



PETROLEUM TECHNOLOGY TRANSFER COUNCIL

Focused Technology Workshop

**Outcrop Analogs for Trenton/Black River Fractured Dolomite Reservoirs:
A Field Trip and Core Workshop in Central Kentucky**

June 4, 2002
Kentucky Geological Survey Well Sample and Core Library,
Lexington, Ky.

Hosted by:
the Kentucky Geological Survey, University of Kentucky
Dave Harris and Jim Drahovzal, Workshop Coordinators

Ordovician carbonates exposed in outcrops in central Kentucky (Lexington Limestone and the High Bridge Group) are equivalent to the Trenton Limestone and Black River Group deeper in the Appalachian Basin. These rocks are the host for Mississippi Valley-type hydrothermal mineralization. Some faults within these carbonates contain hydrothermal dolomite, which has replaced the host limestone adjacent to faults in some cases. These outcrop exposures provide a valuable analog to fractured and dolomitized natural gas reservoirs contained in equivalent units in New York, Ohio, West Virginia, Michigan, and Ontario.

This workshop will consist of two parts, both held on the same day. In the morning, selected cores from central Kentucky and New York will be the subject of a core workshop. These Ordovician cores contain representative fractured limestone and dolomite from the Trenton/Black River interval. The second part will be an afternoon field trip in central Kentucky to examine various outcrops of Ordovician hydrothermal dolomites. One roadcut has a spectacular exposure of fault-controlled hydrothermal dolomitization (the "lightbulb" structure). Other outcrops contain dolomite with oil-filled vugs, and excellent exposures of deep-seated faults related to the deeper Cambrian Rome Trough. Specific topics will include:

- Hydrothermal mineralization in central Kentucky
- Relationship of mineralization to hydrocarbons
- Characteristics of hydrothermal dolomite, relationship to faulting and analogies with subsurface reservoirs
- Expression of basement faults in Ordovician carbonates
- Core and interpretations from the Shell No. 1 Matejka core, Chemung Co., N.Y.
- Cores from Jephtha Knob cryptoexplosive structure: hydrothermal or impact origin?
- Seismic expression of potential dolomite reservoirs

Instructors: Dave Harris (KGS), Jim Drahovzal (KGS), Doug Black (USGS, retired), Taury Smith, N.Y. State Museum, Warren Anderson (KGS)

Includes: Workshop notes, field guide, CD-ROM with digital photos and PDF files, breaks, and box lunch

Hotel Information: The **Holiday Inn North**, 1950 Newtown Pike is now full on June 3 and 4. We have reserved a block of rooms at the **Campbell House**, 1375 Harrodsburg Rd. Rate is \$51 single, \$69 double plus tax. Please call 800-432-9254 (inside Ky.) or 800-354-9235 (outside Ky.) to reserve a room. Refer to Group # 12185. Other options:

Four Points Sheraton Hotel 859-259-1311; \$75-\$105 single or double (1938 Stanton Way)

University Inn Hotel 859-278-6625; \$55 single, \$59 double (1229 S. Limestone St.)

Red Roof Inn 859-277-9400; \$48-\$59 single or double (2651 Wilhite Dr.)

Comfort Inn 859-299-0302; \$49.99 single or double (2381 Buena Vista Dr.)

Date/Time: June 4, 2002 — Registration/Coffee 8–8:30 AM, Workshop 8:30 AM–5:30 PM (*if registration fills up for this day, we may run the trip again on June 5*).

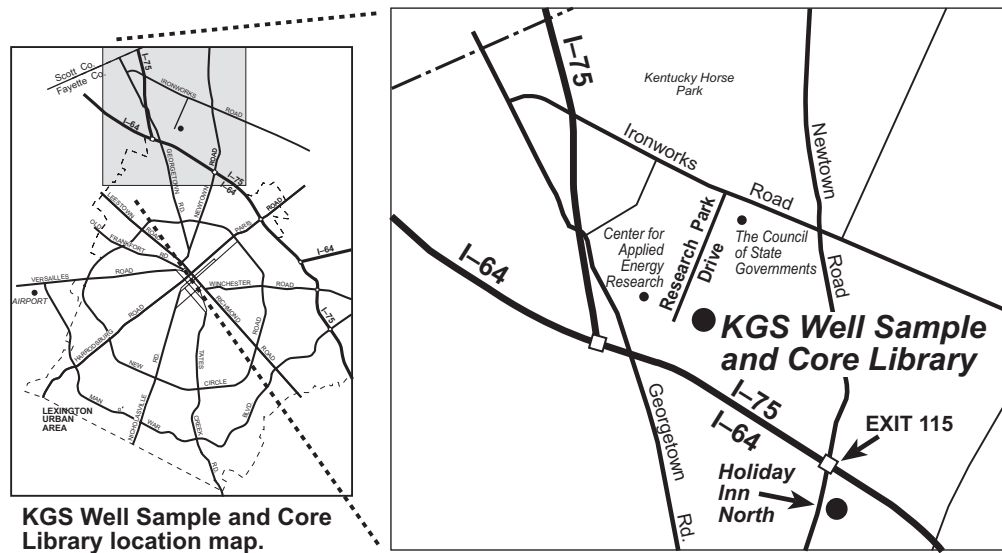
Location: Kentucky Geological Survey Well Sample and Core Library, Research Park Dr., Lexington, KY (859-389-8810) (map below)

Bring: Camera, sample bags, marker, hand lens, sunscreen, insect repellent, daypack, boots or study shoes. One stop on the field trip will involve a moderate hike away from the vehicles (optional).

For More Information: Contact Tina White, Kentucky Geological Survey (859) 257-5500, twhite@kgs.mm.uky.edu

If you wish to receive notices of future PTTC activities via e-mail, please send a message to: avary@geosrv.wvnet.edu

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ADVANCE REGISTRATION FORM PTTC Focused Technology Workshop—June 4, 2002

To register mail this form or call Tina White at 859-257-5500

Cost: \$65 through May 27; \$75 after May 27—includes course notes, CD, breaks, and lunch

Name _____ Nickname for badge _____

Company _____ Address _____

City _____ State _____ Zip _____ Phone _____

E-mail address: _____

IMPORTANT NOTE: This workshop is limited to 45 attendees due to logistics in the field. If June 4 fills up, would you be interested in attending a repeat of the same workshop on June 5? Yes No

Please make checks payable to the Kentucky Geological Survey

Mail to: Tina White, Kentucky Geological Survey, 228 Mining and Mineral Resources Bldg., University of Kentucky, Lexington, KY 40506-0107

HURRY! Space is limited!