 16 2024 to January 2, 2025, a duration of 18 days.

I am responsible for Sections 1.1, 1.2, 1.3, 1.8, 1.16 (excepting tailings storage and water management); Sections 2.1, 2.2, 2.3, 2.4.6; Section 3; Section 5; Section 12.3.6; Sections 18.1, 18.2, 18.3, 18.4, 18.7, 18.8, 18.9, 18.10; Sections 25.1, 25.10 (excepting tailings storage and water management); and Section 27 of the technical report.

I am not independent of B2Gold as independence is described by Section 1.5 of NI 43-101.

I have been involved with the Goose Project since B2Gold acquired the project in 2023.

I have read NI 43-101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated: March 28, 2025

(Signed) "William Lytle"

William Lytle, P.E.



CERTIFICATE OF QUALIFIED PERSON

I, Ali El Takch, P.Eng., am employed as the Corporate Geotechnical and Tailings Engineer with B2Gold Corp. ("B2Gold"), which has its head offices at 666 Burrard St #3400, Vancouver, BC V6C 2X8, Canada.

This certificate applies to the technical report titled "Goose Project and Back River District, Nunavut, NI 43-101 Technical Report", that has an effective date of December 31, 2024 (the "technical report").

I am a Professional Engineer (P.Eng.) of Engineers and Geoscientists British Columbia (EGBC), Licence #46259, and also a P.Eng. member of Professional Engineers Ontario (PEO), Licence #100214792. I graduated from University of Western Ontario with a Master of Engineering Science in Civil and Environmental Engineering degree in 2014, and from the Lebanese University in Lebanon with a Bachelor's degree in Civil Engineering in 2011.

I have practiced my profession for 10 years. I have been directly involved in civil and mining projects, specializing in ground and tailings characterization, water dams, tailings storage facility and dike design and management, and supervising geotechnical investigations and dam construction.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (NI 43-101).

I visited the Goose Project most recently from February 12-18, 2025, a duration of seven days.

I am responsible for Sections 1.1, 1.2, 1.8, 1.16 (tailings storage and water management only); Sections 2.1, 2.2, 2.3, 2.4.7; Section 12.3.7; Sections 18.5, 18.6; Sections 25.1, 25.10 (tailings storage and water management only), and Section 27 of the technical report.

I am not independent of B2Gold as independence is described by Section 1.5 of NI 43-101.

I have been involved with the Goose Project since B2Gold acquired the project in 2023.

I have read NI 43-101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated: March 28, 2025

(Signed) "Ali El Takch"

Ali El Takch, P.Eng.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This NI 43-101 Technical Report (the “Technical Report”) contains “forward-looking information” and “forward-looking statements” (collectively “forward-looking statements”) within the meaning of applicable Canadian and United States securities legislation, including, but not limited to, B2Gold Corp.’s (“B2Gold”): objectives, strategies, intentions and expectations; projections; forecasts; estimates; outlook; guidance; schedules; plans; designs; and other statements regarding future or estimated financial and operational performance, gold production and sales, revenues and cash flows, capital (sustaining and non-sustaining) and operating costs, and budgets; assumptions as to closure costs and closure requirements; estimated ore grades, throughput and processing; statements regarding anticipated exploration, drilling, development, construction and permitting; statements regarding indications from, and potential impacts of, drilling results; and including, but not limited to: the objectives, strategies, intentions, expectations, production, cost, capital and exploration expenditure guidance, anticipated timelines, potential mineralization and recovery estimates, mine life and the estimated economics of the Goose Project; events that may affect B2Gold’s operations, including projected power requirements and other project infrastructure, systems, equipment and materials requirements; anticipated cash flows from the Goose Project and related liquidity requirements; B2Gold’s ability and timeline to secure all relevant rights, licences, permits and authorizations; the anticipated effect of external factors on revenue, mining and/or development activities, such as commodity prices and metal price assumptions, estimation of Mineral Reserves and Mineral Resources, mine life projections, environmental liabilities, reclamation costs, economic outlook, tailings dam and storage facilities, the maintenance or provision of required infrastructure (including, without limitation, annual construction of the winter ice road, from the Goose Mine to the marine laydown area) and information technology systems, government regulation of mining operations and the entering into of major contracts required for development and/or operations; potential environmental, physical, social and economic impacts and plans, measures, and requirements to address such impacts, including the socio-economic impact of the Goose Mine, winter ice road and marine laydown area, environmental considerations and closing and reclamation planning; stakeholder engagement; and other expectations regarding community relations. All statements in this Technical Report that address events or developments that B2Gold expects to occur in the future are forward-looking statements. Forward-looking statements are statements that are not historical facts and are generally, although not always, identified by words such as “expect”, “plan”, “anticipate”, “project”, “target”, “potential”, “schedule”, “forecast”, “budget”, “estimate”, “intend” or “believe” and similar expressions or their negative connotations, or that events or conditions “will”, “would”, “may”, “could”, “should”, “might” or will “likely” occur. All such forward-looking statements are based on the opinions and estimates of B2Gold’s management as of the date such statements are made. All of the forward-looking statements in this Technical Report are qualified by this cautionary note.

Forward-looking statements are not, and cannot be, a guarantee of future results or events. Forward-looking statements are based on, among other things, opinions, assumptions, estimates and analyses of qualified persons, as defined in NI 43-101, that, while considered reasonable at the date the forward-looking statements are provided, inherently are subject to significant risks, uncertainties, contingencies and other factors that may cause actual results and events to be materially different from those expressed or implied by the forward-looking statements. The material factors or assumptions that B2Gold identified and applied in drawing conclusions or making forecasts or projections set out in the forward-looking statements include, but are not limited to: the factors identified in Sections 1.9, 1.10, 1.11, 14 and 25 (and the tables identified thereunder) of this Technical Report, which may affect the Mineral Resource estimate; the forward-looking statements and factors identified in Sections 1.12, 1.13, 15 and 25 (and the tables identified thereunder) of this Technical Report, which may affect the Mineral

Reserve estimate; the metallurgical recovery estimates identified in Section 13 of this Technical Report; the assumptions identified in Table 14-6, 14-7 and 14-12 and Section 14.2.11 and 14.3.11 of this Technical Report as being used in evaluating prospects for eventual economic extraction; the factors and assumptions identified in Section 15.4 to 15.5 of this Technical Report as forming the basis for converting Mineral Resources to Mineral Reserves, as well as the assumptions identified in Section 16; the design parameters set forth in Table 16-1; the assumptions relating to waste rock storage facilities identified in Section 16.2.5, including Table 16-2; the assumptions relating to the production schedule in Section 16.2.7, 16.3.10 and 16.4 (and the tables identified thereunder); the design and equipment assumptions identified in Section 16, 17 and 18, including Table 17-1 and Figure 17-1 of this Technical Report; the general assumptions identified in Sections 1.13, 1.14, 1.15, 1.16, 1.17, 1.18, 1.19, 1.20, 1.21, 16, 17, 18, 19, 20, 21, 22 and 25 of this Technical Report, as well as the tables included therein; dilution, ore loss and mining recovery assumptions; assumptions regarding stockpiles; the success of mining, processing, exploration and development activities; the accuracy of geological, mining and metallurgical estimates; the financial models used; the supply and demand for, and the anticipated metals prices and the costs of production; no significant unanticipated operational or technical difficulties; the execution of B2Gold's business and growth strategies, including the success of B2Gold's strategic investments and initiatives; the availability of additional financing, if needed; the availability of personnel for exploration, development, and operational projects and ongoing employee relations; maintaining good relations with the Indigenous communities surrounding the Goose Project; no significant unanticipated events or changes relating to regulatory, environmental, health and safety matters; diminishing quantities or grades of reserves; increased costs, delays, suspensions, and technical challenges associated with the construction of capital projects; geotechnical and hydrogeological considerations during mining being different from what was assumed; market competition; no contests over title to B2Gold's properties; no significant unanticipated litigation; certain tax matters; and no significant and continuing adverse changes in general economic conditions or conditions in the financial markets (including commodity prices and foreign exchange rates).

The risks, uncertainties, contingencies and other factors that may cause actual results to differ materially from those expressed or implied by the forward-looking statements may include, but are not limited to: risks generally associated with mining operations, including problems related to resource shortages and severe weather and climate in remote areas; the accessibility of the Goose Project; economic factors, including fluctuations in commodity prices, currency, energy prices and general cost escalation; uncertainties related to the continued development and operation of the Goose Project; the permafrost conditions of the Goose Project open pits and the arctic climate of the underground mine; the speculative nature of mineral exploration and development; changes to production, exploitation and exploration successes, cost and other estimates; changes to national and local government legislation, taxation laws, policies and practices in the jurisdictions in which we operate, and risks and uncertainties associated with political and economic instability in those jurisdictions; changes in the administration of laws, policies and practices, including political or economic developments in the United States; fluctuations in the price and availability of infrastructure, energy and other commodities; the impact of inflation; the market price of our common shares; compliance with government regulations, including anti-bribery and corruption laws, environmental, health and safety regulations and internal control over financial reporting; risks associated with infectious diseases; damage to B2Gold's reputation due to actual or perceived occurrence of any number of events, including negative publicity with respect to the handling of environmental matters or dealings with community groups, whether true or not; risk of loss due to acts of war, terrorism, sabotage and civil disturbances; challenges to mineral or surface rights to our properties; the failure to obtain required licences, permits, approvals or clearances from governmental authorities, including environmental permits, on a timely basis or at all; contests over title

to properties or over access to water, power and other required infrastructure; climate change; risks related to community relations and opposition, including claims by local communities and Indigenous populations; the ability to service our debt; uncertainties relating to Mineral Reserve and Mineral Resource estimates, including in relation to the geology, continuity, grade and estimates of Mineral Reserves and Mineral Resources and the potential for variations in grade and recovery rates; the potential for conflict with small scale miners; volatile financial markets and the ability to obtain additional financing; hedging transactions; the inability to insure against all risks; litigation risks; dependence on key personnel and employee relations; operational risks and hazards, industrial accidents, unusual or unexpected formations, unanticipated environmental, industrial and geological events and developments, ground conditions, pressures, slope instability, cave-ins, fire, flooding and gold ore losses (and the risk of inadequate insurance, or inability to obtain insurance, to cover these risks), failure of plant, equipment, processes, transportation and other infrastructure to operate as anticipated; depletion of Mineral Reserves; uncertain costs of reclamation activities, and the final outcome thereof; as well as other factors identified and as described in more detail under the heading "Risk Factors" in B2Gold's most recent Annual Information Form and B2Gold's other filings with Canadian securities regulators and the U.S. Securities and Exchange Commission, which may be viewed at www.sedarplus.ca and www.sec.gov, respectively.

The list is not exhaustive of the factors that may affect B2Gold's forward-looking statements. There can be no assurance that such statements will prove to be accurate, and actual results, performance or achievements could differ materially from those expressed in, or implied by, these forward-looking statements. Accordingly, no assurance can be given that any events anticipated by the forward-looking statements will transpire or occur, or if any of them do, what benefits or liabilities B2Gold will derive therefrom. B2Gold's forward looking statements reflect current expectations regarding future events and operating performance and speak only as of the date hereof and B2Gold does not assume any obligation to update forward-looking statements if circumstances or management's beliefs, expectations or opinions should change other than as required by applicable law. For the reasons set forth above, undue reliance should not be placed on forward-looking statements.

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1.0 SUMMARY

1.1 Introduction

Mr. Andrew Brown, P.Geo., Mr. Peter Montano, P.E., Mr. John Rajala, P.E., Mr. Ken Jones, P.E., Mr. Michael Meyers, P.Eng., Mr. William (Bill) Lytle, P.E., and Mr. Ali El Takch, P.Eng., collectively the Qualified Persons (QPs), prepared an NI 43-101 Technical Report (the Report) on the Goose Project (the Project) for B2Gold Corp. (B2Gold).

1.2 Terms of Reference

The Report was prepared to support disclosures in B2Gold's Annual Information Form for the year ended December 31, 2024, and in the news release titled "B2Gold Announces Updated Life of Mine Mineral Reserve Case for the Goose Project; Company to Initiate a Study to Expand Mill Throughput at the Goose Project by 50%", dated March 28, 2025.

The Report includes Mineral Resource estimates for the Umwelt, Llama, Goose Main, Echo, Nuvuyak, Goose Neck South, Locale 1, Locale 2, LCP North, LCP South, Tupiq, and GH deposits, and Mineral Reserve estimates for the Umwelt, Llama, Goose Main, and Echo deposits.

The Report uses the following terms:

- **Goose Project:** encompasses the Back River District, and includes the Goose Mine, the winter ice road, and the marine laydown area;
- **Back River District:** comprises 11 claims groups (including the Goose and George Claims Groups that host the Mineral Resource estimates); each of which consists of a group of contiguous mineral claims, and/or leases, and/or exploration permits;
- **Goose Mine:** refers to the mining operation being developed within the Goose Claims Group, and includes the open pits, the underground mine, and the on-site infrastructure such as the waste rock storage facilities, tailings storage facilities, power infrastructure, and process plant;
- **Goose Claims Group:** contains the Mineral Resource estimates for the Umwelt, Llama, Goose Main, Echo, Nuvuyak, Goose Neck South deposits, the Mineral Reserve estimates for the Umwelt, Llama, Goose Main, and Echo deposits, and the Goose Mine;
- **George Claims Group:** contains the Mineral Resource estimates for the Locale 1, Locale 2, LCP North, LCP South, Tupiq, and GH deposits.

The Goose Project is wholly-owned by B2Gold Back River Corp. (referred to in this Report as B2Gold Nunavut), a wholly-owned subsidiary of B2Gold Corp.

Units used in the Report are metric units unless otherwise noted. Monetary units are in United States dollars (US\$) unless otherwise stated. Mineral Resources and Mineral Reserves are classified using the 2014 edition of the Canadian Institute of Mining and Metallurgy (CIM) Definition Standards for Mineral Resources and Mineral Reserves (the 2014 CIM Definition Standards).

1.3 Project Setting

The Goose Project is situated within the West Kitikmeot region of southwestern Nunavut. The Goose Mine is situated approximately 400 km southwest of Cambridge Bay, 95 km southeast of the southern end of Bathurst Inlet, and 520 km northeast of Yellowknife, Northwest Territories.

The marine laydown area is located on the southern extent of the Bathurst Inlet, approximately 130 km directly north–northwest of the Goose Mine. The shipping season is restricted to the period of no sea ice, generally late summer, from approximately August to mid-October.

Goose Project access is primarily by air; all-weather airstrips were constructed at the Goose Mine and marine laydown area sites.

An approximately 163 km-long winter ice road is constructed each year from the Goose Mine to the marine laydown area. The duration that the ice road can be used depends on winter ice conditions, and varies on a year-to-year basis. An all-weather road connects the Goose exploration camp to the Goose Mine and airstrip, and roads are present throughout the camp.

The Goose Project is located in an arctic climate. Mining operations are, and will be, conducted year-round.

The Goose Project is remote from existing infrastructure. Current exploration and development activities source goods and services from northern-based suppliers, primarily in Yellowknife and Edmonton. There are four all-season accommodations camps, at Goose Mine (600 person capacity), Goose exploration (180 person) at the Goose Mine, near the Locale 1 deposit within the George Claims Group (58 person) and at the marine laydown area (200 person). There are two winter ice road service/emergency camps along the winter ice road alignment. All of the camps except the George Claims Group camp and the winter ice road camps operate year round.

The average elevation in the Goose Project area is approximately 288 metres above sea level, with gently rolling topography made up of broad, sloping uplands, plateaus, and lowlands. Much of the Goose Project area consists of unvegetated rock outcrops and boulder fields. Outcrop distribution is highly variable. The Goose Project lies north of the tree line. Plant cover is characteristic of the arctic tundra. The area is in a zone of continuous permafrost.

1.4 Mineral Tenure, Surface Rights, Water Rights, Royalties, Agreements

Mineral tenure in Nunavut is split between the Government of Canada (the Crown) and Nunavut Tunngavik Incorporated, as a result of the creation of the territory from the Nunavut Agreement, signed May 25, 1993 which came into force April 1, 1999 creating the territory of Nunavut.

The Goose Project comprises 11 mineral claims groups that collectively cover approximately 96,150 ha.

One licence is held on Inuit Owned Lands: Mineral Exploration Area BB13-21-001. The Mineral Exploration Area is valid for an initial 20-year term, expiring on July 30, 2032, and requires that both an annual rent payment and yearly work expenditure requirements are fulfilled, to remain in good standing. All required reporting and payment obligations had been met at the effective date of this Report. There are other mineral leases and claims that are on Inuit Owned Lands.

However, the mineral tenure groups were established prior to the creation of the Nunavut Agreement and continue to be managed by Crown-Indigenous Relations and Northern Affairs Canada.

The Goose Project includes 57 federal mining leases, and 35 federal mineral claims managed by Crown-Indigenous Relations and Northern Affairs Canada. Prior to 2021, claims were paper-staked, and subsequently are staked using an online claim management portal. Selected claims were converted to lease after expenditure and time requirements were met, as per the Nunavut Mining Regulations. A registered Canadian land surveyor surveyed the mining leases. Mining leases do not require filing of annual assessment work reports but do have an annual rent payment. Leases are valid for 21 years from the date of conversion, and are renewable.

Annual reports are delivered to the Kitikmeot Inuit Association, Crown-Indigenous Relations and Northern Affairs Canada, the Nunavut Impact Review Board, and the Nunavut Water Board as per the terms and conditions of authorizations issued for work completed on the Goose Project. All mining tenure is in good standing at the effective date of this Report.

Surface rights in Nunavut mining regulations authorize activities such as prospecting, exploration, and surface-level operations on both Inuit Owned Land and Crown land. These rights do not include access to or extraction of subsurface minerals, which are governed separately by mineral rights. These are issued by the Kitikmeot Inuit Association, Crown-Indigenous Relations and Northern Affairs Canada and the Nunavut Water Board. The surface rights held by B2Gold are sufficient for the life-of-mine (LOM) plan that supports the Mineral Reserve estimates.

Water rights are granted through water licences and are managed under the Water Management Plan. Type B water licences allow for exploration related activities while Type A water licences pertain to operations.

Prior to acquisition by B2Gold, Sabina Gold & Silver Corp (Sabina) completed a definitive framework agreement with the Kitikmeot Inuit Association that formalized the commercial leases and authorized mine development and operations; it is a comprehensive agreement that sets out rights and obligations with respect to surface land access on Inuit-owned land. The framework agreement includes an Inuit Impact and Benefit Agreement and other obligations required by the Nunavut Agreement.

Mineral claims or leases governed by the Nunavut Mining Regulations are subject to Crown royalties. Under the Nunavut Mining Regulations, each fiscal year, the owner, or operator of a mine must pay to the Crown, royalties based on the value of the mine's output during that fiscal year. The royalty is based on defined profits multiplied by a royalty rate, which is the lesser of 13% of the net value of mine output during a fiscal year, and an escalating rate from 0–14%, on incremental levels, of the net value of the mine output, as defined in the Nunavut Mining Regulations. The output value is based on the market value of the minerals produced by the mine, minus various deductions and allowances provided for in the regulations. Deductions include costs for mineral exploration, production, and processing, repair and maintenance at the mine, and allowances include an equipment depreciation allowance, a development allowance, and a processing allowance.

The following net smelter return (NSR) royalties are payable:

- **Goose Claims Group:**
 - On the first 400,000 oz of gold production, there is a 0.7% NSR payable to a third party and a 1.5% NSR payable to B2Gold Nunavut (the B2 Goose Royalty), as B2Gold Nunavut purchased this royalty from a third party;
 - On any gold production over 400,000 oz, there is an aggregate 3.5% NSR payable to a third party and the 1.5% B2 Goose Royalty until B2Gold Nunavut pays a total of C\$5,000,000 in royalties (the Goose Threshold Amount). Once B2Gold Nunavut has paid the Goose Threshold Amount, the aggregate royalty to the third party becomes 4.25% and the B2 Goose Royalty decreases to 0.75%;
- **George Claims Group:**
 - On the first 800,000 oz of gold production, there is an aggregate 1.15% NSR payable to third parties and a 1.5% NSR payable to B2Gold Nunavut (the B2 George Royalty), as B2Gold Nunavut purchased this royalty from a third party;
 - On any gold production over 800,000 oz, there is an aggregate 3.5% NSR payable to third parties and the 1.5% B2 George Royalty until B2Gold Nunavut pays a total of C\$5,000,000 in royalties (the George Threshold Amount). Once B2Gold Nunavut has paid the George Threshold Amount, the aggregate royalty to the third parties becomes 4.25% and the B2 George Royalty decreases to 0.75%.
- **Back River District:** 1% NSR on future gold production, payable to Kitikmeot Inuit Association.

The specific set of claims underlying the royalties listed above for the Goose Claims Group and the George Claims Group are set out in the respective underlying royalty agreements. These underlying royalty agreements also contain the details of the royalty calculations and any adjustments.

1.5 Geology and Mineralization

Deposits within the Back River District are characterized as banded iron formation-hosted gold deposits, which are structurally and stratigraphically controlled with gold mineralization predominantly hosted in sulphide-bearing oxide-iron formation.

The Goose Project is in the Hackett River terrane in the eastern part of the Archean Slave craton. Gold mineralization in the Slave craton is commonly hosted within Archean greenstone belts. The Hackett River terrane comprises predominately metasedimentary and metavolcanic rocks of the Archean Yellowknife Supergroup, and syn to late-kinematic granitoids. The Yellowknife Supergroup in the region is divided into three major sequences:

- **Beechey Lake Group:** part of the Slave-wide Burwash Basin, consists of a metasedimentary sequence comprising immature greywacke turbidites, mudstone, and intercalated banded iron formation unconformably overlying the older volcanic strata below;

- Back Group: a series of metavolcanic and volcano–sedimentary rocks, mainly comprising intermediate to felsic volcanic units;
- Hackett River Group: a volcanic sequence comprising felsic to mafic volcanic flows, tuffs, and chemical sediments.

The primary lithologies in the Goose Project area are metasedimentary units belonging to the Yellowknife Supergroup and the Goulburn Group, together with intrusive rocks provisionally assigned to the Regan Intrusive Suite. The majority of the claims groups are underlain by open to tightly folded Beechey Lake Group turbidite rocks. Greywacke and mudstone are the most volumetrically significant lithologies in the Goose Project area, with lesser amounts of interbedded banded iron formation occurring at the Goose, George, Boot, Boulder, Needle, Malley, and Wishbone Claims Groups. At the Beech Claims Group, volcanic rocks assigned to the Hackett River Group occur in a narrow, 300–400 m wide, north–south trending belt juxtaposed between Beechey Group and Regan Intrusive Suite rocks. This is the only known occurrence of Hackett River volcanic rocks in the Goose Project area.

The Goose Project area has undergone at least four major deformation events extending from the late Archean to Paleoproterozoic. Structural features are dominated by D2 and are characterized by tight to isoclinal, subvertical, northwest-trending folds with moderate to steep plunges and accompanied by a moderate to strong axial planar cleavage and localized high-strain zones. The Back River District was subject to regional upper greenschist metamorphism attributed to crustal thickening and burial during D2.

Granitic plutons attributed to the Regan Intrusive Suite, cross-cut the southeast part of the Goose Project area, forming a northeast-trending intrusive belt that outcrops at the Needle, Del, Goose, Boot, Beech, and Wishbone Claims Groups. Banded iron formation units exhibit strong warping and deflection around the more rigid plutonic bodies in these areas and result in an irregular deviation and re-folding of the overall northwest-trending folds and fabrics.

Gold mineralization is primarily hosted within oxide iron formation, and is spatially correlated with discrete high strain zones, F2 fold hinges and short limbs, lithological contacts, and quartz–feldspar porphyry dykes. Mineralization is commonly developed in fold axial planes and sub-parallel high-strain zones within limbs of F2 folds.

Gold is strongly associated with sulphide minerals, preferentially arsenopyrite, pyrrhotite and pyrite. Native gold may occur as visible grains, along fractures within sulphides, or within chlorite or amphibole altered iron formation. Sulphide mineralization is interpreted to have occurred during two distinct events, both of which are attributed to D2. The deposits in the Goose Claims Group occur within the lower iron formation in well-defined structural corridors and are spatially associated with lithological contacts. Gold mineralization is strongly correlated with tension vein filling semi-massive pyrrhotite, pyrite, and coarse-grained arsenopyrite. Gold mineralization at the George Claims Group has similar depositional styles as those observed throughout the Back River District. However, the structural corridors at George are less well-defined than those at the Goose Claims Group. Gold mineralization is typically hosted in oxide iron formation, occurring in three distinct fold belts, George belt, Fold Nose belt, and Lookout Hill belt, with little continuity exhibited between these discrete mineralized domains.

1.6 History

Prior to B2Gold's Goose Project interest, the following companies had completed work in the Goose Project area: Trigg, Woollett, Olsen Consulting Limited; J.G. Greenough, Gold Bar Development Ltd., Andromeda Investments Ltd., Ezzo Minerals Canada, Kerr-McGee Corp., Bow Valley Industries, Homestake Mineral Development Company Ltd., Arauco Resources Corporation, which later changed its name to Kit Resources Corp., Kinross Gold Corp., Miramar Mining Corporation, Dundee Precious Metals, and Sabina. Work completed included: prospecting; geological and reconnaissance mapping (1:200, 1:1,000, 1:5,000, 1:10,000, 1:25,000 scales); specialist geological studies (mineralogical and gold genesis, till orientation, mafic intrusion geochemistry and structure, metamorphic grade; felsic dyke geochemical characterization; geochronology; regional trace element); geochemical sampling (grab, rock chip, till, soil, channel, trench); airborne geophysical surveys (magnetic, electromagnetic, and radiometric), ground geophysical surveys (magnetics, induced polarization (IP), magnetometer, horizontal-loop electromagnetic, time-domain electromagnetic, IPower three dimensional (3D)); exploration and infill core drilling; metallurgical testwork; geotechnical and hydrological data collection and studies; mining studies; environmental and baseline surveys; Mineral Resource and Mineral Reserve estimates.

Since B2Gold's acquisition of Sabina in 2023, work completed has included claim and deposit/prospect-scale mapping (1:200, 1:1,000, 1:5,000, 1:10,000, 1:25,000 scales), geochemical sampling (reconnaissance and grab, channel and till); structural studies; geophysical surveys (airborne magnetic and radiometric, bore hole time domain electromagnetic, light detection and ranging (LiDAR), 3D direct current resistivity and IP); trenching; core drilling, including drilling for exploration, resource estimation, geotechnical, hydrogeological and metallurgical testwork purposes; metallurgical testwork; Mineral Resource and Mineral Reserve estimates and updates to those estimates; mining studies; environmental baseline surveys; stakeholder consultation, permitting, and mine construction activities.

1.7 Drilling and Sampling

Drilling on the Goose Project was completed by a number of operators, including B2Gold. To December 31, 2024, there have been a total of 2,813 core holes drilled for 648,459 m of drilling. Of this total, 158 core holes (55,578 m) were completed by B2Gold. A number of core sizes have been used, including AQTK (30.5 mm core diameter), BQ (36.5 mm), BQ2 (40.67 mm), NQ (47.6 mm), NQ2 (50.6 mm), NQ3 (45.08 mm), HQ (63.5 mm), HQ3 (61.1 mm) and PQ (85 mm).

Geological logging procedures varied over time. Typically, information such as lithology, mineralization, veining, description of specific structures and alteration styles, together with their width, intensity and associated mineral assemblage information were recorded. Rock quality designation (RQD) descriptions were undertaken and core recovery was measured. Other data collected could include specific gravity, magnetic susceptibility, and conductivity measurements. Core was photographed. Core recoveries were typically good across all drill campaigns.

Drill collar information was recorded using a number of instruments, including global positioning system (GPS), differential global positioning system (DGPS), total station, and electronic distance

measurement instruments. Historical down hole surveys were conducted using a combination of Maxibor, Sperry Sun single shot (magnetic), EZ-shot (magnetic), EZ-Trac (magnetic), RotoDip (magnetic), and acid tests (no azimuth) instruments/methods. From 2005 onward, instruments included Reflex Maxibor, Reflex EZ-Shot (magnetic), Reflex EZ-Trac, Reflex Sprint-IQ gyro and Omni38x Gyro Survey tools.

Only one drill hole has been completed at Goose Main since the database close-out date of 2 August, 2024. This drill hole does not significantly impact the Mineral Resource estimate. At the George Claims Group, 11 holes (2,803 m) were drilled since the database close-out date of 8 April 2020 across five deposits containing Mineral Resource estimates. Comparisons of this drilling to existing resource models indicate that they will not have a material effect on the Mineral Resource estimates.

Core sampling procedures have evolved with the various operators and industry standards since exploration began in the Back River District in 1982. Sample lengths ranged from 0.5–2.0 m with a 1.0 m average length, focusing on mineralized and strongly veined lithologies. Samples consisted of half core, split by manual core splitter until 2002 (no drilling took place in 2003), and then cut with a diamond saw from 2004 to the Report effective date.

As at the Report effective date there are 21,336 density measurements determined by the water immersion method in the database. Mineral Resource estimates used averaged specific gravity values for the stratigraphic and intrusive units in the estimate.

Numerous independent laboratories were used over the data collection period, including Acme Analytical Laboratories, Vancouver, British Columbia; Actlabs, Kamloops, British Columbia; ALS Chemex Laboratories, North Vancouver, British Columbia; Assayers Canada; Bondar-Clegg, North Vancouver, British Columbia; Bureau Veritas, Vancouver, British Columbia; Cantech Laboratories, Calgary, Alberta; International Plasma Laboratory, Vancouver, British Columbia; Min-En Laboratories, North Vancouver, British Columbia; Overburden Drilling Management Limited, Nepean, Ontario; SGS Canada, Burnaby, British Columbia; Swastika Laboratories (Swastika), Ontario; and TSL Laboratories, Saskatoon, Saskatchewan. Where accreditations are known, these included ISO 9002 and ISO 17025. One non-independent field laboratory at the Del Camp, Del Claims Group was used for exploration purposes in 1986.

Sample preparation methods changed over time and with the laboratory performing the preparation. Core samples could be crushed to $\frac{1}{4}$ inch, >70% passing 2 mm (10 mesh), 95% passing -10 mesh, or 95% passing 10 mesh. Pulverization could include -100 mesh, >85% passing 75 μ m (200 mesh), 90% passing -150 mesh, or 90% passing -140 mesh.

Analytical methods also varied over time and by laboratory. Gold was assayed using fire assay with a finish that could include inductively-coupled plasma (ICP) mass spectrometry (MS), ICP-atomic emission spectroscopy (AES), atomic absorption spectroscopy (AAS) or gravimetry. Multi-element data were typically collected using ICP methods.

No information on quality assurance and quality control (QA/QC) measures are known for programs prior to 1997. After that date, programs used QA/QC programs that had variable insertion rates, but typically included standard reference materials, blanks, and duplicate samples

in the sample stream. Other data that had QA/QC measures in place included density and magnetic susceptibility measurements. During the Sabina and B2Gold programs, QA/QC data were continuously reviewed as new data is imported. Reports were reviewed to ensure ongoing data integrity.

Various relogging and resampling programs have been completed throughout the life of the Goose Project to reflect evolving geological understanding and changing logging strategies. Results of these programs have allowed for improved understanding of the mineralization controls, and improved stratigraphic and intrusive 3D modelling.

Sample security measures for earlier drill programs are not known. Sample security measures for the Miramar, Dundee and Sabina programs included moving drill core samples from the drill site to the core processing facility twice daily, moving core samples from the core processing facility to the air-cargo planes on the day of flight, and tracking sample shipments using industry-standard procedures. B2Gold's sample shipment and security includes moving samples from the drill site and/or field work areas to the sample yards at the end of each work shift and tracking sample shipments.

1.8 Data Verification

Site visits were completed. The QPs individually reviewed the information in their areas of expertise, and concluded that the information supported Mineral Resource and Mineral Reserve estimation, and could be used in mine planning and in the economic analysis that supports the Mineral Reserve estimates.

1.9 Metallurgical Testwork

There have been numerous testwork programs over the period 1992–2024.

Metallurgical laboratories used in testwork include ALS Metallurgy, Gekko Systems Ltd., Geoscience Laboratories, Hazen Research Inc., Process Research Associates Ltd.), SGS Mineral Services (SGS), Terra Mineralogical Services, Base Metallurgical Laboratories Ltd., FLSmidth A/S, and Pocock Industrial.

Tests completed include sample preparation; chemical analysis (head, metallic gold, multi-element and whole rock); specific gravity; mineralogy (scanning electron microscope, rapid mineral scan, polished section, bulk mineral analysis and trace mineral search using quantitative evaluation of minerals by scanning electron microscopy); comminution (Bond ball mill work index, impact crushing work index, preliminary grinding circuit simulation; gravity recoverable gold; leach (cyanide and batch carbon-in-pulp (CIP)); settling (flocculant screening and dosage determination); solid–liquid separation, viscosity; cyanide detoxification testing, and evaluation of total organic carbon content of the ores.

Design and debottlenecking reviews were completed with Lycopodium Minerals Pty Ltd of Brisbane, Australia to identify and correct process design deficiencies and bottlenecks prior to completion of plant construction.

From the leach optimization test program, the overall gravity/leach gold recovery on the Year 1-3 composite sample is estimated at 92.5%. This includes a 1.9% discount on the optimum recovery from the SGS testwork. The discount is used to account for soluble gold and fine carbon losses as well as process upsets. This figure is the expected plant-scale gold recovery for the initial three years of mill operation. Prior gold recovery estimates appeared to be based on direct laboratory results.

There are no known deleterious elements that would incur penalties in the doré production and marketing. There are also no known elements in the material to be treated that may cause plant processing issues other than reactive pyrrhotite which has been addressed through a leach optimization test program.

1.10 Mineral Resource Estimation

Geological logging, structural logging and assay results from core drill holes were used as the basis of 3D models of overburden, lithology, structure, mineralization zones and gold grade estimates.

Software used in estimation included Leapfrog Geo (modelling), Leapfrog Edge (estimation), Supervisor (variography and geostatistics), Datamine Studio RM (estimation), Surpac (tabulation) and Whittle (open pit optimization).

Block modelling typically used a sub-cell approach. The parent block size was based on the spacing of drill holes and considered potential mining method. Block sizes included 5 x 10 x 5 m (Umwelt, Llama), 8 x 8 x 8 m (Goose Main, Nuvuyak), 10 x 4 x 10 (Echo), 16 x 16 x 16 (Goose Neck South), and 2 x 10 x 10 (all George Claims Group deposits). Sub-blocks included 1 x 1 x 1 m (Umwelt, Llama, Goose Main, Nuvuyak, Goose Neck South), 1.25 x 0.5 x 1.25 m (Echo), and 0.2 x 2 x 1 m (all George Claims Group deposits). AFor open pit mine planning on resources converted to Mineral Reserves, fully diluted whole-block models were derived from the subcell model using 5 x 4 x 5 m blocks at Echo and 5 x 5 x 5 m blocks at all other deposits at the Goose Claims Group.

1.10.1 Goose Claims Group

Statistics were completed on gold assays categorized by logged pyrite, pyrrhotite and arsenopyrite content, shearing intensity, alteration mineralogy, lithology, stratigraphy, vein types, structure, texture, grain size and sulphide content.

Lithology was modeled with specific focus on the lower iron formation stratigraphic unit, gabbro dykes and the quartz–feldspar porphyry dykes. Logged lithology intervals from drill core were manually grouped into stratigraphic and intrusive units. These units, or groups of these units, were modelled in 3D. Detailed deposit–scale shear/fault models were developed for Umwelt, Llama, Goose Main, and Echo. Several post-mineral faults were modeled in 3D based on logged data. These late faults sometimes offset stratigraphy and mineralization. An overburden model was constructed from logged drill hole data, surface mapping and lake surveys.

Low-grade mineralization domains were modeled based on a nominal gold cut-off of 0.2–0.4 g/t Au. High-grade domains were modelled based on a nominal gold cut-off that varies by deposit and ranges from 2–6 g/t Au. Consideration was given to logged sulphide intensity, especially arsenopyrite.

At each deposit area, the mean of density measurements in each lithology unit was calculated and applied to the lithology model. Gold values were capped, with caps varying by deposit. Downhole composites, regularized by length, were created within mineralized domains and lithological boundaries. Composite lengths varied between deposits, and ranged from 1–2 m. Gold variograms were created from composites in domains with sufficient samples and used as interpolation inputs for ordinary kriging.

Lithology and mineralization domains were coded to the block model using subcells. Depending on the deposit, the number of drill holes that could be used in interpolation ranged from 2–5, the minimum number of composites from 1–8 and the maximum number from 6–16. Estimation was typically completed using three passes. Mineral Resources are reported from the ordinary kriged (OK) grade estimate for all of the Goose Claims deposits.

Block grade estimates were checked using the following methods: visual comparison of block grades to composites on cross-sections and levels; global statistical comparison of nearest neighbour (NN), inverse distance weighting interpolation to the third power (ID3), and OK estimates, and swath plots by estimation domain to check for potential local biases in the estimates. No material biases or issues were noted.

Resource models were classified using an assessment of geological and mineralization complexity, data quality, and data density. Classification was completed using drill hole spacing as the primary criterion. Resources were classified separately for mineralization considered potentially amenable to either underground or open pit mining methods, and based on the following criteria:

- Open pit: Indicated: blocks in regions of 40–60 m spacing; supported by two or more drill holes; Inferred: blocks in regions of 60–100 m spacing;
- Underground: Indicated: blocks in regions of 30–50 m spacing; supported by two or more drill holes; Inferred: blocks in regions of 50–80 m spacing.

No Measured Mineral Resources were classified. No underground Indicated Mineral Resources were classified at Goose Main, Echo, or Goose Neck South.

Mineral Resources considered potentially amenable to open pit mining methods were constrained within a conceptual open pit mine design at Umwelt and Echo. For the other open-pit resources (Goose Main, Llama, Goose Neck South) Whittle optimized pit shells were created.

Mineral Resources considered potentially amenable to underground mining methods were reported outside of the conceptual pit shells and design pits. No allowances were made for crown pillars. Mineral Resources outside of the area were reported above an underground cut-off grade; however no stope or other constraint was applied.

For Mineral Resources, considered potentially amenable to open pit mining operations, a cut-off of 0.9 g/t Au was used. For Mineral Resources outside of the conceptual open pits, which may be amenable to underground mining, a 2.2 g/t Au cut-off was used.

1.10.2 George Claims Group

Exploratory data analysis was performed on a merged drill-log and assay file to assess mineralization controls.

Lithology, dyke, and mineralization models were built for the deposits within the George Claims Group. Geological models were based on logging observations, surface mapping and geophysical interpretations. 3D models were created for all the stratigraphic units in the model areas using logged lithology. In addition, several sub-vertical intrusive dykes were modeled. Intrusive units were treated as separate domains for the grade estimate and are typically not mineralized. Several post-mineral faults were modeled in 3D based on logged data. A base of overburden surface was also constructed.

Mineralization domains used the following criteria: halo domain with a 0.2 g/t Au threshold and minimum 3 m downhole length; low grade domain with a 1.0 g/t Au threshold and minimum 3 m downhole length; and high grade domain with a 3.0 g/t Au threshold and 2 m minimum downhole length. Mineralization domain orientations are controlled by stratigraphy.

Bulk density was applied to the block models using the mean sample value in the stratigraphic/lithological units. Gold values were capped, with caps varying by deposit. One-metre composites were created using the mineralized zone envelope as a limiting boundary. Variograms were created for the larger domains; however they were very poor due to the low numbers of composites in each domain. The primary interpolation method, inverse distance weighting interpolation to the second power (ID2), did not require inputs from variograms.

Search orientations were controlled by Datamine's dynamic anisotropy function, using the mineralized domains as an orientation control. A maximum of five composites from a single drill hole could be used, with a minimum number of six and maximum of 25 composites used overall. Estimation was completed in three passes. Estimates were reported from the ID2 interpolation.

Block grade estimates were checked using the following methods: visual comparison of block grades to composites on cross-sections and levels; global statistical comparison of NN and ID2 estimates, and swath plots by estimation domain to check for potential local biases in the estimates. No material biases or issues were noted.

Classification was implemented using drill hole spacing as the primary criterion. Resources were classified separately for mineralization considered potentially amenable to either underground or open pit mining methods, and based on the following criteria:

- Open pit: Indicated: blocks in regions of 50–60 m spacing; supported by two or more drill holes; Inferred: blocks in regions of 100–120 m spacing;
- Underground: Indicated: no blocks were classified as Indicated; Inferred: blocks in regions of 60–80 m spacing.

No blocks were classified as Measured Mineral Resources.

Mineral resources potentially amenable to open pit mining were constrained within pit shells. The Mineral Resources potentially amenable to underground mining methods were constrained by cut-off grade; however no stope or other constraint was applied.

The calculated open pit cut-off grade was rounded to 1.4 g/t Au. The cut-off grade used for the underground estimate was calculated at 3.1 g/t Au.

1.11 Mineral Resource Statement

Mineral Resources are reported in situ or in stockpiles, using the 2014 CIM Definition Standards, and have an effective date of December 31, 2024.

Mineral Resource estimates at the Echo deposit are inclusive of depletion as at December 31, 2024.

The Qualified Person for the in situ estimates is Mr. Andrew Brown, P.Geo., B2Gold's Vice President, Exploration. The Qualified Person for the estimates in stockpiles is Mr. Peter Montano, P.E., B2Gold's Vice President, Projects.

Indicated Mineral Resources are reported in Table 1-1, inclusive of those Indicated Mineral Resources that were converted to Probable Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Inferred Mineral Resources are reported in Table 1-2.

Factors that may affect the Mineral Resource estimates include: metal price and exchange rate assumptions; changes to the assumptions used to generate the gold grade cut-off grade; changes in local interpretations of mineralization geometry and continuity of mineralized zones; changes to geological and mineralization shapes, and geological and grade continuity assumptions; density and domain assignments; changes to geotechnical, mining and metallurgical recovery assumptions; changes to the input and design parameter assumptions that pertain to the conceptual pit constraining the estimates; and assumptions as to the continued ability to access the site, retain mineral and surface rights titles, maintain environment and other regulatory permits, and maintain the social licence to operate.

1.12 Mineral Reserve Estimation

Mineral Reserves were converted from Indicated Mineral Resources. Inferred Mineral Resources were set to waste. The mine plan is a combination of open pit and underground mining using conventional mine methods and equipment, and in-pit tailings deposition.

The pit shell sequences obtained from optimisations were analysed to define a practical mining sequence for the pit stage designs. Some pits are too small for phasing and are mined in one pass.

An applied cut-off grade of 1.65 g/t Au is used for Mineral Reserves reporting.

Table 1-1: Indicated Mineral Resource Statement

Claims Group	Deposit	Conceptual Mining Method	Tonnes (x 1,000)	Gold Grade (g/t Au)	Contained Gold Ounces (x 1,000)
Goose	Umwelt	Open pit	2,580	8.06	670
		Underground	4,120	11.65	1,540
	Llama	Open pit	2,400	5.77	450
		Underground	130	7.46	30
	Goose Main	Open pit	5,700	4.40	810
	Echo	Open pit	300	5.02	48
	Stockpile	Stockpile	240	2.76	21
	Total Indicated		15,460	7.16	3,560
George	LCP North	Open pit	150	8.88	43
	LCP South	Open pit	350	8.74	97
	Locale 1	Open pit	590	8.49	160
	Locale 2	Open pit	270	6.30	55
	Tupiq	Open pit	64	4.80	10
	GH	Open pit	260	6.99	58
	Total Indicated		1,680	7.85	420
Total Indicated			17,140	7.23	3,990

Table 1-2: Inferred Mineral Resource Statement

Claims Group	Deposit	Conceptual Mining Method	Tonnes (x 1,000)	Gold Grade (g/t Au)	Contained Gold Ounces (x 1,000)
Goose	Umwelt	Open pit	100	1.56	5
		Underground	1,230	10.02	400
	Llama	Open pit	320	6.12	64
		Underground	2,180	10.68	750
	Goose Main	Open pit	160	2.23	11
		Underground	3,000	4.57	440
	Nuvuyak	Underground	2,430	8.14	640
	Echo	Underground	580	7.04	130
George	Goose Neck South	Open pit	51	2.98	5
	<i>Total Inferred</i>		<i>10,060</i>	<i>7.54</i>	<i>2,440</i>
	LCP North	Underground	160	9.99	53
	LCP South	Underground	270	10.17	87
	Locale 1	Underground	1,150	10.24	380
	Locale 2	Underground	1,730	8.81	490

Claims Group	Deposit	Conceptual Mining Method	Tonnes (x 1,000)	Gold Grade (g/t Au)	Contained Gold Ounces (x 1,000)
	Tupiq	Underground	230	8.52	63
	GH	Underground	190	7.60	45
	Total Inferred		3,730	9.32	1,120
Total Inferred			13,780	8.02	3,550

Notes:

1. Mineral Resources were classified using the 2014 CIM Definition Standards and have an effective date of December 31, 2024. Mineral Resources are reported in situ or in stockpiles, inclusive of those Mineral Resources that have been modified to Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2. Mineral Resources are reported on a 100% project basis.
3. The Qualified Person for the in situ Mineral Resource estimate is Andrew Brown, P.Geo., Vice President, Exploration, B2Gold.
4. The Qualified Person for the stockpile estimate is Peter Montano, P.E., Vice President, Projects, B2Gold.
5. Goose Claims Group: Mineral Resource estimates that are potentially amenable to open pit mining methods are reported within conceptual open pit shells based on a gold price of US\$2,100/oz, metallurgical recovery of 92.5%, selling costs of US\$107.50/oz Au including royalties and levies, and operating cost estimates of US\$5.99–6.63/t mined (mining), US\$32.40–32.72/t processed (processing) and US\$22.27/t processed (general and administrative), pit slope angles of 45°, and an exchange rate of 1.33. Mineral Resources potentially amenable to open pit mining methods are reported at an average cut-off grade of 0.9 g/t Au. Mineral Resource estimates potentially amenable to underground mining are reported at a cut-off grade of 2.2 g/t Au, assuming a gold price of US\$2,100/oz Au, process recovery of 92.5%, variable mining costs by deposit of US\$134.20–171.18/t mined, processing cost of US\$54.72/t processed, and a selling cost of US\$107.50/oz Au produced. No stope or other constraint was applied.
6. George Claims Group: Mineral Resources potentially amenable to open pit mining methods are reported within conceptual open pit shells based on a gold price of US\$2,100/oz, metallurgical recovery of 92.5%, selling costs of US\$107.50/oz Au including royalties and levies, and operating cost estimates of US\$6.56/t mined (mining), US\$57.94/t processed (processing) and US\$26.55/t processed (general and administrative), pit slope angles of 43°, and an exchange rate of 1.33. Mineral Resources potentially amenable to open pit mining methods are reported at an average cut-off grade of 1.4 g/t Au. Mineral Resource estimates potentially amenable to underground mining are reported at a cut-off grade of 3.1 g/t Au, assuming a gold price of US\$2,100/oz Au, process recovery of 92.5%, mining costs of US\$175.46/t mined, processing cost of US\$84.50/t processed including haulage, and a selling cost of US\$107.50/oz Au produced. No stope or other constraint was applied.
7. Mineral Resources at Echo account for mining depletion as of December 31, 2024.
8. Mineral Resources in stockpiled material were prepared by mine site personnel at the operation.
9. All tonnage, grade and contained metal content estimates have been rounded; rounding may result in apparent summation differences between tonnes, grade, and contained metal content.

In development of the Mineral Reserve models, dilution and ore loss were applied through whole block averaging, which led to variances between the Mineral Reserve models and the parent Mineral Resource models. No additional ore loss or dilution factors were applied downstream of the whole block averaging process for open pit Mineral Reserves.

Stope shapes appropriate for Mineral Reserve estimation and long-term production planning were created assuming transverse and longitudinal longhole stoping mining methods. The cut-off grade was 4.64 g/t Au. Transverse stopes dominate the tonnes and ounces contained, and so the transverse stoping areas were set first in the stope design process. Where feasible, longitudinal stoping zones outside of or adjacent to the transverse zones were manually added to form the overall Mineral Reserve stope shapes.

Stopes above the applied cut-off grade that exist far from the main mining zones that cannot economically justify the development required for access were removed from the Mineral Reserve.

1.13 Mineral Reserve Statement

Mineral Reserves are reported at the point of delivery to the process plant using the 2014 CIM Definition Standards.

The Mineral Reserve estimate is reported within ultimate open pit and underground designs, and is summarized in Table 1-3. The estimate has an effective date of December 31, 2024.

The Qualified Person for the estimate of Mineral Reserves within the open pits and stockpiles is Mr. Peter Montano, P.E., Vice President, Projects, an employee of B2Gold.

The Qualified Person for the estimate of Mineral Reserves within the underground mine is Mr. Michael Meyers, P.Eng., Manager, Projects, an employee of B2Gold.

Factors that may affect the Mineral Reserve estimates apply to both open pit and underground reserves, and include: changes to the gold price assumptions; changes to geotechnical assumptions; unforeseen dilution or ore loss; changes to hydrogeological and dewatering assumptions; changes to inputs to capital and operating cost estimates; changes to operating cost assumptions used in the constraining pit shells or stope optimizer; changes to pit and stope designs from those currently envisaged; changes in mining or milling productivity assumptions; changes to modifying factor assumptions, including environmental, permitting and social licence to operate.

Table 1-3: Mineral Reserves Statement

Deposit	Mining Method	Tonnes (x 1,000)	Gold Grade (g/t Au)	Contained Gold Ounces (x 1,000)
Echo	Open pit	180	5.69	30
Umwelt	Open pit	2,600	7.75	650
Llama	Open pit	1,400	6.39	290
Goose Main	Open pit	3,100	4.79	470
<i>Subtotal – Open Pits</i>		<i>7,300</i>	<i>6.19</i>	<i>1,450</i>
Umwelt	Underground	3,800	8.30	1,010
Stockpiles	Stockpiles	240	2.76	21
Total Probable Reserves		11,300	6.82	2,480

Notes:

1. Mineral Reserves have been classified using the CIM Standards, are reported at the point of delivery to the process plant, and have an effective date of December 31, 2024.
2. Mineral Reserves are reported on a 100% project basis.
3. The Qualified Person for the open pit and stockpile Mineral Reserve estimate is Peter Montano, P.E., Vice President, Projects, B2Gold.
4. The Qualified Person for the underground Mineral Reserve estimate is Michael Meyers, P.Eng., Manager, Projects, B2Gold.
5. Mineral Reserves from open pit mine methods and stockpiles are based on a conventional open pit mining method, gold price of US\$1,750/oz, metallurgical recovery of 92.5%, selling costs of US\$90.00/oz including royalties and levies, average mining cost of US\$4.92/t mined at surface, average processing cost of US\$41.08/t processed, and general and administrative costs of US\$66.95/t processed. Reserve model dilution and ore loss were applied through whole block averaging such that at a 1.65 g/t Au cut-off, for all pits combined there is a 32% increase in tonnes, a 25% reduction in grade, and a 1% reduction in ounces when compared to the Mineral Resource model. Mineral Reserves that will be mined by open pit methods or are in stockpiles are reported above a cut-off grade of 1.65 g/t Au.
6. Mineral Reserves that will be mined by underground methods assume longhole stoping mining methods, gold price of US\$1,750/oz, metallurgical recovery of 92.5%, selling costs of US\$90.00/oz including royalties and levies, average mining cost of US\$120.13/t ore mined, average processing cost of US\$41.08/t processed, general and administrative costs of US\$66.95/t processed, dilution % variable by stoping area, and 90% mining recovery. Mineral Reserves that will be mined by underground methods are reported above a cut-off grade of 4.64 g/t Au.
7. All tonnage, grade and contained metal content estimates have been rounded; rounding may result in apparent summation differences between tonnes, grade, and contained metal content.

1.14 Mining Methods

Mining operations use, or will use, conventional open pit and underground mining methods and equipment. The total remaining mine life is nine years for the development of all open pit and underground Mineral Reserves.

1.14.1 Open Pit

The Echo, Umwelt, Llama, and Goose Main pits will be mined using open pit methods. Open pit operations began in 2023 and are scheduled to continue until 2032. Open pit mining rates ramp up to 18 Mt/a by 2027, before beginning to ramp down in 2030 as pits are depleted. Production of the pits is staggered to provide a steady source of ore to the mill, as well as to facilitate in-pit tailings deposition for processing.

The open pit deposits follow a common design approach as the pits are of similar scales and will use a shared equipment fleet. Typically, two pits are in operations at the same time, one in a stripping heavy phase of development with the other in primarily ore.

Geotechnical investigations support the open pit designs. Design sectors were defined based on geomechanical domains and pit shells. Design and assessment confirm that the recommended geometries are appropriate for the Echo, Umwelt, Llama, and Goose Main pits, assuming the implementation of controlled blasting, proactive monitoring, and continuous geomechanical data collection. Maintaining flexibility in the mine plan will be crucial for effectively managing slope stability.

The Echo, Umwelt, and Goose Main pits are expected to be mined through permafrost conditions over their operational life. The Llama pit is developed under Llama Lake, which is a talik. Localized thawing and snow melt are expected to occur each year resulting in pit water, in addition to water brought into the pit for operational activities such as drilling and dust suppression when applicable. The water volumes will be managed through small in-pit sumps and mobile diesel pumps when water movement is required.

1.14.2 Underground

The Umwelt underground mine will be drive-in portal access and will be mined using a mix of transverse and longitudinal longhole open stoping methods in five designated mining zones. Stopes with a width of <10 m will typically be taken longitudinally, while stopes larger than this are taken transversely. Umwelt underground will average 1,300 ore tonnes per day once in steady state operations, reaching a maximum of 1,600 t/d in 2030, while developing an average of 12 m/day.

Stope heights will vary over the life-of-mine (LOM), starting at 20 m, and later reaching 25 m high. In transverse areas early in the operations, the primary and secondary stope widths are 18 m each. Later in the mine life, the transverse stopes are still centered on 18 m widths, but the primary stopes are designed to be 16m wide and the secondaries are 20 m wide. Cemented backfill will be used in all stopes proximal to the crown pillar, and the base of the mined-out Umwelt

open pit, which will be used to store tailings. Later in the mine life, only the primary stopes in the sequence will be cemented to allow for mining of the secondary stopes later in the sequence.

For all stopes, a dilution skin is applied during stope optimization measuring 1.0 m in the hanging wall, and 0.5 m in the footwall. During scheduling, a 10% ore loss assumption is applied for all stopes.

In the bottom of each mining zone will be a sillmat level, in which every stope will be backfilled with cemented rock fill to enable access from the mining zone below it in the future. When it is time to extract the production level below the sillmat, it is planned to re-develop through the cemented rock fill to establish a top cut where production drilling and backfill will occur.

Stope design, ground support and dilution estimates were assessed using standard industry empirical methods. Stope design used the defined geotechnical properties and considered practical mining limitations, orebody geometry, numerical modelling stresses and geological features. Ground support will be installed using standard methods.

A thermal model of the Umwelt mine, encompassing all stages of the underground, open pit, and tailings deposition sequence, indicates that the introduction of heat from mining activities, water, and tailings, will lead to an unfrozen condition by Q4 2028. This unfrozen condition will remain for the entirety of the mine life.

1.14.3 Production Schedule

Overall production planning is a blend of open pit and underground ore. Where possible, stronger periods in production in one ore source are scheduled to offset a weaker period in another. In periods where ore production from the mining areas exceeds the mill throughput capacity of 1.46 Mt/a, low-grade ore from the open pits will be stockpiled for later processing.

1.15 Recovery Methods

The results of the metallurgical testwork described in Section 13, together with financial evaluation data, were used to develop metallurgical design criteria, which in turn were used to design the process facility.

The process consists of a leach and carbon adsorption process comprising: crushing; grinding; gravity concentration; leaching; carbon adsorption; cyanide destruction; carbon elution and regeneration; gold refining; and tailings thickening and disposal.

The mill is designed with a nominal capacity of 4,000 t/d at a planned average feed grade of 6 g/t Au. Design mill feed grade is 7.5 g/t Au. The crushing circuit will operate at an availability of 70%. Milling and leaching circuits will operate 24 h/d, 365 d/a, at an availability of 92%.

Process plant water requirements include process water (overflow solution from the pre-leach thickener and tailings thickener), reclaim water (water reclaimed from the tailings storage facilities (TSFs)), and fresh water (pumped from Goose Lake). Reagents will be conventional for gold operations.

1.16 Project Infrastructure

The two main infrastructure areas, at the Goose Mine and the Bathurst Inlet marine laydown area, are linked by the winter ice road.

Infrastructure at the Goose Mine includes: four open pits; one underground mine; three waste rock storage areas (WRSAs); tailings storage using the mined-out open pits at Echo and Umwelt, and Llama if necessary; process-related facilities including assay laboratory and oxygen plant; truck shop (including service and wash bays, tyre repair, and storage space for spare parts and consumables); light surface vehicle maintenance facility; warehouse and laydown areas; power plant and power distribution; the Energy Centre (wind turbines and solar facility); fuel storage farm; explosives facility; permanent accommodations camps, administration office, and mine dry facility; utilities (including fresh, process, and potable water; sewage treatment; heating, ventilation, dust control, and fume extraction; waste heat recycling; fire protection; security); plant site water management facilities (including water diversion structures, water management ponds); two reverse osmosis water treatment plants and reverse osmosis polishing units; airstrip; all-season haul roads and service roads; and industrial waste management facilities.

Infrastructure at the marine laydown area primarily consists of a marine receiving and staging facility, which is used to receive fuel, cargo, and consumables during mine construction and operation. Key items include: grounded terminal barge that will accept lighter barges; shore-mounted anchorages for shipping; diesel fuel storage tank farm; container storage area; construction laydown area; warehouse; power plant; maintenance shop; desalination plant; fresh/fire-water storage and distribution; accommodations camp with offices; waste management infrastructure; winter ice road; and all-weather airstrip.

Goods can be transported to the site either by aircraft or sealift marine vessels. Aircraft shipments are routed through Edmonton, Alberta or Yellowknife, NWT, with goods consolidated at warehouses in these cities before being flown to the site. Typical aircraft used include 737 cargo planes and Hercules C-130 aeroplanes for oversized items.

Most goods are shipped to the Goose Mine via sealift marine vessels. Goods are trucked to ports over the summer and loaded onto vessels that depart in mid-July and August, arriving at the marine laydown area in August and September. The primary port for sealift freight is Salaberry-de-Valleyfield, QC, with alternative ports on Canada's West Coast if needed. A less favorable barge route from Hay River, NWT, is also available.

At the marine laydown area, supplies are stored until the winter ice road is operational. The 163 km-long ice road, annually constructed and operated from approximately December through April, connects the marine laydown area with Goose Mine and is the primary supply delivery method. The airstrip at Goose Mine is used for personnel transport and for transshipment of incidental freight, while the airstrip at the marine laydown area handles personnel transport, consumables, and groceries.

There will be three WRSAs for the Goose Mine. The Umwelt WRSA will be adjacent the Umwelt open pit, the Llama WRSA will be adjacent the Llama open pit, and the Echo WRSA, which will be used for both the Echo and Goose Main open pit mine waste; located directly over the top of

the Echo pit after completion of backfilling of the pit with tailings once the tailings have consolidated. Potentially-acid generating (PAG) material will be encapsulated in the facilities by at least 5 m of non-acid generating (NAG) material. Drainage from the WRSAs is considered contact water, and is contained within contact water ponds. Underground mine waste will be temporarily stored on surface, used for construction (if NAG), and permanently stored underground as backfill.

An estimated 11.3 Mt of tailings of tailings will be generated over the LOM. The tailings will be deposited into the mined-out open pits at Echo and Umwelt. The Llama and Goose Main pits are permitted for tailings deposition is required. The Echo facility will receive tailings for the first 3.5 years (4.5 Mt of tailings), followed by 4.5 years of deposition to the Umwelt pit (6.8 Mt of tailings). Tailings will need to be managed to prevent metal-leaching and acid-rock drainage, and it is planned to flood the Llama and Umwelt facilities with water, and cover the Echo facility with waste rock at closure, which will limit acidic conditions from developing.

The primary water management infrastructure will consist of water conveyance channels, stormwater ditches, and sediment control ponds.

1.17 Environmental, Permitting and Social Considerations

1.17.1 Goose Mine, Winter Ice Road, and Marine Laydown Area

The Environmental Assessment, which encompassed the Goose Mine, winter ice road, and marine laydown area, commenced in June 2012, with submission of the project (Goose Mine, winter ice road, and marine laydown area) Proposal to the Nunavut Impact Review Board (NIRB File No. 12MN026). Following completion of a project certificate workshop on the Goose Mine, winter ice road, and marine laydown area, held in December 2017, the Nunavut Impact Review Board issued the final project certificate (PC No. 007) pursuant to Section 12.5.12 of Article 12 of the Nunavut Agreement for the Goose Mine, winter ice road, and marine laydown area in December 2019.

An application for a Type A Water Licence to the Nunavut Water Board was submitted in October 2017, in accordance with the regulatory framework provided in the Nunavut Agreement, the Nunavut Waters and Nunavut Surface Rights Tribunal Act, and Nunavut Water Regulations. A Type A Water Licence (2AM-BRP1831) was issued in November 2018 and amendment No. 1 was issued on August 31, 2021.

In April 2018, the Framework Agreement for the Goose Mine, winter ice road, and marine laydown area was finalized with the Kitikmeot Inuit Association, establishing the rights and obligations related to surface land access on Inuit-owned land. This agreement achieves two key objectives: it ensures long-term land tenure security for B2Gold Nunavut and defines the benefits the Goose Mine, winter ice road, and marine laydown area will provide to the Kitikmeot Inuit and Kitikmeot Inuit Association in return for access to their land.

1.17.2 Environmental Considerations

B2Gold Nunavut's Environmental Management System provides the framework through which the Environmental Management Plans will be delivered. The Environmental Management System is the system through which B2Gold Nunavut will verify that the conditions set in the project certificate for the Goose Mine, winter ice road, and marine laydown area, permits, authorizations, licences and associated legislative requirements are met. The Environmental Management System is a tool for managing the effects of its activities on the environment, as well as providing a structured approach to planning and implementing environmental protection measures. A suite of over 30 Environmental Management Plans are grouped into the following categories:

- Atmospheric environment;
- Fisheries management;
- Freshwater environment;
- General monitoring;
- Infrastructure and access;
- Marine environment;
- Terrestrial environment;
- Waste management ;
- Wildlife monitoring;
- Socio-economic environment.

1.17.3 Closure and Reclamation Planning

B2Gold Nunavut's overall goal of mine closure is to return the mine site and affected areas to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities. This overall closure goal is supported by the achievement of four closure principles: physical stability, chemical stability, no long-term active care requirements, and compatibility with future land uses for each component (Goose Mine, winter ice road, and marine laydown area).

Financial security is required under the Type A Water Licence and is posted to Crown Indigenous and Northern Affairs Canada for water-related closure costs, and the Kitikmeot Inuit Association for land-based reclamation activities associated with the Goose Mine, winter ice road, and marine laydown area. The amount of security was agreed upon during the regulatory phase in 2018. The security will be deposited at agreed-upon milestones to ensure that the funds required for future reclamation will be available. The total closure cost of the Goose Mine, winter ice road, and marine laydown area outlined in the Type A Water Licence Amendment No. 1 (issued August 31, 2021) is approximately C\$50 M (approximately US\$34 M, assuming an exchange rate of 1.44C\$:US\$).

1.17.4 Permitting Considerations

B2Gold Nunavut has successfully completed the various permitting steps to proceed to mine development and has obtained all necessary major permits required for construction and operation of the Goose Mine, winter ice road, and marine laydown area.

1.17.5 Social Considerations

The closest communities to the Goose Mine are Kingaok, approximately 160 km north of the Goose Mine, and Omingmaktok, approximately 250 km northeast. These are considered 'outpost camps', otherwise known as 'seasonal communities', and are only used for short periods of the year by a limited number of community members (i.e. typically <50 persons). The communities of Kugluktuk and Cambridge Bay are the closest major regional communities. Other communities that are considered to be in relative proximity to the Goose Mine include Gjoa Haven, Kugaaruk, and Taloyoak.

The Final Environmental Impact Statement determined that the socio-economic impact of the Goose Mine, winter ice road, and marine laydown area would mostly be positive, notably due to delivery of benefits to local populations via the Inuit Impact and Benefit Agreement. Potential project impacts are monitored and managed through the implementation of several management plans. Continual improvements and adjustments to B2Gold Nunavut's management and monitoring program continue to be made and B2Gold Nunavut has committed to continue using adaptive management as a tool for improving the overall socio-economic performance in the future.

1.18 Markets and Contracts

The Goose Mine will produce a readily-saleable commodity in the form of doré. Doré produced is shipped to Asahi Refining in Brampton, Ontario for refining.

Commodity prices used in Mineral Resource and Mineral Reserve estimates are set by B2Gold corporately. The current gold price provided for Mineral Reserve estimation is US\$1,750/oz, and US\$2,100/oz for Mineral Resource estimation.

The financial model assumes a gold price of US\$2,668/oz in 2025, US\$2,621/oz in 2026, US\$2,490/oz in 2027, US\$2,363/oz in 2028, and US\$2,212/oz for all subsequent years.

Major contracts include blasting explosives and accessories, open pit drilling, underground definition drilling, and contracts related to infrastructure construction. Contracts are negotiated and renewed as needed. Contract terms are within industry norms, and typical of similar contracts in Nunavut with which B2Gold is familiar.

1.19 Capital Cost Estimates

Capital costs consist largely of site processing and infrastructure facilities, mining and processing equipment and rebuilds, power generation including powerhouse and wind farm, and allowances for general and administrative costs. Capital costs are split into:

- Sustaining capital: costs that support the existing LOM plan;
- Non-sustaining capital: costs are for a long-term structures or external project that do not necessarily depend on the mine plan. Non-sustaining capital allocations include remaining infrastructure development required to start processing operations in Q2 2025.

The capital cost estimate for the LOM plan is included in Table 1-4. LOM plan capital cost estimates total US\$500 M, excluding capitalized surface waste and capitalized underground development.

1.20 Operating Cost Estimates

Operating cost estimates are based on actual and forecast costs as at December 31, 2024 on mining and processing Mineral Reserves from open pit, underground, and existing stockpile sources.

Department costs are estimated independently. Some departments are treated as distributable costs such as power generation, marine laydown area, and winter ice road, and are allocated to other departments.

The operating cost estimate for the LOM plan is included in Table 1-5. Total operating costs for are estimated at US\$252.48/t ore processed, and US\$1,244.05/oz Au produced.

1.21 Economic Analysis

Identification of information that is forward-looking is included in the statement at the front of this Report.

The financial model that supports the mineral reserve declaration in a standalone model that calculates annual cash flows based on scheduled ore production, assumed processing recoveries, metal sale prices, exchange rate of 1.44 CAD/US\$, projected operating and capital costs, and estimated taxes.

The financial analysis is based on an after-tax discount rate of 6%. All costs and prices are in unescalated “real” dollars. The currency used to document the cash flow is US\$.

The Goose Mine is subject to Federal and Territorial corporate income tax at a combined rate of 27% (15% federal and 12% Nunavut) and mining royalties (i.e., Nunavut Mining Tax). The royalty is calculated based on graduated rates to a maximum royalty rate of 13%. As the royalty is based on production less operational expenses and certain other deductions, it has been reflected as an income and mining tax for the purposes of the LOM.

The valuation date is December 31, 2024. The after-tax NPV is US\$1,305 M. The internal rate of return is calculated to be 214%, with a payback period of 1.5 years.

A summary of the financial results is provided in Table 1-6.

Table 1-4: LOM Capital Cost Estimate

Area	Sub-Area	Units	Value
Non-sustaining capital	Construction - all site development prior to first gold production	US\$ M	150
	Construction - all site development after first gold production	US\$ M	37
	<i>Subtotal non-sustaining capital</i>	<i>US\$ M</i>	<i>187</i>
Sustaining capital	Mining - surface	US\$ M	81
	Mining - underground	US\$ M	45
	Processing	US\$ M	10
	General and administrative	US\$ M	19
	Distributable (power, marine laydown area)	US\$ M	124
	<i>Subtotal sustaining capital</i>	<i>US\$ M</i>	<i>279</i>
Closure capital	Closure costs	US\$ M	34
Total All Capital Costs		US \$ M	500

Note: Mining sustaining capital costs exclude mine capital stripping and development. Table 21-2 in Section 21 includes mine capital stripping and development. Totals may not sum due to rounding.

Table 1-5: LOM Unit Operating Costs (Ore Processed)

Area	Ore Processed (US\$/t)	Gold Produced (US\$/oz Au)
Mining (all areas)	95.69	471.49
Processing	45.04	221.93
General and administrative	68.31	336.57
Distributable (winter ice road and marine laydown area)	43.44	214.06
Total	252.48	1,244.05

Note: Mining costs are US\$4.62/t mined for surface mining including capitalized waste, and US\$116.76/t ore mined for underground excluding capitalized development. Processing costs include stockpile rehandle and ore haulage where applicable. Totals may not sum due to rounding.

Table 1-6: Cashflow Summary Table

Item	Units	Value
<i>Production Profile</i>		
Contained gold ounces processed	Moz	2.48
Gold recovery	%	92.5
Average gold grade	g/t	6.82
Gold ounces produced	Moz	2.29
Average annual gold production	koz/yr	269,842
Mine life (surface and underground)	Years	9.0
Mill life	Years	8.5
Ore tonnes processed	Mt	11.3
Surface waste material mined	Mt	102
Surface waste to ore strip ratio	Waste: Ore	14.1
Underground lateral meters developed	m	27,806
Underground vertical meters developed	m	2,319
<i>Goose Mine Economics - US\$2,345/oz project average gold price</i>		
Non-sustaining capital	US\$M	187
Sustaining capital incl. mine capital stripping and development	US\$M	601
Closure capital	US\$M	34
Gross gold revenue	US\$M	5,378
Net cash flow (after tax)	US\$M	1,760
NPV _{6.0%} (after tax)	US\$M	1,305
IRR (after tax)	%	214
Payback	years	1.5
<i>Unit Operating Costs</i>		
LOM cash operating costs (mining, processing, and site G&A)	US\$/oz Au	1,129
LOM AISC (cash operating costs + royalties, corporate G&A, selling costs and excluding pre-production capital costs)	US\$/oz Au	1,547
Average LOM surface mining cost	US\$/t rock mined	4.62
Average LOM underground mining cost	US\$/t ore mined	116.76
Average LOM processing cost	US\$/t processed	45.04

Note: numbers have been rounded. n/a = not applicable. AISC = all-in sustaining costs. G&A = general and administrative costs.

1.22 Sensitivity Analysis

The sensitivity of the Goose Mine to changes in grades, sustaining capital costs and operating cost assumptions was tested using a range of 25% above and below the base case values. The changes in metal prices are representative of changes in grade.

The Goose Mine is most sensitive to changes in the gold price and grade, less sensitive to changes in operating costs, and least sensitive to capital cost changes.

1.23 Risks

Risk factors specific to the Mineral Resource and Mineral Reserve estimates were provided in Section 1.11 and Section 1.13, respectively.

1.23.1 Mineral Tenure, Surface Rights and Royalties

The mineral tenure, surface rights and royalty data for the Goose Project is multifaceted, comprising a combination of Crown and Inuit Owned Land, and royalty interests payable to several parties. The QPs have relied upon information from B2Gold Corp experts. There is a risk that when a detailed audit is performed, issues may be identified, such as: arrears in or non-compliance with Territorial reporting obligations; mis-identification of current royalty holders or changes in individual royalty holder interests; mis-correlation of royalty percentages, agreements, and royalty holders on legacy cell or boundary claims to the current claim boundaries; and the status of, or currency of, agreements not being up-to-date.

1.23.2 Mining

Not meeting the mining productivity targets including underground development, open pit total mining tonnage, underground stope production forecasts is a risk to the Goose Mine assumptions if the production profile and tailings management plan are to be met.

The interface between the suprapermafrost and subpermafrost zones requires proactive planning and execution to ensure appropriate water management.

Monitoring of the production profile against the block model is required to ensure that the reconciliation data supports the geological modelling assumptions.

1.23.3 Cost Estimation

The cost estimates that are forecast are estimates based on reasonable assumptions. Actual costs may vary because there are few analogue mines to benchmark against that are open pit and underground operations in the arctic environment, and the Goose Mine has not yet reached steady-state operations.

1.23.4 Wildlife Management

A key area of study over the past 15 years has been the biodiversity and priority species identified in the area surrounding Goose Mine. B2Gold Nunavut has developed a Wildlife Mitigation and Monitoring Program Plan that will be followed concurrent with the development of the Goose Mine.

The Wildlife Mitigation and Monitoring Program Plan describes actions that are intended to reduce mine-related effects on wildlife, in particular, caribou. The plan is intended to ensure wildlife habitats and populations are maintained in the area that will be influenced by mine development, while taking into account operational requirements and the safety of mine employees.

Caribou are an extremely important cultural and subsistence resource for Kitikmeot Inuit, and are integral to their livelihood. B2Gold Nunavut worked closely with the Kitikmeot Inuit Association to understand and document Traditional Knowledge of the Goose Main, winter ice road, and marine laydown areas and the wildlife and people who depend on it. While B2Gold Nunavut has established caribou protection measures that range from site notifications and alerts as caribou migration seasons and individuals approach the mine site, to staged, rapid, and planned operational shutdowns of activities such as blasting, heavy mobile equipment, helicopters, and fixed-wing aircraft, there remains a risk that individual caribou within the caribou migratory range could experience short-term effects from mine-related activities as the staged, rapid, and planned operational shutdowns are implemented.

1.23.5 Stakeholder Relations

The Inuit Impact and Benefit Agreement, commercial lease and water compensation agreement sets out rights and obligations with respect to land access on Inuit-owned land in the Goose Mine, the winter ice road, and the marine laydown areas. Additionally, these agreements provide Inuit of the Kitikmeot Region with financial and socio-economic benefits including training and employment opportunities, business and contracting opportunities, share ownership in the Goose Mine, the winter ice road, and the marine laydown area, and royalties on future production from the Goose Mine. The Inuit Impact and Benefit Agreement is managed by a joint committee of appointed members from both B2Gold Nunavut and the Kitikmeot Inuit Association, all of whom are dedicated to ensuring the implementation of the terms contained within.

Maintaining the established relationship between B2Gold and the Inuit communities is critical to successful mining operations.

1.24 Opportunities

1.24.1 Geology and Mineral Resources

There is upside potential for the Mineral Resource estimates if mineralization that is currently classified as Inferred can be upgraded to higher-confidence Mineral Resource categories.

At the Goose Claims Group, Umwelt, Llama, Goose Main, and Echo deposits remain open down plunge. The Nuvuyak and Goose Neck South deposits are open down dip and along strike, respectively.

At the George Claims Group, Locale 1, Locale 2, and LCP South remain open down dip. LCP North, Tupiq and GH remain open down plunge and down dip.

The regional exploration programs have identified several promising prospects through mapping, geophysical surveys, and various types of sampling, including tills, grabs, rock chip sampling and diamond drilling. These efforts have helped define favorable lithologies and prospective

structures associated with gold mineralization. The Boot Claims Group hosts multiple mineralized structures intersecting iron formation, coinciding with geophysical and geochemical anomalies with limited drilling. The Boulder Claims Group hosts a sequence of tightly folded banded iron formation continuous with the banded iron formation exposed at the George Claims Group. The Del Claims Group hosts a structurally-controlled, northwest-trending alteration zone within vein-bearing clastic sediments. The Needle Claims Group hosts a structurally complex and prospective thick package of banded iron formation. The BB13, Beech, Malley, and Wishbone Claims Groups have known gold occurrences associated with prospective stratigraphy in a complex structural framework.

The Mineral Resource estimates use a long-term gold price that is significantly lower than the March 2025 spot gold prices. There is upside potential if the constraining pit shells can be updated with a higher gold price, which could capture additional Mineral Resources within a larger pit shell.

1.24.2 Mining

A portion of the estimated Indicated Mineral Resources were not converted to Mineral Reserves. This material represents upside potential for extending the mine life once studies have been completed that support conversion to Mineral Reserves. Examples include a potentially larger open pit at Goose Main, and additional stopes that may be added to the Umwelt underground mine plan through alternative mining methods.

There have been limited mining studies and reviews completed by B2Gold on the George Claims Group deposits. These retain upside potential for extending the mine life once studies have been completed that support conversion of the Indicated Mineral Resources in these deposits to Mineral Reserves.

There is potential to exceed the planned production from the Umwelt underground by increasing the mine production rate through development of more active production levels. This could increase annual gold production and lower unit operating costs.

Electrification of the hauling fleet through deployment of battery electric vehicles has the potential to significantly reduce operating costs and lower greenhouse gas emissions.

Remote operation of surface and underground equipment presents an opportunity to optimize production efficiencies, reduce the number of on-site staff that require transport to and from the Goose Mine site, and reduce operating costs.

1.25 Interpretation and Conclusions

An economic analysis was performed in support of estimation of the Mineral Reserves; this indicated a positive cash flow using the assumptions detailed in this Report.

1.26 Recommendations

Recommendations relate to mining work programs. All of the work can be conducted concurrently, no elements of the work program are dependent on the outcome of another

program. The programs suggested require a budget allocation of approximately US\$4.1 M, and an ongoing annual budget allocation of US\$4.3 M per year for underground definition drilling.

The mining recommendations include:

- Upgrading the open pit geotechnical assessment for the Llama and Goose Main pits in advance of operations;
- Finalizing the Umwelt underground Zone 1 tailings barrier construction and monitoring program;
- Upgrading the hydrogeological assessment for the Umwelt underground as mine development advances to depths closer to the expected transition out of permafrost conditions;
- Evaluating a larger-scale mine method for Umwelt underground to potentially increase the production rate;
- Evaluating mine technology projects such as autonomous, or remote operations of select equipment and operational functions both in the open pit and underground.

2.0 INTRODUCTION

2.1 Introduction

Mr. Andrew Brown, P.Geo., Mr. Peter Montano, P.E., Mr. John Rajala, P.E., Mr. Ken Jones, P.E., Mr. Michael Meyers, P.Eng., Mr. William (Bill) Lytle, P.E., and Mr. Ali El Takch, P.Eng., collectively the Qualified Persons (QPs), prepared an NI 43-101 Technical Report (the Report) on the Goose Project and Back River District (the Project) for B2Gold Corp. (B2Gold). The Project location is shown on Figure 2-1.

2.2 Terms of Reference

The Report was prepared to support disclosures in B2Gold's Annual Information Form for the year ended December 31, 2024, and in the news release titled "B2Gold Announces Updated Life of Mine Mineral Reserve Case for the Goose Project; Company to Initiate a Study to Expand Mill Throughput at the Goose Project by 50%", dated March 28, 2025.

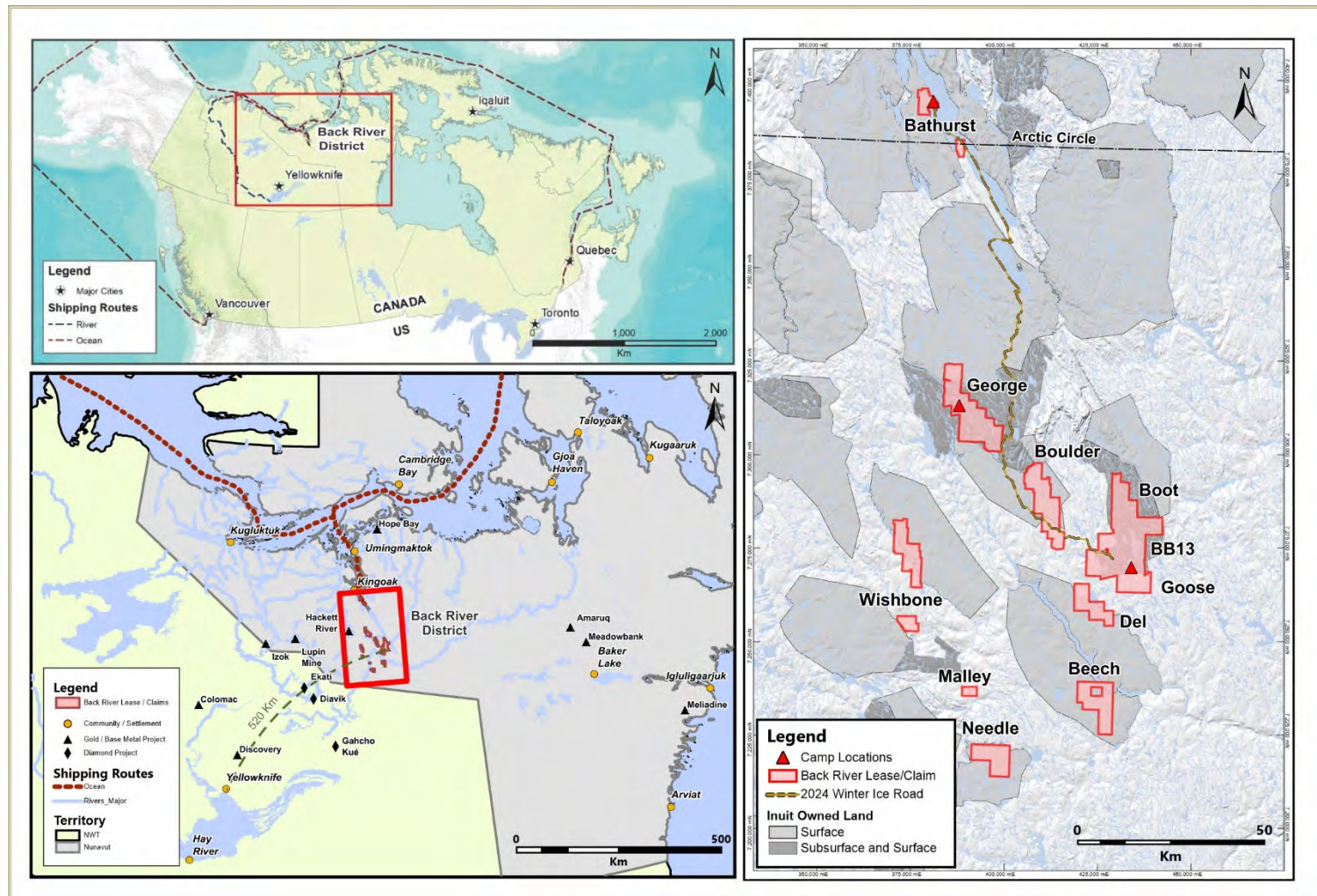
The Report includes Mineral Resource estimates for the Umwelt, Llama, Goose Main, Echo, Nuvuyak, Goose Neck South, Locale 1, Locale 2, LCP North, LCP South, Tupiq, and GH deposits, and Mineral Reserve estimates for the Umwelt, Llama, Goose Main, and Echo deposits.

The Report uses the following terms:

- **Goose Project:** encompasses the Back River District, and includes the Goose Mine, the winter ice road, and the marine laydown area;
- **Back River District:** comprises 11 claims groups (including the Goose and George Claims Groups that host the Mineral Resource estimates); each of which consists of a group of contiguous mineral claims, and/or leases, and/or exploration permits;
- **Goose Mine:** refers to the mining operation being developed within the Goose Claims Group, and includes the open pits, the underground mine, and the on-site infrastructure such as the waste rock storage facilities, tailings storage facilities, power infrastructure, and process plant;
- **Goose Claims Group:** contains the Mineral Resource estimates for the Umwelt, Llama, Goose Main, Echo, Nuvuyak, Goose Neck South deposits, and the Mineral Reserve estimates for the Umwelt, Llama, Goose Main, and Echo deposits;
- **George Claims Group:** contains the Mineral Resource estimates for the Locale 1, Locale 2, LCP North, LCP South, Tupiq, and GH deposits.

The Project and all mineral tenure are wholly-owned by B2Gold Back River Corp. (referred to in this Report as B2Gold Nunavut), a wholly-owned subsidiary of B2Gold Corp.

Figure 2-1: Location Plan



Note: Figure prepared by B2Gold, 2025.

Units used in the Report are metric units unless otherwise noted. Monetary units are in United States dollars (US\$) unless otherwise stated. Mineral Resources and Mineral Reserves are classified using the 2014 edition of the Canadian Institute of Mining and Metallurgy (CIM) Definition Standards for Mineral Resources and Mineral Reserves (the 2014 CIM Definition Standards).

2.3 Qualified Persons

The following serve as the qualified persons for this Technical Report as defined in National Instrument 43-101, Standards of Disclosure for Mineral Projects, and in compliance with Form 43-101F1:

- Mr. Andrew Brown, P.Geo.; Vice President, Exploration, B2Gold;
- Mr. Peter Montano, P.E.; Vice President of Projects, B2Gold;
- Mr. John Rajala, P.E.; Vice President, Metallurgy, B2Gold;
- Mr. Ken Jones, P.E., Director, Sustainability, B2Gold;
- Mr. Michael Meyers, P.Eng., Manager, Projects B2Gold;
- Mr. William (Bill) Lytle, P.E., Senior Vice President, and Chief Operating Officer, B2Gold;
- Mr. Ali El Takch, P.Eng., Corporate Geotechnical and Tailings Engineer, B2Gold.

2.4 Site Visits and Scope of Personal Inspection

2.4.1 Mr. Andrew Brown

Mr. Brown visited the Project on several occasions, most recently from September 16–20, 2024. His first visit to the Goose Project was July 7–11, 2023, with subsequent visits from March 15–23, 2024, July 31–August 13, 2024, and August 21–August 23, 2024.

During the visits Mr. Brown inspected examples of drill core, the open pit and underground mining operations, toured the site infrastructure, and discussed aspects of geology, exploration methodology, and mining practices with site staff.

2.4.2 Mr. Peter Montano

Mr. Peter Montano has visited the Goose Mine on a number of occasions, most recently from September 17–October 3, 2024. During the most recent site visit Mr. Montano visited the Echo and Umwelt open pits, Umwelt underground mine, mobile equipment workshop, ore stockpiles, and construction areas including the primary pond, processing plant, and power plant.

2.4.3 Mr. John Rajala

Mr. John Rajala most recently visited the Goose Mine from January 30–February 6, 2025. The purpose of the site visit was to review the progress and status in the following areas: process plant and powerhouse construction; process and powerhouse commissioning plans; mill operator

training manuals and materials; and hiring schedules for process plant and powerhouse personnel.

Mr. Rajala also visited the Goose Mine during 2024, from January 23–30, May 16–21, August 15–20 and December 5–10. These trips were primarily to review process plant and powerhouse construction progress and commissioning plans.

2.4.4 Mr. Ken Jones

Mr. Ken Jones has visited the Goose Project on a number of occasions, most recently from June 24–26, 2024. During the most recent site visit, Mr. Jones viewed the Echo open pit, waste management and materials storage areas, workshops, offices, camps, and airstrip; the process plant, power house, fuel tanks, and the marine laydown area and its facilities. Mr. Jones discussed with staff the status of, and improvements to, the implementation and performance of the environmental management systems, environmental management plans and environmental work plans.

2.4.5 Mr. Michael Meyers

Mr. Michael Meyers visited the Goose Mine on a number of occasions, most recently from September 24–October 3, 2024. During the most recent site visit Mr. Meyers visited the Umwelt underground mine, Echo and Umwelt open pits, the planned future mining areas of Llama and Goose open pit, ore stockpiles, and construction areas including the primary pond, processing plant, and power plant.

2.4.6 Mr. William (Bill) Lytle

Mr. Bill Lytle visited the Goose Mine on a number of occasions, most recently from December 16 2024 to January 2, 2025. He was also at the site from January 15–18, 2024, February 12–March 7, 2024, May 20–June 7, 2024, July 3–24, 2024, and October 21–30, 2024. During his time on site, Mr. Lytle was the Acting General Manager, responsible for project development aspects for mine construction through to mine operations. He inspected the progress on the infrastructure and construction areas, the underground mine development, and the open pits.

2.4.7 Mr. Ali El Takch

Mr. Ali El Takch visited the Goose Mine from February 12–18, 2025, touring key construction and mining areas such as the Echo tailings storage facility, primary pond, plant, fuel farm, and low-grade stockpile mechanically stabilized earth wall. He attended catch-up meetings with various managers and discussed tailings deposition and water management strategies with the construction and engineering teams to enhance operational efficiency.

2.5 Effective Dates

There are a number of effective dates pertinent to the Report, as follows:

- Date of the latest drilling information included in the Report: December 31, 2024;

- Database close-out dates for the Mineral Resource estimates:
 - Umwelt, Llama (Goose Claims Group): December 5, 2024;
 - Goose Main, Echo (Goose Claims Group): August 2, 2024;
 - Nuvuyak (Goose Claims Group): December 31, 2024;
 - Goose Neck South (Goose Claims Group): December 13, 2024;
 - All George Claims Group deposits: April 8, 2020;
- Effective date of the Mineral Resource estimate for the deposits in the Goose and George Claims Groups: December 31, 2024;
- Effective date of the Mineral Reserve estimate: December 31, 2024;
- Effective date of the economic analysis that supports the Mineral Reserves: December 31, 2024.

The overall Report effective date is taken to be the date of the Mineral Reserve estimate and the economic analysis, and is December 31, 2024.

2.6 Information Sources and References

Reports and documents listed in Section 27 of this Report were used to support preparation of the Report. Additional information was provided by B2Gold personnel as requested. Supplemental information was also provided to the QPs by third-party consultants retained by B2Gold in their areas of expertise.

Information pertaining to surface rights, royalties, environmental, permitting, and social considerations, marketing, and taxation were sourced from B2Gold as required.

2.7 Previous Technical Reports

B2Gold has not previously filed a technical report on the Project.

Prior to B2Gold's Project interest, the following technical reports had been filed:

- Thibodeau, D., Shannon J.M., Nussipakynova, D., Klabenes, J., Mostert, M., Farmer, N., Freudigmann, S., Peacock, B., Cook, R., Blackwell, A., Dawson, M., Benjamin, V., Kurylo, J., and Teymouri, S., 2021: National Instrument (NI) 43-101 Technical Report, 2021 Updated Feasibility Study for the Goose Project at the Back River Gold District, Nunavut, Canada: report prepared by Sacré-Davey Engineering Inc., Mining Plus, DT Engineers Ltd., Canenco Canada Inc., AMC Mining Consultants (Canada) Ltd., SRK Consulting (Canada) Inc., and Knight Piésold Ltd. for Sabina Gold & Silver Corp., effective date 15 January 2021;
- Doerksen, G., Pilotto, D., Feudigmann, S., Fowler, A., Nussipakynova, D., Shannon, J.M., Rykaart, M., and Mercer, R., 2015: Technical Report for the Initial Project Feasibility Study on the Back River Gold Property, Nunavut, Canada: report prepared by JDS Energy &

Mining Inc., Canenco Canada Inc., AMC Mining Consultants (Canada) Ltd., SRK Consulting (Canada) Inc., and Knight Piésold for Sabina Gold & Silver Corp., effective date 14 September, 2015.

- Doerksen, G., Pilotto, D., Fowler, A., Nussipakynova, D., Shannon, J.M., Rykaart, M., Schwab, G., Ritson, G., and Mercer, R., 2015: Technical Report and Feasibility Study for the Back River Gold Property, Nunavut: report prepared by JDS Energy & Mining Inc., AMC Mining Consultants (Canada) Ltd., SRK Consulting (Canada) Inc., and Hatch Ltd. for Sabina Gold & Silver Corp., effective date 20 May, 2015;
- Kent, A., Fowler, A., Nussipakynova, D., Wilkins, G., Stoyko, H.W., Ghaffari, H., Smith, H.A., Huang, J., Shannon, J.M., Galbraith, L., Hafez, S.A., 2014: Mineral Resource Update for the Back River Gold Property, Nunavut, Canada: report prepared by TetraTech, AMC Mining Consultants (Canada) Ltd., Knight Piésold Ltd., EBA, a Tetra Tech Company, G&T Metallurgical Services Ltd., Merit Consultants International Inc., and Rescan Environmental Services Ltd. for Sabina Gold & Silver Corp., effective date 4 March, 2014;
- Kent, A., Fowler, A., Nussipakynova, D., Wilkins, G., Stoyko, H.W., Ghaffari, H., Smith, H.A., Huang, J., Shannon, J.M., Galbraith, L., Hafez, S.A., 2013: Technical Report and Prefeasibility Study for the Back River Gold Property, Nunavut, Canada: report prepared by TetraTech, AMC Mining Consultants (Canada) Ltd., Knight Piésold Ltd., EBA, a Tetra Tech Company, G&T Metallurgical Services Ltd., Merit Consultants International Inc., and Rescan Environmental Services Ltd. for Sabina Gold & Silver Corp., effective date 9 October, 2013;
- Shannon, J.M., Nussipakynova, D., Fowler, A., Yakasovich, J., Dance, A., Duncan, J., Iakovlev, I., Laudrum, A., Murphy, B., Royle, M., and Rykaart, M., 2013: Technical Report for the Initial Project Feasibility Study on the Back River Gold Property, Nunavut: report prepared by AMC Mining Consultants (Canada) Ltd., and SRK Consulting (Canada) Inc. for Sabina Gold & Silver Corp., effective date 15 February 2013;
- Barnett, W., Nowak, M., Yakasovich, J., Iakovlev, I., Royale, M., Laudrum, A., Rykaart, M., Duncan, J., and Nakai-Lajoie, P., 2012: Preliminary Economic Assessment Report for the Back River Gold Project, Nunavut Territory, Canada: report prepared by SRK Consulting (Canada) Inc. and Roscoe Postle Associates Inc. for Sabina Gold & Silver Corp., effective date 22 May, 2012;
- Cater, D., Nowak, M., Brown, F.H., Farrow, D., and Barnett, W., 2011: Back River Gold Project Mineral Resource Technical Report, Nunavut Territory, Canada: report prepared by SRK Consulting (Canada) Inc. for Sabina Gold & Silver Corp., effective date 21 November, 2011;
- Nakai-Lajoie, P., and Cater, D., 2011: Technical Report on the Goose Lake Property of the Back River Project, Nunavut Territory, Canada: report prepared by Roscoe Postle Associates Inc. and Sabina Gold & Silver Corp. for Sabina Gold & Silver Corp., effective date 31 March, 2011;

- Cater, D., 2010a: Technical Report, Back River Project, Nunavut Territory, Canada: report prepared for Sabina Gold & Silver Corp., effective date 31 December, 2010;
- Cater, D., 2010b: Technical Report, Back River Project, Nunavut Territory, Canada: report prepared for Sabina Gold & Silver Corp., effective date 30 June, 2010;
- Nicholls B., Cloutt, B., and Gossage, B., 2009: Back River Project, Nunavut Territory, Canada, National Instrument 43-101 Technical Report: report prepared by Coffey Mining Pty Ltd., for Sabina Silver Corp., effective date 6 March, 2009;
- Palich, B., Inwood, N., and Gossage, G., 2007: Back River Project, Technical Report, Goose Lake, And George Lake Properties: report prepared by RSG Global Consulting Pty Ltd for Dundee Precious Metals Inc., effective date 30 July, 2007;
- Risto, R.W, Kociumbas, M.W, and MacFarlane, G.R., 2005: Technical Report on the Back River Project, Nunavut, prepared by Watts, Griffis and McOuat Ltd. for Dundee Precious Metals Inc., effective date 30 March, 2005;
- Risto, R.W., Kociumbas, M.W., Wahl, G.H., and MacFarlane, G.R., 2003: Technical Report on the George Lake Project, Nunavut: report prepared by Watts, Griffis and McOuat Limited for Miramar Mining Corporation, effective date 17 December, 2003;
- Juras, S., 2001: Technical Report, George Lake Project Nunavut: report prepared by Mineral Resources Development Inc. for Wheaton River Minerals Ltd., effective date 24 July, 2001.

3.0 RELIANCE ON OTHER EXPERTS

This section is not relevant to this Report. The QPs are not using the allowance for reliance on other experts.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Introduction

The Project is approximately 520 km northeast of Yellowknife and 400 km south of Cambridge Bay, centred at approximately 65° N latitude, 107° W longitude.

The marine laydown area is located on the Bathurst mineral tenure claims/leases 100757 and 100758, and is located at 66° 38' 40" N latitude, 107° 41' 12" W longitude.

Locations for the claims groups are presented in Table 4-1, and locations for all deposits are presented in Table 4-2.

4.2 Mineral Tenure and Process in Nunavut

The Goose Project, located in the territory of Nunavut, is governed by the mineral tenure and surface access legislation established by the Nunavut Agreement (1993) in effect since 1999, and the Nunavut Mining Regulations (2014), superseded by the 2020 Mining Regulations Act, in effect since January 30, 2021. A brief description of the mineral tenure, surface rights and royalty regulations is provided in the following sub-sections.

4.2.1 Mineral Tenure

Mineral tenure in Nunavut is split between the Government of Canada (the Crown) and Nunavut Tunngavik Incorporated, as a result of the creation of the territory from the Nunavut Agreement, signed May 25, 1993 which came into force April 1, 1999 creating the territory of Nunavut.

This agreement created 944 parcels of land, called Inuit Owned Land, totaling 356,000 km² in addition to Nunavut Tunngavik Incorporated and three Regional Inuit Associations.

Mineral titles held before this date are managed by the Crown. Inuit Owned Lands are parcels of land which are managed by Nunavut Tunngavik Incorporated. Certain land parcels have surface and subsurface rights, whereas others have only surface rights. The surface rights are managed by Regional Inuit Associations and the subsurface rights are managed by Nunavut Tunngavik Incorporated.

The Federal Government through Crown-Indigenous Relations and Northern Affairs Canada and the Mining Recorder manages mineral claims, leases, prospecting permits, and coal licences outside of Inuit Owned Land or grandfathered tenures on Inuit Owned Land that were held and retained prior to the agreement. Descriptions of the types of mineral title on crown lands and Inuit Owned Lands are summarized in Table 4-3 and Table 4-4.

Table 4-1: Mineral Tenure Group Locations

Mineral Tenure Group	Latitude N	Longitude W
Goose	65° 32' 31"	-106° 27' 17"
George	65° 55' 45"	-107° 27' 05"
Boot	65° 41' 12"	-106° 26' 43"
Boulder	65° 40' 15"	-106° 53' 24"
Del	65° 27' 03"	-106° 39' 46"
BB13	65° 36' 18"	-106° 27' 05"
Needle	65° 05' 03"	-107° 11' 02"
Beech	65° 12' 42"	-106° 03' 00"
Wishbone	65° 34' 12"	-107° 43' 11"
Malley	65° 14' 06"	-107° 20' 18"
Bathurst	66° 38' 31"	-107° 41' 02"

Table 4-2: Deposit Locations

Mineral Tenure Group	Deposit	Latitude N	Longitude W
Goose	Umwelt	65° 33' 11"	-106° 31' 16"
	Llama	65° 33' 58"	-106° 32' 43"
	Goose Main	65° 32' 31"	-106° 25' 46"
	Goose Neck South	65° 32' 37"	-106° 29' 05"
	Echo	65° 32' 06"	-106° 27' 18"
	Nuvuyak	65° 32' 31"	-106° 26' 43"
George	Locale 1	65° 55' 26"	-107° 28' 46"
	Locale 2	65° 55' 02"	-107° 27' 45"
	LCP North	65° 57' 08"	-107° 30' 11"
	LCP South	65° 56' 49"	-107° 29' 23"
	Tupiq	65° 55' 00"	-107° 25' 28"
	GH	65° 53' 36"	-107° 24' 27"

Table 4-3: Federal Mineral Title, Nunavut

Tenure Type	Description	Duration and Retention Requirements
Prospecting permit	Prospecting permits are grandfathered into the 2020 Nunavut regulations. Prospecting permit provisions are retained until permits that existed before CIF expire or are cancelled. Permittees continue to have the exclusive right to submit an application to record a claim within the permit zone. The claim is made of units selected on the map.	New prospecting permits are no longer issued under the 2021 Mining Regulations Act.
Mineral claim	Minimum area of a claim: 25 ha. Maximum area of a claim: 1,250 ha. Shape of a claim: rectangular. Area of units: between 10–25 ha, depending on the location, with an average of 18 ha. May be made in respect of not less than one unit and not more than 100 units. Recorded claims may be grouped for the purpose of allocating the cost of work done, but groups may not exceed 400 units, and none of the claims can be leased.	The duration of a recorded claim is 30 years, beginning on its recording date. The following per unit charges apply, annually beginning on the day on which the claim is recorded, to the right to hold a recorded claim and assess its mineral potential: (a) C\$45 in respect of the first year beginning on the day on which the claim is recorded; (b) C\$90 in respect of years 2–4; (c) C\$135 in respect of years 5–7; (d) C\$180 in respect of years 8–10; (e) C\$225 in respect of each years 11–20; (f) C\$270 in respect of each of years 21–30. To reduce the area of a claim, the claim holder must have done at least two years' worth of work (C\$10 per hectare) on that claim. There is an obligation to report work conducted, in the form of annual assessment reports.
Mining lease	A holder of a recorded claim who wants to obtain a lease of the claim must make an application to the Mining Recorder at least a year prior to the claim expiry date. The claim must be surveyed.	Granted for an initial term of 21 years. Can be renewed for an additional 21-year term. The annual rent for a lease that was issued before November 1, 2020 is C\$2.50 per hectare during the first term and C\$5 per hectare during each renewed term before that date. The annual rent for a lease that is issued on or after November 1, 2020 and for any lease that is renewed on or after that date is C\$10 per hectare.

Table 4-4: Inuit Owned Lands, Mineral Title, Nunavut

Claim	Description	Duration and Retention Requirements
Mineral exploration area	An Exploration Agreement grants a company or individual the exclusive right to explore and prospect for minerals (excluding oil and gas, construction materials such as sand, and carving stone) on a specified section of Inuit Owned Land for which Nunavut Tunngavik Incorporated owns the minerals.	Valid for 20 year initial term. Requires annual rent payments of (a) C\$1/ha in respect of the first year; (b) C\$2/ha in respect of years 2–5; (c) C\$3/ha in respect of years 6–10; (d) C\$4/ha in respect of years 11–15; (e) C\$5/ha in respect of years 16-20; Requires annual work expenditure of: (a) C\$5/ha in respect of years 1-2; (b) C\$10/ha in respect of years 3-5; (c) C\$20/ha in respect of years 6–10; (d) C\$30/ha in respect of years 11–15; (e) C\$40/ha in respect of years 16-20
Mineral production lease	A production lease grants the holder the right to produce minerals from the production lease area. The lease is granted after the holder of an Exploration Agreement has delivered a “prefeasibility study” to Nunavut Tunngavik Incorporated that demonstrates the existence of a mineral resource on the property and has met any other requirements defined under the terms of the Exploration Agreement.	1. Initial term of 10 years, extensions for two additional 5-year terms possible. Grant of 21 year term upon delivery of “feasibility study” or start of production. 2. C\$100/ha with a minimum of C\$10,000. 3. Subject to 12% net profits, or 1.8% gross profits

The Nunavut Mining Regulations (SOR/2014-69), which came into effect in 2014, outlined the legal framework for mining activities in Nunavut, covering aspects such as claim recording, work requirements, requisite fees, and environmental considerations. The 2014 regulations were amended several times between August 10, 2020 and January 30, 2021. The most notable changes included a change to online staking from ground staking, changes to fee structure for claims and leases, a discontinuation of the issuance of prospecting permits, (existing permits remain valid until expiry), and changes to the schedule of reporting requirements.

To conduct exploration on Inuit Owned Land with subsurface rights, an application must be made to Nunavut Tunngavik Incorporated. Nunavut Tunngavik Incorporated then consults with the appropriate Regional Inuit Association and once approved, enters into a Mineral Exploration Agreement with the company. These agreements are valid for 20 years and require both an annual rent payment, based on permit size and annual work expenditure commitments. Rent increases from C\$1–C\$5/ha, over the duration of the agreement. Similarly, work requirements range from C\$5–C\$40/ha depending on the year. The annual work needs to be reported within 90 days of the due date for annual rent payments. Excess work can be carried forward for credit to meet subsequent year’s requirements.

To stake a claim, lease a claim, or renew a lease in Nunavut, the operating company needs to hold a valid prospecting licence. This licence is renewed annually, subject to payment of

associated fees. Claims are staked online and are valid for 30 years from the date of staking as long as annual work is performed and reported. The work requirements are based on the age of the claim and range from C\$45–C\$270 per unit. A report must be submitted to the Mining Report within 120 days of the claim's anniversary date.

A claim can be converted to a lease after a minimum of 10 years and C\$1,260 per unit of work has been completed. A lease needs to have its boundaries legally surveyed as part of the application. Once a claim is converted to a lease, annual work no longer needs to be completed or reported, but continues to require payment of an annual rent. Leases acquired prior to the 2020 Mining Regulations are subject to a payment of C\$2.50/ha for the first term and C\$5/ha for the second term. Leases acquired after the implementation of the new regulations incur annual payments of C\$10/ha.

A claim or exploration area must be converted to a lease (Crown land) or Mineral Production Lease (Inuit Owned Land) prior to commencement of any production.

4.2.2 Surface Rights

Surface rights are managed by Regional Inuit Associations (as defined by the Nunavut Agreement); the Kitikmeot Inuit Association, the Qikiqtani Inuit Association, or the Kivalliq Inuit Association. Land use permits are required to conduct exploration and exploitation work, and these are obtained through the appropriate Regional Inuit Association.

4.2.3 Royalties

Mineral claims or leases governed by the Nunavut Mining Regulations are subject to Crown royalties. Under the Nunavut Mining Regulations, each fiscal year, the owner, or operator of a mine must pay to the Crown, royalties based on the value of the mine's output during that fiscal year. The royalty is based on defined profits multiplied by a royalty rate, which is the lesser of 13% of the net value of mine output during a fiscal year, and an escalating rate from 0–14%, on incremental levels, of the net value of the mine output, as defined in the Nunavut Mining Regulations. The output value is based on the market value of the minerals produced by the mine, minus various deductions and allowances provided for in the regulations. Deductions include costs for mineral exploration, production, and processing, repair and maintenance at the mine, and allowances include an equipment depreciation allowance, a development allowance, and a processing allowance.

4.3 Project Ownership

In 2023, B2Gold acquired a 100% interest in Sabina Gold & Silver Corp. (Sabina) and all of its assets, including the Goose Project.

The Project and all mineral tenure are wholly-owned by B2Gold Back River Corp. (referred to in this Report as B2Gold Nunavut), a wholly-owned subsidiary of B2Gold Corp.

4.4 Mineral Tenure

The Goose Project comprises 10 mineral claims groups, including 57 federal mining leases and 35 federal mineral claims managed by Crown-Indigenous Relations and Northern Affairs Canada. It also includes one Mineral Exploration Area on Inuit Owned Land. Collectively, these 11 claims group areas cover approximately 96,150 ha (Table 4-5). The locations are shown on Figure 4-1 to Figure 4-6.

4.4.1 Mineral Tenure on Inuit Owned Land

One licence is held on Inuit Owned Lands: Mineral Exploration Area BB13-21-001 (Table 4-5). The Mineral Exploration Area is valid for an initial 20-year term and requires that both an annual rent payment and yearly work expenditure requirements are fulfilled, to remain in good standing. All required reporting and payment obligations had been met at the effective date of this Report.

There are other mineral leases and claims that are on Inuit Owned Lands. However, the mineral tenure groups were established prior to the creation of the Nunavut Agreement and continue to be managed by Crown-Indigenous Relations and Northern Affairs Canada.

4.4.2 Mineral Tenure on Crown Land

The Goose Project comprises 57 federal mining leases, and 35 federal mineral claims managed by Crown-Indigenous Relations and Northern Affairs Canada.

Prior to 2021, claims were paper-staked, and subsequently are staked using an online claim management portal. Selected claims were converted to lease after expenditure and time requirements were met, as per the Nunavut Mining Regulations. A registered Canadian land surveyor surveyed the mining leases. Mining leases do not require filing of annual assessment work reports but do have an annual rent payment. Leases are valid for 21 years from the date of conversion, and are renewable.

Annual reports are delivered to the Kitikmeot Inuit Association, Crown-Indigenous Relations and Northern Affairs Canada, the Nunavut Impact Review Board, and the Nunavut Water Board as per the terms and conditions of authorizations issued for work completed on the Project.

All mining tenure is in good standing at the effective date of this Report.

