



Michigan Geological Repository for Research and Education (MGRRE) At the Michigan Geological Survey



Fact Sheet

Building Facilities

- Laboratory established in 1982 as the Michigan Basin Core Research Laboratory
- Currently at 5272 West Michigan Avenue, with easy access to US Hwy. 131 and I-94
- Total area—28,500 square feet—with 22,000 square feet for sample preservation and examination and 6,500 square feet for offices, research labs, student work space and library

MGRRE Laboratory Resources

- More than 550,000 linear feet of core samples from Michigan's subsurface geological formations
- Drill cuttings samples from over 25,000 Michigan wells
- Wireline logs from over 35,000 Michigan wells
- Well records, sample data, engineering analyses, testing data from nearly 50,000 Michigan wells
- Oil and gas well production records from Michigan's nearly 2000 fields
- Hundreds of historic maps of Michigan's geology and oil and gas fields
- Extensive geological texts and journals
- Permeability testing equipment
- High resolution, digital photo microscopes for sample analyses
- Fluid inclusion and cathode luminescence microscopes for sample analyses
- Handheld X-ray Fluorescence (XRF) elemental analysis tool

Training and Outreach (Professional and K-12)

- Sample examination area for more than 1000 feet of core
- 30-seat education room for seminars, workshops, short courses, and lectures
- Michigan home for the Petroleum Technology Transfer Council
- Active Web site with digital data resources and "industry standard" software for data analysis
- Ongoing active partnerships with Michigan Oil and Gas Association, Michigan Basin Geological Society, Consumers Energy, DTE Energy Corporation, Battelle Memorial Institute and Core Energy, LLC
- Dozens of workshops, lectures, seminars and short courses presented
- CoreKids K-12 Outreach program reaches 1000's of students, teachers and the public per year

Personnel at MGRRE

- Director, Dr. William B. Harrison, III
- Department faculty – Dr. Stephen Kaczmarek, Dr. Peter Voice, Dr. Robb Gillespie
- Emeritus faculty – Dr. David A. Barnes, Dr. Lloyd Schmaltz
- Researchers and administrators – Dr. Andrew Caruthers, Ms. Linda K. Harrison, Ms. Jennifer Trout
- 10 graduate and undergraduate students, 5 student employees

Recent Research Activities at MGRRE

- Research partner with Battelle Memorial Institute funded by USDOE for reservoir characterization related to CO₂ sequestration and enhanced oil recovery in Michigan, 2005-2019
- USDOE research contract, establishing the relationship between fracture-related dolomite and primary rock fabric on the distribution of reservoirs in the Michigan Basin, 2005-2007
- K-12 Geoscience education and outreach, 2008-2017
- Partnership with Arizona Geological Survey, state geothermal data project, 2010-2013
- Partnership with USGS, carbon sequestration potential of the Michigan Basin, 2010-2011
- Partnership with RPSEA (USDOE) integrated regional and production-scale reservoir characterization model of the Ordovician Trenton and Black River units in Michigan, 2009-2012
- Research contracts from USGS National Geological and Geophysical Data Preservation Program to rescue, inventory and archive for Michigan core, samples and data 2008-2018
- Partnership with Battelle Memorial Institute and USDOE for CarbonSafe Phase I research on large volume carbon storage facility in Northern Michigan 2017-2018
- NSF grant for outreach, research and education 2016-2019



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