

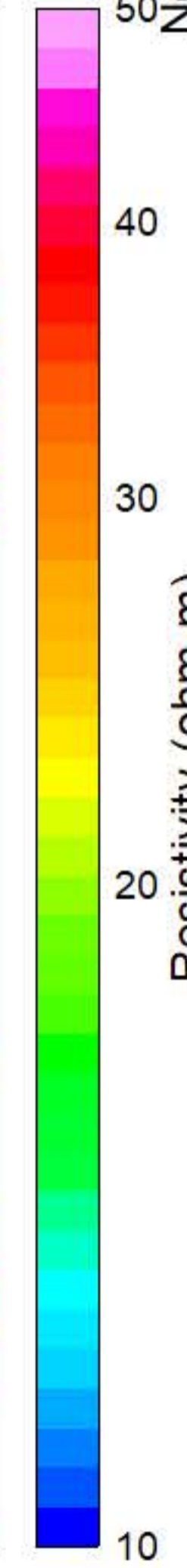
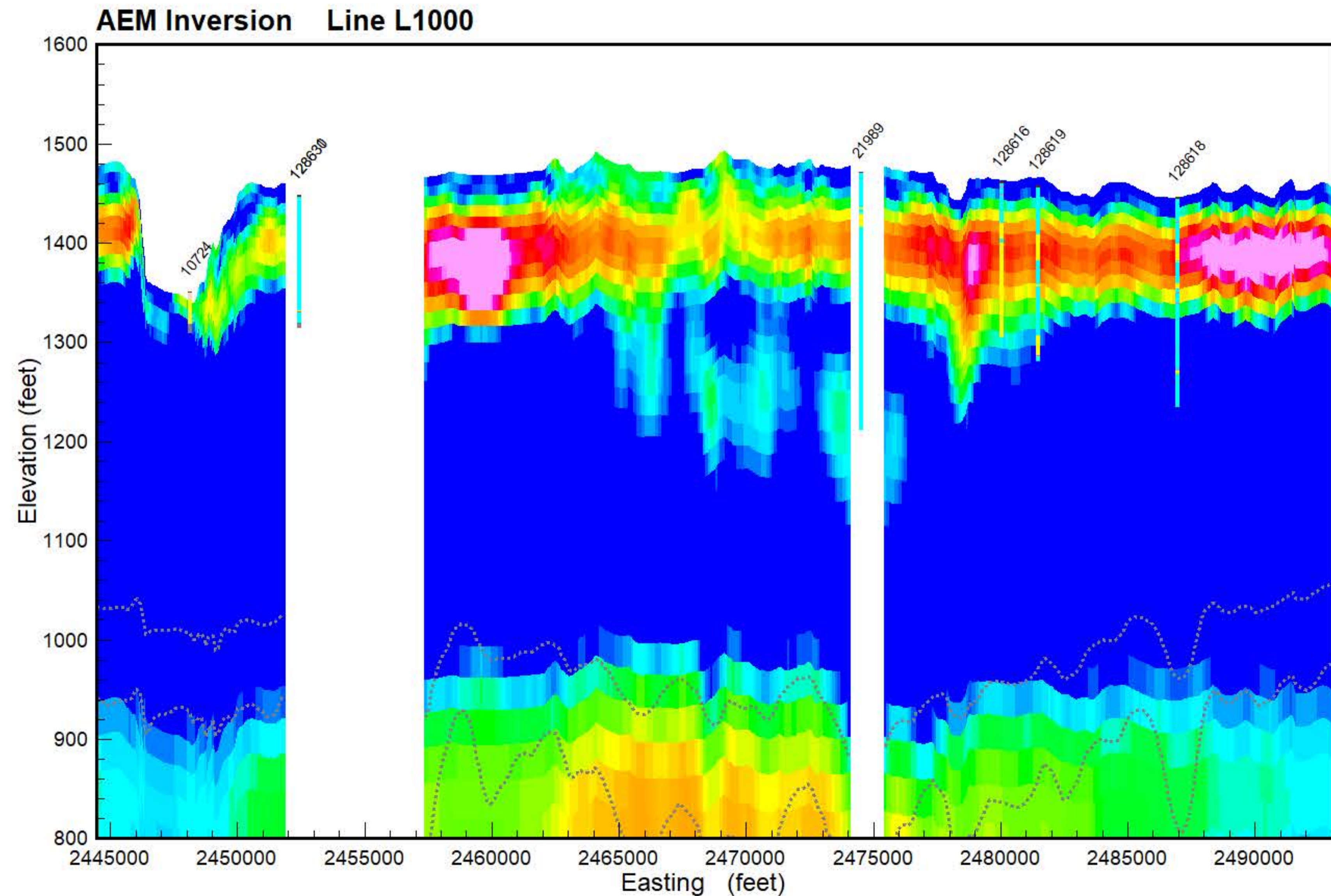
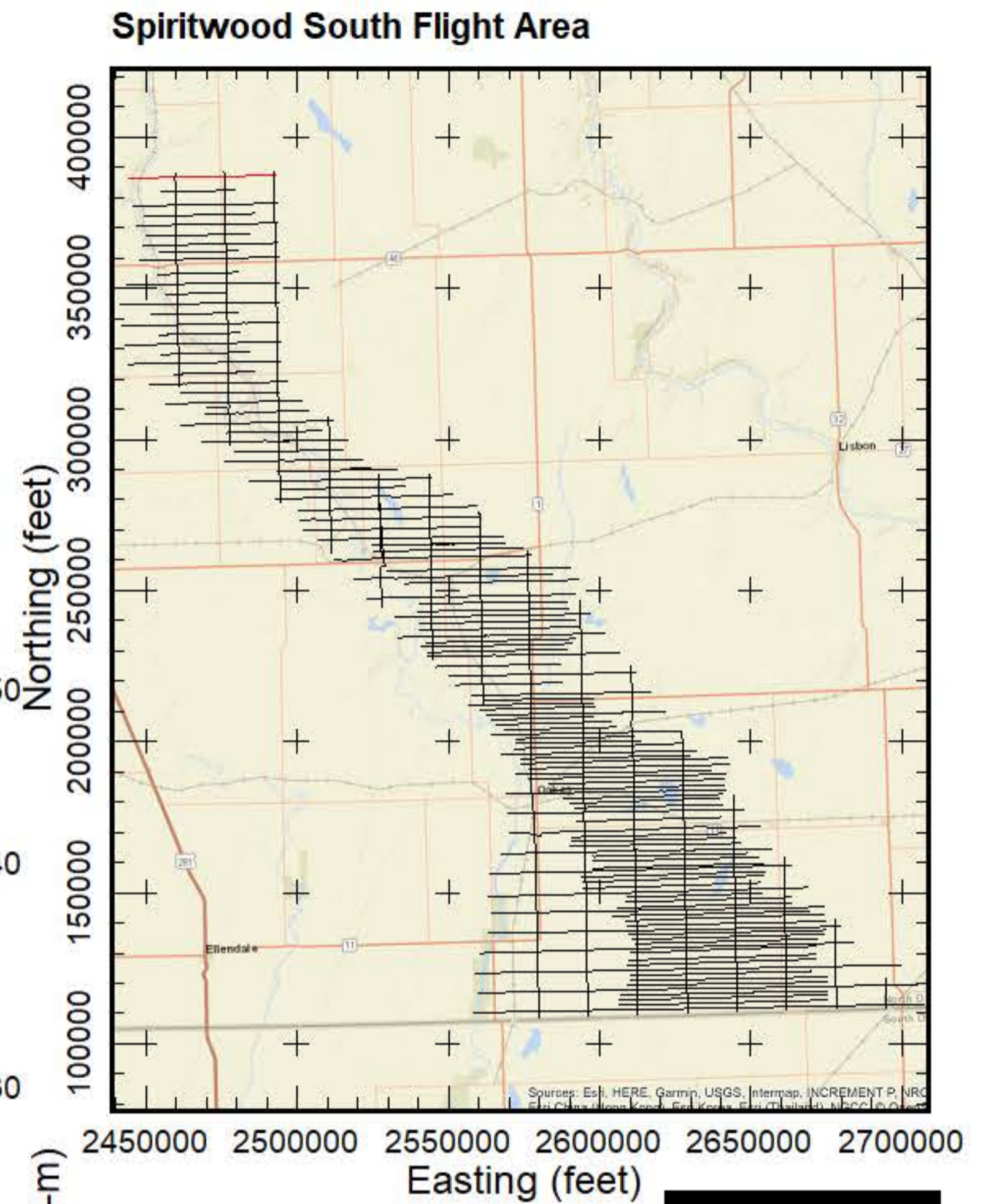
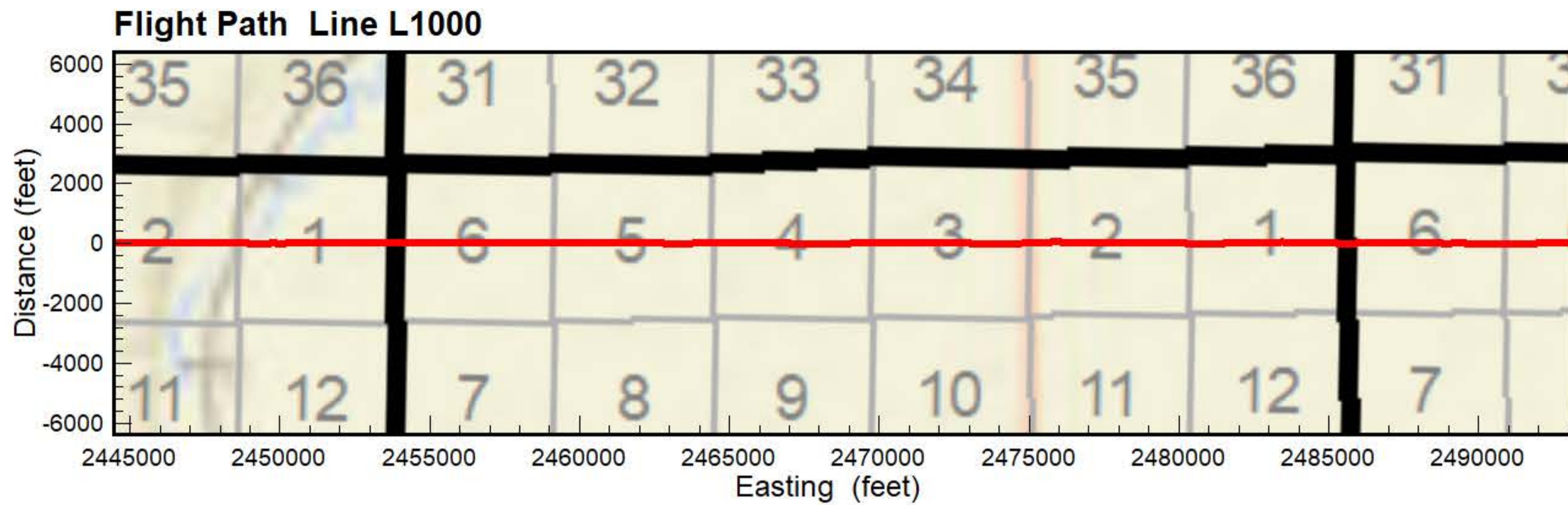
# Appendix 1:

## 2D Profiles – Full for the Spiritwood South Area

### Page

A1A-Final-2 – A1A-Final-139      2D profiles for the Spiritwood South AEM survey area with inverted resistivity profile, flight location map, and survey path map.



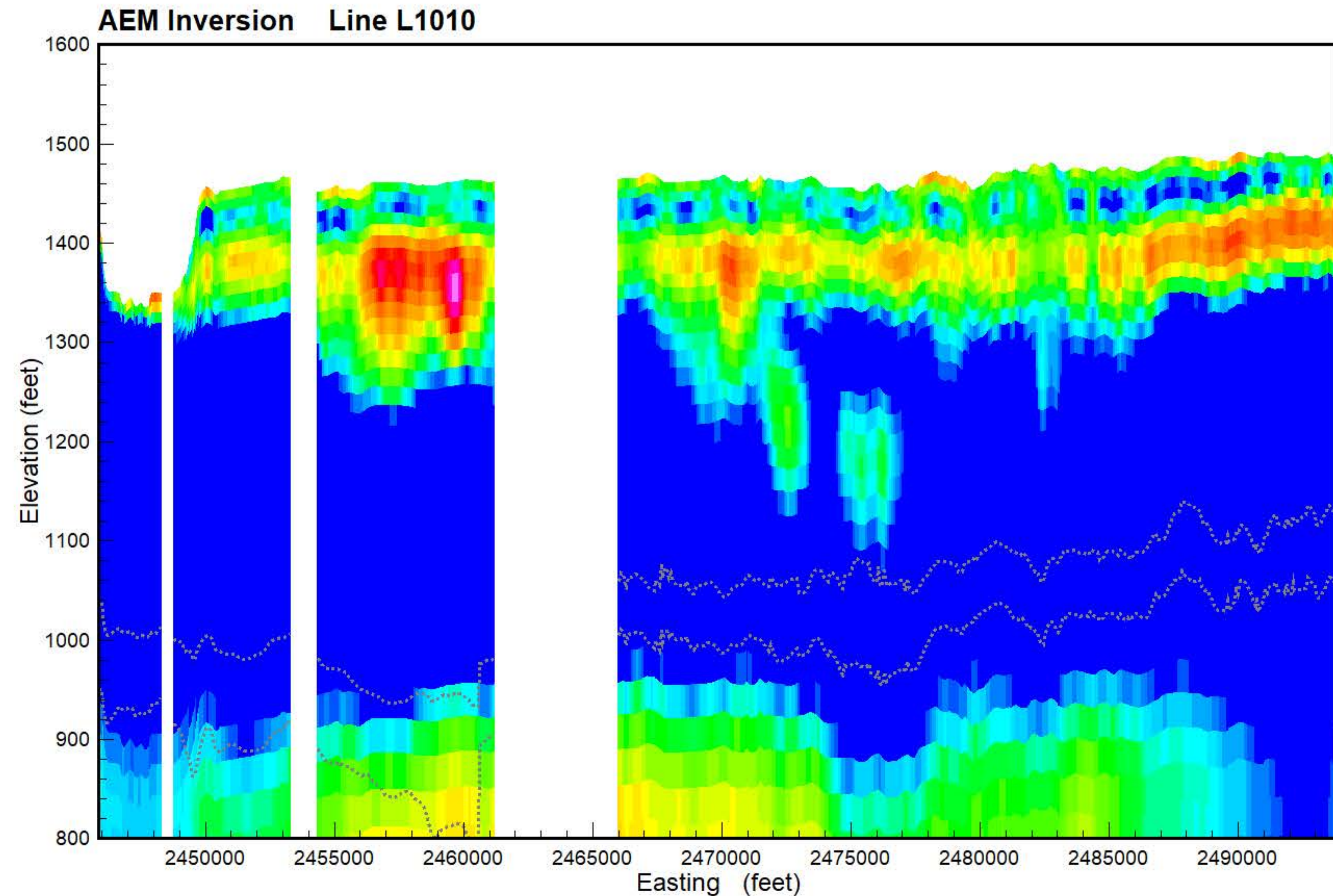
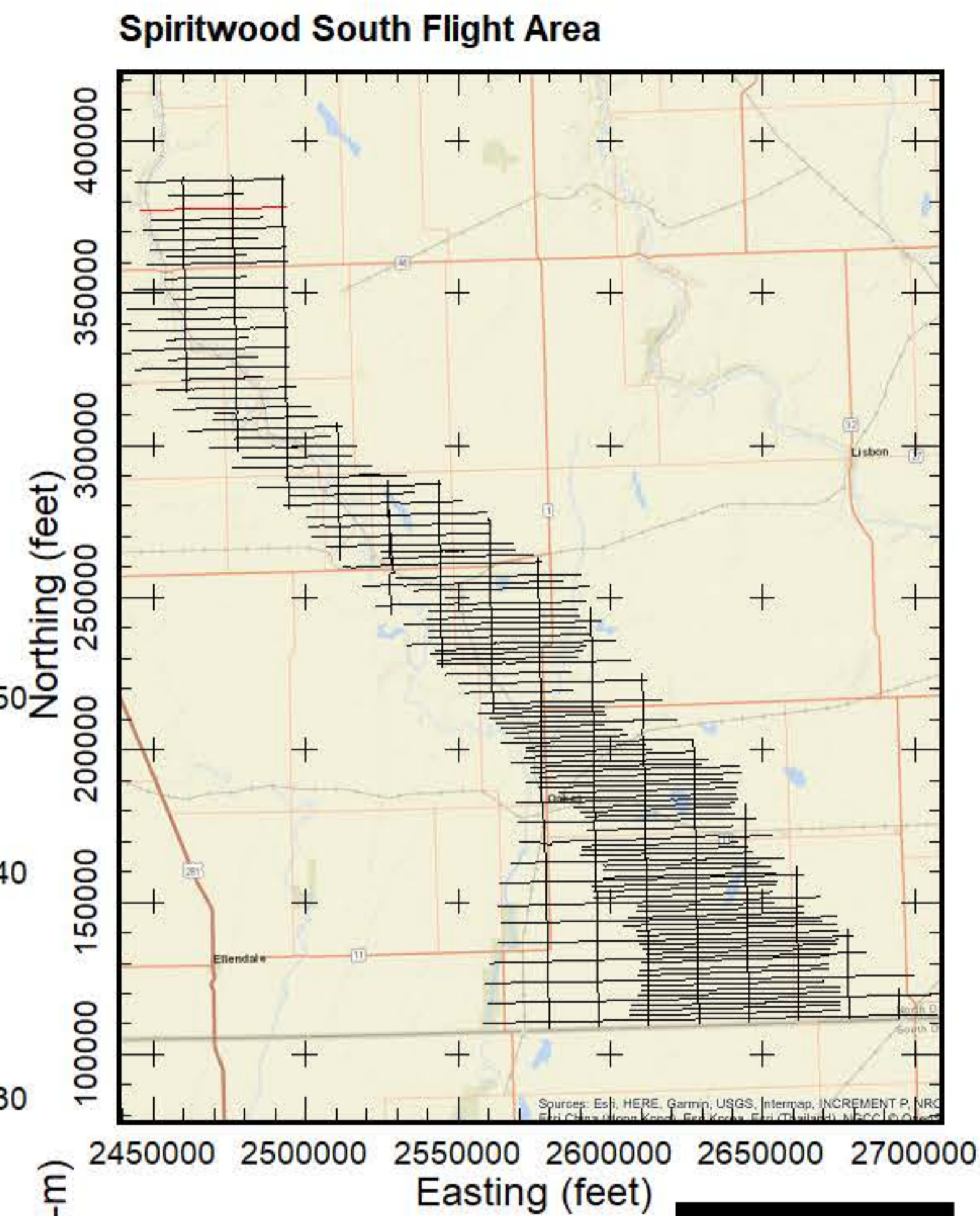
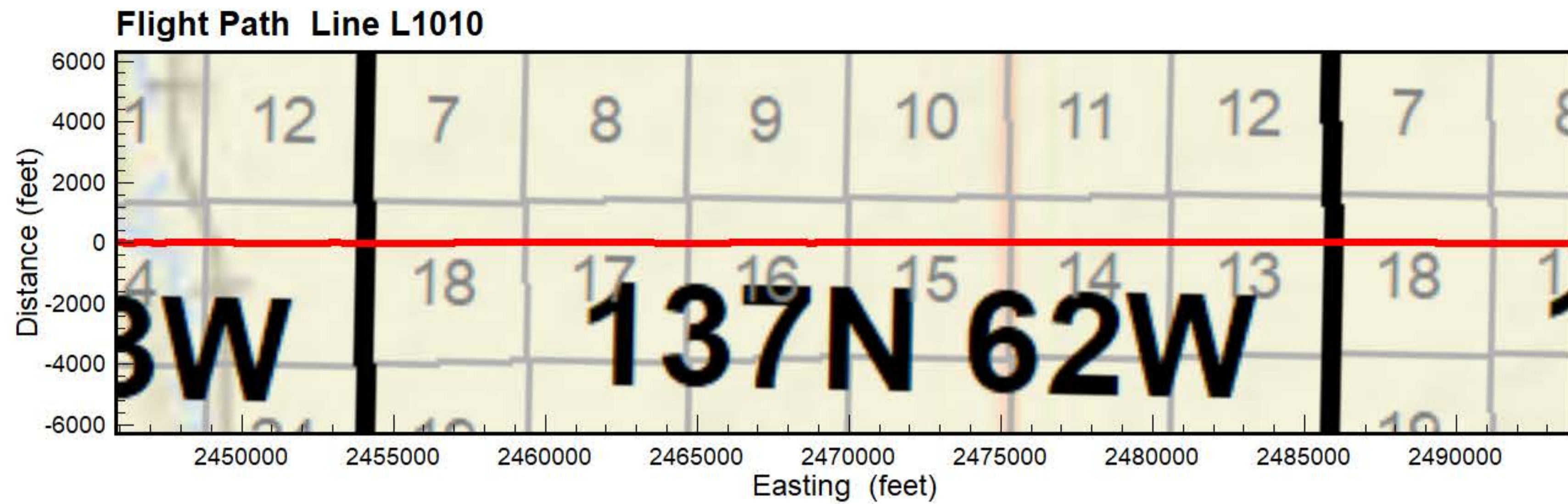


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- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.





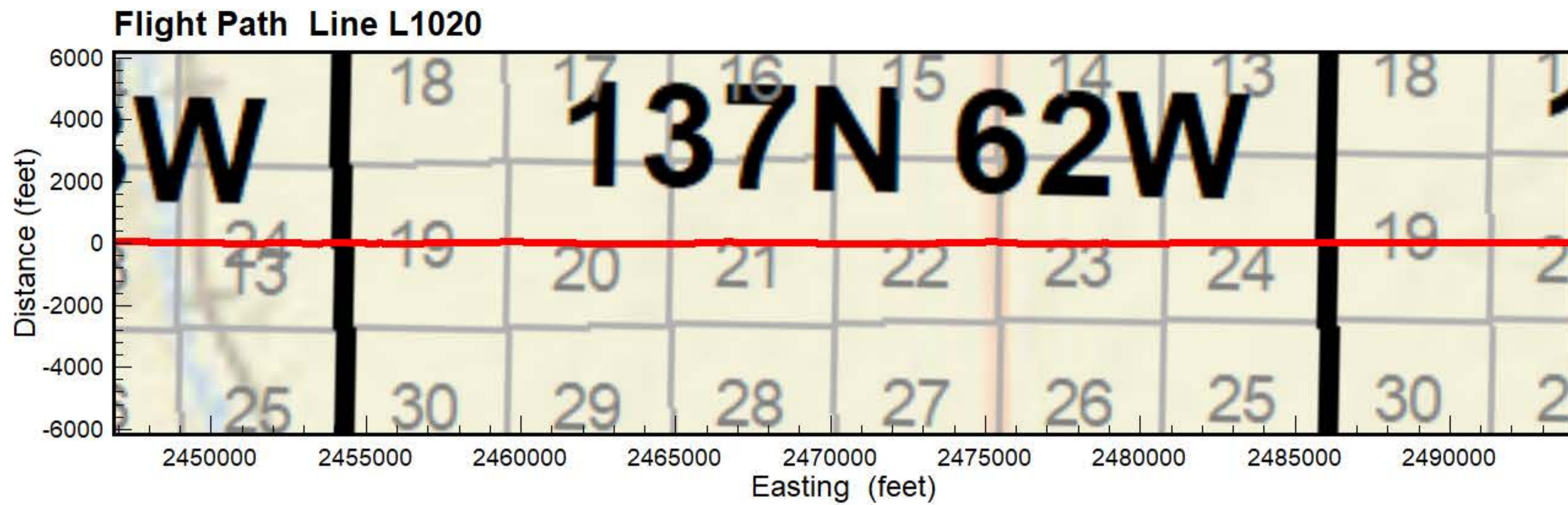


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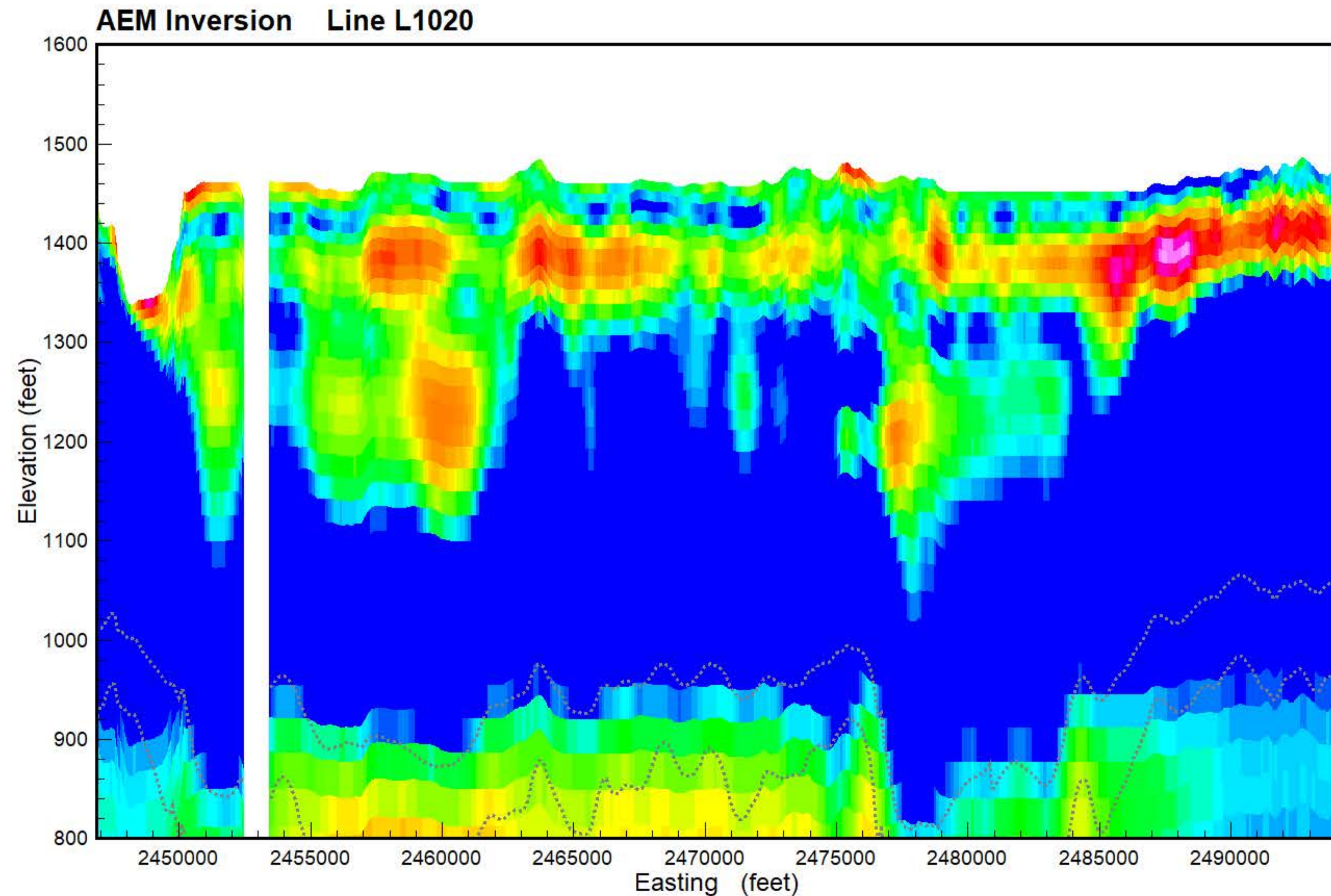
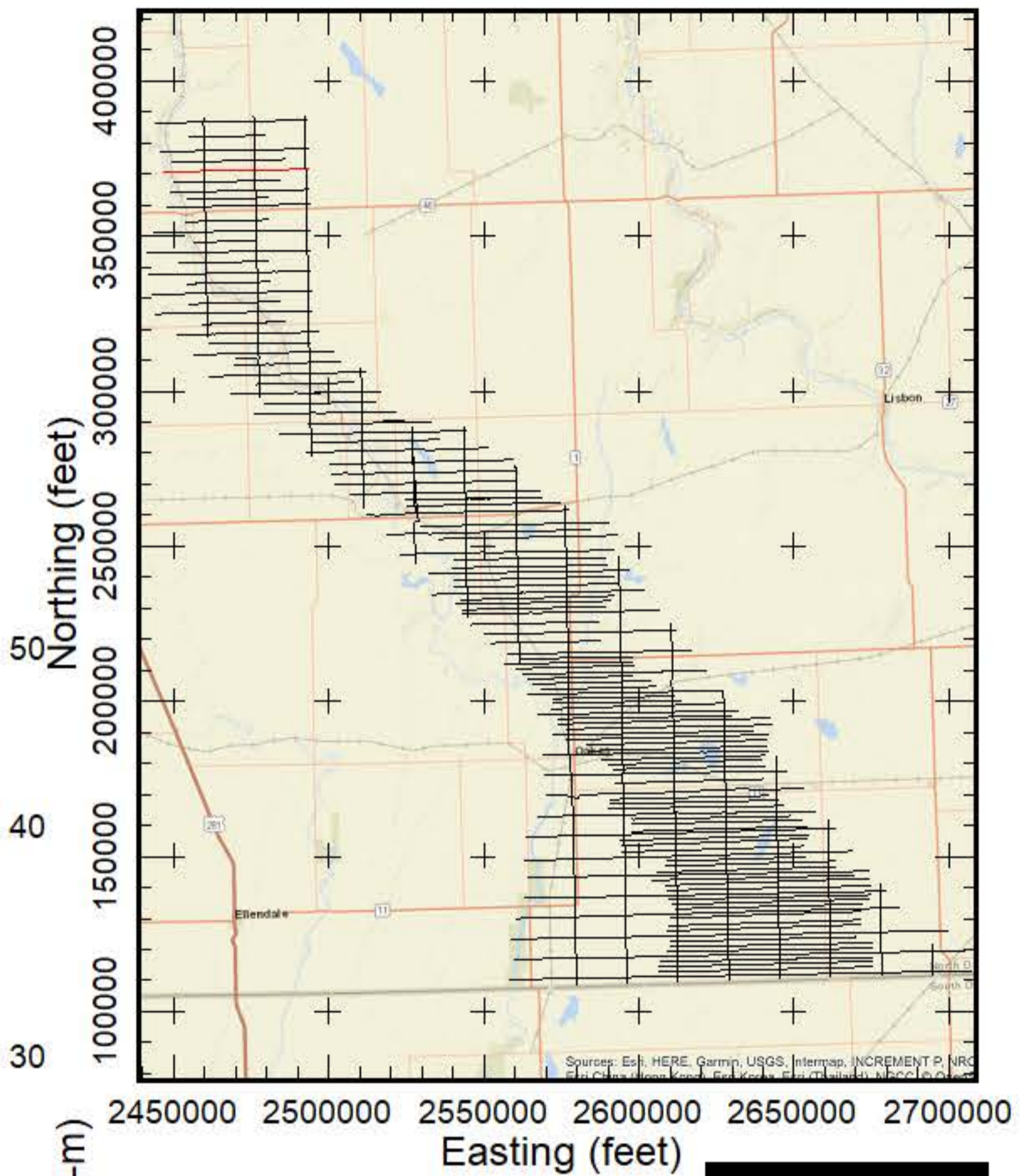
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.







Spiritwood South Flight Area



**GEOTECH**

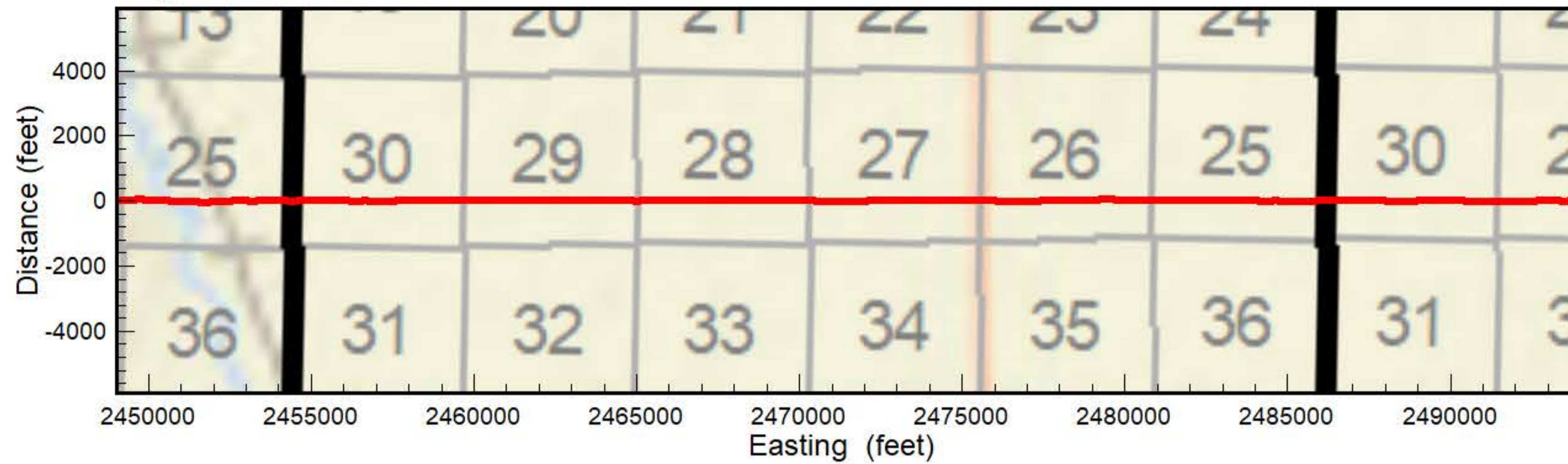
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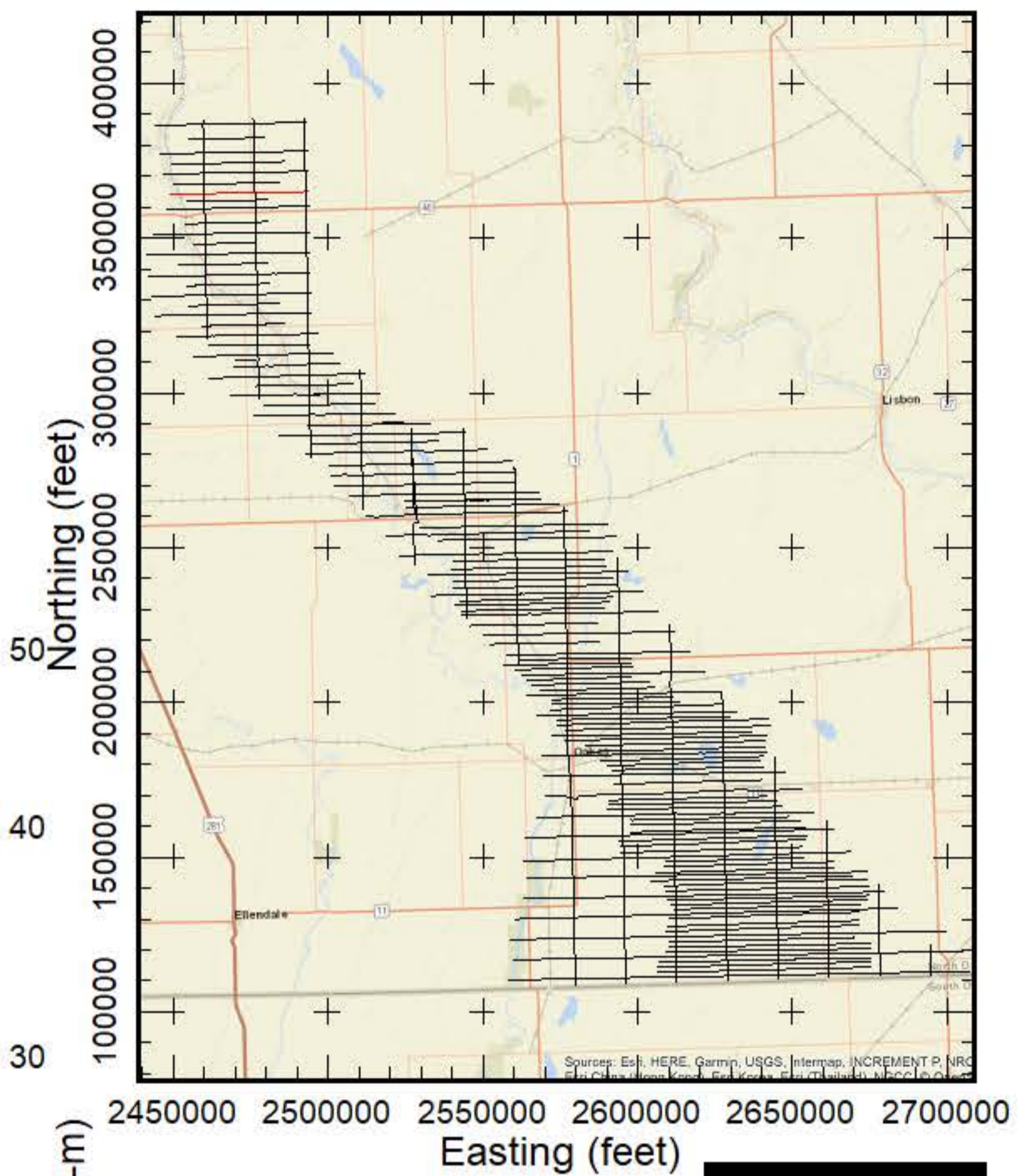
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Aqua Geo Frameworks



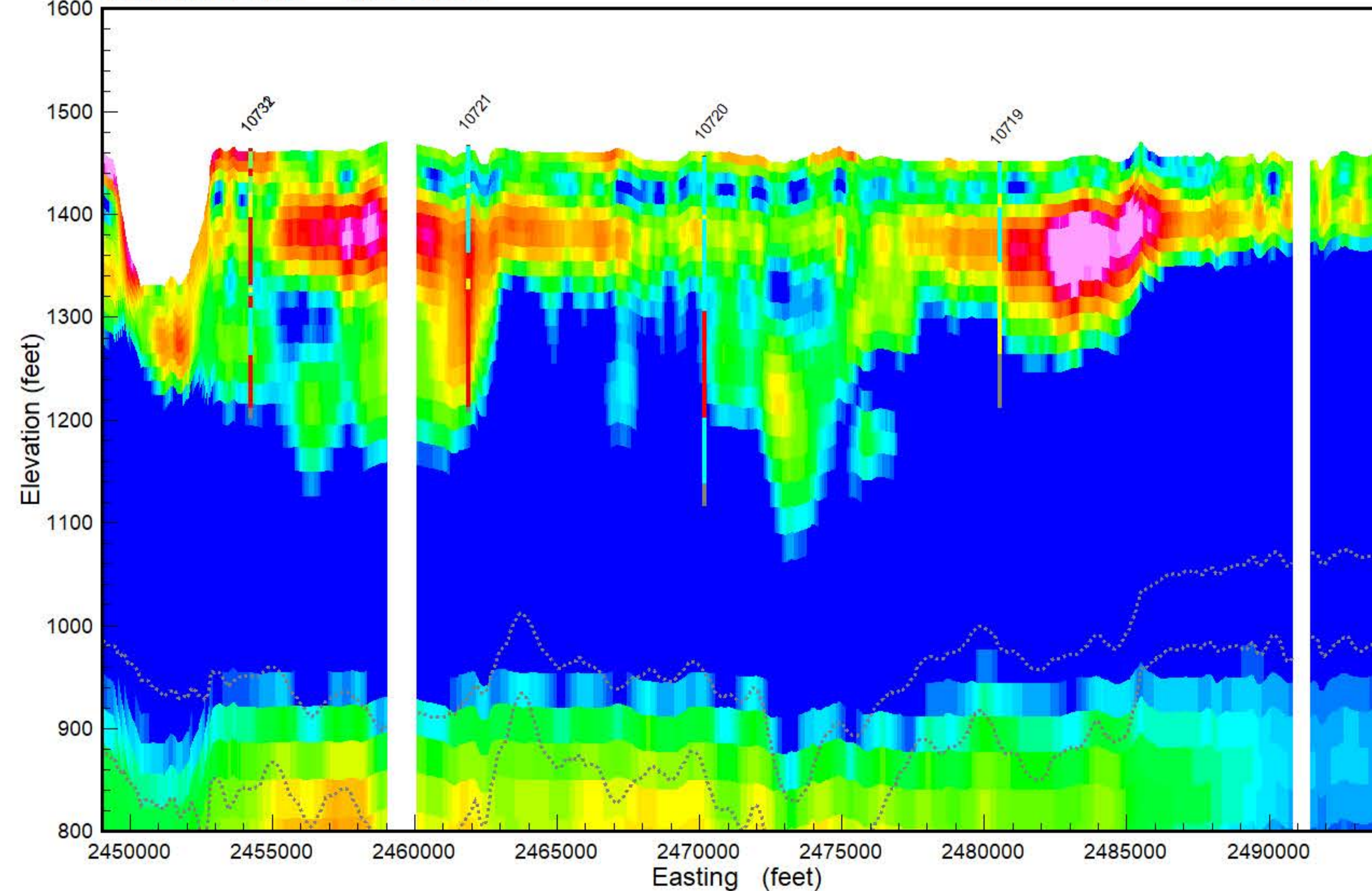
**Flight Path Line L1030**



**Spiritwood South Flight Area**



**AEM Inversion Line L1030**

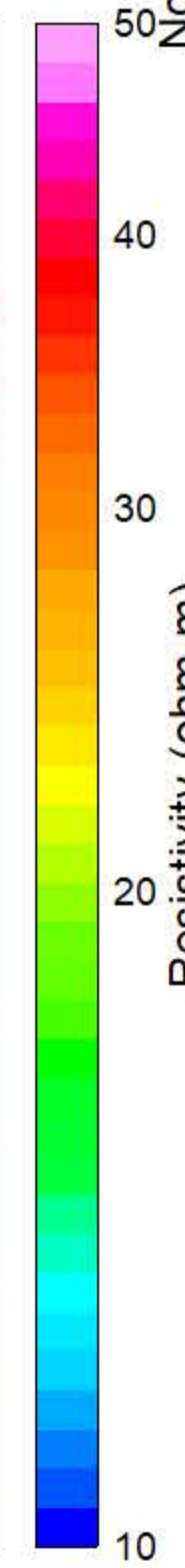
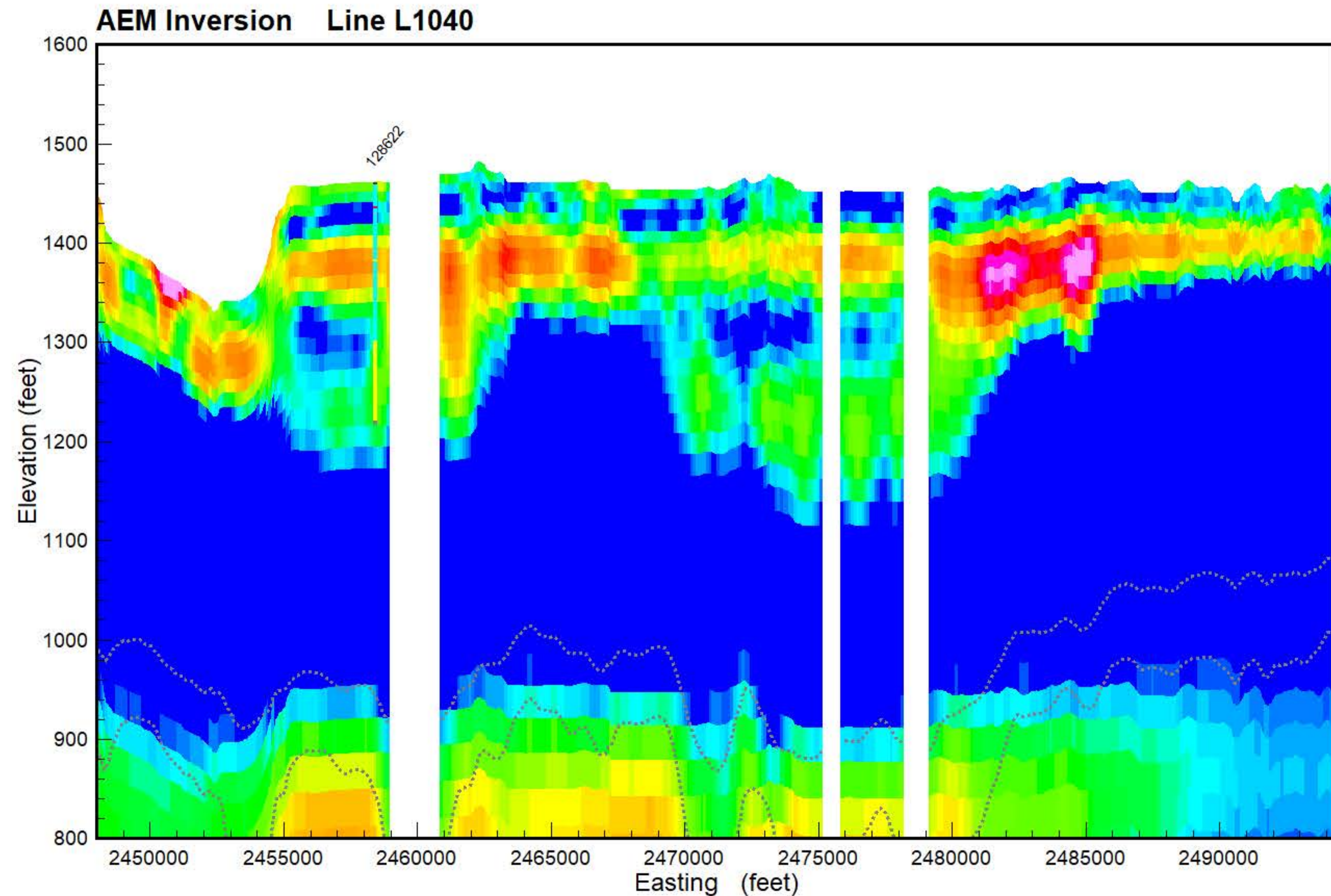
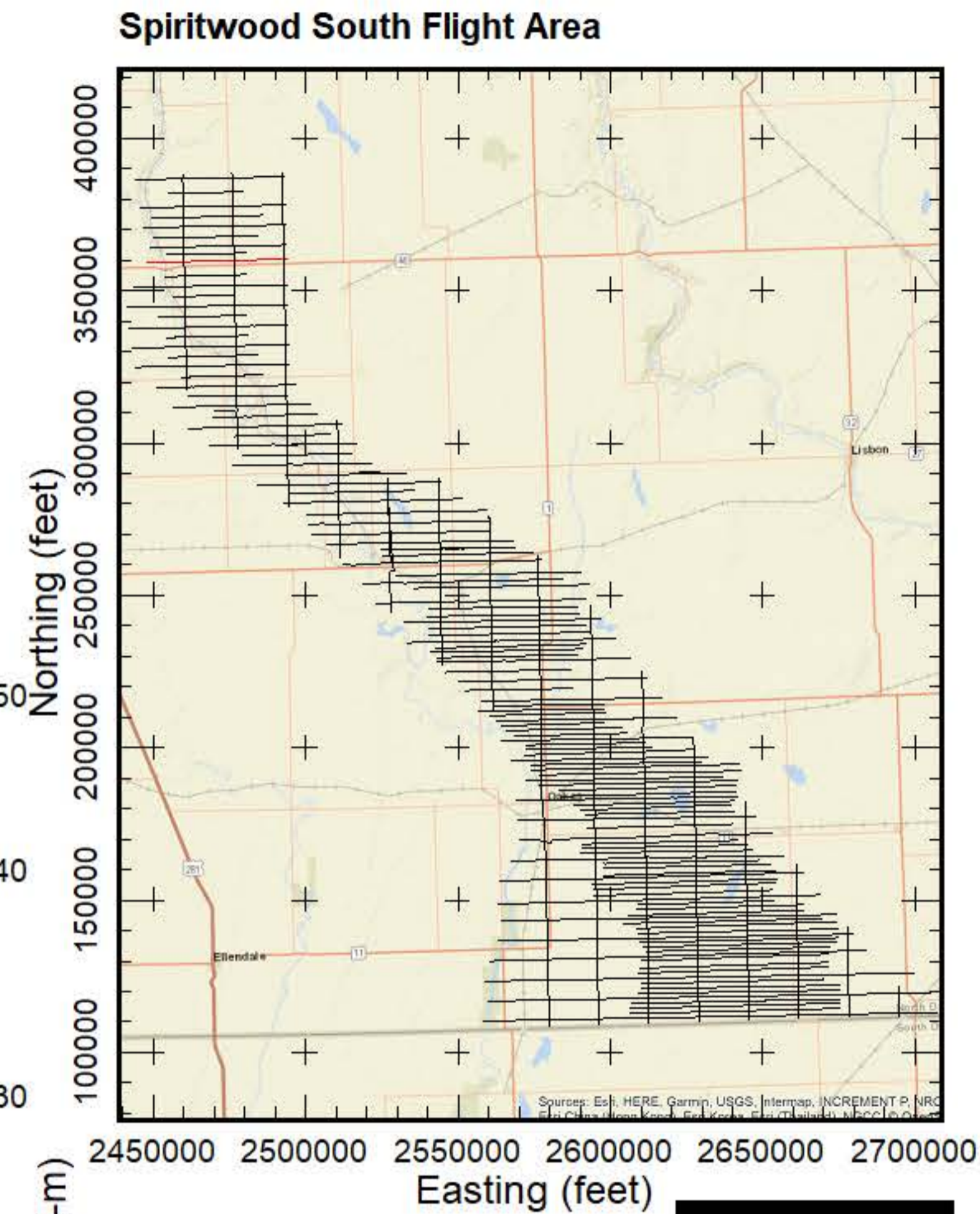
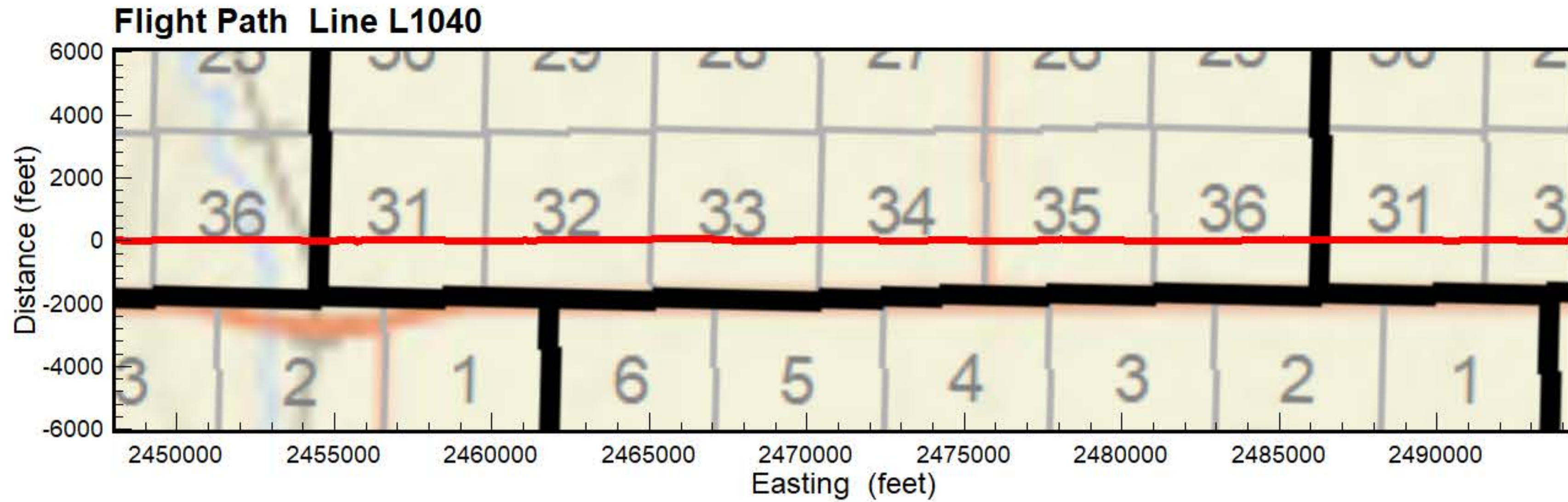


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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.







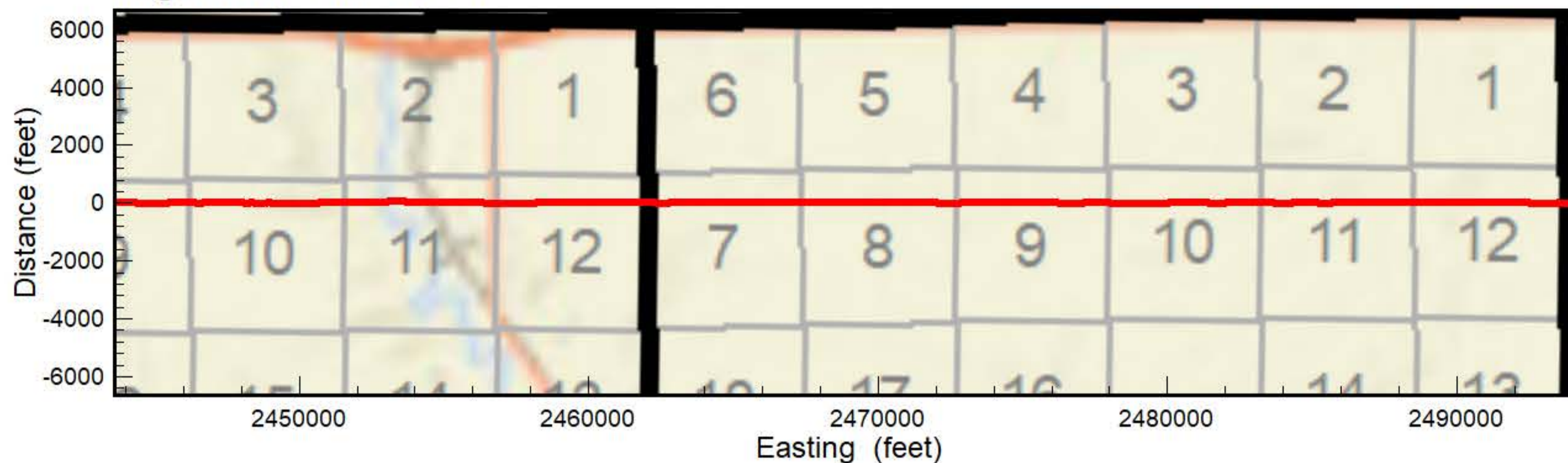
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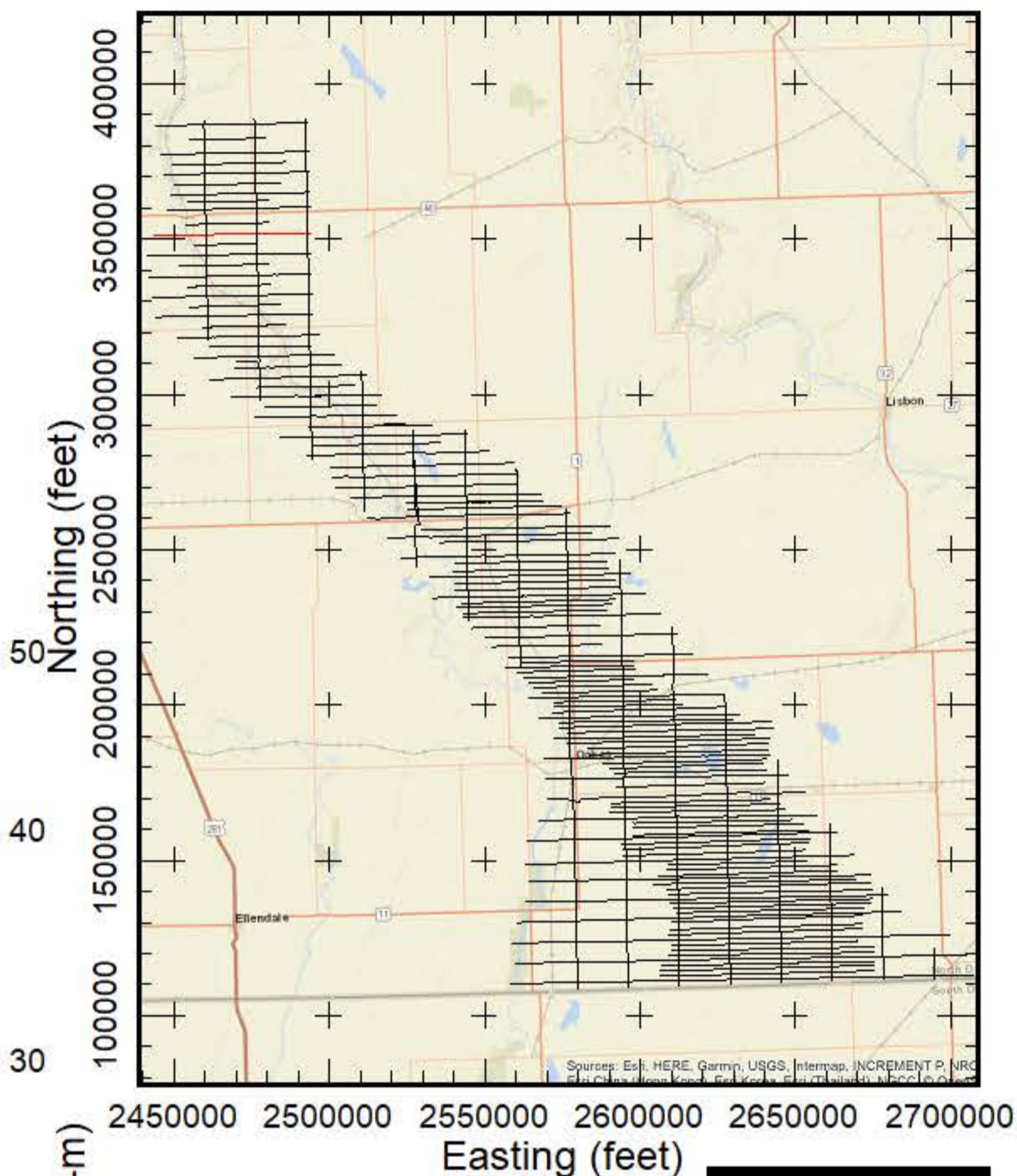




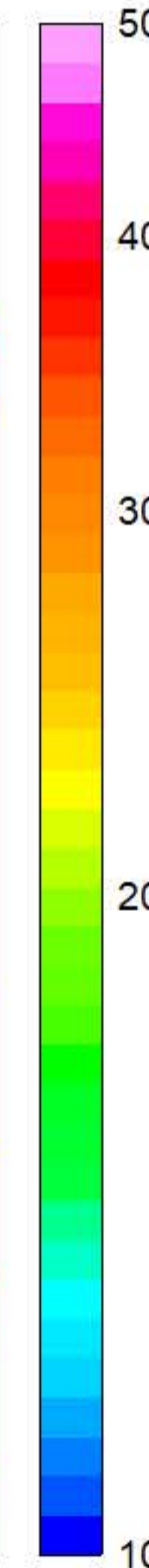
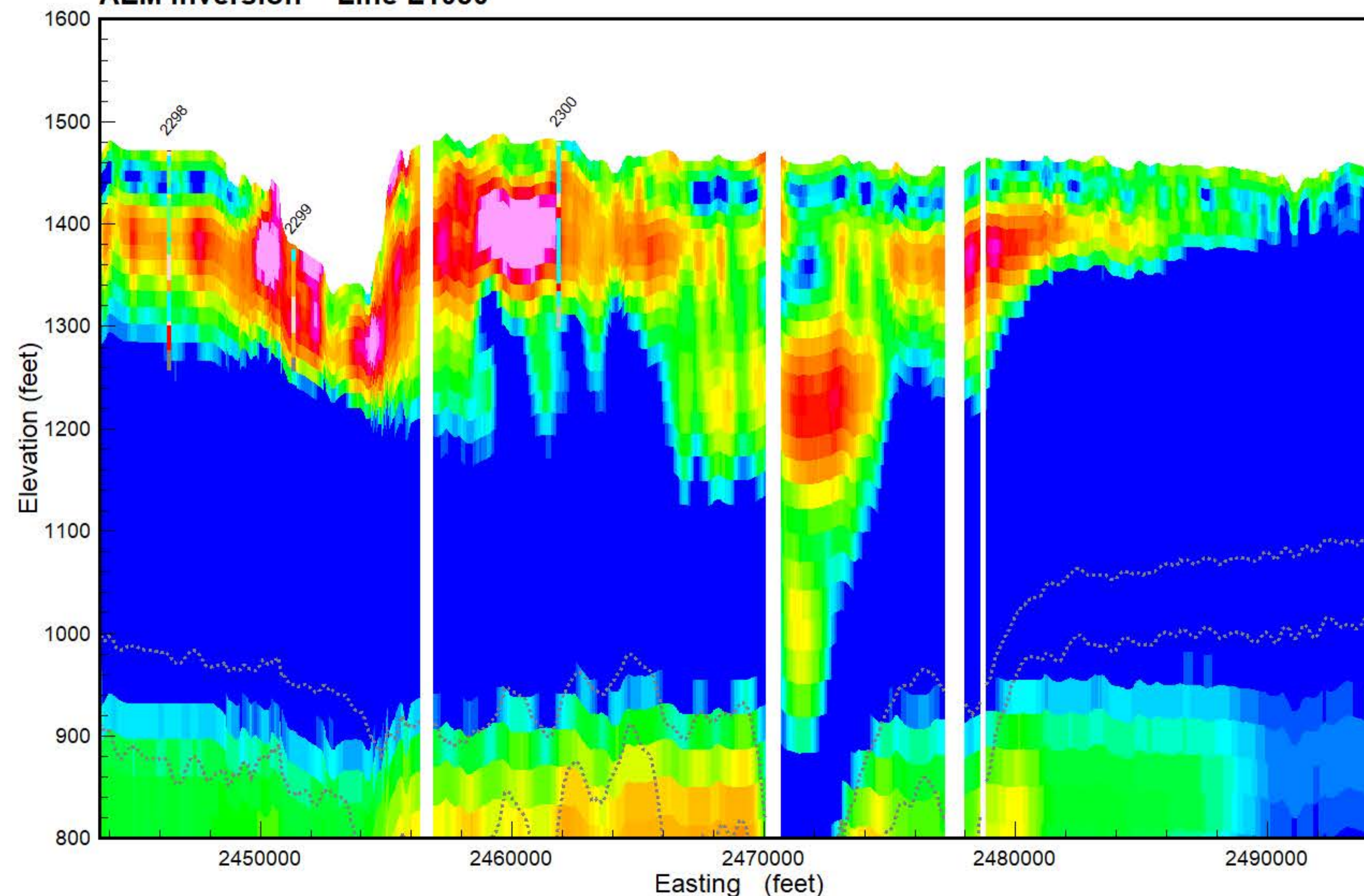
**Flight Path Line L1050**



**Spiritwood South Flight Area**



**AEM Inversion Line L1050**



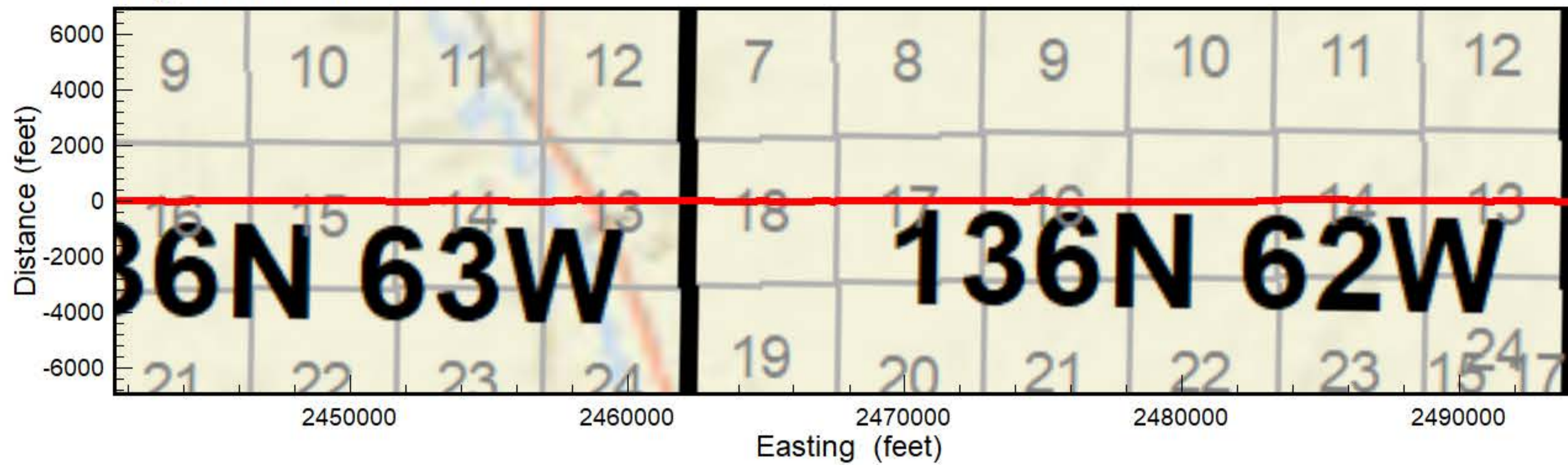
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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

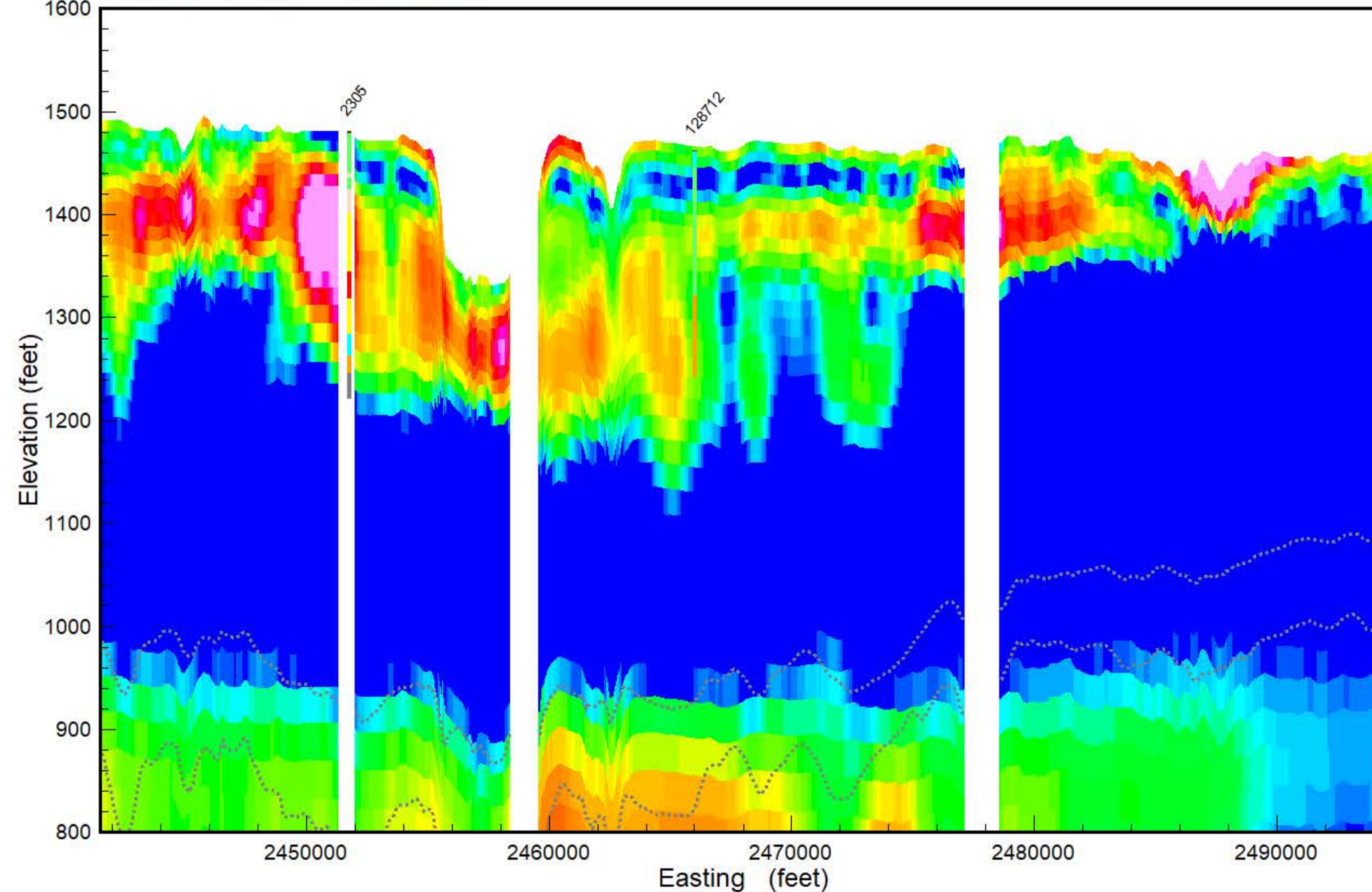




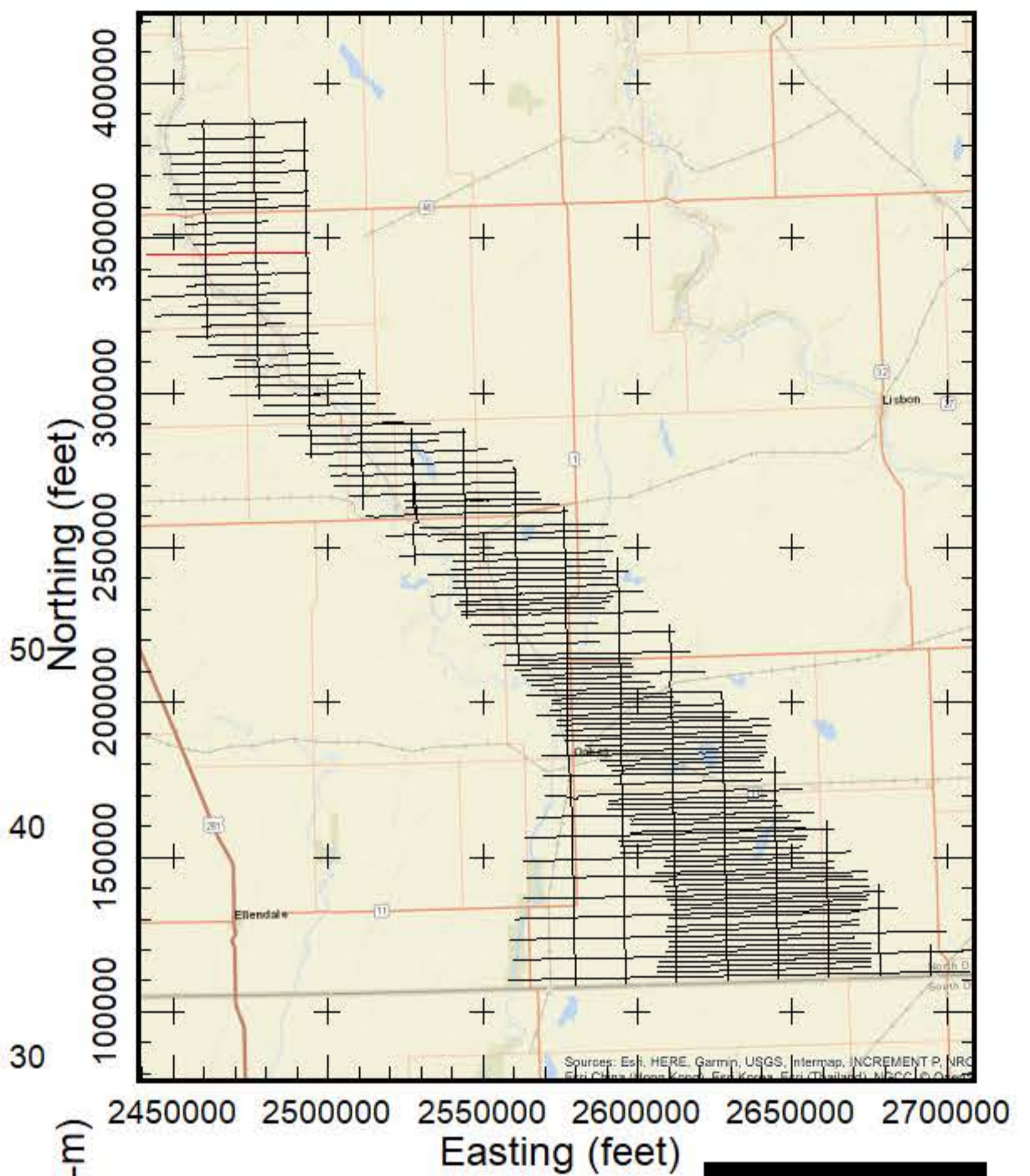
**Flight Path Line L1060**



**AEM Inversion Line L1060**



**Spiritwood South Flight Area**

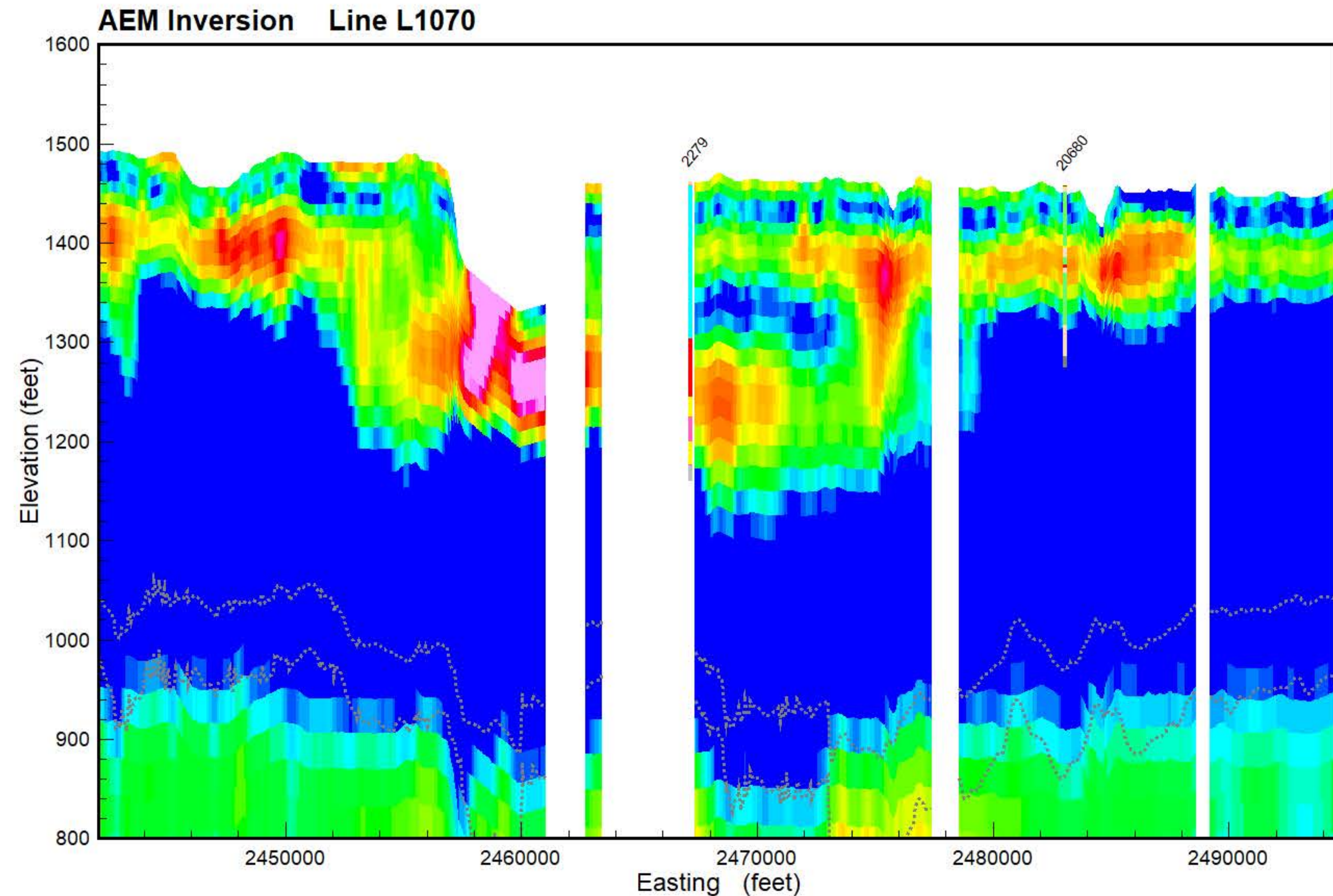
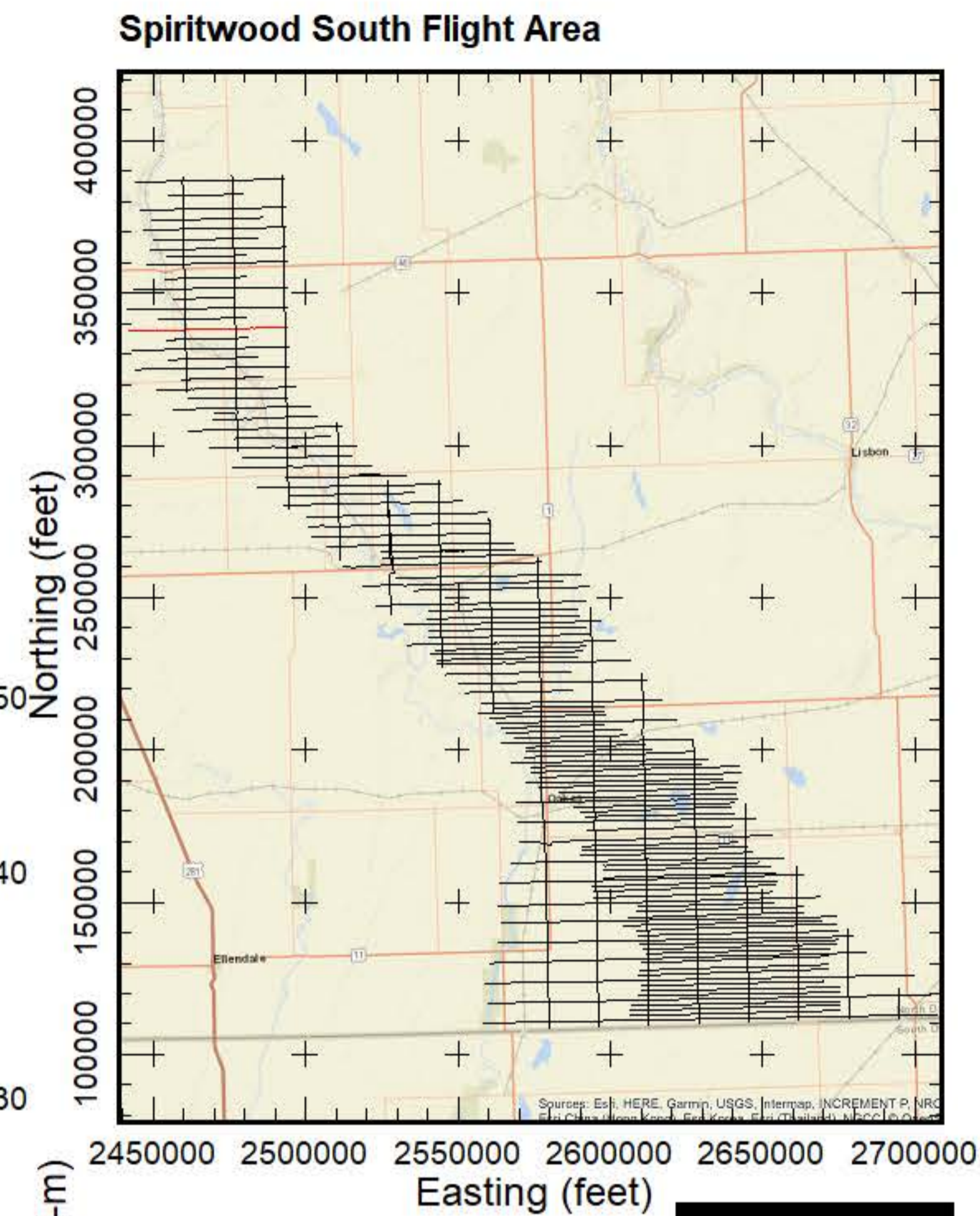
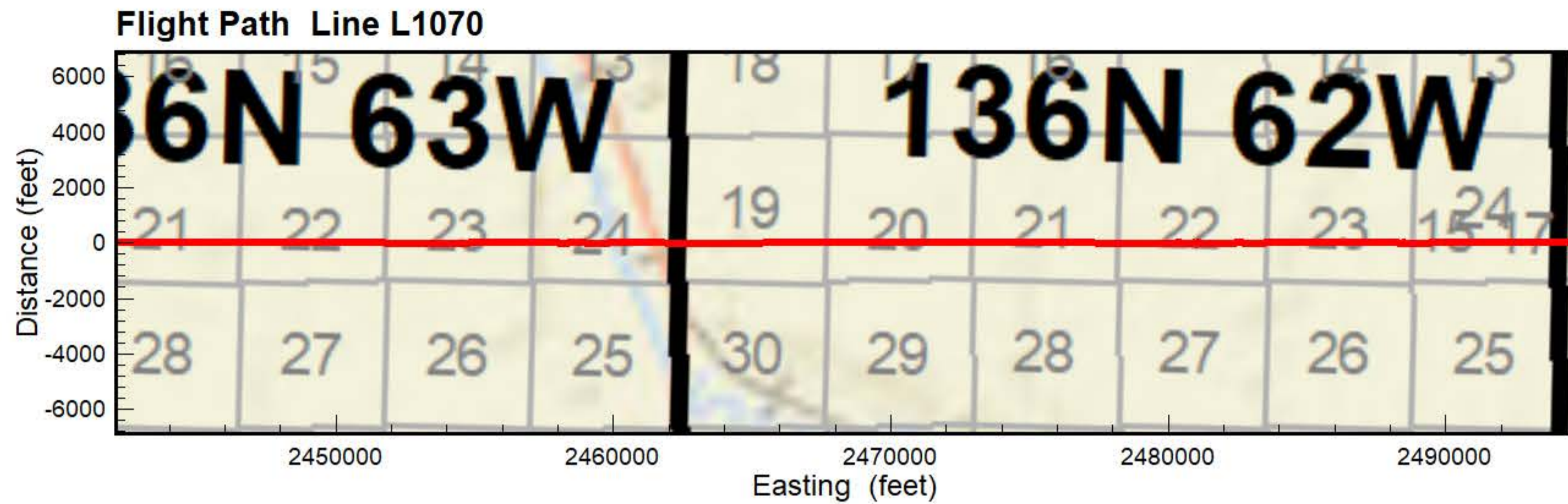


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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.







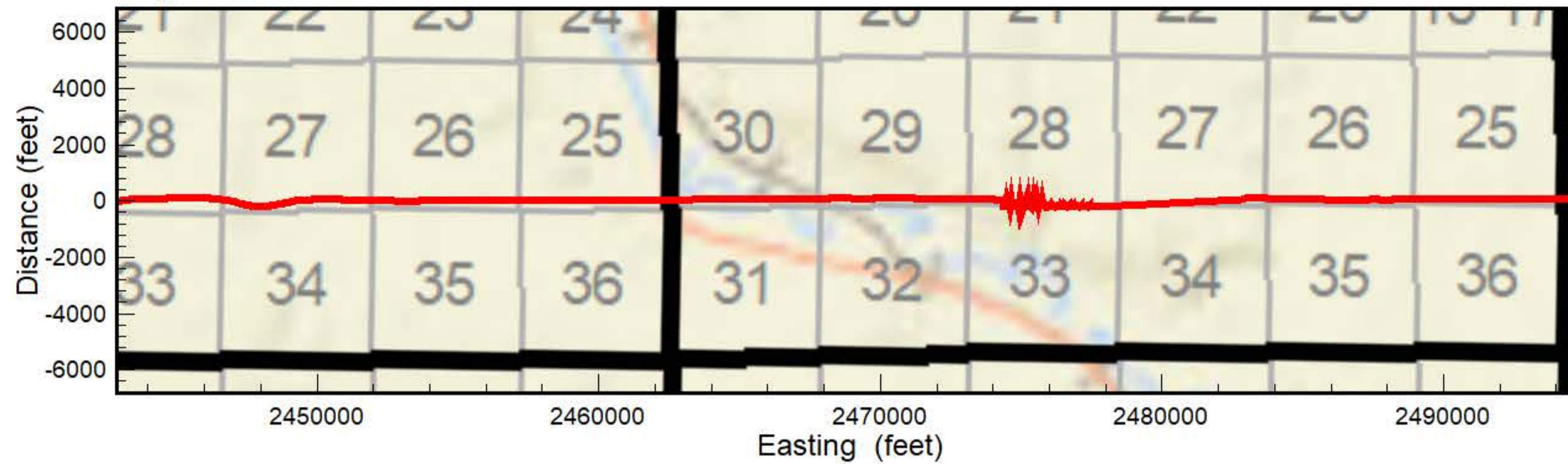
**GEOTECH**

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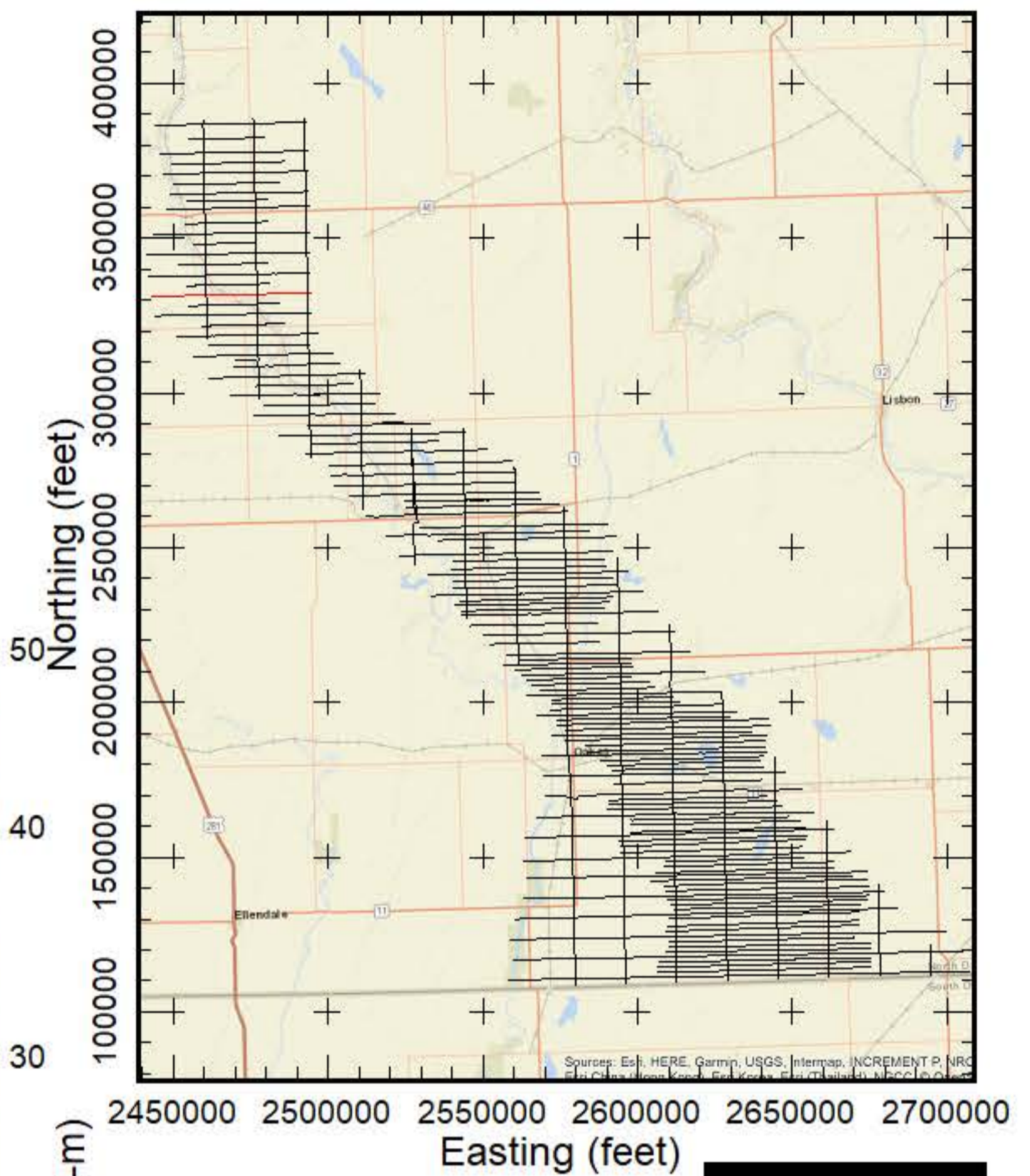
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.



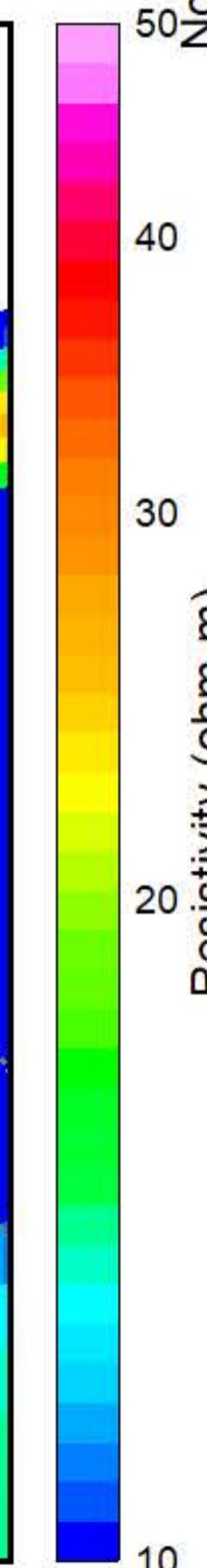
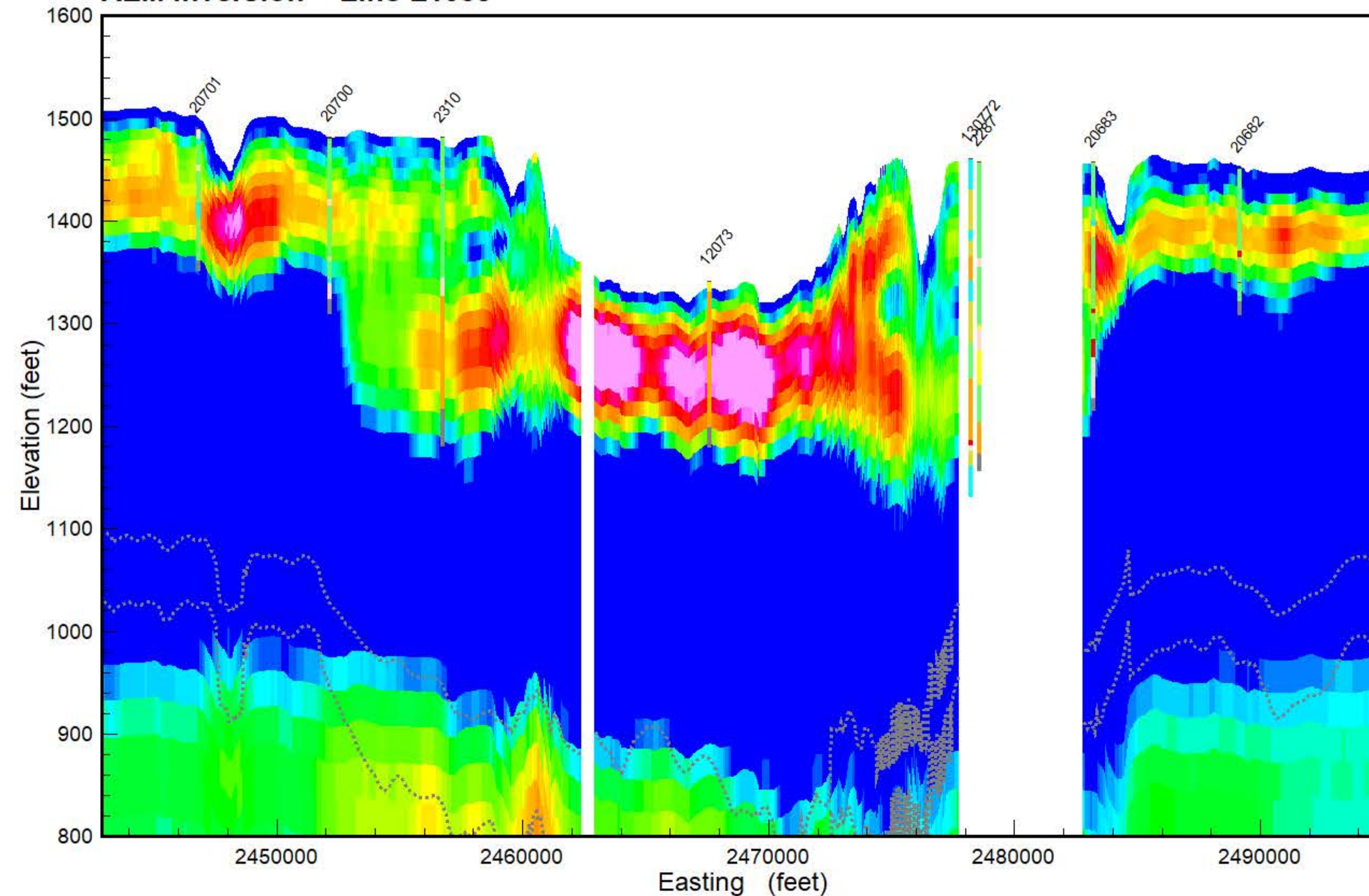
**Flight Path Line L1085**



**Spiritwood South Flight Area**



**AEM Inversion Line L1085**



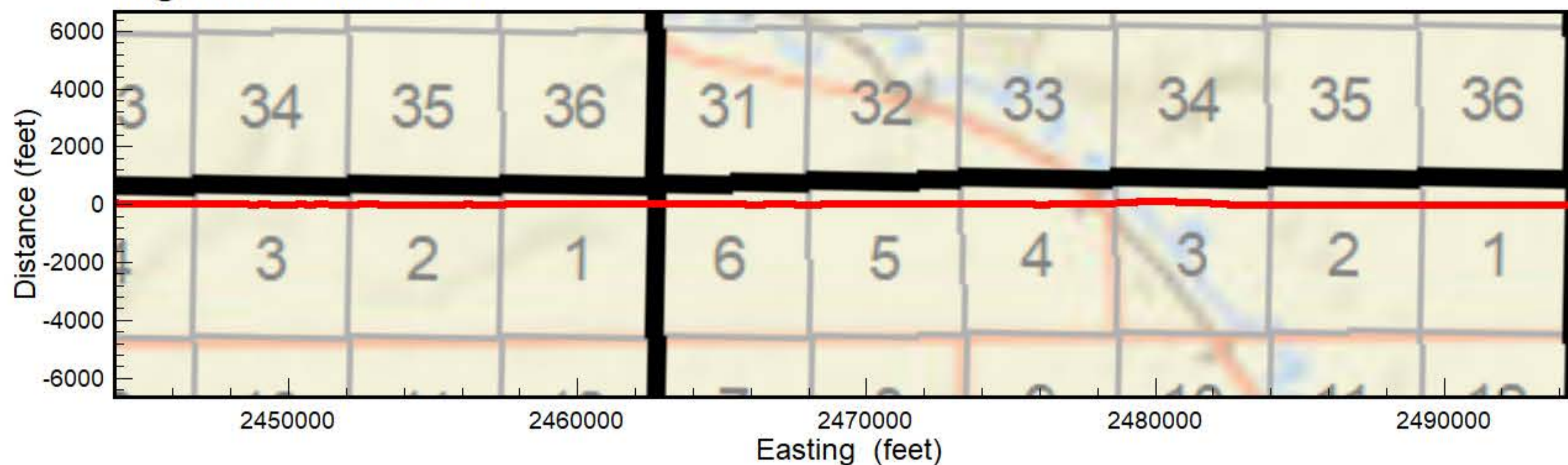
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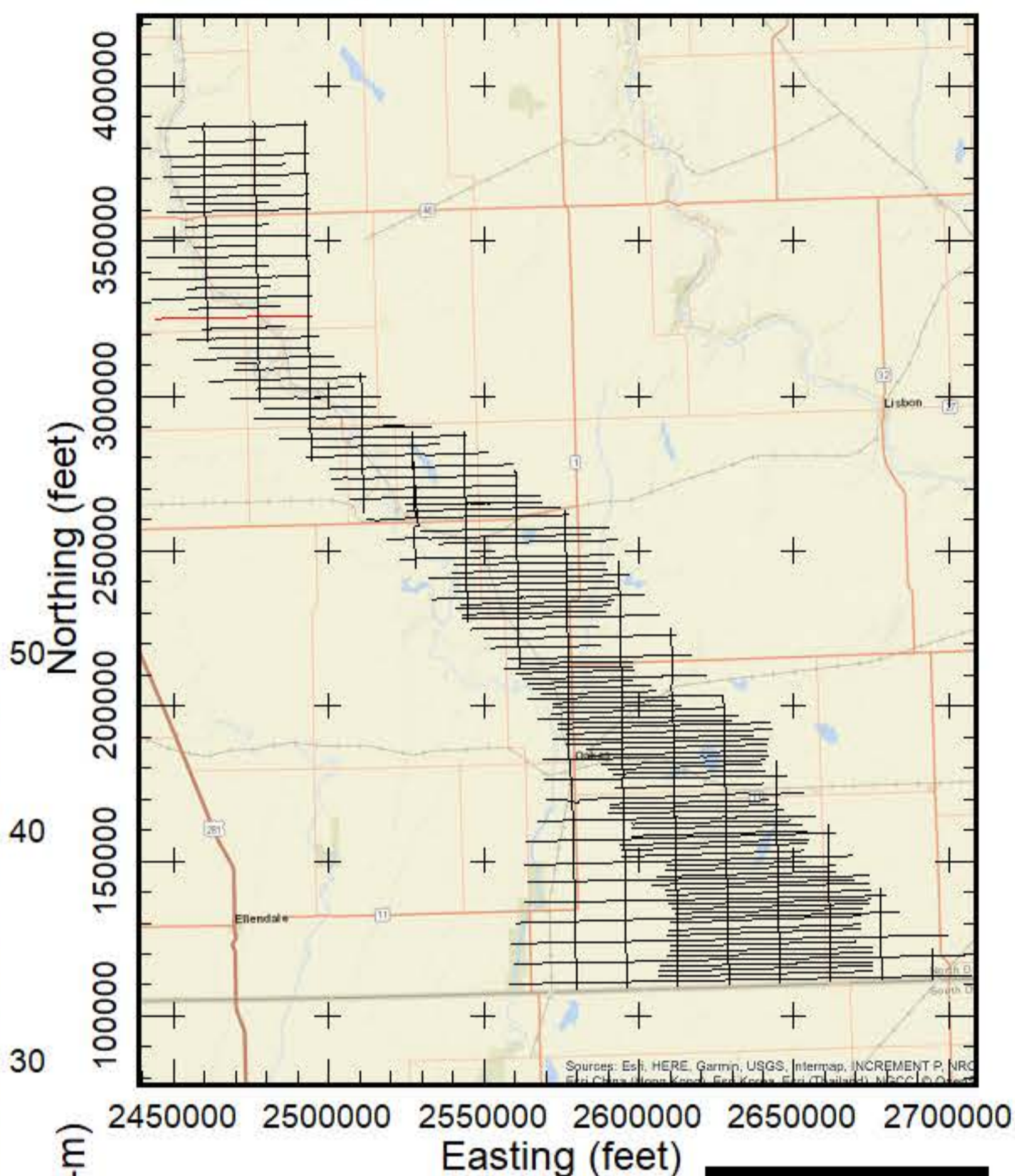




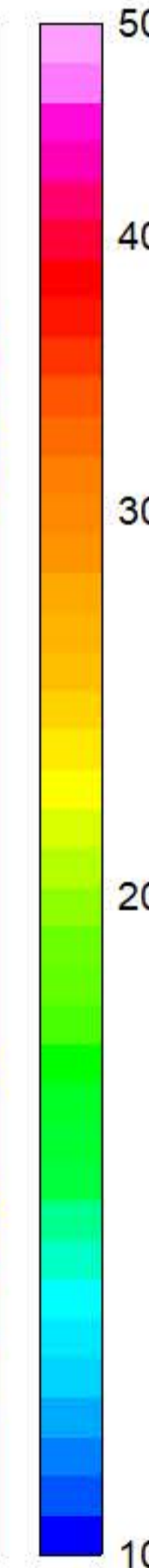
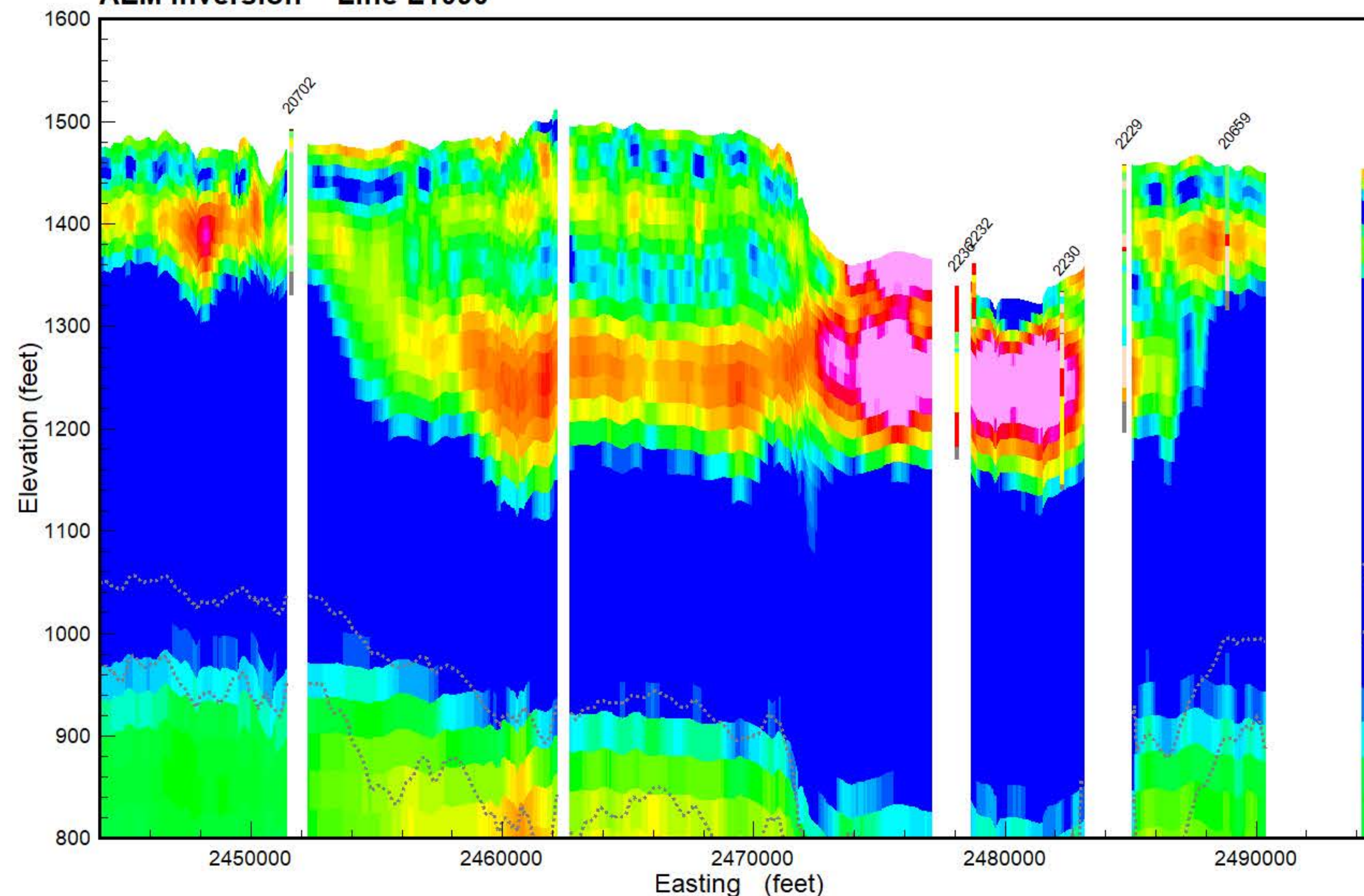
**Flight Path Line L1090**



**Spiritwood South Flight Area**



**AEM Inversion Line L1090**

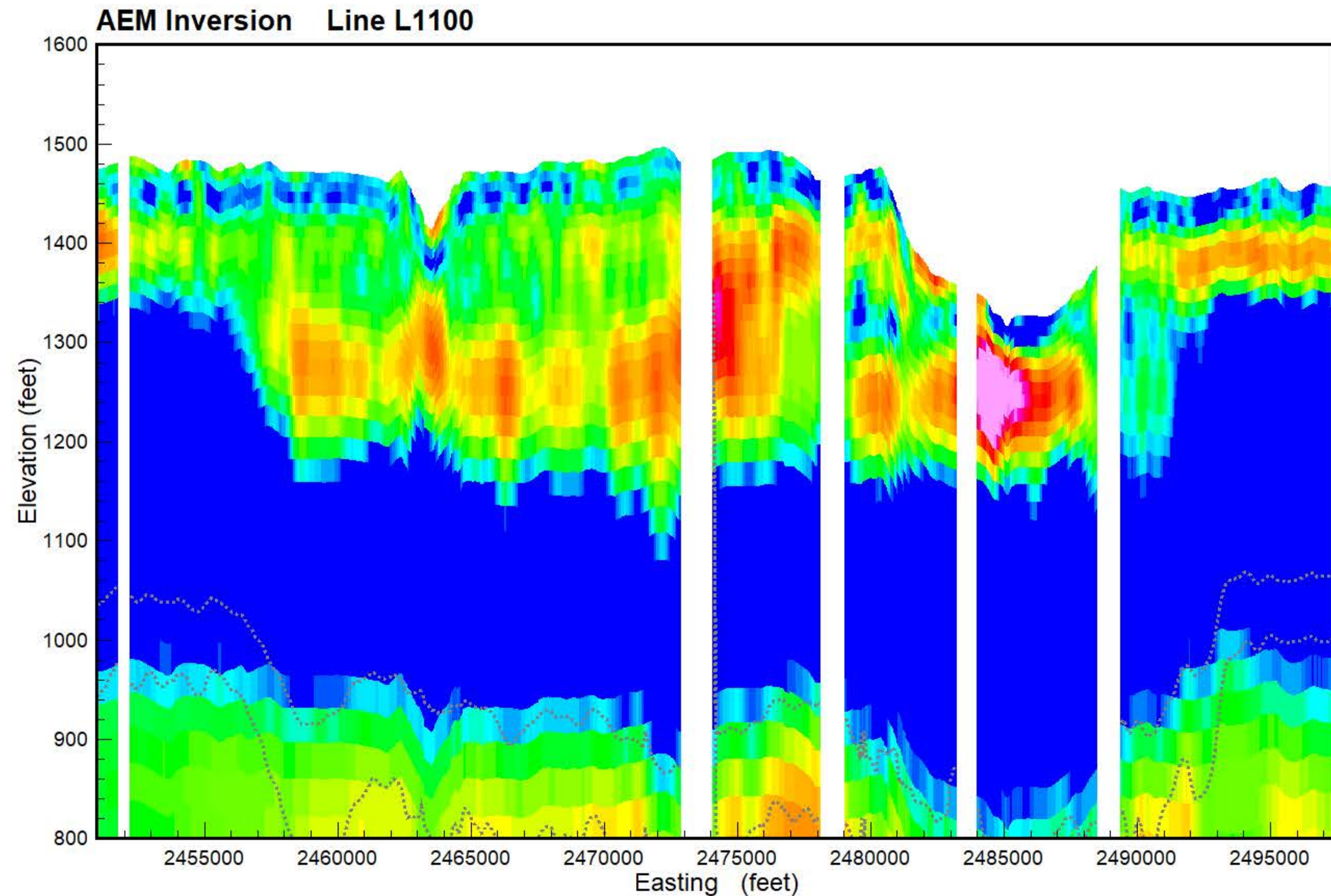
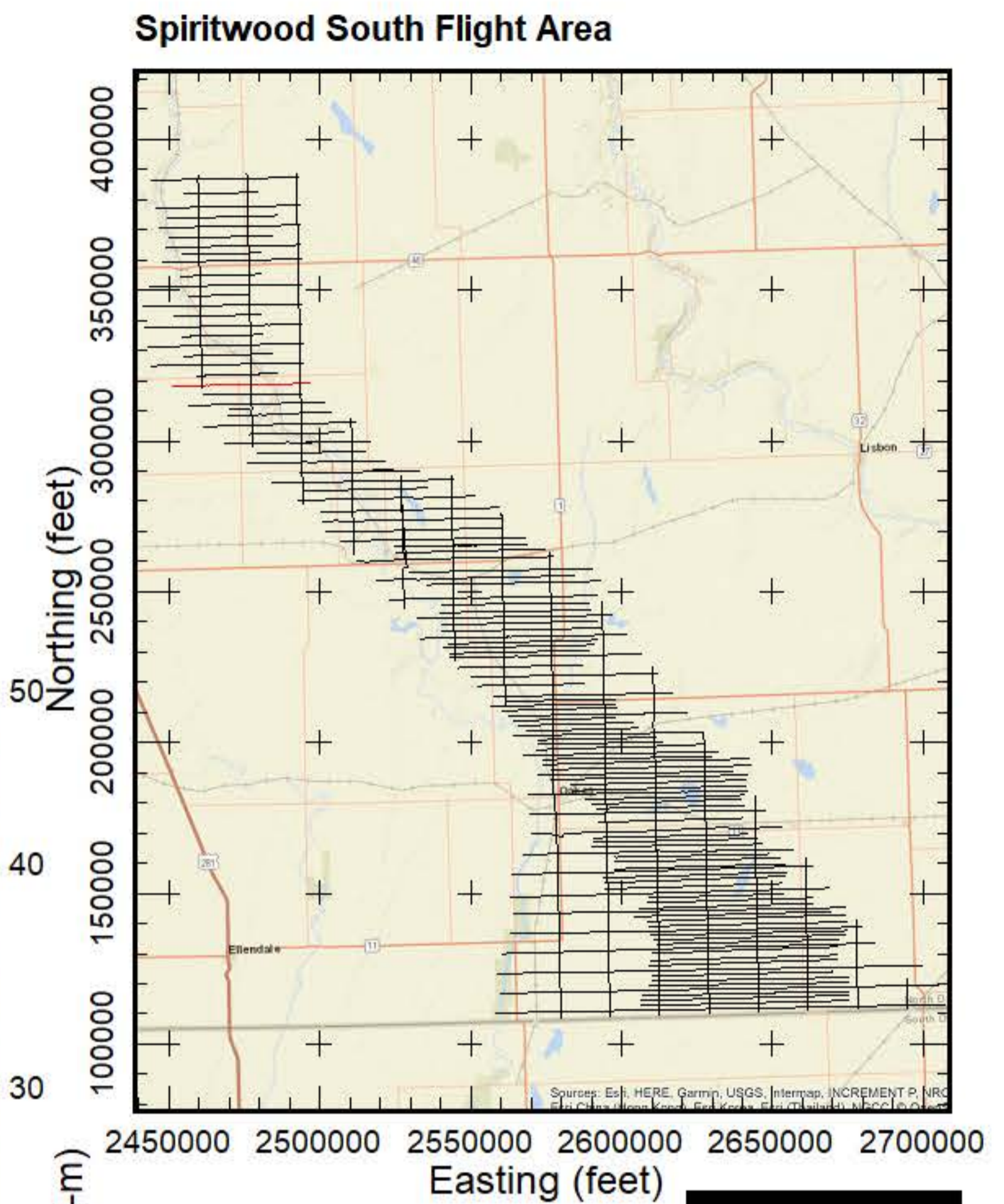
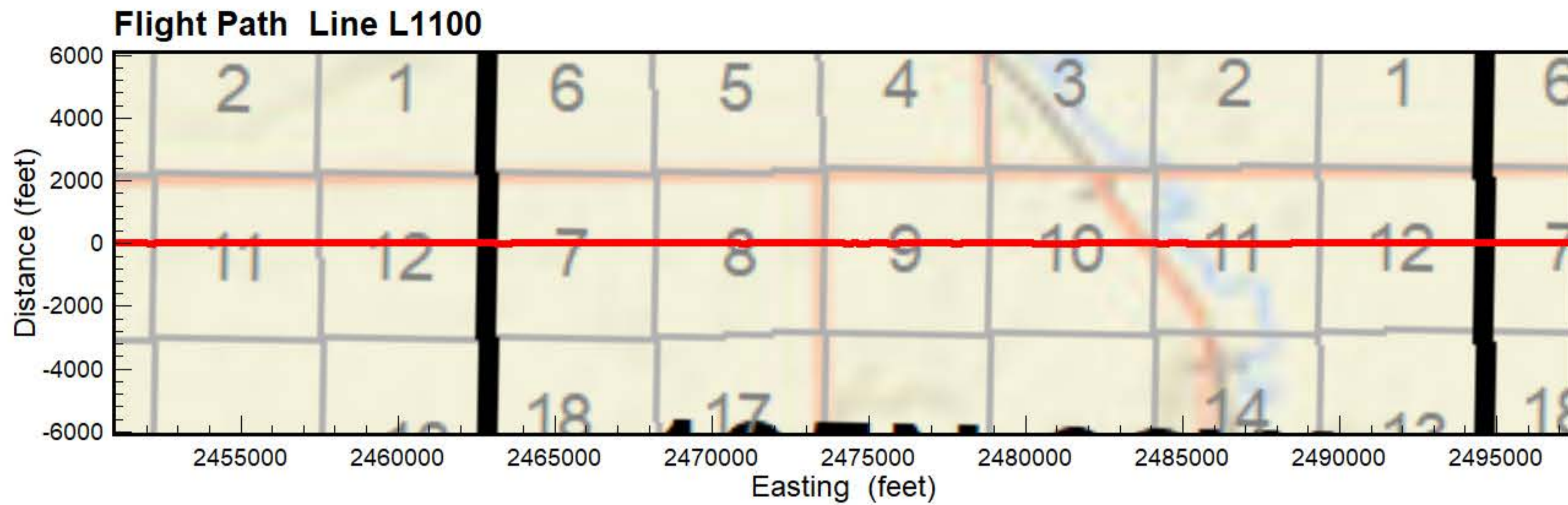


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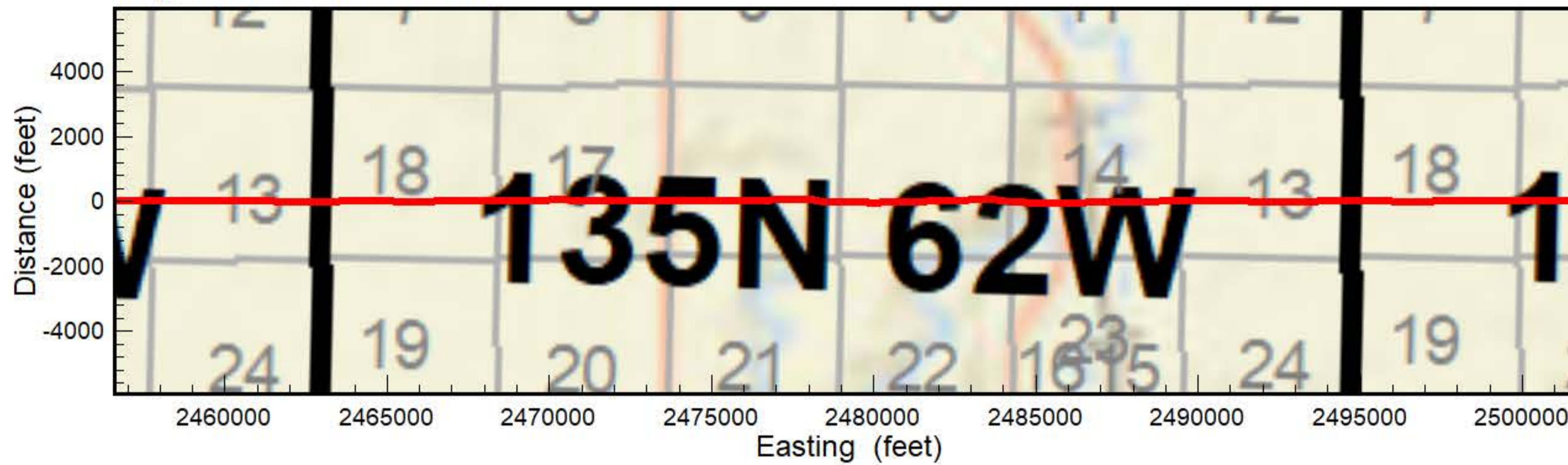


Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

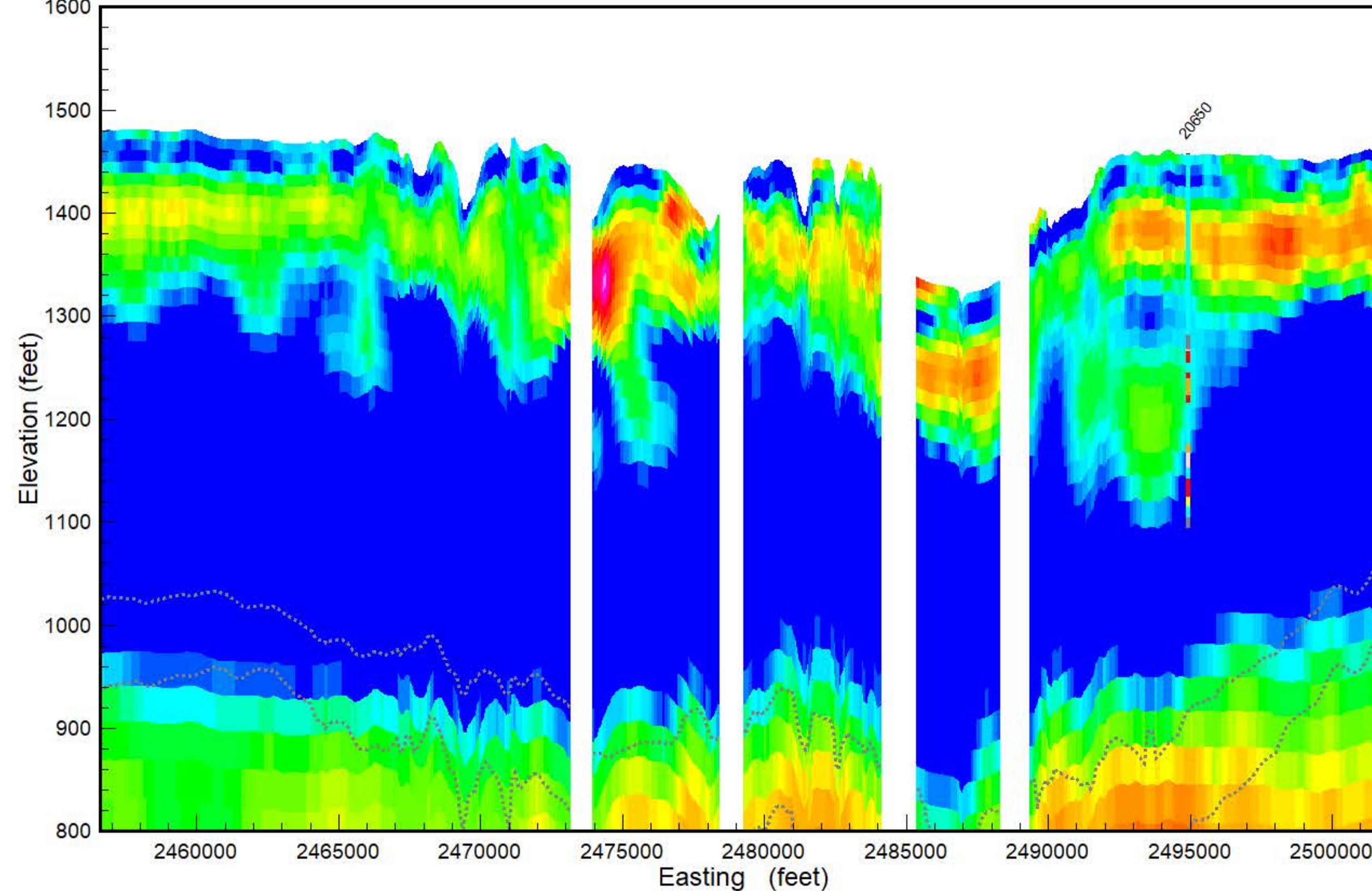




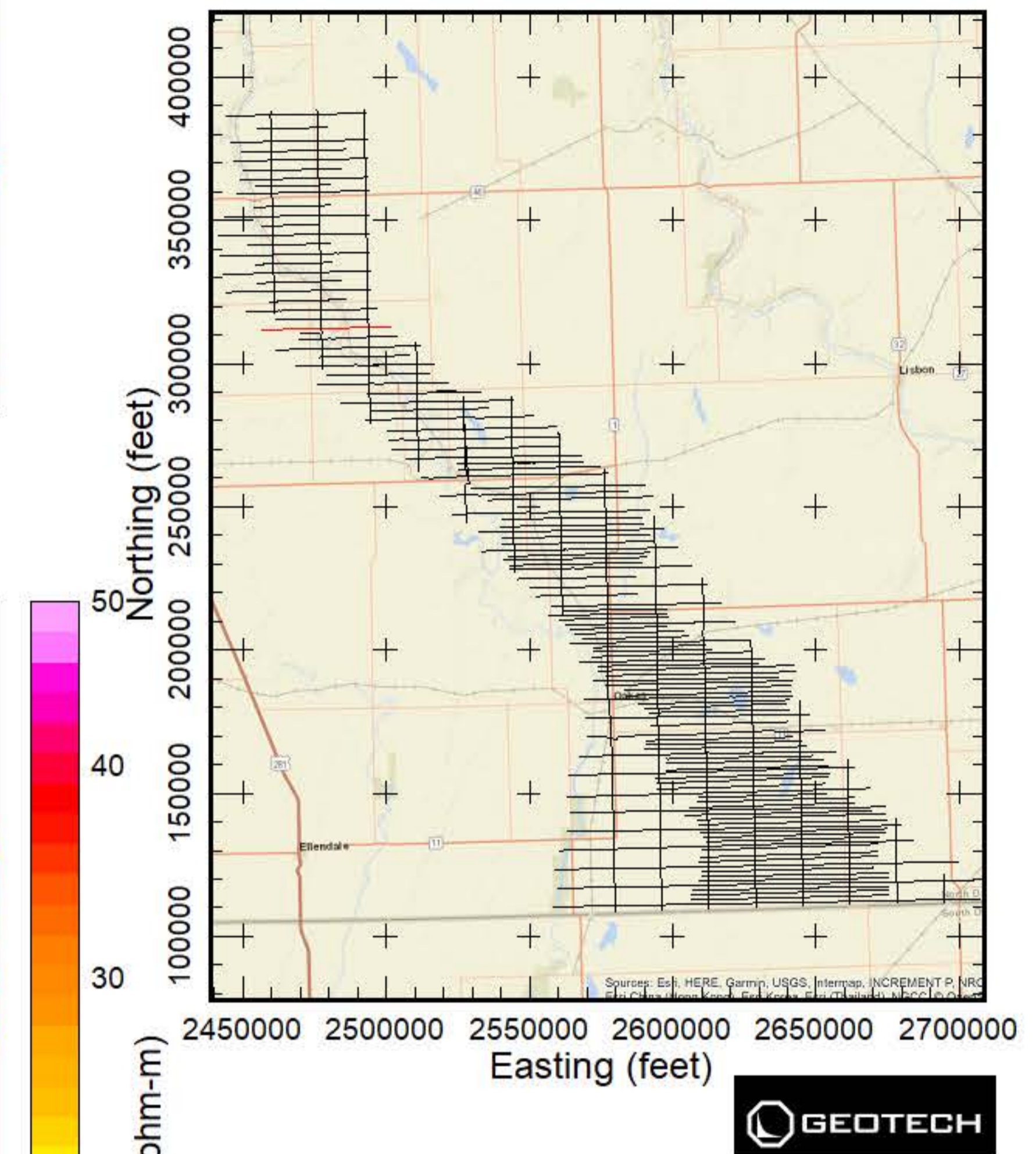
**Flight Path Line L1110**



**AEM Inversion Line L1110**



**Spiritwood South Flight Area**

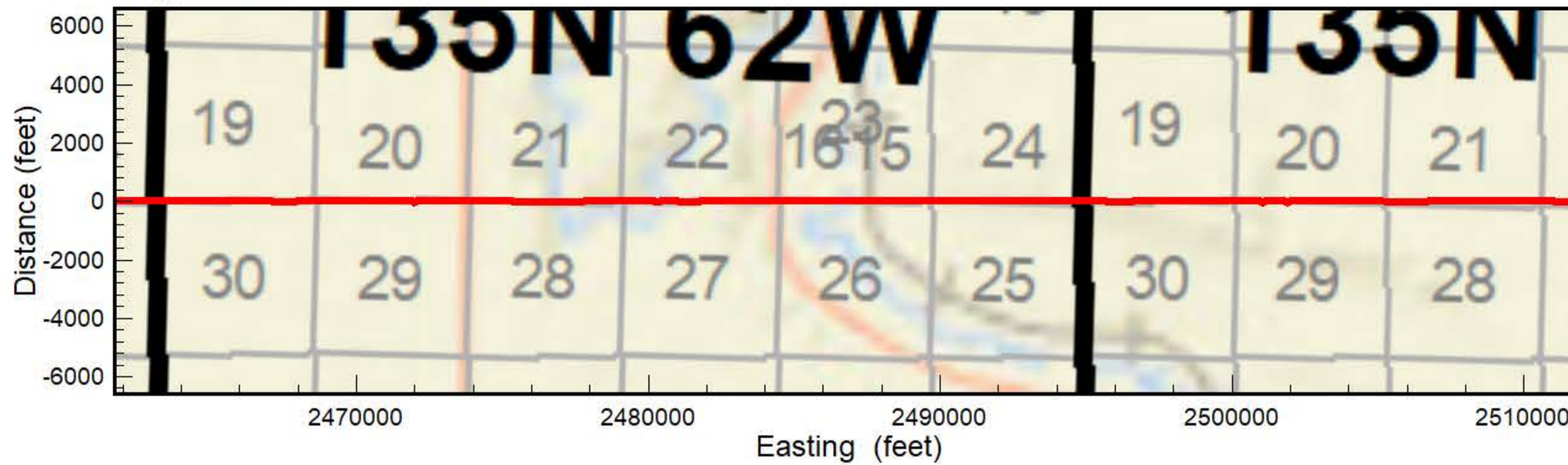


Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

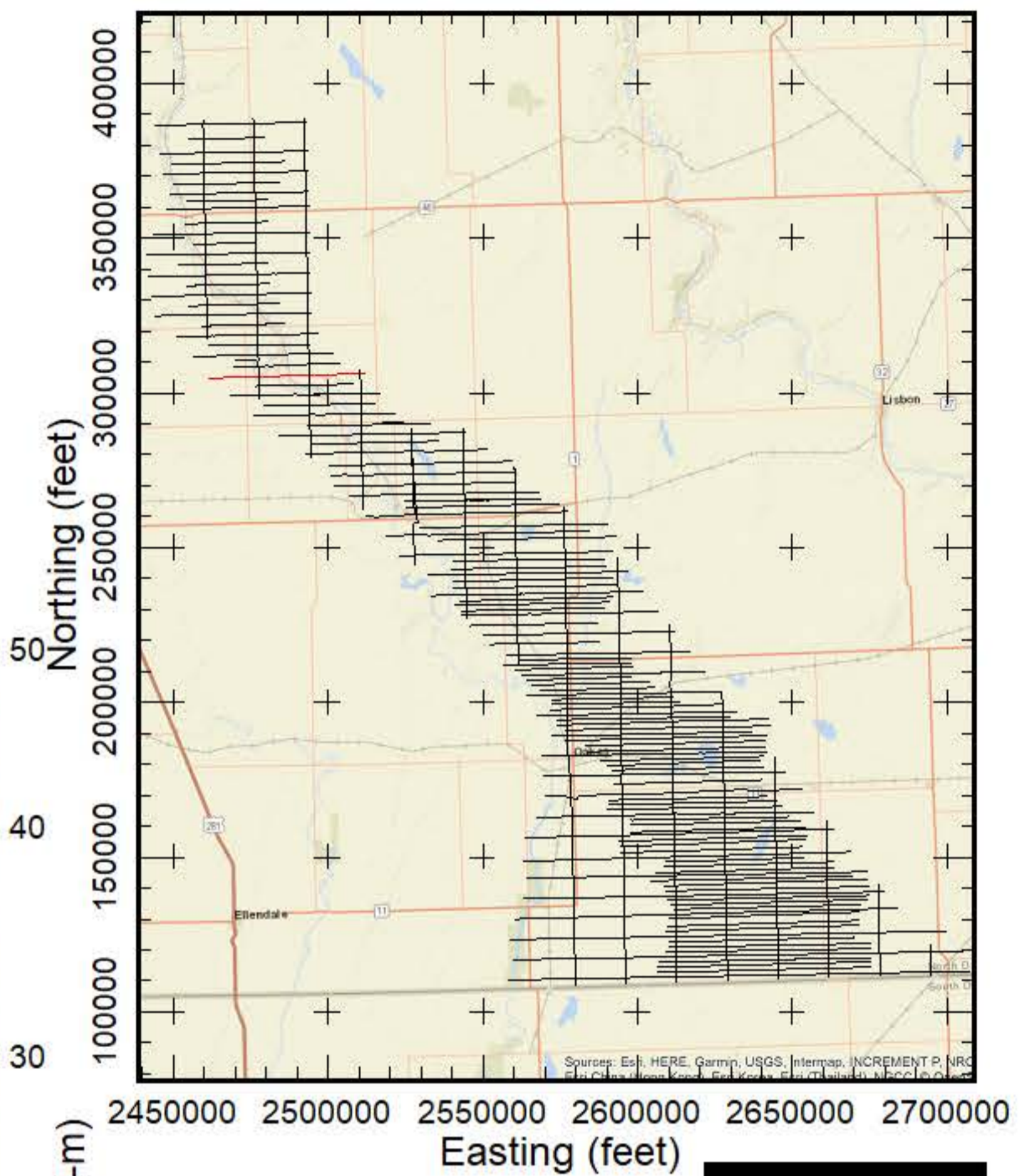
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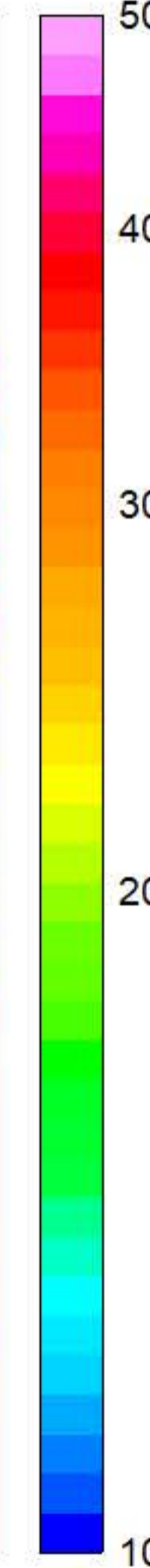
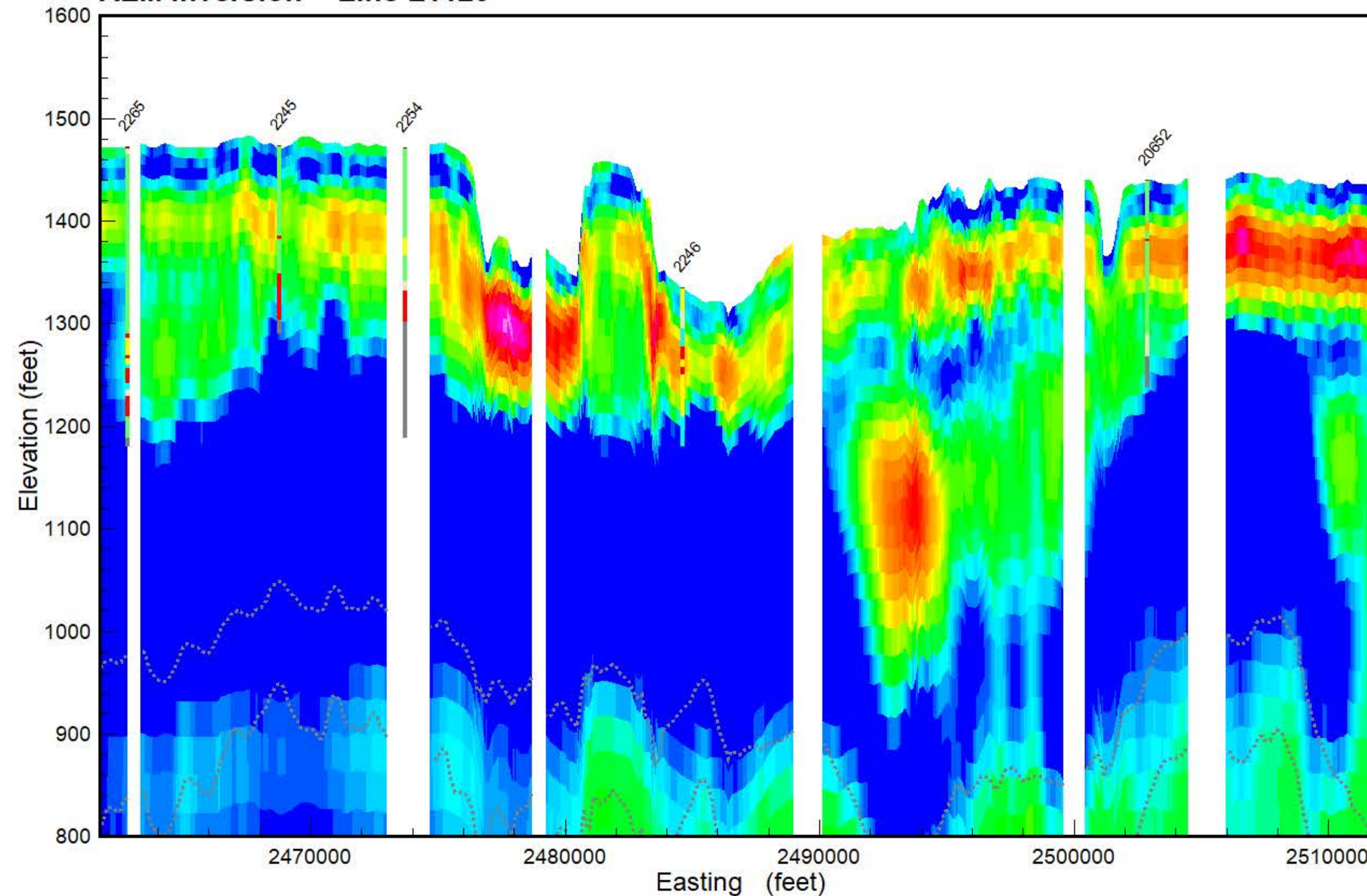
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**Spiritwood South Flight Area**



**AEM Inversion Line L1120**



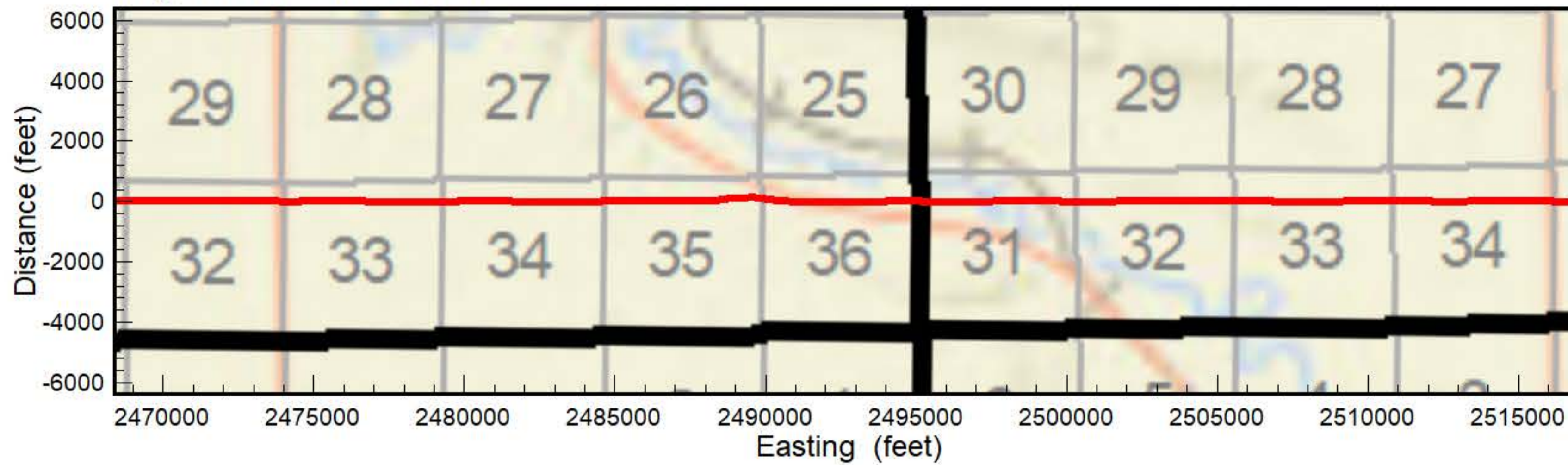
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- NOSAMPLE

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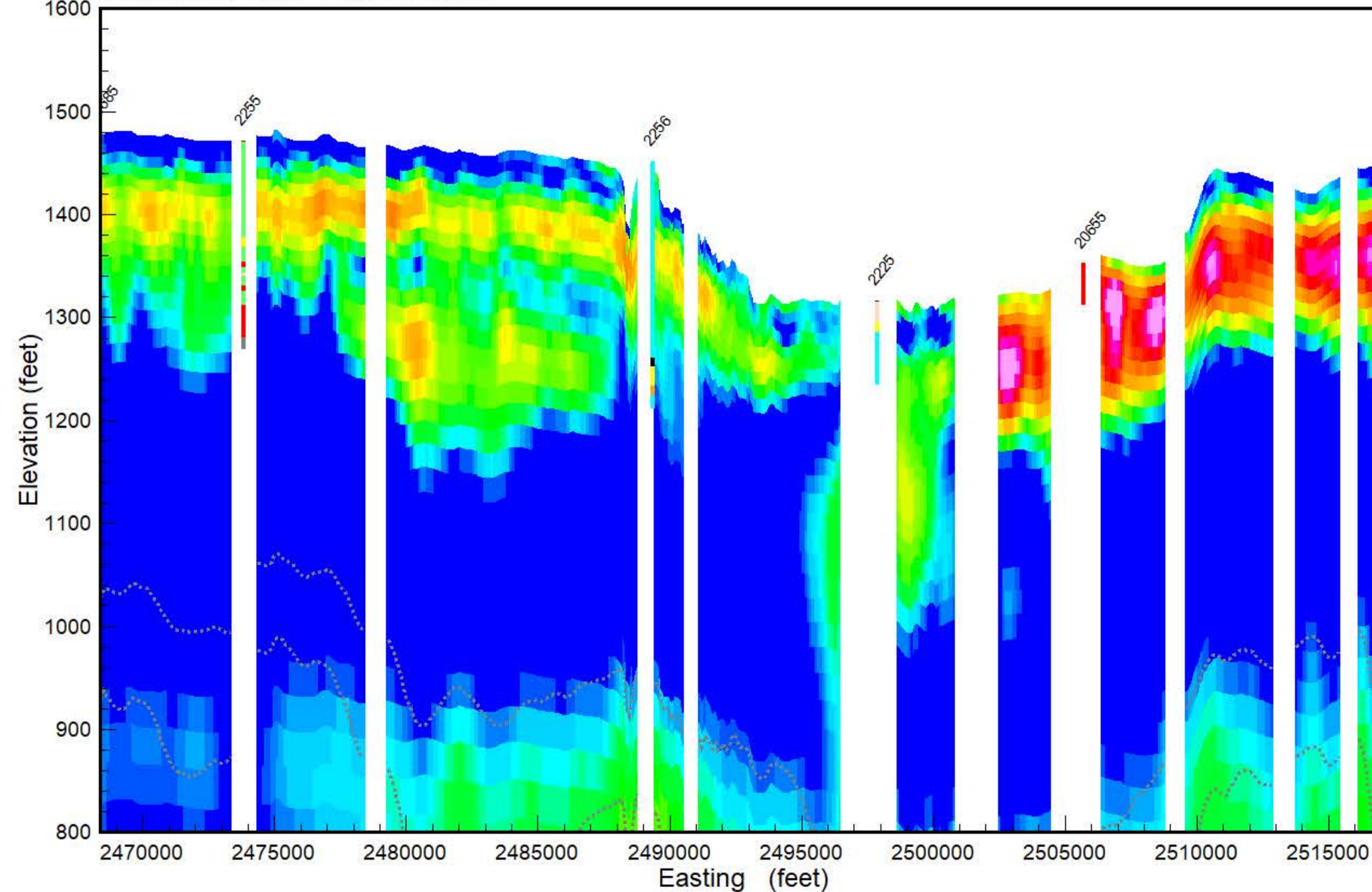




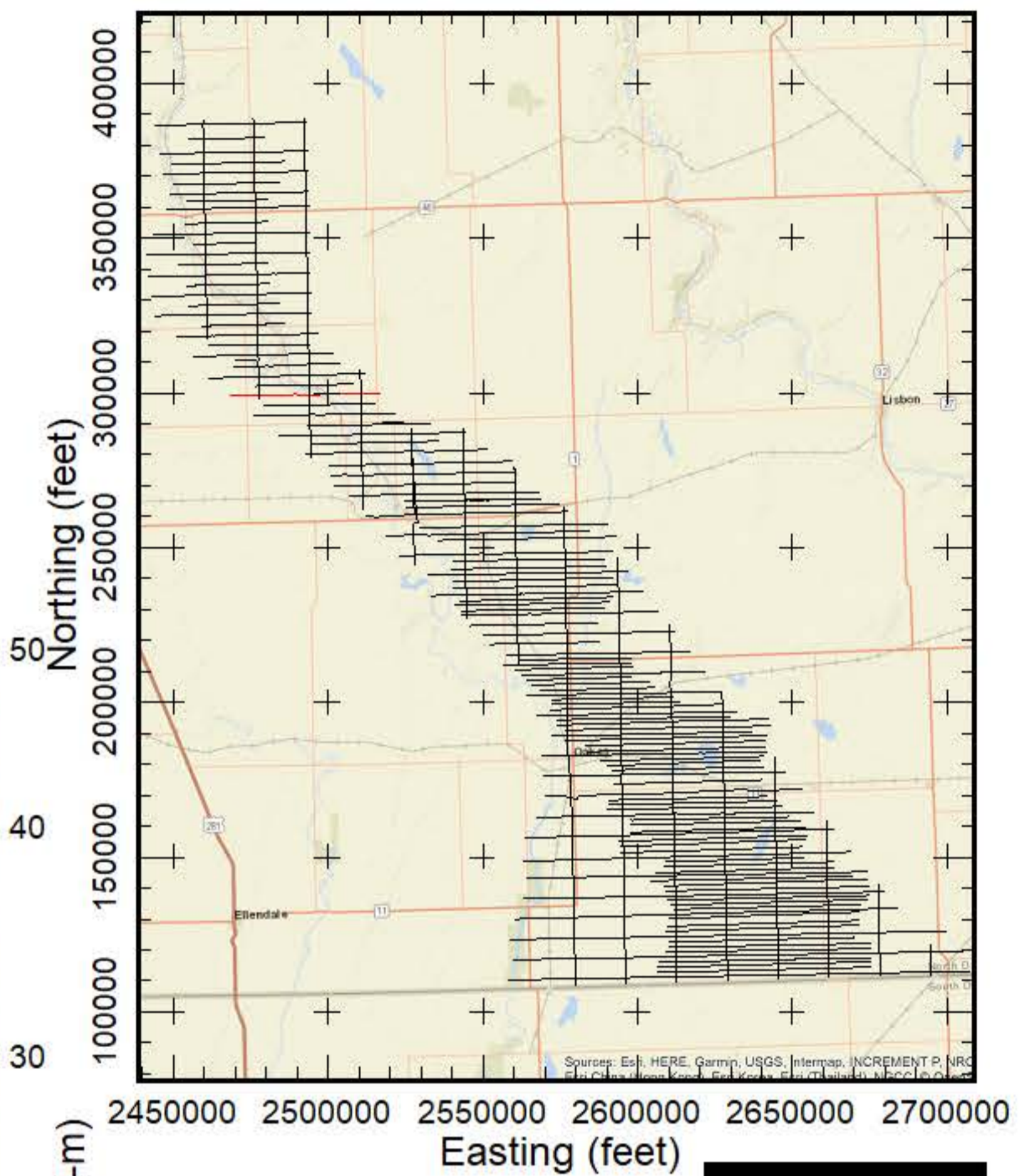
**Flight Path Line L1130**



**AEM Inversion Line L1130**



**Spiritwood South Flight Area**



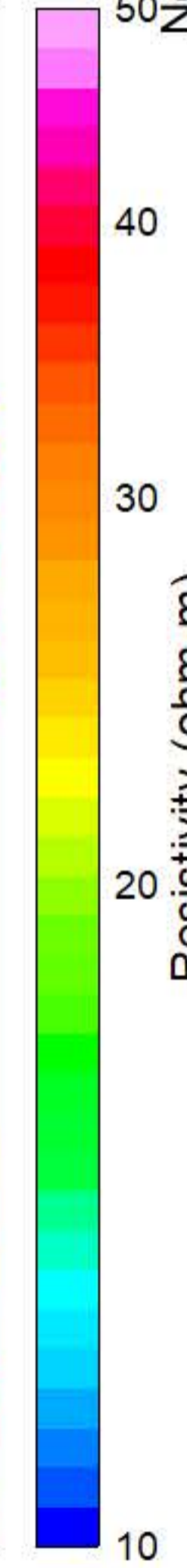
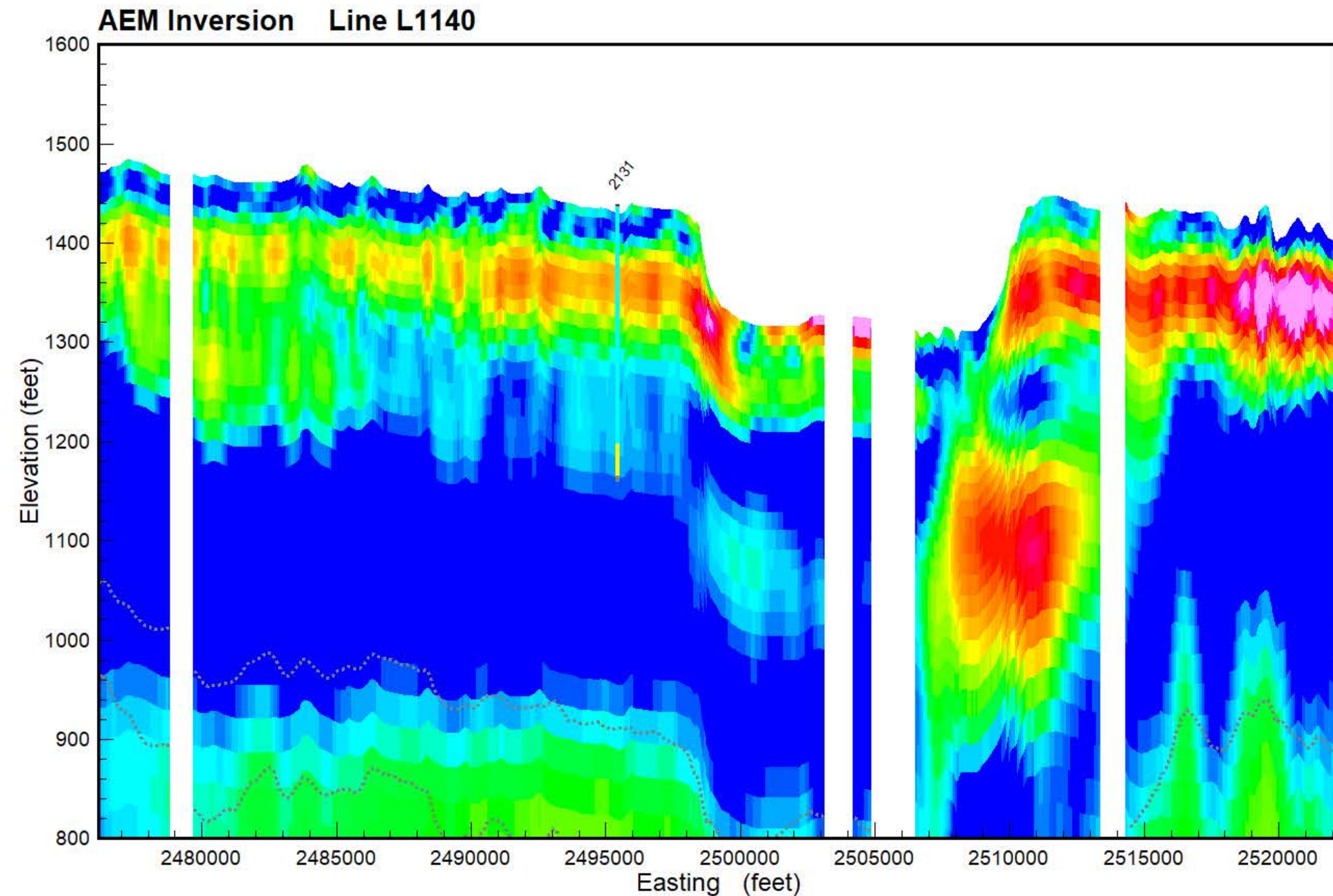
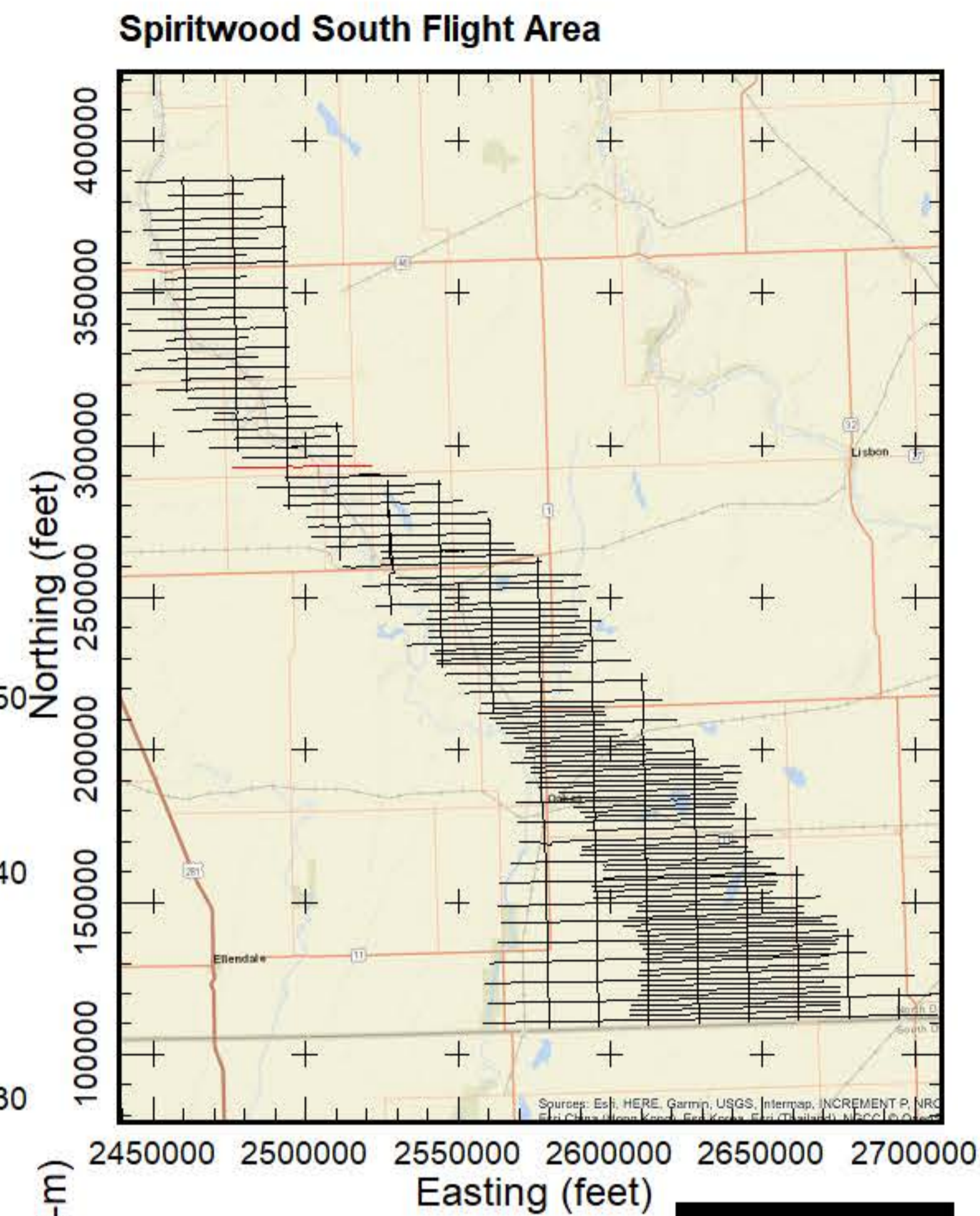
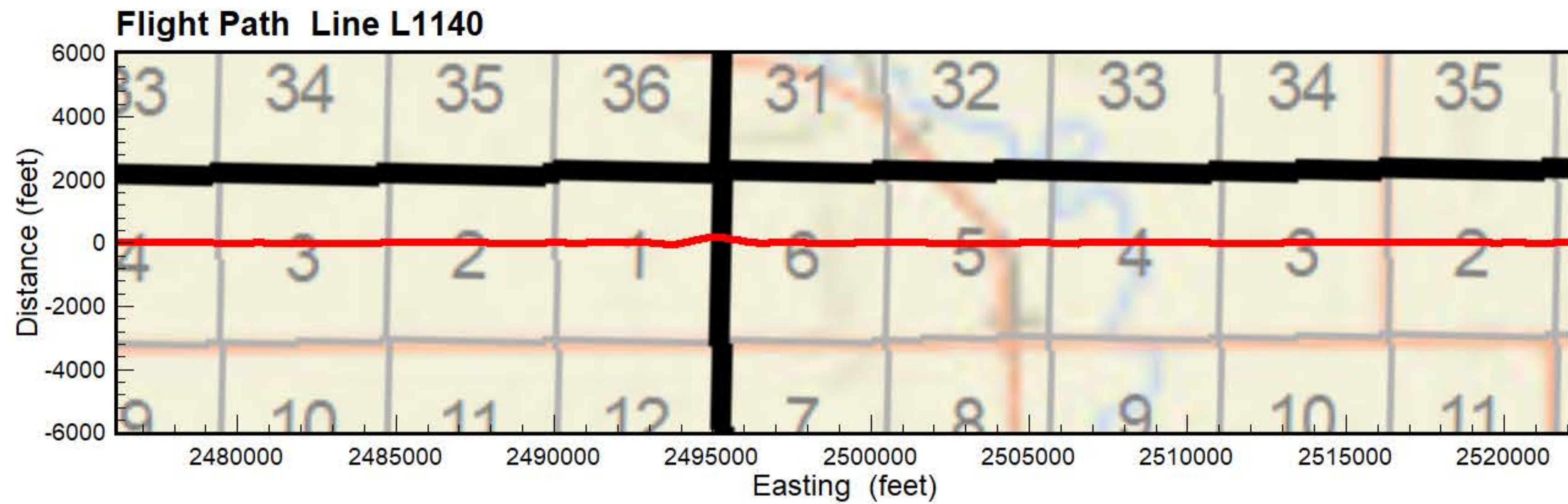
**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
LIGNITE
COBBLES
BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
SHALE
BEDROCK
GRAVEL
SAND & GRAVEL
SAND
INTERBEDDED
SILT
CLAY
TILL
FILL
TOPSOIL
NOSAMPLE

