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## **CO2 conference draws attendance from world over**

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Begun 10 years ago as a conference to share expertise in carbon dioxide (CO2) flooding for enhanced oil recovery, the CO2 Conference has grown and gained an international reputation.

The CO2 Conference, celebrating its 10th anniversary this year, has outgrown its original site, the Center for Energy and Economic Diversification, and this week will be held in two venues: The Permian Basin Petroleum Museum and the Midland Center in downtown Midland.

Attendees are expected from as far off as Norway, Denmark, Japan and Australia, said Steve Melzer, conference director, adding that a 30-member group from Canada is also expected as are three from Croatia, which is designing a CO2 project.

"The CO2 conference is a great draw to get everyone involved in tertiary recovery together," said Hoxie Smith, director of Midland College's Petroleum Professional Development Center, which is a first-time sponsor of the conference. The center, he said, will assist in putting together the manuals for the workshops and with registration.

Not only is it a good way for the center to promote itself, Smith said, but it follows the center's mandate of continuing professional education.

"Workshop attendees will get a certificate for continuing education hours from Midland College," he said, noting a new requirement for engineers registered in Texas to have 15 hours continuing education by March 2005.

The conference begins Tuesday, December 7 with the first of a two-day carbon management workshop, "CO2 Sequestration and the Billions of Barrels of CO2 Driven Enhanced Oil Recovery."

Melzer noted that this is the second year for the sequestration workshop, which will be held at the Petroleum Museum Tuesday and Wednesday, December 8. Speakers will represent the Texas Bureau of

Economic Geology, Department of Energy, Bank of Montreal, British Petroleum and Dow Chemical and environmental groups Natural Resources Defense Council and Environmental Defense, among others. The Wednesday session will offer global perspectives from Norway and Canada and initiatives from other states, including Illinois, Kansas, Mississippi and Wyoming.

The keynote address at Tuesday's luncheon will cover the state's efforts to secure the FutureGen project, a state-of-the-art coal-fired electricity generating plant that would burn clean coal and capture the CO2 generated by the plant, sequester and sell it to operators for use in EOR projects.

Approximately 140 are expected for the workshop, and a total of 160 for two concurrent workshops to be held at the Midland Center Wednesday: Health and Safety of CO2 Operations and CO2 Flood Surveillance and Monitoring. The Wednesday sessions will end at 12:45 p.m. for a field trip to ChevronTexaco's Mabee Field CO2 facilities. Melzer said 175 have already signed up for the field trip.

Case histories will dominate the final two days of the conference, to be held Thursday, December 9 and Friday, December 7 at the Midland Center, Melzer said, where 250 are expected to attend, 170 of them from out of town.

"Operations-oriented histories will be Thursday morning and unconventional CO2 floods will be presented Thursday afternoon," he said of unconventional projects like immiscible or gravity-stable floods. Case histories of conventional floods will present Friday morning as the conference wraps up.

The key to the conference when it began 10 years ago, Melzer said, was for companies large and small to discuss their CO2 projects, problems encountered and solutions found.

"These are best practices you hear about," he said, citing the attendance by employees of EnCana from Alberta, Calgary, which has the Weyburn flood in Canada.

"They tended to take advantage of the projects discussed at the conference so they could design Weyburn better," he said. "You like to think safer, better projects occur because of the conference."

The sequestration workshops have grown out of an increasing global concern about capturing CO2 before it is emitted into the atmosphere, Melzer said.

"Avoidance of CO2 emissions sometimes is easy and at other times it's difficult and expensive, like a fruit tree where some of the fruit is hanging low or even on the ground," he said.

Another purpose of the sequestration workshops, he said, is to show the world communities how CO2 can be sequestered and converted into revenue streams by selling CO2 for tertiary recovery projects.

A number of industrial process, he pointed out, produce the nearly-pure CO2 needed for tertiary projects. In the southern Permian Basin, PetroSource is capturing CO2 generated as a byproduct of purifying natural gas, and similar projects are being done in Wyoming and Michigan. EnCana's Weyburn project in Saskatchewan uses CO2 captured from a coal gasification plant, and an ammonia plant in Enid, Okla. produces pure CO2 for use in tertiary recovery.

"These are examples of capturing CO2 and making money," Melzer said. "When we get the word out that it's feasible, more projects will happen. We're seeing ideas germinating in Croatia, Australia, Denmark, BP is doing one in Egypt."

With a majority of the world's tertiary recovery projects located in the Permian Basin, Smith said, "Midland has the best experts in enhanced oil recovery and should be a center for training, technology transfer -- the whole ball of wax."

Sponsors, in addition to Midland College's Petroleum Professional Development Center, are Anadarko Petroleum, Denbury Resources, ExxonMobil Gas and Power Marketing, Kinder Morgan CO2, Nicholas Consulting Group, Oxy Permian, Petroleum Technology Transfer Council Southwest and Texas regions, Russell K. Hall and Associates, Trinity CO2, Permian Basin section, Society of Petroleum Engineers, University of Texas of the Permian Basin. Workshop sponsors include the Department of Energy Fossil Energy/National Energy Technology Lab, Kinder Morgan CO2, PetroSource Energy and Blue Source.