



AQUAMETALS

Lead Reinvented

Leading a Revolution in the
Lead Acid Battery Industry

Corporate Presentation

May 2019

This document contains forward-looking statements concerning Aqua Metals, Inc.

Forward-looking statements include, but are not limited to, our plans, objectives, expectations and intentions and other statements that contain words such as “expects,” “contemplates,” “anticipates,” “plans,” “intends,” “believes” and variations of such words or similar expressions that predict or indicate future events or trends, or that do not relate to historical matters. The forward looking statements in this document include the strength and efficacy of Aqua Metals’ portfolio of patent applications and issued patents, the lead acid battery recycling industry, the future of lead acid battery recycling via traditional smelters, the Company’s development of its commercial lead acid battery recycling facilities, the quality and efficiency of the Company’s proposed lead acid battery recycling operations, and the Company’s proposed joint development agreement with Clarios and other potential licensing agreements. Those forward-looking statements involve known and unknown risks, uncertainties and other factors that could cause actual results to differ materially. Among those factors are: (1) the risk that the Company may not be able to produce and market AquaRefined lead on a commercial basis or, if the Company achieves commercial operations, that such operations will be profitable, (2) the fact that the Company only recently commenced production of AquaRefined lead and has not generated any significant revenue from the sale of AquaRefined lead to date, thus subjecting the Company to all of the risks inherent in an early-stage company; (3) the risk no further patents will be issued on the Company’s patent applications or any other application that it may file in the future and that those patents issued to date and any patents issued in the future will be sufficiently broad to adequately protect the Company’s technology, (4) the risk that the Company’s initial patents and any other patents that may be issued to it may be challenged, invalidated, or circumvented, (5) the risk that the Company may not realize the expected benefits of its relationships with Veolia and Interstate Battery (6) the risk that the Company may not be able to successfully conclude its proposed joint development agreement with Clarios or, if it does, realize the expected benefits of such agreement, (7) risks related to Aqua Metals’ ability to raise sufficient capital, as and when needed, to develop and operate its recycling facilities and fund continuing losses from operations as the Company endeavors to achieve profitability; (8) changes in the federal, state and foreign laws regulating the recycling of lead acid batteries; (9) the Company’s ability to protect its proprietary technology, trade secrets and know-how and (10) those other risks disclosed in the section “Risk Factors” included in the Company’s Annual Report on Form 10-K filed on February 28, 2019. Aqua Metals cautions readers not to place undue reliance on any forward-looking statements. The Company does not undertake, and specifically disclaims any obligation, to update or revise such statements to reflect new circumstances or unanticipated events as they occur, except as required by law.

Aqua Metals at a Glance

Snapshot



- Aqua Metals (or “the Company”) has developed an innovative lead recycling technology, called AquaRefining (“AR”), that produces high purity lead with potentially reduced toxic emissions
- Manufacturing facility at the Tahoe Reno Industrial Center (“TRIC”) near Reno, NV
- **Ticker:** AQMS (NASDAQ)
- **Corporate HQ:** McCarran, NV
- **Incorporated:** 2014
- **Employees:** ~95

Investment Highlights

- 1 \$20+ billion addressable global lead market driven by strong growth in lead acid battery (“LAB”) applications (automotive, data centers, renewables, etc.)
- 2 First company to develop commercially-scalable alternative to smelting, producing ultra-pure lead with less environmental impact
- 3 Attractive business model to expand beyond initial manufacturing facility by licensing AquaRefining technology to existing battery recycling facilities
- 4 Technology and business validation through strategic partnerships with Clarios⁽¹⁾, Veolia North America Regeneration Services and Interstate Batteries
- 5 Intellectual property strategy will provide protection for the Company’s AquaRefining technology – 90 patent applications filed and 14 patents granted in the US and internationally
- 6 Experienced management team and Board, with deep expertise in process chemistry and lead recycling technologies

1) Johnson Controls International’s power solutions business sold to Brookfield Business Partners on 11/13/18 for \$13.2bn. The power solutions business rebranded as Clarios on 05/01/19.

Experienced Management and Board Focused on Execution

Executive Management Team

Stephen Cotton, *President and CEO, Executive Director*

- Served as Chief Commercial Officer of Aqua Metals from January 2015 to June 2017
- Spent 15 years as the Co-Founder and CEO of Canara, a company with data center battery-monitoring products and services; exited to a private equity firm in 2012

Judd Merrill, *CFO*

- Proven skills in SEC compliance and reporting, cash management, budgeting, forecasting, inventory management, due diligence, M&A and project management
- Formerly Director of Finance / Accounting for Klondex Mines Ltd.

