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MONETA PORCUPINE MINES INC.

A SECOND UPDATED MINERAL RESOURCE ESTIMATE AND PRELIMINARY ECONOMIC ASSESSMENT FOR THE SOUTH WEST DEPOSIT AT THE GOLDEN HIGHWAY PROJECT, MICHAUD AND GARRISON TOWNSHIPS, BLACK RIVER - MATHESON AREA, NORTHEASTERN ONTARIO

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Report By:

B. Terrence Hennessey, P.Geo.
Richard M. Gowans, P.Eng.
Barnard Foo, M.Eng., MBA, P.Eng.
Christopher Jacobs, CEng, MIMMM
David Makepeace, M.Eng., P.Eng.
Nigel Fung, P.Eng.

900 - 390 BAY STREET, TORONTO ONTARIO, CANADA M5H 2Y2
Telephone +1 416 362 5135 Fax +1 416 362 5763

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1.0 SUMMARY

1.1 INTRODUCTION

At the request of Mr. Gary O'Connor, CEO and Chief Geologist of Moneta Porcupine Mines Inc. (Moneta), Micon International Limited (Micon) undertook an independent technical review of the mineral exploration completed on the Golden Highway Project, prepared an updated mineral resource estimate for the South West zone and completed a Preliminary Economic Assessment (PEA) for that zone in October, 2020 (Hennessey et al., 2020). Since that time Moneta has requested that the mineral resources for the remaining zones be updated. The PEA is repeated here in order to keep it current and reportable. The PEA considered only the South West zone which has not been updated for this report.

Since the completion of the 2012 mineral resource estimate and Preliminary Economic Assessment (Puritch et al., 2012), additional drilling on several targets has been performed by Moneta. This drilling and its results led to a new geological interpretation and resource estimate prepared by Micon and issued on January 17, 2019. Further infill drilling on the South West zone led to a mineral resource update for that deposit which was released on November 26, 2019. Since the data freeze date for the PEA, additional infill drilling has been completed on other zones. This additional drilling has been used herein to update those zones.

1.2 LOCATION

The Golden Highway Project is located within the Larder Lake Mining Division, northeastern Ontario, Canada. It is centred about 571456 East and 5368622 North, in Zone 17N of the NAD83 UTM coordinate system or 48°, 28" North Latitude and 80°, 02" West Longitude. The property is located approximately 540 kilometres (km) north of Toronto, 92 km east of Timmins, and 40 km north of Kirkland Lake.

The project is easily accessible via Highway 101 east from Timmins through Matheson.

1.3 PROPERTY DESCRIPTION

The Golden Highway Project is a large package of mining claims totaling 10,971 hectares (ha). The claims and leases under joint venture with Kirkland Lake Gold Mines located east of Matheson in a number of claim blocks, some adjacent to the project, are not included in the scope of this report as they are not considered to be part of the same project. The property is comprised of 22 patented mineral claims, 4 leased mineral claims, and 310 unpatented mineral claims (consisting of 213 single cell mining claims and 97 boundary cell claims) located in Guibord, Michaud, Barnet, Garrison and McCool Townships. These contiguous claims total 6,844 ha and are owned 100% by Moneta, excluding the Dyment 3 claim block (53.2 ha) that is held 75% by Moneta and 25% by Kirkland Lake Gold Inc.

1.4 REGIONAL GEOLOGY

The project is located within the southern part of the Archean (ca. 2.7 Ga) Abitibi greenstone belt of the Superior Province of the Canadian Shield in northeastern Ontario. The Abitibi greenstone belt consists of Neoarchean supracrustal rocks divided into tectonic-stratigraphic assemblages that include metavolcanic rocks, synvolcanic intrusions, metasedimentary rocks, calc-alkaline and alkaline intrusive rocks, and late Proterozoic dykes. The dominant regional structures of interest are the Destor Porcupine Fault Zone (DPFZ) and Pipestone Fault Zone with their associated gold deposits and mineralization.

The project is located on the DPFZ, a major gold mineralized regional fault structure. Figure 1.1 shows the location of the DPFZ in red and several prominent gold deposits, including the Black Fox Mine, Ross Mine, Holloway Mine and Holt-McDermott Mine, that are located within an approximately 25 km radius of the Golden Highway Project.

1.5 PROPERTY GEOLOGY

Holocene organic deposits of peat and black muck cover much of the property. Underlying the organic deposits are extensive Quaternary glacio-lacustrine, deep water varved silts and clays of the Barlow-Ojibway Formation and/or sands associated with the Munro Esker complex. They are up to several metres thick, overlying the Matheson Till at the bedrock interface.

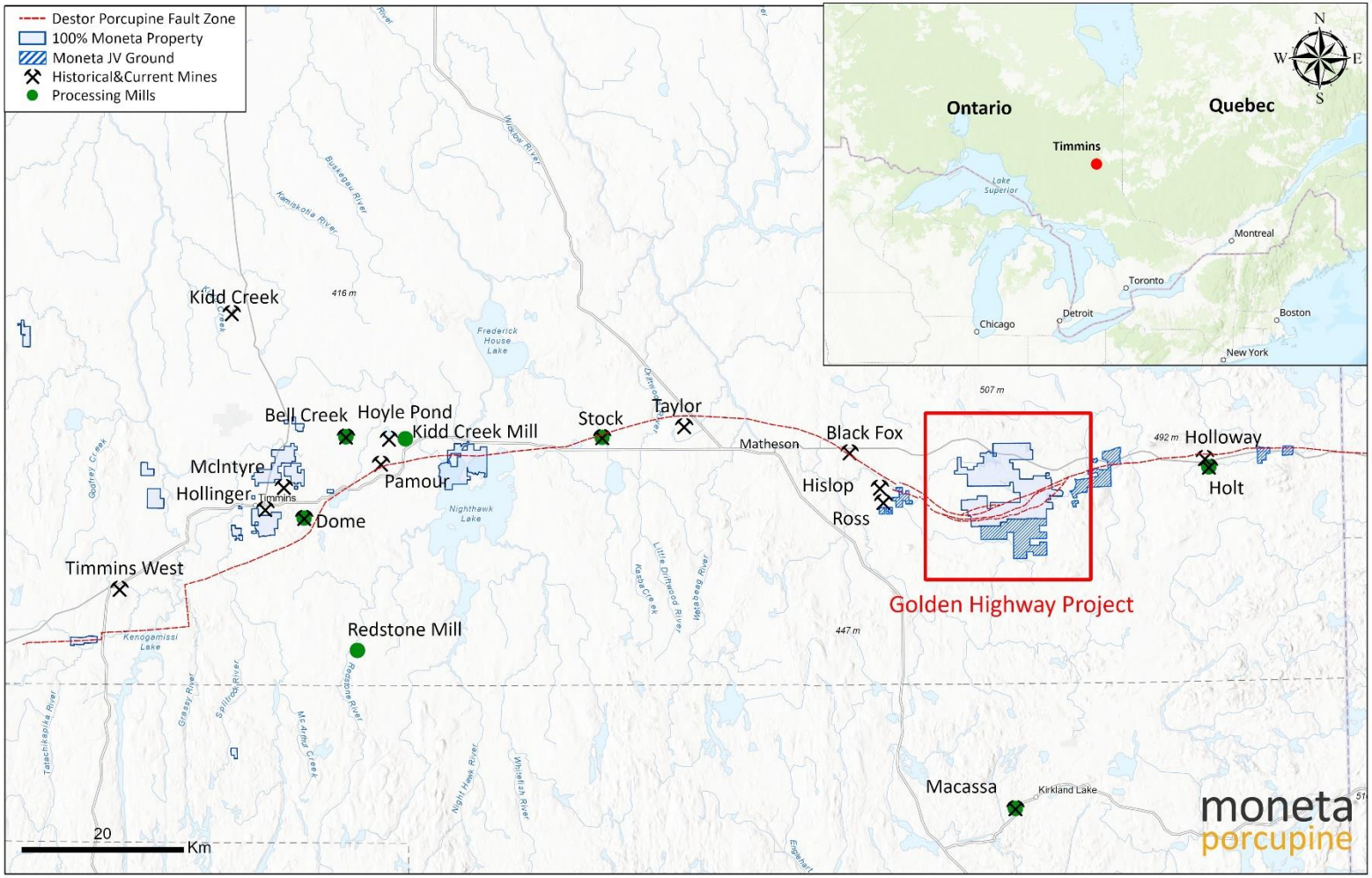
These recent unconsolidated sediments mean that there is no exposure of mineralized rock over any of the known zones. The bedrock geology of the property is mainly determined from drill core observations, geophysical interpretations and local rock outcrop areas outside of the mineralized lithologies. The area is largely covered with overburden consisting mainly of sands associated with the Munro Esker complex. A few outcrops are located in the centre of the property south of Emens Lake and more extensively south of the Pike River valley to the south of the DPFZ.

The central portion of the property is the main area of exploration work and can be divided into a North corridor and South corridor that together define the DPFZ, as it crosses Michaud and western Garrison Townships. These distinct geological corridors contain the bulk of the known gold mineralization discovered to date. The North corridor contains the historical DPFZ (north branch) trace in a sequence of Tisdale mafic and ultramafic metavolcanics. The Timiskaming metasedimentary rocks, iron formation and associated rocks are contained in the South corridor.

1.6 MINERALIZATION AND DEPOSIT TYPE

The seven deposits on the property which have had mineral resources estimated for them, (South West, Westaway, West Block, Windjammer South, Discovery, Windjammer North, and 55) have been classified as structurally controlled orogenic gold deposits in an Archean greenstone belt setting. This deposit type is a significant source of gold mined in the Superior and Slave provinces of the Canadian Shield.

Figure 1.1
Gold Deposits in the Matheson Area along the Destor-Porcupine Fault Zone



Source: Moneta, 2021.

These deposits are typically quartz-carbonate vein hosted and are distributed along crustal-scale fault zones that mark convergent margins between major lithological boundaries such as those between volcano-plutonic and sedimentary domains. The Golden Highway Project is located on the DPFZ, a major regional structure.

The DPFZ in northeastern Ontario, hosts the largest Archean orogenic gold camp in the world and has produced over 75 Moz of gold from the Timmins Camp alone. When combined with the adjacent Larder Lake-Cadillac Fault Zone and associated splays, this region has hosted over 200 Moz of gold (Dubé, B et al. 2017).

The greenstone-hosted quartz-carbonate vein deposits are structurally controlled, epigenetic deposits characterized by simple to complex networks of gold-bearing, laminated quartz-carbonate structure-fill veins. These veins are hosted by moderately to steeply dipping, compressional, brittle-ductile shear zones and faults with locally associated extensional veins and hydrothermal breccias. The latter structures are the main host for mineralization on the Golden Highway Project.

1.7 EXPLORATION

The area between Matheson and the Quebec border has a long history of prospecting, mineral exploration and gold mining dating back to the beginning of the 20th Century. Production from mines in the area began in 1911.

Staking of the Golden Highway Property commenced in 1939 and known exploration work commenced in 1945. Details of the work conducted are somewhat restricted and generally limited to data in the province's assessment files (see Section 6.0). It is known that several companies worked the claims and that geophysical surveys (magnetics, VLF, induced polarization and horizontal loop EM) and drilling programs were conducted.

Moneta gained control of the core claims in 1986 and commenced its own exploration.

Since acquisition, Moneta, or its joint venture partners at the time, have completed some additional geophysical work (airborne and ground magnetics and VLF). The majority of the work completed was drilling, mostly diamond core drilling with a small amount of reverse circulation (RC) drilling. A significant amount of drilling has been completed by Moneta.

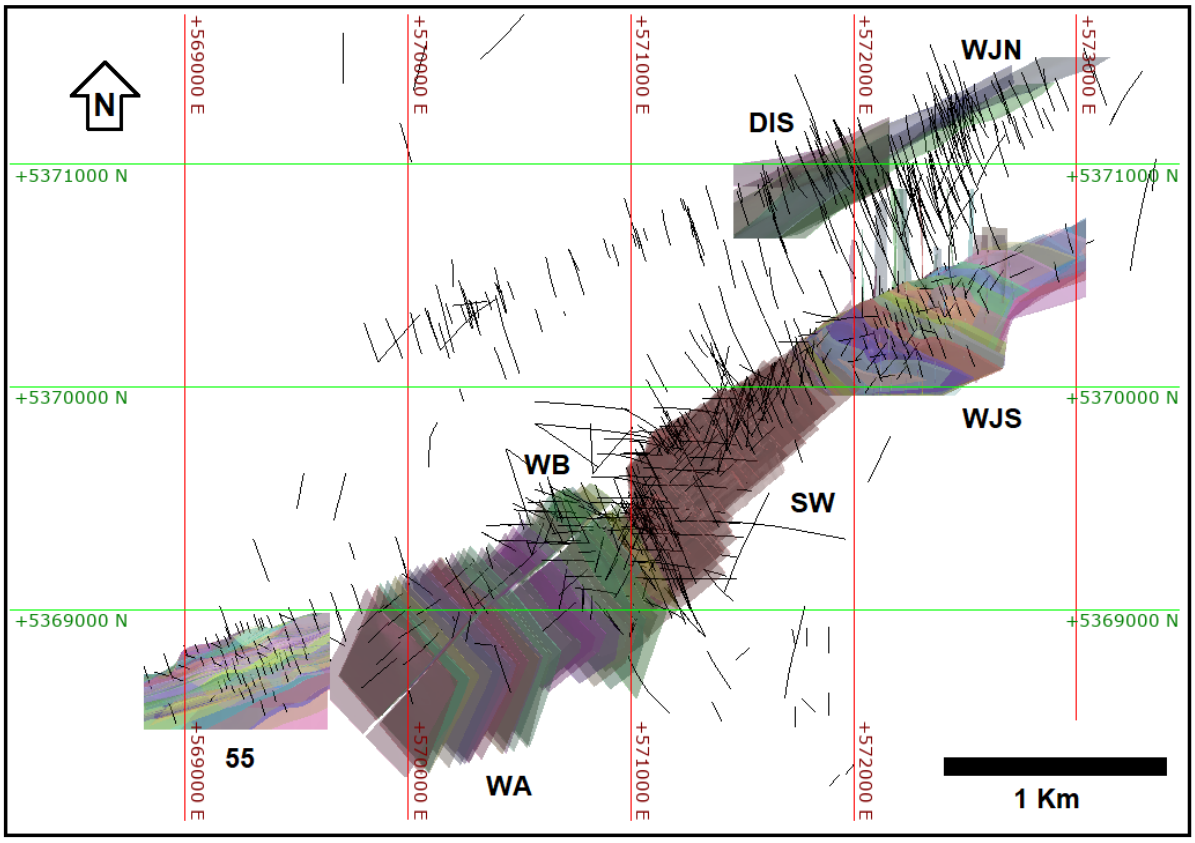
Moneta has possession of all of the drill core from 1986 on at its secure logging facility on Hwy. 655 in Timmins. This core library is frequently used for reference when conducting geological modelling. Only assays from the 1986 and newer drilling were used for the mineral resource estimate in this report.

1.8 MINERAL RESOURCES

The Golden Highway Project mineral resources have been estimated using multiple series of narrow vein interpretations grouped in seven mineralization areas, Windjammer North Zone

(WJN), Windjammer South Zone (WJS), Discovery (DIS), South West Zone (SW), West Block (WB), Westaway (WA) and 55 Zone (55). The seven zones contain steep parallel, contiguous vein-type structures disposed in groups with variable bearings and dips, by group. For the 55 Zone and Windjammer South, flat parallel veins were also interpreted which were cross-cut by the steep veins. Figure 1.2 shows the location of the 112 vein interpretations constructed by Moneta. The mineral resources for the Golden Highway deposits have been estimated assuming both surface and underground mining scenarios.

Figure 1.2
Location of the Moneta Golden Highway Mineralized Zones and Drill Holes



Source: Micon 2021.

Micon received from Moneta a large updated drill hole database with gold grade, lithologies and bulk density data. Moneta personnel, in collaboration with Micon, also interpreted wireframes of the numerous narrow veins suitable for an underground mining scenario. The Golden Highway Project database provided to Micon is comprised of 1,357 drill holes, with a total of 401,542 m of drilling and containing 173,011 samples. This number is smaller than the number of holes reported in the 2020 PEA report. Drill holes outside of the main mineralized corridor had been remove.

This database was the starting point from which the 112 veins were modelled. Those holes which intersected the wire frames were used in this resource estimate. Most drill holes intersected multiple veins/zones.

The assay data were composited to 1-m length. The univariate statistics were estimated and the need for grade capping was analyzed. A small number of composites were capped.

Good variograms were modelled and grade was therefore interpolated into the model using ordinary kriging. Long ranges varying from 60 to 100 m on the major axis were achieved. Many variograms ranges exceeded 70 m.

The mineral resources have been classified into the Indicated and Inferred Resource categories. For Indicated Resources, the closest informing composite needed to be less than 50 m away and the block had to be informed by 3 or more drill holes. (Forty metres was used for one vein where the range of the variogram was shorter.) All other blocks were classified as Inferred.

The mineral resource estimates for the seven reportable deposits (South West, West Block, Windjammer South, Windjammer North, 55 and Discovery) are set out in Table 1.1. The mineral resources have been reported at a 3.0 grams per tonne (g/t) Au cut-off except at the South West (SW) deposit. Work completed for this PEA has shown that a cut-off grade of 2.6 g/t is justified for the South West Zone (see Section 16.0).

The Qualified Person (QP) considers that the resource estimate for the Golden Highway Project has been reasonably prepared and conforms to the current Canadian Institute of Mining, Metallurgy and Petroleum (CIM) standards and definitions for estimating mineral resources.

The process of mineral resource estimation includes technical information which requires subsequent calculations or estimates to derive sub-totals, totals and weighted averages. Such calculations or estimations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, the QP does not consider them to be material.

Table 1.1
Golden Highway Project Mineral Resource Estimate by Deposit

Mining Constrain	Cut-off	Category	Deposit	Tonnes	Avg. Grade g/t Au	Au Ounces
Open Pit	0.30	Indicated	55	9,896,000	1.30	412,600
			WJS	40,582,000	0.84	1,099,300
Total Open Pits Indicated				**50,478,000**	**0.93**	**1,511,900**
Open Pit	0.30	Inferred	55	5,079,000	1.10	179,500
			WJS	28,956,000	1.10	1,027,700
Total Open Pits Inferred				**34,035,000**	**1.10**	**1,207,200**
UG Potential	2.60	Indicated	SW	4,530,000	4.07	592,400
	3.00		55	-	-	-
			WJS	6,000	3.90	800
			WB	-	-	-
			WA	-	-	-
			DIS	141,000	3.49	15,800
			WJN	182,000	3.98	23,300
Total UG Potential Indicated				**4,859,000**	**4.05**	**632,300**
UG Potential	2.60	Inferred	SW	9,607,000	4.01	1,237,900
	3.00		55	123,000	4.65	18,400
			WJS	143,000	4.06	18,700
			WB	973,000	4.17	130,500
			WA	3,394,000	4.87	531,400
			DIS	658,000	4.00	84,700
			WJN	813,000	4.08	106,500
Total UG Potential Inferred				**15,711,000**	**4.21**	**2,128,100**
Total Golden Highway Indicated Resource (OP + UG)				**55,337,000**	**1.21**	**2,144,200**
Total Golden Highway Inferred Resource (OP + UG)				**49,746,000**	**2.09**	**3,335,300**

Notes:

1. Mineral Resource Estimates are reported at a cut-off grade of 3.00 g/t Au for an underground mining scenario, except for the South West zone which used the cut-off determined in this PEA (2.6 g/t). For most zones the cut-off grade was calculated at a gold price of US$1,250 per ounce, an exchange rate of US$/C$ of 0.75 and operational assumptions outlined in Section 14 of this report. The cut-off for the South West zone was derived by calculations presented in the mining sections of this report.
2. The resource estimate is supported by statistical analysis with different high grade capping applied to each of the deposits ranging from 6.0 g/t Au to 37.0 g/t Au on 1-m composites.
3. The mineral resources presented here were estimated with a block size of 10 m x 5 m x 10 m utilizing sub-blocks of variable size as required, and constrained within geological wireframes with a minimum width of 1.50 m, except for the South West update. There the mineral resources were estimated using a sub-blocked model with a parent block size of

15 m x 5 m x 15 m and child block size down to 5 m x 1 m x 5m utilizing these sub-blocks as required and constrained within geological wireframes with a minimum width of 1.50 m. The cells are estimated by Ordinary Kriging using the appropriate variogram model of each structure with individual search ellipsoids.

4. The mineral resources presented here were estimated by Micon International Limited using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definitions and Standards on Mineral Resources and Reserves.
5. Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, market or other relevant issues.
6. The quantity and grade of reported Inferred Resources are somewhat uncertain in nature and there has not been sufficient work to define these Inferred Resources as Indicated or Measured Resources.
7. There are no historical underground voids from mining including shafts, ramps drifts or stopes in any of the deposit areas.
8. Tonnage estimates are based on bulk densities individually measured and calculated for each of the deposit areas, averaging 2.78 tonnes per cubic metre for the total resource. Resources are presented as undiluted and in situ.
9. This mineral resource estimate effective date for the South West and West Block is dated September 9, 2020. All other zones are dated January 15, 2019. The effective date for the drill hole database used to produce this updated mineral resource estimate for South West and West Block is November 26, 2019 and November 19, 2018 for the other zones. Tonnages and ounces in the tables are rounded to the nearest thousand and hundred respectively. Numbers may not total precisely due to rounding.
10. At the present time, Micon does not believe that the mineral resource estimate is materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

1.9 MINING

The complexity of the multiple, parallel, narrow to medium thickness mineralized structures, spatially located at depth presents challenges to underground mine design, however the mineral resource to be considered in the mine production rate, design and production schedule for the SW zone is considered suitable for the proposed mining and extraction method.

The proposed mining method for the SW zone is Longitudinal Longhole Stoping with conventional drilling and blasting. The optimal nominal mine production rate for the SW zone project is estimated to be 1,750 tonnes per day (t/d), taking into consideration the geometry of the deposits. Waste rock generated from the mine will be the main source of unconsolidated backfill.

The main decline provides access into the mine with a series of internal ramps linking one mining area to another, while crosscuts provide access into the deposits. Sills are developed in each deposit where production drilling and blasting will be carried out.

Excavated mineralized material from the mine will be transported to the processing facilities on surface with trucks, while waste material will be transported and deposited into excavated stopes to provide a working platform for the subsequent mining lift.

The cut-off grade (CoG) of 2.6 g/t was established based upon input parameters including a mining cost of C$75/t mill feed and milling cost of C$40/t mill feed, and was subsequently used in the Datamine Mineable Shape Optimizer (MSO) to generate mineable stope shapes for the proposed longitudinal sublevel stoping mining method.

The life-of-mine (LOM) plan will spend 12 years mining a total of 5,394 kt of resource with a grade of 3.92 g/t Au from stopes and 641 kt of resource with a grade of 4.07 g/t Au from sills, for a total of 6,035 kt of mined resource with an average grade of 3.93 g/t Au.

The LOM plan mines a total of 1,589 kt of development waste from 52 km of development.

It is estimated that the mine will require 41 pieces of mobile equipment, including eight trucks, three jumbos, six LHDs and two long hole drills.

Mining will require 143 persons in total, including 82 equipment operators, 36 maintenance crew, 15 technical services staff and ten operations management staff.

1.10 MINERAL PROCESSING AND METALLURGICAL TESTING

A number of metallurgical test work studies have been completed using samples taken from the property. This includes preliminary leach tests undertaken by Barrick in 1996 and Newmont in 2001. More recently, gravity, grinding and leach tests were undertaken by SGS Minerals Services (SGS) in Vancouver in 2012 and SGS in Lakefield, Ontario in 2019.

The 2012 SGS program was a scoping level metallurgical test work program, comprised of standard bench scale cyanide leach bottle roll tests and a Bond Ball Mill Work Index test. The samples used for the test work program included six composites representing different mineralized zones identified at the Golden Highway Project. These samples were relatively low grade, intending to be representative of an open pit mining scenario.

The 2019 SGS test program comprised gravity separation testing, cyanide leach bottle roll tests and a Bond Ball Mill Work Index test. The composite sample used for this program was prepared mainly from the South West zone 2019 drill core with a target average gold grade that would be appropriate for an underground mining operation.

Although the previous test work is useful in assessing the metallurgical performance of the different deposits on the property, only the results from the 2019 test program were used as a basis for this PEA, which is based on the underground mining and processing of South West Zone deposit mineralization.

The Bond Work Index for the 2019 South West Zone Master Composite was 19.7 kilowatt hour per tonne (kWh/t), which suggests that the mineralization is relatively hard.

Preliminary gravity amenability test results suggest that up to 50% of the gold can be recovered from South West Zone mineralization using gravity separation technology.

The preliminary test work undertaken in 2019 using a composite sample representative of the South West deposit mineral resources shows that good gold recoveries can be expected using conventional free-milling gold process technology. The preliminary non-optimized test work results suggest an overall gold recovery of approximately 94% for a gravity plus CIL circuit.

1.10.1 Recovery Methods

The recent metallurgical test program using mineralized samples representing the South West Zone mineral resources shows that gravity concentration followed by pre-oxidation, cyanide leach, carbon adsorption/desorption and electrowinning can yield an overall gold extraction of around 94.2%. Results from this test program were used to develop the PEA process design criteria, process flowsheet, process operating cost estimate and conceptual plant capital cost estimate. The selected process plant flowsheet for the on-site processing scenario will include the following unit operations:

- Single stage crushing.
- Two stages of grinding with closed circuit pebble crushing and hydrocyclone classification.
- Gravity separation and intensive leaching of the final gravity concentrate.
- Cyanide leaching and carbon adsorption using carbon-in-pulp (CIP) technology.
- Cyanide destruction of plant tailings and storage of slurry tailings.
- Loaded carbon acid wash, elution and regeneration.
- Electrowinning, refining and production of gold doré bars.

For the toll treatment option, the PEA includes on-site primary crushing, loading into trucks and transportation of approximately 50 km to a nearby gold processing facility. It is assumed that the toll mill grinds the material to 80% passing 75 microns, has no gravity circuit and has a 30-hour leach retention time. The overall estimated gold recovery used for the toll treatment option is 92.2%.

1.11 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

Moneta is in the exploration stage of its Golden Highway project and has completed some Environmental Baseline Studies (EBS) work. To advance the project in a timely manner, the EBS work needs to continue, including on-going consultation with the local First Nation community. It is anticipated that some of these studies may take at least a year, if not more, to complete while others may take approximately six months. The cost of the EBS work is approximately $100,000 to $250,000.

Moneta will need to prepare a Terms of Reference (TOR) and have it approved by the government before the Environmental Assessment (EA) can be initiated. The TOR/EA process may take 3 to 4 years to get government approval and cost approximately 0.2 to 0.5% of the project costs. A number of permits will be required after the EA has been approved before the mine can start construction and operation. The permitting process should take approximately 3 months depending on how complicated the project becomes.

1.12 MARKET STUDIES AND CONTRACTS

1.12.1 Gold Prices

Markets for gold doré bars are readily available. Gold markets are mature, global markets with reputable smelters and refiners located throughout the world. Demand has been increasing during 2019 and 2020, with prices fluctuating in the US$1,200 to US$2,000 per ounce range. The price has been more than US$1,400 for over a year. (See Figure 1.3).

Figure 1.3
Two Year Gold Price Chart

Source: https://goldprice.org/gold-price-history.html, September 22, 2020.

The 36-month average gold price through September 18, 2020 is US$1,421 per ounce (www.gold.org).

1.12.2 Contracts

There are no known contracts for service, sales of product, or for the purchase of goods that would be material to the economic analysis of the project.

1.12.3 Royalty Contracts

There are no royalty contracts currently known that would be material to the economic analysis of the project.

1.13 CAPITAL AND OPERATING COSTS

Micon's assessment of the capital and operating costs for the base case (with an on-site mill) and the alternative toll-milling case are expressed in second quarter 2020 Canadian dollars, without provision for escalation. Where appropriate, an exchange rate of US$0.77/C$ has been applied. The expected accuracy of the cost estimates is ±30%.

1.13.1 Capital Costs

The project is a greenfields development and, as such, the capital cost estimate for the base case includes the costs of developing and equipping the underground mine, process plant, tailings storage facility and other on-site infrastructure.

Total capital costs for the base case are estimated as shown in Table 1.2.

Table 1.2
Capital Cost Summary - Base Case

Area	Initial Capital ($'000)	Sustaining Capital ($'000)	LOM Total Capital ($'000)
Mining	49,696	119,893	169,589
Processing Plant	47,786	-	47,786
Site Infrastructure	14,100	8,300	22,400
Indirects	15,675	-	15,675
Contingency	16,906	7,524	24,431
Total	**144,163**	**135,717**	**279,880**

An alternative development option assessed as part of the PEA is to develop the mine as a source of feed for a nearby toll-milling plant. In this scenario, the underground mine remains the same, but only the primary crushing plant is required to process material prior to its delivery to a third-party toll-milling facility. In this case, no tailings dam is required at the project.

Total capital costs for the alternative, toll-milling case are estimated as shown in Table 1.3.

Table 1.3
Capital Cost Summary - Alternative Case

Area	Initial Capital ($'000)	Sustaining Capital ($'000)	LOM Total Capital ($'000)
Mining	49,696	119,893	169,589
Processing Plant	2,500	-	2,500
Site Infrastructure	5,800	-	5,800
Indirects	-	-	-
Contingency	6,517	7,524	14,042
Total	**64,513**	**127,417**	**191,930**

1.13.2 Operating Costs

1.13.2.1 Base Case

Estimated LOM total cash operating costs for the base case (with on-site milling by the owner) are summarized in Table 1.4.

Table 1.4
LOM Total Cash Costs - Base Case

Area	Life-of-Mine Cost ($ 000)	Unit Cost $/t milled	Unit Cost US$/oz Gold
Mining	393,243	65.16	422.71
Processing	112,852	18.70	121.31
General & Administrative	36,840	6.10	39.60
Selling costs	6,363	1.05	6.84
Total Cash Costs	**549,298**	**91.02**	**590.46**

1.13.2.2 Alternative Case

Estimated LOM total cash operating costs for the alternative, toll-milling case are summarized in Table 1.5.

Table 1.5
LOM Total Cash Costs - Alternative Case

Area	Life-of-Mine Cost ($ 000)	Unit Cost $/t milled	Unit Cost US$/oz Gold
Mining	393,243	65.16	431.88
Processing	289,680	48.00	318.14
General & Administrative	35,772	5.93	39.29
Selling costs	6,234	1.03	6.85
Total Cash Costs	**724,929**	**120.12**	**796.15**

1.14 ECONOMIC ANALYSIS

This preliminary economic assessment is preliminary in nature; it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.

The results of the economic analyses discussed in this section represent forward-looking information as defined under Canadian securities law. The results depend on inputs that are subject to a number of known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those presented here.

Information that is forward-looking includes:

- Mineral Resource and Mineral Reserve estimates.
- Assumed commodity prices and exchange rates.
- The proposed mine production plan.
- Projected mining and process recovery rates.
- Assumptions as to mining dilution.
- Capital and operating cost estimates and working capital requirements.
- Assumptions as to closure costs and closure requirements.
- Assumptions as to environmental, permitting and social considerations and risks.

Additional risks to the forward-looking information include:

- Changes to costs of production from what is assumed.
- Unrecognized environmental risks.
- Unanticipated reclamation expenses.
- Unexpected variations in quantity of mineralized material, grade or recovery rates.
- Geotechnical or hydrogeological considerations differing from what was assumed.
- Failure of mining methods to operate as anticipated.
- Failure of plant, equipment or processes to operate as anticipated.
- Changes to assumptions as to the availability and cost of electrical power and process reagents.
- Ability to maintain the social licence to operate.
- Accidents, labour disputes and other risks of the mining industry.
- Changes to interest rates.
- Changes to tax rates and availability of allowances for depreciation and amortization.

1.14.1 Macro-Economic Assumptions

All results are expressed in Canadian dollars except where stated otherwise. Cost estimates and other inputs to the cash flow model for the project have been prepared using constant, second quarter 2020 money terms, i.e., without provision for escalation or inflation.

The project has been evaluated using a constant metal price of US$1,500/oz Au. Micon notes that in August, 2020 gold prices reached a high of more than $2,050/oz, and that the average price for the month was above $1,950/oz.

An annual discount rate of 5% was selected. Canadian federal and Ontario provincial income and mining taxes have been provided for in the economic evaluation. Micon understands that no royalties are payable on the South West zone.

1.14.2 Project Cash Flow

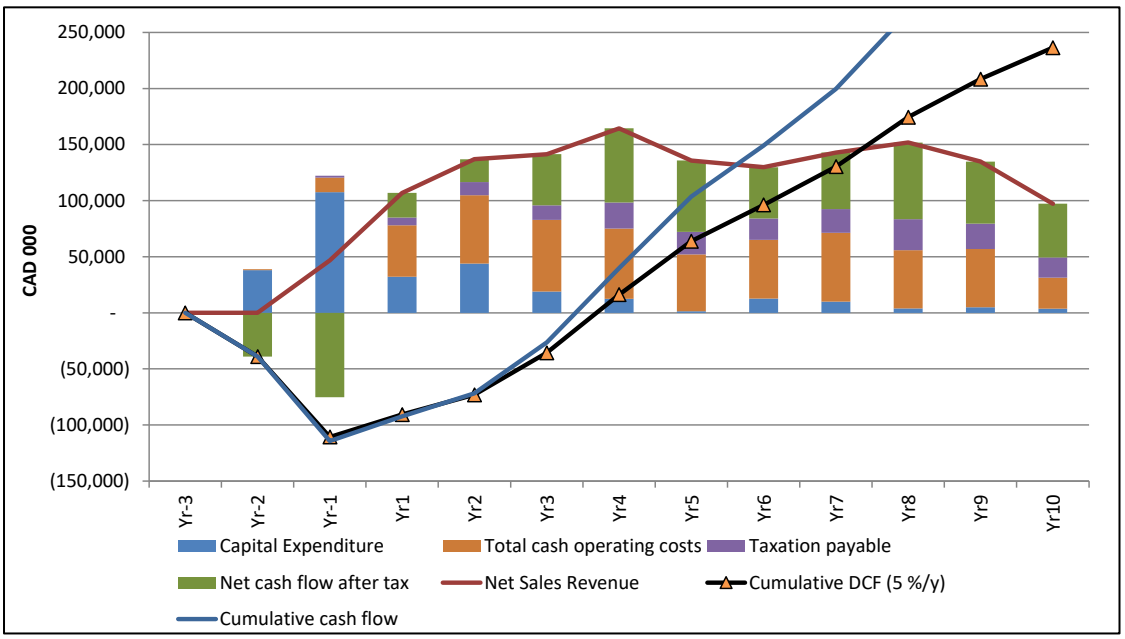
1.14.2.1 Base Case

The LOM base case project cash flow is presented in Table 1.6 and summarized in Figure 1.4.

Table 1.6
Life-of-Mine Cash Flow Summary

	LOM Total $'000	$/t Milled	US$/oz Au
Gross Revenue	**1,395,438**	**231.22**	**1,500**
Mining costs	393,243	65.16	423
Processing costs	112,852	18.70	121
General & Administrative costs	36,840	6.10	40
Selling expenses	6,363	1.05	7
Total Cash Cost	**549,298**	**91.02**	**590**
Net cash operating margin	846,141	140.21	910
Initial capital	144,163	23.89	155
Sustaining capital	135,717	22.49	146
Closure provision	10,000	1.66	11
Movement in working capital	-	-	-
Net Cash flow before tax	**556,261**	**92.17**	**598**
Taxation	184,952	30.65	199
Net Cash flow after tax	**371,309**	**61.53**	**399**
All-in Sustaining Cost per ounce (AISC)			747
All-in Cost per ounce (AIC)			902

Figure 1.4
Life-of-Mine Base Case Cash Flows



Pre-tax base case cash flows provide an internal rate of return (IRR) of 39.7%; when discounted at the rate of 5% per year, the pre-tax net present value (NPV_5) is $368.2 million. Undiscounted, the pre-tax payback period is 2.9 years. When discounted at 5% per year, it extends 3.1 years.

After-tax cash flows provide an IRR of 29.7%; after-tax NPV_5 is $236.4 million. Profitability index (i.e., the ratio of NPV_5/Initial Capital) is 1.6. Undiscounted, the after-tax payback period is 3.4 years. When discounted at 5% per year, it extends to 3.7 years.

1.14.2.2 Alternative Case (Toll Milling)

Micon evaluated the toll milling scenario as an alternative development option to the base case. The LOM project cash flow for the toll milling scenario is presented in Table 1.7.

Table 1.7
Toll Milling: LOM Cash Flow Summary

	LOM Total $'000	$/t Milled	US$/oz Au
Gross Revenue	1,365,811	226.32	1,500.00
Mining costs	393,243	65.16	431.88
Processing costs	289,680	48.00	318.14
General & Administrative costs	35,772	5.93	39.29
Selling expenses	6,234	1.03	6.85
Total Cash Cost	**724,929**	**120.12**	**796.15**
Net cash operating margin	640,882	106.19	703.85
Initial capital	64,513	10.69	70.85
Sustaining capital	127,417	21.11	139.94
Closure provision	2,000	0.33	2.20
Movement in working capital	-	-	-
Net Cash flow before tax	446,952	74.06	490.86
Taxation	150,745	24.98	165.56
Net Cash flow after tax	**296,207**	**49.08**	**325.31**
All-in Sustaining Cost per ounce (AISC)			**938.28**
All-in Cost per ounce (AIC)			**1,009.14**

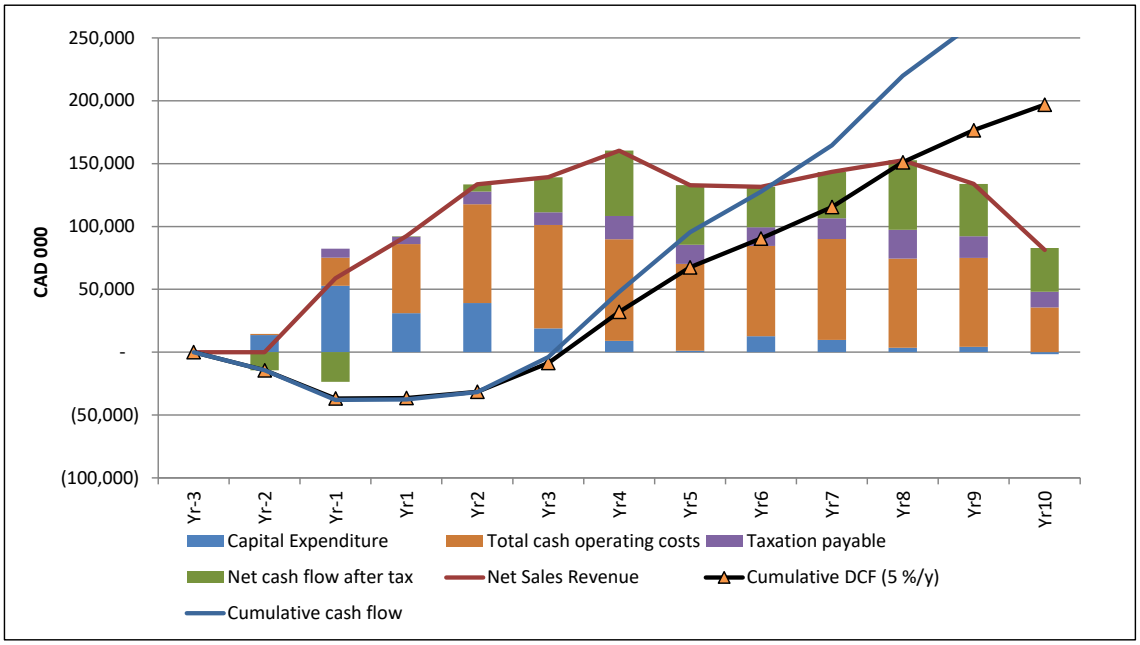
Pre-tax cash flows in the toll milling scenario provide an IRR of 63.9%; when discounted at the rate of 5% per year, the pre-tax net present value (NPV_5) is $306.2 million. Payback period is 2.2 years (undiscounted) or 2.3 years (discounted at 5%).

After-tax cash flows in this scenario provide an IRR of 43.8%; after-tax NPV_5 is $196.9 million, almost $40 million less than in the base case. However, the profitability index (i.e., the ratio of NPV_5/Initial Capital) is 3.1 for toll milling, compared to 1.6 in the base case.

Undiscounted, the after-tax payback period is 3.1 years. When discounted at 5% per year, payback extends to 3.2 years.

Annual cash flows for the toll milling scenario are summarized in Figure 1.5.

Figure 1.5
LOM Cash Flows (Toll Milling)



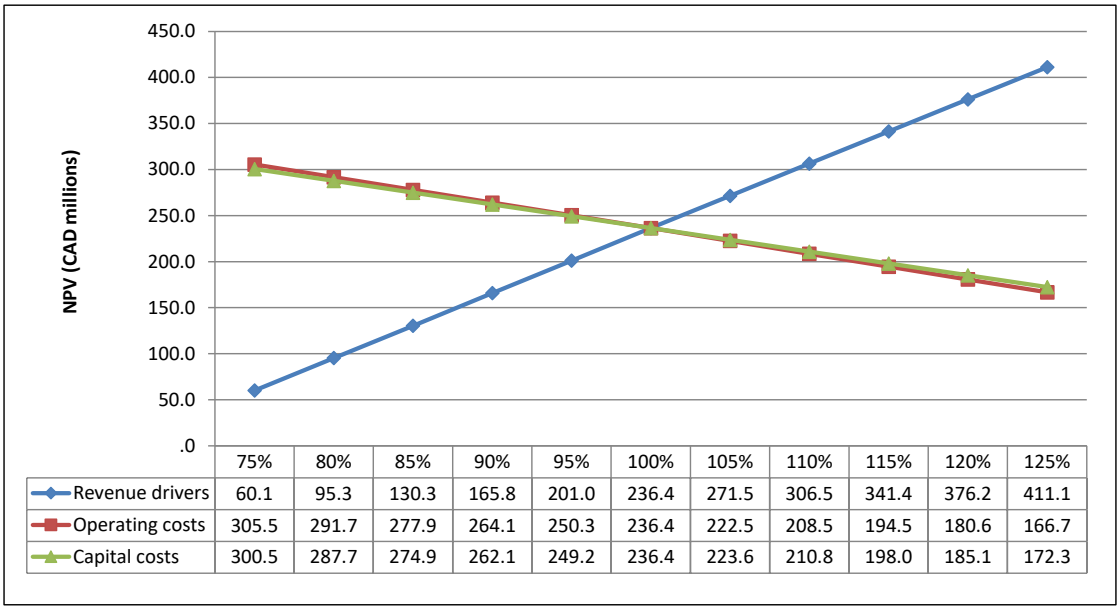
1.14.3 Sensitivity Study and Risk Analysis

1.14.3.1 Base Case

Micon tested the sensitivity of the base case after-tax NPV_5 to changes in metal price, operating costs and capital investment for a range of 30% above and below base case values. The impact on NPV_5 to changes in other revenue drivers such as gold grade of material treated and the percentage recovery of gold from processing is equivalent to gold price changes of the same magnitude, so these factors can be considered as equivalent to the price sensitivity.

Figure 1.6 shows the results of changes in each factor separately. The chart demonstrates that the project remains viable across the range of sensitivity tested. Nevertheless, it is most sensitive to gold price with a reduction of 25% reducing NPV_5 to $60 million. The project is less sensitive to both operating and capital costs, with an increase of 25% reducing NPV_5 to $166 million and $172 million, respectively.

Figure 1.6
Sensitivity of Base Case to Capital, Operating Costs and Gold Price

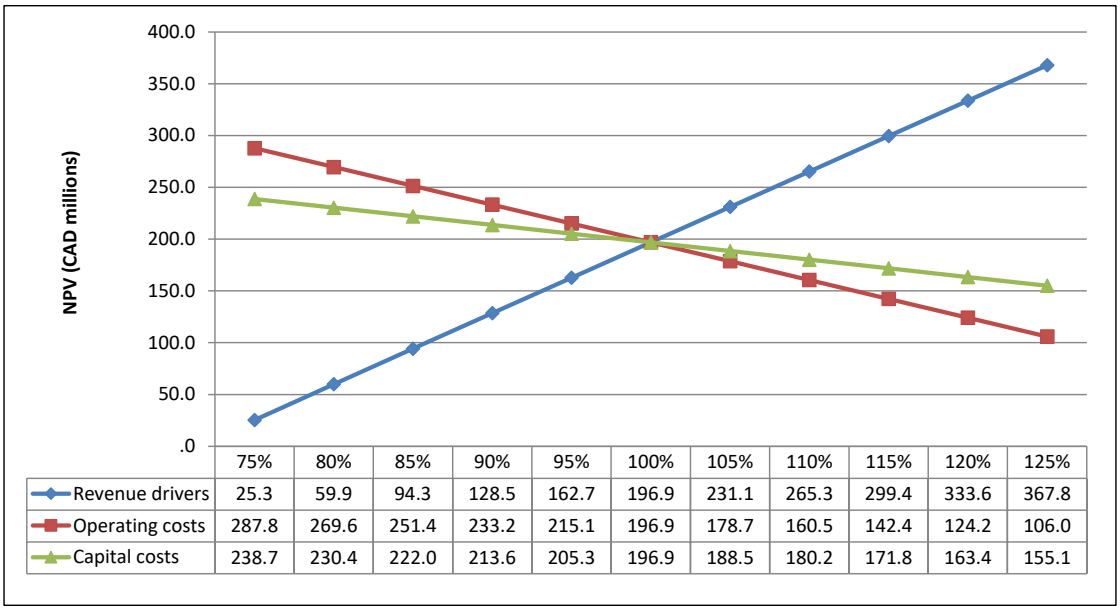


	75%	80%	85%	90%	95%	100%	105%	110%	115%	120%	125%
Revenue drivers	60.1	95.3	130.3	165.8	201.0	236.4	271.5	306.5	341.4	376.2	411.1
Operating costs	305.5	291.7	277.9	264.1	250.3	236.4	222.5	208.5	194.5	180.6	166.7
Capital costs	300.5	287.7	274.9	262.1	249.2	236.4	223.6	210.8	198.0	185.1	172.3

1.14.3.2 Alternative Case

Micon tested the sensitivity of the after-tax NPV_5 for the toll milling scenario to changes in metal price, operating costs and capital investment for a range of 30% above and below base case values. Figure 1.7 shows the results for the toll milling scenario of changes in each factor separately.

Figure 1.7
Sensitivity of NPV in Toll Milling Scenario



	75%	80%	85%	90%	95%	100%	105%	110%	115%	120%	125%
Revenue drivers	25.3	59.9	94.3	128.5	162.7	196.9	231.1	265.3	299.4	333.6	367.8
Operating costs	287.8	269.6	251.4	233.2	215.1	196.9	178.7	160.5	142.4	124.2	106.0
Capital costs	238.7	230.4	222.0	213.6	205.3	196.9	188.5	180.2	171.8	163.4	155.1

The chart demonstrates that this scenario remains viable across the range of sensitivity tested. Nevertheless, it is most sensitive to gold price with a reduction of 25% reducing NPV_5 to $25 million. The project is less sensitive to both operating and capital costs, with an increase of 25% reducing NPV_5 to $106 million and $155 million, respectively.

1.15 INTERPRETATION AND CONCLUSIONS

Since the early 1980s, exploration on the Golden Highway property has resulted in the discovery of a number of gold deposits and gold-mineralized zones. These can be classified as structurally-controlled orogenic gold deposits in an Archean greenstone belt setting.

Seven of these (South West, Westaway, West Block, Windjammer South, Windjammer Central, Windjammer North, 55 and Discovery) have been sufficiently drilled to have mineral resource estimates prepared for them. For all but Windjammer Central narrow, higher-grade vein structures have been modelled. Central, is a wider, lower grade bulk tonnage target potentially suitable for open pit mining. However, the deep overburden in the area has resulted in only a small tonnage of mineralization lying within a pit shell floated on it. For this reason, no resources have been reported for Central.

Other zones (Western, Dyment 3, LC, Halfway, South Basin, Twin Creeks, and Landing) and isolated drill intersections have also been found which deserve follow-up exploration.

The updated mineral resource statement for the Golden Highway Project is summarized above in Table 1.1.

The QP considers that the resource estimate for the Golden Highway Project has been reasonably prepared and conforms to the current CIM standards and definitions for estimating mineral resources.

The process of mineral resource estimation includes technical information which requires subsequent calculations or estimates to derive sub-totals, totals and weighted averages. Such calculations or estimations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, Micon does not consider them to be material.

Micon concludes that, based on the forecast production, capital and operating costs presented in this study, the project base case demonstrates an all-in sustaining cost (AISC) of US$747/oz, and that both the base case and alternative toll-milling scenarios present a potentially viable project at gold prices above $1,200/oz.

1.16 RECOMMENDATIONS

1.16.1 Recommended Future Work

Micon has reviewed a recommended program of continued exploration which has been proposed by Moneta staff. It is recommended that the following activities and programs be conducted to continue to advance the development of the project:

- Exploration drilling program to test mineralized targets already identified.
- Exploration drilling to expand the current mineral resources.
- Exploration drilling to test new exploration drill targets.
- Infill drilling within the current resource where drilling gaps occur or to upgrade resource confidence categories.
- Drilling within the current open pits in areas currently classified lacking sufficient drilling to support mineral resource estimates.
- Drill extensions of mineralization on extensions of open pits.
- Further geological interpretation and modelling.
- Updating mineral resource estimates upon completion of drill campaigns.
- Mineralogical and petrological studies to determine the deportment of gold.
- Metallurgical test work of the different styles and geological settings of mineralization to test recoveries near cut-off grade, the new higher average grade, as well as higher-grade areas of the resources.
- Metallurgical test work to include acid base accounting and trace element background data collection for environmental base line studies.
- Geotechnical data collection and test work to establish geotechnical aspects of mining the deposits.
- Environmental study programs including aquatic, terrestrial, hydrology and groundwater to provide data for planning and permitting.
- First Nation and other stakeholder consultation.
- Updated resource and preliminary economic assessment (PEA) of the project to include new and expanded resource areas to determine the focus, direction and plans for further resource development.
- Subject to positive results from the updated PEA, pre-feasibility studies, geotechnical studies, hydrological studies and additional engineering and mine plan studies.

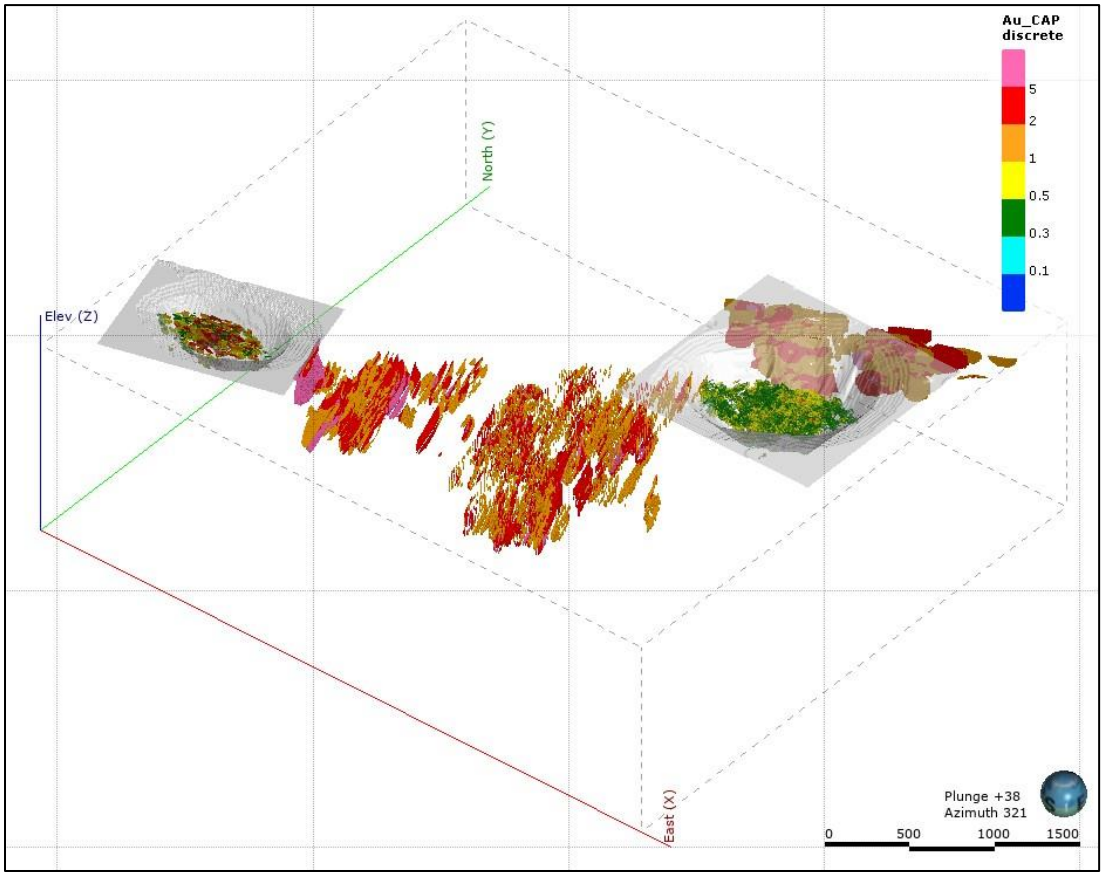
An infill drilling program of 40,000 m is recommended to infill portions of the resource where drill spacing is not sufficient within the interpreted wireframes to fully interpolate grade

between more widely spaced drill holes and to connect shallower structures with extensions at depth.

A 60,000 m exploration drilling program is recommended to expand the currently modelled or pending resources as well as areas within proposed open pits which have not been sufficiently drilled to define resources. A new maiden resource estimate is currently planned for Westaway. Drilling should be allocated to the following target areas: down dip and strike extensions of the 55, Westaway/West Block area, South West east extension (former Gap area) and Windjammer South deposits, as well as the Discovery and Windjammer North deposits and associated zones along the northern splay of the DPFZ. The area north of the BIF units at Windjammer South is not sufficiently drilled to support mineral resource estimates.

A number of new targets not included in the current resource have been identified and found to host gold mineralization, notably along the southern contact of the regional banded iron formation (BIF) and the southern margins of the sedimentary basin where a repeat of the BIF unit has been discovered associated with mineralization. A program of 35,000 m is recommended to test the Halfway, Halfway Lake, East Fold, South Basin, Dyment 3 and Western Zones (Figure 1.8).

Figure 1.8
Golden Highway Project, 3D Isometric View, Main Target Zones



Source: Moneta, 2021.

A number of zones including LC, Landing Zone and Twin Creeks occur along the northern splay of the DPFZ within the Tisdale and Kidd-Munro Formations which warrant additional drill testing. A large portion of this structure east of Windjammer North has not been tested. Along the regional BIF, approximately 8 km of strike length is untested. Drill testing is required east of the Windjammer South and west of the 55-deposit area. Historical holes have also been identified with gold mineralization along the Arrow Fault to the north. It is recommended to conduct 65,000 m of exploration drilling.

Upon completion of the proposed additional drilling updated mineral resource estimates and, subsequently, an updated PEA should be completed to first determine the overall size of the project, then determine the potential economics and outline the best program to advance the project prior to commencing a full pre-feasibility study covering all resource areas.

It is recommended that Moneta characterize the acid generation/acid consuming and metal leaching potential of the different mineralized zones and rock types potentially to be mined/exposed.

Commencing geotechnical data collection is recommended in line with the current status of the project in order to establish suitable base line data as required for further development.

A program of environmental and social base line data collection and studies is recommended to reflect the current status of the project and situate the project favourably for further advancement. The collection of suitable hydrology, ground water and weather data are also recommended.

Moneta is still in the exploration stage of the project. Some environmental baseline data have been collected. It is recommended that Moneta continue all the baseline studies outlined in Section 20.1.2.3 including continued First Nations and community consultation. It is then recommended that a Terms of Reference be prepared and submitted to the government for approval.

Once the approval has been received Moneta will need to prepare the Environmental Assessment that identifies all positive and negative environmental impacts and how it intends to mitigate all negative impacts.

The Closure Plan document should be prepared at the same time as the EA document to streamline as much as possible the permitting process. The EA document will need to be submitted to the government for review, comments and approval. It is recommended that Moneta secure all necessary permits as soon as practical.

1.16.2 Recommended Program Budget

Moneta has also prepared a program budget which is based, in part, on Micon's recommendations (Table 1.8).

Table 1.8
Recommended Work Program Budget

Program	Units (m)	Unit Cost (C$/m)	Budget
Mine Property General			
Infill Drilling Program	40,000	$150	$6,000,000
Resource Expansion Drilling, including in pit drilling	60,000	$150	$9,000,000
Exploration Drilling	65,000	$150	$9,750,000
Drill Test Known Targets	35,000	$150	$5,250,000
Metallurgical Recovery Test Work			$250,000
Petrographic and Mineralogical Studies			$50,000
Geological Interpretation and Modelling			$550,000
Environmental Base Line Study Work: Aquatic, Terrestrial, Ground Water, Water Quality			$350,000
First Nation Consultation and Archaeological Studies			$350,000
Geotechnical and Hydrology programs and studies			$250,000
Resource updates and PEA			$850,000
Pre-feasibility Study			$1,500,000
Total			**$34,400,000**

The QPs have reviewed the proposed program of work and budget and find them to be reasonable and justified in light of the observations made in this report. The QPs recommend that Moneta conduct the planned activities subject to availability of funding and any other matters which may cause the objectives to be altered in the normal course of business activities.

2.0 INTRODUCTION

2.1 TERMS OF REFERENCE

At the request of Mr. Gary O'Connor, CEO and Chief Geologist of Moneta Porcupine Mines Inc. (Moneta), Micon International Limited (Micon) undertook an independent technical review of the mineral exploration completed on the Golden Highway Project, prepared an updated mineral resource estimate for the South West zone and completed a Preliminary Economic Assessment (PEA) for that zone in October, 2020. Since that time Moneta has requested that the mineral resources for the remaining zones be updated. The PEA is repeated here in order to keep it current and reportable. The PEA considered only the South West zone which has not been updated for this report.

Since the completion of the 2012 mineral resource estimate and PEA (Puritch et al., 2012), additional drilling on several targets has been performed by Moneta. This drilling and its results led to a new geological interpretation and resource estimate prepared by Micon and issued on January 17, 2019. Further infill drilling on the South West zone led to a mineral resource update for that deposit which was released on November 26, 2019. Since the data freeze date for the PEA, additional infill drilling has been completed on other zones. This additional drilling has been used herein to update those zones.

Some of the boiler plate text for this report has been contributed by Moneta and edited by Micon.

Micon and the consultants who prepared this report do not have any material interest in Moneta or any related entities. The relationship between Micon and Moneta is solely a professional association between client and independent consultant. This report is prepared in return for fees based upon agreed commercial rates and the payment of these fees was in no way contingent on the results of this report.

The requirements of electronic document filing on SEDAR necessitate the submission of this report as an unlocked, editable PDF (portable document format) file. Micon accepts no responsibility for any changes made to the file after it leaves its control.

2.2 INFORMATION SOURCES

Micon was given access to electronic data and previous reports compiled by Moneta and its consultants. Some of the illustrations in this report are reproduced from those data and documents.

2.3 QUALIFIED PERSONS, SITE VISITS AND AREAS OF RESPONSIBILITY

The primary authors of this report and Qualified Persons are:

- B. Terrence Hennessey, P.Geo., Senior Associate Geologist.

- Barnard Foo, P.Eng., Senior Engineer.
- Richard Gowans, P.Eng., President and Principal Metallurgist.
- Christopher Jacobs, CEng, MIMMM
- David K. Makepeace, P.Eng., Associate Geological and Environmental Engineer
- Nigel Fung, P.Eng., Vice President of Mining.

Micon's site visit to the Golden Highway Project was conducted between September 11 and 14, 2018 by Terrence Hennessey. The project site east of Matheson was accessed by four-wheel drive truck on September 12, 2018. The QP visited the locations of the Windjammer Zones, 55 Zone and South West Zone target areas. As the local topography is generally flat and low, with frequent swampy areas, no exposures of mineralization or local host rocks were available to be seen. Drill set-up locations were also viewed and surveyed locations of a few were checked by GPS. This was followed by visits to Moneta's core storage yard and logging facility in Timmins to inspect core and review procedures with the logging geologists. The core from several typical diamond drill holes was reviewed to assess the quality of drilling, core recovery and sampling and to view the lithologic, alteration and structural controls of the mineralization. Moneta's office in downtown Timmins was also visited to review geological and mineralization models.

2.4 UNITS AND ABBREVIATIONS

All currency amounts are stated in Canadian (C$) or US dollars (US$) as indicated. Quantities are generally stated in metric units, the standard Canadian and international practice, including metric tons (tonnes, t) and kilograms (kg) for weight, kilometres (km) or metres (m) for distance, hectares (ha) for area. Wherever applicable, Imperial units have been converted to Système International d'Unités (SI) units for reporting consistency. Precious metal grades may be expressed in grams (g) or grams per tonne (g/t), parts per million (ppm) or parts per billion (ppb). Their quantities may also be reported in troy ounces (ounces, oz), a common practice in the mining industry. A list of abbreviations is provided in Table 2.1.

Table 2.1
Abbreviations

Abbreviation	Meaning	Abbreviation	Meaning
µ	micron	km^2	square kilometre
°C	degree Celsius	kPa	kilopascal
°F	degree Fahrenheit	kVA	kilovolt-amperes
°	azimuth/dip in degrees	kW	kilowatt
µg	microgram	kWh	kilowatt-hour
A	ampere	L	litre
A	annum	L/s	litres per second
Au	gold	m	metre
Bbl	barrels	M	mega (million)
Btu	British thermal units	m^2	square metre
C$	Canadian dollars	m^3	cubic metre

Abbreviation	Meaning	Abbreviation	Meaning
Cal	calorie	min	minute
Cfm	cubic feet per minute	MASL	metres above sea level
Cm	centimetre	mm	millimetre
cm^2	square centimetre	mph	miles per hour
D	day	MVA	megavolt-amperes
dia.	diameter	MW	megawatt
Dmt	dry metric tonne	MWh	megawatt-hour
Dwt	dead-weight ton	m^3/h	cubic metres per hour
Ft	foot	opt, oz/st	ounce per short ton
ft/s	foot per second	oz	Troy ounce (31.1035g)
ft2	square foot	ppm	part per million
ft3	cubic foot	psia	pound per square inch absolute
G	gram	psig	pound per square inch gauge
G	giga (billion)	RL	relative elevation
Gal	Imperial gallon	s	second
g/L	gram per litre	st	short ton
g/t	gram per tonne	stpa	short ton per year
Gpm	Imperial gallons per minute	stpd	short ton per day
Hr	hour	t	metric tonne
Ha	hectare	tpa	metric tonne per year
Hp	horsepower	tpd	metric tonne per day
In	inch	US$	United States dollar
in^2	square inch	USg	United States gallon
J	joule	USgpm	US gallon per minute
K	kilo (thousand)	V	volt
Kcal	kilocalorie	W	watt
Kg	kilogram	wmt	wet metric tonne
Km	kilometre	yd^3	cubic yard
km/h	kilometre per hour	yr	year

2.5 ACKNOWLEDGMENT

Micon is pleased to acknowledge the helpful cooperation of Moneta personnel, all of whom made any and all data requested available and responded openly to all questions, queries and requests for material.

3.0 RELIANCE ON OTHER EXPERTS

A description of the properties, and ownership thereof, is provided in Section 4 of this report for general information purposes only, as required by NI 43-101.

The QPs have not reviewed any of the documents or agreements under which Moneta holds title to the claims of the Golden Highway Project and offers no opinion as to the validity of the mineral titles claimed.

Moneta has supplied Micon with written descriptions of the property outlining the current claim status and any underlying royalties.

The QP has relied on the property descriptions and claim status for completion of Section 4.0 of this report. The QPs have also relied on information regarding royalties provided by Moneta.

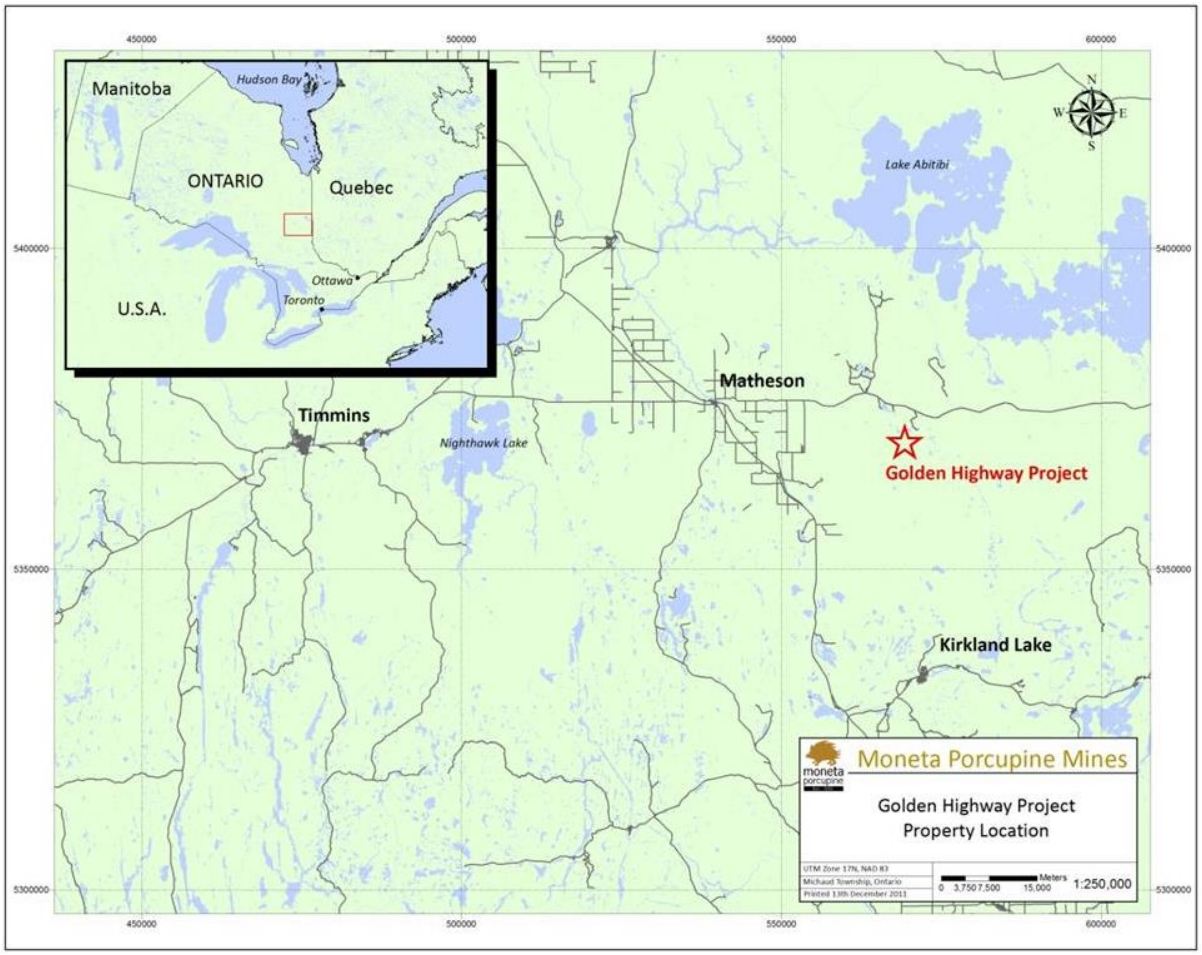
4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 PROPERTY LOCATION

The Golden Highway Project is located within the Larder Lake Mining Division, northeastern Ontario, Canada. It is centred about 571456 East and 5368622 North, in Zone 17N of the NAD83 UTM coordinate system or 48° 28" North Latitude and 80° 02" West Longitude. The property is located approximately 540 km north of Toronto, 92 km east of Timmins, and 40 km north of Kirkland Lake (Figure 4.1)).

The property co-ordinates used in this report are located using the NAD83 UTM coordinate system.

Figure 4.1
Property Location Map



Source: Moneta, 2019.

4.2 PROPERTY DESCRIPTION AND LAND TENURE

The Golden Highway Project and Kirkland Lake Garrison JV ground is a large package of mining claims totaling 10,971 ha. For the purposes of this report, only the main contiguous portion of the project is detailed and is referred to as the Golden Highway Project. The claims and leases under joint venture (JV) with Kirkland Lake Gold Mines located east of Matheson in a number of claim blocks, some adjacent to the Golden Highway Property, are not included in the scope of this report as they are not considered to be part of the same project. The Garrison JV mining claims are not included, including the Dyment 3 claims. The Golden Highway Project is comprised of 22 patented mineral claims, 4 leased mineral claims, and 310 unpatented mineral claims (consisting of 213 single cell mining claims and 97 boundary cell claims) located in Guibord, Michaud, Barnet, Garrison and McCool Townships (Figure 4.2). These contiguous claims total 6,844 ha and are owned 100% by Moneta, excluding the Dyment 3 claim block (53.2 ha) that is held 75% by Moneta and 25% by Kirkland Lake Gold Inc. Details of the property claims are set out in Appendix 1.

On April 10, 2018 Ontario launched a new electronic Mining Lands Administration System (MLAS) replacing the province's century-old traditional ground staking methods. It marked the completion of the modernization of the Mining Act. For purposes of this report, the new MLAS system of claims and leases references and numbering system is used. However, for completeness, the historical legacy numbering and references are included in the tables located in the appendices. The mineral resource estimate is located entirely on the patented claims and leased mineral claims.

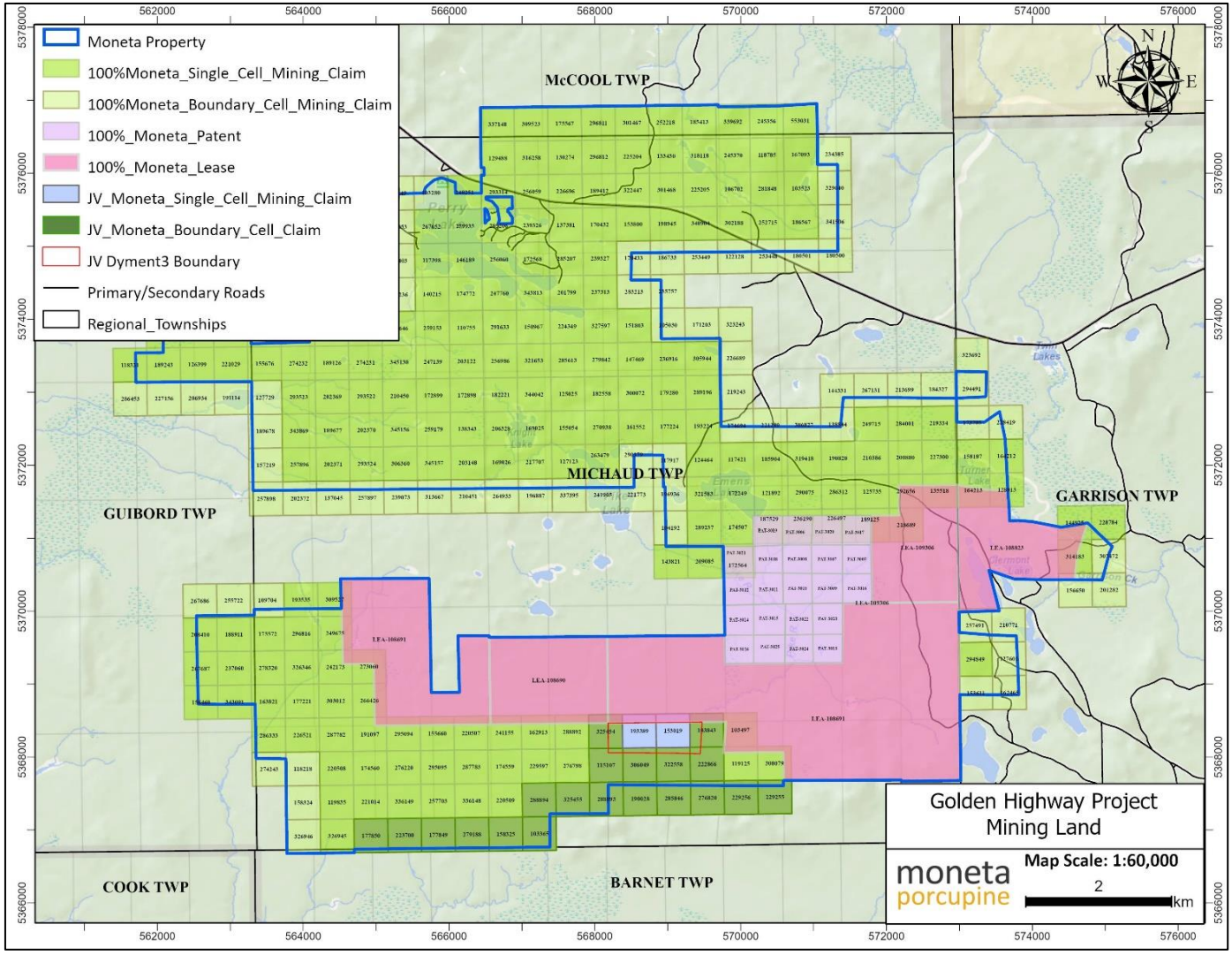
The patented mineral claims are a contiguous block of 22 (355.97 ha) with both mining (MR) and surface rights (SR). Each patent covers approximately 16 ha, as listed Appendix 1, and shown on Figure 4.2. They are subject to annual mining taxes and are owned 100% by Moneta with no underlying royalty agreements.

The four leased mineral claims on the property consist of three in Michaud (LEA-109306, 108690, and 108691) and one in Garrison Townships (LEA-108823) covering a total of 1,653.20 ha. Mining leases LEA-108690 and 108691 include surface rights and all are subject to mining taxes. These leases are listed in Appendix 1 and shown in Figure 4.2. All leases are 100% Moneta owned and have no underlying royalty agreements.

The remaining 310 unpatented mineral claims making up the Golden Highway Project are located in Guibord, Michaud, Barnet, Garrison and McCool Townships (Figure 4.2). For these, underlying royalty agreements are in place for two blocks located in areas to the north and away from the mineral resource estimate (Section 4.3).

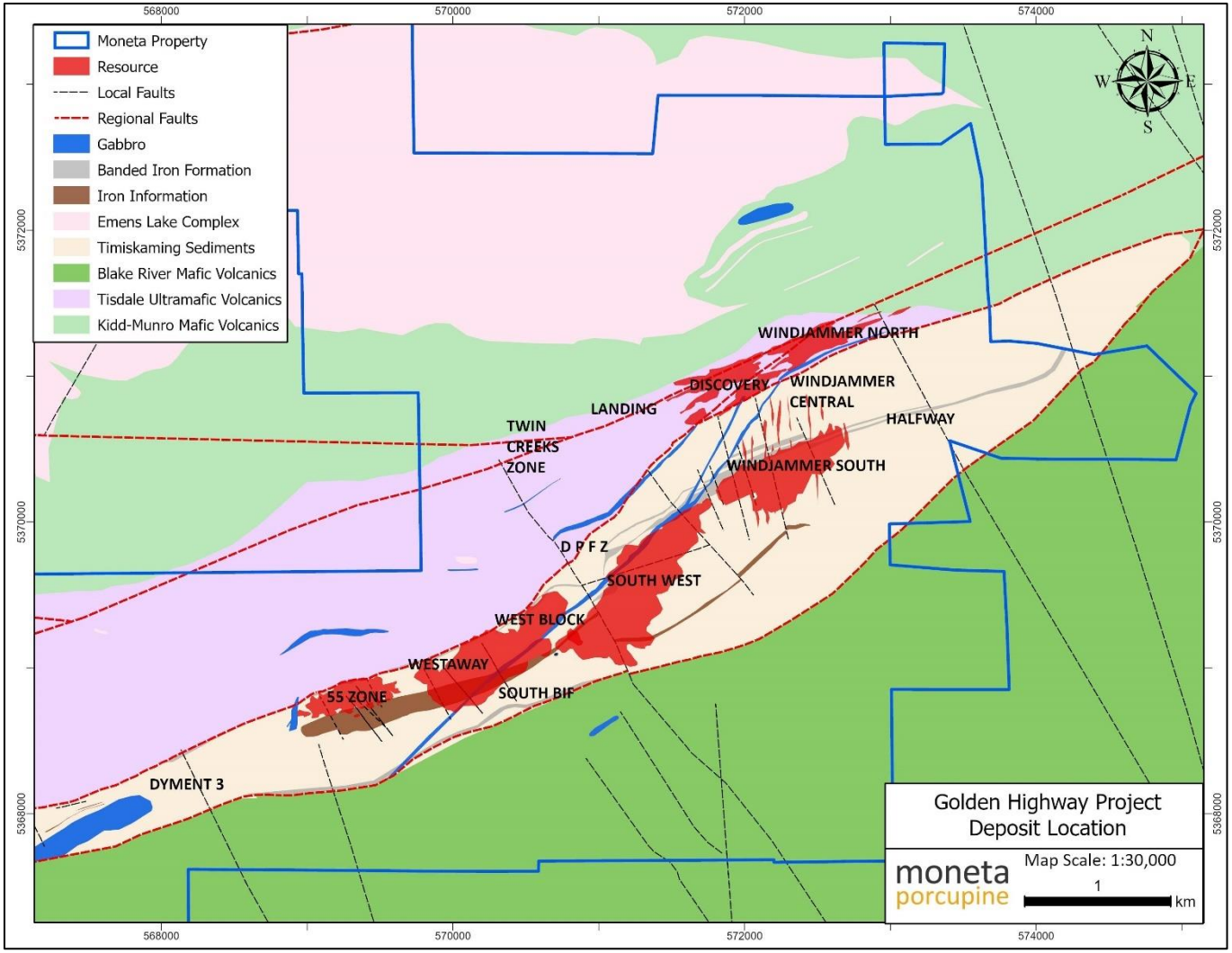
The location of the principal mineralized zones within Property Boundary is shown below in Figure 4.3.

Figure 4.2
Property Claim Map



Source: Moneta, 2020.

Figure 4.3
Location of Mineral Zones Relative to Mining Lease Boundaries



Source: Moneta, 2021.

4.3 UNDERLYING AGREEMENTS

None of the patented mineral claims or leased mineral claims containing the mineral resource estimate are subject to any underlying royalty agreements and are owned 100% by Moneta. Within the 310 unpatented mineral claims making up the Golden Highway Project a total of 10 legacy claim units referred to as the Moses block are subject to a $5,000 per annum advance royalty.

The Moses block is located to the north and east of the mineral resource estimate within Michaud and Garrison Townships. In addition, a total of 12 legacy mineral claim units referred to as the Hennesy block are subject to a 10% NPI (Net Profits Interest). The block is located to the north and west of the mineral resource estimate within Michaud Township. The locations of the unpatented claims subject to underlying royalty agreements are shown in Figure 4.4.

4.4 ENVIRONMENTAL AND PERMITTING

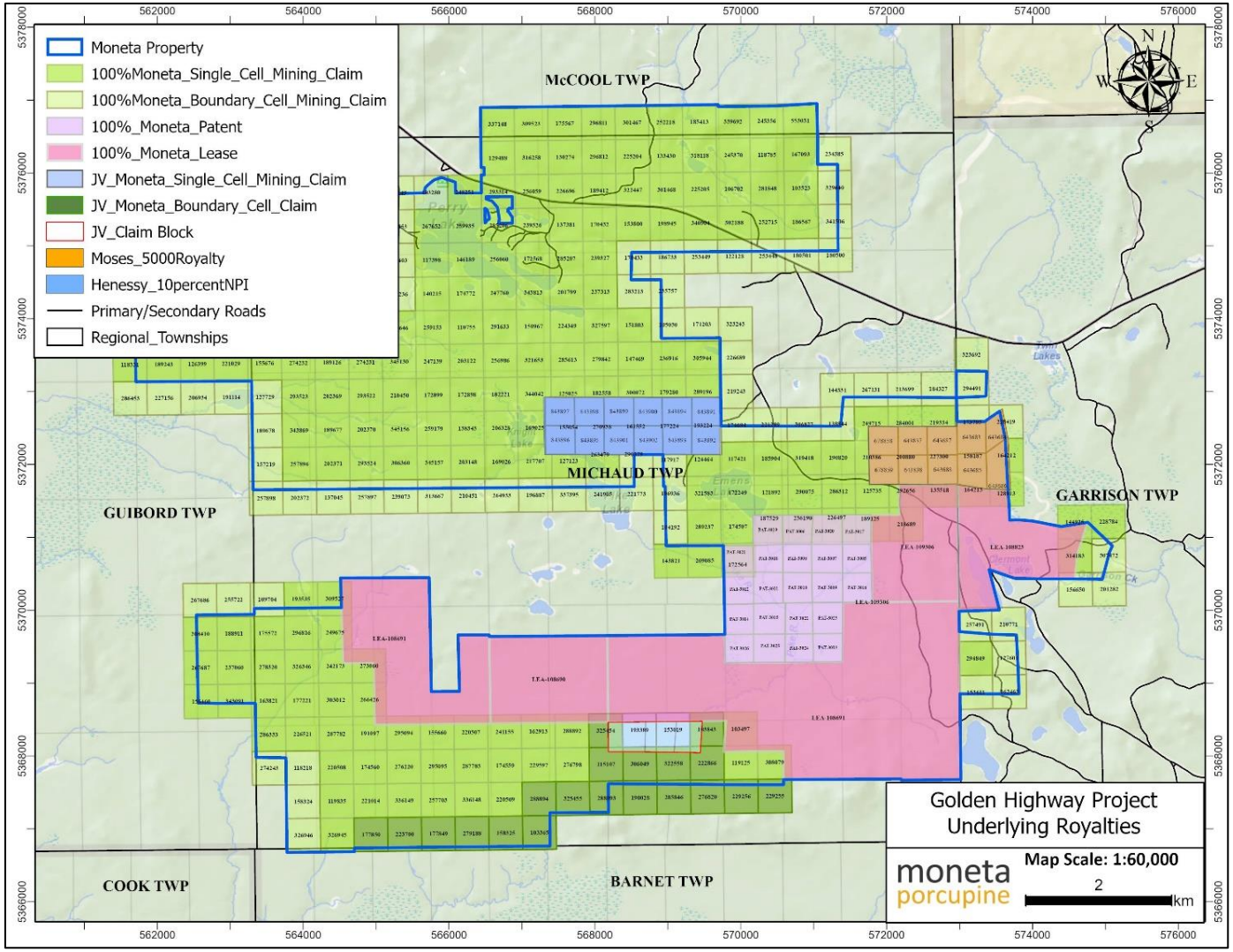
No industrial activities such as mining or mineral processing are known to have been conducted on the property.

Moneta has advised the QP that it is not aware of any environmental liabilities within the Golden Highway Project area or of any restrictions beyond those covered by existing legislation and regulation with respect to potential mine sites and tailings and disposal sites should future development take place. During the site visit, the QP did not notice any significant environmental liabilities on the property.

Some of the property has been logged for timber.

The Ontario Mining Act requires companies to apply for a three-year exploration permit prior to undertaking any exploration activities involving heavy equipment. The process includes First Nations consultation. Moneta submitted and obtained exploration permits for the Golden Highway Project for its 2013 to 2019 drilling programs. Moneta's current exploration permit PR19-000171 is valid until September 05, 2022.

Figure 4.4
Claims Subject to Underlying Royalty Agreements



Source: Moneta, 2020.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 ACCESSIBILITY

The Golden Highway Project is accessed by logging and drilling roads that extend south from Highway 101, east of Matheson, Ontario. The intersection for the main logging access road (Tower Road) is 32 km east of Matheson at 570730E and 5374755N UTM NAD 83. The mineral deposits are located approximately 4 km south of Highway 101 and accessed locally by a network of forestry logging and drilling roads of varying quality (see Figure 4.1).

The location of the proposed portal site in the study is accessed by a surface road which connects with Tower Road. The site is located on bedrock and above any low-lying wet areas.

5.2 CLIMATE

The climate is typical of northern boreal forest areas with the project area experiencing four distinct seasons. There are extended periods of sub-zero temperatures during the months of November through March. The daily average winter temperature in January is -6.2°C with daily average maximum and minimum of -10°C and -22.8°C respectively, and an extreme daily minimum of -45°C. The daily average summer temperature in July is +18.3°C with daily average maximum and minimum of +24.8°C and +11.8°C respectively and an extreme daily maximum of +38.3°C. The region has average annual precipitation of approximately 78.6 cm including approximately 57 cm of rain, largely during the months of April to October and up to 22 cm of winter snow accumulation, occurring largely between the months of November and April (Environment Canada website, 1981 to 2010 data).

Mineral exploration can be conducted year-round. However, because of the swampy ground conditions on much of the project area, exploration activities such as geophysical surveys and diamond drilling are more easily conducted in the winter due to better accessibility after freeze-up. Drilling at other times is possible on portions of the property.

5.3 LOCAL RESOURCES AND INFRASTRUCTURE

There are excellent local resources and infrastructure to support exploration and mining activities in the region which has a long history of both activities. Mining equipment and personnel are readily available from the towns of Matheson, Kirkland Lake and Timmins. Timmins and Kirkland Lake are major supply and service centres for the mining industry. They are serviced by modern telecommunications, commercial airlines or rail service and truck transportation.