Table 4-5: Mineral Tenure Table

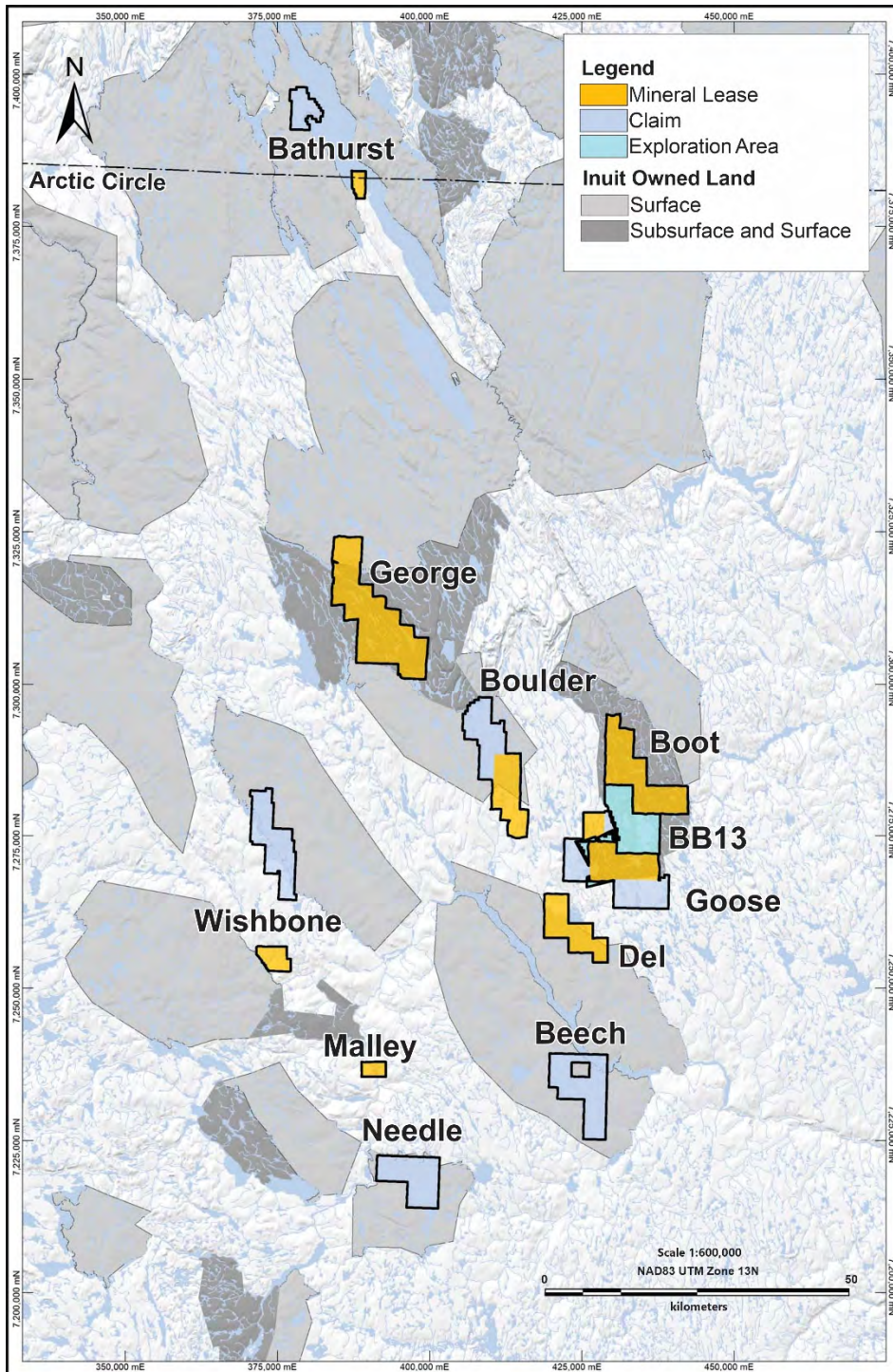
Mineral Claims Group	Mineral Tenure Type	Tenure ID	Area (ha)	Expiry Date
Goose	Mineral lease	L-5750	922.00	2039-05-19
		L-5751	614.00	2039-05-19
		L-3694	417.60	2039-10-16
		L-3695	409.95	2039-10-16
		L-3696	1076.87	2039-10-16
		L-3697	1100.94	2039-10-16
		L-3698	1072.82	2039-10-16
		L-3699	1003.21	2039-10-16
		L-3700	1083.74	2039-10-16
	Claim	100756	1024.48	2027-09-25
		101400	1007.72	2026-09-23
		102475	1377.80	2026-01-30
		102476	874.03	2026-01-30
		102582	16.80	2028-02-12
		102650	686.21	2027-04-30
		102649	1173.29	2027-04-30
		102648	1392.79	2027-04-30
George	Mineral lease	L-3677	536.53	2039-10-16
		L-3729	111.01	2039-10-16
		L-3730	749.88	2039-10-16
		L-3562	69.48	2036-11-09
		L-5707	1865.06	2036-11-25
		L-3649	1046.92	2039-12-19
		L-3653	1074.84	2038-12-19
		L-3605	1036.80	2039-12-19
		L-3606	1074.04	2039-12-19
		L-3607	1033.97	2039-12-19
		L-3608	1057.61	2039-12-19
		L-3650	200.08	2037-12-28
		L-3651	1042.06	2037-12-28
		L-3599	821.11	2037-12-28
		L-3598	394.16	2037-12-28
		L-3600	1008.88	2037-12-28
		L-3601	1097.91	2037-12-28
		L-3602	1027.90	2037-12-28

Mineral Claims Group	Mineral Tenure Type	Tenure ID	Area (ha)	Expiry Date
		L-3603	1078.08	2037-12-28
		L-3604	450.01	2037-12-28
Boot	Mineral lease	L-3724	541.47	2039-10-16
		L-3678	1060.68	2039-10-16
		L-3679	1001.60	2039-10-16
		L-3609	1081.32	2038-12-30
		L-3612	1079.70	2038-12-30
		L-3613	1024.26	2038-12-30
		L-3552	1029.12	2038-12-30
		L-3553	1036.00	2038-12-30
		L-3554	1092.65	2038-12-30
		L-3555	1014.38	2038-12-30
Boulder	Mineral lease	L-3691	259.81	2039-10-16
		L-3692	456.49	2039-10-16
		L-3693	670.56	2039-10-16
		L-3466	300.28	2036-11-18
		L-3557	1012.12	2038-12-30
		L-3558	1051.37	2038-12-30
		L-3559	1048.54	2038-12-30
		L-3560	1099.53	2038-12-30
	Claim	100174	1051.04	2027-10-04
		100175	1249.81	2027-10-04
		100176	1065.57	2027-10-04
		100177	998.80	2027-10-04
		100179	365.84	2027-10-04
		100180	898.07	2027-10-04
Del	Mineral lease	L-5800	959.49	2039-10-12
		L-5801	955.24	2039-10-12
		L-5802	959.17	2039-10-12
		L-5803	958.36	2039-10-12
		L-5804	958.06	2039-10-12
		L-5805	972.62	2039-10-02
BB13	Exploration area	BB13-21-001	8041.00	2032-07-30
Needle	Claim	102840	1435.87	2025-01-30*
		104817	1638.69	2025-07-11
		104818	1536.20	2025-07-11

Mineral Claims Group	Mineral Tenure Type	Tenure ID	Area (ha)	Expiry Date
		104819	1228.73	2025-07-11
		104820	614.36	2025-07-11
Beech	Claim	104807	1630.52	2025-07-09
		104808	1256.69	2025-07-09
		104809	1700.86	2025-07-09
		104810	1509.99	2025-07-09
		104811	1662.53	2025-07-09
		104812	50.86	2025-07-09
		104813	681.08	2025-07-09
Wishbone	Mineral lease	L-6103	890.00	2039-08-15
		L-6102	970.00	2039-08-15
	Claim	100544	1036.90	2030-10-07
		100545	1155.19	2031-10-07
		100546	888.17	2030-10-07
		100547	1006.67	2031-10-07
		100548	1209.76	2029-10-07
		100549	1409.17	2030-10-07
		100550	804.36	2030-10-07
Malley	Mineral lease	L-6104	972.00	2039-07-26
Bathurst (including Marine Laydown Area)	Mineral lease	L-5152	982.39	2029-03-10
	Claim	100757	1300.78	2026-09-25
		100758	1253.96	2026-09-25

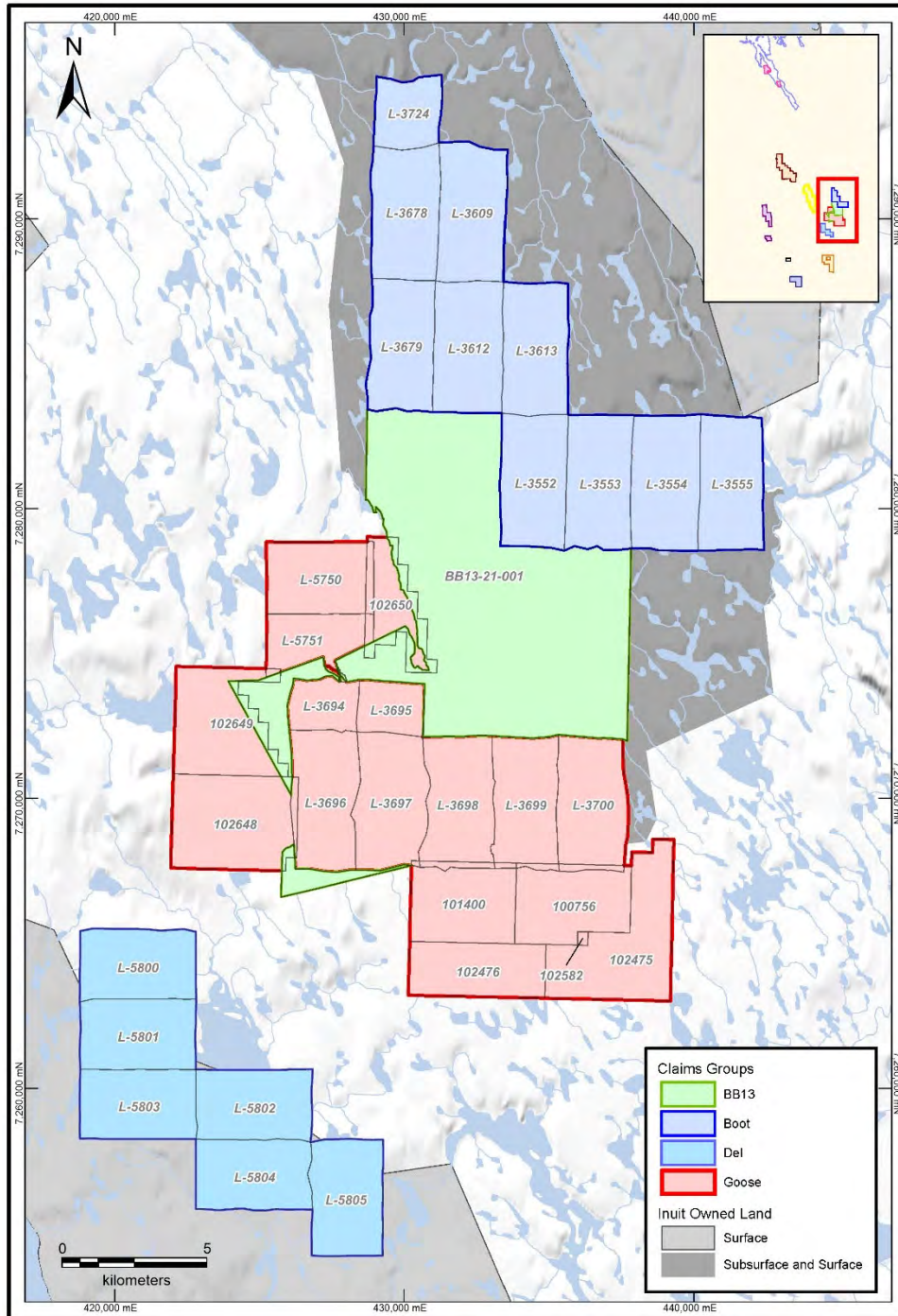
Note: (*): Assessment work filed; updated expiry date is pending at Report effective date.

Figure 4-1: Mineral Tenure Claims Groups Location Map



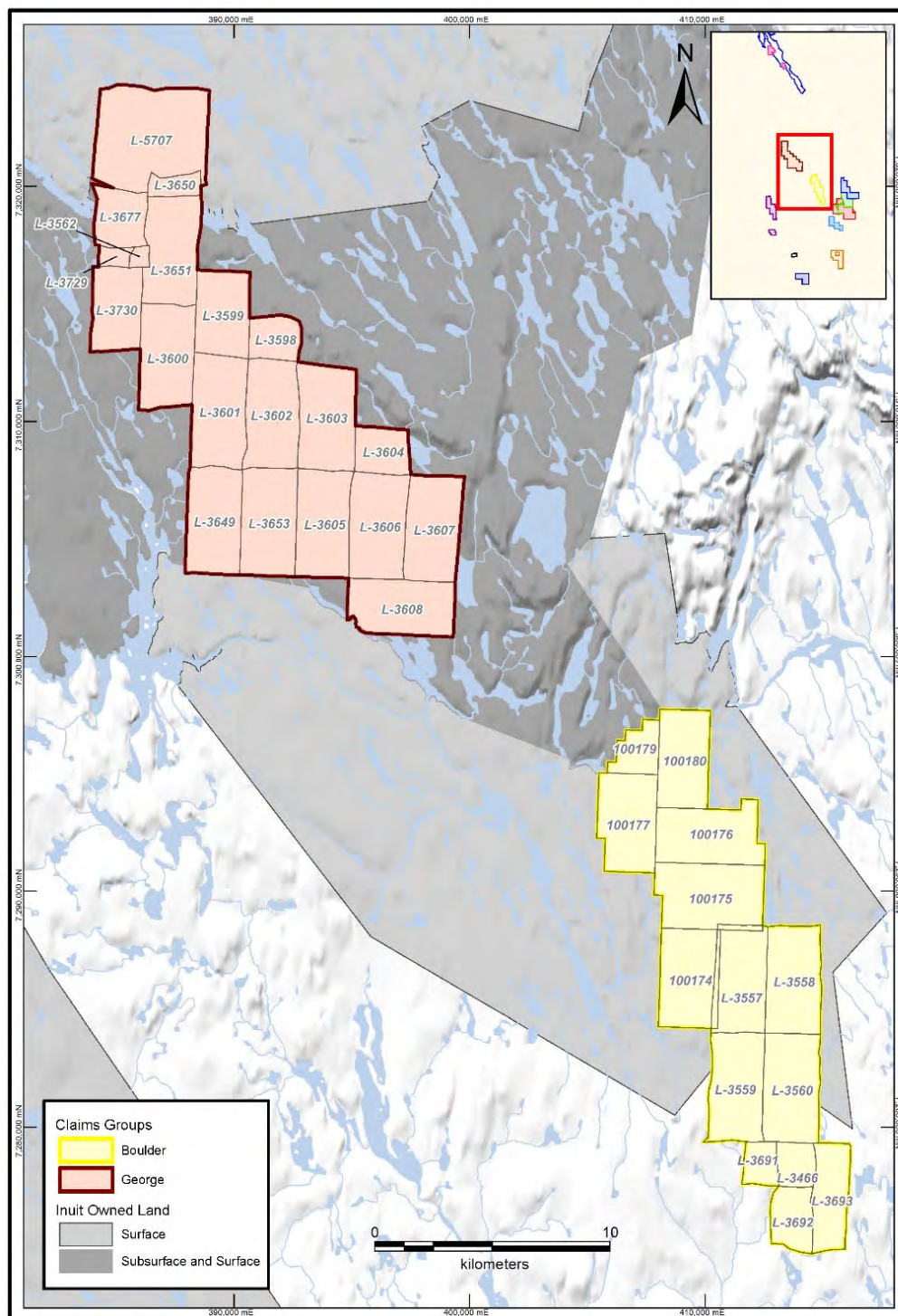
Note: Figure prepared by B2Gold, 2025.

Figure 4-2: Mineral Tenure Claims Groups Details, Goose, Boot, BB13, and Del



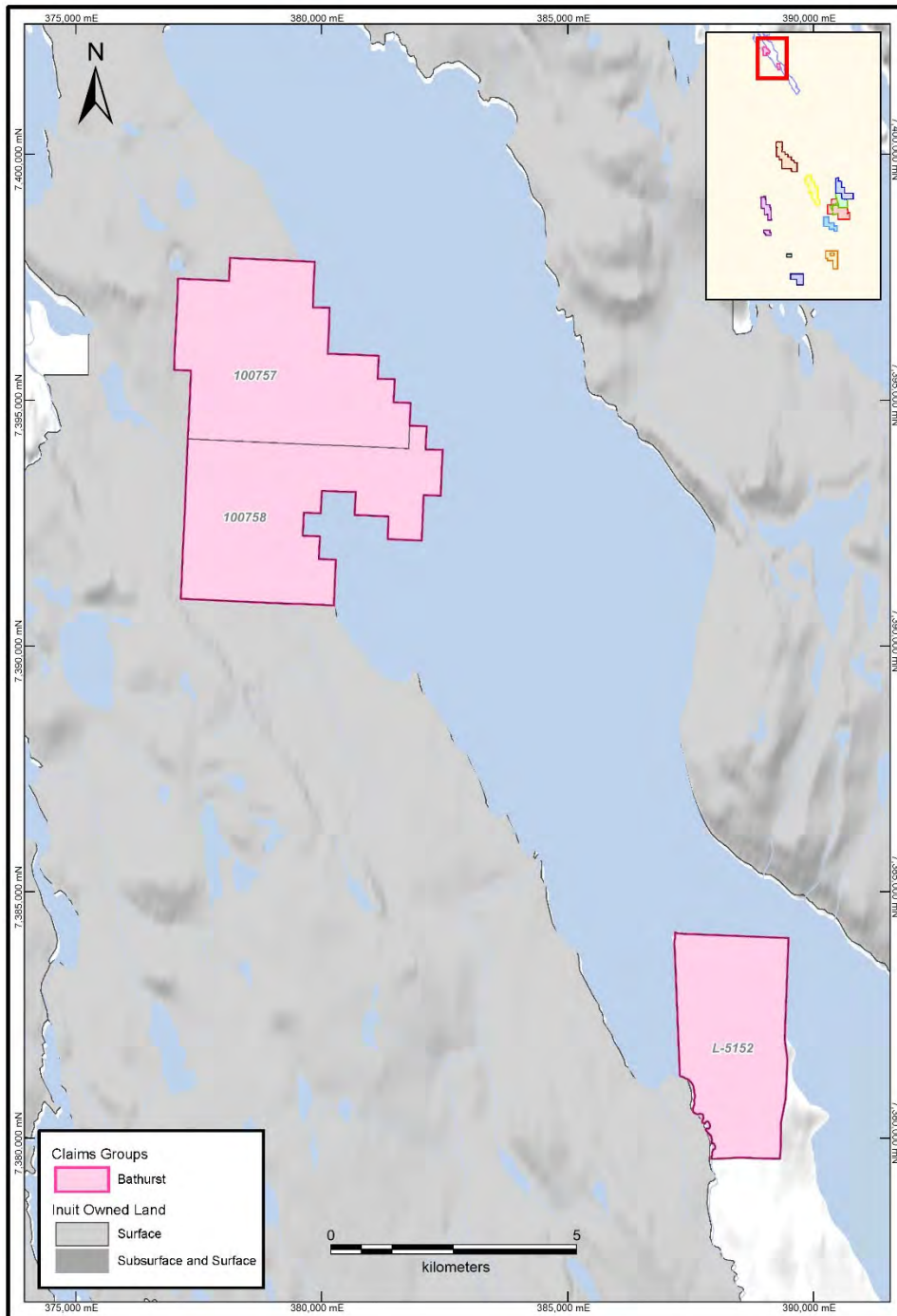
Note: Figure prepared by B2Gold, 2025.

Figure 4-3: Mineral Tenure Claims Groups Details, George, and Boulder



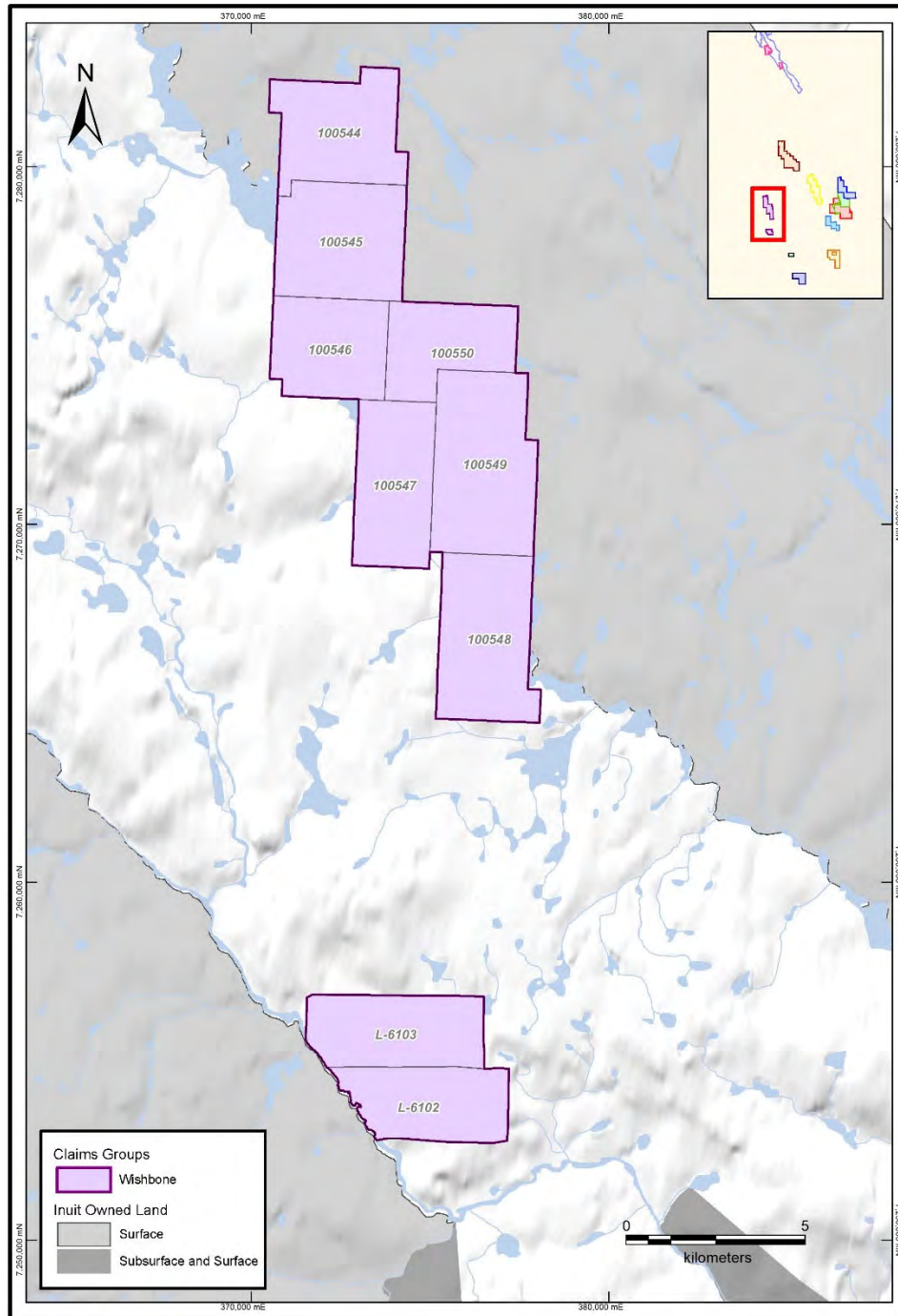
Note: Figure prepared by B2Gold, 2025.

Figure 4-4: Mineral Tenure Claims Groups Details, Bathurst



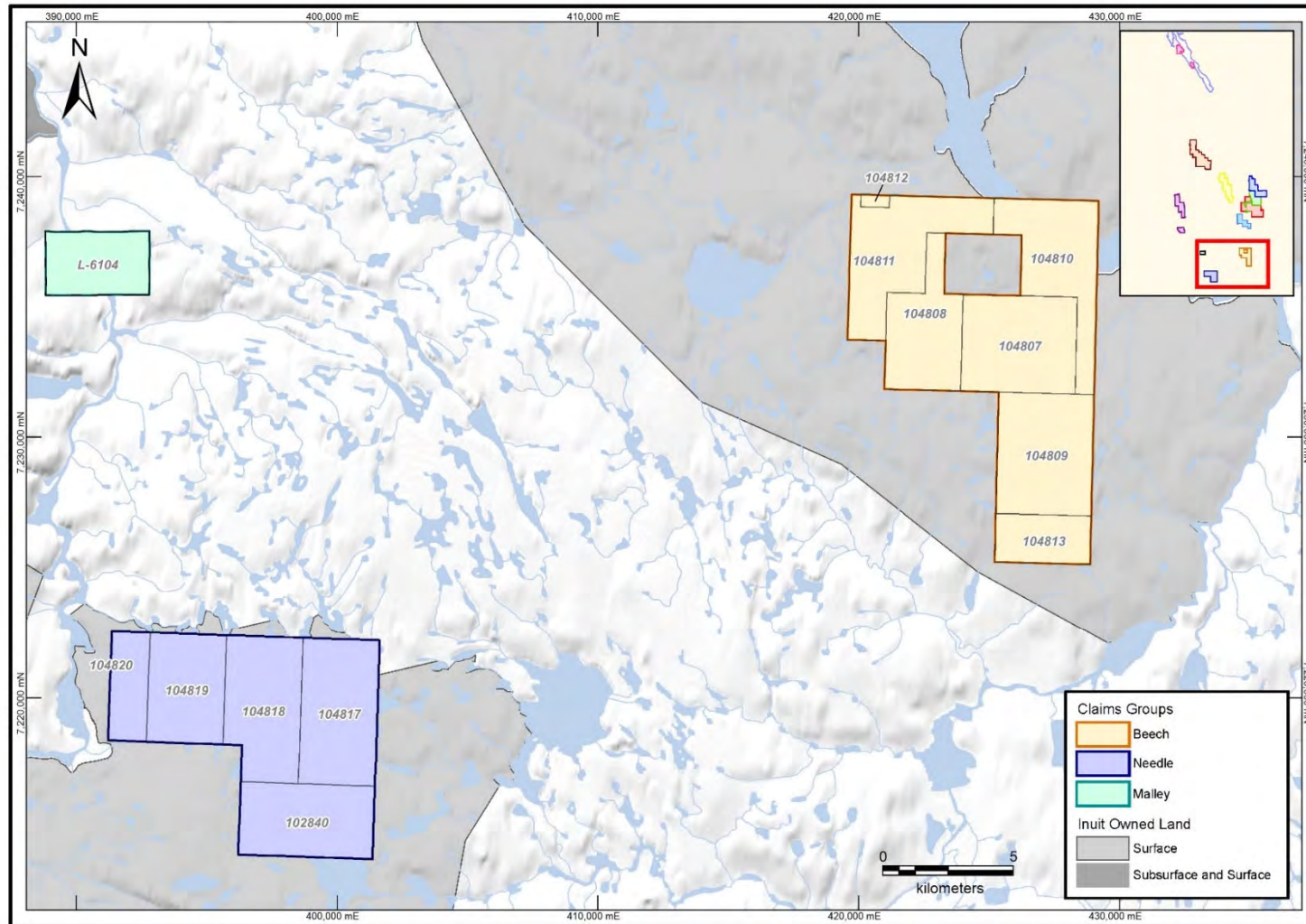
Note: Figure prepared by B2Gold, 2025.

Figure 4-5: Mineral Tenure Claims Groups Details, Wishbone



Note: Figure prepared by B2Gold, 2025.

Figure 4-6: Mineral Tenure Claims Groups Details, Malley, Needle, and Beech



Note: Figure prepared by B2Gold, 2025.

4.5 Surface Rights

Surface rights in Nunavut mining regulations authorize activities such as prospecting, exploration, and surface-level operations on both Inuit Owned Land and Crown land. These rights do not include access to or extraction of subsurface minerals, which are governed separately by mineral rights. These are issued by the Kitikmeot Inuit Association, Crown-Indigenous Relations and Northern Affairs Canada and the Nunavut Water Board. A list of the associated permits currently granted is provided in Table 4-6.

These leases as well as other permits required for subsurface and mine operation are discussed in more detail in Section 20 of this Report. The surface rights are sufficient for the life-of-mine (LOM) plan that supports the Mineral Reserve estimates.

4.6 Water Rights

Water rights are granted through water licences and are managed under the Water Management Plan. Type B water licences allow for exploration related activities while Type A water licences pertain to operations. The Water Management Plan is discussed in Section 20 of this Report.

4.7 Agreements

Prior to acquisition by B2Gold, Sabina completed a definitive framework agreement with the Kitikmeot Inuit Association that formalized the commercial leases and authorized mine development and operations; it is a comprehensive agreement that sets out rights and obligations with respect to surface land access on Inuit-owned land at the Project.

The framework agreement includes an Inuit Impact and Benefit Agreement and other obligations required by the Nunavut Agreement.

There are certain key provisions:

- A renewable 20-year term;
- Surface access rights for exploration, development, mine construction, and mine operations activities;
- Certain payments for such rights, including, but not limited to,:
 - Annual payments to Kitikmeot Inuit Association of C\$1,000,000, of which pre-production payments of C\$500,000 were made prior to B2Gold's acquisition of Sabina;
 - Issuance to Kitikmeot Inuit Association of 6,700,000 common shares of Sabina (issued on 6 June 2018 at a share price of C\$1.66 for total consideration of C\$11,100,000). The Sabina shares converted to B2Gold shares at a rate of 0.3867 B2Gold common share per Sabina common share during the purchase of Sabina by B2Gold in 2023;

Table 4-6: Surface Rights

Identifier	Name	Start Date	Expiry Date
KTCL-18D001	Goose Mine commercial lease	20-04-2018	20-04-2038
KTCL-18D002	Bathurst site commercial lease (marine laydown area)	20-04-2018	20-04-2038
KTCL-18D003	Winter road commercial lease	20-04-2018	20-04-2038
KTACL-18C001	George Claims Group advanced exploration lease	20-04-2018	20-04-2038
076G/9-1-2	Federal land use lease	01-05-2019	30-04-2048
076J/12-7-2	Federal land use lease	15-08-2018	14-08-2048

Note: dates in day, month, year format.

- In accordance with the previously determined production decision, B2Gold made the first full payment of C\$1,000,000 in 2023;
- Grant to Kitikmeot Inuit Association of a 1% net smelter royalty on future production from the Back River District;
- An initial investment of C\$4,000,000 into the Regional Wealth Creation Fund to support initiatives in the Kitikmeot.

4.8 Royalties and Encumbrances

The following net smelter return (NSR) royalties are payable:

- Goose Claims Group:
 - On the first 400,000 oz of gold production, there is a 0.7% NSR payable to a third party and a 1.5% NSR payable to B2Gold Nunavut (the B2 Goose Royalty), as B2Gold Nunavut purchased this royalty from a third party;
 - On any gold production over 400,000 oz, there is an aggregate 3.5% NSR payable to a third party and the 1.5% B2 Goose Royalty until B2Gold Nunavut pays a total of C\$5,000,000 in royalties (the Goose Threshold Amount). Once B2Gold Nunavut has paid the Goose Threshold Amount, the aggregate royalty to the third party becomes 4.25% and the B2 Goose Royalty decreases to 0.75%;
- George Claims Group:
 - On the first 800,000 oz of gold production, there is an aggregate 1.15% NSR payable to third parties and a 1.5% NSR payable to B2Gold Nunavut (the B2 George Royalty), as B2Gold Nunavut purchased this royalty from a third party;
 - On any gold production over 800,000 oz, there is an aggregate 3.5% NSR payable to third parties and the 1.5% B2 George Royalty until B2Gold Nunavut pays a total of C\$5,000,000 in royalties (the George Threshold Amount). Once B2Gold Nunavut has paid the George Threshold Amount, the aggregate royalty to the third parties becomes 4.25% and the B2 George Royalty decreases to 0.75%.

- Back River District: 1% NSR on future gold production, payable to Kitikmeot Inuit Association.

The specific set of claims underlying the royalties listed above for the Goose Claims Group and the George Claims Group are set out in the respective underlying royalty agreements. These underlying royalty agreements also contain the details of the royalty calculations and any adjustments.

Royalties are also payable to the Canadian Government, as outlined in Section 4.2.3.

4.9 Permitting Considerations

Permitting considerations for operations are discussed in Section 20.

4.10 Environmental Considerations

Environmental and closure considerations for operations are discussed in Section 20.

4.11 Social Licence Considerations

Social licence considerations for operations are discussed in Section 20.

4.12 Comments on Property Description and Location

To the extent known to the QP, there are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the Project that have not been discussed in this Report.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1 Accessibility

Accessibility

The Project is situated within the West Kitikmeot region of southwestern Nunavut. It is situated approximately 400 km southwest of Cambridge Bay, 95 km southeast of the southern end of Bathurst Inlet, and 520 km northeast of Yellowknife, Northwest Territories.

Due to the remote location of the Project, it is not connected via roads to hamlets within Nunavut or southern Canada. Project access is primarily by air; all-weather airstrips and aprons capable of servicing passenger and large cargo aircraft exist at both the Goose Mine and marine laydown area sites. Crew movements are facilitated by chartered air service from Edmonton, Yellowknife, Cambridge Bay, and Kugluktuk. Air freight services use Edmonton and Yellowknife as hubs.

An approximately 163 km-long winter road is constructed each year from the Goose Mine to the marine laydown area, and is used to transport fuel, equipment, and supplies brought into the marine laydown area during the summer shipping season to the mine site. The duration that the ice road can be used depends on winter ice conditions, and varies on a year-to-year basis (see also discussion in Section 18.2).

The marine laydown area is located on southern Bathurst Inlet on the Bathurst Claims Group, approximately 130 km directly north–northwest of the Goose Mine. It is used to receive fuel, equipment, and supplies during mine construction and will continue to be used during operations. The shipping season is restricted to the period of no sea ice, generally late summer, from August to mid-October (see also discussion in Section 18.2).

An all-weather road connects the Goose exploration camp to the Goose Mine and airstrip, and roads are present throughout the Project area.

5.2 Climate

The Project is located in an arctic climate, a region characterized by long dark winters and short summers. Typically, the ground is covered in snow from October to June, and during that time lakes are covered with approximately 2 m of ice.

Average temperatures range from about 6°C in summer to -26°C in winter. The mean annual precipitation ranges from 200–300 mm.

Mining operations are, and will be, conducted year-round.

5.3 Local Resources and Infrastructure

The Project is remote from major infrastructure.

Current exploration and development activities source goods and services from northern-based suppliers, primarily in Yellowknife and Edmonton. Infrastructure required to support mining activities is discussed in Section 18.

The existing Goose Mine camp, located in the Goose Claims Group, contains an approximately 600 person all-season camp consisting of sleeping units, dry and mess facilities, offices, heavy-equipment storage and maintenance facilities, multiple warehouses, water and wastewater treatment facilities, an engineered secondary containment bulk fuel facility, an explosives facility aggregate site roads, storage pads, and airstrip, multiple diesel-powered generators, process plant, crusher, and other buildings necessary for mineral processing,

The existing Goose exploration camp, located in the Goose Claims Group within the Goose Mine area, is an approximately 180 person all-season camp consisting of sleeping units, dry and mess facilities, offices, a drill core processing facility, heavy-equipment storage and maintenance facilities, a warehouse, and an engineered bermed fuel farm. The Goose camp is powered by multiple diesel-powered generators.

The existing George camp, located in the George Claims Group, contains an approximately 58 person all-season camp consisting of sleeping units, dry and mess facilities, offices, a core-processing facility, a maintenance shop, an engineered bermed fuel farm, and multiple prefabricated sleeper trailers. Aggregate roads and an airstrip exist at the George camp site. Multiple diesel-powered generators provide power for the site, and the bulk fuel storage facility consists of two 75,000 L double-walled steel enviro-tanks.

The existing marine laydown area camp contains an approximately 200 person all-season camp consisting of sleeping units, dry and mess facilities, office units, maintenance facilities, an engineered secondary containment bulk fuel facility, aggregate site roads, storage pads, and airstrip, ship and barge offloading facilities and fuel transfer conduit, multiple diesel-powered generators, and a desalinization plant.

There are two winter ice road service/emergency camps spaced along winter ice road alignment. They are situated on approximately 100 x 100 m aggregate pads and are used to support construction of the winter ice road, as well as provide ongoing support and safety during winter ice road operations. These camps include a kitchen, camp dry, sleeping and office spaces, communication capabilities, fuel storage in secondary containment berms, equipment maintenance shop, and material and supply storage.

All of the accommodations camps except the George and winter ice road camps operate year round.

5.4 Physiography

Regionally the Project lies within the Takijuk Lake Uplands ecoregion, which covers the south-central portion of the West Kitikmeot region. This area consists of broad, sloping uplands, plateaus, and lowlands. The average elevation in the Project area is approximately 288 metres above sea level, with gently rolling topography.

Much of the Project area is consists of unvegetated rock outcrops and boulder fields. Outcrop distribution is highly variable. Where present, it occurs on the tops or flanks of hills. Valleys and depressions are commonly filled with glacial till of mixed gravel, sand, silt, and clay.

The Project area lies north of the tree line. Plant cover is characteristic of the arctic tundra community, and consists of willow shrubs of willow, birch, Labrador tea, and mountain cranberry. Lichen is common. Shrubs are found sparsely distributed on the mesic sites near the rivers and lakes. Low-growing perennials are found on the interfluvies and include grasses and sedges and some flowering species. Very little plant cover is supported on the esker areas.

In general, lakes in the area contain extremely clear, low-nutrient, low-metal water, indicative of pristine, high arctic lakes. Most lakes have near-neutral waters, with very low hardness and alkalinity. However, naturally high metal concentrations are present in some lakes, indicating their proximity to surface mineralized areas. The area is in a zone of continuous permafrost.

5.5 Comments on Sufficiency of Surface Rights

There is sufficient surface area for the open pit, waste rock storage facilities, plant, tailings storage facilities, associated infrastructure and other operational requirements for the LOM plan discussed in this Report.

6.0 HISTORY

6.1 Project History

A summary of the exploration and development history is provided in Table 6-1.

Several mining studies have been completed over the Project history including:

- 2012: Preliminary economic assessment based on open pit mining at the Llama, Umwelt, and Goose deposits, and underground mining at the Umwelt, Goose, and George deposits;
- 2013: Pre-feasibility study based on pits at Umwelt, Llama, and Goose Main (all located within the Goose Claims Group), and Locale 1, Locale 2, and LCP North (located within the George Claims Group), and one underground mine in the Umwelt deposit, located within the Goose Claims Group;
- 2015: Feasibility study (June 2015 Feasibility Study) based on open pit mining at the Umwelt, Llama, Goose Main, and Echo deposits within the Goose Claims Group and LCP South, Locale 1, Locale 2, and LCP North in the George Claims Group, and underground Umwelt, Llama, Goose Main, and Echo in the Goose Claims Group, and LCP South, Locale 1, and Locale 2 in the George Claims Group;
- 2015: Initial feasibility study (October 2015 Feasibility Study) based on open pit mining at the Goose Claims Group (Umwelt, Llama, and Goose Main) and underground mining at the Umwelt Deposit. The 2015 October Feasibility Study excluded the deposits within the George Claims Group;
- 2021: Updated feasibility study (2021 Feasibility Study) based on open pit mining of the Umwelt, Llama, Goose Main, and Echo deposits (Goose Claims Group), and underground mining of the Umwelt, Llama, Goose Main, and Echo deposits (Goose Claims Group). The 2021 Feasibility Study excluded the deposits within the George Claims Group.

6.2 Production

There is no known commercial production from the Project area.

Table 6-1: Exploration and Development History

Company/Entity	Date	Comment
Trigg, Woollett, Olsen Consulting Ltd.; J.G. Greenough, Gold Bar Development Ltd., and Andromeda Investments Ltd.	1982–1985	Form the Back River Joint Venture in 1982. Prospecting Permits were acquired from 1983-1985 for the areas now referred to as the George, Goose, Boot, Boulder, Malley, and Needle Claims Groups. Select claims within the George Claims Group were staked in 1985. Completed reconnaissance exploration; gridding; geological mapping; reconnaissance sampling; exploration drilling (36 drill holes); and aeromagnetic surveys.
F.W. Hill (Hill) and Esso Minerals Canada (Esso)	1985	Joined as investors in and operators of the Back River Joint Venture. Completed airborne magnetic and electromagnetic surveys at the George, Goose, Boot and Boulder Claims Group.
Kerr-McGee Corp. (Kerr)	1985–1986	Acquired interest in the joint venture in 1985, and became operator in 1986. Completed exploration drilling (31 drill holes). Staked claims within the Boot and Boulder Claims Groups in 1986.
Bow Valley Industries (Bow)	1986	Acquired Del claims. Soil sampling at Del prospect; trenching; exploration drilling (11 drill holes). Claims relinquished after no significant drill results returned.
Homestake Mineral Development Company Ltd. (Homestake)	1987–1996	Earned into the Back River Joint Venture, acquiring Esso's remaining 26.25% in 1989 and purchasing 100% of the interest held by Andromeda Investments Ltd.'s successor. Became operator in 1991. Staked claims within the Goose Claims Group in 1987. Geological mapping; panel and till sampling, exploration, and infill drilling (666 drill holes); geochemical study; geophysical surveys; legal surveying. Completed pre-feasibility and feasibility studies on the George Claims Group.
Arauco Resources Corp. (Arauco) later changed name to Kit Resources Corp.	1997–1998	Acquired 100% interest in the Back River Joint Venture. Geological mapping; reconnaissance sampling; exploration and infill drilling (184 drill holes); mineral resource estimate.
Kinross Gold Corp. (Kinross)	1999–2002	Started to earn into the Back River Joint Venture. Kit Resources merged with Wheaton River Minerals Ltd. (Wheaton), and Kinross purchased Kit Resources' joint venture interest, giving it a 100% ownership interest. Spectral induced polarization (IP)/resistivity survey; till, channel and soil sampling; geological mapping; exploration and infill drilling (126 drill holes). Completed mineral resource estimate and conceptual mining study at Goose.
Miramar Mining Corp. (Miramar)	2003–2004	Finalized an option agreement with Kinross and became operator in 2004. Exploration and infill drilling (41 drill holes).
Dundee Precious Metals Inc. (Dundee)	2005–2008	Acquired the option to earn the 60% interest from Miramar and became primary operator. By 2006, Dundee had purchased the remaining Project interest from Kinross.

Company/Entity	Date	Comment
		Staked 95 claims in the Wishbone area in 2007. Staked 12 claims in the Del area, 30 claims in the Malley area, 82 claims to extend the Wishbone claims to the south, 78 claims extending the Wishbone claims to the north and surrounding the Hackett River deposit, and 22 Prospector Permits in the region in 2008. The majority of these claims had lapsed as at the Report effective date. Trench sampling, geological mapping; exploration and infill drilling (186 drill holes); structural analysis; airborne magnetic, electromagnetic, and radiometric surveys; geochemical and rock chip sampling; mineral resource estimate.
Sabina Silver Corp. (changed name to Sabina Gold & Silver Corp. October 28, 2009) (Sabina)	2009–April 2023	Purchased the Back River project from Dundee. Regional and deposit geological mapping (1:10,000, 1:25,000 scales), detailed geological mapping (1:200, 1:1,000, 1:5,000 scales); reconnaissance and grab sampling, magnetics, IP, magnetometer, horizontal-loop electromagnetic (HLEM) surveys; time-domain electromagnetic (TDEM) ground and borehole surveys; IPower 3D geophysical survey; mineralogical and gold genesis studies; till orientation study; mafic intrusion geochemistry and structural study; metamorphic grade study; felsic dyke geochemical characterization study; geochronology study; regional trace element study; review of historical drill core; regional and infill drilling (1,374 core holes; 356,580 m of core) and geotechnical assessments of an area proposed to be used as a marine laydown area during shipping season. Completed Mineral Resource and Mineral Reserve estimates and updates to those estimates, preliminary economic assessment, pre-feasibility, and feasibility studies.
B2Gold Corp. (B2Gold)	April 2023– Report effective date	Purchased all assets of Sabina, including the Back River District. Claim and deposit/prospect-scale mapping (1:200, 1:1,000, 1:5,000, 1:10,000, 1:25,000 scales), reconnaissance and grab, channel and till sampling (2,206 samples); structural studies; geophysical surveys (airborne magnetic, bore hole time domain electromagnetic (BHTEM), LiDAR, and 3D DC resistivity and IP surveys); trenching to obtain metallurgical samples (one trench, 27 m); core drilling (158 core holes; 55,578 m of core), including drilling for exploration, resource estimation, geotechnical purposes and metallurgical testwork; completed Mineral Resource and Mineral Reserve estimates and updates to those estimates; environmental and mining studies, permitting activities.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Goose Project is in the Hackett River terrane in the eastern part of the Archean Slave craton (Figure 7-1). The Hackett River terrane comprises predominately metasedimentary and metavolcanic rocks of the Archean Yellowknife Supergroup (2.7–2.6 Ga) and syn to late-kinematic granitoids (Bleeker and Hall, 2007).

The Yellowknife Supergroup is part of a collection of contiguous supracrustal rocks that span the Slave craton. The Yellowknife Supergroup stratigraphy marks the transition to calc-alkaline and intercalated volcanoclastic arc-like sequences and subsequent deposition of thick turbidite sediments following a rifting event in the Central Slave Basement Complex in the Neoarchean (Bleeker and Hall, 2007; Haugaard et al., 2017).

The Yellowknife Supergroup in the region is divided into three major sequences:

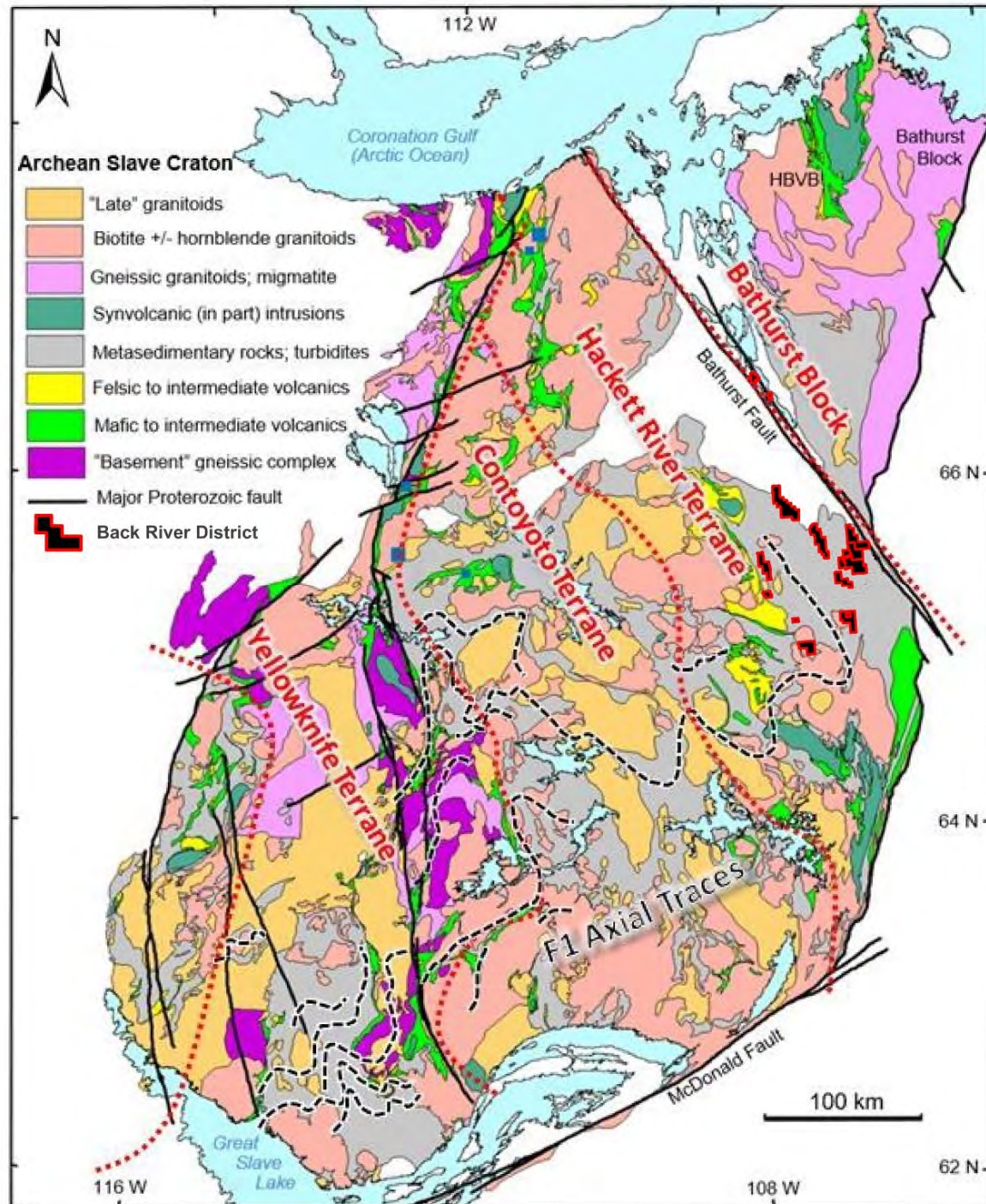
- Beechey Lake Group: part of the Slave-wide Burwash Basin, consists of a metasedimentary sequence comprising immature greywacke turbidites, mudstone, and intercalated banded iron formation unconformably overlying the older volcanic strata below;
- Back Group: a series of metavolcanic and volcano–sedimentary rocks, mainly comprising intermediate to felsic volcanic units;
- Hackett River Group: a volcanic sequence comprising felsic to mafic volcanic flows, tuffs, and chemical sediments.

Granitic to dioritic plutons and dyke equivalents of the Archean Defeat and Regan Intrusive Suites intrude the Yellowknife Supergroup lithologies.

Proterozoic clastic and carbonate sedimentary rocks of the Goulburn Group unconformably overlie the Beechey Lake Group in the northeast region of the Slave craton.

The regional architecture is strongly influenced by two major Archean deformation events that resulted in considerable crustal shortening during collision with an outboard terrane and the subsequent closure of the Burwash Basin (Bleeker and Beaumont-Smith, 1995). The D1 event produced regional, large-scale, upright folds generally trending northeast–southwest (Bleeker and Hall, 2007). A series of cross-cutting plutons, the Defeat Suite (ca. 2.63–2.62 Ga), provide a minimum age for D1 deformation in the central Yellowknife Terrane (Davis and Bleeker, 1999). The D2 event is characterized by northeast-southwest shortening resulting in the formation of northwest-trending F2 folds and accompanied by a strong axial planar cleavage. A broad magmatic event attributed to crustal thickening and partial melting during D2 led to the emplacement of the Regan Intrusive Suite between ca. 2.59–2.58 Ga (Frith and Fryer, 1985), marking the end of D2.

Figure 7-1: Regional Geology Map



Note Figure prepared by B2Gold, 2025, based on Bleeker and Hall (2007) and Stubley (2019).

Gold mineralization in the Slave craton is commonly hosted within Archean greenstone belts, such as at Hope Bay in the northeast and the Con and Giant mines near Yellowknife, and less commonly within banded iron formation, such as at the Lupin mine located 170 km west of the Project area.

7.2 Project Geology

7.2.1 Overview

The primary lithologies in the Goose Project area are metasedimentary units belonging to the Yellowknife Supergroup and the Goulburn Group, together with intrusive rocks provisionally assigned to the Regan Intrusive Suite (Figure 7-2). Summary descriptions of the main lithologies and their occurrences are provided in Table 7-1.

The majority of the claims groups are underlain by open to tightly folded Beechey Lake Group turbidite rocks. Greywacke and mudstone are the most volumetrically significant lithologies in the Project area, with lesser amounts of interbedded banded iron formation occurring at the Goose, George, Boot, Boulder, Needle, Malley, and Wishbone Claims Groups. At the Beech Claims Group, volcanic rocks assigned to the Hackett River Group occur in a narrow, 300–400 m wide, north–south-trending belt juxtaposed between Beechey Group and Regan Intrusive Suite rocks. This is the only known occurrence of Hackett River volcanic rocks in the Goose Project area.

Proterozoic clastic sedimentary rocks of the Goulburn Group unconformably overlie Archean rocks at the Bathurst Claims Group and extend south to partially cover the eastern and northern portions of the George and Boulder Claims Groups, obscuring a portion of what is believed to be a continuous iron formation horizon between the two claims groups, with an approximate 50 km strike extent.

The region is covered with a thin and discontinuous veneer of Quaternary till (silty sands, gravel, and lean clays) as well as localized recent terraced beach sands.

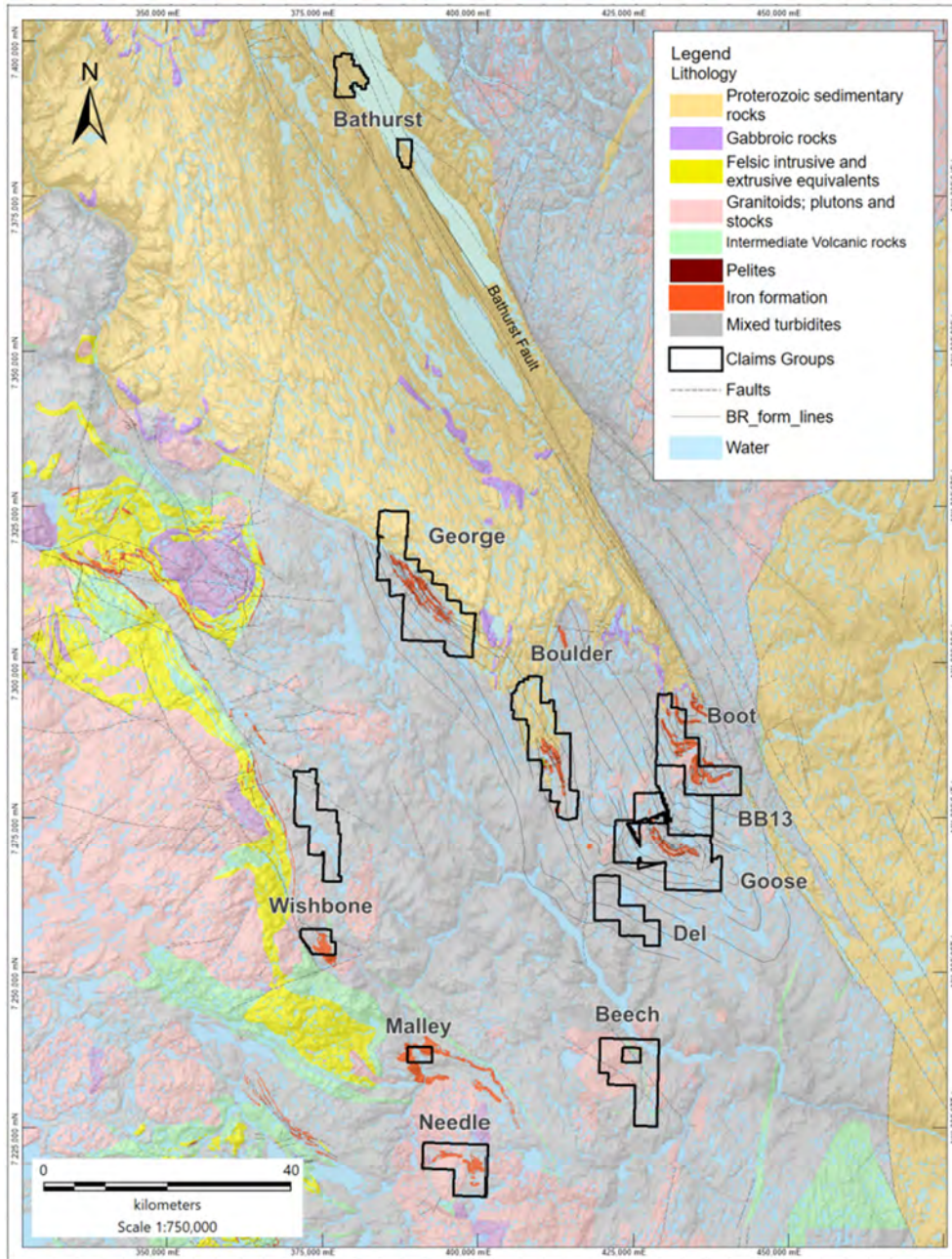
7.2.2 Property Geology

Goose Claims Group

A generalized stratigraphy for the Goose Claims Group is provided in Table 7-2. This stratigraphy is broadly consistent across Goose Claims Group area. The stratigraphic package preserves a wide-spread transitional- to deep-marine depositional environment, affected by periods of turbiditic sedimentation, followed by long periods of quiescence and banded iron formation deposition.

The geology of the Goose Claims Group comprises moderately to tightly-folded, steep- to sub-vertically-dipping, banded iron formation within the mixed turbidite package. The banded iron formation unit is continuous across the Goose Claims Group and is folded into the Goose Lake synclinorium. A geology map is provided as Figure 7-3.

Figure 7-2: Project Geology Map



Note: Figure prepared by B2Gold, 2025.

Table 7-1: Back River District Lithology

Lithology	Map Unit	Age (Ma)	Description	Occurrence	Reference
Sandstone and conglomerate	Goulburn Group	2150–1630	Mainly flat-lying fluvial and near-shore marine deposits of the Paleoproterozoic Kilohigok Basin. Includes poorly-consolidated sandstones and conglomerates. Lies unconformably on top of the Archean Yellowknife Supergroup	Bathurst, George, Boulder, Boot	Ielpi et al., 2017
Greywacke	Beechey Lake Group	2670–2650	Medium- to fine-grained clastic sediment. Well sorted, equigranular thickly bedded to semi-massive texture, light to dark gray in color, locally contains up to 20% mudstone/siltstone interbeds and rip-up clasts. Very little alteration, veining, or sulphides.	All claims groups except Bathurst	Bleeker and Hall, 2007
Mudstone	Beechey Lake Group	2670–2650	Massive to phyllitic black mudstone. Commonly interbedded with fine sand or siltstone units, but mudstone must constitute >70% of the lithology. Moderate to strong foliation, commonly shows strong crenulation cleavage. Chloritic alteration near veins or iron formations.	All claims groups except Bathurst	Bleeker and Hall, 2007
Mixed turbidite package	Beechey Lake Group	2670–2650	Thinly bedded to laminated package of greywacke, siltstone, and mudstone. Well-bedded, heterogenous, individual beds range in thickness from several mm to several 10's of cm. Gradational contacts between the three rock types are common, providing an excellent means of determining younging direction. Often exhibits refracted cleavage due to cross-cutting foliation bends as the grain sized finer.	All claims groups except Bathurst	Bleeker and Hall, 2007
Silicate facies iron formation	Beechey Lake Group	2670–2650	Composed of poorly-banded chert and iron silicates (amphiboles, grunerite, garnet). Commonly interbedded with mudstone or clastic sediments. Chert is often boudinaged and may contain small amounts of magnetite (grains or thin filaments; lacks distinct bands). Bands generally range between 5–25 cm in width.	George, Goose, Boot, Boulder, Needle, Malley, Wishbone	Bleeker and Hall, 2007
Oxide facies iron formation	Beechey Lake Group	2670–2650	Composed of alternating bands of chert, magnetite, and smaller amounts of iron silicates (e.g., amphiboles, grunerite, garnet). Magnetite-rich bands are dark grey to brown and sometimes display a metallic luster when less altered. Magnetite is commonly replaced by grunerite, amphiboles and sulphide minerals (dominated by pyrrhotite). Can also appear poorly banded with high magnetite content. Individual bands range from 5 cm to	George, Goose, Boot, Boulder, Needle, Malley, Wishbone	Bleeker and Hall, 2007

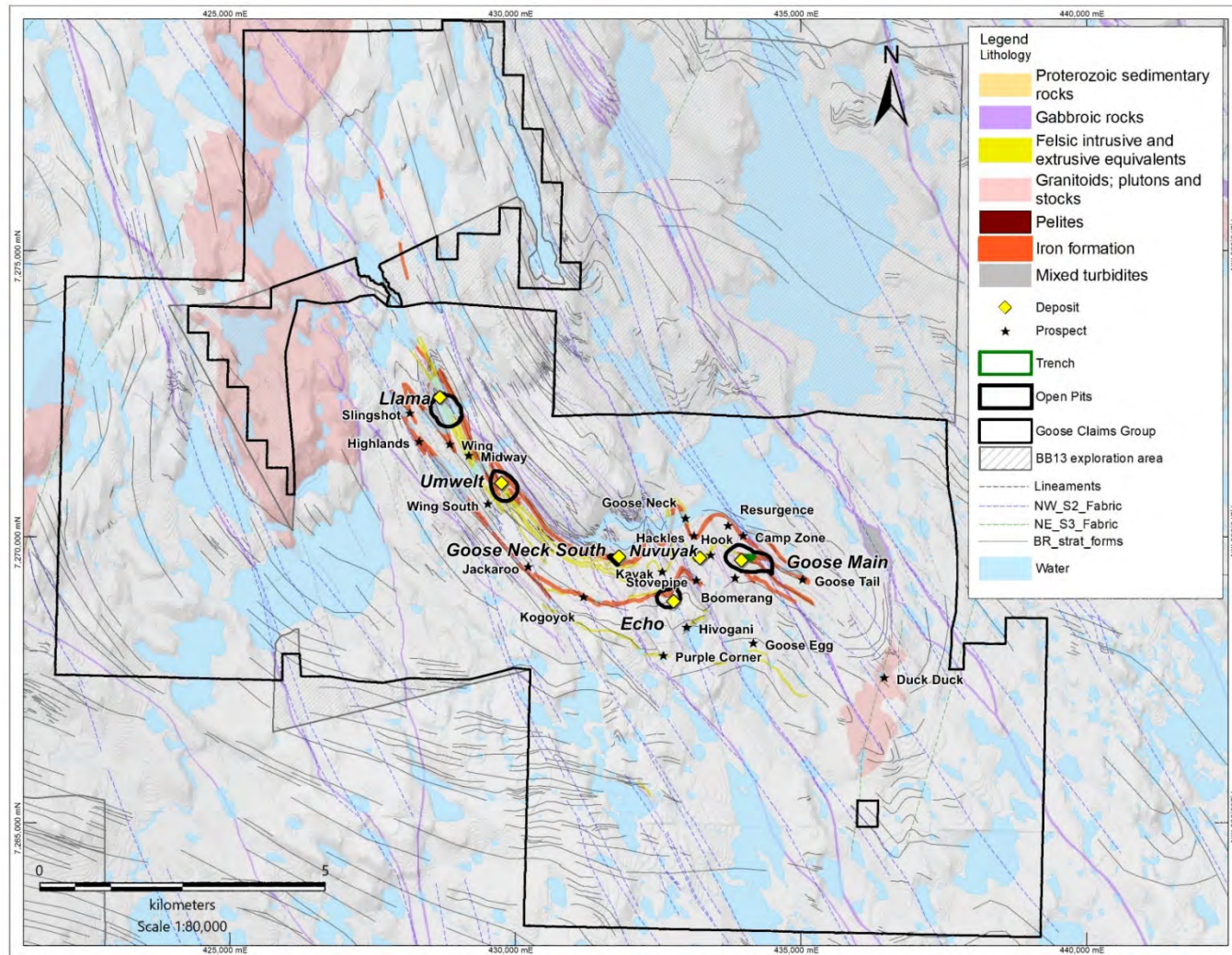
Lithology	Map Unit	Age (Ma)	Description	Occurrence	Reference
			>50 cm thick, while the entire sequence thickness can be 10's of metres thick.		
Granite, granodiorite, tonalite, diorite	Regan Intrusive Suite	2590–2580	Granitoid plutons, stocks, and dykes, ranging from felsic to intermediate composition.	All claims groups except Del and Bathurst	Frith and Fryer, 1985
Felsic dykes	Unknown	2600	Fine- to medium-grained, light grey to beige, homogenous intrusive rocks. Highly siliceous, commonly porphyritic, featuring euhedral feldspars and rounded quartz phenocrysts. Can display a sheared or strongly foliated lithology contact. Informally referred to as quartz feldspar porphyries. Felsic dykes are closely spatially associated with the mineralized zone at the Goose Claims Group.	Common at Goose, Boot, and Boulder	Internal company reports
Gabbro	Malley or Mackenzie Dyke swarms	2130 or 1269	Fine to coarse grained dykes/sills, light to dark green or greenish-grey; aphanitic chilled margins; locally porphyritic texture away from the margins; occurs as magnetic and non-magnetic variants.	Common throughout region	Bleeker and Hall, 2007

Table 7-2: Goose Claims Groups Stratigraphy

Predominant/ Key Unit		Thickness (m)	General Description
Name	Code		
Top sediments	SEDT	Unbounded	Interbedded sequence of weakly to moderately foliated greywacke/mudstone turbidite with rare minor (<1%) iron formation. Below the unconformity with the Proterozoic rocks, no other stratigraphic unit is seen above the Top Sediments within the Goose Claims Group, however, thicknesses of >200 m have been intersected in the Project area. Lower contact is gradational and represents an increase in iron formation content.
Upper iron formation	UIF	10 to 50	Interbedded sequence of greywacke, silicate iron formation (amphibole–chlorite–chert ± magnetite with amphibole- and chlorite-bearing metasedimentary rocks), oxide iron formation (chert–magnetite–grunerite–amphibole) and mudstone; becoming more iron formation-rich at the base. Individual layers range from 10 cm to 2 m in thickness. Upper contact is gradational.
Middle mudstone	MM	1 to 10	Primarily composed of massive to strongly foliated mudstone with interbedded silicate iron formation (chert–amphibole–chlorite ± garnet) [mud-rich and sheared with chert nodules] and rare oxide iron formation; becoming more mudstone-rich at the lower contact which is typically sharp. Upper contact is gradational.
Lower iron formation	LIF	2 to 30	Poorly- to well-banded, oxide iron formation (chert–magnetite–amphibole layers ranging from 1–50 cm in thickness) with rare discontinuous units of greywacke and mudstone. Upper and lower contacts are sharp. Hosts the majority of the gold at Goose Claims Group.
Middle sediments	SEDM	15 to 45	Primarily massive to moderately foliated greywacke, with infrequent mudstone and siltstone. When cross-cut by quartz–feldspar porphyries and quartz veins, can host localized disseminated arsenopyrite.
Deep iron formation	DIF	5 to 15	Interbedded sequence of greywacke, silicate iron formation (amphibole–chlorite–chert), oxide iron formation (chert–magnetite–grunerite–amphibole) and mudstone with individual layers ranging from 10 cm to 2 m in thickness. This unit splits the clastic sediments below the lower iron formation into two sections, which are given different names for reference only.
Basal sediments	SEDB	Unbounded	Primarily massive to moderately foliated greywacke, with infrequent mudstone and siltstone. When cross-cut by quartz–feldspar porphyries and quartz veins, can host localized disseminated arsenopyrite.

Note: Unbounded = as the upper or lower stratigraphic unit in the suite, the unit does not have a defined thickness.

Figure 7-3: Geology Map, Goose Claims Group



Note: Figure prepared by B2Gold, 2025.

Banded iron formation units are volumetrically dominated by oxide facies (magnetite–chert–grunerite), with subordinate silicate facies (chert–grunerite–chlorite). Abrupt transitions between sedimentation styles are noted at the Goose Claims Group, where thin-bedded sedimentary sequences, capped by banded iron formation are overlain by thick-bedded, coarse-sandy sediments.

Quartz–feldspar porphyry dykes intrude the sedimentary units and are generally axial planar to mesoscopic F2 folds. There is a close spatial association between the dykes and mineralization, specifically where they intersect the oxide iron formation.

Northwest-trending gabbroic dykes intrude the Archean stratigraphy, while the much younger (ca. 1.2 Ga) Mackenzie diabase dykes cut all lithologies.

George Claims Group

The geology of the George Claims Group comprises tightly folded, subvertically-dipping, northwest-trending banded iron formation, within mixed metasedimentary rocks. The banded iron formation units are continuous along the George Claims Group for over 20 km of strike length and are folded into subparallel antiform–synform sets, resulting in repetition of strata. A geology map is provided as Figure 7-4.

Banded iron formation units are volumetrically dominated by oxide facies (magnetite–chert–grunerite) with subordinate silicate facies (chert–grunerite–chlorite). Abrupt transitions between sedimentation styles are noted at the George Claims Group, with thin-bedded sedimentary sequences, capped by banded iron formation are overlain by thick-bedded, coarse-sandy sediments.

Quartz–feldspar porphyry dykes and intermediate dykes intrude the metasedimentary units.

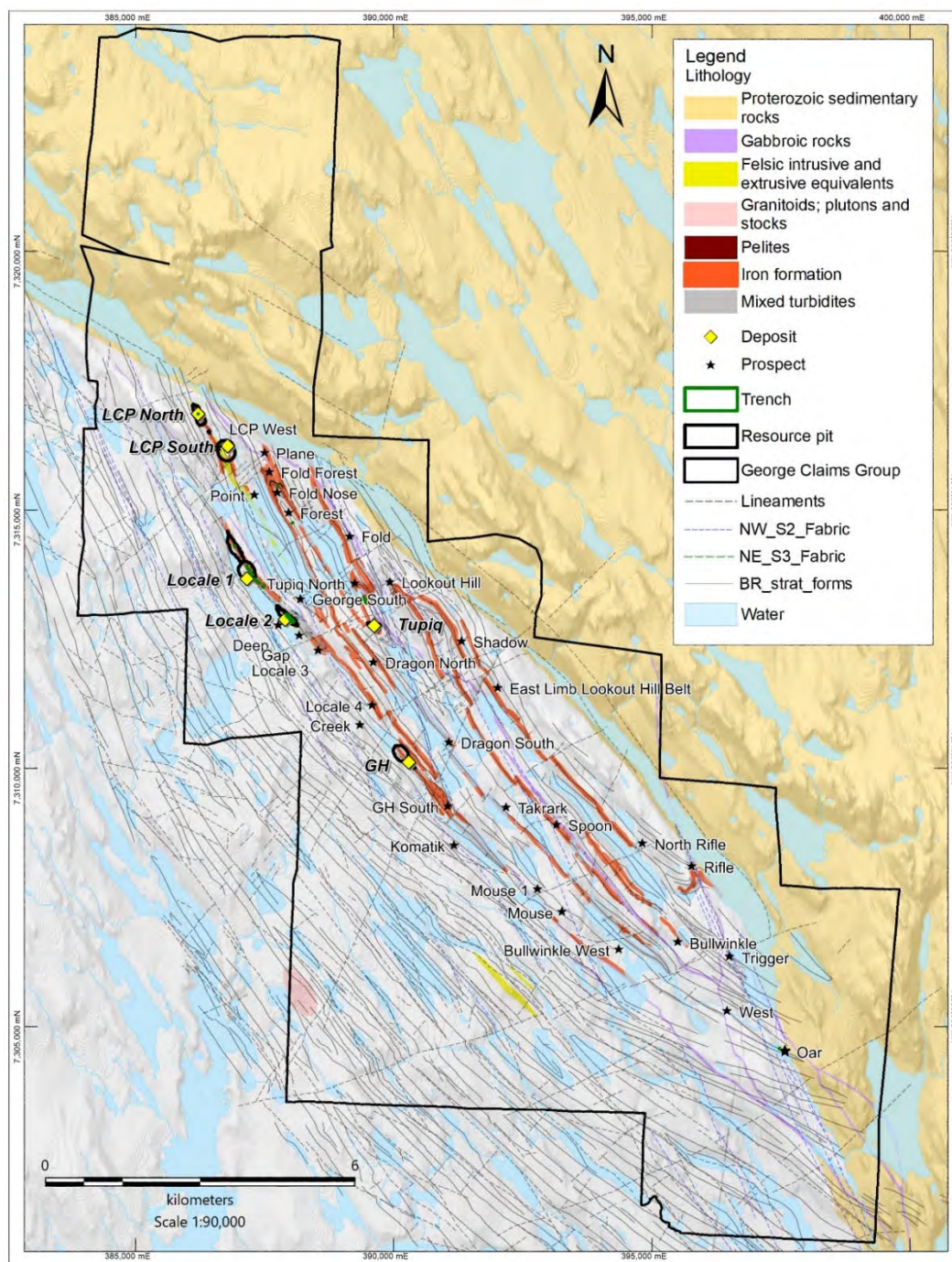
Northwest-trending gabbroic dykes intrude the Archean stratigraphy, while the much younger (ca. 1.3 Ga) Mackenzie diabase dykes cut all lithologies.

Boot Claims Group

The geology of the Boot Claims Group comprises complexly folded banded iron formation within mixed clastic metasedimentary rocks. The iron formation is volumetrically dominated by oxide facies (magnetite–chert–grunerite), with subordinate silicate facies (chert–grunerite–chlorite). In many locations, oxide banded iron formation has a high proportion of clastic sedimentary material and is similar to the sediment-rich, upper banded iron formation at the Goose Claims Group.

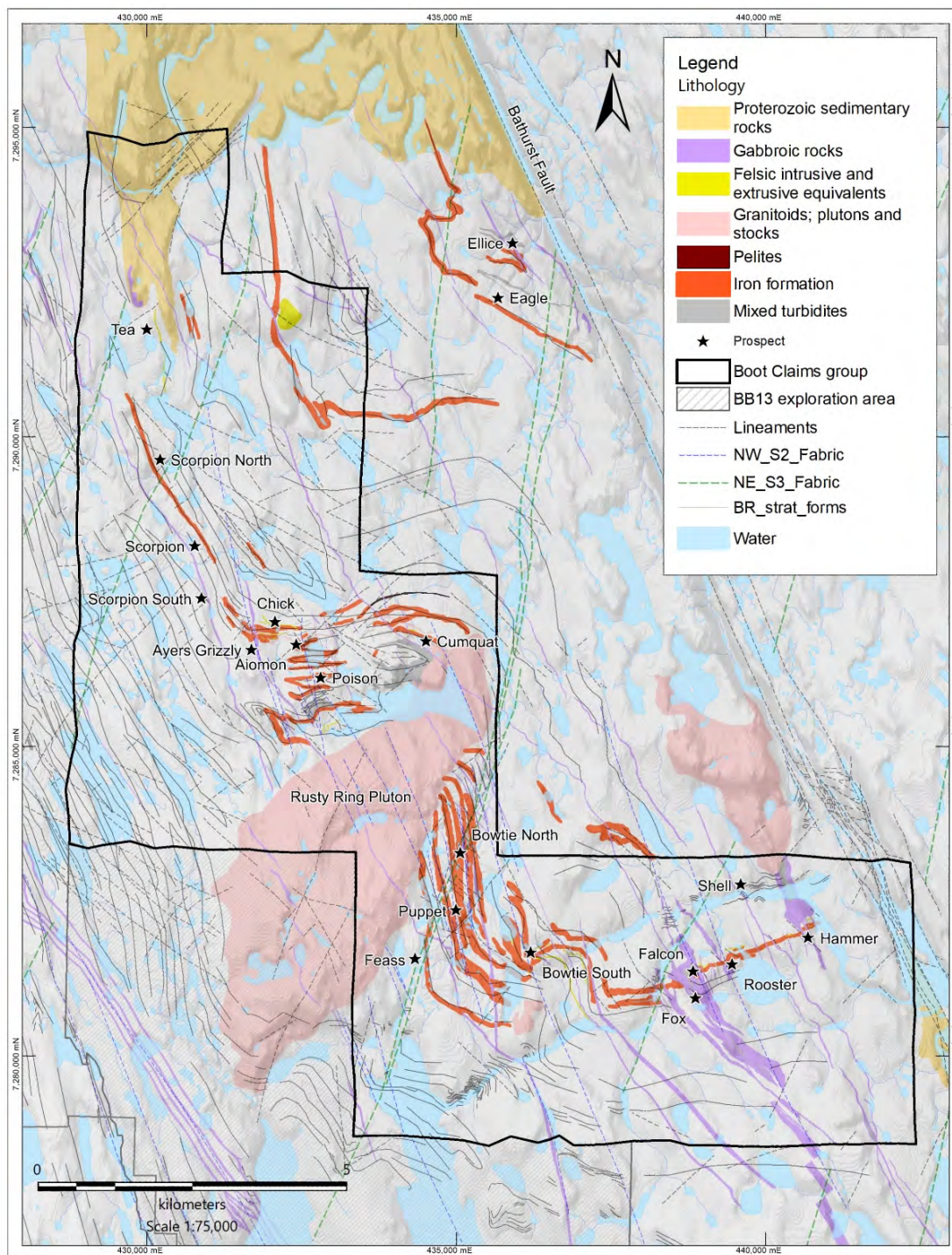
Several felsic to intermediate dykes and plutons are present in the Boot Claims Group, the most significant of which is the Rusty Ring pluton that intrudes the central and southwestern parts of the claims group (Figure 7-5). The iron formation stratigraphy exhibits structural repetition due to folding or faulting south of the Rusty Ring pluton at the Bowtie North, Puppet and Bowtie South showings, and tight east–west-trending folding and repetition in the area north of the pluton at the Cumquat, Poison and Aires-Grizzly showings.

Figure 7-4: Geology Map, George Claims Group



Note: Figure prepared by B2Gold, 2025.

Figure 7-5: Geology Map, Boot Claims Group



Note: Figure prepared by B2Gold, 2025.

The fold geometry appears to be controlled by the shape of the pluton, suggesting the intrusive rocks acted as a buttress to the actively deforming turbidite package. The timing of this deformation is interpreted as syn-D3, based on a provisional Regan suite assignment for the Rusty Lake pluton, although no dating has been carried out to date.

Northwest-trending gabbroic dykes intrude the Archean stratigraphy, while the much younger (ca. 1.3 Ga) Mackenzie diabase dykes cut all lithologies.

Boulder Claims Group

The Boulder Claims Group hosts a 10 km-long package of northwest-trending oxide iron formation, hosted in a mixed turbidite sequence of the Beechey Lake Group. A geology map is provided in Figure 7-6.

The main banded iron formation stratigraphic package exhibits a continuous northwest strike over most of the area. The main banded iron formation package contains up to four distinct oxide-rich units interbedded with mudstone, greywacke, and locally intermediate to felsic volcanoclastic units. Mineralogically, the banded iron formation is relatively consistent throughout the area, both along and across strike, but does display local variability in detrital and chemical components.

Interpretation of geophysical surveys suggests that the Boulder banded iron formation is continuous with the banded iron formation exposed at the George Claims Group. However, between the two claims groups, the banded iron formation is overlain by a thick (up to 300 m) sequence of flat-lying Proterozoic Goulburn Group sedimentary rocks.

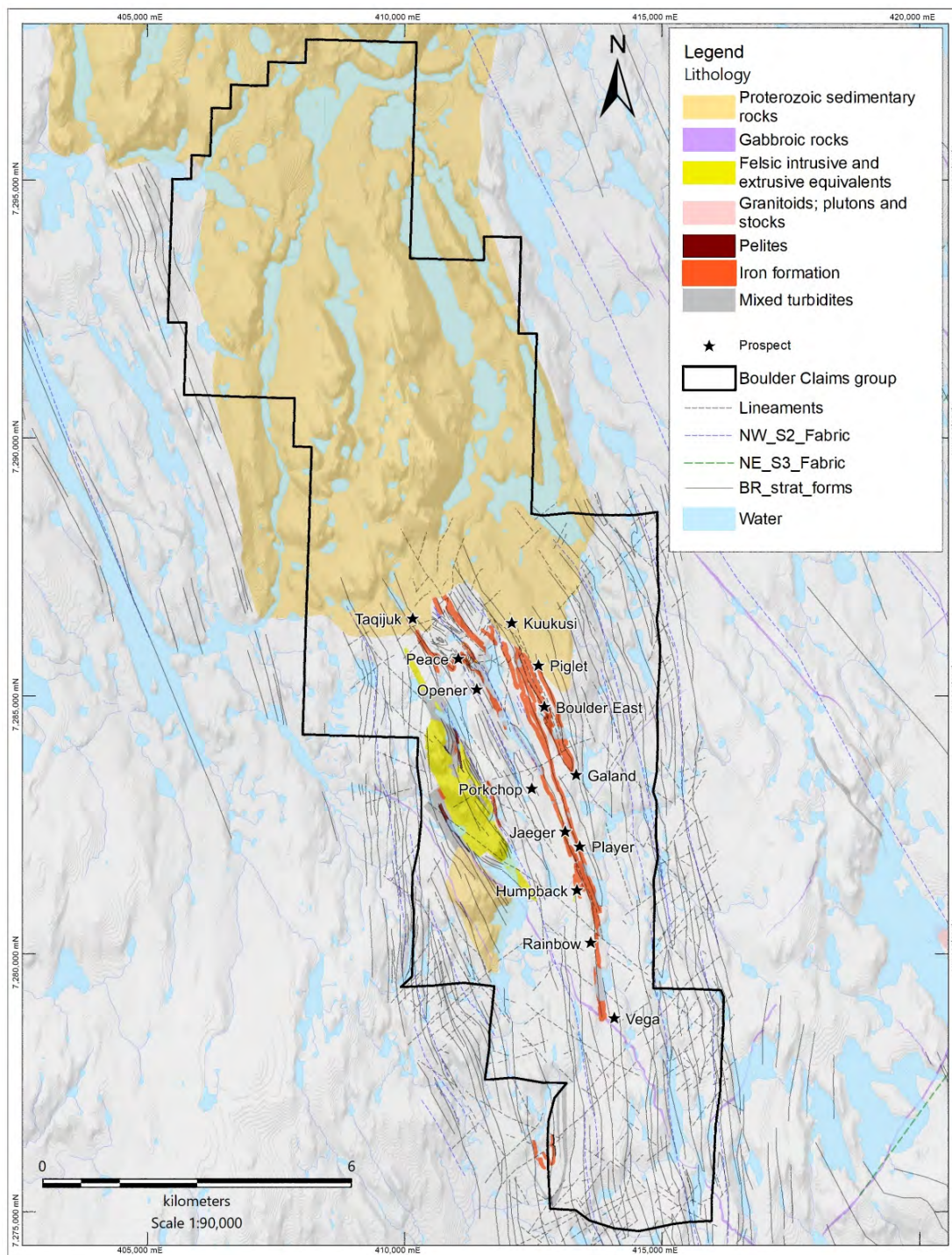
Needle Claims Group

The Needle Claims Group exhibits similar geology to Boot in that complexly folded banded iron formation abuts against a large granitic intrusion to the south, southwest, and north. Fold axial traces indicate polyphase deformation and locally, vary sharply from the regionally prominent northwest trend. Attenuated slivers of banded iron formation were also observed as rafts in the intrusion. A geology map is provided in Figure 7-7.

Malley Claims Group

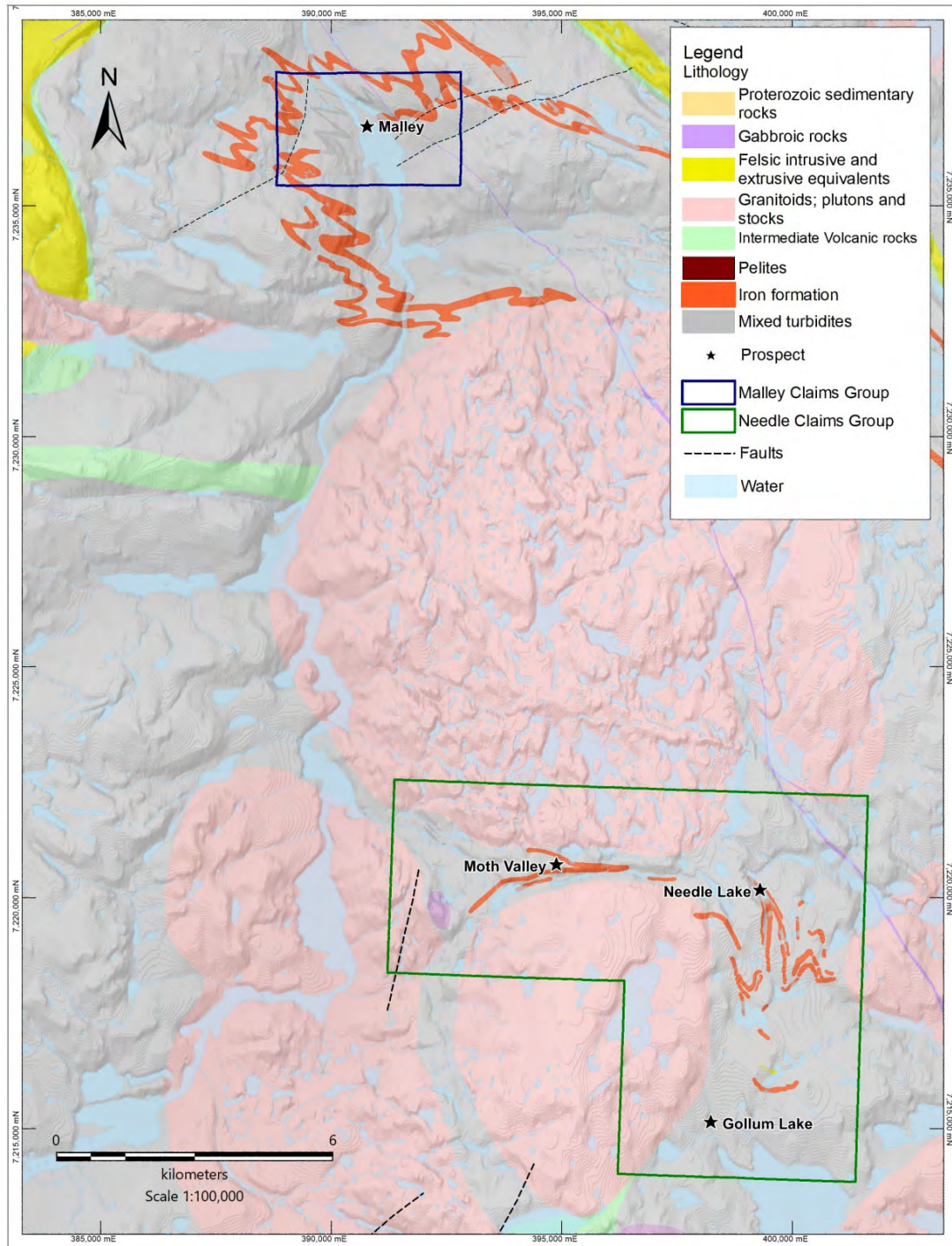
The Malley Claims Group geology consists of two parallel northeast-trending banded iron formation horizons within turbiditic sequences of greywacke and interbedded mudstone, all of which have been tightly folded into a set of northwest–southeast-trending folds. The rocks are part of a larger iron formation and turbidite package that abuts and is deformed by a large granitic intrusion to the south. A geology map is provided in Figure 7-7.

Figure 7-6: Geology Map, Boulder Claims Group



Note: Figure prepared by B2Gold, 2025.

Figure 7-7: Geology Map, Malley, and Needle Claims Groups



Note: Figure prepared by B2Gold, 2025.

Wishbone Claims Group

The southern part of the Wishbone Claims Group hosts iron formation within turbiditic sequences of greywacke and interbedded mudstone. Intermediate volcanic rocks of the Hackett River volcanic suite are observed in mapping and drill core in the northeastern corner of the claims group. The iron formation has been folded into a tight northwest-trending package surrounded by Regan Intrusive Suite rocks.

The geology of the northern part of the Wishbone Claims Group comprises steeply-dipping, northwest-trending turbidite sequences, dominated by greywacke interbedded with mudstone.

The contact to the Hackett River volcanic suite sits to the west of the claims group. Regan Intrusive Suite rocks occur between the north and south areas of the claims group. A geology map is provided in Figure 7-8.

Del Claims Group

The Del Claims Group is not known to host banded iron formation. The geology comprises turbiditic sequences dominated by greywacke interbedded with mudstone. The rocks are steeply dipping and isoclinally folded. Mineralized shear zones occur parallel to the stratigraphic layering. Rare, narrow felsic dykes are sub-vertical and cross-cut the stratigraphy, aligned in a northwest orientation. A geology map is provided in Figure 7-9.

BB13 and Beech Claims Groups

The BB13 and Beech Claims Groups are not known to host banded iron formation.

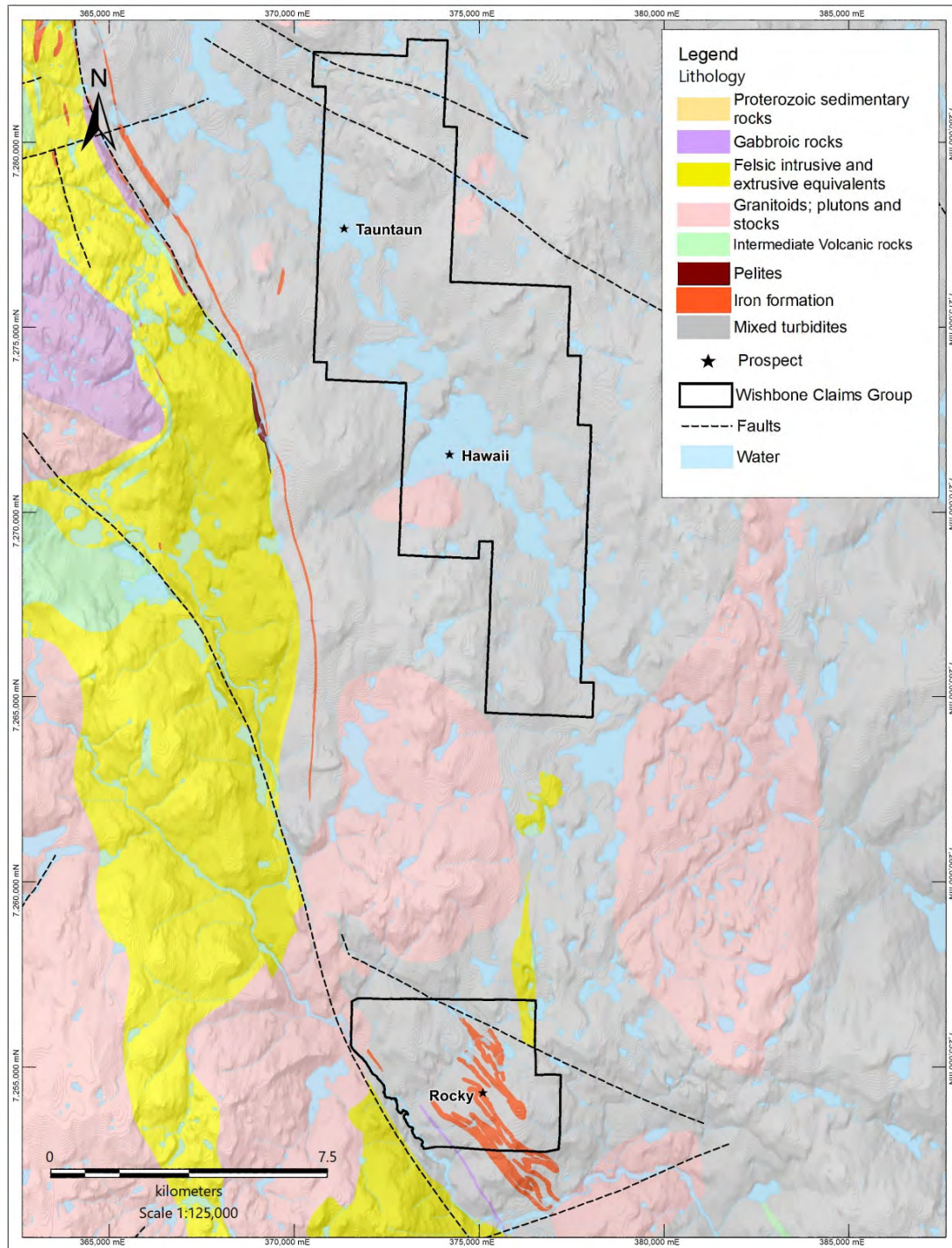
BB13 has not been the focus of much exploration, however, the observed geology is consistent with a folded turbidite package intruded by abundant gabbro dykes that are parallel to the stratigraphy. Geology maps are provided in Figure 7-10.

At Beech, volcanic rocks belonging to the Hackett River suite occur in the central part of the claims group, surrounded by Beechey Lake turbidites and Regan Intrusive Suite rocks. A geology map is provided in Figure 7-11.

Bathurst Claims Group

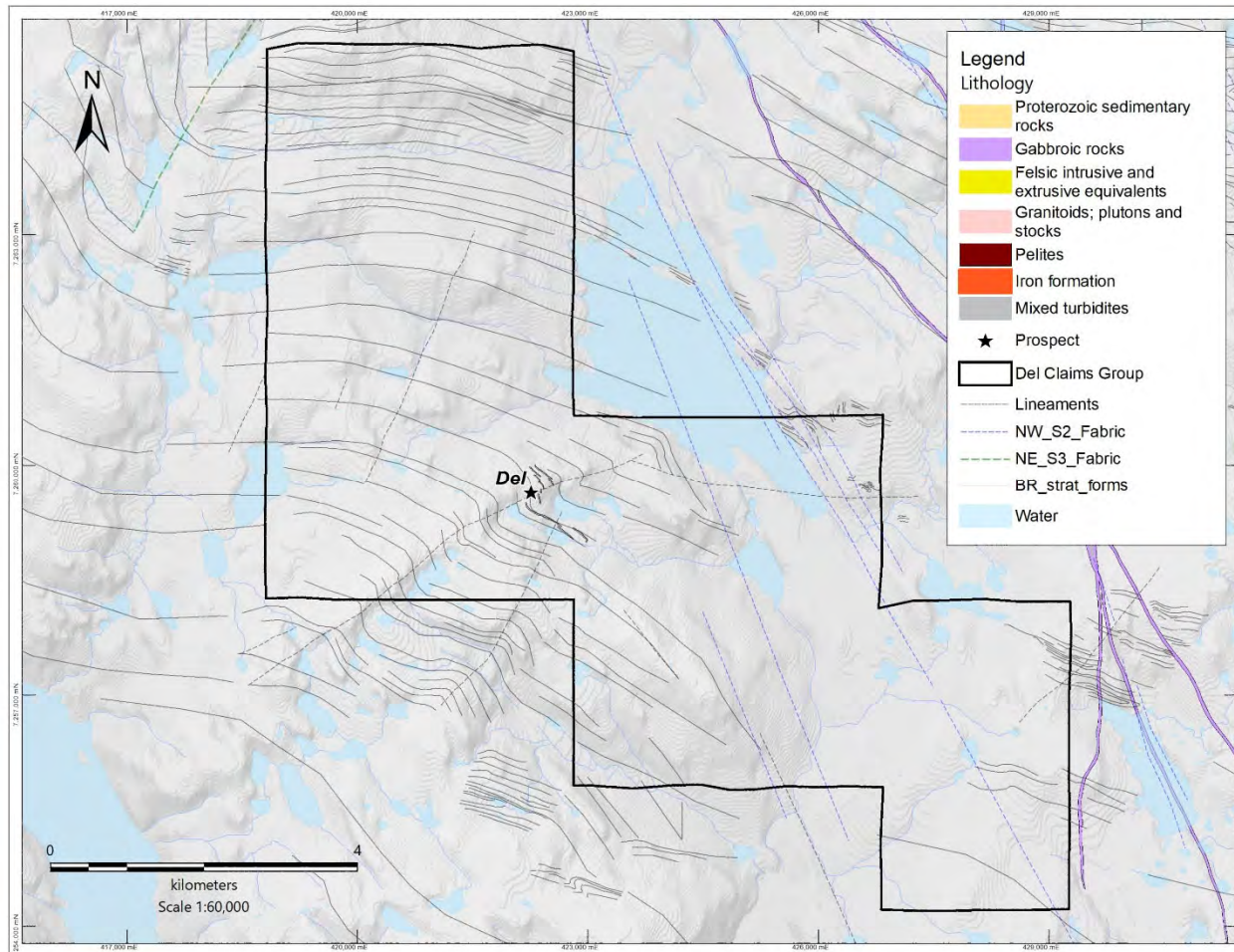
The Bathurst Claims Group is not known to host banded iron formation. Proterozoic clastic sedimentary rocks of the Goulburn Group unconformably overlie Archean rocks at the claims group. The claims lie on the western side of the Bathurst Fault Zone, a left-lateral fault zone with up to 110 km of displacement (Sveida, et al., 2018). Figure 7-2 included an overview of the geology of the claims group.

Figure 7-8: Geology Map, Wishbone Claims Group



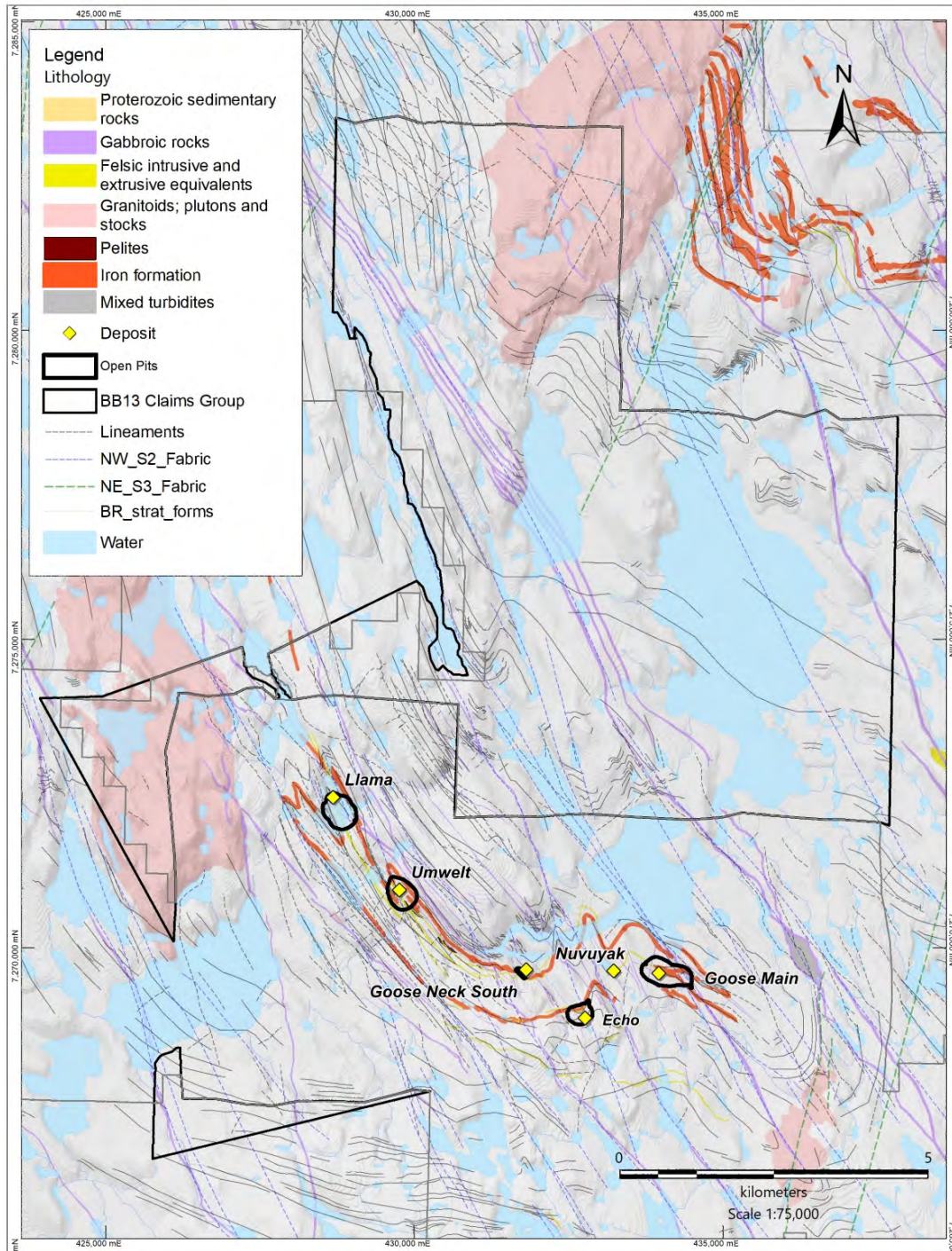
Note: Figure prepared by B2Gold, 2025.

Figure 7-9: Geology Map, Del Claims Group



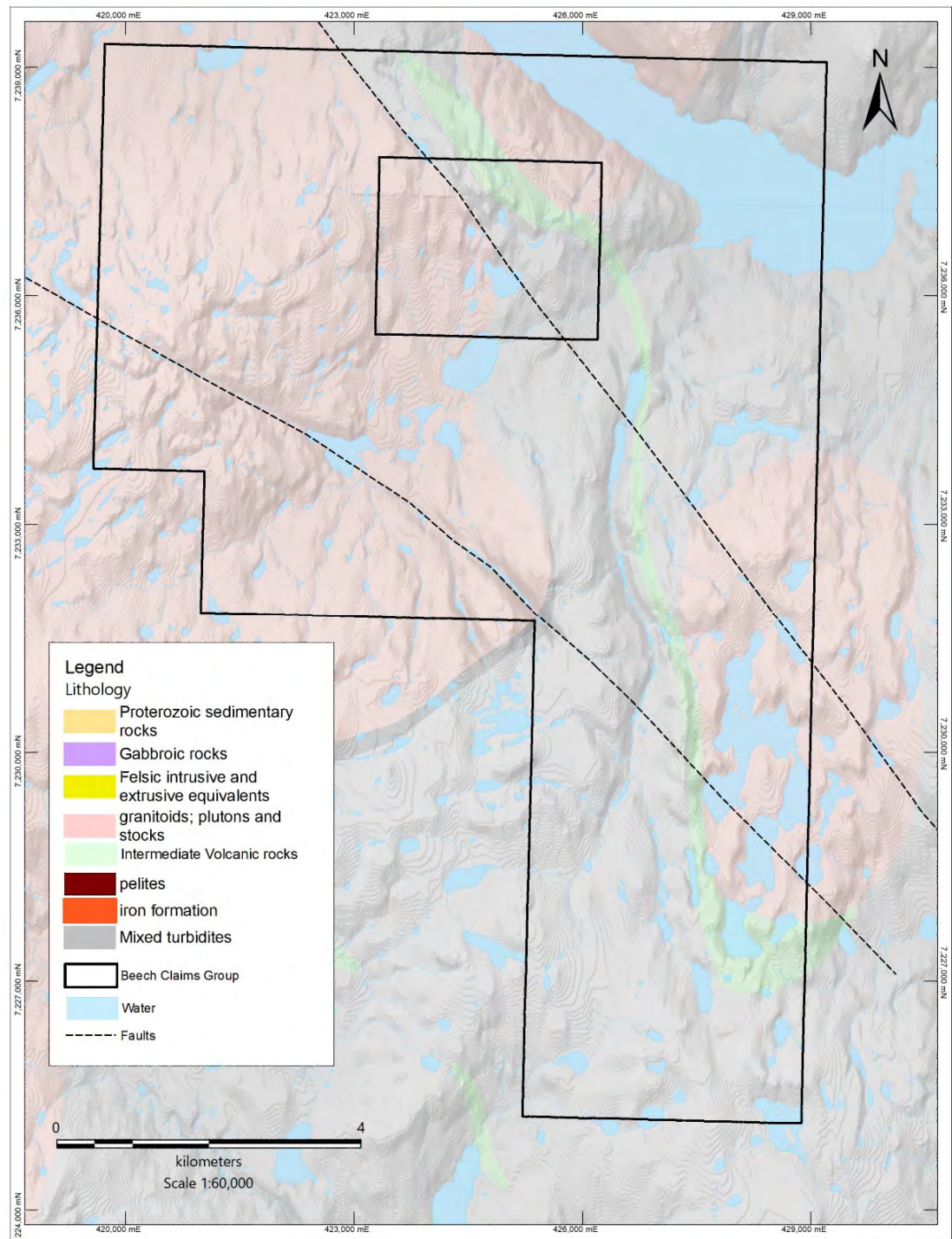
Note: Figure prepared by B2Gold, 2025.

Figure 7-10: Geology Map, BB13 Claims Group



Note: Figure prepared by B2Gold, 2025.

Figure 7-11: Geology Map, Beech Claims Group



Note: Figure prepared by B2Gold, 2025.

7.2.3 Alteration and Metamorphism

The Back River District was subject to regional upper greenschist metamorphism attributed to crustal thickening and burial during D2. Background metamorphic alteration products, including disseminated amphiboles, garnets and weak to moderate disseminated chlorite, affect the entire turbidite package but are most abundant in the banded iron formation units and mudstone, due to their higher reactivity. These minerals are frequently destroyed during mineralization, replaced by chlorite, calcium amphiboles and pyroxenes (hedenbergite), and sulphides, intensifying in the proximity to mineralized deposits.

Of the permits that make up the Back River District, only the Goose and George Claims Groups have sufficient data to inform a description of the alteration assemblage that is regarded as typical for mineralized iron formation in the region.

At the Goose Claims Group, metamorphic amphiboles, chlorite, and garnets are present throughout the sequence and most abundantly, within the iron formation. Grunerite is the dominant amphibole within the oxide iron formation, while hornblende and actinolite are the dominant amphiboles in the silicate iron formation. Minor, localized silicification is also present, typically associated with high strain zones.

Pervasive, texturally-destructive chlorite alteration is associated with structures hosting high-grade mineralization, where chlorite preferentially replaces magnetite and iron sulphide-rich bands in oxide iron formation. Grunerite is commonly altered to chlorite, or less commonly, to fine-grained hornblende. Weak potassic - alteration has been geochemically identified in the greywacke, proximal to the mineralized iron formation in the Umwelt deposit.

At the George Claims Group, the dominant alteration assemblage includes narrow zones of chlorite, localized along the margins of quartz veins and that is spatially associated with higher-grade gold mineralization. Hornblende is the dominant amphibole in the mineralized banded iron formation, with little or no grunerite. Where both amphiboles are present, grunerite is partially replaced by hornblende.

Along strike from the mineralized zones, the sulphide-bearing, hornblende-rich, mineralized banded iron formation transitions into a sulphide- and gold-poor, unmineralized banded iron formation comprising grunerite + quartz $\pm$ magnetite $\pm$ minor amounts of hornblende. Less common alteration styles include (Fe?) carbonate associated with late quartz/carbonate veining, potassic and albitic alteration proximal to intrusive bodies.

Graphite alteration is associated with late overprinting faults at both locations.

The key alteration minerals are summarized in Table 7-3.

7.2.4 Structure

The Project area has undergone at least four major deformation events extending from the late Archean to Paleoproterozoic. Deformation events are summarized in Table 7-4.

Table 7-3: Alteration

Alteration Type	Note
Chlorite	Forms patchy aggregates in veins and/or replaces amphiboles in oxide and/or silicate facies iron formation
Actinolite, grunerite, and hedenbergite	Forms prismatic crystals, radiating sprays, and fibrous aggregates. Actinolite is more common in silicate facies iron formation while grunerite is more common in oxide facies iron formation
Graphite	Commonly found in mudstones, near fault zones and/or fractured surfaces but can also occur within turbidites and iron formations
Silica	Found throughout the turbidites and iron formations, typically within veins
Garnet	Commonly found in altered mudstones and silicate facies iron formation

Table 7-4: Project Area Deformation Events

Event	Age (Ma)	Description
D1	2560–2630	Regional northwest–southeast shortening event resulting from collision between the proto-Slave craton and an unknown terrane to the southeast. Resulted in thin-skinned tectonics affecting the Burwash Basin. Select strain partitioning in BIF units and bedding-parallel slip within the turbidites resulted in asymmetric isoclinal folding of BIF, boudinage of chert beds and schistosity in pelitic beds. Bedding was transposed into parallelism with S1 foliation, forming an S0/S1 composite northeast-trending fabric.
D2	2610–2590	A protracted event resulting from collision along the eastern margin of the Slave craton. Divided into two sub-events based on a shift in deformation style: - D2a: Involved the initiation of northeast–southwest compression and formation of the Goose Lake synclinorium. The iron formation and siliciclastic package was tightly folded about northwest-trending, moderately plunging folds (F2). - D2b: Involved a slight rotation in the principal stress direction to east–northeast–west–southwest late in the collision process, leading to the development of a transpressive regime and onset of shearing. Secondary folding and colinear high-strain zones disrupted and transposed earlier structures and stratigraphy. In the southeast part of the Goose Claims Group, D2b formed tight F2 folds with moderate plunges to the northwest and a slight sinistral offset to the Goose Main deposit. This resulted in the apparent NW verging asymmetry in the Goose synclinorium observed in plan view. Vein emplacement occurred throughout D2 with shear veins and extensional vein arrays occupying D2 structures and exhibiting a range of deformation and over-printing relationships. The main gold event occurred during D2b where mineralizing fluids were localized in structural traps and vein systems initiated during D2a, but continually deformed throughout D2b. At the George Claims Group, F2 folds control the structural architecture, and are analogous to macroscopic folds that comprise the Goose Lake synclinorium.
D3	2580–2570	East–west shortening event during the final closure of the Burwash Basin. Resulted in development of upright F3 open folds and warping and deflection of the S2 fabric around syn-tectonic intrusions. D3 also generated crenulation cleavages in pelitic rocks.
D4	1933–1895	Regional transpression at onset of Thelon orogeny along the northeast margin of the Slave craton during the docking with the Rae craton. Resulted in the development of north-west

Event	Age (Ma)	Description
		sinistral brittle faults and brittle reactivation of ductile shears. The most significant of these structures is the Bathurst Fault, located along the eastern boundary of the Project area.

