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Title: Inventory two collections (microfilm and field notebooks) and generate metadata and digital scans for ten field notebooks

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Abstract: This project involved inventorying two collections geologic information housed at the Missouri Division of Geology and Land Survey (DGLS) in Rolla, Missouri. One collection comprises 64 rolls of microfilm that contain potentially more than 10,000 records. The second collection comprises 1,293 Missouri Geological Survey field notebooks that date back to 1855 and which are maintained in a climate-controlled, fire-protected vault. Both collections are one of a kind, are available only at DGLS and would be impossible to replace should they be lost or destroyed. The project also involved developing metadata and digital scans for 10 of the field notebooks.

Project Report

DGLS has long been committed to preserving, protecting and serving its collections of geologic information, including drillcore and cuttings, survey publications and historic unpublished data. The immediate goals specific to this proposal were to 1) inventory the microfilm and field notebook collections and enter the inventories into the National Digital Catalog and 2) conduct a pilot project on 10 field notebooks to establish a protocol for subsequent scanning of the remaining field notebooks and generation of their metadata in a timely and efficient manner.

The microfilm reels contain information related to metallic mineral resources exploration and production in Missouri. This information includes descriptive well logs, maps of drill hole locations, mine maps, geophysical data and various reports. The inventory involved developing a database of all reel numbers and dates as well as checking that the film on all reels was still usable. Twenty-seven of the reels have a paper index with minimal information related to each frame. This index was entered into a database and comprises a total of 4,876 records containing 4,195 descriptive borehole logs, 546 mine and drill hole location maps, 131 reports on various aspects of mining and 202 records of geophysical data. The index has very poor print quality; some characters simply could not be deciphered and were entered as question marks. The quantity of data contained on these 27 reels suggests that the original estimate of 5,000 records is low, with likely over 10,000 records present on these reels. Future DGLS plans include converting the information on these reels into a digital format, at which time detailed metadata will be completed. Established goals for this inventory were met, and were exceeded with the additional data from the paper index.

DGLS maintains a repository of field notebooks that date as far back as 1855. These notebooks have been stored in a climate-controlled, fire-protected vault with limited access. A previous inventory from 30 years ago was simply a numerical listing that noted if a notebook was missing at that time. For this inventory, notebooks were again noted to be present or missing; only those present are included in the database uploaded to the National Digital Catalog. A search will be made for the missing notebooks. Authors and years were noted where easily determined. Handling of the notebooks was kept to a minimum in this inventory to prevent further damage to older notebooks. During this inventory, DGLS also located field notebooks that were not previously inventoried; these have now been numbered and included in the inventory. This inventory met established goals.

Scanning was completed on 10 field notebooks and metadata was generated on the author(s), year(s) of work and content. The notebooks were selected randomly to test a range of data quality. Content categories that were noted included stratigraphy and formations, minerals and rocks of note, paleontology, structure, karst, measured sections and if the work was for a specific geologic map. Future work will include additional categories as needed for individual notebooks. Original formation names were kept when noting stratigraphy and may not match current names, especially in older notebooks. Minerals and rocks included were based on both economic and environmental importance; consequently pyrite, marcasite and others minerals with potential deleterious properties were noted. The counties in which investigations were done were also included.

The field notebooks were scanned and compiled as pdf documents. Settings were adjusted for varying handwriting styles and weights. Also, scans were done in RGB to enhance readability of the text. Scanning included the front cover, the inside covers that contained information and any additional papers that were included in the notebook. Pages with no text or other information were not scanned in order to limit overall file size; blank page numbers were noted in the DGLS database. This work also met established goals.

DGLS is continuing to scan field notebooks and generate metadata in our current NGGDPP grant work.