Ben Taecker, *Vice President of Operations*

- 17 years of experience in manufacturing and ops leadership
- Spent 6 years in progressive leadership roles at Johnson Controls' (now Clarios) Lead Acid Battery Recycling Center in Florence, SC and was involved in early planning, construction, commissioning, scaling and leading operations of the facility

Terri Bradfield, *Vice President of Human Resources*

- Leadership roles in HR in energy, mining, manufacturing for up to 5,000 employees

Sam Mohanta PhD, *Vice President of Engineering*

- I.I.T. & U of Waterloo ChemE with many patents and successes in electrochemical process commercialization

Independent Directors

S. Shariq Yosufzai, *Non-Executive Chairman*

- Held various executive positions at Chevron for 20+ years and has held numerous Board and Chairman positions

Gayle Gibson, *Independent Director*

- 30+ years of engineering and executive experience at DuPont, including leading DuPont Engineering; an extensive background in process development and improvement

Vincent DiVito, *Chair of the Audit Committee*

- Experienced in accounting and financing of NASDAQ companies; former CFO of fast-growing specialty chemicals company

Sushil ("Sam") Kapoor, *Chair of Compensation Committee*

- 30+ years of technology and operations experience; former Chief Global Operations Officer of Equinix, ran design / build / ops from 7-200+ sites while market cap grew from <\$100M to \$35B

Mark Stevenson, *Chair of the Nominating & Corporate Governance Committee*

- Former Head of Asian Operations for RSR / EcoBatt; experienced and successful in lead smelting and battery recycling; owner and organizer of bi-annual Secondary Lead Conference, accomplished metallurgist

Status of TRIC Production Facility

Significant Operational Progress

Current Operations:

- Four AR modules currently producing AquaRefined lead at TRIC, with additional 12 modules expected to commence production in 2019 as the Company demonstrates 24/7 capabilities and proves economics at scale
 - Ability to produce up to 10 mT of AquaRefined lead from the four modules, in aggregate, per day

2018 – 2019 YTD Accomplishments:

- Began continuous production of AquaRefined lead already being sold at a premium to London Metal Exchange (“LME”)
- Achieved approved lead supplier status from Clarios and shipping directly to battery manufacturing facilities
- Announced contract with Veolia to provide operations, maintenance and management services
- ***Achieved steady state, 24/7 operations (running one to four modules at any given time)***
- ***Completed Phase One of the Company’s capital program; refining underway for the continuous production of concentrate sent to the AquaRefining modules at improved costs***
- Began process to roll out modules five through eight; on track to achieve target of 16 modules in operation by the end of 2019



An additional kettle (far left) installed and operating with first metallic lead product shipped in March 2019 – will initially provide up to a 25% increase in ingot production and improve contribution margin.



The membrane filter press and other concentrate producing equipment are currently operating and processing material through production and is expected to have a positive impact on future throughput and contribution margin.

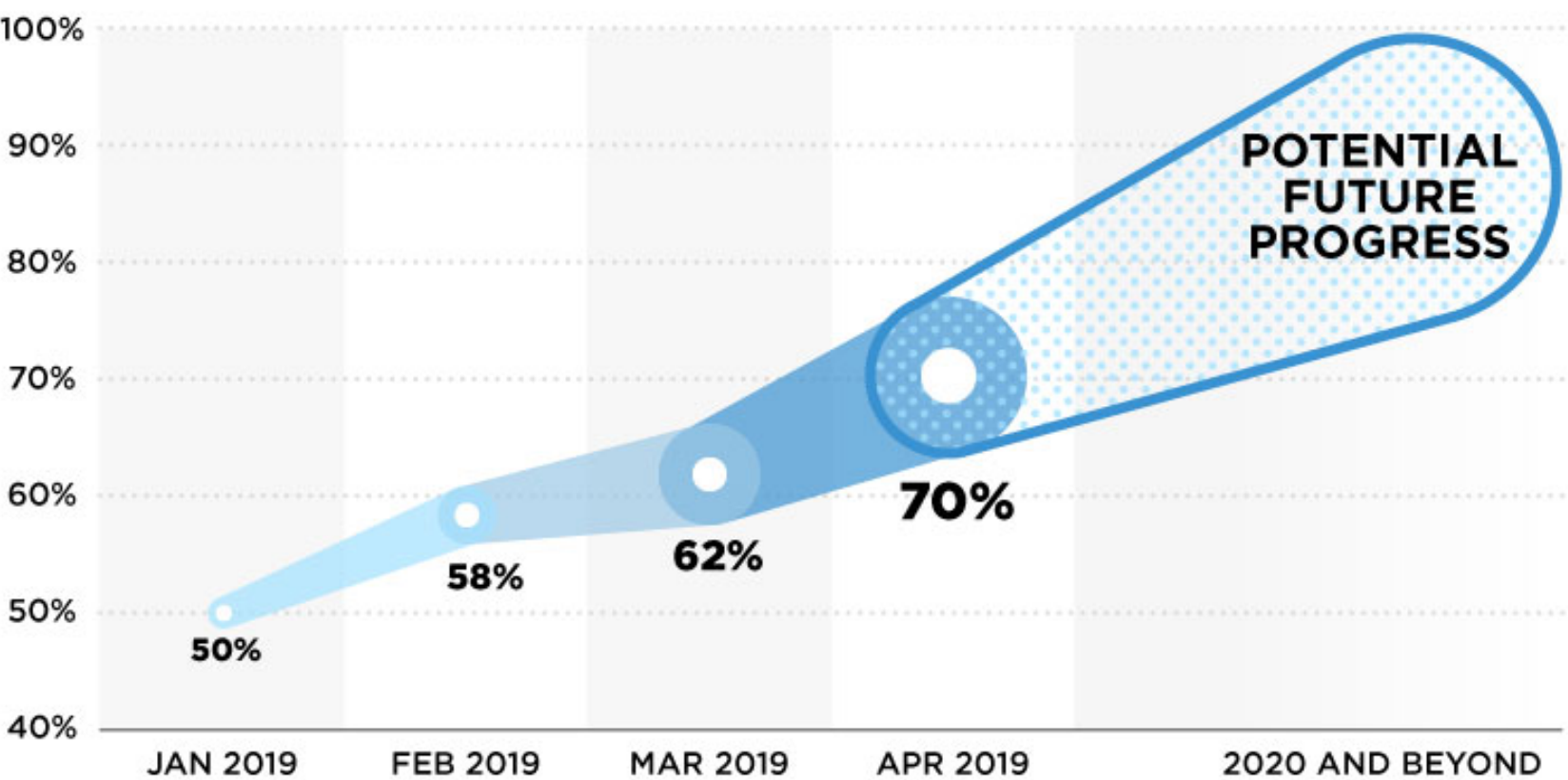
Phase One of Capital Improvement Plan Completed