Evidence of the three Archean deformation events is generally preserved across the Project area, with the exception of the Bathurst Claims Group. Structural features are dominated by D2 and are characterized by tight to isoclinal, subvertical, northwest-trending folds with moderate to steep-plunges and accompanied by a moderate to strong axial planar cleavage and localized high-strain zones. Complex boudinage, kinking, folding and attenuation of individual chert beds and quartz veins have been observed in outcrop.

Granitic plutons attributed to the Regan Intrusive Suite, cross-cut the southeast part of the Project area, forming a northeast-trending intrusive belt that outcrops at the Needle, Del, Goose, Boot, Beech, and Wishbone Claims Groups. Banded iron formation units exhibit strong warping and deflection around the more rigid plutonic bodies in these areas and result in an irregular deviation and re-folding of the overall northwest-trending folds and fabrics. The timing of this deformation is poorly constrained; however, if the intrusions are the same age as the Regan Intrusive Suite, it would imply the deformation is D3 or D4, making it post-mineralization. Further age dating of the plutons is planned to help resolve this question.

Based on limited observations made to date, only D4 structures are readily apparent in Proterozoic rocks underlying the Bathurst Claims Group. The area is adjacent to the Bathurst Fault Zone, a left-lateral fault zone with approximately 130 km of displacement (Sveida et al., 2018).

7.2.5 Mineralization

Gold mineralization is primarily hosted within oxide iron formation, and is spatially correlated with discrete high strain zones, F2 fold hinges and short limbs, lithological contacts, and quartz-feldspar porphyry dykes. Mineralization is commonly developed in fold axial planes and sub-parallel high-strain zones within limbs of F2 folds.

Gold is strongly associated with sulphide minerals, preferentially arsenopyrite, pyrrhotite and pyrite. Native gold may occur as visible grains, along fractures within sulphides, or within chlorite or amphibole/hedenbergite altered iron formation.

Sulphide mineralization is interpreted to have occurred during two distinct events, both of which are attributed to D2. An earlier event involved pyrrhotite and pyrite partially replacing magnetite bands and amphiboles, whereas the later event introduced the gold, and coarse arsenopyrite, and remobilized and deformed the early phase of pyrrhotite and pyrite. Semi-massive pyrrhotite and coarse-grained, subhedral arsenopyrite, are both strongly correlated with gold.

Pyrrhotite and pyrite associated with gold mineralization often occupy extensional features such as discrete extension veins and associated vein arrays, which frequently extend beyond individual beds or fold hinges. Sulphide-filled extensional features occur with greater frequency near zones

of elevated gold mineralization. Pyrite is more common than pyrrhotite at shallower depths, though both sulphides display similar textural habits.

Visible gold occurs as very fine disseminations in chlorite and amphiboles proximal to, and sometimes along fractures within, coarse, subhedral arsenopyrite crystals. Gold is occasionally disseminated in quartz $\pm$ chlorite veins. Elevated concentrations of arsenopyrite exhibiting larger crystal size and a higher degree of euhedral crystallinity generally correlates with higher gold grades. Quartz $\pm$ chlorite veins rarely host scattered grains of arsenopyrite, minor patches of pyrrhotite, and secondary pyrite.

Quartz–feldspar porphyry dykes can contain evenly disseminated, medium-grained, euhedral arsenopyrite but typically do not contain gold, except when cross-cut by gold bearing quartz veins, commonly at dyke-wall rock contacts. Wall rock proximal to dyke contacts often hosts scattered arsenopyrite grains.

Trace to minor chalcopyrite, typically associated with pyrrhotite, is present in post-mineralization carbonate veins hosted in phaneritic gabbroic dykes of the Mackenzie Group.

Goose Claims Group

Mineralization occurs within the lower iron formation in well-defined structural corridors and is spatially associated with lithological contacts. Gold mineralization is strongly correlated with tension vein filling semi-massive pyrrhotite, pyrite, and coarse-grained arsenopyrite.

George Claims Group

Gold mineralization at the George Claims Group has similar depositional styles as those observed throughout the Back River District. However, the structural corridors at George are less well-defined than those at the Goose Claims Group. Gold mineralization is typically hosted in oxide iron formation, occurring in three distinct fold belts, George belt, Fold Nose belt, and Lookout Hill belt, with little continuity exhibited between these discrete mineralized domains.

Boot Claims Group

Gold mineralization at the Boot Claims Group conforms to depositional styles observed throughout the Back River District, though a prevalence of mineralized quartz veins and gold-proximal, massive chlorite bands has been observed locally. Gold mineralization is primarily correlated with arsenopyrite, but pyrrhotite, and pyrite also exhibit a spatial relationship to elevated gold grades. Sulphides are typically associated with quartz–chlorite veins and form massive pods or disseminated euhedral crystals within chloritic vein selvages, or within the adjacent wall rock to quartz–chlorite veins.

Boulder Claims Group

Gold mineralization within the Boulder Claims Group is primarily correlated with arsenopyrite but also related to pyrrhotite and pyrite. High-grade intersections occur in mineralized parasitic folds. Sulphides are typically associated with quartz–chlorite veins, and form either massive pods or disseminated euhedral crystals within chloritic vein selvages or within the adjacent wall rock.

Del Claims Group

Mineralization at the Del Claims Group is hosted in greywackes within an alteration zone characterized by a broad halo of disseminated sulphide mineralization. Mineralization primarily consists of arsenopyrite, with minor pyrite and pyrrhotite. Sulphides occur as discrete, fine to medium grained specks and are subhedral. Gold is highly correlated with remobilized arsenopyrite near the margins of quartz veins.

Needle Claims Group

Gold mineralization is hosted in sulphidized iron formation and spatially related quartz veins. Mineralization is dominated by pyrite and pyrrhotite with lesser arsenopyrite and chalcopyrite, all typically present as fine-grained disseminated crystals or as distinct laminae, in the case of pyrite and pyrrhotite. Sulphide and gold mineralization are adjacent to, or within quartz veins and sulphide abundance can range up to 10–16%. Some of the visible gold identified in historic drill core was proximal to the interface between quartz veins and chlorite alteration. A pronounced shear fabric exists within the iron formation and enclosing metasedimentary rocks in some of the Needle outcrops. The gold-bearing sulphidized zones exhibit the same shear fabric.

Other Areas

Exploration is in the early stages at the Beech, Malley and Wishbone Claims Groups.

Previous workers have reported sulphide mineralization consisting of pyrite, pyrrhotite and arsenopyrite in Beech, Malley and Wishbone Claims Groups. These sulphides are commonly associated with tension vein arrays, fracture fills in deformed veins, and disseminated in shear zones. Sulphide bearing grab samples have returned anomalous to high gold grades.

No mineralization has been identified on the BB13 Claims Group. At the Bathurst Claims Group, disseminated pyrite and chalcopyrite were locally found in Goulburn Group rocks in the Kent peninsula. Sulphides are associated with diabase dykes and sills in the area.

7.3 Deposit Descriptions

The Goose Project hosts a total of 12 gold deposits with current Mineral Resource estimates. Six of these are hosted within the Goose Claims Group: the Umwelt, Llama, Goose Main, Echo, Nuvuyak, and Goose Neck South deposits. An additional six deposits are hosted within the George Claims Group: the Locale 1, Locale 2, LCP North, LCP South, Tupiq, and GH deposits.

For the Goose Claims Group, descriptions of each deposit are provided in Table 7-5, dimensions of each deposit are provided in Table 7-6, and geology maps and cross-sections for each deposit are provided in Figure 7-12 through Figure 7-23.

For the George Claims Group, descriptions of each deposit are provided in Table 7-7, dimensions of each deposit are provided in Table 7-8, and geology maps and cross-sections for each deposit are provided in Figure 7-24 to Figure 7-33.

Table 7-5: Key Deposit Characteristics, Goose Claims Group

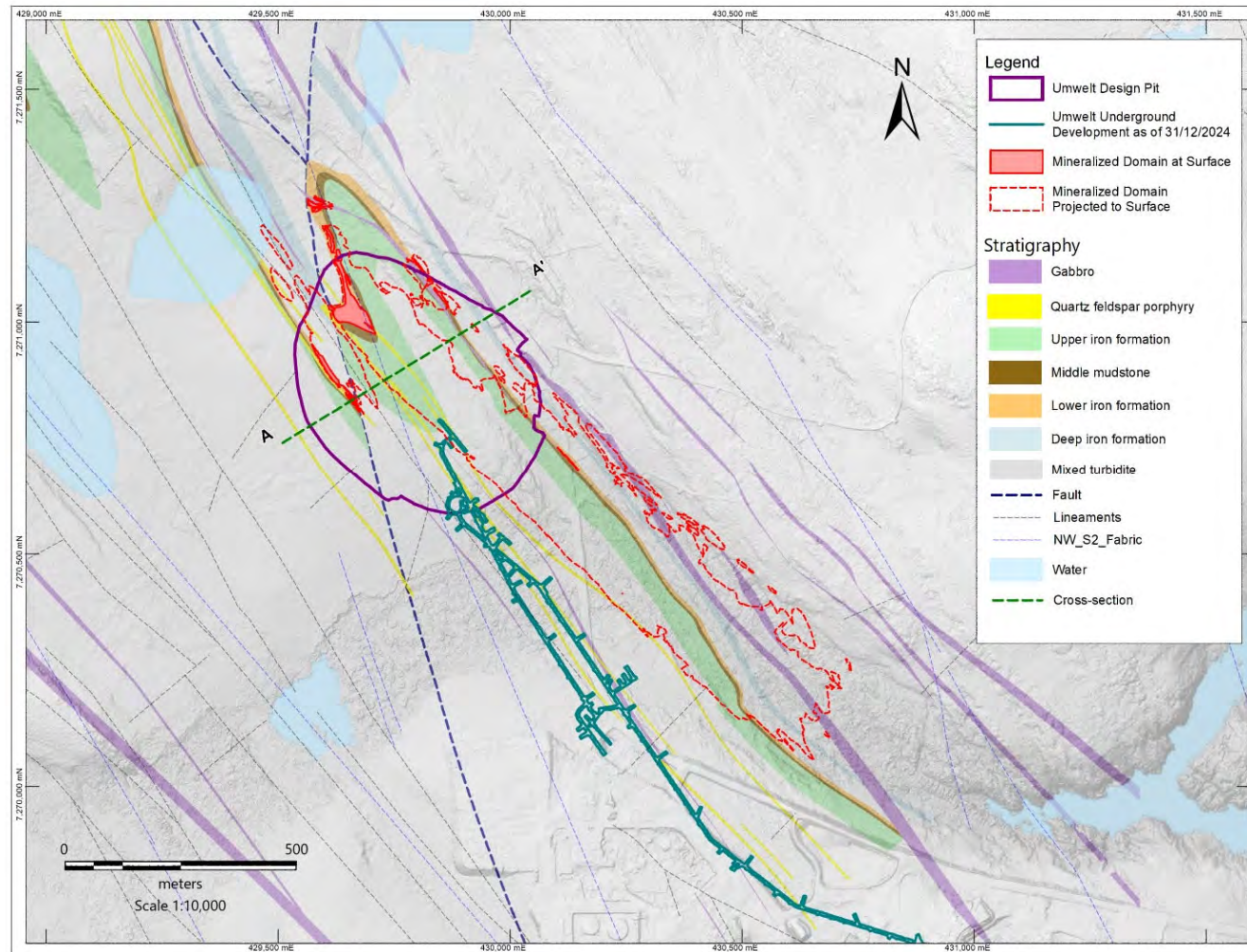
Deposit	Description
Umwelt	- Hosted in a thickened antiform hinge and east-dipping short limb. The antiform trends approximately 125° and plunges approximately 25° south, with an axial plane dipping to the east at about 65°. A parasitic fold originating from the antiform hinge near surface rakes at an oblique 20° angle to the axial plane plunging moderately to the southeast. - High-grade mineralization is concentrated in the thickened portion of the antiform hinge, and along the parasitic fold on the short limb. Mineralization is primarily concentrated within the lower iron formation, with minor mineralization occurring in the surrounding metasedimentary units. - The deposit is cut at the northwest end by a brittle sinistral fault with offset of approximately 200 m, with a trend of 355° and dip of approximately 65° eastward. - Quartz–feldspar porphyry dykes are axial planar to the F2 folds and show a strong spatial correlation to higher mineralization grades where they cross the lower iron formation. - Late post-mineralization gabbroic dykes intrude all units.
Llama	- Hosted in the thickened antiform and limbs of a fold couplet, with synforms on each side of it. The folds create a nearly symmetrical 'W'-fold geometry with amplitudes and wavelengths of approximately 100 m at the northern end of the deposit. The internal antiform diminishes down plunge, with both internal synforms coalescing into one synform at depth. The Llama deposit trends at about 150° and plunges at approximately 20°, with an axial plane dip of 75° to the east. The plunge shallows to the south to approximately 15°, and the axial plane shallows to a dip of 65° to the east. Parasitic folding is present throughout the deposit. - Mineralization is primarily concentrated within the lower iron formation. High grade mineralization is concentrated in the thickened portion of the antiform hinge, and along the parasitic folds on the limbs. - High grade zones are characterised by abundant, medium to coarse grained euhedral or semi-massive arsenopyrite, commonly rimmed by pyrrhotite and associated with sheared quartz veins and pervasive chlorite. Pyrrhotite becomes significantly more prominent as the gold-mineralized zone plunges to the southeast. - A steeply-dipping northwest- trending, post-mineral fault is interpreted as intersecting Llama, mid-way along the known plunge extent. - Quartz–feldspar porphyry dykes are axial planar to the F2 folds and show a strong spatial correlation to higher mineralization grades where they cross the lower iron formation. - Late post-mineralization gabbroic dykes intrude all units.
Goose Main	- Hosted within a tightly folded, antiform with an axial trace trending approximately 295° and plunging approximately 25° to the northwest. - Gold mineralization is associated with D2 structures, specifically discordant quartz veins that are commonly boudinaged and transposed parallel to S2 foliation. - Mineralization is primarily concentrated within the lower iron formation, with lesser mineralization developed within the deep iron formation, and upper iron formation. - The middle sediment unit is absent from the deposit, as it pinches out from the west. - A single axial planar quartz feldspar porphyry dyke intrudes the antiform. - Late post-mineralization gabbroic dykes intrude all units.
Echo	- Hosted in the fold hinge of an open F3 fold on the southern limb of the Goose Lake synclinorium. The dip of the limb is approximately 75° to the south, and the F3 axial plane trends 350° dipping approximately 75° to the east. The resulting fold hinge plunges towards 135° at about 65°. - Mineralization is primarily concentrated within the lower iron formation. Pyrrhotite is the dominant gold-associated sulphide at Echo. The lower iron formation has a higher mudstone to iron

	formation ratio than all other deposits, which may represent a facies change. Oxide iron formation thickness increases with depth to approximately 15 m. • Cross-cut by multiple faults which are oriented tangentially to the F3 fold structure of the lower iron formation. Dips of the faults range from 60–85°, with little to no offset. • One quartz–feldspar porphyry dyke cross-cuts the stratigraphic package subparallel to the lower iron formation and folded by F3, showing a strong spatial correlation to higher mineralization grades where it crosses the lower iron formation. • Late post-mineralization gabbroic dykes intrude all units.
Nuvuyak	• Hosted in an isoclinal F2 antiform re-folded by F3. The deposit has a fold axis trend of 300°, plunges 30° towards NW, with an axial plane dipping 78° east. The fold is interpreted as the down-plunge continuation of the Goose antiform and lies within the core of the Goose Lake synclinorium. • One quartz feldspar porphyry dyke intrudes the stratigraphic package, intruding parallel to the isoclinal fold limbs and nearly axial planar to the antiform; • Mineralization is primarily concentrated within the lower iron formation, and shows a close spatial association with the quartz–feldspar porphyry dyke. • High-grade mineralization is associated with shearing, with an increased abundance of deformed quartz veins overprinted by arsenopyrite and pyrrhotite. • Late post-mineralization gabbroic dykes intrude all units.
Goose Neck South	• Hosted in the northwest–southeast striking northern limb of the macroscale Goose Lake synclinorium. The limb is dipping at 88° toward 200°, with some local reversal where bedding is dipping sub-vertically north–northeast. Parasitic folding is present throughout the deposit. • Mineralization is primarily concentrated within the lower iron formation. Pyrrhotite is the dominant sulphide, exhibiting semi–massive, tension gash, and tension array fill habit. Mineralization is associated with localized parasitic folding overprinted by ductile shearing and associated cm-scale quartz veins.

Table 7-6: Deposit Dimensions, Goose Claims Group

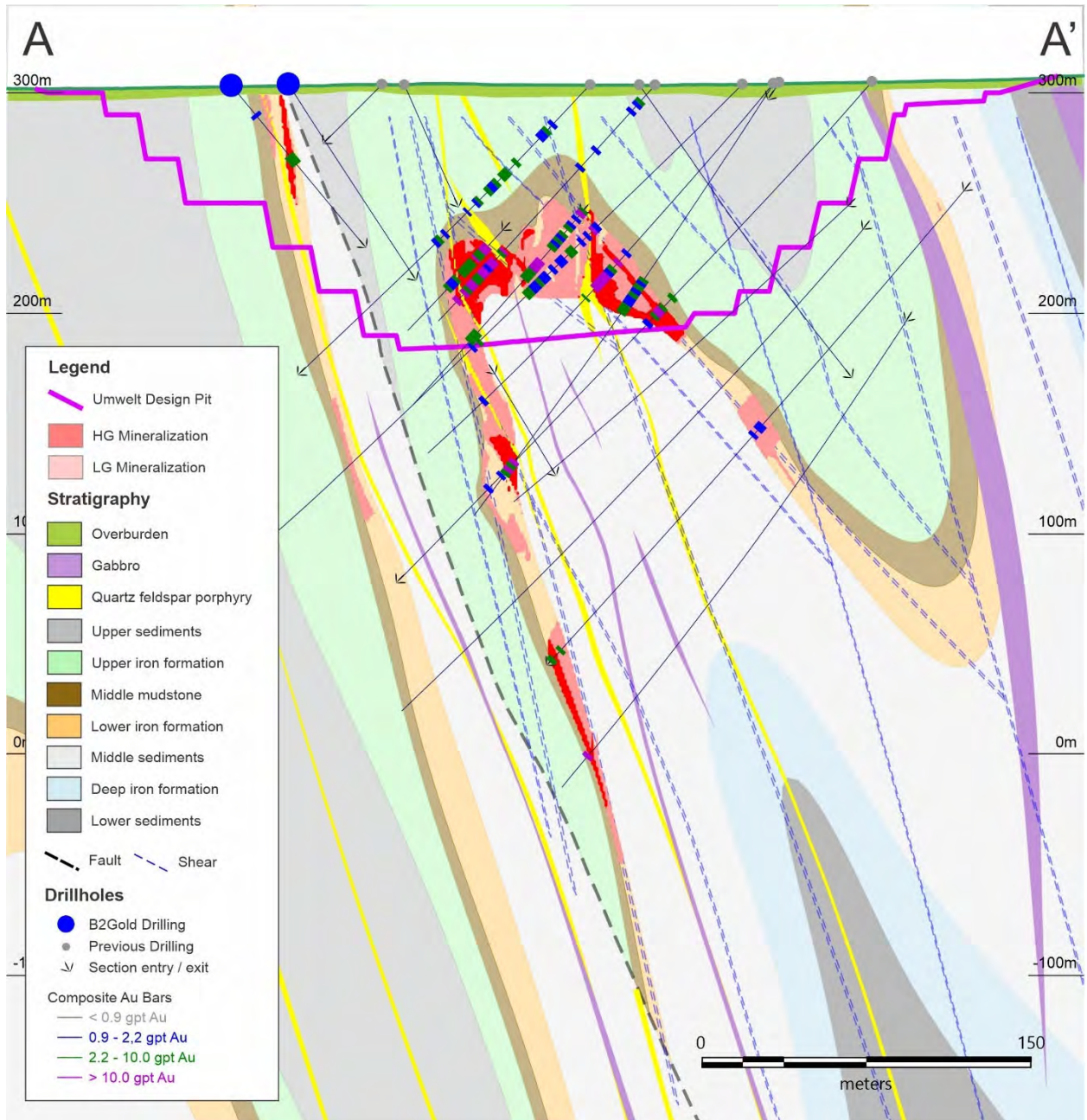
Dimensions	Umwelt	Llama	Goose Main	Echo	Nuvuyak	Goose Neck South
Dimensions (m)	1,700 x 200 x 15	1,900 x 150 x 10	700 x 460 x 15	450 x 370 x 6	450 x 250 x 8	400 x 350 x 6
Depth drilled to (vertical m)	720	700	540	170	870	320
Remains open	Down plunge	Down plunge	Down plunge	Down plunge	Down plunge and down dip	Down plunge and along strike

Figure 7-12: Geology Map, Umwelt Deposit



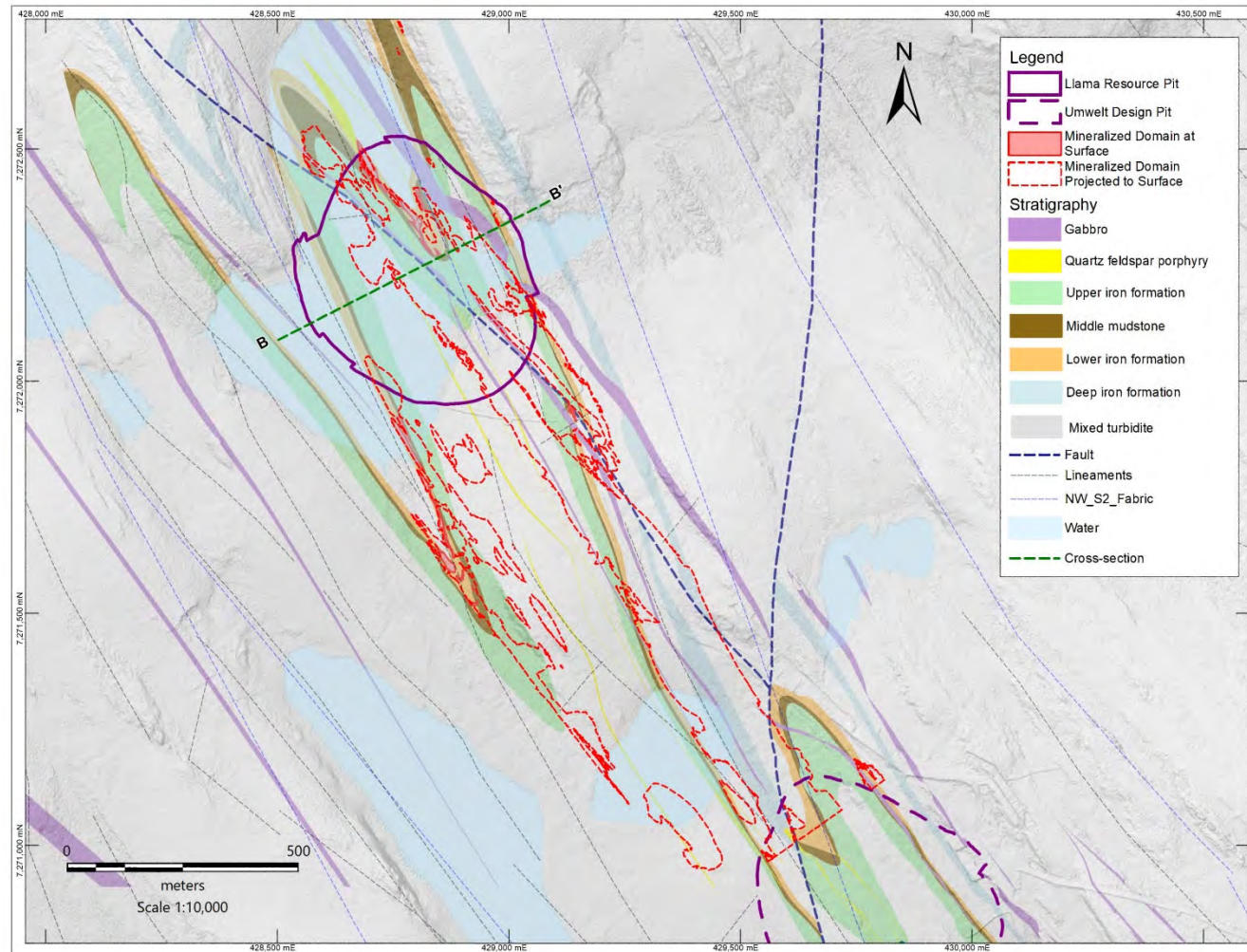
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds as follows: LG (low grade) = 0.3–3 g/t Au, HG (high grade) = >3 g/t Au.

Figure 7-13: Cross-Section, Umwelt Deposit



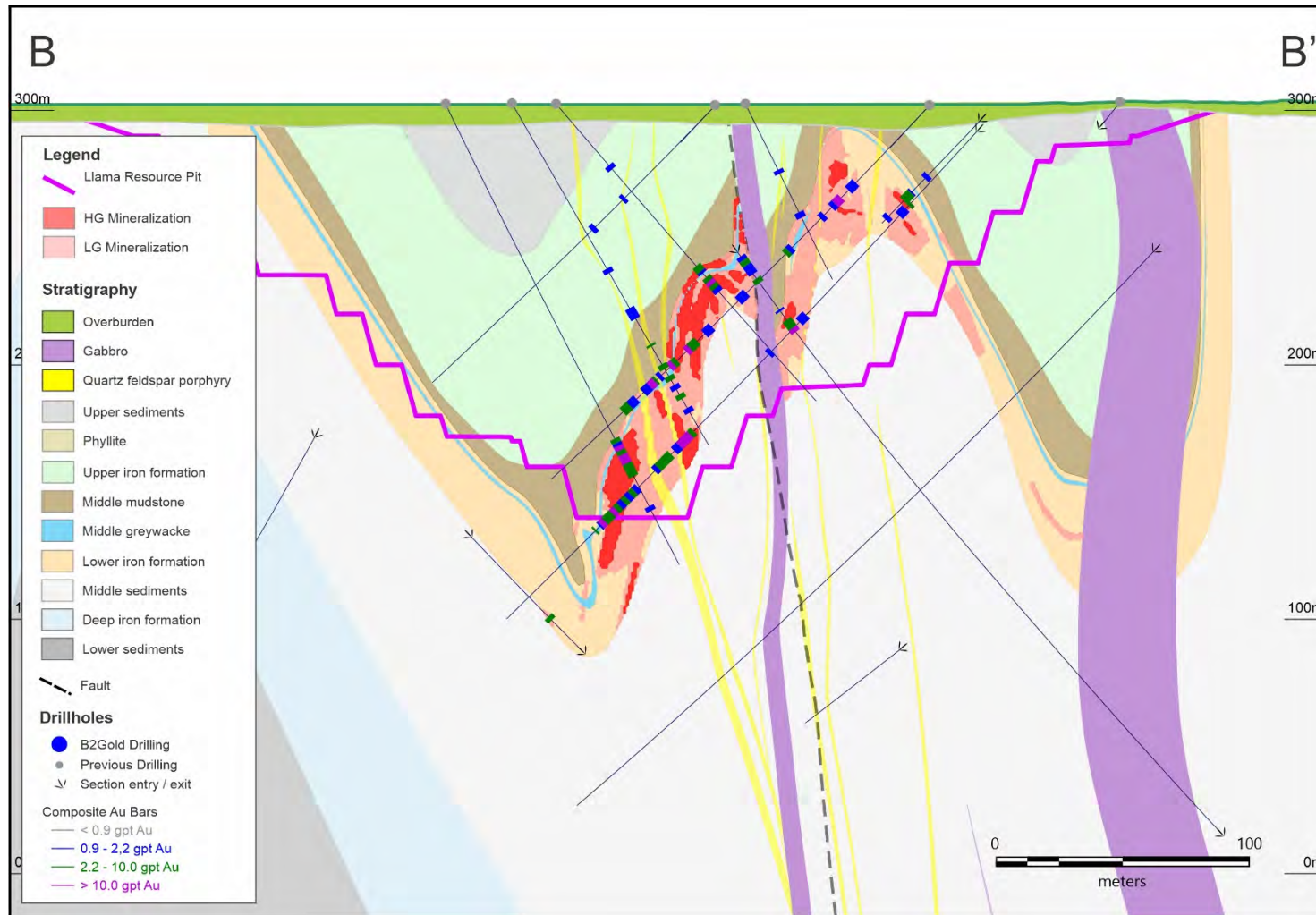
Note: Figure prepared by B2Gold, 2025. Cross-section 20 m wide, looking northwest. Mineralization domains approximate gold thresholds as follows: LG (low grade) = 0.3–3 g/t Au, HG (high grade) = >3 g/t Au.

Figure 7-14: Geology Map, Llama Deposit



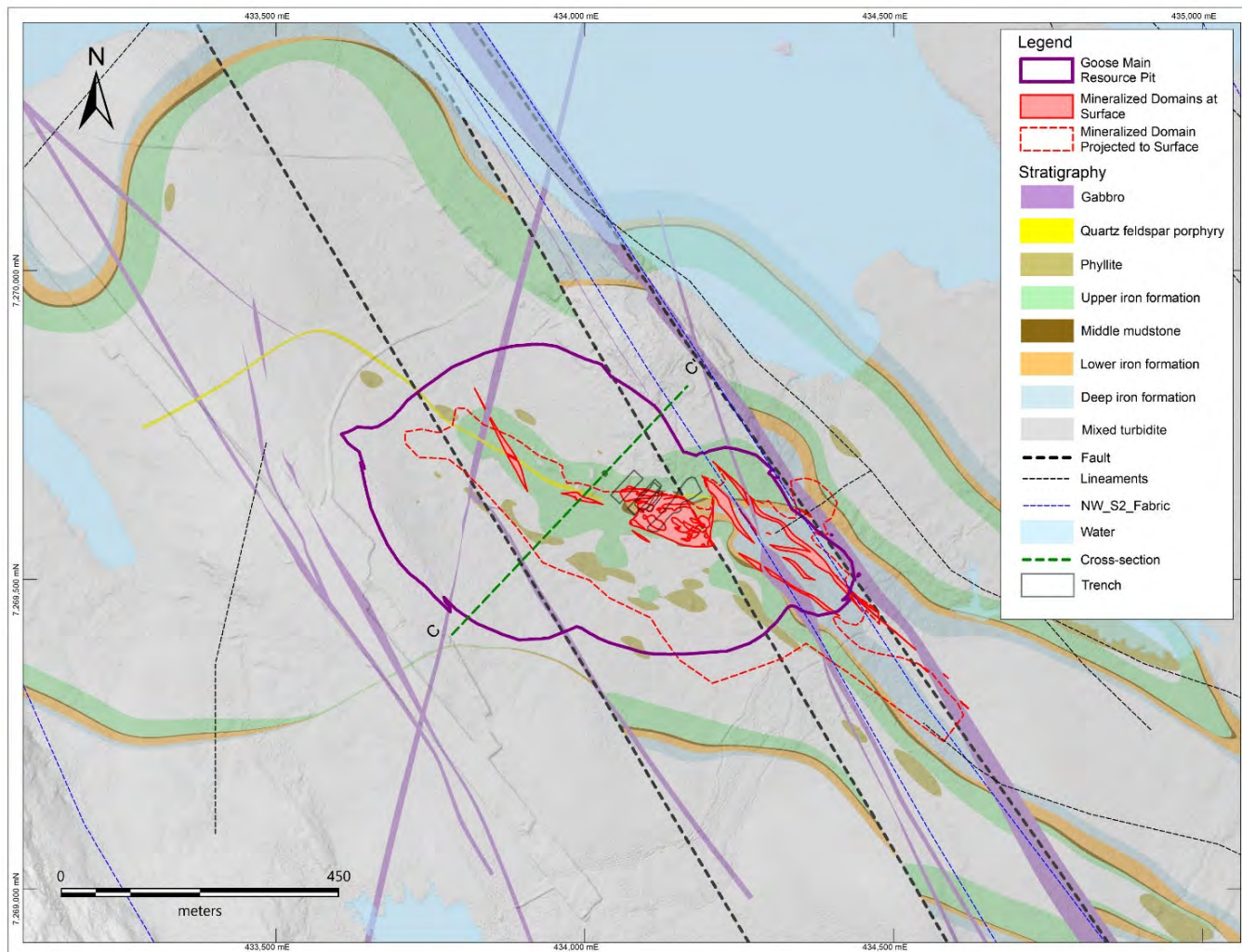
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds as follows: LG (low grade) = 0.3–3 g/t Au, HG (high grade) = >3 g/t Au.

Figure 7-15: Cross-Section, Llama Deposit



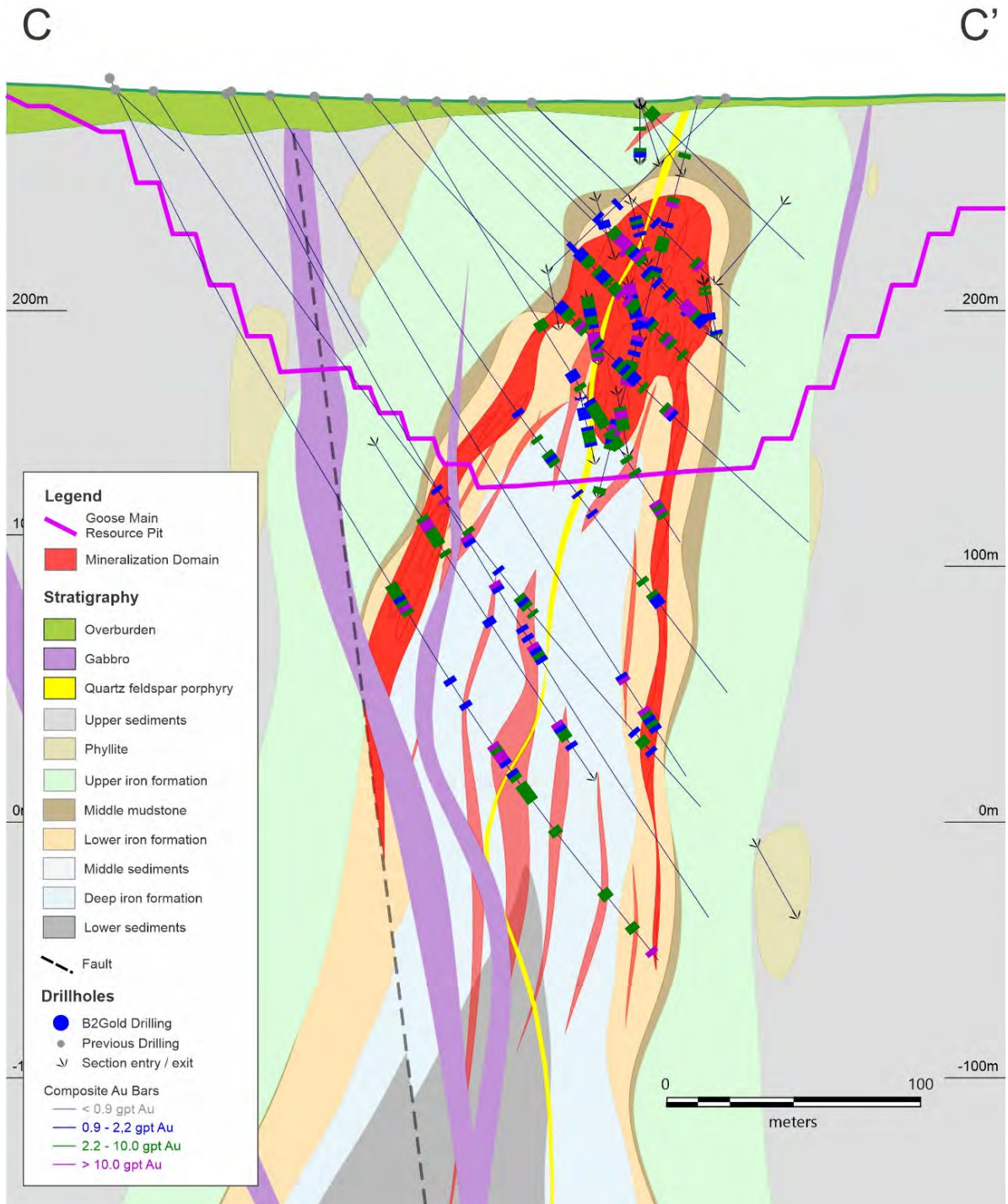
Note: Figure prepared by B2Gold, 2025. Cross-section 25 m wide, looking northwest. Mineralization domains approximate gold thresholds as follows: LG (low grade) = 0.3–3 g/t Au, HG (high grade) = >3 g/t Au.

Figure 7-16: Geology Map, Goose Main Deposit



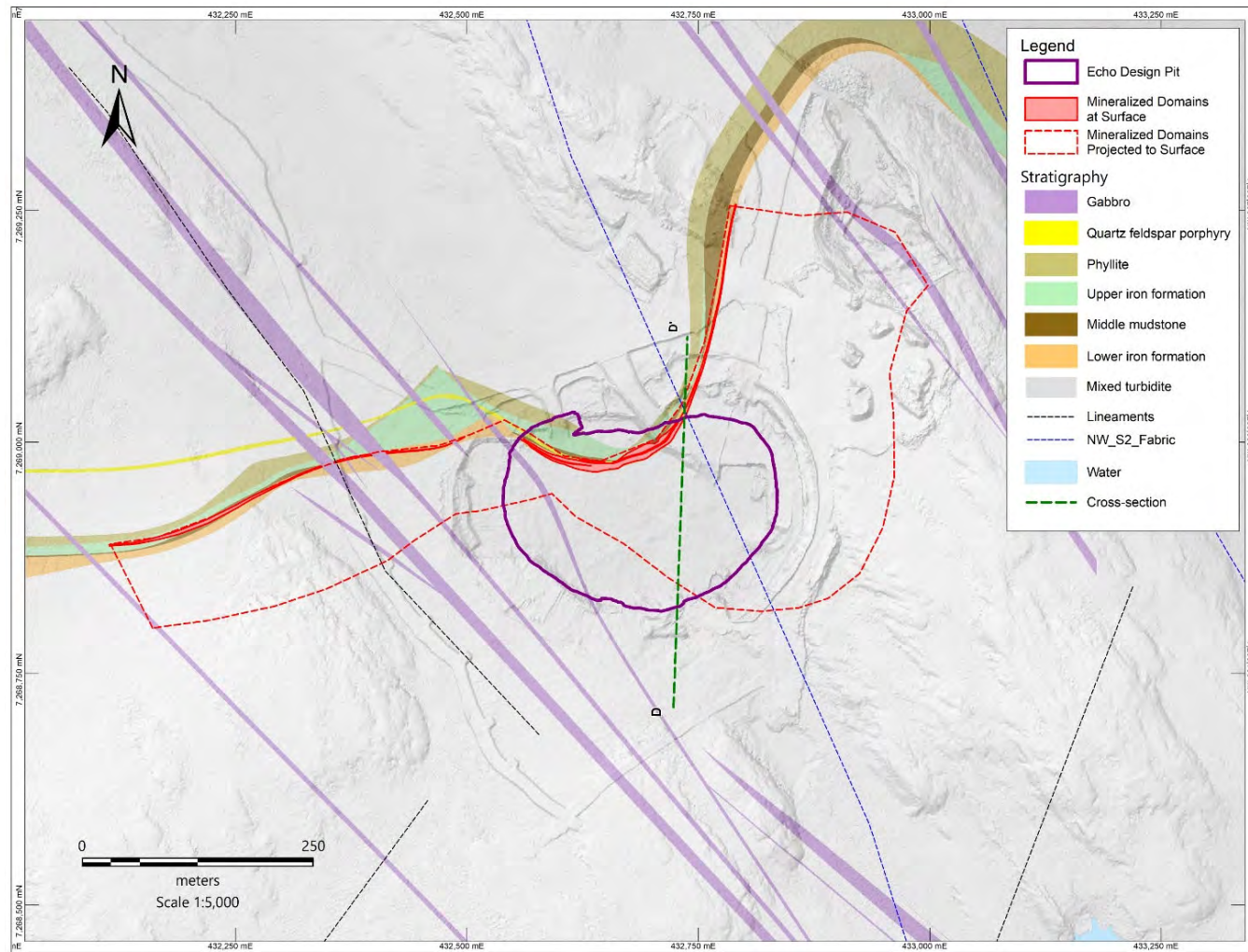
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds as follows: LG (low grade) = 0.3–3 g/t Au, HG (high grade) = >3 g/t Au.

Figure 7-17: Cross-Section, Goose Main Deposit



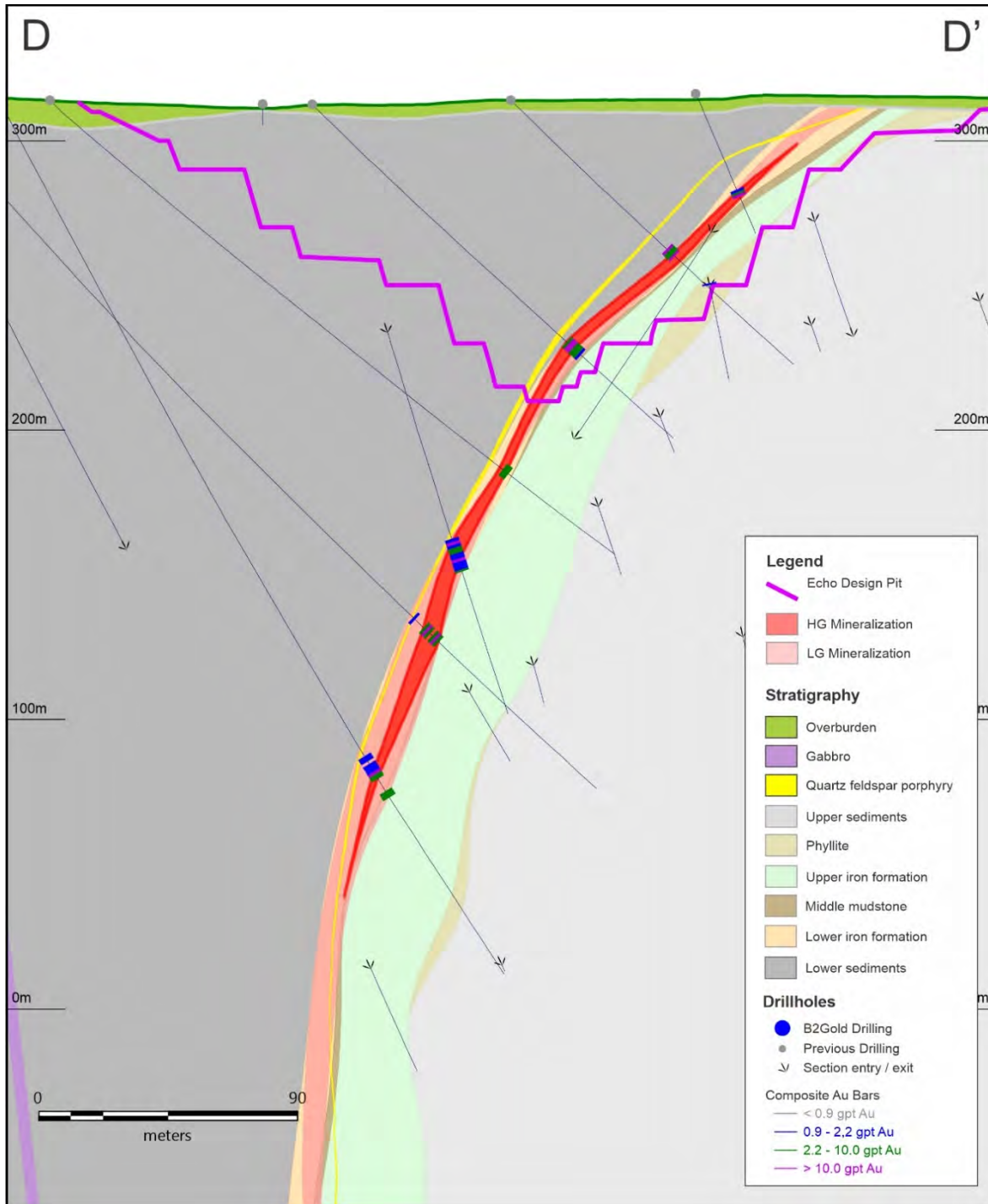
Note: Figure prepared by B2Gold, 2025. Cross-section 20 m wide, looking northwest. Mineralization domains approximate gold thresholds as follows: LG (low grade) = 0.3–3 g/t Au, HG (high grade) = >3 g/t Au.

Figure 7-18: Geology Map, Echo Deposit



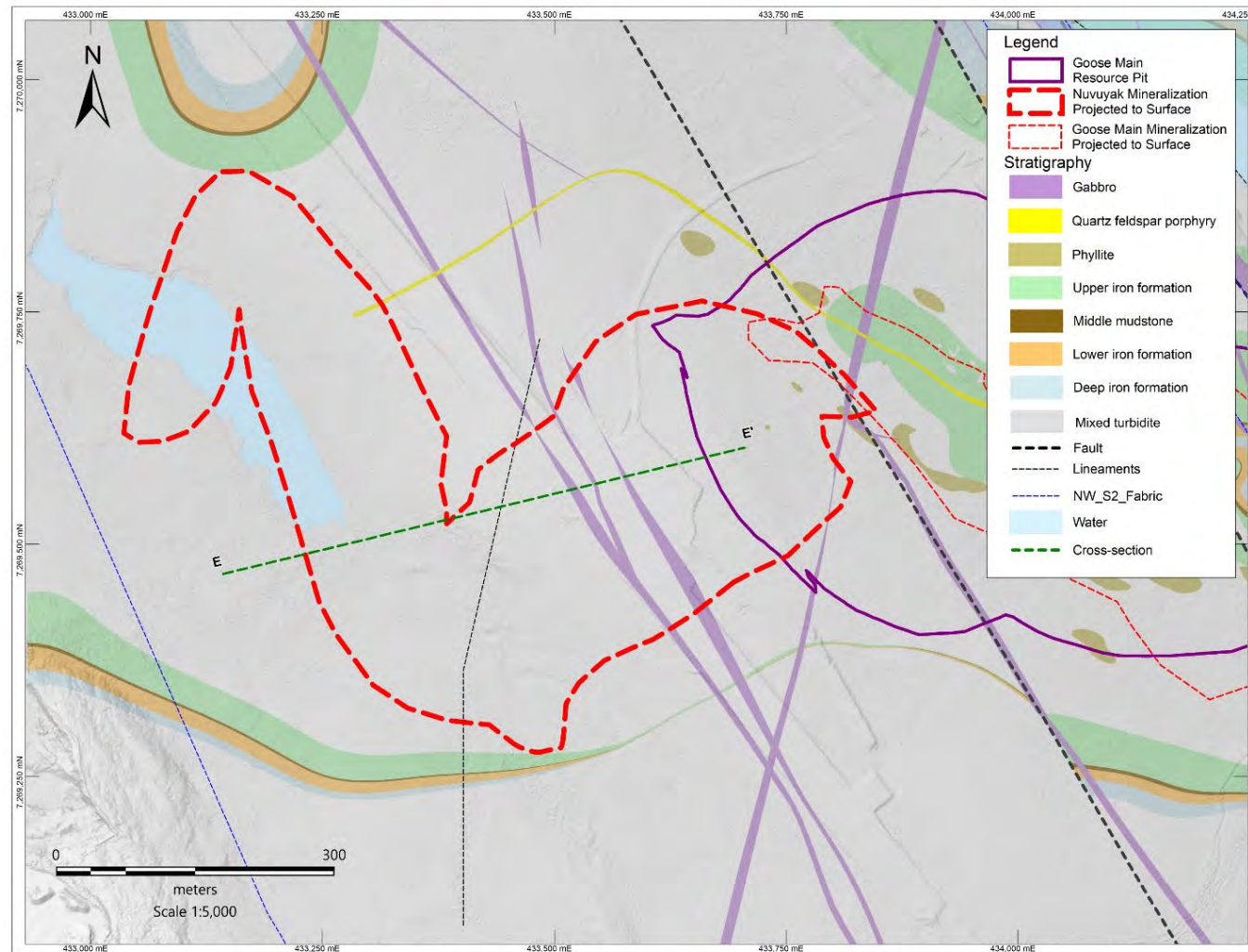
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds as follows: LG (low grade) = 0.35–4 g/t Au, HG (high grade) = >4 g/t Au.

Figure 7-19: Cross-Section, Echo Deposit



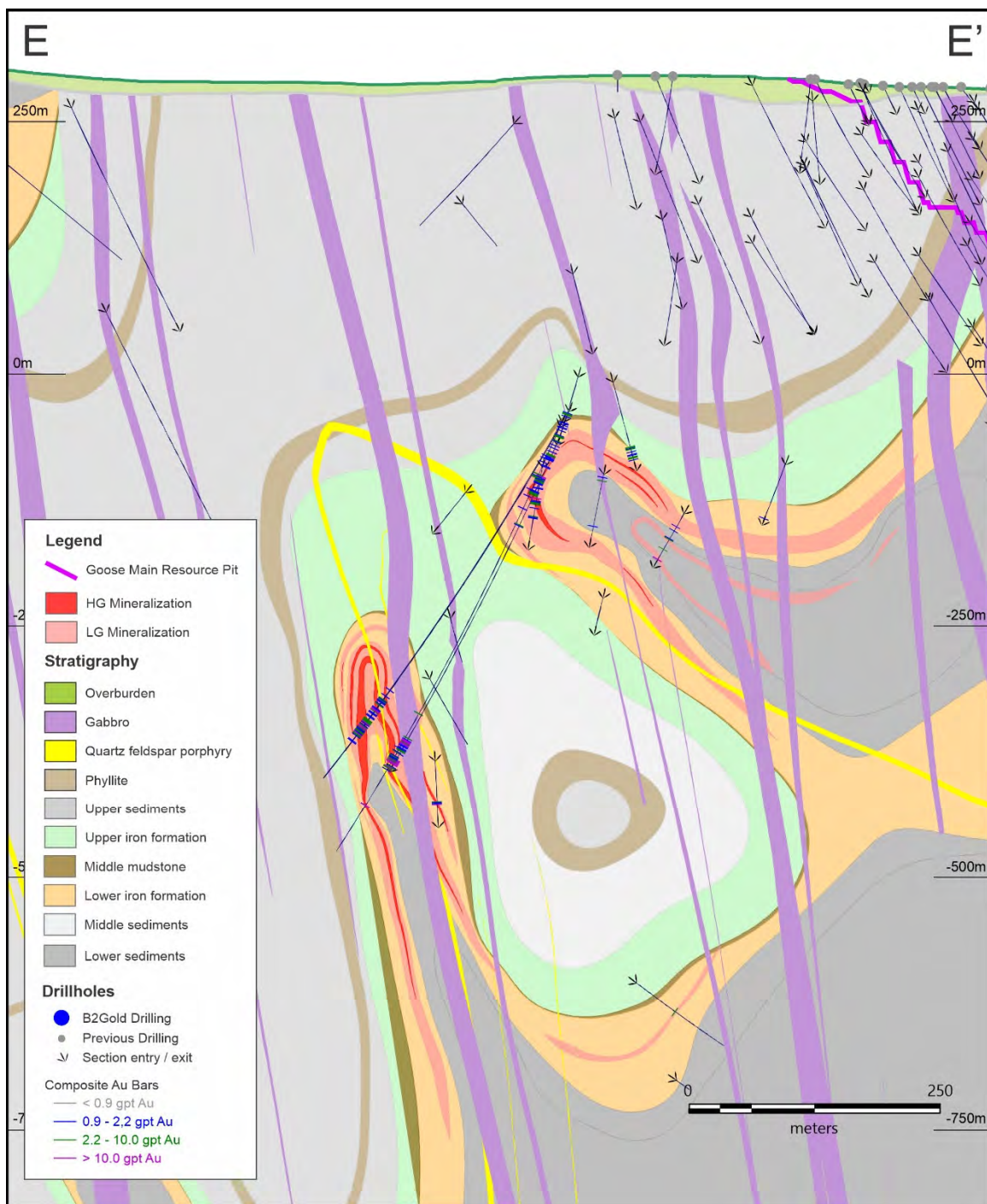
Note: Figure prepared by B2Gold, 2025. Cross-section 40 m wide, looking west. Mineralization domains approximate gold thresholds as follows: LG (low grade) = 0.35–4 g/t Au, HG (high grade) = >4 g/t Au.

Figure 7-20: Geology Map, Nuvuyak Deposit



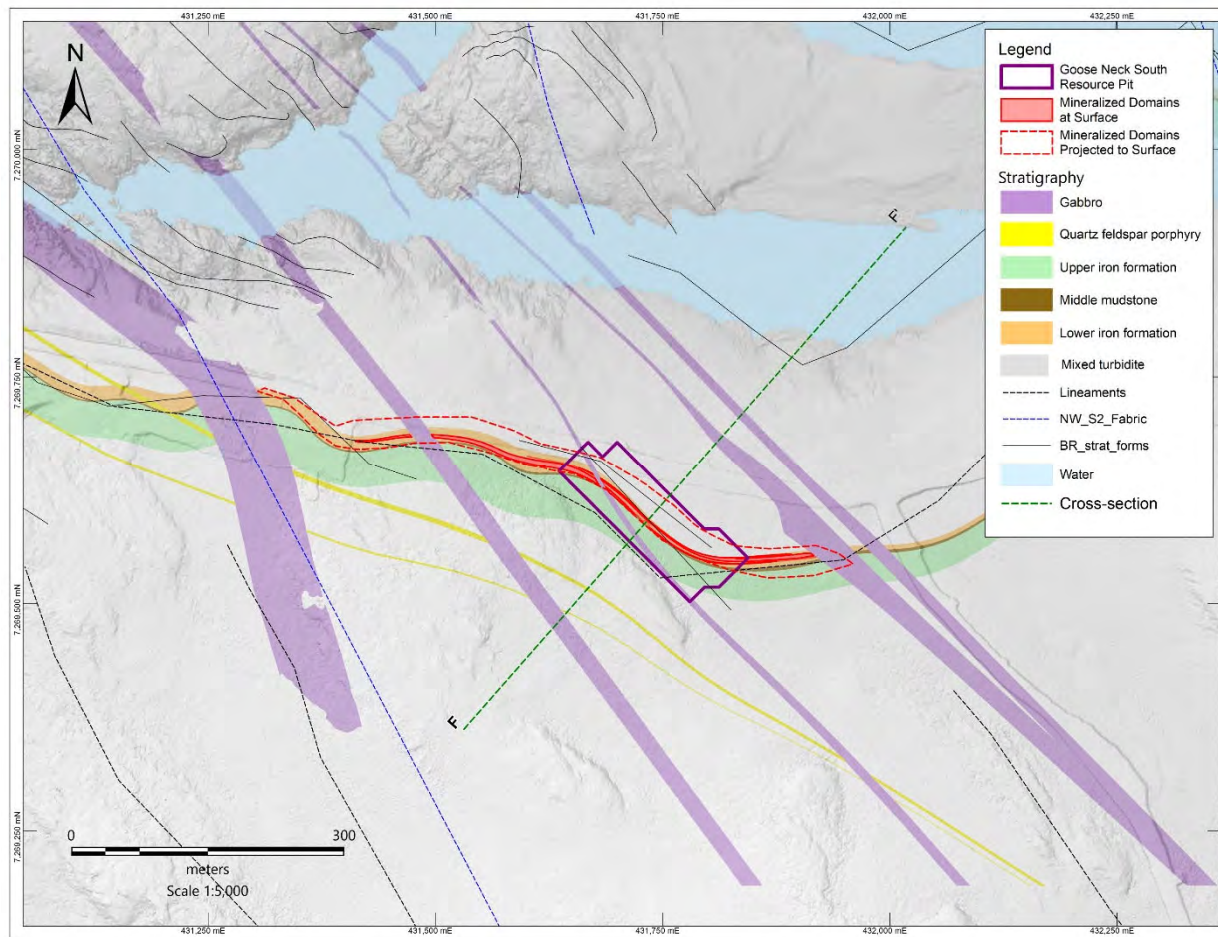
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds as follows: LG (low grade) = 0.15–2 g/t Au, HG (high grade) = >2 g/t Au.

Figure 7-21: Cross-Section, Nuvuyak Deposit



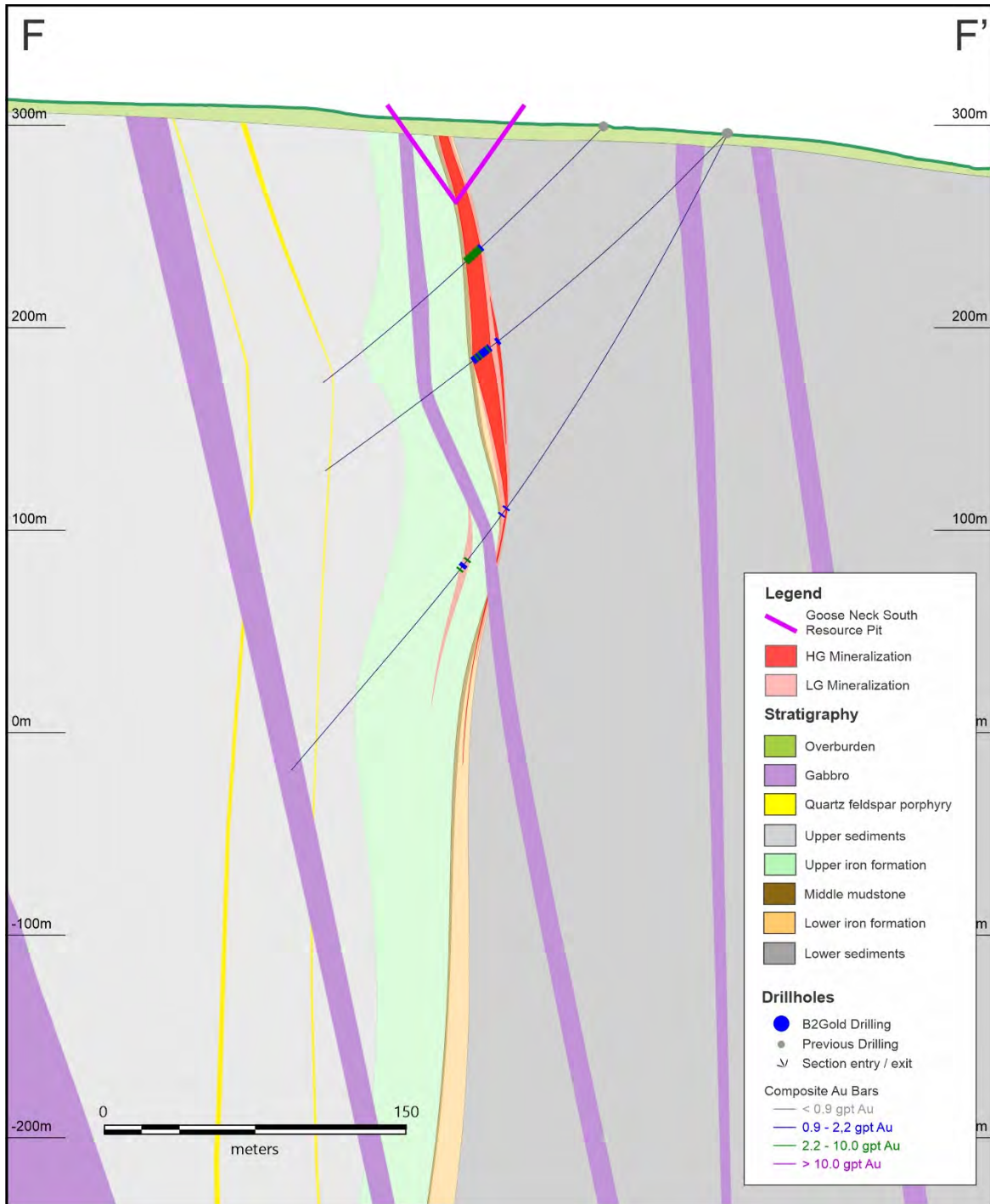
Note: Figure prepared by B2Gold, 2025. Cross-section 40 m wide, looking north-northwest. Mineralization domains approximate gold thresholds as follows: LG (low grade) = 0.15–2 g/t Au, HG (high grade) = >2 g/t Au.

Figure 7-22: Geology Map, Goose Neck South Deposit



Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds as follows: LG (low grade) = 0.25–1.5 g/t Au, HG (high grade) = >1.5 g/t Au.

Figure 7-23: Cross-Section, Goose Neck South Deposit



Note: Figure prepared by B2Gold, 2025. Cross-section 20 m wide, looking northwest. Mineralization domains approximate gold thresholds as follows: LG (low grade) = 0.25–1.5 g/t Au, HG (high grade) = >1.5 g/t Au.

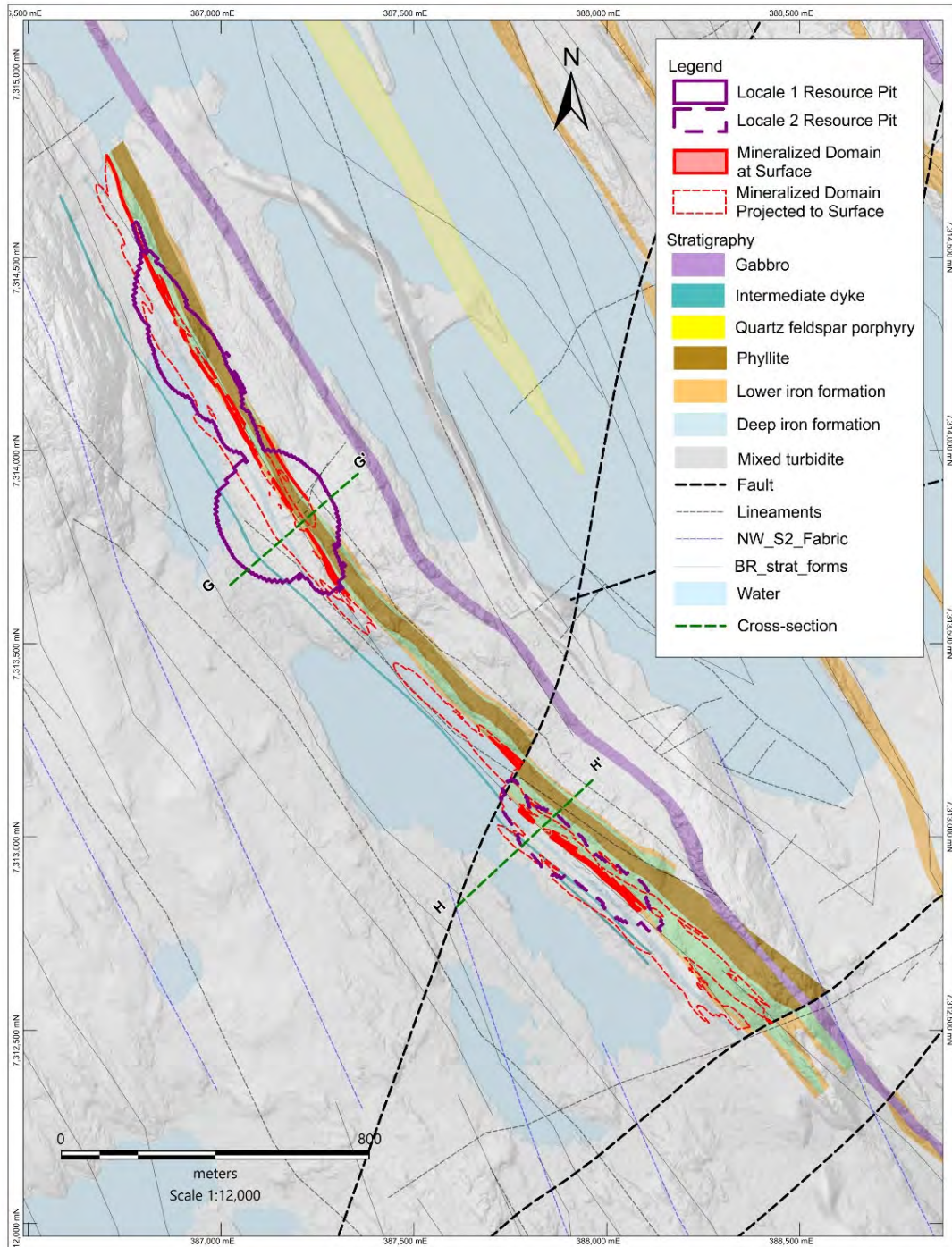
Table 7-7: Key Deposit Characteristics, George Claims Group

Deposit	Description
Locale 1	- Hosted in the west limb of a macroscopic northwest plunging F2 fold in the oxide iron formation. - The fold is interpreted as being an isoclinally-folded, inclined syncline, with both the limbs of the fold dipping 78° towards 245°.
Locale 2	- Hosted in the west limb of a macroscopic northwest plunging F2 fold in the oxide iron formation. - The limbs of the fold both dip steeply at 80° towards 224°, with the western limb hosting mineralization. Second order parasitic folds have been interpreted down-limb at depth. - A late vertical northeast-trending fault cross-cuts stratigraphy, with up to 65m of dextral offset along the northern bounds of the deposit.
LCP North	- Hosted in the west limb of a macroscopic F2 fold, which plunges moderately to the northwest. The mineralized western limb dips steeply at 85° towards 238°. - One intermediate dyke intrudes the stratigraphic package at an oblique 25° to the lower iron formation, with a dip of approximately 45° to the northeast.
LCP South	- Hosted in the east limb of a macroscopic F2 fold, which plunges moderately to the northwest. The mineralized eastern limb dips steeply at 85° toward 248°. - In the northern third of the deposit, one 1-8m wide quartz–feldspar porphyry dyke intrudes the stratigraphic package subparallel to the lower iron formation trend, merging at depth with a large strongly foliated felsic dyke to the west.
Tupiq	- Hosted in the limbs of an F2 synform, which plunges at 45° towards 318°. The majority of mineralization is found in the eastern limb which dips at 70° toward 230°. - A late vertical northeast-trending fault cross-cuts stratigraphy, with up to 100m of sinistral offset through the middle of the deposit; however, most of the mineralization is on the southern side of the fault.
GH	- Hosted in the limbs of a tight isoclinal F2 syncline, which plunges at 60° towards 160°. Both limbs of the fold dip steeply at 78° towards 229°, with the western limb hosting mineralization. - Three quartz feldspar porphyry dykes intrude the stratigraphic package subparallel to the axial plane. - One intermediate dyke crosscuts the stratigraphic package at a strike subparallel the lower iron formation, but with a dip of approximately 45° to the northeast.

Table 7-8: Deposit Dimensions, George Claims Group

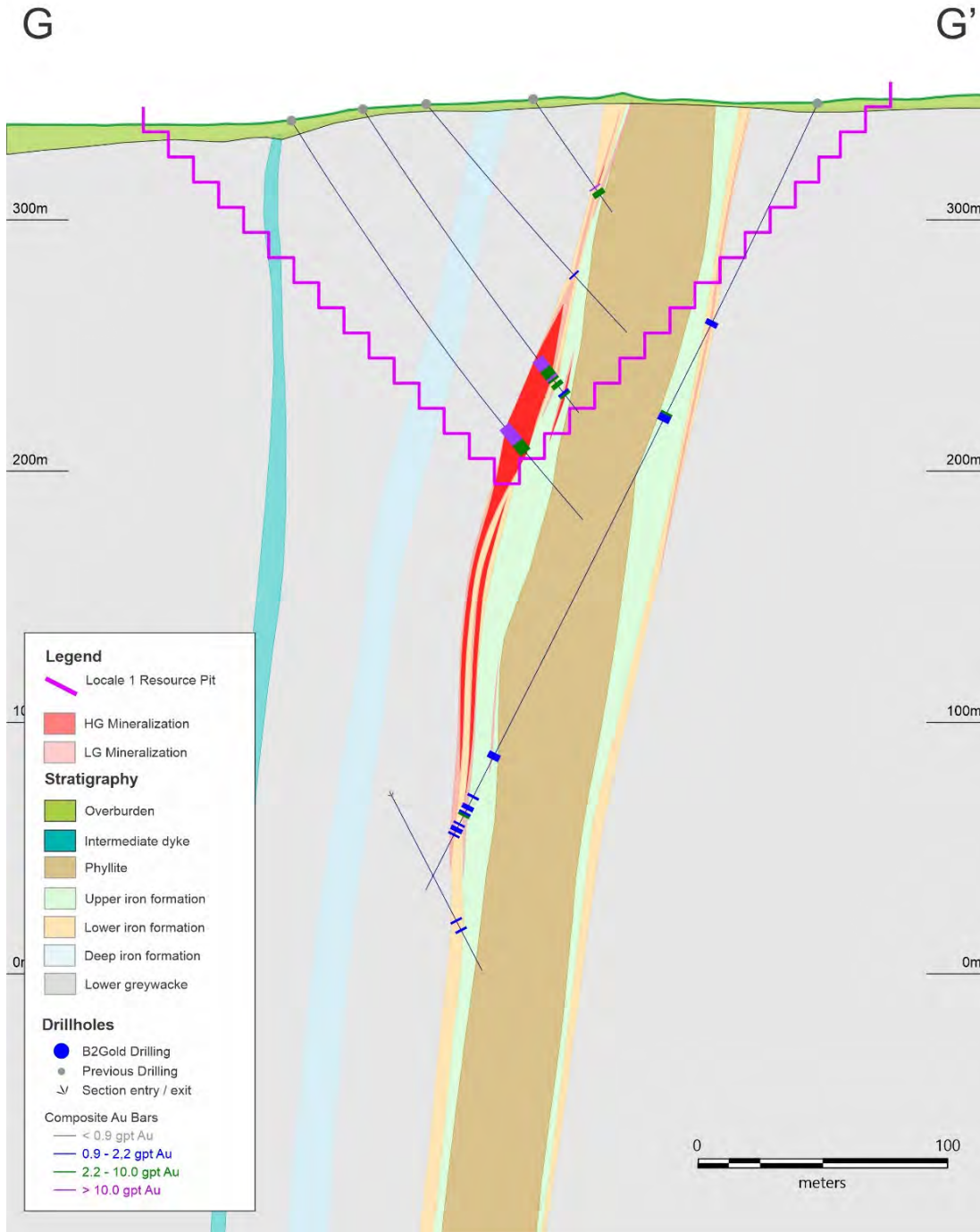
Dimensions	Locale 1	Locale 2	LCP North	LCP South	Tupiq	GH
Dimensions (m)	1,350 x 300 x 3	980 x 500 x 4	680 x 180 x 3	520 x 240 x 3	540 x 140 x 4	650 x 250 x 3
Depth drilled to (vertical m)	400	580	340	400	250	360
Remains open	Narrows down dip	Down dip	Down dip and down plunge to the northwest	Down dip	Down plunge to the north	Down dip and down plunge, along strike

Figure 7-24: Geology Map, Locale 1, and Locale 2 Deposits



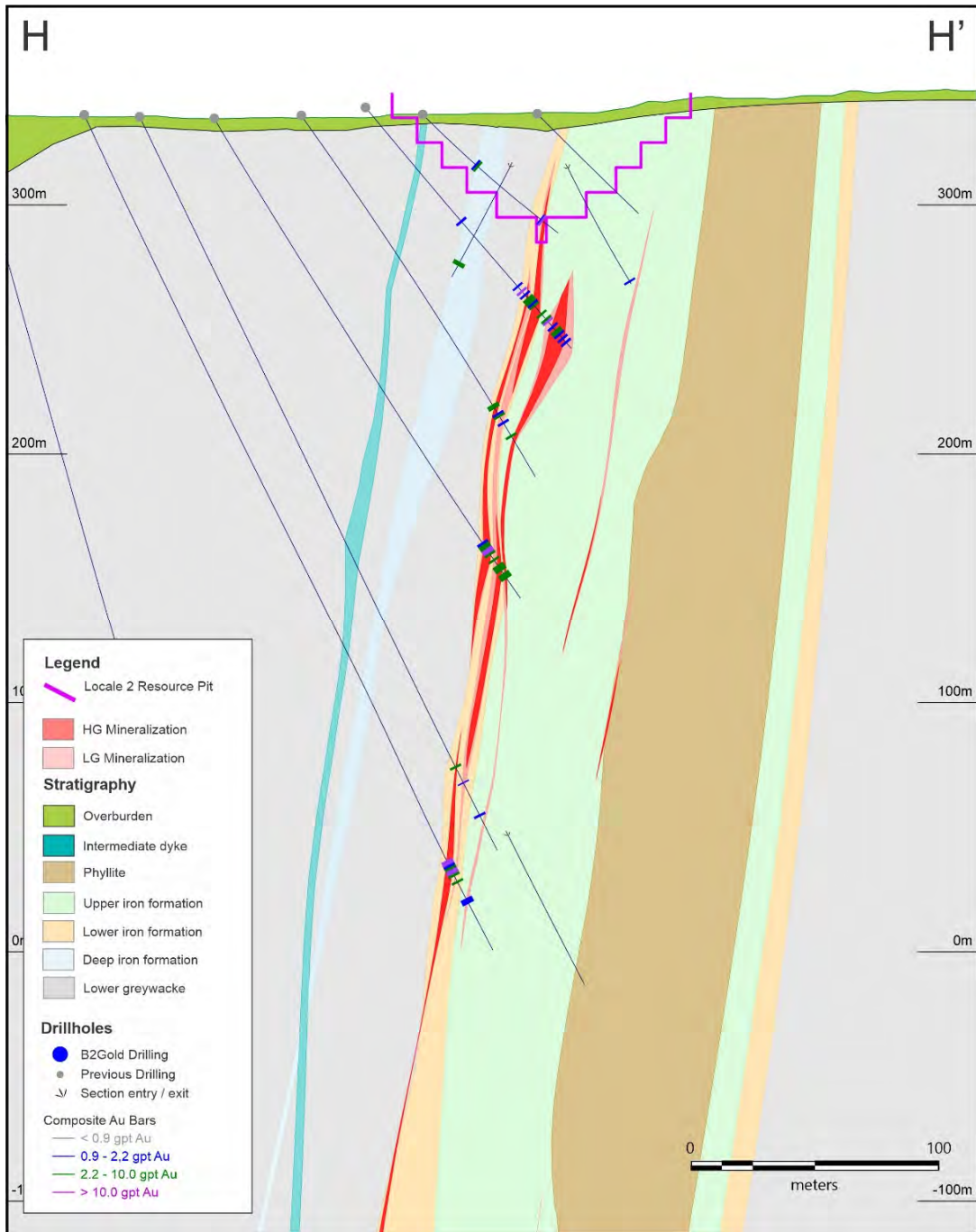
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds as follows: LG (low grade; 3 m minimum downhole length) = 1.0–3.0 g/t Au, HG (high grade; 3 m minimum downhole length) = >3.0 g/t Au.

Figure 7-25: Cross-Section, Locale 1 Deposit



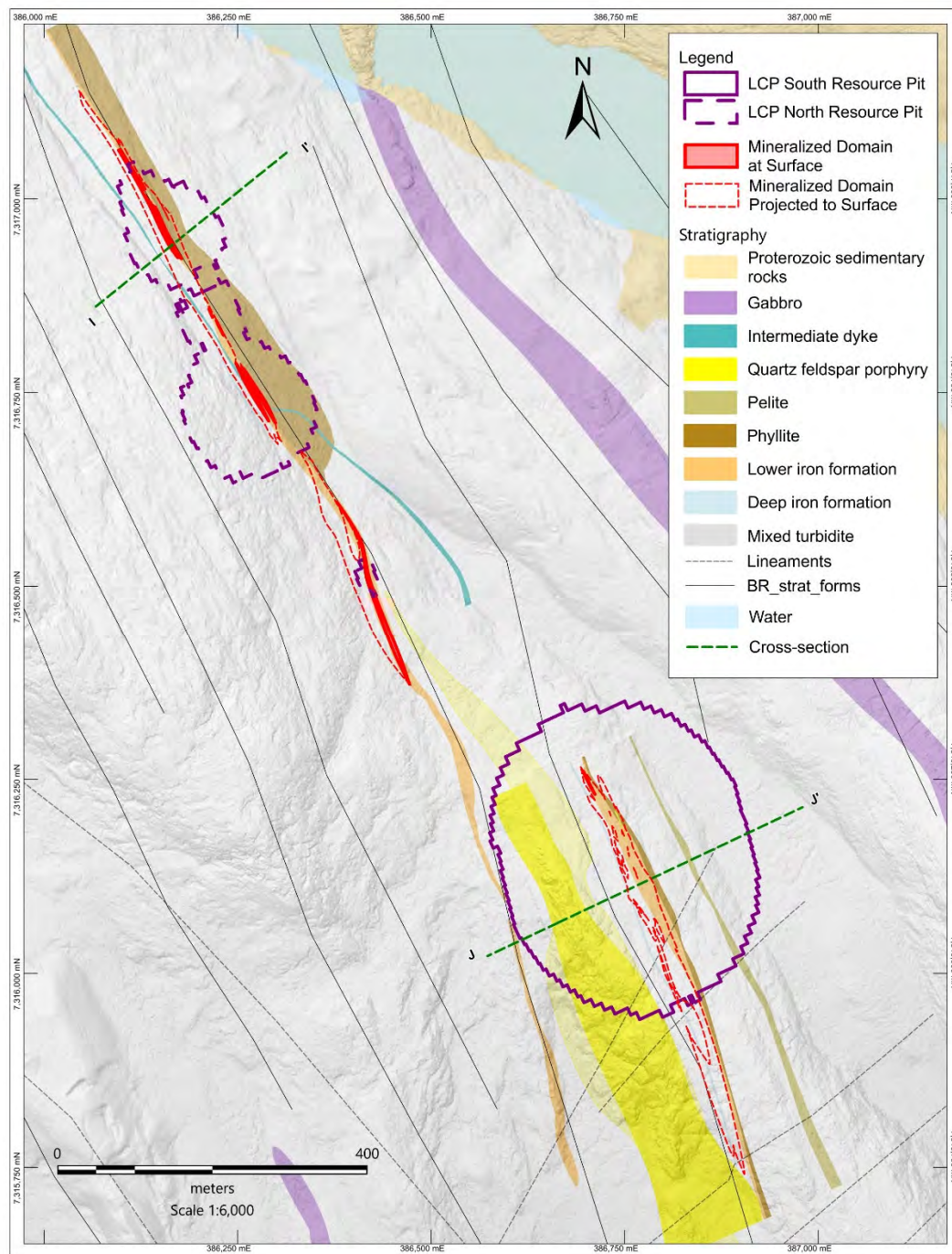
Note: Figure prepared by B2Gold, 2025. Cross-section 30 m wide, looking northwest. Mineralization domains approximate gold thresholds as follows: LG (low grade; 3 m minimum downhole length) = 1.0–3.0 g/t Au, HG (high grade; 3 m minimum downhole length) = >3.0 g/t Au.

Figure 7-26: Cross-Section, Locale 2 Deposit



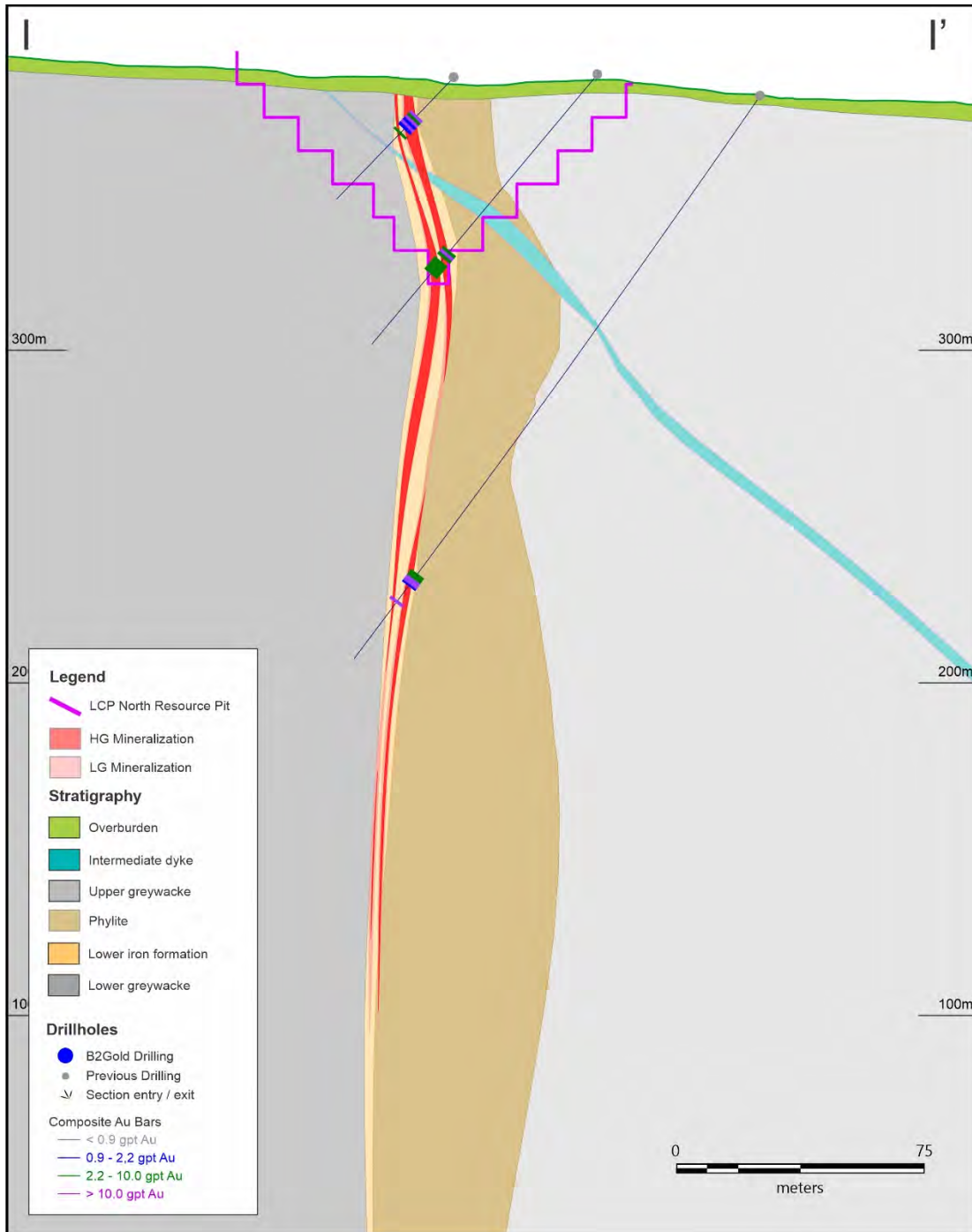
Note: Figure prepared by B2Gold, 2025. Cross-section 25 m wide, looking northwest. Mineralization domains approximate gold thresholds as follows: LG (low grade; 3 m minimum downhole length) = 1.0–3.0 g/t Au, HG (high grade; 3 m minimum downhole length) = >3.0 g/t Au.

Figure 7-27: Geology Map, LCP North, and LCP South Deposits



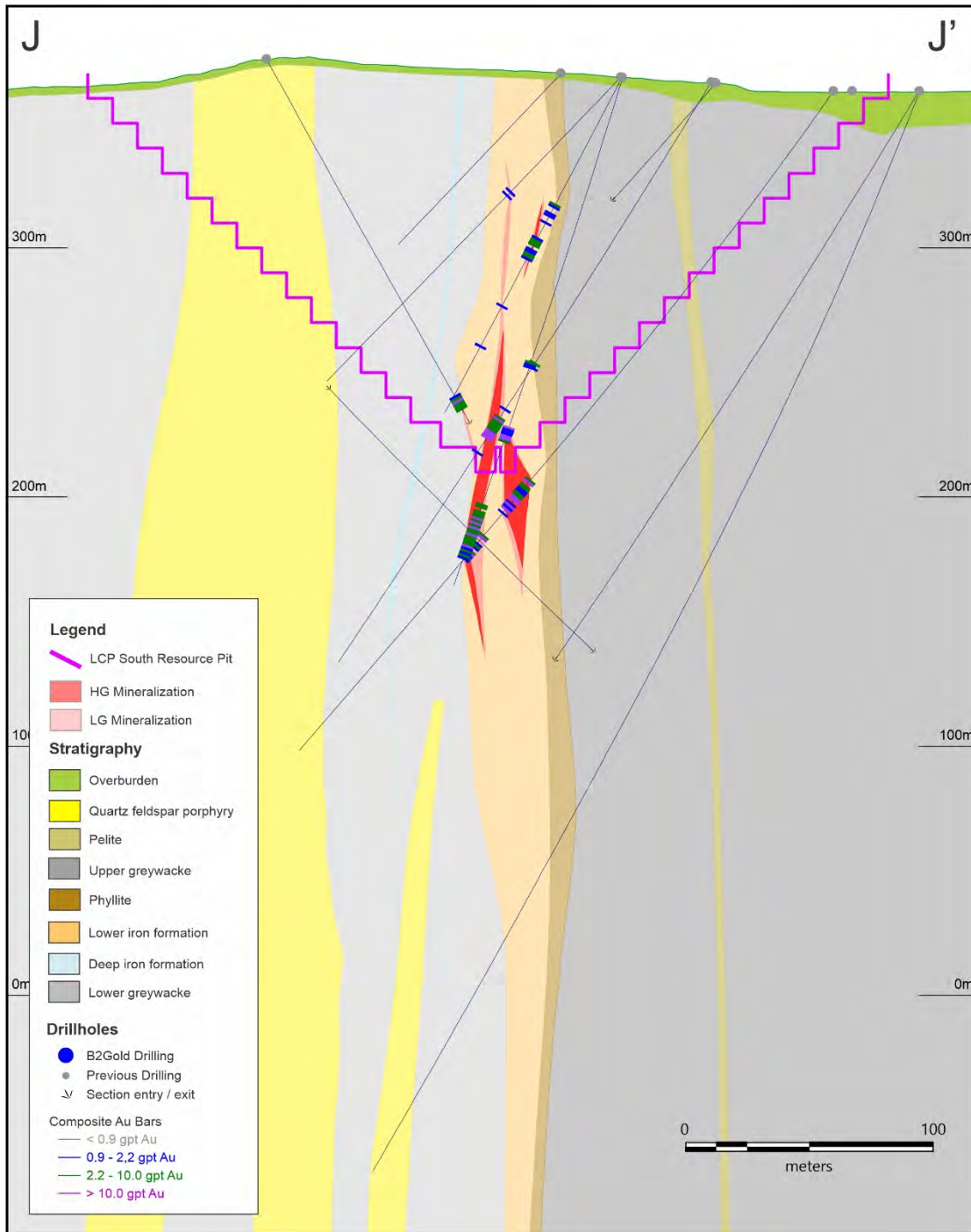
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds as follows: LG (low grade; 3 m minimum downhole length) = 1.0–3.0 g/t Au, HG (high grade; 3 m minimum downhole length) = >3.0 g/t Au.

Figure 7-28: Cross-Section, LCP North Deposit



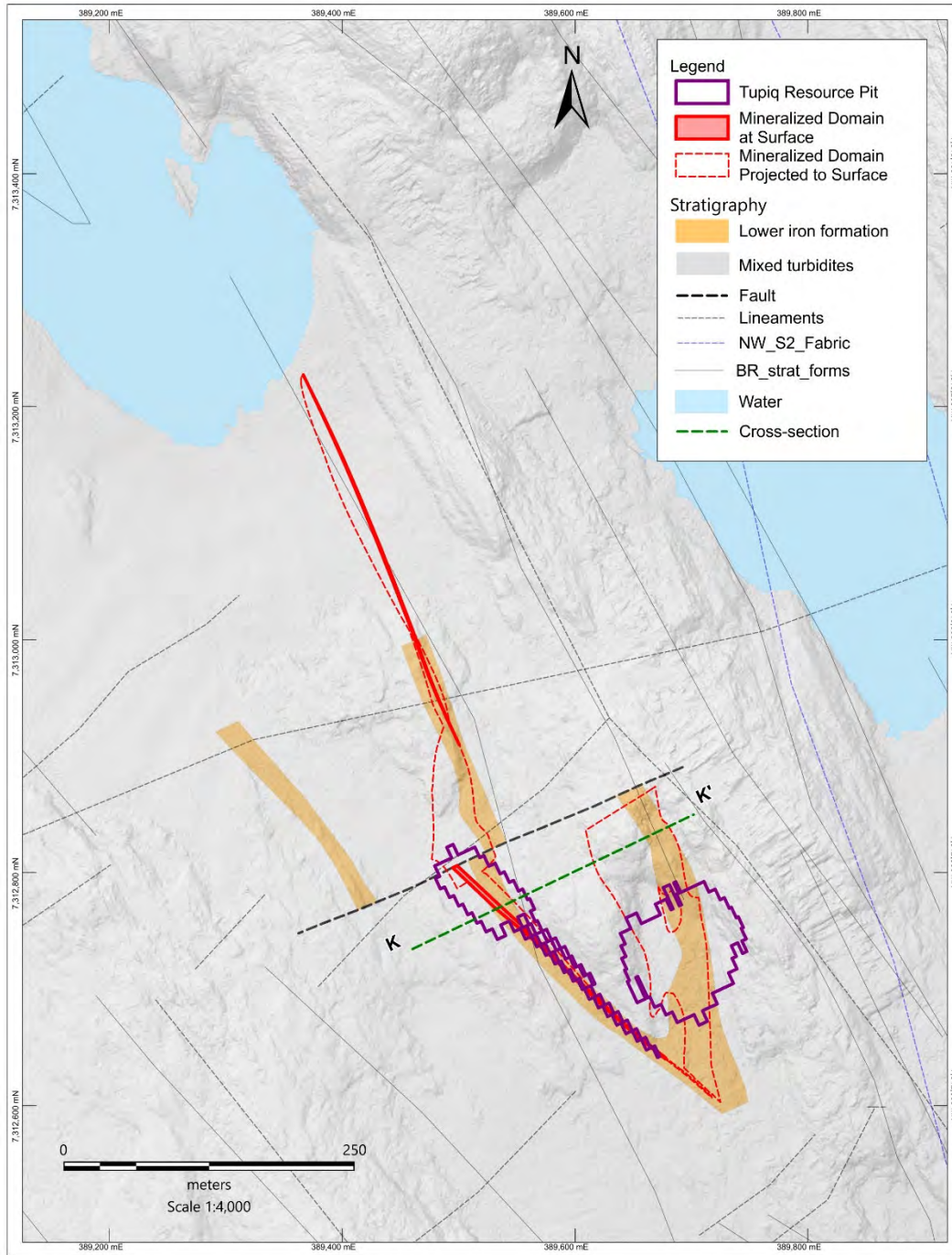
Note: Figure prepared by B2Gold, 2025. Cross-section 25 m wide, looking northwest. Mineralization domains approximate gold thresholds as follows: LG (low grade; 3 m minimum downhole length) = 1.0–3.0 g/t Au, HG (high grade; 3 m minimum downhole length) = >3.0 g/t Au.

Figure 7-29: Cross-Section, LCP South Deposit



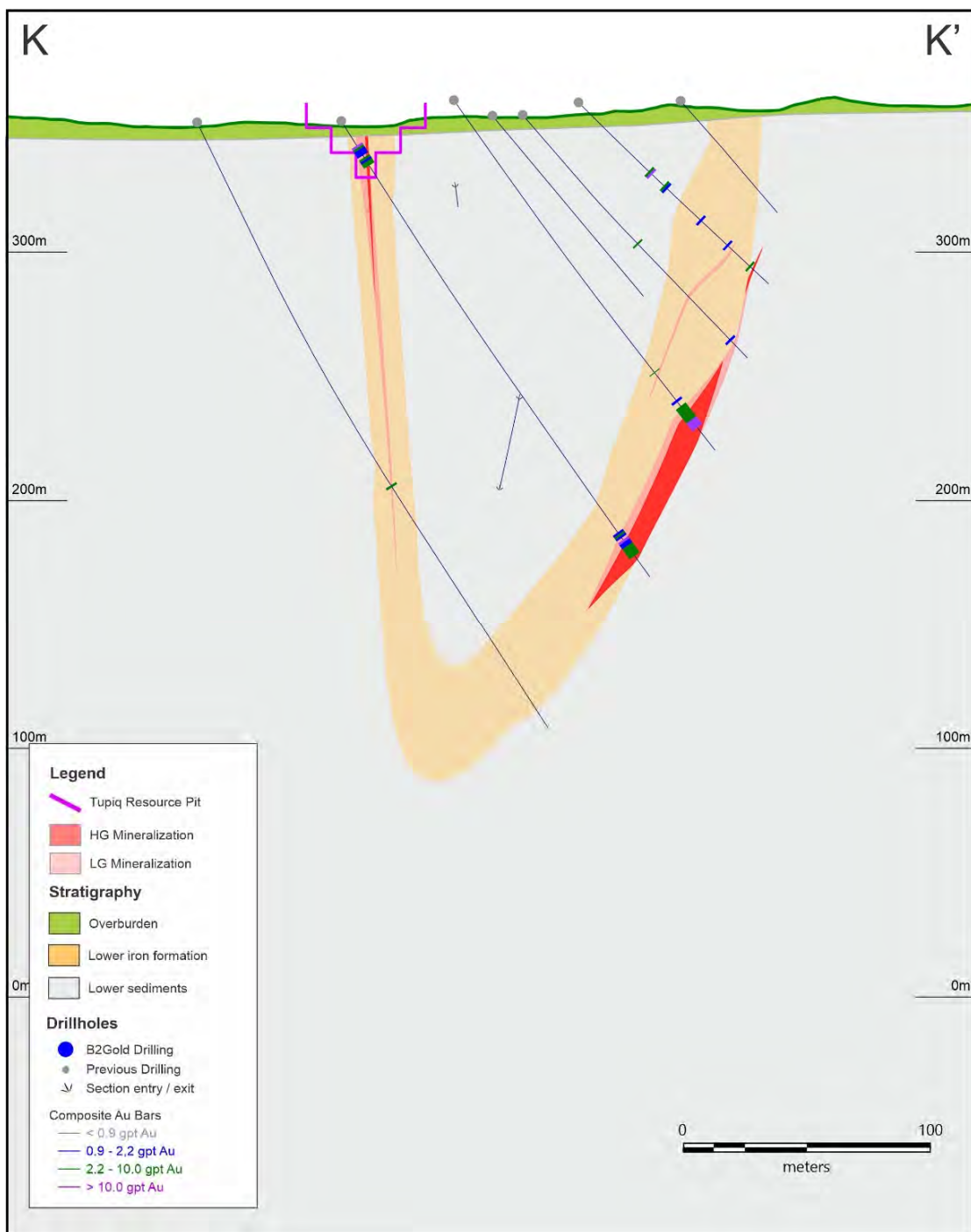
Note: Figure prepared by B2Gold, 2025. Cross-section 25 m wide, looking northwest. Mineralization domains approximate gold thresholds as follows: LG (low grade; 3 m minimum downhole length) = 1.0–3.0 g/t Au, HG (high grade; 3 m minimum downhole length) = >3.0 g/t Au.

Figure 7-30: Geology Map, Tupiq Deposit



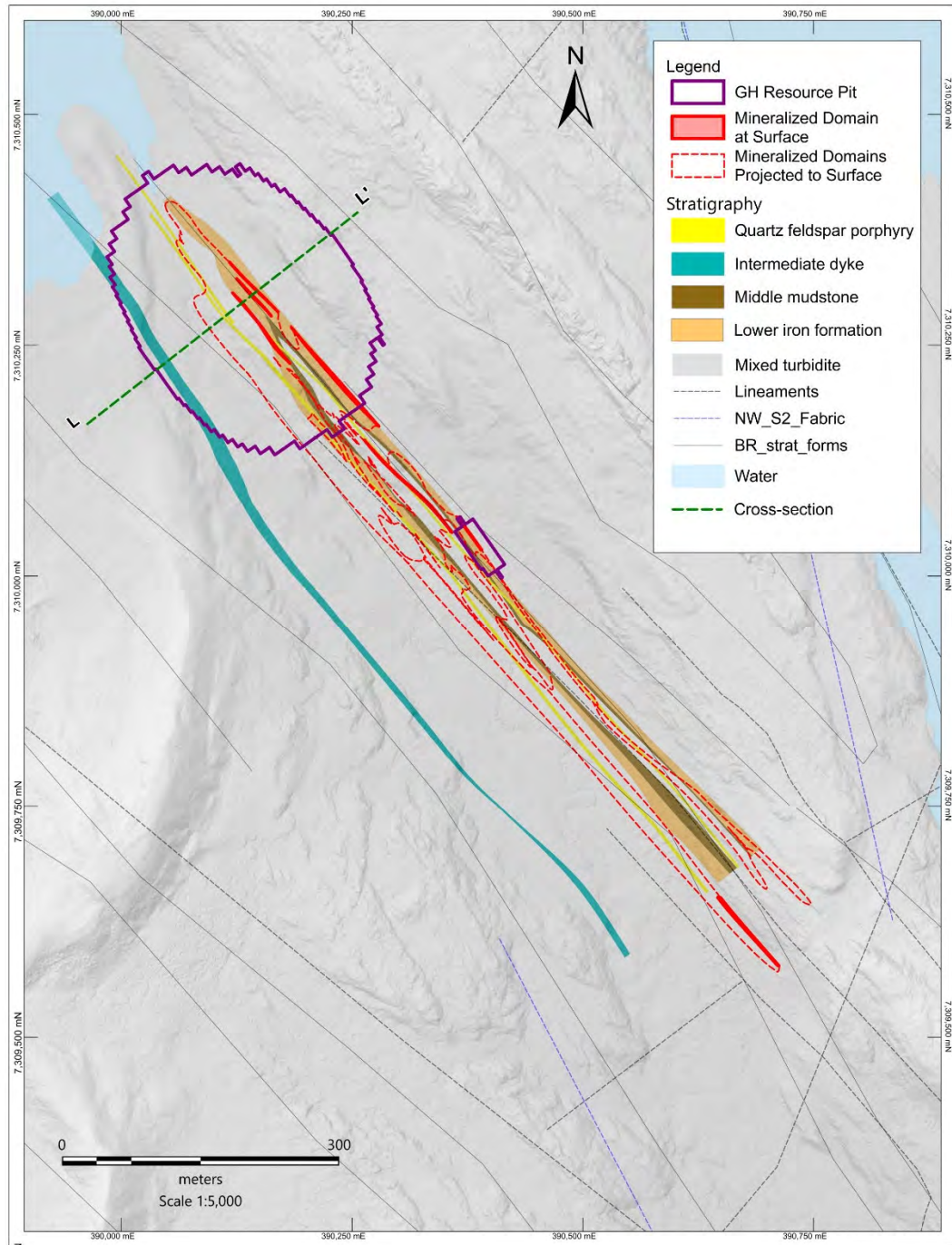
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds as follows: LG (low grade; 3 m minimum downhole length) = 1.0–3.0 g/t Au, HG (high grade; 3 m minimum downhole length) = >3.0 g/t Au.

Figure 7-31: Cross-Section, Tupiq Deposit



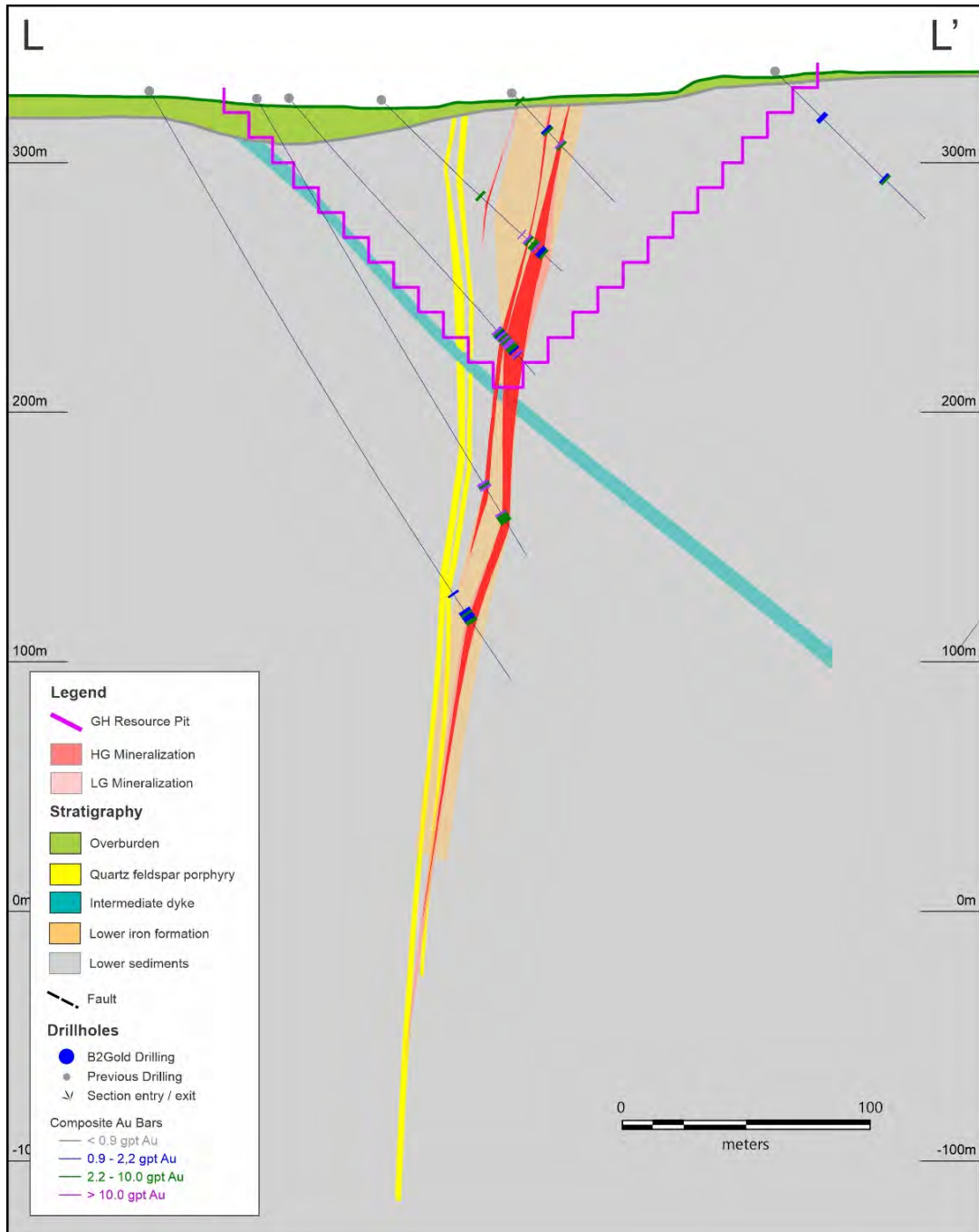
Note: Figure prepared by B2Gold, 2025. Cross-section 25 m wide, looking northwest. Mineralization domains approximate gold thresholds as follows: LG (low grade; 3 m minimum downhole length) = 1.0–3.0 g/t Au, HG (high grade; 3 m minimum downhole length) = >3.0 g/t Au.

Figure 7-32: Geology Map, GH Deposit



Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds as follows: LG (low grade; 3 m minimum downhole length) = 1.0–3.0 g/t Au, HG (high grade; 3 m minimum downhole length) = >3.0 g/t Au.

Figure 7-33: Cross-Section, GH Deposit



Note: Figure prepared by B2Gold, 2025. Cross-section 25 m wide, looking northwest. Mineralization domains approximate gold thresholds as follows: LG (low grade; 3 m minimum downhole length) = 1.0–3.0 g/t Au, HG (high grade; 3 m minimum downhole length) = >3.0 g/t Au.

7.4 Prospects/Exploration Targets

Prospects are discussed in Section 9.

8.0 DEPOSIT TYPES

Deposits within the Back River District are characterized as banded iron formation-hosted gold deposits, which are structurally and stratigraphically controlled with gold mineralization predominantly hosted in sulphide-bearing oxide-iron formation.

Banded iron formations are defined as containing at least 15 wt.% Fe, within laminated sedimentary rock (James, 1954). Deformed banded iron formation provides both a structural and chemical affinity to trap gold from gold-bearing metamorphic-derived hydrothermal fluids, offering significant potential for high-grade gold deposition (Phillips and Powell, 2010; Lebeau and Mercier-Langevin, 2021).

Gold mineralization is typically associated with high strain zones developed in tightly folded and structurally complex banded iron formation horizons. Gold mineralization is predominantly hosted within the oxide-iron formation and is commonly associated with bedding-parallel and cross-cutting quartz veining, chlorite alteration and silicification. Arsenopyrite, pyrrhotite and/or pyrite are the dominant sulphide minerals associated with gold. The gold mineralization process is controlled by prograde metamorphic fluids concentrating in fold hinges of deformed banded iron formation sequences, leading to localized retrograde metamorphism and the deposition of arsenopyrite, löllingite, chalcopyrite, pyrite, and gold. Subsequently, exotic hydrothermal fluids infiltrated these heavily veined and fractured fold hinges, introducing a retrograde mineral assemblage characterized by chlorite $\pm$ stilpnomelane and magnetite (Ford and Duke, 1993).

8.1 Comments on Deposit Types

Archean to early Proterozoic greenstone belts in Nunavut are widely regarded as prospective terranes for the location of banded iron formation-hosted gold deposits. Well-documented regional examples of these deposits include the Meadowbank, Meliadine, and Lupin mines.

In the QP's opinion, an exploration program based on the well-documented controls on iron formation host gold mineralization is a reasonable and geologically sound strategy for the Back River District.

9.0 EXPLORATION

9.1 Grids and Surveys

The coordinate system used is UTM 13N, worldwide/NAD83 with orthometric heights transformed using the HT2_O(H2_0Geo.ggf) geoidal model and global ref EPOCH of 2010.00.

9.2 Geological Mapping

The Geological Survey of Canada completed 1:1,000,000 scale regional mapping programs in Nunavut, which included the Project area.

Additional geological mapping programs were conducted by companies involved in the Back River Joint Venture, and by Arauco Resources, Kinross, Miramar, Dundee, and Sabina (refer to Table 6-1). B2Gold has continued with claim and deposit/prospect-scale mapping.

Mapping programs since Dundee's ownership in 2005 are summarized in Table 9-1 and included:

- Regional scale: 1:1,000,000;
- Claims group scale: 1:10,000 to 1:25,000;
- Deposit/prospect scale: 1:200, 1:1,000, 1:5,000.

Mapping was used to delineate lithologies, alteration, and structures. The results of the mapping programs in conjunction with the drilling information support the geology figures provided in Section 7.

9.3 Quaternary Geology Mapping and Topography Surveys

Initial surficial mapping of the Quaternary geology, at 1:100,000 scale was completed by the Geological Survey of Canada.

In 2018, Stea Surficial Geology Services (Stea) of Nova Scotia visited the Project and subsequently produced surficial maps of the Quaternary geology using high-resolution (1 m) light detection and ranging (LiDAR) orthophotographs which covered up to approximately 60% of the Goose, Boulder, and George groups. Available open source panchromatic band SPOT 4 and 5 satellite imagery at 10 m resolution was used to supplement the uncovered areas (Stea, 2018).

The predominant ice-flow directions were defined as north–northwestward, with an early phase characterized by flow features trending 340–350°, and a more-prominent northwestward flow at 310–330°.

Glacial flow trends were identified in the photo imagery from flow-parallel landforms at large scales (i.e., drumlins, and crag-and-tail hills), then confirmed by field ground-truthing and small-scale glacial striae measurements.

