The Clastic Diagenesis Research Group convened on August 27th during the IMAGE Conference in Houston. The topic of the group meeting was "The state of sandstone petrology and diagenesis research in the United States." Eight geoscientists, including SEPM Executive Director Howard Harper, attended the presentation and participated in discussions. At the meeting, a proposal was made to incorporate the Clastic Diagenesis Research Group into a new research group that includes siliciclastic petrologists and petrographers from a broader range of specializations. Suzanne Kairo presented a situation analysis and described the possible structure, objectives and initiatives of a new research group. An hour-long discussion of the topic followed.

Issues presented

- Over the last 30+ years in the US, there has been an alarming decline in the number of sandstone diagenesis and petrology topics in research, teaching, and business applications.
- There has been serious attrition in the number of geoscientists trained and experienced in sandstone sedimentary petrology, with no indication that numbers will increase.
- The SEPM Clastic Diagenesis Research Group is no longer supported by a large, active community of researchers. The community is small, disconnected and is not providing support to the next generation of sedimentary petrographers.

Proposal for a new research group

Establish a new research and technology organization dedicated to the advancement and support of siliciclastic sedimentary petrology concepts, methods and applications. Include a broad spectrum of specialists with expertise in:

- provenance
- sediment generation and evolution of composition and texture from source to sink
- diagenesis
- reservoir quality
- various rock characterization approaches and methods (*i.e*. petrographic, elemental, geochemical, x-ray and isotopic, and digital imagery approaches; existing and new analytical tools and software; etc...)
- Include specialists studying sandstones, siltstones, mudstones, and mixed systems.

Objectives:

- Proactively rebuild and expand community
- Demonstrate relevance and value of siliciclastic sedimentary petrology and petrography in energy, environmental and hydrology projects
- Step out from narrowly focused micro-scale studies to integrate and collaborate across subdisciplines and scales of analysis

Initiatives:

- Organize and promote a clastic sedimentary petrology symposium and/or research conference to summarize current state of understanding, identify scientific and functional challenges to the discipline, and outline a path forward.
- Promote, develop and sponsor short courses, seminars and workshops to fill the gap left by diminishing academic support of sedimentary petrology, petrography and sedimentary geochemistry courses as well as to demonstrate and train in the applications of concepts, tools and approaches to current geoscience projects and issues.

Discussion Summary

After the presentation, a series of questions was used to prompt discussion. Paraphrased responses follow each question below.

1. Are you concerned that sandstone petrography has been "sidelined", or even abandoned as a subdiscipline of geology?
    a. "Companies don't want to spend money on rock sampling and petrographic analyses because they want to cut costs and don't see the value."
    b. "Geologists who have access to petrographic data don't know what to do with it, so they ignore it."
2. Do you perceive that routine petrographic analysis is now considered an archaic tool?
    a. "Traditional sandstone petrography is considered too interpretive."
    b. "Methods such as elemental, laser and x-ray analyses are perceived as providing better, unbiased analyses of rock composition."
    c. "Radiometric dating and isotopic methods have become fast, unbiased ways to gain insight on sediment provenance and mineral origin."
3. Do you want SEPM to support a different sort of petrography/petrology research group that embraces more than "Clastic Diagenesis"?
    a. Unanimous agreement
    b. "Sandstone diagenesis is no longer the hot topic it was in the 1980's and 90's."
    c. "We need to investigate and demonstrate ways to apply and advance the fundamental learnings of the past 30 years."
4. Are you in support of growing an active technical network and community? If so, what are your thoughts and ideas for doing that?
    a. Yes
    b. "Make ties to the European geoscience community that is currently more active in certain areas such as sandstone provenance, and sandstone diagenesis."
    c. "Reach out to academic research groups to address industry needs (leverage laboratory and analytical facilities and expertise, suggest and support student research)."
    d. "Learn about and apply knowledge and approaches from the planetary science community."