**AGF**  
Aqua Geo Frameworks





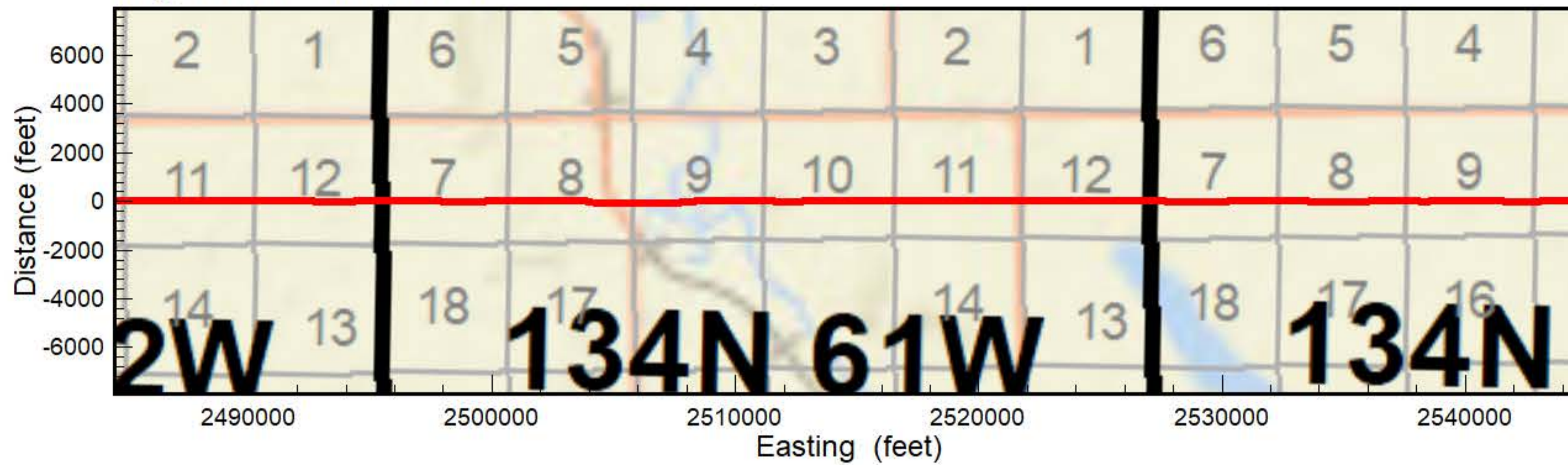
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
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- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

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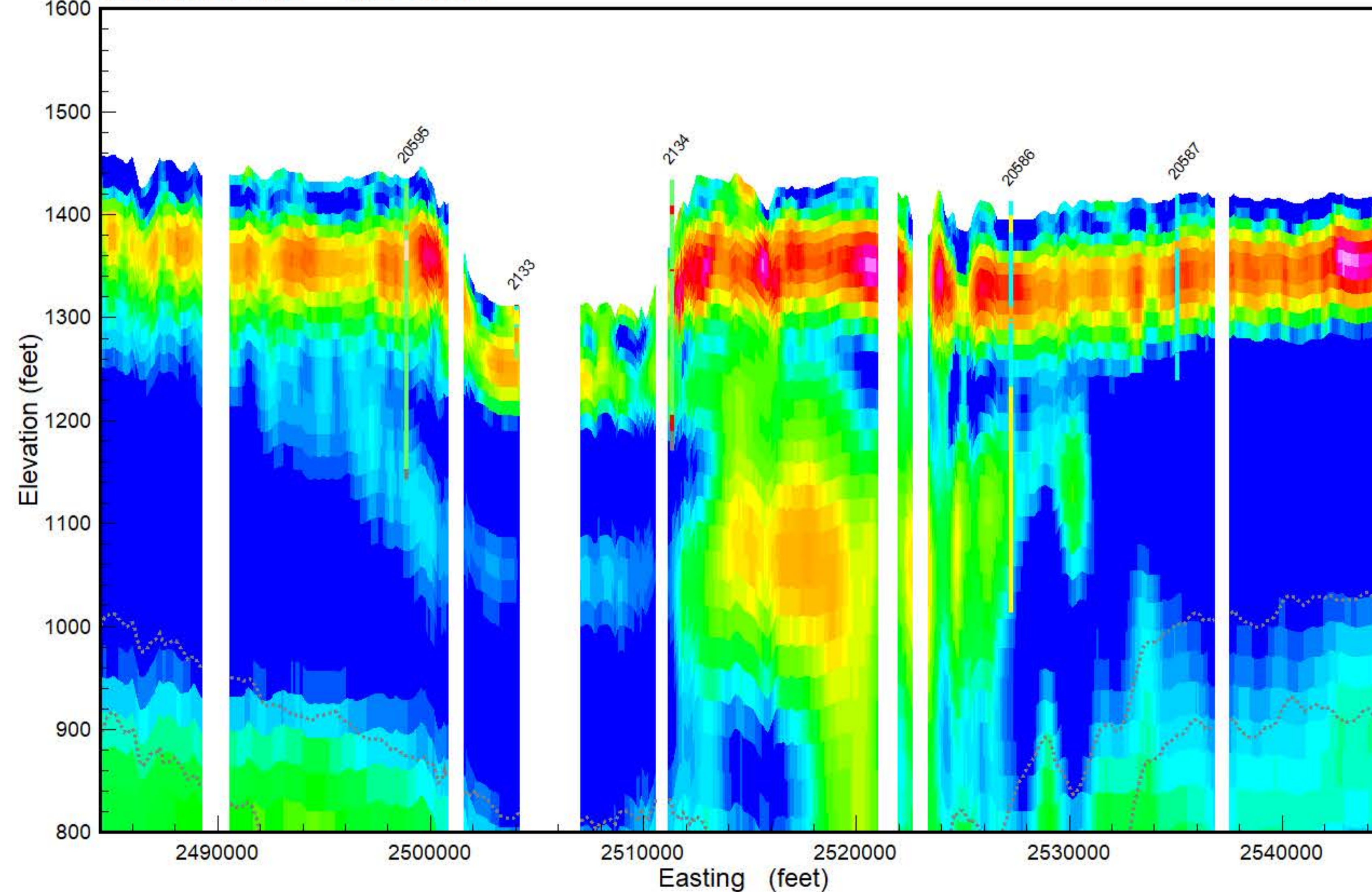




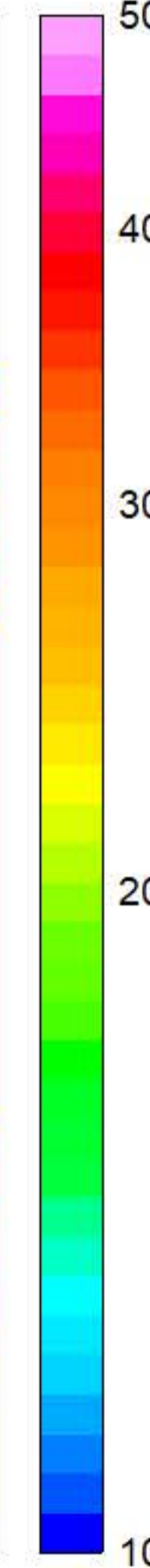
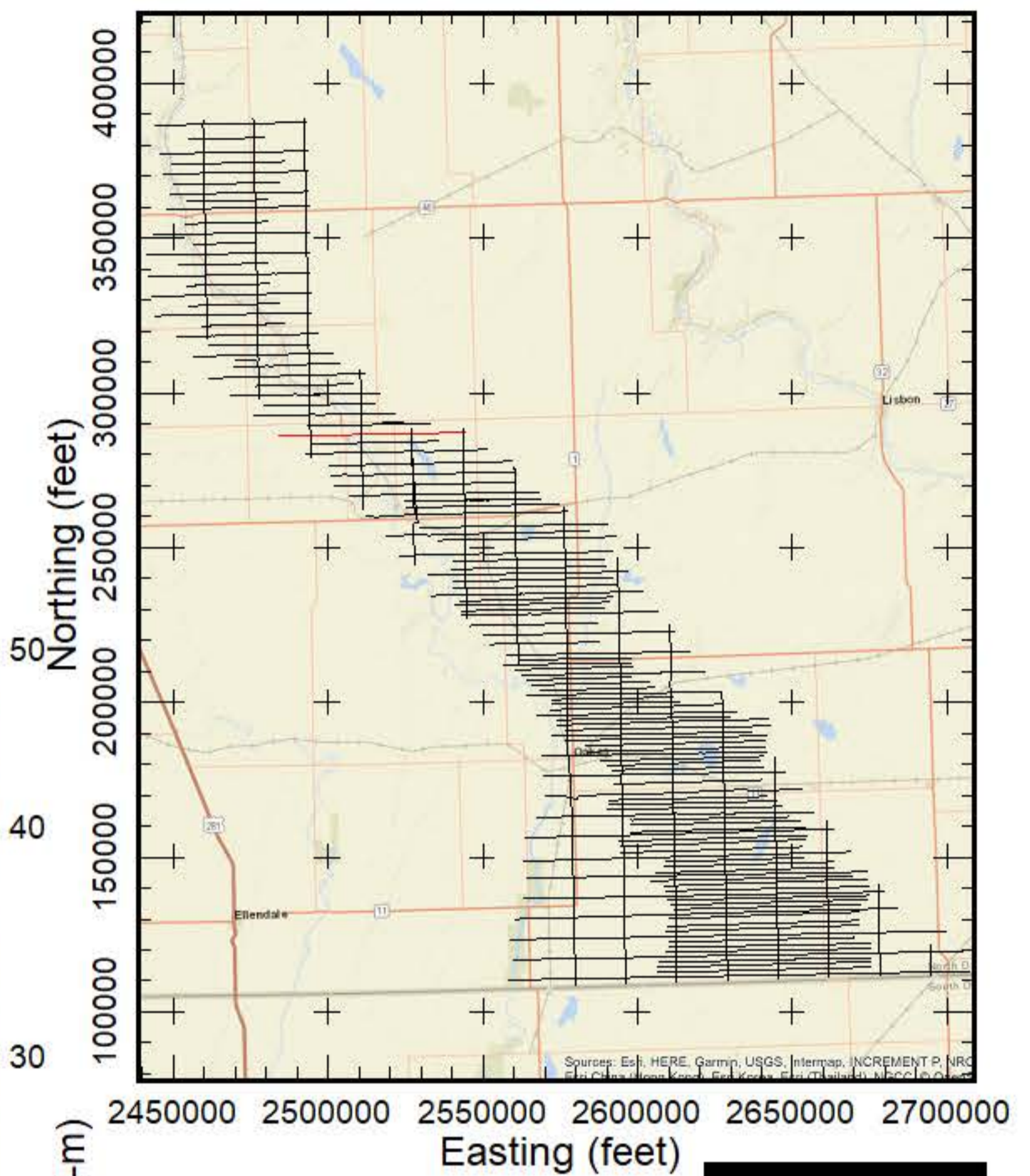
**Flight Path Line L1150**



**AEM Inversion Line L1150**



**Spiritwood South Flight Area**



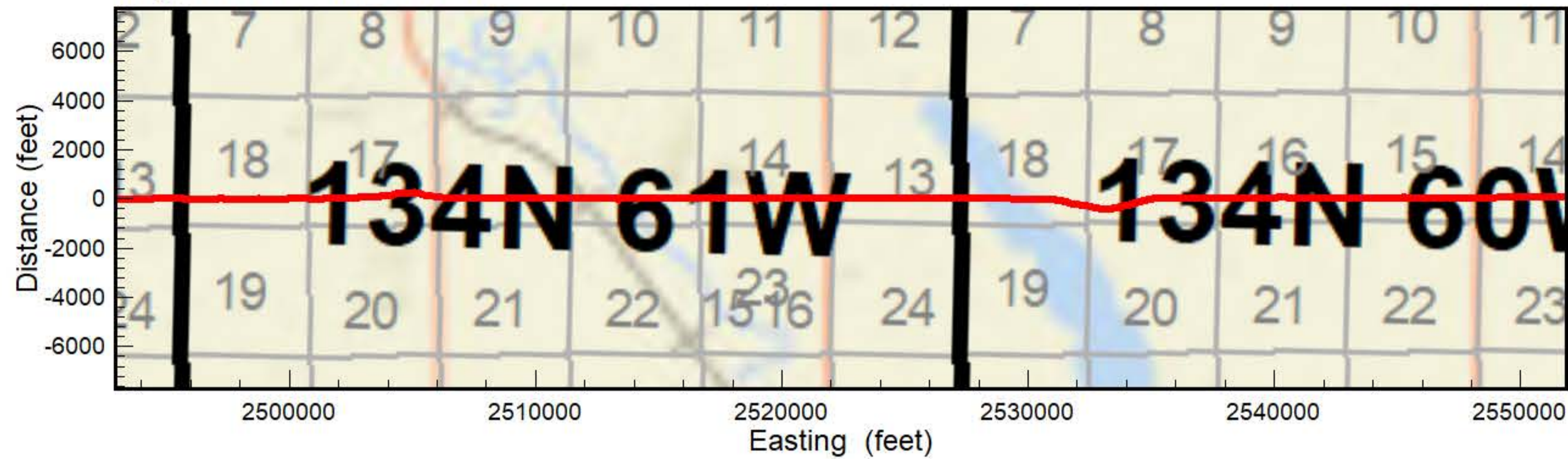
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

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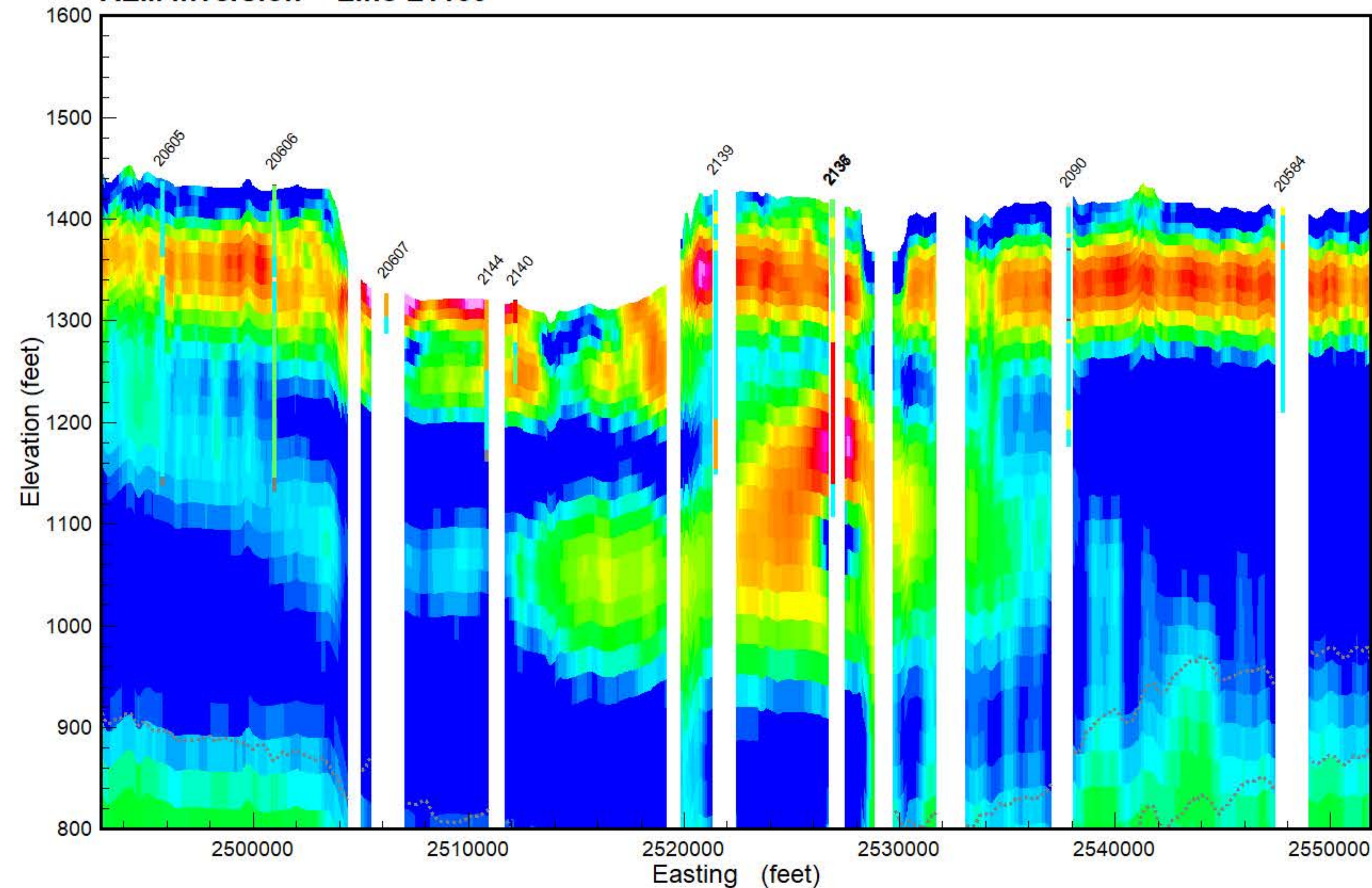




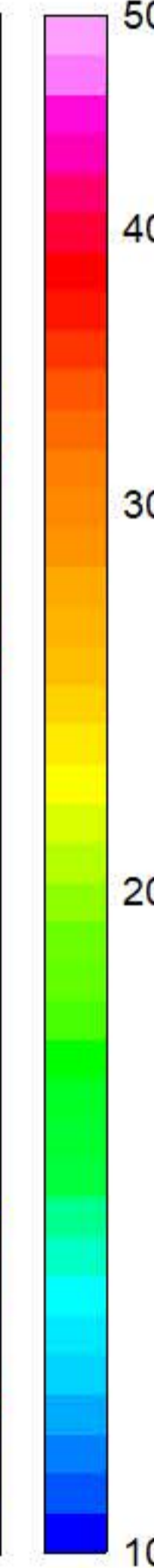
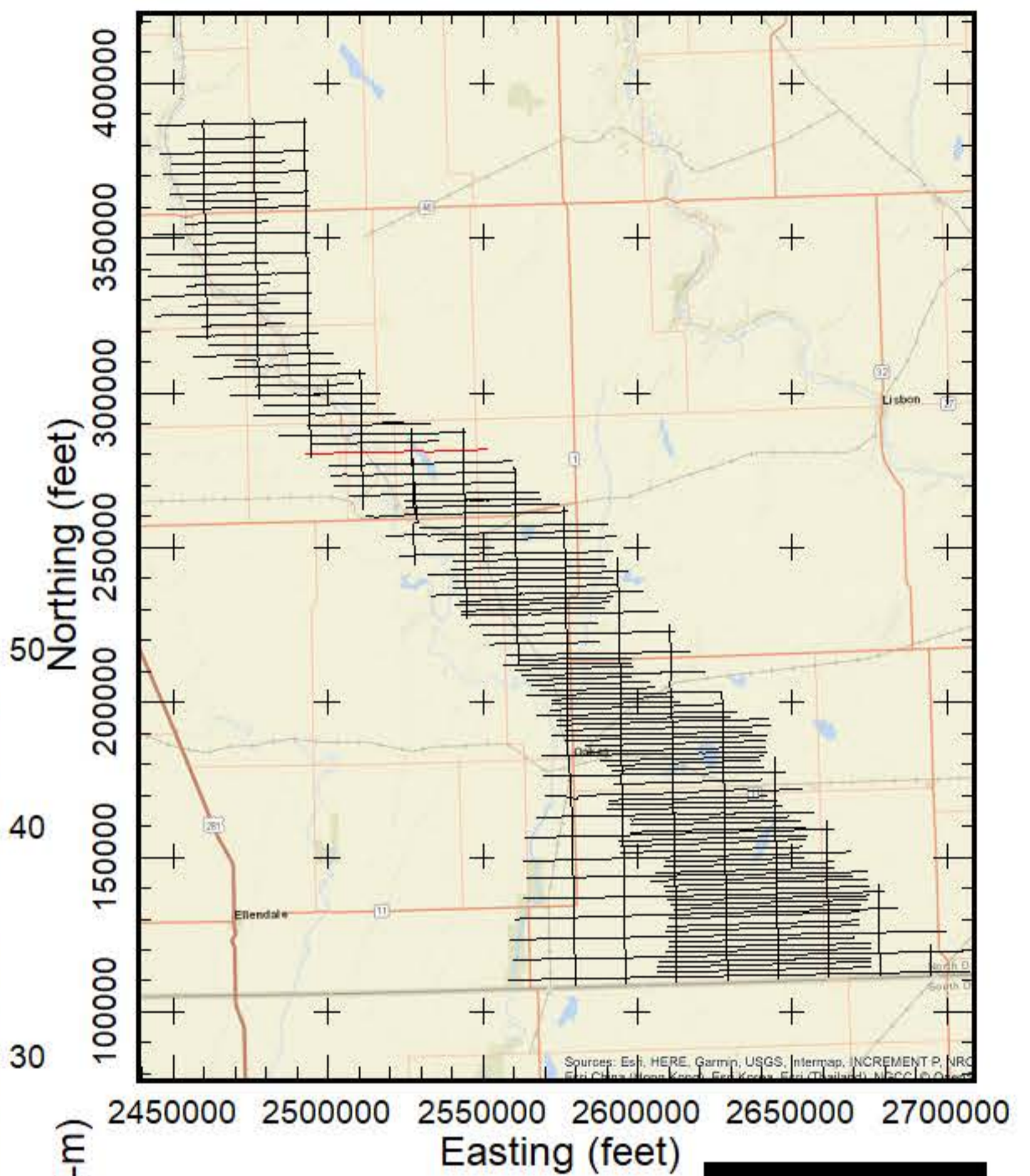
**Flight Path Line L1160**



**AEM Inversion Line L1160**



**Spiritwood South Flight Area**



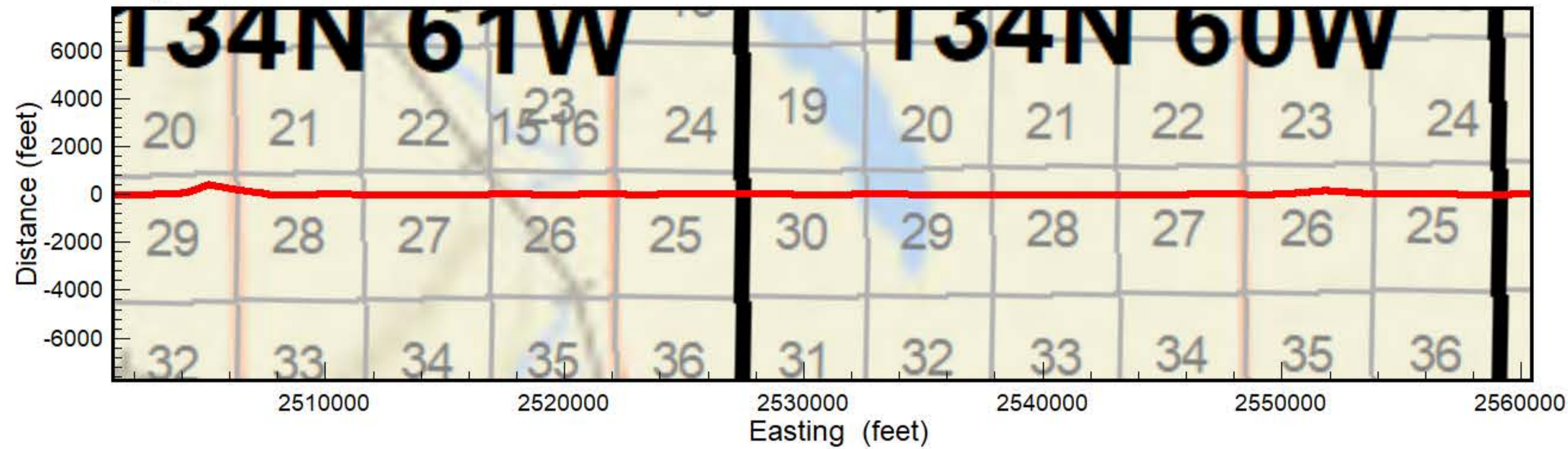
- PEAT
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

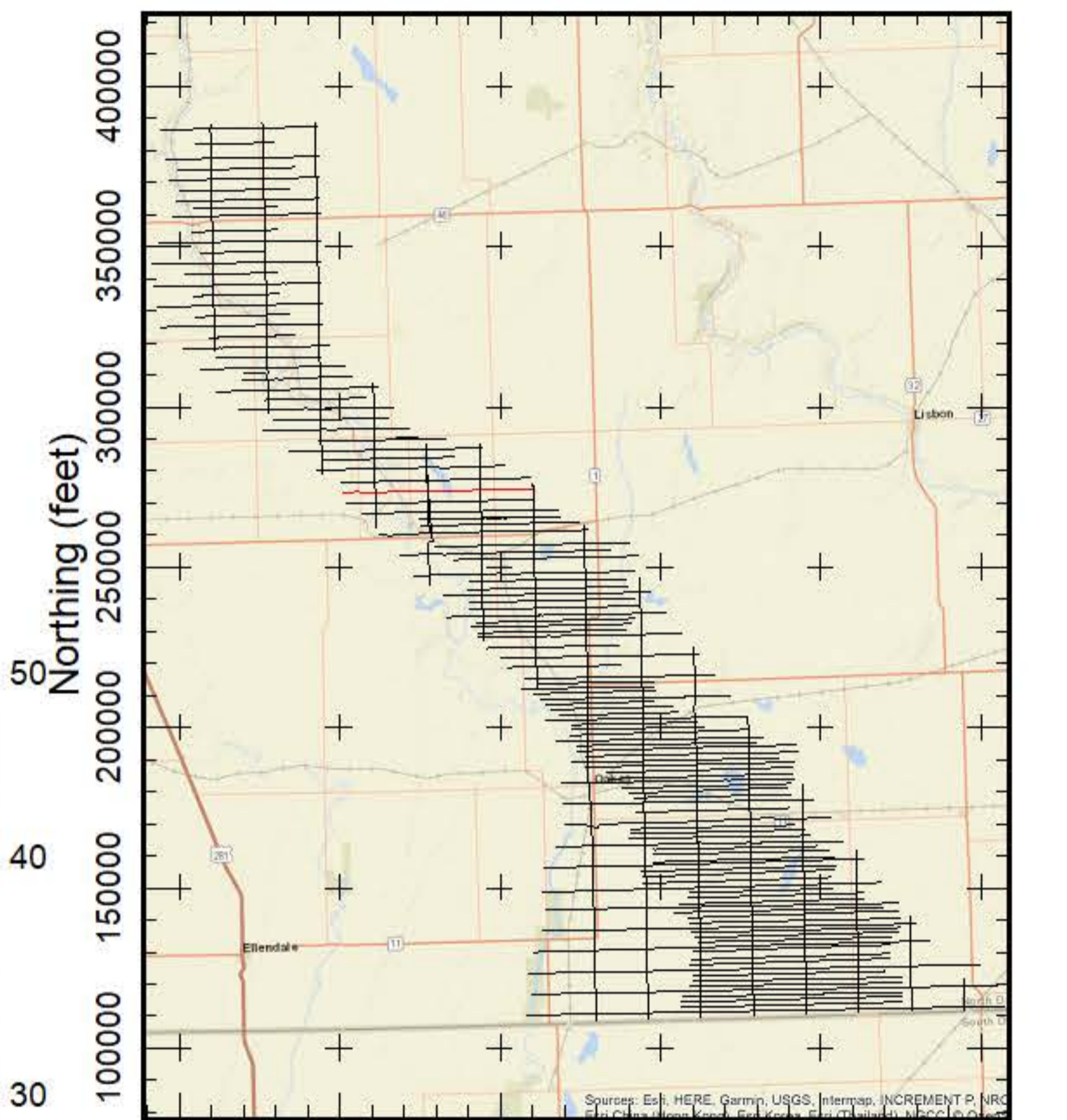




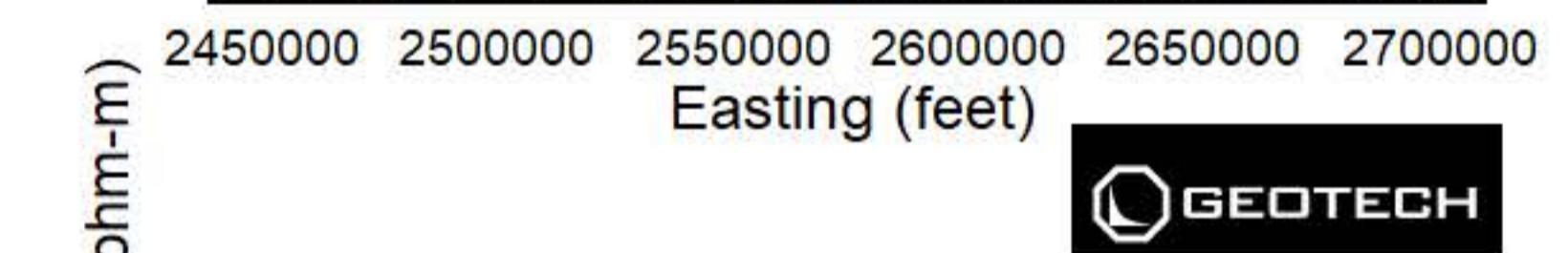
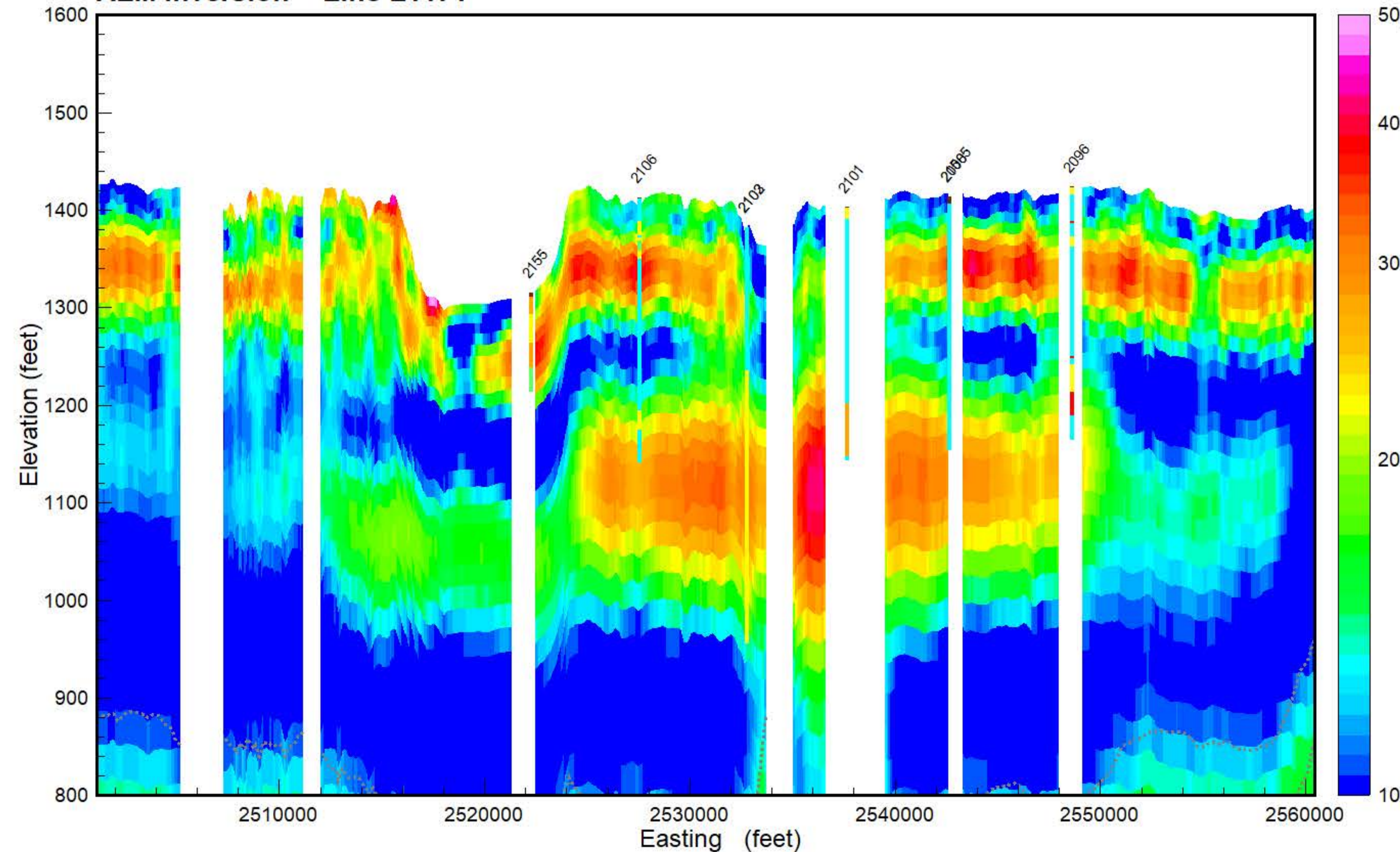
**Flight Path Line L1171**



**Spiritwood South Flight Area**



**AEM Inversion Line L1171**

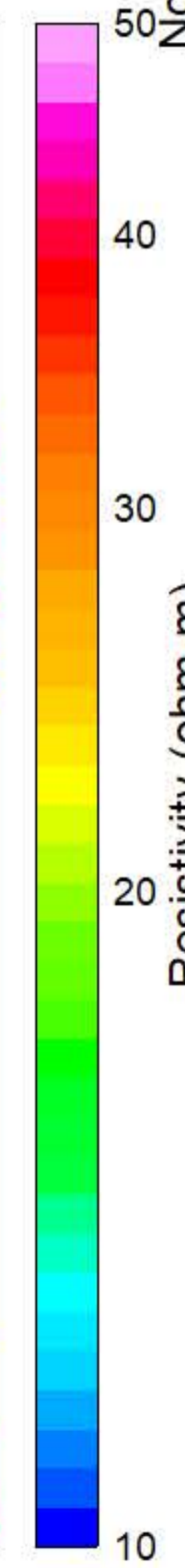
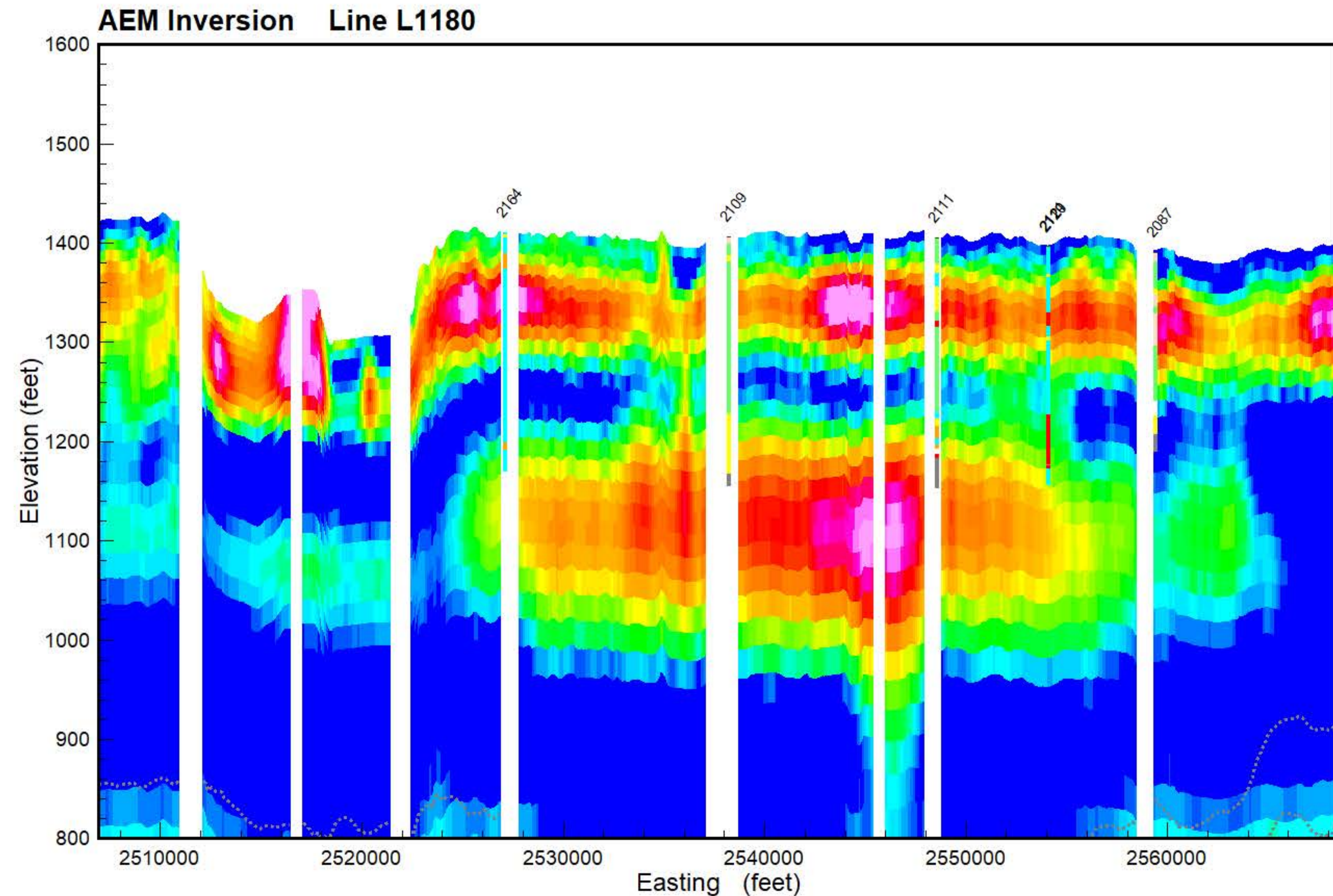
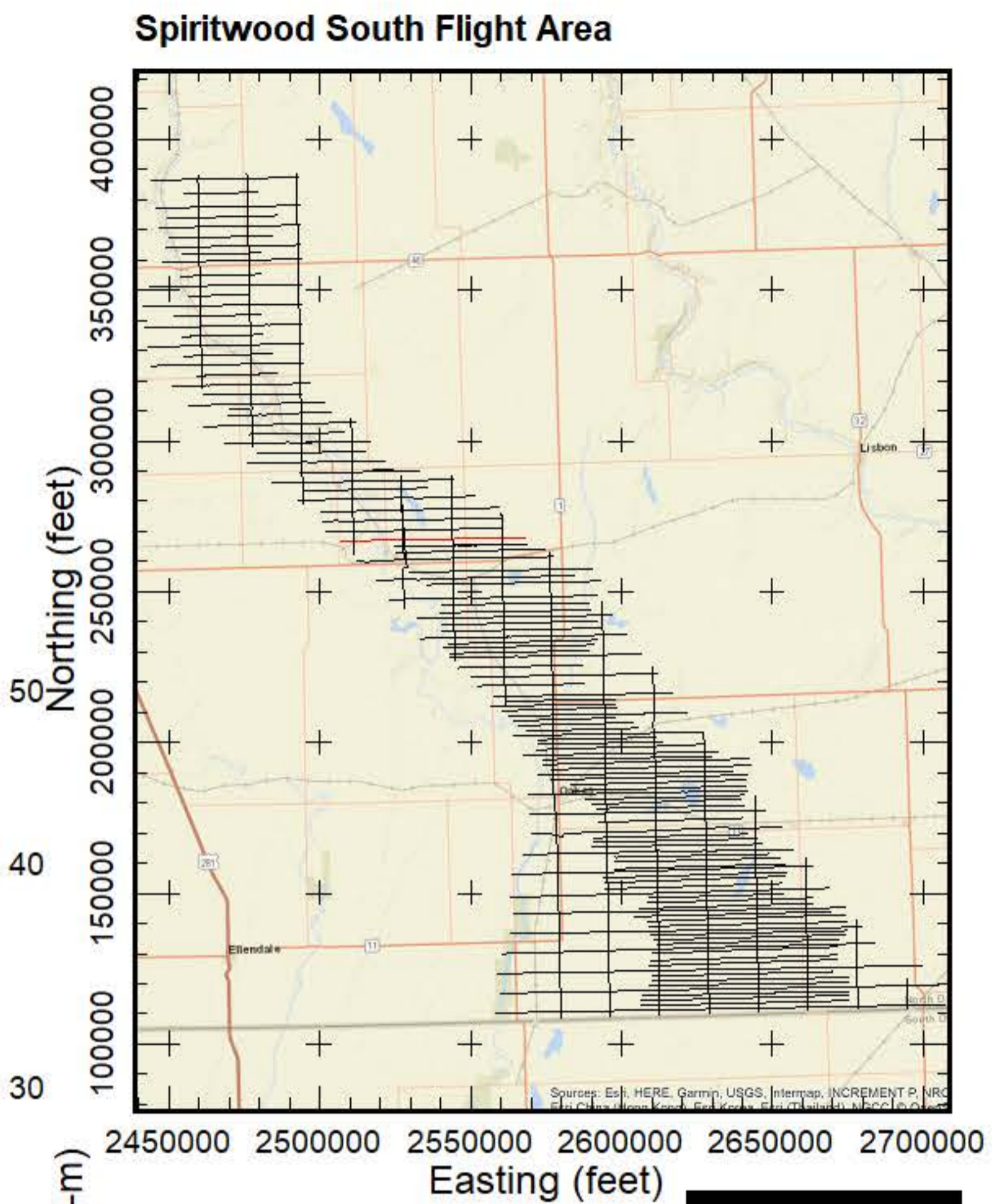
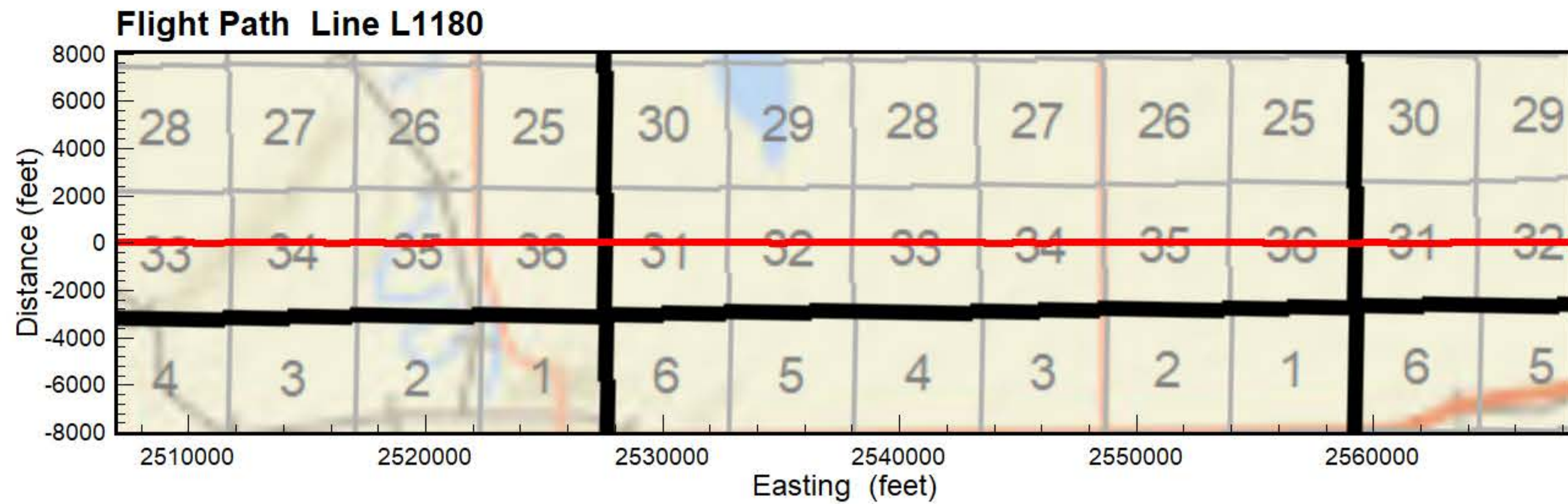


- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

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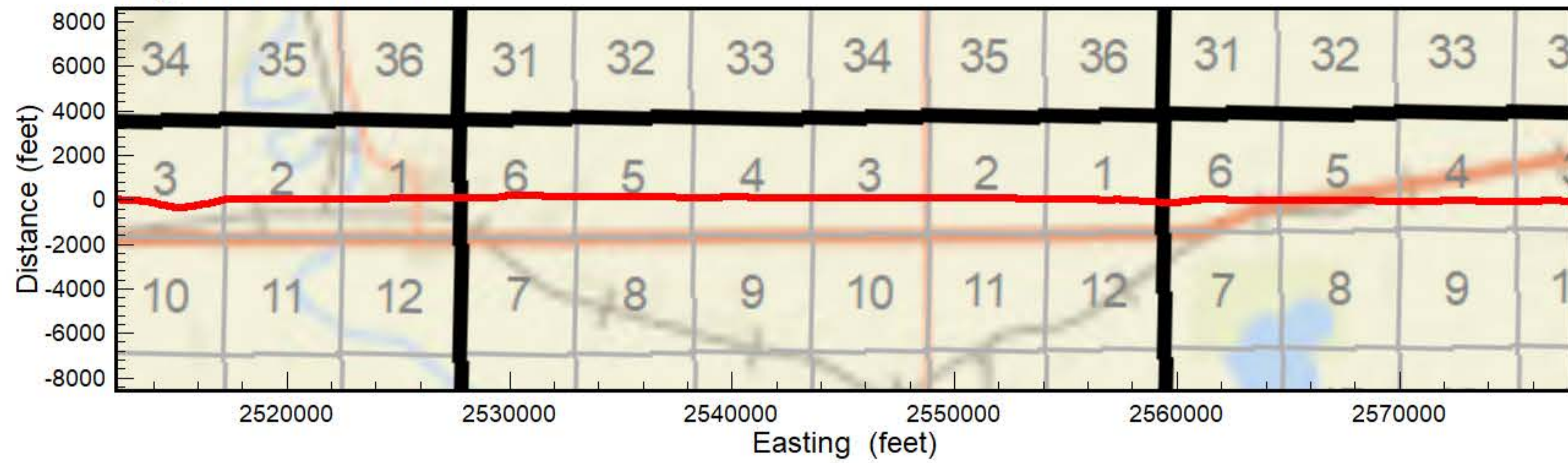
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- BOULDER
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- WEATHERED GRANITE
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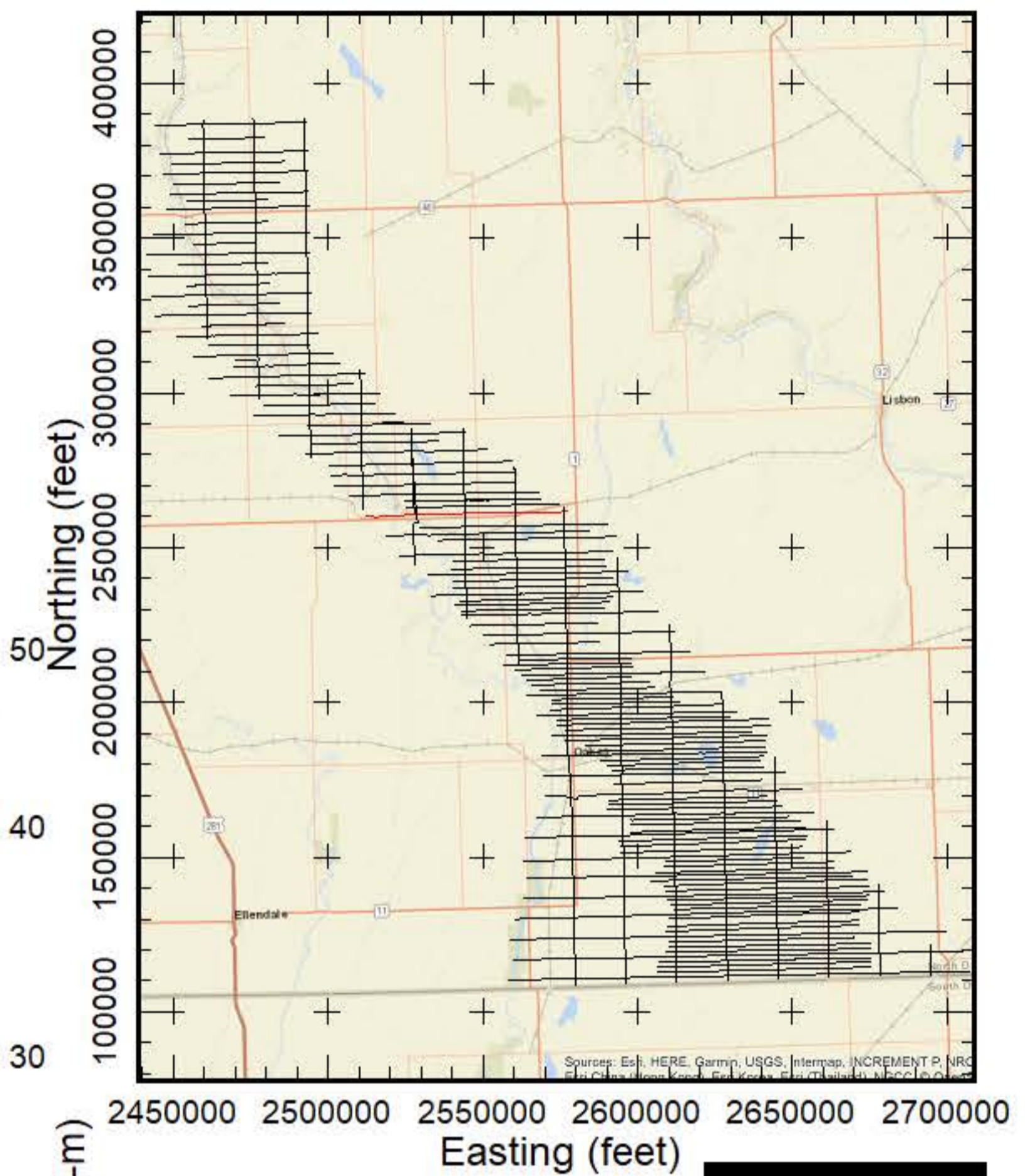




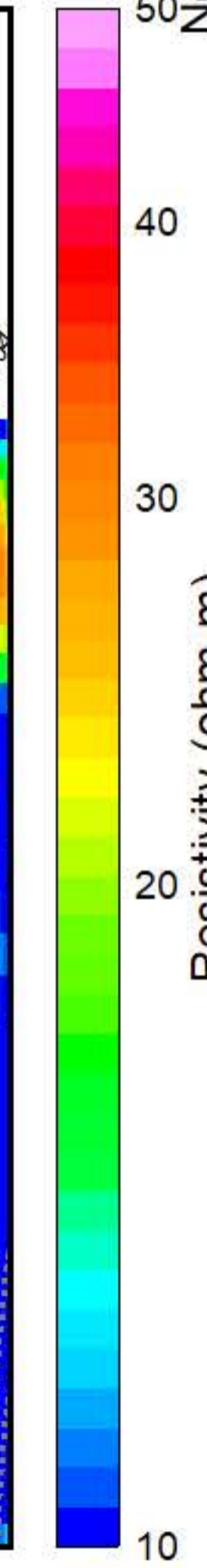
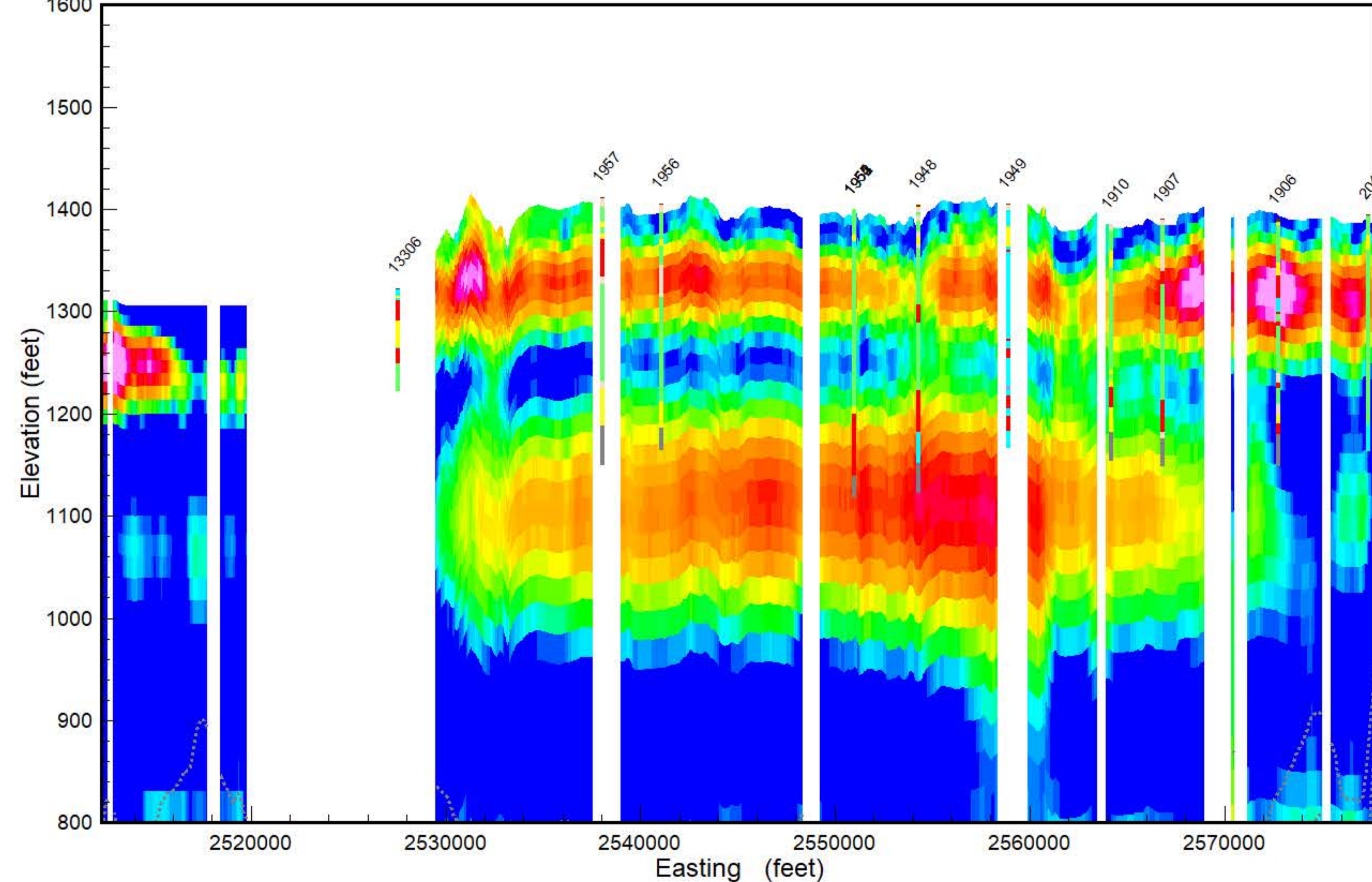
**Flight Path Line L1195**



**Spiritwood South Flight Area**



**AEM Inversion Line L1195**



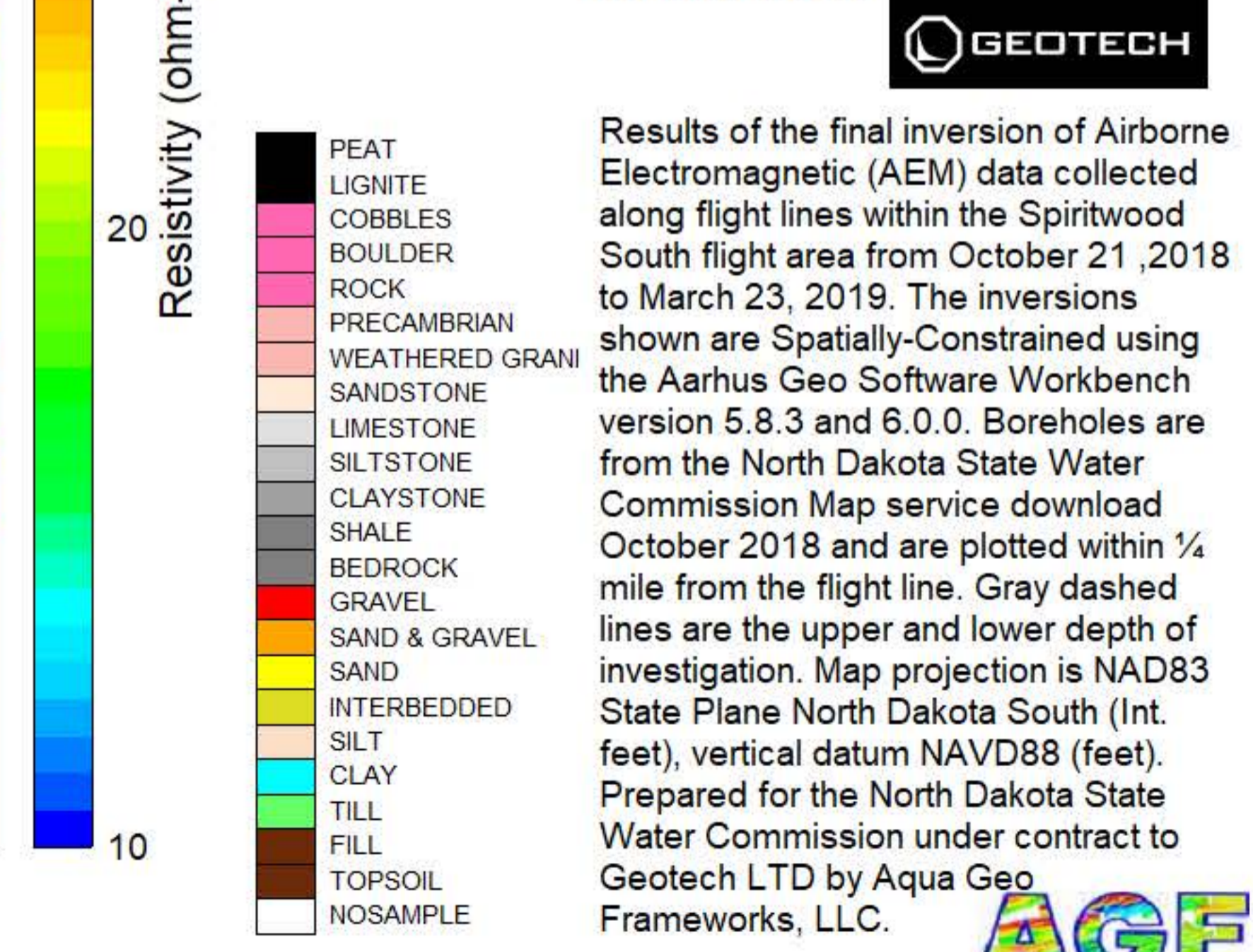
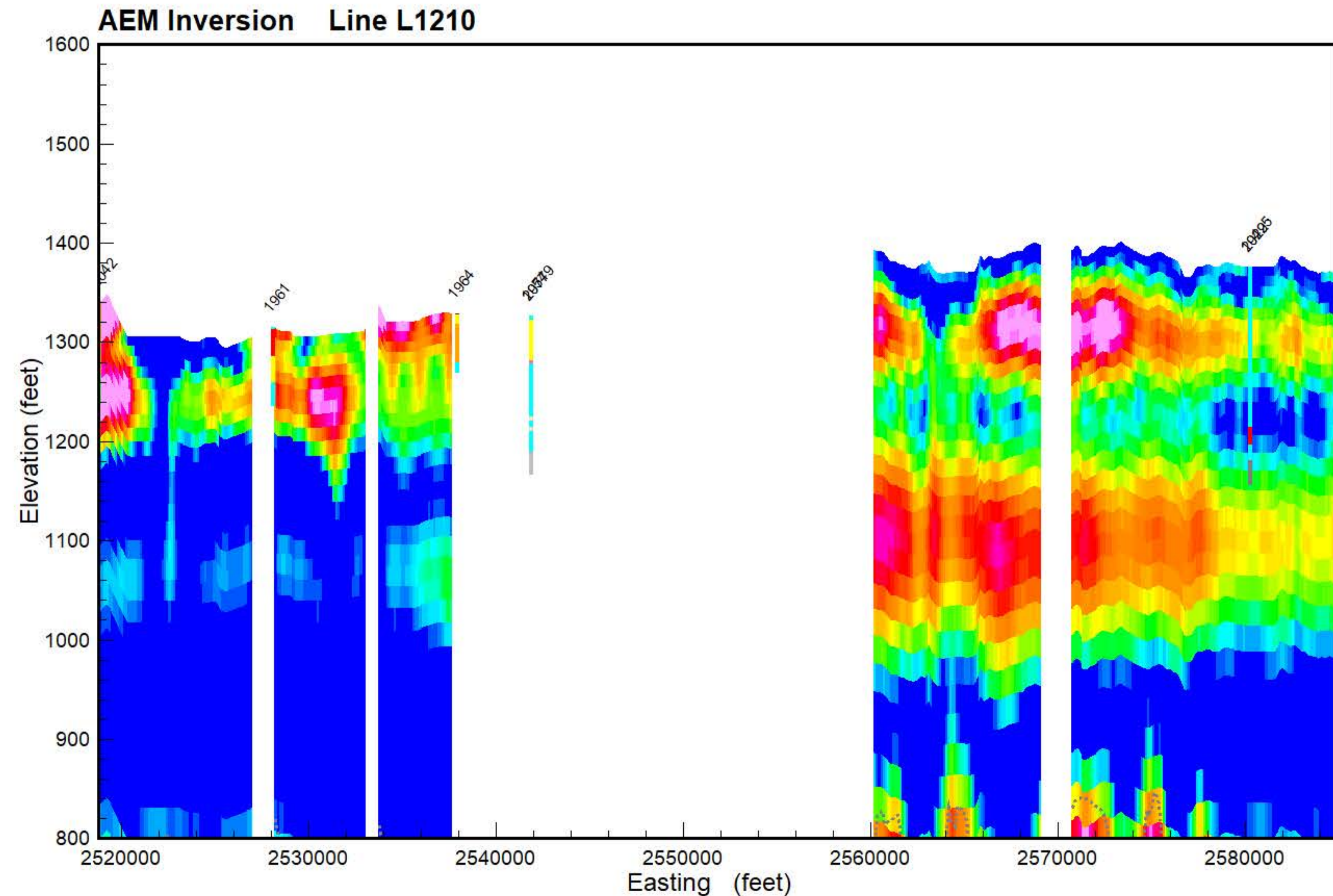
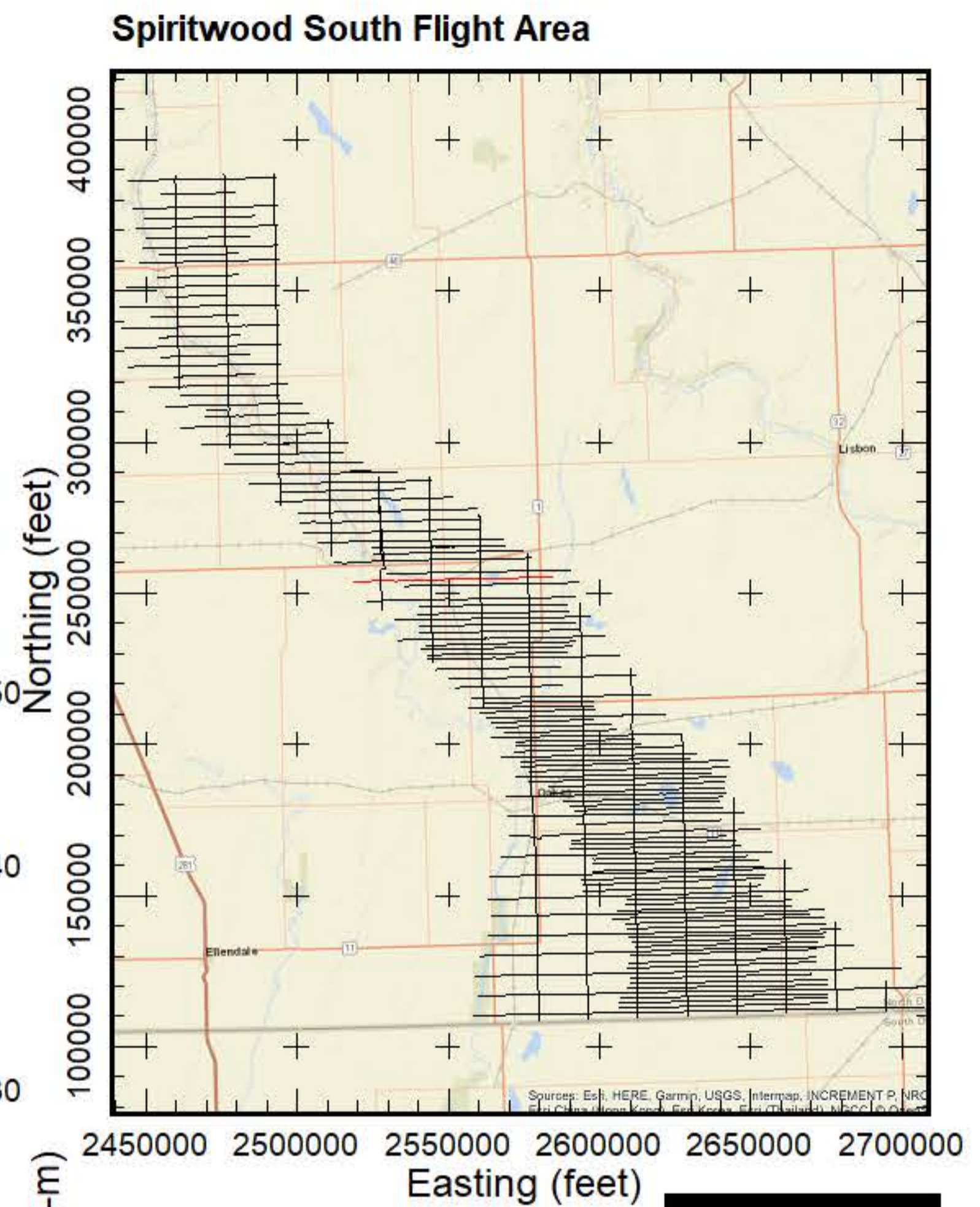
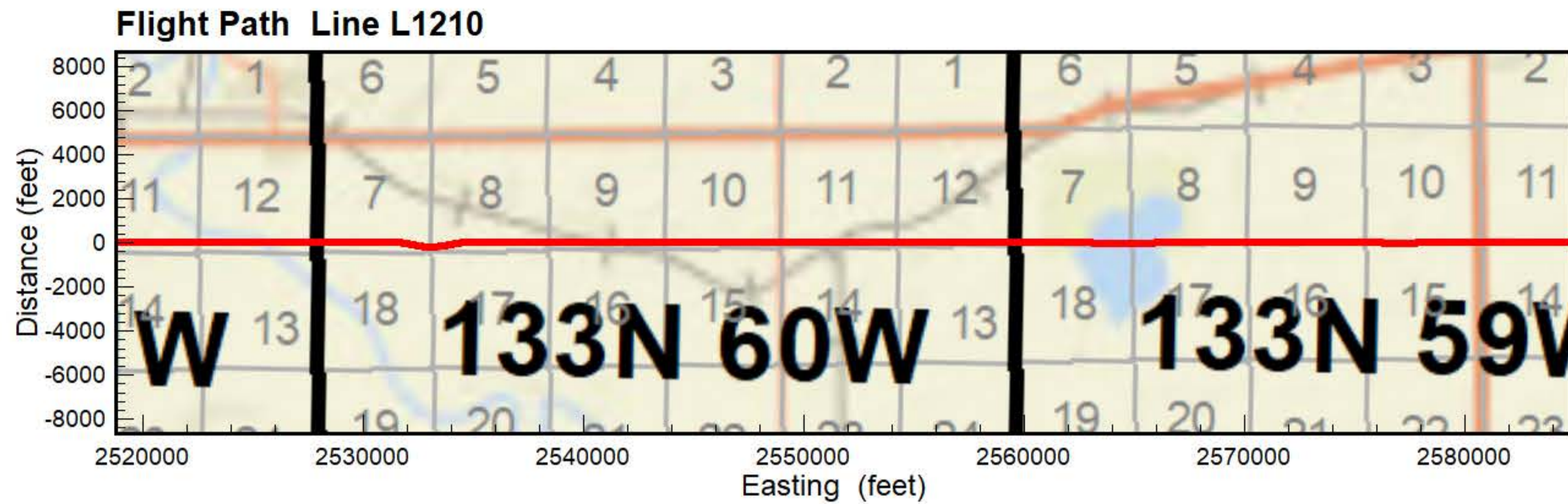
**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
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- TILL
- FILL
- TOPSOIL
- NOSAMPLE

**AGF**  
Aqua Geo Frameworks



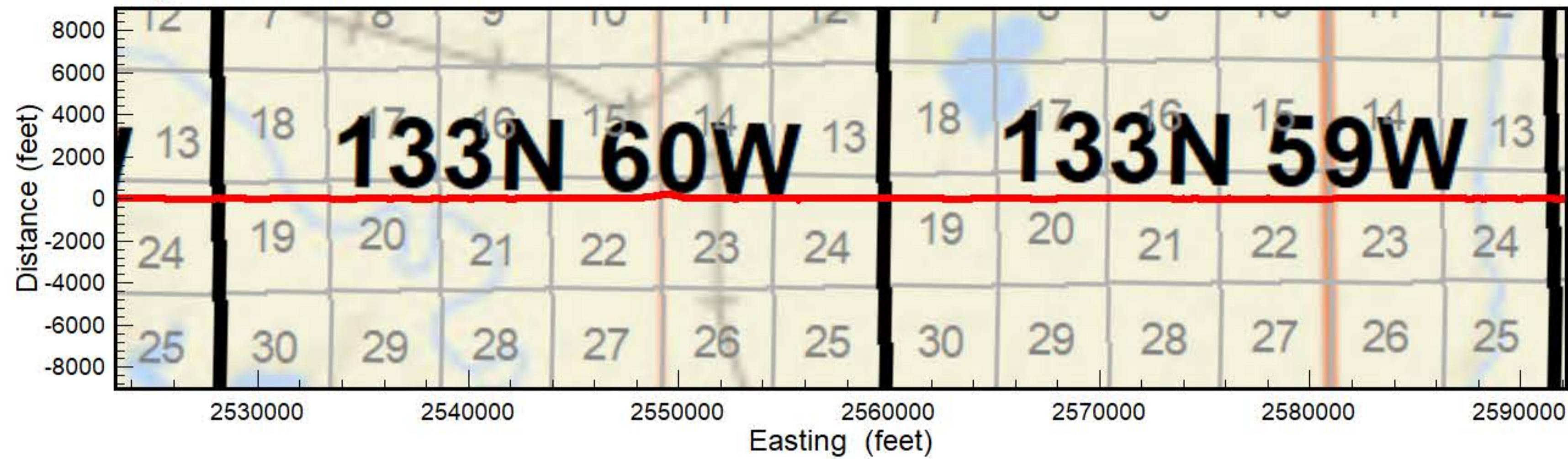


Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

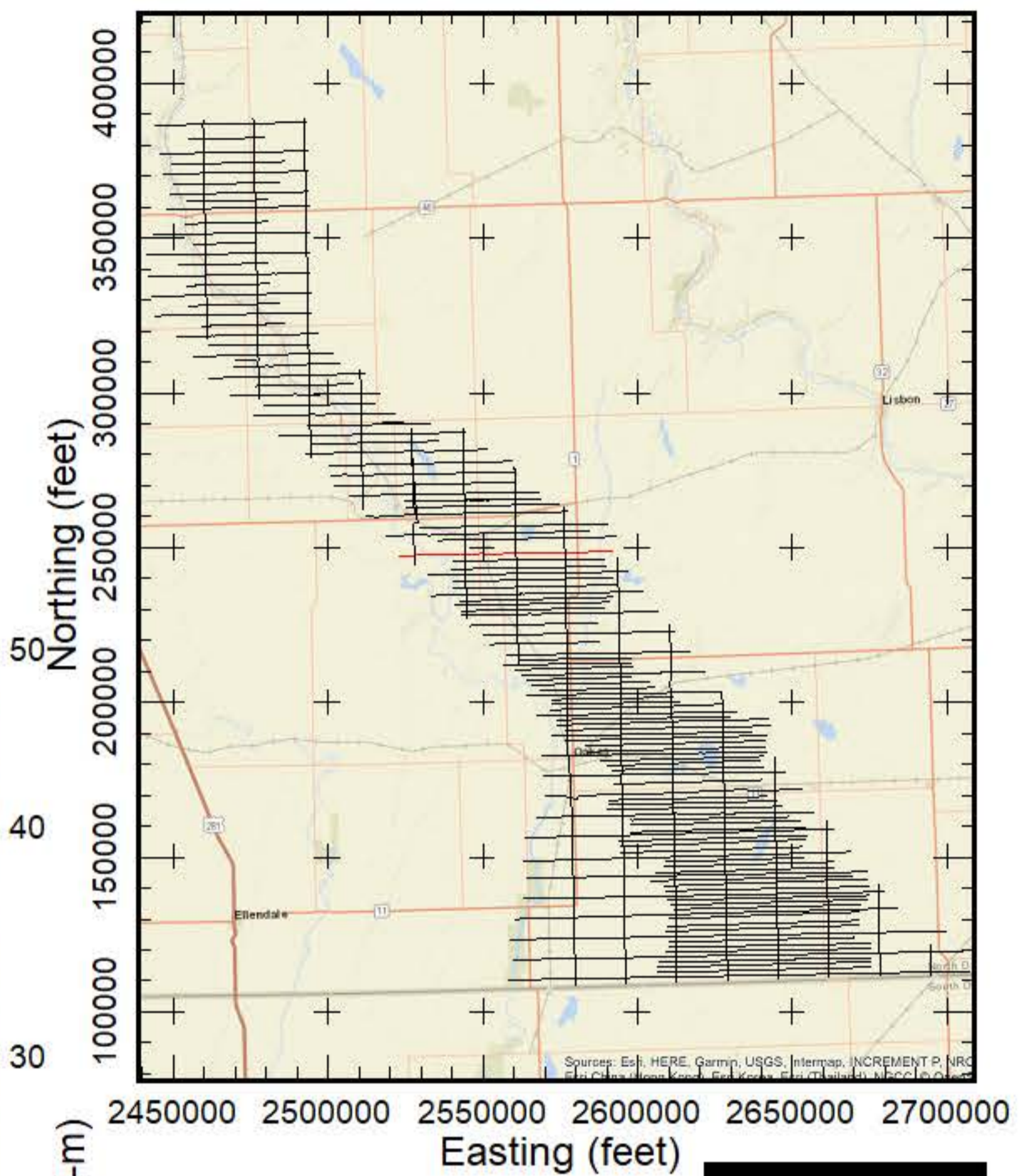




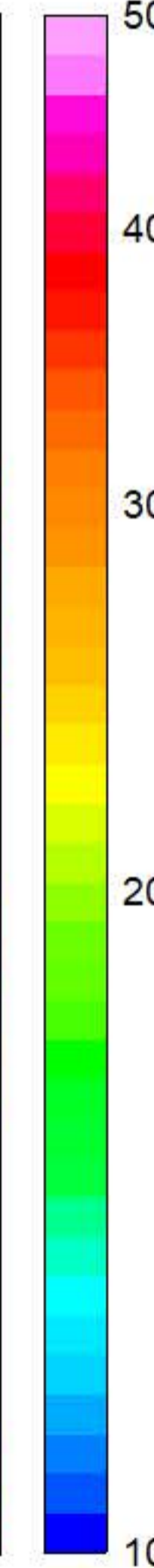
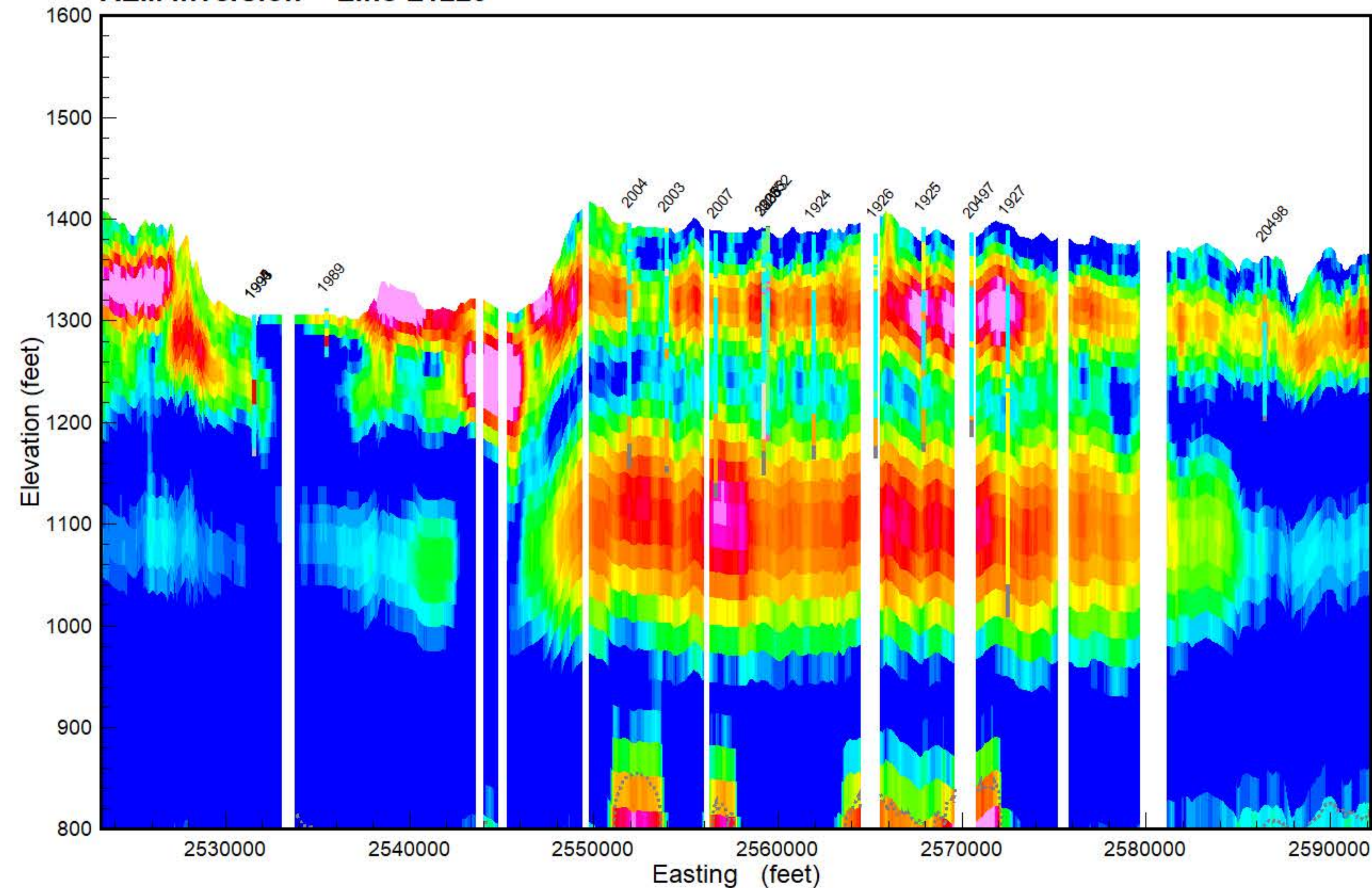
**Flight Path Line L1220**



**Spiritwood South Flight Area**



**AEM Inversion Line L1220**



**GEOTECH**

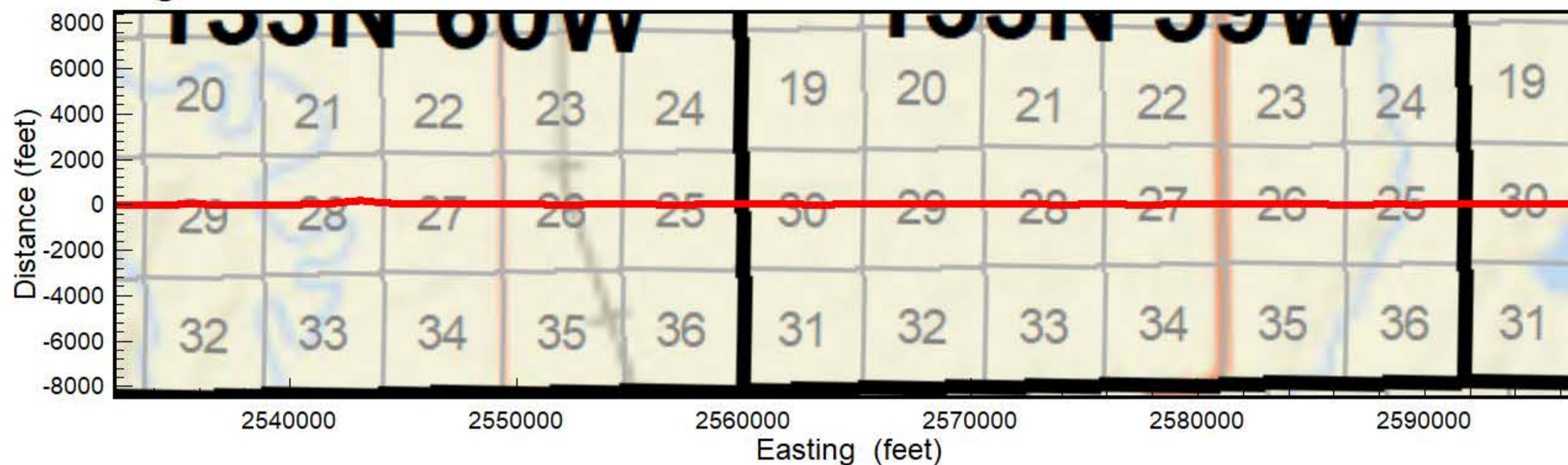
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

**AGF**  
Aqua Geo Frameworks

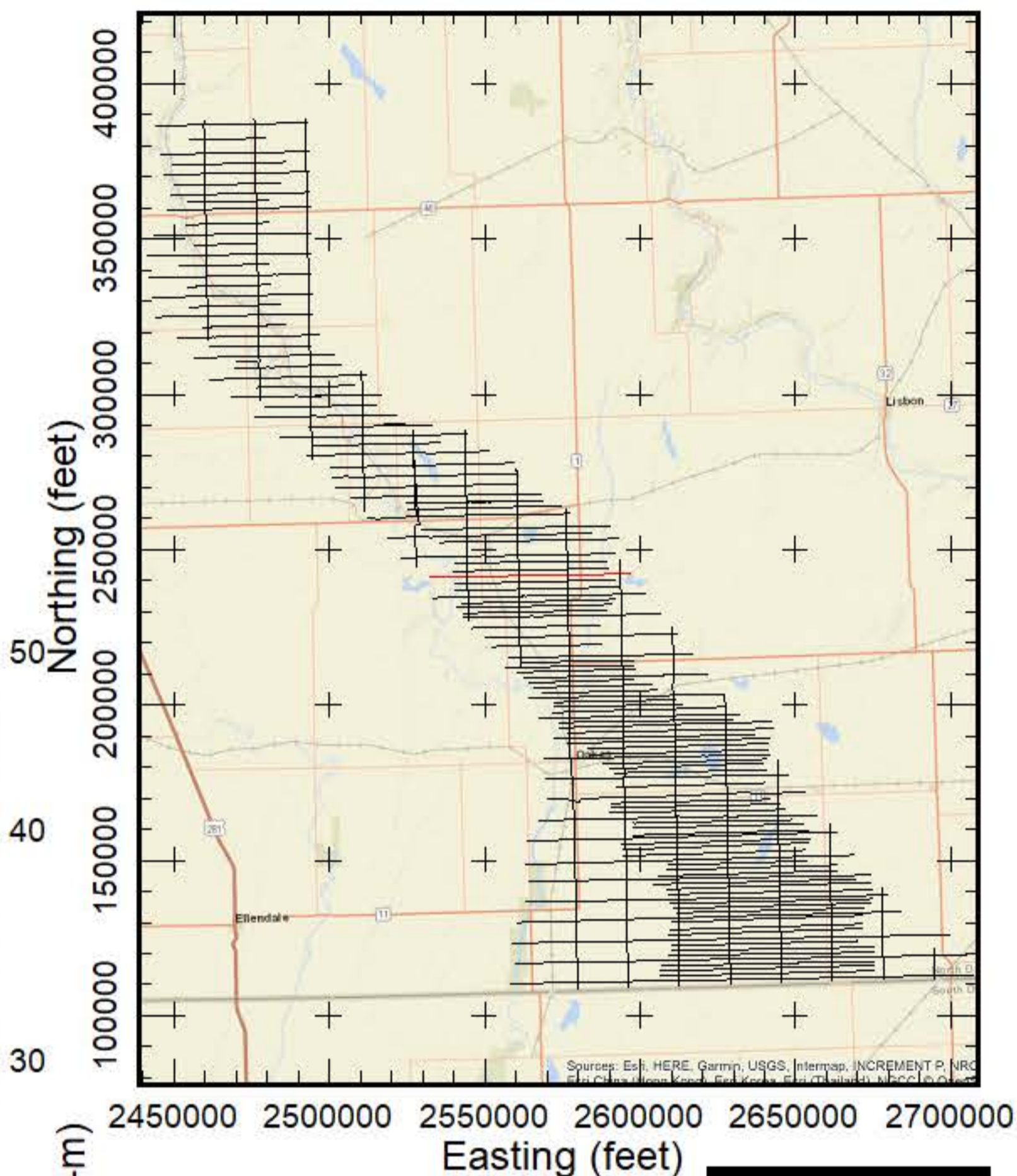
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- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
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- FILL
- TOPSOIL
- NOSAMPLE



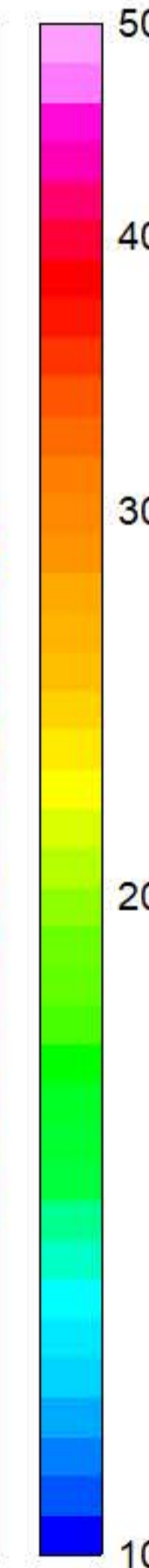
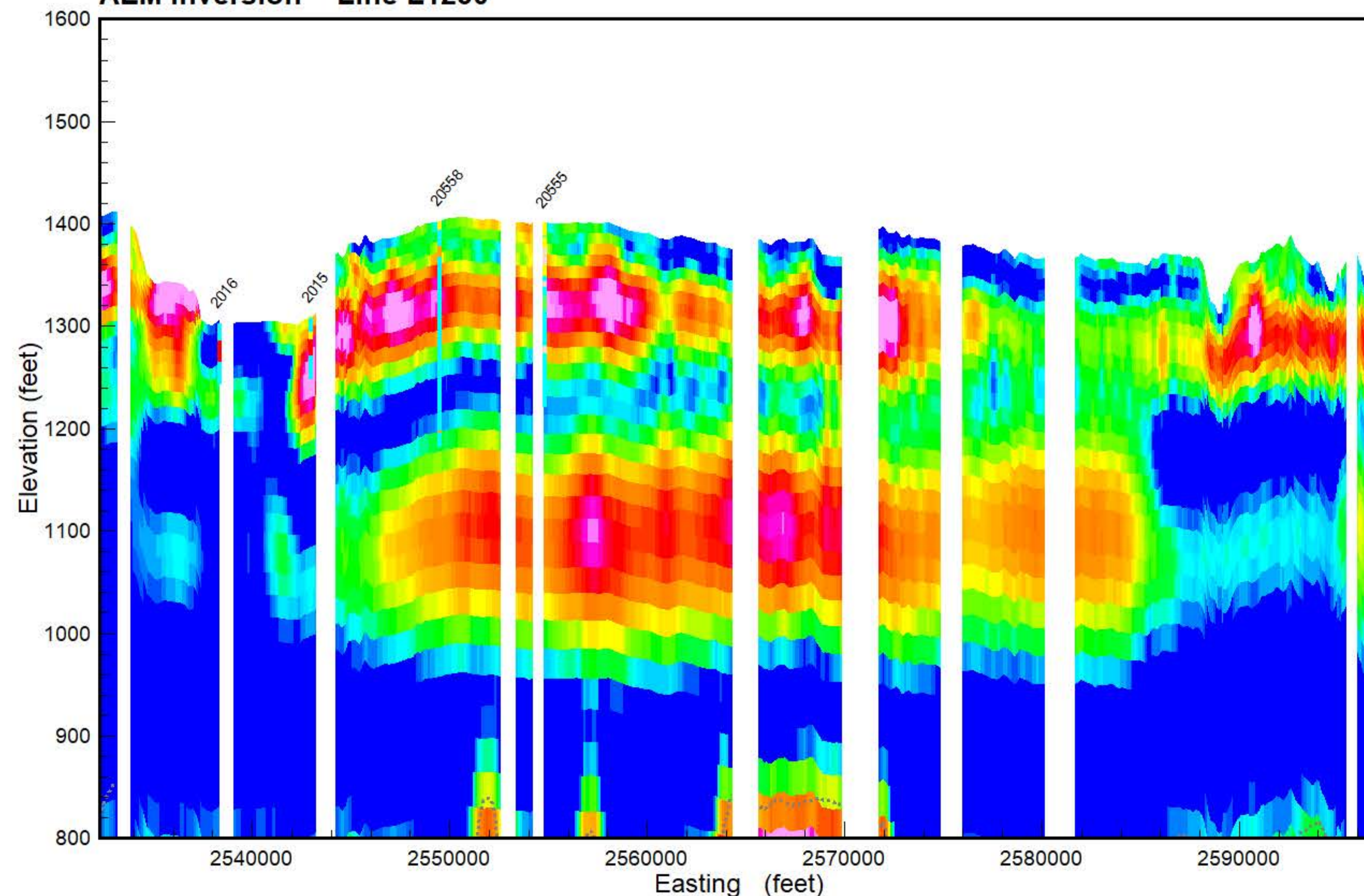
**Flight Path Line L1230**



**Spiritwood South Flight Area**



**AEM Inversion Line L1230**



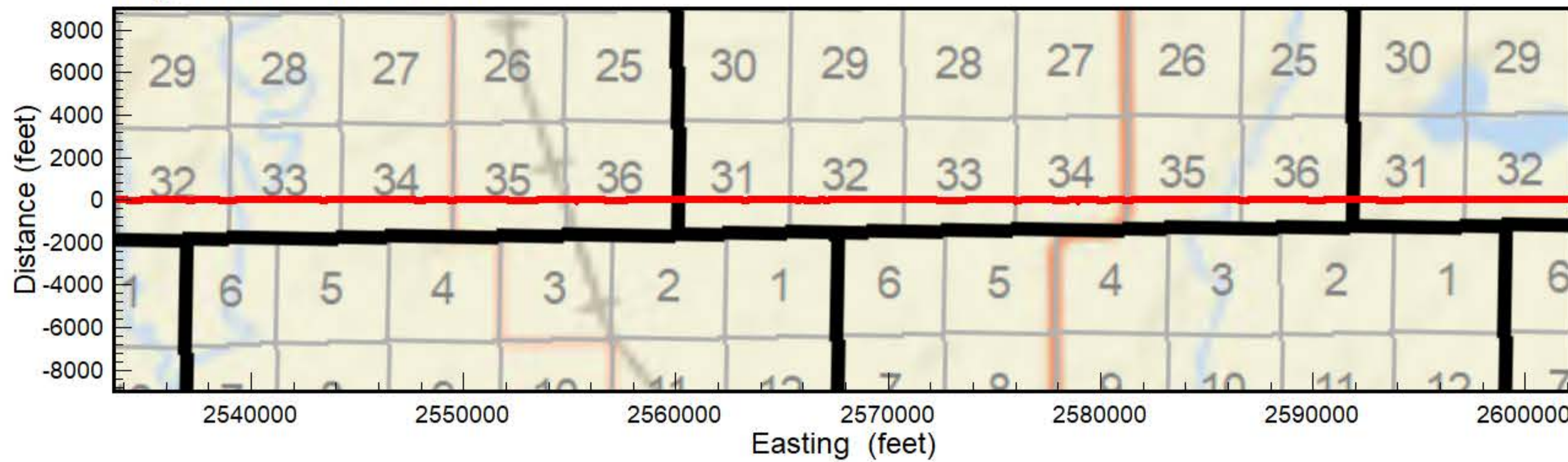
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- SAND & GRAVEL
- SAND
- INTERBEDDED
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- CLAY
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- TOPSOIL
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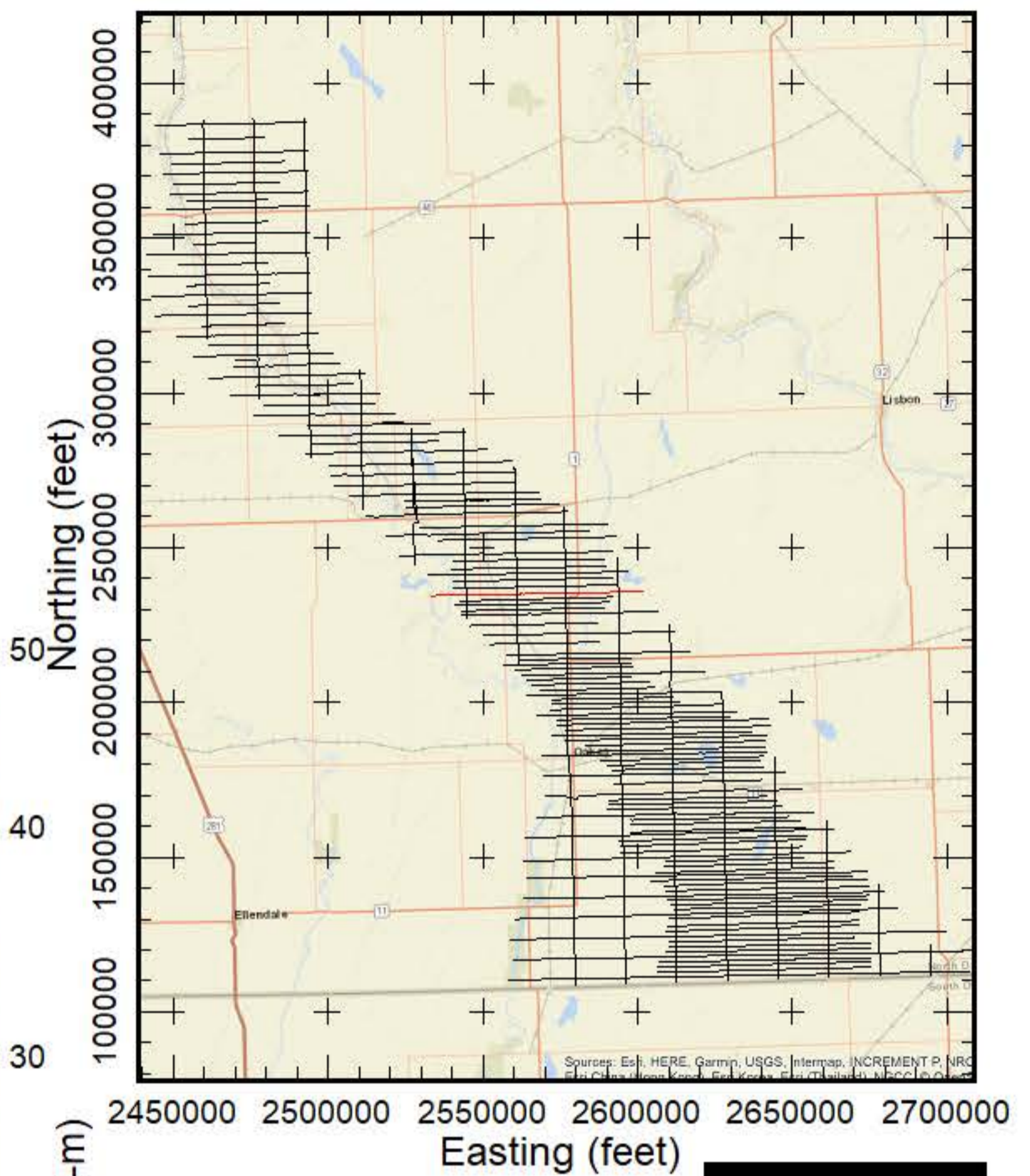




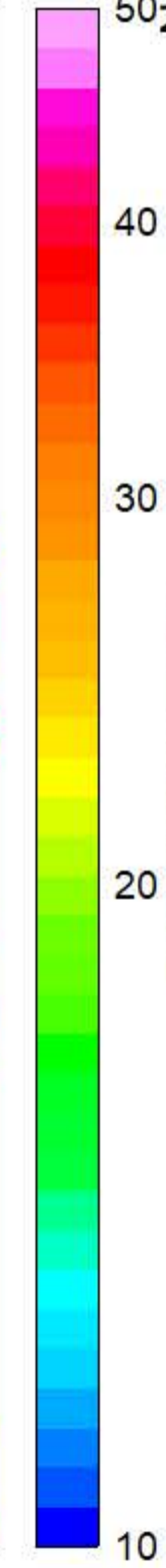
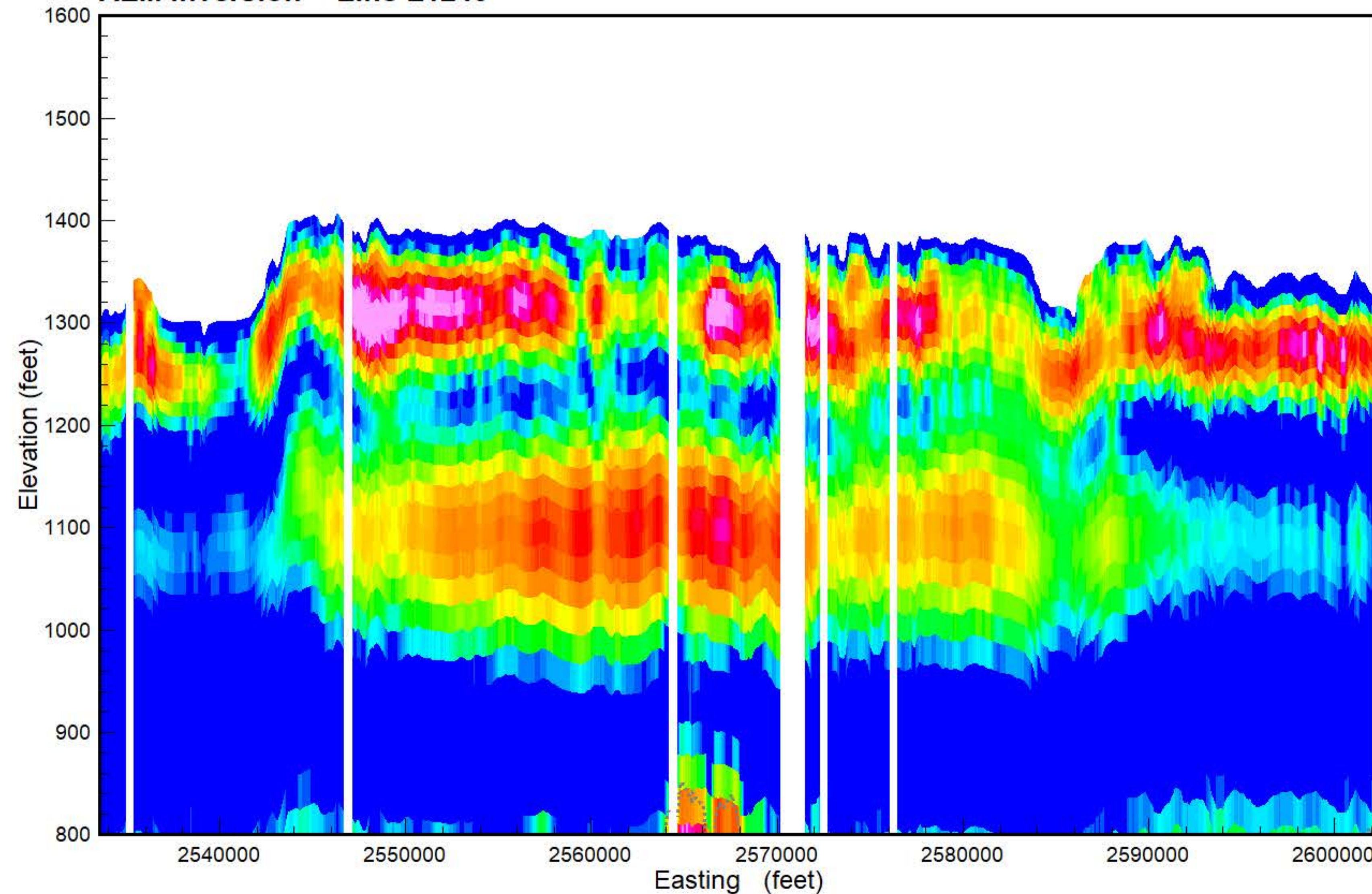
**Flight Path Line L1240**



**Spiritwood South Flight Area**



**AEM Inversion Line L1240**

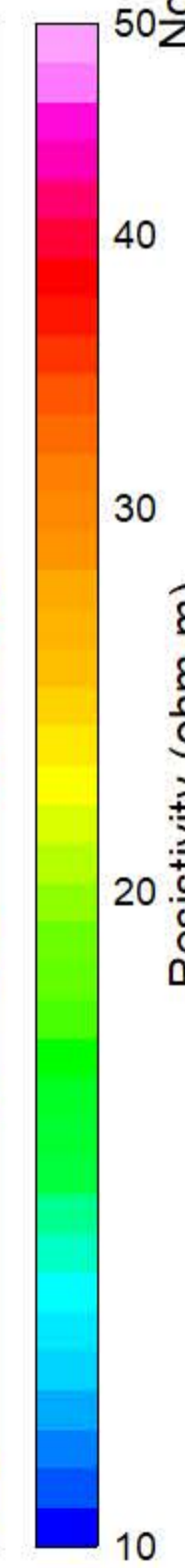
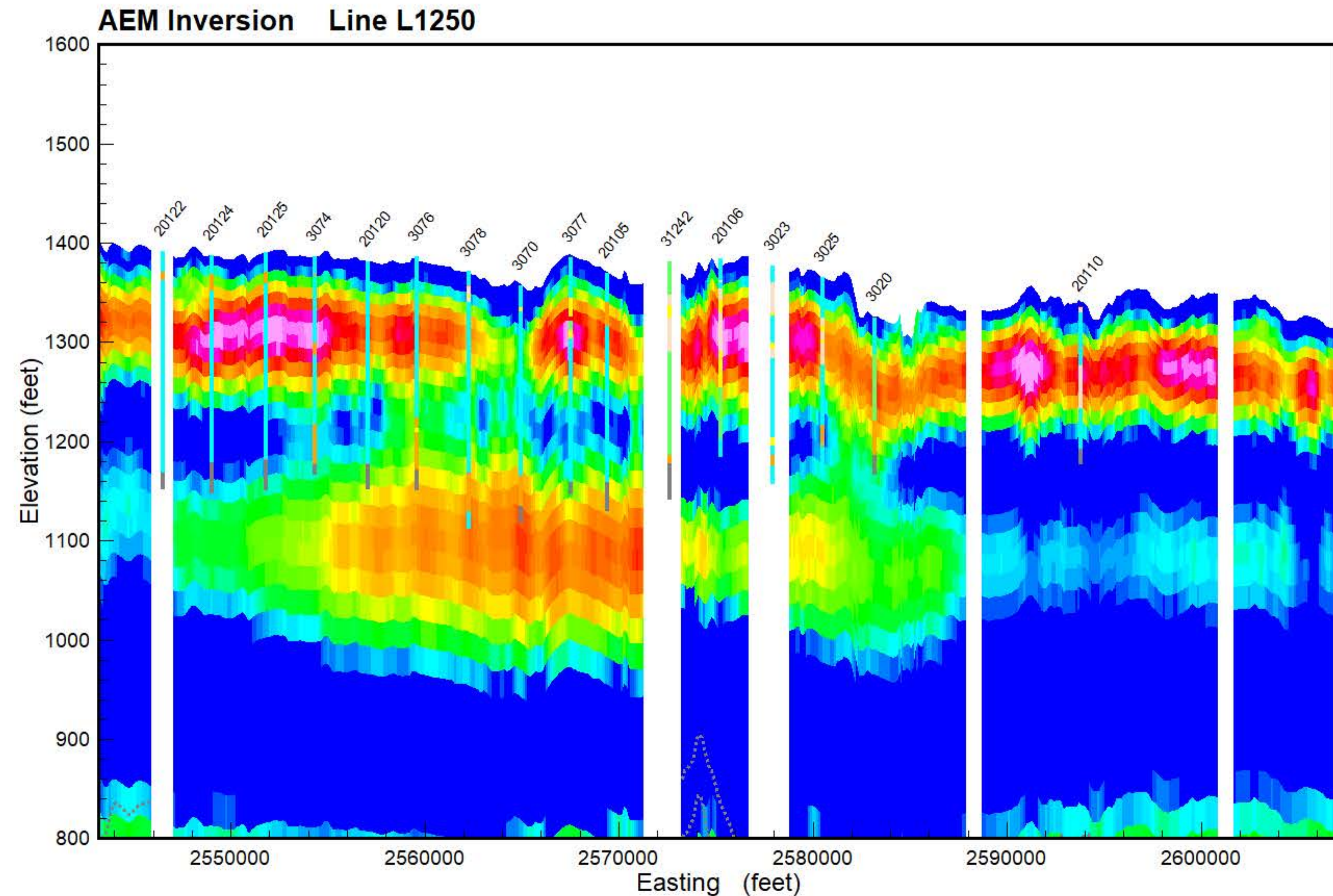
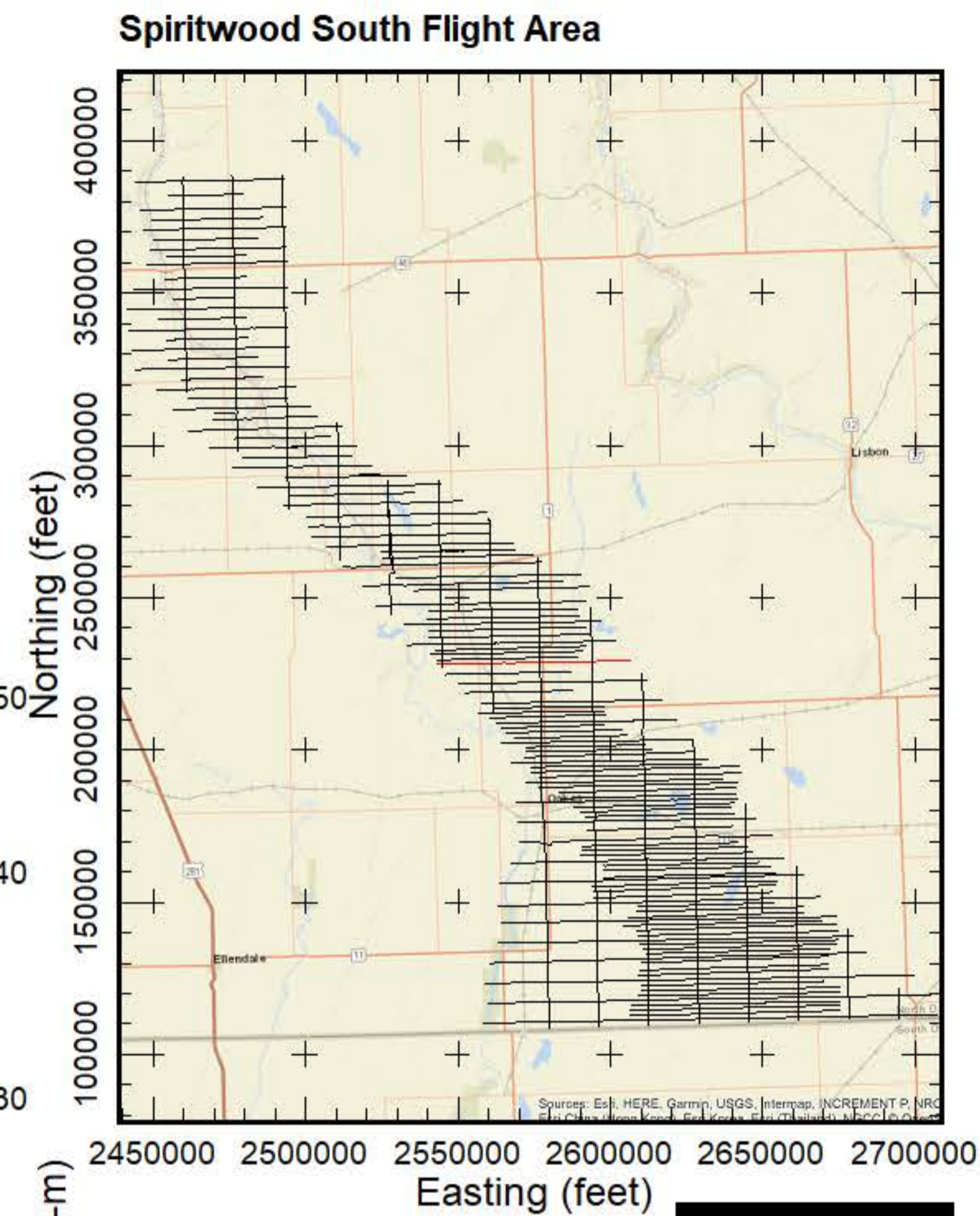
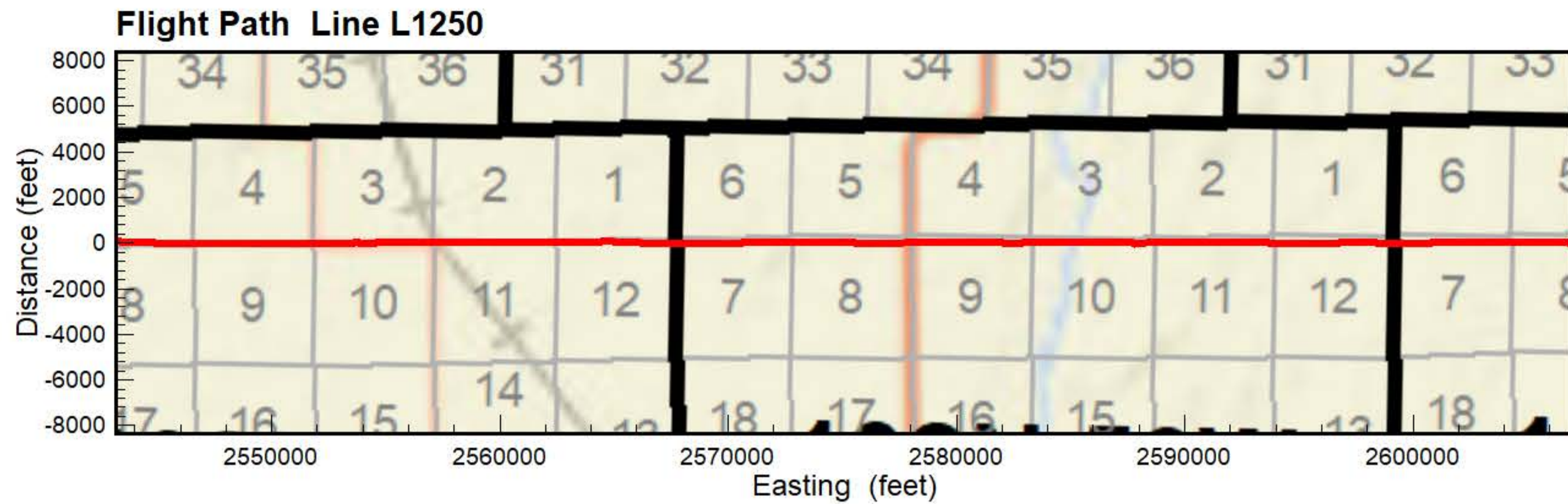


- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.





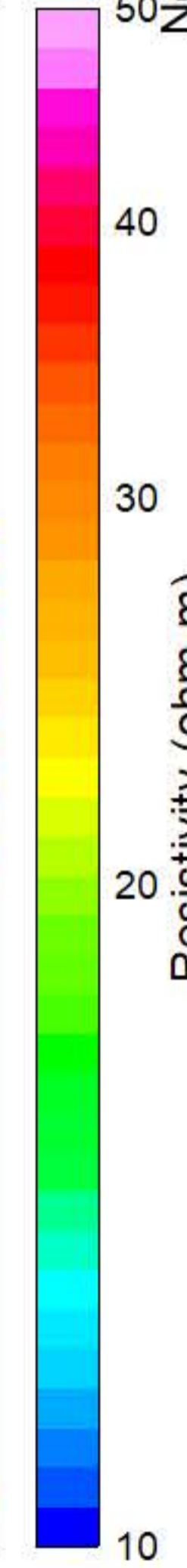
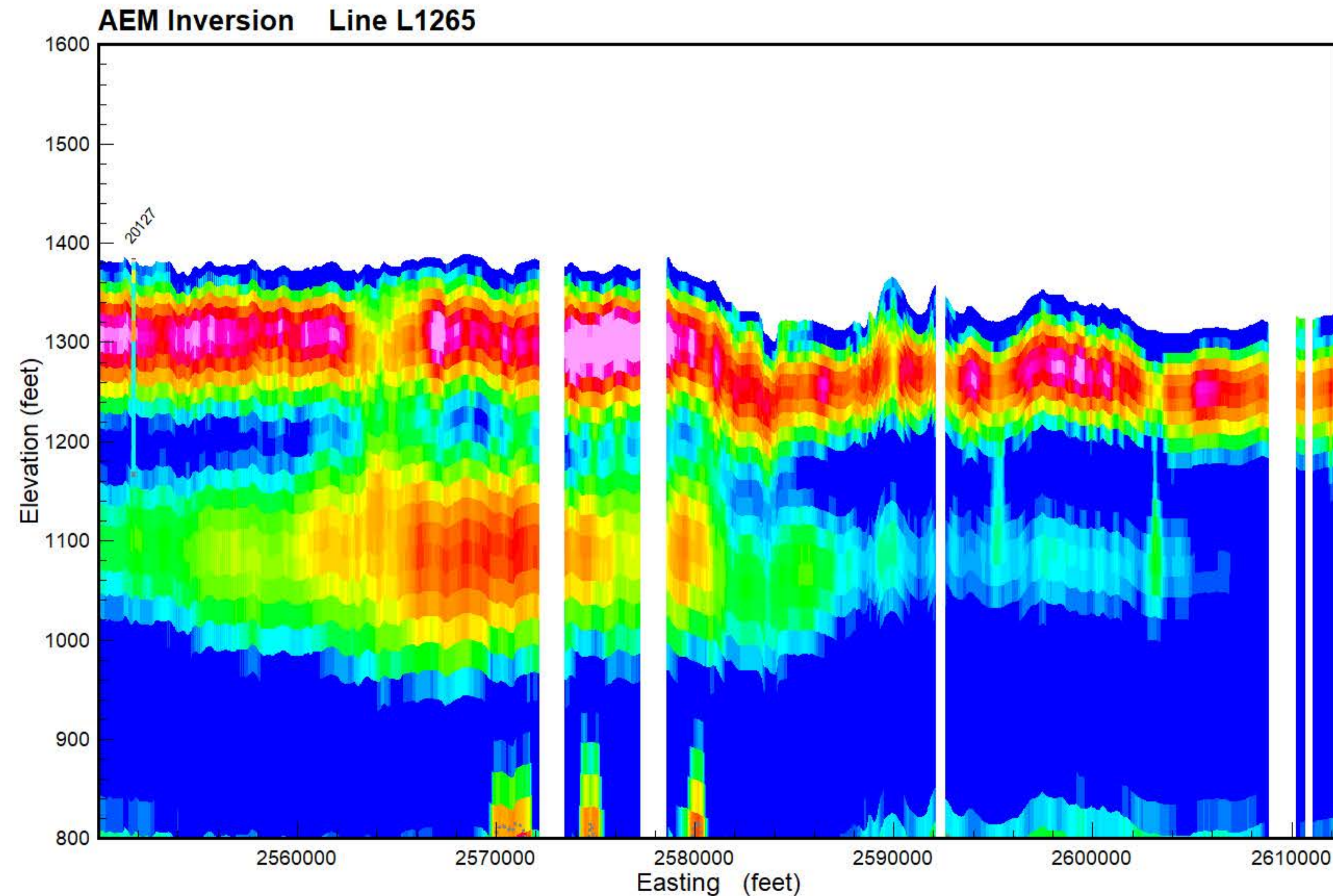
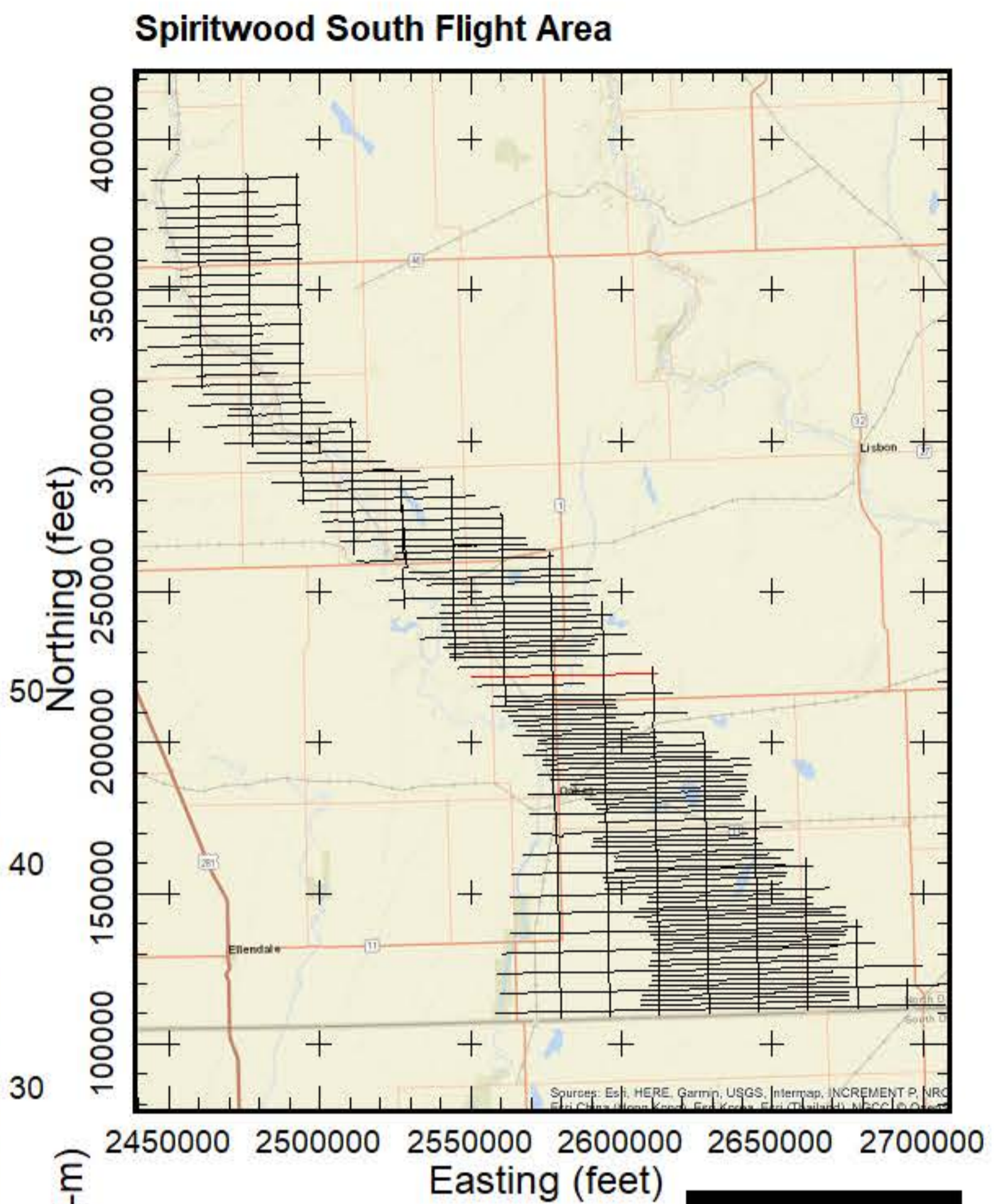
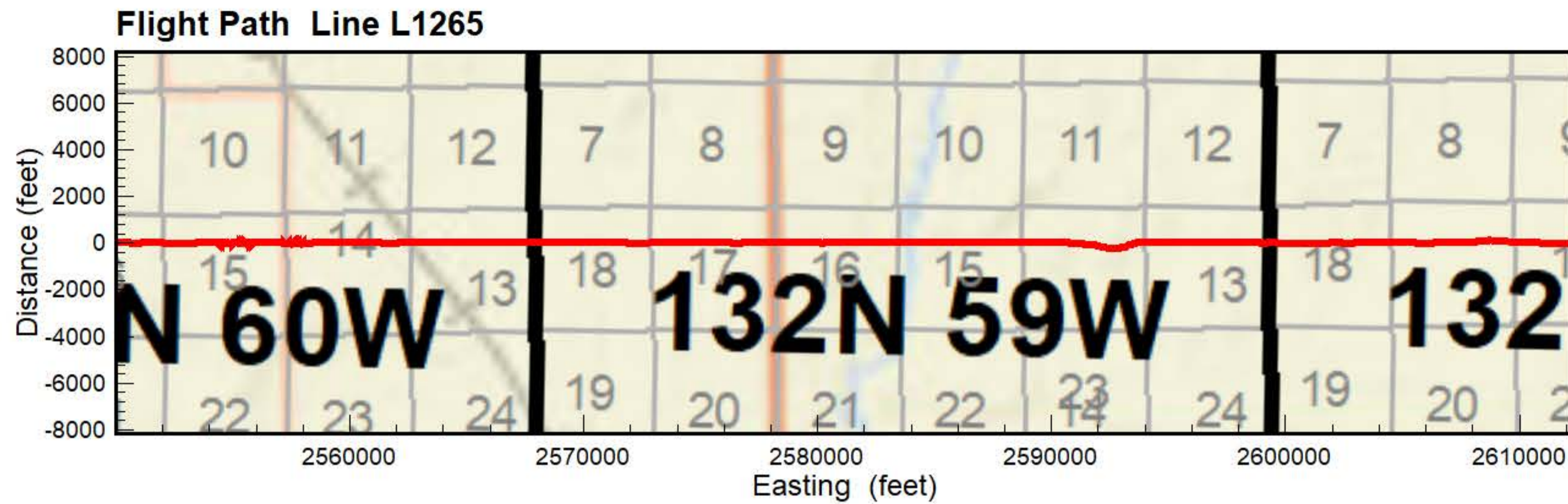


- PEAT
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- ROCK
- PRECAMBRIAN
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- SANDSTONE
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- GRAVEL
- SAND & GRAVEL
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- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.







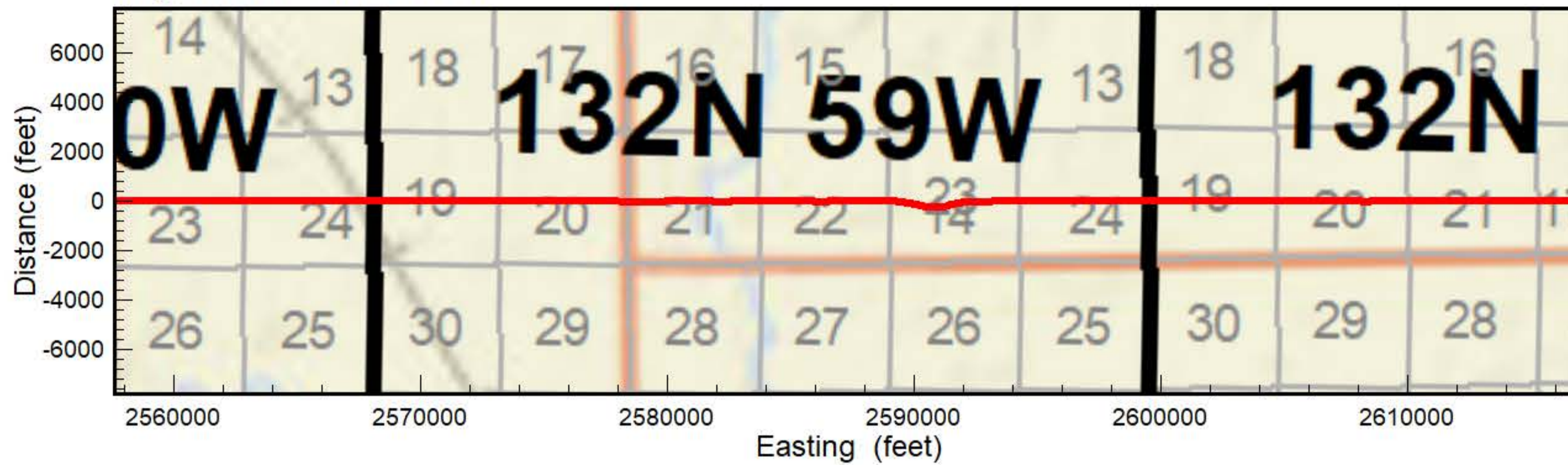
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

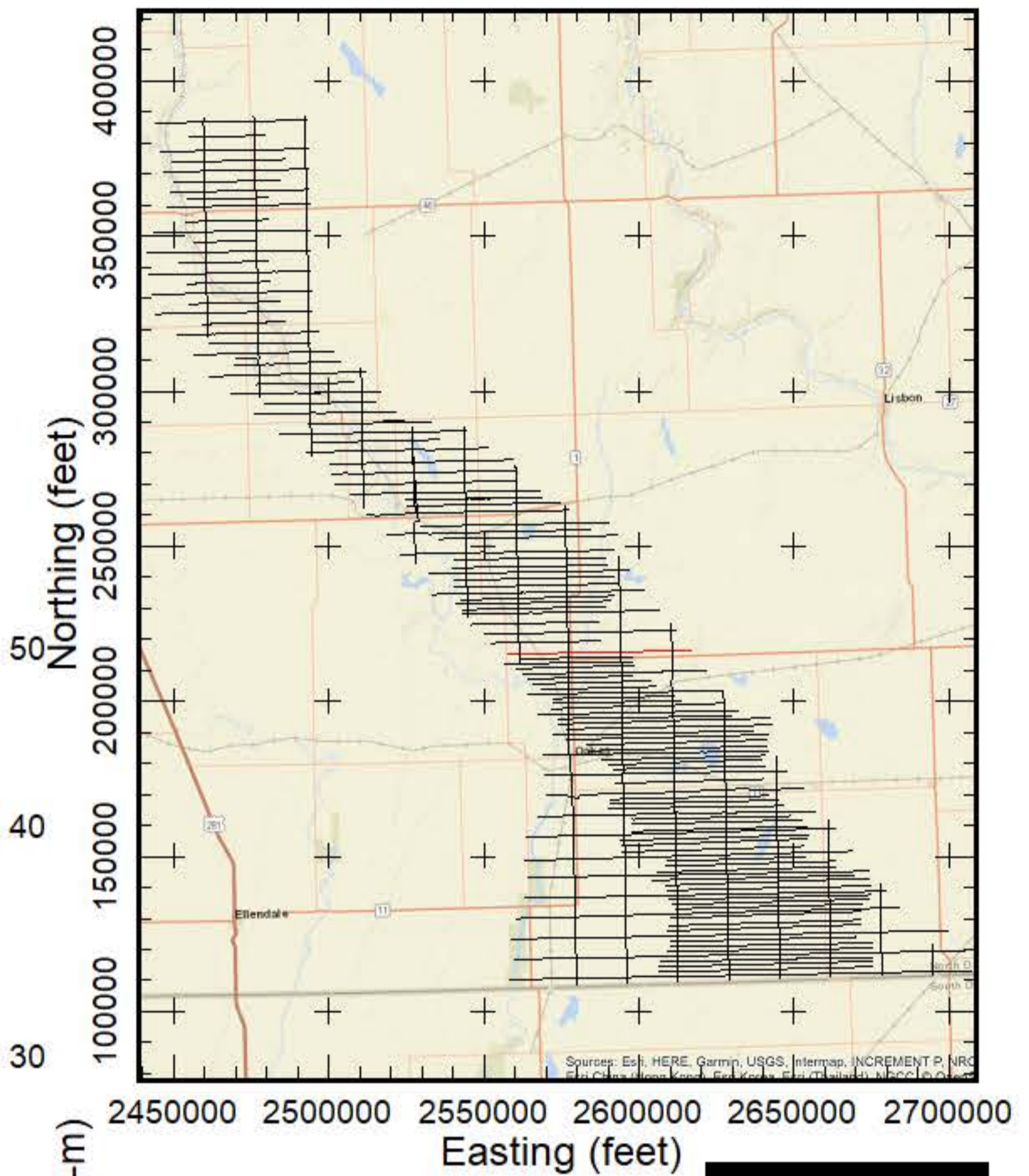




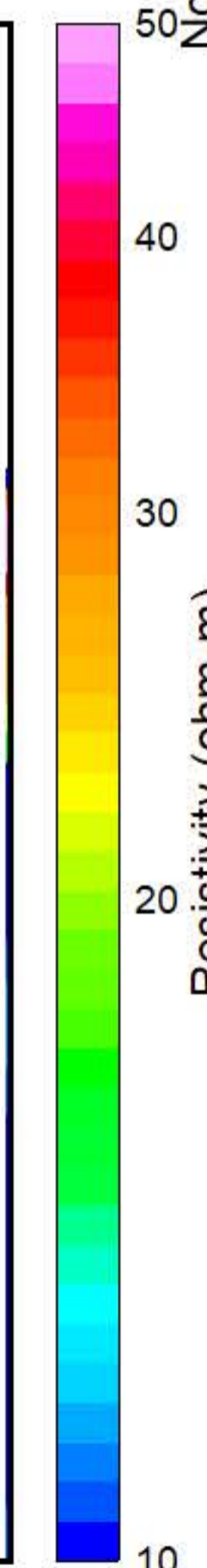
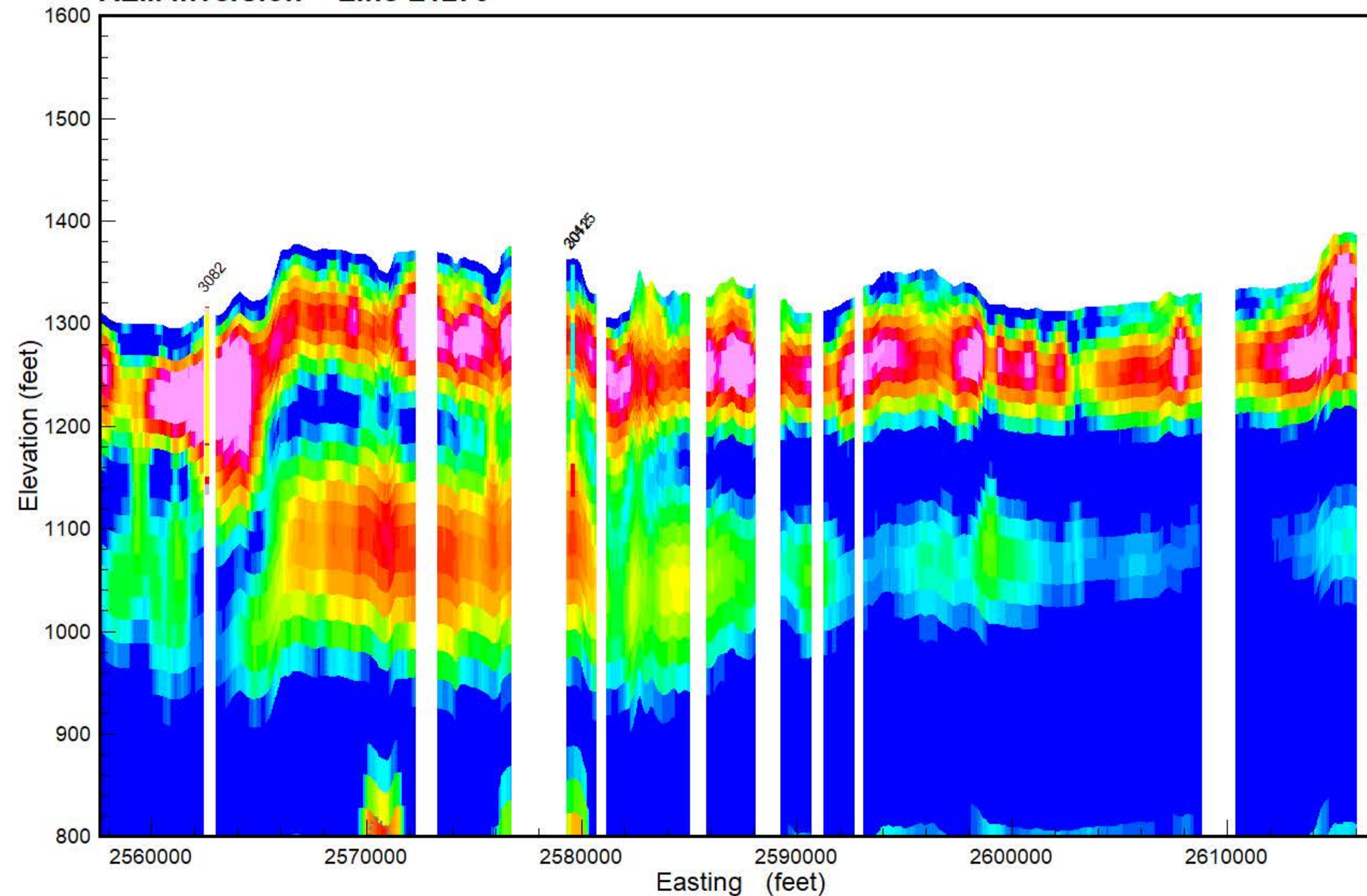
**Flight Path Line L1270**



**Spiritwood South Flight Area**



**AEM Inversion Line L1270**



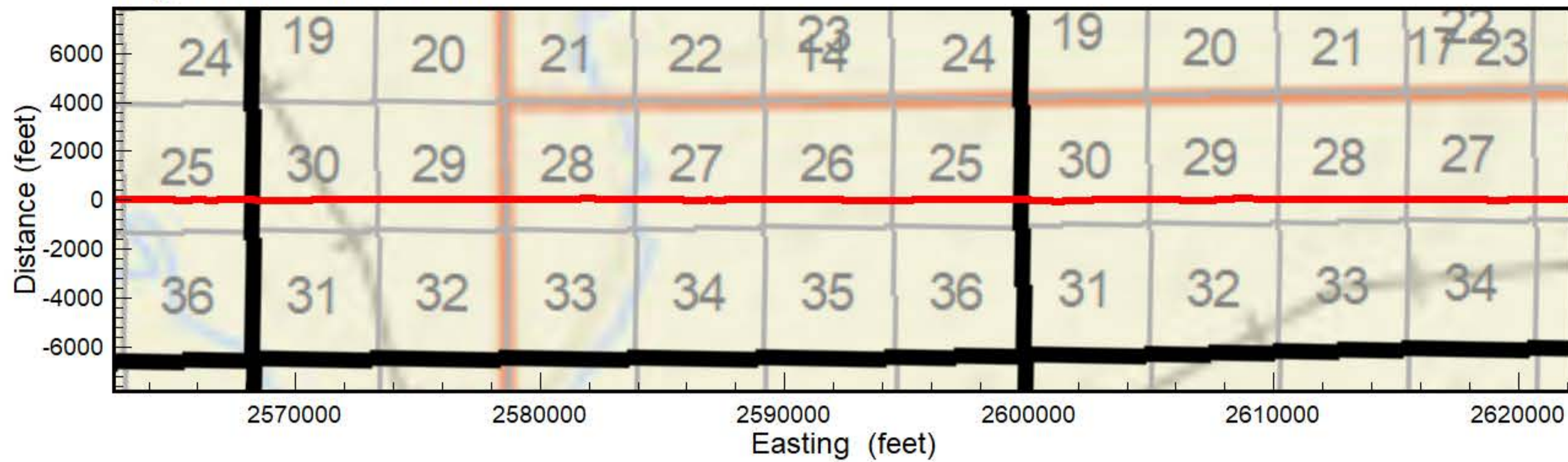
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
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- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

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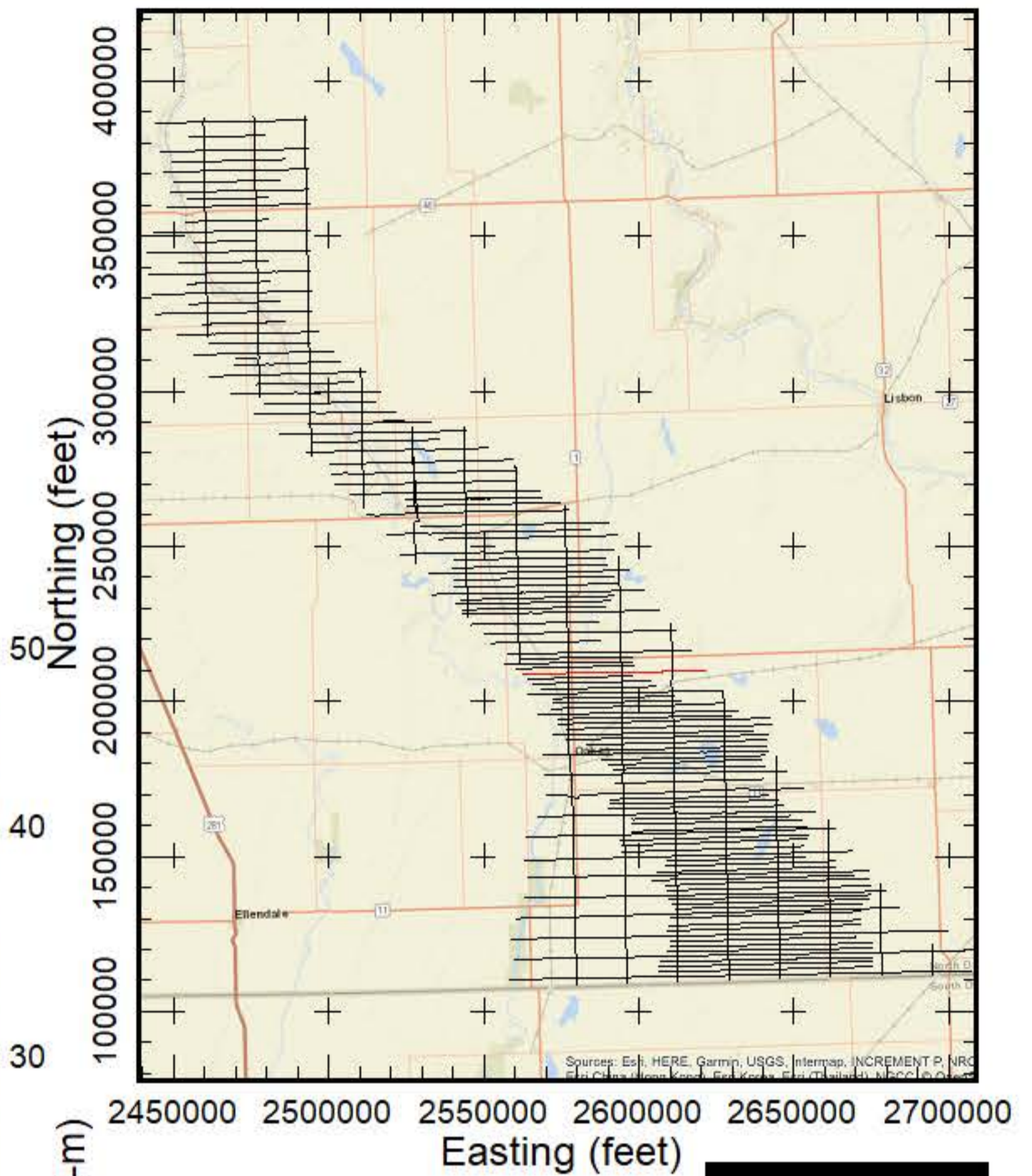




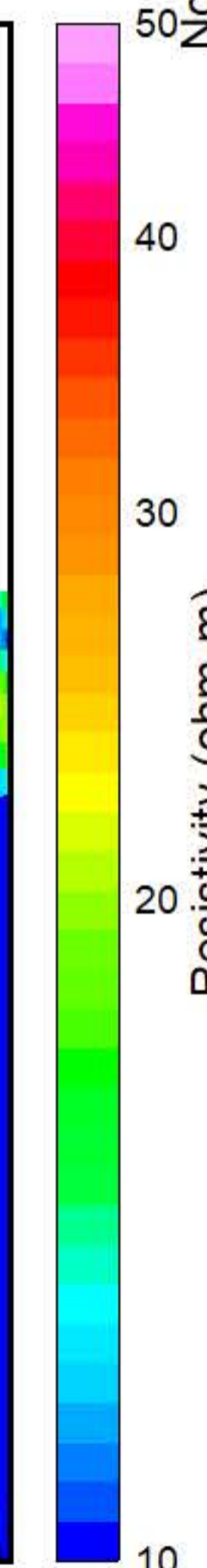
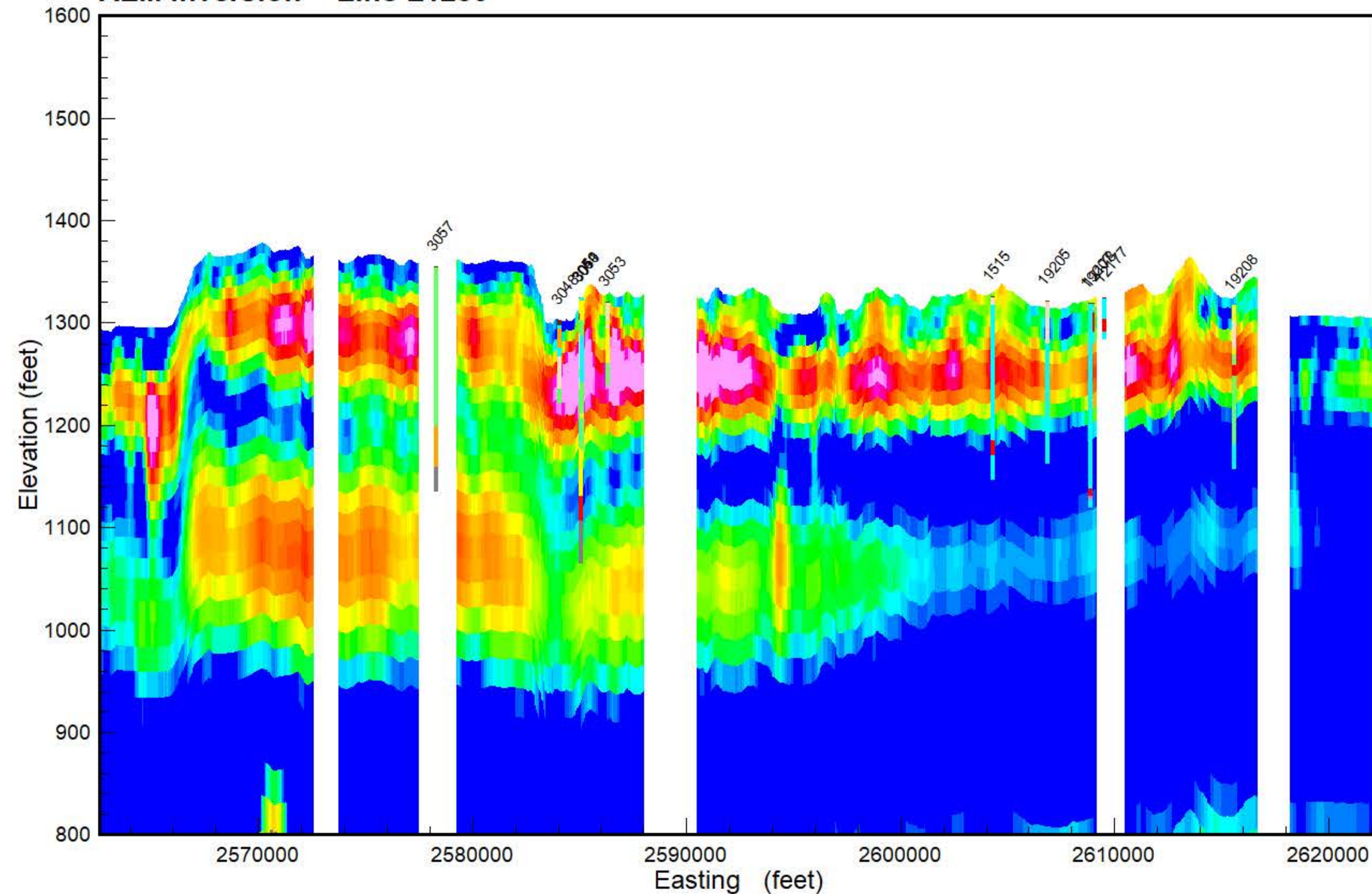
**Flight Path Line L1280**



**Spiritwood South Flight Area**



**AEM Inversion Line L1280**

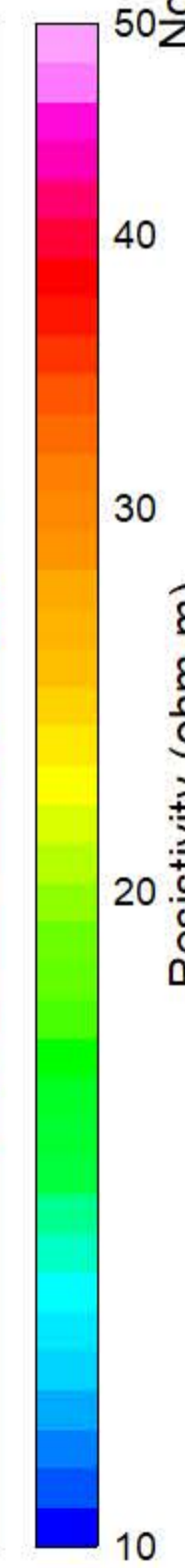
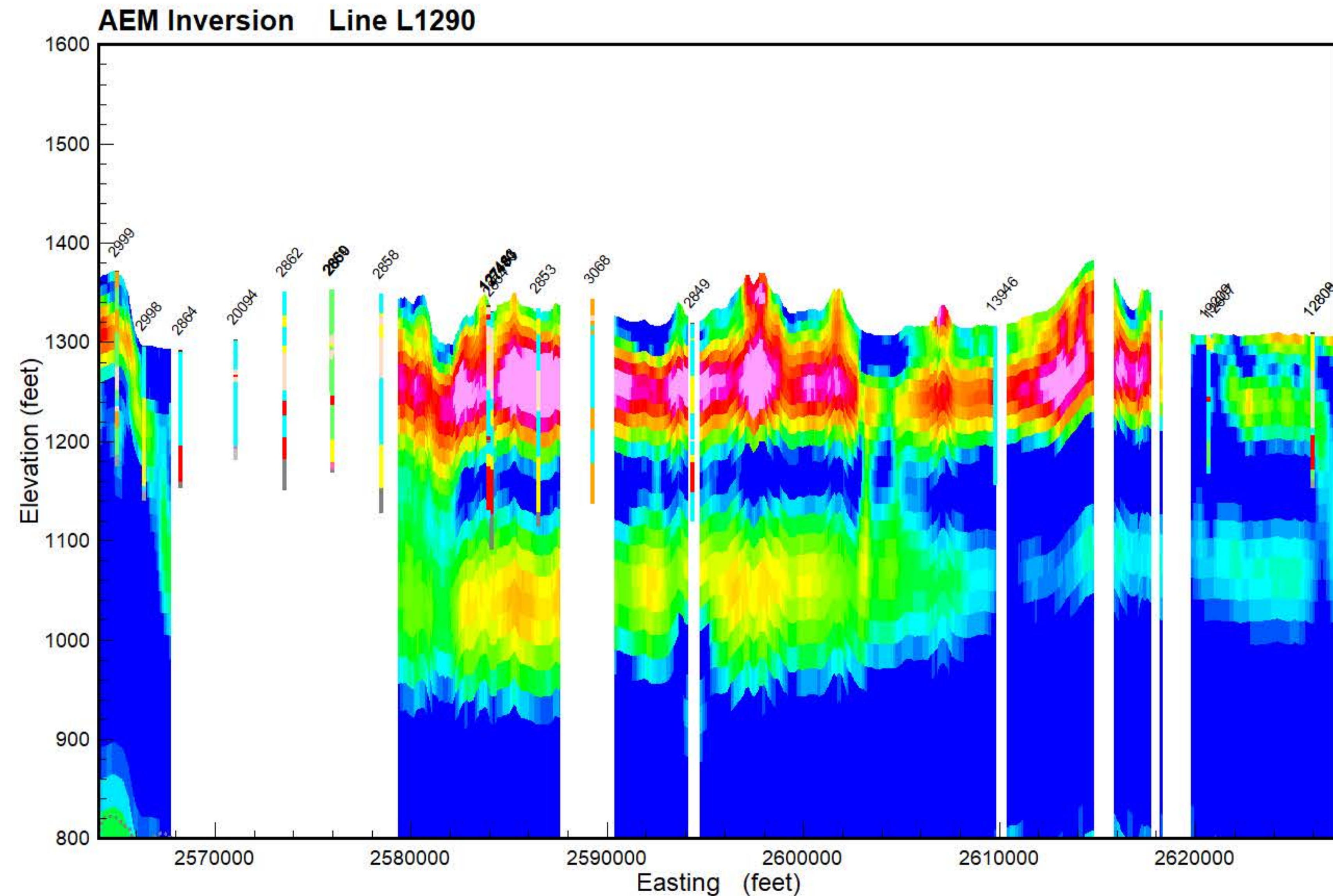
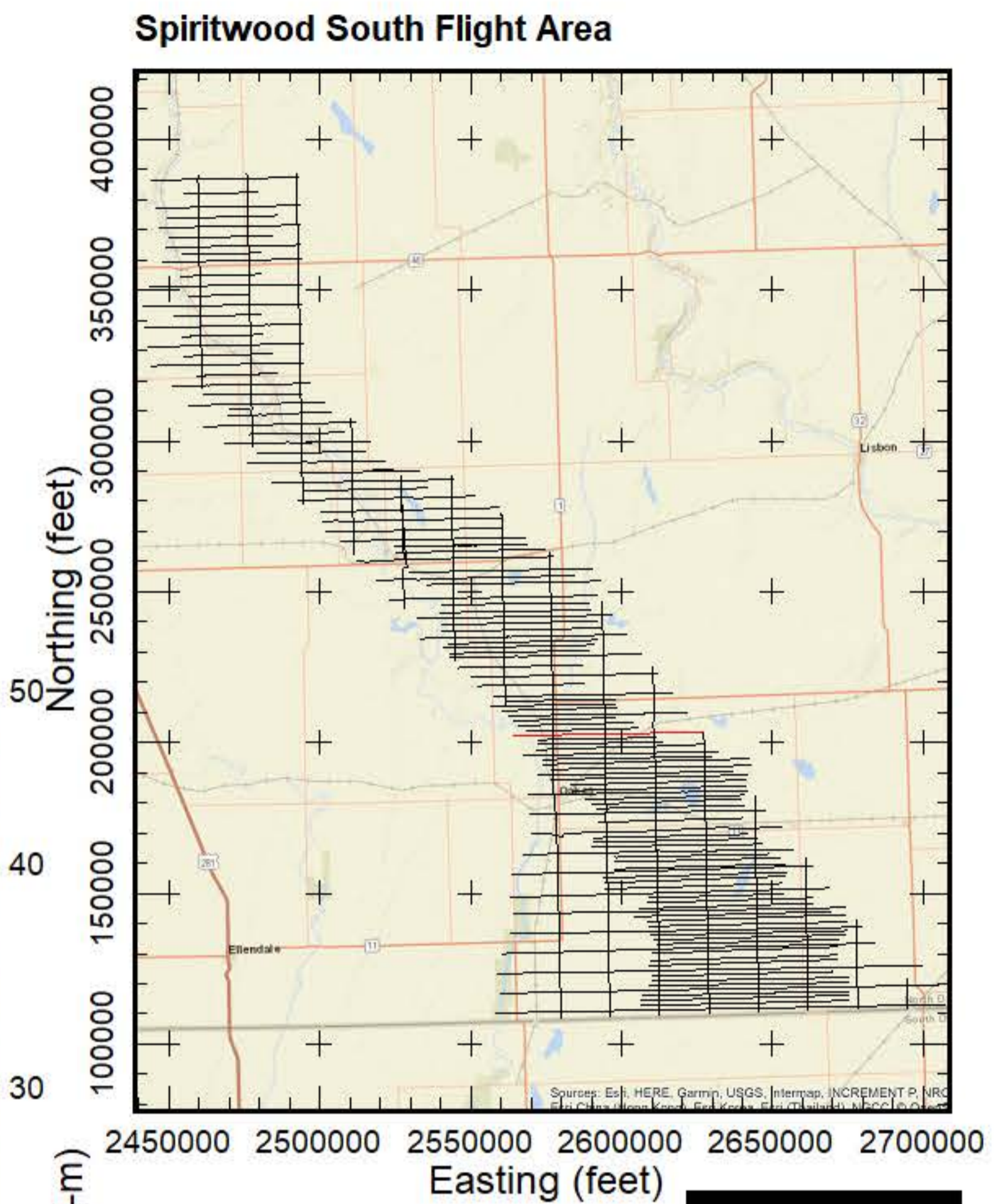
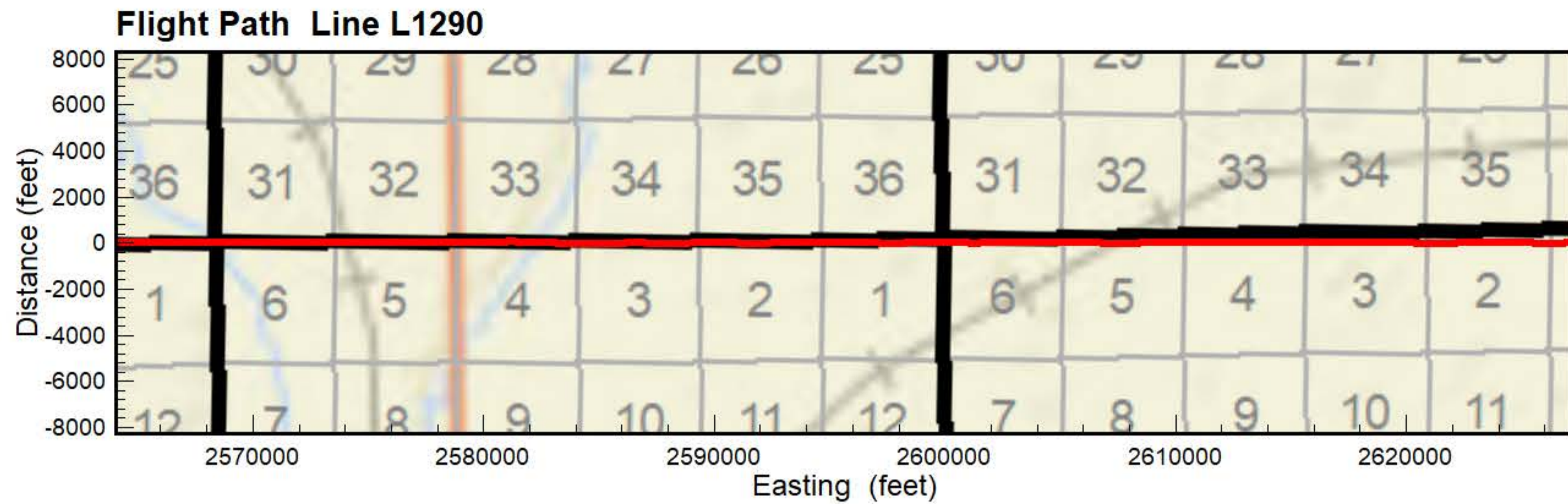


- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.