Table 9-1: Geological Mapping Programs since 2005

Year	Location/Comment
2005	Goose, Boot, Boulder, Bathurst, and Needle Claims Groups.
2009	North of Llama Lake. Four discrete gold mineralized horizons were identified along the northern shore of Llama Lake.
2010	Near and north of the Umwelt and Llama deposits, and at the Del Claims Group.
2010, 2011	Llama and Umwelt deposits.
2012	Regional mapping. Identified five stages of deformation affecting the Beechey Group sediments and associated iron formations. Two of these stages reliably identified as Archean; a third stage was probably Archean, and the final two stages of deformation were assigned to the Proterozoic.
2013	Various key areas proximal to drill prospects at the Boot, Boulder, and George Claims Groups. Confirmed the overall interpretations implicit in historical mapping but significantly improved both spatial accuracy and structural measurement density, increasing overall confidence in the interpretation. Regional-scale mapping served to confirm the general interpretation of Beechey Group geology; however, some key areas were shown to have undergone anomalously strong F3 deformation and, as such, can be categorized as distinctive D3 domains superposed on an otherwise relatively monotonous F1/F2 relationship.
2014	Highly detailed lithological and structural characterization carried out over the key areas of the George Claims Group banded iron formation. Mapping completed near deposits and prospects at scales varying from 1:500 (Locales 1 and 2, LCP South), 1:1,000 (LCP North) and 1:5,000 (at Slave, Slave North, and GH), and designed to provide maximum geometric support to the then-ongoing 3D modelling. Largely succeeded in characterizing any unit that was recognized in drilling, which improved the correlation between surface observations and drill-derived observations. Reconnaissance mapping at 1:10,000 scale over Wishbone Claims Group.
2016	Reconnaissance mapping over the George Claims Group, the south portion of the Boulder Claims Group, and at the Goose Claims Group.
2017	Reconnaissance mapping and prospecting at the Goose and Boulder Claims Groups
2018	Geological mapping and sampling at the Boulder Claims Group. Reconnaissance mapping conducted at the George, Goose and Boot Claims Groups. 1:200 scale map of vein generations and relationships in detailed outcrop evaluation at the Goose Claims Group.
2020	Geological mapping and sampling at the Goose and Del Claims Groups.
2023– 2024	Geological mapping at the Goose and George Claims Groups. George: focus at Dragon prospect, testing potential structural trends identified from historical geophysics. Felsenmeer in the area consisted primarily of banded iron formation with trace disseminated arsenopyrite, pyrite, and pyrrhotite identified in select samples. Mouse prospect: testing a northwest structural trend, with sulphide mineralised banded iron formation boulder float being found in several locations. Goose Claims Group: focus at Duck Duck prospect, contacts around felsic intrusions and identification of a potential shear zone. Del Claims Group: mapping of a mineralized zone associated with quartz veins, arsenopyrite, and visible gold. Boulder Claims Group: mapping focused on an intercalated unit of banded iron formation and clastic sediments with mineralization associated with a discrete shear

Year	Location/Comment
	zone containing boudinaged quartz veins associated with pyrrhotite, arsenopyrite and pyrite. Focus also on structural interpretation of folded iron formation. Boot Claims Group: focus on delineating the orientation of regional structural fabrics and investigating an arsenic anomaly identified in historical till sampling data. Focus on structural interpretation of folded iron formation at the Ayers, Aiomon, and Cumquat prospects. Beech Claims Group: exploring previously identified mineralized zones and structural trends. Needle Claims Group: testing an identified east–west mineralized trend hosted in folded banded iron formation.

Surficial quaternary geology maps were compiled for the Goose, George, and Boulder Claims Groups.

In 2023, a LiDAR survey program was completed to update and add to the existing data set, which now comprises imagery for the Goose, George, Boot, Boulder, Del and BB13 Claims Groups.

9.4 Structural Studies

Numerous structural studies have been completed over the Project history (Table 9-2).

Structural studies were used to delineate the structural fabrics within the Project area, discriminate between mineralizing events, and identify controls on mineralization. These studies utilized a combination of geological mapping, core logging, and geophysical surveys to define paragenetic relationships and identify key structural features such as faults, folds, and shear zones.

As a result of these studies, several key structural criteria were identified as having a strong correlation with gold mineralization and are useful for exploration targeting. These include:

- F2 folds in oxide iron formation, specifically hinge zones, secondary parasitic folds, and short limbs of asymmetric folds;
- Other zones of structural thickening and repetition in oxide iron formation;
- Proximity to quartz-feldspar dykes, specifically where they intersect oxide iron formation;
- Zones of dilation and extension along D2 high-strain zones that localize the formation of extensional vein arrays.

9.5 Geochemistry

Geochemical sampling programs were completed by the companies involved in the Back River Joint Venture, and by Arauco Resources, Kinross, Miramar, Dundee, and Sabina (refer to Table 6-1). B2Gold continued the exploration geochemical programs in 2023–2024.

Sample types have included rock chip and grab, till, soil, lake sediment and channel samples. The most common sample types are till and grab samples.

Table 9-2: Structural Studies

Year	Author	Title/Scope
1990	Oliver, J.	Structural geological report on the George Lake property, north half, George Lake, District of Mackenzie, NWT.
1991	Oliver, J.	Structural evaluation of the Locale 2 North Trench, George Lake Property, George Lake, District of Mackenzie, NWT.
1995	Lewis, P.D.	Structural evaluation: Goose Lake Property. Internal report prepared for the Back River Joint Venture (Homestake Mineral Development Company).
1998	Grant, J., Parent, R., Szeto, R., and Wojcik, M.	1997 Back River exploration George Lake Property, NWT. Internal report prepared for Kit Resources
2003	Barclay, W.A	Structural Analysis of Selected Drill Core (DDH 02G0-29 & 02G0-30) from the Goose Lake Deposit, Nunavut, including Reviews of Previous Petrographic and Structural Studies
2004	Barclay, W.A	Structural Geology Study of Outcrop at the Goose Lake Deposit, Nunavut.
2005	Davis, B.	Structural Geologic Assessment of the Back River Project, Nunavut, Northern Canada. Prepared by RSG Global.
2019	Siron, C.	Structural Data Assessment of the Goose Property, Back River Project, Nunavut. Prepared by Green Mountain Exploration LLC.
2019	MacKenzie, D.	Controls on mineralization at the Goose Property, Nunavut.
2022	MacKenzie, D.	Controls on mineralization at the George Property, Nunavut.
2024	Internal B2Gold reports.	Multiple internal studies completed by B2Gold Corp. geologists. Assess the structural controls of mineralization, evaluate structural database, and core logging procedures, and review previous structural interpretations through field visits and core review.

Sampling programs are summarized in Table 9-3, and sample location plan maps are provided as Figure 9-1 to Figure 9-8. Till samples are colour-coded by the operator to avoid biases introduced by different sampling media and analytical methods. Rock samples are displayed by gold grades because sample media and analytical methods are comparable. High-grade gold values in rock samples have been the priority vector for follow-up in the Back River District.

9.6 Pits and Trenches

Several trenching programs have been completed (Table 9-4). Trench locations were shown on

Table 7-2: Goose Claims Groups Stratigraphy

Predominant/ Key Unit		Thickness (m)	General Description
Name	Code		
Top sediments	SEDT	Unbounded	Interbedded sequence of weakly to moderately foliated greywacke/mudstone turbidite with rare iron formation. Below the unconformity with the Proterozoic rocks, no other stratigraphic unit is present in the Top Sediments within the Goose Claims Group, however, thicknesses of >200 m have been reported in the Project area. Lower contact is gradational and represents an increase in iron formation.
Upper iron formation	UIF	10 to 50	Interbedded sequence of greywacke, silicate iron formation (amphibole–chlorite–chert ± magnetite), amphibole- and chlorite-bearing metasedimentary rocks), oxide iron formation (chert–magnetite–amphibole) and mudstone; becoming more iron formation-rich at the base. Individual layers range from 1 to 2 m in thickness. Upper contact is gradational.
Middle mudstone	MM	1 to 10	Primarily composed of massive to strongly foliated mudstone with interbedded silicate iron formation (amphibole–chlorite ± garnet) [mud-rich and sheared with chert nodules] and rare oxide iron formation. Upper contact is gradational, becoming more mudstone-rich at the lower contact which is typically sharp. Upper contact is gradational.
Lower iron formation	LIF	2 to 30	Poorly- to well-banded, oxide iron formation (chert–magnetite–amphibole layers ranging from 1 to 10 m thickness) with rare discontinuous units of greywacke and mudstone. Upper and lower contacts are gradational. Hosts the majority of the gold at Goose Claims Group.
Middle sediments	SEDM	15 to 45	Primarily massive to moderately foliated greywacke, with infrequent mudstone and siltstone. May contain quartz–feldspar porphyries and quartz veins, can host localized disseminated arsenopyrite.
Deep iron formation	DIF	5 to 15	Interbedded sequence of greywacke, silicate iron formation (amphibole–chlorite–chert), oxide iron formation (chert–magnetite–grunerite–amphibole) and mudstone with individual layers ranging from 10 to 15 m thickness. This unit splits the clastic sediments below the lower iron formation into two sections given different names for reference only.
Basal sediments	SEDB	Unbounded	Primarily massive to moderately foliated greywacke, with infrequent mudstone and siltstone. May contain quartz–feldspar porphyries and quartz veins, can host localized disseminated arsenopyrite.

Note: Unbounded = as the upper or lower stratigraphic unit in the suite, the unit does not have a defined thickness.

Figure 7-3, Figure 7-4, and Figure 7-16.

9.7 Geophysics

Airborne, ground, and downhole geophysical programs have been conducted throughout the Back River District area since 1985 by companies involved in the Back River Joint Venture, and by Homestake, Kinross, Dundee, Sabina, and B2Gold.

A summary of the various geophysical survey programs is provided in Table 9-5, with results summarized in Table 9-6. Geophysical survey area locations are shown on Figure 9-9.

Table 9-3: Geochemical Sampling Programs

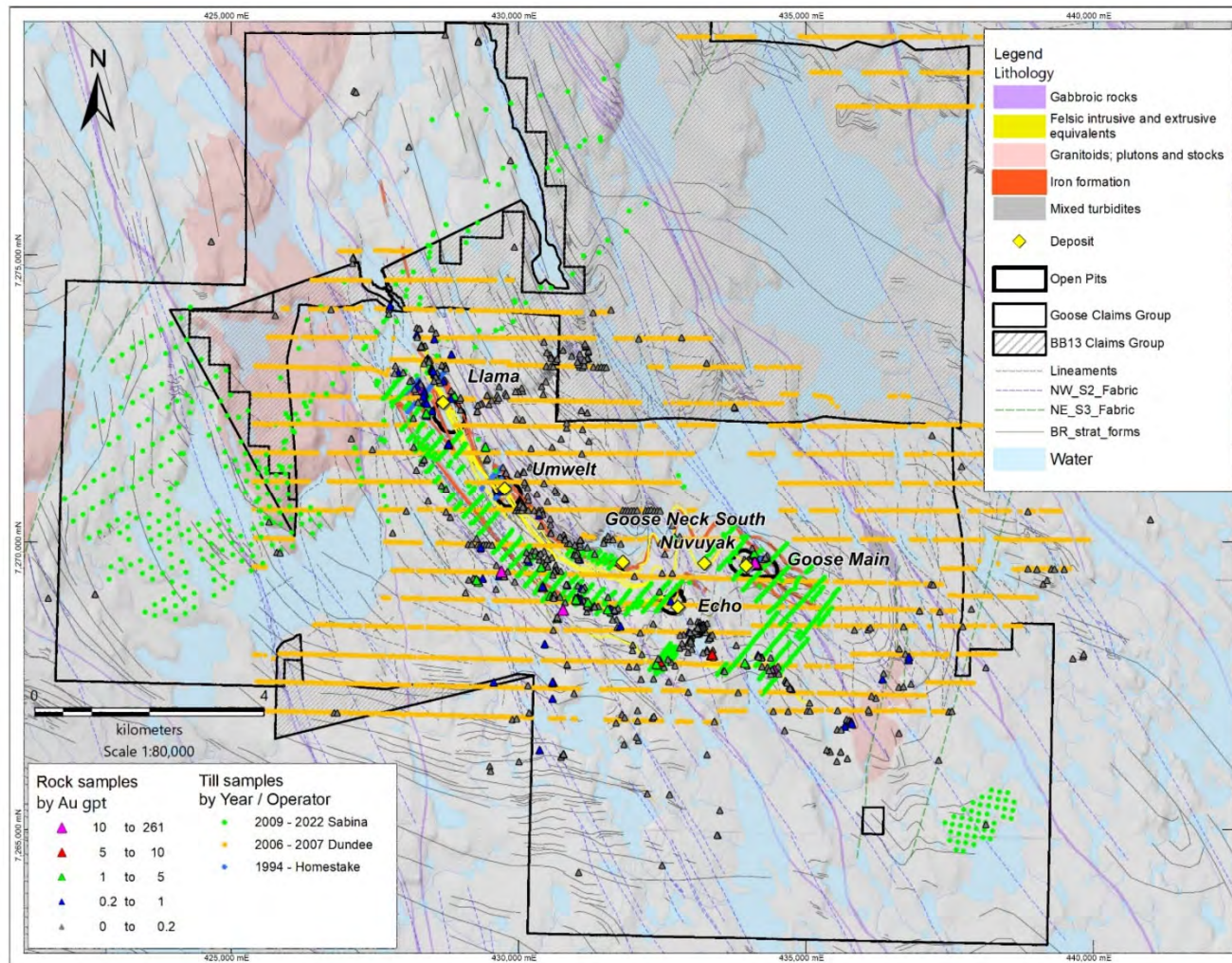
Sample Type	Claims Group	Year	Operator	Number of Samples	Comments/Results
Rock	George	1982–1985	Trigg/Ess0	723	Grab samples returning with anomalous Au ± pathfinder elements are followed up with additional geological work. Additional geological work includes detailed mapping, collecting additional grab samples, trenching, channel sampling, drilling, and/or a combination of these methods.
		1988	Homestake	6	
		1997	Arauco/Kit	10	
		2005–2007	Dundee	244	
		2013–2022	Sabina	382	
		2023–2024	B2Gold	64	
	Goose	1985	Trigg/Ess0	6	
		1986–1994	Homestake	64	
		1997	Arauco/Kit	30	
		2005–2007	Dundee	84	
		2009–2022	Sabina	909	
		2024	B2Gold	13	
	Boot	1985	Trigg/Ess0	39	
		1986–1994	Homestake	574	
		1997	Arauco/Kit	191	
		2005–2007	Dundee	126	
		2011–2018	Sabina	281	
		2024	B2Gold	4	
	Boulder	1986–1994	Homestake	116	
		1997	Arauco/Kit	70	
		2005–2007	Dundee	157	
		2011–2018	Sabina	366	
		2024	B2Gold	31	
	Del	2007	Dundee	19	
		2009–2021	Sabina	151	
		2024	B2Gold	67	
	BB13	—	—	—	
	Needle	2005–2006	Dundee	8	
		2009–2014	Sabina	40	
		2024	B2Gold	12	
	Beech	2024	B2Gold	30	
	Wishbone	2007	Dundee	292	
		2009–2017	Sabina	1,156	
	Malley	—	—	—	
	Bathurst	—	—	—	

Sample Type	Claims Group	Year	Operator	Number of Samples	Comments/Results
	Regional	2005–2007	Dundee	29	
		2011–2013	Sabina	29	
Till	George	1983	Trigg	260	Geochemical anomalies and dispersal trains linked to potential mineralization (Au, As, Ag, Bi, etc.) are followed up with additional geological work. Additional geological work includes detailed mapping, collecting additional grab samples, trenching, channel sampling, drilling, and/or a combination of these methods.
		2007	Dundee	6,115	
		2018–2022	Sabina	45	
	Goose	1994	Homestake	95	
		2007	Dundee	2,963	
		2009–2022	Sabina	1,202	
	Boot	2007	Dundee	4,333	
		2024	B2Gold	710	
	Boulder	2006–2007	Dundee	3,861	
		2016–2018	Sabina	545	
		2024	B2Gold	234	
	Del	2009–2012	Sabina	277	
		2024	B2Gold	370	
	BB13	—	—	—	
	Needle	2024	B2Gold	80	
	Beech	2024	B2Gold	400	
	Wishbone	2007	Dundee	108	
		2011–2012	Sabina	1,055	
Lake sediment	Goose	2010	Sabina	29	Lake sediments in Llama Lake and Goose Lake returned with elevated arsenic (As) concentrations, indicating its usefulness as a sampling medium in exploration.
Channel	George	1983–1984	Trigg	632	Channel sampling is conducted to test gold grade continuity and its distribution. Economic grades at reasonable widths are followed up with drilling.
		1991	Homestake	516	
	Goose	2005	Dundee	200	
		2024	B2Gold	38	
	Boulder	2024	B2Gold	11	
	Del	2012	Sabina	55	
		2024	B2Gold	151	
	Needle	2024	B2Gold	54	

Sample Type	Claims Group	Year	Operator	Number of Samples	Comments/Results
Shallow overburden drill samples	Bathurst	2012	Sabina	11	Shallow drilling completed in support of geotechnical assessments for infrastructure planning (e.g., laydown areas, freight storage areas, etc.). Drilling showed that permafrost exists within the coastal area with a variable active layer.

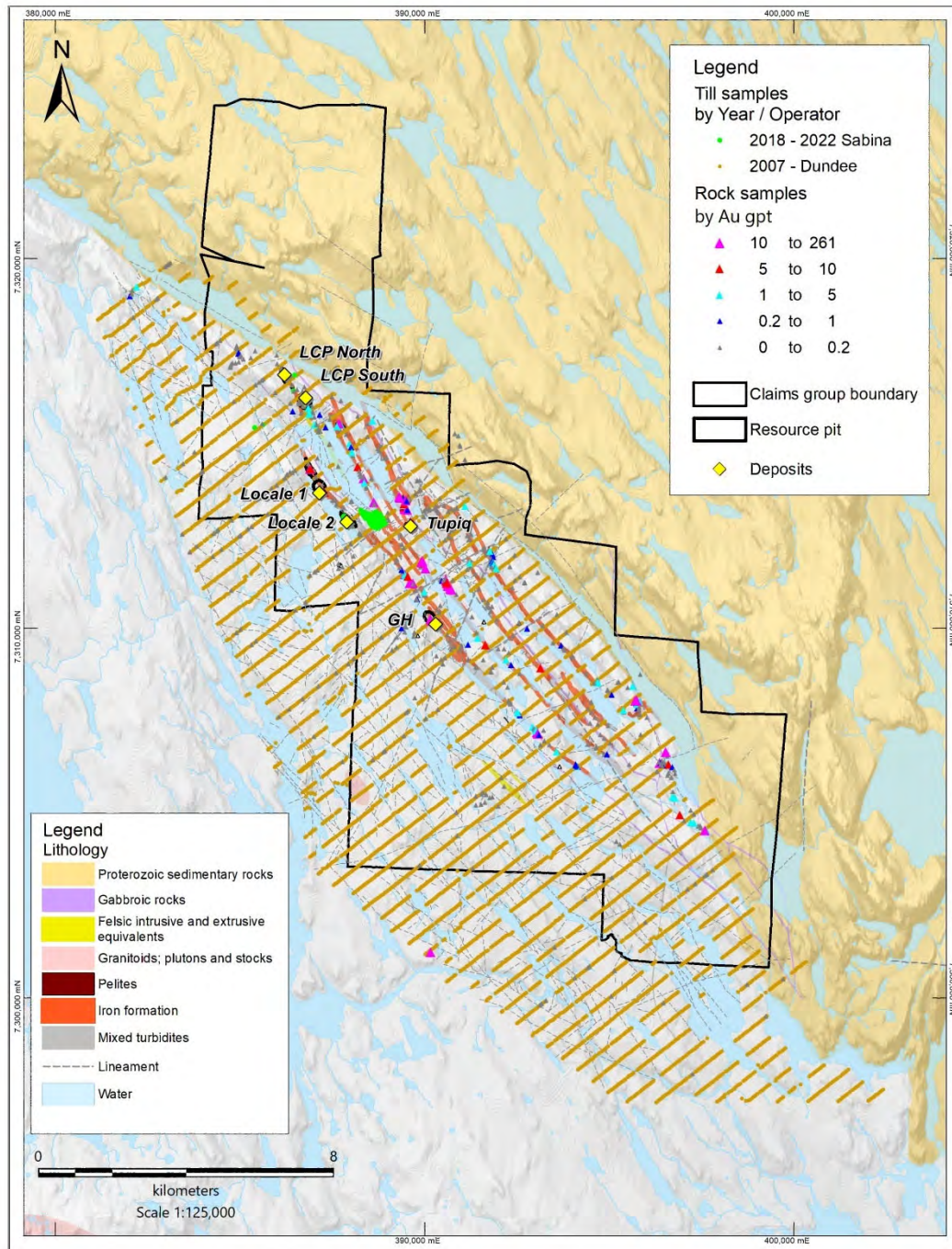
Note: Samples prior to 1985 not completely digitized.

Figure 9-1: Geochemistry Sample Location Map, Goose and BB13 (South)



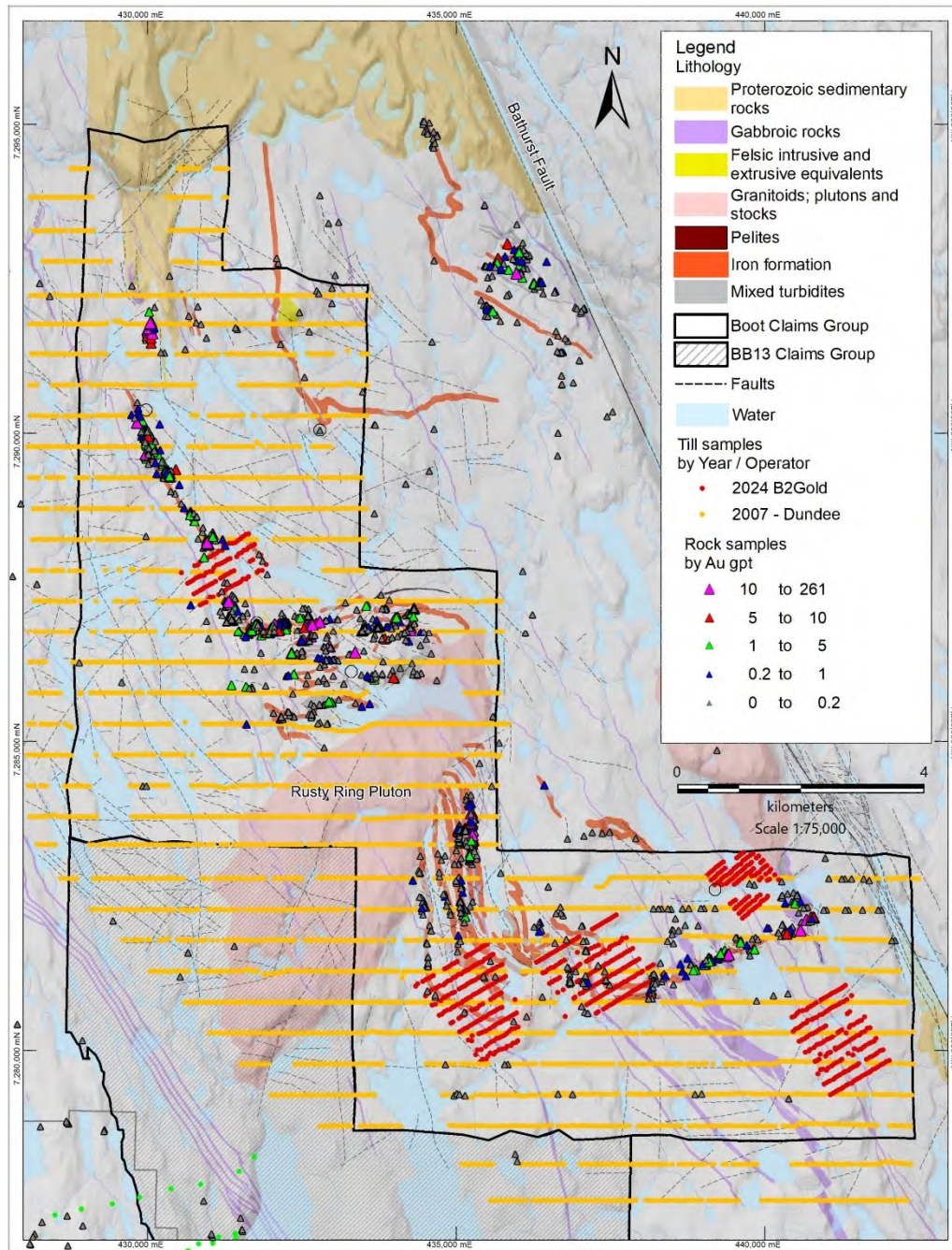
Note: Figure prepared by B2Gold, 2025.

Figure 9-2: Geochemistry Sample Location Map, George



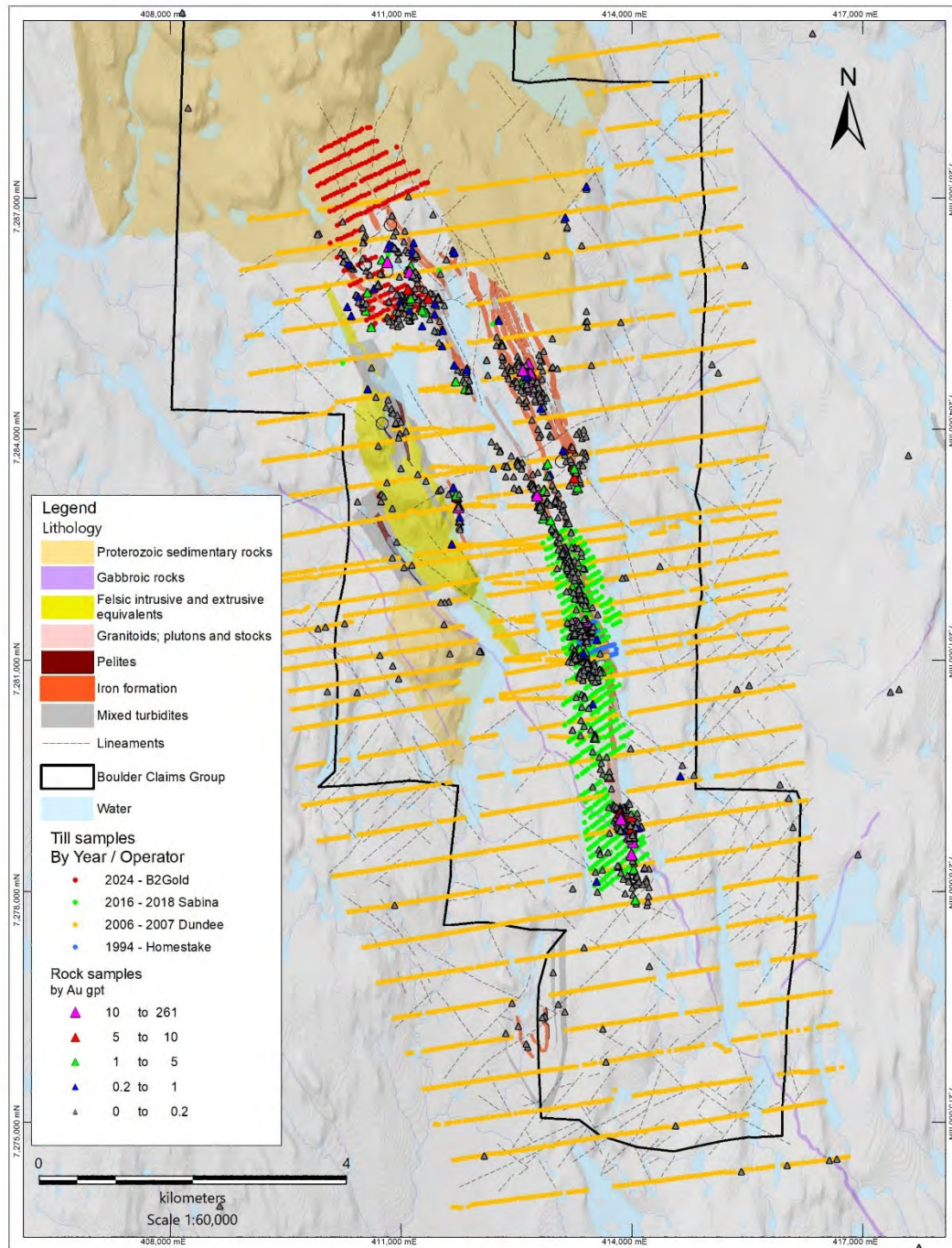
Note: Figure prepared by B2Gold, 2025.

Figure 9-3: Geochemistry Sample Location Map, Boot and BB13 (North)



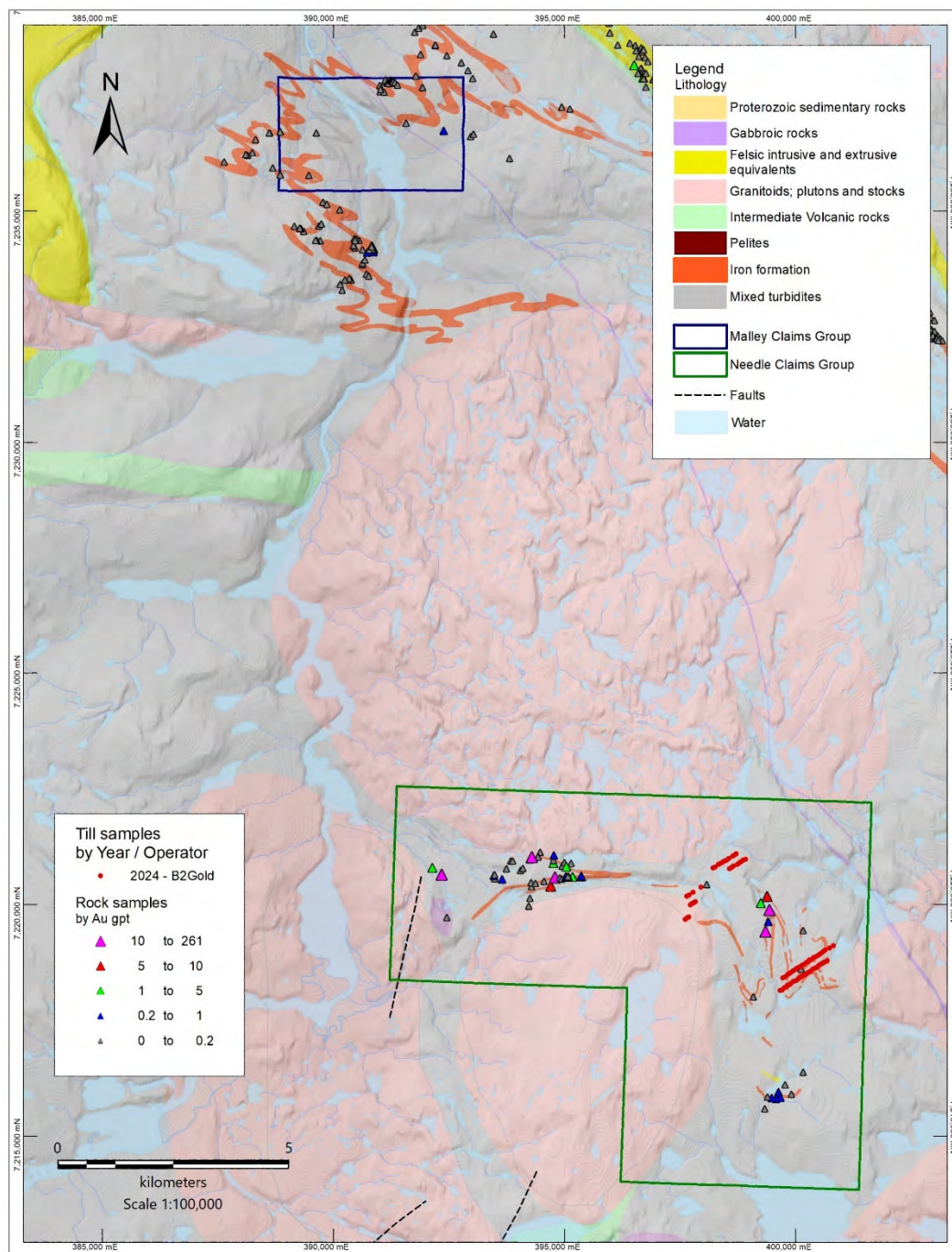
Note: Figure prepared by B2Gold, 2025.

Figure 9-4: Geochemistry Sample Location Map, Boulder



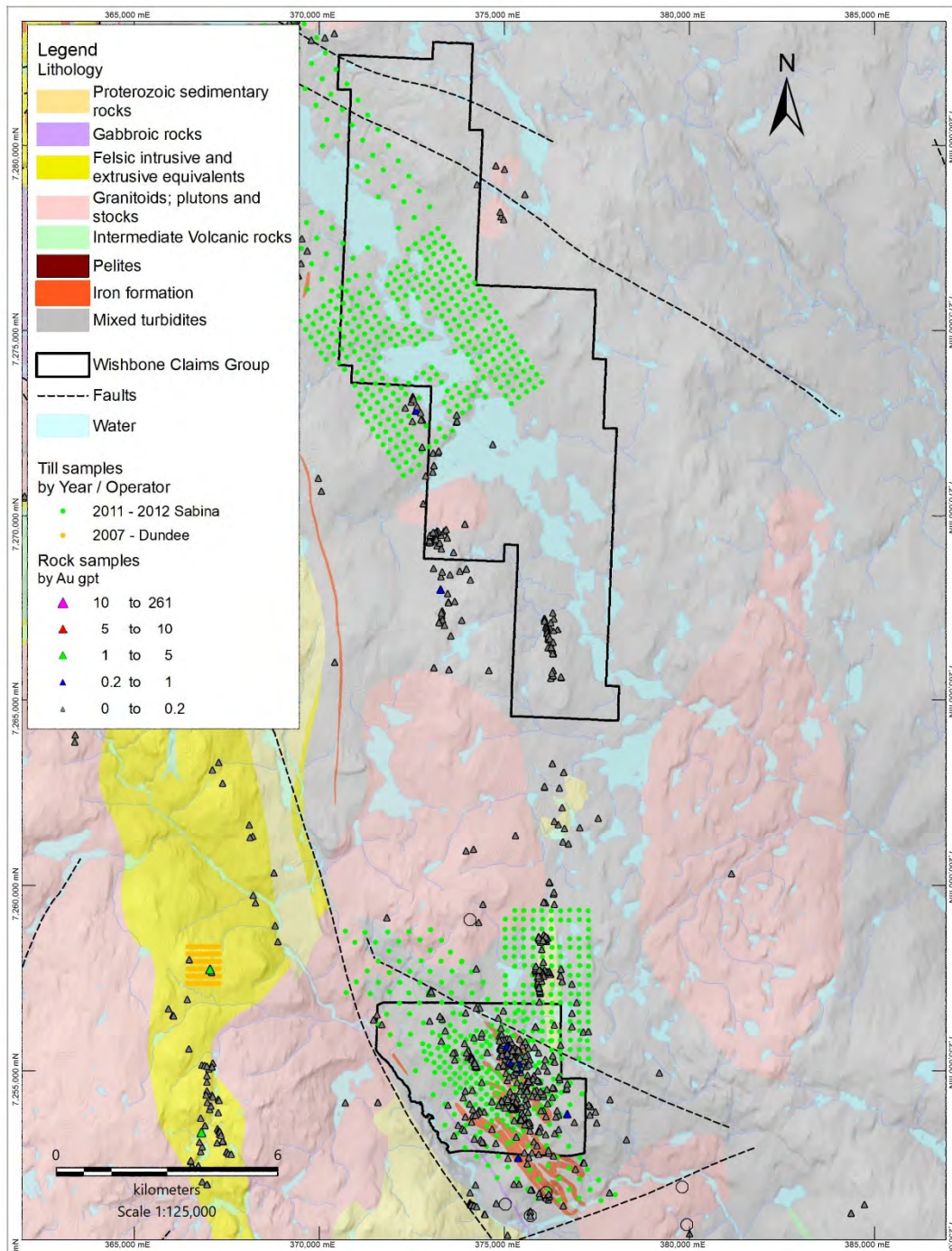
Note: Figure prepared by B2Gold, 2025.

Figure 9-5: Geochemistry Sample Location Map, Needle and Malley



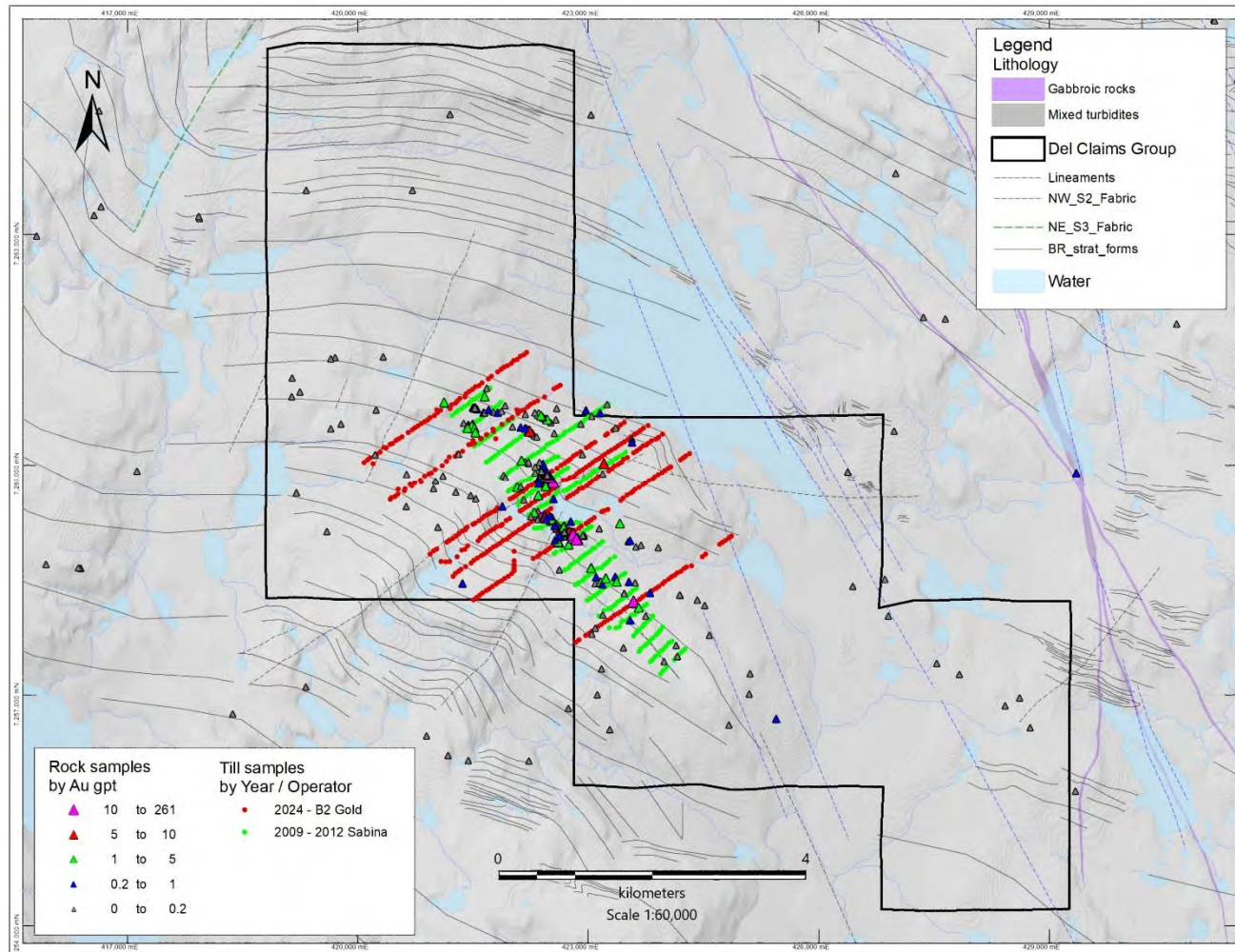
Note: Figure prepared by B2Gold, 2025.

Figure 9-6: Geochemistry Sample Location Map, Wishbone



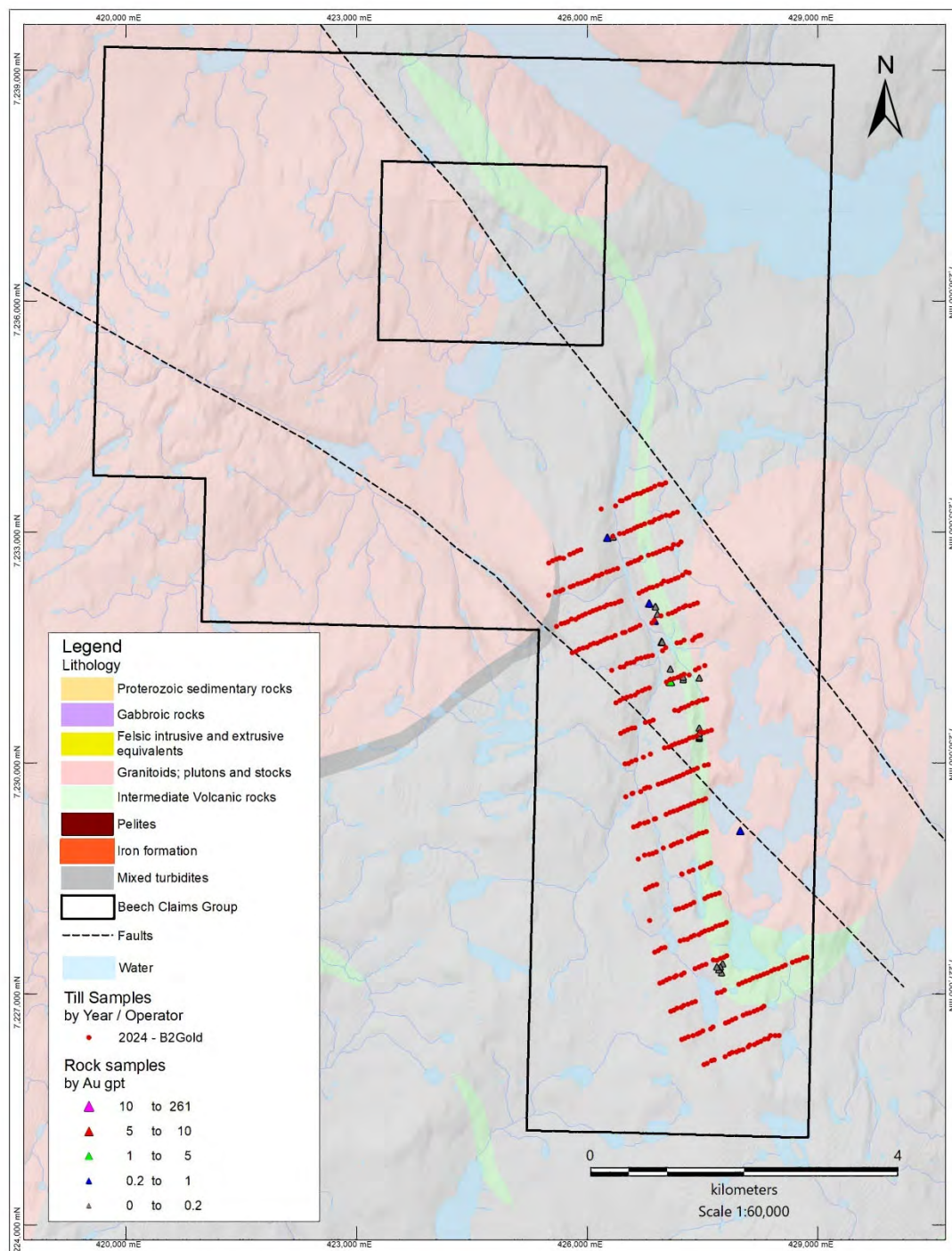
Note: Figure prepared by B2Gold, 2025.

Figure 9-7: Geochemistry Sample Location Map, Del



Note: Figure prepared by B2Gold, 2025.

Figure 9-8: Geochemistry Sample Location Map, Beech



Note: Figure prepared by B2Gold, 2025.

Table 9-4: Trenches

Year	Operator	Number	Note
1983	Trigg, Woollett, Olson Consulting Ltd	13	At 50 m intervals spaced 500 m along Locale 1 strike; revealing gold bearing iron formation.
1984	Trigg, Woollett, Olson Consulting Ltd	24	Three at Locale 2; 20 at Tupiq; one at Oar prospect; revealing gold bearing iron formation.
1985	Trigg, Woollett, Olson Consulting Ltd	7	One at LCP North, three at Locale 1, one at Fold Nose prospect, and one at Forest prospect. Excavated using gas-powered hand drills, explosives, shovels, and gas-powered water pumps. Revealed iron formation.
1986	Kerr-McGee	3	Total 3 m ³ overburden excavated over Locale 4 prospect; revealed gold bearing silicate oxide iron formation.
1990–1991	Homestake	1	Totalled 570.77 m. Excavated at the Locale 2 deposit over two seasons using tracked equipment, explosives, and high-powered washers; revealed gold deposit stratigraphy.
2005–2006	Dundee	3	Totalled 145.42 m. Excavated at Goose Main over two seasons using tracked equipment and high-powered washers; revealed gold bearing deposit stratigraphy, quartz–feldspar porphyry dyke, and gabbro dykes.
2015	Sabina	4	Test pits excavated at marine laydown area by manual shovelling, to evaluate properties of glacial till.
2019	Sabina	2	Totalled 70 m. Excavated at Goose Main using tracked equipment and high-powered washers. Included re-opening one of the 2005 trenches, and creating a new smaller trench northwest of the 2005 trench. Revealed gold bearing deposit stratigraphy, quartz–feldspar porphyry dyke, and gabbro dykes.
2024	B2Gold	1	Totalled 27 m. Excavated at Goose Main using tracked equipment; channel samples of mineralized iron formation were collected from these trenches, combined into a bulk sample, and sent for metallurgical testwork.

Table 9-5: Geophysical Surveys

Year	Company	Work Completed	Note
1985	Esso and Hill	Airborne magnetics and electromagnetic surveys.	No information as to survey specifications.
1992	Homestake	Ground vertical magnetic gradient, VLF–EM and horizontal loop electromagnetic surveying.	
1999–2000	Kinross	233 line kilometers of mag/VLF surveys and 2.12 km of spectral IP/resistivity surveying.	Completed by JvX Ltd.
2005–2006	Dundee	Airborne magnetic, electromagnetic, and radiometric survey.	Completed by Fugro. No information as to survey specifications.
2009		Small spectral IP survey and a walking magnetics survey.	No information as to survey specifications.
2010	Sabina	Walking or skidoo-mounted magnetometer and HLEM ground surveys were conducted using 50 m spaced grid lines. A max-min survey was completed over the Llama deposit. A small HLEM and walking magnetics survey was conducted on the Del Claims Group.	Completed by Aurora Geosciences.
2011		TDEM and IP ground surveys over most of the Goose Claims Group. The survey covered 14 lines from 3980N to 5540N overlapping with the Echo Grid and previous surveys with the intent of tying the data together. IP survey on the Umwelt Grid over and west of the Umwelt deposit. The survey covered 11 lines from U4900N to U5400N with line U4600N resurveyed with 'a = 100 m' spacing in an attempt to increase depth resolution. IP survey over the Jackaroo Grid. The survey covered 11 lines from section 3600N to 4600N overlapping with previous surveys with the intent of tying the data together. TDEM survey at Umwelt area to detect deeper conductors to assist targeting. A total of 14.7 line km were surveyed. Six holes were tested using down hole TDEM. Small HLEM/walking magnetometer survey over the Trigger target in the George Claims Group.	Completed by Clearview, Ptarmigan Geophysics and Aurora Geosciences.
2014		IPower 3D system on a portion of the Goose Claims Group area west of the Goose Main deposit. System tested to see if it could advance the understanding of stratigraphy and mineralization below 200 m vertical depth. 40 line kilometres were surveyed.	Completed by Abitibi Geophysics.
2020		Helicopter-borne VTEM geophysical survey over the Goose and George Claims Groups, and Del prospect. Totalled 2,064-line km. The Del prospect and Goose Claims Group survey areas were flown in a southwest to northeast (45°) orientation, with line spacing of 150 m and 100 m, respectively. The George Claims Group was flown in a 59° direction at 100 m line spacing.	Completed by Geotech Airborne Geophysical Surveys.

Year	Company	Work Completed	Note
2024	B2Gold	Airborne magnetic and radiometric survey was carried out on Needle, Beech, and BB13 Claims Groups. A total of 1,260 line-km covering 57.3 km ² were flown over Needle Claims Group, 2,021 line km were flown over an area of 91.9 km ² at Beech Claims Group, and 1,650 line km covering 73 km ² were flown over the BB13 Claims Group.	Completed by Precision GeoSurveys.
		BHTEM surveys were conducted in holes 24GSE683Z1, 24GSE687, 24GSE692, and 24GSE692Z1, to test the viability of this technique for targeting discrete zones of mineralization and to improve targeting within the Goose Claims Group area.	Completed by Dias Geophysical
		3D DC resistivity and IP surveys were conducted over the Boot and Boulder Claims Group. The survey covered an area of approximately 2.2 km ² for the Boot Claims Group and 3 km ² for the Boulder Claims Group	Completed by Dias Geophysical.

Note: VLF-EM = very low frequency electromagnetic; mag = magnetic; IP = induced polarization; HLEM = horizontal-loop electromagnetic; TDEM = time domain electromagnetic; VTEM = versatile time-domain electromagnetic.

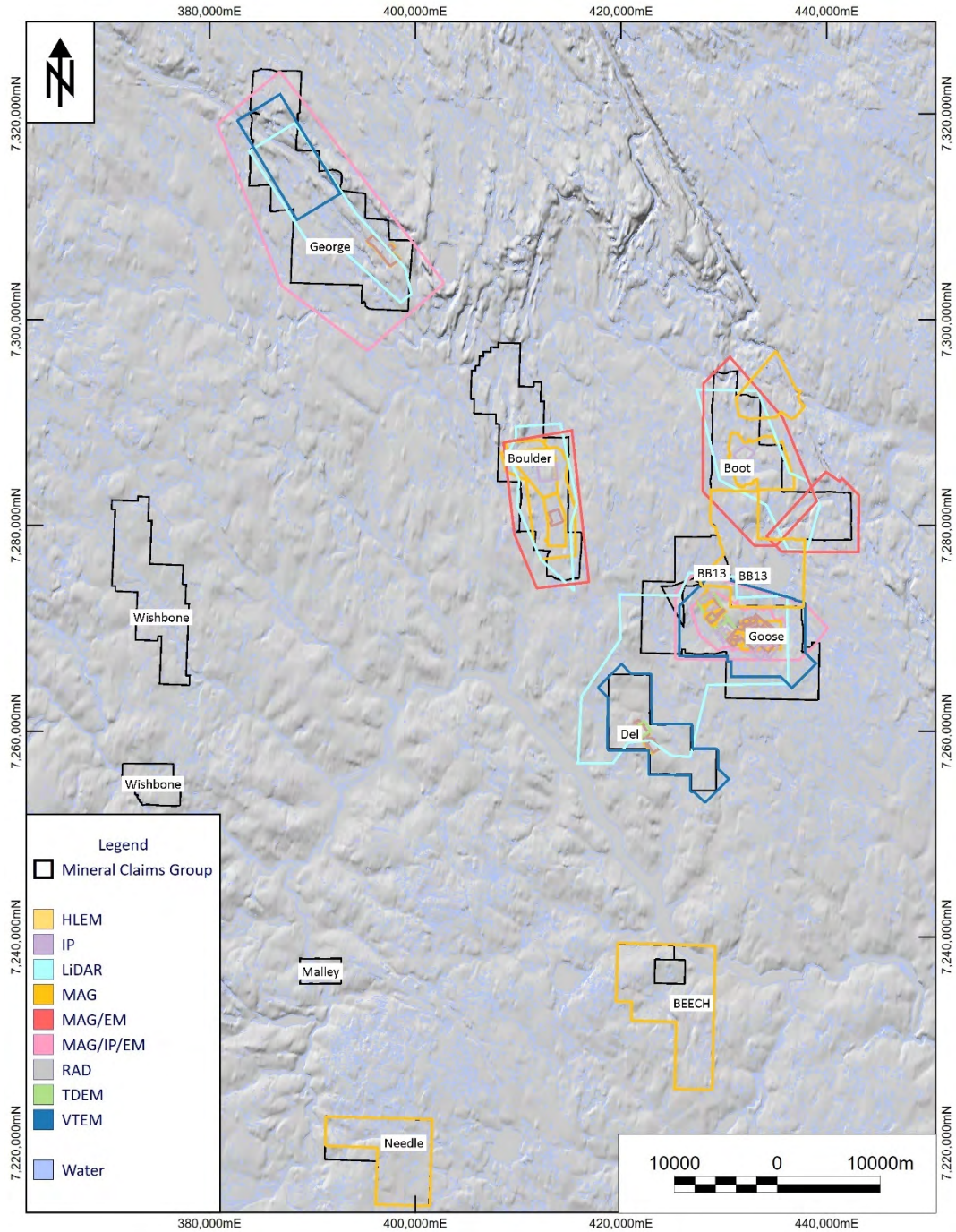
Table 9-6: Geophysical Survey Results

Survey Type	Survey Code(s)	Survey Area	Scope	Results
Airborne magnetic	MAG	Goose, Needle, Beech, BB13, Boot, Boulder	Regional survey	Displays the position of Banded Iron Formations (BIFs), highlights fold geometries and dykes influenced by varying iron content in lithologies. Assists with regional exploration.
Ground magnetic	MAG	Goose (Canoe)	Local/detailed survey	Shows fold geometries and dykes, in greater detail. Allows for improved drill targeting.
Induced polarization	IP	Goose (Llama, Umwelt, Jackaroo, Echo), Boulder, Boot	Local/detailed survey	Shows BIF/Sediment/Mudstone. Can sometimes highlight zones of intense sulphide mineralisation. Assists in exploration vectoring.
Very low frequency electromagnetic	VLF-EM	Needle	Local/detailed survey	Shows BIF units and discrete conductors within BIFs that could correspond to sulphides rich zones.
Downhole electromagnetic	Downhole EM	Goose	Local/detailed survey	Shows conductors around drillholes that may represent sulphide rich zones associated with Au mineralization. Allows estimation of lateral extent of sulphide mineralisation intercepted in drill holes.
DIGHEM	DIGHEM	Goose	Regional survey	Shows BIF trends and discrete conductors that may be associated with sulphide rich zones. Assists with regional exploration.
Horizontal loop electromagnetic	HLEM	Goose (Llama), Boulder	Local/detailed survey	Shows shallow conductors that may corresponds to sulphides rich zones.

Survey Type	Survey Code(s)	Survey Area	Scope	Results
				Improves precision of anomalies identified by DIGHEM.
VTEM	VTEM	Needle	Regional survey	Shows BIF distribution and discrete conductors that may be associated with sulphide mineralisation.
Ground EM	EM	Goose (Umwelt, Llama, Jackaroo)	Local/detailed survey	Shows deep conductors that may corresponds to zones of sulphide mineralisation. Used for targeting below depth limit detection of DIGHEM/HLEM.
Radiometrics	RAD	BB-13, Beech, Needle	Regional survey	Highlights areas of potassic alteration and intrusions. Helps to develop regional geological maps.

Note: VLF-EM = very low frequency electromagnetic; mag = magnetic; IP = induced polarization; EM = electromagnetic; HLEM = horizontal-loop electromagnetic; TDEM = time domain electromagnetic; VTEM = versatile time-domain electromagnetic; DIGHEM = frequency-domain electromagnetic and airborne magnetic survey; RAD = radiometrics.

Figure 9-9: Geophysical Survey Location Map



Note: Figure prepared by B2Gold, 2025.

9.8 Petrology, Mineralogy, and Research Studies

A number of research studies were completed in the Project area, with work and results summarized in Table 9-7.

9.9 Exploration Potential

The regional exploration programs have identified several promising prospects through mapping, geophysical surveys, and various types of sampling, including tills, grabs, rock chip sampling and diamond drilling. These efforts have helped define favorable lithologies and prospective structures associated with gold mineralization. A compilation of the areas with exploration potential within the Back River District is presented in Figure 9-11.

9.9.1 Goose and George Claims Groups

The deposits within the Goose Claims Group remain open down plunge, including Umwelt, Llama, Goose Main, and Echo. Deposits such as Nuvuyak and Goose Neck South are also open down dip and along strike, respectively. Figure 7-12 to Figure 7-23 show the continuation of the favorable stratigraphy and structural framework outside the Mineral Resource areas.

Besides the extension of the known deposits, other occurrences are pending to be followed up within and outside the Goose Synclinorium, including the Boomerang and Camp zones (

Table 7-2: Goose Claims Groups Stratigraphy

Predominant/ Key Unit		Thickness (m)	General Description
Name	Code		
Top sediments	SEDT	Unbounded	Interbedded sequence of weakly to moderately foliated greywacke/mudstone turbidite with rare iron formation. Below the unconformity with the Proterozoic rocks, no other stratigraphic unit is present in the Top Sediments within the Goose Claims Group, however, thicknesses of >200 m have been reported in the Project area. Lower contact is gradational and represents an increase in iron formation.
Upper iron formation	UIF	10 to 50	Interbedded sequence of greywacke, silicate iron formation (amphibole–chlorite–chert ± magnetite), amphibole- and chlorite-bearing metasedimentary rocks, oxide iron formation (chert–magnetite–amphibole) and mudstone; becoming more iron formation-rich at the base. Individual layers range from 1 to 2 m in thickness. Upper contact is gradational.
Middle mudstone	MM	1 to 10	Primarily composed of massive to strongly foliated mudstone with interbedded silicate iron formation (amphibole–chlorite ± garnet) [mud-rich and sheared with chert nodules] and rare oxide iron formation. Contact with underlying iron formation is typically sharp. Upper contact is gradational.
Lower iron formation	LIF	2 to 30	Poorly- to well-banded, oxide iron formation (chert–magnetite–amphibole layers ranging from 1 to 10 m thickness) with rare discontinuous units of greywacke and mudstone. Upper and lower contacts are gradational. Hosts the majority of the gold at Goose Claims Group.
Middle sediments	SEDM	15 to 45	Primarily massive to moderately foliated greywacke, with infrequent mudstone and siltstone. Hosts the majority of the gold at Goose Claims Group, can host localized disseminated arsenopyrite.
Deep iron formation	DIF	5 to 15	Interbedded sequence of greywacke, silicate iron formation (amphibole–chlorite–chert), oxide iron formation (chert–magnetite–grunerite–amphibole) and mudstone with individual layers ranging from 10 to 15 m in thickness.

Predominant/ Key Unit		Thickness (m)	General Description
Name	Code		
			thickness. This unit splits the clastic sediments below the lower iron formation into two sections given different names for reference only.
Basal sediments	SEDB	Unbounded	Primarily massive to moderately foliated greywacke, with infrequent mudstone and siltstone. by quartz–feldspar porphyries and quartz veins, can host localized disseminated arsenopyrite

Note: Unbounded = as the upper or lower stratigraphic unit in the suite, the unit does not have a defined thickness.

Figure 7-3).

The deposits within the George Claims Group remain open down dip, including Locale 1 and 2, and LCP South. Deposits such as LCP North, Tupiq and GH remain open down plunge and down dip. Figure 7-24 to Figure 7-33 show the continuation of the favorable iron formation and structural framework outside the areas where Mineral Resources have been estimated.

Besides the extension of the known deposits, other prospects, such as Fold Forest and Lookout Hill have follow up exploration planned (Figure 7-4).

9.9.2 Boulder, Boot, Del, and Needle Claims Groups

The Boot Claims Group (Figure 7-5) hosts multiple mineralized structures intersecting iron formation, coinciding with geophysical and geochemical anomalies with limited drilling. Hammer, Rooster and Aimon are among the more advanced prospects. Prospects such as Shell and Poison are in earlier stages of exploration and would benefit from detailed geological mapping.

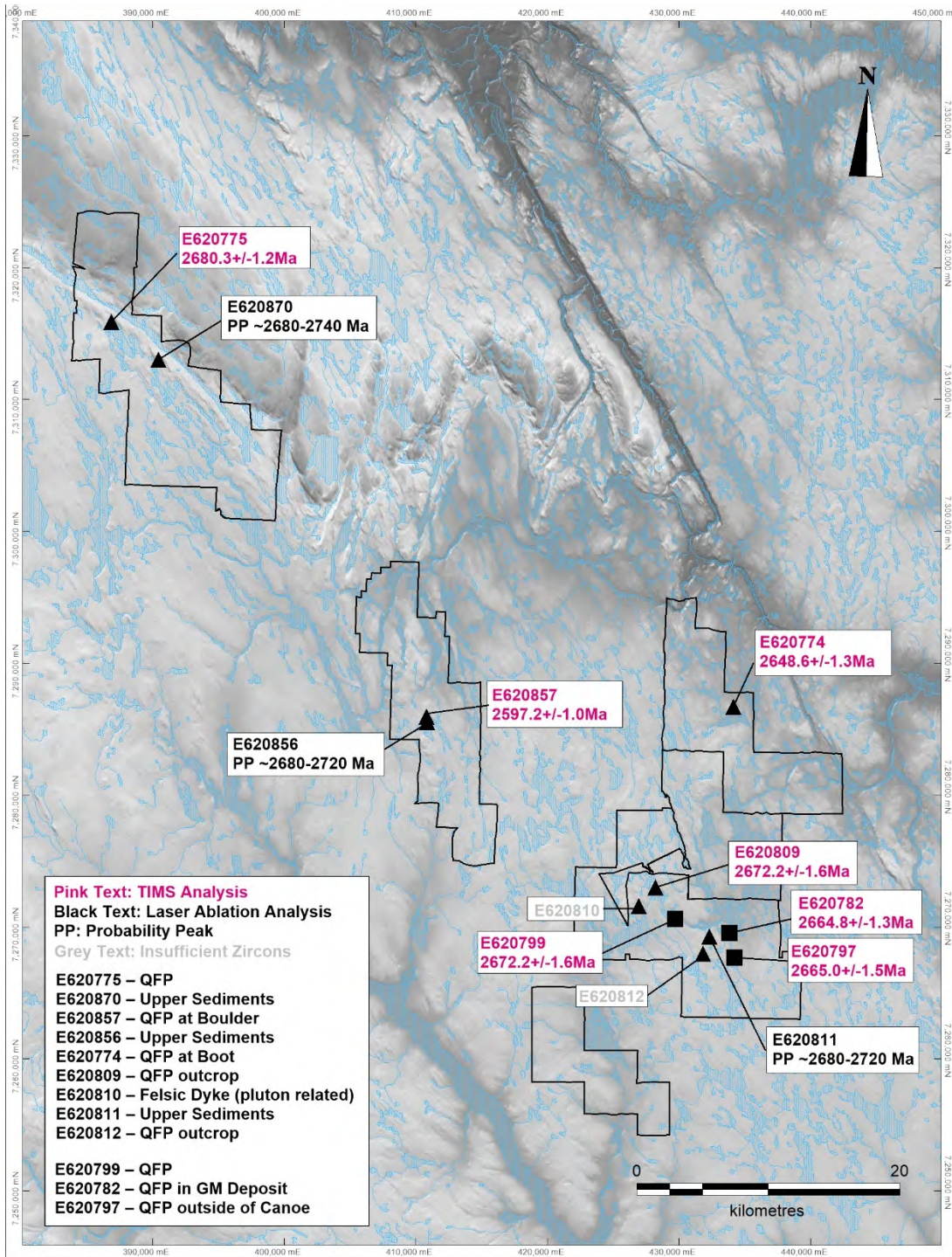
Boulder Claims Group (Figure 7-6) hosts a sequence of tightly folded banded iron formation continuous with the banded iron formation exposed at the George Claims Group. Humpback and Boulder East are among the more advanced prospects. New structural interpretations could reveal different plunge directions, uncovering growing opportunities. Prospects such as Galand and Porkchop are in earlier stages of exploration and detailed geological mapping is planned.

The Needle Claims Group (Figure 7-7) hosts a structurally complex and prospective thick package of banded iron formation. The Needle Lake and Moth Valley are the most important prospects, with anomalous grab samples and drill hole results.

Table 9-7: Research Studies

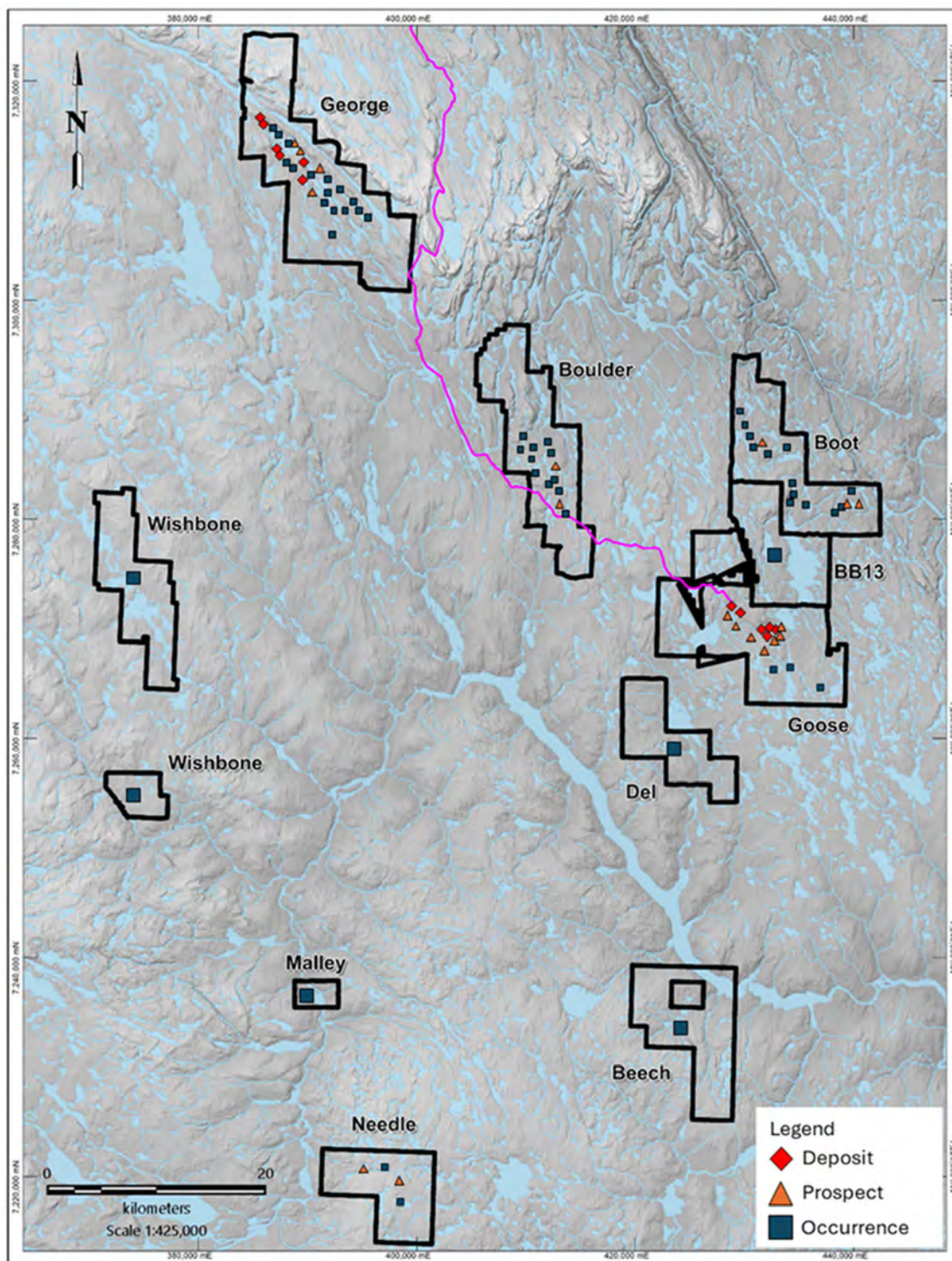
Study	Year	Comment
Mafic intrusion geochemistry and structural study	2012	Conducted at the Goose Claims Group in 2012 to recognize and outline all mafic dykes, assess the presence and absence of deformational fabrics, and collect representative samples from each dyke. Results are unpublished.
Felsic dyke study	2012	A total of 81 felsic dyke samples were analyzed by a lithium-borate fusion for whole rock analysis at the Goose Claims Group. This study was aimed to identify the variability in major elements across felsic dykes at the Goose group, as they are spatially associated with gold mineralization in some of the Goose deposit. Results for this study are consistent with one generation of felsic dykes. However, a larger geochemical dataset at Goose (four-acid multi-element data) indicates a dyke of intermediate signature in the George Claims Group and at the Nuvuyak deposit (within the Goose Claims Group).
Metamorphic grade study	2012–2015	Peter. H Thompson Geological Consulting Ltd. was contracted to create a map of the regional metamorphism across the Back River district. This study was completed by reviewing 133 historic and 218 new thin sections and on field observations made during bedrock geological mapping. Rock samples were slabbed at the Goose camp and then sent to Peter H. Thompson Geological Consulting Ltd. in Ottawa, Ontario for thin section preparation and review. On selected samples, off-cuts were sent for analysis of whole-rock characterization at Acme. Results of this study indicate the metamorphic grade in the Back River district ranging from lower greenschist to lower amphibolite. The patterns in metamorphic grade were observed to be predominantly a product of regional metamorphism, however contact-metamorphism was associated with early-syn orogenic plutons within the Boot group.
Mineralogy and petrography	2010–2014	During 2010, Terra Mineralogical Services conducted a mineralogical study of the gold mineralisation at Goose and Llama. In 2011, the focus was on the gold mineralisation distribution at the Goose deposit and on Umwelt at depth. Test work included scanning electron and standard microscopy. Sabina collected a limited number of samples in 2014 for petrographic description; these were taken from lithologies of uncertain affinity or from known lithologies with cryptic mineralogical features. These were described in the field, their position noted, and were then cut down into thin-section billets at Goose camp. Offcuts from the samples were then submitted for ICP and whole rock analysis and the raw billets sent to Thompson Geological Services, Ltd., in Ottawa, for thin section preparation and petrographic description.
Geochronology	2011–2018	A total of 19 samples have been collected and analyzed for age dating across the Back River District from 2011–2018. The Pacific Centre for Isotopic and Geochemical Research at the University of British Columbia analyzed 7 quartz-feldspar porphyry and 3 greywacke samples using U-Pb TIMS and U-Pb ICP-MS analyses, respectively. The Jack Satterly Geochronology Laboratory at the University of Toronto analyzed 2 quartz-feldspar porphyry samples using U-Pb TIMS analysis. The Geological Survey of Canada analyzed a total of 5 arsenopyrite grains using U-Pb TIMS analysis. Age dates for arsenopyrite grains are unpublished as of the Report effective date. Sample locations and the age dates generated for quartz-feldspar porphyry and greywacke samples are shown in Figure 9-10.

Figure 9-10: Geochronology Sample Location Map



Note: Figure prepared by B2Gold, 2025. QFP = quartz-feldspar porphyry; GM = Goose Main

Figure 9-11: Exploration Potential



Note: Figure prepared by B2Gold, 2025.

The Del Claims Group (Figure 7-9) hosts a structurally controlled, northwest-trending alteration zone within vein-bearing clastic sediments. Grab sampling has returned anomalous gold values. Detailed mapping and geochemical surveys could outline the first significant non-iron formation prospect in the Back River District.

9.9.3 BB13, Beech, Malley and Wishbone Claims Groups

The BB13 (Figure 7-10), Beech (Figure 7-11), Malley (Figure 7-7) and Wishbone (Figure 7-8) Claims Groups are at an early stage of exploration and require additional geochemical and geophysical surveys, and mapping campaigns, to delineate potential drill-ready prospects. These claims groups remain highly prospective, with known gold occurrences associated with prospective stratigraphy in a complex structural framework.

10.0 DRILLING

10.1 Introduction

Drilling on the Project was completed by a number of operators, including B2Gold. To December 31, 2024, there have been a total of 2,813 core holes drilled for 648,459 m of drilling (Table 10-1 and Figure 10-1 to Figure 10-3). Of this total, 158 core holes (55,578 m) were completed by B2Gold. Drilling by area is summarized in Table 10-2.

Drilling and assaying that supports the Mineral Resource estimates is summarized by deposit in Table 10-3. Drill collar location plans by deposit are provided in Figure 10-4 to Figure 10-15.

10.2 Drill Methods

Drill methods and core sizes varied over time, and are summarized, where known, in Table 10-4. Table 10-5 provides the core size diameters to accompany Table 10-4.

10.3 Geological Logging Procedures

10.3.1 Pre-Sabina Programs

A helicopter or tracked equipment was used to transport core from the rig sites to the core facility at the Goose Lake camp, George Lake Camp, Boot Lake Camp or Hackett River Camp. All core trays were sealed with wooden lids to ensure no core was lost or displaced during transit. On arrival at the core yard, the trays were laid out in consecutive order and reviewed.

Geological information was captured on paper and digitized onsite until 2002, whereafter, the information was recorded digitally. Logged information included lithology, mineralization, veining, description of specific structures and alteration styles, together with their width, intensity and associated mineral assemblage. Rock quality designation (RQD) descriptions were undertaken to record the number of natural breaks in the core (by metre interval) for subsequent geotechnical assessment. Core recovery was measured. Other data collected included specific gravity, magnetic susceptibility, and conductivity. Core was photographed.

10.3.2 Sabina Programs

Core was placed in appropriately labelled wooden core trays at the drill rig prior to transport to the Goose Lake Camp core facility, the George Lake Camp core facility, or the Hackett River Camp core facility, twice daily.

All geological information was captured digitally and updated to a Microsoft Access database. Geological information captured included lithology, mineralization, veining, description of specific structures and alteration styles, together with the width, intensity, and associated mineral assemblage. RQD and core recovery measurements were taken. Other data collected included specific gravity, magnetic susceptibility, and conductivity. All core was photographed.

Table 10-1: Drill Summary Table, Drill Campaigns by Year (all drilling)

Operator (s)	Year	Item	Goose	George	Boot	Boulder	Needle	Wishbone	Del	BB13	Bathurst	Totals
Hill/Esso	1985	Drill holes	—	28	8	—	—	—	—	—	—	36
		Metres	—	2,078	488	—	—	—	—	—	—	2,566
Bow/Kerr	1986	Drill holes	—	31	—	—	—	—	11	—	—	42
		Metres	—	2,918	—	—	—	—	610	—	—	3,528
Homestake	1987	Drill holes	—	20	—	—	—	—	—	—	—	20
		Metres	—	3,682	—	—	—	—	—	—	—	3,682
	1988	Drill holes	—	122	—	—	—	—	—	—	—	122
		Metres	—	20,881	—	—	—	—	—	—	—	20,881
	1989	Drill holes	—	71	—	—	—	—	—	—	—	71
		Metres	—	18,708	—	—	—	—	—	—	—	18,708
	1990	Drill holes	—	161	—	—	13	—	—	—	—	174
		Metres	—	28,421	—	—	1,287	—	—	—	—	29,709
	1991	Drill holes	—	141	20	—	—	—	—	—	—	161
		Metres	—	28,700	1,822	—	—	—	—	—	—	30,522
	1992	Drill holes	19	—	22	—	—	—	—	—	—	41
		Metres	2,744	—	2,366	—	—	—	—	—	—	5,110
	1993	Drill holes	31	—	4	4	—	—	—	—	—	39
		Metres	5,968	—	313	300	—	—	—	—	—	6,581
Arauco/Kit	1997	Drill holes	26	143	15	—	—	—	—	—	—	184
		Metres	4,035	15,480	1,612	—	—	—	—	—	—	21,127
Kinross	2000	Drill holes	41	—	—	—	—	—	—	—	—	41
		Metres	11,097	—	—	—	—	—	—	—	—	11,097
	2001	Drill holes	52	—	—	—	—	—	—	—	—	52

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	2002	Metres	9,839	—	—	—	—	—	—	—	—	9,839
		Drill holes	33	—	—	—	—	—	—	—	—	33
		Metres	7,681	—	—	—	—	—	—	—	—	7,681
Miramar	2004	Drill holes	41	—	—	—	—	—	—	—	—	41
		Metres	11,081	—	—	—	—	—	—	—	—	11,081
Dundee	2005	Drill holes	40	6	—	—	—	—	—	—	—	46
		Metres	13,058	3,138	—	—	—	—	—	—	—	16,197
	2006	Drill holes	11	24	22	23	—	—	—	—	—	80
		Metres	5,181	8,196	4,557	6,074	—	—	—	—	—	24,008
	2007	Drill holes	—	32	—	—	—	—	—	—	—	32
		Metres	—	10,500	—	—	—	—	—	—	—	10,500
	2008	Drill holes	9	19	—	—	—	—	—	—	—	28
		Metres	2,438	3,711	—	—	—	—	—	—	—	6,149
Sabina	2009	Drill holes	29	—	—	—	—	—	—	—	—	29
		Metres	6,727	—	—	—	—	—	—	—	—	6,727
	2010	Drill holes	166	—	—	—	—	—	—	—	—	166
		Metres	40,570	—	—	—	—	—	—	—	—	40,570
	2011	Drill holes	146	39	—	—	—	19	—	—	—	204
		Metres	53,644	8,381	—	—	—	4,831	—	—	—	66,855
	2012	Drill holes	142	62	—	10	—	20	—	—	—	234
		Metres	49,824	17,266	—	2,441	—	4,389	—	—	—	73,919
	2013	Drill holes	239	101	29	37	—	—	—	10	—	416
		Metres	45,407	19,830	6,195	11,035	—	—	—	127	—	82,594
	2014	Drill holes	34	—	—	—	—	—	—	—	—	34
		Metres	12,174	—	—	—	—	—	—	—	—	12,174
	2015	Drill holes	38	—	—	—	—	—	—	—	11	49
		Metres	943	—	—	—	—	—	—	—	16	959



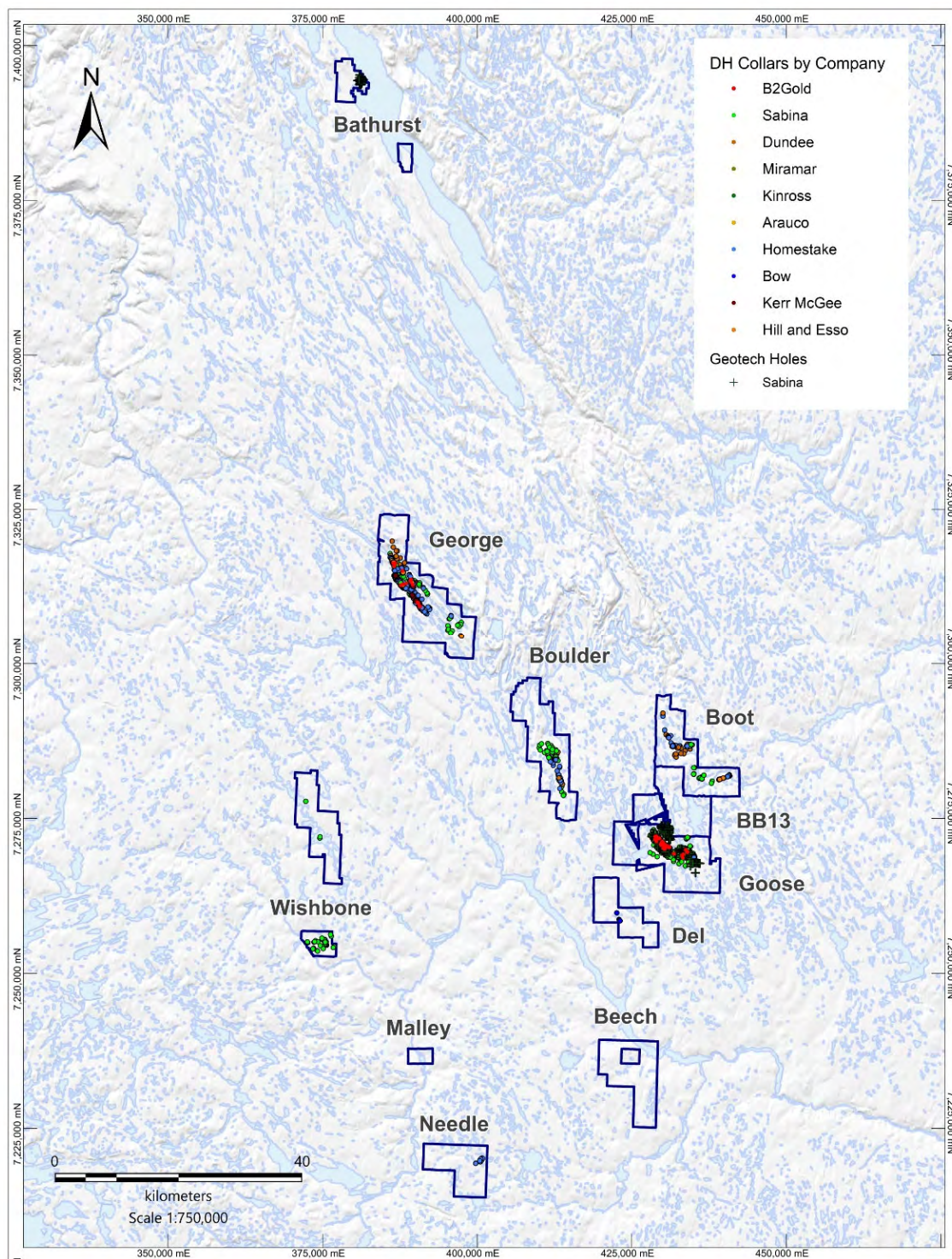
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	2016	Drill holes	19	—	—	—	—	—	—	—	—	19
		Metres	2,746	—	—	—	—	—	—	—	—	2,746
	2017	Drill holes	54	—	—	—	—	—	—	—	24	78
		Metres	12,812	—	—	—	—	—	—	—	148	12,960
	2018	Drill holes	65	—	—	—	—	—	—	—	—	69
		Metres	21,573	—	—	1,385	—	—	—	—	—	22,958
	2019	Drill holes	10	—	—	—	—	—	—	—	—	10
		Metres	6,465	—	—	—	—	—	—	—	—	6,465
	2020	Drill holes	21	—	—	—	—	—	—	—	—	21
		Metres	8,095	—	—	—	—	—	—	—	—	8,095
	2021	Drill holes	25	—	—	—	—	—	—	—	—	25
		Metres	4,583	—	—	—	—	—	—	—	—	4,583
	2022	Drill holes	15	—	—	—	—	—	—	—	—	15
		Metres	3,656	—	—	—	—	—	—	—	—	3,656
Sabina/B2Gold	2023	Drill holes	68	26	—	—	—	—	—	—	—	94
		Metres	24,538	6,013	—	—	—	—	—	—	—	30,551
B2Gold	2024	Drill holes	69	—	—	—	—	—	—	—	—	69
		Metres	26,209	—	—	—	—	—	—	—	—	26,209
Totals		Drill holes	1,464	1,026	126	89	13	39	11	10	35	2,813
		Metres	397,987	197,902	18,129	23,033	1,287	9,219	610	127	164	648,459

Notes: All holes are core drill holes. Drill holes listed are for exploration, Mineral Resource, metallurgical, and geomechanical/geotechnical purposes. Trenches are not included in drilling totals. Historical drill holes were assigned to the appropriate deposits and all abandoned/restarted drill holes were included in the totals.

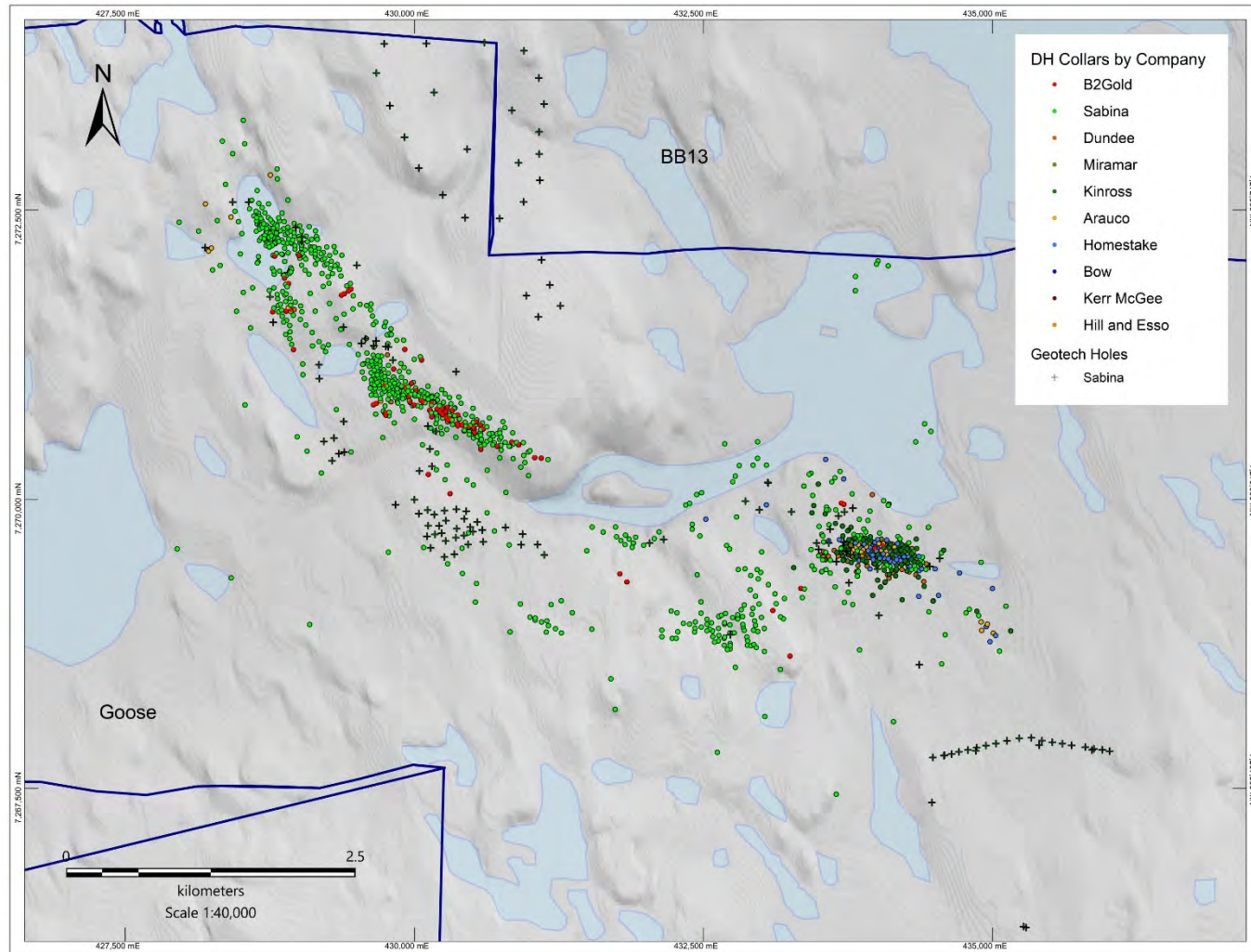


Figure 10-1: Project Drill Collar Location Plan



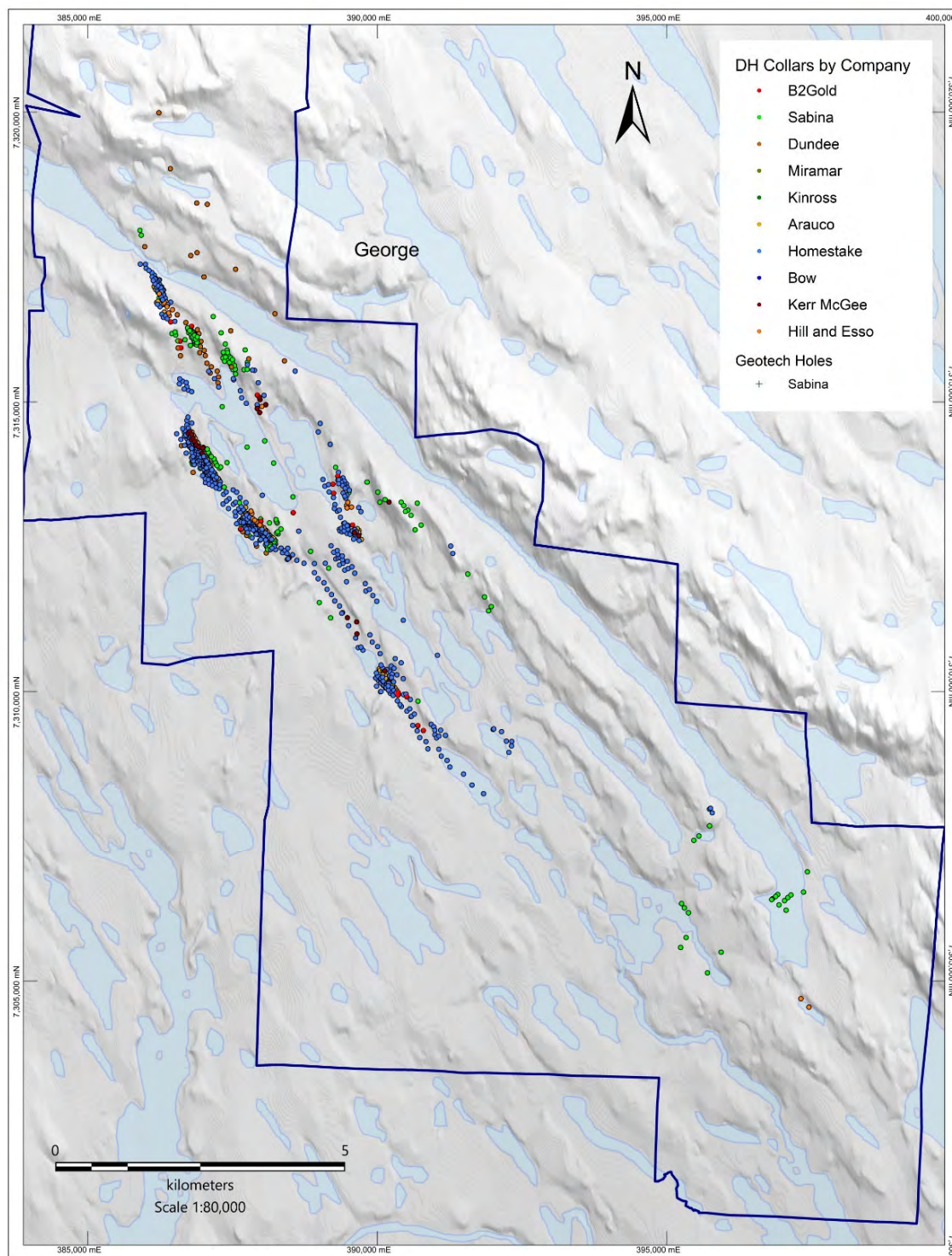
Note: Figure prepared by B2Gold, 2025.

Figure 10-2: Project Drill Collar Location Plan, Detail at Goose Claims Group



Note: Figure prepared by B2Gold, 2025.

Figure 10-3: Project Drill Collar Location Plan, Detail at George Claims Group



Note: Figure prepared by B2Gold, 2025.

Table 10-2: Drill Summary Table, Drill Campaigns by Area (all drilling)

Claims Group	Deposit	Unit Type	Pre-B2Gold	B2Gold	Total
Goose	Umwelt	Drill holes	289	103	392
		Metres	103,205	37,836	141,041
	Llama	Drill holes	266	18	284
		Metres	75,986	5,437	81,424
	Goose Main	Drill holes	338	2	340
		Metres	83,074	229	83,303
	Echo	Drill holes	85	—	85
		Metres	21,646	—	21,646
	Nuvuyak	Drill holes	34	8	42
		Metres	22,106	4,720	26,826
	Goose Neck South	Drill holes	19	2	21
		Metres	4,601	850	5,451
	Other	Drill holes	296	4	300
		Metres	36,622	1,675	38,297
George	Sub–Total	Drill holes	1,327	137	1,464
		Metres	347,240	50,747	397,987
	Locale 1	Drill holes	247	—	247
		Metres	43,604	—	43,604
	Locale 2	Drill holes	201	2	203
		Metres	49,958	742	50,700
	LCP North	Drill holes	79	1	80
		Metres	11,631	143	11,774
	LCP South	Drill holes	88	4	92
		Metres	19,224	894	20,118
	Tupiq	Drill holes	52	1	53
		Metres	6,655	284	6,939
	GH	Drill holes	74	5	79
		Metres	11,913	667	12,580
Boot	Other	Drill holes	264	8	272
		Metres	50,085	2,101	52,186
Boulder	Other	Drill holes	1,005	21	1,026
		Metres	193,071	4,831	197,902
Boot	Other	Drill holes	126	—	126
		Metres	18,129	—	18,129
Boulder	Other	Drill holes	89	—	89
		Metres	23,033	—	23,033

Claims Group	Deposit	Unit Type	Pre-B2Gold	B2Gold	Total
Needle	Other	Drill holes	13	—	13
		Metres	1,287	—	1,287
Wishbone	Other	Drill holes	39	—	39
		Metres	9,219	—	9,219
Del	Other	Drill holes	11	—	11
		Metres	610	—	610
BB13	Other	Drill holes	10	—	10
		Metres	127	—	127
Bathurst	Other	Drill holes	35	—	35
		Metres	164	—	164
Totals		Drill holes	2,655	158	2,813
		Metres	592,880	55,578	648,459

Note: Due to the proximity of some deposits to others, some drill holes intersect multiple deposits but are coded to only the one deposit in this table. The totals given in this table and the totals in Table 10-3 may not match.

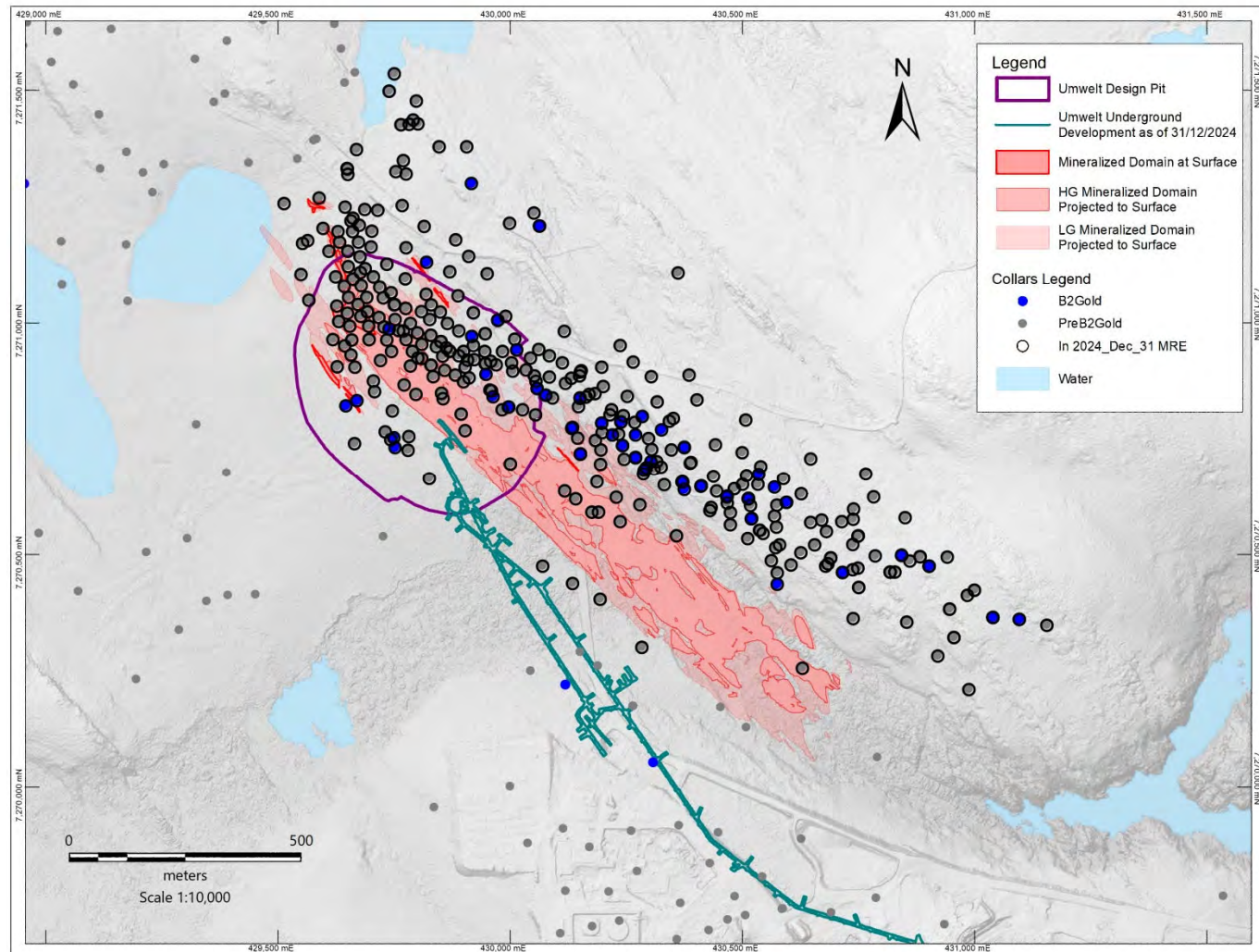
Table 10-3: Drilling and Assaying Supporting Mineral Resource Estimates, by Deposit

Deposit	Drilling & Assaying Completed			Drill Holes	Drill Metres	Trenches	Trench Metres
	From	To	Company				
Umwelt	1997-10-10	2024-12-05	Pre-B2Gold	310	109,234	—	—
			B2Gold	107	40,201	—	—
			Total	417	149,436	—	—
Llama	1997-09-28	2024-12-05	Pre-B2Gold	382	94,432	—	—
			B2Gold	21	6,350	—	—
			Total	403	100,782	—	—
Goose Main	1992-08-06	2023-11-20	Pre-B2Gold	375	96,170	24	183
			B2Gold	1	92	—	—
			Total	376	96,262	24	183
Echo	2009-08-24	2020-02-20	Pre-B2Gold	84	23,247	—	—
			B2Gold	—	—	—	—
			Total	84	23,247	—	—
Nuvuyak	1993-07-26	2024-12-31	Pre-B2Gold	74	33,865	—	—
			B2Gold	8	4,720	—	—
			Total	82	38,585	—	—
Goose Neck South	2011-08-17	2024-12-13	Pre-B2Gold	22	4,625	—	—
			B2Gold	2	850	—	—
			Total	24	5,475	—	—

Deposit	Drilling & Assaying Completed			Drill Holes	Drill Metres	Trenches	Trench Metres
	From	To	Company				
Locale 1	1986-07-07	2020-04-08	Pre-B2Gold	245	43,211	—	—
			B2Gold	—	—	—	—
			Total	245	43,211	—	—
Locale 2	1985-07-04	2020-04-08	Pre-B2Gold	202	50,131	—	—
			B2Gold	—	—	—	—
			Total	202	50,131	—	—
LCP North	1985-08-06	2020-04-08	Pre-B2Gold	75	11,150	—	—
			B2Gold	—	—	—	—
			Total	75	11,150	—	—
LCP South	2006-08-18	2020-04-08	Pre-B2Gold	78	16,125	—	—
			B2Gold	—	—	—	—
			Total	78	16,125	—	—
Tupiq	1985-07-26	2020-04-08	Pre-B2Gold	52	6,655	—	—
			B2Gold	—	—	—	—
			Total	52	6,655	—	—
GH	1986-07-11	2020-04-08	Pre-B2Gold	79	12,655	—	—
			B2Gold	—	—	—	—
			Total	79	12,655	—	—

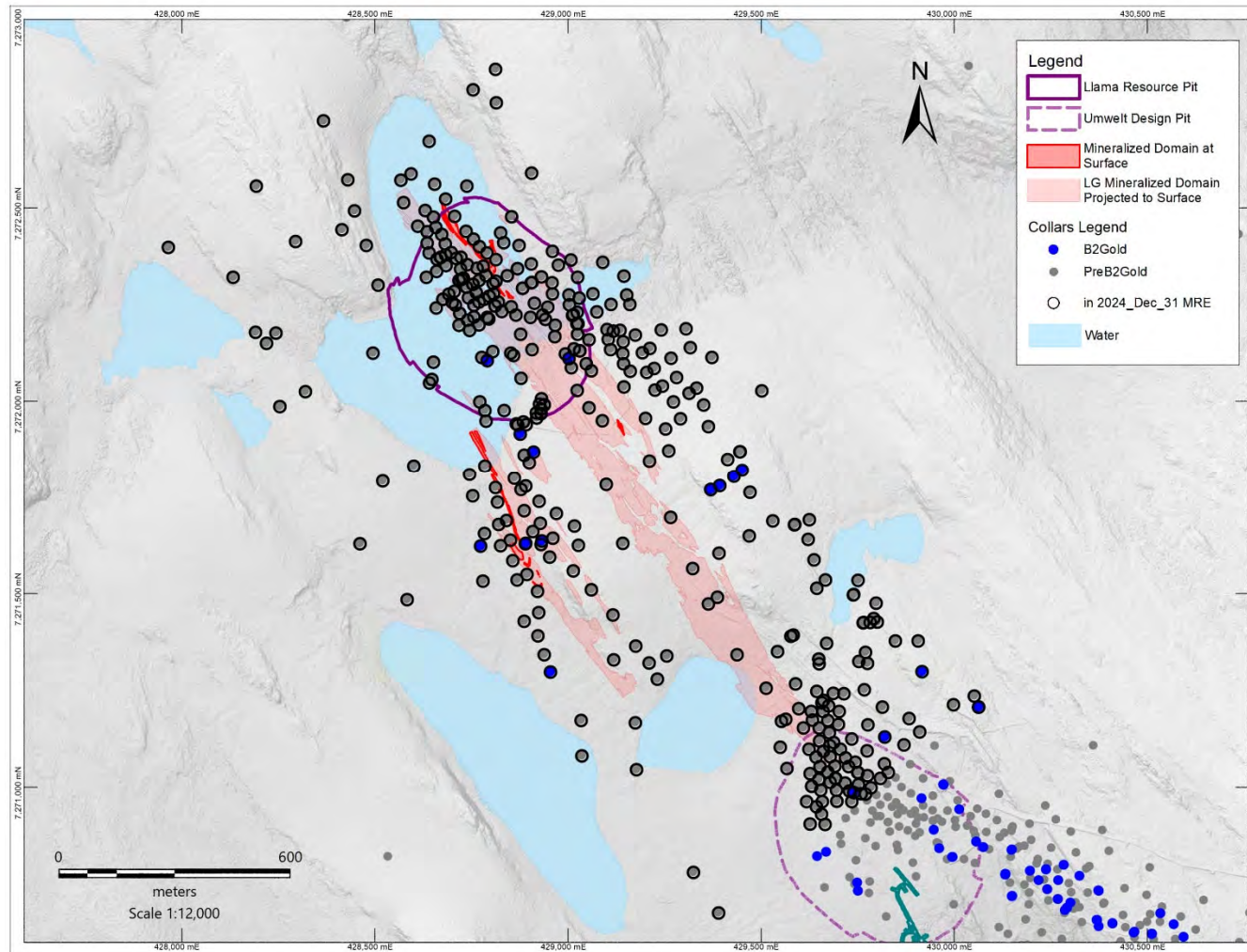
Note: Some drill holes may be duplicated due to the proximity between deposits. The totals given in this table should not be summed and may not match the totals in previous tables.

Figure 10-4: Project Drill Collar Location Plan, Umwelt



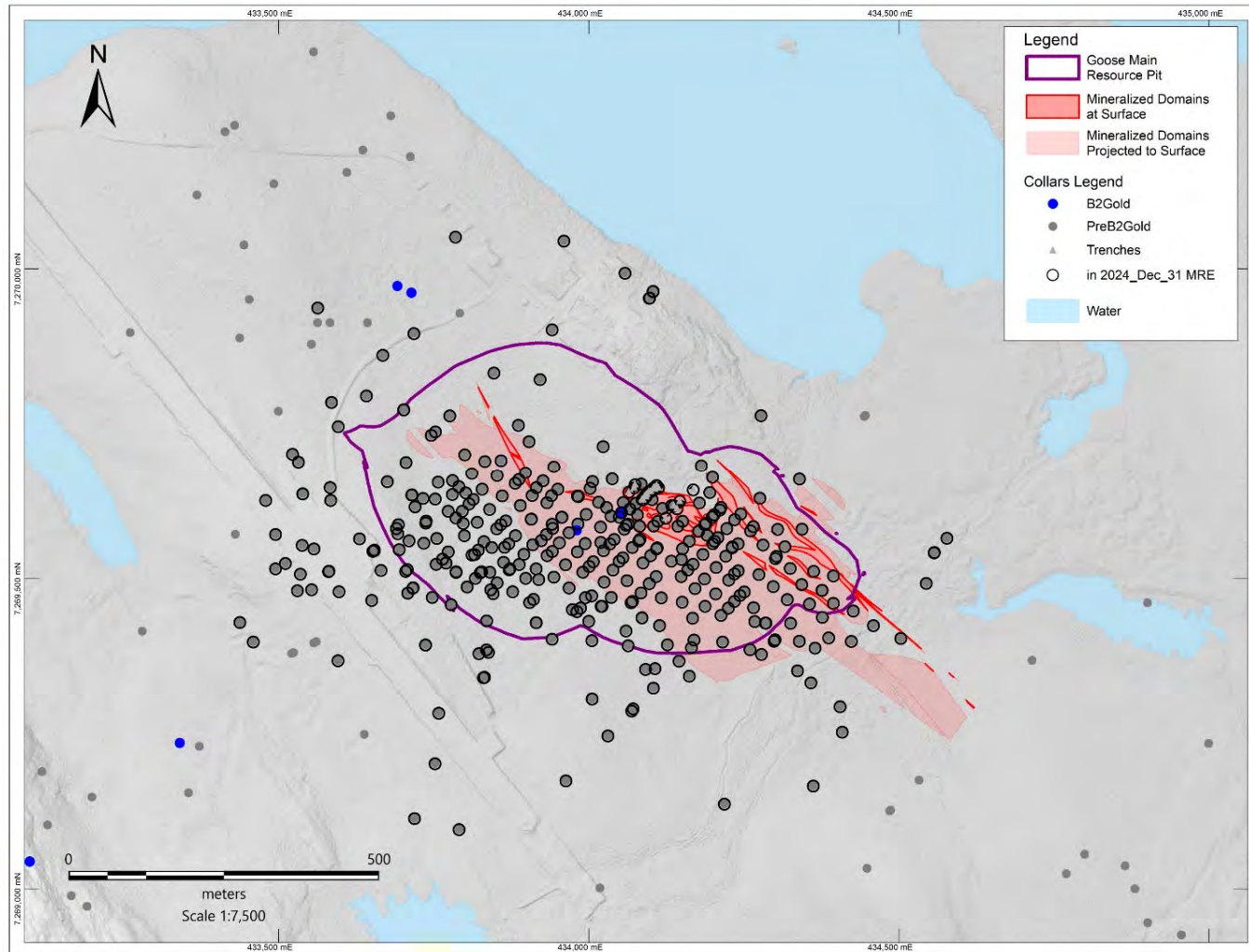
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds: LG (low grade) = 0.3–3 g/t Au, HG (high grade) = >3 g/t Au.

Figure 10-5: Project Drill Collar Location Plan, Llama



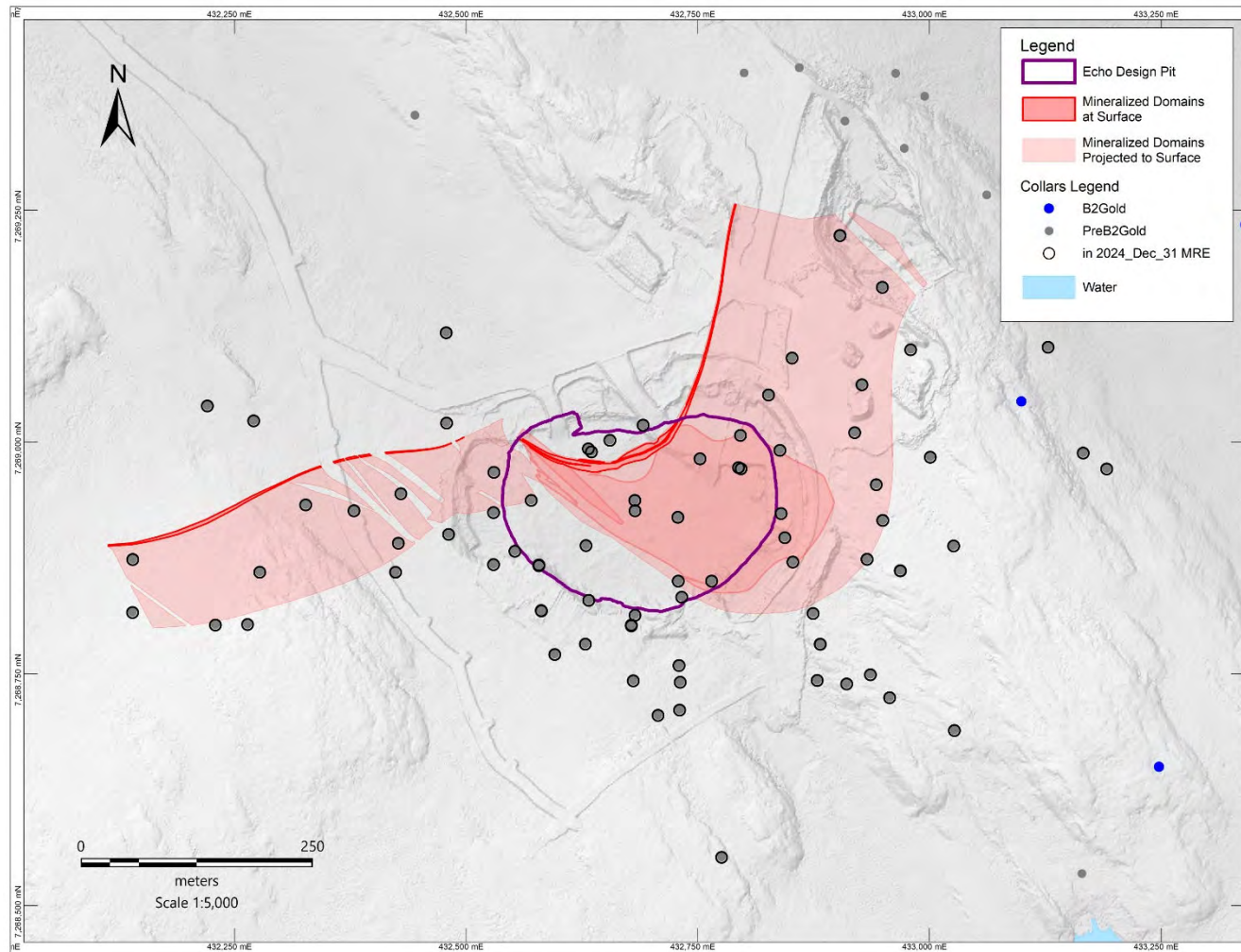
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds: LG (low grade) = 0.3–3 g/t Au, HG (high grade) = >3 g/t Au.

