

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2022
or
 TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____
Commission file number: 001-37515

Aqua Metals, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

47-1169572
(I.R.S. Employer Identification
Number)

5370 Kietzke Lane, Suite 201.
Reno, Nevada 89511
(Address of principal executive offices)

(775) 446-4418

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act

Title of each class of stock:
Common Stock

Trading symbol
AQMS

Name of each exchange on which registered:
The Nasdaq Capital Market

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the past 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company (as defined in Rule 12b-2 of the Act):

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging Growth Company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

State the aggregate market value of voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter: \$59,250,404.

The number of shares of the registrant's common stock outstanding as of February 17, 2023 was 81,341,241.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for the registrant's 2023 Annual Meeting of Stockholders to be filed pursuant to Regulation 14A within 120 days of the registrant's year ended December 31, 2022 are incorporated herein by reference into Part III of this Annual Report on Form 10-K.

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CAUTIONARY NOTICE

This annual report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Those forward-looking statements include our expectations, beliefs, intentions and strategies regarding the future. Such forward-looking statements relate to, among other things,

- our ability to have our Aqua Refining solutions gain market acceptance;
- our intentions, expectations and beliefs regarding anticipated growth, market penetration and trends in our business;
- the ability to maximize selling value from licensing our technology and selling our equipment to recyclers of lead-acid batteries, or LABs;
- the timing and success of our plan of commercialization;
- our ability to demonstrate the operation of our AquaRefining process on a commercial scale;
- our ability to successfully apply our AquaRefining technology to the recycling of lithium-ion batteries;
- the effects of market conditions on our stock price and operating results;
- our ability to maintain our competitive technological advantages against competitors in our industry;
- our ability to have our Aqua Refining solutions gain market acceptance;
- our ability to maintain, protect and enhance our intellectual property;
- the effects of increased competition in our market and our ability to compete effectively;
- costs associated with defending intellectual property infringement and other claims;
- our expectations concerning our relationships with suppliers, partners and other third parties; and
- our ability to comply with evolving legal standards and regulations, particularly concerning requirements for being a public company and environmental regulations.

These and other factors that may affect our financial results are discussed more fully in “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included in this report. Market data used throughout this report is based on published third party reports or the good faith estimates of management, which estimates are presumably based upon their review of internal surveys, independent industry publications and other publicly available information. Although we believe that such sources are reliable, we do not guarantee the accuracy or completeness of this information, and we have not independently verified such information. We caution readers not to place undue reliance on any forward-looking statements. We do not undertake, and specifically disclaim any obligation, to update or revise such statements to reflect new circumstances or unanticipated events as they occur, and we urge readers to review and consider disclosures we make in this and other reports that discuss factors germane to our business. See in particular our reports on Forms 10-K, 10-Q, and 8-K subsequently filed from time to time with the Securities and Exchange Commission.

PART I

Item 1. Business

Background

We were formed as a Delaware corporation on June 20, 2014, for the purpose of engaging in the business of recycling metals through a novel, proprietary and patent-pending process that we developed and named “AquaRefining.” In 2015, Aqua Metals developed a breakthrough metal recycling technology that utilizes a clean, closed-loop process that can produce high-purity metal. We believe this innovative approach can deliver raw materials back into the manufacturing supply chain, while reducing emissions and toxic byproducts and creating a safer work environment. In particular, the modular AquaRefining systems have already demonstrated the ability to recover critical minerals from both lead acid batteries and lithium-ion batteries and can reduce the cost and environmental impact of battery recycling.

In 2017, Aqua Metals initially applied this breakthrough technology in the lead acid battery (LAB) recycling industry, building its first integrated recycling system for breaking LAB and recovering pure metal from the resulting scrap. In 2018, we commenced sale of finished products of AquaRefined lead to market in the form of either two tonne blocks or lead ingots for battery manufacturing. In 2019, we operated our demonstration AquaRefinery at commercial quantity production levels and produced over 35,000 AquaRefined ingots through twenty-four hours a day, seven days a week for sustained periods of time.

On November 29, 2019, a fire occurred in the AquaRefining area of the lead recycling facility at Tahoe-Reno Industrial Center (TRIC). The fire was caused by contracting activities happening on site, and not related to the technology or process of AquaRefining. The Company and the insurance carriers agreed on a total claim of \$30.25 million which was paid in full by the carriers. Plant clean-up and repair of fire damaged areas began in 2021 and were completed in 2022.

During 2020, we engaged in the pursuit of our business strategy that is based on finding licensing opportunities within the lead battery recycling marketplace. During 2020 and 2021, we successfully iterated our lead AquaRefining ‘Aqualyzer’ through a 1.25 and a 1.5 version which tripled the throughput of the 2019 iteration that produced over 35,000 industry standard ingots in commercial production. During the third and fourth quarters of 2022, we deployed and operated the first phase of lead AquaRefining with our partner ACME Metal in Taiwan. The operation continues to successfully produce lead. The two installed Aqualyzers are producing at demonstration levels.

In February 2021, we announced our entry into the lithium-ion battery (LiB) recycling market through a key provisional patent we filed that applies the same innovative AquaRefining approach. In August 2021, we announced we had established our Innovation Center in TRIC focused on applying our proven technology to LiB recycling research and development and prototyping. Our strategic decision to apply our proven clean, closed-loop hydrometallurgical and electrochemical recycling experience to lithium-ion battery recycling is designed to meet the growing demand for critical metals driven by the global transition to electric vehicles; growth in Internet data centers; and alternative energy applications including solar, wind, and grid-scale storage.

During the first half of 2022, we announced our ability to recover copper, lithium hydroxide, nickel, and cobalt from lithium-ion battery black mass at the Company’s Innovation Center. During 2022, we built our fully-integrated pilot system, located within the Company’s Innovation Center, which is designed to allow Aqua Metals to be the first company in North America to recycle battery minerals from black mass, sell them in the U.S. and position the Company as the first LiB recycler in North America to align with the U.S. government’s goal of retaining strategic battery minerals within the domestic supply chain.

During 2022, we conducted environmental comparisons based on Argonne National Lab’s modeling of lithium battery supply chains – called EverBatt. The initial results indicate that AquaRefining is a cleaner approach to LiB recycling, producing far less CO₂ waste streams than smelting or chemical driven hydrometallurgical processes currently on the market. In December 2022, we completed equipment installation and began to operate our first-of-a-kind LiB recycling facility, utilizing electricity to recycle instead of intensive chemical processes, fossil fuels, or high-temperature furnaces. In January of 2023, Aqua Metals recovered its first metals from recycling lithium batteries using the patent-pending Li AquaRefining process, and is currently scaling operations at the Company’s pilot facility.

In February 2023, we acquired a five-acre recycling campus at TRIC. The facility is designed, when fully developed, to process up to 10,000 tonnes of lithium-ion battery material each year using our proprietary AquaRefining technology. We expect to complete development of phase one, including all equipment installation, by the end of 2023 and to commence operations at the new campus in the first quarter of 2024. We have financed the purchase of the property with a \$3 million loan from an unaffiliated mortgage lender. The loan accrues interest at a fixed annual rate of 9.50%. Interest-only payments are due monthly for the first twenty-four months and the principal and all unpaid interest is due on March 1, 2025. We have the right to prepay the loan at any time, provided that we must pay guaranteed minimum interest of \$213,750 (9-months of interest). The loan agreement includes representations, warranties, and affirmative and negative covenants that are customary of institutional loan agreements. The loan is collateralized by a first priority lien on the building and site improvements.

Unless otherwise indicated, the terms “Aqua Metals,” “Company,” “we,” “us,” and “our” refer to Aqua Metals, Inc. and its wholly owned subsidiaries.

All references in this report to “ton” or “tonne” refer to a metric ton, which is equal to approximately 2,204.6 pounds.

Overview

Aqua Metals is seeking to reinvent metal recycling with its patented and patent-pending AquaRefining™ technologies. Aqua Metals is focused on developing cleaner and safer metals recycling through innovation. We believe our Innovation Center can expand the development of breakthrough technologies for sustainable metal recycling and deliver high-value critical minerals back into the manufacturing supply chain while reducing emissions and toxic byproducts and creating much safer work environments.

Unlike smelting, AquaRefining is a low-temperature, water-based process. Aqua Metals has invested in breakthrough metals recycling methodologies that we believe are environmentally responsible, economically competitive, and will help retain critical strategic metals within the U.S. while lowering reliance on unsafe and toxic mining operations. Since 2015, Aqua Metals has developed breakthrough metal recycling technologies that utilize a clean, closed-loop process that can produce ultra-high purity metals. AquaRefining is designed to deliver raw materials back into the manufacturing supply chain, and replaces the need for polluting furnaces and hazardous chemicals with electricity-powered electroplating to recover valuable metals and materials from spent batteries with higher purity, lower emissions, and minimal waste.

Aqua Metals has demonstrated this technology in lead acid battery recycling and is currently scaling operations for its lithium-ion battery recycling pilot facility. AquaRefining for lead uses a bio-degradable aqueous solvent and a novel ambient temperature electro-chemical process to produce lead suitable for use in new battery production. Our AquaRefining process produces lead with a purity of 99.996+%, making it the purest lead ever made from a recycling technique that is in fact purer than lead made from mining processes.

We are in the process of demonstrating that Li AquaRefining (which is also electricity-based and fundamentally non-polluting) can create the highest quality and highest yields of recovered minerals from lithium-ion batteries, with lower waste streams and lower costs than alternatives. With the proven ability to recover valuable metals from lithium-ion batteries at our pilot facility in TRIC, our goal is to process commercial quantities of high-purity lithium hydroxide, nickel, cobalt, manganese dioxide, and copper in pure forms that can be sold to the general metals and superalloy markets, and can be made into battery precursor compound materials with proven processes that are already used in the battery industry.

The Company is also exploring additional novel applications of AquaRefining across metals recycling industries at our Innovation Center, including recycling emerging battery chemistries and opportunities to develop additional products for sale to customer specifications.

Our Markets

Aqua Metals' AquaRefining process produces high purity metals and alloys that can be returned into the battery manufacturing supply chain or sold into metals markets for use across industries. This combination of approaches and the broad applicability of the end products we aim to produce enables Aqua Metals to create low-emissions inputs for the battery supply chain or to help decarbonize other sectors that utilize these critical metals and superalloys – creating a more resilient and adaptable business model for the Company as a whole.

Metals Markets

Most of the minerals and metals that can be recovered in the recycling of batteries of various chemistries are also globally traded commodities. Lead, copper, cobalt, nickel, and other metals can be recovered and sold in pure metal form into these markets at the prevailing price or sold directly to a customer at a price set relative to the current market price.

For example, battery metals are globally traded metal commodities. Metals such as lead for LABs and nickel, cobalt, copper and lithium for LIBs are the essential components for the world's rechargeable batteries. These metals are globally traded primarily on the London Metals Exchange (LME), although the smaller Shanghai Metals Exchange (SHME) in China also trades these elements. Conventionally in the industry, there are two separate groupings of lead: i) primary lead which refers to lead produced at primary smelters that use mined lead concentrates (generally lead sulfide) as their major feedstock, and ii) secondary lead which refers to lead smelters utilizing LABs as their main feed source. In their pure forms, the other minerals that Aqua Metals intends to recover from spent batteries can be sold into these global markets. Unlike lead markets, recycling currently makes up a smaller portion of metals like cobalt and nickel, relying almost entirely on newly mined ore and refining to meet global demand.

As noted above, although metals are traded as a commodity on the various global exchanges, the major sales are directly between producers/traders and users (whom are typically battery manufacturers). The LME daily price is used as the benchmark in forming the basis of physical trades, forward contracts, and hedge strategies for both primary and secondary metals, in metal form. Based on market and product knowledge with buyers of metals in the U.S. and global metals markets, different grades (termed alloys) of metal are traded at a premium to the base LME price. Metal alloys, which are typically designed specifically for the customer, are also sold at a premium above the base LME, whereas byproducts (generally lower purity, compounds, or scrap) are traded at a discount to the LME as they are based on the underlying metals content and its form.

Lead Acid Batteries

Although the LAB is one of the earliest battery technologies, in terms of energy capacity deployed and installed manufacturing capacity, it still dominates the battery industry today. Historically, the largest market for LABs has been as starter batteries for vehicles. However, with the increasing electrical load on modern vehicles and the adoption of additional “Stop-Start” conventional 12V “starter batteries”, LABs are evolving into more capable and higher value products. At the same time, large new markets such as Cell Tower, Data Center and Industrial back-up are adding to demand. Consequently, existing LAB production facilities are being expanded and new facilities are being built.

According to Grand View Research, annual lead acid battery sales are expected to nearly double to \$84 billion by 2025, driving demand for lead. Similar prospects for healthy growth in the lead industry continue to be published and support continued growth in demand for lead for at least the next 20 years. We believe that grid storage and other energy storage applications linked to renewable energy (solar and wind) will also generate increased demand for LABs, where low cost, safety and reliability will make them attractive options.

The increase in LAB manufacturing in general and particularly in China, India, and Southeast Asia, has increased demand for lead, putting pressure on global recycling networks to meet this demand. At present, we believe that much of the LAB recycling performed outside of the U.S., Canada, the EU, Japan, and Australia is carried out in outdated facilities with poor environmental standards and insufficient enforcement. China, India, Pakistan, and South America appear to be moving toward tougher regulation and enforcement. We believe that this will drive a demand in foreign markets for less polluting LAB recycling processes.

The Lithium Battery Market

According to our sources, including Goldman Sachs, the global lithium-ion battery market was assessed at approximately USD \$9 billion in 2020 and is expected to grow at a compound annual growth rate (CAGR) of 19.0% from 2020 to 2028. The growth of the market is being driven by the growing demand for the lithium-ion battery in Electric Vehicles (EVs) and grid storage which offers lightweight high-energy density solutions. The market is also being influenced by increased registration of EVs and a reduction in the price of the lithium-ion battery. Costs have been driven down a long way since 2010, when battery prices were \$1,100/kWh, representing a 90% drop over ten years to about \$110/kWh today. Rechargeable battery technologies are becoming key to moving from a fossil-fuel driven economy to an electrified world powered by renewable energy that can be stored.

More than 15 million tons of lithium-ion batteries are expected to retire between now and 2030. All major car manufacturers are working on providing electric vehicles and some are moving most of the future production to electric only vehicles.

Lithium Batteries

EV batteries are powered by a battery pack made up of individual cells. Each cell has 4 components: the cathode, anode, separator, and electrolyte. Lithium-ion batteries use different raw materials for each of the components. The most common material used for the anode is graphite. The most widely used metals for the cathode is metal oxides that are combinations of lithium, cobalt, nickel, manganese, and aluminum. The electrolyte is generally made using acidic salts and solvents such as sulfuric acid and there are also solid-state silicon based alternatives on the horizon. The separator is usually created using a porous, polyolefin material like polyethylene or polypropylene.

Lithium-ion battery recycling is the method of taking EV batteries and splitting it into its components, ultimately into the original raw materials (lithium, nickel, cobalt, etc.) that can be reused in new batteries. While making lithium-ion batteries for EVs is important to address climate change, the batteries themselves are harmful to the environment if left in landfills or burned. Currently, 5-7% of lithium-ion batteries are recycled and that must get close to 100% both to avoid environmental issues and to recapture the critical minerals in those spent batteries to feed the massive demand growth curve. Battery recycling helps address this problem, but current pyro-based battery recycling technology (smelting) also creates harmful emissions, potentially creating new climate problems faster than they are being solved. There are alternative hydro-based technologies being attempted but they are not yet proven and rely on older methodologies that are known to create significant waste streams, potentially with more waste than product recovered, which have their own negative environmental and economic impacts.

AquaRefining Process

We developed AquaRefining to be a cleaner and modular alternative to smelting. Our process has two key elements, both of which are integral to our issued patents and pending-patent applications. The first is our use of proprietary, non-toxic solvents that dissolves metal compounds. The second is a proprietary electro-chemical process and our modular Aqualyzer cells that selectively target each critical element and converts the dissolved metal compounds into high purity metals and/or salts.

The AquaRefining process begins with the processing of crushed used batteries either in the form of paste (for LAB) or, black mass (for LIB). The active materials are first processed to remove sulfur and then dissolved in our solvent. Metals are plated from the solvent using our patented and patent-pending process allowing the solvent to be reused.

We have demonstrated at bench scale and begun to demonstrate in our pilot facility that our lithium battery AquaRefining process can generate cobalt, lithium hydroxide, copper, nickel, and manganese dioxide from lithium-ion battery black mass. A significant benefit of our AquaRefining process is that it can produce higher yields of higher purity thus higher value product than that derived from primary smelters with product from secondary sources.

Another significant benefit of our process is that we designed our AquaRefining equipment to be manufactured on a purpose-built production line in standard sized Aqualyzers. This is not possible with the smelting process, as smelters need to be constructed on site. This gives us the ability to provide AquaRefining systems with varying capacities to meet the specific needs of potential customers and suppliers. We have also developed an integrated software and portal called PureMetrics that keeps track of production and key operating metrics.

Recycling is subject to a variety of domestic and international regulations related to hazardous materials, emissions, employee safety and other matters. While our operations will be subject to these regulations, we believe that one of our potential advantages will be our ability to conduct battery recycling operations with less regulatory cost and burden than smelting operators due to the nature of our process. One of our key initiatives is and will continue to be, to educate regulators and the public as to the environmental benefits of AquaRefining. We believe that we have the potential to develop a business model that offers the opportunity to conduct, in an environmentally friendly manner, an important recycling activity that historically has been conducted in an often highly polluting manner.

Our Business Model

Aqua Metals is engaged in the business of applying its commercialized clean, water-based recycling technology principles to develop the clean and cost-efficient recycling solutions for both lead and lithium-ion (“Li”) batteries. Our recycling process is a patented hydro- and electrometallurgical technology that is a novel, proprietary and patented process we developed and named AquaRefining. AquaRefining is a low-emissions, closed-loop recycling technology that replaces polluting furnaces and hazardous chemicals with electricity-powered electroplating to recover valuable metals and materials from spent batteries with higher purity, lower emissions, and with minimal waste. The “Aqualyzers” cleanly generate ultra-pure metal one atom at a time, closing the sustainability loop for the rapidly growing energy storage economy.

Our process was originally designed for lead recycling. Lead is a globally traded commodity with a worldwide market value in excess of \$20 billion. We believe our suite of patented and patent pending AquaRefining technologies will allow the lead-acid battery industry to simultaneously improve the environmental impact of lead recycling and scale recycling production to meet demand. Furthermore, our AquaRefining technologies result in high purity lead. We offer technology licensing and related services to lead recyclers across the globe for lead recycling.

We are also applying our commercialized clean, water-based recycling technology principles with the goal of developing the cleanest and most cost-efficient recycling solution for lithium-ion batteries. We believe our process has the potential to produce higher quality products at a lower operating cost without the damaging effects of furnaces and greenhouse emissions. Aqua Metals estimates the total addressable market for lithium-ion battery recycling will be approximately \$9 billion by 2025 and grow to exceed lead battery recycling by the end of the decade. Unlike the mature lead recycling market, the deployed lithium-ion battery recycling infrastructure to serve market growth does not exist today.

Our business strategy is based on the pursuit of building and operating Li AquaRefining recycling capacity to meet the growing demand for critical metals in lithium-ion batteries driven by innovations in automobile batteries, growth in internet data centers, and alternative energy applications, including solar, wind, and grid-scale storage. We are also continuing to pursue equipment supply and licensing opportunities within the lead acid battery recycling marketplace.

We are in the process of demonstrating that Li AquaRefining, which is fundamentally non-polluting, can create the highest quality and highest yields of recovered minerals from lithium-ion batteries with lower waste streams and lower costs than existing alternatives. We have already demonstrated at our pilot facility our ability to recover key valuable minerals in lithium-ion batteries, such as lithium hydroxide, copper, nickel, cobalt, and other compounds in 2022. Our goal is to process commercial quantities of nickel, cobalt, and copper in a pure metal form that can be sold to the general metals and superalloy markets and can be made into battery precursor compound materials with known processes already used in the mining industry. We have installed, commissioned, and began to operate the first Li AquaRefining pilot plant at the end of 2022, scaling towards a commercial demonstration operation through 2023. The location for the pilot demonstration quantity is currently the Innovation Center with expansion to happen at our new 5-acre recycling campus to commercial quantities to ~10,000 tonnes / year or more of production starting in 2024, which would be enough material to build ~100,000 average EVs or ~400,000 average home energy storage systems. At today’s metals prices, this capacity could also generate \$200,000,000 plus of revenues for the company.

Our focus for the lead market is providing equipment and licensing of our lead acid battery recycling technologies in an enabler model which allows us to work with anyone in the industry globally and address the entire marketplace. Our focus for the lithium market includes operating our first-of-a-kind lithium battery recycling facility, utilizing electricity to recycle instead of intensive chemical processes, fossil fuels, or high-temperature furnaces. We are also exploring partnership and/or joint venture agreements, particularly as our Li AquaRefining matures through 2023 and into 2024. We believe that Aqua Metals is in a position to become one of the few critical minerals recovery players for which our environmental and economic value proposition should generate both great commercial wins and potentially government grants to accelerate our credibility and progress.

The market for lead and other lithium-ion batteries are global in scale but local in nature and execution, with large differences in local regulation, custom and practice, and access to transportation and electricity costs. In some regions, it is highly regulated, and in others it is not. Consequently, we are evolving our business model to commercialize our technology optimally across multiple locations.

Competition

At the present time, our primary competition in the production of lead comes from operators of existing smelters and other parties heavily invested in the existing supply chain for smelting. Our approach to this competition is to make AquaRefining available for the conversion of existing smelter-based facilities, retrofits, and new construction. However, it is prudent to assume that outside of our strategic relationships, a conversion to AquaRefining may be resisted by some of the incumbent lead producers.

Our development of recycling technology for lithium-ion batteries is a unique approach to extracting the high-value metals compared to the array of other potential solutions under development. Currently, smelting is the only commercially proven process for recycling lithium-ion batteries. The smelting process utilizes multiple high emissions steps with low yields to produce battery ready materials. Over the next decade and beyond, when the volume of used batteries becomes significant, smelting will likely not be a viable solution due to the negative environmental impact and likelihood of regulatory restrictions on emissions. The other technologies currently under development utilize a predominately hydrometallurgical approach that consumes significant amounts of chemicals to extract the metals resulting in high cost and excessive waste streams. Our approach is a hybrid of hydrometallurgical and electrometallurgical processes like the process we have commercialized for lead, we call it “Li AquaRefining.” We believe, and our lab scale and then bench scale and now pilot scale R&D supports, that Li AquaRefining requires less chemicals, produces less waste streams, and creates higher purity products at a lower cost as compared to both smelting and standard hydrometallurgy.

The lithium-ion battery recycling market is significantly different from that of the lead recycling market in that it is a nascent industry. With no predominant technology to displace, our goal is to enable new and existing recyclers across the globe with Li AquaRefining as a best-in-class solution for meeting the supply chain demands of the lithium-ion battery industry as well as meeting the environmental needs of the planet and the corporations seeking to achieve net zero emissions.

Intellectual Property Rights

We regard the protection of our technologies and intellectual property rights as an important element of our business operations and crucial to our success. We endeavor to generate and protect our intellectual property assets through a series of patents, trademarks, internal and external policy and procedures and contractual provisions.

Patent Portfolio

Currently, we have secured 9 US patents, 91 international patents, and 2 allowances (international). In addition to the US patents, we have international patents/allowances in the African Regional Intellectual Property Organization, African Intellectual Property Organization, Australia, Brazil, Canada, Chile, China, the Eurasian Patent Organization, European Union, Honduras, India, Indonesia, Japan, Malaysia, Mexico, Peru, South Korea, South Africa, Turkey, Ukraine, and Vietnam. We also have 50 US and foreign patent applications pending with patent applications pending in 21 additional non-US jurisdictions across ten distinct patent applications relating to certain elements of the technology underlying our AquaRefining process and related apparatus and chemical formulations. The claims of the granted patents substantially address the same subject matter and are drawn to various aspects of processing lead materials using an aqua refining process. Differences in the claim number and scope are due to local rules and practice.

We intend to continue to prepare and file domestic and foreign patent applications covering expanding aspects and applications of our technology, as circumstances warrant.

There can be no assurance that any patents will issue from any of our current or any future applications. Also, any patents that may issue may not survive a legal challenge to their scope, validity, or enforceability, or provide significant protection for us. Competitors may work around our patents, so they are not infringing. Our patent portfolio and our existing policy and procedures safeguarding our trade secrets nonetheless may face challenges so that our competitors can copy our AquaRefining process.

Trademark Portfolio

We have filed for trademark registration in the US and foreign countries for the following trademarks:

- AQUA METALS (US and 14 foreign countries)
- SQUAREFINING (US and 10 foreign countries)
- AQMS (US only)
- AQUAFIT (US only)
- SQUAREFINERY (9 foreign countries)

Trade Secrets and Contract Protection

We have developed our internal policy and procedures in safeguarding our trade secrets and proprietary information. Our procedures generally require our employees, consultants, and advisors to enter into confidentiality agreements. These agreements provide that all confidential information developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except under specific circumstances. In the case of our employees, the agreements provide that all of the technology that is conceived by the individual during the course of employment is our exclusive property. The development of our technology and many of our processes are dependent upon the knowledge, experience, and skills of key scientific and technical personnel.

Government Regulation

Our operations and the operations of our licensees in the United States will be subject to the federal, state, and local environmental, health and safety laws applicable to the reclamation of LABs and lithium based batteries. While the reclamation process itself is generally not subject to federal permitting requirements, depending on how any particular operation is structured, our facilities and the facilities of our licensees may have to obtain environmental permits or approvals from federal, state or local regulators to operate, including permits or regulatory approvals related to air emissions, water discharges, waste management, and the storage of batteries on-site should that become necessary. We may face opposition from local residents or public interest groups to the installation and operation of our or our licensee's facilities. Failure to secure (or significant delays in securing) the necessary approvals could prevent us from pursuing some of our planned operations and adversely affect our business, financial results, and growth prospects.

In addition to permitting requirements, our operations and the operations of our licensees are subject to environmental health, safety and transportation laws and regulations that govern the management of and exposure to hazardous materials such as the lead, acids, and other metals involved in reclamation. These include hazard communication and other occupational safety requirements for employees, which may mandate industrial hygiene monitoring of employees for potential exposure to lead. Failure to comply with these requirements could subject our business to significant penalties (civil or criminal) and other sanctions that could adversely affect our business. Changes to these regulatory requirements in the future could also increase our costs, require changes in or cessation of certain activities, and adversely affect the business.

The nature of our operations and the operations of our licensees involves risks, including the potential for exposure to hazardous materials such as lead, that could result in personal injury and property damage claims from third parties, including employees and neighbors, which claims could result in significant costs or other environmental liability. Our operations and the operations of our licensees also pose a risk of releases of hazardous substances, such as lead, acids, and other metals related to lithium batteries into the environment, which can result in liabilities for the removal or remediation of such hazardous substances from the properties at which they have been released, liabilities which can be imposed regardless of fault, and our business could be held liable for the entire cost of cleanup even if we were only partially responsible. Like any manufacturer, we and our licensees are also subject to the possibility that we may receive notices of potential liability in connection with materials that were sent to third-party recycling, treatment, and/or disposal facilities under the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), and comparable state statutes, which impose liability for investigation and remediation of contamination without regard to fault or the legality of the conduct that contributed to the contamination, and for damages to natural resources. Liability under CERCLA is retroactive, and, under certain circumstances, liability for the entire cost of a cleanup can be imposed on any responsible party.