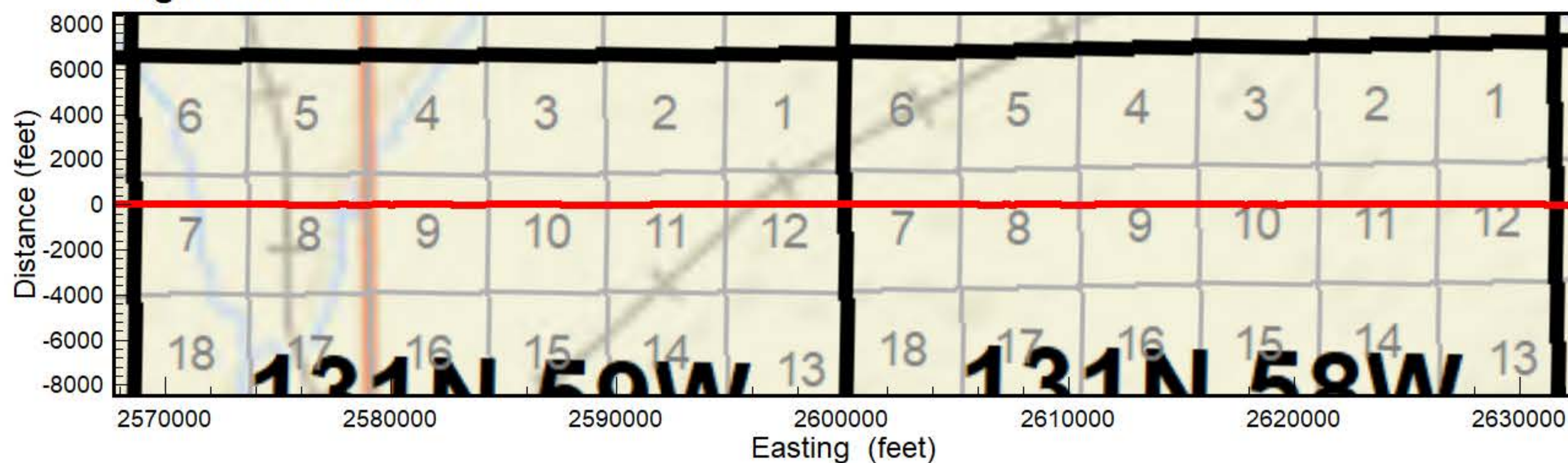
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
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- SILTSTONE
- CLAYSTONE
- SHALE
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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

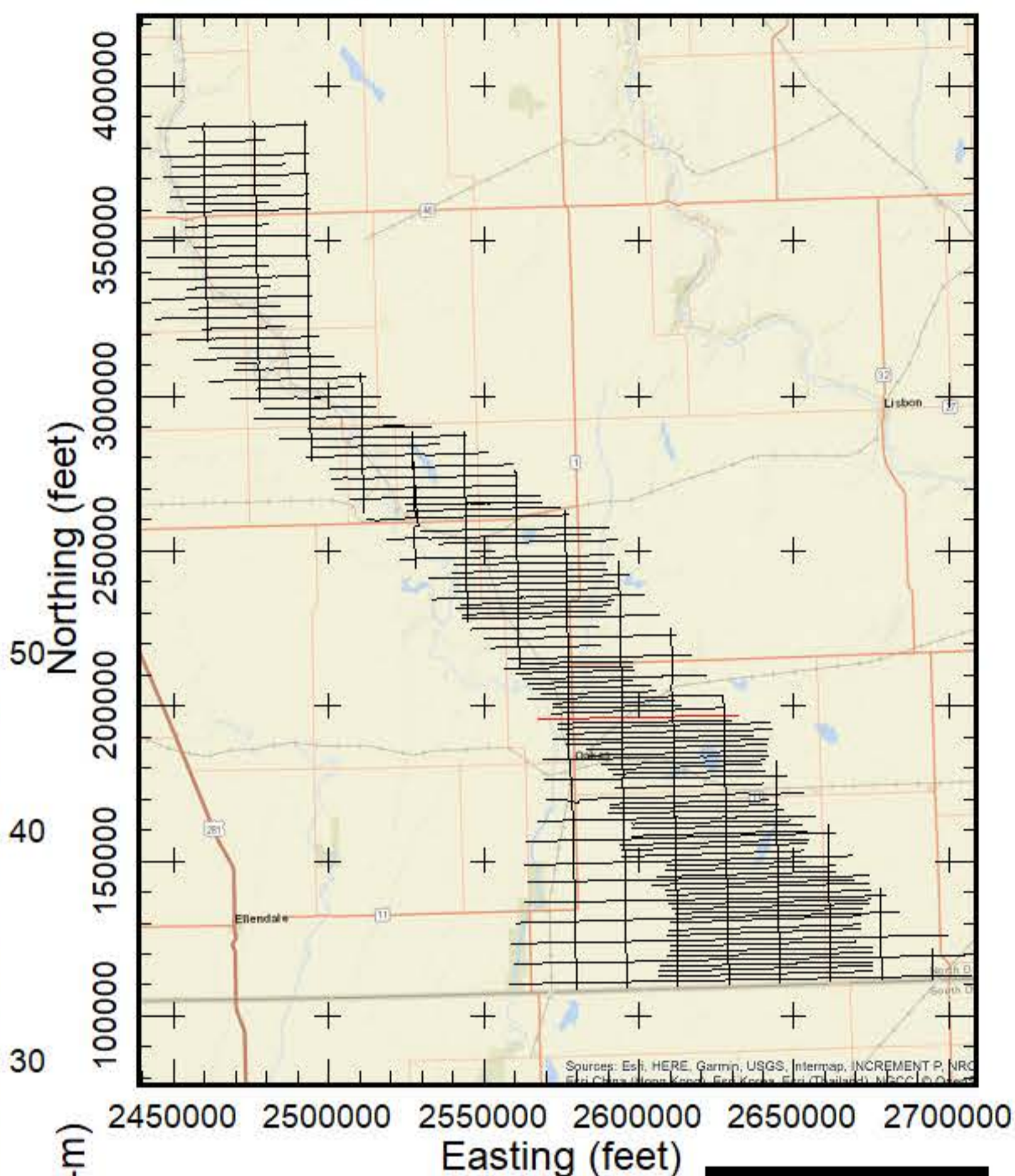




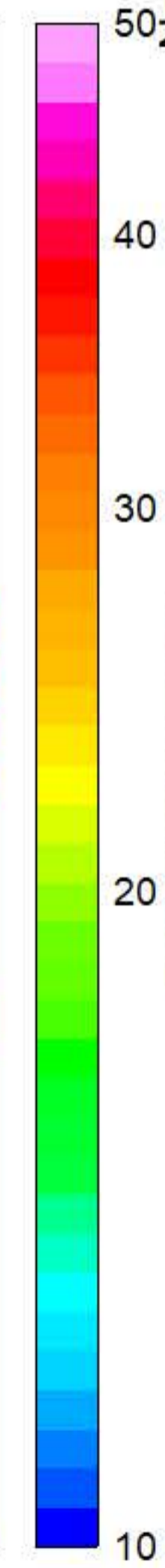
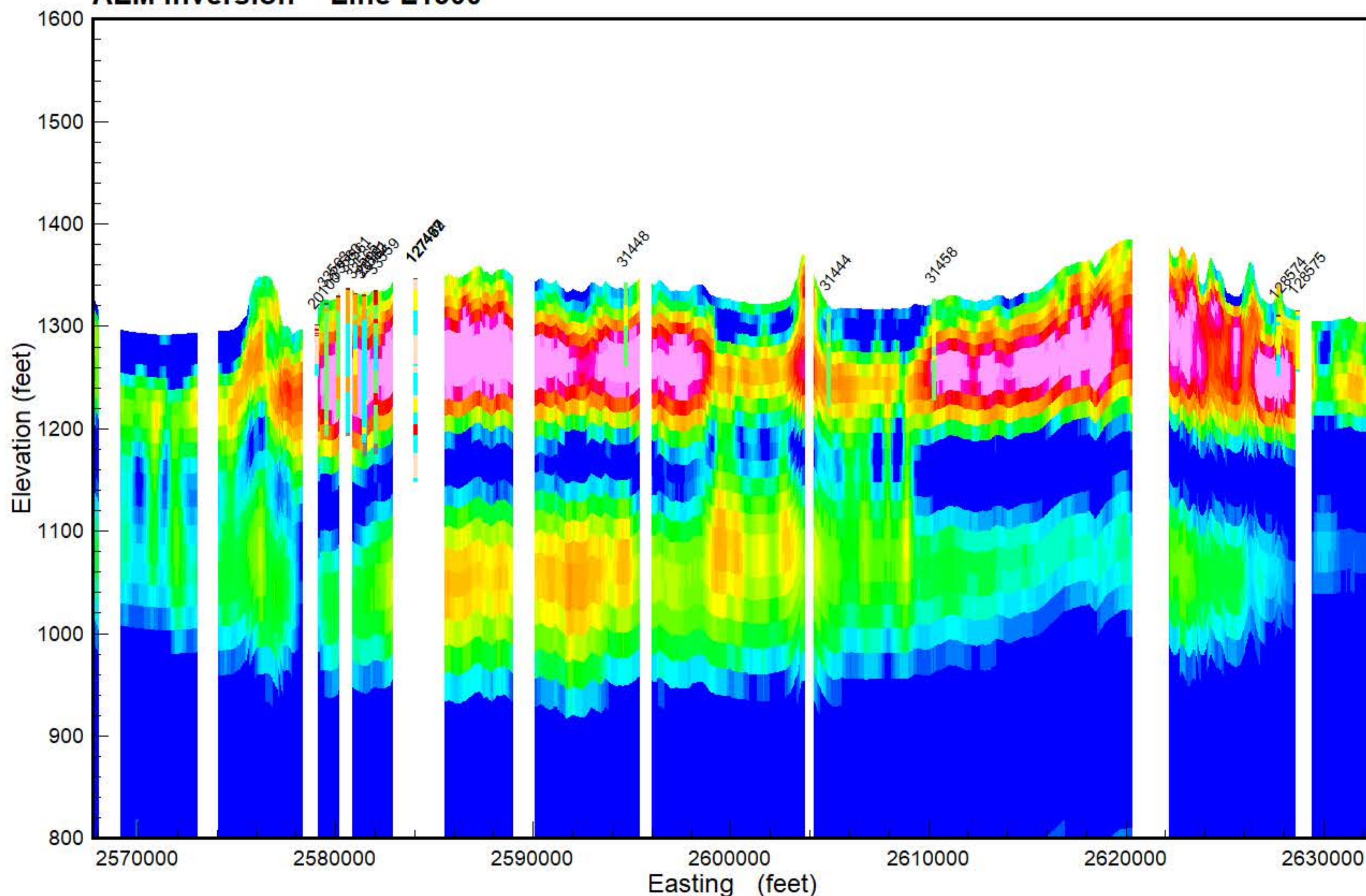
**Flight Path Line L1300**



**Spiritwood South Flight Area**



**AEM Inversion Line L1300**



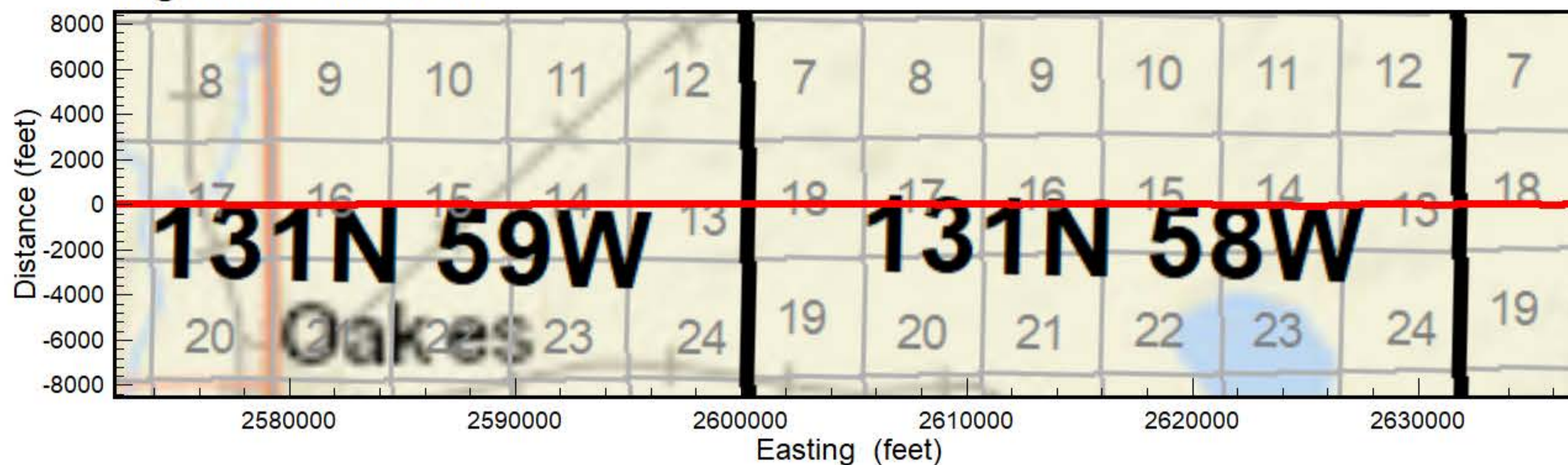
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
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- SAND
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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018, to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

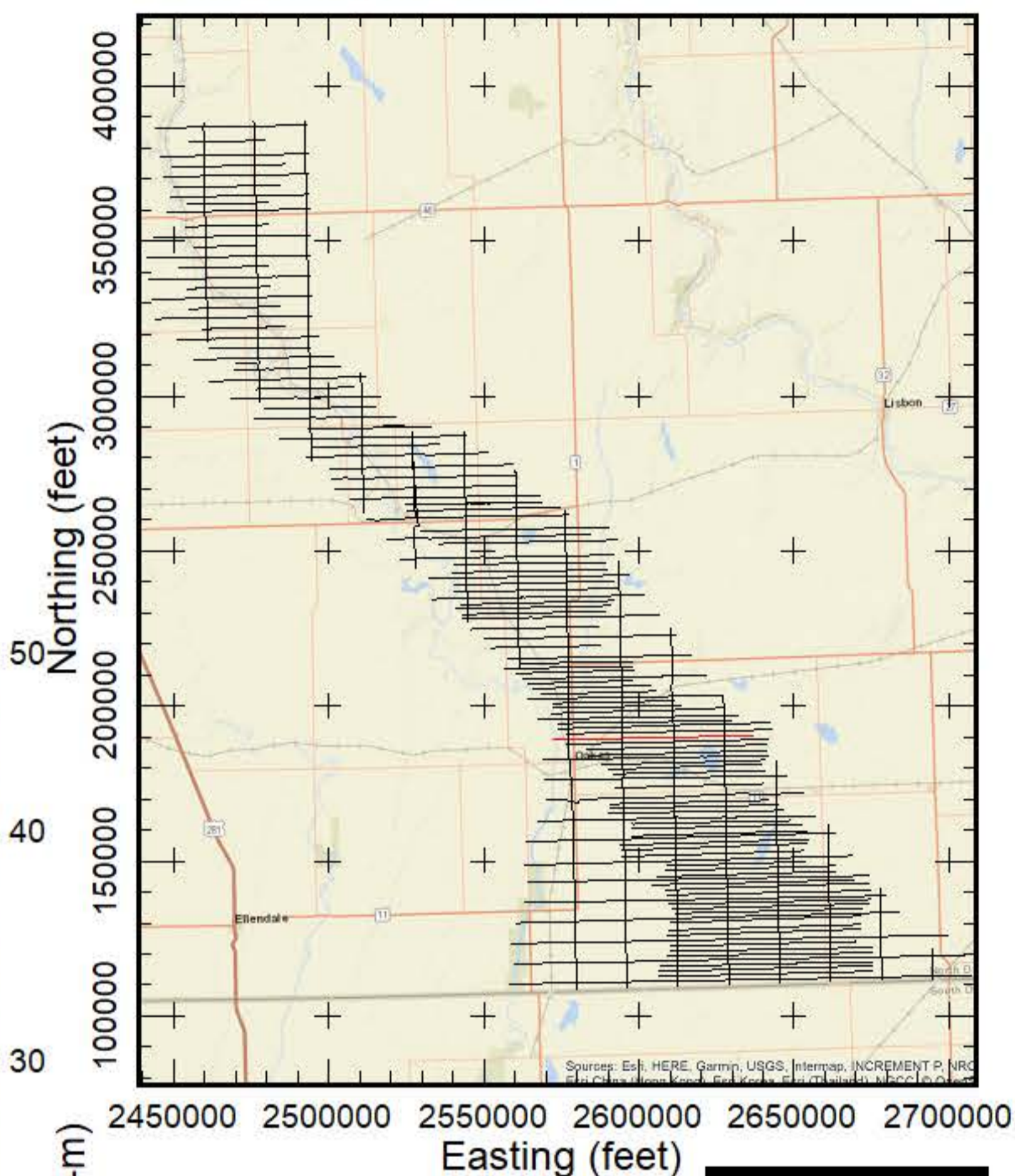




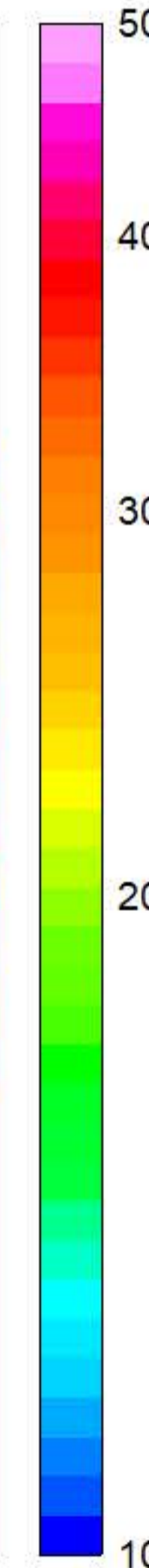
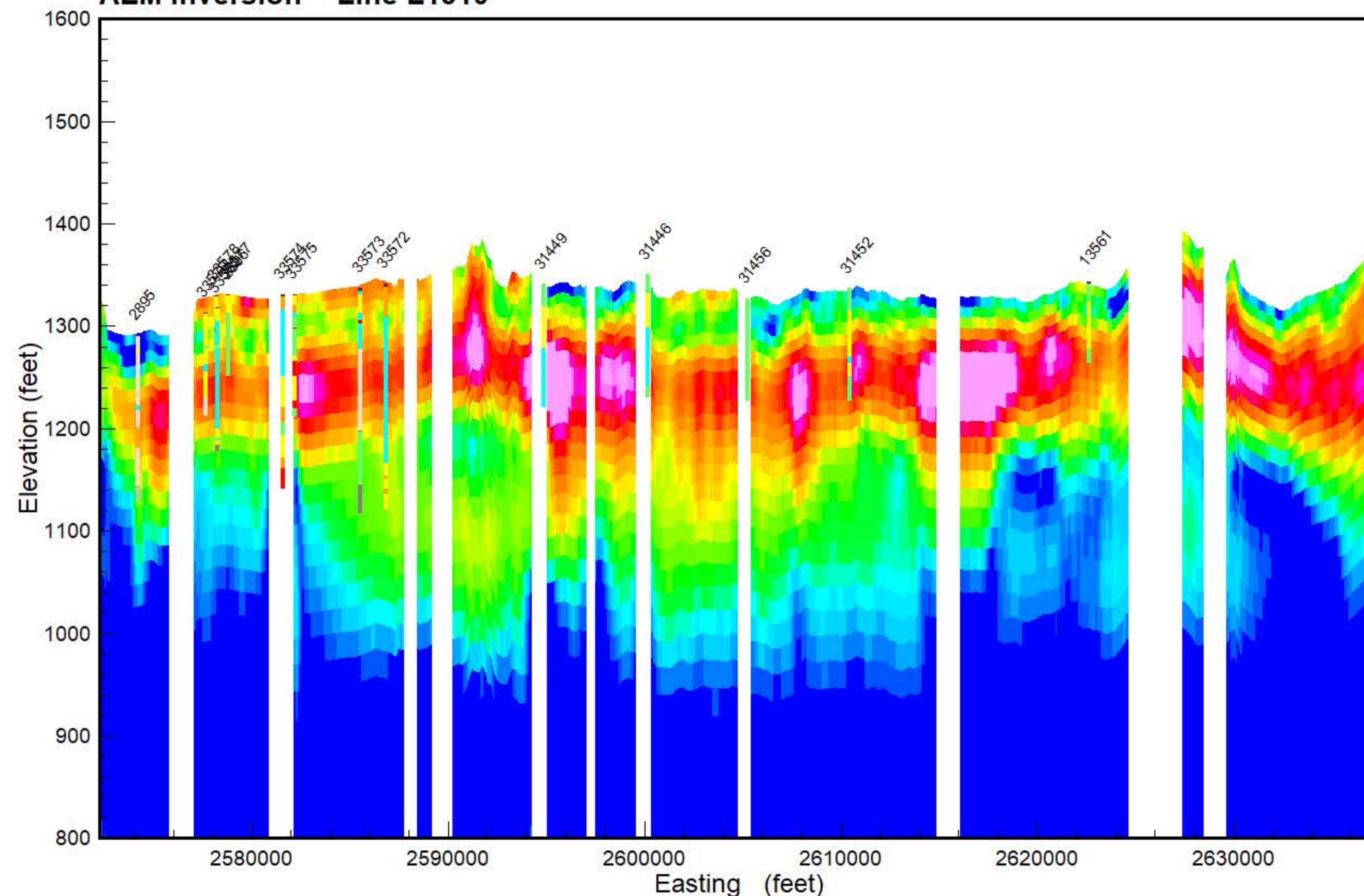
**Flight Path Line L1310**



**Spiritwood South Flight Area**



**AEM Inversion Line L1310**



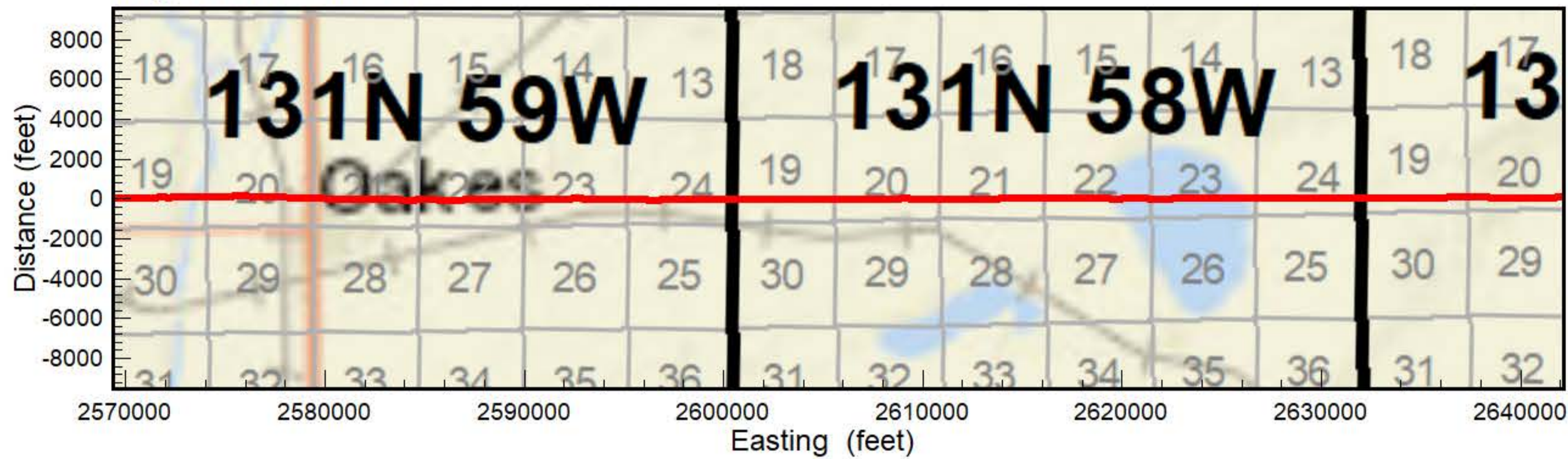
- PEAT
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
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- CLAYSTONE
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- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

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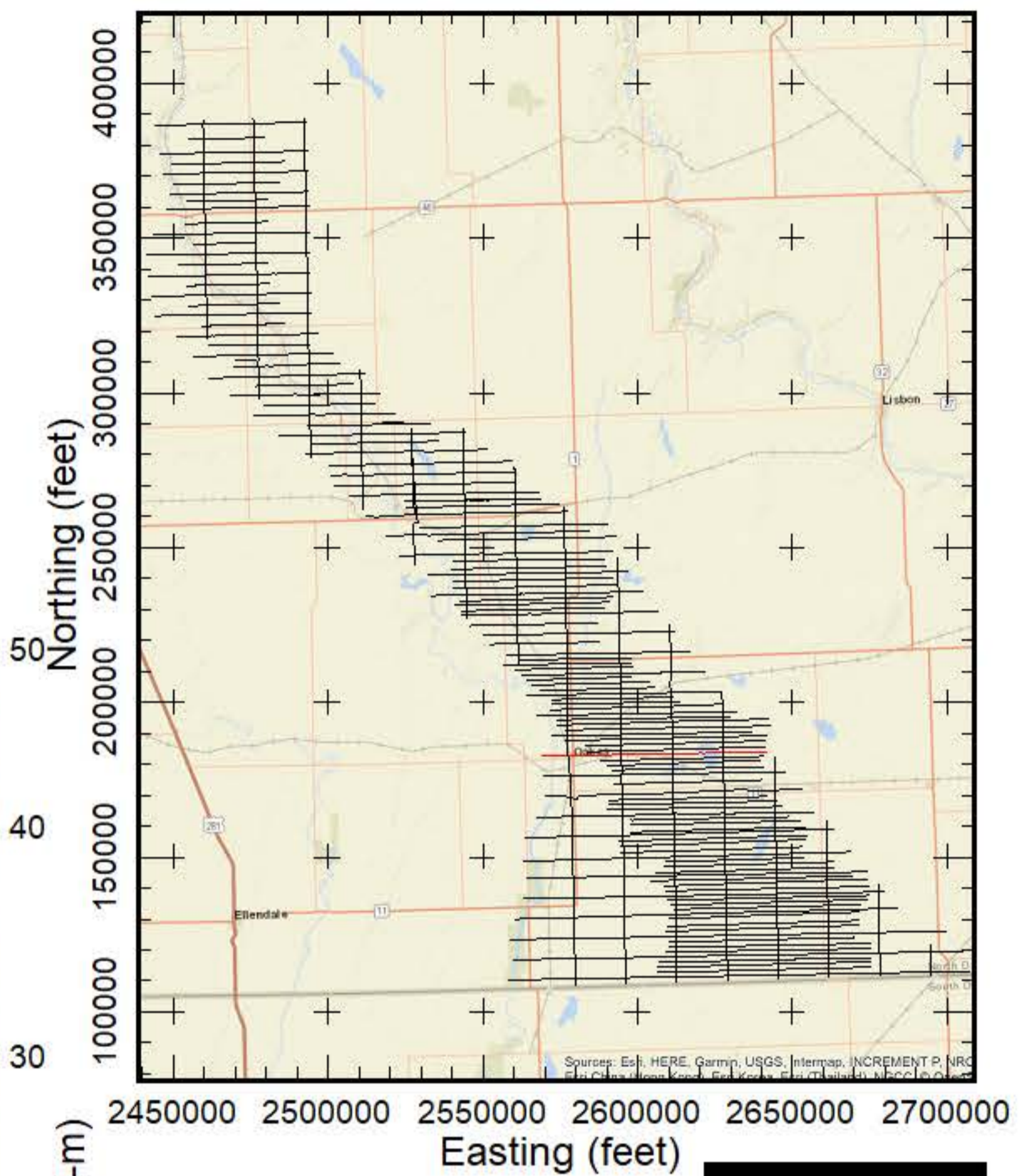




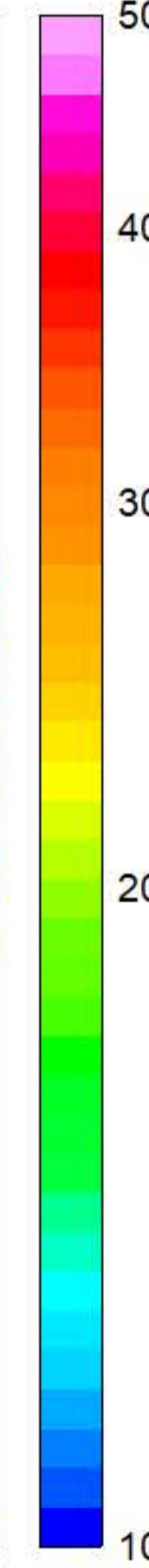
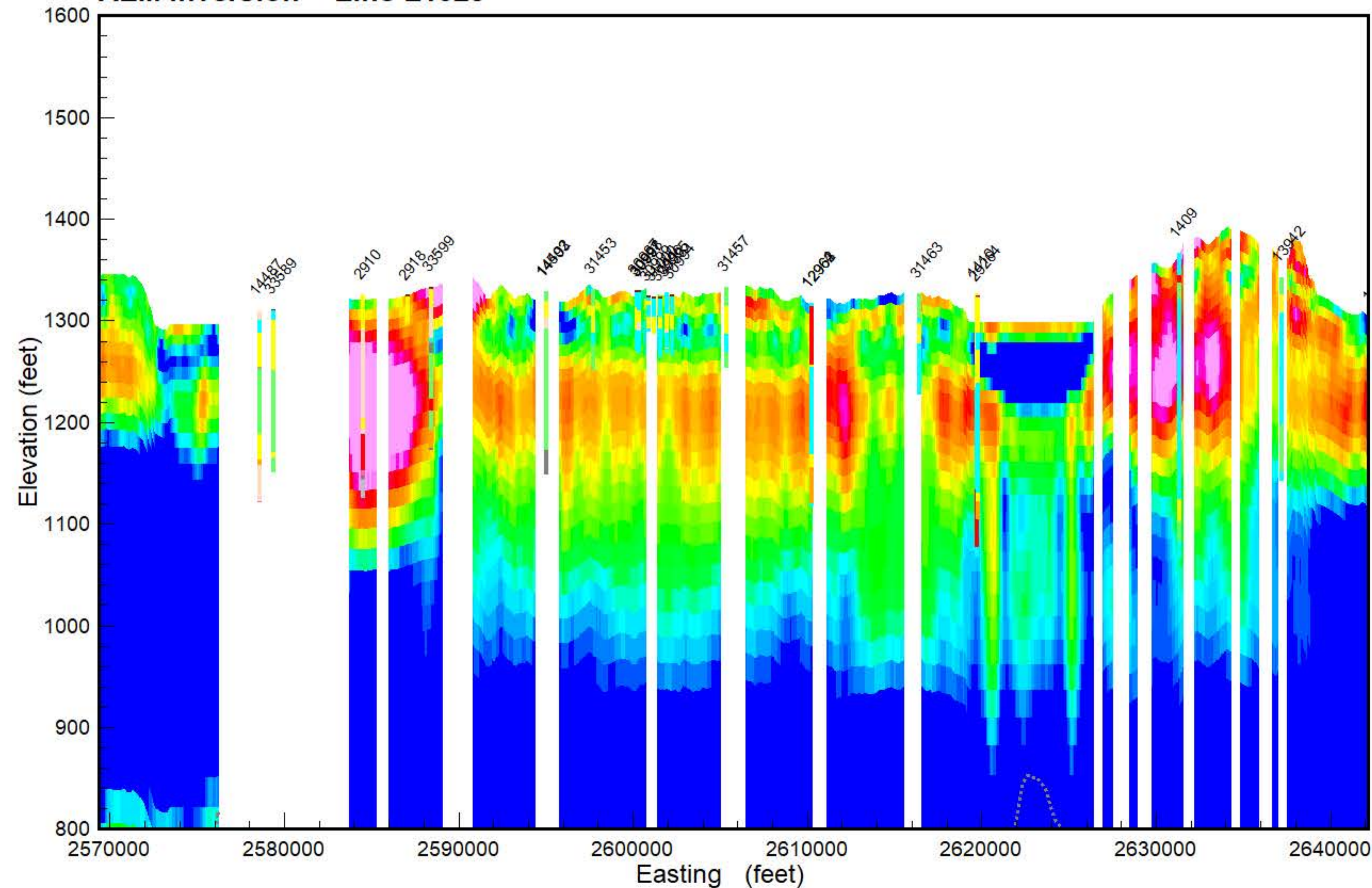
**Flight Path Line L1325**



**Spiritwood South Flight Area**



**AEM Inversion Line L1325**



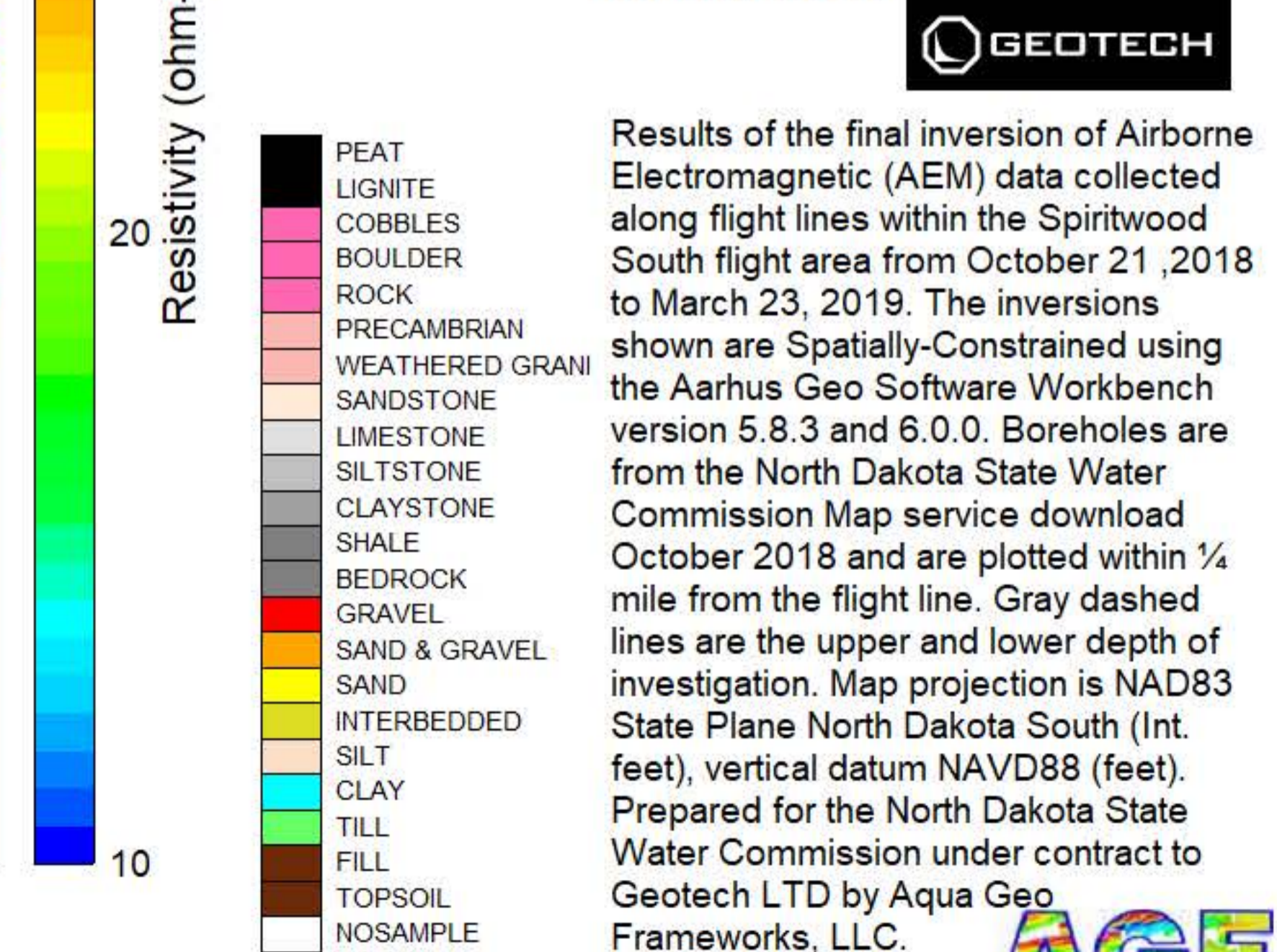
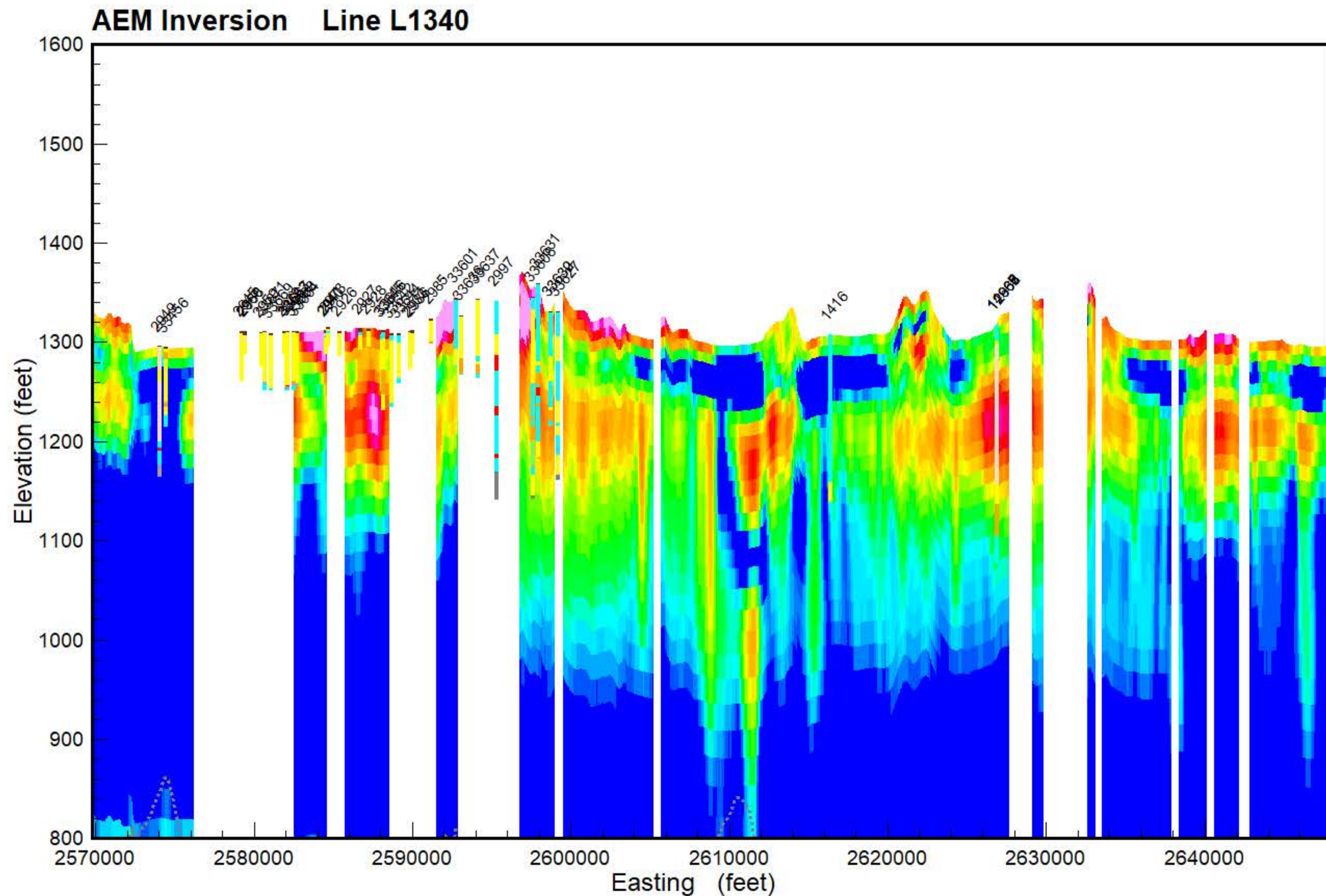
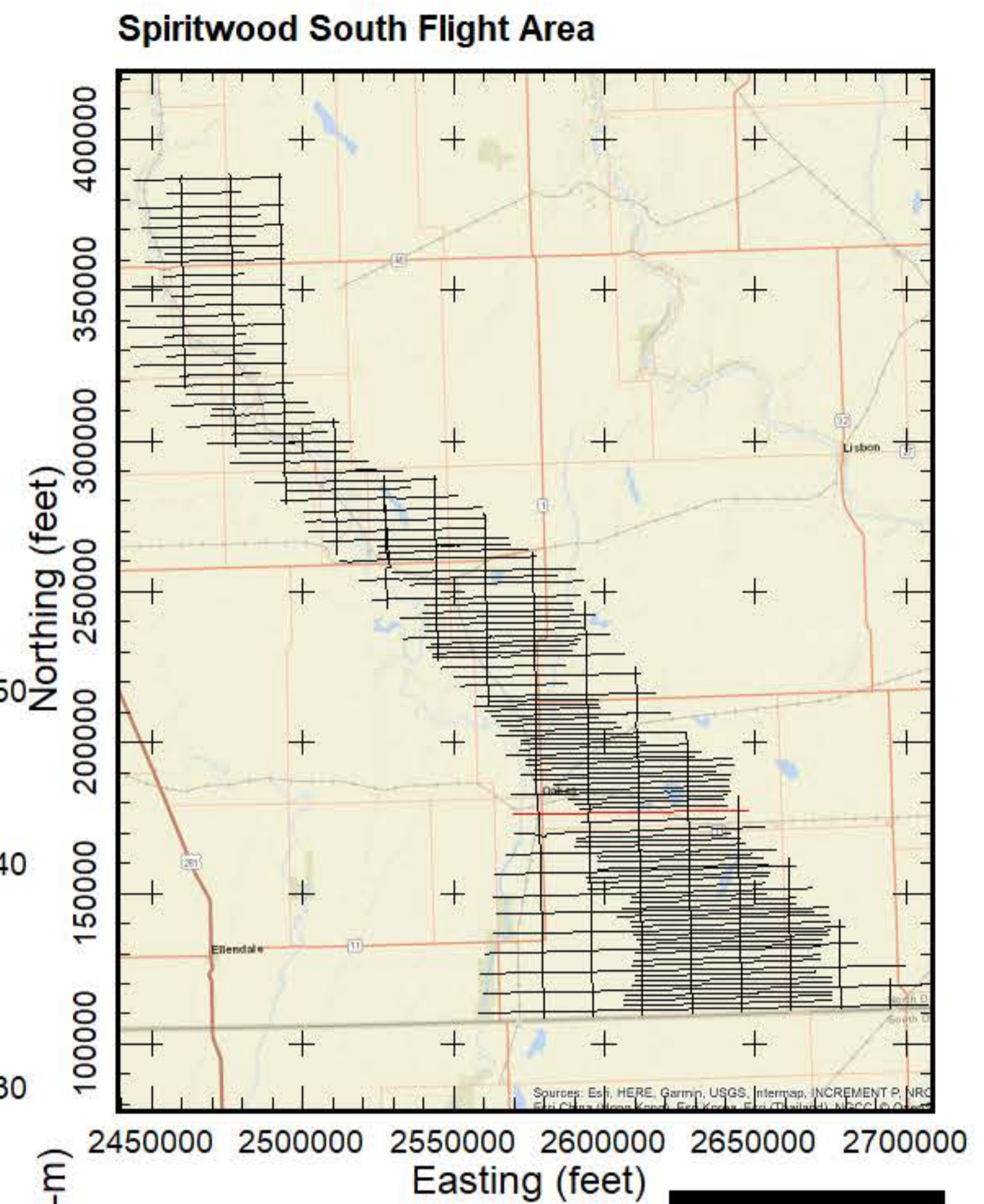
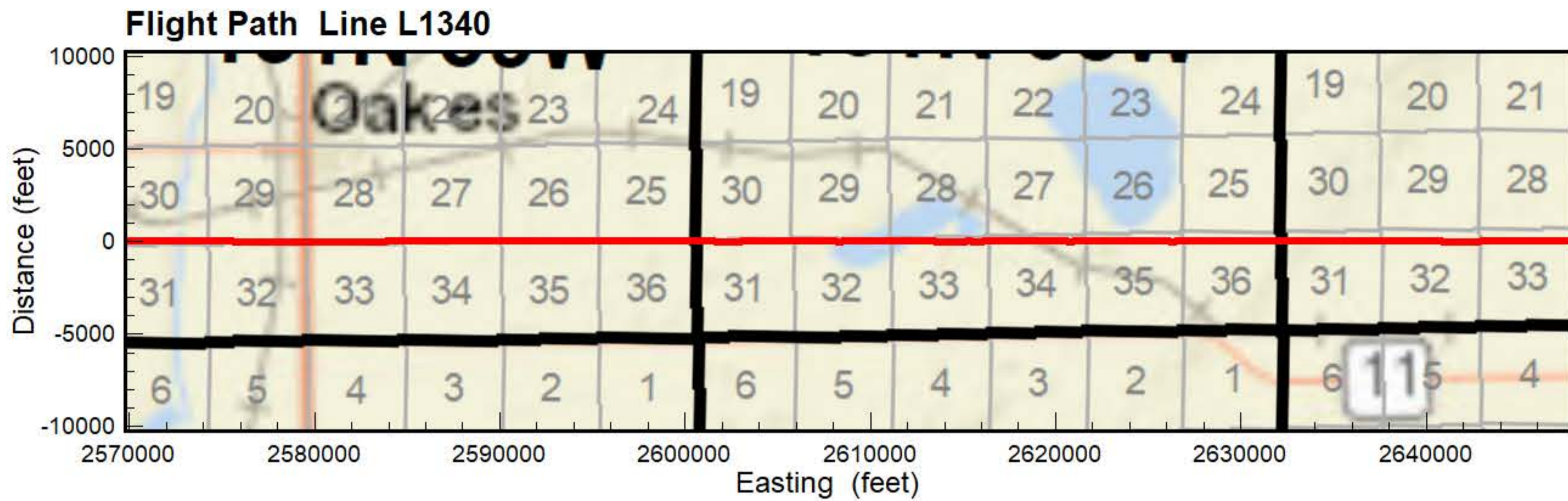
**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
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- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

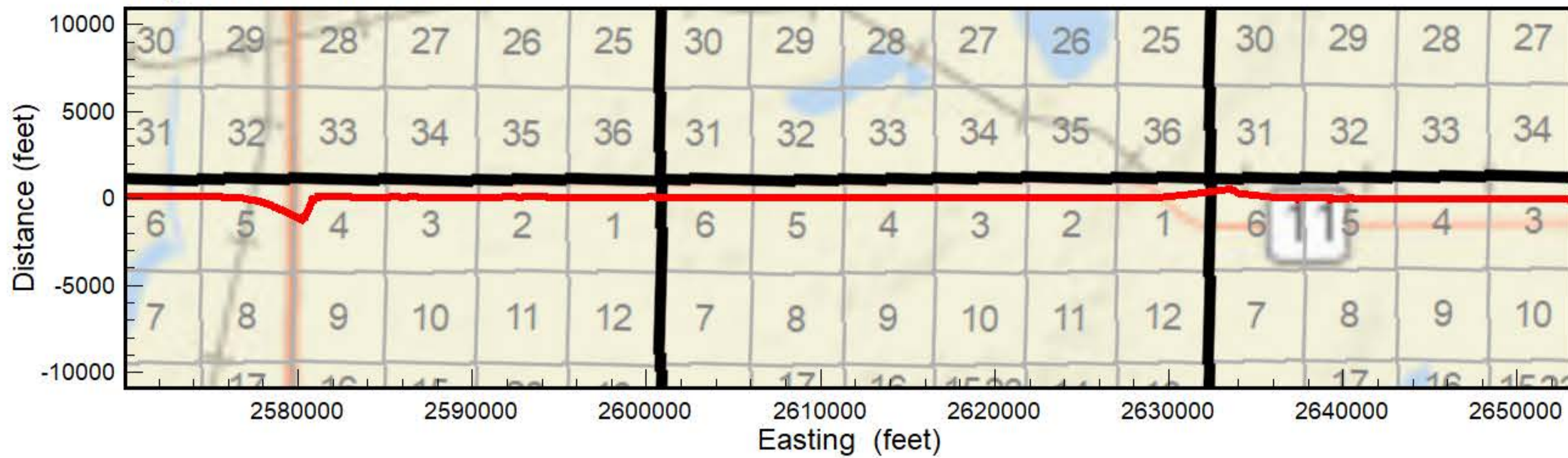
**AGF**  
Aqua Geo Frameworks



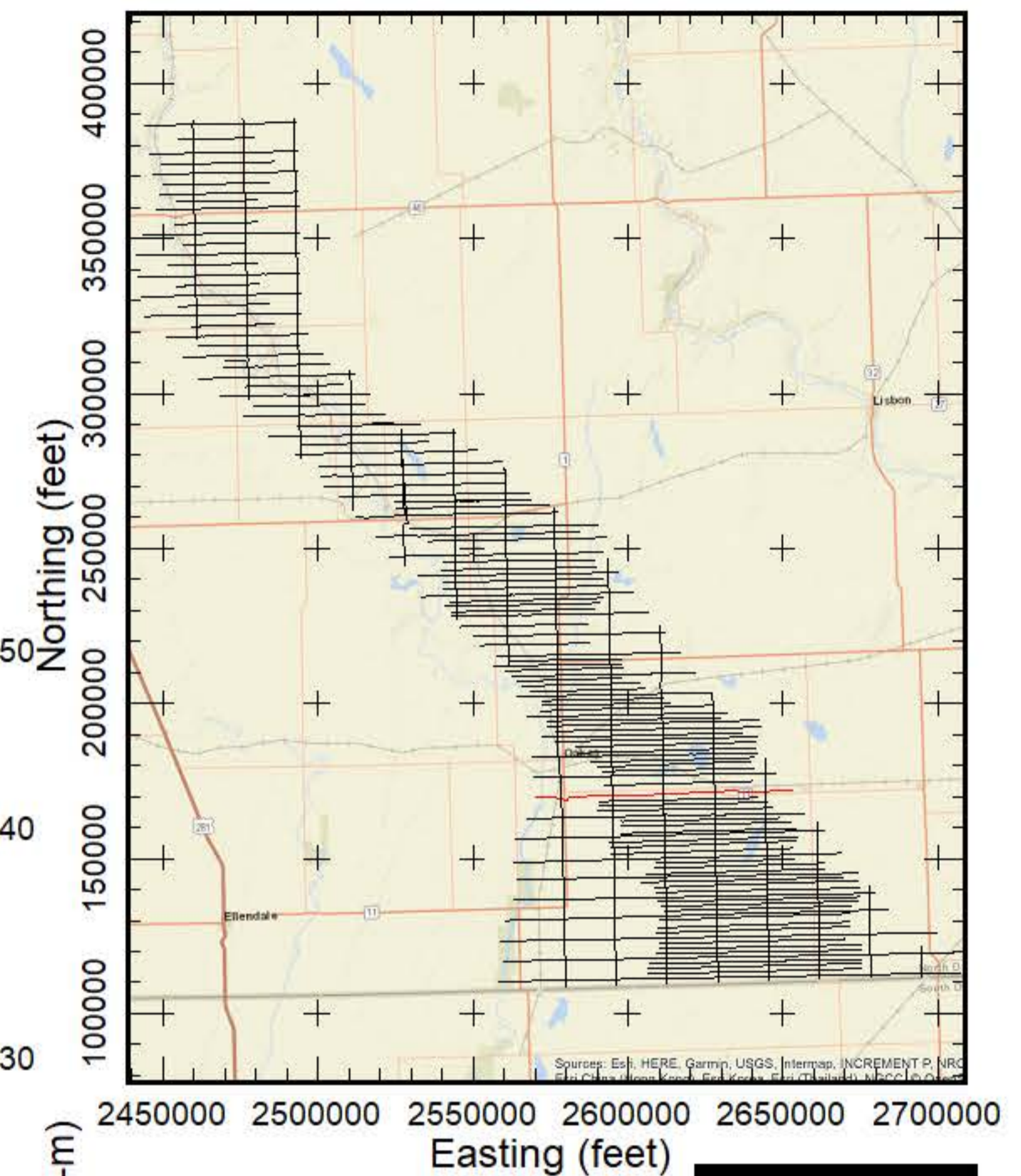




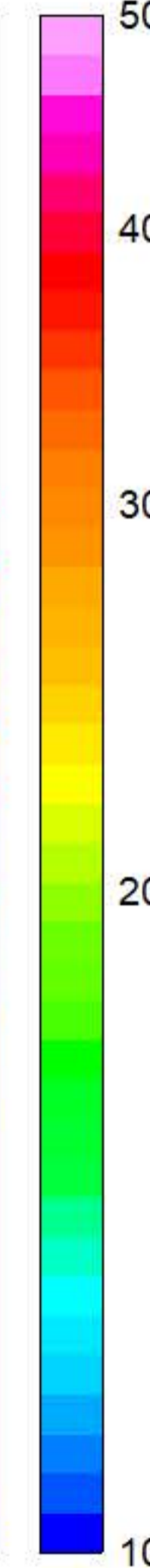
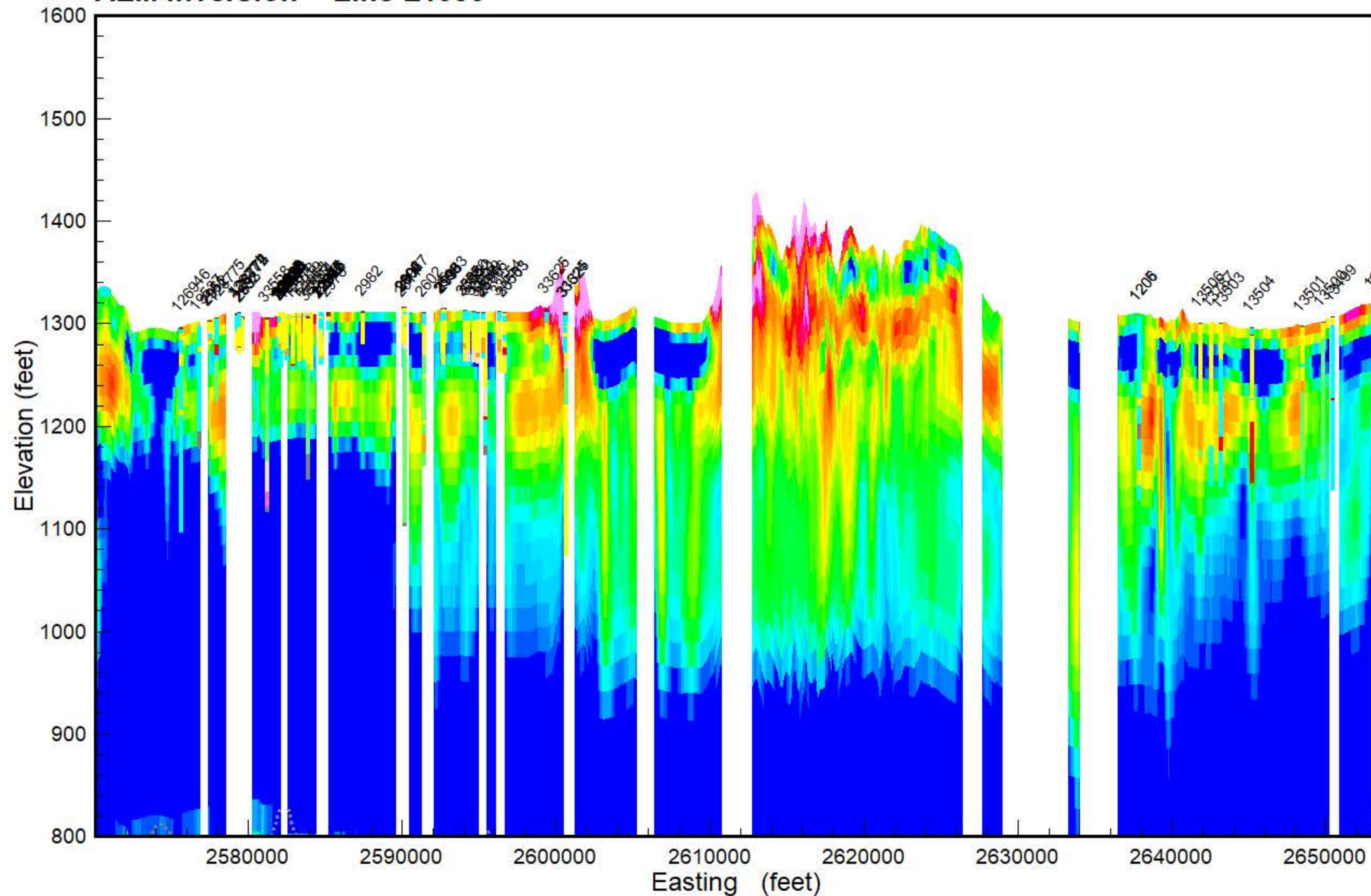
**Flight Path Line L1350**



**Spiritwood South Flight Area**



**AEM Inversion Line L1350**



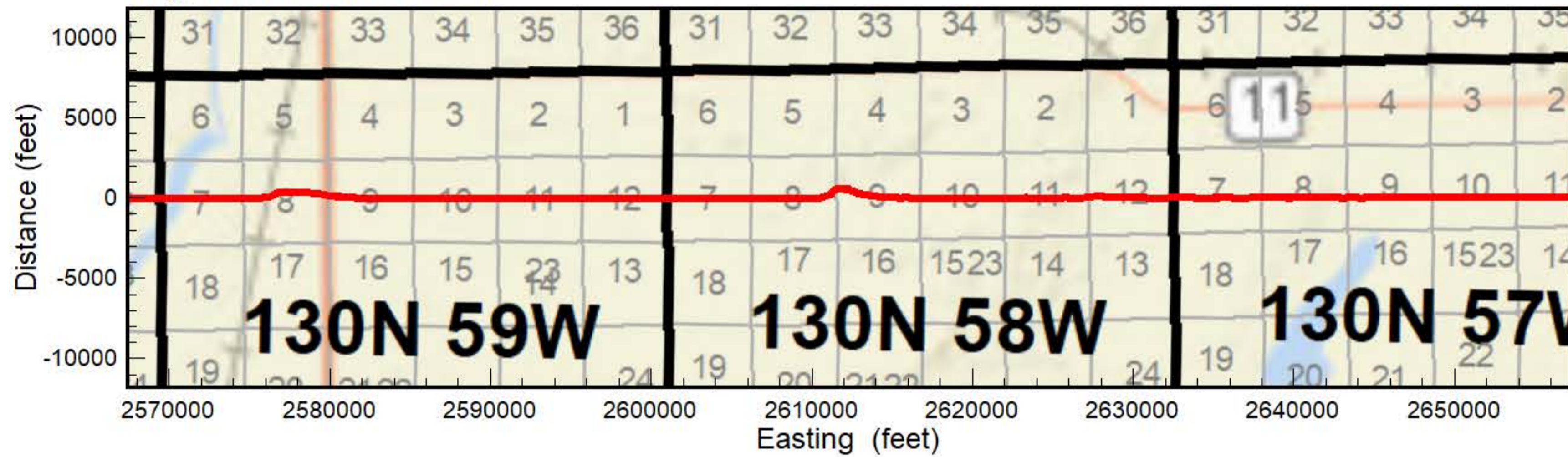
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- SILTSTONE
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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

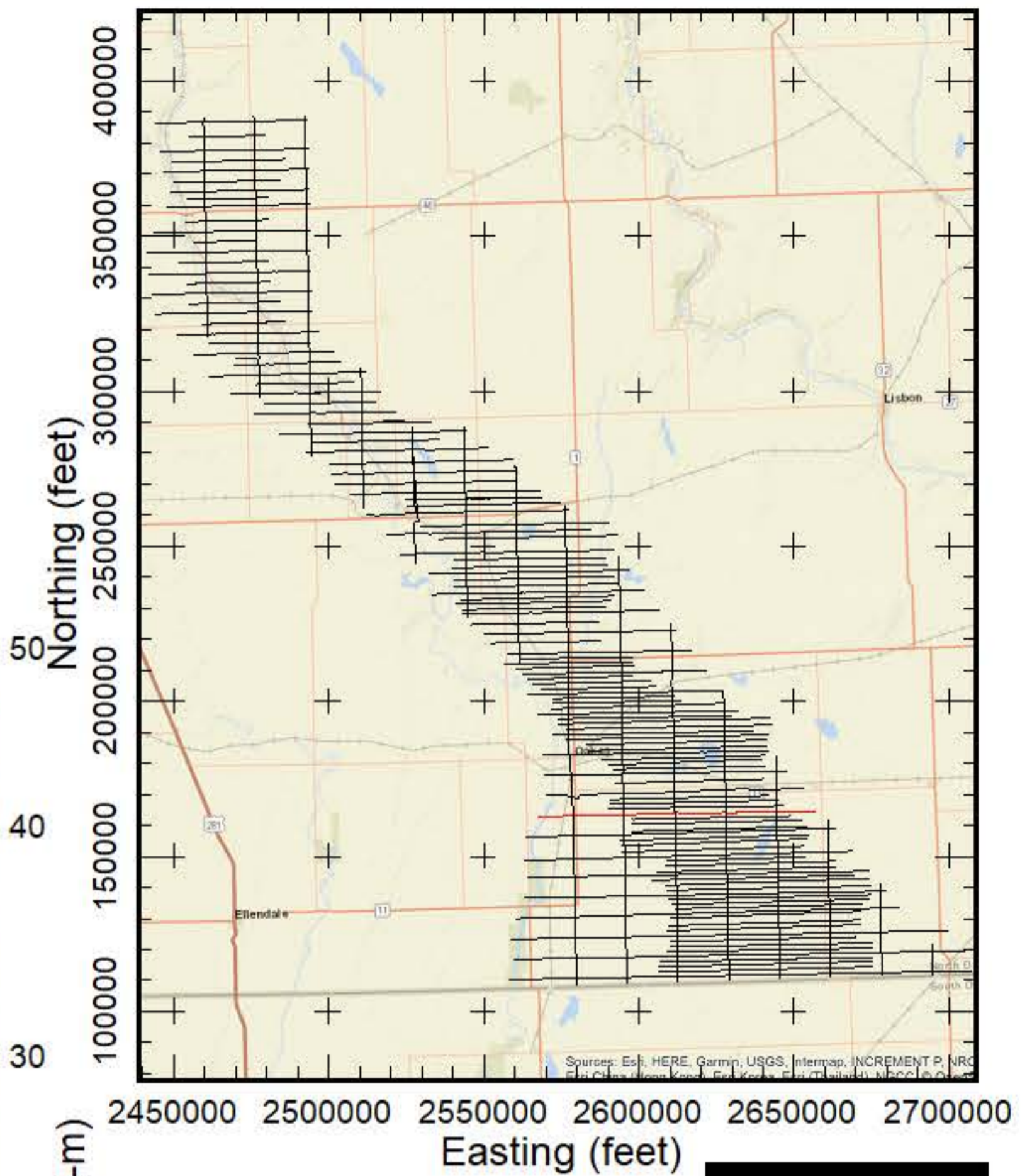




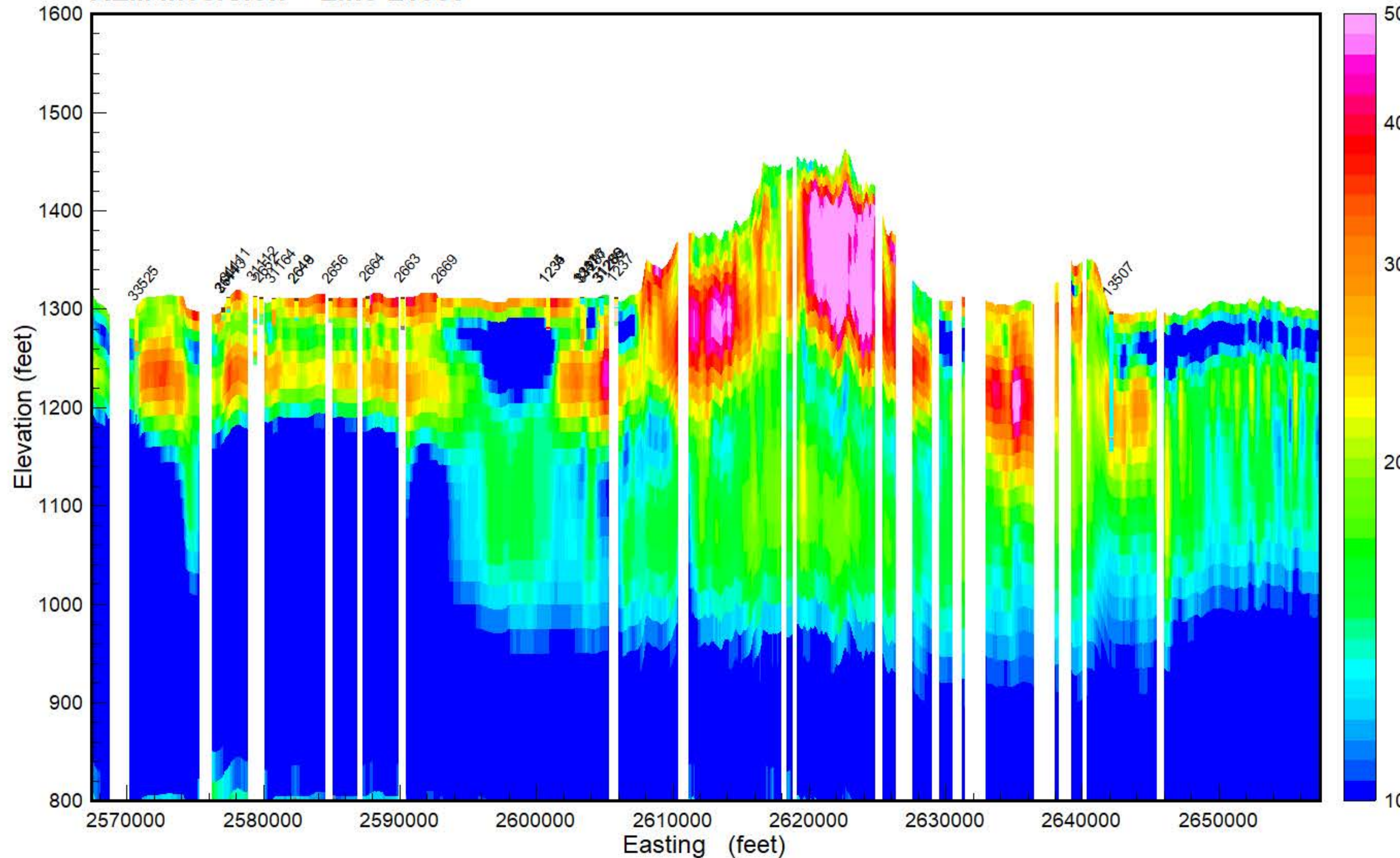
**Flight Path Line L1360**



**Spiritwood South Flight Area**



**AEM Inversion Line L1360**



**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

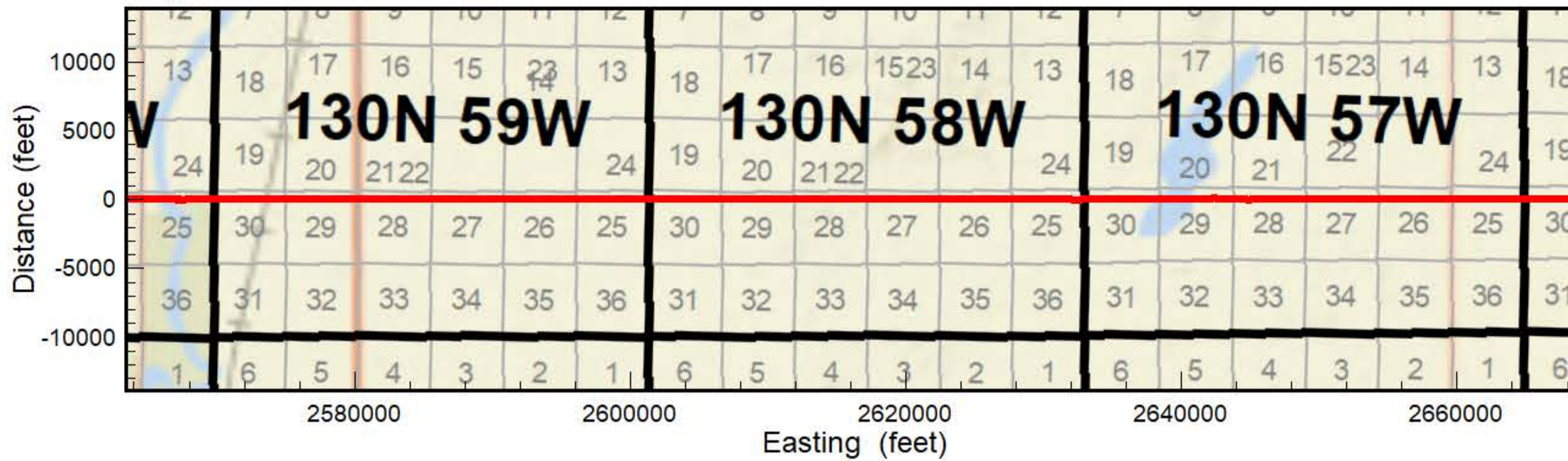
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- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
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- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
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- SAND & GRAVEL
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- TILL
- FILL
- TOPSOIL
- NOSAMPLE



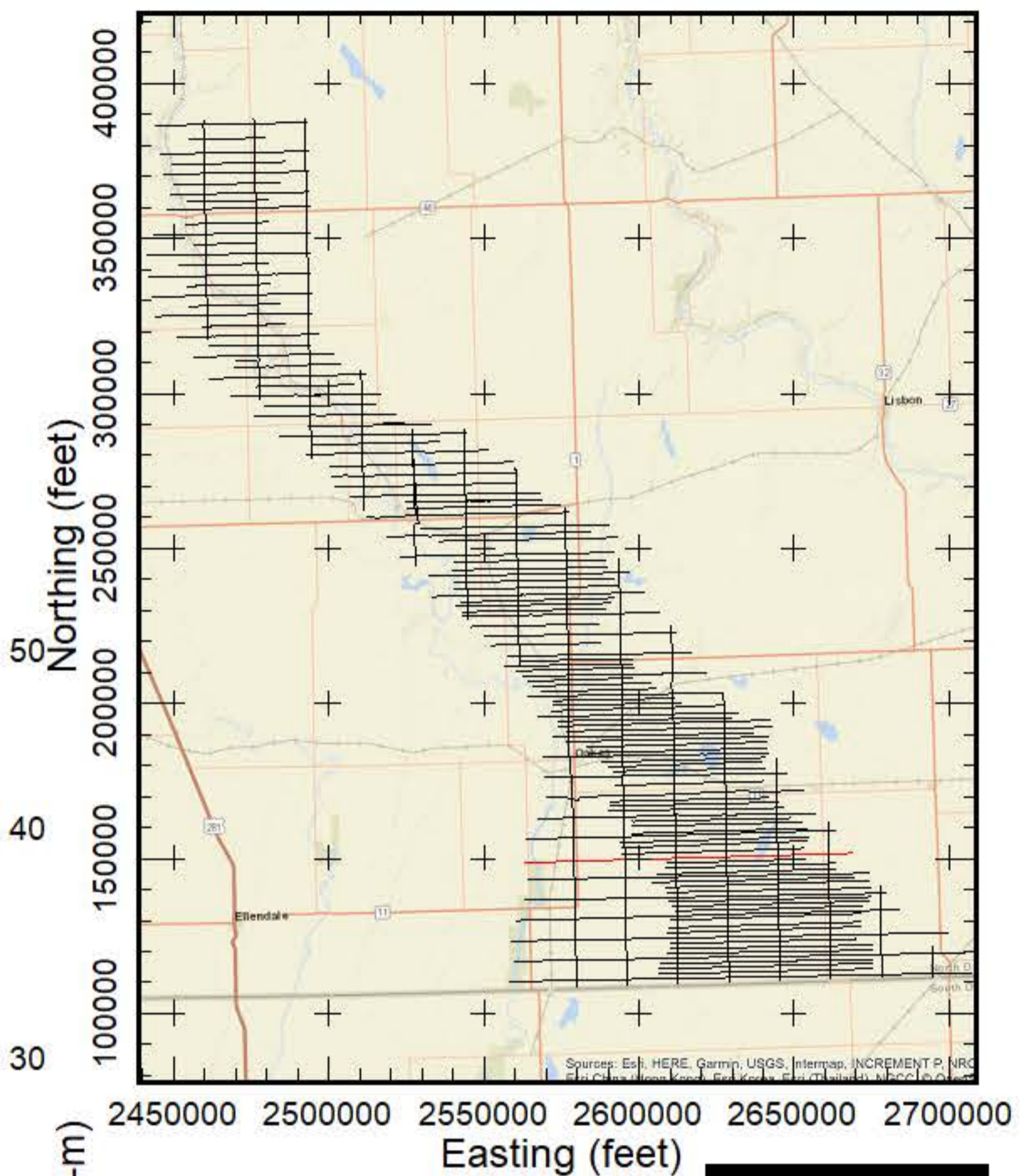




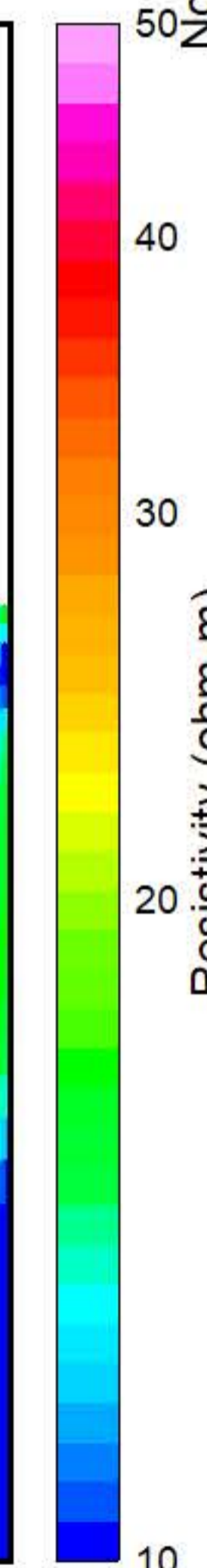
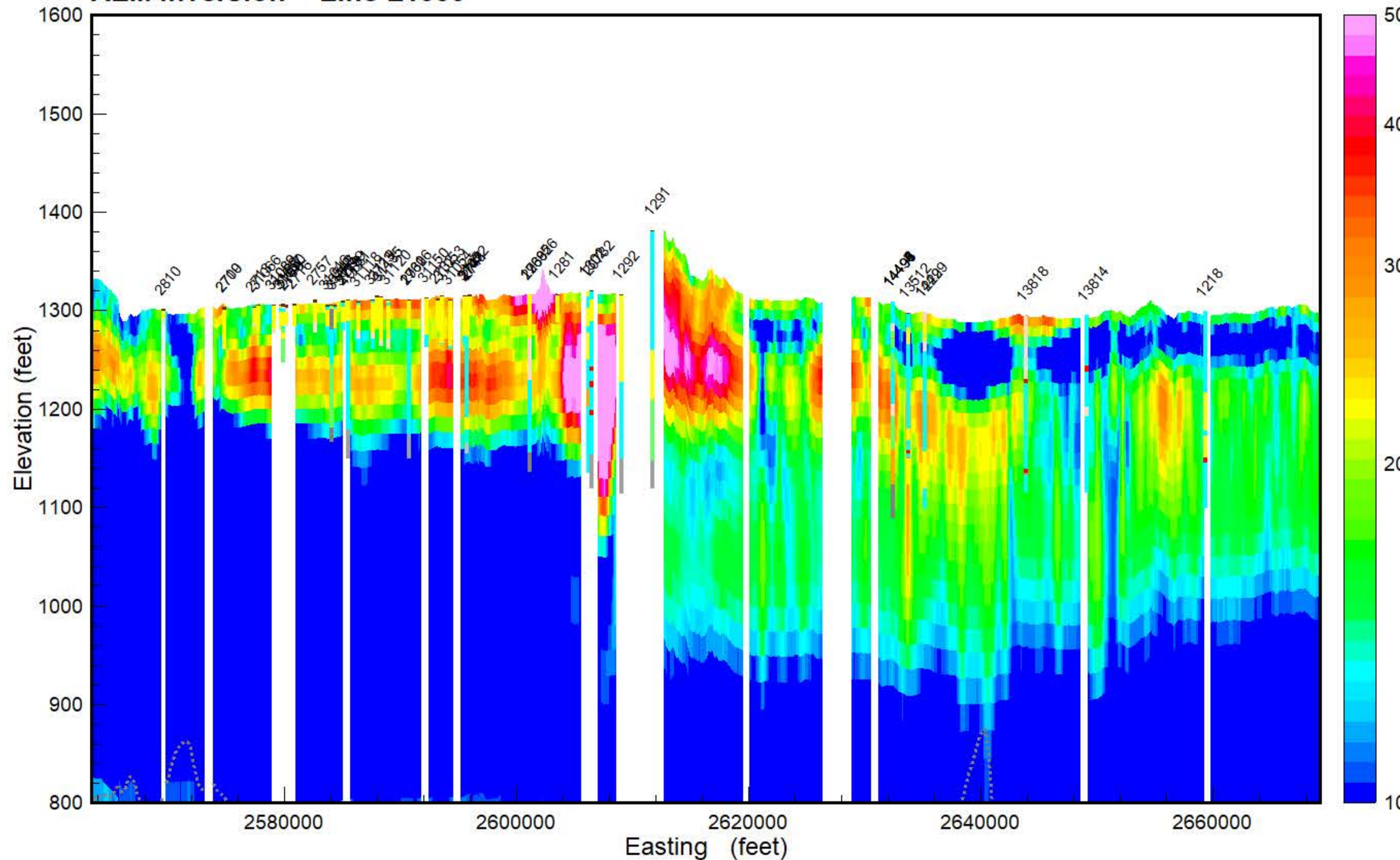
**Flight Path Line L1380**



**Spiritwood South Flight Area**



**AEM Inversion Line L1380**



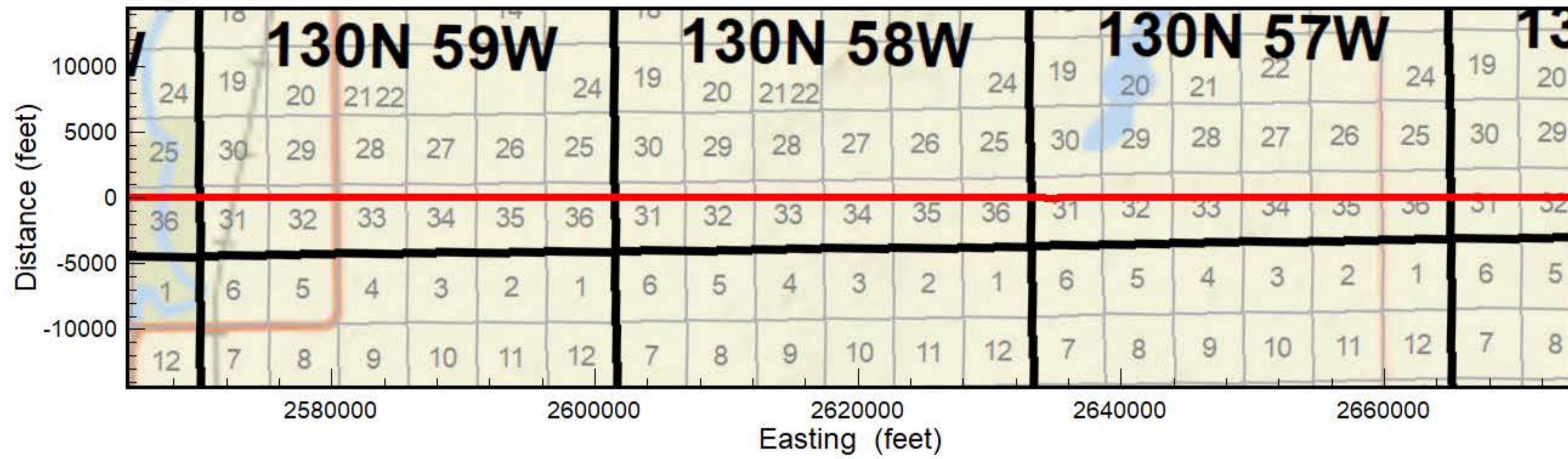
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
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- SAND & GRAVEL
- SAND
- INTERBEDDED
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- CLAY
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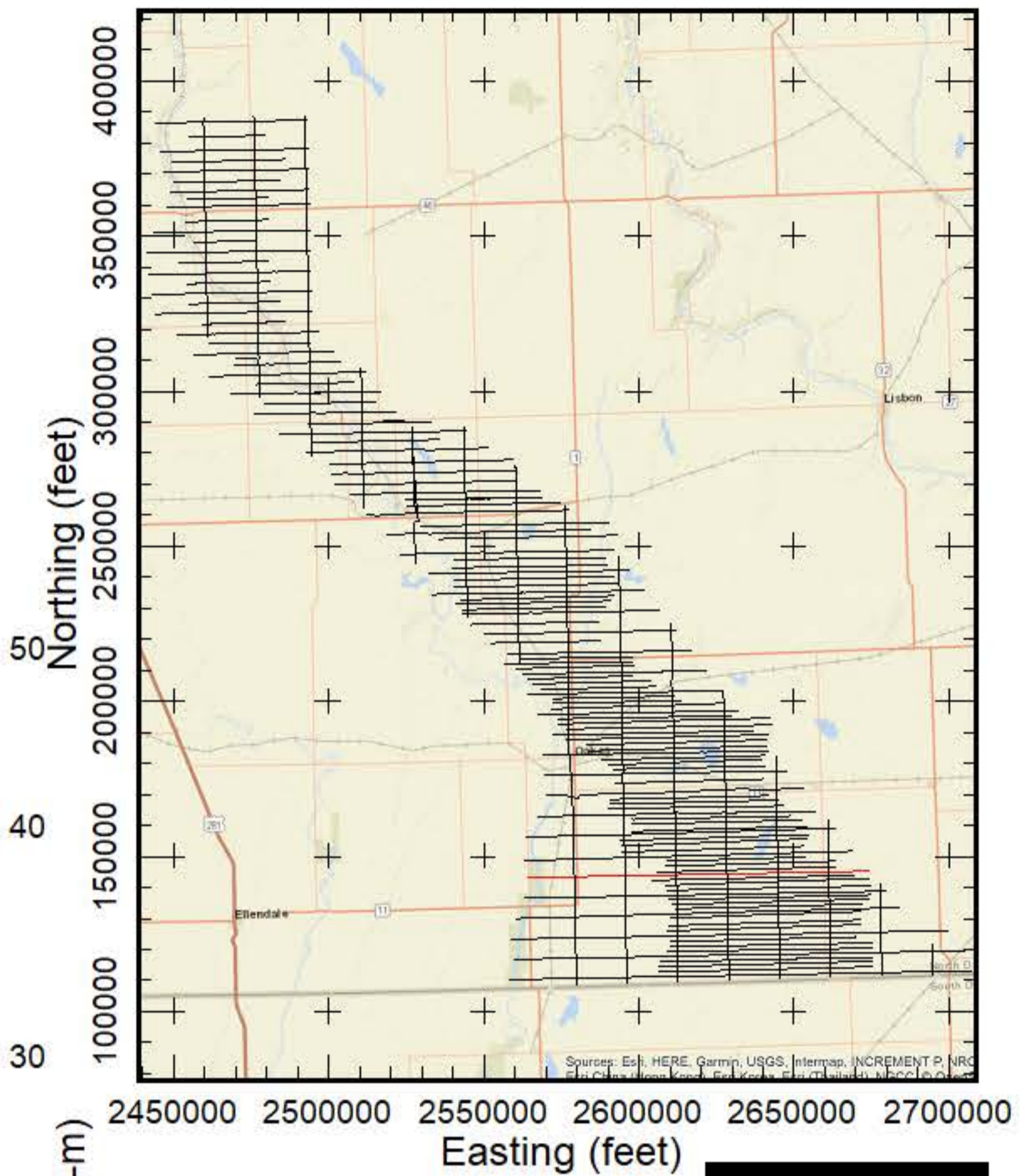




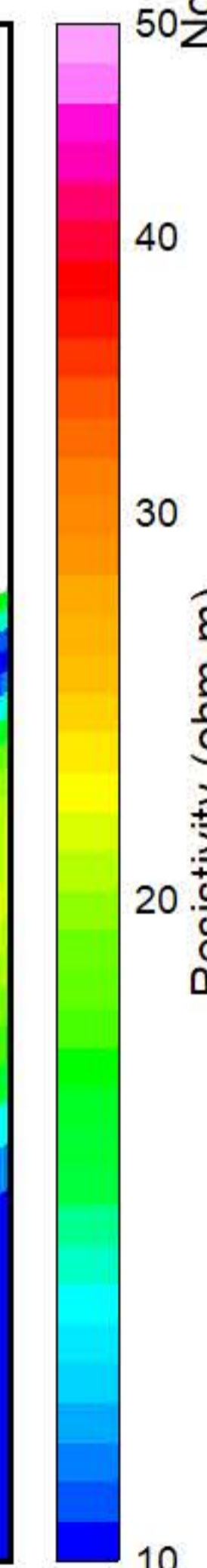
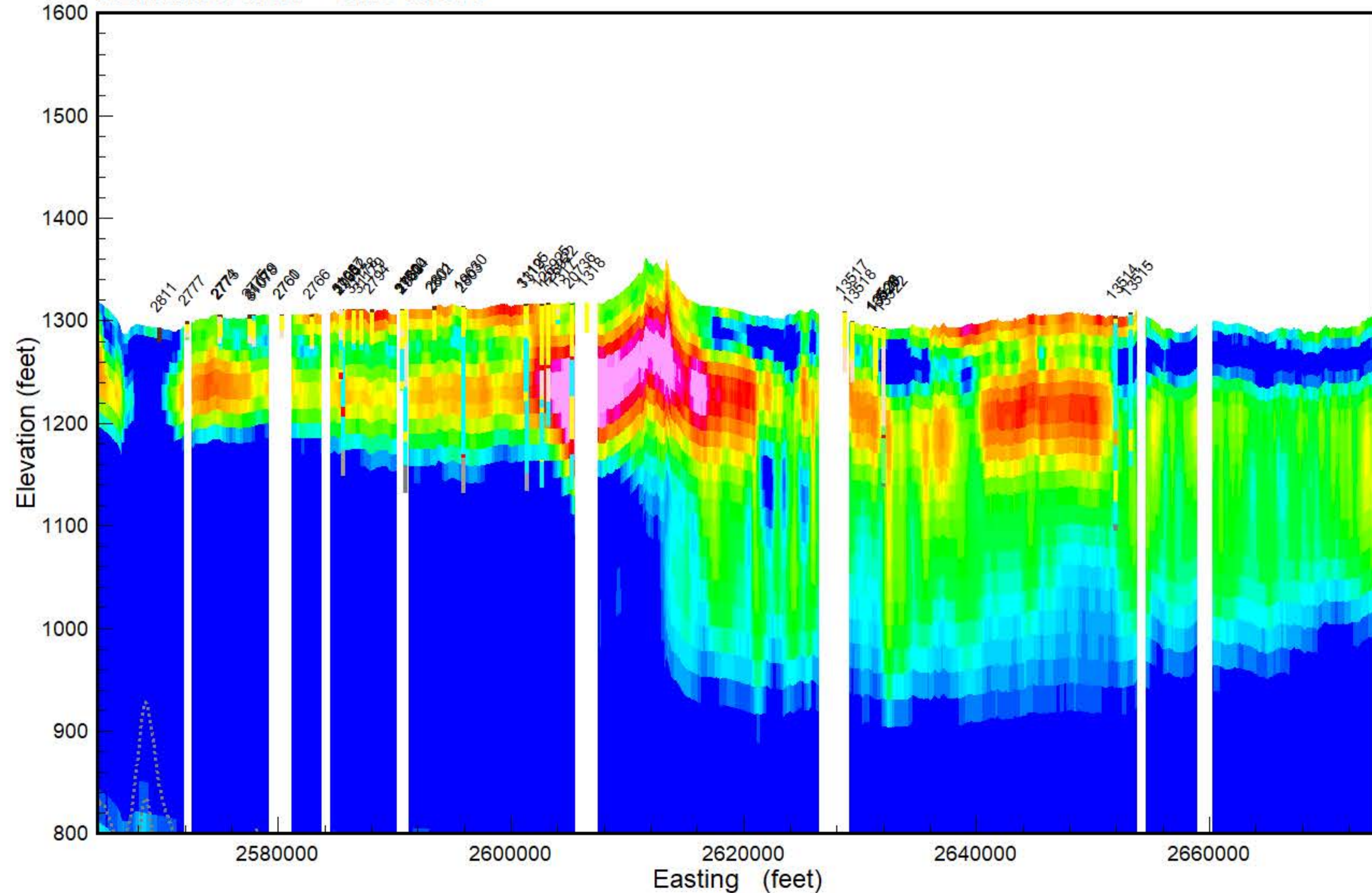
**Flight Path Line L1390**



**Spiritwood South Flight Area**



**AEM Inversion Line L1390**

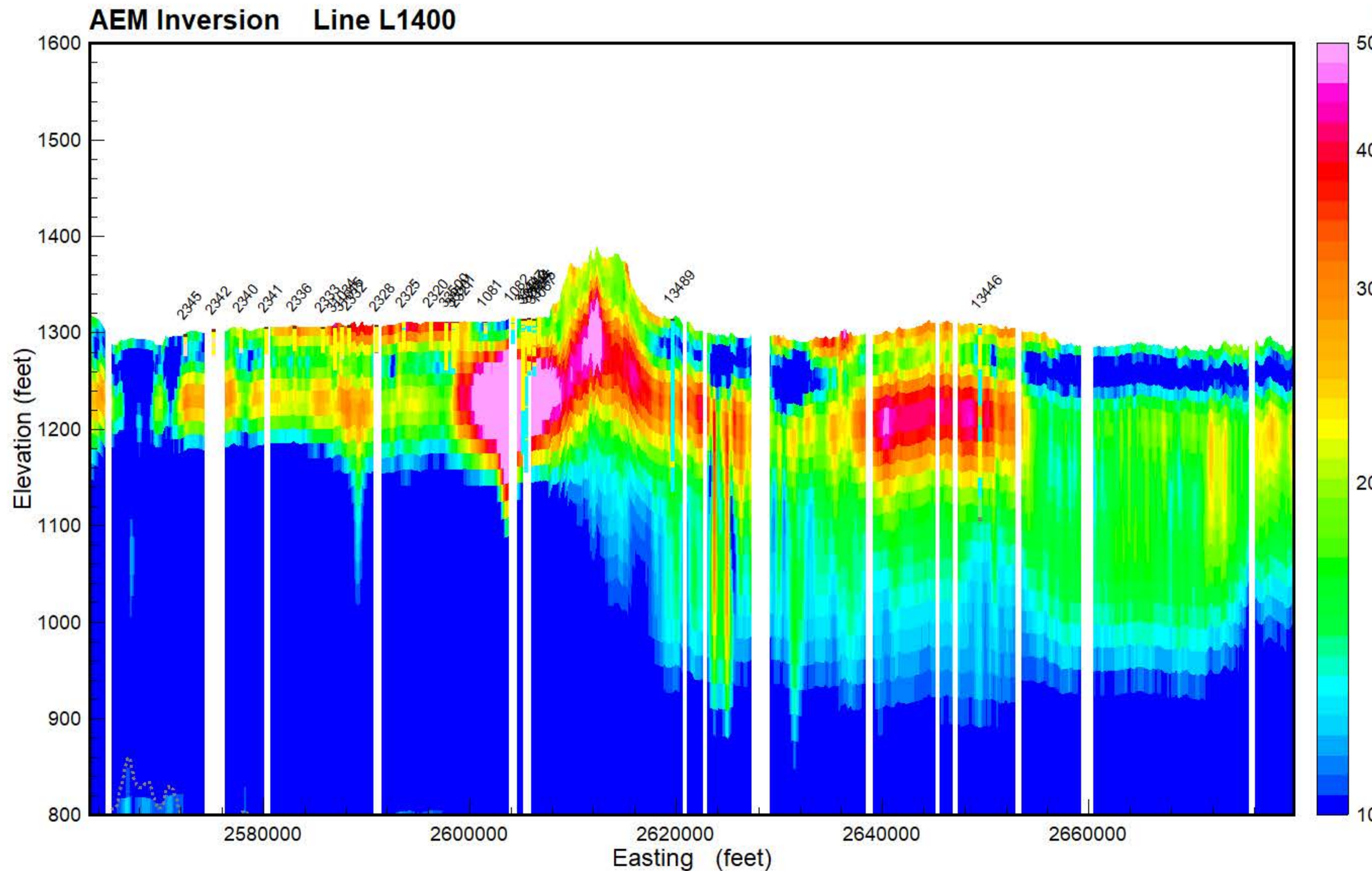
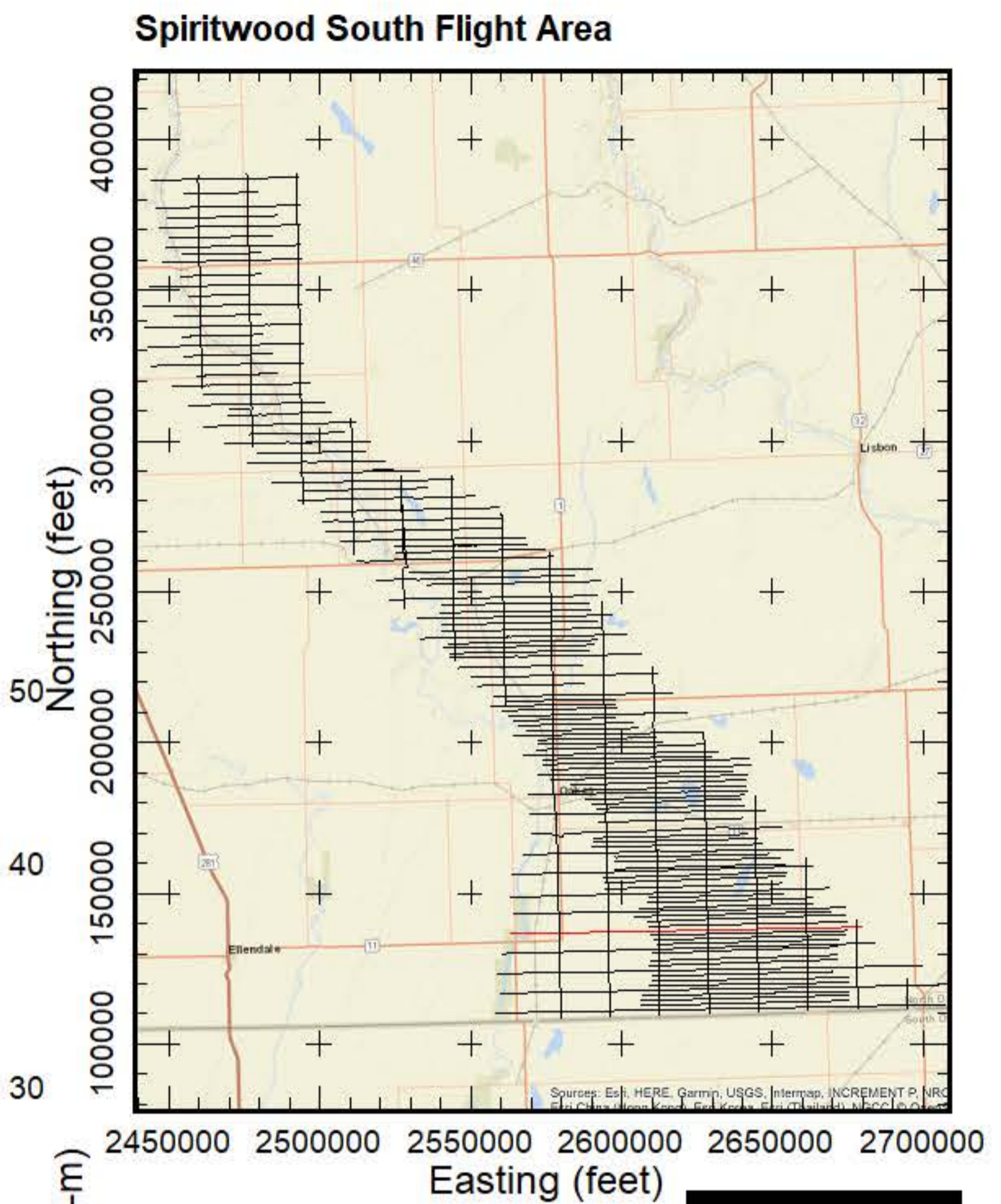
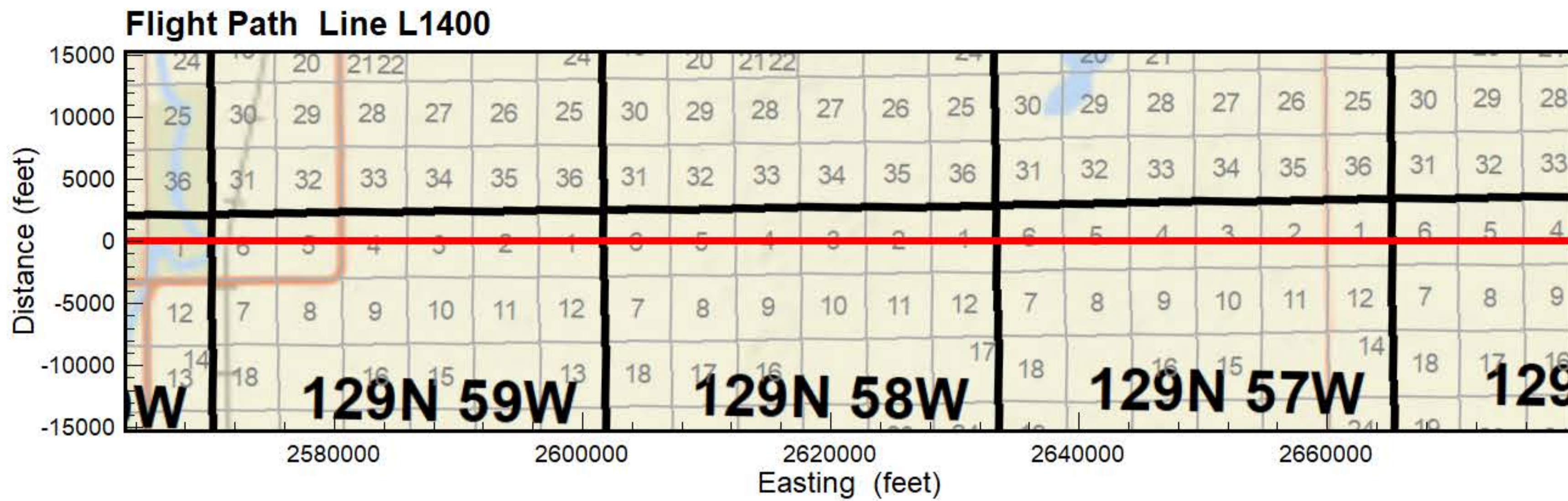


- PEAT
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
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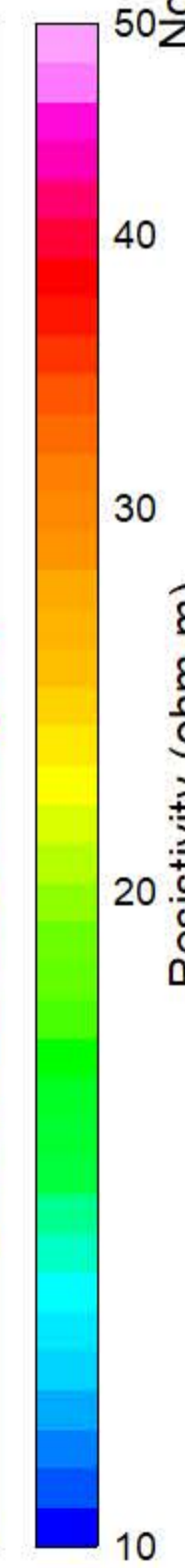
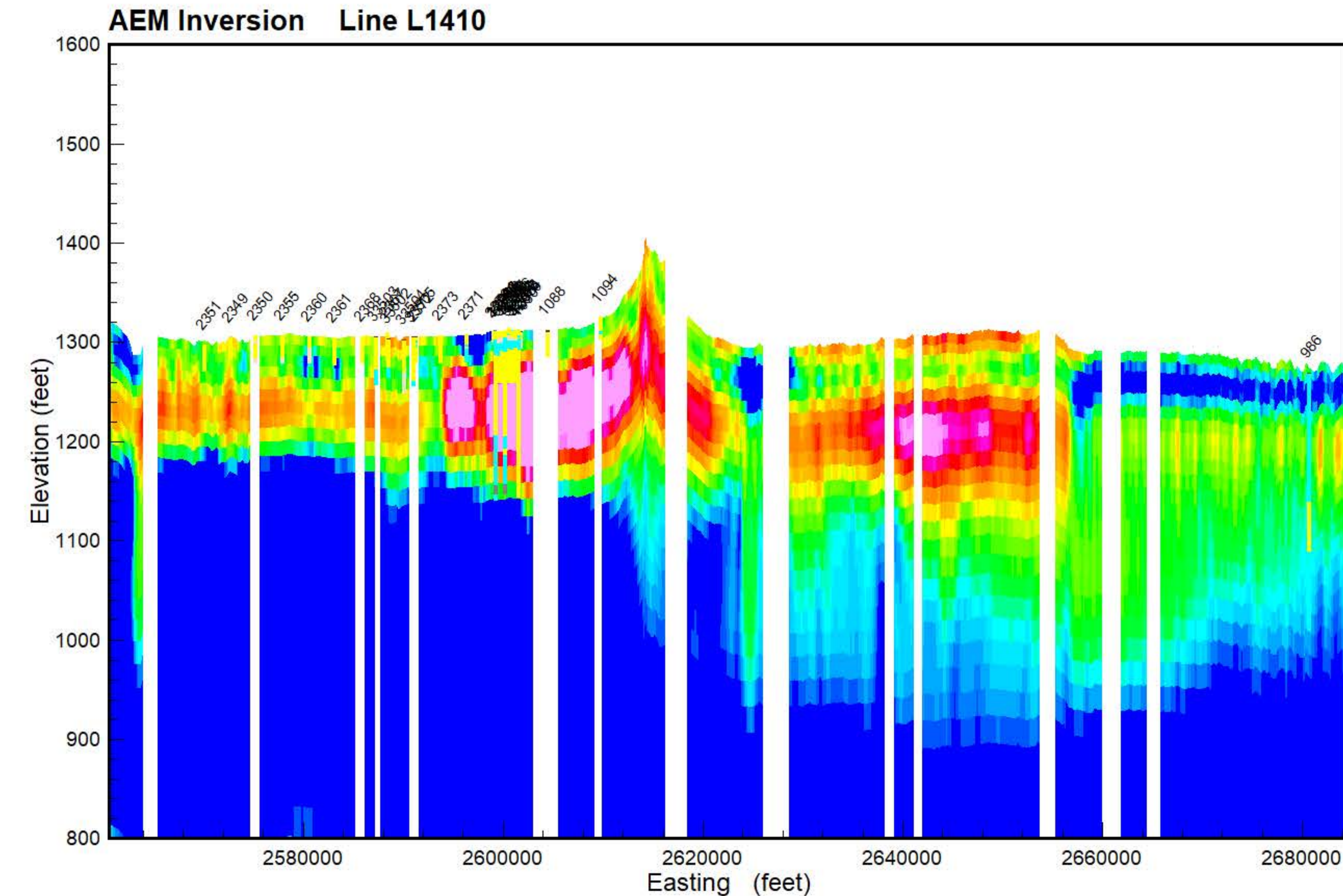
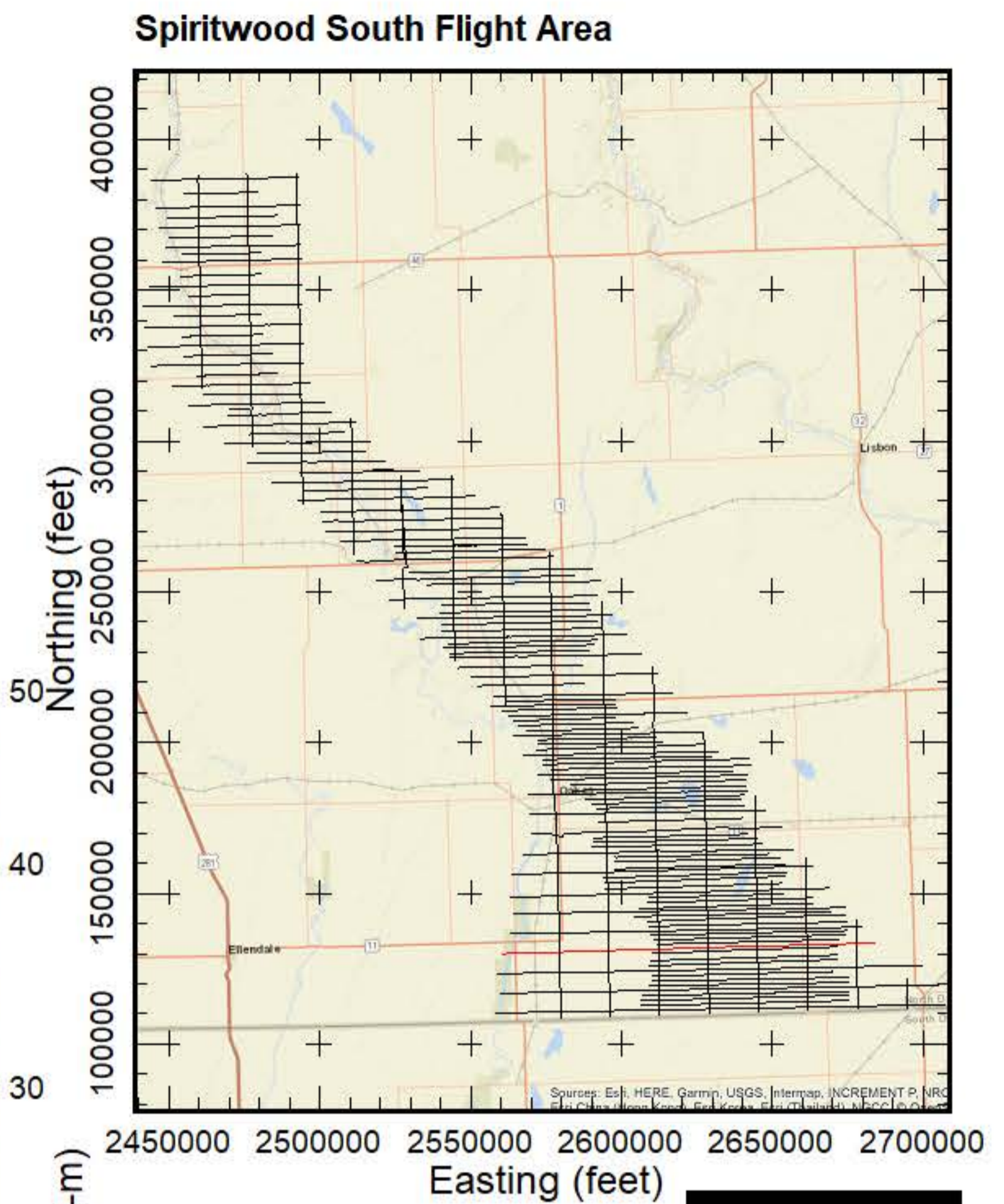
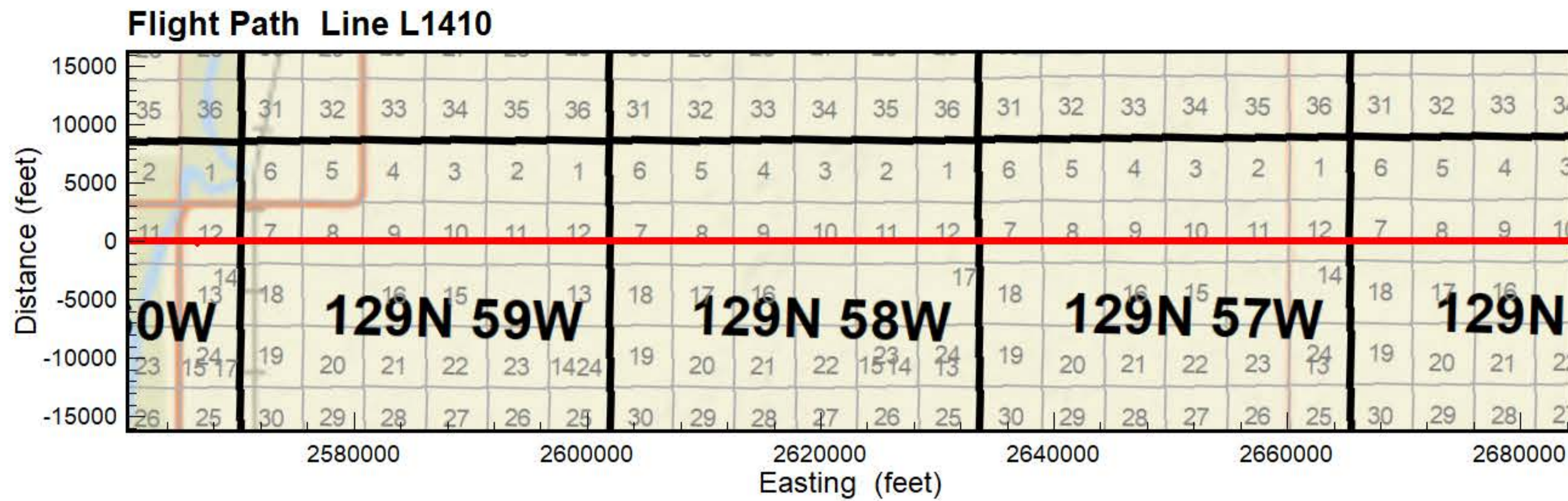


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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). 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 Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

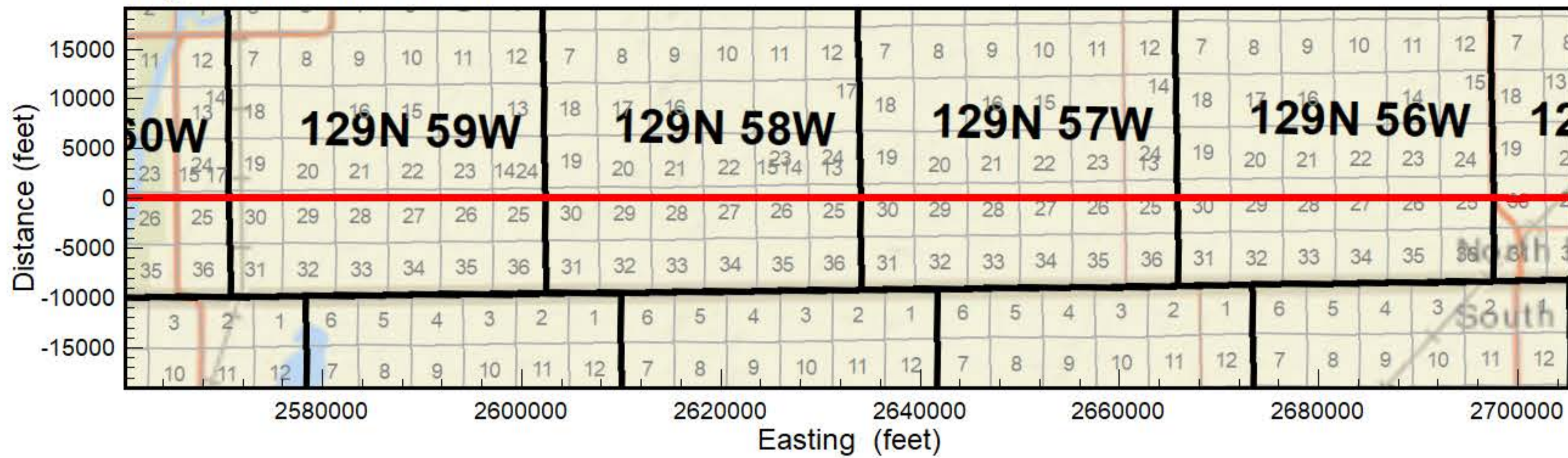




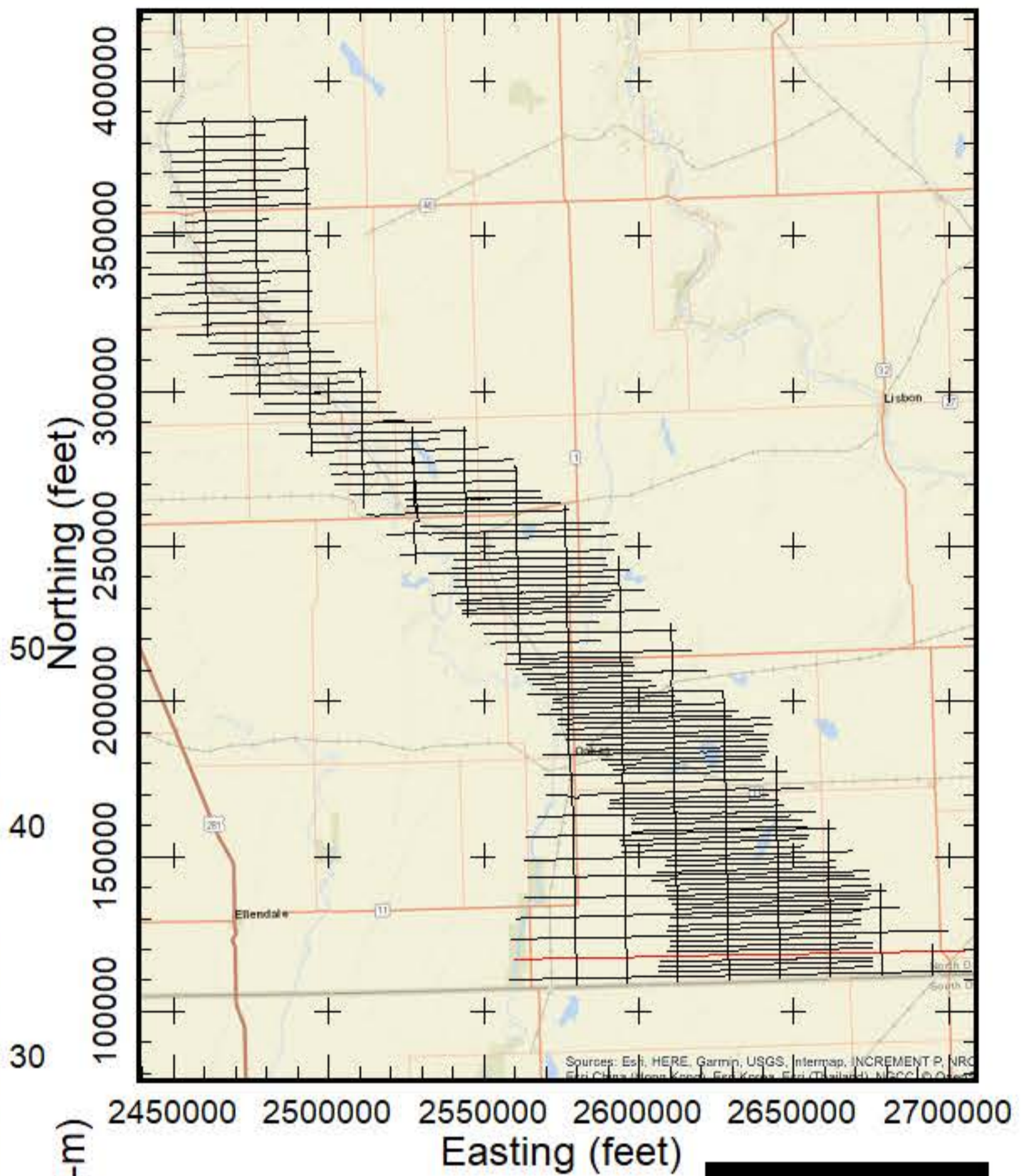




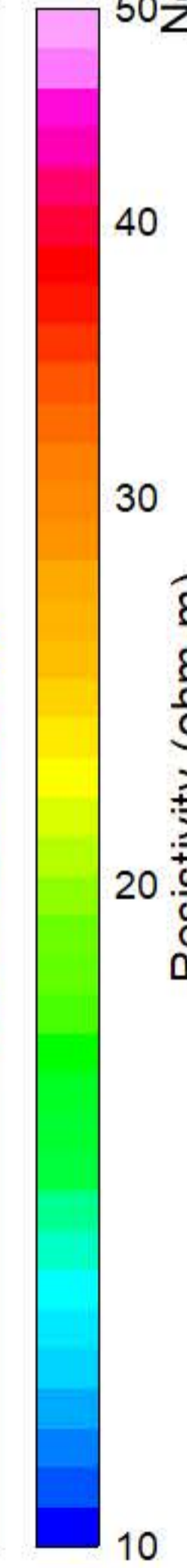
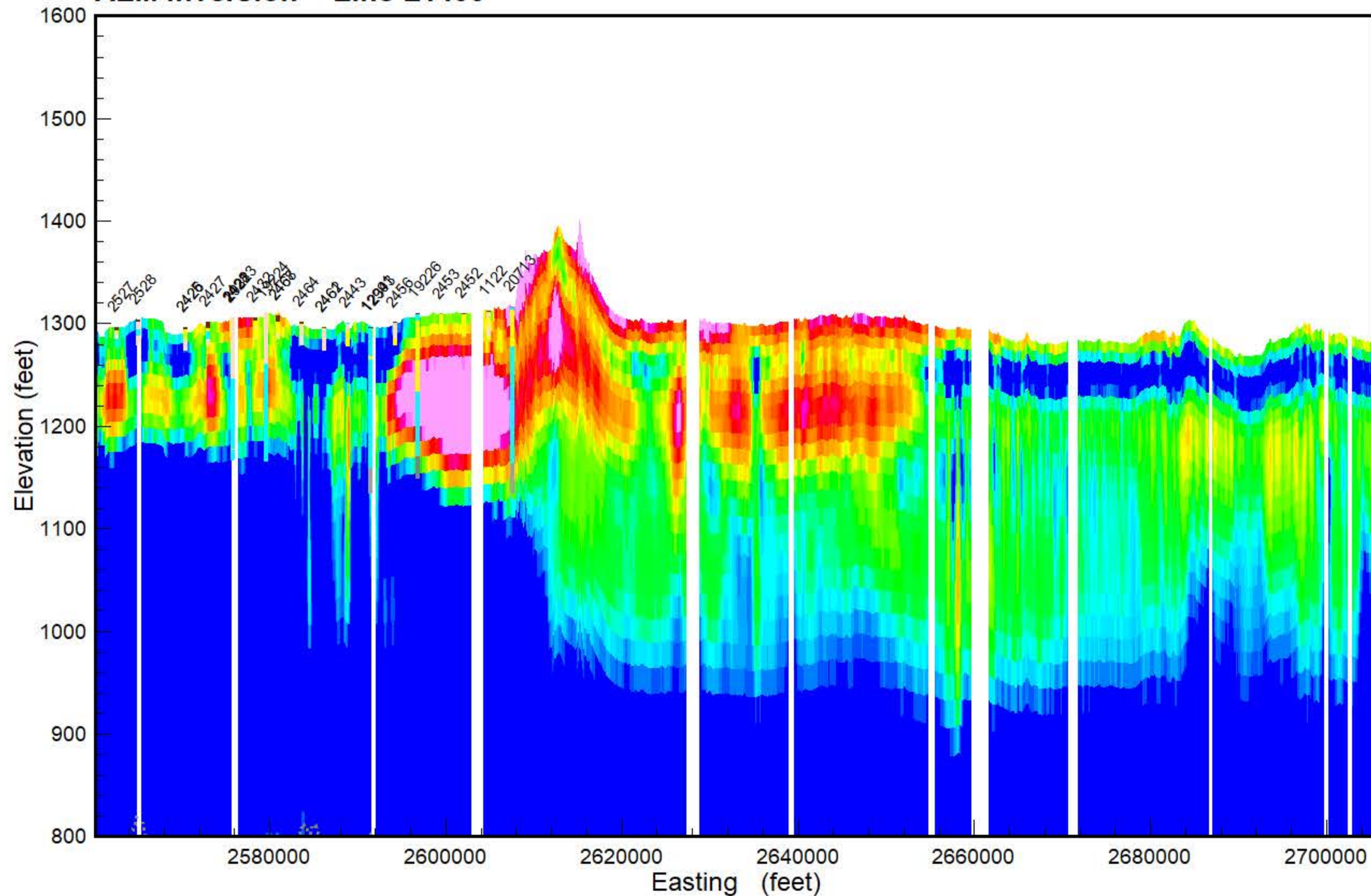
**Flight Path Line L1430**



**Spiritwood South Flight Area**



**AEM Inversion Line L1430**

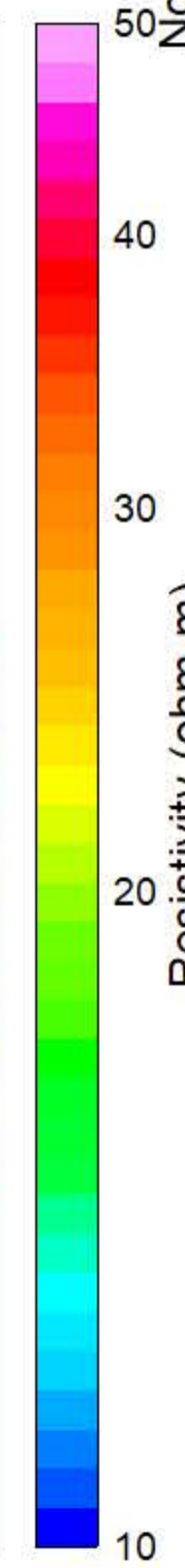
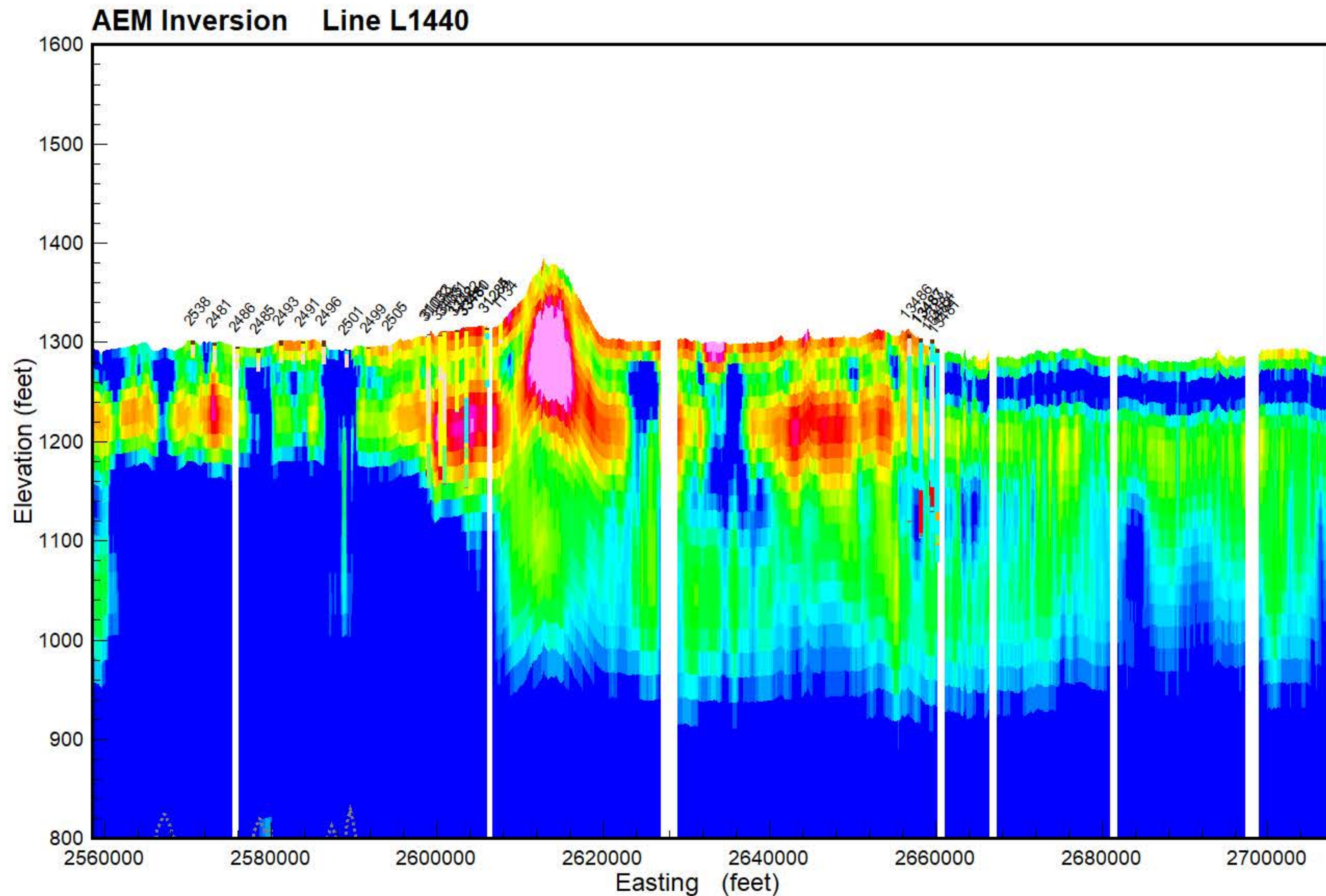
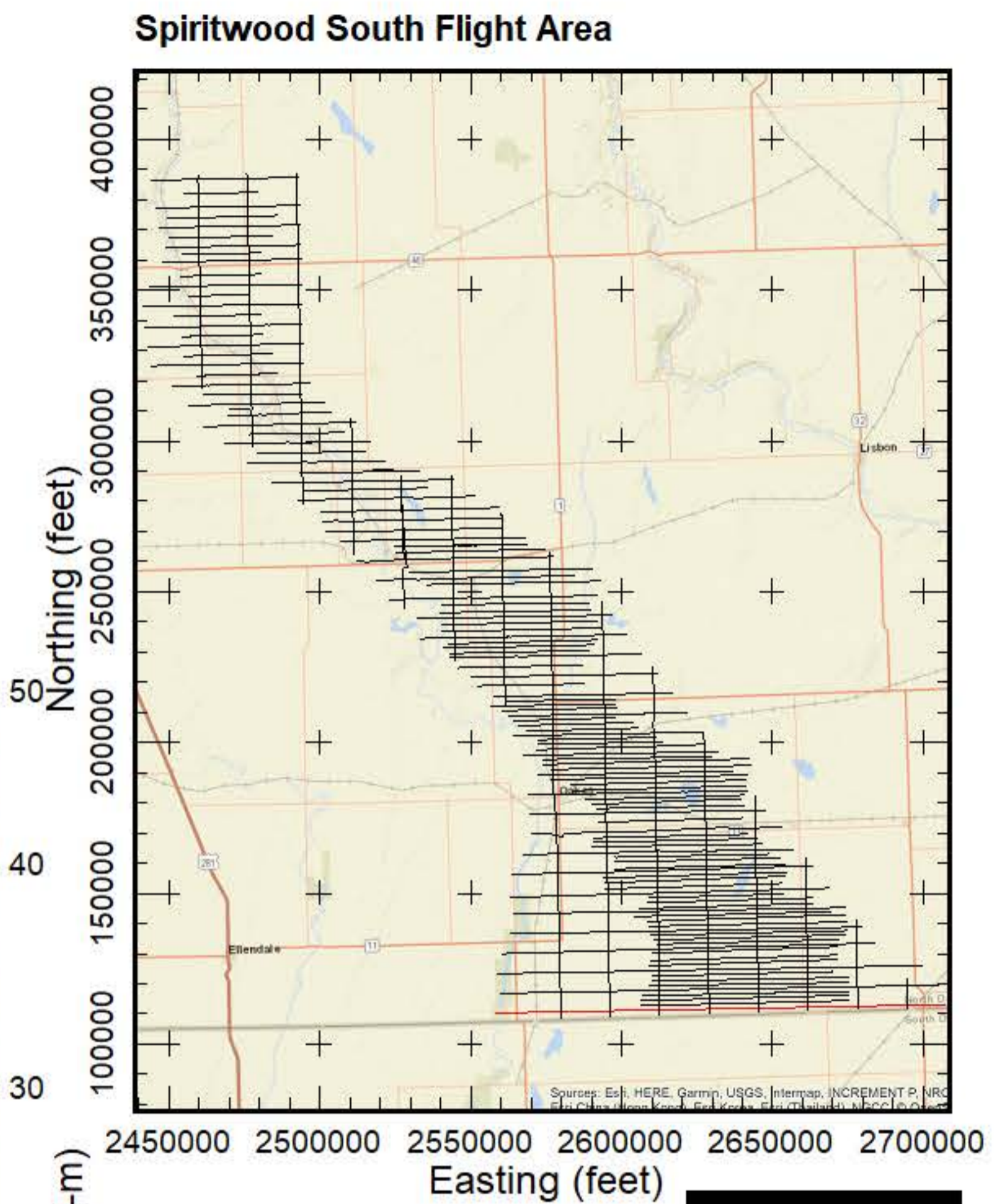
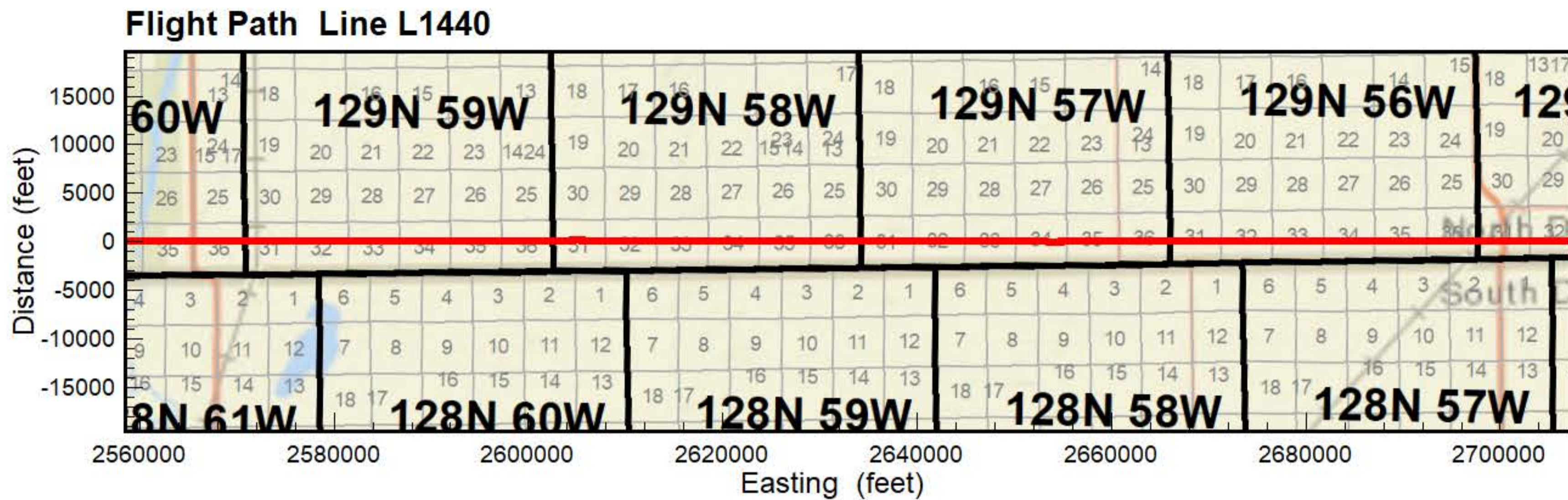


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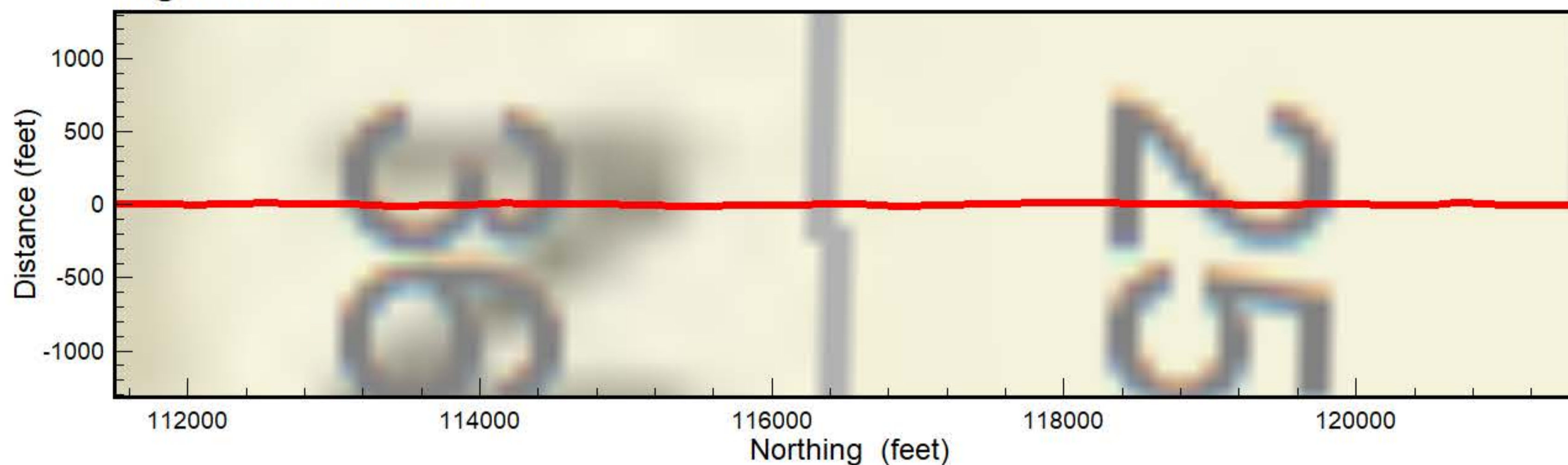
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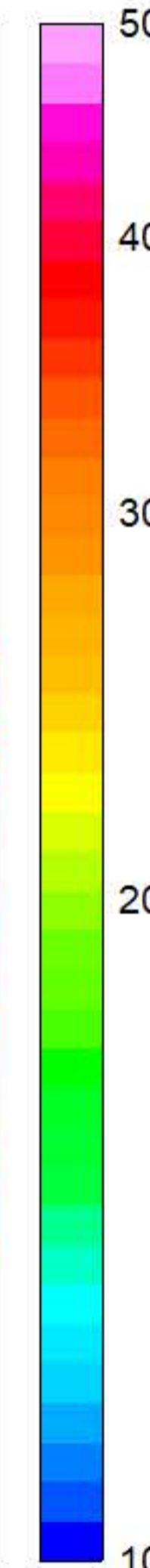
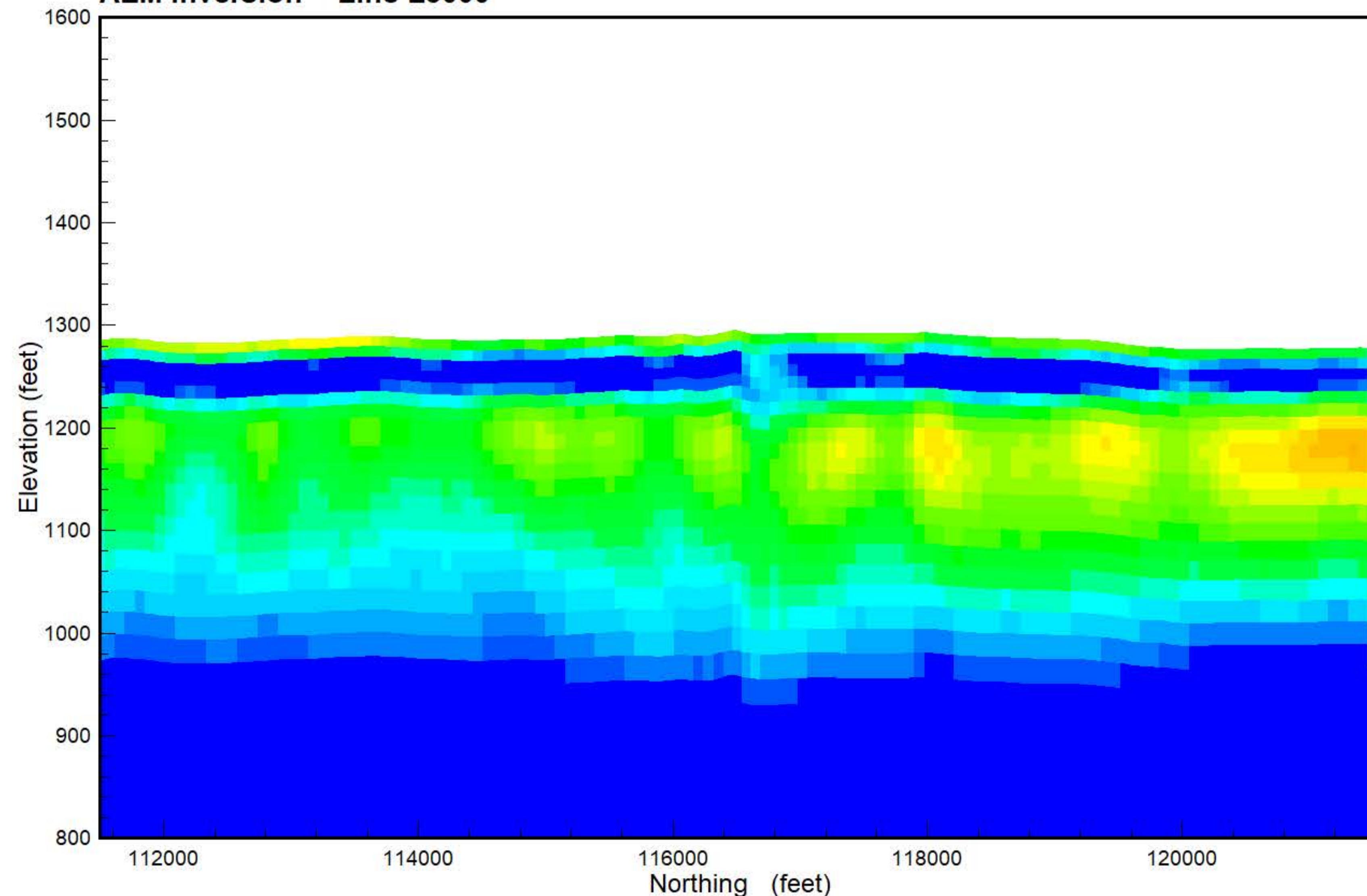




