

ASX

# Announcement

29 November 2012

## Water subsidiary signs contract with AngloGold Ashanti Australia

### Highlights:

- First mining deployment of AGG's AquaArmour™ with AngloGold Ashanti Australia
- Environmental considerations and flexibility of AquaArmour™ product key to winning business
- Secondary sale to existing client for a further 7000 square meters
- Growing pipeline of upcoming sales

Wasabi Energy Limited (ASX:WAS, AIM:WAS, OTCQX:WSBLY) ("Wasabi"), an emerging power producer, is pleased to announce that its subsidiary, Aqua Guardian Group ("AGG"), of which Wasabi owns 79.2%, has completed its first mine site sale and deployment in Western Australia with AngloGold Ashanti Australia ("AGAA").

AGAA has taken the lead on environmental excellence in water management by signing an agreement with AGG to roll out its innovative modular evaporation and algal control system, AquaArmour™, at the Tropicana Gold Mine in Western Australia. AngloGold Ashanti Australia's parent company, AngloGold Ashanti, is the third largest gold producer in the world. It has 20 sites in operation across 10 countries with a focus on four operational regions which all display semi-arid to arid, water stressed zones, namely; South Africa, Continental Africa, Australia and the Americas.

**Executive Chairman of Wasabi, John Byrne, commented,** "The deployment of AquaArmour™ in the mining industry is a significant step forward in the ongoing evolution of AGG. The mining sector has been a key target market due to the large number of mine sites in arid, water stressed areas and the importance of water to the mining process and to the local communities. In Australia there are 364 operating mines<sup>1</sup>. Approximately half of these mines are located in Western Australia, South Australia or the Northern Territory. The majority of mines use open water storage facilities and are located in arid areas (e.g. western and central Australia) where water availability is relatively low and access to water is expensive.

In 2011 over \$8.3 billion was spent by the mining industry on water with the Australian mining industry incurring a total water expenditure of \$1.5 billion, which was more than any other country and almost double the next biggest spenders being Chile and China<sup>2</sup>.

With their rigorous health, safety and risk management assessments, this sale and deployment to a global mining company, demonstrates the compliance of the AquaArmour™ product and we expect an increase in mining sales. The product has already been tested and successfully deployed in a number of environments, ranging from residential water, storm water harvesting and now mine site uses, for the effective mitigation of evaporation, algal control and maintenance of water quality.

<sup>1</sup> Geoscience Australia – Australian Mines Atlas

<sup>2</sup> Global Water Intelligence, "Mining a rich seam for water companies", Vol 12, Issue 7 (July 2011)

We have received interest from a wide range of potential customers in both the mining sector and water authorities and we continue to see an acceleration of the pipeline from initial contact through to sale and deployment of the modules. We look forward to providing ongoing updates as the activities of our water subsidiary, AGG, grow.

“We would like to acknowledge AngloGold Ashanti’s commitment to the environment and water conservation at its Tropicana mine through the application of the Aqua Armour™ modules.”

Tropicana, 70% owned and managed by AGAA with Independence Group holding the balance, is located 330 kilometres east-northeast of Kalgoorlie-Boulder on the western edge of the Great Victoria Desert in Australia. The Tropicana mine site covers 13,000 square kilometres of very remote terrain. The climate is arid and experiences temperatures of up to 45 degrees Celsius and between 150mm and 250mm of rainfall per year. The deployment of Aqua Armour™ provides an economically viable, simple solution to securing the site’s water security and water quality. The mine is currently under construction and is scheduled to pour first gold in the December 2013 quarter.

The Aqua Armour™ modular evaporation and algal control system will be utilised in a water storage at the reverse osmosis water plant at Tropicana, the main supply of water to the site.

For Tropicana Gold Mine Business Improvement Co-ordinator, Ian Winn, it was the flexibility and environmental credentials of Aqua Armour™ that proved central to the decision-making process.

Ian Winn commented: “The product is portable, very flexible, easily scalable, requires minimal maintenance and has a 20-year life. The transferability of the product is also an important factor for us as we are able to move it to a different pond, or even change the shape of the pond, and we don’t need a large amount of labour to move it. The other point is that water does not collect on the surface so we don’t need to pump it out and if one unit does get damaged it is easy to replace.”

While Tropicana represents AGG’s first mining application, seven installations have already been undertaken in Australia with further deployments to occur in the coming months. Installations to date include Victorian Water Board affiliates GWM (Grampians, Wimmera Mallee) Water, Gippsland Water and South Gippsland Water. In South Australia, clients include the District Councils of Mt Remarkable and Boolaroo.

We are now seeing interest from existing clients in expanding their use of Aqua Armour™ with a recent purchase of Aqua Armour™ for a 2<sup>nd</sup> storage covering approximately 7000 square meters by one of the water utilities. As *in situ* performance data becomes available we anticipate an increase in secondary sales to existing clients and those considering initial smaller deployments before committing to multiple sites.