As our business expands outside of the United States, our licensed operations will be subject to the environmental, health and safety laws of the countries where we do business, including permitting and compliance requirements that address the similar risks as do the laws in the United States, as well as international legal requirements such as those applicable to the transportation of hazardous materials. Depending on the country or region, these laws could be as stringent as those in the US, or they could be less stringent or not as strictly enforced. In some countries in which we are interested in expanding our business, such as South America, Taiwan and China, the relevant environmental regulatory and enforcement frameworks are in flux and subject to change. Therefore, while compliance with these requirements will cause our business to incur costs, and failure to comply with these requirements could adversely affect our business, it is difficult to evaluate such potential costs or adverse impacts until such time as we decide to initiate operations in particular countries outside the United States.

Employees

As of the date of this report, we employ 30 people on a full-time basis. None of our employees are represented by a labor union.

Financial and Segment Information

We operate our business as a single segment, as defined by generally accepted accounting principles. Our financial information is included in the consolidated financial statements and the related notes.

Available Information

Our website is located at www.aquametals.com and our investor relations website is located at <https://ir.aquametals.com/>. Copies of our Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Reports on Form 8-K, and amendments to these reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, are available, free of charge, on our investor relations website as soon as reasonably practicable after we file such material electronically with or furnish it to the Securities and Exchange Commission, or the SEC. The SEC also maintains a website that contains our SEC filings. The address of the site is www.sec.gov. Further, a copy of this Annual Report on Form 10-K is located at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Information on the operation of the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330. The contents of our website are not intended to be incorporated by reference into this Annual Report on Form 10-K or in any other report or document we file with the SEC, and any references to our websites are intended to be inactive textual references only.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. Before purchasing our common stock, you should read and consider carefully the following risk factors as well as all other information contained in this report, including our consolidated financial statements and the related notes. Each of these risk factors, either alone or taken together, could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our common stock. There may be additional risks that we do not presently know of or that we currently believe are immaterial, which could also impair our business and financial position. If any of the events described below were to occur, our financial condition, our ability to access capital resources, our results of operations and/or our future growth prospects could be materially and adversely affected and the market price of our common stock could decline. As a result, you could lose some or all of any investment you may make in our common stock.

Risks Relating to Our Business

We have a limited operating history and limited revenue producing operations and are currently undertaking a reset of our business strategy. Therefore, it is difficult for potential investors to evaluate our business. We formed our corporation in June 2014. From inception through December 31, 2022, we generated a total of \$11.7 million of revenue, all of which was derived primarily from the sale of lead compounds and plastics and, to a lesser extent, the sale of lead bullion and AquaRefined lead, and all but approximately \$285,000 of which was derived prior to the November 2019 fire at our former LAB recycling facility at TRIC. Following the TRIC fire, we chose to suspend all plant-based revenue producing operations, entered into a lease-to-buy agreement with respect to TRIC and have shifted our business model to focus exclusively on the licensing of our AquaRefining technology to partners engaged in LAB recycling. We also commenced the research and development of the application of our AquaRefining technology to the recycling of lithium-ion batteries. Based upon our success to date in recovering high value metals from lithium-ion batteries using our AquaRefining technology, we have commenced the development of a five-acre recycling campus designed to process up to 10,000 tonnes of lithium-ion battery material annually. While we intend to continue to pursue our licensing business model, the development of our lithium-ion battery recycling facility represents a significant change in our business strategy and course of operations. As of the date of this report, we have estimated that we will begin to realize revenues from lithium-ion battery recycling within the coming year, however we are unable to estimate when we expect to commence any meaningful commercial or revenue producing operations from either our licensing model or our lithium-ion battery recycling facility. Our limited operating history makes it difficult for potential investors to evaluate our technology or prospective operations and we are, for all practical purposes, an early-stage company subject to all the risks inherent in the initial organization, financing, expenditures, complications and delays in a new business, including, without limitation:

- our ability to successfully apply, and realize the expected benefits of applying, our AquaRefining technology to the plating of high value metals found in lithium-ion batteries, including cobalt, nickel, and copper;
- the timing and success of our plan of commercialization and the fact that we have not entered into a commercial license for our AquaRefining technology and only have recently commenced the development of our lithium-ion recycling facility;
- our ability to successfully develop our proposed lithium-ion recycling facility;
- our ability to demonstrate that our AquaRefining technology can recycle either LABs or lithium-ion batteries on a commercial scale; and
- our ability to license our AquaRefining process and sell our AquaRefining equipment to ACME Metal Enterprise Co., Ltd and other recyclers of LABs and lithium-ion batteries.

Investors should evaluate an investment in us in light of the uncertainties encountered by developing companies in a competitive environment. There can be no assurance that our efforts will be successful or that we will ultimately be able to attain profitability.

We recently commenced the development of a lithium-ion recycling facility, however we are in the early stages of developing the facility and there can be no assurance that we will be able to successfully develop the facility or, if we do, realize the expected benefits of the facility. In January 2023, we announced our plans to conduct the phased development of a five-acre recycling campus in the Tahoe-Reno Industrial Center, or TRIC, in McCarran, Nevada. The facility is designed, when fully developed, to process up to 10,000 tonnes of lithium-ion battery material each year using our proprietary AquaRefining technology. As of the date of this report, we entered into an agreement to acquire the five-acre site, plus the existing 21,000 square foot building, and have obtained a non-binding letter of intent with a mortgage lender that we have worked with in the past to acquire the necessary financing for the property purchase. Subsequent to year end, we closed on the acquisition financing and the property was purchased on February 1, 2023. However, we have no agreements, understandings or arrangements at this time for our acquisition of the financing required to build out phase one and there can be no assurance we will be able to acquire such financing in a timely manner, or at all. Subject to our receipt of development financing on a timely basis, we expect to complete development of phase one, including all equipment installation, by the end of 2023 and to commence operations at the new campus in the first quarter of 2024. However, there can be no assurance we will be able to do so.

We have initiated the research and development of the application of our AquaRefining technology to the recycling and recovery of lithium-ion batteries, however there can be no assurance that our efforts will be successful. In September 2021, we announced the establishment of our Innovation Center, in McCarran, Nevada, focused on applying our AquaRefining technology to lithium-ion battery recycling research and development and prototype system activities. Earlier in 2021, we filed a provisional patent for recovering high-value metals from recycled lithium-ion batteries to complement the patents for AquaRefining. In the fourth quarter of 2022, we successfully recovered copper from spent lithium-ion batteries at production scale using our AquaRefining technology and we are currently applying our technology to the recovery of the other high value metals in lithium-ion batteries, including lithium hydroxide, nickel, cobalt, and manganese dioxide. However, we have only recently begun our efforts to recover lithium hydroxide, nickel, cobalt, and manganese dioxide from recycled lithium-ion batteries, and there can be no assurance that our efforts will be successful or that we will be able to conduct the recycling and recovery of the high value metals from lithium-ion batteries on a commercial scale.

Our business strategy includes licensing arrangements and entering into joint ventures and strategic alliances, however as of the date of this report we have no such agreements in place and there can be no assurance we will be able to do so. Failure to successfully integrate such licensing arrangements, joint ventures, or strategic alliances into our operations could adversely affect our business. We propose to commercially exploit our AquaRefining process primarily by licensing our technology to third parties and entering into joint ventures and strategic relationships with parties involved in the manufacture and recycling of LABs, and, lithium-ion batteries, including ACME Metal Enterprise Co., Ltd., among others. In July 2021, we entered into an agreement with ACME Metal Enterprise Co., Ltd to deploy and potentially license our AquaRefining equipment at ACME's LAB recycling facility in Keelung, Taiwan. The agreement provides for a phased deployment of our AquaRefining technology at ACME's Taiwan facility, the joint development of processing AquaRefined briquettes into battery ready oxide material and potentially an exclusive license of our AquaRefining technology to ACME for all of Taiwan. Although we are currently seeking to negotiate agreements with others, as of the date of this report, we have not entered into any such licensing, joint venture or strategic alliance agreements, apart from our agreement with ACME, and there can be no assurance that we will be able to do so on terms that benefit us, if at all. Our ability to enter into licensing, joint ventures and strategic relationships with third parties will depend on our ability to demonstrate the technological and commercial advantages of our AquaRefining process, of which there can be no assurance. Also, even if we are able to enter into licensing, joint venture or strategic alliance agreements, there can be no assurance that we will be able to obtain the expected benefits of any such arrangements. In addition, licensing programs, joint ventures and strategic alliances may involve significant other risks and uncertainties, insufficient revenue generation to offset liabilities assumed and expenses associated with the transaction, potential additional challenges in protecting our intellectual property, and unidentified issues not discovered in our due diligence process, such as product quality, technology issues and legal contingencies. In addition, we may be unable to effectively integrate any such programs and ventures into our operations. Our operating results could be adversely affected by any problems arising during or from any licenses, joint ventures or strategic alliances.

Our business is dependent upon our successful implementation of novel technologies and processes and there can be no assurance that we will be able to implement such technologies and processes in a manner that supports the successful commercial roll-out of our business model. While much of the technology and processes involved in battery recycling operations are widely used and proven, our AquaRefining process is largely novel and, to date, has been demonstrated on a modest scale of operations. While we have shown that our proprietary technology can produce AquaRefined lead from LABs and high value metals from lithium-ion batteries on a small scale, we have not processed either LABs or lithium-ion batteries on a commercial scale. We recently commenced the development of a five-acre recycling campus designed to process lithium-ion batteries, however there can be no assurance that we will be able to complete the development of the recycling facility or, if we are able to do so, that we will be able to successfully process lithium-ion batteries on a commercial scale. In this regard, as we developed our LAB recycling facility at TRIC during 2018 and 2019, there can be no assurance that we will not encounter unforeseen complications as we pursue our revised business model.

We will need additional financing to execute our business plan and fund operations, which additional financing may not be available on reasonable terms or at all. As of December 31, 2022, we had total cash of \$7.1 million and working capital of \$10.9 million. As of the date of this report, we believe that we may require additional capital in order to fund our current level of ongoing costs and our proposed business plan over the next 12 months as we move forward with our business strategy. We intend to acquire the necessary capital through the possible sale of certain equipment and assets at TRIC. However, there can be no assurance that we will be able to acquire proceeds from the sale of TRIC in amounts sufficient to fund the capital requirements or, if we are successful, that we will not require additional capital. If needed, we may seek funding through the sale of equity or debt financing. Funding that includes the sale of our equity may be dilutive. If such funding is not available on satisfactory terms, we may be unable to further pursue our business plan and we may be unable to continue operations, in which case you may lose your entire investment.

Our business may be adversely affected by the recent coronavirus outbreak. In December 2019, a novel strain of coronavirus was reported to have surfaced in Wuhan, China. In January 2020, this coronavirus spread to other countries, including the United States, and efforts to contain the spread of this coronavirus intensified. The outbreak and any preventative or protective actions that we or our partners and suppliers may take in respect of this coronavirus may result in a period of disruption to work in progress. Our partners' and suppliers' businesses could be disrupted, and our ongoing operations and license negotiations could be negatively affected. Any resulting financial impact cannot be reasonably estimated at this time but may materially affect our business and financial condition. The extent to which the coronavirus impacts our results will depend on future developments, which are highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of the coronavirus and the actions to contain the coronavirus or treat its impact, among others.

Our business model is new and has not been proven by us or anyone else We are engaged in the business of producing recycled lead from LABs and high value metals from lithium-ion batteries through a novel, and proven on a modest scale, technology. While the production of recycled LABs and lithium-ion batteries is an established business, to date virtually all recycled lead and high value metals have been produced by way of traditional smelting processes. To our knowledge, no one has successfully produced recycled lead or lithium-ion batteries in commercial quantities other than by way of smelting. In addition, neither we nor anyone else has ever successfully built a production line that commercially recycles LABs or lithium-ion batteries without smelting. Further, there can be no assurance that either we will be able to produce AquaRefined lead or high value metals from lithium-ion batteries in commercial quantities at a cost of production that will provide us with an adequate profit margin. The uniqueness of our AquaRefining process presents potential risks associated with the development of a business model that is untried and unproven.

Even if our licensees are successful in recycling lead or lithium-ion batteries using our processes, there can be no assurance that the AquaRefined lead or other recycled metals will meet the certification and purity requirements of the potential customers. A key component of our business plan is the production of recycled metals through our AquaRefining process. Our customers will require that our AquaRefined metals meet certain minimum purity standards and, in all likelihood, require independent assays to confirm the metal's purity. As of the date of this report, we have produced limited quantities of AquaRefined lead and in November 2018, Clarios confirmed its approval of the purity of our AquaRefined lead by providing to us official vendor approval to receive finished lead at its manufacturing facilities. However, we have not produced AquaRefined metals in significant commercial quantities and there can be no assurance that we will be able to do so or, that such metals will meet the required purity standards of our customers. Further, while we have recently commenced the application of our AquaRefining process towards the recovery of high value metals found in lithium-ion batteries, such as cobalt, nickel, lithium hydroxide, copper, and manganese dioxide, we have only recently begun to conduct research and development in the recycling of lithium-ion batteries, and there can be no assurance that our efforts will be successful or that we will be able to conduct the recycling and recovery of the high value metals from lithium-ion batteries on a commercial scale.

While we have been successful in producing AquaRefined lead in small volumes, there can be no assurance that either we or our licensees will be able to replicate the process, along with all of the expected economic advantages, on a large commercial scale either for us or our prospective licensees. Our commercial operations have primarily involved the production of lead compounds and plastics from recycled LABs, and more recently, the sale of lead bullion and AquaRefined lead. In April 2018, we commenced the limited production of cast lead bullion (mixture of lead purchased to prime the kettles and AquaRefined lead from our AquaRefining process), and in June 2018, we commenced the sale of pure AquaRefined lead in the form of two tonne blocks. While we believe that our development, testing and limited production to date has validated the concept of our AquaRefining process, the limited nature of our operations to date are not sufficient to confirm the economic returns on our production of recycled lead. Further, we have only recently commenced commercial operations in the area of recycling of lithium-ion batteries. There can be no assurance that either us or our licensees will be able to produce AquaRefined lead or high value metals from lithium-ion batteries in commercial quantities at a cost of production that will provide us and our proposed licensees with an adequate profit margin.

Our business may be negatively affected by labor issues and higher labor costs. Our ability to maintain our workforce depends on our ability to attract and retain new and existing employees. As of the date of this report, none of our employees are covered by collective bargaining agreements and we consider our labor relations to be acceptable. However, we could experience workforce dissatisfaction which could trigger bargaining issues, employment discrimination liability issues as well as wage and benefit consequences, especially during critical operation periods. We could also experience a work stoppage or other disputes which could disrupt our operations and could harm our operating results. In addition, legislation or changes in regulations could result in labor shortages and higher labor costs. There can be no assurance that we may not experience labor issues that negatively impact our operations or results of operations.

Our intellectual property rights may not be adequate to protect our business. As of the date of this report, we have secured 9 US patents, 91 international patents and 2 allowances (international) related to our AquaRefining process.

We also have further patent applications pending in the United States and numerous corresponding patent applications pending in 21 additional jurisdictions relating to certain elements of the technology underlying our AquaRefining process and related apparatus and chemical formulations. However, no assurances can be given that any patent issued, or any patents issued on our current and any future patent applications, will be sufficiently broad to adequately protect our technology. In addition, we cannot assure you that any patents issued now or in the future will not be challenged, invalidated, or circumvented.

Even patents issued to us may not stop a competitor from illegally using our patented processes and materials. In such event, we would incur substantial costs and expenses, including lost time of management in addressing and litigating, if necessary, such matters. Additionally, we rely upon a combination of trade secret laws and nondisclosure agreements with third parties and employees having access to confidential information or receiving unpatented proprietary know-how, trade secrets and technology to protect our proprietary rights and technology. These laws and agreements provide only limited protection. We can give no assurance that these measures will adequately protect us from misappropriation of proprietary information.

Our processes may infringe on the intellectual property rights of others, which could lead to costly disputes or disruptions. The applied science industry is characterized by frequent allegations of intellectual property infringement. Though we do not expect to be subject to any of these allegations, any allegation of infringement could be time consuming and expensive to defend or resolve, result in substantial diversion of management resources, cause suspension of operations or force us to enter into royalty, license, or other agreements rather than dispute the merits of such allegation. If patent holders or other holders of intellectual property initiate legal proceedings, we may be forced into protracted and costly litigation. We may not be successful in defending such litigation and may not be able to procure any required royalty or license agreements on acceptable terms or at all.

Global economic conditions could negatively affect our prospects for growth and operating results Our prospects for growth and operating results will be directly affected by the general global economic conditions of the industries in which our suppliers, partners and customer groups operate. We believe that the market price of battery metal is relatively volatile and reacts to general global economic conditions. Our business will be highly dependent on the economic and market conditions in each of the geographic areas in which we operate. These conditions affect our business by reducing the demand for LABs and LIBs and decreasing the price of lead in times of economic downturn and increasing the price of used batteries in times of increasing demand of LABs and recycled lead. There can be no assurance that global economic conditions will not negatively impact our liquidity, growth prospects and results of operations.

We are subject to the risks of conducting business outside the United States A part of our strategy involves our pursuit of growth opportunities in certain international market locations. We intend to pursue licensing or joint venture arrangements with local partners who will be primarily responsible for the day-to-day operations. Any expansion outside of the U.S. will require significant management attention and financial resources to successfully develop and operate any such facilities, including the sales, supply and support channels, and we cannot assure you that we will be successful or that our expenditures in this effort will not exceed the amount of any resulting revenues. Our international operations expose us to risks and challenges that we would otherwise not face if we conducted our business only in the United States, such as:

- increased cost of enforcing our intellectual property rights;
- diminished ability to protect our intellectual property rights;
- heightened price sensitivities from customers in emerging markets;
- our ability to establish or contract for local manufacturing, support and service functions;
- localization of our LABs and components, including translation into foreign languages and the associated expenses;
- compliance with multiple, conflicting and changing governmental laws and regulations;
- compliance with the Federal Corrupt Practices Act and other anti-corruption laws;
- foreign currency fluctuations;
- laws favoring local competitors;
- weaker legal protections of contract terms, enforcement on collection of receivables and intellectual property rights and mechanisms for enforcing those rights;
- market disruptions created by public health crises in regions outside the United States;
- difficulties in staffing and managing foreign operations, including challenges presented by relationships with workers' councils and labor unions;
- issues related to differences in cultures and practices; and
- changing regional economic, political and regulatory conditions.

U.S. government regulation and environmental, health and safety concerns may adversely affect our business Our operations and the operations of our licensees in the United States will be subject to the federal, state and local environmental, health and safety laws applicable to the reclamation of batteries including the Occupational Safety and Health Act ("OSHA") of 1970 and comparable state statutes. Our facilities and the facilities of our licensees will have to obtain environmental permits or approvals to expand, including those associated with air emissions, water discharges, and waste management and storage. We and our licensees may face opposition from local residents or public interest groups to the installation and operation of our respective facilities. In addition to permitting requirements, our operations and the operations of our licensees are subject to environmental health, safety and transportation laws and regulations that govern the management of and exposure to hazardous materials such as the acids involved in battery reclamation. These include hazard communication and other occupational safety requirements for employees, which may mandate industrial hygiene monitoring of employees for potential exposure.

We and our licensees are also subject to inspection from time to time by various federal, state and local environmental, health and safety regulatory agencies and, as a result of these inspections, we and our licensees may be cited for certain items of non-compliance. For example, in August 2018, the Nevada Occupational Safety and Health Administration, or Nevada OSHA, delivered to us a citation and notification of penalty. The citation listed a number of items related to our compliance with Nevada OSHA's Lead Standard. We reached a settlement agreement with Nevada OSHA on the amount of penalties associated with the citation. We also agreed to engage a lead compliance expert to audit our facility at TRIC for compliance with all provision of the Lead Standard and to generate a written report with findings of any noncompliance, recommended corrective actions, and a time frame to correct the findings of noncompliance. We agreed with Nevada OSHA to correct all findings of noncompliance within the time frame proposed by the lead compliance expert in their report. The lead compliance expert has been engaged, has visited the facility at TRIC and has completed the written report. We have corrected all findings of noncompliance in a timely manner.

Failure to comply with the requirements of federal, state and local environmental, health and safety laws could subject our business and the businesses of our licensees to significant penalties (civil or criminal) and other sanctions that could adversely affect our business. In addition, in the event we are unable to operate and expand our AquaRefining process and operations as safe and environmentally responsible, we and our licensees may face opposition from local governments, residents or public interest groups to the installation and operation of our facilities.

The development of new AquaRefining technology by us or our partners or licensees, and the dissemination of our AquaRefining process will depend on our ability to acquire necessary permits and approvals, of which there can be no assurance. As noted above, our AquaRefining processes will have to obtain environmental permits or approvals to operate, including those associated with air emissions, water discharges, and waste management and storage. In addition, we expect that any use of AquaRefining operations at our partner's facilities will require additional permitting and approvals. Failure to secure (or significant delays in securing) the necessary permits and approvals could prevent us and our partners and licensees from pursuing additional AquaRefining expansion, and otherwise adversely affect our business, financial results and growth prospects. Further, the loss of any necessary permit or approval could result in the closure of an AquaRefining facility and the loss of our investment associated with such facility.

Our business involves the handling of hazardous materials and we may become subject to significant fines and other liabilities in the event we mishandle those materials. The nature of our operations involves risks, including the potential for exposure to hazardous materials such as lead, that could result in personal injury and property damage claims from third parties, including employees and neighbors, which claims could result in significant costs or other environmental liability. Our operations also pose a risk of releases of hazardous substances, such as lead or acids, into the environment, which can result in liabilities for the removal or remediation of such hazardous substances from the properties at which they have been released, liabilities which can be imposed regardless of fault, and our business could be held liable for the entire cost of cleanup even if we were only partially responsible. We are also subject to the possibility that we may receive notices of potential liability in connection with materials that were sent to third-party recycling, treatment, and/or disposal facilities under the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, or CERCLA, and comparable state statutes, which impose liability for investigation and remediation of contamination without regard to fault or the legality of the conduct that contributed to the contamination, and for damages to natural resources. Liability under CERCLA is retroactive, and, under certain circumstances, liability for the entire cost of a cleanup can be imposed on any responsible party. Any such liability could result in judgments or settlements that restrict our operations in a manner that materially adversely effects our operations and could result in fines, penalties or awards that could materially impair our financial condition and even threaten our continued operation as a going concern.

We will be subject to foreign government regulation and environmental, health and safety concerns that may adversely affect our business As our business expands outside of the United States, our operations will be subject to the environmental, health and safety laws of the countries where we do business, including permitting and compliance requirements that address the similar risks as do the laws in the United States, as well as international legal requirements such as those applicable to the transportation of hazardous materials. Depending on the country or region, these laws could be as stringent as those in the U.S., or they could be less stringent or not as strictly enforced. In some countries in which we are interested in expanding our business, such as Mexico and China, the relevant environmental regulatory and enforcement frameworks are in flux and subject to change. Compliance with these requirements will cause our business to incur costs, and failure to comply with these requirements could adversely affect our business.

In the event we are unable to present and operate our AquaRefining process and operations as safe and environmentally responsible, we may face opposition from local governments, residents or public interest groups to the installation and operation of our facilities.

Risks Related to Owning Our Common Stock

The market price of our shares may be subject to fluctuation and volatility. You could lose all or part of your investment. The market price of our common stock is subject to wide fluctuations in response to various factors, some of which are beyond our control. Since January 1, 2022, the reported high and low sales prices of our common stock have ranged from \$1.59 to \$0.50 through February 17, 2023. The market price of our shares on the NASDAQ Capital Market may fluctuate as a result of a number of factors, some of which are beyond our control, including, but not limited to:

- actual or anticipated variations in our and our competitors' results of operations and financial condition;
- changes in earnings estimates or recommendations by securities analysts, if our shares are covered by analysts;
- development of technological innovations or new competitive products by others;
- regulatory developments and the decisions of regulatory authorities as to the approval or rejection of new or modified products;
- our sale or proposed sale, or the sale by our significant stockholders, of our shares or other securities in the future;
- changes in key personnel;
- success or failure of our research and development projects or those of our competitors;
- the trading volume of our shares; and
- general economic and market conditions and other factors, including factors unrelated to our operating performance.

These factors and any corresponding price fluctuations may materially and adversely affect the market price of our shares and result in substantial losses being incurred by our investors. In the past, following periods of market volatility, public company stockholders have often instituted securities class action litigation. If we were involved in securities litigation, it could impose a substantial cost upon us and divert the resources and attention of our management from our business.

If securities or industry analysts do not continue to publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline. The trading market for our common stock depends in part on the research and reports that securities or industry analysts publish about us or our business. If industry analysts cease coverage of us, the trading price for our common stock would be negatively affected. If one or more of the analysts who cover us downgrade our common stock or publish inaccurate or unfavorable research about our business, our common stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our common stock could decrease, which might cause our common stock price and trading volume to decline. In addition, independent industry analysts may provide reviews of our AquaRefining technology, as well as competitive technologies, and perception of our offerings in the marketplace may be significantly influenced by these reviews. We have no control over what these industry analysts report, and because industry analysts may influence current and potential customers, our brand could be harmed if they do not provide a positive review of our products and platform capabilities or view us as a market leader.

We may be at an increased risk of securities class action litigation Historically, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because early-stage companies have experienced significant stock price volatility in recent years. If we were to be sued, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business. In 2017, a securities class action lawsuit and shareholder derivative lawsuit were filed against us. In 2021, we were able to settle both actions through our issuance of \$500,000 of our common shares and our adoption of limited corporate governance reforms, however we incurred significant legal costs in defending both actions and our management was required to devote significant time in managing the defense of the actions.

We maintain director and officer insurance that we regard as reasonably adequate to protect us from potential claims; however, we are responsible for meeting certain deductibles under the policies and, in any event, we cannot assure you that the insurance coverage will adequately protect us from claims made. Further, the costs of insurance may increase and the availability of coverage may decrease. As a result, we may not be able to maintain our current levels of insurance at a reasonable cost, or at all, which might make it more difficult to attract qualified candidates to serve as executive officers or directors.

Future sales of substantial amounts of our common stock, or the possibility that such sales could occur, could adversely affect the market price of our common stock. We cannot predict the effect, if any, that future issuances or sales of our securities or the availability of our securities for future issuance or sale, will have on the market price of our common stock. Issuances or sales of substantial amounts of our securities, or the perception that such issuances or sales might occur, could negatively impact the market price of our common stock and the terms upon which we may obtain additional equity financing in the future.

We have not paid dividends in the past and have no plans to pay dividends. We plan to reinvest all of our earnings, to the extent we have earnings, in order to pursue our business plan and cover operating costs and to otherwise become and remain competitive. We do not plan to pay any cash dividends with respect to our securities in the foreseeable future. We cannot assure you that we would, at any time, generate sufficient surplus cash that would be available for distribution to the holders of our common stock as a dividend. Therefore, you should not expect to receive cash dividends on our common stock.

Our charter documents and Delaware law may inhibit a takeover that stockholders consider favorable. Provisions of our certificate of incorporation and bylaws and applicable provisions of Delaware law may delay or discourage transactions involving an actual or potential change in control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. The provisions in our certificate of incorporation and bylaws:

- limit who may call stockholder meetings;
- do not provide for cumulative voting rights;
- establish an advance notice procedure for stockholders' proposals to be brought before an annual meeting, including proposed nominations of persons for election to our board of directors, and
- provide that all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum.

