



**AQUILA RESOURCES INC.**

ANNUAL INFORMATION FORM

FISCAL YEAR ENDED DECEMBER 31, 2018

DATED FEBRUARY 28, 2019

## TABLE OF CONTENTS

INTRODUCTION .....	3
General .....	3
Currency .....	3
Forward-looking Statement .....	3
Mineral Resources .....	4
Qualified Persons .....	4
Non-IFRS Measures .....	5
CORPORATE STRUCTURE .....	6
Name, Address and Incorporation .....	6
Inter-Corporate Relationships.....	7
GENERAL DEVELOPMENT OF THE BUSINESS.....	8
GENERAL DESCRIPTION OF THE BUSINESS .....	13
General .....	13
Other Information .....	15
Risk Factors .....	<b>Error! Bookmark not defined.</b>
MATERIAL MINERAL PROJECT.....	25
Back Forty Project.....	25
Property Description and Location.....	25
Accessibility, Climate, Local Resources, Infrastructure and Physiography .....	26
History .....	26
Geology and Mineralization .....	29
Deposit Types.....	31
Exploration .....	31
Drilling .....	32
Sample Preparation, Analyses and Security.....	34
Data Verification .....	35
Mineral Processing and Metallurgical Testing .....	36
2018 Mineral Resource Estimate.....	37
Mineral Reserve Estimate.....	40
Mining .....	40
Recovery Methods.....	42
Infrastructure .....	46
Permits and Environmental Considerations.....	48
Capital and Operating Costs .....	48
Economic Analysis.....	51
Conclusions and Recommendations .....	52
DIVIDENDS .....	52
DESCRIPTION OF CAPITAL STRUCTURE .....	52
Common Shares .....	52
MARKET FOR SECURITIES .....	53
ESCROWED SECURITIES.....	53
DIRECTORS AND OFFICERS.....	53
Name, Occupation and Security Holding .....	53
Corporate Cease Trade Orders .....	59
Bankruptcies .....	59

Penalties or Sanctions .....	60
Conflicts of Interest .....	60
AUDIT COMMITTEE .....	60
Composition of the Audit Committee.....	60
Audit Committee Oversight .....	60
Pre-Approved Policies and Procedures .....	60
External Auditor Service Fees (by category).....	61
PROMOTERS .....	61
LEGAL PROCEEDINGS AND REGULATORY ACTIONS .....	61
Legal Proceedings .....	61
Regulatory Actions.....	61
INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS.....	61
TRANSFER AGENT AND REGISTRAR.....	62
MATERIAL CONTRACTS .....	62
NAMES AND INTERESTS OF EXPERTS .....	62
ADDITIONAL INFORMATION.....	62
SCHEDULE A AUDIT COMMITTEE CHARTER.....	A-1

## INTRODUCTION

### General

In this Annual Information Form (“**AIF**”), unless the context otherwise requires, “**Aquila**” or the “**Company**” refers to Aquila Resources Inc., its subsidiaries and their respective predecessors. Unless otherwise indicated, the information contained herein is given as at December 31, 2018.

### Currency

This AIF contains references to both United States dollars and Canadian dollars. All dollar amounts referenced, unless otherwise indicated, are expressed in United States dollars, and Canadian dollars are referred to as “C\$”.

### Forward-looking Statement

This AIF contains “forward-looking statements” and “forward-looking information” (forward-looking statements) within the meaning of applicable securities legislation. All statements other than statements of historical fact contained in this AIF are forward-looking statements, including, without limitation, the Company’s statements regarding its business, future results, future financial position, business strategy, plans and objectives, the expected activities at the Back Forty Project, the expected completion date of any preliminary economic analysis or future feasibility study, permitting application and other project milestones. In certain cases, forward-looking statements can be identified by the use of words such as “plans”, “expects”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates” or “believes”, or variations of such words and phrases or state that certain actions, events or results “may”, “could”, “would”, “might” or “will”, “occur” or “be achieved” and similar words or the negative thereof. Although management of the Company believes that the expectations represented in such forward-looking statements are reasonable, there can be no assurance that such expectations will prove to be correct.

By their nature, forward-looking statements are inherently uncertain, are subject to risk and are based on assumptions including those discussed herein. Readers are cautioned to not place undue reliance on forward-looking statements made herein because a number of factors could cause actual future results, conditions, actions or events to differ materially from the targets, expectations, estimates or intentions expressed in the forward-looking statements. The forward-looking statements contained herein are expressly qualified in their entirety by the above cautionary statement.

The future outcomes that relate to forward-looking statements may be influenced by many factors, including, but not limited to, the risk factors described under the heading “Risk Factors” in this AIF. The Company cautions that such list of factors is not exhaustive, and that, when relying on forward-looking statements to make decisions with respect to the Company, readers should carefully consider these factors, as well as other uncertainties and potential events, and the inherent uncertainty of forward-looking statements.

Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. Such information is based on numerous assumptions, including those regarding:

- the availability of financing for the Company’s exploration and development projects and other operations on reasonable terms;
- the availability of personnel for the Company’s exploration and development projects;
- interest rates and foreign exchange rates;

- the supply and demand for, deliveries of, and the level and volatility of prices of zinc, copper, gold, silver and other commodities;
- the timing of the receipt of regulatory and governmental approvals for the Company's development projects and other operations;
- market competition;
- risks involved in mining, processing, exploration and research and development activities;
- tax benefits;
- the ability to use tax losses against future sources of income;
- the supply and availability of consumables and services;
- the supply and availability of all forms of energy and fuels at reasonable prices;
- the Company's ongoing relations with its employees;
- the accuracy of geological, metallurgical and cost assumptions with respect to the size, grade and recoverability of mineral reserves and resources;
- unanticipated operational difficulties;
- unanticipated events relating to regulatory, environmental, health and safety matters; and
- changes in general economic conditions or conditions in the financial markets.

There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements. Forward-looking statements are provided as of the date of this AIF or such other date specified herein, and the Company assumes no obligation to update or revise such forward-looking statements to reflect new events or circumstances except as required under applicable securities laws.

### **Mineral Resources**

Mineral resources that are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues. The quantity and grade of reported inferred resources in this estimation are uncertain in nature and there has been insufficient exploration to define these inferred resources as an indicated or measured mineral resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured mineral resource category. The inclusion of inferred mineral resources are considered too speculative geologically to have the economic considerations applied to enable them to be categorized as mineral reserves. The mineral resources in this AIF were reported using Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Standards.

### **Qualified Persons**

The content of this AIF has been read and approved by Andrew Boushy, Senior Vice President, Projects at Aquila. Mr. Boushy is a Qualified Person as defined by National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI 43-101").

### **Non-IFRS Measures**

C1 cash costs, AISC, EBITDA and free cash flow are non-IFRS financial measures calculated by the Company as set forth below, and may not be comparable to similar measures reported by other companies. These metrics are included for completeness but are currently not in use. These metrics will be used once the mine is developed.

C1 cash costs, which are intended to measure direct cash costs of producing paid metal, include all direct costs that would generate payable recoveries of metals for sale to customers, including mining of mineralized materials and waste, leaching, processing, refining and transportation costs, on-site administrative costs and royalties, net of by-product credits. C1 cash costs do not include depreciation, depletion, amortization, exploration expenditures, reclamation and remediation costs, sustaining capital, financing costs, income taxes, or corporate general and administrative costs not directly or indirectly related to the Project. C1 cash costs are divided by the number of ounces of gold or pounds of zinc, as applicable, estimated to be produced for the period to arrive at cash costs per gold ounce or zinc pound produced.

AISC includes C1 cash costs, as defined above, plus exploration costs at the Project and sustaining capital expenditures (including additional leach pads, permitting and customary improvements to the operations over the life of the project). AISC is divided by the number of ounces of gold or pounds of zinc, as applicable, estimated to be produced for the period to arrive at AISC per gold ounce or zinc pound produced.

EBITDA is earnings before interest, taxes, depreciation, and amortization.

Free cash flow is cash flows from operations less all capital investments including closure costs.

## CORPORATE STRUCTURE

### **Name, Address and Incorporation**

Aquila is an Ontario corporation which was formed by a statutory plan of arrangement pursuant to the *Business Corporations Act* (Ontario) (the “**OBCA**”) involving REBgold Corporation (“**REBgold**”), Aquila and the holders of the common shares of REBgold on January 16, 2014.

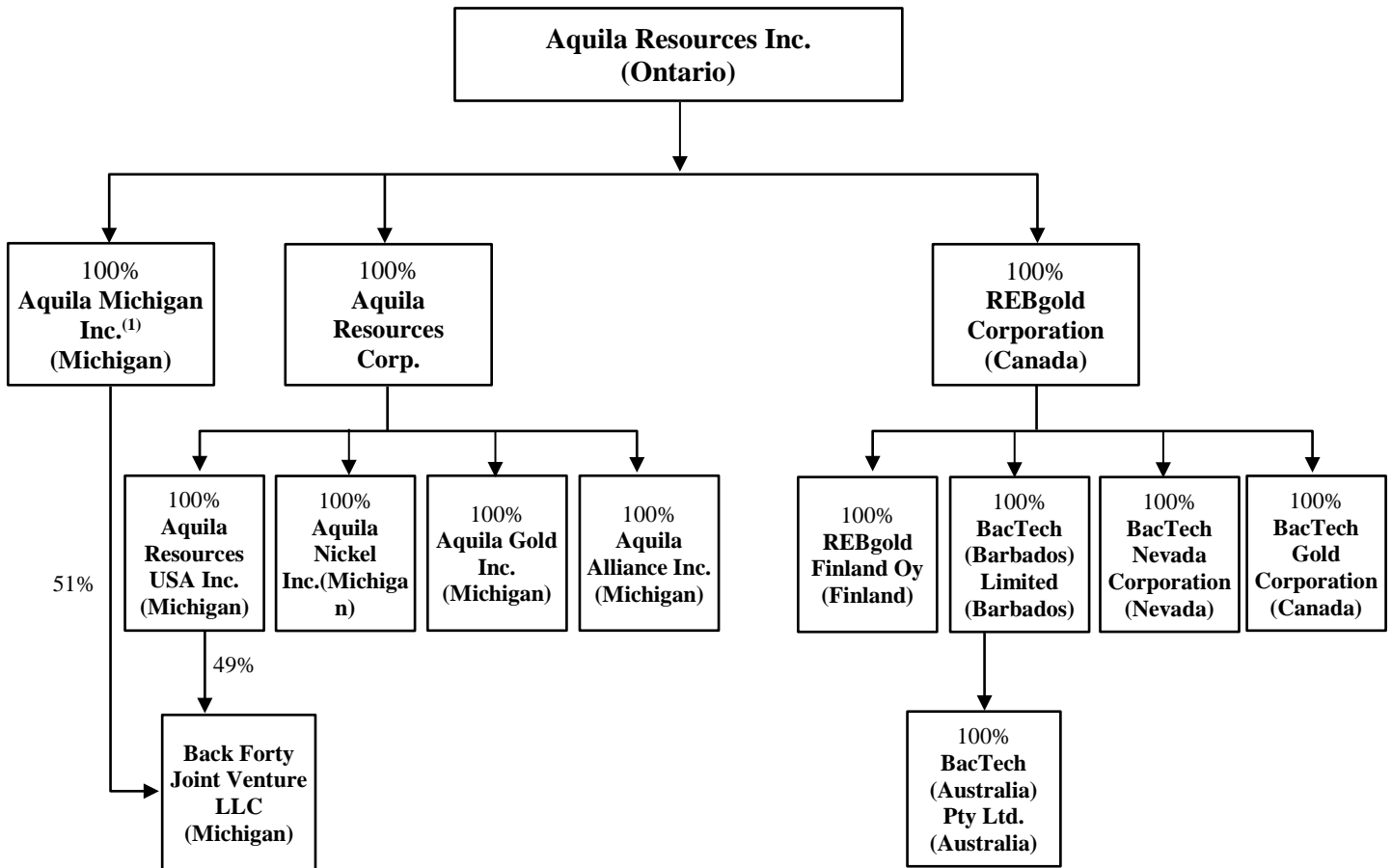
The Company’s head and registered office is located at 141 Adelaide Street West, Suite 520, Toronto, Ontario M5H 3L5. The Company’s U.S. operations are located at E807 Gerue Street, Stephenson, Michigan, 49887.

Aquila is a reporting issuer in the Provinces of British Columbia, Alberta, Saskatchewan, Ontario and Nova Scotia. The common shares of the Company are listed on the Toronto Stock Exchange (“**TSX**”) in Canada under the symbol “**AQA**” and cross-traded on the OTCQB Venture Market (“**OTCQB**”) in the United States under the symbol “**AQARF**”.

### Inter-Corporate Relationships

The Company has three main subsidiaries, Aquila Resources Corp., Aquila Resources USA Inc., and Aquila Michigan Inc. (formerly known as HudBay Michigan Inc.). The remaining subsidiaries are inactive. All subsidiaries are 100% owned.

As of December 31, 2018, the corporate structure of Aquila Resources Inc. is as follows:



(1) Aquila Michigan Inc. was formerly named HudBay Michigan Inc.



## GENERAL DEVELOPMENT OF THE BUSINESS

The Company is a natural resource company engaged in the acquisition, exploration and development of mineral properties. The principal asset of the Company is its 100% owned Back Forty Project located in Menominee County, Michigan. The Company has two other 100% owned exploration projects: the Reef Gold Project located in Marathon County Wisconsin and the Bend Project located in Taylor County, Wisconsin. The following is a summary of the general development of the Company over the last three years:

### *Back Forty Feasibility Study and Technical Report*

On August 1, 2018, Aquila announced the results of the Back Forty feasibility study (“**Back Forty Feasibility Study**”) and construction implementation plan for its Back Forty Project, which had been commenced in January 2016 and updated in February 2017. Following the announcement of the results of the Back Forty Feasibility Study, the Company filed a technical report, titled “Back Forty Project, Michigan, USA – Feasibility Study NI 43-101 Technical Report”, prepared by Lycopodium Minerals Canada Ltd. with support from globally recognized experts and specialist consulting engineering companies and dated and filed on SEDAR on September 7, 2018 (the “**Feasibility Study Technical Report**”).

The Feasibility Study Technical Report also incorporates data from the Company’s February 7, 2018 updated mineral resource estimate for the Back Forty Project (the “**2018 Mineral Resource Estimate**”), which was originally documented in a technical report, titled “Updated Mineral Resource Estimate and Technical Report on the Back Forty Project, Michigan, USA” prepared by P&E Mining Consultants Inc. (“**P&E**”), dated and filed on SEDAR on March 26, 2018 (the “**Mineral Resource Estimate Technical Report**”). As a result of the filing of the Feasibility Study Technical Report, Aquila no longer considers the Mineral Resource Estimate Technical Report or any prior technical reports to be a current technical report and, at this time, the Feasibility Study Technical Report is the only current technical report in respect of the Back Forty Project.

Highlights of the Back Forty Feasibility Study, which assessed the open pit only, include:

- Open pit Proven and Probable Mineral Reserves of 11.65M tonnes of ore.
- Pre-tax net present value (“**NPV**”) of \$259 million at a 6% discount rate and internal rate of return (“**IRR**”) of 32.0% at base case metal prices of \$1,300/oz gold, \$1.20/lb zinc, \$20/oz silver, \$3.00/lb copper and \$1.00/lb lead.
- After-tax NPV of \$208 million at a 6% discount rate and IRR of 28.2% with a 2.2 year payback.
- An estimated open pit project life of seven years with total payable gold production of 468,000 oz (or an average of 67,000 oz per year) and 135,000 oz in Year 1. Total payable gold equivalent production of 1.1 million oz.
- Total payable zinc production of 512M lbs (or an average of 73M lbs per year). Total payable zinc equivalent production of 1.2B lbs.
- Initial project capital costs estimated at \$294M with a 24-month construction period.
- Sustaining capital costs of \$110.6M.

- Gross C1 cash costs<sup>1</sup> of \$499/oz gold equivalent or \$0.46/lb zinc equivalent and net C1 cash costs of -\$590/oz gold or -\$1.73/lb zinc.
- Gross AISC<sup>2</sup> of \$677/oz gold equivalent or \$0.62/lb zinc equivalent and net AISC of -\$171/oz gold or -\$1.34/lb zinc.
- The Company has also identified a number of opportunities to further enhance the overall economics of the Back Forty Project including the future addition of an underground expansion.

The 2018 Mineral Resource Estimate incorporates the results of an additional 22 diamond drill holes completed in 2015 through 2017. The additional drill holes, which were primarily designed to target Inferred Mineral Resources, successfully increased the global tonnage as well as the contained metal inventories within the Measured and Indicated Mineral Resource categories. The 2018 Mineral Resource Estimate also incorporates updated mineral resource modeling and mineral resource determinations based on updated net smelter return (“NSR”) calculations and revised cut-off values. The updated NSR calculations incorporated updated metal pricing, recovery information and product specifications which were derived from recently completed metallurgical test work as well as revised terms related to smelting, refining and transportation. In-pit and out-of-pit Mineral Resource quantities were determined based on the generation of optimized pit shells to determine the optimum profitable open pit configuration and incorporated updated pit slope information derived from additional geotechnical data.

Highlights of the 2018 Mineral Resource Estimate include a 10% increase in tonnage in the Measured and Indicated Mineral Resource categories versus the Company’s prior mineral resource estimate (the “**2013 Mineral Resource Estimate**”), a 12% increase in contained zinc and a 4% increase in contained gold. Contained silver, copper and lead also increased versus the 2013 Mineral Resource Estimate.

The 2018 Mineral Resource Estimate is based on a drill hole database consisting of 741 boreholes totaling 128,670 meters of drilling, which includes the additional 22 new holes. It does not incorporate an additional 28 holes that were drilled related to geotechnical investigations, metallurgical purposes and exploration, including drilling on the mineralized zone discovered in 2016 that is located approximately 500 meters south west of the proposed open pit.

More information on the Feasibility Study Technical Report, including the Back Forty Feasibility Study and the 2018 Mineral Resource Estimate, is described in the “General Description of the Business” and “Material Mineral Property” sections, below.

#### *Osisko Financing and Gold Purchase Agreement*

On November 10, 2017 Aquila closed a financing transaction with Osisko Bermuda Limited (“**OBL**”), a wholly owned subsidiary of Osisko Gold Royalties Ltd. (“**Osisko**”), pursuant to which OBL committed approximately \$65 million to Aquila through a \$10 million equity private placement (the “**Osisko Private Placement**”) and a \$55 million gold stream purchase agreement (the “**Gold Purchase Agreement**”).

Pursuant to the Osisko Private Placement, OBL purchased 49,173,076 units of Aquila at a price of C\$0.26 per unit for aggregate gross proceeds of \$10 million. Each unit consisted of one common share and one-quarter of one common share purchase warrant. Each whole warrant entitles the holder to purchase one common share at a price of C\$0.34 for a period of 42 months from the date of closing of the Osisko Private Placement. Proceeds from the Osisko Private Placement were used to complete the feasibility study for the Back Forty Project, and **[are being used]** to advance the Back Forty Project to full permits for construction, complete exploration programs, and for general corporate purposes.

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<sup>1</sup> C1 cash costs, which are intended to measure direct cash costs of producing paid metal, does not have a standardized meaning under IFRS. See “Non-IFRS Measures”.

<sup>2</sup> All-in sustaining costs (“**AISC**”) does not have a standardized meaning under IFRS. See “Non-IFRS Measures”.

OBL currently owns approximately 14.5% of Aquila's issued and outstanding common shares. For such time as OBL and its affiliates own at least 10% of the issued and outstanding common shares of Aquila, it will have the right to participate in future equity or equity-linked placements to maintain its interest in Aquila and have the right to nominate one individual for election or appointment to the board of directors of the Company.

Pursuant to the Gold Purchase Agreement, OBL will provide Aquila with staged payments totalling \$55 million, payable as follows:

- \$7.5 million was advanced upon closing of the gold stream transaction;
- \$7.5 million upon receipt by Aquila of all material permits required for the development and operation of the Back Forty Project, and receipt of a positive feasibility study (received October 5, 2018);
- \$10 million following a positive construction decision for the Back Forty Project; and
- \$30 million upon the first drawdown of an appropriate project debt finance facility, subject to a change of control provision.

Pursuant to the Gold Purchase Agreement, OBL will purchase 18.5% of the refined gold from Aquila's Back Forty Project (the "**Threshold Stream Percentage**") until Aquila has delivered 105,000 ounces of gold (the "**Production Threshold**"). Upon satisfaction of the Production Threshold, the Threshold Stream Percentage will be reduced to 9.25% of the refined gold (the "**Tail Stream**"). In exchange for the refined gold delivered under the Gold Purchase Agreement, OBL will pay the Company ongoing payments equal to 30% of the spot price of gold on the day of delivery, subject to a maximum payment of \$600 per ounce. Aquila also agreed to pay a \$200,000 capital commitment fee to OBL payable as to 50% upon closing of the stream transaction and 50% upon OBL funding the second deposit under the Gold Purchase Agreement. Aquila will satisfy the fee by way of the issuance of common shares of the Company based upon the five-day volume weighted average price of the common shares prior to the applicable deposit funding date.

In the event of a change of control of the Company prior to the advancement of the final \$30 million under the Gold Purchase Agreement, the person or entity acquiring control over the Back Forty Project may elect to forgo the final payment, in which case the Threshold Stream Percentage and Tail Stream will be reduced to 9.5% and 4.75%, respectively. All other terms and conditions of the Gold Purchase Agreement will remain unchanged.

On October 5, 2018, Aquila received a payment of \$7.4 million from an affiliate of Osisko under the Gold Purchase Agreement. This payment represents the second deposit of the total advance payment of US\$55 million to be made by Osisko under the Gold Purchase Agreement. The payment, which was made net of a \$100,000 capital commitment fee, follows receipt by Aquila of all material permits required for the development and operation of the Back Forty Project in Michigan and the completion of the Back Forty Project feasibility study ("**Back Forty Feasibility Study**"), which is described in more detail below.

#### *2017 Private Placement*

On February 6, 2017 Aquila closed an equity private placement for gross proceeds of C\$7.9 million. Pursuant to the private placement, Aquila issued 36,017,725 units at a price of C\$0.22 per unit. Each unit consisted of one common share and one-half of one common share purchase warrant. Each whole warrant is exercisable at price of C\$0.30 for a period of three years from the closing date of the private placement.

#### *Permitting Process*

Aquila has received all necessary United States state and federal permits required for the construction and commencement of operations at its Back Forty Project.

### Wetlands Permit

On June 4, 2018, Aquila received its wetland/stream/floodplain permit (the “**Wetlands Permit**”) from the Michigan Department of Environmental Quality (the “**MDEQ**”). The Wetlands Permit was issued inclusive of specific conditions, including those requested by the United States Environmental Protection Agency (the “**EPA**”). With the issuance of the Wetlands Permit, and the objections of the EPA which were raised during its review process resolved, Aquila received all state and federal permissions required for the construction and commencement of operations at the Back Forty Project.