Figure 10-6: Project Drill Collar Location Plan, Goose Main



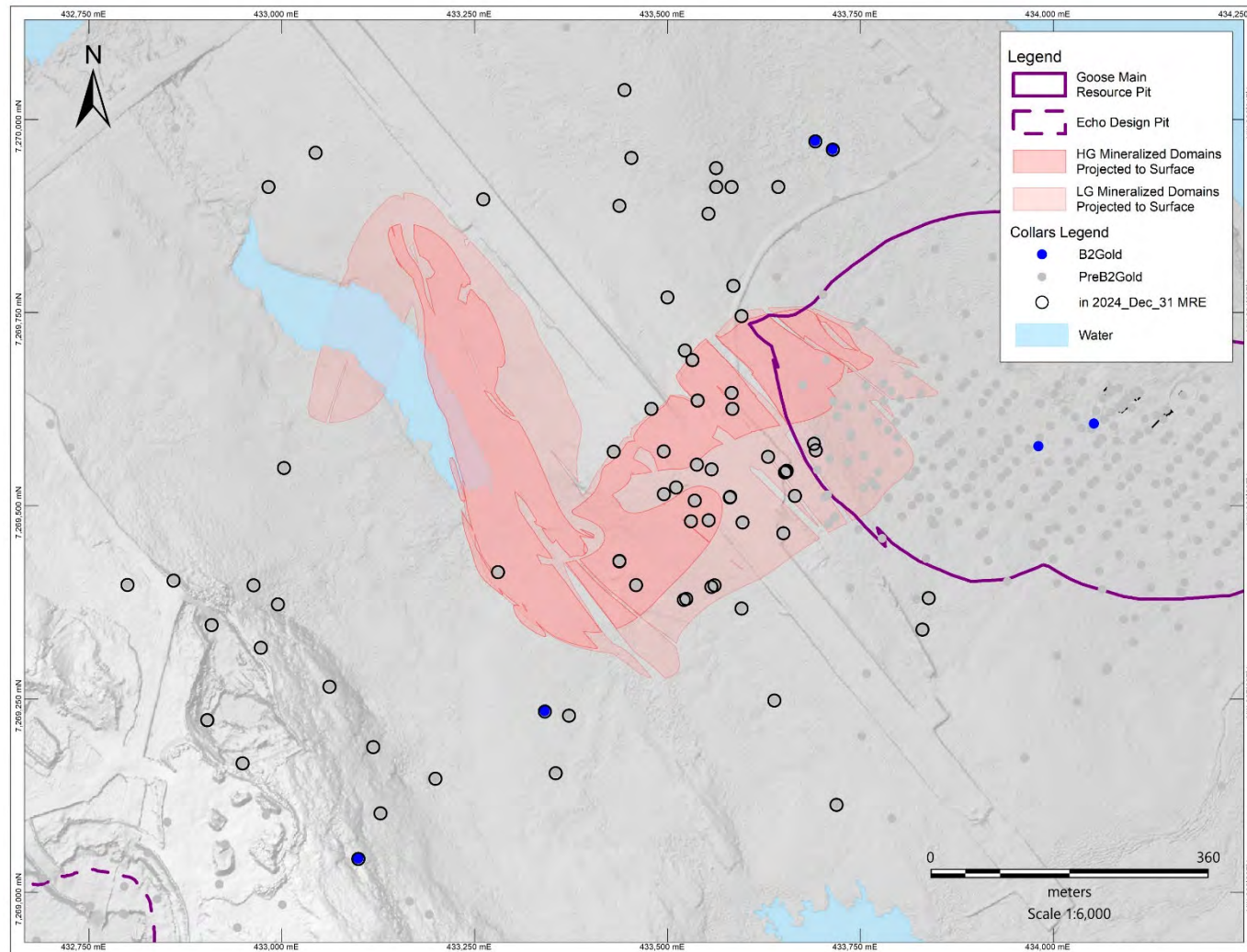
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds: LG (low grade) = 0.25–3 g/t Au, HG (high grade) = >3 g/t Au.

Figure 10-7: Project Drill Collar Location Plan, Echo



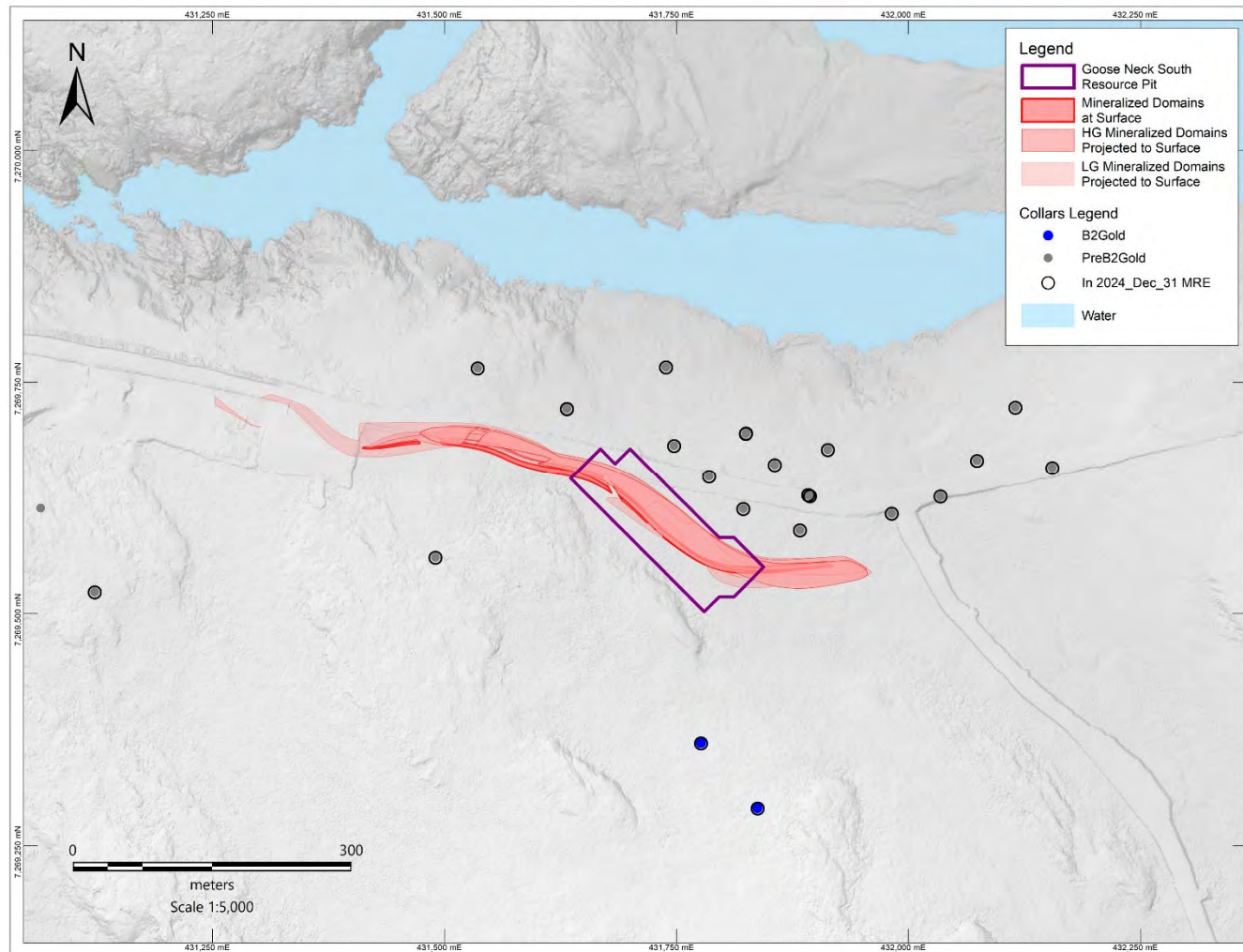
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds: LG (low grade) = 0.35–4 g/t, HG (high grade) = >4 g/t Au.

Figure 10-8: Project Drill Collar Location Plan, Nuvuyak



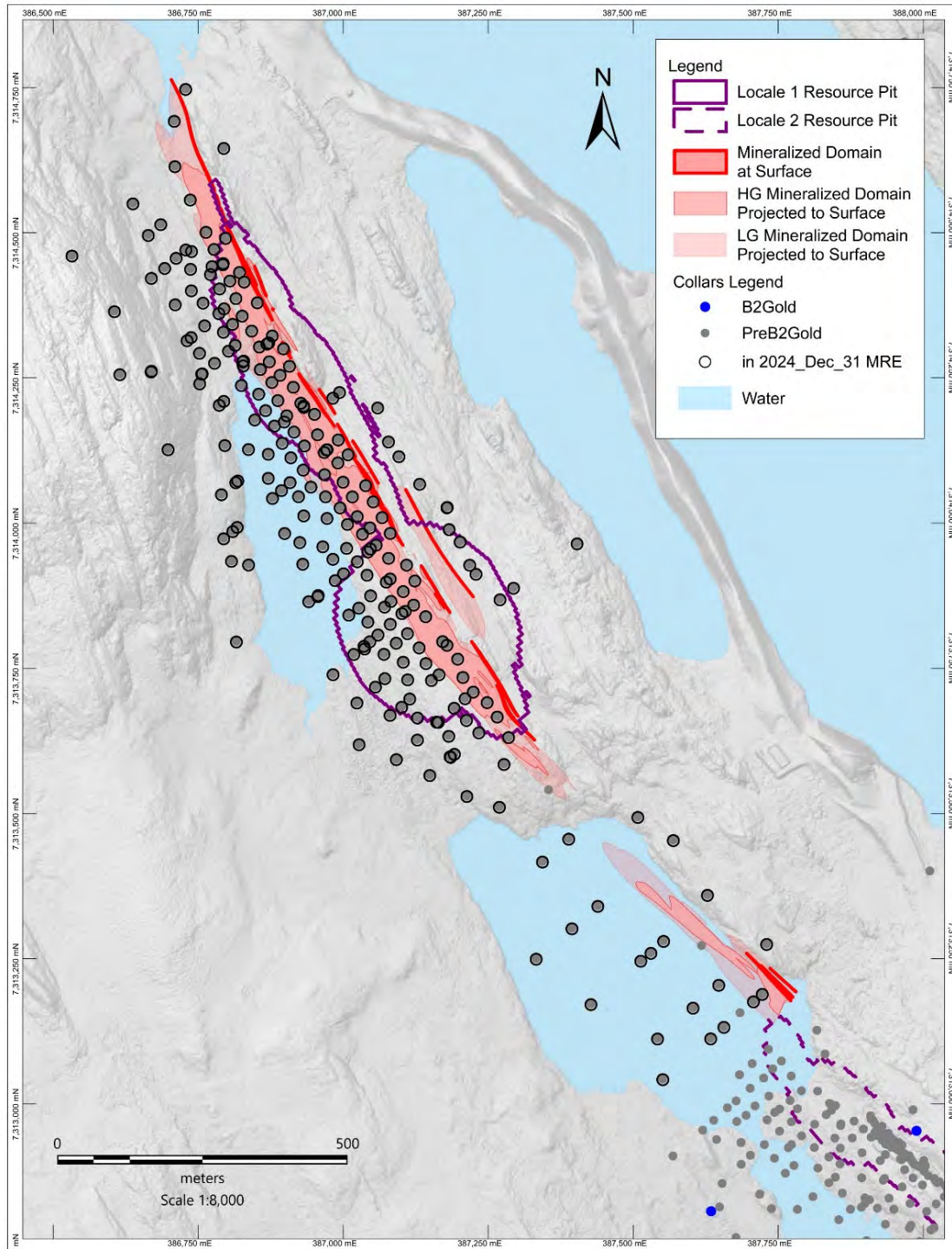
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds: LG (low grade) = 0.15–2 g/t Au, HG (high grade) = >2 g/t Au.

Figure 10-9: Project Drill Collar Location Plan, Goose Neck South



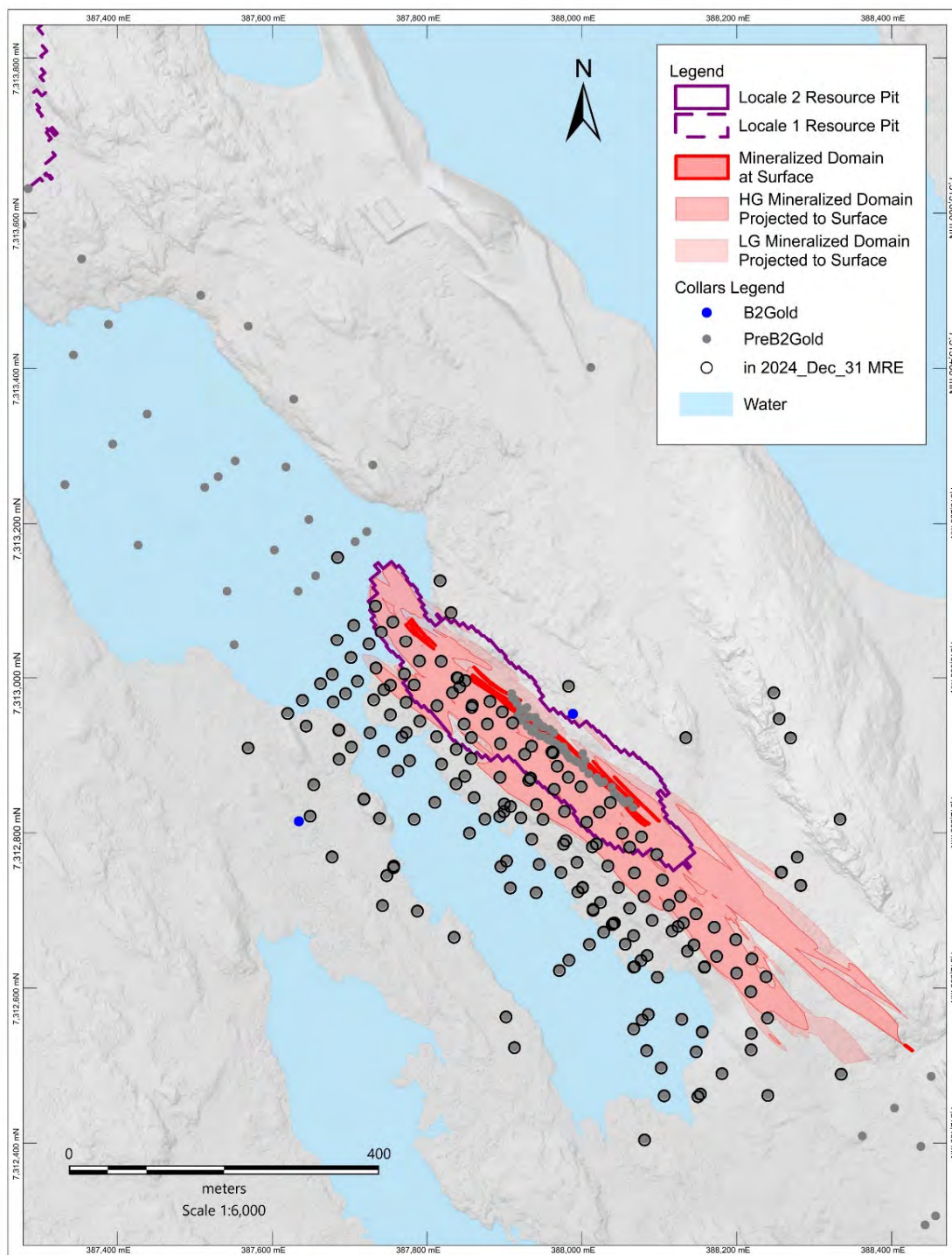
Note: Figure prepared by B2Gold, 2025. Mineralization domains approximate gold thresholds: LG (low grade) = 0.25–1.5 g/t Au, HG (high grade) = >1.5 g/t Au.

Figure 10-10: Project Drill Collar Location Plan, Locale 1



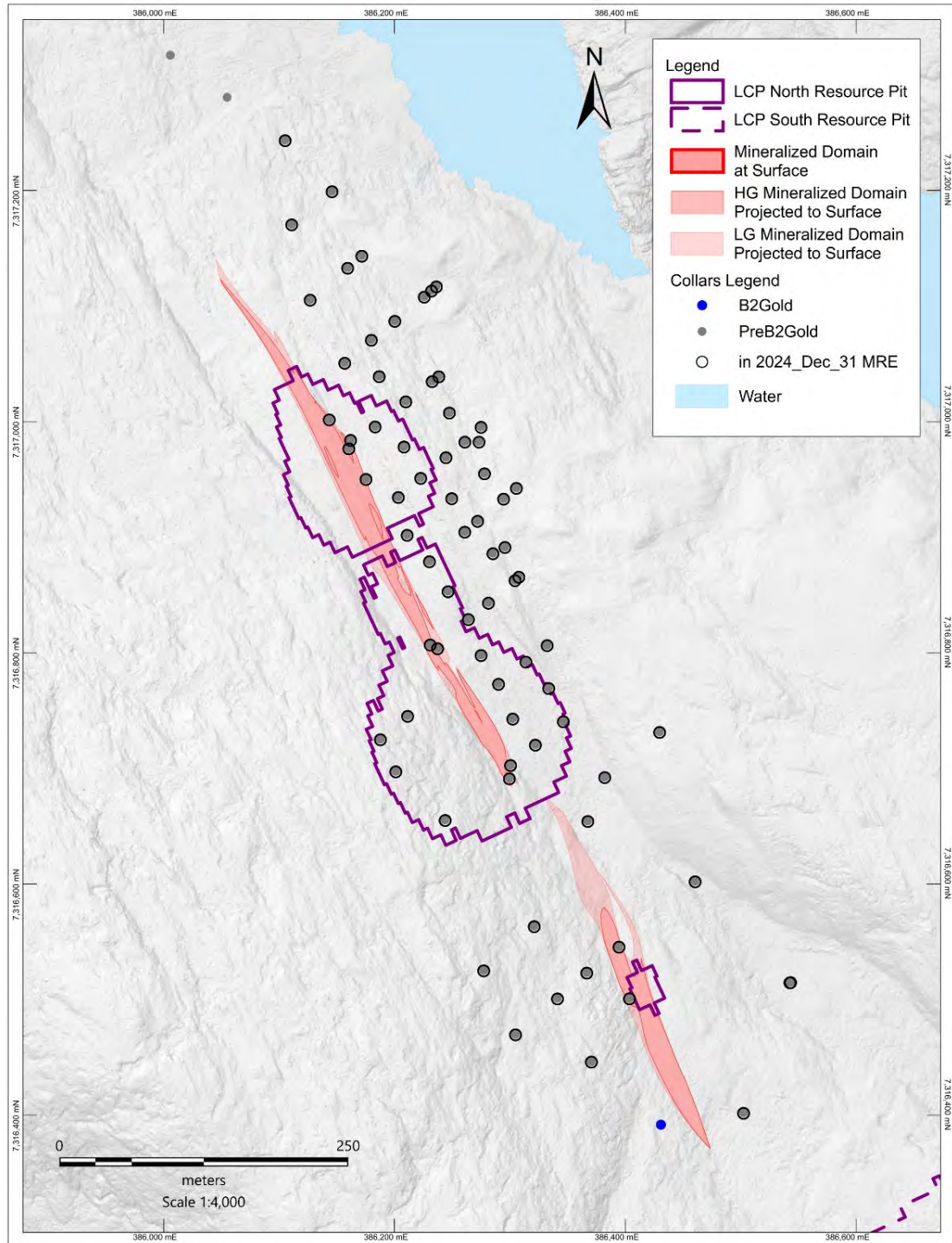
Note: Figure prepared by B2Gold, 2025. Mineralization domains gold thresholds: LG (low grade) = 1.0–3.0 g/t Au (minimum 3 m downhole length), HG (high grade) = >3.0 g/t Au (minimum 2 m downhole length).

Figure 10-11: Project Drill Collar Location Plan, Locale 2



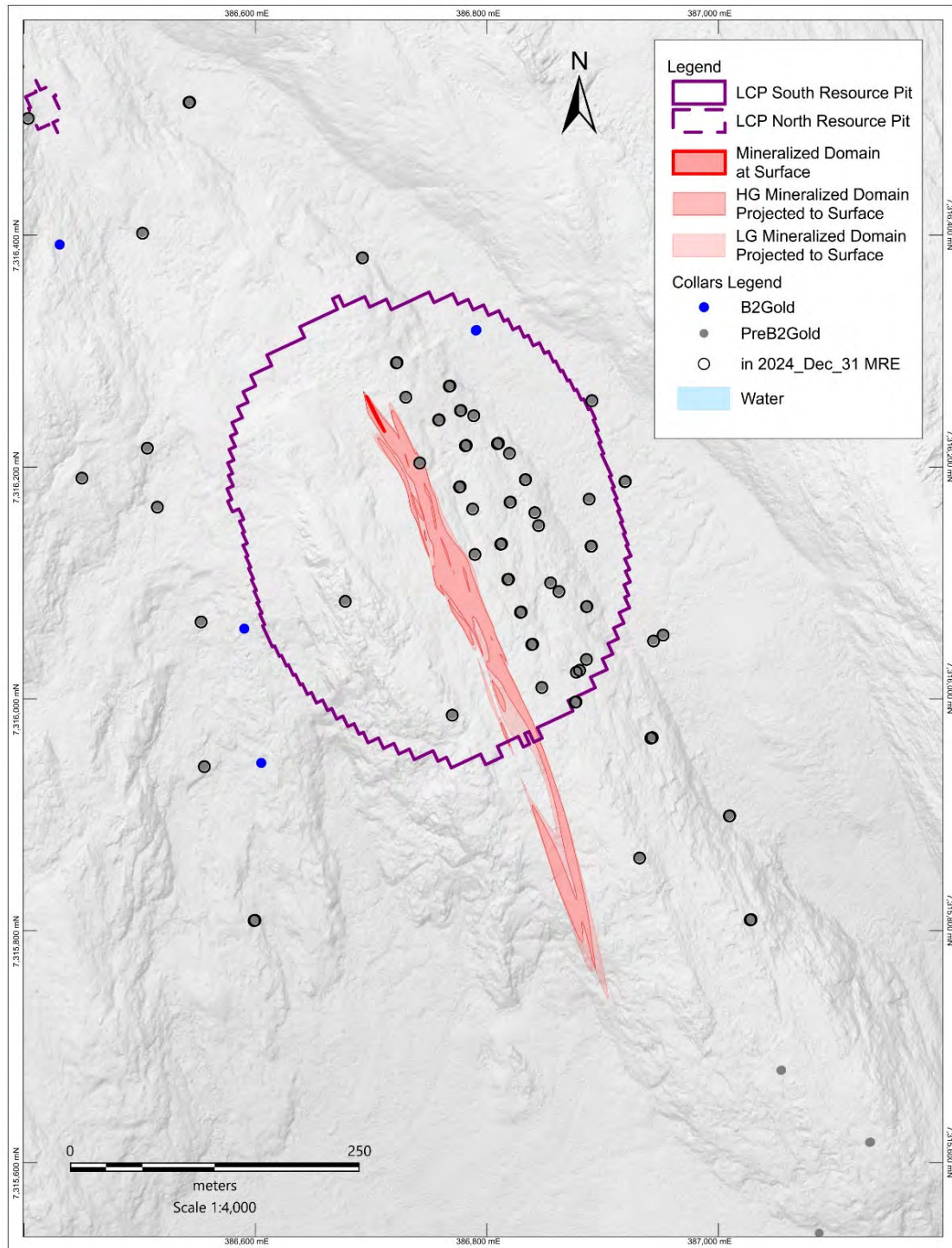
Note: Figure prepared by B2Gold, 2025. Mineralization domains gold thresholds: LG (low grade) = 1.0–3.0 g/t Au (minimum 3 m downhole length), HG (high grade) = >3.0 g/t Au (minimum 2 m downhole length).

Figure 10-12: Project Drill Collar Location Plan, LCP North



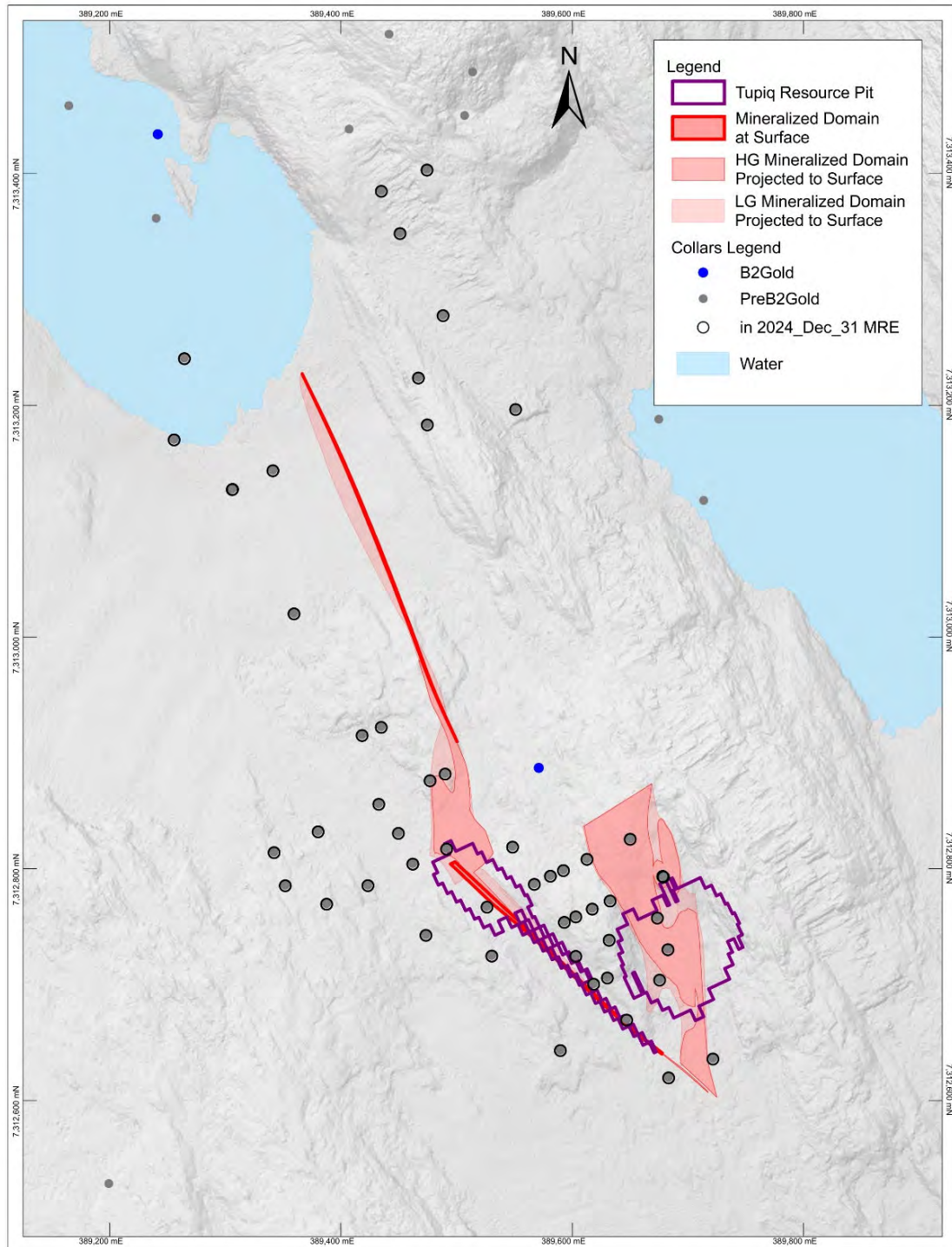
Note: Figure prepared by B2Gold, 2025. Mineralization domains gold thresholds: LG (low grade) = 1.0–3.0 g/t Au (minimum 3 m downhole length), HG (high grade) = >3.0 g/t Au (minimum 2 m downhole length).

Figure 10-13: Project Drill Collar Location Plan, LCP South



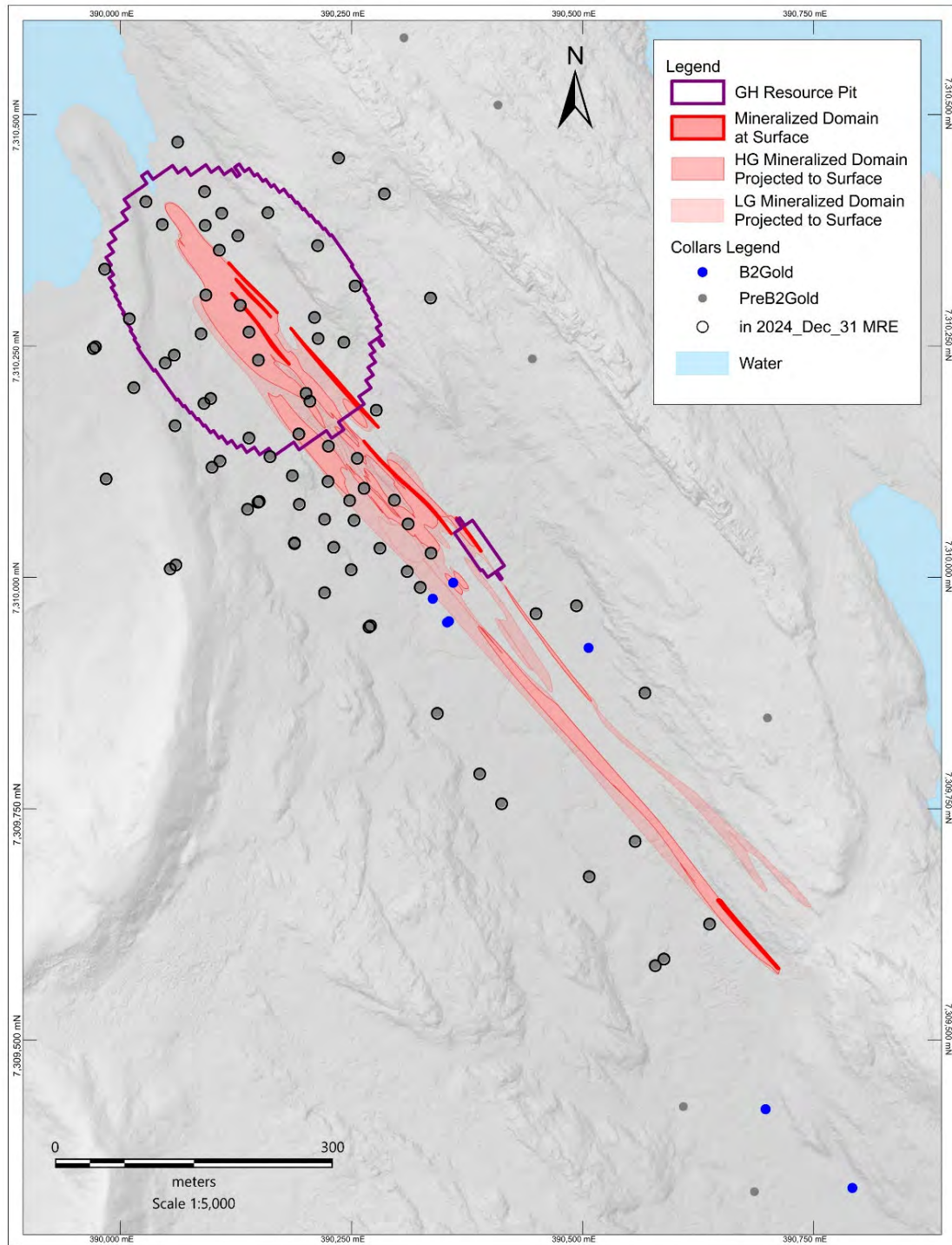
Note: Figure prepared by B2Gold, 2025. Mineralization domains gold thresholds: LG (low grade) = 1.0–3.0 g/t Au (minimum 3 m downhole length), HG (high grade) = >3.0 g/t Au (minimum 2 m downhole length).

Figure 10-14: Project Drill Collar Location Plan, Tupiq



Note: Figure prepared by B2Gold, 2025. Mineralization domains gold thresholds: LG (low grade) = 1.0–3.0 g/t Au (minimum 3 m downhole length), HG (high grade) = >3.0 g/t Au (minimum 2 m downhole length).

Figure 10-15: Project Drill Collar Location Plan, GH



Note: Figure prepared by B2Gold, 2025. Mineralization domains gold thresholds: LG (low grade) = 1.0–3.0 g/t Au (minimum 3 m downhole length), HG (high grade) = >3.0 g/t Au (minimum 2 m downhole length).

Table 10-4: Drill Methods

Year	Drill Contractor	Core Size
1985–1986	Connors Drilling	BQ
1987–1988		HQ/NQ/BQ
1989		HQ/NQ
1990		HQ/NQ2/NQ
1991		BQ
1991–1993	J.T. Thomas	NQ/BQ
1994		HQ/NQ/BQ
1997	Connors Drilling	NQ2
2000	Bradley Brothers	NQ
2001		NQ/NW
2002		NQ
2004–2008		NQ2
2009–2020	Major Drilling	NQ
2011		HQ/NQ
2012		NQ/NQ3/BQ2
2013		HQ/HQ3/NQ/NQ3
2014		NQ/NQ3
2015		HQ3/NQ/BQ
2015	Rocky Mountain Soil Sampling Inc.	NQ
2016	Major Drilling	NQ
2017		HQ3/NQ/NQ3
2018		HQ/NQ
2019–2020		NQ
2021		HQ3/NQ
2022		NQ
2023		HQ/HQ3/NQ/PQ
2024		HQ/AQTK/NQ

Table 10-5: Core Sizes

Core Size	Core Diameter (mm)
AQTK	30.5
BQ	36.5
BQ2	40.67
NQ	47.6
NQ2	50.6
NQ3	45.08
HQ	63.5
HQ3	61.1
PQ	85

10.3.3 B2Gold Programs

Geological data are digitally captured using MX Deposit software. The logged information includes lithology, alteration, mineralization, fabric, deformation, veining, and the presence of key minerals and mineralization styles.

Geotechnical logging includes RQD, fracture frequency, and core recovery. Core is oriented for structural data collection, and both goniometer and “rocket launcher”-type orientation devices are used. Structural features logged include veining, bedding, foliation, shearing, faulting, lithological contacts, joints, and lineation data. Other data collected includes specific gravity, magnetic susceptibility, and conductivity. Core is photographed wet and dry.

10.4 Recovery

Drill core recoveries are summarized in Table 10-6. Recoveries were typically good across all drill campaigns.

10.5 Collar Surveys

The majority of the early drill collars were surveyed using either global positioning system (GPS) or differential global positioning system (DGPS) instruments.

Early Homestake drill hole collar locations were located by conventional survey techniques based on a chained grid on cut lines. SRK Consulting (2012) reported that many of the original Homestake holes were resurveyed using DGPS instruments by Focus Surveys in 1997, but no record of which holes were resurveyed was available at the time.

Miramar drill holes completed in 2004 were surveyed using a Topcon GPT 2000 Total Station electronic distance measurement tool.

Table 10-6: Core Recoveries

Operator	Note
Dundee	In the Dundee drill programs, core recoveries were routinely recorded as part of standard geological logging practices. Most of the core was highly competent and recoveries of 100% were the norm, rarely falling below 95%.
Miramar	Recoveries during the 2000–2005 Miramar Mining Corporation campaigns averaged 98.6%.
Sabina	The average core recovery during 2009–2023 was 99.13% for the Goose group, and <2% of recoveries were under 90%. The average core recovery for the George group during 2009–2023 was 99.25%
B2Gold	The average core recovery during 2023–2024 was 99.3% for the Goose Group and 99.0% for the George Group.

From 2005 onward, Dundee used electronic distance measurement equipment to survey the drill hole collars. Ollerhead Survey completed resurveying of select 2006 drill holes (40 holes representing 20% of the 2006 holes) and found good agreement with the site surveys.

Dundee completed resurveying of all pre–2006 holes at the George and Boot Claims Groups using electronic distance measurement equipment between 2006 and 2008.

All collar surveys for Sabina and B2Gold drill programs used technologies to ensure precise and reliable data. Differential DGPS provides high accuracy by using a network of fixed ground-based reference stations to correct GPS signals. Additionally, total station instruments combine electronic distance measurement and angle measurement to provide precise location data.

10.6 Downhole Surveys

10.6.1 Pre-Sabina Programs

Historical down hole surveys were conducted using a combination of Maxibor, Sperry Sun single shot (magnetic), EZ-shot (magnetic), EZ-Trac (magnetic), RotoDip (magnetic), and acid tests (no azimuth) instruments/methods.

Down hole surveys for the 2005 Dundee drill program drilling were completed using the Reflex Maxibor and the Reflex EZ-Shot (magnetic) instruments.

The general procedure for down hole surveys involved drillers taking EZ-shot tests at specific intervals until the end of the hole. At that point, geo-technicians or surveyors conducted a Maxibor test from the bottom to the top of the drill hole.

Based on a detailed review by Dundee (Labelle, 2005), certain George Claims Group down hole survey azimuth data were adjusted. The Dundee study analyzed the azimuth deviation that would be expected in those drill holes that had either no azimuth, or suspected unreliable azimuth data, based upon the down hole deviations experienced by drill holes that had Maxibor surveys. As a result of the changes made, some drill holes significantly changed from the original drill hole traces (SRK Consulting, 2012).

10.6.2 Sabina Programs

The general procedure for down hole surveys was that Reflex EZ-Trac tests were taken by the drillers at 6 m below casing, then at 50 m intervals to the end of the drill hole. All drill holes deeper than 20 m were surveyed with either Maxibor (2009–2011) or gyro (2011–2023) instruments. Drill holes longer than 250 m would have multiple surveys taken, the first after reaching approximately 50 m depth, and then approximately every 200–300 m, to the end of the drill hole.

10.6.3 B2Gold Programs

Down hole surveys were completed using either a Reflex Sprint-IQ gyro (2023–August 2024) or an Omni38x Gyro Survey tool (August 2024–Report effective date). North-seeking and reference azimuth testing was conducted with both tools. Due to the Goose Project location at high latitudes, only referenced azimuth survey methods were used in estimation.

Surveys are completed at 15 and 30 m, and thereafter every 150 m until the end of the drill hole. At the completion of the drill hole a gyro survey is conducted from the collar to the bottom of the drill hole, similar to the process used when surveying an off-cut daughter drill hole resulting from directional drilling.

10.7 Twin Hole Drilling

In 2002, Kinross completed a twin drill hole at the Goose Main Deposit after the initial drill hole was halted at 85.5 m depth. The twin drill hole, drilled just 1 m from the original collar, shows the same broad characteristics in lithology and grade as the original drill hole.

Three dedicated twin drill holes were completed by Dundee in 2005 at the Goose Main deposit. Dundee selected drill holes for twinning, from a pool of three different drill programs, which were completed by three different operators to be twinned. The twin drill holes were collared approximately 2 m from the original drill holes' surveyed positions, as casings had previously been removed, and the drill holes were not clearly visible. The twin drill holes completed by Dundee show a good reproduction of the major geological features of the primary drill hole. In general, the overall gold grades of the twin drill holes matched the original drill hole, except for a Homestake drill hole (92G007) twinned by Dundee (05GSE076), which had similar mineralized intersections but at consistently lower gold grades.

Dundee carried out a twinning hole program in 2008 to evaluate for geological and mineralization risk at the Goose Main (n=9), and the Locale 1 and Locale 2 (n=19) deposits. Results allowed for the historic drill holes to be used in Mineral Resource estimation.

10.8 Metallurgical Drilling

Drilling and collection of samples for metallurgical testwork was often carried out in conjunction with exploration drilling campaigns as summarized in Table 10-7. Results from these drilling and sampling programs were used to estimate gold recovery and to design the Goose Mine ore processing facility.

Table 10-7: Metallurgical Drilling and Sampling Programs

Collection Year	Deposits	Dedicated Holes Drilled	Total Drill Holes Sampled	Sample Medium (s)	Laboratory
1987	Locale 1			65 lbs of 3 inch diameter channel samples from trench	Dawson Metallurgical Laboratories Inc. in Utah
1988	Locale 1, GH, LCP North		4	unknown	Dawson Metallurgical Laboratories Inc. in Utah
1990	Locale 1, Locale 2		8	crushed drill core	Dawson Metallurgical Laboratories Inc. in Utah
1991	Locale 1, Locale 2		5	crushed drill core	Hazen Research Inc. Golden Colorado.
1998	Locale 1, Locale 2, GH, Goose Main		52	crushed drill core	Process Research Associates Ltd. Vancouver, BC.
2006	Locale 2, Goose Main		5	crushed drill core	Process Research Associates Ltd. Vancouver, BC.
2006	Locale 2, Goose Main	10	10	quarter-core	SGS Lakefield, ON and SGS Toronto, ON
2008	Locale 1, Locale 2, Goose Main	21	26	half-core, quarter-core, grab samples	Gekko Systems Pty Laboratory in Ballarat, Victoria, Australia
2010	Umwelt, Llama, Echo		9	quarter-core	SGS Lakefield, ON
2012	Umwelt, Llama, Goose Main, Locale 1, Locale 2		32	half-core, quarter-core, crushed drill core	G&T Metallurgical Services (a division of ALS Canada Ltd.), Kamloops, BC
2013	Umwelt, Llama, Goose Main, Echo, Locale 1, Locale 2, LCP South	3	63	whole-core, quarter-core, crushed drill core	ALS Metallurgy-Kamloops, in Kamloops, BC
2014	Umwelt		10	half-core, quarter-core	ALS Metallurgy-Kamloops, in Kamloops, BC

Collection Year	Deposits	Dedicated Holes Drilled	Total Drill Holes Sampled	Sample Medium (s)	Laboratory
2015	Umwelt, Llama, Goose Main, Echo, Locale 1, Locale 2, LCP South		20	crushed drill core	Base Metallurgical Laboratories Ltd. in Kamloops, BC
2016	Umwelt, Llama, Goose Main		44	half-core, quarter-core, crushed drill core	Base Metallurgical Laboratories Ltd. in Kamloops, BC
2020	Umwelt		14	quarter-core	Base Metallurgical Laboratories Ltd. in Kamloops, BC
2023	Umwelt, Llama, Goose Main	3	3	whole-core	SGS Lakefield, ON
2024	Umwelt, Llama, Goose Main		10	whole-core, quarter-core, channel samples from trench (Goose Main and crushed drill core)	SGS Lakefield, ON

Metallurgical sample collection programs from 2014 to 2020 added material to the already extensive sample inventory held at ALS Metallurgy-Kamloops, in Kamloops, BC. In 2016 all material from ALS Metallurgy was moved to Base Metallurgical Laboratories Ltd. in Kamloops, BC. Metallurgical testwork from 2013–2020 used combinations of the sampled material.

Metallurgical testwork was completed by B2Gold through two different short programs in 2023 and 2024.

10.9 Geotechnical, Geomechanical, and Hydrogeological Drilling

Drilling and collection of data for geotechnical, geomechanical, and hydrogeological investigations was often carried out in conjunction with exploration drilling campaigns, as summarized in Table 10-7 to Table 10-10. Results from these drilling and sampling programs were used during engineering of the Goose mine. There has been no condemnation redrilling completed as of the Report effective date.

Drilling was included in Table 10-1, and the drill hole collars were shown on Figure 10-1.

10.10 Sample Length/True Thickness

A summary of the relationship between sample lengths and true thicknesses is provided in Table 10-11.

10.11 Drilling Since Database Close-out Date

The databases used for Mineral Resource estimation have various cut-off dates, refer to Section 2.5.

Only one drill hole has been completed at Goose Main since the database close-out date of 2 August, 2024. This drill hole does not significantly impact the Mineral Resource estimate.

At the George Claims Group, 11 holes (2,803 m) were drilled since the database close-out date of 8 April 2020 across five deposits containing Mineral Resource estimates. Comparisons of this drilling to existing resource models indicate that they will not have a material effect on the Mineral Resource estimates.

10.12 Comments on Drilling

In the opinion of the QP, the quantity and quality of the logged geological data, collar, and downhole survey data collected in the exploration and infill drill programs are sufficient to support Mineral Resource and Mineral Reserve estimation and mine planning as follows:

- Core logging meets industry standards for gold exploration;
- Collar surveys have been performed using industry standard instrumentation;
- Downhole surveys were performed using industry standard instrumentation;
- Recovery data from core a drill programs are acceptable;

Table 10-8: Geotechnical Drilling and Sampling Programs by Year

Year	Claims Group	Location	Dedicated Holes Drilled	Core Size
2011	Goose	All-weather airstrip	12	HQ3 triple tube
2013	Goose	Goose plant site, and tailings facility	34	HQ3 triple tube
2015	Goose	Goose tailings facility	36	HQ3 triple tube
2015	Bathurst	Marine Laydown Area	11	NQ
2017	Bathurst	Marine Laydown Area	24	HQ3 triple tube
2017	Goose	Revised Goose plant site	29	HQ3 triple tube

Table 10-9: Geomechanical Drilling and Sampling Programs

Year	Claims Group	Deposits	Dedicated Holes Drilled	Core Size	Total Drill Holes Tested
2012	Goose	Goose Main, Llama, and Umwelt	5	NQ3 triple tube	22
2013	Goose, George	Goose Main, Llama, Umwelt, Locale 1, Locale 2, LCP North, and LCP South	34	NQ3 triple tube	34
2014	Goose	Goose Main, Llama, Umwelt, and Echo	11	NQ3 triple tube	38
2017	Goose	Umwelt	—	—	8
2023	Goose	Umwelt	7	HQ3 triple tube	7

Table 10-10: Hydrogeological Drilling and Sampling Programs

Year	Claims Group	Deposits	Location	Total Drill Holes Tested	Hydraulic Packer Tests	Thermistors Installed	Piezometers Installed	Other Installation
1997	Goose	Goose Main		1		1		
2008	Goose	Goose Main		1		1		
2011	Goose		All-weather airstrip	1		1		
2012	Goose	Goose Main, Llama, and Umwelt		16	16	3	3	
2013	Goose, George	Goose Main, Llama, Umwelt, Locale 1, Locale 2, LCP North, LCP South	Umwelt fault, Goose Lake talik, all-weather airstrip	15 (Two dedicated DDH (NQ3))	34	13	13	Westbay Well
2014	Goose	Echo		2		2	1	
2017	Goose	Umwelt		1	2			
2023	Goose	Umwelt		1		1	4	

Table 10-11: Drilled Versus True Thicknesses

Deposit	Note
Goose Main	Structurally complex, and the zone morphology is extremely intricate, resulting in a wide variety of drill hole/mineralization intersection angles and true mineralization thickness relationships. Over 80% of the drill holes were drilled with an azimuth between 40°–60°, and nearly 60% had an inclination between -50° and -60°. The average true width of the mineralization is 65% of the sample length with 15% of the intercepts having a true mineralization width of 85% or greater.
Llama	Predominantly drilled from the west and east, with 57% of the drill holes oriented between 220°–250°, and 34% oriented between 50°–70°. Drill hole inclinations vary from -40° to vertical, with over 70% of the holes in the -40° to -60° range, and 23% in the -60° to -70° range. The drill hole spacing along sections is approximately 50 m. The true length of mineralization intercepts varies from 60–90% of the sampled length, averaging 73%.
Umwelt	Primarily drilled from the west, with 68% of the drill holes oriented between 220°–240°, and 17% oriented between 200°–220°. Drill hole inclinations range from -30° to vertical, with 31% of the holes in the -60° to -70° range, 25% in the -50° to -60° range, and 14% in the -70° to -80° range. The drill hole spacing along sections is approximately 30 m. Based on the structural and stratigraphic control of mineralization, the average true width of the mineralization is about 75–85% of the sampled length, although this varies depending on the local orientation of mineralized zones and natural drill hole deviation.
Echo	Most holes are drilled towards the west or northwest, with nearly 30% oriented between 280–300°, and another 30% between 340–360°. The dip is predominantly in the -50° to -40° range (50% of drill holes), with drill holes reaching up to -80°. The drill hole spacing along sections is approximately 30 m. The average true thickness of the mineralization is 65% of the sample length with 25% of the intercepts being 90% of the sample length or greater.
Nuvuyak	The preferential azimuth ranges from 220° to 240° with 60% of the holes drilled with this orientation. 25% of the remaining holes have the counter azimuth (40°–60°). Drill hole inclinations vary from 57° to 74°, with 70% of the holes in the -65° to -74° range. The average true thickness of the mineralization is 85% of the sample length.
Goose Neck South	Most holes are drilled towards the southwest, with 70% of the drillholes with azimuth between 220° and 240°. Hole inclinations vary from -50° to -40° and from -70° to -60°, representing 65% and 23% of the drillholes, respectively. The average true thickness of the mineralization at Goose Neck South is 76% of the sample length.
Locale 1	Mainly drilled from west to east with 90% of drill holes with an azimuth between 40°–60° with slightly over 50% of these holes with an inclination between -50° and -60°. The remaining 50% is divided into 23% with an inclination between -60° and -70° and 21% between -40° and -50°. The average true width of mineralization is approximately 65% of the sample length.
Locale 2	Predominantly drilled from west to east with 90% of drill holes with an azimuth between 40°–60° with approximately 50% of these holes with an inclination between -50° and -60°. The remaining 50% is divided into 29% with an inclination between -60° and -70° and 16% between -40° and -50°. The average true mineralization is approximately 75% of the sample length.
LCP North	Primarily drilled from east to west with 76% of the azimuths between 220° and 240°, and 18% from west to east with azimuth between 40° and 60°. Inclination is evenly distributed with 52% between -50° and -40° and 43% between -60° and -50°. The average true mineralization width is approximately 65% of the sample length, reflecting the steep-dipping nature of the mineralization.
LCP South	Primarily drilled from east to west with 94% of the azimuths between 240° and 260° with an inclination that varies from -40° to vertical. The average true mineralization width is approximately 60% of the sample length, reflecting the steep-dipping nature of the mineralization.

Deposit	Note
Tupiq	61.5 % of the drill holes have azimuth in the 60°–80° range. Inclinations vary with 50% of drillholes between the -50° and -40° range, and 41% between -60° and -50°. The average true thickness of the mineralization is 75% of the sample length.
GH	84% of drill holes were drilled towards northeast (azimuth 40°-60°) and 16% towards northwest (220° -240°). Inclination varies from -40° to -70° with the bulk of the data (57%) falling between -50° and -40°. The average true thickness of the mineralization is 75% of the sample length.

- Drill orientations are generally appropriate for the mineralization style and the orientation of mineralization for the bulk of the deposit area;
- Drilling has generally been done at regularly-spaced intervals and is considered representative of the deposit. Drilling was not specifically targeted to the high-grade portions of the deposits, rather, a relatively consistent drill spacing was completed.

There are no drilling, sampling, or recovery factors known to the QP that could materially impact the accuracy and reliability of the results.

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Geochemical Programs

Geochemical sample types are summarized in Table 11-1.

11.2 Drill Programs

Core sampling procedures have evolved with the various operators and industry standards since exploration began in the Back River District in 1982. Sample lengths ranged from 0.5–2.0 m with a 1.0 m average length, focusing on mineralized and strongly veined lithologies. Samples consisted of half core, split by manual core splitter until 2002 (no drilling took place in 2003), and then cut with a diamond saw from 2004 to the Report effective date.

Sampling methodology performed on drill core is summarized in Table 11-2.

11.3 Density Determinations

Specific gravity determinations were completed as summarized in Table 11-3. As at the Report effective date there are 21,336 density measurements determined by the water immersion method in the database, of which 5,310 were collected by B2Gold. Of the B2Gold measurements, 4,986 were conducted at the Goose Claims Group and 325 at the George Claims Group.

Comparative analyses of wax-coated and non-wax-coated samples in 2006 (n = 44), 2008 (n=388), and 2024 (n = 494) revealed negligible differences across all lithologies.

In 2024 B2Gold compared density measurements of oven-dried and wax coated samples against air-dried samples, with negligible differences across all lithologies with one exception. Two of the 15 sulphidized silicate iron formation tested showed a statistically significant difference of >1 g when comparing the air-dried versus oven-dried weight. However, further density comparison tests of sulphidized silicate iron formation remain within 0.03 g/cm³.

B2Gold intends to discontinue wax coatings in 2025. From that year onward the company will obtain bulk density measurements using the immersion method to compile density data.

Mineral Resource estimates used averaged specific gravity values for the stratigraphic and intrusive units in the estimate, as provided in Table 11-4 and Table 11-5.

11.4 Analytical and Test Laboratories

Laboratories used, the type of work completed, accreditations, and independence are summarized in Table 11-6.

11.5 Sample Preparation

Sample preparation methods varied over time with the use of different laboratories. Where known, the sample preparation procedures are summarized in Table 11-7.

Table 11-1: Geochemical Sampling

Sample Type	Year	Operator	Note
Grab sample	All	All	Averaged 2–3 kg. Collected from outcrop, sub-crop, felsenmeer, and float. Lithologies included banded iron formation, felsic dykes, mineralized quartz veins, or any other lithologies that had gold potential. Sampling focused on identification of mineralization in bedrock and felsenmeer.
Till	1994	Homestake	Frost boil sampling from 30-50 cm depth holes, sieved to eliminate most of the coarse fragments, collected in kraft bags and dried onsite. 95 samples collected from three areas at the Goose Claims Group.
	2007	Dundee	Typically 1 kg sample. Collected along nominal 500 x 50 m or 300 x 50 m spaced grids. Wherever possible, soil was collected from the B soil horizon, with preference given to sites that contained frost boils. Where till material was unavailable, grab samples were taken instead.
	2018	Sabina	Typically 1 kg sample. Two types of till were sampled: clayey basal till and sandy ablation till. Frost boils were also sampled in 44 locations
	2024	B2Gold	Typically 1 kg sample. Spacing of 200 x 50 m between samples. Sampling oriented perpendicular to the main ice-flow direction. Active and inactive frost boils provided the best sampling media to be representative of the basal till and/or local bedrock. If a well-defined frost boil could not be found, the sample was recorded as a “dug hole,” or a sample was not taken. Till sampling stations are cleared of organic debris with 2kg of material collected below the soil development and screened to <63 µm.
Lake sediment	2018	Sabina	Goose, Llama and Umwelt Lakes sampled using a hornbrook sediment sampling tool which was dropped into the lake bottoms from a small boat. Sample personnel collected two sample shots at each location, discarding the top 2–3 cm of material from each sample, and collecting the remaining samples in bags.
Channel	2005–2006	Dundee	Channels were collected from the Goose Main trenches using a handheld water cooled, rotary diamond saw. Sampling intervals were between 0.5 m and 1 m in length, 5 cm in width. Sampling intervals were chipped out with a hammer and chisel, bagged and labelled on site.
	2012	Sabina	Channels were cut to a minimum of 5 cm-wide and 5 cm-deep in Del Claims Group. Sample lengths were defined by changes in major lithology and vein density, and then further hand-cobbled into two sub-samples for each interval, separating quartz veins from wall-rock material. All material within the channels was collected for analysis; however, some of the channels have small gaps in sampling due to surface irregularities.
	2019	Sabina	Channels were collected from the Goose Main trenches using a handheld water cooled, rotary diamond saw. Sampling intervals were between 0.5 m and 1 m in length, 5 cm in width. Sampling intervals were chipped out with a hammer and chisel, bagged and labelled on site.
	2024	B2Gold	256 channel samples were collected in Boulder, Del, and Needle Claims Groups. The channels were oriented to cut across mineralized trends and cut to a maximum of 5 cm-wide and 5 cm-deep. Sample lengths were defined based on major lithology/sulphide/vein density changes. All

Sample Type	Year	Operator	Note
			material was evenly collected within the channels for analysis. Small gaps in channel samples are present in a minority of channels due to surface irregularities.
Bulk sample	2024	B2Gold	Bulk sample for metallurgical testwork collected from three channel lines within a trench in Goose Main Deposit (Approximately 265 kg). Sampling intervals were 0.5–1 m in length, 5 cm in width. Samples were cut with a rock saw, chipped out with a hammer and chisel, bagged and labelled on site.

Table 11-2: Core Sampling

Year	Operator	Note
1985	TWO	Sampled material included all banded iron formation including a 1.0 m shoulder; as well as intervals with strong quartz veins, chlorite, and sulphides alteration.
1986–1987	Kerr, Bow, Homestake	Sampled material included all banded iron formation and intervals with strong quartz veins, chlorite, and sulphides alteration. 0.5 m shoulder included
1988–1990	Homestake	Sampled material included all sulphidized banded iron formation and intervals with strong quartz veins, chlorite, and sulphides alteration. 0.5 to 1.0 m shoulder included
1991–1994	Homestake	Sampled sulphidized banded iron formation including 0.5–1.0 m shoulders. Sample lengths ranged from 0.4 m to 1.5 m.
1997–2001	Homestake, Arauco/Kit, Kinross	Sampled material included all oxide banded iron formation including a 1.0 m shoulder, and sulphidized silicate banded iron formation, quartz veins, and sulphidized sediments. Samples ranged from 0.5 m to 2.0 m, averaging 1.0 m. Samples with visible gold were sawn in half instead of being split.
2002	Kinross	Samples ranged from 0.5 m to 1.5 m, averaging 1.0 m. This is the last year that samples were split.
2004–2005	Miramar, Dundee	A cut line was drawn on the core to ensure representative sampling of mineralized structures. Sampling was generally on 1 m intervals, with shoulder samples up to 1.5 m. Samples were selected based on contacts, alteration, mineralization, and structure, with a minimum sampling width of 0.3 m. In intervals of mechanically-oriented drill core, the oriented bottom-of-hole line was used as the cutting line. Sample intervals were recorded in a sample sheet and in the sample tag book, and tags were inserted into the core box at the end of each sample. The sample sheet included sample numbers for blanks, duplicates, and standards, all of which were inserted using a pre-set protocol. Sample bags are prepared using a pre-labelled sample bag, sealed, and weighed.
2006–2008	Dundee	All drill core was sampled from top to bottom of the drill hole. A cut line was drawn on the core to ensure representative sampling of mineralized structures. Sampling was generally on 1 m intervals, with shoulder samples up to 1.5 m. Samples were divided by geological considerations for contacts, alteration, mineralization, and structure, with a minimum sampling width of 0.3 m. In intervals of mechanically-oriented drill core, the oriented bottom-of-hole line was used as the cutting line. Sample intervals were recorded in sample tag books and tags inserted into the core box at the end of each sample. The logger would prepare a sample sheet containing all sample IDs with corresponding intervals with the appropriate QA/QC inserted into the sample sequence. The sample sheet includes sample numbers for blanks, duplicates, and standards. Sample bags are prepared using a pre-labelled sample

Year	Operator	Note
		bag, sealed, and weighed. The QA/QC samples were inserted using a pre-set QA/QC insertion procedure.
2009–2023	Sabina	A cut line was drawn on the core to ensure representative sampling of mineralized structures. Sampling focused on capturing representative mineralized structures while adhering to lithological contacts, alteration, and structures. For iron formations, a minimum sample length of 0.5 m was required, with an average sample length of 1.0 m, while felsic dykes necessitated a minimum length of 0.3 m, ensuring lithological contacts aligned within a sample boundary. Shoulder samples up to 1.5 m were used to bridge gaps between samples. Shoulder widths for isolated samples ranged from 1.0–2.0 m, while mineralized or target zones required a minimum shoulder width of 6.0 m. Sample intervals were digitally recorded and tags printed, then inserted into the core box at the end of each sample. The logging geologist would prepare a sample sheet containing all sample IDs with corresponding intervals with the appropriate QA/QC inserted into the sample sequence. The sample sheet includes sample numbers for blanks, duplicates, and standards. Sample bags were prepared using a pre-labelled sample bag, sealed, and weighed. The QA/QC samples were inserted using a pre-set QA/QC insertion procedure.
2023–2024	B2Gold	Core was sampled primarily based on geological boundaries such lithology, alteration, mineralization, and structural domains. Sample intervals ranged from 0.5–1.5 m, with an optimal length set at 1 m. The first and last meter of every hole is sampled. Shoulder sampling width around the main target zone is 6m. Shoulder widths for isolated samples range from 1.0-2.0 m. All intervals containing iron formation, felsic dyke lithologies and the middle mudstone stratigraphic unit are sampled. The QA/QC samples were incorporated following a predefined QA/QC insertion protocol. A minimum of one standard, one blank and one duplicate is inserted every 25 samples. Core was cut in half using automatic core saws along an orientation line. When no orientation line was available due to structural difficulties, a cutting line was marked aligning with any existing orientation line. For AQ core only, the entire core was sampled as the volume was otherwise too small for analysis. One half of the core was retained in the core trays, while the other half was placed in a plastic bag, labeled and dispatched for analysis. Using a Zebra Bar-Code printer, two-part sample tickets are printed following a protocol connected to MX Deposit. One half of the sample tag is inserted in the pre-labeled sample bag, then sealed and weighted. While the other half was stapled into the core box for reference. The retained half-core was cataloged and stored for future reference. Core trays were consecutively stacked and clearly labeled with the drill hole number, tray number, and interval.

Table 11-3: Density Sampling Summary

Year	Laboratory/Operator	Method
2005–2008	TSL Laboratories	Water immersion method: The core is initially weighed in air. Subsequently, it is weighed again while suspended in water using a basket beneath the scales. A formula is then applied to calculate the specific gravity of the material. Core was not sealed prior to immersion, aside from during the comparison studies which found negligible differences between the wax-coated and uncoated measurements.
2011–2023	Sabina Core Facility	Specific gravity determined using the water immersion method. Water density was corrected for temperature fluctuations. Core was not wax-coated prior to immersion.
	TSL Laboratories, SGS, ALS Chemex	As part of the QA/QC program each year, Sabina sent 4–30% of the Sabina collected SG samples to the main preparation laboratory (TSL, SGS, and ALS Chemex) for comparative testing. Each laboratory used the water immersion method on uncoated core.
2023–2024	B2Gold Core Facility	Specific gravity determined using the water immersion method. 10–20 cm long core samples taken every 20 m outside of mineralized zones, and every 4 m within mineralized zones, with local adjustments to ensure capture of narrow intervals of specific lithology. Wax-coated samples tested in October–November 2024. Oven drying prior to specific gravity determinations started in August 2024.

Table 11-4: Specific Gravity By Stratigraphic and Intrusive Units, Goose Claims Group Deposits

Stratigraphic/Intrusive Unit	Density (g/cm ³)					
	Umwelt	Llama	Goose Main	Nuvuyak	Echo	Goose Neck South
Overburden (till)	1.90	1.90	1.90	1.90	1.90	1.90
Gabbro	2.90	3.00	3.00	2.97	3.00	2.97
Quartz–feldspar porphyry	2.79	2.69	2.70	2.70	2.70	2.70
Upper sediments	2.83	2.78	2.80	2.78	2.78	2.78
Phyllite	—	—	2.80	2.78	2.80	—
Upper middle sediments	2.83	2.76	—	2.78	—	—
Upper iron formation	2.93	2.93	2.90	2.90	2.95	2.90
Middle mudstone	2.95	2.95	2.85	2.85	2.85	2.85
Lower iron formation	3.17	3.18	3.05	3.10	3.05	3.10
Middle lower sediments	2.77	2.76	—	2.78	—	—
Deep iron formation	2.80	2.76	2.80	2.78	—	—
Lower sediments	2.93	2.78	2.80	2.78	2.78	2.78

Table 11-5: Specific Gravity By Stratigraphic and Intrusive Units, George Claims Group Deposits

Stratigraphic/Intrusive Unit	Density (g/cm ³)			
	Locale 1 & 2	LCP North & South	GH	Tupiq
Overburden	2.5	2.5	2.5	2.5
Gabbro	2.86	—	—	—
Intermediate and Stealth dykes	2.75	2.75	2.75	—
Quartz–feldspar porphyry	—	2.69	2.77	—
Upper iron formation	3.04	—	3.04	—
Lower iron formation	3.12	3.00	3.12	3.12
Deep iron formation	2.77	2.76	—	—
Phyllite	2.82	2.81	—	—
Lower greywacke	2.76	2.77	—	—
Upper greywacke	—	2.76	—	—
Pelite	—	2.81	—	—
Middle mudstone	—	—	2.82	—
Mineralized zones	3.09	3.06	3.00	3.00

Table 11-6: Analytical Laboratories

Laboratory	Years Used	Purpose	Accreditation	Independent	Comment
Acme Analytical Laboratories (Acme), Vancouver, British Columbia	2005–2009	Check laboratory	ISO 9002	Yes	Dundee exploration and drill programs
	2010–2014				Sabina exploration and drill programs
Acme Labs, Vancouver, British Columbia	2012	Check Laboratory	Unknown	Yes	Sabina exploration and drill programs
Actlabs, Kamloops, British Columbia	2020	Check laboratory	ISO 17025	Yes	Sabina exploration and drill programs
ALS Chemex Laboratories (ALS Chemex), North Vancouver, British Columbia	2002	Primary laboratory	Unknown	Yes	Kinross exploration and drill programs
	2005–2009	Check laboratory	ISO 17025		Dundee exploration and drill programs
	2011	Primary laboratory			Sabina lake sediment sampling
	2016–2019	Check laboratory			Sabina exploration and drill programs
	2020–2023	Primary laboratory			Sabina exploration and drill programs
	2023–2024	Primary laboratory			B2Gold exploration and drill programs
Assayers Canada (Assayers)	2002	Primary laboratory	Unknown	Yes	Kinross exploration and drill programs
Bondar-Clegg, North Vancouver, British Columbia	1982–1994	Primary laboratory	Unknown	Yes	Homestake exploration and drill programs
	2000–2001	Primary laboratory			Kinross exploration and drill programs
Bureau Veritas, Vancouver, British Columbia	2016–2018	Primary laboratory	ISO 17025	Yes	Till sampling programs

Laboratory	Years Used	Purpose	Accreditation	Independent	Comment
	2023–2024	Check laboratory	ISO 17025	Yes	B2Gold exploration and drill programs
Cantech Laboratories (Cantech), Calgary, Alberta	1997	Primary laboratory	Unknown	Yes	Arauco exploration and drill programs
	1999–2000				Kinross exploration and drill programs
Field Laboratory, Del Camp, Del Claims Group	1986	Primary laboratory	Unknown	No	Bow exploration drill program at the Del Claims Group.
International Plasma Laboratory, Vancouver, British Columbia	1994	Primary laboratory	Unknown	Yes	Homestake exploration and drill programs
Min–En Laboratories, North Vancouver, British Columbia	1986	Check laboratory	Unknown	Yes	Bow exploration drill program at the Del Claims Group.
Overburden Drilling Management Limited, Nepean, Ontario	2011–2012	Primary laboratory	Unknown	Yes	Sabina till sampling program
SGS Canada (SGS), Burnaby, British Columbia	2016–2019	Primary laboratory	ISO 17025	Yes	Sabina exploration and drill programs
Swastika Laboratories (Swastika), Ontario	2000–2001	Check laboratory	Unknown	Yes	Kinross exploration and drill programs
TSL Laboratories (TSL), Saskatoon, Saskatchewan	2004	Primary laboratory	ISO/IEC Standard 17025 obtained in 2004	Yes	Miramar exploration and drill programs
	2005–2008				Dundee exploration and drill programs
	2005–2008				Dundee density determinations
	2010–2015				Sabina exploration and drill programs
	2011–2015				Sabina density determination checks

Table 11-7: Sample Preparation

Sample Type	Operator	Laboratory	Note
Rock chip, channel, grab	All	various	Samples were typically sent to the same laboratory and prepared with the same methods as drill core samples for each exploration program.
Till	Dundee	ALS Chemex	Dried in <60°C oven, crushed to >70% passing 2 mm (10 mesh), pulverized entire sample to >85% passing 75 µm (200 mesh)
	Homestake	International Plasma Laboratory	Samples sieved onsite to eliminate most fragments, dried onsite. Dried and sieved at laboratory to -80 mesh.
	Sabina	Overburden Drilling Management Limited	Magnetic mineral separation, heavy mineral concentration, sulphide estimation, and gold grain count and morphology description.
		Bureau Veritas, Vancouver	Sieved to 63 µm (230 mesh).
		SGS	Dried at 60°C. Sieved to 180 µm (80 mesh)
	B2Gold	ALS Chemex	Dried at 60°C. Sieved to 180 µm (80 mesh)
Lake sediment	Sabina	ALS Chemex	No details of the sample preparation methods are available.
Core	TWO, Kerr, Homestake 1985-1994	Bondar-Clegg	Crushed and a 250 g sub-sample pulverized to 90% passing -150 mesh.
	Bow 1986	Field Lab	Del Claims Group drilling only: Crushed to -¼ inch, passed twice through Jones splitter to obtain a ¼ sub-sample, pulverized to -100 mesh.
	Homestake 1994	International Plasma Laboratory	Crushed to 95% passing -10 mesh, and a 250 g sub-sample pulverized to 90% passing -140 mesh.
	Arauco 1997–1999	Cantech	Crushed to 10 mesh, and a 1 kg sub-sample was pulverized to 90% passing 150 mesh.
	Kinross 2000–2002	Cantech	Dried, crushed to -10 mesh, and a 300 g sub-sample pulverized to 90% passing 150 mesh.
		Bondar-Clegg	1 kg sub-sample pulverized to 95% passing 150 mesh.
		Assayers Canada	1 kg crushed sub-sample pulverized to 85% passing 75 µm.
		ALS Chemex	1 kg crushed sub-sample pulverized to 85% passing 75 µm.
	Miramar 2004	TSL	Samples were dried, crushed to 95% passing 10 mesh, and a 1 kg sub-split was pulverized to 95% passing 150 mesh.
	Dundee 2005–2008	TSL	Samples were dried, crushed to 95% passing 10 mesh, and a 1 kg sub-split was pulverized to 95% passing 150 mesh.

Sample Type	Operator	Laboratory	Note
	Sabina 2009–2023	TSL	Drying, crushing to 95% passing 10 mesh (1.70 mm), and pulverizing of 1 kg sub-split to 95% passing 150 mesh (106 µm).
		SGS	Drying, crushing to 95% passing 10 mesh (1.70 mm), and pulverizing of 1 kg sub-split to 95% passing 150 mesh (106 µm).
		ALS Yellowknife	Drying and crushing to 95% passing 10 mesh, followed by pulverizing of 1 kg sub-split to 95% passing 140 mesh.
	B2Gold 2023–2024	ALS Yellowknife	Drying and crushing to 95% passing 10 mesh, followed by pulverizing to 95% passing 140 mesh.
Core (rush samples for data cutoff)		Goose mine laboratory	Drying, crushing to 95% passing 10 mesh (1.70 mm), and pulverizing to 95% passing 150 mesh (106 µm).

11.6 Analysis

Analytical methods varied over time with the use of different laboratories. Where known, the analytical procedures are summarized in Table 11-8.

11.7 Quality Assurance and Quality Control

11.7.1 Trigg, Woollett, Olsen Consulting, Hill, Esso, Kerr, Bow, and Homestake (pre-1997)

No records were located on the type and results of any quality assurance program for the pre-1997 period of sample preparation and analysis.

11.7.2 Arauco (1997–1999)

Quality control consisted of the submission of three in-house control standards at a rate of 1:20. Two sets of duplicates were also made for every batch of 20 samples. The duplicates included a pulp sample, and field duplicate or coarse reject sample. A blank sample was also included in every batch of 20 samples.

11.7.3 Kinross (2000–2002)

Quality assurance data included analysis field or coarse duplicates for 10% of samples taken in 2000, pulp umpires of 5% of samples taken in 2001, and an unknown number of pulp duplicates of samples taken in 2002. Reference standards (n = 18) were sourced from CDN Resource Laboratories (CDN). Additionally, 19 duplicate samples representing the second half of the core were sent for re-assay.

Table 11-8: Analytical Methods

Sample Type	Operator	Laboratory	Note
Rock chip, channel, and grab (gold)	All	Various	Samples were typically sent to the same laboratory and assayed for gold with the same methods as drill core sample for each exploration program. In some cases, the samples would be analysed with a multi-element package as well.
Rock chip, channel, and grab (multielement)	Dundee	Acme	Samples analyzed for multi-element by 4-acid multi-element analysis (method Group 1EX).
		ALS Chemex	Samples analyzed for Au by fire assay with ICP-MS finish (method Au-ICP21) and for multi-element by aqua regia ICP-MS (method ME-MS41).
	Sabina	Acme	Analysis of whole-rock major and trace element composition (method 1F15 and 4A-4B)
			2012 Wishbone: Assay samples were analyzed by ultra-trace aqua regia ICP-MS (package AQ251-EXT). Eleven additional samples were analyzed by fire assay (package FA350-Au).
	B2Gold	ALS Chemex	Samples analyzed for Au by fire assay (method Au-AA24 and Au-GRA22) and multi-element suite by 4-acid ICP-MS (method ME-MS61).
Till	Dundee	Acme	4-acid multi-element analysis (method Group 1EX)
		ALS Chemex	Analyzed for gold by fire assay with ICP–AES finish (method Au-ICP21) and for a multi-element suite by aqua regia ICP-MS (method ME-MS41).
	Homestake	International Plasma Labs	Analysed for 30 elements with ICP, and gold by fire assay / geochemistry.
	Sabina	ALS Chemex	Analyzed for gold by fire assay with ICP–AES finish (method Au-ICP21) and for a multi-element suite by four-acid ICP–MS (method ME-MS61).
		Bureau Veritas Vancouver	Aqua regia digestion followed by ICP–ES/MS analysis for a 37-element suite (method AQ200 and AQ252).
		SGS	Samples analyzed for multi-element by aqua regia ICP–MS (method IMS14B).
	B2Gold	ALS Chemex	Samples analyzed by 4-acid ultra-trace ICP–MS (method ME-MS61L)
Lake sediment	Sabina	ALS Chemex	Analysed for gold and a series of pathfinder elements at trace level detection limits using analytical package TL-44, which includes analysis by aqua regia.
Core	TWO, Hill, Esso, Kerr, and Homestake 1985–1994	Bondar-Clegg	29.17 g sub-sample assayed by fire assay with an AAS finish. Samples that assayed ≥ 10 g/t Au re-assayed by a gravimetric technique. Subsequent to this assaying, all anomalous intervals were re assayed using screen fire assaying (-150 mesh) and these data were given priority in the database.

Sample Type	Operator	Laboratory	Note
	Bow 1986	Field Lab	Del Claims Group drilling only: Gold was analyzed by fire assay with an AAS finish. Initial assay results which returned values >1.0 g/t Au were sent to Min-En Laboratories for 'standard fire-assay techniques'
	Homestake 1994	International Plasma Labs	Gold was analysed by fire assay (10–30 g sub-sample) with AA finish.
	Arauco 1997–1999	Cantech	Gold assays were completed by either AAS or a gravimetric technique. Samples that had visible gold or that assayed >10 g/t Au were re-assayed by a gravimetric technique. The gravimetric values superseded any AAS results as final gold assays in the database.
	Kinross 2000–2002	Cantech	Gold was analyzed by either AAS or a gravimetric finish. Samples that assayed >5 g/t Au were re-assayed using a gravimetric technique. A screen fire assaying (metallics) was completed for intervals either identified with visible gold or with an initial fire assay of >20 g/t Au. Priority was given to the screen fire assays in the database over the gravimetric assaying; gravimetric assays were used where available over the AAS finish fire assays as final gold assays in the database.
		Bondar-Clegg	The laboratory used 60 g fire assays for samples not logged as containing visible gold. Initial fire assays that returned >5 g/t Au or designated as visible gold intervals were assayed using screen fire assay methods (metallic) based on a -150 mesh size fraction.
		Assayers Canada	50 g fire assay and screen fire assaying based on -150 mesh.
		ALS Chemex	Gold analyses were performed by fire assay using a gravimetric finish and screen fire assaying for visible gold intervals and >5 g/t Au gravimetric assays. A 30 g screen fire assay was completed using a 100 mesh screen size.
	Miramar 2004	TSL	Gold analysis was completed via fire assay with a gravimetric finish or screened (metallic) fire assay. Intervals either logged as having visible gold, significant sulphide concentration, or significant quartz veining, were selected for screen fire assaying. Initial assay results which returned values >20 g/t Au were also sent for screen metallic fire assay.
	Dundee 2005–2008	Acme	Trace multi-element analysis using ICP–MS analytical method.
		TSL	Gold analysis was completed via fire assay with a gravimetric finish (58.2 g sub-sample), or screened (metallic) fire assay. Intervals either logged as having visible gold, significant sulphide concentration, or significant quartz veining, were selected for screen fire assaying. Initial assay results which returned values >20 g/t Au were also sent for screen metallic fire assay. Metallics were screened at 150 mesh; the entire

Sample Type	Operator	Laboratory	Note
	Sabina 2009–2023		plus fraction (+150 mesh) was assayed by fire assay with a gravimetric finish, and the minus fraction (–150 mesh) was assayed by fire assay with a gravimetric finish (58.2 g sub-sample) in duplicate. The weighted average of the coarse and passing fraction was reported as the screen assay.
		TSL	Gold analysis was completed via fire assay with a gravimetric finish (58.2 g sub-sample).
		SGS	Gold analysis was completed via fire assay with an AAS finish (2AT charge). Initial assay results which returned values >3.0 g/t Au were re-assayed by fire assay with a gravimetric finish (2AT charge). Both results were reported on the assay certificate.
		ALS Chemex	Gold was analyzed using fire assay with an AAS finish. Samples returning >3.0 g/t Au were re-assayed using a gravimetric finish. Metallica were performed on a new 1,000 g split from the reject material if sufficient sample remained, or on the remaining pulp from the master pulp, which was typically 800 g. Metallica were screened at 140 mesh; the entire plus fraction (+140 mesh) was assayed by fire assay with a gravimetric finish, and the minus fraction (–140 mesh) was assayed by fire assay with an AAS finish (2 assay ton charge) in duplicate. Results were reported for the plus and minus fractions, and the weighted average for the sample.
			For the four acid-digest multi-element determination, a 0.2 g subsample was digested with HNO ₃ , HCl, HF, and HClO ₄ . The resulting solution was split into two. One part was analyzed using ICP and the other by ICP–MS, for a total determination of 49 elements.
			For whole-rock determination, a 0.1 g subsample was fused with LiBO ₂ . The resulting solution was analyzed by ICP to determine major oxides and some minor elements.
	B2Gold 2023–2024	ALS Chemex	Gold was analyzed using fire assay with an AAS finish.
			Samples returning >3,000 ppb Au were re-assayed using a gravimetric finish. Metallica were performed on a new 1,000 g split from the reject material if sufficient sample material remained, or on the remaining pulp from the master pulp, typically 800 g. Metallica were screened at 140 mesh; the entire plus fraction (+140 mesh) was assayed by fire assay with a gravimetric finish, and the minus fraction (–140 mesh) was assayed by fire assay with an AAS finish (2 assay total (+) (–) charge) in duplicate. Results were reported for the plus and minus fractions, and the weighted average for the sample.
			For the four acid-digest multi-element determination, a 0.25 g subsample was digested with HNO ₃ , HCl, HF, and HClO ₄ . The resulting solution was split into two. One part was analyzed using ICP and the other by ICP–MS, for a total determination of 48 elements.

Sample Type	Operator	Laboratory	Note
			For whole-rock trace determination, a 0.1 g subsample was fused with LiBO ₂ . The resulting solution was analyzed by ICP-MS to determine major oxides and some minor elements.
		Bureau Veritas	Umpire samples were assayed for gold using fire assay with AAS and overages with gravimetric finish.

Note: AA = atomic absorption; AAS = atomic absorption spectroscopy; ICP = inductively coupled plasma; MS = mass spectrometry; ES = emission spectrometry; AES = atomic emission spectroscopy.

11.7.4 Miramar (2004)

The quality assurance data included by Miramar included six CDN standards, inserted at a rate of 1:20 and blanks which were also included at a rate of 1:20.

11.7.5 Dundee (2005–2008)

Standards were sourced from Rocklabs Limited, Geostats Pty. Ltd (Geostats) and CDN. Blank control samples were generated from barren lithologies, for example gabbro dyke with a minimal amount of veining, sulphide, and alteration. These samples were inserted into the sample stream at a rate of 1:20.

TSL Laboratories inserted internal standards into the assay batches at a rate of 2:24 per sample batch. Standards were also inserted into check sample batches submitted to Acme and ALS Chemex.

11.7.6 Sabina (2009–April 2023)

Standards

Standards were sourced from Geostats and CDN, and inserted at a rate of 1:20 for all campaigns.

Sabina treated each standard fail (defined as an assay value that was outside two standard deviations from the expected value of the standard) individually, and investigated each instance. Batches were not re-run if the AAS or the gravimetric standard did not fail; if there were no mineralized samples in the batch; or if there was an obvious sample mix-up. Upon receipt of any re-run batches, the original and re-run samples were checked for consistency using a relative paired difference comparison plot, and a decision was made to keep the original assay values or the values from the re-run batch. Typically, the original assay value was retained.

In 2019, there was a higher-than-normal proportion of standard failures with the standard G316-8 performing particularly poorly. This prompted Sabina to conduct a standard re-run program that involved sending eight different standards to three different laboratories, SGS, ALS Chemex, and Bureau Veritas. All warnings and failures from SGS were found to be biased low. The standard G316-8 performed well in the re-run, indicating that there was nothing wrong with the standard

material itself. A check assay program was also conducted in 2019 with all three laboratories, SGS, ALS Chemex, and Bureau Veritas, to confirm the validity of the 2019 assay results.

Blanks

Blanks were taken from unmineralized sections of core (mainly late gabbro dykes) that had been removed from the core boxes and either kept in bins in the sampling room or bagged in individual sample bags. Only coarse blanks were submitted. A blank was considered to fail if the sample returned a value of >0.1 g/t Au. No instances of significant contamination were noted. Although Sabina did not insert pulp blanks into its sample stream, the low failure rate suggested that the laboratory had little or no contamination present in either the sample preparation or assay processes.

Duplicate and Check Samples

Every fourth sample with a value ≥ 0.2 g/t Au had a repeat pulp and reject duplicate analysis completed by the original laboratory. Where there was insufficient sample for a duplicate, another ≥ 0.2 g/t Au sample nearby was selected.

TSL Laboratory included internal laboratory pulp duplicates every 13 samples and crusher duplicates every 20 samples during the 2012 analytical program.

In 2014–2015, TSL Laboratories included 336 internal laboratory pulp duplicates to test for repeatability. An additional blank was inserted after each sample in which visible gold was observed. Sabina also selected 167 pulp duplicate samples and 141 coarse duplicate samples to be re-assayed by TSL Laboratories. External check assays were arranged by sending a selection of samples that returned greater than 0.2 g/t gold to Acme. This resulted in 50 pulp duplicates to test for accuracy of the primary laboratory.

For the 2017–2020 campaigns, every fourth sample with a value ≥ 0.2 g/t Au had a repeat pulp and reject duplicate analysis with the initial laboratory, every eighth sample with a value ≥ 0.2 g/t Au had a pulp repeat analysis at a different laboratory carried out, and where there was insufficient sample for a duplicate, an adjacent ≥ 0.2 g/t Au sample selected.

Duplicate data was reviewed in 2020 by combining the 2017–2019 data analyzed at SGS, and separately for the 2020 data analyzed at ALS. The results were also evaluated separately by AAS and gravimetric methods to determine the performance of each method. For 2017–2019, the gravimetric method performed better than the AAS method for both pulp and coarse duplicates. For 2017–2019, coarse duplicates performed a little outside the ideal parameters; however, this was attributed to the geological variances common in Archean gold deposits. For 2017–2019, pulp duplicates performed well-outside the ideal parameters. Explanations included natural deposit variation, settling of pulp material during storage such that it was not properly being re-mixed prior to the duplicate assay being analyzed, and some samples not meeting the grind size specified.

Check Samples

Every eighth sample with a value ≥ 0.2 g/t Au had a pulp repeat analysis completed by a different laboratory. Where there was insufficient sample for a duplicate, an adjacent ≥ 0.2 g/t Au sample was selected. Between 2017 and 2019, the pulp was submitted to ALS Chemex for analysis for check assay, and in 2020 to Actlabs.

Check assay results showed a better performance for the gravimetric method compared to the AAS method. There was a positive bias towards the SGS samples for the AAS analysis. There was no evidence of a negative bias for the SGS samples as was seen in the 2019 standard re-run program.

11.7.7 B2Gold (April 2023–Report effective date)

Standards

Since April 2023, standards have been sourced from CDN, Geostats, Rocklabs, and OREAS, encompassing 16 different standards that cover a wide range of gold grades.

The standard insertion rate for 2023 drill activities initially followed the previous operator's protocols, with standards inserted every 20 samples. In late September 2023, the frequency was adjusted to every 39 samples to make the insertion less predictable. In late November 2024, the insertion rate for drill programs was further amended to every 25 samples to better align with fusion assay oven batch size at ALS Chemex.

Blanks

Blank material is collected from within the Goose group area from barren gabbroic dykes. During 2023, blank insertion rates were 1:20; this was amended in August 2023 to 1:39, and further amended in 2024 to a 1:26 insertion rate. Geologists may increase the insertion rate at their discretion during field programs; for example, the blank insertion rate can be increased in highly-mineralized zones to verify proper cleaning of laboratory equipment.

Duplicates

Three duplicate types are in use:

- Preparation duplicates: request to prepare a second pulp from a coarse reject split at an insertion rate of 1:26, changed to 1:25 in November, 2024. Geologists increase the insertion rate within mineralized zones;
- Pulp duplicates: selected by the analytical laboratory as part of their internal QA/QC every 25 samples;
- External umpire assays: about 5% of samples assaying above detection limit are submitted for umpire analysis. These samples are distributed equitably in six gold grade bins. The umpire pulps are prepared at the preparation laboratory for all the samples, and the selected pulps are submitted to the umpire laboratory.

Magnetic Susceptibility

Magnetic susceptibility measurements are collected from all drill core. Measurements are taken every metre of drill core using a KT-20 mag sus metre. Duplicate readings have been taken on all samples from November 2024 onward. The operator visually selects the same position on the core and performs two separate measurements, both of which are recorded. This process ensures the QA/QC of the magnetic susceptibility data.

Density

Metal standardized weights are used to periodically calibrate the balance used on the density determinations by the water immersion method. Results from each specimen are compared with known density averages by lithology, and unexpected results are repeated and validated.

Additionally, since October 2024, two soda ash glass standards are used to verify the density measurement process. These standards are processed as part of the regular specific gravity procedure, every 15 samples, or at least one on every drill hole.

Data Checks

QA/QC data are continuously reviewed as new data is imported. Reports are generated by the head office database manager and are reviewed by senior staff to ensure ongoing data integrity.

Monthly QA/QC reports are generated by B2Gold's head office, and include information such as:

- Reports on samples shipped, assays received during the period, and turnaround time;
- Performance of standards and blanks categorized by month, year, and type of standard;
- Scatter plots for standards and blanks performance are generated, with two plots for each type of standard or blank. The first plot shows the initial values, and the second displays the final accepted values. These plots allow for the evaluation of accuracy, bias trends, and anomalous trends;
- Scatter plots for preparation duplicates (coarse reject split) and pulp duplicates (second split of pulp) are evaluated.

Umpire samples are sent to a referee laboratory for check assays either quarterly or when a sufficient population is available. The samples are evaluated by gold range bins, with a minimum of 30 samples required in each range.

11.7.8 Collar Surveys

There is a base station on the Goose Mine that is used as a reference for all surveys undertaken within the Goose Lake and surrounding areas. There are also survey reference points that are used as a known reference for the collar surveys. These permanent control monuments have been set via 30-minute occupation times with Trimble R12 RTK GPS receiving corrections from the B2Gold mine base station.

A spike, pounded into bedrock, was surveyed near the collar using the R12 GPS system with an occupation time of five minutes. The total station was then used for a station setup using the S5/TSC5 and back sighted a permanent control monument. For quality assurance, a second back sight was used, and the tolerance results could not exceed Hz <20 mm, Vt <100 mm.

Collar surveys checks were performed with Trimble S5, TSC5, and Trimble R12 RTK GPS units. A reference azimuth procedure, heads-and-tails, was used, and checked for each drill rig on a weekly basis.

11.7.9 Down Hole Surveys

Based on detailed review by Dundee (Labelle, 2005), certain George Claims Group down hole survey azimuth data were adjusted. The Dundee study had analysed the azimuth deviation that would be expected in those drill holes that had either no azimuth, or suspected unreliable azimuth data, based upon the down hole deviations experienced by drillholes that had Maxibor surveys. As a result of the changes made, some drill holes significantly deviated from the original drill hole traces.

To further investigate the impact of the downhole survey adjustments and confidence of the 3D location of data in space, a coding scheme was applied to the sample intervals. Samples from holes with Maxibor surveys were given a code of 1 (high confidence), samples from holes that had magnetic azimuth data and had an adjusted displacement of <10 m were given a code of 2 (moderate confidence), and samples from holes that experienced >10 m displacement or had no reliable original azimuth data were given a code of 3 (lower confidence).

With consideration of the empirical classification assigned to the downhole survey data quality, the down hole survey data was considered of sufficient quality to be used for the Mineral Resource estimates.

All survey data from the period 1985–2012 was checked by Sabina during 2013. Drill hole survey data were checked against original drill logs, reports, and survey files (including Sperry Sun disks, Ezi-Trac data sheets, and Maxibor and Gyro files), where available. Select collars were resurveyed in the field as a cross-check. Where material errors were found, corrections were applied to the database.

B2Gold used HUB-IQ for quality assurance, measuring rapid tool movements, accelerometer vibrations, gyro variances, misclosures from in and out measurements, azimuths, dips, and true north azimuths. Survey staff and senior geologists compared these data to previous surveys for additional QA/QC. By exporting raw or interpolated files, staff could thoroughly review and validate the data. This process helped identify any discrepancies or anomalies, ensuring the accuracy and reliability of the survey results. Additionally, all certificates of calibration for the equipment in use are requested and monitored.

Table 11-9: Core Re-Logging and Re-Sampling Programs

Operator	Year	Holes Relogged	Claims Group/Deposit	Primary Purpose
Homestake	1992	16	George (Locale 2)	Check and verify original logging
Homestake	1994	10	Goose	Check and verify original logging
Miramar	2004	36	Goose	Sample gaps in assays and mineralization not covered in original drill program
Dundee	2005	81	Goose	Verify and correct historical data from previous operators
Sabina	2010	45	Goose (Goose Main)	Resampling
Sabina	2011	11	Del	Check and verify original logging and sampling from previous operators
Sabina	2011	20	Goose (Llama)	Resampling and structure review
Sabina	2012	19	Goose (Llama, Umwelt)	Resampling
B2Gold	2024	27	Goose (Umwelt)	A partial core re-logging program, covering holes from the 2023 Umwelt deposit drill program. These data were incorporated into the drill hole database for use in geological modeling.

11.7.10 Core Re-logging

Various relogging and resampling programs have been completed throughout the life of the Goose Project to reflect evolving geological understanding and changing logging strategies. Table 11-9 outlines the various relogging and resampling programs. Results of these programs have allowed for improved understanding of the mineralization controls, and improved stratigraphic and intrusive 3D modelling.

11.8 Databases

11.8.1 Database History

From 1985 to 2002 drill logging data was captured on paper into custom core logging forms and then digitized onsite and at the operator's headquarters. Software included Core Log, BlackLOG, Quattro Pro, TechBASE, Drillpad, and Microsoft Access.

In 2004 Miramar used Access to record logging data, and GEOVIA GEMS as the database.

From 2005–2008, Dundee used an acQuire database, with either Pocket acQuire or Field Marshall as the data capture front-end.

During the 2009 field program, Sabina used Microsoft Excel to capture core logging data. From 2010 onward, Sabina used Microsoft Access to capture digital data and GEOVIA GEMS as the database. In 2020, Sabina adopted Seequent MX Deposit (MX Deposit) software and used the 'Union' function in Microsoft Access to merge data from GEMS, MX Deposit, and Microsoft Excel into a single database. From 2020–2021, data capture was conducted via MX Deposit, and

Sabina began migrating data from MX Deposit and GEMS to a Fusion database, although assay data continued to be compiled in Microsoft Excel files. Sabina used DHLogger for data collection in 2022 and returned to using MX Deposit in 2023.

In 2013, all 1985–2009 drill data for the Goose Claims Group was re-compiled by Sabina from various historical digital sources to populate the database with supporting data for ongoing exploration. Sabina conducted the same exercise for all 1985–2009 drill data for the George Claims Group, with the information all collated within the database by 2021.

Since acquisition, B2Gold continues to use MX Deposit for data collection and have commenced data migration to the Fusion database. Microsoft Access can be used as a temporary compilation database during data migration.

In 2023, B2Gold re-compiled all 1985–2009 drill data for the Boot, Boulder, Del, Needle and Bathurst Claims Groups to populate the database with supporting data for ongoing exploration purposes.

11.8.2 B2Gold Data Upload

Geologists and geo-technicians capture data using MX Deposit, entering it into predefined templates with specific picklists and built-in validation rules. At the completion of each drill hole, the logged data are digitally reviewed by a senior geologist. Any identified errors or improper logging practices are flagged, and the geologist responsible is contacted for corrections. Once validated, the data are imported into the Fusion database by the on-site database manager.

Assay certificates and data are received as PDFs and CSV files directly from the laboratories. Assay results are only associated with their respective samples after successful QA/QC validation. During this process, results for blanks and standards are compared to expected values using database queries. After validation, assay results are assigned a priority status of: "Passing" or "Failing". Passing is accepted by the program presets. Failing assays are examined to determine the source of the error, which can be sent back to the laboratories to be re-run or flagged as excluded from the database records.

The Fusion database includes QA/QC reporting tools to monitor the performance of standards and blanks, assess duplicate precision, and evaluate analytical bias. QA/QC data are reviewed continuously as new data are imported. QA/QC reports are generated by the head office database manager and are reviewed by senior staff to ensure ongoing data integrity.

Downhole surveys are conducted by a surveyor both during drilling and upon completion of each drill hole. The survey data are reviewed by the onsite senior Geologist and then sent to the database manager via email and subsequently uploaded to the server for integration with the Project database.

Digital core photos are stored on the onsite server, organized by drilling method and drill hole ID. Each drill hole is photographed both wet and dry, with the photos labeled by drill hole ID and interval. These digital images are regularly backed up and integrated into the primary database to ensure accessibility and data preservation.

The entire SQL database is backed up daily at the head office server and exported to the onsite mine file server to provide additional security.

11.9 Sample Security

Sample security measures for earlier drill programs are not known. Sample security measures for the Miramar, Dundee and Sabina programs included moving drill core samples from the drill site to the core processing facility twice daily, moving core samples from the core processing facility to the air-cargo planes on the day of flight, and tracking sample shipments using industry-standard procedures.

B2Gold's sample shipment and security includes moving samples from the drill site and/or field work areas to the sample yards at the end of each work shift and tracking sample shipments.

All samples are organized in a secure area with camera surveillance before being bagged into woven bags. A well-established chain of custody is employed to ensure the safe and secure transport and delivery of core samples to and from the laboratory.

ALS served as the primary laboratory for sample preparation and analysis in 2023 and 2024. In the latter half of 2024, the onsite Goose Mine preparation laboratory was utilized for rush samples and to alleviate the workload of the ALS preparation laboratory in Yellowknife.. Both laboratories sent notifications of receipt to confirm the arrival of samples which included the security seal ID and the shipment IDs.

B2Gold's shipment procedures are considered to provide adequate security for the samples used in the Mineral Resource estimate.

11.10 Comments on Sample Preparation, Analyses and Security

In the opinion of the QP:

- Sample collection, preparation, analysis, and security for core drill programs are in line with industry-standard methods for gold deposits;
- Drill programs included insertion of blank, duplicate, and standard reference material samples;
- QA/QC methods are practiced during collar survey, down hole survey, magnetic susceptibility, and density measurement programs, which are industry-leading practices;
- QA/QC program results do not indicate any problems with the analytical programs (refer to discussion in Section 12);
- Data are subject to validation, which includes checks on surveys, collar co-ordinates, lithology data, and assay data. The checks are appropriate, and consistent with industry standards (refer to discussion in Section 12);

The QP is of the opinion that the quality of the gold analytical data is sufficiently reliable to support Mineral Resource estimation without limitations on Mineral Resource confidence categories.

12.0 DATA VERIFICATION

12.1 Data Verification by Third Parties

A number of data verification programs have been completed over the Project history in support of technical reports or mining studies, and are summarized in Table 12-1. These third-party reviews identified no material issues with the data that had been checked.

12.2 B2Gold Data Checks

12.2.1 Legacy Data

Legacy data from the project was compiled into a Microsoft Access database from various GEMS and MX Deposit exports. Queries were created to detect gaps in intervals, overlapping samples, differences in depths, or missing data across different tables. Any issues identified were reviewed against the original logging data sources and corrected when necessary.

As part of B2Gold's database checks, all historical results were compiled from the original laboratory certificates into the Microsoft Access database. The compiled population was validated against the legacy data exports from Sabina. This work, carried out between 2023–2024, ensured that the assay data were reliable.

12.2.2 B2Gold Data

Currently, data capture is performed via MX Deposit, which includes rules to help prevent missing data, and extensive picklist codes to prevent typographical errors. These rules ensure data integrity.

12.3 Data Verification by Qualified Persons

12.3.1 Mr. Andrew Brown

Mr. Brown completed site visits, see Section 2.4.1.

During those site visits he personally inspected:

- Core drilling at various drills and the core retrieval and handling procedures;
- Core metre and low line marking and geotechnical assessment procedures;
- Core logging procedures, protocols, and geological control;
- Core photography procedures and quality;
- Core cutting and sampling procedures;
- Core storage and security;
- Density measurement and density QA/QC procedures;
- Sample shipping and chain of custody procedures;

Table 12-1: Third Party Data Verification

Year	Third-Party	Note
1997	Smee and Associates Consulting Ltd.	QAQC review. The sampling and quality control program at George Lake is well run, and has no obvious important deficiencies. The standard samples plotted to date show that Cantech analysis falls within the limits of accuracy established by the round robin analysis. The field duplicate samples reveal a nugget effect in the George Lake mineralization. This effect is not severe and should not present a problem in the ore reserve calculations. The field blank has not shown any contamination due to field sampling or laboratory preparation errors. Small changes in sampling procedures should streamline the logging and QC flow. The field crew is under some pressure to keep up with data flow and sample entry into the database, but this should improve with time.
2001	MRDI	Review of the quality control data submitted to Cantech. High relative percent differences for the 2000 program samples were noted. In 2001 the Cantech samples were re-assayed at Bondar Clegg using the metallic screen fire method and these data were given preference over the original assays in the database.
2002	Watts, Griffith and McOuat	WGM observed drill set-up, checked grid coordinates for previous drillholes, observed logging, sampling, and splitting procedures, and examined and independently sampled new and previously drilled core. Down hole surveying and sample quality control procedures were also discussed. The drillhole database provided by Kinross containing all sample assays was also scrutinized by WGM to ensure that assays on laboratory certificates matched assays posted in the database and that other drillhole data were correct. Ten samples of ½ core were collected for screen metallic assaying. WGM's assays generally compare with original assays and we believe differences are largely due to the nuggety nature of the mineralization. On the basis of this comparison, WGM concludes that assaying by Kinross and its immediate predecessor was/is reasonably representative of the gold content of the samples.
2004	Maxwell GeoServices	Completed an audit of the exploration database. No material issues reported.
2005	Watts, Griffith and McOuat	Sample preparation and assay work performed on the Goose Lake and George Lake properties were of excellent quality. Little QA/QC data exists for the pre-1997 assaying but Watts, Griffith and McOuat considered that Bondar Clegg results were likely to be of satisfactory quality and unbiased based on their knowledge of the laboratory.
	Maxwell GeoServices	The audit of the surface exploration and drilling database highlighted some areas of missing data, which were generally rectified from hard copy reports. However, no material issues were noted from the verification of assay and geological data. Maxwell GeoServices' recommendation included a wider spread verification of metadata. In follow-up to Maxwell's recommendation, during January 2006 Dundee requested that Maxwell GeoServices enter all available missing meta-data not already captured from historical Annual reports and hard copy drill logs
2009	Coffey Mining	Reviewed the available quality data presented in various technical and quality control reports and completed an independent review of available quality control data. Concluded that the analytical data are accurate with precision consistent with a high nugget gold deposit. Coffey Mining differed in opinion to previous reviewers on the potential bias of core re-sampling. It was likely that an apparent bias of >30 g/t gold subset for the 2004

Year	Third-Party	Note
		drilling was due to the original sample containing visible gold or coarse gold, and given the relatively inhomogeneous distribution of gold mineralization it was unlikely the extreme grades would be adequately repeated. The re-assay of 1/4 diamond core, as completed for this program, was flawed given the different sample support between 1/2 and 1/4 core and the inhomogeneous distribution of the gold mineralization. The relatively small data set was also a limiting factor. Concluded that the gold assay data contained in the George and Goose databases were of acceptable quality and are suitable for use in resource estimation studies.
2010	Roscoe Postle Associates	Site visit. Examined several outcrop exposures, examined plans and sections, and reviewed core logging and sampling procedures. Five drill core samples were also taken and submitted to SGS in Don Mills, Ontario. Results confirmed that significant gold mineralization exists on the Goose Property. Checked the Goose Main and Llama databases against copies of the assay certificates, independently sampled drill core, and reviewed QA/QC data collected by Sabina. Checked 25% of gold assay records in the Llama Lake and Umwelt Lake databases against original hardcopy assay certificates. All digital drill hole data included in the Llama Lake and Umwelt Lake mineralized zones were also checked against original logs for discrepancies in collar coordinates, downhole surveys, and lithology records. RPA did not identify any significant discrepancies
2011	SRK	Site visit. Six samples with varying gold mineralization were collected as a check to confirm the existence of gold mineralization in the Umwelt Deposit. Samples were submitted to ALS Chemex for fire assay gravity finish analysis for gold. Results confirmed gold mineralization in the Umwelt deposit at the same levels as reported by Sabina. Audited drill hole and assay database, reviewed assay certificates received directly from TSL, and reviewed QA/QC data for blank, standard and duplicate samples. Two transposition errors noted in database, but not considered a material issue. The Umwelt quality control program and results were considered suitable for mineral resource estimation.
2012		Site visit. Verified the collar positions of 48 drill holes completed on the George deposits between 1986–2007. Drill core from George was also reviewed to confirm the documented mineralogical association with gold mineralization, as well as the reported phases of structural deformation. 2011–2012 sampling and quality control procedures employed by Sabina were reviewed. Audited 15% of the drill holes completed and sampled between 1985–2008. No material issues identified.
2012	AMC	Site visit. Discussed with site geologists the following: sample collection, sample preparation, sample storage, QA / QC, data validation procedures, mapping procedures, survey procedures, geological interpretation, and exploration strategy. Inspected the core shed and drill core intersections from the Goose and George projects.
2013		Cross checked 5% of the 2013 assays that were above detection limit, comparing database entries with original assay certificates. One transposition error noted, but not considered a material issue.
2014		Random cross-checks of assay results in the database with original assay results on the assay certificates returned from TSL. No errors were detected.

Year	Third-Party	Note
2020		Site visit. Reviewed the orientation of stratigraphy and foliation at the Goose deposits and undertook a more detailed review of the upper sediments in the central area of the Goose Site and the lower sediments in the quarry near Echo. Reviewed drill core of selected representative intervals for the Goose Main, LCP South, Umwelt, Nuvuyak, and Llama Extension deposits/areas. Reviewed the processes used in the data collection and handling in 2017–2020 and undertook random cross-checks of assay results in the database with original assay results on the assay certificates returned from SGS and ALS. This verification consisted of comparing 1,495 of the 21,832 (6.7%) assays for the 2017–2020 drilling at Goose. No errors were detected. In addition, verification was carried out using the normal routines in Datamine where the database was checked for collar, survey, and assay inconsistencies, overlaps, and gaps.

- Data entry and data verification procedures;
- Spot inspections of data filing and organization;
- Database management procedures;
- Accuracy of geological interpretations and grade interpretations on section and plan and in geological models.

As a result of the data verification, Mr. Brown concluded that the Project data and database are acceptable for use in Mineral Resource and Mineral Reserve estimation and can be used to support mine planning.

12.3.2 Mr. Peter Montano

Mr. Montano completed a site visit, see Section 2.4.2.

Mr. Montano performed a number of reviews in support of the open pit and stockpile Mineral Reserves and cost assumptions that included: pit design and optimization parameters; open pit geotechnical designs; equipment selection; production and development rates; sustaining and non-sustaining capital and operating costs; and sensitivity of costs to key input parameters. He reviewed the Mineral Reserves mine plan.

As a result of the data verification, Mr. Montano concluded that the data are acceptable for use in Mineral Reserve estimation and can be used to support mine planning.

12.3.3 Mr. John Rajala

Mr. Rajala completed a site visit, see Section 2.4.3.

He performed reviews of the available metallurgical testwork data supporting the metallurgical recoveries used in the LOM plan and amenability of the mineralization within the LOM plan to the proposed process facilities; assessed process plant consumable requirements for suitability for LOM plan purposes; and reviewed sustaining and operating cost forecasts for the process plant in the LOM plan.

During the site visit, he reviewed the progress and status in the following areas, as set out in Section 2.4.3: process plant and powerhouse construction; process and powerhouse commissioning plans; mill operator training manuals and materials; and hiring schedules for process plant and powerhouse personnel.

As a result of the data verification, Mr. Rajala considers that the metallurgical recovery forecasts used in the Mineral Resource, Mineral Reserve and economic analysis supporting the Mineral Reserves are appropriate. The process portion of the LOM plan can be used to support the Mineral Reserve estimates.

12.3.4 Mr. Ken Jones

Mr. Jones completed a site visit, see Section 2.4.4.

He undertook reviews of, and discussed aspects of, environmental approvals; environmental compliance and environmental issues; closure and reclamation planning and cost estimates for closure; and social engagement with local stakeholders and communities with appropriate B2Gold staff. He participated in reviews and discussions with staff responsible for obtaining and maintaining permits. As a result of the data verification, Mr. Jones considers that the mine plan is achievable.

12.3.5 Mr. Michael Meyers

Mr. Meyers completed a site visit, see Section 2.4.5.

Mr. Meyers performed a number of reviews in support of the underground Mineral Reserves and cost assumptions that included: underground design and stope optimization parameters; equipment selection; production and development rates; sustaining and non-sustaining capital and operating costs; and sensitivity of costs to key input parameters. He reviewed the underground mineral reserves mine plan and was responsible for underground cost estimation. As a result of the data verification, Mr. Meyers considers that underground Mineral Reserves are supported by an achievable cost estimate and mine plan.

12.3.6 Mr. William (Bill) Lytle

Mr. Lytle completed a site visit, see Section 2.4.6.

Mr. Lytle verified the information on the nature and type of infrastructure required to support the LOM plan, the topographic data for infrastructure site locations, construction activities, winter ice road and supplies logistics planning, suitability of the accommodations camps and power supply to support construction activities.

As a result of the data verification, Mr. Lytle considers that the infrastructure under construction and to be used in operations is appropriate to support the LOM plans and Mineral Reserve estimates.

12.3.7 Mr. Ali El Takch

Mr. El Takch completed a site visit, see Section 2.4.7.

