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NGGDPP Geological and Geophysical Data Preservation Plan for Michigan

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# Geological and Geophysical Data Preservation Plan for Michigan

## Purpose and Justification

*From the proposal: The purpose of this project is to: (1) create readily accessible detailed and accurate inventories of all the geological data collections held by authorized Michigan data repositories and to (2) integrate these data into one common digital database with appropriate metadata conforming in format to the requirements of the National Geological and Geophysical Data Preservation Program (NGGDPP).*

Both objectives were achieved. Metadata has been uploaded to the national data base. Metadata and additional collection specific data will be available on-line at the Michigan Geological Repository for Research and Education at Western Michigan University web site (<http://wst023.west.wmich.edu/MGRRE%20Website/mgrre.html>) and the Office of Geological Survey web site ([http://www.michigan.gov/deq/0,1607,7-135-3311\\_4111\\_18442-168830--,00.html](http://www.michigan.gov/deq/0,1607,7-135-3311_4111_18442-168830--,00.html)).

The MDEQ OGS oil and gas database was used as a source for location and API number reference data. A series of queries were developed to cross reference and extract data to complete the inventory data requirements. Specifically County name, Township number and direction and Range number and direction were compared. Where matches existed API Numbers, longitude and latitude were extracted. Where APIs were not already allocated they were assigned using established protocols. As part of the process of verifying and extracting metadata, some records were found to be incomplete or otherwise not verifiable. Additional work will be needed to determine what is missing or what is needed so these records can be included. The majority of records that did not survive verification are those from activities that are not part of oil and gas or mineral well programs.

## Strategy for Data Preservation

*From the proposal: During the inventory process for this project, close examination of the condition of all cores, samples and data will be recorded. A plan will be developed for all cores and samples that are in need of new boxes or other types of sample containers to insure adequate and stable preservation. Paper data will be assessed for condition and stability. Plans will be developed for stabilizing paper records and possible digitization of these records and documents. Without adequate inventory information, making decisions about sample acquisitions is haphazard and ineffective.*

Inventorying and related curatorial work consumed most of the available time and resources. Two memoranda of understanding between Michigan Geological Repository for Research and Education at Western Michigan University and the Office of Geological Survey have helped normalize and fortify the professional relationships that have developed between the two repositories and associated organizations. Converting paper records to digital files continues to be an objective to be completed as funding is available; however, the necessary specialized scanners for strip-logs and maps and illustrations larger than 11 by 17 inches are expensive and difficult to justify due to continuing budget and staff reductions.

## Products/Reports

*From the proposal: Digital databases will be compiled for all core, sample and data collections at the two Michigan repositories. These records will be incorporated into a common database with appropriate metadata. These databases will be available to the public online through the State and MGRRE websites. Protocols for maintaining and updating data will be developed as well.*

Data has been compiled and is available on the web sites for the repositories listed above.

### Proposal to Create Metadata

*From the proposal: This project will inventory the collections that are known to exist. All data will be formatted as CSV files.*

*Metadata descriptions as submitted in proposal were listed as: 1. Site ID, 2. Collection ID, 3. Additional Identifiers, 4. Location, 5. Site Description, and 6. Materials and Data.*

Metadata descriptions were uploaded to National Digital Catalog Metadata Data Base following the 2009-05-15 standards. ("Preparing Metadata for the National Digital Catalog (05/15/2009)", Richard Brown, USGS, Rolla, MO - on line at [http://datapreservation.usgs.gov/docs/NGGDPP\\_MetadataPreparation.pdf](http://datapreservation.usgs.gov/docs/NGGDPP_MetadataPreparation.pdf) )

Name	Required Element Definition
1 Collection ID	A unique collection ID assigned by the National Digital Catalog to identify distinct collections. This field is required but may be left blank and assigned during the file loading process within the National Digital Catalog.
2 Title	The text title for the individual record that will be used in any listing or search result. It is best to keep this title short for display purposes but containing enough information to distinguish it from other records.
3 Abstract	The text description of the individual record used to help determine the nature of the underlying physical data resource. Due to the general nature of the catalog, a fair amount of information about the data resource may need to be captured into this one general element.
4 Data Type2	A controlled vocabulary of data types. An item may include multiple Data Types. Data types include: <input type="checkbox"/> Auger Sample <input type="checkbox"/> Fluid Sample <input type="checkbox"/> Geochemical Sample <input type="checkbox"/> Hand Sample <input type="checkbox"/> Ice Core <input type="checkbox"/> Paleontological Sample <input type="checkbox"/> Rock Core <input type="checkbox"/> Rock Cuttings <input type="checkbox"/> Sediment Core <input type="checkbox"/> Sidewall Core <input type="checkbox"/> Thin Section <input type="checkbox"/> Type Stratigraphic Section (expanded list provided by email from Richard Brown, USGS, Rolla, MO).
5 Supplemental Information	This standard field will be used to provide specific information on how to access the physical data represented by the metadata record. This may be general for the entire collection (e.g., a URL to another Web site) or a specific reference to an online resource like an ordering system with a specific ID.
6 Coordinates	Geographic longitude and latitude. Both values shall be contained in the same element and be listed in the order: longitude, latitude with values separated by a comma.
7 Dataset Reference Date	A reference date indicating currency of the underlying data record. In many cases, this may be the date the metadata record was assembled for the National Catalog. Proper date formats are defined in ISO 8601. The format used was yyyy-mm-dd. Other date format options include - yyyy - yyyy-MM3 - yyyyMMdd.

Optional metadata elements were not developed.

Data has been uploaded to myUSGS.com for inclusion in the National Digital Catalog. Additional detailed information will be available at the appropriate repository web site.

Throughout the term of the project all parties involved were in compliance with the additional terms enumerated in the original grant documents.

## Statistical Summary of Information Submitted

The table below is a compilation of the number of entries for each of the five collection types that were generated during the course of this grant.

Collection Type	Coll. ID #	Count
Cores	R1402	3,646
Cuttings	R1403	1,721
Logs	P1537	35,330
Geophysical Core analysis	R1404	2,273
Geochemical Gas analysis	R1406	1,284
Total		44,254