After the Wetlands Permit was awarded to the Company, the Menominee Indian Tribe of Wisconsin (the “**Tribe**”) filed a federal lawsuit in the Eastern District of Wisconsin against the EPA and the U.S. Army Corps of Engineers, claiming the federal government should exercise jurisdiction over the wetlands permitting process currently being administered by the State of Michigan and require the Company to obtain a federal Wetlands Permit. On December 19, 2018, the U.S. District Court for the Eastern District of Wisconsin (the “**Court**”) dismissed the lawsuit. The Court held that the Tribe could not challenge the federal government’s refusal to exercise jurisdiction over the Wetlands Permit under the Administrative Procedures Act or the Clean Water Act. The Tribe has appealed the District Court’s dismissal of its case to the federal Seventh Circuit Court of Appeals. Aquila anticipates that briefing and oral argument on the appeal will be completed by Q4 of 2019.

In November of 2018, the Coalition to SAVE the Menominee River, Inc. filed a lawsuit in the U.S. District Court for the Eastern District of Wisconsin challenging the EPA and the U.S. Army Corps of Engineers’ failure to exercise jurisdiction over Aquila’s Wetlands Permit for its Back Forty Project. This lawsuit is nearly identical to the prior lawsuit in the same court filed by the Tribe. In December 2018, however, the Court dismissed the Tribe’s lawsuit, holding that the Tribe could not challenge the federal government’s refusal to exercise jurisdiction over the Wetlands Permit under the Administrative Procedures Act or the Clean Water Act. Accordingly, the United States and Aquila intend to intervene in the Coalition’s lawsuit and file a motion to dismiss the lawsuit before the end of Q1 2019.

### National Pollutant Discharge Elimination Permit

On April 5, 2017 the Company announced that it received the National Pollutant Discharge Elimination Permit from the MDEQ for its Back Forty Project following a comprehensive public commentary period that ended on November 3, 2016 and a review by the federal Environmental Protection Agency completed on February 24, 2017.

### Nonferrous Metallic Mineral Mining and Michigan Air Use Permit to Install

On December 29, 2016 the Company announced that it received two final permits from the MDEQ for its Back Forty Project. Specifically, the Company received the final Nonferrous Metallic Mineral Mining (the “**Mining Permit**”) and Michigan Air Use Permit to Install following a public comment period that ended on November 3, 2016.

The Mine Permit Application (“**Back Forty Application**”) for the Back Forty Project is with respect to the open pit portion of the mine operation and includes Aquila’s plan for mining, management of tailings and waste rock, reclamation, monitoring, contingency plan and plan for financial assurance. The Back Forty Application also contains a detailed environmental impact assessment supported by over two years of baseline studies on environmental and cultural resources. The Back Forty Application review process and permit decisions have been completed in conformance with Part 632 of Michigan’s *Natural Resources and Environmental Protection Act* (“**NREPA**”) which regulates nonferrous metallic mineral mining in the State of Michigan.

### *2017 Drill Program*

On November 3, 2017 Aquila announced the final drill results of its 2017 drilling program at the Back Forty Project in Michigan’s Upper Peninsula. The holes tested the area in the vicinity of the new zone of massive sulphide intercepts identified in the 2016 drilling program. This new zone of mineralization is approximately 500 meters south west of the proposed open pit.

LK-17-529 intersected a zinc-rich massive sulphide adjacent with a massive chlorite interval. This interval extends the 2016 Zone 30 meters east.

LK-17-534, LK-17-535 and LK-17-536 all intersected a similar stratigraphy that included multiple mineralized intervals. The three holes were drilled in a fence such that LK-17-534 was drilled, followed by LK-17-535 drilled as an overcut and LK-17-536 was drilled at a steeper angle. The fence was designed to test the down-strike extension of the 2016 Zone and confirmed the zone of massive sulphides and tuffaceous sediments continues more than 20 meters to the southwest, but may be offset vertically downward.

LK-17-537 tested an additional southwest extension of the 2016 zone. Zinc-rich massive sulphide and tuffaceous sediments were intersected more than 30 meters southwest of the mineralization identified in the LK-17-534 fence to the east.

#### *2016 Drill Program*

On November 22, 2016 Aquila announced the final drill results of its 2016 exploration program consisting of 1,786 meters of drilling in 10 holes. The exploration program focused on targeting potential extensions of known mineralized zones as well as new targets proximal to the Back Forty deposit. The final drill results include assay results from two holes that the Company announced on September 27, 2016, indicating the discovery of a new mineralized zone at Back Forty.

The 2016 drilling campaign identified new zinc rich massive and semi massive sulfide zones to the southwest of the Back Forty deposit. A discreet zone of massive sulfide in LK-16-515, 516 and 517 remains open along strike to the northeast and southwest as well as at depth. This new zone lies approximately 400 meters southwest of the proposed open pit, and may eventually prove to be continuous with underground resources extending southwest from the pit. Additionally, strong geophysical trends have identified targets for an additional 500 meters to the southwest.

Separate zinc and silver mineralized horizons were also encountered deeper in LK-16-515 as well as in LK-16-518. These horizons were hosted by siliceous, tuffaceous sediments similar to the Tuff zone and deeper mineralization under the Back Forty deposit. Future drilling will target extensions of these horizons and will test potential continuity with these zones.

Gold and silver mineralization was encountered in LK-16-514 at two separate horizons approximately 60 meters apart. The orientation of these intercepts is currently unknown, but the high grades, including visible gold in the lower interval, warrant follow up drilling. This area occupies an apparent gap between known Pinwheel massive sulfide mineralization and the newly discovered zone of mineralization in LK-16-515, 516 and 517.

Drill holes LK-16-511, 512, and 513 were step out holes testing the potential extension of the Pinwheel massive sulfide northeast of the proposed open pit. They encountered significant but narrow zones of precious metal mineralization, but no extensions of massive sulfide. LK-16-510 testing a geophysical target 325 meters northeast of the open pit did not return significant values.

All of the ten holes from this drilling program as well as strategic historic drill holes were surveyed with downhole, pulse electromagnetic techniques.

#### *2015 Orion Financing and Silver Purchase Agreement*

On March 31, 2015, the Company closed a multi-level financing transaction with Orion Mine Finance (“**Orion**”) that included an equity private placement and a silver stream for total funding of \$20.75 million (collectively, the “**Orion Transaction**”). Concurrent with the Orion Transaction, the Company completed the repurchase of two existing royalties on the Back Forty Project.

As part of the Orion Transaction, Aquila issued 26,923,077 units at a price of \$0.13 per unit for gross proceeds of \$3.5 million, with each unit consisting of one common share and one-half common share purchase warrant. Each whole

warrant allows the holder to purchase one common share at a price of \$0.19 per common share for a term of three years.

Also as part of the Orion Transaction, pursuant to a silver purchase agreement (the “**Silver Purchase Agreement**”) dated March 31, 2015 between Orion Titheco Limited, the Company and Back Forty Joint Venture LLC, Orion acquired 75 per cent of Aquila’s life-of-mine (“**LOM**”) silver production from the Back Forty Project for gross proceeds of \$17.25 million, subject to a drawdown schedule that is set out in the definitive agreement as follows:

- \$6.5 million was received on March 31, 2015,
- \$1.35 million was received on July 24, 2015 to be used for the final property payment for the Back Forty Project due August 4, 2015,
- \$3.0 million was received on December 11, 2015 upon the submission of an administratively complete mining permit,
- \$4.0 million upon a completion of the process design including a definitive flow sheet, with respect to the open pit portion of the Back Forty Project, of which a \$1.5 million advance was received in October 2015, a \$625,000 reduction was agreed to in June 2016 (discussed below) and the balance of \$1.875 million was received in August 2016, and
- \$2.4 million on completion of the Feasibility Study, of which \$1.386 million was received as an advance and a \$14,000 reduction was agreed to in November 2016. The remaining \$0.99 million was received by the Company in August 2017.

In connection with the exercise by Orion of 13,461,539 common share purchase warrants, Aquila agreed to amend the Silver Purchase Agreement by reducing the amount of the deposit payable thereunder by \$625,000 (as noted above). Aquila received \$2,557,692 of gross proceeds for the exercise of the common share purchase warrants.

In July 2017, Orion sold a royalty portfolio to Osisko which included the Company’s Back Forty silver stream and Orion’s rights under the Silver Purchase Agreement.

## **GENERAL DESCRIPTION OF THE BUSINESS**

### **General**

The Company is a natural resource company engaged in the acquisition, exploration and development of mineral properties. The principal asset of the Company is its 100% owned Back Forty Project located in Menominee County, Michigan. The Company has three other 100% owned exploration projects: the Reef Gold Project located in Marathon County Wisconsin and the Bend Project located in Taylor County, Wisconsin.

#### *The Back Forty Project*

The Back Forty Project is a polymetallic (zinc, lead, copper, gold silver) volcanogenic massive sulfide (“**VSM**”) deposit located in Menominee County, Michigan, U.S.A. The Back Forty Project was originally discovered in 2002 and is directly owned by the Back Forty Joint Venture LLC (“**BFJV**”) which controls approximately 3,222 gross acres of surface and mineral rights which are owned or held under lease or option by BFJV. Some lands are subject to net smelter royalties varying from 1% to 3.5%, and others are subject to a 2% to 7% royalty, which includes state royalties, which under Michigan state law can be renegotiated.

Aquila owns 100% of the BFJV through its 49% direct interest in BFJV and its indirect 51% interest, held through Aquila Michigan Inc.

Aquila filed the Feasibility Study Technical Report on September 7, 2018. The Feasibility Study Technical Report also incorporates data from the Company’s February 7, 2018 updated 2018 Mineral Resource Estimate, which was originally documented in the Mineral Resource Estimate Technical Report. As a result of the filing of the Feasibility Study Technical Report, Aquila no longer considers the Mineral Resource Estimate Technical Report or any prior

technical reports to be a current technical report and, at this time, the Feasibility Study Technical Report is the only current technical report in respect of the Back Forty Project.

Highlights of the Back Forty Feasibility Study include:

- Pre-tax net present value (“**NPV**”) at a 6% discount rate of \$259 million and IRR of 32.0% at base case metal prices of \$1,300/oz gold, \$1.20/lb zinc, \$20/oz silver, \$3.00/lb copper and \$1.00/lb lead.
- After-tax NPV at a 6% discount rate of \$208 million and IRR of 28.2% with a 2.2 year payback.
- Open pit Proven and Probable Mineral Reserves of 11 million tonnes.
- A project life of seven years with total payable gold production of 468,000 oz (or an average of 67,000 oz per year) and 135,000 oz in Year 1. Total payable gold equivalent production of 1.1 million oz.
- Total payable zinc production of 512 million lbs (or an average of 73 million lbs per year). Total payable zinc equivalent production of 1.2 billion lbs.
- Initial project capital costs estimated at \$294 million with a 24-month construction period.
- Sustaining capital costs of \$110.6 million.
- Gross C1 cash costs<sup>3</sup> of \$499/oz gold equivalent or \$0.46/lb zinc equivalent and net C1 cash costs of -\$590/oz gold or -\$1.73/lb zinc.
- Gross AISC<sup>4</sup> of \$677/oz gold equivalent or \$0.62/lb zinc equivalent and net AISC of -\$171/oz gold or -\$1.34/lb zinc.
- The Company has also identified a number of opportunities to further enhance the overall economics of the Back Forty Project including the future addition of an underground expansion.

The Feasibility Study Technical Report is described in further detail in the “Material Mineral Property” section below. The full Feasibility Study Technical Report is available under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com) and on its website at [www.aquilaresources.com](http://www.aquilaresources.com).

Aquila has received all necessary State and Federal permits required for the construction and commencement of operations at its Back Forty Project.

#### *Reef Gold Project and Bend Project*

The Reef Gold Project is primarily a gold asset, located in Marathon County Wisconsin while the Bend Project is a volcanogenic massive sulfide occurrence in Taylor County Wisconsin containing primarily copper and gold. Both projects host non-NI-43-101 compliant resources from former operators, and both projects were the focus of significant amounts of drilling after acquisition by the Company. Both projects are currently inactive except for ongoing compilation and analysis of historic and Aquila generated data. The land tenure for both projects are being maintained in good standing.

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<sup>3</sup> C1 cash costs, which are intended to measure direct cash costs of producing paid metal, does not have a standardized meaning under IFRS. See “Non-IFRS Measures”.

<sup>4</sup> All-in sustaining costs (“**AISC**”) does not have a standardized meaning under IFRS. See “Non-IFRS Measures”.

## **Other Information**

### *Specialized Skill and Knowledge*

All aspects of the Company's business require specialized skills and knowledge. Such skills and knowledge include the areas of geology, engineering, operations, environmental, drilling, logistical planning and implementation of exploration and development programs, treasury, accounting and legal. The Company has been able to locate and retain such employees and consultants and believes it will continue to be able to do so.

### *Competitive Conditions*

The mining industry is intensely competitive in all of its phases, and the Company competes with many companies possessing greater financial and technical facilities than itself in the search for and acquisition of attractive mineral properties, and the development of such properties. In addition, the Company also competes for the technical expertise to develop and operate such properties, the labour to operate the properties, and the capital for the purpose of funding such properties (see "Risk Factors").

### *Business Cycles*

The mineral exploration business is subject to mineral price cycles. The marketability of minerals and mineral concentrates and the ability to finance the Company on favourable terms is also affected by worldwide economic cycles.

### *Environmental Protection*

The Company is subject to federal, state and local environmental legislation at its operation. The Company recognizes that it must conduct its business in such a manner as to protect and preserve the environment. Management is not aware of any pending environmental legislation which would be likely to have a material impact on any of its operations. The Company believes that it is compliant in all material respects with all applicable environmental laws (see "Risk Factors").

### *Employees*

As at December 31, 2018, the Company and its subsidiaries had 17 full-time employees. The Company also relies on consultants and contractors to carry out many of its activities and, in particular, to carry out project development activities and to supervise work programs on its mineral properties.

## **RISK FACTORS**

An investment in common shares of the Company involves a high degree of risk and must be considered a highly speculative investment due to the nature of the Company's business and the present stage of exploration and development of its mineral properties. Resource exploration and development is a speculative business, characterized by a number of significant risks including, among other things, unprofitable efforts resulting not only from the failure to discover mineral deposits but also from finding mineral deposits, which, though present, are insufficient in quantity or quality to turn a profit from production. An investor should carefully consider the risk factors described below, together with all of the other information included or incorporated by reference in this AIF.

The risks described below are not the only ones which may affect the Company. Additional risks that the Company currently does not foresee or believes to be immaterial may become important factors that affect the Company's business. If any of the following risks occur, or if others occur, the Company's business, operating results and financial condition could be materially adversely affected and investors may lose all of their investment.



### *Mineral Exploration, Development and Operating Risks*

Mineral exploration is highly speculative in nature, generally involves a high degree of risk and frequently is non-productive. Resource acquisition, exploration, development, and operation involves significant financial and other risks over an extended period of time, which even a combination of careful evaluation, experience, and knowledge may not eliminate. Significant expenses are required to locate and establish economically viable mineral deposits, to acquire equipment, and to fund construction, exploration and related operations, and few mining properties that are explored are ultimately developed into producing mines.

Success in establishing an economically viable project is the result of a number of factors, including the quantity and quality of minerals discovered, proximity to infrastructure, metal and mineral prices which are highly cyclical, costs and efficiencies of the recovery methods that can be employed, the quality of management, available technical expertise, taxes, royalties, environmental matters, government regulation (including land tenure, land use and import/export regulations) and other factors. Even in the event that mineralization is discovered on a given property, it may take several years in the initial phases of drilling until production is possible, during which time the economic feasibility of production may change as a result of such factors. The effect of these factors cannot be accurately predicted, but the combination of these factors may result in the Company not receiving an adequate return on its invested capital, and no assurance can be given that any exploration program of the Company will result in the establishment or expansion of resources or reserves.

The Company's operations are subject to all the hazards and risks normally encountered in the exploration, development and production of gold and other minerals, including hazards relating to the discharge of pollutants or hazardous chemicals, changes in anticipated grade and tonnage of ore, unusual or unexpected adverse geological or geotechnical formations, unusual or unexpected adverse operating conditions, slope failures, rock bursts, cave-ins, seismic activity, the failure of pit walls, pillars or dams, fire, explosions and natural phenomena and 'acts of God' such as inclement weather conditions, floods, earthquakes or other conditions, any of which could result in damage to, or destruction of, mineral properties or production facilities, personal injury or death, damage to property, environmental damage, unexpected delays, monetary payments and possible legal liability, which could have a material adverse impact upon the Company. In addition, any future mining operations will be subject to the risks inherent in mining, including adverse fluctuations in fuel prices, commodity prices, exchange rates and metal prices, increases in the costs of constructing and operating mining and processing facilities, availability of energy and water supplies, access and transportation costs, delays and repair costs resulting from equipment failure, changes in the regulatory environment, and industrial accidents and labour actions or unrest. The occurrence of any of these risks could materially and adversely affect the development of a project or the operations of a facility, which could have a material adverse impact upon the Company.

### *Uncertainty of mineral resource and mineral reserve estimates*

Although the Company has carefully prepared its mineral resource and mineral reserve figures with the assistance of independent experts, such figures are estimates only and no assurance can be given that the indicated tonnages and grade will be achieved or that the indicated level of recovery will be realized. There is significant uncertainty in any mineral resource and mineral reserve estimate, and the actual deposits encountered and the economic viability of, and returns from, mining a deposit may differ materially from estimates disclosed by the Company. The estimating of mineral resources and mineral reserves is a subjective process and the accuracy of mineral resource and mineral reserve estimates is a function of the quantity and quality of available data, the accuracy of statistical computations, and the assumptions used, and judgments made in interpreting engineering and geological information. Estimated mineral resources and mineral reserves may also require downward revisions based on changes in metal prices, changes in assumptions regarding size, grade and/or estimated recovery rates, further exploration or development activity, increased production costs or actual production experience, which could require material write downs in investment in the affected property and increased amortization, reclamation and closure charges. Any future changes in assumptions regarding commodity prices, operating costs and exchange rates may also render certain mineral resources or mineral reserves uneconomic to mine and result in a significant reduction in the reported mineral resources or mineral reserves.

Mineral resources that are not mineral reserves do not have demonstrated economic viability. Due to the uncertainty which may attach to mineral resources, there is no assurance that any or all of the currently identified indicated mineral resources will be upgraded to measured mineral resources and/or proven mineral reserves as a result of continued exploration.

#### *Uncertainties and Risks Relating to Feasibility Studies*

Feasibility studies are used to determine the economic viability of a deposit, as are pre-feasibility studies and preliminary assessments. Feasibility studies are the most detailed and reflect a higher level of confidence in the reported capital and operating costs. Generally accepted levels of confidence are plus or minus 15% for feasibility studies, plus or minus 25-30% for pre-feasibility studies and plus or minus 35- 40% for preliminary assessments.

There is no certainty that the Feasibility Study Technical Report will be realized. While the Feasibility Study Technical Report is based on the best information available to the Company, it cannot be certain that actual costs will not significantly exceed the estimated costs. While the Company incorporates what it believes is an appropriate contingency factor in cost estimates to account for this uncertainty, there can be no assurance that the contingency factor is adequate. Many factors are involved in the determination of the economic viability of a mineral deposit, including the achievement of satisfactory mineral reserve estimates, the level of estimated metallurgical recoveries, capital and operating cost estimates and estimates of future metal prices. Resource estimates are based on the assay results of many intervals from many drill holes and the interpolation of those results between holes and may also be materially affected by metallurgical, environmental, permitting, legal title, socio-economic factors, marketing, political and other factors.

In addition, mining operations at the Back Forty Project will be dependent on a number of factors including, but not limited to, the acquisition and/or delineation of economically recoverable mineralization, favorable geological conditions, maintaining the necessary approvals from all relevant authorities and parties, seasonal weather patterns, unanticipated technical and operational difficulties encountered in extraction and production activities, mechanical failure of operating plant and equipment, shortages or increases in the price of consumables, spare parts and plant and equipment, cost overruns, access to the required level of funding and contracting risk from third parties providing essential services. Actual operating results may differ from those anticipated in the Feasibility Study Technical Report.

The Company's operations may be disrupted by a variety of risks and hazards which are beyond its control, including environmental hazards, industrial accidents, technical failures, labour disputes, unusual or unexpected rock formations, flooding and extended interruptions due to inclement or hazardous weather conditions and fires, explosions or accidents. Capital and operating cost estimates are based upon many factors, including anticipated tonnage and grades of ore to be mined and processed, the configuration of the ore body, ground and mining conditions, expected recovery rates of the metals from the ore and anticipated environmental and regulatory compliance costs. Each of these factors involves uncertainties, and as a result, the Company cannot give any assurance that the Feasibility Study Technical Report results will not be subject to change and revisions.

#### *Mineral reserves*

Only those mineral deposits that the Company can economically and legally extract or produce, based on a comprehensive evaluation of cost, grade, recovery and other factors, are considered mineral reserves. The scope of Back Forty mining operation considered for purposes of the Feasibility Study Technical Report included only open pit mining hence, all of the mineral reserves included therein are deemed to be open pit mineral reserves. No inferred mineral resources are used in the mineral reserve estimate therein. These mineral reserves are a sub-set of all potentially economic mineral resources and subsequent future studies will investigate the feasibility of exploiting the remaining mineral resources with underground methods and/or a push back of the current open pit design. No assurance can be given that any particular level of recovery of minerals will in fact be realized or that an identified mineralized deposit will ever qualify as a commercially mineable (or viable) reserve. Substantial expenditures would be required to establish additional mineral reserves through drilling and metallurgical and other testing techniques. The costs, timing and complexities of upgrading additional mineralized material at the Back Forty Project to proven or probable reserves may be greater than the Company anticipates and may not be undertaken prior to development, if at all.

Failure to discover economically recoverable reserves on a mineral property will require the Company to write-off the costs capitalized for that property in its financial statements. No assurance can be given that any level of recovery of any mineral resources will be realized or that any identified mineral deposit will ever qualify as a commercially mineable ore body that can be legally and economically exploited.

#### *Lack of cash flow and requirements for new capital*

The Company's current operations do not generate any positive cash flow and it is not anticipated that any positive cash flow will be generated in the near future. Despite the closing of the Orion Transaction, and the Osisko Private Placement and Gold Stream Agreement, the Company continues to have limited financial resources and the mining claims, leases and licenses which the Company holds impose financial obligations on the Company. There can be no assurance that additional funding will be available to allow the Company to fulfill such obligations.

The ability of the Company to arrange additional financing in the future will depend, in part, on the prevailing debt and equity market conditions, the price of commodities and the business performance of the Company. In addition, the Company has granted Osisko a security interest over the assets of the Back Forty Project in connection with the Gold Purchase Agreement and the Silver Purchase Agreement, which could make debt financing on favorable terms more difficult to arrange. Furthermore, there is no certainty that the Company will be able to meet its metal delivery obligations thereunder. Failure to obtain sufficient financing, if required, may result in delaying or the indefinite postponement of the development of the Back Forty Project or could result in the Company being forced to sell some of its assets on an untimely or unfavorable basis. Any such delay or sale could have a material adverse effect on the Company's financial condition, results of operations and liquidity. If the Company raises additional funds through the sale of equity securities or securities convertible into equity securities, shareholders may have their equity interest in the Company diluted.