As part of his data verification, Mr. El Takch:

- Reviewed tailings deposition and water reclaim infrastructure design work for the Echo and Umwelt TSFs that had been performed by a third-party consultant;
- Reviewed the site-wide water balance carried out by a third-party consultant and verified inputs and assumptions;
- Reviewed various water management structures, including the primary pond dam design and construction, and saline water pond dam designs;
- Reviewed the Llama and Umwelt lake dewatering plans and schedules;

As a result of the data verification, Mr. El Takch considers that the Mineral Reserves and mine plans are supported by acceptable tailings and water management designs and assumptions.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Introduction

There have been numerous testwork programs over the period 1992–2024.

Metallurgical laboratories used in testwork include ALS Metallurgy, Gekko Systems Ltd. (Gekko), Geoscience Laboratories (Geoscience), Hazen Research Inc. (Hazen), Process Research Associates Ltd. (PRA), SGS Mineral Services (SGS), Terra Mineralogical Services (Terra), Base Metallurgical Laboratories Ltd. (BML), FLSmidth A/S (FLSmidth), and Pocock Industrial (Pocock).

Tests completed include sample preparation; chemical analysis (head, metallic gold, multi-element and whole rock); specific gravity (SG); mineralogy (scanning electron microscope (SEM), rapid mineral scan (RMS), polished section, bulk mineral analysis (BMA) and trace mineral search (TMS) using quantitative evaluation of minerals by scanning electron microscopy (QEMSCAN)); comminution (Bond ball mill work index (BWI), impact crushing work index (CWi), preliminary grinding circuit simulation; gravity recoverable gold (GRG); leach (cyanide and batch carbon-in-pulp (CIP)); settling (flocculant screening and dosage determination); solid–liquid separation, viscosity; cyanide detoxification testing, and evaluation of total organic carbon content of the ores.

13.2 Metallurgical Testwork

A summary of the completed testwork is provided in Table 13-1.

13.2.1 Chemical Assays

Head gold grade and metallic gold assays, ICP multi-element assays and whole-rock analysis were completed in most of the early testwork programs. There was a significant variation in the head grade among the samples. Review of the coarser than 150 mesh fraction and finer than 150 mesh fraction indicated potential nugget gold occurrences in the mineralized samples.

Additional head grade analysis was completed on the 2018 mine composites.

13.2.2 Density

In 2008, TSL conducted specific gravity (SG) determinations on every fourth core sample. The SG of the 388 samples tested ranged from 2.69–3.4. The average SG was 2.82.

A review of data collected by PRA in 1998 and Gekko in 2009 on samples from the Goose and George sites indicated that the average SG was 3.06 for samples from the Goose site, and 3.04 for samples from the George site. The total average SG was 3.05.

13.2.3 Mineralogy

Early mineralogical studies included polished section descriptions, scanning electron microscopy, and rapid mineral scans.

Table 13-1: Metallurgical Testwork Programs

Year	Laboratory/Facility	Work Conducted
1992	Hazen Research Inc.	Locale 1 and Locale 2 zones, George Lake. Head assays; BWi; gravity recovery tests.
1998	Process Research Associates Ltd.	Goose Lake composite, and six composites from Locale 1, Locale 1B, Locale 1C, Locale 2, Locale 2B, and GH at George Lake. Head, metallic gold, and multi-element assays, whole rock analysis; SG; BWi; gravity recovery tests.
2006	Geoscience Laboratories	Three Goose Lake samples sent for scanning electron microscopy.
2007	SGS Lakefield	Six composite samples from Goose Lake; four composites from George Lake. Head assays, rapid mineral scans; SG; BWi, CWi; gravity recovery tests.
2008–2009	Gekko Systems Ltd	One Goose Lake composite, one George Lake composite. Head and multi-element assays; SG; Ai; CWi; gravity recovery tests.
2010	SGS Lakefield	Scoping level grindability and leach test program on three representative samples from Echo, Llama, and Umwelt mineral zones. Completed head sample chemical analysis, BWi, and cyanide leach testing.
2010	Terra Mineralogical Services	Geometallurgical study on gold mineralized samples collected from the Llama, Umwelt and Echo zones.
2010	Terra Mineralogical Services	Geometallurgical study on gold mineralized samples collected from the downdip gold mineralized extension of the Umwelt deposit in the vicinity of the G2 zone and on the Goose Main deposit.
2012–2013	G&T and ALS Australia	Five zone composites from George Lake, Llama, Goose Lake, Umwelt Underground, and Umwelt Pit. Master Composite 1 and Master Composite 2 created from the zone composites. Completed gravity concentration; cyanidation testwork; determined grindability and tailings settling and tailings slurry viscosity parameters; cyanide detoxification tests.
2014	ALS, Gekko, FLSmidth, SGS	Samples from Goose Main, Llama, Umwelt, George, Echo. Completed BWi, Ai, τ grind size evaluations, gravity concentration, intensive leach, carbon in leach (CIL), total organic carbon evaluation, carbon adsorption tests, cyanide detoxification tests.
2016	BML	Goose Main, Llama, Umwelt. Tailings generation for testwork.
2017	BML, SGS	George, Goose Main, Llama, Umwelt; 17 VC composites. Tailings generation for fine grinding, ISAMill regrinding, cyanide detoxification tests.
2018	BML, Pocock Industrial, Metso, FLS	Three mine production composites (MPC-1, -2, -3) mimicking Years 1–2, Years 3–5, and Years 6–9 of the then mine plan. Mineralogy, comminution work, gravity testwork, and some flowsheet development refinement, diagnostic leaching, oxygen uptake rate determinations, tailings thickening, jar mill grindability, gravity modelling.
2019	FLS	Goose Main, Llama, Umwelt.

Year	Laboratory/Facility	Work Conducted
		VXP fine grinding.
2020	BML	Umwelt, MPC-1, -2, -3, and variability composites. Variability.
2024	SGS	Year 1-3 Composite. Evaluation and optimization of cyanidation circuit parameters; comminution; mineralogy; and geotechnical testwork.
	Jenike & Johanson Ltd	Year 1-3 Composite. Compressibility, particle density, and bulk density; cohesive strength tests; wall friction tests; angle of repose and drawdown tests.
	FLS	Year 1-3 Composite. Solid-liquid separation; thickening.

Scanning electron microscopy on three Goose Lake samples indicated that gold was most often associated with arsenopyrite but was also observed as discrete blebs in pyrite, quartz, and stilpnomelane. Most gold particles occurred in the 1–5 µm particle size range; however, by mass distribution, gold carried in the larger nugget gold particles ranged from 100–2,000 µm as inclusions in arsenopyrite.

Rapid mineral scans completed on three Goose Lake composite samples indicated that the predominant sulphide minerals were pyrite and pyrrhotite with lesser arsenopyrite, with trace chalcopyrite, sphalerite, galena, molybdenite, and pentlandite observed. Iron oxides were primarily magnetite, with lesser hematite, ilmenite, jarosite, and rutile. Graphite was identified in most samples. Sulphides were liberated up to 90% for all the samples. Gold grain sizes ranged from 20–70 µm.

Rapid mineral scans completed on three George Lake composite samples indicated that the predominant sulphide minerals were pyrite and pyrrhotite with lesser arsenopyrite. Traces of chalcopyrite, sphalerite, galena, molybdenite, and pentlandite were identified. Iron oxides were primarily magnetite, with lesser jarosite, ilmenite, and hematite. Graphite was identified in some samples. Gold grain sizes were typically about 20 µm in size.

Polished section examination indicated that gold was commonly present as native gold, and silver in the form of electrum. Gold–silver-bearing particles typically occurred at grain boundaries, with <3–5% of the gold entirely locked or semi-locked in sulphide, chiefly arsenopyrite. There were correlations between gold, arsenic, and, to a lesser extent, tellurium, and bismuth.

2018 mineralogical testwork was completed on MPC-1 and MPC-2. The bulk mineral analysis confirmed that pyrite was the main sulphur-bearing mineral, followed by pyrrhotite, with smaller amounts of arsenopyrite. Trace mineral searches indicated similar gold occurrences in both composites. Of the 34–38 gold particles observed, gold occurrence was approximately equal parts of native gold and electrum. The study concluded that the liberated and adhesion gold particles can be leached, whereas the gold present as tiny inclusions within larger multiphase particles would be harder to leach. The inclusion particles would require further grinding to expose the gold for leaching.

13.2.4 Comminution

Standard BWi tests were completed the Goose Lake and George Lake samples from 1992–2010. The 2008 program completed Ai tests on both deposit areas. The BWi determined from different test programs ranges from 14.9–18.8 kWh/t, averaging 17.1 kWh/t. Ai ranges from 0.3916–0.4822 g, averaging 0.4369 g. The data suggest that mineralization at the Goose and George sites is of moderate hardness and medium abrasiveness. The data also indicate that the Goose site mineralization, with an average BWi of 17.1 kWh/t and an Ai of 0.4822 g, is relatively harder and more abrasive than the George site mineralization, with an average BWi of 14.2 kWh/t and Ai of 0.3916 g.

Testing in 2007 indicated that the samples were moderately hard for crushing. CWi values were highly variable from 0.5–9.9 kWh/t.

Impact crushing work index (CWi) tests were conducted in 2009 on Goose Lake and George Lake samples. The average CWi suggested a soft material.

Additional comminution tests were completed in 2014. At the completion of this program, all available comminution test results were reviewed, with the following conclusions:

- BWi values were variable, ranging from 11.7–20.6 kWh/t; the weighted average and weighted 75th percentile were calculated as 15.1 kWh/t and 15.8 kWh/t respectively;
- Grind size recommended for design was P80 of 50 µm.

BWi tests completed in 2018 indicated that MPC-1 and MPC-2 were moderately hard, with a BWi of 16.0 kWh/t for MPC-1 and 17.0 kWh/t for MPC-2 at a closing screen size of approximately 150 µm.

Three test programs to investigate fine grinding were completed between 2017–2019. SGS completed IsaMill testing on a rougher concentrate sample created by BML to determine the specific energy requirement. To reduce the sample from an F80 of approximately 53 µm to a P80 of approximately 22 µm and 11 µm resulted in specific energy requirements of 19.0 kWh/t and 67.7 kWh/t, respectively. In 2018, samples representing MPC-1 and MPC-2 were sent to Metso for particle-size analysis and jar mill grindability tests targeting a P80 of approximately 50 µm. The results indicated that, to reduce the mill feed to the target grind size of P80 of approximately 50 µm from feed size F80 of approximately 106 µm, the vertimill specific energy requirement was 5.91 kWh/t for MPC-1 and 6.37 kWh/t for MPC-2.

Similar testwork was completed by FLSmidth to determine the VXP mill specific energy requirement on Goose Main, Llama, and Umwelt samples. In addition to the fine grinding, BWi tests were completed at a target grind size of P80 of approximately 106 µm on the eight samples. The FLSmidth results indicate the Back River deposits range from medium to very hard in terms of BWi, with an average of 17.93 kWh/t and a 75th percentile of 18.17 kWh/t for all samples tested.

During 2024, SGS completed included SMC, RWi, BWi, and Ai tests on a composite prepared from the Goose deposits to represent the average feed blend for the initial three years of mill operation based on the current mine plan (Year 1-3 Comp). The sample was characterized as

moderately hard with respect to resistance to impact breakage, with an average $A \times b$ value of 31.0. The sample was characterized as hard with respect to resistance to abrasion breakage, with an average t_a value of 0.26. The average relative density was 3.08. The RWi value was 18.6 kWh/t, which placed it in the hard range of hardness relative to the SGS database. The BWi values were 18.9 kWh/t (270 mesh) and 16.0 kWh/t (65 mesh), which placed them in the moderately hard to hard range of hardness relative to the SGS database.

13.2.5 Gravity Recoverable Gold

Gravity recovery testwork was completed on samples taken from the Goose and George sites from 1992–2009. Test results demonstrated that the samples from both deposits were amenable to gravity gold recovery. All the test reports suggested that a gravity concentration circuit should be included in the grinding circuit.

The 2014 program results showed a wide variation in recovery from approximately 16–76% with an average of 39%.

The MPC-1, MPC-2, and MPC-3 composites were subject to GRG testing in 2018. The highest percentage and grade of gravity gold recovered to the concentrates for all samples was at a grind size of 80% passing (P_{80}) of approximately 106 μm . The GRG for all three samples was in the high 70% range. The two samples representing the initial years of mining were be classified as moderate and were favourable for gravity recovery. Three circuit options were provided from modeling, which included installing gravity in the primary grinding circuit only; the secondary grinding circuit only; and both grinding circuits. The sizing options were based on a primary grinding circuit with a typical 300% circulating load and target grind size P_{80} of approximately 106 μm , with the secondary grinding circuit using a circulating load of 150% and final grind size P_{80} of approximately 50 μm .

The Year 1-3 Comp was subject to a complete extended gravity recoverable gold (E-GRG) testwork program at SGS in 2024, with results forwarded to FLS for modelling. The GRG test results were considered to be good, with moderate to high GRG value, and the GRG was fine to moderate in size. FLS concluded that both a primary and secondary gravity circuit were warranted.

SGS also completed seven gravity separation tests to evaluate the recovery of gold, as well as to provide samples for downstream testwork. The final concentrates from the tests were either fire assayed to extinction or forwarded for intensive cyanide leaching. The Year 1-3 Comp gravity gold recovery values ranged from about 27–41% and averaged approximately 34%. The average percent mass pull to the gravity concentrate was about 0.09%. The grind size P_{80} values for the seven tests ranged from approximately 100–150 μm . The average calculated gold head grades for the seven tests averaged about 8.6 g/t Au, which was slightly lower than the direct head assays and the E-GRG head assay grade of 9.38 g/t Au.

13.2.6 Cyanide Leach

Between 1992–2012, four test programs were carried out to evaluate the metallurgical response of George Lake and Goose Lake samples to cyanide leach.

Cyanidation tests that were conducted in 1992 on the gravity tailings produced from two George Lake composite samples (Locale 1 and Locale 2) gave gold extractions ranged from 91.2–94.1% (averaging 93.6%) for the Locale 1 sample and from 76.1–81.6% (averaging 79%) for the Locale 2 sample using a leaching retention time of 48 hours.

The 1998 tests investigated the effect of different variables on gold extraction by cyanide leach, including lead nitrate dosage, aeration time, pH (by lime and cement), sodium cyanide dosage, and grind size. The tests were conducted on the gravity concentration tailings and head samples. Grind size tests indicated that the optimum grind size was 80% passing approximately 86 µm. A gold extraction of between 92–93% was achieved from the gravity concentration tailings. Using a combination of gravity concentration and cyanide leaching, the total gold recovery, including gravity concentration, was approximately 95%.

Intensive cyanide leaching (at a cyanide concentration of 2%) was conducted in 2009 to investigate gold extraction from the gravity concentrate and flotation concentrate. Blended gravity separation and flotation concentrates produced from the bulk Goose Lake and George Lake composite samples respectively had the following results. Approximately 95% of the gold was extracted from the Goose Lake composite (grading 40.9 g/t Au), and 96% of the gold was extracted from the George Lake composite (grading 43.4 g/t Au) within a leach retention time of six hours when the bulk concentrates were reground to a particle size of 80% passing 106 µm.

Cyanide leach tests were conducted in 2010 on the Echo composite at a grind size of 80% passing 88 µm, and on the Llama and Umwelt composites at a grind size of 80% passing 72 µm. Approximately 88–89% of the gold was extracted from the Llama and Umwelt composite samples after being leached for 48 hours. A lower gold recovery of 80.2% was obtained from the Echo composite sample.

The 2014 leach program was conducted over a range of times up to 48 hours on P80 of 50 µm samples, at a density of 33% solids. Approximately 60% of the leaching was completed in the first eight hours, with considerable leaching occurring up to 24 hours. From 24–48 hours, the average additional leach recovery was calculated to be 1.6%, from 24 to 36 hours, an approximately 1% additional recovery, and 36–48 hours an approximately 0.6% additional recovery.

During the 2018 testwork program, composites were initially ground to a P₈₀ of approximately 1,000, 106, and 50 µm with gravity at each stage. The gravity concentrate from each stage was combined and subjected to intensive leach, with the gravity tailings progressing to the leach stage. Both CIL and CIP circuits were tested. The test parameters used the previously developed flowsheet with 16 h pre-oxidation (pre-ox), 48 h leach, 20 g/t lead nitrate, and 500 ppm NaCN. The overall gold extraction was on average in the range of 92–93% for the three composites.

Multistage diagnostic leach tests were conducted on the leach residue from composites MPC-1, MPC-2, and MPC-3 to investigate gold deportment. The test program included five stages: high-intensity cyanide leach; hydrochloric acid digestion; nitric acid digestion followed by cyanidation; aqua regia digestion; and fire assay. The data from each stage provided information on the association of gold with carbonate, arsenic, silicate/or gangue, and determined the gold

amenability to cyanidation and acid solubility. The results confirmed previous mineralogical work and indicate the gold appears to be free, associated with pyrite and arsenopyrite.

SGS, as part of their 2024 testwork program, completed a comprehensive leach optimization evaluation. In total, 40 cyanidation tests were completed. The initial test conditions were based on the current process design criteria and the tests were used to evaluate the parameters and determine a new optimized set of conditions, planned to be used for actual plant operations in 2025.

The results from the initial tests (no pre-aeration) indicated that higher gold extractions were achieved when using elevated dissolved oxygen concentrations. The results from the second set of tests indicated that gold recoveries were similar when using a dissolved oxygen concentration of ~20–25 mg/L, but the cyanide additions were greatly improved with longer pre-aeration times. The results from the third series of tests confirmed that a higher dissolved oxygen concentration (~20–25 mg/L) and a pre-aeration period of 14 hours provided the best results in terms of gold recovery and cyanide addition.

The addition of lead nitrate was evaluated in an effort to decrease cyanide addition and potentially improve gold extraction. Five tests were completed. The overall gold recoveries for these tests were very similar, at ~94%.

The impact of pulp density was examined, with two lower pulp density tests at 50% and 45% solids completed. The results from the two tests were similar. Overall gold recoveries were 93.1% and 93.4%, respectively.

The impact of cyanide concentration was evaluated, with four tests completed. A high overall gold recovery of 93.4% was achieved in test CN-21 (0.25 g/L NaCN). Overall gold recoveries for the tests were similar, at ~93–94%, and within assay error.

Fourteen tests were conducted to evaluate the effect of P80 grind sizes. The overall gold recoveries increased from ~81% (149 µm) to ~98% (15 µm). Reagent additions increased with finer grind.

One final series of tests were completed which evaluated temperature and during the series of tests a final longer pre-aeration test was also completed. The cyanide and lime additions will be higher at warmer temperatures. The overall gold recoveries ranged from 94.4% to 93.1% and decreased slightly with increasing temperature, which was unexpected.

13.2.7 Oxygen Uptake

Composites MPC-1 and MPC-2 samples were processed in the 2018 testwork using the optimized flowsheet parameters, with dissolved oxygen measurements taken every minute for 15 minutes, at hours 0, 1, 2, 3, 4, 5, 6, and 24. The results indicate the dissolved oxygen rates slowed and dropped off after 5 h for MPC-1 and 6 h for MPC-2.

A single oxygen uptake test was completed by SGS in 2024 using the Year 1-3 Comp. The rate at which oxygen was consumed was determined over a 14-hour (pre-aeration period) and 28-hour leaching period. Oxygen demand decreased throughout the test and levelled out at ~0.1–0.2 mg/L/min after about 18 hours. SGS noted that the Year 1-3 Comp contained elevated

sulphur, and this would need to be taken into consideration when oxygen is added to the pre-aeration tanks and initial tanks in the leaching circuit.

13.2.8 Electrowinning

Electrowinning tests were completed on solutions used from the bulk leach tests on Goose Lake and George Lake composite samples. Results showed that the gold in the bulk leach solutions could be effectively deposited onto the cathode. The test results indicated that the impurity concentrations in the feed solutions should not limit the final electrowinning tailings grade.

13.2.9 Settling

Preliminary settling tests were completed on the leach residue samples generated from the Goose Lake and George Lake composite samples. For the leach residue of the Goose Lake composite sample, the tests predicted that an overflow with good clarity and an underflow nearing 60% solids could be achieved with the addition of approximately 20 g/t flocculant. For the leach residue of the George Lake composite sample, one test showed that a good settling rate with good overflow clarity and a high underflow density could be obtained by using Nalco Optimizer 85010 Plus at a dosage rate of 18 g/t flocculant.

The 2014 testwork program evaluated the use of Superfloc A130, Superfloc C496, and Magnafloc 333 as flocculants. Magnafloc 333 (non-ionic) was the most optimal from the flocculant screening tests.

A suite of static settling tests were conducted in 2014 on samples from Echo, Goose Main, Llama, and Umwelt. The testwork showed that the ores can be thickened consistently to >60% solids.

13.2.10 Solid-Liquid Separation

Tailings samples representing MPC-1, MPC-2, and MPC-3 were sent to Pocock to conduct solid-liquid separation tests to provide thickener and pumping design criteria. The testwork included flocculant screening, static and dynamic thickening tests, and viscosity tests. The flocculant screening tests indicate that flocculant SNF AN 913 SH at a feed slurry concentration of 15% showed the best performance.

Dynamic thickener testwork was completed to determine the design criteria for a high-rate thickener. The results from the tests on each of the composites shows that a slightly higher flocculant dosage (5–10 g/t) was required, compared to the static thickener tests, to achieve similar underflow densities. At a solids feed concentration of 20%, the design hydraulic loading rate for MPC-1, MPC-2, and MPC-3 were 4.19 m³/m²/h, 3.92 m³/m²/h, and 4.05 m³/m²/h, respectively.

FLS completed additional testwork in 2024. Thickening test results showed that BASF MF-1011, an anionic polyacrylamide flocculant with a high molecular weight and medium charge density, produced excellent supernatant clarity and settling velocities when used on pre-leach and tailings samples. The results showed rapid underflow consolidation for each of the samples with relatively small flocculant dose. Based on the test results, the currently installed thickeners can process the design throughput of 182 t/h (unit area 0.06-m²/t/d).

13.2.11 Total Organic Carbon

The carbonaceous content of the ores was reviewed in 2014. There was no major decrease in recovery with increase in total organic carbon content in the range of 0–1.8%. However, there is potential for a leach reduction of up to 2% in some ores. Using a carbon-in-pulp (CIP) rather than a CIL circuit was recommended. ~~Both~~ Using gravity recovery and carbon-in-columns (CIC) prior to the leach tanks would extract a substantial amount of gold, so the fraction of gold reporting to leach, and the potential for preg-robbing, would be reduced.

13.2.12 Carbon Adsorption

Carbon loading testwork in 2014 led to the adoption of a 12-day carbon residence time for design purposes.

13.2.13 Cyanide Destruction

A sulphur dioxide/air procedure to destruct residual cyanide in the slurries produced from the bulk cyanide leach tests was tested on Goose Lake and George Lake composite samples. The test results indicated that the sulphur dioxide/air cyanide destruction procedure was able to effectively reduce weakly-acid dissociable (WAD) cyanide concentrations from 9,551 mg/L in the head samples to approximately 15–20 mg/L in four hours for the Goose Lake composite sample, or in six hours for the George Lake composite sample.

Testwork conducted in 2014 was to determine the amenability of samples to the SO_2/O_2 cyanide destruction process to achieve a primary target of <10 mg/L CN_{WAD} with <20 mg/L cyanide total (CN_{TOTAL}). A secondary target of <15 mg/L CN_{WAD} with <25 mg/L CN_{TOTAL} and a final target of <1 mg/L CN_{TOTAL} was stipulated. A feed slurry containing 90 mg/L CN_{WAD} and 96 mg/L CN_{TOTAL} was effectively treated and resulted in a stable final CN_{WAD} of <0.2 mg/L and CN_{TOTAL} of <5.2 mg/L. The ores had a strong copper dependency when destructing cyanide, and the cyanide destruction process was more sensitive to copper availability than any other parameter. The SO_2/O_2 cyanide destruction process did not achieve any of the target CN_{WAD} levels if the g SO_2 :g CN_{WAD} ratio was reduced to below a 4:1 ratio, or the copper addition was reduced to <15 mg/L. Increasing the pulp density to 58% was not detrimental to the cyanide destruction process.

Cyanide detoxification testwork was conducted in 2018 on the leach tailings for composites MPC-1, MPC-2, and MPC-3. The samples were leached based on the previously developed flowsheet parameters, then treated with Inco SO_2 /Air process using Cu_2SO_4 as a catalyst to reduce the CN_{WAD} to below a 10 ppm target. The results indicate that lower SO_2 : CN_{WAD} ratios and Cu_2SO_4 additions struggled to achieve the target 10 ppm CN_{WAD} for MPC-1. Final parameters indicated that a SO_2 : CN_{WAD} ratio of 5.5:1 with 40 ppm Cu_2SO_4 as a catalyst for 60 min achieved the target final CN_{WAD} for MPC-1, with potentially lower requirements for MPC-2.

In early 2020, a gap analysis was undertaken, and it was determined that the metallurgy required additional SO_2 /air detoxification testwork to understand the detox response of the different mineralogies, and to confirm the historical optimization work undertaken in previous test programs. The approach for the detoxification test program was based on historical work, the current process

design criteria (PDC), and the current CN_{WAD} target of <10 ppm. Due to MPC-1 appearing historically to have the most issues with detoxification, it was selected for optimization testwork; the optimum conditions would be confirmed on the other two composites, and six separate variability composites representing different mining areas from the three deposits: Goose Main, Umwelt, and Llama. All the testwork, leaching, and detoxification would use site water.

Optimization testwork was completed on a 20 kg sample of MPC-1 using the 2020 flowsheet with the following parameters: a primary grind P_{80} of approximately 50 μm ; gravity recovery; pre-ox of the gravity tailings for 16 h; leach of the pre-oxidized gravity tailings for 48 h at 50% solids; pH 11; DO above 20 ppm; 20 g/t $PbNO_3$; and a NaCN concentration of 500 ppm. The last NaCN addition was at 24 h, and the level of CN allowed to drift down to the 48-h termination.

The dissolved oxygen levels in these tests were all maintained above 20 ppm, and as a result, the leach kinetics were excellent, with most of the leaching concluded before after 24 h. The final gold stage leach extractions for MPC-1, MPC-2, and MPC-3 were 95.4%, 93.4%, and 92.4%, respectively. Gravity recovery for these tests was 41.2%, 54.7%, and 50.1%, respectively. Overall extractions for the three MPCs were 97.3%, 97.0%, and 96.2% for gold; 63.0%, 72.8%, and 98.3% for silver. Metallurgically, these samples responded similarly to the variability program undertaken in the 2015 Feasibility Study.

Three tests were undertaken to assess decreasing the $SO_2:C�_{WAD}$ ratio from 6.0–5.0:1 while maintaining the $CuSO_4$ at the level where the 2018 testwork finished (40 mg/L $CuSO_4$). All results achieved below the target CN_{WAD} level of 10 ppm, even within the 90 min available. Additional tests confirmed previous work showing varying pulp density had minimal effect on the reaction in a laboratory setting. Decreasing the $SO_2:C�_{WAD}$ ratio from 5.0 to 4.0:1 indicated that CN_{WAD} levels increased above the target CN_{WAD} level of 10 ppm. However, after the final displacement, the results showed the CN_{WAD} levels were stable and descending, indicating there may be room for further optimization in operation.

Test conditions from these tests were used for confirmation testing on the other MPCs and VCs. The MPC samples were successfully detoxed. The VCs were also all successfully detoxed, with the CN_{WAD} levels all below the target of 10 ppm. Some variability was observed in the CN_{WAD} feed and tailings, which corresponded to the changes in cyanide consumers in the mineralization.

13.3 Optimization Testwork

A metallurgical test program was conducted in 2024 at SGS Lakefield, Ontario to optimize the leach conditions primarily related to the high design cyanide consumption of 1.4 kg/t from prior work. Parameters evaluated included dissolved oxygen concentration, pre-aeration/leach residence times, lead nitrate addition, leach density, cyanide concentration and grind size. The sample tested was a composite prepared from the Goose deposits to represent the average feed blend for the initial three years of mill operation based on the current mine plan. Process economic factors including reagent and power costs as well as gold recovery were used as the basis for the selection of the optimum leach parameters.

From the test program the following optimized leach conditions for plant start-up were established:

- Feed size P₈₀ of 45 µm;
- Sodium cyanide concentration of 0.25 g/L;
- Dissolved oxygen concentration of 20-25 mg/L;
- Pre-aeration residence time of 21 hours;
- Leach residence time of 32 hours;
- Lead nitrate addition of 50 g/t;
- Leach density of 52% solids.

The optimized cyanide consumption was reduced to 0.47 kg/t and the design gold leach extraction was improved by 2% from 88.8% to 90.8%.

13.4 Debottlenecking and Design Reviews

Design and debottlenecking reviews were completed with Lycopodium Minerals Pty Ltd of Brisbane, Australia to identify and correct process design deficiencies and bottlenecks prior to completion of plant construction.

13.5 Recovery Estimates

From the leach optimization test program, the overall gravity/leach gold recovery on the Year 1-3 composite sample is estimated at 92.5%. This includes a 1.9% discount on the optimum recovery from the SGS testwork. The discount is used to account for soluble gold and fine carbon losses as well as process upsets. This figure is the expected plant-scale gold recovery for the initial three years of mill operation.

Prior gold recovery estimates appeared to be based on direct laboratory results.

13.6 Metallurgical Variability

Samples selected for metallurgical testing were representative of the various types and styles of mineralization within the different zones. Samples were selected from a range of locations within the deposit zones. Sufficient samples were taken so that tests were performed on sufficient sample mass.

New variability samples will be tested at SGS Lakefield using the optimized leach conditions summarized in Section 13.3 during 2025.

13.7 Deleterious Elements

There are no known deleterious elements that would incur penalties in the doré production and marketing. There are also no known elements in the material to be treated that may cause plant processing issues other than reactive pyrrhotite which has been addressed through the leach optimization test program.

14.0 MINERAL RESOURCE ESTIMATES

14.1 Introduction

Mineral Resources are estimated for the Umwelt (open pit and underground), Llama (open pit and underground), Goose Main (open pit and underground), Echo (open pit and underground), Nuvuyak (underground), and Goose Neck South (open pit) deposits within the Goose Claims Group.

Mineral Resources considered amenable to open pit and underground mining methods were estimated for the Locale 1, Locale 2, LCP North, LCP South, Tupiq, and GH deposits within the George Claims Group.

Geological logging, structural logging and assay results from core drill holes were used as the basis of the three-dimensional (3D) models of overburden, lithology, structure, mineralization zones and gold grade estimates.

Software used in estimation included Leapfrog Geo (modelling), Leapfrog Edge (estimation), Supervisor (variography and geostatistics), Datamine Studio RM (estimation), Surpac (tabulation) and Whittle (open pit optimization).

Block modelling typically used a sub-cell approach. The parent block size was based on the spacing of drill holes and considered potential mining method. Block sizes included 5 x 10 x 5 m (Umwelt, Llama), 8 x 8 x 8 m (Goose Main, Nuvuyak), 10 x 4 x 10 (Echo), 16 x 16 x 16 (Goose Neck South), and 2 x 10 x 10 (all George Claims Group deposits). Sub-blocks included 1 x 1 x 1 m (Umwelt, Llama, Goose Main, Nuvuyak, Goose Neck South), 1.25 x 0.5 x 1.25 m (Echo), and 0.2 x 2 x 1 m (all George Claims Group deposits). As an aid to open pit mine planning on resources converted to Mineral Reserves, fully diluted whole-block models were derived from the subcell resource model using 5 x 4 x 5 m blocks at Echo and 5 x 5 x 5 m blocks at all other deposits at the Goose Claims Group.

14.2 Goose Claims Group

14.2.1 Exploratory Data Analysis

Statistics were completed on gold assays categorized by logged pyrite, pyrrhotite, and arsenopyrite content, shearing intensity, alteration mineralogy, lithology, stratigraphy, vein types, structure, texture, grain size, and sulphide content. The statistical results confirm field observations that an increased sulphide content, increase in shearing intensity, increase in fold complexity, proximity to quartz–feldspar porphyry dykes, and favourable stratigraphic unit (specifically the lower iron formation) are the strongest identified controls on gold mineralization. The highest gold grades are associated with arsenopyrite alteration in iron formation.

14.2.2 Geological Models

Structural, lithological and mineralization domains were modeled. Lithology was modeled with specific focus on the lower iron formation stratigraphic unit, gabbro dykes, and the quartz–feldspar

porphyry dykes. Geological features seen in aerial geophysical surveys and surface mapping were used to assist with interpretations.

Sample sections and levels showing lithology, structural and mineralization domains for each deposit are presented in Section 7.3.

Lithology Models

Logged lithology intervals from drill core were manually grouped into stratigraphic and intrusive units. These units, or groups of these units, were modelled in 3D using Leapfrog Geo.

The lower iron formation is particularly important since it is the principal host rock for gold mineralization. Gold grades in the iron formations are typically elevated where iron formation is intruded by quartz–feldspar porphyry dykes.

Structural Models

Within the Goose Claims Group, gold deposits are predominantly hosted by structurally thickened, antiformal folds and parasitic folds of the larger Goose synclinorium. Fold interpretations are informed by drill core (stratigraphy; bedding reversals), and geophysical surveys (magnetic oxide iron formation in non–magnetic clastic sediments).

Several post-mineral faults were modeled in 3D based on logged data. These late faults sometimes offset stratigraphy and mineralization.

Detailed deposit–scale shear/fault models were developed for Umwelt, Llama, Goose Main, and Echo.

Overburden/Glacial Till Models

Glacial tills of silty gravels, sands, and clays overlie weathered and fresh rock. They have been grouped to create the overburden model. The base of the overburden surface was built from logged drill hole data, surface mapping and lake surveys. Overburden thickness ranges between 0–30 m and has an average thickness of approximately 10 m.

14.2.3 Mineralization Domains

Gold mineralization is dominantly hosted in iron formation that has been folded and sheared, resulting in structural thickening of fold hinge zones, and local thinning of the iron formation along attenuated fold limbs. Within the iron formation lithologies, mineralizing fluids have variably replaced iron oxide and silicate minerals with gold-bearing sulphides, often in areas of increased quartz veining, and proximal to quartz–feldspar porphyry dykes.

The geometry of the mineralized zones is dominantly controlled by the folded architecture of the iron-formation units, the plunge of the main and parasitic fold hinges, and the high strain corridors commonly associated with quartz–feldspar porphyry dykes.

Low-grade mineralization domains were modeled based on a nominal gold cut-off of 0.2–0.4 g/t Au, with consideration given to the logged sulphide intensity within a given interval. Grades

in the low-grade zone are generally sub-economic, but reflect the sulphidation of iron formation as a setting in which elevated gold grades are likely to occur.

High-grade domains were modelled based on a nominal gold cut-off that varied by deposit and ranged from 2–6 g/t Au. Consideration was given to logged sulphide intensity, especially arsenopyrite.

At Echo, Goose Main, Goose Neck South, and Nuvuyak, mineralization domains were modeled as 3-D solids in Leapfrog Geo. At Umwelt, Llama, and select zones at Goose Main, the mineralized domains were defined directly in the block model using estimated indicators.

The thresholds and methods used to create mineralized zones for the various deposits are summarized in Table 14-1.

14.2.4 Density Assignment

At each deposit area, the mean of density measurements in each lithology unit was calculated and applied to the lithology model (Table 14-2).

14.2.5 Grade Capping/Outlier Restrictions

To mitigate the risk of over projecting very high grades, gold values were capped prior to compositing. Capping thresholds were determined by reviewing outliers spatially, probability plots, and through descriptive statistics. Table 14-3 summarizes the assay capping values used for each deposit.

14.2.6 Composites

Downhole composites, regularized by length, were created within mineralized domains and lithological boundaries. Target composite lengths varied between deposits, and ranged from 1–2 m. In all cases, composite lengths vary a small amount to avoid small residual composites at the end of intervals. Unsourced intervals within mineralization domains were assigned near-zero gold grades prior to compositing.

Table 14-4 summarizes capped composites by deposit and domain in the Goose Claims Group.

14.2.7 Variography

Gold variograms were created from composites in domains with sufficient samples. Resulting variogram parameters, including nugget, correlation coefficients and ranges, were used as input to ordinary kriging and other estimation parameters.

Because mineralization occurs in folded lithologies, dynamic anisotropy was used to control the continuity directions.

At Umwelt and Llama composites were unfolded prior to completing variogram analysis.

When indicator kriging was used, indicator variograms were also completed.

Table 14-1: Domain Threshold Definition, Goose Claims Group Deposits

Deposit	Nominal Low-Grade Threshold (g/t Au)	Nominal High-Grade Threshold (g/t Au)	Method
Umwelt	0.2–0.4	2–4	Indicators within lower iron formation stratigraphic unit
Llama	0.2–0.4	2–4	Indicators within lower iron formation stratigraphic unit
Goose Main	0.2–0.3	2–4	3D wireframes and Indicators.
Echo	0.3–0.4	3–5	3D wireframes
Nuvuyak	0.1–0.2	2	3D wireframes
Goose Neck South	0.2–0.3	1–2	3D wireframes

Table 14-2: Density Assignment By Lithological Unit, Goose Claims Group Deposits

Lithology	Unit Code	Density (g/cm ³)					
		Umwelt	Llama	Goose Main	Nuvuyak	Echo	Goose Neck South
Overburden (till)	OVB	1.90	1.90	1.90	1.90	1.90	1.90
Gabbro	GAB	2.90	3.00	3.00	2.97	3.00	2.97
Quartz–feldspar porphyry	QFP	2.79	2.69	2.70	2.70	2.70	2.70
Upper sediments	SDT	2.83	2.78	2.80	2.78	2.78	2.78
Phyllite	PHY	—	—	2.80	2.78	2.80	—
Upper middle sediments	SDMU	2.83	2.76	—	2.78	—	—
Upper iron formation	UIF	2.93	2.93	2.90	2.90	2.95	2.90
Middle mudstone	MM	2.95	2.95	2.85	2.85	2.85	2.85
Lower iron formation	LIF	3.17	3.18	3.05	3.10	3.05	3.10
Middle lower sediments	SDM	2.77	2.76	—	2.78	—	—
Deep iron formation	DIF	2.80	2.76	2.80	2.78	—	—
Lower sediments	SDB	2.93	2.78	2.80	2.78	2.78	2.78

Table 14-3: Capping Levels By Deposit and Domain, Goose Claims Group Deposits

Deposit	Domain	Number of Samples	Average Length (m)	Grade Cap Range (g/t Au)	Au Reduction (%)	CV Reduction (%)
Umwelt	High grade	2,823	0.92	40–95	11	33
	Low grade	3,256	0.94	6-9	15	64
Llama	High grade	1,908	0.7	100	9	23
	Low grade	4,117	0.80	22	23	68
Goose Main	High grade	8,953	0.86	8–100	8	33
	Low grade	2,928	0.82	8	37	48
Nuvuyak	High grade	553	0.81	30–80	5	19
	Low grade	1,488	0.77	8	5	20
Echo	High grade	144	0.98	80	4	12
	Low grade	475	0.99	10	43	83
Goose Neck South	High grade	79	0.95	15	0	0
	Low grade	124	0.94	5	0	0

Note: CV = co-efficient of variation

Table 14-4: Composite Statistics By Deposit and Domain, Goose Claims Group Deposits

Deposit	Domain	Number of Composites	Average Composite Length (m)	Capped Grade Range (g/t)	Average Capped Grade (g/t)	Typical CV Range
Umwelt	High grade	1,311	1.93	0.60–60.79	13.26	0.81
	Low grade	1,546	1.90	0.02–5.18	1.21	0.65
Llama	High grade	694	1.93	0.16–75.07	13.11	1.07
	Low grade	1,730	1.91	0.02–16.26	1.09	1.11
Goose Main	High grade	4,046	1.90	1.52–16.43	4.52	0.09–1.60
	Low grade	1,259	1.91	0.59–1.00	0.82	0.59–4.19
Nuvuyak	High grade	426	1.00	3.30–9.43	8.28	0.67–1.40
	Low grade	1,203	1.00	0.67–1.07	0.70	1.58–1.80
Echo	High grade	144	0.98	9.60	9.60	1.10
	Low grade	475	0.99	0.35–1.15	1.07	1.24–1.26
Goose Neck South	High grade	79	0.96	2.00–3.18	2.90	0.6–1.03
	Low grade	124	0.94	0.1–1.01	0.46	0.67–0.81

Note: CV = co-efficient of variation.

Typical variogram nugget values used for ordinary kriged (OK) estimates were 20–50% of the sill. Total ranges were typically 100–200 m in the major direction, 50–100 m in the semi-major and 10–30 m in the minor. Correlation between composites drops off significantly past 30 m of separation.

14.2.8 Estimation/Interpolation Methods

Lithology and mineralization domains were coded to the block model using subcells. All grades were estimated into parent blocks using the search parameters summarized in Table 14-5.

Umwelt

At Umwelt, gold grade interpolation is controlled by two geological features: stratigraphy and structure.

For stratigraphic mineralization, blocks and composites were unfolded prior to interpolation using the lower iron-formation footwall and hanging wall surfaces as controls. Indicator and grade interpolations occurred in unfolded space.

For the structurally-controlled estimation, indicators and grades were interpolated in regular (UTM) space. Ellipse orientations were controlled using Datamine's dynamic anisotropy using the plane of mineralizing structures (quartz–feldspar porphyry dykes) as controls. The long dimension of the ellipse is oriented along the intersection of bedding and the structures.

Ordinary kriged, inverse distance weighting to the third power (ID3) and nearest neighbour (NN) methods were used to interpolate grades into parent-sized blocks (5 x 10 x 5 m) using 2 m capped composites. Mineral Resources are reported from the OK grade estimate.

Final block grades were calculated using the high-grade and low-grade domain indicators and a 60/40 rule for combining grades. That is, if the indicator was >60%, the grade of the higher-grade domain was used. If the indicator was <40% the grade of the lower grade domain was used. For indicator values between 40% and 60%, the indicator was used to calculate a weighted average.

Llama

Indicator and grade interpolation of stratigraphy-parallel models were controlled by Datamine's dynamic anisotropy using the hanging wall and footwall surfaces of the lower iron formation surface. The long dimension was oriented along the trend and plunge of folds.

Indicators and grades of structurally controlled mineralization were interpolated in regular (UTM) space. Ellipse orientations were controlled using Datamine's dynamic anisotropy using the plane of mineralizing structures as controls. The long dimension of the ellipse was oriented along the plunge of the intersection of bedding and the structure.

Block grades were estimated using OK, ID3 and NN interpolation into parent-sized blocks (5 x 10 x 5 m), with Mineral Resources reported from the OK grade estimate. Gold grades for each domain were estimated using 2 m capped composites.

Table 14-5: Search Criteria, Goose Claims Group Deposits

Deposit	Mineralization Domains	Pass Number	Search Dimensions (m)			Maximum Composites Per Drill Hole	Minimum Composites	Maximum Composites
			X	Y	Z			
Umwelt	All	Pass 1	40	60	8	4	5	16
		Pass 2	60	90	12	4	5	16
		Pass 3	100	150	20	4	1	16
Llama	All	Pass 1	40	60	10	4	5	16
		Pass 2	60	90	12	4	5	16
		Pass 3	100	150	20	4	1	16
Goose Main	All	Pass 1	40–50	40–50	5–10	4–6	5–8	10–16
		Pass 2	80–100	80–100	10–30	4–5	5–6	10–16
		Pass 3	180–200	180–200	40–80	4–5	1	8–9
Nuvuyak	High grade	Pass 1	70	70	20	4	5	14
		Pass 2	120	120	40	3	4	12
		Pass 3	240	240	120	4	1	8
	Low grade halo	Pass 1	70	70	20	4	5	16
		Pass 2	120	120	40	3	4	16
		Pass 3	280	280	140	4	1	12
Echo	High grade main	Pass 1	75	75	40	4	8	16
		Pass 2	130	130	80	4	1	10
	All other domains	Pass 1	75	75	40	4	8	16
		Pass 2	150	150	80	4	8	12
		Pass 3	300	300	150	4	1	10
Goose Neck South	High grade	Pass 1	90	90	30	3	4	10
		Pass 2	150	150	60	3	4	10
		Pass 3	225	225	90	3	1	6
	Low grade	Pass 1	75	75	30	3	4	10
		Pass 2	150	150	60	2	3	6
		Pass 3	225	225	90	3	1	6

Final block grades were calculated using the high-grade and low-grade domain indicators and a 60/40 rule for combining grades. That is, if the indicator was >60%, the grade of the higher-grade domain was used. If the indicator was <40% the grade of the lower grade domain was used. For indicator values between 40% and 60%, the indicator was used to calculate a weighted average.

Goose Main

The Goose Main deposit occupies a lower iron formation antiform and associated limbs, with the fold hinge plunging at 20–30° toward the west–northwest. Gold grades were estimated into 29 domains. Approximately 60% of the composites were from a single domain, D1.

The D3 domain was estimated using indicator kriging at a grade threshold of 1.5 g/t Au. Final grades were calculated using the high-grade and low-grade indicators and a 70/30 rule for combining grades. That is, if the indicator was >70%, the grade of the higher-grade domain was used. If the indicator was <30% the grade of the lower grade domain was used. For indicator values between 30% and 70%, the indicator was used to calculate a weighted average.

All other domains were estimated using OK as they exhibited less variability. NN and inverse distance interpolation to the second power (ID2) were completed for comparison and validation. Mineral Resources are stated from the OK estimates for most domains and indicator OK estimates for one domain that had higher variance.

Estimates were completed in three passes based largely based on the density of drilling data using 2 m capped composites. Ordinary kriged, ID2 and NN grades were estimated into parent-sized blocks (8 x 8 x 8 m). Estimation search directions were controlled by dynamic anisotropy using the hanging wall and footwall surfaces of the domains to control orientations.

Mineralization domain boundaries were treated as hard boundaries due to distinct grade changes across these domain thresholds.

Nuvuyak

The Nuvuyak deposit includes five high-grade and three low-grade domains. Lower grade domains are associated with three iron formation units at different stratigraphic levels. Higher grade domains form folded lenses within restricted layers in the low-grade domains.

Mineralization domain boundaries were treated as hard boundaries (no sharing of composites across contacts) due to distinct grade changes across these domain thresholds as well as the significant grade change between low-grade and high-grade domains.

All domains were estimated using OK, while NN and ID2 estimations were completed for comparison and validation. Gold grades used for reporting resources were based on OK.

Estimation search directions were controlled by dynamic anisotropy using the hanging wall and footwall surfaces of the domains to control the directions.

The estimate was completed in three passes, using 1 m composites.

Echo

The Echo deposit domains include one high-grade domain and two lower-grade domains. The core of the mineralization (high-grade main and low-grade main) lies along an open fold that plunges at 60–70° toward the southeast. The high-grade main domain forms a thin, discontinuous core to the low-grade main zone. In the low-grade main zone, the combined mineralization is typically 2–15 m thick and the high-grade main domain ranges from 1–5 m in thickness.

Mineralization domain boundaries are treated as hard boundaries (no sharing of composites across contacts) due to distinct grade changes across these domain thresholds, as well as the significant grade change between the high-grade main and low-grade main domains.

All domains were estimated primarily using OK, while NN and ID2 estimations were completed for comparison and validation. Final gold grades were based on OK.

Estimation search directions were controlled by dynamic anisotropy using the hanging wall and footwall surfaces of the domains to control the directions. Estimates were completed into parent blocks in all cases, using 1 m composites.

Goose Neck South

The Goose Neck South deposit domains include three high-grade and three low-grade domains; however, the high-grade main domain hosts most of the mineralization >1 g/t Au.

Mineralization domain boundaries were treated as hard boundaries (no sharing of composites across contacts) due to distinct grade changes across these domain thresholds as well as the significant grade change between low-grade and high-grade domains.

All domains were estimated primarily using OK, while NN and ID2 estimations were completed for comparison and validation. Final gold grades were based on OK.

Estimation search directions were controlled by dynamic anisotropy using the hanging wall and footwall surfaces of the domains to control the directions and using 1 m composites.

14.2.9 Block Model Validation

Block grade estimates were checked using the following methods:

- Visual comparison of block grades to composites on cross-sections and levels.
- Global statistical comparison of NN, ID3, and OK estimates.
- Swath plots for each estimation domain to check for potential local biases in the estimates.

Block indicator and grade estimates were visually inspected relative to drill hole composites on sections and levels on screen. Mineralization domains (wireframes or indicators) coincide with the current structural and lithological understanding of the deposit. Local grade variability is sometimes high; however, block grade estimates reasonably represent composite grades.

Global statistical comparisons of gold grades in the OK, ID3 and NN estimates at a cut-off of 0 g/t Au were completed for each estimation domain. Kriged estimates were within 5% of the NN

estimate for the high-grade domains. These differences are within acceptable levels of differences for this type of check.

14.2.10 Classification of Mineral Resources

Resource models were classified using an assessment of geological and mineralization complexity, data quality, and data density. Classification was implemented using drill hole spacing as the primary criterion.

Resources were classified separately for mineralization considered potentially amenable to either underground or open pit mining methods, and based on the following criteria:

- Open pit:
 - Indicated: blocks in regions of 40–60 m spacing; supported by two or more drill holes;
 - Inferred: blocks in regions of 60–100 m spacing;
- Underground:
 - Indicated: blocks in regions of 30–50 m spacing; supported by two or more drill holes;
 - Inferred: blocks in regions of 50–80 m spacing.

Classification was applied to the block models by creating solid volumes of areas that met the criteria defined above.

No Measured Mineral Resources were classified. No underground Indicated Mineral Resources were classified at Goose Main, Echo, or Goose Neck South.

14.2.11 Reasonable Prospects of Eventual Economic Extraction

Mineral Resources Potentially Amenable to Open Pit Mining Methods

Mineral Resources considered potentially amenable to open pit mining methods were constrained within a conceptual open pit mine design at Umwelt and Echo. For the other deposits, (Goose Main, Llama, Goose Neck South) Whittle optimized pit shells were created using the parameters in Table 14-6.

Operating costs were based on the life-of-mine plans, budget, and actual costs (see Section 15 for additional details on the cost basis and other pit optimization parameters).

Mineral Resource Potentially Amenable to Underground Mining Methods

Mineral Resources considered potentially amenable to underground mining methods were reported outside of the conceptual pit shells and design pits. No allowances were made for crown pillars. Underground Mineral Resources were reported above an underground cut-off grade; however, no stope or other constraint was applied. Table 14-7 summarizes the underground mining costs used in the cut-off calculation discussed in Section 14.2.12.

Table 14-6: Pit Input Parameters, Goose Claims Group Deposits

Parameter	Unit	Value
Gold price, Mineral Resources	US\$/oz Au	2,100
Gold recovery (process)	%	92.5
Mining cost	US\$/t mined	3.62–4.26
Mining sinking rate	US\$/t per 10 m bench	0.039
General and administrative cost, mining	US\$/t mined	1.86
Sustaining capital, mining	US\$/t processed	0.51
Whittle mining cost	US\$/t mined	5.99–6.63
Processing cost	US\$/t processed	31.76
General and administrative cost, processing	US\$/t processed	22.27
Sustaining capital, processing	US\$/t processed	0.68
Haulage	US\$/t mineralization haul	0
Whittle processing cost	US\$/t processed	32.40–32.72
Selling cost	US\$/oz Au produced	107.50
Pit slopes	degrees	45

Table 14-7: Underground Mining Costs, Goose Claims Group Deposits

Parameter	Unit	Value
Gold price, Mineral Resources	US\$/oz Au	2,100
Gold recovery (process)	%	92.5
Total mining cost	US\$/t processed	134.20–171.18
Total processing cost	US\$/t processed	54.72
Total cost	US\$/t processed	188.92–225.90
Selling cost	US\$/oz Au produced	107.50

14.2.12 Cut-off Criteria

Cut-off grade calculations assumed the costs, prices and recoveries summarized in Table 14-6 and Table 14-7.

For Mineral Resources considered potentially amenable to open pit mining operations, a cut-off of 0.9 g/t Au was used.

For Mineral Resources outside of the conceptual open pits, which may be amenable to underground mining, a 2.2 g/t Au cut-off was used.

14.3 George Claims Group

14.3.1 Exploratory Data Analysis

Exploratory data analysis was performed on a merged drill log and assay file to assess mineralization controls.

This analysis shows that most gold mineralization is hosted within iron-formation units, while many dykes appear to be barren.

Higher gold grade samples are associated with pyrrhotite and arsenopyrite mineralization. Gold grade is significantly elevated when sulphide values are >2%.

The statistical results confirm field observations.

14.3.2 Geological Models

Lithology, dyke, and mineralization models were built for the deposits within the George Claims Group. Geological models were based on logging observations, surface mapping and geophysical interpretations.

Sample sections and levels showing lithology, structural models and mineralization domains for each deposit are presented in Section 7.3.

Lithology Model

3D models were created for all the stratigraphic units in the model areas using logged lithology. Stratigraphic units are isoclinally folded and appear tabular, with steep dips and an approximate northwesterly strike direction.

In addition, several sub-vertical intrusive dykes were modeled including felsic dykes, quartz-feldspar porphyry dykes, and gabbro dykes. Intrusive units were treated as separate domains for the grade estimate and are typically not mineralized.

Structural Model

Several post-mineral faults were modeled in 3D based on logged data. These late faults sometimes offset stratigraphy and mineralization.

Overburden/Glacial Till Model

A bottom of overburden surface was created from drill hole intercepts and surface mapping. Overburden thickness varies from 0–25 m with an average thickness of 5 m.

14.3.3 Mineralization Domains

Mineralization domains were built using the following criteria:

- Halo domain: 0.2 g/t Au threshold and minimum 3 m downhole length;
- Low grade domain: 1.0 g/t Au threshold and minimum 3 m downhole length;

- High grade domain: 3.0 g/t Au threshold and 2 m minimum downhole length.

Mineralization domain orientations are controlled by stratigraphy.

14.3.4 Density Assignment

Bulk density was applied to the block models using the mean sample value in the stratigraphic/lithological units and mineralization domains. Table 14-8 summarizes the values applied to the various models.

14.3.5 Grade Capping/Outlier Restrictions

Capping levels were determined using log probability plots of assays for each domain. Assays were capped prior to compositing (Table 14-9).

14.3.6 Composites

One-metre composites were created using the mineralized zone envelope as a limiting boundary. The length of short, residual composites at the end of domain intervals was re-distributed to all composites within domain boundaries. Composite statistics are provided in Table 14-10.

14.3.7 Variography

Variograms were created for the larger domains; however they were very poor due to the low numbers of composites in each domain.

The primary interpolation method (ID2) did not require inputs from variograms.

14.3.8 Estimation/Interpolation Methods

Gold grades were estimated into the block model using 1 m composites. Both ID2 and NN estimates were run for comparison and validation. Mineral Resources are stated from the ID2 estimate. Hard boundaries were used at every contact.

Search orientations were controlled by Datamine's dynamic anisotropy function, using the mineralized domains as an orientation control. Composite search criteria are presented in Table 14-11.

14.3.9 Block Model Validation

Block models were validated using the following checks:

- Visual comparison of block grades to composites on cross sections and levels;
- Comparison of global block statistics of the NN and ID2 models;
- Swath plots comparing blocks to composites grades.

Block grades were visually checked against composite grades on vertical sections and levels. Some smoothing of grades was observed in the model, but this is expected and was deemed to be within acceptable tolerance. Block grades reasonably represent composite grades.

Table 14-8: Density Assignment, George Claims Group Deposits

Stratigraphic Unit	Unit Code	Density (g/cm ³)					
		Locale 1	Locale 2	LCP North	LCP South	GH	Tupiq
Overburden	OVB	2.5	2.5	2.5	2.5	2.5	2.5
Gabbro	GAB	2.86	2.86	—	—	—	—
Intermediate and Stealth dykes	IDYK	2.75	2.75	2.75	2.75	2.75	—
Quartz–feldspar porphyry	QFP	—	—	2.69	2.69	2.77	—
Upper iron formation	UIF	3.04	3.04	—	—	3.04	—
Lower iron formation	LIF	3.12	3.12	3.00	3.00	3.12	3.12
Deep iron formation	DIF	2.77	2.77	2.76	2.76	—	—
Phyllite	PHY	2.82	2.82	2.81	2.81	—	—
Lower sedimentary/greywacke	SDB	2.76	2.76	2.77	2.77	—	—
Upper greywacke	SDT	—	—	2.76	2.76	—	—
Pelite	PEL	—	—	2.81	2.81	—	—
Middle mudstone	MM	—	—	—	—	2.82	—
Mineralized zones	MIN	3.09	3.09	3.06	3.06	3.00	3.00

Table 14-9: Capping Levels, George Claims Group Deposits

Deposit	Domain	Number of Samples	Average Length (m)	Grade Cap Range (g/t Au)	Au Reduction (%)	CV Reduction (%)
Locale 1	Halo	1,338	0.96	0.8–6.0	8	25
	Low grade	550	0.97	3.0–12.0	8	34
	High grade	725	0.93	9.0–50.0	2	5
Locale 2	Halo	2,777	0.98	3.5–10.0	13	35
	Low grade	819	0.97	5.0–10.0	14	66
	High grade	813	0.96	30.0–50.0	5	25
LCP North	Halo	169	0.91	1.5–2.0	2	7
	Low grade	107	0.96	5.0–10.0	7	31
	High grade	150	0.92	10.0–50.0	6	10
LCP South	Halo	311	0.99	2.5–4.0	31	53
	Low grade	164	0.99	3.5–9.0	12	31
	High grade	374	0.99	30.0–40.0	5	15
GH	Halo	311	0.95	1.2–3.5	7	23
	Low grade	132	0.95	3.0–5.0	4	20
	High grade	155	0.91	25.0–30.0	4	14
Tupiq	Halo	137	0.96	1.0–1.5	19	53

Deposit	Domain	Number of Samples	Average Length (m)	Grade Cap Range (g/t Au)	Au Reduction (%)	CV Reduction (%)
	Low grade	45	0.97	3.0–3.5	14	48
	High grade	96	0.96	12.0–25.0	5	10

Note: CV = co-efficient of variation.

Table 14-10: Composite Statistics, George Claims Group Deposits

Deposit	Domain	Number of Composites	Average Composite Length (m)	Capped Grade Range (g/t Au)	Average Capped Grade (g/t Au)	CV
Locale 1	Halo	1,338	0.96	0.01–5.64	0.48	1.12
	Low grade	550	0.93	0.01–12	1.76	0.85
	High grade	725	0.97	0.02–48	10.60	0.88
Locale 2	Halo	2,777	0.98	0.01–10	0.50	1.60
	Low grade	819	0.96	0.02–10	1.77	0.76
	High grade	813	0.97	0.05–50	9.36	0.90
LCP North	Halo	169	0.91	0–1.59	0.46	0.69
	Low grade	107	0.92	0.04–8.1	1.94	0.65
	High grade	150	0.96	0.25–50	11.44	0.92
LCP South	Halo	311	0.99	0.02–3.67	0.50	1.23
	Low grade	164	0.99	0.02–9	2.10	0.94
	High grade	374	0.99	0.02–40	10.58	0.80
GH	Halo	311	0.95	0–3.5	0.48	0.91
	Low grade	132	0.91	0.13–5	1.71	0.47
	High grade	155	0.95	0.02–27.01	8.79	0.65
Tupiq	Halo	137	0.96	0.04–1.25	0.38	0.72
	Low grade	45	0.96	0.07–3.5	1.77	0.43
	High grade	96	0.97	0.1–25	7.99	0.82

Note: CV = co-efficient of variation.

Table 14-11: Search Criteria, George Claims Group Models

Mineralization Domains	Pass Number	Search Dimensions (m)			Maximum Composites Per Drill Hole	Minimum Composites	Maximum Composites
		X	Y	Z			
All	Pass 1	100	60	20	5	6	25
	Pass 2	150	90	30	5	6	25
	Pass 3	260	156	52	5	1	25

Block model statistics were compared for the NN and ID2 estimates at a 0 g/t Au cut-off. Differences between the two models are within 5%, which is within acceptable levels.

Swath plots were used to check for local bias. The plot compares composite grades to block grades in each coordinate direction. The composites, NN model and ID2 model track each other very well, and indicate that the models represent the composite data.

14.3.10 Classification of Mineral Resources

Classification was implemented using drill hole spacing as the primary criterion. No blocks were classified as Measured Mineral Resources. Resources were classified separately for mineralization considered potentially amenable to either underground or open pit mining methods, and based on the following criteria:

- Open pit:
 - Indicated: blocks in regions of 50–60 m spacing; supported by two or more drill holes;
 - Inferred: blocks in regions of 100–120 m spacing;
- Underground:
 - Indicated: no blocks were classified as Indicated;
 - Inferred: blocks in regions of 60–80 m spacing.

14.3.11 Reasonable Prospects of Eventual Economic Extraction

Mineral Resources Potentially Amenable to Open Pit Mining Methods

Mineral resources potentially amenable to open pit mining were constrained within pit shells using the parameters summarized in Table 14-12.

Mineral Resource Potentially Amenable to Underground Mining Methods

The Mineral Resources were constrained by cut-off grade (see Section 14.3.12); however, no stope or other constraint was applied.

Table 14-12: Pit Input Parameters, George Claims Group Deposits

Parameter	Unit	Value
Gold price, Mineral Resources	US\$/oz Au	2,100
Gold recovery (process)	%	92.5
Mining cost	US\$/t mined	3.83
Mining sinking rate	US\$/t per 10 m bench	0.039
General and administrative cost, mining	US\$/t mined	2.22
Sustaining capital, mining	US\$/t processed	0.51
Whittle mining cost	US\$/t mined	6.56
Processing cost	US\$/t processed	31.76
General and administrative cost, processing	US\$/t processed	2.22
Sustaining capital, processing	US\$/t processed	0.68
Haulage	US\$/t mineralization haul	25.50
Whittle processing cost	US\$/t processed	84.50
Selling cost	US\$/oz Au produced	107.50
Pit slopes	degrees	43

14.3.12 Cut-off Criteria

The calculated open pit cut-off grade used the assumptions in Table 14-12, and was rounded to 1.4 g/t Au.

The cut-off grade used for the estimates potentially amenable to underground mining methods was calculated at 3.1 g/t Au, assuming a gold price of US\$2,100/oz Au, process recovery of 92.5%, mining cost of US\$171.18/t mined, processing cost of US\$54.72/t processed, and a selling cost of US\$107.5/oz Au produced.

14.4 Mineral Resource Statement

Mineral Resources are reported in situ or in stockpiles, using the CIM Definition Standards, and have an effective date of December 31, 2024.

Mineral Resource estimates at the Echo deposit are inclusive of depletion as at December 31, 2024.

The Qualified Person for the in situ estimates is Mr. Andrew Brown, P.Geo., B2Gold's Vice President, Exploration. The Qualified Person for the estimates in stockpiles is Mr. Peter Montano, P.E., B2Gold's Vice President, Projects.

Indicated Mineral Resources are reported in Table 14-13, inclusive of those Indicated Mineral Resources that were converted to Probable Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Inferred Mineral Resources are reported in Table 14-14.

Table 14-13: Indicated Mineral Resource Statement

Claims Group	Deposit	Conceptual Mining Method	Tonnes (x 1,000)	Gold Grade (g/t Au)	Contained Gold Ounces (x 1,000)
Goose	Umwelt	Open pit	2,580	8.06	670
		Underground	4,120	11.65	1,540
	Llama	Open pit	2,400	5.77	450
		Underground	130	7.46	30
	Goose Main	Open pit	5,700	4.40	810
	Echo	Open pit	300	5.02	48
	Stockpile	Stockpile	240	2.76	21
	Total Indicated		15,460	7.16	3,560
George	LCP North	Open pit	150	8.88	43
	LCP South	Open pit	350	8.74	97
	Locale 1	Open pit	590	8.49	160
	Locale 2	Open pit	270	6.30	55
	Tupiq	Open pit	64	4.80	10
	GH	Open pit	260	6.99	58
	Total Indicated		1,680	7.85	420
Total Indicated			17,140	7.23	3,990

Table 14-14: Inferred Mineral Resource Statement

Claims Group	Deposit	Conceptual Mining Method	Tonnes (x 1,000)	Gold Grade (g/t Au)	Contained Gold Ounces (x 1,000)
Goose	Umwelt	Open pit	100	1.56	5
		Underground	1,230	10.02	400
	Llama	Open pit	320	6.12	64
		Underground	2,180	10.68	750
	Goose Main	Open pit	160	2.23	11
		Underground	3,000	4.57	440
	Nuvuyak	Underground	2,430	8.14	640
	Echo	Underground	580	7.04	130
George	Goose Neck South	Open pit	51	2.98	5
	<i>Total Inferred</i>		<i>10,060</i>	<i>7.54</i>	<i>2,440</i>
	LCP North	Underground	160	9.99	53
	LCP South	Underground	270	10.17	87
	Locale 1	Underground	1,150	10.24	380
	Locale 2	Underground	1,730	8.81	490

Claims Group	Deposit	Conceptual Mining Method	Tonnes (x 1,000)	Gold Grade (g/t Au)	Contained Gold Ounces (x 1,000)
	Tupiq	Underground	230	8.52	63
	GH	Underground	190	7.60	45
	Total Inferred		3,730	9.32	1,120
Total Inferred			13,780	8.02	3,550

Notes:

1. Mineral Resources were classified using the 2014 CIM Definition Standards and have an effective date of December 31, 2024. Mineral Resources are reported in situ or in stockpiles, inclusive of those Mineral Resources that have been modified to Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2. Mineral Resources are reported on a 100% project basis.
3. The Qualified Person for the in situ Mineral Resource estimate is Andrew Brown, P.Geo., Vice President, Exploration, B2Gold.
4. The Qualified Person for the stockpile estimate is Peter Montano, P.E., Vice President, Projects, B2Gold.
5. Goose Claims Group: Mineral Resource estimates that are potentially amenable to open pit mining methods are reported within conceptual open pit shells based on a gold price of US\$2,100/oz, metallurgical recovery of 92.5%, selling costs of US\$107.50/oz Au including royalties and levies, and operating cost estimates of US\$5.99–6.63/t mined (mining), US\$32.40–32.72/t processed (processing) and US\$22.27/t processed (general and administrative), pit slope angles of 45°, and an exchange rate of 1.33. Mineral Resources potentially amenable to open pit mining methods are reported at an average cut-off grade of 0.9 g/t Au. Mineral Resource estimates potentially amenable to underground mining are reported at a cut-off grade of 2.2 g/t Au, assuming a gold price of US\$2,100/oz Au, process recovery of 92.5%, variable mining costs by deposit of US\$134.20–171.18/t mined, processing cost of US\$54.72/t processed, and a selling cost of US\$107.50/oz Au produced. No stope or other constraint was applied.
6. George Claims Group: Mineral Resources potentially amenable to open pit mining methods are reported within conceptual open pit shells based on a gold price of US\$2,100/oz, metallurgical recovery of 92.5%, selling costs of US\$107.50/oz Au including royalties and levies, and operating cost estimates of US\$6.56/t mined (mining), US\$57.94/t processed (processing) and US\$26.55/t processed (general and administrative), pit slope angles of 43°, and an exchange rate of 1.33. Mineral Resources potentially amenable to open pit mining methods are reported at an average cut-off grade of 1.4 g/t Au. Mineral Resource estimates potentially amenable to underground mining are reported at a cut-off grade of 3.1 g/t Au, assuming a gold price of US\$2,100/oz Au, process recovery of 92.5%, mining costs of US\$175.46/t mined, processing cost of US\$84.50/t processed including haulage, and a selling cost of US\$107.50/oz Au produced. No stope or other constraint was applied.
7. Mineral Resources at Echo account for mining depletion as of December 31, 2024.
8. Mineral Resources in stockpiled material were prepared by mine site personnel at the operation.
9. All tonnage, grade and contained metal content estimates have been rounded; rounding may result in apparent summation differences between tonnes, grade, and contained metal content.

14.5 Factors That May Affect the Mineral Resource Estimate

Factors that may affect the Mineral Resource estimates include:

- Metal price and exchange rate assumptions;
- Changes to the assumptions used to generate the gold grade cut-off grade;
- Changes in local interpretations of mineralization geometry and continuity of mineralized zones;
- Changes to geological and mineralization shapes, and geological and grade continuity assumptions;
- Density and domain assignments;
- Changes to geotechnical, mining, and metallurgical recovery assumptions;
- Change to the input and design parameter assumptions that pertain to the conceptual pit constraining the estimates;
- Assumptions as to the continued ability to access the site, retain mineral and surface rights titles, maintain environment and other regulatory permits, and maintain the social licence to operate.

14.6 Comments on Mineral Resources

The QP notes the following.

Mineral Resources are reported in accordance with the 2014 CIM Definition Standards.

There is upside potential for the estimates if mineralization that is currently classified as Inferred can be upgraded to higher-confidence Mineral Resource categories.

There are no other known environmental, legal, title, taxation, socioeconomic, marketing, political or other relevant factors that would materially affect the estimation of Mineral Resources that are not discussed in this Report.

15.0 MINERAL RESERVE ESTIMATES

15.1 Introduction

Mineral Reserves were converted from Indicated Mineral Resources. Inferred Mineral Resources were set to waste. The mine plan is a combination of open pit and underground mining using conventional mine methods and equipment, and in-pit tailings deposition.

15.2 Mineral Reserves Statement

The Mineral Reserve estimates, reported within the ultimate open pit and underground designs, are presented in Table 15-1.

The Qualified Person for the estimate of Mineral Reserves in the open pits and stockpiles is Mr. Peter Montano, P.E., Vice President, Projects, an employee of B2Gold.

The Qualified Person for the estimate of Mineral Reserves in the underground mine is Mr. Michael Meyers, P.Eng., Manager, Projects, an employee of B2Gold.

The estimate has an effective date of December 31, 2024.

15.3 Factors that May Affect the Mineral Reserves

Factors that may affect the Mineral Reserve estimates apply to both open pit and underground reserves, and include:

- Changes to the gold price assumptions;
- Changes to geotechnical assumptions;
- Unforeseen dilution or ore loss;
- Changes to hydrogeological and dewatering assumptions;
- Changes to inputs to capital and operating cost estimates;
- Changes to operating cost assumptions used in the constraining pit shells or stope optimizer;
- Changes to pit and stope designs from those currently envisaged;
- Changes in mining or milling productivity assumptions;
- Changes to modifying factor assumptions, including environmental, permitting, and social licence to operate.

Table 15-1: Mineral Reserves Statement

Deposit	Mining Method	Tonnes (x 1,000)	Gold Grade (g/t Au)	Contained Gold Ounces (x 1,000)
Echo	Open Pit	180	5.69	30
Umwelt	Open Pit	2,600	7.75	650
Llama	Open Pit	1,400	6.39	290
Goose	Open Pit	3,100	4.79	470
<i>Subtotal – Open Pits</i>		7,300	6.19	1,450
Umwelt	Underground	3,800	8.30	1,010
Stockpiles		240	2.76	21
Total Probable Reserves		11,300	6.82	2,480

Notes:

1. Mineral Reserves have been classified using the CIM Standards, are reported at the point of delivery to the process plant and have an effective date of December 31, 2024.
2. Mineral Reserves are reported on a 100% project basis.
3. The Qualified Person for the open pit and stockpile Mineral Reserve estimate is Peter Montano, P.E., Vice President, Projects, B2Gold.
4. The Qualified Person for the underground Mineral Reserve estimate is Michael Meyers, P.Eng., Manager, Projects, B2Gold.
5. Mineral Reserves from open pit mine methods and stockpiles are based on a conventional open pit mining method, gold price of US\$1,750/oz, metallurgical recovery of 92.5%, selling costs of US\$90.00/oz including royalties and levies, average mining cost of US\$4.92/t mined at surface, average processing cost of US\$41.08/t processed, and general and administrative costs of US\$66.95/t processed. Reserve model dilution and ore loss were applied through whole block averaging such that at a 1.65 g/t Au cut-off, for all pits combined there is a 32% increase in tonnes, a 25% reduction in grade, and a 1% reduction in ounces when compared to the Mineral Resource model. Mineral Reserves that will be mined by open pit methods or are in stockpiles are reported above a cut-off grade of 1.65 g/t Au.
6. Mineral Reserves that will be mined by underground methods assume longhole stoping mining methods, gold price of US\$1,750/oz, metallurgical recovery of 92.5%, selling costs of US\$90.00/oz including royalties and levies, average mining cost of US\$120.13/t ore mined, average processing cost of US\$41.08/t processed, general and administrative costs of US\$66.95/t processed, dilution % variable by stoping area, and 90% mining recovery. Mineral Reserves that will be mined by underground methods are reported above a cut-off grade of 4.64 g/t Au.
7. All tonnage, grade and contained metal content estimates have been rounded; rounding may result in apparent summation differences between tonnes, grade, and contained metal content.

15.4 Open Pit Mineral Reserves

Mineral Reserves were estimated from four deposits based on open pit mining methods: Echo, Umwelt, Llama, and Goose Main.

15.4.1 Pit Optimization

The overall pit optimization process was consistent for all open pit deposits.

Pit optimizations were completed using Pseudoflow with Geovia Whittle pit optimisation software and cross referenced using Pseudoflow with Deswik.AdvOPM software. The pit shell sequences

obtained from optimisations were analysed to define a practical mining sequence for the pit stage designs. Some of the open pits are too small for phasing and will be mined in one pass.

For a given block model, cost, recovery and slope data, the software determines a series of incremental pit shells, in which each shell is an optimum for a slightly higher price factor. In the analysis of the incremental pit shells, indicative net present values (NPV) were calculated by discounting the preliminary cash flows over time. The reported NPVs in pit optimisation results were indicative operating values for relative comparison purposes only. As well as the indicative NPVs, the incremental operating cost per ounce for the pit shells was also used to guide the pit shell selection and design process.

Additional optimisations were carried out to the base case optimisation to determine the sensitivities around the base case results.

The optimum pit shell is according to the software is not necessarily selected if other constraints to mining or scheduling or known. The Echo and Umwelt pits are limited by the overall project processing and the in-pit tailings deposition schedule.

Echo Pit Optimization

The Echo open pit is the first pit in the open pit mine sequence. It is also the smallest, reaching a maximum depth of 100 m from surface elevation. Pit optimization was completed to confirm its viability as a Mineral Reserve, but the pit design was not materially updated during development of Mineral Reserves as the pit volumes are limited by mining and processing scheduling constraints that require the Echo pit to be available for in-pit tailings deposition in June of 2025.

The pit optimization parameters used in the Echo pit are provided in Table 15-2.

Umwelt Pit Optimization

The Umwelt pit is the second pit in the open pit mine sequence. The Umwelt pit reaches a maximum depth of 160 m from surface elevation. Pit optimization was completed to confirm its viability as a Mineral Reserve, but the pit design is limited by surface mining and processing scheduling constraints that require the Umwelt pit to be available for water storage and in-pit tailings deposition in Q3 2028. The Umwelt pit analysis included an underground extraction trade-off that was considered when determining the pit optimization shell to be selected.

The pit optimization parameters used in the Umwelt pit are provided in Table 15-3.

Llama Pit Optimization

The Llama pit is the third pit in the open pit mine sequence. The Llama pit reaches a maximum depth of 170 m from surface elevation. The Llama pit is not constrained by mining or processing schedules, and an optimal pit shell was selected based on the pit optimization parameters used.

The pit optimization parameters used in the Llama pit are provided in Table 15-4.

Table 15-2: Echo Pit Optimization Parameters

Parameter	Unit	Value
Gold price	US\$/oz Au	1,750
Mined tonnage	Mt/year	17.50
Processed tonnage	Mt/year	1.46
Mining cost*	US\$/t mined	4.07
Processing cost	US\$/t processed	40.40
Ore waste haul differential**	US\$/t processed	0.23
G&A cost	US\$ M/year	97.74
G&A mining	% of G&A	0.50
G&A mining	US\$/t mined	2.79
G&A processing	% of G&A	0.50
G&A processing	US\$/t processed	33.47
Sustaining capital cost mining	US\$ M/year	9.00
Sustaining capital cost mining	US\$/t mined	0.51
Sustaining capital cost processing	US\$ M/year	1.00
Sustaining capital cost processing	US\$/t processed	0.68
Pit optimization mining cost	US\$/t mined	7.38
Pit optimization processing cost	US\$/t processed	74.79
Selling cost	US\$/oz produced	90.00
Mining sinking rate	US\$/10 m bench	0.04
Processing recovery	% of contained	0.925
Cut-off grade - calculated	g/t	1.51
Cut-off grade - applied	g/t	1.65
Pit slopes	degrees	32–47

Note: * Mining cost is applied at the elevation of the natural topography, and increases with depth due to application of the mining sinking rate. ** Ore waste haul differential is a debit when the waste haul is longer than the ore haul, and a credit when the ore haul is longer than the waste haul. G&A = general and administrative.

Table 15-3: Umwelt Pit Optimization Parameters

Parameter	Unit	Value
Gold price	US\$/oz Au	1,750
Mined tonnage	Mt/year	17.50
Processed tonnage	Mt/year	1.46
Mining cost*	US\$/t mined	4.15
Processing cost	US\$/t processed	40.40
Ore waste haul differential**	US\$/t processed	0.04
G&A cost	US\$ M/year	97.74
G&A mining	% of G&A	0.50
G&A mining	US\$/t mined	2.79
G&A processing	% of G&A	0.50
G&A processing	US\$/t processed	33.47
Sustaining capital cost mining	US\$ M/year	9.00
Sustaining capital cost mining	US\$/t mined	0.51
Sustaining capital cost processing	US\$ M/year	1.00
Sustaining capital cost processing	US\$/t processed	0.68
Pit optimization mining cost	US\$/t mined	7.46
Pit optimization processing cost	US\$/t processed	74.60
Selling cost	US\$/oz produced	90.00
Mining sinking rate	US\$/10 m bench	0.04
Processing recovery	% of contained	0.925
Cut-off grade - calculated	g/t	1.51
Cut-off grade - applied	g/t	1.65
Pit slopes	degrees	41–47

Note: * Mining cost is applied at the elevation of the natural topography, and increases with depth due to application of the mining sinking rate. ** Ore waste haul differential is a debit when the waste haul is longer than the ore haul, and a credit when the ore haul is longer than the waste haul. G&A = general and administrative.

Table 15-4: Llama Pit Optimization Parameters

Parameter	Unit	Value
Gold price	US\$/oz Au	1,750
Mined tonnage	Mt/year	17.50
Processed tonnage	Mt/year	1.46
Mining cost*	US\$/t mined	4.17
Processing cost	US\$/t processed	40.40
Ore waste haul differential**	US\$/t processed	0.27
G&A cost	US\$ M/year	97.74
G&A mining	% of G&A	0.50
G&A mining	US\$/t mined	2.79
G&A processing	% of G&A	0.50
G&A processing	US\$/t processed	33.47
Sustaining capital cost mining	US\$ M/year	9.00
Sustaining capital cost mining	US\$/t mined	0.51
Sustaining capital cost processing	US\$ M/year	1.00
Sustaining capital cost processing	US\$/t processed	0.68
Pit optimization mining cost	US\$/t mined	7.48
Pit optimization processing cost	US\$/t processed	74.83
Selling cost	US\$/oz produced	90.00
Mining sinking rate	US\$/10 m bench	0.04
Processing recovery	% of contained	0.925
Cut-off grade - calculated	g/t	1.52
Cut-off grade - applied	g/t	1.65
Pit slopes	degrees	42–44

Note: * Mining cost is applied at the elevation of the natural topography, and increases with depth due to application of the mining sinking rate. ** Ore waste haul differential is a debit when the waste haul is longer than the ore haul, and a credit when the ore haul is longer than the waste haul. G&A = general and administrative.

Goose Main Pit Optimization

The Goose Main pit is the fourth pit in the open pit mine sequence. The Goose Main pit reaches a maximum depth of 190 m from surface elevation. The pit is not constrained by mining or processing schedules, and an optimal pit shell was selected based on the pit optimization parameters used.

The pit optimization parameters used in the Goose Main pit are provided in Table 15-5.

15.4.2 Process Costs and Recovery

All ore will be processed at a single processing facility. Long-term planning is based on a mill throughput of 1.46 Mt/a. Processing costs were estimated by B2Gold's metallurgy team with input from Lycopodium Minerals Pty Ltd. Process operating costs for pit optimization purposes, prior to G&A and capital allocations, are US\$40.40/t processed.

Process recovery is modelled at 92.5%.

15.4.3 Gold Price, Royalty, and Discounting

A gold price of US\$1,750/oz Au was used in the pit optimisations and the calculation of the break-even cut-off grade for Mineral Reserves reporting.

Royalties were modelled at 5%, with an additional US\$2.50/oz for freight, insurance, and refinery charges for a total of US\$90.00/oz Au.

15.4.4 Cut-Off Grade

Cut-off grades are shown in Table 15-2 through Table 15-5. However, for Mineral Reserve reporting, an applied cut-off grade of 1.65 g/t Au is used.

15.4.5 Ore Loss and Dilution

In development of the Mineral Reserve models, dilution and ore loss are applied through whole block averaging, which leads to variance between the Mineral Reserve models and the parent Mineral Resource models.

No additional ore loss or dilution factors are applied downstream of the whole block averaging process for open pit Mineral Reserves.

Echo Pit

Within the Echo pit, reserve model dilution and ore loss were applied through whole block averaging such that at a 1.65 g/t Au cut-off there is a 65% increase in tonnes, a 40% reduction in grade, and a 2% reduction in ounces when compared to the Mineral Resource model.

Table 15-5: Goose Main Pit Optimization Parameters

Parameter	Unit	Value
Gold price	US\$/oz Au	1,750
Mined tonnage	Mt/year	17.50
Processed tonnage	Mt/year	1.46
Mining cost*	US\$/t mined	4.71
Processing cost	US\$/t processed	40.40
Ore waste haul differential**	US\$/t processed	(0.05)
G&A cost	US\$ M/year	97.74
G&A mining	% of G&A	0.50
G&A mining	US\$/t mined	2.79
G&A processing	% of G&A	0.50
G&A processing	US\$/t processed	33.47
Sustaining capital cost mining	US\$ M/year	9.00
Sustaining capital cost mining	US\$/t mined	0.51
Sustaining capital cost processing	US\$ M/year	1.00
Sustaining capital cost processing	US\$/t processed	0.68
Pit optimization mining cost	US\$/t mined	8.02
Pit optimization processing cost	US\$/t processed	74.51
Selling cost	US\$/oz produced	90.00
Mining sinking rate	US\$/10 m bench	0.04
Processing recovery	% of contained	0.925
Cut-off grade - calculated	g/t	1.51
Cut-off grade - applied	g/t	1.65
Pit slopes	degrees	44–46

Note: * Mining cost is applied at the elevation of the natural topography, and increases with depth due to application of the mining sinking rate. ** Ore waste haul differential is a debit when the waste haul is longer than the ore haul, and a credit when the ore haul is longer than the waste haul. G&A = general and administrative.

Umwelt Pit

Within the Umwelt pit, reserve model dilution and ore loss were applied through whole block averaging such that at a 1.65 g/t Au cut-off there is a 9% increase in tonnes, a 15% reduction in grade, and a 7% reduction in ounces when compared to the Mineral Resource model.

Llama Pit

Within the Llama pit, reserve model dilution and ore loss were applied through whole block averaging such that at a 1.65 g/t Au cut-off there is a 73% increase in tonnes, a 31% reduction in grade, and a 1% increase in ounces when compared to the Mineral Resource model.

Goose Main Pit

Within the Goose Main pit, reserve model dilution and ore loss were applied through whole block averaging such that at a 1.65 g/t Au cut-off there is a 48% increase in tonnes, a 31% reduction in grade, and a 2% increase in ounces when compared to the Mineral Resource model.

15.5 Underground Mineral Reserves

15.5.1 Umwelt Stope Optimization

Underground stope optimization for the Umwelt deposit was completed using the Deswik.SO software module to create stope shapes appropriate for Mineral Reserve estimation and long term production planning.

Historically, the Umwelt deposit has had stope optimization runs completed for various mining methods including cut-and-fill, drift-and-fill, post-pillar cut-and-fill, and longhole stoping. Transverse and longitudinal longhole stoping was selected for the Mineral Reserves reporting and long-term planning discussed in this Report. Mine method selection is described in Section 16.3.1.

15.5.2 Cut-off Grade

Stope optimizer is run at an expected cut-off grade for the operation. The inputs to the cut-off grade used for the Umwelt underground stope optimization are described in Table 15-6. The cut-off grade for the Umwelt underground stope optimization is 4.64 g/t Au.

15.5.3 Stope Optimization Geometry

Stope optimization parameters related to the geometry of the stopes are described in Table 15-7 and Table 15-8.

Various sensitivities were run including alternate stope length and heights, pillar widths, and stope orientations.

Table 15-6: Underground Cut-off Grade Calculation

Parameter	Unit	Value
Gold price	US\$/oz Au	1,750
Mining cost - production	US\$/t processed	69.13
Mining cost – development and access	US\$/t processed	41.00
Mining cost - mobile equipment sustaining cost	US\$/t processed	10.00
Mining cost - G&A	US\$/t processed	33.47
Mining Cost - Total	US\$/t processed	153.60
Processing cost - operating	US\$/t processed	40.40
Processing cost - G&A	US\$/t processed	33.47
Processing cost - Sustaining capital cost	US\$/t processed	0.68
Processing Cost - Total	US\$/t processed	74.56
Total Cost	US\$/t processed	228.16
Selling costs	US\$/oz produced	90.00
Process recovery	%	92.5
Mineral Reserve cut-off grade	g/t Au	4.64

Table 15-7: Transverse Stope Optimization Geometry Parameters

Geometry	Item	Value
Orientation	Z axis (deg)	-38.0
Length and height	Stope height (m)	25
	Stope length (m)	18
Width and pillar width	Stope width – min (m)	6
	Stope width – max (m)	40
	Stope pillar – min (m)	6
Side ratio	Top to bottom	2
	Front to back	1.25
Dilution	ELOS (m)	1.0 m HW 0.5 m FW
Strike and dip	Width convention	Apparent width
	Stope seed dip (deg)	110
	Stope seed strike (deg)	0
Wall angle constraints	Constraint	Near/far
	Minimum dip (deg)	64/64
	Maximum dip (deg)	120/120
	Maximum change (deg)	20/20

	Constraint	Strike direction
	Minimum dip (deg)	-90
	Maximum dip (deg)	90
	Maximum change (deg)	30

Note: ELOS = equivalent linear overbreak/slough, FW = footwall, HW – hanging wall.

Table 15-8: Longitudinal Slope Optimization Geometry Parameters

Geometry	Item	Value
Orientation	Z axis (deg)	-38.0
Length and height	Stope height (m)	25
	Stope length (m)	30
Width and pillar width	Stope width – min (m)	4
	Stope width – max (m)	10
	Stope pillar – min (m)	6
Side ratio	Top to bottom	2
	Front to back	1.25
Dilution	ELOS (m)	1.0 m HW 0.5 m FW
Strike and dip	Width convention	Apparent width
	Stope seed dip (deg)	110
	Stope seed strike (deg)	0
Wall angle constraints	Constraint	Near/Far
	Minimum dip (deg)	64/64
	Maximum dip (deg)	120/120
	Maximum change (deg)	20/20
	Constraint	Strike direction
	Minimum dip (deg)	-90
	Maximum dip (deg)	90
	Maximum change (deg)	30

Note: ELOS = equivalent linear overbreak/slough, FW = footwall, HW – hanging wall.

Upon completion of both transverse and longitudinal stope optimizer runs, a determination of which stope shape to accept was made. In Umwelt underground, transverse stopes dominate the tonnes and ounces contained, and so the transverse stoping areas were set first. Where feasible, longitudinal stoping zones outside of, or adjacent to, the transverse zones were added manually to form the overall Mineral Reserve stope shapes.

Stopes above the applied cut-off grade that exist far from the main mining zones that cannot economically justify the development required for access were removed from the Mineral Reserve.

15.6 Comments on Open Pit and Underground Mineral Reserves

The QPs note the following:

Mineral Reserves are reported using the 2014 CIM Definition Standards.

There are no other known environmental, legal, title, taxation, socioeconomic, marketing, political or other relevant factors that would materially affect the estimation of Mineral Reserves that are not discussed in this Report.

There is upside potential for the estimates if mineralization that is currently classified as Mineral Resources potentially amenable to underground mining methods can be converted to Mineral Reserves following appropriate technical studies, or if higher gold prices support larger open pits at Llama and Goose Main.

16.0 MINING METHODS

16.1 Overview

Mining operations use, or will use, conventional open pit and underground mining methods and equipment.

The total remaining mine life is nine years for the development of all open pit and underground Mineral Reserves.

16.2 Open Pit Mining Methods

The Echo, Umwelt, Llama, and Goose Main pits will be mined using open pit methods. Open pit operations began in 2023 and are scheduled to continue until 2032. Open pit mining rates ramp up to 18 Mt/a by 2027, before beginning to ramp down in 2030 as pits are depleted. Production of the pits is staggered to provide a steady source of ore to the mill, as well as to facilitate in-pit tailings deposition for processing.

16.2.1 Geotechnical Considerations

Terracon Geotechnique Ltd. conducted a feasibility-level geotechnical assessment for the Echo and Umwelt open pits, confirming that the designs meet industry-standard safety factors.

Slope stability analyses for the Echo pit identified distinct design sectors based on litho-structural models and pit wall orientations. The study used empirical assessments, 2D limit equilibrium, and kinematic analyses to evaluate potential failure mechanisms, including planar, wedge, and toppling instabilities. The rock mass is classified as "Good" to "Very Good," with low fracture frequency and wide joint spacing, which contribute to overall pit stability.

For the Umwelt pit, the slope stability analyses divided the pit into two sectors: the east "kinematic" sector and the west "rock mass" sector. The study applied empirical assessments, 2D limit equilibrium, and 3D finite element modeling to assess stability.

The Umwelt open pit design achieves industry-standard factors of safety and acceptably low probabilities of failure for the overall pit slopes, inter-ramp slopes, and bench configurations. It is reasonable to anticipate minor, localized bench-scale instabilities, which can be managed with appropriate operational tools and systems such as controlled blasting and regular monitoring.

The pit slope and bench designs for the Llama and Goose Main pits are based on investigations and analyses conducted by Knight Piésold for Sabina Gold and Silver, and after review were accepted by B2Gold for project feasibility. Design sectors were defined based on geomechanical domains and pit shells, with kinematic and limit-equilibrium analyses establishing slope configurations. Further assessment prior to operation, similar to the Echo and Umwelt pits, is recommended.

Design and assessment confirm that the recommended geometries are appropriate for the Echo, Umwelt, Llama, and Goose Main pits, assuming the implementation of controlled blasting,

proactive monitoring, and continuous geomechanical data collection. Maintaining flexibility in the mine plan will be crucial for effectively managing slope stability.

Geotechnical design sectors are shown in Figure 16-1 (Echo) and Figure 16-2 (Umwelt).

16.2.2 Hydrogeological Considerations

The Echo, Umwelt, and Goose Main pits are expected to be mined through permafrost conditions over their operational life. Localized thawing and snow melt are expected to occur each year resulting in water in the pit, additional to water brought into the pit for operational activities such as drilling and dust suppression when applicable. The water volumes will be managed through small in-pit sumps and mobile diesel pumps when water movement is required.

The Llama pit is developed under Llama Lake, which is a talik. Prior to mining, the lake will have fish removed, and then the lake water will be pumped down during the summer season to enable pit excavation preparations. Fish were removed in the summer of 2024, and dewatering activities are planned for summer of 2025 in advance of mining operations in 2026.

Due to the talik environment, mining will largely occur in unfrozen ground, leading to increased attention on pit water management year-round. It is expected that operational dewatering will be managed through in-pit sumps and mobile diesel pumps as is the strategy in the other open pit deposits.

16.2.3 Open Pit Design

The open pit deposits follow a common design approach as the pits are of similar scales and will use a shared equipment fleet. Typically, two pits are in operations at the same time, one in a stripping heavy phase of development with the other primarily in ore.

The Echo pit is mined in a single phase. It reaches a maximum depth of 100 m, and is 400 m wide at its widest section at surface level. Mining of the Echo pit began in 2023. As of December 31, 2024, about 2 Mt remain to be mined. Mining of the Echo pit is scheduled to be completed in May 2025. Some of the design parameters both in the Echo Pit and Echo waste rock storage areas (WRSAs) are smaller as this mining area is developed exclusively with the CAT 775 haul truck. The Echo pit will be used as the first in-pit tailings deposition site upon completion of mining activities.

The Umwelt pit is mined in two phases. Phasing of Umwelt is driven by balancing ore feed to the mill over the years 2025 to 2027. The ultimate pit reaches a maximum depth of 160 m, and measures 625 m wide at its widest section at surface level. Mining of overburden in the Umwelt pit began in 2024. As of December 31, 2024, 34.5 Mt remain in the Umwelt pit. The Umwelt pit is scheduled to be completed by the end of Q1, 2028. The Umwelt pit will be used as the second in-pit tailings deposition site upon completion of mining activities, and construction of a tailings barrier to discourage seepage of tailings through the crown pillar towards the Umwelt Underground mine that will be operating down plunge.

Figure 16-1: Echo Pit Geotechnical Design Sectors

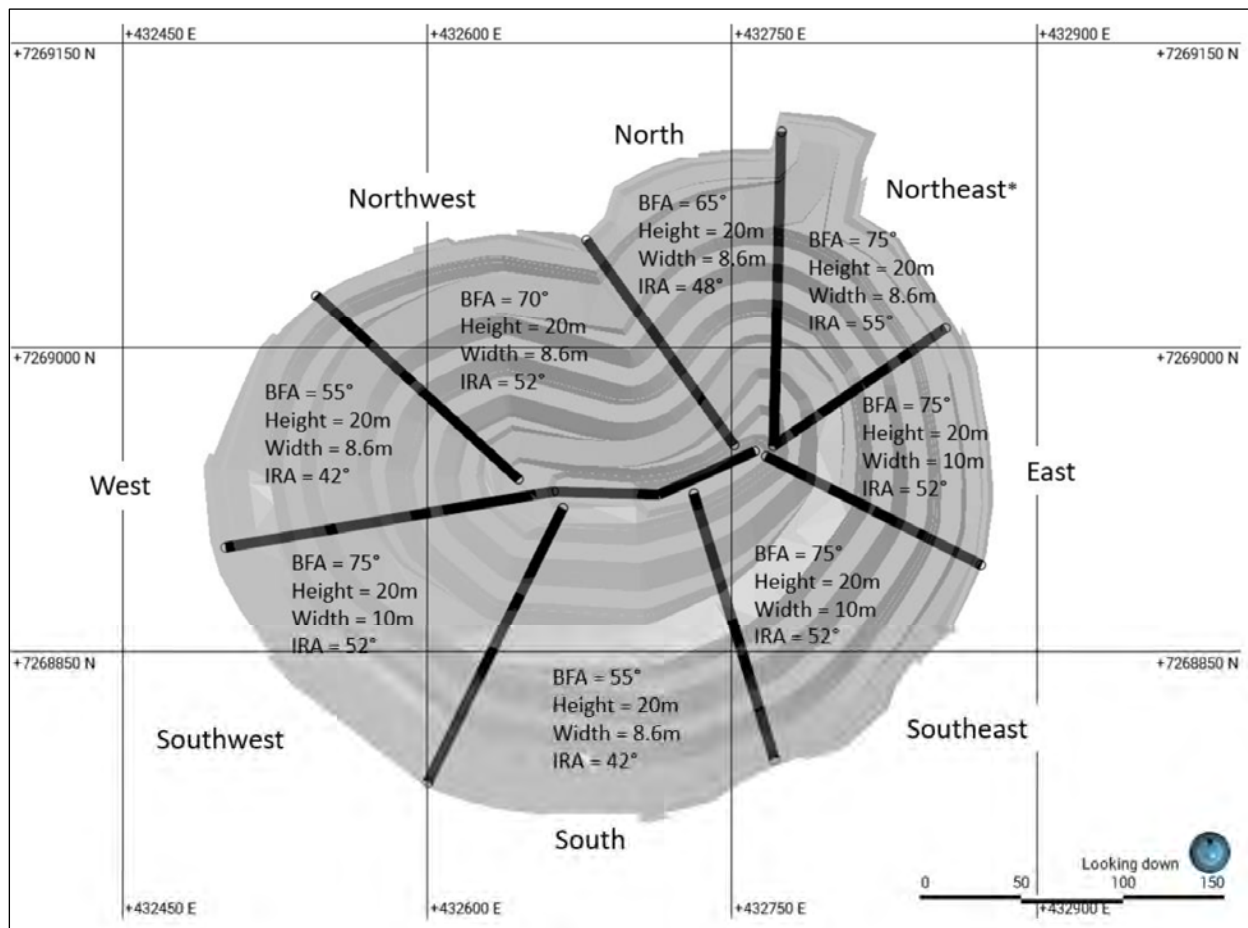


Figure prepared by Terracon Geotechnique Ltd., 2023.

Figure 16-2: Umwelt Pit 2D Geotechnical Stability Sections

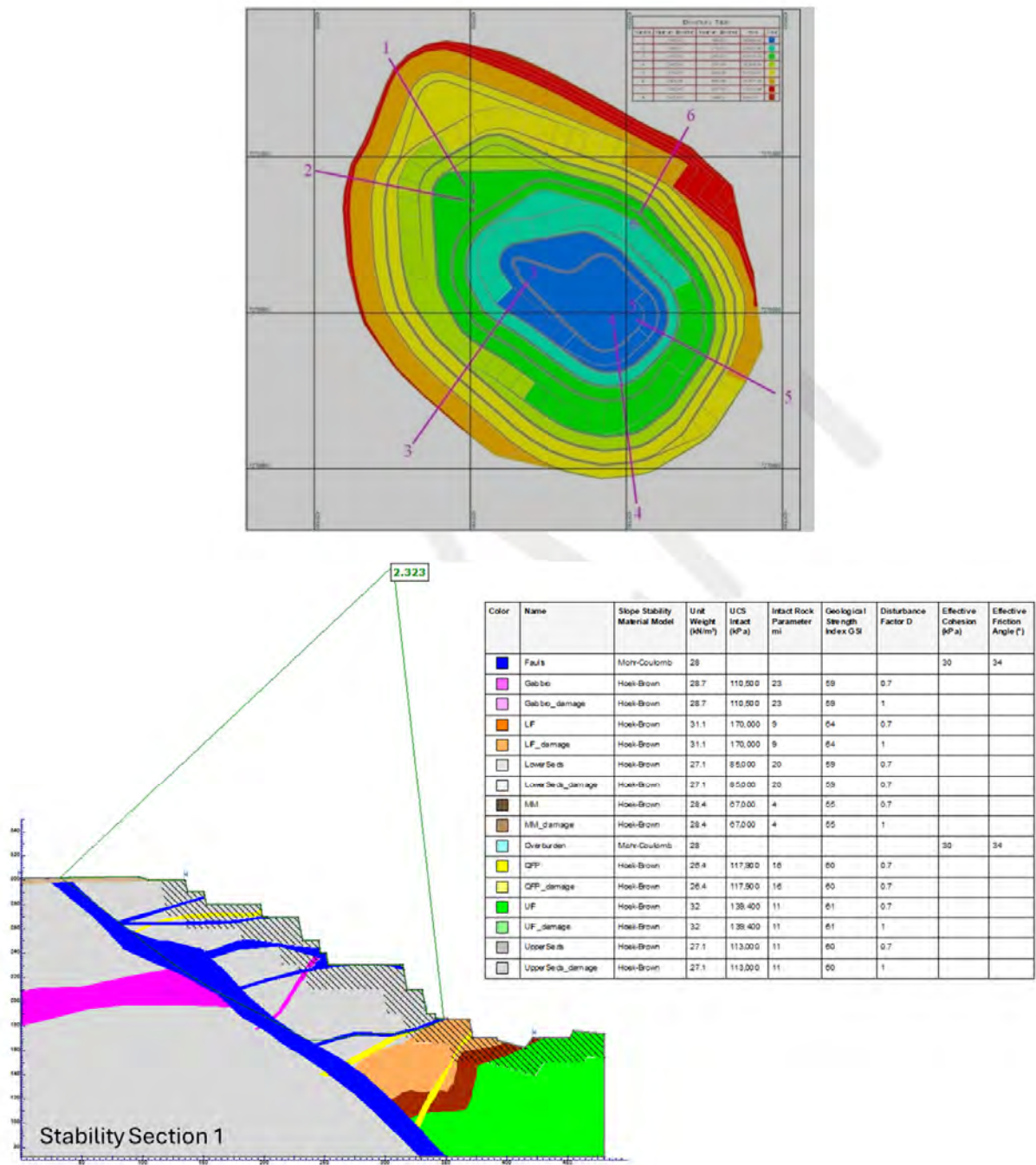


Figure prepared by Terracon Geotechnique Ltd., 2025.

The Llama pit is mined in a single phase. It reaches a maximum depth of 170 m and is 590 m wide at its widest section at surface level. Mining of the Llama pit is scheduled for operations in late 2026 through 2029, and contains 30 Mt. The Llama pit may be used as the third in-pit tailings deposition site, should it be required.

The Goose Main pit is mined in two phases. Phasing of the Goose Main pit is driven by desire to balance open pit ore production with the needs of the processing plant. The Goose Main pit reaches a maximum depth of 190 m, and is 820 m wide at its widest section at surface level. Mining of the Goose Main pit is scheduled for operations in 2028 through 2032, and contains 43 Mt. It is not envisaged the Goose Main pit will be required for in-pit tailings deposition.

Pit design parameters for all open pits are described in Table 16-1. Pit layout plans are provided in Figure 16-3 (Echo), Figure 16-4 (Umwelt), Figure 16-5 (Llama) and Figure 16-6 (Goose Main).

16.2.4 Road and Ramp Design Criteria

A nominal ramp and road width of 26 m in pits, and 28 m on WRSAs was designed where a CAT 777 (100 t) truck fleet is in operation. Road widths are reduced to 25 m and 20 m respectively at the Echo Pit and WRSA as this area is developed exclusively with a CAT 775 (70 t) truck fleet early in the mine life. In the pit bottoms, single lane widths of 15 m are designed in Echo, and 16 m in Umwelt, Llama, and Goose Main. These widths include drainage and safety windrows and allow for dual lane truck operation in the mine design.

16.2.5 Waste Rock Storage Area Design Criteria

WRSAs are designed using the parameters in Table 16-2. WRSA locations were selected based on several criteria which included proximity to source of waste material, water catchment and water management criteria, and suitability of foundation.

For closure, the outermost 5 m of the WRSAs will be constructed with non-acid generating (NAG) materials from the various open pits.

The location of the Echo WRSA is provided in Figure 16-7, the Umwelt WRSA and stockpile area (marked as SA on the figure) in Figure 16-8, the Llama WRSA in Figure 16-9, and the Goose Main component of the Echo WRSA in Figure 16-10.

16.2.6 Operational Cut-off Grades

An applied cut-off grade of 1.65 g/t Au was used for all open pit deposits. Details on the inputs to arrive at this applied cut-off grade are provided in Section 15.4.4.

16.2.7 Open Pit Production Schedule

The open pits will generally be operated using two simultaneous mining phases, and will be operational until 2032.

Table 16-1: Open Pit Design Parameters

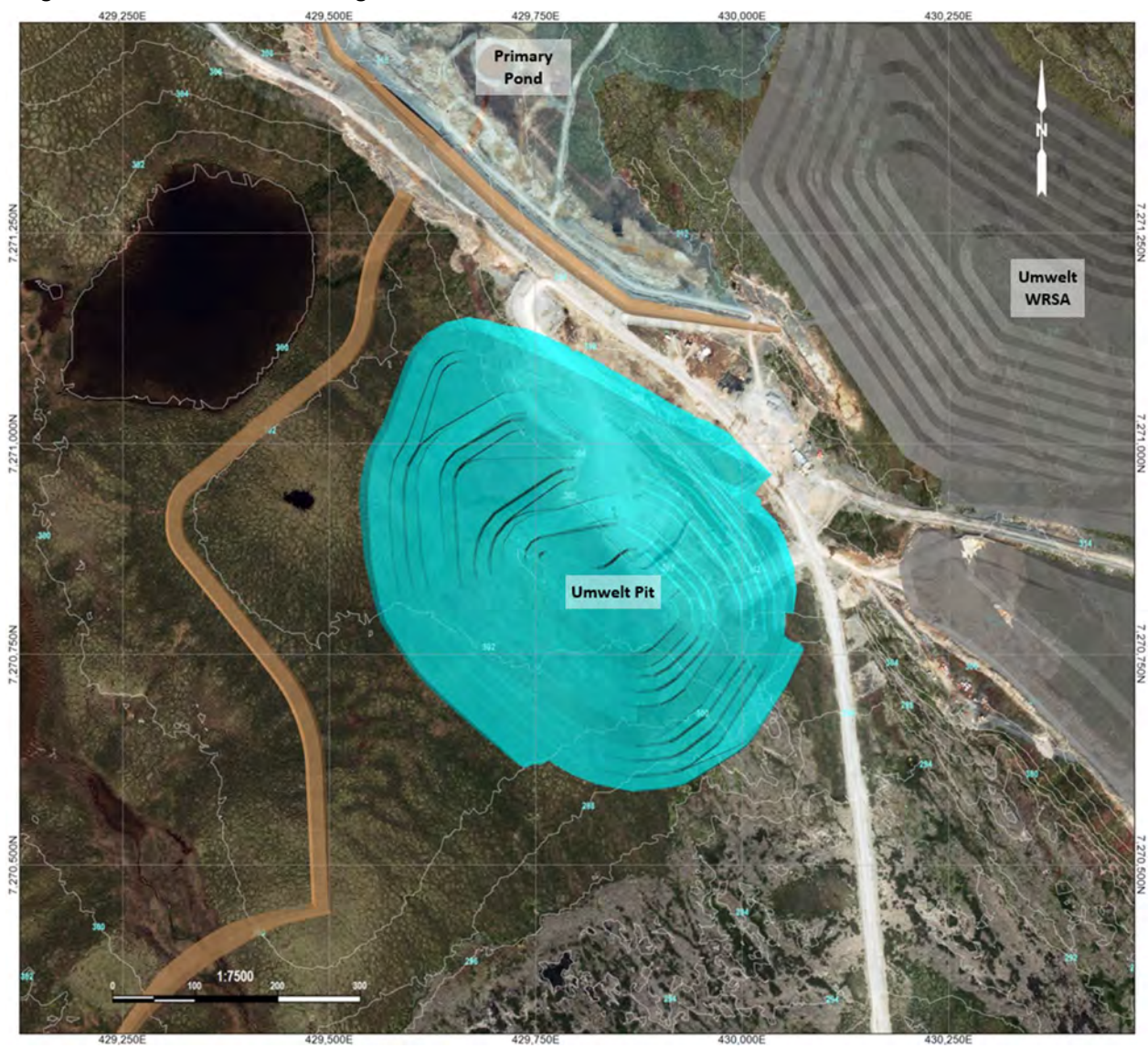
Description	Units	Echo	Umwelt	Llama	Goose Main
Bench height	m	20 m final pit 5–10 m on overburden and pit bottom	20 m final pit 5–10 m on overburden and pit bottom	20 m final pit 5–10 m on overburden and pit bottom	20 m final pit 5–10 m on overburden and pit bottom
Face angle	degrees	55–75 26.54 in overburden	80° 18.4 in overburden	75° 18.4 in overburden	75° 26.54 in overburden
Berm width	m	8.6–10	10–14.5	8.6–10	8.6–10
Inter-ramp angle	degrees	48–55	48–56	52–55	52–55
Ramp width - double lane	m	25	26	26	26
Ramp width - single lane - lower benches	m	15	16	16	16
Ramp gradient	percent	10% 12% for pit bottom access	10% 12% for pit bottom access	10% 12% for pit bottom access	10% 12% for pit bottom access
Overall slope angle	degrees	32–47	30–50	30–44	39–46

Figure 16-3: Echo Pit Design



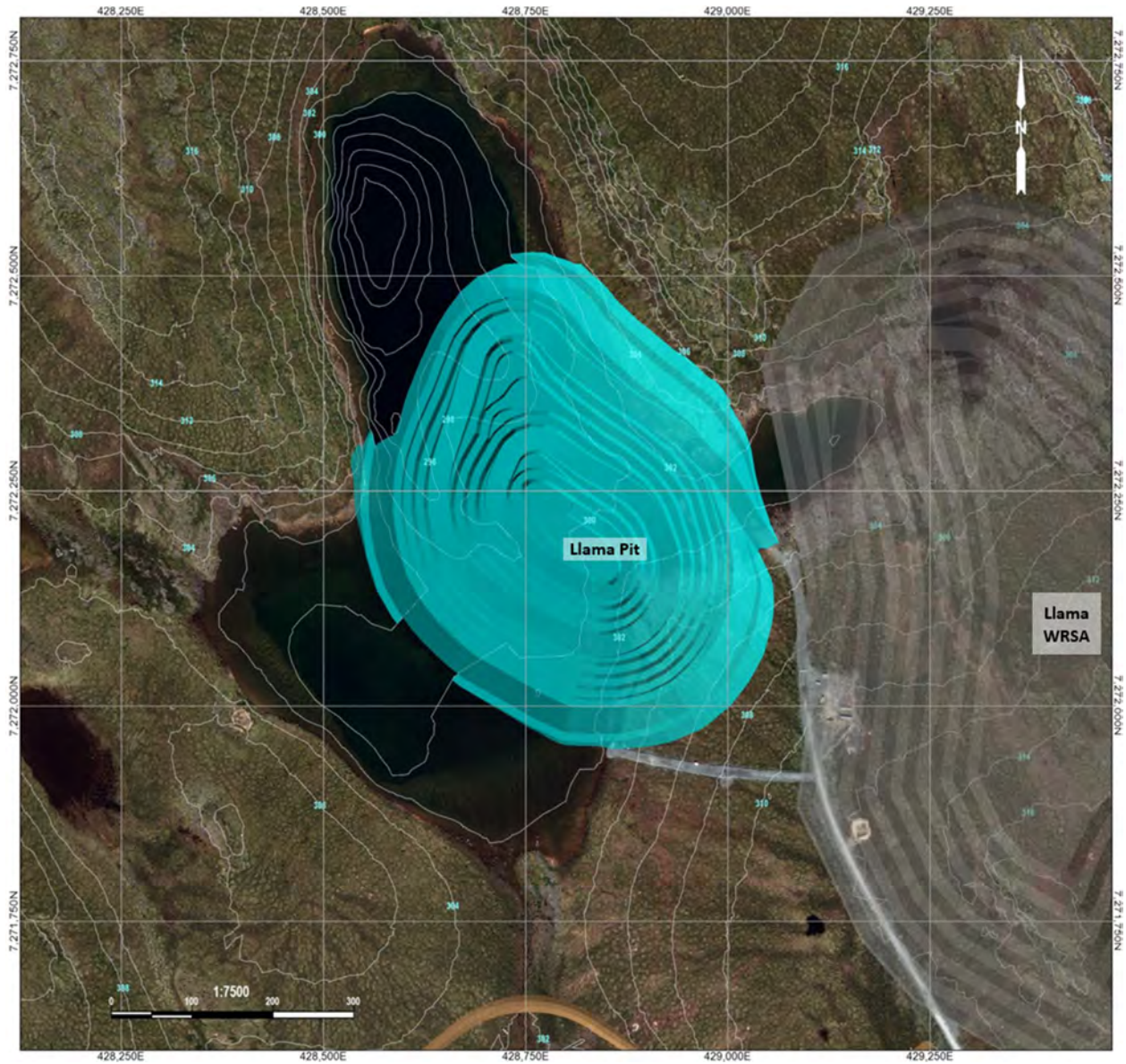
Note: Figure prepared by B2Gold, 2025. Shaded portion of pit design depicts design pit remaining to be operated as of December 31, 2024. The image does not depict the Goose WRSA which is planned to be constructed on top of the Echo WRSA (see Figure 16-10).

