

Mining Valuable Minerals From Produced Water



Mark J. Rigali

*New Mexico Produced Water
Research Consortium*

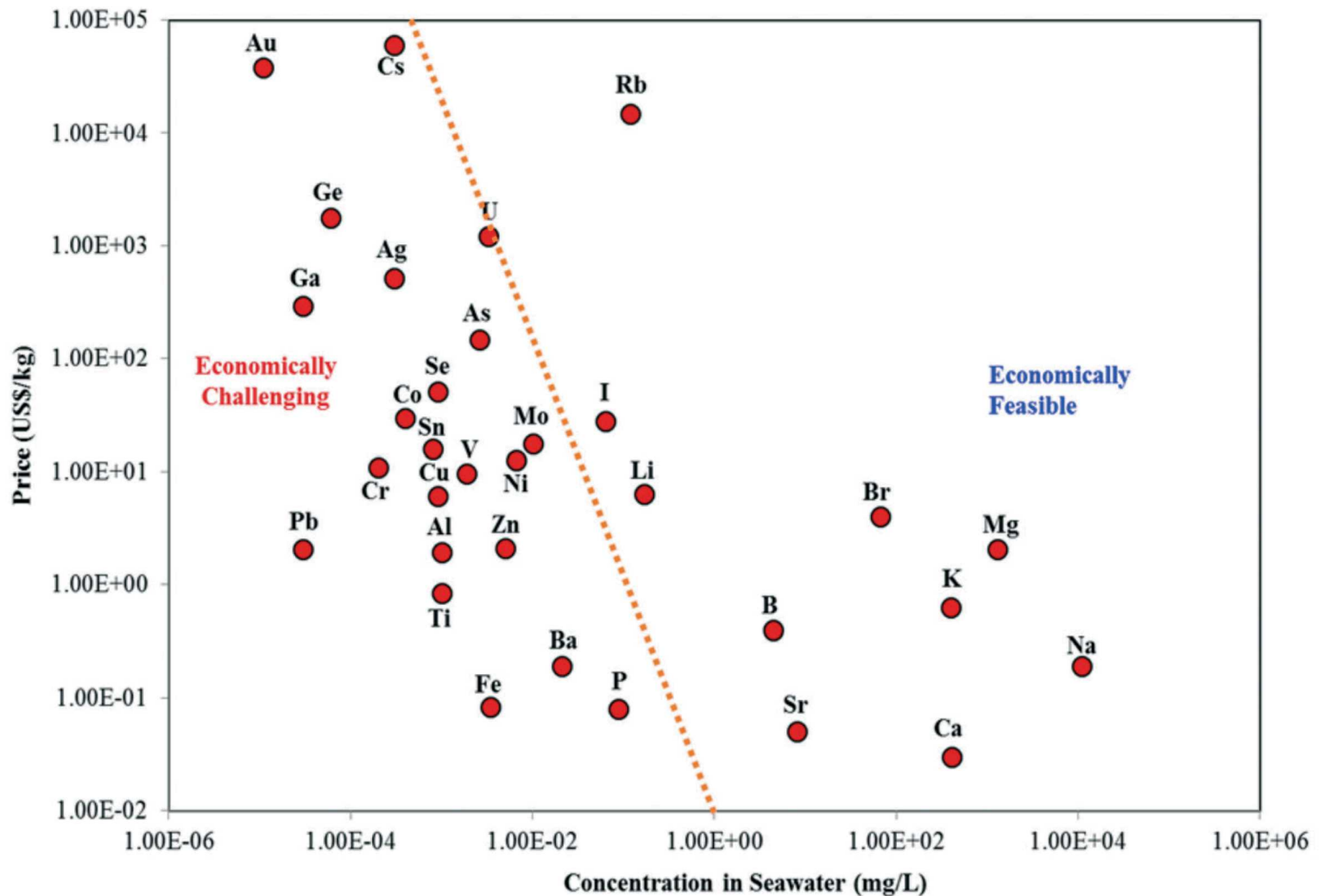
*Steering Committee Working
Group*

January 15th 2020



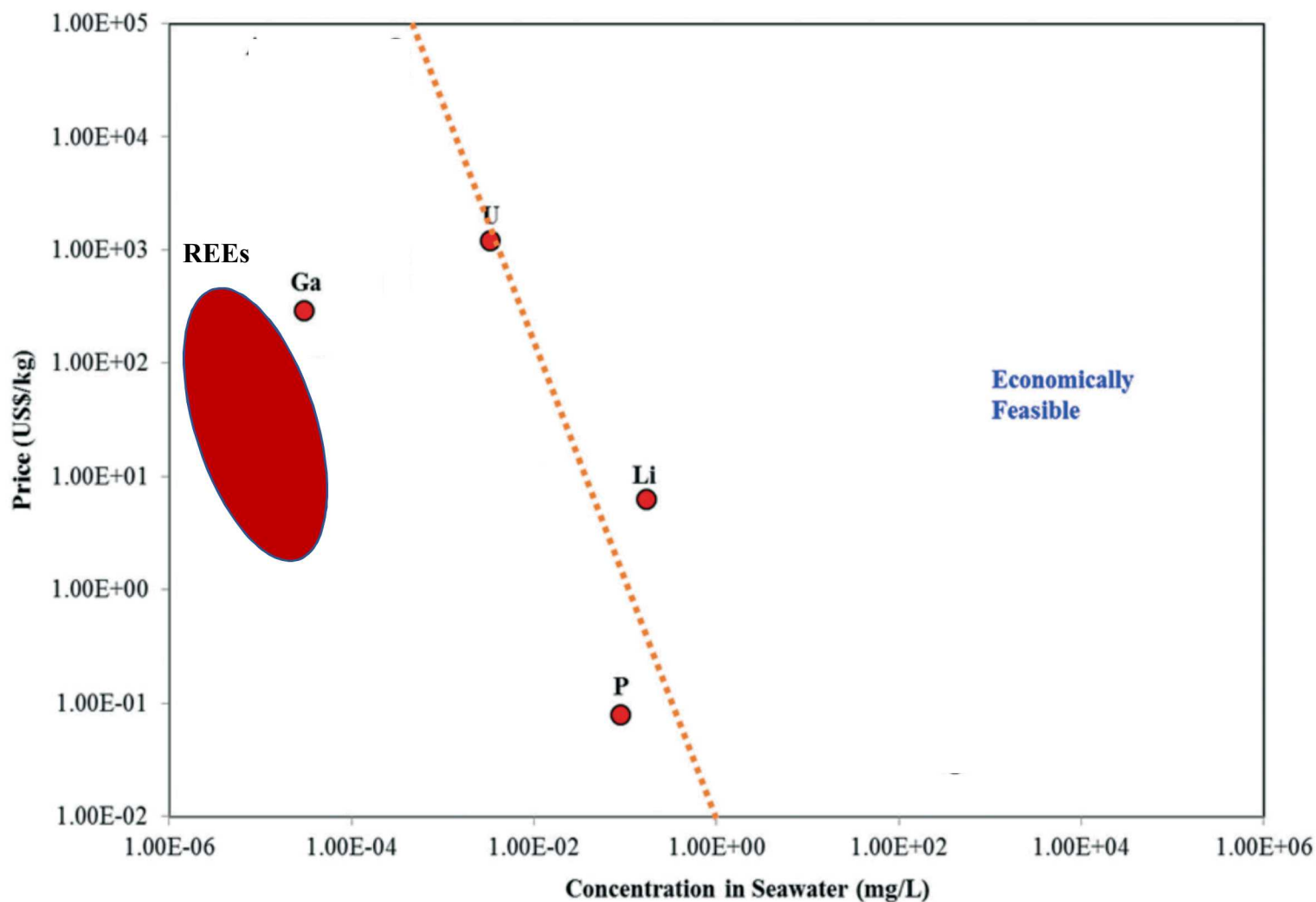
Sandia National Laboratories is a multimission laboratory managed and operated by National Technology & Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International Inc., for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525.

Mining Valuable Minerals From Seawater



P. Loganathan et al., Environ. Sci.: Water Res. Technol., 2017, 3, 37

Critical Minerals From Seawater?



P. Loganathan et al., Environ. Sci.: Water Res. Technol., 2017, 3, 37

Enabling Mineral Recovery from Produced Waters

- Detailed Chemical and Economic Analyses of Produced Water (Resources)
- Collaborations with Local Mining Operations in the Basins of Interest (Potash)
- Development of Low Cost (Energy) Separation Technologies (Element Selective Sorbents)