In addition, Section 203 of the Delaware General Corporation Law may limit our ability to engage in any business combination with a person who beneficially owns 15% or more of our outstanding voting stock unless certain conditions are satisfied. This restriction lasts for a period of three years following the share acquisition. These provisions may have the effect of entrenching our management team and may deprive you of the opportunity to sell your shares to potential acquirers at a premium over prevailing prices. This potential inability to obtain a control premium could reduce the price of our common stock.

Our bylaws designate the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with the Company. Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim against us or any our directors, officers or other employees arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws, or (iv) any action asserting a claim against us or any our directors, officers or other employees governed by the internal affairs doctrine. This forum selection provision in our bylaws may limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or any of our directors, officers or other employees.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our executive offices are presently located in 4,183 square feet of class A office space in Reno, Nevada. We lease this facility at a lease rate of approximately \$11,000 per month. The lease term began in September, 2021 and expires September 30, 2024.

Our executive offices were previously located in 21,697 square feet of office and industrial space in a multi-building commercial project known as “Marina Village” located in Alameda, California. The lease term was 76 months, commencing February 1, 2016, and expiring May 31, 2022. We sublet the property with the sublease commencing on February 4, 2019 and expiring May 31, 2022. This lease was terminated in early 2022.

We have developed and lease an Innovation Center focused on applying Aqua Metals technology to lithium-ion battery recycling. We lease this facility at a lease rate of approximately \$11,000 per month. The original lease term expired on December 31, 2021 but was renewed for a three year period which commenced on January 1, 2022 and expire on December 31, 2024.

We have developed and own a 136,750 square foot LAB recycling facility on 11.73 acres of land located in TRIC, a 107,000-acre park located nine miles east of Reno, Nevada on I-80. We have entered into an Industrial Lease Agreement with LINICO Corporation, or (“LiNiCo”), dated February 15, 2021, pursuant to which we have leased the TRIC facility to LiNiCo. The lease commenced April 1, 2021 and expires on March 31, 2023. LiNiCo has agreed to a purchase price of \$15.25 million and paid a nonrefundable deposit of \$1.25 million in October 2021, and a second nonrefundable deposit of \$2 million in October 2022, per the terms of the agreement. Both nonrefundable deposits in the total of \$3.25 million will be applied towards the sale price.

In February 2023, we purchased a property located in TRIC. The property includes both the land and an existing building. The land totals approximately five acres and the building is approximately 21,000 square feet. The Company intends to redevelop the existing building and install our first commercial-scale Li AquaRefining system, with an estimated capacity of 3,000 tonnes of materials processed each year. The Company is also exploring plans to develop the remaining land on the property to expand capacity and operations.

Item 3. Legal Proceedings

We may, from time to time, be party to litigation and subject to claims incident to the ordinary course of business. As our growth continues, we may become party to an increasing number of litigation matters and claims. The outcome of litigation and claims cannot be predicted with certainty, and the resolution of any future matters could materially affect our future financial position, results of operations or cash flows. We are not party to any legal proceedings that, if determined adversely to us, would individually or taken together have a material adverse effect on our business, results of operations, financial condition or cash flows.

Item 4. Mine Safety Disclosures

Not applicable.

PART II**Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities****Market Information**

Our common stock has traded on the NASDAQ Capital Market under the symbol “AQMS.”

Holders of Record

As of February 17, 2023, there were eleven holders of record of our common stock.

Dividend Policy

We have never declared or paid cash dividends on our common stock. We presently intend to retain earnings, if any, to finance the operation and expansion of our business.

Equity Compensation Plan Information

We have adopted the Aqua Metals, Inc. 2014 Stock Incentive Plan providing for the grant of non-qualified stock options and incentive stock options to purchase shares of our common stock and for the grant of restricted and unrestricted share grants. We have reserved 2,113,637 shares of our common stock under the plan. All of our officers, directors, employees and consultants are eligible to participate under the plan. The purpose of the plan is to provide eligible participants with an opportunity to acquire an ownership interest in our company.

In 2019, our board of directors adopted the Aqua Metals, Inc. 2019 Stock Incentive Plan (the “2019 Plan”). A total of 18,500,000 shares of common stock was authorized for issuance pursuant to the 2019 Plan. The 2019 Plan provides for the following types of stock-based awards: incentive stock options; non-statutory stock options; restricted stock; and performance stock. The 2019 Plan, under which equity incentives may be granted to employees and directors under incentive and non-statutory agreements, requires that the option price may not be less than the fair value of the stock at the date the option is granted. Option awards are exercisable until their expiration, which may not exceed 10 years from the grant date.

The following table sets forth the number and weighted-average exercise price of securities to be issued upon exercise of outstanding options and warrants, and the number of securities remaining available for future issuance, under our equity compensation plan at December 31, 2022.

	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted- Average Exercise Price of Outstanding Options and Warrants	Number of Securities Remaining Available for Future Issuance Under Equity compensation Plans
Equity compensation plans approved by stockholders	6,542,204(1)	\$ 3.82	5,262,254
Equity compensation plans not approved by stockholders	846,372(2)	\$ 4.48	

(1) Includes 154,267 shares relating to outstanding options and 6,387,937 relating to restricted stock units under our stock-based compensation plans.

(2) Consists of warrants issued in connection with financing activities and 840,000 shares relating to outstanding options granted in reliance on Nasdaq Rule 5635(c)(4).

Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 6. Reserved

None.

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

General

Aqua Metals is engaged in the business of applying its commercialized clean, water-based recycling technology principles to develop the clean and cost-efficient recycling solutions for both lead and lithium-ion (“Li”) batteries. Our recycling process is a patented hydro- and electrometallurgical technology that is a novel, proprietary and patented process we developed and named AquaRefining. AquaRefining is a low-emissions, closed-loop recycling technology that replaces polluting furnaces and hazardous chemicals with electricity-powered electroplating to recover valuable metals and materials from spent batteries with higher purity, lower emissions, and with minimal waste. The modular “Aqualyzers” cleanly generate ultra-pure metal one atom at a time, closing the sustainability loop for the rapidly growing energy storage economy.

Our process was originally designed for lead recycling. Lead is a globally traded commodity with a worldwide market value in excess of \$20 billion. We are also applying our commercialized clean, water-based recycling technology principles with the goal of developing the cleanest and most cost-efficient recycling solution for lithium-ion batteries. We believe our process has the potential to produce higher quality products at a lower operating cost without the damaging effects of furnaces and greenhouse emissions. Aqua Metals estimates the total addressable market for lithium-ion battery recycling will be approximately \$9 billion by 2025 and grow to exceed lead battery recycling by the end of the decade.

In February 2021, we announced our entry into the lithium-ion battery (LiB) recycling market through a key provisional patent we filed that applies the same innovative AquaRefining approach. In August 2021, we announced we had established our Innovation Center in TRIC focused on applying our proven technology to LiB recycling research and development and prototyping. Our strategic decision to apply our proven clean, closed-loop hydrometallurgical and electrochemical recycling experience to lithium-ion battery recycling is designed to meet the growing demand for critical metals driven by the global transition to electric vehicles; growth in internet data centers; and alternative energy applications including solar, wind, and grid-scale storage.

During the first half of 2022, we announced our ability to recover copper, lithium hydroxide, nickel and cobalt from lithium-ion battery black mass at the Company’s Innovation Center. During 2022, we built our fully-integrated pilot system, located within the company’s Innovation Center, which is designed to allow Aqua Metals to be the first company in North America to recycle battery minerals from black mass and sell them in the U.S. and position the Company as the first LiB recycler in North America to align with the U.S. government’s goal of retaining strategic battery minerals within the domestic supply chain.

During 2022, we conducted environmental comparisons based on Argonne National Lab’s modeling of lithium battery supply chains – called EverBatt. The initial results indicate that AquaRefining is a cleaner approach to LiB recycling, producing far less CO₂ waste streams than the two evaluated primary processes currently on the market which include smelting and chemically driven hydrometallurgical process. In December of 2022, we completed equipment installation and began to operate our first-of-a-kind LiB recycling facility, utilizing electricity to recycle instead of intensive chemical processes, fossil fuels, or high-temperature furnaces. In January of 2023, Aqua Metals recovered its first metals from recycling lithium batteries using the patent-pending Li AquaRefining process and is currently scaling operations at the Company’s pilot facility.

In February 2023, we acquired a five-acre recycling campus at TRIC. The facility is designed, when fully developed, to process up to 10,000 tonnes of lithium-ion battery material each year using our proprietary AquaRefining technology. We expect to complete development of phase one, including all equipment installation, by the end of 2023 and to commence operations at the new campus in the first quarter of 2024. Our initial plans call for upgrading the current building to install a commercial-scale Li AquaRefining system capable of recycling 3,000 tons of lithium battery ‘black mass’ each year. We expect to complete redevelopment of the current space and finalize equipment installation this year, and to commence operations at the new campus in the first quarter of 2024. The purchase of the new property was funded with a non-dilutive loan. We also intend to finance the development of Phase One through a non-dilutive loan. The Company is currently in discussions with a provider of debt financing that has provided financing in the past.

Our focus for the lead market is providing equipment and licensing of our lead acid battery recycling technologies in an enabler model which allows us to work with anyone in the industry globally and address the entire marketplace. Our focus for the lithium market includes operating our first-of-a-kind lithium battery recycling facility, utilizing electricity to recycle instead of intensive chemical processes, fossil fuels, or high-temperature furnaces. We are also exploring partnership and/or joint ventures agreements, particularly as our Li AquaRefining matures through 2023 and into 2024. We believe that Aqua Metals is in a position to become one of the few critical minerals recovery players for which our environmental and economic value proposition should generate both great commercial wins and potentially government grants to accelerate our credibility and progress.

During the year ended December 31, 2022, we issued 6,742,069 shares of common stock pursuant to an At the Market Issuance Sales Agreement ("ATM") for net proceeds of \$6.5 million.

Results of Operations for the Fiscal Year Ended December 31, 2022 Compared to the Fiscal Year Ended December 31, 2021

During the years ended December 31, 2022 and December 31, 2021, revenue resulted from the sale of inventory consisting of lead compounds that were generated during operation of the TRIC facility prior to the November 2019 fire at our TRIC facility. During the years ended December 31, 2022 and December 31, 2021, product sales consisted of lead bullion, lead compounds and plastics that were generated through the AquaRefining process. The following table summarizes results of operations with respect to the items set forth below for the twelve months ended December 31, 2022 and 2021 together with the percentage change from the twelve months ended December 31, 2021 for those items (in thousands).

	Year ended December 31,			
	2022	2021	Favorable (Unfavorable)	% Change
Product sales	\$ 4	\$ 173	\$ (169)	(98)%
Plant operations and clean up	3,959	7,017	3,058	44%
Research and development cost	1,813	933	(880)	(94)%
General and administrative expense	9,815	9,688	(127)	(1)%
Total operating expense	\$ 15,587	\$ 17,638	\$ 2,051	12%

Except for nominal sales of inventory, we did not generate revenue during the years ended December 31, 2022 and December 31, 2021. Plant activity during 2022 consisted of testing our lithium-ion battery recycling technology and developing the prototype system activities.

Plant operations and clean-up includes supplies and related costs, salaries and benefits, consulting and outside services costs, depreciation and amortization costs, insurance, travel and overhead costs. Plant operations and clean up decreased approximately 44% for the twelve months ended December 31, 2022, as compared to the twelve months ended December 31, 2021 as a result of plant clean-up and repair of fire damaged areas that began in 2021 and were completed earlier in 2022.

Research and development cost included expenditures related to the improvement of our lithium-ion battery recycling technology. During the twelve months ended December 31, 2022, research and development costs increased approximately 94% from the comparable period in 2021. Research and development is a key part of our business strategy and includes our focus on improving the Company's proprietary technology for LAB recycling and advancing our research related to the application of AquaRefining to recycling lithium-ion batteries.

General and administrative expense increased approximately 1% for the twelve months ended December 31, 2022 compared to the twelve months ended December 31, 2021. Increases in general and administrative expenses included changes in payroll and payroll related expenses, in addition to an increase in travel expenses.

The following table summarizes our other income and interest expense for the years ended December 31, 2022 and December 31, 2021 together with the percentage change in those items (in thousands).

	Year ended December 31,			
	2022	2021	Favorable (Unfavorable)	% Change
Other (expense) income				
Insurance proceeds net of related expenses	\$ —	\$ 4,794	\$ (4,794)	(100)%
Impairment expense	\$ (579)	\$ (545)	\$ (34)	(6)%
PPP loan forgiveness	\$ —	\$ 332	\$ (332)	100%
Gain (loss) on disposal of property and equipment	\$ 596	\$ (5,665)	\$ 6,261	111%
Interest expense	\$ (125)	\$ (21)	\$ (104)	495%
Interest and other income	\$ 262	\$ 379	\$ (117)	(31)%

Insurance proceeds net of related expenses resulted from collection and payment activity that began in 2020 following the November 2019 fire. The change from period to period is due to the timing of insurance payments and associated fire clean-up expenses. The Company does not expect any additional insurance payments related to this matter. Both of the Company's two PPP loans totaling \$332,000 received in May 2020 have been forgiven.

For the year ended December 31, 2022, we recognized a write down to fair market value of our assets held for sale of approximately \$0.6 million. We recorded a gain of \$0.7 million that resulted from the write-off of plant commitment accrued expenses and \$0.1 million gain that resulted from the sale of construction in progress ("CIP") equipment. The gain was offset by a loss on the sale of assets held for sale of approximately \$0.1 million and \$0.1 million bad debt resulting from the sale of the battery breaker. For the year ended December 31, 2021, we recognized a non-cash impairment charge of \$0.5 million, subsequent to an analysis of our fixed assets and a write down to fair market values. We recognized a loss on the sale of assets held for sale of approximately \$1.4 million during the year ended December 31, 2021 as the result of disposals completed in conjunction with the plant clean-up. In addition, we recognized a loss of \$3.5 million related to the purchase arrangement for the Company's facility located at 2500 Peru. The loss on sale of assets held for sale also included \$0.7 million resulting from the sale of a battery breaker and related equipment.

We recognized interest expense of \$125,000 for the year ended December 31, 2022 and \$21,000 for the comparable period of 2021. The increase in interest expense from the prior year is due to the interest paid on the secured loan agreement we entered in September 2022. We recognized \$262,000 in interest and other income during the year ended December 31, 2022 and \$379,000 for the year ended December 31, 2021. The primary driver of the decrease in interest and other income was due to the payments received for scrap material salvaged during the 2021 plant clean-up process.

Liquidity and Capital Resources

As of December 31, 2022, we had total assets of \$33.5 million and working capital of \$10.9 million.

The following table summarizes our cash provided by (used in) operating, investing and financing activities (in thousands):

	Year ended December 31,	
	2022	2021
Net cash used in operating activities	\$ (10,148)	\$ (7,062)
Net cash used in investing activities	\$ (3,420)	\$ (2,228)
Net cash provided by financing activities	\$ 12,513	\$ 10,894

Net cash used in operating activities

Net cash used in operating activities for the years ended December 31, 2022 and December 31, 2021 was approximately \$10.1 million and \$7.6 million, respectively. Net cash used in operating activities during each of these periods consisted primarily of our net loss adjusted for non-cash items such as depreciation, amortization, and stock-based compensation charges as well as net changes in working capital. During the year ended December 31, 2022, we recognized a \$0.6 million gain on disposal of property and equipment and approximately \$0.6 million expense for impairment on assets held for sale. During the year ended December 31, 2021, we recognized a \$5.7 million loss on disposal of property and equipment and \$0.5 million expense for impairment on assets held for sale.

Net cash used in investing activities

Net cash used in investing activities for the year ended December 31, 2022 was \$3.4 million compared to \$2.2 million for the year ended December 31, 2021. Net cash in investing activities during each of these periods consists primarily of purchases of fixed assets and proceeds received from sale of equipment respectively.

Net cash provided by financing activities

Net cash provided by financing activities for the year ended December 31, 2022 consisted of \$6.5 million net proceeds from ATM shares sales and \$5.9 million net proceeds from the loan we secured in September 2022. Net cash provided by financing activities for the year ended December 31, 2021 consisted of \$10.2 million in net proceeds from ATM share sales.

As of December 31, 2022, we had total cash of \$7.1 million and working capital of \$10.9 million. As of the date of this report, we believe that we will require additional capital in order to fund our current level of ongoing costs over the next twelve months and move forward with our current business strategy. There can be no assurance that we will be able to acquire the necessary funding on commercially reasonable terms or at all. We intend to seek funds through the possible sale of equipment, lease revenue, licensing revenue and collection on the sale of the building. However, there can be no assurance that such funds will be available. If needed, we may seek funding through the sale of equity or debt financing. Funding that includes the sale of our equity may be dilutive. If such financing is not available on satisfactory terms, we may be unable to further pursue our business plan and we may be unable to continue operations.

Critical Accounting Policies and Significant Judgments and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles, or U.S. GAAP. The preparation of our consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of expenses during the period. Significant items subject to such estimates and assumptions include the carrying amount and valuation of long-lived assets, the valuation of conversion features of convertible debt, valuation allowances for deferred tax assets, the determination of estimated asset retirement obligations, the determination of stock option expense, and the determination of the fair value of stock warrants issued. Our actual results could differ from these estimates under different assumptions or conditions.

While our significant accounting policies are more fully described in Note 2 to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K, we believe that the following accounting policies are the most critical to assist stockholders and investors reading the consolidated financial statements in fully understanding and evaluating our financial condition and results of operations.

Lease receivable

The Company has an outstanding direct sale-type industrial lease agreement with LINICO Corporation pursuant to which the Company has leased to LINICO the 136,750 square foot recycling facility at 2500 Peru. The lease commenced April 1, 2021 and expires on March 31, 2023. LINICO has agreed to a purchase price of \$15.25 million and paid nonrefundable deposits totaling \$3.25 million. These non-refundable deposits indicate the lessee's intention to complete the purchase and are included in current liabilities until forfeited or applied towards the purchase balance. As of December 31, 2022 the outstanding balance of our lease receivable was \$15.5 million. The Company expects to collect the outstanding balance by March 31, 2023 and therefore, no valuation allowance was recorded.

Property and equipment, net

Property and equipment are stated at cost net of accumulated depreciation. Depreciation on property and equipment is calculated on the straight-line basis over the estimated useful lives of the assets. Leasehold improvements are depreciated over the shorter of the life of the asset or the remaining term of the lease. Upon the retirement or sale of our property and equipment, the cost and associated accumulated depreciation are removed from the consolidated balance sheet, and the resulting gain or loss is reflected on the consolidated statement of operations. Maintenance and repair expenditures are expensed as incurred while major improvements that increase the functionality, output or expected life of an asset are capitalized and depreciated over the estimated useful life.

We periodically evaluate our property and equipment assets for indications that the carrying amount of an asset may not be recoverable. At December 31, 2022 and December 31, 2021, management compared the carrying value of the assets held for sale against current fair market values. We determined the carrying value needed to be reduced to align with current fair market values. At December 31, 2022 and 2021, we recognized write down on the assets held for sale to fair market value of approximately \$0.6 million and \$0.5 million, respectively.

Intangible and other long-lived assets

The intangible assets consist of a patent application contributed to us by five founding stockholders, patent applications for technology developed by us and trademark applications. The useful life of the intangible assets has been determined to be ten years and the assets are being amortized. We periodically evaluate our intangible and other long-lived assets for indications that the carrying amount of an asset may not be recoverable. In reviewing for impairment, we compare the carrying value of such assets to the estimated undiscounted future cash flows expected from the use of the assets and their eventual disposition. When the estimated undiscounted future cash flows are less than their carrying amount, an impairment loss is recognized equal to the difference between the assets' fair value and their carrying value. In addition to the recoverability assessment, we routinely review the remaining estimated lives of our long-lived assets. Any reduction in the useful life assumption will result in increased depreciation and amortization expense in the period when such determination is made, as well as in subsequent periods. We evaluate the need to record impairment during each reporting period. No impairment has been recorded. We determined that the estimated life of the intellectual property properly reflected the current remaining economic life of the asset.

Revenue recognition

The Company records revenue recognition in accordance with ASC 606, *Revenue from Contracts with Customers*. ASC 606 provides a single comprehensive model for the recognition of revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. It requires an entity to recognize revenue when the entity transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASC 606 creates a five-step model that requires entities to exercise judgment when considering the terms of contract(s), which includes (1) identifying the contract(s) with the customer, (2) identifying the separate performance obligations in the contract, (3) determining the transaction price, (4) allocating the transaction price to the separate performance obligations, and (5) recognizing revenue as each performance obligation is satisfied. ASC 606 requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including qualitative and quantitative information about contracts with customers, significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract.

Insurance proceeds

On November 29, 2019, there was a fire in the Aqua Refining area of the TRIC facility. The Company recorded an insurance proceeds receivable balance of \$19.9 million during the fourth quarter of 2019, which was limited by GAAP accounting standards to the net book value of assets written off as a result of the fire. The insurance proceeds receivable balance has been reduced to zero as insurance payments have exceeded the total established insurance proceeds receivable amount. Any amounts received in excess of that total are reported as other income. The Company does not expect any additional insurance payments related to this matter.

Research and development

Research and development expenditures are expensed as incurred.

Income taxes

We account for income taxes in accordance with the asset and liability method of accounting for income taxes. Under the asset and liability method, deferred assets and liabilities are recognized based upon anticipated future tax consequences attributable to differences between financial statement carrying amounts of assets and liabilities and their respective tax bases. The provision for income taxes is comprised of the current tax liability and the changes in deferred tax assets and liabilities. We established a valuation allowance to the extent that it is more-likely-than-not that deferred tax assets will not be recoverable against future taxable income.

We recognize the effect of uncertain income tax positions only if those positions are more-likely-than-not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs.

Stock-based compensation

We recognize compensation expense for stock-based compensation in accordance with ASC 718 "Compensation – Stock Compensation." For employee stock-based awards, we calculate the fair value of the award on the date of grant using the Black-Scholes-Merton method for stock options; the expense is recognized over the service period for awards to vest.

The estimation of stock-based awards that will ultimately vest requires judgment and to the extent actual results or updated estimates differ from the original estimates, such amounts are recorded as a cumulative adjustment in the period estimates are revised. The Company considers many factors when estimating expected forfeitures, including types of awards, employee class and historical experience.

Recent accounting pronouncements

See discussion of recent accounting pronouncements in Note 2 of the Consolidated Financial Statements located in Item 8 in this Annual Report.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations as of December 31, 2022 and the effect such obligations are expected to have on our liquidity and cash flow in the future years (in thousands):

	Total	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years
Operating leases	\$ 504	\$ 266	\$ 238	\$ —	\$ —
Finance leases	113	68	45	—	—
	<u>\$ 617</u>	<u>\$ 334</u>	<u>\$ 283</u>	<u>\$ —</u>	<u>\$ —</u>

Operating lease obligations

We currently have two operating leases for real estate. We lease our Reno and McCarran, Nevada spaces under non-cancelable operating leases. The Reno, Nevada lease expires in 2024. The initial lease term for our mixed office and warehouse space in McCarran, Nevada expired on December 31, 2021. We elected to exercise our first extension option provided for in the McCarran, Nevada lease agreement, which extended the current term of the lease to December 31, 2024. In February 2022, the lease on Alameda, California facility was terminated.

Finance lease obligation

We currently maintain two finance leases for equipment. In November 2021, we entered into a finance lease for a modular laboratory which expires in October of 2024. Our second finance lease is for warehouse equipment.

Note payable

Aqua Metals Reno, Inc. entered into a \$6,000,000 loan agreement with Summit Investment Services, LLC, a Nevada limited liability company as to an undivided 90.8334% interest, Darren McBride, Trustee of the Arduino 1 Trust, U/A dated April 25, 2022, as to an undivided 8.3333% interest and Jason Yelowitz, Trustee of the Jason Yelowitz 2006 Trust, dated March 31, 2006 as to an undivided .8333% interest (collectively, the "Lenders") on September 30, 2022. See Note 13 in the accompanying notes to the consolidated financial statements for additional information.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We do not enter into financial instruments for trading or speculative purposes. Our cash, cash equivalents and restricted cash balances as of December 31, 2022 consisted of cash and cash equivalents. We experience market risk with respect to the volatility of lead commodity prices. The purchase price of our primary raw material used lead acid batteries (used LABs), and the sales price of our lead-based finished products are based on commodity pricing. Due to the relatively short turnaround between the purchase of used LABs and the sale of our finished goods, we believe the risk is minimized.

Item 8. Financial Statements and Supplementary Data

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and
Stockholders of Aqua Metals, Inc. and Subsidiaries:
Reno, NV

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Aqua Metals, Inc. and Subsidiaries (collectively the "Company") as of December 31, 2022 and 2021, and the related consolidated statements of operations, stockholders' equity and cash flows, for each of the two years in the period ended December 31, 2022, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.



Valuation of Lease Receivable

Critical Audit Matter Description

As described in Note 4 to the consolidated financial statements, the Company has accounted for its Industrial Lease and Option to Purchase Agreement as a sales-type lease. The lease receivable balance as of December 31, 2022 was approximately \$15.5 million. Given the potential for impairment, the related audit effort to evaluate management's valuation of the lease receivable was extensive and required a high degree of auditor judgment.

How the Critical Audit Matter Was Addressed in the Audit

Our principal audit procedures related to the Company's lease receivable valuation methodology included the following:

- We obtained management's memo documenting the accounting treatment of the sales-type lease transaction and evaluated management's approach and conclusions for adherence to U.S. generally accepted accounting principles.
- We obtained management's calculation of the receivable and performed the following procedures:
 - Confirmed the significant terms of the Industrial Lease and Option to Purchase Agreement directly with the counterparty.
 - Performed corroborative calculations confirming that the inputs and calculations appeared accurate based on the terms of the agreement.
 - Tested a sample of lease payments for accuracy.
- We evaluated the reasonableness of management's assessment of the collectability of the lease receivable.

We have served as the Company's auditor since 2014.

/s/ ArmaninoLLP
San Ramon, California

March 9, 2023

AQUA METALS, INC.
Consolidated Balance Sheets
(in thousands, except share and per share amounts)

	December 31, 2022	December 31, 2021
ASSETS		
Current assets		
Cash and cash equivalents	\$ 7,082	\$ 8,137
Accounts receivable	12	269
Lease receivable, current portion	15,527	920
Inventory	278	123
Assets held for sale	47	2,633
Prepaid expenses and other current assets	263	356
Total current assets	23,209	12,438
Non-current assets		
Property and equipment, net	7,343	2,367
Intellectual property, net	461	640
Investment in LINICO	2,000	1,500
Lease receivable, non-current portion	—	15,528
Other assets	489	796
Total non-current assets	10,293	20,831
Total assets	\$ 33,502	\$ 33,269
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	\$ 1,075	\$ 685
Accrued liabilities	1,780	3,005
Building purchase deposit, current portion	3,250	—
Lease liability, current portion	307	388
Note payable	5,899	—
Total current liabilities	12,311	4,078
Building purchase deposit, non-current portion	—	1,328
Lease liability, non-current portion	275	330
Total liabilities	12,586	5,736
Commitments and contingencies (see Note 15)		
Stockholders' equity		
Common stock; \$0.001 par value; 200,000,000 shares authorized; 79,481,751 and 70,416,552 shares issued and outstanding as of December 31, 2022 and December 31, 2021, respectively	79	70
Additional paid-in capital	220,114	211,309
Accumulated deficit	(199,277)	(183,846)
Total stockholders' equity	20,916	27,533
Total liabilities and stockholders' equity	\$ 33,502	\$ 33,269

The accompanying notes are an integral part of these consolidated financial statements.