Phase One of our capital improvement plan and other process improvements recently completed include:

- Installation of a membrane press to improve electrolyte recovery and throughput in generating concentrate for the AquaRefiners
- Installation of a third kettle which allows the processing of hard metallic lead from batteries resulting in a significant improvement in contribution margin
- Installation of a centrifuge to increase throughput and quality of concentrate sent to the AquaRefining Modules
- Electrical power upgrade that included installation of an additional transformer and electrical infrastructure to ensure all the equipment installed in both phases of the electrolyte recovery projects have the necessary power for operation
- Water recovery equipment and process improvements that include the continued commissioning of Veolia evaporators and a centrifuge that brings water usage at the McCarran Facility to near neutral with additional positive impact to contribution margin
- Shipping cost improvements for all offtake materials with significant saving towards contribution margin
- Battery Breaker enhancements improving separation of the battery components resulting in an increased yield of ultra-pure AquaRefined lead
- Increase in the amount of lead units that can be processed through AquaRefining
- ***Equipment for Phase Two of the capital program has been ordered and will further boost electrolyte recovery, increase yield and add contribution margin later in 2019***

Increasing Yield of Lead Recovery

PERCENTAGE OF LEAD CONVERTED INTO HIGH VALUE INGOTS FROM BATTERY FEEDSTOCK AT AQUAREFINERY 1



Key Prospective Milestones

1H 2019

- Increase proportion for finished lead recovered to boost plant economics
- Further integrate Veolia at AquaRefinery
- Continue Clarios joint development agreement to define AquaRefining rollout plan for inaugural Clarios facility