Figure 16-4: Umwelt Pit Design



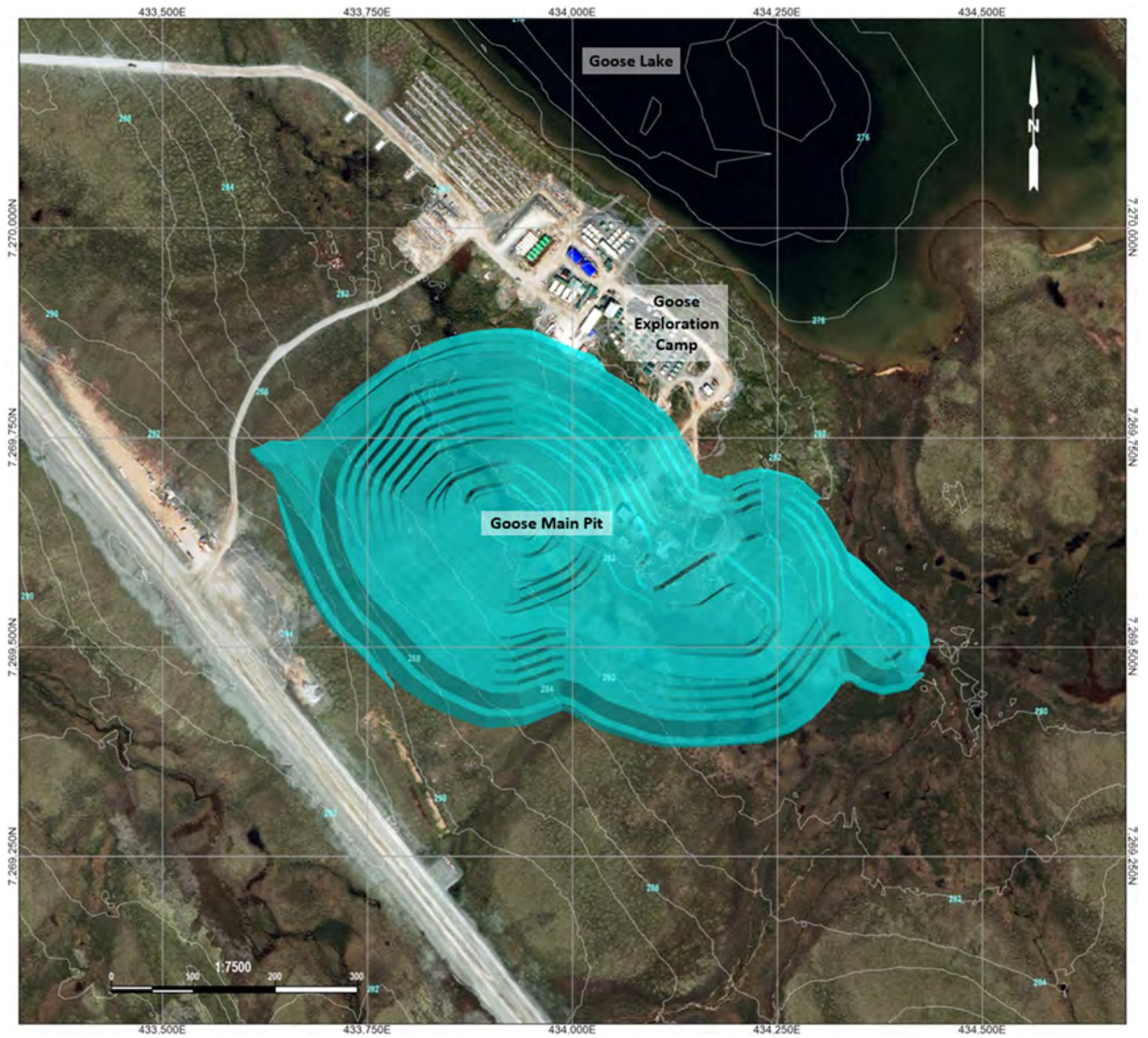
Note: Figure prepared by B2Gold, 2025.

Figure 16-5: Llama Pit Design



Note: Figure prepared by B2Gold, 2025. Llama pit will commence after the dewatering of the lake above it. The access road in the image depicts current access to Llama, and will be adjusted for operations to ensure adequate space for equipment between the Llama pit and the Llama WRSA.

Figure 16-6: Goose Main Pit Design



Note: Figure prepared by B2Gold, 2025. The Goose exploration camp will be decommissioned in advance of Goose Main pit operations, which are scheduled to begin in 2028.

Table 16-2: WRSA Design Parameters

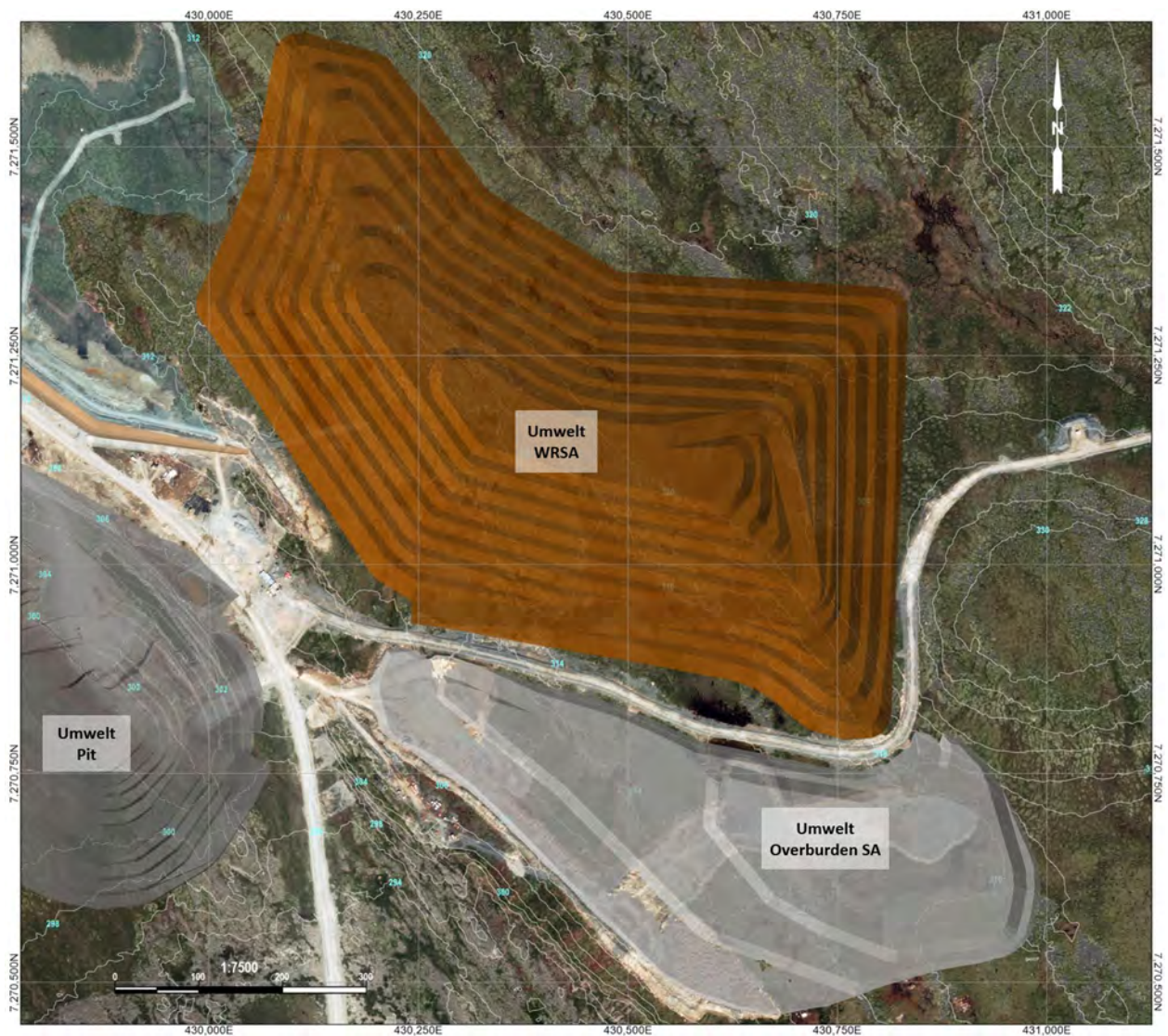
Description	Units	Echo	Umwelt	Llama	Goose Main
Lift height	m	10	10	10	10
Lift face angle	degrees	30	35.5	33	33
Berm width	m	10	10	15	15
Ramp width	m	20	28	28	28
Ramp gradient	percent	10	10	10	10

Figure 16-7: Echo WRSA



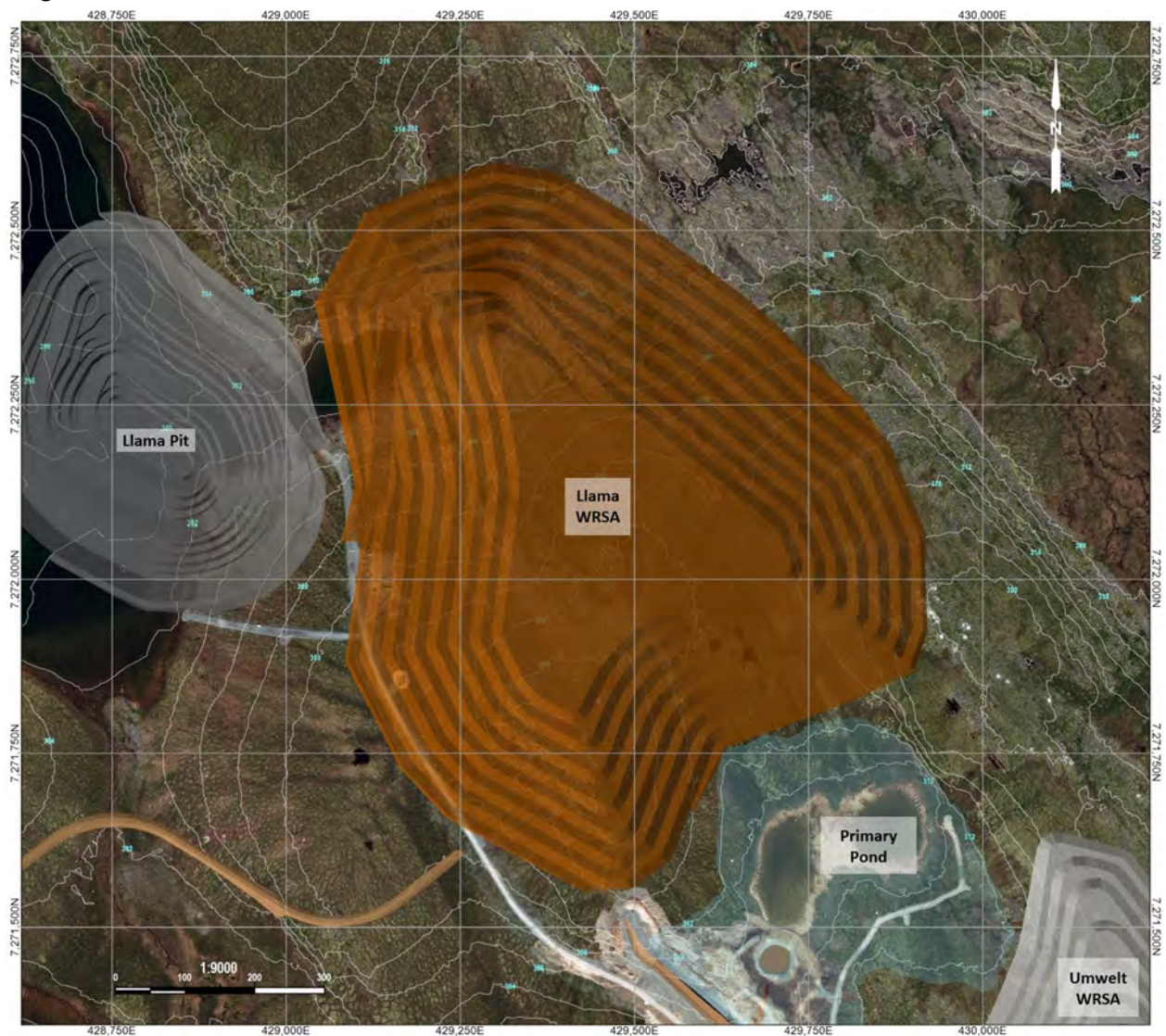
Note: Figure prepared by B2Gold, 2025.

Figure 16-8: Umwelt Overburden SA and WRSA



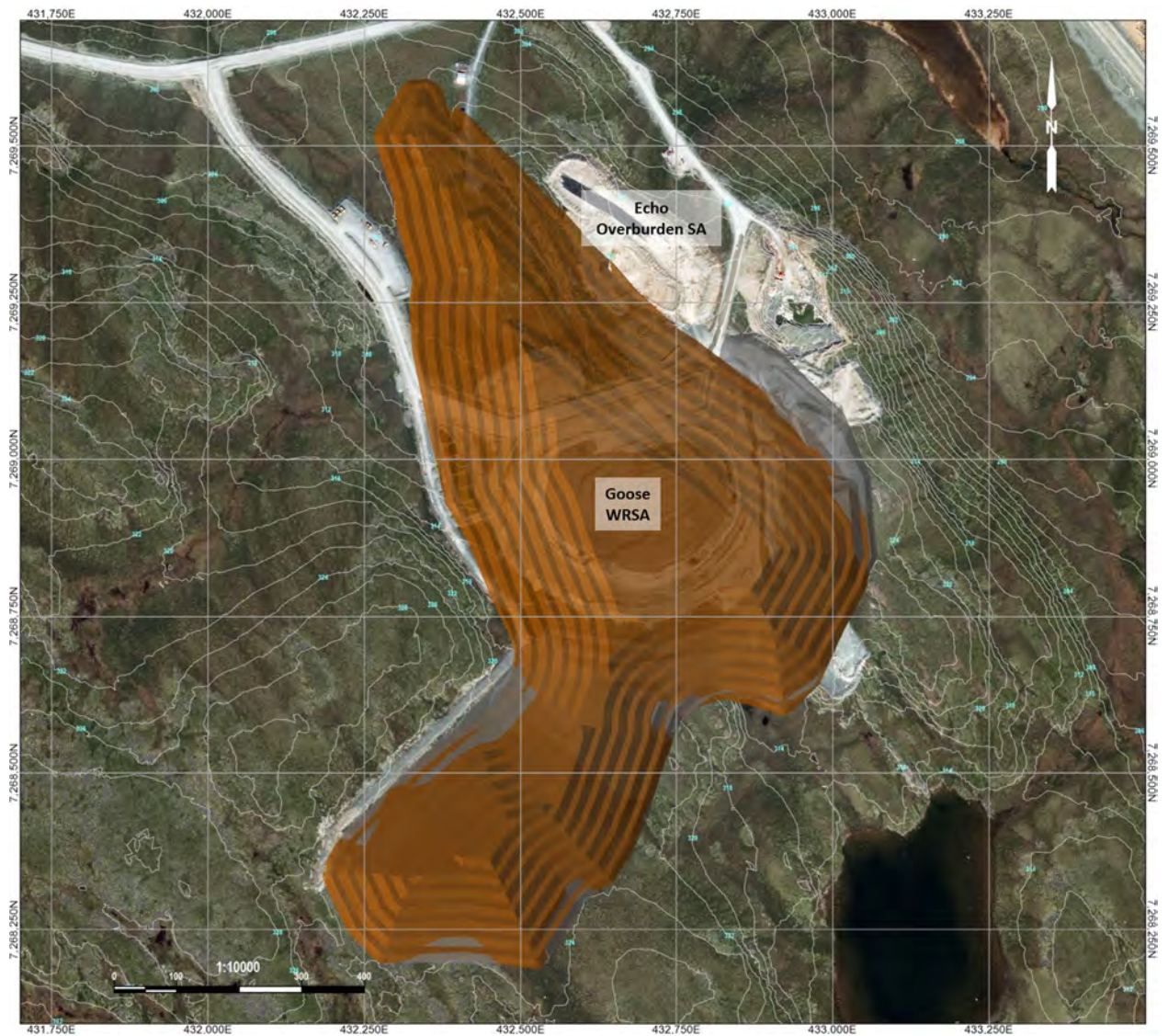
Note: Figure prepared by B2Gold, 2025.

Figure 16-9: Llama WRSA



Note: Figure prepared by B2Gold, 2025.

Figure 16-10: Echo WRSA (Goose Main Component)



Note: Figure prepared by B2Gold, 2025. The Goose component of the Echo WRSA is placed on top of the initial Echo WRSA, and Echo pit, once filled with tailings earlier in the project development sequence.

The major constraints applied in the production schedule include:

- Maintaining relatively consistent mining rates for better utilisation of the mining equipment throughout the mine life;
- Balancing haul distances at the end of the mine life to avoid purchasing additional trucks that will not have a long service life;
- Keeping the average vertical mining advance (sink) rates generally below 100 per year, or 10 benches per year. The sink rates are lower at the base of each phase where the mining area is restricted, water management impacts mining operations, the strip ratio is lower, and hauls are longer;
- Operating at least two pits at the same time. This will avoid congestion and yields a balanced and productive mining sequence.

Overall, open pit mining ramps up to a mining rate of 18 Mt/a in 2027 and stays at that rate until 2030 where operations begin to taper off as the pits are depleted.

Ore tonnes by pit, combined stripped ratio, and combined mined grade are summarized in Figure 16-11.

Open pit production is combined with underground production to form the overall production schedule. This is described in Section 16.4.

16.2.8 Blasting and Explosives

Drilling and blasting operations will be carried out using the same fundamental methods across all pits.

The current average powder factor varies from 0.21–0.32 kg/t with an average of 0.26 kg/t. In overburden, drilling and blasting requirements are reduced. Blast optimization is ongoing as the operations team learns about the behavior of the rock from certain drill and blast strategic adjustments.

Production drilling will be performed by a total of six Sandvik DI650i production drills. These drills are capable of drilling both production and pre-split drillholes.

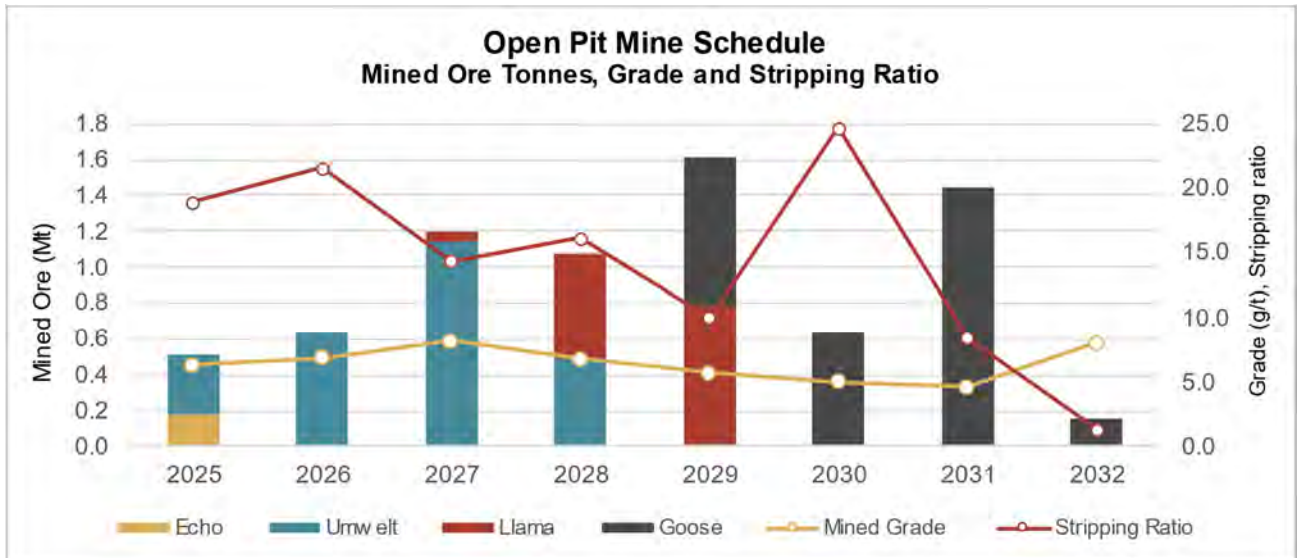
Bulk emulsion will be used. B2Gold has a contract with an explosives supply company on site.

In general, drilling and blasting will be completed using 10 m bench intervals. For blasting of 10 m benches, 152 mm diameter blast holes will be used. Patterns will vary based on lithology and other data available but are generally 3.8 x 4.3 m.

16.2.9 Grade Control

Grade control sampling is currently completed through pre-blast blasthole sampling in the holes near the ore zone required for drill and blast, and post-blast muckpile sampling of the ore zone. Blasthole sampling may be replaced by RC drilling and sampling, depending on reconciliation and site operational requirements.

Figure 16-11: Open Pit Mine Schedule



Note: Figure prepared by B2Gold, 2025.

Blasthole sampling is performed over the ore zone using the drill cuttings from production drilling. All safely accessible holes over the ore zone and within 5m of the boundaries of the zone are sampled.

Muckpile sampling is completed over the blasted ore zone in the pit, if safe, and as material is relocated to the run-of-mine (ROM) stockpile. The number of samples to be collected is assessed on a per-blast basis.

Future RC grade control drilling would generally be spaced along strike, dependent on the deposit geometry, and drilled to one to three benches depth, depending on mine production scheduling and data priorities. Open pit RC drilling would be spaced on a 10 x 10 m pattern, with a sample composite interval (2.5 m) for ore flitch mining.

Samples are sent to an onsite laboratory for gold and multi-element analysis, with pulp sample fractions remaining in storage. B2Gold will ship 7–10% of yearly gold assays performed at the onsite laboratory for third party verification.

16.2.10 Open Pit Mobile Mining Equipment

Open pit equipment is shared between the four open pit deposits. Peak equipment requirements are detailed in Table 16-3.

All new trucks purchased to sustain future operations are planned to be 100 t class (CAT 777) haul trucks to reduce equipment count and increase productivity in the larger open pits.

Table 16-3: Peak Open Pit Mining Equipment

Mining Equipment	Unit Numbers
70t trucks 775G	15
100t trucks 777	13
100t excavator EX390	2
140t excavator EX6015	2
200/250 t excavator (TBD)	1
Production drills DI650i	6
Wheel loader 990	1
Wheel loader 980	4
Wheel loader 966	2
Volvo A45 trucks	3
Volvo A30 trucks	4
Cat 730 Articulated	2
Cat D8T dozer	1
Cat D9T dozer	5
Cat 14M grader	2
Water trucks	1
Service and fuel trucks	11

16.3 Underground Mining Methods

The Umwelt Underground will be drive-in portal access and will be mined using a mix of transverse and longitudinal longhole open stoping methods. Five mining zones are planned. The Umwelt underground will average 1,300 ore tonnes per day while in production, while developing an average of 12 m/day.

16.3.1 Underground Stope Mining Method Selection, and Mine Design

Mining Method Selection

Longhole stoping was selected as the mine method for Umwelt underground due to its high productivity and lower operating cost, at the expense of increased dilution and lower selectivity versus the smaller scale mine methods which would also be potentially valid for the Umwelt deposit.

The Umwelt deposit will be extracted through dominantly transverse longhole stoping, with some zones of longitudinal longhole stoping. In the transverse sections, the stoping sequence will be primary-secondary, with the primary stopes backfilled with cemented rockfill, and the secondary stopes backfilled with unconsolidated rockfill from run-of-mine development waste or supplemented from open pit mining when necessary.

Figure 16-12 shows a long section of the overall underground mine layout. Figure 16-13 shows the proposed production zones.

Longhole Stope Design and Sequence

Stopes shapes are informed by the stope optimization parameters described in Section 15.5.1.

A determination was made on whether each area should be mined by longitudinal or transverse methods based on the width of the stoping zone, as well as the vertical continuity of the deposit. Stopes with a width of <10 m will typically be taken longitudinally, while stopes larger than this will be taken transversely.

Within zone 1, which spans two production levels, stope heights will be 20 m. In transverse areas, the primary and secondary stope widths will be 18 m each. In zone 1, all stopes will have cemented backfill due to its proximity to the crown pillar, and the Umwelt open pit which will host in-pit tailings deposition. Zone 1 design is described in more detail in Section 16.3.5.

Beginning in zone 2 and continuing for the LOM, stope heights will be increased to 25 m. The transverse stopes will still be centred on 18 m widths, but the primary stopes will be designed to be 16 m wide and the secondaries will be 20 m wide. This design reduced cement consumption overall as only the primary stopes in the sequence are cemented to allow for mining of the secondary stopes later in the sequence.

For all stopes, a dilution skin was applied during stope optimization measuring 1.0 m in the hanging wall, and 0.5 m in the footwall. During scheduling, a 10% ore loss assumption was applied for all stopes.

In the bottom of each mining zone will be a sillmat level, in which every stope will be backfilled with cemented rock fill to enable access from the mining zone below it in the future. When it is time to extract the production level below the sillmat, it is planned to re-develop through the cemented rock fill to establish a top cut where production drilling and backfill will occur.

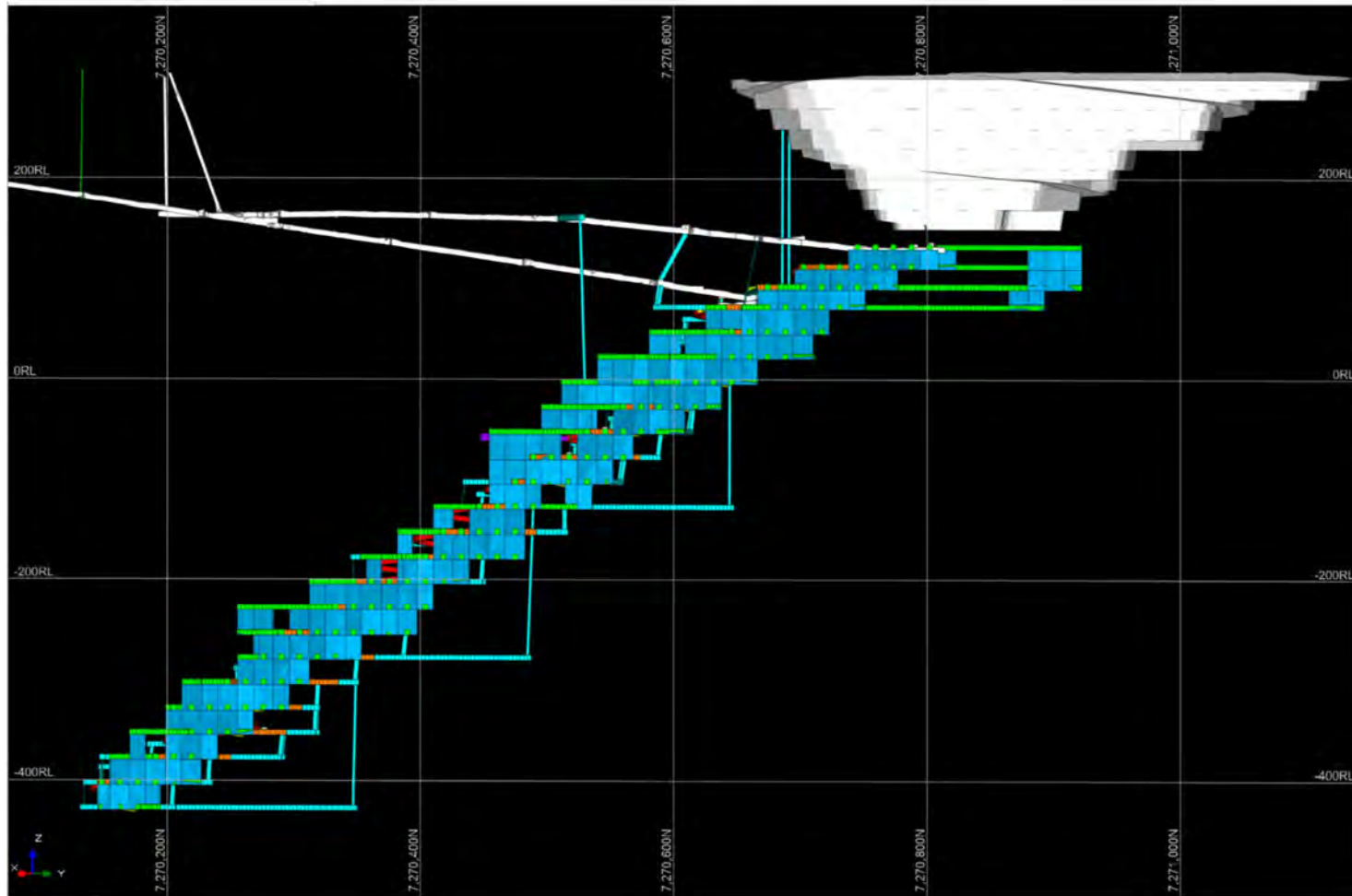
Development Design

Mine development will occur through typical underground hard rock mine development methods.

The development dimensions were selected to excavate the minimum amount of rock to enable safe, productive mine operations for all phases of the mine development.

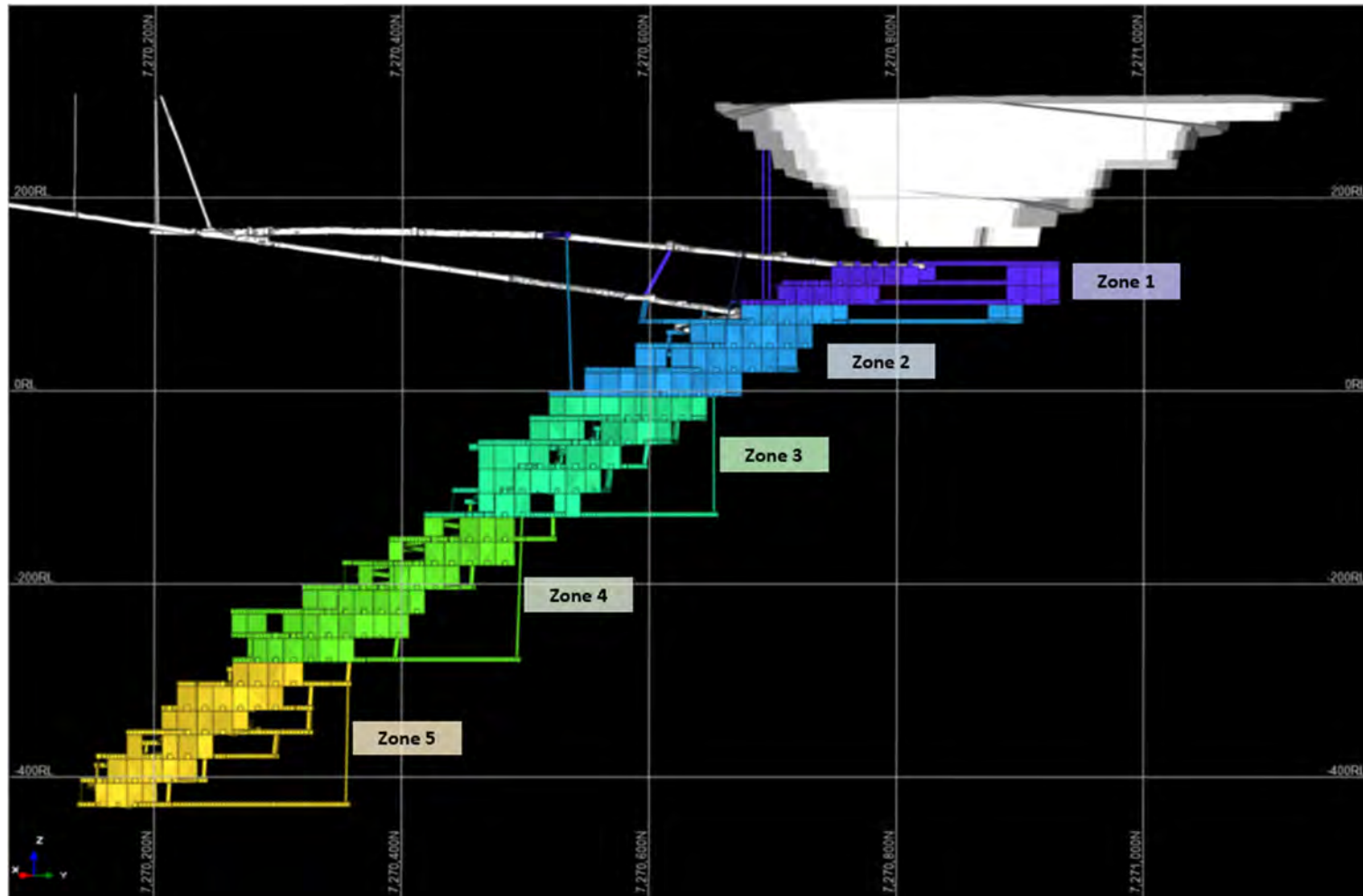
At the Umwelt underground mine, all drifts will be a minimum of 5.5 m wide to accommodate ground support installation using the DD422iE development drill, with the limiting factor being the swing of the boom. Drift back height will vary depending on the expectation for equipment, ventilation, and other permanent and semi-permanent infrastructure. In most cases, the back height will be 5.5 m.

Figure 16-12: Umwelt Mine Stope Layout



Note: Figure prepared by B2Gold, 2025. Image is looking northwest. The grey underground development depicts actual development as at December 31, 2024. The white open pit surface represents the Umwelt open pit and is not yet developed.

Figure 16-13: Umwelt Mine Production Zones



Note: Figure prepared by B2Gold, 2025. Image is looking northwest. The grey underground development depicts actual development as at December 31, 2024. The white open pit surface represents the Umwelt open pit and is not yet developed.

Vertical development will vary from 3.0 x 3.0 m where the Alimak raise will be used, to 4.5 x 4.5 m in raises between production levels for ventilation. The mine design includes three surface raisebore holes of 3.5 m diameter and one 3.0 x 3.0 m Alimak raise. The Alimak raise and one of the raisebore holes is complete. The remaining surface raises will be completed by a raisebore specialist contractor.

Decline development will advance with remucks, sumps, electrical substations, and refuge bays as required for operations or as per regulations.

Production levels were designed in a consistent manner in their access and their fundamental capabilities. Ore drifts will be variable due to the nature of the orebody and mine method required for optimal extraction.

Figure 16-14 shows a schematic for a typical production level.

16.3.2 Backfill Methodology

The longhole stoping mine method employed at Umwelt underground will require a variety of backfill scenarios.

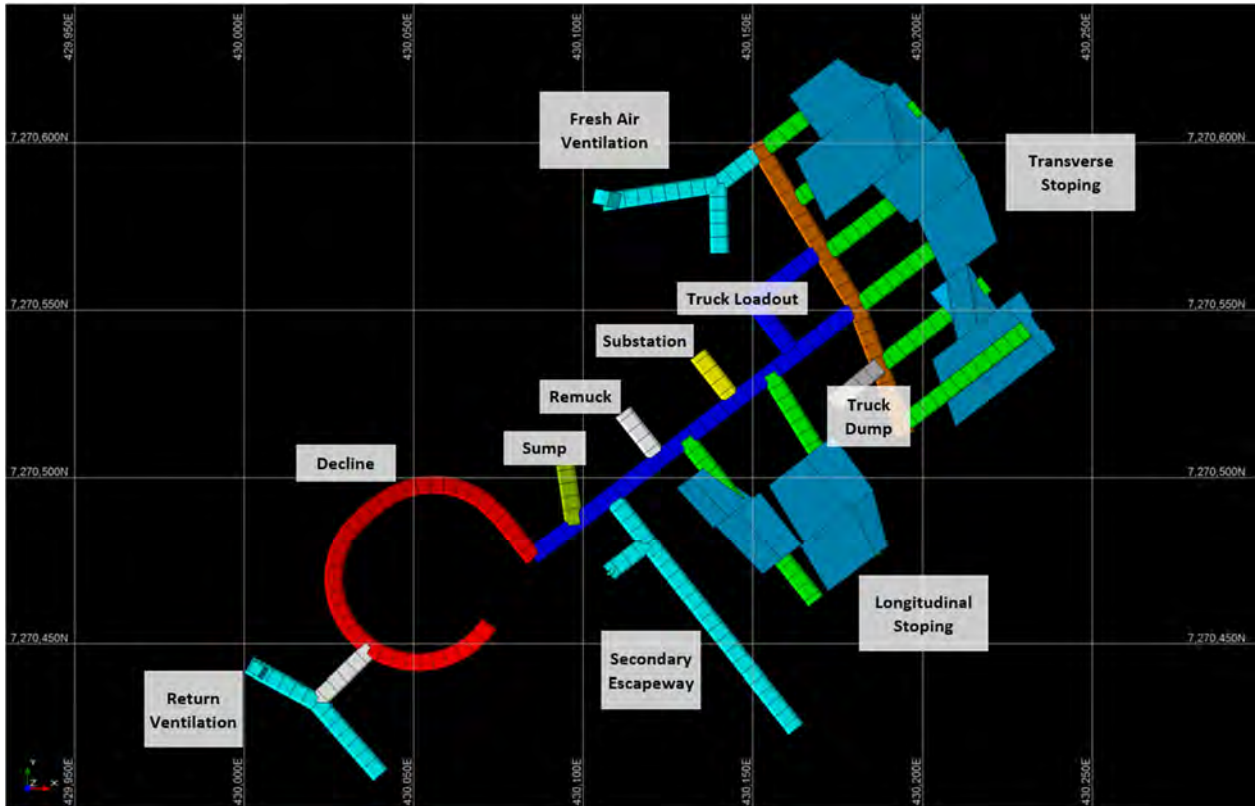
B2Gold worked with Paterson and Cooke Canada Inc. (Paterson and Cooke) and SRK Consulting (Canada) Inc. (SRK) to develop backfill criteria for mine operations. A cemented rockfill testing program was completed in the summer of 2024 by Paterson and Cooke to analyze the rock material performance at a variety of cement dosages. This information was shared with SRK to develop a recommended cement dosage required to achieve geotechnically-sound stope wall strengths to execute the bottom-up, primary secondary mining sequence.

Within zone 1, cemented aggregate or cemented rockfill will be used at a cement dosage of 10% in all stopes. On sillmat levels, the bottommost production level of a zone, all stopes will be filled with cemented rockfill at a cement dosage of 8.5%. On standard primary-secondary stoping levels, the primary stopes will be filled with cemented rockfill at a cement dosage of 7%. Secondary stopes will be filled with unconsolidated rockfill. Longitudinal stopes will be filled with unconsolidated rockfill, except for sillmat levels which will be filled with cemented rockfill at a cement dosage of 8.5%.

A backfill QA/QC program will be developed in advance of operations to ensure backfill performance is acceptable. Adjustments to the specification of fill type and cement dosages may be made as an understanding of performance is acquired. Backfill operations in Umwelt are scheduled to begin in Q3 2025.

When using aggregate, a 4" crush material will be manufactured using surface crushing and screening plants and waste rock available from open pit mining operations. When using rockfill, development waste will be used. There are periods of the mine development where there is insufficient development waste rock available for all backfill needs. During these periods, waste rock from the open pits will be backhauled underground, with oversize rocks removed.

Figure 16-14: Umwelt Underground Production Level Development Layout



Note: Figure prepared by B2Gold, 2025.

Underground, there will be dedicated truck dumps on the production levels where the trucks will dump the rock. Underground 17 t class loaders will pick up the rock, mix it with an appropriate dosage of cement if required in an available drift on the level, and will backfill the stope. A mobile cemented rock fill plant will be moved around production levels as needed, and will be placed in a no longer required or not yet required ore drift.

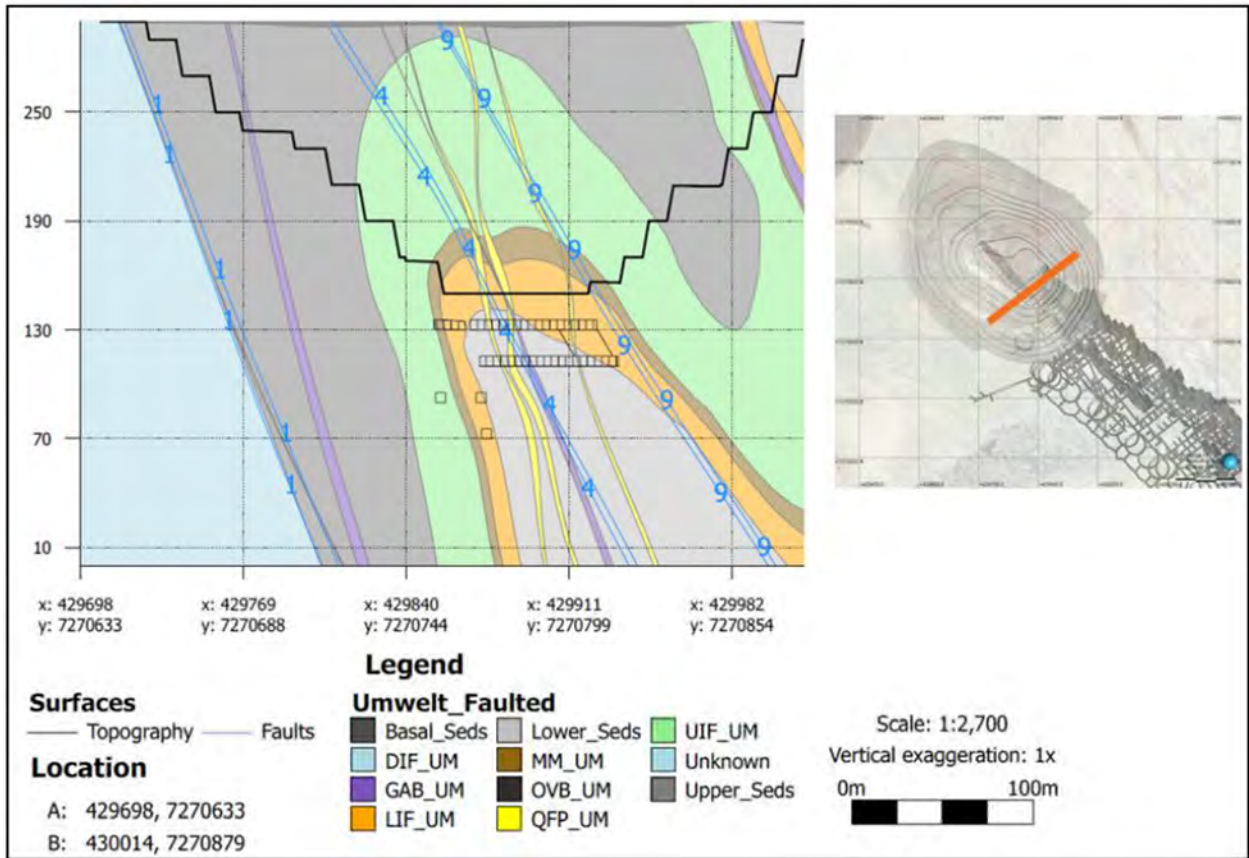
16.3.3 Geotechnical Considerations

B2Gold worked with SRK to assess the geotechnical conditions within the underground mine.

SRK evaluated the historical site investigation data by lithology unit and adopted the stratigraphic model as the basis of the project geotechnical model. The approach evolved over the period of the study to consider both lithology and stratigraphy in the analyses.

The most prevalent stratigraphic units within the crown pillar and zone 1 area of interest shown in Figure 16-15, and include Lower Sediments, Lower Iron Formation, Middle Mudstone and Upper Iron Formation. The most prevalent lithology units in these are Unit 1c (Mixed Clastic Sediments), 2c (Oxide Formation), 2c (Sulphide-bearing Oxide Formation) and 1a (Greywacke) respectively.

Figure 16-15: Representative Section of Stratigraphic Units and Fold Axial-Planar Features



Note: Figure prepared by SRK Consulting (Canada) Inc., 2025

The lithology units have mean rock mass rating values in the category of 'Good', except Unit 1c, 2dc, 2dca, 3a and 3c which are in the category of 'Fair'. These categorizations are expected to be dominant over the LOM. Locally poorer zones of rock can be expected in the underground excavations, potentially requiring locally heavier ground support. Modelled faults include primary and second order faults.

The structural fabric populations define a typically blocky rock mass. Fabric (foliation and bedding) and fabric-parallel discontinuities are the dominant feature and set. The orientation of these two fabrics is synonymous on the west limb but bedding is flatter on the east limb. Coupled with the finding that fabric presents strength anisotropy, these fabrics will be a strong control on the rock behaviour.

Ground support will be installed using standard methods. All development rounds will be bolted and screened. Bolt types will vary by ground type and expected service life of a given development area. Where required, secondary support in the form of shotcrete and cable bolts will be installed.

Stope sizes will require cable bolts on the top drifts for ground support during production, both to enable drilling, blasting, and backfill from the top of the stope, and as brow support on the bottom of a stope for mucking. The hanging wall of the stopes will also have cable bolts installed for dilution control (Figure 16-16).

Stope design, ground support and dilution estimates were assessed using standard industry empirical methods. Stope design used the defined geotechnical properties and considered practical mining limitations, orebody geometry, numerical modelling stresses and geological features.

Dilution estimates in stopes range from <0.5 to <1 m depending on the stope orientation and local ground conditions. In several cases the stope shapes have boundaries close to modelled faults which may require individual management with mitigations such as adjusting stope shapes, additional ground support, and trade-off with additional planned dilution. It will be vital to manage and mitigate against stope back and hanging wall overbreak in Zone 1 to preserve the future overlying crown pillar. Practices will include following recommended stoping and backfilling sequencing including backfilling the stope as soon as it is called empty, quality blasting and backfilling, and routine fan layout cable-bolting of stope backs and hanging walls to manage fall-out and propagation associated with fabric. Close monitoring of stope performance is planned, and immediate remedial actions will be taken if unusual stope overbreak or ground damage occurs.

Dynamic loading due to either regional or mining-induced seismicity was not considered in the geotechnical assessment because of low probabilities.

A ground control management plan will be maintained through the LOM, which is a live document that details the specific geotechnical measures and procedures implemented mine wide.

16.3.4 Hydrogeological Considerations

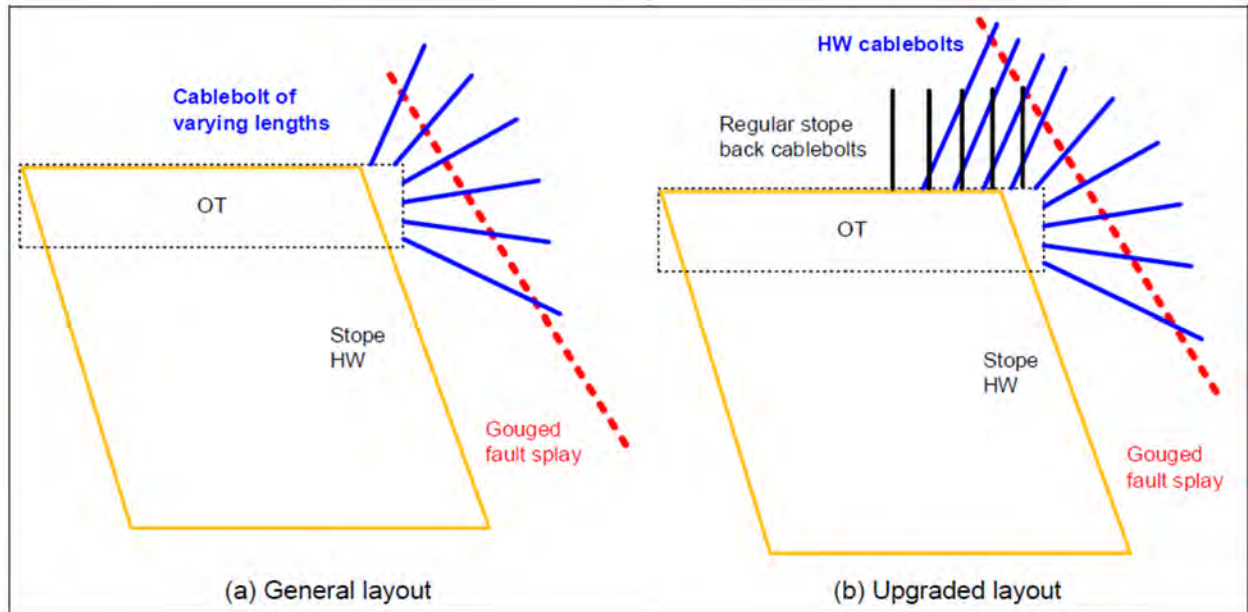
B2Gold worked with SRK to characterize hydrogeological conditions, assess inflow risks, and to engineer mitigations to inflow risks to ensure the long-term viability of the project.

Hydraulic conductivities vary by unit and are described in Table 16-4. Each unit has a different conductivity due to the influence of mining activities. The blast damage zone is the zone of bedrock affected by open pit blasting that will be subject to blast damage which can induce fracturing and dilation of joints. The disturbance zone is the zone of stress relaxation around the excavation face where relaxed conditions can allow conditions for conductivity. The cemented aggregate fill conductivity is applied for backfilled stopes in zone 1.

Various flow scenarios have been analyzed including general seepage calculations, flow through core drill holes, and inflows from structural features.

Permafrost conditions are expected in the underground mine from surface level down to the -30 RL, a vertical distance of approximately 350 m. During the mining of zone 1 through 2027, open pit operations will have a minimum 55 m thick frozen bedrock crown pillar. Inflows are not expected in this period.

Figure 16-16: Stope Hanging Wall Cable-bolt Layout



Note: Figure prepared by SRK Consulting (Canada) Inc., 2025.

Table 16-4: Umwelt Assumed Hydraulic Conductivities

Unit	Hydraulic Conductivity, K (m/s)
Bedrock	2.5×10^{-10}
Blast damage zone	2.5×10^{-8}
Disturbance zone	2.5×10^{-9}
Cemented aggregate fill	1×10^{-8}

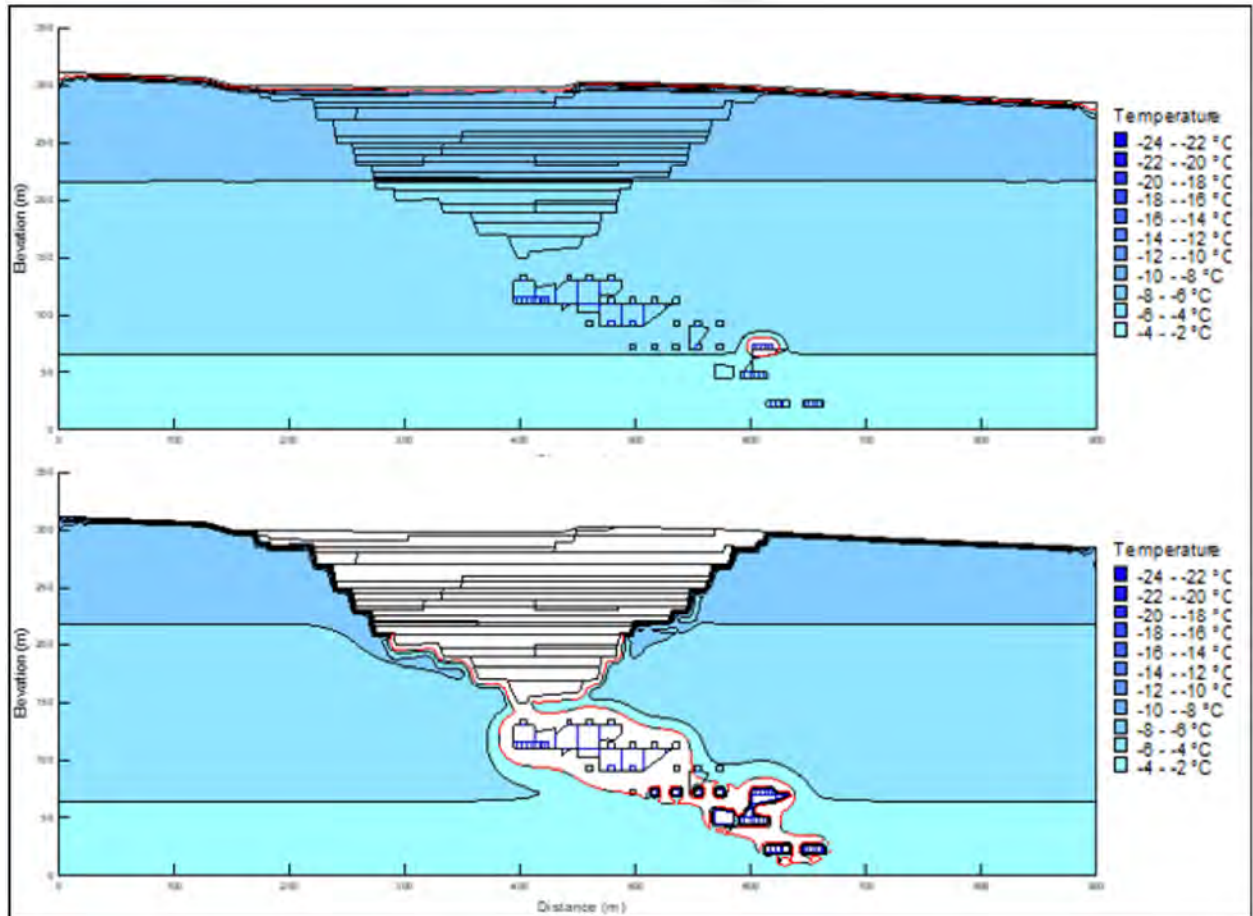
SRK completed a thermal model of the Umwelt mine, encompassing all stages of the underground, open pit, and tailings deposition sequence. The thermal model indicates that the introduction of heat from mining activities, water, and tailings, will lead to an unfrozen condition by Q4 2028 (Figure 16-17). This unfrozen condition will remain for the entirety of the LOM.

After mining of the open pit to 20 m above zone 1, and beginning to fill the Umwelt pit with water and tailings, inflows into zone 1 are estimated to be $21 \text{ m}^3/\text{d}$, with the potential range expected to be between $6\text{--}170 \text{ m}^3/\text{d}$.

Due to the proximity of zone 1 to the planned in-pit tailings deposition, hydraulic bulkheads will be installed underground to seal off zone 1 prior to allowing water and tailings to be deposited in the open pit above (Figure 16-18).

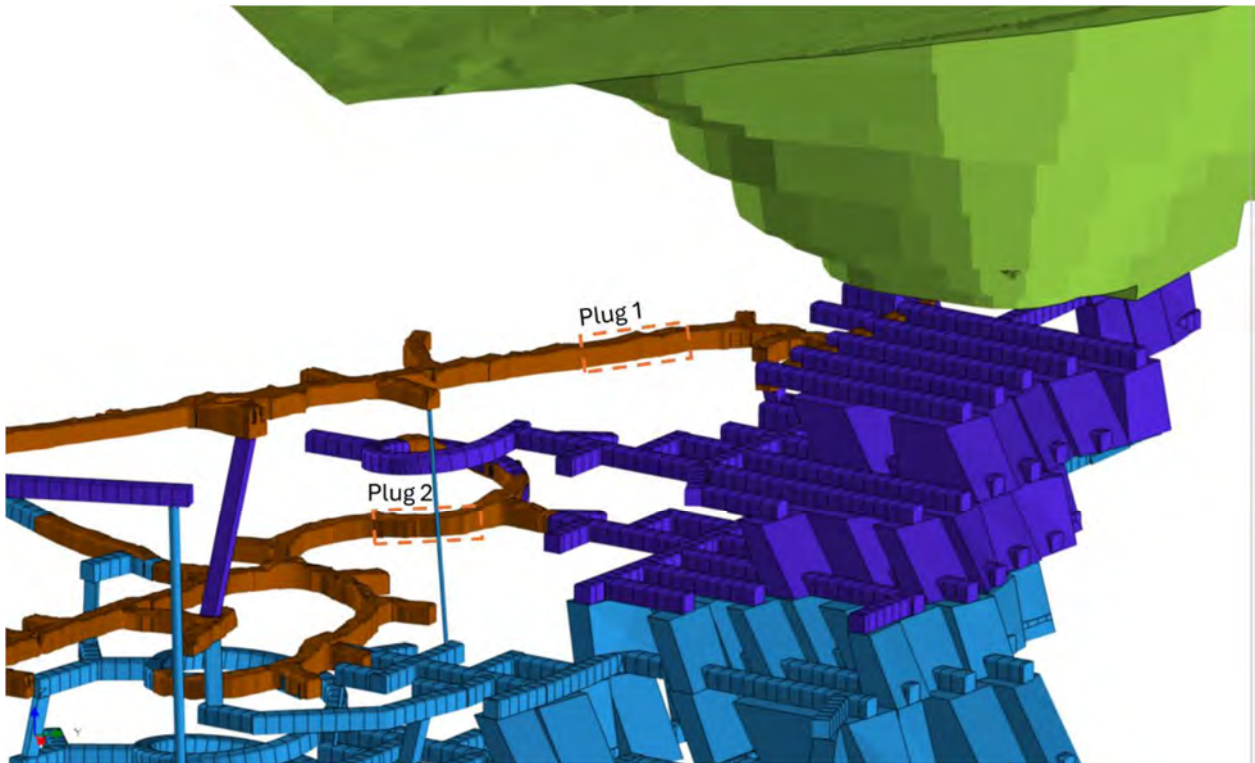
By the time mining is ongoing in zone 3, the potential range of inflows grows to $7\text{--}670 \text{ m}^3/\text{d}$.

Figure 16-17: Umwelt Thermal Model Conditions, Q1 2025 and Q4 2028.



Note: Figure prepared by SRK Consulting (Canada) Inc., 2025. Top image is Q1 2025, illustrating frozen conditions before underground production and open pit mining. Bottom image is Q4 2028, illustrating thaw connectivity between the open pit and underground workings when water and tailings are introduced into the Umwelt pit.

Figure 16-18: Hydrostatic Bulkhead Conceptual Locations



Note: Figure prepared by SRK Consulting (Canada) Inc., 2025. The term 'Plug' in the image represents the hydrostatic bulkhead locations.

It is expected that inflows will continue to grow through the LOM as more underground openings are created and the geothermal gradient increases with depth. Definition drill programs will continuously improve the hydrogeological information available and will continue to inform the dewatering requirements of the mine.

Mitigations and management tools for hydrogeological impacts at the Umwelt underground mine include correct backfill processes, including cemented rock/aggregate fill when required as well as tight filling of zone 1, grouting of core drill holes and seepage pathways as they are intersected from underground during development and operations, monitoring the performance of hydrostatic bulkheads, and implementation of a seepage monitoring program.

16.3.5 Umwelt Zone 1 and Crown Pillar Methodology

Geotechnical Considerations

During mining of zone 1, there will be a low risk of instability of the temporary stand-off crown pillar.

After the completion of Zone 1 mining towards mine closure, the modelling and empirical results indicate that ground damage can be expected in the crown pillar, but the volumetric strain is very

low. This suggests that stress induced cracking will occur in the crown pillar, but the stress damage will not be significant. The mined-out area underlying the crown pillar only accounts for a small portion of the ultimate pit floor area. Tight and high-quality backfill in the stope voids beneath the final crown pillar will prevent any mobilization of the stress damaged rock mass below the crown pillar.

Good stope management, tight filling, upgraded ground support, and robust instrumentation and monitoring are planned to prevent or minimise the effect of ground damage mechanisms in the crown pillar.

Cracking of the crown pillar will likely lead to creating or enhancing water seepage pathways and overall increased hydraulic permeability. Engineering measures of backfill and hydraulic bulkheads are proposed to mitigate against mobilization of pit backfill material and for fluid containment. Backfilling of the pit will provide surcharge loading but also confinement. Modelling results do not show deterioration of the crown pillar stability through all of the mining stages.

A robust instrumentation and monitoring campaign, including visual inspection, displacement monitoring using cabled or wireless instruments, as well as micro-seismic monitoring will be employed.

A numerical model was constructed by SRK. The numerical model does not show any major concerns. This is largely due to the relatively competent rock mass of the crown pillar, the mining and surcharge induced stress level in the crown pillar is low, and the mined-out area underlying the crown pillar only accounts for a small portion (< 20%) of the ultimate pit floor area. Additionally, the advanced numerical modelling supported that there are no obvious stress related issues in the crown pillar region, including the final natural crown pillar, the engineered sill pillar area, and the temporary sill pillar below zone 1.

Risk Assessment

Multiple risk assessment workshops were carried out between B2Gold and SRK to assess and mitigate risks related to the Umwelt underground, open pit, and tailings sequence.

Risks were developed through a comprehensive identification, ranking, and mitigation process. Risks include geotechnical (structural) risks, and hydrogeology risks. Controls were identified to address each potential risk, ultimately leading to six potential strategies for the Umwelt mine sequence. Some strategies were discounted immediately due to their unlikelihood to reach feasibility, while others are advanced.

It is not expected that there will be zero seepage of water from the in-pit tailings deposition process through the in-situ crown pillar into the former zone 1 underground workings. Seepage is expected to be managed through prevention and blockage of seepage pathways in advance of water and tailings deposition, and isolation of zone 1 from the remainder of the planned umwelt underground workings.

Zone 1 Mining, Tailings Barrier, and Tailings Deposition Sequence

Zone 1 is defined as the first two underground production levels of the Umwelt underground between the 130 and 90 elevations.

The overall development sequence is as follows. First, zone 1 is excavated underground through transverse and longitudinal longhole stoping mine methods. Stopes in this zone are backfilled with cemented aggregate or cemented rockfill at a dosage of 10%. The top drift on the 130 level will also be backfilled with the same materials, attempting to tight-fill as much as possible. Any volumes remaining will be filled with a paste or foam to remove voids that could become potential seepage pathways. Underground mining operations in zone 1 are scheduled to be complete by Q3 2027.

Simultaneous with underground mine operations in zone 1, the Umwelt open pit will be completing surface mine operations from Q1 2025. The open pit will not come within 55 m of the underground operations while they are ongoing. After underground operations are complete, the Umwelt open pit will continue to advance to an elevation of 150 m, leaving an in-situ crown pillar between 130–150 m. This crown pillar is not scheduled for production over the LOM. Open pit mine operations are scheduled to be complete by the end of Q1 2028.

After open pit and underground mine operations, but before water storage and in-pit tailings deposition in the Umwelt pit, a tailings barrier will be constructed to minimize seepage pathways between the open pit and underground zone 1 (Figure 16-19). The tailings barrier will have multiple lines of defence that include a paste, rock filter, or cemented tailings layer at the bottom of the open pit, tight-filled underground workings with rockfill, paste and/or foam, and hydrostatic bulkheads strategically placed to seal the zone 1 underground workings from future access. Additional detailed engineering of the tailings barrier is planned to be completed in 2025. To ensure the tailings barrier is not disturbed by ongoing Umwelt underground operations, the production level directly below zone 1, at the 70 m elevation, will be the final production level scheduled in operations in 2033.

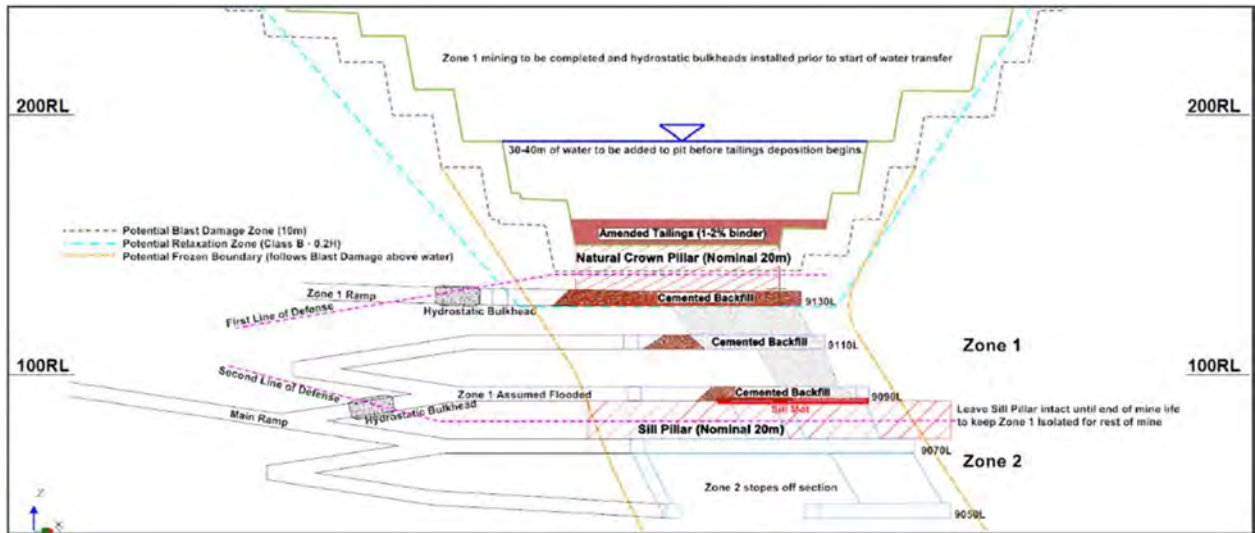
16.3.6 Mine Services

Ventilation

Umwelt underground will be ventilated through a forced air strategy, where air is pushed through the mine layout from large fans on surface raises, and directed as required to working areas through smaller auxiliary ventilation systems. The ventilation strategy was developed with SRK.

The main source of fresh air will be through two surface raises, which will have two 475 kW main fans installed. These main fresh air raises will be directed through dedicated ventilation headings to the production levels. Once in the production levels, 20 and 25 m drop raises will connect the levels, enabling the fresh air to progress deep into the mine. Before depth and losses become an issue for ventilation, a dedicated internal fresh air raise will be developed with a raisebore to direct the fresh air to the bottommost active level of the mine.

Figure 16-19: Umwelt Zone 1, Zone 2, Open Pit, and Tailings Barrier



Note: Figure prepared by SRK Consulting (Canada) Inc., 2025. Looking north. Tailings barrier illustrated conceptually as "Amended Tailings".

Exhaust air will flow out of the decline, and a series of drop raises connected to the decline. The drop raises are necessary for exhaust to keep air velocities in the decline at a manageable and permissible level. Near surface, exhaust air will be directed to two exhaust raises, or will flow out of the haulage decline.

Auxiliary ventilation will be managed with smaller, mobile fans ranging in size from 15–110 kW t depending on the application. Fresh air will typically be forced to where it is needed in ventilation bags attached to the back of the development drifts.

On a short- and medium-term basis, vent walls, brattices, regulators, and ventilation doors may be used to ensure correct ventilation system operation.

At its peak, the Umwelt underground is modelled to require 250 m³/s of airflow.

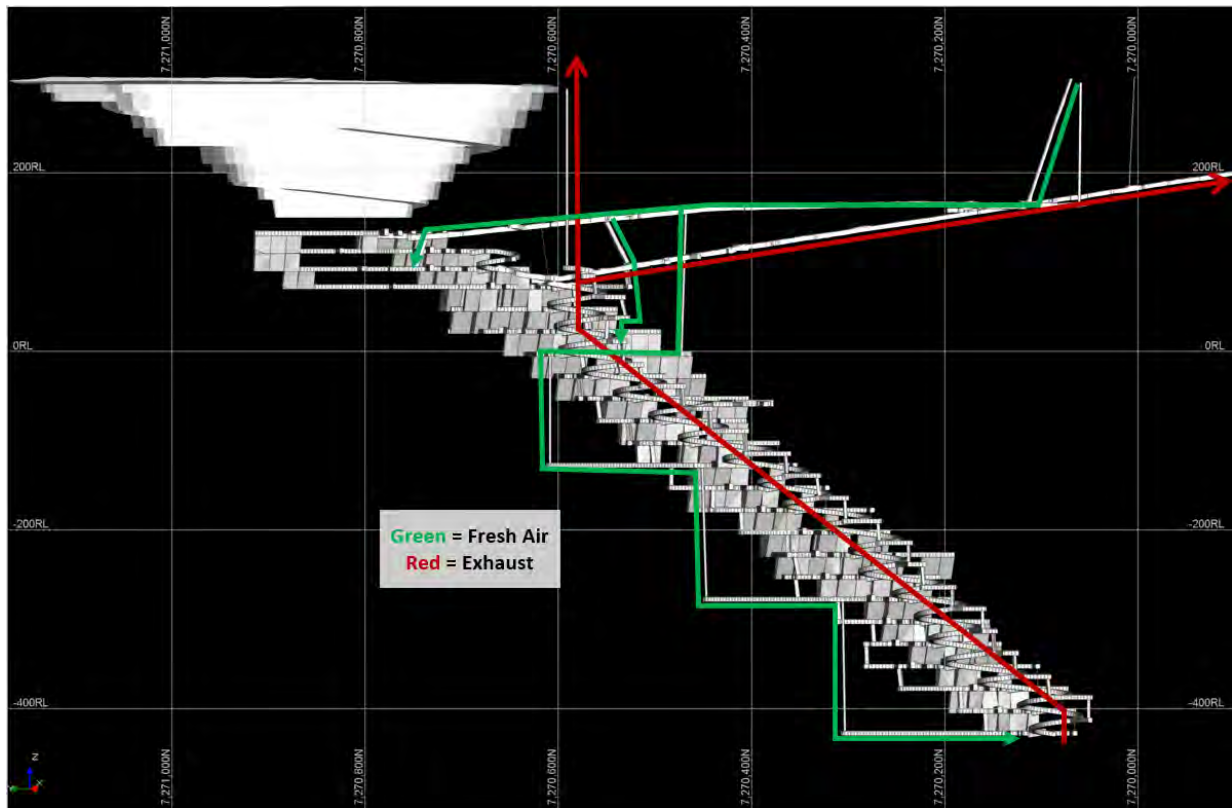
Figure 16-20 illustrates the Umwelt ventilation design.

Heating

The underground mine is in an arctic climate with extreme low temperatures, which creates hazards to personnel and infrastructure due to risk of freezing.

To mitigate extreme cold conditions in Umwelt underground, mine air is to be heated at the fresh air raises, to a target temperature of -10°C at the bottom of the raise, or the 9130 level approximately 120 m below surface. This temperature was selected as a balance of safety concerns for extreme low temperatures, managing salt addition to mine water for brine use in mine equipment, energy and fuel consumption required for heating, and avoiding unnecessary disturbance of the permafrost mining environment which is beneficial for rock stability.

Figure 16-20: Umwelt Ventilation System



Note: Figure prepared by B2Gold, 2025. Image is looking east. Not all ventilation routes are highlighted.

Two, 100 kW heaters using glycol, often capturing already occurring heat energy from the main powerhouse, will be installed in tandem with the fresh air raise fans.

Air warms naturally with depth due to the earth's geothermal gradient, and so it is expected that as mine operations occur at increasing depths, heating requirements for the mine will decrease.

Compressed Air

Compressed air is supplied through the mine through a series of pipes, compressors, and receivers. The mine will initially be developed with a 4" air line, but in advance of steady state operations an 8" line will be used. Underground will have dedicated compressor stations as needed, with two 150 kW compressors installed. One compressor is planned to be in use while the other is a reserve. Compressed air is a required service for various underground drills, brine mixing, pumps, and refuge stations.

Service Water and Mine Dewatering

Mine service water will be supplied to the mine through a series of tanks and pipes, beginning at the Umwelt portal. Salt will be added to the water to create a brine during cold temperatures to

ensure water does not freeze in the pipes. The average salt content in service water will average 10%, but is expected to decrease as mine working areas become deeper as mine development progresses.

Dewatering will be limited to managing mine service water and localized thawing of the permafrost in zones 1 and 2 of operations. In zone 3 and below, it is expected the underground will transition out of permafrost conditions and mine dewatering needs will increase. Additional data will be collected on hydrogeology as the decline gets closer to zone 3 and definition drilling collects more data.

On the mining levels, water movement will be managed through small sumps and 12 kW and 23 kW pumps. For pumping water longer distances vertically, the mine will be equipped with 45 kW and 90 kW pumps. At depth, larger permanent pumping stations will be evaluated should water inflow conditions require this infrastructure.

Umwelt will initially be developed with a 3" water line in and out, but in advance of steady state operations 6" lines will be installed.

Communications

Mine operations will use a leaky feeder communications system. Key mine personnel will carry underground radios to access the leaky feeder network. Femco mine telephones will be located at key mine infrastructure such as refuge stations, and will be independently powered so they can be used in the event of emergency.

In advance of stoping operations, a long-term evolution (LTE) communications network will be installed in the Umwelt underground mine as well as operational areas at surface. The LTE network will enable faster, more reliable communications, and will also provide the communications infrastructure required for technology applications planned in the mine, such as remote scoop operation.

Power

Power to the underground mine will be connected to the main powerhouse in 2027. In the interim, the Umwelt underground has four dedicated 1.8 MW diesel generators capable of meeting short-term power needs prior to full connection to the site powerhouse. Power generation is described in Section 18.8.

Underground power will be distributed through the mine through a series of cables and substations. Each production level will have development for a dedicated substation to power the equipment on that level. Substations will also be located at key locations through the capital development, such as pump stations and key vent fan placements. In general, power will be needed to for underground mobile equipment, ventilation, pumping, lighting, refuge chambers, and other fixed plant equipment.

Power demand will grow year over year as the underground mine gets deeper, as ventilation needs grow, and additional pumps are added for dewatering. The mine will have a total installed power of 8.6 MW, and is estimated to grow to have an average running load of 5.1 MW.

Other Mine Infrastructure

Underground operations are supported by other infrastructure in and around the mine site.

The underground mine dry is located at the main camp accommodation. Employees are transported to and from the underground operations offices by bus.

The underground operations offices are located next to the Umwelt portal, within walking distance to the underground workshop, and technical services offices. The operations offices include some office space for underground management, as well as a lineup room and storage areas.

In 2027, a dedicated underground workshop is planned to be developed within zone 3 of the Umwelt underground. This workshop will have cranes, lube bays, office space, and will be used to carry out routine and short planned and unplanned maintenance activities for the underground operation. The location underground will save traffic on the decline and lost time for travel of personnel and equipment.

16.3.7 Blasting and Explosives

Primary explosive storage and manufacturing will be handled by a contractor at a dedicated surface plant. Secondary underground facilities may store limited quantities of explosives, and will have strict access control for authorized personnel. Bulk explosives and detonators will be stored separately.

Specialized equipment will be used for transporting and loading development and production blasts.

Blasting operations of development headings and production areas will typically be carried out at shift change when all underground personnel are out of the mine. In certain circumstances, blasting may occur during the shift, and mine clearing procedures will be carried out to ensure the safety of all personnel and equipment.

Explosives handling, loading, and detonation will only be carried out by trained and authorized personnel.

16.3.8 Definition Drilling

Definition drilling is planned on a continuous basis over the LOM. As the decline develops deeper in advance of future production zones, cubbies for core drilling will be used to improve the confidence level of geology and hydrogeological data available to be used for stope design and production planning. An average of 37,500 m per year of definition drilling is planned over the LOM. The B2Gold production geology team will manage the data from definition drilling programs, while the drilling activity itself will be contracted to a core drilling company. This cost is included within tech services, and allocated to underground mining.

Underground drill spacing will typically at 15 x 15 m intervals. Chip samples will be taken to support grade control modelling. The actual drill hole spacing and sample density will continue to be optimized as part of development, production mining and block model reconciliation activities.

16.3.9 Operational Cut-off Grades

The calculated and applied cut-off grade for stoping operations is 4.64 g/t Au.

In a scenario where development en-route to a stoping area encounters mineralization that is <4.64 g/t Au, but above the applied stockpile cut-off grade for processing of 1.65 g/t Au, the material will be sent to the process plant.

16.3.10 Underground Production Schedule

Underground production scheduling will be driven by development of production zones to accommodate the bottom-up, primary–secondary transverse stoping sequence that will provide most of the ore tonnes. Production zones will typically contain five, 25 m vertical stoping horizons. The bottommost horizon will be a sillmat level that is backfilled with cemented rock fill in all stopes, such that the uppermost horizon in the production zone below it may be extracted later in the mine life.

The first production zone, zone 1, is planned to come into production in Q3 2025 and ramps up through the first half of 2026. This zone contains just two stoping horizons of 20 m each to accommodate early access to high-grade ore for production, as well as to develop the zone in a complementary sequence with the Umwelt open pit, tailings barrier, and in-pit tailings deposition that follow (see Section 16.3.5.)

Zone 2 is planned to begin production in the middle of 2026. From this point forward in the mine plan, two production zones will be online, each with development, stoping, and backfill activities occurring simultaneously.

Mine development will reach a steady-state development rate of 12 m per day. Ore production rate averages 1,300 t/d once in steady state operations, reaching a maximum of 1,600 t/d in 2030.

The underground mine schedule is summarized in Figure 16-21.

16.3.11 Underground Mobile Mining Equipment

Peak underground mobile equipment requirements are detailed in Table 16-5.

16.3.12 Underground Mine Safety

Fire Prevention

Fire extinguishers will be provided at the underground refuge stations, electrical substations, pump stations, fuelling stations, explosive magazines, and other strategic areas and maintained in accordance with applicable regulations and best practices. Every vehicle will carry at least one fire extinguisher; the correct type and size will depend on the type of vehicle. Underground heavy mobile equipment will be equipped with automatic fire-suppression systems.

Figure 16-21: Umwelt Underground Mine Schedule



Note: Figure prepared by B2Gold, 2025.

Table 16-5: Umwelt Underground Peak Mobile Mining Equipment

Mining Equipment	Unit Numbers
30 t trucks AD30	3
51 t truck TH551i	6
17 t loader LH517i	5
14 t loader LH514	1
10 t loader LH410	1
Development drill DD422iE*	4
Production drill DL422i	2
Cable-bolter DS422i	1
Maclean bolter**	2
ITC 950K	3
Boom truck A64	2
Scissor lift USL5000	2
Telehandler TH514C	2
Grader UG20M	1
Spraymec MF050VC	2
Charmec MC605D	2
Agitator truck LF600	1
Flat bed truck	1
Service truck	2

Mining Equipment	Unit Numbers
Various underground light vehicles	11

Note: *Initial development drills are not the 'E' model but will be phased out over the LOM. **Maclean bolters are part of initial development fleet but are not replaced over the LOM.

Mine Rescue

A fully trained and equipped mine rescue team is essential to the safe operation of any mine. B2Gold has a surface and underground mine rescue team trained for emergencies that can occur around the project site.

Refuge Stations

Self-contained portable refuge stations will be provided in the main underground work areas. The stations are equipped with compressed air, potable water, and first aid equipment. They are also supplied with a fixed telephone line and emergency lighting. The refuge chambers are sealable to prevent the entry of gases. These refuge stations will be moved to new locations as the work area changes as egress routes are established in the course of mine development; this eliminates the need to construct permanent refuge stations.

Emergency Egress

The main decline is planned to provide primary egress from the underground workings. The fresh air raise system would provide the secondary egress in case of emergency. The escapeway would be equipped with steel ladders and platforms.

Emergency Stench System

A stench gas system will be installed on each fresh-air intake and could be triggered to alert underground personnel in the event of an emergency.

16.4 Production Schedule

Overall production planning is a blend of open pit and underground ore. Where possible, stronger periods in production in one ore source are scheduled to offset a weaker period in another. In periods where production from the mining areas exceeds the mill throughput capacity of 1.46 Mt/a, low grade ore available from the open pit deposits will be stockpiled for processing later in the mine life.

Table 16-6 summarizes the LOM production schedule, based on the combined open pit and underground operations. Table 16-7 shows the actual LOM production schedule on an annual basis. Table 16-8 provides the opening stockpile balance and Table 16-9 summarizes the schedule.

Figure 16-22 summarizes the projected ore tonnes that will be processed, by stockpile grade bin. Figure 16-23 provides the forecast LOM gold grade and production on an annual basis.

Table 16-6: LOM Production Schedule Summary

Item	Unit	Value
Open pit mine life	years	8.0
Open pit nominal production rate	Mt/a rock (max)	18
Underground mine life	Years	9.0
Underground nominal production rate	Ore t/d (max)	1,600
Process plant life	Years	8.5
Processing rate	Mt/a	1.46
Processing recovery	%	92.5
Average mined ore grade	g/t Au	6.91
Maximum reserve stockpile tonnage	Mt	0.5
Total life of mine gold production	koz	2,294
Average life of mine gold production	koz/a	270
Average gold production first five years	koz/a five yrs	303

Table 16-7: LOM Mine Production Schedule

Combined LOM Mine Production Schedule	Units	Total LOM	2025	2026	2027	2028	2029	2030	2031	2032	2033
Open Pit Total											
Total waste	kt	102,235	9,772	13,886	17,113	17,252	16,072	15,815	12,110	217	—
Stripping ratio	w:o	14.1	18.9	21.6	14.3	16.1	10.0	24.7	8.4	1.4	—
Ore	kt	7,270	517	643	1,193	1,070	1,608	640	1,440	160	—
Grade	g/t Au	6.19	6.33	6.90	8.17	6.78	5.69	5.04	4.60	8.06	—
Contained gold	koz Au	1,446	105	143	313	233	294	104	213	42	—
Echo Pit											
Total waste	kt	1,857	1,857	—	—	—	—	—	—	—	—
Stripping ratio	w:o	10.1	10.1	—	—	—	—	—	—	—	—
Ore	kt	184	84	—	—	—	—	—	—	—	—
Grade	g/t Au	5.69	5.69	—	—	—	—	—	—	—	—
Contained gold	koz Au	34	34	—	—	—	—	—	—	—	—
Umwelt Pit											
Total waste	kt	31,901	7,915	13,373	9,885	728	—	—	—	—	—
Stripping ratio	w:o	12.2	23.8	20.8	8.6	1.5	—	—	—	—	—
Ore	kt	2,610	333	643	1,143	490	—	—	—	—	—
Grade	g/t Au	7.75	6.68	6.90	8.18	8.59	—	—	—	—	—
Contained gold	koz Au	650	72	143	301	135	—	—	—	—	—
Llama Pit											
Total waste	kt	28,573	—	513	7,227	16,370	4,463	—	—	—	—
Stripping ratio	w:o	20.3	—	—	146.8	28.2	5.7	—	—	—	—
Ore	kt	1,409	—	—	49	580	780	—	—	—	—
Grade	g/t Au	6.39	—	—	7.88	5.25	7.15	—	—	—	—
Contained gold	koz Au	290	—	—	12	98	179	—	—	—	—

Combined LOM Mine Production Schedule	Units	Total LOM	2025	2026	2027	2028	2029	2030	2031	2032	2033
Goose Main Pit											
Total waste	kt	39,904	—	—	—	154,190	11,608	15,815	12,110	217	—
Stripping ratio	w:o	13.0	—	—	—	—	14.0	24.7	8.4	1.4	—
Ore	kt	3,068	—	—	—	—	828	640	1,440	160	—
Grade	g/t Au	4.79	—	—	—	—	4.31	5.04	4.60	8.06	—
Contained gold	koz Au	473	—	—	—	—	115	104	213	42	—
Underground Summary											
Ore	kt	3,792	125	468	400	529	480	571	385	490	344
Grade	g/t Au	8.30	8.35	8.06	8.17	7.72	7.30	7.39	9.63	10.25	8.29
Contained gold	koz Au	1,012	34	121	105	131	113	136	119	161	92
Lateral development metres	m	27,806	3,741	3,880	4,244	4,049	4,224	4,109	2,593	509	457
Total backfill tonnes	kt	2,513	51	233	313	334	299	416	260	327	280

Note: numbers have been rounded.

Table 16-8: Stockpile Opening Balance

Metric	Units	Value
Ore tonnes	kt	240
Grade	g/t Au	2.76
Contained gold	koz Au	21

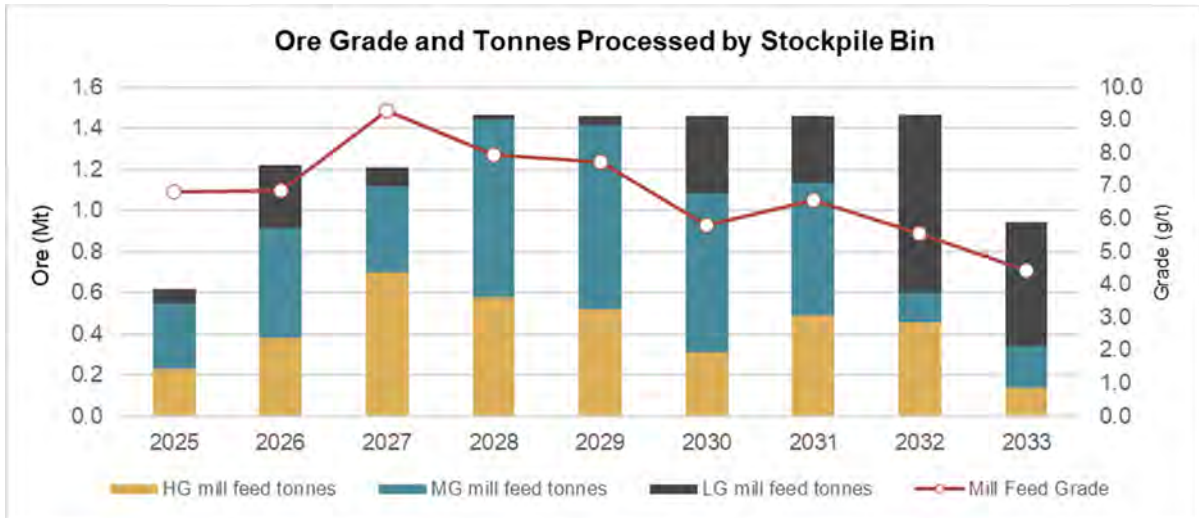
Note: Numbers have been rounded. Stockpile balance is dated December 31, 2024.

Table 16-9: LOM Processing Summary

LOM Processing Summary	Units	LOM Total	2025	2026	2027	2028	2029	2030	2031	2032	2033
Ore	kt	11,302	616	1,222	1,209	1,464	1,460	1,460	1,460	1,464	945
Grade	g/t Au	6.82	6.84	6.87	9.28	7.93	7.74	5.80	6.58	5.54	4.43
Contained gold	koz Au	2,480	135	270	361	373	363	273	309	261	135
Recovery	%	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5
Produced gold	koz Au	2,294	125	250	334	345	336	252	286	241	124

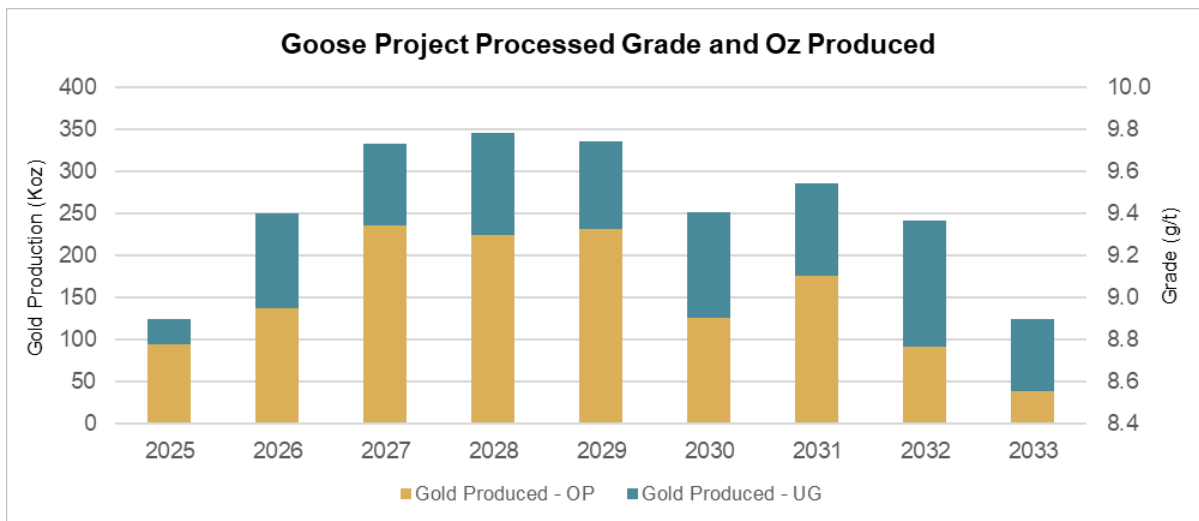
Note: numbers have been rounded.

Figure 16-22: Ore Grade and Tonnes Processed by Stockpile Bin



Note: Figure prepared by B2Gold, 2025.

Figure 16-23: LOM Gold Production



Note: Figure prepared by B2Gold, 2025.

17.0 RECOVERY METHODS

17.1 Introduction

The results of the metallurgical testwork described in Section 13, together with financial evaluation data, were used to develop metallurgical design criteria, which in turn were used to design the process facility.

The process consists of a leach and carbon adsorption process comprising: crushing; grinding; gravity concentration; leaching; carbon adsorption; cyanide destruction; carbon elution and regeneration; gold refining; and tailings thickening and disposal.

The mill is designed with a nominal capacity of 4,000 t/d at a planned average feed grade of 6 g/t Au. Design mill feed grade is 7.5 g/t Au. The crushing circuit will operate at an availability of 70%. Milling and leaching circuits will operate 24 h/d, 365 d/a, at an availability of 92%.

17.2 Key Design Assumptions

The key process design assumptions are summarized in Table 17-1.

17.3 Process Flowsheet

The proposed flowsheet is illustrated in Figure 17-1.

17.4 Plant Description

17.4.1 Primary Crushing

Gold ore from open pit and underground mining operations will feed a vibrating grizzly–primary jaw crusher system, which will produce a product size of approximately 170 mm.

Feed material to the crusher system will be hauled by 70 t trucks to the ROM stockpile from the mines. Material will be stockpiled near the crusher and fed by a front-end loader to a static grizzly installed on top of the ROM bin. Oversize from the static grizzly will be removed and broken by a mobile rock breaker. The grizzly undersize will discharge to the ROM bin.

A vibrating grizzly feeder will draw material from the ROM bin. The spacing between the rails on the grizzly feeder are 100 mm. The vibrating grizzly oversized material will discharge directly into the primary jaw crusher. A rock breaker will be provided for oversize not removed by the static grizzly. The undersized material will bypass the crusher and feed directly onto the primary crusher discharge conveyor.

Table 17-1: Process Design Assumptions

Area	Criteria	Unit	4,000 t/d Design Value
General	Gold	g/t	7.5
	Silver *	g/t	3.75
	Daily throughput	t/d	4,000
	Process plant availability	%	92
	Overall gold recovery	%	92.5
Crusher system	Availability/Utilities	%	70
	Crusher work index (CWi)	kWh/t	14.6
	Number of crushing stages	—	3
	Crushing system product size (P80)	mm	7.4
Fine mineralized material storage	Capacity (live)	t	2,000
	Capacity (total)	t	9,440
	Capacity (live)	h	12
Grinding	BWi (106 µm), 75 th percentile	kWh/t	17.2
	BWi (53 µm), 75 th percentile	kWh/t	18.3
	Ball mill product size (P80)	µm	175
	Fine-grind mill product size (P80)	µm	45
Gravity recovery	Gold recovery	%	40
	Feed to primary gravity circuit	t/h	253
	Feed to secondary gravity circuit	t/h	120
Screening and thickening	Feed density	% w/w	30
	Thickener underflow density	% w/w	52
Pre-aeration	Retention time	h	21
Leaching and CIP	Leach retention	h	32
	CIP carousel residence time	hr	2.1
	Leach slurry feed rate	m ³ /h	227
	CIP slurry feed rate	m ³ /h	233
	CIP carbon concentration	g/L	67
	Loaded carbon grade	g/t	5,300
Tailings thickening	Thickener feed density	% w/w	20
	Thickener underflow density	% w/w	60
Cyanide destruction	Feed solution CN _{WAD}	ppm	145
	Target discharge solution CN _{WAD}	ppm	<10.0
	Total residence time	h	2.7
Carbon treatment	Acid used	—	HCl
	No. of acid wash vessels	—	1

Area	Criteria	Unit	4,000 t/d Design Value
	Acid wash batch size	t	4
	Number of elution vessels	-	2
	Elution batch size	t	4
Electrowinning and refining	EW recovery	%	99

Note: * Silver is not included in the precious metals economics. CN_{WAD} = weakly acid dissociable cyanide.

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NOTES:

- LYCOPODIUM RESPONSIBILITY AND APPROVAL IS FOR WORK WITHIN TAGS: CONTRACTED SCOPE. THIS WORK IS FOR GRASSES RECEIVED BY OPERATIONS: UNKNOWN WITHIN INVENTED: CLONES WITHIN INVENTED TO THE INVENTOR: NOTED IN THE INVENTOR: DRAWINGS: SECTION OF THE TIE BLOCK.
- OPERATING: NOT: SIGNED: OR: INVENTOR: PROCESS: FLOW: DIAGRAM.

OVERALL PROCESS FLOW DIAGRAM

82GOLD BACK RIVER CORP.
GOOSE PROJECT
Lycopodium
The design of this process is confidential, as it represents a competitive edge. The design of this process is confidential, as it represents a competitive edge. The design of this process is confidential, as it represents a competitive edge.

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17.4.2 Screening

The screen-feed conveyor will collect product from all three crushers and feed onto a double-deck vibrating banana screen. An electromagnet and metal detector will be provided to protect downstream equipment from tramp metal ingress.

The top deck aperture will be 32 mm and a bottom deck aperture will be 10 mm, generating an undersize product stream P80 of approximately 7.4 mm. The oversize from the top screen deck will convey to the secondary crusher, while oversize from the second screen deck will convey to the tertiary crusher.

Screen undersize will be transferred using two conveyors to the fine ore stockpile dome.

17.4.3 Secondary and Tertiary Crushing

The secondary crusher will reduce the screen oversize (+32 mm) to a nominal product size P80 of approximately 22 mm using a standard crushing chamber configuration with a closed side setting of 25 mm.

The tertiary crusher will reduce the bottom deck oversize (+10 mm to -32 mm) to a nominal product size P80 of approximately 13 mm using a short-head chamber configuration with a closed size setting of 12 mm.

Both crushers will discharge to a common conveyor system for recirculation back to a double-deck banana screen. A common bypass chute from the crusher feed bins was designed to allow for each crusher to be shut down individually to allow for maintenance at a reduced overall throughput rate.

17.4.4 Fine Ore Stockpile and Reclaim

The fine ore storage facility will consist of a dome-covered stockpile with two in-line belt feeders located within a corrugated pipe reclaim tunnel. The belt feeders will transfer material to the conveyor feeding the ball mill.

The stockpile will have a 2,000 t live capacity that can support process plant operations for 12 h when the crushing plant is not operating. The total capacity of the stockpile will be 9,440 t, which corresponds to approximately 2.5 days storage. Each belt feeder can provide the total throughput to the plant when required. The stockpile will be managed using a dozer to ensure the total capacity can be used effectively when needed.

For pH control of downstream processes, quicklime will be added to the ball mill feed conveyor from a lime silo via a screw feeder.

17.4.5 Grinding

The grinding circuit will consist of a primary ball mill operating in closed circuit with a hydrocyclone bank (one operating and one standby) and a secondary stirred media mill operating in closed circuit with a hydrocyclone cluster (5 operating and 4 standby). Material from the fine ore stockpile will be fed to the ball mill via the ball mill feed conveyor. The overall grinding circuit will operate

at a nominal throughput of 181 t/h (fresh feed) and produce a target final particle size P80 of 45 µm. The ball mill is 4.6 m in diameter by 9 m effective grinding length, driven by a 3.3 MW motor.

Water will be added to the ball mill to maintain the charge in the mill at a constant slurry density. Slurry will overflow from the ball mill to a trommel screen, attached to the ball mill discharge end. The ball mill trommel screen oversize will discharge into a trash bin for removal from the system. The trommel will be removable to allow for access to the mill interior for liner replacement.

The primary ball mill cyclone bank will classify the feed slurry into coarse and fine fractions. The coarse underflow will feed the ball mill for additional grinding. The fine overflow with a nominal P80 of approximately 175 µm will flow by gravity to the secondary grinding circuit cyclone feed pump box for classification. The primary ball mill cyclones were designed for a 300% circulating load. Secondary grinding will be performed by a 3 MW stirred media mill to achieve the final grind P80 of 45 µm.

A portion of the primary ball mill discharge will be pumped to a scalping screen, which in turn will feed a gravity concentrator circuit. A portion of the secondary cyclone underflow will flow by gravity to a separate gravity concentrator circuit.

17.4.6 Gravity Concentration

The gravity recovery and intensive leach circuits will consist of gravity concentrators with a feed scalping screen, and a single skid-mounted intensive leach reactor. The overall design target gravity gold recovery is 40% from 4.2 t/d of concentrate.

A scalping screen prior to the gravity concentrator will remove coarse particles and/or metal pieces that would otherwise fill the concentrator cones with lower-grade material, reducing the capacity and/or causing higher wear rates. Scalping screen oversize will be directed by a launder to the gravity tailings box. Periodically, the centrifugal concentrators will be bypassed and switched to flushing mode to recover the collected concentrate.

Gravity concentrate material will be treated in an intensive leach (Acacia) system. At the completion of the batch leach cycle, the resulting gold-rich pregnant solution will be pumped to the refinery for gold recovery using electrowinning cells.

The intensive leach reactor tailings, along with decanted pre-wash fines, will be pumped to the ball mill cyclone feed-pump box for return to the primary grinding circuit.

17.4.7 Thickening

The secondary grinding circuit cyclone overflow will flow by gravity to a vibrating trash screen to remove trash material prior to downstream processing. The vibrating screen will have an area of 10.1 m² and screen panels with slotted apertures of 800 µm x 11 mm.

The undersize from the screens will flow by gravity to the pre-leach thickener. Flocculant solution will be added to the thickener feed to flocculate and promote the settling of solids. The pre-leach thickener will have a diameter of 18 m and produce a thickened product of 52% solids for the leach circuit.

The thickened slurry from the pre-leach thickener will be pumped to the leach circuit. Thickener overflow solution will flow by gravity to the process water tank.

17.4.8 Leaching and Carbon Adsorption

The pre-leach thickener underflow will be pumped to three pre-aeration tanks in series, prior to being leached in five similar-sized leach tanks (a total of 21 hours retention time, pre-leach). The pre-aeration tanks will passivate sulphide material to reduce cyanide consumption and improve gold cyanidation recoveries. The leach circuit will extract gold into solution prior to contact with activated carbon in the CIP circuit. The leach circuit was designed to provide 32 h retention time, with an additional 2.1 h in the CIP circuit. All leach tanks will be located outside and adjacent to the main process building. They will be insulated owing to the outside installation. The CIP circuit will be located inside the main process building.

The two pre-aeration tanks will be operated with dissolved oxygen concentrations of 20–25 ppm and lead nitrate will be added to reduce cyanide consumption and improve recovery. The leach circuit dissolved oxygen concentration will also be maintained at 20–25 ppm and sodium cyanide concentration will be maintained at 250 ppm across the circuit.

Leached slurry from the final tank will flow by gravity to the CIP carousel circuit for carbon adsorption. Dissolved gold and silver will be adsorbed onto granular activated carbon in the CIP tanks.

The CIP carousel circuit was designed to provide a total slurry retention time of 16 h with eight tanks in series. The carousel circuit is a modification of the traditional CIP circuit. Leached slurry will feed a distribution launder. The distribution launder, using valving and piping, can feed any of the CIP tanks. There will be a carbon inventory in each of the CIP tanks, but they will not be pumped counter-current to the slurry flow. Instead, when CIP Tank 1 carbon is loaded, the distribution launder will send fresh leach slurry to CIP Tank 2. CIP Tank 1 loaded carbon will be pumped to the carbon handling plant for gold elution, and newly-regenerated carbon will fill CIP Tank 1. CIP Tank 1 will become the last tank in the series, and CIP Tank 2 will be the head tank. This practice will be continued through the tanks with CIP Tank 1 eventually becoming the head tank once again.

Each CIP tank will have a single inter-stage screen/agitator to retain carbon in the tank and allow discharge of slurry to the next tank. All CIP tanks will be at the same elevation.

The average carbon concentration in the CIP carousel circuit is expected to be 67 g/L. As the slurry proceeds through the circuit, metal values in solution will progressively decrease through adsorption onto carbon. The carbon will be transferred by pumping to the loaded carbon screen and then to acid wash when the first CIP tank metal loading reaches about 5,300 g/t Au and 2,700 g/t Ag. Loaded carbon will be sprayed with water on the screen and collected and transferred to the acid wash column daily. The loaded carbon screen undersize will be returned to CIP feed. The tailings stream from the CIP carousel circuit will flow onto a carbon safety screen to capture any carbon particles that may have escaped from the final CIP tank. Safety screen undersize will then be pumped to cyanide destruction for treatment and then to the tailings thickener prior to final disposal in the tailings storage facility (TSF).

17.4.9 Carbon Acid Wash, Elution, and Regeneration

Loaded carbon will be treated with 3% hydrochloric acid solution in the acid wash circuit to remove calcium deposits, magnesium, sodium salts, silica, and fine iron particles. Organic foulants such as oils and fats will be unaffected by the acid, and will be removed after the elution step by thermal reactivation using a rotary kiln.

The carbon will first be rinsed with fresh water. Acid will then be pumped from the acid wash circulation tank to the acid wash column. Acid solution will be pumped upward through the column and overflow back to the acid wash circulation tank. The carbon will then be rinsed with fresh water to remove the residual acid and any mineral impurities.

Pressurized water will transfer acid washed carbon from the acid wash column into one of two elution columns. Carbon slurry will discharge directly into the top of the selected elution column. Under normal operation at 4,000 t/d, only one elution will take place each day; however, additional elution capacity is available with two columns.

17.4.10 Carbon Stripping (Elution)

The carbon stripping (elution) process will use barren solution to strip gold and silver from the carbon, creating a pregnant solution that will be pumped through electrowinning and back to the elution column.

The elution columns are constructed from carbon steel tanks that will hold approximately 4 t of carbon each. During the elution cycle, solution containing approximately 1.5% sodium hydroxide and 0.2% sodium cyanide at a temperature of 145°C will be circulated through the elution column. Solution exiting the top of the column will be cooled below its boiling point by the heat recovery heat exchanger. Heat from the outgoing solution will be transferred to the incoming barren solution, prior to the solution passing through the solution heater.

17.4.11 Carbon Regeneration

Pressurized water will transfer the stripped carbon from the elution column to the kiln feed dewatering screen. The kiln feed screen will double as a dewatering screen and a carbon sizing screen, where fine carbon particles will be removed. Oversize carbon from the screen will discharge by gravity to the carbon-regeneration kiln feed hopper. Screen undersize carbon, containing carbon fines and water, will drain by gravity into the carbon fines tank. Subsequently, the carbon fines will be filtered and collected into bags. A horizontal rotary kiln with residual heat dryer will be used to treat 4–8 t/d of carbon, depending on the elution rate. The regeneration kiln discharge will be transferred to the carbon quench tank by gravity and be cooled by fresh water prior to being pumped to the CIP circuit. The carbon regeneration will use residual heat from the kiln to heat the pre-dryer.

To compensate for carbon losses by attrition, virgin carbon will be added to the carbon attrition tank along with fresh water to pre-attrition and screen the carbon before using in the process.

17.4.12 Gold Electrowinning and Refining

Pregnant solution from the strip column will be pumped to the refinery for electrowinning to produce a gold sludge. Resulting barren solution will be pumped back into the barren solution tank for reuse in electrowinning, with periodic bleeding to the CIP circuit.

Intensive leach reactor pregnant solution will be pumped from the intensive leach circuit into a solution tank within the gold electrowinning room. The solution will then be pumped into an electrowinning cell with solution overflowing back into the recirculating tank. Once the gold has been extracted from the intensive leach reactor pregnant solution, the resulting barren solution will be pumped to the CIP circuit.

Gold-rich sludge will then be washed off the cathodes in the electrowinning cells into the sludge holding tank. Periodically, the sludge will be drained, filtered, dried, mixed with fluxes and smelted in an induction furnace to produce gold doré. This process will take place within a secure and supervised area. The gold doré will be stored in a vault awaiting shipment.

17.4.13 Cyanide Destruction and Thickening

The cyanide destruction circuit will consist of two mechanically agitated tanks, each with a residence time of 1.35 hours. Cyanide will be destroyed using the SO_2 /air process with a ratio of 6.5:1 SO_2 : CN_{WAD} . Treated slurry from the cyanide destruction circuit will be pumped to a tailings thickener where the thickened tailings will be pumped to the TSF.

In the cyanide destruction tanks, oxygen will be sparged from near the bottom of the tanks, under the agitator impeller. Lime slurry will be added to maintain the pH of 8.0–8.5, and copper sulphate will be added as a catalyst, maintaining 24 ppm concentration in solution. Sodium metabisulphite (SMBS) will be dosed into the system as a solution as the source of SO_2 . This system has been designed to reduce the solution concentration to a target of less than 10 mg/L CN_{WAD} prior to transfer to the TSF via the tailings thickener.

17.5 Energy, Water, and Process Materials Requirements

17.5.1 Power

Power requirements for the operations are discussed in Section 18.8.

17.5.2 Water

The following types of water will be used in the process plant:

- Process water: Overflow solution from the pre-leach thickener and tailings thickener will be used as process water. Process water will be used predominantly in the grinding circuit to dilute slurry to the required pulp densities. Total process water demand at design throughput is 504.5 m³/h, made up from the following sources: pre-leach thickener overflow (291.0 m³/h), tailings thickener overflow (176.1 m³/h), process water pump gland water (4.4 m³/h) and reclaim water addition (33 m³/h);

- Reclaim water: water reclaimed from the TSF will be used in various areas of the process where a cleaner water is required. A separate tank and pumping distribution system will be provided for reclaim water. Total reclaim water demand is 120.3 m³/h;
- Fresh water: fresh water for the process plant will be pumped from Goose Lake and used as required for reagent make-up water and other areas such as ball mill cooling water. The total fresh water demand for process requirements is 38.2 m³/h. This excludes camp and mine water.