AQUA METALS, INC.
Consolidated Statements of Operations
(in thousands, except share and per share amounts)

	Year ended December 31,	
	2022	2021
Product sales	\$ 4	\$ 173
Operating cost and expense		
Plant operations and clean up	3,959	7,017
Research and development cost	1,813	933
General and administrative expense	9,815	9,688
Total operating expense	<u>15,587</u>	<u>17,638</u>
Loss from operations	<u>(15,583)</u>	<u>(17,465)</u>
Other income and expense		
Insurance proceeds net of related expenses	—	4,794
Impairment expense	(579)	(545)
PPP loan forgiveness	—	332
Gain (loss) on disposal of property and equipment	596	(5,665)
Interest expense	(125)	(21)
Interest and other income	<u>262</u>	<u>379</u>
Total other income (expense), net	<u>154</u>	<u>(726)</u>
Loss before income tax expense	<u>(15,429)</u>	<u>(18,191)</u>
Income tax expense	<u>(2)</u>	<u>(2)</u>
Net loss	<u>\$ (15,431)</u>	<u>\$ (18,193)</u>
Weighted average shares outstanding, basic and diluted	<u>75,811,034</u>	<u>70,002,180</u>
Basic and diluted net loss per share	<u>\$ (0.20)</u>	<u>\$ (0.26)</u>

The accompanying notes are an integral part of these consolidated financial statements.

AQUA METALS, INC.
Consolidated Statements of Stockholders' Equity
(in thousands, except share amounts)

	Common Stock		Additional Paid- in Capital	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount			
Balances, December 31, 2020	64,461,065	\$ 64	\$ 196,728	\$ (165,653)	\$ 31,139
Stock-based compensation	—	—	2,199	—	2,199
Common stock issued upon RSU vesting	2,114,396	2	—	—	2
Common stock issued upon exercise of employee stock options	347,901	—	727	—	727
Common stock issued upon warrant exercise	65,590	—	—	—	—
Common stock issued for consulting services	57,170	—	225	—	225
Common stock issued for ATM share sales, net of \$339 transaction costs	2,995,430	3	10,163	—	10,166
Common stock issued related to LINICO investment	375,000	1	1,267	—	1,268
Net loss	—	—	—	(18,193)	(18,193)
Balances, December 31, 2021	<u>70,416,552</u>	<u>\$ 70</u>	<u>\$ 211,309</u>	<u>\$ (183,846)</u>	<u>\$ 27,533</u>
Stock-based compensation	—	—	2,253	—	2,253
Common stock issued upon RSU vesting	2,275,731	2	—	—	2
Common stock issued for consulting services	19,176	—	19	—	19
Common stock issued for ATM share sales, net of \$250 transaction costs	6,742,069	7	6,512	—	6,519
Common stock issued for directors fees	28,223	—	21	—	21
Net loss	—	—	—	(15,431)	(15,431)
Balances, December 31, 2022	<u>79,481,751</u>	<u>\$ 79</u>	<u>\$ 220,114</u>	<u>\$ (199,277)</u>	<u>\$ 20,916</u>

The accompanying notes are an integral part of these consolidated financial statements.

AQUA METALS, INC.
Consolidated Statements of Cash Flows
(in thousands)

	Year ended December 31,	
	2022	2021
Cash flows from operating activities:		
Net loss	\$ (15,431)	\$ (18,193)
Reconciliation of net loss to net cash used in operating activities		
Depreciation	882	1,140
Amortization of intellectual property	179	180
Fair value of common stock issued for consulting services	19	225
Stock-based compensation	2,255	2,201
Fair value of common stock issued for director fees	21	—
Amortization of deferred financing costs	13	—
Inventory NRV adjustment	—	146
Loss (gain) on disposal of property and equipment	(596)	5,665
Forgiveness of PPP loan	—	(332)
Impairment of equipment	579	545
Lease of building	920	553
Changes in operating assets and liabilities		
Accounts receivable	120	(237)
Inventory	(155)	822
Prepaid expenses and other current assets	93	345
Accounts payable	22	8
Accrued liabilities	1,428	378
Other assets and liabilities	(497)	(508)
Net cash used in operating activities	<u>(10,148)</u>	<u>(7,062)</u>
Cash flows from investing activities:		
Purchases of property and equipment	(4,771)	(2,350)
Proceeds from sale of equipment	1,760	275
Equipment deposits and other assets	91	79
Investment in LINICO	(500)	(232)
Net cash used in investing activities	<u>(3,420)</u>	<u>(2,228)</u>
Cash flows from financing activities:		
Proceeds from note payable	5,886	—
Proceeds from exercise of stock options	—	728
Proceeds from ATM, net	6,519	10,166
Proceeds from employee stock purchase plan	108	—
Net cash provided by financing activities	<u>12,513</u>	<u>10,894</u>
Net increase (decrease) in cash and cash equivalents	(1,055)	1,604
Cash and cash equivalents at beginning of period	8,137	6,533
Cash and cash equivalents at end of period	<u>\$ 7,082</u>	<u>\$ 8,137</u>

AQUA METALS, INC.
Consolidated Statements of Cash Flows
(in thousands)

(Continued)

	Year ended December 31,	
	2022	2021
Supplemental disclosure of cash flow information:		
Cash paid for interest, net of amounts capitalized	\$ 84	\$ 21
Cash paid for income taxes	\$ 2	\$ 2
Non-cash financing activities		
Fair value of common stock issued to consultants	\$ 19	\$ 91
Supplemental disclosure of non-cash transactions		
Change in property and equipment resulting from change in accounts payable	\$ (368)	\$ 875
Change in property and equipment resulting from change in accrued expenses	\$ (55)	\$ —
Change in investing activity resulting from issuance of equity	\$ —	\$ (1,268)

The accompanying notes are an integral part of these consolidated financial statements.

AQUA METALS, INC.
Notes to Consolidated Financial Statements

1. Organization and Operations

Aqua Metals is engaged in the business of applying its commercialized clean, water-based recycling technology principles to develop the clean and cost-efficient recycling solutions for both lead and lithium-ion (“Li”) batteries. Our recycling process is a patented hydro- and electrometallurgical technology that is a novel, proprietary and patented process we developed and named AquaRefining. AquaRefining is a low-emissions, closed-loop recycling technology that replaces polluting furnaces and hazardous chemicals with electricity-powered electroplating to recover valuable metals and materials from spent batteries with higher purity, lower emissions, and with minimal waste. The modular “Aqualyzers” cleanly generate ultra-pure metal one atom at a time, closing the sustainability loop for the rapidly growing energy storage economy.

We are in the process of demonstrating that Li AquaRefining, which is fundamentally non-polluting, can create the highest quality and highest yields of recovered minerals from lithium-ion batteries with lower waste streams and lower costs than existing alternatives. We have already demonstrated at our pilot facility our ability to recover key valuable minerals in lithium-ion batteries, such as lithium hydroxide, copper, nickel, cobalt, and other compounds in 2022. Our goal is to process commercial quantities of nickel, cobalt, and copper in a pure metal form that can be sold to the general metals and superalloy markets and can be made into battery precursor compound materials with known processes already used in the mining industry. We have installed, commissioned, and began to operate the first Li AquaRefining pilot plant at the end of 2022, scaling towards a commercial demonstration operation through 2023.

Our focus for the lead market is providing equipment and licensing of our lead acid battery recycling technologies in an enabler model which allows us to work with anyone in the industry globally and address the entire marketplace. Our focus for the lithium market includes operating our first-of-a-kind lithium battery recycling facility, utilizing electricity to recycle instead of intensive chemical processes, fossil fuels, or high-temperature furnaces.

Liquidity and Management Plans

The Company generated revenues of \$4 thousand and \$0.2 million during the years ended December 31, 2022 and December 31, 2021, respectively. The Company had net losses of \$15.4 million and \$18.2 million for the years ended December 31, 2022 and December 31, 2021, respectively. As of December 31, 2022, the Company's cash balance was \$7.1 million. As of the date of this report, the Company believes it will require additional capital in order to fund its current level of ongoing costs over the next twelve months and move forward with its lithium-ion battery recycling activities.

2. Summary of Significant Accounting Policies

Basis of presentation and consolidation

The accompanying consolidated financial statements include those of Aqua Metals, Inc. and its subsidiaries, after elimination of all intercompany accounts and transactions. The Company has prepared the accompanying consolidated financial statements in accordance with accounting principles generally accepted in the United States of America ("GAAP") and pursuant to the rules and regulations of the United States Securities and Exchange Commission (the "SEC").

Use of estimates

The preparation of the consolidated financial statements requires management of the Company to make a number of estimates and assumptions relating to the reported amount of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of expenses during the period. Significant items subject to such estimates and assumptions include the carrying amount and valuation of long-lived assets, valuation allowances for deferred tax assets, the determination of stock option expense and the determination of the fair value of stock warrants issued. Actual results could differ from those estimates.

Cash and cash equivalents

The Company considers all highly liquid instruments with original or remaining maturities of ninety days or less at the date of purchase to be cash equivalents. The Company maintains its cash balances in large financial institutions. Periodically, such balances may be in excess of federally insured limits.

Accounts receivable

The Company has traditionally sold its products to large well-established companies and extends credit without requiring collateral, based on an ongoing evaluation of the customer's business prospects and financial condition. In the event that payment of a customer's account receivable is doubtful, the Company would reserve the receivable under an allowance for doubtful accounts. As of December 31, 2022, the Company had no trade accounts receivable balance and has not created a reserve for doubtful accounts. The total accounts receivable balance as of December 31, 2022 and December 31, 2021 consisted of proceeds from the sale of equipment.

Inventory

Inventory is stated at the lower of cost or net realizable value. Cost is recorded on a first-in, first-out basis using the weighted average method. Net realizable value is determined as the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. The Company records a write-down, if necessary, to reduce the carrying value of inventory to its net realizable value. The effect of these write-downs is to establish a new cost basis in the related inventory, which is not subsequently written up.

Property and equipment, net

Property and equipment are stated at cost net of accumulated depreciation. Depreciation on property and equipment is calculated on the straight-line basis over the estimated useful lives of the assets. Leasehold improvements are depreciated over the shorter of the life of the asset or the remaining term of the lease.

Property and equipment are stated at cost net of accumulated depreciation. Depreciation on property and equipment is calculated on the straight-line basis over the estimated useful lives of the assets. Leasehold improvements are depreciated over the shorter of the life of the asset or the remaining term of the lease. We periodically evaluate our property and equipment assets for indications that the carrying amount of an asset may not be recoverable. At December 31, 2022 and 2021, management compared the carrying value of the assets held for sale against current fair market values. We determined the carrying value needed to be reduced to align with current fair market values. At December 31, 2022 and 2021, we recognized a write-down on the assets held for sale to fair market value of approximately \$0.6 million and \$0.5 million, respectively.

Intellectual property, net

Intellectual property consists of patent applications contributed to the Company by five founding stockholders and patent applications for technology developed by the Company. The useful life of this intellectual property has been determined to be ten years and the assets are being amortized straight-line over this period. The Company periodically evaluates its intangible and other long-lived assets for indications that the carrying amount of an asset may not be recoverable. In reviewing for impairment, the Company compares the carrying value of such assets to the estimated undiscounted future cash flows expected from the use of the assets and their eventual disposition. When the estimated undiscounted future cash flows are less than their carrying amount, an impairment loss is recognized equal to the difference between the assets' fair value and their carrying value. In addition to the recoverability assessment, the Company routinely reviews the remaining estimated lives of its long-lived assets. Any reduction in the useful life assumption will result in increased depreciation and amortization expense in the period when such determination is made, as well as in subsequent periods. The Company evaluates the need to record impairment during each reporting period. As of December 31, 2022 and 2021, the Company determined that the estimated life of the intellectual property properly reflected the current remaining economic life of the asset.

Investment in LINICO

Investments, which may be made from time to time for strategic reasons (and not to engage in the business of investments) are included in non-current assets in the consolidated balance sheets. Investments are recorded at cost and the Company analyzes the value of investments on a quarterly basis. The nature and timing of the Company's investments will depend on available capital at any particular time and the investment opportunities identified and available to the Company.

Leases

The Company determines if an arrangement is a lease at inception. Operating lease right-of-use assets ("ROU assets") and short-term and long-term lease liabilities are included in the consolidated balance sheets. ROU assets represent the right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating and finance lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As most of the Company's leases do not provide an implicit rate, the Company uses an incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. The Company's lease terms may include options to extend or terminate the lease. Lease expense for lease payments is recognized on a straight-line basis over the lease term. For lease agreements with terms less than 12 months, the Company has elected the short-term lease measurement and recognition exemption, and the Company recognizes such lease payments on a straight-line basis over the lease term.

Revenue recognition

The Company records revenue in accordance with Accounting Standards Codification ("ASC") 606, Revenue from Contracts with Customers. ASC 606 provides a single comprehensive model for the recognition of revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. It requires an entity to recognize revenue when the entity transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASC 606 creates a five-step model that requires entities to exercise judgment when considering the terms of contract(s), which includes (1) identifying the contract(s) with the customer, (2) identifying the separate performance obligations in the contract, (3) determining the transaction price, (4) allocating the transaction price to the separate performance obligations, and (5) recognizing revenue as each performance obligation is satisfied. ASC 606 requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including qualitative and quantitative information about contracts with customers, significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract.

Revenue is generally recognized with the delivery of the Company's products, primarily hard lead, lead compounds and plastics, to customers. Sales, value add, and other taxes, if any, that are collected concurrent with revenue-producing activities are excluded from revenue as they are subsequently remitted to governmental authorities. Incidental items that are immaterial in the context of the contract are recognized as expense. Freight and shipping costs related to the transfer of the Company's products to customers are included in revenue and cost of product sales. Payment on invoices is generally due within 30 days of the invoice.

Arrangements with Multiple Performance Obligations

Contracts with customers may include multiple performance obligations. A performance obligation is a promise in a contract to transfer a distinct good or service to the customer and is the unit of account in ASC 606. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. The Company expects that many of our contracts will have a single performance obligation as the promise to transfer the individual goods or services will not be separately identifiable from other promises in the contracts and therefore, not distinct. For contracts with multiple performance obligations, revenue will be allocated to each performance obligation based on the Company's best estimate of the standalone selling price of each distinct good or service in the contract. The primary method used to estimate standalone selling prices is based on prices charged separately to customers or expected cost-plus margin. At present, the Company does not have any arrangements with multiple performance obligations.

Significant Judgments

The Company estimates variable consideration for arrangements where the transaction price is not fully determinable until the completion of yield testing. The Company estimates variable consideration at the most likely amount to which it expects to be entitled and includes estimated amounts in revenue to the extent it is probable that a significant reversal of revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. Adjustments to revenue is recognized in the period when the uncertainty is resolved. To date, any adjustments to estimates have not been material.

Practical Expedients and Exemptions

The Company does not disclose the value of unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which we recognize revenue at the amount to which we have the right to invoice for services performed.

Insurance proceeds

On November 29, 2019, there was a fire in the Aqua Refining area of the TRIC facility. As of December 31, 2021, the Company had received a total of \$30.25 million in insurance payments as a result of the fire damage. The Company does not expect any additional insurance payments as a result of the 2019 fire.

Research and development

Research and development expenditures are expensed as incurred.

Income taxes

The Company accounts for income taxes in accordance with the asset and liability method of accounting for income taxes. Under the asset and liability method, deferred assets and liabilities are recognized based upon anticipated future tax consequences attributable to differences between financial statement carrying amounts of assets and liabilities and their respective tax bases. The provision for income taxes is comprised of the current tax liability and the changes in deferred tax assets and liabilities. The Company establishes a valuation allowance to the extent that it is more-likely-than-not that deferred tax assets will not be recoverable against future taxable income.

The Company recognizes the effect of uncertain income tax positions only if those positions are more-likely-than-not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs.

Fair value measurements

The carrying amounts of cash and cash equivalents, accounts receivable, inventory, prepaid expenses and other current assets, accounts payable, and accrued expenses approximate fair value due to the short-term nature of these instruments. The carrying value of short and long-term debt, and lease liabilities also approximates fair value since these instruments bear market rates of interest or are calculated using market rates of interest. None of these instruments are held for trading purposes.

Fair value is defined as an exit price, representing the amount that would be received upon the sale of an asset or payment to transfer a liability in an orderly transaction between market participants. Fair value is a market-based measurement that is determined based on assumptions that market participants would use in pricing an asset or liability. A three-tier fair value hierarchy is used to prioritize the inputs in measuring fair value as follows:

Level 1. Quoted prices in active markets for identical assets or liabilities.

Level 2. Quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, or other inputs that are observable, either directly or indirectly.

Level 3. Significant unobservable inputs that cannot be corroborated by market data.

The asset or liability's fair value measurement within the fair value hierarchy is based upon the lowest level of any input that is significant to the fair value measurement.

There are no assets or liabilities that are measured at fair value on a recurring basis at December 31, 2022 or December 31, 2021.

Stock-based compensation

The Company recognizes compensation expense for stock-based compensation in accordance with ASC 718 "Compensation – Stock Compensation." The fair value of restricted stock units ("RSUs") is measured on the grant date based on the closing fair market value of our common stock. The resulting cost is recognized over the period during which an employee is required to provide service in exchange for the awards, usually the vesting period, which is generally three years for RSUs. Stock-based compensation expense is recognized on a straight-line basis, net of actual forfeitures in the period.

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Net loss per share

Basic net loss per share is computed by dividing net loss by the weighted average number of vested shares outstanding during the period. Diluted net loss per share is computed by giving effect to all potential dilutive common securities, options and warrants. Potential dilutive common shares include the dilutive effect of the common stock underlying in-the-money stock options and is calculated based on the average share price for each period using the treasury stock method. Under the treasury stock method, the exercise price of an option and the average amount of compensation cost, if any, for future services that the Company has not yet recognized when the option is exercised, are assumed to be used to repurchase shares in the current period.

For all periods presented in this report, stock options and warrants werenot included in the computation of diluted net loss per share because such inclusion would have had an antidilutive effect.

	Year Ended December 31,	
	2022	2021
Excluded potentially dilutive securities (1):		
Options to purchase common stock	994,267	1,026,712
Unvested restricted stock	6,387,937	5,246,875
Financing warrants to purchase common stock	6,372	6,372
Total potential dilutive securities	<u>7,388,576</u>	<u>6,279,959</u>

(1) The number of shares is based on the maximum number of shares issuable on exercise or conversion of the related securities as of the period end. Such amounts havenot been adjusted for the treasury stock method or weighted average outstanding calculations as required if the securities were dilutive.

Segment and geographic information

Our chief operating decision maker (“CODM”) is the Chief Executive Officer. Operating segments are defined as components of an enterprise engaging in business activities for which discrete financial information is available and regularly reviewed by the CODM in deciding how to allocate resources and in assessing performance. The CODM views its operations and manages its business in one operating segment, and the Company operates in only one geographic segment.

Concentration of credit risk

The Company generated revenue of \$4,000 and \$173,000 for the years ended December 31, 2022 and 2021, respectively, for the sale of inventory to P. Kay Metals. Revenue from P. Kay Metals represented 100% of total revenue for the years ended December 31, 2022 and 2021. The Company did not have a trade receivable balance as of December 31, 2022. The Company's trade accounts receivable balance was \$17,000 as of December 31, 2021. The accounts receivable balance on the Company's consolidated balance sheets as of December 31, 2022 and December 31, 2021 consisted of proceeds from sale of equipment.

Plant operations and clean up

During the fourth quarter of 2022, the Company reclassified cost of product sales as plant operations and clean up to make the financial statements be more informative. Prior year amounts have been reclassified for consistency with the current year presentation. The reclassification has no effect on the reported results of operations.

Recent accounting pronouncements

There were no recent accounting pronouncements or changes in accounting pronouncements during the year ended December 31, 2022 that are of significance or potential significance to the Company.

3. Revenue recognition

The Company has historically generated revenues by recycling lead acid batteries (“LABs”) and selling the recovered lead to its customers.

The Company was not in commercial production in 2022 or 2021. The nominal revenue generated during the years ended December 31, 2022 and December 31, 2021 resulted from the sale of inventory. Revenue from products transferred to customers at a single point in time with the delivery of the Company’s products to customers accounted for 100% of our revenue during the years ended December 31, 2022 and December 31, 2021.

4. Lease receivable

The Company has entered into an Industrial Lease Agreement with LINICO Corporation, a Nevada corporation, or (“LINICO”), dated February 15, 2021 pursuant to which the Company has leased to LINICO the 136,750 square foot recycling facility at TRIC. The lease commenced April 1, 2021 and expires on March 31, 2023. LINICO has agreed to a purchase price of \$15.25 million, and paid a nonrefundable deposit of \$1.25 million in October 2021, and a second nonrefundable deposit of \$2 million in October 2022, per the terms of the agreement, both of which will be applied towards the purchase price. The lease agreement is a triple-net lease pursuant to which LINICO is responsible for all fixed costs, including maintenance, utilities, insurance, and property taxes. The lease agreement provides for LINICO’s monthly lease payments starting at \$68,000 per month and increasing to \$100,640 in the last six months of the lease.

With respect to the portion of the facility that was damaged in the November 2019 fire, consisting of approximately 30,000 square feet, the Company was obligated to complete the clean-up of the damaged area, at the Company's expense and repair all damage to the damaged area, at the Company's expense. Repairs and clean up were completed in 2022. With regard to the equipment on-site at TRIC, the Company granted LINICO the right of first offer to purchase any equipment the Company offers for sale. The lease agreement contains customary representations, warranties and indemnities on the part of both parties. At the beginning of 2022, LINICO purchased approximately \$0.8 million of equipment.

The Company accounted for the Industrial Lease and Option to Purchase Agreement as a sales-type lease. As a component of the accounting for the agreement, the Company recognized at the inception the estimated fair market value of the land and plant of \$17.0 million as a lease receivable, which is reflected on the Company's consolidated balance sheets. The implied interest rate of 0.5% was utilized for the amortization of the scheduled building lease/purchase payments outlined in the agreement. The Company applies the monthly payments received as a reduction to lease receivable and interest income. The interest income recognized from the agreement is included in "Interest and other income" on the Company's consolidated statements of operations. For the year ended December 31, 2022, the Company recognized a reduction in the lease receivable balance of approximately \$920,000 and recorded \$76,000 of interest income related to this agreement.

5. Inventory, net

Inventory consisted of the following (in thousands):

	December 31,	
	2022	2021
Finished goods	\$ 28	\$ 28
Work in process	—	9
Raw materials	250	86
	<u>\$ 278</u>	<u>\$ 123</u>

6. Assets held for sale

Assets are classified as held for sale when, among other factors, they are identified and marketed for sale in their present condition, management is committed to their disposal, and the sale of the asset is probable within one year. Management believes these assets are no longer necessary for the Company's future operating plans. As of December 31, 2022 and 2021, Aqua Metals had assets with a book value of \$47,000 and \$2.6 million classified as assets held for sale, respectively.

At December 31, 2022 and 2021, the Company compared the carrying value of the assets held for sale against current fair market values. We determined the carrying value needed to be reduced to align with current fair market values. During the years ended December 31, 2022 and 2021 we recognized a \$0.6 million and \$0.5 million impairment of assets held for sale, respectively.

7. Property and equipment, net

Property and equipment, net, consisted of the following (in thousands):

Asset Class	Useful Life (Years)	December 31,	
		2022	2021
Operational equipment	3 - 10	\$ 1,445	\$ 1,539
Lab equipment	5	730	530
Computer equipment	3	6	8
Office furniture and equipment	3	90	91
Leasehold improvements	2.5	80	—
Equipment under construction		6,486	1,328
		8,837	3,496
Less: accumulated depreciation		(1,494)	(1,129)
		<u>\$ 7,343</u>	<u>\$ 2,367</u>

Property and equipment depreciation expense was \$0.5 million and \$0.6 million for the years ended December 31, 2022 and December 31, 2021, respectively. Equipment under construction is comprised of our lithium-ion battery recycling pilot along with various components being manufactured or installed by the Company.

8. Intellectual property, net

Intellectual property, net, is comprised of the following (in thousands):

	2022	2021
Intellectual property	\$ 1,794	\$ 1,794
Accumulated amortization	(1,333)	(1,154)
Intellectual property, net	<u>\$ 461</u>	<u>\$ 640</u>

Aggregate amortization expense for both of the years ended December 31, 2022 and December 31, 2021 was \$0.2 million.

Estimated future amortization is as follows as of December 31, 2022 (in thousands):

2023	\$ 179
2024	135
2025	70
2026	51
2027	26
Thereafter	—
Total estimated future amortization	<u>\$ 461</u>

9.

Investments

On February 15, 2021, the Company entered into a Series A Preferred Stock Purchase Agreement with LINICO Corporation, a Nevada Corporation, that provided for the Company's issuance of 375,000 shares ("Aqua Shares") of the Company's common stock in consideration of LINICO's issuance of 1,500 shares of its Series A Preferred Stock, at a stated aggregate value of \$1.5 million, along with a three-year warrant ("Series A Warrant") to purchase an additional 500 shares of LINICO Series A Preferred Stock at an exercise price of \$1,000 per share. During the first quarter of 2022, the Company exercised the warrant for all 500 LINICO Series A Preferred shares. Following the exercise, the Company held a total of 2,000 shares of the Series A Preferred Stock representing approximately 12% of LINICO common stock on a fully diluted basis.

The Company accounted for the LINICO investment under ASC 321, Investments-Equity Securities, using the measurement alternative of recording at cost as the investment in LINICO doesn't have a readily determinable fair value.

The LINICO Series A Preferred Stock is senior to all other capital stock of LINICO with regard to dividends and distributions upon liquidation, dissolution and sale of the company. Each share of LINICO Series A Preferred Stock is entitled to one vote per share and votes with the common stock on all matters, subject to certain protective provisions that require the approval of the holders of the Series A Preferred Stock voting as a class. The Series A Preferred Stock accrues a cumulative dividend of 8% per annum on the original stated value of \$1,000 per share, and all accrued and unpaid dividends on the Series A Preferred Stock must be paid in full prior to the payment of any dividends on any other shares of LINICO capital stock. In the event of any liquidation or dissolution of LINICO, which would include a sale of LINICO, the holders of the Series A Preferred Stock shall receive the return of their stated value of \$1,000 per share plus all accrued and unpaid dividends prior to any distribution to the holders of any other capital stock of LINICO, following which the holders of the Series A Preferred Stock shall participate in the distribution of any remaining assets with the holders of the junior stock on an as-converted basis. The Series A Preferred Stock is convertible into shares of LINICO common stock at the Company's option and is automatically converted into LINICO common stock upon the election of the holders of a majority of the LINICO Series A Preferred Stock or upon a qualifying IPO of LINICO common stock. The Series A Preferred Stockholders are also provided with preemptive rights allowing them the right to purchase their proportional share of certain future LINICO equity issuances.

The Series A Preferred Stock Purchase Agreement includes customary representations, warranties, and covenants by LINICO and the Company.

As LINICO's sale of the 375,000 of Aqua Shares resulted in net proceeds to LINICO that were less than \$1,500,000, the Company was required to pay LINICO the difference of \$232,000 in cash.

