

FAIRPORT REVITALISES ONE OF THE OLDEST BASE METAL MINES IN EUROPE

Over the past 12 months, Fairport Engineering has been working with Anglesey Mining plc on a Scoping Study for their Parys Mountain project in North Wales. The Parys Mountain deposit, mined since the Bronze Age, contains mineral resources estimated at 2.1 million tonnes at 6.9% combined base metals (lead, copper and zinc) in the indicated category, with a further 4.1 million tonnes at 5.0% combined base metals in the inferred category. Although the project is projected to be financially viable on base material extraction alone, the deposit contains further value in the form of significant grades of the precious metals, gold and silver.



Working in conjunction with mining consultants Micon International Ltd, Fairport provided metallurgical expertise, process design, concentrator plant and infrastructure layout plus estimates for capital and operating cost based on a number of throughput options. The study established an optimum plant throughput of 1000 t/d, or around 350,000 t/a. Increasing the throughput compared to previous studies (500-700 t/d) reduced the estimated opex considerably, for a modest increase in capex. Micon verified that it would be possible to mine the ore and raise it to the surface at this increased rate, and Fairport projected concentrate grades and production rates over the mine life projected based on the Micon predicted head grades.

In outline, the concentrator plant will consist of crushing and screening of the ROM ore, pre-concentration by dense medium separation followed by a two-stage grind plus gravity concentration, before feeding to a three-stage preferential floatation circuit. Product dewatering via thickeners and filters with closed-loop water recovery is also included. All of these mineral processing technologies are extensively proven and long-established, enabling competitive procurement from a wide selection of reputable vendors. Furthermore, Fairport established that it would be viable to reduce the initial capex requirement considerably by exploring the market for high-quality refurbished equipment.

For further information on Fairport Engineering's mineral processing capability please contact Linda White: Communications Manager.