Communications and power are available along Highway 101 and Highway 672. Water resources are locally available. Cell phone coverage extends to the property. Electrical power is supplied to various mining and mineral exploration projects along Hwy 101 from west of Matheson to the Quebec border.

Moneta maintains a secure and well equipped, core logging and storage facility in north Timmins at 2679 Highway 655 and an office in downtown Timmins at 65 Third Avenue.

Moneta holds sufficient surface rights necessary for potential future mining operations including tailings storage areas, waste disposal areas and a processing plant.

5.4 PHYSIOGRAPHY

Regional-scale, poorly drained swamp dominates much of the project area. The property topography is relatively flat with an elevation of approximately 330 m above sea level. Relief is generally only a few metres, with drier sandy esker ridges and dunes rising up to 25 m above open and forested swampy areas in the northern and eastern parts. The property has very limited outcrop. There are areas of swamp in the southern part of the property.

All streams and rivers in the area are part of the Arctic watershed. The Pike River meanders through the centre of the property. It is a potential source of water for mining operations but provides little drainage for the low-lying terrain. Drainage patterns are poorly developed due to the low topographic relief and the extensive clay cover immediately below the vegetation layer. Several small lakes occur on the property. Perry Lake, the largest, is situated in the northwest corner of the property. Some of the diamond drill holes form natural wells.

Overburden depths on the property are variable and generally deep, with depths up to 80 m. There are isolated areas of bedrock exposure located in the centre of the Michaud Parcel and to the southeast marking the southern limit of the Pike River valley.

Vegetation consists of low stands of black spruce and alder in the wetter areas, with stands of birch, poplar and jack pine in the higher drier sandy areas.

6.0 HISTORY

6.1 EARLY REGIONAL HISTORY

The area between Matheson and the Quebec border has a long history of prospecting, mineral exploration, and gold mining dating back to the beginning of the 20th Century. Production from mines in the area began in 1911.

6.2 PROPERTY HISTORY

Claim staking in the area increased in 1944 as a consequence of an Ontario Department of Mines report which suggested that the Destor Porcupine Fault Zone (DPFZ) passed through the original Moneta patented claims in Michaud Township. These patents had been staked as claims in 1939 and optioned to Moneta Porcupine Mines Ltd. (a predecessor company) in 1945. Since that time various portions of the property have been held and explored by a succession of companies. Moneta's current land position was primarily acquired through staking and by a series of joint venture agreements dating from the late 1980's onward.

In 1986, Moneta activated exploration on its patents in Michaud Township and optioned the immediately adjacent Nahanni Mines claim group. This claim group was taken to lease and later became known as the Nufort leases (LEA-108690 and LEA-108691) In 1988 to 1989, Unocal Canada Ltd. optioned the property and completed the Nahanni (Nufort) 50% earn-in on behalf of Moneta for total expenditures of $1 million and payments of $100,000. Unocal dropped its option in 1989 due to a corporate decision to terminate exploration in Canada and the property was returned to Moneta.

Independence Mining Company Inc. optioned the property in 1991 and completed its minimum expenditure commitment of $400,000 before returning it. The agreement called for exploration expenditures of $4 million and payments of $290,000 for a 50% property interest.

Lac North America Ltd. (acquired by Barrick Gold Inc. in August, 1994) optioned the property from Moneta in 1994 including Moneta's interest in the Nufort Leases. The agreement called for total expenditures of $3.5 million including payments of $225,000 for a 60% interest on the 100% Moneta ground. Lac also optioned the Nufort lease interests in 1995 under a separate agreement that required total expenditures of $3.0 million and payments of $200,000 for an overall 70% interest. The combined property was returned to Moneta in 1998 following the downsizing of Barrick's exploration activities.

In 1998, Moneta acquired the remaining 50% interest in the Nufort leases for a 100% interest, extinguishing all underlying encumbrances.

In 2001, an option agreement was entered into with Acrex Ventures Ltd. covering a significant portion of the southern staked claims and larger Nufort lease, as well as several patents. Acrex vested in a portion of the option in 2004 by meeting earn-in requirements and both companies

formed the Michaud Joint Venture. In 2009, Moneta acquired the 50% Acrex ownership interest in the Michaud Joint Venture ground for $1 million, terminating the joint venture.

St Andrew Goldfields Ltd., optioned the southern portion of the property in Barnet and southeastern Michaud Township in 2001 with a 50% earn-in expenditure level of $200,000 and staged option payments, satisfied in 2009 as part of a property exchange agreement. In this property exchange Moneta was granted a 100% interest in 29 claim units in Cody Township, a 100% interest in three claim units in Guibord Township, and a $50,000 cash payment from St Andrew Goldfields Ltd. In return, and, in order to address expenditure commitments, the Agreement granted St Andrew Goldfields Ltd. a 75% vested interest in the Guibord property and 50% vested interest and operatorship in the Barnet Joint Venture.

In 2004, the Perry Lake property was staked (68 claim units) and the Turner Lake (ten claim units) and Dyment 3 (three claim units) properties were optioned. In 2006, an additional ten claim units were staked adjoining the Perry Lake block to the north.

In November, 2007, Moneta entered into an agreement with a subsidiary of Newmont Mining Corporation to acquire Newmont's 50% interest and operatorship in a joint venture known as the Windjammer property comprised of two mining leases (22 claim units) in Garrison and Michaud Townships. Moneta issued 4,380,000 common shares to Newmont as consideration for the acquisition. A subsequent February, 2009 vesting order from the Mining Commissioner increased Moneta's interest to 100% in the Windjammer property.

Moneta also staked three claim units in 2008. A total of eight claim units were acquired in Michaud Township by purchase (four claims) and staking (four claims) in 2010. In 2011 Moneta staked an additional two claim units in Michaud Township and successfully renewed three mining leases within the Golden Highway project for a further 21 years. A fourth mining lease was renewed in 2012, also for 21 years.

In August, 2019, Moneta acquired three (3) single (64.2 ha) and three (3) boundary cell mining claims (64.2 ha) contiguous with the eastern edge of the Golden Highway project, within Garrison Township, covering a total of 128.4 ha. Moneta also staked one single cell claim in the NE area of the project in 2019 for 21.4ha.

6.3 HISTORIC EXPLORATION PRIOR TO MONETA

This section of the report and Table 6.1 summarize the known exploration history of the project prior to Moneta's exploration in the area. Table 6.1 is a general listing of exploration records available for the current Golden Highway Project, primarily sourced from government assessment files and reports (Puritch et al., 2012).

Table 6.1
Golden Highway - Summary of Historical Exploration and Development Activities

Year	Company	Exploration	Township
1945	Koulomzine	Mag survey, hole 6, 8, 9, 12	Michaud
1946	Clodan	Mag survey	Michaud
1946	Moneta	Holes 1 to 18, geological report	Michaud
1966	Dalhousie Oil and Gas	DM66-1 and 2	Michaud
1967	Amax	MR/H/W-1 to 40, overburden drilling	Michaud
1968	Amax	KX25-67 and KX26-68	Michaud
1970	Renzy Mines	Holes 1 to 12	Michaud
1972	Hollinger Mines	Mag survey	Guibord, Michaud
1979	Amax	Geological survey	Michaud
1980	Redstone	Mag survey, horizontal loop	Michaud
1980	Windjammer Power	Summary report, Holes 1 & 2	Michaud, Garrison
1981	Lacana	Geophysical surveys	Michaud
1981	Nahanni	Mag and VLF survey	Michaud
1981	Redstone	Mag survey	Michaud
1981	Tesluk	Drill hole 81-1	Michaud
1982	Gold Fields	Mag and VLF survey	Michaud, Guibord
1982	Nahanni	Drill holes M-82-1 to 4 & Geological mapping	Michaud
1982	Selco	Geophysical surveys (IP and Mag)	Michaud
1983	Moses	Drill holes JM-3 and 4	Michaud, Garrison
1983	Nahanni	Mag and VLF survey	Michaud
1983	Nahanni	Drill holes M-83-5 to 7, Mag and VLF survey, Geological mapping, R83-1 series, Overburden drilling, exploration report	Michaud
1983	OGS - Abitibi Project	Airborne Mag Survey	Michaud, Barnet
1984	Asarco	Geological mapping, Drill hole DPL-1	Michaud
1985	Falconbridge	Drill holes 659-04 to 6 , IP survey	Michaud
1985	Meunier	Geological report	Michaud
1985	Noranda	Mag and VLF survey, drill holes WJ-85-1 and 2	Barnet, Michaud
1985	St Joe	Drill holes PR85-05 to 11	Guibord, Michaud
1986	Hennessey	Mag survey	Michaud
1986	Kidd Creek	Mag and VLF survey	Michaud
1987	Goldfields/Lacana	MPH Ground Mag Survey, IP	Michaud
1986	Lacana	Drill holes MD-1-86 and 2	Michaud
1986	Nahanni	Drill holes NM-86-8 to 13	Michaud
1986	Noranda	Geological mapping, drill holes GR-86-01 and 2	Michaud

Source: Puritch et al., 2012.

6.4 DEPOSIT RELEVANT HISTORIC EXPLORATION

This section summarizes the historic exploration in the immediate area of the 55, South West, Windjammer and Discovery deposits, for which the resource estimation has been undertaken.

In 1947 to 1948, Wright-Hargreaves Mines Ltd. drilled four holes totalling 1,346 m on the Windjammer property (WH series). This program completed a section across the main iron formation east of the current Windjammer South deposit with a best value of 6.9 g/t Au over 0.32 m reported.

In 1966, also on Windjammer, Dalhousie Oil and Gas completed two drill holes in the northern part of the property with no assays reported.

In 1980 Windjammer Power and Gas completed two diamond drill holes in iron formation on the Windjammer property (WJMPH series), with a best result of 36.6 g/t Au over 0.32 m.

From 1983 to 1989, after optioning the Windjammer portion of the property, Noranda Exploration Co. Ltd. carried out considerable work. One diamond drill hole was completed in 1983 in the southeast section, with a best assay of 1.38 g/t Au over 1.23 m. In 1985 two holes were drilled through the DPFZ intersecting green carbonate, felsic tuff and basalt with a best result of 4.3 g/t Au over 0.60 m. The 1987 program included a 41 km grid with magnetometer and IP surveys, followed by a Phase One 30-drill-hole program totalling 9,626.70 m. Phase Two was completed in 1988 with five holes (2,404.50 m) in the South Zone and 11 holes (4,287.30 m) in the North Zone. Later that year two additional holes were drilled in South Zone (823.20 m) and one hole in the North Zone (395.67 m). This program was continued into 1989 with two holes each in the South Zone (958.90 m) and North Zone (1,019 m). These drill holes comprise the WJ series in the database.

6.5 HISTORIC RESOURCE ESTIMATES

In 1996, Barrick Gold Inc. (Barrick) prepared a preliminary internal historical resource estimate for the South West Zone. This resource predates NI 43-101. The estimate was based on information from approximately 65 drill holes from Moneta's 1987 drilling and Barrick's drilling in 1995 and 1996 (Carre and Lei, 1997).

Initial metallurgical tests indicated that gold recoveries up to 95% were possible and that the free gold and minor low-sulphide ore could be readily processed at Barrick's former (now Kirkland Lake Gold's) Holt-McDermott Mill nearby.

In late 1997, Barrick updated the South West internal resource calculation based on a reinterpretation of the South West Zone and incorporating relevant data from the last phase of drilling completed in 1997. This was performed using the similar methodology and modified parameters reflecting the alternative interpretation (Carre and Lei, 1997).

The mineral resources completed by Barrick are historic in nature and therefore not NI 43-101 compliant and should not be relied upon.

In 2008 and updated in 2009 a near-surface NI 43-101-compliant resource estimate was completed on the Windjammer South Zone by D. George Cargill, Ph.D., P.Eng., of Cargill Consulting Geologists Limited. This resource included an estimate of Indicated and Inferred

Resources. This resource was based on 26 drill holes (8,875 m) completed by Noranda (1983 to 1989) and 21 drill holes (7,097 m) drilled by Moneta from 2007 to 2008.

An NI 43-101 mineral resource estimate was prepared by P&E Mining Consultants Inc. for the Golden Highway Project in 2011 (Dated December 01, 2011) and was comprised of both underground and surface resources totalling 33,533,000 tonnes @ 0.99 g/t Au in indicated resources for some 1,071,000 contained ounces and 47,837,000 tonnes @ 1.35 g/t Au in inferred resources for some 2,069,000 contained ounces.

An updated NI 43-101 Mineral Resource Estimate and Preliminary Economic Assessment (PEA) was conducted by P&E Mining Consultants Inc. (P&E) on the Golden Highway Project in late 2012. The updated mineral resource was reported by way of a press release on October 25, 2012. It was based on 349 surface diamond drill holes completed on the Windjammer (South/Central/North), Gap, South West, and 55 Zones. P&E's updated NI 43-101 compliant mineral resource estimate included Indicated and Inferred Resources with an open pit cut-off grade of 0.37 g/t Au, and an underground cut-off grade of 2.00 g/t gold.

The PEA considered the development of the Windjammer (South/Central/North), Gap, South West, and 55 Zone pits, and the underground resources on the South West Zone. The PEA results released on November 01, 2012 estimate potentially economic portions of the mineral resources, before dilution and mine extraction, that include combined open-pit and underground Indicated Resources at cut-off grades of 0.40 g/t Au and 2.0 g/t Au for open-pit and underground resources respectively. The 2012 mineral resources are superseded by this report.

An updated NI 43-101 mineral resource estimate was conducted by Micon and reported in a technical report dated February, 2019 on the underground resources of the Golden Highway Project. The resource estimate was conducted on the South West, 55, West Block, Windjammer South, Discovery and Windjammer North areas and was reported at a 3.0 g/t Au cut-off grade. An open pit resource was attempted but was unable to be developed on the Windjammer Central area (at various cut-off grades). The 2019 mineral resource is superseded by this report.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 REGIONAL GEOLOGY

Moneta's Golden Highway Project (Figure 7.1) is located within the southern part of the Archean (ca. 2.7 Ga) Abitibi greenstone belt of the Superior Province of the Canadian Shield in northeastern Ontario. The Abitibi greenstone belt consists of Neoarchean supracrustal rocks divided into tectonic-stratigraphic assemblages that include metavolcanic rocks, synvolcanic intrusions, metasedimentary rocks, calc-alkaline and alkaline intrusive rocks, and late Proterozoic dykes. The dominant regional structures of interest are the Destor Porcupine Fault Zone (DPFZ) and Pipestone Fault Zone with their associated gold deposits and mineralization. More thorough discussions of the Superior Province Archean geology are provided by Jackson and Fyon (1991), as well as Ayer et al. (2001/2005).

The Golden Highway Project is located on the DPFZ, a major gold-mineralized regional fault structure. Figure 7.2 shows the location of the DPFZ and several prominent gold deposits including the Black Fox Mine, Ross Mine, Holloway Mine and Holt-McDermott Mine that are located within an approximately 25 km radius of the Golden Highway Project.

More specific to the local geology of the Golden Highway Project is Berger's (2002) geological synthesis of the Highway 101 corridor from Matheson east to the Province of Quebec's provincial boundary. He subdivides the geology into five litho-tectonic assemblages (Ayers and Trowell, 2001) as follows: Kidd-Munro (2,719 to 2,711 Ma), Tisdale (2,710 to 2,703 Ma), Blake River (2,697 to 2,701 Ma), Porcupine (2,696 to 2,690 Ma) and Timiskaming (2,687 to 2,675 Ma). The distribution of gold deposits in relation to major faults and the Timiskaming assemblage is shown in Figure 7.3.

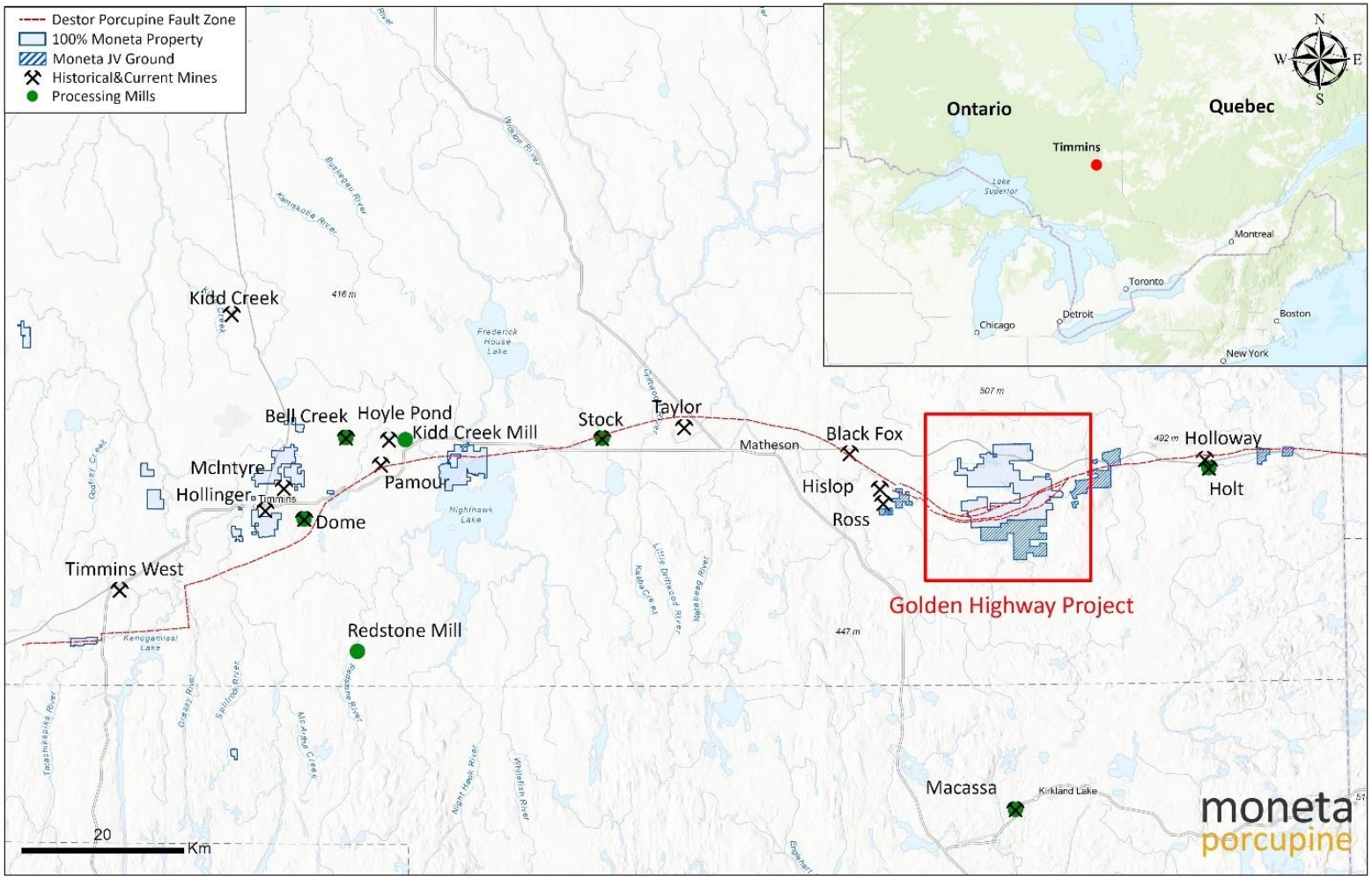
Berger's (2002) description of the geology of the Golden Highway Project area is as follows:

> "The Kidd-Munro assemblage underlies the north part of the study area and is composed of a tholeiitic metavolcanic member and a calc-alkalic metavolcanic member. Ultramafic to mafic layered sills intrude the metavolcanic rocks. The Tisdale assemblage is composed of tholeiitic metavolcanic rocks and subordinate amounts of calc-alkalic metavolcanic rocks. The distribution of the assemblage is poorly constrained because of the Porcupine-Destor deformation zone and related splay faults transect the assemblage in several places. The Blake River assemblage underlies the south part of the study area and is composed of predominantly mafic tholeiitic metavolcanic rocks that are intercalated with thin units of tholeiitic rhyolite and calc-alkalic metavolcanic rocks. The Porcupine assemblage underlies the northwest part of the study area and is composed of greywacke, argillite, and rare conglomerate that are intruded by small alkalic intrusions. The Timiskaming assemblage is composed of clastic and chemical metasedimentary rocks and rare alkalic metavolcanic rocks that are distributed within and near to the Porcupine-Destor deformation zone. Ultramafic to felsic alkalic intrusive rocks are also correlated with the Timiskaming assemblage and occur as dikes, small single-phase intrusions and large multi-phase intrusions throughout the area. Paleoproterozoic quartz-diabase dikes, Keweenawan-age olivine diabase dikes and Jurassic kimberlite dikes and diatremes intrude the Neoarchean rocks."

Figure 7.1
Regional Geology, Golden Highway Project

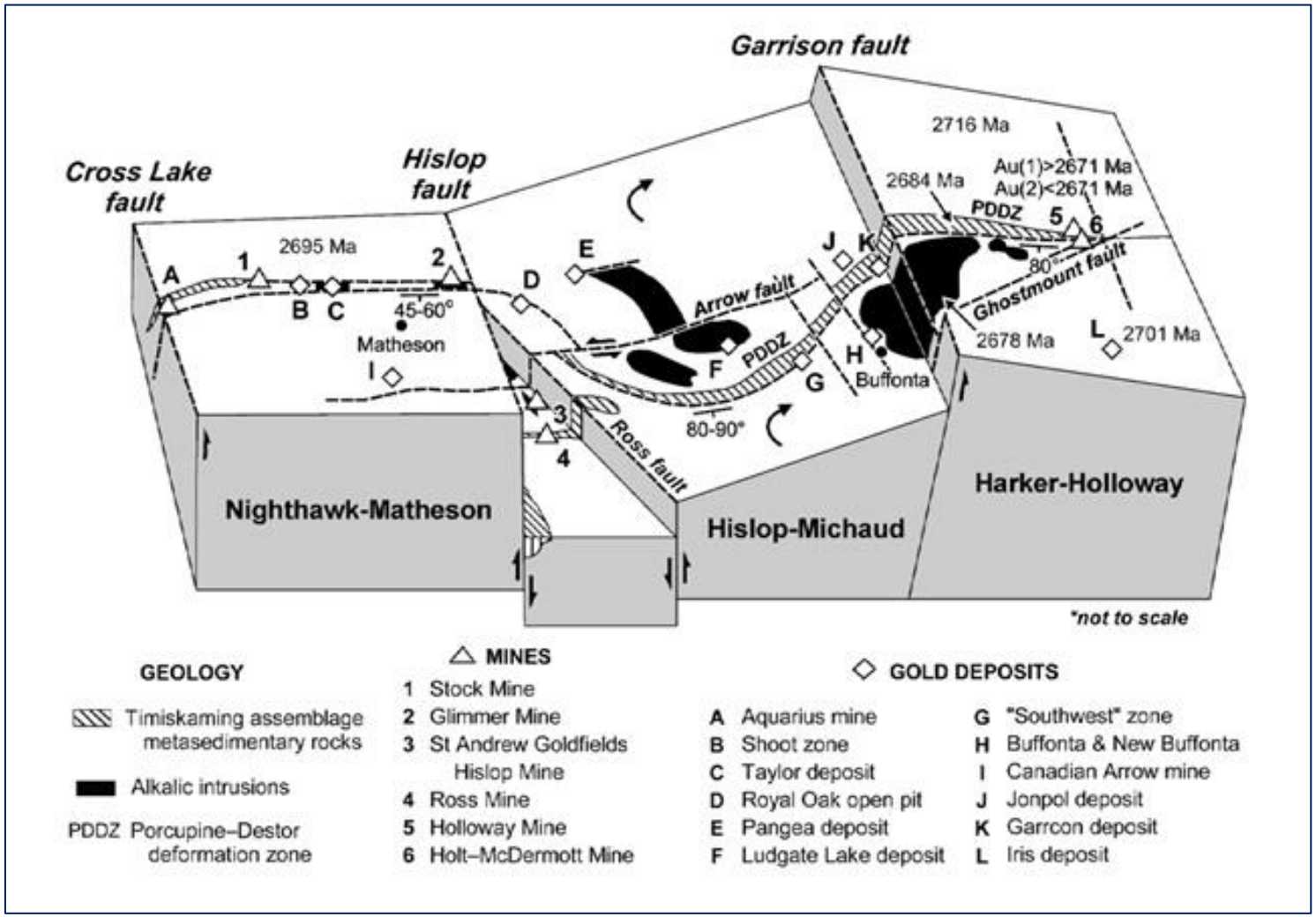
Source: Moneta, 2021.

Figure 7.2
Gold Deposits in the Matheson Area along the Destor-Porcupine Fault Zone



Source: Moneta, 2021.

Figure 7.3
Regional Schematic Model Showing Distribution of Gold Deposits in Relation to Major Structures and the Distribution of Timiskaming Assemblage Rocks



Source: Moneta, 2019.

> "The Porcupine-Destor deformation zone is a crustal-scale structure that transects the study area and is characterized by south-side-up vertical movement. The fault zone and related northeast striking splay faults such as the Ghostmount fault and McKenna fault, are the loci for gold mineralization. Northeast-striking faults with dominant vertical displacement transect the Porcupine-Destor deformation zone. Two of these faults, the Hislop fault and Garrison fault, are major structural features that act as the boundaries to different metallogenic segments. Gold mineralization occurs in different structural settings, different styles, and different types of alteration patterns in each segment."

The DPFZ remains a most prolific gold-bearing structure with several gold deposits discovered along its strike length and within splays and extensive alteration zones. In the general area of the property gold production was underway in 2019 from Kirkland Lake Gold Ltd.'s Holt-McDermott mine (Holloway Township), McEwen Mining Inc.'s Black Fox mine (Hislop Township, the former Glimmer mine), and Kirkland Lake Gold Ltd.'s Taylor Mine, approximately 25 km east, 15 km west and 25 km west of the property, respectively. Additional gold prospects, former producers, and more significant gold occurrences in various stages of exploration are also present (Figure 7.2 and Figure 7.3) including, from west to east, the Ross Mine, and Fenn-Gib, Ludgate, 55/South West/Windjammer, Jonpol, 903 and Garrcon deposits.

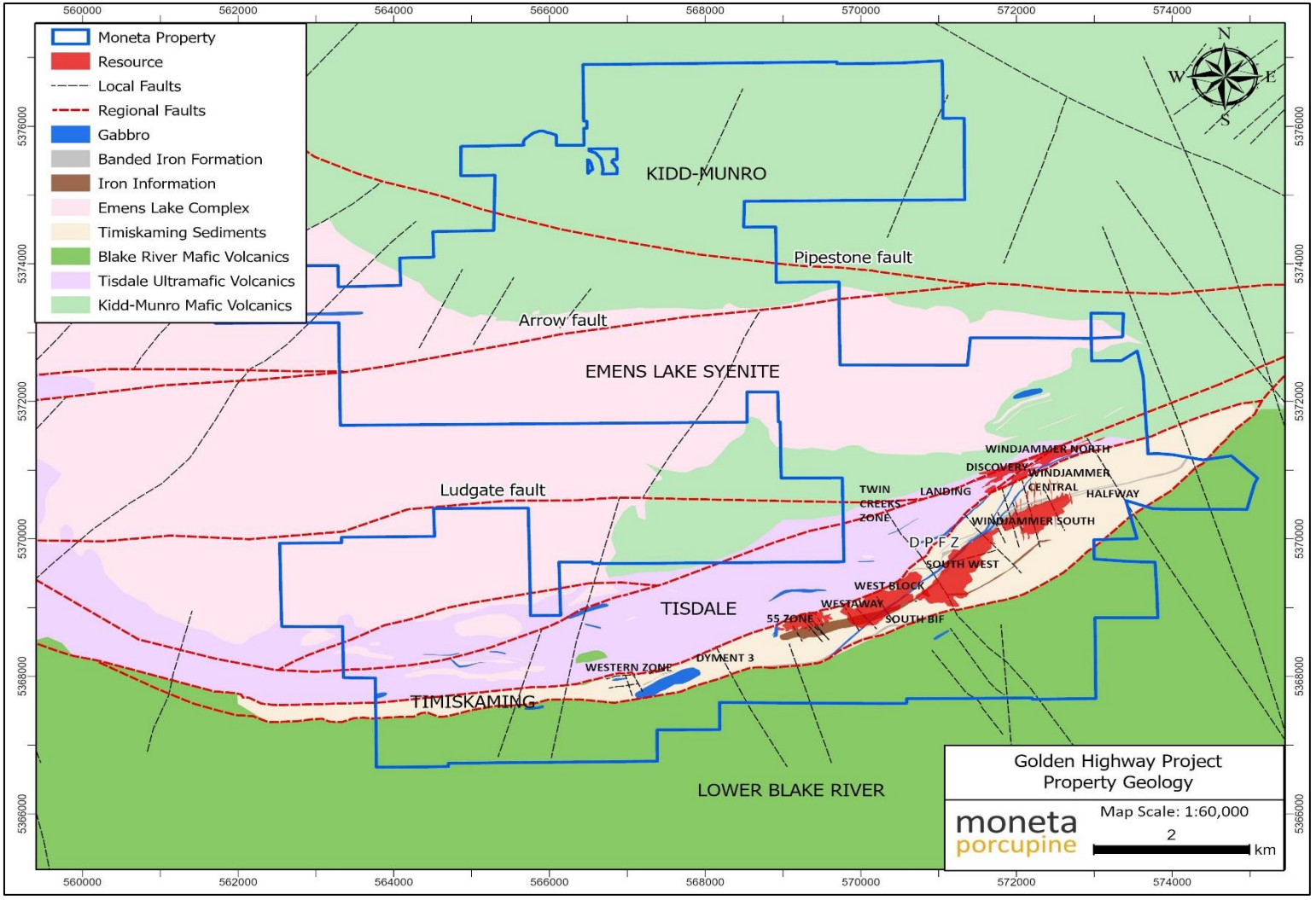
7.2 PROPERTY GEOLOGY

Holocene organic deposits of peat and black muck cover much of the map area. Underlying the organic deposits are extensive Quaternary glacio-lacustrine deep water varved silts and clays of the Barlow-Ojibway Formation and/or sands associated with the Munro Esker complex. They are up to several metres thick, overlying the Matheson Till.

The bedrock geology of the property is mainly determined from drill core observations, geophysical interpretations, and local rock outcrop areas. The geology was mapped by Satterly (1949) with a more recent refinement by Berger (2002). The area is largely covered with overburden consisting mainly of sands associated with the Munro Esker complex. A few outcrops are in the centre of the property south of Emens Lake and more extensively south of the Pike River valley.

The central portion of the property is the main area of exploration work and can be divided into a North corridor and South corridor that together define the DPFZ, as it crosses Michaud and western Garrison Townships. These distinct geological corridors contain the bulk of the known gold mineralization discovered to date. The North corridor contains the historical DPFZ (north branch) trace in a sequence of Tisdale mafic and ultramafic metavolcanics. The Timiskaming metasedimentary rocks, iron formation and associated rocks are contained in the South corridor (Figure 7.4).

Figure 7.4
Golden Highway Property Geology



Source: Moneta, 2021.

The Northern corridor on the eastern portion of the property consists of a 4.5-km long, variably altered and deformed/sheared sequence of Tisdale intercalated komatiitic ultramafic rocks and tholeiitic basalts, generally bounded by talc-chlorite schists. The basalts are traceable along most of the north branch of the DPFZ across the property, and, generally, when altered and quartz carbonate veined, host numerous gold zones such as Twin Creek, Landing, and the Discovery and Windjammer North deposits as well as scattered higher-grade gold intercepts. These Northern corridor volcanics continue in the western portion of the property, widening substantially and include gold zones associated with pyritic syenites such as the LC Zone and the LC extension.

In the northern portion of the property, the Kidd-Munro metavolcanic rocks are associated with the Arrow, Pipestone and Munro Faults. Limited drilling has established a sequence of tholeiitic mafic volcanics in contact to the south by phases of the Emens Lake (Central Michaud) syenite complex. The Arrow, and a portion of the Pipestone Faults, a regional east-west structure, follow this contact. Only minor and scattered gold mineralization has been discovered to date.

The Southern corridor is well defined by the belt of Timiskaming sediments that parallels the DPFZ and includes the main gold deposits/zones discovered to date on the property. This corridor has a strike length of approximately 12 km crossing Michaud Township and continuing northeasterly into Garrison Township. This corridor hosts the Western Zone, Dyment 3 Zone, 55 deposit, Westaway/West Block deposit, South West deposit (including the former Gap Zone), Windjammer Central Zone and Windjammer South deposit (Figure 7.4)

The Timiskaming metasediments consist of a series of alternating fine to coarse greywacke units with subordinate argillite, and conglomerate and possible rare sandstone. Greywacke is generally fine to medium grained with minor sections of very fine and coarser grained conglomeratic material. The greywacke is typically green-grey, massive to well-bedded, chloritized and can be locally pyritic.

Conglomerate typically consists of a grey to pink-grey and medium to coarse grained sandstone matrix containing pebble to cobble sized angular to sub-rounded clasts ranging in size from several millimetres to rarely greater than 10 cm. Clasts include greenish black to grey mafic volcanics, less common iron formation and rare massive sulphide fragments. Conglomerate is typically found along the south contact of iron formation where it may represent a disconformity.

The oxide facies iron formation (bedded jasper, magnetite, or hematite) ranges in thickness from 10 to 100 m, generally strikes 070º with a steep 80º southeast dip. It is much more magnetite rich and massive to the east while to the west it thins quickly and is dominated by hematite. The iron formation is well bedded, shows locally changing dips and soft sediment deformation and displacement features. Fracturing and deformation are usually parallel to the bedding. Pyrite is present from trace to 0.5 % both along bedding and in fractures. Fractures contain calcite and locally traces of specular hematite. Local variations in thickness are

attributed to overall thickening and thinning, facies changes, and poorly defined isoclinal folding.

The metasediments are bounded to the north by the dominantly ultramafic volcanic sequence of the Tisdale assemblage (Northern corridor) and to the south by the Blake River metavolcanics. The sedimentary sequence is from 500 to 900 m thick. It is crosscut by a major vertical gabbro dyke, the Golden Highway Gabbro trending 050º. The dyke is 10 to 40 m wide and has been traced for 2.3 km from west of the South West deposit to the Windjammer North deposit.

In addition to the importance of the DPFZ and its associated splays and similar oriented structures, interpretive work has identified northwest- to north-trending cross structures believed to play a significant role in localizing gold mineralizing systems. Many of the recently drilled significant quartz and quartz carbonate veins and vein zones reflect similar orientations to these higher angle cross structures/faults.

7.3 DEPOSIT GEOLOGY AND MINERALIZATION

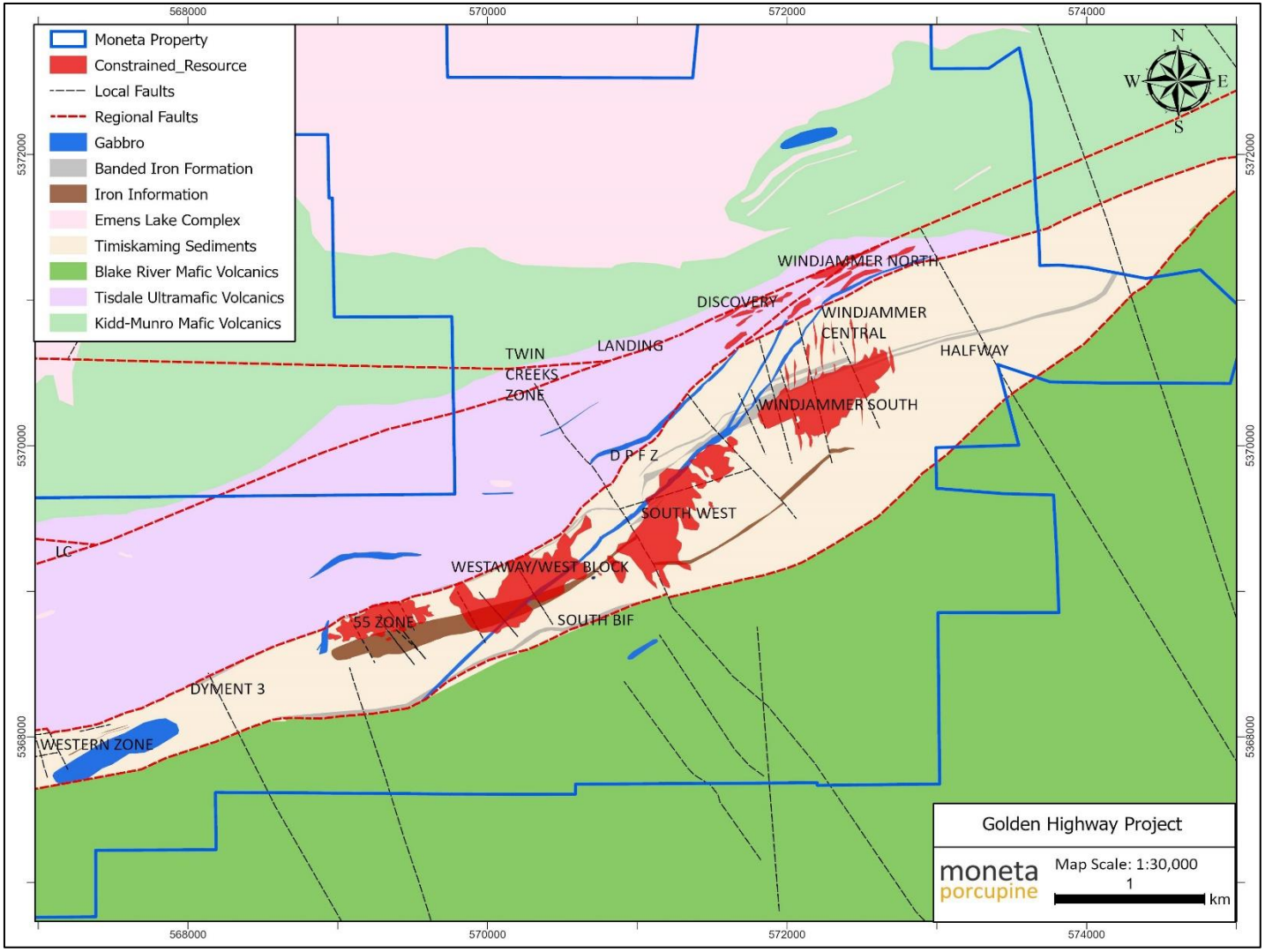
7.3.1 General

The Golden Highway property to date is known to host six gold deposits, seven gold mineralized zones and numerous unassigned gold drill intersections along a 12-km long mineralized corridor. This corridor contains two highly prospective geological settings: a northern corridor with sheared mafic and ultramafic volcanic units and syenitic intrusive complexes, and a southern corridor defined by Timiskaming sediments containing banded iron formation (BIF). This section describes the geology and gold mineralization of the following deposits: South West, 55, Westaway/West Block, Windjammer South, Windjammer North, and Discovery (Figure 7.5) which were examined in the current mineral resource estimation. The following gold zones: Western, Dyment 3, LC, Windjammer Central, Halfway, Twin Creeks, and Landing on the property are also briefly discussed although no resources were estimated for them.

7.3.2 South West Deposit

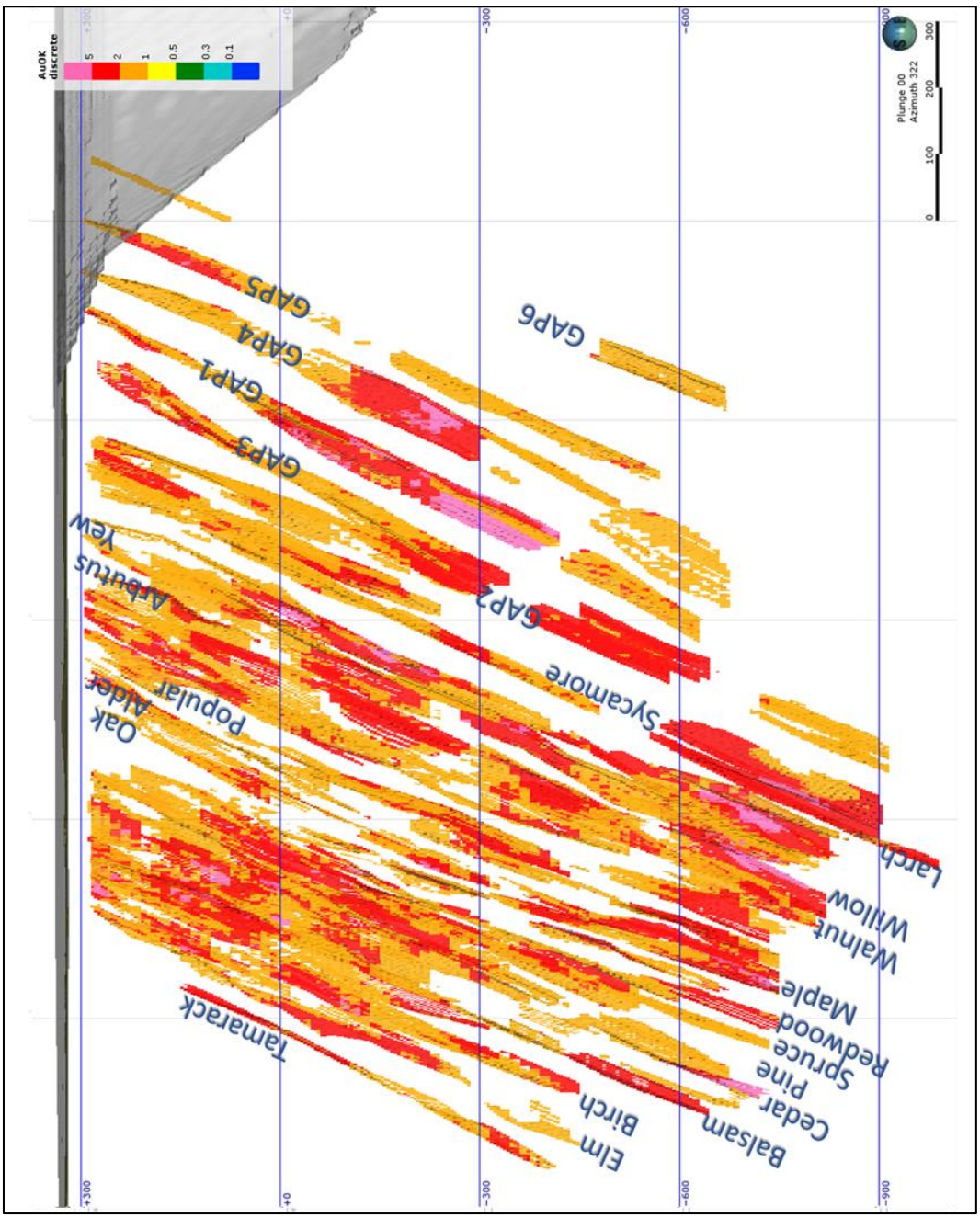
The South West deposit (including the former Gap area) comprises a series of mineralized extensional veins and stockwork. The vein arrays and associated stockwork veining occur as stacked, en échelon vein structures within Timiskaming sediments, south of the southern contact of a regional BIF (See Figure 7.6).

Figure 7.5
Gold Deposits and Zones of the Golden Highway Property



Source: Moneta, 2021.

Figure 7.6
South West Deposit Geology and Drill Location Map



Source: Moneta, 2021.

The regional iron formation at the South West deposit is a banded jasperoid-hematite-magnetite formation (BIF) varying in thickness from 1 m up to 25 m. It has been traced for approximately 5 km, from the 55 deposit to the eastern boundary of the property (Figure 7.4).

In the South West deposit area, the regional BIF consists of two iron formations, where the southern, termed BIF-A is in contact with a conglomerate unit and the northern BIF-B lacks a conglomerate unit (Figure 7.5 and Figure 7.6). The Timiskaming sediments consist of a polymictic conglomerate unit, coarse lithic greywackes with occasional sericitic argillite fragments, weakly bedded, medium to fine greywackes, bedded greywackes and argillites (from the south contact of the BIF towards the Blake River mafic volcanics to the south). The sediments overall fine towards the south. In the centre of the Timiskaming sediments, a narrow horizon of weakly magnetic hematitic greywacke units interbedded with fine greywackes (termed IF-C) is present.

The sedimentary bedding generally strikes northeast or southwest and dips steeply to the northwest or southeast. The Timiskaming sediments are pervasively chloritized and in the vicinity of the BIF, hematization overprints the chloritization. Local sericitization occurs within the coarse greywackes as bands and the argillite units are often strongly sericitized.

The South West deposit stratigraphy is cut by two major cross faults. The Main (West) Fault is a dip slip fault that displaces the BIF and the north Timiskaming sediment-Tisdale ultramafic volcanics contact. The Main Fault strikes 155° and dips 60° to the southwest. The second in the east portion of the South West deposit, the Gap Fault strikes 135° and dips 65° to the southwest. Both faults are crosscut by the Golden Highway Gabbro that trends 050º.

Drilling to date has outlined twenty-four southeast-trending extensional veins and associated stockwork vein zones. These tension vein arrays are continuous from the Gap area to the Main Fault over a distance of 1.2 km along a northeast strike.

The vein arrays and stockwork dip steeply to the southwest at 70°, with eighteen tree-named veins occurring in the central area and six Gap vein arrays in the east area (Figure 7.6 and Figure 7.7). The veins and associated stockwork zones generally have an average width of approximately 2.8 m and up to 25 m in proximity to the regional BIF. These mineralized structures generally occur 25 m to 30 m apart. The vein arrays and stockwork zones can be traced for 300 to 400 m southeast from the southern regional BIF contact.

The vein structures have been intersected at depths up to 1,200 m below surface and remain open down dip. The vein arrays are extensional quartz-carbonate-pyrite veins and/or quartz-carbonate stockwork style veining with distinct narrow (mm to cm) ankerite-silica alteration halos. Gold mineralization occurs associated with 1 to 3% pyrite in the veins and vein alteration halos, as well as visible gold. In some cases, a zone of quartz-pyrite veinlets occurs adjacent to the veins and hosts mineralization. The veins can be brecciated and occur as quartz matrix-supported breccia zones. Selected significant gold intersections are listed in Table 7.1.

In proximity to the southern contact of the BIF, the vein arrays expand into stockwork zones and are up to 25 m wide in the porous coarse greywackes. The stockwork of quartz-carbonate-pyrite veins (3 to 20% veining) occurs within a distinct ankerite-silica alteration halo occasionally with sericite. Gold mineralization occurs associated with pyrite in the veins and vein alteration halos, as well as visible gold.

Table 7.1
South West Deposit Selected Gold Results

Hole #	From (m)	To (m)	Length (m)	Au (g/t)	Vein Array Name
MGH13-080	769.50	774.00	4.50	5.62	Alder
MGH19-110	144.00	147.00	3.00	5.12	Alder
MGH17-070	267.00	270.00	3.00	4.41	Arbutus
MGH17-073	500.00	505.00	5.00	4.12	Arbutus
MSW10-162G	1280.82	1304.57	23.75	3.67	Arbutus
MGH17-073	460.00	461.00	1.00	15.10	Arbutus
MGH17-056	441.50	445.51	4.01	34.17	Balsam
MM-95-158	266.27	274.76	8.50	4.31	Balsam
MGH17-056	441.50	445.51	4.01	38.33	Balsam
MGH17-076	220.50	230.00	9.50	2.48	Balsam
MGH17-081	177.00	180.00	3.00	5.38	Birch
M-87-72	64.13	68.77	4.64	4.62	Cedar
MGH17-051	565.00	568.00	3.00	7.13	Cedar
MGH17-081	266.97	269.13	2.16	30.47	Cedar
MM97-208	330.94	335.34	4.40	7.16	Cedar
MSW10-162D	1312.70	1320.87	8.17	4.66	Larch
MGH17-079	414.75	416.05	1.30	16.21	Larch
MGH17-070	360.00	362.80	2.80	3.75	Larch
MM97-190	890.40	895.50	5.10	4.18	Maple
MGH17-077	527.30	531.00	3.70	5.17	Maple
MM96-177	696.01	700.80	4.79	7.20	Oak
MSW10-267G	1011.30	1025.00	13.69	3.58	Oak
MGH13-010	313.00	329.00	16.00	3.75	Pine
MGH17-051	636.00	639.00	3.00	7.01	Pine
MGH17-064	472.80	477.00	4.20	41.08	Pine
MM97-188	559.50	562.80	3.30	5.58	Pine
MGH13-010	281.04	332.75	51.71	1.70	Pine
MGH17-064	457.70	495.6	30.60	5.01	Pine
MGH17-075	271.92	275.00	3.08	3.99	Redwood
MGH17-076	429.00	432.30	3.30	7.60	Redwood
MGH13-075	392.97	395.23	2.26	11.3	Spruce
MM97-177A	552.11	559.21	7.10	5.89	Spruce
MGH19-113	63.30	64.20	0.90	8.75	Spruce
MGH18-106	301.00	305.00	4.00	3.59	Sycamore
MGH19-111	736.20	740.80	4.60	4.60	Sycamore
MGH19-113	810.85	812.50	1.65	7.95	Sycamore
MGH19-115	503.00	505.00	2.00	6.80	Sycamore
MM96-170	190.70	201.6	10.9	4.04	Walnut
MGH19-110	307.79	308.36	0.57	15.70	Walnut
MGH19-113	581.35	585.70	4.35	4.19	Walnut

Hole #	From (m)	To (m)	Length (m)	Au (g/t)	Vein Array Name
MGH18-098	418.00	443.00	25.00	2.48	Willow
includes	418.00	422.50	4.50	5.00	Willow
MGH19-112	311.00	314.45	3.45	3.76	Willow
MGH17-073	551.59	553.92	2.33	10.21	Yew
MGH18-103	387.02	394.15	7.13	5.06	Yew
MGH19-110	452.58	455.00	2.42	3.60	Yew
MGH18-102	425.00	437.00	12.00	2.74	Gap-1
MGH19-110	617.00	620.00	3.00	3.70	Gap-2
MGH19-120	315.75	320.10	4.35	6.94	Gap-3
MGH18-102	568.00	573.30	5.30	7.63	Gap 4
MGH19-115	768.00	772.00	4.00	5.20	Gap-5

7.3.3 Westaway/West Block Deposit

The Westaway/West Block deposit is located between the South West deposit and the 55 deposit, south of the south branch of the DPFZ. It is essentially a continuation of the South West deposit west of the Main Fault. Significant gold mineralization was discovered at Westaway in 1996 and 1997 drilling which returned 5.80 g/t Au over 6.30 m including 10.4 g/t Au over 1.50 m, 6.22 g/t Au over 3.30 m, 6.14 g/t Au over 3.20 m, and 5.64 g/t Au over 2.90 m. Moneta has expanded this mineralization to a resource with drilling in 2019 and 2020.

In the deposit area, the regional BIF units (BIF-A and BIF-B) form discontinuous lenses along the northern contact between the ultramafic volcanic and the sedimentary sequence. They also pinch and swell vertically. The ultramafic contact at Westaway/West Block is generally striking at 050º-060º and is dipping steeply to the south. The Timiskaming sediments consist of a polymictic conglomerate unit, coarse lithic greywackes with occasional sericitic argillite fragments, weakly bedded, medium to fine greywackes, bedded greywackes and argillites (from the south contact of the BIF towards the Blake River mafic volcanics to the south). In the centre of the Timiskaming sediments, a horizon of weakly magnetic hematitic greywacke units interbedded with fine greywackes (termed IF-C) is present. This horizon is narrow near the Main Fault and widens in the deposit area west towards the 55 deposit.

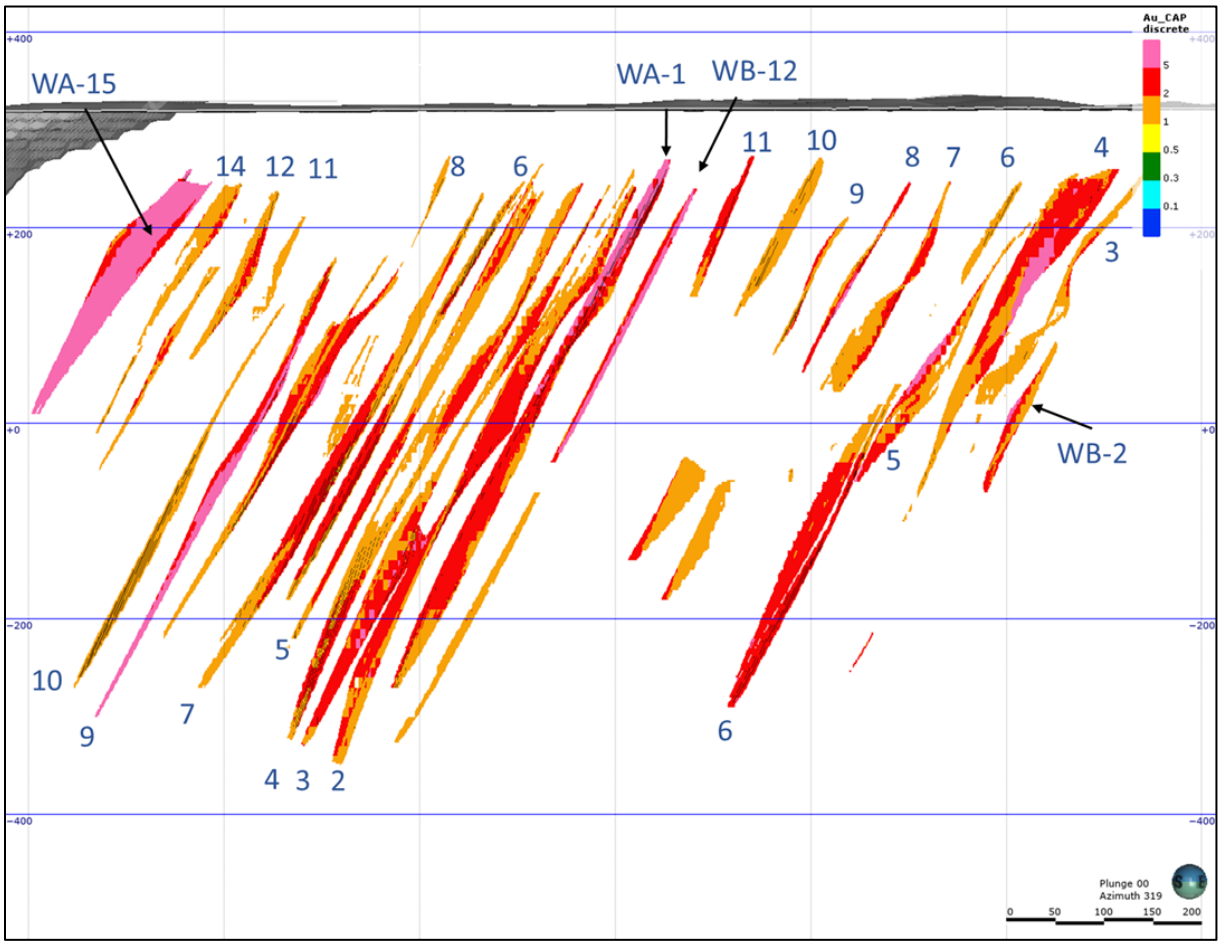
Gold mineralization is associated with quartz veining and breccias within Timiskaming sediments. They form vein corridors with associated ankerite alteration, silicification and pyritization of the wall rock sediments. Drilling to date has outlined twenty-seven southeast striking (135º-145º) extensional vein corridors at Westaway/West Block. Selected significant gold intersections are listed in Table 7.2. These tension vein arrays are continuous from the Main Fault over a distance of 1.4 km along a southwest strike.

In the West Block area, a set of twelve vein corridors (WB1-WB12) have been outlined, dipping at 60º-70º southwest (Figure 7.7). The easternmost corridors have been terminated by the slightly shallower southwest dipping (50º-60º) Main Fault. However, no drilling has been conducted in the West Block area underneath the Main Fault. The West Block vein corridors are generally open below a vertical depth of 600 m. They currently strike a distance of 200 m

southeast from the regional BIF units to the Golden Highway gabbro and are open south of the gabbro.

Contiguous to the west of the West Block area, a total of fifteen vein corridors (WA-1 to WA-14 and WA-7A) have been defined to date at Westaway (Figure 7.7). They dip 60º-70º to the southwest and strike southeast over a distance of 350 m, from the regional BIF units to the Golden Highway gabbro. They are open along strike southeast of the Golden Highway gabbro and at depth below 600 m vertically.

Figure 7.7
Westaway/West Block Deposit Zones Mineralization Model



Source: Moneta 2021

Table 7.2
Westaway/West Block Deposit Selected Gold Results

Hole #	From (m)	To (m)	Length (m)	Au (g/t)	Zone Name
M-87-6	178.61	195.38	16.77	3.50	WB-4
MM-95-153	263.25	274.00	10.75	6.18	WB-2
MM97-190	155.00	157.80	2.80	3.75	WB-1
MM97-194	229.20	234.90	5.70	11.28	WB-4
MM97-218	184.50	186.50	2.00	3.55	WB-7
MM97-220	201.90	205.10	3.20	4.81	WB-3
MSW10-270	204.00	206.20	2.20	15.76	WB-6
MGH17-029	637.40	639.50	2.10	5.12	WB-3
MGH17-062	270.12	271.75	1.63	1,078.43	WB-3
MGH19-116	274.32	280.51	6.19	12.22	WB-5
MGH19-121	227.00	229.00	2.00	9.60	WB-8
MGH19-133	565.50	568.00	2.50	5.91	WB-6
MGH19-133	247.00	249.55	2.55	5.45	WB-12
MGH20-137	76.50	79.50	3.00	4.03	WB-11
MGH20-152	88.28	90.77	2.49	4.49	WB-12
MGH20-156	371.30	374.00	2.70	8.96	WB-2
MN96-178	268.50	271.40	2.90	5.64	WA-3
MN97-186	176.40	179.70	3.30	6.22	WA-1
MN97-205	367.70	371.10	3.40	4.76	WA-1
MGH19-129	189.85	194.10	4.25	5.77	WA-12
MGH19-129	328.00	333.25	5.25	6.30	WA-8
MGH19-133	200.32	209.35	9.03	4.75	WA-1
MGH20-143	428.30	432.50	4.20	4.49	WA-9
MGH20-143	627.00	638.80	11.80	3.91	WA-4
MGH20-143	653.00	660.00	7.00	4.19	WA-3
MGH20-143	685.00	696.00	11.00	3.38	WA-2
MGH20-150	338.40	341.00	2.60	6.08	WA-9
MGH20-150	532.00	557.50	25.50	3.70	WA-3
MGH20-151	279.00	283.00	4.00	4.47	WA-6

7.3.4 55 Deposit

The 55 deposit is located two kilometres along strike, west-southwest of the South West deposit. It hosts gold mineralization in a similar geological setting to South West, within Timiskaming clastic sediments between two iron formation horizons, the northern one being the regional BIF-B along the ultramafic to mafic volcanic contact and the southern being the hematitic BIF-C horizon. The central portion of the 55 deposit consists of a thick sequence (150-180 m) of fine- to medium-grained greywacke hosting gold mineralization. South of the greywacke is a package of iron formations. This southern IF complex consists of several grey hematitic magnetite iron formations (same as the IF-C type at South West) interbedded with greywackes. The sedimentary stratigraphy is cut by at least four northwest-trending cross-faults. A major north-south trending diabase dyke occurs in the western portion of the 55 deposit area.

Gold mineralization is associated with quartz and quartz-carbonate veining within structural corridors associated with ankerite-sericite-silica-pyrite alteration. Sulphides are dominantly finely disseminated pyrite and scattered coarser-grained subhedral aggregates in veins. Visible gold and rare accessory molybdenite and chalcopyrite have been observed. Additional high-grade gold mineralization occurs when these veins intersect the northern iron formation and cause extensive sulphidization. Selected significant gold intersections are listed in Table 7.3.

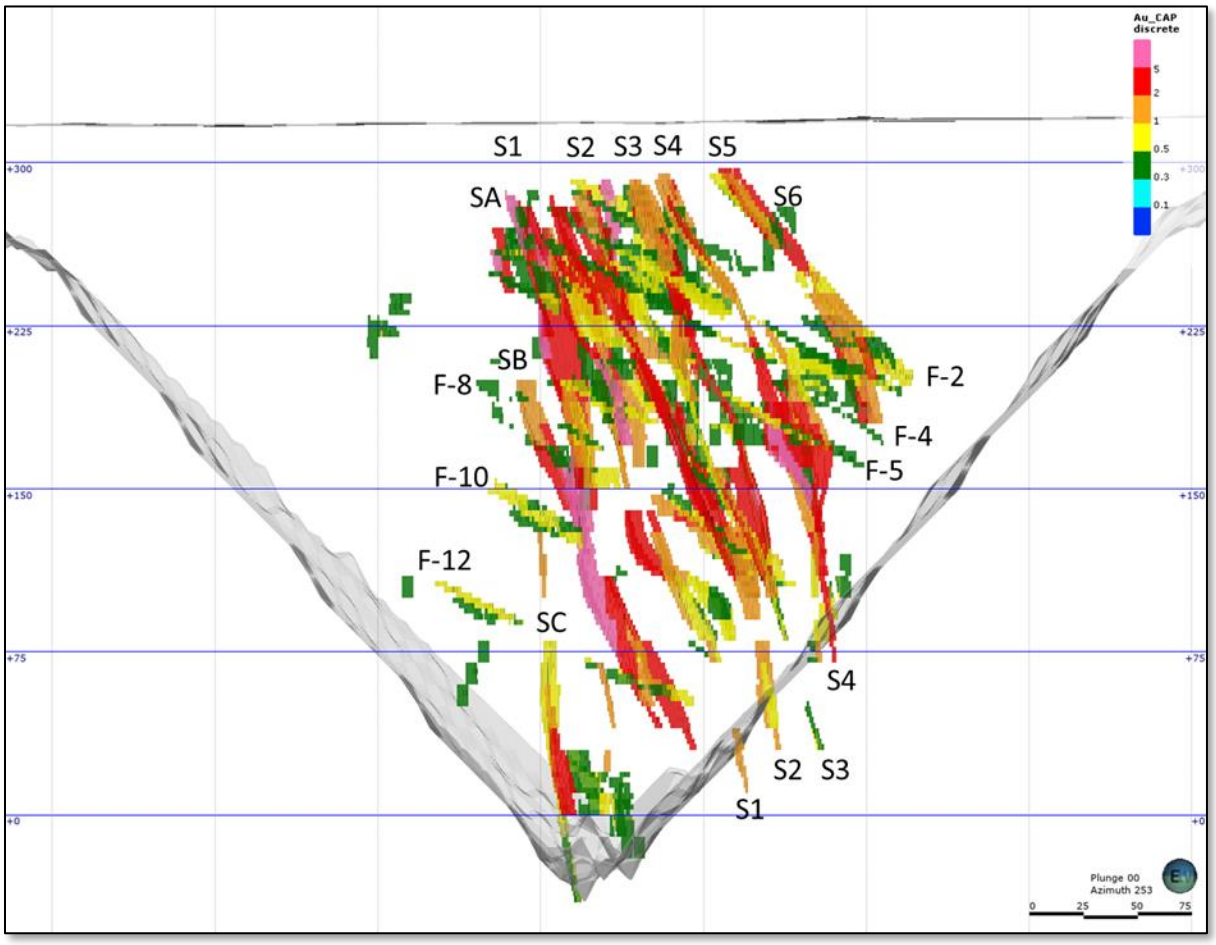
A geological review of the 55 deposit was conducted by Moneta geologists during the summer of 2020. The update was conducted, because of additional drilling, totalling 2,265 m, in early 2020. The review has led to a change and a better definition of the gold zones at the 55 deposit. It has revealed two main sets of quartz and quartz-carbonate veins resulting in a set of steep zone wireframes and shallower (flat) zone wireframes. The 19 steep zone wireframes trend 255 degrees and dip 60-70 degrees to the north. The 21 shallow (flat) zone wireframes trend 255 degrees and dip 20-30 degrees to the north (Figure 7.8). These shallow zone wireframes outlined at the 55 deposit are amendable to open pit mining.

The zones have been traced for up to 1 km in strike length and drilled to depths of up to 450 m. The 55 mineralized system is currently known to extend for 1 km along the northeast strike, with possibly significant untested potential west of the diabase dyke and to depth.

Table 7.3
55 Deposit Selected Gold Results

Hole #	From (m)	To (m)	Length (m)	Au (g/t)	Zone Name
M55-10-04	76.60	81.80	5.20	9.09	Steep-8
M55-10-14	92.66	95.30	2.64	15.03	Steep-7
MA-02-06	211.00	217.50	6.50	7.74	Steep-A
MA-04-25	55.00	62.00	7.00	8.68	Steep-2
MA-05-32	238.50	239.80	1.30	37.08	Steep-4
MA-08-43	80.90	83.80	2.90	42.29	Steep-1
MA-08-49	127.00	163.00	36.00	7.96	Steep-1
MN-97-195	261.80	265.30	3.50	13.04	Steep-A
MGH17-052	75.85	77.60	1.75	7.04	Steep-3
includes	75.85	76.70	0.85	12.15	Steep-3
MGH20-146	160.00	171.48	11.48	1.83	Flat-5
includes	160.00	162.60	2.60	4.04	Steep-3
MGH20-149	86.80	92.43	5.63	1.68	Flat-2
MGH20-154	252.00	257.00	5.00	1.42	Flat-9
includes	253.50	254.10	0.60	11.20	Flat-9
MGH20-157	78.00	83.45	5.45	1.61	Flat-3

Figure 7.8
55 Deposit Mineralization Zones Model



Source: Moneta, 2019.

7.3.5 Windjammer South Deposit

The Windjammer South deposit (WJS) is located within Timiskaming sediments south of the regional oxide facies banded iron formation (BIF). The mineralized stockwork zones and vein structures at Windjammer South occur in the same geological setting as the South West deposit located two kilometres to the west.

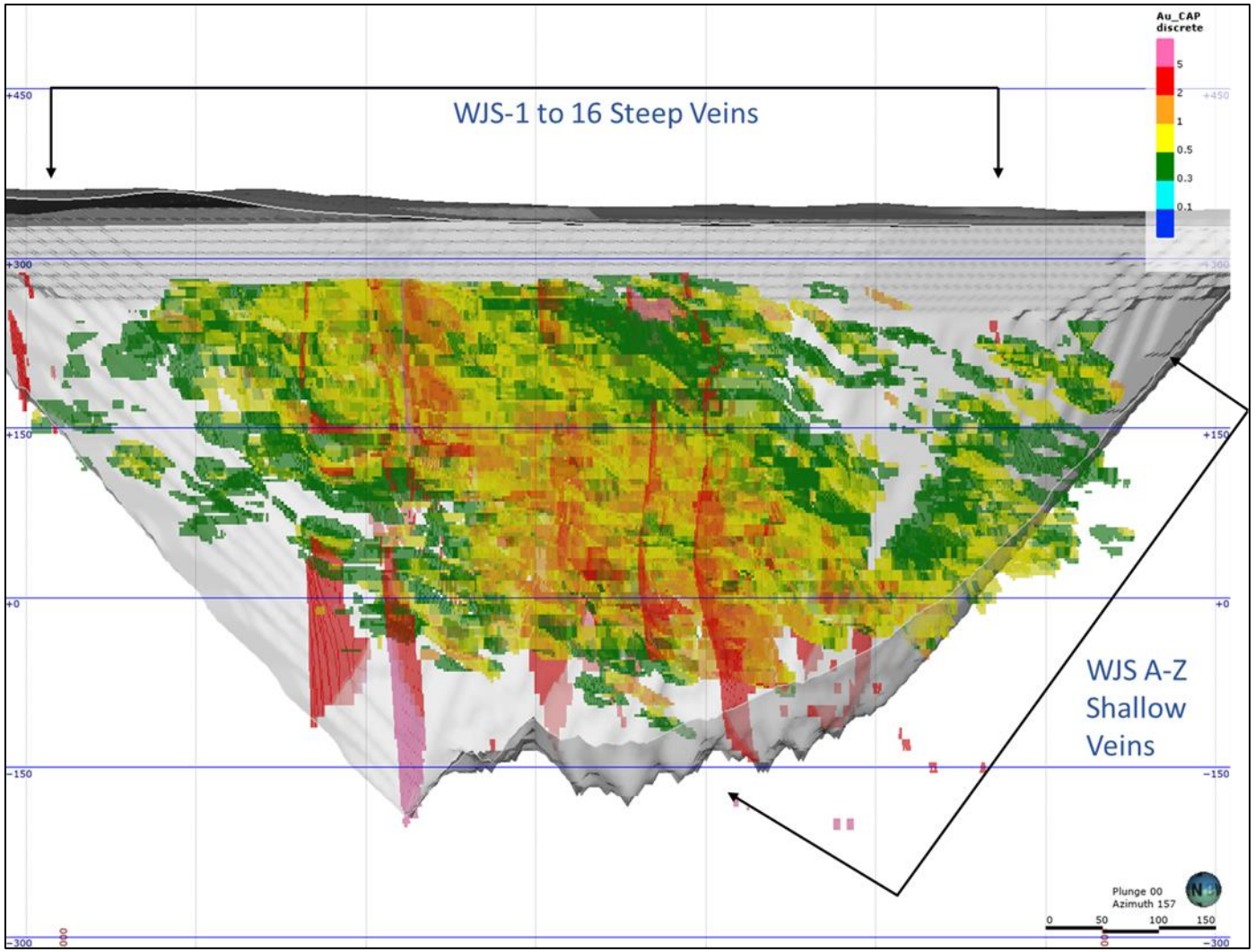
The regional BIF units (BIF-A and BIF-B) extend from the South West deposit and are separated by a greywacke unit <12 m in thickness. As at South West, the southern BIF A unit is in unconformable contact to the south with a polymictic conglomeratic unit 1 to 10 m in true thickness. Medium to coarse grained greywacke units conformably overlie the conglomerate and they are commonly 100 to 150 m thick. These grade southward into medium-fine to fine grained greywackes towards the centre of the Timiskaming basin.

Eight subvertical northwest-trending fault zones have been identified across the WJS deposit. The BIF sequence is notably offset by these faults in the horizontal dimension. Two main faults of this set are situated in the western and eastern parts of the deposit and have been labeled the W1 and E3 faults respectively (strike 160 - 165 degrees). The W1 and E3 faults host only minor gold mineralization, however, the bulk of the gold mineralization at WJS is focused in the vicinity of these faults and gold zone grades and widths tend to be higher in their proximity.

Gold mineralization at WJS is also spatially associated with the southern contact of BIF A and is dominantly hosted within medium- to coarse-grained greywackes. Mineralization within this corridor is associated with extensional quartz-carbonate veining with accompanying widespread silica-ankerite-sericite-pyrite and lesser hematite-chlorite related alteration products. Gold mineralization has been intersected up to 300 m south of the BIF-A unconformity but tends to be narrower and lower grade within the finer grained greywackes.

Interpreted gold mineralized zones to date occur as two main orientations: southeast striking shallow southwest dipping thick stacked extensional quartz-carbonate vein and vein breccia zones, and regularly spaced narrow north-south trending steeply west dipping, extensional quartz-carbonate vein and vein breccia zones. Mineralized zones contain 1-3% secondary pyrite. The 25 shallow (flat) zone wireframes strike 310 degrees and dip 20 degrees to the southwest, they are wide with widths up to 64 m. The 16 steep zone wireframes strike 174 - 187 degrees and dip 77 - 86 degrees to the west and have true thicknesses averaging 2 m. The mineralized system is currently known to extend for 500 m along stratigraphic strike (Figure 7.9). Selected significant gold intersections are listed in Table 7.4.

Figure 7.9
Windjammer South Deposit Mineralization Zones Model



Source: Moneta, 2021.

Table 7.4
Windjammer South Deposit Selected Gold Results

Hole #	From (m)	To (m)	Length (m)	Au (g/t)	Zone Name
MGH13-042	322.00	364.00	42.00	1.43	N
MGH13-043	94.00	158.00	64.00	1.47	D
MGH13-046	228.00	233.00	5.00	3.51	L
MGH13-047	144.00	149.00	5.00	22.25	H
MGH13-049	431.00	450.00	19.00	2.65	O
MGH13-057	203.00	213.00	10.00	7.72	J
MGH13-063A	82.00	87.00	5.00	3.60	C
MGH13-063A	105.00	117.00	12.00	3.99	D
MGH17-069X	561.00	582.00	21.00	1.59	J
MGH18-108	474.50	507.00	32.50	1.68	O
MGH18-108	213.00	236.20	23.20	3.06	G
MGH18-108	267.00	273.35	6.35	3.69	H
MGH19-125	323.00	343.00	20.00	1.58	K
MGH19-125	417.00	437.00	20.00	2.34	N
MGH19-126	467.00	498.00	31.00	2.22	O
MWJ07-01	209.85	218.20	8.35	5.76	J
MWJ07-03	318.30	354.40	36.10	2.35	M
MWJ08-07	414.35	423.75	9.40	2.87	L
MWJ08-09	185.00	192.65	7.65	3.16	J
MWJ08-11	122.55	149.50	26.95	7.28	I
MWJ08-15	452.00	457.00	5.00	3.39	T
MWJ08-15A	63.70	92.00	28.30	1.52	G
MWJ08-16	251.60	275.00	23.40	1.56	K
MWJ08-16	339.00	358.80	19.80	1.69	O
MWJ08-17X	308.90	316.00	7.10	3.90	J
MWJ08-18	192.00	223.00	31.00	2.09	I
MWJ10-32	252.90	270.50	17.60	2.92	G
MWJ11-36	344.00	350.00	6.00	2.53	J
MWJ11-43	404.62	414.00	9.38	3.24	T
WJ87-1	184.35	199.00	14.65	6.41	H
WJ87-4	199.00	233.00	34.00	1.54	I
WJ87-7	223.40	235.00	11.60	3.67	I
WJ87-7	253.70	254.80	1.10	3.86	J
WJ88-16	222.00	235.40	13.40	5.14	J
WJ88-36	332.00	337.00	5.00	2.57	L
WJ88-40	238.30	243.90	5.60	3.07	H
WJ88-40	96.50	102.50	6.00	3.28	D
WJ88-45	152.60	194.30	41.70	1.48	I
WJ88-47	249.50	255.50	6.00	2.83	L
WJ89-52	367.00	390.00	23.00	6.26	N
WJ89-53	330.00	374.00	44.00	1.53	N

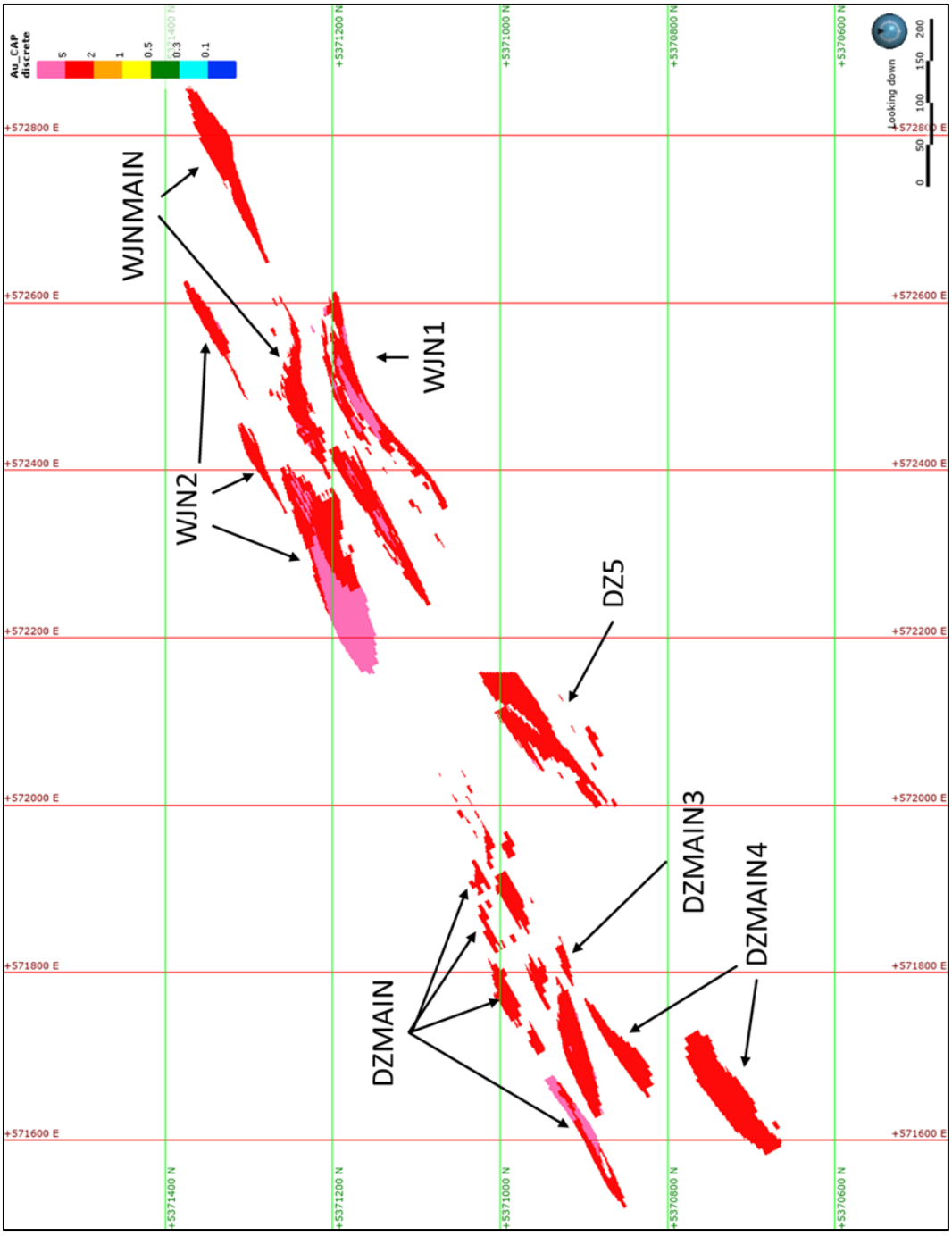
7.3.6 Discovery Deposit

The Discovery deposit includes a mineralized DZ Main Zone (formerly Upper Zone) and a DZ5 Zone (formerly Contact Zone). It is located on a southern splay of the DPFZ and hosted within altered komatiitic ultramafic rocks of the Kidd-Munro assemblage to the north and the sheared fault contact with conglomerate and greywacke units of the Timiskaming sedimentary rocks to the south.

The Main Zone ultramafic host rocks have been intruded by a series of roughly east-northeast-trending (070°) steeply-south dipping quartz-feldspar-syenite porphyry (QFP) to lamprophyre porphyry dykes spatially associated with quartz vein-hosted gold mineralization. The Main Zone is comprised of four parallel stacked mineralized lenses that have been traced for over 500 m in strike length (Figure 7.10) and to a vertical depth of 400 m. The south dipping lenses of mineralization occur over an aggregate width of 175 m. Each lens is 5 to 15 m wide. The individual mineral lenses trend 070° and dip very steeply (80° to 85°) to the south, like the orientation of the DPFZ. They are noted by chlorite-pyrite alteration. Significant drill results are included in Table 7.5.

The deeper DZ5 Zone to the south (Figure 7.10), dips steeply to the north (approximately 80°). It occurs associated with, and parallel to, the sediment-ultramafic contact trending ~070° (east-northeast), north of the Golden Highway gabbro. The DZ5 Zone is comprised of three mineralized lenses. The gold mineralization in the three lenses is characterized by quartz veining, stockwork and breccias often with altered QFP clasts. The mineralization is associated with pyrite-chlorite and ankerite alteration within the sediments. These lenses are narrower (5 m to 10 m) and potentially higher grade. The deeper lenses have been intersected for 200 m along strike and remain open to depth and on strike.

Figure 7.10
Discovery and Windjammer North Deposit Zones



Source: Moneta, 2021.

Table 7.5
Discovery Deposit Selected Gold Results

Hole #	From (m)	To (m)	Length (m)	Au (g/t)	Zone Name
MGH13-077	153.00	162.00	9.00	5.48	DZ Main
MGH13-088	308.00	315.3	7.30	5.18	DZMain3
MGH17-037	338.13	371.00	32.87	2.71	DZ Main
includes	349.00	353.88	4.88	4.80	DZ Main
MGH17-038	273.40	275.00	1.60	6.04	DZ Main
MGH17-045	593.10	600.00	6.90	2.30	DZ5
Includes	595.00	596.00	1.00	10.30	DZ5
MGH17-048	486.00	487.00	1.00	3.16	DZ5

7.3.7 Windjammer North Deposit

The Windjammer North deposit is located within the North corridor volcanics of the northern branch of the DPFZ. The deposit consists of three subparallel zones trending 065° and plunging 80-85° to the west (Figure 7.10). The zones vary in width from 5 to 15 m and are up to 25 m thick. They have been traced down plunge for over 600 m and tested to depths up to 450 m below surface. Gold mineralization is hosted by massive to brecciated ultramafic metavolcanics that have been altered to a green fuchsite-carbonate assemblage in the western and central portion of the zone with more mafic metavolcanics to the east displaying albite bleaching and sericite alteration. Fracture filling chlorite and specular hematite are common. The mineralization is associated with pyrite-rich white to light grey quartz veining and veinlets. The structural corridor has been intruded by variably altered felsic intrusive dykes. Selected significant gold intersections are listed in Table 7.6.

Table 7.6
Windjammer North Deposit Selected Gold Results

Hole #	From (m)	To (m)	Length (m)	Au (g/t)	Zone Name
WJ-87-06	292.20	300.70	7.80	7.86	WJN Main
WJ-87-08	291.70	313.10	21.40	5.06	WJN Main
includes	292.20	300.30	8.10	10.69	WJN Main
WJ-88-29	272.40	275.25	3.35	6.49	WJN Main
WJ-88-15	267.70	284.50	16.80	4.39	WJN Main
includes	274.00	279.80	5.80	6.36	WJN Main
MGH13-024	534.00	537.00	3.00	6.91	WJN Main
WJ-88-49	308.50	314.50	6.00	4.73	WJN Main
WJ-88-51	372.00	376.80	4.50	4.41	WJN2
WJ-88-27	265.80	272.20	6.40	4.73	WJN Main
MGH17-046	444.50	445.50	1.00	5.78	WJN Main
MGH17-049	143.50	146.50	3.00	3.60	WJN Main
includes	145.50	146.50	1.00	7.56	WJN Main
MGH17-053	462.30	471.80	9.50	7.52	WJN Main
includes	462.30	463.27	0.97	10.90	WJN Main
and	467.30	470.12	2.82	19.46	WJN Main

7.3.8 Other Gold Zones

In addition to the above six gold deposits, the Golden Highway property currently hosts seven distinct gold-bearing zones (namely Halfway, Windjammer Central, Landing, Twin Creeks, LC, Dyment 3, and Western from east to west). At the present time, there is insufficient drilling in the zone areas to complete an interpretation and resource estimate on them. The location of the zones is shown in Figure 7.5.

The easternmost zone to date, Halfway, is located 500 m east of the Windjammer South deposit. Gold mineralization occurs at the contact of Temiskaming sediments and regional BIF. It is associated with ankerite-pyrite-silica altered, coarse grained greywacke units on the contact with sulphidized BIF. Drill hole MWJ11-43 intersected 8.87 g/t Au over 3.25 m, including 11.74 g/t Au over 2.30 m at 410.75 m down hole depth. A follow up hole MGH19-123 was drilled at the Halfway target in 2019 and intersected three new zones: 2.02 g/t Au over 7.70 m including 7.48 g/t Au over1.80 m at 210.20 m drill depth, 1.46 g/t Au over 6.50 m including 3.13 g/t Au over 1.50 m at 232.00 m drill depth, and 7.79 g/t Au over 1.28 m at 288.00 m drill depth.

The Windjammer Central zones are hosted in a 500-m wide section of the Timiskaming sedimentary sequence north of the Windjammer South deposit. They are bounded by the regional iron formation to the south and to the north by the Kidd-Munro volcanics hosting the Windjammer North deposit. Drilling on Windjammer Central has identified gold mineralization over wide intervals in the sediments both along the volcanic contact and well south into the sediments. The mineralization has been traced along the volcanic/sedimentary contact for a 750 m strike length, a width of up to 350 m southerly into the hanging wall, and to a depth of only 350 m. The gold mineralization is dominantly of the stockwork style associated with pyrite in and around fine quartz stringers and variable scale quartz and quartz-carbonate veining. Previously reported drill highlights included 1.02 g/t Au over 73.00 m, 0.94 g/t Au over 54.00 m including 1.42 g/t Au over
26.00 m and 1.06 g/t Au over 22.00 m.

The Landing Zone and Twin Creeks Zone host gold mineralization in quartz and quartz-carbonate veins, breccia zones and stockworks often with 2 to 5% fine disseminated pyrite and occasional visible gold. Mineralization is often associated with deformed syenite dykes within a wide deformation zone of highly altered, ultramafic and mafic volcanics. Mafic volcanics show pervasive carbonate (ankerite) and sericite alteration with varying silicification. Drilling on the Landing Zone has intersected 12.20 g/t Au over 5.04 m and 3.12 g/t Au over 4.60 m. The Twin Creeks Zone has returned gold intercepts of 6.00 g/t Au over 2.70 m, 5.50 g/t Au over 4.70 m, 3.64 g/t Au over 5.56 m, 2.89 g/t Au over 6.55 m, and a longer 2.63 g/t Au over 27.81 m.