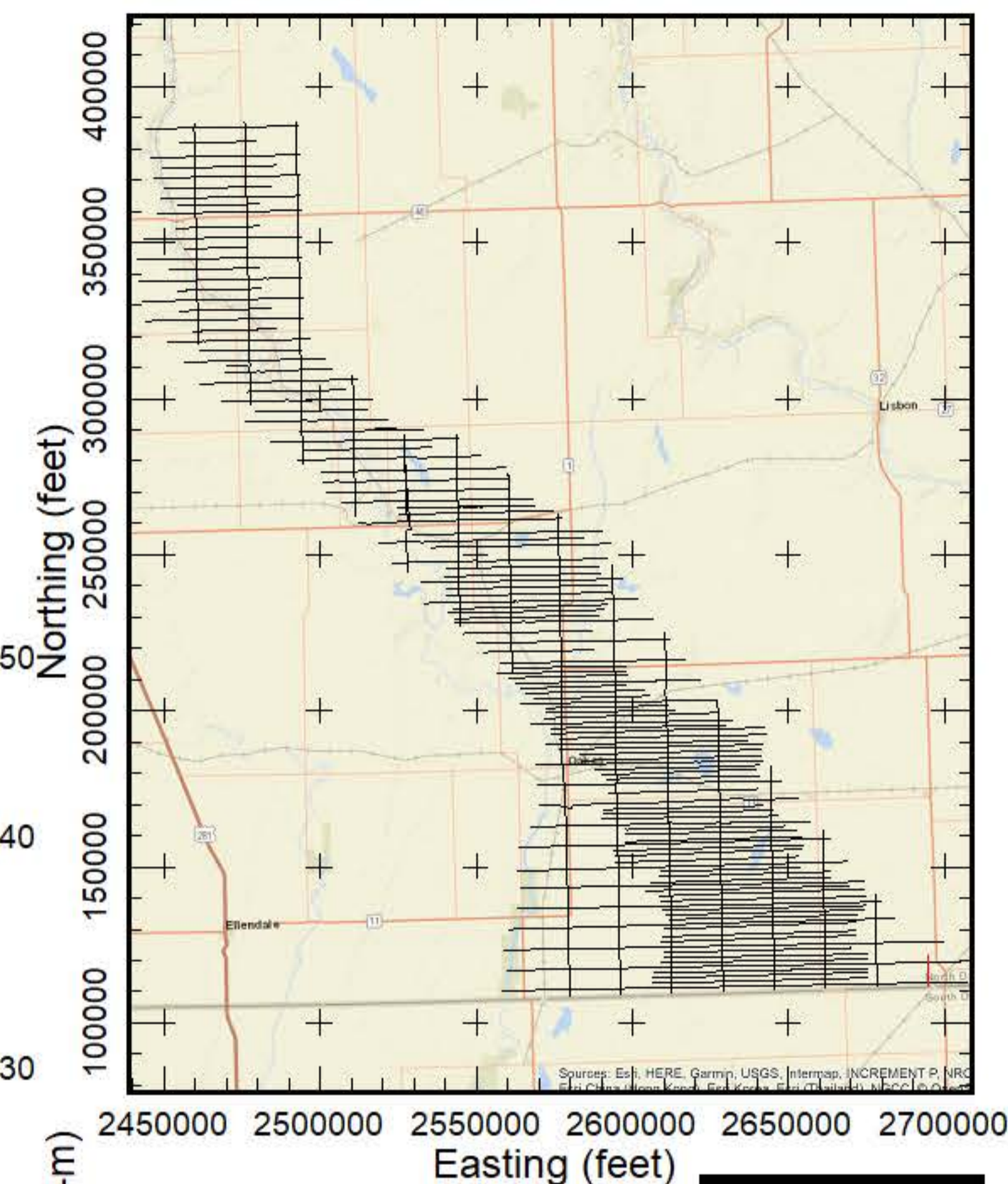
**Flight Path Line L5000**



**AEM Inversion Line L5000**



**Spiritwood South Flight Area**



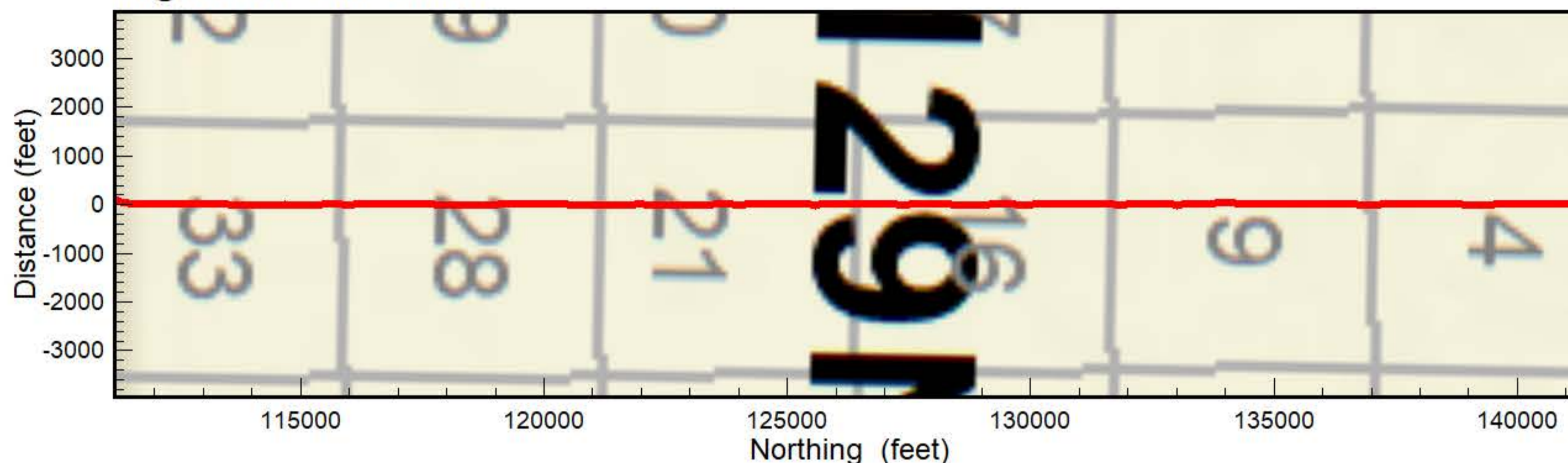
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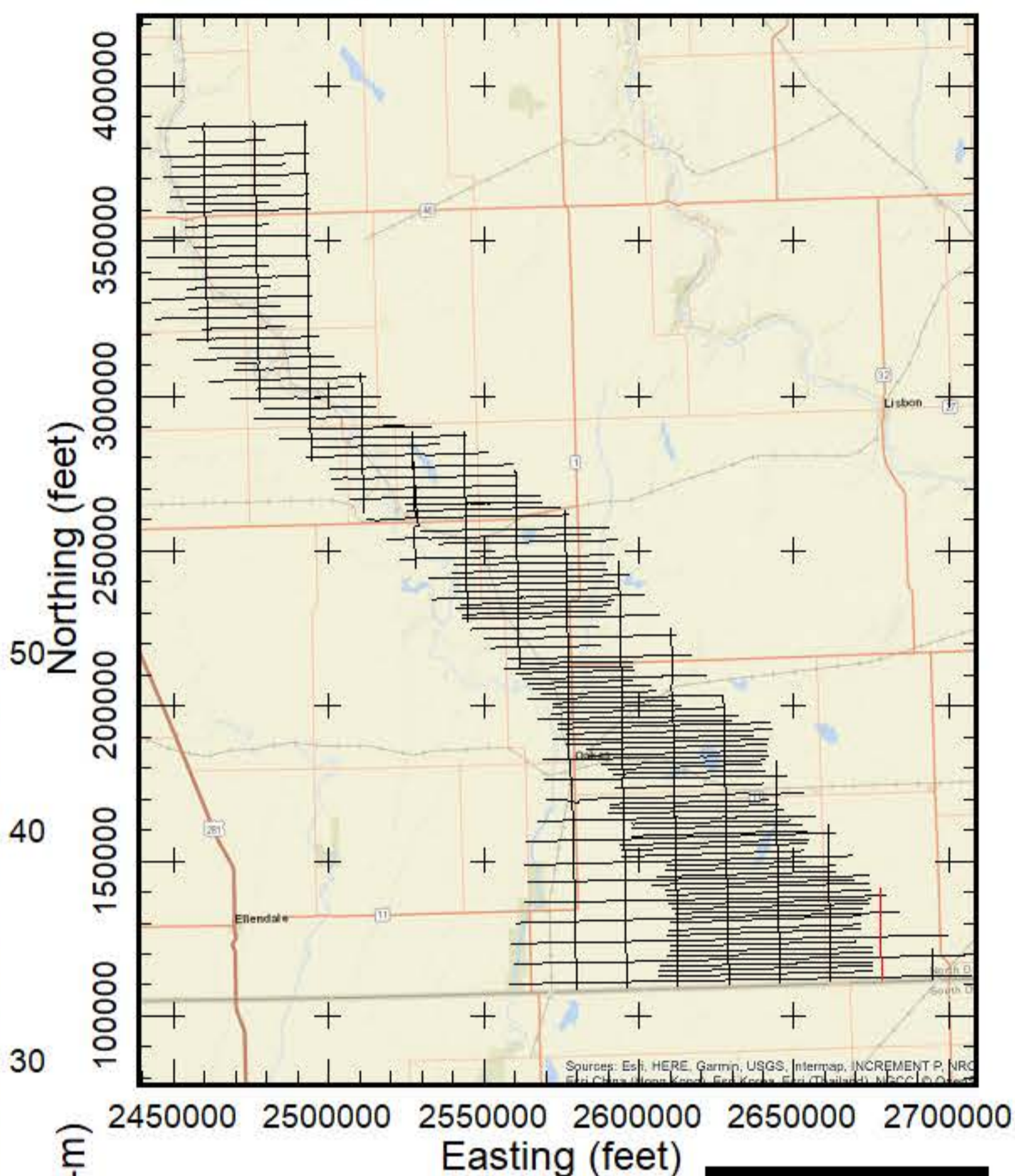




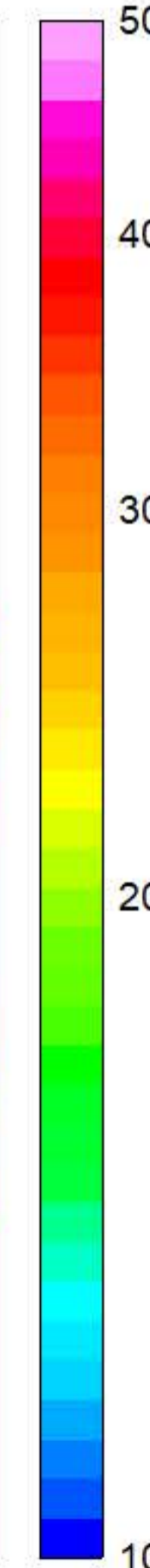
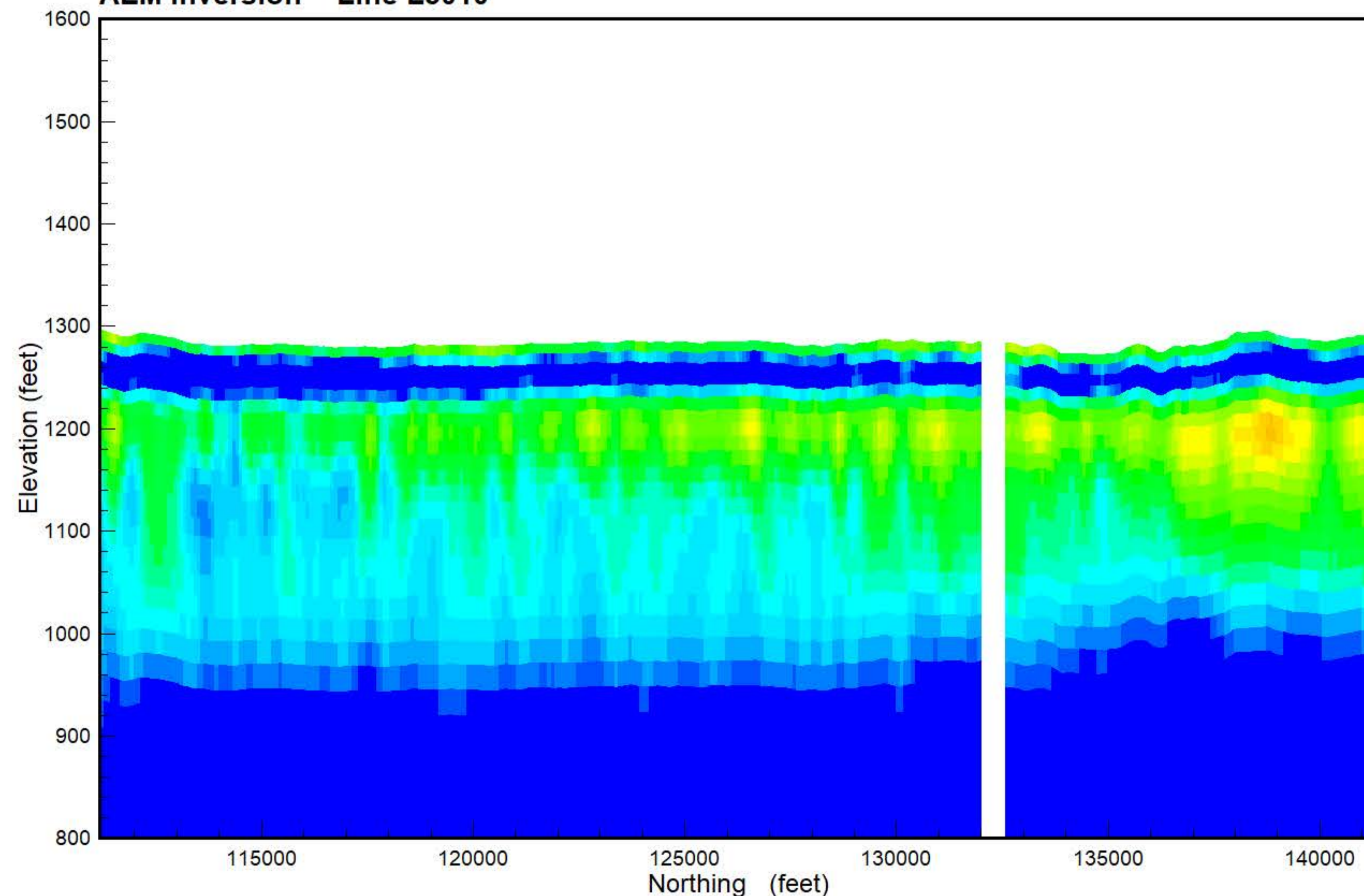
**Flight Path Line L5010**



**Spiritwood South Flight Area**



**AEM Inversion Line L5010**



- PEAT
- LIGNITE
- COBBLES
- BOULDER
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- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
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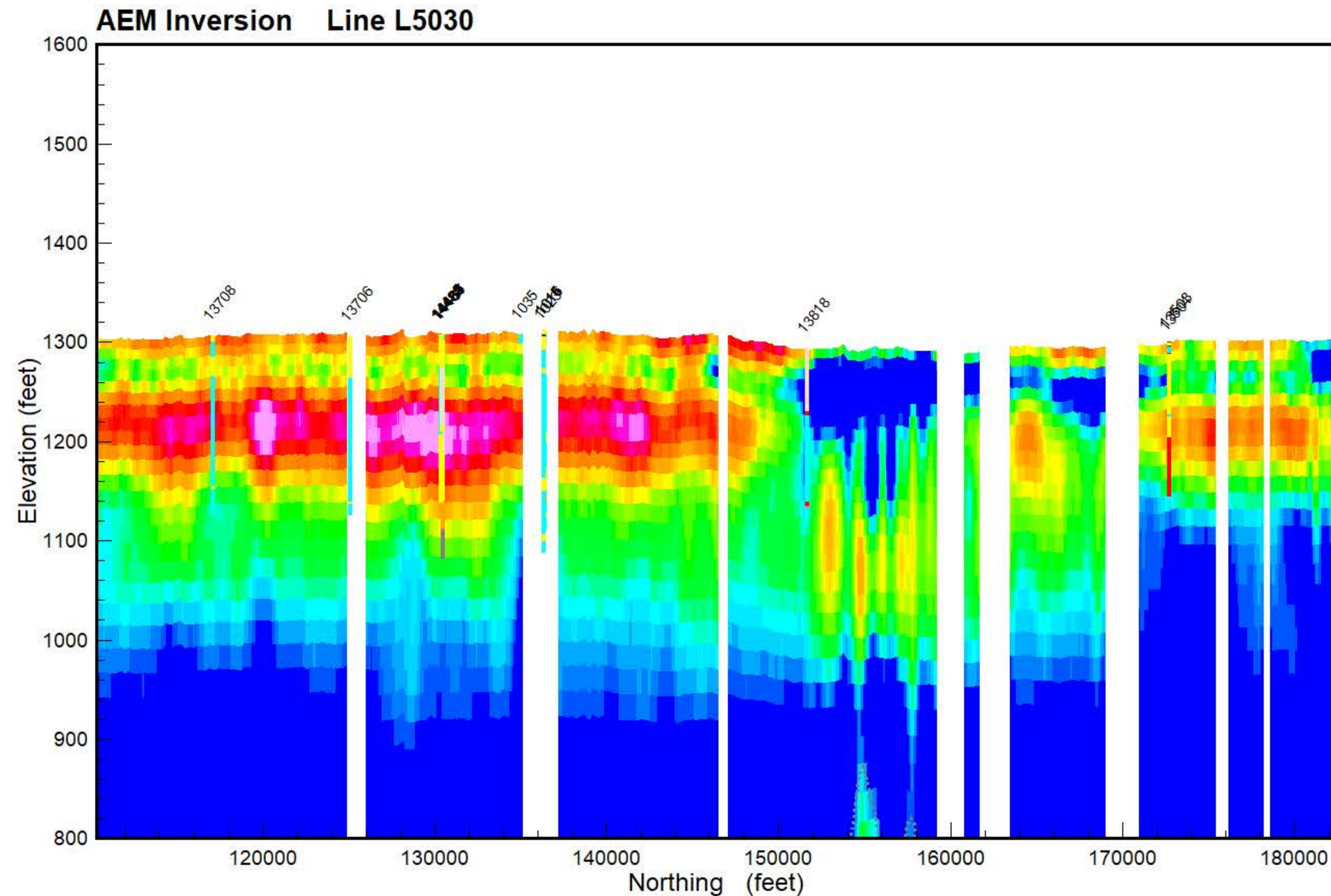
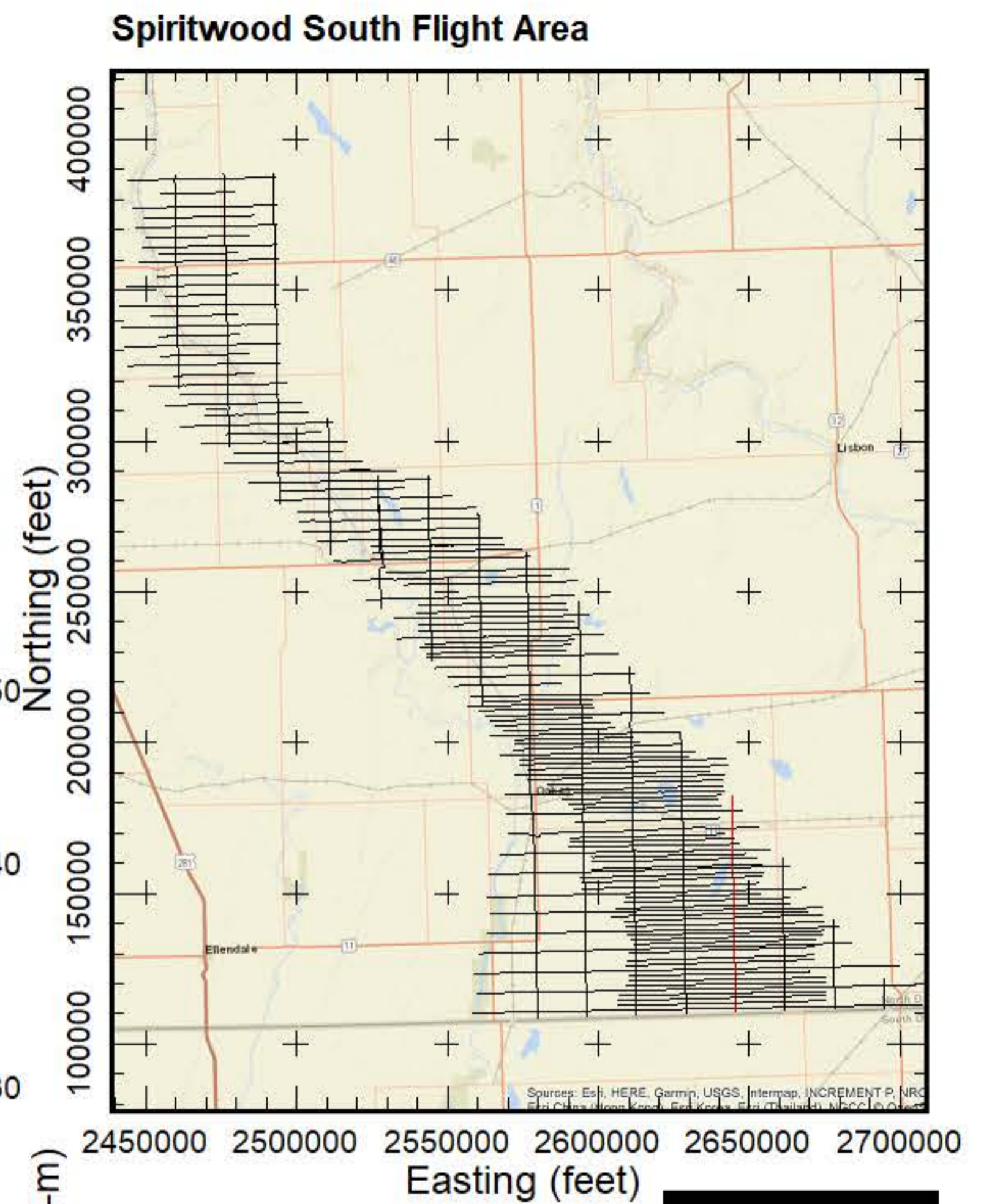
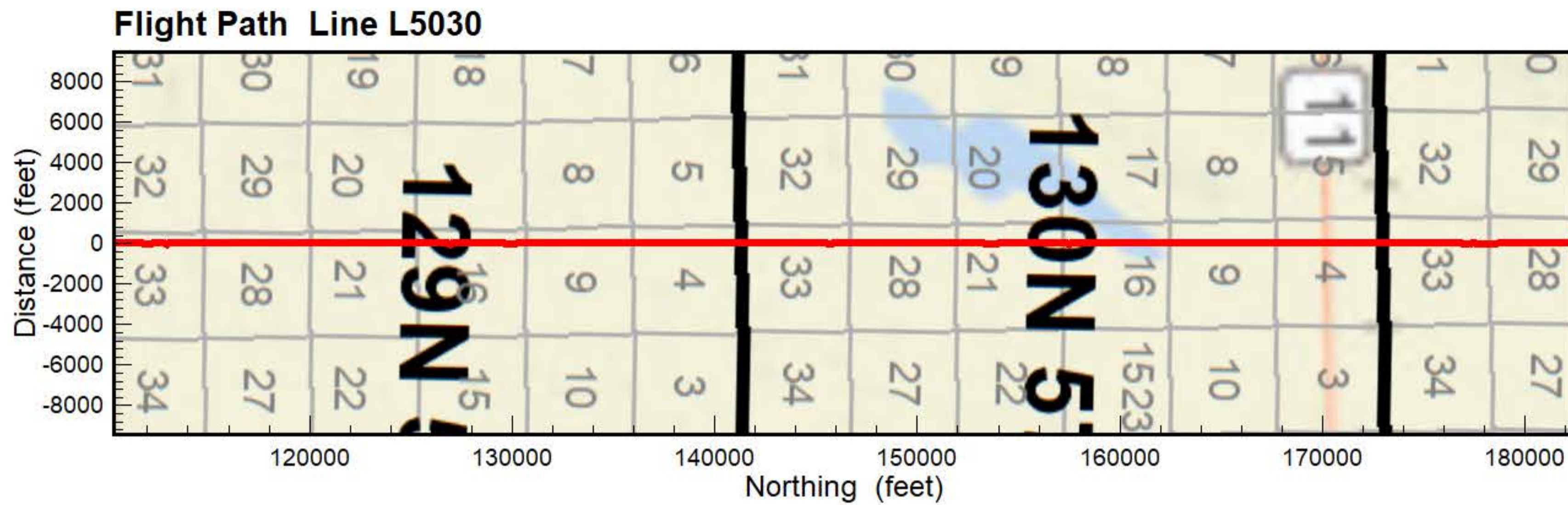
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.









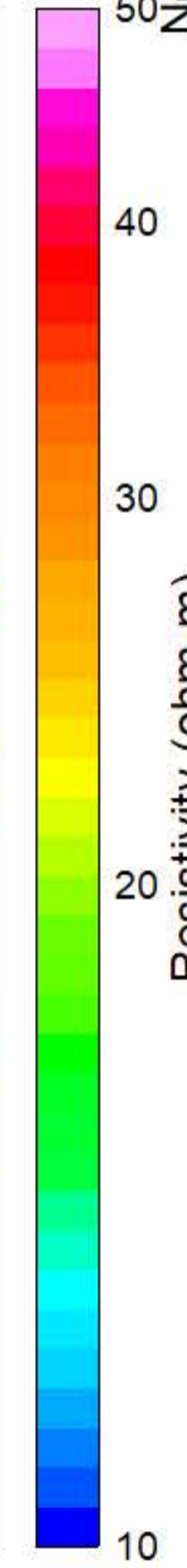
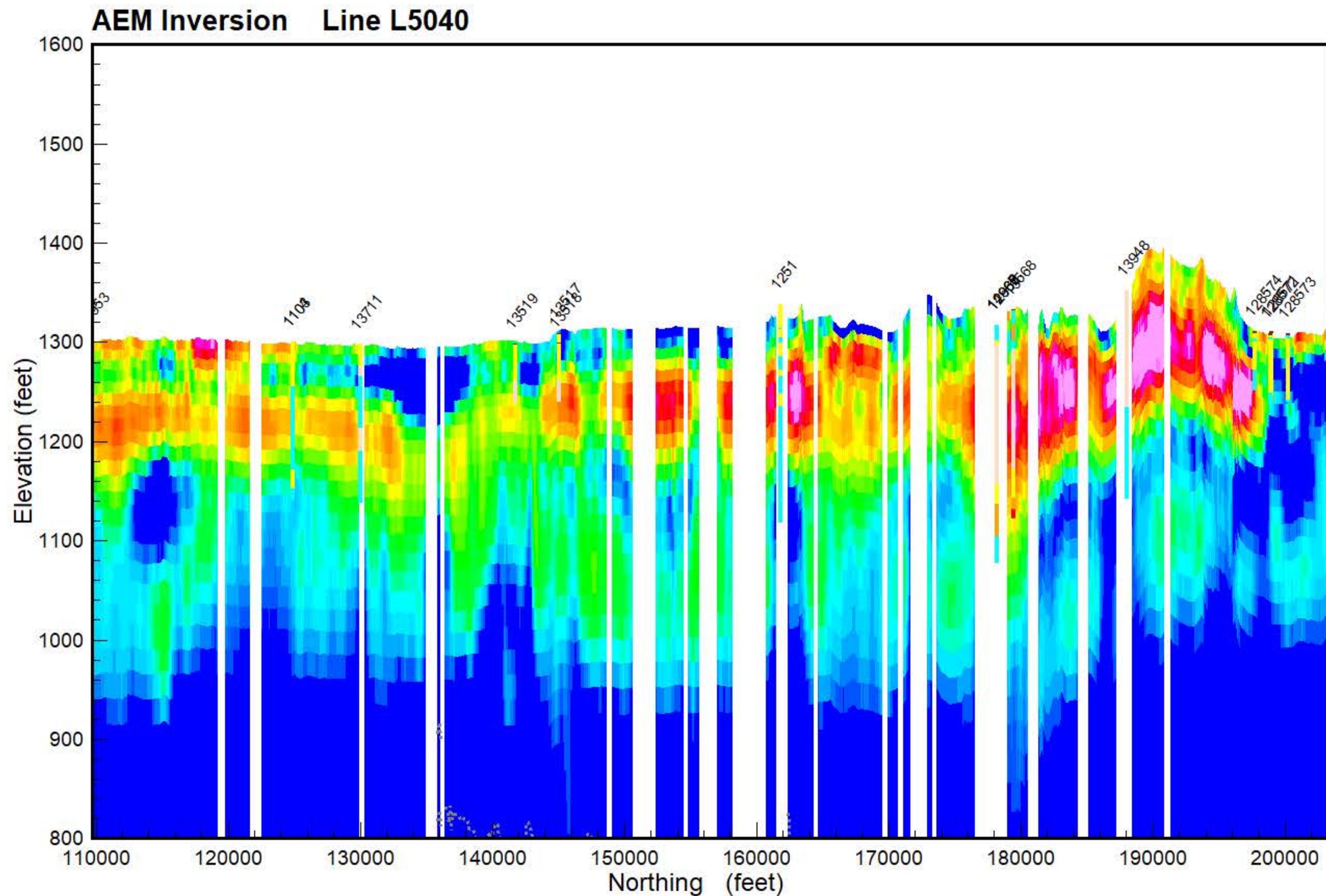
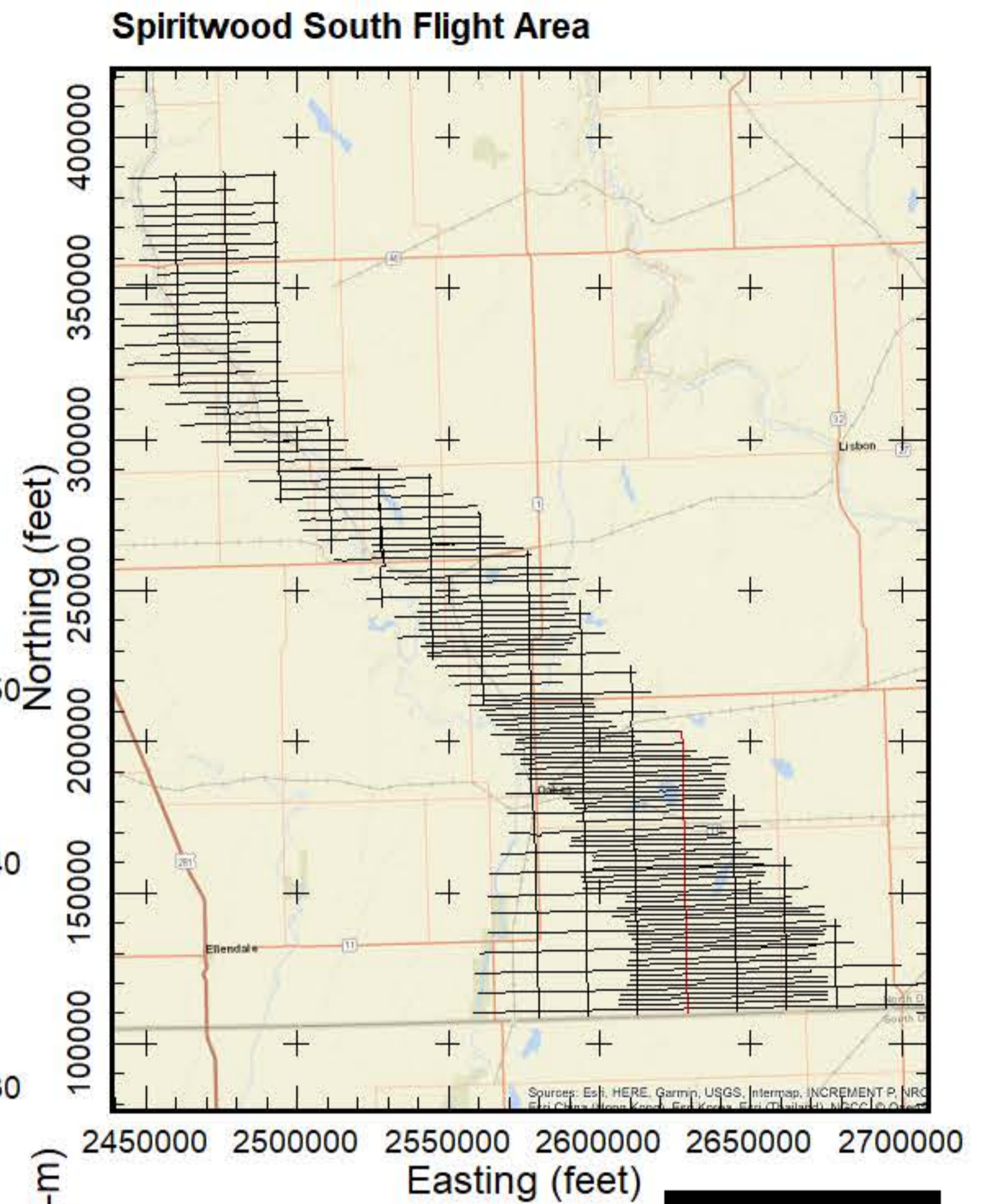
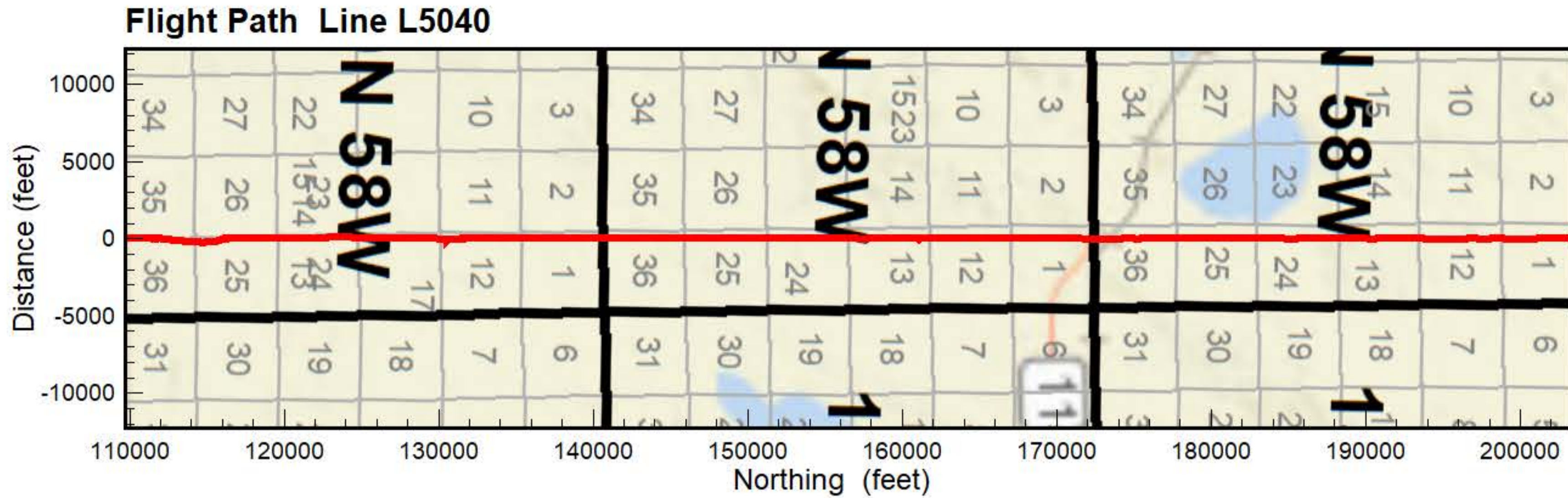


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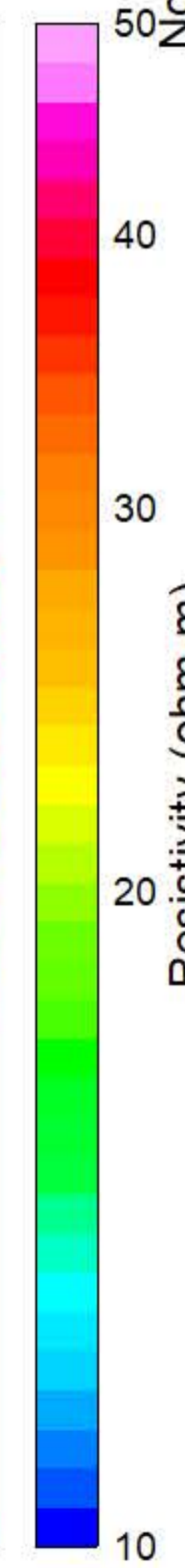
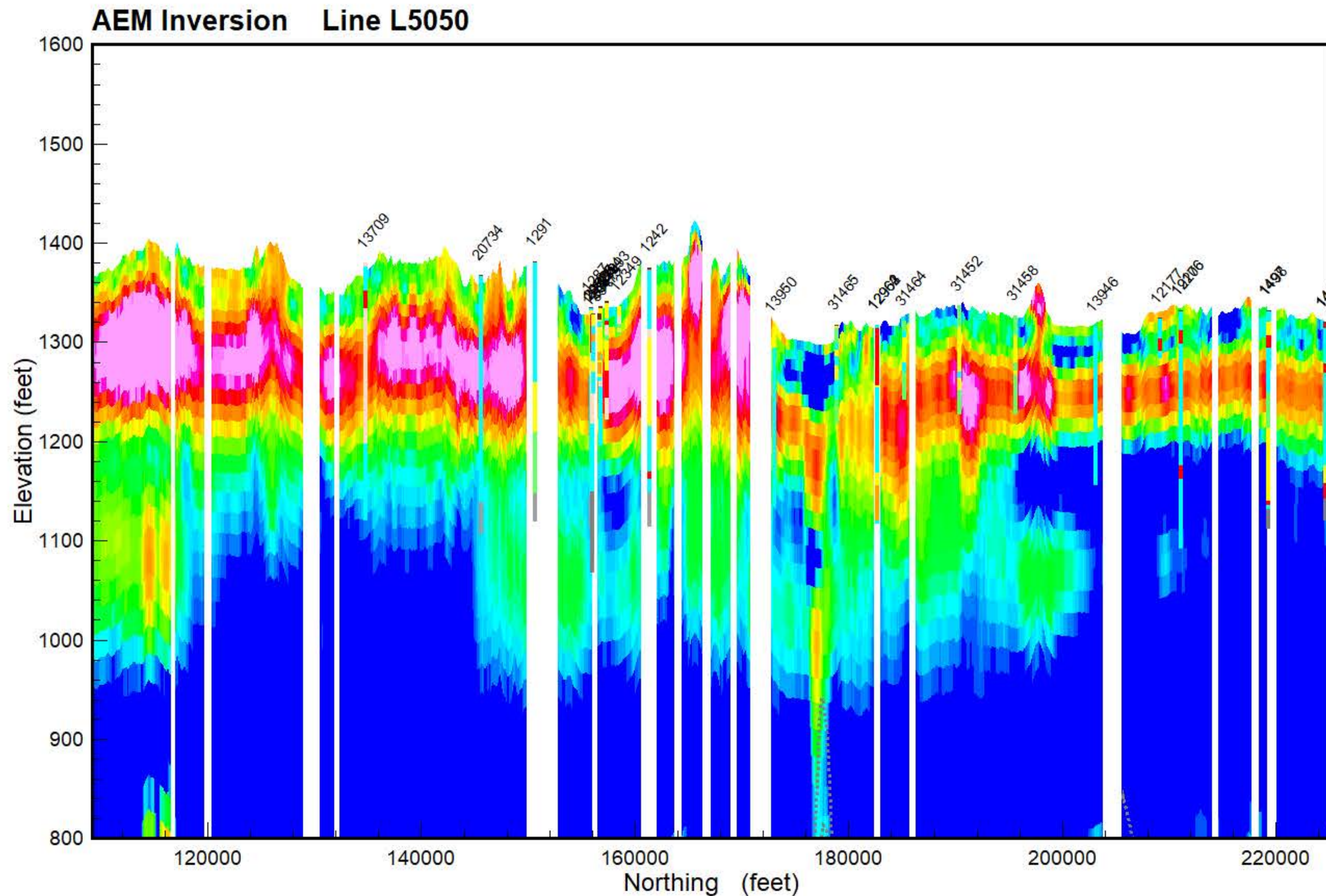
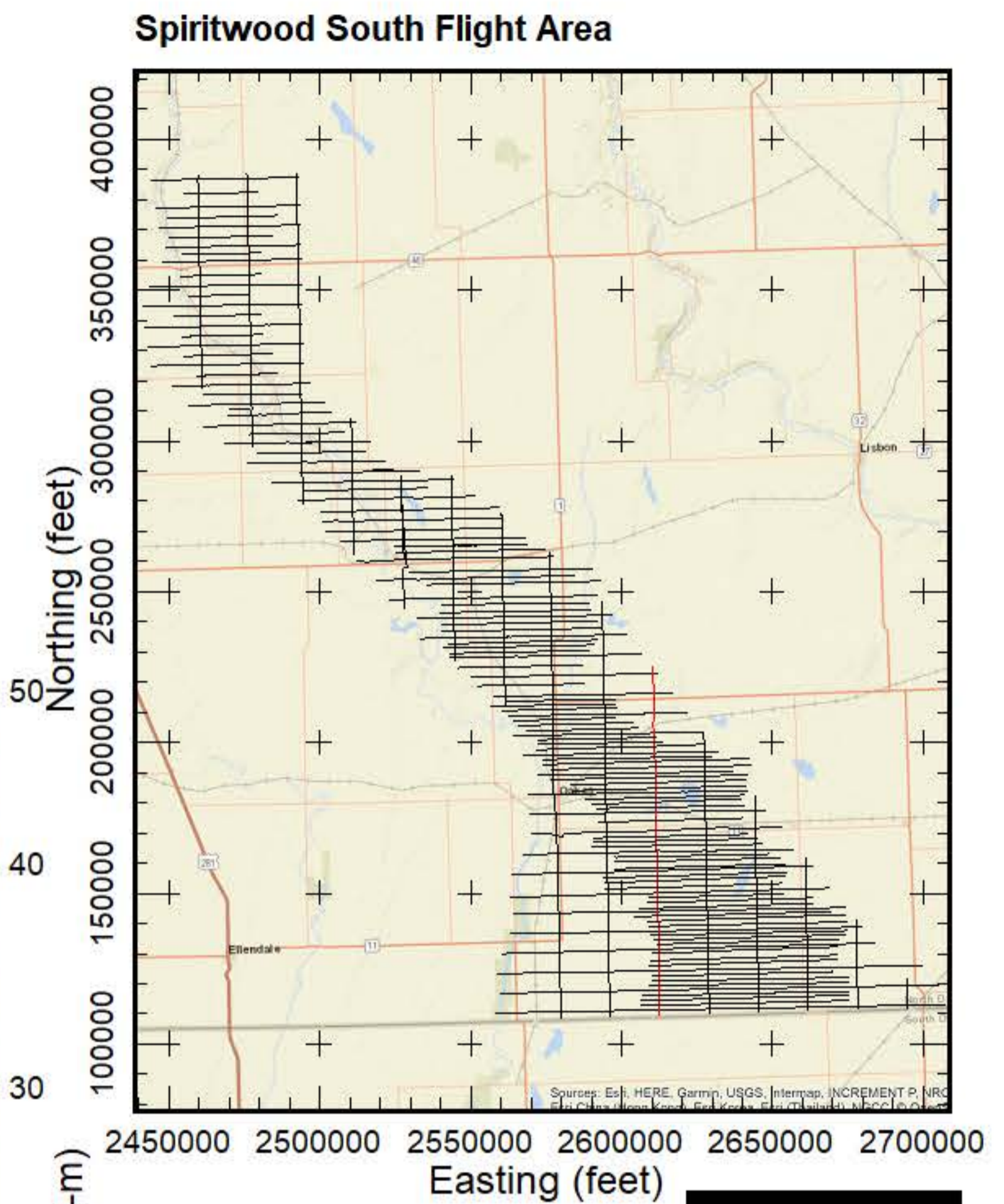
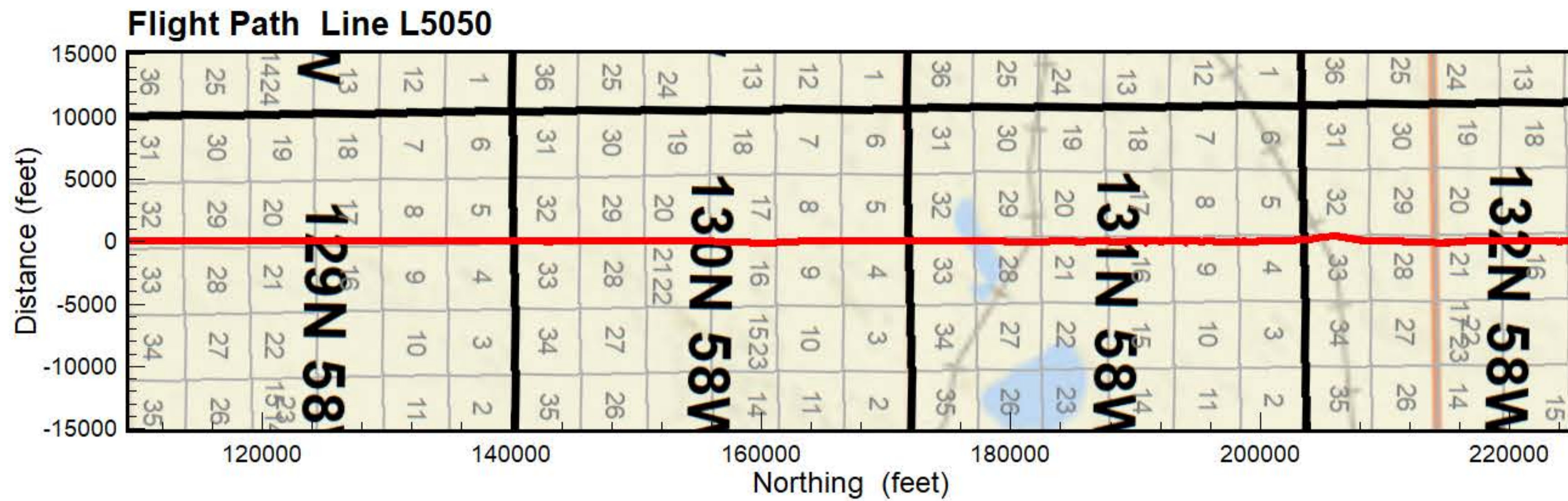


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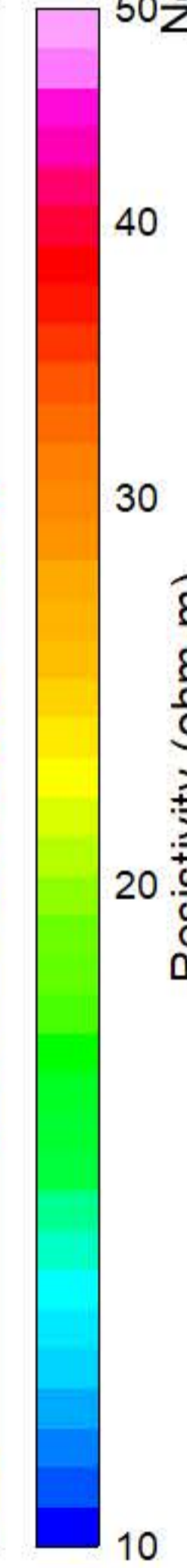
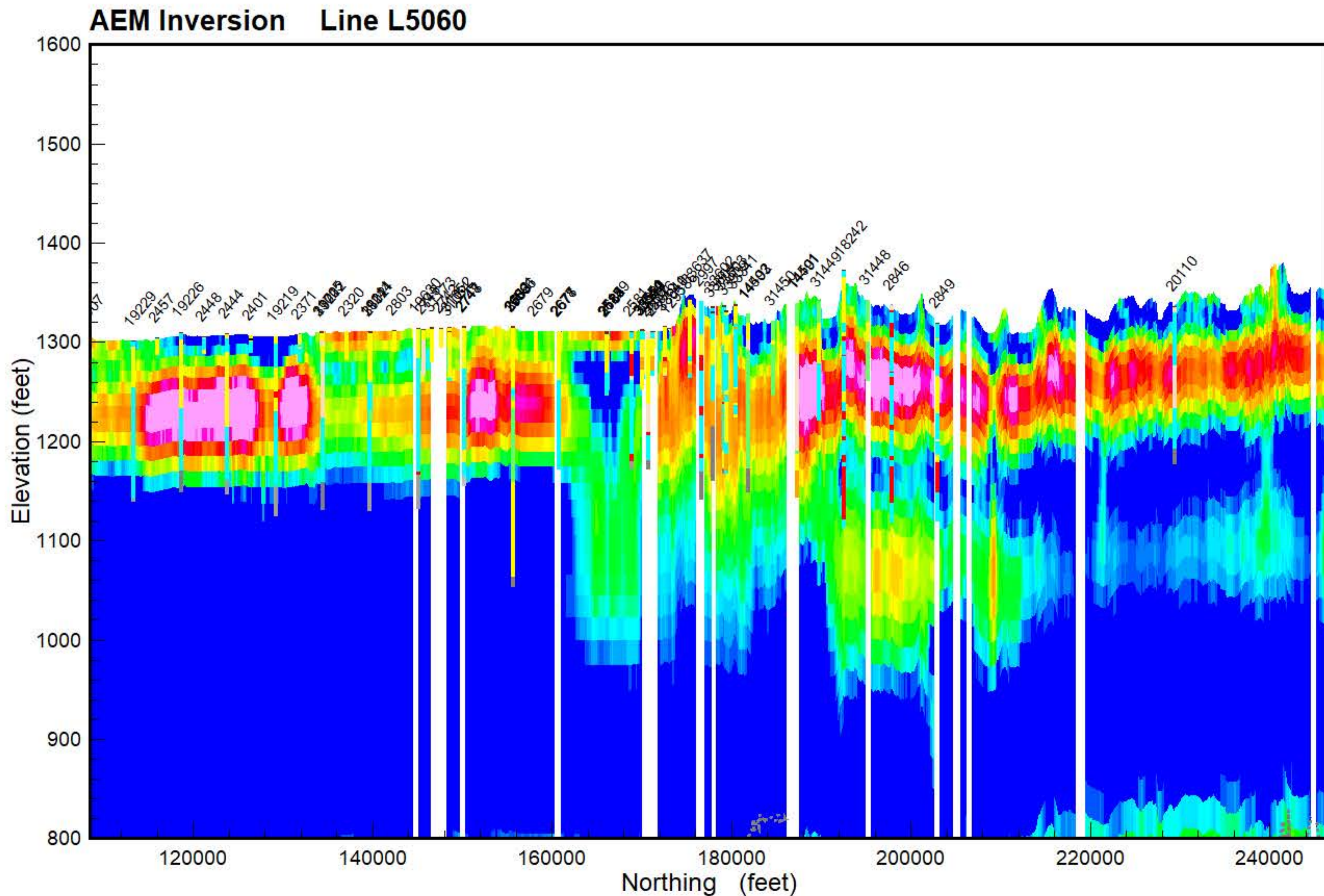
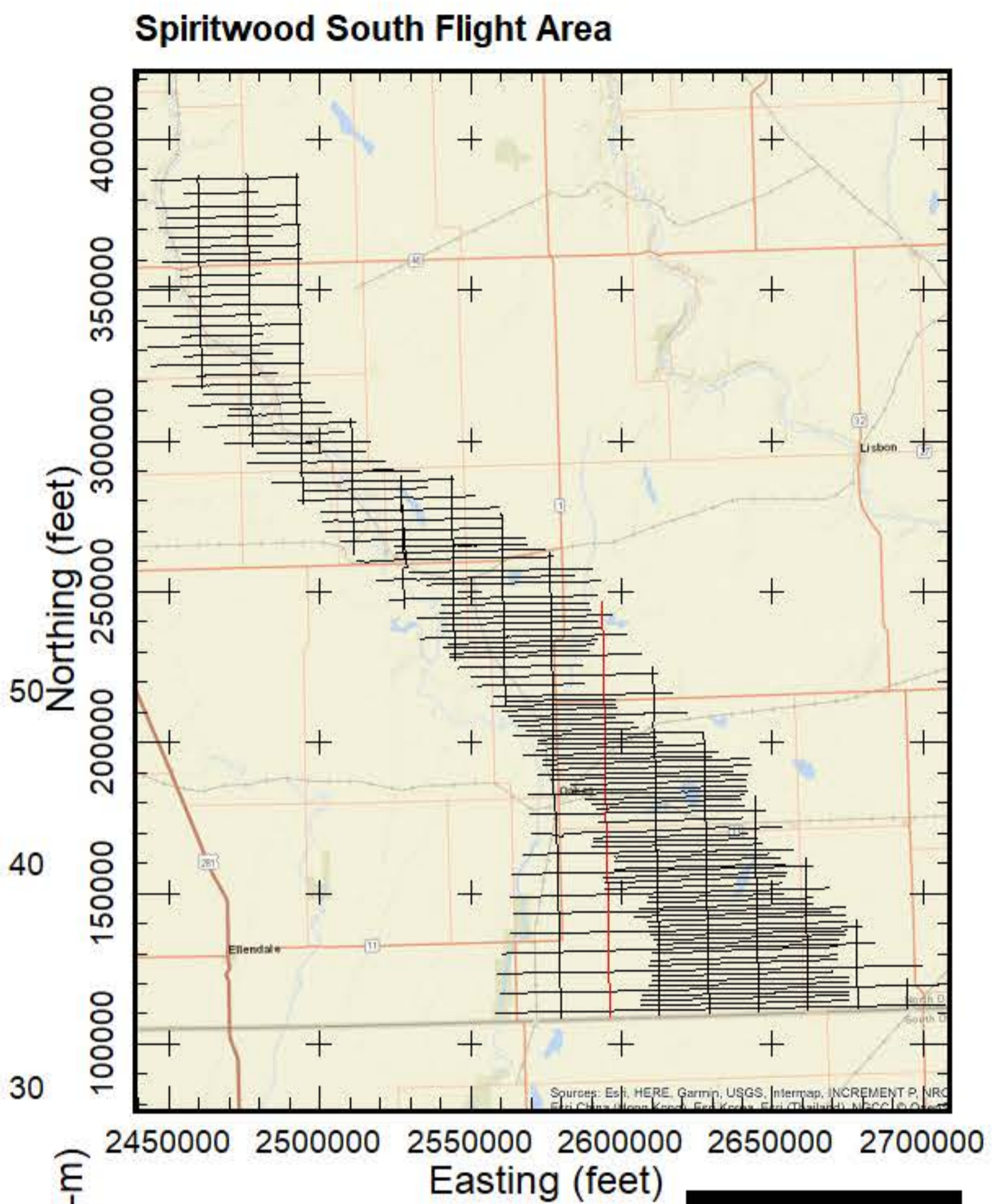
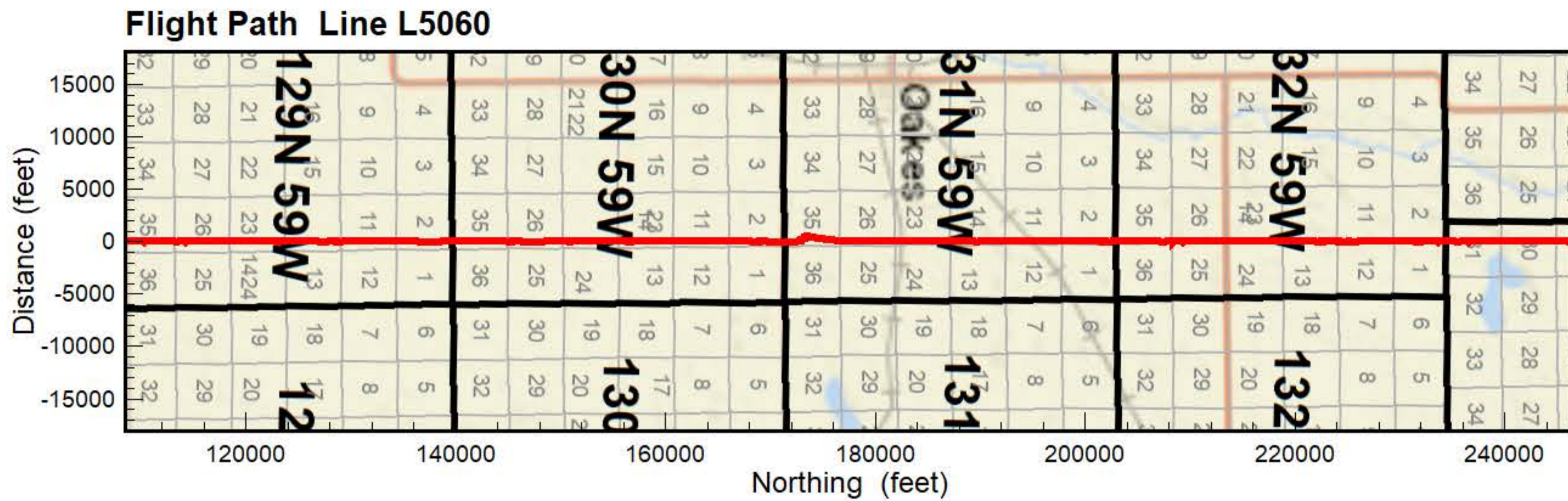


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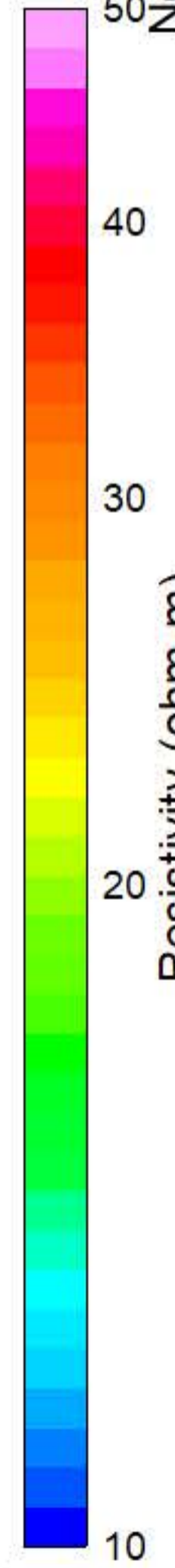
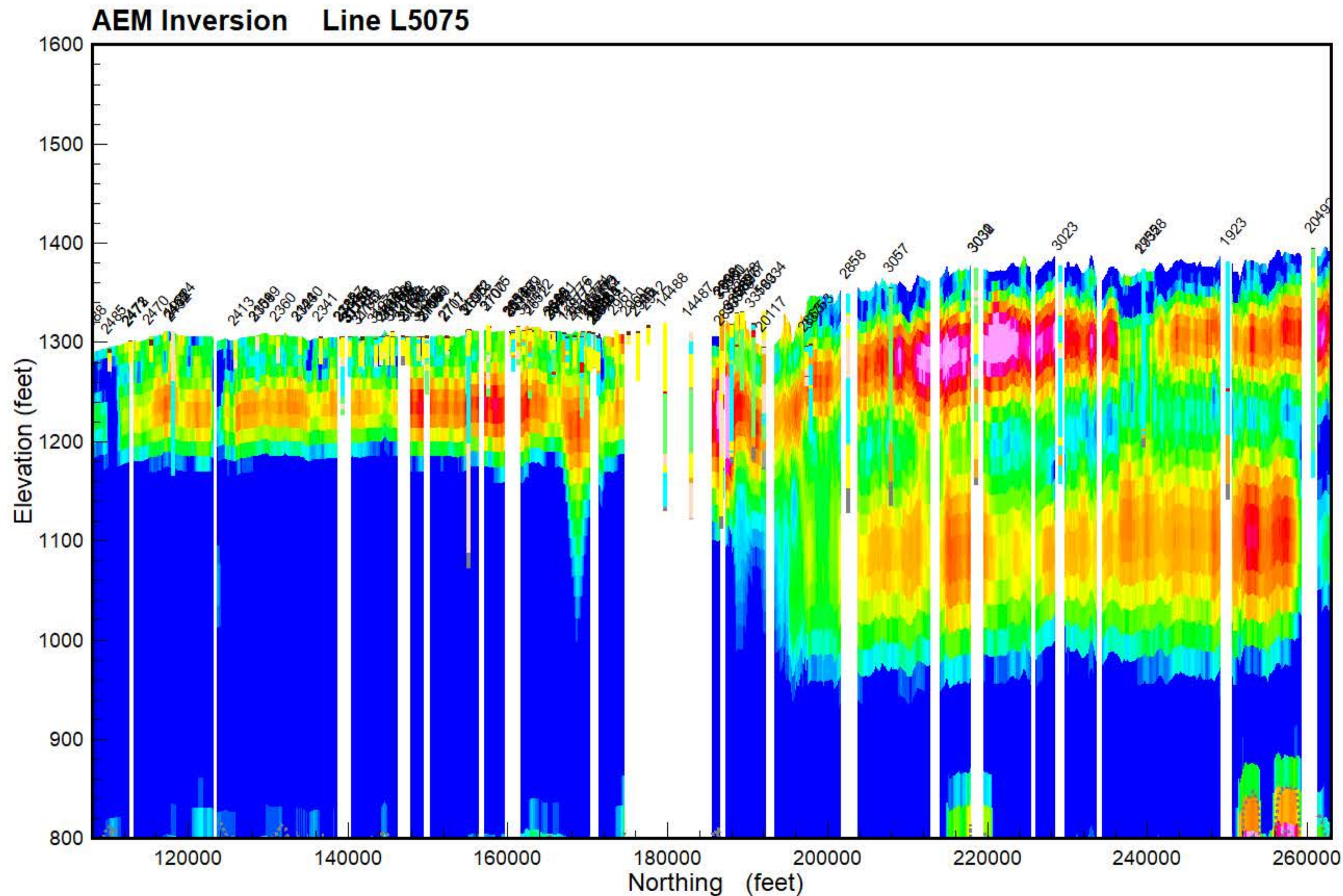
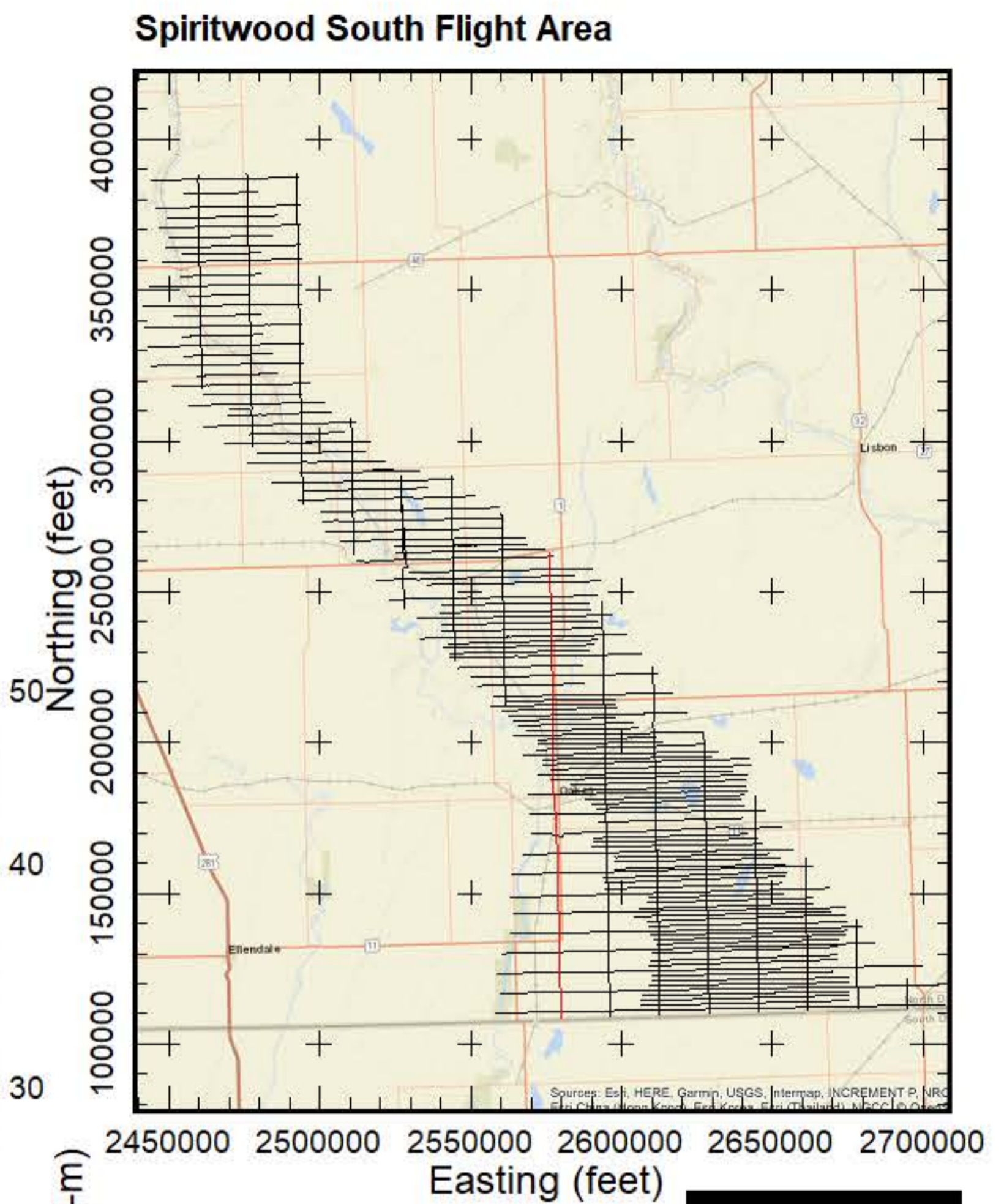
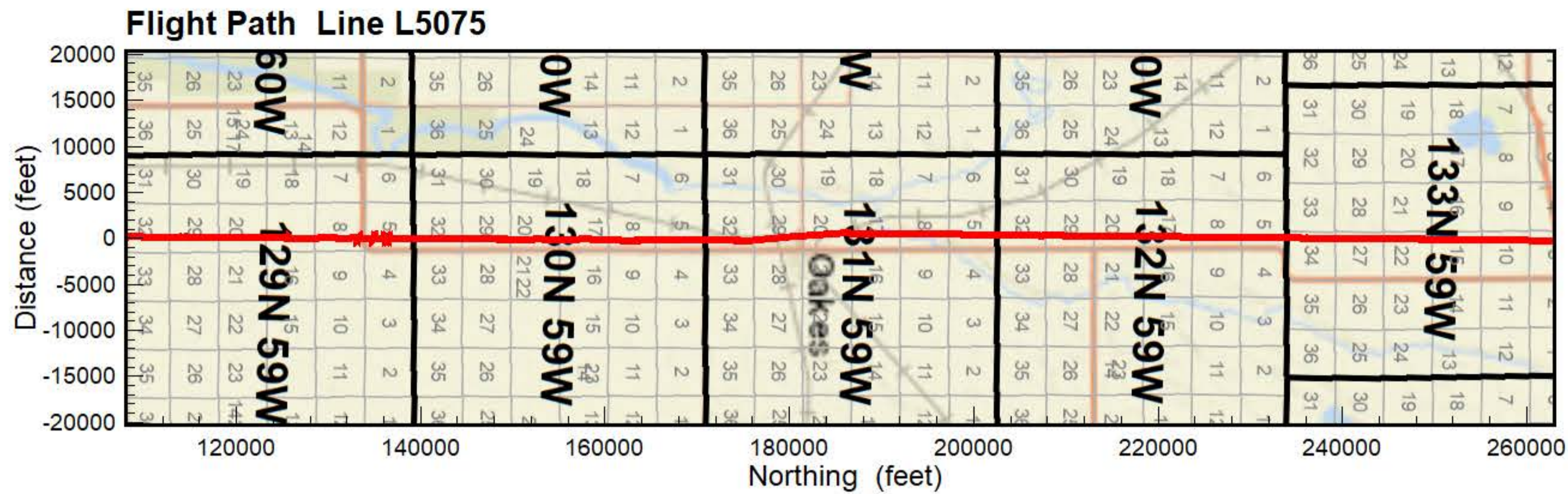


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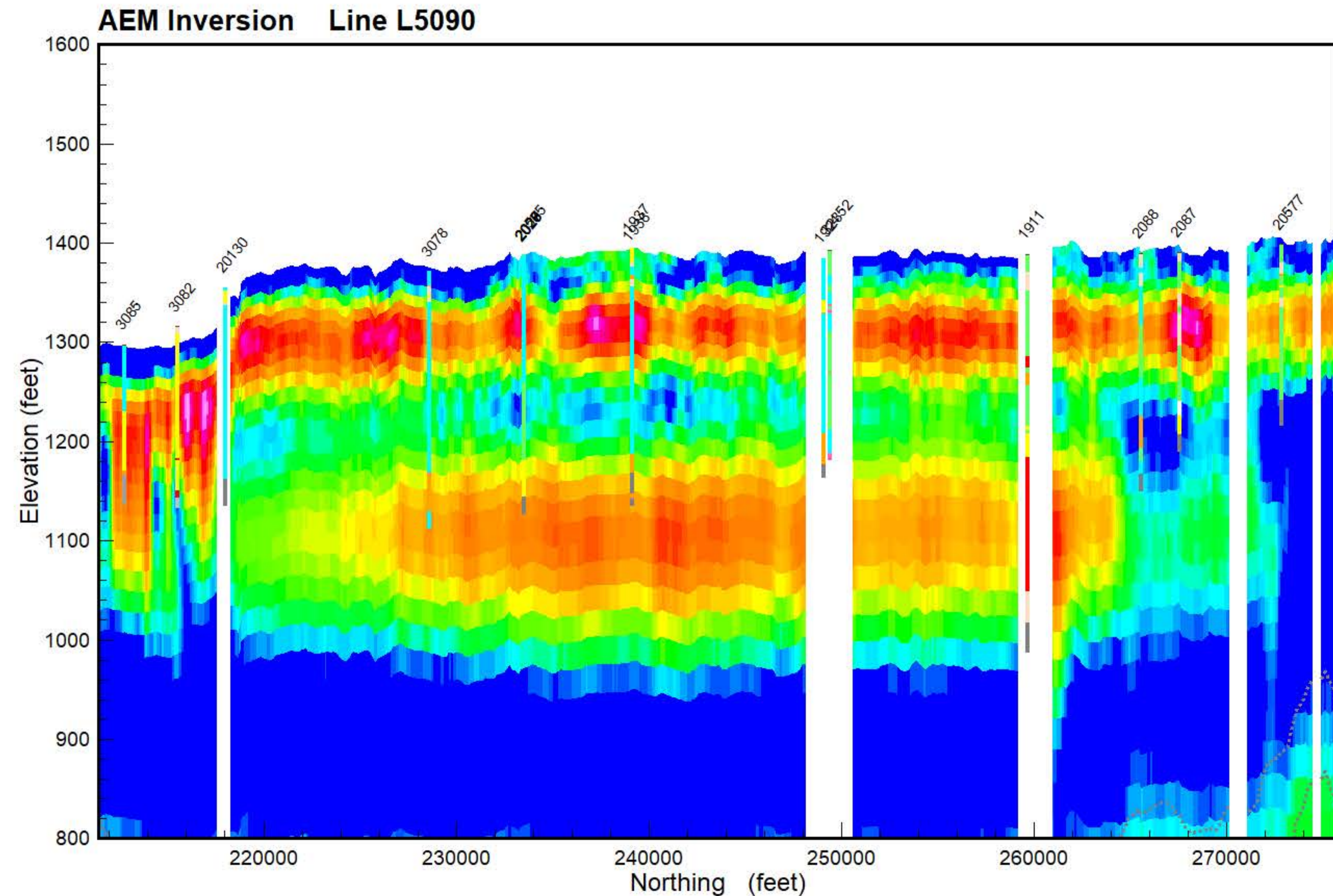
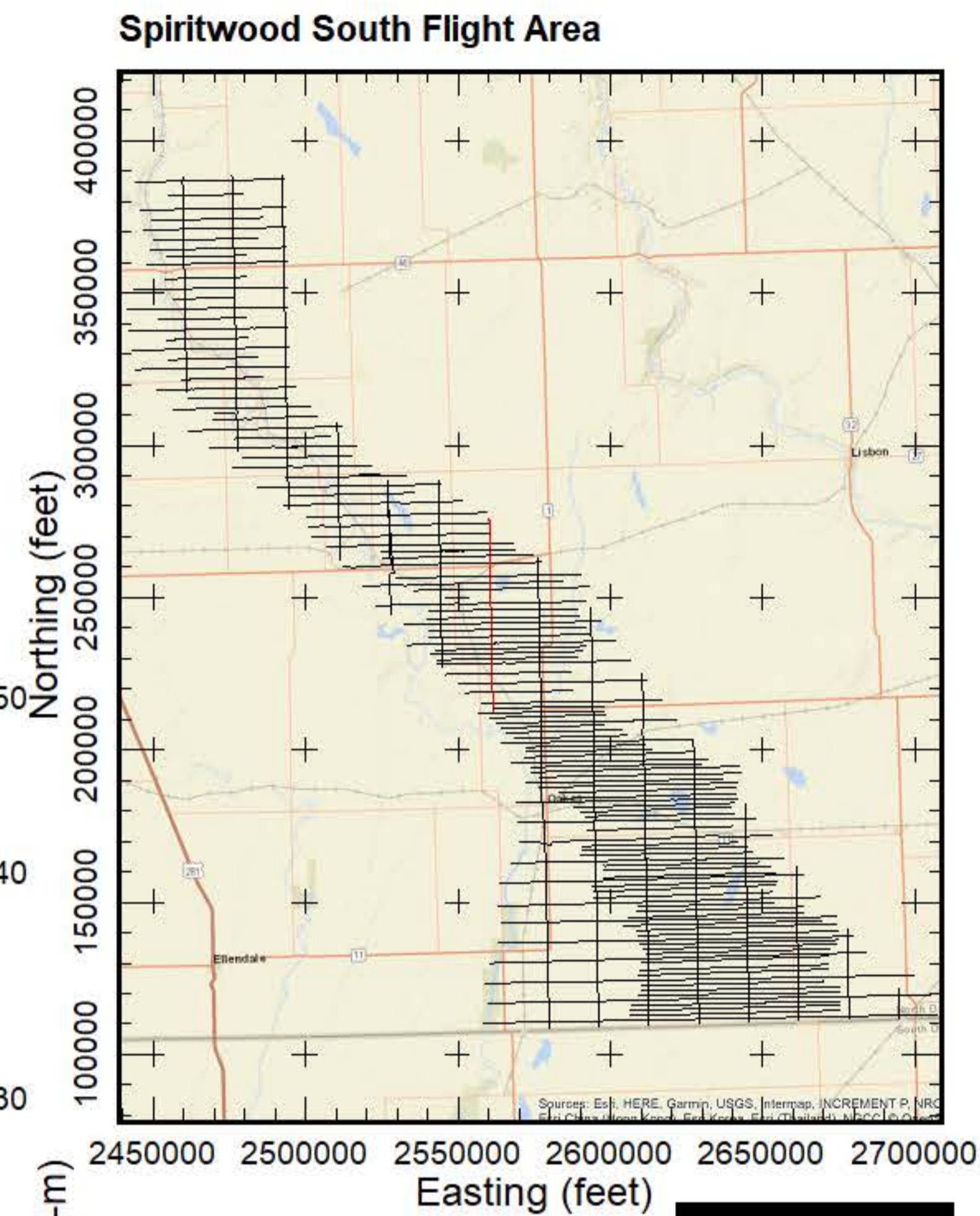
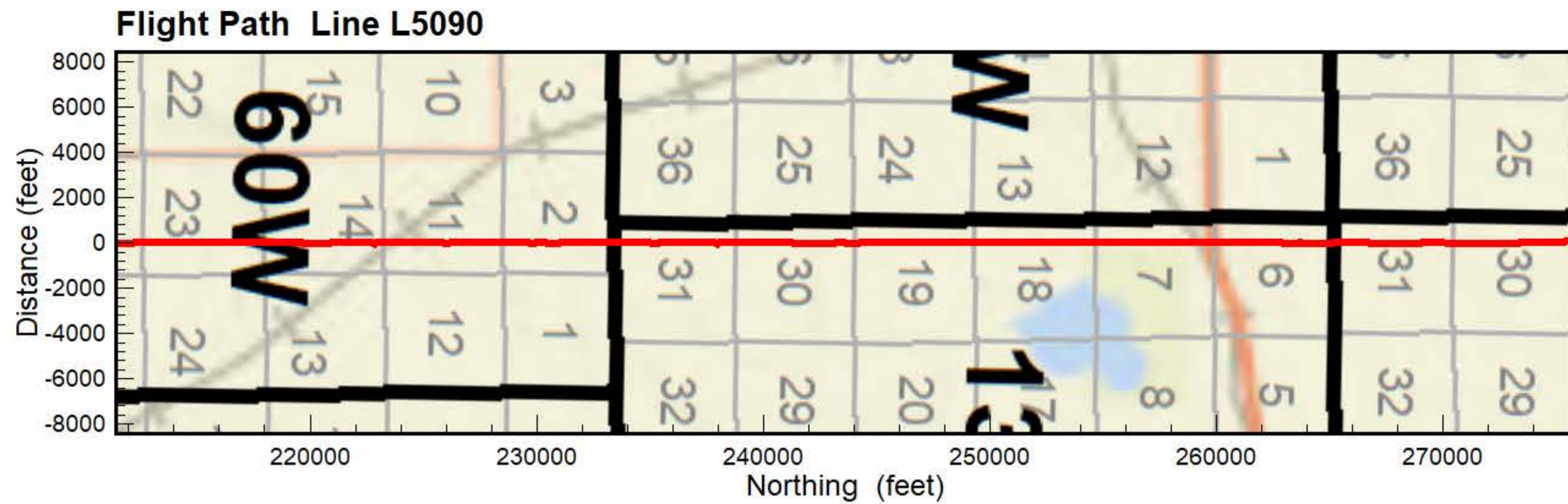


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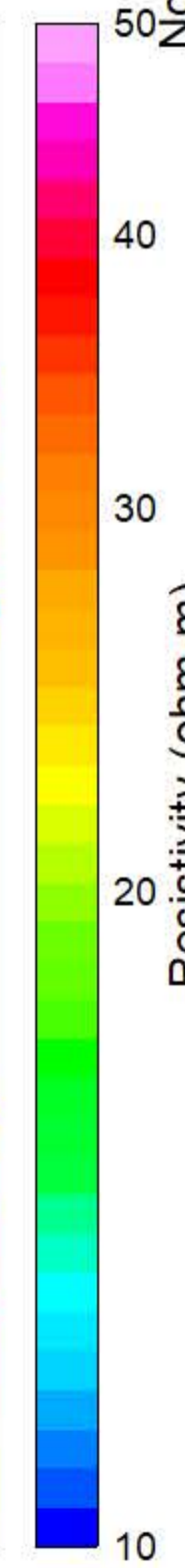
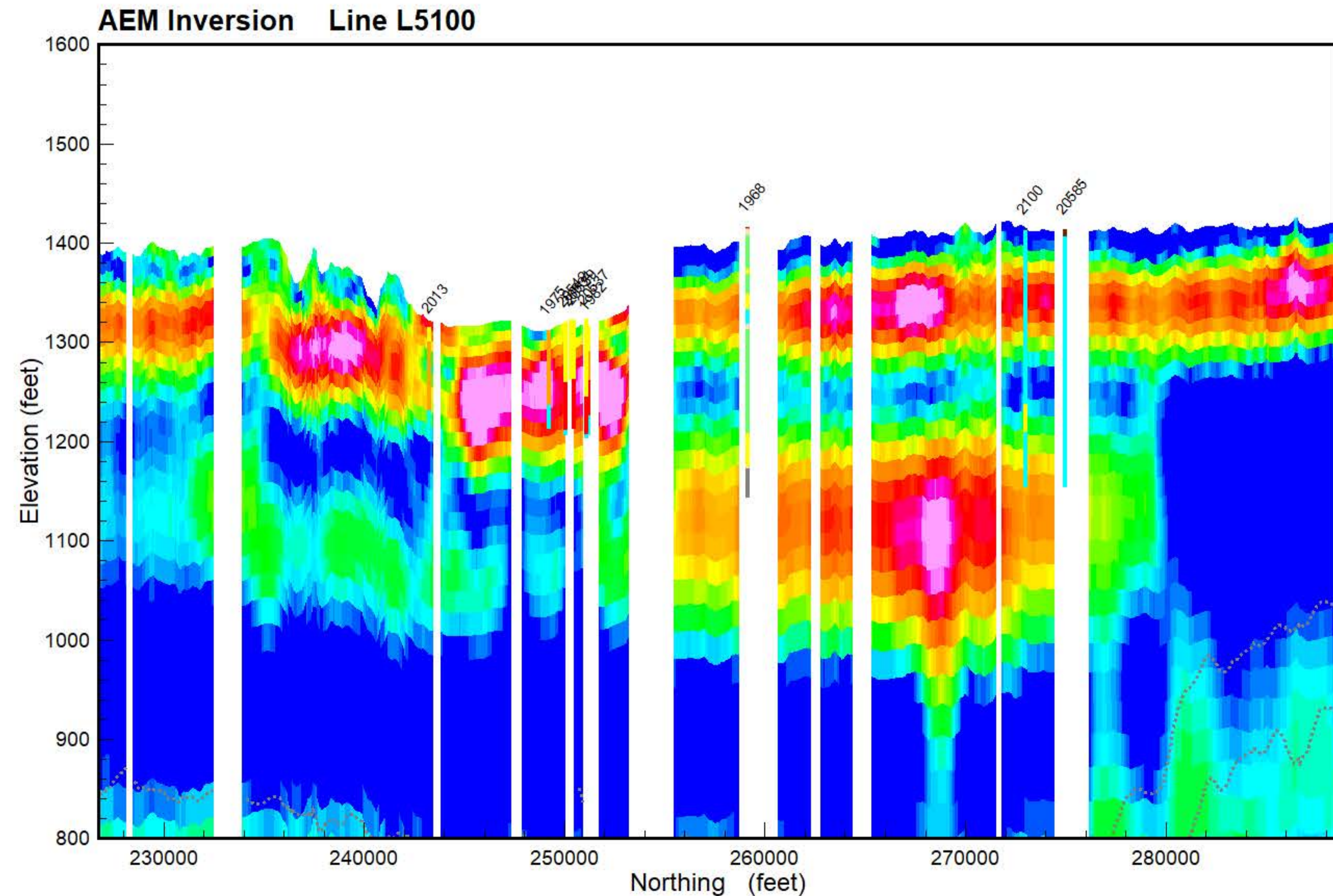
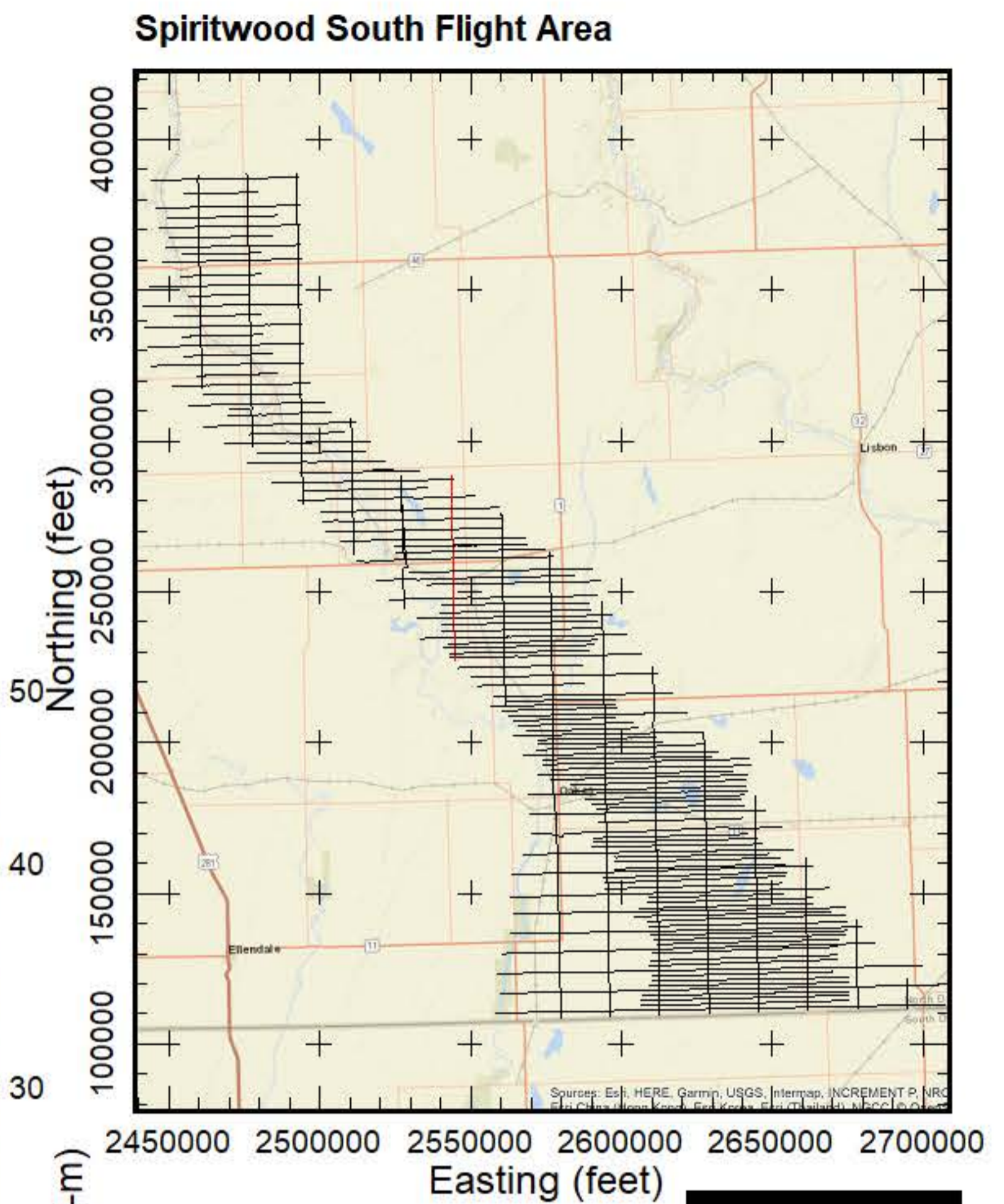
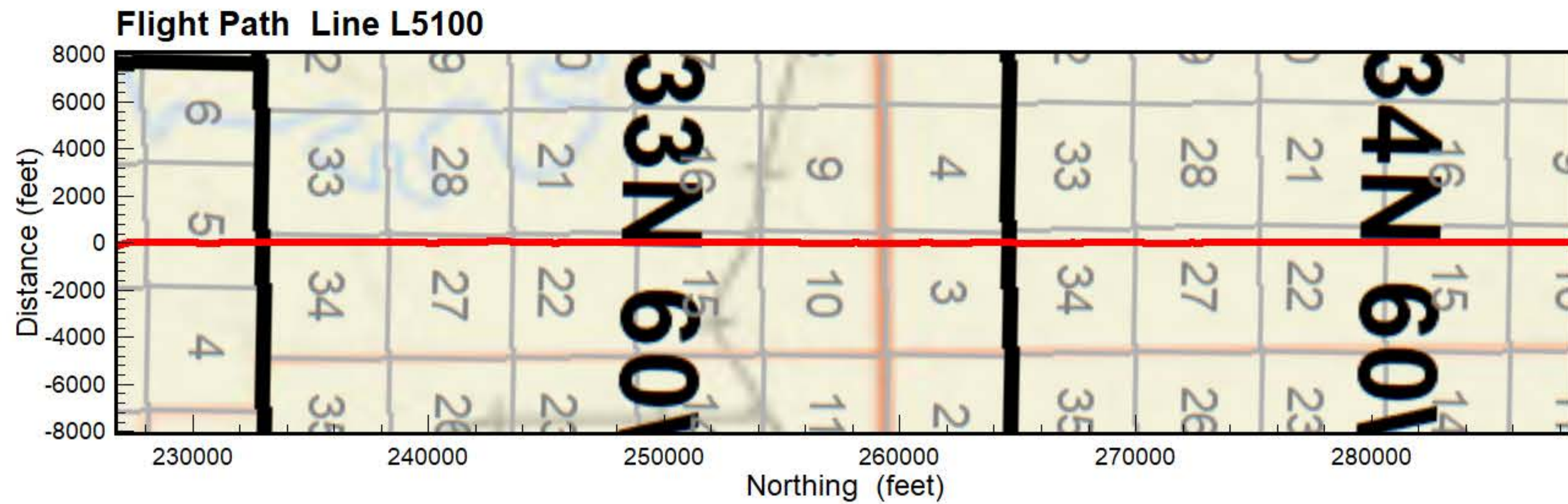


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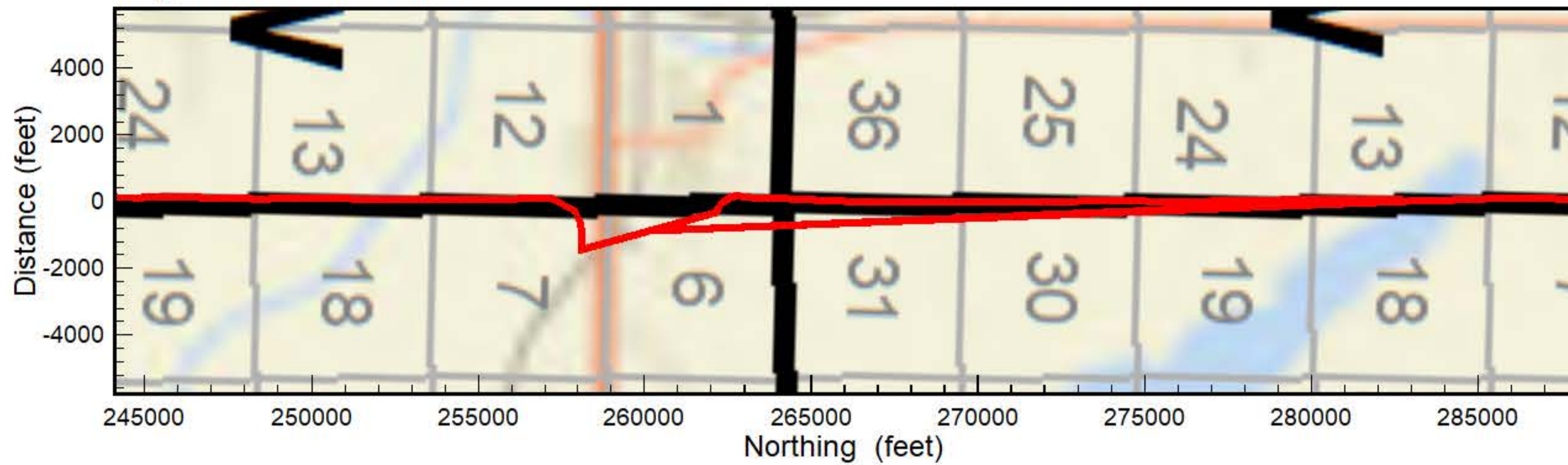
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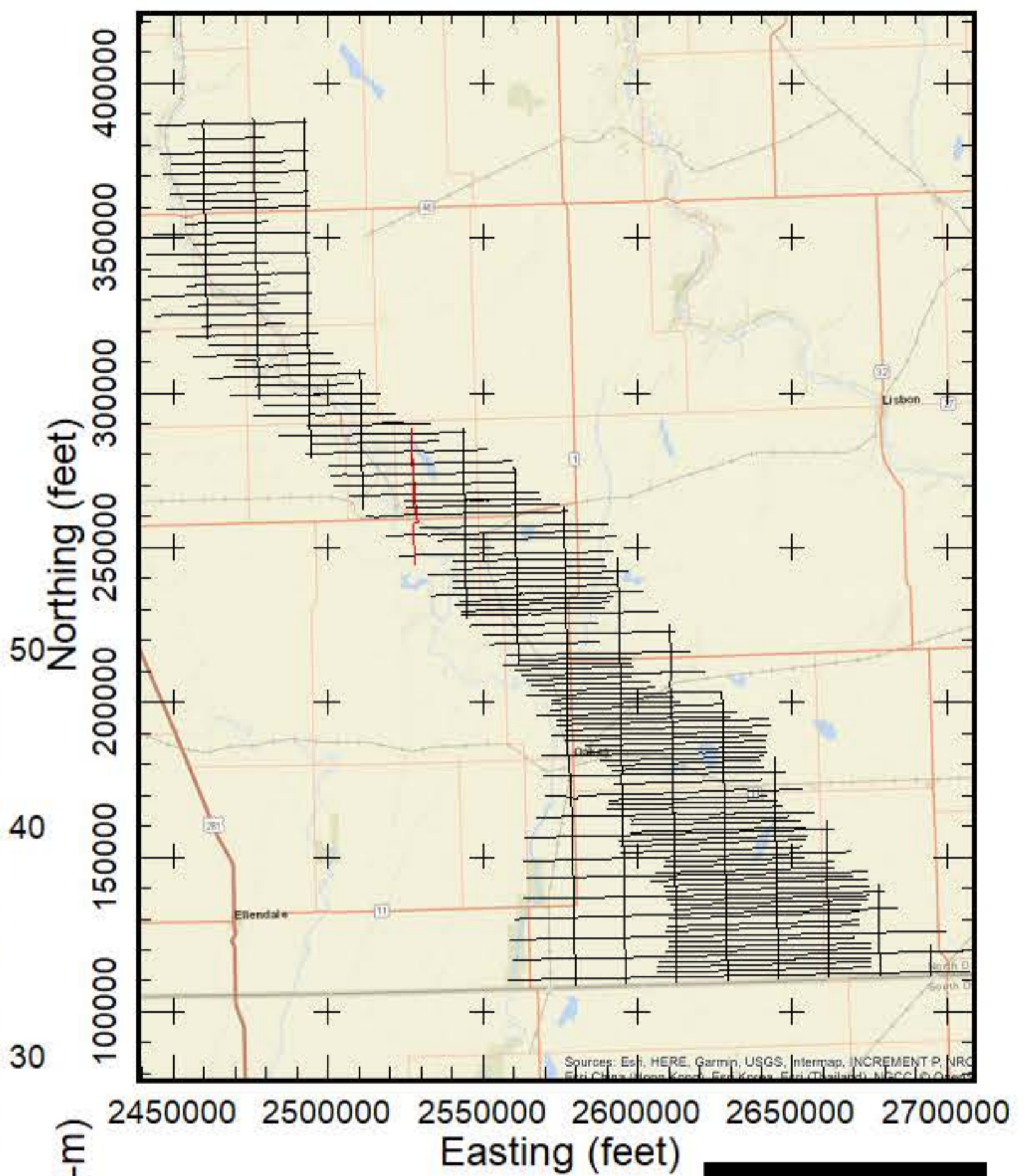




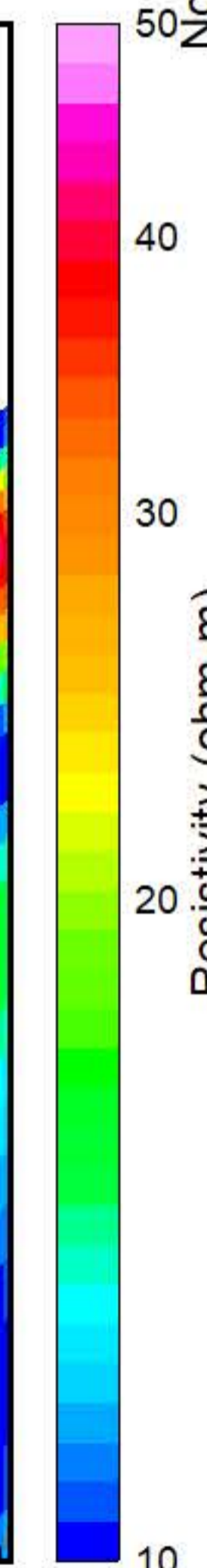
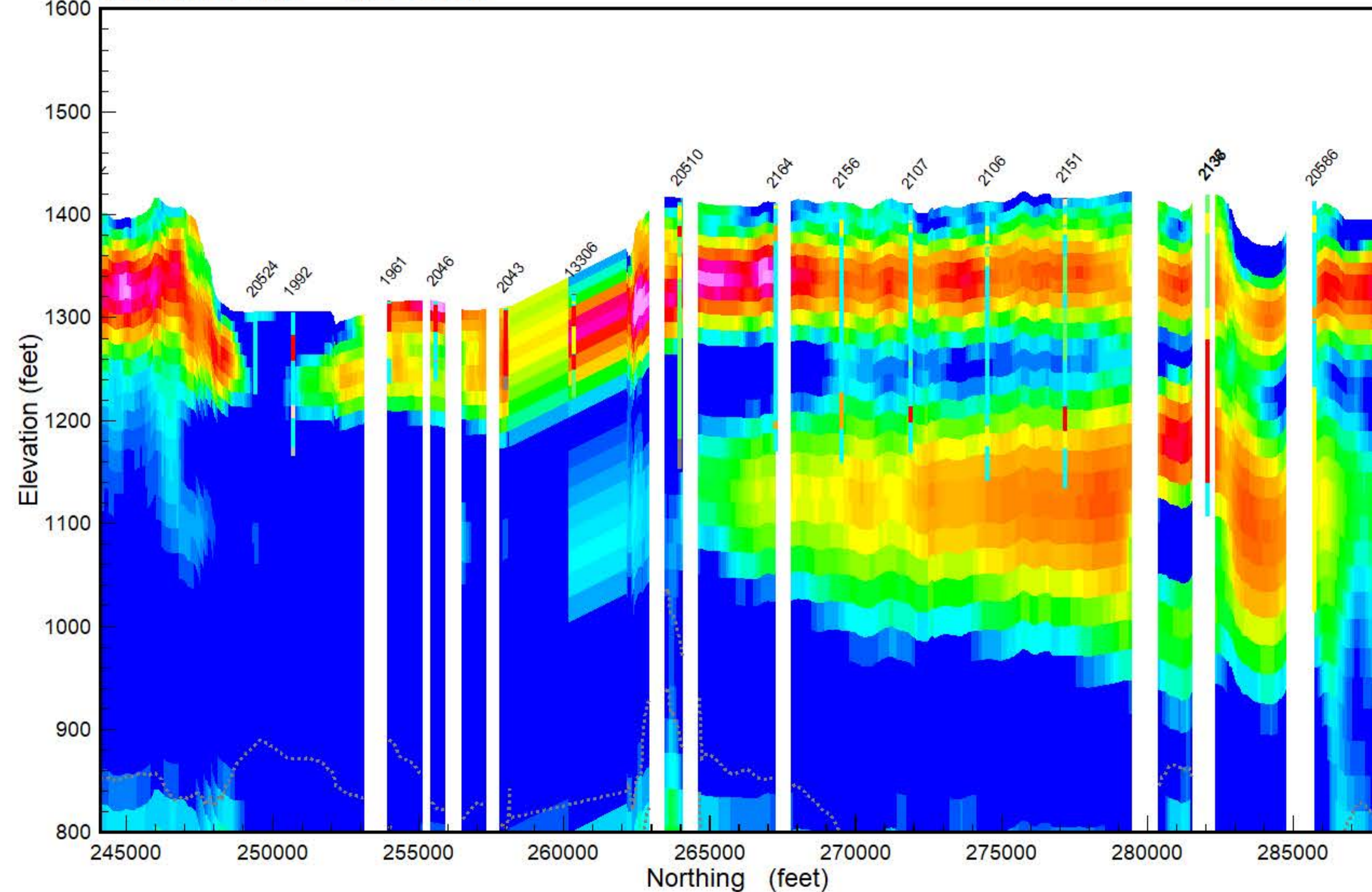
**Flight Path Line L5115**



**Spiritwood South Flight Area**



**AEM Inversion Line L5115**



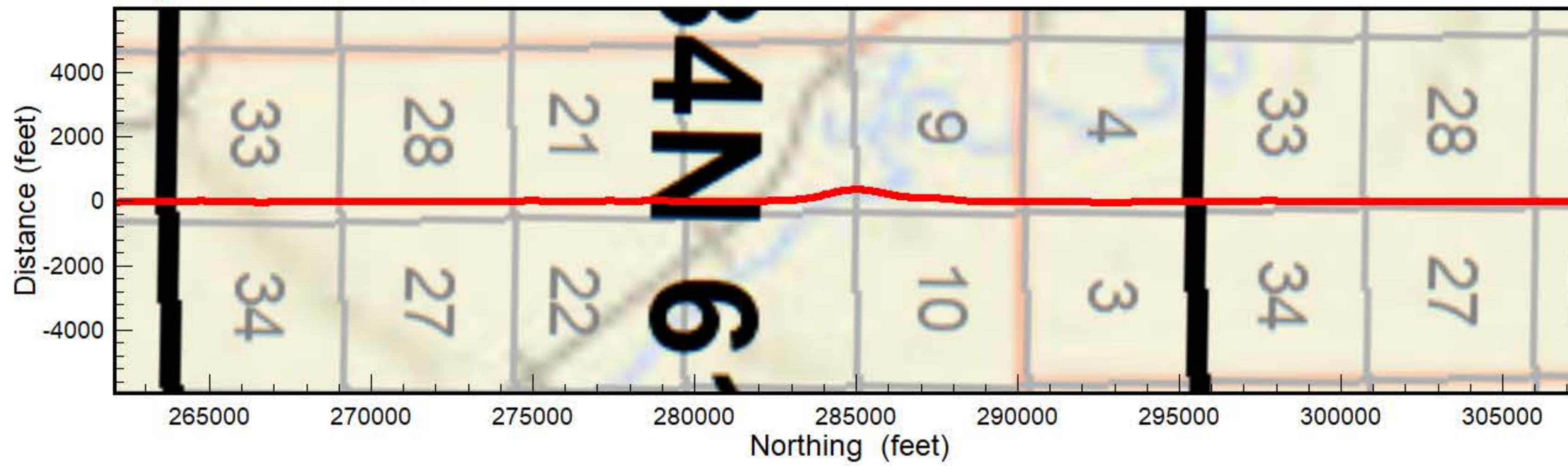
**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018, to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

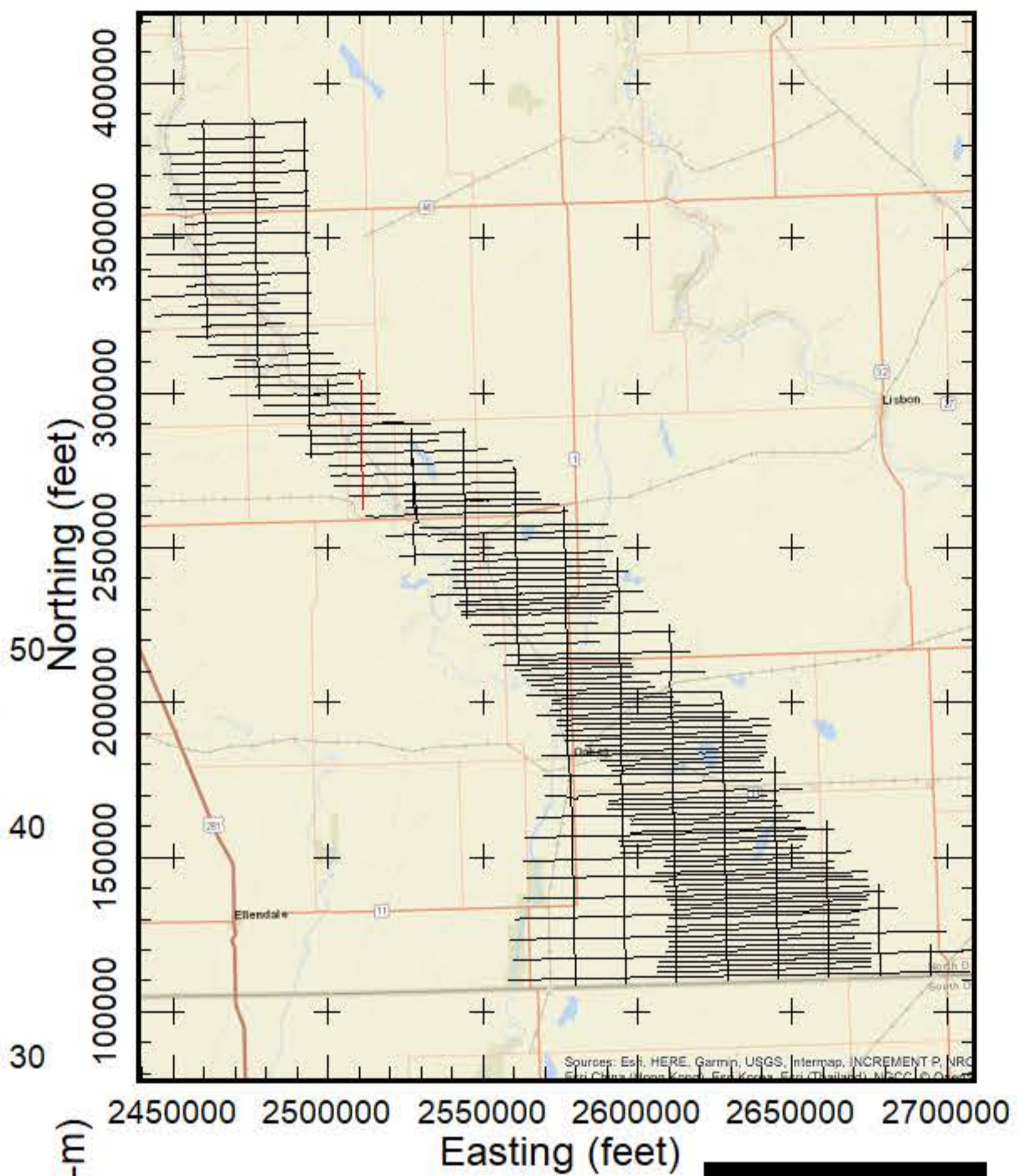
**AGF**  
 Aqua Geo Frameworks



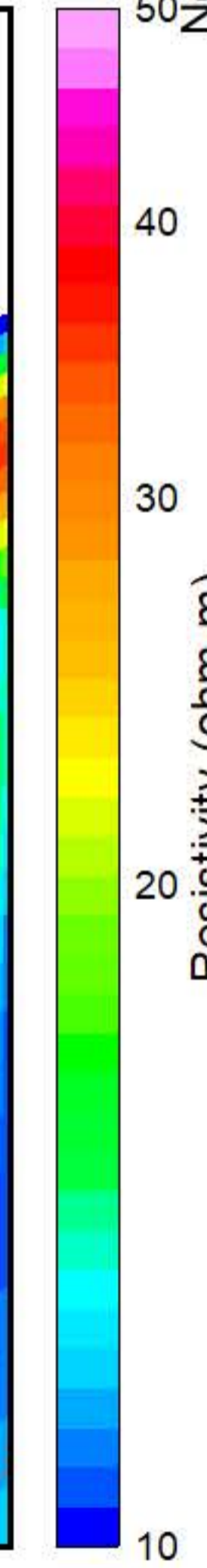
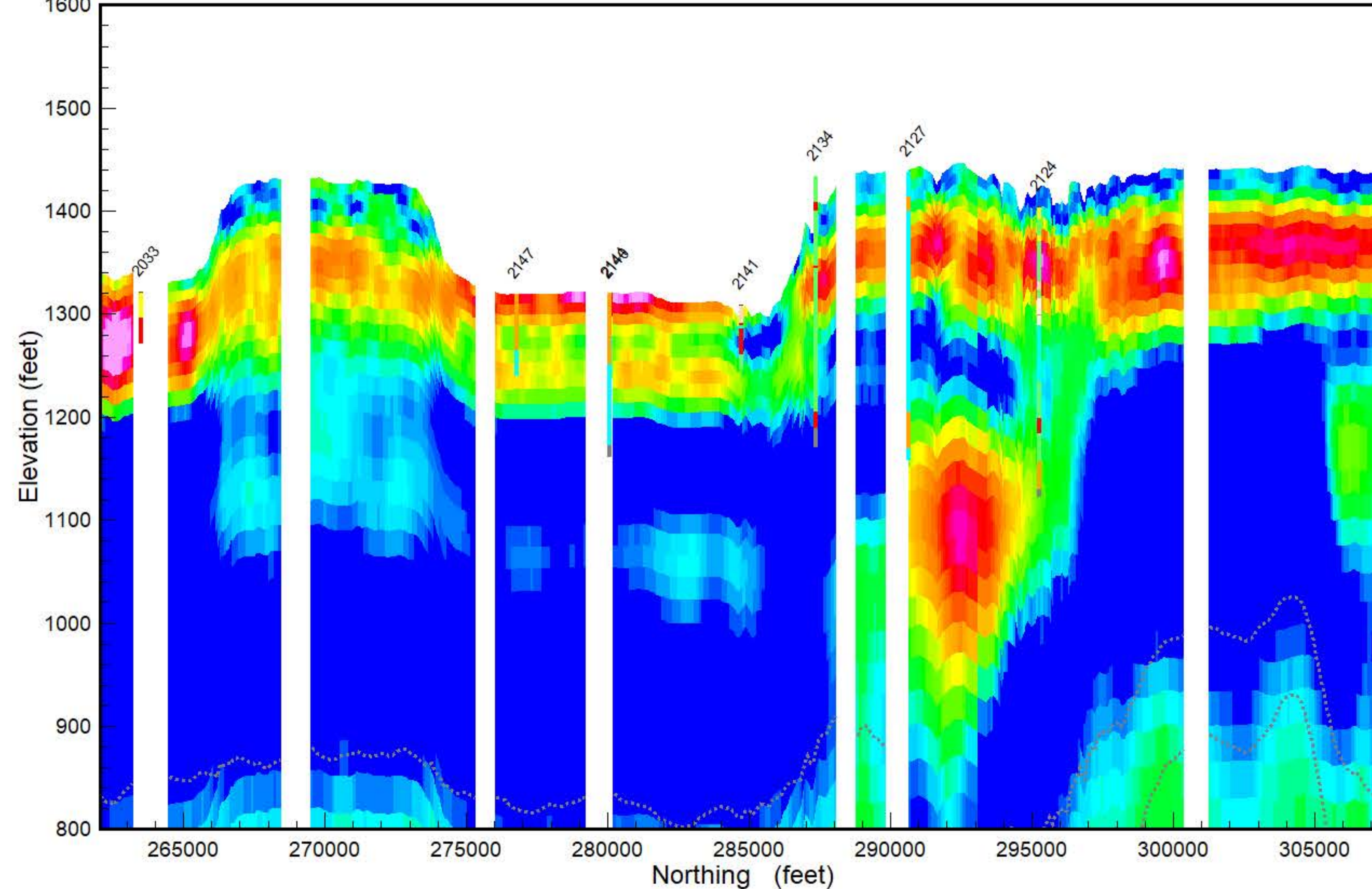
**Flight Path Line L5130**



**Spiritwood South Flight Area**



**AEM Inversion Line L5130**



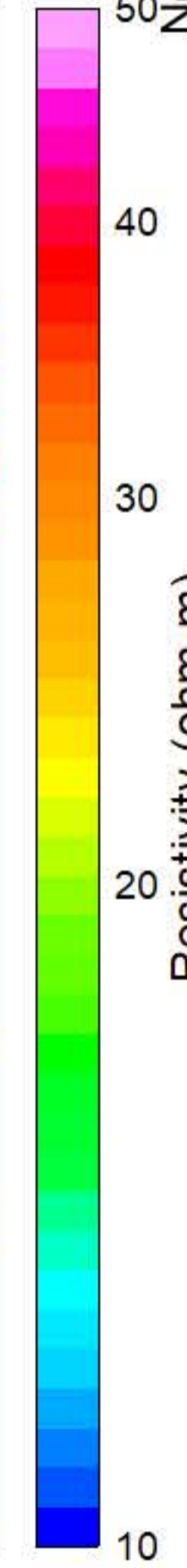
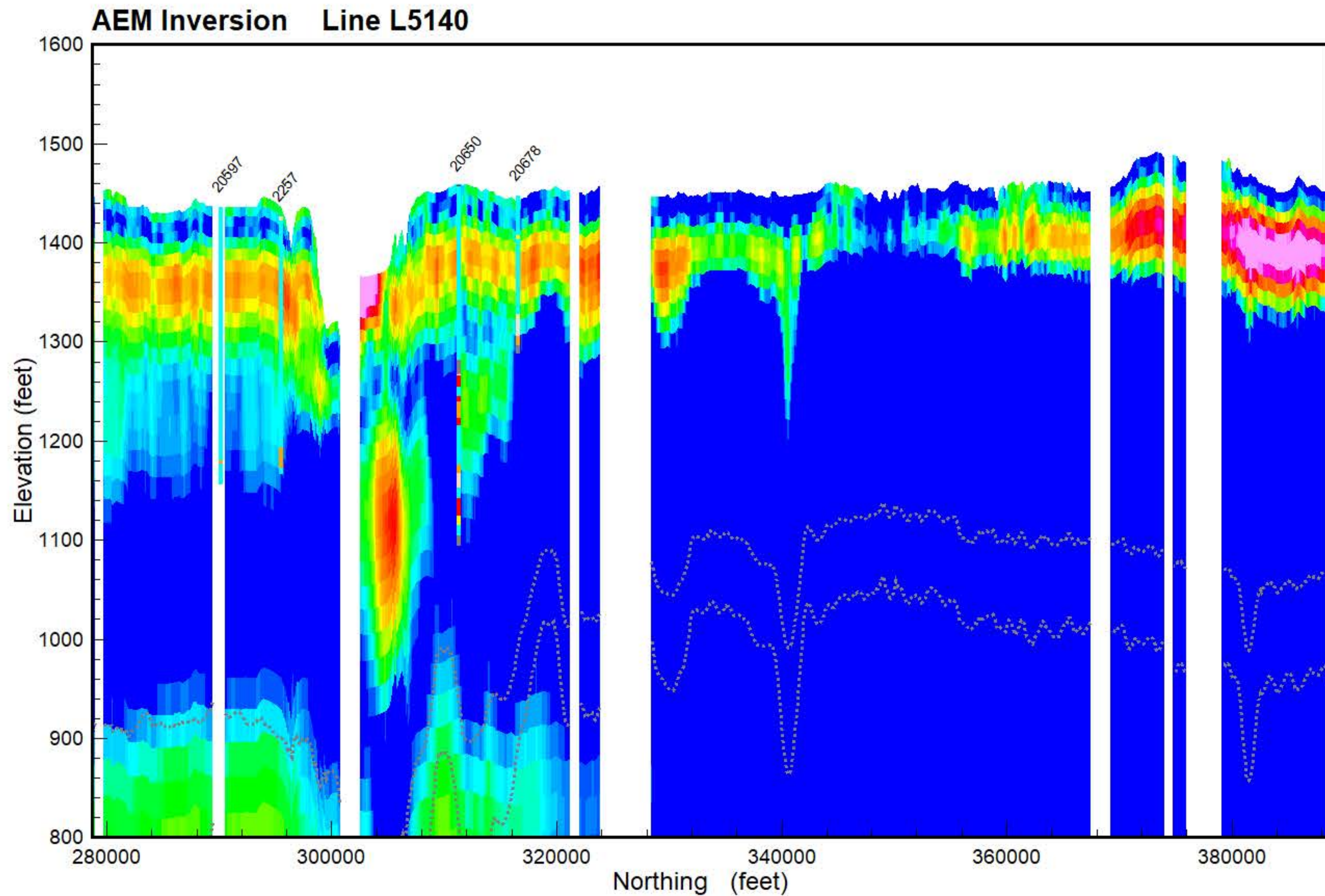
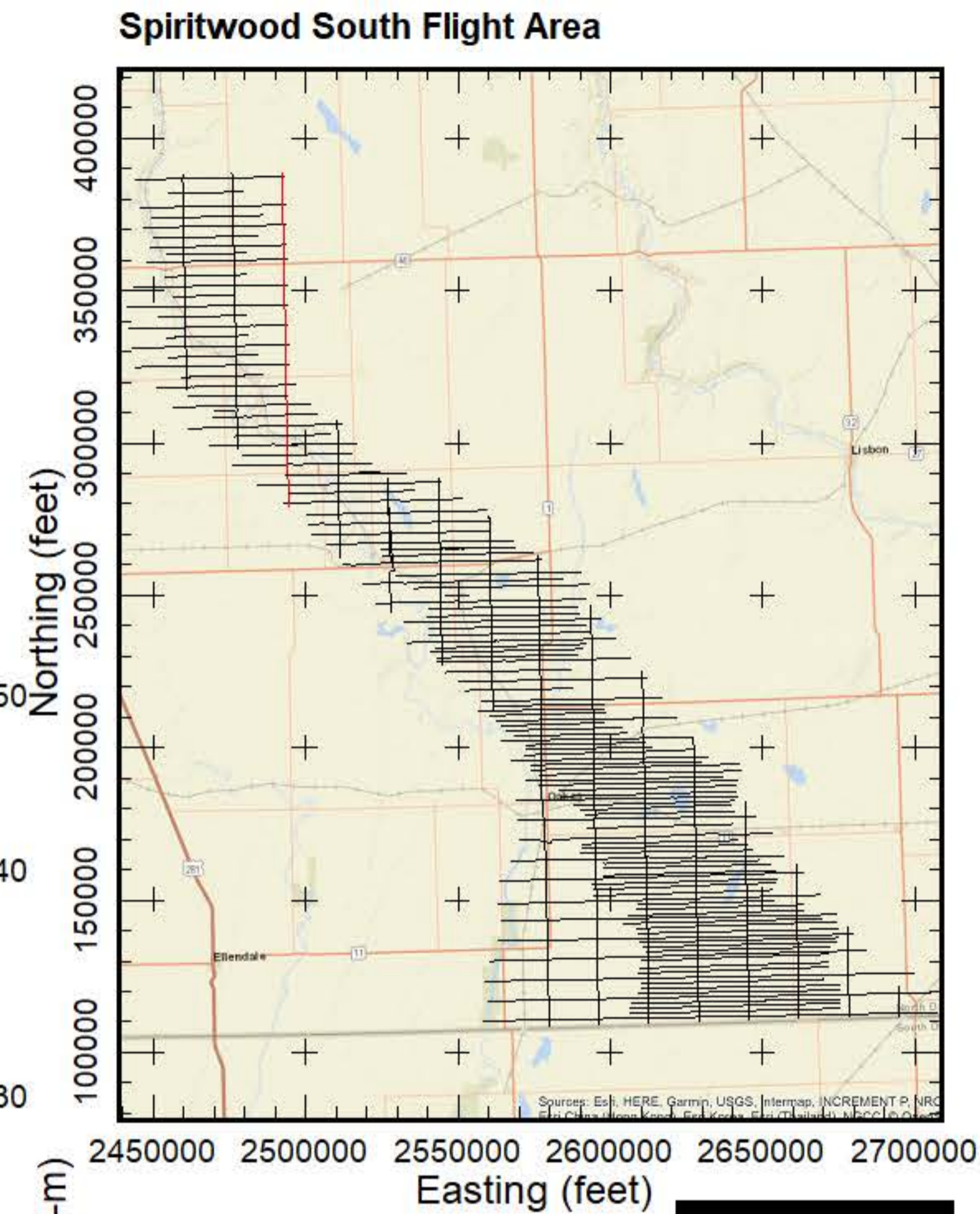
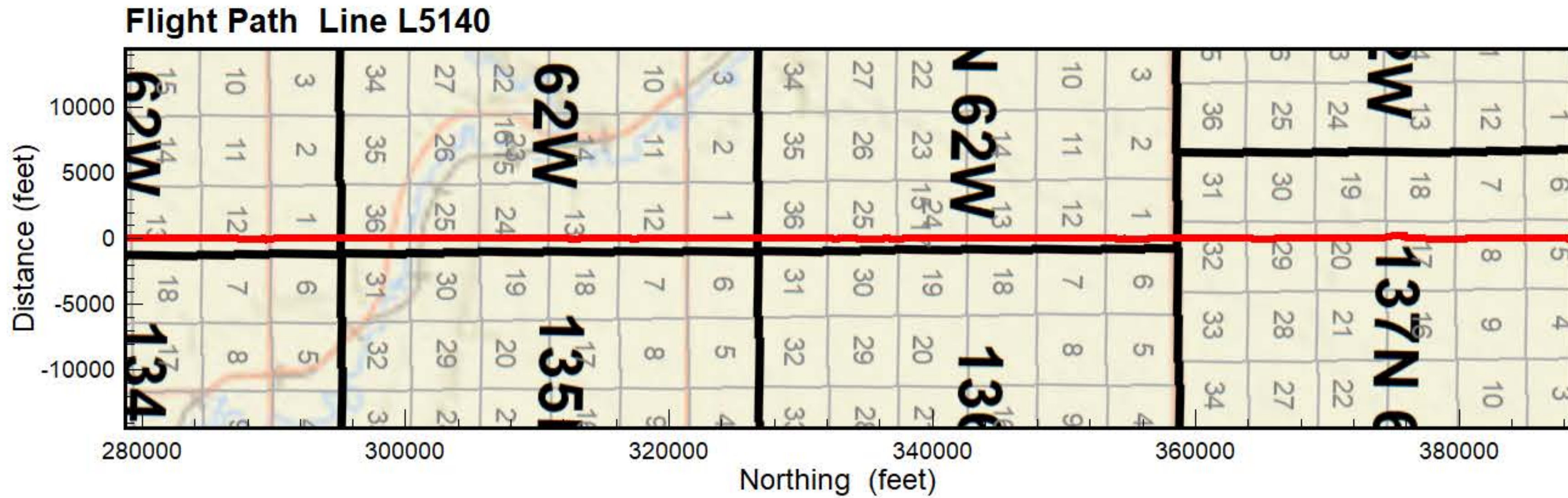
**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
LIGNITE
COBBLES
BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
SHALE
BEDROCK
GRAVEL
SAND & GRAVEL
SAND
INTERBEDDED
SILT
CLAY
TILL
FILL
TOPSOIL
NOSAMPLE

**AGF**  
Aqua Geo Frameworks



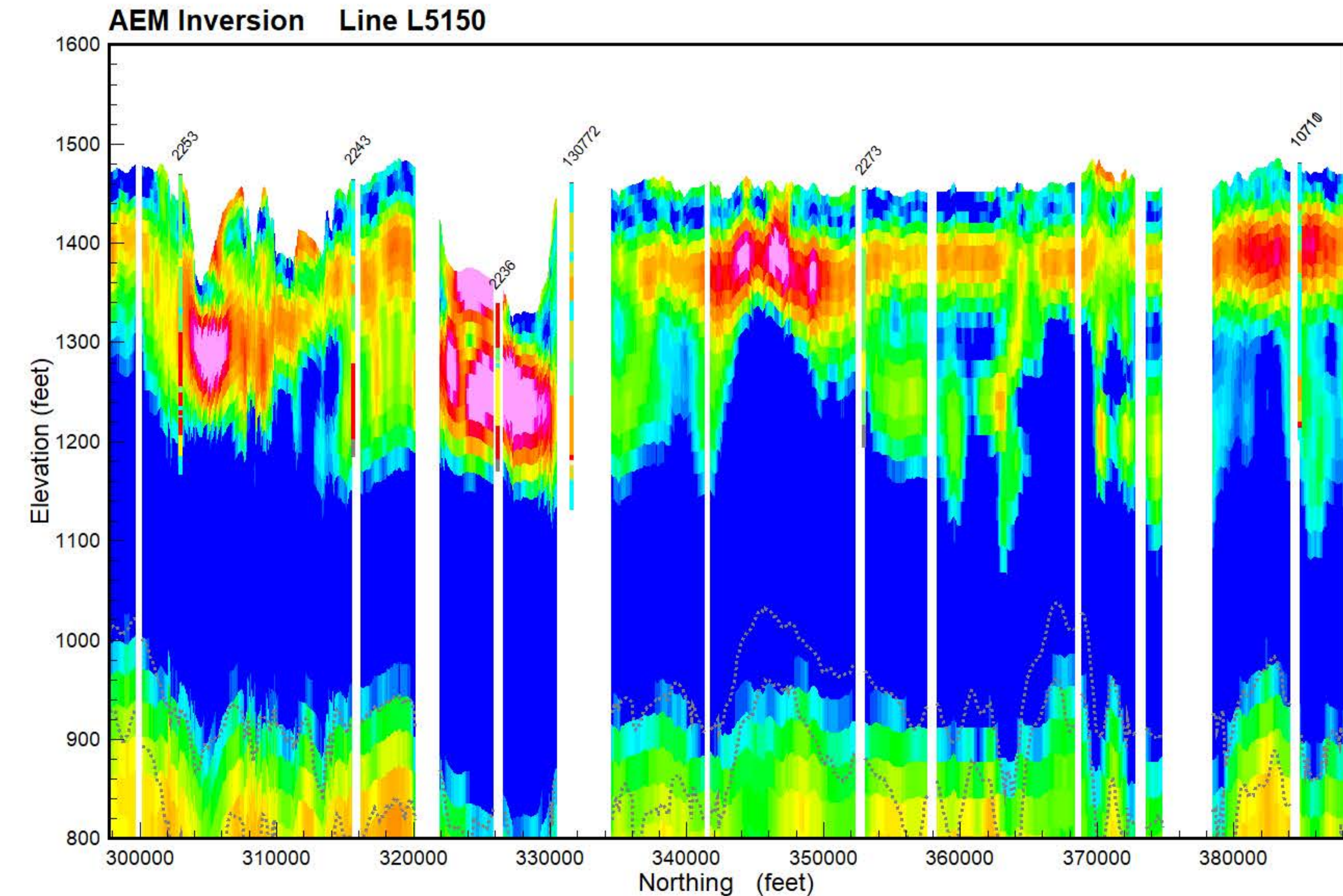
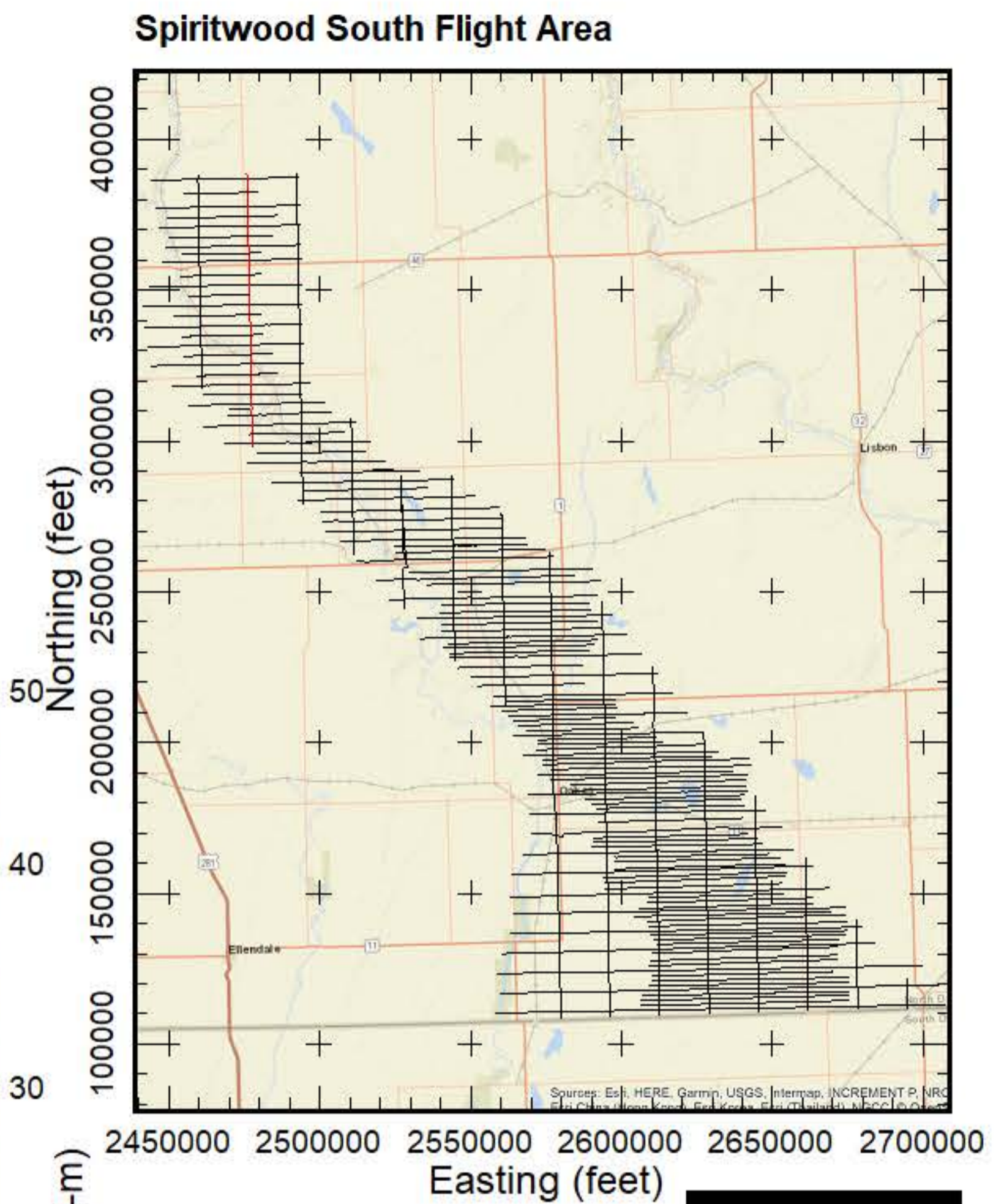
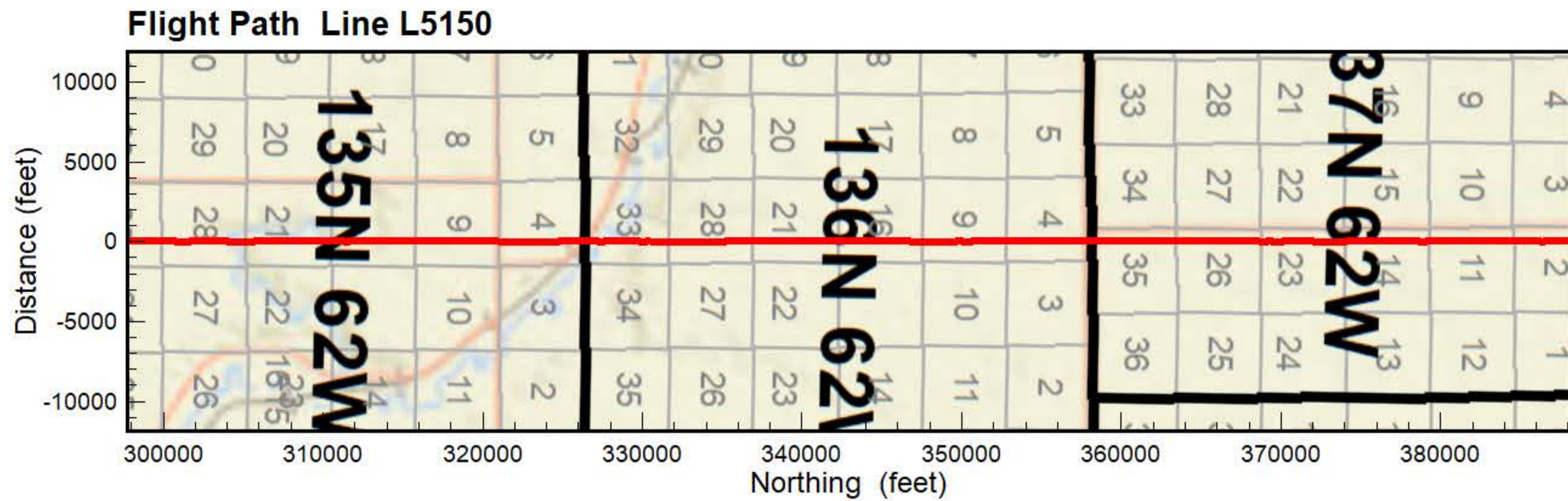


- PEAT
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- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018, to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.





