**Case Study – Underground Dewatering System Project**

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| **Project** | Design & Construction Support for an Underground Mine Dewatering System |
| **Date** | 2015 - 2016 |
| **Location** | Gosowong Gold Mine, North Sulawesi Indonesia. |
| **Client**  **Or**  **Project** | The Gosowong Gold Mine is owned and operated by PT Nusa Halmahera Minerals which is a subsidiary of Newcrest Mining Ltd. |
| **Services offered** | IMEC provided multi-discipline engineering services to design a fit for purpose mine dewatering system. The system comprised of a pump station located strategically within the underground mine, and connected with a pipe network to discharge water directly from the underground area of the mine to surface at a capacity of 400 L/s.  IMEC completed all fluid mechanical modelling, civil and mechanical design along with piping and process design for the entire system. |
| **Project Outcomes** | The pumping system was successfully commissioned in April 2016. The project marked a significant milestone for the mine, as it provided dewatering capacity to enable mining production to advance in alignment with the set schedule (prior to the installation of the system, the inflow rate of groundwater and limited installed infrastructure to pump out, meant that mining was constrained as a result of water management and flood prevention).  The system was unique in that the water to be pumped from the mine was at temperatures upto 750C, meaning standard equipment, processes and typical dewatering system function would not be practical, and therefore IMEC developed a bespoke and unique system to safely and efficiently manage mine dewatering. |
| **Our Role** | IMEC provided all engineering services, project management support and onsite commissioning of the facility. |
| **Personnel Involved** | IMEC utilised staff from both its Australian and Dublin based offices. Staff throughout included Chartered Professional Engineers, Senior Design Drafters, experienced Construction Managers and Certified Project Managers. |