#### *Global financial conditions*

Global financial conditions continue to be characterized by volatility. Many industries, including the mining industry, are impacted by volatile market conditions. Global financial conditions remain subject to sudden and rapid destabilizations in response to economic shocks. A slowdown in the financial markets or other economic conditions, including but not limited to consumer spending, employment rates, business conditions, inflation, fluctuations in fuel and energy costs, consumer debt levels, lack of available credit, the state of the financial markets, interest rates and tax rates, may adversely affect the Company's growth and profitability. Future economic shocks may be precipitated by a number of causes, including the government debt levels, fluctuations in the price of oil and other commodities, the volatility of metal prices, geopolitical instability, terrorism, the volatility of currency exchanges, the devaluation and volatility of global stock markets and natural disasters. Any sudden or rapid destabilization of global economic conditions could impact the Company's ability to obtain equity or debt financing in the future on terms favorable to the Company or at all. In such an event, the Company's operations and financial condition could be adversely impacted.

#### *Commodity prices*

The Company does not own any metal or other mineral producing assets. The profitability of any mining operations in which the Company has an interest will be significantly affected by changes in the market price of the particular commodity. Metal and other mineral prices fluctuate on a daily basis and are affected by numerous factors beyond the Company's control. The level of interest rates, the rate of inflation, central bank sales, world supply and demand of metals and other minerals and stability of exchange rates, among other factors, can cause significant fluctuations in metal and other mineral prices. Such external factors are in turn influenced by changes in international investment patterns and monetary systems and political developments. The price of metals and other minerals has historically fluctuated widely and, depending on the price of metals and other minerals, revenues from mining operations may not be sufficient to offset the costs of such operations.

### *Commitments under the Gold Purchase Agreement*

Pursuant to the terms of the Gold Purchase Agreement, the Company is required to achieve certain milestones as conditions precedents to OBL advancing deposits thereunder. The Company's ability to retain the permits which it has already obtained, is subject to legislative, regulatory and other factors beyond the Company's control.

The Company's ability to make deliveries under the Gold Purchase Agreement is dependent on its ability to successfully complete construction and place the Back Forty Project into production, as well as the Company's financial condition and operating performance once the Back Forty Project is complete, which will be subject to prevailing economic and competitive conditions and to certain financial, business, legislative, regulatory and other factors beyond the Company's control.

If the Company's cash flows and capital resources are insufficient to complete permitting, construction and place the Back Forty Project into production, the Company could face substantial liquidity problems and could be forced to reduce or delay investment and capital expenditures, dispose of assets or operations, or seek additional debt or equity capital. The Company may not be able to effect any such alternative measures on commercially reasonable terms or at all and, even if successful, those alternatives may not allow the Company to meet its delivery obligations under the Gold Purchase Agreement.

If the Company does not meet its delivery obligations within the term of the Gold Purchase Agreement the uncredited balance of the advance the Company received upon closing of the gold stream transaction under shall be due and owing. Failure to otherwise fulfill its commitments under these agreements could result in adverse impacts on the Company.

If metal prices improve over time, the Gold Purchase Agreement may reduce the Company's ability to sell resources later at higher market prices due to the Company's obligations under this agreement.

### *Restrictive covenants under the Gold Purchase Agreement*

The restrictive covenants contained in the Gold Purchase Agreement could have adverse consequences on business, including:

- limiting the Company's ability to obtain additional financing for working capital, capital expenditures, exploration and development, debt service requirements, acquisitions and general corporate or other purposes;
- restricting the Company's flexibility and discretion to operate the business; limiting its ability to adjust to changing market conditions;
- making the Company vulnerable in a downturn in general economic conditions; and
- making the Company unable to make expenditures that are important to growth and strategies.

The restrictive covenants contained in the Gold Purchase Agreement may limit operating flexibility and could prevent the Company from taking advantage of business opportunities.

Failure to comply with these covenants may result in an event of default. If such event of default is not cured or waived, the Company may suffer adverse effects on operations, business or financial condition, including being required to return non-offset portions of the advances the Company has received under the Gold Purchase Agreement. In such a case, there can be no assurance that the Company's assets would be sufficient to repay any non-offset portions of the amount owing in full.

### *Exploration risks*

Exploration for metals and other minerals is speculative in nature, involves many risks and is frequently unsuccessful. Any exploration program entails risks relating to the location of economic ore bodies, development of appropriate metallurgical processes, receipt of necessary governmental approvals and construction of mining and processing facilities at any site chosen for mining. The commercial viability of a mineral deposit is dependent on a number of factors including the price of the commodities, exchange rates, the particular attributes of the deposit, such as its size, grade, geometry and proximity to infrastructure, as well as other factors including financing costs, taxation, royalties, land tenure, land use, water use, power use, import and export costs and environmental protection. The effect of these factors cannot be accurately predicted.

All of the resource properties in which the Company has an interest or right are in the exploration and development stages only and are without reserves of metals or other minerals. There can be no assurance that the current or proposed exploration or development programs on properties in which the Company has an interest will result in the discovery of economic mineralization or will result in a profitable commercial mining operation.

### *Lack of operating history and operational control*

The Company has no current source of revenue and its ultimate success will depend on its ability to generate profits from its properties. The Company currently has no producing properties and operates at a loss. The Company's commercial viability is largely dependent on the successful commercial development of its properties.

The Company anticipates continued losses for the foreseeable future until it can successfully place one or more of its properties into commercial production on a profitable basis. It could be years before the Company receives any revenues from any production of metals, if ever. If the Company is unable to generate significant revenues with respect to its properties, the Company will not be able to earn profits or continue operations.

### *Political and regulatory risks*

Any changes in government policy may result in changes to laws affecting ownership of assets, mining policies, monetary policies, taxation, rates of exchange, environmental regulations, labour relations, repatriation of income and return of capital. This may affect both the Company's ability to undertake exploration and development activities in respect of present and future properties in the manner currently contemplated, as well as its ability to continue to explore, develop and operate those properties in which it has an interest or in respect of which it has obtained exploration and development rights to date. The possibility that future governments may adopt substantially different policies, which might extend to expropriation of assets, cannot be ruled out.

The Company has exploration projects in Wisconsin and Michigan where mining projects have been opposed in recent years. Each mining project of the Company will face unique environmental and social issues in the permitting process. There are no guarantees that permitting of a particular project will be achieved.

### *Competition*

The mining industry is intensely competitive in all of its phases, and the Company competes with many companies possessing greater financial and technical facilities than itself in the search for and acquisition of attractive mineral properties, and the development of such properties. In addition, the Company also competes for the technical expertise to develop and operate such properties, the labour to operate the properties, and the capital for the purpose of funding such properties.

### *Management; dependence on key personnel*

The Company is dependent on a relatively small number of key personnel the loss of any one of whom could have an adverse effect on the Company. The loss of any one or more of the senior management could have a negative impact on the Company's business, as the Company may not be able to find suitable personnel to replace departing

management on a timely basis or at all. The loss of any member of the senior management team could impair the Company's ability to execute its business plan and could therefore have a material adverse effect on the Company's business, results of operations and financial condition.

In addition to its key personnel and other employees, the Company is highly dependent upon contractors and third parties in the performance of certain of its exploration and development activities. There can be no guarantee that such contractors and third parties will continue to be available to carry out such activities on behalf of the Company or be available upon commercially acceptable terms.

#### *Conflicts of interest*

Certain directors of the Company are directors of, or may become associated with, other natural resource companies that acquire interests in mineral properties. Such associations may give rise to conflicts of interest from time to time. Such a conflict poses the risk that the Company may enter into a transaction on terms which place the Company in a worse position than if no conflict existed. The directors of the Company are required by law to act honestly and in good faith with a view to the best interests of the Company and to disclose any interest which they may have in any project or opportunity of the Company, but each officer or director has the identical obligation to other companies for which such officer or director serves as an officer or director.

#### *Title matters*

The Company has investigated its rights to explore, exploit and develop its various properties and, to the best of its knowledge, those rights are in good standing. No assurance can be given that such exploration and mining authorities will not be challenged or impugned by third parties. In addition, there can be no assurance that the properties in which the Company has an interest are not subject to prior unregistered agreements, transfers or claims and title may be affected by undetected defects. In addition, there is a risk that commercially exploitable metal or other mineral deposits are located on adjoining properties which are not owned by the Company.

#### *Permitting*

The Company's current and anticipated future operations, including further exploration, development activities and commencement of production on the Company's properties, require permits from various federal, state and local governmental authorities. There can be no assurance that the Company will be able to obtain and maintain all necessary licenses and permits that may be required to carry out exploration, development and mining operations at its projects, on reasonable terms. Delays or a failure to obtain such licenses and permits, or a failure to comply with the terms of any such licenses and permits that the Company does obtain, could increase the Company's costs and delay its activities, and could have a material adverse effect on the Company.

An Administrative Law Judge ("ALJ") convened an evidentiary hearing in April of 2018 on Petitioners' contested case challenges to the Mining Permit. The hearing ended in August 2018 and the hearing record is now closed. The ALJ's decision will stand as the final decision of the MDEQ, unless a party that disagrees with the decision appeals the decision to an internal environmental review board made of up technical experts from various fields. A decision is anticipated in Q2 2019. An evidentiary hearing on the contested case challenge to the Wetlands Permit is scheduled to begin in June of 2019. An ALJ decision on the Wetlands Permit contested case is anticipated in Q4 2019. As in the case of the mining permit contested case, the ALJ's decision will stand as the final decision unless a party appeals the decision to the internal environmental review board. There is no guarantee that the decision will be favourable to the Company.

In November of 2018, the Coalition to SAVE the Menominee River, Inc. filed a lawsuit in the U.S. District Court for the Eastern District of Wisconsin challenging the EPA and the U.S. Army Corps of Engineers' failure to exercise jurisdiction over Aquila's Wetlands Permit for its Back Forty Project. This lawsuit is nearly identical to the prior lawsuit in the same court filed by the Tribe. In December 2018, however, the Court dismissed the Tribe's lawsuit, holding that the Tribe could not challenge the federal government's refusal to exercise jurisdiction over the Wetlands Permit under the Administrative Procedures Act or the Clean Water Act. Accordingly, the United States and Aquila

intend to intervene in the Coalition's lawsuit and file a motion to dismiss the lawsuit before the end of Q1 2019. There is no certainty that the Company's efforts will be successful.

The Tribe has appealed the District Court's dismissal of its case to the federal Seventh Circuit Court of Appeals. There is no certainty about the outcome which could affect the Company. Mining is inherently dangerous

Hazards such as fire, explosion, floods, structural collapses, industrial accidents, unusual or unexpected geological conditions, ground control problems, power outages, inclement weather, seismic activity, cave-ins and mechanical equipment failure are inherent risks in the Company's exploration, development and mining operations. These and other hazards may cause injuries or death to employees, contractors or other persons at the Company's mineral properties, severe damage to and destruction of the Company's property, plant and equipment and mineral properties, and contamination of, or damage to, the environment, and may result in the suspension of the Company's exploration and development activities and any future production activities. Safety measures implemented by the Company may not be successful in preventing or mitigating future accidents. It is not always possible to obtain insurance against all such hazards and the Company may decide not to insure against certain risks because of high premiums or other reasons. Moreover, insurance against environmental pollution or other hazards as a result of exploration and production is not generally available to the Company, or to other companies in the mining industry, on acceptable terms. Although the Company maintains insurance to protect against certain hazards in such amounts as it considers reasonable, its insurance will not cover all potential hazards associated with its operations, and insurance coverage may not continue to be available or may not be adequate to cover any resulting liability. Should such liabilities arise, they could reduce or eliminate any further profitability and result in increasing costs and a decline in the value of the securities of the Company.

In addition, from time to time the Company may be subject to governmental investigations and claims and litigation filed on behalf of persons who are harmed while at its properties or otherwise in connection with the Company's operations. To the extent that the Company is subject to personal injury or other claims or lawsuits in the future, it may not be possible to predict the ultimate outcome of these claims and lawsuits due to the nature of personal injury litigation. Similarly, if the Company is subject to governmental investigations or proceedings, the Company may incur significant penalties and fines, and enforcement actions against it could result in the closing of certain of the Company's mining operations. If claims and lawsuits or governmental investigations or proceedings are finally resolved against the Company, the Company's financial performance, financial position and results of operations could be materially adversely affected.

#### *Equipment and infrastructure*

Natural resource exploration, development, processing and mining activities are dependent on the availability of mining, drilling and related equipment in the particular areas where such activities are conducted. A limited supply of such equipment or access restrictions may affect the availability of such equipment to the Company and may delay exploration, development or extraction activities. Certain equipment may not be immediately available, or may require long lead time orders. A delay in obtaining necessary equipment could have a material adverse effect on the Company's operations and financial results. Natural resource exploration, development, processing and mining activities also depend on adequate infrastructure. Reliable roads, bridges, power sources and water supply are important determinants, which affect capital and operating costs. The Company will need sufficient infrastructure to commence and continue mining operations at the Back Forty Project. Unusual or infrequent weather phenomena, sabotage, civil disobedience, government or other interference in the maintenance or provision of such infrastructure could also adversely affect the Company's operations, financial condition and results of operations.

#### *Environmental risk*

The Company is required to restore lands that are subject to exploration on an ongoing basis. The financial impact to the Company is expected to be minimal given any surface disturbance is limited in nature. The Company undertakes to observe and adhere by all environmental laws and exploration best practices of the jurisdictions in which it operates.

With respect to environmental regulation, environmental legislation is generally evolving in a manner which will require stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent

environmental assessments of proposed projects and a heightened degree of responsibility for companies and their officers, directors and employees. There can be no assurance that future changes to environmental regulation, if any, will not adversely affect the Company's operations. Environmental hazards that have been caused by previous or existing owners or operators of the properties may exist on the properties in which the Company holds interests, and may contravene existing or future regulatory standards.

#### *Currency risk*

Currency fluctuations may affect the funds available to the Company as well as the cash flow that the Company may realize from its operations, since metals and other minerals are generally sold in U.S. dollars. The Company's costs are incurred in both U.S. dollars and Canadian dollars.

#### *Litigation*

Due to the nature of its business, the Company may, in the future, be subject to claims (including class action claims and claims from government regulatory bodies) based on allegations of negligence, breach of statutory duty, public nuisance or private nuisance or otherwise in connection with its operations or investigations relating thereto. The results of these legal proceedings cannot be predicted with certainty due to the uncertainty inherent in litigation, including the effects of discovery of new evidence or advancement of new legal theories, the difficulty of predicting decisions of judges and juries and the possibility that decisions may be reversed upon appeal. While the Company is presently unable to quantify its potential liability under any of the above heads of damage, such liability may be material to the Company and may materially adversely affect its ability to continue operations. The Company maintains liability insurance to cover certain portions of these potential claims; however, the Company's liability insurance may not fully cover such claims.

#### *Dividends*

The Company has no history of earnings and as such the Company has not paid dividends on its common shares since incorporation and does not expect to do so in the foreseeable future. Payment of any future dividends will be at the discretion of the board of directors after taking into account many factors, including operating results, financial condition and anticipated cash needs.

#### *Volatile common share price*

The common shares of the Company are listed on the TSX in Canada and cross-listed on the OTCQB in the United States. In recent years, the securities markets in the United States and Canada have experienced a high level of price and volume volatility, and the market price of securities of many companies, particularly those considered exploration or development-stage mining companies, have experienced wide fluctuations in price which have not necessarily been related to the operating performance, underlying asset values or prospects of such companies. There can be no assurance such volatility will not continue to occur and will not impact the price of the common shares of the Company. The factors influencing such volatility include macroeconomic developments in North America and globally, and market perceptions of the attractiveness of particular industries.

The price of the Company's common shares is also likely to be significantly affected by short-term changes in precious metal prices or other mineral prices, currency exchange fluctuations and the Company's financial condition or results of operations as reflected in its earnings reports. Other factors unrelated to the performance of the Company that may have an effect on the price of its common shares include the following: the extent of analyst coverage available to investors concerning the business of the Company may be limited if investment banks with research capabilities do not follow the Company's securities; lessening in trading volume and general market interest in the Company's securities may affect an investor's ability to trade significant numbers of securities of the Company; the size of the Company's public float may limit the ability of some institutions to invest in the Company's securities; and a substantial decline in the price of the securities of the Company that persists for a significant period of time could cause the Company's securities to be delisted from an exchange, further reducing market liquidity.



Additionally, the OTCQB is not a stock exchange, and trading of securities on this market is often more sporadic than the trading of securities listed on a national securities exchange like the TSX. Accordingly, shareholders may have difficulty reselling the Company's shares on the OTCQB.

Securities class-action litigation often has been brought against companies following periods of volatility in the market price of their securities. The Company may in the future be the target of similar litigation. Securities litigation could result in substantial costs and damages and divert management's attention and resources.

#### *Options or other equity-based securities*

The issuance of common shares upon the exercise of the Company's outstanding stock options ("**Options**") or other equity-based securities will result in dilution to the interests of shareholders, and may reduce the trading price of the Company's common shares. Furthermore, the Company may grant additional Options and other equity-based securities may be issued in the future. Exercises of such Options and other equity-based securities, or even the potential of their exercise may have an adverse effect on the trading price of the Company's common shares. The holders of Options are likely to exercise them at times when the market price of the common shares exceeds the exercise price of the securities. Accordingly, the issuance of common shares upon exercise of outstanding Options will likely result in dilution of the equity represented by the then outstanding common shares held by other shareholders. Holders of Options can be expected to exercise or convert them at a time when the Company would, in all likelihood, be able to obtain any needed capital on terms which are more favorable to the Company than the exercise terms provided by such Options.

#### *Dilution*

The Company may sell additional equity securities in subsequent offerings (including through the sale of securities convertible into equity securities) and may issue additional equity securities to finance operations, exploration, development, acquisitions or other projects. The Company cannot predict the size of future issuances of equity securities or the size and terms of future issuances of debt instruments or other securities convertible into equity securities or the effect, if any, that future issuances and sales of the Company's securities will have on the market price of its common shares. Any transaction involving the issuance of previously authorized but unissued common shares, or securities convertible into common shares, would result in dilution, possibly substantial, to security holders. The board of directors of the Company has the authority to authorize certain offers and sales of additional securities without the vote of, or prior notice to, shareholders. Based on the need for additional capital to fund expected expenditures and growth, it is possible that the Company will issue additional securities to provide such capital. Such additional issuances may involve the issuance of a significant number of common shares at prices less than the current market price for the common shares. Sales of substantial amounts of the Company's securities, or the availability of such securities for sale, could adversely affect the prevailing market prices for the Company's securities and dilute investors' earnings per share. A decline in the market prices of Company's securities could impair the Company's ability to raise additional capital through the sale of securities should the Company desire to do so.

#### *Tax Risk*

The Company runs its business in the United States and Canada and strives to run its business in as tax efficient a manner as possible. The tax systems in these countries are complicated and subject to changes. By this reason, future negative effects on the result of the Company due to changes in tax regulations cannot be excluded. Any such changes in taxation laws or reviews and assessments could result in higher taxes being payable by the Company which could adversely affect the Company's profitability. Repatriation of earnings to Canada from the United States may be subject to withholding taxes. The Company has no control over changes in tax regulations and withholding tax rates.

In 2018, the Company received a re-assessment of certain of its input tax credits ("ITCs") totaling approximately C\$669,000 (\$529,000). The Company has recorded the amount as a payable on the statement of financial position and as an exploration expense on the statement of net loss. The Company received a second re-assessment of certain of its ITCs related to financing totaling approximately C\$181,000 (\$141,000) which is included in Accounts Receivable. The Company has filed a Notices of Objection in relation to these matters as the Company disagrees with Canada

Revenue Agency's characterization of these ITCs. There is no guarantee that the decision will be favourable to the Company.

## MATERIAL MINERAL PROJECT

### **Back Forty Project**

The Back Forty Project is the Company's only material mineral property. The Back Forty Project (the "**Project**" or the "**Property**") is a polymetallic (zinc, gold, silver, copper, lead) volcanogenic massive sulphide ("**VMS**") deposit located in Menominee County, Michigan. The Back Forty Deposit was originally discovered in 2002, and is currently wholly-owned by Aquila.

The following summary of the Back Forty Project is based on or extracted directly from the Feasibility Study Technical Report, as updated with current information to the extent available. The Feasibility Study Technical Report was prepared in accordance with NI 43-101 by Lycopodium and authored by Neill Lincoln, P. Eng., David Burga, P. Geo., Jarita Barry, P. Geo., Yungang Qu, P. Eng., Eugene Puritch, P. Eng., Ken Kuchling, P. Eng., Kebreab Hable, P. Eng., David Penswick, P. Eng. and Curtis Mohns, P. Eng., each of whom is a Qualified Person and "independent" as such term is defined in NI 43-101.

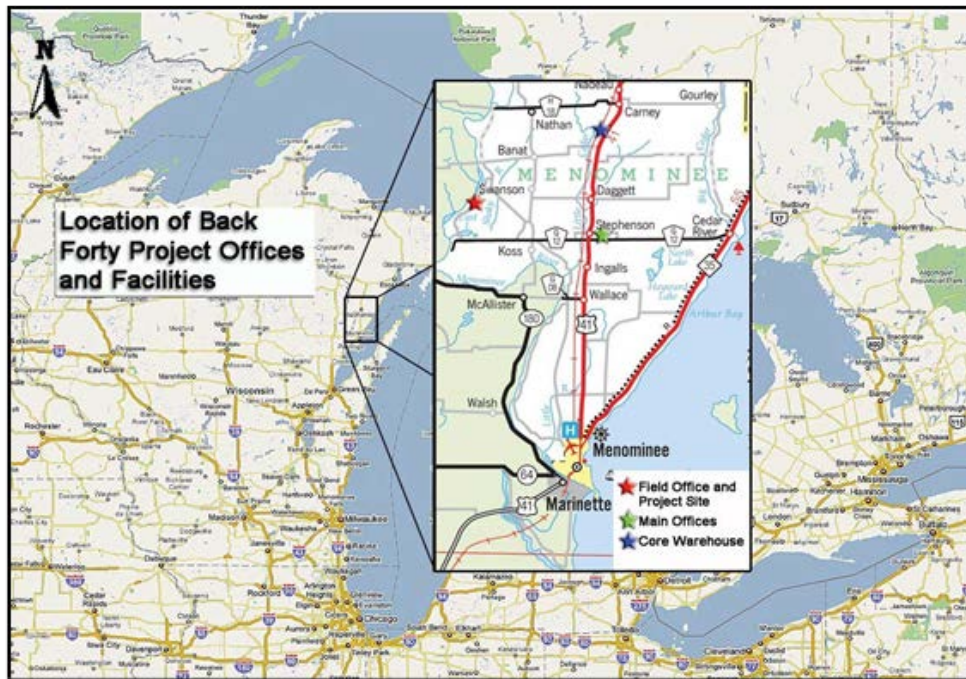
The following summary does not purport to be a complete summary of the Back Forty Project and is subject to all the assumptions, qualifications and procedures set out in the Feasibility Study Technical Report and, other than information that has been updated, is qualified with reference to the text the Feasibility Study Technical Report. Readers should read the following summary in conjunction with the Feasibility Study Technical Report, filed on September 7, 2018 and available under Aquila's SEDAR project at [www.sedar.com](http://www.sedar.com).