In connection with the investment transactions, the Company also entered into an Investors Rights Agreement and a Voting Agreement, each dated February 15, 2021, pursuant to which LINICO granted the Company customary demand and piggyback registration rights, information rights and the right to nominate one person to the LINICO board of directors as long as the Company is the owner of at least 10% of the LINICO common stock on a fully-diluted basis.

Comstock Mining Inc., a Nevada corporation (NYSE-MKT: LODE), is the beneficial owner of approximately 88% of the common shares of LINICO. The Company's Chief Financial Officer, Judd Merrill, is a member of the board of directors of Comstock Mining.

10.

Other assets

Other assets consist of the following (in thousands):

	December 31,	
	2022	2021
Nevada and Alameda facilities Right of Use Assets (1)	\$ 463	\$ 514
Equipment deposits (2)	6	217
Other assets	20	65
Total other assets, non-current	<u>\$ 489</u>	<u>\$ 796</u>

(1) See Footnote 12.

(2) Deposits for equipment to be acquired and utilized at the Company's Innovation Center or customer locations.

11. Accrued liabilities

Accrued liabilities consist of the following (in thousands):

	December 31,	
	2022	2021
Property and equipment related	\$ 770	\$ 2,242
Class action settlement	500	500
Payroll related	418	180
Professional services	51	56
Other	41	27
	<u>\$ 1,780</u>	<u>\$ 3,005</u>

12. Leases

As of December 31, 2022, the Company maintained two operating leases for real estate. The Company's operating leases have terms of 36 and 37 months and include one or more options to extend the duration of the agreements. These operating leases are included in "Other assets" on the Company's December 31, 2022 and 2021 consolidated balance sheets and represent the Company's right to use the underlying assets for the term of the leases. The Company's obligation to make lease payments are included in "Lease liability, current portion" and "Lease liability, non-current portion" on the Company's December 31, 2022 and 2021 consolidated balance sheets. The Company recognized sublease income of \$85,000 and \$509,000 for the twelve months ended December 31, 2022 and December 31, 2021, respectively. The Alameda lease and sublease agreement ended during the first quarter of 2022.

Based on the present value of the lease payments for the remaining lease term of the Company's existing operating leases, as of December 31, 2022, total right-of-use assets were approximately \$0.5 million and operating lease liabilities were approximately \$0.5 million. As of December 31, 2021, total right-of-use assets were approximately \$0.5 million and operating lease liabilities were approximately \$0.6 million.

The Company currently maintains two finance leases for equipment. In November 2021, the Company entered into a finance lease for a modular laboratory which expires in October of 2024. The second finance lease is for warehouse equipment that expires in September of 2023.

Information related to the Company's right-of-use assets and related lease liabilities were as follows (in thousands):

	Twelve Months Ended December 31, 2022	Twelve Months Ended December 31, 2021
Cash paid for operating lease liabilities	\$ 344	\$ 694
Operating lease cost	\$ 338	\$ 621
Cash paid for finance lease liabilities	\$ 61	\$ 26
Interest expense	\$ 9	\$ 3
		<u>December 31, 2022</u>
Weighted-average remaining lease term (years) - operating leases		1.9
Weighted-average discount rate - operating leases		6.16%
Weighted-average remaining lease term (years) - finance leases		1.3
Weighted-average discount rate - finance leases		7.50%

Maturities of lease liabilities as of December 31, 2022 were as follows (in thousands):

Due in 12-month period ended December 31,

	Operating Leases	Finance Leases
2023	\$ 266	\$ 68
2024	\$ 238	\$ 45
2025	\$ —	\$ —
	\$ 504	\$ 113
Less imputed interest	\$ (28)	\$ (7)
Total lease liabilities	<u>\$ 476</u>	<u>\$ 106</u>
Current lease liabilities	\$ 245	\$ 62
Non-current lease liabilities	\$ 231	\$ 44
	<u>\$ 476</u>	<u>\$ 106</u>

13.

Note payable

On September 30, 2022, Aqua Metals Reno, Inc., our wholly-owned subsidiary, entered into a Loan Agreement with Summit Investment Services, LLC, a Nevada limited liability company as to an undivided 90.8334% interest, Darren McBride, Trustee of the Arduino 1 Trust, U/A dated April 25, 2022, as to an undivided 8.3333% interest and Jason Yelowitz, Trustee of the Jason Yelowitz 2006 Trust, dated March 31, 2006 as to an undivided .8333% interest (collectively, the “Lenders”), pursuant to which the Lenders provided us with a loan in the amount of \$6 million. The loan accrues interest at a fixed annual rate of 8.50%. Interest-only payments are due monthly for the first twenty-four months and the principal and all unpaid accrued interest is due on September 29, 2024. We have the right to prepay the loan at any time, provided that we must pay guaranteed minimum interest of \$255,000 (6-months of interest). The Loan Agreement includes representations, warranties, and affirmative and negative covenants that are customary of institutional loan agreements. The loan is collateralized by a first priority lien interest on our land and recycling facility at TRIC that is expected to sell before March 31, 2023 to LINICO as disclosed in Note 4 of the consolidated financial statements. Upon the completion of the sale, the commitments and obligations per our loan agreement with the Lenders will terminate, and all amounts then outstanding will become payable. The costs associated with obtaining the loan were recorded as a reduction to the carrying amount of the note and are being amortized over the life of the loan.

Note payable is comprised of the following (in thousands):

	December 31,	
	2022	2021
Note payable, current portion		
The Lenders, net of issuance costs	\$ 5,899	\$ —
Total note payable, current portion	\$ 5,899	\$ —

14. Stockholders' equity**Authorized capital**

The authorized capital stock of the Company consists of 200,000,000 shares of common stock, par value \$0.001 per share. In the event of liquidation of the Company, dissolution or winding up, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities. The common stock has no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. The outstanding shares of common stock are fully paid and non-assessable.

The holders of the Company's common stock are entitled to one vote per share. Holders of common stock are entitled to receive a ratable share of dividends, if any, as may be declared by the board of directors.

Other shares issued

During the year ended December 31, 2021, the Company issued 2,005,258 shares of common stock upon vesting of RSUs granted by the Company to management and employees.

During the year ended December 31, 2021, the Company issued, when the five-day average of closing prices for the Company's common stock was \$3.95 per share, 5,371 shares of the Company's common stock pursuant to a cashless exercise of a warrant for 10,350 shares of the Company's common stock with an exercise price of \$1.90 per share.

During the year ended December 31, 2021, the Company issued, when the five-day average of closing prices for the Company's common stock was \$6.20 per share, 60,219 shares of the Company's common stock pursuant to a cashless exercise of a warrant for 86,778 shares of the Company's common stock with an exercise price of \$1.90 per share.

During the year ended December 31, 2021, the Company issued 109,138 shares of common stock upon vesting of RSUs granted to Board members.

During the year ended December 31, 2021, the Company issued 57,170 shares of common stock to a consultant to fulfill obligations related to a consulting agreement.

During the year ended December 31, 2021, the Company issued 375,000 shares of common stock pursuant to the Series A Preferred Stock Purchase Agreement, with LINICO, dated February 15, 2021.

During the year ended December 31, 2021, the Company issued 347,901 shares of common stock upon stock option exercises.

During the year ended December 31, 2021, the Company issued 2,995,430 shares of common stock pursuant to the At The Market Issuance Sales Agreement for net proceeds of \$10.2 million.

During the year ended December 31, 2022, the Company issued 2,150,467 shares of common stock upon vesting of RSUs granted by the Company to management and employees.

During the year ended December 31, 2022, the Company issued 125,264 shares of common stock upon vesting of RSUs granted to Board members.

During the year ended December 31, 2022, the Company issued 28,223 shares of common stock to a Board member related to director fees.

During the year ended December 31, 2022, the Company issued 19,176 shares of common stock to a former Board member to fulfill obligations related to a consulting agreement.

During the year ended December 31, 2022, the Company issued 6,742,069 shares of common stock pursuant to the At The Market Issuance Sales Agreement for net proceeds of \$6.5 million.

Warrants outstanding

Warrants outstanding to purchase shares of the Company's common stock at a weighted average exercise price of \$1.90 per share are as follows.

Exercise Price per Share	Expiration Date	Shares Subject to Purchase at December 31, 2022
\$ 1.90	1/22/2024	6,372

Stock-based compensation

In 2014, the Board of Directors adopted the Company's stock incentive plan (the "2014 Plan"). The 2014 Plan was most recently amended and restated effective as of the Company's 2017 Annual Stockholders' Meeting. A total of 2,113,637 shares of common stock was authorized for issuance pursuant to the 2014 Plan at the time of its most recent amendment and restatement in 2017. The 2014 Plan provides for the following types of stock-based awards: incentive stock options; non-statutory stock options; restricted stock; and performance stock. The 2014 Plan, under which equity incentives may be granted to employees and directors under incentive and non-statutory agreements, requires that the option price may not be less than the fair value of the stock at the date the option is granted. Option awards are exercisable until their expiration, which may not exceed 10 years from the grant date.

In 2019, the Board of Directors adopted the Company's stock incentive plan (the "2019 Plan"). The 2019 Plan was most recently amended and restated effective as of the Company's 2020 Annual Stockholders' Meeting. A total of 18,500,000 shares of common stock was authorized for issuance pursuant to the 2019 Plan. The 2019 Plan provides for the following types of stock-based awards: incentive stock options; non-statutory stock options; restricted stock; and performance stock. The 2019 Plan, under which equity incentives may be granted to employees and directors under incentive and non-statutory agreements, requires that the option price may not be less than the fair value of the stock at the date the option is granted. Option awards are exercisable until their expiration, which may not exceed 10 years from the grant date.

Stock-based compensation expense recorded was allocated as follows (in thousands):

	Year ended December 31,	
	2022	2021
Cost of product sales	\$ 104	\$ 73
Research and development cost	36	77
General and administrative expense	2,115	2,051
Total	\$ 2,255	\$ 2,201

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The risk-free interest rate assumption was based on the United States Treasury's zero-coupon bonds with maturities similar to those of the expected term of the award being valued. The assumed dividend yield was based on the Company's expectation of not paying dividends in the foreseeable future. The weighted-average expected life of the options was calculated using the simplified method as prescribed by the Securities and Exchange Commission ("SEC") Staff Accounting Bulletin No. 107 and No. 110 ("SAB No. 107 and 110"). This decision was based on the lack of relevant historical data due to the Company's limited historical experience. In addition, due to the Company's limited historical data, the estimated volatility also reflects the application of SAB No. 107 and 110, using the weighted average of the Company's historical volatility and the historical volatility of several unrelated public companies within the recycling industry. Forfeitures are recognized as they occur.

The following table summarizes the stock-based compensation plan activity and related information through December 31, 2022.

	Number of Shares Available for Grant	Options Outstanding		RSUs Outstanding	
		Number of Shares	Weighted-Average Exercise Price Per Share	Number of RSUs	Weighted-Average Grant Date Fair Value Per Share
Balance at December 31, 2020	3,398,870	1,387,673	\$ 3.89	5,624,166	\$ 0.66
Granted	(1,803,172)	—	—	1,803,172	1.63
Exercised/ Released	—	(347,901)	2.09	(2,121,220)	0.91
Forfeited	72,303	(13,060)	8.71	(59,243)	0.83
Balance at December 31, 2021	1,668,001	1,026,712	\$ 4.44	5,246,875	\$ 1.07
Authorized	7,000,000	—	—	—	—
Granted	(3,691,202)	—	—	3,691,202	0.69
Exercised/ Released	—	—	—	(2,297,130)	0.90
Forfeited	285,455	(32,445)	5.78	(253,010)	1.16
Balance at December 31, 2022	5,262,254	994,267	\$ 4.40	6,387,937	\$ 0.91

There were no option exercises during the year ended December 31, 2022. There were 347,901 common shares issued related to option exercises during the year ended December 31, 2021.

Additional information related to the status of options at December 31, 2022 is as follows:

	Shares	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value (in thousands)
Outstanding	994,267	\$ 4.40	0.40	\$ —
Vested and exercisable	994,267	\$ 4.40	0.40	\$ —

The intrinsic value of options is the fair value of the Company's stock at December 31, 2022 and 2021 less the per share exercise price of the option multiplied by the number of shares.

As of December 31, 2022, there is approximately \$4.5 million of total unrecognized compensation cost related to the unvested share-based (option and RSU) compensation arrangements granted under the stock-based compensation plans. The remaining unrecognized compensation cost will be recognized over a weighted-average period of 2.3 years.

The following table summarizes information about stock options outstanding as of December 31, 2022:

Range of Exercise Prices Per Share	Options Outstanding		Options Exercisable	
	Number of Shares	Weighted-Average Remaining Contractual Life (Years)	Number of Shares	Weighted-Average Remaining Contractual Life (Years)
\$1.60 - \$2.79	106,361	0.86	106,361	0.86
\$2.80 - \$4.50	450,882	0.33	450,882	0.33
\$4.51 - \$7.50	420,000	0.33	420,000	0.33
\$7.51 - \$12.55	8,690	0.45	8,690	0.45
\$12.56 - \$24.81	8,334	0.84	8,334	0.84
	994,267	0.40	994,267	0.40

2021 Restricted stock units

In February 2021, the Company granted 25,000 RSUs, all of which were subject to vesting, with a grant date fair value of \$151,500 to a contractor. The shares vest in three tranches 1) upon the signing of a licensing agreement, 2) delivery of a final engineering package, and 3) full handover of project to site owner.

In May 2021, the Company granted 81,883 RSUs, all of which were subject to vesting, with a grant date fair value of \$235,000 to Board members. The shares vest in twelve equal installments over a one-year period.

In September 2021, the Company granted 12,111 RSUs, all of which were subject to vesting, with a grant date fair value of \$25,000 to employees. The shares vest in six equal installments over a three-year period.

In October 2021, the Company granted 4,673 RSUs, all of which were subject to vesting, with a grant date fair value of \$10,000 to employees. The shares vest in six equal installments over a three-year period.

In December 2021, the Company granted 1,652,517 RSUs, all of which were subject to vesting, with a grant date fair value of \$2,420,000 to employees. The shares vest in six equal semi-annual installments over a three-year period.

Total intrinsic value of RSUs vested and released during 2021 was \$6.9 million. Intrinsic value of RSUs outstanding at December 31, 2021 was \$6.5 million.

2022 Restricted stock units

In January 2022, the Company granted 44,780 RSUs, all of which were subject to vesting, with a grant date fair value of \$50,000 to employees. The shares vest in three equal installments over a three-year period.

In February 2022, the Company granted 47,933 RSUs, all of which were subject to vesting, with a grant date fair value of \$50,000 to employees. The shares vest in three equal installments over a three-year period.

In April 2022, the Company granted 9,615 RSUs, all of which were subject to vesting, with a grant date fair value of \$10,000 to employees. The shares vest in three equal installments over a three-year period.

In May 2022, the Company granted 182,293 RSUs, all of which were subject to vesting, with a grant date fair value of \$175,000 to Board Members. The shares vest in four equal installments over a twelve-month period.

In June 2022, the Company granted 12,121 RSUs, all of which were subject to vesting, with a grant date fair value of \$10,000 to employees. The shares vest in three equal installments over a three-year period.

In July 2022, the Company granted 143,708 RSUs, all of which were subject to vesting, with a grant date fair value of \$120,000 to employees. The shares vest in three equal installments over a three-year period.

In August 2022, the Company granted 10,537 RSUs, all of which were subject to vesting, with a grant date fair value of \$10,000 to employees. The shares vest in three equal installments over a three-year period.

In October 2022, the Company granted 28,223 RSUs, all of which were vested immediately, with a fair value of \$21,308 to a Board Member.

In December 2022, the Company granted 27,739 RSUs, all of which were subject to vesting, with a grant date fair value of \$20,000 to employees. The shares vest in three equal installments over a three-year period.

In December 2022, the Company granted 3,184,253 RSUs, all of which were subject to vesting, with a grant date fair value of \$2,368,682 to employees. The shares vest in six equal semi-annual installments over a three-year period.

Total intrinsic value of RSUs vested and released during 2022 was \$2.4 million. Intrinsic value of RSUs outstanding at December 31, 2022 was \$8 million.

Reserved shares

At December 31, 2022, the Company has reserved shares of common stock for future issuance as follows:

	<u>Number of Shares</u>
Equity Plan	
Subject to outstanding options and restricted shares	7,382,204
Available for future grants	5,262,254
Officer and Director Purchase Plan	237,382
Warrants	6,372
	<u>12,888,212</u>

15. Commitments and contingenciesLease commitments

In July 2018, the Company signed a lease for 14,016 square feet of mixed office and warehouse space in McCarran, Nevada. The initial lease term for this facility expired on December 31, 2021 and has been extended to the current maturity date of December 31, 2024.

In September 2021, the Company entered into a lease for 4,183 square feet of office space in Reno, Nevada. The lease term for this facility expires on September 30, 2024.

We currently maintain two finance leases for equipment. In November 2021, we entered into a finance lease for a modular laboratory which expires in October of 2024. Our second finance lease is for warehouse equipment, which is deemed immaterial to the Company's Consolidated Balance Sheets.

The future minimum payments related to these operating and finance leases are as follows as of December 31, 2022 (in thousands):

	<u>Operating Leases</u>	<u>Finance Leases</u>
2023	\$ 266	\$ 68
2024	\$ 238	\$ 45
2025	\$ —	\$ —
Total minimum lease payments	<u>\$ 504</u>	<u>\$ 113</u>

Legal proceedings

See Item 3. Legal Proceedings

16. Related party transactions

The Company has adopted a policy that any transactions with directors, officers, beneficial owners of five percent or more of our common shares, any immediate family members of the foregoing or entities of which any of the foregoing are also officers or directors or in which they have a financial interest, will only be on terms consistent with industry standards and approved by a majority of the disinterested directors of our board.

17. Income taxes

Loss before income tax expense consists of the following (in thousands):

	Year ended December 31,	
	2022	2021
US	\$ (15,429)	\$ (18,191)
Foreign	—	—
Total	\$ (15,429)	\$ (18,191)

The components of the provision for income tax expense consist of the following (in thousands):

	Year ended December 31,	
	2022	2021
Current		
Federal	\$ —	\$ —
State	2	2
Deferred		
Federal	—	—
State	—	—
Total provision for income taxes	\$ 2	\$ 2

Reconciliation of the statutory federal income tax rates consist of the following:

	Year ended December 31,	
	2022	2021
Tax at federal statutory rate	21.00%	21.00%
State tax, net of federal benefit	(0.01)%	(0.01)%
Change in rate	—%	(0.08)%
Valuation allowance	(19.45)%	(19.59)%
PPP loan forgiveness	—%	0.38%
Disallowed executive compensation	(1.80)%	(5.45)%
Equity compensation	0.11%	5.10%
Other	0.14%	(1.36)%
Provision for taxes	(0.01)%	(0.01)%

The components of deferred tax assets (liabilities) included on the consolidated balance sheets are as follows (in thousands):

	As of December 31,	
	2022	2021
Deferred tax assets		
Capitalized start-up costs	\$ 2,842	\$ 3,147
Credits	405	380
Fixed assets	618	1,367
Net operating losses	32,505	28,762
Others	995	744
Total gross deferred tax assets	37,365	34,400
Valuation allowance	(37,282)	(34,281)
Total gross deferred tax assets (net of valuation allowance)	\$ 83	\$ 119
Deferred tax liabilities		
Patents	\$ (83)	\$ (119)
Other	—	—
Total gross deferred tax liabilities	(83)	(119)
Net deferred tax assets	\$ —	\$ —

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Based on the available objective evidence at this time, management believes that it is more-likely-than-not that the net deferred tax assets of the Company will not be realized. Accordingly, management has applied a full valuation allowance against net deferred tax assets at both December 31, 2022 and December 31, 2021. The net valuation allowance increased by approximately \$3.0 million during the year ended December 31, 2022. The increase in net valuation allowance primarily relates to net operating losses generated during 2022.

At December 31, 2022, the Company has Federal and California net operating loss carryforwards of approximately \$153.4 million and \$4.1 million, respectively, which will begin to expire on December 31, 2034 for Federal and California purposes.

Utilization of the Company's net operating loss may be subject to substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code and similar state provisions. Such an annual limitation could result in the expiration of net operating loss carryforwards prior to utilization.

At December 31, 2022, the Company had research and development credits carryforward of approximately \$0.5 million and \$0.5 million for Federal and California income tax purposes, respectively. If not utilized, the Federal research and development credits carryforward will begin to expire on December 31, 2034. The California credits can be carried forward indefinitely.

The Company's policy is to account for interest and penalties as income tax expense. As of December 31, 2022, the Company had no interest related to unrecognized tax benefits. No amounts of penalties related to unrecognized tax benefits were recognized in the provision for income taxes.

The Company maintains liabilities for uncertain tax positions. These liabilities involve considerable judgement and estimation and are continuously monitored by management based on the best information available, including changes in tax regulations, the outcome of relevant court cases, and other information. The Company recognizes potential accrued interest and penalties related to unrecognized tax benefits as income tax expense. At December 31, 2022, the Company's total amount of unrecognized tax benefit was approximately \$0.3 million, none of which will affect the effective tax rate, if recognized. The Company does not expect its unrecognized benefits to change materially over the next twelve months.

The Company files income tax returns with the United States federal government and the State of California. The Company's tax returns for 2019, 2020 and 2021 remain open to audit for Federal and California purposes.

18. 401(k) Savings plan

The Company maintains a defined-contribution savings plan under Section 401(k) of the Internal Revenue Code (the "401(k) Plan"). The 401(k) Plan covers all employees who meet defined minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pretax or after tax basis. Beginning in January 2021, the Plan included a maximum of 4% employer matching contributions with immediate vesting. We recognized \$111,000 and \$71,000 of expenses related to employer contributions for the 401(k) savings plan during the years ended December 31, 2022 and 2021, respectively.

19. Subsequent events

On February 1, 2023, Aqua Metals Reno, Inc., our wholly-owned subsidiary, entered into a Loan Agreement with Summit Investment Services, LLC, a Nevada limited liability company (the "Lender"), pursuant to which the Lender provided us with a loan in the amount of \$3 million. The loan proceeds were used to purchase a building located at 2999 Waltham Way McCarran, NV 89434 (the "Building"). The loan accrues interest at a fixed annual rate of 9.50%. Interest-only payments are due monthly for the first twenty-four months and the principal and all unpaid interest is due on March 1, 2025. We have the right to prepay the loan at any time, provided that we must pay guaranteed minimum interest of \$213,750 (9-months of interest). The Loan Agreement includes representations, warranties, and affirmative and negative covenants that are customary of institutional loan agreements. The loan is collateralized by a first priority lien on the Building and site improvements, and is guaranteed by Aqua Metals, Inc.

On February 1, 2023, Aqua Metals Reno, Inc., our wholly-owned subsidiary, completed the purchase of a 21,000 square foot building, from an unaffiliated party, located on 2999 Waltham Way McCarran, Nevada 89434 for \$4.275 million.

The Company has evaluated subsequent events through the date which the consolidated financial statements were available to be issued. Based upon this review, the Company did not identify any other subsequent events that would have required adjustment or disclosure.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

(a) Evaluation of disclosure controls and procedures.

Our management, with the participation of our chief executive officer and chief financial officer evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Based upon that evaluation, our management, including our chief executive officer and chief financial officer, concluded that for the reasons described below our disclosure controls and procedures were effective as of December 31, 2022 in ensuring all material information required to be filed has been made known in a timely manner.

(b) Changes in internal control over financial reporting.

There were no changes to our internal control over financial reporting, as defined in Rules 13a-15(f) under the Exchange Act that occurred during the fiscal quarter ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

(c) Management’s report on internal controls over financial reporting.

Our management is responsible for establishing and maintaining adequate internal controls over financial reporting, as defined under Rule 13a-15(f) under the Exchange Act. Our management has assessed the effectiveness of our internal controls over financial reporting as of December 31, 2022 based on the framework established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”). Our internal control system was designed to provide reasonable assurance to our management and board of directors regarding the preparation and fair presentation of published financial statements. An internal control material weakness is a significant deficiency, or aggregation of deficiencies, that does not reduce to a relatively low level the risk that material misstatements in financial statements will be prevented or detected on a timely basis by employees in the normal course of their work. Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2022, and based on that evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2022.

This report does not include an attestation report of our registered public accounting firm regarding internal control over financial reporting. Management’s report was not subject to attestation by our registered public accounting firm pursuant to the rules of the Securities and Exchange Commission that permit us to provide only management’s report in this annual report.

Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

The information required by Part III is omitted from this report because we will file a definitive proxy statement within 120 days after the end of our 2022 fiscal year pursuant to Regulation 14A for our 2023 Annual Meeting of Stockholders, or the 2023 Proxy Statement, and the information to be included in the 2023 Proxy Statement is incorporated herein by reference.

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item will be contained in the 2023 Proxy Statement and is hereby incorporated by reference.

Item 11. Executive Compensation

The information required by this item will be contained in the 2023 Proxy Statement and is hereby incorporated by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this item will be contained in the 2023 Proxy Statement and is hereby incorporated by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item will be contained in the 2023 Proxy Statement and is hereby incorporated by reference.

Item 14. Principal Accountant Fees and Services

The information required by this item will be contained in the 2023 Proxy Statement and is hereby incorporated by reference.

PART IV**Item 15. Exhibits and Financial Statement Schedules**

(a) Financial statements

Reference is made to the Index and Financial Statements under Item 8 in Part II hereof where these documents are listed.

(b) Financial statement schedules

Financial statement schedules are either not required or the required information is included in the consolidated financial statements or notes thereto filed under Item 8 in Part II hereof.

(c) Exhibits

The exhibits to this Annual Report on Form 10-K are set forth below. The exhibit index indicates each management contract or compensatory plan or arrangement required to be filed as an exhibit.

Number	Exhibit Description	Method of Filing
3.1	First Amended and Restated Certificate of Incorporation of the Registrant	Incorporated by reference from the Registrant's Registration Statement on Form S-1 filed on June 9, 2015.
3.2	Third Amended and Restated Bylaws of the Registrant	Incorporated by reference from the Registrant's Current Report on Form 8-K filed on January 21, 2022.
3.3	Certificate of Amendment to First Amended and Restated Certificate of Incorporation of the Registrant	Incorporated by reference from the Registrant's Registration Statement on Form S-1 filed on June 25, 2015.
3.4	Certificate of Amendment to the First Amended and Restated Certificate of Incorporation	Incorporated by reference from the Registrant's Quarterly Report on Form 10-Q filed on May 9, 2019.
3.5	Certificate of Amendment to the First Amended and Restated Certificate of Incorporation	Incorporated by reference from the Registrant's Quarterly Report on Form 10-Q filed on July 21, 2022
4.1	Specimen Certificate representing shares of common stock of Registrant	Incorporated by reference from the Registrant's Registration Statement on Form S-1 filed on July 20, 2015.
4.9	Warrant dated January 22, 2019 issued to National Securities Corporation	Incorporated by reference from the Registrant's Current Report on Form 8-K filed January 17, 2019
4.10	Description of Capital Stock	Incorporated by reference from the Registrant's Annual Report on Form 10-K filed on February 25, 2022
10.1	Form of Indemnification Agreement entered into by the Registrant with its Officers and Directors	Incorporated by reference from the Registrant's Registration Statement on Form S-1 filed on June 9, 2015.
10.2*	Aqua Metals, Inc. Amended and Restated 2014 Stock Incentive Plan	Incorporated by reference from the Registrant's Proxy Statement on Form DEF 14A filed on April 24, 2017.
10.3	Lease Agreement dated August 7, 2015 between Registrant and with BSREP Marina Village Owner LLC	Incorporated by reference from the Registrant's Current Report on Form 8-K filed on August 27, 2015.
10.4*	Aqua Metals, Inc. Officer and Director Share Purchase Plan	Incorporated by reference from the Registrant's Quarterly Report on Form 10-Q filed on November 9, 2017.

