



Mining Law for the Heavens and the Depths of the Sea

@THE UNIVERSITY OF ARIZONA

| NOVEMBER 8, 2019

Sponsored by The University of Arizona Global Mining Law Program,
a collaboration of the James E. Rogers College of Law and the Lowell Institute for Mineral Resources

SYNOPSIS

Fourth Annual Mining Law Summit— *Mining Law for the Heavens and the Depths of the Sea*

As mineral deposits are increasingly being found in areas that present technical, political or environmental challenges, miners are looking to extraterrestrial and deep-sea resources. Presently, mineral development is being considered at the bottom of the oceans and outside of our planet, either on the moon, other planets or asteroids. The University of Arizona James E. Rogers College of Law's Fourth Annual Mining Law Summit, entitled "Mining Law for the Heavens and the Depths of the Sea," will survey the laws and international treaties regarding these new frontiers to suggest appropriate laws and policies for such development.

The program includes:

- ▶ a discussion of the development challenges of lunar mineral resources, particularly Helium-3
- ▶ a review the economic opportunities that exist on the Moon and a new Earth-Moon economy
- ▶ a brief history of marine mining, the mineral types and economics, and current legal regimes
- ▶ an outline of historical mining practices applicable to new discoveries and those under consideration for development of mineral resources in space
- ▶ a panel discussion offering ideas for formulating mining laws for the moon and asteroids

THANK YOU SPONSORS

Logos to come

SCHEDULE

8–8:30 a.m.	Registration and Coffee
8:30–8:35 a.m.	Dean's Welcome; Special Thank You to Sponsors
8:35–9:20 a.m.	<p>TOPIC 1 Mans' Venture into the Heavens: The challenges of development of lunar mineral resources, and particularly the challenges for recovery, processing and uses of Helium-3.</p> <p><i>Speaker:</i> Harrison Schmitt, Apollo 17 Astronaut, graduate geologist and professor of practice, University of Wisconsin-Madison. Dr. Schmitt has the distinction of being the only geologist who has ever set foot on the moon. He has subsequently studied and written about the problems associated with the development of ³He and the promise it offers for future energy production.</p>
9:20–10:015 a.m.	<p>TOPIC 2 Back to the Moon—The Initiatives of the University of Arizona: Five decades ago, humans first set foot on the Moon... then stopped. Now, it's time to go back, and this time, to stay. This presentation will review the economic opportunities that exist on the Moon, and how can resource extraction be the foundation of a new Earth-Moon economy?</p> <p><i>Speaker:</i> Stephen Fleming, Vice President, Strategic Business Initiatives Research, Discovery & Innovation, University of Arizona</p>

- 10:15–11 a.m. Questions and comments
- 11–11:50 a.m. TOPIC 3
Mineral Development of the Seabed—Its Physical and Legal Difficulties: Presenting a brief history of marine mining, the mineral types and economics, and the legal regimes currently in place including the Law of the Sea legislation and its implementation by the United Nations through the International Seabed Authority, the competing national Exclusive Economic Zone legislation, and the now somewhat defunct U.S. Reciprocal States Agreement of the 1980s. Also briefly addressed will be the efforts of some private companies, such as Nautilus Minerals, trying to work with third world governments to get a viable industry going without going through the United Nations.
Speaker: John C. Wiltshire, emeritus professor of the University of Hawaii’s Ocean and Resources Engineering Department and a graduate geologist
- 11:50 a.m.–1 p.m. Lunch and networking
- 1–2 p.m. TOPIC 4
Proposals and Legislative Efforts for Mineral Resource Development in Areas of No or Limited Legal Structures—
Historic Mining Practices Applicable to New Discoveries: What has been done historically when mineral explorers have faced a void of legal structures? This presentation will briefly outline the mining laws applied to the New World and the California gold fields before laws were enacted.
Speaker: John Lacy, Director, Global Mining Law Program, University of Arizona James E. Rogers College of Law.
Mining Laws Being Considered for Space Resources: This presentation will outline the legislative measures that have been passed or under consideration in several countries to promote the development of mineral resources on the moon and asteroids
Speaker: Andrew Woods, Professor of Law, University of Arizona James E. Rogers College of Law.
- 2–3:30 p.m. TOPIC 5
Panel Discussion—A Mining Law for the Moon and Asteroids: **John Lacy** will moderate a session in which the speakers will offer views on what sort of laws should be formulated to promote the development of mineral resources in space including what sort of tenure would be required, how tenure can be protected, the nature of private and governmental support that would be needed. For this discussion, the speakers will be joined by **Dr. Mary Poulton**, the Co-Director of the University of Arizona Lowell Institute for Mineral Resources.
- 3:30–4 p.m. Questions and comments
- 4–5 p.m. Reception?