### **Property Description and Location**

The Back Forty property is fully controlled by Aquila. Aquila controls approximately 1,304 hectares of private and public (State of Michigan) mineral lands located in Lake and Holmes Townships in Menominee County, Michigan. The Company holds leases with private mineral owners, State of Michigan metallic mineral leases, purchases, and options to purchase. Properties comprising the Project are currently 100% owned or controlled by Aquila through purchase of the Back Forty Joint Venture LLC ("**BFJV**") and Hudbay Michigan Inc. ("**HMI**").

The active project area encompasses approximately 479 hectares and is situated in portions of Sections 1, 11 and 12 in Township 35N, Range 29W, and portions of Sections 6 and 7, in T35N, R28W, in Lake Township, Menominee County, Michigan. The Project is centred at latitude 45° 27' north and longitude 87° 51' west. This area does not include land tenure outside the immediate surrounding area of the Project area.

**Figure A.1 Location of the Back Forty Project**



### **Accessibility, Climate, Local Resources, Infrastructure and Physiography**

The Property is located approximately 55 km south-southeast from Iron Mountain, and approximately 19 km west of Stephenson, Michigan, within the Escanaba River State Forest (shown in Figure A.1). Access from Stephenson is via County G12 Road, north on River Road, travelling approximately 5 km to the Project field office. A number of drill roads connect with River Road and cross the Property. Infrastructure on the Property includes a power line and paved road access.

The Property area lies along the east bank of the Menominee River and consists of low, rolling hills with maximum topographic relief of 30 m and intervening swamps (in part prairie-savannah); mean elevation is approximately 200 to 300 metres above sea level. Vegetation is mostly immature hardwood-pine forest and swamp/prairie-savannah grasses. Swampy areas also occur along creeks and secondary tributaries. The climate is temperate, allowing exploration, potential development, and potential mining activities to take place year-round.

Regionally, July is the warmest month with a mean temperature of 19.7°C and January is the coldest month with a mean temperature of minus 9.7°C. On average, the region receives approximately 796 millimetres of precipitation annually. July and August are the wettest months, with average monthly precipitation of 92 millimetres, and February is the driest month with 27 millimetres of precipitation on average. The area receives an average of 154 centimetres of snowfall per year, with most snowfall occurring in January. The local climate will not impede an open pit mining operation at the Property and the expectation is to operate on a year-round basis.

### **History**

In early 2004, a new company, Aquila Resources Corporation (“ARC”), was formed for the purpose of going public with the Project. In mid-2006 JML Resources acquired 100% of the outstanding shares of ARC through a reverse take-over and was listed on the TSX Venture Exchange. Once listed, the new company, renamed

Aquila Resources Inc., raised exploration capital to restart drilling operations. In April of 2007, Aquila announced the approval to list on the Toronto Stock Exchange.

In August of 2009, Hudbay Minerals Inc. (“**Hudbay**”) entered into a Subscription, Option, and Joint Venture Agreement allowing Hudbay to earn a majority share of the Project and become the operator. In September 2010, Hudbay announced that, pursuant to the terms of a Subscription, Option, and Joint Venture Agreement with Aquila, Hudbay had exercised its option to earn a 51% joint venture interest in Aquila’s Back Forty Project after expenditures of \$10 million on the Project.

On January 16, 2014, REBgold and Aquila closed a statutory plan of arrangement (the “Arrangement”). The Arrangement was comprised of:

- Aquila’s acquisition of 100% of the outstanding shares of REBgold in exchange for Aquila shares on a one-for-one basis.
- Aquila’s acquisition of 100% of the shares of HMI, effectively giving Aquila 100% ownership of the Back Forty Project.
- The non-brokered private placement of REBgold shares for gross proceeds of approximately \$4.85 million (the “**REBgold Financing**”). Pursuant to the REBgold Financing, Baker Steel Capital Managers LLP (“**Baker Steel**”), on behalf of investment funds managed or controlled by it, invested \$4.5 million of such gross proceeds. Proceeds from the REBgold Financing would be used for general working capital and to fund the next phase of development activity at Back Forty.

Pursuant to the REBgold Financing, REBgold issued a total of 37,300,385 shares at a price of \$0.13 per share for gross proceeds of approximately \$4.85 million. All of these shares were immediately exchanged for 37,300,385 Aquila shares pursuant to the Arrangement. In connection with the issuance of 2,285,000 REBgold shares for gross proceeds of \$297,050 as part of the REBgold private placement, REBgold paid broker compensation consisting of (i) a cash commission equal to 7% of the gross proceeds related to such subscriptions, and (ii) non-transferable broker warrants (the “**Broker Warrants**”) to purchase an aggregate of 159,950 REBgold shares (representing 7% of the REBgold shares related to such subscriptions) at a price of \$0.15 per share for two years from the closing of the REBgold Financing. As a result of completion of the Arrangement, each Broker Warrant became exercisable for one Aquila share at a price \$0.15 per share.

Immediately following completion of the Arrangement and related transactions, there were approximately 183 million common shares of Aquila outstanding and 27.6 million common shares exercisable through stock options, convertible debentures and warrants. Immediately prior to completion of the Arrangement and related transactions, there were 64,825,568 REBgold shares outstanding (including shares issued pursuant to the REBgold Financing). All of these shares were exchanged for Aquila shares pursuant to the Arrangement on a one-for-one basis.

Pursuant to the acquisition of HMI, Hudbay’s 51% interest in the Back Forty Project was acquired in consideration for the issuance of 18,650,193 common shares of Aquila, future milestone payments tied to the development of the Back Forty Project and a 1% net smelter return royalty on production from certain land parcels in the Project. The net smelter return royalty was repurchased in conjunction with the Orion Transaction. At the time, Baker Steel was Aquila’s largest shareholder and owned or controlled 45,483,886 Aquila common shares or approximately 25% of the outstanding Aquila common shares. Hudbay owned or controlled 33,017,758 Aquila common shares or approximately 18% of the outstanding Aquila common shares. In connection with the completion of the Arrangement, REBgold, as a wholly-owned subsidiary of Aquila, had its shares delisted from the TSX Venture Exchange and ceased to be a reporting issuer.

In 2014, the 2014 PEA was completed which contemplated mining mineralized material in an open pit followed by an underground mining operation including an onsite processing facility and associated infrastructure at Back Forty.

On March 31, 2015, the Company closed the Orion Transaction. Concurrent with the Orion Transaction, the Company completed the repurchase of two existing royalties on the Back Forty Project. As part of the Orion Transaction, Aquila issued 26,923,077 units at a price of \$0.13 per unit for gross proceeds of \$3.5 million, with each unit consisting of one common share and one-half common share purchase warrant. Each whole warrant allows the holder to purchase one common share at a price of \$0.19 per common share for a term of three years. Also as part of the Orion Transaction, Aquila entered into the Silver Purchase Agreement.

The Company currently has three main subsidiaries, Aquila Resources Corp., Aquila Resources USA Inc., and Aquila Michigan Inc. (formerly known as HMI). The remaining subsidiaries are inactive. All subsidiaries are 100% owned.

On November 10, 2017, the Company completed the Osisko Private Placement and the Gold Purchase Agreement. OBL purchased 49,173,076 units of Aquila at a price of C\$0.26 per unit for aggregate gross proceeds of \$10 million. Each unit consists of one common share and one-quarter of one common share purchase warrant. Each whole warrant entitles the holder to purchase one common share of the Company for C\$0.34 until May 10, 2021. OBL also has the right to participate in any future equity or equity-linked financings to maintain its ownership level in Aquila. In connection with the private placement, OBL received the right to nominate one individual to the board of directors of Aquila and thereafter for such time as OBL owns at least 10 per cent of the outstanding common shares. Osisko's nominee was appointed to the board of directors in November 2017.

Concurrent with the Strategic Investment, the parties have entered into a Gold Purchase Agreement (the "**Stream**"), whereby OBL will provide the Company with staged payments totalling \$55 million, payable as follows:

- \$7.5 million on close of the Stream;
- \$7.5 million upon receipt by Aquila of all material permits required for the development and operation of the Project, and receipt of a positive Feasibility Study;
- \$10 million following a positive construction decision for the Project; and
- \$30 million upon the first drawdown of an appropriate Project debt finance facility, subject to the COC Provision (as defined below).

Under the terms of the Stream Agreement, OBL will purchase Threshold Stream Percentage (18.5%) until the Company has delivered the Production Threshold. Upon satisfaction of the Production Threshold, the Threshold Stream Percentage will be reduced to the Tail Stream Percentage (9.25%). In exchange for the refined gold delivered under the Stream, OBL will pay the Company ongoing payments equal to 30% of the spot price of gold on the day of delivery, subject to a maximum payment of \$600 per ounce.

In the event of a change of control of the Company prior to the advancement of the final \$30 million under the Stream, the person or entity acquiring control over the Project may elect to forgo the final payment, in which case the Threshold Stream Percentage and Tail Stream will be reduced to 9.5% and 4.75%, respectively (the "**COC Provision**"). All other terms and conditions of the Stream will remain unchanged.

Pursuant to the Stream, the Company has agreed to pay a \$200,000 capital commitment fee. The fee is payable as to 50% upon closing of the Stream transaction and 50% upon OBL funding the second deposit under the Stream. Aquila satisfied the initial \$100,000 fee by way of the issuance of 478,781 common shares of the Company based upon the five-day volume weighted average price of the common shares prior to November 10, 2017. Under IFRS 15, these transaction costs were adjusted as a reduction of the deferred revenue balance on January 1, 2018 on the statement of financial position. The remaining \$100,000 capital commitment fee was settled in cash in October 2018.

when the second tranche of funding was received and is offset against the deferred revenue balance in the statement of financial position.

## **Geology and Mineralization**

The Back Forty VMS deposit is one of a number of deposits located throughout the Ladysmith-Rhineland volcanic complex in northern Wisconsin and western Michigan. The complex lies within the lower Proterozoic Penokean Volcanic Belt (“PVB”), also known as the Wisconsin Magmatic Terranes. The PVB is part of the Southern Structural Sub-province of the Canadian Shield.

Published small-scale (1:250,000) geologic maps of north-eastern Wisconsin indicate the area to the west of the Project area is underlain by the 1,760 to 1,870 Ma old Athelstane Quartz Monzonite, an intrusive complex composed of tonalite, granodiorite and granite. The plutonic complex is bounded on the north, east, and south by metavolcanic rocks of the Beecher Formation and contains numerous metavolcanic rock inclusions. The volcanics generally face outward from the margin of the intrusive complex. Dykes of Athelstane Quartz Monzonite extend a short distance into the Beecher Formation (Jenkins 1973).

The Beecher Formation consists of a stratigraphically lower, 3,000 metre thick sequence of calc-alkaline andesite to dacite flows and an upper 300 metre thick section of interbedded felsic ash, crystal tuff, lapilli tuff, coarser fragmental rocks, and locally black slates near the stratigraphic top of the formation. The Back Forty deposit is hosted by a volcanic complex quite similar to the upper volcanoclastic section of the Beecher Formation. Zircons extracted from rhyolite crystal tuff and intrusive rhyodacite porphyry from Back Forty have yielded a uranium/lead age of  $1,874 \pm 4$  Ma (Schulz et al. 2008). This age is consistent with the published age of the Athelstane Quartz Monzonite. It is likely that the felsic sequence at Back Forty is a member of the Beecher Formation. The lateral extent of this volcanic centre is unknown at this time. However, drilling and gravity surveys indicate it is truncated to the west and north by Athelstane Quartz Monzonite, but likely extends further to the east and south, beneath Cambrian sandstone sediments.

Detailed core logging and lithochemical studies completed to date by Aquila have established at least four lithologic units within the portion of the felsic centre hosting the Back Forty mineralization. Regional deformation has produced a penetrative foliation; locally, shears have been observed. The foliation is developed best in rhyolite crystal tuff units that have the strongest sericite alteration. In the fragmental units, clasts are commonly stretched parallel to foliation. In the bedded tuffaceous unit, schistosity is parallel to relict bedding.

Based on geologic relationships and apparent offsets, high angle, north-south striking faults were inferred striking through the central portion of the Back Forty deposit. A detailed review of drill core and geotechnical data did not confirm these as major, through-going structures. A second set of west-southwest trending, high-angle faults were also previously interpreted. These faults, in general, parallel the axial plane of the anticlinal fold. The principal east-west fault has been confirmed by a review of drill core and geotechnical data, and appears to strike through the southern portion of the East Zone massive sulphide and continue west to form the northern boundary of the Hinge Zone massive sulphide, as well as the southern boundary of the Pinwheel Zone.

Mineralization at the Back Forty deposit consists of discrete zones of: 1) zinc or copper-rich massive sulphide ( $\pm$ lead), which may contain significant amounts of gold and silver, 2) stockwork stringer and peripheral sulphide, which can be gold, zinc, and copper-bearing ( $\pm$ lead/silver), 3) precious metal-only, low-sulphide mineralization, and 4) oxide-rich, precious metal-bearing gossan.

To date, VMS-style mineralization has been identified within at least two stratigraphic levels within the felsic sequence at the Back Forty. Although the majority of rhyolitic rocks hosting the Back Forty sulphide mineralization are indiscernible with respect to appearance, the two main rhyolites (Rhyolites 1 and 2) have distinctive geochemical signatures as can be observed through aluminium-titanium and zirconium-titanium ratios. The Main Zone massive sulphide, which accounts for the vast majority of massive sulphide mineralization lies at the stratigraphic boundary of these two rhyolite units. Rhyolite 1 lies stratigraphically below this sulphide horizon (footwall) while Rhyolite 2 lies above the horizon (hanging wall). Another massive sulphide horizon, the Tuff Zone, is located at or near the upper contact of Rhyolite 2 and the lower contact of an overlying package of tuffaceous and siliceous sediments. Another zone of massive sulphide mineralization, the Deep Zone, was identified as a possible third, lower mineralized horizon.

The general configuration of the massive sulphide horizons is evidenced in the 435150E cross-section. Additional drill intercepts of massive sulphide mineralization have been encountered at depth and to the southwest (down plunge) of known mineralization. Due to limited follow-up drilling of these intercepts, it is, at the current time, unknown as to how these fit in with the overall geology and stratigraphy of the deposit. In this section, massive sulphide refers to rocks composed of at least 80% sulphide, rather than the more common cut-off of 60% for massive sulphides. Semi-massive sulphide mineralization is considered to contain 10 to 80% sulphides.

The Main Zone is composed of three separate massive sulphide bodies (referred to as the East, Hinge, and South Limb Zones) that form parts of a plunging anticlinal structure and are considered the same horizon. These bodies are hosted by Rhyolite 1 (footwall) along and stratigraphically below their contact with Rhyolite 2 (hangingwall). These horizons are stacked, strata-bound massive sulphide bodies that are enveloped locally by stockwork and semi-massive sulphide mineralization. Pervasive sericite and disseminated pyrite alteration as well as variable silicification are abundant and extend outward for an undetermined distance. The Main Zone extends along strike for over 450m in a west-southwest direction; it is up to 100 metres wide and subcrops at its eastern end under thin (less than 10 metres) glacial overburden or local Palaeozoic sandstone. The stockwork-stringer and peripheral sulphide envelope grades outward into a semi-conformable disseminated (less than 10%) pyritic halo that extends throughout the entire altered Rhyolite 1 host unit for an undetermined distance. The zone has been extensively disrupted by variably altered quartz feldspar porphyry (“QFP”) intrusions.

The East Zone subcrops east of the Keweenaw dike under glacial overburden, which is less than 10 metres thick. Locally, erosional outliers of Palaeozoic sandstone are less than 0.5 metre thick. The massive sulphide body is capped by a thin gossan (generally 3-5 metres thick). At the top of the massive sulphide, directly underlying the gossan is a thin zone of copper-rich massive sulphide (often less than 1-2 metres) which was likely enriched by means of late super-gene processes.

The Hinge zone, in part offset by faulting, has been folded tightly into a cigar-shaped body that plunges moderately at approximately 40° to the southwest along the axial plane of the anticlinal fold; the South Limb is separated from the Hinge by a laterally persistent QFP dike and remains open to the southwest. Further west, the horizon is apparently offset downwards again between Sections 435225E and 435200E. Between sections 435200E and 435100E, deformation of the Hinge horizon likely has resulted in tectonic thickening of this unit (up to approximately 70 metres in the “hinge” area). Beyond Section 435100E to the west, the Hinge horizon appears to pinch out against a QFP dike.

The South Limb Zone is interpreted to represent the steeply-dipping southern fold limb of the anticline where it is steeply dipping to the south, while plunging to the west-southwest this interpretation is supported by litho-geochemical data. Locally, shearing is common, resulting in an overall uniform thickness and lens-shaped geometry.

The Hinge and South Limbs zones are separated by large, variably-altered QFP dikes that have been intruded into the axial plane area of the anticlinal fold. These syn or post-mineralization QFP intrusions have intruded, cut-off, and obliterated portions of both horizons. To the west, the model suggests that the South Limb may be pinching and swelling down plunge into a series of thin to thick lenses that occupy the south limb of the anticline. Drilling continues to support the above interpretation. The South Limb remains open along strike.

The Pinwheel Zone is located at the northwest end of the deposit and is a shallow, isolated erosional remnant located structurally along the gently north-dipping northern limb of the anticlinal fold and is truncated to the south by the E-W fault. Limited geochemical data suggests that this unit is in fact located along the contact between Rhyolite 1 and Rhyolite 2, and is therefore likely the equivalent to the Main Zone massive sulphide and represent a ‘faulted-up’ portion of the north limb of this important massive sulphide horizon. Massive sulphide mineralization on strike of the pinwheel zone has been traced for roughly 700 metres to the west-southwest where the gentle north-dip of the unit steepens. It should be noted however, that the massive sulphide mineralization is to some degree discontinuous and often times has a ‘stacked’ geometry, and that numerous faults and shear zones have been encountered in the adjacent host rock. The geometry of this zone is likely complicated due to these structures.

The Pinwheel Zone is broken up in to two separate units based on spatial relationships and dominant mineralization types. The near-surface gently north-dipping eastern-most portion of the Pinwheel Zone, is referred to as the ‘Pinwheel Cu-Rich Zone’ due to the relative abundance of copper mineralization (predominantly pyrite and chalcopyrite) and

subsequent lack of other base metals (zinc and lead) within the massive sulphide. The majority of the Cu-Rich Zone is capped by an overlying gossan that crops out on the property along the southeast terminus of the zone. The Cu-Rich portion of the Pinwheel Zone represents the most copper-enriched massive sulphide located at the Back Forty deposit and it is interpreted that the copper enrichment has a secondary, supergene association. It is possible, however, that this zone represents an original, high-temperature, copper rich portion of the VMS system. Along strike to the west-southwest, copper-dominant mineralization diminishes with a subsequent increase in the presence of zinc (sphalerite) and to a lesser extent lead (galena). This zone has been referred to as the 'Pinwheel Extension' or 'Pinwheel Zn-Rich Zone', and the variation in metal content with respect to the Cu-Rich portion is interpreted to be due, in part, to a lack of influence from secondary, super-gene processes.

The Deep Zone is located north of one of the QFP dikes, juxtaposed against the South Limb Horizon. Recent geological and geochemical data interpretation suggests that the Deep Zone may be the down-dip continuation of the South Limb, where it has been folded and rotated. This interpretation leaves significant spatial potential for further Mineral Resource discovery between the South Limb and the Deep Zone as well as down dip of the Deep Zone.

The Deep Zone is relatively enriched in copper compared to zones of the main horizon (East, Hinge, and South Limb) and suggests that a more copper-rich portion of this VMS system may occur at depth.

The Tuff Zone massive sulphide occurs at the south edge of the deposit. Stratigraphic and structural data suggest this zone is located at a higher level in the volcanic sequence. In cross sections and three-dimensional models, the zone appears to have a bowl-shaped geometry possibly reminiscent of small relict depositional basin or local graben structure.

The Tuff Zone is hosted at or near the stratigraphically upper portions of the intensely sericitized and locally chlorite-altered Rhyolite 2 unit, as well as within the lower portion of the overlying siliceous tuffaceous sediment unit. The Tuff Zone has been traced along strike to the southwest by drilling (parallel to the Main Zone) for roughly 25 m. The zone is predominantly steeply dipping to the south and occupies the southern limb of the anticlinal structure. Drilling intercepts down dip and at depth of the zone indicate shallowing and flattening of the unit that suggests proximity to a synclinal structure to the south. Massive sulphide mineralization of the Tuff zones appears preferentially developed within coarser grained tuffaceous units at or near the contact of Rhyolite 2 and of the overlying tuffaceous and siliceous sediments. Overall sulphide content is less massive than that of the Main zone (~60-80%) and is dominated by sphalerite, pyrite, and galena. The zone's thickness is typically on the order of a couple of meters. The horizon possibly subcrops in the northeast along Sections 435175E and 435150E but plunges southwest (to at least Section 435000E) similar to the orientation of the massive sulphide horizons of the Main Zone.

### **Deposit Types**

The zinc-copper-gold-silver bearing sulphide mineralization identified on the Property exhibits typical characteristics of VMS mineralization. VMS deposits form in a marine volcanic environment by the circulation of hot hydrothermal fluids near spreading centres. Cold seawater infiltrating ocean crust off-axis is progressively heated by hot magma underlying the rift zone. Heated and buoyant fluids leach metals from the surrounding rocks. Metallic sulphides precipitate at or near the rock-water interface as a result of rapid changes in Eh and pH triggered by rapid mixing with cold ambient seawater. Precipitated sulphides form massive mounds, fracture and cavity fills, as well as replacement textures. Metal zoning is common with copper-rich zones at or near the centre and zinc-rich zones at the fringes of a sulphide mound. Multiple events and zone refinement are common, often due to changes in the internal plumbing system.

### **Exploration**

Geophysical surveys including airborne EM, ground EM, gravity, and magnetic surveys have been the primary means of exploration over the life of the Project. To a lesser extent, geochemistry and geologic mapping have also been utilized to aid in exploration efforts.

Sparse outcrop mapping in the immediate deposit area has yielded structural and geochemical data supporting the general deposit model, although outcrop distribution does not allow for any delineation of mineralization.



A total of 680 geochemical whole rock analysis of drillcore have been collected from host rocks at the Back Forty deposit as well as from drilling peripheral to the deposit area from 2002 to 2012 and have been compiled into a geochemical database. Additional whole rock samples have been collected from the 2015 to 2017 drill programs and are currently being added to the geochemical database. No traditional soil geochemical surveys have been undertaken in the project area.

Extensive geophysical surveys have been completed over the immediate project area and surrounding areas from 2002 to present. Geophysical surveys include two airborne magnetic/EM surveys and extensive ground surveys including HLEM (MaxMin), Pulse EM (PEM), magnetics and gravity as well as extensive downhole Pulse EM surveys completed during various drilling campaigns.

Two airborne electromagnetic and magnetic surveys have been flown over the Project area. In 2002, a Geotem, fixed wing electromagnetic and magnetic survey with north south 200 m spaced lines was flown over the area of the Back Forty discovery, and in 2007 a larger (500 km<sup>2</sup>), partially overlapping VTEM and magnetic survey was flown by Geotech Ltd. The VTEM survey line spacing was 100m in the western portion of the block and 200 m in the eastern portion.

