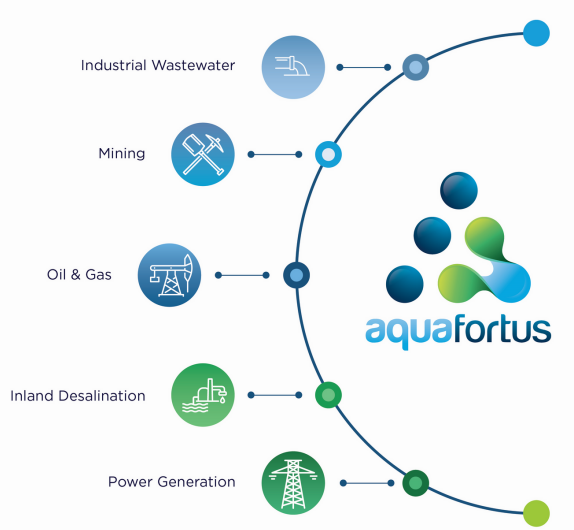
New wastewater treatment technology

Name	Aquafortus Technologies Limited
Sector	Green Economy
Sub-sector	Zero Liquid Discharge (ZLD) / Wastewater treatment
Capital raise	NZ$7.65 million
Looking for	An institutional or sophisticated or strategic long-term investor with the ability to fulfil follow-on rounds at pace if required. Once this technology has been proven and adopted as the new industry standard in brine management, customer acquisition will be rapid as will ensuing scale-up.
Web-links	• www.aquafortus.com

Summary

Aquafortus has developed and patented a non-thermal technology to treat high salinity industrial wastewater / brine. The Aquafortus technology crystallizes out all salts commonly found in high salinity industrial brines and recovers up to 98% of the clean water. Compared to incumbent technologies, it can do this without thermal energy, saving 90% in energy use and 60% in OpEx.



Background

Aquafortus Technologies Limited is a New Zealand company co-founded by CEO, Daryl Briggs, and COO Jessica Lam. Aquafortus was formed in 2016 to commercialise novel and proprietary high salinity wastewater remediation technology. It's non-thermal Zero Liquid Discharge technology was introduced to the market in early 2018.

“The effective processing of wastewater generated by industries all over the world is a significant, and expensive environmental problem,” says Briggs. “Aquafortus is committed to bringing the most advanced and economic water recovery technologies to more markets and more industries globally.”

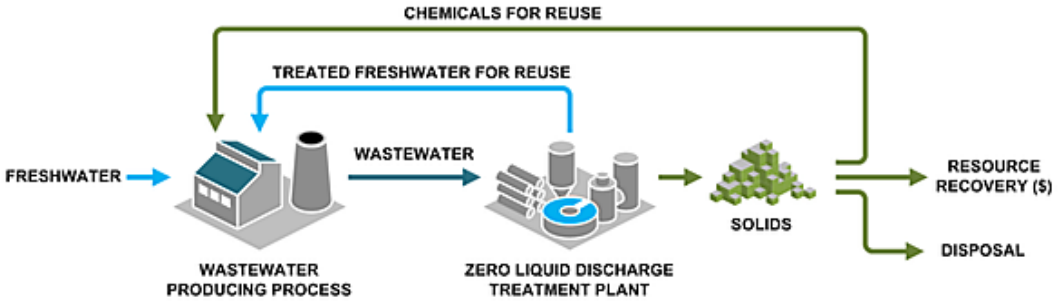
Timeline

Aquafortus:

- was first funded in September 2016
- built its first ZLD pilot plant in February 2018
- signed its first customer in April 2018
- deployed its first commercial trial in October 2019 and
- signed its second customer January 2020

First Customer

PetroH2O is Aquafortus’ US-based oil and gas licensee. Post the recent oil price shock, PetroH2O has reengaged with the oil and gas supermajors. The supermajors are looking to take a more direct role in the deployment of the Aquafortus technology using their own balance sheets. PetroH2O has already built and deployed a 100 barrels per day Aquafortus plant and are now looking to scale-up to a 2,000 barrels per day plant. Aquafortus has also manufactured in-territory and supplied its first batch of commercial scale consumables to the 100 barrels per day plant.



Second Customer

Aquafortus has also signed a second licensee, Lenntech, a globally respected engineering firm based in the Netherlands. The licence signed is a non-exclusive agreement for industrial wastewater applications in Europe. Signing Lenntech allows Aquafortus to speed up its commercial deployment by having more parties constructing "reference-site" processing plants. This will also result in a greater diversity of reference sites in recognised territories and applications. The more reference sites, the lower the barrier to entry for signing future licensees.

Lenntech has two highly motivated customers that Aquafortus has been working closely with for the past thirteen months. The first customer has paid to secure early access to Aquafortus ZLD technology while the second has a wastewater application that will scale up to 8,400 m3/day. This stands to generate a royalty of USD4.2 million to Aquafortus as well as significant volumes of on-going absorbent and regenerant chemical sales. (Source NZ Export and Trade Handbook. 2020).

Next Potential Customer

"Mining – as one of the most water-intensive industries – often faces operational risks with regard to water supply and many operations have made substantial efforts to improve water efficiency in recent years. As a result, incremental improvements in water efficiency have become increasingly difficult. Demand for copper, gold, iron ore, lithium, cobalt and zinc is set to rise substantially by the late 2020s due to increased use in electric vehicles and renewables. However, 30%–50% of global production of these key commodities is concentrated in areas where water shortage risk is already high. Water risk will increase further in these regions as a result of population pressure and regional climatic changes, which in turn will further increase the risk of supply disruption or curtailment of water rights to miners and metal processors."[1]

Aquafortus has been working with one of the world's largest mining companies on an application in Australia. It is a three-month work package covering a feasibility study of Aquafortus' technology. Following the successful completion of the feasibility study, it is likely that the Aquafortus technology will be the chosen technology to deploy in that mine site. This project is just the tip of the iceberg as to what Aquafortus' technology can do for the mining industry. From treating decant liquors to tailings slurry for dry stacking, it recovers up to 98% of the water for reuse, therefore, increasing clean water available for mining operations. This increases the water security of the mine, improves the tailings management risk and reduces competition with communities for scarce local water resources.

[1]McNeil, Tang, Steel, Increasing Water Risks in Metals and Mining - Low-CarbonTechnology Supply Chains Face Growing Constraints, FitchRatings, 8 July 2020)– p1 and p3-4

Total Addressable Market

Aquafortus is targeting these highly regulated industries that generate enormous volumes of brine.

- Global Oil and Gas Water Management US$ 58 billion in 2020. Includes costs of water hauling, water disposal, produced water treatment and produced water treatment equipment.
- Global Mining Water Management US$ 14.4 billion in 2020
- Global Power plant Water Management US$ 34 billion in 2020

Looking for

Capital raise NZ$7.65 million

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For more information please contact

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