The LC Zone is approximately 2.5 km west of the Landing Zone along the DPFZ. This gold mineralization occurs within the lower of two southwest dipping porphyritic syenitic intrusions in the immediate hanging wall of the DPFZ. The syenitic intrusives cover approximately 1,000 m along strike and up to 200 m in width with limited drill testing to a vertical depth of 500 m.

Gold occurs in quartz and quartz-carbonate-chlorite stringers within highly fractured silicified and hematitic alteration zones containing pyrite. The gold mineralization is associated with the upper intrusive contact and volcanics of the DPFZ as well as the centre of the lower syenitic porphyry. Drilling on the LC Zone has returned high grade gold intercepts of 11.30 g/t Au over 3.70 m, 20.60 g/t Au over 1.20 m, 13.00 g/t Au over 3.10 m, 7.18 g/t Au over 4.26 m, 6.22 g/t Au over 7.50 m, 5.54 g/t over 5.76 m and lower grade, possible bulk tonnage intercepts of 1.54 g/t Au over 22.50 m, 1.39 g/t Au over 27.00 m, and 1.30 g/t Au over 22.00 m.

The Dyment 3 Zone is located one kilometre southwest of the 55 deposit in a similar sedimentary geological setting. Mineralization is hosted in discrete quartz and quartz-carbonate veins and stringers of varying widths and orientations, accompanied by sericite/ankerite alteration. Several syenitic and quartz feldspar porphyry dykes have been intersected. Pervasively hematized, moderately sericitized and blocky intervals (fault zones) were also intersected close to the Tisdale ultramafic volcanic/Timiskaming sediment contact. Drill hole intercepts from ten historical holes (2,568 m) include 3.07 g/t Au over 1.50 m and 5.49 g/t Au over 0.40 m.

The Western Zone was discovered 1.5 km west-southwest of the Dyment 3 Zone along the volcanic-sedimentary contact and has only been tested with 14 drill holes (4,760 m). Significant drill intercepts include 23.52 g/t Au over 0.40 m, 10.05 g/t Au over 1.00 m, 7.34 g/t Au over 1.00 m and 5.67 g/t Au over 4.00 m in quartz and quartz-carbonate veining with associated ankerite and sericite alteration. The drilling on the Western Zone has indicated gold mineralization that currently extends over 650 m of strike along the volcanic contact and to a depth of less than 200 m. Untested potential remains both east towards the Dyment 3 Zone and west for 3 km to the western limits of the Golden Highway Project.

8.0 DEPOSIT TYPES

The South West, Windjammer South, Windjammer Central, Discovery, Windjammer North, Westaway, West Block and 55 deposits of the Golden Highway Project can be classified as structurally-controlled orogenic gold deposits in an Archean greenstone belt setting. The Abitibi greenstone belt of Ontario and Quebec is located in the southeastern portion of the Superior Province (Nassif et al., 2018) of the Canadian Shield. This deposit type is a significant source of gold mined in the Superior and Slave provinces. Dubè and Gosselin (2007) published an overview of greenstone-hosted gold deposits in Canada. These deposits are typically quartz-carbonate vein hosted and are distributed along crustal-scale fault zones that mark convergent margins between major lithological boundaries such as those between volcano-plutonic and sedimentary domains. The Golden Highway Project is located on the DPFZ, a major regional structure.

The DPFZ in northeastern Ontario, hosts the largest Archean orogenic gold camp in the world and has produced over 80 Moz of gold from the Timmins Camp alone. When combined with the adjacent Larder Lake-Cadillac Fault Zone and associated splays, this region has hosted over 200 Moz of gold (Dubé, B et al. 2017).

The greenstone-hosted quartz-carbonate vein deposits are structurally controlled, epigenetic deposits characterized by simple to complex networks of gold-bearing, laminated quartz-carbonate structure-fill veins. These veins are hosted by moderately to steeply dipping, compressional, brittle-ductile shear zones and faults with locally associated extensional veins and hydrothermal breccias. The later structures are the main host for mineralization on the Golden Highway Project.

Along the DPFZ the main host rocks are greenschist facies metamorphic rocks of dominantly mafic to ultramafic metavolcanic rocks intruded by intermediate to felsic porphyry. In the Timmins area, larger deposits are spatially associated with fluvio-alluvial conglomerate (Timiskaming conglomerate) distributed along major and deep-seated crustal fault zones such as the DPFZ. On the Golden Highway Project, a banded iron formation transects the Timiskaming sedimentary basin and is spatially associated with gold mineralization.

The deposits are typically associated with iron-carbonate (ankerite) and sericite alteration with gold usually occurring in the quartz-carbonate-pyrite vein network. Significant gold can also occur associated with the iron-rich, sulphidized, wall rock selvages or within silicified and arsenopyrite-rich replacement zones.

In the Superior Province, orogenic gold deposits are spatially associated with large scale regional deformation zones such as the DPFZ, primarily hosted in second order associated structures. These large-scale structures and the associated Timiskaming-type sediments are interpreted as zones of transgressive terrain accretion (Kerrich and Wyman 1990), (Nassif et al. 2018). Colvine et al.'s (1988) study of gold deposits in Ontario concluded that Archean lode gold deposits are formed at deeper crustal levels (2 to 10 km) than younger epithermal deposits.

There is a general consensus that greenstone-hosted quartz-carbonate vein deposits are related to metamorphic fluids and generated by prograde metamorphism with fluid channelling along major crustal deformation zones and thermal re-equilibration of subducted volcano-sedimentary terranes.

Auriferous quartz veins cut many different rock types in the Timmins-Kirkland Lake area, including late intrusive rocks and late deformation zones such as the DPFZ. As a consequence, it is likely that gold mineralization formed late in the Archean geological history of the Timmins area (Fyon and Green, 1991). In the Timmins area, Corfu et al. (1989) have documented auriferous quartz veins cutting 2,691 to 2,688 Ma quartz-feldspar porphyry intrusions and a 2,673 +6/-2 Ma albitite dikes. At the adjacent Garrison project, Nassif et al. (2018) have concluded that north-northwest-trending extensional gold bearing quartz veins post-dated earlier sinistral trans-tensional northeast-trending shear zones hosting hydrothermal mineralization dated 2,657 +/-15Ma.

9.0 EXPLORATION

This section of the report and Table 9.1 summarize the exploration history of the project after Moneta activated exploration in 1986.

Table 9.1
Golden Highway - Summary of Moneta Exploration and Development Activities

Year	Company	Exploration	Township
1986	Moneta	MPH Ground Mag Survey, IP Various interpretations over time, drill hole M-86-01	Michaud
1986	St Joe	Mag survey	Guibord, Michaud
1987	Asarco	Drill holes PL87-01 to PL87-11	Michaud
1987	Falconbridge	Mag and VLF survey	Michaud
1987	Moneta	Mag and VLF survey, drill holes M-87-02 to 8,15, M-87-17 to 26, M-87-50 and MJB87-01 to 27, Overburden drilling	Michaud
1987	Nahanni	IP survey	Michaud
1987	Noranda	NBR87-01 to 29, drill holes BT-87-01 and 2	Barnet, Michaud
1988	Asarco	Drill holes PL87-12 to PL88-16	Michaud
1988	Falconbridge	Drill hole MI54-01	Michaud
1988	Golden Range	Drill holes GRM-88-1 to 4B	Michaud
1988	Lacana	Drill holes MD-88-3 to 7	Michaud
1988	Mid-North	Drill holes PT88-1 to 3	Michaud
1988	Noranda	Drill hole WJ-88-44	Michaud, Garrison
1988	Stellar	Mag and VLF survey	Michaud
1989	Corona	Mag survey	Michaud
1989	Falconbridge	Drill holes MI55-01 and 2	Michaud
1989	Golden Range	Mag survey	Michaud
1989	Moneta/Unocal	MU89 drill holes series	Michaud
1989	Moneta	Drill hole MPM-89-01	Michaud
1990	Corona	Drill hole PL-90-1B	Michaud
1990	Lacana	Drill holes MD-90-08 to 11	Michaud
1990	Moneta	Mag survey, geological mapping	Michaud
1991	Independence	Ground Mag Survey, IP, drill holes MI-91-139 to 150	Michaud, Guibord
1993	Moses	Drill hole JM-5	Michaud
1994	Hawley	Mag and VLF survey	Michaud
1994	Lac Minerals	IP survey	Michaud, Barnet, Guibord
1994	Noranda	Geophysical survey	Guibord
1994	Tandem	TM series, Overburden drilling	Michaud, Guibord
1995	Battle Mountain	Ground Mag / IP Survey,	Michaud, Guibord
1995	Lac Minerals	Drill holes PR-95-01 to 04	Michaud, Barnet
1995	St Andrew Goldfields Ltd.	Airborne Mag Survey	Michaud, McCool
1996	Barrick	MN96 series drill holes, Geophysical interp, Mag survey	Michaud

Year	Company	Exploration	Township
1996	Battle Mountain	Geophysical surveys (IP and Mag), geological report, prelim, drill holes PL96-1 and 2	Michaud
1996	Lac Exploration	Drill hole MM94 and MM95 series	Michaud
1996	Moneta	IP survey	Michaud
1996	Tandem	Drill holes 96-01 to 96-04	Michaud
1997	Battle Mountain	Drill holes PL96-1-2, PL97-3 to 5	Michaud
1997	Beagan	Mag and VLF survey	Michaud
1997	Lac Exploration	Drilling report, MN97 series	Michaud
1997-1998	Moneta	IP surveys	Michaud
1998	Totem	Exploration summary	Michaud, Garrison
1999	Hagen	IP survey	Michaud
1999	Kidston	Mag survey	Michaud
2000	Moneta	IP survey	Michaud
2000	Moses	OPAP, Soil geochemistry survey	Michaud
2002	Moneta	Ground mag (26.3 line km) and IP survey (6.1 line km)	Michaud
2001	Moneta	Drill holes M-01-225 and 226	Michaud
2002	Moneta/Acrex	Drill holes MA02-01 to 09	Michaud
2003	Moneta/Acrex	Drill holes MA03-10X to 14	Michaud
2003	Moneta	Drill holes M-03-236 to 239	Michaud
2004	Moneta/Acrex	Drill holes MA04-15 to 26	Michaud
2004	Moneta	Drill holes M-04-257 and 258	Michaud
2005	Moneta/Acrex	Drill holes MA05-27 to 32	Michaud
2006	Moneta/Acrex	Drill holes MA06-33 to 37A	Michaud
2007	Moneta/Acrex	Drill holes MA07-38 to 42	Michaud
2007	Moneta	Drill holes MWJ07-01 to 03	Garrison
2008	Moneta	Drill holes MWJ08-05 to 22	Michaud
2008	Moneta/Acrex	Drill holes MA08-43 to 50	Michaud
2008	Moneta	Drill holes M-08-259	Michaud
2009	Moneta	Tuned gradient IP survey	Michaud
2009	Moneta	Drill holes MWJ09-23 to 31	Michaud
2010	Moneta	Borehole 3D Resistivity/IP and Infinity TEM	Michaud
2010	Moneta	Drill holes MSW10-162 A, B, D, G, MM97-203X and MSW10-260 to 276	Michaud
2010	Moneta	Drill holes M55-10-01 to 36 and MWJ10-32 to 33	Michaud
2011	Moneta	Drill holes MPL11-01 to 09, MWJ11-34 to 59 and MSW11-277 to 294	Michaud
2012	Moneta	Drill holes MSW295, 296, 299 to 309, M55-12-37 to 39, MWJ12-60 to 79	Michaud

The diamond drilling listed above is discussed in Section 10.0.

In 1986 to 1987, Moneta carried out magnetometer, induced polarization and VLF-EM surveys which were followed by diamond drilling and reverse circulation drilling, discussed in Section 10.0. As a result of this work, Moneta discovered the South West deposit gold mineralization. MPH Consulting Ltd. compiled and interpreted the geophysical data in a report written in March, 1988.

In 1991, a geophysical data compilation and interpretation was undertaken for Independence Mining Company Inc. utilizing existing ground magnetics and IP geophysical data.

In 1994 to 1995, additional work by Lac Minerals, during its option period, included detailed ground magnetics on local grids (1996), GPS surveying, internal resource estimates, and preliminary metallurgical testing.

Since the end of 2012, exploration work has primarily been diamond drilling that focused on the expansion and better definition of known gold mineralization areas. This work was completed by or for Moneta and is documented in Section 10.0.

Magnetic data originally collected by Saint Andrews Goldfields covering the Golden Highway project area were provided to Fathom Geophysics by Moneta for geophysical processing in 2012. These data were processed by a suite of standard filters and Fathom Geophysics' structure detection filter, radial symmetry filter and complexity analysis were applied to the data. A series of digital images and maps were produced from the data (Daniel Core, 2012).

In 2016, and to supplement internal magnetic interpretations, Moneta outsourced a comprehensive interpretation of the high-resolution airborne magnetics available for the Golden Highway to independent consultants. Several high priority target areas were identified, and correlated with the extensive property drill database, increasing the level of confidence of these areas for potential gold mineralization. A test of an advanced AMT (audio magneto-telluric) geophysical survey was conducted in 2016.

Due to the complete coverage of the mineralization by overburden of moderate depth, Moneta did not complete any trenching or grab or channel sampling on the property.

While it may have been used to guide early drill hole spotting, none of the geophysical data were reviewed by the QP or used for, or have a bearing on, the mineral resource estimate presented in this report.

10.0 DRILLING

Historic drilling on the Golden Highway Property is covered in Section 6.0.

10.1 PRE-2013 MONETA DRILLING

After the 1986 initiation of exploration by Moneta, and the completion of the magnetometer, induced polarization and VLF-EM surveys, diamond drilling and reverse circulation drilling commenced. By 1988, 93 diamond drill holes (M-87 series) and 132 RC holes had been completed.

In 1989, UNOCAL Canada Ltd. optioned the property and completed two phases of drilling comprising 9,246 m in 44 holes primarily along the DPFZ (MU series). A total of five drill holes (1,178.20 m) were completed on the South West Zone as part of this drill program. UNOCAL dropped its option in the same year.

From December, 1994 to April, 1995, Lac North America Ltd. (a subsidiary of Barrick Gold Inc.) drilled 4,583 m in 11 holes (MM series holes). Three were drilled on mineralized zones (North Zone) associated with the DPFZ, and eight on the South West Zone. In 1995 to 1996, additional drilling took place for a total of 11,534 m in 23 drill holes. Ten holes were drilled on the South West Zone, nine holes on the Last Chance Zone, and four holes were exploration holes on what is now the Far West Block (former the 04 Extension Zone). In 1997, Lac drilled an additional 44 holes (22,270 m) on the greater South West Zone (MN series holes). The property was returned to Moneta in 1998.

In 2002, the Moneta/Acrex drill program consisted of 9 drill holes for a total of 3,038.5 m. Holes were drilled into several zones; four in the three blocks of the South West Zone, one into the Far West block area, two into the 55 Zone, and two north of the South West Zone Central Block.

In late 2003 and continuing into 2004, three new drill holes were completed by Moneta/Acrex in the 55 Zone and one was deepened. An additional 13 holes were drilled approximately 2 km to the west. In total, 4,940 m were drilled of which 793 m were drilled in the 55 Zone, with the remaining 4,147 m on the newly discovered Western Zone.

From 2005 to 2006, the Moneta/Acrex JV completed 6 infill drill holes totalling 2,142 m on the 55 Zone including an 800-m westerly step out.

In 2007, Moneta acquired Newmont's operating interest the Windjammer property and completed three drill holes totalling 988 m on Windjammer South.

In 2008, a drill program totalling 6,914 m in 21 holes, was completed by Moneta on the Windjammer South Zone.

Also in 2008, the Moneta/Acrex Joint Venture completed an 8-hole, 2,449 m drill program, on the 55 Zone increasing drill data density for potential resource modelling.

In 2009, Moneta completed a 9-hole drill program totalling 4,753 m and 2 drill hole extensions (281 m) in the Windjammer South, Central, and North zone area.

2010 saw a significant increase in the drilling program, with drilling taking place in all three known zones. In the 55 Zone drill holes M55-01 to 36 were completed. In Windjammer South holes MWJ10-25 and 29 to 32 were completed for a total footage of 1,475 m. Drill holes MWJ10-29 and 30, as well as the extension of MWJ10-25, profiled the area that is now part of Windjammer Central. Holes MWJ10-26 to 28 were drilled in the Windjammer North area. South West Zone drilling included holes MSW10-260 to 273 for a total of 7,375 m and included numerous wedges from several deeper mother holes.

2011 drilling focused on Windjammer South and the eastern and deeper portions of the South West Zone. Windjammer South drilling consisted of holes MWJ11-35 to 50 for 6,400 m. South West Zone drilling completed the deeper phase of drilling with holes MSW11-278 to 282, 284 and 285 for a total of 4,375 m (Puritch et al., 2012).

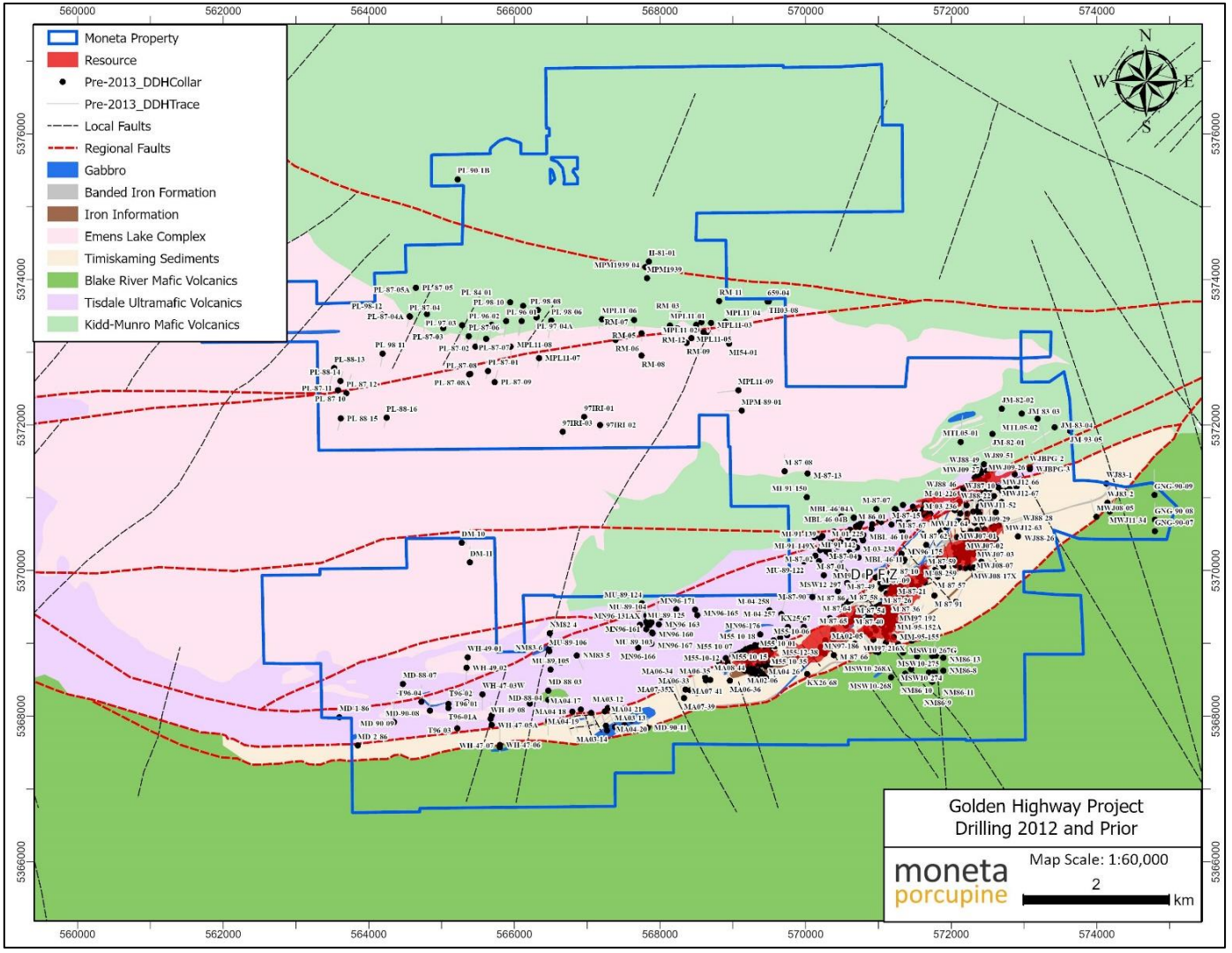
Figure 10.1 shows the known drilling completed on the property prior to 2012.

10.2 DIAMOND DRILLING 2013 TO 2020

Since the end of 2012, exploration activities at the Golden Highway Project deposits have consisted of several diamond drilling programs. The 2013 drilling program included advancing the 2012 NI 43-101 mineral resource areas to higher confidence categories, drilling Windjammer Central to the west and establishing a better linkage to Windjammer South, advancing the Gap area and better defining its linkage to both the South West and Windjammer South (Puritch et al., 2012). No mineral resource update was performed on completion of the 2013 drill program. The 2014 exploration activities were successful in identifying and expanding the Discovery Zone immediately adjacent to the modelled Windjammer North 2012 NI 43-101 open pit.

The 2017 to 2018 winter drill program was conducted from September, 2017 through to the end of April 2018. It focused on the South West deposit, where 45 drill holes for 29,803.90 m were completed. The remainder of the program tested the Discovery, Gap, 55, Windjammer North and LC areas. The drill program was designed to verify and extend newly interpreted zones of higher-grade gold mineralization which had been identified after a technical review of all property drill targets was completed over the summer of 2017. The 2019 drill program primarily tested the extensions of the South West deposit.

Figure 10.1
Pre-2012 Drill Hole Collar Locations



Source: Moneta, 2021.

An additional eight drill holes for 3,551 m were drilled on the South West and Windjammer South deposits areas during the summer of 2018. This included seven holes for 2,903 m at South West and one hole of 648 m at Windjammer South. The drilling was conducted as infill drilling on newly discovered vein and stockwork zones to enable the zones to be included in the new resource estimate. The holes were drilled from July 31, 2018 to September 04, 2018.

There has been a significant amount of diamond drilling since 2013 which is summarized in Table 10.1. All drill holes were completed with NQ size core.

Table 10.1
Moneta Diamond Drilling 2013 to 2018 Golden Highway Property

Program	Drill Hole Series	Total No. Drill Holes*	Total Metres
2013-2014	MGH13-001 to 105A	112	49,719
2016	MGH16-001 to 011	11	6,052
2017-2018	MGH17-012 to 100	102	49,817
2018	MGH18-101 to 108	8	3,551
2019	MGH19-109 to 122	15	9,455
2019-2020	MGH19-123 to 157	37	18,524
		Total	**137,118**

*Includes abandoned and extended drill holes.

The 2013-2014 exploration was focused on drill programs to expand and better define the in- and out-of-pit October, 2012 NI 43-101 resource estimate. Moneta completed 112 holes over the course of two years, equivalent to 49,719 m of drilling.

In 2015, there was no drilling on the Golden Highway project.

Moneta completed 11 drill holes in 2016 totaling 6,052 m. A western "North Corridor Volcanic" target (Destor West), delineated by an advanced AMT (audio magneto-telluric) geophysical survey, was tested in 2016, by drill holes MGH16-004 and 006 (1,667 m). The remaining holes of the drill program (2,937 m), stepped out 700 to 1,400 m southwesterly along strike of the DPFZ from the LC Zone.

In 2017, exploration was comprised of two drill programs. In early 2017, the first drill campaign consisted of 25 drill holes and 3 drill hole extensions, for 11,781.22 m (MGH17-012 to 035). Drilling was targeted at areas outside of the 2012 resource estimate and notably along the north branch of the DPFZ in the LC and Twin Creeks areas where gold mineralization had been historically intersected.

During late 2017 to early 2018, Moneta conducted drill testing of mineralized targets generated in a technical review. The program involved up to six contract drill rigs being mobilized to the Discovery, South West, Gap, 55, Windjammer North and LC target areas as well as earlier on the Twin Creeks target. A total of 38,715.1 m was drilled in 78 holes (MGH17-037 to MGH18-100), from September 11, 2017 to April 26, 2018.

During 2019, a total of 9,455 m of drilling was completed in 15 holes on the Golden Highway project. This consisted of 14 holes for 8,990 m of drilling at South West and one hole for 465 m of drilling on the 55 deposit. The South West drilling was conducted to test the down dip and strike extensions of new veins identified in the Gap area on the eastern part of South West. The drilling also infilled and confirmed some of the main South West mineralized structures.

During the winter of 2019-2020, a total of 37 holes were drilled for 18,524 m of drilling on the Golden Highway project. This consisted of 12 holes and 6,264 m at Windjammer South, 17 holes for 8,885 m at Westaway/West Block, 6 holes for 2,265 m at 55 and one hole for 609 m on the South Basin target and one hole for 501 m on the new Halfway target (MGH19-123). The drilling was conducted at Windjammer South and 55 to confirm the new geological interpretation and test the extensions of near surface gold mineralization for resource definition. At Westaway drilling was conducted to drill define a new underground resource and was conducted at Halfway and Westaway to test for new zones of gold mineralization.

A table of all drill holes included in the database provided to Micon is provided in Appendix 2. Not all of the holes in the database were used in the resource estimate. As discussed above, only the post 1987 drilling, for which Moneta has the remaining core, were used in grade estimation for the mineral resource reported herein.

The post 2012 drilling was largely targeted at the zones considered for the mineral resource estimate presented in this report. The drill hole collar locations are shown in Figure 10.2 to Figure 10.6.

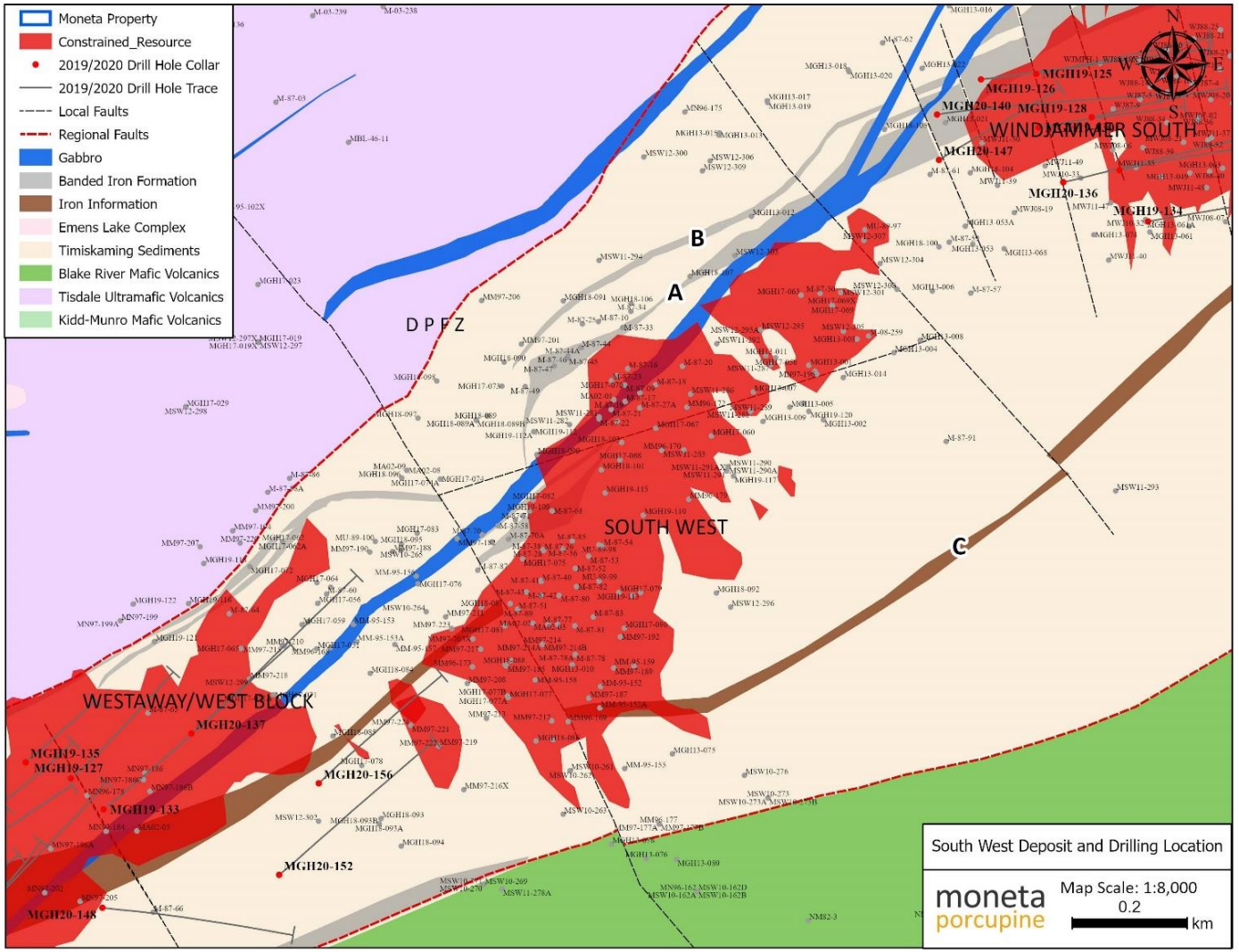
10.3 DRILLING PROCEDURES

Knowledge of the drilling procedures used in the pre-Moneta drilling (1986) is limited. Only the 1987 onwards drill hole assay results were used for the mineral resource estimate. Moneta has all of the core from 1987 on.

Drill hole collars were positioned by Moneta personnel with a hand-held GPS unit. All diamond drill holes were aligned by drilling crews employing an Azimuth Pointing System (APS) rented from Reflex instruments of Timmins, Ontario. The Azimuth Pointing System (APS) is a GPS-based compass that provides a True North Azimuth measurement and position. Since the APS is not using the earth's magnetic field to determine the azimuth, it is not affected by ferrous anomalies (metal) from the ground or surrounding structures.

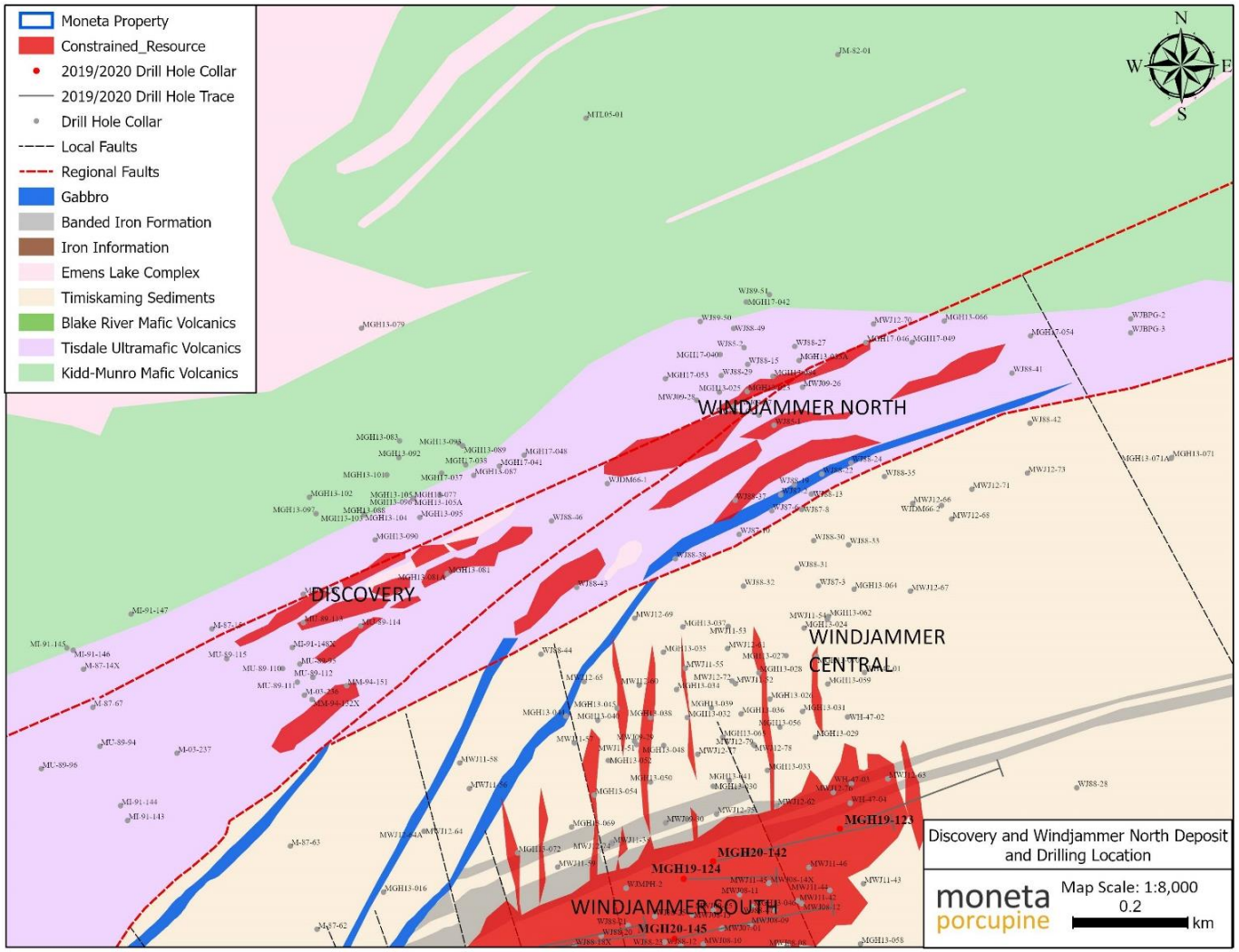
The APS uses two antennae to calculate an azimuth solution. The APS surveys the drill hole collar coordinates and elevation in UTM coordinates (NAD83) utilizing total station GPS instrumentation. These data were recorded and subsequently entered by Moneta personnel into a computer database. As a verification of the initial GPS collar co-ordinates, after demobilization of the drill rig off the hole, Talbot Surveys Inc. of Timmins Ontario surveyed the top of the drill hole casing with a Topcon Hiper II Real time GPS system. The Topcon Total Station survey instrument was utilized by Talbot Surveys to measure the drill hole casing azimuth and inclination.

Figure 10.2
South West Deposit Current Drill Hole Locations



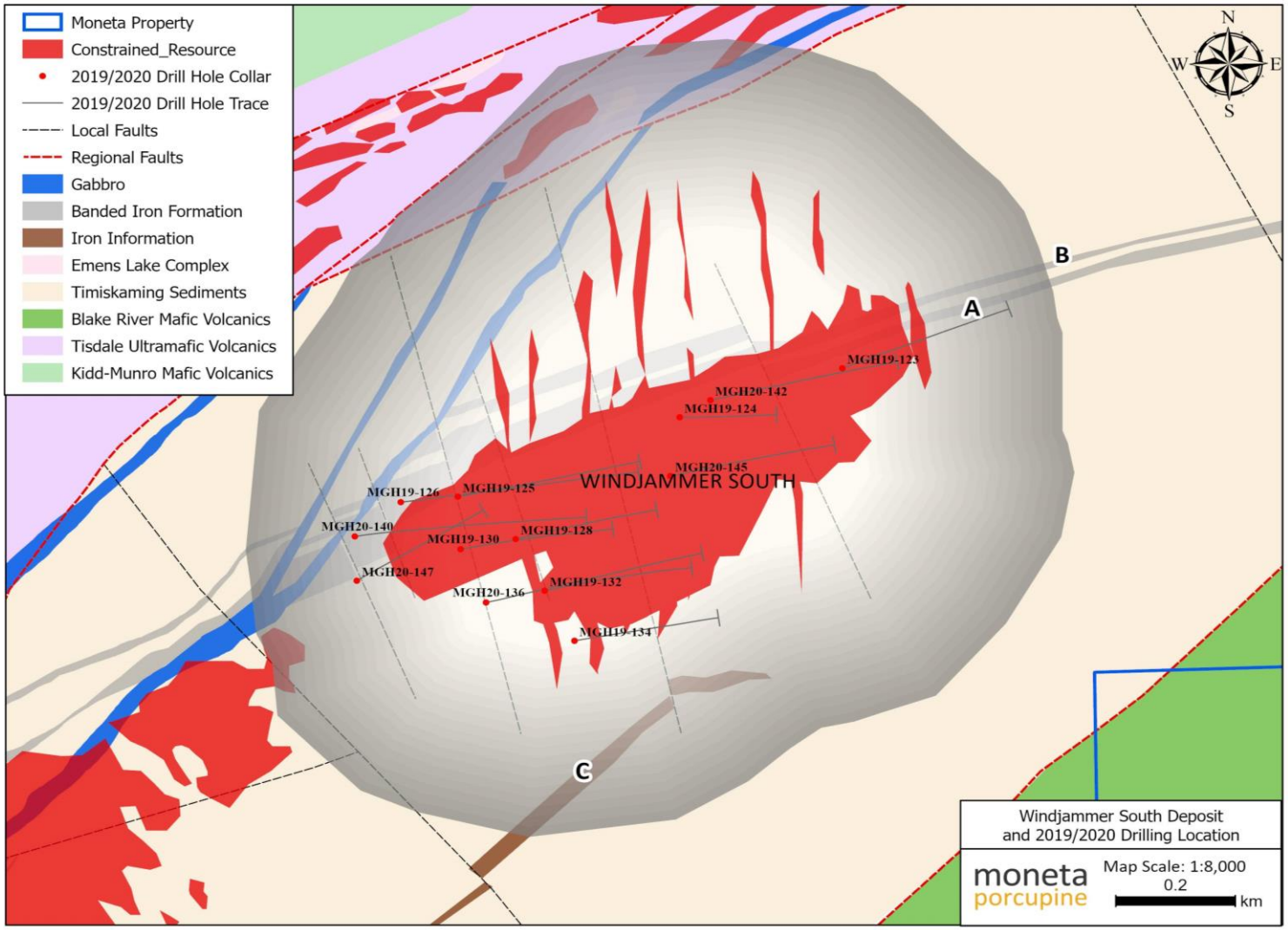
Source: Moneta, 2021

Figure 10.3
Windjammer North, Discovery Deposits Current Drill Hole Locations



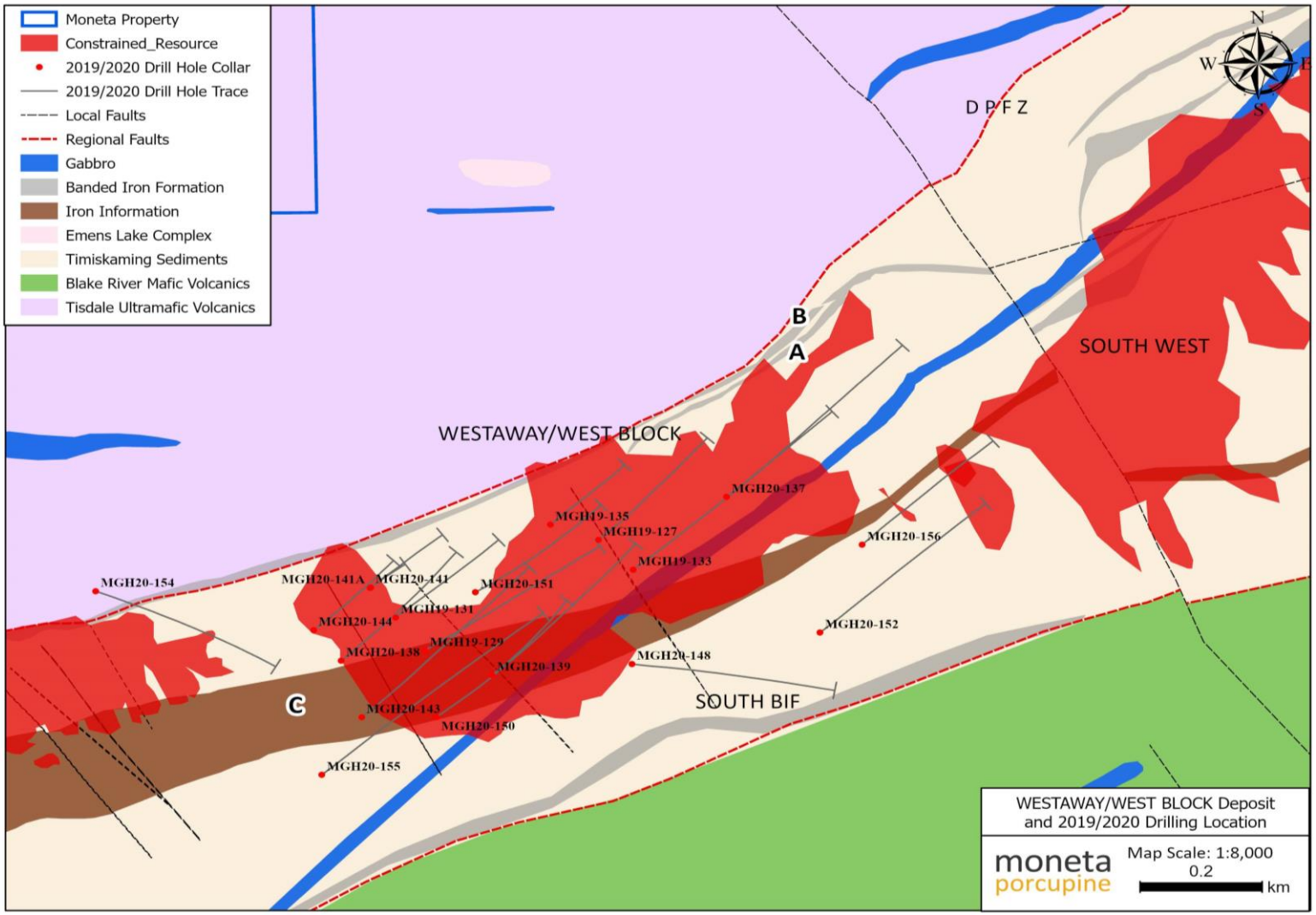
Source: Moneta, 2021.

Figure 10.4
Windjammer South Deposit Current Drill Hole Locations



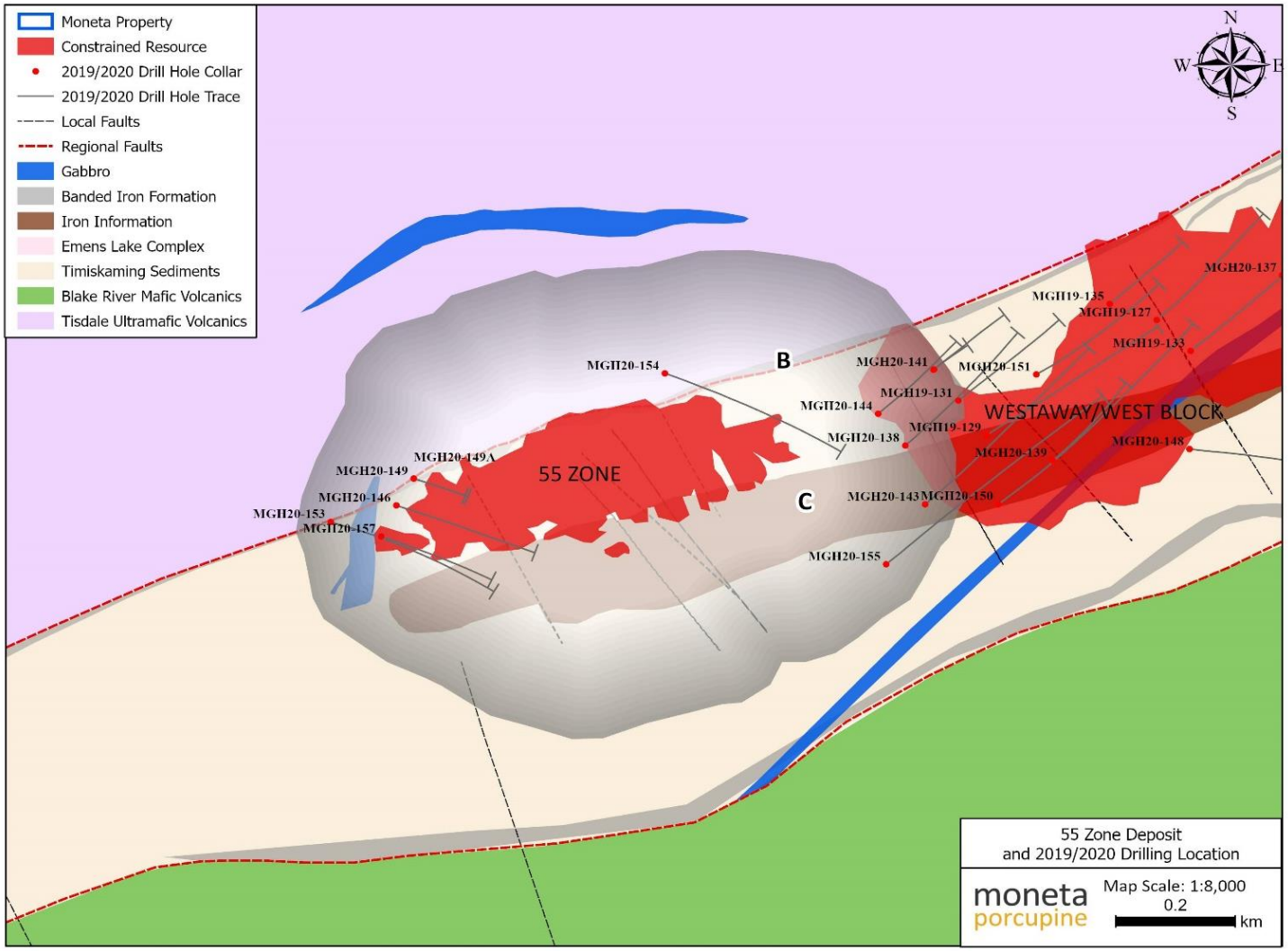
Source: Moneta, 2021.

Figure 10.5
Westaway/West Block Deposit Current Drill Hole Locations



Source: Moneta 2021.

Figure 10.6
55 Zone Deposit Current Drill Hole Locations



Source: Moneta 2021.

During drilling, the contractor conducted down hole surveying utilizing a Reflex EZ-Shot®, an electronic single shot instrument. It accurately measures six parameters in one single shot: azimuth, inclination, magnetic tool face angle, gravity roll angle, magnetic field strength and temperature. Single shot tests were taken 15 m or so below the casing and every 60 m down the drill hole. Upon completion of a drill hole, a gyroscopic survey of the hole was completed by the drill crew. The gyroscopic survey utilized a Reflex IQ Logger structural EZ-Gyro instrument and azimuth/inclination readings were taken every 10 m downhole. The gyroscopic survey results superseded the Reflex single shot results for drill hole orientation and the Talbot surveyed collar azimuth/inclination in the computer database.

Casing was left in each of the holes and the stand pipes were capped and labelled.

Industry standard core sampling protocols were used by Moneta on all drill holes. These protocols are documented in a hard copy Moneta sampling operating procedures (SOP) manual, which were provided to Micon and are described in this section.

At the drill site, the drilling contractor places drill core into wooden tray boxes along with marker blocks to indicate measured distances down the drill hole from the collar. Drill core was also oriented by the drilling contractor personnel for most holes from MGH16-001 to MGH20-157. The orientation involved using the Reflex Act III instrument, with the orientation mark indicated at the end of a core run (3 or 6 m interval), on the bottom of the core.

Since September 2019, the down-hole survey instrument utilized by the drill contractor has been a Champion gyroscope (Champ Gyro™). The Champ Gyro™ is a North seeking solid state gyroscopic system that allows users to take high accuracy singleshot, multishot or orientation measurements at the push of a button. It requires no starting azimuth and is ready to survey within minutes. It is run with the Champ OSA™ (overshot assembly) in wireline coring applications to take a gyro survey simultaneously with retrieval of inner tube and core.

This capability removes the need for a separate magnetic single shot survey run and reduces survey time at any depth. At surface the user initialises the Champ Gyro via a computer tablet. Downhole, singleshot or multishot measurements are taken at desired depths. On return to surface, data is downloaded via high speed wireless communication and is immediately accessible without any need for post processing or interpretation.

The downhole survey data are then uploaded to a designated web portal from the tablet. This typically occurs at the end of a 12-hour drill shift. The survey data are then available for review by the Moneta database geologist. Moneta initially instructed the drill contractor to take gyroscopic survey readings every 9 m down the hole and has reduced this to every 21 m. The drill operator will mark the hole ID, depth, azimuth and inclination on a paper slip at every station (secondary back-up). These paper slips are inserted in a plastic sandwich bag and placed in the core box. Readings in the upper casing are taken after bedrock has been reached and the casing is firmly sunk.

During drilling operations, the progress of the drill rigs is monitored by a designated Moneta geologist through constant cellular communications with individual drill rig crews and the drill foreman. The drill foreman provides Moneta with daily rig timesheets via email. These daily timesheets are compiled by a Moneta database geologist into a tracking excel file. Each drilling day, drill core is collected by Moneta technicians at the drill sites or the drill and transported to Moneta's core logging and storage facility. The secure facility is located at 2679 Highway 655, Timmins, Ontario. Since the summer of 2019, Moneta has contracted out the delivery of drill core from the Golden Highway Property, to Wahgoshig Resources LP a company based on the nearby Wahgoshig First Nation.

At the logging facility, the length of drill core recovered was compared to the position of depth markers in the core boxes by a technician or geologist in order to check for misplaced markers and to measure core boxes for tagging. After core measuring, a Moneta technician or geologist cleaned the core if necessary, completed a geotechnical log of core recovery and Rock Quality Designation (RQD, percentage of the core run with individual pieces longer than 10 cm) measurements, on the core.

Prior to logging, the core bottom orientation line was drawn on the core. This was accomplished by locating the core bottom mark scribed by the drillers at the end of a core run, then rotating and aligning the core so that the core bottom mark was placed at the edge of the core box or edge of a 1.5-m long angle iron. A solid line was then marked with a wax marker along the edge producing the core orientation line. If the drill core was not oriented, the core was rotated so the foliation was perpendicular to the edge of the core box/angle iron and a dashed line was marked on the core.

The core was then logged and sampled by qualified geologists. Geological descriptions of the core and sampling intervals with corresponding identifier numbers were entered onto a diamond drill log record captured on a laptop computer. In addition, orientation measurements (α and β angles) were recorded of structures and veins utilizing a kenometer.

Bulk density measurements were taken every 20 m down the hole using the water immersion technique. Tighter spaced measurements, at approximately 6 m through mineralized and altered halo zones of target zones, were taken. This was to ensure that the bulk density (g/cm^3) of the various mineralization host units could be utilized for the resource estimation (see Section 11.5.3).

Sampling of the core was based on visual observations of rock type, alteration intensity, quartz and quartz-carbonate vein intensity, and/or sulphide mineralization. The samples were collected within lithologically homogeneous intervals with due regard for varying mineralogy and textures. The sample length within mineralized zones was not less than 0.30 m and generally 1.00 m, with non-mineralized samples up to a maximum of 1.50 m. Sample intervals did not cross lithological boundaries in the 2017 to 2020 drilling programs. Core with visible gold (VG) was noted on the sample tag with VG to enable the laboratory to clean the sample preparation equipment after this sample to avoid contamination. All logging was recorded directly to laptop computers and completed drill logs and sample tables were stored offsite on a company server which is routinely backed up.

After lithological logging and sampling, a Moneta geologist took digital photographs of the core (dry and wet). Moneta has a vast collection of core photographs dating back to 2004 and hole M-04-257. The NQ core selected for sampling was cut in half along the core orientation line using an electric diamond core saw with continuous fresh water flushing, and half-bagged with the first part of a three-part assay tag bearing a unique identifier number. The other half of the core was stored at the logging facility with the second part of the three-part assay tag number placed in the core box at the beginning of the sample interval. Records of the sampled intervals and sample numbers were recorded in the computerized drill logs, and the third part of the assay tag is filed.

The sawn and unsampled whole drill core from the 2013 to 2020 drill programs is catalogued and securely stored on core racks at the Moneta core logging/storage facility, 2679 Highway 655 in Timmins.

10.4 CONCLUSIONS

The QP has examined the logging procedures used and described above. In the opinion of the QP, Moneta personnel have used industry standard best practices in the collection, handling and management of drill core and assay samples.

The QP is not aware of any drilling, sampling, or recovery factors that could materially impact the accuracy and reliability of the results presented in this report.

11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 GENERAL

The master assay database has been compiled by Moneta incorporating all available records and then used for the purposes of the resource estimate presented in this report. The data used for resource estimation does not include any assays from pre-1986 work. Moneta has the entire core, pulp rejects, and coarse rejects dating from 1986 catalogued and stored in the company's secure core logging-sampling facility located in Timmins. Data entries have been verified and scans of paper drill logs and assay certificates are available.

11.2 HISTORICAL SAMPLES

Historical drilling and geological data were sourced from government assessment and company files and considered indicative of geology and mineralization. Older (pre-1980) assay results may not be reliable and core sizes ranged from AQ to NQ. The pre-1986 assay data were not used for resource estimation, but the logging may be used for drill hole planning.

More recent drill programs since 1986 have primarily used BQ and NQ sized core with some HQ, as determined by drilling situations and program design at the time. Results from these programs are believed to be reliable, with the inclusion of extensive duplicates and screen metallic analyses when warranted. Moneta drill results from 1986 to 1987 have been tested and confirmed by Lac Minerals (Barrick 1994 to 1995) resampling. Noranda drill results to 1989 have also been verified by resampling and twinning of two drill holes as detailed by Cargill (2008). Significant drilling within the historical drill patterns in the zones has generated similar results. Recent sampling conducted in 2017 and 2018 of 1980's core has continued to validate the original data.

A variety of analytical laboratories have been used over the course of the various drill programs. Moneta drill programs from 1986 to 1987 used Bell-White Analytical Laboratories Ltd. (Haileybury) and, later in the programs, Swastika Laboratories Ltd. (Swastika) in Kirkland Lake and Bondar Clegg (Ottawa), now ALS-Global. Lac Minerals (Barrick) also used Swastika Laboratories in Kirkland Lake. The Swastika Laboratory is still in operation. Moneta used Laboratoire Expert (Rouyn-Noranda, Quebec) and Activation Laboratories (Timmins) over the period 2011 to 2012. Both laboratories are still operating.

Past programs, in particular the Lac Minerals (Barrick) and Unocal drill programs, used offsite facilities to log and process core. In the case of Barrick, it was the Holt-McDermott mine site approximately 20 km to the east along Highway 101, while Unocal used the Perry Lake Lodge also on Highway 101 and adjacent to the current property. Moneta's drill core samples have routinely been collected at the company's core logging and storage facility, a gated area in Timmins where all core, pulps and rejects from post 1986 drilling are stored (see Figure 11.1 and Figure 12.2). A permanent insulated building, suitable for winter operations, is available for core logging and sampling, including diamond saws, office area and core logging and display areas. Drill core samples were typically picked up by laboratory personnel or delivered

directly to the laboratory for preparation and analysis, or to a secure lockup to be shipped by bus, as required.

Figure 11.1
Moneta Core Logging and Storage Facility

Source: Moneta, 2019.

From 2002 to 2004, Moneta core samples were assayed at Swastika Laboratories using a 30 g aliquot for NQ core and 2 x 30 g aliquots for HQ core, giving a representative 1 assay ton sample portion. Samples were analyzed by fire assay with an atomic absorption finish with a 2-ppb detection limit. Gold values greater than 1.0 g/t Au were reassayed by standard gravimetric fire assay with a detection limit of 0.03 g/t Au from the same prepared pulp.

Screen metallics assays were completed on any samples with visible gold observed in core. A random 41 samples were sent to Bondar Clegg as third-party checks using the same primary pulp. Also, in 2004, additional duplicate assays from coarse reject material were completed on all assays over 5 g/t Au at the primary laboratory. Later screen metallic fire assays were performed on samples defining zones from both geological and gold content considerations. Adjacent flanking or low gold grade samples were also included. Internal pulp repeat analysis on the same original pulp was completed by Swastika on a regular basis and up to 15% of the pulps representing a range of results were submitted to ALS Chemex (now ALS Global) as checks for third party quality control.

11.2.1 Quality Assurance/Quality Control

A Quality Assurance/Quality Control (QA/QC) program was established. Standards and blanks were routinely submitted in the sample stream, assayed and reported by the laboratory for at least every 20 samples. The analytical methods for the standards and blanks were as per the original sample. Samples containing visible gold may have been subjected to a metallic sieve assay and a check assay, should repeated check samples show significant variability.

11.3 2007 TO 2013 SAMPLING METHOD AND APPROACH

The methods described in this section were utilized by Moneta from 2007 until 2013.

In the course of the drill program regular core pick-up runs were made to the drill site by pickup truck on an as needed basis but generally daily or after two productive drill shifts.

All mineralized sections of drill core considered significant were marked and tagged to be split using a diamond saw with continuous fresh water flushing. One core half was retained as a reference sample while the other was bagged and shipped for assay as directed by the project geologist and Qualified Person. Sample intervals and corresponding sample numbers were entered into the standardized core log sheets by computer. Sample lengths were determined by the geologist logging the core with samples ranging from 0.20 m to 1.50 m in length. Typical sample lengths were 0.50 to 1.00 m. The samples selected for assay were batched with standards and blanks included, to be shipped to appropriate laboratories by bonded commercial carrier from secure lockups.

Results were first reported electronically for direct database entry, followed by certified assay certificates.

11.4 2007 TO 2013 SAMPLE PREPARATION AND ANALYSIS

Swastika Laboratories Ltd., Laboratoire Expert, and Activation Laboratories were used for analysis. They participated regularly in the Proficiency Testing Program for Mineral Analysis Laboratories (PTP-MAL) administered by the Standards Council of Canada and maintain Certificates of Successful Participation in Proficiency Testing for gold, and other elements.

At Swastika, the samples were dried and crushed to approximately six mesh. A Jones riffle splitter was used to take a 400 g sub sample for pulverizing with the reject portion bagged and stored. After reducing the 400 g sub sample to 80% passing -100 mesh, the sample was thoroughly blended and a 29.166 g portion (one assay ton) used for fire assaying. Assayed samples were finished by Atomic Absorption. Those which returned a value of greater than 2 g/t Au were re-assayed and finished gravimetrically. Repeat or check assays were run by the laboratory on at least one in every 10 samples on the original pulp or on a second pulp prepared from the reject. Additional checks were provided in a number of instances when an assay was greater than 2 g/t.

Laboratoire Expert Inc. (Rouyn-Noranda, Quebec) undertook the primary analytical work since 2009, with third party check analyses conducted by Activation Laboratories (Timmins/Ancaster). Prior to 2009, Swastika Laboratories Ltd. undertook the primary analytical work with third party check analyses conducted by Laboratoire Expert Inc. Blank material utilized was commercial landscaping marble.

One standard and blank were included within every batch of 24 samples sent to Laboratoire Expert, the primary laboratory.

Typically core samples were dried, crushed by jaw crusher and further reduced to approximately 6 to 10 mesh using a roll crusher. The jaws and rolls were cleaned with a wire brush and air jet and the processing of barren material. A Jones riffle was used to take a 300 to 400 g sub-sample for pulverizing. The remaining reject portion was bagged and stored. After reducing to a nominal -100 or -200 mesh with a pulverizer, the sample was thoroughly blended and sent to the fire assay department. A 1-assay ton portion (29.166 g) was used for fire assaying. This process results in a particle of gold that, in the normal assay method, is weighed (gravimetric).

For screen metallics gold assays, the total sample is dried if necessary, crushed and pulverized, then screened using a 100-mesh screen. The minus 100-mesh portion is mixed and assayed in duplicate by fire assay with a gravimetric finish, as well as a complete digestion of the +100-mesh portion. All individual assays are reported as well as the final calculated value. For geochemical analysis or where lower detection limits are required, the gold is dissolved and determined by Atomic Absorption Spectrophotometry. This was done after collecting the precious metals with a fire assay fusion.

Third party checks and pulp repeat analyses were conducted regularly on the same original pulp and duplicate sampling was occasionally conducted on a second pulp prepared from the stored coarse reject. Analytical standards (also known as certified reference materials, CRM) and blanks were also used for control samples. Selected samples, determined based on showing significant variability, defining zones, or having noted visible gold during logging, were reprocessed using screen metallics assay methodologies. Up to 15% of all pulps collected using a range of values were reassayed by the second third party check laboratory (Activation Laboratories or Swastika) using internal standards. Results were monitored and repeat analysis completed when required. Coarse rejects and all prepared pulps were stored for any additional analytical work.

Results >1.0 g/t Au were automatically repeated using gravimetric fire assay methods, >10 g/t Au were reassayed as second cuts from the reject, and >20 g/t Au were subject to metallic gold assays. Assay results were then reported over the drilled widths using the either the first primary analysis or what was considered to be the most complete and accurate method (the gravimetric fire assay or the screen metallic assay if conducted).

11.5 2016 TO 2018 SAMPLE PREPARATION AND ANALYSIS

11.5.1 2016 to August 2017 Sample Preparation and Analysis

For the 2016 to August 2017 program, Moneta used the same core logging, data entry and sampling procedures, three standards and two blanks were included within every batch of 74 samples sent to the primary laboratory of SGS Laboratories in Cochrane and collected from the secured Moneta core logging and storage facility located in Timmins. The batches were collected by SGS personnel from the core facility and driven directly to the laboratory.

Typically, core samples were dried, crushed by jaw crusher and further reduced to approximately 75% passing 10 mesh (2 mm) using a roll crusher. The jaw crusher and roll crusher were cleaned with a wire brush and air jet as well as barren material flush. A Jones riffle was used to collect a 250 g sub-sample for pulverizing. The remaining reject portion was bagged and stored. After reducing to a nominal 85% passing -200 mesh (-75 µm) with a disc pulverizer, the sample was thoroughly blended and sent to the fire assay department.

A 1-assay ton portion was used for fire assaying with an ICP-AES finish. The detection limit of this was 0.001 g/t Au and the upper limit was 10 g/t Au. Samples above 3 g/t Au were reanalyzed by fire assay with a gravimetric finish. This final assay was determined by weighing the final prill (gravimetric).

Samples above 20 g/t Au from gravimetric assaying were subjected to a metallic screen fire assay of the total sample. The total sample was dried crushed and pulverized, then screened using a 100-mesh screen. The -100-mesh portion was mixed and assayed in duplicate using two 30 g fire assay charges with a gravimetric finish. The entire +100 mesh portion was analyzed by fire assay with a gravimetric finish. All individual assays were reported, as well as the final calculated (weight averaged) value. Independent certified standards were sourced from OREAS through Analytical Solutions Ltd.

Assay results were then reported using drilled widths and gold values, the reported value is the first ICP-AES result, replaced by the first gravimetric result if that was run, or replaced by the metallic screen result if that was undertaken.

11.5.1.1 Repeat Third-Party Assay Checks

Repeat or check assays were conducted regularly (every 90 days when pulps were returned from the laboratory) on the same original pulps, at a third-party check (umpire) laboratory, Activation Laboratory in Timmins. Standards and blanks are also inserted in the third-party repeat batches as control samples.

A list of samples was prepared taking 3/24 or 9 samples per batch of 74 (~12%) based on 3 value points, ~100 ppb, ~1 g/t and ~3 g/t, or 3 ppb, 100 ppb and 500 ppb for low result batches. For a batch of 35 samples sent for third party checks, 4 samples were inserted consisting of standards/blanks, one from each original certificate. The list was printed and provided to the

technician with certificate and sample numbers. The pulps were retrieved from each box to make new batches. The batches were delivered directly to the Activation laboratory in Timmins by Moneta personnel in sealed bags, including a digital chain of custody and sample list.

Assaying at Activation Laboratories was performed by 30 g fire assay with an AAS finish for samples less than 3 g/t and a 30 g charge with a gravimetric finish for samples above 3 g/t Au.

All coarse rejects and pulps are stored at the Timmins core logging and sampling facility of Moneta for any additional analytical work.

11.5.2 September, 2017 to Present Sampling Procedures

For the September, 2017 to current drilling programs, the same core processing and sampling protocols were followed with a minimum sampling interval of 0.30 m and a maximum interval of 1.50 m, collected from the same right-hand side of the oriented and marked up core. In most cases, a 1.00 m sample was used unless geological contacts meant that a shorter sample length was required. The primary laboratory was changed to ALS-Chemex (now ALS Global) located in Timmins and the secondary umpire laboratory used was Activation Laboratories also based in Timmins. The following QA/QC sampling procedures were followed:

11.5.2.1 Assaying and Sample Preparation Procedures

Delivery: Samples were collected directly from the secured Moneta core facility in Timmins by ALS-Chemex staff upon notification that a batch was ready for pick-up and were delivered directly in sealed rice sacks to the sample preparation facility. Activation Laboratory staff collected the third-party check assay samples directly from the Moneta core facility also upon notification.

Preparation: Drill core and rock samples were dried and crushed to 85% passing ~2mm (~10#), a 1kg split using a Jones Riffle splitter was then pulverized to 85% passing 75µm (~200#) at the ALS-Chemex sample preparation facility in Timmins. A 250 g split of this pulp was sent directly to the ALS-Chemex assay facility in Vancouver, Canada by ALS-Chemex staff.

Fire Assay Method: The sample was homogenized and a 50 g charge assayed by Fire Assay with an Atomic Absorption Spectrometry (AAS) finish analytical procedure. The detection limit of this procedure is 0.001 g/t Au and the upper limit is 10 g/t Au.

Standards (Certified Reference Material): Standards (CRM's) within drill sample batches were inserted at a frequency of ~1 in 20 (5%) by the logging geologists (3 standards per batch of 70 samples). The standards used covered 3 grade ranges, near cut-off (~0.3 g/t Au), average grade of mineralization in the area (~1.0 g/t Au) and higher grade (3 to 6 g/t Au). Independent certified CRM's were sourced from OREAS through Analytical Solutions Ltd.

Blanks: Blanks within drill sample batches were inserted at a frequency of 2 per batch of 70. Where possible blanks were inserted immediately after high grade samples. Blank material was sourced from clean commercially available landscaping marble.

Pulp repeat sample (Pulp duplicate): The laboratory was requested to produce a second sample repeat from the same prepared pulp twice (2) per batch of 70 samples. This pulp was submitted using a unique sample number and assayed using the same method as the primary sample.

Third party check assays: Repeat samples were selected from 5% of prepared sample pulps and sent to an independent third-party laboratory upon receipt of the returned pulps from the primary laboratory and sent to Activation Laboratory in Timmins. Samples were randomly selected to cover the grade range of interest. These sample batches contained new standards at a frequency of ~1 in 20 and blanks at a frequency of ~1 in 20 (5%).

Gravimetric Fire Assay: A fire assay with a gravimetric finish (50 g charge) was conducted for all samples over 10 g/t Au at the ALS-Chemex Laboratory in Vancouver.

Metallic screen fire assays: These were performed on samples which had been identified by the logging geologist as containing coarse gold or considered to be potentially high grade. The geologist requested this on submission. The metallic screen fire assays were performed on the same initial 1 kg prepared pulp with total analysis of the +100mesh fraction and duplicate (2x) 50 g fire assays with an AAS finish on the -100mesh fraction. All fire assays were completed with an AAS finish.

Clean Pulverizers: Samples with identified coarse visible gold or high grade were flagged for the laboratory with VG written on the sample tag and a clean quartz flush was requested of the crushing and grinding equipment after preparation of this sample, so as not to contaminate the following sample. Blanks were submitted after potentially high-grade samples, as a test for contamination.

Field Duplicate samples (Coarse Duplicates): Upon return of the coarse rejects from the primary laboratory, field duplicates samples were collected from the samples which returned a range of assays (low, medium and high) within all drill sample batches at a frequency of ~1 in 20 (5%) of samples. The field duplicate sample was submitted to the same primary laboratory (ALS-Chemex Laboratories, Timmins) that had performed the initial assay and a second pulp was prepared and assayed by fire assay in the same manner as the primary sample.

Multi-Element ICP Analysis: Multi-element ICP analysis was conducted across mineralized zones and alteration haloes and into wall rock on a regular basis. This involved an ICP-AES analysis of the same prepared pulp at the primary laboratory using a 4-acid digestion and analyzed for 61 elements. The results were monitored to determine if pathfinder or deleterious elements exist.

11.5.2.2 QA/QC Procedures

Laboratory Inspections: Routine visits were made by Moneta personnel to the sample preparation facility to check that samples are being crushed and pulverized to the required size in the correct percentages. Checks were made that the general cleanliness of the facility and the handing of samples were to best industry standards.

Standards: The assay results for certified standards were plotted on control charts upon receipt of the initial assays. Anything more than two standard deviations above or below the mean certified result was considered a fail. If more than 4 consecutive assays of the standard fell above or below the mean but within two standard deviations, this was also considered a fail.

Blanks: Any reported assay >0.001 g/t Au was considered a fail.

Some judgement was used for the request of reanalysis of entire batches if failures did occur. Should batches contain no detectable assays, then a batch may not be reassayed and, if adjacent standards were within acceptable levels, then only partial batches may have been reanalyzed.

Regular monthly, or as required, reporting of QA/QC results was maintained, to include a high-level summary of the information contained in the monthly assay tracking sheet. Included was how many samples were submitted, how many standards/blank failures occurred, any sample preparation failures, how many reassays were requested, and laboratory turnaround times, as well as steps to remedy failures. Monthly performance charts displaying all standards and blanks for the month were plotted and identification of any positive/negative bias highlighted for all standards over time. Analysis of the pulp repeat samples was also charted, as well as comparison of third-party check assays and coarse field duplicate samples against the primary assay. Internal laboratory QA/QC sampling and analysis, including pulp repeat and assaying of internal laboratory standards, was also assessed.

11.5.3 Bulk Density

Bulk density measurements were collected on roughly one sample in every 6 m of core from cut full core samples. The bulk density measurement method used was the instantaneous water immersion method which records the dry weight immediately followed by the weight in water which is used to calculate the bulk density. The results were entered into the database to correspond with the drill hole number, depth, grade and rock and alteration types.

$GB = \frac{W}{W-Sw}$ Where GB = Bulk Density of the Sample in g/cm^3, W = Dry Weight of the Sample in g, Sw = Suspended Weight of the sample in water, g

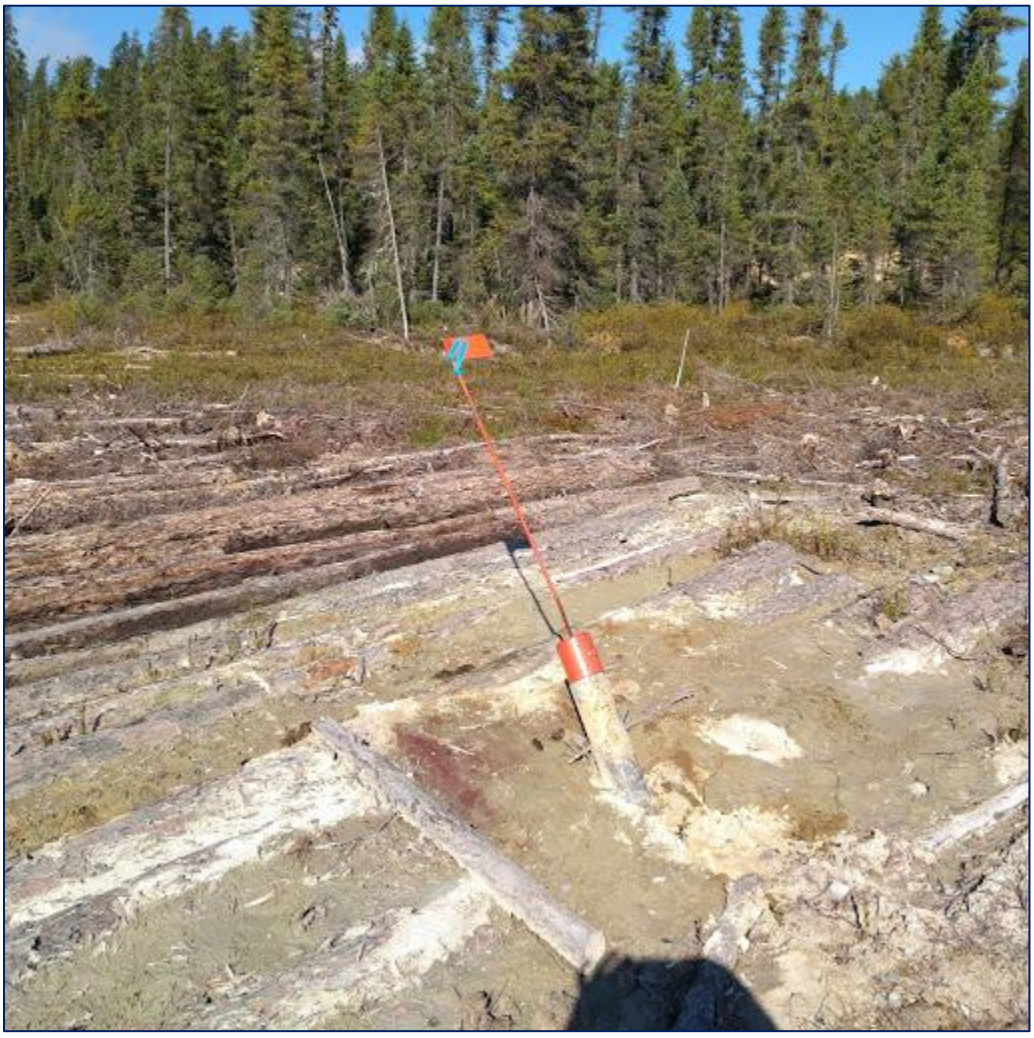
11.6 CONCLUSIONS

The QP is satisfied with the adequacy of the sample preparation, security, and analytical procedures employed and concludes that they have resulted in data suitable for use in a mineral resource estimate.

12.0 DATA VERIFICATION

During the September, 2018 site visit, the QP travelled to the Golden Highway Project field site east of Matheson, Ontario, as required by NI 43-101. While no rock outcrops are available near the mineralized bodies allowing for examination of mineralization in place, there was extensive evidence of previous drilling activity including well-marked drill casings (see Figure 12.1).

Figure 12.1
Drill Hole Casing and Marker Flag



Source: Micon, 2019.

The collar co-ordinates of several of the drill holes were checked against their reported surveyed locations with a hand-held Garmin GPS. Discrepancies noted were typically less than 1 or 2 m.

Moneta maintains a secure core storage yard and logging facility behind a locked gate on Highway 655 in north Timmins (see Figure 12.2). An extensive and well-organized core rack system contains much of the drill core from the Golden Highway Project. The core storage yard contains all drill core from the 1980s onward, which is available for review.

Figure 12.2
Moneta Core Stroage and Logging Facility

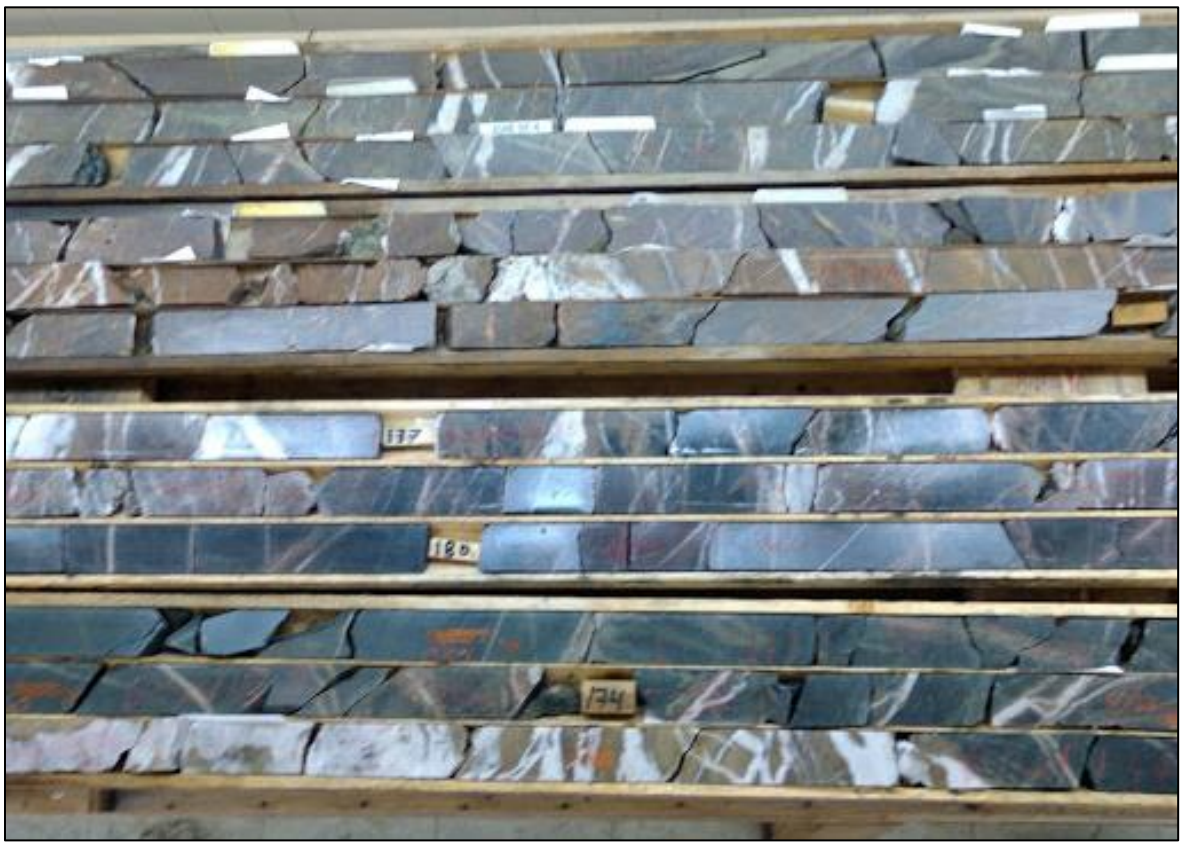
Source: Micon, 2019.

Moneta staff geologists and technicians selected typical mineralized intersections from the Golden Highway Project drill core in the yard and presented them to the QP with explanations of the group's interpretations. Examples of core from 1987 to 2018 were examined. Obvious sign of mineralization and alteration were noted in the core (see Figure 12.3). Occasional examples of visible gold were also noted.

While at the core logging facility, the QP reviewed the core logging, sampling, sample shipment, sample security procedures and QA/QC protocols employed by Moneta staff. The QP also reviewed the equipment and procedures used for bulk density measurement of the drill core.

On the final day of the site visit, the QA/QC program results, data verification, geological modelling procedures used by Moneta personnel and the resulting geological model were reviewed on-screen at Moneta's office on Third Avenue in Timmins.

Figure 12.3
Golden Highway Project Drill Core



Source: Micon, 2019.

While reviewing type examples of mineralization in drill core, four quarter-sawn duplicate samples were collected and submitted to ALS Minerals sample preparation facility in Sudbury, Ontario. The samples were prepared using the Prep 31D method (crush to 90% less than 2 mm, riffle split off 1 kg, pulverize split to better than 85% passing 75 microns) and analyzed by fire assay using the Au-AA26 method (50 g fire assay with atomic absorption finish).

The results obtained are compared to the original Moneta assay results in Table 12.1.

Table 12.1
Micon Check Assays

Hole	From (m)	To (m)	Zone	Original Assay (Au g/t)	Reassay (Au g/t)
MGH-13-10	174.00	175.00	South West	5.38	8.28
MGH-13-10	175.00	176.00	"	4.42	3.18
MGH-13-77	154.50	156.00	Discovery	6.49	6.44
MGH-17-53	462.30	463.27	Windjammer North	10.90	9.78

The assay results received by Micon are considered by the QP to be reasonable confirmation of the presence of gold at approximately the same concentrations as measured by Moneta.

After receipt from Moneta, of the project database used in the January, 2019 mineral resource estimate, the entry of assay results was checked against original assay certificates. The database contained 154,412 records of which 4,176 or 2.7% of the database were checked. No significant data entry errors were discovered.

For the November, 2019 mineral resource estimate update of the South West zone Micon received an updated database comprised of 1,574 drill holes, with a total of 454,945 m of drilling and containing 175,430 sample results. Micon checked the entry into the database of 1,488 additional assays from the South West drill program and found no data entry errors.

For this second mineral resource update of the zones other than South West (December 10, 2020) Micon again checked assay entries in the database against assay certificates. The checks were done by electronic matching of csv files against the database. 12,637 assay records from recent drilling were checked, of which 9,397 matched perfectly. Investigation showed that most of the rest reflected the use of reassays rather than original assays. A few represented detection limit or over limit results which are reported as character fields rather than numeric (i.e. <0.01). No serious issues were found.

Moneta tracks the results of its QA/QC samples (standards, blanks and pulp and reject duplicates) using standard control charts. The QP reviewed the QA/QC results and control chart plots prepared by Moneta. These were found to be acceptable.

12.1 CONCLUSIONS

The QP is satisfied that the exploration, sampling, security and QA/QC procedures employed by Moneta, and their results, are sufficient to produce data adequate for the purposes used in this technical report.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

A number of metallurgical test work studies have been completed using samples taken from the property. This includes preliminary leach tests undertaken by Barrick in 1996, Newmont in 2001. More recently, gravity, grinding and leach tests were undertaken by SGS Minerals Services (SGS) in Vancouver in 2012 and SGS in Lakefield, Ontario in 2019.

The 2012 SGS scoping level metallurgical test work program comprised standard bench scale cyanide leach bottle roll tests and a Bond Ball Mill Work Index test. The samples used for the test work program included six composites representing different mineralized zones identified at the Golden Highway Project. These samples were relatively low-grade, intending to be representative of an open pit mining scenario.

The 2019 SGS test program comprised gravity separation testing, cyanide leach bottle roll tests and a Bond Ball Mill Work Index test. The composite sample used for this program was prepared from mainly South West zone 2019 drill core, with a target average gold grade that would be appropriate for an underground mining operation.

Although the previous test work is useful, only the results from the 2019 test program were used as a basis for this PEA.

13.1 METALLURGICAL SAMPLES

13.1.1 Historical Testwork (Barrick and Newmont)

Barrick's preliminary program in 1996 used mineralized samples representing the South West deposit. The average gold grade of the mineralized drill core used for the leach tests was 8.00 g/t.

Newmont's 2001 program used four of six samples received from the Windjammer North and South deposits. Of the two rejected Newmont samples, one was determined to be refractory (Windjammer North deposit), based on a poor extraction from a cyanide based analytical procedure, and the second reject sample was considered to be waste.

The average calculated gold head grades from the four fine grind leach tests are shown in Table 13.1.

Table 13.1
Metallurgical Samples (2001) Gold Head Grades

Sample[1]	8 WJN	41 WJN	4 WJS	A WJS
Calculated Head Grade (Au g/t)	4.94	1.15	1.65	0.92

[1] WJN = Windjammer North Zone, WJS = Windjammer South Zone.

13.1.2 SGS - 2012

Six boxes containing approximately 165 kg of split drill core were received by SGS in August, 2012. These samples were selected by Moneta and represented the main mineralized zones at the project. The head grade of these composite samples is shown below in Table 13.2.

Table 13.2
Metallurgical Samples (2012) Gold Head Grades

Composite[1]	WJN	GAP	WJC	WJS	WJS (dup.)	SWZ	55 Zone
Head Grade (Au g/t)	0.84	1.04	1.21	0.83	0.99	0.99	1.2
Master Composite[2]	5%	10%	15%	28%	0%	33%	10%

[1] WJN = Windjammer North Zone, GAP = Gap Zone, WJC = Windjammer Central Zone, WJS = Windjammer South Zone, SWZ = South West Zone.
[2] Master composite was used for the Bond Work Index test.

The gold head grades were determined by using a standard screened metallics fire assay procedure.

The metallurgical samples were typical of the mineralization occurring at the property. However, they were originally selected to represent open pit material and, therefore, do not represent the potentially underground minable mineralization spatially or in terms of gold head grade.

13.1.3 SGS - 2019

Approximately 33 kg of samples were prepared from the 2018/2019 drilling program and sent to SGS Lakefield. These mineralized samples were selected to be representative of the South West Zone underground mineral resources. The origin of these samples, which were combined into a Master Composite at SGS, is shown in Table 13.3.

Table 13.3
Drill Core used for the Metallurgical Composite Sample (2019)

Target Zone name	Drill Hole Number	From (m)	To (m)	Length (m)	Au Grade (g/t)	Vein Name
South West	MGH19-110	144.00	147.00	3.00	5.12	Alder
South West	MGH19-110	617.00	620.00	3.00	3.70	Gap-2
South West	MGH19-112	311.00	314.45	3.45	3.76	Willow
South West	MGH19-115	348.48	352.00	3.52	3.41	Arbutus
West Block	MGH19-116	290.00	293.00	3.00	3.78	WB-8
South West	MGH19-115	768.00	772.00	4.00	5.20	Gap-4
South West	MGH19-113	574.60	576.50	1.90	5.79	Walnut
South West	MGH19-113	581.35	584.00	2.65	6.73	Walnut
South West	MGH19-119	599.95	602.00	2.05	5.41	Gap-1
South West	MGH19-120	264.60	267.10	2.50	4.31	Gap-3
South West	MGH18-103	387.02	394.15	7.13	5.06	Yew

The results from a multi-element analysis of the Master Composite used for the 2019 testwork is presented in Table 13.4. These results suggest that there are minor sulphides present but no material amounts of potential deleterious elements.