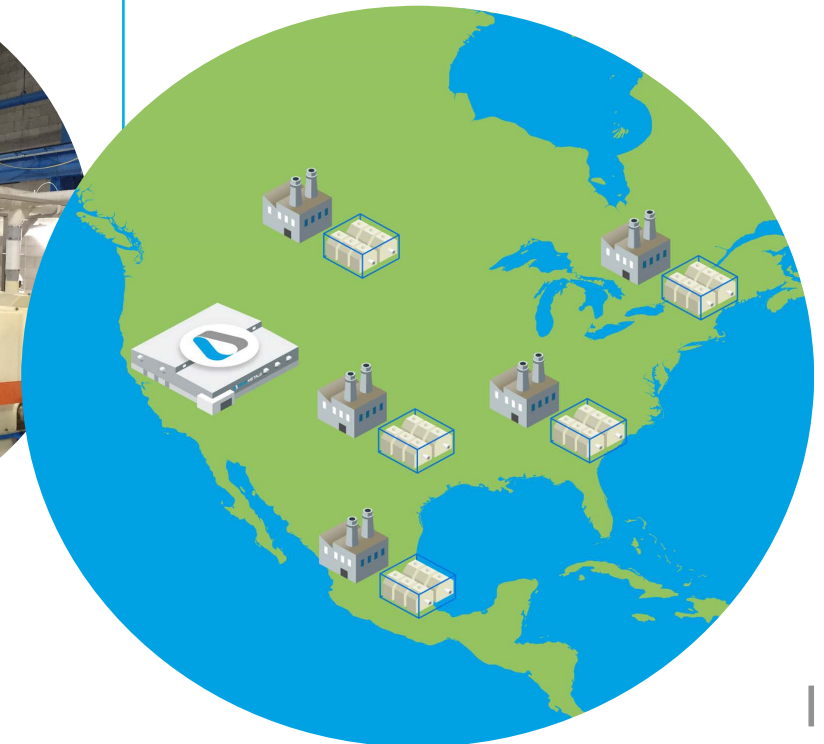
2H 2019

- Complete Phase Two of capital improvement plan expected to achieve additional 25% recovery of electrolyte and other benefits
- Scale AquaRefinery to 16 modules
- Consider expanding AquaRefinery to 32 modules



2020

- Commence expansion of AquaRefinery to 32 modules
- Further progress with Clarios joint development blueprint
- Expansion of capital light licensing strategy to additional battery recyclers



Key Strategic Partnerships Fortify our Ecosystem

INPUT

PROCESSING

OUTPUT



Industry Leader in Battery Recycling
25 Million LABs recycled per year

- Ensures feedstock supply for Aqua Metals production
- Possible future branding opportunities for green battery



North America
Regeneration Services

- Managing operations, supply chain, offtake and management of the AquaRefinery
- Execution partner in proliferation of AquaRefining across the globe

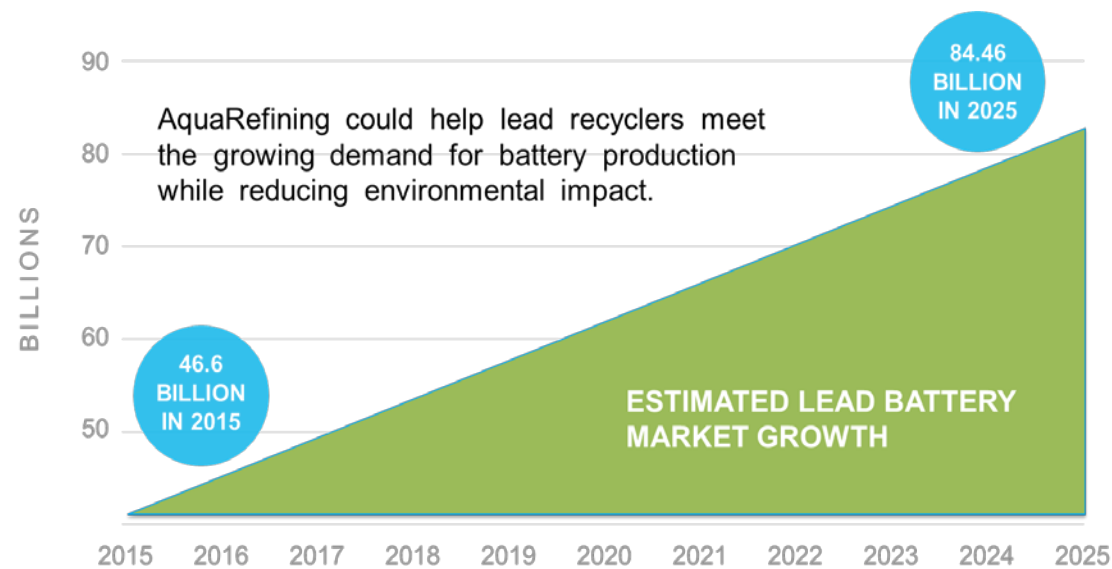


(Formerly Johnson Controls' power solutions business)
World's Largest Battery Company

- Established a 5-year, "rolling evergreen" off-take agreement to take up to 100% of the lead produced at LME + Premium
- Pursuing a joint development agreement to install AquaRefining equipment at Clarios recycling facilities

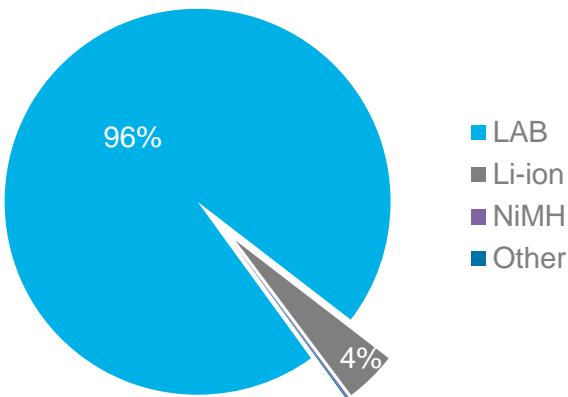
Lead Acid Battery (LAB) Market Driving Growing Demand for Lead