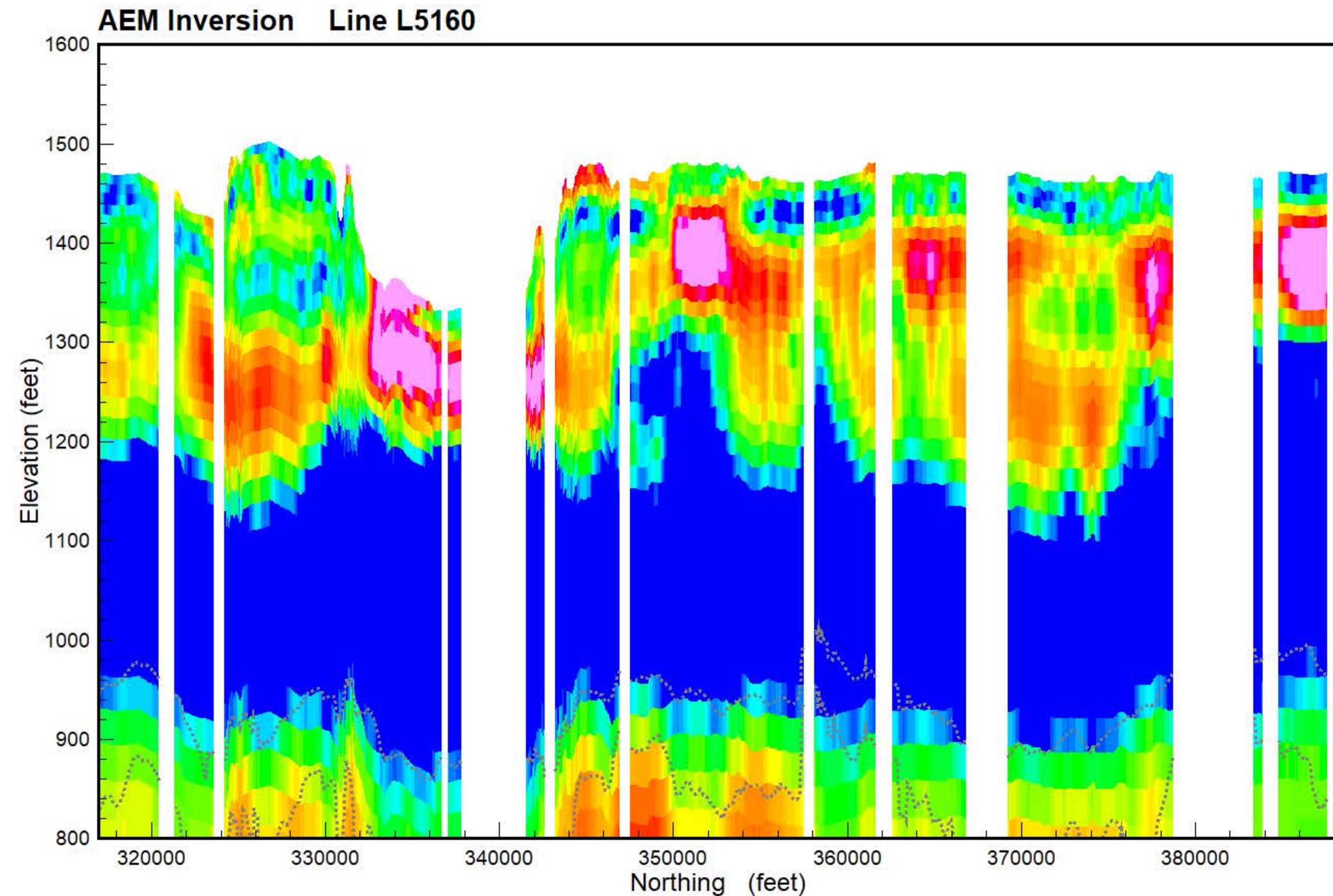
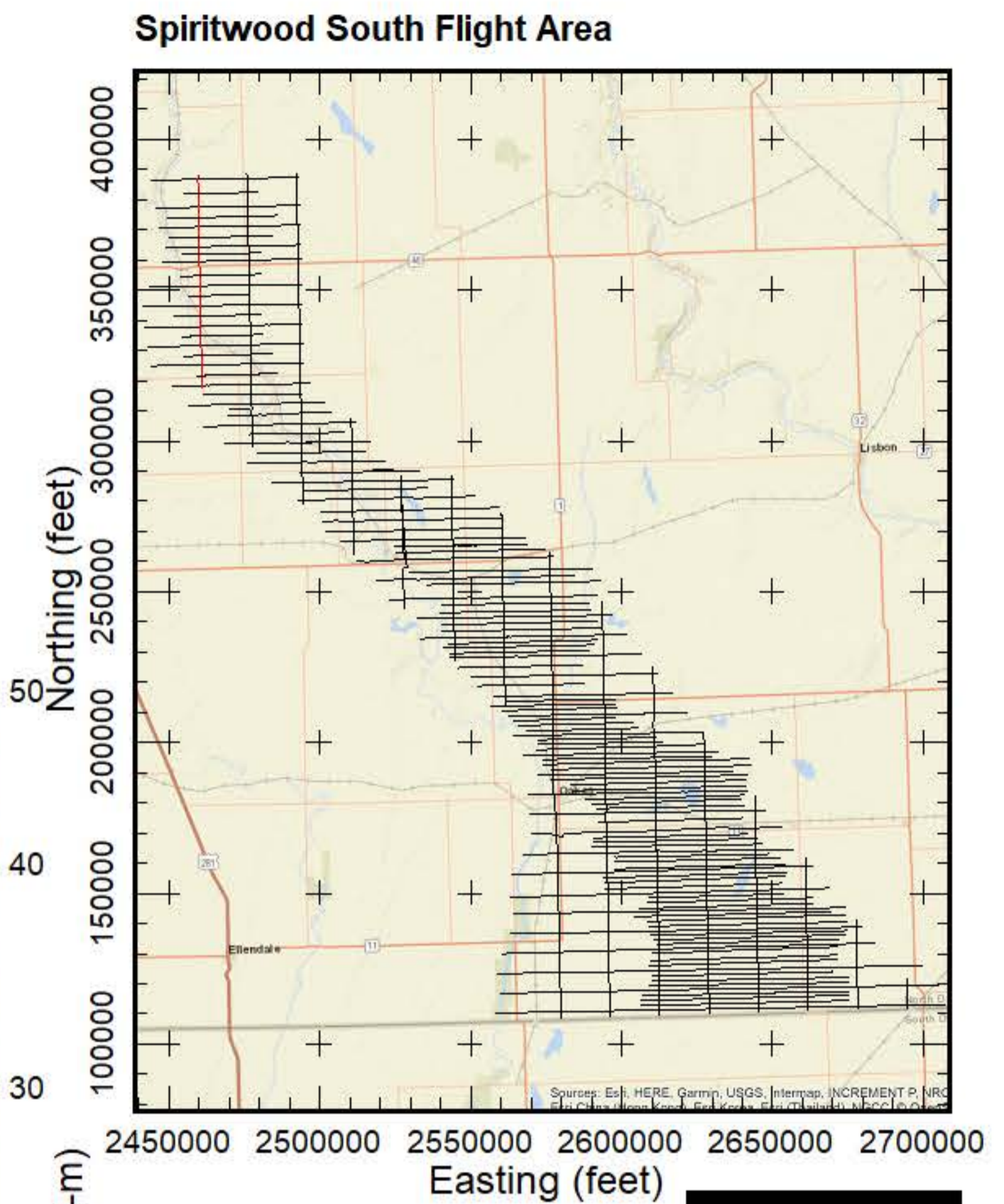
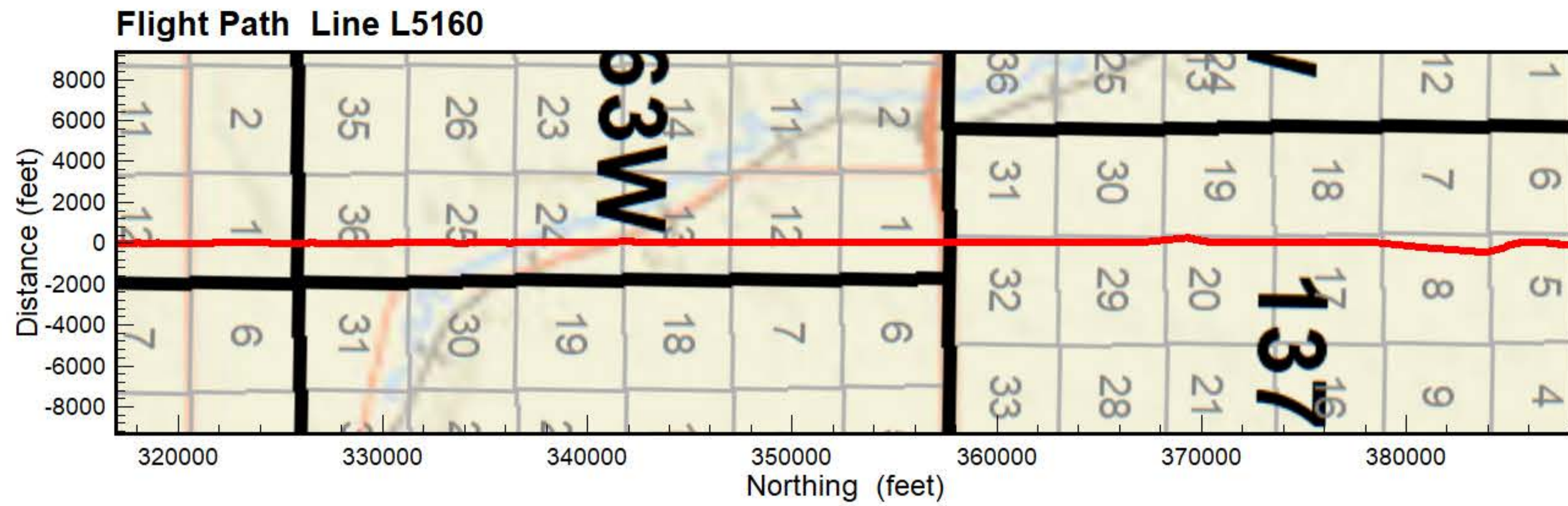


**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
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- FILL
- TOPSOIL
- NOSAMPLE





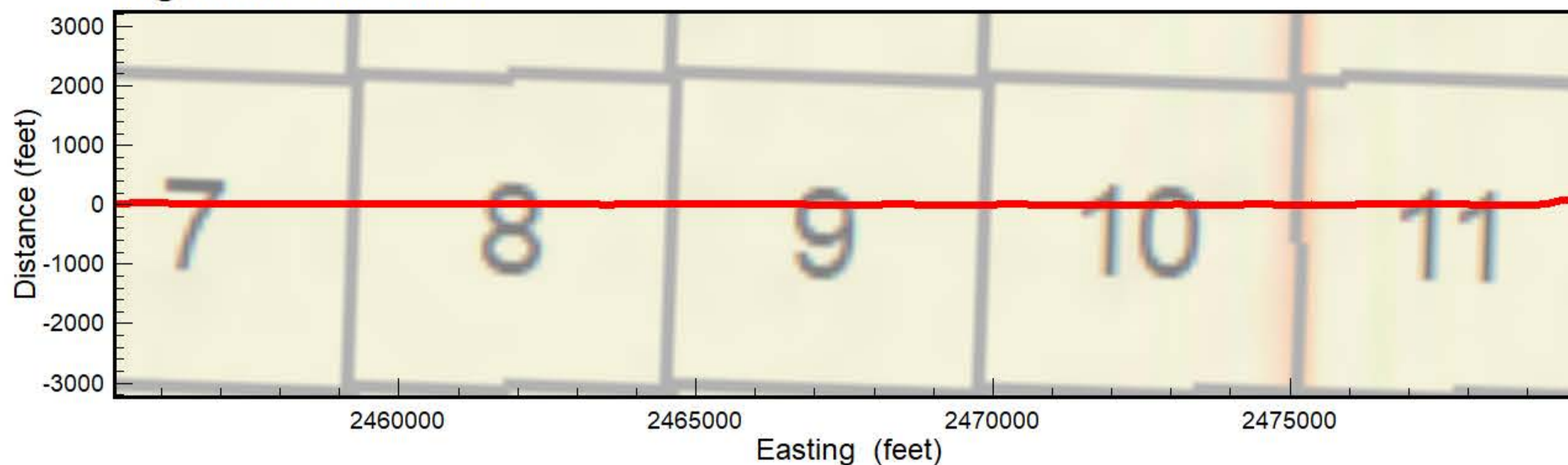
**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

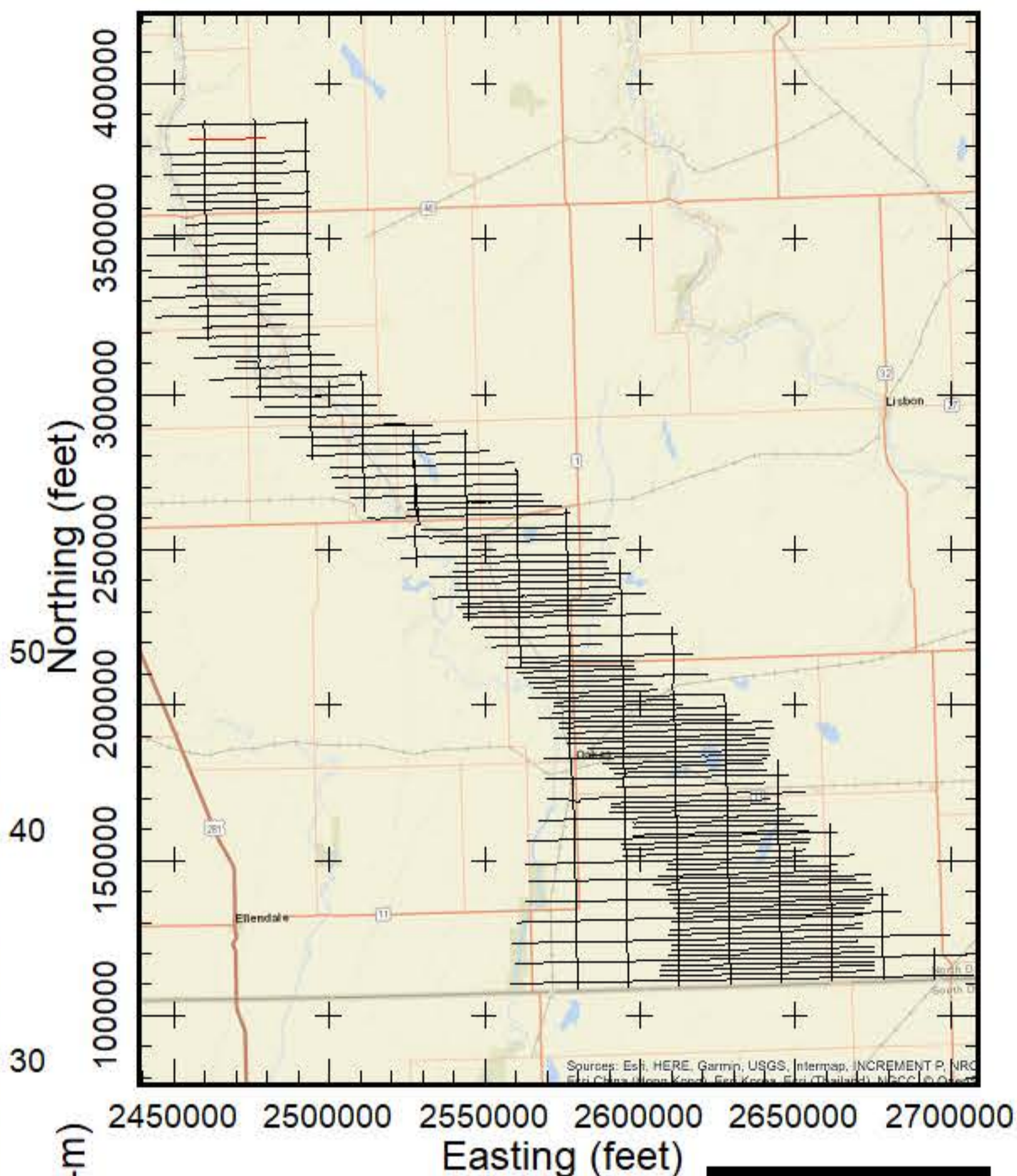
PEAT
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BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
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SAND
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SILT
CLAY
TILL
FILL
TOPSOIL
NOSAMPLE



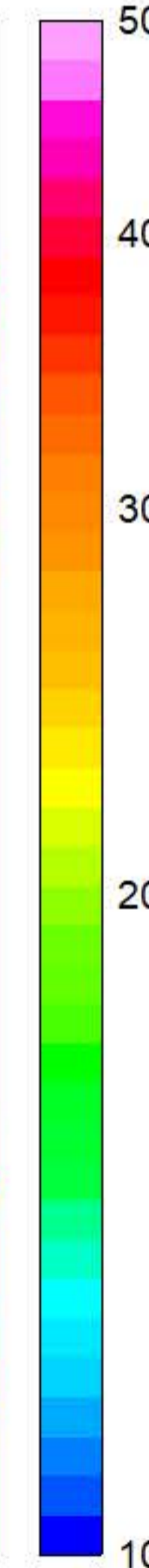
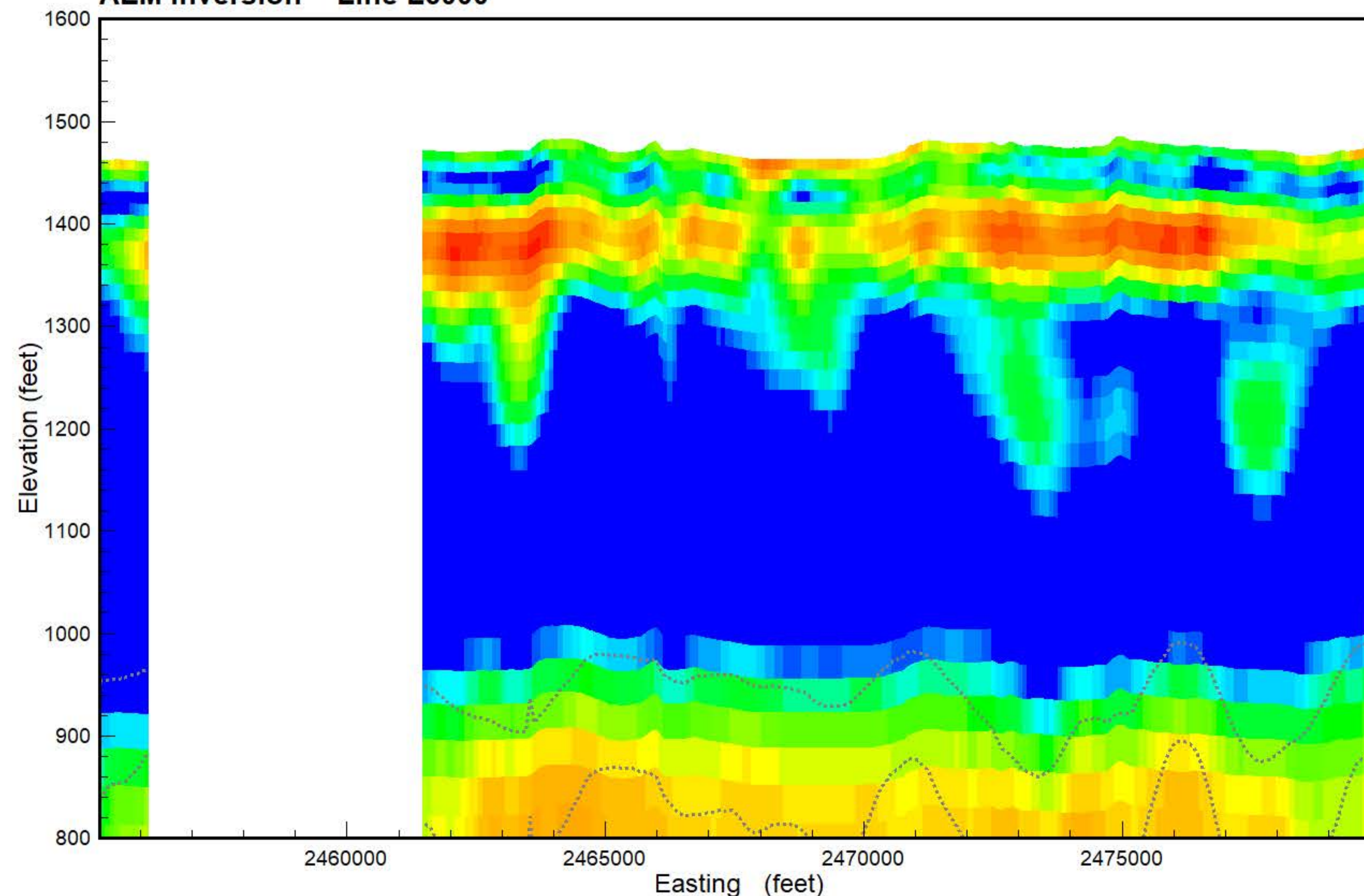
**Flight Path Line L6000**



**Spiritwood South Flight Area**



**AEM Inversion Line L6000**



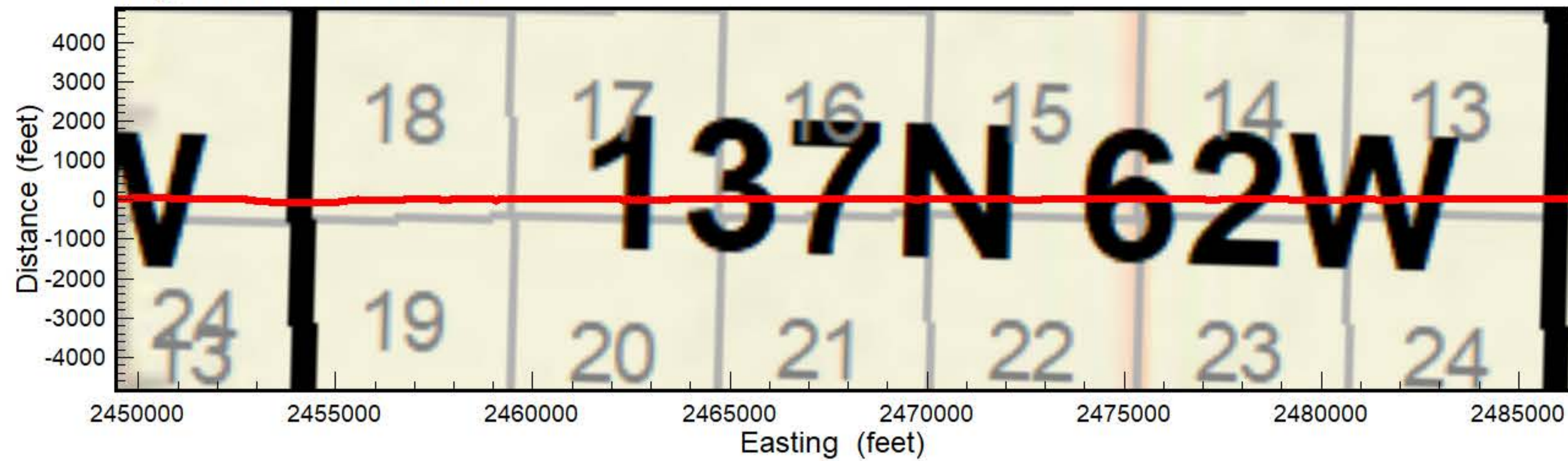
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- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

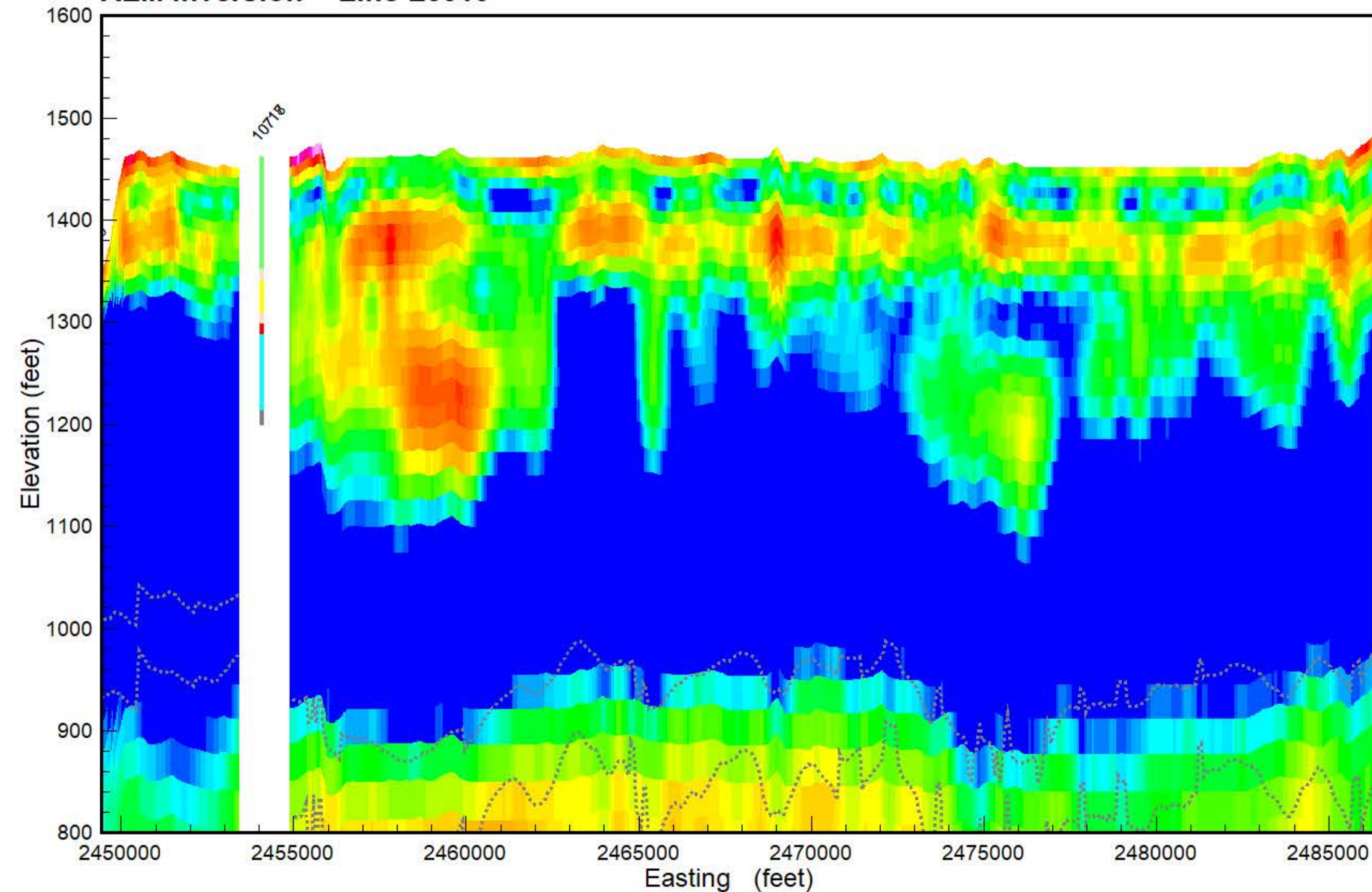




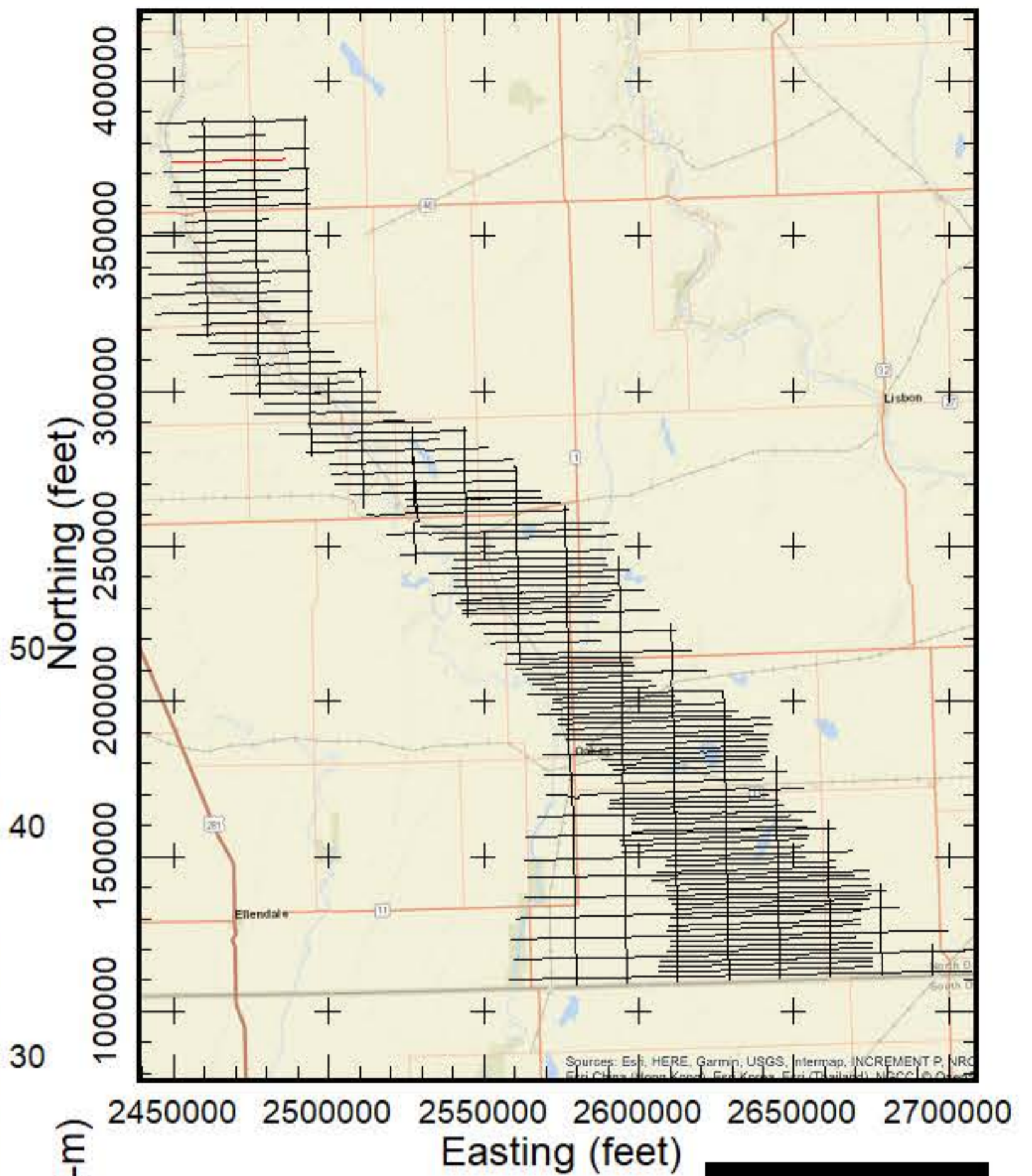
**Flight Path Line L6010**



**AEM Inversion Line L6010**



**Spiritwood South Flight Area**



**GEOTECH**

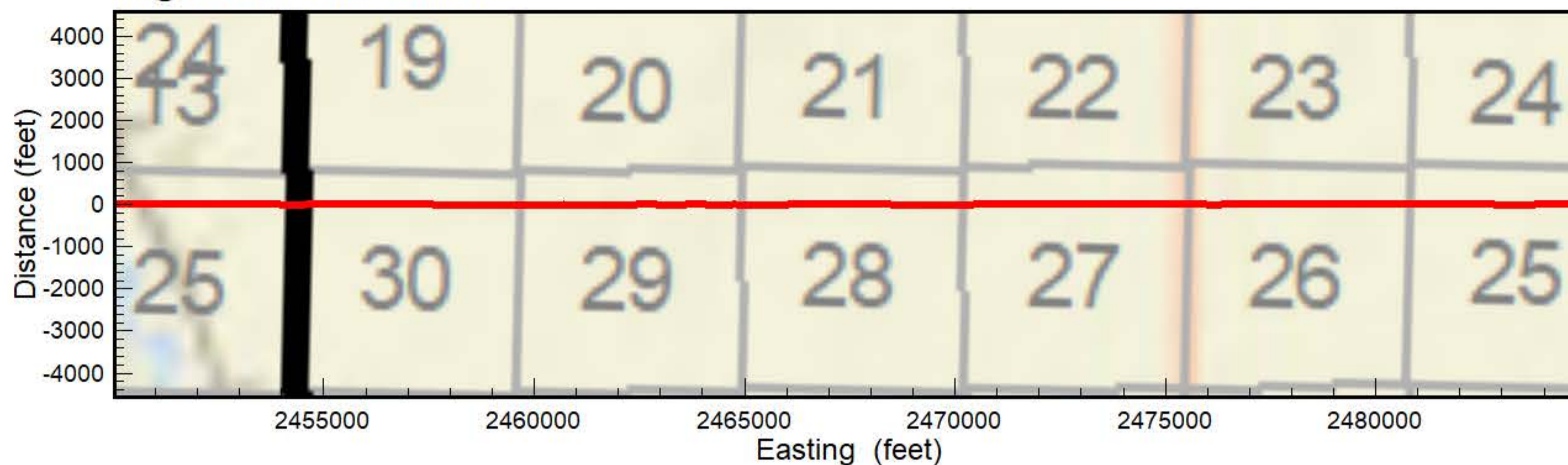
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- WEATHERED GRANITE
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- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

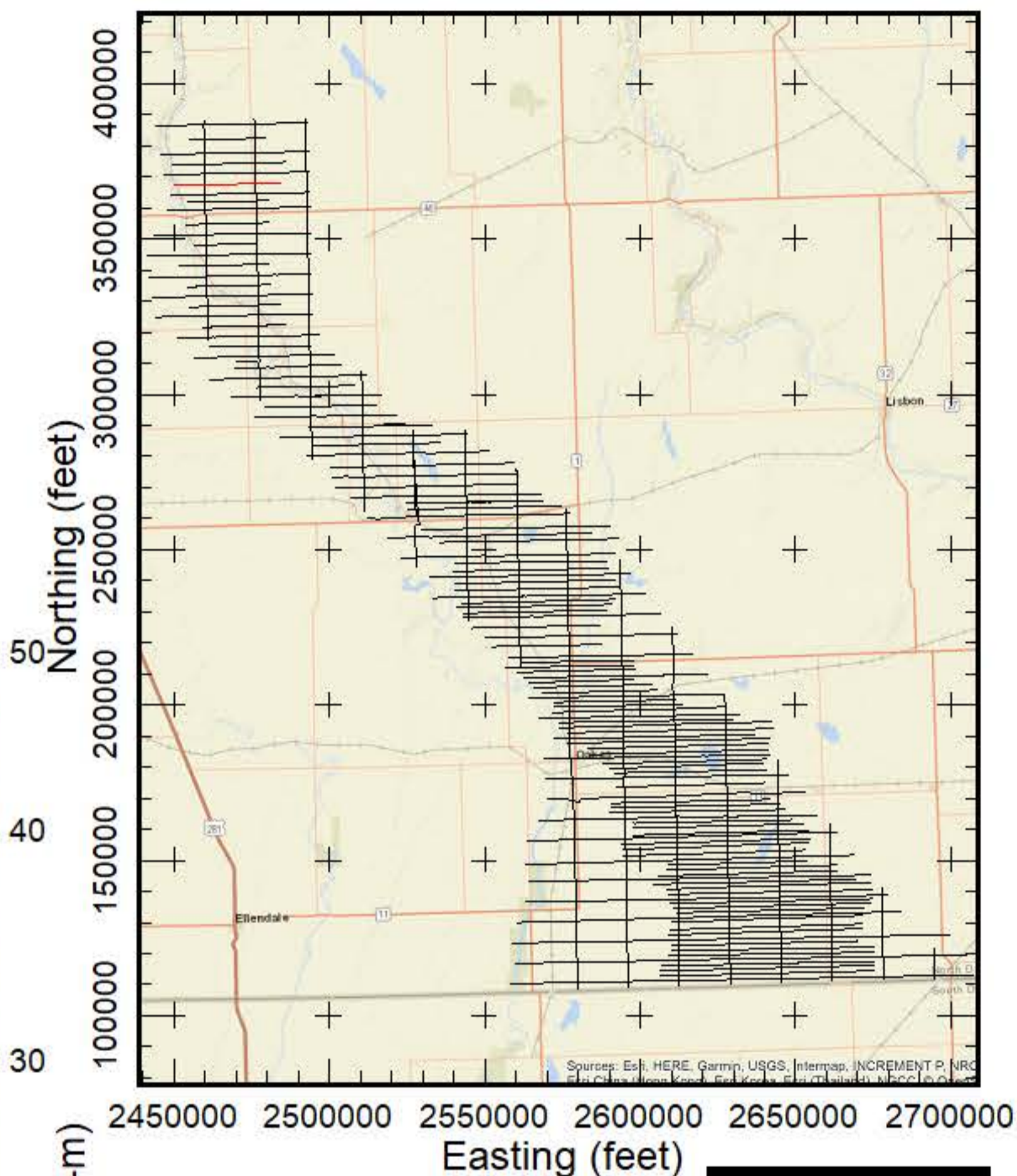
**AGF**  
Aqua Geo Frameworks



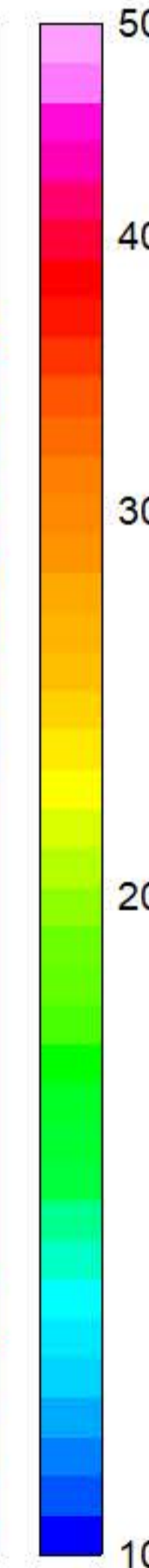
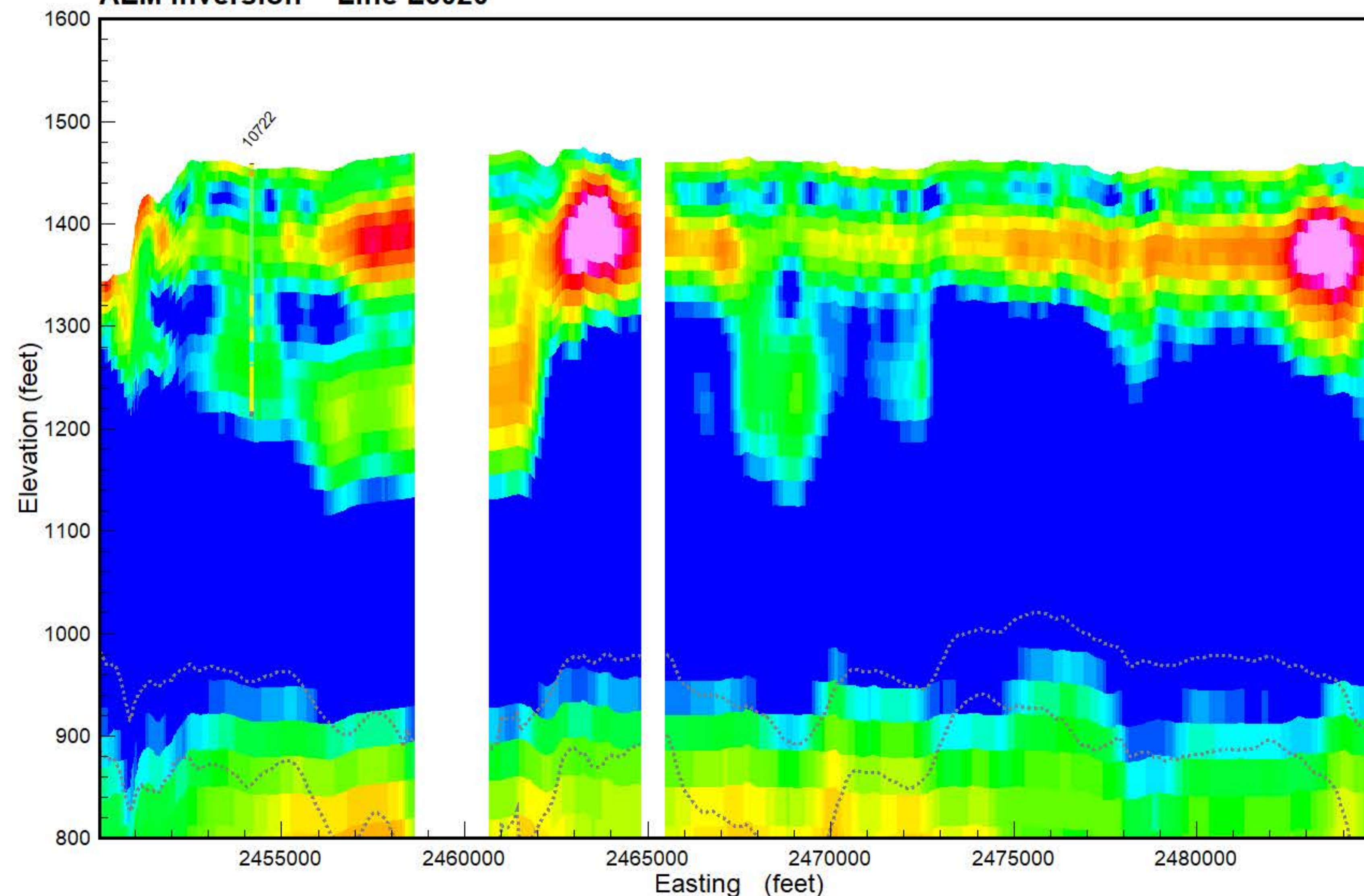
**Flight Path Line L6020**



**Spiritwood South Flight Area**



**AEM Inversion Line L6020**



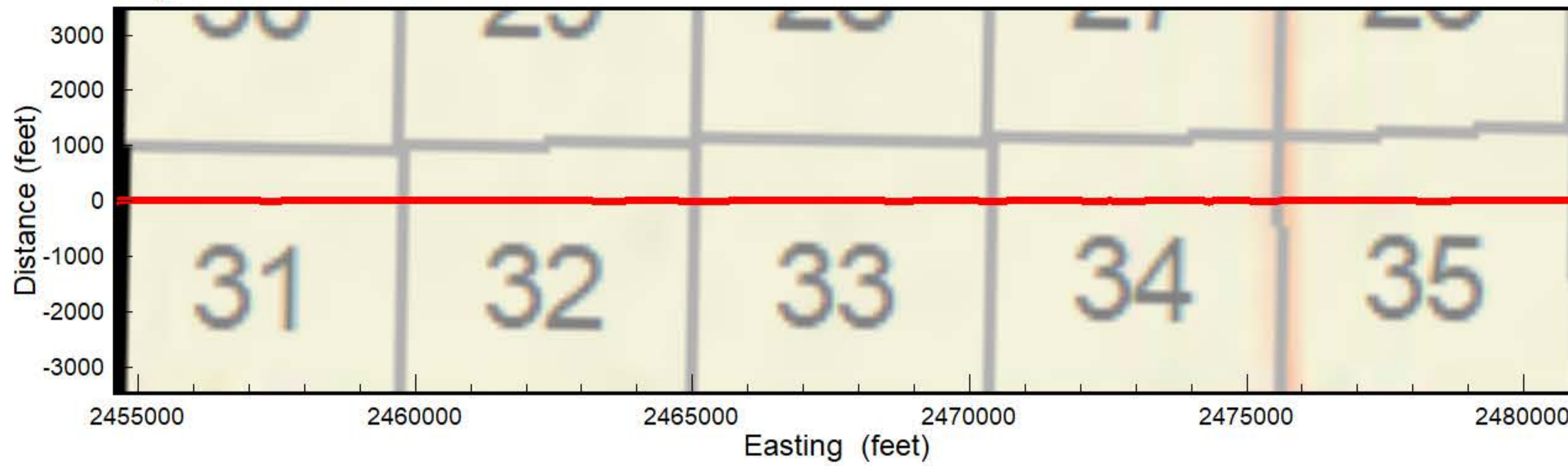
- PEAT
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
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- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

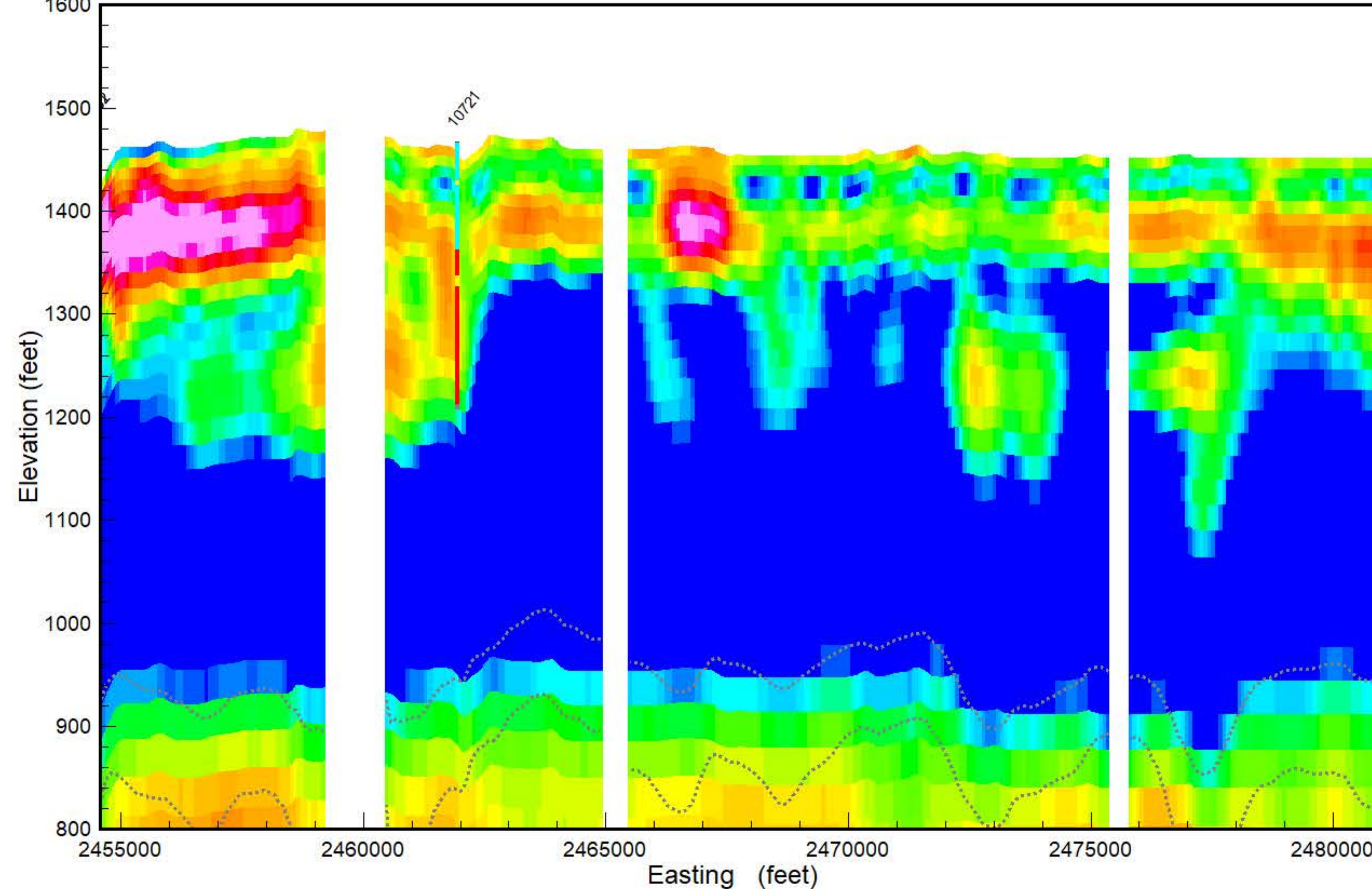




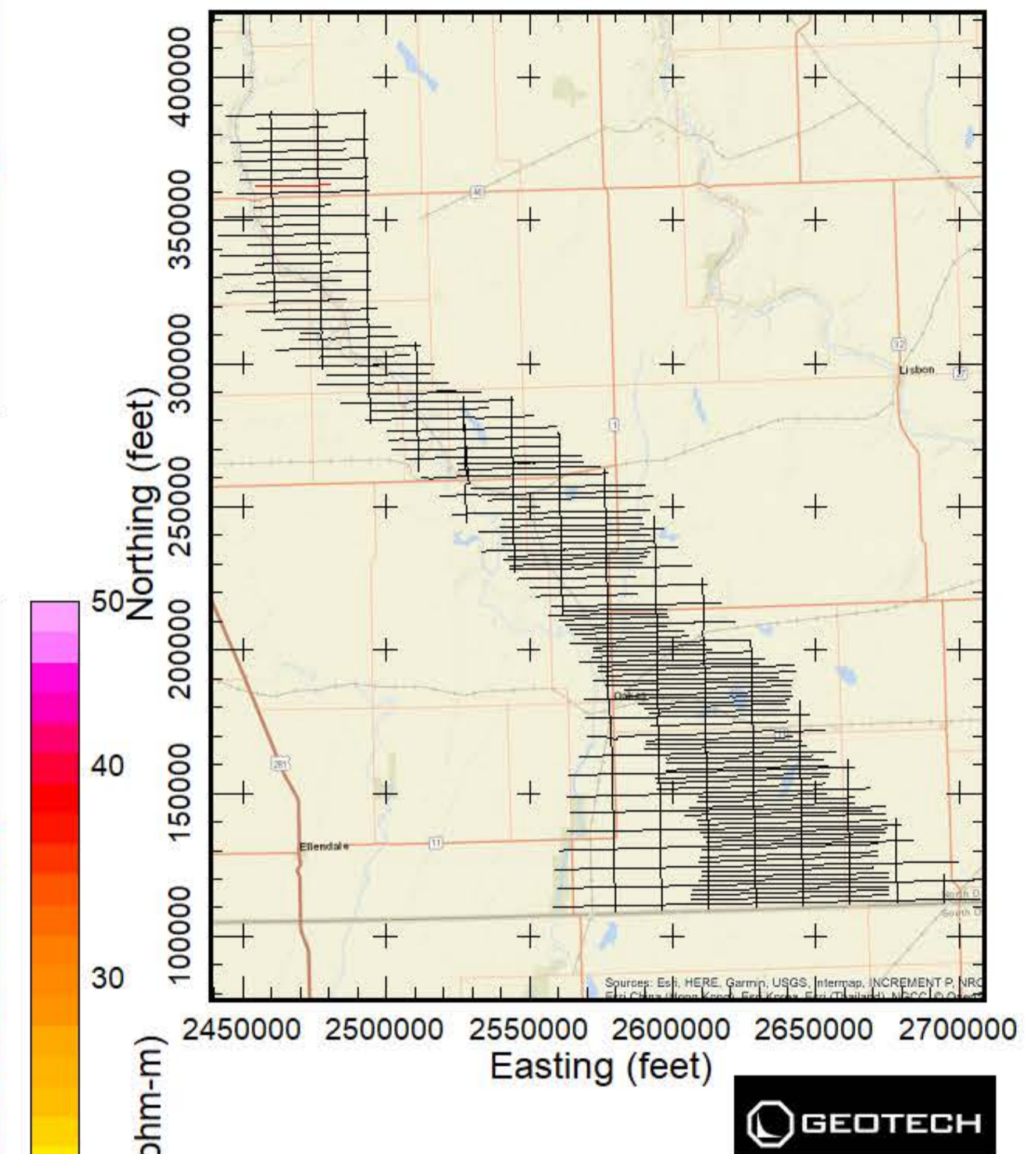
**Flight Path Line L6030**



**AEM Inversion Line L6030**



**Spiritwood South Flight Area**



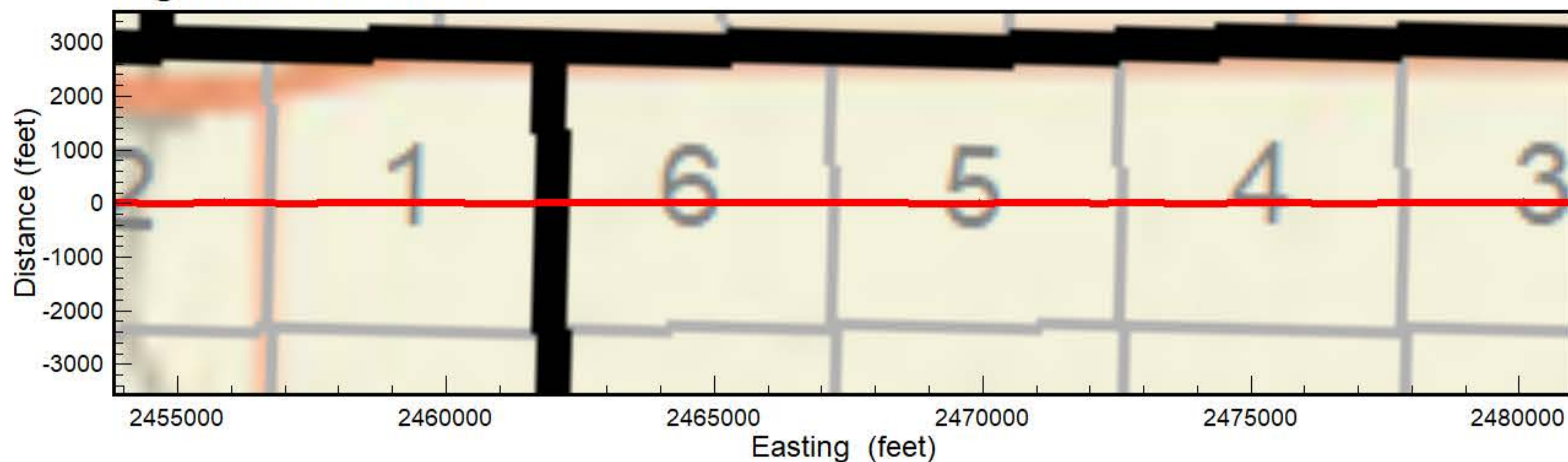
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

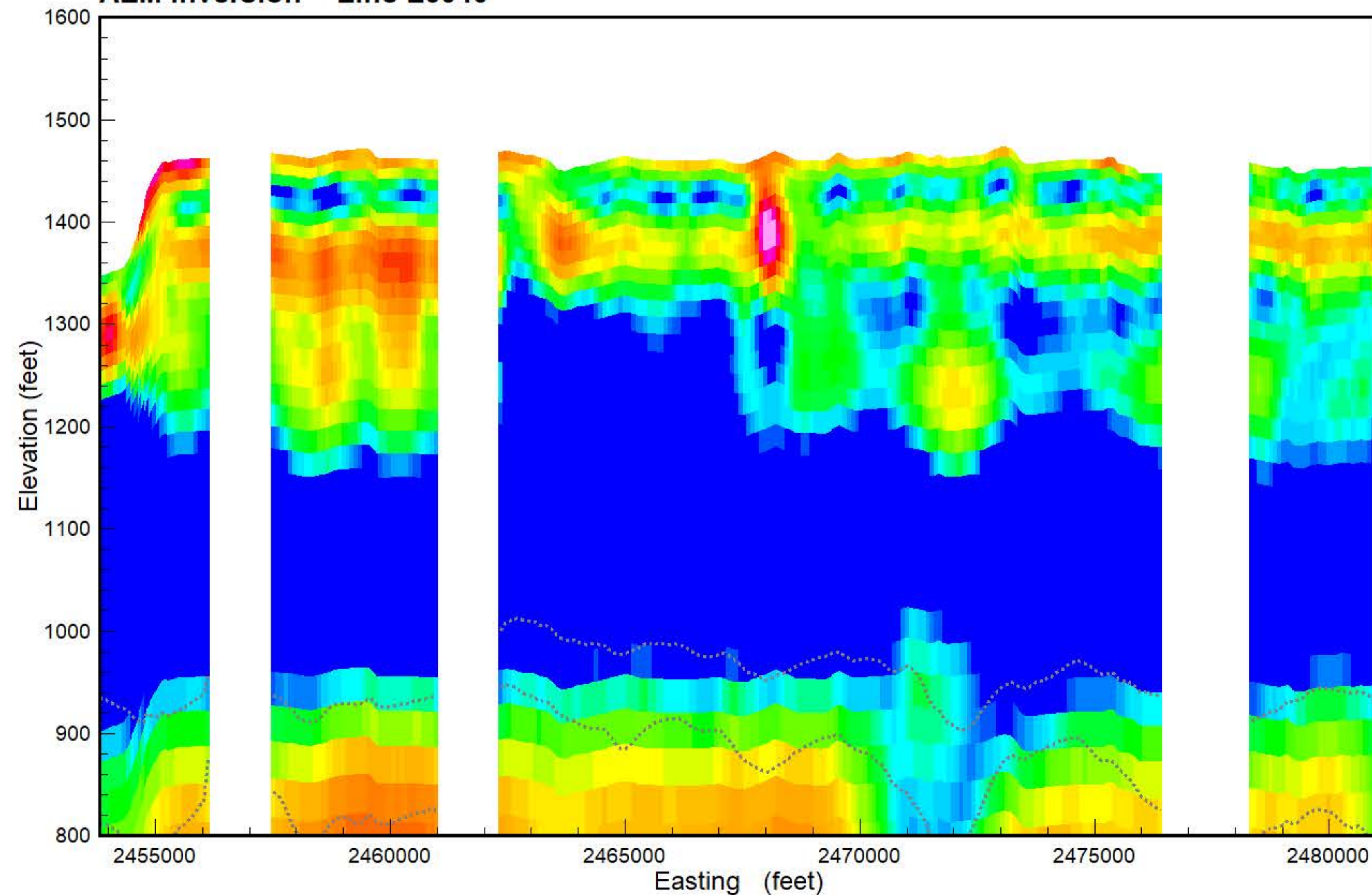




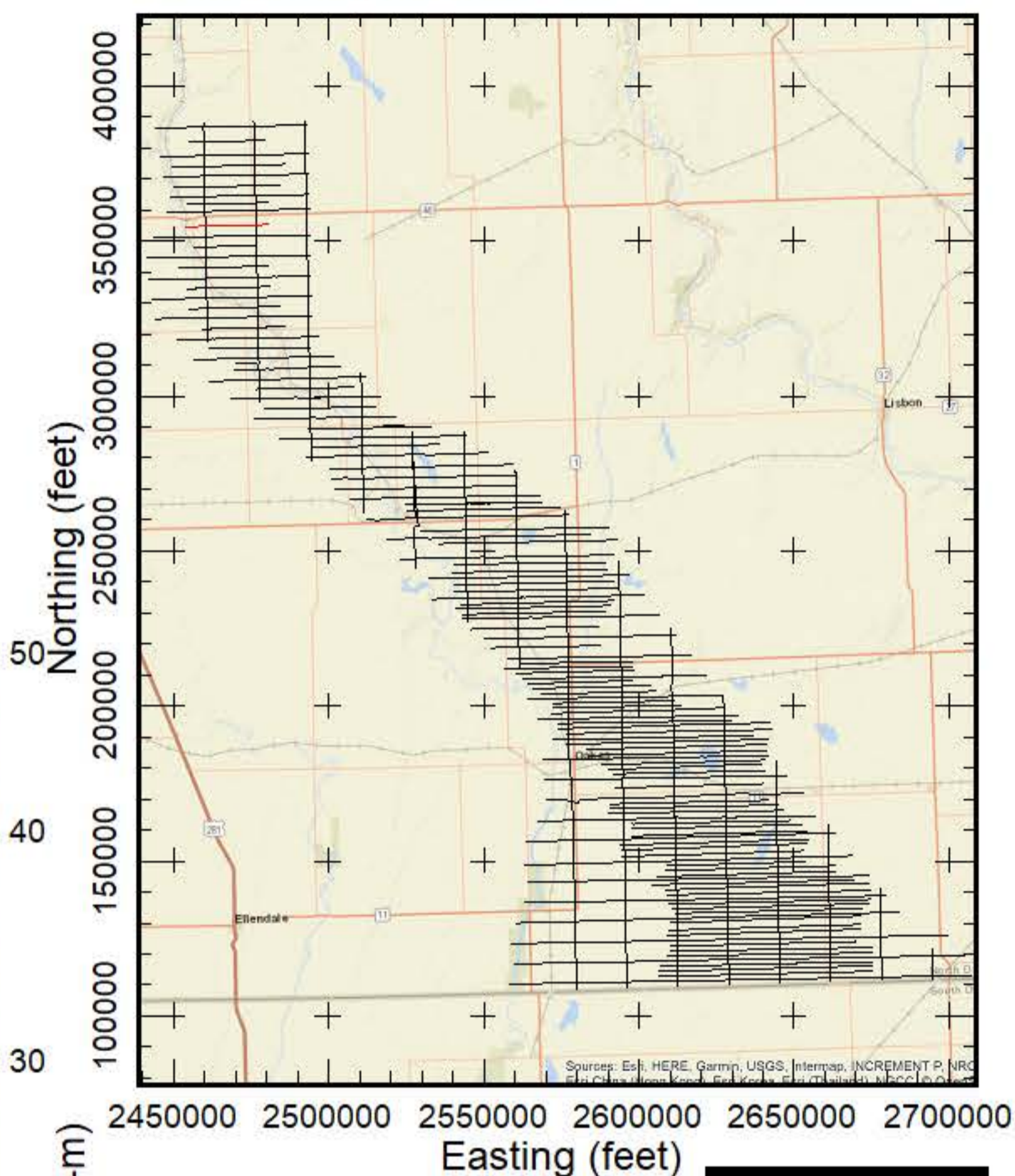
**Flight Path Line L6040**



**AEM Inversion Line L6040**



**Spiritwood South Flight Area**



**GEOTECH**

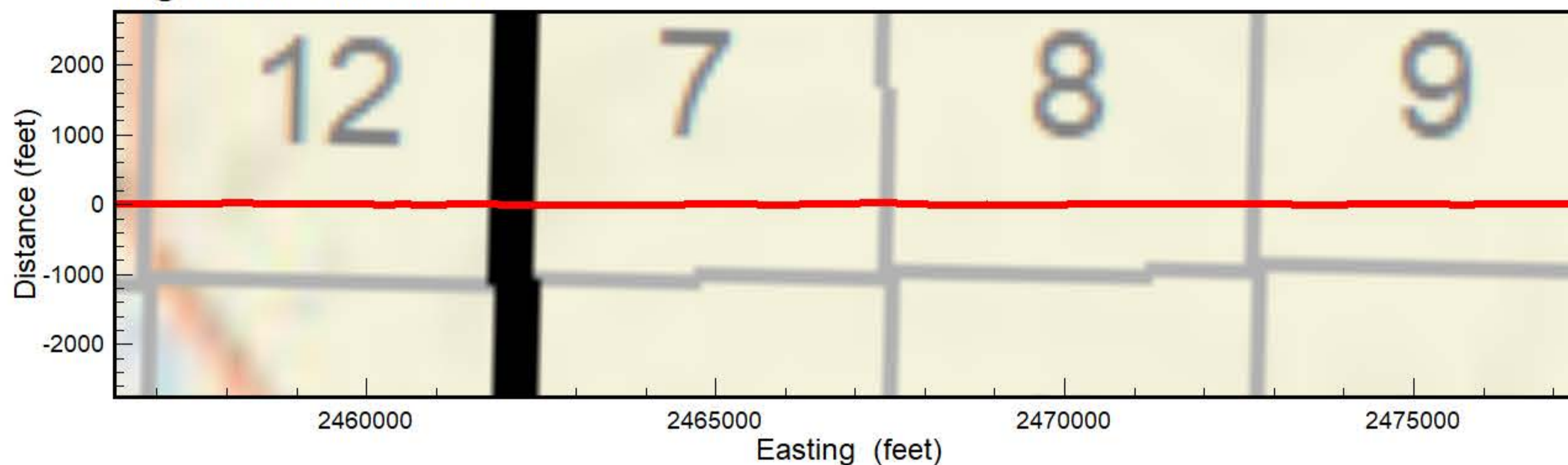
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
LIGNITE
COBBLES
BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
SHALE
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CLAY
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FILL
TOPSOIL
NOSAMPLE

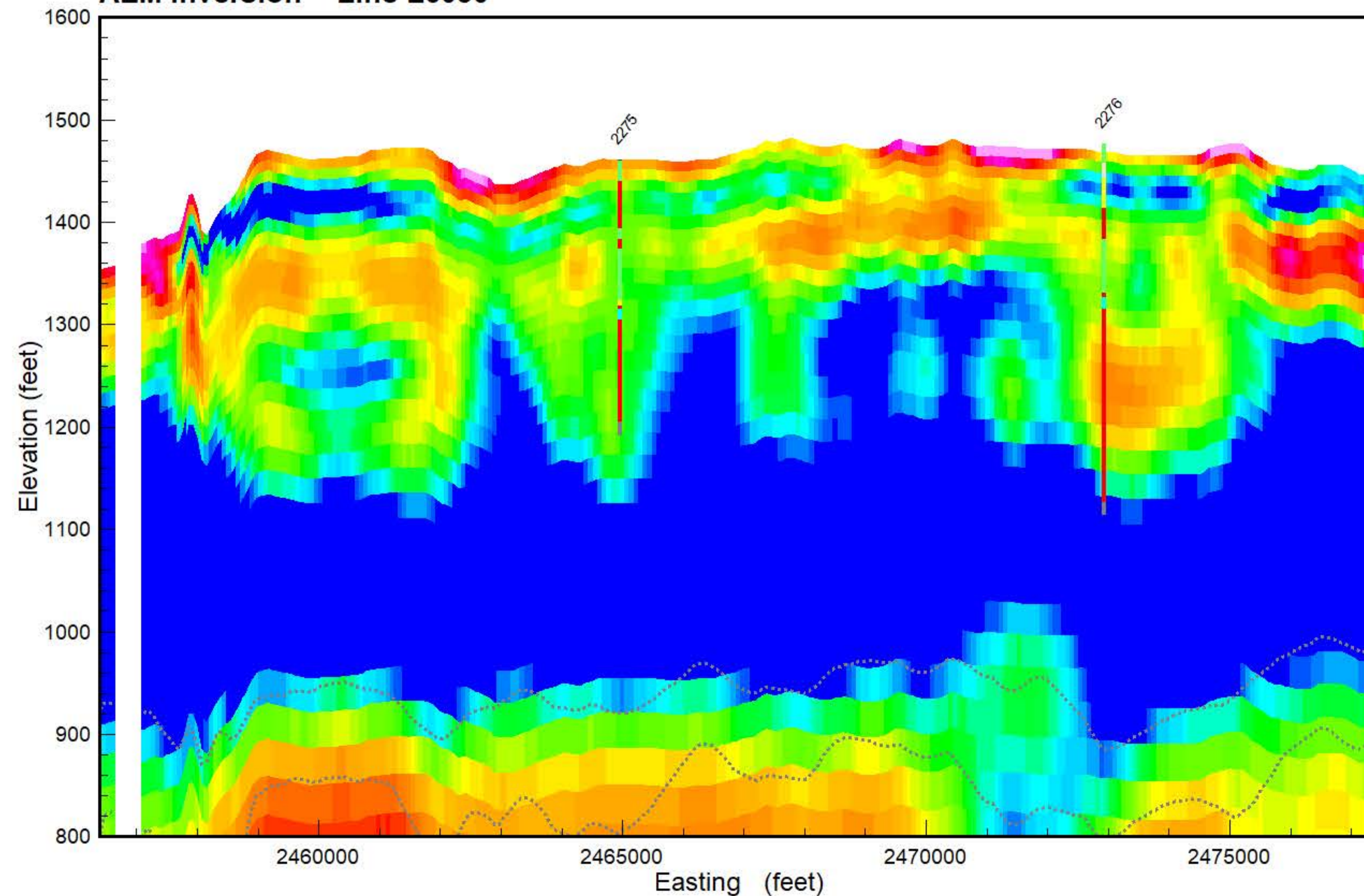
**AGF**  
Aqua Geo Frameworks



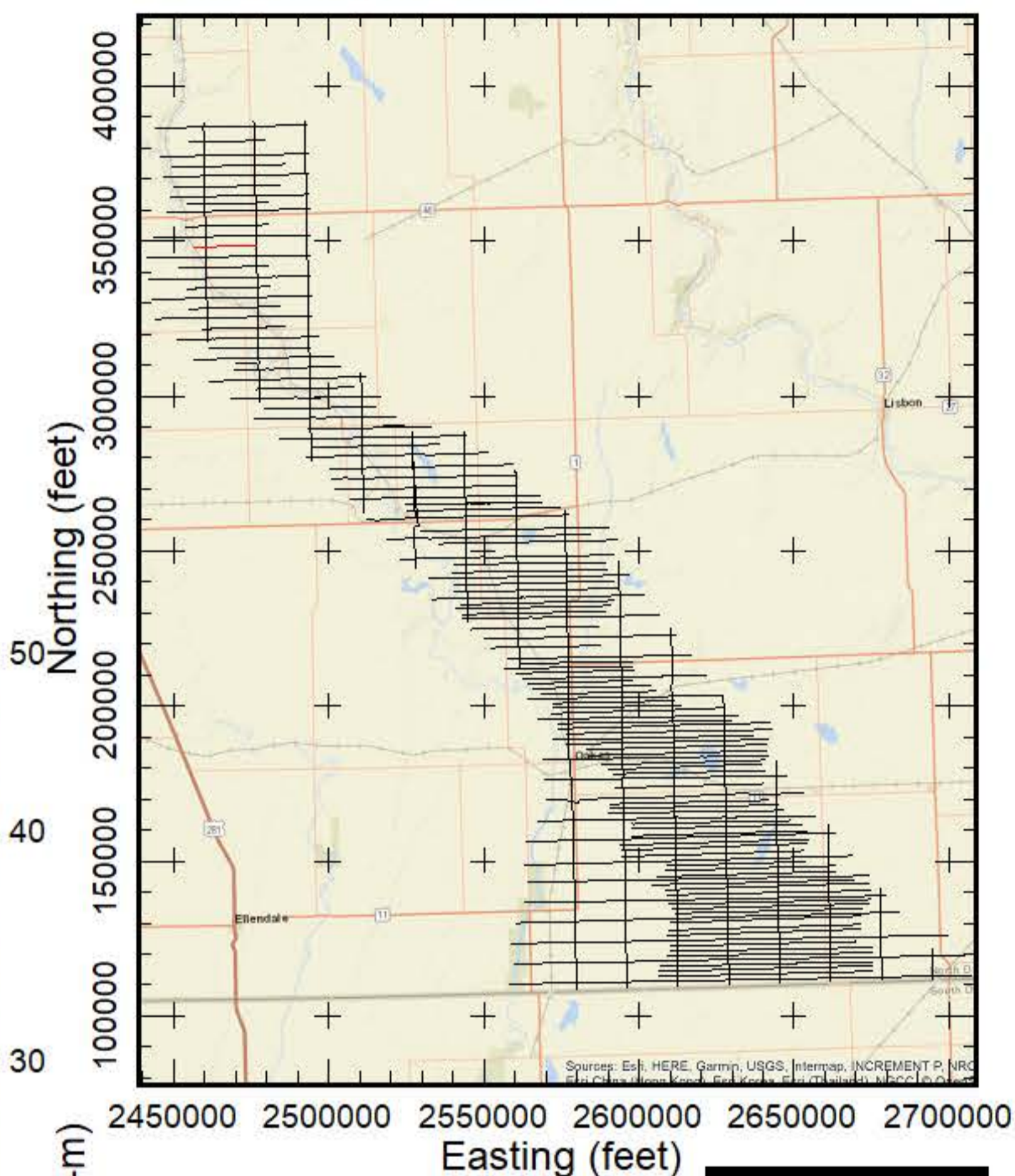
**Flight Path Line L6050**



**AEM Inversion Line L6050**



**Spiritwood South Flight Area**



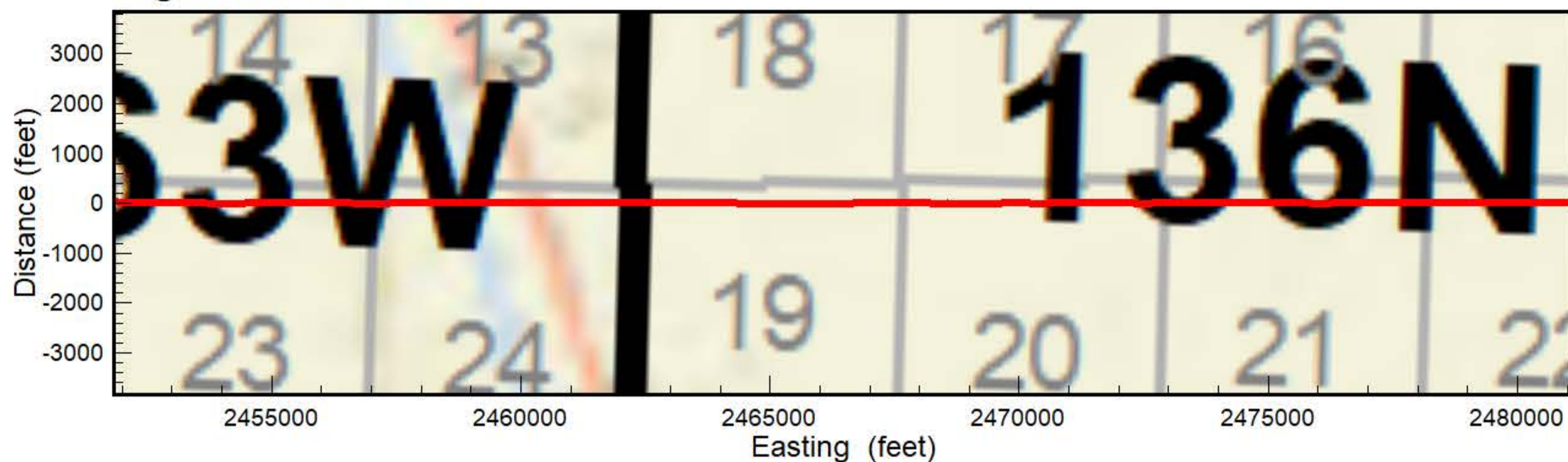
- PEAT
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- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
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- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

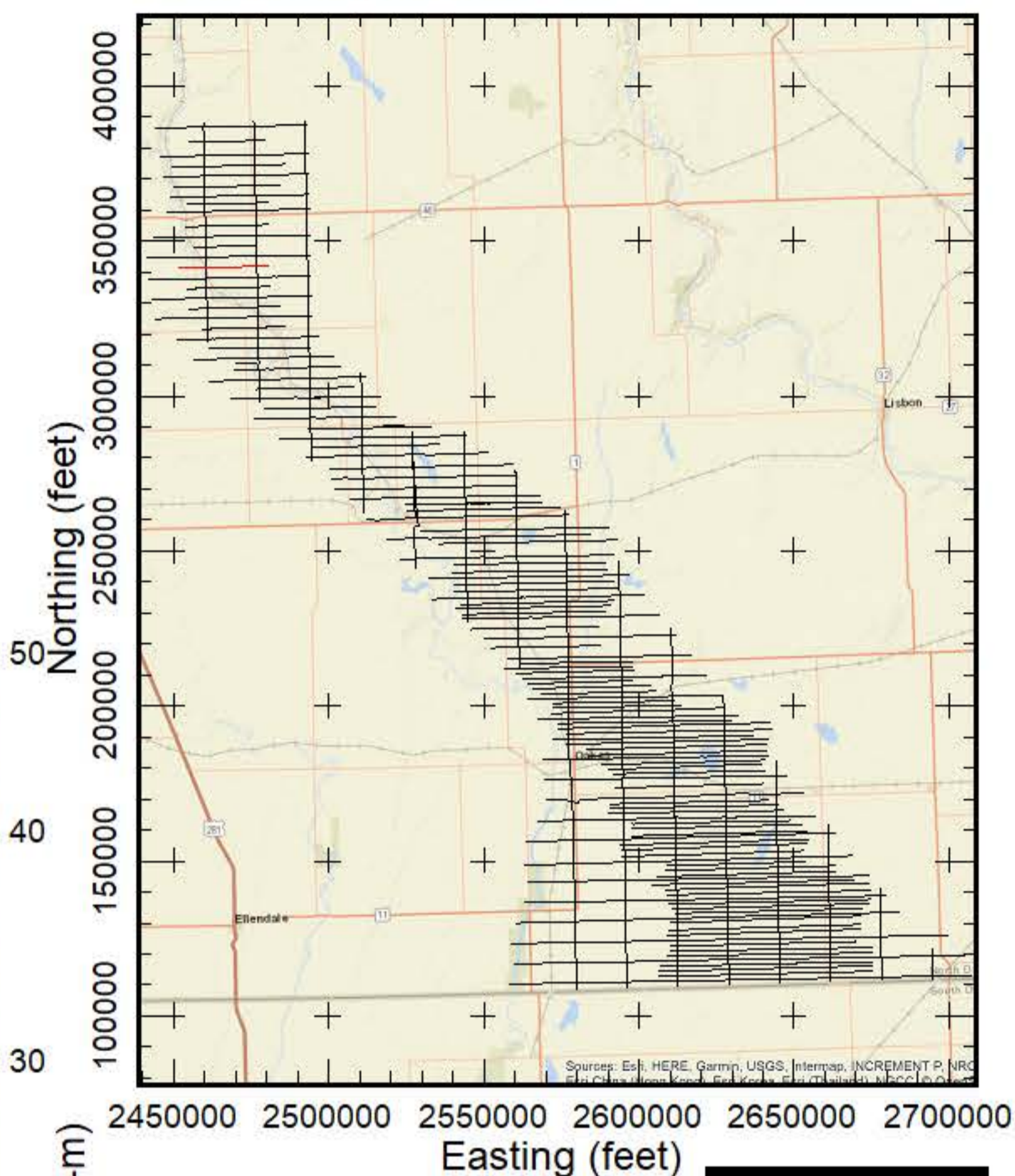




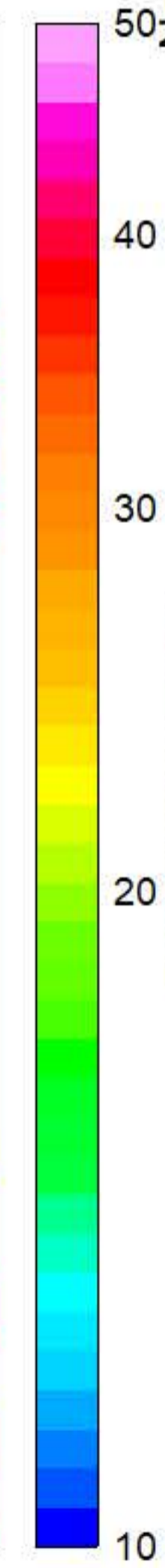
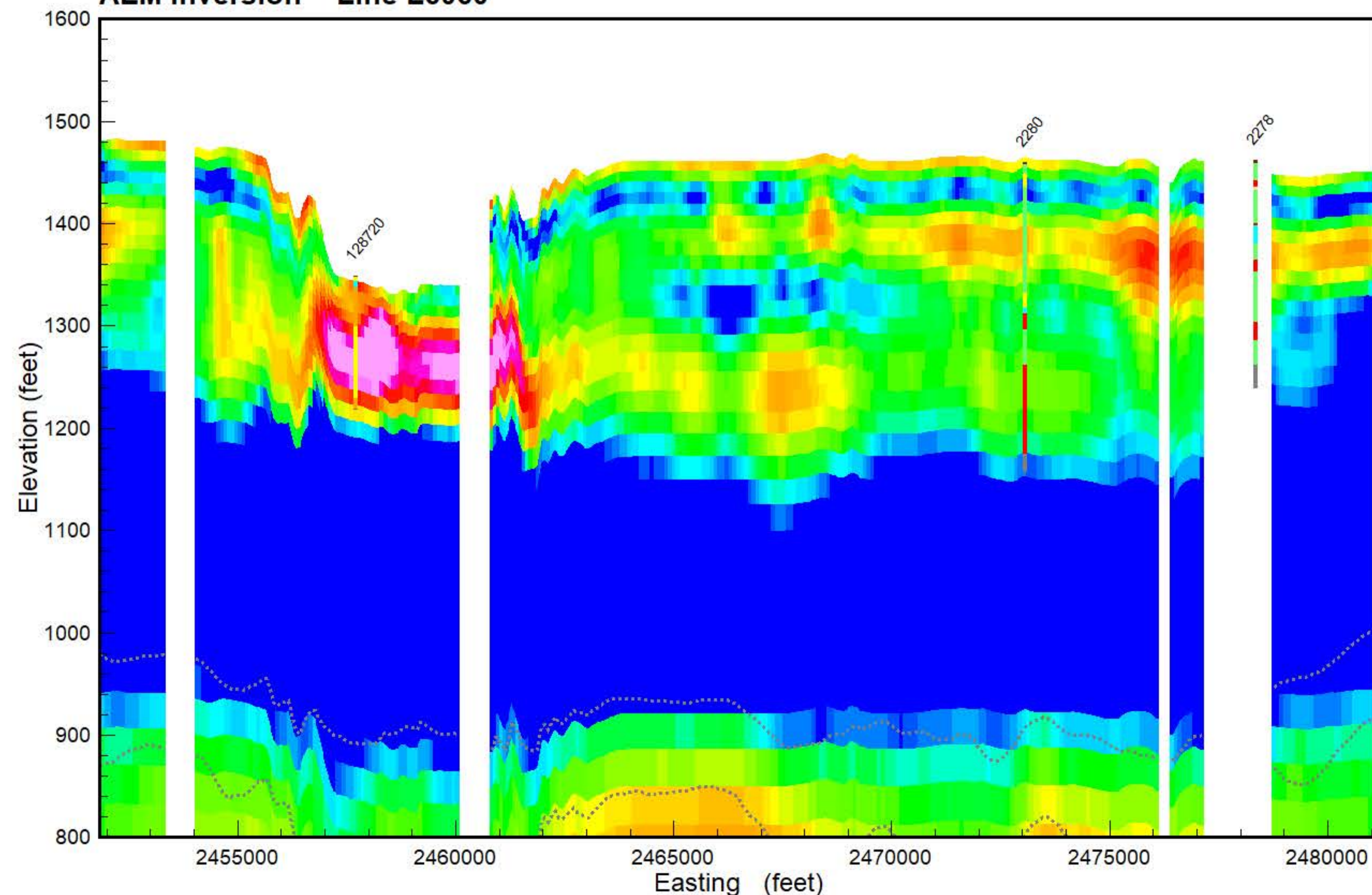
**Flight Path Line L6060**



**Spiritwood South Flight Area**



**AEM Inversion Line L6060**



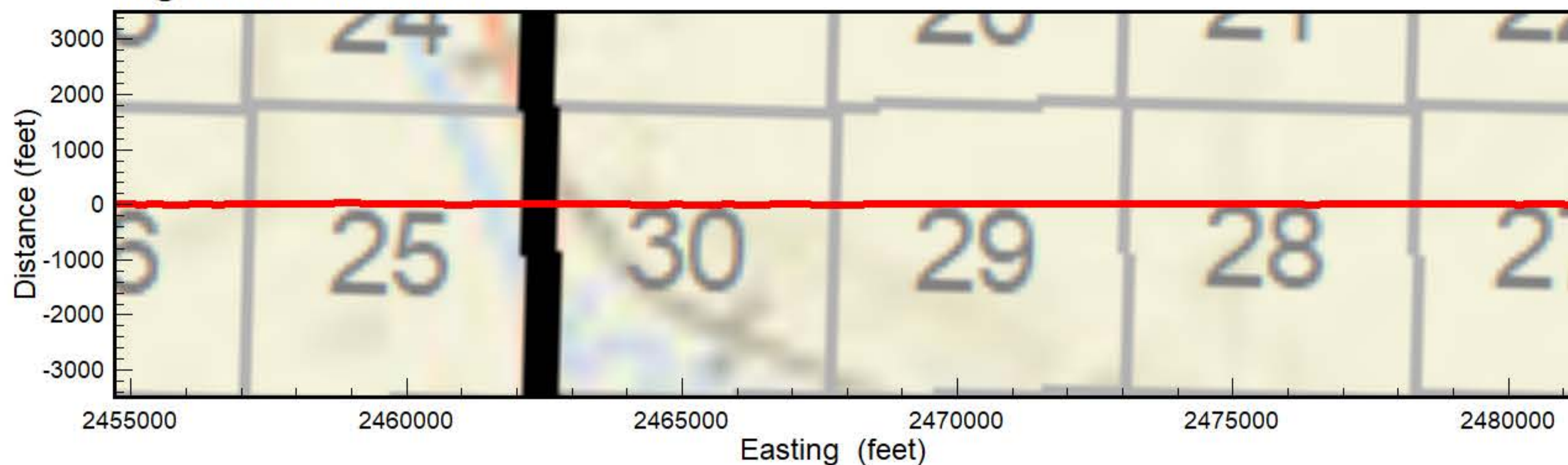
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- ROCK
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- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

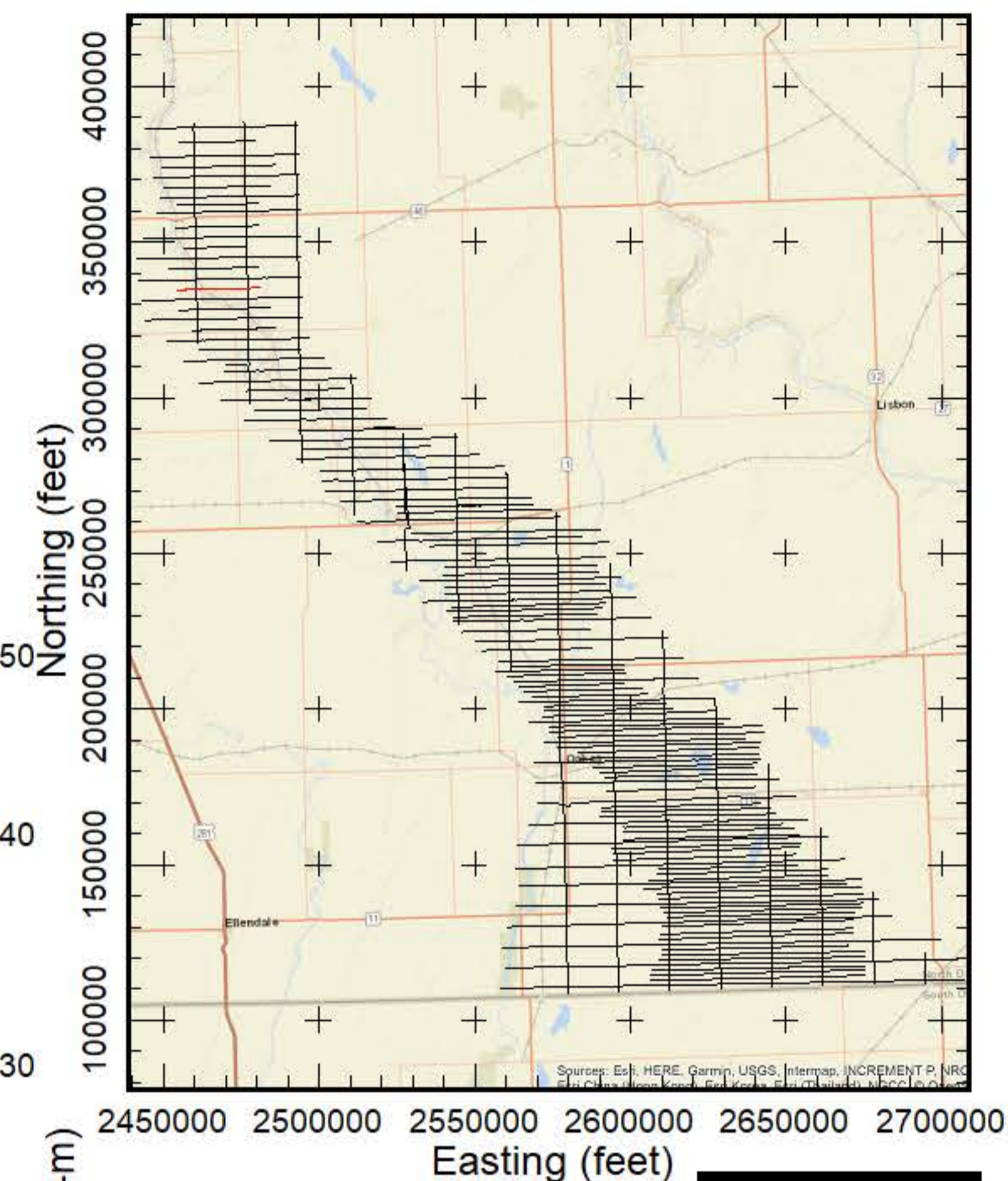




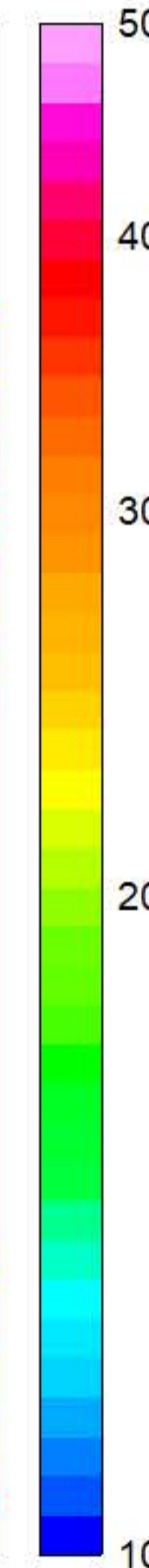
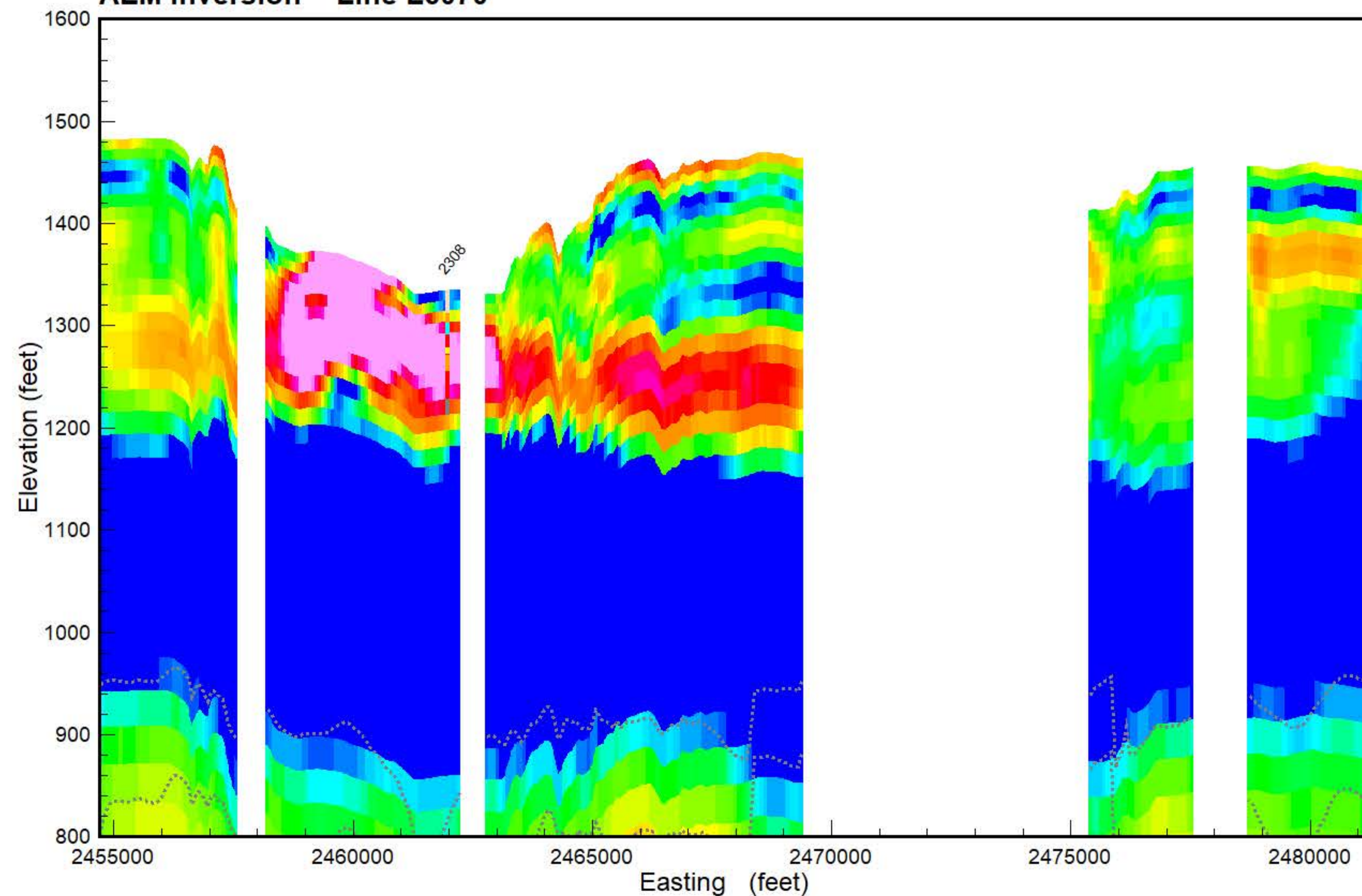
**Flight Path Line L6070**



**Spiritwood South Flight Area**



**AEM Inversion Line L6070**



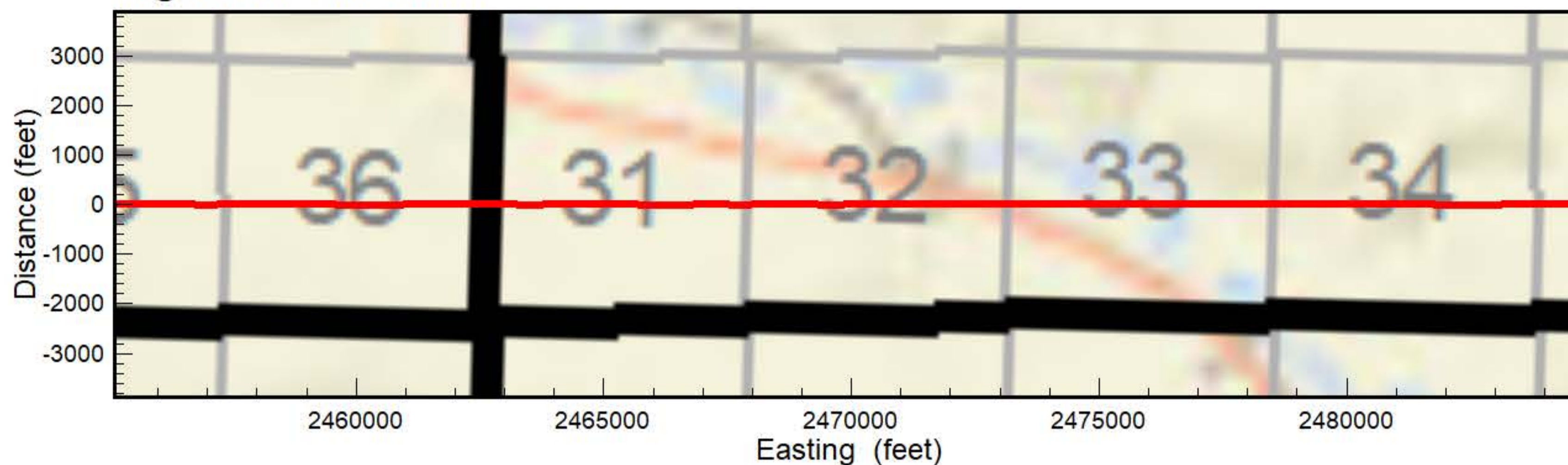
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- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

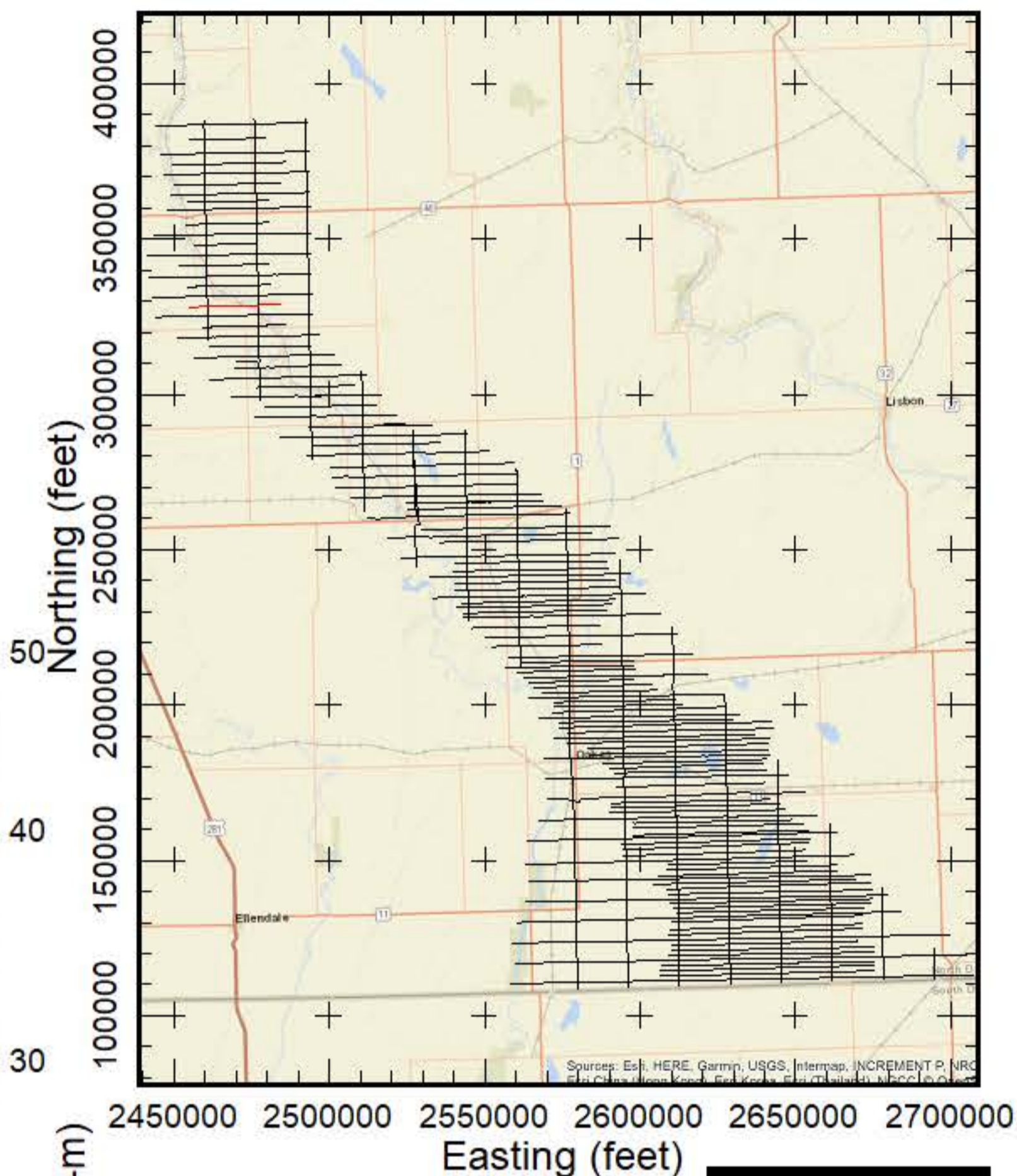




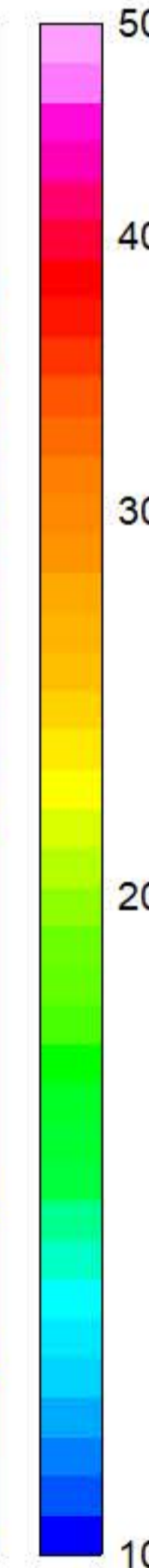
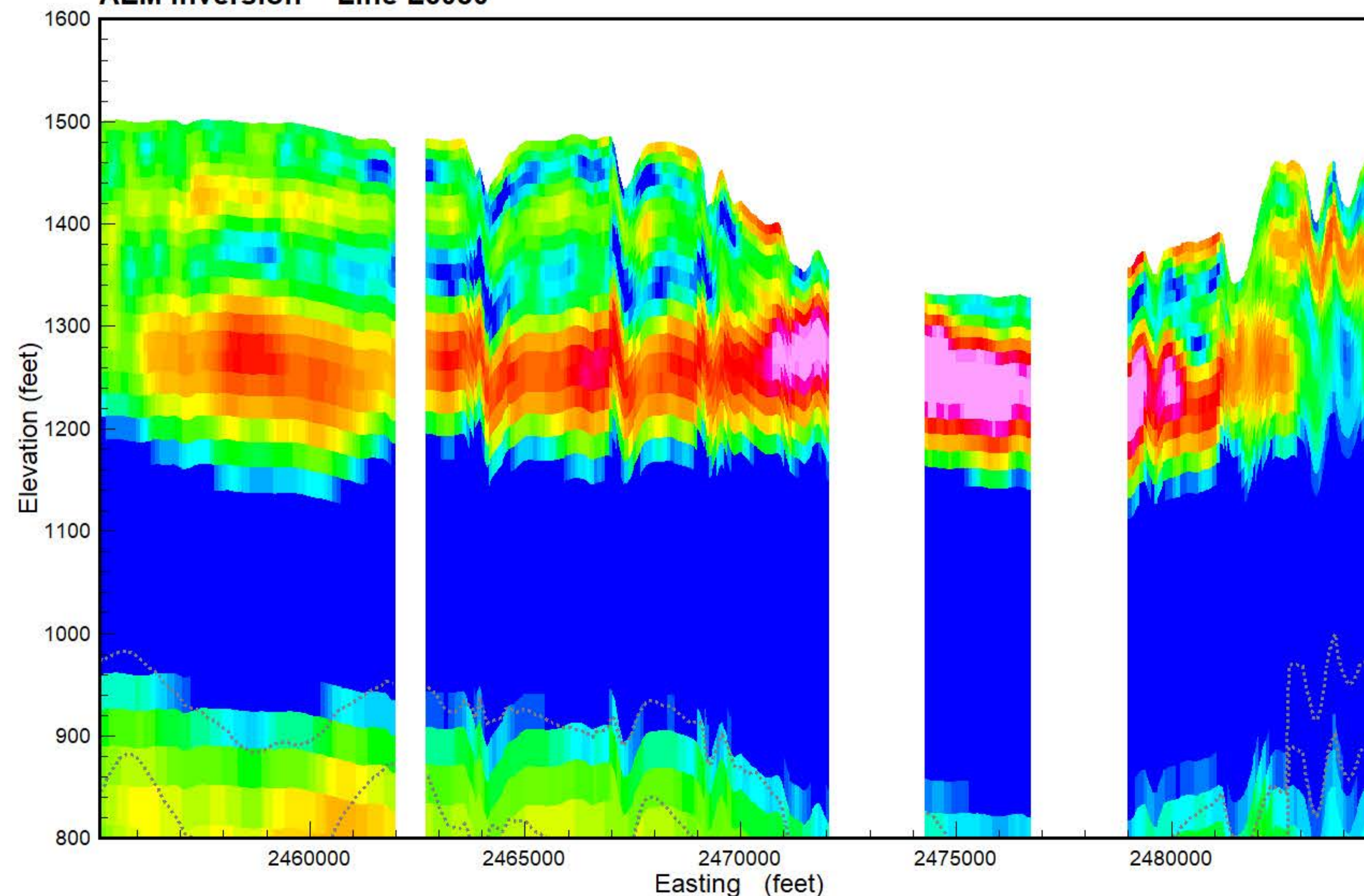
**Flight Path Line L6080**



**Spiritwood South Flight Area**



**AEM Inversion Line L6080**



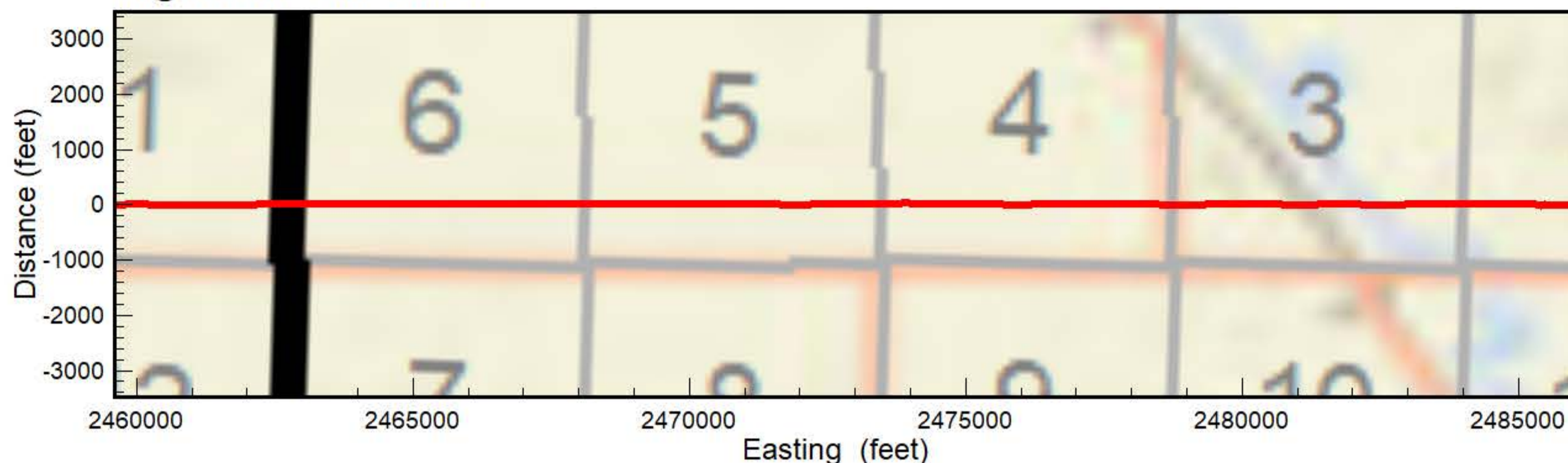
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

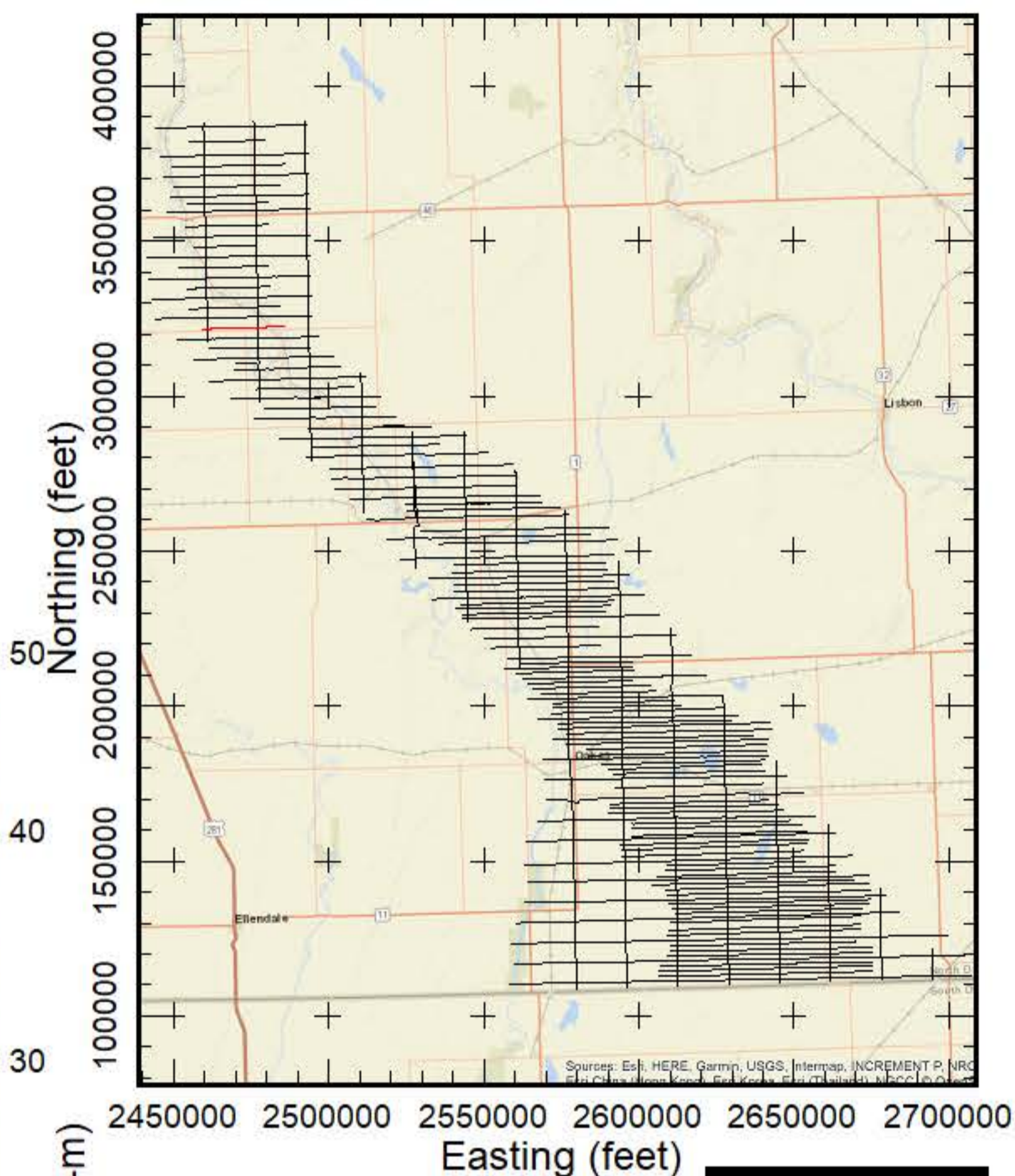




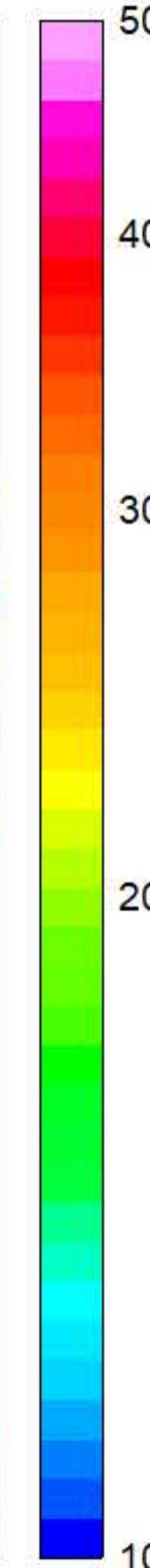
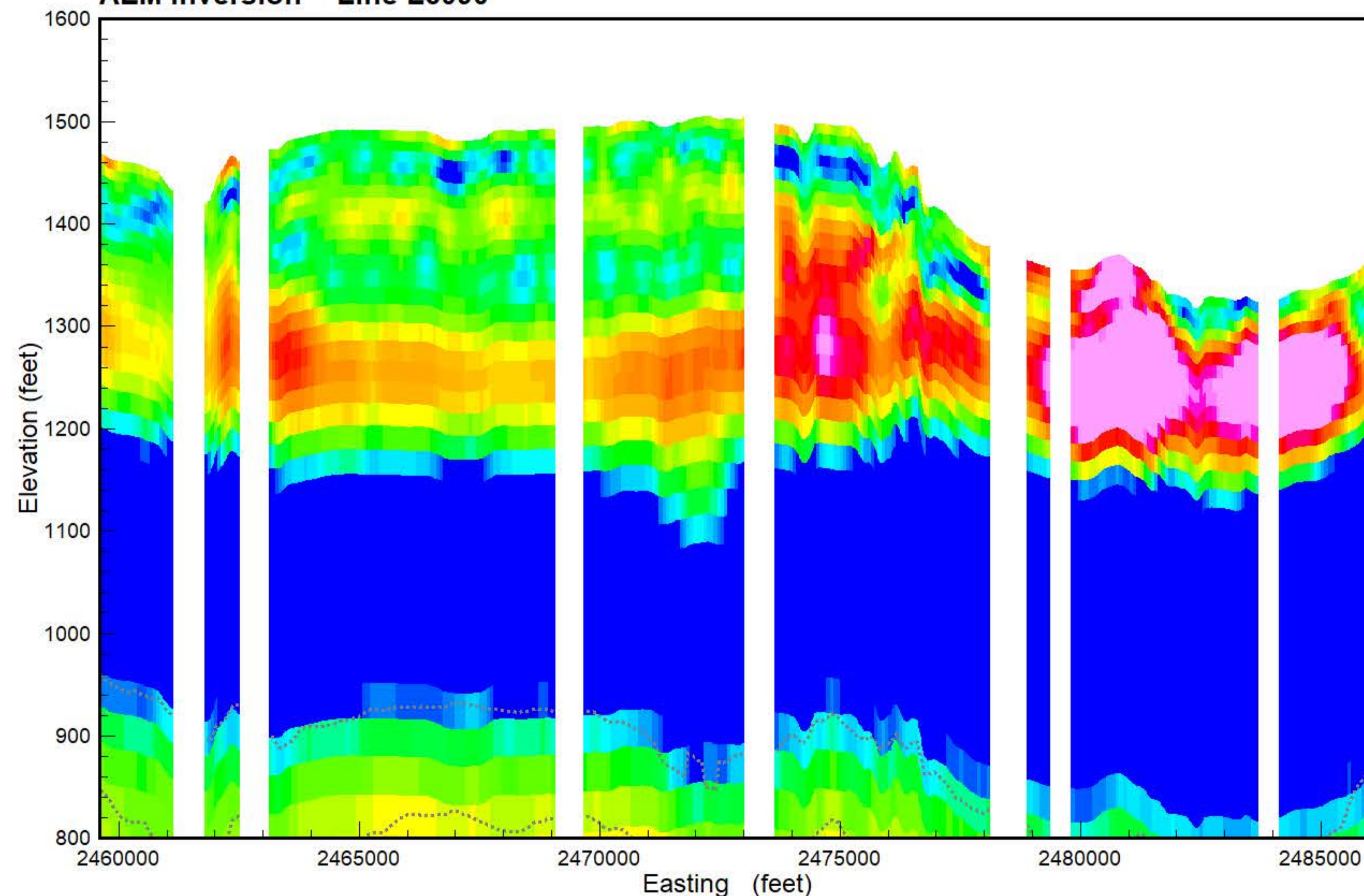
**Flight Path Line L6090**



**Spiritwood South Flight Area**



**AEM Inversion Line L6090**



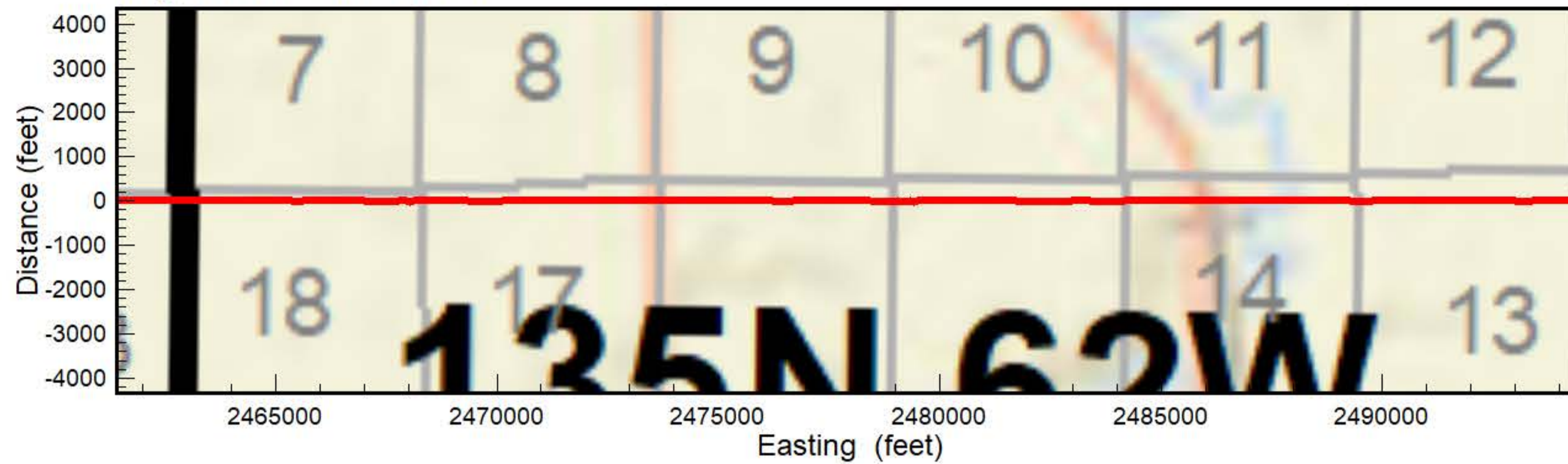
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- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

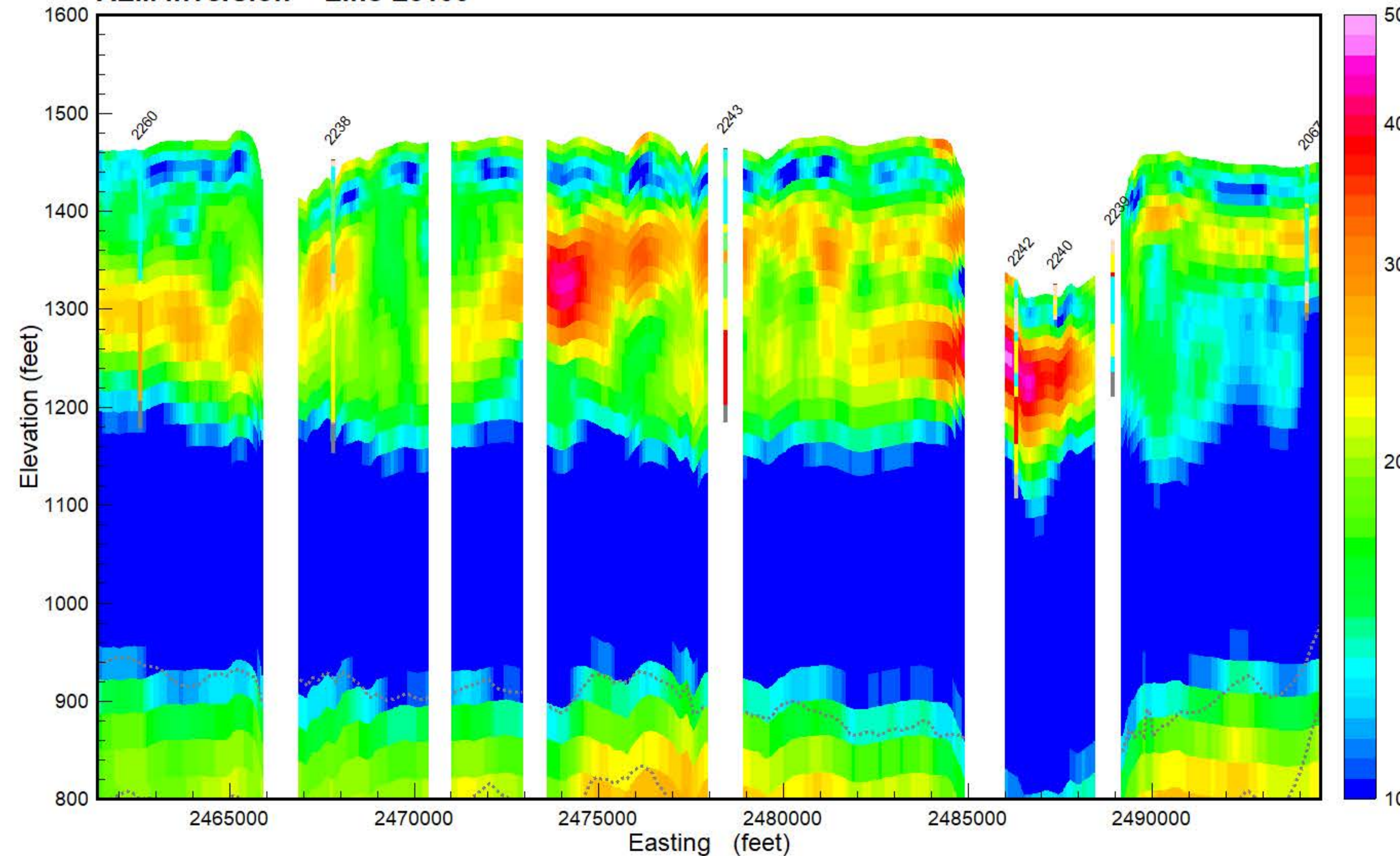




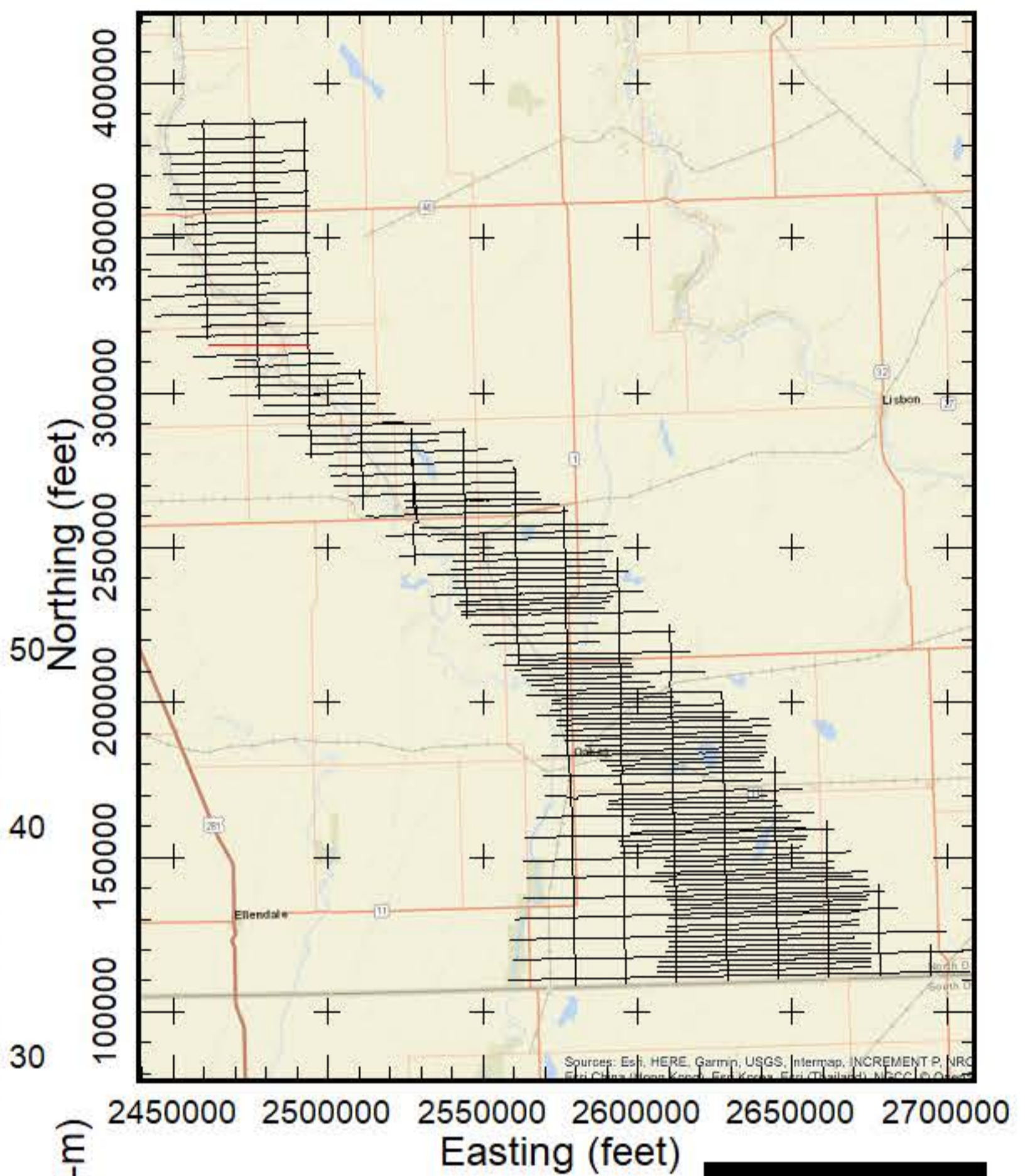
**Flight Path Line L6100**



**AEM Inversion Line L6100**



**Spiritwood South Flight Area**



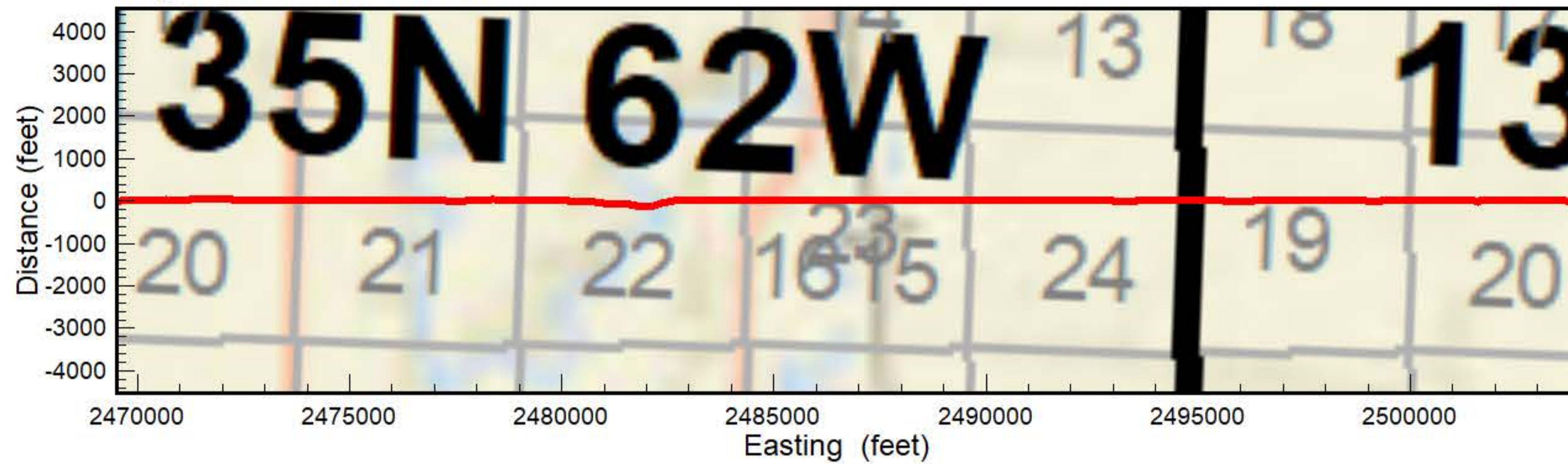
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- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

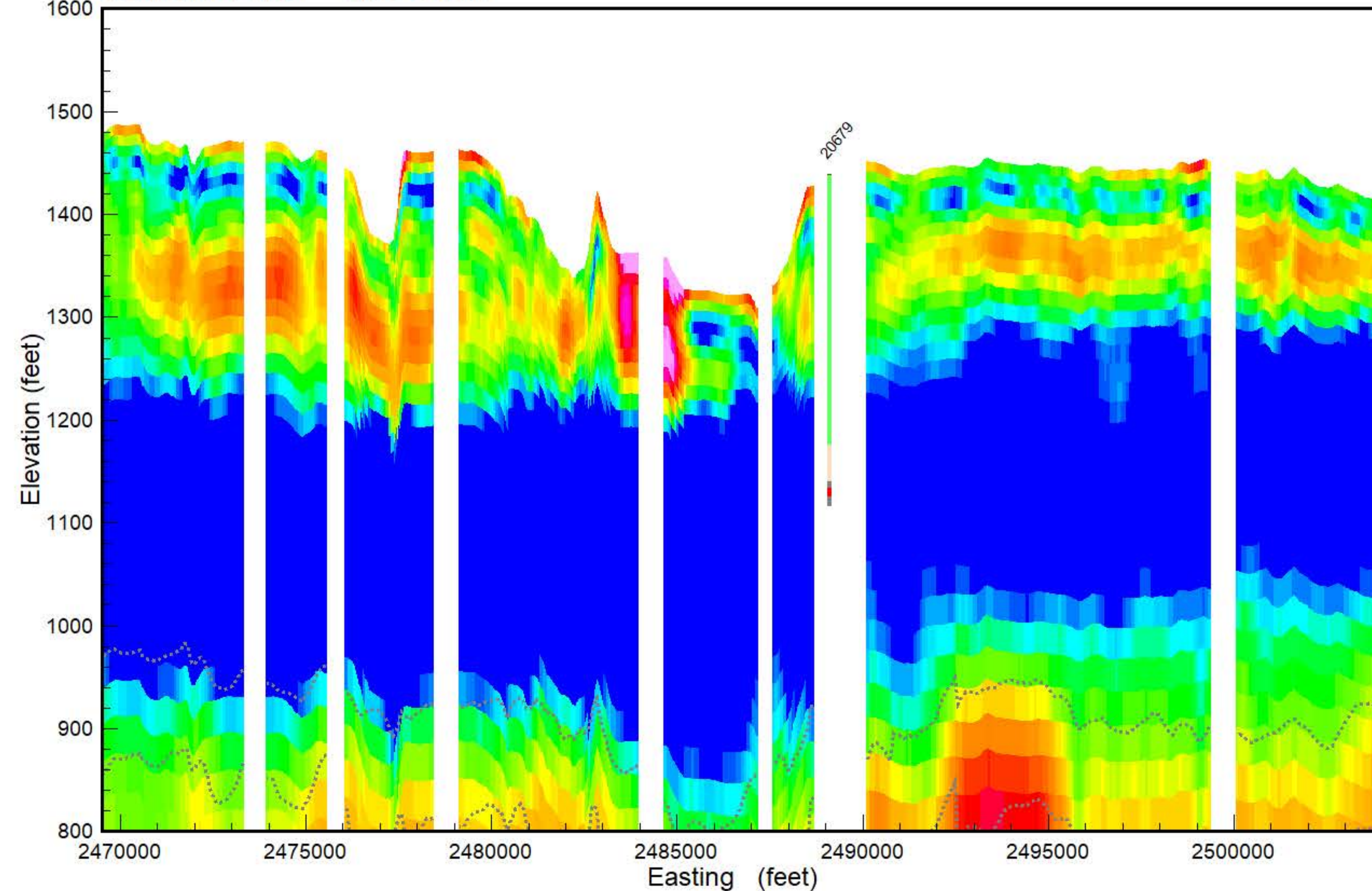




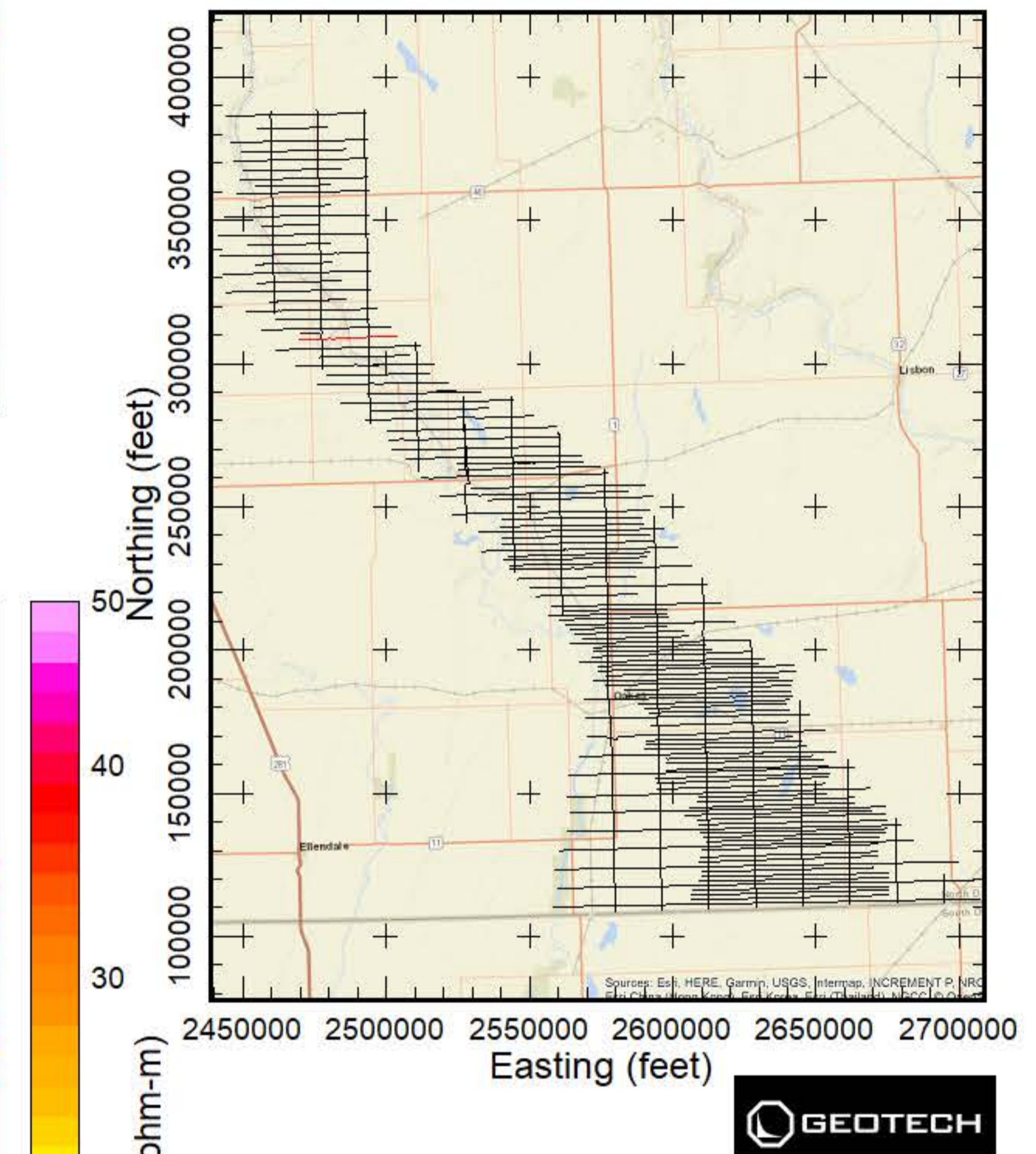
**Flight Path Line L6110**



**AEM Inversion Line L6110**



**Spiritwood South Flight Area**



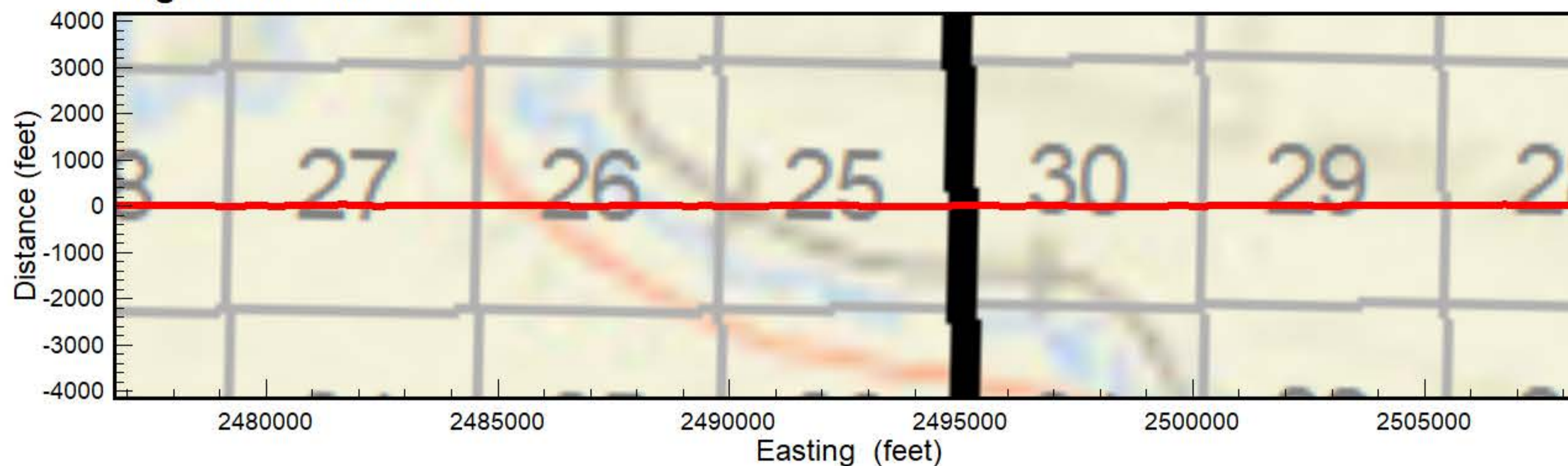
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
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- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

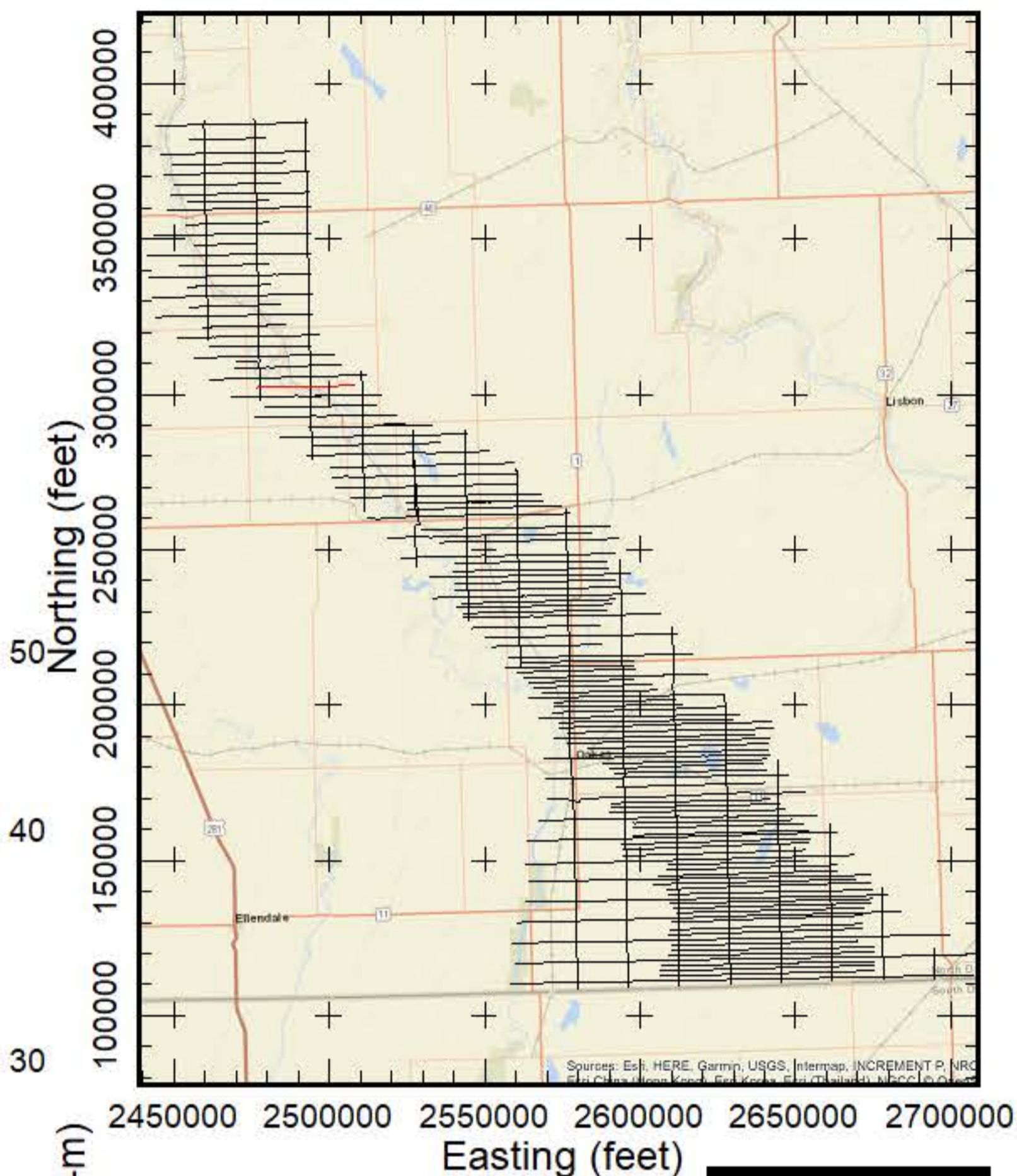




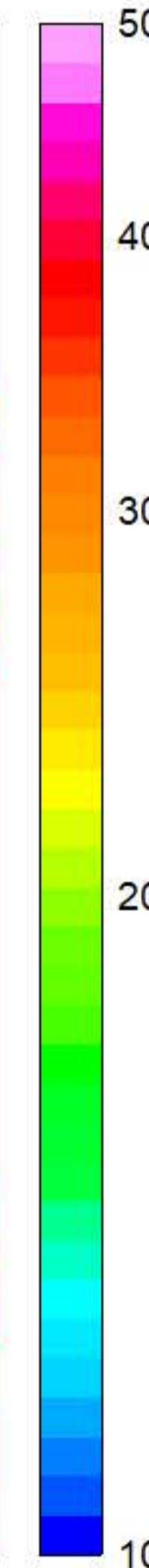
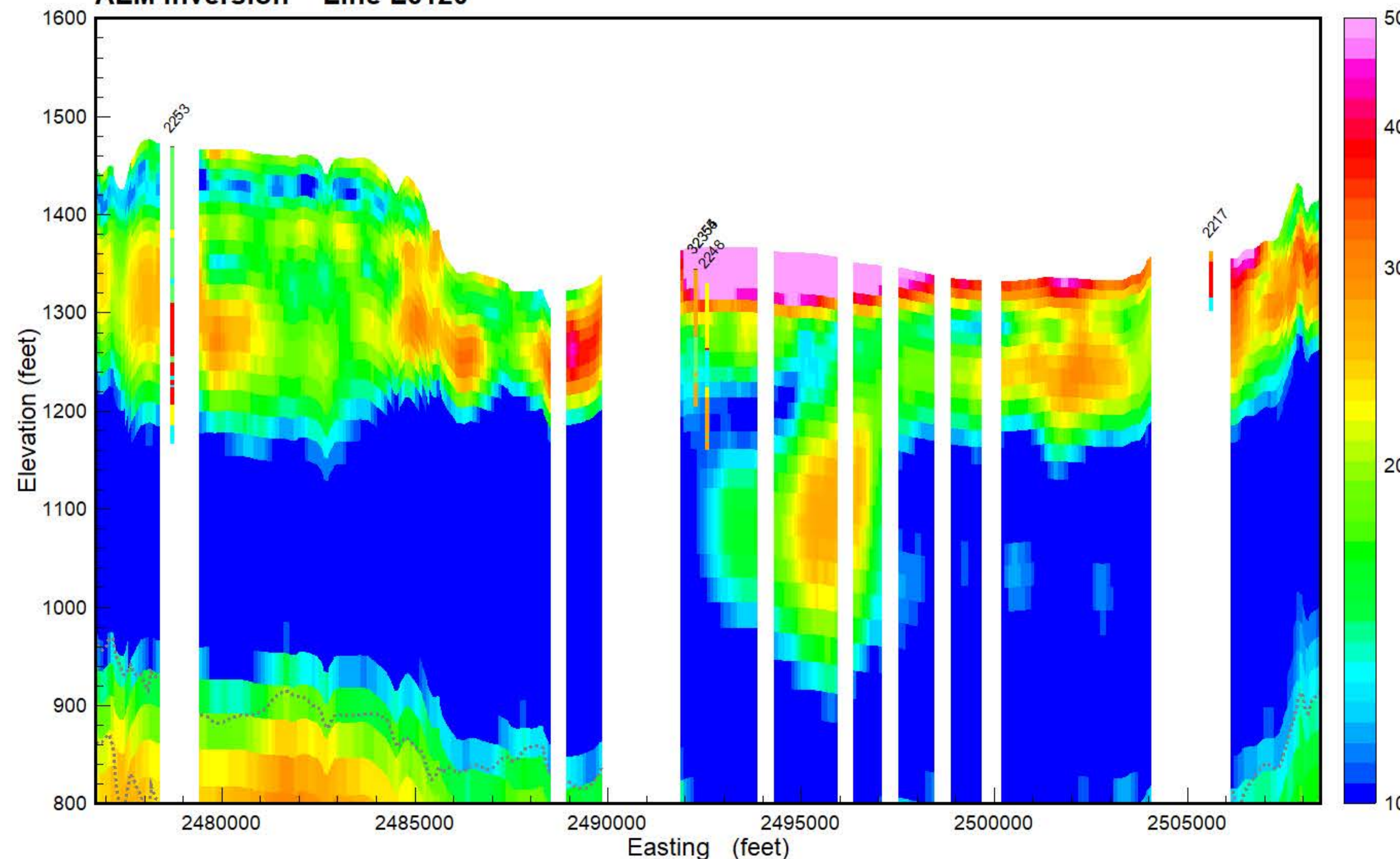
**Flight Path Line L6120**



**Spiritwood South Flight Area**



**AEM Inversion Line L6120**



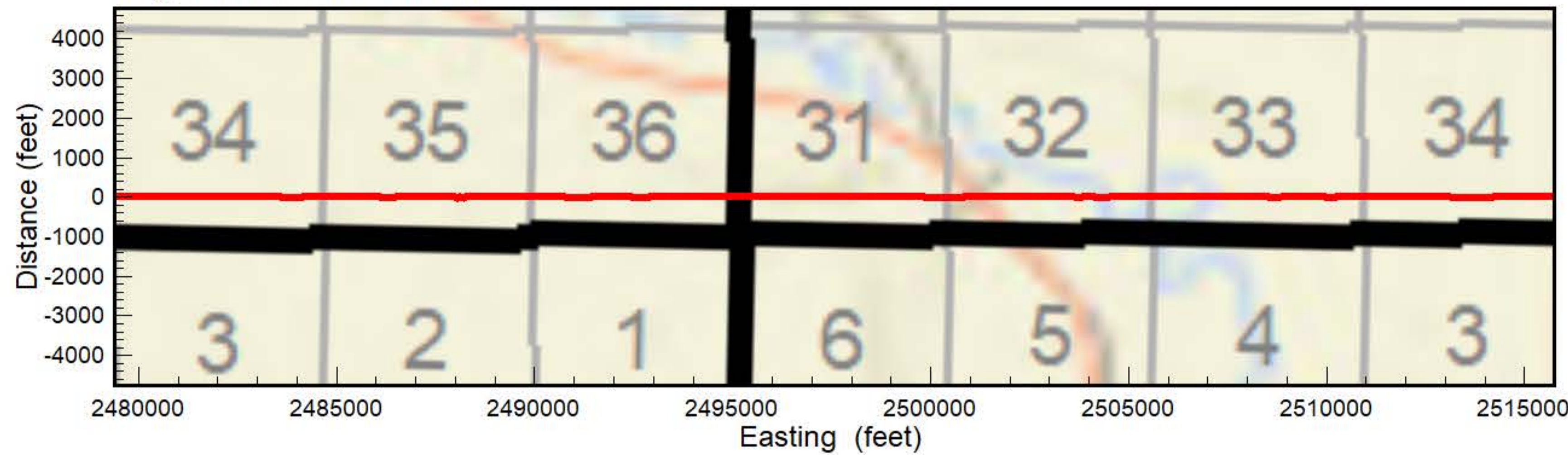
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

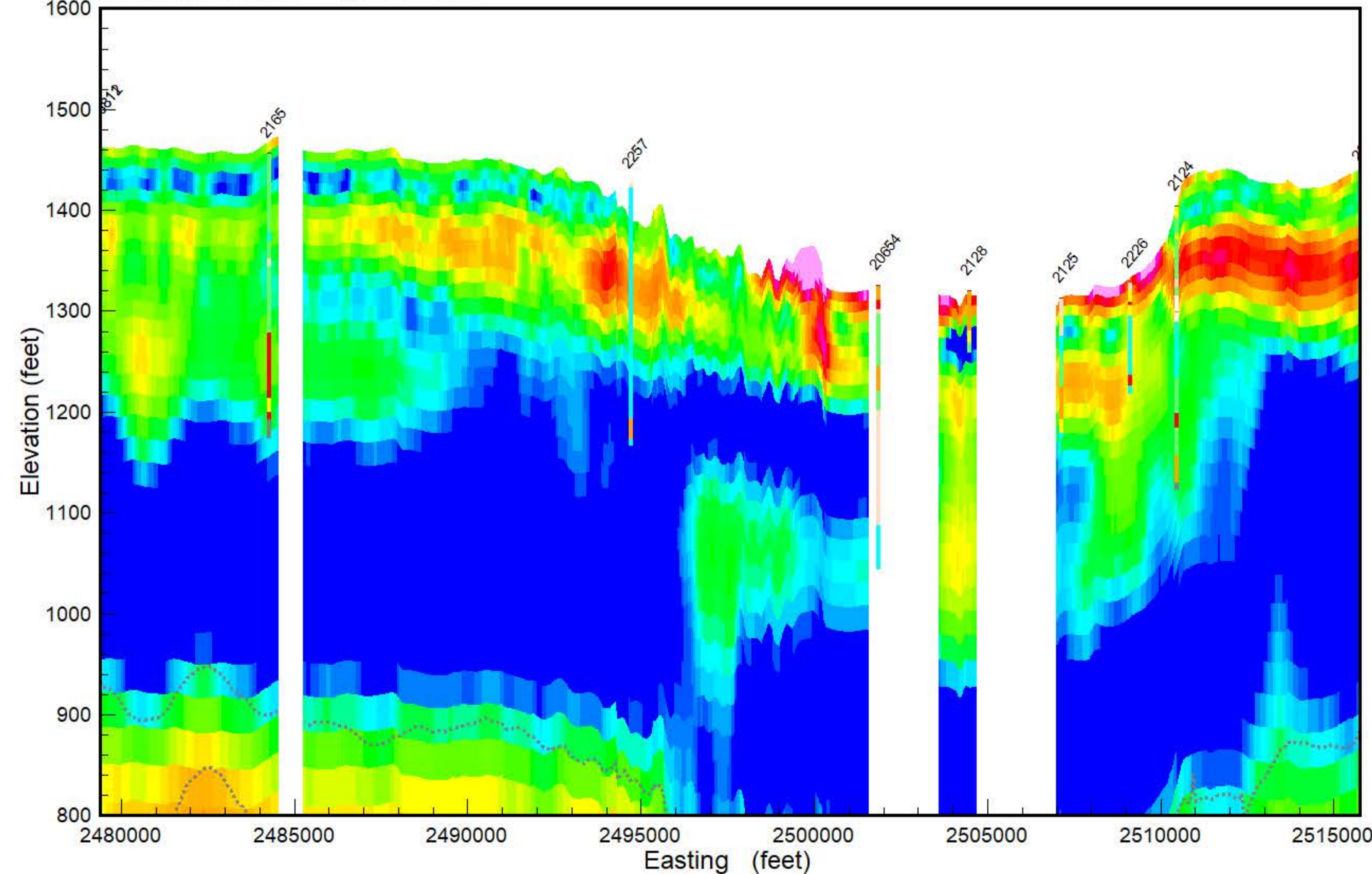




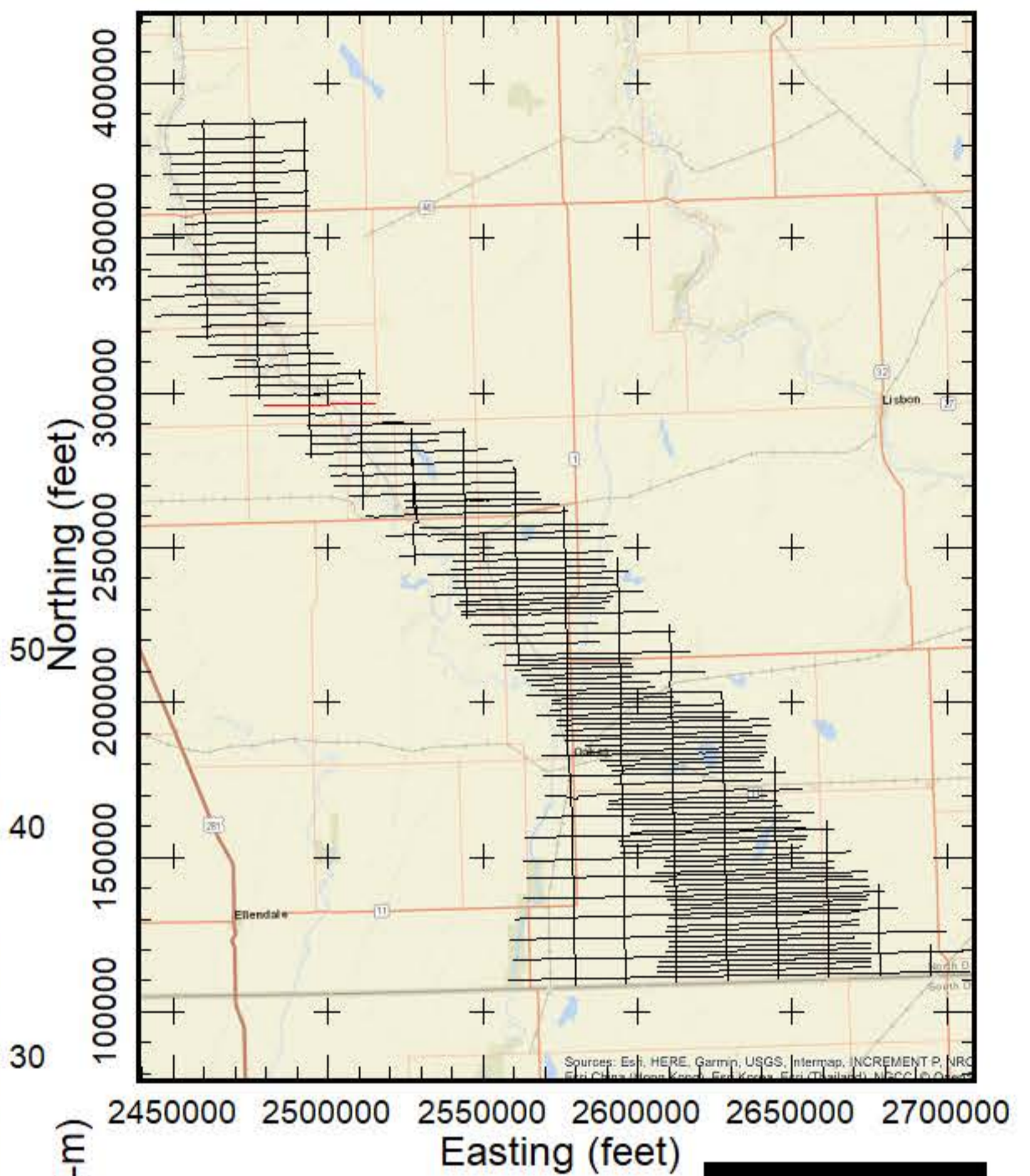
**Flight Path Line L6130**



**AEM Inversion Line L6130**



**Spiritwood South Flight Area**



**GEOTECH**

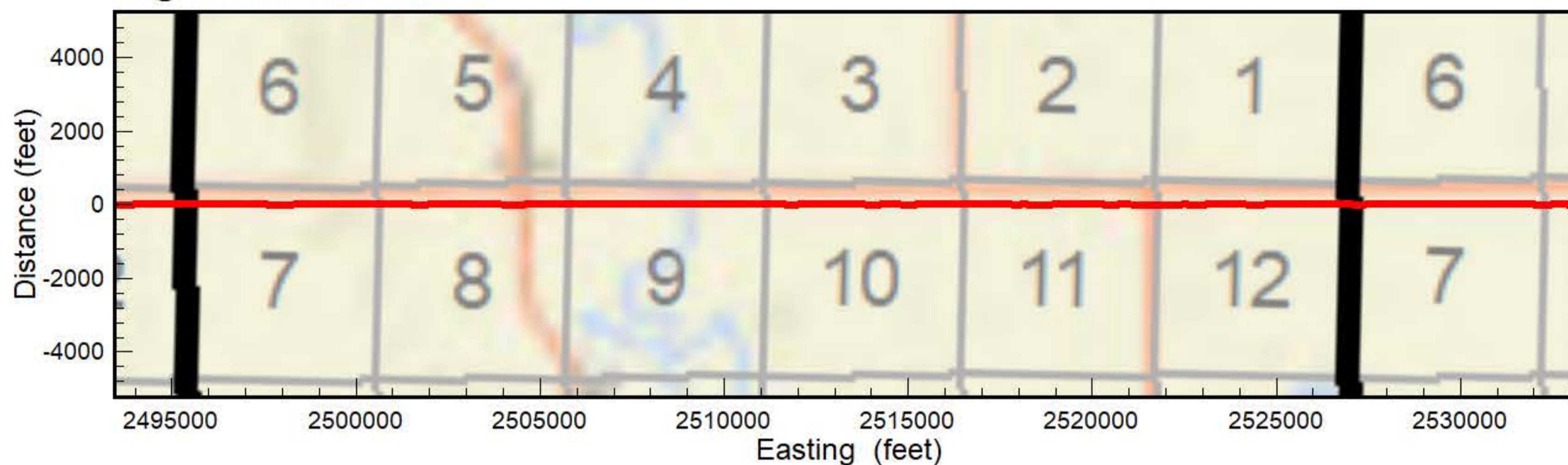
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
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BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
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TILL
FILL
TOPSOIL
NOSAMPLE

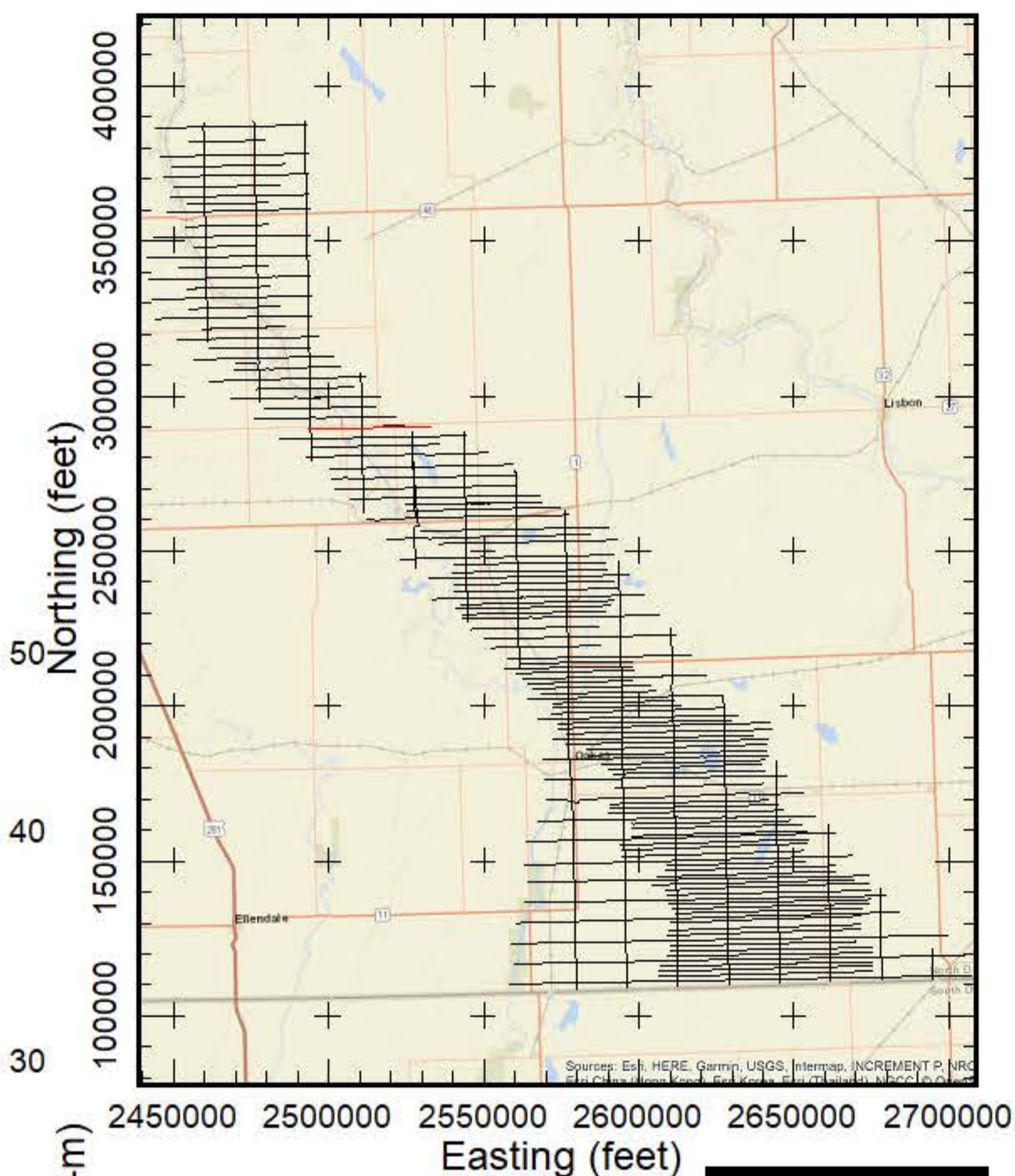
**AGF**  
Aqua Geo Frameworks



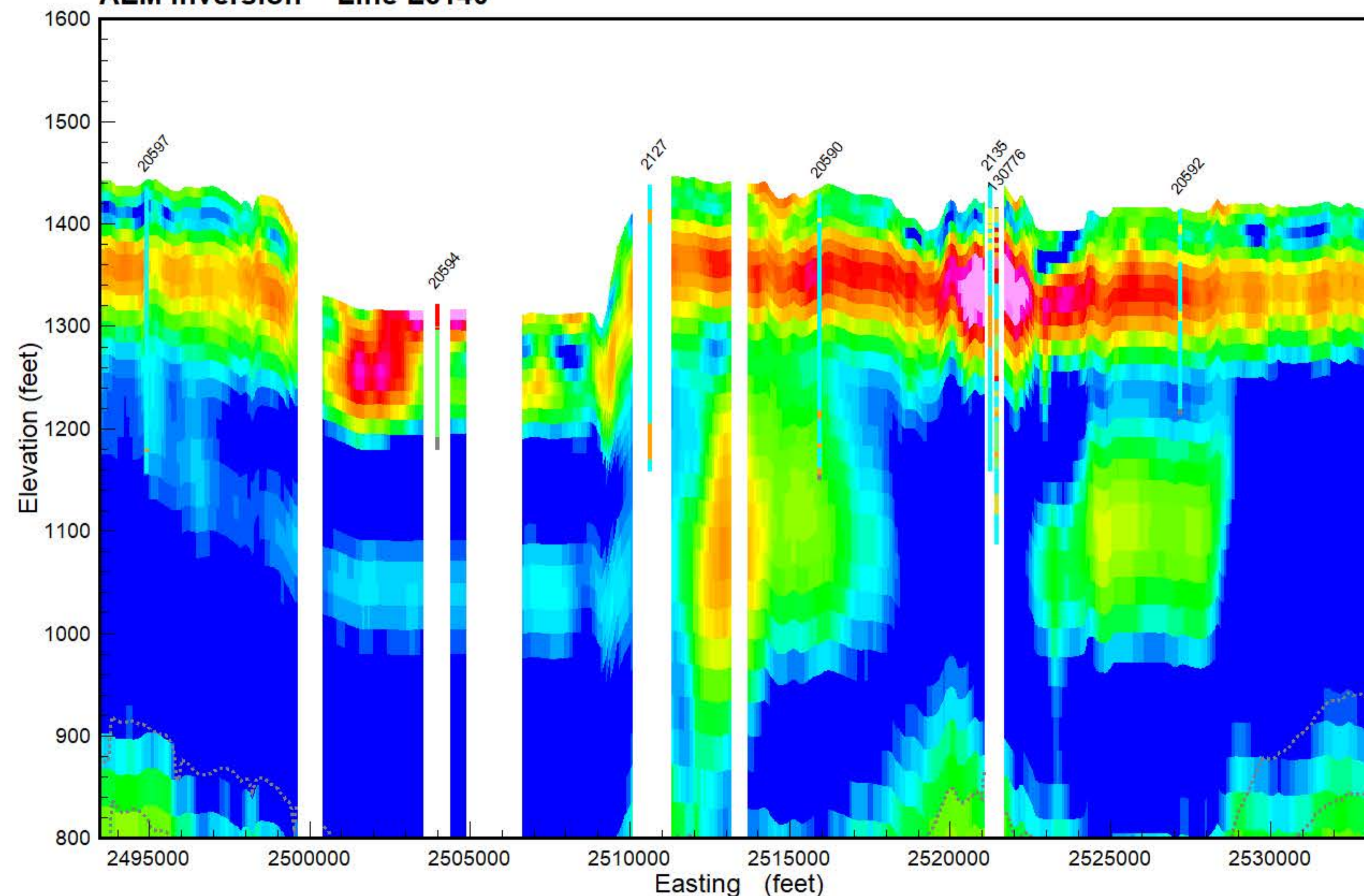
**Flight Path Line L6140**



**Spiritwood South Flight Area**



**AEM Inversion Line L6140**



**GEOTECH**

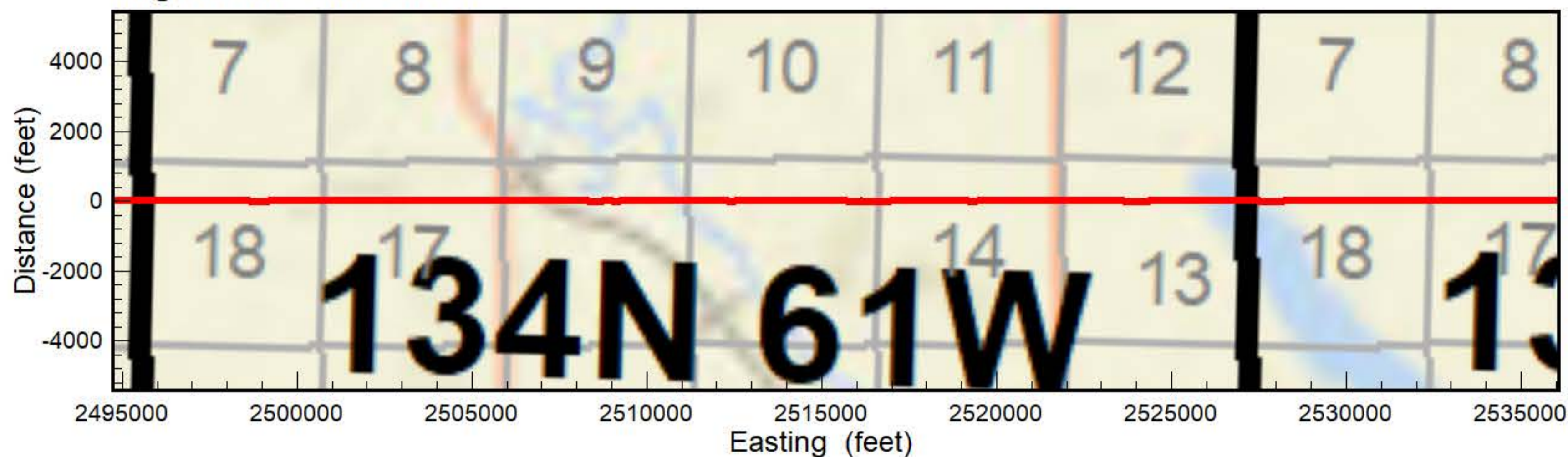
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
LIGNITE
COBBLES
BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
SHALE
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SAND
INTERBEDDED
SILT
CLAY
TILL
FILL
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NOSAMPLE

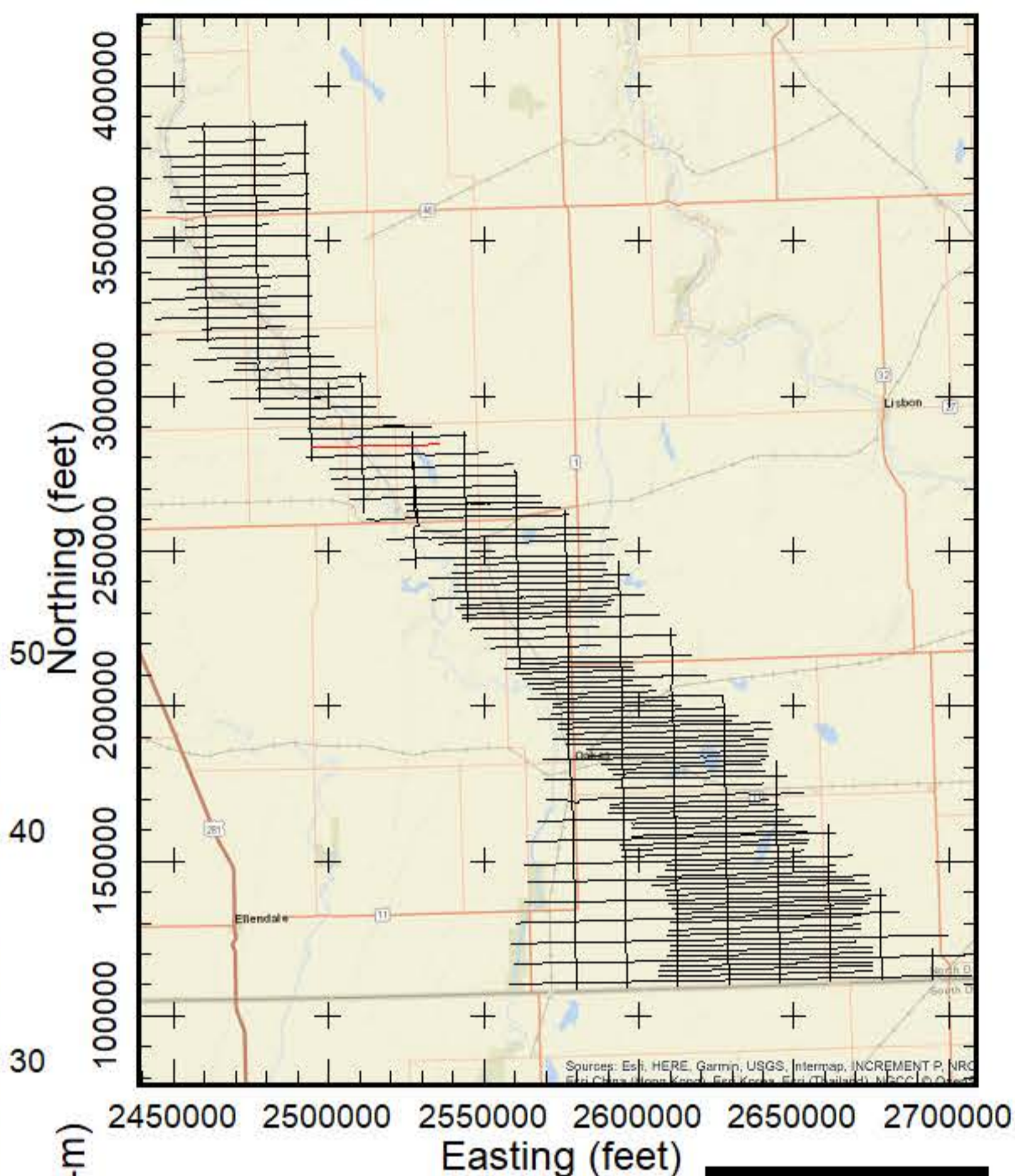
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Aqua Geo Frameworks