Table 13.4
Metallurgical Samples (2019) Master Composite Multi-Element Analyses

Element	Value	Element	Value	Element	Value
Au g/t	3.67	Cr g/t	96	Sb g/t	< 20
S %	1.12	Cu g/t	47.9	Se g/t	< 30
C(t) %	1.1	Fe g/t	26,600	Sn g/t	< 20
Ag g/t	< 2	K g/t	4,190	Sr g/t	195
Al g/t	65,000	Li g/t	< 5	Ti g/t	2,640
As g/t	< 40	Mg g/t	10,300	Tl g/t	< 30
Ba g/t	726	Mn g/t	387	U g/t	< 20
Be g/t	0.98	Mo g/t	100	V g/t	46
Bi g/t	< 20	Na g/t	45,700	Y g/t	7.9
Ca g/t	23,000	Ni g/t	58	Zn g/t	102
Cd g/t	< 2	P g/t	411		
Co g/t	17	Pb g/t	< 90		

The samples used for the 2019 SGS metallurgical test program are a good representation of typical mineralization of the South West Zone underground mineral resources.

13.2 PETROLOGICAL AND MINERALOGICAL STUDIES

A number of petrological and mineralogical studies have been performed on rock samples representing the different mineralized zones identified at the Golden Highway Project. These include the following:

- P. J. Whittaker, Whittaker Geological Services, "Petrographic Report for Noranda Exploration", November, 1988.
- Y. Lei, Barrick Gold Corporation, "Distribution of Free Gold Grains on Polished Thin Sections from the Southwest Zone (Moneta and Nufort Projects)", September, 1996.
- D. Mackenzie, University of Otago, New Zealand, "Southwest Zone Polished Sections, Photomicrographs and Sample Descriptions", November, 2018.

13.2.1 South West Zone

The most recent study by Mackenzie in 2018 comprised a collection of photomicrographs and petrographic descriptions of 11 NQ core samples from South West Zone drill holes MGH17-56 and MGH18-98. The samples include one BIF, three conglomerates, five greywackes, one finely banded siltstone/sandstone and one mineralised quartz vein. It was noted that all the samples were altered to some degree. The significant findings from this study are reproduced below:

i. *"There is an early generation of hematite-chlorite alteration that is present in the conglomerate samples and associated with early shears subparallel to, but locally oblique to bedding. There is also remnant disseminated hematite and minor chlorite in many of the greywacke samples and this is overprinted by later quartz-sericite-carbonate-pyrite alteration.*

ii. *Quartz-sericite-carbonate alteration is common in the greywacke samples (particularly adjacent to crosscutting pyrite-bearing quartz veins) and this is characterised by sericite altered feldspar grains and sericite-carbonate±quartz altered matrix. The amount of quartz silicification is hard to quantify as there is so much fine grained quartz in the matrix of these clastic sediments.*

iii. *Fine grained pyrite is disseminated through the matrix of many of the samples and this is associated with the quartz-sericite-carbonate alteration. In some samples, pyrite appears to have nucleated on older hematite grains and commonly contains hematite (and other unidentified) inclusions. Some pyrite contains inclusion-rich cores and inclusion-free rims. This texture may represent a later phase of pyrite (inclusion-free phase) that has nucleated on and overgrown an earlier (inclusion-rich) phase of pyrite - or- a later phase of mineralizing fluid has reacted with and recrystallized the outer rims of an earlier phase of pyrite.*

iv. *In addition to euhedral disseminated pyrite associated with quartz veins, some samples contain fine grained anhedral pyrite that is associated with hematite; so the early hematite-chlorite alteration phase may have been weakly mineralised with pyrite.*

v. *Both points iii and iv are consistent with there being two phases of pyrite in some samples. The later pyrite associated with quartz veins is more common in the mineralised samples. Sample MGH18-098 420.28m is cut by numerous quartz-sericite-pyrite veins and disseminated pyrite in the immediate host rock contains gold. The gold is found as microparticulate grains in pyrite and in fractures in pyrite. There is an unidentified silver-grey coloured inclusion in the gold-bearing pyrite.*

vi. *Hydrothermal quartz in the mineralised Arbutus vein has textures indicative of dynamic recrystallization and these quartz textures are typical of orogenic quartz veins formed at depths near or below the brittle-ductile transition.*

vii. *The BIF sample is cut by a quartz-carbonate-pyrite vein and pyrite has extensively replaced the hematite ± magnetite layers adjacent to the vein. The vein is likely the same generation as quartz-carbonate-pyrite veins in the greywacke and conglomerate, however due to different host rock geochemistry there is no sericite alteration in the BIF.*

viii. *There are late stage calcite-quartz ± chlorite veins that cut the earlier generations of alteration."*

The study by Lei in 1996 comprised a systematic identification of gold grains occurring in 23 polished sections obtained from 12 drill cores that intersected different mineralized zones. A summary of the results from this study is presented in the following bullet points:

- The number gold grains found using a microscope varied considerably for the different thin sections, from 2 observations to over 1,500.
- The size of gold grains varied from 0.1 micron to 80 microns with 86% less than 10 microns.
- Approximately 93% of the gold content is contributed by grains that are >5 microns.
- Majority of the gold grains were found in Qz-Cb veins and veinlets, Fp+Qz+Cb+Hm veinlets and pyrite rich stringers. Only a few were observed in the disseminated pyrite within altered sediments.
- Most gold grains were found in the fractures of quartz and pyrite suggesting that the main gold mineralization was the result of a late hydrothermal event.

13.3 METALLURGICAL TESTWORK

13.3.1 Historical Metallurgical Test Work (Barrick and Newmont)

The Barrick 1996 test work included standard preliminary cyanide leach tests at various grind sizes. A summary of these test results is presented in Table 13.5.

Table 13.5
Barrick Preliminary Leach Test Results

Leach Time (h)	Grind (%-200 mesh)	Au Extraction (%)	Consumption (kg/t)	
			NaCN	Lime
94	74	87.1	0.47	7.3
94	84	90.3	0.49	8.0
94	88	91.7	0.48	9.3
72	99	94.0	0.35	7.4

The leach test results suggest a positive grind-gold recovery relationship, moderate cyanide consumption and relatively high lime consumption. Gold extraction was about 90% at a grind size of 80% passing 200 mesh (74 microns).

The 2001 Newmont test program included two sets of tests using the four samples, one comprised 96 hour leaching of a coarse crushed aliquot (<10 mesh or 2 mm) and the other a standard 24 hour leaching test using samples ground to 80% passing 200 mesh (74 microns). The test results are summarized in Table 13.6.

Table 13.6
Newmont Preliminary Leach Test Results

Sample	Au Head Grade (Calc. - g/t)	Grind Size	Au Extraction (%)
8 WJN	5.14	Coarse	49.2
8 WJN	4.94	Fine	90.5
44 WJN	1.25	Coarse	53.0

Sample	Au Head Grade (Calc. - g/t)	Grind Size	Au Extraction (%)
44 WJN	1.15	Fine	91.5
4 WJS	1.42	Coarse	58.4
4 WJS	1.65	Fine	93.8
A WJS	1.06	Coarse	31.5
A WJS	0.92	Fine	80.1

The coarse leach tests using <10 mesh material suggested that heap leaching would probably not be a viable processing option. The fine leach tests using 80% passing 200 mesh material showed gold extractions of around 91% for the WJN sample, 93.8% for one WJS sample but only 80% for the other WJS sample.

13.3.2 Comminution Testing

Bond ball mill grindability tests have been completed using the composite samples from the 2012 and 2019 testwork programs. Both tests used a closing screen size of 200 mesh (75 µm). The Bond Work Index for the 2012 Master Composite was 17.4 kWh/t and the 2019 master Composite was 19.7 kWh/t, which suggests that the mineralization is relatively hard.

13.3.3 Gravity Separation Testing

Two tests were completed by SGS Lakefield in 2019 using the Master Composite. The test feed samples (South West Zone) were passed through a Knelson MD-3 concentrator and the Knelson concentrate was upgraded using a Mozley Laboratory Separator (MLS). The Mozley gravity concentrate was submitted for gold fire assay while the Mozley and Knelson tailings were combined. The results are summarized in Table 13.7.

Table 13.7
Gravity Separation Test Results

Test No	Feed Weight kg	Grind P_{80} µm	Gravity Concentrate			Tailing Assay* Au, g/t	Head (calc) Au, g/t	Head (direct) Au, g/t
			Wt %	Assay Au, g/t	Recovery Au, %			
G1	2	77	0.125	1,044	**30.1**	3.04	4.34	3.67
G2	10	79	0.092	2,564	**50.6**	2.31	4.66	3.67

The test results suggest that up to 50% of the gold can be recovered from South West Zone mineralization using gravity separation technology.

13.3.4 2012 Cyanide Leach Tests

Initial cyanide bottle roll leach tests using very fine ground samples were completed by SGS Following the fine grind leach tests, additional cyanidation work was undertaken using target 80% passing grind sizes (P_{80}) of 55, 65 and 80 µm. Due to lower gold extractions using the WJN sample, CIL tests were conducted using 10 g/L of carbon.

A summary of the results for these coarser grind tests is presented in Table 13.8.

Table 13.8
Moderate Grind Leach Test Results

Sample	Grind - P_{80} (µm)	Au Extraction (%)		Consumption (kg/t)	
		24 h	48 h	NaCN	Lime
WJN-CIL	47	-	81.1	0.23	1.27
WJN-CIL	61	-	78.3	0.23	1.60
WJN-CIL	82	-	78.9	0.29	1.15
GAP	60	93.8	92.7	1.33	0.83
GAP	75	91.2	91.9	1.20	1.42
GAP	123	87.5	91.1	0.98	0.93
WJC	47	95.6	92.6	0.13	0.82
WJC	64	92.1	92.7	0.19	0.80
WJC	85	87.6	91.7	0.17	0.97
WJS	58	84.8	92.0	0.14	1.18
WJS	70	92.9	94.3	0.18	0.75
WJS	99	84.4	91.7	0.15	0.92
SWZ	56	92.6	95.0	0.14	0.64
SWZ	79	94.4	94.4	0.18	0.72
SWZ	79	92.4	92.6	0.25	1.47
55 Zone	55	90.8	92.9	0.14	0.97
55 Zone	68	90.9	91.5	0.14	0.72
55 Zone	85	90.2	89.1	0.19	1.05
Ave-all[1]	74	90.7	92.4	0.37	0.95
Ave-fine[1]	55	91.5	93.0	0.38	0.89
Ave-medium[1]	71	92.3	93.0	0.38	0.88
Ave-coarse[1]	94	88.4	91.2	0.35	1.07

[1] Excludes results for WJN

The average leach test results for the different zones are presented in Table 13.9.

Table 13.9
Average Leach Test Results for Each Zone

Zone	Grind - P_{80}(µm)	Au Extraction (%)		Consumption (kg/t)	
		24 h	48 h	NaCN	Lime
WJN	46	85.3	82.6	0.30	1.28
GAP	65	91.5	93.3	0.72	1.12
WJC	49	92.8	93.2	0.15	1.06
WJS	50	91.2	93.7	0.17	1.15
SWZ	55	89.3	94.8	0.17	1.06
55 Zone	53	88.3	93.0	0.13	1.15
Average	**53**	**90.3**	**91.9**	**0.27**	**1.14**

13.3.5 2019 Cyanide Leach Tests

A series of standard cyanide leach bottle roll tests were completed by SGS Lakefield in 2019 using aliquots of the Master Composite and gravity tailings samples from test G2 shown in Table 13.7. The results from the leach tests undertaken at different concentrations of NaCN, grind size and one test (CN7) without pre-gravity recovery, are summarized in Table 13.10.

Table 13.10
Summary of 2019 SGS Bottle Roll Leach Test Results

Gravity Recovery Au - %	Leach Feed Au - g/t	Test No.	Grind Size P_{80}, µm	NaCN Conc. g/L	Consumption		Leach Extraction		Residue	30 h Total Recovery
					NaCN kg/t	CaO kg/t	24 h Au - %	48 h Au - %	Au - g/t	Au - %
50.6	2.32	CN1	79	0.5	1.45	0.81	85.9	85.8	0.26	**93.0**
	2.19	CN2R		0.5	1.45	0.81	88.5	88.9	0.28	**94.4**
	2.36	CN 4		0.35	0.31	1.50	86.1	88.9	0.31	**93.8**
	2.36	CN 5		0.25	0.31	1.25	84.9	87.6	0.38	**93.2**
	2.38	CN 6		0.5	0.08	0.75	83.4	85.4	0.36	**92.3**
	2.27	CN3	59	0.5	0.44	1.34	89.8	88.4	0.21	**94.6**
	2.21	CN3R		0.5	0.43	1.29	89.8	90.9	0.21	**95.2**
n/a	4.49	CN7	77	0.5	0.29	0.97	90.3	93.1	0.30	**92.7**

The average gold recovery used for the "on-site" milling option is 94.2%. This is based on the average gravity plus 24 h and 48 h leach recoveries at a P_{80} grind of 59 microns, and a deduction of 0.5% to allow for refining and solution losses to tailings. Using the same criteria, the estimated gold recovery at a 79-micron grind is 92.9% and, for a leach only scenario, the corresponding estimated gold recovery is 92.2%.

The average test cyanide and lime consumptions were 0.44 kg/t and 1.32 kg/t, respectively.

13.4 CONCLUSIONS AND RECOMMENDATIONS

The preliminary testwork using a composite sample representative of the South West zone mineral resources shows that good gold recoveries can be expected using conventional free-milling gold process technology. The preliminary non-optimized testwork results suggest an overall gold recovery of 94.2% for a gravity plus CIL circuit.

The Bond ball mill index tests suggests that the mineralization is relatively hard. Additional comminution testwork will be required as the project develops in order to select and size an efficient size reduction circuit.

A program of optimization, including cyanide leach tests, is recommended using samples that represent all the mineral resources. This should include a trade-off study to select the optimum grind size.

Variability testwork should be considered in order to model potential metallurgical performance of the various mineralized zones included in the mineral resources.

Preliminary geochemical tests and characterization testwork should be undertaken on representative samples to assess the ARD potential of plant feed material, tailings and waste rock.

The recovery of gold using gravity separation from South West Zone mineralization has shown to be promising. Additional work should be done to optimize this process, and gold extraction using high intensity cyanide leaching should be assessed.

14.0 MINERAL RESOURCE ESTIMATES

14.1 INTRODUCTION

On December 10, 2020, Moneta announced an updated mineral resource estimate for five zones at the Golden Highway Project (Westaway, Windjammer South, 55, Discovery and Windjammer North). On November 26, 2019, Moneta announced, via press release, an update to the mineral resources at the South West and West Block deposits, the former being the subject of the PEA presented in this report. The South West and West Block deposits are close together.

The procedures used in the December, 2020 estimate are described in this section (Section 14.2). The procedures employed in the November, 2019 South West and West Block update are discussed below in Section 14.3. Section 14.3 and the mineral resources in the South West and West Block have not changed since the last report (Hennessey B. T., et al. 2020). The PEA presented in that report, which uses the South West resource model, is reproduced here in order to keep it current and reportable.

14.2 WESTAWAY, WINDJAMMER SOUTH, 55, DISCOVERY AND WINDJAMMER NORTH

14.2.1 General Description

The Golden Highway Project mineral resources have been estimated using multiple series of narrow vein interpretations grouped in seven mineralization areas, Windjammer North Zone (WJN), Windjammer South Zone (WJS), Discovery (DIS), South West Zone (SW), West Block (WB), Westaway (WA) and 55 Zone (55). The seven zones contain steep parallel, contiguous vein-type structures arranged in groups with variable bearings and dips, by group. For the 55 Zone and Windjammer South, flat parallel veins were also interpreted which were cross-cut by the steep veins. Figure 14.1 shows the location of the 112 vein interpretations constructed by Moneta and reviewed by Micon. The mineral resources for the Golden Highway deposits have been estimated assuming both surface and underground mining scenarios.

14.2.2 Mineral Resource Estimate Definitions

The current mineral resource estimate for the Golden Highway Project has been prepared following the 2014 CIM Definition Standards - For Mineral Resources and Mineral Reserves, as required under NI 43-101. The CIM standards and definitions are as follows:

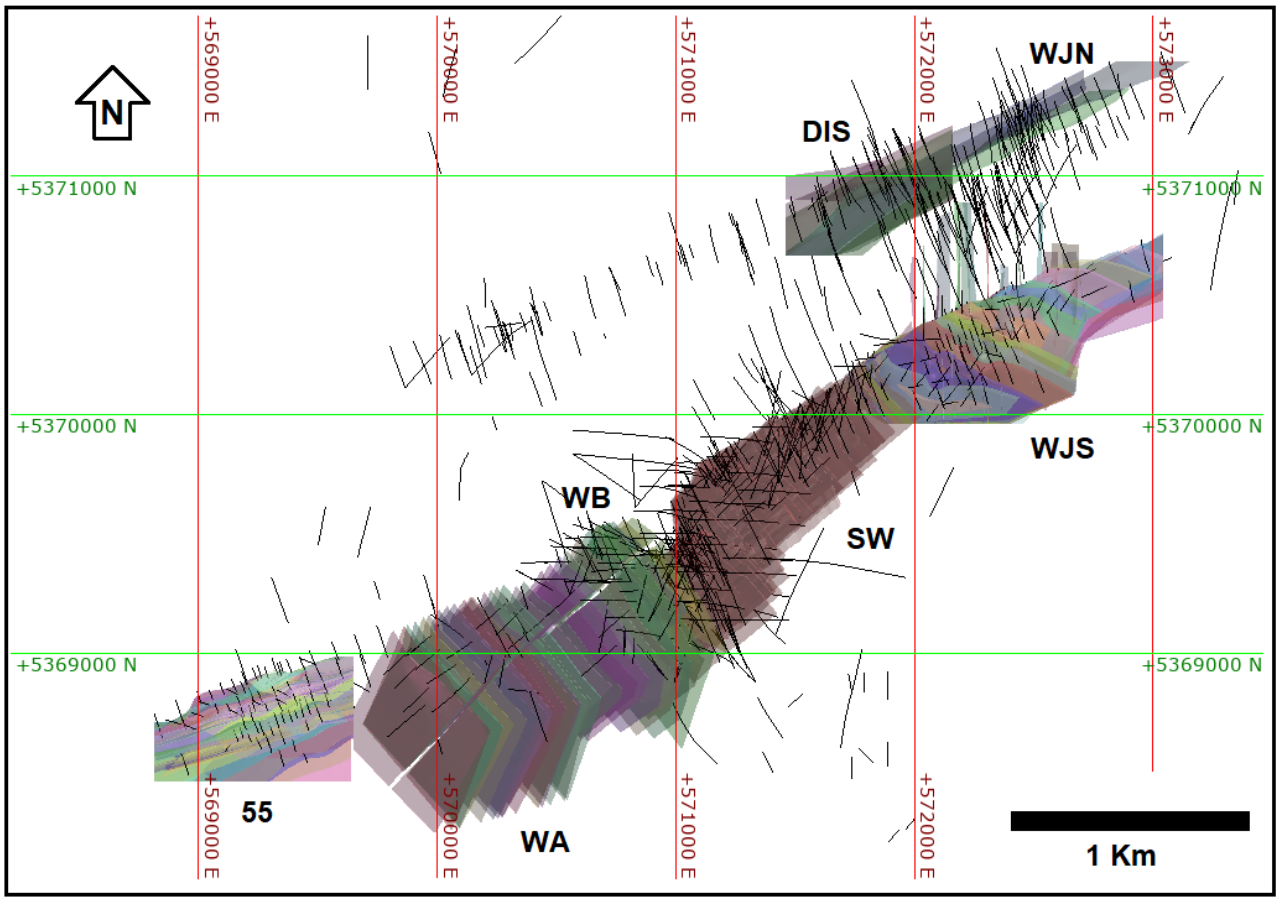
> "Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource."

"A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction."

"The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling."

"Material of economic interest refers to diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals."

Figure 14.1
Location of the Moneta Golden Highway Project Mineralized Zones and Drill Holes



Source: Micon, 2021.

Inferred Mineral Resource

"An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration."

"An Inferred Mineral Resource is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine plans and cash flow models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101."

Indicated Mineral Resource

"An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit."

"Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation."

"An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve."

Measured Mineral Resource

"A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit."

"Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation."

"A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve."

"Mineralization or other natural material of economic interest may be classified as a Measured Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such that the tonnage and grade or quality of the mineralization can be estimated to within close limits and that variation from the estimate would not significantly affect potential economic viability of the deposit. This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit."

14.2.3 Supporting Data

The Golden Highway Project database provided to Micon is comprised of 1,357 drill holes, with a total of 401,542 m of drilling and containing 173,011 samples. This database was the starting point from which the 112 veins were modelled. This number is smaller than the number of holes reported in the 2020 PEA report (Hennessey et al. 2020). Drill holes outside of the main mineralized corridor had been remove.

During the site visit, the QP reviewed the logging and interpretation procedures used to construct the wireframes. After hand off of the data, the final interpretations were reviewed for consistency and conformity to the informing data.

For the purposes of mineral resource estimation, Micon used only the data contained within the wireframes. The effective number of drill holes and samples used were 588 holes and 53,438 m of core. Most drill holes intersected multiple vein wireframes. A significant amount of drilling was used this time because of the surface mining scenarios at 55 Zone and Windjammer South.

No trench samples or any other type of sampling were used in the resource estimate.

14.2.3.1 Topography

The project topography was provided by Moneta as a digital terrain model (DTM) in DXF format. The DTM was of sufficient quality, although, given the underground extraction assumption, it was not used for the mineral resource estimate other than to limit the extent of the vein wireframes. It was used for the open pit optimization for the Windjammer South and 55 Zone deposits.

14.2.3.2 Rock Density

A total of 7,070 density measurements were delivered to Micon, from which average densities were calculated for each deposit at the Golden Highway Project. The overall average density value for the entire project is 2.78 g/cm^3 (or t/m^3). Table 14.1 summarizes the density averages.

Table 14.1
Average Density by Deposit

Deposit Name	Count	Length (m)	Density Value (t/m^3)
South West*	338	66.03	2.75
Discovery / Windjammer North	65	16.49	2.85
Windjammer South (Veins)	478	157.53	2.76
Windjammer South (Out)	378	53.8	2.84
55 Zone (Veins)	239	120.72	2.71
55 Zone (Out)	448	136.23	2.77
Westaway / West Block	226	23.97	2.72
Elsewhere (Outside)	4,894	573.67	2.80
Overburden (assumption)	NA	NA	1.80

The South West portion still employs the old density grouping that was used at the time with 2,460 measurements, 283.2 m of core and a weighted average of 2.79 g/cm^3

14.2.4 General Statistics

Basic statistics were calculated for the entire Golden Highway Project database and for the selected intervals inside the mineralized vein envelopes. The results are summarized in Table 14.2 and Table 14.3.

Table 14.2
Global Statistics, Gold

Description	Au (g/t)
Count	177,163
Length	370,079
Mean	0.15
Standard deviation	4.22
Coefficient of variation	28.86
Variance	17.79
Minimum	0.00
Lower quartile	0.00
Median	0.00
Upper quartile	0.02
Maximum	3,510.00

Table 14.3
Basic Statistics within the Wireframes

Description	Deposit						
Selection	55 Zone	Discovery	South West	WA	WB	WJN	WJS
Count	3,654	1,881	6,893	612	898	132	15,265
Length	2,809	1,834	6,743.15	545	809	112	14,374
Mean	1.19	1.58	1.48	1.83	3.63	1.70	0.71
Standard deviation	4.01	2.98	3.91	2.86	87.33	1.89	3.17
Coefficient of variation	3.37	1.89	2.64	1.56	24.06	1.11	4.44
Variance	16.10	8.86	15.27	8.19	7,626.87	3.57	10.05
Minimum	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Lower quartile	0.02	0.21	0.03	0.02	0.04	0.57	0.10
Median	0.20	0.88	0.49	0.77	0.43	1.18	0.33
Upper quartile	1.04	1.92	1.72	2.39	1.78	2.08	0.74
Maximum	187.99	65.00	148.80	30.40	3,510	11.12	391.84

WA = Westaway, WB = West Block, WJN = Windjammer North, WJS = Windjammer South.

14.2.5 Three-Dimensional Modelling

Moneta provided Micon with wireframes of the 112 interpreted veins. Micon and Moneta had various review sessions and discussions to approve the final wireframes. Figure 14.1 illustrates the final wireframes for the multiple deposits. They can also be seen in Figure 14.9.

14.2.6 Data Processing

14.2.6.1 Compositing

The selected intercepts for the Golden Highway Project were composited to 1.0 m equal length intervals, with the composite length selected based on the most common original sample length and suitability for the selected block sizes and typical zone widths. Table 14.4 summarizes the basic statistics for the composited data.

Table 14.4
Summary of the Basic Statistics for the 1.0 m Composites

Description		Deposits						
Selection	Entire Database	55 Zone	Discovery	South West	WA	WB	WJN	WJS
Uncapped Gold Values								
Count	28,116	3,003	1,888	7,065	597	894	122	14,636
Length	27,120	2,809	1,834	6,802.21	545	809	112	14,373
Mean	1.18	1.19	1.57	1.76	1.83	3.63	1.70	0.71
Standard deviation	11.02	3.13	2.68	3.35	2.52	61.74	1.80	2.23
Coefficient of variation	9.36	2.63	1.71	2.28	1.38	17.01	1.06	3.13
Variance	121.47	9.81	7.21	11.24	6.35	3,811.7	3.25	4.99
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Lower quartile	0.13	0.05	0.31	0.04	0.04	0.07	0.65	0.14
Median	0.47	0.33	0.97	0.61	0.90	0.62	1.12	0.36
Upper quartile	1.23	1.19	1.96	1.82	2.63	1.82	2.11	0.77
Maximum	1,755.40	101.22	65.00	131.86	18.90	1,755.4	11.12	159.88
Capped Gold Values								
Count	28,116	3,003	1,888	7,065	597	894	122	14,636
Length	27,120	2,809	1,834	6,802.21	545	809	112	14,373
Mean	1.05	1.15	1.48	1.66	1.82	1.41	1.69	0.68
Standard deviation	1.81	2.39	1.78	2.60	2.49	2.38	1.75	1.16
Coefficient of variation	1.72	2.09	1.20	1.58	1.37	1.69	1.04	1.72
Variance	3.27	5.73	3.17	11.24	6.20	5.66	3.07	1.36
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Lower quartile	0.13	0.05	0.31	0.04	0.04	0.07	0.65	0.14
Median	0.47	0.33	0.97	0.61	0.90	0.62	1.12	0.36
Upper quartile	1.23	1.19	1.96	1.82	2.63	1.82	2.11	0.77
Maximum	37.00	37.00	18.00	37.00	22.00	22.00	10.00	30.00

WA = Westaway, WB = West Block, WJN = Windjammer North, WJS = Windjammer South.

14.2.6.2 Grade Capping

All outlier assay values for gold were analyzed individually by vein and, when grouped by deposit, using log probability plots and histograms. It was decided to cap based on data grouped by deposit, as the veins are close together and are assumed to have similar mineralization history.

In order to identify true outliers, and reduce the effect of short sample bias, the data were reviewed after compositing to constant intervals using the most common sample length of 1.0 m. Table 14.5 summarizes the capping grades used.

Table 14.5
Selected Capping Grades on 1 m Composites

Deposit	Max. Grade (Au g/t)	Capping Grade (Au g/t)	Capped Composites	Total Composites
55 Zone (Steep)	101.22	37.0	7	1,915
55 Zone (Flat)	25.87	18.0	4	1,088
55 Zone (Out)	19.19	2.0	32	20,525
South West	131.86	37.0	8	7,065
West Block	1,755.40	22.0	8	894
Westaway	18.9	22.0	0	597
WJ North	11.12	10.0	2	268
WJ South (Steep)	107.13	30.0	4	1,694
WJ South (Flat)	159.88	20.0	18	2,353
WJ South (Out)	4.9	1.0	46	24,721
Discovery	33.14	15.0	1	696

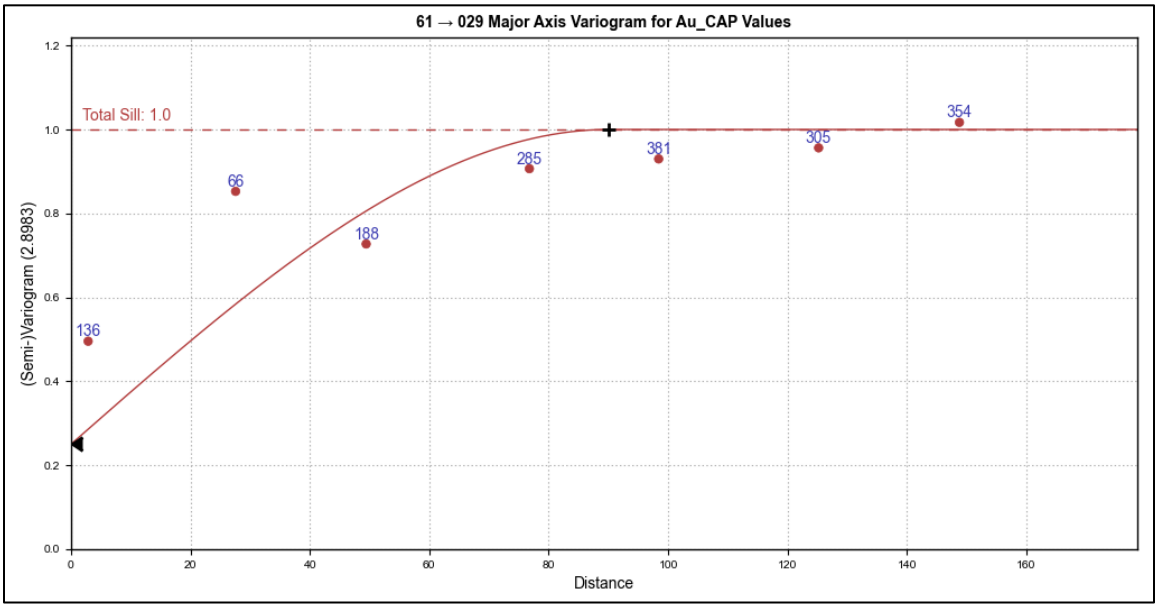
WJN = Windjammer North, WJS = Windjammer South.

14.2.7 Mineral Deposit Variography

Variography is the analysis of the spatial continuity of grade for the commodity of interest. In the case of the Golden Highway deposits the analysis was done on a selection of three veins in each deposit. The three veins selected were the ones with the most data. Each individual vein was analyzed using down-the-hole variograms and 3D variographic analysis, in order to define the directions of maximum continuity of grade, and, therefore, the best parameters to interpolate the grades of each deposit. Each of the variograms for the three veins were compared to ensure similarity then applied to all veins present.

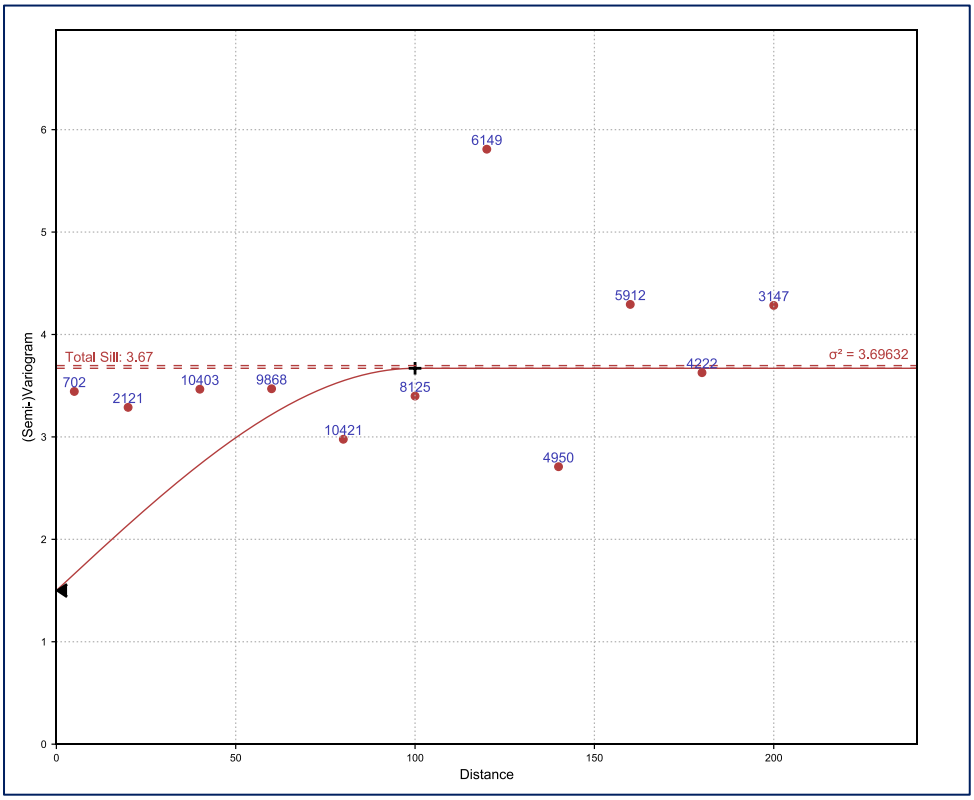
Variography must be performed on regular coherent shapes with geological continuity of support. First, down-the-hole variograms were constructed for each vein, to establish the nugget effect to be used in the modelling of the 3D variograms. Figure 14.2 to Figure 14.5 show some of the more relevant major variograms for gold within the veins.

Figure 14.2
55 Zone - Major Variogram



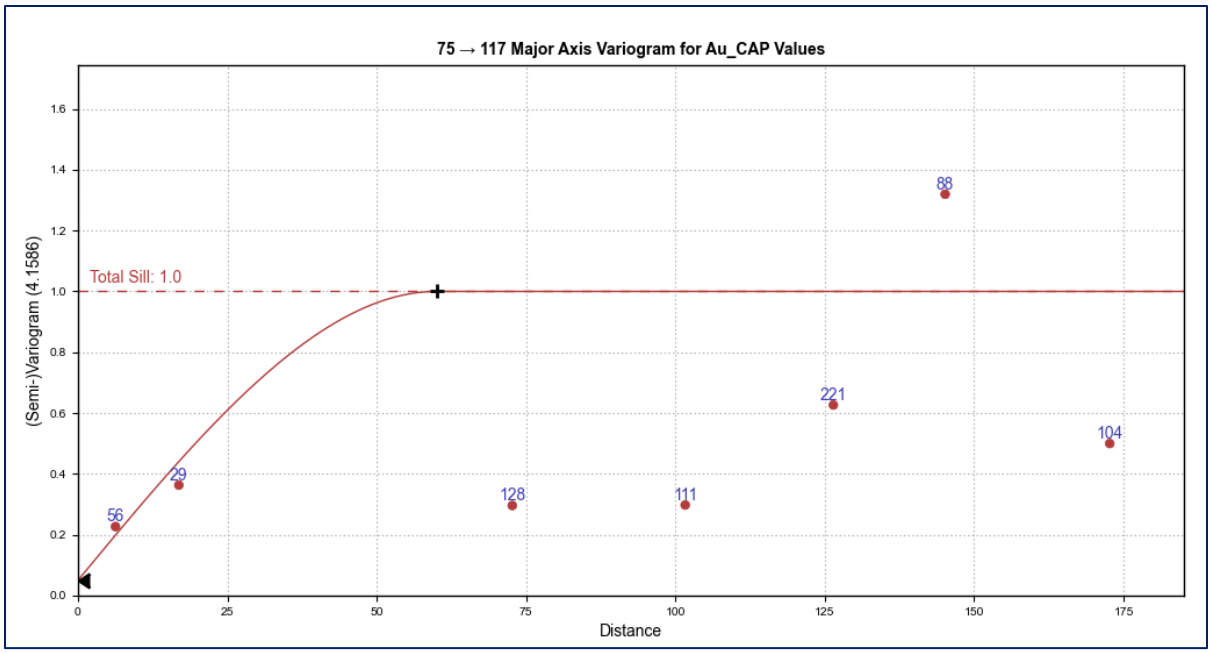
Source: Micon, 2021.

Figure 14.3
South West - Major Variogram



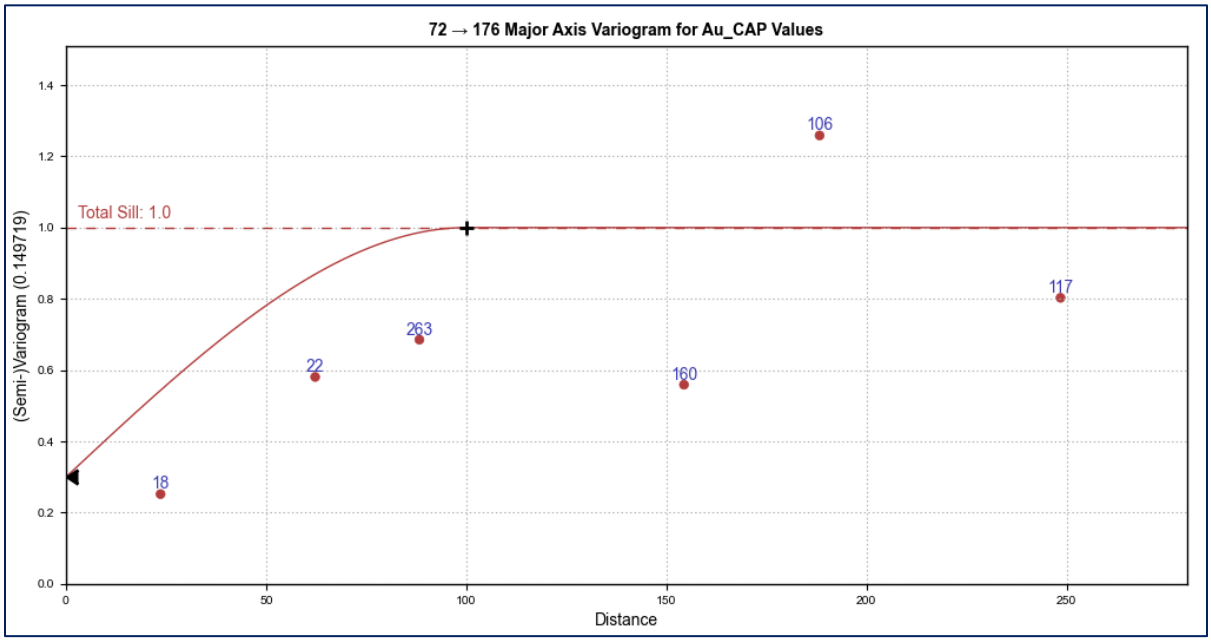
Source: Micon, 2019.

Figure 14.4
Windjammer North - Major Variogram



Source: Micon, 2019.

Figure 14.5
Windjammer South - Major Variogram



Source: Micon, 2019.

For most of the selected veins good variogram models were achieved. They were sufficient to support the use of the Ordinary Kriging interpolation method. Major variogram ranges between 60 m and 100 m were modelled. Most ranges were 70 m or more. The variography results were used to support the search ranges and anisotropy directions. More details are discussed in Section 14.2.8.2, Search Strategy and Interpolation.

14.2.7.1 Continuity and Trends

The Golden Highway deposits present variable strikes and dips, grouped in parallel veins with well-defined geometry. They are generally supported by geology, grades and abundant drill hole intercepts giving sufficient confidence to their continuity along strike and down dip. The general deposit bearings and dips are as follows:

- 55 Zone (Steep), 345º dip direction and -68º dip
- 55 Zone (Flat), 331º dip direction and -28º dip
- 55 Zone (Out), 343º dip direction and -70º dip
- South West, 216º dip direction and -66º dip
- West Block, 230º dip direction and -60º dip
- Westaway, 230º dip direction and -60º dip
- Windjammer North, 334º dip direction and -73º dip
- Windjammer South (Steep), 238º dip direction and -53º dip
- Windjammer South (Flat), 190º dip direction and -30º dip
- Windjammer South (Out), 160º dip direction and -88º dip
- Discovery, 158º dip direction and -78º dip

14.2.8 Mineral Resource Estimation

The commodity of economic interest at the Golden Highway Project is gold. The estimation of the deposit tonnage and grade was performed using Leapfrog Geo/EDGE software.

14.2.8.1 Block Model

A total of five block models were constructed to contain the vein codes, gold grades and density. A summary of the definition of the block models is shown in Table 14.6.

Table 14.6
Information Summary, Project Block Models

Description	55 Zone (55BM)	South West (UGSWBM)	Westaway West Block (WB-WA)	WJN * (DIS-WJN)	WJS (WJSBM)
Model Dimension X (m)	1200	690	1560	1930	1460
Model Dimension Y (m)	880	1495	1170	485	1430
Model Dimension Z (m)	480	1230	790	1380	680
Origin X (Easting)	568885	570530.77	570220	571520	571540
Origin Y (Northing)	5368155	5369297.02	5367915	5370490	5369700
Origin Z (Upper Elev.)	300	300	288	340	345
Rotation (º)	345	50	320	330	0.0
Parent Block Size X (m) - Along Strike	10	15	5	10	5
Parent Block Size Y (m) - Across Strike	5	5	10	5	10
Parent Block Size Z (m) - Down Dip	10	15	10	10	10
Child Block Size X (m) - Along Strike	2.5	5	1	2	1
Child Block Size Y (m) - Across Strike	1	1	2	1	2.5
Child Block Size Z (m) - Down Dip	2.5	5	2	2	2.5

WJN = Windjammer North, WJS = Windjammer South
* - Includes the Discovery Zone
BM = Block Model)

Intercepts used to model the wireframes were flagged as to which mineral envelope they belonged, so that assays outside the wireframes, or from adjacent wireframes, would not be used to interpolate grade into the wrong vein when each block model was run.

14.2.8.2 Search Strategy and Interpolation

A set of parameters were derived from variographic analysis to interpolate the composite grades into the blocks. A summary of the Golden Highway Project Ordinary Kriging (OK) interpolation parameters is shown in Table 14.7.

Table 14.7
Ordinary Kriging Interpolation Parameter Summary
(Parameters from the Vein with the Most Data within Each Deposit Presented*)

Deposit* Code(s)	**Nº of Veins**	**Pass**	**Orientation**	**Search Parameters**							
			Dip Az (°)	Pitch (°)	Dip (°)	Range Major Axis (m)	Range Semi-Major Axis (m)	Range Minor Axis (m)	Minimum Samples	Maximum Samples	Maximum Samples per Hole
55 Zone (Steep)	16	1	345	110	-68	90	90	33	1	25	5
55 Zone (Flat)	17	1	331	30	-28	100	80	30	1	25	5
55 Zone (Out)	NA	1	343	170	-70	60	50	50	1	25	5
South West	25	1	216	124	-66	150	150	100	1	25	5
West Block	13	1	230	50	-60	100	100	20	1	25	5
Westaway	16	1	230	50	-60	100	100	20	1	25	5
WJN	3	1	334	23	-73	150	130	20	1	25	5
WJS (Steep)	16	1	238	79	-53	100	70	60	1	25	5
WJS (Flat)	25	1	190	110	-30	75	75	30	1	25	5
WJS (Out)	NA	1	160	0	-88	50	30	30	1	25	5
Discovery	6	1	158	80	-78	60	60	20	1	25	5

*Note: Each deposit contains multiple individual veins with their own slightly different interpolation parameters. The variability of parameters between veins in each deposit was limited.

Due to the large number of wireframes present, and the very large number of small blocks included, it was decided to interpolate the model in a single pass using 150% of the range of the variogram. Indicated Resources were determined using approximately 2/3 of the variogram range.

14.2.9 Prospects for Economic Extraction

The CIM standards require that a mineral resource must have reasonable prospects for eventual economic extraction.

This mineral resource has been constrained by reasonable mining shapes using economic assumptions of an underground mining scenario. The potential mining shapes are conceptual in nature, not stope designs, and are based on a single cut-off value of 3.0 g/t Au.

The gold price and operating costs were suggested by Moneta and approved by Micon. In the QP's opinion the economic parameters are reasonable, but they were not developed from first principles and are considered conceptual in nature.

Table 14.8 summarizes the underground economic assumptions upon which the resource estimate for the Golden Highway Project is based.

Table 14.8
Summary of Economic Assumptions for the Conceptual Underground and Surface Mining Scenarios

Description	Units	Value Used
Underground Mining Parameters		
Gold Price	US$/oz	1,500.00
Exchange Rate	US$/C$	0.77
Mining Cost	C$/t	75.00
Processing Cost	C$/t	45.00
General & Administration	C$/t	15.00
Gold Recovery (Metallurgical)	%	92.00
Sell Cost	C$/oz	5.00
Exchange Rate	C$/US$	0.75
Surface Mining Parameters		
Mining Cost	C$/t	2.75
Processing Cost	C$/t	12.00
General & Administration	C$/t	2.00
Slope Angle Overburden	Degrees (º)	20
Slope Angle Overburden	Degrees (º)	50

The underground parameters noted above suggested a cut-off grade of 2.35 g/t Au, however, Moneta and Micon concurred in using 3.00 g/t Au to be more consistent with other Canadian resources estimates, and to be selective and improve the overall gold average grade.

14.2.9.1 Pit Optimization

Using the parameters shown in table 14.8, an open pit optimization was conducted for the 55 Zone and Windjammer South deposits. Both pit shells take most of the resources in the models.

14.2.10 Classification of the Mineral Resource Estimate

Micon has classified the mineral resource estimate at the Golden Highway Project in the Indicated and Inferred categories. No Measured resource is declared at this time. The Westaway deposit, Windjammer North and Discovery deposits are entirely classified as Inferred Resources due to the lack of sampling and data spacing.

The approach used to categorize the Indicated resource was to select those blocks informed by more than 3 drill holes and within a 50 m distance from the closest composite (forty metres was used in one case where the range of the variogram was shorter). The results were then smoothed out to remove isolated small blocks and produce coherent shapes of reasonable volume, eliminating the "spotted dog effect". All other blocks were classified in the Inferred category.

14.3 NOVEMBER, 2019 SOUTH WEST ZONE RESOURCE UPDATE

This section summarizes the methodology used for the independent resource estimate update of the South West and West Blocks at Moneta's Golden Highway Gold Project. This update included only the areas of South West (SW) and West Block (WB) deposits.

14.3.1 Supporting Data

The Golden Highway Project database provided to Micon was comprised of 1,574 drill holes, with a total of 454,945 m of drilling and containing 175,430 sample results some of which, from the zones noted above, were used in this resource estimate.

Micon has reviewed the quality assurance/quality control program instituted by Moneta, and its results, and found it/them to be acceptable. Micon also checked the entry of 1,488 assays from the recent drill program into the database and found no data entry errors. For the January, 2019 estimate an additional 4,176 records, or 2.7% of the database, were checked

14.3.2 Geological Domains

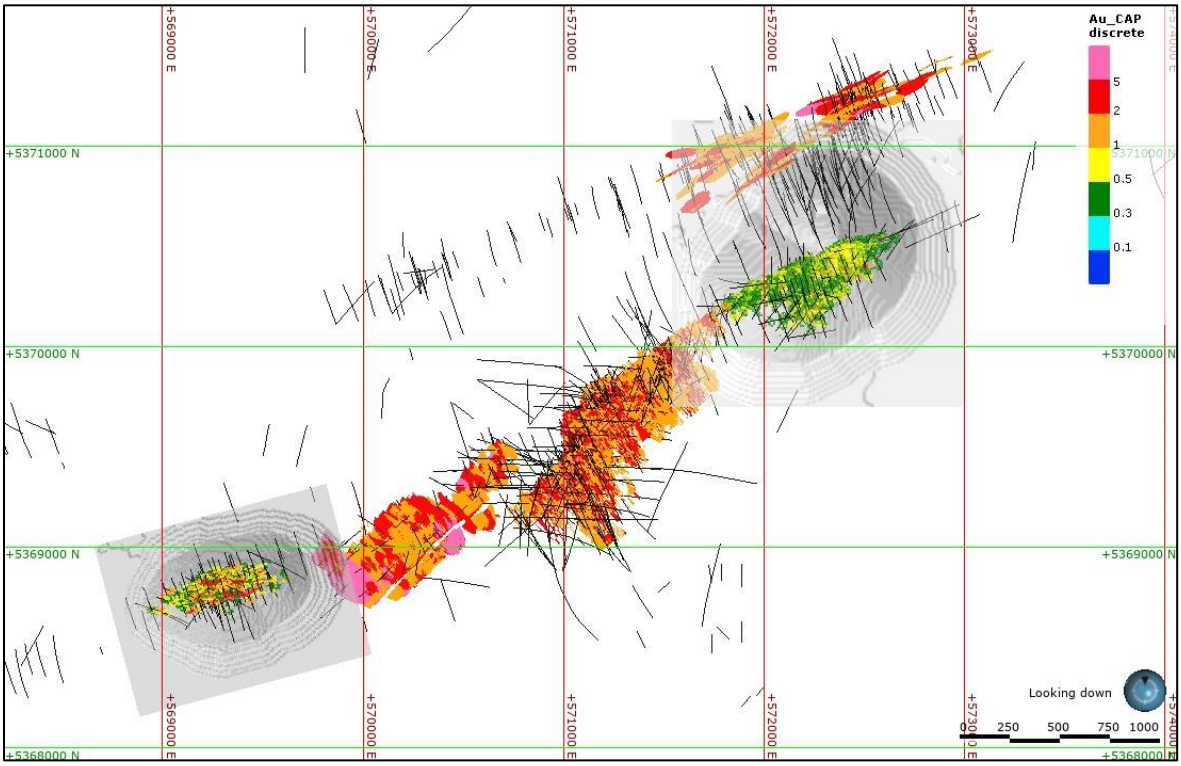
The geological domain wireframes were completed by Moneta with a few modifications from Micon. The resulting domains are listed below in Table 14.9.

Table 14.9
Golden Highway Mineralized Zones List

Area	Vein	Status
West Block	WB-01	New
West Block	WB-02	New
West Block	WB-03	New
West Block	WB-04	New
West Block	WB-05	New
West Block	WB-06	New
West Block	WB-07	New
West Block	WB-08	New
West Block	WB-09	New
South West	Tamarack	Updated
South West	Elm	Same
South West	Birch	Updated
South West	Balsam	Updated
South West	Cedar	Same
South West	Pine	Same
South West	Spruce	Same
South West	Redwood	Same
South West	Maple	Same
South West	Oak	Updated
South West	Alder	Updated
South West	Poplar	Updated
South West	Walnut	Updated
South West	Willow	Updated
South West	Arbutus	Updated
South West	Yew	Updated
South West	Larch	Updated
South West	Sycamore	New
South West	Gap-1	Updated
South West	Gap-2	Updated
South West	Gap-3	Updated
South West	Gap-4	Updated
South West	Gap-5	Updated
South West	Gap-6	New

A graphical display of the domain wireframes is shown in Figure 14.6

Figure 14.6
Golden Highway Mineralized Zones



Source: Micon 2021

14.3.3 Statistics

A summary of the univariate population statistics is presented in Table 14.10.

Table 14.10
Golden Highway Global, SW & WB Raw Au Statistics

Deposit	Zone	Count	Length	Mean	SD	CoV	Var	Min	Q1	Median	Q3	Max
Global	**All Zones**	**169,139**	**379,582.41**	**0.14**	**4.17**	**30.79**	**17.37**	**-**	**-**	**-**	**0.02**	**3,510.00**
South West	ALDER	296	297.85	1.34	2.40	1.79	5.77	-	0.01	0.49	1.71	18.89
	ARBUTUS	512	416.46	2.19	6.65	3.03	44.26	0.00	0.26	1.30	2.49	148.80
	BALSAM	510	543.39	2.08	7.49	3.61	56.14	-	0.35	1.08	2.14	206.00
	BIRCH	356	382.21	1.65	4.68	2.84	21.90	-	0.07	0.59	1.58	67.54
	CEDAR	634	721.28	1.76	3.48	1.98	12.09	-	0.21	0.93	2.06	63.20
	ELM	211	197.37	1.59	2.28	1.43	5.20	-	0.23	0.75	1.92	20.37
	GAP1	297	268.51	1.70	3.11	1.83	9.70	-	0.25	0.81	1.89	34.71
	GAP2	205	196.84	1.12	1.53	1.36	2.35	-	0.07	0.61	1.56	14.33
	GAP3	129	116.30	1.50	2.34	1.56	5.49	-	0.08	0.67	1.95	15.39
	GAP4	278	254.70	1.35	2.21	1.64	4.88	0.00	0.37	0.81	1.47	22.40
	GAP5	132	126.56	1.23	2.14	1.74	4.58	0.01	0.41	0.81	1.60	29.42
	GAP6	98	93.15	0.88	0.85	0.96	0.71	0.02	0.29	0.53	1.50	3.54
	LARCH	277	269.23	1.29	1.86	1.44	3.47	-	0.09	0.77	1.73	15.05
	MAPLE	255	213.49	2.31	4.20	1.82	17.68	-	0.01	0.64	3.22	49.75
	OAK	257	231.99	1.66	3.54	2.14	12.54	-	0.02	0.22	1.77	34.77
	PINE	461	484.64	1.97	6.94	3.52	48.18	-	0.18	0.89	1.92	141.50
	POPLAR	171	161.97	1.38	2.17	1.57	4.72	-	0.07	0.62	1.78	18.60
	REDWOOD	193	224.52	0.87	2.78	3.20	7.74	-	-	0.01	0.23	19.55
	SPRUCE	245	229.54	1.54	2.99	1.94	8.93	-	0.02	0.47	1.75	30.20
	SYCAMORE	261	234.65	1.26	1.59	1.26	2.54	-	0.18	0.70	1.82	11.93
	TAMARACK	45	38.90	1.90	2.14	1.12	4.56	0.00	0.14	1.21	2.90	7.50
	WALNUT	282	289.98	1.83	2.97	1.63	8.84	-	0.16	0.96	2.19	33.22
	WILLOW	437	398.41	1.76	3.16	1.79	9.98	-	0.08	0.82	2.17	43.10
	YEW	381	301.68	2.29	4.05	1.77	16.42	-	0.36	1.31	2.79	59.58
West Block	WB-9	14	12.80	2.65	2.34	0.88	5.46	0.24	1.50	2.15	2.98	11.93
	WB-8	26	22.58	3.71	7.06	1.90	49.81	-	0.09	0.31	2.09	27.50
	WB-7	20	20.55	1.02	0.85	0.83	0.72	0.02	0.46	0.80	1.34	3.43
	WB-6	33	30.65	0.65	0.85	1.30	0.72	-	0.09	0.36	0.80	4.49
	WB-5	35	29.75	2.92	5.64	1.93	31.85	-	0.32	0.69	3.91	28.46
	WB-4	26	22.30	1.12	1.27	1.14	1.62	0.01	0.25	0.75	1.54	5.31
	WB-3	48	44.83	40.31	373.42	9.26	139,444	-	0.11	0.45	1.47	3,510.00
	WB-2	64	63.35	1.14	0.97	0.85	0.94	-	0.28	1.03	1.65	3.74
	WB-1	72	72.71	2.03	3.96	1.95	15.70	0.01	0.21	1.20	2.40	39.29
	WB-2B	74	67.57	1.92	4.98	2.59	24.77	0.00	0.27	0.95	2.30	49.13

14.3.4 Compositing

After the domain wireframes were finalized, all samples inside the domains were selected and processed into 1-m equal length composites. The selected length was based on the most common sample length in the data. All composites were flagged with each vein code to be used during the interpolation process to make certain that each vein's grade estimate was informed only by the pertinent composites.

14.3.5 Grade Capping

Given the relatively nuggety nature of the Golden Highway gold deposit, grade capping was applied to control smearing of the scattered high outlier values. The capping grades were decided based on statistical analysis performed on 1-m composites for all veins in each deposit, i.e. the South West and West Block group of veins. This approach was selected as many of the individual vein wireframes contained an insufficient amount of data for separate analysis, as well as the observation that the veins were close together and likely constituted a single mineralizing event within the same host rocks.

Table 14.11 shows the capping thresholds selected. Table 14.12 shows the results of capping on the population statistics.

Table 14.11
Grade Capping Information

Deposit	Grade Capping Au g/t	Number of Capped Composites
SW	37.0	8
WB	6.0	16

14.3.6 Density

A total of 4,144 density measurements were delivered to Micon, from which average densities were calculated for each deposit at the Golden Highway Project. The overall average density value for the entire project is 2.78 g/cm^3 (or t/m^3). The densities remain the same as those used in the February, 2019 NI 43-101 Technical Report and are presented above in Table 14.1.

Micon reviewed the results for reasonableness and used a density of 2.78 t/m^3 for the South West mineral resource estimate update.

14.3.7 Variography

Variograms were modelled successfully for the most-sampled veins of the South West deposit, these being the Cedar, Balsam and Pine veins. Variograms from these veins were used as guidance to define searching and estimation parameters for the rest of the veins in the South West and West Blocks. The resulting parameters are compiled below in Table 14.13.

Table 14.12
1 m Capped Composites Statistics Summary

Deposit	Zone	Count	Length	Mean	SD	CoV	Var	Min	Q1	Median	Q3	Max
SW+WB	**All Veins**	**7,447**	**7,080.7**	**1.64**	**2.65**	**1.62**	**7.01**	**-**	**0.21**	**0.92**	**2.04**	**37.00**
South West	ALDER	313	297.9	1.34	2.20	1.64	4.82	-	0.01	0.58	1.80	18.17
	ARBUTUS	430	416.5	2.03	3.15	1.55	9.94	0.00	0.48	1.41	2.56	37.00
	BALSAM	568	543.4	1.91	3.18	1.67	10.11	-	0.51	1.18	2.23	37.00
	BIRCH	402	382.2	1.63	3.86	2.37	14.89	-	0.14	0.69	1.61	37.00
	CEDAR	750	721.3	1.73	2.61	1.51	6.84	-	0.34	1.07	2.10	37.00
	ELM	215	197.4	1.59	2.00	1.26	4.02	-	0.35	1.02	2.03	20.37
	GAP1	277	268.5	1.70	2.73	1.61	7.48	0.00	0.29	0.93	2.00	22.07
	GAP2	205	196.8	1.12	1.34	1.19	1.79	-	0.13	0.70	1.63	9.89
	GAP3	126	116.3	1.50	2.09	1.39	4.37	-	0.18	0.81	1.79	15.39
	GAP4	259	254.7	1.35	1.90	1.41	3.61	0.00	0.41	0.84	1.47	15.08
	GAP5	129	126.6	1.23	1.70	1.38	2.89	0.01	0.42	0.82	1.59	13.61
	GAP6	95	93.2	0.88	0.80	0.91	0.65	0.02	0.29	0.58	1.32	3.36
	LARCH	280	269.2	1.29	1.68	1.30	2.84	-	0.10	0.88	1.77	13.56
	MAPLE	227	213.5	2.31	3.31	1.43	10.93	-	0.02	1.05	3.31	20.14
	OAK	252	232.0	1.66	2.99	1.81	8.96	-	0.04	0.50	1.94	28.69
	PINE	510	484.6	1.78	3.26	1.83	10.60	-	0.40	1.07	2.05	37.00
	POPLAR	174	162.0	1.38	1.79	1.29	3.19	-	0.16	0.65	1.85	9.39
	REDWOOD	244	224.5	0.87	2.46	2.83	6.07	-	-	0.02	0.46	19.55
	SPRUCE	245	229.5	1.54	2.55	1.65	6.50	-	0.04	0.75	1.92	21.15
	SYCAMORE	244	234.7	1.26	1.42	1.13	2.03	0.00	0.21	0.80	1.80	9.43
	TAMARACK	42	38.9	1.90	1.80	0.95	3.24	0.00	0.52	1.33	3.12	6.81
	WALNUT	307	290.0	1.83	2.68	1.47	7.18	-	0.27	1.18	2.17	31.00
	WILLOW	419	398.4	1.76	2.55	1.45	6.52	-	0.16	1.06	2.28	21.46
	YEW	321	301.7	2.29	2.87	1.25	8.22	-	0.46	1.46	2.80	21.97
West Block	WB-9	14	12.8	2.65	1.22	0.46	1.50	0.54	2.02	2.58	3.25	5.11
	WB-8	25	22.6	1.86	2.32	1.25	5.40	-	0.11	0.63	3.55	6.00
	WB-7	23	20.6	1.02	0.73	0.72	0.53	0.02	0.62	0.80	1.34	3.43
	WB-6	33	30.7	0.65	0.76	1.16	0.58	0.02	0.20	0.45	0.72	4.03
	WB-5	33	29.8	1.82	2.13	1.17	4.56	-	0.40	0.78	3.91	6.00
	WB-4	24	22.3	1.12	1.14	1.02	1.31	0.02	0.25	0.82	1.55	4.11
	WB-3	46	44.8	1.26	1.65	1.31	2.71	-	0.14	0.51	1.63	6.00
	WB-2	66	63.3	1.14	0.91	0.80	0.83	-	0.36	1.02	1.65	3.42
	WB-1	77	72.7	1.70	1.63	0.96	2.65	0.01	0.29	1.37	2.34	6.00
	WB-2B	72	67.6	1.45	1.36	0.94	1.85	0.00	0.34	1.02	2.22	6.00

Table 14.13
South West Normalized Variogram Results and Search Parameters

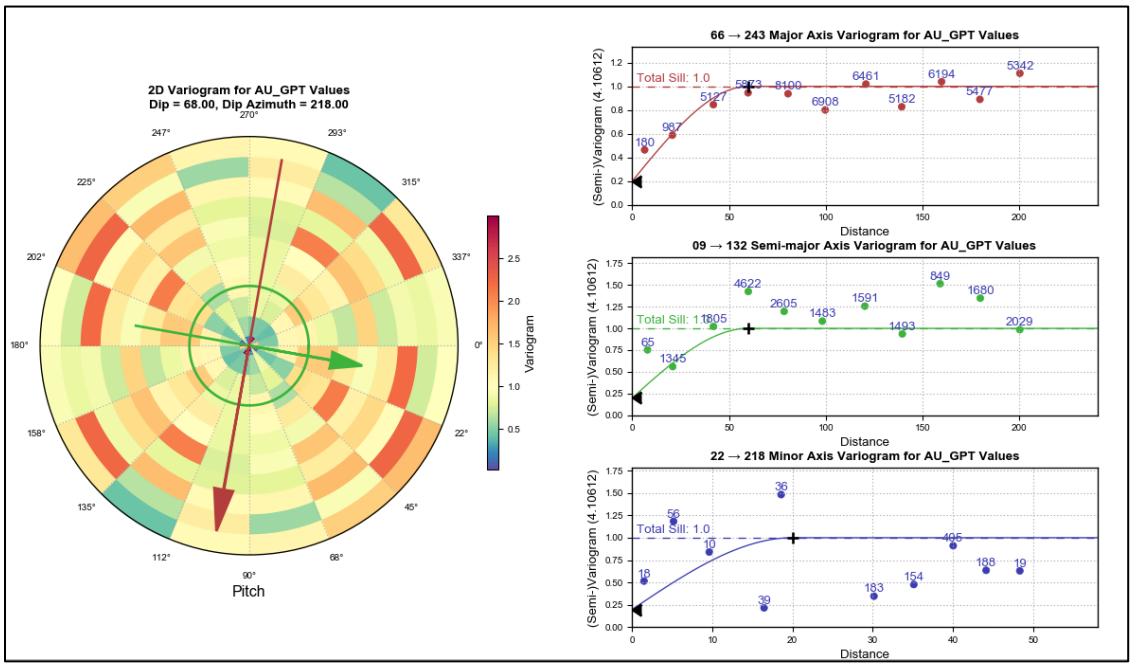
Description	Cedar Au 1m Comps	Balsam Au 1m Comps	Pine Au 1m Comps	Elsewhere Au 1m Comps
Bearing (º)	128	128	130	Variable
Dip (º)	-68	-68	-68	Variable
Plunge (º)	-80	-80	-45	Variable
Nugget*	0.2	0.2	0.2	0.2
Sill	1	1	1	1
Variance	4.1	4.1	3.41	Variable
Var. Range Along Strike (m)	60	60	60	60
Var. Range Down Dip (m)	60	60	60	30
Var. Range Across Strike (m)	20	20	20	10
Search Along Strike (m)	120	120	120	120
Search Range Down Dip (m)	120	120	120	120
Search Range Across Strike (m)	50	50	50	50
Min. Composites	1	1	1	1
Max. Composites	20	20	20	20
Max. Comps per Hole	5	5	5	5

* Taken from the down-the-hole variogram

An example variogram is shown in Figure 14.7.

As a result of the successful modelling of a variogram it was decided to use ordinary kriging to interpolate grade into the block model.

Figure 14.7
Cedar Vein, the Most Representative Variogram of the South West Deposit



Source: Micon 2020.

14.3.8 Mineral Resource, Updated Zones

The CIM guidelines for mineral resources and mineral reserves require that a mineral resource be that part of a mineral deposit with reasonable prospects for economic extraction. For the Golden Highway deposit an underground mining method was selected. The economic assumptions used in the November 26, 2019 disclosure of the updated mineral resources and unchanged resource zones are shown in Table 14.14.

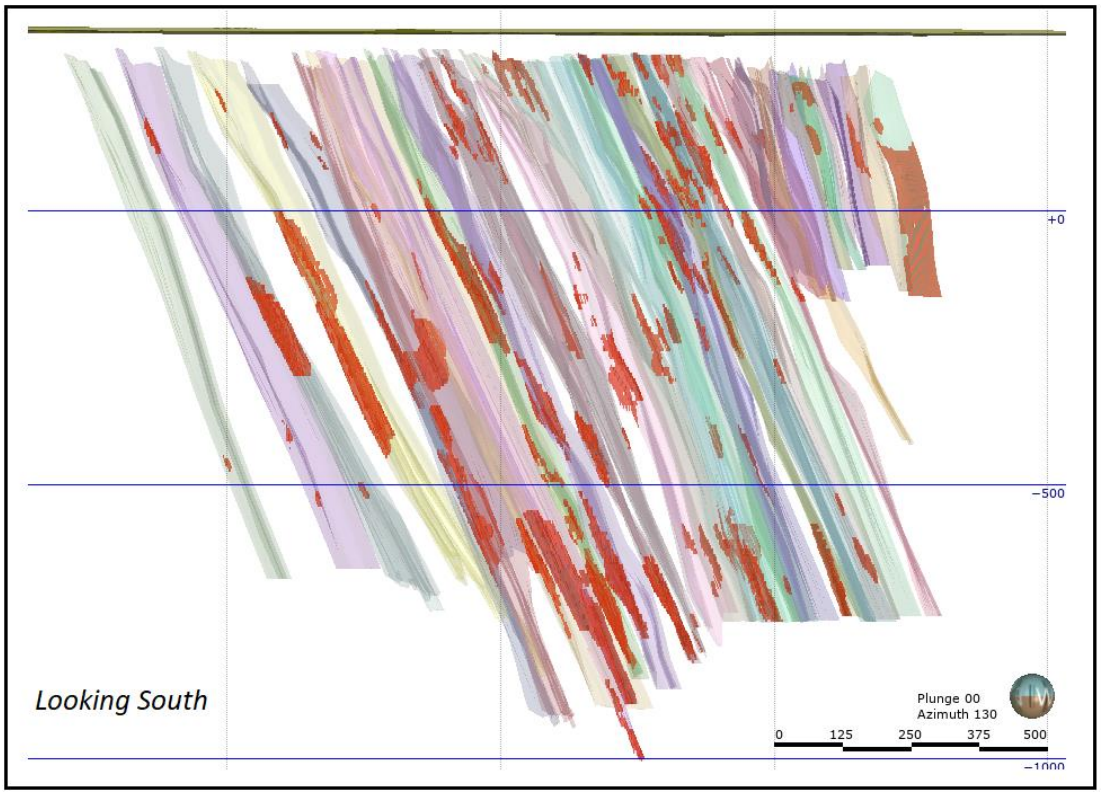
Table 14.14
November 26, 2019 Golden Highway Economic Assumptions

Description	Units	Value
Gold Price	US$/oz	1,250
Exchange Rate	US$/C$	0.75
Mill Recovery	%	93.0
Sell Cost	C$/oz	5.0
Royalties	%	0.0
Mining Cost	C$/t milled	75.0
G&A Cost	C$/t milled	15.0
Processing Cost	C$/t milled	45.0
Transportation	C$/t milled	10.0
Environment	C$/t milled	5.0
Preferred Cut-Off Grade	Au g/t	3.00

The economic cut-off derived from the parameters above is 3.01 g/t Au. 3.00 g/t Au was the cut-off selected for reporting most of the mineral resources in this report, as done previously. However, work completed for this PEA has shown that a cut-off grade of 2.6 g/t is justified for the South West Zone (see Section 16.0).

The blocks meeting these parameters are shown graphically in Figure 14.8.

Figure 14.8
Golden Highway Block Model and Underground Potential (Red Patches)



Source: Micon 2020.

Isolated small areas with blocks above cut-off were eliminated from the mineral resource tabulation due to their likely failure to meet the CIM criterion of reasonable prospects for economic extraction. A summary of the resulting updated mineral resources is set out in Table 14.15.

Table 14.15
November, 2019 Mineral Resource, Updated Zones Only

Deposit	Cut-off Grade	Indicated			Inferred		
		Tonnes (t)	Grade (g/t)	Ounces Au	Tonnes (t)	Grade (g/t)	Ounces Au
South West	2.6	4,530,000	4.07	592,400	9,607,000	4.01	1,237,900
West Block	3.0	-	-	-	301,000	3.23	31,200

Table 14.16 and Table 14.17 present a breakdown of the mineral resources by vein wireframe and category in the South West and West Block deposits. It shows those blocks above the 2.6 g/t Au and 3.0 g/t Au cut-off, for South West and West Block respectively, which have been determined to be potentially economic.

Table 14.16
November, 2019 South West Block Mineral Resource by Vein

Category	AuOK Domain	Tonnes	Grade AuOK (g/t)	Metal Content AuOK (oz)
Indicated	Au_WILLOW	506,000	3.78	61,500
	Au_YEW	348,000	4.40	49,200
	Au_WALNUT	184,000	3.42	20,200
	Au_PINE	266,000	3.85	33,000
	Au_SPRUCE	291,000	3.88	36,300
	Au_OAK	177,000	3.50	19,900
	Au_REDWOOD	62,000	3.89	7,700
	Au_POPLAR	237,000	3.28	25,000
	Au_LARCH	3,000	3.06	200
	Au_MAPLE	367,000	4.19	49,400
	Au_ELM	32,000	3.66	3,700
	Au_GAP1	196,000	3.89	24,500
	Au_GAP2	4,000	3.19	500
	Au_GAP3	40,000	3.61	4,600
	Au_GAP5	68,000	3.45	7,500
	Au_BIRCH	293,000	3.91	36,800
	Au_CEDAR	342,000	4.02	44,100
	Au_BALSAM	358,000	4.41	50,800
	Au_ARBUTUS	757,000	4.82	117,200
	Total	**4,530,000**	**4.07**	**592,400**
Inferred	Au_WILLOW	410,000	3.94	51,900
	Au_YEW	1,026,000	4.45	146,900
	Au_WALNUT	474,000	3.17	48,300
	Au_TAMARACK	61,000	3.07	6,000
	Au_PINE	165,000	4.98	26,500
	Au_SPRUCE	259,000	3.40	28,300
	Au_OAK	133,000	3.33	14,200
	Au_REDWOOD	95,000	3.67	11,200
	Au_POPLAR	74,000	3.42	8,100
	Au_LARCH	1,359,000	4.09	178,700
	Au_MAPLE	326,000	3.79	39,600
	Au_ELM	52,000	3.19	5,300
	Au_GAP1	1,373,000	5.14	226,900
	Au_GAP2	383,000	3.85	47,400
	Au_GAP3	759,000	3.43	83,600
	Au_GAP4	666,000	4.33	92,600
	Au_GAP5	43,000	3.69	5,100
	Au_BIRCH	34,000	2.75	3,000
	Au_CEDAR	34,000	3.34	3,700
	Au_BALSAM	276,000	2.87	25,500
	Au_ARBUTUS	698,000	3.80	85,200
	Au_ALDER	475,000	3.42	52,200
	Au_SYCAMORE	433,000	3.42	47,600
	Total	**9,607,000**	**4.01**	**1,237,900**

Note: Differences may occur in totals due to rounding.

Table 14.17
November, 2019 West Block Resource Update - Underground Potential (Zone Breakdown)

Category	AuOK Domain	Tonnes	Grade AuOK (g/t)	Metal Content AuOK (oz)
Inferred	Au_WB-1	1,000	3.38	100
	Au_WB-5	21,000	3.46	2,400
	Au_WB-8	23,000	3.49	2,600
	Au_WB-9	256,000	3.19	26,200
	Total	**301,000**	**3.23**	**31,200**

Note: Differences may occur in totals due to rounding.

14.4 MINERAL RESOURCE STATEMENT

The updated mineral resource statement for the Golden Highway Project is summarized in Table 14.18.

14.5 MINERAL RESOURCE SENSITIVITY

Table 14.19 presents an analysis of the mineral inventory's sensitivity to cut-off.

Table 14.18
Golden Highway Project Mineral Resource Estimate by Deposit

Mining Constrain	Cut-off	Category	Deposit	Tonnes	Avg. Grade g/t Au	Au Ounces
Open Pit	0.30	Indicated	55	9,896,000	1.30	412,600
			WJS	40,582,000	0.84	1,099,300
Total Open Pits Indicated				**50,478,000**	**0.93**	**1,511,900**
Open Pit	0.30	Inferred	55	5,079,000	1.10	179,500
			WJS	28,956,000	1.10	1,027,700
Total Open Pits Inferred				**34,035,000**	**1.10**	**1,207,200**
UG Potential	2.60	Indicated	SW	4,530,000	4.07	592,400
	3.00		55	-	-	-
			WJS	6,000	3.90	800
			WB	-	-	-
			WA	-	-	-
			DIS	141,000	3.49	15,800
			WJN	182,000	3.98	23,300
Total UG Potential Indicated				**4,859,000**	**4.05**	**632,300**
UG Potential	2.60	Inferred	SW	9,607,000	4.01	1,237,900
	3.00		55	123,000	4.65	18,400
			WJS	143,000	4.06	18,700
			WB	973,000	4.17	130,500
			WA	3,394,000	4.87	531,400
			DIS	658,000	4.00	84,700
			WJN	813,000	4.08	106,500
Total UG Potential Inferred				**15,711,000**	**4.21**	**2,128,100**
Total Golden Highway Indicated Resource (OP + UG)				**55,337,000**	**1.21**	**2,144,200**
Total Golden Highway Inferred Resource (OP + UG)				**49,746,000**	**2.09**	**3,335,300**

Notes:

1. Mineral Resource Estimates are reported at a cut-off grade of 3.00 g/t Au for an underground mining scenario, except for the South West zone which used the cut-off determined in this PEA (2.6 g/t). For most zones the cut-off grade was calculated at a gold price of US$1,250 per ounce, an exchange rate of US$/C$ of 0.75 and operational assumptions outlined in Section 14 of this report. The cut-off for the South West zone was derived by calculations presented in the mining sections of this report.
2. The resource estimate is supported by statistical analysis with different high grade capping applied to each of the deposits ranging from 6.0 g/t Au to 37.0 g/t Au on 1-m composites.
3. The mineral resources presented here were estimated with a block size of 10 m x 5 m x 10 m utilizing sub-blocks of variable size as required, and constrained within geological wireframes with a minimum width of 1.50 m, except for the South West update. There the mineral resources were estimated using a sub-blocked model with a parent block size of

15 m x 5 m x 15 m and child block size down to 5 m x 1 m x 5m utilizing these sub-blocks as required and constrained within geological wireframes with a minimum width of 1.50 m. The cells are estimated by Ordinary Kriging using the appropriate variogram model of each structure with individual search ellipsoids.

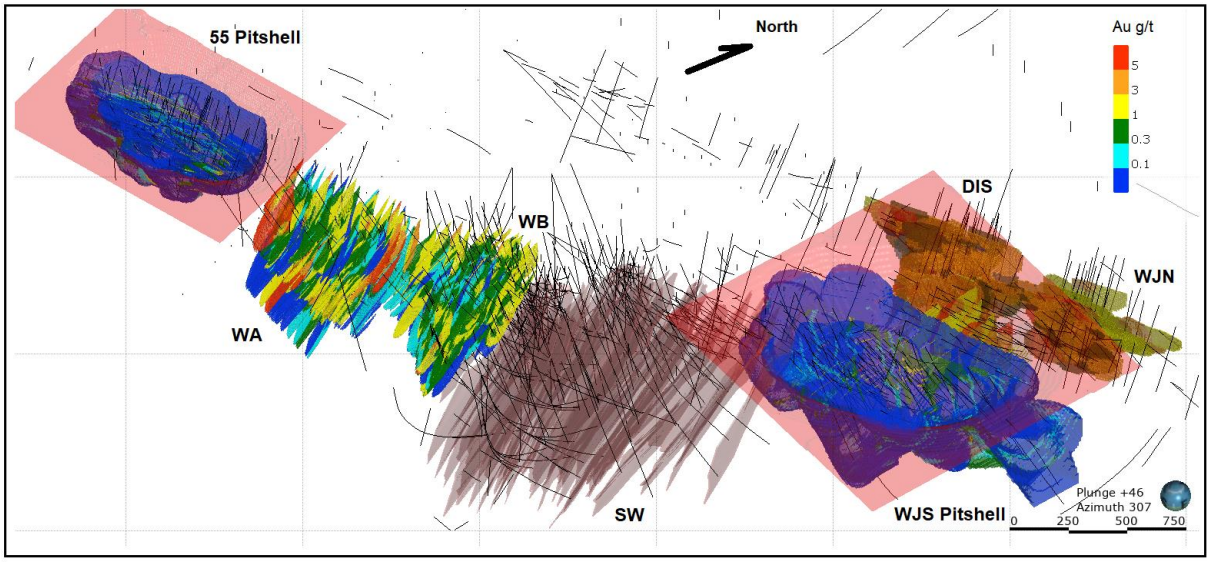
4. The mineral resources presented here were estimated by Micon International Limited using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definitions and Standards on Mineral Resources and Reserves.
5. Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, market or other relevant issues.
6. The quantity and grade of reported Inferred Resources are somewhat uncertain in nature and there has not been sufficient work to define these Inferred Resources as Indicated or Measured Resources.
7. There are no historical underground voids from mining including shafts, ramps drifts or stopes in any of the deposit areas.
8. Tonnage estimates are based on bulk densities individually measured and calculated for each of the deposit areas, averaging 2.78 tonnes per cubic metre for the total resource. Resources are presented as undiluted and in situ.
9. This mineral resource estimate effective date for the South West and West Block is dated September 9, 2020. All other zones are dated January 15, 2019. The effective date for the drill hole database used to produce this updated mineral resource estimate for South West and West Block is November 26, 2019 and November 19, 2018 for the other zones. Tonnages and ounces in the tables are rounded to the nearest thousand and hundred respectively. Numbers may not total precisely due to rounding.
10. At the present time, Micon does not believe that the mineral resource estimate is materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

The QP considers that the resource estimate for the Golden Highway Project has been reasonably prepared and conforms to the current CIM standards and definitions for estimating mineral resources.

The process of mineral resource estimation includes technical information which requires subsequent calculations or estimates to derive sub-totals, totals and weighted averages. Such calculations or estimations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, Micon does not consider them to be material.

The mineral resources summarized in Table 14.18 above are shown graphically in Figure 14.9.

Figure 14.9
Resource Blocks – Isometric View



Source: Micon 2021.

Table 14.19
Mineral Inventory Sensitivity Table

Cut-Off Grade (g/t)	Indicated			Inferred		
	Tonnes (t)	Grade (g/t)	Ounces Au (oz)	Tonnes (t)	Grade (g/t)	Ounces Au (oz)
5.00	905,921	6.95	202,410	1,800,282	6.30	364,511
4.50	1,280,230	6.30	259,234	2,476,089	5.87	467,130
4.00	1,908,644	5.62	344,770	3,990,055	5.26	675,164
3.50	2,782,994	5.03	449,724	6,214,086	4.71	941,059
3.00	4,238,364	4.41	600,769	9,075,854	4.24	1,237,865
2.50	6,446,025	3.84	794,785	13,061,220	3.78	1,587,620
2.00	10,598,817	3.20	1,091,132	20,437,828	3.22	2,116,757
1.50	17,600,437	2.62	1,480,495	32,913,611	2.66	2,816,112
1.00	27,176,001	2.13	1,863,489	47,417,362	2.22	3,388,656
0.50	34,845,064	1.83	2,054,712	62,800,090	1.87	3,767,704

Note: The mineral inventory used in the sensitivity analysis table at various cut-off grades has not been corrected to remove isolated blocks which do not have a reasonable chance of extraction. The removal of isolated blocks has been conducted for the mineral resource estimate reported at a 3.00 g/t Au cut-off (Table 14.9) resulting in a loss of 9.8% of tonnes and 7.6% of ounces from the mineral inventory at this cut-off grade.

14.6 MINERAL RESOURCE VALIDATION

Micon has validated the block model using statistical comparisons and visual inspection.

14.6.1 Statistical Comparison

The Golden Highway deposit is difficult to validate with swath plots or visual inspection due to the geometry, close proximity and parallel nature of the veins. The best way to compare the performance of the input 1-m composites vs. the output block model is by statistical comparison as shown in Table 14.20.

Although, at the level of vein-by-vein statistical comparison, there are important differences of either under- or over-estimation, the overall estimate performs very well. This is shown below in Figure 14.10.

