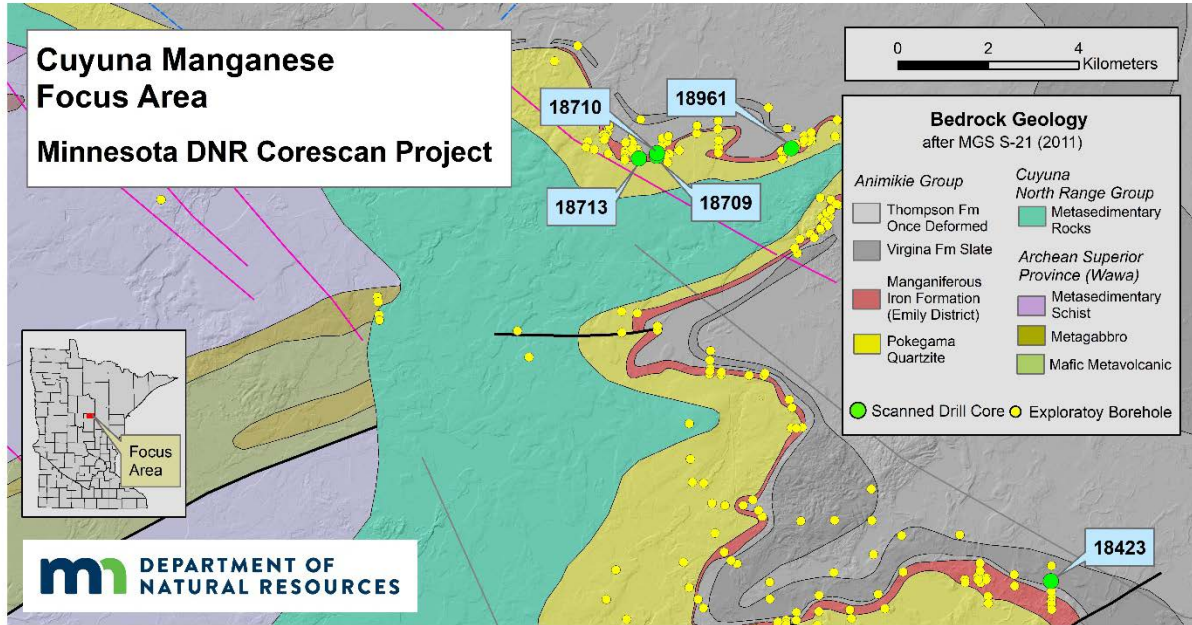


Cuyuna Manganese Focus Area

Five archived drill cores from the Cuyuna Manganese Focus Area were selected for 1,130 feet (344 m) of hyperspectral imaging.

The Cuyuna Range was home to significant iron mining operations from 1905 to 1984. The Emily District was the northern-most iron deposit in the Cuyuna Range; while it hosted an extensive drilling program in the 1950's, it was never mined.



The Cuyuna Range's iron formations have much higher manganese content than comparable iron formations in the Lake Superior Region. Manganese grades greater than 50% are observed in core from the northern portion of the Emily District, with reserve estimates that would make this area one of the largest undeveloped manganese deposits in North America. A company called Cooperative Minerals Resources has been actively exploring options for developing a manganese resource in this area.

While the Emily District's iron formations are considered correlative to the Mesabi Range's Biwabik Iron Formation, the later has much lower manganese content. The reasons for this difference and the mechanisms for manganese enrichment are not well-understood.

Focus Area Goals

- Determine whether hyperspectral core imaging could provide useful information on minerals and mineral textures within this manganese-rich iron formation.
- Identify potential minerals or mineral textures that would support the stratigraphic argument that the Emily District's iron formation is correlative with the Biwabik Iron Formation.
- Search for potential minerals or mineral textures that might serve as useful stratigraphic markers in this portion of the Animikie Basin.

DDH	DNR_ID	Core Start	Core End	Scan Start	Scan End	Total Feet	Total Meters
18423	11670	145	835	145	328	183	55
18961	11836	203	489	284	489	205	63
18709	11817	190	540	340	540	200	61
18713	11821	178	375	178	375	197	60
18715	11823	205	599	254	599	345	105
					Total	1130	344

For more information, visit: [DNR Corescan Project Home Page](http://mndnr.gov/corescan) (mndnr.gov/corescan)