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National Geological and Geophysical Data Preservation Program

Arkansas Geological Survey FY2016 Historic Rare Books Project

Final Technical Report

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In response to the USGS FY 2015 National Geological and Geophysical Data Preservation Program (NGGDPP) grant announcement, the Arkansas Geological Survey (AGS) developed a plan to inventory and scan 250 rare books and publications that date from 1887 to the present. The project continues the Agency's plan to rescue and preserve geologic data that is improperly stored as well as making this information easily accessible to the public. The project ensures information from these documents will be preserved by storing the original documents correctly, converting the information to digital format and placing a paper copy on library shelves. All documents have been made available to the public digitally on the Agency's website.

The books were collected from different locations throughout the library. Most books were stored in a variety of cabinets with the rest stacked on shelves and in boxes. The project addressed the need for organization and inventory of these books. From the collection and inventory the team was able to assess the currently scanned inventory of books. Lost and needed books were then found to complete series and fill the gaps in the current scanned inventory. The collection was then inspected to determine the condition and fragile nature of each book. The more fragile and extremely rare book were separated and handled on a limited basis. The Arkansas History Commission was contacted and a training session was conducted for the handling and care for historic documents before the scanning process was begun. Scanning of the collection was completed using existing equipment. Each book was scanned using a .tiff file format at 600 dpi optical resolution at 24 bit, which produced the highest quality images. PDF format at lower resolution was also created and is available online for the public for easier downloading capabilities. Scanned images have been indexed and added to the existing library database. Scanning was conducted in color and if allowed converted to grayscale or black and white as needed to maintain a high-quality image and reduce file size. Scanned images went through an inspection process where they were cleaned and straightened. The cleaning process involved the removal of the yellow color due to the aging process of the paper as well as the dark areas caused by the scanning process. This process was achieved by the use of Paper Port software.

Funds were used to buy new fireproof cabinets so the collection could be housed in one location. The cabinets are better suited for storage with fire, dust and mold protection and the added security by being locked. Before the books were stored, repairs and preparation for storage were conducted. Books suffered from different types of damage through the years. Damage included page tears, broken and loose bindings, mold, dirt and acid deterioration. Books that fell into this classification went through the repair process so the declining condition of the books could be slowed. Funds were also used to purchase the correct supplies to carry out these repairs. Absorene product was purchased to clean pages before the scanning process to increase the quality of image during scanning. The acid produced by the papermaking process the books are printed on was sprayed with a deacidification spray which will help slow the decaying process. Buffered interleaving paper was also used to be placed between pages to prevent ink transfer between pages as well as help slow the decaying process. Books with covers susceptible to mold growth were covered with an archival polyester film to reduce the problem. A total of 251 books were scanned but due to sensitive information in some of the field books, 76 will not be placed on the website for public use. The information contained in these books includes latitude and longitude coordinates of cave locations natural

spring locations as well as property owner's addresses and phone numbers. This project has helped the agency maintain its plan to preserve geologic information by making it digital and by protecting the original sources. The information in its digital form is now more accessible to staff, students and the public which until now would not have the ability to use some of this information.