Australia’s gold mining industry began in 1851, significantly increasing the country’s population within a few years. As the world’s second largest producer of gold, and a major player in the extraction of iron ore, nickel, opal and zinc, mining remains one of Australia’s primary industries.

Dewatering is an important part of the mining industry in general and for gold mining in particular. Open saline pit dewatering is especially critical as it is the key to continued and efficient extraction of precious metals.

Going for gold
For one large-scale gold mine in Western Australia, investing in a dewatering system that could effectively remove the continual influx of saline ground water and precipitation, was vital in keeping the mine running at optimum production levels.

Like most open-pit dewatering, extracting water from this site required a system that was capable of processing low-flow fluids through extremely high head in order to pump the saline water up the pit face and out of the mine.

For maximum efficiency, Xylem Water Solutions Australia suggested drawing on the expertise and solutions from its Vogel brand of submersible multistage pumps and flotation modules from its Flygt brand. When installed horizontally into low-flow fluids, these multistage pump systems can deliver head up to 500m, much more than single-stage pumps that are readily available in Australia.

Vogel pumps are manufactured in Austria enabling Xylem to offer an extremely competitive lead time for a more efficient system. Two duplex TVS submersible multistage pumps were delivered to the gold mine in Western Australia within a short period of time. The site manager was relieved to receive a new dewatering system quickly and with less required maintenance than other systems.

“There is no manufacturer in Australia that can deliver a duplex multistage submersible pump quicker than Xylem, even though these particular pumps are made in Europe,” said Rob Besant, project manager western region, Xylem Water Solutions Australia Ltd.
The ease of installation and maintenance was a winning factor for the gold mine and played a large role in the final selection. In large open pits, having access to the equipment for planned maintenance can reduce the need for excessive equipment retrieval and manpower, saving the staff and company time and money throughout the life of the pump.

Besant added, “Flotation modules make installing and maintaining pumping equipment quick and convenient. By floating near the surface, the pump does not have to process ‘high solids’ water from the bottom of the pit, which extends the life of the equipment.”

A market-leading solution
The gold mine drew on the experience and product portfolio of Xylem to create an efficient, cost-saving dewatering system by selecting two Vogel duplex multistage pumps and two flotation modules from Flygt. Together, Xylem’s product solutions have given the mine the very best in market-leading technology.

About Xylem
Xylem (XYL) is a leading global water technology provider, enabling customers to transport, treat, test and efficiently use water in public utility, residential and commercial building services, industrial and agricultural settings. The company does business in more than 150 countries through a number of market-leading product brands, and its people bring broad applications expertise with a strong focus on finding local solutions to the world’s most challenging water and wastewater problems. Launched in 2011 from the spinoff of the water-related businesses of ITT Corporation, Xylem is headquartered in White Plains, N.Y., with 2011 revenues of $3.8 billion and 12,500 employees worldwide.

The name Xylem is derived from classical Greek and is the tissue that transports water in plants, highlighting the engineering efficiency of our water-centric business by linking it with the best water transportation of all -- that which occurs in nature. For more information, please visit us at www.xyleminc.com.

The Vogel Pumps duplex multistage submersible pump delivers head of up to 500m, which is enough to propel the saline water out of the gold mine.

Xylem Vogel Pumps Submersible TVS pump
Capacity: Up to 520m³/h
Head: Up to 500 meters (1600 feet)
Materials: Basic type in austenitic stainless steel and higher graded duplex is optional and suits more aggressive and saline waters.

Xylem Flygt Pump Floatation Modules
Flygt’s range of pump floatation modules has been developed to provide a light-weight and cost-effective alternative to the traditional steel pontoon. The flotation modules are prefabricated from light-weight, foam-filled, GRP (Glass fibre Reinforced Polymer) and are available in four sizes, from 50 to 1150kg.