Figure 14.10
Golden Highway SW & WB Statistical Validation - Graphical Version

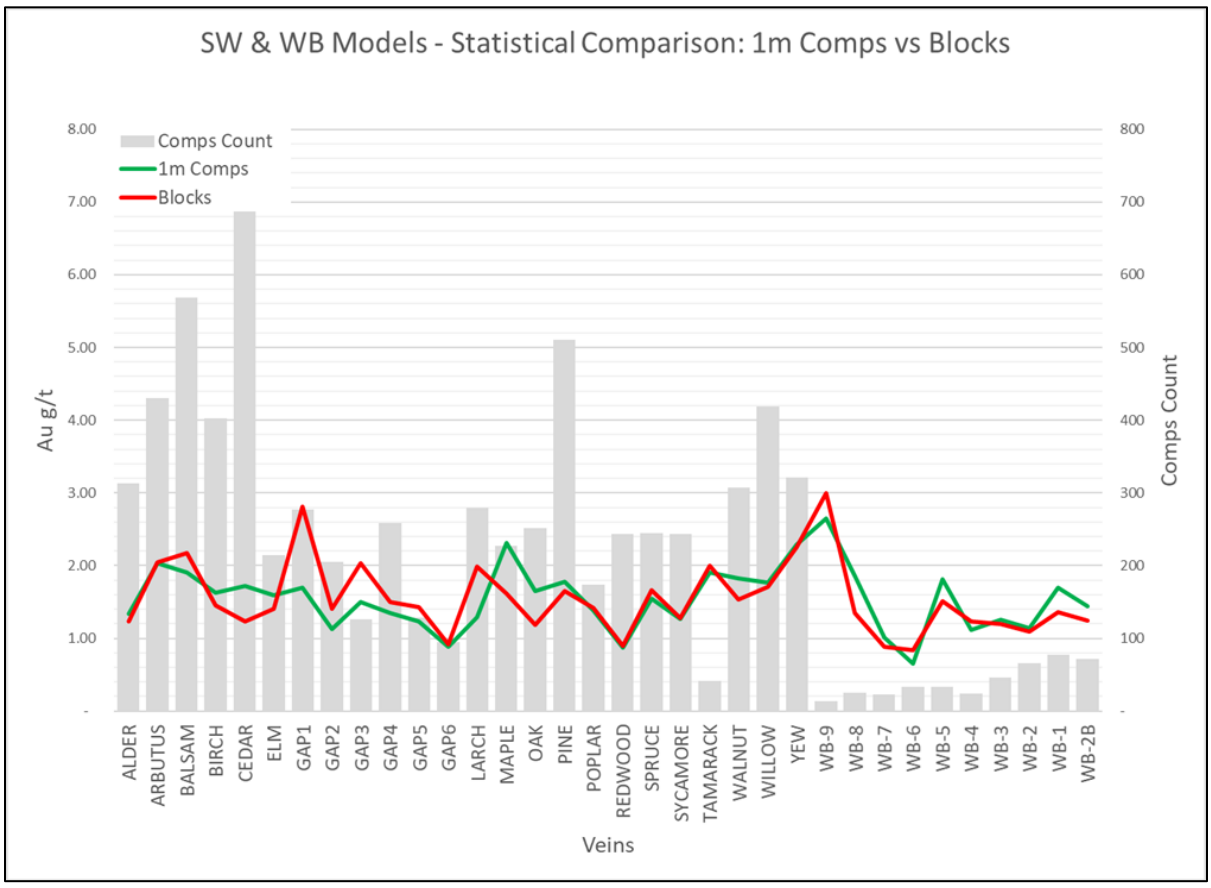


Table 14.20
Golden Highway Mineral Resource Statistical Validation

Deposit	Vein Name	1m Composites			Block Model			Difference	
		Nº of Comps	Total Length	Au g/t	Nº of Blocks	Volume (m^3)	Au g/t	%	g/t Au
55	F-12	85	81	0.43	116,717	729,481	0.37	-19%	-0.07
	F-11	65	62	0.12	93,708	585,675	0.07	-64%	-0.05
	F-10	123	119	0.34	111,526	697,038	0.28	-24%	-0.07
	F-9	92	88	0.34	95,721	598,256	0.22	-56%	-0.12
	F-8	81	78	0.63	93,208	605,263	0.41	-55%	-0.23
	F-7	102	98	0.58	103,279	645,494	0.53	-10%	-0.05
	F-6	125	120	0.58	79,609	497,556	0.24	-140%	-0.34
	F-5	107	103	0.55	101,796	636,225	0.33	-64%	-0.21
	F-4	124	119	0.34	98,519	617,225	0.17	-101%	-0.17
	F-3	102	98	0.49	46,727	292,044	0.32	-56%	-0.18
	F-2	87	84	0.46	58,224	363,900	0.32	-41%	-0.13
	F-1	28	27	0.54	30,440	190,250	0.23	-140%	-0.32
	F-6C	3	3	1.22	13,514	84,463	1.07	-14%	-0.14
	F-AA	34	33	0.43	94,606	591,288	0.71	39%	0.28
	F-AB	15	15	0.31	39,019	243,869	0.44	31%	0.13
	F-AC	21	20	0.69	29,538	184,613	0.81	15%	0.12
	S-8	13	13	4.63	2,908	18,175	2.47	-87%	-2.16
	S-7	21	20	2.66	20,935	130,844	1.85	-44%	-0.81
	S-6	38	37	1.22	29,573	184,831	0.89	-37%	-0.33
	S-5	110	106	1.38	46,741	292,131	1.09	-26%	-0.29
	S-4	159	153	1.22	78,914	493,213	0.98	-24%	-0.24
	S-3	188	181	1.43	84,880	581,356	1.18	-21%	-0.25
	S-2	218	210	2.17	86,182	538,638	1.67	-30%	-0.50
	S-1	190	182	2.61	90,127	563,294	1.52	-71%	-1.08
	S-3A	37	36	1.42	13,549	84,681	1.14	-24%	-0.27
	S-4A	51	49	0.47	37,899	236,869	0.57	18%	0.10
	S-A	137	132	2.44	89,374	558,588	1.61	-52%	-0.83
	S-B	88	84	1.51	109,760	687,975	1.35	-12%	-0.16
	S-C	71	68	0.91	91,394	571,213	0.92	1%	0.01
	S-D	35	34	0.89	91,178	569,863	0.71	-26%	-0.18
	S-E	21	20	0.56	54,329	339,556	0.68	18%	0.12
	S-F	15	14	0.32	46,605	291,281	0.32	-3%	-0.01

Deposit	Vein Name	1m Composites			Block Model			Difference	
		Nº of Comps	Total Length	Au g/t	Nº of Blocks	Volume (m^3)	Au g/t	%	g/t Au
DIS/WJN	DZ2	103	99	0.85	133,523	534,092	0.90	5%	0.05
	DZ4	26	25	1.12	32,401	129,604	1.62	31%	0.50
	DZ5	80	77	1.54	154,607	682,412	1.60	4%	0.06
	DZMAIN	1,421	1,364	1.54	410,516	2,627,120	1.56	1%	0.02
	DZMAIN3	146	140	1.37	155,342	625,336	1.21	-14%	-0.17
	DZMAIN4	26	25	1.80	69,225	277,396	2.17	17%	0.37
	WJN1	99	96	1.27	117,032	473,088	1.86	32%	0.59
WA	WA-15	21	20	2.49	99,931	399,724	4.72	47%	2.23
	WA-14	17	17	0.64	72,201	288,804	0.58	-10%	-0.06
	WA-13	19	18	0.71	77,822	311,288	0.77	8%	0.06
	WA-12	27	26	1.33	94,547	378,188	0.98	-36%	-0.35
	WA-11	22	21	0.83	91,757	367,028	0.66	-26%	-0.17
	WA-10	19	18	0.61	85,849	343,396	0.83	26%	0.22
	WA-9	31	30	2.19	120,129	480,516	3.42	36%	1.22
	WA-8	34	33	1.94	140,195	560,780	1.39	-40%	-0.55
	WA-7	33	32	1.51	132,011	528,044	1.25	-20%	-0.26
	WA-6	43	41	1.37	144,762	579,048	1.07	-28%	-0.30
	WA-5	44	42	1.80	158,274	633,096	1.20	-51%	-0.60
	WA-4	44	42	1.67	147,269	591,060	1.28	-31%	-0.39
	WA-3	77	74	2.24	236,831	1,136,796	1.45	-55%	-0.79
	WA-2	73	71	2.47	193,222	807,608	1.97	-25%	-0.50
	WA-1	40	38	3.28	187,761	751,044	3.99	18%	0.71
	WA-7A	24	23	0.52	108,370	433,480	0.32	-61%	-0.20
WB	WB-12	25	24	1.97	159,751	639,004	2.75	29%	0.79
	WB-11	22	21	0.85	90,210	360,840	0.71	-19%	-0.14
	WB-10	16	16	0.65	127,292	509,168	0.68	5%	0.03
	WB-9	23	22	1.44	124,216	496,864	1.07	-35%	-0.37
	WB-8	67	64	1.24	110,361	443,428	0.97	-28%	-0.27
	WB-7	60	58	0.92	134,350	537,400	0.75	-21%	-0.16
	WB-6	73	70	1.41	155,560	632,656	1.30	-8%	-0.10
	WB-5	86	83	1.22	159,359	637,436	0.54	-124%	-0.67
	WB-4	133	128	1.77	174,133	696,532	0.95	-87%	-0.82
	WB-3	106	102	1.19	219,834	879,336	1.28	8%	0.10
	WB-2	125	120	1.68	152,455	610,316	1.27	-32%	-0.41
	WB-1	73	70	1.35	108,819	435,276	1.12	-21%	-0.23

Deposit	Vein Name	1m Composites			Block Model			Difference	
		Nº of Comps	Total Length	Au g/t	Nº of Blocks	Volume (m^3)	Au g/t	%	g/t Au
	WB-TAMARACK	34	32	1.91	52,666	210,664	1.73	-10%	-0.18
SW	ALDER	313	297.9	1.34	60,614	1,517,550	1.23	-8.21	-0.11
	ARBUTUS	430	416.5	1.99	90,873	2,335,625	1.98	-0.50	-0.01
	BALSAM	568	543.4	1.85	33,702	849,150	2.08	12.43	0.23
	BIRCH	402	382.2	1.52	38,089	973,125	1.41	-7.24	-0.11
	CEDAR	750	721.3	1.71	70,286	1,807,750	1.19	-30.41	-0.52
	ELM	215	197.4	1.59	18,255	456,375	1.41	-11.32	-0.18
	GAP1	277	268.5	1.66	59,537	1,510,425	2.66	60.24	1.00
	GAP2	205	196.8	1.12	67,037	1,680,325	1.41	25.89	0.29
	GAP3	126	116.3	1.50	38,395	959,875	2.10	40.00	0.60
	GAP4	259	254.7	1.35	60,942	1,652,250	1.50	11.11	0.15
	GAP5	129	126.6	1.23	40,725	1,140,225	1.43	16.26	0.20
	GAP6	95	93.2	0.88	28,218	705,450	0.91	3.41	0.03
	LARCH	280	269.2	1.29	76,904	1,923,700	1.99	54.26	0.70
	MAPLE	227	213.5	2.31	43,958	1,124,250	1.62	-29.87	-0.69
	OAK	252	232	1.64	42,835	1,070,875	1.19	-27.44	-0.45
	PINE	510	484.6	1.72	50,302	1,305,950	1.51	-12.21	-0.21
	POPLAR	174	162	1.38	35,064	876,600	1.42	2.90	0.04
	REDWOOD	244	224.5	0.87	48,773	1,219,325	0.90	3.45	0.03
	SPRUCE	245	229.5	1.54	47,929	1,198,225	1.66	7.79	0.12
	SYCAMORE	244	234.7	1.26	78,347	1,964,175	1.28	1.59	0.02
	TAMARACK	42	38.9	1.90	7,924	198,100	2.00	5.26	0.10
	WALNUT	307	290	1.80	68,673	1,735,525	1.53	-15.00	-0.27
	WILLOW	419	398.4	1.76	64,897	1,645,525	1.72	-2.27	-0.04
	YEW	321	301.7	2.29	69,272	1,851,700	2.26	-1.31	-0.03
WJS	D	577	554	0.53	211,860	1,425,838	0.37	-42%	-0.16
	E	532	511	0.39	254,270	1,656,338	0.33	-18%	-0.06
	F	782	751	0.49	333,519	2,181,269	0.40	-24%	-0.09
	G	1,445	1,387	0.52	498,443	3,704,313	0.40	-28%	-0.11
	H	1,672	1,605	0.65	532,513	4,104,381	0.57	-15%	-0.09
	I	1,793	1,721	0.75	486,022	4,110,063	0.60	-24%	-0.15
	J	1,168	1,121	0.76	484,019	3,497,638	0.57	-33%	-0.19
	K	964	925	0.66	490,034	3,482,400	0.46	-42%	-0.20
	L	652	626	0.72	363,552	2,485,006	0.44	-64%	-0.28

Deposit	Vein Name	1m Composites			Block Model			Difference	
		Nº of Comps	Total Length	Au g/t	Nº of Blocks	Volume (m^3)	Au g/t	%	g/t Au
	M	515	494	0.67	323,973	2,097,413	0.34	-94%	-0.32
	N	446	428	0.84	206,132	1,347,575	0.48	-76%	-0.37
	O	402	386	0.78	284,735	2,161,756	0.40	-95%	-0.38
	P	370	355	0.42	266,473	1,771,613	0.27	-55%	-0.15
	Q	311	299	0.54	261,761	1,693,775	0.34	-60%	-0.20
	R	182	175	0.43	222,135	1,453,025	0.31	-37%	-0.11
	S	218	210	0.39	284,729	1,924,719	0.28	-37%	-0.10
	T	164	158	0.43	292,814	1,982,656	0.43	0%	0.00
	U	95	91	0.35	181,711	1,138,163	0.37	6%	0.02
	V	132	127	0.50	9,311	58,194	0.15	-225%	-0.35
	W	128	123	0.50	93,578	598,688	0.22	-132%	-0.29
	WJ1	77	73	2.73	66,994	418,713	2.40	-14%	-0.33
	WJ2	84	81	2.11	75,349	470,931	2.09	-1%	-0.01
	WJ3	63	61	2.62	70,588	441,175	2.11	-24%	-0.51
	WJ4	70	67	2.89	110,210	718,438	2.47	-17%	-0.42
	WJ5	51	49	2.33	98,611	705,688	3.29	29%	0.97
	WJ6	36	35	2.20	34,850	217,813	1.63	-35%	-0.57
	WJ7	34	33	3.01	71,024	477,969	4.96	39%	1.95
	WJ8	34	33	2.36	70,747	446,119	2.39	2%	0.04
	WJ9	20	19	0.88	20,036	125,225	1.27	31%	0.39
	WJ10	18	18	0.79	32,758	204,738	0.72	-9%	-0.07
	WJ11	15	14	0.64	31,852	199,075	0.66	4%	0.02
	WJ12	12	12	1.61	27,453	171,581	1.16	-39%	-0.45
	WJ13	34	33	1.54	30,266	189,163	1.55	1%	0.02
	WJ14	43	41	1.90	33,382	208,638	1.57	-21%	-0.33
	WJ15	29	28	1.74	72,490	474,788	1.37	-27%	-0.37
	WJ16	19	18	1.66	17,883	111,769	1.85	10%	0.19
	X	422	405	0.40	235,746	1,477,363	0.36	-10%	-0.04
	Y	249	239	0.46	153,210	967,931	0.40	-15%	-0.06
Global		19,758	18,967	0.88	14,448,115	85,634,943	0.86	-3%	-0.03

The variability in the local estimates is hard to control due to some smearing or lack of sampling in some veins. This presents an opportunity to continue improving the interpretations and data selection in future updates. At a global scale the estimate fairly represents the data with a conservative average of 0.86 g/t Au compared to the informing composites of 0.88 g/t Au.

14.6.2 Visual Inspection

The model blocks and the drill hole intercepts were reviewed interactively, in three-dimensional mode, to ensure that the blocks were honouring the drill hole data. The agreement between the block grades and the drill intercepts of the Golden Highway deposits was found to be satisfactory. Due to the complexity and the narrow nature of the parallel veins there are no suitable still images to attach to this report.

Because of the tight clustering of veins within each block model, and the number of veins, producing individual swath plots was deemed to be impractical.

14.7 RESPONSIBILITY FOR ESTIMATION

The mineral resources presented in this report have been prepared under the direction of B. Terrence Hennessey, P.Geo., of Micon International Limited.

15.0 MINERAL RESERVE ESTIMATES

As no feasibility or pre-feasibility studies have been completed at this time, no mineral reserves have been estimated for the Golden Highway Project.

16.0 MINING METHODS

16.1 SUMMARY

Micon reviewed the geological block modelling information available on the South West (SW) zone in order to identify the most suitable underground mining method for the deposits located in the zone. Given the information available on the project and the deposits, a Preliminary Economic Analysis (PEA) was carried out with the preparation of a mine design, mine production plan and schedule to evaluate the potential economic viability of the deposits in the SW zone. This zone is currently the most advanced deposit on the project.

The proposed mining method for the SW zone is Longitudinal Longhole Stoping with conventional drilling and blasting at stope height of 20 m. The optimal nominal mine production rate for the SW zone project is estimated to be 1,750 t/d, taking into consideration the geometry of the deposits. Waste rock generated from the mine will be the main source of unconsolidated backfill for the excavated stopes. When required, additional crushed rock will be transported into the mine as backfill material.

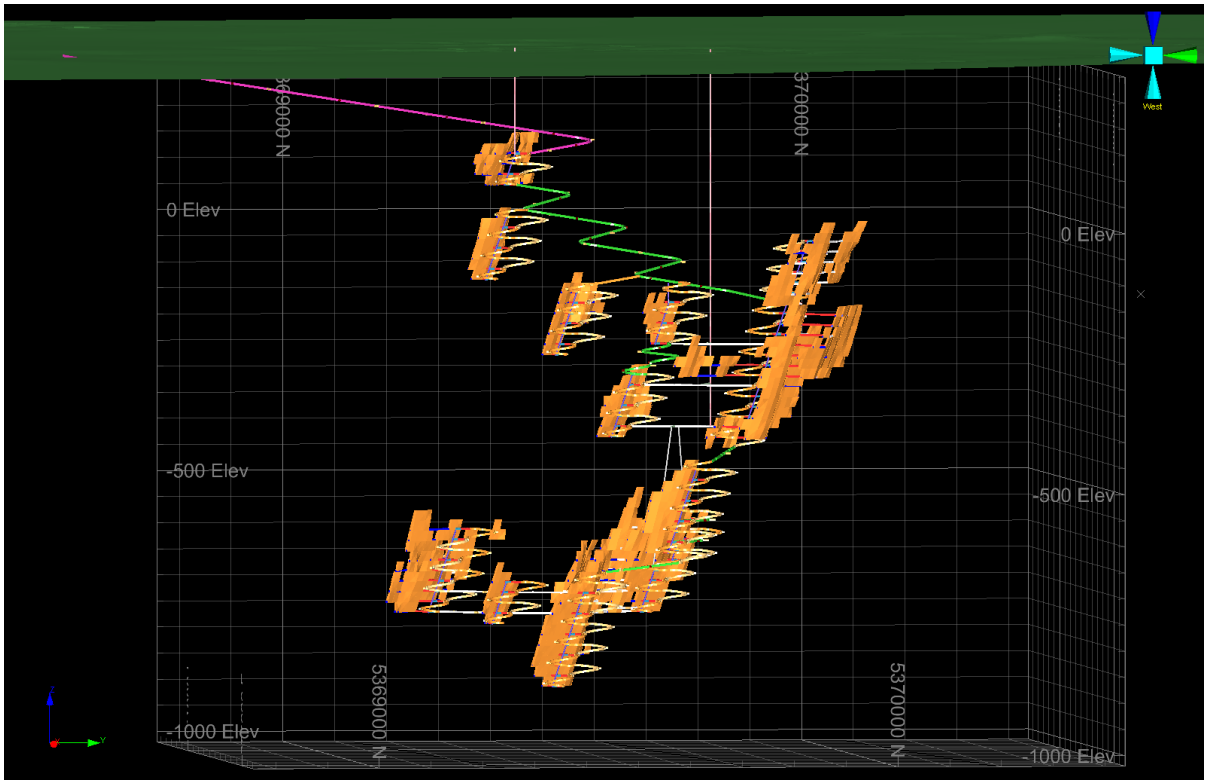
The main decline provides access into the mine with a series of internal ramps linking one mining area to another, while crosscuts provide access into the deposits. Sills are developed in each deposit where production drilling and blasting will be carried out.

Excavated mineralized material from the mine will be transported to the processing facilities on surface with low-profile diesel-powered underground trucks, while waste material will be transported and deposited into excavated stopes as unconsolidated backfill, providing a working platform for the subsequence mining lift.

At the current (PEA) stage, two main ventilation shafts are proposed in the mine design with auxiliary inter-level ventilation raises located at the crosscuts.

A schematic of the proposed mine layout for the SW zone PEA is presented in Figure 16.1.

Figure 16.1
Proposed SW Zone Underground Mine Layout (Isometric View)



16.2 MINERAL RESOURCE CONSIDERED FOR MINING

Indicated and Inferred mineral resources in the SW zone at a cut-off grade of 2.6 g/t Au are considered in the mine design, production plan and schedule. No Measured mineral resources are currently identified on the deposit. A sectional view of the resources is provided in Figure 16.2.

16.3 MINING METHOD

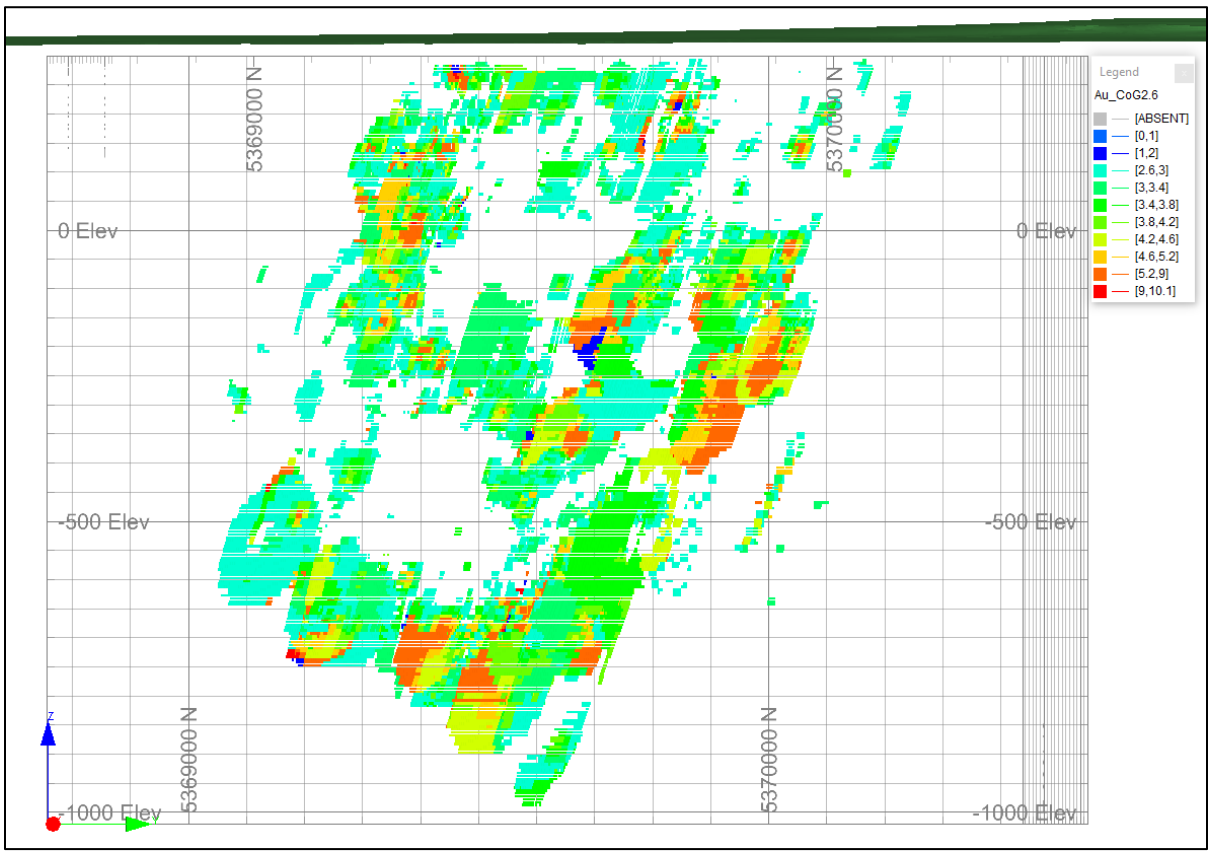
The mining method selection for the SW zone was determined using the ranking matrix proposed by UBC Mining Method Selection (Miller-Tait, Pakalnis et. al, 1995), which is a modified version of the mining method selection proposed by Nicholas in 1992. The UBC Mining Method Selection evaluates the physical geometry of the deposits and its rock mass characteristics.

The rock mass for SW zone is assumed to be in fair to good rock quality with a low stress regime for the deposit and its geographic region. The parameters used to determine the mining methods for SW zone are:

- Depth: Close to surface to depth of approximately 1,000 m below the topography.
- Mineralization widths: Narrow to moderate widths ranging from 1.0 m to 25 m.

- Dipping: Steep (≥65º).

Figure 16.2
Section View of SW Zone at 2.6 g/t Au. CoG with Surface Topography



The UBC mining method selection tool ranked Sublevel Stoping, and Cut and Fill as potential mining methods for the SW zone. The proposed list of mining method also includes Open Pit mining. However, Micon selected Longitudinal Sublevel Stoping for the SW zone, because of the depth, width, inclination, and strike length of the deposits.

The option for open pit mining was not considered in this PEA, even though there is mineralization close to the surface. This is because of the presence of lakes, muskegs and swamps overlying the deposits.

The mining method selection tool also suggested the Cut and Fill mining method because it is a versatile underground mining method for many types of deposit. However, this mining method was not considered for the SW zone because the physical geometry of the deposits renders them better suited to extraction with the Sublevel Stoping mining method, given the current available information.

Longitudinal Sublevel Stoping is expected to provide more flexibility in production faces and extracted tonnages, and to be more cost effective in comparison to Cut and Fill mining

methods, given the information available on the project. Sills developed within the mineralization will provide multiple accesses into the deposits, enabling mining to be carried out in various stopes on single or multiple levels. This should also enable better management of mining grade and ore blending.

Nevertheless, Micon recommends that additional technical evaluation be carried out to determine the optimum mining methods for the deposits as more information becomes available.

16.4 CUT-OFF GRADE DETERMINATION

The cut-off grade (CoG) used to determine the mineable portion of the mineral resource and the mine design for the PEA was developed using the parameters listed in Table 16.1.

Table 16.1
Cut-Off Grade Parameters

Parameter	Unit	Value
Gold Price	US$/oz	1,250
Exchange Rate	C$/US$	1.35
Gold Mass Conversions	g/oz	31.10
Gold Price	C$/g	54.25
Payable Gold	%	99.95
Refining Cost	C$/oz	5
Transport & Insurance	C$/oz	0.84
Excess Liability	C$/oz	0.92
Value of Gold	C$/g	54.01
Operating Costs	**Unit**	**Value**
UG Mining (includes backfill)	C$/t mill feed	75.00
Sampling, G&A plus Assay	C$/t mill feed	5.00
Mill feed Crushing	C$/t mill feed	5.00
Haul to Toll Mill	C$/t mill feed	5.00
Toll Milling	C$/t mill feed	40.00
Total operating cost estimate	**C$/t mill feed**	**130**
OPEX Cut-off Grade	**g/t Au**	**2.41**
Mill Recovery	%	93
Estimated Cut-off Grade	g/t Au	2.60

Stope outlines delimiting the tonnage and grade of the mineable portion of the mineral resource using the proposed Longitudinal Sublevel Stoping mining method were generated by DATAMINE Mineable Shape Optimizer (MSO) software based on a cut-off grade of 2.6 g/t Au.

16.5 MINEABLE STOPE SHAPE

The stope outlines were prepared from the updated mineral resource geological block model for the Golden Highway Project which is summarized in Section 14.3.

The mineable stope outlines were generated with DATAMINE MSO software in such a manner as to represent the planned extraction of the mineralized zones, together with any internal or external dilution meeting the minimum mining width and stope dimension for the proposed mining method and the cut-off grade.

The stope outlines were generated from a 20 m vertical level interval stope height, stope minimum mining width of 3.0 m and length of 15 m, while honoring the cut-off grade of 2.6 g/t Au.

The material contained in the MSO stope outlines to be considered in the mine design and production plan, including dilution, is 6,634,321 t at an average gold grade of 3.93 g/t (839,024 oz Au contained). This quantity does not account for any mining losses.

16.6 PRODUCTION RATE

The proposed nominal mine production rate for the SW zone is approximately 1,750 t/d.

This value was calculated from the rules of thumb proposed by Taylor (1986), Mosher, Rice, and Singer et al. and Long (2000 and 2009, respectively), and based to the extent practicable on the mineral resource to be considered in the mine plan generated by the MSO stope outlines (Table 16.2).

Table 16.2
Proposed Production Rate for SW zone Project

Potential Production Rate on Based Rule of Thumb	Tonnes/day
[1]Taylor's Formula (1977 & 1986)	1,791
[1]Mosher's Formula	1,411
[1]One level per year @ 150 vertical feet/level (Rice)	1,662
[2]Updated Taylor's Formula -Underground (Long, 2009)	2,058
Weighted Avg. Prod. Rate Est.	1,762

Source:
[1] - McIntosh Engineering, Hard Rock Miner's Handbook, Ed. 3 May 2003.
[2] - Estimation of the Potential Production Rate (Queen's Mine Design Wiki), Feb 08, 2014.

The production rate of 1,750 t/d is deemed to be appropriate given the physical geometry, type and spatial location of the deposits, the available data for the proposed mining method, mine design, and the level of accuracy for the current engineering evaluation.

However, Micon recommends that additional technical evaluation be carried out to revise and optimize the production rate as additional exploration drilling and updated mineral resource information become available for the SW zone.

16.7 MODIFYING FACTORS

16.7.1 Dilution

Two types of dilution values were applied in determining the mineral resource to be considered in the mine plan during the MSO analysis:

- A planned dilution of 0.5 m of overbreak on the hanging-wall and 0.5 m on the footwall.
- An unplanned dilution, which is unavoidable, by low grade and internal waste material contained in the block model for the proposed stope dimensioning.

The average dilution is estimated to be approximately 15%.

16.7.2 Mining Recovery

The mining recovery for this PEA is estimated to be 90% which assumes a material loss of 10% during extraction of blasted material from the mining stopes, transportation and handling of the material from the stopes to the surface processing facility.

16.8 MINE DESIGN

The mine design was developed to support a nominal mine production rate of approximately 1,750 t/d for the proposed mining method with unconsolidated waste rock as backfill material. The mine design was carried out in Datamine Studio UG software.

Mining commences at the bottom of each deposit with the development of sills, where production drilling, blasting and mineralized material will be extracted from the stope in a longitudinal retreat, fashion towards the crosscut. Unconsolidated waste rock will be placed from the level above during the retreat, forming the working platform for the subsequent extraction panel (i.e. mining bottom up).

16.8.1 Underground Excavation Dimensions

All the primary underground development was designed with dimensions of 4.0 m W x 4.5 m H, with the exception of lateral developments such as levels, sills, crosscuts, remucks, safety bays and ventilation drifts, which are sized at 4.0 m W x 4.0 m H. Main ventilation shafts will be excavated with a raise bore and the remaining ventilation raises between levels will be excavated by drilling and blasting.

Table 16.3 summarizes the estimated life of mine (LoM) development length and the proposed excavation dimensions.

Table 16.3
Estimated Mine Development Length

Description	Dimensions (m)		Total LoM
	W	H	
Main Decline & Ramp	4	4.5	20,143 m
Crosscut	4	4	5,954 m
Level	4	4	3,539 m
Sill	4	4	14,903 m
Remuck	4	4	2,332 m
Safety Bay	3	4	128 m
Vent. Drift	3	4	1,418 m
Vent. Shaft		3 Ø	930 m
Vent. Raises		3 Ø	2,319 m
Sub-total Lateral Development			48,417 m
Sub-total Vertical Development			3,249 m
Total Development			**51,666 m**

16.8.2 Mine Access

The main decline and a system of ramps provide access to the underground workings and production areas. There will only be one portal into the mine, providing access into the mine production headings and acting as the service tunnel.

In total there are 20,143 m of main decline and ramp system in the proposed mine design to access all the mineable deposits within the SW zone. The main decline and underground ramp systems are designed at a nominal -15% grade. The main decline is 1,360 m long. This connects to a series of internal ramps linking one mining area to another, totaling 2,612 m. The remaining inter-ramp system links one production level to another with at a total of 16,171 m.

Provisions for remuck and safety bays are included in the design. It is also assumed that, in certain areas, such as in the inter-ramp, the remuck bays will have multiple purposes and can be used as safety or vehicle passing bays to reduce the amount of underground development.

Currently, a provision of 10% in the LoM development cost is included to account for sumps, refuge or lunchroom, electrical and dewatering stations, explosive and fuel storage bays, ore and waste passes, and underground maintenance facilities, considering that this is preliminary economic evaluation. It is recommended that these auxiliary excavations, including secondary escape-ways or emergency exits from the mine, be considered in the mine design during future advanced stages of the project.

The proposed mine development for SW zone is presented in Figure 16.3.

16.8.3 Underground Mine Layout

Currently, all the underground development and access into the stopes are located in the hanging-wall, which also enables better location for further exploration and definition drilling to be carried out, and is geotechnically more advantageous.

Access into the production stopes will be from the hanging-wall, through a series of level developments with access drives connecting the decline or the ramp to the haulage drifts and crosscuts.

The proposed mine stope layout for SW zone is presented in Figure 16.4.

16.8.4 Mine Development, Production Schedule and Services

Mine development will be carried out by a mining contractor during the pre-production period from year one to year three, focusing on the excavation of the primary accesses into deposits close to the surface, ramps, and sills to assist Moneta with the mine ramp up, prior to the steady state production.

All stoping activities (i.e., stope production drilling, blasting, mucking and hauling) throughout the mine life are assumed to be carried out by the owner, Moneta.

Moneta will take over all the mine development activities from the contractor during year four and will assume responsibility of all the mine development and stoping activities from that year onward.

The advance rate for development headings with mechanized mining equipment is approximately 4.0 m/round for single headings, 6.0 m/round for multiple headings and stoping activities of approximately 1,750 t/d during steady state operation in year four to year 11.

The mine development and production schedule were prepared by Micon using Datamine Enhanced Production Scheduler (EPS) software.

Crosscuts into the stopes from the ramps are designed to be approximately 35-50 m long, depending on the geometry of each stope. Provision has been made in the design of the crosscuts to include a remuck and a ventilation drift which connects to a ventilation raise.

The LoM annual mine development metreage, stope and sill tonnages, including backfill mass balance, are summarized in Table 16.4.

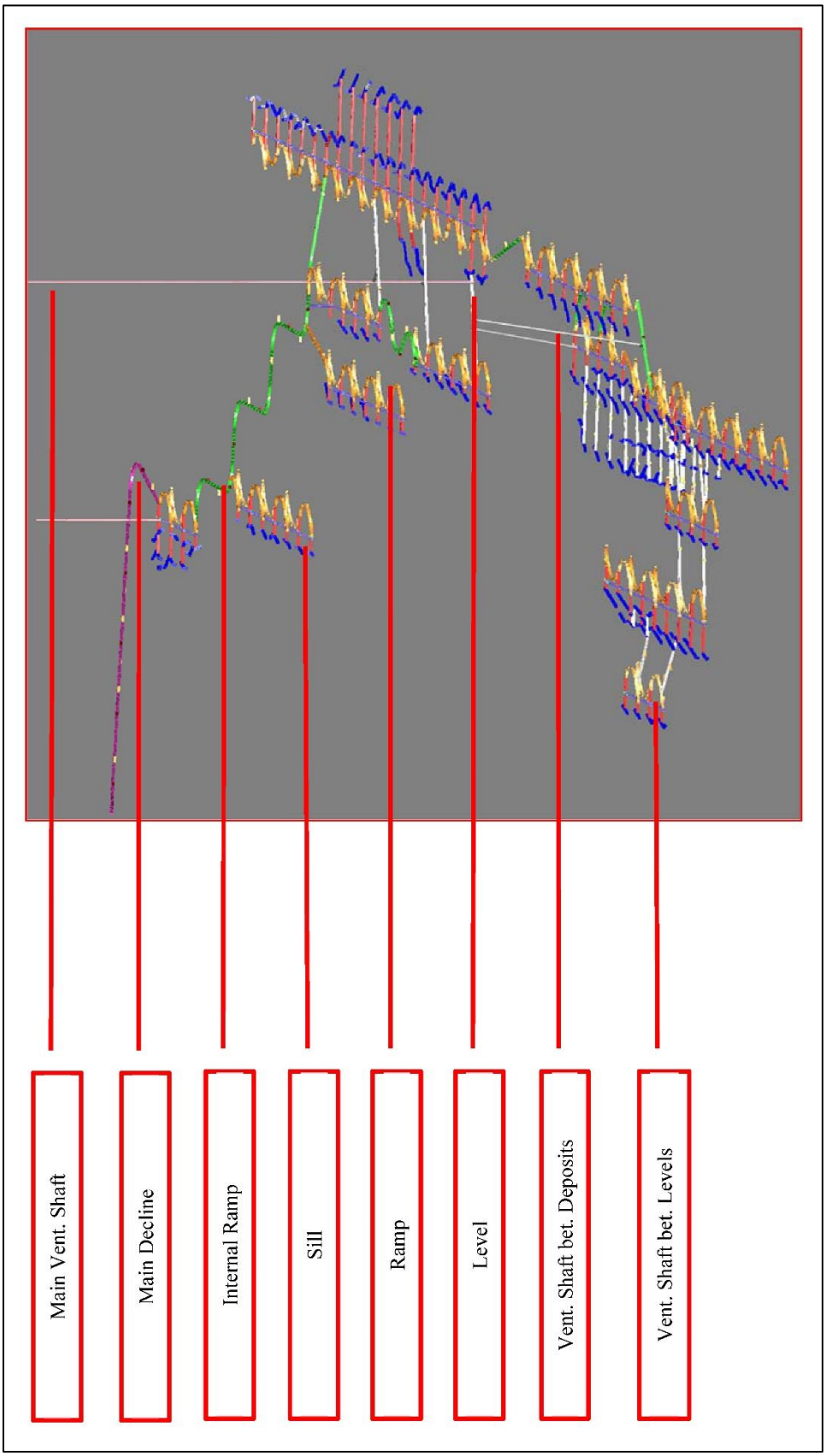


Figure 16.3
SW Zone Mine Development Layout

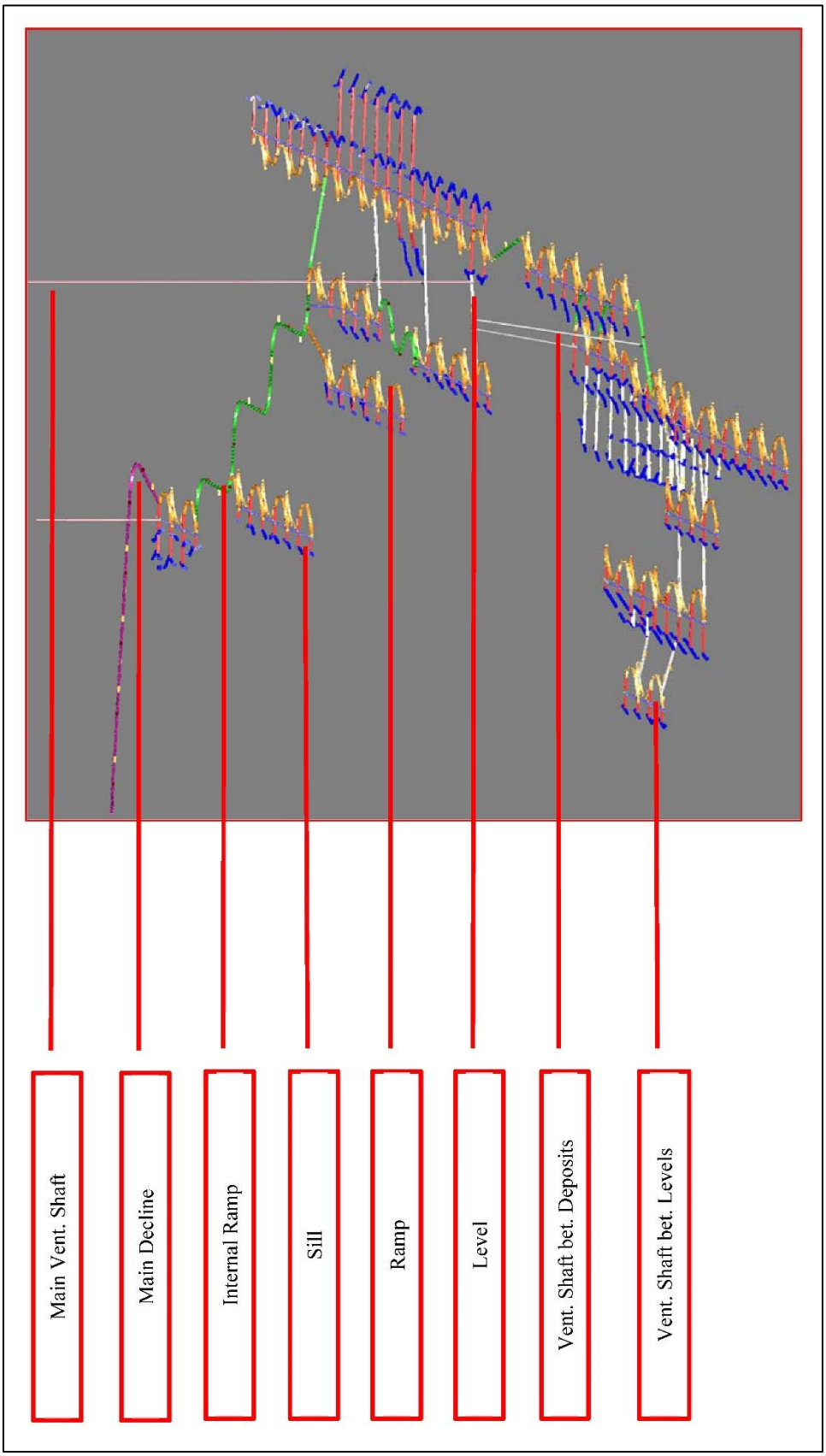


Figure 16.4
SW Zone Typical Stope Layout

Table 16.4
Estimated Mine Development and Production Schedule

Description	Total	Units	Pre-Production	Production	1	2	3	4	5	6	7	8	9	10	11	12
Stope Tonnages	5,393,955.0	t	487,272.0	4,906,683.0	-	207,619.0	279,653.0	481,777.0	533,263.0	502,992.0	602,217.0	634,345.0	576,730.0	621,299.0	613,381.0	340,679.0
Sill (t)	641,039.0	t	186,856.0	454,183.0	9,897.0	58,106.0	118,853.0	121,506.0	90,623.0	113,232.0	15,000.0	11,039.0	59,308.0	16,208.0	18,102.0	9,165.0
Stope Grades (Au g/t)	3.92	g/t	8.07	35.22	-	4.04	4.03	3.79	3.96	4.59	3.71	3.55	3.97	4.20	3.68	3.77
Sill Grades (Au g/t)	4.07	g/t	10.50	36.57	2.70	3.53	4.27	4.41	3.55	4.48	4.38	4.19	3.78	3.88	3.64	4.26
Prod (Sills + Stopes)	6,034,994.0	m	674,127.0	5,360,867.0	9,897.0	265,725.0	398,505.0	603,283.0	623,886.0	616,224.0	617,217.0	645,384.0	636,038.0	637,508.0	631,483.0	349,844.0
Total Average Grade	3.93	g/t	10.73	35.28	2.70	3.93	4.10	3.91	3.90	4.57	3.73	3.56	3.95	4.19	3.68	3.78
Total Metal Content	763,487.3	oz	86,971.6	676,515.7	859.1	33,562.0	52,550.5	75,932.8	78,236.6	90,536.8	73,944.3	73,888.1	80,820.6	85,917.8	74,690.4	42,548.4
Average Production Rate	1,524.0	t/d	1,872.6	14,891.3	27.5	738.1	1,107.0	1,675.8	1,733.0	1,711.7	1,714.5	1,792.7	1,766.8	1,770.9	1,754.1	971.8
			-	-												
Main Decline	1,360.0	m	1,360.0	-	1,360.0	-	-	-	-	-	-	-	-	-	-	-
Internal Ramp	2,612.0	m	1,960.0	652.0	-	1,462.0	498.0	167.0	485.0	-	-	-	-	-	-	-
Ramp in bet. Levels	16,171.0	m	6,782.0	9,389.0	373.0	3,123.0	3,286.0	2,846.0	2,263.0	1,180.0	105.0	373.0	1,507.0	419.0	481.0	215.0
Crosscuts	5,954.0	m	2,939.0	3,015.0	146.0	906.0	1,887.0	954.0	589.0	341.0	85.0	117.0	516.0	120.0	160.0	133.0
Sill	14,903.0	m	4,354.0	10,549.0	231.0	1,354.0	2,769.0	2,832.0	2,075.0	2,639.0	350.0	257.0	1,382.0	378.0	422.0	214.0
Level Development	3,539.0	m	751.0	2,788.0	-	24.0	727.0	274.0	904.0	965.0	161.0	247.0	189.0	48.0	-	-
Remucks on Main Decline	110.0	m	110.0	-	110.0	-	-	-	-	-	-	-	-	-	-	-
Remucks on Internal Ramp	170.0	m	130.0	40.0	-	100.0	30.0	10.0	30.0	-	-	-	-	-	-	-
Remucks on Levels	494.0	m	30.0	464.0	-	-	30.0	30.0	150.0	190.0	30.0	40.0	20.0	-	-	4.0
Remucks on Ramp bet. Levels	790.0	m	330.0	460.0	16.0	150.0	164.0	136.0	104.0	56.0	4.0	20.0	76.0	16.0	32.0	16.0
Remucks on Crosscuts	768.0	m	312.0	456.0	16.0	120.0	176.0	128.0	96.0	56.0	16.0	16.0	72.0	16.0	32.0	24.0
Safety Bays on Internal Ramp	84.0	m	68.0	16.0	-	48.0	20.0	-	16.0	-	-	-	-	-	-	-
Safety Bays on Main Decline	44.0	m	44.0	-	44.0	-	-	-	-	-	-	-	-	-	-	-
Vent Drifts bet. Deposits	170.0	m	84.0	86.0	-	18.0	66.0	60.0	26.0	-	-	-	-	-	-	-
Vent Drifts on Levels	1,248.0	m	507.0	741.0	26.0	195.0	286.0	208.0	156.0	91.0	26.0	26.0	117.0	26.0	52.0	39.0
Vent Shaft 1	205.0	m	205.0	-	29.0	176.0	-	-	-	-	-	-	-	-	-	-
Vent Shaft Main	725.0	m	389.0	336.0	-	-	389.0	336.0	-	-	-	-	-	-	-	-
Vent Shafts bet. Levels	1,852.0	m	761.0	1,091.0	22.0	299.0	440.0	327.0	218.0	109.0	44.0	44.0	196.0	44.0	65.0	44.0
Vent Shaft Bet. Deposit	467.0	m	-	467.0	-	-	-	-	270.0	197.0	-	-	-	-	-	-
Total Length of All Dev.	51,663.0	m	21,115.0	30,548.0	2,372.0	7,975.0	10,768.0	8,308.0	7,383.0	5,824.0	820.0	1,139.0	4,075.0	1,067.0	1,244.0	688.0
Dev. Waste	1,589,388.0	t	732,783.0	856,605.0	99,171.0	294,374.0	339,238.0	232,167.0	228,349.0	134,558.0	19,404.0	38,459.0	117,521.0	30,489.0	35,641.0	20,017.0
Stope and Sill	3,620,996.0	t	404,476.0	3,216,520.0	5,938.0	159,435.0	239,103.0	361,970.0	374,331.0	369,735.0	370,330.0	387,230.0	381,623.0	382,505.0	378,890.0	209,906.0
Imported Backfill Mat.	2,031,608.0	t	-	2,031,608.0				36,570.0	11,043.0	135,042.0	350,926.0	348,771.0	264,102.0	352,016.0	343,249.0	189,889.0
Backfill Trans. & Placed	3,620,996.0	t	404,476.0	3,216,520.0		165,373.0	239,103.0	361,970.0	374,331.0	369,735.0	370,330.0	387,230.0	381,623.0	382,505.0	378,890.0	209,906.0
Waste Stockpile	328,307.0	t	328,307.0	-	93,233.0	134,939.0	100,135.0	-	-	-	-	-	-	-	-	-

At the current stage, two main ventilation shafts are proposed in the mine design with auxiliary ventilation raises in between the levels, located at the crosscuts. Detail engineering work was not carried out for the mine ventilation, dewatering, and electrical power requirements (i.e. mine services) for this PEA. However, provision was made for these in the mine cost model based on relevant project experience and published references. The mine's ventilation and dewatering systems are recommended to be studied in more detail in the next stage of the project.

16.9 MINING EQUIPMENT

The mining contractor will supply its own mining equipment and manpower during the pre-production development stages, up to year three. Moneta will engage its own production mining crew during this period and will mobilize the remainder of its own full underground mining equipment fleet in year four.

A list summarizing the owner's mining equipment for the LoM is presented in Table 16.5. This list does not include the replacement of major mining equipment in year eight, but the costs of that major mining equipment replacement are accounted for in the estimate of sustaining capital expenditure.

The remaining auxiliary mining equipment will be refurbished. The breakdown on the initial capital and sustaining cost of each equipment type is presented in the capital and operating cost section of this report.

All the mining equipment proposed for SW zone is diesel powered. Drilling equipment will also be diesel powered for mobility, only requiring electricity to power the drills.

Table 16.5
Estimated Mining Equipment Fleet

Description	Total LOM	Units
LH Drill	2.0	units
2-boom Jumbo	3.0	units
10.0 t - LHD ŵ remote	6.0	units
30-tonne trucks	8.0	units
Bolter	2.0	units
Scissor Lift	2.0	units
Emulsion & ANFO Loader	3.0	units
Lube & Fuel Truck	2.0	units
Crane Truck & Grader	2.0	units
Personnel carrier	1.0	units
Light Duty Truck	10.0	units
Total Mining Equipment	**41.0**	**units**

16.10 MANPOWER REQUIREMENT

The manpower and mine labour requirement during the pre-production years will be supplied by the mining contractor. Moneta will also have its own technical staff and mine production crew during this period, working with and supervising the work carried out by the contractor.

Moneta will mobilize its full mining crew in year four. The manpower requirements were estimated based on productivities, capacities, and availabilities of the equipment to the accuracy of PEA level analysis.

The mine technical, support staff and labour for SW zone are listed in Table 16.6 to Table 16.9.

Table 16.6
SWZ Estimated Mine Technical Staff

Description	Total LoM	Units
Mine Manager/Superintendent	1	person
Chief Engineer	1	person
Sr. Mining Engineer	1	person
Mine Eng. Planner	1	person
Int. Mine Engineer	1	person
Mine Technicians	1	person
Mine Geology	1	person
Sr. Geologist	1	person
Inter. Geologist	1	person
Geological Technicians	1	person
Samplers	2	persons
Lead Surveyor	1	person
Sr. Surveyors	1	person
Surveying Technicians	1	person
Total Engr. Staff	**15**	**persons**

Table 16.7
SWZ Estimated Mine Operation Staff

Description	Total LoM	Units
Mine Captain	1	person
Mine Supervisors	6	persons
Mine Technician	2	persons
Mine Admin.	1	persons
Total Mine Operation Staff	**10**	**persons**

Table 16.8
SWZ Estimated Mine Maintenance Crew

Description	Total LoM	Units
Chief Maintenance	1	person
Maint. Coordinator	1	persons
Heavy Duty Mechanics	14	persons
Light Duty Mechanics	8	persons
Sr. Electrical	4	persons
Electricians	4	persons
Technicians	4	persons
Total Mine Maint.	**36**	**persons**

Table 16.9
SWZ Estimated Underground Mine Labour

Description	Total LoM	Units
Mine Manpower (Owner's)		
LH Drill	4	persons
2-boom Jumbo	6	persons
10.0 t - LHD ŵ remote	12	persons
30-tonne trucks	16	persons
Bolter	4	persons
Scissor Lift	4	persons
Emulsion & Anfo Loader	6	persons
Lube & Fuel Truck	4	persons
Crane Truck & Grader	4	persons
Standby Operators	18	persons
Miners	4	persons
Total Mine Manpower	**82**	**persons**

16.11 CONCLUSIONS AND RECOMMENDATIONS

The mineral resource to be considered in the mine production rate, design and production schedule for the SW zone is considered suitable for the proposed mining and extraction method. A preliminary economic analysis was carried out to evaluate the potential economic viability of extracting mineralized material for the deposits located in the SW zone.

The complexity of the multiple, parallel, narrow to medium thickness mineralization structures, spatially located at depth, presents a challenge to underground mine design.

Micon recommends that the following be carried out to provide a framework for future study of the project and mine design:

- Additional exploration drilling programs to potentially increase the quantity of mineral resource to be considered in the mine plan.
- Geotechnical and hydrogeological data collection, investigation and analyses.
- Optimization of the mining methods and production rate.

- Revise and optimize the material handling system (shaft vs. haulage; diesel power vs electric) as additional updated mineral resource information is available.
- Optimization of the mine services (i.e., backfill selection, mine dewatering and ventilation systems).
- Revise the mine design, manpower requirements and costs, if necessary, with the updated information.

17.0 RECOVERY METHODS

The recent metallurgical test program using mineralized samples representing the South West Zone mineral resources completed at SGS Mineral Services in Lakefield, Ontario, which is summarized in Section 13.0, shows that gravity concentration followed by pre-oxidation, cyanide leach, carbon adsorption/desorption and electrowinning can yield an overall gold extraction of around 94.2%. Results from this test program were used to develop the PEA process design criteria, process flowsheet, process operating cost estimate and conceptual plant capital cost estimate. The selected process plant flowsheet for the on-site processing scenario will include the following unit operations:

- Single stage crushing.
- Two stages of grinding with closed circuit pebble crushing and hydrocyclone classification.
- Gravity separation and intensive leaching of the final gravity concentrate.
- Cyanide leaching and carbon adsorption using carbon-in-pulp (CIP) technology.
- Cyanide destruction of plant tailings and storage of slurry tailings.
- Loaded carbon acid wash, elution and regeneration.
- Electrowinning, refining and production of gold doré bars.

For the toll treatment option, the PEA includes on-site primary crushing, loading into trucks and transportation of approximately 50 km to a nearby gold processing facility. It is assumed that the toll mill grinds the material to 80% passing 75 microns, has no gravity circuit and has a 30-hour leach retention time. The overall estimated gold recovery used for the toll treatment option is 92.2%.

17.1 PROCESS DESIGN CRITERIA

The on-site milling option process design criteria developed for the PEA are based on the underground mine production rate, metallurgical test work described in Section 13.0 and Micon's in-house experience. The table below presents some of the key process design criteria.

Table 17.1
Summary of Key Process Design Criteria

Criterion	Units	Value
Feed rate (nominal)	t/d	1,750
Feed grade - gold (nominal)	g/t	3.93
Feed grade - gold (design)	g/t	4.72
Plant operating days	d/y	365
Crusher plant utilization	%	67%
Leach plant availability	%	95%
Ball Mill Work Index	kWh/t	19.7
Mill circuit product size (P_{80})	micron	59
Gravity gold recovery	%	50.6
Gold leach extraction (based on plant feed)	%	43.6
Leach retention time	h	30
Total gold recovery (gravity plus CIP)[1]	%	94.2
Lime consumption rate	kg/t	1.32
NaCN consumption rate	kg/t	0.44

[1] Includes allowance for gravity leach and solution gold losses

17.2 PROCESS DESCRIPTION (ON-SITE MILLING OPTION)

17.2.1 Crushing and Grinding Circuits

Plant feed material transported by truck from the underground mine will be either dumped directly into the primary jaw crusher feed hopper or dumped onto the nearby crusher feed stockpile. Material from the stockpile will be fed to the crusher using a front end loader.

The crushing circuit comprises single-stage jaw crusher and the design crushing rate is 109 t/h, treating a maximum lump size of 800 mm, with a product size of approximately 80% passing 125 mm. The crushed material will be conveyed onto a crushed ore stockpile that will hold 1,750 t of live capacity (one day).

The crushed ore will be fed at a controlled rate (about 77 t/h) onto the SAG mill feed conveyor which will feed the semi autogenous mill, ball mill and crusher (SABC) comminution circuit. The SAG mill in the SABC circuit will be in a closed circuit with a pebble crusher while the ball mill will be in a closed circuit with a nest of cyclones.

17.2.2 Gravity Gold Recovery

A fraction of the cyclone underflow (approximately 30%) will report to two centrifugal gravity concentrators. On average, approximately 50% of the gold in the plant feed is estimated to be recovered by the gravity circuit. An intensive leach unit will be used to solubilize the gold from the gravity concentrate, and gold in the pregnant solution will be recovered by electrowinning. Access to the gravity concentration circuit and intensive leaching area will be restricted to authorized personnel only and the secure enclosure will be monitored by closed circuit television (CCTV) cameras.

17.2.3 Leaching and CIP Circuits

The cyclone overflow from the SABC circuit will flow by gravity to the trash screen and then the pre-leach thickener, where the slurry will be thickened to around 40% solids by weight for downstream cyanidation. The thickener underflow will feed the tank leach circuit comprising a series of six agitated leach tanks. Lime will be added to the leach feed and periodically to subsequent leach tanks to maintain a pH of between 9.5 to 10.0. Sodium cyanide will also be added to maintain the cyanide content of the leach solution at around 0.5 g/L and air is injected to achieve a target dissolved oxygen content of around 7 mg/L. The average leach tank circuit residence time will be approximately 30 hours.

The slurry from the final leach tank will feed the carbon-in-pulp circuit which will comprise six agitated CIP tanks in series. The total CIP circuit residence time will be approximately 2.5 hours. The movement between slurry and carbon will be counter-current. The slurry discharging from the final CIP tank will feed the carbon safety screen, the undersize from which will feed the cyanide destruction circuit that will reduce the free and residual weak acid dissociable (WAD) cyanide to an acceptable level prior to being pumped to the tailings management facility.

17.2.4 Carbon Elution and Gold Recovery

The loaded carbon from the CIP circuit will be washed by diluted acid solution and eluted by the Zadra elution process. The gold in the pregnant solution will be recovered by electrowinning and the barren solution will be recirculated back to the elution circuit. The gold sludge produced in the electrowinning cells, together with the gold sludge from the intensive leach circuit, will be filtered, dried, mixed with flux and smelted in an induction furnace to produce gold doré bars. A regeneration kiln will be used to regenerate stripped carbon.

17.2.5 Plant Services and Utilities

Two high pressure compressors (one duty and one standby) will supply plant and instrument air to the plant and two low pressure compressors will provide low pressure air to the leach tanks and cyanide detoxification circuits for oxidation.

Process water will be stored process water tank which will be supplied by TMF return water and raw water make-up. Process water pumps will feed water to the comminution area, detoxification and lime make-up circuits, and the general plant spray/hose water system.

Fresh water will be stored in the fresh raw water tank which will also be used as part of the fire water system. Two pumps, electric and diesel, will be provided to feed the fire reticulation water system. Fresh water pumps will distribute fresh water to the plant for a number of applications, including feed to the potable water system, grinding mill cooling water, elution and reagent make-up. Dedicated gland service pumps will provide high pressure fresh water for certain pumping applications.

17.2.6 Reagents

Reagents required by the process plant will be stored, prepared and distributed on site. The reagents used by the process will include sodium cyanide (NaCN), lime, hydrochloric acid (HCl), caustic soda (NaOH), copper sulphate, sodium metabisulphite (SMBS), antiscalant, flocculant, activated carbon and smelter fluxes. All reagent areas will be within bermed areas and have sump pumps that will transfer spills to the final tailings tank. All the reagents will be delivered to site in dry form, except for HCl and antiscalant, which will be delivered in liquid form.

17.3 PRODUCTION SCHEDULE

The annual schedules of process plant feed and gold produced for the process plant and toll milling cases are provided in Tables 22.2 and Table 22.5, respectively.

18.0 PROJECT INFRASTRUCTURE

The infrastructure requirements for the project are summarized in the following sections and are incorporated in the PEA capital cost estimate.

18.1 SUMMARY

The PEA includes all the necessary infrastructure to support an underground gold mine and on-site processing facility.

The external infrastructure required for the project includes:

- Power supply.
- Access roads.
- Water supply.
- The external infrastructure and logistics to support the handling and transportation of operating supplies and consumables.

The on-site infrastructure to support the mining and processing sites includes the following:

- Site roads.
- Site buildings, including:
    - Process plant building.
    - Administration offices (inside the plant building).
    - Gatehouse.
    - Maintenance building/ warehouse.
    - Washroom and change rooms.
    - Assay laboratory.
    - Consumables storage.
- Security and fencing.
- Power reticulation system.
- Fuel storage and dispensing system.
- Parking area.
- Data and communications infrastructure.
- Tailings management facility.
- Waste rock management facility.

An accommodation camp is not included, as the nearby local towns will accommodate the employees.

18.2 OFF-SITE INFRASTRUCTURE AND LOGISTICS

The Golden Highway Project is located approximately 540 km north of Toronto, 92 km east of Timmins, and 40 km north of Kirkland Lake, Ontario. The approximate centre of the property lies at 48° 28" N. Latitude and 80° 02" W. Longitude.

18.2.1 Access Roads and Transportation Logistics

The Golden Highway project property is located approximately 4 km south of Highway 101, approximately 32 km east of Matheson, Ontario, and is currently accessed locally by a network of forestry logging and drilling roads of varying quality. The PEA includes an allowance to construct a more suitable access road from Highway 101 by upgrading existing infrastructure to accommodate increased traffic, comprising mining equipment, fuel trucks, mobilization of construction equipment and ongoing operational usage.

Mining equipment and personnel are readily available from the towns of Matheson, Kirkland Lake and Timmins. Timmins and Kirkland Lake are major supply and service centres for the local mining industry and are serviced by modern telecommunications, commercial airlines, rail service and truck transportation.

18.2.2 Electrical Power Supply

Communications and power are available along Highway 101. The PEA assumes that the site electrical power will be supplied by the local grid with a connection to the nearby 115 kV power line.

The connected load at the mine site will be approximately 4,000 kW with 3,000 kW for the plant and site infrastructure and 1,000 kW allowed for the underground mine. The average operating power for the total mine site is estimated to be around 2,800 kW. The main power users will be the grinding mills in the plant.

The PEA assumes an average power supply unit cost of $0.075/kWh.

A power study should be undertaken during the phase of the project.

18.2.3 Fresh Water Supply

The PEA assumes that fresh water will be abstracted from one of many potential sources on the property. The Pike River meanders through the centre of the property and there are several small lakes in the area, including the largest (Perry Lake) that is located in the in the northwest corner of the property. There is also potential to obtain water from ground water wells.

It is recommended that a water supply study be undertaken during the next phase of the project.

18.3 ON-SITE PROJECT INFRASTRUCTURE

The main criteria considered during the site layout development for the processing plant and other surface infrastructure were:

- Close proximity to the underground shaft access.
- Level ground with foundation bed rock close to surface.
- Minimal land disturbance in the immediate vicinity of the mine.
- Minimal noise emissions from the plant site.

18.3.1 Site Roads

A network of new light vehicle access roads are included in the PEA. These roads will provide access to the TMF, tailings pipeline, mine portal and plant site facilities. It is envisaged that these single-lane light vehicle roads would be 6 m wide including berms (where required) and ditches.

18.3.2 Site Buildings

The site buildings included in the PEA include the following:

Process Plant

The process plant will be located as close as possible to the mine portal. The building is envisioned to be a pre-engineered steel structure approximately 45 m x 80 m in size and will include the administration offices and plant change rooms.

Maintenance Shop and Warehouse

The maintenance shop and warehouse will be contained in one common pre-engineered building, approximately 35 m x 20 m in size. The first aid room will be located in the warehouse and a qualified nurse or first-aid attendant will be stationed on-site.

Secure Site Access Facility / Gatehouse

All public access will be via a single controlled security entrance and only authorized personnel will be able to access the site facilities and operations. A prefabricated container will serve as the site security entrance control gatehouse and will be equipped with site monitoring security systems. A number of CCD cameras will be installed at the entrance gates and in the gold room. A parking area outside the site access gate will be provided for workers' personal vehicles.

Mine Change Room and Ablution Facility

A mine dry will be installed adjacent to the mine portal and the design will include washrooms, personnel lockers and shower facilities.

Assay Laboratory

A sample preparation and assay laboratory fashioned from prefabricated containers will serve as the main site analytical facility for the process plant and mining department. It will be located adjacent to the process plant building.

Consumables Storage

Reagent storage, make-up and distribution systems will be housed in or adjacent to the process plant building.

18.3.3 Data and Communications Infrastructure

In addition to the regular cellular phone coverage in the area, it is anticipated that the mine-site will have a wired and wireless computer network. Where required, a hand-held radio system will be utilized for voice-communication between personnel in the field.

18.3.4 Bulk Explosives Storage and Magazines

Explosives are planned to be stored at a secured and monitored site located at least 1 km from populated, high traffic areas. The final location of the explosives storage site will be determined as part of future pre-feasibility or feasibility studies. All explosives and detonators will be stored in accordance with provincial and federal guidelines.

18.3.5 Bulk Fuel Storage and Dispensing System

Diesel fuel will be stored in a dual wall fuel tank located near the maintenance shop. The tank will be located within a lined compound that meets Ontario and Environment Canada regulations. A dispensing system will be used to fuel all surface site vehicles, while diesel will be delivered to mine mobile equipment by the fuel and lube truck.

18.3.6 Water Systems and Sewage

18.3.6.1 Process Water

Process water will be delivered to a process water tank adjacent to the processing facility from the following sources:

- Tailings storage facility decant return water.
- Leach feed thickener overflow.

- Water from mine dewatering, following removal of sediment and any hydrocarbon contamination.
- Make-up from the fresh water tank.

18.3.6.2 Fresh Water

The site's fresh water will be supplied from the fresh water tank located adjacent to the process plant. Fresh water will be used for the following:

- Fire water for use in the sprinkler and hydrant system. Approximately half of the plant's raw water storage capacity will be dedicated for fire water and connected to the emergency diesel fire pump.
- Cooling water for mill motors and mill lubrication systems.
- Gland service water for pumps.
- Reagent make-up.
- Feed to the potable water system.

18.3.6.3 Potable Water

Water supplied from the fresh water tank will be delivered to a potable water plant, and treated water will be stored in a potable water tank then pumped to the process plant ablution facility, administration office, workshops and the mine dry.

18.3.7 Sewage

Sewage generated on site will be treated at the sewage treatment plant. Treated effluent generated at the sewage treatment plant will be compliant with local, provincial, and national regulations.

18.3.8 Waste Disposal Facilities

Waste management for the site will consider the principles of waste reduction, reuse, and recycling, where feasible. Wastes that cannot be eliminated, reused, or recycled will be either landfilled or shipped off site for final disposal.

18.3.9 Tailings and Mine Waste Management

The principal objectives of the tailings management facility will be to provide safe and secure storage of tailings, to protect regional groundwater and surface water during operations and post closure, and to achieve effective reclamation following mine closure. Any suitable waste rock from underground will be used in the construction of the TMF, while any potentially acid generating waste will be stored within the TMF.

An engineered design and TMF site selection study was not completed during the PEA as there were no geotechnical data available for the site. However, these studies will be required for any subsequent phases of project development. Hydrological and geohydrological studies will also be required and ground/surface water models developed, together with a site water balance.

Tailings water will be pumped back to the process plant and used as process water. Any surplus water generated by the mining operation will be treated in a waste water treatment facility and tested prior to being discharged into the environment. Potential discharge points will be assessed in the next level of study.

19.0 MARKET STUDIES AND CONTRACTS

19.1 MARKET STUDIES

Markets for gold doré bars are readily available. Gold markets are mature, global markets with reputable smelters and refiners located throughout the world. Demand has been increasing during 2019 and 2020, with prices fluctuating in the US$1,200 to US$2,000 per ounce range. The price has been over US$1,400 for more than a year. (See Figure 19.1).

Figure 19.1
Two Year Gold Price Chart

Source: https://goldprice.org/gold-price-history.html, September 22, 2020.

The 36-month average gold price through September 18, 2020 is US$1,421 per ounce (www.gold.org).

19.2 CONTRACTS

There are no known contracts for service, sales of product, or for the purchase of goods that would be material to the economic analysis of the project.

19.3 ROYALTY CONTRACTS

There are no royalty contracts currently known that would be material to the economic analysis of the project.

20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 ENVIRONMENT

20.1.1 Regulations

Mining projects may be required to conduct an environmental assessment (EA) under both provincial and federal regulations. EAs tend to be directed by provincial Acts and Regulations with input and consultation from the federal government agencies under the Canadian Environmental Assessment Act. Under the current Ontario Environmental Assessment Act (EA Act), EAs are required for large-scale, complex projects with the potential for significant environmental effects, however, this only applies to provincial ministries and agencies, municipalities and public bodies, not the private sector, under which the mining industry falls.

Although the mining industry is technically exempt from the EA requirements, all projects will be required to complete one either due to a recommendation to Cabinet from the Ministry of the Environment, Conservation and Parks (MOE) or through voluntary agreement. Whether an EA is completed through a Cabinet approval or through voluntary agreement, terms of reference (TOR) need to be provided and approved by government. The TOR is an outline of the work and studies that have been conducted before and during the EA. These studies are referred to as environmental baseline studies (EBS).

Most mining projects will voluntarily submit themselves to the EA Act due to the nature of the project, the potential for significant environmental effects and the level of public interest most projects generate.

There are two types of EAs under the EA Act, individual and streamlined. Individual EAs apply to large-scale, complex projects with the potential for significant environmental effects and streamlined EAs apply to routine projects with predictable and manageable environmental effects. The Individual EAs require approval from the MOE, while the Streamlined EAs do not require direct approval for these projects. The Golden Highway project would fall under the Individual EA category.

Moneta's primary focus has been to explore and assess the potential economic viability of the property's gold deposits. Therefore, Moneta has not yet commenced formal discussions with regulatory authorities in regard to the TOR or the EA and subsequent permitting requirements. However, Moneta has started to develop an Environmental Baseline Study (EBS) database with the anticipation of commencing initial consultations with regulators and First Nation communities, and then to develop the TOR in the near future.

20.1.2 Environment Baseline Studies

EBSs describe the current physical, biological and socio-economic conditions of the immediate and surrounding area of the mine project. These studies are needed to identify all potential and

perceived environmental impacts that may occur during the construction, operation and closure of the mine. These studies are the backbone of the Environmental Assessment (EA) report required by both the federal and provincial governments before a mine is permitted to operate. Moneta has retained Blue Heron Solutions for Environmental Management (Blue Heron) to undertake some of these baseline studies.

In April, 2011, Blue Heron proposed a phased approach to undertaking environmental baseline studies. It was further refined in August, 2011. Three stages were proposed, as follows:

- Phase 1 - Site Reconnaissance.
- Phase 2 - Environmental Baseline Studies:
    - Environmental Information Review with government agencies, First Nations and other stakeholders.
    - Meteorology and Hydrology of the area focusing on surface water quality.
    - Initial Aquatic/Terrestrial Review.
    - Site Visit, Project Scoping and Consultation with Stakeholders.
- Phase 3 - Environmental Baseline Components:
    - Field Terrestrial/Aquatic Environment.
    - Desktop and Field Archaeology Study.
    - Geochemistry - ARD/ML (acid rock drainage/metal leaching) characterization of the lithologies of the deposit.
    - Hydrogeology - Groundwater quality and modeling.
    - Advanced Exploration Permitting.

Moneta has started surface water quality sampling and completed a desktop study for fauna and species at risk.

20.1.2.1 Surface Water Quality

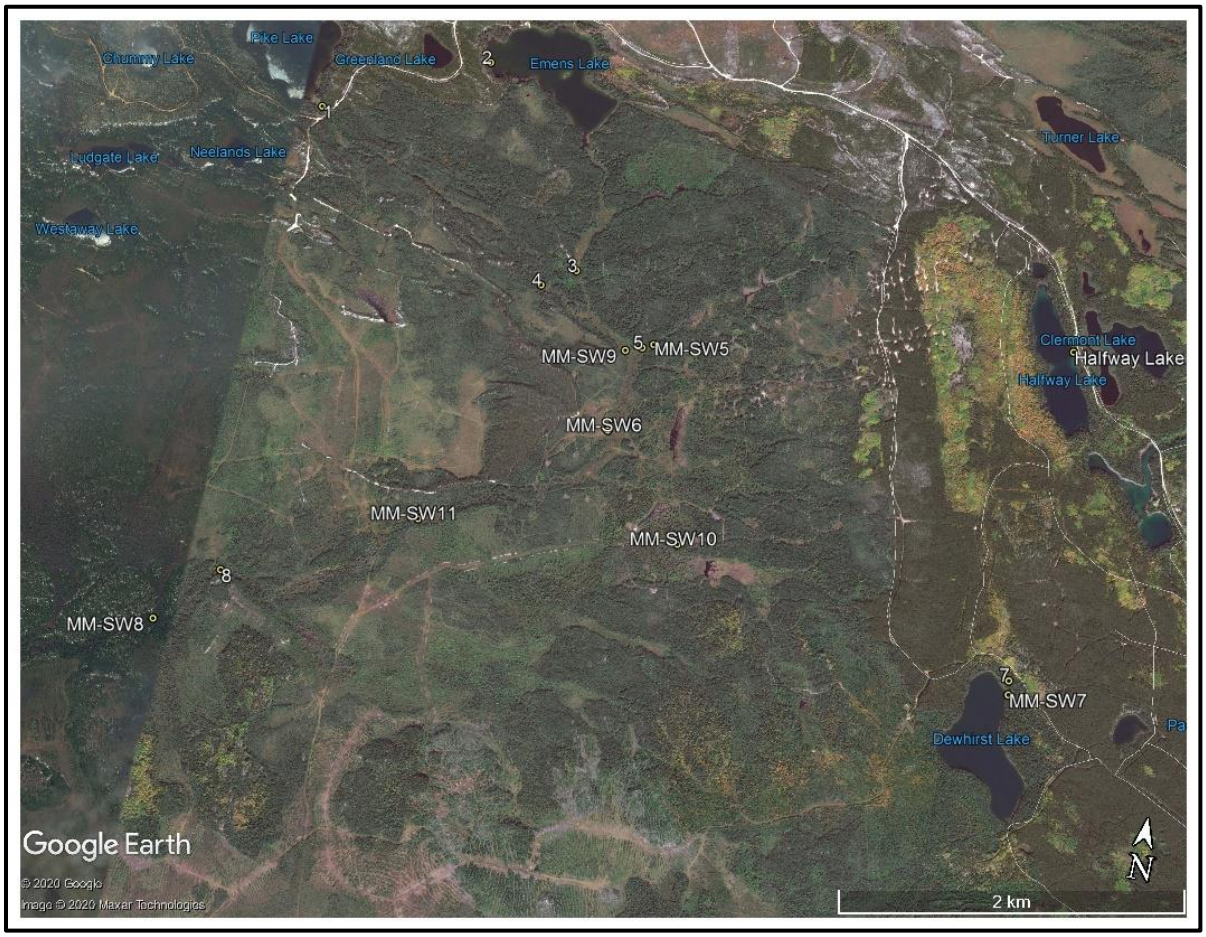
2011-2012 Program

Blue Heron initiated a surface water quality sampling program in 2012 as part of its Phase 2 proposal. After initial field work in 2011, seven sample sites were chosen for water quality measurements and of those, five stations were measured for their stream flow (see Table 20.1 and Figure 20.1).

Table 20.1
2012 Water Quality Sample Locations

Sample Number	Description	Location UTM	
		Easting	Northing
MM-SW5	0.07 km upstream of the original MM-SW5	570881 mE	5370010 mN
MM-SW6	0.02 km downstream of the original MM-SW6	570715 mE	5369431 mN
MM-SW7	0.08 km north of the original MM-SW7	573355 mE	5368363 mN
MM-SW9	Downstream of the original MM-SW4	570719 mE	5369940 mN
MM-SW10	Dewhirst Creek	571266 mE	5368837 mN
MM-SW11	Pike upstream of the original MM-SW8	569701 mE	5368671 mN
MM-SW12	L. Pike River & 572	553537 mE	5371964 mN

Figure 20.1
Water Quality Sample Locations



Note: Individual numbers are 2012 locations while the "MM-SW" numbers are 2019 locations.

The water samples were collected on November 22, 2019 and sent to Testmark Laboratories Ltd., Timmins, Ontario, which is accredited to the ISO/IEC 17025 standard and licensed by the MOE. The samples were analyzed for anions, dissolved and total metals and other general water quality parameters. All samples were above the Canadian Drinking Water Quality

Guidelines for Total Coliforms and E.Coli. MM-SW12 was above the Ontario PWQO for total aluminum and iron while MM-SW 6, MM-SW9, and MM-SW11 were above the PWQO for iron as well. All other parameters for all samples were below maximum allowable levels.

No additional samples have been collected by Blue Heron on the property and no formal water quality report has been submitted to Moneta. Water quality sampling should be taken over a year at least, to create a proper baseline. Moneta has completed monthly water quality sampling for only three consecutive months. Moneta should consider doing quarterly water quality sampling, rather than monthly sampling to save costs, but at the same time identify trends. From the limited data, the Coliform and E Coli results indicate that the water may not be potable but could be used for industrial purposes.

20.1.2.2 Fauna

Species at Risk

Blue Heron completed a desktop study of Species at Risk (SAR) dated 2020. The consultants used the Ontario Endangered Species Act (ESA, 2007), the Federal Species at Risk Act (2002) and the Federal Fisheries Act (1985). Three separate assessments were undertaken (i.e. Species at Risk, Significant Wildlife Habitat and Fish Habitat) to identify fauna that are at risk and may be within or surrounding the property. The study found threatened or endangered species as documented in Table 20.2.

Table 20.2
Species at Risk Potentially Within the Study Area

Taxon	Name		ESA Designation	Potential to Occur in the Study Area
	Common	Scientific		
Bird	Bank Swallow	Riparia riparia	Threatened	Moderate
Bird	Barn Swallow	Hirundo rustica	Threatened	Moderate
Bird	Eastern Whip-poor-will	Antrostomus vociferous	Threatened	Moderate
Mammal	Little Brown Myotis	Myotis lucifugus	Endangered	Moderate
Mammal	Northern Long-eared Myotis	Myotis septentrionalis	Endangered	Moderate
Mammal	Tri-coloured Bat	Perimyotis subflavus	Endangered	Moderate
Reptile	Blanding's Turtle	Emydoidea blandingii	Threatened	Moderate

Source: Baseline Desktop Study (Draft), March 2020.

There has not been a detailed fauna study undertaken in the field to verify whether these species exist in the project area, but this list would assist in this study. After the field work is completed, the report should document the various wildlife (i.e. animals, birds, fish and other species) including any Species at Risk in the area as well as their respective habitat and range.
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20.1.2.3 Baseline Studies Not Completed

Moneta has undertaken some environmental studies but none of them has been sufficient to fully cover baseline conditions. A normal set of EBS documents include:

- Hydrology Assessment:
    - Surface water quality monitoring.
    - Groundwater quality monitoring.
    - Flows and flood conditions.
    - Water demands.
- Air Quality and Atmospheric Conditions Assessment:
    - Air quality (chemical and dust).
    - Atmospheric conditions.
    - Noise.
- Terrain Assessment
    - Bedrock geology.
    - Acid rock drainage and metal leaching (ARD/ML) potential.
    - Soils.
    - Erosion factors.
    - Land use.
- Fauna Assessment, including habitat:
    - Wildlife.
    - Aquatic life.
    - Avian life.
    - Species at risk.
- Flora Assessment:
    - Vegetation.
    - Species at risk.
    - Evasive vegetation.
- Socio-Economic.
- Cultural:
    - Archaeology.
    - First Nations.
    - Community.

Some of these studies take at least a year to complete while others can be completed within six months. All of these studies can be run in parallel if finances permit. Some studies must be completed at specific times of the year (i.e. benthic invertebrates sampling is done between September and November).

The cost of all the above Environmental Baseline Studies ranges from approximately $100,000 to $250,000.

20.1.2.4 Environmental Impact Assessment

Moneta is still in the exploration phase and working toward defining an economic mineral deposit. It has initiated some EBS work and will continue these and other studies until negative and positive environmental impacts are identified and initial mitigation measures are studied. Moneta will then develop a Terms of Reference (TOR) and submit it to government to initiate the formal EA process.

The TOR should take approximately 6 to 9 months to develop, submit and be approved by government agencies. The EA will take approximately 2 to 3 years to complete the document and study period. The final review will take a maximum of 30 weeks before an approval is granted. The cost of the entire EA process is usually 0.2 to 0.5% of the project's capital costs.

20.2 SOCIAL/COMMUNITY CONSULTATION

20.2.1 First Nations

The Golden Highway Project is currently at an early development stage. No people reside, on a full-time basis, within the project area; however, the project falls within the traditional territory, but not the actual Indian Reserve, of the Wahgoshig First Nation (Wahgoshig). The Wahgoshig were formally known as Abitibi Band of Abitibi Indians or Abitibi #70. Its people are of Algonquin or Cree decent and the main community is approximately 10 km northeast of the project area. The community is a political member of the Algonquin Anishinabeg Nation Treaty Council.

An Exploration Agreement, sometimes referred to as a Memorandum of Understand (MOU), was signed between Moneta and Wahgoshig in 2019. Moneta has hired members of the Wahgoshig (Wahgoshig Resources LP) to assist Moneta's drilling program, with contracts to deliver core from the drill sites to Moneta's core logging and storage area in Timmins, as well as to clear snow during the winter months.

Moneta has continued consultation with the Wahgoshig and has documented the correspondence with the First Nation throughout 2018 to 2020. No formal and documented meetings have been initiated between Moneta and Wahgoshig to date. It is anticipated that Moneta will start community and government meetings in the future, as a requirement of the Ontario EA Act.

20.2.2 Communities

There are no private landowners in the immediate area of the project. The project is within the Black River - Matheson Township. It lies 40 km northwest of Kirkland Lake, 92 km east of Timmins and 300 km north of North Bay and is within the District of Cochrane.

The town of Matheson is approximately 40 km by road from the project area. The nearest community is the Hamlet of Holtyre which is approximately 32 km by road from the main project area.

Moneta and its consultants have been in contact with government agencies with respect to the desktop studies that have been completed. Moneta is waiting for a reply from those agencies on those studies. There have been no formal and documented meetings between Moneta and the different federal and provincial government agencies or the District/Township.

20.3 PERMITTING

Any proposed program would require permitting on a local, provincial and national level. The initial exploration work in 2017 was conducted under Ontario Exploration Permit number PR-16-10985A2, initially issued November 14, 2016 and renewed in 2017. The current exploration work has been approved under a new Ontario Exploration Permit number PR-19-000171, dated May 9, 2019. Both permits covered mechanized drilling only.

In Canada, regulating natural resource extraction is largely the responsibility of the individual provinces and territories. Once the EA has been approved by the Ontario government and possibly the federal government, several federal and provincial permits will be required before starting the construction and operation of a mine.

20.3.1 Federal Permits

The federal government may involve the following federal Acts and Regulations:

- Canadian Environmental Protection Act.
- Canadian Environmental Assessment Act.
- Fisheries Act, including the Metal Mining Effluent Regulations.
- Navigable Waters Protection Act/Navigation Protection Act.
- Species at Risk Act.
- Migratory Birds Convention Act.
- Transportation of Dangerous Goods Act.
- Explosives Act.

Although the majority of permits required to operate a mine are provincial, some federal permits may or will be required, as shown in Table 20.3.

Table 20.3
Federal Agencies and Possible Required Permits

Federal Agency	Requirement
Natural Resources Canada	Licence for an explosive magazine; to store and use explosives;
Environment Canada	Species at risk impact reporting
	Metal Mining Effluent Regulations reporting
Fisheries and Oceans	Fisheries Act Authorization (potential impact of fish and fish habitat);
Canadian Nuclear Safety Commission	Certification of Radiation Devices (mineral/ore analysers, etc.);
Transport Canada	Transportation of Dangerous Goods permit;
	Major Works Order (building bridges over navigable waterways).

20.3.2 Provincial Permits

The following provincial permits, approvals, registrations and reporting will or may be required to construct and operate a mine. The list is divided into the different Ontario ministries handling each permit.

Ministry of Environment:

- Permit to Take Water - Surface or groundwater uptake that exceeds 50,000 L per day.
- Environmental Compliance Approval - Covers all emissions, discharges and wastes discharged into the environment (i.e. air, land or water).
- Approval of Water Works - Potable water supply greater than 50,000 L per day.
- Sewage Works Operator Licence.
- Waste Generator Registration - production and storage of liquid or hazardous wastes.
- Certificate of Approval for Waste Management - Waste haulage to a disposal site.

Ministry of Energy, Northern Development, Mines:

- Mine Closure Plan - Plan for mine reclamation with financial assurance.
- Bulk Test Approval - Bulk sample over 10 t.

Ministry of Natural Resources:

- Forest Resource Licence - Removal of merchantable timber on crown land.
- Lakes and Rivers Improvement Act Approval (i.e. construction/modification of dams, water crossings, etc.).
- Work Permits - Work on crown land, other than the mine lease area (i.e. construction of roads, etc.).
- Land Use Permit - Construction of buildings on Crown land.
- Dams and Diversions Approval - Tailings dyke construction and water diversions.

Ministry of Health:

- Notice of Camp Opening - Construction of a camp on crown land.
- Approval of Septic Systems.

Ministry of Labour:

- Occupational Health & Safety - Review of safety and procedures.
- Notification Letter of Storage or Use of Explosives.

Technical Standards & Safety Authority:

- Certification and Inspection of fuel storage and handling.

There is a possibility that either the District of Cochrane and/or the Black River-Matheson Township may require that Moneta apply for Building Permit(s) that would require following under the current Ontario Building Code. The Code is administered by the Building and Development Branch of the Ministry of Municipal Affairs and Housing. It is assumed that the mine would follow or exceed the Code whether or not a Building Permit is required.

Once the EA is approved the different permits can be obtained from the various government agencies. It could take approximately 1 to 3 months depend on the individual permit. The cost of the permits can be up to $20,000, depending on the permit.

20.4 CLOSURE

Ontario requires that a project receive a Closure Plan Approval (CP) prior to beginning any mine development or operation activities. The CP includes plans for the decommissioning, dismantling and removal of all equipment and buildings and reclaiming as much as possible land disturbance created by the mine operation. The goal of the Closure Plan is to ensure public safety and reclaim the mine property and the surrounding environment to as close to the original baseline conditions as possible, so that the land can be productive for other uses.

The Closure Plan is a detailed document that can take months to prepare. The average cost to prepare the original CP can be up to approximately $200,000. The CP is a living document that usually is updated over the course of the life of the mine. The CP is outlined in the O. Reg. 240/00, Part VII., Schedule 2 and must include:

- Project Information.
- Current project site conditions.
- Project description.
- Progressive rehabilitation measures.
- Rehabilitation measures during a temporary suspension of activities (planned or unplanned).

- Rehabilitation measures during a state of inactivity (indefinite project suspension).
- Rehabilitation measures as a result of project permanent closure (End of Mine Life).
- Monitoring program and procedures.
- Expected site conditions after closure.
- Cost details of expected implementation.
- Financial assurance.
- Consultation with Aboriginal peoples.

The financial assurance portion of the Closure Plan is a financial guarantee provided by Moneta that is equal to the estimated cost of the rehabilitation work. It ensures that at the end of the project life, whether the project ends as planned or due to financial or legal trouble, the funds required to rehabilitate the site are available. The financial assurance is returned to Moneta after the reclamation work has been completed and the ministry signs off on the work.

21.0 CAPITAL AND OPERATING COSTS

Micon's assessment of the capital and operating costs for the base case (with an on-site mill) and the alternative toll-milling case are described below. These estimates are expressed in second quarter 2020 Canadian dollars, without provision for escalation. Where appropriate, an exchange rate of US$0.77/C$ has been applied. The assessed accuracy of the estimates is ±30%.

21.1 CAPITAL COSTS

The project is a greenfields development and, as such, the capital cost estimate for the base case includes the costs of developing and equipping the underground mine, process plant, tailings storage facility and other on-site infrastructure.

Total capital costs for the base case are estimated as shown in Table 21.1.

Table 21.1
Capital Cost Summary - Base Case

Area	Initial Capital ($'000)	Sustaining Capital ($'000)	LOM Total Capital ($'000)
Mining	49,696	119,893	169,589
Processing Plant	47,786	-	47,786
Site Infrastructure	14,100	8,300	22,400
Indirects	15,675	-	15,675
Contingency	16,906	7,524	24,431
Total	**144,163**	**135,717**	**279,880**

An alternative development option assessed as part pf the PEA is to develop the mine as a source of feed for a nearby toll-milling plant. In this scenario, the underground mine remains the same, but only the primary crushing plant is required to process material prior to its delivery to a third-party toll-milling facility. In this case, no tailings dam is required at the project.

Total capital costs for the alternative, toll-milling case are estimated as shown in Table 21.2.