- Annual LAB sales expected to nearly double to \$84+ billion by 2025⁽¹⁾ driving demand for lead
- LAB production constitutes the largest use of lead today⁽²⁾
- LABs still represent over 95% of all batteries produced⁽³⁾ due to improved recyclability, safety and performance compared to Li-ion and NiMH
- Over 99% of used LABs are sent to recycling for lead extraction⁽⁴⁾ to address growing shortage
- Secondary (recycled) lead comprises ALL the lead produced in the US⁽²⁾ as well as >50% of all lead produced worldwide and 74% in Europe



Global Battery Production⁽³⁾

(GWh/year)



1) Grand View Research Report.
2) International Lead Association Research.
3) Sandia National Laboratories, 25th International Materials Congress Presentation.
4) BCI International, "Study Finds Lead Batteries Are Most Recycled Consumer Product".

The Solution to Recycling LABs

Smelting

the current, conventional method of LAB recycling

- A high temperature, polluting process with large costs and risks for proper environmental containment that can also leave behind large volumes of waste
- Additional refining required to produce the high purity lead required for more modern and advanced lead acid batteries
- Capacity expansion limited by environmental regulations and concerns



VS

AquaRefining

novel, electrochemical, alternative to LAB recycling

- Room temperature, water-based process
- Reduced emissions and environmental permitting challenges
- Produces high-purity lead assayed at 99.996%
- Modular and scalable design
- Co-exists with existing battery recycling facilities that want to expand capacity and product mix while decreasing emissions
- More sustainable model for the recycling industry to support a circular economy



The AquaRefined Advantage

Compared to traditional recycling technologies, AquaRefining offers large advantages:



Improved Product Quality



Enables Global Battery
Recyclers to Meet Demand



Potentially Reduced
Environmental Impact

New high-growth LAB applications require
high-purity lead

Auto Growth in Emerging Markets: China, India and South America are using additional lead batteries for automobile start-stop functionality

Renewable Energy Economy: growing and dependent on energy storage to be efficient and effective

Data Center & Telecom Industries: growing rapidly and utilize lead batteries for back up power

Electric Vehicles: use lead batteries in addition to Lithium-Ion to support electronics

Aqua Metals is well positioned to capitalize
on market trends

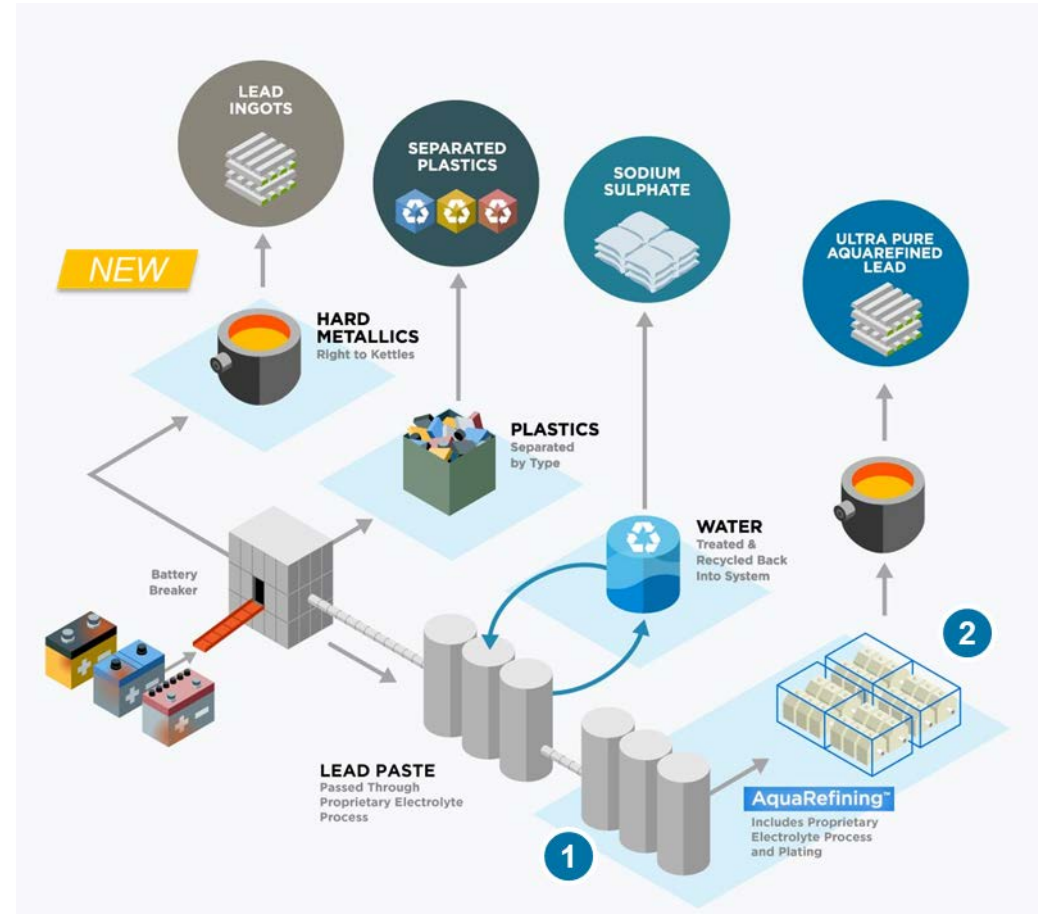
Aqua Metals plans to be producing the
purest lead on Earth:

99.999% purity

- ✓ Better potential battery performance and life
- ✓ Higher premium for lead and value-add for licensing AquaRefining technology

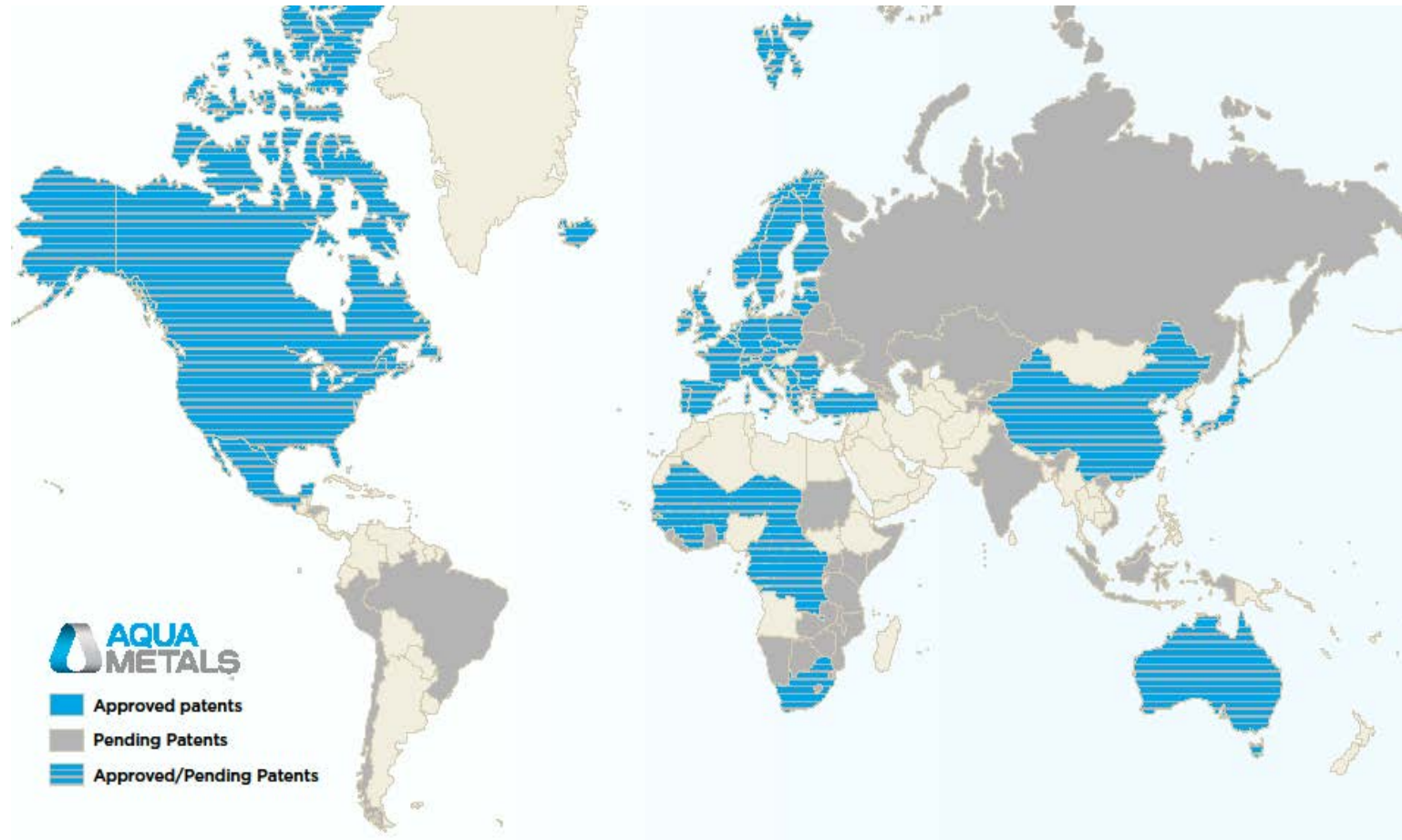
How AquaRefining Works

- Used LABs are separated into hard metallics, plastics and lead paste
- The lead paste (approximately 50% of the battery) is sent to AquaRefining
- AquaRefining occurs in two steps:
 - 1 Proprietary digestion process: lead paste is digested in bio-degradable proprietary electrolyte (water used will be recycled)
 - 2 In a continuous process, a rotating disc electrolyzer plates and recovers lead from the electrolyte
- The ultra-pure AquaRefined lead can be cast into ingots
- The hard metallics are now being processed into lead ingots in growing percentages over time



Our AquaRefiners are constructed using a modular design to enable scaling both up and down to fit a plant's desired manufacturing capacity – this approach allows AquaRefining to be added to an existing battery recycling facility. Operating at full-capacity, each module is designed to produce 2.4 mT/day of AquaRefined lead.