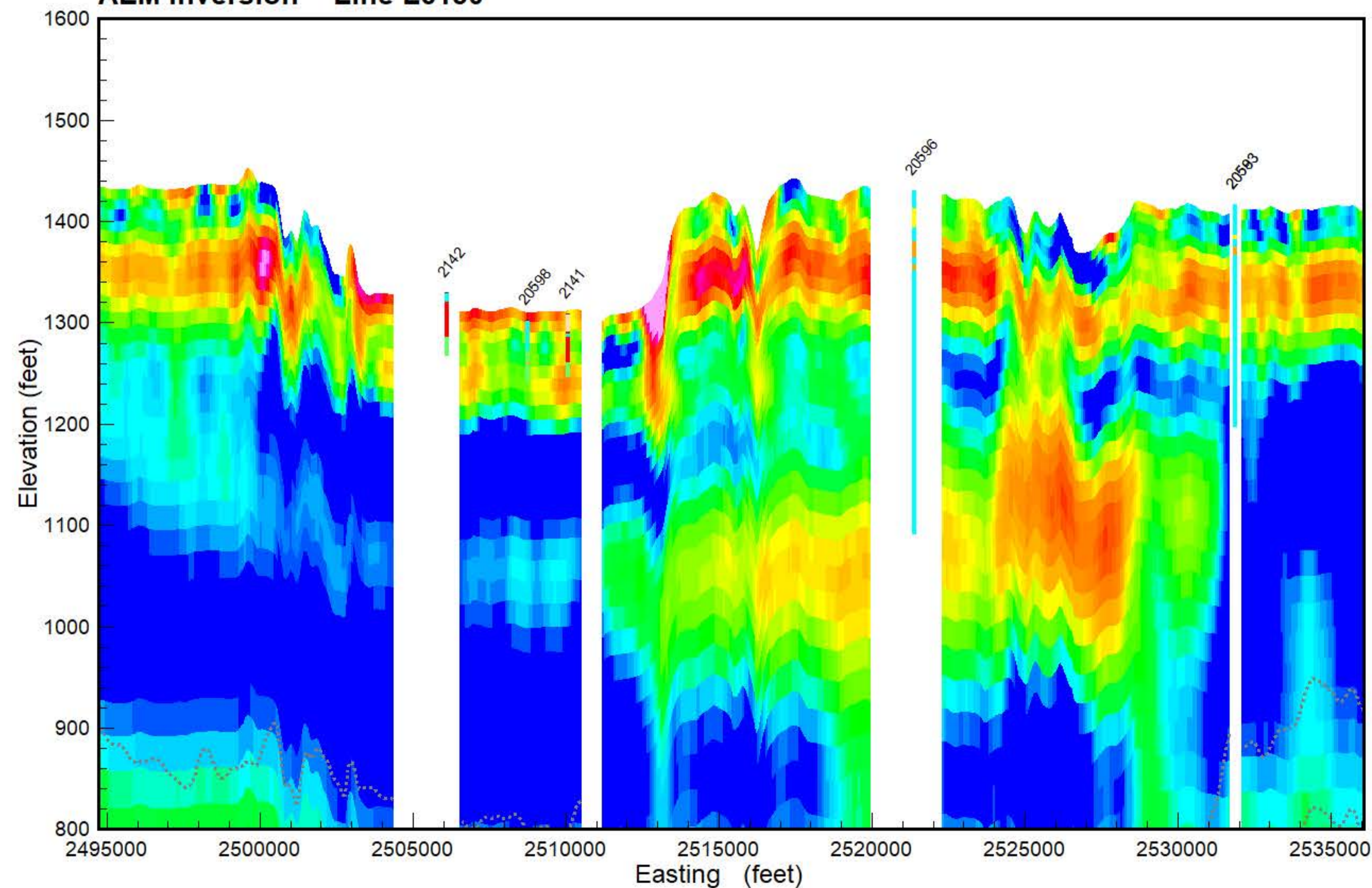
**Flight Path Line L6150**



**Spiritwood South Flight Area**



**AEM Inversion Line L6150**



**GEOTECH**

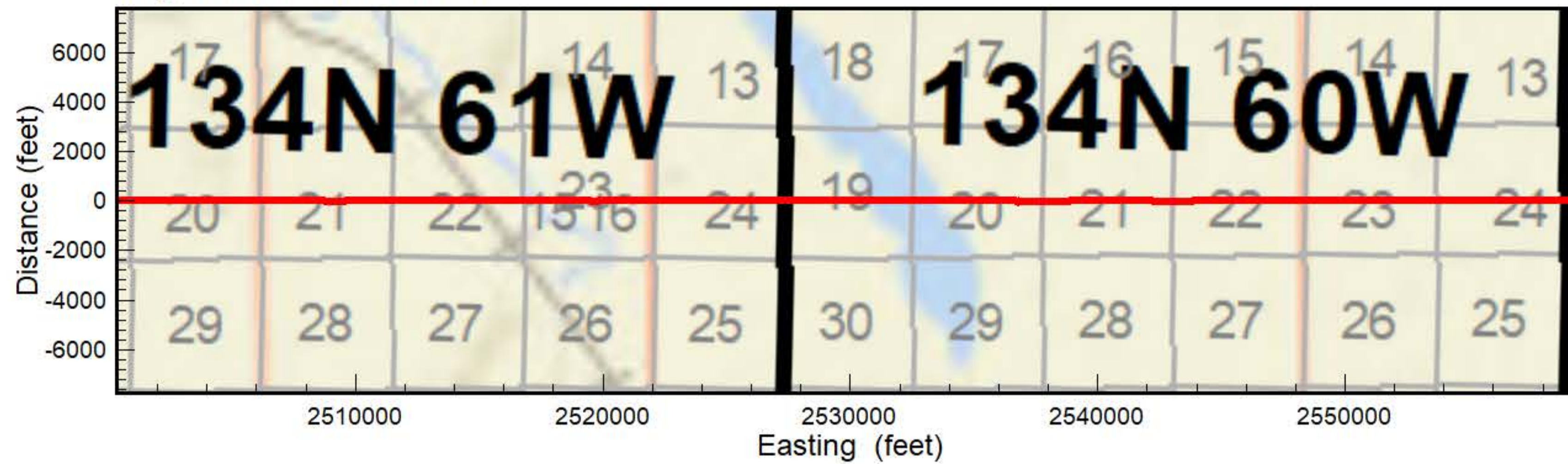
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
LIGNITE
COBBLES
BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
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SILT
CLAY
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FILL
TOPSOIL
NOSAMPLE

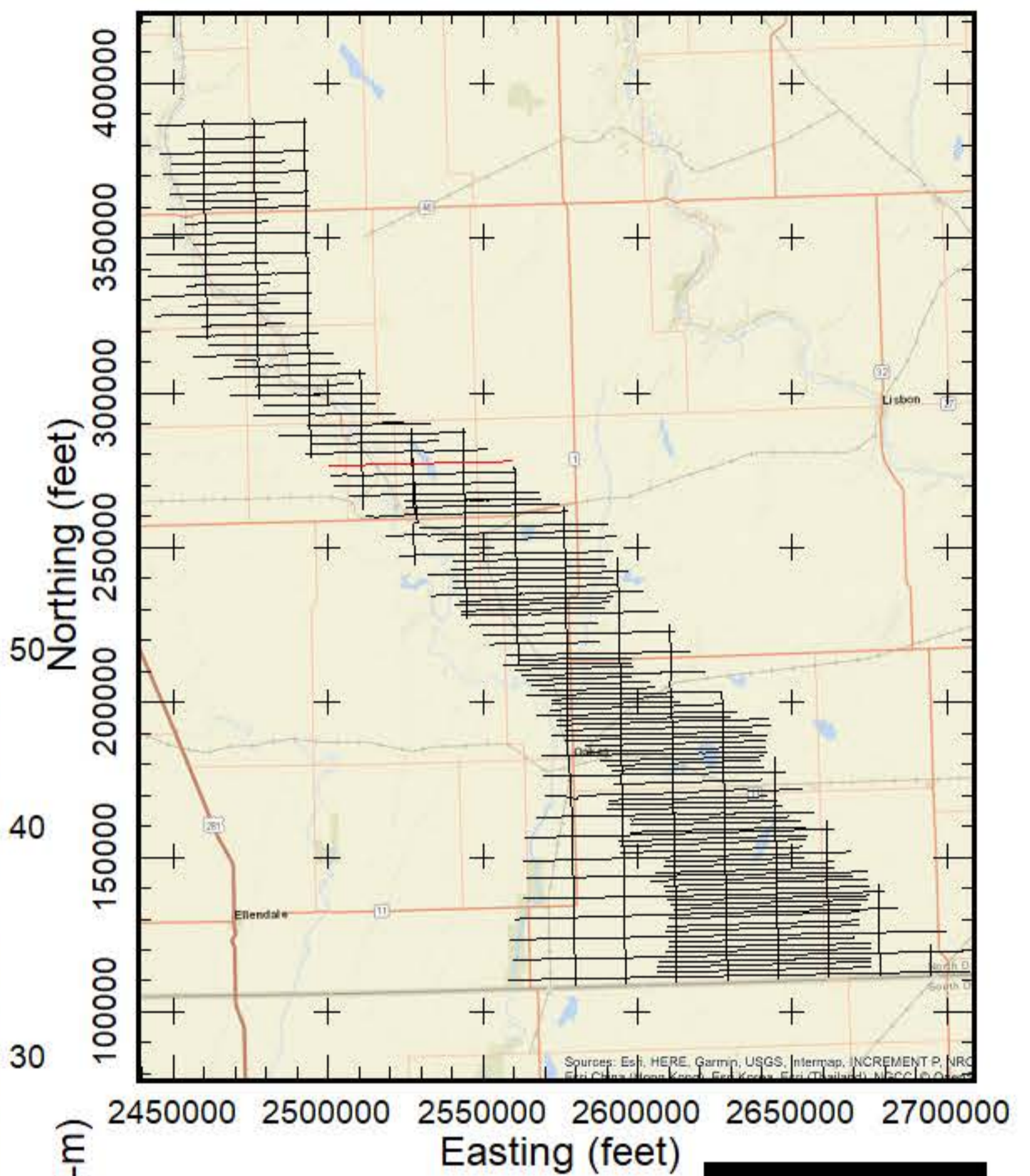
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Aqua Geo Frameworks



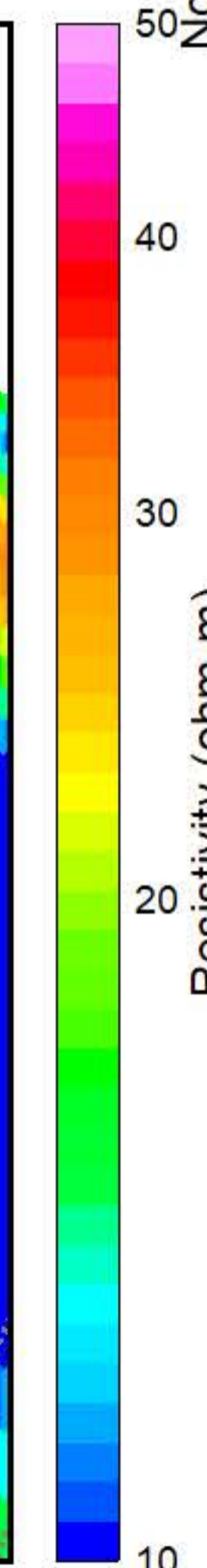
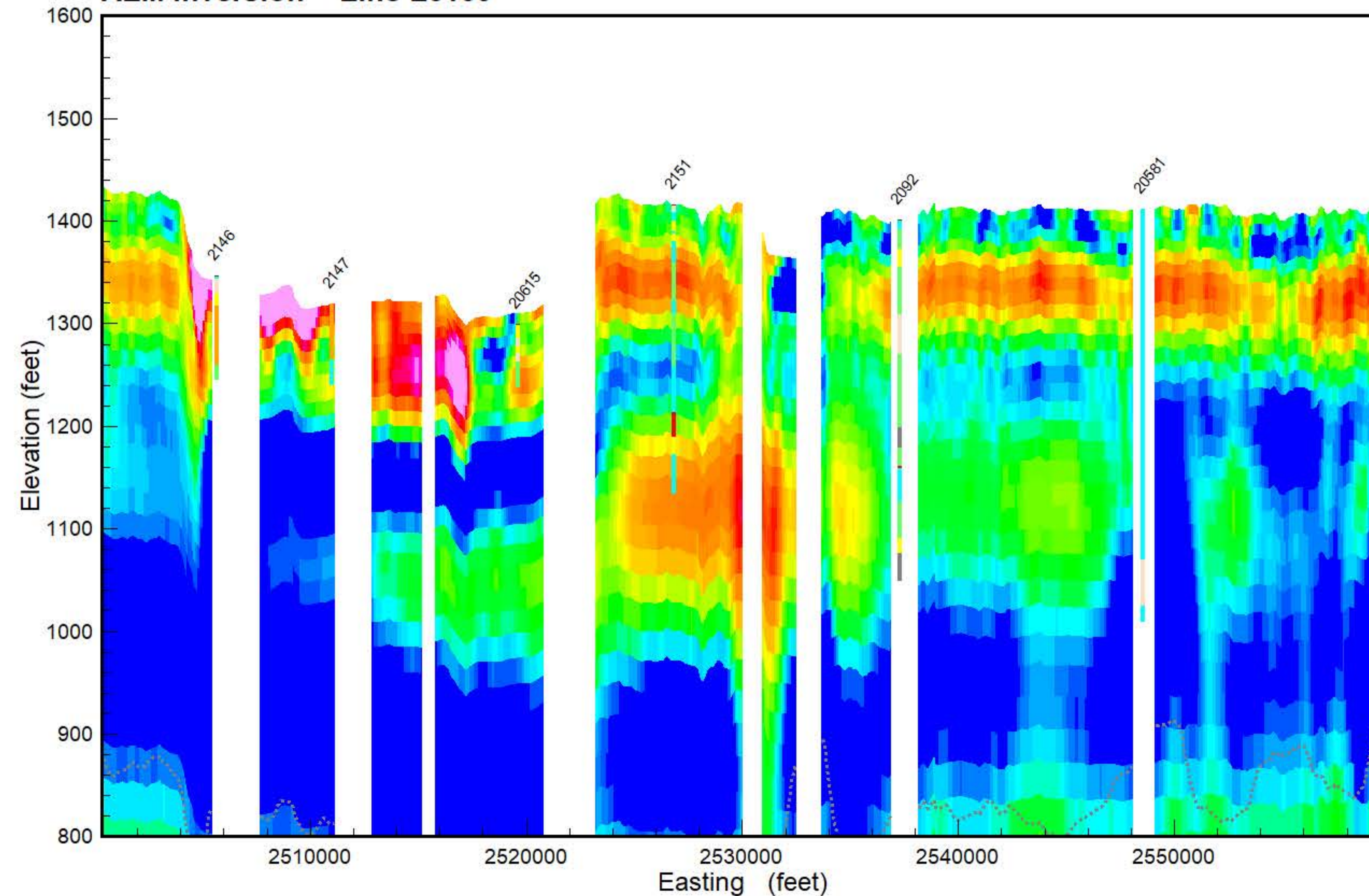
**Flight Path Line L6160**



**Spiritwood South Flight Area**



**AEM Inversion Line L6160**



**GEOTECH**

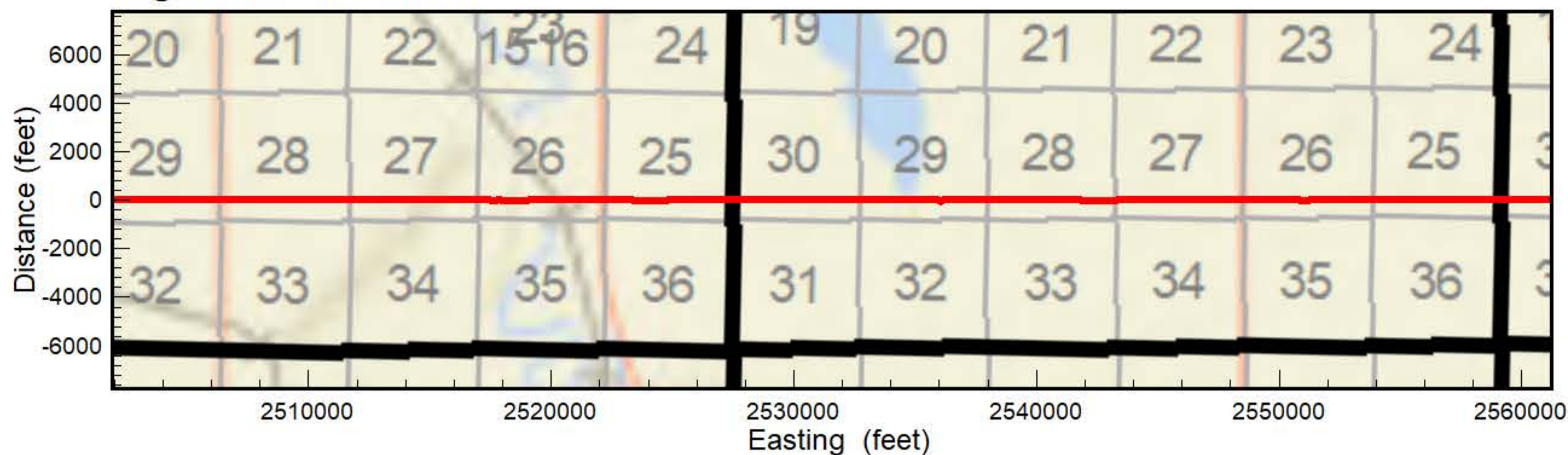
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
LIGNITE
COBBLES
BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
SHALE
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NOSAMPLE

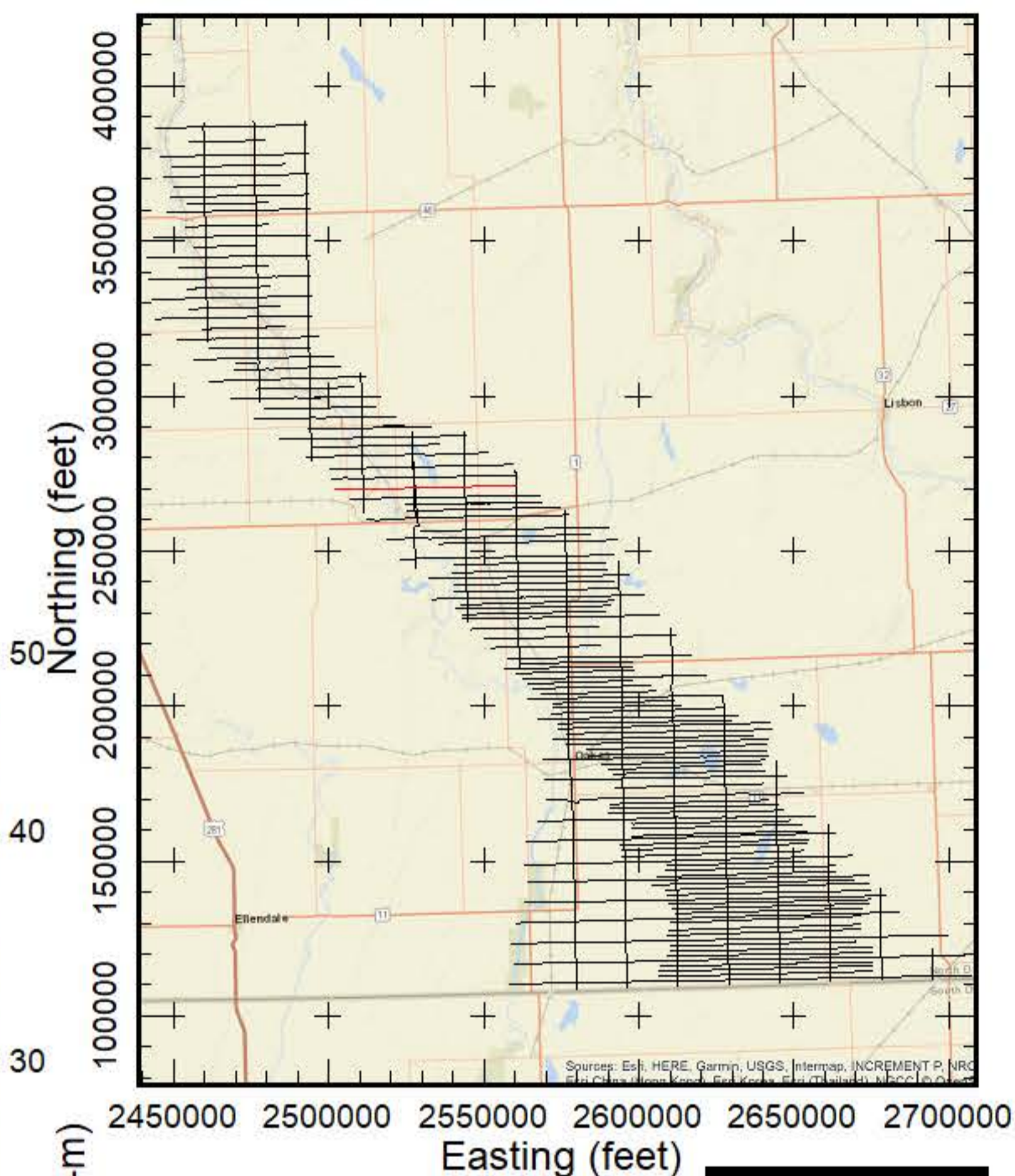
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Aqua Geo Frameworks



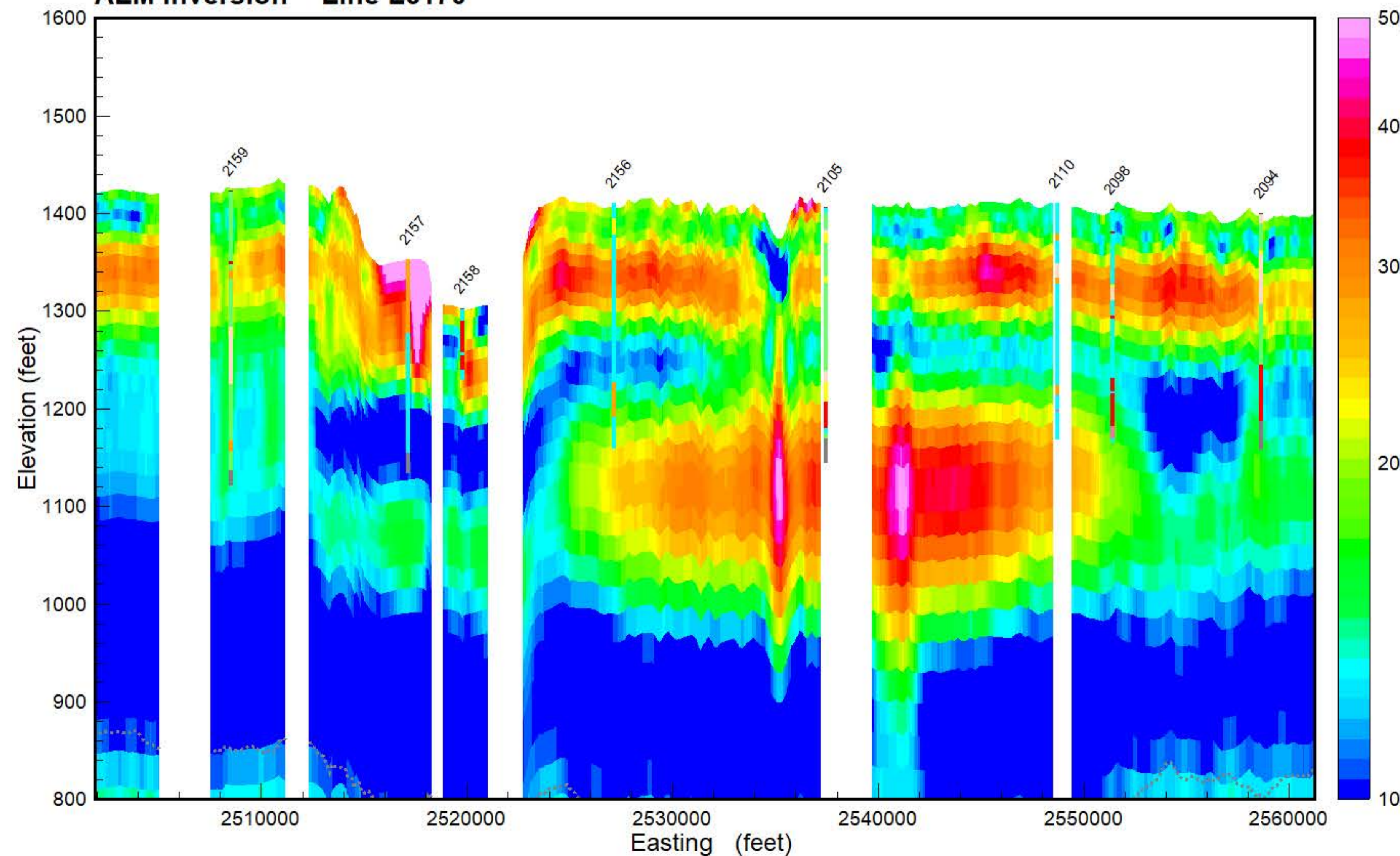
**Flight Path Line L6170**



**Spiritwood South Flight Area**



**AEM Inversion Line L6170**



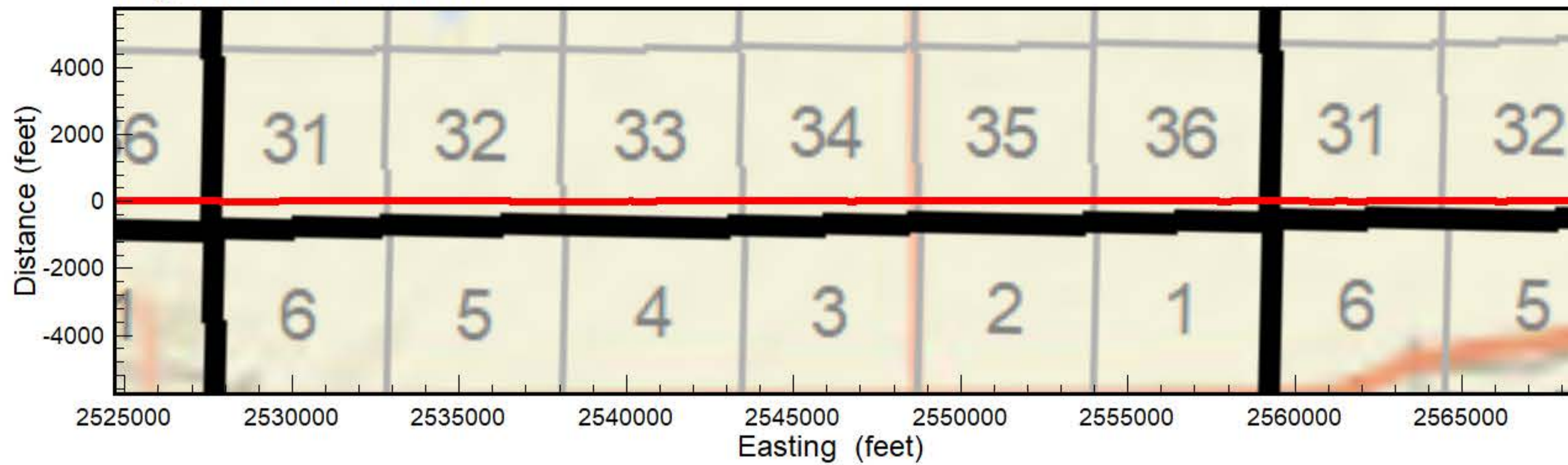
**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

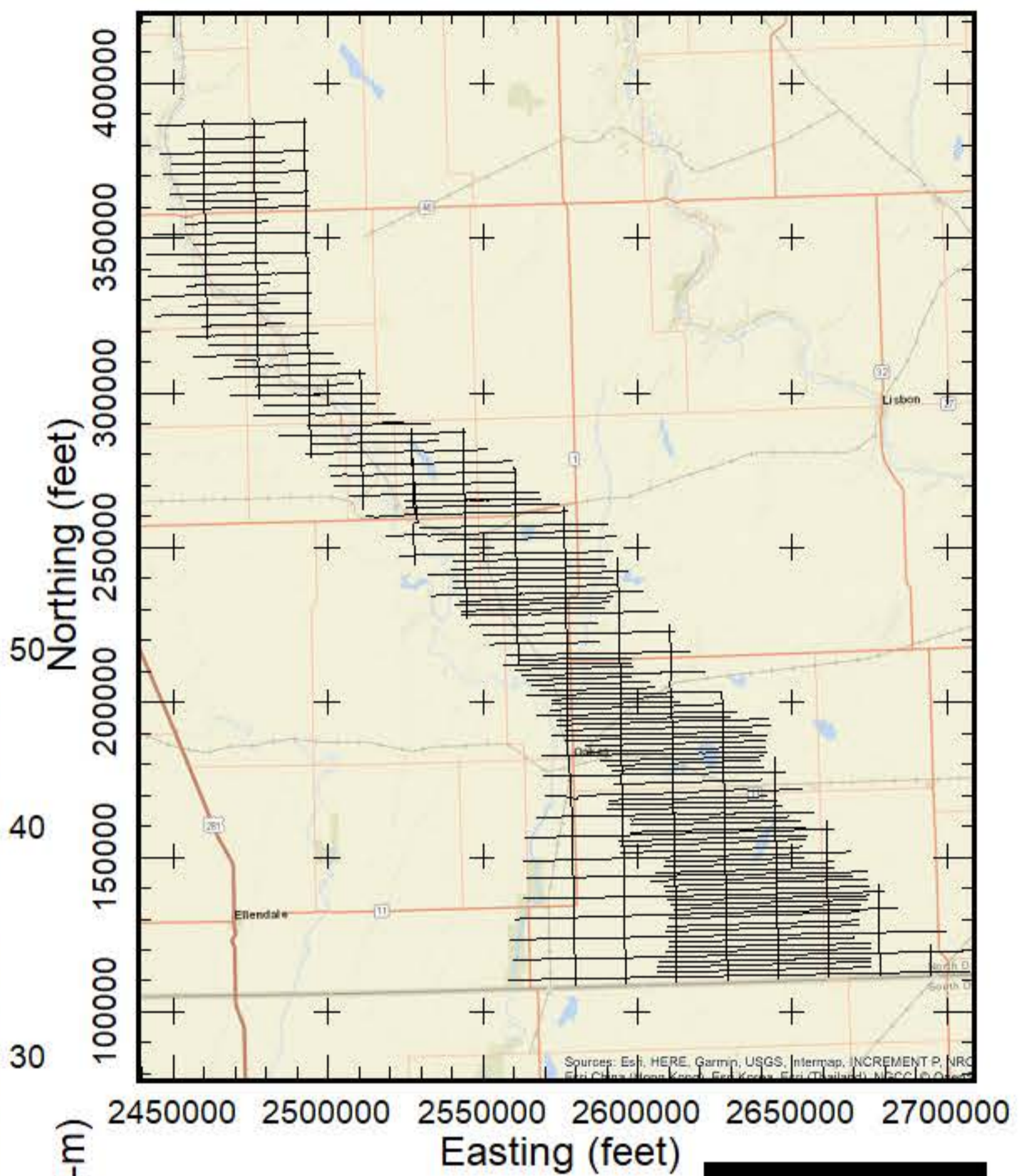
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Aqua Geo Frameworks



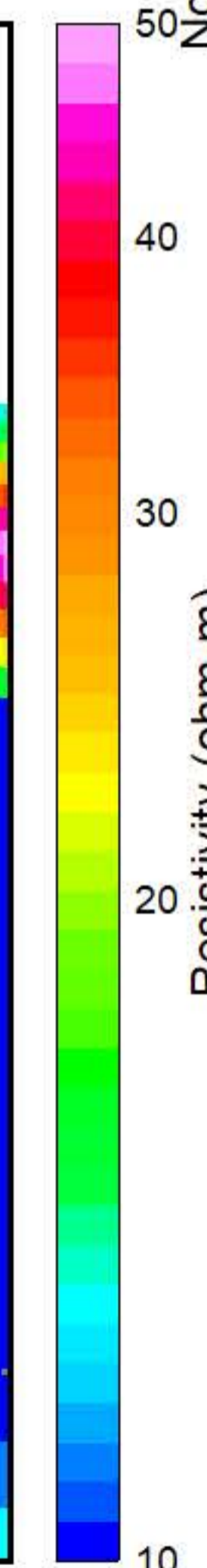
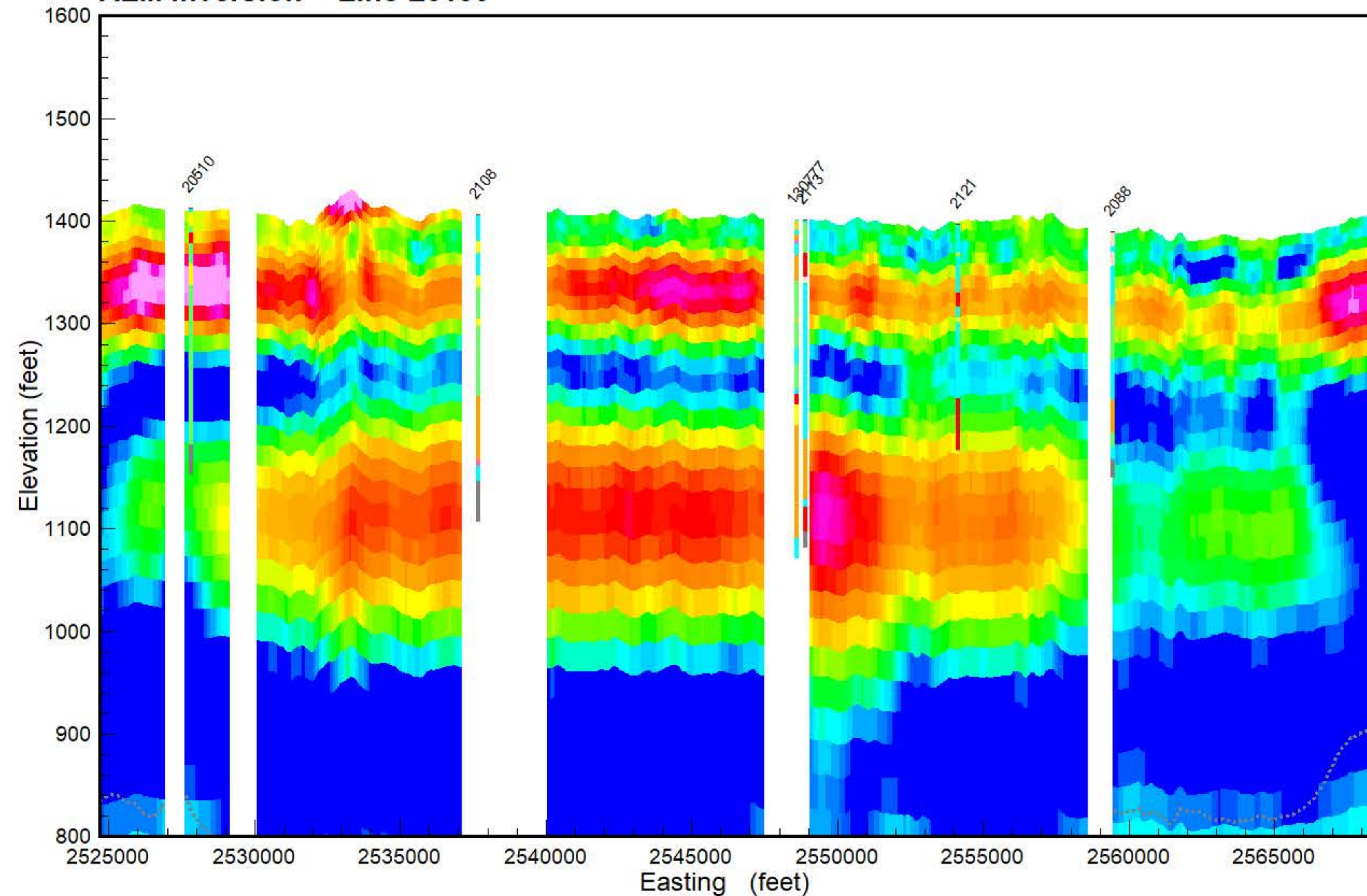
**Flight Path Line L6180**



**Spiritwood South Flight Area**



**AEM Inversion Line L6180**



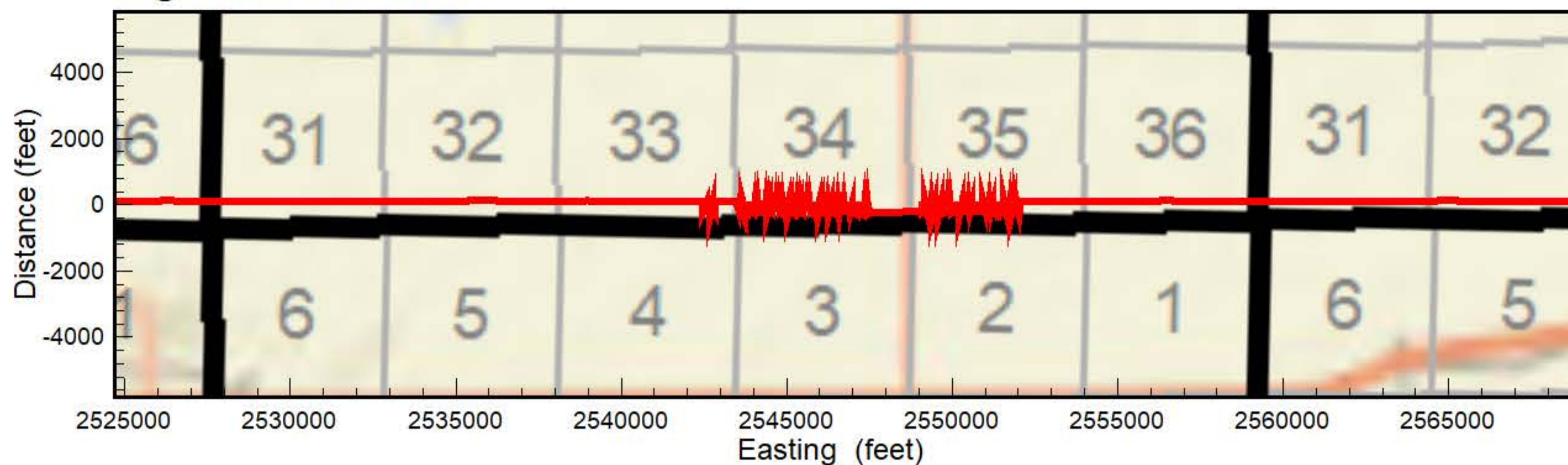
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018, to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

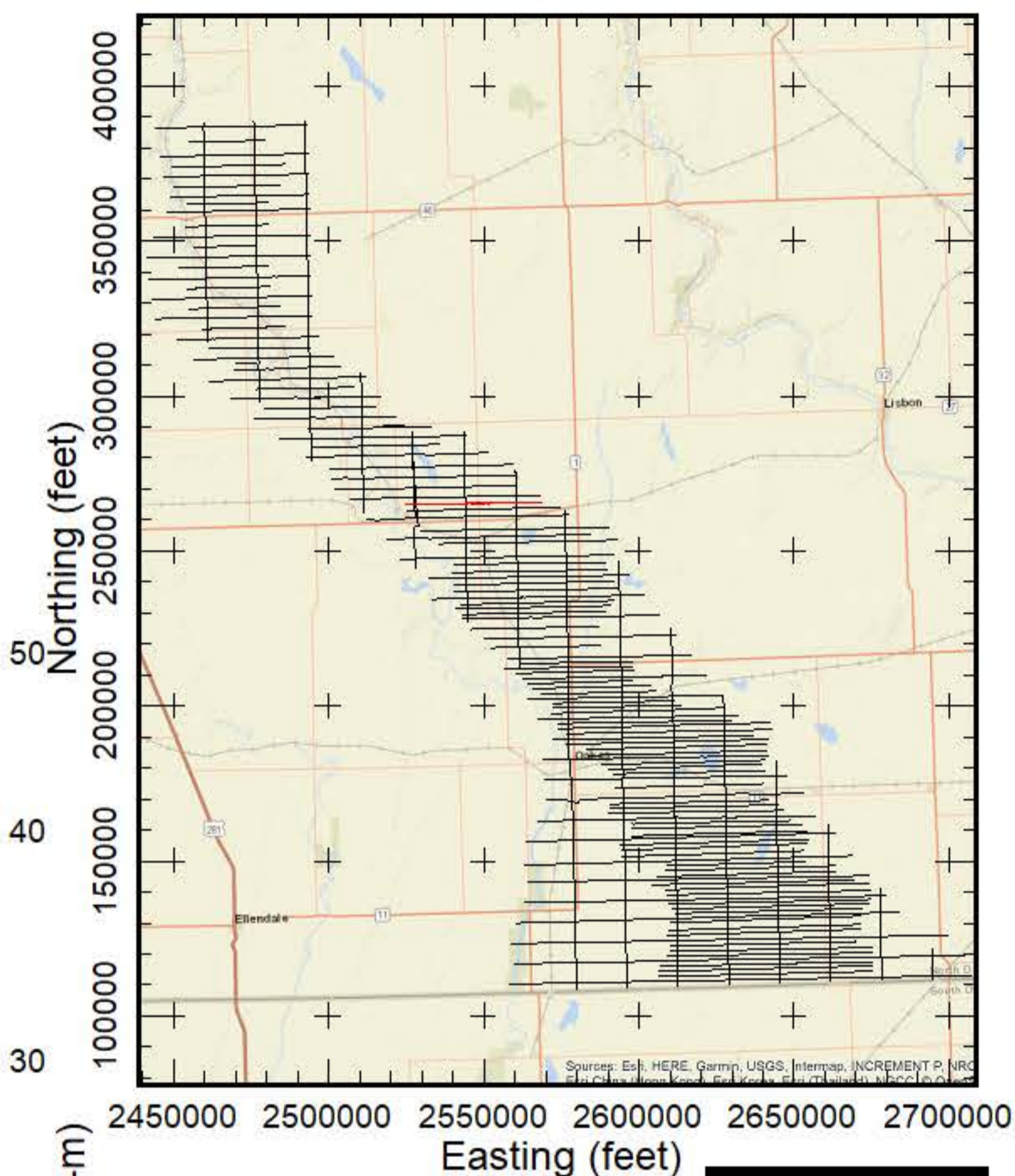




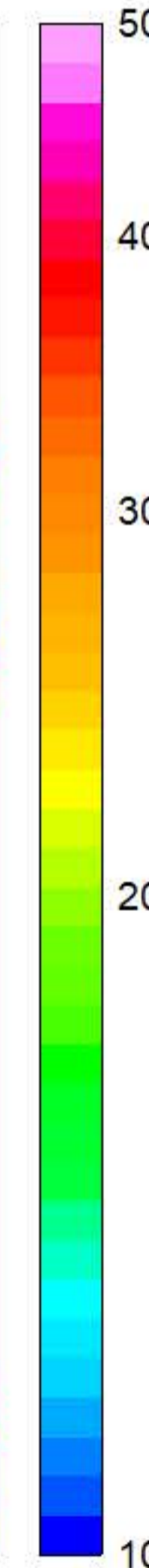
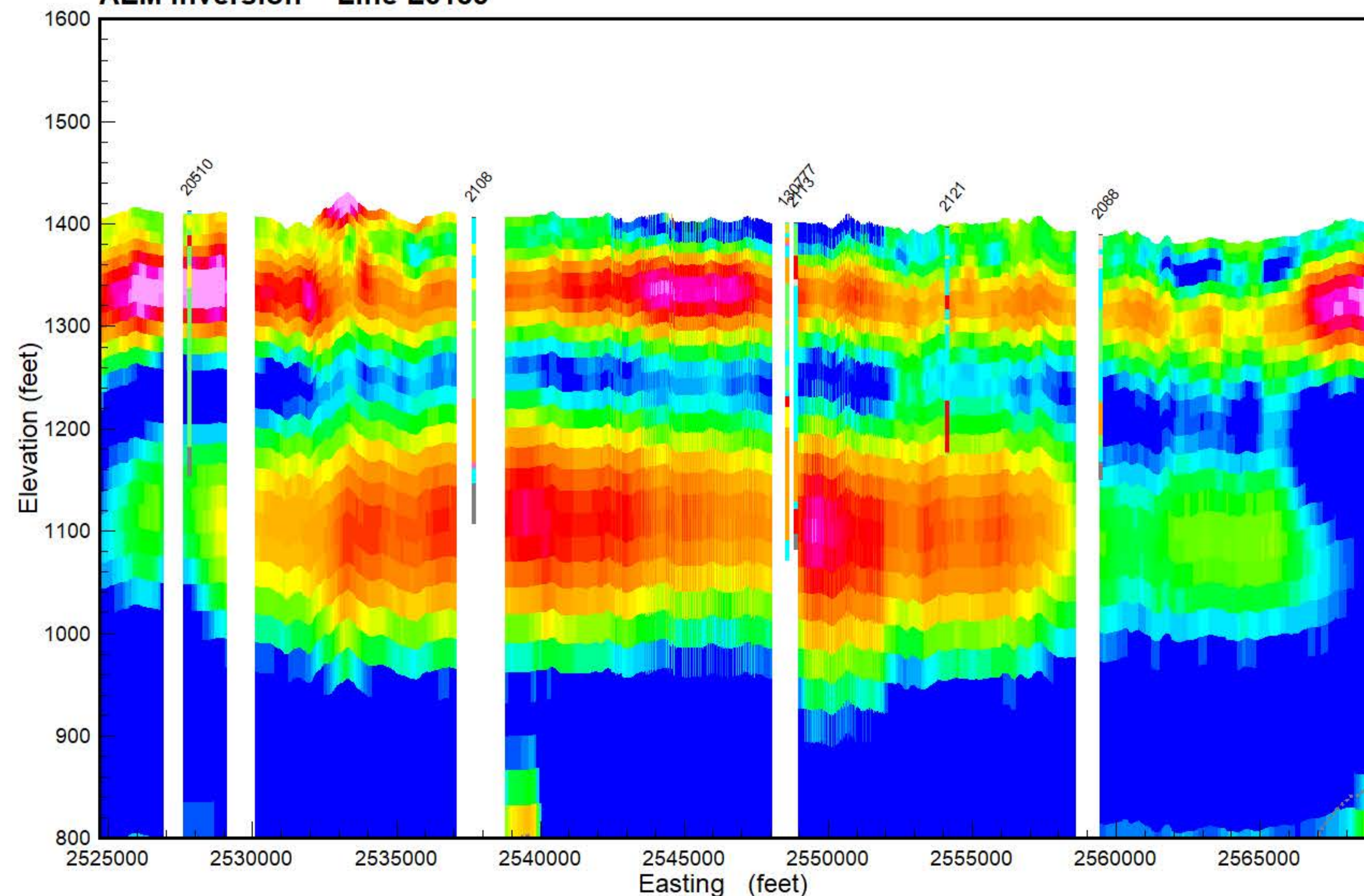
**Flight Path Line L6185**



**Spiritwood South Flight Area**



**AEM Inversion Line L6185**

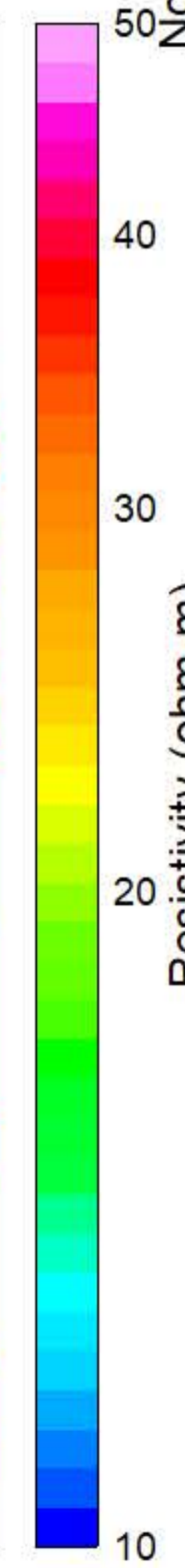
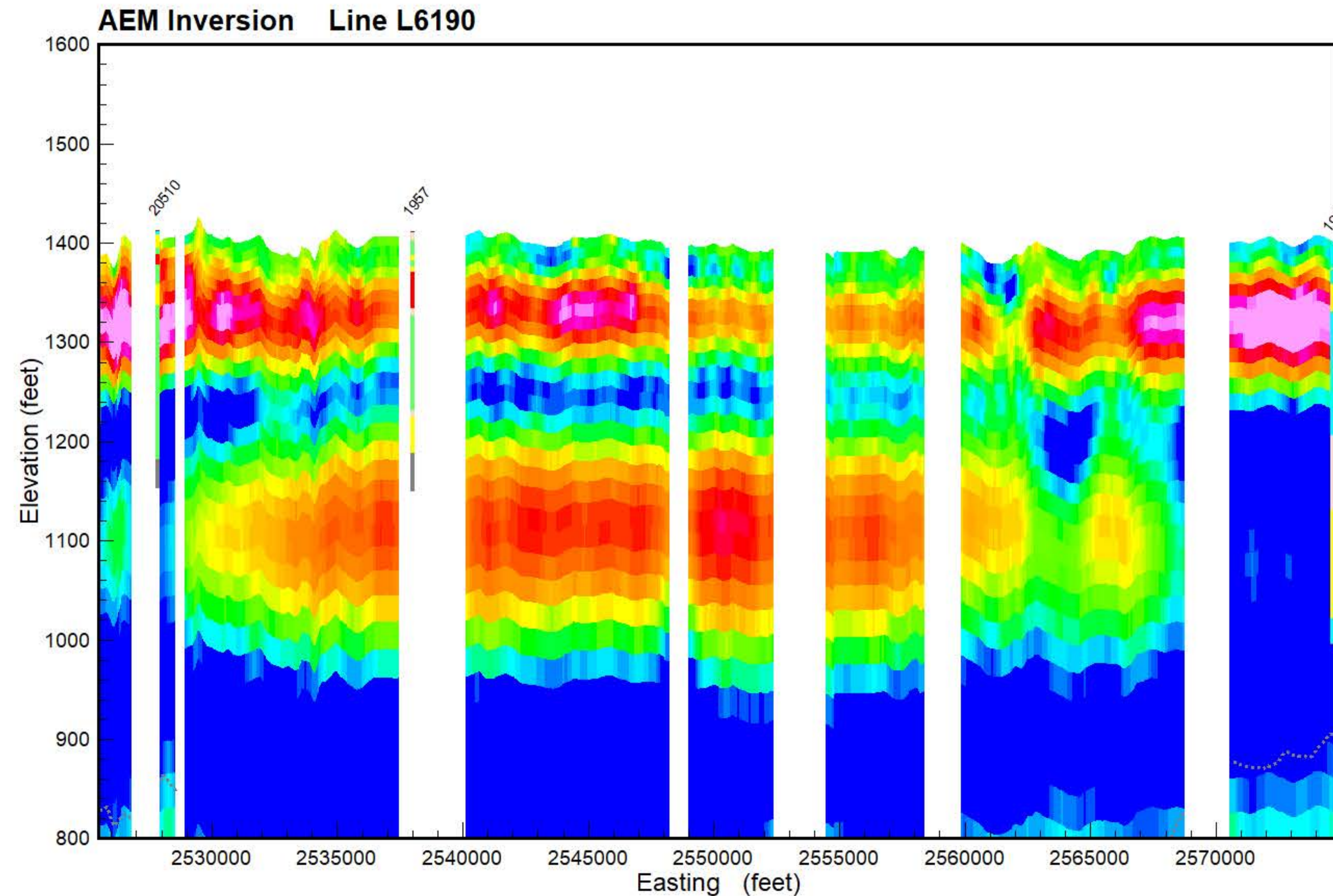
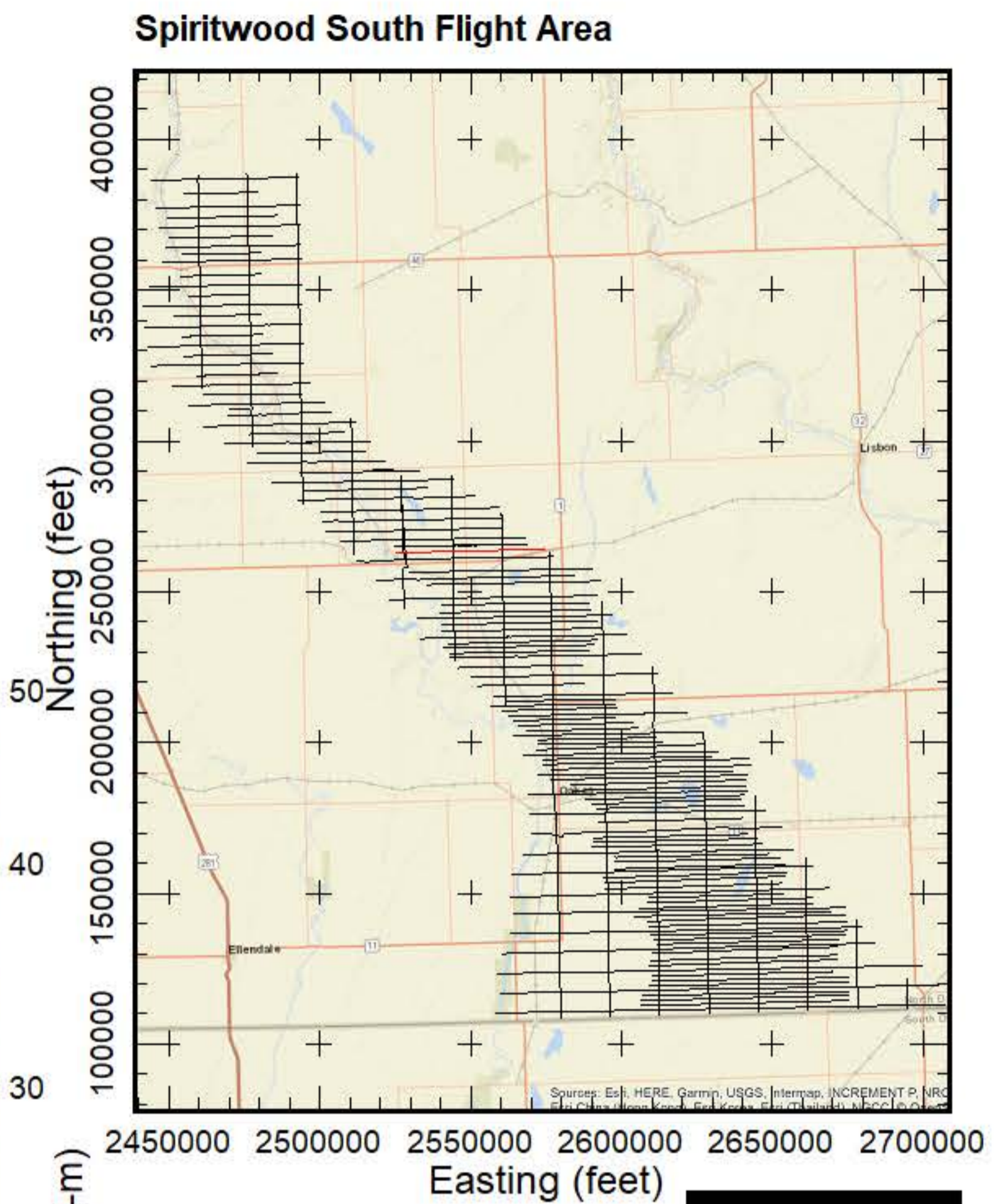
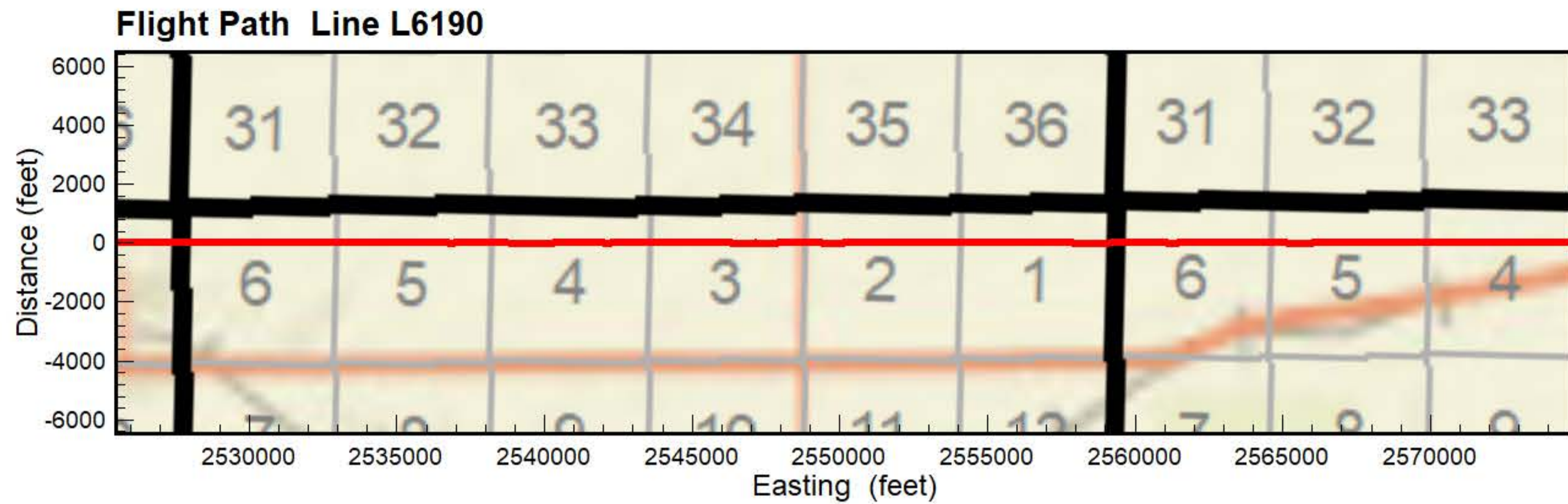


- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.







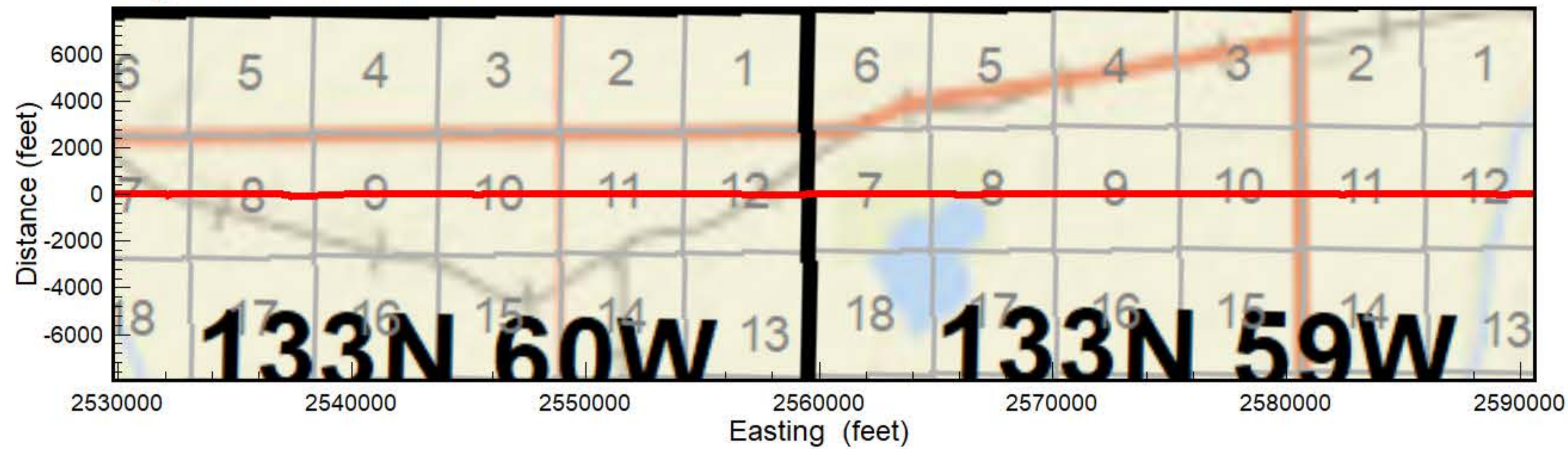
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

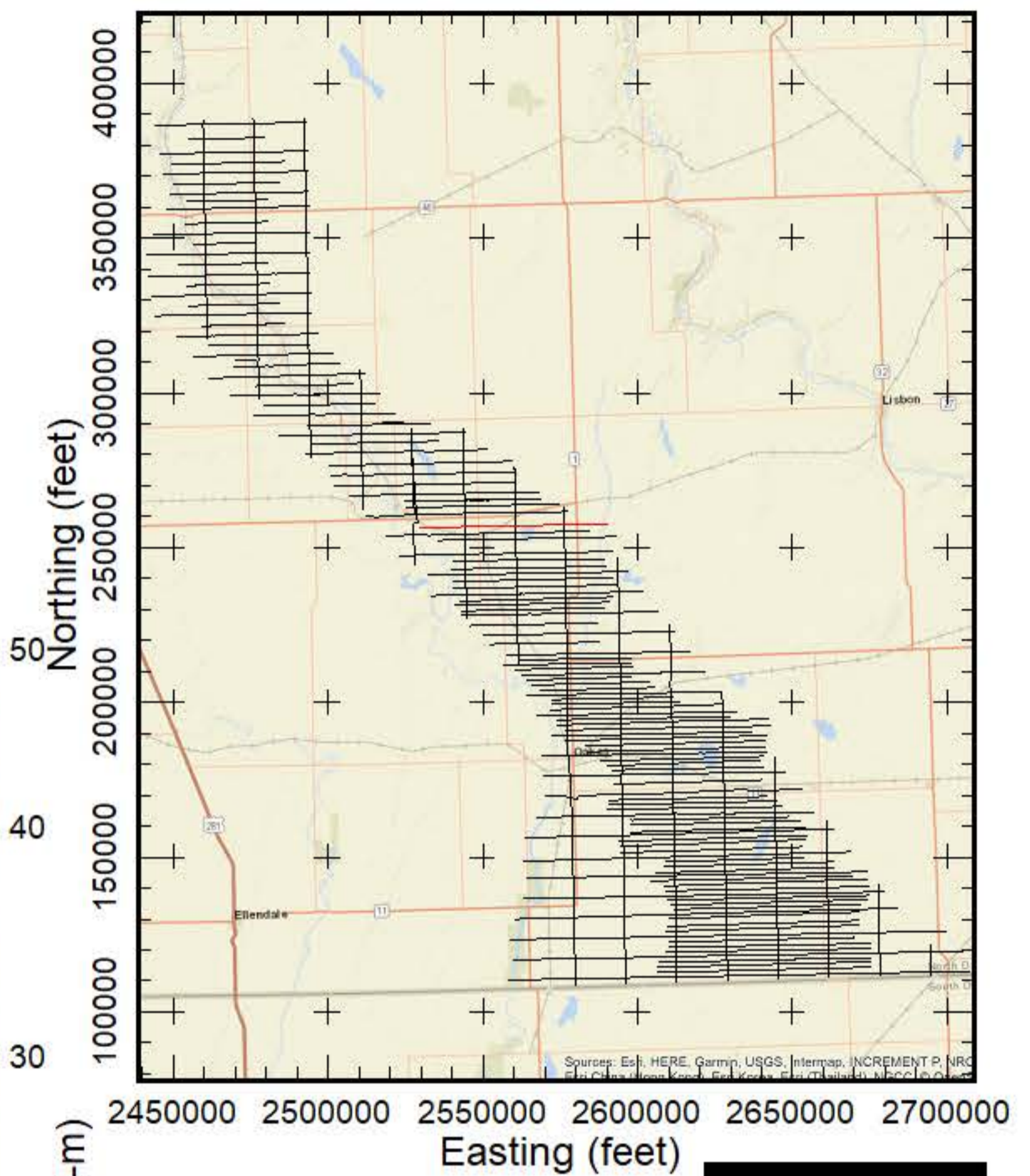




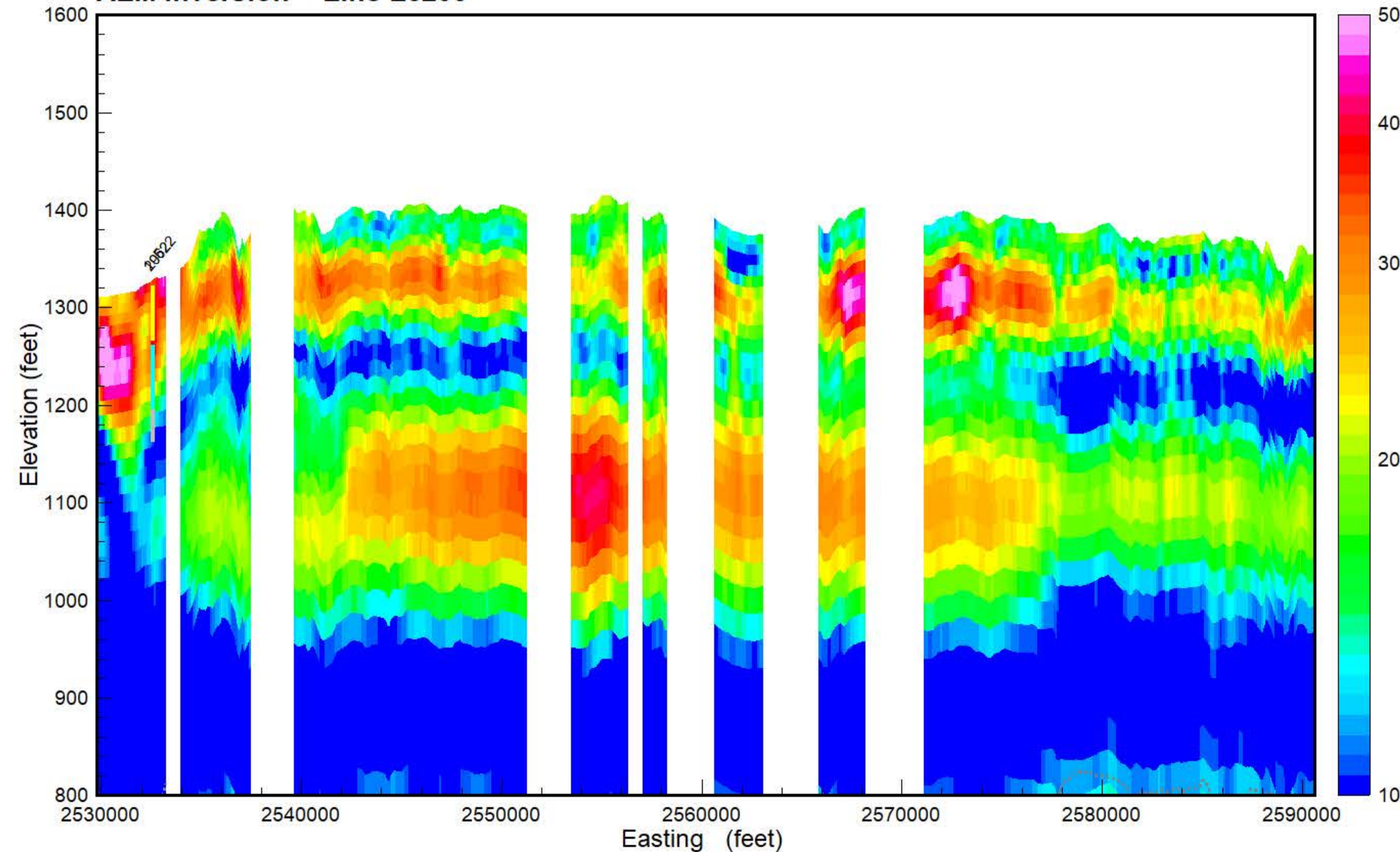
**Flight Path Line L6200**



**Spiritwood South Flight Area**



**AEM Inversion Line L6200**



**Resistivity (ohm-m)**

50  
40  
30  
20  
10

PEAT
LIGNITE
COBBLES
BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
SHALE
BEDROCK
GRAVEL
SAND & GRAVEL
SAND
INTERBEDDED
SILT
CLAY
TILL
FILL
TOPSOIL
NOSAMPLE

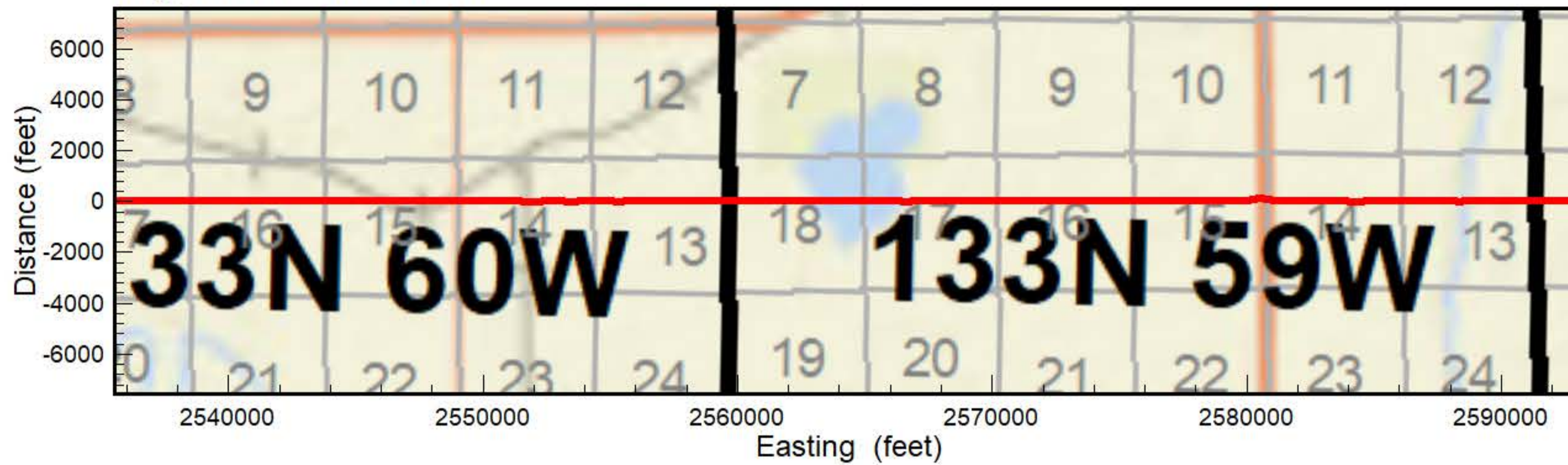
**Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.**

**GEOTECH**

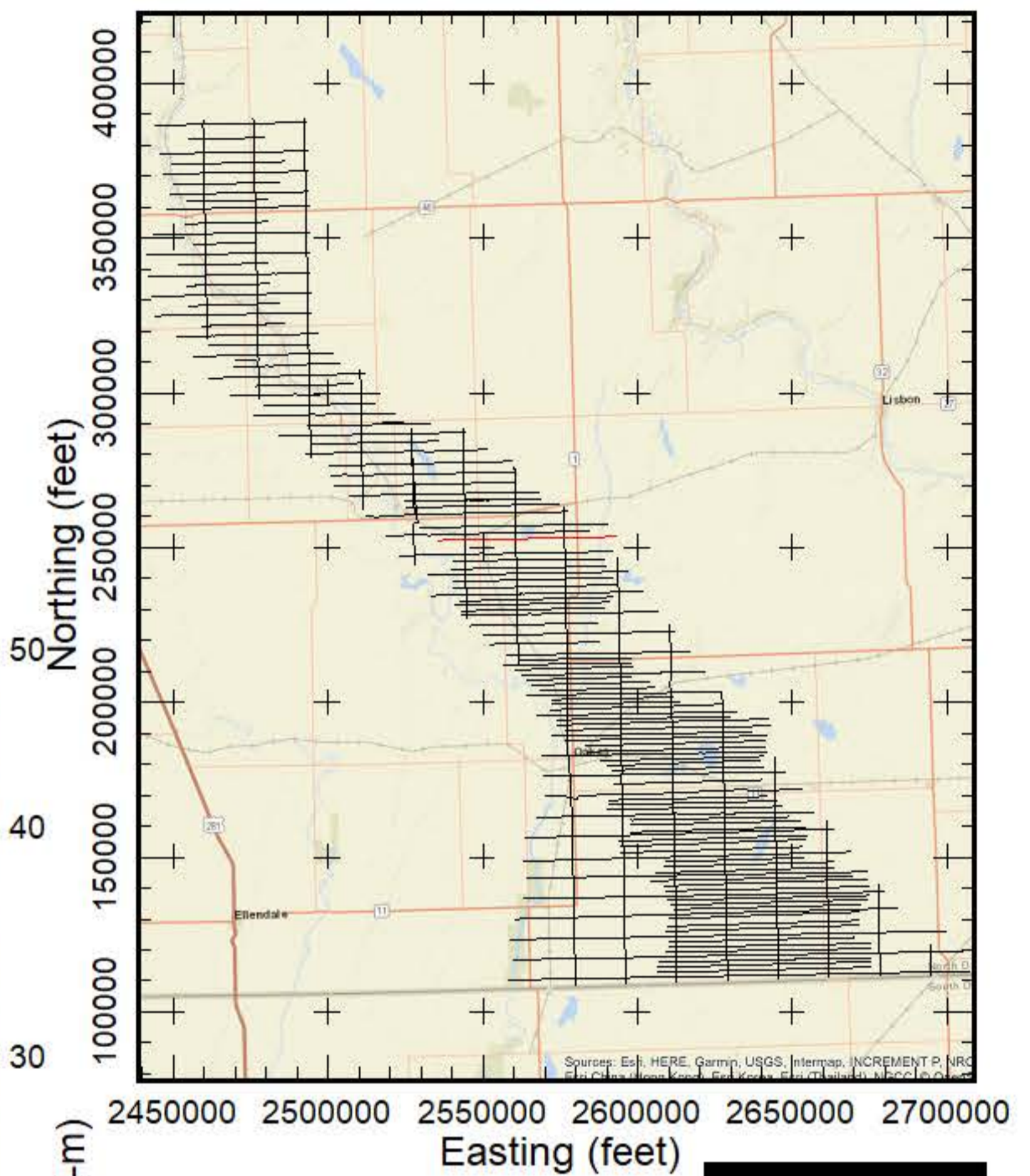
**AGF**  
Aqua Geo Frameworks



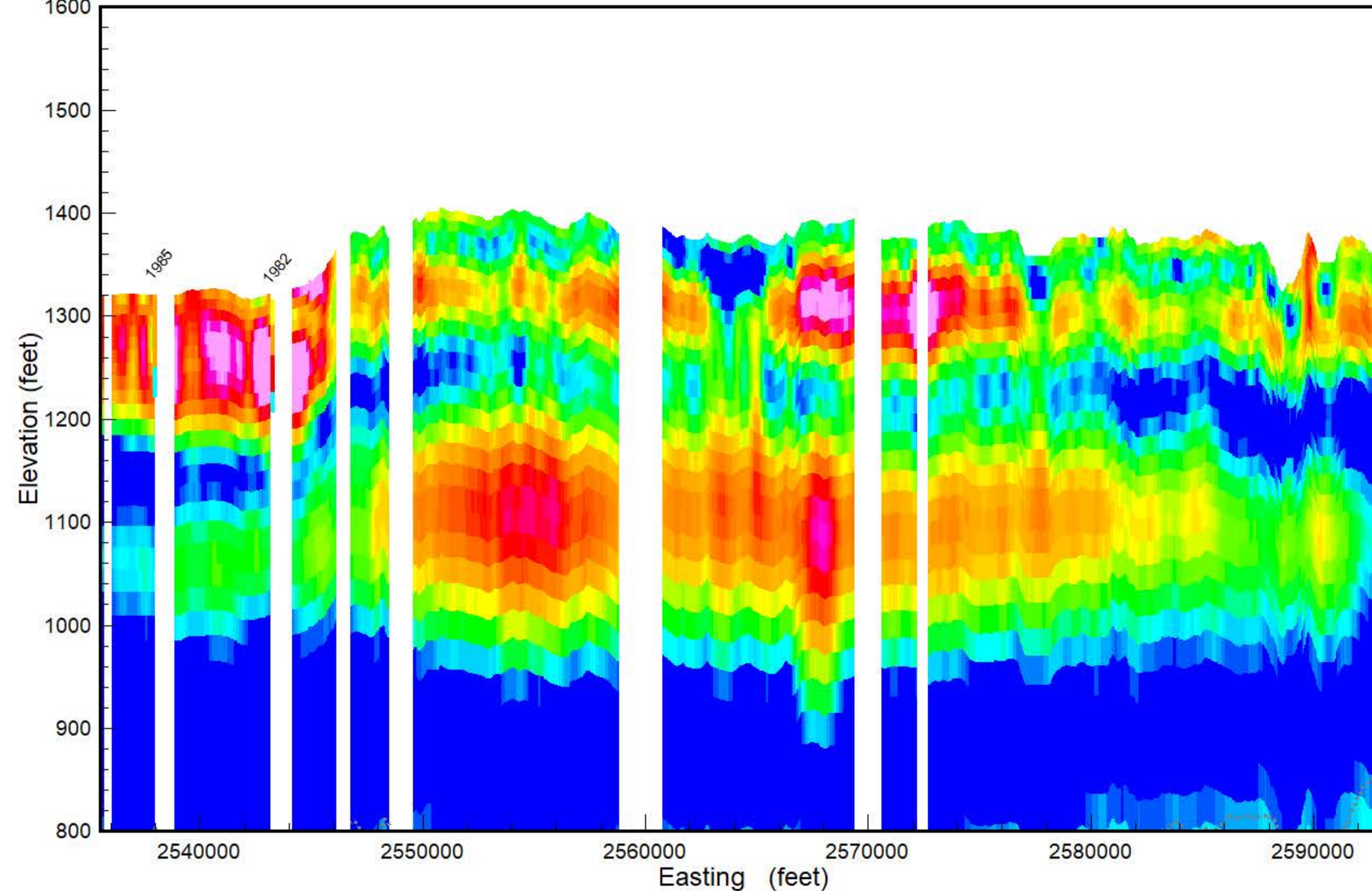
**Flight Path Line L6210**



**Spiritwood South Flight Area**



**AEM Inversion Line L6210**



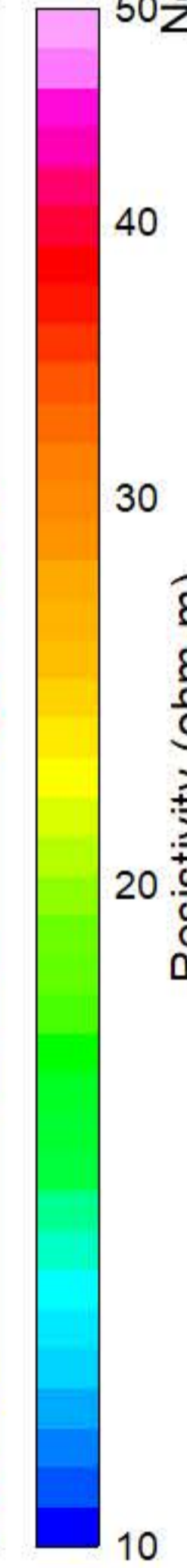
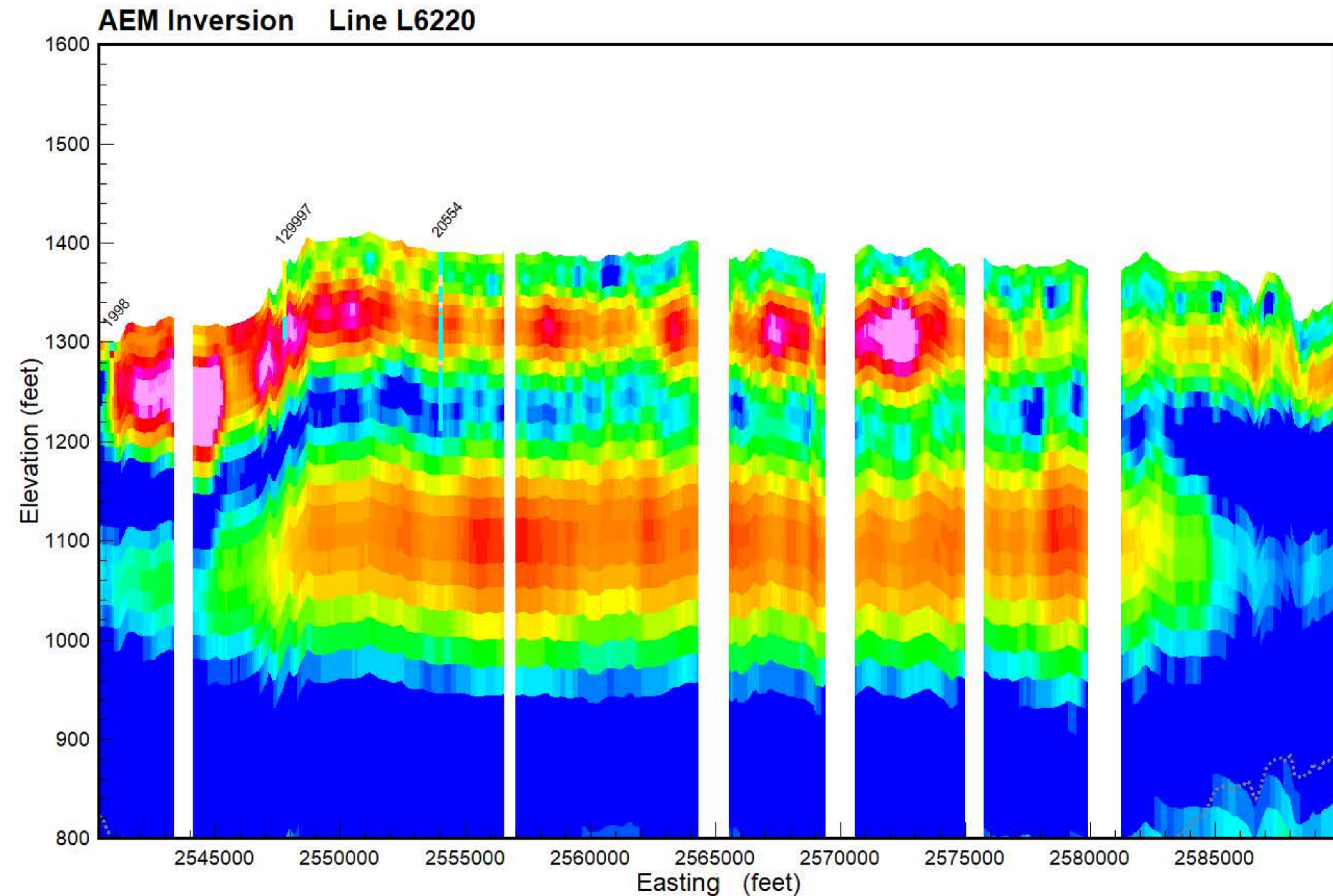
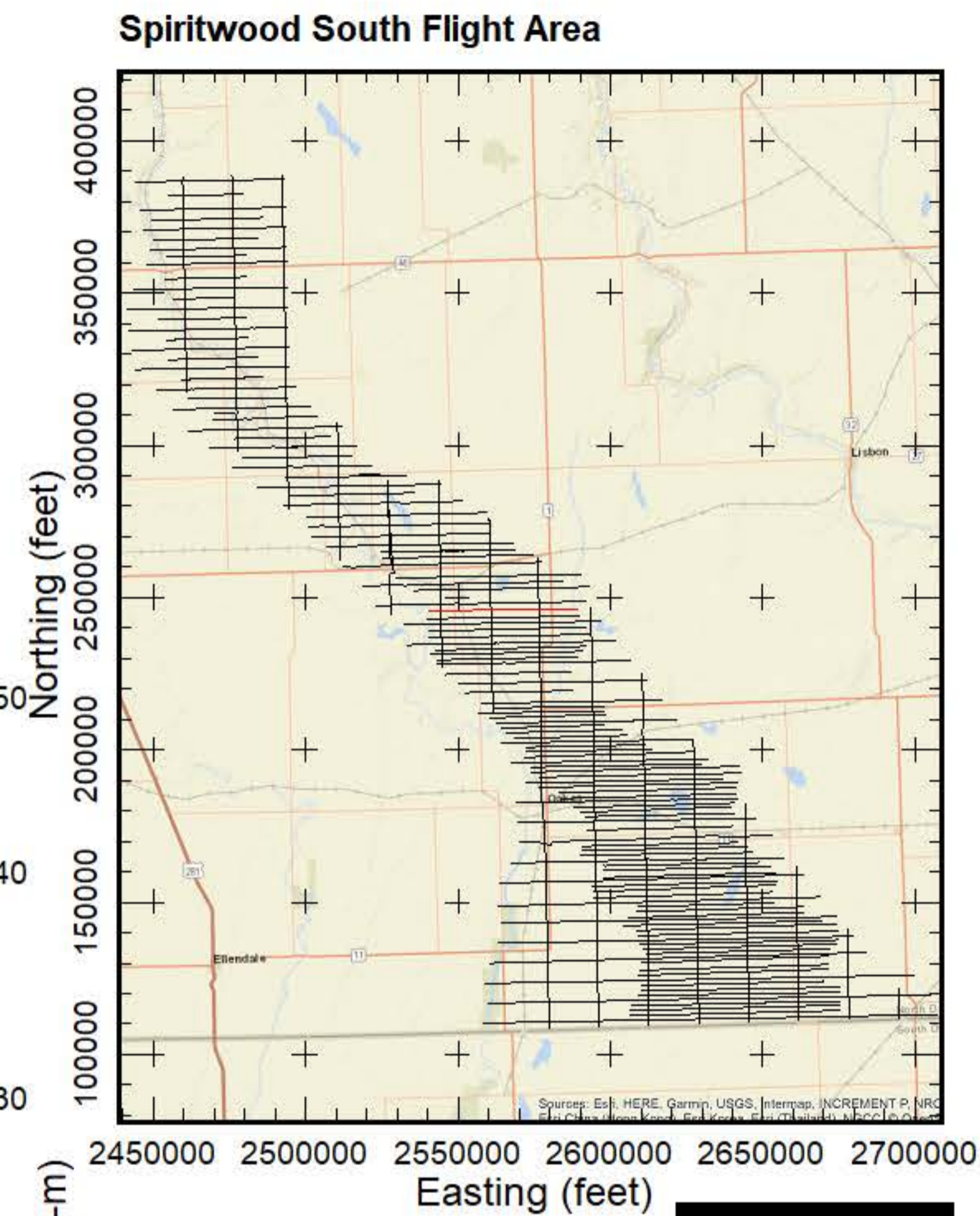
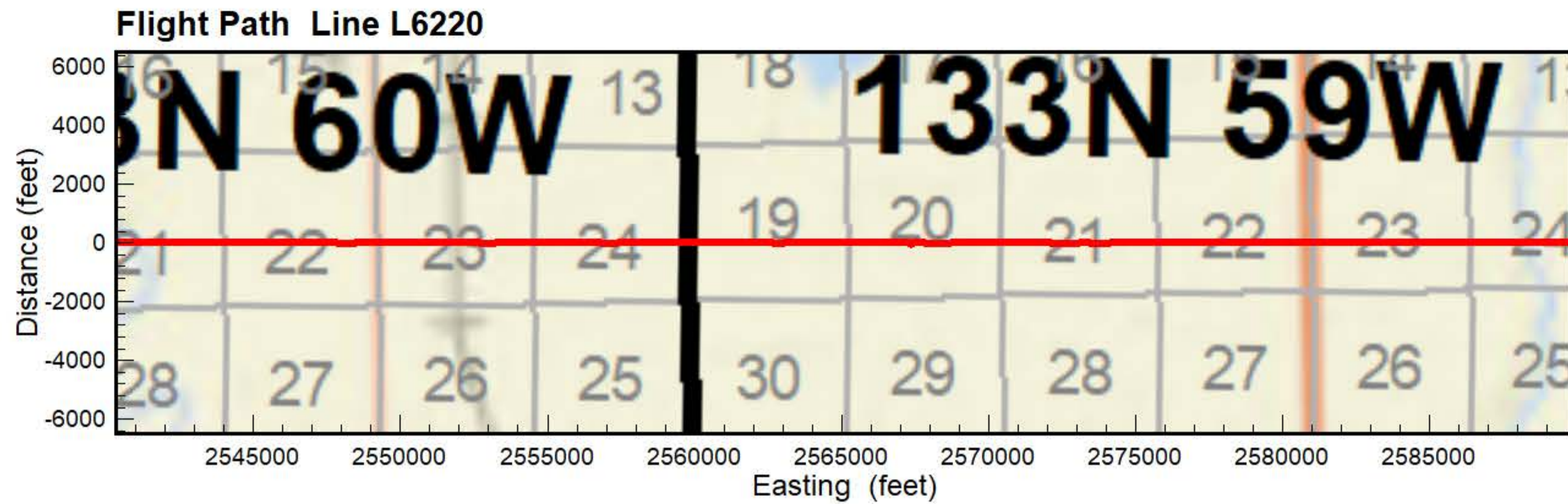
**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

**AGF**  
Aqua Geo Frameworks





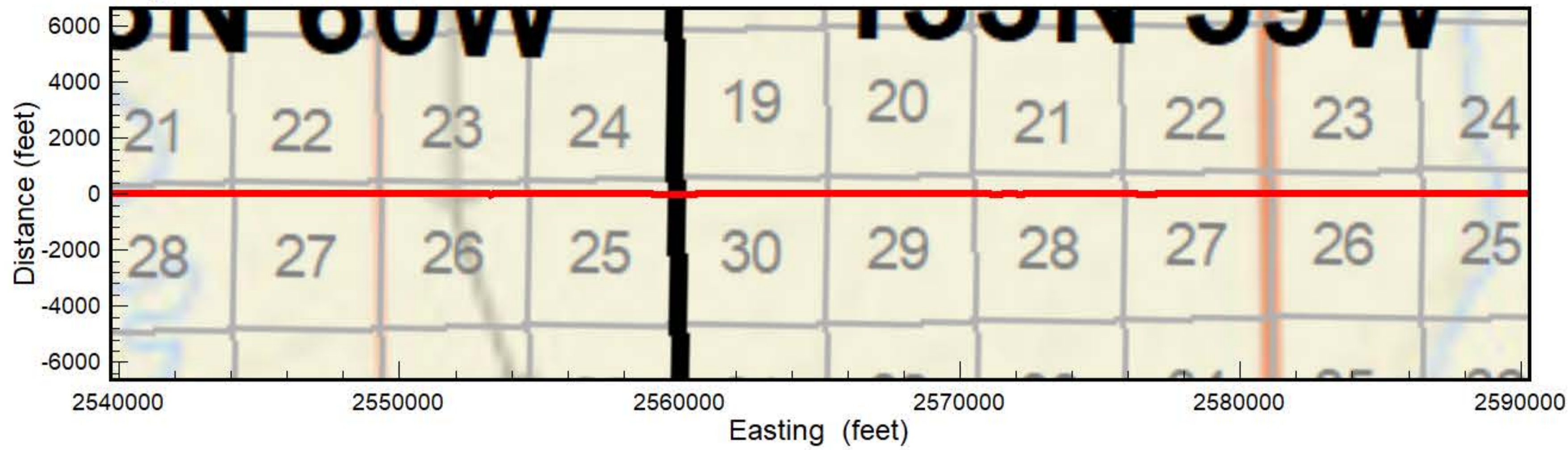
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
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- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018, to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

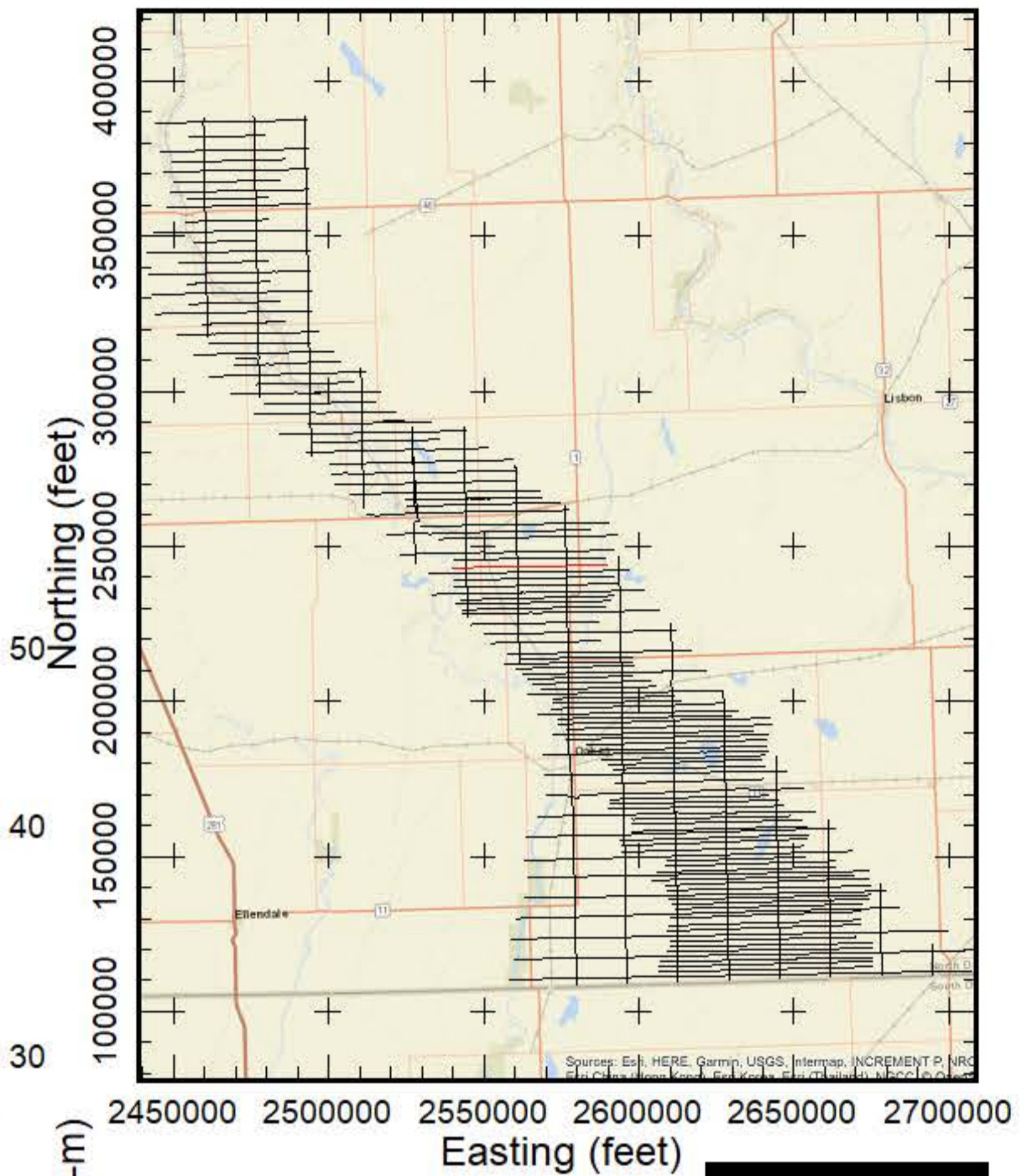




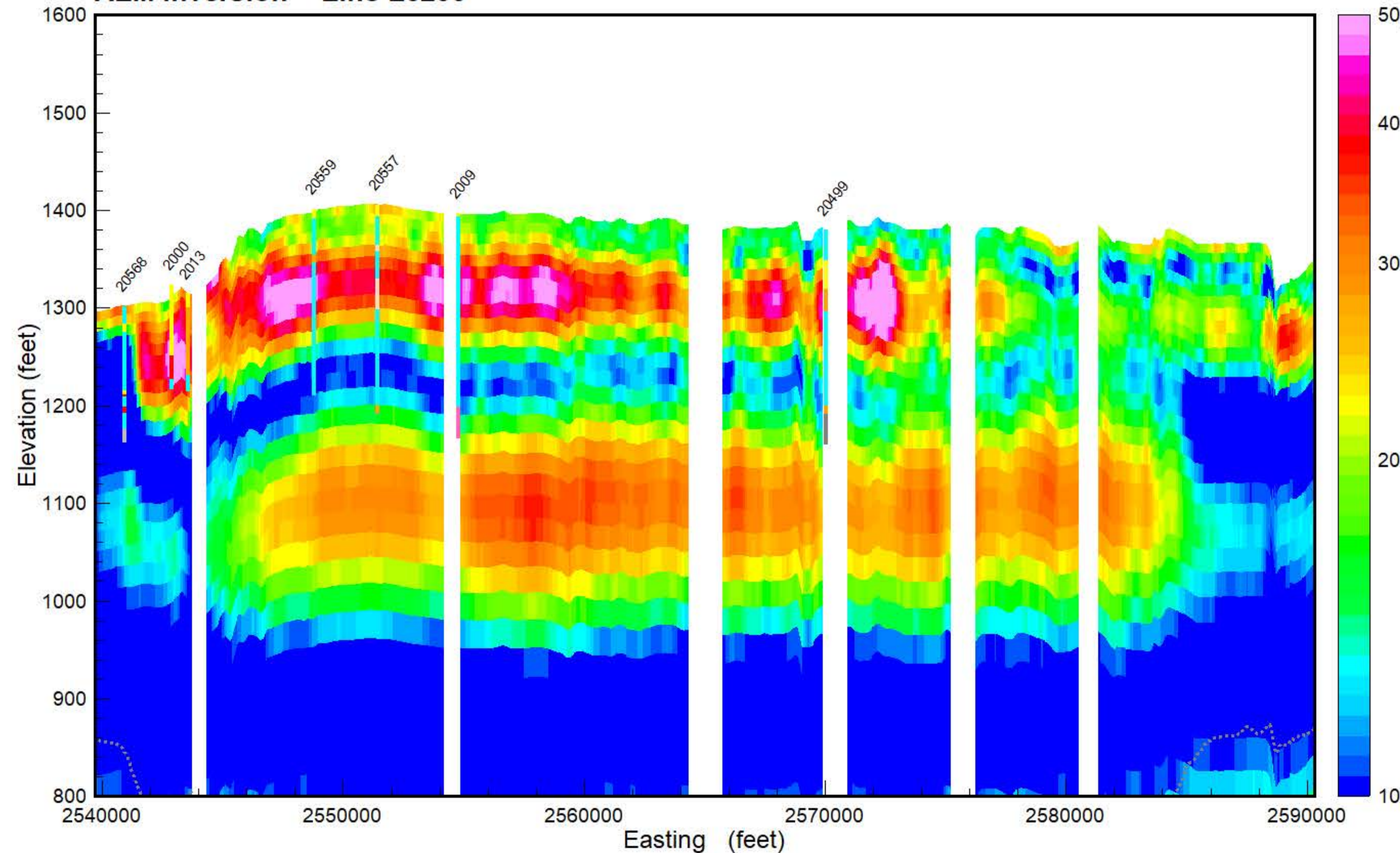
**Flight Path Line L6230**



**Spiritwood South Flight Area**



**AEM Inversion Line L6230**



**GEOTECH**

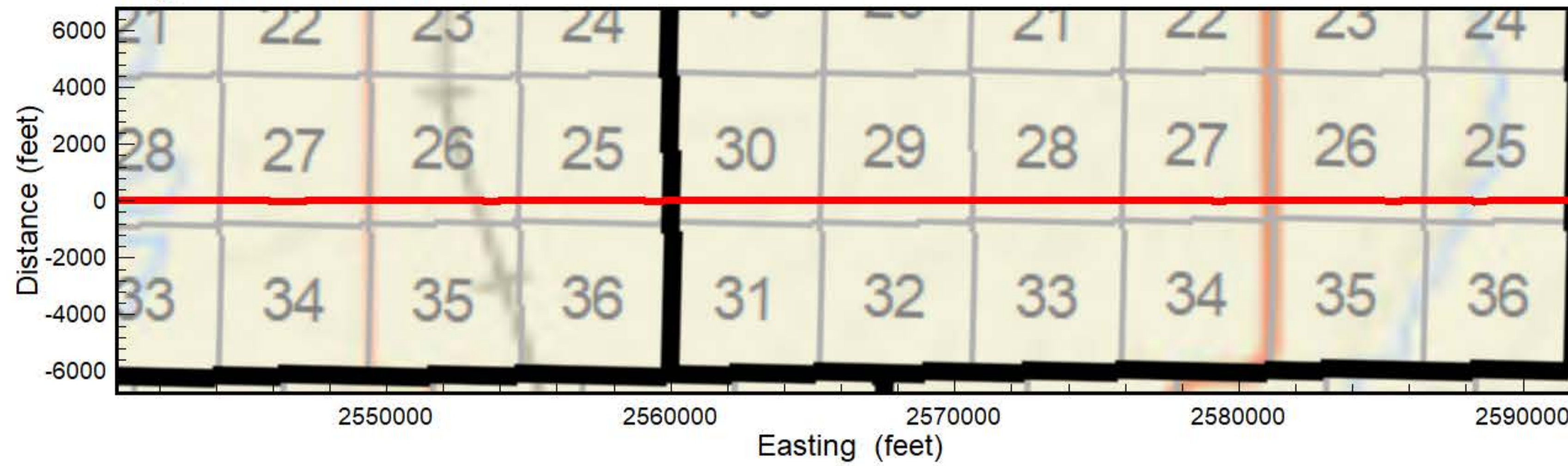
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
LIGNITE
COBBLES
BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
SHALE
BEDROCK
GRAVEL
SAND & GRAVEL
SAND
INTERBEDDED
SILT
CLAY
TILL
FILL
TOPSOIL
NOSAMPLE

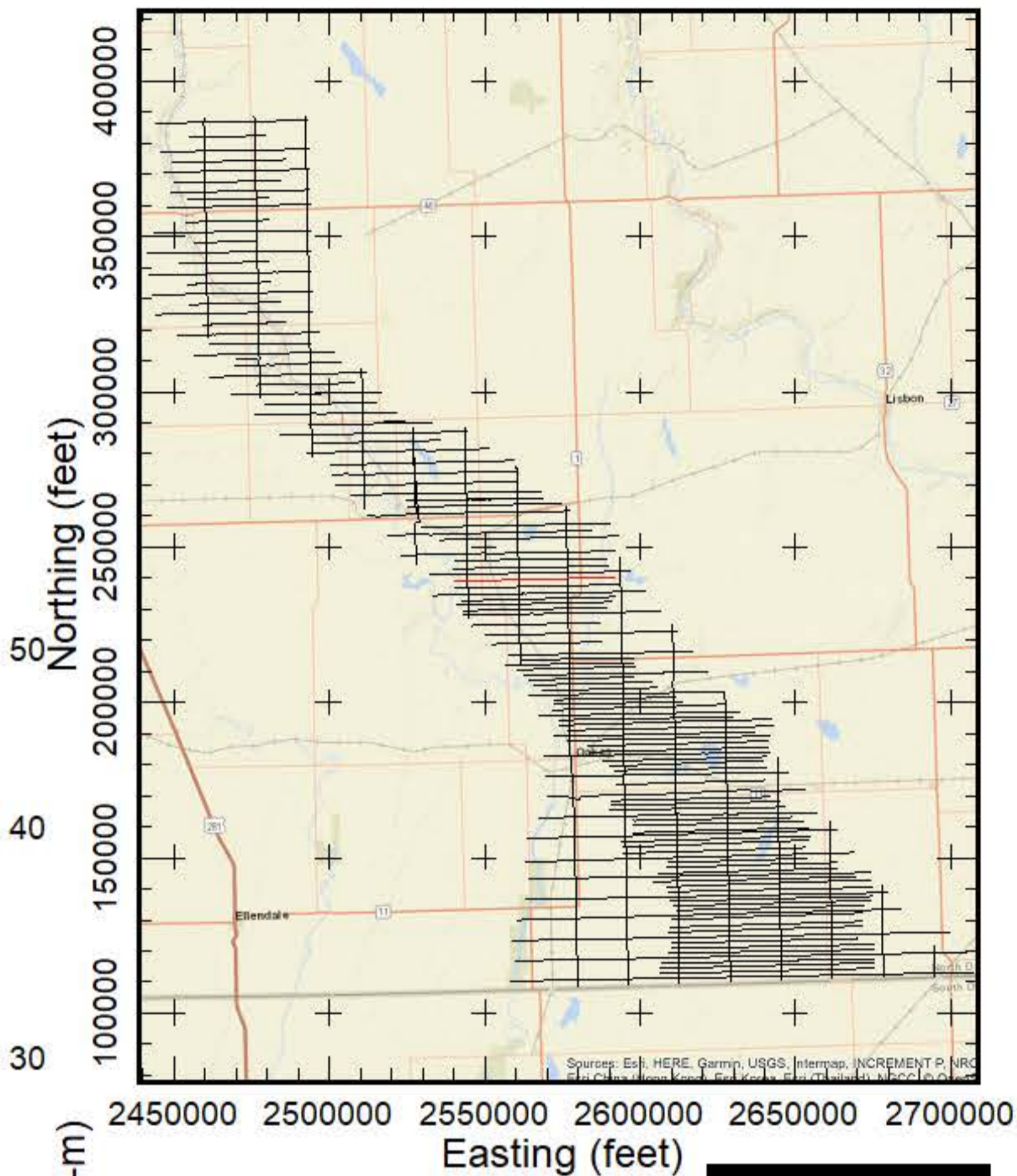
**AGF**  
Aqua Geo Frameworks



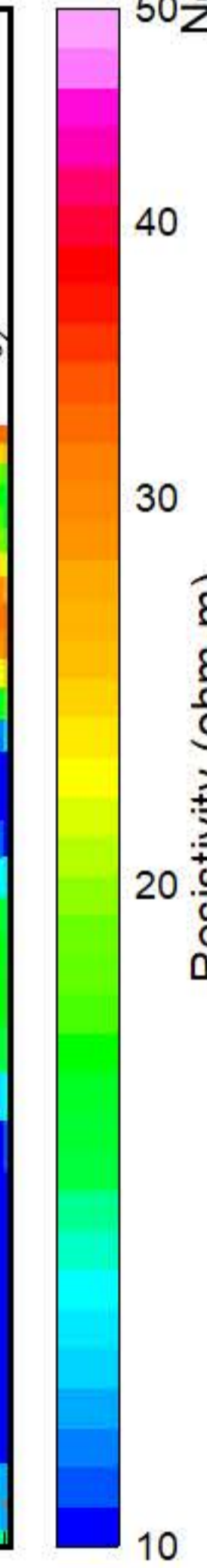
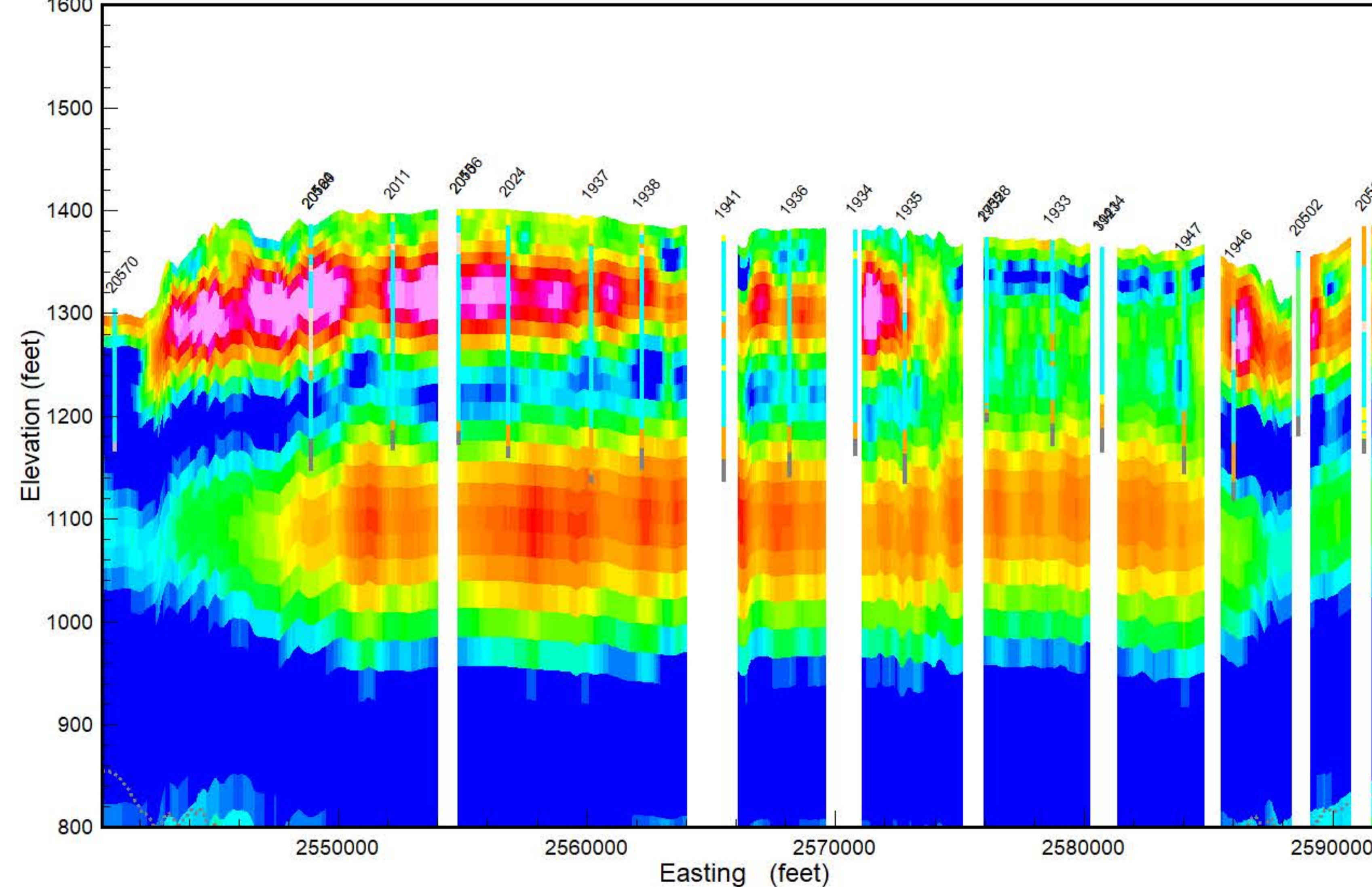
**Flight Path Line L6240**



**Spiritwood South Flight Area**



**AEM Inversion Line L6240**



**GEOTECH**

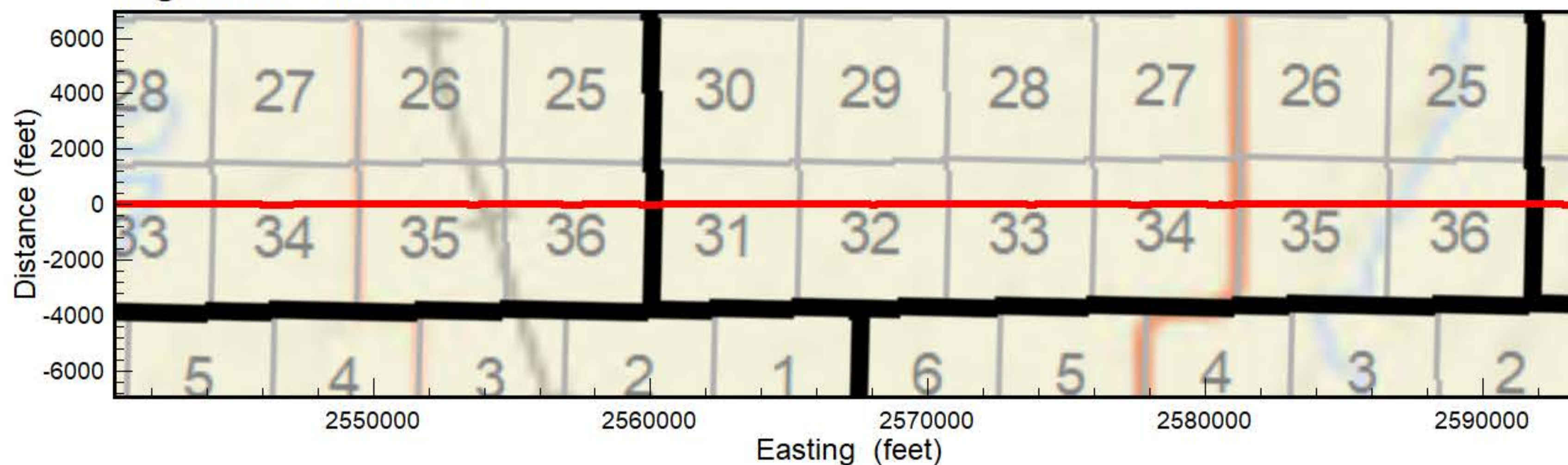
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

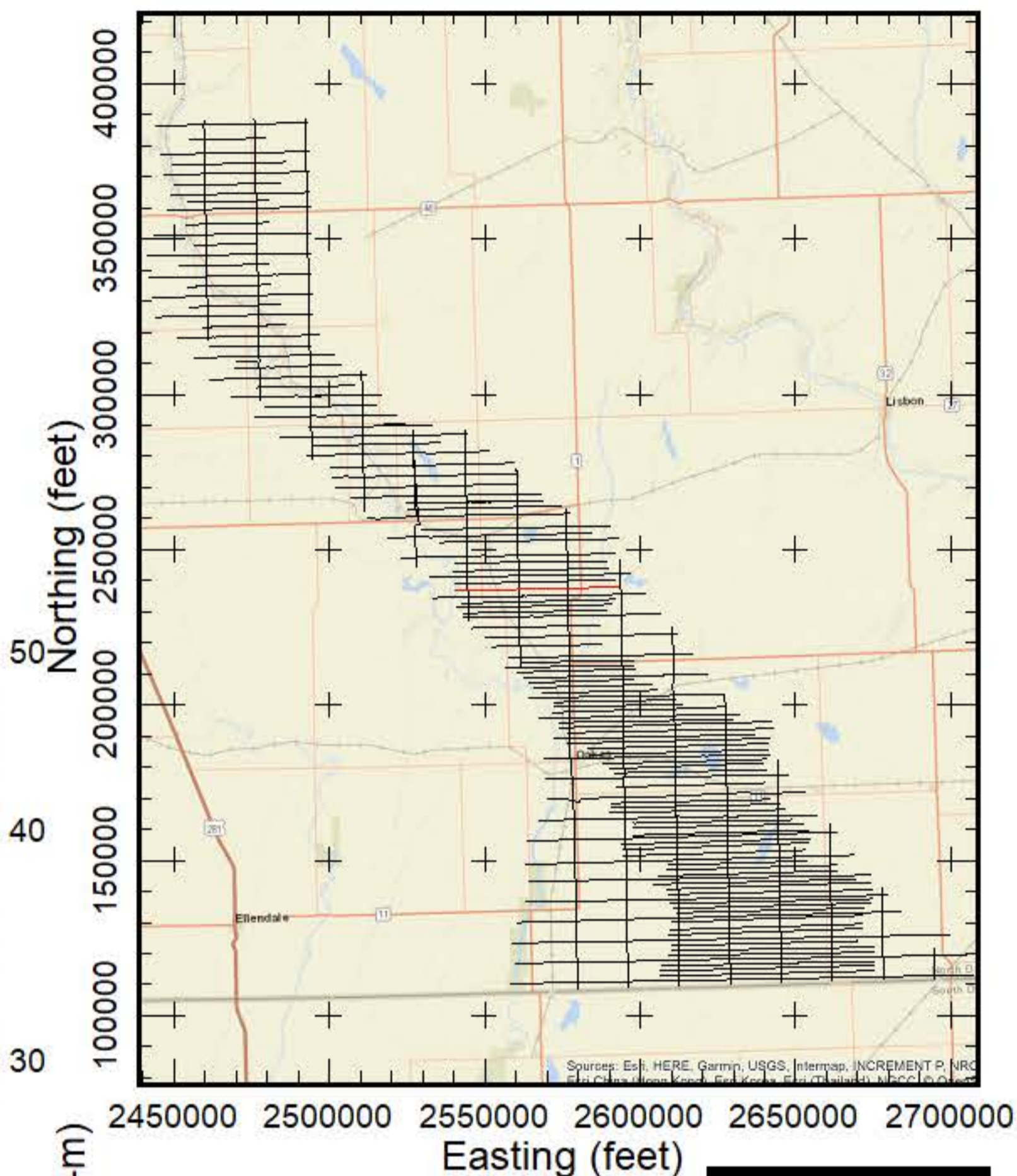
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Aqua Geo Frameworks



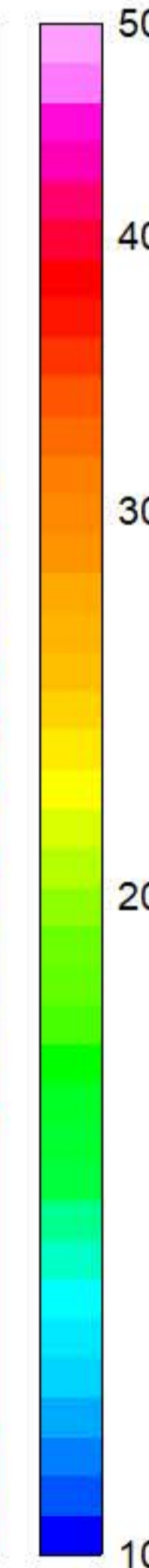
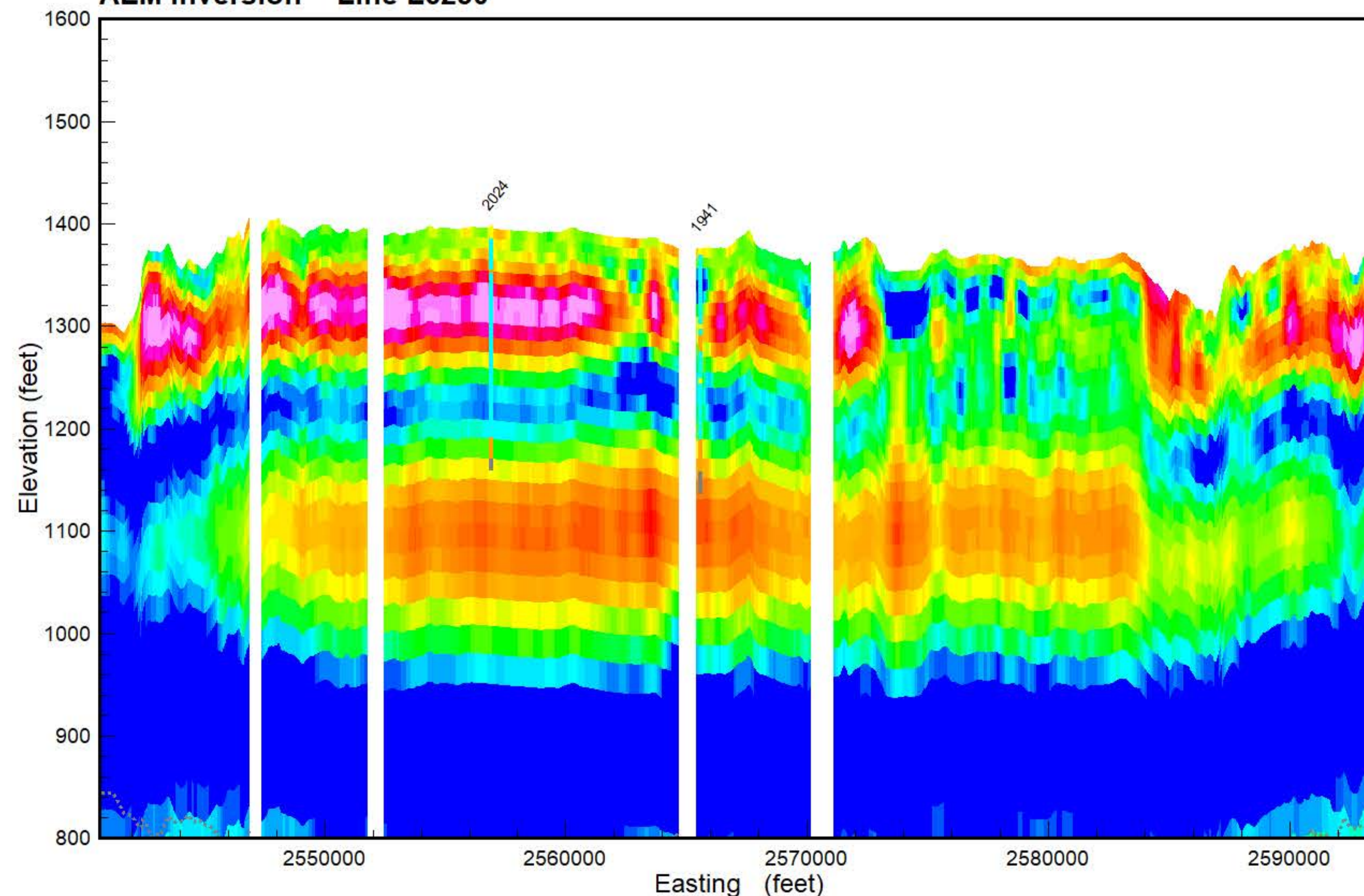
**Flight Path Line L6250**



**Spiritwood South Flight Area**



**AEM Inversion Line L6250**

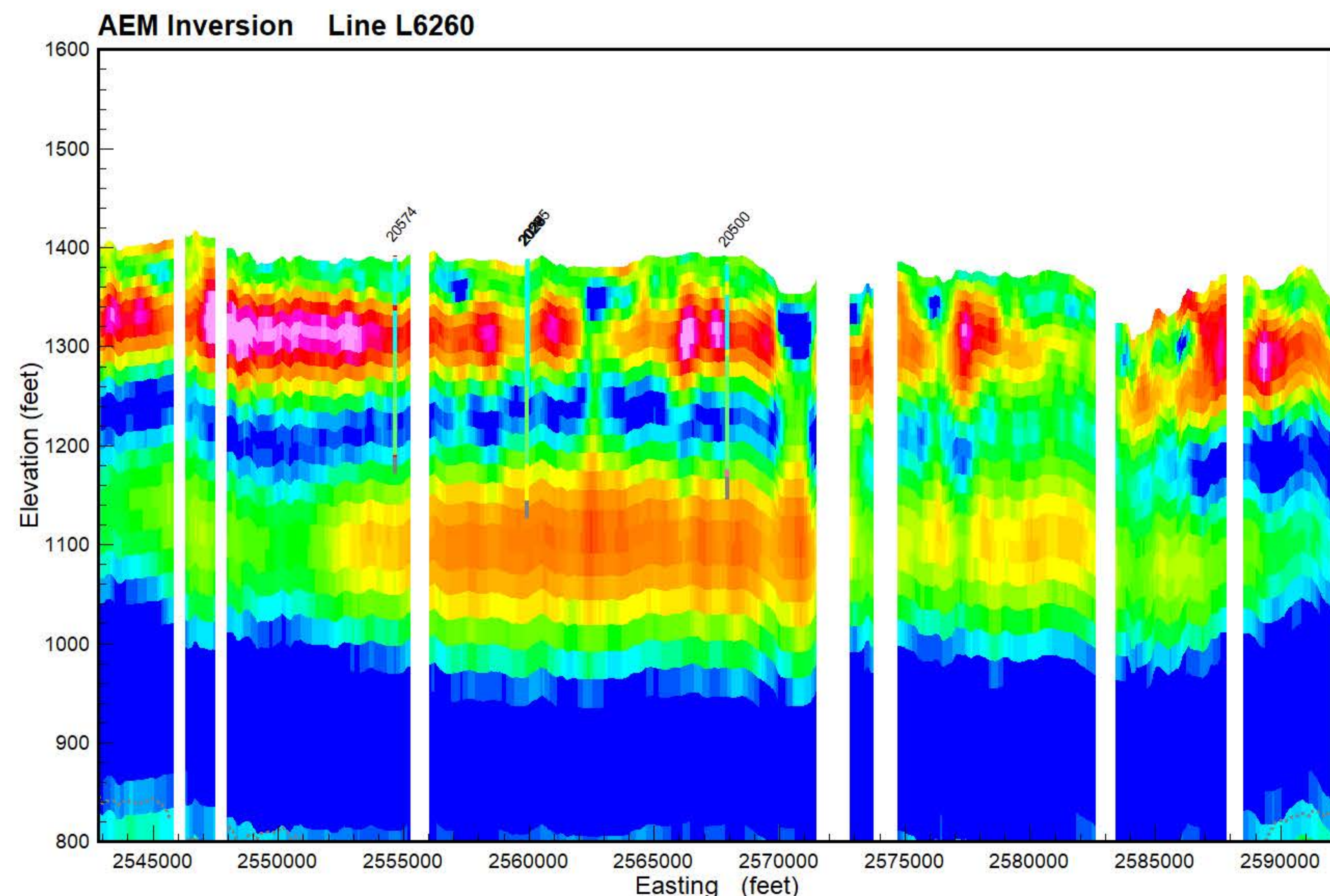
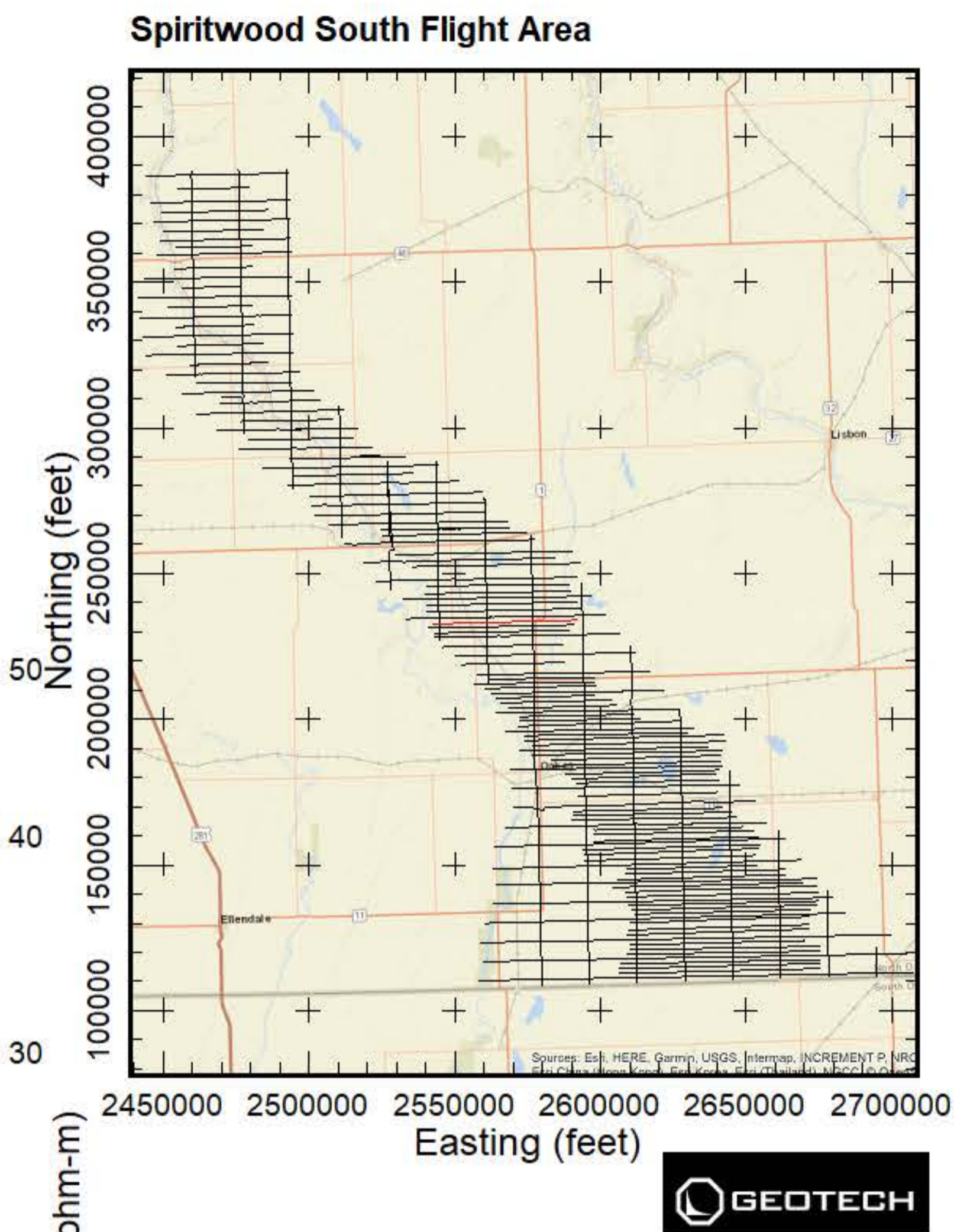
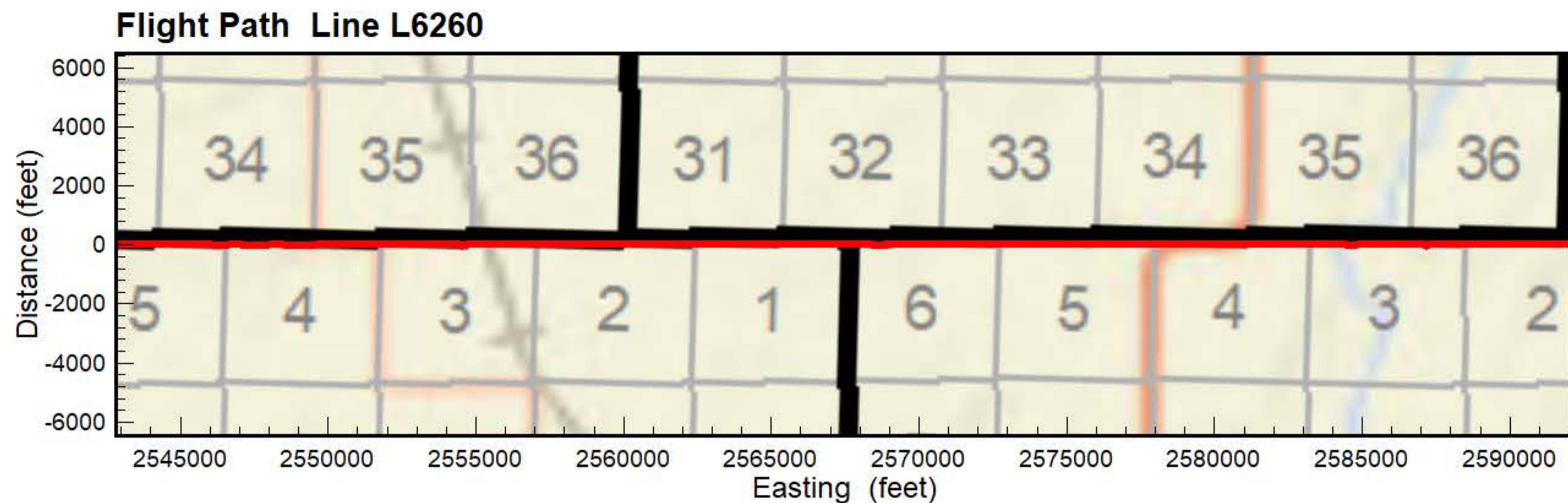


- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). 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 Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.**

**Legend:**

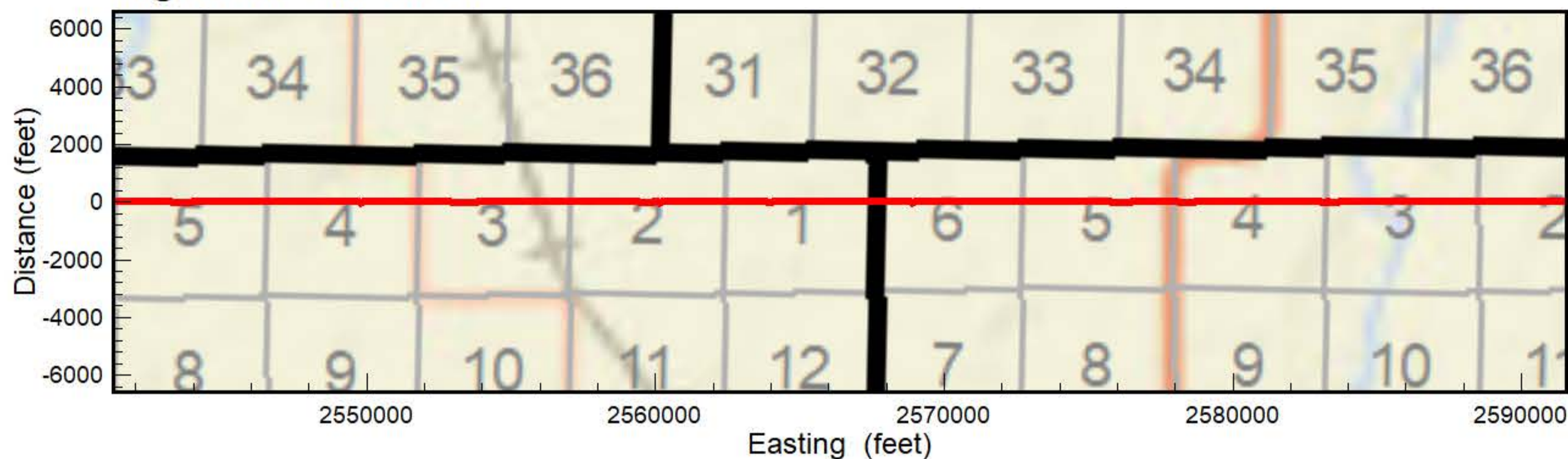
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

**Geotech**

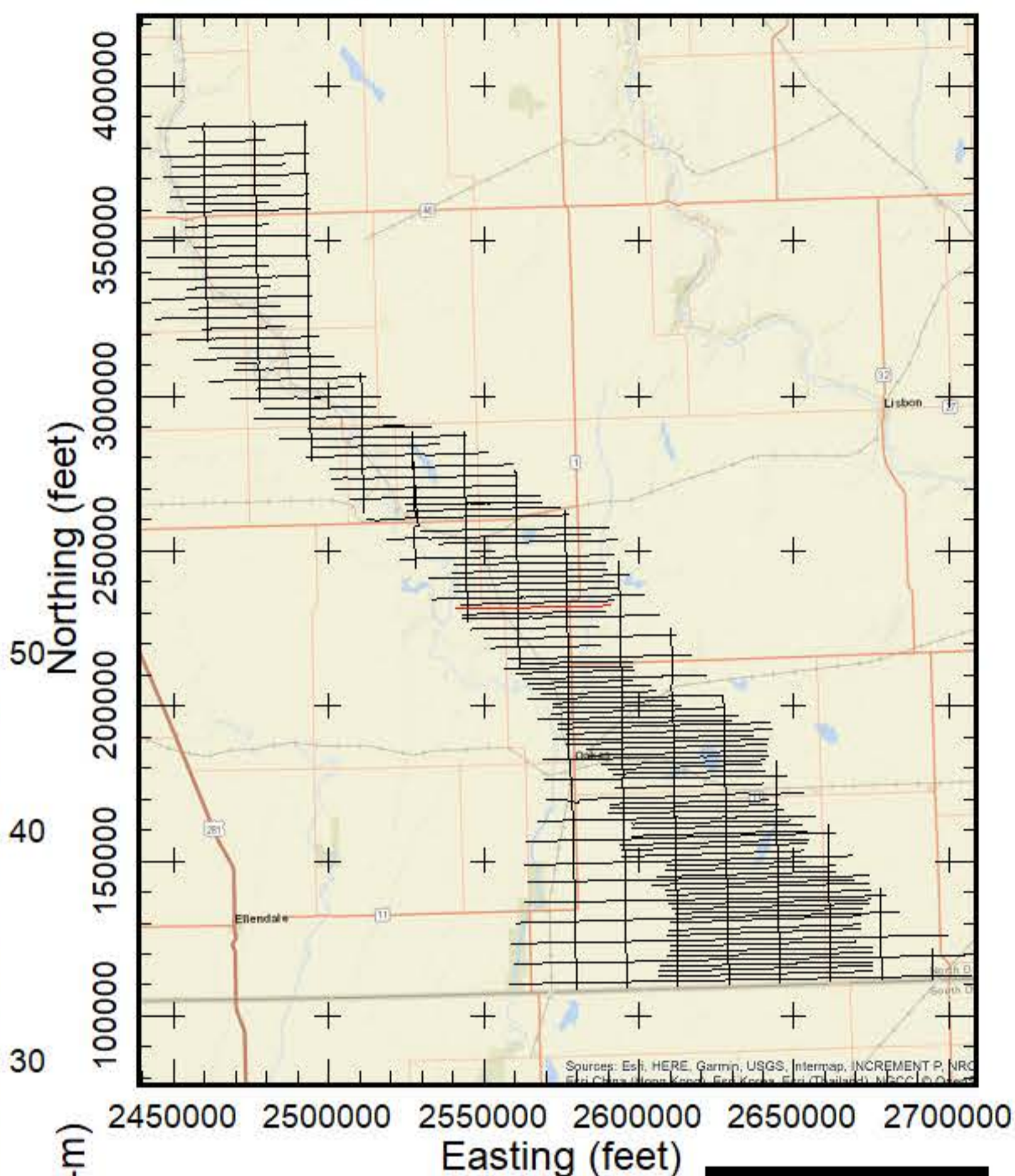
**AGF**  
Aqua Geo Frameworks



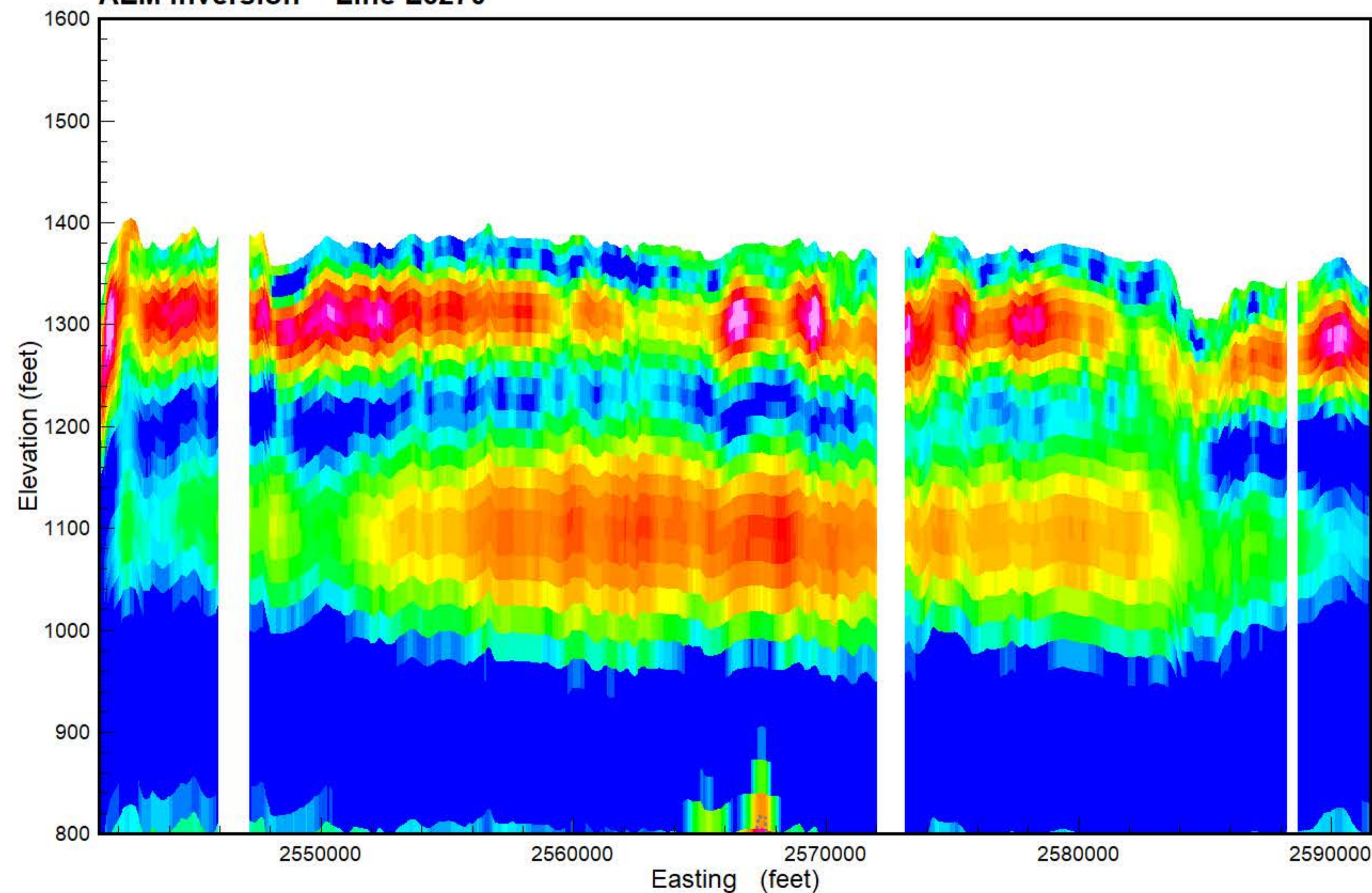
**Flight Path Line L6270**



**Spiritwood South Flight Area**



**AEM Inversion Line L6270**



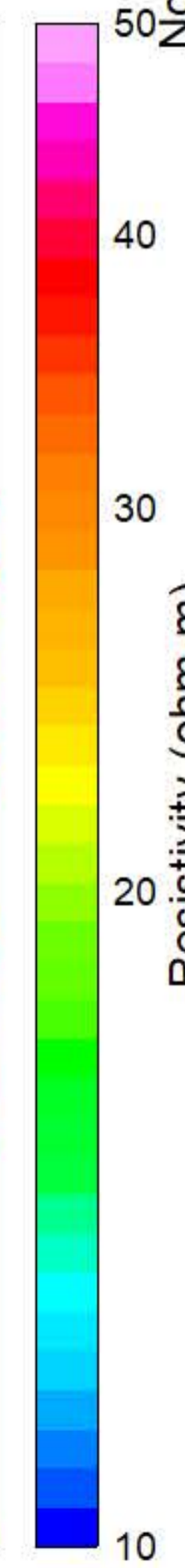
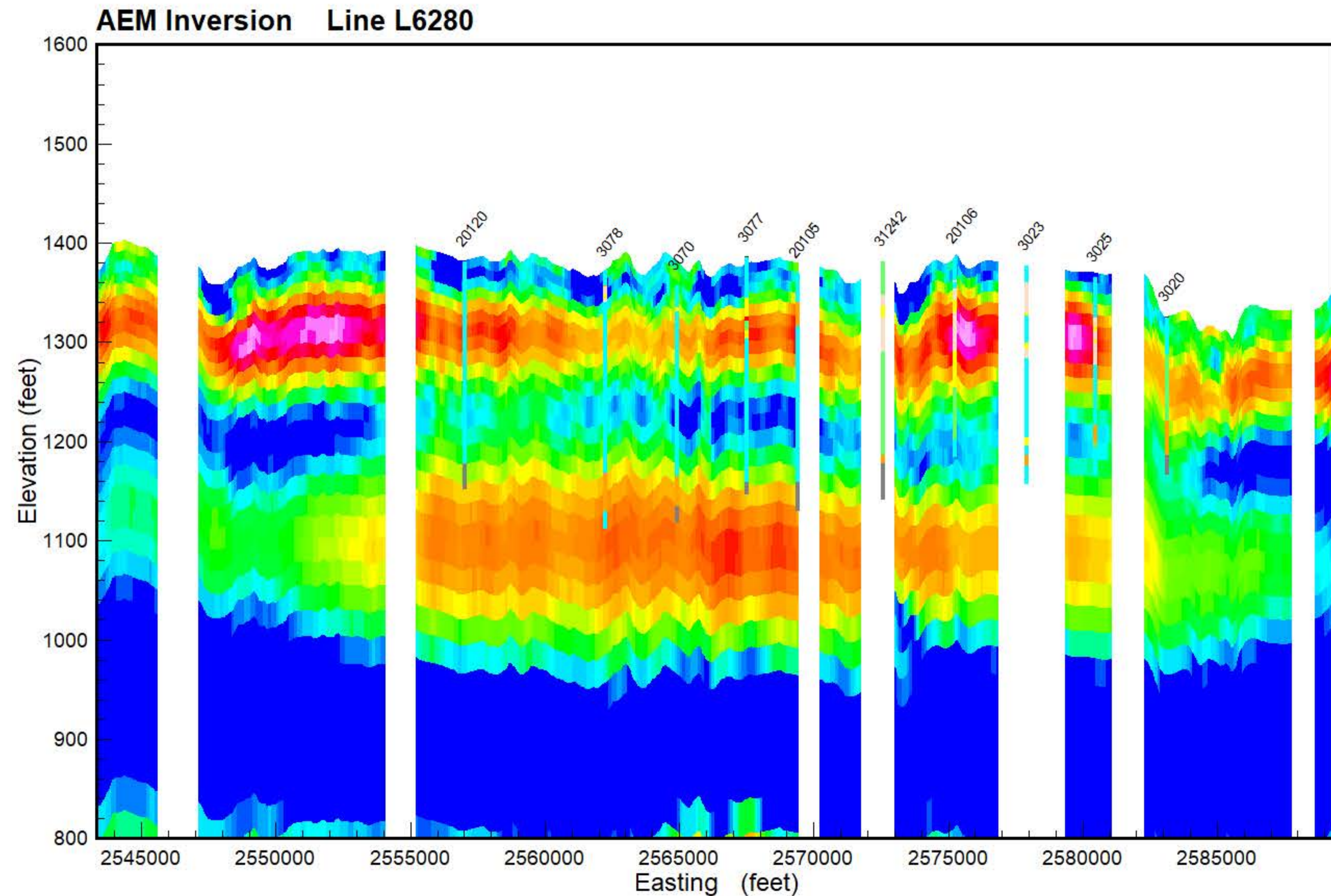
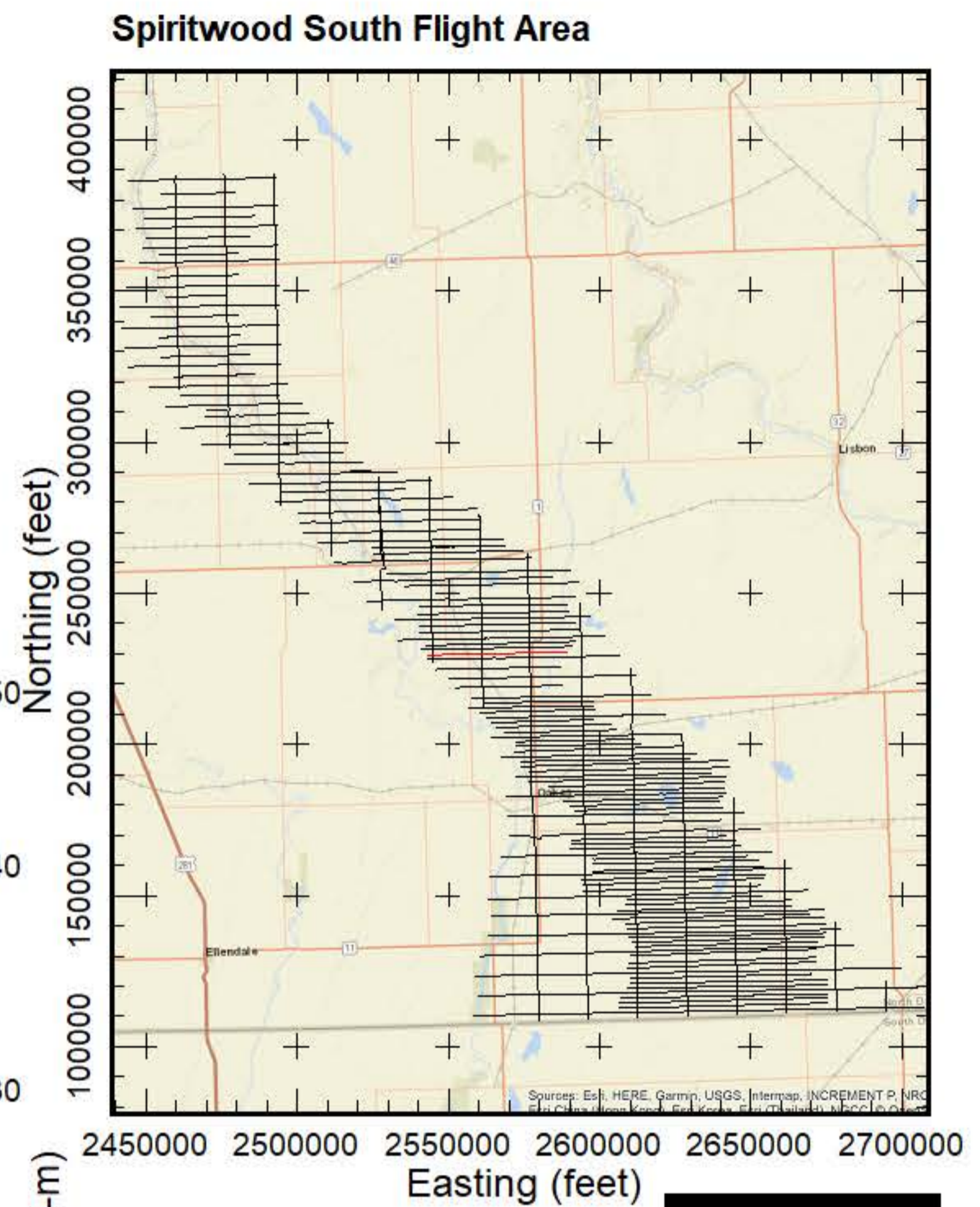
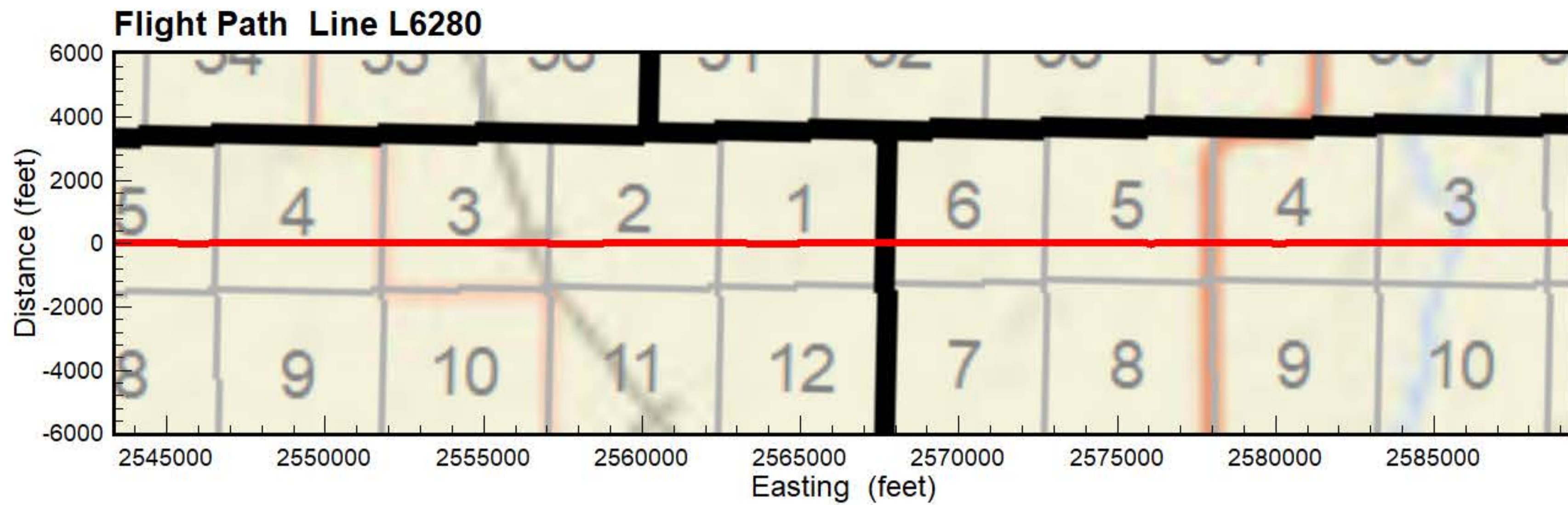
**GEOTECH**