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<u>10.5*</u>	<u>Employment Agreement dated May 2, 2018 between the Registrant and Stephen Cotton</u>	Incorporated by reference from the Registrant's Current Report on Form 8-K filed on May 2, 2018.
<u>10.6*</u>	<u>Employment Agreement dated November 4, 2018 between the Registrant and Judd Merrill</u>	Incorporated by reference from the Registrant's Annual Report on Form 10-K filed on February 28, 2019.
<u>10.7*</u>	<u>Employment Agreement dated August 9, 2021 between the Registrant and Benjamin Taecker</u>	Filed electronically herewith.
<u>10.8*</u>	<u>Employment Agreement dated August 9, 2021 between the Registrant and Dave McMurtry</u>	Filed electronically herewith.
<u>10.9*</u>	<u>Aqua Metals 2019 Stock Incentive Plan</u>	Incorporated by reference from the Registrant's Definitive Proxy Statement filed on March 4, 2019
<u>10.10*</u>	<u>Loan Agreement dated September 30, 2022 with Summit Investment Services, LLC</u>	Filed electronically herewith.
<u>21.1</u>	<u>List of subsidiaries of Registrant.</u>	Filed electronically herewith.
<u>23.1</u>	<u>Consent of Armanino LLP, Independent Registered Public Accounting Firm.</u>	Filed electronically herewith.
<u>31.1</u>	<u>Certification under Section 302 of the Sarbanes-Oxley Act of 2002.</u>	Filed electronically herewith.
<u>31.2</u>	<u>Certification under Section 302 of the Sarbanes-Oxley Act of 2002.</u>	Filed electronically herewith.
<u>32.1</u>	<u>Certifications Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350.</u>	Filed electronically herewith.
101.INS	Inline XBRL Instance Document	Filed electronically herewith
101.SCH	Inline XBRL Taxonomy Extension Schema Document	Filed electronically herewith
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document	Filed electronically herewith
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document	Filed electronically herewith
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document	Filed electronically herewith
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document	Filed electronically herewith
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).	Filed electronically herewith

* Indicates management compensatory plan, contract or arrangement.

+ Certain portions of the exhibit have been omitted pursuant to Registrant's confidential treatment request filed with the Commission pursuant to Rule 24b-2 under the Securities Exchange Act of 1934. The omitted text has been filed separately with the Commission.

Item 16. Form 10-K Summary

Not provided

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this annual report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

AQUA METALS, INC.

Date: March 9, 2023

By: /s/ Stephen Cotton
Stephen Cotton,
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Stephen Cotton</u> Stephen Cotton	President, Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	March 9, 2023
<u>/s/ Judd Merrill</u> Judd Merrill	Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>	March 9, 2023
<u>/s/Vincent L. DiVito</u> Vincent L. DiVito	Director, Chairman of the Board	March 9, 2023
<u>/s/David Kanen</u> David Kanen	Director	March 9, 2023
<u>/s/ Edward Smith</u> Edward Smith	Director	March 9, 2023
<u>/s/ Peifang Zhang</u> Peifang Zhang	Director	March 9, 2023

AQUA METALS, INC.

EXECUTIVE EMPLOYMENT AGREEMENT

THIS EXECUTIVE EMPLOYMENT AGREEMENT is entered into on July 22, 2022, to be effective on July 22, 2022 (*Effective Date*) between AQUA METALS, INC., a Delaware corporation ("*Company*"), and Dave McMurtry ("*Employee*").

1. EMPLOYMENT. Company hereby employs Employee in accordance with the terms of this Agreement and all the policies and procedures set forth in the Employee Handbook as in effect as of the date of this Agreement and as it may be modified or amended in the future ("*Employee Manual*"), and other Company policies or procedures currently in effect or subsequently implemented. Employee acknowledges that Employee is not employed for a specific term but is an at-will employee who may resign at any time without notice. Likewise, the Company may terminate the Employee at any time, with or without notice, and with or without cause or reason.

2. TITLE AND WORK RESPONSIBILITIES

2.1 Employee shall be employed hereunder as Chief Business Officer of Company effective as of the date of this Agreement.

2.2 As Chief Business Officer, Employee shall be responsible for the executive management of the commercial and business development departments of the Company and such other duties and responsibilities as are typically associated with such position or may be assigned to Employee by the Chief Executive Officers or the the Board of Directors. .

2.3 Work assignments are made at the exclusive discretion of the Company and the Company has the absolute right to assign Employee new or different job duties as deemed appropriate by the Company.

2.4 Employee's compensation and benefits under Sections 4.1 through 4.3 shall commence on the Effective Date.

3. EMPLOYEE'S OBLIGATIONS. Employee covenants and agrees, as a condition of accepting or continuing employment with the Company, to all the terms and conditions in the Employee Manual, as amended, other agreements executed by Employee and all Company policies, procedures and other agreements now in existence or hereafter implemented, including, without limitation, the duty to:

3.1 Comply with all Company policies and procedures as set forth in the Employee Manual, policy and procedure manuals, safety manuals and other sources;

3.2 Devote his full time and attention to meet the requirements set forth in the job description which objectives or duties may change from time to time;

3.3 Follow the direction and recommendations of Company management, including the Chief Executive Officer and the Board of Directors;

3.4 Refrain from investing in any direct competitor of the Company except that Employee may at any time own beneficially up to one (1%) of the stock of any competing corporation whose securities are listed on a national securities exchange or regularly traded in the national over-the-counter-market; and

3.5 To observe and comply at all times with the provisions of the Company's Insider Trading Policy (as amended, from time to time) and with every rule of law and every regulation in force in relation to dealings in stock, shares, debentures or other securities of the Company (including in relation to unpublished price sensitive information affecting such securities), in whatever jurisdiction, and to observe and comply with all laws and regulations of any stock exchange, market or dealing system in which such dealings take place.

4. COMPENSATION

4.1 **Salary.** The Employee will be paid an annual salary of Three Hundred and twenty Thousand Dollars (\$320,000). Salary shall be paid on a bi-weekly basis as adjusted from time to time. During employment, the Company will pay Employee the annual base salary in accordance with the terms of the Employee Manual less state and federal withholding and authorized deductions.

4.2 **Bonuses.** Employee shall be eligible to receive annual performance-based short-term incentive (STIP) bonuses of up to 50% of his then current salary based upon achievement of specific milestones established by the Compensation Committee ("Committee") of the Board in advance and at its discretion. The bonus shall be paid, at the Company's option, in cash or restricted stock units ("RSUs") under the Company's 2019 Stock Incentive Plan, as it may be amended from time to time, or any successor equity incentive plan ("Plan"). Employee shall be eligible to receive annual performance-based long-term incentive (LTIP) bonuses of up to 100% of his then current salary based upon achievement of specific milestones established by the Committee in advance and at its discretion. The LTIP bonus shall be paid in RSUs under the Plan.

4.3 **Benefits.** Employee shall be entitled to the insurance and employee benefits set forth in the Employee Manual and such other benefits that are made available generally to senior management of the Company ("**Benefits**"). The Company does not warrant that it will continue to offer the same or similar medical insurance benefits or other related Benefits in the future and reserves the right to modify, reduce or eliminate benefits at its sole discretion.

4.4 **Severance on Termination in the Event of a Change of Control.** The parties acknowledge having entered into that certain Change-of-Control Severance Agreement ("**Severance Agreement**") of even date herewith and Employee's rights to severance in accordance therewith. The Employee's rights under the Severance Agreement are in addition to his rights under this Agreement and shall survive any modification or termination of this Agreement.

4.5 **Sign on Equity Grant.** Employee shall be entitled to receive a one time sign on **Restricted Stock Units ("RSUs")** grant using the stock price on the date of hire, at the C-Suite level, which is **\$100,000**. All new-hire RSUs will be priced on the date of hire and will vest in 1/3rd annual installments over 3 years.

5. CONFIDENTIAL INFORMATION, NON DISCLOSURE, AND TRADE SECRETS AGREEMENT

5.1 Employee acknowledges having entered into that certain Confidential Information, Non-Disclosure, and Trade Secrets Agreement (“*Confidentiality Agreement*”) dated May XX, 2022 and attached hereto as Exhibit A to this Agreement. Employee acknowledges and agrees to strictly comply with the terms of Confidentiality Agreement during the term of this Agreement and following the termination of his employment with the Company, as provided for in the Confidentiality Agreement.

5.2 Employee shall not during his employment directly or indirectly render any services of a business, commercial or professional nature to any other person or organization, whether for compensation or otherwise, which would be in competition with the Company, or which would prevent Employee from rendering the agreed services to Company during the tenure of his employment.

6. TERMINATION.

6.1 Subject to Section 6.3, either party may terminate this Agreement at any time and for any reasons effective upon written notice to the other party.

6.2 Upon the termination of this Agreement, (i) the Company shall pay Employee all salary and unreimbursed expenses accrued through date of termination and (ii) Employee shall return all Company’s property such as cell phones, lap tops, or other tangible and intangible property including, without limitation, customer lists, manuals, contract forms, documents or any other tangible or intangible documents or information used by the Company in the Employee’s possession at the time of termination, in a manner consistent with Company policy.

6.3 All the obligations set forth in Sections 4, 5.1, 6 and 7 shall survive the termination of the Agreement and the termination of Employee’s employment with the Company.

7. MISCELLANEOUS

7.1 Notices. All notices required or permitted hereunder shall be in writing and deemed properly given when delivered in person to Employee or to a corporation officer of Company, as the case may be, or when deposited in the United States mail, postage prepaid and properly addressed to the party to be notified, if to Employee, to his residence, and if to Company, to its Secretary, at the home office, McCarran, Nevada, or to any such other address as shall have last been given by the party to be notified.

7.2 Parties Benefited. This Agreement shall inure to the benefit of, and be binding on Employee, his heirs, executors and administrators and on Company, its successors and assigns.

7.3 Assignments. This Agreement may be assigned at any time by Company to any related corporation or a successor corporation. In the event of such an assignment, the assignee corporation to which the Agreement is assigned shall automatically be substituted for the assignor Company for all intentions and purposes and to the same extent as if this assignee were the Company that had originally executed this Agreement. This is a personal contract and the Employee cannot assign or transfer all or any portion of the contract except that in the event of the Employee’s death the compensation due and owing the Employee can be paid in accordance with any assignment of death benefits.

7.4 Waiver. The waiver by either party of a default or a breach of any provision of this Agreement by the other party shall not operate or be construed as a waiver of any subsequent default or breach.

7.5 Modifications. The provisions of this Agreement shall constitute the entire agreement between the parties, with respect to the specific terms set forth herein, and may only be modified by an agreement in writing signed by the party against whom enforcement is sought. Modifications to this Agreement do not change or alter the at-will status of the Employee.

7.6 Construction of Agreement. This Agreement shall be construed consistently with the terms and conditions of all other Company policies and procedures, which are referenced in this Agreement. If there is any conflict with the terms of this Agreement and Company policy or procedure, this Agreement shall be interpreted to comply with Company policies or procedures.

7.7 Supersedes Prior Agreements. This Agreement and all the terms hereof supersede all prior employment agreements executed by Employee but shall be interpreted consistent with the Employee Manual and other policies and procedures of the Company. This Agreement will be interpreted independently of any and all agreements executed by Employee pertaining to equity awards. Nothing in this Agreement shall be deemed to modify or supersede the Confidentiality Agreement or the Severance Agreement.

7.8 Attorneys Fees. The prevailing party in any action brought to enforce this Agreement may recover reasonable attorneys' fees and costs including all costs and fees incurred in the preparation, trial and appeal of an action brought to enforce this Agreement.

7.9 Applicable Law. It is the intent of the parties that all provisions of this Agreement be enforced to the fullest extent permissible under the law and public policy of the state of Nevada, unless prohibited by law in which case this Agreement shall be enforced in accordance with the laws where the action for enforcement is filed. If any section is determined by a court of law to be unenforceable, that section shall be severed from the Agreement and the balance of the Agreement shall be enforced according to its terms.

8. EMPLOYEE CERTIFICATION. Employee hereby certifies that he has had an adequate opportunity to review, and understands all the terms and conditions of, this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be duly executed as of the day and year first above written.

EMPLOYEE

/s/ Dave McMurtry

Dave McMurtry

COMPANY

Aqua Metals, Inc.,
A Delaware corporation

By: /s/ Stephen Cotton

Stephen Cotton, President and CEO

CHANGE-OF-CONTROL SEVERANCE AGREEMENT

THIS CHANGE-OF-CONTROL SEVERANCE AGREEMENT ("*Agreement*") is entered into this 22nd day of July 2022 between Dave McMurtry ("**Employee**") and Aqua Metals, Inc., a Delaware corporation ("*Company*").

RECITALS

- A. The Company considers the retention of certain employees to be important to protecting and enhancing its best interests;
- B. The Company has determined that appropriate steps should be taken to reinforce and encourage the Employee's continued attention and dedication as an employee to his assigned duties without distraction in the face of potentially disruptive circumstances arising from the possibility of a change of control of the Company.

AGREEMENT

NOW THEREFORE, the parties, in consideration of the promises and the mutual covenants and agreements contained herein, mutually agree and covenant as follows:

SECTION 1. DEFINITIONS

The following words and terms used in this Agreement shall have the following meanings:

- 1.1 "Cause" shall have the meaning given to it in Section 2.3 of the Company's 2019 Stock Incentive Plan ("*Plan*").
 - 1.2 "Change of Control" shall have the meaning given to it in Section 2.4 of the Plan.
 - 1.3 "Date of Termination" means the date the Employee's employment is terminated by the Company without Cause or by the Employee with Good Reason, provided such termination constitutes a separation from service as defined in Section 409A of the U.S. Internal Revenue Code.
 - 1.4 "Disability" shall have the meaning given to it in Section 2.8 of the Plan.
 - 1.5 "Good Reason" means the continued occurrence of any of the following conditions without Employee's consent after the Employee has given the Company written notice of such condition within thirty (30) days following the initial existence of the condition, and the Company has failed to cure such condition within thirty (30) days of the date it received notice of the condition:
 - (a) A material reduction by the Company in the Employee's base salary as in effect immediately prior to the Change of Control; or
 - (b) The Company assigns to the Employee primary duties and responsibilities that are materially inconsistent with the Employee's primary duties and responsibilities immediately prior to the Change of Control; or
-

(c) The Company unilaterally relocating the Employee's principal location for performing services more than fifty (50) miles from the Employee's work location immediately prior to the Change of Control.

1.6 "Protected Period" means the 12-month period immediately following a Change of Control.

1.7 "Termination Benefit" means those benefits described in Section 2 of the Agreement.

SECTION 2. BENEFITS UPON TERMINATION OF EMPLOYMENT

2.1 General. If, during the Protected Period following a Change in Control, the Employee's employment is terminated either (i) by the Company (other than for Cause, Disability or death), or (ii) by the Employee for Good Reason, then the Employee (or his estate or personal representative), shall be entitled to the following Termination Benefits:

(a) The Company shall promptly pay the **Employee** his full base salary in effect at the time notice of termination is given ("**Salary**") through the Date of Termination, plus (i) any vacation earned but not taken, (ii) an additional 18 months Salary and (iii) 150% of Employee's target annual bonus incentive for the then current year; and

(b) The acceleration of vesting or settlement of all outstanding equity awards that are subject to the vesting, risk of forfeiture or settlement.

2.2 Except as otherwise provided under applicable law or a separate written agreement between Employee and the Company, the Employee shall not be entitled to any further termination payments, damages or compensation whatsoever.

2.3 The Company's obligation to make payments and benefits in Section 2.1 is conditioned upon Employee timely signing and returning to the Company (and not revoking) a release agreement in a form satisfactory to the Company (which shall include, but not be limited to, a full release of claims of Employee's claims against the Company) and on Employee's continued compliance with Employee's obligations to the Company that survive termination of his employment under his Executive Employment Agreement with the Company of even date herewith, including the Confidential Information, Non-Disclosure, and Trade Secrets Agreement referred to therein.

SECTION 3. MISCELLANEOUS

3.1 Notice. All notices, elections, waivers and all other communications provided for in this Agreement shall be in writing and shall be deemed to have been duly given when delivered or mailed by United States certified mail, return receipt requested, postage prepaid, to such address as either party may have furnished to the other in writing in accordance herewith, except that notices of change of address shall be effective only upon receipt.

3.2 No Waiver. No provision of this Agreement may be modified, waived or discharged unless such waiver, modification or discharge is agreed to in writing signed by the Employee and an authorized officer of the Company. No waiver by either party at any time of any breach by the other party of, or compliance with, any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time. No agreements or representations, oral or otherwise, express or implied, with respect to the subject matter hereof have been made by either party which are not set forth expressly in this Agreement.

- 3.3 Controlling Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Nevada.
- 3.4 Assignability. This Agreement, and benefits provided under it, may not be assigned by the Employee. Any benefits otherwise payable to the Employee that have not been paid at Employee's death will be paid to Employee's designee or, if there is no such designee, to his estate. Without in any way limiting the rights of the Company to assign this Agreement, it is expressly understood and agreed that the Company shall have the right to assign this Agreement to any other entity to which the business of the Company is transferred, in whole or in part, which thereafter carries on the business of the Company.
- 3.5 Modification of Agreement. Any modification to this Agreement must be in writing and signed by the parties or it shall have no effect and shall be void.
- 3.6 Taxes. All payments under this Agreement shall be subject to withholding of such amounts, if any, relating to tax or other payroll deductions as the Company may reasonably determine should be withheld pursuant to any applicable law or regulation.

IN WITNESS WHEREOF, the parties have entered into this Agreement as of the date first set forth above.

"COMPANY"

AQUA METALS, INC.
a Delaware corporation

By: /s/ Stephen Cotton
Stephen Cotton, President and CEO

"EMPLOYEE"

/s/ Dave McMurtry
Dave McMurtry

AQUA METALS, INC.

EXECUTIVE EMPLOYMENT AGREEMENT

THIS EXECUTIVE EMPLOYMENT AGREEMENT is entered into on August 9, 2021, to be effective on August 1, 2021 ("**Effective Date**") between AQUA METALS, INC., a Delaware corporation ("**Company**"), and Benjamin Tarcker ("**Employee**").

1. EMPLOYMENT. Company hereby employs Employee in accordance with the terms of this Agreement and all the policies and procedures set forth in the Employee Handbook as in effect as of the date of this Agreement and as it may be modified or amended in the future ("**Employee Manual**"), and other Company policies or procedures currently in effect or subsequently implemented. Employee acknowledges that Employee is not employed for a specific term but is an at-will employee who may resign at any time without notice. Likewise, the Company may terminate the Employee at any time, with or without notice, and with or without cause or reason.

2. TITLE AND WORK RESPONSIBILITIES

2.1 Employee shall be employed hereunder as Chief Engineering and Operating Officer of Company effective as of the date of this Agreement.

2.2 As Chief Engineering and Operating Officer, Employee shall be responsible for the executive management of the operations, engineering and research and development departments of the Company and such other duties and responsibilities as are typically associated with such position or may be assigned to Employee by the Chief Executive Officers or the the Board of Directors. .

2.3 Work assignments are made at the exclusive discretion of the Company and the Company has the absolute right to assign Employee new or different job duties as deemed appropriate by the Company.

2.4 Employee's compensation and benefits under Sections 4.1 through 4.3 shall commence on the Effective Date.

3. EMPLOYEE'S OBLIGATIONS. Employee covenants and agrees, as a condition of accepting or continuing employment with the Company, to all the terms and conditions in the Employee Manual, as amended, other agreements executed by Employee and all Company policies, procedures and other agreements now in existence or hereafter implemented, including, without limitation, the duty to:

3.1 Comply with all Company policies and procedures as set forth in the Employee Manual, policy and procedure manuals, safety manuals and other sources;

3.2 Devote his full time and attention to meet the requirements set forth in the job description which objectives or duties may change from time to time;

3.3 Follow the direction and recommendations of Company management, including the Chief Executive Officer and the Board of Directors;

3.4 Refrain from investing in any direct competitor of the Company except that Employee may at any time own beneficially up to one (1%) of the stock of any competing corporation whose securities are listed on a national securities exchange or regularly traded in the national over-the-counter-market; and

3.5 To observe and comply at all times with the provisions of the Company's Insider Trading Policy (as amended, from time to time) and with every rule of law and every regulation in force in relation to dealings in stock, shares, debentures or other securities of the Company (including in relation to unpublished price sensitive information affecting such securities), in whatever jurisdiction, and to observe and comply with all laws and regulations of any stock exchange, market or dealing system in which such dealings take place.

4. COMPENSATION

4.1 **Salary.** The Employee will be paid an annual salary of Two Hundred Fifty Thousand Dollars (\$250,000). Salary shall be paid on a bi-weekly basis as adjusted from time to time. During employment, the Company will pay Employee the annual base salary in accordance with the terms of the Employee Manual less state and federal withholding and authorized deductions.

4.2 **Bonuses.** Employee shall be eligible to receive annual performance-based short-term incentive (STIP) bonuses of up to 50% of his then current salary based upon achievement of specific milestones established by the Compensation Committee ("Committee") of the Board in advance and at its discretion. The bonus shall be paid, at the Company's option, in cash or restricted stock units ("RSUs") under the Company's 2019 Stock Incentive Plan, as it may be amended from time to time, or any successor equity incentive plan ("Plan"). Employee shall be eligible to receive annual performance-based long-term incentive (LTIP) bonuses of up to 100% of his then current salary based upon achievement of specific milestones established by the Committee in advance and at its discretion. The LTIP bonus shall be paid in RSUs under the Plan.

4.3 **Benefits.** Employee shall be entitled to the insurance and employee benefits set forth in the Employee Manual and such other benefits that are made available generally to senior management of the Company ("**Benefits**"). The Company does not warrant that it will continue to offer the same or similar medical insurance benefits or other related Benefits in the future and reserves the right to modify, reduce or eliminate benefits at its sole discretion.

4.4 **Severance on Termination in the Event of a Change of Control.** The parties acknowledge having entered into that certain Change-of-Control Severance Agreement ("**Severance Agreement**") of even date herewith and Employee's rights to severance in accordance therewith. The Employee's rights under the Severance Agreement are in addition to his rights under this Agreement and shall survive any modification or termination of this Agreement.

5. CONFIDENTIAL INFORMATION, NON DISCLOSURE, AND TRADE SECRETS AGREEMENT

5.1 Employee acknowledges having entered into that certain Confidential Information, Non-Disclosure, and Trade Secrets Agreement ("**Confidentiality Agreement**") dated March 3, 2020 and attached hereto as Exhibit A to this Agreement. Employee acknowledges and agrees to strictly comply with the terms of Confidentiality Agreement during the term of this Agreement and following the termination of his employment with the Company, as provided for in the Confidentiality Agreement.

5.2 Employee shall not during his employment directly or indirectly render any services of a business, commercial or professional nature to any other person or organization, whether for compensation or otherwise, which would be in competition with the Company, or which would prevent Employee from rendering the agreed services to Company during the tenure of his employment.

6. TERMINATION.

6.1 Subject to Section 6.3, either party may terminate this Agreement at any time and for any reasons effective upon written notice to the other party.

6.2 Upon the termination of this Agreement, (i) the Company shall pay Employee all salary and unreimbursed expenses accrued through date of termination and (ii) Employee shall return all Company's property such as cell phones, lap tops, or other tangible and intangible property including, without limitation, customer lists, manuals, contract forms, documents or any other tangible or intangible documents or information used by the Company in the Employee's possession at the time of termination, in a manner consistent with Company policy.

6.3 All the obligations set forth in Sections 4, 5.1, 6 and 7 shall survive the termination of the Agreement and the termination of Employee's employment with the Company.

7. MISCELLANEOUS

7.1 **Notices.** All notices required or permitted hereunder shall be in writing and deemed properly given when delivered in person to Employee or to a corporation officer of Company, as the case may be, or when deposited in the United States mail, postage prepaid and properly addressed to the party to be notified, if to Employee, to his residence, and if to Company, to its Secretary, at the home office, McCarran, Nevada, or to any such other address as shall have last been given by the party to be notified.

7.2 **Parties Benefited.** This Agreement shall inure to the benefit of, and be binding on Employee, his heirs, executors and administrators and on Company, its successors and assigns.

7.3 **Assignments.** This Agreement may be assigned at any time by Company to any related corporation or a successor corporation. In the event of such an assignment, the assignee corporation to which the Agreement is assigned shall automatically be substituted for the assignor Company for all intentions and purposes and to the same extent as if this assignee were the Company that had originally executed this Agreement. This is a personal contract and the Employee cannot assign or transfer all or any portion of the contract except that in the event of the Employee's death the compensation due and owing the Employee can be paid in accordance with any assignment of death benefits.

7.4 **Waiver.** The waiver by either party of a default or a breach of any provision of this Agreement by the other party shall not operate or be construed as a waiver of any subsequent default or breach.

7.5 Modifications. The provisions of this Agreement shall constitute the entire agreement between the parties, with respect to the specific terms set forth herein, and may only be modified by an agreement in writing signed by the party against whom enforcement is sought. Modifications to this Agreement do not change or alter the at-will status of the Employee.

7.6 Construction of Agreement. This Agreement shall be construed consistently with the terms and conditions of all other Company policies and procedures, which are referenced in this Agreement. If there is any conflict with the terms of this Agreement and Company policy or procedure, this Agreement shall be interpreted to comply with Company policies or procedures.

7.7 Supersedes Prior Agreements. This Agreement and all the terms hereof supersede all prior employment agreements executed by Employee but shall be interpreted consistent with the Employee Manual and other policies and procedures of the Company. This Agreement will be interpreted independently of any and all agreements executed by Employee pertaining to equity awards. Nothing in this Agreement shall be deemed to modify or supersede the Confidentiality Agreement or the Severance Agreement.

7.8 Attorneys Fees. The prevailing party in any action brought to enforce this Agreement may recover reasonable attorneys' fees and costs including all costs and fees incurred in the preparation, trial and appeal of an action brought to enforce this Agreement.

7.9 Applicable Law. It is the intent of the parties that all provisions of this Agreement be enforced to the fullest extent permissible under the law and public policy of the state of Nevada, unless prohibited by law in which case this Agreement shall be enforced in accordance with the laws where the action for enforcement is filed. If any section is determined by a court of law to be unenforceable, that section shall be severed from the Agreement and the balance of the Agreement shall be enforced according to its terms.

8. EMPLOYEE CERTIFICATION. Employee hereby certifies that he has had an adequate opportunity to review, and understands all the terms and conditions of, this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be duly executed as of the day and year first above written.

EMPLOYEE

/s/ Benjamin Taecker
Benjamin Taecker

COMPANY

Aqua Metals, Inc.,
A Delaware corporation

By: /s/ Stephen Cotton
Stephen Cotton, President and CEO

CHANGE-OF-CONTROL SEVERANCE AGREEMENT

THIS CHANGE-OF-CONTROL SEVERANCE AGREEMENT ("*Agreement*") is entered into this 9th day of August 2021 between Benjamin Taecker ("**Employee**") and Aqua Metals, Inc., a Delaware corporation ("*Company*").