Strong IP Portfolio Supports Global Licensing



IP Strategy Focused on “Materials And Methods”

- Proving electrochemical battery recycling is viable
- Protecting our breakthrough technology
 - Filed 90 patent applications across 7 distinct patents
 - Key patents filed in up to 21 different countries / regions

14 Patents Granted and 2 Allowances By The Following Governing Authorities:

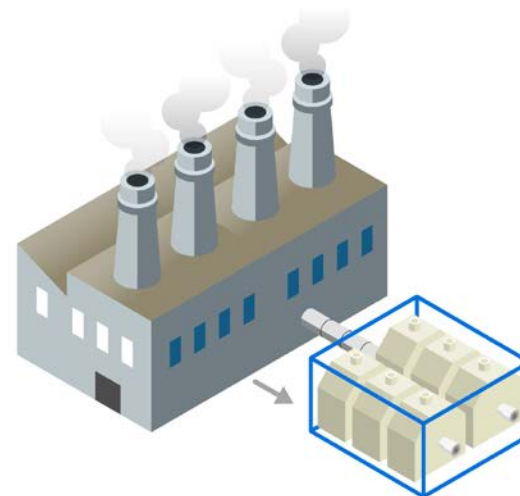
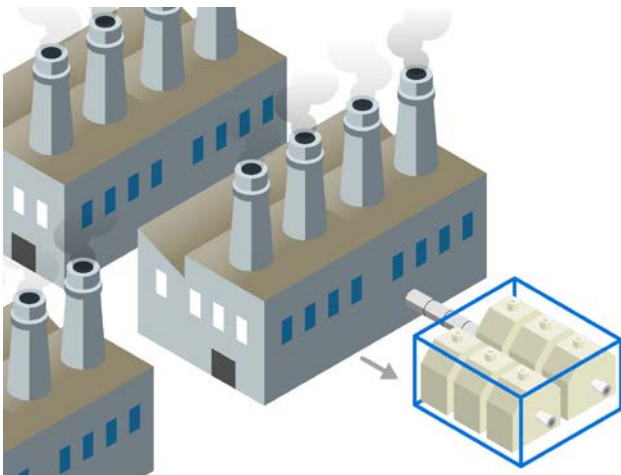
United States
Canada
Korea
Australia
Japan
South Africa
China
Europe
African Intellectual Property Organization
Mexico
Ukraine

AquaRefining Licensing Opportunity

Aqua Metals' long term vision is to partner with battery recycling centers across the globe to increase production without increasing emissions

Recycling Centers Have Two Models For Retrofitting With AquaRefining:

- 1 Increase production without increasing emissions by adding AquaRefining but keeping furnace capacity
- 2 Keep total production the same by adding AquaRefining and reducing furnace usage while reducing emissions



Financial Overview

Capitalization

Cash and Cash Equivalents as of March 31, 2019	\$15.3 million
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Debt as March 31, 2019

Green Bank, Prime Rate plus 2-6% Secured Loan, Matures November 3, 2036 ⁽¹⁾	\$8.9 million
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Warrants (Outstanding as of March 31, 2019, in thousands of shares)

Interstate Batteries	
\$3.33 Exercise Price, Expires June 23, 2020	702
\$9.00 Exercise Price, Expires May 24, 2019	1,605
National Securities Corporation	
\$10.00 Exercise Price, Expires November 21, 2019	33
\$1.90 Exercise Price, Expires January 22, 2024	104

Common Stock (Outstanding as of March 31, 2019, in thousands of shares)

Shares Outstanding Owned by	
Officers and Directors: 982	2.2%
Strategic Partners: 1,413	3.2%
Other Insiders: 6,036	13.5%

❖ **AQMS sold 11 million shares at \$2.00 for net proceeds of \$20.2 million on May 7, 2019**

Note: Q1'2019 (March 31) results to be announced May 9, 2019.

1) Net of issuance costs.

