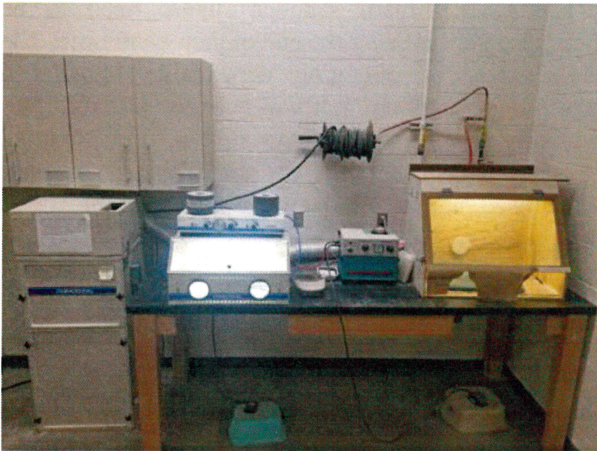


Senate Bill 2014
House Appropriations – Government Operations Division
DMR Equipment Needs
(2021-2023)

Equipment < \$5,000

Custom Air Chamber for Abrasive Work in the Paleontology Laboratory

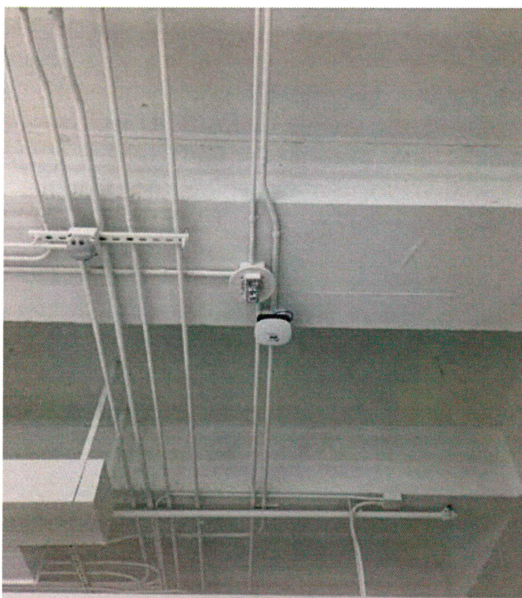
\$2,500



The current air chamber is not sealed and leaks dust and other hazardous fumes into the lab area. An updated dust collection system and the 2 x 3 x 2-foot air chamber will protect Survey paleontologists, volunteers, and guests from exposure to potentially harmful dust.

Additional WiFi Routers in Paleontology Laboratory and Collection Areas

\$3,100



Adding additional WIFI routers in the ceilings of the paleontology labs and collections areas would allow for distance education and online outreach activities to be expanded without losing signal as we do now.

Equipment over \$5,000

Printer/Scanner (O&G Division)

\$10,000

Printer/Scanner (Geological Survey Division)

\$10,000



The DMR routinely scans and occasionally prints documents on high-speed scanner/printers. The DMR is attempting to eliminate paper files by scanning numerous documents into a database. Occasionally some documents must be retained in paper form and a quality printer must be utilized. The DMR's main scanner/printers need to be replaced because they are near the end of their useful life. The DMR is desirous of obtaining dependable high-speed scanning/printing equipment that will enhance our ability to provide quality information to users via the internet, including landowners, oil and gas and mineral industry personnel, consultants, as well as the general public.

Plotter (Geological Survey - Bismarck)

\$7,338

Plotter (Geological Survey - Core Library)

\$5,000



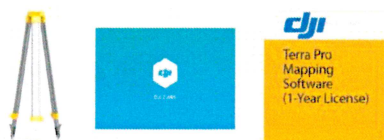
The Geological Survey needs to replace two aging plotters (one is six years old with mechanical problems and the other is 12 years), one in the Bismarck office and the other in the core library in Grand Forks. The Survey prints and sells on demand maps to the mineral industry as well as the general public and also prints draft quality maps and cross sections for Survey geologists to work on.

Drone DJI Phantom and Mobile Station

\$10,200

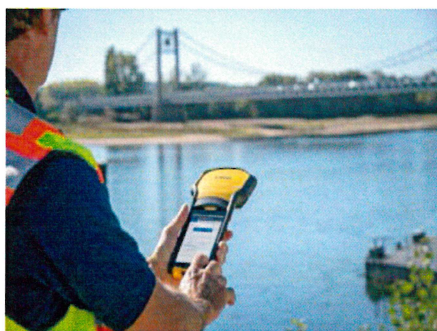


The DJI Phantom 4 RTK and Mobile Station delivers automated centimeter-level accurate 3-D mapping that is extremely useful for surveying landslides, well-pads, pipeline corridors, and mineral-bearing rock outcrops. The acquisition of this system would save several hours of fieldwork (hand-placing ground control points around the site) and post-processing (manually georeferencing the model) during each project.



Trimble handheld receivers (2) and software

\$14,385



NDGS geologists currently use commercial grade Garmin GPS units for logging the location of fossil and mineral localities with horizontal accuracy of around 3 meters. The Trimble TDC150 is a differential grade GNSS receiver capable of centimeter-scale accuracy, necessary for resolving tight sampling intervals, closely spaced fossils, or high-precision drone surveys. Centimeter accuracy.

Leica S91 microscope

\$6,400



The Geological Survey doesn't currently have a stereo microscope in our Bismarck office. The Leica S9i Stereomicroscope with integrated camera captures digital photomicrographs of geologic samples such as sand and sandstone and is used for enhanced sedimentological and mineralogical analysis of potential natural proppant sands. This would enable Survey geologists to investigate and to photograph rocks and sediment that they bring in from the field as well as rocks that the general public bring into our office.

Paleontology Microscope and Camera (Vstack – automated focus stacking)

\$21,565



The camera for the microscope in the Paleontology Laboratory has failed and the microscope is not compatible with modern camera hardware or software. The proposed microscope setup would save dozens of hours of staff time per year by automating the imaging process instead of every image having to be adjusted and photographed by hand.

Dust Collector (Paleontology Laboratory)

\$10,650



The current dust collector unit is undersized for the required duties and is reaching the end of its service period. A larger dust collector unit designed for continuous operation (as opposed to intermittent operation) is needed to handle the current scale of fossil preparation in the lab.

Pallet Rack Shelving – 10 shelves (Paleontology Collections)

\$5,122



We are currently out of storage space for large fossils that do not fit in storage cabinets. We can place more shelves into the existing shelving units, increasing our capacity to store large specimens, mostly dinosaur bones and large petrified trees.