Previous ground geophysical surveys completed over the prospect area were conducted by initial operator MPC and include horizontal loop electro-magnetic (max-min), total field magnetics, and gravity. Ground and downhole pulse electromagnetic surveys (PEM) were conducted during the 2002 to 2003 drilling program. The ground and down-hole geophysical surveys were conducted by Crone Geophysics with interpretation provided by ACNC geophysicists. Four loops were laid out to locate extensions of the sulphide deposit.

Additional PEM surveys that were conducted in the immediate Back Forty resource area were run during middle to late 2006 and 2007 with interpretation provided by Clark Jorgenson in 2007 and 2008. All electromagnetic responses were modelled with the "Maxwell" program developed by Electromagnetic Imaging Technology of Perth, Australia. A number of geophysical targets were tested successfully; other targets could not be explained through drilling.

Additional downhole Pulse EM surveys were completed during the 2009-2011 drill programs. The surveys were completed by Crone Geophysics and reviewed and interpreted by Hudbay geophysicists who aided in the initial delineation of the Back Forty Deposit at depths exceeding 650 m in the vertical direction.

Downhole surveys were also carried out following the 2016 drilling campaign and were completed by Abitibi Geophysics. Geophysicist Dan Card has been overseeing the design and interpretation of these recent surveys, and has also recently reinterpreted the VTEM responses in the deposit are in conjunction with past and recently completed downhole PEM and Surface PEM.

Since most of the immediate deposit area and prospective geologic trends adjacent to the deposit are covered with glacial drift and Paleozoic sediments, and because cultural features (power lines, fences etc.) are common and interfere with electromagnetic techniques, extensive gravity surveys have been conducted over the deposit and surrounding area from the projects inception through 2016.

In 2016, consolidation of land ownership peripheral to the deposit allowed expansion of the detailed gravity grid to the northeast and southwest of the deposit. Subsequent drill testing of the gravity anomaly extending southwest of the known deposit resulted in the discovery of a new zone of massive sulphide mineralization – the 2016 Zone, which has been the target of recent drill testing in 2017.

## **Drilling**

Drilling on the Property was conducted over several campaigns. Between 2002 and 2017, 624 drilling totalled approximately 122,100 m. In addition to mineral resource delineation drilling associated with the expansion of the Back Forty Mineral Resource, focused drill efforts were also undertaken which included: drilling of exploration (geophysical) targets in the immediate vicinity of the deposit area, drilling to support metallurgical testing programs, and geotechnical drilling to characterize the rock quality of the deposit area.

The first program, conducted by ACNC, started in February 2002 and continued to late May 2003. The program consisted of 71 boreholes (20,600 m), from which approximately 7,600 assay samples and 340 whole-rock samples were collected.

The second drill program occurred in Q4 2006. This program delivered 13,190 m of core in 80 BTW sized holes. The majority of the drilling targeted the East and Pinwheel Zones.

The third drilling program was completed in 2007 with 118 boreholes totalling 27,800 metres.

A fourth drill program in 2008 on targets distributed throughout the mineral resource area was completed in 2008 with 66 holes for 13,950 m.

From October 2009 to May 2010, another phase of drilling was mounted. For this program, IDEA Drilling drilled the first 20 holes on the Project using NQ2 and the holes were oriented (totalling 1,327 m). IDEA Drilling subsequently completed 93 NQ3 split-tube oriented holes and one extension using BTW for a total of 8,681 m. IDEA Drilling also drilled 11 holes outside the immediate Deposit area that were not used for the 2018 Mineral Resource Estimate (1,388 m). Boart Longyear completed 11 NQ3 split-tube oriented holes that were included in the Mineral Resource Estimate totalling 1,492 m. In addition, Boart Longyear completed five NQ3 "geotechnical" holes that targeted the conceptual open pit walls (971 m). The core from these holes was archived in its entirety (i.e., not cut and assayed), so they are not included in the 2018 Mineral Resource Estimate.

Drilling from 2009 to 2010 outside the immediate Back Forty Deposit approximately 600 m to the east was targeted on ground magnetic and gravity anomalies. Anomalous zinc and gold mineralization in altered rhyolites and sediments was encountered in two holes. Drillhole PTL-1 intersected 10.0 m of 0.61% zinc, including one 1.5 m sample of 1.08% zinc. Drillhole PTL-2 encountered an interbedded sequence of flows and tuffaceous sediments including a chlorite- altered fragmental zone containing 26.5 m of 0.54% zinc, with smaller zones exceeding 1% zinc, a lower interval of tuffaceous sediments containing 12.5 m of 0.51% zinc, and an underlying siliceous breccia with 6 m of 1.1 g/t gold, including 1.5 m of 2.67 g/t gold. This suggests that prospective host rocks continue to the east of the Back Forty Deposit for at least 600 m. These two holes are not part of the 2018 Mineral Resource Estimate.

78 holes were drilled during 2011. The programs included drilling 22 high grade gold targets at depth, four geophysical targets, and 22 relatively shallow holes to delineate the Pinwheel Gossan Zone.

A total of 11 holes were drilled to collect metallurgical samples, 12 for condemnation purposes east of the mineral resource and 5 holes to install monitoring wells for groundwater purposes. These additional 28 holes are not part of the 2018 Mineral Resource Estimate.

Drilling in 2015 consisted of a total of 13 NQ sized drillholes totalling 1,775 m. The primary focus of the program consisted of 833 m of drilling in 9 metallurgical drillholes targeting sulphide mineralization within the open-pit portion of the Mineral Resource. Two drillholes from the 2015 drill program targeted Mineral Resource expansion of the Pinwheel Zone on a property that had previously been unavailable for drilling. The two drillholes intercepted zinc-rich massive sulphide and associated gold mineralization within the host rocks. An additional 2 drillholes targeted a geophysical anomaly peripheral to the deposit area. No significant grades were reported in the two drillholes.

A total of 2,333 m were drilled in 13 holes in 2016. Geotechnical drilling consisted of 671 m of drilling in 3 drillholes evaluating rock quality in the south-western and south-eastern portion of the open pit Mineral Resource area as well as to test the rock mass quality along the proposed cut-off wall between the planned open pit and the Menominee River. One hole intercepted mineralization outside of the planned open pit extents. The drillhole was sampled and assayed as part of the 2017 drill program.

4 drillholes for 627 m were completed in 2016 to delineate and extend the known Mineral Resource outside of the planned open pit. An additional 6 drillholes totalling 1,195 m were drilled testing both airborne and recently identified ground geophysical anomalies proximal to the Back Forty Deposit.

A total of 24 drillholes totalling 6,001 m were drilled between January and June of 2017. The drilling consisted of three independent programs including a geotechnical drilling program which characterized rock mass qualities for 'out of pit' Mineral Resource, a Mineral Resource delineation drilling program which included both infill drilling to convert Inferred Mineral Resources to Indicated Mineral Resources and step out drilling on known mineralization, as well as an exploration program evaluating geophysical anomalies. The geotechnical drilling program consisted of a total of 5 drillholes and 1,281.2 m total of drilling designed to evaluate the rock mass quality within the potential underground mining area including 3 drillholes in the Pinwheel area southwest of the planned open pit and 2 holes in the Main Zone and Deep Zone area below and southwest of the planned open pit. In addition to collecting geotechnical data a number of the geotechnical drillholes were also designed to intercept areas of Inferred mineralization within the Mineral Resource model in the vicinity of the Pinwheel Zone, Tuff Zone as well as the Deep Zone.

Mineral Resource delineation drilling consisted of a total of 10 drillholes as well as extensions of two holes for a total of 2,610 m. In addition to geological logging, geotechnical logging was completed on select drillholes due to a lack of geotechnical information within the Pinwheel portion of the potential underground mine area. Seven holes were designed to intercept Inferred Mineral Resource material as well as to test the western, down-dip extension of the Pinwheel Massive sulphide. All drillholes encountered massive sulphide mineralization associated with the pinwheel massive sulphide. Two holes were designed to intercept Inferred mineralization located in the Deep Zone massive sulphide and adjacent Porphyry Margin Gold Zone. Both drillholes also encountered mineralization associated with the Tuff Zone massive sulphide and stringers as well as the 90 Gold Zone along the south margin of the proposed open pit.

A total of 9 drillholes totalling 2,110 m were drilled as part of an exploration program targeting a geophysical anomaly identified during 2016 and as follow-up on the newly discovered massive sulphide zone from the 2016 drill program. Given the limited drilling in this area mineralization has not been modelled and is not currently incorporated into the 2018 Mineral Resource Estimate.

### **Sample Preparation, Analyses and Security**

Verification of gold, silver, copper, zinc and lead assay database was performed by P&E against original laboratory electronically issued certificates from ALS Chemex, Vancouver, BC, Accurassay Laboratories, Thunder Bay, Ontario, Inspectorate America Corporation, Sparks, Nevada, and Minerals Processing Corporation, Carney, Michigan. A total of approximately 60% of the wireframe constrained assays were checked. Unchecked assays were due to laboratory certificates not being available to P&E.

P&E also validated the 2018 Mineral Resource Estimate database by checking for inconsistencies in analytical units, duplicate entries, interval, length or distance values less than or equal to zero, blank or zero-value assay results, out-of-sequence intervals, intervals or distances greater than the reported drillhole length, inappropriate collar locations, survey and missing interval and coordinate fields. Some very minor errors were noted and corrected. P&E believes that the corrected database is suitable for a mineral resource estimate.

All samples submitted for analysis were analyzed for gold, silver, copper, lead and zinc. A variety of laboratory test procedures were used over a period from 2002 to 2017. In general, a minimum of 250 g of the crushed reject was split using a Jones riffle and then pulverized to more than 90% -150 mesh. At ALS in Vancouver, all samples were analyzed for gold by fire assay with AA finish (code Au- AA25) on 30 g charges. The lower and upper detection limits for this package were 10 ppb to 100 ppm, respectively. Higher-grade samples were re-run with a gravimetric finish upon request. All samples were also analyzed using a multi-element package (code ME-ICP61). ME-ICP61 consisted of a four-acid digestion, "mineralized grade" inductively coupled plasma ("ICP") package with over-limit samples re-assayed for copper, lead, zinc and silver by four-acid digestion followed by AA (code AA62). A limited number of samples were analyzed for mercury by aqua regia digestion and flameless AA spectrometry (Hg-CV41 with detection

limits of 0.01 to 100 ppm), and for total sulphur by Leco furnace and infrared spectroscopy (code S-IR08 with detection limits of 0.01 to 50%). All remaining pulps and coarse rejects were returned to the Project warehouse facilities in Michigan.

It is P&E's opinion that sample preparation, security and analytical procedures for the Project drilling and sampling programs were adequate for the purposes of the 2018 Mineral Resource Estimate.

Based upon the evaluation of the QA/QC programs undertaken by Aquila, P&E concludes that the data are of good quality for use in the Back Forty current 2018 Mineral Resource Estimate.

### **Data Verification**

In 2016 P&E conducted verification of the Back Forty Project drill hole assay database for gold, silver, zinc, copper and lead by comparison of the database entries with the assay certificates. The assay certificates were obtained in digital format directly from three assay laboratories:

- Inspectorate America of Sparks, Nevada.
- Accurassay of Thunder Bay, ON.
- ALS Chemex (now ALS Minerals) of Vancouver, BC.

Assay data ranging from 2002 through 2011 were verified for the Back Forty Project. 65% (7,543 out of 11,552) of the constrained drilling assay data were checked for gold, 58% for silver, 59% for zinc and 57% for copper and lead. A number of errors were encountered during verification of the Back Forty database and were corrected in the database utilized to calculate the 2018 Mineral Resource Estimate.

The Project was visited by Mr. Yungang Wu, P.Geo., and Mr. Eugene Puritch, P.Eng., FEC, CET of P&E on May 23, 2016, for the purposes of completing a site visit and due diligence sampling. Mr. Wu and Mr. Puritch obtained information pertaining to general data acquisition procedures, core logging procedures and quality assurance/quality control ("QA/QC" or "QC").

In 2017 P&E conducted further verification of the Back Forty Project drill hole assay database for gold, silver, zinc, copper and lead by comparison of the database entries with the assay certificates. The assay certificates were obtained in digital format directly from two assay laboratories:

- Inspectorate America of Reno, Nevada.
- MPC, of Carney, Michigan.

Assay data ranging from 2016 through 2017 were verified for the Project. 96% (497 out of 517) of the constrained drilling assay data were checked and 53% (2,726 out of 5,141) of the overall data were checked against the original laboratory certificates from Inspectorate America and MPC. Seven errors were observed for gold and ten for copper. All errors were corrected in the database.

The Project was visited again by Mr. Yungang Wu, P.Geo., of P&E from November 13 to 14, 2017, for the purposes of completing a site visit and due diligence sampling. Mr. Wu obtained information pertaining to general data acquisition procedures, core logging procedures and QA/QC.

Based upon P&E's due diligence sampling, P&E concludes that the data are of good quality for use in the Back Forty current 2018 Mineral Resource Estimate.

## Mineral Processing and Metallurgical Testing

The objective of the metallurgical study was to quantify the metallurgical response of the Back Forty VMS mineralization. The study focused on the three distinct sulphide zones (main, pinwheel and tuff) as well as the oxide portion of the deposit. The program was designed with the intent to develop the parameters for process design criteria for comminution, flotation, leaching, Merrill-Crowe precipitation, oxide filtration, cyanide destruction and tailings dewatering and rheology in the process plant.

Sixty-one grindability samples were submitted to SGS Canada Inc. (Lakefield, ON) to complete a suite of grinding characterization tests including Bond ball work index (“**BWi**”), modified Bond ball work index (“**ModBond**”) and abrasion index (“**Ai**”). In addition to these sixty-one samples, eight composites were selected from the PQ variability samples and compiled to complete crusher work index (“**CWi**”) and SAG mill comminution (“**SMC**”) tests. Further to the aforementioned sixty-nine samples, twenty-four additional samples were selected to complete SMC variability tests and complementary BWi and ModBond tests. Overall, the samples depicted a high degree of variability across the grindability characterization tests.

The CWi values ranged from 4.4 kilowatt hour per ton (“**Wh/t**”) to 12.5 kWh/t, which covered the soft to moderately hard range of hardness within the SGS historical database. The average CWi was 7.9 kWh/t, which was classified as moderately soft.

With respect to the initial round of SMC testing, nine samples were tested: three from the main zone, one from the pinwheel zone, two from the tuff zone, and three from the oxide portion of the deposit. The samples fell in the soft to very hard range of hardness, with A x b ranging from 83.9 to 22.5. Relative densities also were variable, ranging from 2.7 to 4.9. The subsequent round of SMC testing, of 24 samples, returned a similar A x b range of 85.6 to 27.0.

The BWi and ModBond results showed variability in hardness, with averages of 13.8 and 13.3 kWh/t, respectively, at a closing size of 200 mesh. This is considered medium in hardness. The oxide and tuff zone samples were the most competent, with pinwheel samples being the least competent.

The Ai values ranged from 0.285 g to 0.564 g, with an average value of 0.398 g, which is considered medium.

In 2016, a feasibility sample selection study led to a drilling campaign to acquire fresh samples for flotation (sulphides) and cyanidation bottle roll testing (oxides). Following sub-domain compositing, three sulphide master composites were created with the sub-domain composite material. The sampling is understood to have taken into account ore grades, spatial representation, production schedule and domain quantities. In 2017, additional sulphide samples were selected for each of five ore types (main, tuff and three distinct pinwheel zones). The primary driver was variability in terms of base metals, but other factors were considered.

The two main objectives of the feasibility flotation campaign were to minimize the number of distinct metallurgical sample types from a processing perspective and to optimize reagent dosages with some consideration for alternatives. Historical testwork was used as the basis of the initial tests.

Although reagents and reagent dosages differed among metallurgical types, samples were tested using a similar sequence of unit operations. In total, fifty-two composites were subjected batch flotation tests. Additionally, nine locked cycle tests were completed (2 on master composites and 7 on variability composites).

The batch and locked cycle flotation test results, along with valid historical test result data, formed the basis for each of the five metallurgical ore type recovery equations. In general, there is a reasonable correlation between the head grade of the target base metal with the ultimate recovery to the concentrate.

Target concentrate grades were selected based on the metallurgical performance of the samples for each ore as well as financial analysis. For copper, the target concentrate grade varies for each copper containing ore type and has a range of 17% to 22% copper. Zinc concentrate targets vary from 50% to 55% zinc and the lead target concentrate

grade is 35%. The main impurity in all flotation concentrates is mercury. By-product credits for gold and silver in copper, lead and zinc flotation concentrates were considered in the financial analysis.

As part of the 2016 sample selection process, nine variability composites representing the sub-domains and transition zones within the oxide portion of the Back Forty deposit were selected. These samples were each subjected to a series of cyanidation bottle roll tests. Various test conditions were explored, including but not limited to sodium cyanide (NaCN) concentration, aeration, primary grind size, pH and addition of lead nitrate. Precious metal recoveries to the pregnant solution ranged from 72% to 97% for gold and 39% to 91% for silver. Additionally, an oxide master composite was produced by combining appropriate amounts from each of the variability composites. The master composite was subjected to a cyanidation bottle roll test to produce adequate product for downstream testing.

The master composite pregnant solution was subjected to several Merrill-Crowe precipitation tests. The barren solution was subjected to cyanide destruction testing. Both of tests provided critical recovery and reagent dosage information.

Four tailings samples, representing the main, pinwheel, tuff and oxide zones were subjected to settling and rheology testing.

### **2018 Mineral Resource Estimate**

The 2018 Mineral Resource Estimate is tabulated in Table A.2 below. P&E considers the mineralization of Back Forty to be potentially amenable to Open Pit and Out of Pit (underground) extraction.

**TABLE A.1**  
**2018 MINERAL RESOURCE ESTIMATE STATEMENT<sup>(1-6)</sup>**

Mineral Resource Area	Metallurgy Type	Class	NSR Cut-off	Tonnes	Gold	Gold	Silver	Silver	Zinc	Zinc	Copper	Copper	Lead	Lead
			\$/tonne	(1,000)	g/t	K oz	g/t	K oz	%	M lb	%	M lb	%	M lb
Pit Constrained	Flotable	Meas	21	6,797	1.75	381	18.4	4,027	3.45	516.5	0.38	56.4	0.16	23.4
		Ind	21	3,768	1.58	191	25.2	3,056	3.15	261.7	0.24	19.9	0.39	32.8
		<b>M &amp; I</b>	<b>21</b>	<b>10,565</b>	<b>1.68</b>	<b>572</b>	<b>20.9</b>	<b>7,083</b>	<b>3.34</b>	<b>778.2</b>	<b>0.33</b>	<b>76.3</b>	<b>0.24</b>	<b>56.2</b>
		Inf	21	71	1.01	2	30.7	70	2.98	4.7	0.14	0.2	0.37	0.6
	Leachable	Meas	22	553	5.61	100	34.8	618	0.19	2.4	0.05	0.6	0.13	1.5
		Ind	22	1,777	2.15	123	39.6	2,263	0.41	16.1	0.03	1.3	0.29	11.5
		<b>M &amp; I</b>	<b>22</b>	<b>2,330</b>	<b>2.97</b>	<b>223</b>	<b>38.5</b>	<b>2,881</b>	<b>0.36</b>	<b>18.5</b>	<b>0.04</b>	<b>1.9</b>	<b>0.25</b>	<b>13.0</b>
		Inf	22	378	3.62	44	40.1	487	0.38	3.2	0.06	0.5	0.52	4.3
	Total	Meas	21+22	7,350	2.04	481	19.7	4,645	3.20	518.8	0.35	57.0	0.15	24.9
		Ind	21+22	5,545	1.76	314	29.8	5,319	2.27	277.8	0.17	21.2	0.36	44.3
		<b>M &amp; I</b>	<b>21+22</b>	<b>12,895</b>	<b>1.92</b>	<b>795</b>	<b>24.0</b>	<b>9,964</b>	<b>2.80</b>	<b>796.6</b>	<b>0.28</b>	<b>78.2</b>	<b>0.24</b>	<b>69.2</b>
		Inf	21+22	448	3.21	46	38.6	557	0.79	7.9	0.07	0.7	0.49	4.9
Out of Pit	Flotable	Meas	70	556	1.79	32	26.8	480	5.32	65.2	0.33	4.0	0.41	5.0
		Ind	70	3,059	1.84	181	26.2	2,577	4.23	285.4	0.51	34.3	0.30	20.3
		<b>M &amp; I</b>	<b>70</b>	<b>3,615</b>	<b>1.83</b>	<b>213</b>	<b>26.3</b>	<b>3,057</b>	<b>4.40</b>	<b>350.7</b>	<b>0.48</b>	<b>38.4</b>	<b>0.32</b>	<b>25.3</b>
		Inf	70	544	2.96	52	37.5	656	1.38	16.6	0.62	7.5	0.39	4.6
	Leachable	Meas	70	37	7.38	9	74.3	89	0.31	0.3	0.12	0.1	0.11	0.1
		Ind	70	77	3.85	10	47.3	117	0.32	0.5	0.15	0.2	0.13	0.2
		<b>M &amp; I</b>	<b>70</b>	<b>114</b>	<b>5.01</b>	<b>18</b>	<b>56.1</b>	<b>206</b>	<b>0.32</b>	<b>0.8</b>	<b>0.14</b>	<b>0.3</b>	<b>0.13</b>	<b>0.3</b>
		Inf	70	137	5.93	26	81.0	356	0.42	1.3	0.16	0.5	0.49	1.5
	Total	Meas	70	593	2.14	41	29.8	569	5.01	65.5	0.32	4.1	0.39	5.1
		Ind	70	3,135	1.88	190	26.7	2,694	4.14	286.0	0.50	34.6	0.30	20.5
		<b>M &amp; I</b>	<b>70</b>	<b>3,729</b>	<b>1.93</b>	<b>231</b>	<b>27.2</b>	<b>3,262</b>	<b>4.28</b>	<b>351.5</b>	<b>0.47</b>	<b>38.7</b>	<b>0.31</b>	<b>25.7</b>
		Inf	70	680	3.56	78	46.2	1,011	1.19	17.8	0.53	8.0	0.41	6.1
Total	Flotable	Meas	21+70	7,353	1.75	414	19.1	4,507	3.59	581.7	0.37	60.5	0.18	28.4
		Ind	21+70	6,827	1.69	371	25.7	5,633	3.64	547.1	0.36	54.2	0.35	53.1
		<b>M &amp; I</b>	<b>21+70</b>	<b>14,180</b>	<b>1.72</b>	<b>785</b>	<b>22.2</b>	<b>10,140</b>	<b>3.61</b>	<b>1,128.8</b>	<b>0.37</b>	<b>114.7</b>	<b>0.26</b>	<b>81.5</b>
		Inf	21+70	615	2.74	54	36.7	726	1.57	21.2	0.57	7.7	0.38	5.2

**TABLE A.1**  
**2018 MINERAL RESOURCE ESTIMATE STATEMENT<sup>(1-6)</sup>**

Mineral Resource Area	Metallurgy Type	Class	NSR Cut-off	Tonnes	Gold	Gold	Silver	Silver	Zinc	Zinc	Copper	Copper	Lead	Lead
			\$/tonne	(1,000)	g/t	K oz	g/t	K oz	%	M lb	%	M lb	%	M lb
	Leachable	Meas	22+70	590	5.72	109	37.3	707	0.20	2.6	0.05	0.7	0.12	1.6
		Ind	22+70	1,854	2.22	132	39.9	2,380	0.41	16.7	0.04	1.6	0.29	11.7
		<b>M &amp; I</b>	<b>22+70</b>	<b>2,444</b>	<b>3.07</b>	<b>241</b>	<b>39.3</b>	<b>3,087</b>	<b>0.36</b>	<b>19.3</b>	<b>0.04</b>	<b>2.2</b>	<b>0.25</b>	<b>13.4</b>
		Inf	22+70	514	4.24	70	51.0	842	0.39	4.5	0.09	1.0	0.51	5.8
	<b>Total</b>	<b>Meas</b>	<b>21+22+70</b>	<b>7,943</b>	<b>2.04</b>	<b>522</b>	<b>20.4</b>	<b>5,214</b>	<b>3.34</b>	<b>584.3</b>	<b>0.35</b>	<b>61.2</b>	<b>0.17</b>	<b>30.0</b>
		<b>Ind</b>	<b>21+22+70</b>	<b>8,680</b>	<b>1.80</b>	<b>504</b>	<b>28.7</b>	<b>8,013</b>	<b>2.95</b>	<b>563.8</b>	<b>0.29</b>	<b>55.8</b>	<b>0.34</b>	<b>64.9</b>
		<b>M &amp; I</b>	<b>21+22+70</b>	<b>16,623</b>	<b>1.92</b>	<b>1,026</b>	<b>24.8</b>	<b>13,227</b>	<b>3.13</b>	<b>1,148.1</b>	<b>0.32</b>	<b>116.9</b>	<b>0.26</b>	<b>94.9</b>
		<b>Inf</b>	<b>21+22+70</b>	<b>1,129</b>	<b>3.42</b>	<b>124</b>	<b>43.2</b>	<b>1,568</b>	<b>1.03</b>	<b>25.7</b>	<b>0.35</b>	<b>8.7</b>	<b>0.44</b>	<b>11.0</b>

Notes:

- (1) Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.
- (2) The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
- (3) The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM"), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
- (4) Metallurgical type Oxide (all gold domains and leachable Gossans) is leachable, while all other metallurgical types are floatable.
- (5) The 2018 Mineral Resource Estimate was based on metal prices of US\$1,375/oz gold, US\$22.27/oz silver, US\$1.10/lb zinc, US\$3.19/lb copper and US\$1.15/lb lead.
- (6) Mineral Resources were defined within a conceptual constrained pit shell.
- (7) Mineral Resources are inclusive of Mineral Reserves.