## Market Potential

Internationally, AGG are in the process of establishing initial sites, in particular in South America, where a number of large mining operations are based in arid areas such as Chile. Opportunities for deployments in North America are also being pursued with the first deployment in the water intensive fracking industry expected in the near future. AGG have been building linkages to increase their capability through partnerships with local companies in international jurisdictions for manufacturing, marketing and deployment of Aqua Armour™. More recently in WA, the Merredin Shire Council with assistance from engineering consultancy firm Cardno (WA), has installed Aqua Armour™ on a stormwater harvest and recovery pond. This project was a finalist in the Infrastructure Innovation category and was highly commended at the AWA WA Water Awards 2012.

The cost and usage of water is becoming a major issue for many areas. In the South American mining area in the Atacama Desert in Chile, 66% of the water used is by the mining industry<sup>3</sup>. Due to the high demand for water, the water rights are selling for US\$2,500 to US\$3,800 per megalitre (ML)<sup>4</sup>. Much of the water used at the mines is desalinated which is estimated to cost US\$3,000 to US\$4,000 per ML<sup>5</sup>.

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<sup>3</sup> Azzopardi, T. (2011) Chile’s Drought Dilemma, Business Chile, 20/04/2011

<sup>4</sup> BBC News (23 March 2012) – War for water in Chile’s Atacama Desert: Vines or Mines?

<sup>5</sup> Mining magazine (2009) Water, water everywhere?, 10/09/2009

Within the fracking market for shale gas in the US it is estimated that a typical shale gas well requires 11.4 to 15.1 ML of water for drilling and completion<sup>6</sup> which is the equivalent of 4 to 6 Olympic sized swimming pools. The shale gas industry currently pays at least US\$3,700 per ML for source water to use in hydraulic fracturing of gas wells<sup>6</sup>.

Within Australia the water lost to evaporation from major dams in Australia in 2011 was 24,236.6 gegalitre (1GL = 1,000 ML)<sup>7</sup> which is over 9.5 million Olympic sized pools. In November 2010, the Australian Bureau of Statistics reported that the amount of water consumed by the mining industry across Australia in 2008–09 was 508 GL. With the mining sector growth especially in iron ore, the mining water use projections provided in the Pilbara Regional Water Plan, 2010–2030, is expected to increase from approximately 75 GL/year in 2006 to over 230 GL/year by 2012<sup>8</sup>. Within Australia the cost of water in arid regions is in excess of AUD\$2,000 per ML.

Significant cost savings can be achieved by the use of AquaArmour™ to prevent evaporation. AquaArmour™ has an estimated cost between AUD\$411 and \$1,438 per ML.

#### About AquaArmour™

The AquaArmour™ system is scalable and projects have been as small as 950 square metres to 23,000 square metres, while early stage discussions have progressed for a 150-hectare deployment.

Independently verified to save 88% of the water that would otherwise be lost to evaporation, the technology also inhibits algal growth by lowering the temperature of the water and minimises ultra violet and visible light penetration by 95%. A sustainable and environmentally safe solution for mining, agriculture, urban and rural water storages, it also has no effect on dissolved oxygen levels.

Made of virgin polymer HDPE plastic, AquaArmour™ does not react with chemicals like caustic soda, cyanide or highly acidic water, while at the same time it will not leach any contaminants to the water surface – something particularly important for potable water.

Being hexagon in shape, the modules tessellate together, forming a blanket across the water surface. Each module is kept stable on the water's surface because it holds 80 litres of water as ballast and is designed to withstand winds of up to 200km per hour.

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<sup>6</sup> Black & Veatch, "Nexus of Water and Energy"

<sup>7</sup> AGG company website

<sup>8</sup> Integrating the mining sector into water planning and entitlements regimes, March 2012



## About Wasabi Energy

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Wasabi Energy Limited is listed on both the Australian Securities Exchange (ASX: *WAS*) and the AIM market in London (AIM: *WAS*) as well as American Depository Receipts trading on OTCQX Market (OTCQX: *WSBLY*). Wasabi Energy is an emerging power producer that also invests in sustainable technologies. Its power business is based on the proprietary Kalina Cycle® power generation technology which utilises low grade, waste heat from industrial facilities or geothermal sources to produce electricity. In a typical industrial application of the Kalina Cycle® technology can increase energy efficiency in an industrial plant by up to 20%. Through its strategic investments Wasabi Energy owns a 79.2% interest in Aqua Guardian Group, the developer of the AquaArmour™ a water management, conservation and algal control product. Aqua Guardian Group also has a 22.7% interest in the air, water and minerals ASX listed company CleanTeq (ASX: CLQ). Wasabi Energy also owns a 19.2% interest in Lignol Energy Corporation (TSXV: LEC) an advanced bio-refinery group who recently purchased an 11% interest in Australian Renewable Fuels, a separately ASX listed company (ASX: ARW) which produces liquid biofuels from a variety of non-food grade feedstocks, from Wasabi Energy.

Additional information:

[www.wasabienergy.com](http://www.wasabienergy.com)