

12.1

Energy independence for Europe from the Cambrian Alum Shale of Sweden: oil and uranium - a two-fold energy resource

Edward Godin, Stewart Jackson, Patricia Sheahan, Michael Bromley-Challenor, Sven Snaell

¹*Continental Precious Minerals Inc., Toronto, Ontario, Canada,* ²*University of Alberta, Edmonton, Alberta, Canada,* ³*Carleton University, Ottawa, Ontario, Canada,* ⁴*University of Uppsala, Uppsala, Sweden,* ⁵*University of Stockholm, Stockholm, Sweden*

The black Alum Shale of Sweden is currently undergoing extensive exploration for oil, uranium, nickel, molybdenum and vanadium. The long term commodity prices have stimulated Continental Precious Minerals Inc; which has now established a greater than 1 billion pounds resource of uranium oxide together with significant amounts of other associated metals. Ongoing bench scale process development is being conducted for the extraction of metals and hydrocarbon compounds. This resource can be the basis for future and partial energy independence for Sweden and for Europe. Earlier, prior to and during World War II, uranium and oil production were undertaken for national energy security. Licensed ground now surrounds Ranstad where a production-scale mine plant unit existed (southern Sweden) and demonstrated the recoverability of uranium and other metals from the alum shale. Elsewhere the shale was exploited for oil by retorting and in-situ recovery to safeguard Sweden during the war years. Continental Precious Mineral Inc. is currently undertaking further drilling in southern Sweden followed with parallel metallurgical investigations and extraction in addition to testing for fuel, oil and gas. Fischer assays in two of the districts give > 4.5 % oil and evaluation of retort processes is underway. These results support the conclusions by the Swedish Geological Survey in Andersson's report published in 1985. This report provided estimates of contained metals, to be measured in billions of pounds, and the estimated oil resources to be approximately 4.5 billion barrels of oil from shale containing more than 10% organic matter, that being the cut off grade. Continental Precious Minerals Inc. continues to establish and expand this world class resource of all materials.