EM Coupling Impacting Basement Resistivity

Good Correlation to Borehole

Results of the final inversion of Airborne Electromagnetics (AEM) data collected along flight lines within the Waterton AEM flight area from November 7-10, 2017. The inversions shown are Spatially-Constrained using the AEMplus Geo Software Workflow version 5.6.2.0. Boreholes are from the North Dakota State Water Commission Water and Soil download on November 6, 2017. Prepared for the North Dakota State Water Commission under contract to GeoTech Ltd by Agap Geo Frameworks, LLC.

Gray dashed lines are the Upper and Lower Depth of Investigation

Boreholes plotted within 1/4 mile of flight line

Map projection NAD83 State Plane North Dakota South (ft), NAVD88 (feet)
Boreholes indicate Precambrian and Weathered Granite.
Good Correlation to Borehole Sand & Gravel Body
Borehole does not indicate resistive body.
Borehole indicated Sand & Gravel above resistive body
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Wahpeton AEM flight area from November 7-18, 2017. The inversions show are Spatially- constrained using the Aarhus Geo Software Workbench version 3.0.2.0. Boreholes are from the North Dakota State Water Commission. Prepared for the North Dakota State Water Commission under contract to GeoTech Ltd by Aqua Geo Frameworks, LLC.
Indication of Cretaceous Rocks in Borehole and Resistivity

Borehole Indicates Gravel Not Detected in Resistivity
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Walnutem AEM flight area from November 7-18, 2017. The inversions shown are Spatially-Constrained using the Aurora Geo Software Workbench versions 5.8.2.6. Boreholes are from the North Dakota State Water Commission Map service downloaded on November 6, 2017. Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

Gray dashed lines are the Upper and Lower Depth of Investigation

Boreholes plotted within 1/4 mile of flight line

Map projection NAD83 State Plane North Dakota South (int. feet), NAVD88 (faid)
Poor Correlation to Borehole
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Wahpeton AEM flight area from November 7-18, 2017. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench versions 3.0.2.0. Boreholes are from the North Dakota State Water Commission Map service download on November 6, 2017. Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Wahpeton AEM flight area from November 7-19, 2017. The inversions shown are Spatially-Constrained using the Aarhus Gao Software Workbench versions 5.9.2.6. Boreholes are from the North Dakota State Water Commission. Map service downloaded on November 6, 2017. Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.
Good Correlation to Boreholes

Borehole Indicates Precambrian and Weathered Granite

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Wahpeton AEM flight area from November 7-18, 2017. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench versions 3.6.2.0. Boreholes are from the North Dakota State Water Commission Map service downloaded on November 6, 2017. Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aera Geo Frameworks, LLC.
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Washpeton AEM flight area from November 7-18, 2017. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench versions 3.6.2.0. Boreholes are from the North Dakota State Water Commission Map service downloaded on November 6, 2017. Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

Indication of Cretaceous Rocks in Borehole and Resistivity

Gray dashed lines are the Upper and Lower Depth of Investigation

Boreholes plotted within 1/4 mile of flight line

Map projection NAD83 State Plane North Dakota South (Int. ft.), NAVD88 (ft)
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Wahpeton AEM Flight area from November 7-10, 2017. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench versions 5.6.2.0. Boreholes are from the North Dakota State Water Commission Mapserve download on November 6, 2017. Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aquia Geo Frameworks, LLC.

Gray dashed lines are the Upper and Lower Depth of Investigation
Boreholes plotted within 1/4 mile of flight line
Map projection NAD83 State Plane North Dakota South (int. foot), NAVD88 (foot)
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Wahpeton AEM flight area from November 7-10, 2017. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench versions 5.0.2.0. Boreholes are from the North Dakota State Water Commission Mappservice downloaded on November 6, 2017. Prepared for the North Dakota State Water Commission under contract to GeoTech LTD by Aqua Geo Frameworks, LLC.
Sand & Gravel on Basement

Gray dashed lines are the Upper and Lower Depth of Investigation. Boreholes plotted within 1/4 mile of flight line.
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Walpeton AEM flight area from November 7-18, 2017. The inversions shown are Spatially-Constrained using the Aerohio GeoSoftware Workbench version 5.6.2.0. Boreholes are from the North Dakota State Water Commission MapService download on November 6, 2017. Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

Good Correlation to Borehole

Cretaceous?