Development of a New Mining Industry for Sea Bed Massive Sulphides

by

Dr. Charles Morgan
Marine Minerals Technology Center
SOEST
University of Hawaii at Manoa

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Abstract

Sea bed hydrothermal vents have been the objects of intense scientific study since their discovery in 1979. More recently, the vent sites have aroused the interest of mining and biotechnology companies. Presently, at least two industrial groups are attempting to develop mining operations at these deep sea bed sites. Significant engineering challenges exist in the development of such a deep sea bed mining industry. Efficient methods of exploration, mine site delineation, and the gathering, lifting and transport of ore must be developed and verified. Fortunately, much of the progress made in the development of offshore oil, diamonds and manganese nodules can be transferred with little new development required. The prospect of relatively high grade and continuous deposits which have not been diluted and scattered by post-depositional geological processes, and the potential of having a portable infrastructure which does not have to remain with the mine site after the ore is commercially exhausted, are tempting commercial interests to assume these challenges.