Table 21.2
Capital Cost Summary - Alternative Case

Area	Initial Capital ($'000)	Sustaining Capital ($'000)	LOM Total Capital ($'000)
Mining	49,696	119,893	169,589
Processing Plant	2,500	-	2,500
Site Infrastructure	5,800	-	5,800
Indirects	-	-	-
Contingency	6,517	7,524	14,042
Total	**64,513**	**127,417**	**191,930**

21.1.1 Mining Capital

Mining capital costs have been estimated on the basis of contractor rates for the initial mine development applied to development metreage measured from the proposed underground layout. A contingency of 10% was allowed for unplanned development. Equipment required for initial stoping operations has been priced against the fleet requirements identified as part of the mine production scheduling exercise that Micon carried out for this PEA.

The mining capital cost estimate set out in Table 21.3 is the same for both the base case (on-site mill) and alternative, toll-milling scenario.

Table 21.3
Capital Cost Summary - Mining

Area	Initial Capital ($'000)	Sustaining Capital ($'000)	LOM Total Capital ($'000)
Mobilization	260	-	260
Demobilization	-	60	60
Portal & Vent Platform	650	50	700
LH Drill	1,602	3,203	4,805
2-boom Jumbo	-	5,889	5,889
10 t - LHD ŵ remote	1,030	7,211	8,241
30-tonne trucks	995	8,951	9,946
Bolter	-	3,111	3,111
Scissor Lift	-	889	889
Emulsion & ANFO Loader	521	1,562	2,082
Lube & Fuel Truck	-	979	979
Crane Truck	-	1,463	1,463
Personnel carrier	-	431	431
Light Duty Truck	520	455	975
Miscellaneous	233	1,707	1,941
Sustaining Costs	245	8,689	8,934
Equipment finance	-	-	-
Capitalized Development	43,640	75,242	118,882
Total Mining Capital	**49,696**	**119,893**	**169,589**

21.1.2 Processing Capital

21.1.2.1 Base Case

Processing capital costs for the base case have been forecast on the basis of estimates of the installed cost for primary equipment, with appropriate factors applied for piping, civils (steel, concrete, earthworks), electrical, and instrumentation. The cost of other processing direct cost items such as the mill buildings and laboratory have been estimated separately.

Indirect costs, including construction indirects, EPCM services and freight charges, are based on factors applied to the direct cost estimate.

A contingency of 15% has then been added to both the direct and indirect estimates.

The base case processing capital cost estimate is set out in Table 21.4.

Table 21.4
Capital Cost Summary - Processing (Base Case)

Area	Initial Capital ($'000)	Sustaining Capital ($'000)	LOM Total Capital ($'000)
Mechanical (incl. installation)	21,000	-	21,000
Piping	4,039	-	4,039
Civils (steel, concrete, earthworks)	8,481	-	8,481
Electrical	5,654	-	5,654
Instrumentation	1,212	-	1,212
Mill building	5,000	-	5,000
Mobile equipment	800	-	800
Laboratory	450	-	450
Reagent storage/maintenance building	850	-	850
Tailings pipeline	300	-	300
Total Processing Capital	**47,786**	**-**	**47,786**

21.1.2.2 Alternative Case

In the alternative scenario, the material to be processed is hauled by road to a third-party toll mill. In this case, only a primary crushing plant is constructed on site, along with temporary rehandle and stockpile areas for mill-feed and waste rock, respectively.

In total, a provision of $2.50 million is made in the cash flow model for these facilities.

21.1.3 Infrastructural Capital

21.1.3.1 Base Case

Infrastructural capital costs for the base case include the first phase of construction for a waste storage facility for tailings or waste development rock that cannot be used as backfill or otherwise stowed underground.

In addition, a power supply to the site, upgrading of the access road, provision of a supply of fresh water and a waste water treatment plant are recognized as infrastructural requirements that are common to both the base case and the alternative scenario.

The base case infrastructural capital cost estimate is set out in Table 21.5.

Table 21.5
Capital Cost Summary - Infrastructure (Base Case)

Area	Initial Capital ($'000)	Sustaining Capital ($'000)	LOM Total Capital ($'000)
Tailings	8,300	8,300	16,600
Power line	1,400	-	1,400
Access road - upgrade	1,000	-	1,000
Fresh water supply	400	-	400
Water treatment plant	3,000	-	3,000
Total Infrastructural Capital	**14,100**	**8,300**	**22,400**

21.1.3.2 Alternative Case

In the alternative scenario, no permanent waste storage facility will be required on site. In this case the total infrastructural capital is estimated as shown in Table 21.6.

Table 21.6
Capital Cost Summary - Infrastructure (Alternative Case)

Area	Initial Capital ($'000)	Sustaining Capital ($'000)	LOM Total Capital ($'000)
Power line	1,400	-	1,400
Access road - upgrade	1,000	-	1,000
Fresh water supply	400	-	400
Water treatment plant	3,000	-	3,000
Total Infrastructural Capital	**5,800**	**-**	**5,800**

21.1.4 Indirect Capital

21.1.4.1 Base Case

The principal items of indirect capital expenditure are construction indirects, EPCM services and freight. The base case indirect capital cost estimate is set out in Table 21.7.

21.1.4.2 Alternative Case

No indirect costs have been provided for in the alternative scenario.

Table 21.7
Capital Cost Summary - Infrastructure (Base Case)

Area	Initial Capital ($'000)	Sustaining Capital ($'000)	LOM Total Capital ($'000)
Construction Indirects	3,823	-	3,823
EPCM services	7,168	-	7,168
Freight and spares (for mech. equip.)	2,940	-	2,940
First fill reagents (2 months' supply)	741	-	741
Commissioning incl. vendor reps.	525	-	525
Insurance	478	-	478
Total Indirect Capital	**15,675**	**-**	**15,675**

21.2 OPERATING COSTS

21.2.1.1 Base Case

Estimated LOM total cash operating costs for the base case (with on-site milling by the owner) are summarized in Table 21.8.

Table 21.8
LOM Total Cash Costs - Base Case

Area	Life-of-Mine Cost ($ 000)	Unit Cost $/t milled	Unit Cost US$/oz Gold
Mining	393,243	65.16	422.71
Processing	112,852	18.70	121.31
General & Administrative	36,840	6.10	39.60
Selling costs	6,363	1.05	6.84
Total Cash Costs	**549,298**	**91.02**	**590.46**

21.2.1.2 Alternative Case

Estimated LOM total cash operating costs for the alternative, toll-milling case are summarized in Table 21.9.

Table 21.9
LOM Total Cash Costs - Alternative Case

Area	Life-of-Mine Cost ($ 000)	Unit Cost $/t milled	Unit Cost US$/oz Gold
Mining	393,243	65.16	431.88
Processing	289,680	48.00	318.14
General & Administrative	35,772	5.93	39.29
Selling costs	6,234	1.03	6.85
Total Cash Costs	**724,929**	**120.12**	**796.15**

21.2.2 Mine Operating Costs

Mine operating costs are the same for both the base case and the alternative, toll-milling option, except that costs per ounce in the alternative are slightly higher owing to a lower expected recovery of gold at the toll mill.

Initial (pre-production) mine development costs are based on contractor mining rates for drill, blast, load and haul applied to development metreage measured from the proposed underground layout. A contingency of 10% was allowed for unplanned development metres.

Owner-mining will be utilized for all stoping activities and development during operations. Owner mining cost estimates are based on Micon's analysis of the fleet and labour requirements to meet the demands of the development and production schedules, with provision for ancillary costs of mine technical services, supervision and equipment maintenance. The cost estimate also takes into account the volume of backfill material to be placed and haulage of excess waste material to surface.

It is assumed that all mine development costs will be capitalized, with the exception of crosscuts, sills and other short-lived development that services only one group of stopes.

Table 21.10 summarizes the mining operating cost estimate.

Table 21.10
Mine Operating Costs (Base Case)

Area	Life-of-Mine Cost ($ 000)	Unit Cost $/t milled	Unit Cost US$/oz Gold*
Total development	197,099	32.66	211.87
Mill feed production (stoping)	84,414	13.99	90.74
U/G haulage	88,061	14.59	94.66
Imported Backfill Material	17,269	2.86	18.56
Mining Services	6,355	1.05	6.83
Mine Manpower	60,757	10.07	65.31
Mine Engineering	15,195	2.52	16.33
Mine Operation	9,475	1.57	10.18
Mine Maintenance	33,500	5.55	36.01
Total Mining Costs	**512,125**	**84.86**	**550.50**
LESS Capitalized development	(118,882)	(19.70)	(127.79)
Mine Operating Costs (net)	**393,243**	**65.16**	**422.71**

* Base case only.

21.2.3 Processing Operating Costs

21.2.3.1 Base Case

The base case process operating cost estimate is based on labour, power, process consumables (including fuel for plant heating when required) and equipment maintenance requirements.

Power demand is provisionally estimated at 30 kWh/t, with a tariff of $0.075/kWh for an average of $2.25/t milled.

A total head count of 49 people will be required in the plant, including technical support and maintenance staff.

Provision is made in the operating cost estimate for crusher and mill liners, grinding media, cyanide and CN-destruction reagents and gold-room supplies.

Annual maintenance costs for equipment and buildings are based on factors applied to original cost of supply.

Table 21.11 summarizes the process operating cost estimate for the base case.

Table 21.11
Process Operating Costs (Base Case)

Area	Life-of-Mine Cost ($ 000)	Unit Cost $/t milled	Unit Cost US$/oz Gold*
Labour	47,220	7.82	50.76
Electrical power	13,579	2.25	14.60
Consumables (incl. plant heating fuel)	43,220	7.16	46.46
Maintenance	8,832	1.46	9.49
Process Operating Costs	**112,852**	**18.70**	**121.31**

21.2.3.2 Alternative Case

Processing costs for the alternative, toll-milling case are based on unit costs for crushing, loading and hauling material from the mine site to a toll mill, and for tolling milling and gold recovery at a remote site.

Table 21.12 summarizes the process operating cost estimate for the toll-milling case.

Table 21.12
Process Operating Costs (Toll Milling)

Area	Life-of-Mine Cost ($ 000)	Unit Cost $/t milled	Unit Cost US$/oz Gold*
Crush/Haul to off-site mill	48,280	8.00	53.02
Toll-milling margin	241,400	40.00	265.12
Toll Milling Operating Costs	**289,680**	**48.00**	**318.14**

21.2.4 General and Administration Costs

General and administrative costs are treated as a fixed cost item, totalling $3.678 million per year at steady state. Over the LOM this equates to a cost of $5.93/t milled or US$39.29/oz.

21.2.5 Selling Costs

Selling costs for doré bars comprise bullion transport, insurance and refining charges. Transport is estimated on a flat rate per shipment, insurance at a percentage of bullion value, and refining on a cost per ounce of payable gold.

The overall average selling costs provide for in the base case evaluation are at US$6.84/oz payable gold. For the alternative case, the average selling cost is US$6.85/oz.

22.0 ECONOMIC ANALYSIS

22.1 CAUTIONARY STATEMENT

This preliminary economic assessment is preliminary in nature; it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.

The results of the economic analyses discussed in this section represent forward-looking information as defined under Canadian securities law. The results depend on inputs that are subject to a number of known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those presented here.

Information that is forward-looking includes:

- Mineral Resource and Mineral Reserve estimates.
- Assumed commodity prices and exchange rates.
- The proposed mine production plan.
- Projected mining and process recovery rates.
- Assumptions as to mining dilution.
- Capital and operating cost estimates and working capital requirements.
- Assumptions as to closure costs and closure requirements.
- Assumptions as to environmental, permitting and social considerations and risks.

Additional risks to the forward-looking information include:

- Changes to costs of production from what is assumed.
- Unrecognized environmental risks.
- Unanticipated reclamation expenses.
- Unexpected variations in quantity of mineralized material, grade or recovery rates.
- Geotechnical or hydrogeological considerations differing from what was assumed.
- Failure of mining methods to operate as anticipated.
- Failure of plant, equipment or processes to operate as anticipated.
- Changes to assumptions as to the availability and cost of electrical power and process reagents.
- Ability to maintain the social licence to operate.
- Accidents, labour disputes and other risks of the mining industry.

- Changes to interest rates.
- Changes to tax rates and availability of allowances for depreciation and amortization.

22.2 BASIS OF EVALUATION

Micon has prepared its assessment of the project on the basis of a discounted cash flow model, from which Net Present Value (NPV) can be determined. Assessments of NPV are generally accepted within the mining industry as representing the economic value of a project after allowing for the cost of capital invested.

The objective of the study was to determine the potential viability of an underground mine with (or alternatively, without) a processing plant on site. In order to do this, the cash flow arising from the base case and the alternative case have both been forecast, enabling a computation of the respective NPVs to be made. The sensitivity of these NPVs to changes in the base case assumptions are then examined.

22.3 MACRO-ECONOMIC ASSUMPTIONS

22.3.1 Exchange Rate and Inflation

All results are expressed in Canadian dollars except where stated otherwise. Cost estimates and other inputs to the cash flow model for the project have been prepared using constant, second quarter 2020 money terms, i.e., without provision for escalation or inflation.

22.3.2 Weighted Average Cost of Capital

In order to find the NPV of the cash flows forecast for the project, an appropriate discount factor must be applied which represents the weighted average cost of capital (WACC) imposed on the project by the capital markets. The cash flow projections used for the evaluation have been prepared on an all-equity basis. This being the case, WACC is equal to the market cost of equity.

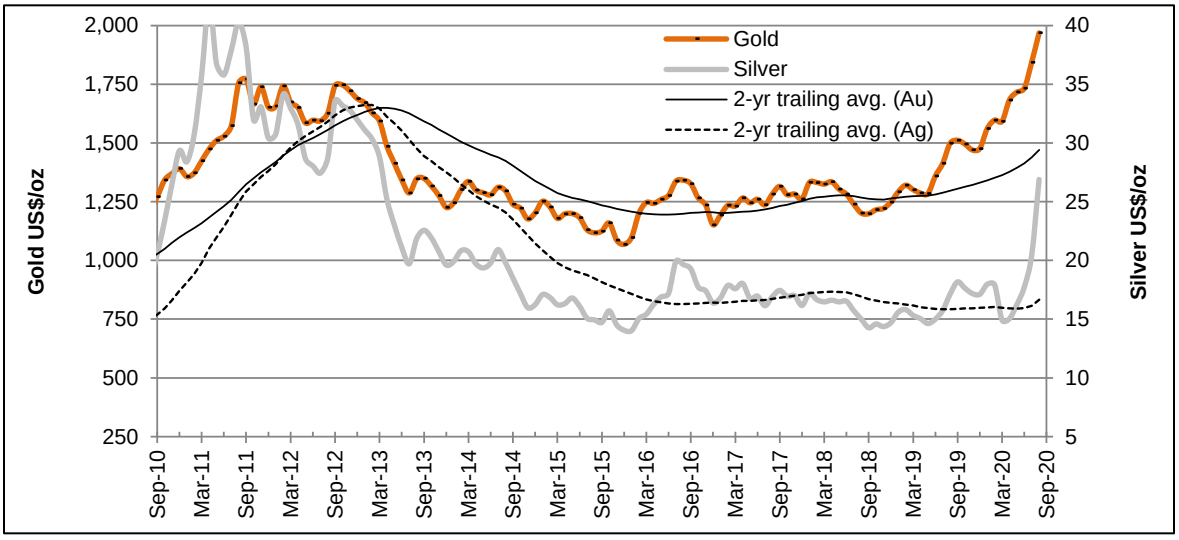
In this case, Micon has selected an annual discount rate of 5% for its base case and has tested the sensitivity of the project to changes in this rate.

22.3.3 Expected Metal Prices

Project revenues will be generated from the sale of gold doré bars. The project has been evaluated using constant metal prices of US$1,500/oz Au. While below current market levels, the forecast gold price approximates the average achieved over the 18 months ending 31 August, 2020.

Figure 22.1 presents monthly average prices for gold and silver over the past ten years and shows the upward trend in the average price over the past two years.

Figure 22.1
Ten Year Price History



22.3.4 Taxation Regime

Canadian federal and Ontario provincial income and mining taxes have been provided for in the economic evaluation.

22.3.5 Royalty

Micon understands that no royalties are payable on the South West zone.

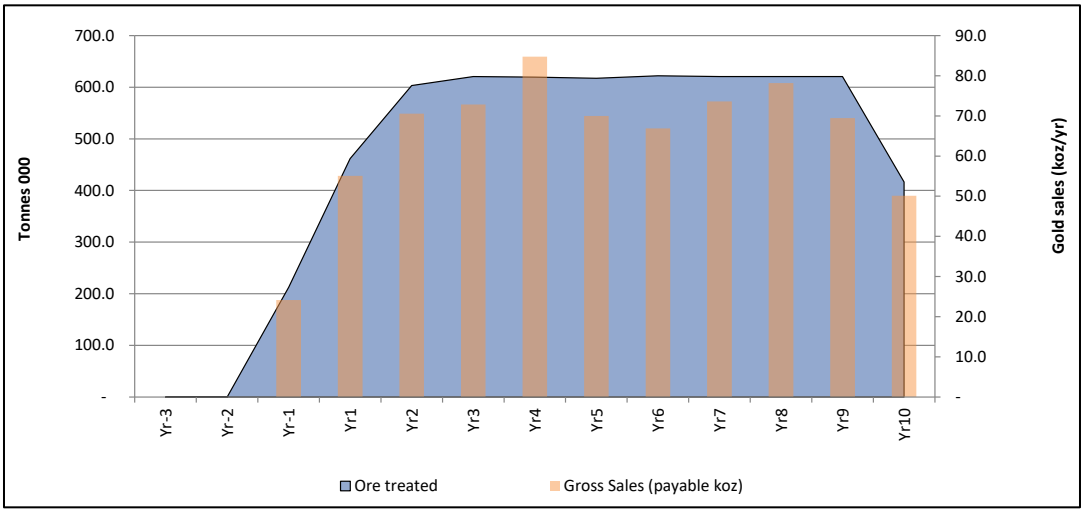
22.4 TECHNICAL ASSUMPTIONS

The technical parameters, production forecasts and estimates described earlier in this report are reflected in the base case cash flow model. These inputs to the model are summarized below.

22.4.1 Production Schedule

Figure 22.2 shows the annual tonnages of material milled, together with the overall gold production for the base case.

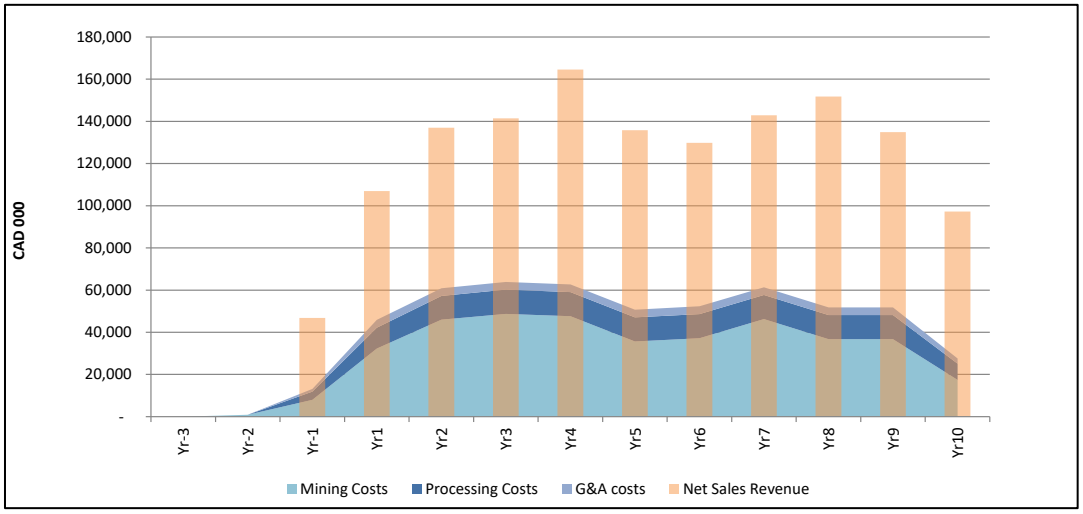
Figure 22.2
LOM Production Schedule



22.4.2 Operating Margin (Base Case)

Figure 22.3 shows the annual cash operating costs, compared to the net sales revenue, demonstrating that the project maintains a significant operating margin in each period. Over the LOM, the average operating margin is forecast to exceed 60%.

Figure 22.3
LOM Net Revenue and Operating Costs (Base Case)



22.4.3 Project Cash Flow (Base Case)

The LOM base case project cash flow is presented in Table 22.1 and summarized in Figure 22.4. Annual cash flows are set out in Table 22.2.

Table 22.1
Life-of-Mine Cash Flow Summary

	LOM Total $'000	$/t Milled	US$/oz Au
Gross Revenue	**1,395,438**	**231.22**	**1,500**
Mining costs	393,243	65.16	423
Processing costs	112,852	18.70	121
General & Administrative costs	36,840	6.10	40
Selling expenses	6,363	1.05	7
Total Cash Cost	**549,298**	**91.02**	**590**
Net cash operating margin	846,141	140.21	910
Initial capital	144,163	23.89	155
Sustaining capital	135,717	22.49	146
Closure provision	10,000	1.66	11
Movement in working capital	-	-	-
Net Cash flow before tax	**556,261**	**92.17**	**598**
Taxation	184,952	30.65	199
Net Cash flow after tax	**371,309**	**61.53**	**399**
All-in Sustaining Cost per ounce (AISC)			747
All-in Cost per ounce (AIC)			902

Figure 22.4
Life-of-Mine Base Case Cash Flows

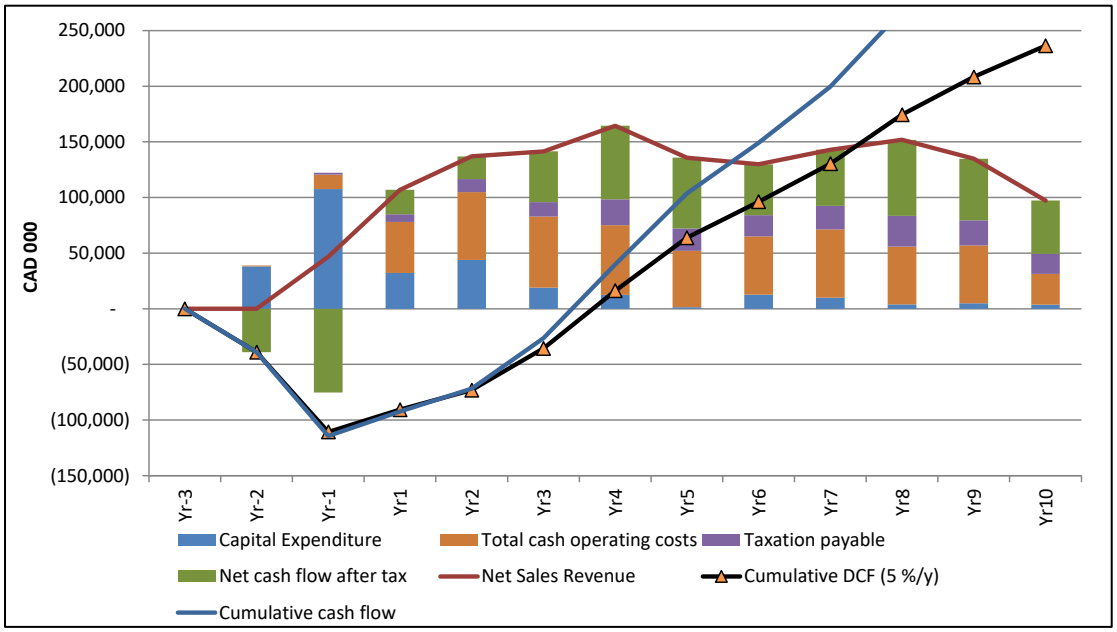


Table 22.2
Base Case Life of Mine Annual Cash Flow

Period	Units	LOM Total	Yr-2	Yr-1	Yr.1	Yr.2	Yr.3	Yr.4	Yr.5	Yr.6	Yr.7	Yr.8	Yr.9	Yr.10
Tonnes milled (t'000)	t'000	6,035	-	213	462	603	621	620	617	622	621	621	621	417
Mill Head Grade	g/t Au	3.93	-	3.93	4.05	3.91	3.90	4.57	3.73	3.56	3.95	4.19	3.70	3.77
Gold Content	koz Au	763.5	-	26.8	60.1	75.9	77.8	91.0	73.9	71.2	78.8	83.6	73.7	50.4
Recovery	%	94.2		94.2	94.2	94.2	94.2	94.2	94.2	94.2	94.2	94.2	94.2	94.2
Gold Production	koz Au	719.2	-	25.3	56.6	71.5	73.3	85.7	69.7	67.1	74.3	78.8	69.4	47.5
Gold Sales (payable oz)	koz Au	715.6	-	24.1	55.1	70.6	72.9	84.8	70.0	66.9	73.6	78.2	69.5	50.1
Gross revenue		1,395,438	-	47,039	107,404	137,597	142,077	165,264	136,427	130,399	143,537	152,485	135,484	97,725
Mining	$'000	393,243	865	7,933	32,252	45,941	48,746	47,598	35,652	37,189	46,218	36,710	36,704	17,435
Processing	$'000	112,852	-	3,916	9,941	11,274	11,436	11,428	11,405	11,452	11,436	11,436	11,436	7,692
G&A	$'000	36,840	-	1,260	3,678	3,678	3,678	3,678	3,678	3,678	3,678	3,678	3,678	2,479
Selling costs	$'000	6,363	-	215	489	628	650	753	621	592	657	696	617	446
Total Cash Costs	$'000	549,298	865	13,324	46,359	61,521	64,510	63,456	51,356	52,911	61,989	52,519	52,435	28,052
		-												
Net cash operating margin	$'000	846,141	(865)	33,715	61,044	76,076	77,567	101,808	85,072	77,488	81,548	99,966	83,049	69,674
		-												
Initial capital	$'000	144,163	38,101	106,062	-	-	-	-	-	-	-	-	-	-
Sustaining capital	$'000	135,717	-	-	29,779	43,094	18,669	11,923	1,886	12,554	9,093	3,120	3,674	1,926
Closure provision	$'000	10,000	-	-	1,000	111	139	179	238	333	500	833	1,667	5,000
Change in working capital	$'000	-	-	1,472	1,423	676	102	340	(774)	(82)	429	(13)	(318)	(3,255)
Net Cash flow before tax	**$'000**	**556,261**	**(38,967)**	**(73,819)**	**28,842**	**32,195**	**58,657**	**89,367**	**83,721**	**64,683**	**71,526**	**96,025**	**78,027**	**66,003**
Taxation	$'000	184,952	-	1,542	6,792	11,823	13,008	23,198	19,996	19,072	21,078	27,723	22,723	17,997
Net Cash flow after tax	**$'000**	**371,309**	**(38,967)**	**(75,362)**	**22,050**	**20,373**	**45,649**	**66,169**	**63,725**	**45,610**	**50,448**	**68,302**	**55,304**	**48,006**
Disc. cash flow (5%)	$'000	236,421	(38,967)	(71,773)	20,000	17,599	37,556	51,845	47,553	32,414	34,145	44,028	33,952	28,068
Cumulative disc. cash flow	$'000		(38,967)	(110,740)	(90,740)	(73,141)	(35,585)	16,260	63,813	96,227	130,372	174,400	208,352	236,421
Net Present Value	**$'000**	**236,421**												
Internal Rate of Return	**$'000**	**29.7%**												
Total Cash Cost	US$/oz	590.5												
All-in Sustaining Cost	US$/oz	747.1												
All-in Cost	US$/oz	902.1												

Pre-tax base case cash flows provide an internal rate of return (IRR) of 39.7%; when discounted at the rate of 5% per year, the pre-tax net present value (NPV_5) is $368.2 million. Undiscounted, the pre-tax payback period is 2.9 years. When discounted at 5% per year, it extends 3.1 years.

After-tax cash flows provide an IRR of 29.7%; after-tax NPV_5 is $236.4 million. Profitability index (i.e., the ratio of NPV_5/Initial Capital) is 1.6. Undiscounted, the after-tax payback period is 3.4 years. When discounted at 5% per year, it extends to 3.7 years.

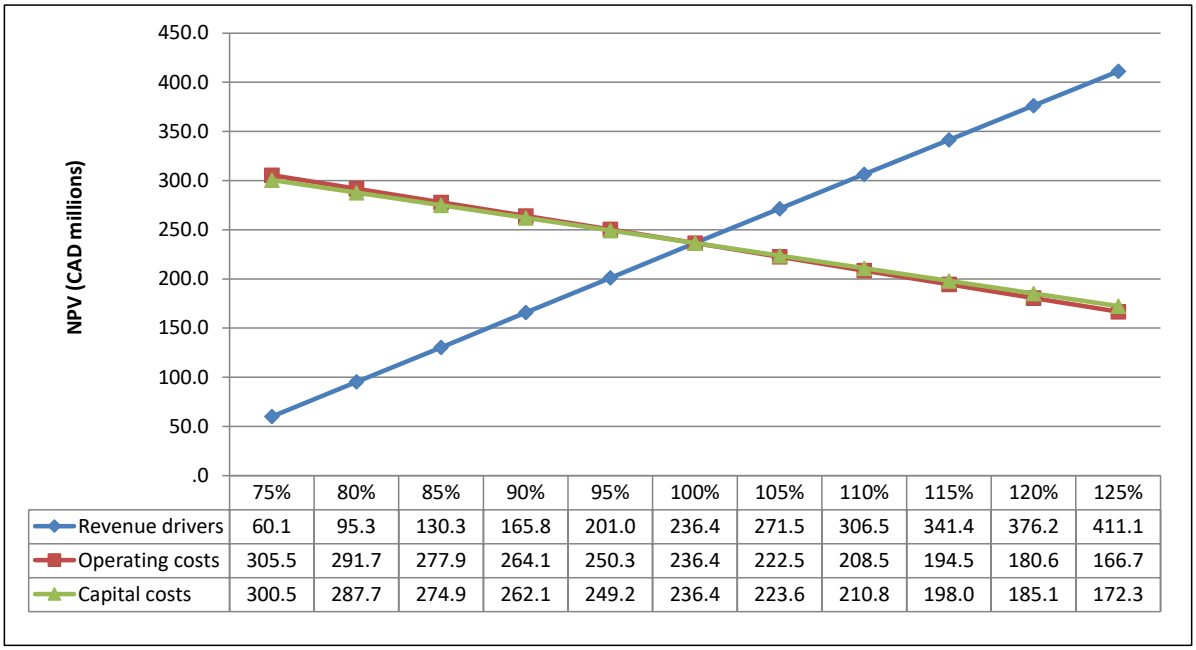
22.5 Sensitivity Study and Risk Analysis

22.5.1 Metal Price and Exchange Rate Assumptions

Micon tested the sensitivity of the base case after-tax NPV_5 to changes in metal price, operating costs and capital investment for a range of 30% above and below base case values. The impact on NPV_5 to changes in other revenue drivers such as gold grade of material treated and the percentage recovery of gold from processing is equivalent to gold price changes of the same magnitude, so these factors can be considered as equivalent to the price sensitivity.

Figure 22.5 shows the results of changes in each factor separately. The chart demonstrates that the project remains viable across the range of sensitivity tested. Nevertheless, it is most sensitive to gold price with a reduction of 25% reducing NPV_5 to $60 million. The project is less sensitive to both operating and capital costs, with an increase of 25% reducing NPV_5 to $166 million and $172 million, respectively.

Figure 22.5
Sensitivity of Base Case to Capital, Operating Costs and Gold Price



	75%	80%	85%	90%	95%	100%	105%	110%	115%	120%	125%
Revenue drivers	60.1	95.3	130.3	165.8	201.0	236.4	271.5	306.5	341.4	376.2	411.1
Operating costs	305.5	291.7	277.9	264.1	250.3	236.4	222.5	208.5	194.5	180.6	166.7
Capital costs	300.5	287.7	274.9	262.1	249.2	236.4	223.6	210.8	198.0	185.1	172.3

Separately, Micon also tested the sensitivity of the Project NPV_5 for specific gold prices above and below the base case price of $1,500/oz. Table 22.3 shows the results of this exercise, and demonstrates that each $100/oz change in the gold price results in a change of around $47 million in NPV_5.

Table 22.3
Base Case: Sensitivity of NPV_5 to Gold Price

Gold Price (US$/oz)	NPV_5 (US$M)	IRR (%)
1,200	95.2	15.5
1,300	142.2	20.4
1,400	189.2	25.1
1,500	**236.4**	**29.7**
1,600	283.2	34.2
1,700	329.8	38.6
1,800	376.3	42.9
1,900	422.9	47.3
2,000	469.4	51.6

Micon notes that in August, 2020 gold prices reached a high of more than $2,050/oz, and that the average price for the month was above $1,950/oz.

22.5.2 Alternative Development Case (Toll Milling)

Micon evaluated the Toll Milling scenario as an alternative development option to the base case. The LOM project cash flow for the Toll Milling scenario is presented in Table 22.4.

Table 22.4
Toll Milling: LOM Cash Flow Summary

	LOM Total $'000	$/t Milled	US$/oz Au
Gross Revenue	**1,365,811**	**226.32**	**1,500.00**
		-	-
Mining costs	393,243	65.16	431.88
Processing costs	289,680	48.00	318.14
General & Administrative costs	35,772	5.93	39.29
Selling expenses	6,234	1.03	6.85
Total Cash Cost	**724,929**	**120.12**	**796.15**
Net cash operating margin	640,882	106.19	703.85
Initial capital	64,513	10.69	70.85
Sustaining capital	127,417	21.11	139.94
Closure provision	2,000	0.33	2.20
Movement in working capital	-	-	-
Net Cash flow before tax	**446,952**	**74.06**	**490.86**
Taxation	150,745	24.98	165.56
Net Cash flow after tax	**296,207**	**49.08**	**325.31**
All-in Sustaining Cost per ounce (AISC)			938.28
All-in Cost per ounce (AIC)			1,009.14

Pre-tax cash flows in the Toll Milling scenario provide an IRR of 63.9%; when discounted at the rate of 5% per year, the pre-tax net present value (NPV_5) is $306.2 million. Payback period is 2.2 years (undiscounted) or 2.3 years (discounted at 5%).

After-tax cash flows in this scenario provide an IRR of 43.8%; after-tax NPV_5 is $196.9 million, almost $40 million less than in the base case. However, the Profitability index (i.e., the ratio of NPV5/Initial Capital) is 3.1 for Toll Milling, compared to 1.6 in the base case.

Undiscounted, the after-tax payback period is 3.1 years. When discounted at 5% per year, payback extends to 3.2 years.

Annual cash flows for the Toll Milling scenario are set out in Table 22.5 and summarized in Figure 22.6.

Figure 22.6
LOM Cash Flows (Toll Milling)

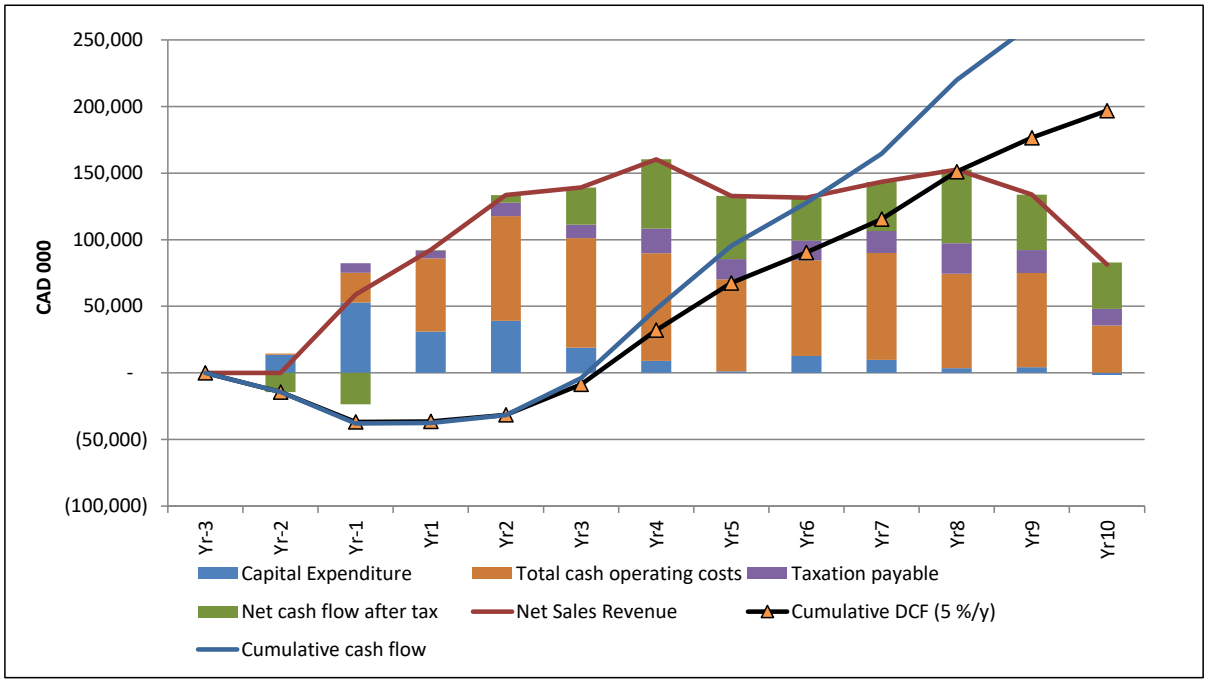
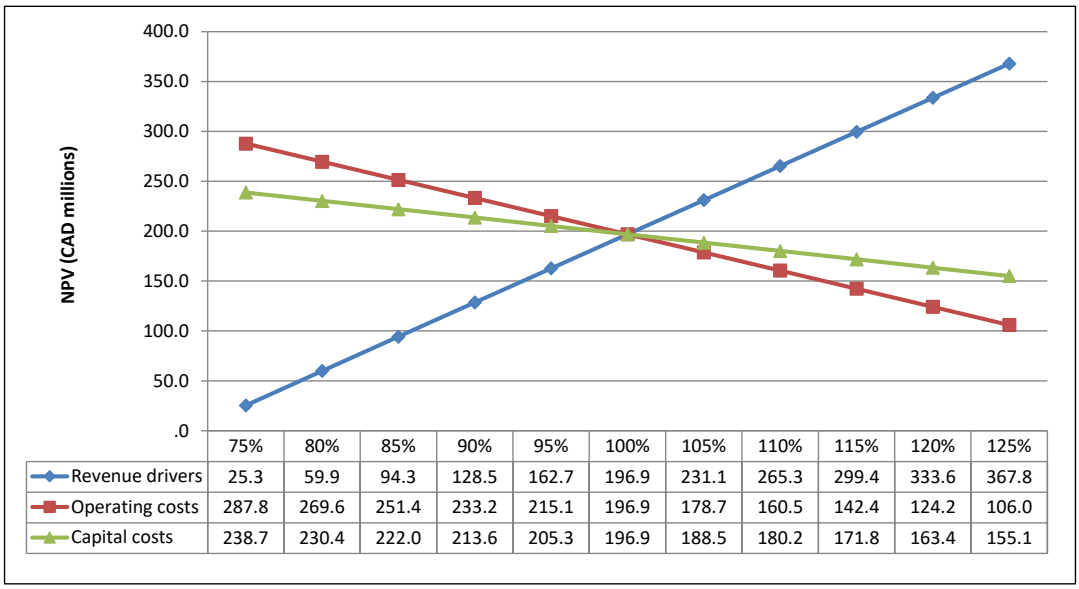


Table 22.5
LOM Annual Cash Flow (Toll Milling)

Period	Units	LOM Total	Yr-2	Yr-1	Yr.1	Yr.2	Yr.3	Yr.4	Yr.5	Yr.6	Yr.7	Yr.8	Yr.9	Yr.10
Tonnes milled (t'000)	t'000	6,035	-	276	399	603	624	616	617	645	636	638	631	350
Mill Head Grade	g/t Au	3.93	-	3.88	4.10	3.91	3.90	4.57	3.73	3.56	3.95	4.19	3.68	3.78
Gold Content	koz Au	763.5	-	34.4	52.6	75.9	78.2	90.5	73.9	73.9	80.8	85.9	74.7	42.5
Recovery	%	92.2		92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2
Gold Production	koz Au	703.9	-	31.7	48.5	70.0	72.1	83.5	68.2	68.1	74.5	79.2	68.9	39.2
Gold Sales (payable oz)	koz Au	700.4	-	30.3	47.5	68.8	71.7	82.6	68.5	67.8	73.9	78.6	68.9	41.8
Gross revenue		1,365,811	-	59,046	92,675	134,118	139,789	161,058	133,500	132,183	144,071	153,325	134,440	81,606
Mining	$'000	393,243	865	7,933	32,252	45,941	48,746	47,598	35,652	37,189	46,218	36,710	36,704	17,435
Processing	$'000	289,680	-	13,230	19,128	28,958	29,947	29,579	29,626	30,978	30,530	30,600	30,311	16,793
G&A	$'000	35,772	-	1,260	3,678	3,678	3,678	3,678	3,678	3,678	3,678	3,678	3,678	1,411
Selling costs	$'000	6,234	-	269	426	612	636	737	609	604	658	700	613	371
Total Cash Costs	$'000	724,929	865	22,691	55,484	79,189	83,007	81,591	69,565	72,450	81,084	71,687	71,306	36,009
Net cash operating margin	$'000	640,882	(865)	36,354	37,191	54,929	56,782	79,467	63,935	59,734	62,987	81,637	63,134	45,597
Initial capital	$'000	64,513	13,565	50,948	-	-	-	-	-	-	-	-	-	-
Sustaining capital	$'000	127,417	-	-	29,779	38,094	18,669	8,623	1,886	12,554	9,093	3,120	3,674	1,926
Closure provision	$'000	2,000	-	-	222	28	36	48	67	100	167	333	1,000	-
Change in working capital	$'000		-	1,816	911	996	135	299	(748)	24	400	(7)	(358)	(3,468)
Net Cash flow before tax	**$'000**	**446,952**	**(14,430)**	**(16,410)**	**6,279**	**15,812**	**37,942**	**70,498**	**62,730**	**47,055**	**53,328**	**78,190**	**58,818**	**47,140**
Taxation	$'000	150,745	-	7,118	5,929	10,036	10,085	18,579	15,182	14,923	16,358	22,872	17,230	12,434
Net Cash flow after tax	**$'000**	**296,207**	**(14,430)**	**(23,528)**	**350**	**5,776**	**27,858**	**51,919**	**47,548**	**32,132**	**36,970**	**55,318**	**41,588**	**34,706**
Disc. cash flow (5%)	$'000	196,889	(14,430)	(22,408)	317	4,990	22,919	40,680	35,481	22,836	25,023	35,659	25,531	20,292
Cumulative disc. cash flow	$'000		(14,430)	(36,838)	(36,521)	(31,531)	(8,613)	32,068	67,549	90,384	115,407	151,066	176,597	196,889
Net Present Value	**$'000**	**196.889**												
Internal Rate of Return	**$'000**	**43.8%**												
Total Cash Cost	US$/oz	796.2												
All-in Sustaining Cost	US$/oz	938.3												
All-in Cost	US$/oz	1,009.1												

Micon tested the sensitivity of the after-tax NPV_5 to changes in metal price, operating costs and capital investment for a range of 30% above and below base case values. Figure 22.7 shows the results for the Toll Milling scenario of changes in each factor separately.

Figure 22.7
Sensitivity of NPV in Toll Milling Scenario



	75%	80%	85%	90%	95%	100%	105%	110%	115%	120%	125%
Revenue drivers	25.3	59.9	94.3	128.5	162.7	196.9	231.1	265.3	299.4	333.6	367.8
Operating costs	287.8	269.6	251.4	233.2	215.1	196.9	178.7	160.5	142.4	124.2	106.0
Capital costs	238.7	230.4	222.0	213.6	205.3	196.9	188.5	180.2	171.8	163.4	155.1

The chart demonstrates that this scenario remains viable across the range of sensitivity tested. Nevertheless, it is most sensitive to gold price with a reduction of 25% reducing NPV_5 to $25 million. The project is less sensitive to both operating and capital costs, with an increase of 25% reducing NPV_5 to $106 million and $155 million, respectively.

Separately, Micon also tested the sensitivity of NPV_5 for Toll Milling scenario at specific gold prices above and below the base case price of $1,500/oz. Table 22.6 shows the results of this exercise, demonstrating that each $100/oz change in the gold price results in a change of around $45 million in NPV_5.

Table 22.6
Toll Milling: Sensitivity of NPV_5 to Gold Price

Gold Price (US$/oz)	NPV_5 (US$M)	IRR (%)
1,200	59.8	16.9
1,300	105.7	25.8
1,400	151.3	34.7
1,500	**196.9**	**43.8**
1,600	242.5	53.3
1,700	288.1	63.3
1,800	333.7	73.6
1,900	379.3	84.5
2,000	425.0	95.8

22.6 CONCLUSION

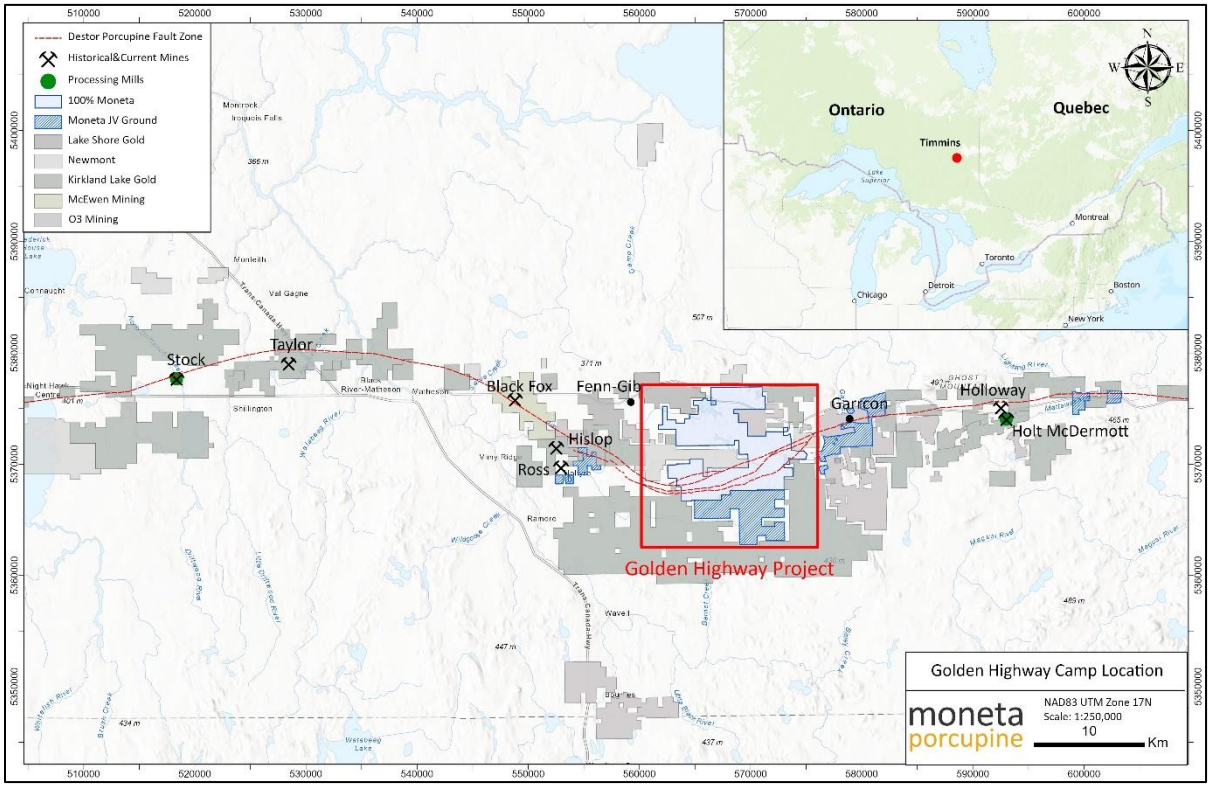
Micon concludes that, based on the forecast production, capital and operating costs presented in this study, the project base case demonstrates an all-in sustaining cost (AISC) of US$747/oz, and that both the base case and alternative toll-milling scenarios present a potentially viable project at gold prices above US$1,200/oz.

23.0 ADJACENT PROPERTIES

23.1 GENERAL

Moneta's Golden Highway Project is located on the DPFZ, a major gold-mineralized regional fault structure. Figure 23.1 shows the location of the DPFZ and several prominent gold deposits including the Black Fox Mine, Hislop Mine, Ross Mine, Holloway Mine and Holt-McDermott Mine that are located within an approximately 25 km radius of the Golden Highway Project. The project is surrounded by claims, mining leases, or patents held by other mining and exploration companies. The most active of the neighbouring companies are Pan American Silver, McEwen Mining, Kirkland Lake Gold Mines and O3 Mining.

Figure 23.1
Golden Highway Camp Location



Source: Moneta, 2021.

The current resources on the adjacent properties are reported on the corporate websites and SEDAR filings of the holding companies. These data have not been verified by Micon and are not reported here. The information presented may not necessarily be indicative of the geology or mineralization on the Golden Highway Project that is the subject of this technical report.

23.2 FENN-GIB DEPOSIT

Pan American Silver acquired Tahoe Resources in 2019, which in turn had acquired Lakeshore Gold in 2016, which had acquired the Fenn-Gib property to the west-northwest of Moneta's Property in 2012. Pan American Silver Corp. completed an acquisition of Tahoe on February 22, 2019. SGS Canada Inc. completed an NI 43-101 resource estimate for the Fenn-Gib deposit in January, 2012 and no more recent resource estimate has been released to date. Pan American Silver sold the Fenn-Gib property to a private company, Mayfair Gold Corporation in 2020. Pan American Silver sold the Fenn-Gib property to a private company, Mayfair Gold Corporation in 2020.

The Fenn-Gib property is located along Highway 101, approximately 80 km east of Timmins and 21 km east of Matheson, Ontario. Geologically, the Fenn-Gib property is located in the southern portion of the Abitibi Subprovince, which is part of the Superior Province of the Canadian Shield. The Abitibi Subprovince is principally underlain by volcanic and sedimentary assemblages that have generally been metamorphosed to greenschist facies. The property area is underlain by rocks of the Hoyle Sedimentary Assemblage and the Kidd-Munro Volcanic Assemblage. In places the contact has been intruded by a series of felsic to intermediate intrusions. The property lies on the northern portion of the Blake River Synclinorium and approximately three kilometres north of the DPFZ. (See Figure 23.2).

Gold within the Fenn-Gib deposit is primarily associated with disseminated pyrite in syenites and basalts affected by albitization and silicification in proximity to the fault contact between the Hoyle and Kidd-Munro packages. There appears to be a close association of the mineralization with syenite dykes and intrusions. The deposit itself can be traced for 1.25 km along strike, and is thickest at the western end (300 m). The mineralization forms a thinner extension to the east along the same contact concentrated within the deformation zone itself. Although the deposit is reported to be open in all directions, the quality of mineralization (grade and thickness) appears to decrease away from the core of the Fenn-Gib deposit.

23.3 GARRCON DEPOSIT

Osisko Mining acquired Northern Gold in 2015 to gain ownership of the Garrison Project. In 2019 Osisko Mining spun out O3 Mining including the Garrison Project. The Garrison Project is located to the northeast of Moneta's Property and is reported to contain several zones of gold mineralization, including the Garrcon, Jonpol, and newly discovered 903 Zone. In March, 2014, A.C.A. Howe International Limited (Howe) completed an NI 43-101 technical report on the Garrison Project that describes the mineralization and provides a resource estimate. The Garrison Project is underlain by the Kidd Munro Assemblage metavolcanic rocks that are in fault contact with or unconformably overlain by metasedimentary rocks of the Timiskaming assemblage. Banded magnetite-hematite iron formation is interbedded with and structurally interleaved with clastic metasedimentary rocks.

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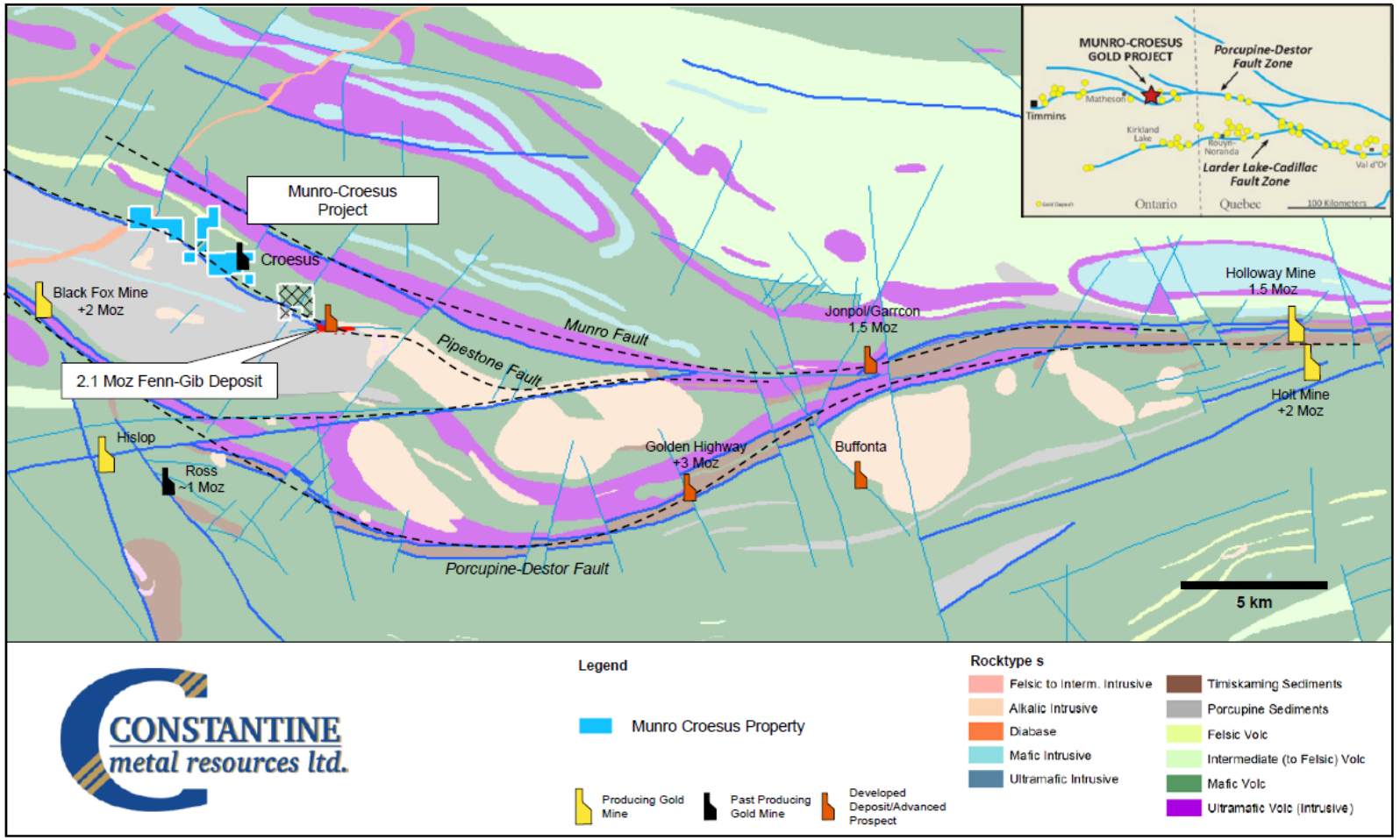
Figure 23.2
Fenn-Gib Project Property Geology

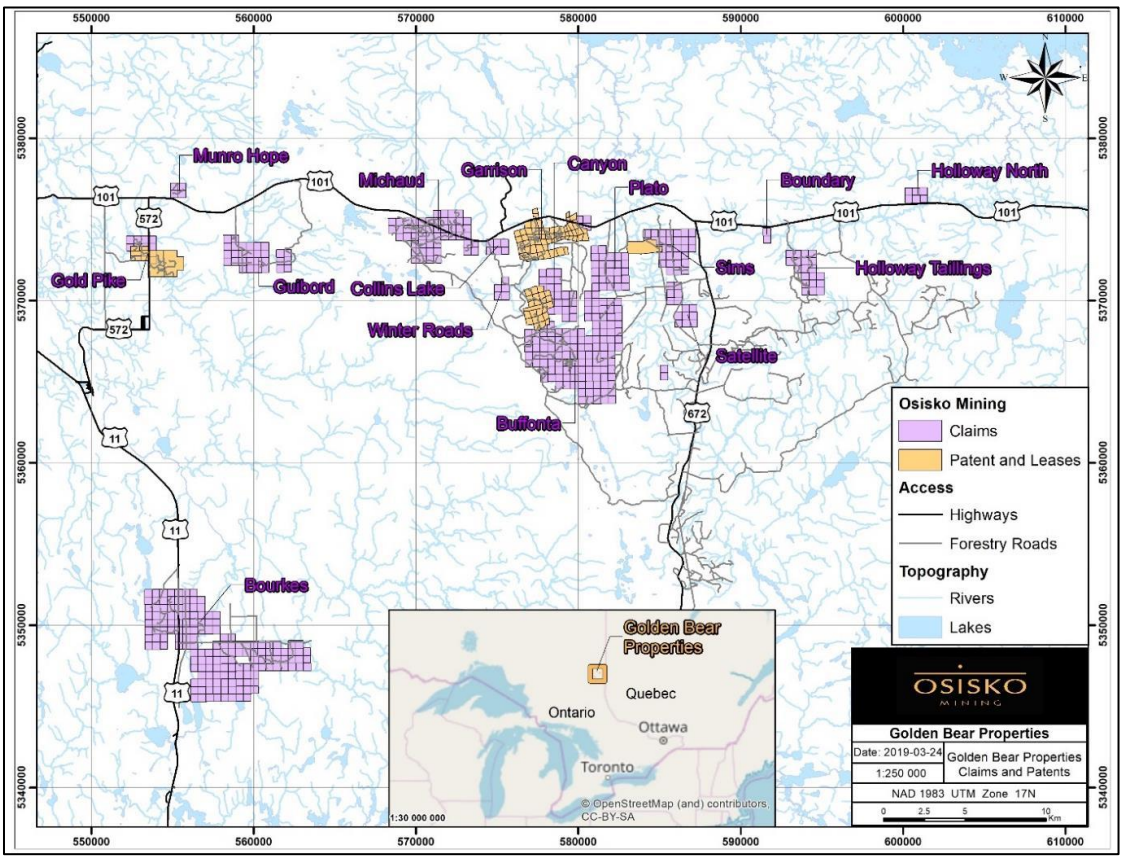


Source: http://constantinemetals.com.

At the Garrison Project, gold mineralization occurs as gold-bearing quartz veins and as disseminated sulphide bearing zones adjacent to the deformation zones. The Garrcon deposit gold mineralization on the Garrison property is primarily associated with quartz-pyrite vein stockworks hosted in altered and metamorphosed Timiskaming metasediments along the northern edge of the DPFZ. The Jonpol deposit, comprising the JD, JP, RP and East Zones, is associated with sulphide-rich (pyrite-arsenopyrite) mineralization in deformed ultramafic metavolcanics in the Munro Fault Zone. The 903 Zone has a similar type of mineralization and is located within the DPFZ south of the Garrcon deposit. The Garrison Project belongs to the Golden Bear Properties which are made up of 16 non-contiguous claim groups (Figure 23.2) The Golden Bear Group of properties, situated in the Abitibi Greenstone Belt (AGB), are underlain by Neoarchean supracrustal rocks of the Abitibi Subprovince of the Canadian Shield. Gold deposits in the area are structurally controlled and are widely distributed within the AGB, but all the large deposits occur within 2 km of the DPFZ, the Pipestone Fault Zone or the Cadillac-Larder Lake Shear Zone.

The Garrison Project is underlain by rocks of the Kidd-Munro and Timiskaming Assemblages and about 4 km of the regionally significant Destor-Porcupine Fault Zone and a major splay, the Munro Fault Zone (Figure 23.3).

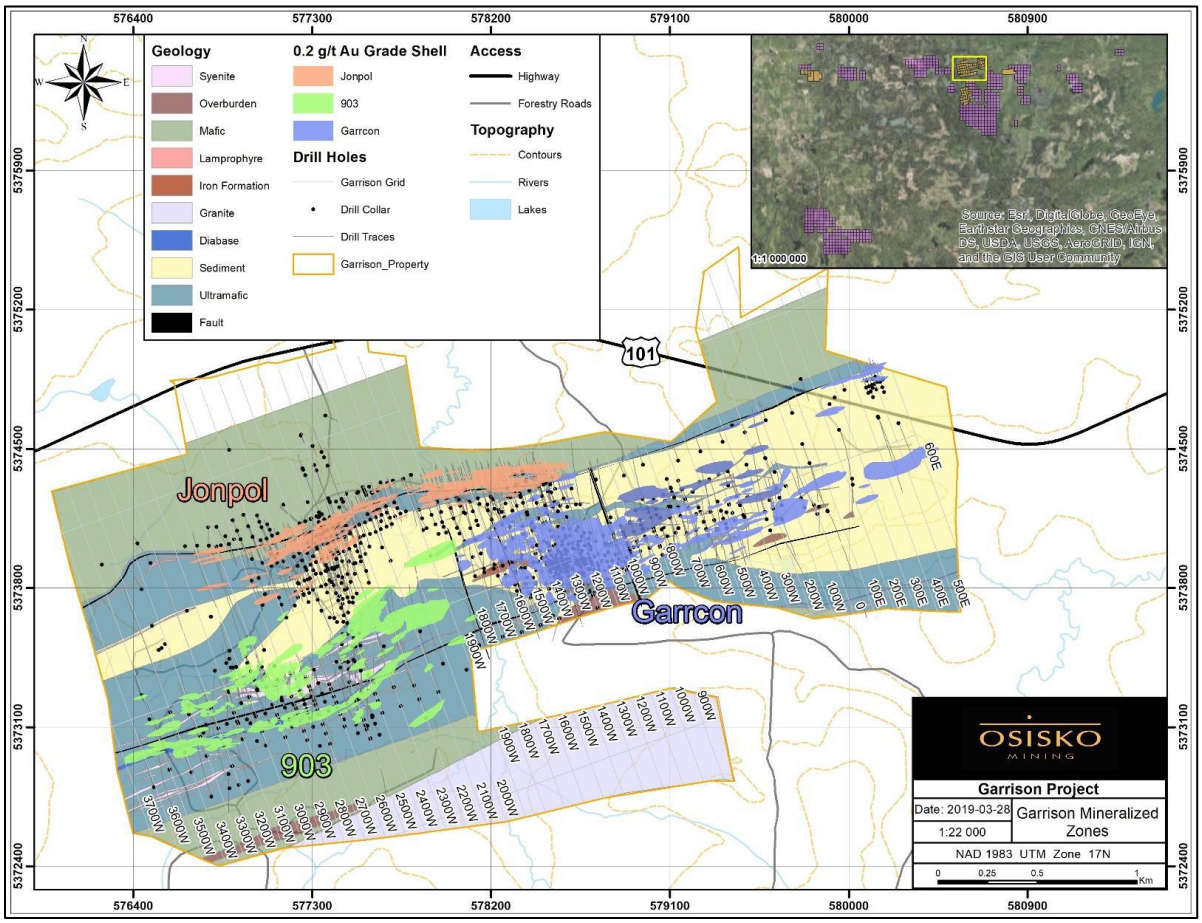
Figure 23.3
Golden Bear Properties (Including Garrcon Project) Location Map



Source: www.O3mining.ca.

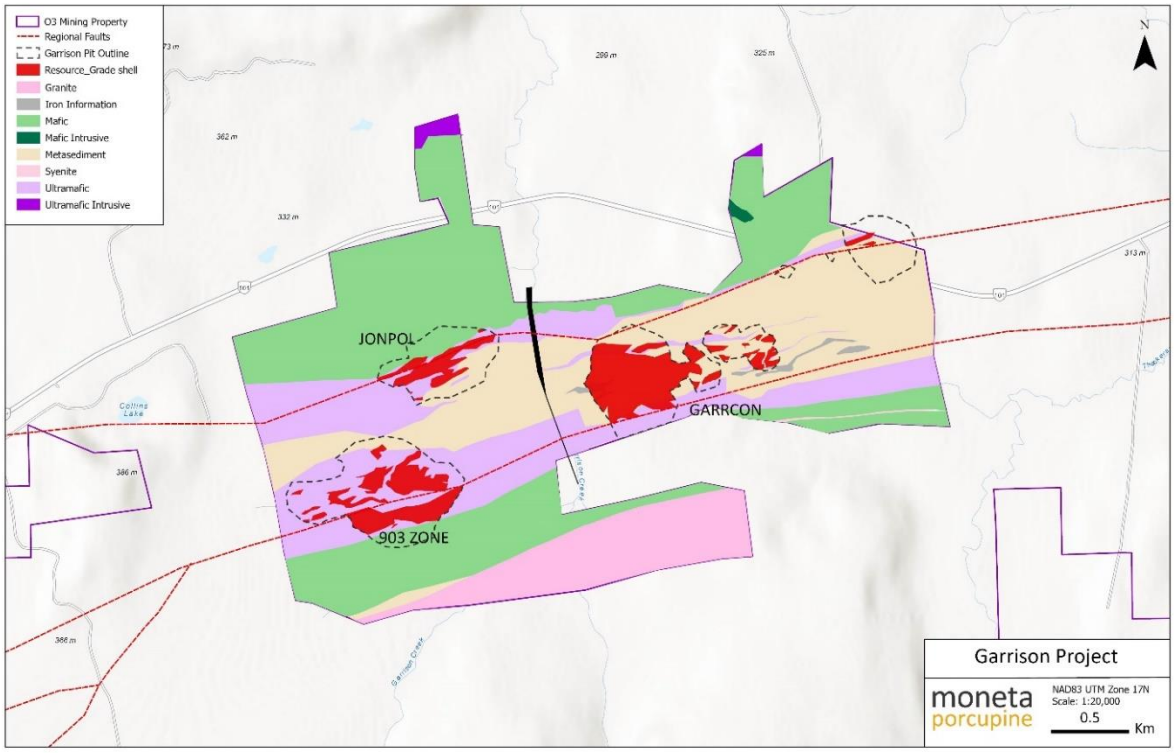
The Kidd-Munro Assemblage is comprised of massive to pillowed, mafic (high magnesium and iron tholeiites) and ultramafic (komatiite) metavolcanic rocks. The metavolcanic flows strike in a general east-west direction and dip steeply to the south. The Timiskaming Assemblage is composed of clastic metasedimentary rocks, consisting of conglomerate, wacke-sandstone, siltstone, argillite and schist, and is closely associated with the Porcupine Destor deformation zone from the Quebec border to Hislop Township, a distance of approximately 65 km (Berger, 2002). Banded magnetite-hematite iron formation is complexly interbedded and structurally interleaved with clastic metasedimentary rocks. The Timiskaming Assemblage is younger than the Kidd-Munro Assemblage, and in the absence of faults, the contact between the assemblages is an angular unconformity. On the property, the Timiskaming Assemblage is fault-bounded on the north side by the Munro fault and on the south side by the DPFZ. (See Figure 23.4 and 23.5)

Figure 23.4
Garrison Project Geology Map



Source: www.o3mining.ca.

Figure 23.5
Garrison Project Geology Map



Source: O3 Mining, 2020

The style of mineralization at the Garrcon deposit has some similarities to the gold mineralization on Moneta's Windjammer South, South West, and 55 deposits.

On December 14, 2020 O3 Mining Inc. announced the results from an independent Preliminary Economic Assessment (PEA) on the Garrison project. The PEA was prepared by Ausenco Engineering Canada Inc. and included an updated mineral resource estimate (see Table 23.1).

Table 23.1
Garrison Project Resource Estimate

2020	Open Pit (0.30g/t Cut-off)			
Deposit	**Category**	**Tonnes Kt**	**Grade Au g/t**	**Ounces Koz**
Garcon				
	Indicated	20,923	0.82	552
	Inferred	7,056	0.87	197
	Total	27,979	0.83	749
Jonpol				
	Indicated	17,786	0.91	523
	Inferred	7,521	0.76	183
	Total	25,307	0.87	706
903				
	Indicated	27,558	0.84	747
	Inferred	30,760	0.69	682
	Total	58,318	0.76	1429
Total				
	M&I	66,267	0.86	1,822
	Inferred	45,337	0.73	1062
	Total	111,604	0.8	2,884

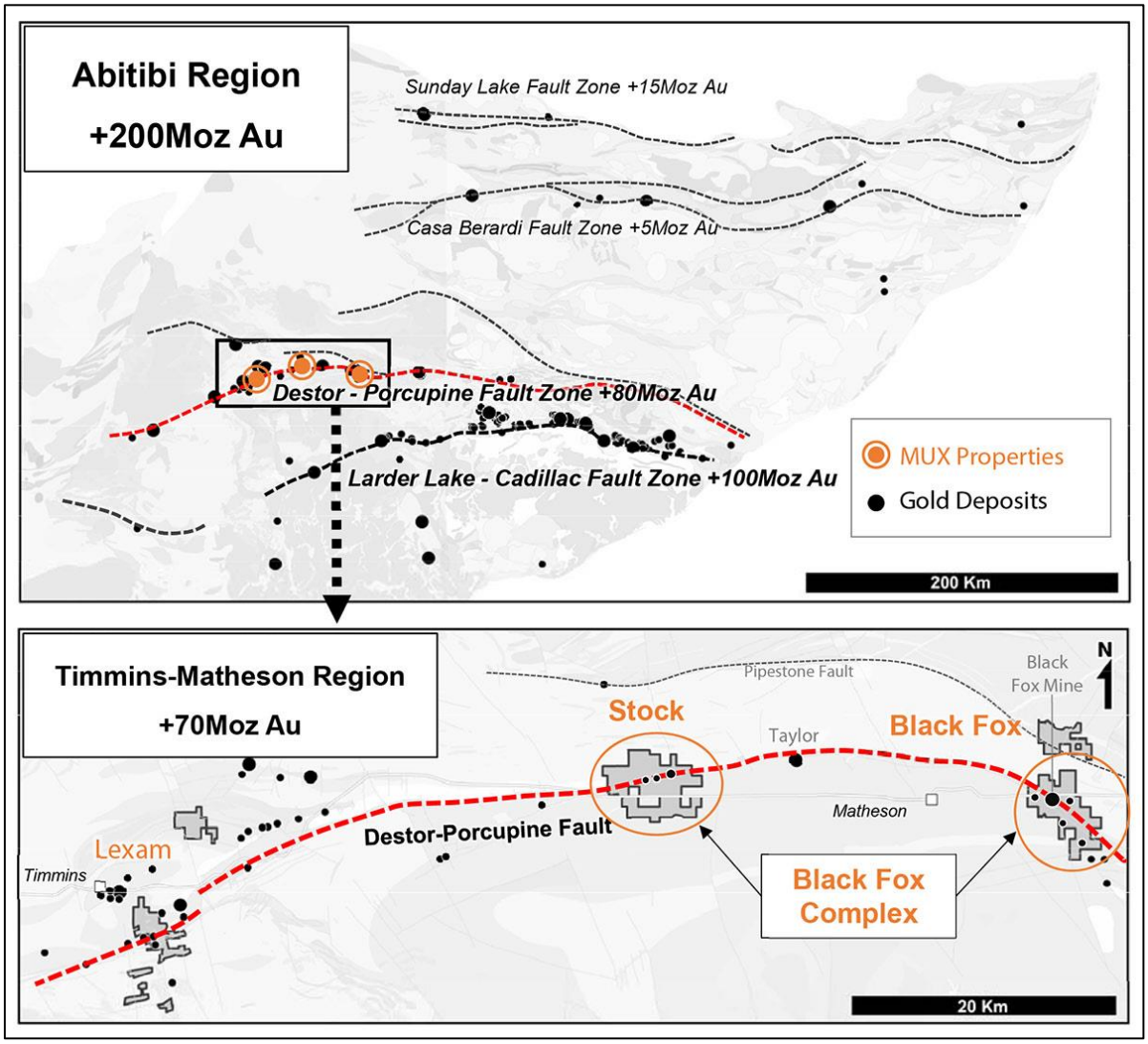
Values are rounded to nearest thousand which may cause apparent discrepancies.
Source: Ausenco, December 2020.

23.4 BLACK FOX MINE PROJECT

The Black Fox Complex is located approximately 10 km east of the town of Matheson, 65 km east of the city of Timmins and is adjacent to Provincial Highway 101. The complex is composed of two land packages that total 1,750 ha and covers 11 km of the DPFZ, sometimes known as the 'Golden Highway'. The DPFZ has a total strike length of approximately 200 km and hosts many of Ontario's gold mines and deposits.

The Black Fox Mine is a key component of the complex, which also includes the Black Fox-Stock mill and the Froome and Grey Fox deposits (see Figure 23.6). The Black Fox mine had an initial production run from 1997 to 2001 and was later recommissioned, operating continuously from 2009. Commercial production from the Black Fox open pit occurred from May, 2009 to September, 2015, while underground mining commenced in October, 2011. The open pit and underground operations at the Black Fox mine have produced a total of 835,000 ounces of gold to date. The Stock property surrounding the Black Fox-Stock mill is also the site of the former Stock Mine, which produced 137,000 ounces of gold from an underground operation between 1989 and 2005, bringing the combined production at the Black Fox Complex to 972,000 ounces of gold.

Figure 23.6
Black Fox Project Location



Source: www.mcewenmining.com.

Although there is a history of exploration and production, the land packages of the Black Fox Complex remain relatively underexplored. Black Fox has a high gold endowment, the presence of high-grade mineralization, multiple prospective structural trends, as well as various styles of mineralization and host rock types.

The Stock property covers a 6.5 km section of the prolific DPFZ. The property is the site of the current Black Fox Stock Mill and of the former Stock Mine.

23.5 HOLT MINE PROJECT

The Holt Mine was originally built and operated by Barrick in the late 1980's. The mine has a long history of reserve replacement. Approximately 85% of the current reserves are situated in

three zones: Zone 4, Zone 6 and Zone 7. At the timing of the writing of this report the mine was on care and maintenance and was not in production.

Kirkland Lake Gold acquired St Andrew Goldfields Ltd. in January of 2016, which included the Taylor, Holloway, Holt and Hislop mines and a milling facility on the Holt property.

The Holt Mine is a mafic volcanic, sulphide-replacement-hosted gold deposit. The mineralized zones are structurally controlled by both the McDermott Fault and the Ghostmount Fault Zone, which are splays off the DPFZ. Unlike other quartz vein hosted deposits in the region, native gold at the Holt Mine occurs as very fine grains spatially associated with pyrite, typically located in fractures, on grain boundaries, or encapsulated in pyrite grains. Zone thickness can widen from less than 10 m to locally more than 50 m. Historically mined zones include the South (Zone 4), C-104, McDermott, Worvest/Three Star, Mattawasaga, and C-97, which occur over a strike length of three kilometres and have been mined to depths of over one kilometre below surface. More recently, the bulk of the existing gold mineralization is located within Zone 4, Zone 6, Zone 7 and C Zones.

The mineralized zones at the Holt Mine display two pronounced shoot plunges: (a) moderate to steep east plunges that outline the major zones, and (b) alignment of zones and small mineralized shoots along shallow west plunging axes.

24.0 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.

25.0 INTERPRETATION AND CONCLUSIONS

Since the early 1980s, exploration on the Golden Highway Property has resulted in the discovery of a number of gold deposits and gold-mineralized zones. These can be classified as structurally controlled orogenic gold deposits in an Archean greenstone belt setting.

Seven of these (South West, West Block, Windjammer South, Windjammer Central, Windjammer North, 55 and Discovery) have been sufficiently drilled to have mineral resource estimates prepared for them. For all but Windjammer Central narrow, higher-grade vein structures have been modelled. Central is a wider, lower grade bulk tonnage target potentially suitable for open pit mining. However, the deep overburden in the area has resulted in only a small tonnage of mineralization lying within a pit shell floated on it. For this reason, no resources have been reported for Central.

Other zones (Western, Dyment 3, LC, Westaway, Halfway, South Basin, Twin Creeks, and Landing) and isolated drill intersections have also been found which deserve follow-up exploration.

25.1 MINERAL RESOURCES

The updated mineral resource statement for the Golden Highway Project is summarized in Table 25.1.

Table 25.1
Golden Highway Project Mineral Resource Estimate by Deposit

Mining Constrain	Cut-off	Category	Deposit	Tonnes	Avg. Grade g/t Au	Au Ounces
Open Pit	0.30	Indicated	55	9,896,000	1.30	412,600
			WJS	40,582,000	0.84	1,099,300
Total Open Pits Indicated				**50,478,000**	**0.93**	**1,511,900**
Open Pit	0.30	Inferred	55	5,079,000	1.10	179,500
			WJS	28,956,000	1.10	1,027,700
Total Open Pits Inferred				**34,035,000**	**1.10**	**1,207,200**
UG Potential	2.60	Indicated	SW	4,530,000	4.07	592,400
	3.00		55	-	-	-
			WJS	6,000	3.90	800
			WB	-	-	-
			WA	-	-	-
			DIS	141,000	3.49	15,800
			WJN	182,000	3.98	23,300
Total UG Potential Indicated				**4,859,000**	**4.05**	**632,300**
UG Potential	2.60	Inferred	SW	9,607,000	4.01	1,237,900
	3.00		55	123,000	4.65	18,400
			WJS	143,000	4.06	18,700
			WB	973,000	4.17	130,500
			WA	3,394,000	4.87	531,400
			DIS	658,000	4.00	84,700
			WJN	813,000	4.08	106,500
Total UG Potential Inferred				**15,711,000**	**4.21**	**2,128,100**
Total Golden Highway Indicated Resource (OP + UG)				**55,337,000**	**1.21**	**2,144,200**
Total Golden Highway Inferred Resource (OP + UG)				**49,746,000**	**2.09**	**3,335,300**

Notes:

11. Mineral Resource Estimates are reported at a cut-off grade of 3.00 g/t Au for an underground mining scenario, except for the South West zone which used the cut-off determined in this PEA (2.6 g/t). For most zones the cut-off grade was calculated at a gold price of US$1,250 per ounce, an exchange rate of US$/C$ of 0.75 and operational assumptions outlined in Section 14 of this report. The cut-off for the South West zone was derived by calculations presented in the mining sections of this report.
12. The resource estimate is supported by statistical analysis with different high grade capping applied to each of the deposits ranging from 6.0 g/t Au to 37.0 g/t Au on 1-m composites.
13. The mineral resources presented here were estimated with a block size of 10 m x 5 m x 10 m utilizing sub-blocks of variable size as required, and constrained within geological wireframes with a minimum width of 1.50 m, except for the South West update. There the mineral resources were estimated using a sub-blocked model with a parent block size of

15 m x 5 m x 15 m and child block size down to 5 m x 1 m x 5m utilizing these sub-blocks as required and constrained within geological wireframes with a minimum width of 1.50 m. The cells are estimated by Ordinary Kriging using the appropriate variogram model of each structure with individual search ellipsoids.

14. The mineral resources presented here were estimated by Micon International Limited using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definitions and Standards on Mineral Resources and Reserves.
15. Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, market or other relevant issues.
16. The quantity and grade of reported Inferred Resources are somewhat uncertain in nature and there has not been sufficient work to define these Inferred Resources as Indicated or Measured Resources.
17. There are no historical underground voids from mining including shafts, ramps drifts or stopes in any of the deposit areas.
18. Tonnage estimates are based on bulk densities individually measured and calculated for each of the deposit areas, averaging 2.78 tonnes per cubic metre for the total resource. Resources are presented as undiluted and in situ.
19. This mineral resource estimate effective date for the South West and West Block is dated September 9, 2020. All other zones are dated January 15, 2019. The effective date for the drill hole database used to produce this updated mineral resource estimate for South West and West Block is November 26, 2019 and November 19, 2018 for the other zones. Tonnages and ounces in the tables are rounded to the nearest thousand and hundred respectively. Numbers may not total precisely due to rounding.
20. At the present time, Micon does not believe that the mineral resource estimate is materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

The QP considers that the resource estimate for the Golden Highway Project has been reasonably prepared and conforms to the current CIM standards and definitions for estimating mineral resources.

The process of mineral resource estimation includes technical information which requires subsequent calculations or estimates to derive sub-totals, totals and weighted averages. Such calculations or estimations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, the QP does not consider them to be material.

25.2 MINING

The complexity of the multiple, parallel, narrow to medium thickness mineralized structures, spatially located at depth, presents challenges to underground mine design, however, the mineral resource to be considered in the mine production rate, design and production schedule for the SW zone is considered suitable for the proposed mining and extraction method.

The proposed mining method for the SW zone is Longitudinal Longhole Stoping with conventional drilling and blasting. The optimal nominal mine production rate for the SW zone project is estimated to be 1,750 t/d, taking into consideration the geometry of the deposits. Waste rock generated from the mine will be the main source of unconsolidated backfill.

The main decline provides access into the mine with a series of internal ramps linking one mining area to another while crosscuts provide access into the deposits. Sills are developed in each deposit where production drilling and blasting will be carried out.

Excavated mineralized material from the mine will be transported to the processing facilities on surface with trucks, while waste material will be transported and deposited into excavated stopes to provide a working platform for the subsequent mining lift.

The cut-off grade (CoG) of 2.6 g/t was established based upon input parameters including a mining cost of C$75/t mill feed and milling cost of C$40/t mill feed, and was subsequently used in the Datamine Mineable Shape Optimizer (MSO) to generate mineable stope shapes for the proposed longitudinal sublevel stoping mining method.

The life-of-mine (LOM) plan will spend 12 years mining a total of 5,394 kt of resource with a grade of 3.92 g/t Au from stopes and 641 kt of resource with a grade of 4.07 g/t Au from sills, for a total of 6,035 kt of mined resource with an average grade of 3.93 g/t Au.

The LOM plan mines a total of 1,589 kt of development waste from 52 km of development.

It is estimated that the mine will require 41 pieces of mobile equipment, including eight trucks, three jumbos, six LHDs and two long hole drills.

Mining will require 143 persons in total, including 82 equipment operators, 36 maintenance crew, 15 technical services staff, and ten operations management staff.

25.3 MINERAL PROCESSING AND METALLURGICAL TESTING

A number of metallurgical test work studies have been completed using samples taken from the property. This includes preliminary leach tests undertaken by Barrick in 1996 and Newmont in 2001. More recently, gravity, grinding and leach tests were undertaken by SGS Minerals Services (SGS) in Vancouver in 2012 and SGS in Lakefield, Ontario in 2019.

The 2012 SGS program was a scoping level metallurgical test work program, comprised of standard bench scale cyanide leach bottle roll tests and a Bond Ball Mill Work Index test. The samples used for the test work program included six composites representing different mineralized zones identified at the Golden Highway Project. These samples were relatively low grade, intending to be representative of an open pit mining scenario.

The 2019 SGS test program comprised gravity separation testing, cyanide leach bottle roll tests and a Bond Ball Mill Work Index test. The composite sample used for this program was prepared from mainly the South West zone 2019 drill core with a target average gold grade that would be appropriate for an underground mining operation.

Although the previous testwork is useful in assessing the metallurgical performance of the different deposits on the property, only the results from the 2019 test program were used as a basis for this PEA, which is based on the underground mining and processing of South West Zone deposit mineralization.

The Bond Work Index for the 2019 South West Zone Master Composite was 19.7 kWh/t, which suggests that the mineralization is relatively hard.

Preliminary gravity amenability test results suggest that up to 50% of the gold can be recovered from South West Zone mineralization using gravity separation technology.

The preliminary testwork undertaken in 2019 using a composite sample representative of the South West deposit mineral resources shows that good gold recoveries can be expected using conventional free-milling gold process technology. The preliminary non-optimized testwork results suggest an overall gold recovery of approximately 94% for a gravity plus CIL circuit.

25.3.1 Recovery Methods

The recent metallurgical test program using mineralized samples representing the South West Zone mineral resources shows that gravity concentration followed by pre-oxidation, cyanide leach, carbon adsorption/desorption and electrowinning can yield an overall gold extraction of around 94.2%. Results from this test program were used to develop the PEA process design criteria, process flowsheet, process operating cost estimate and conceptual plant capital cost estimate. The selected process plant flowsheet for the on-site processing scenario will include the following unit operations:

- Single stage crushing.
- Two stages of grinding with closed circuit pebble crushing and hydrocyclone classification.
- Gravity separation and intensive leaching of the final gravity concentrate.
- Cyanide leaching and carbon adsorption using carbon-in-pulp (CIP) technology.
- Cyanide destruction of plant tailings and storage of slurry tailings.
- Loaded carbon acid wash, elution and regeneration.
- Electrowinning, refining and production of gold doré bars.

For the toll treatment option, the PEA includes on-site primary crushing, loading into trucks and transportation of approximately 50 km to a nearby gold processing facility. It is assumed that the toll mill grinds the material to 80% passing 75 microns, has no gravity circuit and has a 30-hour leach retention time. The overall estimated gold recovery used for the toll treatment option is 92.2%.

25.4 Environmental Studies, Permitting and Social or Community Impact

Moneta is in the exploration stage of the Golden Highway project and have completed some Environmental Baseline Studies (EBS) work. To advance the project in a timely manner the EBS work needs to continue including the on-going consultation with the local First Nation community. It is anticipated that some of these studies may take at least a year, if not more, to complete while others may take approximately six months. The cost of the EBS work is approximately $100,000 to $250,000.