## Mineral Reserve Estimate

The Proven and Probable Mineral Reserve Estimate for the Project is summarised in Table A.3, below. Approximately 70% of the Mineral Reserve Estimate is in the proven category.

<b>TABLE A.2 BACK FORTY MINERAL RESERVE ESTIMATE<sup>(1-7)</sup></b>							
	<b>Ore</b>	<b>NSR</b>	<b>Gold</b>	<b>Silver</b>	<b>Zinc</b>	<b>Lead</b>	<b>Copper</b>
	<b>Mt</b>	<b>\$/t</b>	<b>g/t</b>	<b>g/t</b>	<b>%</b>	<b>%</b>	<b>%</b>
Proven	8.12	\$119	1.95	18.42	3.02	0.13	0.35
Probable	3.53	\$85	1.63	29.26	1.76	0.41	0.10
Proven + Probable	11.65	109	1.85	21.70	2.64	0.21	0.28

Notes:

- (1) CIM definitions were followed for the Mineral Reserve Estimate.
- (2) The Mineral Reserve Estimate used average long term metal prices of US\$1,250/oz gold; US\$20.00/oz silver; US\$1.15/lb zinc; \$US1.00/lb lead; and \$US3.00/lb copper.
- (3) Mineral Reserves are defined within a mine plan, with pit phase designs guided by Lerchs–Grossmann (LG) pit shells, after dilution and mining loss adjustments.
- (4) The Mineral Reserve Estimate is reported using Measured and Indicated Mineral Resources only.
- (5) Metallurgical recovery used was a function of the rock type.
- (6) NSR cut-off values applied are Ore 1 - \$16.50/t, Ore 2,3,4,7,8 - \$16.00/t, Ore 5 - \$17.50/t, and Ore 6 - \$28.50/t.
- (7) The life-of-mine strip ratio is 4.3:1

## Mining

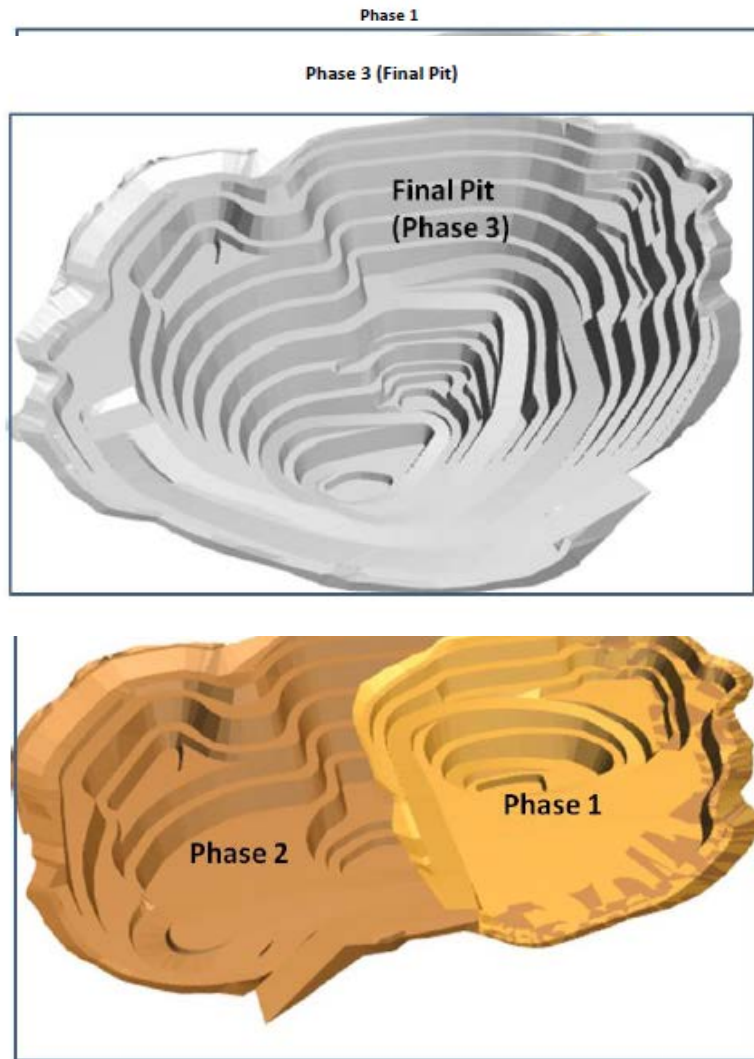
The economic analysis of Project focuses on the sub-set of economically viable resources that will yield optimal returns by open pit mining. The Project area consists of very subdued terrain and topography. The area, topography and climate are amenable to the conventional open pit mining operations proposed for the Project.

The mining operations will encompass a single large pit that will be mined with conventional mining equipment in three pushback phases.

For scheduling purposes, the Back Forty pit was subdivided into three phases. Mining commences in a small higher-grade pit and then expands outwards by pushing back the pit wall. This enables annual waste stripping quantities to be distributed to avoid high and low annual tonnages.

A summary of the phase tonnages is shown in Table A.4 below. Isometric views of the pit phases are shown in the figures below. Mining will occur in several phases simultaneously in order to meet the requisite stripping and process plant feed delivery targets.

<b>TABLE A.3</b>					
<b>PIT PHASE TONNAGES</b>					
		<b>Phase 1</b>	<b>Phase 2</b>	<b>Phase 3</b>	<b>Phase 4</b>
<b>Waste Stripping</b>					
<b>Overburden (OB)</b>	<b>Mt</b>	<b>1.23</b>	<b>1.65</b>	<b>0.9</b>	<b>3.78</b>
<b>Waste</b>	<b>Mt</b>	<b>4.63</b>	<b>19.43</b>	<b>22.39</b>	<b>46.45</b>
<b>Total Waste</b>	<b>Mt</b>	<b>5.86</b>	<b>21.08</b>	<b>23.29</b>	<b>50.23</b>
<b>Strip Ratio</b>	<b>W:O</b>	<b>2.6</b>	<b>4.1</b>	<b>5.4</b>	<b>4.3</b>
<b>Ore Production</b>					
<b>Flotation Ore</b>	<b>Mt</b>	<b>1.95</b>	<b>4.33</b>	<b>3.66</b>	<b>9.94</b>
<b>Leach Ore</b>	<b>Mt</b>	<b>0.28</b>	<b>0.78</b>	<b>0.65</b>	<b>1.71</b>
<b>Total Ore</b>	<b>Mt</b>	<b>2.23</b>	<b>5.11</b>	<b>4.30</b>	<b>11.65</b>
<b>Avg NSR</b>	<b>\$/t</b>	<b>\$135</b>	<b>\$98</b>	<b>\$109</b>	<b>\$109</b>



A production schedule has been developed for mining and processing. The mining schedule defines the annual tonnages of ore and waste that must be moved. Ore may be delivered either to the primary crushers or placed into one of the stockpiles. Waste is either taken to a waste storage facility or used in tailings dam construction.

The processing schedule defines the ore that is delivered to the crusher. This ore could consist of material directly from the mine or reclaimed from one of the run of mine stockpiles. The stockpiling system will utilize up to eight different stockpiles at any point in time. Materials will be moved into and out of stockpiles as needed to meet the processing targets.

### **Recovery Methods**

The process plant design for the Project is based on a flexible metallurgical flowsheet designed for treatment of a variety of different ore types. The flowsheet is based on well proven unit operations in the industry.

The key criteria for equipment selection are suitability for duty, reliability and ease of maintenance. The plant layout provides ease of access to all equipment for operating and maintenance requirement whilst maintaining a layout that will facilitate construction progress in multiple areas concurrently.

The key project design criteria for the plant are:

- Nominal throughput of 4,000 tpd sulphide ore and 800 tpd oxide ore.
- Crushing circuit availability of 75% supported by the use of surge bins and dedicated feeders for choke feeding cone crushers for optimum crushing performance and wear minimization.
- Oxide and sulphide process plant availability of 91.3% through the use of standby equipment in critical areas and reliable grid power supply.
- Sufficient automated plant control to minimize the need for continuous operator interface and allow manual override and control if and when required.

Study design documents have been prepared incorporating engineering design criteria and key metallurgical design criteria derived from the results of the metallurgical testwork.

The process plant has been designed to treat a variety of ore types ranging from low sulphur precious metals ore, high copper massive sulphide ore, high zinc massive sulphide ore, stringer base metal ores and high lead tuff ore. Two separate treatment methods will be employed for processing Back Forty ores:

- Leaching of low sulphide precious metal bearing ore using sodium cyanide, with metal recovery via the Merrill-Crowe process – Oxide Plant.
- Flotation of base metal sulphide ores to produce a bulk (copper or lead) concentrate and a zinc concentrate – Sulphide Plant.

The oxide plant has been designed for a throughput of 800 tpd (dry) at head grades of up to 8 g/t gold and 127 g/t silver. The overall flowsheet includes the following steps:

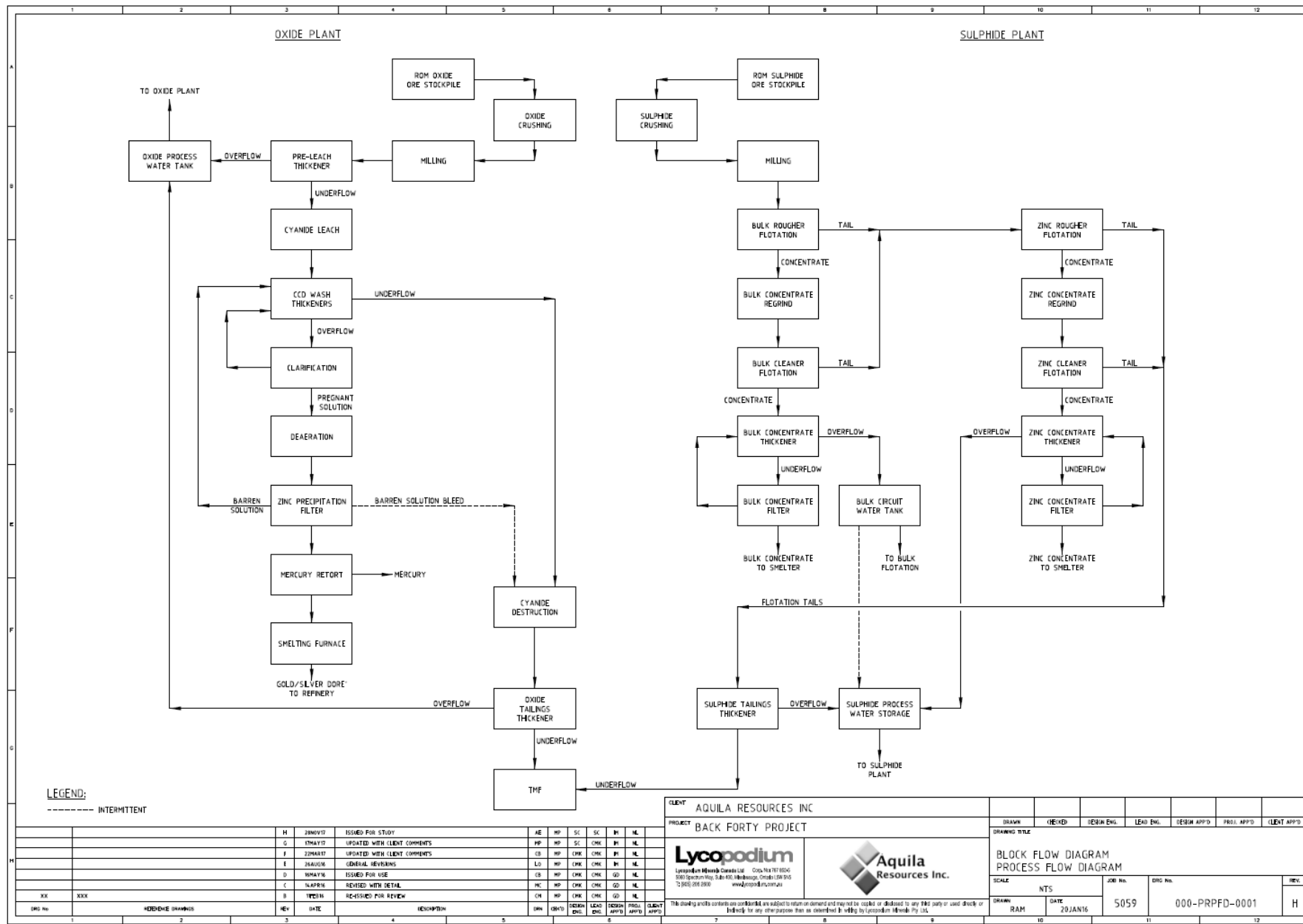
- Three stage crushing using an open circuit jaw crusher, open circuit secondary cone crusher and tertiary cone crusher in closed circuit.
- Grinding and classification.
- Pre-leach thickening.
- Cyanide leach.
- Counter-Current Decantation (CCD) washing and clarification of pregnant solution.
- De-aeration and zinc precipitation (Merrill Crowe).
- Mercury removal using a retort.
- Smelting to produce doré.
- Cyanide destruction of tailings.
- Tailings thickening and disposal in a common Tailings Management Facility (“TMF”).

The sulphide plant has been designed for a throughput of 4,000 tpd (dry), with varying copper, lead and zinc head grades. The overall flowsheet includes the following steps:

- Primary crushing.

- Grinding and classification
- Bulk rougher flotation.
- Zinc rougher flotation.
- Bulk concentrate regrind.
- Zinc concentrate regrind.
- Bulk cleaner flotation, using three stages of cleaning.
- Zinc cleaner flotation, using two or three stages of cleaning depending on head grade.
- Bulk concentrate thickening and filtration.
- Zinc concentrate thickening and filtration.
- Tailings thickening and disposal in the common TMF.

An overall block flow diagram depicting the major unit operations incorporated in the selected process flowsheet is presented below.



LEGEND:  
----- INTERMITTENT

REV	DATE	DESCRIPTION	DRN	CHKD	DESIGN	LEAD	DESIGN	PROJL	CLIENT
H	29NOV10	ISSUED FOR STUDY	AE	MP	SC	SC	IN	HL	
G	07MAY10	UPDATED WITH CLIENT COMMENTS	MP	MP	SC	CHK	IN	HL	
F	22MAR10	UPDATED WITH CLIENT COMMENTS	CB	MP	CHK	CHK	IN	HL	
E	28AUG08	GENERAL REVISIONS	LO	MP	CHK	CHK	IN	HL	
D	04MAY06	ISSUED FOR USE	CB	MP	CHK	CHK	GD	HL	
C	04APR06	REVISED WITH DETAIL	HC	MP	CHK	CHK	GD	HL	
B	17FEB06	RE-DESIGNED FOR REVIEW	CH	MP	CHK	CHK	GD	HL	

CLIENT: AQUILA RESOURCES INC  
PROJECT: BACK FORTY PROJECT

**Lycopodium**  
Lycopodium Minerals Canada Ltd. - 600, Hwy 101 8500  
2500 Spectrum Way, Suite 400, Millwright, Ontario, M6B 1P2  
Tel: 905.265.2900 www.lycopodium.com

**Aquila Resources Inc.**

This drawing and its contents are confidential and are not to be copied or disclosed to any third party or used directly or indirectly for any other purpose than as intended by writing by Lycopodium Minerals Pty Ltd.

DRN	CHKD	DESIGN	LEAD	DESIGN	PROJL	CLIENT

SCALE: NTS  
JOB No.: 5059  
DPC No.: 000-PRPFD-0001  
DATE: 20/JAN/16  
REV: H

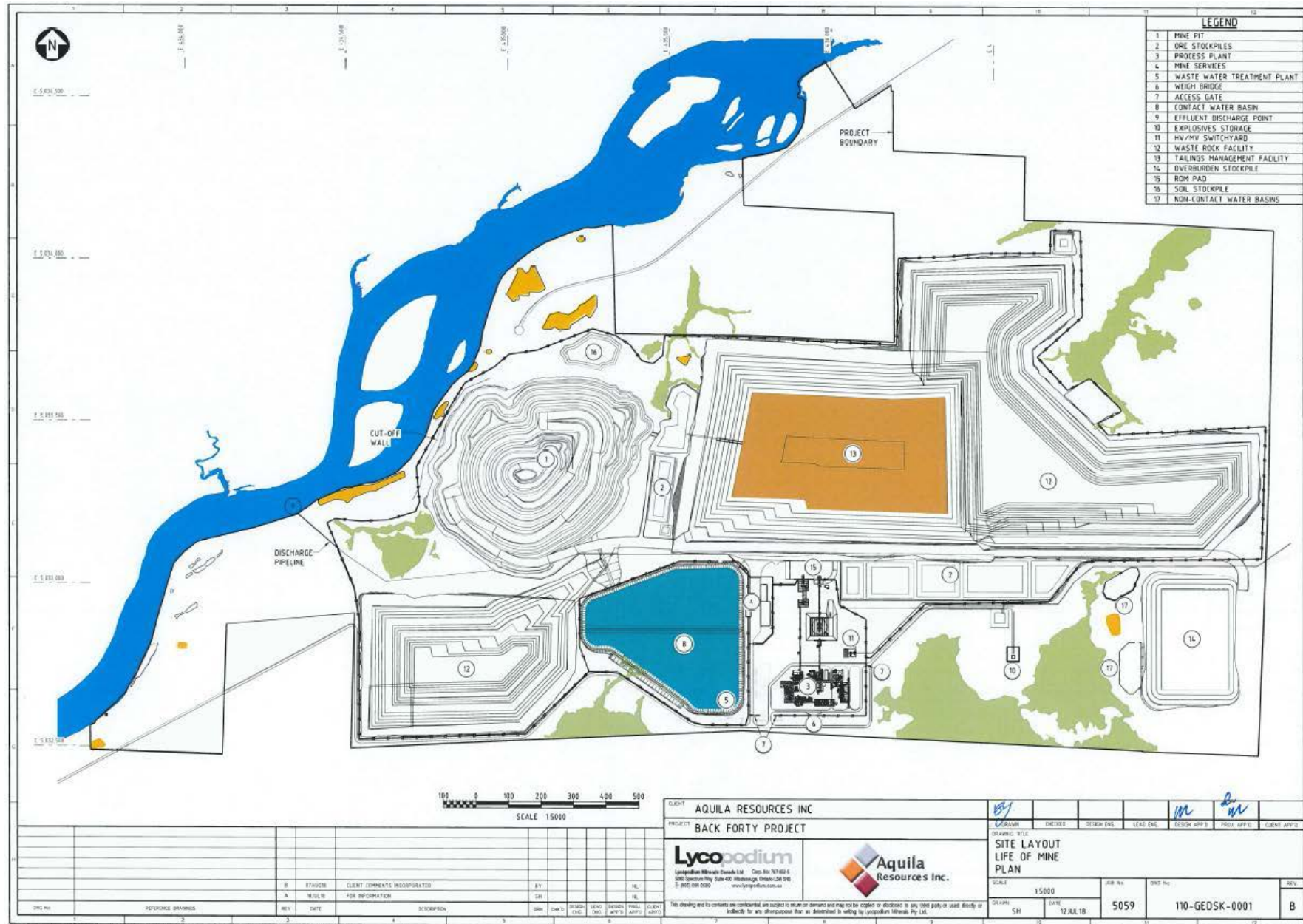
## **Infrastructure**

The overall site plan is shown in the figure below and includes major facilities of the Project including mine open pit, cut-off wall (“**COW**”), oxide and sulphide processing plants, TMF, waste rock facilities (“**WRFs**”), contact water basin (“**CWB**”) and non-contact water basins (“**NCWBs**”), mine services, access road and waste water treatment plant (“**WWTP**”).

Access to the facility is from the west side of the project off the existing River Road. Main access will be via the main security gate near the process plant.

Grid power will be provided from an incoming high-voltage (“**HV**”) line from the east side of the project.

The site as a whole will be fenced to clearly delineate the mine area and deter access by unauthorized people.





## Permits and Environmental Considerations

Mining Permit No. MP 01 2016 issued December 28, 2016 addresses the overall proposed project and based on the permit application, how Part 632 requirements will be met. The application included information as listed in the rules under R425.201 as follows:

- A permit application form.
- A permit application fee.
- An environmental impact assessment.
- A mining, reclamation, and environmental protection plan.
- A contingency plan.
- A financial assurance plan.
- A list of other necessary permits and licenses.
- An organizational report.

Other project permits include:

- Michigan Air Use Permit – Permit to Install 205-15 issued December 28, 2016.
- National Pollutant Discharge Elimination System (“**NPDES**”) Permit MI0059945 issued April 5, 2017.
- Wetland Permit WRP011785 issued June 4, 2018.