Income Statement

	Three Months Ended March 31,		Twelve Months Ended December 31,	
	2019	2018	2018	2017
<i>(\$ in thousands, except per share data)</i>				
Product sales	\$ 437	\$ 1,726	\$ 4,449	\$ 2,088
Operating cost and expense				
Product sales cost	\$ 4,681	\$ 5,436	\$ 22,761	\$ 9,541
Research and development cost	620	1,475	4,502	8,103
General and administrative expense	4,016	1,775	14,214	6,891
Impairment charge	-	-	-	2,411
Total operating expense	\$ 9,317	\$ 8,686	\$ 41,477	\$ 26,946
Loss from operations	\$ (8,880)	\$ (6,960)	\$ (37,028)	\$ (24,858)
Other income and expenses				
Interest expense	\$ (2,889)	\$ (587)	\$ (3,447)	\$ (1,761)
Interest and other income	63	17	223	41
Total other income (expense), net	\$ (2,826)	\$ (570)	\$ (3,224)	\$ (1,720)
Loss before income tax expense	\$ (11,706)	\$ (7,530)	\$ (40,252)	\$ (26,578)
Income tax expense	(2)	(2)	(2)	(2)
Net loss	\$ (11,708)	\$ (7,532)	\$ (40,254)	\$ (26,580)
Basic and diluted net loss per share	\$ (0.27)	\$ (0.27)	\$ (1.18)	\$ (1.31)

Note: Q1'2019 (March 31) results to be announced May 9, 2019.

Balance Sheet

(\$ in thousands)	March 31, 2019	December 31, 2018		March 31, 2019	December 31, 2018
Assets			Liabilities		
Current assets:			Current liabilities:		
Cash and cash equivalents	\$ 15,336	\$ 20,892	Accounts payable	\$ 3,035	\$ 2,088
Accounts receivable	426	725	Accrued expenses	4,449	5,196
Inventory	1,216	765	Deferred rent, current portion	-	8
Prepaid expenses and other current assets	1,157	370	Lease liability, current portion	505	121
Total current assets	\$ 18,135	\$ 22,752	Notes payable, current portion	274	311
Non-current assets:			Convertible note payable, current portion	-	4,075
Property and equipment, net	\$ 46,589	\$ 45,548	Total current liabilities	\$ 8,263	\$ 11,799
Intellectual property, net	1,133	1,271	Non-current liabilities:		
Other assets	3,332	1,800	Deferred rent, non-current portion	\$ -	\$ 27
Total assets	\$ 69,189	\$ 71,371	Lease liability, non-current portion	1,282	110
			Asset retirement obligation	756	745
			Notes payable, non-current portion	8,610	8,600
			Total liabilities	\$ 18,911	\$ 21,281
			Stockholders' equity		
			Common stock	\$ 45	\$ 39
			Additional paid-in capital	157,037	145,147
			Accumulated deficit	(106,804)	(95,096)
			Total stockholders' equity	\$ 50,278	\$ 50,090
			Total liabilities and stockholders' equity	\$ 69,189	\$ 71,371

Note: Q1'2019 (March 31) results to be announced May 9, 2019.

Cash Flow Statement

(\$ in thousands)	Three Months Ended March 31,	
	2019	2018
Cash flows from operating activities:		
Net loss	\$ (11,708)	\$ (7,532)
Reconciliation of net loss to net cash used in operating activities		
Depreciation	843	778
Amortization of intellectual property	48	47
Accretion of asset retirement obligation	11	11
Fair value of common stock issued for consulting services	1,187	-
Stock-based compensation	1,067	144
Warrant expense	578	
Amortization of debt discount	-	235
Amortization of deferred financing costs	29	21
Non-cash convertible note interest expense	2,556	163
Non-cash interest expense	101	-
Loss on disposal of Ebonex asset	90	-
Loss on disposal of equipment	79	-
Inventory adjustment	(119)	39
Changes in operating assets and liabilities		
Accounts receivable	299	(444)
Inventory	(332)	267
Prepaid expenses and other current assets	(786)	132
Accounts payable	493	144
Accrued expenses	(684)	83
Deferred rent	(35)	(46)
Other assets and liabilities	(21)	-
Net cash used in operating activities	\$ (6,304)	\$ (5,958)

Note: Q1'2019 (March 31) results to be announced May 9, 2019.

Cash Flow Statement (Cont.)

(\$ in thousands)	Three Months Ended March 31,	
	2019	2018
Cash flows from investing activities:		
Purchases of property and equipment	\$ (1,612)	\$ (1,337)
Other assets	38	-
Net cash used in investing activities	\$ (1,574)	\$ (1,337)
Cash flows from financing activities:		
Proceeds from issuance of common stock, net of transaction costs	\$ 9,063	\$ 2,107
Payments on notes payable	(90)	(69)
Payments on finance leases	-	(39)
Payments on convertible note	(6,651)	-
Net cash provided by financing activities	\$ 2,322	\$ 1,999
Net decrease in cash and cash equivalents	\$ (5,556)	\$ (5,296)
Cash and cash equivalents at beginning of period	\$ 20,892	\$ 22,793
Cash and cash equivalents at end of period	\$ 15,336	\$ 17,497

Note: Q1'2019 (March 31) results to be announced May 9, 2019.



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