The Company will need to prepare a Terms of Reference (TOR) and have it approved by the government before the Environmental Assessment (EA) can be initiated. The TOR/EA process may take 3 to 4 years to get government approval and cost approximately 0.2 to 0.5% of the

project costs. A number of permits will be required after the EA has been approved before the mine can start construction and operation. The permitting process should take approximately 3 months depending on how complicated the project becomes.

25.5 CAPITAL AND OPERATING COSTS

Micon's assessment of the capital and operating costs for the base case (with an on-site mill) and the alternative toll-milling case are expressed in second quarter 2020 Canadian dollars, without provision for escalation. Where appropriate, an exchange rate of US$0.77/C$ has been applied. The expected accuracy of the estimates is ±30%.

25.5.1 Capital Costs

The project is a greenfields development and as such the capital cost estimate for the base case includes the costs of developing and equipping the underground mine, process plant, tailings storage facility and other on-site infrastructure.

Total capital costs for the base case are estimated as shown in Table 25.2.

Table 25.2
Capital Cost Summary - Base Case

Area	Initial Capital ($'000)	Sustaining Capital ($'000)	LOM Total Capital ($'000)
Mining	49,696	119,893	169,589
Processing Plant	47,786	-	47,786
Site Infrastructure	14,100	8,300	22,400
Indirects	15,675	-	15,675
Contingency	16,906	7,524	24,431
Total	**144,163**	**135,717**	**279,880**

An alternative development option assessed as part of the PEA is to develop the mine as a source of feed for a nearby toll-milling plant. In this scenario, the underground mine remains the same, but only the primary crushing plant is required to process material prior to its delivery to a third-party toll-milling facility. In this case, no tailings dam is required at the project.

Total capital costs for the alternative, toll-milling case are estimated as shown in Table 25.3.

Table 25.3
Capital Cost Summary - Alternative Case

Area	Initial Capital ($'000)	Sustaining Capital ($'000)	LOM Total Capital ($'000)
Mining	49,696	119,893	169,589
Processing Plant	2,500	-	2,500
Site Infrastructure	5,800	-	5,800
Indirects	-	-	-
Contingency	6,517	7,524	14,042
Total	**64,513**	**127,417**	**191,930**

25.5.2 Operating Costs

25.5.2.1 Base Case

Estimated LOM total cash costs for the base case (with on-site milling by the owner) are summarized in Table 25.4.

Table 25.4
LOM Total Cash Costs - Base Case

Area	Life-of-Mine Cost ($ 000)	Unit Cost $/t milled	Unit Cost US$/oz Gold
Mining	393,243	65.16	422.71
Processing	112,852	18.70	121.31
General & Administrative	36,840	6.10	39.60
Selling costs	6,363	1.05	6.84
Total Cash Costs	**549,298**	**91.02**	**590.46**

25.5.2.2 Alternative Case

Estimated LOM total cash costs for the alternative, toll-milling case are summarized in Table 25.5.

Table 25.5
LOM Total Cash Costs - Alternative Case

Area	Life-of-Mine Cost ($ 000)	Unit Cost $/t milled	Unit Cost US$/oz Gold
Mining	393,243	65.16	431.88
Processing	289,680	48.00	318.14
General & Administrative	35,772	5.93	39.29
Selling costs	6,234	1.03	6.85
Total Cash Costs	**724,929**	**120.12**	**796.15**

25.6 ECONOMIC ANALYSIS

This preliminary economic assessment is preliminary in nature; it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.

The results of the economic analyses discussed in this section represent forward-looking information as defined under Canadian securities law. The results depend on inputs that are subject to a number of known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those presented here.

Information that is forward-looking includes:

- Mineral Resource and Mineral Reserve estimates.
- Assumed commodity prices and exchange rates.
- The proposed mine production plan.
- Projected mining and process recovery rates.
- Assumptions as to mining dilution.
- Capital and operating cost estimates and working capital requirements.
- Assumptions as to closure costs and closure requirements.
- Assumptions as to environmental, permitting and social considerations and risks.

Additional risks to the forward-looking information include:

- Changes to costs of production from what is assumed.
- Unrecognized environmental risks.
- Unanticipated reclamation expenses.
- Unexpected variations in quantity of mineralized material, grade or recovery rates.
- Geotechnical or hydrogeological considerations differing from what was assumed.
- Failure of mining methods to operate as anticipated.
- Failure of plant, equipment or processes to operate as anticipated.
- Changes to assumptions as to the availability and cost of electrical power and process reagents.
- Ability to maintain the social licence to operate.
- Accidents, labour disputes and other risks of the mining industry.
- Changes to interest rates.

- Changes to tax rates and availability of allowances for depreciation and amortization.

25.6.1 Macro-Economic Assumptions

All results are expressed in Canadian dollars except where stated otherwise. Cost estimates and other inputs to the cash flow model for the project have been prepared using constant, second quarter 2020 money terms, i.e., without provision for escalation or inflation.

The project has been evaluated using a constant gold price of US$1,500/oz. Micon notes that in August, 2020, gold prices reached a high of more than US$2,050/oz, and that the average price for the month was above US$1,950/oz.

An annual discount rate of 5% was selected. Canadian federal and Ontario provincial income and mining taxes have been provided for in the economic evaluation. Micon understands that no royalties are payable on the South West zone.

25.6.2 Project Cash Flow

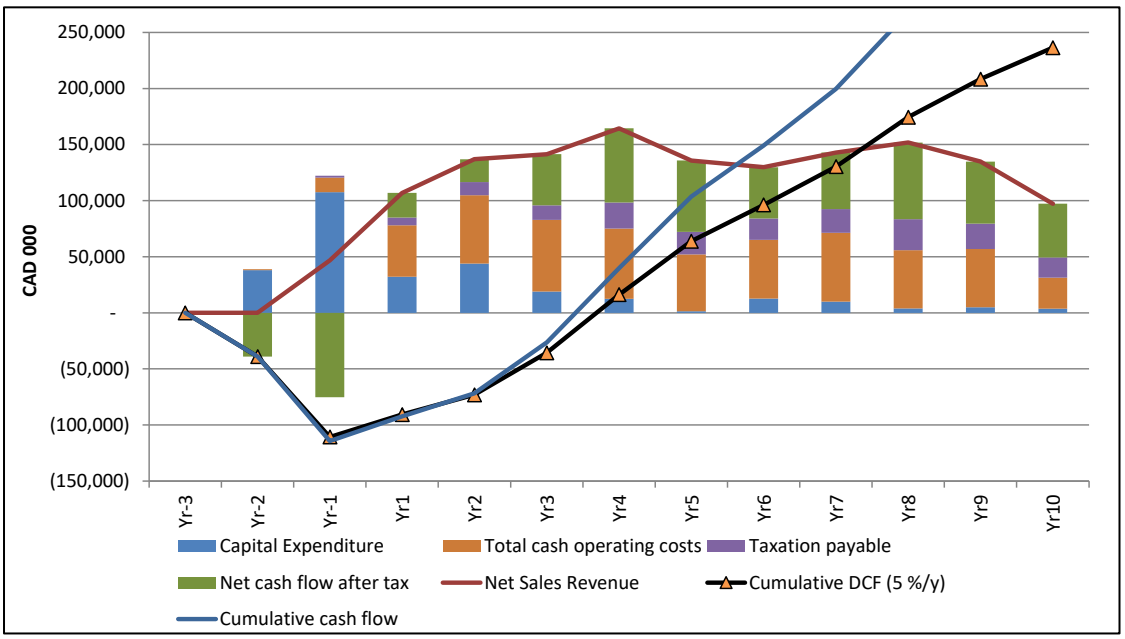
25.6.2.1 Base Case

The LOM base case project cash flow is presented in Table 25.6 and summarized in Figure 25.1.

Table 25.6
Life-of-Mine Cash Flow Summary

	LOM Total $'000	$/t Milled	US$/oz Au
Gross Revenue	**1,395,438**	**231.22**	**1,500**
Mining costs	393,243	65.16	423
Processing costs	112,852	18.70	121
General & Administrative costs	36,840	6.10	40
Selling expenses	6,363	1.05	7
Total Cash Cost	**549,298**	**91.02**	**590**
Net cash operating margin	846,141	140.21	910
Initial capital	144,163	23.89	155
Sustaining capital	135,717	22.49	146
Closure provision	10,000	1.66	11
Movement in working capital	-	-	-
Net Cash flow before tax	**556,261**	**92.17**	**598**
Taxation	184,952	30.65	199
Net Cash flow after tax	**371,309**	**61.53**	**399**
All-in Sustaining Cost per ounce (AISC)			747
All-in Cost per ounce (AIC)			902

Figure 25.1
Life-of-Mine Base Case Cash Flows



Pre-tax base case cash flows provide an internal rate of return (IRR) of 39.7%; when discounted at the rate of 5% per year, the pre-tax net present value (NPV_5) is $368.2 million. Undiscounted, the pre-tax payback period is 2.9 years. When discounted at 5% per year, it extends 3.1 years.

After-tax cash flows provide an IRR of 29.7%; after-tax NPV_5 is $236.4 million. Profitability index (i.e., the ratio of NPV_5/Initial Capital) is 1.6. Undiscounted, the after-tax payback period is 3.4 years. When discounted at 5% per year, it extends to 3.7 years.

25.6.2.2 Alternative Case (Toll Milling)

Micon evaluated the toll milling scenario as an alternative development option to the base case. The LOM project cash flow for the toll milling scenario is presented in Table 25.7 and Figure 25.2.

Table 25.7
Toll Milling: LOM Cash Flow Summary

	LOM Total $'000	$/t Milled	US$/oz Au
Gross Revenue	1,365,811	226.32	1,500.00
Mining costs	393,243	65.16	431.88
Processing costs	289,680	48.00	318.14
General & Administrative costs	35,772	5.93	39.29
Selling expenses	6,234	1.03	6.85

	LOM Total $'000	$/t Milled	US$/oz Au
Total Cash Cost	**724,929**	**120.12**	**796.15**
Net cash operating margin	640,882	106.19	703.85
Initial capital	64,513	10.69	70.85
Sustaining capital	127,417	21.11	139.94
Closure provision	2,000	0.33	2.20
Movement in working capital	-	-	-
Net Cash flow before tax	446,952	74.06	490.86
Taxation	150,745	24.98	165.56
Net Cash flow after tax	**296,207**	**49.08**	**325.31**
All-in Sustaining Cost per ounce (AISC)			**938.28**
All-in Cost per ounce (AIC)			**1,009.14**

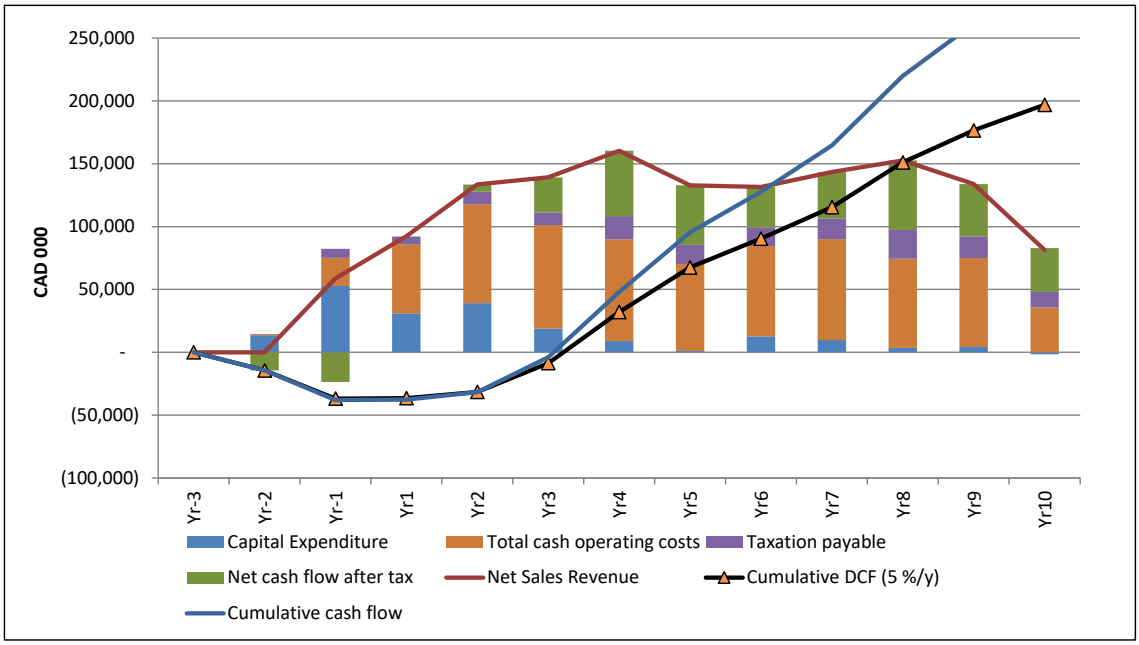
Pre-tax cash flows in the toll milling scenario provide an IRR of 63.9%; when discounted at the rate of 5% per year, the pre-tax net present value (NPV_5) is $306.2 million. Payback period is 2.2 years (undiscounted) or 2.3 years (discounted at 5%).

After-tax cash flows in this scenario provide an IRR of 43.8%; after-tax NPV_5 is $196.9 million, almost $40 million less than in the base case. However, the Profitability index (i.e., the ratio of NPV_5/Initial Capital) is 3.1 for toll milling, compared to 1.6 in the base case.

Undiscounted, the after-tax payback period is 3.1 years. When discounted at 5% per year, payback extends to 3.2 years.

Annual cash flows for the toll milling scenario are summarized in Figure 25.2.

Figure 25.2
LOM Cash Flows (Toll Milling)



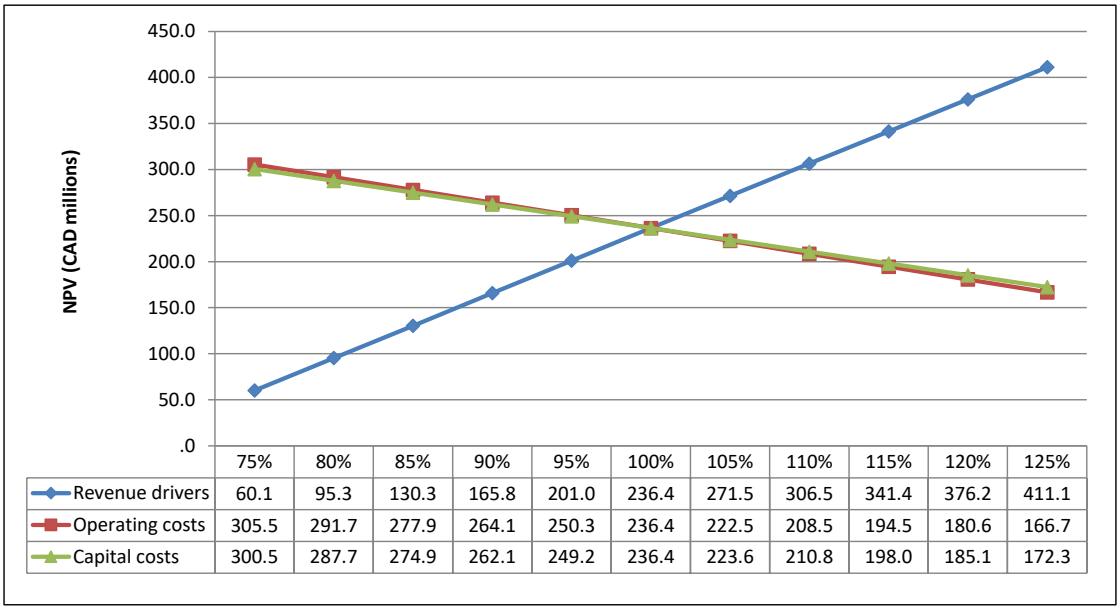
25.6.3 Sensitivity Study and Risk Analysis

25.6.3.1 Base Case

Micon tested the sensitivity of the base case after-tax NPV_5 to changes in metal price, operating costs and capital investment for a range of 30% above and below base case values. The impact on NPV_5 to changes in other revenue drivers such as gold grade of material treated and the percentage recovery of gold from processing is equivalent to gold price changes of the same magnitude, so these factors can be considered as equivalent to the price sensitivity.

Figure 25.3 shows the results of changes in each factor separately. The chart demonstrates that the project remains viable across the range of sensitivity tested. Nevertheless, it is most sensitive to gold price with a reduction of 25% reducing NPV_5 to $60 million. The project is less sensitive to both operating and capital costs, with an increase of 25% reducing NPV_5 to $166 million and $172 million, respectively.

Figure 25.3
Sensitivity of Base Case to Capital, Operating Costs and Gold Price

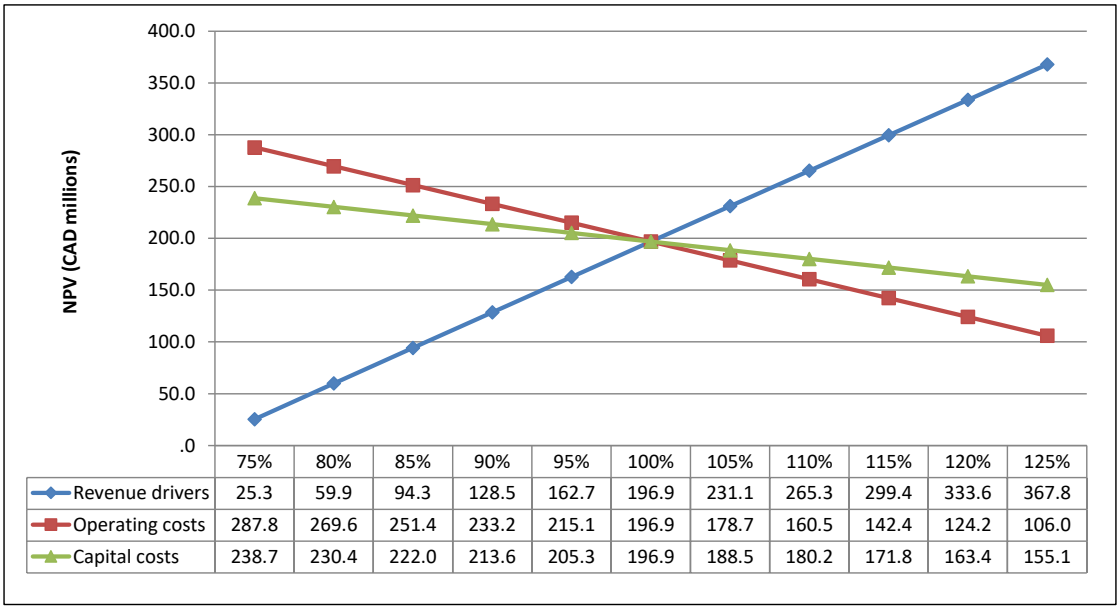


	75%	80%	85%	90%	95%	100%	105%	110%	115%	120%	125%
Revenue drivers	60.1	95.3	130.3	165.8	201.0	236.4	271.5	306.5	341.4	376.2	411.1
Operating costs	305.5	291.7	277.9	264.1	250.3	236.4	222.5	208.5	194.5	180.6	166.7
Capital costs	300.5	287.7	274.9	262.1	249.2	236.4	223.6	210.8	198.0	185.1	172.3

25.6.3.2 Alternative Case

Micon tested the sensitivity of the after-tax NPV_5 to changes in metal price, operating costs and capital investment for a range of 30% above and below base case values. Figure 25.4 shows the results for the toll milling scenario of changes in each factor separately.

Figure 25.4
Sensitivity of NPV in Toll Milling Scenario



	75%	80%	85%	90%	95%	100%	105%	110%	115%	120%	125%
Revenue drivers	25.3	59.9	94.3	128.5	162.7	196.9	231.1	265.3	299.4	333.6	367.8
Operating costs	287.8	269.6	251.4	233.2	215.1	196.9	178.7	160.5	142.4	124.2	106.0
Capital costs	238.7	230.4	222.0	213.6	205.3	196.9	188.5	180.2	171.8	163.4	155.1

The chart demonstrates that this scenario remains viable across the range of sensitivity tested. Nevertheless, it is most sensitive to gold price with a reduction of 25% reducing NPV_5 to $25 million. The project is less sensitive to both operating and capital costs, with an increase of 25% reducing NPV_5 to $106 million and $155 million, respectively.

25.6.4 Conclusion

Since the early 1980s, exploration on the Golden Highway Property has resulted in the discovery of a number of gold deposits and gold-mineralized zones. These can be classified as structurally controlled orogenic gold deposits in an Archean greenstone belt setting.

Seven of these (South West, Windjammer South, Windjammer Central, Windjammer North, 55, Westaway and Discovery) have been sufficiently drilled to have mineral resource estimates prepared for them. For all but Windjammer Central narrow, higher-grade vein structures have been modelled. Central is a wider, lower grade bulk tonnage target potentially suitable for open pit mining. However, the deep overburden in the area has resulted in only a small tonnage of mineralization lying with a pit shell floated on it. For this reason, no resources have been reported for Central.

Other zones (Western, Dyment 3, LC, Westaway, Halfway, South Basin, Twin Creeks, and Landing) and isolated drill intersections have also been found which deserve follow-up exploration.

Micon concludes that, based on the forecast production, capital and operating costs presented in this study, the project base case demonstrates an all-in sustaining cost (AISC) of US$747/oz, and that both the base case and alternative toll-milling scenarios present a potentially viable project at gold prices above US$1,200/oz.

Further exploration is considered to be justified.

26.0 RECOMMENDATIONS

26.1 RECOMMENDED FUTURE WORK

Micon has reviewed a recommended program of continued exploration which has been proposed by Moneta staff. It is recommended that the following activities and programs be conducted to continue to advance the development of the project:

- Exploration drilling program to test mineralized targets already identified.
- Exploration drilling to expand the current mineral resources.
- Exploration drilling to test new exploration drill targets.
- Infill drilling within the current resource where drilling gaps occur or to upgrade resource confidence categories.
- Drilling within the current open pits in areas currently classified as lacking sufficient drilling to support mineral resource estimates.
- Drill extensions of mineralization on extensions of open pits.
- Further geological interpretation and modelling.
- Updating mineral resource estimates upon completion of drill campaigns.
- Mineralogical and petrological studies to determine the deportment of gold.
- Metallurgical test work of the different styles and geological settings of mineralization to test recoveries near cut-off grade, the new higher average grade, as well as higher-grade areas of the resources.
- Metallurgical test work to include acid base accounting and trace element background data collection for environmental base line studies.
- Geotechnical data collection and test work to establish geotechnical aspects of mining the deposits.
- Environmental study programs including aquatic, terrestrial, hydrology, and groundwater to provide data for planning and permitting.
- First Nation and other stakeholder consultation.
- Updated resource and preliminary economic assessment (PEA) of the project to include new and expanded resource areas, to determine the focus, direction and plans for further resource development.
- Subject to positive results from the updated PEA, pre-feasibility studies, geotechnical studies, hydrological studies and additional engineering and mine plan studies

An infill drilling program of 40,000 m is recommended to infill portions of the resource where drill spacing is not sufficient within the interpreted wireframes to fully interpolate grade

between more widely spaced drill holes and to connect shallower structures with extensions at depth.

A 60,000 m exploration drilling program is recommended to expand the currently modelled or pending resources as well as areas within proposed open pits which have not been sufficiently drilled to define resources. A new maiden resource estimate is currently planned for Westaway. Drilling should be allocated to the following target areas: down dip and strike extensions of the 55, Westaway/West Block area, South West east extension (former Gap area) and Windjammer South deposits, as well as the Discovery and Windjammer North deposits and associated zones along the northern splay of the DPFZ. The area north of the BIF units at Windjammer South is not sufficiently drilled to support mineral resource estimates.

A number of new targets not included in the current resource have been identified and found to host gold mineralization, notably along the southern contact of the regional banded iron formation (BIF) and the southern margins of the sedimentary basin where a repeat of the BIF unit has been discovered associated with mineralization. A program of 35,000 m is recommended to test the Halfway, Halfway Lake, East Fold, South Basin, Dyment 3 and Western Zones (See Figure 26.1).

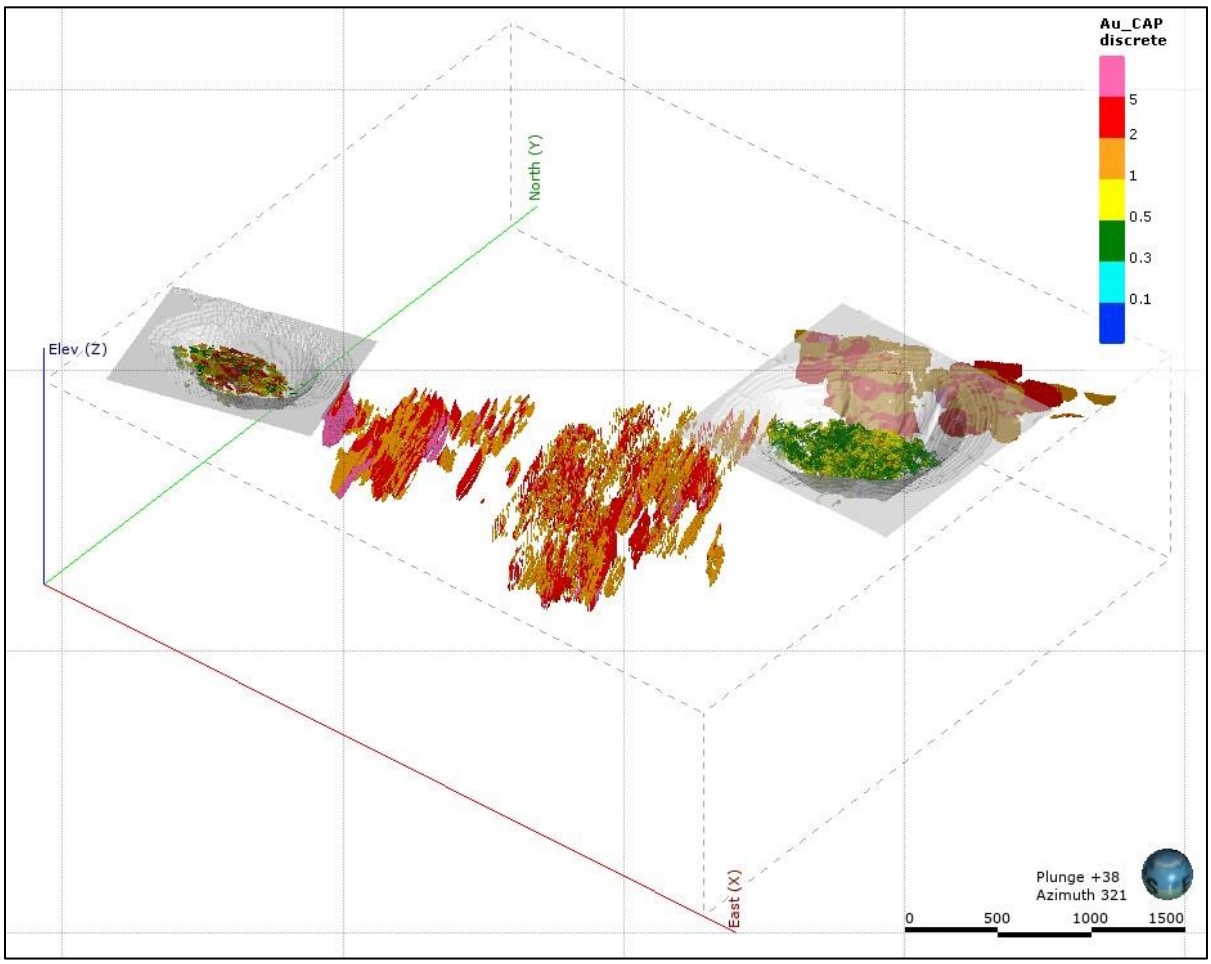
A number of zones including LC, Landing Zone and Twin Creeks occur along the northern splay of the DPFZ within the Tisdale and Kidd-Munro Formations which warrant additional drill testing. A large portion of this structure east of Windjammer North has not been tested. Along the regional BIF, approximately 8 km of strike length is untested. Drill testing is required east of the Windjammer South and west of the 55-deposit area. Historical holes have also been identified with gold mineralization along the Arrow Fault to the north. It is recommended to conduct 65,000 m of exploration drilling.

Upon completion of the proposed additional drilling, updated mineral resource estimates and, subsequently, an updated PEA should be completed to first determine the overall size of the project, then determine the potential economics and outline the best program to advance the project prior to commencing a full pre-feasibility study covering all resource areas.

It is recommended that Moneta characterize the acid generation/acid consuming and metal leaching potential of the different mineralized zones and rock types potentially to be mined/exposed.

Commencing geotechnical data collection is recommended in line with the current status of the project in order to establish suitable base line data as required for further development.

Figure 26.1
Golden Highway Project, 3D Isometric View, Main Target Zones



Source: Moneta, 2021.

A program of environmental and social base line data collection and studies is recommended to reflect the current status of the project and situate the project favourably for further advancement. The commencement of suitable hydrology, ground water and weather data are also recommended.

Moneta is still in the exploration stage of the project. Some environmental baseline data have been collected. It is recommended that Moneta continue all the baseline studies outlined in Section 20.1.2.3, including continued First Nations and community consultation. It is then recommended that a Terms of Reference be prepared and submitted to the government for approval.

Once the approval has been received, Moneta will need to prepare the Environmental Assessment that identifies all positive and negative environmental impacts and how it intends to mitigate all negative impacts.

The Closure Plan document should be prepared at the same time as the EA document to streamline as much as possible the permitting process. The EA document will need to be submitted to the government for review, comments and approval. It is recommended that Moneta secure all necessary permits as soon as practical.

26.2 RECOMMENDED PROGRAM BUDGET

Moneta has also prepared a program budget which is based, in part, on Micon's recommendations (Table 26.1).

Table 26.1
Recommended Work Program Budget

Program	Units (m)	Unit Cost (C$/m)	Budget
Mine Property General			
Infill Drilling Program	40,000	$150	$6,000,000
Resource Expansion Drilling, including in pit drilling	60,000	$150	$9,000,000
Exploration Drilling	65,000	$150	$9,750,000
Drill Test Known Targets	35,000	$150	$5,250,000
Metallurgical Recovery Test Work			$250,000
Petrographic and Mineralogical Studies			$50,000
Geological Interpretation and Modelling			$550,000
Environmental Base Line Study Work: Aquatic, Terrestrial, Ground Water, Water Quality			$350,000
First Nation Consultation and Archaeological Studies			$350,000
Geotechnical and Hydrology programs and studies			$250,000
Resource updates and PEA			$850,000
Pre-feasibility Study			$1,500,000
Total			**$34,400,000**

The QPs have reviewed the proposed program of work and budget and find them to be reasonable and justified in light of the observations made in this report. The QPs recommend that Moneta conduct the planned activities subject to availability of funding and any other matters which may cause the objectives to be altered in the normal course of business activities.

27.0 DATE AND SIGNATURE PAGE

MICON INTERNATIONAL LIMITED

"*B. Terrence Hennessey" {signed, sealed and dated}*

B. Terrence Hennessey, P.Geo.
Vice President
Micon International Limited

January 22, 2021

"Richard M. Gowans" {signed, sealed and dated}

Richard M. Gowans, P.Eng.
President and Principal Metallurgist
Micon International Limited

January 22, 2021

"Barnard Foo" {signed, sealed and dated}

Barnard Foo, P.Eng., M.Eng., MBA
Senior Mining Engineer
Micon International Limited

January 22, 2021

"Christopher Jacobs" {signed, sealed and dated}

Christopher Jacobs, CEng, MIMMM
Vice President and Senior Consultant
Micon International Limited

January 22, 2021

"David Makepeace" {signed, sealed and dated}

David Makepeace, P.Eng.
Senior Associate Engineer
Micon International Limited

January 22, 2021

"Nigel Fung" {signed, sealed and dated}

Nigel Fung, P.Eng.
Vice President of Mining
Micon International Limited

January 22, 2021

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29.0 CERTIFICATES

micon INTERNATIONAL LIMITED | mineral industry consultants

CERTIFICATE OF QUALIFIED PERSON
B. TERRENCE HENNESSEY

As an author of this report titled "A Second Updated Mineral Resource Estimate And Preliminary Economic Assessment For The South West Deposit At The Golden Highway Project, Michaud And Garrison Townships, Black River - Matheson Area, Northeastern Ontario" dated January 22, 2021, with a PEA effective date of September 9, 2020 and a mineral resource effective date of December 8, 2020 (the "Technical Report"), I, B. Terrence Hennessey, P.Geo., do hereby certify that:

1. I am a subconsultant to, and carried out this assignment for Micon International Limited, 900 - 390 Bay Street, Toronto, Ontario M5H 2Y2, Tel.: (416) 362-5135; Fax: (416) 362-5763, e-mail: thennessey@micon-international.com

2. I hold the following academic qualifications:

   B.Sc. (Geology) McMaster University 1978

3. I am a registered Professional Geoscientist with Professional Geoscientists Ontario (membership #0038).

4. I have worked as a geologist in the minerals industry for over 40 years.

5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 (NI 43-101) and, by reason of my education, past relevant work experience and affiliation with a professional association, fulfill the requirements to be a Qualified Person for the purposes of NI 43-101. My work experience includes 7 years as an exploration geologist looking for iron ore, gold, base metal and tin deposits, more than 10 years as a mine geologist in both open-pit and underground mines and 24 years as a consulting geologist working in precious, ferrous and base metals as well as industrial minerals.

6. I have visited the Golden Highway Project near Matheson, Ontario and Moneta's core logging facility and office in Timmins, Ontario.

7. I am responsible for Sections 2 to 12, 14, 15, 19, 23, 24 and summaries therefrom in Sections 1, 25 and 26, of this Technical Report.

8. I am independent of Moneta Porcupine Mines Inc., as defined in Section 1.5 of NI 43-101.

9. I have prepared two previous mineral resource estimates in 2018/2019 on the property that is the subject of the Technical Report.

10. I have read NI 43-101 and Form 43-101F1 and the portions of this report for which I am responsible have been prepared in compliance with that instrument and form.

11. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make this report not be misleading.

Signing Date: January, 22, 2021
PEA Effective Date: September 9, 2020; Mineral Resource Effective Date December 8, 2020.

"B. Terrence Hennessey" {signed and sealed}

B. Terrence Hennessey, P.Geo.

CERTIFICATE OF QUALIFIED PERSON
RICHARD GOWANS, P.ENG.

As an author of this report titled "A Second Updated Mineral Resource Estimate And Preliminary Economic Assessment For The South West Deposit At The Golden Highway Project, Michaud And Garrison Townships, Black River - Matheson Area, Northeastern Ontario" dated January 22, 2021, with a PEA effective date of September 9, 2020 and a mineral resource effective date of December 8, 2020 (the "Technical Report"), I, Richard Gowans do hereby certify that:

1. I am employed by, and carried out this assignment for, Micon International Limited, 900 - 390 Bay Street, Toronto, Ontario M5H 2Y2, tel. (416) 362-5135, fax (416) 362-5763, e-mail rgowans@micon-international.com.

2. I hold the following academic qualifications:

   B.Sc. (Hons) Minerals Engineering, The University of Birmingham, U.K. 1980.

3. I am a registered Professional Engineer in Ontario (membership number 90529389); as well, I am a member in good standing of the Canadian Institute of Mining, Metallurgy and Petroleum.

4. I am familiar with NI 43-101 and by reason of education, experience and professional registration and fulfill the requirements of a Qualified Person as defined in NI 43-101. I have been continuously employed in the mining industry since graduation and my work experience includes over 35 years of the management of technical studies and design of numerous metallurgical testwork programs and metallurgical processing plants.

5. I have not visited the site.

6. I am responsible for Sections 13, 17 and summaries therefrom, in Sections 1, 25 and 26 of this Technical Report.

7. I was an author of a previous Technical Report on the Golden Highway Project.

8. As of the date of this Certificate, to the best of my knowledge, information, and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

9. I am independent of Moneta Porcupine Mines Inc. as defined by Section 1.5 of the Instrument.

10. I have read National Instrument 43-101 and the Technical Report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.

Signing Date: January 22, 2021
PEA Effective Date: September 9, 2020
Mineral Resource Effective Date December 8, 2020

"Richard Gowans" {signed and sealed as of the report date}

Richard Gowans P.Eng.

CERTIFICATE OF QUALIFIED PERSON
BARNARD FOO, M.Eng., MBA, P.Eng.

As an author of this report titled "A Second Updated Mineral Resource Estimate And Preliminary Economic Assessment For The South West Deposit At The Golden Highway Project, Michaud And Garrison Townships, Black River - Matheson Area, Northeastern Ontario" dated January 22,, 2021, with a PEA effective date of September 9, 2020 and a mineral resource effective date of December 8, 2020 (the "Technical Report"), I, Richard Gowans do hereby certify that:

1. I was employed by, and carried out this assignment for, Micon International Limited, 205 - 700 West Pender Street, Vancouver, British Columbia, V6C 1G8., Tel. (604) 647-6463, e-mail bfoo@micon-international.com during the effective date of the project.

2. I hold the following academic qualifications:
   University of Northern British Columbia, Executive MBA, 2010
   University of British Columbia, M.Eng., Rock Mechanics, 2007
   Laurentian University, B.Eng., Mining Engineering, 1998

3. I am a registered Professional Engineer in Ontario (membership number 100052925).

4. I am familiar with NI 43-101 and by reason of education, experience and professional registration and fulfill the requirements of a Qualified Person as defined in NI 43-101. I have been continuously employed in the mining industry since graduation and my work experience includes over 20 years in underground mine operations, design and evaluations in the engineering consulting sector.

5. I have not visited the site.

6. I am responsible for Sections 16, and summaries therefrom, in Sections 1, 2.0, 21, 25 and 26 of this Technical Report titled "A Second Updated Mineral Resource Estimate And Preliminary Economic Assessment For The South West Deposit At The Golden Highway Project, Michaud And Garrison Townships, Black River - Matheson Area, Northeastern Ontario" dated January 22, 2021, with a PEA effective date of September 9, 2020 and a mineral resource effective date of December 8, 2020.

7. I have no prior involvement with the Golden Highway Project that is the subject of the Technical Report.

8. As of the date of this Certificate, to the best of my knowledge, information, and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

9. I am independent of Moneta Porcupine Mines Inc. as defined by Section 1.5 of the Instrument.

10. I have read National Instrument 43-101 and the Technical Report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.

Signing Date: January 22, 2021
PEA Effective Date: September 9, 2020; Mineral Resource Effective Date: December 8, 2020.

"Barnard Foo" {signed and sealed as of the report date}

Barnard Foo, M.Eng., MBA, P.Eng.

CERTIFICATE OF QUALIFIED PERSON
CHRISTOPHER JACOBS, CEng, MIMMM

As an author of this report titled "A Second Updated Mineral Resource Estimate And Preliminary Economic Assessment For The South West Deposit At The Golden Highway Project, Michaud And Garrison Townships, Black River - Matheson Area, Northeastern Ontario" dated January 22, 2021, with a PEA effective date of September 9, 2020 and a mineral resource effective date of December 8, 2020 (the "Technical Report"), I, Christopher Jacobs, do hereby certify that:

1. I am employed as a Vice President and Mining Economist by, and carried out this assignment for, Micon International Limited, 900 - 390 Bay Street, Toronto, Ontario M5H 2Y2. tel. (416) 362-5135, email: cjacobs@micon-international.com.

2. I hold the following academic qualifications:

   B.Sc. (Hons) Geochemistry, University of Reading, 1980;

   M.B.A., Gordon Institute of Business Science, University of Pretoria, 2004.

3. I am a Chartered Engineer registered with the Engineering Council of the U.K.

   (registration number 369178).

4. Also, I am a professional member in good standing of: The Institute of Materials, Minerals and Mining; and the Canadian Institute of Mining, Metallurgy and Petroleum (Member).

5. I am familiar with NI 43-101 and by reason of education, experience and professional registration, fulfill the requirements of a Qualified Person as defined in NI 43-101. I have worked in the minerals industry for more than 40 years; my work experience includes 10 years as an exploration and mining geologist on gold, platinum, copper/nickel and chromite deposits; 10 years as a technical/operations manager in both open-pit and underground mines; 3 years as strategic (mine) planning manager and the remainder as an independent consultant when I have worked on a variety of mineral deposits including gold and base metals.

6. I have not visited the Property that is the subject of this report.

7. I have no prior involvement with the Property that is the subject of the Technical Report.

8. I am responsible for Sections 1.13, 1.14, 21, 22 and 25.6 of this Technical Report.

9. I am independent of Moneta Porcupine Mines Inc. and its related entities, as defined in Section 1.5 of NI 43-101.

10. I have read NI 43-101 and the Sections of this report for which I am responsible have been prepared in compliance with the instrument.

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

Signing Date: January 22, 2021
PEA Effective Date: September 9, 2020; Mineral Resource Effective Date: December 8, 2020

"Christopher Jacobs" {signed and sealed}

Christopher Jacobs, CEng, MIMMM

CERTIFICATE OF QUALIFIED PERSON
DAVID MAKEPEACE, M.Eng., P.Eng.

As an author of this report titled "A Second Updated Mineral Resource Estimate And Preliminary Economic Assessment For The South West Deposit At The Golden Highway Project, Michaud And Garrison Townships, Black River - Matheson Area, Northeastern Ontario" dated January 22, 2021, with a PEA effective date of September 9, 2020 and a mineral resource effective date of December 8, 2020 (the "Technical Report"), I, David K. Makepeace, P.Eng., do hereby certify that:

1. I was subcontracted by, and carried out this assignment for, Micon International Limited, 900 - 390 Bay Street, Toronto, Ontario, M5H 2Y2., Tel.: (416) 362-5135, Fax: (416) 362-5763 under Geospectrum Engineering, 2775 Catherine Crescent, Armstrong, British Columbia, V0E 1B1, Tel.:(604) 751-2272, e-mail geospectrum.2588@gmail.com during the effective date of the project.

2. I hold the following academic qualifications:

   Queen's University at Kingston, Ontario, Hons. BASc., Geological Engineering, 1976

   University of Alberta, M.Eng., Environmental Engineering, 1994

3. I am a registered member of the:

   Engineers and Geoscientists of British Columbia (License: 14912).

   Association of Professional Engineer and Geoscientists of Alberta (Member: 29367)

4. I have worked as a geo-environmental engineer in the mining industry for over 40 years.

5. I have read the definition of a "Qualified Person" (QP), set out in National Instrument 43-101 (NI 43-101) and by reason of my education, my past relevant work experience and my affiliation with professional engineering associations, fulfill the requirements to be a QP, as defined in NI 43-101. My work experience includes 10 years as an exploration geologist, over 20 years as an underground and open pit geologist and engineer and 10 years as an environmental engineer in the mining industry focusing on precious, base and industrial minerals. I have been a geo-environmental engineering consultant for over 20 years to the mining industry.

6. I have not visited the site.

7. I am responsible for Sections 20, and relevant portions of Sections 1 and 25 of this Technical Report titled "A Second Updated Mineral Resource Estimate And Preliminary Economic Assessment For The South West Deposit At The Golden Highway Project, Michaud And Garrison Townships, Black River - Matheson Area, Northeastern Ontario" dated January 22, 2021, with a PEA effective date of September 9, 2020 and a mineral resource effective date of December 8, 2020.

8. I am independent of Moneta Porcupine Mines Inc., as defined in Section 1.5 of NI 43-101.

9. I have read NI 43-101 and Form 43-101F1 and the portions of this report for which I am responsible for have been prepared in compliance with that Instrument and Form.

10. As of the date of this Certificate, to the best of my knowledge, information, and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this technical report not be misleading.

Signing Date: January 22, 2021
PEA Effective Date: September 9, 2020; Mineral Resource Effective Date: December 8, 2020

"David K. Makepeace" {signed and sealed as of the report date}

David K. Makepeace, M.Eng., P.Eng.

CERTIFICATE OF QUALIFIED PERSON
NIGEL FUNG, P.Eng.

As an author of this report titled "A Second Updated Mineral Resource Estimate And Preliminary Economic Assessment For The South West Deposit At The Golden Highway Project, Michaud And Garrison Townships, Black River - Matheson Area, Northeastern Ontario" dated January 22, 2021, with a PEA effective date of September 9, 2020 and a mineral resource effective date of December 8, 2020 (the "Technical Report"), I, Nigel S. Fung do hereby certify that:

1. I am employed by, and carried out this assignment for Micon International Limited, 900 - 390 Bay Street, Toronto, Ontario M5H 2Y2, Tel.: (416) 362-5135; Fax: (416) 362-5763, e-mail: nfung@micon-international.com

2. I hold the following academic qualifications:

   B.Sc.H (Biology) University of Toronto 1993

   B.Eng. (Mining) McGill University 2001

3. I am a registered Engineer with Professional Engineers Ontario (Licence #100173276).

   I am a registered Engineer with the Society for Mining, Metallurgy & Exploration (SME) (#4185435)

4. I have worked as a mining engineer in the minerals industry for over 12 years.

5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 (NI 43-101) and, by reason of my education, past relevant work experience and affiliation with a professional association, fulfill the requirements to be a Qualified Person for the purposes of NI 43-101. My work experience includes 12 years in mine planning in oil sands, gold, and base metals. I have spent over 10 years in open-pit and two years in underground mines. Through work with Caterpillar I have carried out mining production studies throughout Africa, Central Asia and the Middle East in Coal, Precious Metal and industrial mineral mines.

6. I have not visited the Golden Highway Project, near Matheson, Ontario nor Moneta's core logging facility and office in Timmins, Ontario.

7. I am responsible for the mining summaries in Sections 1, 25 and 26, of the Technical Report titled "A Second Updated Mineral Resource Estimate And Preliminary Economic Assessment For The South West Deposit At The Golden Highway Project, Michaud And Garrison Townships, Black River - Matheson Area, Northeastern Ontario" dated January 22, 2021, with a PEA effective date of September 9, 2020 and a mineral resource effective date of December 8, 2020.

8. I am independent of Moneta Porcupine Mines Inc., as defined in Section 1.5 of NI 43-101.

9. I have read NI 43-101 and Form 43-101F1 and the portions of this report for which I am responsible have been prepared in compliance with that instrument and form.

10. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make this report not be misleading.

Signing Date: January 22, 2021
PEA Effective Date: September 9, 2020; Mineral Resource Effective Date: December 8, 2020

"Nigel S. Fung" {signed and sealed}

Nigel S. Fung, P.Eng.

APPENDIX I

CLAIMS LIST

Table 1A
Golden Highway Property, Patented Mining Claims List

Patent ID	Parcel	Claim No.	Township	Con.	Lot	Half	Quarter	Area (ha)
PAT-3005	9921 SEC	L 38501	Michaud	3	2	S	NW	15.479
PAT-3006	9926 SEC	L 38929	Michaud	3	3	N	SW	16.238
PAT-3007	9924 SEC	L 38497	Michaud	3	3	S	NE	16.238
PAT-3008	9925 SEC	L 38493	Michaud	3	3	S	NW	16.238
PAT-3009	9922 SEC	L 38498	Michaud	3	3	S	SE	16.238
PAT-3010	9923 SEC	L 38494	Michaud	3	3	S	SW	16.238
PAT-3011	9927 SEC	L 38490	Michaud	3	4	S	SE	16.236
PAT-3012	9928 SEC	L 38504	Michaud	3	4	S	SW	16.39
PAT-3013	11561 SEC	L 47194	Michaud	2	3	N	SE	16.086
PAT-3014	10215 SEC	L 38505	Michaud	2	4	N	NW	16.491
PAT-3015	10214 SEC	L 38491	Michaud	2	4	N	NE	16.491
PAT-3016	10216 SEC	L 38502	Michaud	3	2	S	SW	15.479
PAT-3017	10217 SEC	L 38500	Michaud	3	2	N	SW	15.479
PAT-3018	10219 SEC	L 38492	Michaud	3	4	S	NE	16.236
PAT-3019	10221 SEC	L 38930	Michaud	3	4	N	SE	16.236
PAT-3020	10218 SEC	L 38928	Michaud	3	3	N	SE	16.238
PAT-3021	10220 SEC	L 38503	Michaud	3	4	S	NW	16.697
PAT-3022	10213 SEC	L 38495	Michaud	2	3	N	NW	16.086
PAT-3023	10212 SEC	L 38499	Michaud	2	3	N	NE	16.086
PAT-3024	11562 SEC	L 47193	Michaud	2	3	N	SW	16.086
PAT-3025	11563 SEC	L 47191	Michaud	2	4	N	SE	16.491
PAT-3026	11564 SEC	L 47192	Michaud	2	4	N	SW	16.491
							Total	**355.968**

Table 1B
Golden Highway Property, Leased Mining Claims List

Legacy Claim ID	Historic Lease No.	Parcel No.	Area (ha)	Township	Lease Expiry Date	Rights
LEA-109306	ML 106312	1665 LC	175.13	Michaud	2033-May-31	Mining only
LEA-108823	ML 105641	1599 LC	180.91	Garrison	2032-Apr-30	Mining only
LEA-108690	ML 105465	1588 LC	1,102.060	Michaud	2031-Nov-30	Mining and Surface
LEA-108691	ML 105466	1589 LC	195.103	Michaud	2031-Dec-31	Mining and Surface
		Total	**1653.203**			

Table 1C
Golden Highway Property, Unpatented Mining Claims List

Record #	Legacy Claim ID	Township/ Area	Tenure Number	Tenure Type	Due Date	Tenure Percentage
1	3016589	Michaud	201799	Single Cell Mining Claim	2023-02-18	100
2	4261890	Guibord	215049	Single Cell Mining Claim	2023-03-24	100
3	4261890	Guibord	233560	Single Cell Mining Claim	2023-03-24	100
4	1226789	Michaud	103497	Single Cell Mining Claim	2023-03-31	100
5	678858	Michaud	249715	Single Cell Mining Claim	2023-03-31	100
6	1219657	Michaud	137381	Single Cell Mining Claim	2023-04-09	100
7	1219657	Michaud	170432	Single Cell Mining Claim	2023-04-09	100
8	1219657	Michaud	239326	Single Cell Mining Claim	2023-04-09	100

Record #	Legacy Claim ID	Township/ Area	Tenure Number	Tenure Type	Due Date	Tenure Percentage
9	1219657	Michaud	285207	Single Cell Mining Claim	2023-04-09	100
10	849660	Michaud	147469	Single Cell Mining Claim	2023-04-29	100
11	849662	Michaud	279842	Single Cell Mining Claim	2023-04-29	100
12	849664	Michaud	285613	Single Cell Mining Claim	2023-04-29	100
13	1243891	Michaud	155660	Single Cell Mining Claim	2023-05-03	100
14	1243891	Michaud	220507	Single Cell Mining Claim	2023-05-03	100
15	1243891	Michaud	241155	Single Cell Mining Claim	2023-05-03	100
16	1243891	Michaud	276220	Single Cell Mining Claim	2023-05-03	100
17	1243891	Michaud	287783	Single Cell Mining Claim	2023-05-03	100
18	1243891	Michaud	295094	Single Cell Mining Claim	2023-05-03	100
19	1243891	Michaud	295095	Single Cell Mining Claim	2023-05-03	100
20	4263034	Michaud	236916	Single Cell Mining Claim	2023-05-05	100
21	4263033	Michaud	305944	Single Cell Mining Claim	2023-05-05	100
22	1219657	Michaud	285206	Single Cell Mining Claim	2023-05-06	100
23	3015387	Guibord, Michaud	102202	Single Cell Mining Claim	2023-05-20	100
24	3015381	Michaud	110755	Single Cell Mining Claim	2023-05-20	100
25	3013806	Guibord	118331	Single Cell Mining Claim	2023-05-20	100
26	3015290	Michaud	125736	Single Cell Mining Claim	2023-05-20	100
27	3013806	Guibord	126399	Single Cell Mining Claim	2023-05-20	100
28	3015380	Michaud	138343	Single Cell Mining Claim	2023-05-20	100
29	3015379	Guibord, Michaud	155676	Single Cell Mining Claim	2023-05-20	100
30	3015380	Michaud	169026	Single Cell Mining Claim	2023-05-20	100
31	3015388	Guibord	172330	Single Cell Mining Claim	2023-05-20	100
32	3015380	Michaud	172898	Single Cell Mining Claim	2023-05-20	100
33	3015380	Michaud	172899	Single Cell Mining Claim	2023-05-20	100
34	3015380	Michaud	182221	Single Cell Mining Claim	2023-05-20	100
35	3015379	Michaud	189677	Single Cell Mining Claim	2023-05-20	100
36	3015379	Michaud	189126	Single Cell Mining Claim	2023-05-20	100
37	3013806	Guibord	189243	Single Cell Mining Claim	2023-05-20	100
38	3015380	Michaud	203122	Single Cell Mining Claim	2023-05-20	100
39	3015380	Michaud	203148	Single Cell Mining Claim	2023-05-20	100
40	3015379	Michaud	202369	Single Cell Mining Claim	2023-05-20	100
41	3015379	Michaud	202370	Single Cell Mining Claim	2023-05-20	100
42	3015379	Michaud	202371	Single Cell Mining Claim	2023-05-20	100
43	3015380	Michaud	206328	Single Cell Mining Claim	2023-05-20	100
44	3015380	Michaud	210450	Single Cell Mining Claim	2023-05-20	100
45	3013806	Guibord	214796	Single Cell Mining Claim	2023-05-20	100
46	3015386	Michaud	219058	Single Cell Mining Claim	2023-05-20	100
47	3015388	Guibord	221029	Single Cell Mining Claim	2023-05-20	100
48	3015384	Michaud	224349	Single Cell Mining Claim	2023-05-20	100
49	3015380	Michaud	247139	Single Cell Mining Claim	2023-05-20	100
50	3015380	Michaud	256986	Single Cell Mining Claim	2023-05-20	100
51	3015379	Michaud	257896	Single Cell Mining Claim	2023-05-20	100
52	3015381	Michaud	259153	Single Cell Mining Claim	2023-05-20	100
53	3015380	Michaud	259179	Single Cell Mining Claim	2023-05-20	100
54	3013806	Guibord	262263	Single Cell Mining Claim	2023-05-20	100
55	3015379	Michaud	274231	Single Cell Mining Claim	2023-05-20	100
56	3015379	Michaud	274232	Single Cell Mining Claim	2023-05-20	100
57	3015290	Michaud	286314	Single Cell Mining Claim	2023-05-20	100
58	3015381	Michaud	291633	Single Cell Mining Claim	2023-05-20	100
59	3015379	Michaud	293522	Single Cell Mining Claim	2023-05-20	100
60	3015379	Michaud	293523	Single Cell Mining Claim	2023-05-20	100
61	3015379	Michaud	293524	Single Cell Mining Claim	2023-05-20	100
62	3015380	Michaud	306360	Single Cell Mining Claim	2023-05-20	100
63	3015381	Michaud	313646	Single Cell Mining Claim	2023-05-20	100
64	3015382	Michaud	321653	Single Cell Mining Claim	2023-05-20	100
65	3015380	Michaud	345130	Single Cell Mining Claim	2023-05-20	100
66	3015380	Michaud	345156	Single Cell Mining Claim	2023-05-20	100
67	3015380	Michaud	345157	Single Cell Mining Claim	2023-05-20	100
68	3015379	Michaud	343869	Single Cell Mining Claim	2023-05-20	100
69	1238680	Michaud	162913	Single Cell Mining Claim	2023-05-31	100
70	1243891	Michaud	174559	Single Cell Mining Claim	2023-05-31	100
71	1247526	Michaud	177221	Single Cell Mining Claim	2023-05-31	100

Record #	Legacy Claim ID	Township/ Area	Tenure Number	Tenure Type	Due Date	Tenure Percentage
72	1243891	Michaud	191097	Single Cell Mining Claim	2023-05-31	100
73	1247515	Michaud	193535	Single Cell Mining Claim	2023-05-31	100
74	1243890	Michaud	226521	Single Cell Mining Claim	2023-05-31	100
75	1238680	Michaud	229597	Single Cell Mining Claim	2023-05-31	100
76	1247515	Michaud	242173	Single Cell Mining Claim	2023-05-31	100
77	1247515	Michaud	249675	Single Cell Mining Claim	2023-05-31	100
78	1247526	Michaud	266426	Single Cell Mining Claim	2023-05-31	100
79	1247526	Michaud	273060	Single Cell Mining Claim	2023-05-31	100
80	1238680	Michaud	276798	Single Cell Mining Claim	2023-05-31	100
81	1243892	Guibord, Michaud	286333	Single Cell Mining Claim	2023-05-31	100
82	1238680	Michaud	288892	Single Cell Mining Claim	2023-05-31	100
83	1243891	Michaud	287782	Single Cell Mining Claim	2023-05-31	100
84	1247515	Michaud	296816	Single Cell Mining Claim	2023-05-31	100
85	1247526	Michaud	303012	Single Cell Mining Claim	2023-05-31	100
86	1247515	Michaud	309527	Single Cell Mining Claim	2023-05-31	100
87	1247515	Michaud	326346	Single Cell Mining Claim	2023-05-31	100
88	4205463	Michaud	117398	Single Cell Mining Claim	2023-06-05	100
89	1248401	Michaud	129488	Single Cell Mining Claim	2023-06-05	100
90	1248401	Michaud	130274	Single Cell Mining Claim	2023-06-05	100
91	1248402	Michaud	133430	Single Cell Mining Claim	2023-06-05	100
92	3015381	Michaud	140215	Single Cell Mining Claim	2023-06-05	100
93	3002169	Michaud	146189	Single Cell Mining Claim	2023-06-05	100
94	1248401	McCool, Michaud	175567	Single Cell Mining Claim	2023-06-05	100
95	3002169	Michaud	174772	Single Cell Mining Claim	2023-06-05	100
96	1248402	McCool, Michaud	185413	Single Cell Mining Claim	2023-06-05	100
97	1219657	Michaud	189412	Single Cell Mining Claim	2023-06-05	100
98	1248401	Michaud	225204	Single Cell Mining Claim	2023-06-05	100
99	1219657	Michaud	226696	Single Cell Mining Claim	2023-06-05	100
100	1248402	McCool, Michaud	245356	Single Cell Mining Claim	2023-06-05	100
101	1248402	Michaud	245370	Single Cell Mining Claim	2023-06-05	100
102	4211425	Michaud	248251	Single Cell Mining Claim	2023-06-05	100
103	1248402	McCool, Michaud	252218	Single Cell Mining Claim	2023-06-05	100
104	1219657	Michaud	256059	Single Cell Mining Claim	2023-06-05	100
105	3002169	Michaud	259935	Single Cell Mining Claim	2023-06-05	100
106	4205463	Michaud	267652	Single Cell Mining Claim	2023-06-05	100
107	1219657	Michaud	293314	Single Cell Mining Claim	2023-06-05	100
108	1248401	McCool, Michaud	296811	Single Cell Mining Claim	2023-06-05	100
109	1248401	Michaud	296812	Single Cell Mining Claim	2023-06-05	100
110	1248401	McCool, Michaud	301467	Single Cell Mining Claim	2023-06-05	100
111	1248401	McCool, Michaud	309523	Single Cell Mining Claim	2023-06-05	100
112	1248402	Michaud	318118	Single Cell Mining Claim	2023-06-05	100
113	1248401	Michaud	316258	Single Cell Mining Claim	2023-06-05	100
114	1248401	McCool, Michaud	337148	Single Cell Mining Claim	2023-06-05	100
115	1248402	McCool, Michaud	339692	Single Cell Mining Claim	2023-06-05	100
116	843897	Michaud	125025	Single Cell Mining Claim	2023-06-13	100
117	4220423	Michaud	127123	Single Cell Mining Claim	2023-06-13	100
118	843895	Michaud	155054	Single Cell Mining Claim	2023-06-13	100
119	843899	Michaud	161552	Single Cell Mining Claim	2023-06-13	100
120	3015382	Michaud	169025	Single Cell Mining Claim	2023-06-13	100
121	843893	Michaud	177224	Single Cell Mining Claim	2023-06-13	100
122	843894	Michaud	179280	Single Cell Mining Claim	2023-06-13	100
123	843898	Michaud	182558	Single Cell Mining Claim	2023-06-13	100
124	843891	Michaud	193224	Single Cell Mining Claim	2023-06-13	100
125	4220423	Michaud	217707	Single Cell Mining Claim	2023-06-13	100
126	4220423	Michaud	263479	Single Cell Mining Claim	2023-06-13	100
127	843895	Michaud	270938	Single Cell Mining Claim	2023-06-13	100
128	843891	Michaud	289196	Single Cell Mining Claim	2023-06-13	100
129	843899	Michaud	300072	Single Cell Mining Claim	2023-06-13	100
130	3015382	Michaud	344042	Single Cell Mining Claim	2023-06-13	100
131	1240793	Michaud	106702	Single Cell Mining Claim	2023-06-27	100
132	1226789	Michaud	119125	Single Cell Mining Claim	2023-06-27	100
133	1219657	Michaud	153800	Single Cell Mining Claim	2023-06-27	100
134	1240794	Michaud	198945	Single Cell Mining Claim	2023-06-27	100

Record #	Legacy Claim ID	Township/ Area	Tenure Number	Tenure Type	Due Date	Tenure Percentage
135	1240793	Michaud	225205	Single Cell Mining Claim	2023-06-27	100
136	1240794	Michaud	301468	Single Cell Mining Claim	2023-06-27	100
137	1240793	Michaud	302188	Single Cell Mining Claim	2023-06-27	100
138	1240788	Michaud	308079	Single Cell Mining Claim	2023-06-27	100
139	1219657	Michaud	322447	Single Cell Mining Claim	2023-06-27	100
140	1240793	Michaud	340904	Single Cell Mining Claim	2023-06-27	100
141	1166919	Guibord	156460	Single Cell Mining Claim	2023-07-24	100
142	1166919	Guibord, Michaud	163821	Single Cell Mining Claim	2023-07-24	100
143	1166919	Guibord, Michaud	175572	Single Cell Mining Claim	2023-07-24	100
144	1166919	Guibord	188911	Single Cell Mining Claim	2023-07-24	100
145	1166919	Guibord	208410	Single Cell Mining Claim	2023-07-24	100
146	1166919	Guibord	237060	Single Cell Mining Claim	2023-07-24	100
147	1166919	Guibord	267687	Single Cell Mining Claim	2023-07-24	100
148	1166919	Guibord, Michaud	278320	Single Cell Mining Claim	2023-07-24	100
149	1166919	Guibord	343091	Single Cell Mining Claim	2023-07-24	100
150	1248410	Michaud	119835	Single Cell Mining Claim	2023-08-01	100
151	1243891	Michaud	174560	Single Cell Mining Claim	2023-08-01	100
152	1243891	Michaud	221014	Single Cell Mining Claim	2023-08-01	100
153	1243891	Michaud	220508	Single Cell Mining Claim	2023-08-01	100
154	1243891	Michaud	220509	Single Cell Mining Claim	2023-08-01	100
155	1243891	Michaud	257703	Single Cell Mining Claim	2023-08-01	100
156	1248410	Barnet, Michaud	326945	Single Cell Mining Claim	2023-08-01	100
157	1243891	Michaud	336148	Single Cell Mining Claim	2023-08-01	100
158	1243891	Michaud	336149	Single Cell Mining Claim	2023-08-01	100
159	643686	Garrison	128913	Single Cell Mining Claim	2023-08-27	100
160	643684	Garrison	164212	Single Cell Mining Claim	2023-08-27	100
161	653659	Garrison, Michaud	294849	Single Cell Mining Claim	2023-09-15	100
162	643688	Michaud	135518	Single Cell Mining Claim	2023-09-20	100
163	643683	Garrison, Michaud	158187	Single Cell Mining Claim	2023-09-20	100
164	643685	Garrison, Michaud	164213	Single Cell Mining Claim	2023-09-20	100
165	643837	Michaud	200880	Single Cell Mining Claim	2023-09-20	100
166	1129845	Michaud	219334	Single Cell Mining Claim	2023-09-20	100
167	643687	Michaud	227300	Single Cell Mining Claim	2023-09-20	100
168	1129845	Michaud	284001	Single Cell Mining Claim	2023-09-20	100
169	1207486	Michaud	151803	Single Cell Mining Claim	2023-09-26	100
170	1206790	Michaud	237313	Single Cell Mining Claim	2023-09-26	100
171	1206790	Michaud	239327	Single Cell Mining Claim	2023-09-26	100
172	1207486	Michaud	327597	Single Cell Mining Claim	2023-09-26	100
173	3003825	Guibord	116916	Single Cell Mining Claim	2023-09-27	100
174	3003825	Guibord	137652	Single Cell Mining Claim	2023-09-27	100
175	3003825	Guibord	328901	Single Cell Mining Claim	2023-09-27	100
176	3004007	Michaud	150967	Single Cell Mining Claim	2023-09-30	100
177	1219657	Michaud	172568	Single Cell Mining Claim	2023-09-30	100
178	3002169	Michaud	247760	Single Cell Mining Claim	2023-09-30	100
179	1219657	Michaud	256060	Single Cell Mining Claim	2023-09-30	100
180	3004007	Michaud	343813	Single Cell Mining Claim	2023-09-30	100
181	949291	Michaud	121892	Single Cell Mining Claim	2023-10-24	100
182	843892	Michaud	124464	Single Cell Mining Claim	2023-10-24	100
183	949284	Michaud	143821	Single Cell Mining Claim	2023-10-24	100
184	949286	Michaud	172249	Single Cell Mining Claim	2023-10-24	100
185	949285	Michaud	172564	Single Cell Mining Claim	2023-10-24	100
186	949285	Michaud	174507	Single Cell Mining Claim	2023-10-24	100
187	949291	Michaud	187529	Single Cell Mining Claim	2023-10-24	100
188	949284	Michaud	209085	Single Cell Mining Claim	2023-10-24	100
189	949294	Michaud	236190	Single Cell Mining Claim	2023-10-24	100
190	949283	Michaud	289237	Single Cell Mining Claim	2023-10-24	100
191	949293	Michaud	290075	Single Cell Mining Claim	2023-10-24	100
192	949282	Michaud	321583	Single Cell Mining Claim	2023-10-24	100
193	3019466	Michaud	103523	Single Cell Mining Claim	2023-11-06	100
194	1248402	Michaud	118785	Single Cell Mining Claim	2023-11-06	100
195	678859	Michaud	125735	Single Cell Mining Claim	2023-11-06	100
196	3019466	Michaud	167093	Single Cell Mining Claim	2023-11-06	100
197	3013403	Michaud	186567	Single Cell Mining Claim	2023-11-06	100

Record #	Legacy Claim ID	Township/ Area	Tenure Number	Tenure Type	Due Date	Tenure Percentage
198	949683	Michaud	189125	Single Cell Mining Claim	2023-11-06	100
199	678858	Michaud	210386	Single Cell Mining Claim	2023-11-06	100
200	949683	Michaud	218689	Single Cell Mining Claim	2023-11-06	100
201	949295	Michaud	226497	Single Cell Mining Claim	2023-11-06	100
202	1240793	Michaud	252715	Single Cell Mining Claim	2023-11-06	100
203	1240793	Michaud	281848	Single Cell Mining Claim	2023-11-06	100
204	949295	Michaud	286312	Single Cell Mining Claim	2023-11-06	100
205	643838	Michaud	292656	Single Cell Mining Claim	2023-11-06	100
206	4257846	Michaud	117421	Single Cell Mining Claim	2023-11-30	100
207	4257847	Michaud	185904	Single Cell Mining Claim	2023-11-30	100
208	4257849	Michaud	190820	Single Cell Mining Claim	2023-11-30	100
209	4257848	Michaud	319418	Single Cell Mining Claim	2023-11-30	100
210	4287093	McCool, Michaud	553031	Single Cell Mining Claim	2024-07-03	100
211	4280014	Garrison	144925	Single Cell Mining Claim	2025-06-27	100
212	4280014	Garrison	228784	Single Cell Mining Claim	2025-06-27	100
213	4280013	Garrison	314183	Single Cell Mining Claim	2025-06-28	100
214	4220423	Michaud	337395	Boundary Cell Mining Claim	2023-02-13	100
215	4220423	Michaud	221773	Boundary Cell Mining Claim	2023-02-13	100
216	4220423	Michaud	241905	Boundary Cell Mining Claim	2023-02-13	100
217	4220423	Michaud	196887	Boundary Cell Mining Claim	2023-02-17	100
218	1129845	Michaud	184327	Boundary Cell Mining Claim	2023-03-30	100
219	1226789	Michaud	103843	Boundary Cell Mining Claim	2023-03-31	100
220	959277	Michaud	144331	Boundary Cell Mining Claim	2023-03-31	100
221	1226791	Michaud	190028	Boundary Cell Mining Claim	2023-03-31	100
222	1129845	Michaud	213699	Boundary Cell Mining Claim	2023-03-31	100
223	959276	Michaud	267131	Boundary Cell Mining Claim	2023-03-31	100
224	1226791	Michaud	306049	Boundary Cell Mining Claim	2023-03-31	100
225	1243892	Guibord, Michaud	274243	Boundary Cell Mining Claim	2023-05-03	100
226	4263033	Michaud	171203	Boundary Cell Mining Claim	2023-05-05	100
227	4263033	Michaud	226689	Boundary Cell Mining Claim	2023-05-05	100
228	4263033	Michaud	323243	Boundary Cell Mining Claim	2023-05-05	100
229	3015290	Michaud	109851	Boundary Cell Mining Claim	2023-05-20	100
230	3015379	Guibord, Michaud	127729	Boundary Cell Mining Claim	2023-05-20	100
231	3015379	Michaud	137045	Boundary Cell Mining Claim	2023-05-20	100
232	3015379	Guibord, Michaud	157219	Boundary Cell Mining Claim	2023-05-20	100
233	3015379	Guibord, Michaud	189678	Boundary Cell Mining Claim	2023-05-20	100
234	3015388	Guibord	191114	Boundary Cell Mining Claim	2023-05-20	100
235	3015379	Michaud	202372	Boundary Cell Mining Claim	2023-05-20	100
236	3013806	Guibord	206934	Boundary Cell Mining Claim	2023-05-20	100
237	3015380	Michaud	210451	Boundary Cell Mining Claim	2023-05-20	100
238	3013806	Guibord	227156	Boundary Cell Mining Claim	2023-05-20	100
239	3015380	Michaud	239073	Boundary Cell Mining Claim	2023-05-20	100
240	3015379	Michaud	257897	Boundary Cell Mining Claim	2023-05-20	100
241	3015379	Guibord, Michaud	257898	Boundary Cell Mining Claim	2023-05-20	100
242	3015380	Michaud	264933	Boundary Cell Mining Claim	2023-05-20	100
243	3015290	Michaud	266263	Boundary Cell Mining Claim	2023-05-20	100
244	3013806	Guibord	286453	Boundary Cell Mining Claim	2023-05-20	100
245	3015380	Michaud	313667	Boundary Cell Mining Claim	2023-05-20	100
246	1235305	Michaud	115107	Boundary Cell Mining Claim	2023-05-31	100
247	1235305	Michaud	288893	Boundary Cell Mining Claim	2023-05-31	100
248	1238680	Michaud	325454	Boundary Cell Mining Claim	2023-05-31	100
249	1235309	Michaud	325455	Boundary Cell Mining Claim	2023-05-31	100
250	4205463	Michaud	103280	Boundary Cell Mining Claim	2023-06-05	100
251	4205463	Michaud	127149	Boundary Cell Mining Claim	2023-06-05	100
252	4205463	Michaud	172220	Boundary Cell Mining Claim	2023-06-05	100
253	3015381	Michaud	192236	Boundary Cell Mining Claim	2023-06-05	100
254	4205463	Michaud	228403	Boundary Cell Mining Claim	2023-06-05	100
255	4205463	Michaud	267653	Boundary Cell Mining Claim	2023-06-05	100
256	4205463	Michaud	323704	Boundary Cell Mining Claim	2023-06-05	100
257	843891	Michaud	219243	Boundary Cell Mining Claim	2023-06-13	100
258	4220423	Michaud	290379	Boundary Cell Mining Claim	2023-06-13	100
259	1240793	Michaud	122128	Boundary Cell Mining Claim	2023-06-27	100
260	1240794	Michaud	186733	Boundary Cell Mining Claim	2023-06-27	100

Record #	Legacy Claim ID	Township/ Area	Tenure Number	Tenure Type	Due Date	Tenure Percentage
261	1226789	Michaud	222866	Boundary Cell Mining Claim	2023-06-27	100
262	1240788	Michaud	229255	Boundary Cell Mining Claim	2023-06-27	100
263	1240788	Michaud	229256	Boundary Cell Mining Claim	2023-06-27	100
264	1240793	Michaud	253449	Boundary Cell Mining Claim	2023-06-27	100
265	1235308	Michaud	276820	Boundary Cell Mining Claim	2023-06-27	100
266	1226791	Michaud	285846	Boundary Cell Mining Claim	2023-06-27	100
267	1226791	Michaud	322558	Boundary Cell Mining Claim	2023-06-27	100
268	1166919	Guibord, Michaud	109704	Boundary Cell Mining Claim	2023-07-24	100
269	1166919	Guibord	255722	Boundary Cell Mining Claim	2023-07-24	100
270	1166919	Guibord	267686	Boundary Cell Mining Claim	2023-07-24	100
271	1199994	Barnet, Michaud	103365	Boundary Cell Mining Claim	2023-08-01	100
272	1243890	Michaud	118218	Boundary Cell Mining Claim	2023-08-01	100
273	1248410	Michaud	158324	Boundary Cell Mining Claim	2023-08-01	100
274	1248410	Barnet, Michaud	158325	Boundary Cell Mining Claim	2023-08-01	100
275	1248410	Barnet, Michaud	177849	Boundary Cell Mining Claim	2023-08-01	100
276	1248410	Barnet, Michaud	177850	Boundary Cell Mining Claim	2023-08-01	100
277	1248410	Barnet, Michaud	223700	Boundary Cell Mining Claim	2023-08-01	100
278	1248410	Barnet, Michaud	279188	Boundary Cell Mining Claim	2023-08-01	100
279	1199994	Michaud	288894	Boundary Cell Mining Claim	2023-08-01	100
280	1248410	Barnet, Michaud	326946	Boundary Cell Mining Claim	2023-08-01	100
281	1129845	Garrison, Michaud	294491	Boundary Cell Mining Claim	2023-08-20	100
282	3001162	Garrison, Michaud	323692	Boundary Cell Mining Claim	2023-08-20	100
283	643684	Garrison	228419	Boundary Cell Mining Claim	2023-08-27	100
284	653659	Garrison	127601	Boundary Cell Mining Claim	2023-09-15	100
285	653659	Garrison, Michaud	153611	Boundary Cell Mining Claim	2023-09-15	100
286	653659	Garrison	162465	Boundary Cell Mining Claim	2023-09-15	100
287	653660	Garrison	210771	Boundary Cell Mining Claim	2023-09-15	100
288	653660	Garrison, Michaud	257491	Boundary Cell Mining Claim	2023-09-15	100
289	1129845	Garrison, Michaud	173795	Boundary Cell Mining Claim	2023-09-20	100
290	1207486	Michaud	105030	Boundary Cell Mining Claim	2023-09-26	100
291	1206790	Michaud	170433	Boundary Cell Mining Claim	2023-09-26	100
292	1207486	Michaud	235757	Boundary Cell Mining Claim	2023-09-26	100
293	1206790	Michaud	283213	Boundary Cell Mining Claim	2023-09-26	100
294	3003825	Guibord	202486	Boundary Cell Mining Claim	2023-09-27	100
295	949283	Michaud	104192	Boundary Cell Mining Claim	2023-10-24	100
296	843893	Michaud	117917	Boundary Cell Mining Claim	2023-10-24	100
297	949282	Michaud	196936	Boundary Cell Mining Claim	2023-10-24	100
298	3019466	Michaud	180500	Boundary Cell Mining Claim	2023-11-06	100
299	3013403	Michaud	180501	Boundary Cell Mining Claim	2023-11-06	100
300	3019466	Michaud	234385	Boundary Cell Mining Claim	2023-11-06	100
301	1240793	Michaud	253448	Boundary Cell Mining Claim	2023-11-06	100
302	3019466	Michaud	329640	Boundary Cell Mining Claim	2023-11-06	100
303	3019466	Michaud	341506	Boundary Cell Mining Claim	2023-11-06	100
304	4257849	Michaud	138844	Boundary Cell Mining Claim	2023-11-30	100
305	4257846	Michaud	174694	Boundary Cell Mining Claim	2023-11-30	100
306	4257847	Michaud	221289	Boundary Cell Mining Claim	2023-11-30	100
307	4257848	Michaud	306827	Boundary Cell Mining Claim	2023-11-30	100
308	4280013	Garrison	156650	Boundary Cell Mining Claim	2025-06-28	100
309	4280013	Garrison	201282	Boundary Cell Mining Claim	2025-06-28	100
310	4280013	Garrison	307472	Boundary Cell Mining Claim	2025-06-28	100
311	1199892/ 1167280	Michaud	153019	Single Cell Mining Claim	2026-07-26	75
312	1225544/ 1199892	Michaud	193389	Single Cell Mining Claim	2026-09-22	75

APPENDIX II

DRILL HOLES

Table 2A
Drill Holes

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
659-04	569475.9	5373694.3	325	221.3	360	-50	DDH	Perry Lake Area	Falconbridge
97IRI-01	566958.4	5372109.5	325.51	93.27	180	-45	DDH	Perry Lake Area	Totem Mining Corp.
97IRI-02	567174.8	5371999	325	98.15	180	-45	DDH	Perry Lake Area	Totem Mining Corp.
97IRI-03	566662.4	5371907.5	325	102.41	180	-45	DDH	Perry Lake Area	Totem Mining Corp.
DM-10	565275	5370385	325	128.32	0	-60	DDH	Far Western Zone	Dunmar Mines Ltd.
DM-11	565390	5370115	325	305.71	0	-53	DDH	Far Western Zone	Dunmar Mines Ltd.
H-81-01	567846.7	5374244.2	325	154.23	20	-60	DDH	Perry Lake Area	J. Tesluk
JM-82-01	572567.4	5371878.8	332.5	377.34	188	-50	DDH	North of Windjammer North; Turner Lake	J. Moses
JM-82-02	572695.7	5372221.7	339.28	251.76	205	-45	DDH	North of Windjammer North; Turner Lake	J. Moses
JM-83-03	572968.7	5372159	340	70.1	360	-45	DDH	North of Windjammer North; Turner Lake	J. Moses
JM-83-04	573419.7	5371968.1	338.84	304.8	360	-45	DDH	North of Windjammer North; Turner Lake	J. Moses
JM-93-05	573632.3	5371919.8	340.16	334	180	-45	DDH	North of Windjammer North; Turner Lake	J. Moses
KX25-67	569760	5369225	322.25	110.03	343	-50	DDH	East of 55 Zone	AMAX EXL INC.
KX26-68	570020	5368580	318.75	106.98	343	-47	DDH	Southeast of 55 Zone	AMAX EXL INC.
M-01-225	570356.6	5370385.6	324.25	210.6	260	-45	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
M-01-226	571635.6	5370937.6	330.25	174	224	-45	DDH	Landing Zone	Moneta Porcupine Mines Inc.
M-03-236	571637.6	5370761.6	328.25	245	160	-45	DDH	Landing Zone	Moneta Porcupine Mines Inc.
M-03-237	571415.6	5370660.6	327	356	160	-50	DDH	Landing Zone	Moneta Porcupine Mines Inc.
M-03-238	570788.6	5370416.6	324.25	344	340	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
M-03-239	570665.6	5370400.6	325.25	305	340	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
M-04-257	569668.6	5369403.6	322.75	314	10	-45	DDH	North of 55 Zone	Moneta Porcupine Mines Inc.
M-04-258	569501.6	5369456.6	323	231	10	-45	DDH	North of 55 Zone	Moneta Porcupine Mines Inc.
M-08-259	571635.3	5369843.3	328.41	437	336.7	-59.6	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
M55-10-01	569371.2	5368879.9	318.88	404	158.6	-61.9	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-02	569309.4	5368857.3	319.22	303	158.1	-62	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-03	569249	5368839.1	319.22	289.95	159.4	-60.7	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-04	569329.2	5368959	319.48	119	160	-60	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-05	569335.7	5368938.9	319.47	335	161.3	-58.3	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-06	569558.6	5369045.3	320.94	271.75	157.1	-61.4	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-07	568994	5368837.3	319.53	281.1	162.3	-60.2	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-08	569420.3	5368987	320.58	305	155.1	-64.4	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-09	569653.3	5369076.8	321.41	253.95	158.5	-60	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-10	569276.6	5368941.2	319.55	311	162.5	-61.2	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-11	569747	5369112.5	321.59	286.41	158.4	-61.2	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-12	568902.8	5368800.9	319.73	302.15	154	-62.3	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-13	569367.4	5368974.6	319.73	296	159.3	-58.8	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-14	569315.8	5368954.7	320.01	179	163.5	-60.1	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-15	569225.3	5368936.6	319.79	251	156.4	-59.7	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-16	569339.8	5368963	319.91	161	161.4	-61.2	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-17	568814.3	5368744.5	319.12	248.82	158.1	-53.8	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-18	569307.7	5368977.4	319.98	191	160.4	-59.6	DDH	55 Zone	Moneta Porcupine Mines Inc.

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
M55-10-19X	569179.8	5368922	319.93	427.85	157.2	-61	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-20	569090.5	5368872.5	320.09	359.05	160.6	-60.1	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-21	569247.7	5368944.9	319.6	371	162.1	-61	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-22	569137.5	5368891.2	319.94	337.9	158.2	-62.4	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-23	569042.5	5368846.9	319.54	254	159	-60	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-24	569448	5368911.6	319.33	224	160.1	-62	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-25	569494.7	5368936.9	319.95	278	157.1	-59.3	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-26	569334.5	5368790.9	318.04	170	158.7	-65	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-27	569463.5	5369012.1	320.47	314	158.1	-59.4	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-28	569278.6	5368787.2	318.65	158	155.9	-62	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-29	569069	5368785.3	319.03	260.15	161.2	-59.1	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-30	569159.2	5368817.5	319.12	263	154.5	-61.8	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-31	569225.3	5368790.7	318.85	205.95	159	-64.4	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-32	569396.1	5368831.1	319.57	212	159.2	-59.7	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-33	569119	5368788.1	319.09	236	161.7	-58.9	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-34	568928.9	5368730.3	319.39	302	159.7	-62.6	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-35	569523.9	5368871.9	319.49	235.9	157.4	-63	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-10-36	569177	5368771.7	318.88	161	158.5	-61	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-12-37	569579.2	5368963.8	320.39	315	158.7	-51.1	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-12-38	569675.9	5368995.7	321.03	218.84	160.8	-50.7	DDH	55 Zone	Moneta Porcupine Mines Inc.
M55-12-39	569575	5368980	320.39	303	160	-60	DDH	55 Zone	Moneta Porcupine Mines Inc.
M-86-01	570718.9	5370620.3	328.57	151.2	154	-45	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
M-87-01	570248.2	5369936.3	325.25	88.39	343	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
M-87-02	570184.9	5370130.3	324.42	257.86	343	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
M-87-03	570601.4	5370250.2	323.25	153.31	343	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
M-87-04	570706.7	5370317.9	322.93	38.1	343	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
M-87-05	570916.8	5370639.9	327.75	141.88	163	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
M-87-06	571022.2	5370708.3	327.76	230.73	163	-50	DDH	Landing Zone	Moneta Porcupine Mines Inc.
M-87-06A	571036	5370668	327.82	60.96	163	-50	DDH	Landing Zone	Moneta Porcupine Mines Inc.
M-87-07	570971.4	5370845.6	329.67	355.4	163	-50	DDH	Landing Zone	Moneta Porcupine Mines Inc.
M-87-08	569710	5371365	330	459.03	0	-65.5	DDH	Emens Lake	Moneta Porcupine Mines Inc.
M-87-09	571236	5369744.6	323.02	241.4	328	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-10	571163.9	5369868.6	323.5	242.62	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-11	571006.9	5370687	328.73	91.44	163	-50	DDH	Landing Zone	Moneta Porcupine Mines Inc.
M-87-12	571055.9	5370713.5	328.54	91.44	163	-50	DDH	Landing Zone	Moneta Porcupine Mines Inc.
M-87-13	570024.7	5371332.6	327.5	304.8	15	-50	DDH	Emens Lake	Moneta Porcupine Mines Inc.
M-87-14X	571252.6	5370806.8	328.41	341	163	-54	DDH	Landing Zone	Moneta Porcupine Mines Inc.
M-87-15	571476.6	5370877.3	329.84	243.84	161	-50	DDH	Landing Zone	Moneta Porcupine Mines Inc.
M-87-16	571214.9	5369786.2	322.7	85.04	333	-51	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-17	571210.7	5369729	322.84	152.4	329	-49	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-18	571263.6	5369758.4	323.33	159.11	328	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-19	571210.5	5369729.4	322.75	213.66	328	-66	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-20	571310.3	5369790.8	324.55	175.56	325	-51	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-21	571186.3	5369715.2	323.32	150.57	319	-51	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-22	571165.2	5369698.8	323.01	151.18	322	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
M-87-23	571186.9	5369765.8	323.5	108.51	328	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-24	571196.4	5369774.3	322.63	94.18	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-25	571135.8	5369864.3	323.5	245.06	150	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-26	571068.1	5369470	322.5	213.36	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-27	571236	5369718.3	323.53	105.13	281	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-27A	571236	5369718.3	323.53	206.04	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-28	571068.1	5369470	322.5	281.94	330	-65	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-28A	571068.1	5369470	322.5	106.98	330	-90	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-29	571171	5369811.8	322.83	182.88	330	-90	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-30	571189.5	5369782.3	322.6	182.88	330	-90	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-31	571172.7	5369763.5	323.5	182.88	300	-90	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-32	571220	5369803.4	322.6	182.88	310	-90	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-33	571206.1	5369858.1	322.56	182.88	150	-60	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-34	571220.5	5369886.1	322.82	137.16	150	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-35	571101.7	5369472.7	323	47.55	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-36	571101.7	5369472.7	323	57.91	330	-65	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-37	571101.7	5369472.7	323	182.88	0	-90	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-38	571066.7	5369471.5	322.24	122.32	330	-65	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-39	571078.3	5369464.2	322.75	183.19	0	-90	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-40	571064.2	5369416.3	322.22	115.82	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-41	571063.8	5369417.8	322.22	138.99	330	-65	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-42	571038.4	5369397.6	322.25	122.83	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-43	571038.4	5369397.6	322.25	149.35	330	-70	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-44	571132.7	5369823.1	322.96	259.08	150	-70	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-44A	571134.2	5369823.2	322.96	245.67	90	-65	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-45	571110.7	5369805.6	322.01	154.23	150	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-46	571110.7	5369808.6	322.01	260.91	150	-70	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-47	571087	5369791.5	322.25	152.4	150	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-48	571082.2	5369789.4	323	26.21	0	-90	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-49	571036.1	5369755.2	322.15	312.72	150	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-50	571550.6	5369917.7	327.61	153.01	342	-50	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
M-87-51	571022.8	5369367.3	321.2	152.4	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-52	571123.8	5369438.8	323	110.03	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-53	571147	5369459.7	323	129.84	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-54	571171.2	5369477.7	322.1	137.46	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-57	571813.3	5369918.1	328.5	243.84	342	-50	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
M-87-58	570988.8	5369512.7	322	276.15	150	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-59	571775.6	5370006.7	328.14	271.27	342	-50	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
M-87-60	570690	5369394	320.1	259.08	343	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-61	571742.3	5370124.6	326.86	274.93	343	-50	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
M-87-62	571659.6	5370353.6	326.52	291.39	343	-50	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
M-87-63	571613	5370498.8	325.57	267	343	-50	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
M-87-64	570520.1	5369359.8	321.26	126.49	343	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-65	570378.7	5369187.1	320.99	148.13	343	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-66	570387.4	5368840.2	319.5	285.9	163	-50	DDH	South of South West Zone	Moneta Porcupine Mines Inc.

