

A History of Solution Mining at the Cane Creek Mine, Moab, Utah

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Summary

Mining at the Cane Creek mine has been in four phases: first the mechanical underground mining of ore in Potash 5; second, the flooding and solution mining of underground mine workings; third, the solution mining of the salt tailings pile; fourth, the construction of horizontal cavern system in Potash 9, a deeper ore horizon. The Cane Creek Potash Mine was opened as a conventional room and pillar underground mine in 1962 by the Texas Gulf Sulfur Company. A series of disastrous misinterpretations and assumptions about the geology of the ore body hampered the mine from the start. In order to help recover its investment, Texas Gulf personnel came up with the innovative idea of flooding the mine and pumping the resulting brine into solar evaporation ponds, harvesting the crystallized ore, and processing potash in the existing surface plant. The plan was implemented, and after 2 years of construction, solution mining from the flooded mine workings started in 1970. A program of solution mining research was also started in 1972 and a series of 9 test wells were drilled in an attempted to mine ore from outside the old mine works. In 1986, the test program was terminated and the mine headed towards depletion and reclamation. The reclamation plan included another innovative and successful program to solution mine and sell salt out of the tailings pile. In 2000, the mine was purchased by Intrepid Mining LLC who planned to use modern horizontal drilling technology to build new solution mining caverns and revitalize the mine. This program was successfully implemented starting in 2002 and today the mine is producing 120,000 tons per year of potash and 150,000 tons per year of salt with a reserve life in excess of 100 years.

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