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PEAT
LIGNITE
COBBLES
BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
SHALE
BEDROCK
GRAVEL
SAND & GRAVEL
SAND
INTERBEDDED
SILT
CLAY
TILL
FILL
TOPSOIL
NOSAMPLE

**AGF**  
Aqua Geo Frameworks





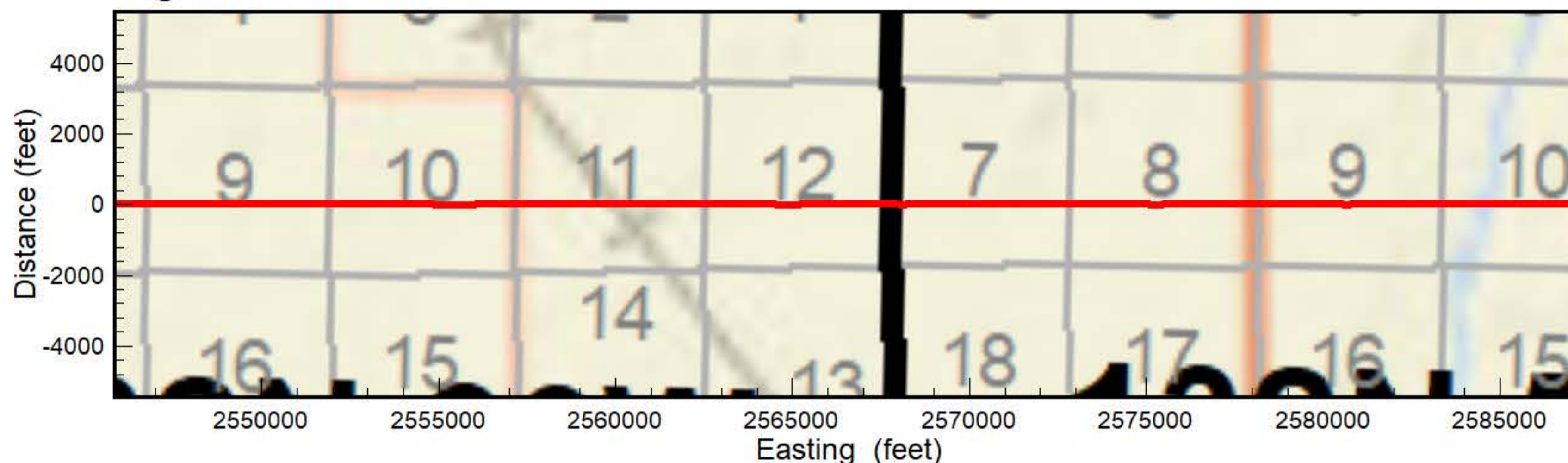
- PEAT
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018, to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

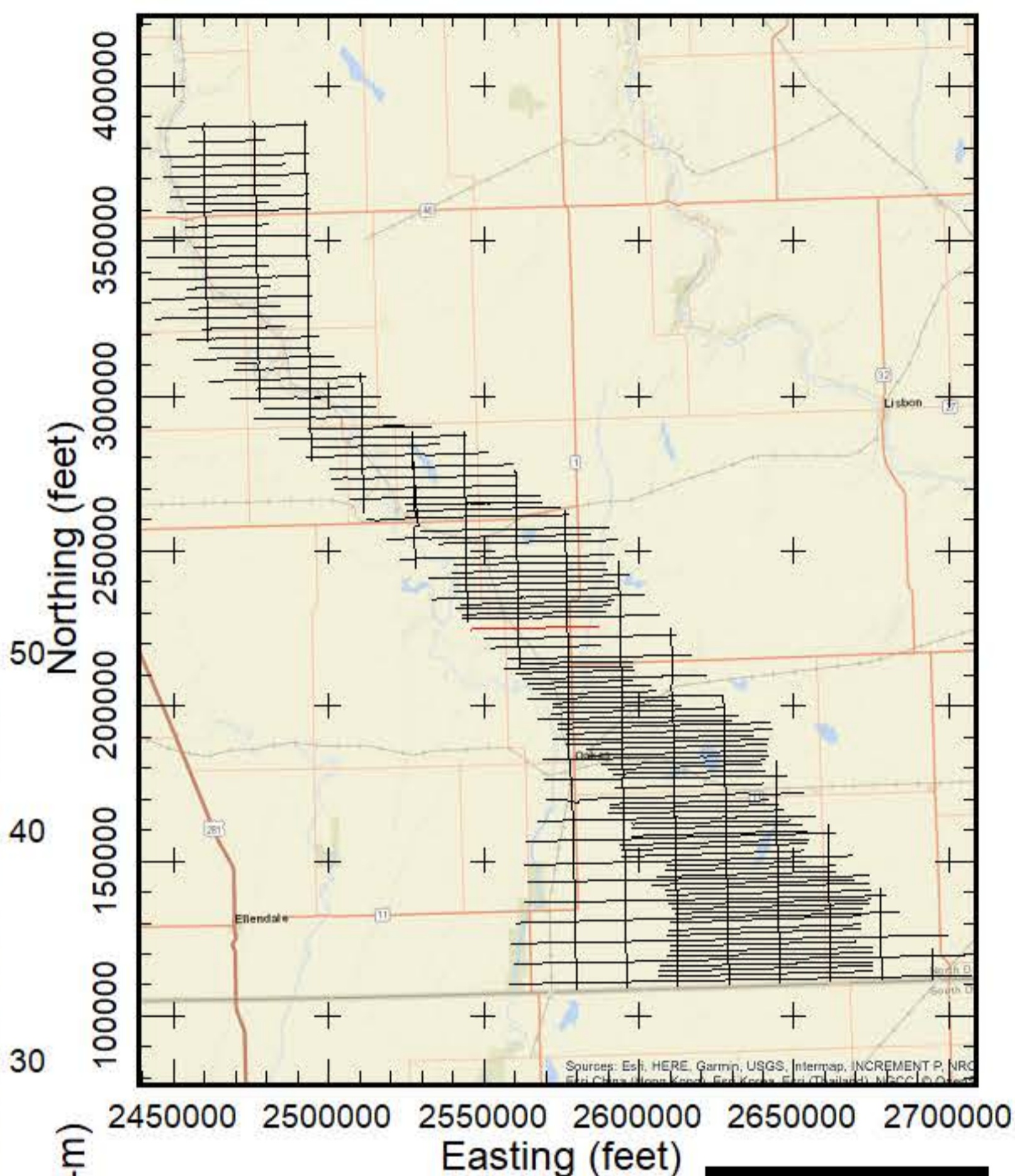




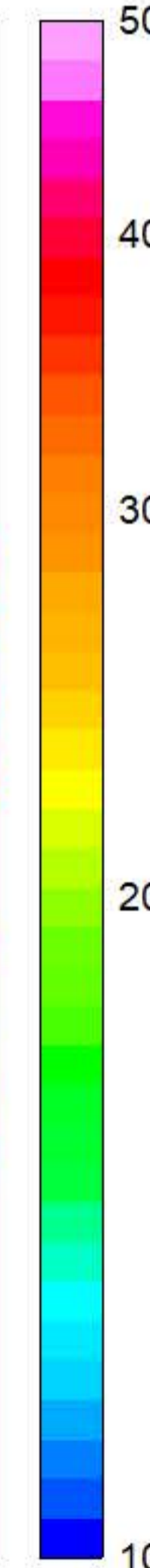
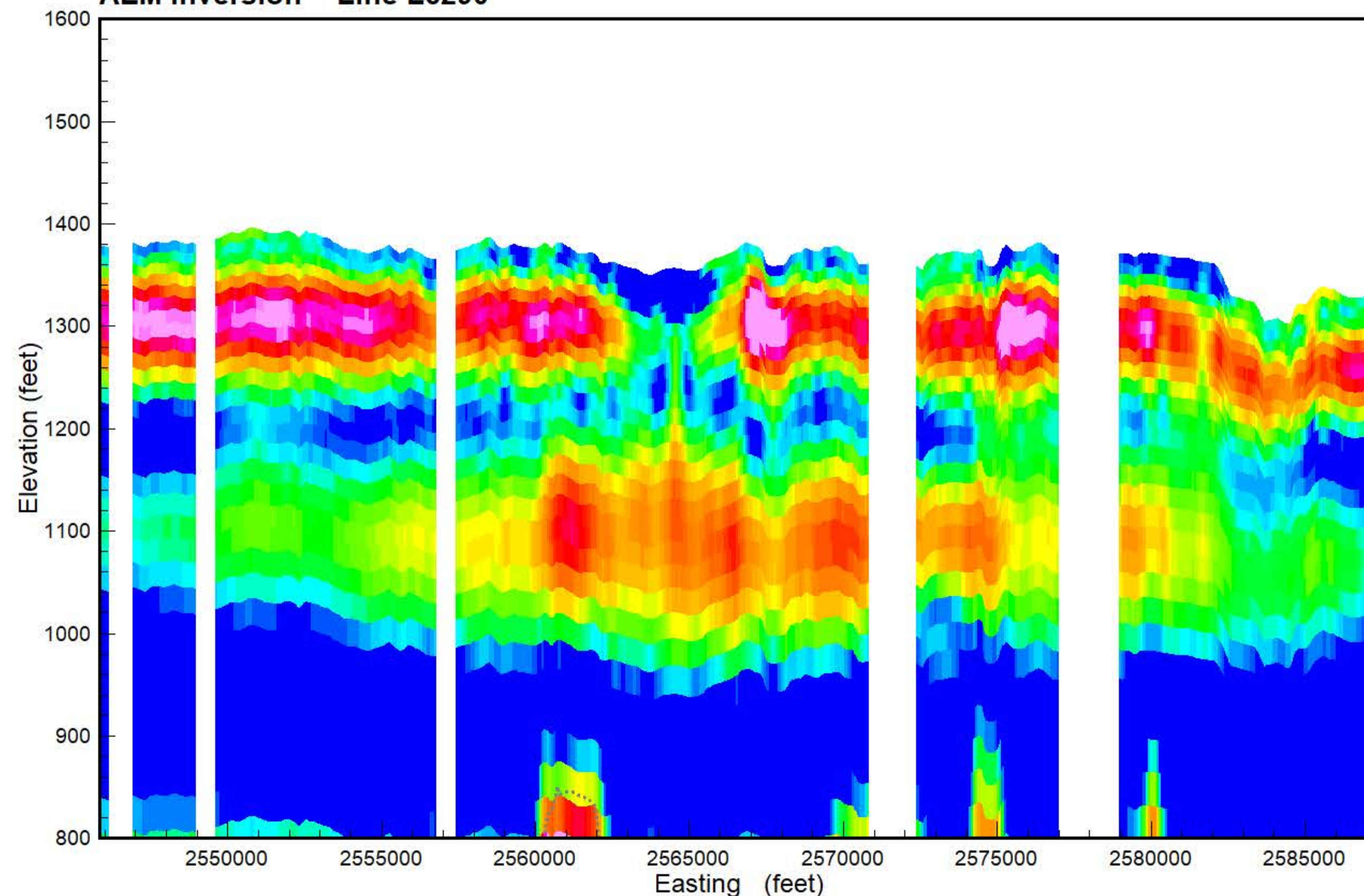
**Flight Path Line L6290**



**Spiritwood South Flight Area**



**AEM Inversion Line L6290**



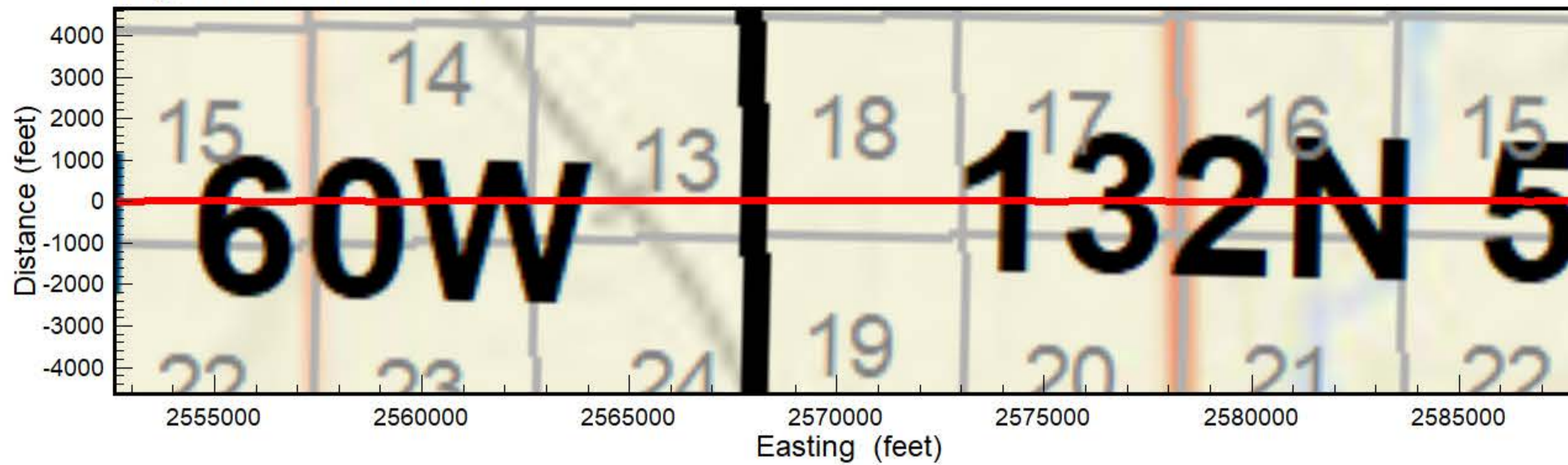
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

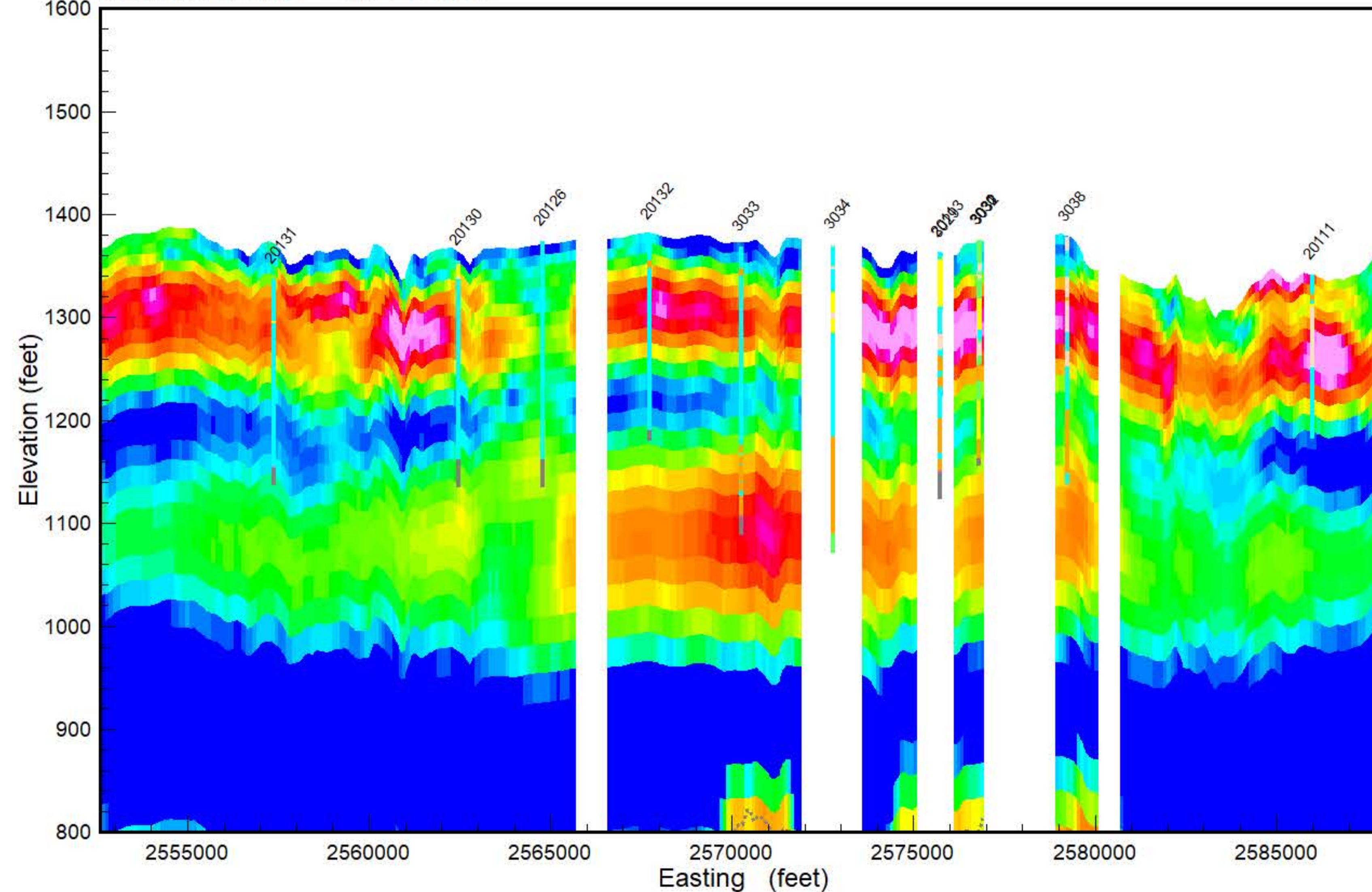




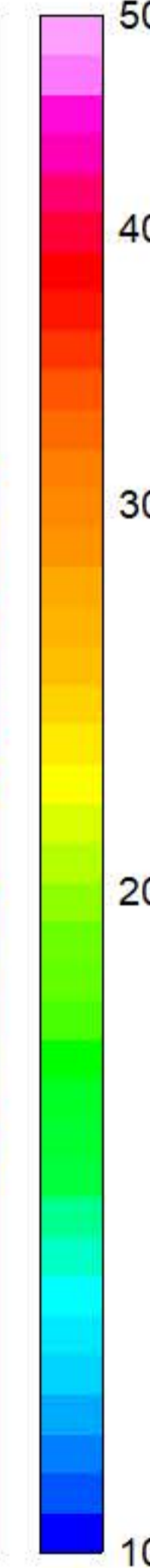
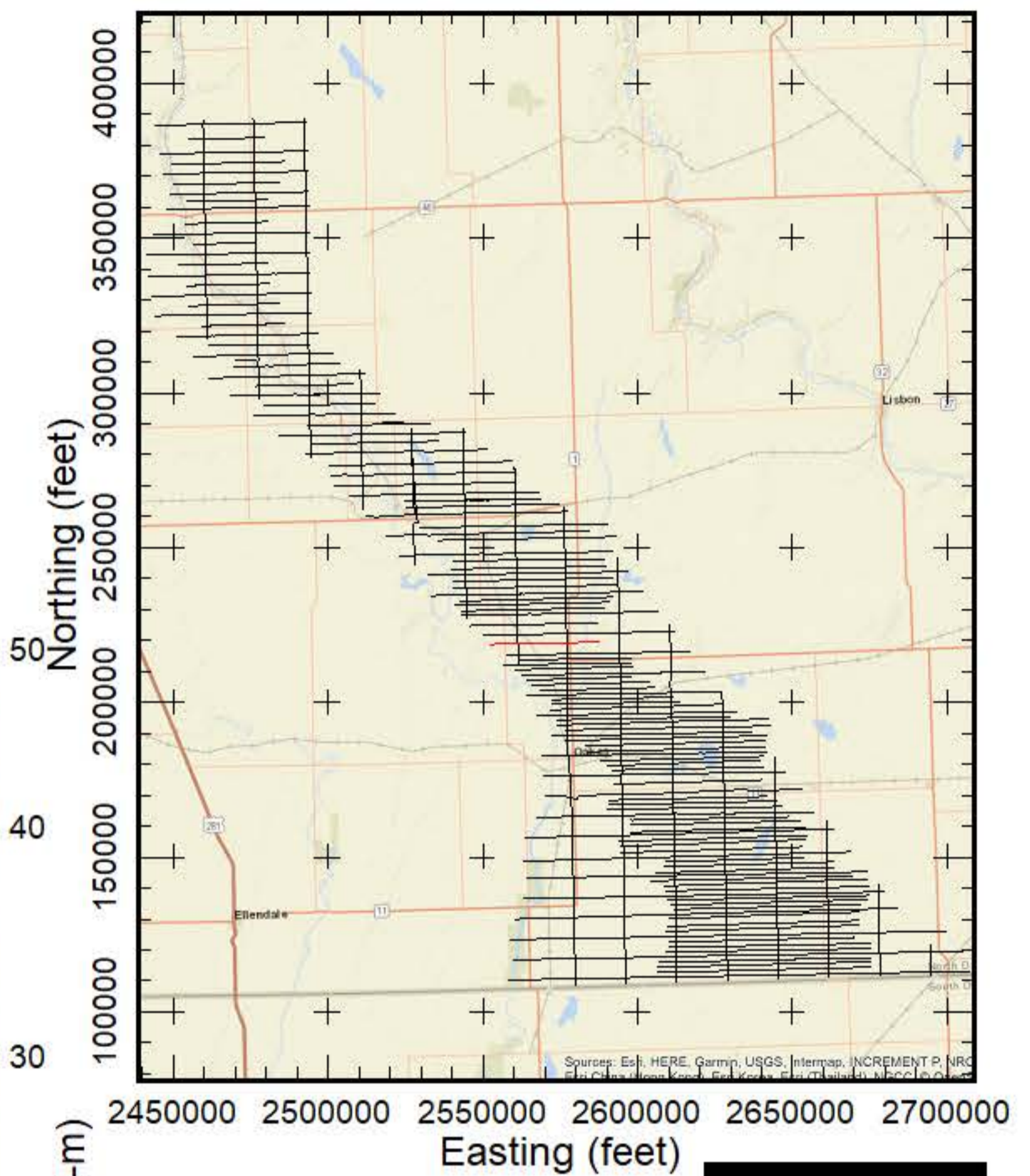
**Flight Path Line L6300**



**AEM Inversion Line L6300**



**Spiritwood South Flight Area**



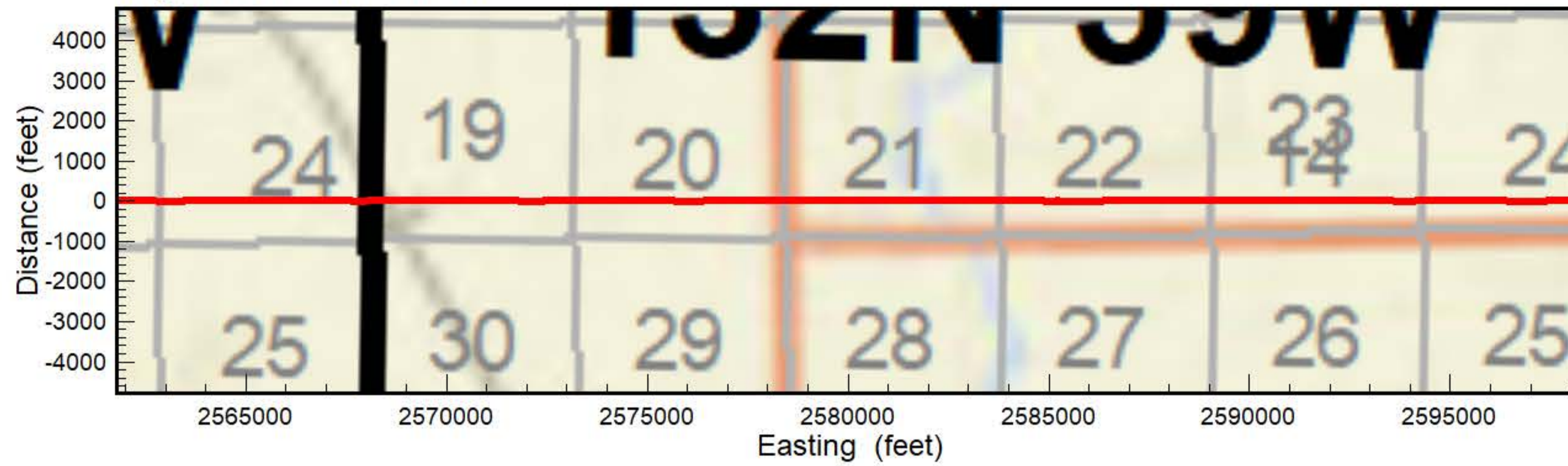
- PEAT
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
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- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

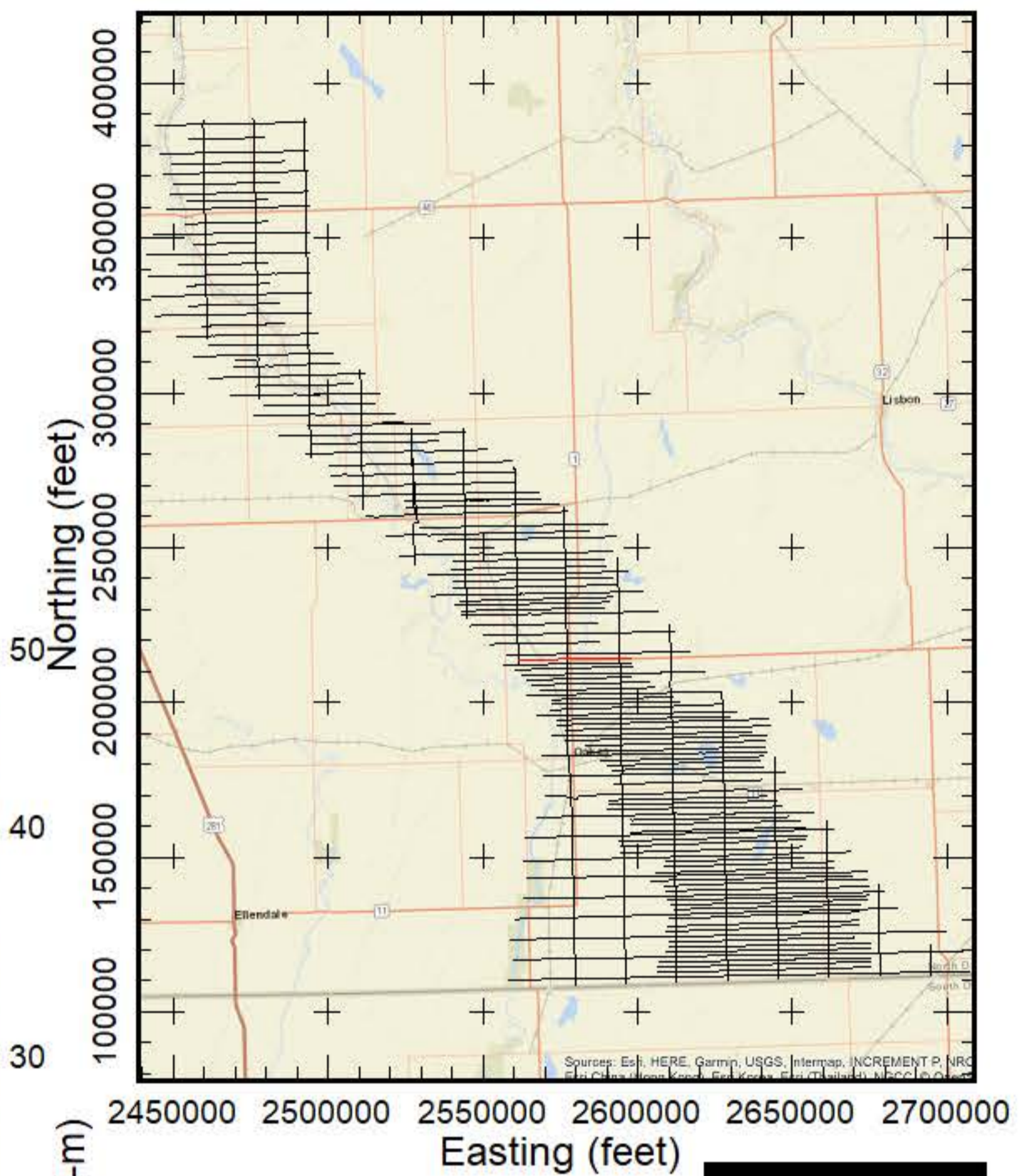




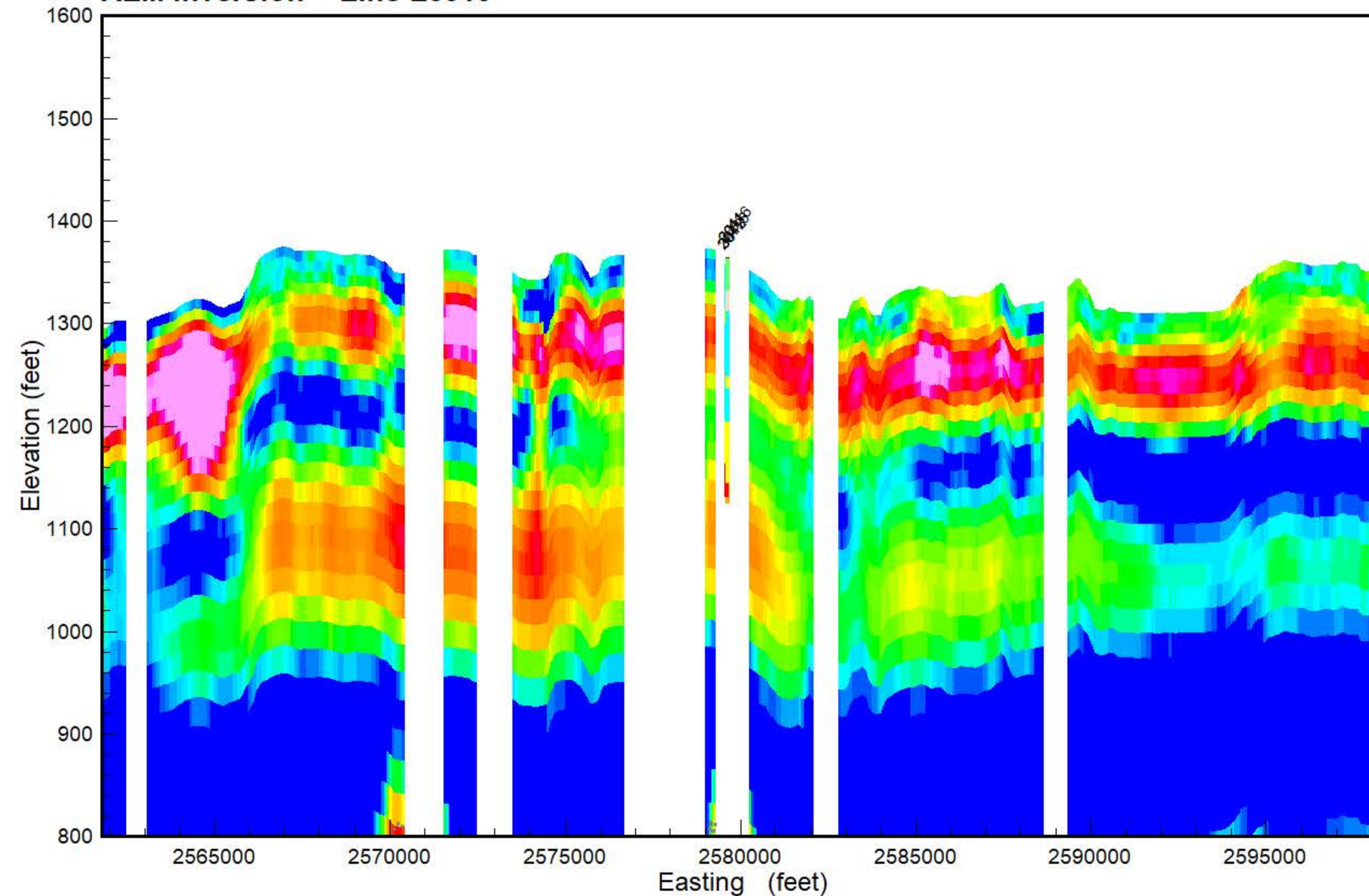
**Flight Path Line L6310**



**Spiritwood South Flight Area**



**AEM Inversion Line L6310**



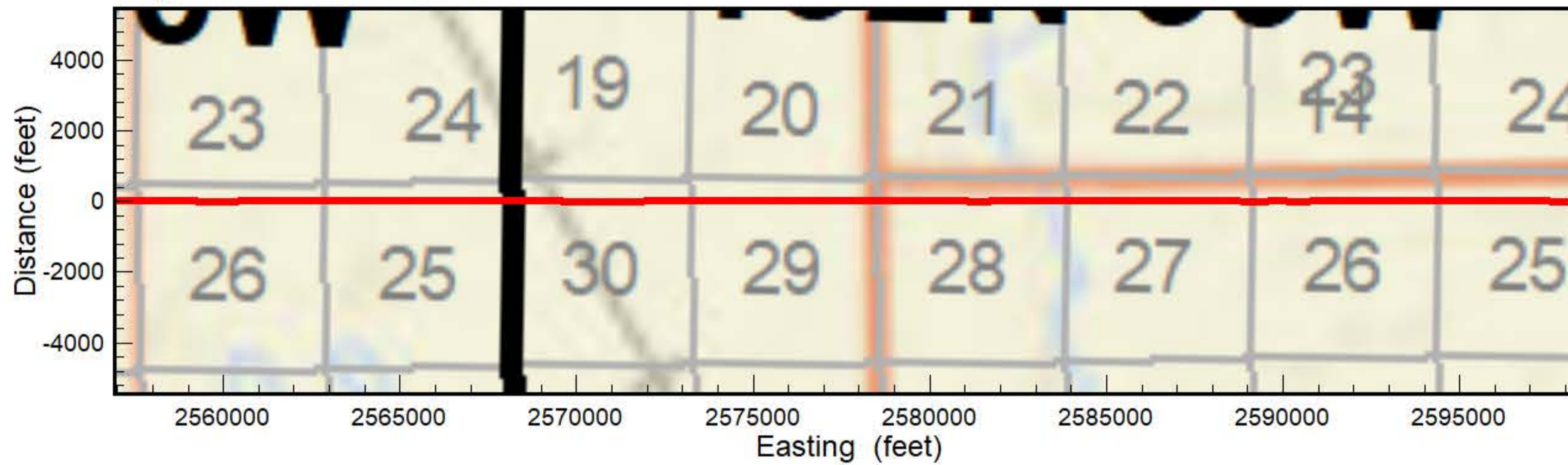
- PEAT
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

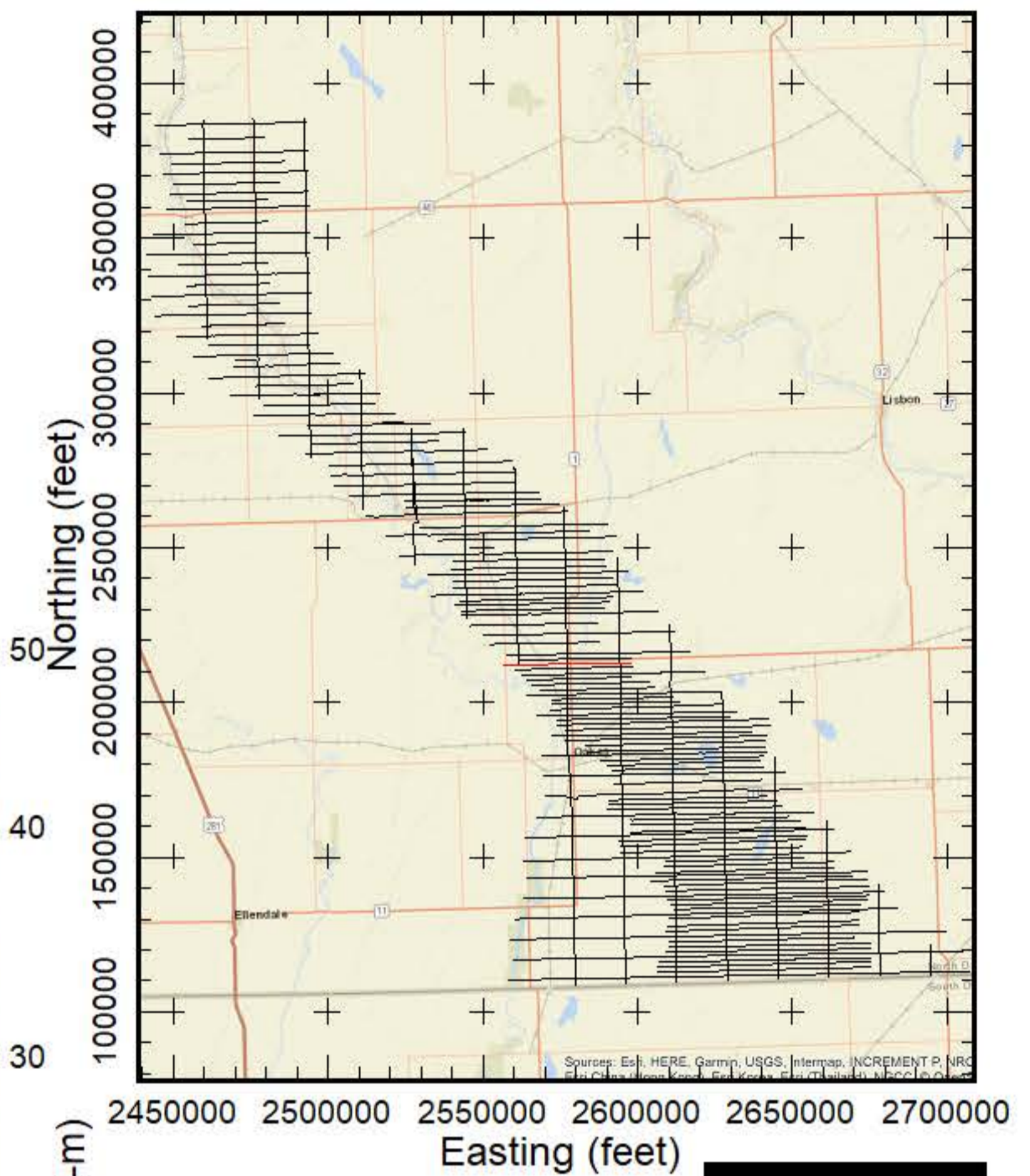




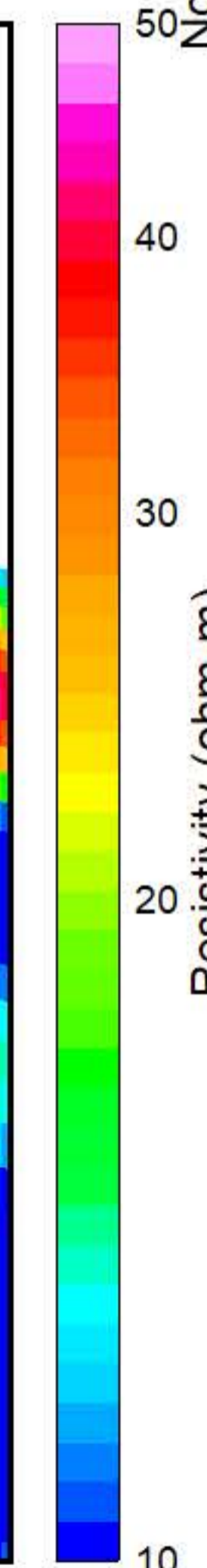
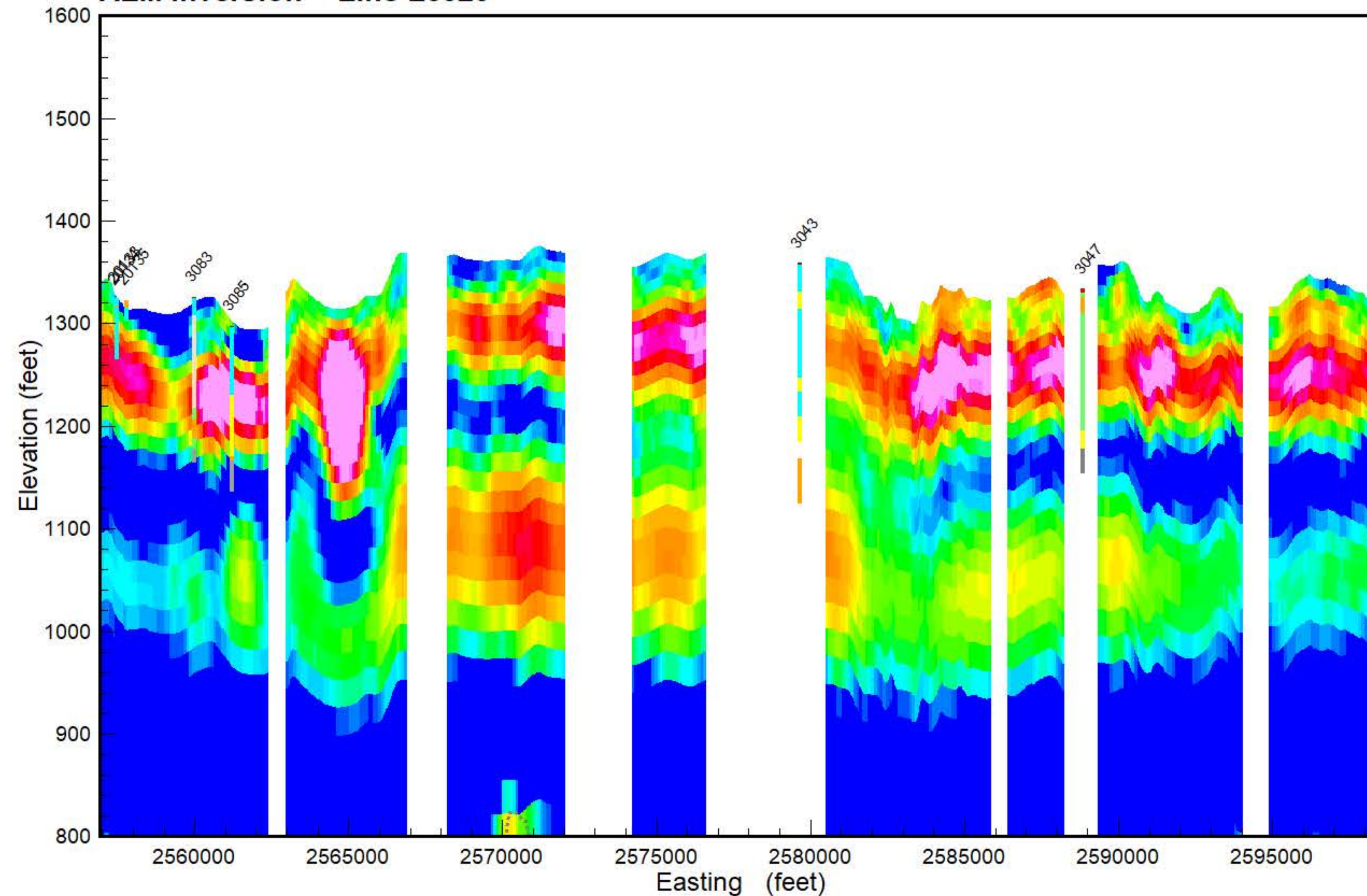
**Flight Path Line L6320**



**Spiritwood South Flight Area**



**AEM Inversion Line L6320**



**GEOTECH**

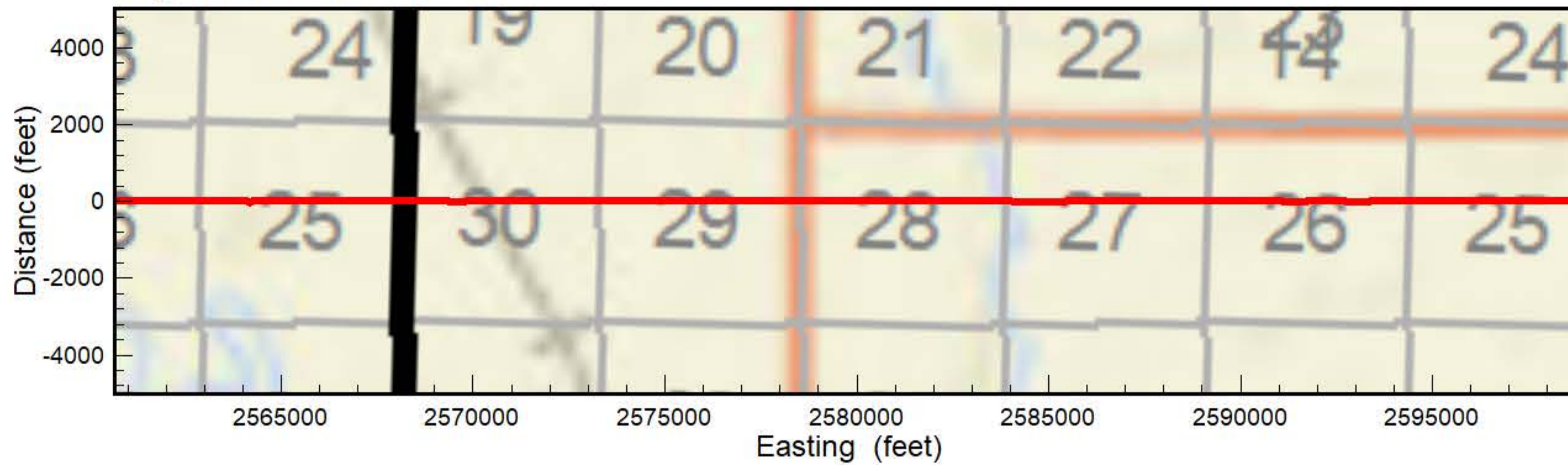
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
LIGNITE
COBBLES
BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
SHALE
BEDROCK
GRAVEL
SAND & GRAVEL
SAND
INTERBEDDED
SILT
CLAY
TILL
FILL
TOPSOIL
NOSAMPLE

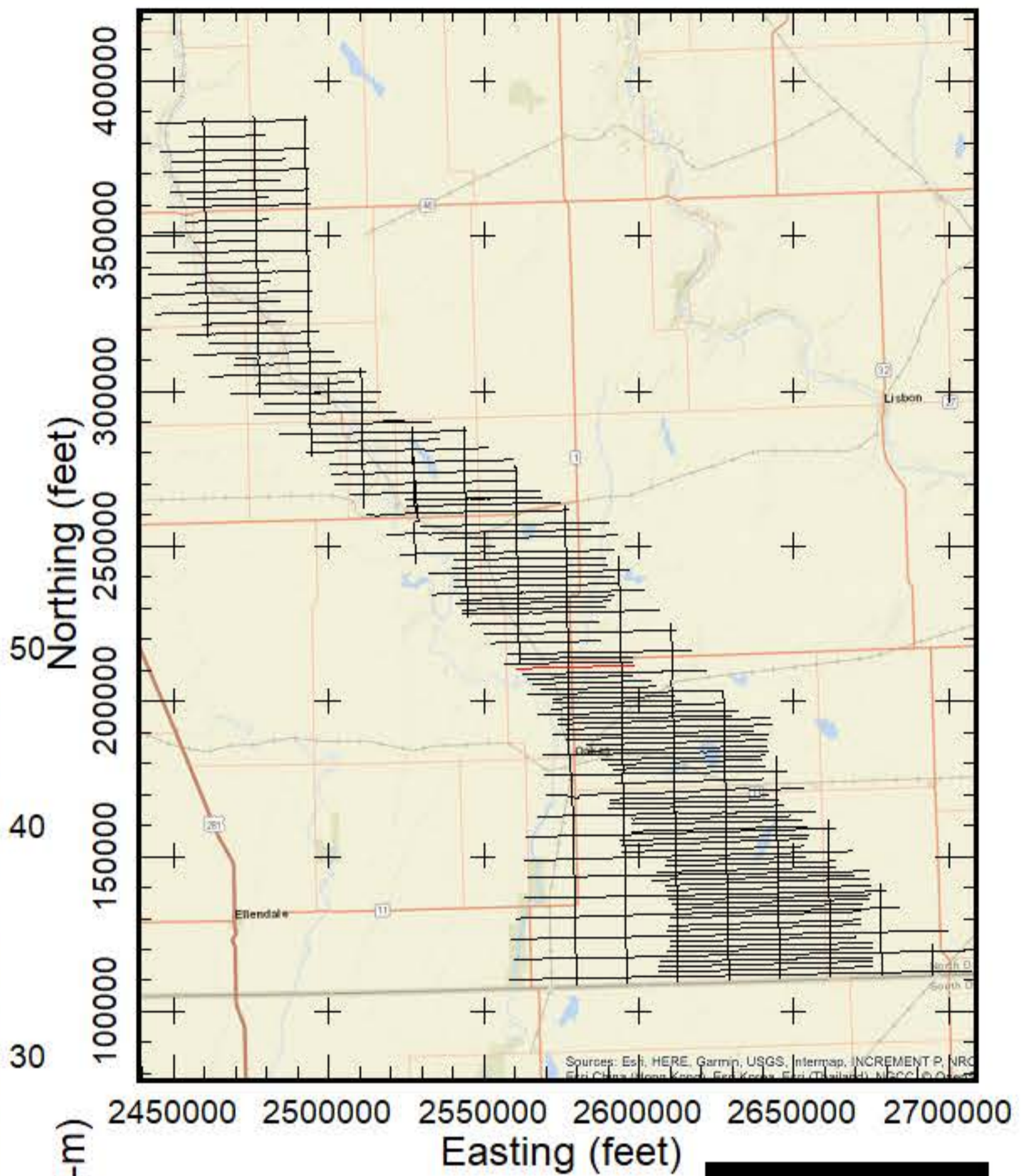
**AGF**  
Aqua Geo Frameworks



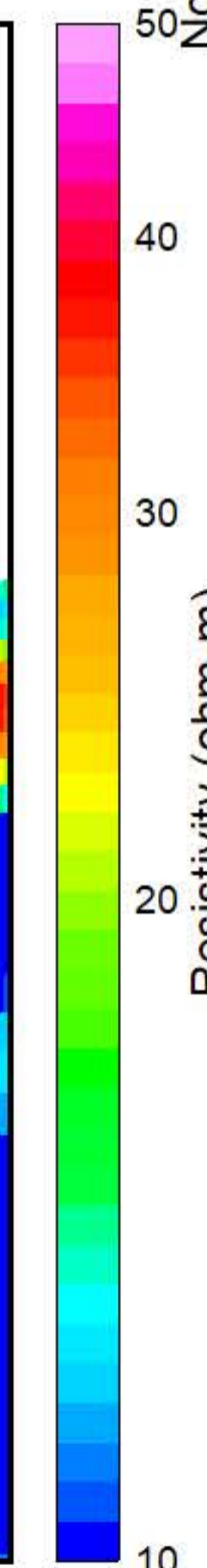
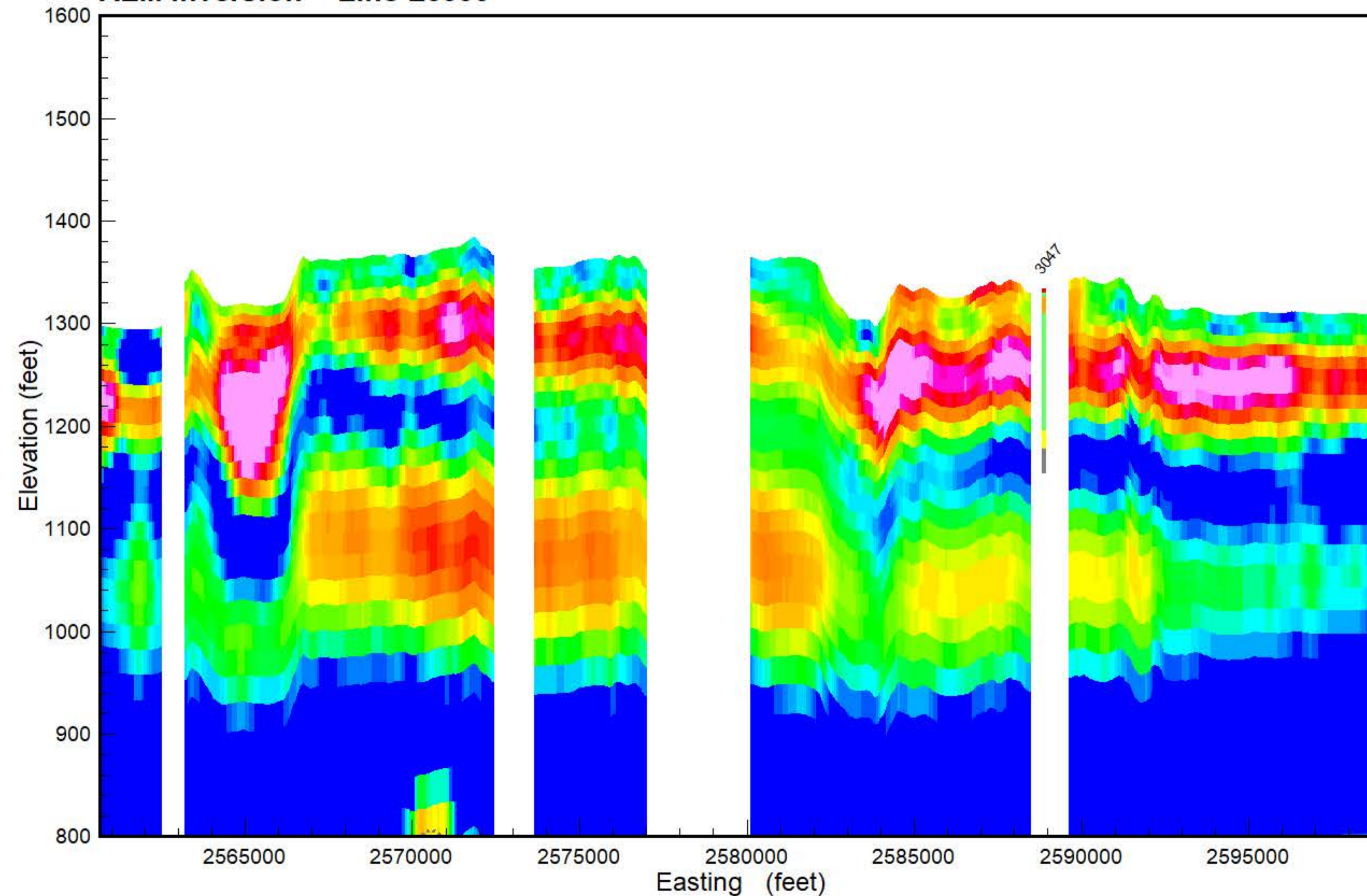
**Flight Path Line L6330**



**Spiritwood South Flight Area**



**AEM Inversion Line L6330**



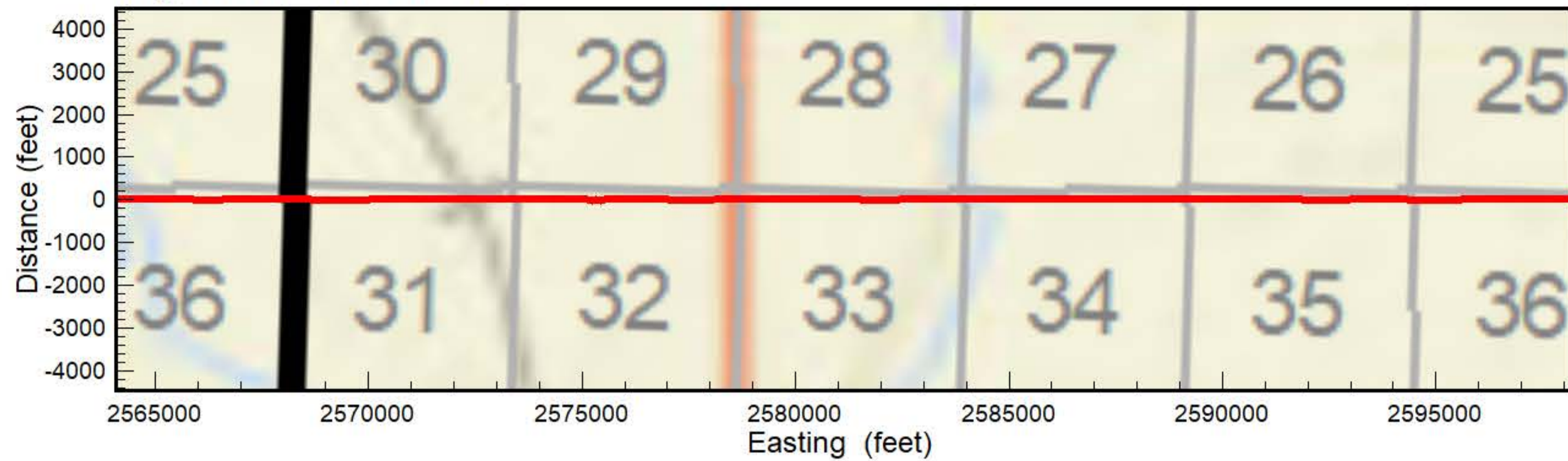
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

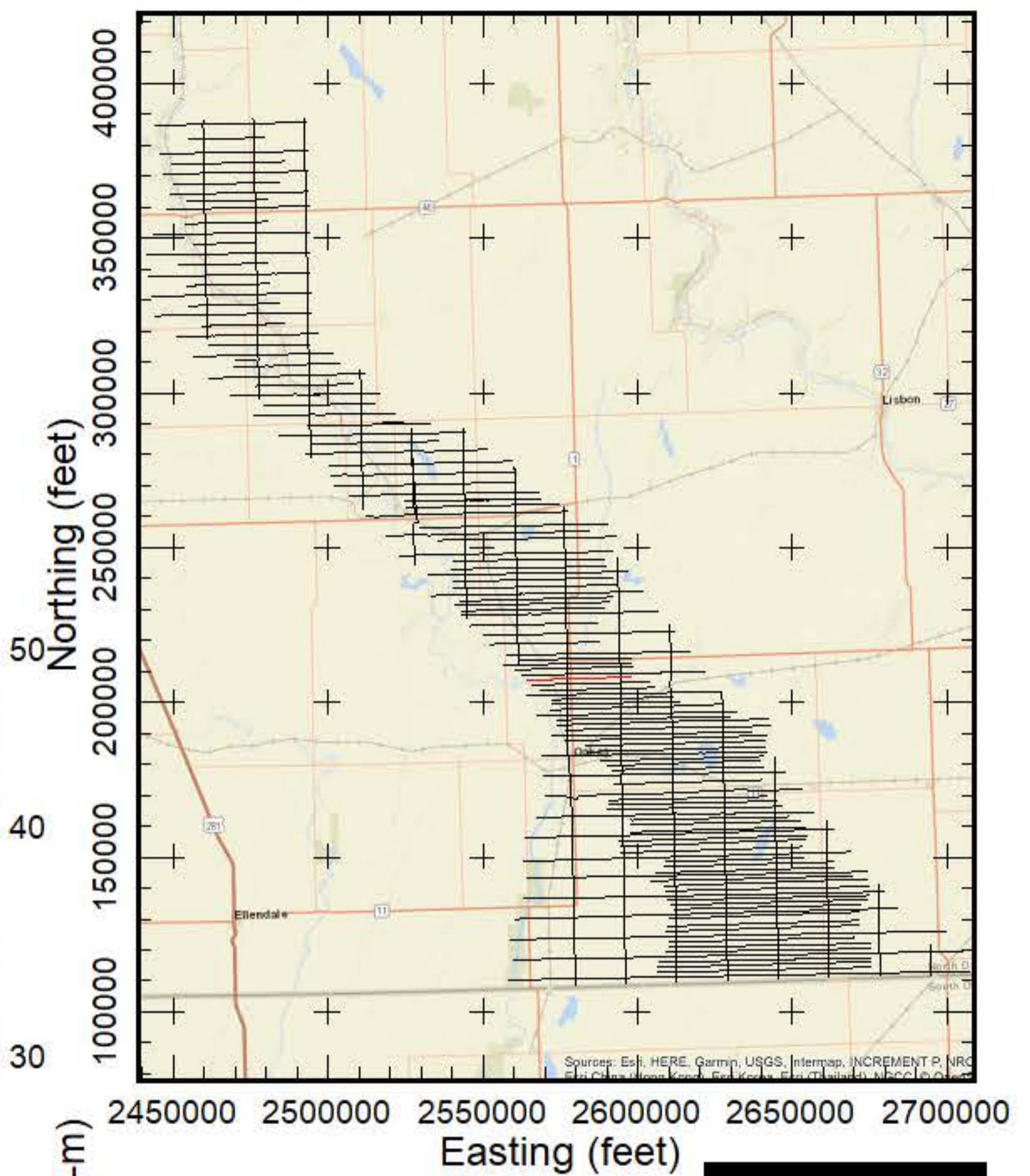




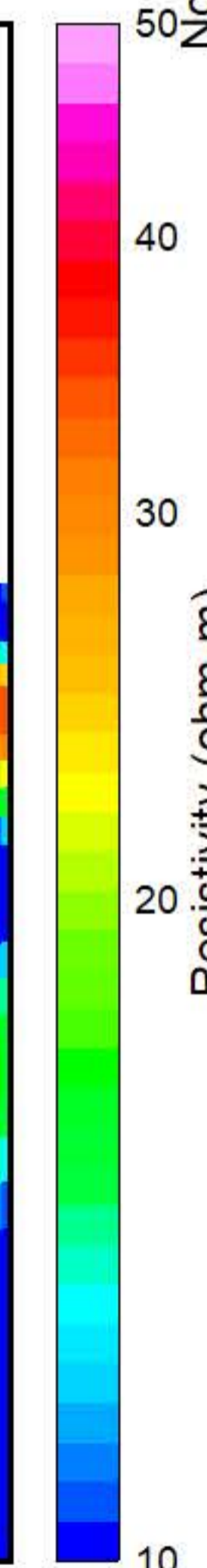
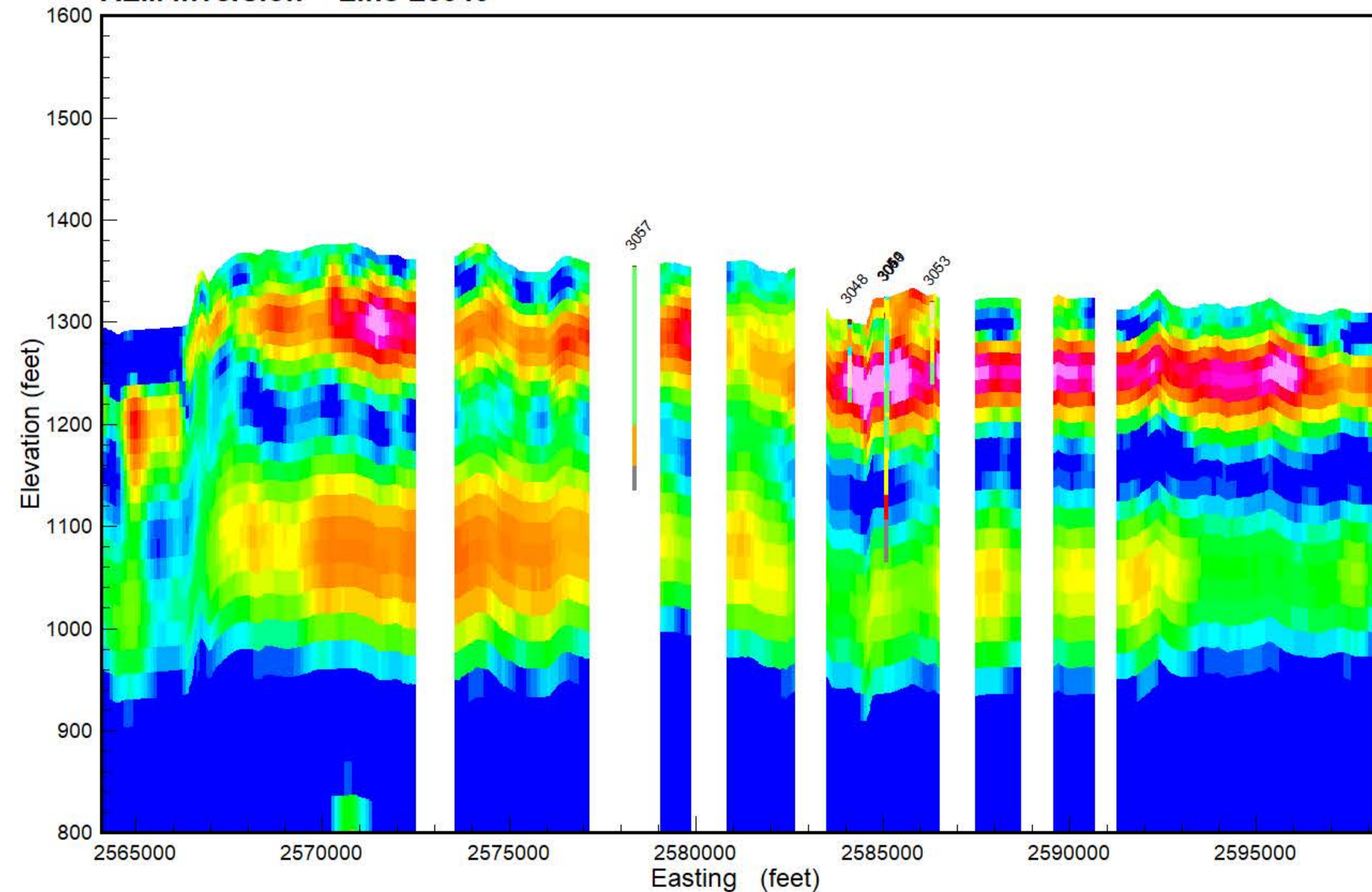
**Flight Path Line L6340**



**Spiritwood South Flight Area**



**AEM Inversion Line L6340**



**GEOTECH**

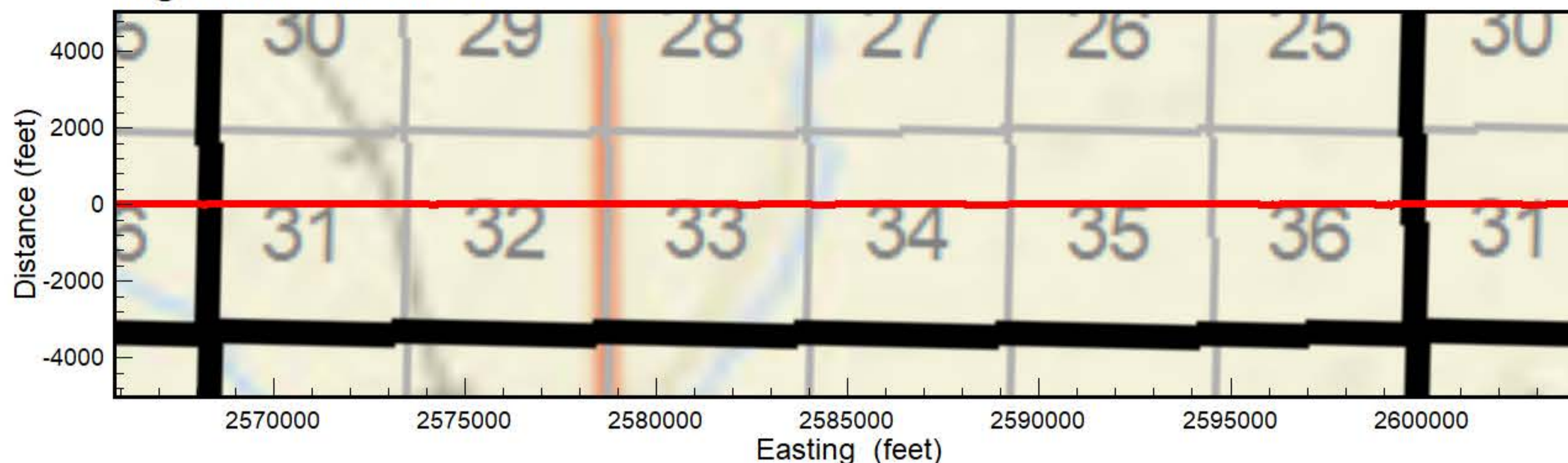
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
LIGNITE
COBBLES
BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
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SILT
CLAY
TILL
FILL
TOPSOIL
NOSAMPLE

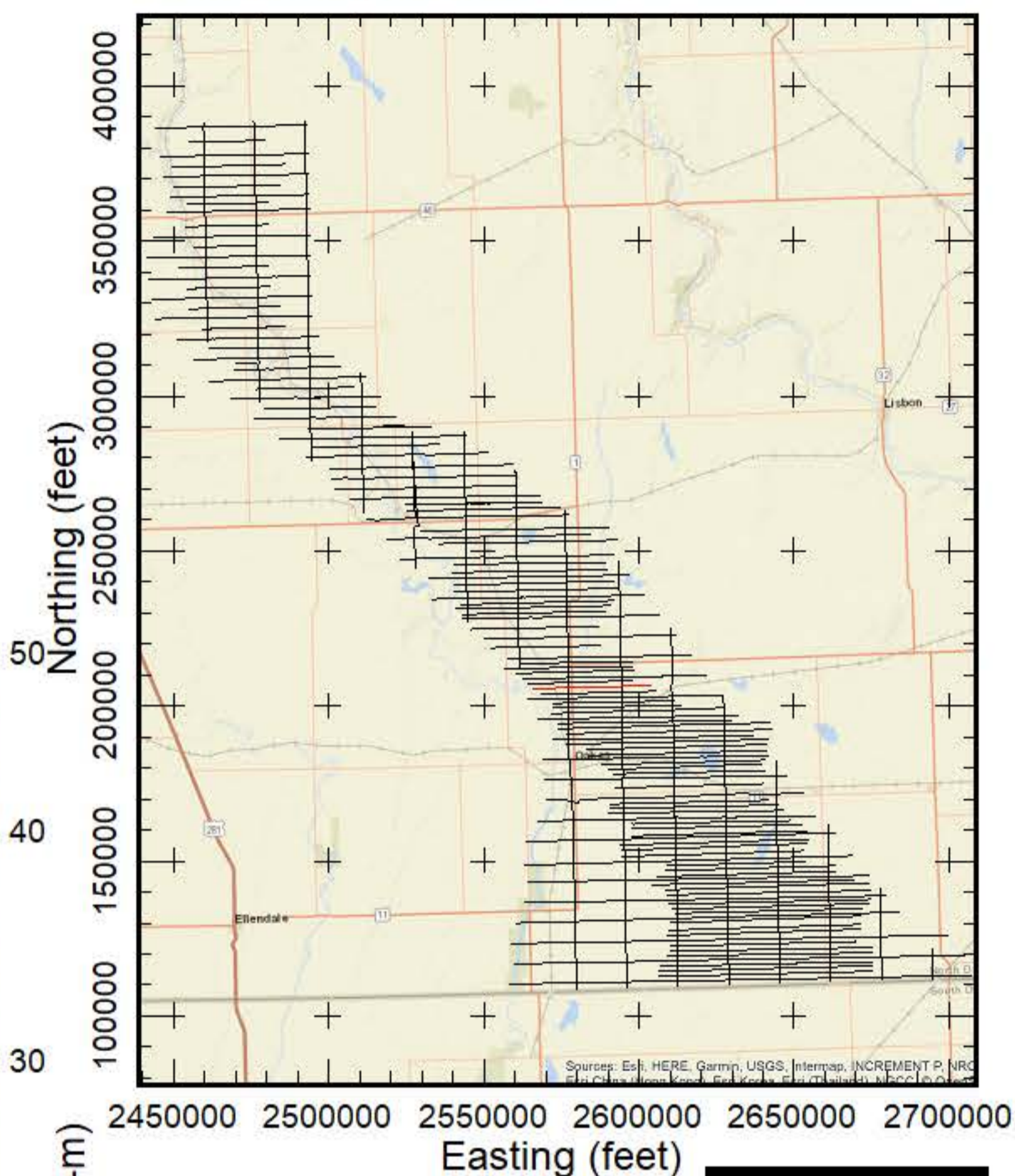




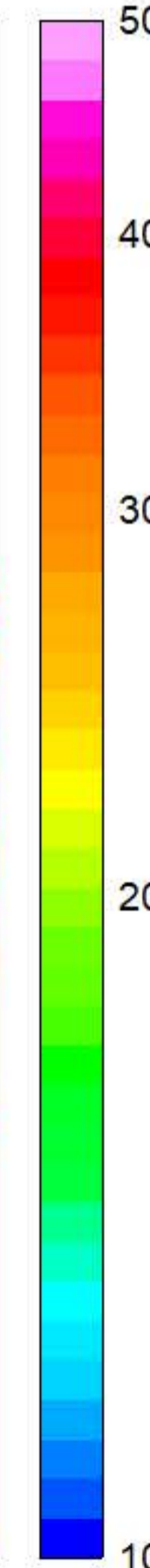
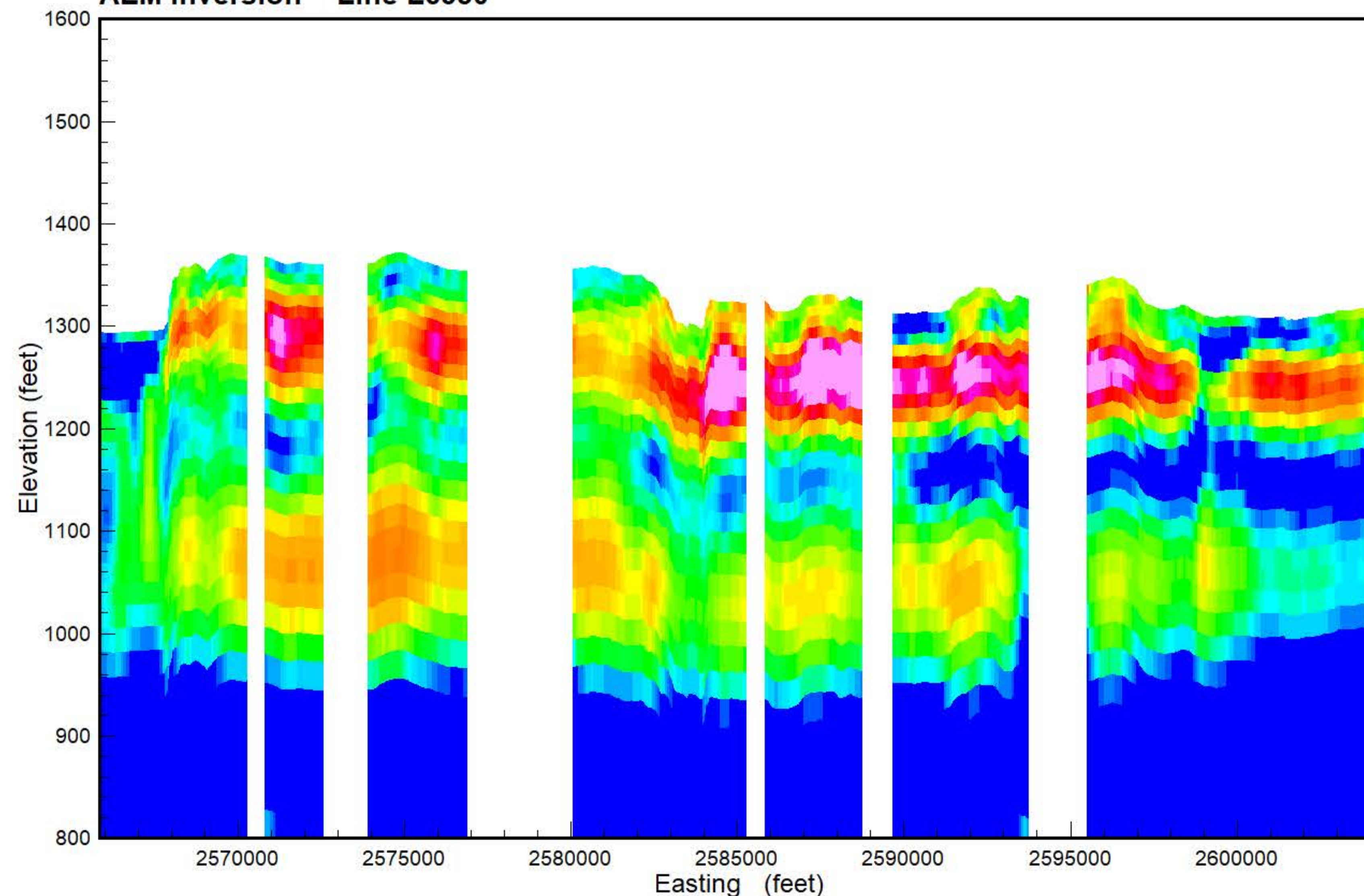
**Flight Path Line L6350**



**Spiritwood South Flight Area**



**AEM Inversion Line L6350**



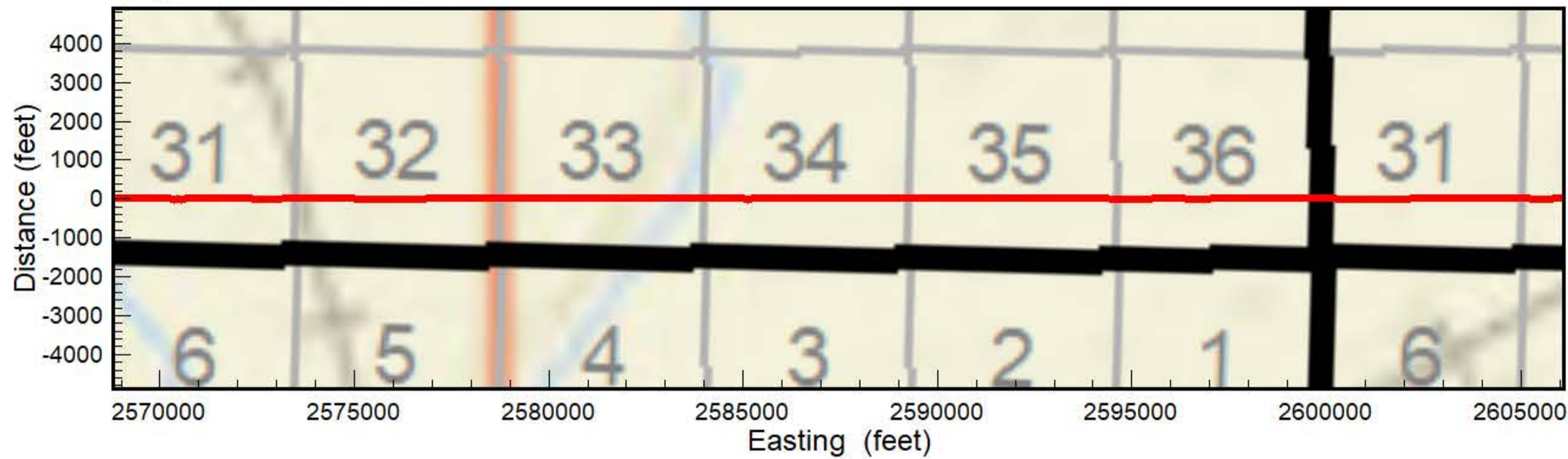
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

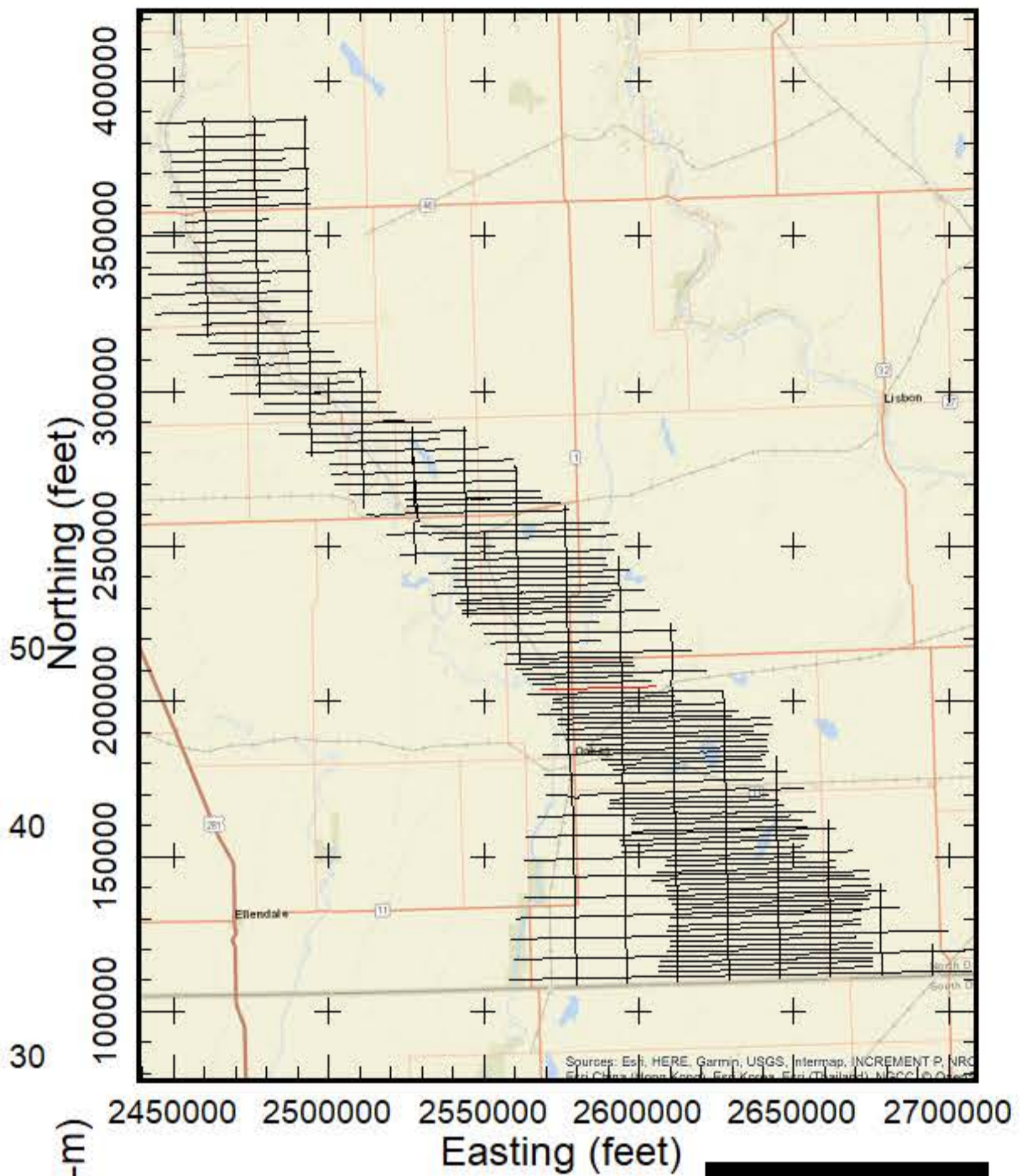




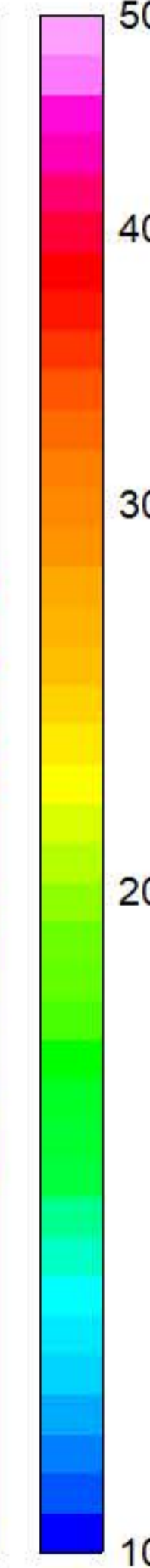
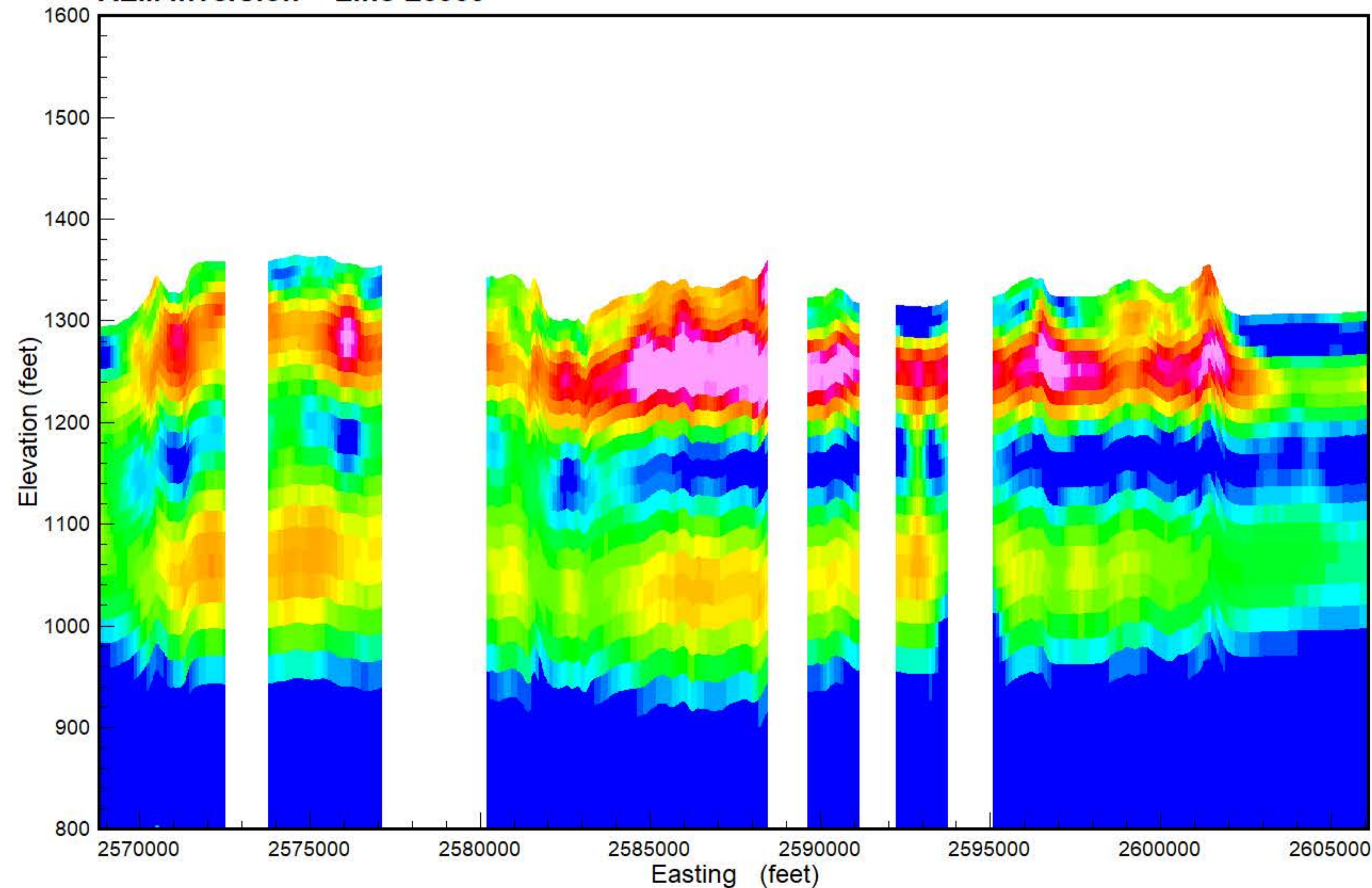
**Flight Path Line L6360**



**Spiritwood South Flight Area**



**AEM Inversion Line L6360**



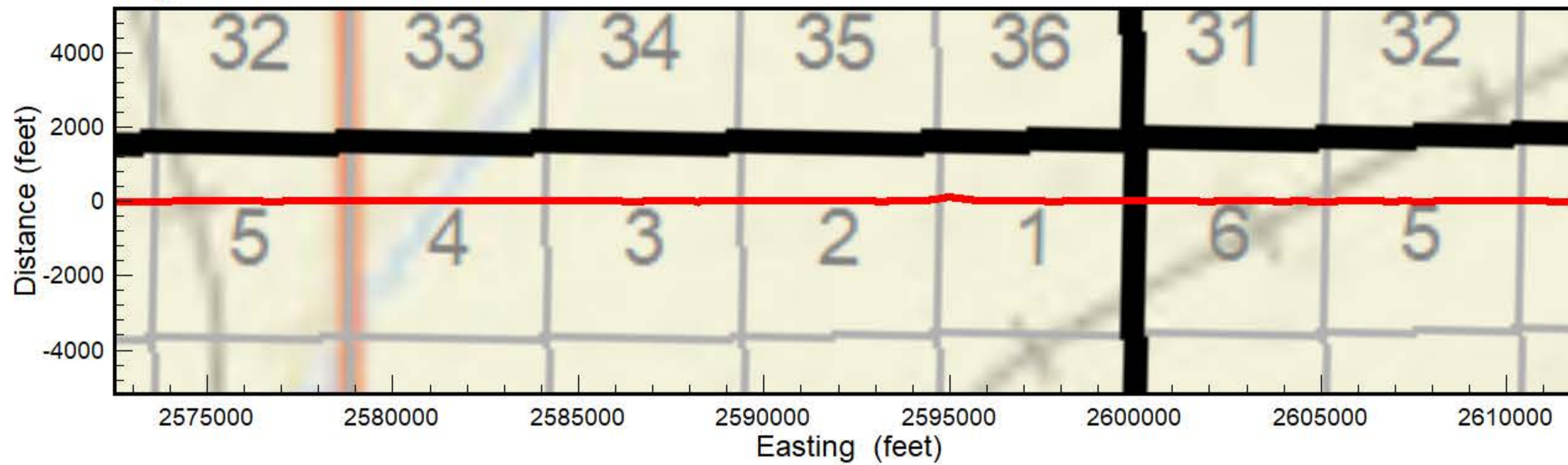
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

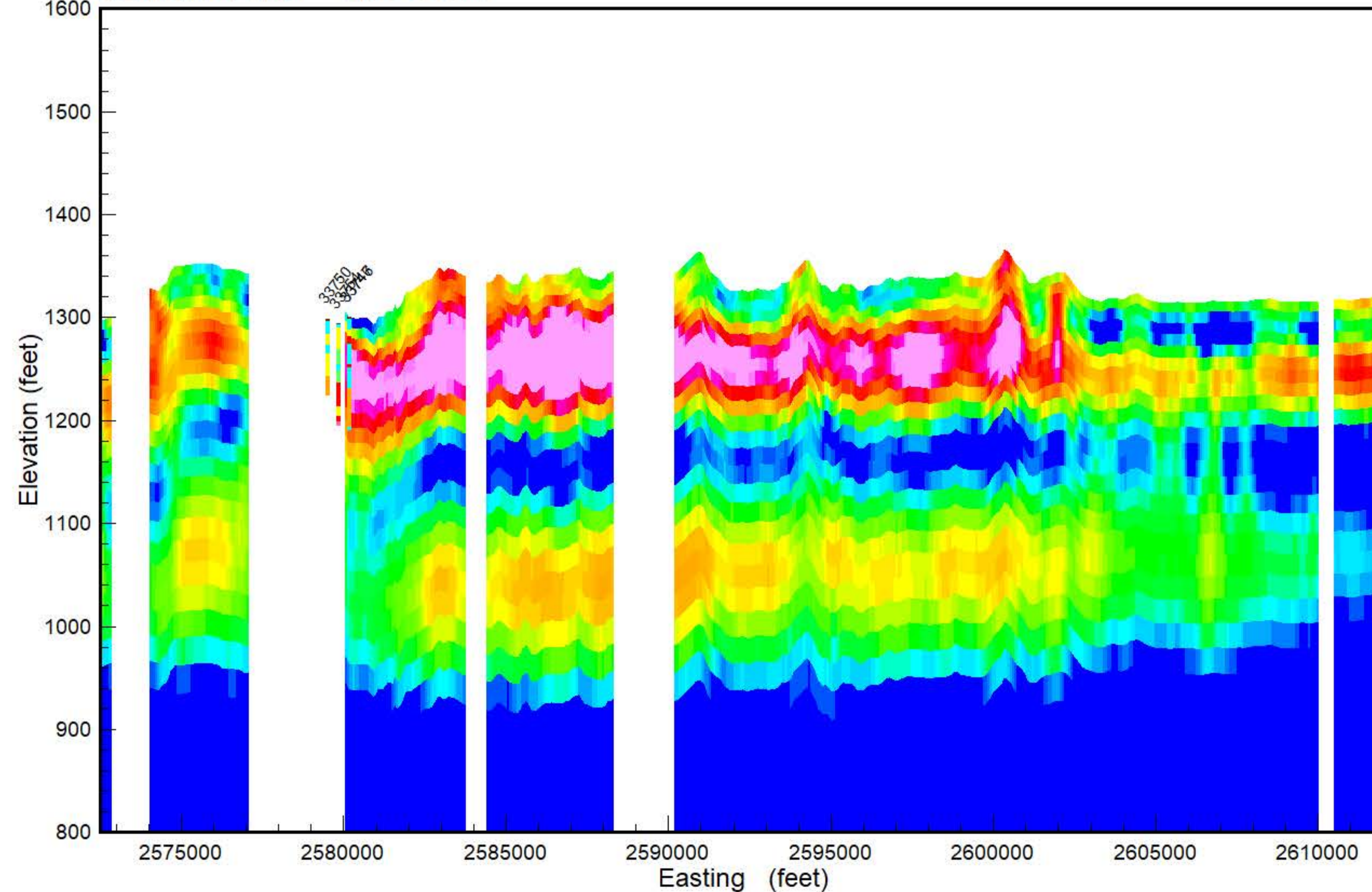




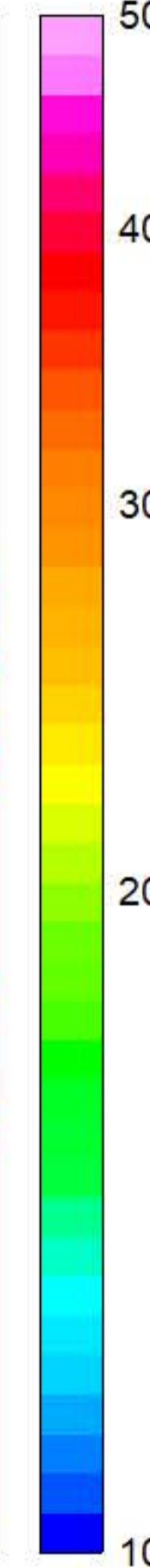
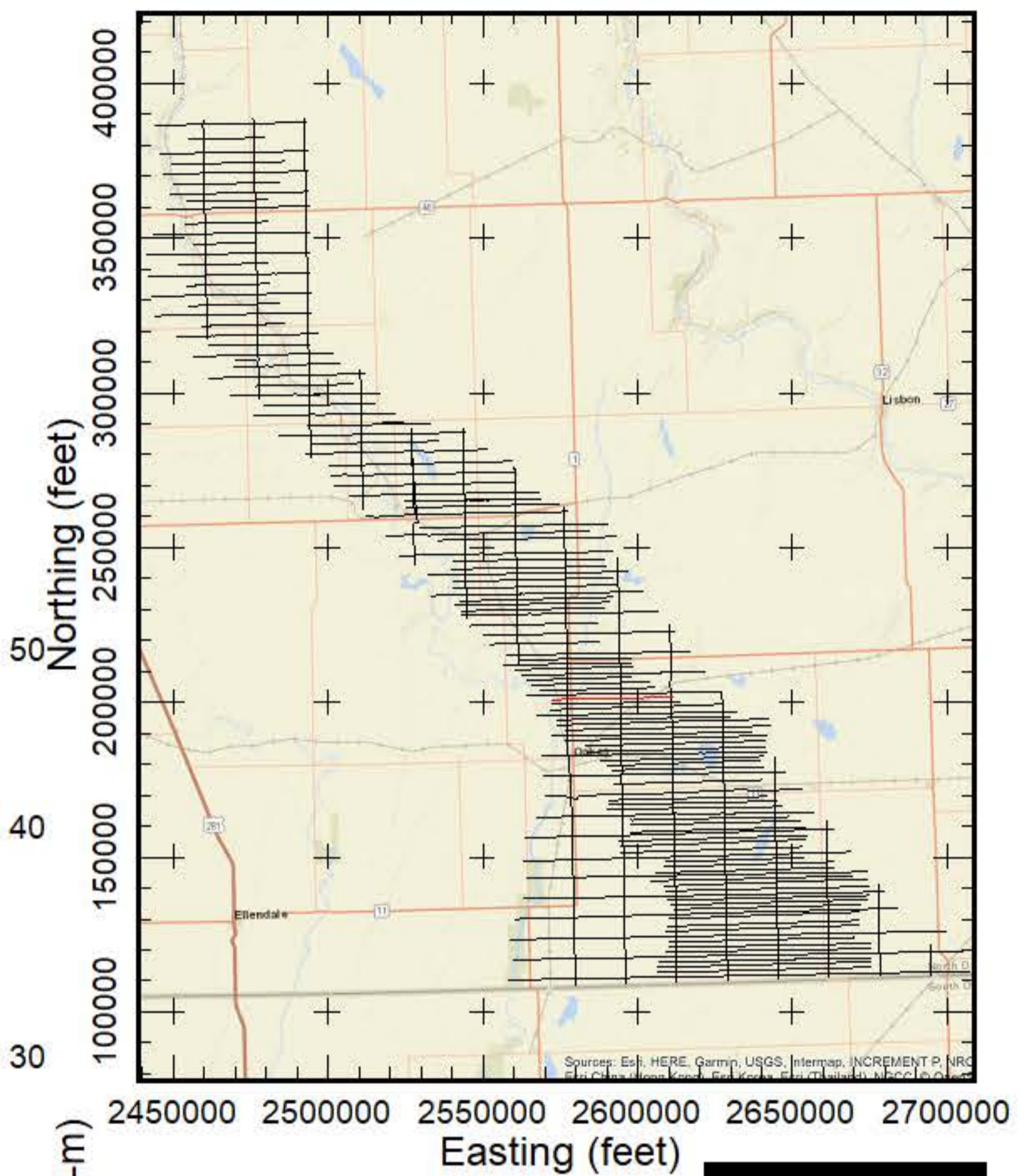
**Flight Path Line L6370**



**AEM Inversion Line L6370**



**Spiritwood South Flight Area**



- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

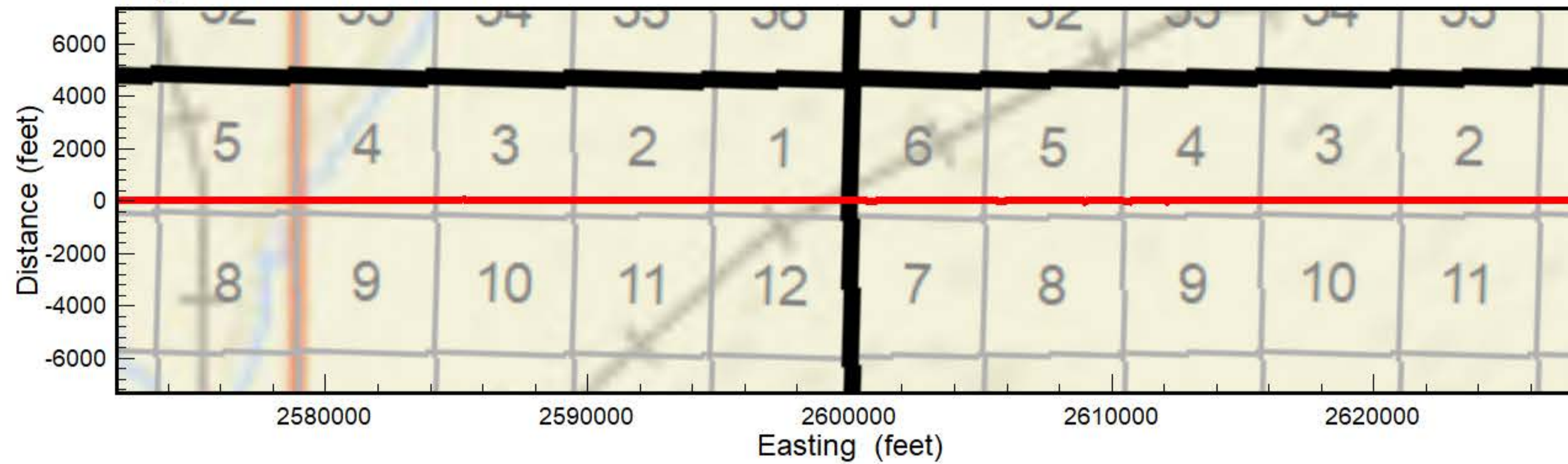




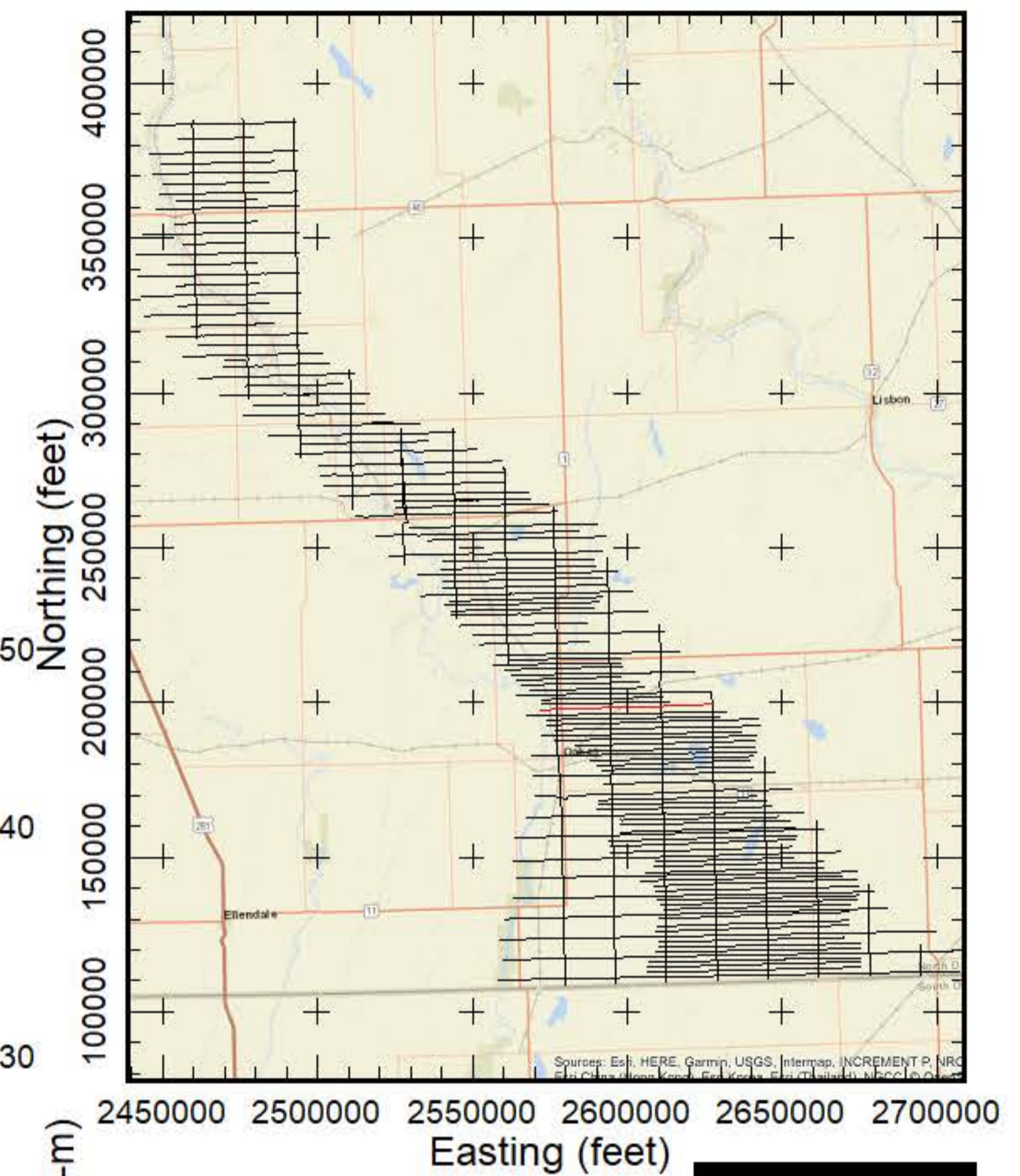




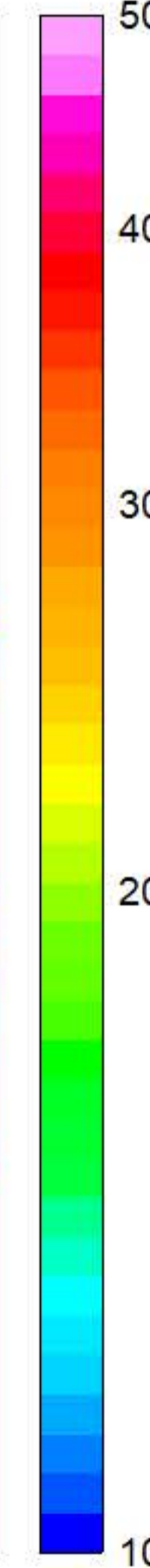
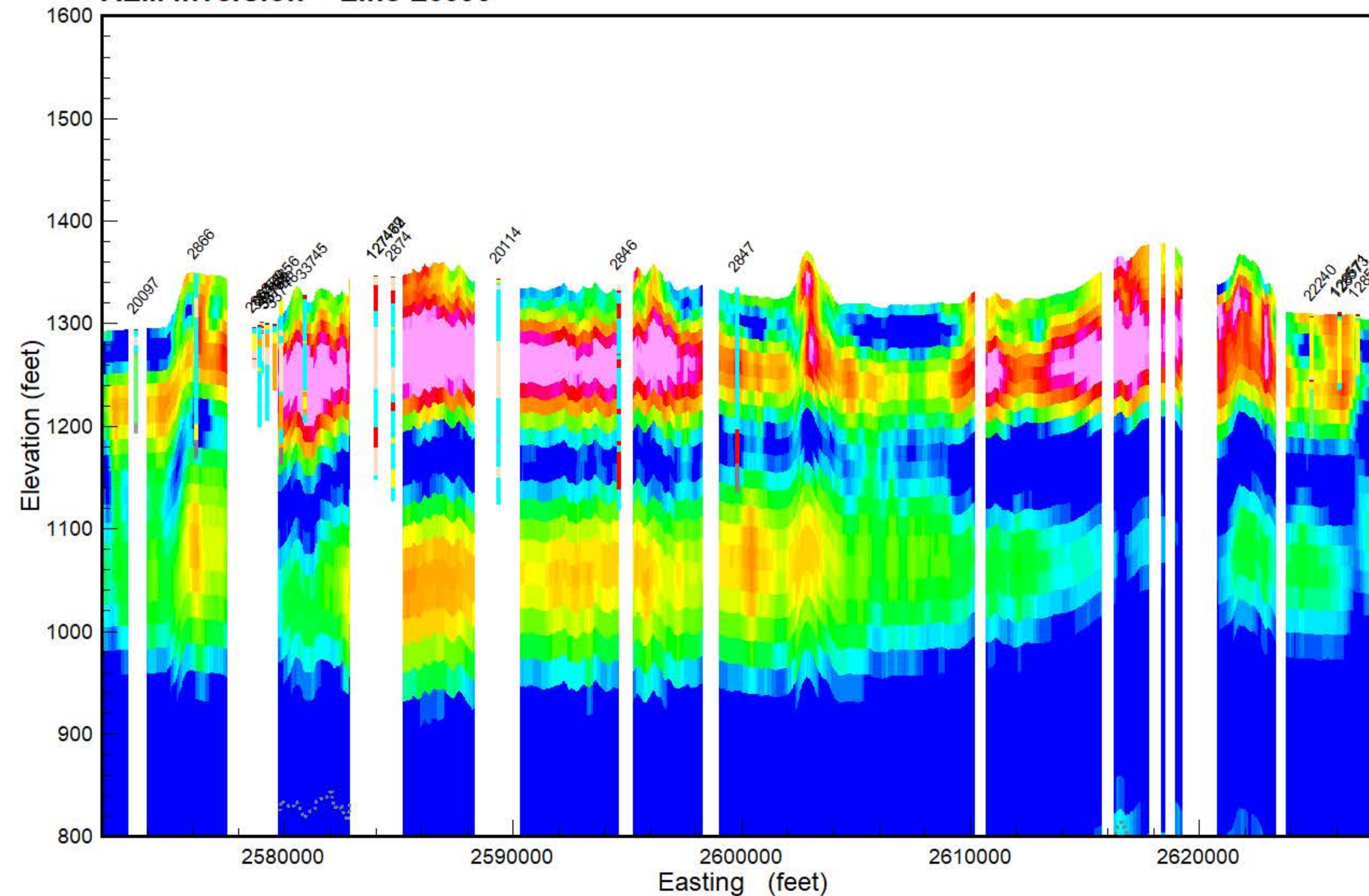
**Flight Path Line L6390**



**Spiritwood South Flight Area**



**AEM Inversion Line L6390**



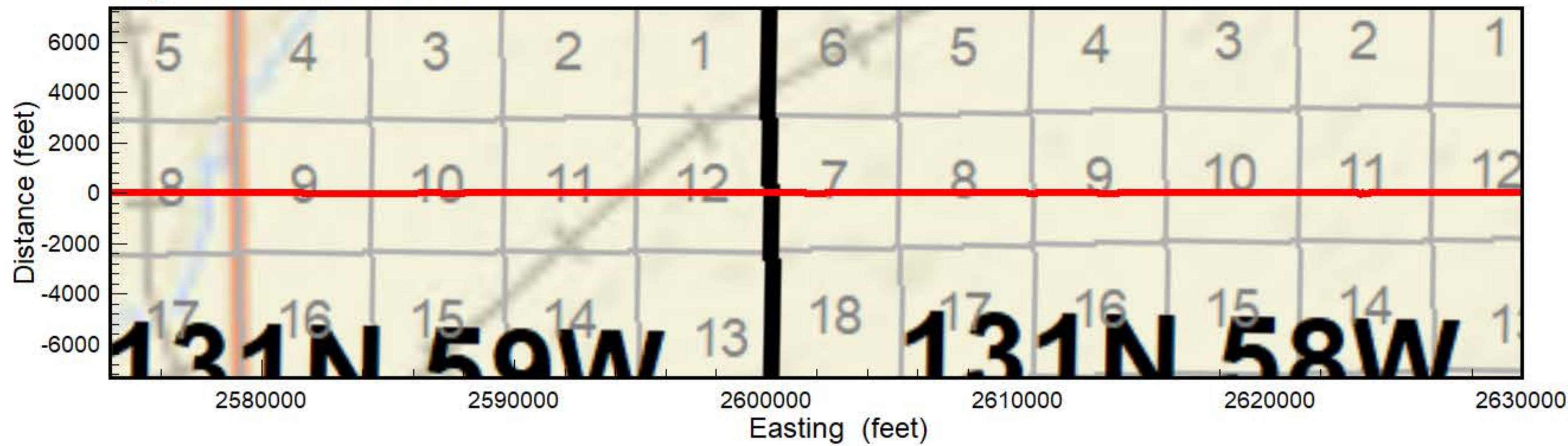
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

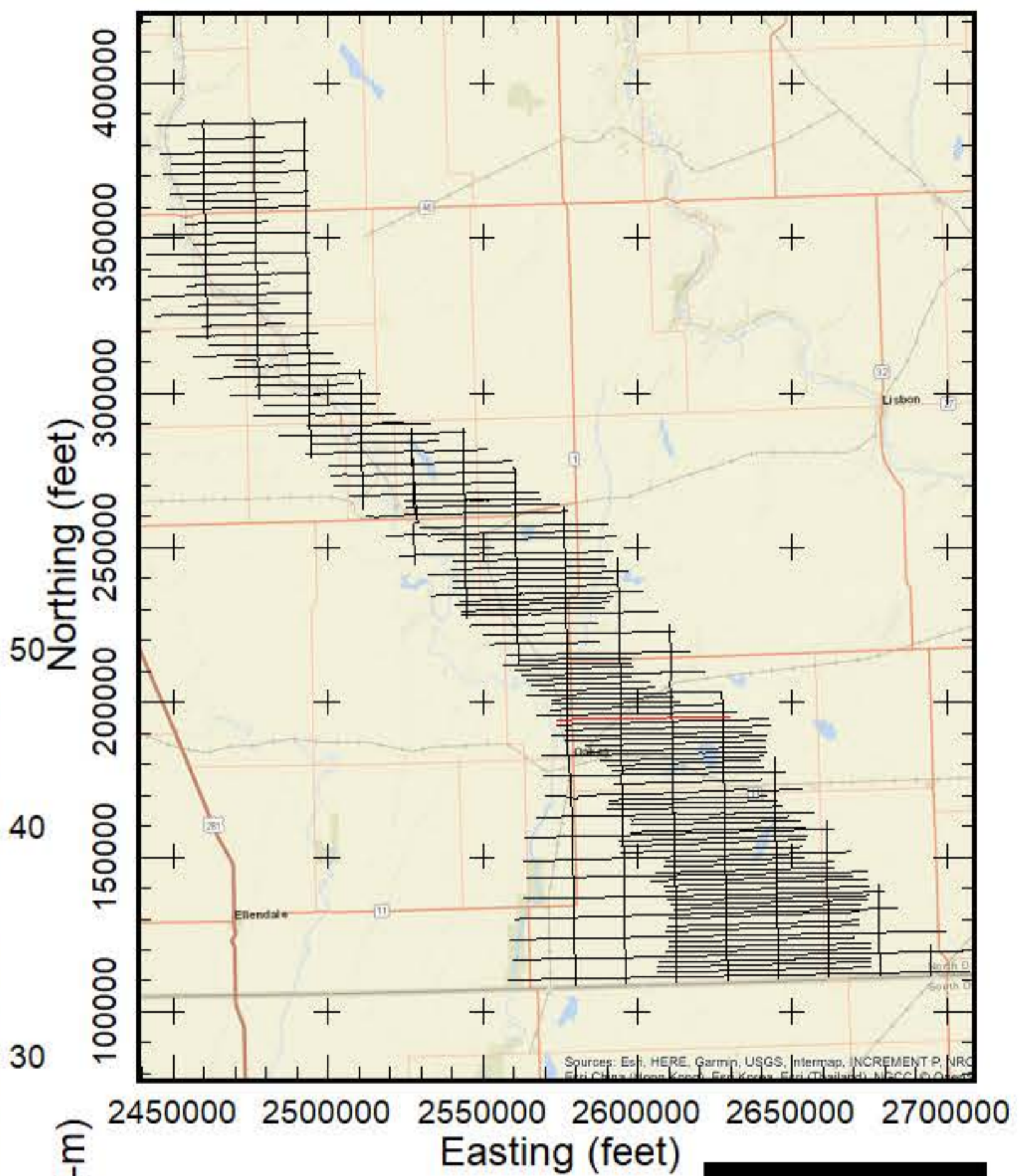




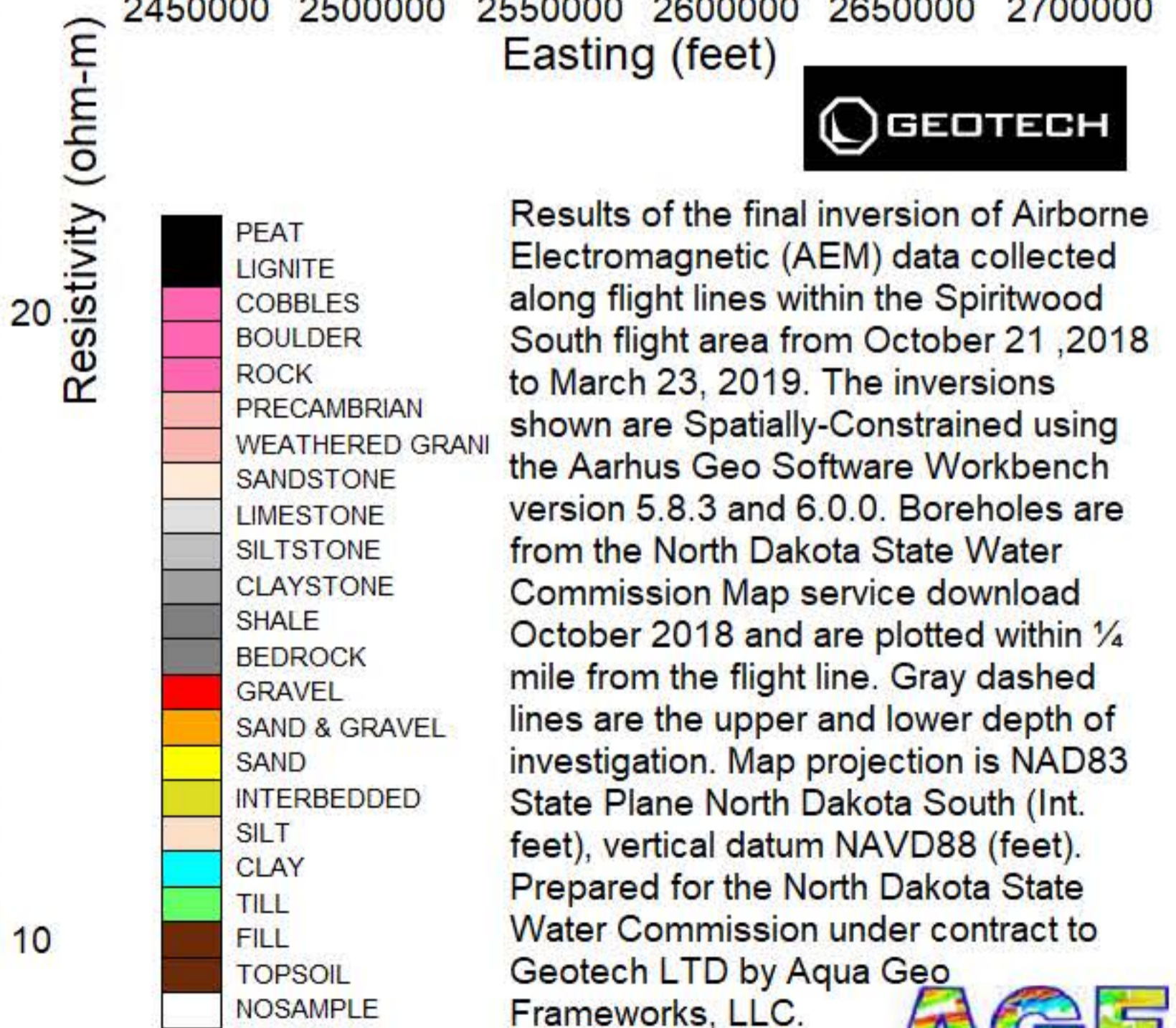
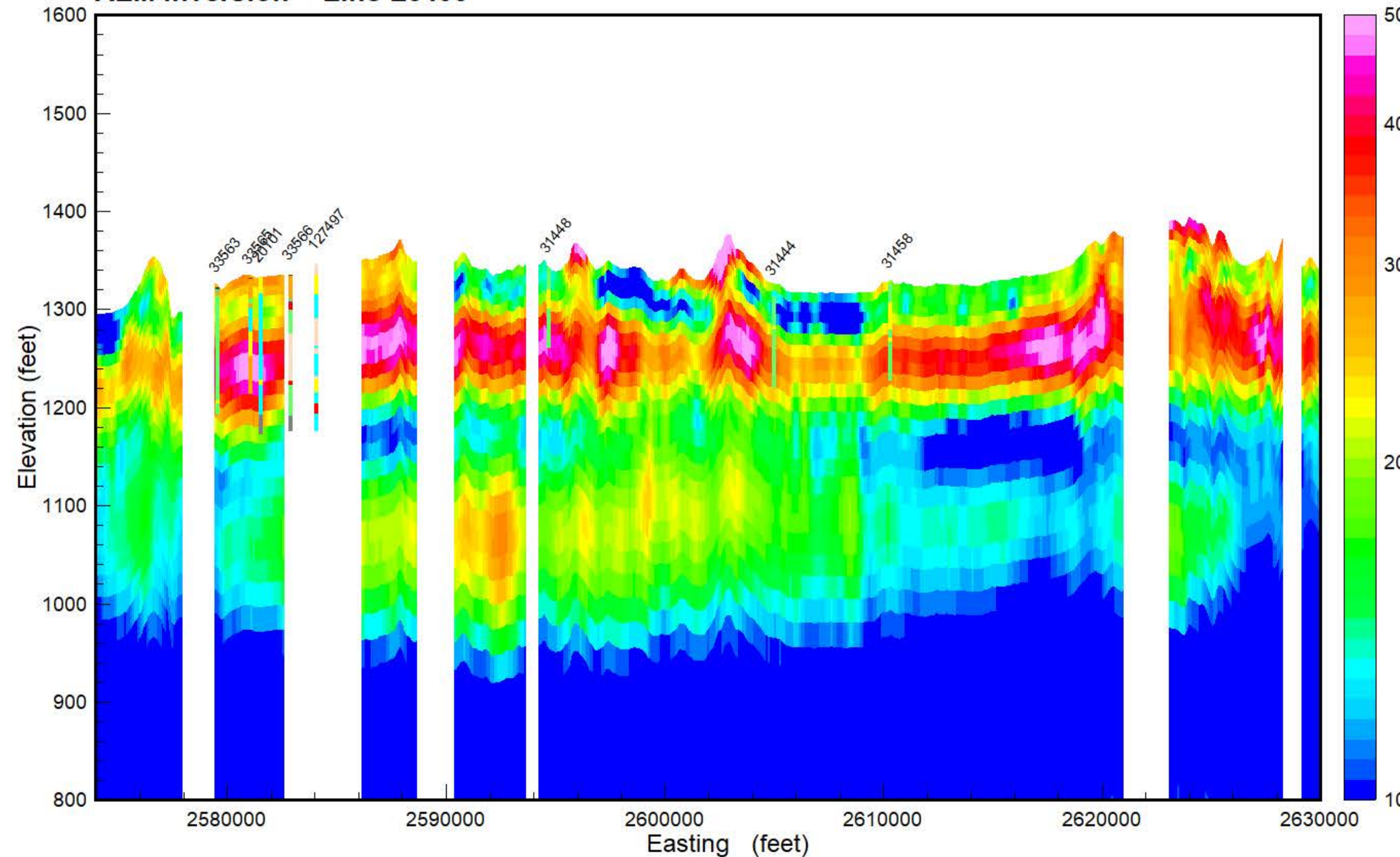
**Flight Path Line L6400**



**Spiritwood South Flight Area**

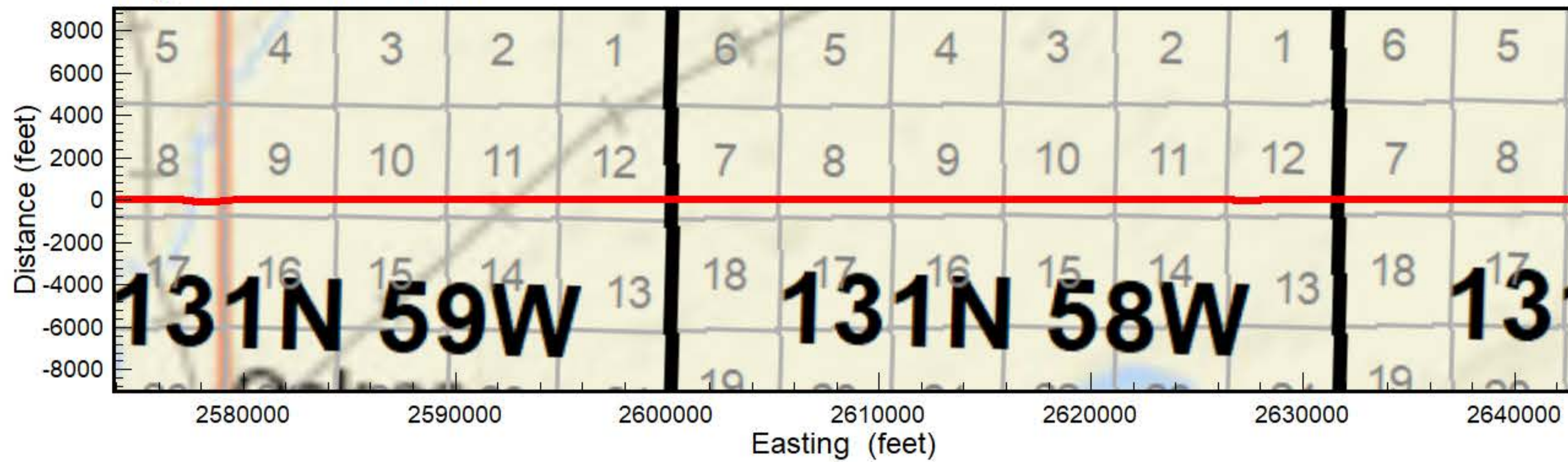


**AEM Inversion Line L6400**

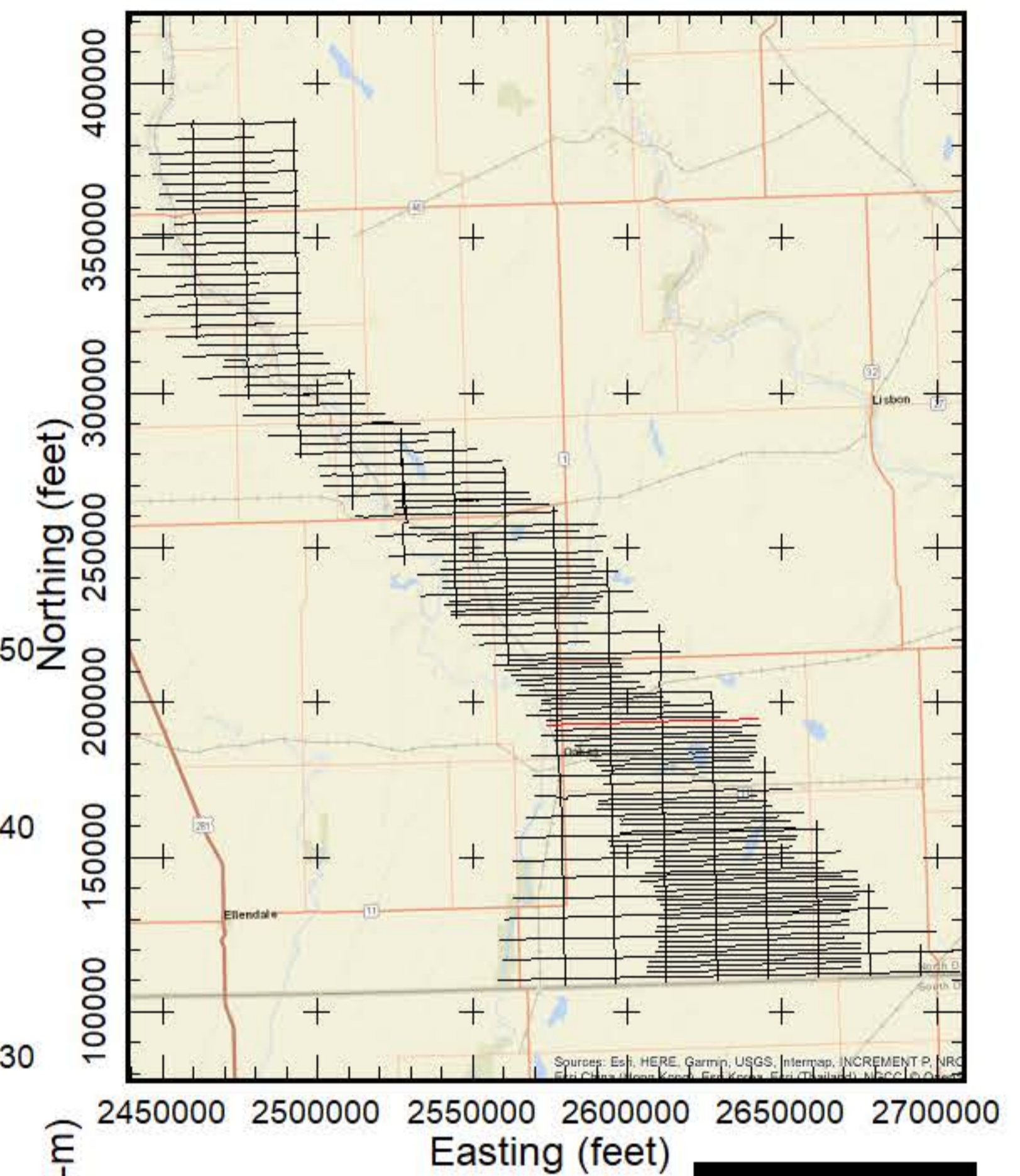




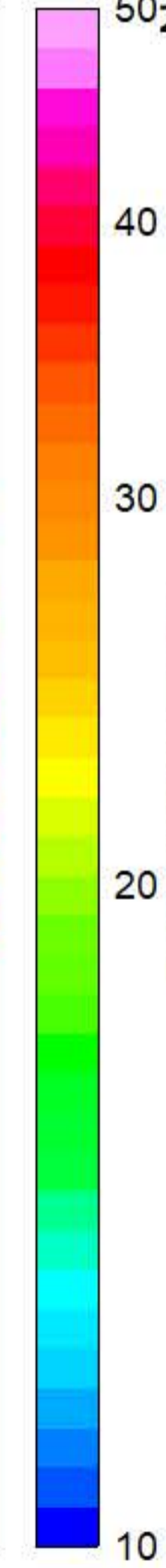
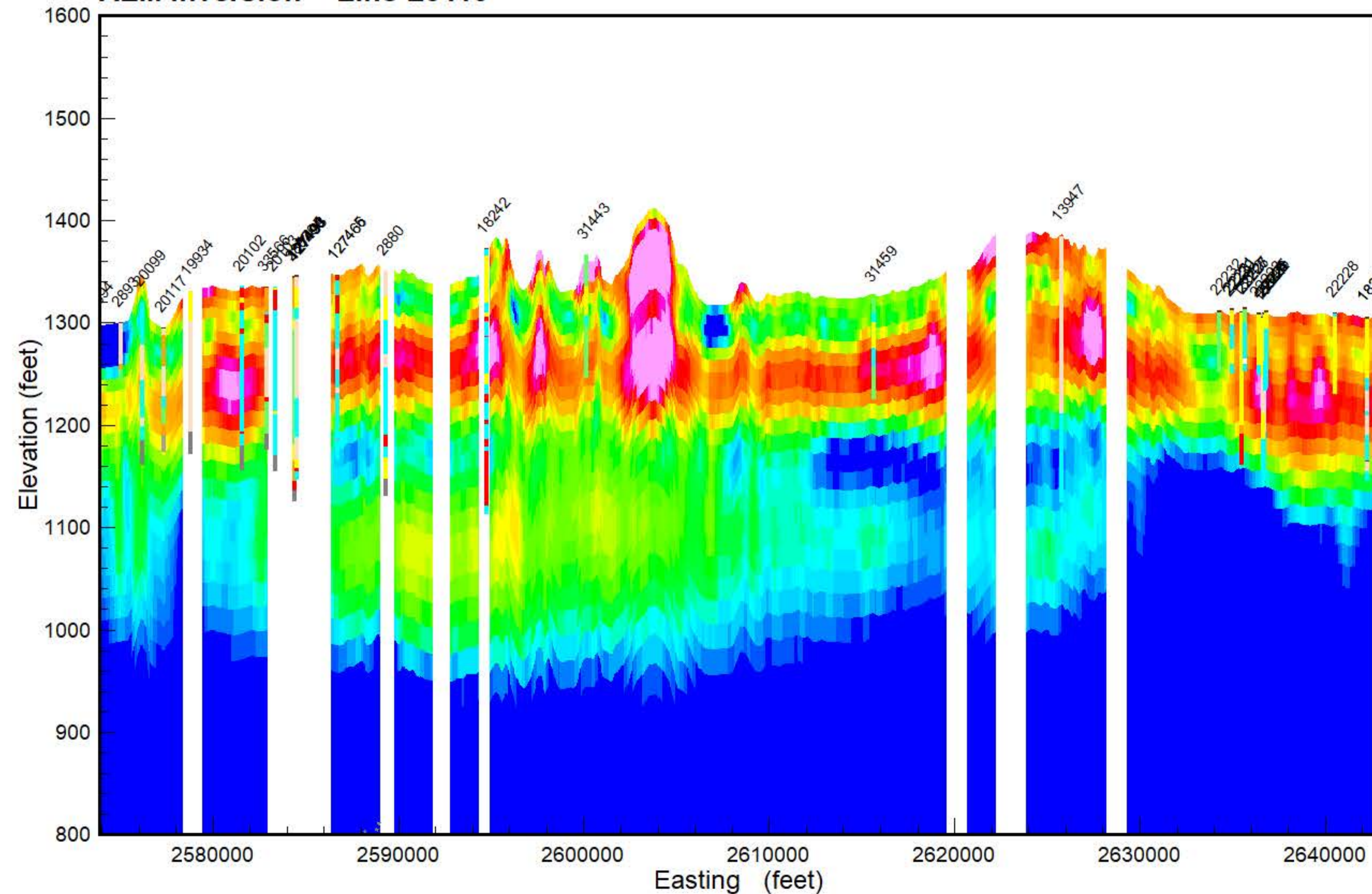
**Flight Path Line L6410**



**Spiritwood South Flight Area**



**AEM Inversion Line L6410**



**GEOTECH**

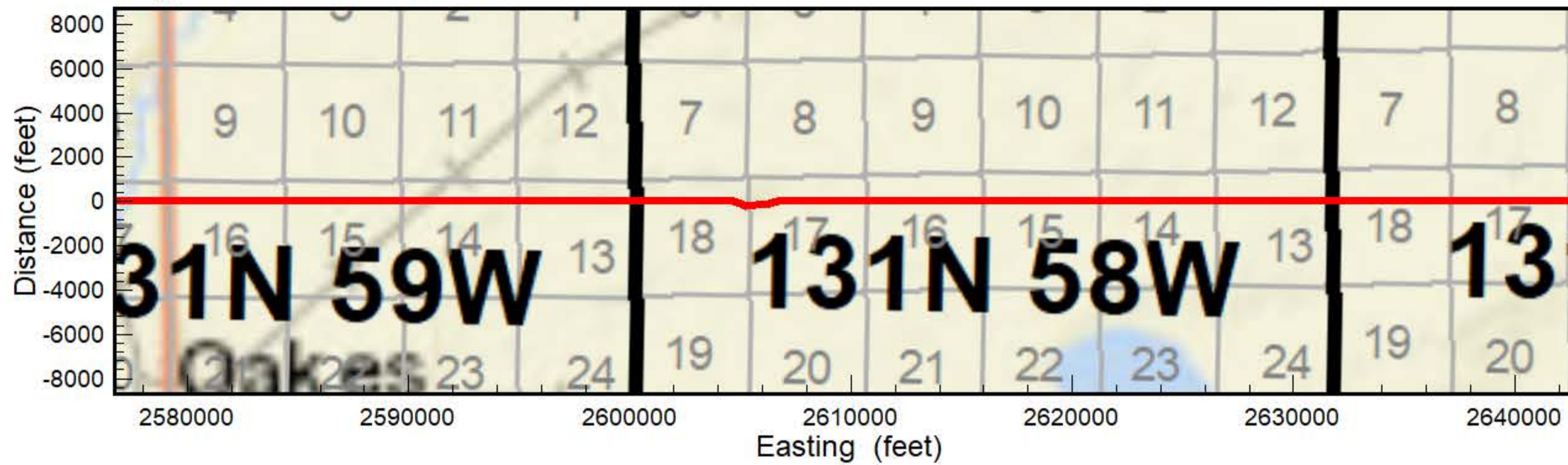
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

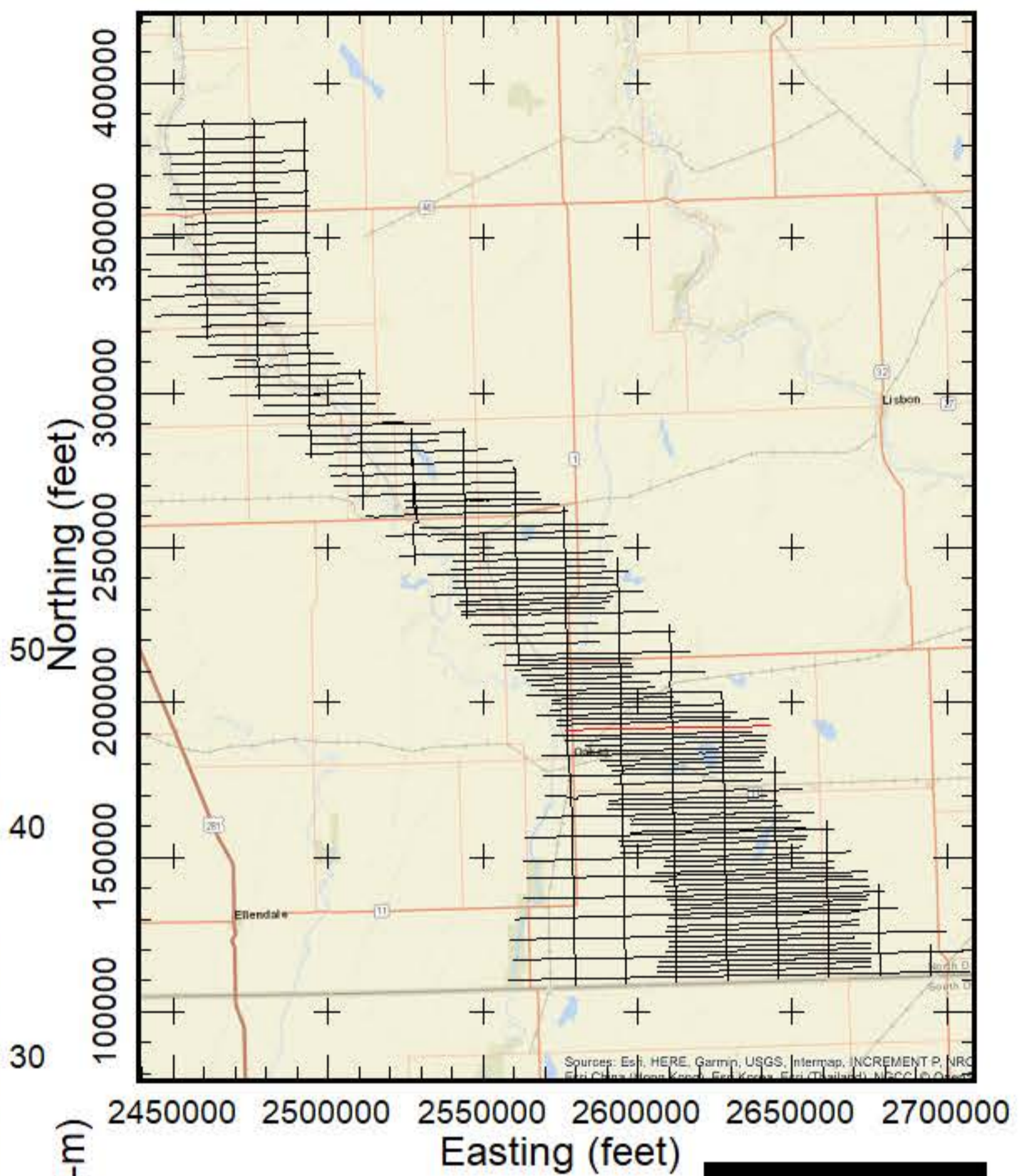
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Aqua Geo Frameworks



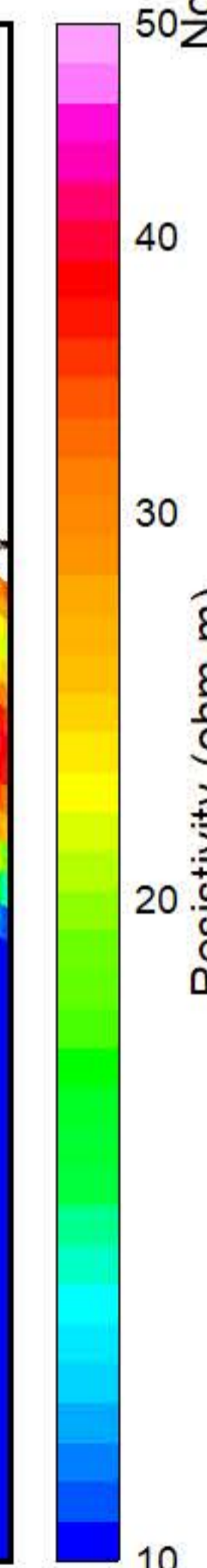
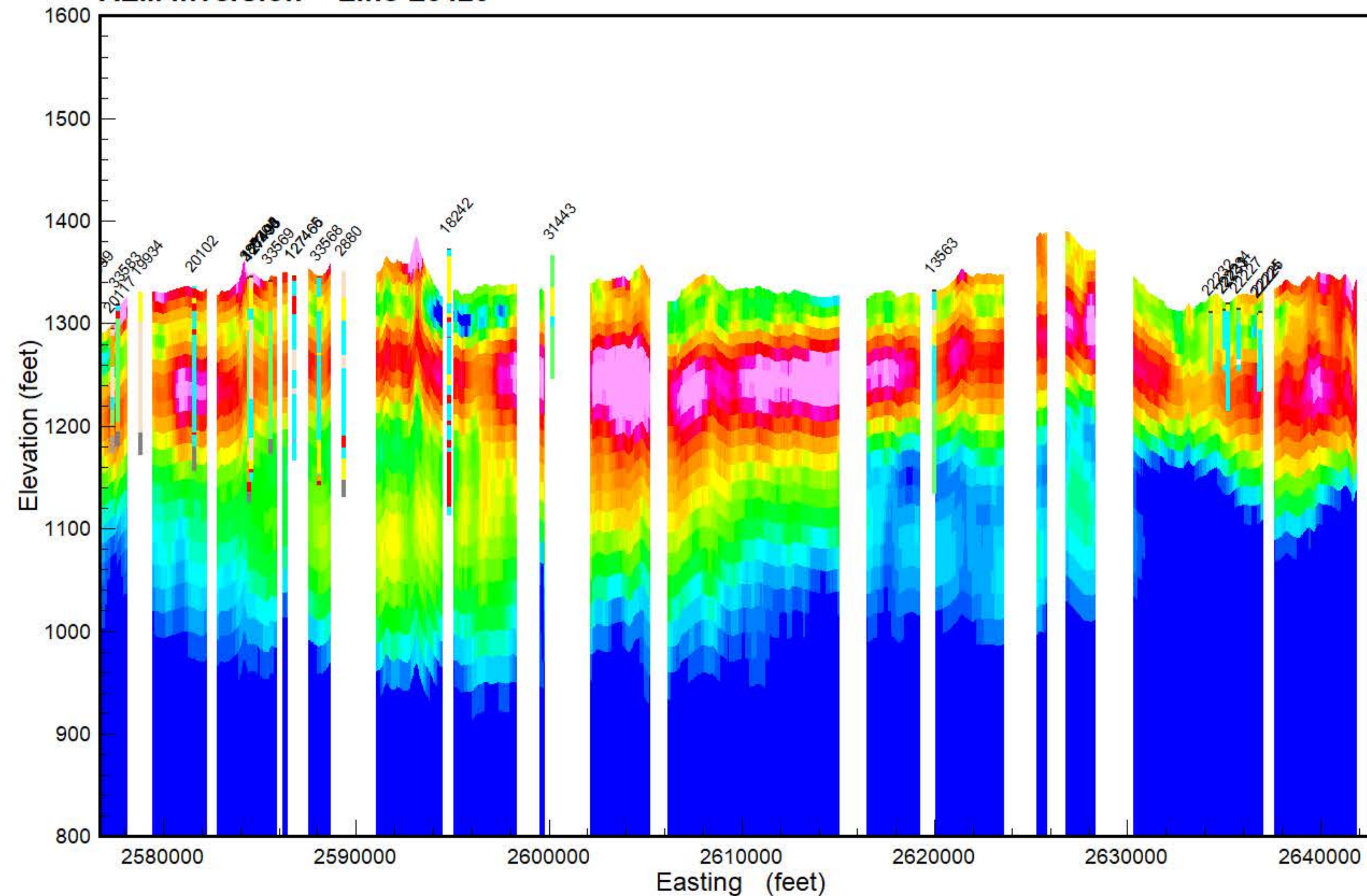
**Flight Path Line L6420**



**Spiritwood South Flight Area**



**AEM Inversion Line L6420**



**GEOTECH**

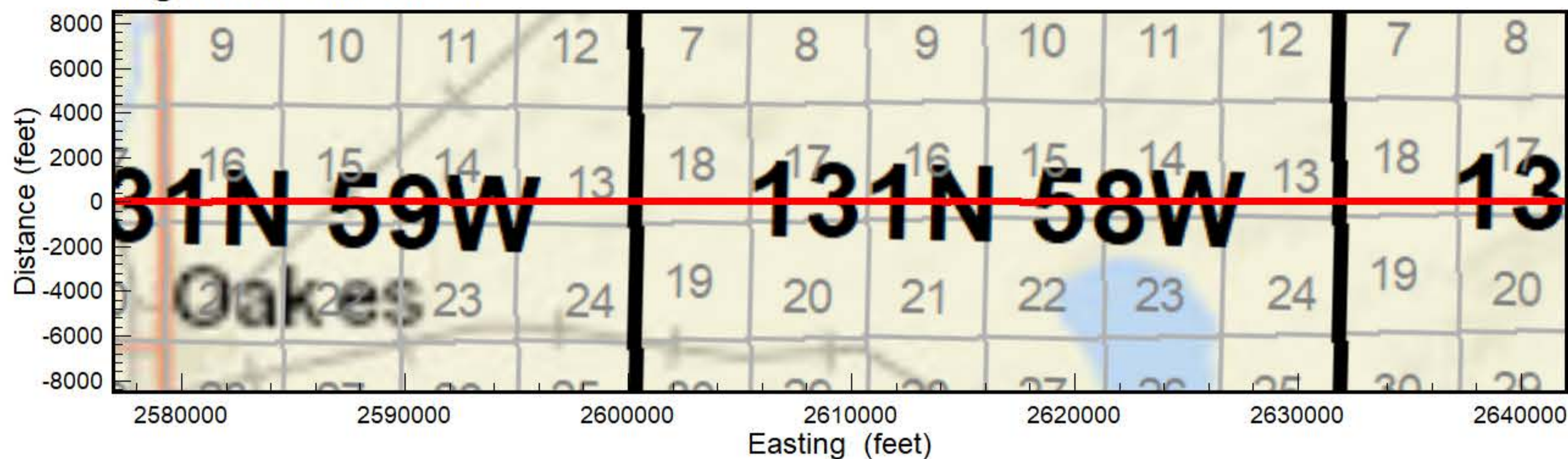
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
LIGNITE
COBBLES
BOULDER
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PRECAMBRIAN
WEATHERED GRANITE
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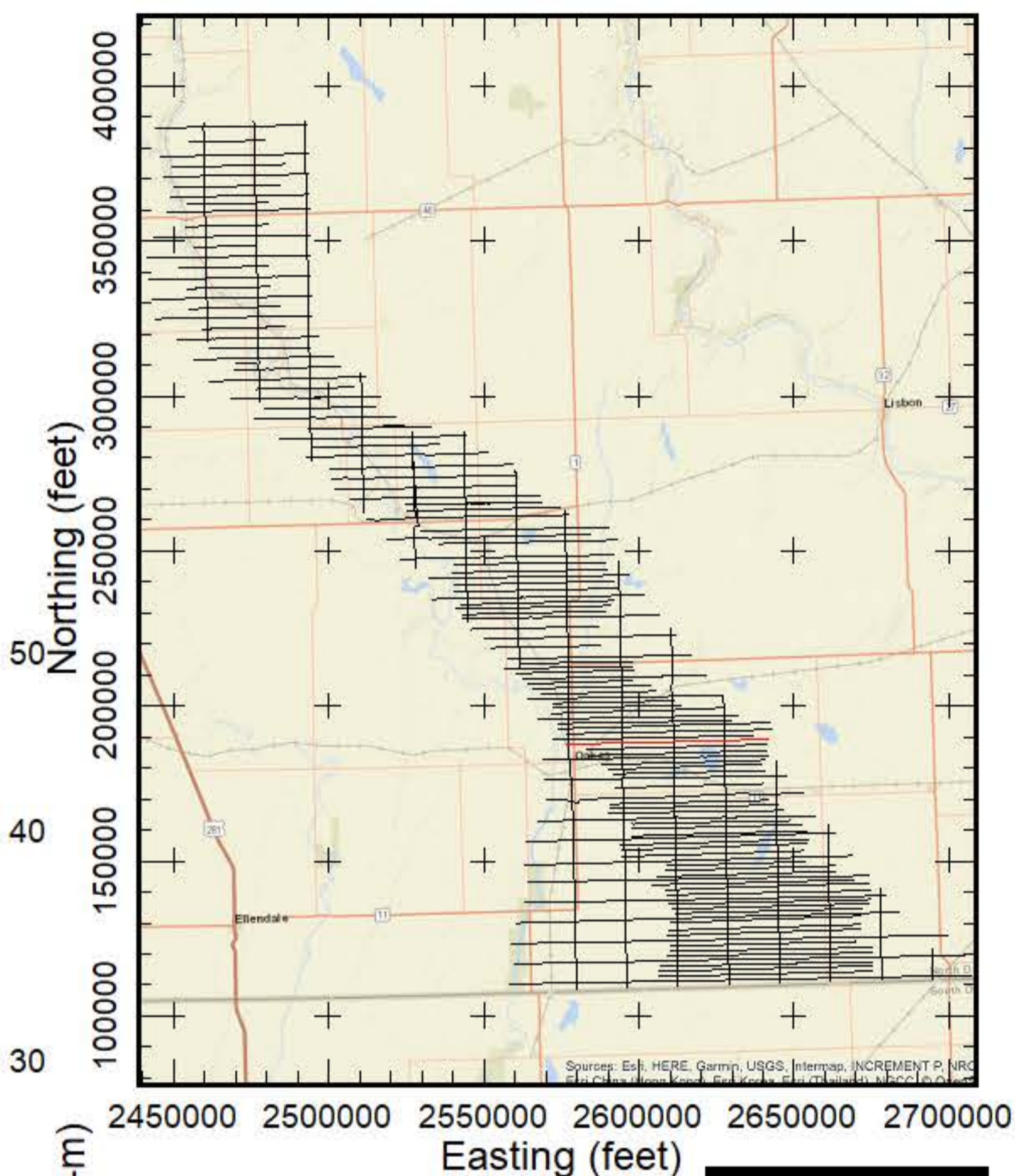
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Aqua Geo Frameworks



