



Energy Mineral Division's

Committee on Uranium (Nuclear and Rare-Earth Minerals)*

February 20, 2019

7:30 PM CST

Teleconference Access: U.S. Dial-In: 1-800-704-9804

Conference Code: XXXXXX

Direct Contact with Chair: 713-248-1708

AGENDA

I. Call to Order (Chairman Campbell)

Committee Members: (☑ = Present)

- ☑ Michael D. Campbell, Chairman, I2M Consulting, LLC, Houston
- ☑ Henry M. Wise, Vice-Chair (Industry), National Recovery Corporation, La Porte
- ☑ Steven S. Sibray, Vice-Chair (University), University of Nebraska, Lincoln
- ☑ Robert W. Gregory, Vice-Chair (Government), Wyoming Geological Survey, Laramie

Advisory Group (see listing in [UCOM reports](#)):

- Kevin T. Biddle, Ph.D., V.P., ExxonMobil Exploration (retired) TX (Founding Member EMD in 1977), Houston,
- ☑ James L. Conca, Ph.D., P.G., Senior Scientist, UFA Ventures, Inc., Richland, WA
- ☑ Gerard Fries, Ph.D., Areva Mines, KATCO JV, LLP, Almaty, Kazakhstan
- ☑ Michael A. Jacobs, P.G., Pioneer Natural Resources, (Founding Member), ex-Tenneco Uranium, Midland, TX
- ☑ Roger W. Lee, Ph.D., P.G., New Fields / An I2M Associate, Austin, TX
- ☑ Karl S. Osvald, P.G., U.S. Bureau of Land Management, Casper, WY
- Mark S. Pelizza P.G., M. S. Pelizza & Associates, LLC, Plano, TX
- Arthur R. Renfro, P.G., Sr. Geological Consultant, (Founding EMD in 1977), Cheyenne, WY
- Samuel B. Romberger, Ph.D., Sr. Geological Consultant, Golden, CO
- ☑ David Rowlands, Ph.D., P.G., Rowlands Geosciences, Houston, TX

Special Consultants to the Uranium (Nuclear and Rare Earths) Committee:

- Ruffin I. Rackley, Senior Geological Consultant (Retired), Anacortes, WA, Ex-Teton Exploration, Casper, WY (Founding Member of EMD in 1977, Secretary-Treasurer: 1977-1979, and EMD President: 1982-1983).
- Bruce Rubin, Senior Geological Consultant and Author, Millers Mills, NY (Founding Member of EMD in 1977), Ex-Teton Exploration and GPU Utilities.

* Note that the AAPG website tends to be rather slow. Expect that up to 10 seconds may be required to load.



- M. David Campbell, P.G., Vice President and Senior Project Manager, I2M Consulting, LLC, Houston, TX
- Robert A. Arrington, VP, Exploration, Texas Eastern Nuclear, Inc. (retired), (Founding Member of EMD in 1977) College Station, TX

II. Agenda Items

Item 1. Restatement of purpose of UCOM:

- 1) “To advise the AAPG membership and the general public on the extent to which uranium used as a fuel to generate electricity competes with fossil fuels, including oil, natural gas, and coal, both today and in the foreseeable future.
- 2) To assess the role uranium is currently playing in supplying more than 20% of the electricity used in the U.S. today, and under what circumstances does it compete with natural gas, as coal continues to decline for such use.
- 3) To evaluate the available uranium resources in the U.S. and overseas by monitoring reports and reviewing said information from the uranium industry focusing on:
 - a) the geology of uranium, (and often associated thorium, and rare-earth deposits),
 - b) the characteristics of the mineralization and the economic factors involved in their availability,
 - c) the exploration for uranium in trend areas (Athabaska Basin area, Wyoming, Utah, and Texas and New Mexico, and in frontier areas such as in Alaska, and elsewhere in the world,
 - d) the nature of any radiation involved in general environment, around drilling and processing, or during transporting uranium (yellowcake) for enrichment or nuclear waste for storage for later use,
 - e) their use in the generation of electricity by fission in nuclear-power plants and in other applications that could benefit society in the short and long terms, such as in medical isotopes, etc., and
 - f) the environmental impacts of all of the above activities or conditions associated therewith on human health and the environment.”

Item 2. Note of Interest: All of the previous UCOM Annual and Mid-Year Reports are now available from the EMD Uranium Committee website ([more](#)). The UCOM members should feel free to distribute these reports and to direct interested parties to the webpages of the UCOM ([more](#)). Please note that recent data reported to the EMD President indicate that visits to the UCOM webpages lead by a large margin all other EMD commodity webpages. Our collective efforts in bringing the UCOM message to the AAPG membership and general public continues to be successful.

Item 3. Note of Interest: The 2019 UCOM Annual Report is currently in preparation. It will be presented by Chairman Campbell in San Antonio, May 18. A draft of the report will be circulated to the



committee in April for review and comment, to be returned by May 10, 2019 for revision and submittal to EMD for distribution.

Item 4. Other Publications by UCOM: The Mid-Year Reports of all EMD Commodity Committees have been eliminated; The bi-annual article for the *Journal of Natural Resources Research* (JNRR) prepared by the EMD commodity chairs may be prepared later in 2019 as a summary update of the commodity annual reports ([more](#)).

Item 5. Requesting increased input from UCOM members to the Chairman on the various aspects of uranium, thorium, and rare-earth deposits, markets, and any environmental issues. Should you encounter a report/paper/article of particular interest (either current or otherwise), please check if the indicated paper/article is already available in the I2M Web Portal by searching via author/title and if not, send a PDF of it to the Chairman.

This Portal has become the foundation and principal source for investigations conducted by the UCOM to generate the Annual UCOM Reports indicated in the above Item 2. At present, there are more than 8,500 papers/articles in the database, available through current “[What’s New](#)” input and by the multiple- or single-word search capability ([more](#)). By becoming familiar with the features and functions of the I2M Web Portal, UCOM members may find it to be a useful tool for research on the topics included in the web portal.

Item 6. Future Activities - New Emphasis:

1. On the economics of mining various types of uranium, thorium, and rare-earth deposits. UCOM members are requested to monitor the information available on the Internet and to advise the UCOM Chair of your findings.

Consensus: All Agreed.

2. On the costs of exploration and development of off-world mineral resources, specifically, precious and strategic minerals, including helium-3, rare earths, thorium, and uranium. This is an extension of our efforts in 2013 producing Chapter Nine of AAPG Memoir 101 ([more](#)).

Proposed paper on the likely occurrence of uranium, thorium, and REE on Moon, asteroids, and other low-oxygen, off-world geological environments.

Item 7. UCOM Future Teleconferences: Are UCOM members in favor of: a) monthly meetings, b) a yearly meeting prior to the preparation of the UCOM Annual report, c) quarterly meetings, or d) limit to the periodic direct contact with the UCOM Chair providing advice, references, reviews of Annual Report, etc.

Consensus: Item b – yearly teleconference before ACE, unless special need.

III. Other Topics for Discussion?

1. Will there be a 2019 JNRR article? When UCOM summary due?

Answer by Chairman: Will check and advise UCOM.



2. Should UCOM group prepare a stand-alone paper for JNRR?
Answer by Chairman: Will consider and advise UCOM.

IV. Motion to Adjoin:

Motion by: Mr. Sibray

Second by: Dr. Fries

Time: 8:20 PM Central Time Zone

Affirmed by Mr. Campbell, Chairman, UCOM

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