

Preface

This book brings together reports from multiple scientific disciplines to produce a comprehensive history of the radium and uranium industries of the twentieth century and their effect on world events. Whereas much has been written about the utilization of uranium to produce atomic bombs, this narrative is concerned with the mining of uranium and its byproducts during the centuries before and the decades after August of 1945. It begins with the discovery of pitchblende and the appearance of Miner's Plague in the mid-sixteenth century and ends with the political and diplomatic events of 1990. The initial status of uranium as a periodic table curiosity and its minor commercial role in ceramics is described. The discovery of ionizing roentgen rays and radioactivity is seen to pave the way for the discovery of radium and radon, both of which had enormous commercial value. The creation of a radium market and the origins of radiation oncology during the inter-War period are detailed.

The sequential radium monopolies of Austria, Colorado and Belgium are examined as is their role in the procurement of uranium during World War II. The scientific work of the German scientists who identified the etiology of Miner's Plague while they overlooked the world's second largest uranium source is explained. The origins of the Cold War are traced to the Soviet obsession to procure enough uranium to achieve nuclear parity. This preoccupation alienated their G.D.R. and CZ satellites while helping to bankrupt the U.S.S.R. Documented are the combined efforts of the United States Public Health Service, Nuclear Regulatory Commission and the Environmental Protection Agency to finally gain control in 1990 over the toxicities of American uranium mining and radium products.

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