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
M-87-67	571268.8	5370740.7	327.68	152.4	163	-50	DDH	Landing Zone	Moneta Porcupine Mines Inc.
M-87-68	571083.3	5369538.8	321.8	367.59	148.5	-53.5	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-70	570961.1	5369497.4	321.88	369.42	150	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-70A	571007.1	5369489.5	321.88	365.76	138.8	-62	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-71	571019.2	5369523	322.25	71.17	150	-65	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-72	571032.3	5369530.3	321.4	523.04	150	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-74	570961.1	5369497.4	321.1	330.71	150	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-76	571063.7	5369392	321.6	230.43	331	-53.5	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-77	571092.7	5369341.8	321.8	275.23	330	-53	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-78	571123.5	5369288.9	321.8	268.83	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-78A	571123.5	5369288.9	321.83	385.88	330	-60	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-80	571095.2	5369391.6	321.7	199.95	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-81	571122.8	5369338.8	321.7	324.92	330	-55	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-82	571125.8	5369407.2	323	234.39	330	-55	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-83	571155.1	5369354.4	323	302.36	330	-55	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-85	571118.3	5369486.3	323	276.15	150	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-86	570625.5	5369595.6	321.4	306.63	163	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-87	570953.5	5369435.7	321.4	337.11	89	-56	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-88A	570587.4	5369571.3	322.25	101.5	157	-51.5	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-89	571023.2	5369367.8	322.07	257.86	102.5	-66.5	DDH	South West Zone	Moneta Porcupine Mines Inc.
M-87-90	570091.6	5369639.7	324.5	325.83	6.5	-53	DDH	Northwest of South West Zone	Moneta Porcupine Mines Inc.
M-87-91	571770.2	5369659.5	327.79	181.66	341	-55	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MA02-01	571190.9	5369732.2	323.74	150	330	-70	DDH	South West Zone	Acrex
MA02-02	571049.4	5369343.3	322.13	239.5	26.5	-69.2	DDH	South West Zone	Acrex
MA02-03	571049.3	5369343.5	322.1	248	11.4	-57.8	DDH	South West Zone	Acrex
MA02-04	570696.9	5369406.1	320.95	261	328.1	-72.7	DDH	South West Zone	Acrex
MA02-05	570359.3	5368981.7	320.21	395	322.7	-57	DDH	South West Zone	Acrex
MA02-06	569297.4	5368611.1	317.35	407	340.8	-57.1	DDH	55 Zone	Acrex
MA02-07	569454	5368541	316.72	551	346.5	-62.9	DDH	55 Zone	Acrex
MA02-08	570830	5369609.4	321.12	416	36.8	-52	DDH	South West Zone	Acrex
MA02-09	570829.6	5369609.8	321.15	371	353.3	-51.7	DDH	South West Zone	Acrex
MA03-10X	569358.4	5368525.4	318.26	482	342.5	-63.1	DDH	55 Zone	Acrex
MA03-11	569220.7	5368628.2	318.75	401	333.7	-59.8	DDH	55 Zone	Acrex
MA03-12	567285.7	5368113.9	313	150	340	-50	DDH	Western Zone	Acrex
MA03-13	567377.7	5367855.9	311.95	290	340	-50	DDH	Western Zone	Acrex
MA03-14	567275.7	5367802.9	312	323	340	-50	DDH	Western Zone	Acrex
MA04-15	567055.7	5368047.9	314	359	160	-50	DDH	Western Zone	Acrex
MA04-16	567509.7	5367881.9	311	299	340	-50	DDH	Western Zone	Acrex
MA04-17	566914.7	5368092.9	314	422.1	160	-50	DDH	Western Zone	Acrex
MA04-18	566793.7	5368062.9	314.3	452	160	-50	DDH	Western Zone	Acrex
MA04-19	566671.7	5368048.9	315	432	160	-50	DDH	Western Zone	Acrex
MA04-20	567609.7	5367941.9	311	286.5	340	-50	DDH	Western Zone	Acrex
MA04-21	567241.7	5368069.9	313.51	461	225	-50	DDH	Western Zone	Acrex
MA04-22	567371.7	5368070.9	312.37	371	225	-50	DDH	Western Zone	Acrex
MA04-23	567259.7	5367867.9	312.55	215	340	-45	DDH	Western Zone	Acrex

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MA04-24	569462.1	5368676.1	318.19	344	343.8	-60.9	DDH	55 Zone	Acrex
MA04-25	569229.8	5368712.2	319.01	254	342.7	-47.9	DDH	55 Zone	Acrex
MA04-26	569407.2	5368586.3	317.86	430	346.8	-64.1	DDH	55 Zone	Acrex
MA05-27	569275.2	5368654.8	317.34	314	340	-45	DDH	55 Zone	Acrex
MA05-28	569199.2	5368678.9	317.71	251	340	-45	DDH	55 Zone	Acrex
MA05-29	569307.3	5368581.9	317.34	515	340.2	-66.4	DDH	55 Zone	Acrex
MA05-30	569264.3	5368597	316.99	401	336	-54	DDH	55 Zone	Acrex
MA05-31	569312.9	5368655.7	318.81	356	337.7	-52.3	DDH	55 Zone	Acrex
MA05-32	569336.2	5368687.8	317.27	305	342	-45	DDH	55 Zone	Acrex
MA06-33	568402.7	5368605.9	318.5	343	206	-50	DDH	Dyment 3	Acrex
MA06-34	568175.7	5368498.9	317.25	104	160	-50	DDH	Dyment 3	Acrex
MA06-35	568688.7	5368499.9	317.25	60	160	-50	DDH	Dyment 3	Acrex
MA06-36	568959.2	5368487.8	317.22	311	341	-50	DDH	55 Zone	Acrex
MA06-37A	569175.6	5368880.6	319.81	299	153.9	-49	DDH	55 Zone	Acrex
MA07-35X	568191.7	5368488.9	317.25	323	160	-50	DDH	Dyment 3	Acrex
MA07-39	568327.7	5368249.9	315.5	347	340	-50	DDH	Dyment 3	Acrex
MA07-40	568416.7	5368356.9	316.25	257	340	-50	DDH	Dyment 3	Acrex
MA07-41	568349.7	5368368.9	316.25	209	340	-50	DDH	Dyment 3	Acrex
MA07-42	568505.7	5368322.9	316	350	340	-50	DDH	Dyment 3	Acrex
MA08-43	569360.9	5368707.1	317.61	323	337.6	-57	DDH	55 Zone	Acrex
MA08-44	569250.2	5368666.2	317.8	329	341.8	-55.6	DDH	55 Zone	Acrex
MA08-45	569188.3	5368642.5	317.87	317	337.8	-58.7	DDH	55 Zone	Acrex
MA08-46	569481	5368800.5	318.54	248	342	-57.3	DDH	55 Zone	Acrex
MA08-47	569469.3	5368745.1	317.49	302	337.2	-58.7	DDH	55 Zone	Acrex
MA08-48	569440.2	5368735.2	317.49	296	344.2	-55.7	DDH	55 Zone	Acrex
MA08-49	569415.4	5368726	317.68	332	338.4	-55.4	DDH	55 Zone	Acrex
MA08-50	569547.4	5368774	318.69	302	341	-54.6	DDH	55 Zone	Acrex
MBL-46-01	570553.6	5370505.5	331.5	320.04	333	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-46-02	570553.6	5370505.5	331.5	144.78	153	-40	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-46-03	570580.1	5370456.6	332.75	189.56	153	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-46-04A	570661.5	5370726.3	327.25	38.4	153	-52	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-46-04B	570660.5	5370729.2	327.25	287.27	153	-55	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-46-05	570719.3	5370621.9	329	246.89	153	-44	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-46-06	570735	5370596.8	329	106.07	153	-45	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-46-07	570746.2	5370639.3	329.5	195.38	158	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-46-08	570692.5	5370608	329	178.61	153	-52	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-46-09	570613.4	5370559.5	327.5	223.42	153	-53	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-46-10	570794.2	5370490.1	325.75	286.51	333	-57	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-46-11	570728.2	5370180.4	323	335.28	333	-55	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-47-12	570768.1	5370669.4	329.5	109.42	333	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-47-13	570780.6	5370445.2	324.5	124.05	333	-57	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-47-14	570447.6	5370846.6	325	304.8	153	-56	DDH	North of Twin Creeks Zone	Moneta Porcupine Mines Inc.
MBL-47-15	570488.6	5370746.6	324.5	423.06	333	-51	DDH	North of Twin Creeks Zone	Moneta Porcupine Mines Inc.
MD-1-86	563596	5367988.5	317	206.65	360	-50	DDH	Far Western Zone	Lacana
MD-2-86	563847.6	5367598.6	316.19	206.96	360	-55	DDH	Far Western Zone	Lacana

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MD-88-03	566463.6	5368353.6	317	270.05	180	-50	DDH	Far Western Zone	Lacana
MD-88-04	566463.6	5368223.6	316.3	199.95	180	-50	DDH	Far Western Zone	Lacana
MD-88-05	566463.6	5367944.6	314	287.19	180	-50	DDH	Far Western Zone	Lacana
MD-88-06	566213.6	5368174.6	316	221.28	360	-47	DDH	Far Western Zone	Lacana
MD-88-07	564469.6	5368444.5	316	291.46	180	-50	DDH	Far Western Zone	Lacana
MD-90-08	564345.6	5367918.6	313.43	217	360	-45	DDH	Far Western Zone	Lacana
MD-90-09	564344.6	5368019.6	314	248.25	360	-45	DDH	Far Western Zone	Lacana
MD-90-10	564837.6	5368079.6	315	252	360	-45	DDH	Far Western Zone	Lacana
MD-90-11	567831.6	5367843.6	309	200	360	-45	DDH	Western Zone	Lacana
MGH13-001	571530.7	5369792.4	326.48	350.58	338.1	-53.6	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-002	571556.2	5369697.5	326.33	490.65	334.6	-54.1	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-003	571615	5369838	328.44	357.25	334.3	-54.4	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-004	571679.4	5369814.3	328.39	436.9	338	-53.7	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-005	571497.8	5369719.4	325.54	436.3	334.6	-54.1	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-006	571746.3	5369921.5	328.42	363.38	336.3	-55.3	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-007	571434.1	5369746	325.45	234.15	335.9	-53.3	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-008	571724.9	5369835.9	328.32	462.3	336.2	-53.9	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-009	571450.9	5369694.7	325.19	429	330.6	-58.4	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-010	571118.2	5369271.2	318.95	339	330.8	-62.8	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH13-011	571455.8	5369809.1	325.47	280	338.3	-56.8	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-012	571430.7	5370051.6	325.62	234.86	337.2	-58.3	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-013	571374.3	5370192.8	325.16	456.43	156.5	-57.5	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-014	571590.8	5369770.9	327.01	397	334.1	-53.6	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-015	571374.8	5370196.9	324.86	314.14	337.3	-57	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-016	571775.5	5370418.4	328.12	425.07	334	-55.8	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-017	571458.1	5370252.8	325.83	320	336.9	-56.1	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-018	571599.5	5370306.5	327.27	420.88	337.2	-51.4	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-019	571459.1	5370249.6	325.78	485	157.8	-52.9	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-020	571600.9	5370303.4	327.08	405	156.7	-52	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-021	571768.9	5370214.7	328.39	210.18	155.1	-57.2	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-022	571728.3	5370309.2	328.09	279	156.8	-51.9	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-023	572409.4	5371291.2	338.4	299	156.8	-61.7	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MGH13-024	572508.7	5370878.6	358.46	574	335.9	-52.1	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-025	572360.8	5371290.1	337.77	501	157.6	-60.3	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MGH13-026	572448.8	5370754.8	349.41	501	335.9	-52.8	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-027	572477.5	5370830.7	360.53	429	335.5	-52.2	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-028	572430	5370801	347.07	425	335.8	-52	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-029	572528.5	5370688.3	362.43	402	336.9	-50.5	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-030	572350.2	5370602.9	335.23	601	334.4	-53.4	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-031	572505.8	5370733.4	362.3	536.33	336.4	-50	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-032	572305.2	5370722.7	334.81	426	337.9	-49.8	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-033	572444.7	5370630.6	343.87	600	332.5	-54.3	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-034	572286.3	5370771.5	332.35	359	336.4	-51.2	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-035	572263.5	5370836.5	332.7	401	335.5	-53.5	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-036	572398.8	5370729.2	341.25	456.5	335.4	-49.5	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MGH13-037	572297.3	5370880.9	333.86	425	337.8	-51.8	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-038	572240.7	5370722.9	331.91	404	337.9	-51.4	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-039	572347.1	5370739.6	337.13	426	335.5	-54.1	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-040	572149.2	5370718	330.04	375	333.9	-55.2	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-041	572378.6	5370613	337.02	575	338.8	-59.1	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-042	572313.1	5370252.3	331	428	335.3	-62.3	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-043	572303.7	5370122.5	330.37	513	334.6	-54.5	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-044	572093.6	5370725.2	329.16	279	334.6	-53.8	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-045	572182.6	5370739	330.74	339	335.2	-53.6	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-046	572419.2	5370393.3	336.74	255	342	-63.3	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-047	572540	5370315.9	345.25	414	334.7	-53.2	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-048	572263.8	5370673.9	331.72	477	333.6	-53.6	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-049	572195.2	5370126.9	330.01	459.25	335.4	-63.1	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-050	572241.1	5370610.2	330.9	585	331.8	-53.9	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-051	572145.3	5370120.9	331.21	438	330.3	-60.4	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-052	572167.3	5370648.1	330	495	336	-54.4	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-053	571816.8	5370003	329.13	134	337.6	-52.5	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-053A	571803.5	5370034.5	328.63	353	337.7	-56	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-054	572142.8	5370587.7	329.09	506.56	333.4	-56.9	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-055	572380.2	5370211.9	332.46	539	336.8	-61.6	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-056	572466.5	5370706.2	350.93	617	335.7	-52.5	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-057	572540.8	5370315.1	345.05	239	332.8	-62.8	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-058	572607.1	5370328	352.33	402	336	-49.6	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-059	572549.8	5370781.3	363.93	447	337.3	-52.6	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-060	572354.9	5370141.8	331.66	318.15	338.3	-54.3	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-061	572125.6	5370024.1	329.86	95	338	-56	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-061A	572118.4	5370042.7	329.94	443.6	344.6	-57.8	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-062	572551	5370899	357.16	513	338.7	-60.7	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-063	572252.3	5370135.3	329.72	120	335.2	-66.8	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-063A	572252.3	5370135.3	329.72	726	335.2	-66.8	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-064	572595.7	5370946.6	346.62	295	334.8	-47.9	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-065	572366.7	5370688.7	337.71	550.4	336.1	-51.2	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-066	572753	5371414.1	330.75	450	160.7	-53.9	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MGH13-067	572437	5370218	334.5	326	335.3	-52.5	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-068	571871.3	5369995.4	330	389	336.5	-52.1	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MGH13-069	572103.3	5370531.7	329.06	574	333.4	-57	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-070	572530.1	5370829.6	359.52	450	336.1	-54.3	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-071	573149.3	5371175.9	338.79	86	24	-50	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-071A	573148.9	5371174.7	338.91	500	25.2	-54.3	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-072	572009.3	5370486.9	329.08	600	337.1	-54.9	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-073	573356	5371020	329.52	218	195	-50	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-073A	573330.8	5370967.7	330.55	569	194.9	-55.4	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-074	572027.7	5370019.6	330.97	459	336.6	-54.4	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MGH13-075	571292.8	5369115.8	323.14	908	336	-58.1	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH13-076	571246.8	5368933.5	323.01	1233.2	337	-67.9	DDH	South West Zone	Moneta Porcupine Mines Inc.

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MGH13-077	571827.5	5371104.9	331.05	510	158.2	-53	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-078	571186.4	5368959	322.86	870	334.5	-63.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH13-079	571737.1	5371401.4	332.56	798	157.7	-47.7	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-080	571299.9	5368932.6	323.03	1244	337.1	-68	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH13-081	571886.5	5370973.5	329.94	56	154.4	-53.9	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-081A	571886.5	5370973.5	329.94	314	154.4	-53.9	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MGH13-082	572430.2	5371250.1	335.32	324.5	158.9	-50.8	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MGH13-083	571803.5	5371205	331.61	660	156.3	-61.6	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-084	572454.4	5371317.7	335.52	423	155.7	-62.1	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MGH13-085	572500.5	5371345.1	333.35	33	158	-58	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MGH13-085A	572500.1	5371345.2	333.29	288	156	-59.3	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MGH13-086	570599.7	5371763.6	340.83	655.3	223	-51.3	DDH	Emens Lake	Moneta Porcupine Mines Inc.
MGH13-087	571932.8	5371144.7	330.89	422	155.8	-57.8	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-088	571742	5371076.2	330.47	509	157.2	-51	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-089	571913.6	5371196.2	331.1	560	157.7	-58.4	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-090	571760.8	5371032.2	330.29	434	157.8	-46.2	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-091	570787.7	5371942.3	350.42	531	223.4	-50.3	DDH	Emens Lake	Moneta Porcupine Mines Inc.
MGH13-092	571802.4	5371175.8	331.3	642	155.6	-61.3	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-093	571913.2	5371197.2	331.18	661	156	-69.9	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-094	570931	5372095	357.43	465	224.6	-49.8	DDH	Emens Lake	Moneta Porcupine Mines Inc.
MGH13-095	571838.7	5371071.5	330.27	290	158.1	-47.3	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-096	571827.1	5371105.3	330.63	444	156.6	-69.2	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-097	571658.1	5371078.2	330.58	450	158.1	-52.3	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-098	571874.2	5371110.7	333.8	402	156.9	-53.4	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-099	571781.4	5371145.5	335.74	425	160.7	-50.8	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-100	571874	5371111	333.82	456	157	-60.6	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-101	571781.3	5371145.9	335.7	525	161.4	-62	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-102	571646.4	5371106.7	331.39	504	161	-60.7	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-103	571741.8	5371077.2	330.52	398	157.8	-58	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-104	571741.6	5371077.7	330.48	423	160.1	-62.1	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-105	571827.8	5371104.4	330.51	65	158.6	-52.5	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH13-105A	571827.5	5371104.6	330.43	351	157.8	-60.1	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH16-001	566881.3	5369052.8	320.48	152	4.47	-50	DDH	Destor West	Moneta Porcupine Mines Inc.
MGH16-002	566881.2	5369052.4	320.55	587	8.72	-66	DDH	Destor West	Moneta Porcupine Mines Inc.
MGH16-003	566678.7	5368946.2	321.07	500	7.95	-52	DDH	Destor West	Moneta Porcupine Mines Inc.
MGH16-004	566283.6	5368668.7	316.27	945	214	-69.4	DDH	Destor West	Moneta Porcupine Mines Inc.
MGH16-005	566209.1	5368782.6	320.95	33	0	-50	DDH	Destor West	Moneta Porcupine Mines Inc.
MGH16-005A	566209.1	5368781.8	321	429.23	4.63	-51	DDH	Destor West	Moneta Porcupine Mines Inc.
MGH16-006	565967	5368644.8	315.96	722.5	169.1	-70.7	DDH	Destor West	Moneta Porcupine Mines Inc.
MGH16-007	566217.9	5368840.9	321.41	387	175.62	-51	DDH	Destor West	Moneta Porcupine Mines Inc.
MGH16-008	565821.5	5368851.1	321.56	396.62	153.67	-51	DDH	Destor West	Moneta Porcupine Mines Inc.
MGH16-009	565362.3	5368999.5	321.17	452	208.97	-55	DDH	Destor West	Moneta Porcupine Mines Inc.
MGH16-010	565726	5368689	320	884.69	168	-77	DDH	Destor West	Moneta Porcupine Mines Inc.
MGH16-011	567978.7	5369268.3	292.46	563	308.47	-52	DDH	LC Zone	Moneta Porcupine Mines Inc.
MGH17-012	565675	5374095	325	694	330	-65	DDH	Perry Lake	Moneta Porcupine Mines Inc.

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MGH17-013	568346.6	5369443.7	324.02	449	335.53	-52	DDH	LC Zone	Moneta Porcupine Mines Inc.
MGH17-014	567275.7	5367802.9	312	519	220	-50	DDH	Western Zone	Moneta Porcupine Mines Inc.
MGH17-015	567725	5369258	322	488	20	-52	DDH	LC Zone	Moneta Porcupine Mines Inc.
MGH17-016	568114	5369358	324	447	340	-50	DDH	LC Zone	Moneta Porcupine Mines Inc.
MGH17-017	567480	5369200	320	301.37	40	-50	DDH	West of LC Zone	Moneta Porcupine Mines Inc.
MGH17-018	567395	5369105	320	492.13	40	-50	DDH	West of LC Zone	Moneta Porcupine Mines Inc.
MGH17-019X	570571.22	5369832.83	324.67	878.79	90.2	-55.5	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-020	567280	5369200	320	341	35	-50	DDH	West of LC Zone	Moneta Porcupine Mines Inc.
MGH17-021	567195	5369110	320	493.65	40	-50	DDH	West of LC Zone	Moneta Porcupine Mines Inc.
MGH17-022	567080	5369150	320	284.2	40	-50	DDH	West of LC Zone	Moneta Porcupine Mines Inc.
MGH17-023	570570	5369933	324	647.3	90	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-024	566995	5369055	320	489	40	-50	DDH	West of LC Zone	Moneta Porcupine Mines Inc.
MGH17-025	569860	5370115	326.5	302.1	340	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MGH17-026	569860	5370115	326.5	500	40	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MGH17-027	568009.9	5369359.4	323	180	40	-50	DDH	LC Zone	Moneta Porcupine Mines Inc.
MGH17-028	570060	5370150	324.75	321	340	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MGH17-029	570444	5369720	324	662.86	162	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-030	567826	5369570	326	698.93	192	-50	DDH	LC Zone	Moneta Porcupine Mines Inc.
MGH17-031	570145	5370164	324	548	40	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MGH17-032	570145	5370164	324	338	340	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MGH17-033	567862	5369496	325	445.85	192	-50	DDH	LC Zone	Moneta Porcupine Mines Inc.
MGH17-034	567912	5369490	325	440.98	192	-50	DDH	LC Zone	Moneta Porcupine Mines Inc.
MGH17-035	570420	5370390	326	139.7	340	-50	DDH	Twin Creeks Zone	Moneta Porcupine Mines Inc.
MGH17-037	571876.9	5371148.8	332.93	632.6	159.01	-61.85	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH17-038	571918.9	5371163.4	332.61	566	160	-56.6	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH17-039	568467.84	5369562.96	323.95	348.18	293.48	-63	DDH	LC Zone	Moneta Porcupine Mines Inc.
MGH17-039A	568468.5	5369563.6	325	76	#N/A	#N/A	DDH	LC Zone	Moneta Porcupine Mines Inc.
MGH17-040	572362.6	5371355.5	339.2	629.97	158.37	-66.32	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MGH17-041	571977.5	5371161.2	332.63	648.1	162.3	-68.09	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH17-042	572407.9	5371447.3	334.89	651	158.2	-61.91	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MGH17-043	568301.9	5369567.6	324.06	351	297.74	-62.15	DDH	LC Zone	Moneta Porcupine Mines Inc.
MGH17-044	568223.5	5369460.8	323.52	411.4	300.51	-55.88	DDH	LC Zone	Moneta Porcupine Mines Inc.
MGH17-045	571906.9	5371201	332.99	636	158.45	-62.42	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH17-046	572616.2	5371376.4	334.54	450.11	160.95	-66.84	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MGH17-047	568150	5369383.4	322.95	402.9	296.99	-57.47	DDH	LC Zone	Moneta Porcupine Mines Inc.
MGH17-048	572020.7	5371180.3	332.19	634.64	158.9	-61.94	DDH	Discovery Zone	Moneta Porcupine Mines Inc.
MGH17-049	572696.8	5371376.9	337.78	401.98	161.89	-67.78	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MGH17-050	569113.7	5368849.4	320.4	239.15	115.3	-56.54	DDH	55 Zone	Moneta Porcupine Mines Inc.
MGH17-051	570672.6	5369298.8	321.72	723	89.52	-52.38	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-052	569127.8	5368762.7	319.82	252	111	-59.33	DDH	55 Zone	Moneta Porcupine Mines Inc.
MGH17-053	572267.1	5371313.3	333.68	653.88	160.07	-67.23	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MGH17-054	572903.4	5371388.1	339.53	300.1	158.88	-61.21	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MGH17-055	569330.9	5368842.9	319.74	248.85	113.05	-58.29	DDH	55 Zone	Moneta Porcupine Mines Inc.
MGH17-055A	569330.9	5368842.9	319.74	30	115	-55	DDH	55 Zone	Moneta Porcupine Mines Inc.
MGH17-056	570674.3	5369377.8	322.09	774.06	88.97	-55.42	DDH	South West Zone	Moneta Porcupine Mines Inc.

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MGH17-057	569320.3	5368810.4	325	246.47	113.03	-56.75	DDH	55 Zone	Moneta Porcupine Mines Inc.
MGH17-057A	569320.3	5368810.4	325	72.9	115.2	-55	DDH	55 Zone	Moneta Porcupine Mines Inc.
MGH17-057B	569321.9	5368807.4	319.12	81	115.2	-55	DDH	55 Zone	Moneta Porcupine Mines Inc.
MGH17-057C	569321.9	5368807.4	319.12	33	115.2	-55	DDH	55 Zone	Moneta Porcupine Mines Inc.
MGH17-058	571473	5369805	326.59	210	13.52	-63.69	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-059	570647.1	5369341.1	322.09	699	84.51	-50.91	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-060	571361	5369669.2	325.35	636	35.01	-57.19	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-061	569233	5368792.1	320.63	405	112.4	-56.1	DDH	55 Zone	Moneta Porcupine Mines Inc.
MGH17-062	570613.3	5369485.1	323.12	507	88.61	-57.04	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-062A	570613.3	5369485.1	325	81	90	-55	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-063	571517.1	5369914.2	328.21	435	34.78	-57.21	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-064	570673	5369413.9	322.29	699	89.39	-50.47	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-065	570540.5	5369299.3	323.13	793.9	90.06	-55.89	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-066	571472.9	5369805.5	326.6	536.95	4.22	-66.35	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-067	571263.86	5369683.03	324.77	453	91.96	-48.04	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-068	571201.31	5369627.92	324.49	452.97	91.93	-53.9	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-069X	571570.9	5369897	325	704.95	31.59	-61.75	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-070	571209.6	5369758	324.68	525	88.36	-55.85	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-071	570597.36	5369218.77	321.84	844.7	88.9	-50.72	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-071A	570597.36	5369218.77	321.84	63	90	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-072	570555.91	5369441.97	323.39	579.7	90.71	-54.19	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-073	570995.59	5369756.07	323.92	600.03	85.6	-61.54	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-073A	570995.59	5369756.07	323.92	42	90	-58	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-073B	570995.59	5369756.07	323.92	39	90	-58	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-074	570888.18	5369594.42	322.8	713.96	85.93	-58.92	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-074A	570888.18	5369594.42	322.8	78	90	-55	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-075	571031.8	5369455.18	323.39	593.88	89.49	-50.7	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-076	570849.53	5369411.59	322.56	628.1	86.58	-52.43	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-077	571006.87	5369214.42	323.5	672.15	92.4	-54.9	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-077A	571006.87	5369214.42	323.5	189.25	90	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-077B	571005	5369217	323.5	57	90	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-078	570751.29	5369095.84	321.39	735.75	92.65	-56.44	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-079	571199.57	5369396.81	324.41	501	89.65	-55.74	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-080	571208.87	5369334.56	324.56	500	89.33	-57.04	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-081	571000.65	5369338.78	323.27	528	88.79	-55.21	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-082	571050.1	5369557.61	323.67	696	87.64	-51.72	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-083	570847.97	5369499.95	322.46	737.84	85.74	-54.13	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH17-086	571055	5369138	320	600	89.9	-50.8	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-069X	571570.9	5369897	325	704.94	#N/A	#N/A	DDH	Gap Zone	Moneta Porcupine Mines Inc.
MGH18-083	570850	5369500	325	737.84	90	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-084	570766.14	5369256.11	321.38	848.4	86.92	-67.96	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-085	570701.04	5369146.79	321.37	812.3	83.41	-64.1	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-086	571055.06	5369138.52	323.83	600	89.58	-54.02	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-087	570959.93	5369371.21	322.9	591.07	89.21	-51.68	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-088	571000.9	5369271.39	323.38	713.85	92.88	-55.21	DDH	South West Zone	Moneta Porcupine Mines Inc.

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MGH18-089	570951	5369697.39	323.54	453	86.46	-57.96	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-089A	570950.92	5369696.72	323.35	57	90	-57	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-089B	570950.92	5369696.72	323.35	249	90	-60	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-090	570999.42	5369797.7	324.51	624.22	85.35	-65.98	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-091	571102.71	5369904.35	324.57	780.02	88.44	-59.65	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-092	571369.36	5369395.94	325.57	791.46	91.66	-53.66	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-093	570784.7	5369003.229	322.735	786	2.57	-72.99	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-093A	570781.728	5368993.863	322.628	366.02	0.47	-68.82	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-093B	570781.728	5368993.863	322.628	99	359.93	-72.83	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-094	570819.91	5368955.49	322.96	824.96	4.9	-74.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-095	570820.49	5369481.27	322.24	801	87.91	-73.41	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-096	570820.69	5369600.35	323.28	839.36	92.62	-70.17	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-097	570850.69	5369700.35	323.28	831	81.8	-73.7	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-098	570885.42	5369767.67	324.22	767.95	88.47	-67.08	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-099	571055	5369635	320	750	92.15	-56.55	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-100	571757.88	5369998.36	329.84	474.31	11.81	-55.84	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-101	571169.203	5369610.25	324.232	366.1237	48	-58	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-102	571521.366	5369725.933	326.685	737	3.37	-66.72	DDH	Gap Zone	Moneta Porcupine Mines Inc.
MGH18-103	571204.385	5369657.995	324.352	588.01	34.86	-66.16	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-104	571812.208	5370127.386	327.278	249	7.98	-56.34	DDH	Gap Zone	Moneta Porcupine Mines Inc.
MGH18-105	571662.575	5370203.195	327.131	372	89.16	-55.29	DDH	Gap Zone	Moneta Porcupine Mines Inc.
MGH18-106	571220.836	5369900.052	324.864	351	92.2	-60.52	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-107	571323.81	5369946.854	325.73	239.64	88.32	-51.84	DDH	South West Zone	Moneta Porcupine Mines Inc.
MGH18-108	572368.105	5370242.707	331.325	648	281.59	-55.77	DDH	Windjammer South	Moneta Porcupine Mines Inc.
MGH19-109	571043.5	5369539	323.37	316	39.21	-76.8	DDH	South West Zone	Moneta Porcupine Mines Inc
MGH19-110	571241.9	5369531	324.55	1086	48.35	-65.1	DDH	South West Zone	Moneta Porcupine Mines
MGH19-111	570970.4	5369704	323.22	984.25	87.59	-74.9	DDH	South West Zone	Moneta Porcupine Mines Inc
MGH19-112	571051.2	5369677	323.59	551.91	46.31	-69.6	DDH	South West Zone	Moneta Porcupine Mines Inc
MGH19-112A	571051.2	5369677	323.59	60.6	50	-69.6	DDH	South West Zone	Moneta Porcupine Mines Inc
MGH19-113	571237.2	5369397	324.6	1012.5	43.14	-81.6	DDH	SW-GAP	Moneta Porcupine Mines Inc
MGH19-114	569111.4	5368587	318.95	465	36.47	-66.7	DDH	55 Zone	Moneta Porcupine Mines Inc
MGH19-115	571175.9	5369570	324.2	798	43.68	-50.1	DDH	South West Zone	Moneta Porcupine Mines Inc
MGH19-116	570449.2	5369378	323.62	567	82.3	-70.7	DDH	West Block	Moneta Porcupine Mines Inc
MGH19-117	571399.6	5369599	325.5	702	48.25	-74.6	DDH	South West Zone	Moneta Porcupine Mines Inc
MGH19-118	570475.7	5369447	322.7	549.1	87.72	-65.2	DDH	South West West Block	Moneta Porcupine Mines Inc
MGH19-119	571196.8	5369694	324.53	827.2	41.2	-68.8	DDH	Gap Zone	Moneta Porcupine Mines Inc
MGH19-120	571530.8	5369712	326.63	381	50.37	-67.6	DDH	South West Zone	Moneta Porcupine Mines Inc
MGH19-121	570389.7	5369311	322.67	497.07	87.47	-60.4	DDH	West Block	Moneta Porcupine Mines Inc
MGH19-122	570352.6	5369377	324.44	657	85.92	-69.4	DDH	South West Zone	Moneta Porcupine Mines Inc
MGH19-123	572571.2	5370529	358.7	501	69.9	-55	DDH	South West Zone	Moneta Porcupine Mines Inc
MGH19-124	572298.7	5370441	334.29	342	90.8	-61.26	DDH	Windjammer South (east side)	Moneta Porcupine Mines Inc
MGH19-125	571927.2	5370300	330	528	79.9	-55.82	DDH	Windjammer South	Moneta Porcupine Mines Inc
MGH19-126	571831.2	5370290	329.68	651	84.9	-54.9	DDH	Windjammer South	Moneta Porcupine Mines Inc
MGH19-127	570243.9	5369073	322.75	480	47.4	-60.28	DDH	West Block	Moneta Porcupine Mines Inc
MGH19-128	572024	5370224	329.76	501	79.7	-60	DDH	Windjammer South	Moneta Porcupine Mines Inc

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MGH19-129	569959.5	5368873	320.31	651	54.8	-62	DDH	Westaway	Moneta Porcupine Mines Inc
MGH19-130	571931.6	5370206	329.97	444	79.6	-58.45	DDH	Windjammer South	Moneta Porcupine Mines Inc
MGH19-131	569911.6	5368933	324.69	449	49.8	-62	DDH	Westaway	Moneta Porcupine Mines Inc
MGH19-132	572072.6	5370132	330.36	492	79.8	-60	DDH	Windjammer South	Moneta Porcupine Mines Inc
MGH19-133	570300.9	5369019	321.2	792	49.8	-62.5	DDH	West Block	Moneta Porcupine Mines Inc
MGH19-134	572122.3	5370043	331.44	504	79.8	-60	DDH	Windjammer South	Moneta Porcupine Mines Inc
MGH19-135	570165.3	5369101	326.15	315	49.9	-59	DDH	Westaway	Moneta Porcupine Mines Inc
MGH20-136	571974.4	5370111	329.56	687	79.8	-58	DDH	Windjammer South	Moneta Porcupine Mines Inc
MGH20-137	570454.2	5369151	322.19	600	49.9	-55	DDH	West Block	Moneta Porcupine Mines Inc
MGH20-138	569822.4	5368854	320.25	519	50.2	-60	DDH	Southwest	Moneta Porcupine Mines Inc
MGH20-139	570069.5	5368828	319.73	381	49.8	-62	DDH	Westaway	Moneta Porcupine Mines Inc
MGH20-140	571754.3	5370229	329.06	630	80	-55	DDH	Windjammer South	Moneta Porcupine Mines Inc
MGH20-141	569870.6	5368987	322.89	288	49.6	-60	DDH	Westaway	Moneta Porcupine Mines Inc
MGH20-141A	569869.8	5368987	323.04	139.5	49.9	-60	DDH	Westaway	Moneta Porcupine Mines Inc
MGH20-142	572350.1	5370472	337.02	540	79.9	-55	DDH	Windjammer South	Moneta Porcupine Mines Inc
MGH20-143	569855.9	5368752	318.82	784	49.9	-60	DDH	Westaway	Moneta Porcupine Mines Inc
MGH20-144	569777.1	5368910	325.8	345	49.9	-60	DDH	Southwest	Moneta Porcupine Mines Inc
MGH20-145	572283	5370337	333.7	471	79.9	-55	DDH	Windjammer South	Moneta Porcupine Mines Inc
MGH20-146	568969.9	5368750	320.47	444	110	-60	DDH	55 Zone	Moneta Porcupine Mines Inc
MGH20-147	571757.7	5370150	329.27	474	59.9	-60	DDH	Windjammer South	Moneta Porcupine Mines Inc
MGH20-148	570299	5368848	321.38	609	99.9	-60	DDH	Westaway	Moneta Porcupine Mines Inc
MGH20-149	568999	5368797	320.08	114	110	-60	DDH	55 Zone	Moneta Porcupine Mines Inc
MGH20-149A	568999.1	5368797	320.58	192	109.8	-60	DDH	55 Zone	Moneta Porcupine Mines Inc
MGH20-150	569978.4	5368752	319.45	717	54.9	-60	DDH	Westaway	Moneta Porcupine Mines Inc
MGH20-151	570042.3	5368978	324.8	492	60	-59.5	DDH	Westaway	Moneta Porcupine Mines Inc
MGH20-152	570607.3	5368905	322.23	582	50.1	-55	DDH	West Block	Moneta Porcupine Mines Inc
MGH20-153	568859.8	5368721	320.08	540	109.9	-60	DDH	55 Zone	Moneta Porcupine Mines Inc
MGH20-154	569419.8	5368980	321.27	621	109.9	-60	DDH	55 Deposit	Moneta Porcupine Mines Inc
MGH20-155	569790.5	5368647	318.98	858	50	-62	DDH	West Block	Moneta Porcupine Mines Inc
MGH20-156	570676.3	5369065	321.47	492	49.9	-60	DDH	West Block	Moneta Porcupine Mines Inc
MGH20-157	568944.4	5368696	320.22	354	109.8	-60	DDH	55 Zone	Moneta Porcupine Mines Inc
MI54-01	568948	5373116.6	350.5	358	360	-50	DDH	Perry Lake Area	Falconbridge
MI-91-139	570228.8	5370475.5	326	387.7	163.6	-57	DDH	Twin Creeks Zone	Independence
MI-91-140	570388.5	5370535.8	323.99	302	162	-60	DDH	Twin Creeks Zone	Independence
MI-91-141	570443.4	5370329.1	324.65	202.9	343	-60	DDH	Twin Creeks Zone	Independence
MI-91-142	570324.8	5370233.6	322.44	305	341.7	-59.1	DDH	Twin Creeks Zone	Independence
MI-91-143	571329.3	5370543.3	325	89.46	342	-55	DDH	Landing Zone	Independence
MI-91-144	571317.3	5370568.9	325	323	345	-59.5	DDH	Landing Zone	Independence
MI-91-145	571223.4	5370844.2	328.78	122.08	163	-61	DDH	Landing Zone	Independence
MI-91-146	571234.5	5370840.3	328.47	315.5	164	-67	DDH	Landing Zone	Independence
MI-91-147	571335.6	5370903	330.25	400.5	163	-60	DDH	Landing Zone	Independence
MI-91-148X	571616.6	5370844.8	329.5	371	164	-54.5	DDH	Landing Zone	Independence
MI-91-149X	570125.6	5370458	324.63	536	164.2	-52.3	DDH	Twin Creeks Zone	Independence
MI-91-150	570015.3	5371009.9	329.96	294.44	343	-51.5	DDH	Emens Lake	Independence
MICH-96-01	570915	5375735	325	61.57	0	-90	DDH	Gem Lake Area	Gem Lake Project Group

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MM-94-132X	571650.9	5370754.4	328	398.2	342	-52	DDH	Landing Zone	Lac Minerals
MM-94-151	571711.3	5370778.3	328	419.7	342	-60	DDH	Landing Zone	Lac Minerals
MM-95-102X	570499.8	5370061.6	322.25	535.5	341	-50	DDH	Twin Creeks Zone	Lac Minerals
MM-95-152	571167.5	5369233	322.83	529.8	330	-60	DDH	South West Zone	Lac Minerals
MM-95-152A	571166.5	5369195.8	322.83	50	330	-60	DDH	South West Zone	Lac Minerals
MM-95-153	570736.7	5369341.5	320.48	306	341	-63	DDH	South West Zone	Lac Minerals
MM-95-153A	570742.5	5369310.8	320.48	50	341	-60	DDH	South West Zone	Lac Minerals
MM-95-154	570657.4	5369345.5	320.95	270.4	335	-55	DDH	South West Zone	Lac Minerals
MM-95-155	571209.8	5369090.4	322.65	619	335	-57	DDH	South West Zone	Lac Minerals
MM-95-156	570846.2	5369425.4	321.36	303.8	335	-59	DDH	South West Zone	Lac Minerals
MM-95-157	570809	5369306.2	320.17	422.7	335	-55	DDH	South West Zone	Lac Minerals
MM-95-158	571053.6	5369244.4	322.34	584.35	335	-57	DDH	South West Zone	Lac Minerals
MM-95-159	571226	5369269.1	323.09	550.7	335	-57	DDH	South West Zone	Lac Minerals
MM96-168	570696.7	5369301	320.48	372	330	-62	DDH	South West Zone	Lac Minerals
MM96-169	571111.2	5369172	321.15	576.65	330	-60	DDH	South West Zone	Lac Minerals
MM96-170	571274.1	5369644.5	323.87	486.75	330	-60	DDH	Windjammer West Zone	Lac Minerals
MM96-172	571318	5369719.3	324.03	301	330	-55	DDH	South West Zone	Lac Minerals
MM96-173	570944.2	5369267.4	321.47	551	340	-62	DDH	South West Zone	Lac Minerals
MM96-177	571270	5368993.8	322.16	1047	330	-68.8	DDH	South West Zone	Lac Minerals
MM96-179	571321.6	5369559.2	323.52	541.4	330	-63	DDH	Windjammer West Zone	Lac Minerals
MM97-177A	571270	5368993.8	322.16	864	330	-68.8	DDH	South West Zone	Lac Minerals
MM97-177B	571270	5368993.8	322.16	309	330	-68.8	DDH	South West Zone	Lac Minerals
MM97-182	570917.6	5369490.6	320.9	630	127	-55	DDH	South West Zone	Lac Minerals
MM97-183	571076.4	5369341.8	322.5	264	330	-60	DDH	South West Zone	Lac Minerals
MM97-185	571003.1	5369269.2	322	282.5	330	-60	DDH	South West Zone	Lac Minerals
MM97-187	571147.2	5369213	322.2	445	330	-60	DDH	South West Zone	Lac Minerals
MM97-188	570804.9	5369467.9	320.3	732	120	-55	DDH	South West Zone	Lac Minerals
MM97-189	571190.5	5369265.4	322.6	639	330	-61.5	DDH	South West Zone	Lac Minerals
MM97-190	570765.2	5369467.2	320.55	996	114	-69.5	DDH	South West Zone	Lac Minerals
MM97-192	571202.2	5369319.8	322.5	531	330	-60	DDH	South West Zone	Lac Minerals
MM97-193	571223.4	5369391.9	323.25	660	330	-61.5	DDH	South West Zone	Lac Minerals
MM97-194	570526	5369504.3	322.3	971	120	-61	DDH	South West Zone	Lac Minerals
MM97-198	570978.5	5369484.8	321.2	597	120	-60	DDH	South West Zone	Lac Minerals
MM97-200	570566.3	5369539.5	322	812	105	-58	DDH	South West Zone	Lac Minerals
MM97-201	571029.5	5369829.5	323.5	402	125	-55	DDH	South West Zone	Lac Minerals
MM97-203X	570944.9	5369316	321.23	777.47	24.6	-53.3	DDH	South West Zone	Lac Minerals/Moneta Porcupine
MM97-204	571011	5369278.3	321.3	402	20	-55	DDH	South West Zone	Lac Minerals
MM97-206	570960.2	5369904.9	322.2	526	117	-55	DDH	South West Zone	Lac Minerals
MM97-207	570469.4	5369476.5	325	474	115	-62	DDH	South West Zone	Lac Minerals
MM97-208	570935.1	5369238.5	321.4	385	20	-60	DDH	South West Zone	Lac Minerals
MM97-209	571010.2	5369377.4	321.8	212.5	25	-55	DDH	South West Zone	Lac Minerals
MM97-210	570616	5369304.2	320.4	646	88	-60	DDH	South West Zone	Lac Minerals
MM97-211	570897.5	5369354.5	320.8	397	85	-60	DDH	South West Zone	Lac Minerals
MM97-212	571082.6	5369173.2	321.8	429	30	-60	DDH	South West Zone	Lac Minerals
MM97-213	570968.7	5369177.9	321.9	462	20	-58	DDH	South West Zone	Lac Minerals

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MM97-214	571066.3	5369306.7	321.8	159	30	-58	DDH	South West Zone	Lac Minerals
MM97-214A	571066.3	5369306.7	321.8	56	30	-55	DDH	South West Zone	Lac Minerals
MM97-214B	571066.3	5369306.7	321.8	156	30	-60	DDH	South West Zone	Lac Minerals
MM97-215	570612.7	5369304.3	320.5	386	20	-60	DDH	South West Zone	Lac Minerals
MM97-216X	570929.2	5369053.7	321.75	1346.05	30	-55.7	DDH	South West Zone	Moneta Porcupine Mines Inc.
MM97-217	570958.4	5369298.4	321.2	420	30	-57	DDH	South West Zone	Lac Minerals
MM97-218	570555.3	5369246.2	320.6	444	20	-65	DDH	South West Zone	Lac Minerals
MM97-219	570885.2	5369129.7	321.25	570	30	-65	DDH	South West Zone	Lac Minerals
MM97-220	570539.2	5369483	322.3	414	90	-60	DDH	South West Zone	Lac Minerals
MM97-221	570836.8	5369165.7	320.4	449	16	-65	DDH	South West Zone	Lac Minerals
MM97-222	570885.2	5369129.7	321.25	558	24	-55	DDH	South West Zone	Lac Minerals
MM97-223	570908	5369333.8	321.14	258	20	-65	DDH	South West Zone	Lac Minerals
MM97-223A	570908	5369333.8	321.14	38	20	-60	DDH	South West Zone	Lac Minerals
MM97-224	570836.8	5369165.7	320.4	383	14	-57	DDH	South West Zone	Lac Minerals
MN96-131AX	567725.8	5369258.3	322.14	436	340.5	-62	DDH	LC Zone	Lac Minerals
MN96-160	567893.8	5369150.9	321.83	525	341.83	-59	DDH	LC Zone	Lac Minerals
MN96-161	567813.1	5369196.8	322.06	429	338.32	-59	DDH	LC Zone	Lac Minerals
MN96-162	571336.4	5368876.9	323.17	1248	330.9	-73.4	DDH	South West Zone	Lac Minerals
MN96-163	567982.7	5369260.6	322.19	405	340.4	-60	DDH	LC Zone	Lac Minerals
MN96-164	568187.2	5369235.9	321.85	471	345	-60	DDH	LC Zone	Lac Minerals
MN96-165	568511	5369389.4	323.96	78	340.52	-59	DDH	LC Zone	Lac Minerals
MN96-166	567698.7	5368940.4	320.45	732	342.8	-59	DDH	LC Zone	Lac Minerals
MN96-167	567883.1	5368997.5	320.82	699.3	340.4	-58	DDH	LC Zone	Lac Minerals
MN96-171	568482.3	5369465.1	323.33	369	340	-60	DDH	LC Zone	Lac Minerals
MN96-174	569233	5368792.2	319.55	363	340	-55	DDH	55 Zone	Lac Minerals
MN96-175	571314.8	5370233.3	323.86	771	150	-58.5	DDH	Windjammer Central Zone	Lac Minerals
MN96-176	569375.8	5369124.3	320.3	340	340	-55	DDH	North of 55 Zone	Lac Minerals
MN96-178	570272.1	5369043.8	320.1	390	330	-60	DDH	South West Zone	Lac Minerals
MN96-180	569166.8	5368627.1	321.16	321	340	-55	DDH	55 Zone	Lac Minerals
MN96-181	569393	5368713.9	320.87	306.2	340	-54	DDH	55 Zone	Lac Minerals
MN97-184	570305.3	5368981.3	319.4	366	330	-65	DDH	South West Zone	Lac Minerals
MN97-186	570373.3	5369082.7	320.25	364	330	-75	DDH	South West Zone	Lac Minerals
MN97-186A	570208.9	5368951	319	54	330	-65	DDH	South West Zone	Lac Minerals
MN97-186B	570382.1	5369051	320	72	330	-65	DDH	South West Zone	Lac Minerals
MN97-186C	570370.6	5369070.9	320	61	330	-70	DDH	South West Zone	Lac Minerals
MN97-191	569975.8	5369159.3	321.3	558	120	-65	DDH	South West Zone	Lac Minerals
MN97-195	569361.2	5368620.8	317.95	432	340	-60	DDH	55 Zone	Lac Minerals
MN97-196	571544.7	5369777	326.62	777.5	327	-60	DDH	Windjammer West Zone	Lac Minerals
MN97-197	569517.7	5368712.9	320.47	342	337	-55	DDH	55 Zone	Lac Minerals
MN97-199	570330.2	5369347.6	323.5	523	118	-65	DDH	South West Zone	Lac Minerals
MN97-199A	570330.2	5369347.6	323.5	111	120	-65	DDH	South West Zone	Lac Minerals
MN97-202	570198.5	5368874.4	318.6	591	15	-60	DDH	South West Zone	Lac Minerals
MN97-205	570260.3	5368859.2	318.6	510	10	-58	DDH	South West Zone	Lac Minerals
MPL11-01	568500	5373375	325	322.69	135	-50	DDH	Perry Lake Area	Moneta Porcupine Mines Inc.
MPL11-02	568600	5373275	325	257	135	-50	DDH	Perry Lake Area	Moneta Porcupine Mines Inc.

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MPL11-03	568700	5373400	325	256.47	135	-50	DDH	Perry Lake Area	Moneta Porcupine Mines Inc.
MPL11-04	568900	5373419	325	195.01	135	-50	DDH	Perry Lake Area	Moneta Porcupine Mines Inc.
MPL11-05	568500	5373300	325	259.92	0	-50	DDH	Perry Lake Area	Moneta Porcupine Mines Inc.
MPL11-06	567200	5373450	325	208.93	199	-50	DDH	Perry Lake Area	Moneta Porcupine Mines Inc.
MPL11-07	566340	5372920	325	201.14	190	-50	DDH	Perry Lake Area	Moneta Porcupine Mines Inc.
MPL11-08	565950	5373075	325	329.1	180	-50	DDH	Perry Lake Area	Moneta Porcupine Mines Inc.
MPL11-09	569075	5372475	325	462	265	-50	DDH	Perry Lake Area	Moneta Porcupine Mines Inc.
MPM1939	567822.8	5374014.3	325	100	0	0	DDH	Perry Lake Area	Stellar
MPM1939-04	567803.2	5374170.2	325	68.95	0	0	DDH	Perry Lake Area	Stellar
MPM-89-01	569120	5372195	325	340.46	270	-50	DDH	Perry Lake Area	Moneta Porcupine Mines Inc.
MSW10-162A	571336.4	5368876.9	323.17	1435.19	330.9	-73.4	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-162B	571336.4	5368876.9	323.17	1320.16	330.9	-73.4	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-162C	571336.4	5368876.9	323.17	897.22	330.9	-73.4	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-162D	571336.4	5368876.9	323.17	1364.78	330.9	-73.4	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-162E	571336.4	5368876.9	323.17	872.95	330.9	-73.4	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-162F	571336.4	5368876.9	323.17	753.39	330.9	-73.4	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-162G	571336.4	5368876.9	323.17	1392.61	331.9	-72.1	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-260	571084.9	5369140.8	322.11	446.27	317.5	-63	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-261	571114.5	5369086.9	322.17	251.69	321.2	-66.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-262	571115.2	5369086	322.44	135	327	-65	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-263	571102.5	5369010.9	322.49	137.5	317.1	-70	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-264	570863.7	5369363.4	321.78	318.92	319.8	-61.8	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-265	570819.7	5369470.5	321.07	265.85	296.1	-58.6	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-267	571336.7	5368876.5	323.17	1515.86	309.2	-81.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-267A	571336.7	5368876.5	323.17	1169.83	309.2	-81.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-267B	571336.7	5368876.5	323.17	850.84	309.2	-81.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-267C	571336.7	5368876.5	323.17	1198.1	309.2	-81.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-267D	571336.7	5368876.5	323.17	921.68	309.2	-81.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-267E	571336.7	5368876.5	323.17	1121.7	309.2	-81.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-267F	571336.7	5368876.5	323.17	1310.8	309.2	-81.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-267G	571336.7	5368876.5	323.17	1531.1	309.2	-81.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-268	571173.6	5368533.4	327.43	1395	315.8	-70.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-268A	571173.6	5368533.4	327.43	1463	315.8	-70.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-269	570963.5	5368888.2	322.56	844.9	315.8	-73.6	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-270	570963.5	5368888.2	318.89	278	322	-67	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-271	570963.5	5368888.2	318.89	740.5	321	-64.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-272	570963.5	5368888.2	318.89	754.5	321.5	-68.6	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-272A	570963.5	5368888.2	318.89	767.2	321.5	-68.6	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-273	571459.7	5369039.1	324.21	1275	306.5	-72.6	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-273A	571459.7	5369039.1	324.21	771.12	306.5	-72.6	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-273B	571459.7	5369039.1	324.21	1152	306.5	-72.6	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-274	571447	5368645.9	325.1	335.45	326.4	-54.8	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-275	571690.6	5368603.2	326.48	642.8	12	-50.9	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW10-276	571418.5	5369078.4	324.3	639	21.7	-50.9	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW11-277	571541.5	5369782	326.49	496.35	30.1	-58.9	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MSW11-278	570995.6	5368880.8	322.71	267	13.5	-78.5	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW11-278A	570995.6	5368880.8	322.71	251.87	13.5	-78.5	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW11-279	570995.8	5368880.5	323.18	1443.06	19.2	-78.8	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW11-280	571190.9	5369732.2	323.56	289.33	19.9	-57.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW11-281	571165	5369702.6	322.97	504.62	25.9	-62.3	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW11-282	571113.4	5369689.2	322.86	336.55	23.8	-57.5	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW11-283	571312.8	5369645	324.46	564.2	20.6	-54.1	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW11-284	570995.8	5368880.5	319.52	257.9	17.7	-75.4	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW11-285X	570996.4	5368880.6	322.53	1366	26.5	-75.9	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW11-286	571324.7	5369742.2	325.21	453.57	20.3	-51.4	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW11-287	571464.4	5369793.2	325.71	327.3	25.2	-49.4	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW11-288	571429.4	5369713.2	324.82	525.63	23.7	-50.9	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW11-289	571428.9	5369712	323.51	478.85	0.1	-64.6	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW11-290	571390	5369615.9	324.46	654.72	19.3	-54.7	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW11-290A	571390	5369615.9	324.46	656.9	19.3	-54.7	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW11-291	571387.5	5369608.2	324.29	338.77	17	-71.8	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW11-291AX	571387.5	5369608.2	324.29	1047.75	17	-71.8	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW11-292	571370.3	5369829.8	324.4	214.4	16.3	-51.7	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW11-293	572065.9	5369573.6	329.2	386.86	27	-53.3	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW11-294	571165	5369975	324	299.86	330	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW12-295	571447	5369854.1	325.34	60	18.7	-51.5	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW12-295A	571447	5369854.1	325.34	332.7	18.7	-51.5	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW12-296	571394.3	5369371.4	324.6	383.87	332.4	-53.7	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW12-297X	570570.6	5369832.7	323.64	535	121.1	-51.5	DDH	South West	Moneta Porcupine Mines Inc.
MSW12-298	570444.6	5369720.3	324.22	218.83	125.3	-52.9	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW12-299	570555.3	5369246.2	320.98	107	340	-50	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW12-300	571243.2	5370155.1	324.15	348.2	141.3	-52.7	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MSW12-301	571586.6	5369919	328.32	294.07	14.7	-50.8	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW12-302	570676	5368998.8	321.31	417.03	13.1	-55.4	DDH	South West Zone	Moneta Porcupine Mines Inc.
MSW12-303	571402	5369983.3	324.94	326.44	11.2	-53.5	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW12-304	571655	5369969.5	327.55	287.3	16.3	-50.9	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW12-305	571590.9	5369851.7	328.08	395.98	10.9	-50.8	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW12-306	571358.8	5370148	325.43	357.11	137.9	-51.8	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MSW12-307	571626.7	5370009.8	327.04	167.53	11	-51.5	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW12-308	571684.6	5369924.6	327.56	455.8	10.6	-53.5	DDH	Windjammer West Zone	Moneta Porcupine Mines Inc.
MSW12-309	571345.3	5370130.9	325.43	303.2	316.3	-62.8	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MTL05-01	572128.6	5371767.6	340.5	560	0	-50	DDH	North of Windjammer North	
MTL05-02	573188.6	5372084.6	340	479	160	-45	DDH	North of Windjammer North	
MU-89-100	570775	5369485.9	321	230	292	-50	DDH	South West Zone	Unocal Canada Ltd.
MU-89-101	570291.7	5370297.5	323.05	229.05	342	-50	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-102	570438.8	5370034.3	323.25	228	342	-50	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-103	567897	5369140.3	321.05	257	342	-52	DDH	LC Zone	Unocal Canada Ltd.
MU-89-104	567811.4	5369383.1	322.9	182	346.4	-49.5	DDH	LC Zone	Unocal Canada Ltd.
MU-89-105	566494.3	5368641.2	317.87	231.17	8.6	-50	DDH	Far Western Zone	Unocal Canada Ltd.

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MU-89-106	566479.2	5368893	321.86	263.9	0	-50	DDH	Far Western Zone	Unocal Canada Ltd.
MU-89-107	569974.3	5369227.7	322.25	68.85	161.2	-50	DDH	South West Zone	Unocal Canada Ltd.
MU-89-108	567853.5	5369275.1	322.71	284	340.25	-47	DDH	LC Zone	Unocal Canada Ltd.
MU-89-109	569943.7	5369325.9	322.5	504.99	162	-50	DDH	South West Zone	Unocal Canada Ltd.
MU-89-110	571599.8	5370808.4	328.71	178.92	340	-51	DDH	Landing Zone	Unocal Canada Ltd.
MU-89-111	571625.2	5370784.3	328.53	187.45	340.2	-49	DDH	Landing Zone	Unocal Canada Ltd.
MU-89-112	571652.2	5370792.9	328.5	184.4	335.5	-51	DDH	Landing Zone	Unocal Canada Ltd.
MU-89-113	571635.9	5370888.2	330	153.92	340	-52.5	DDH	Landing Zone	Unocal Canada Ltd.
MU-89-114	571735.8	5370882.5	329.5	184.4	341.7	-50.5	DDH	Discovery Zone	Unocal Canada Ltd.
MU-89-115	571502.4	5370825.4	328.71	141.73	346.7	-53	DDH	Landing Zone	Unocal Canada Ltd.
MU-89-116	570264.4	5370290.2	324	135.03	340	-57.2	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-117	570285.5	5370263	322.83	60.4	342	-50	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-117A	570290	5370266	322.83	169.16	348	-52.6	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-118	570315.6	5370272.3	322.92	47.24	340	-50	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-118A	570315.6	5370272.3	322.92	184.4	343	-52.4	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-119	570317.7	5370308.9	323.65	123.44	351	-52	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-120	570436.5	5370337.1	323.5	178.31	341	-51.5	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-121	570131	5370206.6	322.89	238.6	339.5	-57	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-122	569976.1	5370124.5	324.75	306.32	339	-49.5	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-123	567830.1	5369333	322.84	216.78	337.97	-49	DDH	LC Zone	Unocal Canada Ltd.
MU-89-124	567750.4	5369548.4	324.48	329.52	160	-50.5	DDH	LC Zone	Unocal Canada Ltd.
MU-89-125	567824.8	5369265	322.22	289.56	338.1	-47	DDH	LC Zone	Unocal Canada Ltd.
MU-89-126	567882	5369285.2	322.33	294.13	341.02	-50	DDH	LC Zone	Unocal Canada Ltd.
MU-89-127	567812.5	5369294.8	322.52	262.13	339.85	-49	DDH	LC Zone	Unocal Canada Ltd.
MU-89-128	567871.4	5369315.1	322.75	248.41	344.92	-46	DDH	LC Zone	Unocal Canada Ltd.
MU-89-129X	568009.9	5369359.4	323	421	341	-50	DDH	LC Zone	Moneta Porcupine Mines Inc.
MU-89-130	568225.8	5369468.1	323.2	205.74	341.5	-55	DDH	LC Zone	Unocal Canada Ltd.
MU-89-131A	567725.8	5369258.3	322.14	224.03	340.5	-62	DDH	LC Zone	Unocal Canada Ltd.
MU-89-133	567859.8	5369256	322.22	309.37	340.37	-52	DDH	LC Zone	Unocal Canada Ltd.
MU-89-134	570198.7	5370281	324.25	150.88	343	-51.9	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-135	570375	5370342.6	323.5	135.64	343	-50	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-136	570476.4	5370392.6	325.91	129.54	338	-50	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-137	570905.4	5370579.3	325.91	143.26	340	-50.5	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-138	570204	5370447.3	323.87	220.98	357	-55	DDH	Twin Creeks Zone	Unocal Canada Ltd.
MU-89-94	571281.3	5370672.6	327	200	342	-50	DDH	Landing Zone	Unocal Canada Ltd.
MU-89-95	571629.7	5370816.1	329.25	236	342	-49	DDH	Landing Zone	Unocal Canada Ltd.
MU-89-96	571179.1	5370633.5	327	234.35	342	-50	DDH	Landing Zone	Unocal Canada Ltd.
MU-89-97	571628.8	5370028.2	327.25	243.99	296	-50	DDH	Windjammer West Zone	Unocal Canada Ltd.
MU-89-98	571165.1	5369479.5	323.25	172.8	286	-50	DDH	South West Zone	Unocal Canada Ltd.
MU-89-99	571165.1	5369416.9	323.25	233.44	286	-50	DDH	South West Zone	Unocal Canada Ltd.
MWJ07-01	572366.5	5370355.7	334.77	239	329.6	-67.8	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ07-02	572209.2	5370219.8	330.12	380	341	-60.2	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ07-03	572269.6	5370248.3	330.95	369	334.8	-64.8	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-05	573994.9	5370740.1	331	401	336.2	-56.1	DDH	East of Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-06	572060.5	5370167.4	328.62	336	343.1	-58.5	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MWJ08-07	572257.7	5370042.2	329.91	556.86	339.8	-53.5	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-08	572479.1	5370322.6	338.95	443	342	-60	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-09	572415.3	5370362.8	335.83	398	340.8	-61.9	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-10	572332.9	5370327.6	333.57	266	338.4	-62.9	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-11	572396	5370414.1	335.68	166	340.2	-61	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-12	572504.7	5370398.5	343.23	341	348.2	-60.7	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-13	572313.8	5370378.6	332.98	185	339.6	-61.3	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-14X	572447.8	5370434.7	339.07	524	349.6	-60.6	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-15	572437.4	5370304.7	335.28	464	340	-60	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-15A	572437.4	5370304.7	335.28	119	335	-60	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-16	572347.6	5370262	331.87	413	342.8	-59.7	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-17X	572308.3	5370045.7	330.44	455	345.7	-48	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-18	572283.1	5370275.3	330.12	299	344.4	-60	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-19	571889.2	5370058.1	328.83	360	337	-60.5	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-20	572231.6	5370255.2	330.43	317	340.9	-65	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-21	572184.2	5370180.7	329.12	362	339.3	-59.8	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ08-22	572405.5	5370315.6	334.54	446	340.1	-62.5	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ09-23	572413.8	5370125.3	332.25	590	341.5	-52.4	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ09-24	572541.6	5370091.6	339.38	470	339.2	-51.4	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ09-25	572350.5	5370387.4	334.32	536	330.8	-54	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ09-26	572506.1	5371298.6	334.55	365	156	-56	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MWJ09-27	572386	5371265.2	337.69	436	157.5	-59.4	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MWJ09-28	572321.4	5371276	333.3	587	160	-59.7	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MWJ09-29	572213.4	5370681.3	331.41	485	340.4	-49	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ09-30	572267.5	5370539.2	331.77	530	339.9	-51.9	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ09-31	572108.1	5370318.6	329.84	473	266.2	-47.7	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ10-32	572118	5370045.8	330.23	451.82	43.2	-53.4	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ10-33	572005.1	5370118.2	328.62	530	40.6	-52.6	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-34	574174.8	5370812	331.37	463.62	24.3	-54.1	DDH	East of Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-35	572101.2	5370136.6	330.51	423.14	38.7	-54	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-36	572194.1	5370034.2	330.03	457.75	36.1	-54.3	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-37	572233.4	5370188.8	329.95	498.85	34.5	-49.2	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-38	572174.2	5370503	330.97	426.3	158.1	-50.9	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-39	571859.9	5370105.5	328.06	429	29.5	-57.4	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-40	572053.8	5369975.6	330.74	432	34.7	-56	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-41	572412.7	5370317.3	334.86	543.03	36.3	-50.7	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-42	572498.2	5370403.5	343.33	306.9	29	-50.7	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-43	572612.1	5370433.1	352.22	429	32.5	-54.2	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-44	572553.5	5370421.6	351.96	480	35.3	-53.9	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-45	572447.1	5370433.8	339.06	342.22	34.8	-59.5	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-46	572517.4	5370461.6	346.54	296.3	32.6	-52	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-47	572057.2	5370074.9	328.8	404.28	37.9	-58.5	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-48	572224.5	5370101.7	329.38	363	37.8	-50.7	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-49	571942.8	5370139.3	328.16	267	30.5	-54	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.
MWJ11-50	571833	5370179.5	328.1	310.03	38.4	-52.3	DDH	Windjammer South Zone	Moneta Porcupine Mines Inc.

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
MWJ11-51	572216.9	5370675.6	331.6	504	16.4	-50.7	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ11-52	572388.9	5370781.7	341.33	465	27.3	-51	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ11-53	572376.3	5370881.7	339.77	396	24.9	-50.3	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ11-54	572549.4	5370893.9	357.83	459	24.4	-52.4	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ11-55	572301.8	5370808.7	333.84	318.04	350	-50.8	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ11-56	571925.2	5370599	328.23	108.75	340	-50	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ11-57	572108.1	5370678.5	329.09	384.13	341.2	-53.7	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ11-58	571908.3	5370643.5	328.13	330.06	339.3	-52.5	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ11-59	572079	5370461.9	330.56	324.02	340.1	-51.4	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-60	572221.1	5370779.2	331.15	312.03	338.1	-52	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-61	572375.2	5370843.1	340.25	278.73	347.8	-48.9	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-62	572461.2	5370569.3	344.1	390.03	351.4	-48.7	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-63	572654.6	5370615.9	350.66	417	335	-50	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-64	571846.3	5370524.4	328.1	63.61	160	-50	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-64A	571846.3	5370524.4	328.1	303.09	156	-49.2	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-65	572125.2	5370785.5	329.37	237.25	332.9	-48.8	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-66	572697.9	5371096.3	331.52	213.15	342.2	-60.7	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-67	572693.9	5370943	340.77	392.94	342	-51.8	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-68	572765.9	5371068.9	330.48	318.55	340.4	-62.2	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-69	572213.5	5370896	330.95	377.88	344.5	-49.7	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-70	572629.7	5371408.9	334.83	393	162.1	-52.2	DDH	Windjammer North Zone	Moneta Porcupine Mines Inc.
MWJ12-71	572801.2	5371120.9	330.63	213	335.1	-59.7	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-72	572383.1	5370786.8	340.37	399.02	347.4	-52.6	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-73	572897.9	5371148.8	330.07	231.3	334.8	-59.6	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-74	572173.7	5370504.7	330.73	413.56	337.4	-54.8	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-75	572356.3	5370554.6	335.31	540.58	345.6	-51.5	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-76	572559.7	5370592.2	360.2	462.07	349.9	-50.9	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-77	572323.3	5370658.5	334.1	513.7	345.2	-50	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-78	572420.5	5370675.6	342.66	423.27	343.2	-51.8	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
MWJ12-79	572422.2	5370674	342.74	406.12	30.6	-50.2	DDH	Windjammer Central Zone	Moneta Porcupine Mines Inc.
NM82-1	571765.6	5368600.6	325.75	152.7	135	-55	DDH	South West Zone	
NM82-2	571365.6	5368583.6	324.25	169.77	153.5	-60	DDH	South West Zone	
NM82-3	571529.6	5368825.6	326	172.21	229	-60	DDH	South West Zone	
NM82-4	566486	5369137.5	321.7	205.74	0	-60	DDH	Far Western Zone	
NM83-5	566856.6	5368836.6	319	359.05	155	-55	DDH	Far Western Zone	
NM83-6	566469.7	5368915.6	325	121.92	180	-55	DDH	Far Western Zone	
NM83-7	571738.6	5368829.6	325.5	152.7	350	-60	DDH	South West Zone	
NM86-10	571739.6	5368474.6	327.73	160.32	360	-55	DDH	South West Zone	
NM86-11	571890.6	5368206.6	332.25	106.68	40	-50	DDH	South West Zone	
NM86-12	571790.6	5368834.6	325.25	138.99	360	-55	DDH	South West Zone	
NM86-13	571889.6	5368804.6	325	206.04	360	-60	DDH	South West Zone	
NM86-8	571889.6	5368628.6	326.5	155.45	180	-50	DDH	South West Zone	
NM86-9	572000.6	5368304.6	334	81.38	220	-45	DDH	South West Zone	
PL-84-01	565690	5373700	325	150.31	180	-45	DDH	Perry Lake Area	Asarco
PL-87-01	565637.6	5372740.4	325	148.13	195	-45	DDH	Perry Lake Area	Battle Mountain Gold

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
PL-87-02	565464.8	5373077.3	325	245.67	15	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-87-03	565022.1	5373329.2	325	215.19	195	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-87-04	564558.7	5373490.4	325	47.55	195	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-87-04A	564563.3	5373489.6	325	201.17	195	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-87-05	564649.2	5373884.1	325	80.77	195	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-87-05A	564649.2	5373884.1	325	187.45	195	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-87-06	565371.9	5373217.5	325	114.6	195	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-87-07	565614.3	5373183.7	325	74.98	195	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-87-08	565377.3	5372696.9	325	53.64	15	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-87-08A	565396	5372698	325	117.65	195	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-87-09	565727.7	5372588.2	325	226.77	15	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-87-10	563575.4	5372479.2	325	334.06	15	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-87-11	563580.1	5372478.3	325	85.34	195	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-87-12	563691.2	5372438.5	325	352.35	15	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-88-13	563524.8	5372782	325	361.49	195	-47	DDH	Perry Lake Area	Battle Mountain Gold
PL-88-14	563609.5	5372606.1	325	193.85	15	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-88-15	563615.6	5372088.5	325	245.67	195	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-88-16	564244	5372100.5	325	193.85	195	-48	DDH	Perry Lake Area	Battle Mountain Gold
PL-90-1B	565220	5375375	325	243	195	-55	DDH	Perry Lake Area	Corona Corporation
PL-96-01	565889	5373429	325	224	190	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-96-02	565690	5373375	325	346	190	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-97-03	565284	5373371	325	274	190	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-97-04	566306	5373485	325	276.1	190	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-97-04A	566304.3	5373475.2	325	21	190	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-97-05	564798	5373522	325	343	190	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-98-06	566506	5373433.4	325	335	190	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-98-07	566099	5373429	325	302	190	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-98-08	566322	5373577	325	623	190	-62	DDH	Perry Lake Area	Battle Mountain Gold
PL-98-09	566121	5373635	325	548	190	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-98-10	565941.1	5373685.3	325	653	190	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-98-11	564191.8	5372978.3	325	251	190	-45	DDH	Perry Lake Area	Battle Mountain Gold
PL-98-12	564184.5	5373512.7	325	113	190	-45	DDH	Perry Lake Area	Battle Mountain Gold
RM-01	568628.7	5373236.2	325	279.5	314	-50	DDH	Pipestone East Target	Renzy Mines
RM-02	568568	5373413	325	309.37	138.5	-45	DDH	Pipestone East Target	Renzy Mines
RM-03	568266	5373515.8	325	200.86	192	-47.5	DDH	Pipestone East Target	Renzy Mines
RM-04	568136.1	5373367.6	325	160.02	9.5	-50	DDH	Pipestone East Target	Renzy Mines
RM-05	567748.1	5373257.6	325	148.13	179	-45	DDH	Pipestone East Target	Renzy Mines
RM-06	567389	5373169	325	166.73	176.8	-45	DDH	Pipestone East Target	Renzy Mines
RM-07	567645.7	5373440.9	325	156.06	176.6	-45	DDH	Pipestone East Target	Renzy Mines
RM-08	567748.1	5372952	325	175.08	169.6	-45	DDH	Pipestone East Target	Renzy Mines
RM-09	568366.8	5373129.2	325	134.75	181	-45	DDH	Pipestone East Target	Renzy Mines
RM-10	568240	5373323.3	325	152.67	178	-45	DDH	Pipestone East Target	Renzy Mines
RM-11	568814.4	5373702.1	325	141.73	173.5	-45	DDH	Pipestone East Target	Renzy Mines
RM-12	568432	5373195	325	172.21	1	-45	DDH	Pipestone East Target	Renzy Mines
T96-01	565092.6	5368168.6	315	94.51	360	-50	DDH	Far Western Zone	Tandem

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
T96-01A	565092.6	5368113.6	314.71	146.55	360	-46	DDH	Far Western Zone	Tandem
T96-02	565341.6	5368193.6	315.7	82.93	360	-52.5	DDH	Far Western Zone	Tandem
T96-02A	565341.6	5368193.8	315.71	243.11	360	-52	DDH	Far Western Zone	Tandem
T96-03	565214.6	5367833.6	314	246.04	360	-50	DDH	Far Western Zone	Tandem
T96-04	564723.6	5368198.6	315	367.99	360	-56.5	DDH	Far Western Zone	Tandem
TH03-08	569494.5	5373694.3	325	236	180	-50	DDH	Perry Lake Area	St Andrews/Royal Victoria
WH-47-01	572614	5370801.3	358.5	181.96	180	-50	DDH	Windjammer Central Zone	Wright Hargreaves Gold Mines
WH-47-02	572584.6	5370723.8	360.75	335.28	180	-50	DDH	Windjammer Central Zone	Wright Hargreaves Gold Mines
WH-47-03	572591.2	5370607.6	356.5	441.35	345	-50	DDH	Windjammer Central Zone	Wright Hargreaves Gold Mines
WH-47-03W	565561.6	5368300.6	316	339.55	180	-50	DDH	Far Western Zone	Wright Hargreaves Gold Mines
WH-47-04	572589.1	5370573.6	358	374.6	155	-60	DDH	Windjammer South Zone	Wright Hargreaves Gold Mines
WH-47-04W	565687.6	5368012.6	314.08	68.58	180	-50	DDH	Far Western Zone	Wright Hargreaves Gold Mines
WH-47-05A	565688.6	5367878.6	313.63	220.68	360	-50	DDH	Far Western Zone	Wright Hargreaves Gold Mines
WH-47-06	565800.6	5367604.6	313	171.6	180	-50	DDH	Far Western Zone	Wright Hargreaves Gold Mines
WH-47-07	565799.6	5367572.6	313	335.28	360	-50	DDH	Far Western Zone	Wright Hargreaves Gold Mines
WH-49-01	565356.6	5368809.6	319.02	308.15	180	-50	DDH	Far Western Zone	Wright Hargreaves Gold Mines
WH-49-02	565340.6	5368664.6	318.12	332.54	180	-50	DDH	Far Western Zone	Wright Hargreaves Gold Mines
WH-49-08	565673.6	5367966.6	314	304.5	360	-50	DDH	Far Western Zone	Wright Hargreaves Gold Mines
WH-49-09	568629.8	5368492.5	317.5	269.14	345	-50	DDH	Dyment 3	Wright Hargreaves Gold Mines
WH-49-10	568620.9	5368536.3	317.75	305.41	165	-50	DDH	Dyment 3	Wright Hargreaves Gold Mines
WJ83-1	574130.8	5371195.2	331.5	87.78	180	-50	DDH	Windjammer Central Zone	Noranda
WJ83-2	574145.5	5370933.4	332.5	219.45	0	-53	DDH	East of Windjammer South Zone	Noranda
WJ85-1	572456.5	5371232.4	336.5	256	340	-55	DDH	Windjammer North Zone	Noranda
WJ85-2	572404.1	5371367.6	336.5	333.6	340	-55	DDH	Windjammer North Zone	Noranda
WJ87-1	572145.8	5370295.7	330.14	398.17	340	-60	DDH	Windjammer South Zone	Noranda
WJ87-10	572395.3	5371042.3	342.18	397.76	340	-60	DDH	Windjammer North Zone	Noranda
WJ87-11	572247.3	5370307.6	331.72	254.81	340	-62	DDH	Windjammer South Zone	Noranda
WJ87-2	572468.1	5371111	345.5	408.74	340	-60	DDH	Windjammer North Zone	Noranda
WJ87-3	572533.9	5370952.5	348.91	623.62	340	-63.5	DDH	Windjammer Central Zone	Noranda
WJ87-4	572198.1	5370283.7	329.88	317.91	342	-61	DDH	Windjammer South Zone	Noranda
WJ87-5	572108.3	5370255.1	329.46	307.54	340	-60	DDH	Windjammer South Zone	Noranda
WJ87-6	572452.2	5371083	346.5	352.04	346	-63	DDH	Windjammer North Zone	Noranda
WJ87-7	572156.1	5370267.4	329.33	263.96	340	-60	DDH	Windjammer South Zone	Noranda
WJ87-8	572504.7	5371085.5	346	388.92	340	-60	DDH	Windjammer North Zone	Noranda
WJ87-9	572061.5	5370238.5	329.14	257.86	340	-62	DDH	Windjammer South Zone	Noranda
WJ88-12	572294.2	5370325	332.51	251.96	340	-60	DDH	Windjammer South Zone	Noranda
WJ88-13	572521.6	5371112.4	344	346.5	340	-61	DDH	Windjammer North Zone	Noranda
WJ88-14	572125.9	5370277.2	329.71	227.38	340	-60	DDH	Windjammer South Zone	Noranda
WJ88-15	572410.3	5371338.4	335.71	334.06	160.3	-65.2	DDH	Windjammer North Zone	Noranda
WJ88-16	572172.5	5370295.1	330.35	239.27	340	-60	DDH	Windjammer South Zone	Noranda
WJ88-17	572218.7	5370312.8	331.07	273.1	340	-61	DDH	Windjammer South Zone	Noranda
WJ88-18X	572108.2	5370324.9	330.69	339.86	340	-60	DDH	Windjammer South Zone	Noranda/Moneta Porcupine Mines
WJ88-19	572491.5	5371128.4	343.5	310.29	340	-60	DDH	Windjammer North Zone	Noranda
WJ88-20	572155.1	5370342	330.5	203.91	340	-60	DDH	Windjammer South Zone	Noranda

Hole Name	X	Y	Z	Length	Az.	Incl.	Type	Zone	Company
WJ88-21	572201.8	5370360.6	330.84	175.6	340	-60	DDH	Windjammer South Zone	Noranda
WJ88-22	572539.8	5371147.3	339.75	343.2	340	-60	DDH	Windjammer North Zone	Noranda
WJ88-23	572265.6	5370331.2	331.56	257.86	340	-60	DDH	Windjammer South Zone	Noranda
WJ88-24	572590.5	5371166.7	340.11	388.92	340	-60	DDH	Windjammer North Zone	Noranda
WJ88-25	572248.4	5370376.2	331.41	199.95	340	-60	DDH	Windjammer South Zone	Noranda
WJ88-26	572919.8	5370471.1	365	413.21	340	-60	DDH	Windjammer South Zone	Noranda
WJ88-27	572492.5	5371369.7	334.7	410.26	160.8	-63.8	DDH	Windjammer North Zone	Noranda
WJ88-28	572984.2	5370600.5	364.5	251.76	340	-60	DDH	Windjammer South Zone	Noranda
WJ88-29	572364.3	5371318.9	338.96	362.41	160	-65	DDH	Windjammer North Zone	Noranda
WJ88-30	572525.4	5371031	348.31	428.55	340	-60	DDH	Windjammer North Zone	Noranda
WJ88-31	572496.6	5370983.2	355.13	502.32	340	-60	DDH	Windjammer North Zone	Noranda
WJ88-32	572403.1	5370951.9	345.3	510.54	340	-60	DDH	Windjammer North Zone	Noranda
WJ88-33	572586.3	5371024	343.2	554.13	340	-61	DDH	Windjammer North Zone	Noranda
WJ88-34	572154.9	5370214.7	329.3	327.96	340	-60	DDH	Windjammer South Zone	Noranda
WJ88-35	572648.9	5371142.9	341	371.25	340	-60	DDH	Windjammer North Zone	Noranda
WJ88-36	572209.8	5370223.4	330.04	371.55	340	-60	DDH	Windjammer South Zone	Noranda
WJ88-37	572388.4	5371101.6	339.5	310.29	340	-60	DDH	Windjammer North Zone	Noranda
WJ88-38	572284.1	5370999.6	340.35	438.3	340	-60	DDH	Windjammer North Zone	Noranda
WJ88-39	572113.6	5370171	330.53	383.38	340	-60	DDH	Windjammer South Zone	Noranda
WJ88-40	572229.6	5370129.8	329.35	1008.28	340	-81.8	DDH	Windjammer South Zone	Noranda
WJ88-41	572871.2	5371323.4	332.02	306.63	340	-60	DDH	Windjammer North Zone	Noranda
WJ88-42	572902.5	5371235.9	331	361.49	340	-60	DDH	Windjammer North Zone	Noranda
WJ88-43	572112.4	5370949.7	329.73	330.71	340	-60	DDH	Windjammer North Zone	Noranda
WJ88-44	572050.1	5370833.1	329.08	298.09	340	-61	DDH	Windjammer North Zone	Noranda
WJ88-45	572364.2	5370354.5	334.08	313.33	340	-60	DDH	Windjammer South Zone	Noranda
WJ88-46	572068.6	5371065.4	330.72	303.58	340	-60	DDH	Windjammer North Zone	Noranda
WJ88-47	572457.9	5370386.6	338.92	382.82	340	-60	DDH	Windjammer South Zone	Noranda
WJ88-48	572390.2	5370286.3	333.8	494.38	340	-62.5	DDH	Windjammer South Zone	Noranda
WJ88-49	572385.7	5371401.3	335.67	395.63	160	-60	DDH	Windjammer North Zone	Noranda
WJ89-50	572327.9	5371413.1	335.27	499.26	160	-65	DDH	Windjammer North Zone	Noranda
WJ89-51	572448.3	5371460	336.04	519.7	158	-65.7	DDH	Windjammer North Zone	Noranda
WJ89-52	572226.8	5370184.3	329.68	444.4	340	-60	DDH	Windjammer South Zone	Noranda
WJ89-53	572319.6	5370218.9	331.06	514.5	340	-61.7	DDH	Windjammer South Zone	Noranda
WJBPG-2	573078	5371418	332.75	336.19	160	-60	DDH	East of Windjammer North Zone	Broulan Gold
WJBPG-3	573078	5371393.6	332.25	213.97	340	-50	DDH	East of Windjammer North Zone	Broulan Gold
WJDM66-1	572166	5371130.5	331	264.87	160	-50	DDH	Windjammer North Zone	Dalhousie Michaud
WJDM66-2	572748.2	5371092.6	330.25	384.05	340	-50	DDH	Windjammer North Zone	Dalhousie Michaud