RECITALS

- A. The Company considers the retention of certain employees to be important to protecting and enhancing its best interests;
- B. The Company has determined that appropriate steps should be taken to reinforce and encourage the Employee's continued attention and dedication as an employee to his assigned duties without distraction in the face of potentially disruptive circumstances arising from the possibility of a change of control of the Company.

AGREEMENT

NOW THEREFORE, the parties, in consideration of the promises and the mutual covenants and agreements contained herein, mutually agree and covenant as follows:

SECTION 1. DEFINITIONS

The following words and terms used in this Agreement shall have the following meanings:

- 1.1** "Cause" shall have the meaning given to it in Section 2.3 of the Company's 2019 Stock Incentive Plan ("*Plan*").
- 1.2** "Change of Control" shall have the meaning given to it in Section 2.4 of the Plan.
- 1.3** "Date of Termination" means the date the Employee's employment is terminated by the Company without Cause or by the Employee with Good Reason, provided such termination constitutes a separation from service as defined in Section 409A of the U.S. Internal Revenue Code.
- 1.4** "Disability" shall have the meaning given to it in Section 2.8 of the Plan.
- 1.5** "Good Reason" means the continued occurrence of any of the following conditions without Employee's consent after the Employee has given the Company written notice of such condition within thirty (30) days following the initial existence of the condition, and the Company has failed to cure such condition within thirty (30) days of the date it received notice of the condition:
- (a) A material reduction by the Company in the Employee's base salary as in effect immediately prior to the Change of Control; or
 - (b) The Company assigns to the Employee primary duties and responsibilities that are materially inconsistent with the Employee's primary duties and responsibilities immediately prior to the Change of Control; or
-

(c) The Company unilaterally relocating the Employee's principal location for performing services more than fifty (50) miles from the Employee's work location immediately prior to the Change of Control.

1.6 "Protected Period" means the 12-month period immediately following a Change of Control.

1.7 "Termination Benefit" means those benefits described in Section 2 of the Agreement.

SECTION 2. BENEFITS UPON TERMINATION OF EMPLOYMENT

2.1 General. If, during the Protected Period following a Change in Control, the Employee's employment is terminated either (i) by the Company (other than for Cause, Disability or death), or (ii) by the Employee for Good Reason, then the Employee (or his estate or personal representative), shall be entitled to the following Termination Benefits:

(a) The Company shall promptly pay the **Employee** his full base salary in effect at the time notice of termination is given ("**Salary**") through the Date of Termination, plus (i) any vacation earned but not taken, (ii) an additional 18 months Salary and (iii) 150% of Employee's target annual bonus incentive for the then current year; and

(b) The acceleration of vesting or settlement of all outstanding equity awards that are subject to the vesting, risk of forfeiture or settlement.

2.2 Except as otherwise provided under applicable law or a separate written agreement between Employee and the Company, the Employee shall not be entitled to any further termination payments, damages or compensation whatsoever.

2.3 The Company's obligation to make payments and benefits in Section 2.1 is conditioned upon Employee timely signing and returning to the Company (and not revoking) a release agreement in a form satisfactory to the Company (which shall include, but not be limited to, a full release of claims of Employee's claims against the Company) and on Employee's continued compliance with Employee's obligations to the Company that survive termination of his employment under his Executive Employment Agreement with the Company of even date herewith, including the Confidential Information, Non-Disclosure, and Trade Secrets Agreement referred to therein.

SECTION 3. MISCELLANEOUS

3.1 Notice. All notices, elections, waivers and all other communications provided for in this Agreement shall be in writing and shall be deemed to have been duly given when delivered or mailed by United States certified mail, return receipt requested, postage prepaid, to such address as either party may have furnished to the other in writing in accordance herewith, except that notices of change of address shall be effective only upon receipt.

3.2 No Waiver. No provision of this Agreement may be modified, waived or discharged unless such waiver, modification or discharge is agreed to in writing signed by the Employee and an authorized officer of the Company. No waiver by either party at any time of any breach by the other party of, or compliance with, any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time. No agreements or representations, oral or otherwise, express or implied, with respect to the subject matter hereof have been made by either party which are not set forth expressly in this Agreement.

3.3 Controlling Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Nevada.

3.4 Assignability. This Agreement, and benefits provided under it, may not be assigned by the Employee. Any benefits otherwise payable to the Employee that have not been paid at Employee's death will be paid to Employee's designee or, if there is no such designee, to his estate. Without in any way limiting the rights of the Company to assign this Agreement, it is expressly understood and agreed that the Company shall have the right to assign this Agreement to any other entity to which the business of the Company is transferred, in whole or in part, which thereafter carries on the business of the Company.

3.5 Modification of Agreement. Any modification to this Agreement must be in writing and signed by the parties or it shall have no effect and shall be void.

3.6 Taxes. All payments under this Agreement shall be subject to withholding of such amounts, if any, relating to tax or other payroll deductions as the Company may reasonably determine should be withheld pursuant to any applicable law or regulation.

3.7 Supersedes Prior Agreements. This Agreement and all the terms hereof supersede the Change of Control Agreement executed by Employee on April 15, 2019 but shall be interpreted consistent with the Employee Manual and other policies and procedures of the Company. This Agreement will be interpreted independently of any and all agreements executed by Employee pertaining to equity awards. Nothing in this Agreement shall be deemed to modify or supersede the Confidentiality Agreement or Executive Employment Agreement dated August 9, 2021.

IN WITNESS WHEREOF, the parties have entered into this Agreement as of the date first set forth above.

"COMPANY"

AQUA METALS, INC.
a Delaware corporation

By: /s/ Stephen Cotton
Stephen Cotton, President and CEO

"EMPLOYEE"

/s/ Benjamin Taecker
Benjamin Taecker

LOAN AGREEMENT

THIS LOAN AGREEMENT (this "Agreement") is entered into to be effective as of September 29, 2022, by and between **SUMMIT INVESTMENT SERVICES, LLC, a Nevada limited liability company as to an undivided 90.8334% interest, DARREN MCBRIDE, TRUSTEE OF THE ARDUINO 1 TRUST, U/A DATED APRIL 25, 2022, as to an undivided 8.3333% interest and JASON YELOWITZ, TRUSTEE OF THE JASON YELOWITZ 2006 TRUST, DATED MARCH 31, 2006, as to an undivided .8333% interest (collectively "Lender") and AQUA METALS RENO, INC., a Delaware corporation ("Borrower").**

RECITALS

Borrower has requested that Lender extend credit to Borrower as described below, and Lender has agreed to provide such credit to Borrower on the terms and conditions contained herein.

NOW, THEREFORE, for valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Lender and Borrower hereby agree as follows:

ARTICLE I
CREDIT TERMS

SECTION 1.1. TERM LOAN.

(a) Generally. Subject to the terms and conditions of this Agreement, Lender hereby agrees to make a loan to Borrower in the principal amount of Six Million and 00/100ths Dollars (\$6,000,000.00) ("Term Loan"), which shall be secured by certain real property located in Storey County, Nevada, more particularly described in Exhibit "A" attached hereto and incorporated herein by this reference (referred to herein as the "Property"). Borrower's obligation to repay the Term Loan shall be evidenced by that certain Promissory Note dated of even date herewith ("Note"), all terms of which are incorporated herein by this reference.

(b) Repayment. The principal amount of the Term Loan and interest accrued thereon shall be repaid in accordance with the provisions of the Note.

(c) Prepayment. Subject to Borrower's payment to Lender of minimum guaranteed interest in the amount of Two Hundred Fifty-Five Thousand and 00/100ths Dollars (\$255,000.00) ("Guaranteed Minimum Interest"), Borrower may prepay principal on the Note without fee. To the extent applicable, Borrower hereby expressly (i) waives any right it may have to prepay this Note in whole or in part, without fee or payment of Guaranteed Minimum Interest charge, upon acceleration of the Maturity Date; and (ii) agrees that if a prepayment of any or all of this Note is made, following any acceleration of the Maturity Date by Lender on account of any transfer or disposition prohibited or restricted herein or by the Loan Documents (defined below), Borrower shall be obligated to pay, concurrently therewith, the Guaranteed Minimum Interest.

(d) Loan Documents. The Note shall be secured by, among other things, a deed of trust ("Deed of Trust") encumbering the Property. This Agreement, the Note, the Deed of Trust, Guarantees, Security Agreement, UCC Financing Statement, Assignment of Leases and Rents, and any and all other documents now or hereafter executed by Borrower and any other person or party in connection with or to evidence or secure payment of the Loan, as the same may be amended, restated, modified or supplemented from time to time, are collectively referred to herein as the "Loan Documents." As used herein, and in the Loan Documents, the term "Loan" shall mean the principal sum of the Loan, all interest thereon, and all sums due, owing and payable to Lender under the Loan Documents. As used herein and in the other Loan Documents, the term "material adverse effect" shall mean an event that could reasonably be expected to have a material adverse effect on the financial condition or business of Borrower and/or Borrower's ability to repay the Loan.

SECTION 1.2. INTEREST/FEES.

(a) Interest. The outstanding principal balance of the Note shall bear interest at the rate, and on the terms and conditions, set forth in the Note. Interest shall begin to accrue on amounts disbursed at the time Lender advances any portion of the Loan.

(b) Computation and Payment. Interest under the Note shall be computed on the basis of a 360-day year, actual days elapsed. Interest shall be payable at the times and place set forth in the Note.

SECTION 1.3. COLLATERAL.

As security for all indebtedness and other obligations of Borrower to Lender, Borrower shall grant to Lender a first priority lien on the Property in the full amount of the loan.

The foregoing shall be evidenced by and subject to the terms of such security agreements, financing statements, deeds or mortgages, and other documents as Lender shall reasonably require, all in form and substance satisfactory to Lender. Borrower shall pay to Lender immediately upon demand the full amount of all charges, costs and expenses (to include fees paid to third parties and all allocated costs of Lender personnel), expended or incurred by Lender in connection with any of the foregoing security, including without limitation, filing and recording fees and costs of appraisals, audits and title insurance.

ARTICLE II
REPRESENTATIONS AND WARRANTIES

Borrower makes the following representations and warranties to Lender, which representations and warranties shall survive the execution of this Agreement and shall continue in full force and effect until the full and final payment, and satisfaction and discharge, of all obligations of Borrower to Lender subject to this Agreement.

SECTION 2.1. LEGAL STATUS. If Borrower or any signatory who signs on its behalf is a corporation, limited liability company, partnership, or trust, that it is duly organized and validly existing and in good standing under the laws of the state of its incorporation or organization and duly qualified to do business in the State of Nevada (if required), and is qualified or licensed to do business (and is in good standing as a foreign limited liability company, if applicable) in all other jurisdictions in which such qualification or licensing is required or in which the failure to so qualify or to be so licensed could have a material adverse effect on Borrower.

SECTION 2.2. AUTHORIZATION AND VALIDITY. This Agreement and each Loan Document required hereby or at any time hereafter delivered to Lender in connection herewith have been duly authorized, and upon their execution and delivery in accordance with the provisions hereof will constitute legal, valid and binding agreements and obligations of Borrower or the party which executes the same, enforceable in accordance with their respective terms.

SECTION 2.3 COMMERCIAL LOAN. Borrower hereby acknowledges and agrees that Lender is extending the Term Loan for commercial purposes as an investment.

SECTION 2.4. NO VIOLATION. The execution, delivery and performance by Borrower of each of the Loan Documents do not violate any provision of any law or regulation, nor contravene any provision of any articles of organization, charter, operating agreement, or similar organizational and operational documents applicable to Borrower, nor result in any breach of or default under any contract, obligation, indenture or other instrument to which Borrower is a party or by which Borrower or the Property may be bound, except to the extent that the foregoing could not reasonably result in a material adverse effect

SECTION 2.5. LITIGATION. There are no pending or, to the knowledge of Borrower, threatened actions, claims, investigations, suits or proceedings by or before any governmental authority, arbitrator, court or administrative agency which could have a material adverse effect other than those disclosed by Borrower to Lender in writing prior to the date hereof.

SECTION 2.6. CORRECTNESS OF FINANCIAL STATEMENT. The most recent financial statements of Borrower or regarding Borrower delivered to Lender, if any, (a) are true, complete, and correct and present fairly the financial condition of Borrower in all material respects, and (b) disclose all liabilities of Borrower, whether liquidated or unliquidated, fixed or contingent. Since the dates of such financial statements there has been no material adverse change in the financial condition of Borrower, nor has Borrower mortgaged, pledged, granted a security interest in or otherwise encumbered any of its assets or properties except in favor of Lender or as otherwise permitted by Lender in writing.

SECTION 2.7. INCOME TAX RETURNS. Borrower has no knowledge of any pending assessments or adjustments of its income tax payable with respect to any year.

SECTION 2.8. NO SUBORDINATION. There is no agreement, indenture, contract or instrument to which Borrower is a party or by which Borrower may be bound that requires the subordination in right of payment of any of Borrower's obligations subject to this Agreement to any other obligation of Borrower.

SECTION 2.9. PERMITS, FRANCHISES. Borrower possesses, and will hereafter possess, all permits, land use entitlements, consents, approvals, and licenses to enable it to own the Property and put it to its current use in compliance with applicable law in all material respects.

SECTION 2.10. OTHER OBLIGATIONS. Borrower is not in default on any obligation for borrowed money, any purchase money obligation or any other material lease, commitment, contract, instrument or obligation, except to the extent that the foregoing could not reasonably result in a material adverse effect.

SECTION 2.11. ENVIRONMENTAL MATTERS. Except as disclosed in writing by Borrower to Lender prior to the date hereof, including, without limitation, as set forth in the Summary of Lead Decontamination Cleaning, and Sampling Activities, Aqua Metals, 2500 Peru Drive, McCarran, Nevada, 89434, dated September 26, 2022, prepared by McGinley & Associates(the "Environmental Reports"), Borrower is in compliance in all material respects with all applicable federal or state environmental, hazardous waste, health and safety statutes, and any rules or regulations adopted pursuant thereto, which govern or affect any of Borrower's operations and/or properties, including without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, the Superfund Amendments and Reauthorization Act of 1986, the Federal Resource Conservation and Recovery Act of 1976, and the Federal Toxic Substances Control Act, as any of the same may be amended, modified or supplemented from time to time, and the Property is not located in a Flood Risk Zone as defined in the Flood Disaster Protection Act of 1973. Except as disclosed in writing by Borrower to Lender prior to the date hereof, including, without limitation, as set forth in the Environmental Reports, none of the operations of Borrower is the subject of any federal or state investigation evaluating whether any remedial action involving a material expenditure is needed to respond to a release of any toxic or hazardous waste or substance into the environment. Borrower has no material contingent liability in connection with any release of any toxic or hazardous waste or substance into the environment.

SECTION 2.12 USE OF PROCEEDS. The loan proceeds shall be used solely as a bridge loan for business operations.

SECTION 2.13. REAL PROPERTY COLLATERAL. Except as disclosed by Borrower to Lender in writing prior to the date hereof, with respect to the Property:

(a) All taxes, governmental assessments, insurance premiums, and water, sewer and municipal charges, and rents (if any) which previously became due and owing in respect thereof have been paid prior to delinquency as of the date hereof.

(b) There are no mechanics' or similar liens or claims which have been filed for work, labor or material (and no rights are outstanding that under law could give rise to any such lien) which affect all or any interest in any such real property and which are or may be prior to or equal to the lien thereon in favor of Lender.

(c) None of the improvements which were included for purpose of determining the value of the Property lies outside of the boundaries and/or building restriction lines thereof, and no improvements on adjoining properties materially encroach upon the Property.

(d) There is no pending, or to the best of Borrower's knowledge threatened, proceeding for the total or partial condemnation of all or any portion of the Property, and the Property is in good repair and free and clear of any damage that would materially and adversely affect the value thereof as security and/or the intended use thereof.

(e) The Property is not subject to any right of possession in favor of any third party other than that certain lease made by and between Borrower, as Landlord, and Linico Corporation, as Tenant, dated February 15, 2021.

SECTION 2.14. DOCUMENTS AND OTHER INFORMATION. All documents and other information delivered to Lender pursuant to any of the Loan Documents are and will be complete and correct in all material respects at the time of delivery to Lender.

SECTION 2.15. ESTOPPEL CERTIFICATES. Borrower shall, from time to time, within ten (10) days after request of Lender, execute and deliver an estoppel certificate, in form and content reasonably acceptable to Lender, certifying (a) the amount of the original principal amount of the Loan; (b) the rate of interest thereon; (c) the unpaid principal amount of the Loan; (d) the dates installments of interest and principal were last paid; (e) any offsets or defenses to repayment of the Loan (if any); and (f) that this Agreement, the Deed of Trust and all other Loan Documents are valid, binding and enforceable obligations of Borrower that have not been modified or, if modified, setting forth the particulars thereof.

SECTION 2.16. EMBARGOED PERSON. None of the funds or assets of Guarantor or Borrower constitute property of, or are beneficially owned directly or, to each Borrower's best knowledge, indirectly, by any Embargoed Person (which means a person identified on (A) the "List of Specially Designated Nationals and Blocked Persons" maintained by the Office of Foreign Assets Control ("**OFAC**"), U.S. Department of the Treasury's FINCEN list, and/or on any other similar list maintained by OFAC or FINCEN pursuant to any authorizing statute including, the International Emergency Economic Powers Act, 50 U.S.C. §§ 1701 et seq., The Trading with the Enemy Act, 50 U.S.C. App. 1 et seq., and any Executive Order or regulation promulgated thereunder). No Embargoed Person has any direct interest, and to each Borrower's best knowledge, as of the date hereof, based upon reasonable inquiry by such Borrower, indirect interest, of any nature whatsoever in any Borrower or any Guarantor, as applicable, with the result that the investment in any Borrower or any Guarantor, as applicable (whether directly or indirectly), is prohibited by any Legal Requirement or the Loan is in violation of any Legal Requirement. No Borrower nor any constituent member of Borrower has been previously indicted for or convicted of any Patriot Act Offense, or is currently under investigation by any Governmental Authority with respect to any alleged Patriot Act Offense.

SECTION 2.17. ANTI-MONEY LAUNDERING. None of the funds of Borrower, Member or Guarantor, as applicable, that are used to consummate this transaction or to operate the Property are derived from or are the proceeds of any unlawful activity, with the result that the investment in Borrower, Member or Guarantor, as applicable (whether directly or indirectly), is prohibited by law or the Loan is in violation of law or may cause any of the Property to be subject to forfeiture or seizure. Borrower has ascertained the identity of all persons and entities who have provided funds to capitalize Borrower and has conducted verification procedures which are sufficient to establish the identity and source of such funds.

ARTICLE III
CONDITIONS AND DISBURSEMENT

SECTION 3.1. INITIAL EXTENSION OF CREDIT. The obligation of Lender to extend any credit contemplated by this Agreement is subject to the fulfillment to Lender's satisfaction of all the conditions listed in **Exhibit B** attached hereto and incorporated herein by reference.

SECTION 3.2 DISBURSEMENT. Once all conditions have been satisfied, the proceeds of the Term Loan, when qualified for disbursement, shall be disbursed by Lender to Borrower in immediately available funds. Lender has no obligation to monitor or determine Borrower's use or application of the disbursements.

ARTICLE IV
AFFIRMATIVE COVENANTS

Borrower covenants that until payment in full of all obligations of Borrower subject hereto, Borrower shall, unless Lender otherwise consents in writing:

SECTION 4.1. PUNCTUAL PAYMENTS. Punctually pay all principal, interest, fees or other liabilities due under any of the Loan Documents at the times and place and in the manner specified therein, and immediately upon demand by Lender, the amount by which the outstanding principal balance of any credit subject hereto at any time exceeds any limitation on borrowings applicable thereto.

SECTION 4.2. ACCOUNTING RECORDS. Maintain adequate books and records in accordance with generally accepted accounting principles and consistently applied practice, and permit any representative of Lender, during normal business hours upon reasonable request (or at any time during the existence of an Event of Default), to inspect, audit and examine such books and records, to make extracts thereof and copies of the same, and to inspect the properties of Borrower.

SECTION 4.3. BUSINESS CONTINUITY. Conduct its business in substantially the same manner and locations as such business is now and has previously been conducted, and Borrower shall not change its name.

SECTION 4.4. TAX RETURNS. Within a reasonable time of receipt of a request from Lender, provide to Lender, in form and detail satisfactory to Lender, within 30 days of filing or by November 15th of each year, whichever is earlier, complete copies of Borrower's federal tax returns, together with all schedules thereto, including, without limitation all K-1 statements, each of which shall be signed and certified by Borrower to be true and complete copies of such returns.

SECTION 4.5. FINANCIAL INFORMATION. Within a reasonable time of receipt of a request from Lender, provide to Lender promptly, in form and detail satisfactory to Lender, such information regarding the business affairs and financial condition of Borrower which Lender may reasonably request, including, without limitation, tax returns (and all schedules thereto), tax information regarding the Property, and financial statements of Borrower.

SECTION 4.6. COMPLIANCE. Preserve and maintain all licenses, permits, governmental approvals, rights, privileges and franchises necessary for the conduct of its business or operation of the Property; and comply with the provisions of all documents pursuant to which Borrower is organized and/or which govern Borrower's continued existence and with the requirements of all laws, rules, regulations and orders of any governmental authority applicable to Borrower, its business, and/or the Property, except to the extent that the failure to comply with the foregoing could not reasonably result in a material adverse effect.

SECTION 4.7. INSURANCE. Maintain and keep in force insurance of the types and in amounts customarily carried by persons or entities with similar assets, including but not limited to extended coverage, public liability, flood (if in a designated flood zone), property damage and workers' compensation, with all such insurance carried with companies and in amounts satisfactory to Lender, naming Lender as loss payee or additional insured, if and as Lender may require, and deliver to Lender from time to time at Lender's request schedules setting forth all insurance then in effect.

SECTION 4.8. TAXES AND OTHER LIABILITIES. Pay and discharge prior to delinquency any and all indebtedness, obligations, assessments and taxes, both real or personal, including without limitation federal and state income taxes and state and local property taxes and assessments, except (a) such as Borrower may in good faith contest or as to which a bona fide dispute may arise, and (b) for which Borrower has made provision, to Lender's satisfaction, for eventual payment thereof in the event Borrower is obligated to make such payment.

SECTION 4.9. NOTICE OF DEFAULT AND OTHER NOTICES.

(a) Notice of Default. Furnish to Lender promptly upon becoming aware of the existence of any condition or event which constitutes an Event of Default (as defined in the Loan Documents) or any event which, upon the giving of notice or lapse of time or both, may become an Event of Default, written notice specifying the nature and period of existence thereof and the action which Borrower is taking or proposes to take with respect thereto.

(b) Other Notices. Promptly notify Lender in writing of (i) any material adverse change in Borrower's financial condition, its business, or the Property; (ii) any material default under any material agreement, contract or other instrument to which Borrower is a party or by which any of its properties are bound, or any acceleration of the maturity of any indebtedness owing by Borrower; (iii) any material adverse claim against or affecting Borrower or any part of its properties; (iv) the commencement of, and any material determination in, any litigation with any third party or any proceeding before any governmental agency or unit affecting Borrower; (v) at least 30 days prior thereto, any change in Borrower's name or address as shown herein, and/or any change in Borrower's structure; and (vi) any termination or cancellation of any insurance policy which Borrower is required to maintain, or any uninsured or partially uninsured loss through liability or property damage, or through fire, theft or any other cause affecting Borrower's property in excess of an aggregate of \$250,000.00.

SECTION 4.10. ADDITIONAL THIRD-PARTY FEES. Pay any and all third-party fees incurred by Lender in connection with the credit facilities hereunder.

SECTION 4.11. LATE CHARGE. Borrower recognizes that Default in making the installment monthly payments when due hereunder will result in Lender incurring additional expense in servicing the Loan, in loss to Lender of the use of the money due and in frustration to Lender in meeting its loan commitments.. Borrower agrees that if, for any reason, any monthly installment of interest shall not be received by Lender within ten (10) days of its due date, Lender shall be entitled to damages for the detriment caused thereby. Borrower therefore agrees to pay Lender a late charge of ten percent (10%) of such installment, but not including the final payment, or the maximum amount allowed by law, whichever is less, such late charge to be immediately due and payable without notice or demand by Lender. Borrower will pay this late charge only once for each late installment payment, but not including the final payment. This Section and the amounts for which it provides shall not limit Lender's right, under this Note, the Deed of Trust, or otherwise, to compel prompt performance thereunder. Lender's failure to collect such late charges shall not constitute a waiver of Lender's right to require payment of such late charges for past or future Defaults. Any late charge shall be in addition to all other rights and remedies available to Lender upon the occurrence of a default under the Loan Documents. BORROWER ACKNOWLEDGES AND AGREES THAT IT WOULD BE EXTREMELY DIFFICULT OR IMPRACTICABLE TO FIX THE ACTUAL DAMAGES RESULTING FROM BORROWER'S FAILURE TO PAY AMOUNTS WHEN DUE AND THEREFORE, SHALL PAY SUCH LATE CHARGES NOT AS A PENALTY, BUT FOR THE PURPOSE OF DEFRAYING THE EXPENSES INCIDENT TO SERVICING THE LOAN AND HANDLING AMOUNTS PAST DUE. FURTHER, BORROWER AGREES THAT THE LATE CHARGES SET FORTH HEREIN ARE A REASONABLE ESTIMATE OF THE DAMAGES TO LENDER. THE LATE CHARGES SHALL BE PAYABLE BY BORROWER WITHOUT PREJUDICE TO THE RIGHTS OF LENDER TO COLLECT ANY OTHER AMOUNTS TO BE PAID UNDER THIS NOTE OR THE DEED OF TRUST.

SECTION 4.12. DEFAULT INTEREST. Following the occurrence and during the continuance of an Event of Default, interest on any amounts then outstanding shall be increased automatically from the date of the Event of Default until cured to thirteen percent (13%) per annum ("Default Interest"), and all outstanding amounts due, including unpaid Regular Interest shall continue to accrue interest from the date of such Event of Default at the Default Interest rate until such Event of Default is cured or waived. Borrower acknowledges and agrees that the application of Default Interest may result in the compounding of interest.

ARTICLE V
NEGATIVE COVENANTS

Borrower further covenants that so long as any liabilities (whether direct or contingent, liquidated or unliquidated) of Borrower to Lender under any of the Loan Documents remain outstanding, and until payment in full of all obligations of Borrower subject hereto, Borrower will not without Lender's prior written consent:

SECTION 5.1. USE OF FUNDS. Use any of the proceeds of any credit extended hereunder except for the purposes stated in this Agreement.

SECTION 5.2. OTHER INDEBTEDNESS. Create, incur, assume or permit to exist any indebtedness or liabilities resulting from borrowings, loans or advances, whether secured or unsecured, matured or unmatured, liquidated or unliquidated, joint or several, direct or indirect, except (a) the liabilities of Borrower to Lender, and (b) additional indebtedness or liabilities in an aggregate amount not to exceed \$250,000.00 at any time.

SECTION 5.3. GUARANTIES. Guarantee or become liable in any way as surety, endorser (other than as endorser of negotiable instruments for deposit or collection in the ordinary course of business), accommodation endorser or otherwise for, nor pledge or hypothecate any assets of Borrower as security for, any liabilities or obligations of any other person or entity, except any of the foregoing in favor of Lender.

SECTION 5.4. LOANS. Other than in the ordinary course of business, make any loans or advances to or investments in any person or entity.