17.5.3 Consumables

Consumables will include:

- Grinding balls: 1.2 kg/t;
- Ceramic grinding media: 0.3 kg/t;
- Sodium cyanide: 0.53 kg/t;
- Quicklime: 3.2 kg/t;
- Hydrated lime: 0.14 kg/t;
- Sodium metabisulphite: 1.24 kg/t;
- Copper sulphate: 0.12 kg/t;
- Flocculant: 40 g/t;
- Lead nitrate: 50 g/t;
- Activated carbon: 30 g/t;
- Sodium hydroxide: 0.07 kg/t;
- Hydrochloric acid: 0.07 kg/t;
- Antiscalant: 0.02 kg/t.

18.0 PROJECT INFRASTRUCTURE

18.1 Introduction

The Goose Project has two main infrastructure areas, at the Goose Mine and the Bathurst Inlet marine laydown area.

Infrastructure at the Goose Mine includes:

- 4 open pits;
- 1 underground mine;
- 3 WRSAs (Echo/Goose WRSA overlap, Umwelt WRSA, and Llama WRSA);
- Tailings storage (using the mined-out open pits at Umwelt, Llama, and Echo);
- Process-related facilities including assay laboratory and oxygen plant;
- Truck shop, including service and wash bays, tyre repair. Truck shop supporting spaces include storage space for lubes and consumables, and a light surface vehicle maintenance facility;
- Warehouse and laydown areas;
- Power plant and power distribution;
- Energy Centre (wind turbines and solar facility);
- Fuel storage farm;
- Explosives facility;
- Permanent accommodations camp, administration office, and mine dry facility;
- Utilities (including fresh, process, and potable water; sewage treatment; heating, ventilation, dust control, and fume extraction; waste heat recycling; fire protection; security);
- Plant site water management facilities (including water diversion structures, water management ponds);
- 2 reverse osmosis water treatment plants and reverse osmosis polishing units;
- Airstrip;
- All-season haul roads and service roads;
- Industrial waste management facilities.

Infrastructure at the marine laydown area primarily consists of a marine receiving and staging facility, which is used to receive fuel, cargo, and consumables during mine construction and operation. Key items include:

- Grounded terminal barge and a barge ramp that will accept lighter barges;

- Shore-mounted anchorages for shipping;
- Diesel fuel storage tank farm, with connection to fuel transfer conduit for sealift fuel deliveries;
- Container storage area;
- Cargo laydown areas;
- Warehouse;
- Power plant;
- Maintenance shop;
- Desalination plant;
- Fresh/fire-water storage and distribution;
- Accommodations camp with offices;
- Waste management infrastructure;
- Winter ice road;
- All-weather airstrip.

A location plan showing the infrastructure at the Goose Mine is provided in Figure 18-1. A layout plan for the marine laydown area is shown in Figure 18-2.

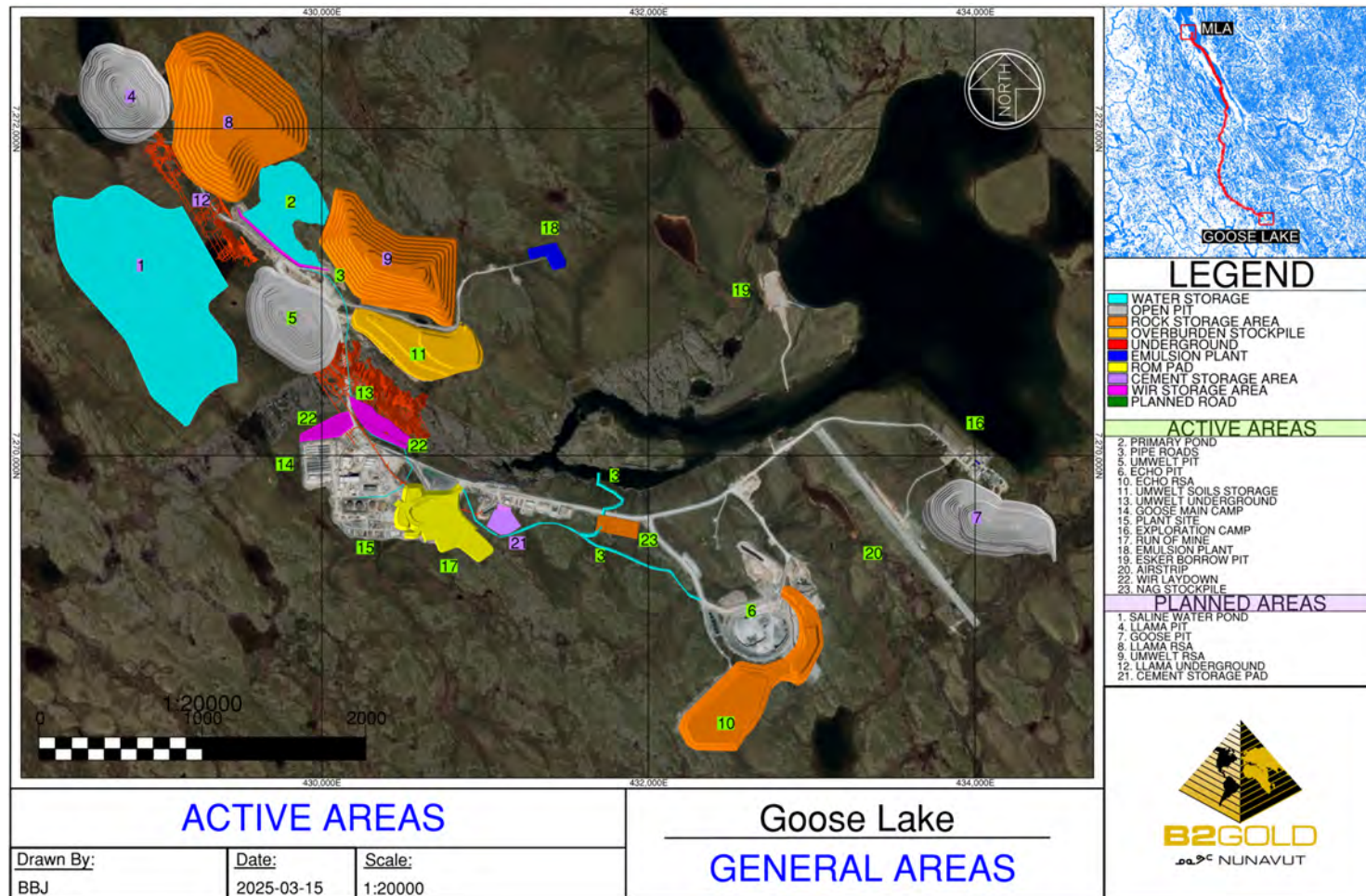
18.2 Road and Logistics

Two supply options are available to bring goods to site either via aircraft or via sealift marine vessels.

Mobilizing goods to site via aircraft can be sent either through Edmonton, Alberta or Yellowknife, NWT. All goods and materials are transported to Edmonton or Yellowknife via tractor trailer trucks from suppliers via national highway infrastructure. Consolidation warehouses have been established at both cities for receiving goods and shipping to site. Various aircraft can be used to bring goods to site; typically goods are sent on 737 cargo aircraft. Any oversize goods can be shipped on Hercules C-130 aircraft.

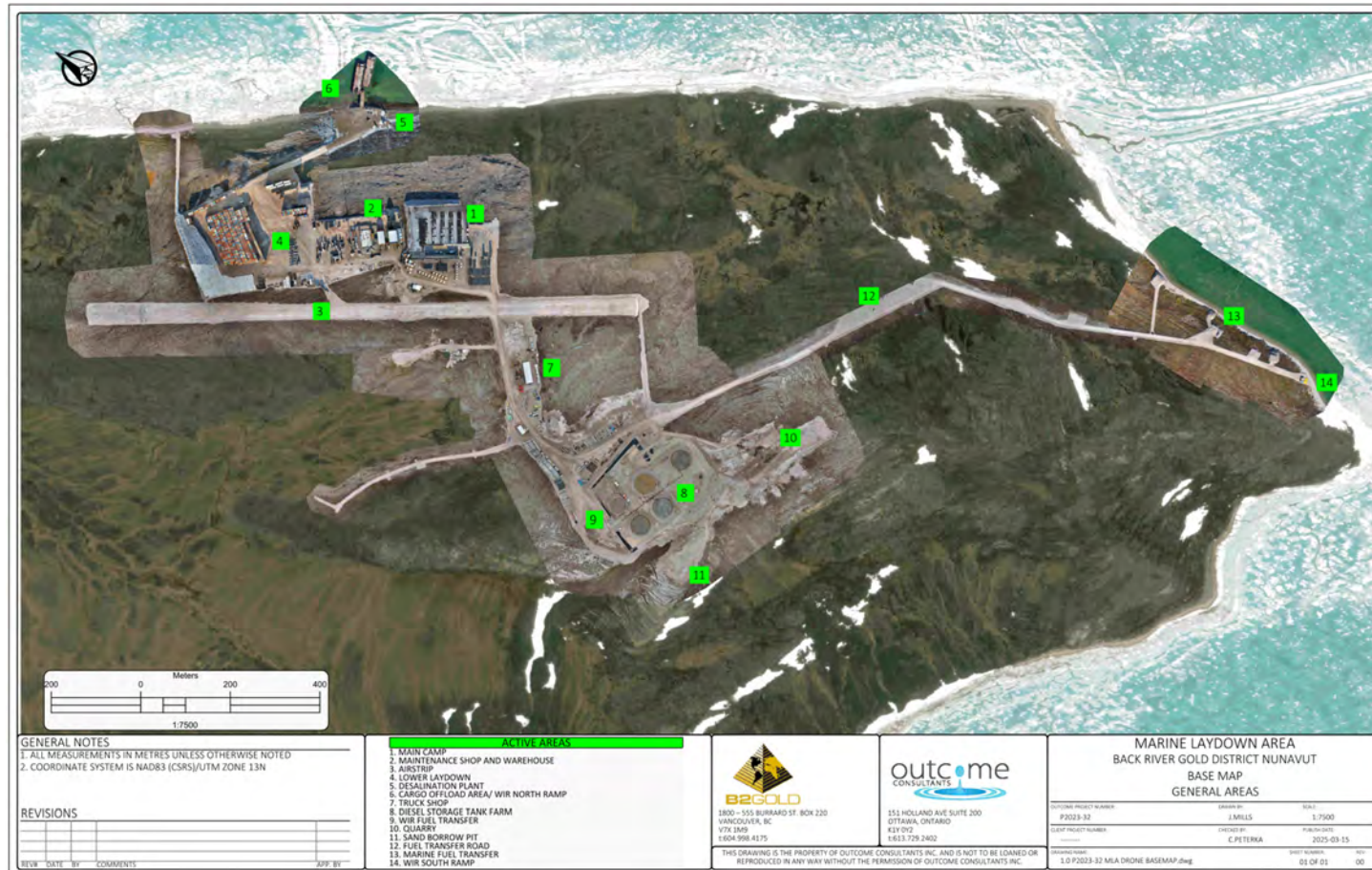
A majority of goods are shipped to the Goose Mine via sealift marine vessels. Goods are deposited via transport truck at the port over the summer before being loaded on to various marine vessels. The vessels will depart port in mid-July and August, sailing time to site is approximately 12–13 days depending on routes/weather conditions. Vessels arrive at the marine laydown area during August–September.

Figure 18-1: Goose Mine Infrastructure Map



Note: Figure prepared by B2Gold, 2025

Figure 18-2: Marine Laydown Area Infrastructure Location Map



Note: Figure prepared by Outcome and B2Gold, 2025

The primary port for sealift freight is Salaberry-de-Valleyfield, QC. Freight shipped via this location is break bulk and containerized cargo. Alternatively ports out of the West Coast of Canada can be utilized if required.

A barge route from Hay River, NWT, allows for freight to be delivered via transport truck in NWT before transporting via Mackenzie River to the Arctic Ocean. This route is less favorable due to the unpredictability of water levels in the Mackenzie River, and is not planned for use annually. Transit time from Hay River to the marine laydown area is about 17–18 days.

All diesel fuel is shipped directly from international ports on the East Coast of the United States of America.

Once at the marine laydown area, supplies are stored in laydown areas until the winter ice road is operational. The supplies are then trucked to the Goose Mine.

The 163 km long winter ice road, shown in Figure 18-3, is annually constructed and operated, commencing in approximately December of each year, to connect the marine laydown area with the Goose Mine. The road was first constructed in 2018–2019 and is typically operational from January through April. It is the primary method of supply delivery for operations.

The airstrip at the Goose Mine is used for mine personnel transport, and for transshipment of incidental freight. The airstrip at the marine laydown facility is used for personnel transport, and for shipment of incidental freight, consumables, and groceries.

18.3 Stockpiles

Ore stockpiles will be managed directly on the ROM pad which is adjacent to the primary crusher. The primary crusher is accessed by a ramp that will allow for the option to feed the primary crusher directly or via a stockpile.

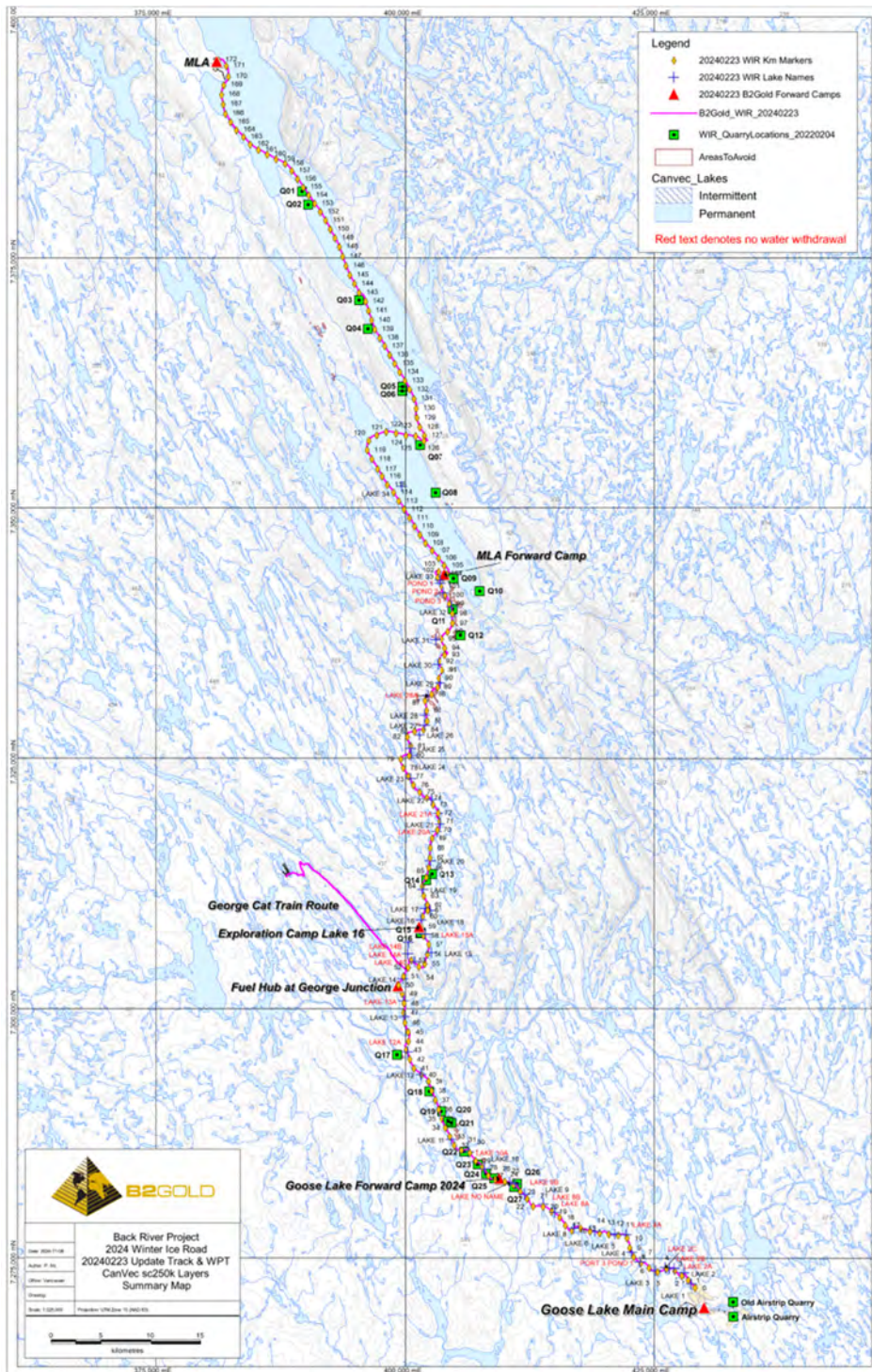
The stockpiles include theoretical maxima for each cut-off grade category needed through out the mine life.

The south section of the ROM pad can be used to store underground waste. The underground waste is recycled and used in stope backfilling through underground operations. The location on the ROM pad provides sufficient capacity and a short haul distance from the portal.

A NAG stockpile location has been designated to temporarily store material to be used for future earthworks construction projects.

An Umwelt soils storage stockpile has been placed south of the Umwelt WRSA. This contains overburden material from pit stripping that has been stored separately. This will allow for future considerations of use for closure.

Figure 18-3: Winter Ice Road 2024-2025 Route



Note: Figure prepared by Outcome and B2Gold, 2024

18.4 Waste Rock Storage Areas

There are three WRSAs (refer to Figure 18-1):

- Umwelt: adjacent to the open pit;
- Llama: adjacent to the open pit;
- Echo: used for both the Echo and Goose Main open pit mine waste. Waste from the Echo pit is placed directly south of the pit, as shown in Figure 18-1. Waste from the Goose Main open pit will be placed directly on top of the Echo open pit after completion of backfilling of the pit with tailings once the tailings have consolidated (refer to Figure 16-10).

Facilities were designed with 10 m benches, 10 m berm widths, and 34° slopes, with the intent of keeping the facilities as flat as practicable so as to be contained within confined catchment basins. The PAG material is encapsulated in the facilities by at least 5 m of NAG material. Drainage from the WRSAs is considered contact water, and is contained within contact water ponds.

Each WRSA has an affiliated pond designed to capture all surface contact water flow. If the WRSA needs to expand or shrink due to LOM plan changes, the ponds will be adjusted and designed accordingly to ensure they can capture and store contact water.

Underground mine waste will be temporarily stored on surface, used for construction (if NAG), and permanently stored underground as backfill. Underground mining will have a waste rock deficit for backfilling, and waste rock from open pits will make up the deficit and be transported underground as backfill.

18.5 Tailings Storage Facilities

An estimated 11.3 Mt of tailings will be generated over the LOM. The tailings will be deposited into the mined-out open pits at Echo and Umwelt. The Llama and Goose Main pits are also permitted for tailings deposition if required. The Echo TSF will receive tailings for the first 3.5 years (4.5 Mt of tailings), followed by 4.5 years of deposition to the Umwelt TSF (6.8 Mt of tailings).

The Echo TSF capacity has been increased by raising the low side of the pit crest by approximately 4 m. Additionally in the final stages of deposition at the Echo facility, the deposition method will change from sub-aqueous to sub-aerial.

Deposition within the mined-out pits will be via pipelines discharging along the pit walls into the supernatant pond.

The Umwelt TSF will start to receive tailings while underground operations are continuing at depth. At the completion of mining of the Umwelt pit, an engineered backfill will be installed to reduce seepage potential into the underground workings.

Tailings will need to be managed to prevent metal-leaching and acid-rock drainage. It is planned to flood the Llama and Umwelt TSFs with water, and cover the Echo TSF with waste rock at closure, which will limit acidic conditions from developing.

18.6 Water Management

18.6.1 Infrastructure

The primary water management infrastructure consists of water conveyance channels, stormwater ditches, and sediment control ponds (Figure 18-4):

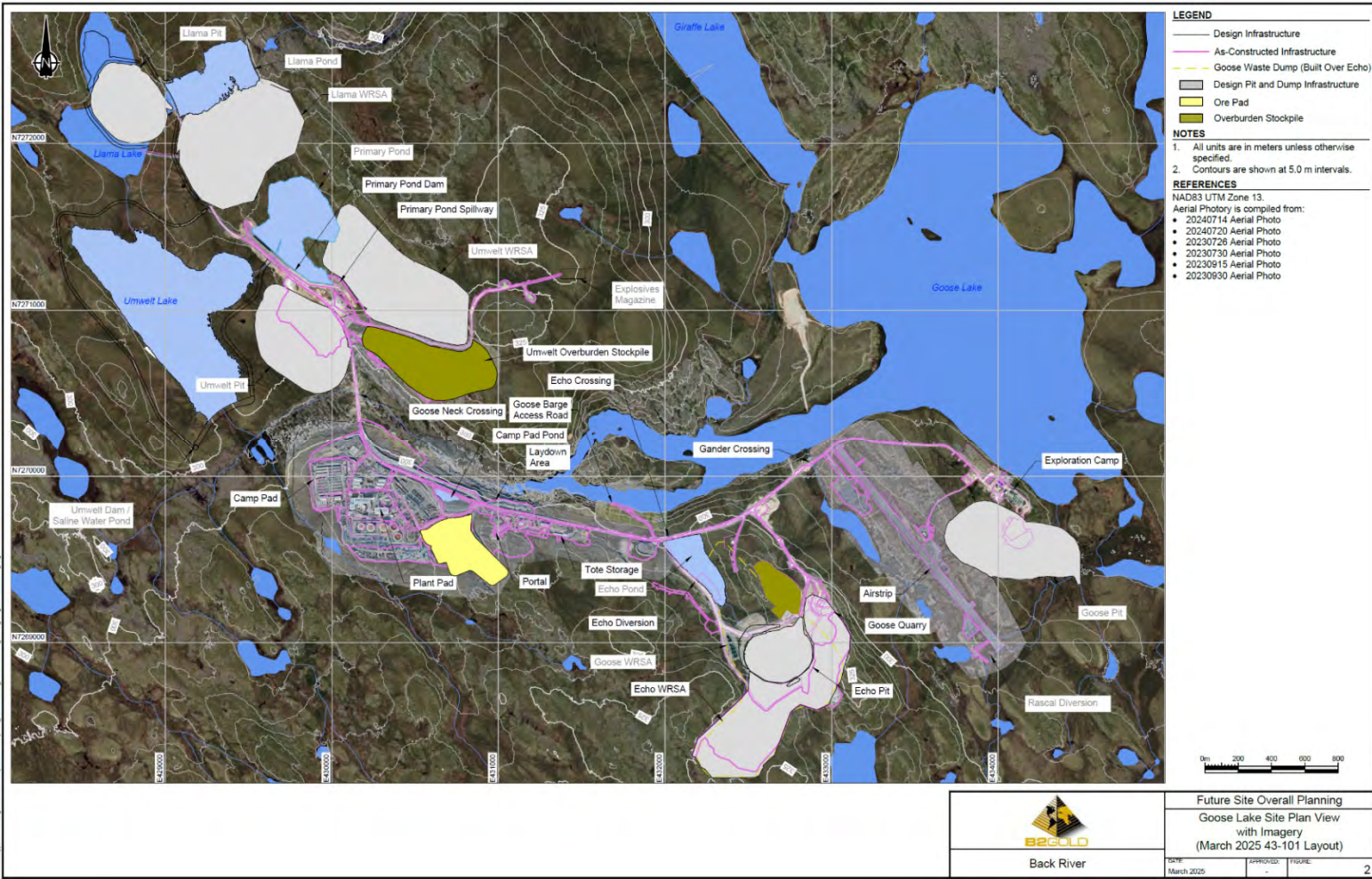
- Llama pit diversion;
- Llama WRSA pond;
- Saline water pond for the temporary storage of saline water and brine from the reverse osmosis plant;
- Saline water pond diversions;
- Primary pond (also acts as the contact water pond for the Umwelt WRSA);
- Umwelt WRSA diversion (portion of the explosives access road);
- Plant/camp site pond;
- Diversion upstream/upslope of Echo pit;
- Echo WRSA pond;
- Goose Main pit diversion.

18.6.2 Water Balance

A site water balance was completed. Water inputs to the site (see also discussion in Section 18.6.4) include:

- Saline groundwater from the Llama pit, which is in a through talik;
- Groundwater from Umwelt underground mine that extend beneath the basement permafrost and intersect saline groundwater;
- Precipitation (direct precipitation on ponds/lakes, and run-off);
- Groundwater during summer season thaw of pit walls, captured in pit sumps and moved to primary pond.

Figure 18-4: Water Management Structures



Note: Figure prepared by SRK Consulting Canada Inc., 2025.

The primary water storage locations include:

- Open pits;
- Underground mine workings (following mining);
- primary pond (contact water, reclaim source for mill feed);
- Saline water pond (saline water storage);
- Tailings void space.

Water outputs include:

- Discharge, such as treated effluent;
- Evaporation;
- Seepage.

Contact water will be generated from open pits, the mined-out pits used for tailings storage, and WRSAs. The anticipated quality of these contact waters is expected to be suitable for reclaim by the mill.

The annual water balance reflects the collection and storage of all water within the TSFs and water retention ponds. A surplus of water will be collected and stored on site over the LOM. A focus on maximizing reclaim and water recycle is necessary.

Fresh water can be drawn from the Goose Lake up to a maximum rate of 70 m³/hr. The intended draw from Goose Lake for the processing plant fresh water make-up is to limit this draw to 22 m³/hr. The remainder of processing make-up water will be reclaimed water with an expected flow rate of 110 m³/hr.

Water reclaim will be sourced from different sources depending on the season. In summer, water will be reclaimed via the primary pond. During winter, water will be reclaimed via the tailings facilities. The primary pond will capture surface run-off from the Umwelt WRSA and collect pit contact water that will be pumped to the primary pond facility. During winter, the primary pond will have a small reserve quantity of free water as a majority of water will be trapped as ice because of the shallow basin of the primary pond facility. In winter, water will be reclaimed from the tailings facilities via submersible pumps. The pumps will be prevented from freezing into the ice lenses via a series of water agitators. During summer months, the tailings facilities will collect surface runoff and excess water to support the winter water reclaim activities. Water will be reclaimed first from the primary pond starting in May 2025. Reclaim activities within the Echo tailings facility will commence in November 2025.

In Year 1, the Llama Lake will be dewatered with water distributed to the primary pond, Echo TSF, and the environment. The Echo TSF will receive 323,500 m³ of water to develop a water cap for tailings distribution. This water cap is necessary to increase water quality or reclaim while also ensuring that the ice lenses that develops in the winter do not freeze the tailings mass. The water pumped to the primary pond in May 2025 will support mill commissioning operations. All

remaining water from the Llama Lake will be treated and discharged to the environment, per permit obligations.

The saline water pond will receive saline water from underground operations in mid-2026 (year 2). The Llama open pit groundwater will be pumped to the saline water pond in year 3. The groundwater from Llama is considered saline as it is from a talik zone. The water in the saline water pond will be treated by a reverse osmosis plant to allow for treated water to be recycled via the primary pond. All brine from the reverse osmosis plant will be placed back into the saline water pond, effectively increasing the salinity concentration over the LOM.

In year 4, the Echo TSF will be at full capacity and operations will transfer from Echo to Umwelt. To develop the necessary water cap in the Umwelt facility, water will be moved from the Echo TSF during the conversion from sub-aqueous to sub-aerial deposition. All winter water reclaim activities will commence in winter of Year 4 from the Umwelt TSF.

An additional fresh water lake source (Big Lake) is permitted for an annual maximum draw of 236,000 m³. This volume of water is not required in the current water balance and is not intended to be used. However if conditions change it can be used as a back-up water source.

18.6.3 Lake Dewatering

Llama Lake (natural capacity of 0.96 Mm³) will be dewatered to the Echo TSF, primary pond, and Goose Lake in the open water season of Year 1. It is assumed that 50% of the lake water volume has low total suspended solids and is suitable for direct discharge to Goose Lake. The remaining 50% is assumed to have total suspended solids concentrations above the discharge limit, and will be treated in a modular water treatment plant or pumped into the Echo TSF. A minor amount of total suspended solids is permitted within the processing feed. Therefore concentrations between 15–100 mg/L can be placed in the Echo TSF.

Mining of the Llama pit does not commence until late 2026. It is expected that some recharge of water will occur over the year 1 winter, which will be treated via the treatment plant and discharged to the environment.

Umwelt Lake will be dewatered in Year 2. The dewatering process will follow that used for Llama Lake, with assumed percentages of total suspended solids treated via a plant before fresh water discharged to the environment. The saline water pond will be constructed with lake water still upstream. This is primarily to prevent the pond from recharging with surface water flows, which would occur if it was pumped out in year 1.

18.6.4 Saline Water Management

Continuous permafrost that is essentially impermeable to groundwater flows underlies the Goose Claims Group area, with a thickness of 300–350 m below ground surface.

Shallow groundwater flows occur in the active layer. The interception of shallow, active-layer flow by the proposed pits is considered insignificant due to the active layer being relatively thin (<2 m), the fact that it is unfrozen only during the summer months, pore water volumes are small, and the

water quality is not saline. Such water can be diverted away from the open pits using diversion structures, if warranted.

Groundwater inflows to the underground mine is expected due to a portion of the underground workings extending below the permafrost. Open pit and underground mining will also occur underneath or adjacent to large lakes associated with bodies of unfrozen ground known as taliks. Site investigations have confirmed the presence of open or through taliks beneath the larger lakes, including the Goose, Llama, Umwelt, Giraffe, Wasp, and Rascal Lakes. An open talik is a body of unfrozen ground that penetrates the permafrost completely, connecting suprapermafrost and subpermafrost water; a through talik is a form of localized unfrozen ground (talik) in an area of permafrost, open to the ground surface and to an area of unfrozen ground beneath it, and encased by permafrost along the sides.

Groundwater is estimated to be hyper-saline, and contain elevated levels of arsenic, boron, iron, and zinc. This chemistry and elevated salinity increases with depth and is commonly observed in permafrost environments.

Saline groundwater will be generated from the following mining areas:

- Llama open pit;
- Umwelt underground;

The Llama pit and partially intersect the open talik supported by Llama Lake; this lake will be dewatered prior to the start of mining operations. The Umwelt underground mine partially intersects the sub-permafrost groundwater system. The Echo pit is not deep enough to encounter the sub-permafrost groundwater system.

To reduce the amount of saline water requiring temporary storage, reverse osmosis water treatment will be used. Brine from the reverse osmosis plant will be deposited in the saline water pond. The primary pond elevation will be raised successively in three phases to ensure all saline water for the LOM can be stored within the facility. If the mine LOM extends beyond the current mine life, the remaining brine solution can be stored in Llama Lake. The volume of the saline water pond can be increased to 3 Mm³ of storage capacity.

The Goose Main pit has capacity in excess of the current LOM storage requirements, and is available for additional saline water and brine storage, if needed.

18.6.5 Water Treatment

Saline water will be treated using reverse osmosis plants to generate a smaller volume of brine that meets the available temporary storage in the saline water pond and Umwelt TSF. There will be a reverse osmosis plant established by year 2 for the LOM.

Pre-treatment consisting of oxidation with potassium permanganate along with greensand and polymeric ultrafiltration will be used to produce a reverse osmosis friendly feed. The major influent is scaling in iron and manganese. The saline water, an inflow concentration of 80,000 mg/L total dissolved solids, will be sent to an ultra-high recovery reverse osmosis plant. This plant will achieve about a 48% recovery of 1,000 mg/L total dissolved solids effluent and a 52% brine reject

with a total dissolved solids concentration of 152,500 mg/L. The low total dissolved solids effluent will be subject to a polishing reverse osmosis step, which will achieve up to 98% recovery, resulting in 7–8 m³/d of 40,000 mg/L total dissolved solids brine that will be recycled back to the ultra-high recovery plant.

18.7 Camps and Accommodation

The Goose Mine camp phase 2 is constructed and operational as of early 2025 and can accommodate 750 persons. A phase 3 camp expansion will add an additional 136 beds in four wings to the north of the camp. The phase 3 camp is intended to allow for the decommissioning of the exploration camp during the first two years of operations.

The camp contains a mine dry affixed with 350 lockers and baskets to support department requirements.

The camp contains:

- A gym facility;
- Office space;
- Commissary;
- Cafeteria and lunch rooms;
- A recreation and lounge room;
- A potable water and sewage treatment facility.

A future gymnasium equipped with racquet and basket ball courts, and a workout space will be constructed in year 1. Arctic corridors will be installed to connect the camp to the process plant and gymnasium facility.

18.8 Power and Electrical

The Goose Mine's electrical power demands are met by two powerhouses: the main powerhouse, equipped with nine 3.6 MW high-speed generator sets, and the underground mine powerhouse, featuring four 1.8 MW high-speed generator sets. The plant functions as a combined heat and power facility, using waste heat for heating buildings and facilities through a glycol circulation system. Additionally, a diesel-fired boiler system supplements the recovered heat and serves as a backup source.

Electrical equipment includes 4,160 V switchgear for generators and process plant feeders, load-sharing systems, neutral grounding equipment, surge suppression, local and master control systems, and necessary low-voltage distribution equipment. Power is distributed at 4,160 V.

The underground powerhouse, dedicated to underground mine activities, operates independently from the centralized grid and will ramp up load as required. The main powerhouse will commence commercial operation in time to support the testing and commissioning of the process plant in 2025, with load ramping as needed.

To meet the load demands of 2027 and enhance power supply reliability and fuel efficiency, B2Gold initiated the medium speed powerhouse project. Design and procurement began in September 2024, with operations expected to start in December 2027. This project will supply power at 13,800 V, feeding into the 4,160 V distribution system via stepdown transformers. The underground mine will receive power from its own transformer connected to the medium speed powerhouse.

The medium speed powerhouse will be equipped with four Wartsila 20V32 diesel generator sets, each with power capabilities of 9.37 MW and full heat regeneration.

Upon full operation of the medium speed powerhouse, the existing high-speed powerhouse will serve as a backup and black start unit.

Water reclaim pumps from the tailings facilities will be powered by a dedicated, local power plant consisting of an N+1 genset configuration. Seasonal open pit dewatering will be handled by diesel pumps to eliminate the need for long distance, high-voltage transmission lines to the Llama, Umwelt, and Goose Main open pits.

A small power plant will be installed at the marine laydown area to meet demand. The sizing philosophy is N+1 for site power requirements.

An Energy Centre is also planned that is based on alternative energy generation (see discussion in Section 20.3). This will contribute about 55 MW from wind generators.

18.9 Fuel and Consumables

The marine laydown area was designed to handle off-loading and storage of 85 ML of diesel fuel.

Fuel tankers will use shore-mounted anchorages to secure the ship offshore during off-loading. The marine laydown area includes an onshore fuel manifold for off-loading fuel from tankers. The fuel storage area is equipped with a tanker/light-vehicle fueling module for filling the tanker trucks that transport the fuel to the Goose Mine, and for fueling local vehicles.

Cargo will be transported to the laydown area by either ocean-going barges or ships, and stored until the winter ice road is operational.

Maximum annual fuel consumption requires 80 ML of diesel fuel storage at the Goose Mine to support year-round operations. Fuel is stored in five tanks of various sizes from 10–17.5 ML. Additional portable diesel tanks are provided to support operations.

18.10 Water Supply

Fresh water is drawn from Goose Lake by a floating pump station. Water is pumped to the process plant fresh/fire water tank. Fire water is stored at the bottom of the tank, and fresh water is drawn from the upper portion of the tank. Fresh water is pumped to a potable water treatment plant, after which it is stored in an insulated and heated storage tank for distribution to the process plant, camp, and mine dry facilities.

Contact water is used to meet process water requirements to the extent possible, so that make-up water withdrawals from Goose Lake are minimized. Process water is sourced from tailings

reclaim water via a reclaim pump barge in the winter, or via the primary pond in the summer. Additionally, water can be recycled from pre-leach and tailings thickener overflows.

19.0 MARKET STUDIES AND CONTRACTS

19.1 Market Studies

No market studies are currently relevant as the Goose Mine will produce a readily-saleable commodity in the form of doré. Doré produced is shipped to Asahi Refining in Brampton, Ontario for refining.

19.2 Commodity Price Projections

Commodity prices used in Mineral Resource and Mineral Reserve estimates are set by B2Gold corporately. The current gold price provided for Mineral Reserve estimation is US\$1,750/oz, and US\$2,100/oz for Mineral Resource estimation.

The financial model assumes a gold price of US\$2,668/oz in 2025, US\$2,621/oz in 2026, US\$2,490/oz in 2027, US\$2,363/oz in 2028, and US\$2,212/oz for all subsequent years.

19.3 Contracts

Major contracts include blasting explosives and accessories, open pit drilling, underground definition drilling, and contracts related to infrastructure construction. Contracts are negotiated and renewed as needed. Contract terms are within industry norms, and typical of similar contracts in Nunavut with which B2Gold is familiar.

Contracts are also established in accordance with obligations under the Inuit Impact and Benefit Agreement signed between B2Gold and Kitikmeot Inuit Association.

19.4 Comments on Market Studies and Contracts

The QP notes the following.

The doré produced by the mine is readily marketable. Metal prices are set corporately for Mineral Resource and Mineral Reserve estimation, and the gold price used for Mineral Resources and Mineral Reserves in this Report was US\$2,100/oz and US\$1,750/oz, respectively.

The QP has reviewed commodity pricing assumptions, marketing assumptions and the current major contract areas, and considers the information acceptable for use in estimating Mineral Reserves and in the economic analysis that supports the Mineral Reserves.

20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

20.1 Environmental Studies and Considerations

B2Gold Nunavut has staff dedicated to environmental and social performance. The environmental team conducts monitoring at the Goose Mine, winter ice road, and marine laydown area sites, and actively maintains permits and approvals covering the existing and proposed facilities required for mine development.

In Nunavut, and within the Kitikmeot region in which the Goose Mine, winter ice road, and marine laydown area are situated, B2Gold Nunavut has maintained longstanding relationships with communities, governments, and representative associations including the Regional Inuit Association (Kitikmeot Inuit Association), Nunavut's Institutes of Public Governance, the Government of Nunavut, and federal regulatory agencies. Consultation records are maintained in a database.

A number of environmental studies have been conducted, commencing in 2008. Baseline studies completed include:

- Air quality (including dust fall monitoring);
- Archaeology;
- Meteorology;
- Hydrology;
- Noise and vibration;
- Freshwater and marine water quality;
- Freshwater and marine sediment quality;
- Freshwater and marine fish and fish habitat;
- Terrestrial ecosystem mapping;
- Bathymetry;
- Vegetation/wetlands including rare plants;
- Soil and terrestrial landforms;
- Country food;
- Wildlife (terrestrial and marine);
- Socio-economics;
- Traditional knowledge;
- Land use;

- Groundwater quality;
- Geochemical characterization.

A Final Environmental Impact Statement was submitted to the Nunavut Impact Review Board in November 2015 (Sabina, 2015).

Additional baseline and monitoring programs have been underway since the Final Environmental Impact Statement was published, to establish a robust pre-development dataset by which future environmental monitoring during mine development can be compared.

A key area of study over the past 15 years has been the biodiversity and priority species identified in the area surrounding Goose Mine. This aspect is discussed in greater detail in the following sub-section.

20.1.1 Biodiversity

The Goose Mine was designed to minimize, mitigate, and/or manage potential adverse effects on the environment while seeking to enhance positive effects. As part of the requirements of the Final Environmental Impact Statement guidelines issued by the Nunavut Impact Review Board, B2Gold Nunavut has developed a Wildlife Mitigation and Monitoring Program Plan that will be followed concurrent with the development of the Goose Mine.

The Wildlife Mitigation and Monitoring Program Plan describes actions that are intended to reduce mine-related effects on wildlife. The plan is intended to ensure wildlife habitats and populations are maintained in the area that will be influenced by mine development, while taking into account operational requirements and the safety of mine employees.

B2Gold Nunavut is committed to minimizing its impacts to wildlife and has designed its monitoring and mitigation activities to be flexible and adaptable as part of its overall management strategy to be responsive to concerns regarding uncertainty in potential effects to wildlife, particularly caribou, raised during the Final Environmental Impact Statement. Key aspects of the Plan are presented in the following sub-sections.

20.1.2 Integration of Traditional Knowledge

B2Gold Nunavut is committed to considering and incorporating Traditional Knowledge into the Plan on an ongoing basis. The incorporation of Traditional Knowledge occurs throughout all stages of the Wildlife Mitigation and Monitoring Program Plan, including identification of mitigation measures, monitoring study design, data collection, and follow-up programs to obtain feedback. Additionally, Traditional Knowledge and feedback from the Inuit Environmental Advisory Committee and the Caribou Technical Advisory Group is tracked and informs the content, results, and management actions associated with B2Gold Nunavut's monitoring program. B2Gold Nunavut also continues to address comments raised about its monitoring programs directly with community members where appropriate.

20.1.3 Caribou

Caribou are an extremely important cultural and subsistence resource for Kitikmeot Inuit. They are integral to their livelihood. B2Gold Nunavut worked closely with the Kitikmeot Inuit Association and Kitikmeot Communities to understand and document Traditional Knowledge of the Goose Mine, winter ice road, and marine laydown areas and the wildlife and people who depend on it. B2Gold Nunavut's levels of caribou protection measures range from site notifications and alerts as caribou migration seasons and individuals approach the mine site, to staged, rapid, and planned operational shutdowns of activities such as blasting, heavy mobile equipment, helicopters, and fixed-wing aircraft.

Overview of Caribou

Caribou from the Beverly/Ahiak herd will likely interact with the Goose Mine during the summer months, and to a lesser degree during the fall and winter periods. The Beverly caribou herd is named for Beverly Lake, where the caribou historically calved. The Ahiak caribou herd was formerly known as the Queen Maud Gulf herd. Currently, both herds calve in the Queen Maud Gulf area. The Beverly/Ahiak caribou herd consists of the Beverly and the Ahiak caribou sub-populations.

The range boundaries for the Bathurst and Dolphin and Union caribou herds are approximately 100 km from the mine site, and do not interact with the mine area. Despite this, mitigation, management, and monitoring is implemented for all caribou, regardless of herd.

The Bathurst caribou herd is named for Bathurst Inlet. Inuit Traditional Knowledge reports that the historic calving ground of the Bathurst caribou is both east and west of Bathurst Inlet (KIA 2012) approximately 100 km north of the Goose Mine site. This is consistent with scientific reports listed above for the period of 1930s to present (Gunn et al., 2008).

Inuit Traditional Knowledge distinguishes the Dolphin and Union herds from mainland caribou by their light colour, and refers to the Dolphin and Union herds as island caribou (KIA 2012; 2014). Inuit Traditional Knowledge includes observations of the historical distribution of the Dolphin and Union herds in winter, primarily in two concentrations on the east and west of Bathurst Inlet, which corresponds with their current winter distribution based on collar data. Collar data indicate that the Dolphin and Union caribou herd winters (December 8 to April 16) on the Nunavut mainland between Kugluktuk and the Queen Maud Gulf, generally within 100–150 km from the coast. Their winter distribution is generally north of the marine laydown area.

Management System to Reduce Disturbance to Caribou

B2Gold Nunavut has designed a management system to reduce the potential for disturbance to caribou. This system includes design mitigation and management actions that will be triggered by ongoing monitoring. The types of monitoring and the associated management actions fall into three tiers of responses briefly described below.

Tier 1: Planning for Caribou

B2Gold Nunavut uses Traditional Knowledge, collar, aerial survey, and remote camera data to determine the times of year when caribou may interact with the site.

Tier 2: Active Monitoring for Caribou

Trained wildlife monitors conduct active monitoring for caribou at the Goose Mine site, the winter ice road, and the marine laydown area during spring migration, calving, post-calving, and summer. The purpose of active caribou monitoring is to trigger site alerts and a staged reduction in mine activities, including management of helicopters, blasting, wind turbine operation, and heavy mobile equipment, if required.

Tier 3: Incidental and Near Real-time Collar Observations

Incidental observations of caribou and near real-time collar monitoring also play a role in monitoring and management and triggering active monitoring.

Incidental observations by all mine personnel are reported to the Environment Department, who may deploy wildlife monitors to conduct additional scans and active monitoring which may trigger a site notification or site alert.

Levels of Management for Caribou during Normal Operations

The Goose Mine site manages four levels of response to caribou presence (Table 20-1).

20.1.4 Water Management

Effective water management is an important aspect of the Goose Mine. The site maintains a Water Management Plan that is designed to ensure the management of surface and groundwater resources at the Goose Mine complies with the applicable territorial and national regulations and standards.

Site water at the Goose Mine is categorized into three types:

- Contact water: surface water that is impacted by/contacts mine workings (e.g., run-off over waste rock, ore stockpiles, open pits, tailings);
- Non-contact water: surface water that is not impacted by/does not contact mine workings;
- Saline water: groundwater that flows into the open pits or underground workings.

Each type of water is managed separately throughout each mine phase. Contact water is contained within primary pond, event ponds, and tailings management facilities and is conveyed on site via diversions and pumped pipelines. Contact water will be used to meet process water requirements to the extent possible, so that make-up water withdrawals from Goose Lake are minimized. Non-contact water is diverted off site through event ponds, pumped pipelines, berms, and culverts.

Table 20-1: Caribou Presence Response Levels

Level	Level Name	Response
1	Normal operations	Normal operations are conducted year-round. Active caribou monitoring is conducted in spring and summer, if triggered (i.e., collar data or incidental sightings) during normal operations. Response levels 2 through 4 can be triggered in any season to replace normal operations.
2	Site notification	A site notification will be triggered by the Environmental Department during sensitive seasons for caribou (calving, post-calving, and early summer) from June 5 to July 31. Site notification includes passing information to all mine personnel to be vigilant for caribou on site and to remind personnel of their responsibilities to protect caribou. Site notification methods may include email or radio notices, postings on bulletin boards and entranceways to buildings, and discussing caribou at morning meetings.
3	Site alert	A site alert can be triggered at any time of year if groups of caribou are observed near the mine site. Site alerts for caribou are similar to the safety warnings disseminated if a grizzly bear is observed on site. Active mine personnel will be alerted by radio that caribou are in the area and reminded of their responsibilities to protect caribou and that staged reductions in mine activities may occur imminently. Site alert methods may include email or radio notices, postings on bulletin boards and entranceways to buildings, and discussing caribou at morning meetings.
4	Staged reduction in mine activities	The objective of staged reductions in mine activities is to limit the amount of noise and/or visual disturbance that emanates from the mine site. Staged reductions in mine activities are triggered by active caribou monitoring or by incidental observations.

Saline water is pumped out of the underground facilities, as well as Llama open pit, and stored in the Saline Water Pond (previously Umwelt Lake). During closure, saline water will be pumped back into the underground workings or into the bottom of the mined-out Llama Pit (referred to for this phase as the Llama Reservoir).

The marine laydown area does not require any pond or diversion infrastructure for water management purposes and remains in the same condition for both the construction and operations phases. A desalination plant will produce domestic and industrial water, and greywater will be discharged to the tundra.

Water management facilities associated with the Goose Mine will include the following:

- A freshwater intake in Goose Lake, related pipelines, and the water treatment plant;
- A primary pond for the storage of water for process and collection of contact runoff from the WRSAs;
- A saline water pond for the temporary storage of saline water and brine from a reverse osmosis plant;
- A reverse osmosis plant including pre-treatment and subsequent polishing to reduce the volume of saline water to be managed temporarily at surface;
- Event ponds at the WRSAs and plant site;

- Freshwater diversions intended to minimize the volume of contact water requiring management;
- Stream diversions to temporarily redirect flows around mining areas;
- Sumps within the pits and in low areas outside of the Llama pit diversion berms;
- Barges, temporary intakes, and pipelines associated with lake dewatering (Llama and Umwelt Lakes) and reclaiming water from the primary pond and tailings facilities (TSFs);
- Local management of site runoff from development areas during active construction.

20.1.5 Site Monitoring

B2Gold Nunavut employs an Environment Department which is located at the project site, and is responsible for compliance monitoring, administering environmental permits, interfacing with regulators, and maintaining an environmental management system.

B2Gold Nunavut's Environmental Management System provides the framework through which the Environmental Management Plans are delivered. The Environmental Management System is the system through which B2Gold Nunavut verifies that the conditions set in the project certificate for the Goose Mine, winter ice road, and marine laydown area, permits, authorizations, licences and associated legislative requirements are met. The Environmental Management System is a tool for managing the effects of its activities on the environment, as well as providing a structured approach to planning and implementing environmental protection measures.

Environmental Management Plans outline the potential impacts, objectives, targets and indicators, key management measures, and the monitoring, reporting, auditing, and review requirements. Each Environmental Management Plan is focused on a specific activity or issue and will be used to provide the overarching direction for environmental and socio-economic management for the project.

The Environmental and Social Management Plans include:

- Atmospheric environment plan;
- Air quality monitoring and management plan;
- Fisheries management plan;
- Fish offsetting plan;
- Freshwater environment plan;
- Dewatering plan;
- Aquatic effects management plan;
- Water management plan;
- General monitoring plan;
- Quality assurance/quality control plan;

- Cultural and heritage resources protection plan;
- Environmental management and protection plan;
- Infrastructure and access plan;
- Shipping management plan;
- Borrow pits and quarry management plan;
- Road management plan;
- Noise abatement plan;
- Marine environment plan;
- Marine monitoring plan;
- Terrestrial environment plan;
- Interim closure and reclamation plan;
- Vegetation monitoring plan;
- Waste management plan;
- Ore storage management plan;
- Land farm management plan;
- Hazardous materials management plan;
- Incineration management plan;
- Tailings management plan;
- Waste rock management plan;
- Explosives management plan;
- Wildlife monitoring plan;
- Wildlife mitigation and monitoring program plan;
- Socio-economic environment plan;
- Socio-economic monitoring plan;
- Community engagement plan;
- Inuit human resources plan;
- Inuit business development plan;
- Stakeholder grievance mechanism plan.

The Environmental Monitoring and Protection Plan and its supporting individual Management Plans are “living documents” which will continue to be amended periodically throughout the life of the project to reflect changes in, for example, procedures, practices, and project phases.

20.2 Mine Reclamation and Closure Considerations

Closure objectives are as follows:

- Design the mine for closure: identify the processes that will act upon the mine components after mine closure so that they can be optimized into the mine design;
- Achieve physical stability: minimize risk to humans, wildlife, and the environment. Mine components that are to remain after mine closure will be conducted or modified at closure such that they are physically stable and do not erode, subside, or move from their final intended locations due to any forces;
- Achieve chemical stability: all mine components and wastes remaining after mine closure will be chemically stable with mitigation. Chemical constituents released from the mine area will not endanger humans, wildlife, or the environment;
- No long-term active care: design reclamation activities such that mine components and wastes remaining after mine closure do not require any active maintenance beyond the post-closure phase;
- Consider future land use and aesthetics: compatibility with the surrounding lands after reclamation activities have been completed;
- Use progressive reclamation during the construction and operations phases wherever practicable;
- Consider direction from regulators: meet all project-specific commitments and project licensing requirements related to the closure of the mine.

The concepts for reclamation and closure of the main facilities are summarized in Table 20-2.

20.3 Permitting

B2Gold Nunavut has successfully completed the various permitting steps to proceed to mine development and has obtained all necessary major permits required for construction and operation.

The Project falls within the Kitikmeot Region of Nunavut. Within the Nunavut Agreement, management boards were created as Institutes of Public Government responsible for resource management in Nunavut.

The Nunavut Planning Commission is responsible for developing, implementing, and monitoring land use plans that guide and direct resource use and development in the Nunavut settlement area. Regional land use plans exist for two other regions, but not for the Kitikmeot Region. The Nunavut Planning Commission is developing a Nunavut Land Use Plan that, once approved, will apply to all of Nunavut.

Table 20-2: Reclamation and Closure Concepts

Concept	Note
Open pit	A boulder fence and warning signs will be placed around each open pit as it is mined out. Pit lake water quality monitoring will be conducted to ensure water meets discharge criteria prior to pit overtopping and passive discharge. In the unlikely event that the water in any of the pit lakes is not suitable for discharge, then pit lake water will be batch-treated to address remaining water quality impairments. Once the outflow water quality requirements have been confirmed, the Umwelt, Llama, and Goose Main pit lakes will be allowed to overflow and discharge to the environment. Appropriate erosion protection measures will be constructed at the overflow location to ensure management of any suspended sediments.
Underground mines	Mine dewatering pipelines, electrical transmission wires, substations, and pumping stations not suitable for reuse will be cleaned, disposing of any hazardous waste at a licenced facility, and the remaining equipment either dismantled and landfilled, or left in place upon closure. All underground void space at the Goose Property will flood at the cessation of mining. The mine portals will be subsequently blocked with NPAG waste rock, extending 10 m into the portal from surface. The portal opening will be flush with the surrounding topography or, if required, at a slope angle of 3H:1V. All underground ventilation raises will be closed using engineered concrete caps, or alternatively, will be filled with waste rock, flush with the surrounding ground surface.
WRSAs	The WRSAs will be shaped so that the overall slopes are 3H:1V and progressively capped with 5 m of non-acid generating waste rock. All WRSAs are designed to freeze back within a period of no more than 10 years. The active freeze-thaw layer of the facilities is expected to remain within the outer 5 m cap of non-acid generating, thus mitigating the risk of acid-rock drainage.
Non-hazardous landfills	Non-hazardous landfills will be constructed within the confines of the WRSAs. All landfill areas will be capped within a minimum of 5 m of non-acid generating waste rock. Non-hazardous waste will also be disposed of within the open pits. Where pits are backfilled, non-hazardous waste will be covered with 5 m of non-acid generating waste rock. Where pits are used as TSFs, flooded, non-hazardous waste must be covered with at least 3 m of water. All available underground void space can also be used for disposal of larger non-hazardous waste prior to flooding.
Onsite infrastructure	All infrastructure not needed for the post-closure requirements will be decommissioned. Roads will have culverts removed to maintain pre-construction surface drainage. Buildings will be dismantled, and all concrete structures will be demolished to ground level with exposed rebar cut and the slabs perforated. Hazardous material will be properly packaged and shipped off site to a licenced facility for disposal.
Monitoring	Monitoring will be carried out during the closure and post-closure phases to verify that closure activities are being undertaken as described in the Closure and Reclamation Plan, and closure objectives are being met. Geotechnical monitoring: ground temperature cables will be installed within the WRSAs during development of each facility. The ground temperature cables will be monitored to verify that freeze-back is being achieved, as per design. During operations, and until complete decommissioning, an annual geotechnical inspection will be carried out by a qualified geotechnical engineer licenced to practice in Nunavut. Water quality monitoring: water quality monitoring will begin as soon as contact or process water is present at the start of construction. Monitoring at designated control points will be checked in accordance with the licence criteria, both with respect to frequency and the necessary testing parameters.

Concept	Note
	Aquatic effects monitoring: aquatic effects monitoring will be carried out in accordance with the requirements of the Type A Water Licence. Cessation of this monitoring will occur when a five-year period has elapsed showing the system has achieved the stated closure objectives. A final biological monitoring study will also be conducted, and a final interpretive report will be submitted to Environment and Climate Change Canada within three years of ceasing mine production, in accordance with Metal Diamond Mining Effluent Regulations.
Reclamation Bond Requirements	Financial security is required under the Type A Water Licence and is posted to Crown Indigenous and Northern Affairs Canada for water-related closure costs, and the Kitikmeot Inuit Association for land-based reclamation activities associated with the Goose Mine, winter ice road, and marine laydown area. The amount of security was agreed upon during the regulatory phase in 2018. The security will be deposited at agreed-upon milestones to ensure that the funds required for future reclamation will be available. Criteria were established that will need to be met prior to release of any security held by the beneficiary (Kitikmeot Inuit Association). Funds may be released by the beneficiary (Kitikmeot Inuit Association) back to B2Gold Nunavut only if B2Gold Nunavut has satisfied its reclamation obligations. The total closure cost outlined in the Type A Water Licence Amendment No. 1 (issued August 31, 2021) is approximately C\$50 M assuming a , which is captured in the financial model (refer to Section 22). To the extent funds are held in trust to cover unforeseen future reclamation costs, or if certain reclamation activities are not completed, the regulatory authorities will have the right to use the security funds to fulfill any necessary obligations.

Note: The closure cost outlined in the Type A Water Licence Amendment No. 1 is approximately US\$34 M, assuming an exchange rate of 1.44C\$:US\$.

New and modified mining projects in Nunavut are subject to an Environmental Assessment and review prior to certification and issuance of permits to authorize construction and operations. The primary environmental review and approval process that applies to the Goose Mine, winter ice road, and marine laydown area is the territorial Environmental Assessment administered by the Nunavut Impact Review Board. Some federal regulatory requirements and processes that were applicable prior to the Nunavut Agreement continue to apply in Nunavut.

The Environmental Assessment for the Goose Mine, winter ice road, and marine laydown area commenced in June 2012, with submission of the project proposal to the Nunavut Impact Review Board (NIRB File No. 12MN026). Following completion of a project certificate workshop for the Goose Mine, winter ice road, and marine laydown area held in December 2017, the Nunavut Impact Review Board issued the final project certificate (PC No. 007) pursuant to Section 12.5.12 of Article 12 of the Nunavut Agreement for the Goose Mine, winter ice road, and marine laydown area in December 2019.

Following completion of the Environmental Assessment process, and receipt of the project certificate from the Nunavut Impact Review Board for the Goose Mine, the winter ice road, and the marine laydown area, the following major requisite permits and approvals required for mine construction and operation were obtained.

An application for a Type A Water Licence to the Nunavut Water Board was submitted in October 2017, in accordance with the regulatory framework provided in the Nunavut Agreement, the Nunavut Waters and Nunavut Surface Rights Tribunal Act, and Nunavut Water Regulations. A

Type A Water Licence (2AM-BRP1831) was issued in November 2018 and amendment No. 1 was issued on August 31, 2021.

In April 2018, the Framework Agreement for the Goose Mine, the winter ice road, and the marine laydown was finalized with the Kitikmeot Inuit Association, establishing the rights and obligations related to surface land access on Inuit-owned land. This agreement achieves two key objectives: it ensures long-term land tenure security for B2Gold, and defines the benefits the Goose Mine, the winter ice road, and the marine laydown area will provide to the Kitikmeot Inuit and Kitikmeot Inuit Association in return for access to their land.

The Goose Mine, the winter ice road, and the marine laydown areas have also received key additional permits and regulations from other federal parties, namely, Crown Indigenous Relations and Northern Affairs Canada, Fisheries and Oceans Canada, Environment and Climate Change Canada, and Transport Canada.

On November 25, 2019, the Goose Mine, the winter ice road, and the marine laydown area received the *Fisheries Act* authorization from Fisheries and Oceans Canada to carry out work at the Goose Mine, the winter ice road, and the marine laydown area that may result in serious harm to fish. In addition, on June 26, 2020, the Goose Mine, the winter ice road, and the marine laydown area received notice of completion of the Schedule 2 process under the Metal Diamond Mining Effluent Regulations (Government of Canada, 2020).

On August 7, 2024, the Project received an amended Project Certificate No. 007 Amendment No. 001, which incorporated the Energy Centre. The Energy Centre includes the addition of infrastructure to support alternative energy generation, including up to 13 wind turbines generators, a battery storage system, solar panel array, transmission lines, and service roads.

B2Gold Nunavut has successfully completed the various permitting steps to proceed to mine development and has obtained all necessary major permits required for construction and operation of the Goose Mine, winter ice road, and marine laydown area. B2Gold Nunavut will continue to engage with regulatory authorities to ensure changes to operational designs/plans and activities are incorporated into relevant management plans and any additional regulatory or permitting requirements are met.

A complete list of existing permits and authorization for the Goose Mine, winter ice road, and marine laydown area is included in Table 20-3.

20.4 Socio-Economic Setting and Impact Management

Prior to the development of the Goose Mine, the winter ice road, and the marine laydown area, a comprehensive socio-economic baseline study and impact assessment was undertaken. These studies included a review of several socio-economic indicators including population demographics, employment, business opportunities, economic development, education and training, health and community well-being, non-traditional land and resource use, and the subsistence economy and land use.

Table 20-3: B2Gold Nunavut Authorization Registry

Authorization No.	Expiry Dates (year/month/day)	Agency	Description
PC No. 007 Amendment No. 001	N/A	Nunavut Impact Review Board	Goose Mine, the winter ice road, and the marine laydown area Nunavut Impact Review Board Project Certificate
2AM-BRP1831 Amendment No. 1	2031-12-31	Nunavut Water Board	Type A Water Licence
N/A	2038-06-31	Kitikmeot Inuit Association	Inuit Impact and Benefit Agreement
KTCL-18D001	2038-04-20	Kitikmeot Inuit Association	Commercial Lease, Goose
KTCL-18D002	2038-04-20	Kitikmeot Inuit Association	Commercial Lease, Marine Laydown Area
KTCL-18D003	2038-04-20	Kitikmeot Inuit Association	Commercial Lease, winter ice road
KTAEL-18C001	2025-04-20	Kitikmeot Inuit Association	Advanced Exploration Lease, George
LUL-XX	Five years from licence date	Kitikmeot Inuit Association	Land Use Licence as per Kitikmeot Inuit Association Framework Agreement
KTL312C004	Renewal pending at Report effective date	Kitikmeot Inuit Association	Wishbone-Malley exploration activities
N2018F0021	2025-10-29	Crown Indigenous and Northern Affairs Canada	Caterpillar train, Beechy Lake area
N2024F0027	2029-11-1128	Crown Indigenous and Northern Affairs Canada	Caterpillar train connecting Bathurst Inlet to the Goose Mine
N2024C0024	2029-11-11	Crown Indigenous and Northern Affairs Canada	Exploration activities
N2018F0017	2025-10-11	Crown Indigenous and Northern Affairs Canada	Winter ice road
Lease No. 76J/12-7-2	2048-08-14	Crown Indigenous and Northern Affairs Canada	Marine environment land lease, adjacent to marine laydown area
Lease No. 76J/9-1-2	2048-04-26	Crown Indigenous and Northern Affairs Canada	Goose Lake TSF
2BE-GOO2028	2028-02-18	Nunavut Water Board	Goose Water Licence (Type B)

Authorization No.	Expiry Dates (year/month/day)	Agency	Description
2BE-GEO2025	2025-05-29	Nunavut Water Board	George Water Licence (Type B)
2BE-MLL2328	2028-05-08	Nunavut Water Board	Wishbone-Malley Water Licence (Type B)
2BC-BRP1819	2019-04-30	Nunavut Water Board	Type B Development Works Water Licence (Replaced by Type A)
12-HCAA-CA7-00007	2031-12-31	Fisheries and Oceans Canada	<i>Fisheries Act</i> Authorization, Goose Mine, the winter ice road, and the marine laydown area
18-HCAA-00185	N/A	Fisheries and Oceans Canada	Letter of Authorization, Gander culvert
18-HCAA-00971	N/A	Fisheries and Oceans Canada	Letter of Authorization, marine laydown area
18-HCAA-01626	N/A	Fisheries and Oceans Canada	Letter of Authorization, winter ice road
12-HCAA-CA7-00007	N/A	Fisheries and Oceans Canada	Letter of Authorization, Rascal stream diversion
2012-600767-002	N/A	Transport Canada	<i>Navigation Protection Act</i> , Marine laydown area discharge pipeline authorization
2012-600767-003	N/A	Transport Canada	<i>Navigation Protection Act</i> , marine laydown area intake pipeline authorization
2012-600767-006	N/A	Transport Canada	<i>Navigation Protection Act</i> , marine laydown area lightering barge authorization
2012-600767-004	N/A	Transport Canada	<i>Navigation Protection Act</i> , Umwelt Lake dewatering authorization
2012-600767-005	N/A	Transport Canada	<i>Navigation Protection Act</i> , Llama Lake dewatering authorization
12-HCAA-CA7-00007	N/A	Environment and Climate Change Canada	<i>Amendment to Metal and Diamond Mining Effluent Regulations-Schedule 2</i>

Note: N/A = not applicable.

The Final Environmental Impact Statement determined that the socio-economic impact of the Goose Mine, the winter ice road, and the marine laydown area would mostly be positive, notably due to delivery of benefits to the Kitikmeot Inuit Association and Kitikmeot Inuit via the Goose Mine, the winter ice road, and the marine laydown area Inuit Impact and Benefit Agreement (as discussed in Section 20.4.4). Areas for ongoing management where adverse effects were potentially anticipated, such as impacts on land use and harvesting, are mitigated via policies and practices that support safe, but ongoing access to the Goose Mine, the winter ice road, and the marine laydown area sites.

Potential impacts are monitored and managed through the implementation of several management plans (see Section 20.1.5). Continual improvements and adjustments to B2Gold Nunavut's management and monitoring program continue to be made and B2Gold Nunavut has committed to continue using adaptive management as a tool for improving the overall socio-economic performance in the future.

20.4.1 Proximity to Local Communities

The closest communities to the Goose Mine are Kingaok, approximately 160 km north of the Goose Mine, and Omingmaktok, approximately 250 km northeast. These are considered 'outpost camps', otherwise known as 'seasonal communities', and are only used for short periods of the year by a limited number of community members (i.e. fewer than about 50 persons). The communities of Kugluktuk and Cambridge Bay are the closest major regional communities. Other communities that are considered to be in relative proximity to the Goose Mine include Gjoa Haven, Kugaaruk, and Taloyoak.

20.4.2 Taloyoak Commercial Land Use

Commercial land use in the areas of the Goose Mine, the winter ice road, and the marine laydown area consists primarily of sport hunting, tourism, mineral exploration, transportation, and shipping. Ecotourism activities include boating in Bathurst Inlet, hiking, and sightseeing. Ecotourism was the only expected potential interaction between the Goose Mine, the winter ice road, and the marine laydown area and commercial land use activities; to the Report effective date, interactions have been limited.

20.4.3 Subsistence Economy and Traditional Land Use

Inuit culture and way of life are intrinsically connected with the land. Subsistence land use such as hunting, fishing, trapping, and gathering take place throughout the Kitikmeot Region of Nunavut where the Goose Mine, the winter ice road, and the marine laydown area are located. To support ongoing access for traditional land users to the Goose Mine, the winter ice road, and the marine laydown areas, B2Gold Nunavut has put in place a site access policy which outlines how B2Gold Nunavut will accommodate land users, and the restrictions that B2Gold Nunavut and the Kitikmeot Inuit Association have agreed to that are required to be adhered to by land users in the area for the health and safety of all parties. To the Report effective date, the policy has proven effective in managing such interactions, almost exclusively at the marine laydown area, although these interactions remain limited (e.g., 30–35 visitors per year over the last two years).

A total of 269 archaeological sites were identified within the regional study area during baseline studies; 64 of these sites are located within 1 km of infrastructure associated with the Goose Mine, the winter ice road, and the marine laydown area, and it is expected that these may be directly or indirectly affected by the Goose Mine, the winter ice road, and the marine laydown area. Protection of these cultural and heritage resources includes ongoing monitoring of known archaeological sites, and the institution of a chance find procedure for the protection of currently unknown sites that may be identified. Avoidance is the primary and preferred mitigation measure for cultural and heritage sites; however, if avoidance is not feasible a systematic data recovery program may be instituted that will be designed in consultation with the Government of Nunavut's Department of Culture and Heritage and the B2Gold's archaeologist. All sites directly impacted by the Goose Mine, the winter ice road, and the marine laydown area have been successfully documented and mitigated following approval from the Government of Nunavut's Department of Culture and Heritage.

20.4.4 Status of Negotiated Agreements

Sabina and the Kitikmeot Inuit Association finalized an Inuit Impact and Benefit Agreement and long-term land tenure agreement (commercial lease and corresponding water compensation agreement) in April 2018. When Sabina was acquired by B2Gold Corp., all obligations within these agreements were transferred to B2Gold Corp. For the purposes of this Report, any historical references to the agreement, and any existing obligations related to the agreement are discussed as between B2Gold Nunavut and the Kitikmeot Inuit Association.

When the overarching Framework Agreement (Inuit Impact and Benefit Agreement, commercial lease and water compensation agreement) for the Goose Mine, the winter ice road, and the marine laydown area were signed in 2018, the parties entered into a 20-year agreement, which set out rights and obligations with respect to land access on Inuit-owned land in the Goose Mine, the winter ice road, and the marine laydown areas. Additionally, these agreements provide Inuit of the Kitikmeot Region with financial and socio-economic benefits including training and preferential employment opportunities, business and contracting opportunities, share ownership in the Goose Mine, the winter ice road, and the marine laydown area, and royalties on future production from the Goose Mine.

The signing and implementation of these agreements provide long-term certainty of tenure to B2Gold Nunavut that ultimately minimize operating risks for the Goose Mine, the winter ice road, and the marine laydown areas. The Inuit Impact and Benefit Agreement also commits B2Gold Nunavut to providing various socio-economic opportunities throughout the Kitikmeot Region, including preferential employment and contracting; the formation of the an Inuit Environmental Advisory Committee, training for Kitikmeot Inuit, and the payment of all applicable taxes and royalties to governing bodies. The Inuit Impact and Benefit Agreement is managed by a joint committee of appointed members from both B2Gold Nunavut and the Kitikmeot Inuit Association, all of whom are dedicated to ensuring the implementation of the terms contained within.

21.0 CAPITAL AND OPERATING COSTS

21.1 Introduction

Capital and operating cost estimates are based on actual and forecast costs as at December 31, 2024, to mine and process Mineral Reserves from open pit, underground, and existing stockpile sources.

The LOM plan assumes Owner-operated mine operations in the surface and underground mines with contractor support in select areas. Surface mining operations began in 2023 and will continue until 2032. Underground mine development began in 2023 and production will begin in Q3 2025 and continue through 2033. Processing operations will commence in Q2 2025.

Capital and operating costs are estimated in Canadian dollars and converted to United States dollars at an exchange rate of 1.44 C\$:US\$.

21.2 Capital Cost Estimates

21.2.1 Basis of Estimate

Capital costs consist largely of site processing and infrastructure facilities, mining and processing equipment and rebuilds, power generation including powerhouse and wind farm, and allowances for general and administrative costs. Capital costs are split into:

- Sustaining capital: costs that support the existing LOM plan;
- Non-sustaining capital: costs are for a long-term structures or external project that do not necessarily depend on the mine plan. Non-sustaining capital allocations include remaining infrastructure development required to start processing operations in Q2 2025.

21.2.2 Labour Assumptions

Owner labour to support projects included in capital costs are included in operating costs after gold production begins. Where the labour is to be provided by some party other than the Owner, labour costs are included in capital costs.

21.2.3 Construction Capital Costs

Infrastructure construction is ongoing as of December 31, 2024, and will continue through first gold production scheduled in Q2 2025. Until the first gold pour, all capital is classified as non-sustaining construction capital. This includes completion of the process plant, powerhouse, open pit and underground mine development, and other site infrastructure.

Costs prior to January 1, 2025 are considered sunk. A remaining construction capital cost of US\$149.7 M is estimated prior to first gold production, followed by US\$37.5 M after first gold production.

21.2.4 Mine Capital Costs

Mine capital costs are estimated based on Owner operation of surface and underground mining fleets. Recent actual costs are available, and maintenance practices are being established. Fleet expansion, rebuilds, and equipment replacement costs are estimated based on actual or forecast data from equipment manufacturers. Major mine equipment fleet replacements are carried out on an as needed basis, depending on equipment condition and utilization.

Surface mining totals US\$80.7 M over the LOM.

Underground mining totals US\$45.1 M over the LOM.

The total mining capital cost is estimated to be US\$125.8 M over the LOM.

21.2.5 Process Capital Costs

Process capital costs include allowances for equipment rebuilds and replacements, as well as setup of future in-pit tailings deposition at Umwelt.

Process capital costs are estimated at US\$9.7 M over the LOM.

21.2.6 General and Administrative Capital Costs

General and administrative capital costs average US\$2.7 M per year for sustaining capital costs, and consist mostly of equipment rebuild and replacement estimates for auxiliary equipment in the support departments around the Goose Mine including site services, winter ice road, and marine laydown area.

Total general and administrative capital costs are estimated to be US\$19.1 M over the LOM.

21.2.7 Power Generation Capital Costs

Power generation-related capital includes US\$94.2 M for a power plant rebuild, and US\$30.2 M for the Owner's portion of a wind farm project.

Total power generation capital costs are estimated to be US\$124.4 M over the LOM

21.2.8 Closure Costs

The total reclamation and closure capital cost is estimated at US\$33.7 M, with costs occurring concurrently with operations where feasible, and most costs occurring at the end of the mining and processing operations.

21.2.9 Capital Cost Summary

Capital costs are summarized by category in Table 21-1.

Table 21-1: LOM Capital Cost Estimate

Area	Sub-Area	Units	Value
Non-sustaining capital	Construction - all site development prior to first gold production	US\$ M	150
	Construction - all site development after first gold production	US\$ M	37
	<i>Subtotal non-sustaining capital</i>	<i>US\$ M</i>	<i>187</i>
Sustaining capital	Mining - surface	US\$ M	81
	Mining - underground	US\$ M	45
	Processing	US\$ M	10
	General and administrative	US\$ M	19
	Distributable (power, marine laydown area)	US\$ M	124
	<i>Subtotal sustaining capital</i>	<i>US\$ M</i>	<i>279</i>
Closure capital	US\$ M	US\$ M	34
Total All Capital Costs		US\$ M	500

Note: Mining sustaining capital costs exclude mine capital stripping and development. Table 21-2 in Section 21.3 includes the mine capital stripping and development costs. Totals may not sum due to rounding.

21.3 Operating Cost Estimates

21.3.1 Basis of Estimate

Department costs are estimated independently. Some departments are treated as distributable costs such as power generation, marine landing area, and winter ice road, and are allocated to other departments.

21.3.2 Mine Operating Costs

Mine operating costs are built up from first principles, and cross referenced with actual cost data source from the open pit and underground mines.

Surface mine operating costs are estimated at US\$4.62/t rock mined, including capitalized waste, excluding winter ice road and marine landing area distributable costs.

Underground mine operating costs are estimated at US\$116.72/t ore mined, excluding capital development and excluding winter ice road and marine landing area distributable costs.

21.3.3 Process Operating Costs

Processing costs include all activities related to the process. Variable costs are costs which change with plant production, consisting largely of consumables/supplies and power costs, as well as maintenance and other allocations. Period costs are time-related costs which are incurred

regardless of production, including labour, contractors, and a portion of maintenance and other distributed costs. Total process costs vary year over year depending on the operational plan.

Stockpile and ore rehandle costs are included with the processing costs.

The total process operating cost is estimated to be US\$45.04/t milled over the processing life of nine years, excluding winter ice road and marine laydown area distributable costs.

21.3.4 Distributable Operating Costs

Distributable operating costs include costs for the winter ice road and marine laydown area.

Distributable costs are estimated at US\$43.44/t processed.

21.3.5 General and Administrative Operating Costs

General and administrative costs are modelled largely as period costs. These include period costs for administrative labour and supplies costs, camp costs, information technology services, personnel transport, health, and safety, environmental, security, supply chain, warehousing, site services, and site finance costs. Total general and administrative costs vary year over year depending on the operational plan.

The total general and administrative cost is estimated at US\$68.31/t processed.

21.3.6 Operating Cost Summary

The estimated LOM plan operating costs are presented in Table 21-2 and Table 21-3.

21.4 Comments on Capital and Operating Costs

The QPs note the following.

The capital and operating costs for the Goose Mine are based on recent actual and forecast costs related to the Mineral Reserve LOM plan. The costs indicate operating and total costs below Mineral Reserve and Mineral Resource cost bases (US\$1,750/oz Au and US\$2,100/oz Au, respectively).

LOM plan capital cost estimates total US\$500 M, excluding capitalized surface waste and capitalized underground development.

LOM plan operating cost estimates total US\$1,244.05/oz Au produced, or US\$252.48/t processed.

Table 21-2: LOM Operating Cost Totals

Area	Units	Value
Surface mining cost	US\$ M	625
Surface mine pre-strip (capitalized waste) credit	US\$ M	-175
Underground mining cost	US\$ M	639
Underground capital development credit	US\$ M	-148
Processing	US\$ M	739
General and administrative	US\$ M	850
Change in stockpiles	US\$ M	22
Selling costs	US\$ M	4
Property tax	US\$ M	25
Inuit Impact Benefit Agreement	US\$ M	8
Total Operating Costs	US\$ M	2,590

Note: Distributable costs from winter ice road and marine landing area are included in the area totals. Totals may not sum due to rounding.

Table 21-3: LOM Unit Operating Costs (Ore Processed)

Area	Ore Processed (US\$/t)	Gold Produced (US\$/oz Au)
Mining (all areas)	95.69	471.49
Processing	45.04	221.93
General and administrative	68.31	336.57
Distributable (winter ice road and marine laydown area)	43.44	214.06
Total	252.48	1,244.05

Note: Mining costs are US\$4.62/t mined for surface mining including capitalized waste, and US\$116.76/t ore mined for underground excluding capitalized development. Processing costs include stockpile rehandle and ore haulage where applicable. Totals may not sum due to rounding.

22.0 ECONOMIC ANALYSIS

22.1 Forward-Looking Information

Identification of information that is forward-looking is included in the statement at the front of this Report.

22.2 Methodology Used

The financial model that supports the mineral reserve declaration in a standalone model that calculates annual cash flows based on scheduled ore production, assumed processing recoveries, metal sale prices, exchange rate of 1.44 C\$/US\$, projected operating and capital costs, and estimated taxes.

The financial analysis is based on an after-tax discount rate of 6%. All costs and prices are in unescalated “real” dollars.

All costs are based on the actual and forecast costs for the Goose Mine, adjusted for planned work in the 2025 LOM plan. Revenue is calculated from the recoverable metals and long-term metal prices described in Section 19.2 and exchange rate forecasts.

22.3 Financial Model Parameters

The economic analysis is based on the metallurgical recovery predictions in Section 13, the Mineral Reserve estimates in Section 15, the mine plan discussed in Section 16, the commodity price forecasts in Section 19, closure cost estimates in Section 20, and the capital and operating costs outlined in Section 21. Royalites average 4.5% over the LOM.

The economic analysis is based on 100% equity financing and is reported on a 100% project ownership basis. The economic analysis assumes constant prices with no inflationary adjustments, and uses a reverting gold price curve as discussed in Section 19.2.

22.4 Taxation Considerations

The Goose Mine is subject to Federal and Territorial corporate income tax at a combined rate of 27% (15% federal and 12% Nunavut) and mining royalties (i.e., Nunavut Mining Tax). The royalty is calculated based on graduated rates to a maximum royalty rate of 13%. As the royalty is based on production less operational expenses and certain other deductions, it has been reflected as an income and mining tax for the purposes of the LOM.

22.5 Results of Economic Analysis

A summary of the financial results is provided in Table 22-1.

An annualized cashflow statement is provided in Table 22-2 (2025–2031) and Table 22-3 (2032–2038). Numbers are in US\$ x 1,000.

Table 22-1: Cashflow Summary Table

Item	Units	Value
<i>Production Profile</i>		
Contained gold ounces processed	Moz	2.48
Gold recovery	%	92.5
Average gold grade	g/t	6.82
Gold ounces produced	Moz	2.29
Average annual gold production	koz/yr	269,842
Mine life (surface and underground)	Years	9.0
Mill life	Years	8.5
Ore tonnes processed	Mt	11.3
Surface waste material mined	Mt	102
Surface waste to ore strip ratio	Waste: Ore	14.1
Underground lateral meters developed	m	27,806
Underground vertical meters developed	m	2,319
<i>Goose Mine Economics - US\$2,345 /oz project average gold price</i>		
Non-sustaining capital	US\$ M	187
Sustaining capital incl. mine capital stripping and development	US\$ M	601
Closure capital	US\$ M	34
Gross gold revenue	US\$ M	5,378
Net cash flow (after tax)	US\$ M	1,760
NPV _{6.0%} (after tax)	US\$ M	1,305
IRR (after tax)	%	214
Payback	years	1.5
<i>Unit Operating Costs</i>		
LOM cash operating costs (mining, processing, and site G&A)	US\$/oz Au	1,129
LOM AISC (cash operating costs + royalties, corporate G&A, selling costs and excluding pre-production capital costs)	US\$/oz Au	1,547
Average LOM surface mining cost	US\$/t rock mined	4.62
Average LOM underground mining cost	US\$/t ore mined	116.76
Average LOM processing cost	US\$/t processed	45.04

Note: numbers have been rounded. n/a = not applicable. AISC = all-in sustaining costs. G&A = general and administrative.

Table 22-2: Annualized Cashflow (2025–2031)

All Numbers in US\$ 000's	Total	2025	2026	2027	2028	2029	2030	2031
Total revenue	5,377,708	333,901	654,537	830,828	816,376	743,201	557,566	632,141
Cost of production	2,589,616	160,670	318,893	273,901	299,009	293,729	313,785	313,325
Royalties & production tax	242,208	5,673	9,399	40,463	42,828	38,987	29,249	33,161
Corporate administration	56,474	3,431	6,862	6,862	6,862	6,862	6,862	6,862
Corporate social responsibility	25,482	1,298	3,119	3,169	3,106	3,009	3,009	3,023
Capital costs: non-sustaining	187,250	185,861	694	694	—	—	—	—
Capital costs: sustaining	279,020	61,395	75,744	58,138	27,361	27,885	15,144	12,520
Capital costs: surface mine stripping	174,536	6,803	43,336	55,159	23,442	1,447	44,349	—
Capital costs: underground mine development	147,854	14,147	21,313	31,054	23,981	22,320	22,769	12,271
Reclamation and closure	33,745	—	—	—	2,756	2,756	2,756	2,756
Total taxes paid (mining and income tax)	42,163	1,562	1,562	1,562	1,562	1,562	1,562	42,761
Working capital	-139,000	—	—	—	—	—	-34,722	-34,722
Change in stockpiled ore	-21,771	2,184	-10,022	21,387	10,143	44,905	-17,285	30,838
Net cash flow (after tax)	1,760,133	-109,121	183,637	338,439	375,326	299,740	170,090	209,347
AISC (US\$/oz)	1,547	2,025	1,917	1,405	1,243	1,182	1,737	1,917

Note: Table presented on a 100% basis and in US\$ x 1,000. AISC = all-in sustaining costs. AISC is both \$/oz sold and \$/oz produced as there is no timing delay because ounces are produced and sold in the same period. G&A = general and administrative. Numbers have been rounded.

Table 22-3: Annualized Cashflow (2032–2038)

All Numbers in US\$ 000's	2032	2033	2034	2035	2036	2037	2038
Total revenue	533,880	275,277	—	—	—	—	—
Cost of production	359,434	256,871	—	—	—	—	—
Royalties & production tax	28,007	14,441	—	—	—	—	—
Corporate administration	6,862	5,008	—	—	—	—	—
Corporate social responsibility	3,078	2,672	—	—	—	—	—
Capital costs: non-sustaining	—	—	—	—	—	—	—
Capital costs: sustaining	833	-	—	—	—	—	—
Capital costs: surface mine stripping	—	—	—	—	—	—	—
Capital costs: underground mine development	—	—	—	—	—	—	—
Reclamation and closure	2,756	2,756	10,798	5,737	337	169	169
Total taxes paid (mining and income tax)	27,077	-15,011	-12,989	-9,046	—	—	—
Working capital	-34,722	-34,833	—	—	—	—	—
Change in stockpiled ore	-59,796	-44,125	—	—	—	—	—
Net cash flow (after tax)	200,352	87,498	2,191	3,310	-337	-169	-169
AISC (US\$/oz)	1,661	2,264	—	—	—	—	—

Note: Table presented on a 100% basis and in US\$ x 1,000. AISC = all-in sustaining costs. AISC is both \$/oz sold and \$/oz produced as there is no timing delay because ounces are produced and sold in the same period. Numbers have been rounded.

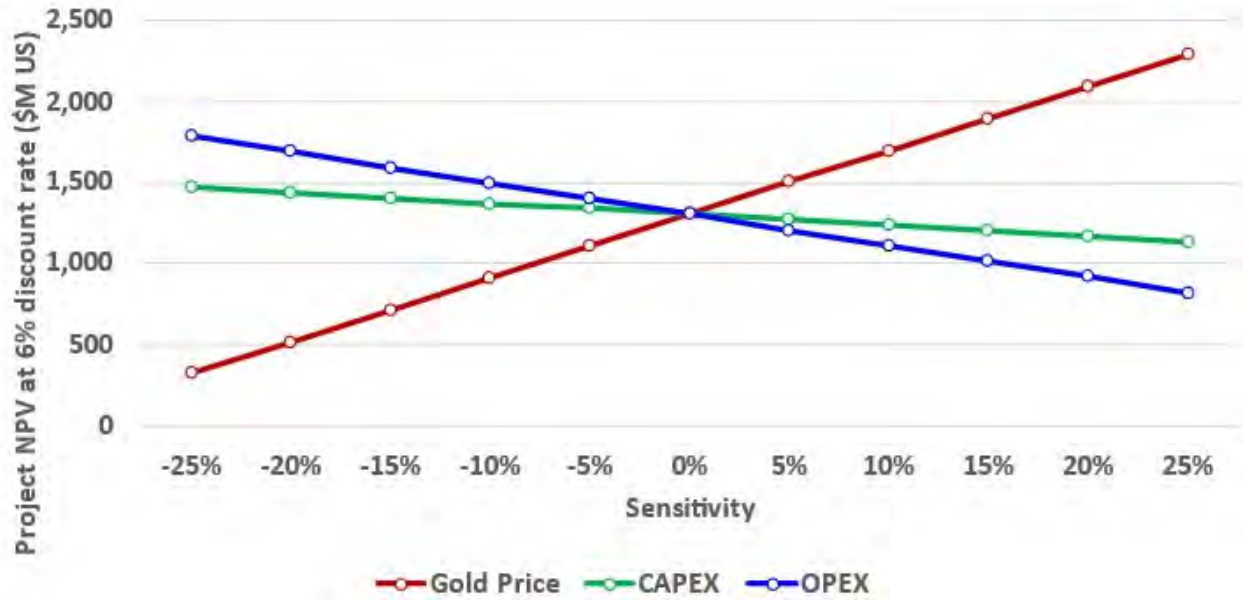
The valuation date is December 31, 2024. A discount rate of 6% is used. The after-tax project NPV is US\$1,305 M. The internal rate of return is calculated to be 214%, with a payback period of 1.5 years.

22.6 Sensitivity Analysis

The sensitivity of the Goose Mine to changes in grades, sustaining capital costs and operating cost assumptions was tested using a range of 25% above and below the base case values. The changes in metal prices are representative of changes in grade.

The Goose Mine is most sensitive to changes in the gold price and grade, less sensitive to changes in operating costs, and least sensitive to capital cost changes (Figure 22-1).

Figure 22-1: Sensitivity Analysis



Note: Figure prepared by B2Gold, 2025. CAPEX = capital costs, OPEX = operating costs. Deferred stripping costs are flexed as part of the capital cost sensitivity. The changes in metal prices are representative of changes in grade.

23.0 ADJACENT PROPERTIES

This section is not relevant to this Report. There are no adjacent properties considered relevant to the Goose Project.

24.0 OTHER RELEVANT DATA AND INFORMATION

This section is not relevant to this Report. There is no additional information or explanation required in this section to support the presentation in the other Report sections.

25.0 INTERPRETATION AND CONCLUSIONS

25.1 Introduction

The QPs note the following interpretations and conclusions in their respective areas of expertise, based on the review of data available for this Report.

25.2 Mineral Tenure, Surface Rights, Water Rights, Royalties/Agreements

Mineral tenure in Nunavut is split between the Crown and Nunavut Tunngavik Incorporated. The mineral tenure groups were established prior to the creation of the Nunavut Agreement and continue to be managed by Crown-Indigenous Relations and Northern Affairs Canada. Inuit Owned Lands are parcels of land which are managed by Nunavut Tunngavik Incorporated; parcels may have surface and subsurface rights or surface rights only. Surface rights are managed by the Regional Inuit Associations and the subsurface rights are managed by Nunavut Tunngavik Incorporated. The Mineral Exploration Area BB13-21-001 licence is held on Inuit Owned Lands, but currently hosts neither Mineral Resources nor Mineral Reserves.

Information obtained from B2Gold supports that the support that the mineral tenure held is valid. All mining tenures were in good standing at the Report effective date.

Surface rights enable a licence holder to travel, explore, work, and use water for exploration and mining purposes on both Inuit Owned and Crown land. The surface rights are sufficient for the LOM plan that supports the Mineral Reserve estimates.

Water rights are granted through water licences and are managed under the Water Management Plan.

A definitive framework agreement is in place with the Kitikmeot Inuit Association that provides the commercial leases authorizing mine development and operations; it is a comprehensive agreement that sets out rights and obligations with respect to surface land access on Inuit-owned land at the Goose Mine, the winter ice road, and the marine laydown areas. The framework agreement includes an Inuit Impact and Benefit Agreement and other obligations required by the Nunavut Agreement.

The following NSR royalties are payable:

- **Goose Claims Group:**
 - On the first 400,000 oz of gold production, there is a 0.7% NSR payable to a third party and a 1.5% NSR payable to B2Gold Nunavut (the B2 Goose Royalty), as B2Gold Nunavut purchased this royalty from a third party;
 - On any gold production over 400,000 oz, there is an aggregate 3.5% NSR payable to a third party and the 1.5% B2 Goose Royalty until B2Gold Nunavut pays a total of C\$5,000,000 in royalties (the Goose Threshold Amount). Once B2Gold Nunavut has paid the Goose Threshold Amount, the aggregate royalty to the third party becomes 4.25% and the B2 Goose Royalty decreases to 0.75%;

- George Claims Group:
 - On the first 800,000 oz of gold production, there is an aggregate 1.15% NSR payable to third parties and a 1.5% NSR payable to B2Gold Nunavut (the B2 George Royalty), as B2Gold Nunavut purchased this royalty from a third party;
 - On any gold production over 800,000 oz, there is an aggregate 3.5% NSR payable to third parties and the 1.5% B2 George Royalty until B2Gold Nunavut pays a total of C\$5,000,000 in royalties (the George Threshold Amount). Once B2Gold Nunavut has paid the George Threshold Amount, the aggregate royalty to the third parties becomes 4.25% and the B2 George Royalty decreases to 0.75%.
- Back River District: 1% NSR on future gold production, payable to Kitikmeot Inuit Association.

The specific set of claims underlying the royalties listed above for the Goose Claims Group and the George Claims Group are set out in the respective underlying royalty agreements. These underlying royalty agreements also contain the details of the royalty calculations and any adjustments.

25.3 Geology and Mineralization

Deposits within the Back River District are characterized as banded iron formation hosted gold deposits that are structurally and stratigraphically controlled with gold mineralization predominantly hosted in sulphide-bearing oxide-iron formation.

The geological understanding of the settings, lithologies, and structural and alteration controls on mineralization in the different zones is sufficient to support estimation of Mineral Resources and Mineral Reserves. The geological knowledge of the area is also considered sufficiently acceptable to reliably inform conceptual mine planning.

The mineralization style and setting are well understood and can support estimation of Mineral Resources and Mineral Reserves.

The majority of the deposits with Mineral Resource estimates remain open down dip. A number of prospects have been identified that warrant additional exploration examination.

25.4 Exploration, Drilling and Analytical Data Collection in Support of Mineral Resource Estimation

The exploration programs completed to date are appropriate for the style of the deposits in the Project area.

Sampling methods are acceptable for Mineral Resource and Mineral Reserve estimation.

Sample preparation, analysis and security are generally performed in accordance with exploration best practices and industry standards.

The quantity and quality of the lithological, geotechnical, collar and down hole survey data collected during the exploration and delineation drilling programs are sufficient to support Mineral

Resource and Mineral Reserve estimation. The collected sample data adequately reflect deposit dimensions, true widths of mineralization, and the style of the deposits. Sampling is representative of the gold and silver grades in the deposits, reflecting areas of higher and lower grades.

The QA/QC programs adequately address issues of precision, accuracy, and contamination. Drilling programs typically included blanks, duplicates, and standards. QA/QC submission rates meet industry-accepted standards.

The data verification programs concluded that the data collected from the Project adequately support the geological interpretations and constitute a database of sufficient quality to support the use of the data in Mineral Resource and Mineral Reserve estimation.

25.5 Metallurgical Testwork

Metallurgical testwork and associated analytical procedures are appropriate to the mineralization type, appropriate to establish the conceptual processing routes, and were performed using samples that are typical of the mineralization styles.

Samples selected for testing were representative of the various types and styles of mineralization. Samples were selected from a range of depths within the deposit. Sufficient samples were taken so that tests were performed on sufficient sample mass.

Recovery factors estimated are based on appropriate metallurgical testwork.

No deleterious elements are known from the processing perspective. From the leach optimization test program, the overall gravity/leach gold recovery on the Year 1-3 composite sample is estimated at 92.5%. This includes a 1.9% discount on the optimum recovery from the SGS testwork. The discount is used to account for soluble gold and fine carbon losses as well as process upsets. This figure is the expected plant-scale gold recovery for the initial three years of mill operation.

25.6 Mineral Resource Estimates

Mineral Resources are reported using the 2014 CIM Definition Standards, and assume open pit or underground mining methods. Estimates are reported either in situ or in stockpiles. The Echo deposit estimate is inclusive of depletion to December 31, 2024.

Factors that may affect the Mineral Resource estimates include: metal price and exchange rate assumptions; changes to the assumptions used to generate the gold grade cut-off grade; changes in local interpretations of mineralization geometry and continuity of mineralized zones; changes to geological and mineralization shapes, and geological and grade continuity assumptions; density and domain assignments; changes to geotechnical, mining and metallurgical recovery assumptions; changes to the input and design parameter assumptions that pertain to the conceptual pit constraining the estimates; and assumptions as to the continued ability to access the site, retain mineral and surface rights titles, maintain environment and other regulatory permits, and maintain the social licence to operate.

25.7 Mineral Reserve Estimates

Mineral Reserves are reported using the 2014 CIM Definition Standards and are based on both open pit and underground mining methods.

Factors that may affect the Mineral Reserve estimates apply to both open pit and underground reserves, and include: changes to the gold price assumptions; changes to geotechnical assumptions; unforeseen dilution or ore loss; changes to hydrogeological and dewatering assumptions; changes to inputs to capital and operating cost estimates; changes to operating cost assumptions used in the constraining pit shells or stope optimizer; changes to pit and stope designs from those currently envisaged; changes in mining or milling productivity assumptions; changes to modifying factor assumptions, including environmental, permitting and social licence to operate.

There is upside potential for the estimates if mineralization that is currently classified as Mineral Resources potentially amenable to underground mining methods can be converted to Mineral Reserves following appropriate technical studies, or if higher gold prices support larger Llama and Goose open pits.

25.8 Mine Plan

Mining operations use, or will use, conventional open pit and underground mining methods and equipment.

The total remaining mine life is nine years for the development of all open pit and underground Mineral Reserves.

The Echo, Umwelt, Llama, and Goose Main pits will be mined using open pit methods. Open pit operations began in 2023 and are scheduled to continue until 2032. Open pit mining rates ramp up to 18 Mt/a by 2027, before beginning to ramp down in 2030 as pits are depleted. Production of the pits is staggered to provide a steady source of ore to the mill, as well as to facilitate in-pit tailings deposition.

The Umwelt underground mine will be drive-in portal access and will be mined using a mix of transverse and longitudinal longhole open stoping methods. Umwelt underground averages 1,300 ore tonnes per day while in production, while developing an average of 12 m/day, reaching a maximum of 1,600 t/d in 2030. Underground production scheduling is driven by development of production zones to accommodate the bottom-up, primary–secondary transverse stoping sequence which provides most of the ore tonnes. Production zones typically contain five, 25 m vertical stoping horizons, except for zone 1 which contains two 20 m production levels. The bottommost production horizon is a sillmat level which is backfilled with cemented rock fill in all stopes, so that the uppermost horizon in the production zone below it may be extracted later in the mine life.

Overall production planning is a blend of open pit and underground ore. Where possible, stronger periods in production in one ore source are scheduled to offset a weaker period in another. In

periods where ore production from the mining areas exceeds the mill throughput capacity of 1.46 Mt/a, low-grade ore from the open pits will be stockpiled for later processing.

25.9 Recovery Plan

The process plant design is based on a robust metallurgical flowsheet designed for optimum recovery with well understood operating costs. The flowsheet is based upon unit operations that are well proven in industry.

The process consists of a leach and carbon adsorption process comprising: crushing; grinding; gravity concentration; leaching; carbon adsorption; cyanide destruction ; carbon elution and regeneration; gold refining; and tailings thickening and disposal.

The mill is designed with a nominal capacity of 4,000 t/d at a planned average feed grade of 6 g/t Au. Design mill feed grade is 7.5 g/t Au. The crushing circuit will operate at an availability of 70%. Milling and leaching circuits will operate 24 h/d, 365 d/a, at an availability of 92%.

The key criteria for equipment selection were suitability for duty, reliability, and ease of maintenance. The plant layout will provide ease of access to all equipment for operating and maintenance requirements whilst maintaining a layout that will facilitate concurrent construction progress in multiple areas.

The plant will produce variations in recovery due to the day-to-day changes in ore type or combinations of ore type being processed. These variations are expected to trend to the forecast recovery value for monthly or longer reporting periods.

25.10 Infrastructure

Infrastructure is centred around two main areas: the Goose Mine and the Bathurst Inlet marine laydown area, which are connected by a winter ice road. The Goose Mine features extensive mining and processing facilities, including open pits, an underground mine, WRSAs and in-pit TSFs.

The marine laydown area serves as a key logistics hub, receiving and staging fuel, cargo, and consumables. Goods are transported to the Goose operations by aircraft or sealift marine vessels, with the winter ice road playing a crucial role in supply delivery. Effective water management and tailings disposal strategies are in place to ensure environmental protection and operational efficiency.

25.11 Environmental, Permitting and Social Considerations

A number of environmental studies have been conducted, started in 2008.

B2Gold Nunavut's Environmental Management System provides the framework through which the >30 individual Environmental Management Plans will be delivered.

The NIRB issued the final project certificate for the Goose Mine, the winter ice road, and the marine laydown area in December 2019. A Type A Water Licence (2AM-BRP1831) was issued in November 2018 and amendment No. 1 was issued on August 31, 2021. In April 2018, the

Framework Agreement for the Goose Mine, the winter ice road, and the marine laydown area was finalized with the Kitikmeot Inuit Association.

Financial security is required under the Type A Water Licence and is posted to Crown Indigenous and Northern Affairs Canada for water-related closure costs, and the Kitikmeot Inuit Association for land-based reclamation activities associated with the Project. The total closure cost of the Project outlined in the Type A Water Licence Amendment No. 1 is approximately C\$50 M (approximately US\$34 M, assuming an exchange rate of 1.44C\$:US\$).

B2Gold Nunavut has successfully completed the various permitting steps to proceed to mine development and has obtained all necessary major permits required for construction and operation of the Goose Mine, the winter ice road, and the marine laydown area.

The Final Environmental Impact Statement determined that the socio-economic impact of the Goose Mine, the winter ice road, and the marine laydown area would mostly be positive, notably due to delivery of benefits to the Kitikmeot Inuit Association and Kitikmeot Inuit via the Inuit Impact and Benefit Agreement. Potential project impacts are monitored and managed through the implementation of several management plans. Continual improvements and adjustments to B2Gold Nunavut's management and monitoring program continue to be made and B2Gold Nunavut has committed to continue using adaptive management as a tool for improving the overall socio-economic performance in the future.

25.12 Markets and Contracts

The Goose Mine will produce a readily-saleable commodity in the form of doré. Doré produced is shipped to Asahi Refining in Brampton, Ontario for refining.

Commodity prices used in Mineral Resource and Mineral Reserve estimates are set by B2Gold corporately. The current gold price provided for Mineral Reserve estimation is US\$1,750/oz, and US\$2,100/oz for Mineral Resource estimation.

Major contracts include blasting explosives and accessories, open pit drilling, underground definition drilling, and contracts related to infrastructure construction. Contracts are negotiated and renewed as needed. Contract terms are within industry norms, and typical of similar contracts in Nunavut with which B2Gold is familiar.

25.13 Capital Cost Estimates

Capital costs consist largely of site processing and infrastructure facilities, mining and processing equipment and rebuilds, power generation including powerhouse and wind farm, and allowances for general and administrative costs.

LOM plan capital cost estimates total US\$500 M, excluding capitalized surface waste and capitalized underground development.

25.14 Operating Cost Estimates

Operating cost estimates are based on actual and forecast costs as at December 31, 2024 on mining and processing Mineral Reserves from open pit, underground, and existing stockpile sources.

Total operating costs are estimated at US\$252.48/t ore processed, and US\$1,244.05/oz Au produced.

25.15 Economic Analysis in Support of Mineral Reserve Estimation

The valuation date is December 31, 2024. After tax project NPV is US\$1,305 M. The internal rate of return is calculated to be 214%, with a payback period of 1.5 years.

The Goose Mine is most sensitive to changes in the gold price and grade, less sensitive to changes in operating costs, and least sensitive to capital cost changes.

25.16 Risks

Risk factors specific to the Mineral Resource and Mineral Reserve estimates were provided in Section 14.5 and Section 15.3, respectively.

25.16.1 Mineral Tenure, Surface Rights and Royalties

The mineral tenure, surface rights and royalty data for the Goose Project is multifaceted, comprising a combination of Crown and Inuit Owned Land, and royalty interests payable to several parties. The QPs have relied upon information from B2Gold Corp experts for this information. There is a risk that when a detailed audit is performed, issues may be identified, such as: arrears in or non-compliance with Territorial reporting obligations; mis-identification of current royalty holders or changes in individual royalty holder interests; mis-correlation of royalty percentages, agreements, and royalty holders on legacy cell or boundary claims to the current claim boundaries; and the status of, or currency of, agreements not being up-to-date.

25.16.2 Mining

Not meeting the mining productivity targets including underground development, open pit total mining tonnage, underground stope production forecasts is a risk to the Goose Mine assumptions if the production profile and tailings management plan are to be met.

The interface between the suprapermafrost and subpermafrost zones requires proactive planning and execution to ensure appropriate water management.

Monitoring of the production profile against the block model is required to ensure that the reconciliation data supports the geological modelling assumptions.

25.16.3 Cost Estimation

The cost estimates that are forecast are estimates based on reasonable assumptions. Actual costs may vary because there are few analogue mines to benchmark against that are open pit

and underground operations in the arctic environment, and the Goose Mine has not yet reached steady-state operations.

25.16.4 Wildlife Management

A key area of study over the past 15 years has been the biodiversity and priority species identified in the area surrounding Goose Mine. B2Gold Nunavut has developed a Wildlife Mitigation and Monitoring Program Plan that will be followed concurrent with the development of the Goose Mine. The Wildlife Mitigation and Monitoring Program Plan describes actions that are intended to reduce mine-related effects on wildlife, in particular, caribou. The plan is intended to ensure wildlife habitats and populations are maintained in the area that will be influenced by mine development, while taking into account operational requirements and the safety of mine employees.

Caribou are an extremely important cultural and subsistence resource for Kitikmeot Inuit, and are integral to their livelihood. B2Gold Nunavut worked closely with the Kitikmeot Inuit Association to understand and document Traditional Knowledge of the Goose Mine, winter ice road, and marine laydown areas and the wildlife and people who depend on it. While the company has established caribou protection measures that range from site notifications and alerts as caribou migration seasons and individuals approach the mine site, to staged, rapid, and planned operational shutdowns of activities such as blasting, heavy mobile equipment, helicopters, and fixed-wing aircraft, there remains a risk that individual caribou within the caribou migratory range could experience short-term effects from mine-related activities as the staged, rapid, and planned operational shutdowns are implemented.

25.16.5 Stakeholder Relations

The Inuit Impact and Benefit Agreement, commercial lease and water compensation agreement sets out rights and obligations with respect to land access on Inuit-owned land in the Goose Mine, the winter ice road, and the marine laydown areas. Additionally, these agreements provide Inuit of the Kitikmeot Region with financial and socio-economic benefits including training and employment opportunities, business and contracting opportunities, share ownership in the Goose Mine, the winter ice road, and the marine laydown area, and royalties on future production from the Goose Mine. The Inuit Impact and Benefit Agreement is managed by a joint committee of appointed members from both B2Gold Nunavut and the Kitikmeot Inuit Association, all of whom are dedicated to ensuring the implementation of the terms contained within.

Maintaining the established relationship between B2Gold and the Inuit communities is critical to successful mining operations.

25.17 Opportunities

25.17.1 Geology and Mineral Resources

There is upside potential for the estimates if mineralization that is currently classified as Inferred can be upgraded to higher-confidence Mineral Resource categories.

The Umwelt, Llama, Goose Main, and Echo deposits remain open down plunge. The Nuvuyak and Goose Neck South deposits are open down dip and along strike, respectively. Locale 1, Locale 2, and LCP South remain open down dip. LCP North, Tupiq and GH remain open down plunge and down dip.

The regional exploration programs have identified several promising prospects through mapping, geophysical surveys, and various types of sampling, including tills, grabs, rock chip sampling and core drilling. These efforts have helped define favorable lithologies and prospective structures associated with gold mineralization. The Boot Claims Group hosts multiple mineralized structures intersecting iron formation, coinciding with geophysical and geochemical anomalies with limited drilling. The Boulder Claims Group hosts a sequence of tightly folded banded iron formation continuous with the banded iron formation exposed at the George Claims Group. The Del Claims Group hosts a structurally-controlled, northwest-trending alteration zone within vein-bearing clastic sediments. The Needle Claims Group hosts a structurally complex and prospective thick package of banded iron formation. The BB13, Beech, Malley, and Wishbone Claims Groups have known gold occurrences associated with prospective stratigraphy in a complex structural framework.

The Mineral Resource estimates use a long-term gold price that is significantly lower than the March 2025 spot gold prices. There is upside potential if the constraining pit shells can be updated with a higher gold price, which could capture additional Mineral Resources within a larger pit shell.

25.17.2 Mining

A portion of the estimated Indicated Mineral Resources were not converted to Mineral Reserves. This material represents upside potential for extending the mine life once studies have been completed that support conversion to Mineral Reserves. Examples include a potentially larger open pit at Goose Main, and additional stopes that may be added to the Umwelt underground mine plan through alternative mining methods.

There have been limited mining studies and reviews completed by B2Gold on the George Claims Group deposits. These retain upside potential for extending the mine life once studies have been completed that support conversion of the Indicated Mineral Resources in these deposits to Mineral Reserves.

There is potential to exceed the planned production from the Umwelt underground by increasing the mine production rate through development of more active production levels. This could increase annual gold production and lower unit operating costs.

Electrification of the hauling fleet through deployment of battery electric vehicles has the potential to significantly reduce operating costs and lower greenhouse gas emissions.

Remote operation of surface and underground equipment presents an opportunity to optimize production efficiencies, reduce the number of on-site staff that require transport to and from the Goose Mine site, and reduce operating costs.

25.18 Conclusions

An economic analysis was performed in support of estimation of the Mineral Reserves; this indicated a positive cash flow using the assumptions detailed in this Report.

26.0 RECOMMENDATIONS

26.1 Introduction

Recommendations relate to mining work programs. All of the work can be conducted concurrently, no elements of the work program are dependent on the outcome of another program. The programs suggested require a budget allocation of approximately US\$4.1 M, and an ongoing annual budget allocation of US\$4.3 M per year for underground definition drilling.

26.2 Mining

The following work programs are proposed:

- Upgrade the open pit geotechnical assessment for the Llama and Goose Main pits in advance of operations. An allowance of US\$300,000 for Llama, and US\$275,000 for Goose Main is proposed to cover geotechnical drilling from surface and related analysis and consulting fees;
- Finalize the Umwelt underground Zone 1 tailings barrier construction and monitoring program. An allowance of US\$3.5 M for Zone 1 geotechnical instrumentation and tailings barrier construction costs is included in the capital and operating cost estimate in this Report;
- Upgrade the hydrogeological assessment for the Umwelt underground as mine development advances to depths closer to the expected transition out of permafrost conditions. An allowance for ongoing definition drilling from underground has been included for all underground definition requirements for Umwelt, and averages US\$4.3 M per year of operations for all activities related to underground definition drilling;
- Evaluation of a larger-scale mine method for Umwelt underground to potentially increase the production rate and lower operating cost, at the expense of potential increased dilution. Costs of this evaluation are included in the technical services labour and consulting cost estimates within the operating cost estimate in this Report;
- Evaluation of mine technology projects such as autonomous, or remote operations of select equipment and operational functions both in the open pit and underground. Costs of this evaluation are covered in the technical services labour and consulting cost estimates within the operating cost estimate in this Report.

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