As the Project has developed through feasibility design and the mine plan refined, the permits above may need to be amended. Michigan has a viable process to amend Mining Permits, as established in Public Act No. 162, and other permits.

Other required permits and plans include:

- Storm water management and soil erosion and sedimentation control plans for operations are addressed in the Mining Permit. A construction storm water permit may be needed at a county level.
- Permits for water supply wells and septic systems may be required.
- Federal plans, such as Spill Prevention, Control, and Countermeasure Plan (“**SPCC**”); Storm Water Pollution Prevention Plan (“**SWPP**”); and Pollution Incident Prevention Plan (“**PIPP**”), will be required.

The company continues to evaluate the applicability of local zoning requirements in the context of the Michigan’s Part 632 mining regulation.

## Capital and Operating Costs

The overall capital cost estimate was compiled by Lycopodium and is presented here in summary format. The capital cost estimate reflects the Project scope as described in this report. Mine capital costs (developed by P&E) are included in Table A.5, below. The pre-production capital cost is estimated at \$294 million. Golder Associates and Hatch provided quantities, rates and costs for the TMF, WRFs and water management areas and are included in the estimate

tables below. All costs are expressed in USD unless otherwise stated and based on Q1 2018 pricing. The estimate is deemed to have an accuracy of  $\pm 15\%$ .

<b>TABLE A.4 CAPITAL ESTIMATE SUMMARY (Q1 2018, <math>\pm 15\%</math>)</b>	
<b>Area</b>	<b>\$M</b>
Indirect Construction	19
Common Plant	20
Oxide Plant	33
Sulphide Plant	59
TMF / WRFs	39
Infrastructure	33
Mining	25
Management Costs	22
Owner Costs	13
<b>Subtotal</b>	<b>263</b>
Contingency	29

The overall operating cost estimate was compiled by Lycopodium and is presented here in summary format.

Aquila, P&E, Golder Associates and Hatch provided input to the costs which are summarized in Table A.6, below. The operating cost estimates are expressed in United States dollars in Q1, 2018 terms and is deemed to have an accuracy of  $\pm 15\%$ .

<b>TABLE A.5 LOM OPERATING COSTS (\$000)</b>								
<b>Year</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Total LOM</b>
<b>Oxide Plant</b>	5,954	6,686	6,686	6,686	6,686	6,686	277	39,661
<b>Sulphide Plant</b>	13,215	15,836	16,126	17,015	16,867	17,312	16,693	113,065
<i>Main</i>	10,141	5,573	9,808	8,359	12,539	0	14,598	61,019
<i>Pinwheel MS Cu/Gossan</i>	3,073	2,169	43	0	0	0	0	5,286
<i>Pinwheel Semi-Massive/Stringers</i>	0	1,011	1,946	0	0	0	0	2,957
<i>Pinwheel MS Cu/Zn</i>	0	1,312	0	0	0	0	0	1,312
<i>Tuff</i>	0	5,771	4,328	8,656	4,328	17,312	2,096	42,490
<b>Common Plant</b>	4,428	4,553	4,553	4,553	4,553	4,553	4,435	31,626
<b>Subtotal Plant Process</b>	23,597	27,075	27,364	28,254	28,106	28,550	21,406	184,351
<b>G&amp;A</b>	3,830	3,830	3,830	3,830	3,830	3,830	3,830	26,811
<b>Mining</b>	31,280	40,209	38,014	37,007	8,303	2,877	2,598	160,286
<b>TMG, WRF &amp; Water Treatment Plant</b>	1,956	1,956	1,956	1,956	1,956	1,956	1,956	13,693
<b>Total (\$000/year)</b>	60,663	73,070	71,164	71,047	42,194	37,213	29,790	385,141

## Economic Analysis

This study shows that the Project will produce approximately 1.1 million ounces of gold equivalent over a seven-year life. It should be noted that the study has been limited to a sub-set of economically viable resources that will yield optimal returns by open pit mining. There are additional economically viable resources that could be exploited with a push back beyond the pit limits contemplated in this study. Alternatively, these incremental resources could also be exploited using underground methods. A separate study will be conducted to determine the optimal manner of exploitation for these resources.

Salient metrics for the base case macro-economic forecast, which includes prices of \$1,300/oz for gold and \$1.20/lb for zinc, are presented in Table A.7 below.

<b>TABLE A.6 SUMMARY METRICS<sup>(1-2)</sup></b>		
	<b>Unit</b>	<b>Value</b>
Ore Mined	Mt	11.7
Payable Au	K oz	512
Payable AuEq2	K oz	468
Payable Zn	M lbs	1,197
Payable ZnEq2	M lbs	1,105
Gross Revenue	\$/t ore	\$123
Treatment Charge/Refining Charge (TCRC)TCRC	\$/t ore	\$15
Net Smelter Return	\$/t ore	\$108
Site Operating Costs	\$/t ore	\$31.88
Net Direct Cash Cost (C1)	\$/lb Zn	(\$1.73)
Initial Capital	\$M	\$294
Total Investment <sup>3</sup>	\$M	\$480
Net All-in Sustaining Costs (AISC)	\$/lb Zn	(\$1.34)
Post-Tax Net Present Value NPV <sup>6%</sup>	\$M	\$208
Post-Tax Internal Rate of Return (IRR)	-	28.2%
Post-Tax Cash Flow Index	NPV: Peak Investment	0.70x
Simple Payback	months	26

Notes:

- (1) By-products converted to equivalent zn and au using weighted average metal prices over life of mine
- (2) Total investment includes initial capital, sustaining capital and closure expenses

Returns are most sensitive to variation in the price of gold, with a 5% change in the metal price having a 9% impact on NPV. Other key sensitivities include (with impact of a 5% variation in the base assumption given in parenthesis):

- Zinc price (8.2% impact).

- Total Site Operating Costs (5.3% impact).
- Initial Capex (4.4% impact).
- Gold Recovery (3.5% impact).

Returns are relatively insensitive to variation in prices or recovery for the other metals.

The peak funding requirement is forecast to be \$296 million. The mine plan targets high value material from the outset, resulting in a rapid repayment of the funding and simple payback is achieved in 26 months.

### **Conclusions and Recommendations**

Based on the work undertaken as of the date of the Feasibility Study Technical Report, as summarized in the Feasibility Study Technical Report, the Back Forty Feasibility Study has identified a viable and attractive development opportunity.

Subject to ongoing project funding constraints and board approval, it is recommended that Aquila commence basic engineering of the Project in line with the preliminary implementation plan, including additional studies and site investigations set out in Section 26 of the Feasibility Study Technical Report.

### **DIVIDENDS**

The Company has not paid any dividends since its incorporation and does not anticipate the payment of dividends in the foreseeable future. At present, the Company's policy is to retain earnings, if any, to finance exploration on its properties. The payment of dividends in the future will depend upon, among other factors, the Company's earnings, capital requirements and operating conditions.

### **DESCRIPTION OF CAPITAL STRUCTURE**

The authorized share capital of the Company consists of an unlimited number of common shares, of which 337,974,556 were outstanding as at December 31, 2018.

#### **Common Shares**

The holders of the common shares are entitled to receive notice of and to attend all meetings of the shareholders of the Company and shall have one vote for each common share held at all meetings of the shareholders of the Company. The holders of common shares are entitled to receive (a) any dividends if, as and when declared by the board of directors of the Company, and (b) receive the remaining assets of the Company available for distribution to shareholders in the event of any liquidation, dissolution or winding-up of the Company. The holders of the common shares have no pre-emptive, redemption or conversion rights.

As at December 31, 2018, the Company had the following Options and warrants outstanding.

Options <sup>1</sup>	21,919,058
Warrants <sup>2</sup>	31,551,545

Notes:

- (1) Each Option entitles the holder to acquire one common share.
- (2) Each warrant entitled the holder to acquire one common share.

### MARKET FOR SECURITIES

The common shares of the Company are on the TSX under the symbol “AQA”.

Following is a monthly summary of prior sales of Aquila shares on the TSX in 2018:

Month	High (C\$)	Low (C\$)	Volume
January	0.28	0.25	1,258,602
February	0.28	0.24	1,882,609
March	0.27	0.24	1,886,979
April	0.26	0.24	1,212,536
May	0.27	0.25	1,266,369
June	0.39	0.26	5,440,158
July	0.3	0.25	888,728
August	0.27	0.24	705,400
September	0.25	0.21	1,563,447
October	0.24	0.18	1,775,415
November	0.21	0.13	2,575,796
December	0.23	0.15	2,248,949

### ESCROWED SECURITIES

There are no common shares of the Company held in escrow. To the knowledge of the Company, no securities of the Company are subject to pooling restrictions or were subject to a contractual restriction on transfer.

### DIRECTORS AND OFFICERS

#### Name, Occupation and Security Holding

The following table sets out the name, municipality of residence, position(s) held with the Company as of the date of this AIF, principle occupations during the last five years (unless otherwise indicated) and security holdings of each director and officer of the Company. Security holdings are presented as of the date of the AIF:

<p><b><u>Edward Munden</u></b> Ontario, Canada</p> <p><b>Position with the Company:</b> Director and Chair of the board of directors <b>Director Since:</b> 2001 <b>Committees:</b> Audit Committee, Nomination, Compensation and Governance Committee <b>Common Shares Held:</b> 741,612<sup>1</sup> <b>Options Held:</b> 850,000 <b>Deferred Share Units Held:</b> 103,295 <b>Warrants Held:</b> 50,000</p>	<p><b>Principal Occupation:</b></p>	<p>Chair of the board of directors of Aquila</p>
	<p><b>Biographical Information:</b></p>	<p>Since 1989, Mr. Munden has been a Director and co-founder of a private investment company that has provided and/or arranged financing and managerial assistance to a portfolio of energy, mining and technology software companies. From 2001 to present, Mr. Munden has focused on development and financing of private oil and gas companies and of leasing and drilling projects, primarily in Texas. In 1994, Mr. Munden co-founded a Dallas based NASDAQ traded energy company engaged in the exploration, development and acquisition of oil and natural gas properties and held senior level positions including Director, Chairman, President and CEO until it was sold in December 2001. From 1999 to present, Mr. Munden has been a director of Mustang Minerals Corporation, a Toronto based TSXV traded mineral exploration company. Mr. Munden has held various positions in the energy, mining and technology industries for more than 35 years. He is a professional geological engineer and holds a Bachelor of Science degree in Engineering and a Masters of Business Administration from Queen's University in Kingston, Canada</p>
<p><b><u>Barry Hildred</u></b> Ontario, Canada</p> <p><b>Position with the Company:</b> Director / CEO <b>Director Since:</b> 2013 <b>Common Shares Held:</b> 3,128,710<sup>2</sup> <b>Restricted Share Units Held:</b> 3,416,250 <b>Options Held:</b> 9,400,728 <b>Warrants Held:</b> 75,000</p>	<p><b>Principal Occupation:</b></p>	<p>Chief Executive Officer of Aquila Principal at Level 2 Advisors</p>
	<p><b>Biographical Information:</b></p>	<p>Mr. Hildred is a senior executive and successful entrepreneur with varied business leadership experience. Mr. Hildred was founder of The Equicom Group, a company specializing in strategic financial and investor relations services for Canadian public companies. In 2007, The Equicom Group was acquired by the TMX Group, owner and operator of the Toronto Stock Exchange and TSX Venture Exchange. Mr. Hildred also serves on the Board of Directors of The Children's Aid Foundation of Canada where he is Past-Chair.</p>

<p><b><u>Peter M.D. Bradshaw</u></b> Ontario, Canada</p> <p><b>Position with the Company:</b> Director <b>Director Since:</b> 2006 <b>Committees:</b> Nomination, Compensation and Governance Committee, Technical, Health &amp; Safety Committee <b>Common Shares Held:</b> 950,000 <b>Deferred Share Units Held:</b> 103,295 <b>Options Held:</b> 650,000 <b>Warrants Held:</b> 350,000</p>	<p><b>Principal Occupation:</b></p>	<p>Chairman of FPX Nickel Corp.</p>
	<p><b>Biographical Information:</b></p>	<p>Dr. Bradshaw, P. Eng., is the co-founder and was first president of FPX Nickel Corp. and is now the Chairman. He has 40 years of international mineral exploration experience in over 30 countries with Barringer Research, Placer Dome and Orvana Minerals. Dr. Bradshaw has a good record of mine finding and has been directly involved with the discovery, evaluation and advancement of properties in Australia, Papua New Guinea and Guyana that have all gone into production. He is also the co-founder and first Chairman of the Mineral Deposit Research Unit, University of British Columbia. Dr Bradshaw is a member of the Canadian Mining Hall of Fame.</p>
<p><b><u>Stephen Fabian</u></b> London, England</p> <p><b>Position with the Company:</b> Director <b>Director Since:</b> 2014 <b>Committees:</b> Audit Committee <b>Common Shares Held:</b> 604,143<sup>3</sup> <b>Options Held:</b> 650,000 <b>Warrants Held:</b> 50,000<sup>3</sup></p>	<p><b>Principal Occupation:</b></p>	<p>Executive Chairman of Brazil Tungsten Holdings Limited</p>
	<p><b>Biographical Information:</b></p>	<p>Mr. Fabian (B.E. Min.) is Executive Chairman of Brazil Tungsten Holdings Limited and has 30 years of experience in the resources sector working as a fund manager and mining analyst with Bankers Trust Australia and County NatWest Australia. He transferred from Australia to London in 1993, where he worked with the Bank's Corporate Advisory Team before establishing Rock Capital Partners in 1996. He relocated to Brazil in 2000 and created a number of mining ventures in the gold, diamond and iron ore sectors. Mr. Fabian is also a director of Greatbanks Resources Ltd. (TSX-V: GTB) and Africa Hydrocarbons Inc. (TSX-V: NFK).</p>



<p><b><u>Andrew W. Dunn,</u></b>  <b>FCPA, FCA</b>                  Ontario, Canada</p> <p><b>Position with the Company:</b> Director  <b>Director Since:</b> 2015  <b>Committees:</b> Audit Committee  <b>Common Shares Held:</b> 505,000<sup>4</sup>  <b>Deferred Share Units Held:</b> 165,273  <b>Options Held:</b> 725,000  <b>Warrants Held:</b> 100,000</p>	<p><b>Principal Occupation:</b></p>	<p>Managing Partner of Canadian Shield Capital</p>
	<p><b>Biographical Information:</b></p>	<p>Mr. Dunn is the Managing Partner of Canadian Shield Capital, a private equity investment and advisory firm focused on building great Canadian businesses with strong management teams. Mr. Dunn spent 27 years at Deloitte, serving as Vice Chair of Deloitte Canada and Chair of its Client Cabinet, responsible for the firm’s largest client and government relationships. He played numerous roles on the firm’s Canadian and global executive teams, including Managing Partner of Tax in Canada. Mr. Dunn previously co-founded Altas Partners, serving as Chief Operating Officer and Co-Managing Partner. Mr. Dunn serves on the boards of Hatch, G.S. Dunn, Right Health and the McMichael Canadian Art Collection (where he is Chair of the board),. He is a Fellow Chartered Accountant (FCPA, FCA) and holds a Bachelor of Arts and a Masters of Accounting from the University of Waterloo.</p>
<p><b><u>Kevin Drover</u></b>                  British Columbia, Canada</p> <p><b>Position with the Company:</b> Director  <b>Director Since:</b> 2015  <b>Committees:</b> Nomination, Compensation and Governance Committee, Technical, Health &amp; Safety Committee  <b>Common Shares Held:</b> 113,650  <b>Options Held:</b> 300,000  <b>Warrants Held:</b> 56,825</p>	<p><b>Principal Occupation:</b></p>	<p>President and CEO of Aurcana Corporation</p>
	<p><b>Biographical Information:</b></p>	<p>Mr. Drover has over 40 years of experience in management, operations, and project development with mining companies developing and producing mining operations located in Canada, the U.S., Latin America, and in other foreign jurisdictions. Mr. Drover has served as the President and Chief Executive Officer and a director of Aurcana Corporation, a Canadian silver mining company, since July 2014. From November 2013 to March 2015, Mr. Drover served as Chief Executive Officer and a director of Oracle Mining Corp. (formerly, Gold Hawk Resources Inc.), a Canadian-based mining company that owns the Oracle Ridge copper mine in Arizona and previously owned the Coricancha Mine in central Peru until it sold the asset to Nyrstar in 2009. From June 2006 to June 2011, he served as Chief Operating Officer and then Chief Executive Officer of Oracle Mining Corp. Previously, Mr. Drover served as Chief Operating Officer of Glencairn Gold Corporation, where he was responsible for two gold mining operations in Latin America, and as Vice President of Operations at Kinross Gold Corporation, where he was responsible for six operating mines worldwide.</p>

<p><b><u>Ian Pritchard</u></b> Ontario, Canada</p> <p><b>Position with the Company:</b> Director <b>Director Since:</b> 2017 <b>Committees:</b> Technical, Health &amp; Safety Committee <b>Common Shares Held:</b> 131,000 <b>Deferred Share Units Held:</b> 165,273 <b>Options Held:</b> 300,000</p>	<p><b>Principal Occupation:</b></p>	<p>Chief Operating Officer of Belo Sun Mining Corp.</p>
	<p><b>Biographical Information:</b></p>	<p>Mr. Pritchard has over 30 years of experience in project and operations management in the mining industry both in North America as well as internationally. Mr. Pritchard's mining experience includes the management of pre-feasibility and feasibility studies, engineering, procurement and construction management projects. He is Chief Operating Officer of Belo Sun Mining Corp. and has held senior executive positions at various organizations worldwide.</p>
<p><b><u>Joseph de la Plante</u></b><sup>5</sup> Quebec, Canada</p> <p><b>Position with the Company:</b> Director <b>Director Since:</b> 2017 <b>Deferred Share Units Held:</b> 103,295</p>	<p><b>Principal Occupation:</b></p>	<p>Vice President Corporate Development of Osisko Gold Royalties</p>
	<p><b>Biographical Information:</b></p>	<p>Mr. de la Plante has been Vice President Corporate Development of Osisko Gold Royalties since June 2014. Prior to this, Mr. de la Plante held the position of Senior Advisor, Investment and Corporate Development of Osisko Mining Corporation, where he played a key role in the company's investor relations and corporate development.</p>
<p><b><u>Jacques Perron</u></b><sup>6</sup> Colorado USA</p> <p><b>Position with the Company:</b> Director <b>Director Since:</b> 2018 <b>Deferred Share Units Held:</b> 20,835 <b>Options Held:</b> 500,000</p>	<p><b>Principal Occupation:</b></p>	<p>Professional director (Aquila Resources Inc., Centerra Gold Inc., Victoria Gold Corp.)</p>
	<p><b>Biographical Information:</b></p>	<p>Mr. Perron has worked in the mining industry for more than 30 years and has extensive technical and operations experience. Mr. Perron also serves on the boards of Centerra Gold Inc. (TSX: CG NFK) and Victoria Gold Corp. (CVE: VIT). Most recently Mr. Perron was President, Chief Executive Officer and Director of Thompson Creek Metals Company Inc. Prior to joining Thompson Creek in 2013, Mr. Perron was President and Chief Executive Officer of St Andrew Goldfields Ltd. since 2007. Previous senior management positions included Senior Vice President of IAMGOLD Corporation from 2006 to 2007 and Vice President, Canada of Cambior Inc. from 2004 to 2006. From 1984 to 2004, Mr. Perron held a variety of increasingly senior management positions with Cameco Inc., Placer Dome Canada Limited, Breakwater Resources Ltd., Cambior Inc., JS Redpath Ltd. and Noranda Inc. Mr. Perron has also been a director of the Canadian Mineral Industry Education Foundation since 2007. Mr. Perron has a Bachelor of Science degree in Mining Engineering from l'École Polytechnique de Montréal.</p>

<p><b><u>Stephanie Malec</u></b> CPA, CA Ontario, Canada</p> <p><b>Position with the Company:</b> CFO <b>Common Shares Held:</b> 36,250 <b>Restricted Share Units Held:</b> 331,250 <b>Options Held:</b> 1,405,655</p>	<p><b>Principal Occupation:</b></p>	Chief Financial Officer of Aquila
	<p><b>Biographical Information:</b></p>	Ms. Malec has extensive financial management and reporting experience in the mining sector. She started her career at PricewaterhouseCoopers LLP, managing audits of public companies. Prior to joining Aquila, Ms. Malec previously held the role of Chief Financial Officer at Malbex Resources Inc. and Controller at both Starfield Resources Inc. and Dundee Precious Metals Inc. Ms. Malec is a Chartered Professional Accountant (CPA, CA) with the Institute of Chartered Accountants of Ontario. She is a graduate of Victoria College at the University of Toronto and holds a Bachelor of Commerce in Economics and Finance.
<p><b><u>Andrew Boushy</u></b> Ontario, Canada</p> <p><b>Position with the Company:</b> VP Project Development <b>Common Shares Held:</b> 153,750 <b>Restricted Share Units Held:</b> 953,015 <b>Options Held:</b> 2,530,990</p>	<p><b>Principal Occupation:</b></p>	Senior Vice President, Projects of Aquila
	<p><b>Biographical Information:</b></p>	Mr. Boushy brings more than 25 years of experience in project delivery, engineering design, strategic planning, contract management, construction and operational improvement to his role at Aquila. He has worked domestically and abroad in various project, construction and consulting roles. Prior to Aquila, Mr. Boushy was Vice President and General Manager at Ausenco Canada, Mining and Minerals, with regional responsibility for corporate development, project oversight and client relationship. Previous to that he held project management positions at Xstrata Nickel, Kinross Gold, Hatch Africa and the Nuclear Waste Management Organization. Mr. Boushy has a degree in Applied Science from Queen's University and is a Professional Engineer in the province of Ontario.
<p><b><u>Michael Welch</u></b> Ontario, Canada</p> <p><b>Position with the Company:</b> Chief Operating Officer <b>Restricted Share Units Held:</b> 887,500 <b>Options Held:</b> 1,676,942</p>	<p><b>Principal Occupation:</b></p>	Chief Operating Officer of Aquila
	<p><b>Biographical Information:</b></p>	With more than 30 years of experience, Mr. Welch was previously the Managing Director and President of the Board of Directors for Lundin Mining Corporation's ("Lundin") Somincor Operations, which include the Neves-Corvo copper and zinc mine in Portugal. Prior to that, he was responsible for the construction completion and start-up of operations for Lundin's Eagle Mine in Northern Michigan, U.S.A. Before joining Lundin, Michael was the Vice President of Operations for Xstrata Nickel's Raglan Operation in Quebec, Canada.

Notes:

- (1) Mr. Munden personally owns 350,000 common shares. He controls an additional 391,612 common shares through Next Capital Corp.
- (2) Mr. Hildred personally owns 479,500 common shares. He controls an additional 2,649,210 common shares through Red Roof Capital.

- (3) Mr. Fabian personally owns 20,000 common shares. He controls an additional 484,143 common shares through Thedal Holdings Limited and 100,000 common shares through Nabuco Holdings Limited. All of Mr. Fabian's warrants are controlled through Nabuco Holdings Limited.
- (4) All 505,000 common shares are held by Mr. Dunn's wife Christine L. Dunn.
- (5) Mr. de la Plante was appointed to the board of directors on November 10, 2017 as Osisko's nominee to the board of directors.
- (6) Mr. Perron was appointed to the board of directors on November 12, 2018.