SECTION 5.5. PLEDGE OF ASSETS. Mortgage, pledge, grant or permit to exist a security interest in, or lien upon, all or any portion of the Property except (a) security interests required by the Loan Documents, and (b) liens for non-delinquent taxes and taxes contested in good faith; and (c) any of the foregoing in favor of Lender.

SECTION 5.6. GOVERNMENT INTERVENTION. Permit the assertion or making of any seizure, vesting or intervention by or under authority of any governmental entity.

SECTION 5.7. MERGER, CONSOLIDATION AND TRANSFER OF ASSETS. If Borrower or any signatory who signs on its behalf is a corporation, limited liability company, partnership, or trust, Borrower shall not: (a) merge or consolidate with any other entity; (b) dissolve, enter into revoked status, or make any change in the nature of Borrower's structure; or (c) make or permit to be made any change to Borrower's organizational documents that is likely to have a material adverse effect on Borrower's ability to own and operate its assets or perform its obligations under the Loan Documents.

ARTICLE VI
EVENTS OF DEFAULT

SECTION 6.1. The occurrence of any of the following shall constitute an "Event of Default" under this Agreement:

(a) Borrower shall fail to pay when due any principal, interest (including Minimum Guaranteed Interest), fees or other amounts payable under any of the Loan Documents, which failure continues for 10 days after written notice from Lender.

(b) Any financial statement or certificate furnished to Lender in connection with, or any representation or warranty made by Borrower or Guarantor under this Agreement or any other Loan Document shall prove to be knowingly incorrect, false or misleading in any material respect when furnished or made.

(c) Any default by Borrower in the performance of or compliance with any obligation, agreement or other provision contained herein or in any other Loan Document (other than those specifically described as an "Event of Default" in this Agreement), and with respect to any such default that by its nature can be cured, such default shall continue for a period of 30 days after written notice from Lender; provided that if the foregoing default requires additional time to cure and Borrower is diligently and in good faith acting to cure such default, then Borrower shall have an additional 60 days to cure such default. (d) The neglect, failure or refusal of Borrower to keep in full force and effect any permit, license, consent, approval or insurance required hereunder or under the loan Documents.

(e) Borrower shall become insolvent, or shall suffer or consent to or apply for the appointment of a receiver, trustee, custodian or liquidator of itself or any of its property, or shall generally fail to pay its debts as they become due, or shall make a general assignment for the benefit of creditors; Borrower shall file a voluntary petition in bankruptcy, or seeking reorganization, in order to effect a plan or other arrangement with creditors or any other relief under the Bankruptcy Reform Act, Title 11 of the United States Code, as amended or recodified from time to time ("Bankruptcy Code"), or under any state or federal law granting relief to debtors, whether now or hereafter in effect; or Borrower shall file an answer admitting the jurisdiction of the court and the material allegations of any involuntary petition; or Borrower shall be adjudicated bankrupt, or an order for relief shall be entered against Borrower by any court of competent jurisdiction under the Bankruptcy Code or any other applicable state or federal law relating to bankruptcy, reorganization or other relief for debtors.

(f) The filing of a notice of judgment lien against Borrower; or the recording of any abstract of judgment against Borrower in any county in which Borrower has an interest in real property; or the service of a notice of levy and/or of a writ of attachment or execution, or other like process, against the assets of Borrower in excess of \$500,000, which is not dismissed or bonded over within 60 days; or the entry of a judgment against Borrower in excess of \$500,000, which is not dismissed or bonded over within 60 days; or any involuntary petition or proceeding pursuant to the Bankruptcy Code or any other applicable state or federal law relating to bankruptcy, reorganization or other relief for debtors is filed or commenced against Borrower, which is not dismissed within 60 days..

(g) Any change in ownership or control of Borrower or any entity or combination of entities that directly or indirectly control Borrower, which change shall be defined as the sale, transfer or conveyance of any interest in Borrower of an aggregate of forty percent (40%) or more of the total interests in Borrower.

(h) The dissolution, liquidation, or revocation of Borrower, or any of its managers or members shall take action seeking to effect the dissolution or liquidation of Borrower, or the distribution of all or substantially all of its assets.

(i) The sale, lease, transfer, hypothecation, assignment, lien, or encumbrance, whether voluntary, involuntary or by operation of law, without Lender's prior written consent, of all or any material part of or interest in the Property other than in the ordinary course of business.

(j) Any breach or default by Borrower under any other loan or credit facility now or hereinafter existing between Lender and Borrower, subject to any applicable notice requirement and opportunity to cure.

SECTION 6.2. REMEDIES. To the extent permitted by applicable law, upon the occurrence and during the continuance of any Event of Default: (a) all indebtedness of Borrower under each of the Loan Documents, any term thereof to the contrary notwithstanding, shall at Lender's option and without notice become immediately due and payable without presentment, demand, protest or notice of dishonor, all of which are hereby expressly waived by Borrower; (b) the obligation, if any, of Lender to extend any further credit under any of the Loan Documents shall immediately cease and terminate; and (c) Lender shall have all rights, powers and remedies available under each of the Loan Documents, or accorded by law, including without limitation the right to resort to any or all security for any credit subject hereto and to exercise any or all of the rights of a beneficiary or mortgagee or secured party pursuant to applicable law. All rights, powers and remedies of Lender may be exercised at any time by Lender and from time to time after the occurrence of an Event of Default, are cumulative and not exclusive, and shall be in addition to any other rights, powers or remedies provided by law or equity.

ARTICLE VII
MISCELLANEOUS

SECTION 7.1. NO WAIVER. No delay, failure or discontinuance of Lender in exercising any right, power or remedy under any of the Loan Documents shall affect or operate as a waiver of such right, power or remedy; nor shall any single or partial exercise of any such right, power or remedy preclude, waive or otherwise affect any other or further exercise thereof or the exercise of any other right, power or remedy. Any waiver, permit, consent or approval of any kind by Lender of any breach of or default under any of the Loan Documents must be in writing and shall be effective only to the extent set forth in such writing.

SECTION 7.2. NOTICES. All notices, requests and demands which any party is required or may desire to give to any other party under any provision of this Agreement must be in writing delivered to each party at the following address and email address:

BORROWER:	Aqua Metals Reno, Inc. 5370 Kietzke Lane Suite 201 Reno, NV 89511 Email: Steve.cotton@aquametals.com Judd.merrill@aquametals.com
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LENDER: Summit Investment Services, LLC, and
The Jason Yelowitz 2006 Trust
c/o Allied Loan Servicing
Post Office Box 17942
Reno, NV 89511
Email: egagnloff@saifunds.com
Jyellowitz@yahoo.com
Darren@high-rely.com

or to such other address as any party may designate by written notice to all other parties. Each such notice, request and demand shall be deemed given or made as follows: (a) if sent by hand delivery, upon delivery; (b) if sent by mail, upon the earlier of the date of receipt or three (3) days after deposit in the U.S. mail, first class and postage prepaid; (c) if sent by nationally recognized overnight delivery service, upon the earlier of receipt or one (1) day after deposit with such service, and (d) if sent by electronic mail (email) to the addresses set forth above, upon receipt of a "read receipt" from the receiving party.

SECTION 7.3. COSTS, EXPENSES AND ATTORNEYS' FEES. Borrower shall pay to Lender promptly upon demand the full amount of all payments, advances, charges, costs and expenses, including reasonable attorneys' fees, expended or incurred by Lender in connection with (a) the negotiation and preparation of this Agreement and the other Loan Documents, Lender's continued administration hereof and thereof, and the preparation of any amendments and waivers hereto and thereto, (b) the enforcement of Lender's rights and/or the collection of any amounts which become due to Lender under any of the Loan Documents, and (c) the prosecution or defense of any action in any way related to any of the Loan Documents, including without limitation, any action for declaratory relief, whether incurred at the trial or appellate level, in an arbitration proceeding or otherwise, and including any of the foregoing incurred in connection with any bankruptcy proceeding (including without limitation, any adversary proceeding, contested matter or motion brought by Lender or any other person) relating to Borrower or any other person or entity. For all purposes of this Agreement, Lender's costs and expenses shall include, without limitation, all appraisal fees, cost engineering and inspection fees, title and escrow fees and expenses, reasonable legal fees and expenses, accounting fees, environmental consultant fees, auditor fees, recording taxes, recording fees, filing fees, UCC filing fees and/or UCC vendor fees, flood certification vendor fees, tax service vendor fees, and the cost to Lender of any title insurance premiums, title surveys, mortgage registration taxes (if applicable), release, reconveyance, satisfaction and notary fees.

SECTION 7.4. SUCCESSORS, ASSIGNMENT. This Agreement shall be binding upon and inure to the benefit of the heirs, executors, administrators, legal representatives, successors and assigns of the parties; provided however, that Borrower may not assign or transfer its interests or rights hereunder without Lender's prior written consent. Lender reserves the right to sell, assign, transfer, negotiate or grant participations in all or any part of, or any interest in, Lender's rights and benefits under each of the Loan Documents. In connection therewith, Lender may disclose all documents and information which Lender now has or may hereafter acquire relating to any credit subject hereto, Borrower, its business, any guarantor, or any collateral required hereunder.

SECTION 7.5. RIGHT TO RELEASE AND RECONVEY. To the extent permitted by applicable law, Borrower hereby acknowledges and agrees that Lender may, at any time and without waiving or prejudicing any other rights of Lender under the Loan Documents, release and reconvey any Deed of Trust for any reason whatsoever, including, without limitation, Lender's determination that its security interest under such Deed of Trust might in some way impair or alter any rights Lender would otherwise hold under the Loan Documents if it did not have any interest under said Deed of Trust.

SECTION 7.6. NO THIRD-PARTY BENEFICIARIES. This Agreement is made and entered into for the sole protection and benefit of the parties hereto and their respective permitted successors and assigns, and no other person or entity shall be a third-party beneficiary of, or have any direct or indirect cause of action or claim in connection with, this Agreement or any other of the Loan Documents to which it is not a party.

SECTION 7.7. TIME. Time is of the essence of each and every provision of this Agreement and each other of the Loan Documents.

SECTION 7.8. SUBJECT TO LAW; SEVERABILITY OF PROVISIONS. All rights, powers and remedies provided in this Agreement and the other Loan Documents may be exercised only to the extent that the exercise thereof does not violate any applicable provisions of law. If any provision of this Agreement shall be prohibited by or invalid under applicable law, such provision shall be ineffective only to the extent of such prohibition or invalidity without invalidating the remainder of such provision or any remaining provisions of this Agreement.

SECTION 7.9. COUNTERPARTS. This Agreement may be executed in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, and all of which when taken together shall constitute one and the same Agreement.

SECTION 7.10. GOVERNING LAW. This Agreement shall be governed by and construed in accordance with the laws of the State of Nevada.

SECTION 7.11 BORROWER INFORMATION; REPORTING. Borrower authorizes Lender at any time to verify or check any information given by Borrower to Lender, check Borrower's credit references, verify employment, and obtain credit reports. Borrower agrees that Lender shall have the right at all times to disclose and report to credit reporting agencies and credit rating agencies such information pertaining to Borrower as is consistent with general lending policies and practices from time to time in effect.

SECTION 7.12 RELATIONSHIP OF PARTIES. The relationship between Borrower and Lender is, and at all times shall remain, solely that of debtor and creditor, and shall not be, or be construed to be, a joint venture, equity venture, partnership or other relationship of any nature. Borrower and Lender warrant to each other that they shall make no statement, orally or in writing, or take or omit any action which could be implied by an ordinary, reasonable, prudent third party as evidence of a joint venture, equity venture or partnership between Borrower and Lender. Lender neither undertakes nor assumes any responsibility or duty to Borrower or to any other person with respect to the Property or the transactions contemplated by the Loan Documents, except as expressly provided in the Loan Documents. Notwithstanding any other provision of the Loan Documents and without limiting the foregoing: (a) Lender is not, and shall not be construed as, a partner, joint venturer, alter ego, manager, controlling person or other business associate or participant of any kind of Borrower or its partners or members, if applicable, and Lender does not intend to ever assume such status; (b) Lender shall in no event be liable for any debts, expenses or losses incurred or sustained by Borrower; (c) Lender's activities in connection with the Loan Documents shall not be outside the scope of the activities of a lender within the meaning of NRS 41.590 and other laws of the State of Nevada, and Lender does not intend to ever assume any responsibility to any person for the quality, suitability, safety or condition of the Property; and (d) Lender shall not be deemed responsible for or a participant in any acts, omissions or decisions of Borrower or its partners or members. In no event shall Lender be liable for any of the debts, obligations or liabilities of Borrower or of its members or owners as a result of the execution and delivery of the Loan Documents; and in no event shall Lender be liable for any contributions to Borrower, and Borrower agrees to indemnify, defend and hold Lender harmless from any claim, cause of action, settlement, judgment, award or damage, including reasonable attorneys' fees and costs, arising from a breach of this warranty.

SECTION 7.13 INDEMNIFICATION. Borrower will indemnify and hold Lender harmless from any loss, liability, damages, judgments, and costs of any kind relating to or arising directly or indirectly out of (a) this Agreement or any other Loan Document, (b) any credit extended or committed by Lender to Borrower hereunder, and (c) any litigation or proceeding related to or arising out of any of the Loan Document or any such credit. This indemnity includes but is not limited to attorneys' fees. This indemnity extends to Lender, its affiliates, members, managers, directors, officers, employees, agents, successors, attorneys, and assigns. This indemnity will survive repayment of Borrower's obligations to Lender.

SECTION 7.14 COMMISSION AND BROKERAGE FEE. Borrower, at its sole cost and expense, has authorized Alpen Mortgage as its mortgage loan broker with regard to this transaction ("Broker"). Neither Borrower nor Lender has authorized any other broker or finder to act on behalf of the other party with regard to the consummation of this loan. Borrower agrees to indemnify, defend, protect and hold harmless Lender from and against any and all demands, claims, losses, damages, liabilities, costs or expenses of any kind or character (including reasonable attorneys' fees and charges) arising out of or resulting from any agreement, arrangement or understanding alleged to have been made by Borrower or on Borrower's behalf with any other broker or finder in connection with the Loan. Lender agrees to indemnify, defend, protect and hold harmless Borrower from and against any and all demands, claims, losses, damages, liabilities, costs or expenses of any kind or character (including reasonable attorneys' fees and charges) arising out of or resulting from any agreement, arrangement or understanding alleged to have been made by Lender or on Lender's behalf with any other broker or finder in connection with the Loan. Notwithstanding anything to the contrary contained herein, this Section 7.14 shall survive the making and repayment of the Loan and the expiration or termination of this Agreement.

SECTION 7.15 VOLUNTARY AGREEMENT; ADVICE FROM INDEPENDENT COUNSEL. Borrower represents to Lender that it has received independent legal advice with regard to this transaction, or has had ample opportunity to do so, and has satisfied itself with regard to any inquiry or investigation relating to the legal and tax implications of this transactions. Borrower has not relied on any statements or advice of Lender or Lender's counsel. This Agreement was prepared and entered into out of the free will of the parties and pursuant to arm's length negotiations, and the parties believe this Agreement and the other Loan Documents to be fair. Lender has not taken advantage of Borrower by threats, intimidation, overreaching, unconscionable conduct, or otherwise, and Borrower is proceeding in this transaction voluntarily in what it perceives to be in its own best interests. Having been negotiated by the parties, this Agreement shall not be construed against any one party for drafting it or any particular provision, but shall be construed as if both parties jointly prepared this Agreement and any uncertainty or ambiguity shall not be interpreted against any one party.

SECTION 7.16 APPROVAL STANDARD; EFFECT OF APPROVAL. Except as otherwise provided herein, whenever Lender's consent or approval is required in this Agreement, such consent or approval may be given or withheld in Lender's sole and absolute discretion. Lender's approval of any matter in connection with the Loan shall be for the sole purpose of protecting Lender's security and rights. No such approval shall result in a waiver of any default of Borrower. In no event shall Lender's approval be a representation of any kind with regard to the matter being approved. No consent or approval shall be effective unless the same is expressly set forth in writing from Lender. In no event shall any other act nor any omission on the part of Lender be construed as a consent or approval or serve to later estop Lender's right to withhold its consent or approval as to a particular matter. Anything contained in this Agreement and the other Loan Documents to the contrary notwithstanding, when Lender's consent or approval is required in this Agreement or the other Loan Documents, such consent only requires the consent of Summit Investment Services, LLC, and not the consent of any other Lender.

SECTION 7.17 . SUPPLEMENTAL AGREEMENT. The provisions of this Agreement are not intended to supersede the provisions of the Deed of Trust but shall be construed as supplemental thereto. This Agreement, and all representations and warranties contained herein, shall remain in effect until all amounts due under the Loan Documents have been paid in full.

SECTION 7.18 SURVIVAL. This Agreement, and all representations, warranties and covenants contained herein, shall remain in effect until the Loan has been paid in full.

SECTION 7.19 JOINT AND SEVERAL LIABILITY. If Borrower consists of more than one person or entity, their liability shall be joint and several, and the compromise of any claim with, or the release of, any Borrower shall not constitute a compromise with, or a release of, any other Borrower.

SECTION 7.20 ENTIRE AGREEMENT; AMENDMENT. This Agreement and the other Loan Documents constitute the entire agreement between Borrower and Lender with respect to each credit subject hereto and supersede all prior negotiations, communications, discussions and correspondence concerning the subject matter hereof. This Agreement may be amended or modified only in writing signed by each party hereto.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused their authorized representatives to execute this Agreement to be effective as of the date first set forth above.

BORROWER:

AQUA METALS RENO, INC., a Delaware corporation

By: /s/ Stephen Cotton
Stephen Cotton

Its: President

By: /s/ Judd Merrill
Judd Merrill

Its: Chief Financial Officer

[Remainder of page intentionally left blank]

LENDER:

SUMMIT INVESTMENT SERVICES, LLC, a Nevada limited liability company

By: /s/ Eric J Gangloff
ERIC J. GANGLOFF
Its: Manager

THE JASON YELOWITZ 2006 TRUST DATED MARCH 31, 2006

By: /s/ Jason A. Yelowitz
JASON A. YELOWITZ
Its: Trustee

THE ARDUINO 1 TRUST, U/A DATED APRIL 25, 2022

By: /s/ Darren McBride
DARREN MCBRIDE
Its: Trustee

Exhibit "A"
Legal Description of the Property

The Land is described as follows:

PARCEL NO. 1:

PARCEL 2015-20 OF RECORD OF SURVEY MAP NO. 122164, FILED IN THE OFFICE OF THE COUNTY RECORDER OF STOREY COUNTY, STATE OF NEVADA ON MAY 26, 2015, AS FILE NO. 122164, OF OFFICIAL RECORDS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

ALL THAT CERTAIN PARCEL SITUATE WITHIN A PORTION OF SECTION TEN (10), TOWNSHIP NINETEEN (19) NORTH, RANGE TWENTY-TWO (22) EAST, MOUNT DIABLO MERIDIAN STOREY COUNTY, NEVADA, BEING PORTIONS OF PARCEL 2007-20 AS SHOWN ON RECORD OF SURVEY MAP, FILE NO. 106292 IN THE OFFICIAL RECORDS OF STOREY COUNTY, NEVADA, PARCEL 2011-09 AS SHOWN ON RECORD OF SURVEY MAP, FILE NO. 115859 IN THE OFFICIAL RECORDS OF STOREY COUNTY, NEVADA AND PARCEL 2015-8 AS SHOWN ON RECORD OF SURVEY MAP, FILE NO. 122158 IN THE OFFICIAL RECORDS OF STOREY COUNTY, NEVADA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY LINE OF SAID PARCEL 2007-20, BEING ON THE WESTERLY RIGHT-OF-WAY OF PERU DRIVE, AS DEDICATED ON DOCUMENT NO. 110592 IN THE OFFICIAL RECORDS OF STOREY COUNTY, NEVADA, FROM WHICH THE SOUTH QUARTER CORNER OF SAID SECTION 10 BEARS SOUTH 34°58'18" WEST, 4039.41 FEET SAID POINT BEING THE BEGINNING OF A NON-TANGENT CURVE TO THE LEFT, FROM WHICH THE RADIUS BEARS NORTH 83°54'19" EAST;

THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE, BEING COINCIDENT WITH THE EASTERLY LINES OF PARCELS 2007-20, 2015-8 AND 2011-09, 585.57 FEET ALONG THE ARC OF A 870.00 FOOT RADIUS CURVE, THROUGH A CENTRAL ANGLE OF 38°33'51";

THENCE LEAVING SAID WESTERLY RIGHT-OF-WAY LINE AND SAID EASTERLY PARCEL LINES, SOUTH 29°53'48" WEST, 328.12 FEET;

THENCE SOUTH 58°29'57" WEST, 74.47 FEET;

THENCE SOUTH 29°53'48" WEST, 222.94 FEET;

THENCE NORTH 70°13'20" WEST, 249.68 FEET;

THENCE NORTH 22°37'49" WEST, 752.29 FEET;

THENCE NORTH 67°22'11" EAST, 667.75 FEET TO THE POINT OF BEGINNING.

NOTE: THE ABOVE METES AND BOUNDS LEGAL DESCRIPTION APPEARED PREVIOUSLY IN THAT CERTAIN DOCUMENT RECORDED MAY 26, 2015 AS DOCUMENT NO. 122165 AND RE-RECORDED MAY 27, 2015, AS DOCUMENT NO. 122168, OF OFFICIAL RECORDS

PARCEL NO. 2:

A NON-EXCLUSIVE EASEMENT FOR THE PURPOSE OF CONSTRUCTION, REPAIR AND MAINTENANCE OF A FILL SLOPE AND DRAINAGE CHANNEL AND RELATED DRAINAGE FACILITIES, AS SET FORTH AND GRANTED BY DOCUMENT, RECORDED MAY 29, 2015, AS DOCUMENT NO. 122186, OFFICIAL RECORDS, STOREY COUNTY, NEVADA.

Exhibit "B"
Conditions for Disbursement

Borrower must satisfy the following conditions and furnish Lender with the following Loan Documents and items ("**Required Items**") prior to each Disbursement:

1. Lender shall have received and approved any and all documents required to be provided to Lender under this Agreement or the Loan Documents. All legal matters incidental to the extension of credit by Lender shall be satisfactory to Lender's counsel.
2. Lender shall have received and approved a written opinion of Borrower's counsel stating, among other things, that Borrower is duly authorized to make the Loan and that the loan documents constitute binding and enforceable obligations of Borrower.
3. Lender shall have received and approved a Tenant Estoppel Certificate and Subordination, Non-disturbance and Attornment Agreement in favor of Lender duly executed by Tenant and Borrower.
4. Borrower shall have paid all fees, costs and expenses in connection with the transactions contemplated by this Agreement and all other Loan Documents, including, without limitation, Lender's attorney's fees, costs and the premium for Lender's title insurance policy (with endorsements required by Lender in its sole discretion).
5. Borrower shall have paid Broker Fees in the amount of \$90,000 plus \$995 Loan Processing Fee to Alpen Mortgage.
6. Lender shall have received and approved evidence Lender requires of the existence, good standing, authority and capacity of Borrower to execute, deliver and perform their respective obligations to Lender under the Loan Documents, all in a form acceptable to Lender.
7. There shall have been no material adverse change, as reasonably determined by Lender, in the financial condition or business of Borrower, nor any material decline, as determined by Lender, in the market value of the Property or a substantial or material portion of the assets of Borrower since the date that Borrower provided to Lender its financial statements and other financial information.
8. Borrower shall have duly executed, acknowledged and/or sworn to as required, and delivered to Lender all Loan Documents then required by Lender, dated the date of this Agreement, each in form and content satisfactory to Lender; the Deed of Trust shall have been recorded in the official records of Storey County, Nevada (as a first deed of trust), and UCC-1 financing statements shall have been recorded and/or filed in all filing offices that Lender may require.

9. Borrower shall have delivered to Lender evidence of insurance coverage on the Property, in form, substance, amounts, covering risks and issued by companies satisfactory to and approved by Lender, and where required by Lender, with loss payable endorsements in favor of Lender, as reasonably requested by Lender, and such policies of insurance against specific hazards affecting the Property as may be required by governmental regulation or Lender, together with evidence satisfactory to Lender that all premiums therefore are paid current, that the policies are in full force and effect and that Lender is named as a Mortgagee/Loss Payee.
10. Lender shall have received an ALTA 2006 Lender's Extended Coverage Policy of Title Insurance, with such endorsements as Lender may require, issued by a company and in form and substance satisfactory to and approved by Lender, in an amount not less than \$6,000,000.00, insuring Lender's lien (subject to permitted exceptions) on the Property to be of first priority, with all costs thereof to be paid by Borrower.
11. Lender shall have received confirmation of the recordation in the appropriate recording office of the instrument creating Lender's lien in the Property, as well as confirmation of the filing in the appropriate filing office of such UCC-1s as Lender may require to perfect its security interest in any other collateral securing the Term Loan.
12. If required by Lender, evidence of all utility services to the boundaries of the Property, copies of any environmental assessments, soils analyses, surveys, or appraisals, heretofore performed with respect to Property.
13. Borrower shall have delivered to Lender, in form and content satisfactory to Lender, such other documents and certificates as Lender may reasonably request.

The following are the wholly-owned subsidiaries of Aqua Metals, Inc.:

Aqua Metals Reno, Inc., a Delaware Corporation

Aqua Metals Operations, Inc., a Delaware Corporation

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and
Stockholders of Aqua Metals, Inc. and Subsidiaries:

We consent to the incorporation by reference in the registration statements (Nos. 333-211810, 333-218709, 333-220171, 333-232148 and 333-248112) on Form S-8 and (Nos. 333-212808, 333-213501, 333-216250, 333-231355 and 333-235238) on Form S-3 of Aqua Metals, Inc. of our report dated March 9, 2023, with respect to the consolidated financial statements of Aqua Metals, Inc. and subsidiaries as of December 31, 2022 and December 31, 2021, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the two years in the period ended December 31, 2022.

/s/ Armanino LLP

San Ramon, CA
March 9, 2023

CERTIFICATIONS

I, Stephen Cotton, certify that:

- (1) I have reviewed this annual report on Form 10-K of Aqua Metals, Inc.;
- (2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- (3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- (4) The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the period covered by this report based on such evaluation; and
 - (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- (5) The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

AQUA METALS, INC.

Date: March 9, 2023

By: /s/ Stephen Cotton
Stephen Cotton, Chief Executive Officer

CERTIFICATIONS

I, Judd Merrill, certify that:

- (1) I have reviewed this annual report on Form 10-K of Aqua Metals, Inc.;
- (2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- (3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- (4) The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the period covered by this report based on such evaluation; and
 - (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- (5) The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

AQUA METALS, INC.

Date: March 9, 2023

By: /s/ Judd Merrill
Judd Merrill, Chief Financial Officer
(Principal Financial Officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. ss.1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Aqua Metals, Inc. (the "Company") on Form 10-K for the period ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Stephen Cotton, the Chief Executive Officer, and Judd Merrill, the Chief Financial Officer, of the Company, respectively, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ Stephen Cotton Dated: March 9, 2023
Stephen Cotton

Title: Chief Executive Officer
(Principal Executive Officer)

By: /s/ Judd Merrill Dated: March 9, 2023
Judd Merrill

Title: Chief Financial Officer
(Principal Financial and Accounting Officer)

This certification is made solely for the purposes of 18 U.S.C. Section 1350, subject to the knowledge standard contained therein, and not for any other purpose.