Directors of the Company are elected to hold office for one year until the next annual meeting of shareholders of the Company is held.

As at December 31, 2018, the directors and executive officers of the Company, as a group, beneficially owned, directly or indirectly, or exercised control or direction over 6,364,115 common shares, representing 1.8% of the outstanding common shares of the Company.

### **Corporate Cease Trade Orders**

To the Company's knowledge, except as otherwise noted herein, none of the Company's directors or executive officers is, as at the date of this AIF, or was been within the 10 years before the date of this AIF, a director or executive officer of any company (including the Company) that, while such person was acting in that capacity:

- (a) was the subject of a cease trade order, an order similar to a cease trade order or an order that denied the relevant company access to any exemption under securities legislation, that was in effect for a period of more than 30 consecutive days;
- (b) was the subject of a cease trade order, an order similar to a cease trade order or an order that denied the relevant company access to any exemption under securities legislation, that was in effect for a period of more than 30 consecutive days and that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer.

### **Bankruptcies**

To the Company's knowledge, except as otherwise noted herein, none of the Company's directors or executive officers, or shareholders holding a sufficient number of securities of the Company to affect materially the control of the Company:

- (a) is, as at the date of this AIF, or has been within the 10 years before the date of this AIF, a director or executive officer of any company (including the Company) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or
- (b) has, within the 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, executive officer or shareholder.

Kevin Drover, a director of the Company, was a director of Oracle Ridge Mining LLC ("**Oracle Ridge**"), a subsidiary of Oracle Mining Corp. ("**Oracle**"), from February 2014 to March 2015. On December 23, 2015, Oracle announced that the Superior Court of Arizona had granted an application of its lender to appoint a receiver and manager over the assets, undertakings and property of Oracle Ridge following the breach by Oracle of a debt covenant in its secured convertible loan facility with Vincere Resource Holdings LLC. Investment Industry Regulatory Organization of

Canada halted trading of Oracle's common shares following the above noted default. Mr. Drover was also a director and officer of Oracle from November 12, 2013 to March 31, 2015.

### **Penalties or Sanctions**

To the Company's knowledge, except as otherwise noted herein, none of the Company's directors or executive officers, or shareholders holding a sufficient number of securities of the Company to affect materially the control of the Company or any of their personal holding companies, has been subject to:

- (a) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or
- (b) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

### **Conflicts of Interest**

Some of the directors and officers of the Company are or may act as directors or officers of other resource companies from time to time. Any decision made in such circumstances by any directors and officers involving the Company are made in accordance with their duties and obligations to deal fairly and in good faith with the Company and such other companies. In addition, each of the directors of the Company discloses and refrains from voting on any matter in which such director may have a conflict of interest.

Other than as discussed above or disclosed elsewhere in this AIF, management of the Company is not aware of any conflicts of interest, direct or indirect, between the Company or any of its subsidiaries and any of the Company's or its subsidiaries' directors or officers.

## **AUDIT COMMITTEE**

### **Composition of the Audit Committee**

The Company's Audit Committee is comprised of three directors, Andrew W. Dunn (Chair), Edward Munden, and Stephen Fabian, each of whom is "independent" under National Instrument 52-110 – *Audit Committees* ("NI 52-110"), "financially literate" as such term is defined in NI 52-110 and possessed the industry experience necessary to understand and analyze financial statements of the level of complexity of the Company, as well as the understanding of internal controls and procedures necessary for financial reporting. The relevant education and experience of each member of the Audit Committee is described as part of their respective biographies above under the "Directors and Officers – Name, Address, Occupation and Security Holding" sub-heading.

The Audit Committee Charter sets out its role and purpose, responsibilities and composition requirements, among other things. A copy of the Audit Committee Charter is attached as Schedule A hereto.

### **Audit Committee Oversight**

Since the commencement of the Company's most recently completed fiscal year, the board has not failed to adopt a recommendation of the Audit Committee to nominate or compensate an external auditor.

### **Pre-Approved Policies and Procedures**

The Company has not adopted specific policies and procedures for the engagement of non-audit services, other than the provisions of an Audit Committee resolution authorising the engagement of the Company's auditor for the purposes of preparing tax filings, and for the provision of assurances to third parties and related services, at the auditor's usual and customary rates. The Audit Committee will review the engagement of additional non-audit services as required.

### External Auditor Service Fees (by category)

The fees billed to the Company by its auditor for each of the financial years ended December 31, 2017 and December 31, 2018 were as follows:

Year	Audit Fees <sup>1</sup> (C\$)	Audit Related Fees <sup>2</sup> (C\$)	Tax Fees <sup>3</sup> (C\$)
2018	72,578	Nil	65,775
2017	58,553	Nil	34,920

Notes:

- (1) Aggregate fees charged for professional services rendered by the auditors for the audit of the Company's annual financial statements.
- (2) Consists of fees billed by the auditors not included in "Audit Fees" that relate to the Company's different subsidiaries for services that are reasonably related to the performance of the audit or review.
- (3) Tax fees are for professional services rendered for tax compliance, tax advice and tax planning.

### PROMOTERS

There is no person or company that has been, within the three most recently completed financial years or during the current financial year, a "promoter" of the Company or a subsidiary of the Company, as such term is defined in the *Securities Act* (Ontario).

### LEGAL PROCEEDINGS AND REGULATORY ACTIONS

#### Legal Proceedings

Except as otherwise disclosed in this AIF, as of the date of this AIF, the Company is not aware of any material or significant current or contemplated legal proceedings to which it is a party or to which any of its property is subject to.

#### Regulatory Actions

Except as otherwise disclosed in this AIF, as of the date of this AIF, the Company is not aware of any:

- (a) penalties or sanctions imposed against the Company by a court relating to securities legislation or by a securities regulatory authority during the financial year ended December 31, 2018;
- (b) other penalties or sanctions imposed by a court or regulatory body against the Company that would likely be considered important to a reasonable investor in making an investment decision; or
- (c) settlement agreements the Company has entered into with a court relating to securities legislation or with the securities regulatory authority during the financial year ended December 31, 2018.

### INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Other than as set forth elsewhere in this AIF, none of the following persons or companies has any material interest, direct or indirect, in any transaction within the three most recently completed financial years or during the current financial year that has materially affected or is reasonably expected to materially affect the Company or its subsidiaries:

- (a) a director or executive officer of the Company or its subsidiaries;

- (b) a person or company that beneficially owns, or controls or directs, directly or indirectly, more than ten percent (10%) of any class or series of the Company or its subsidiaries' outstanding voting securities; and
- (c) an associate or affiliate of any of the persons or companies referred to in paragraphs (a) or (b).

#### **TRANSFER AGENT AND REGISTRAR**

The Company's transfer agent and registrar is TSX Trust Company located at 100 Adelaide St. W., Suite 300, Toronto ON M5H 1S3.

#### **MATERIAL CONTRACTS**

The Gold Purchase Agreement and the Silver Purchase Agreement, as described under "General Development of the Business", are the only material contracts, other than contracts entered into in the ordinary course of business, which have been entered into by the Company, or any of its subsidiaries or their predecessors prior to the date of this AIF, within the most recently completed financial year or before the most recently completed financial year but is still in effect.

#### **NAMES AND INTERESTS OF EXPERTS**

The Feasibility Study Technical Report, prepared by Lycopodium, was authored by Neill Lincoln, P.Eng., David Burga, P.Geo., Jarita Barry, P.Geo., Yungang Qu, P.Eng., Eugene Puritch, P.Eng., Ken Kuchling, P.Eng., Kebreab Hable, P.Eng., David Penswick, P.Eng. and Curtis Mohns, P.Eng., each of whom is a Qualified Person and "independent" as such term is defined in NI 43-101.

The experts referred to above do not have any direct or indirect interests in the Company.

The Company's auditors are PricewaterhouseCoopers LLP, Chartered Professional Accountants, who have prepared an independent auditor's report dated February 28, 2019 in respect of the Company's consolidated financial statements as at December 31, 2018 and December 31, 2017 and for the years then ended. PricewaterhouseCoopers LLP has advised that they are independent with respect of the Company within the meaning of the Rules of Professional Accountants of Ontario CPA Code of Professional Conduct.

#### **ADDITIONAL INFORMATION**

Additional information relating to the Company may be found on SEDAR at [www.sedar.com](http://www.sedar.com), including particulars of directors' and officers' remuneration and indebtedness, principal holders of the Company's securities and securities authorized for issuance under equity compensation plans, where applicable, will be contained in the Company's information circular for its upcoming annual meeting of shareholders. Additional financial information is provided in the Company's financial statements and management's discussion and analysis for the financial year ending December 31, 2018.

**SCHEDULE A  
AUDIT COMMITTEE CHARTER**

**AQUILA RESOURCES INC.  
(the “Corporation”)**

**February 28, 2019**

**ROLE AND PURPOSE**

The purpose of this Charter is to outline the role of the Audit Committee (the “**Committee**”) and the responsibilities assigned to it by the Board of Directors (the “**Board**”) of the Corporation. The primary function of the Committee is to provide oversight and make recommendations to the Board in fulfilling its oversight responsibilities with respect to the accounting and financial reporting processes of the Corporation and reviewing the financial information to be provided to the Corporation’s shareholders and others.

The Corporation’s external auditor shall be accountable to the Committee and the Board, and the Committee shall have the authority and responsibility to nominate an external auditor, oversee the independence, qualification and performance of the external auditor and the resolution of any issues between the external auditor and management and approve the compensation of the external auditor. In the course of fulfilling its specific responsibilities hereunder, the Committee shall strive to maintain open avenues of communication between the Corporation’s external auditor and the Board.

The Committee shall have the power to conduct or authorize investigations into any matters within the Committee’s scope of responsibilities. In connection with such investigations or otherwise in the course of fulfilling its responsibilities under this Charter, the Committee shall have the authority to retain special legal, accounting or other consultants or advisors to advise it, and to authorize the payment of the fees and expenses of such consultants or advisors, and may request any officer or employee of the Corporation, the members of, or consultants or advisors to assist the Committee. The Committee shall also have the authority to direct the funding by the Corporation of ordinary administrative expenses of the Committee that are necessary or appropriate in carrying out its duties. The Committee shall have unrestricted access to personnel and information, and any resources necessary to carry out its responsibilities. In this regard, the Committee may direct internal audit personnel to particular areas for examination.

The Audit Committee should primarily fulfill these responsibilities by carrying out the activities enumerated in this Charter. However, it is not the duty of the Committee to prepare financial statements, to plan or conduct audits, to determine whether the financial statements are complete and accurate and are in accordance with International Financial Reporting Standards (“**IFRS**”), as applicable, to conduct investigations, or to assure compliance with laws and regulations or the Corporation’s internal policies, procedures and controls, as these are the responsibility of management and in certain cases the external auditor, as the case may be.

**LIMITATION ON COMMITTEE’S DUTIES**

In contributing to the Committee’s discharge of its duties under this Charter, each member of the Audit Committee shall be obliged only to exercise the care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances. Nothing in this Charter is intended to be, or may be construed as, imposing on any member of the Committee a standard of care or diligence that is in any way more onerous or extensive than the standard to which the directors are subject.

Members of the Committee are entitled to rely, absent actual knowledge to the contrary, on (i) the integrity of the persons and organizations from whom they receive information, (ii) the accuracy and completeness of the information provided, (iii) representations made by management, (iv) financial statements of the Corporation represented to them by a member of management or in a written report of the external auditors to present fairly the financial position of the Corporation in accordance with IFRS, and (v) any report of a lawyer, accountant, engineer, appraiser or other person whose profession lends credibility to a statement made by any such person.



## COMPOSITION OF THE COMMITTEE AND MEETINGS

1. The Committee must be constituted as required under National Instrument 52-110, as it may be amended or replaced from time to time (“**NI 52-110**”).
2. All members of the Committee must (except to the extent permitted by NI 52-110) be financially literate (which is defined as the ability to read and understand a set of financial statements that present a breadth and level of complexity of the issues that can reasonably be expected to be raised by the Corporation’s financial statements).
3. At least one member of the Committee shall have accounting or related financial experience as determined in accordance with applicable securities laws and stock exchange or quotation system rules (collectively, the “**Regulatory Requirements**”), which must involve: (1) an understanding of the accounting principles used by the Corporation to prepare its financial statements; (2) the ability to assess the general application of such accounting principles in connection with the accounting for estimates, accruals and reserves; (3) experience in the preparation, auditing, analyzing or evaluating financial statements that present a breadth and complexity of issues that are generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the Corporation’s financial statements, or experience actively supervising one or more persons engaged in such activities; (4) an understanding of internal controls and procedures for financial reporting; and (5) an understanding of audit committee functions.
4. Each member of the Committee shall (except to the extent permitted by NI 52-110) be independent (as defined by NI 52-110) and free from any relationship that would interfere with the exercise of his or her independent judgment.
5. Any member may be removed or replaced at any time by the Board and shall, in any event, cease to be a member of the Committee upon ceasing to be a member of the Board. Where a vacancy occurs at any time in the membership of the Committee, it may be filled by election from among the Board at any regular or special meeting. If an whenever a vacancy shall exist on the Committee, the remaining members may exercise all of its powers so long as a quorum remains.
6. New members will participate in such training and orientation as may be deemed by the Board to be necessary or appropriate in the circumstances.
7. The Committee shall meet at least quarterly or more frequently as circumstances require. The Committee should meet within 45 days following the end of the Corporation’s first three financial quarters and within 90 days following the end of the Corporation’s fiscal year.
8. The Board shall appoint a Chair of the Committee. If the Chair of the Committee is not present at any meeting of the Committee, one of the other members of the Committee present at the meeting shall be chosen to preside by a majority of the members of the Committee present at such meeting.
9. At any meeting of the Committee, a quorum will be not less than a majority of its members.
10. The Committee shall have the right to determine who shall, and who shall not, be present at any time during a meeting of the Committee. The Chair of the Committee may ask members of management or others to attend meetings and provide pertinent information as necessary. For purposes of performing their duties, members of the Committee shall have full access to all corporate information and any other information deemed appropriate by them, and shall be permitted to discuss such information and any other matters relating to the financial position of the Corporation with senior employees, officers and the external auditor or the Corporation, and others as they consider appropriate.
11. The Committee shall also meet separately at least once a year with the Corporation’s management and external auditors. In addition, the Committee or the Chair should meet with management quarterly in connection with the Corporation’s interim financial statements.

12. The Board shall be kept informed of the Committee's activities by a report from the Chair of the Committee following each Committee meeting.
13. The Committee shall keep minutes of each meeting of the Committee. A copy of the minutes shall be provided to each Committee member.
14. Meetings of the Committee shall be held from time to time and at such place as any member of the Committee shall determine upon reasonable notice to each of its members, which shall not be less than 48 hours. The notice period may be waived by all members of the Committee. Each of the Chair of the Board and the external auditor, and the President, the Chief Executive Officer, the Chief Financial Officer or the Secretary of the Corporation, shall be entitled to request that any member of the Committee call a meeting.
15. The Committee shall determine any desired agenda items.

### **RESPONSIBILITIES OF THE COMMITTEE**

The Audit Committee's responsibilities shall include:

#### Financial Statements and Other Financial Disclosure

1. Discuss and review with management major issues regarding accounting principles and financial statement presentations, including any significant changes in the selection or application of accounting principles and use of material estimates and judgement in preparing the financial statements. This will also include a review of analyses prepared by management setting forth the impact of alternative IFRS methods and their impact on the financial statements.
2. Discuss and review with management and the external auditors the Corporation's annual audited financial statements, notes to the financial statements, annual Management's Discussion and Analysis ("MD&A") and other related documents prior to their filing or distribution, including consideration of:
  - (a) Accounting principles, practices and significant management estimates and judgments.
  - (b) The external auditors' examination of the financial statements and their audit report.
  - (c) Policies and practices with respect to off-balance sheet transactions and trading and hedging activities.
3. Review any disclosures related to insider and related party transactions.
4. Based on discussions with management and the external auditors, review and formally recommend approval by the Board, as appropriate, of the Corporation's annual audited financial statements, MD&A and other significant public financial disclosure contained in the Corporation's Annual Information Form, if applicable, and Management Information Circular, prior to public disclosure.
5. Based on discussion with management and the external auditors, review and formally recommend approval by the Board, as appropriate, of the Corporation's interim unaudited condensed consolidated financial statements, MD&A and other related documents, prior to public disclosure.
6. Review and discuss with management other financial filings and disclosure, including press releases discussing earnings results or prospective earnings results, earnings guidance or pro forma or non-GAAP information, contained in any filings with the securities regulators or news releases or materials provided to analysts or rating agencies, prior to public disclosure.
7. Review and discuss with management and the external auditors where appropriate, the following financial documents and reports prior to public disclosure:

- (a) all certifications that may be made by the Chief Executive Officer and the Chief Financial Officer of the Corporation on the annual or quarterly financial results, disclosure controls and procedures and internal controls over financial reporting;
  - (b) any legal, tax or regulatory matters that may have a material impact on the Corporation's or any of its subsidiaries' operations and financial statements; and
  - (c) any financial information contained in any prospectus, information circular or other disclosure documents or regulatory filings containing financial information of the Corporation or any of its subsidiaries.
8. The Committee will ensure that adequate procedures are in place for the review of the Corporation's public disclosure of financial information extracted or derived from the Corporation's financial statements and will periodically assess the adequacy of those procedures.
9. The Committee will oversee any auditing or accounting reviews or similar procedures or investigations.
10. The Committee will review, as appropriate, any report required by the appropriate regulatory authority to be included in the annual management information circular related to the matters covered by this Charter including the disclosure of the external auditors' services and fees, Committee members and their qualifications and activities of the Committee.

#### External Auditors

11. The Committee will discuss with the external auditors and then approve the audit plan, scope, responsibilities, budget, staffing, the objectives, coordination, reliance upon management, general audit approach, the responsibilities of management and the external auditors and timing.
12. Subject to applicable Regulatory Requirements and rights of shareholders, assume direct responsibility for the appointment, compensation, retention and oversight of the performance of the external auditors (including the resolution of any disagreements between management and the external auditors regarding financial reporting) for the purpose of preparing or issuing an audit report or performing any other audit, review or test or permitted non-audit services for the Corporation. The external auditors shall report directly to the Committee.
13. Review and approve the services to be provided by the external auditors to the Corporation or any of its subsidiaries, whether audit or non-audit related, (including the fees and terms thereof), prior to the commencement of such services (with the exception of de minimus non-audit services described under applicable Regulatory Requirements which are approved by the Committee prior to the completion of the audit). The Committee may delegate to one of its members the approval of non-audit services. In such instances, the items approved will be reported to the Committee at its next scheduled meeting following such pre-approval.
14. Identify categories of non-audit services that the external auditors must not provide to the Corporation or any of its subsidiaries.
15. Review and evaluate the external auditors' engagement letter and estimated and final compensation for audit and non-audit services.
16. Meet regularly with the external auditors (independent of management), either at the request of the external auditors or on the Committee's own initiative, to consider matters that the external auditors believe should be discussed privately with the Committee.
17. Receive all material written communications between the external auditors and management including the management letter and schedule of unadjusted differences.

18. Review and discuss with the external auditors:
  - (a) Critical accounting policies and practices followed by the Corporation.
  - (b) All alternative treatments within IFRS that have been discussed with management, including the ramifications of each alternative disclosure and treatment and the treatment preferred by the external auditors.
  - (c) Other material written communications between the external auditors and management.
  - (d) Any audit problems or difficulties with management's response.
19. Consider and review with the external auditors and management:
  - (a) Significant findings during the year and management's responses thereto.
  - (b) Difficulties encountered in the course of audits, including any restrictions on the scope of their work or access to required information.
  - (c) Any disagreements between the external auditors and management during the course of the audit, including any restrictions on the scope of their work or access to required information.
  - (d) Proposed changes in accounting standards, policies or practices and the impact of such changes on the Corporation's financial reporting practices.
  - (e) Planned changes in the external auditors' audit plan.
  - (f) Significant risks or exposures identified by management or the external auditors and assess the steps management has taken to minimize such risks to the Corporation.
20. Review and discuss with the external auditors all relationships that the external auditors and their affiliates have with the Corporation and its affiliates in order to assess the external auditors' independence, including, without limitation, (i) ensuring the receipt of and reviewing a written statement from the external auditors describing all relationships that may reasonably be thought to bear on the independence of the external auditors, (ii) discussing any disclosed relationships or services that the external auditors believe may affect the objectivity and independence of the external auditors, (iii) the rotation of the partners assigned in accordance with applicable laws and professional standards, the internal quality control findings of the external auditors' firm and peer reviews, and (iv) recommending that the Board take appropriate action in response to such review to satisfy itself of the external auditors' independence.
21. Assess the performance of the external auditors and, if circumstances warrant, recommend the replacement of the external auditors.
22. Review and approve the Corporation's hiring policies regarding partners, employees and former partners and employees of the Corporation's current and former external auditors as more fully described in NI 52-110.

#### Internal Controls Over Financial Reporting

23. Review with management the effectiveness of the Corporation's system of internal controls for identifying and managing principal business risks, steps taken to address significant risks and exposures of all types, including insurance and tax compliance.
24. Meet on a periodic basis separately with the members of management responsible for internal controls.

25. Review any extraordinary or unusual transactions or payments which come to the attention of the Committee, including related party transactions between the Corporation or any of its subsidiaries and any officers, directors or associates of any officers or directors, which transactions shall be subject to Committee approval.
26. Establish procedures for the receipt and treatment of complaints regarding accounting, internal accounting controls or auditing matters, including a procedure for the confidential and anonymous submission of complaints and concerns by employees of the Corporation regarding questionable accounting or auditing matters as required under applicable Regulatory Requirements.

#### Whistleblower

27. Establish and review procedures established with respect to employees and third parties for:
  - (a) the receipt, retention and treatment of complaints received by the Corporation regarding accounting, internal accounting controls or auditing matters;
  - (b) confidential, anonymous submissions of concerns regarding questionable accounting or auditing matters; and
  - (c) dealing with the reporting, handling and taking of remedial action with respect to alleged illegal or unethical behaviour, as provided in the Corporation's Code of Business Ethics.

#### Other Matters

28. Review any legal or regulatory matters, including correspondence with regulators and governmental agencies, that may have a material impact on the Corporation's financial statements or other financial disclosure.
29. Conduct annual periodic review and assessment of the adequacy of this Charter and the functioning of the Committee and, if necessary, make recommendations to the Board as to proposed changes to this Charter.
30. The Committee is authorized to communicate directly with the external (and, if applicable, internal) auditors as it sees fit.
31. The Committee will participate in the appointment, promotion or dismissal of the Chief Financial Officer and/or Controller and help determine his or her qualifications, access and compensation.
32. At least annually, provide oversight of the Corporation's and its subsidiaries' risk management policies including investment policies and insurance coverage.
33. Nothing contained in this Charter is intended to make the Committee liable for any non-compliance by the Corporation with applicable laws or regulations.

The Committee may, in its sole discretion, delegate all or a portion of its responsibilities to subcommittee made up of members of the Committee.

Approved, February 2019