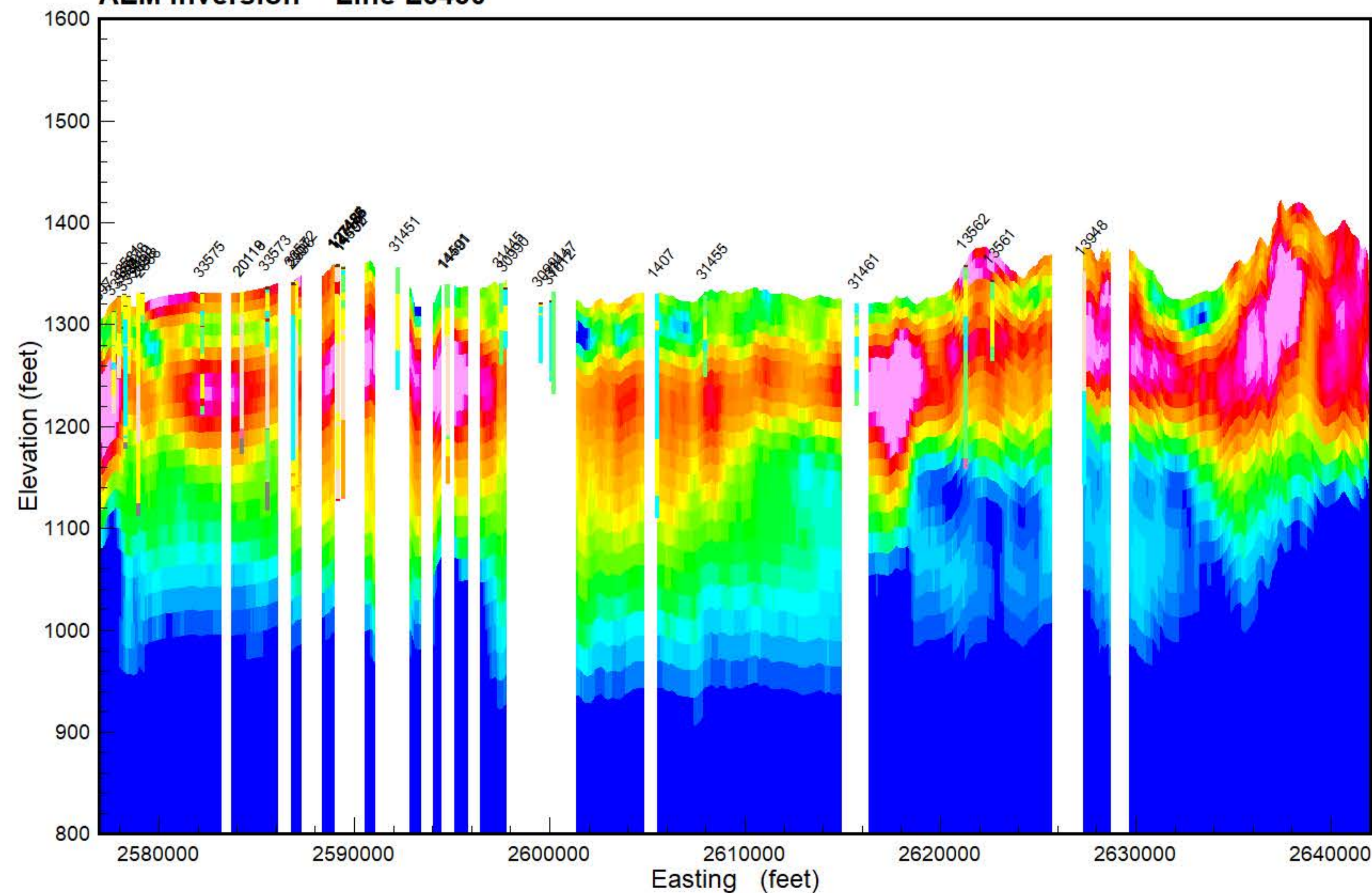
**Flight Path Line L6430**



**Spiritwood South Flight Area**



**AEM Inversion Line L6430**



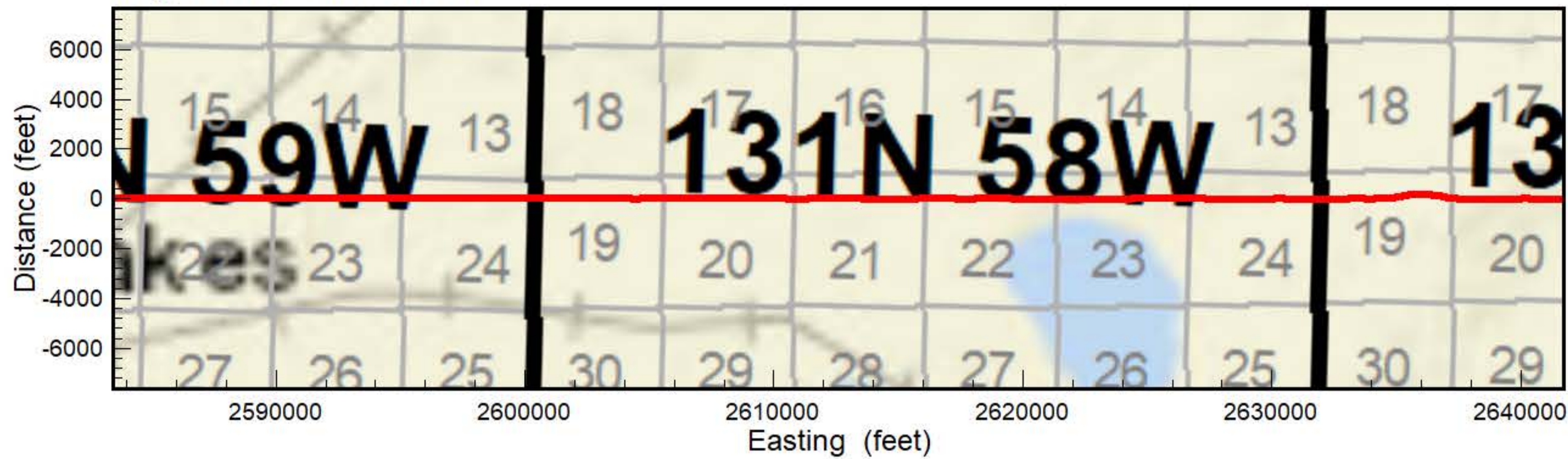
**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

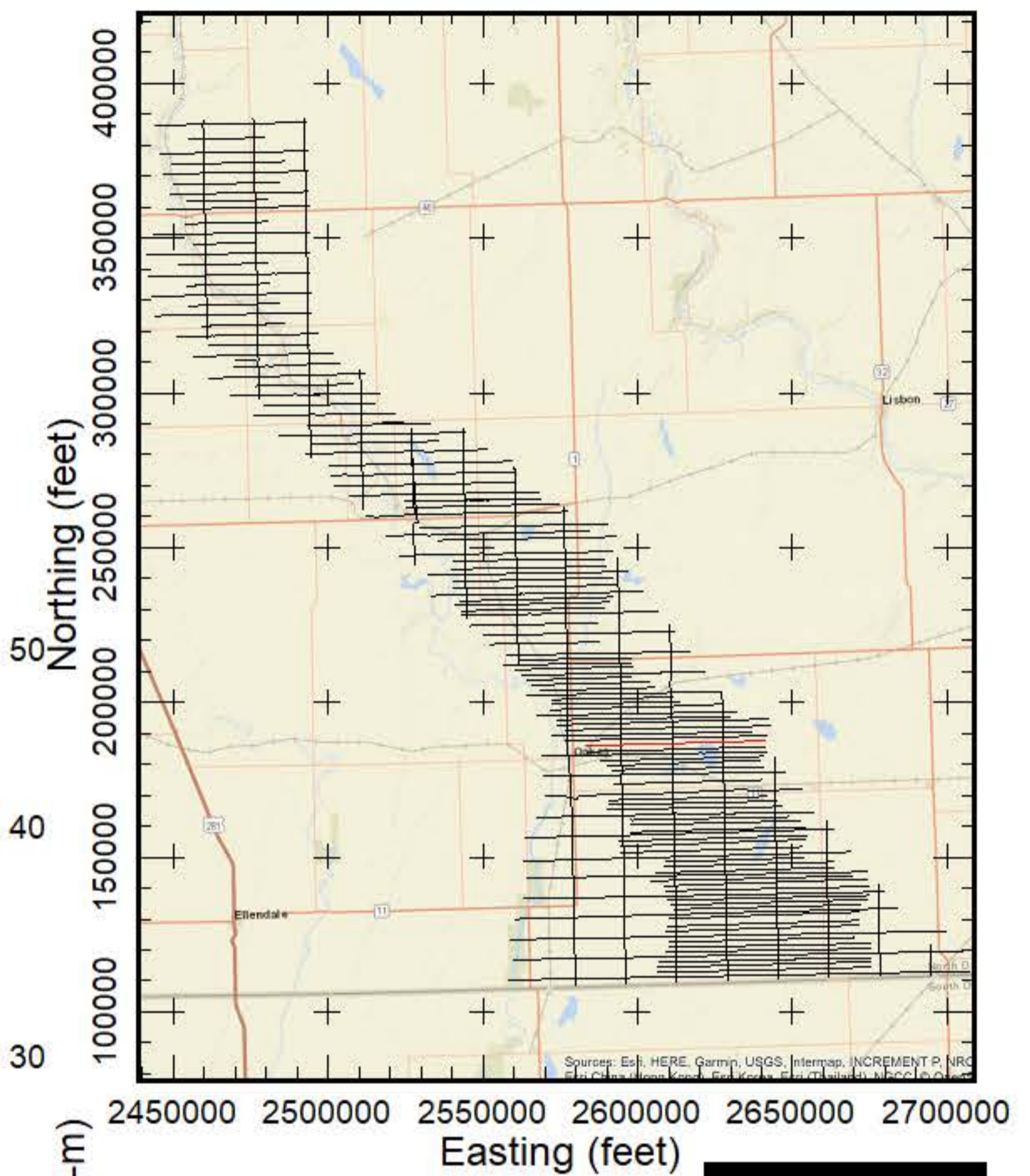
PEAT
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COBBLES
BOULDER
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WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
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FILL
TOPSOIL
NOSAMPLE



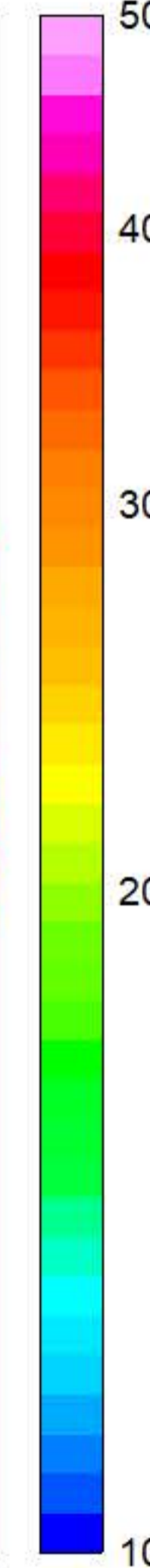
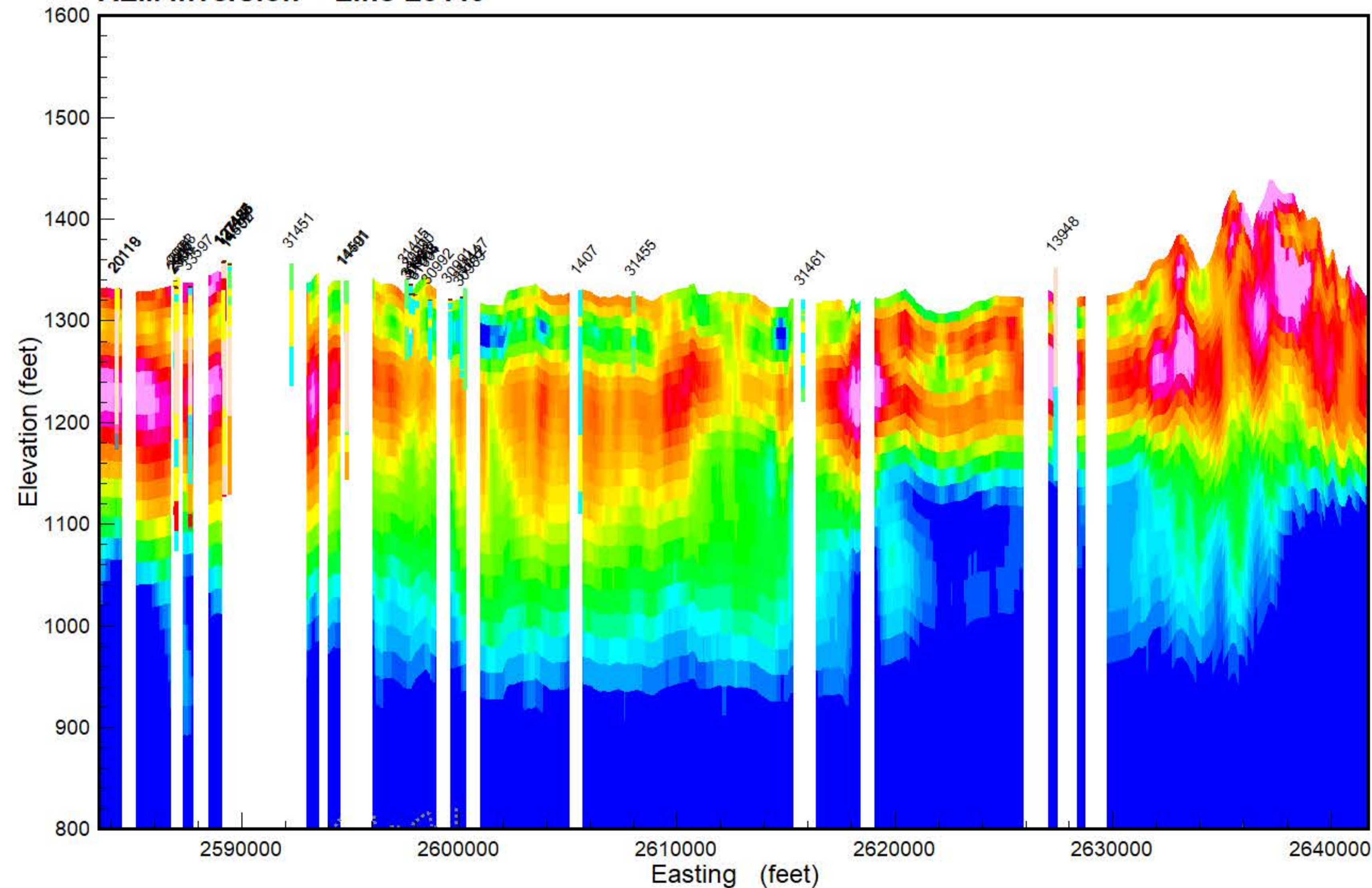
**Flight Path Line L6440**



**Spiritwood South Flight Area**



**AEM Inversion Line L6440**



**GEOTECH**

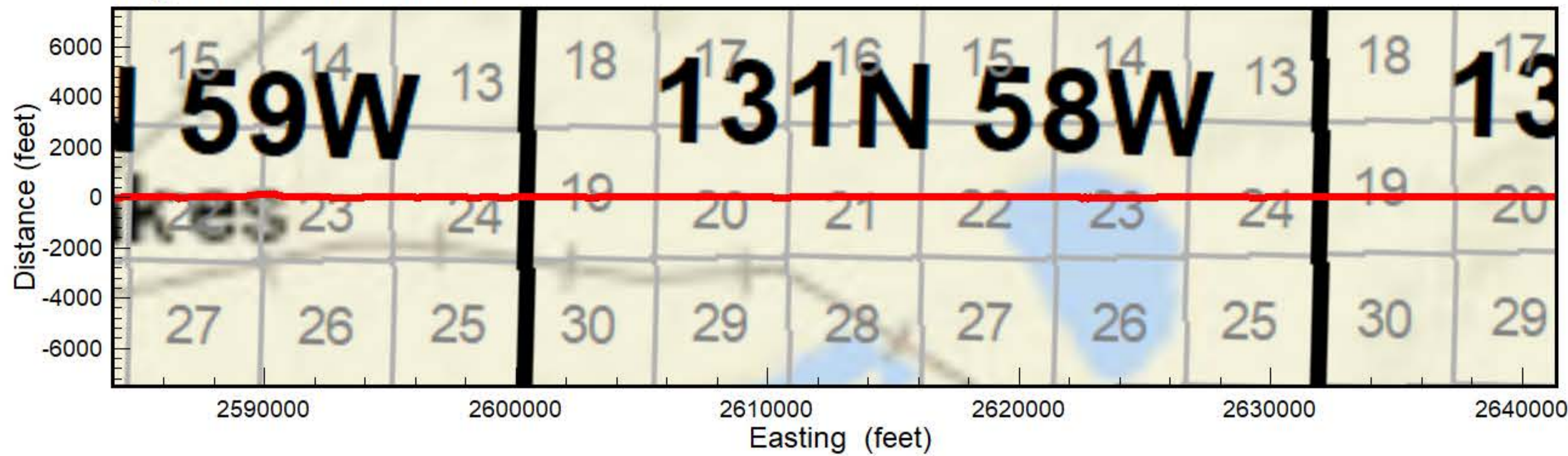
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
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COBBLES
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WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
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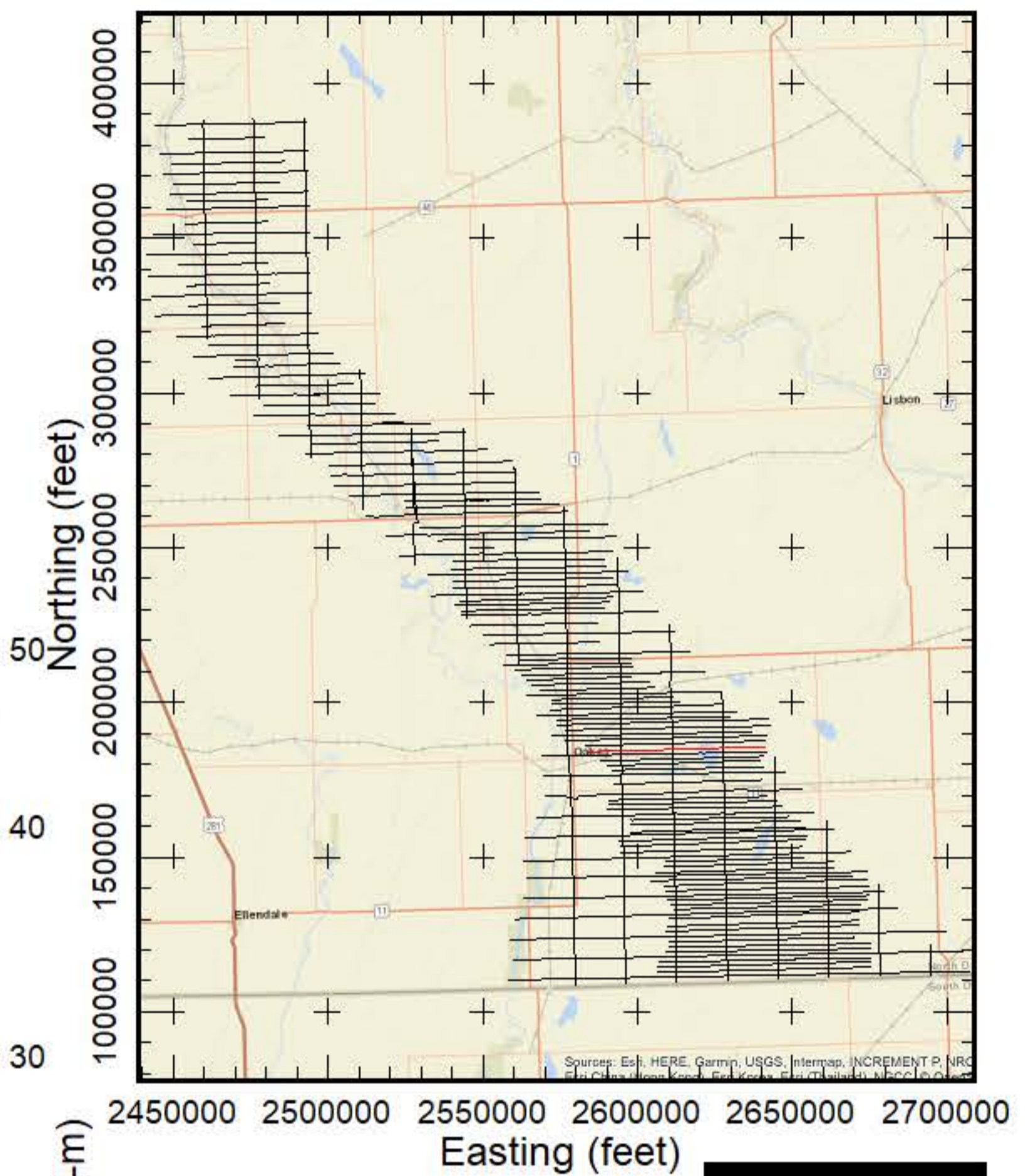
**AGF**  
Aqua Geo Frameworks



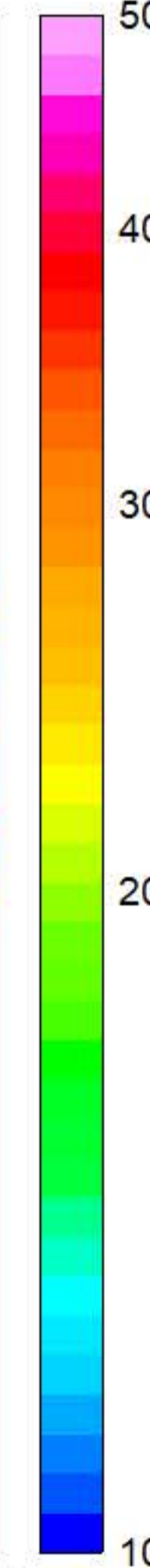
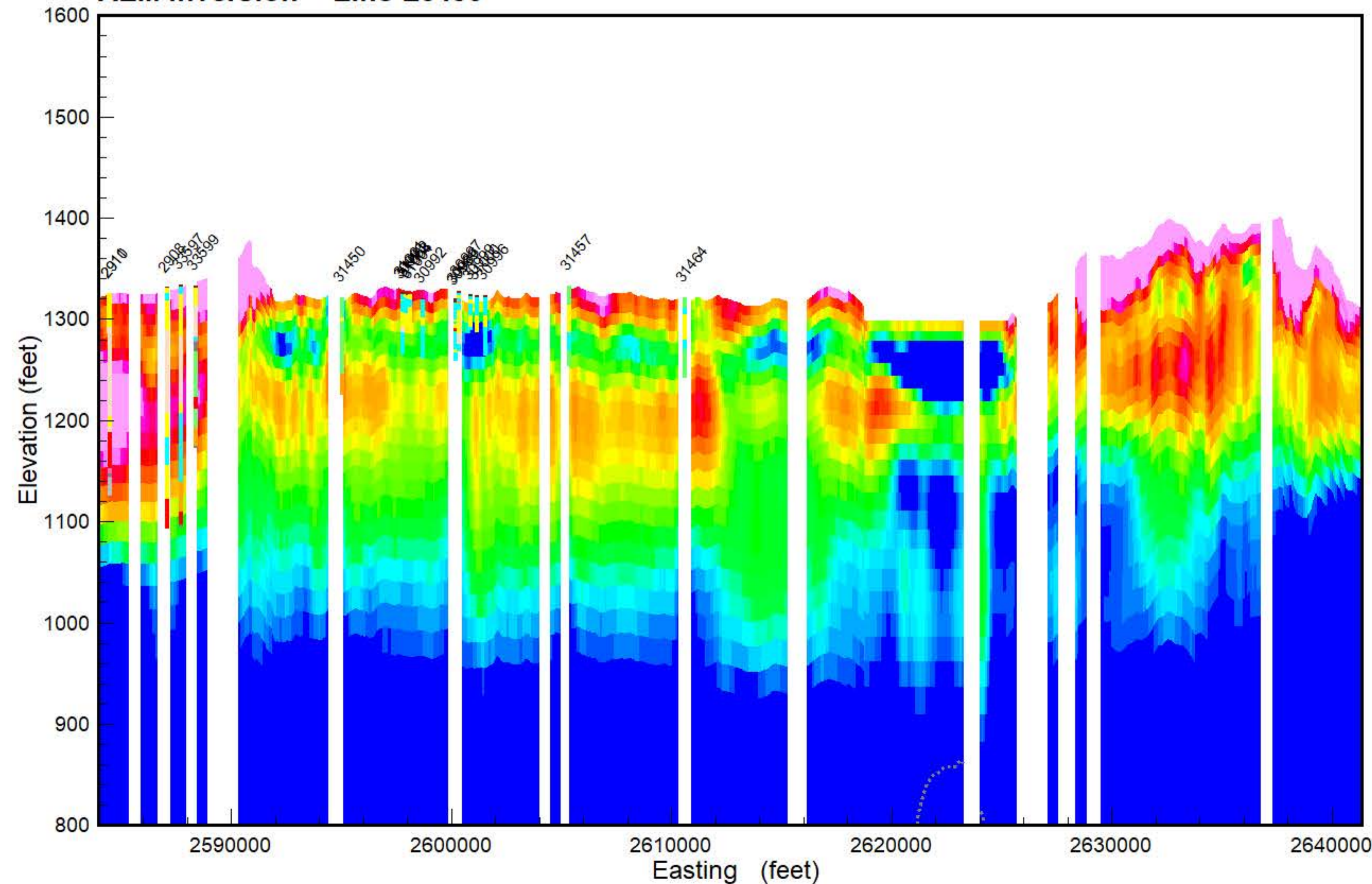
**Flight Path Line L6450**



**Spiritwood South Flight Area**



**AEM Inversion Line L6450**



**GEOTECH**

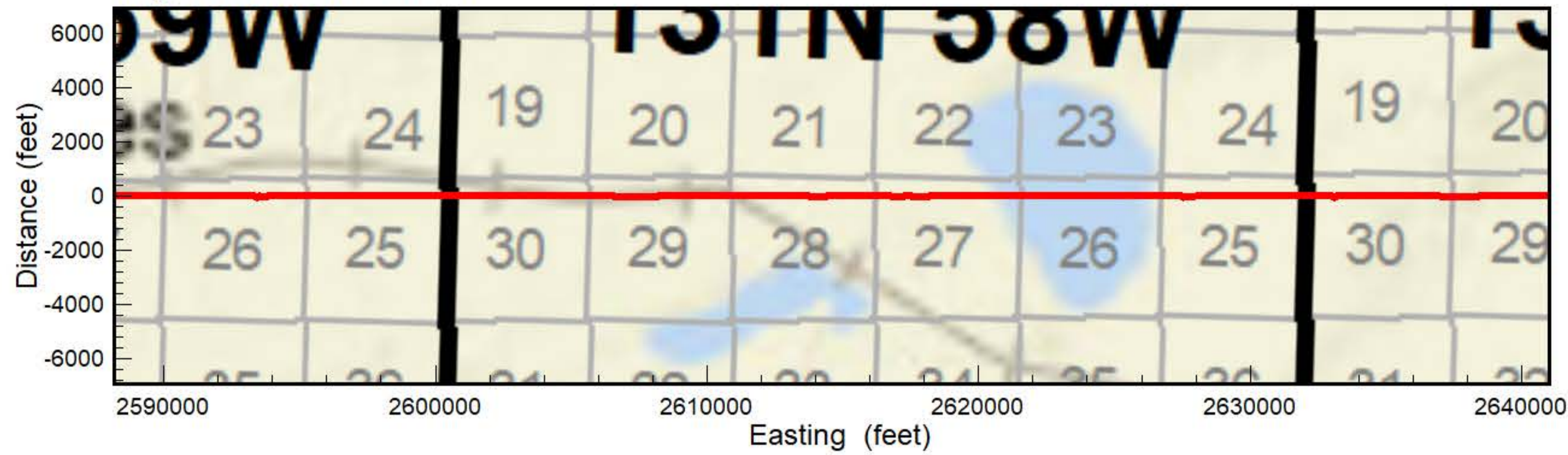
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
LIGNITE
COBBLES
BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
SHALE
BEDROCK
GRAVEL
SAND & GRAVEL
SAND
INTERBEDDED
SILT
CLAY
TILL
FILL
TOPSOIL
NOSAMPLE

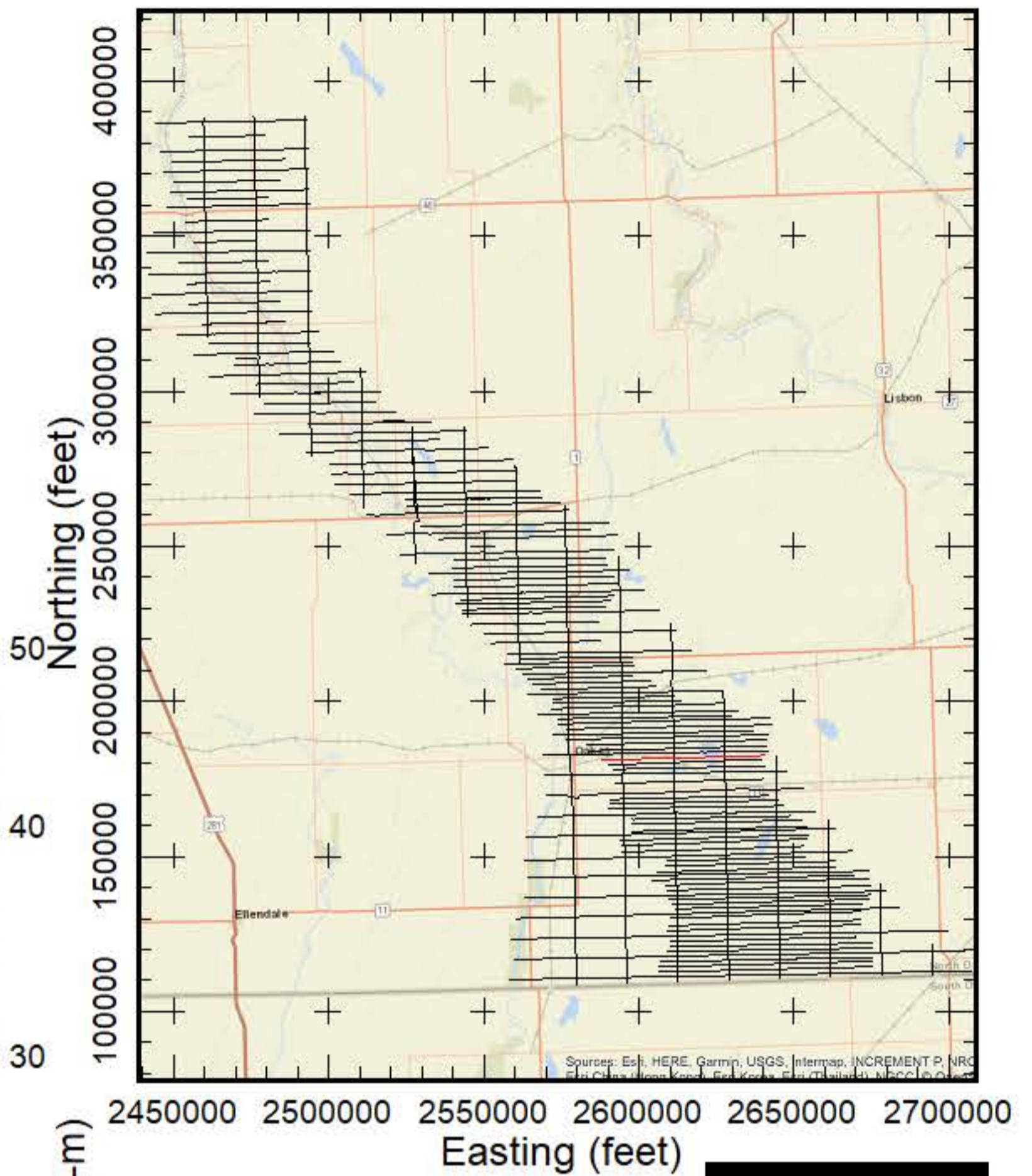
**AGF**  
Aqua Geo Frameworks



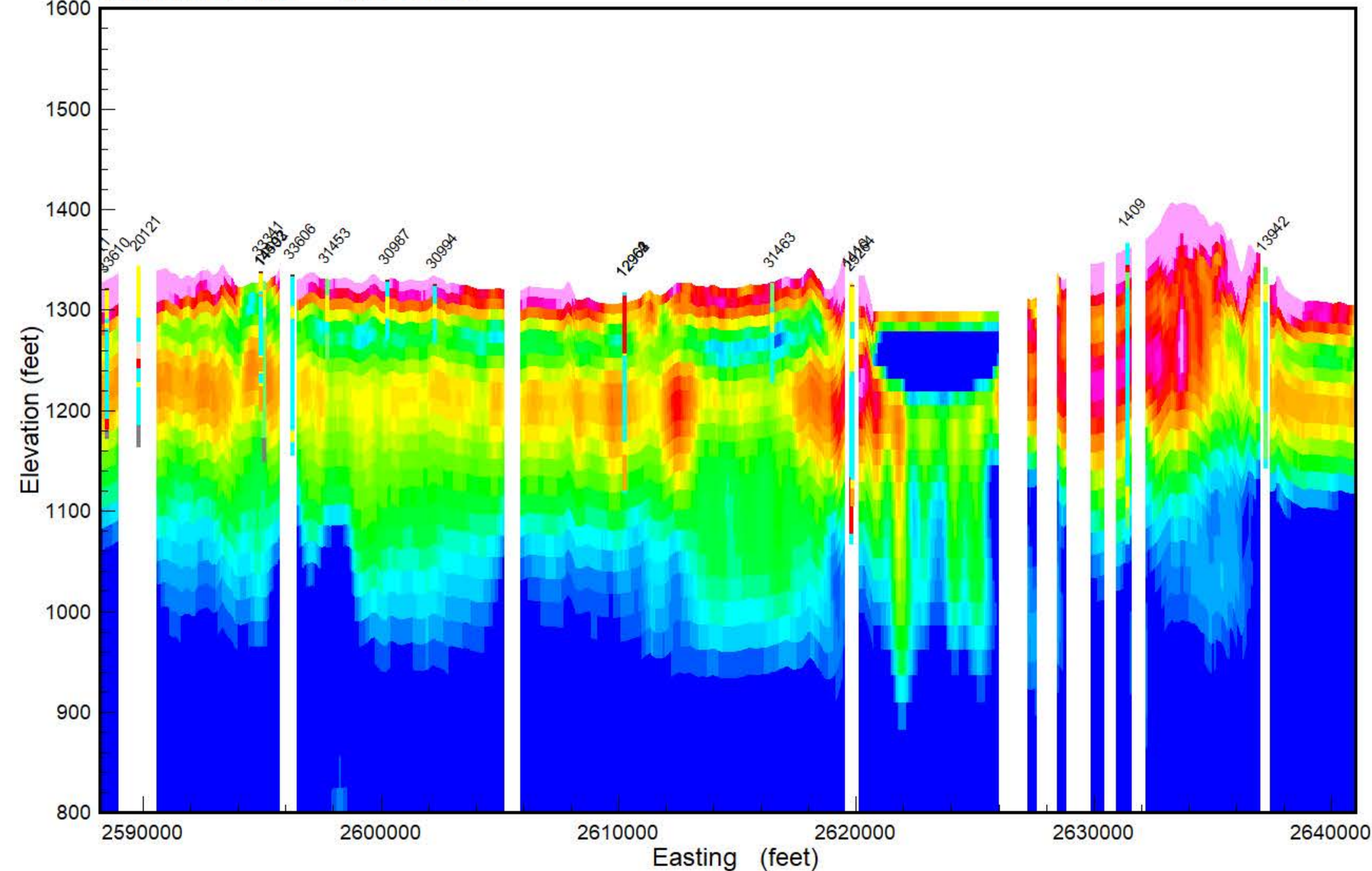
**Flight Path Line L6460**



**Spiritwood South Flight Area**



**AEM Inversion Line L6460**



**GEOTECH**

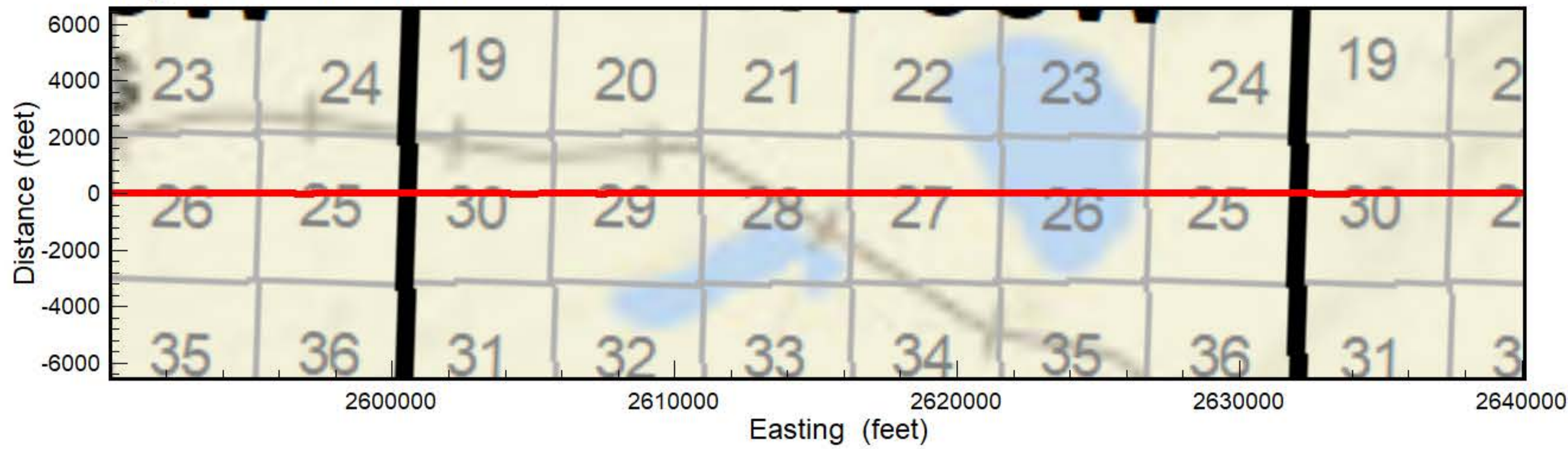
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

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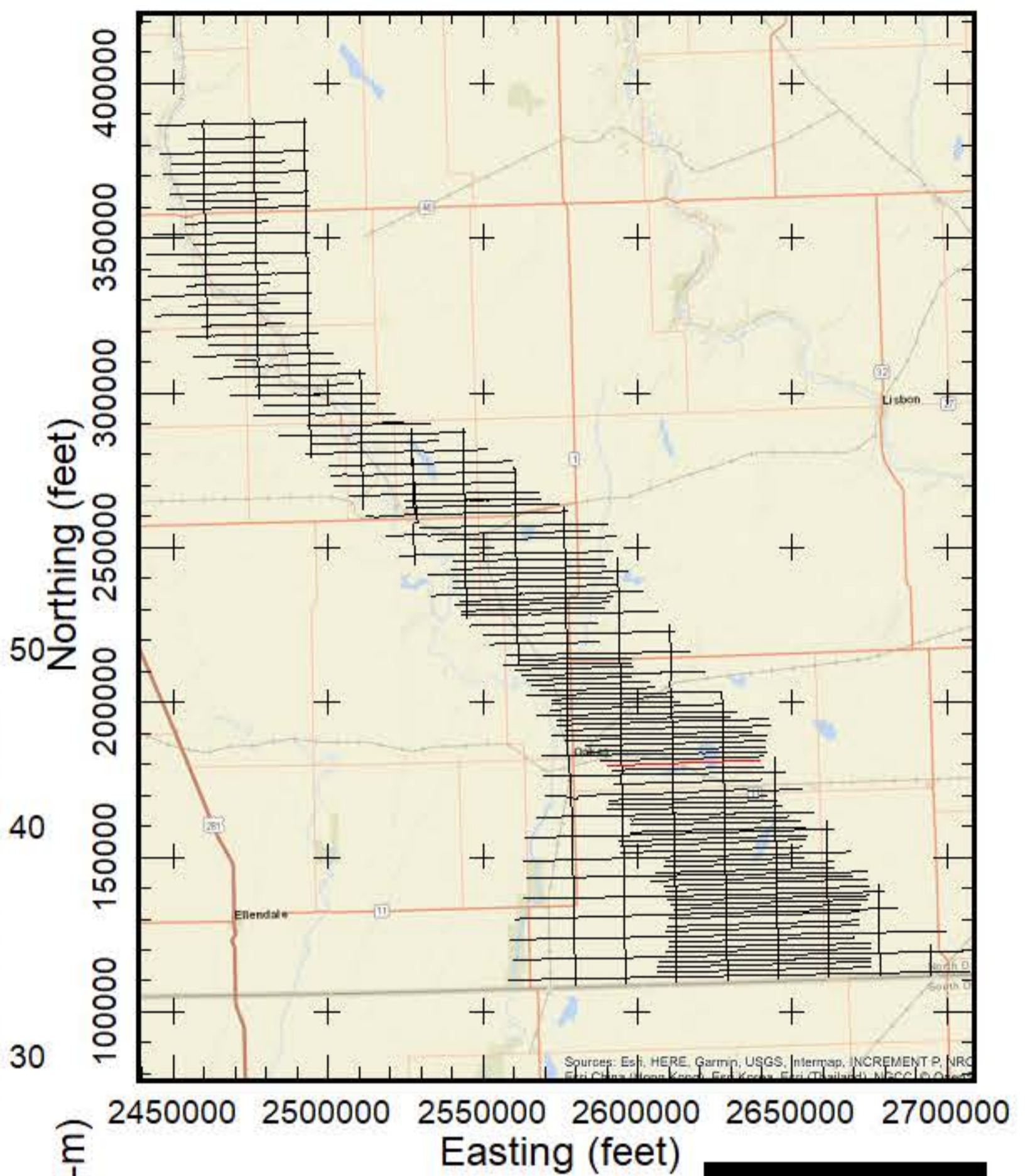
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Aqua Geo Frameworks



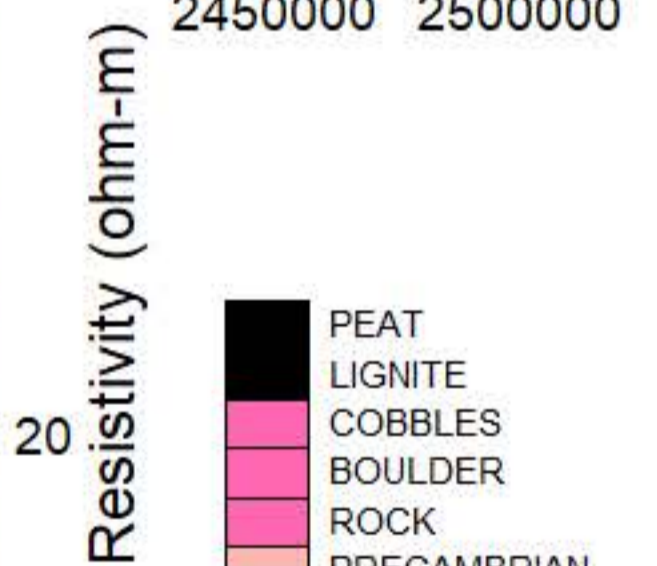
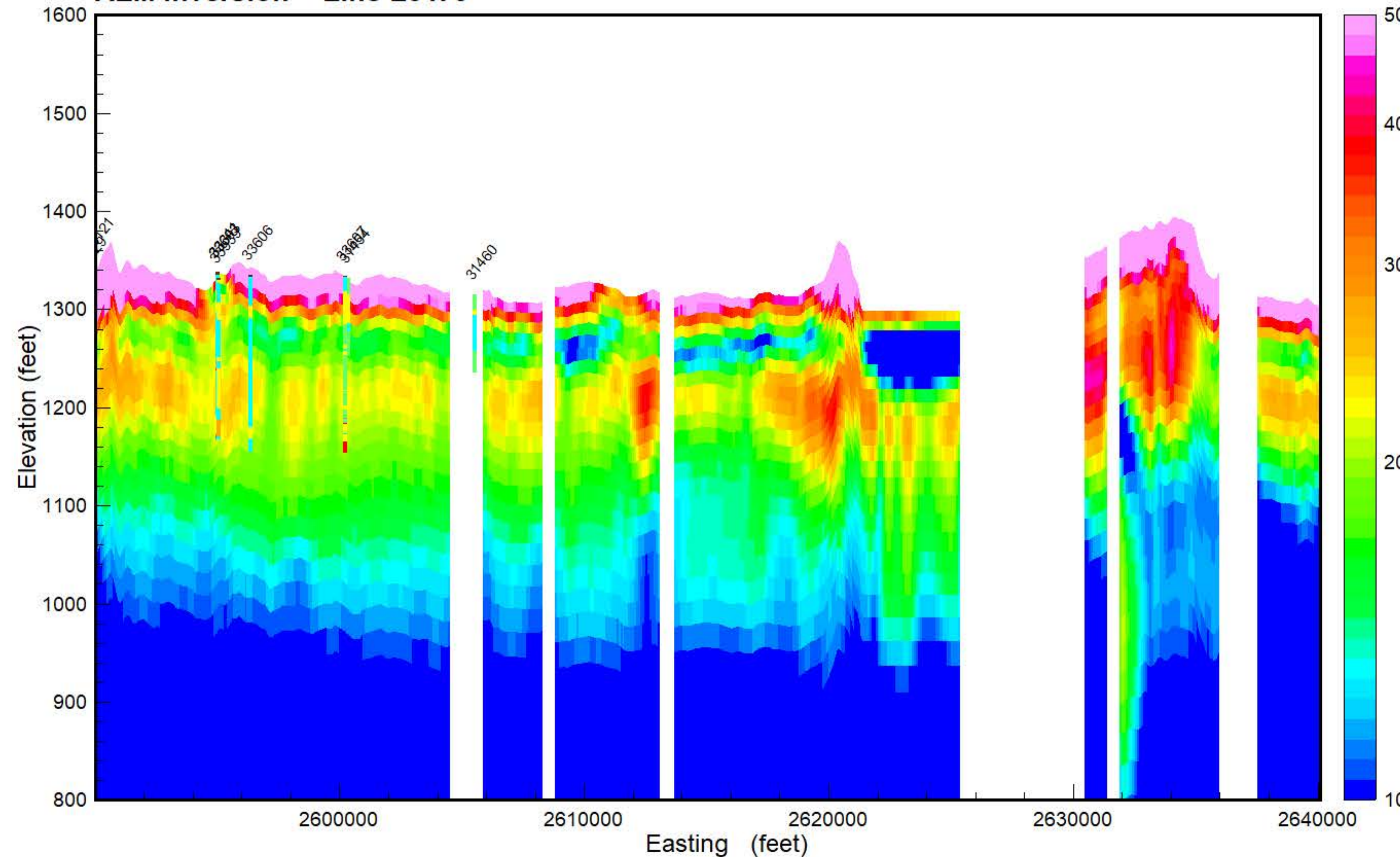
**Flight Path Line L6470**



**Spiritwood South Flight Area**



**AEM Inversion Line L6470**



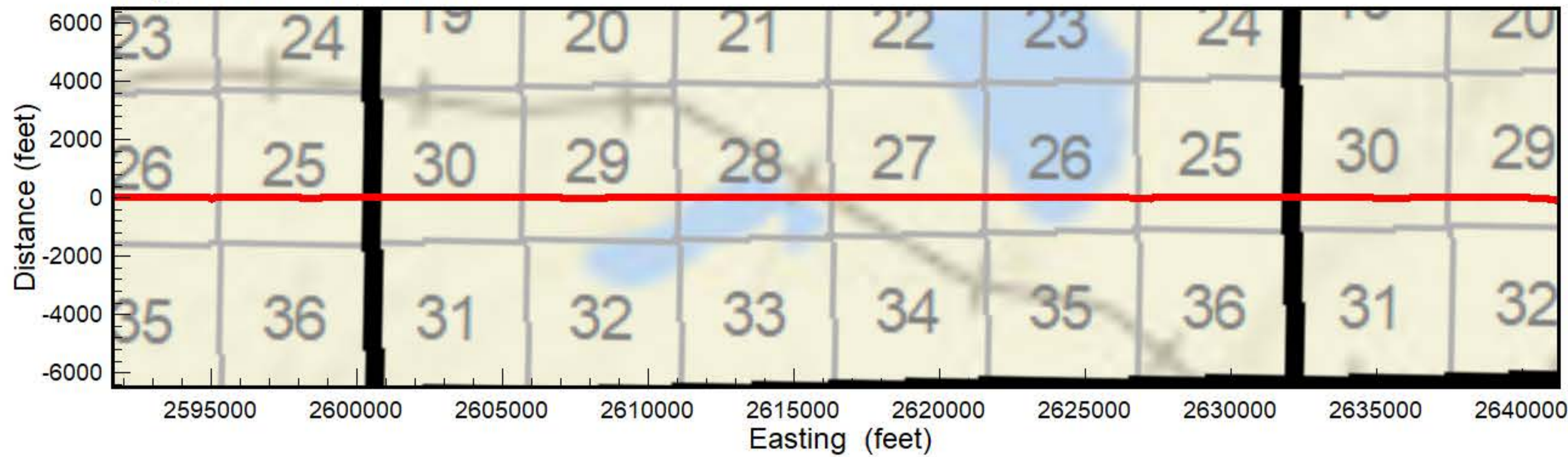
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

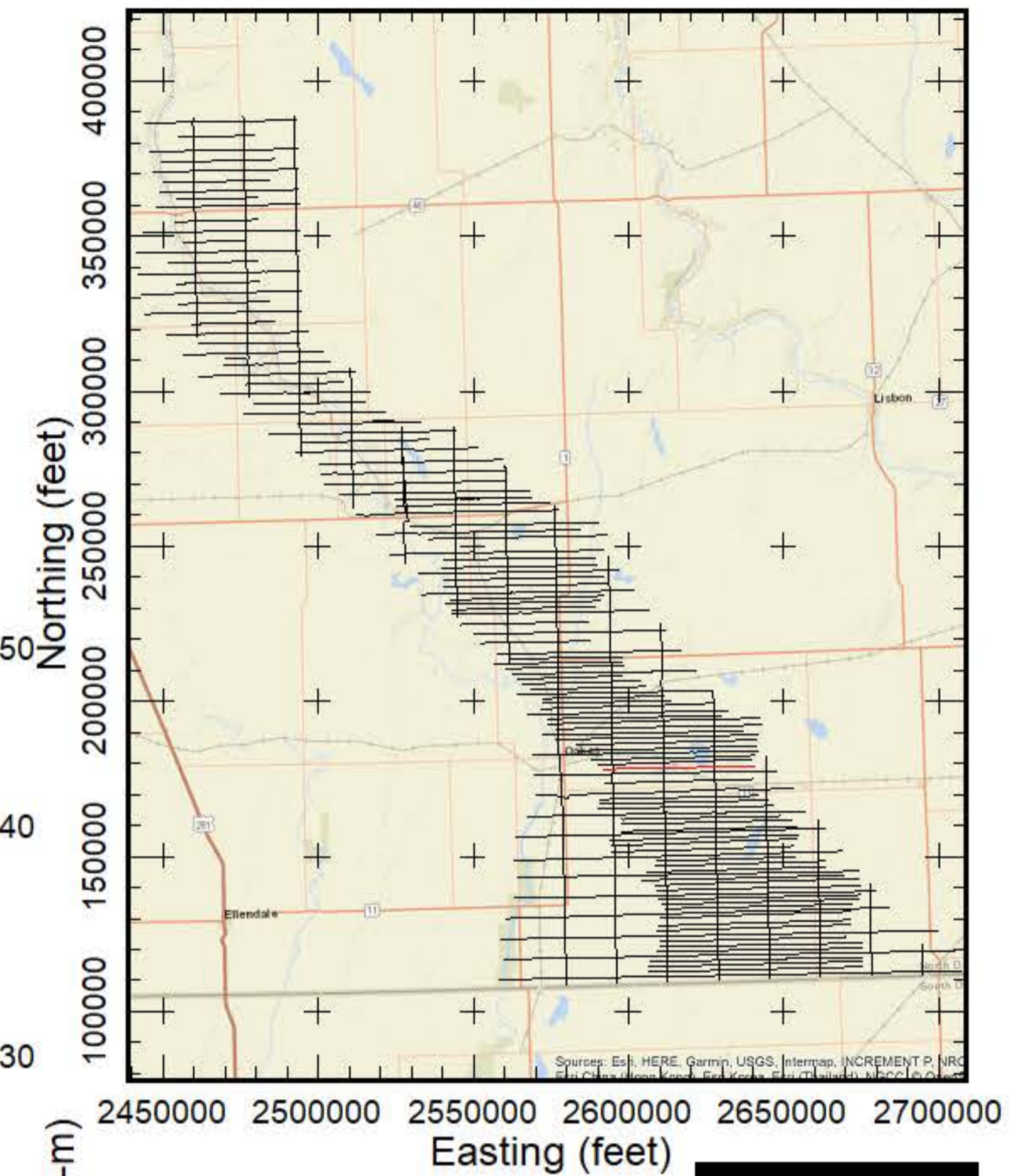




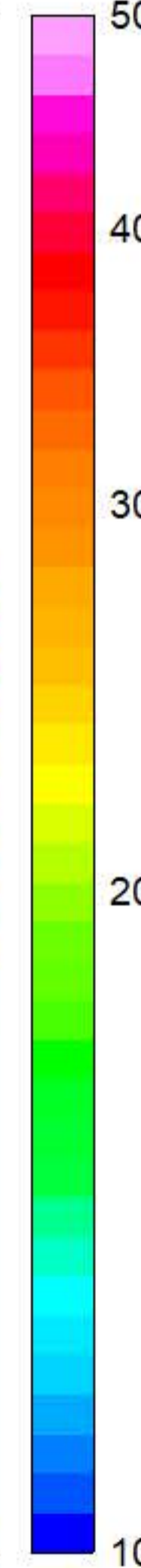
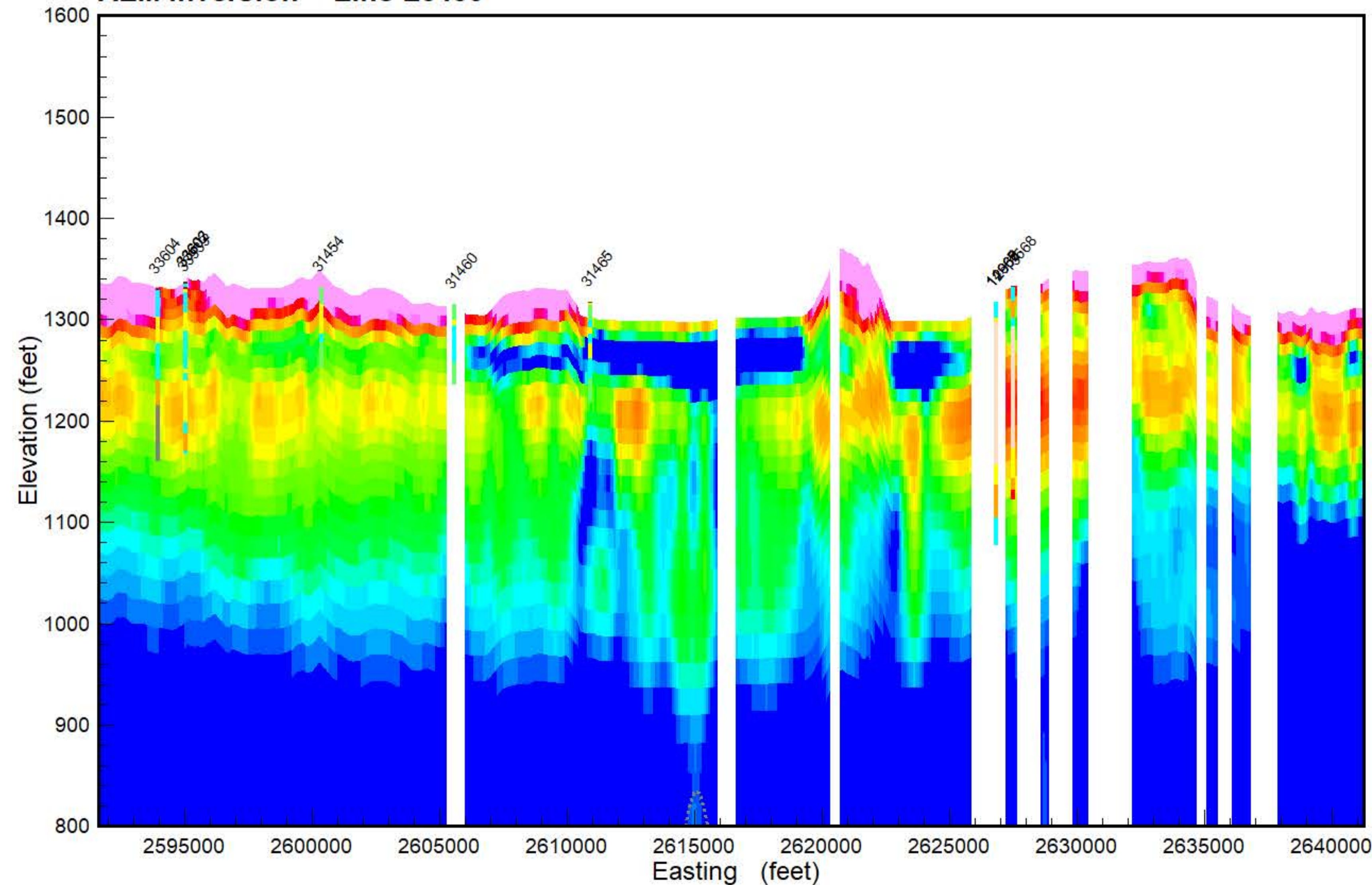
**Flight Path Line L6480**



**Spiritwood South Flight Area**



**AEM Inversion Line L6480**



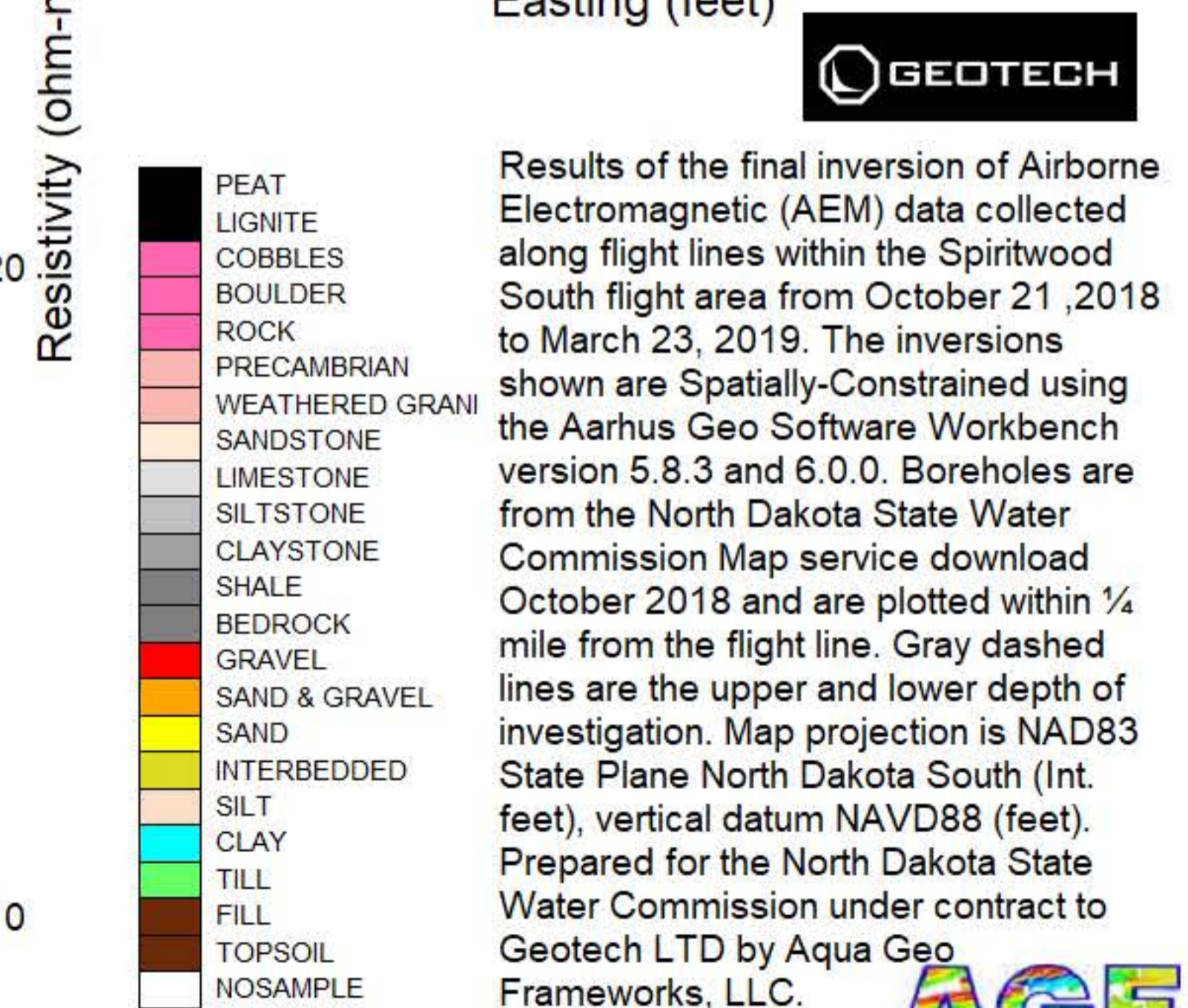
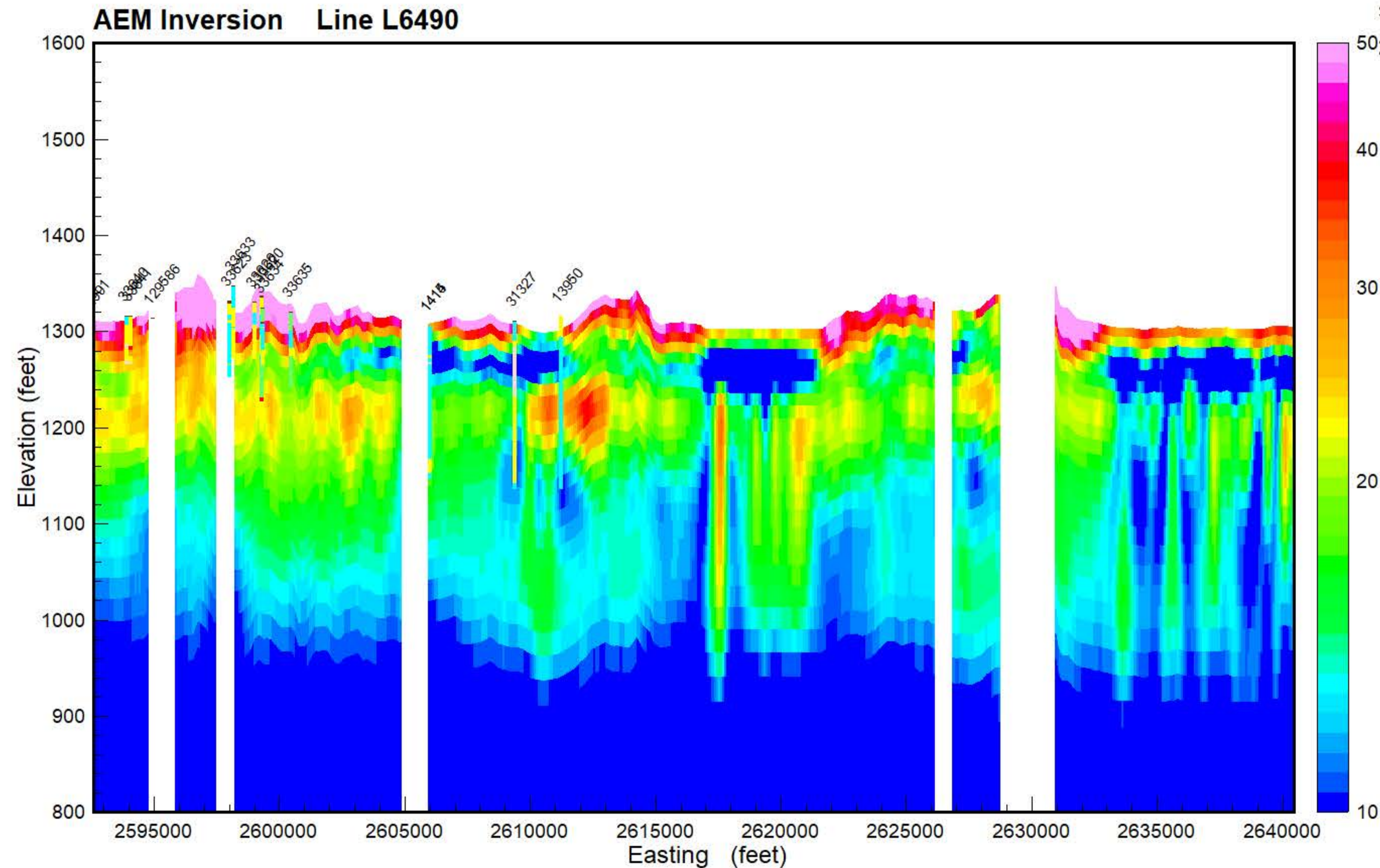
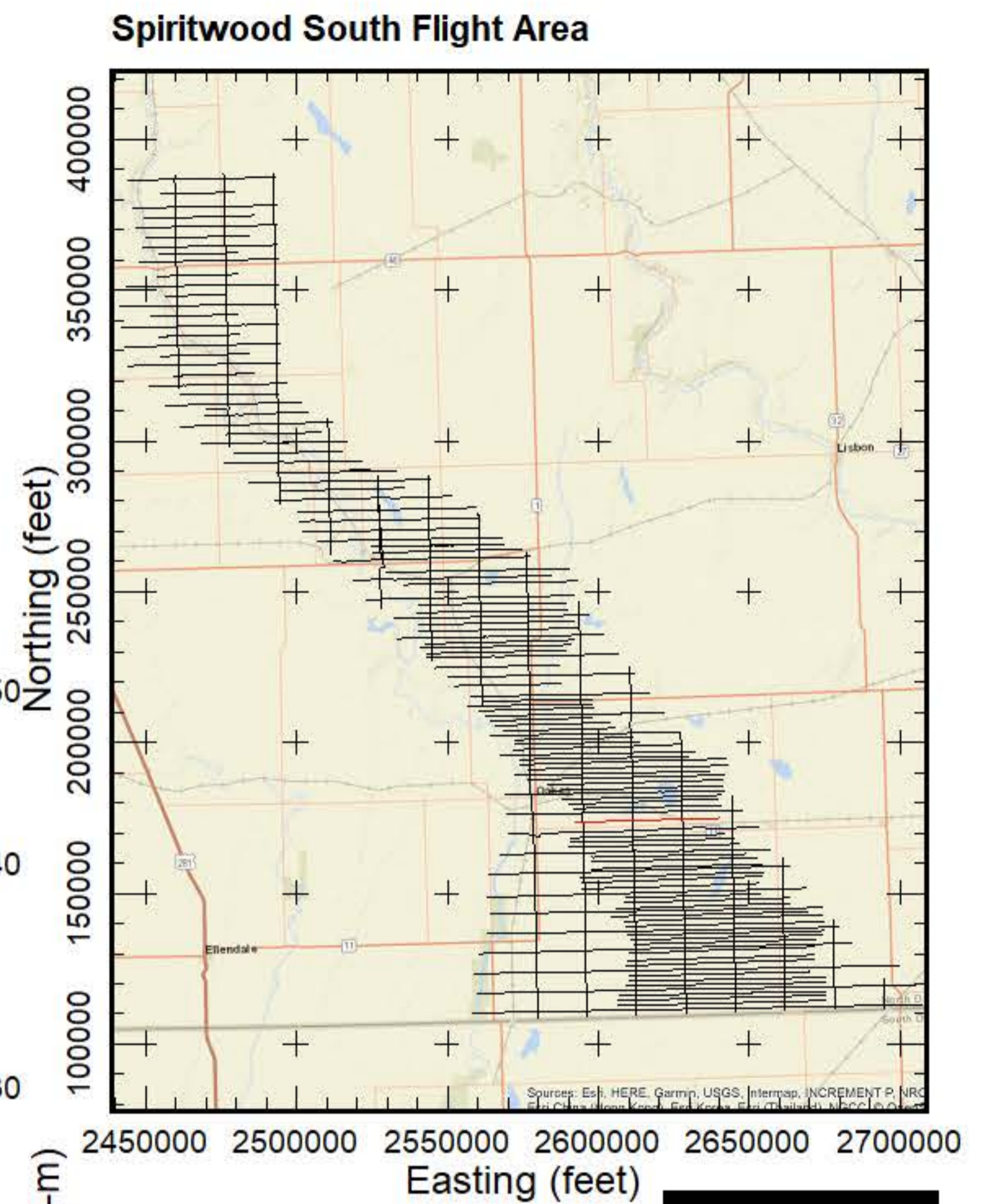
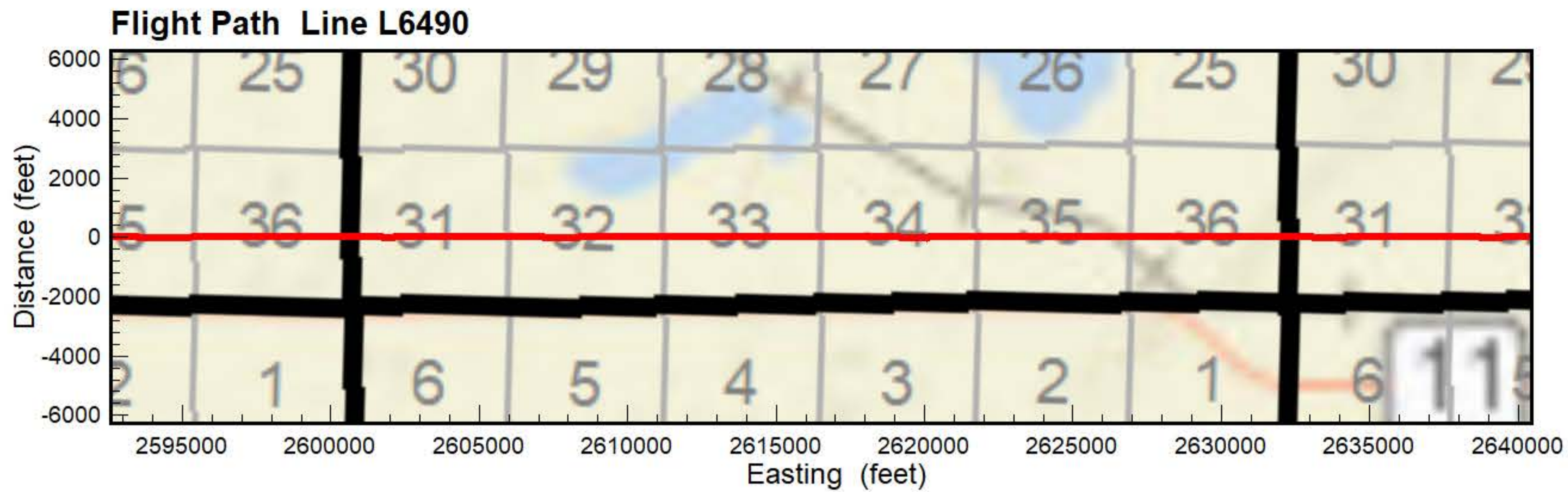
**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

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WEATHERED GRANITE
SANDSTONE
LIMESTONE
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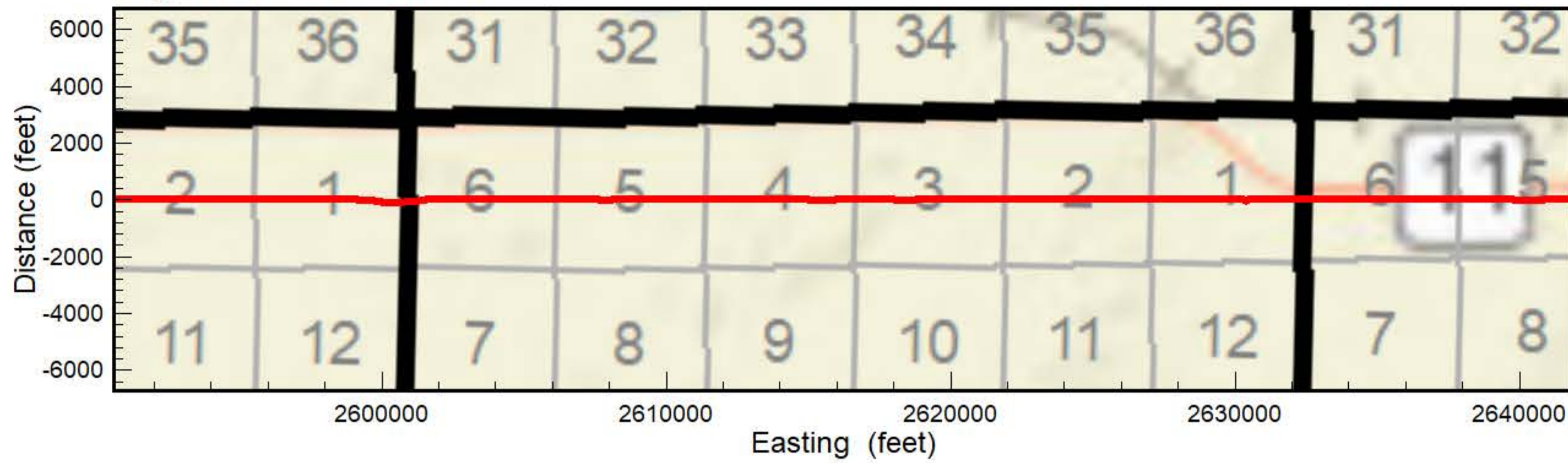
**AGF**  
Aqua Geo Frameworks



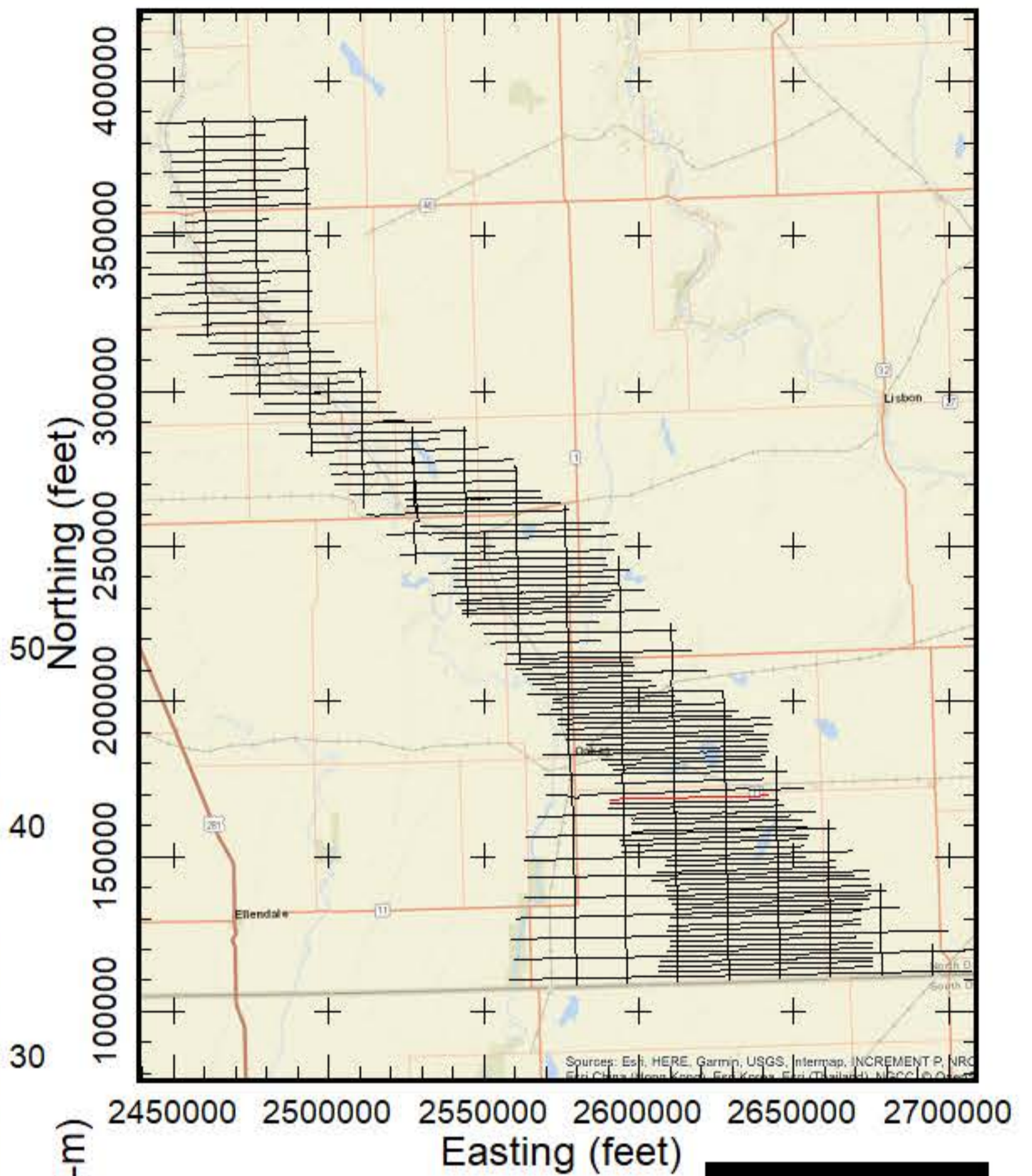




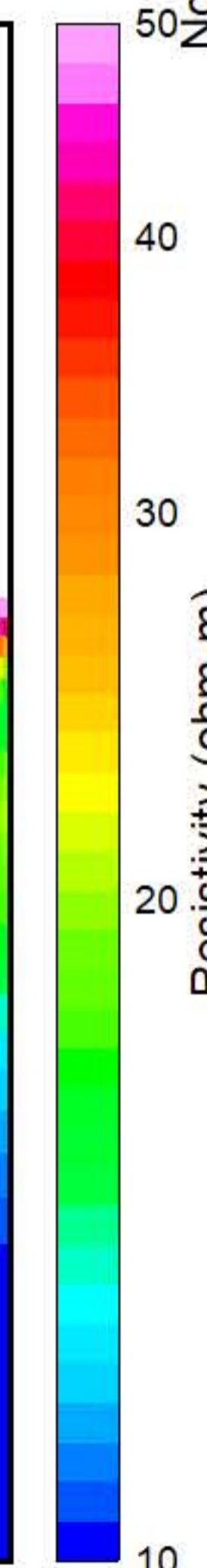
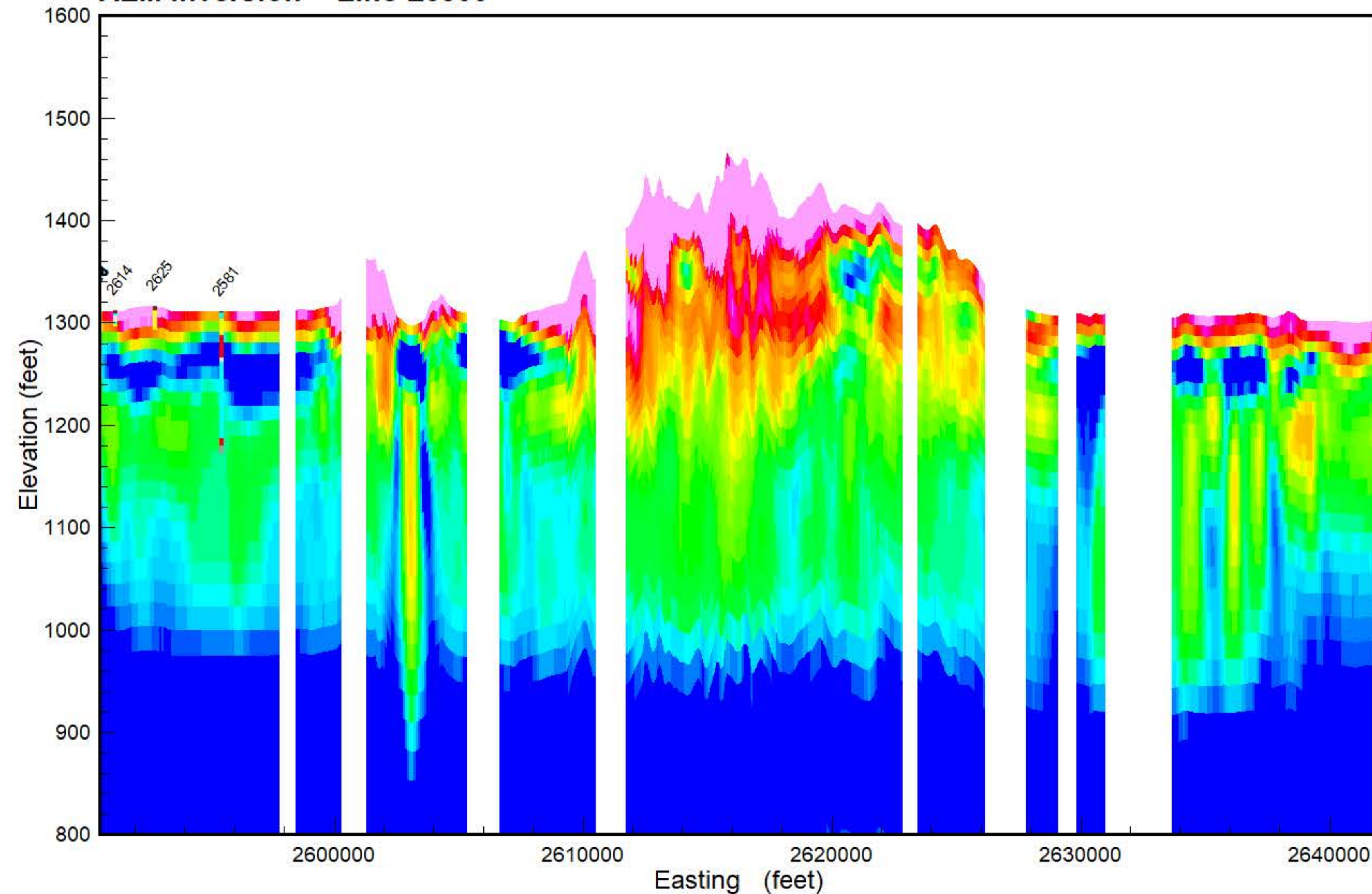
**Flight Path Line L6500**



**Spiritwood South Flight Area**



**AEM Inversion Line L6500**

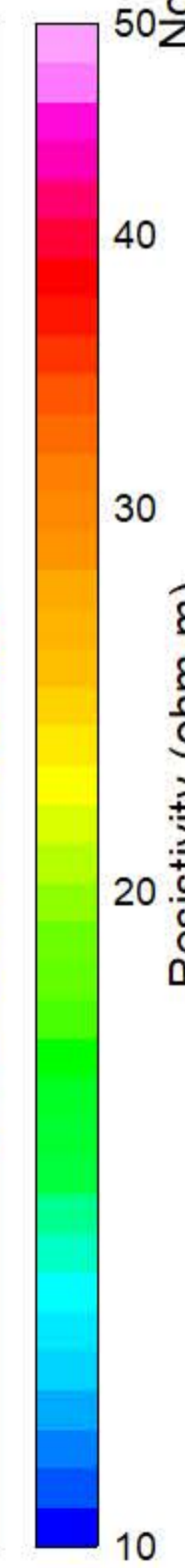
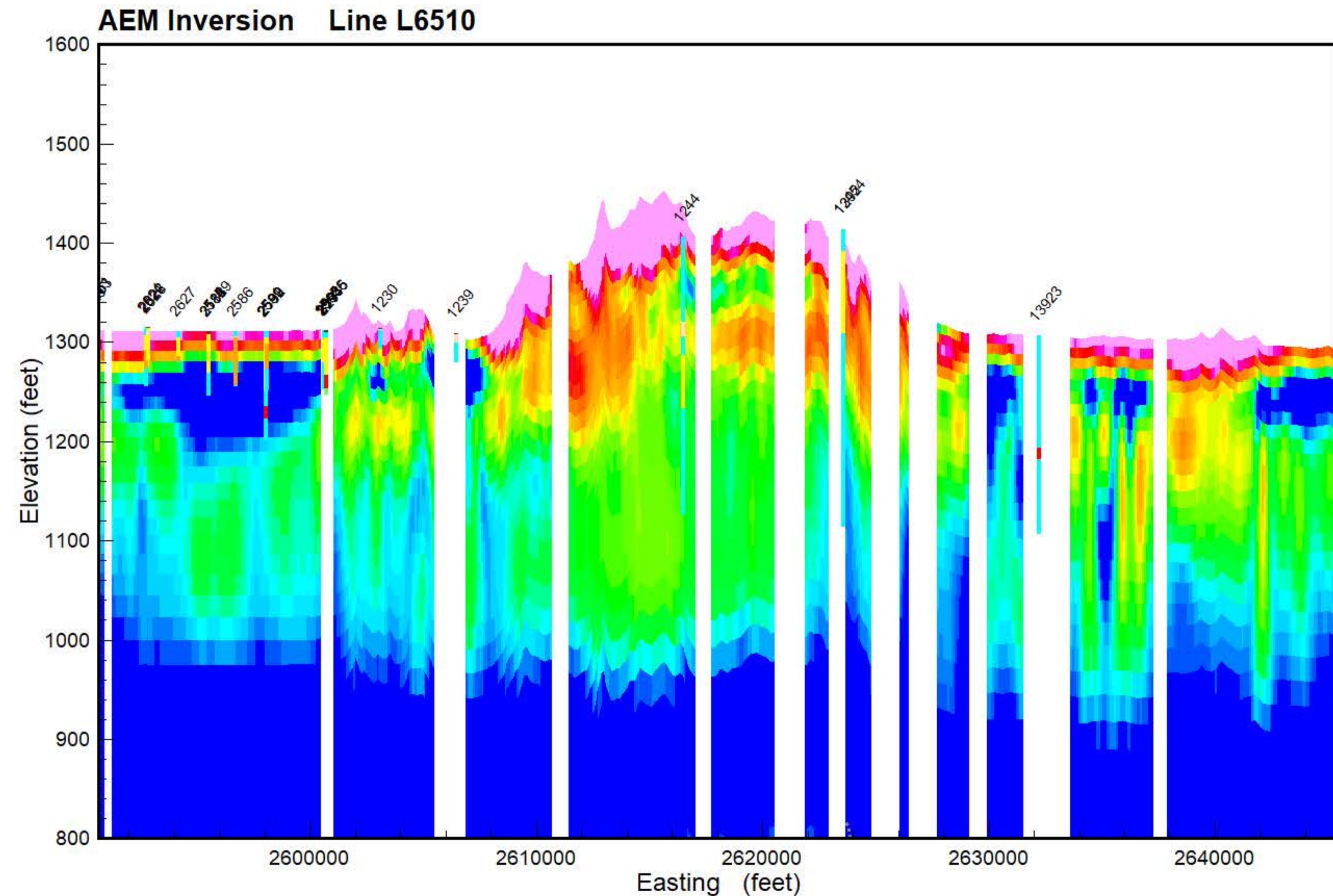
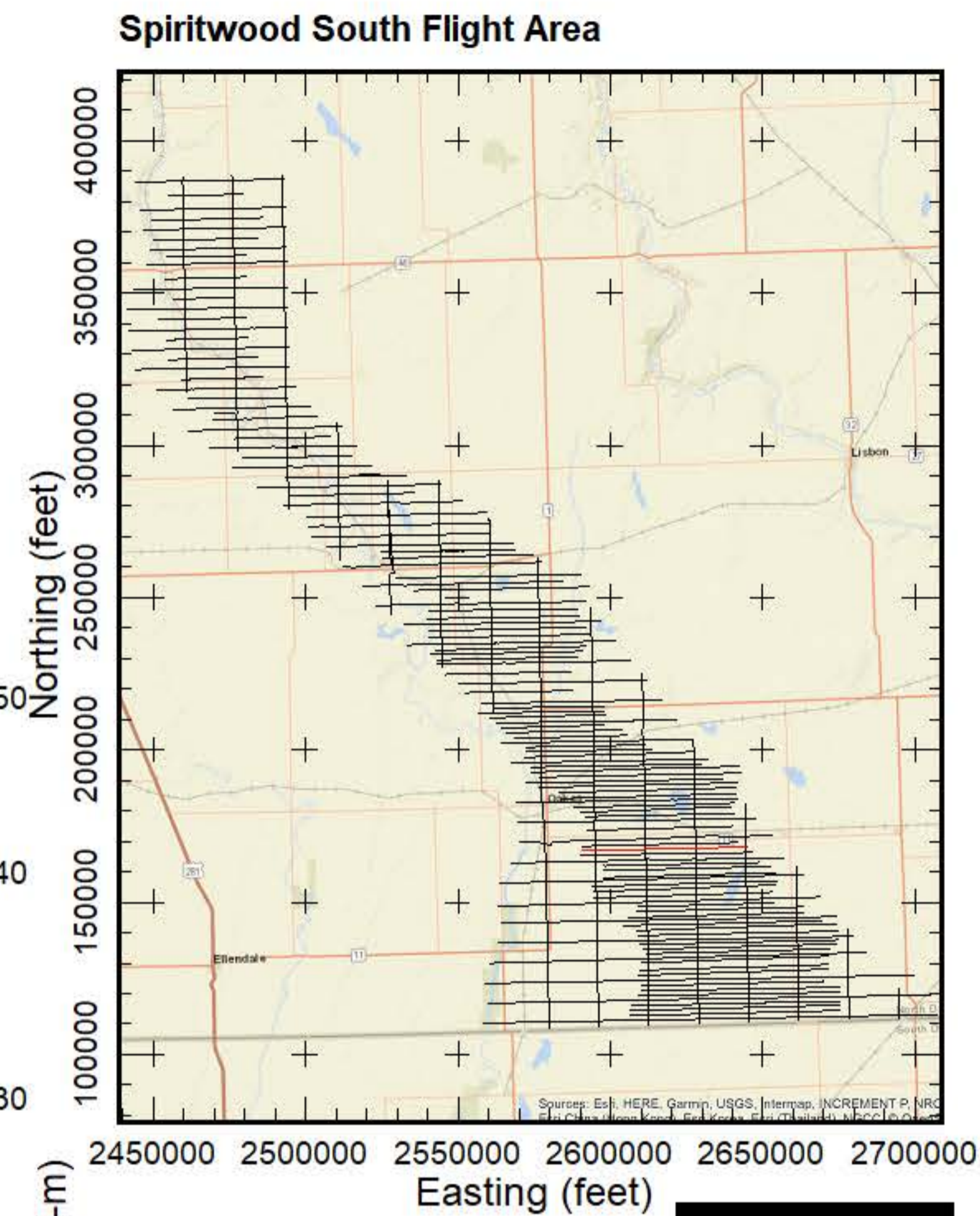
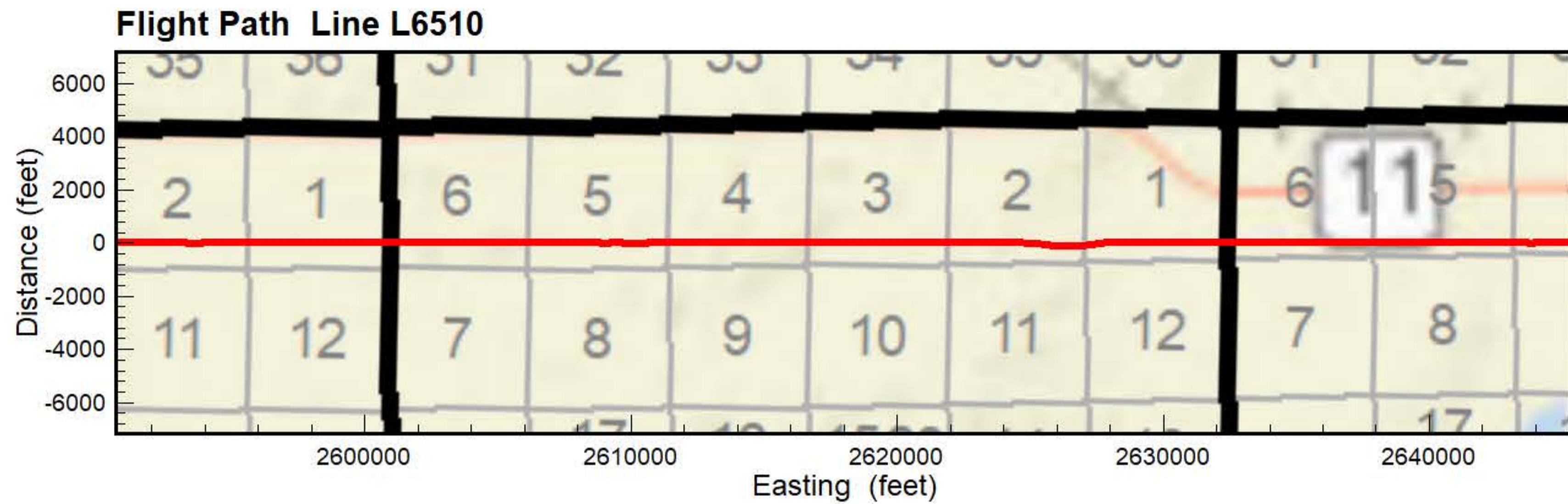


- PEAT
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- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
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- LIMESTONE
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- GRAVEL
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- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.







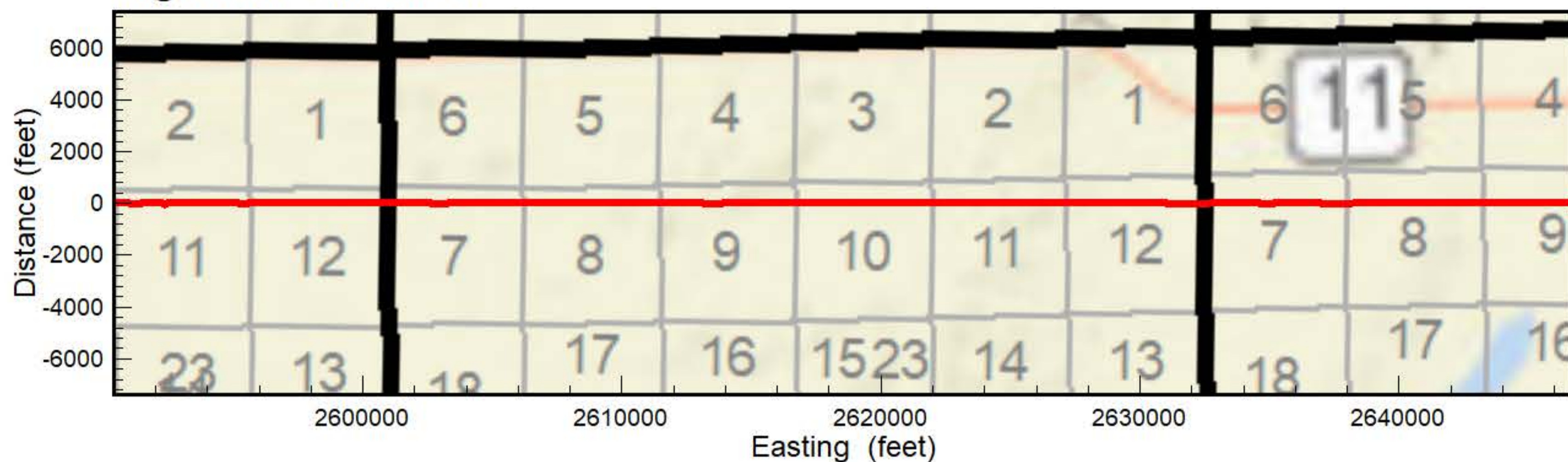
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- BOULDER
- ROCK
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- WEATHERED GRANITE
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- SILTSTONE
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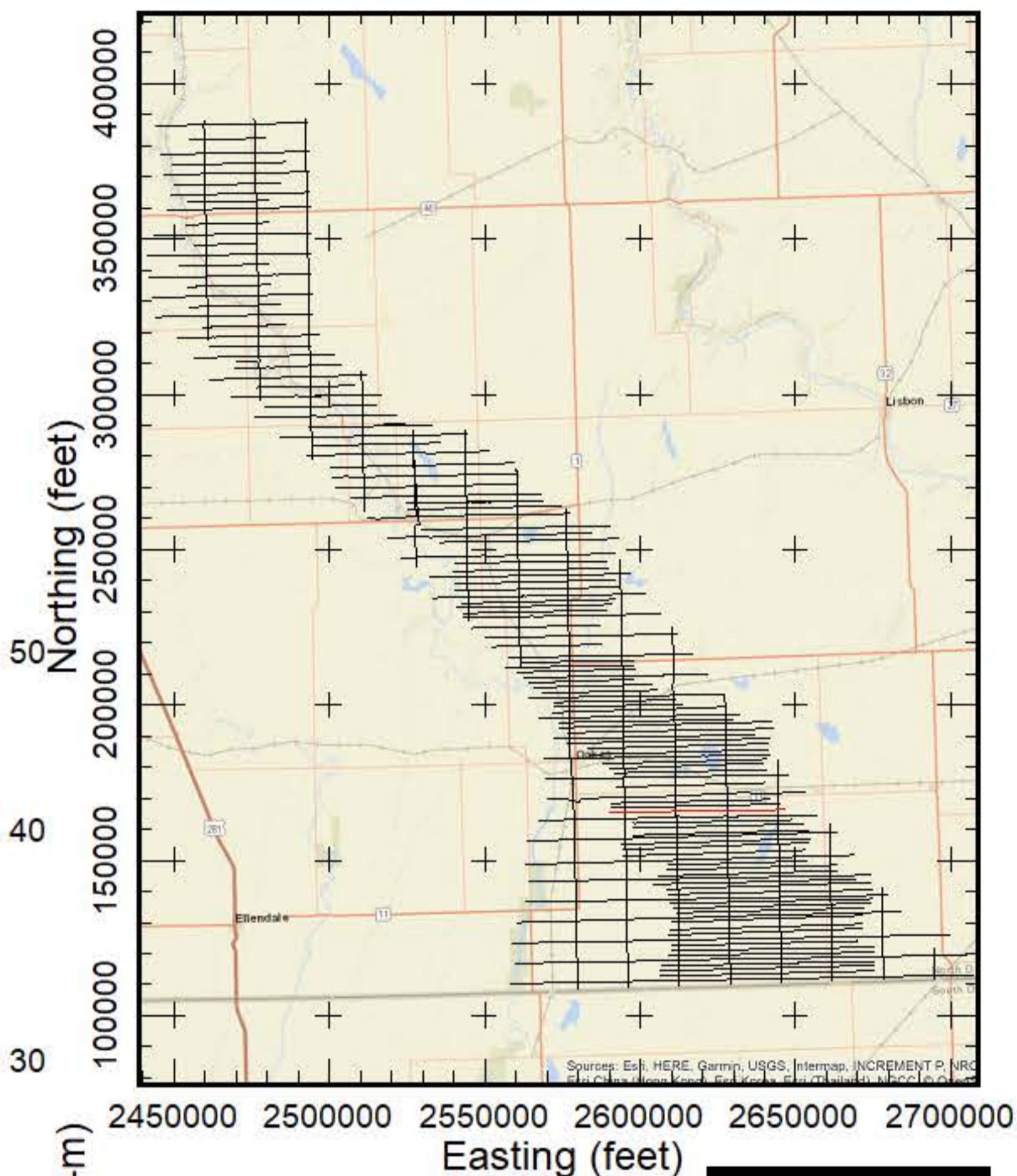




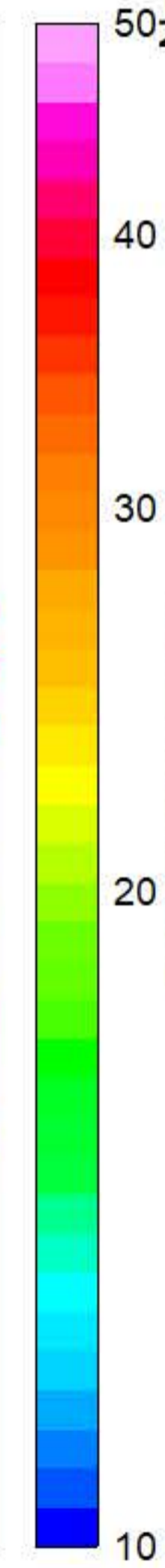
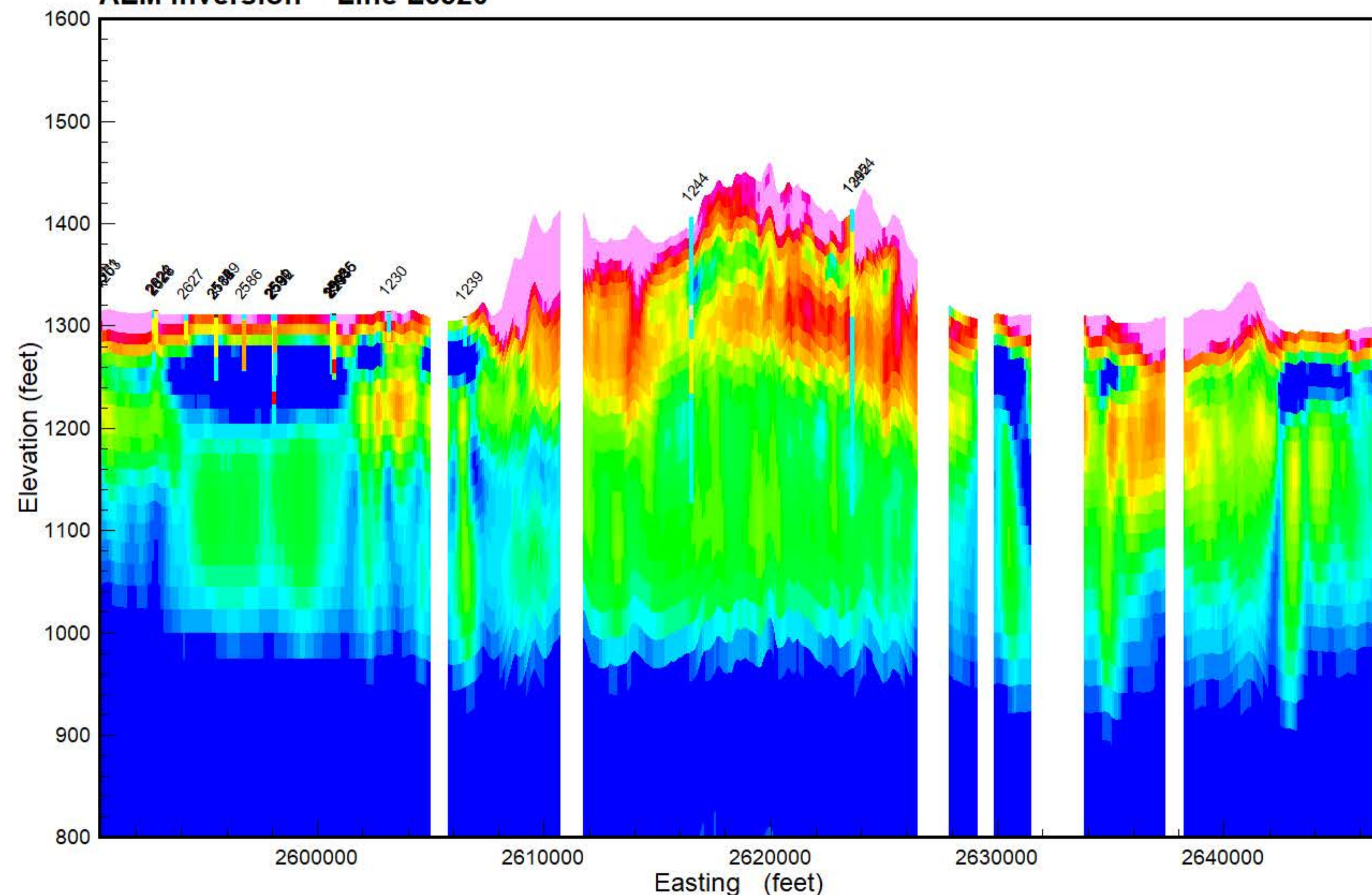
**Flight Path Line L6520**



**Spiritwood South Flight Area**



**AEM Inversion Line L6520**



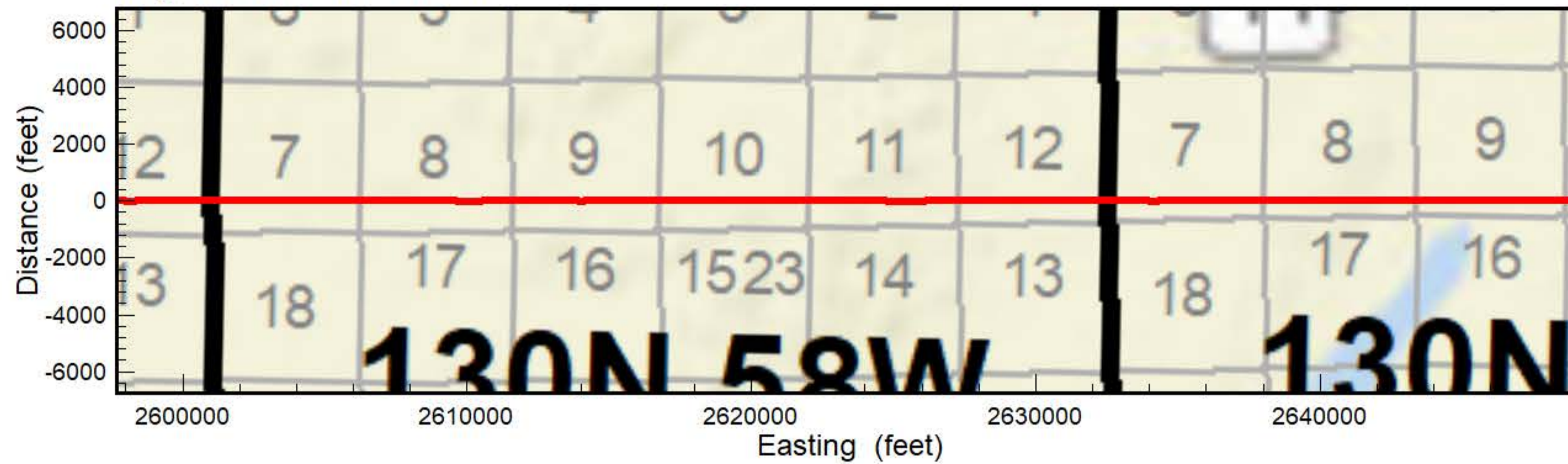
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- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

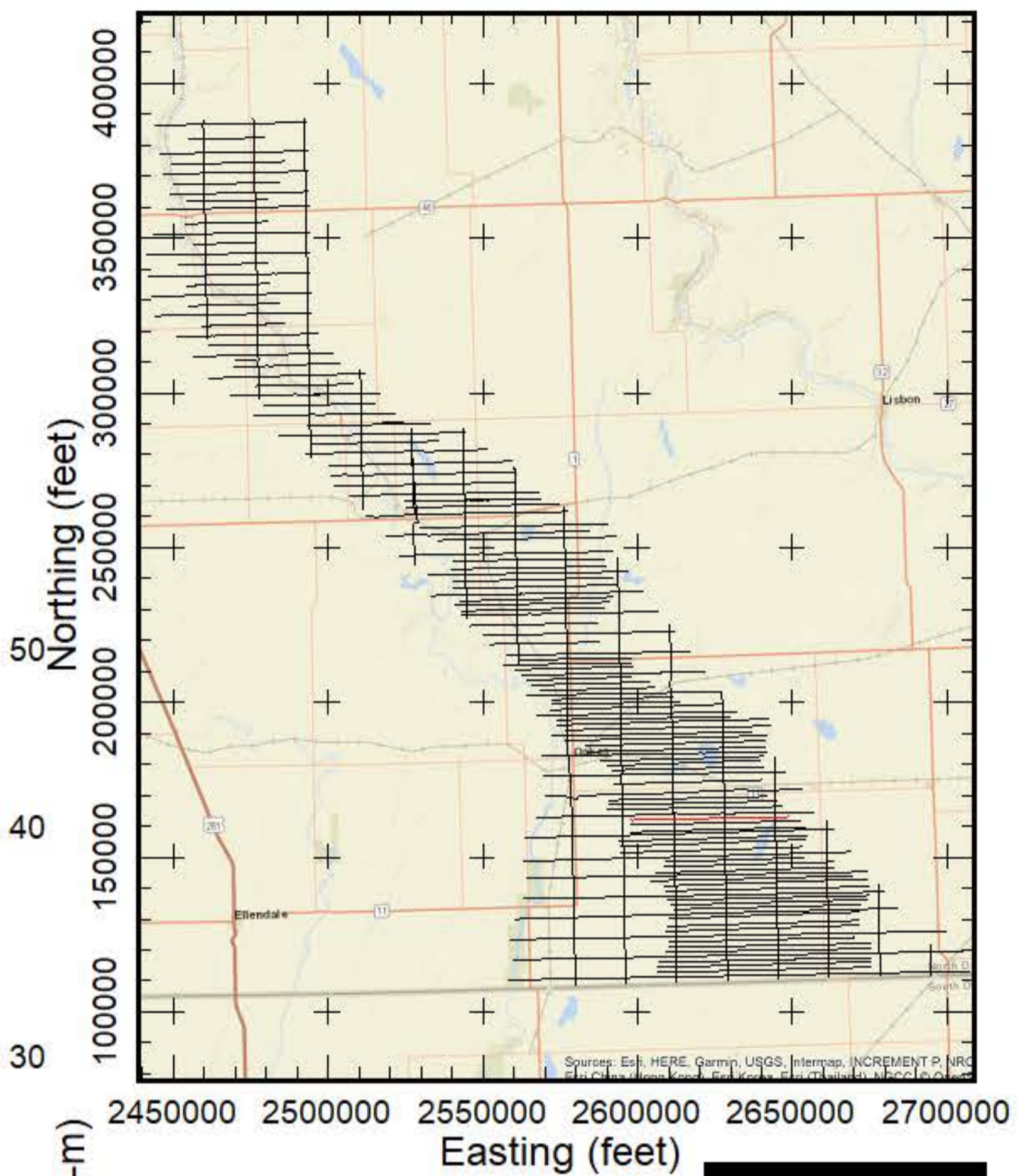




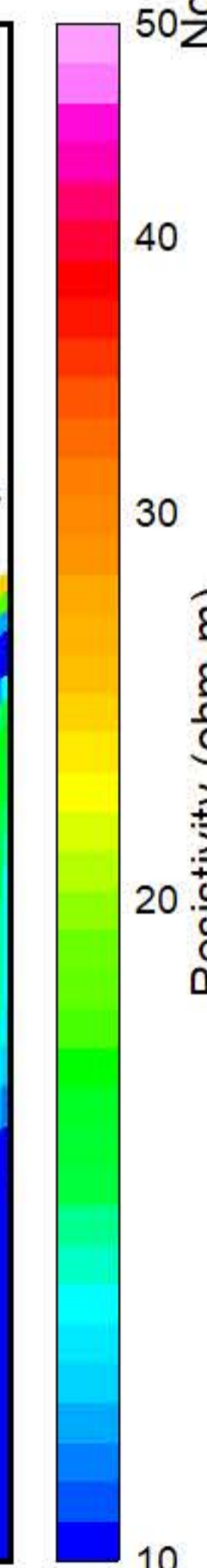
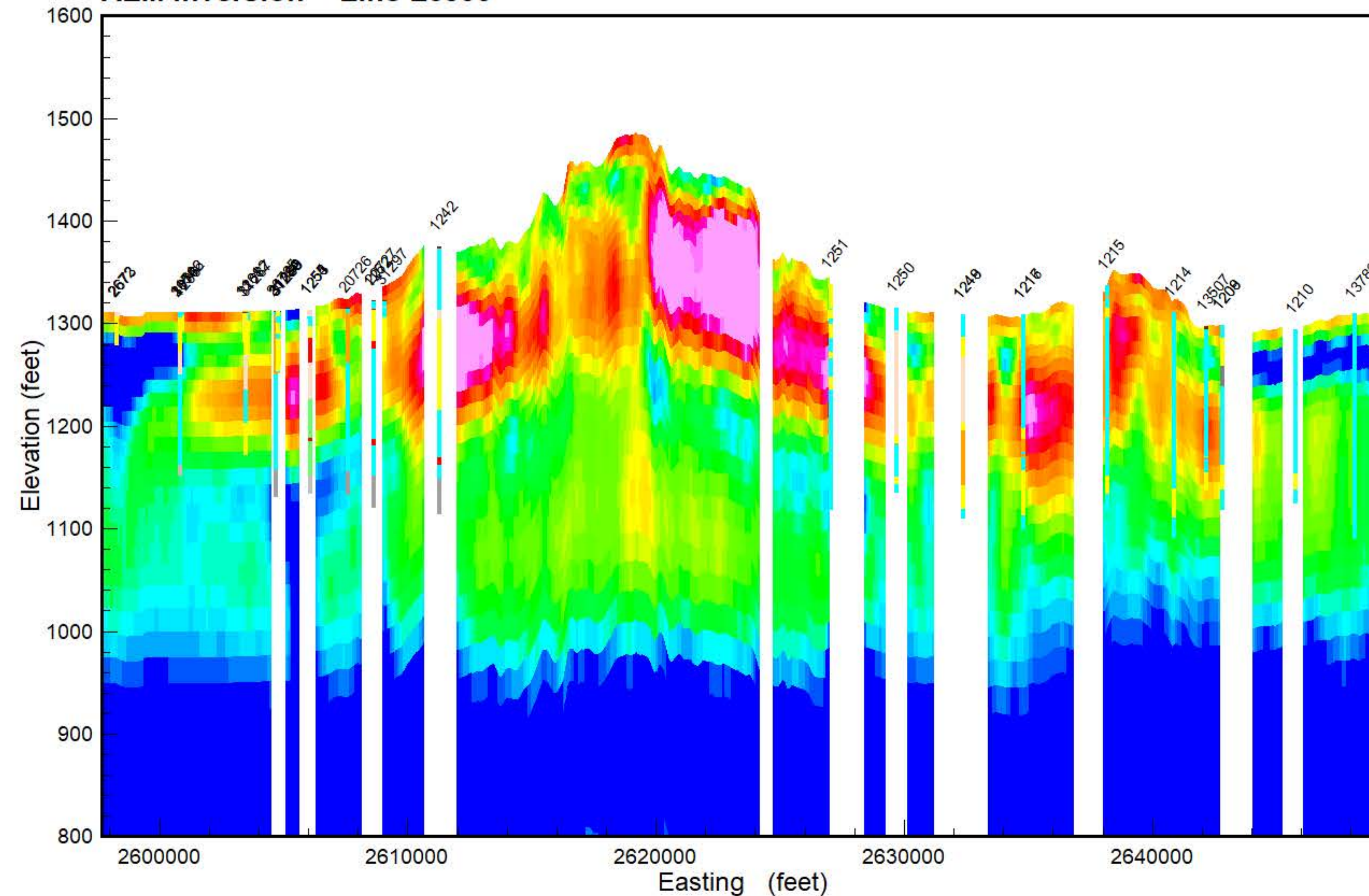
**Flight Path Line L6530**



**Spiritwood South Flight Area**



**AEM Inversion Line L6530**



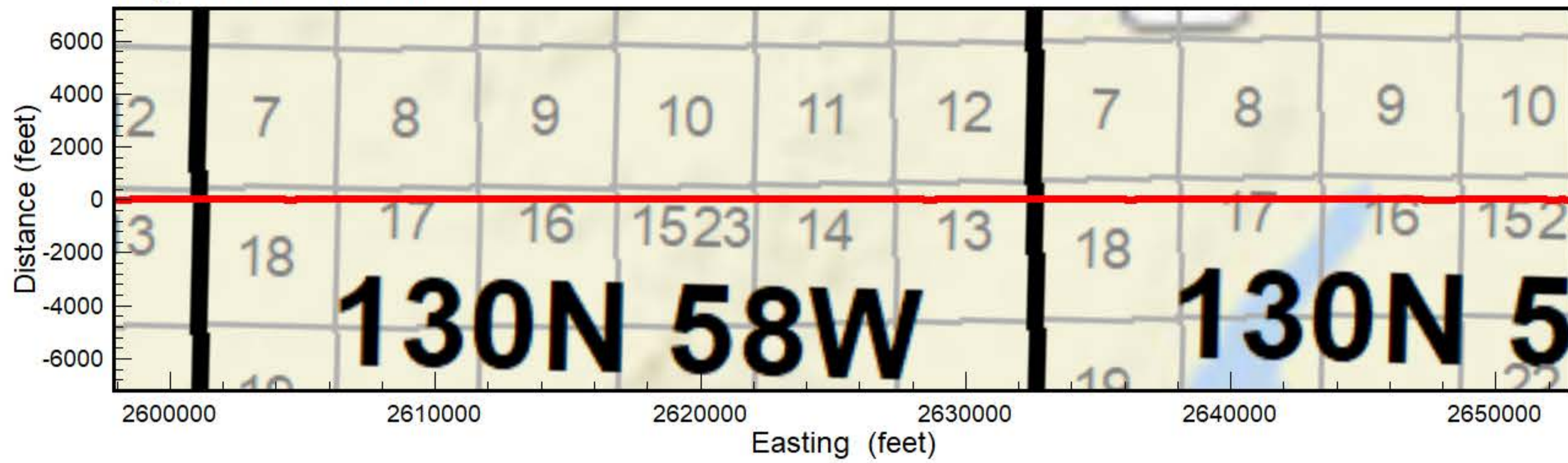
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
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- BEDROCK
- GRAVEL
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- SAND
- INTERBEDDED
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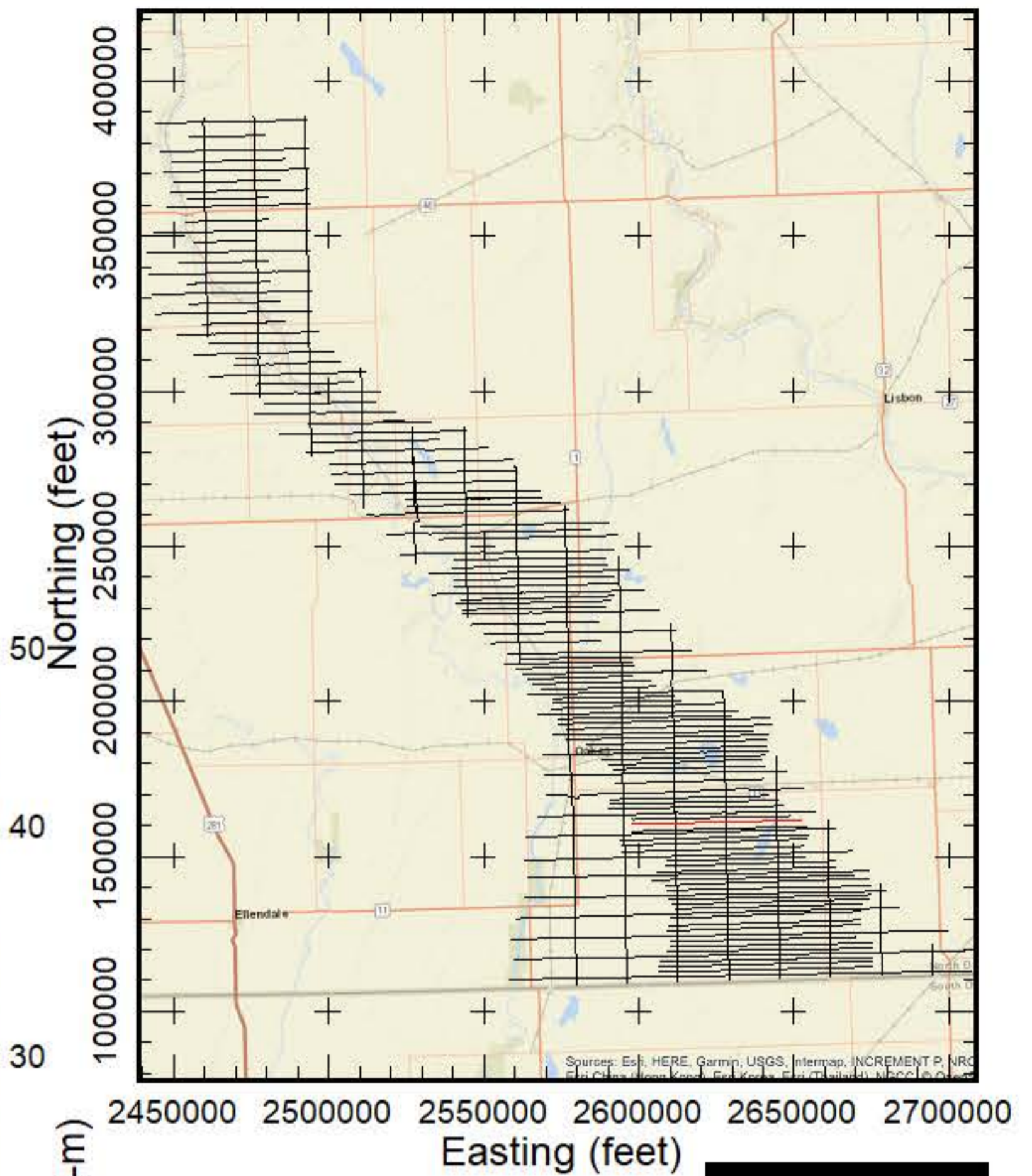




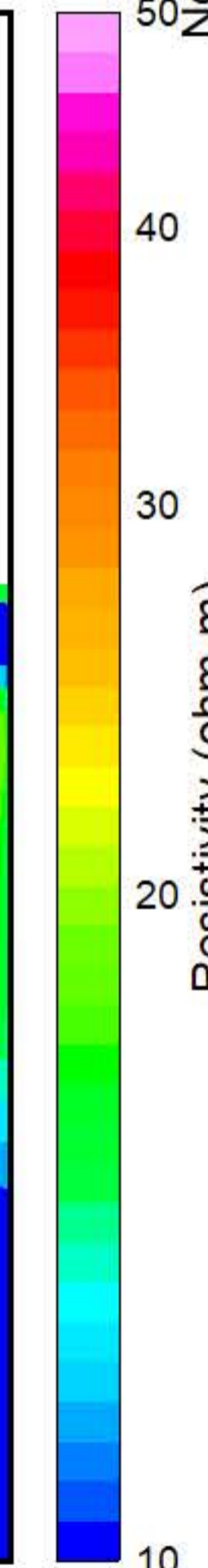
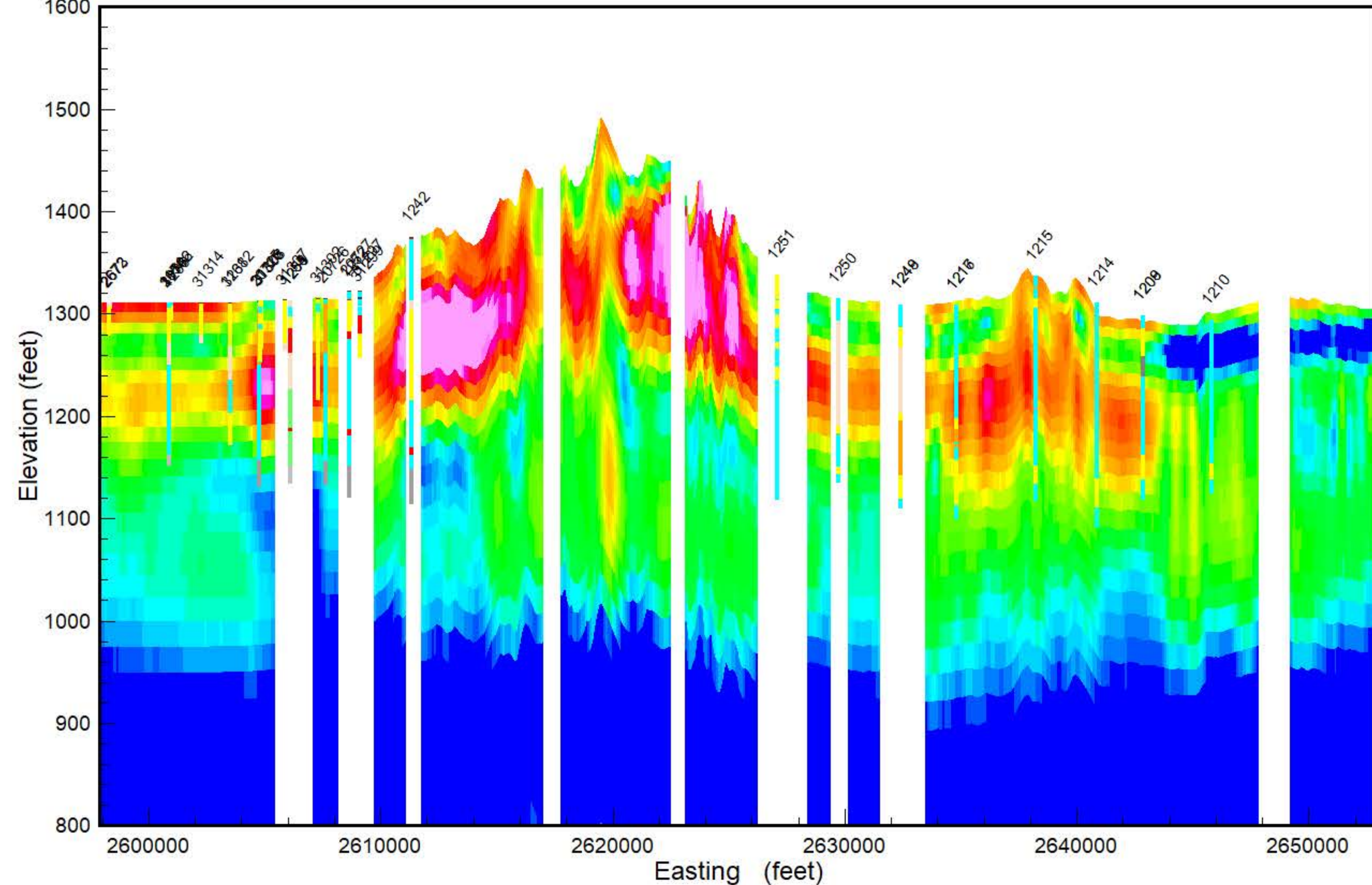
**Flight Path Line L6540**



**Spiritwood South Flight Area**



**AEM Inversion Line L6540**



**GEOTECH**

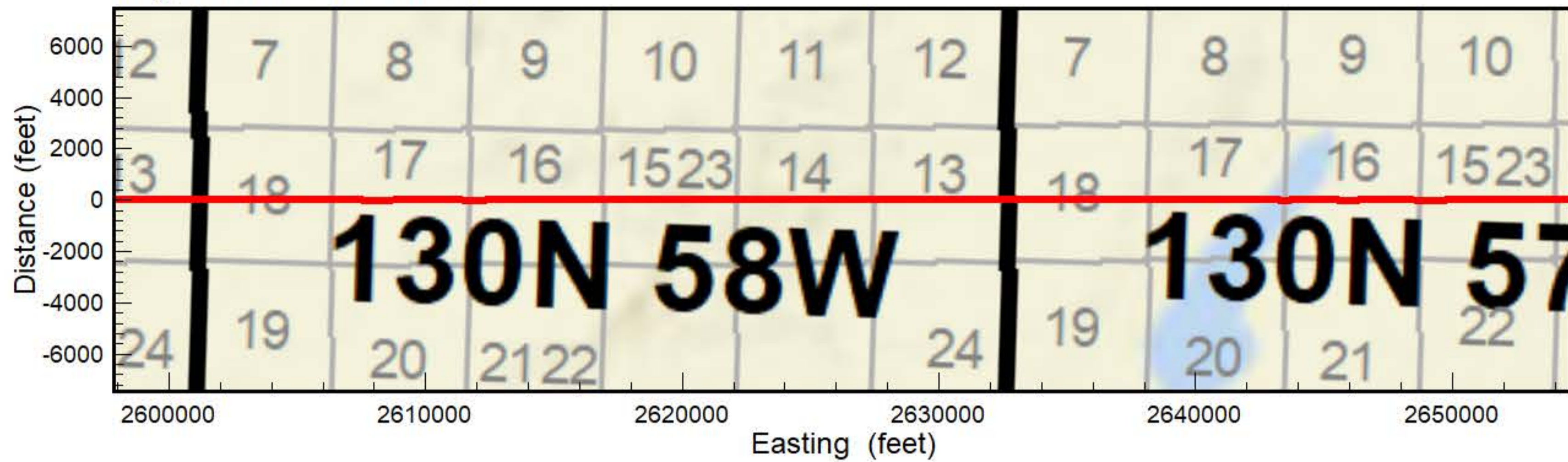
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

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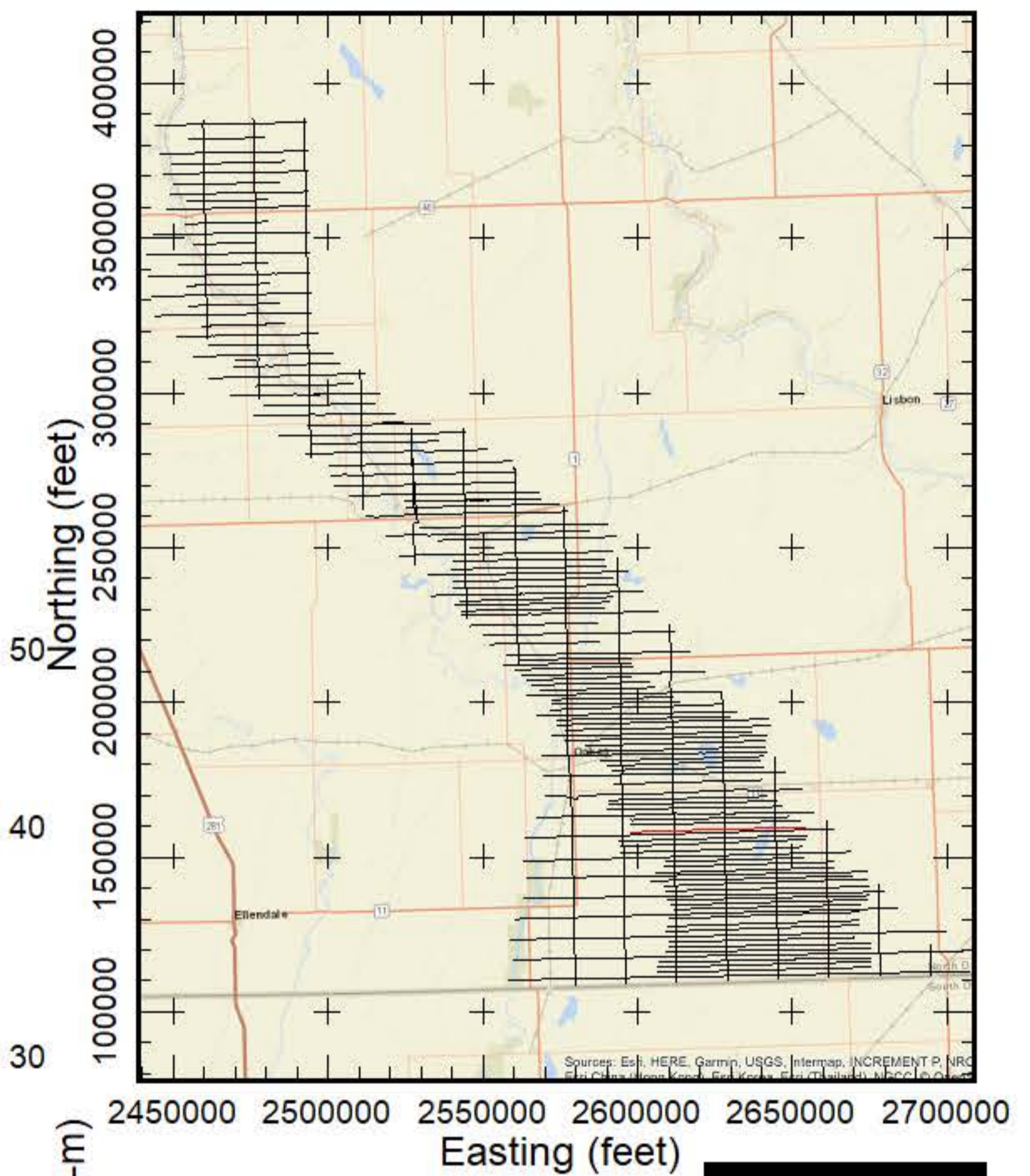
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Aqua Geo Frameworks



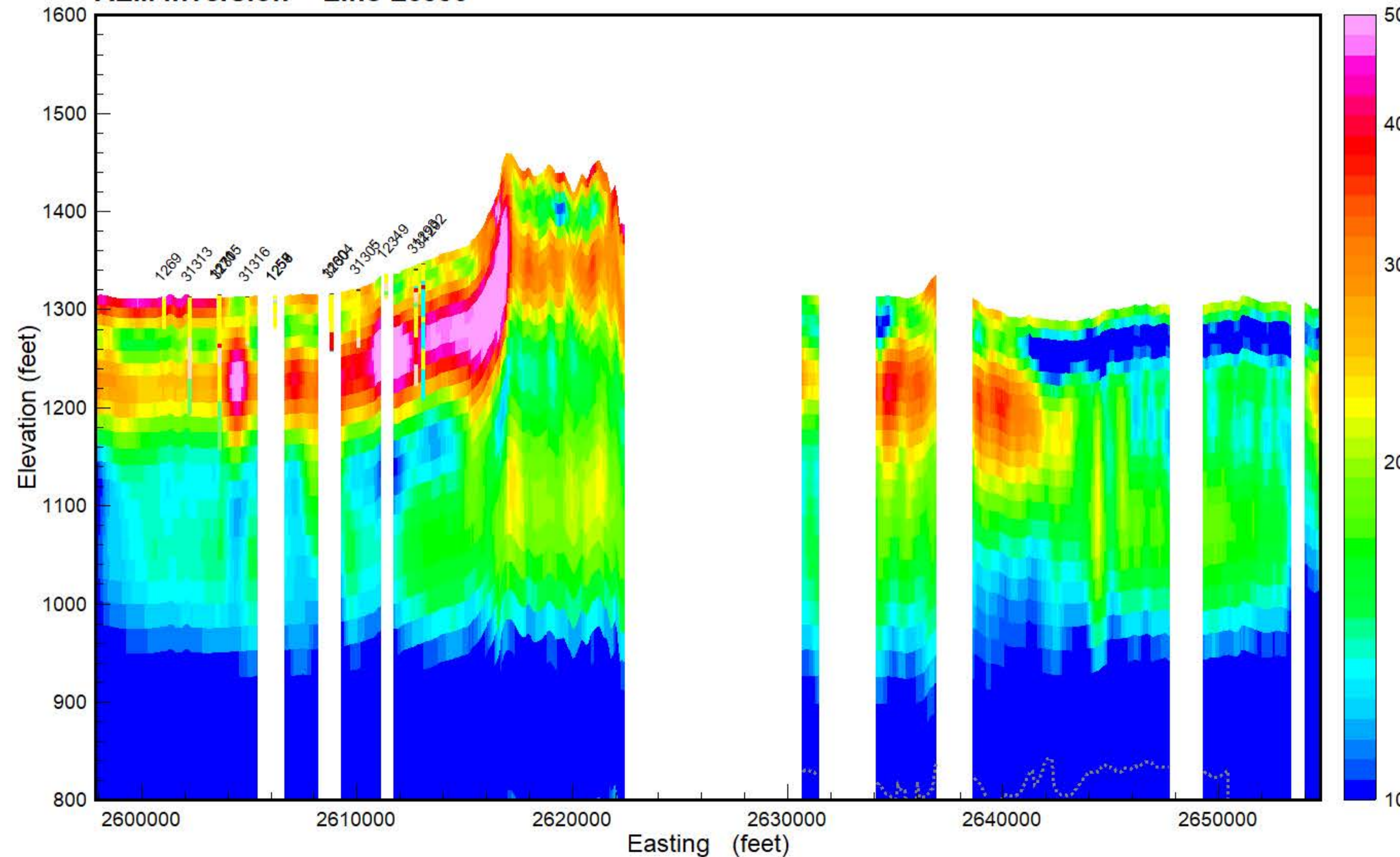
**Flight Path Line L6550**



**Spiritwood South Flight Area**



**AEM Inversion Line L6550**



**GEOTECH**

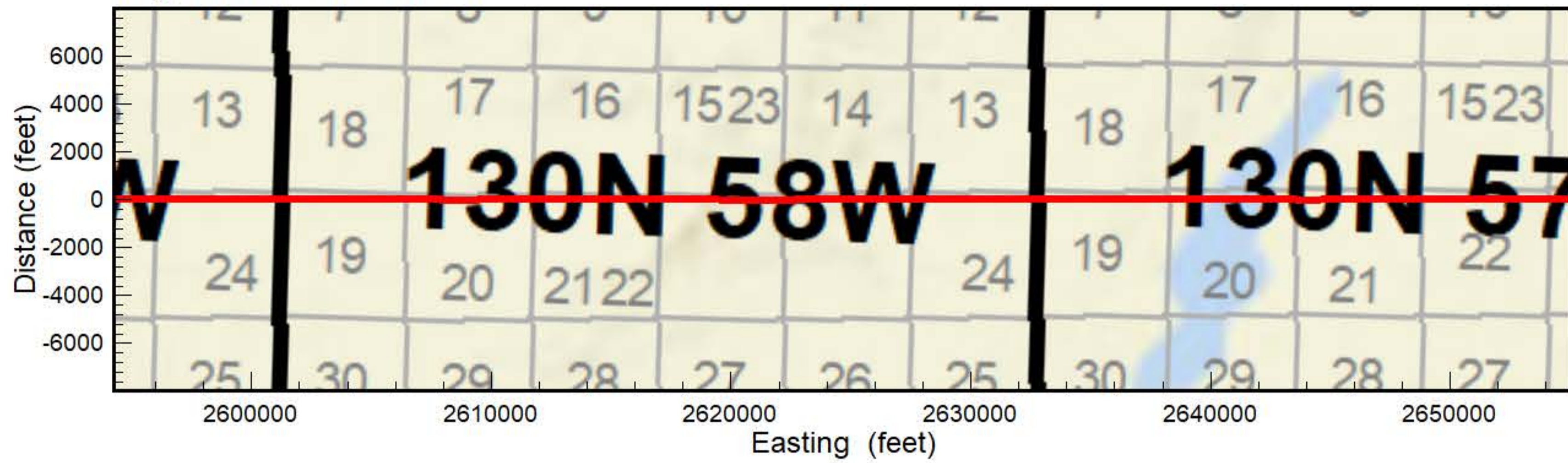
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

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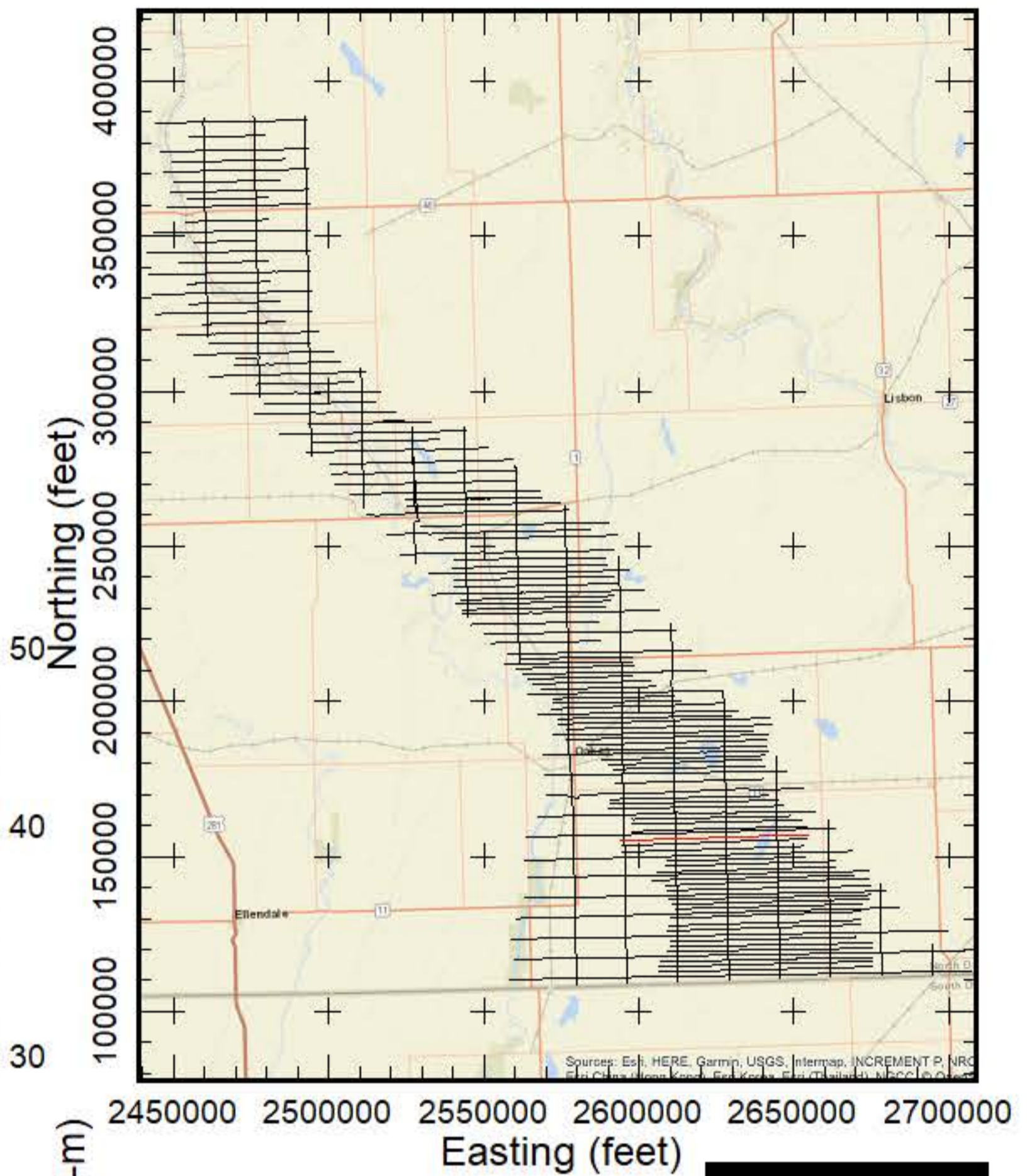
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Aqua Geo Frameworks



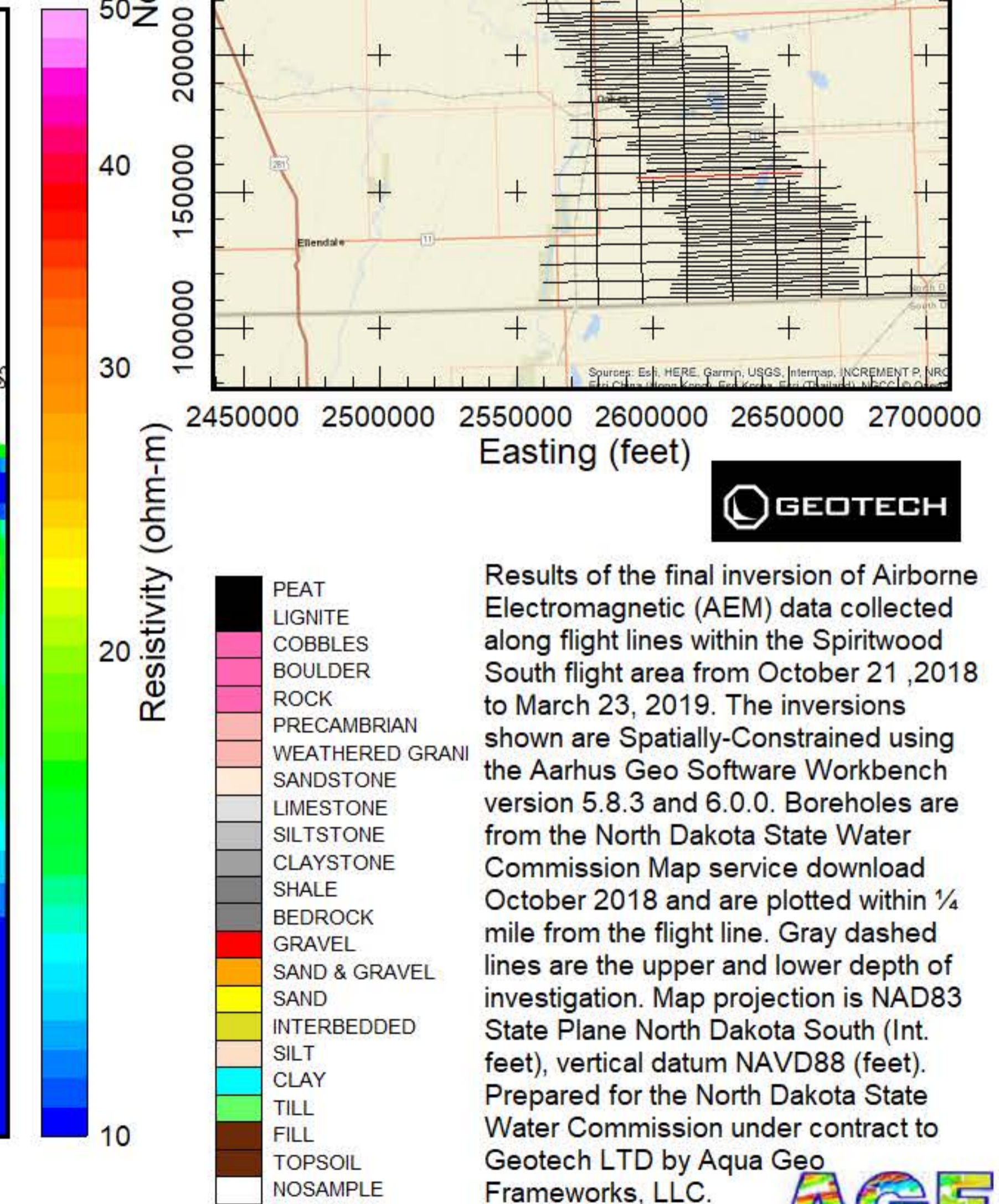
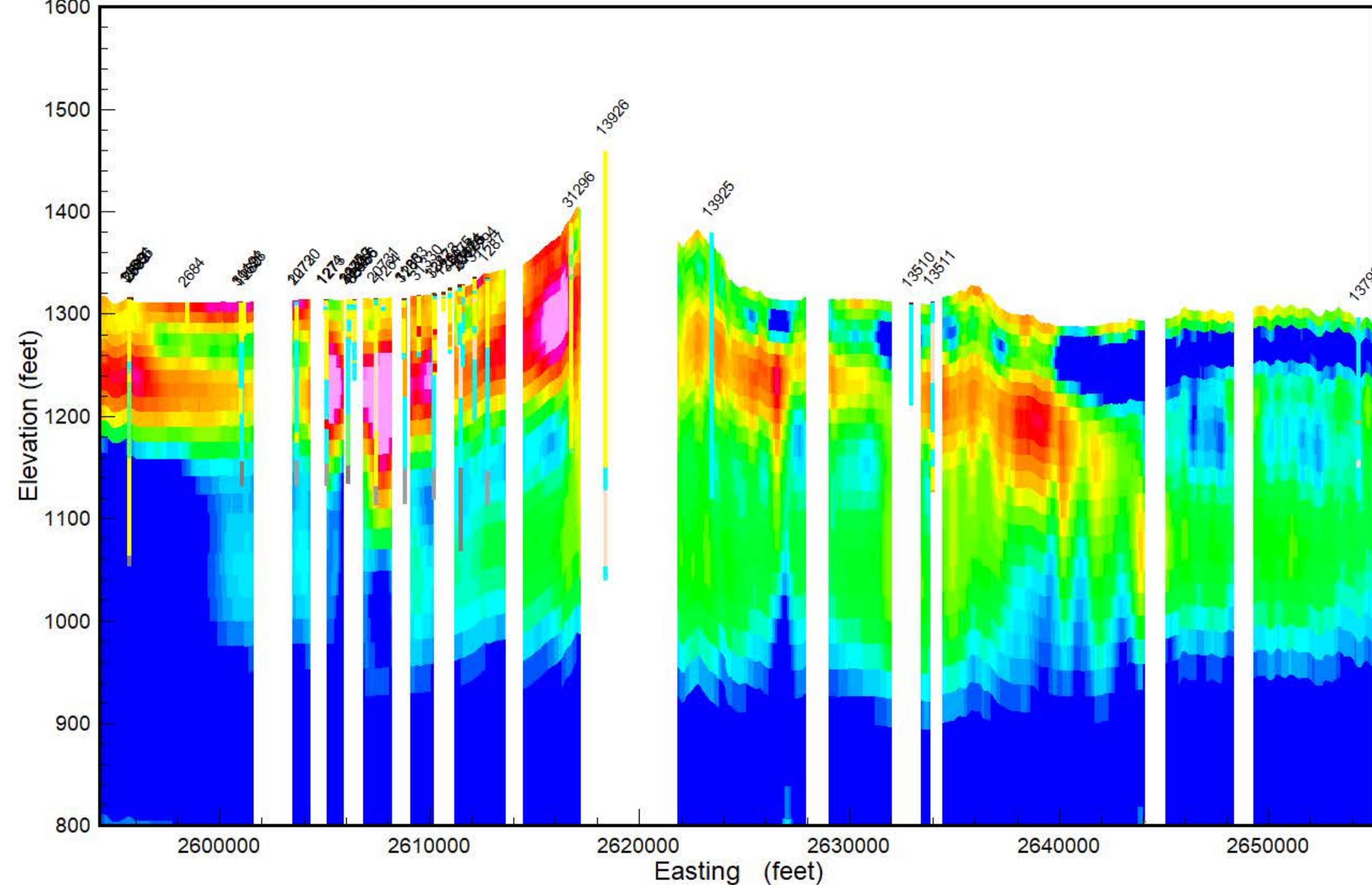
**Flight Path Line L6560**



**Spiritwood South Flight Area**

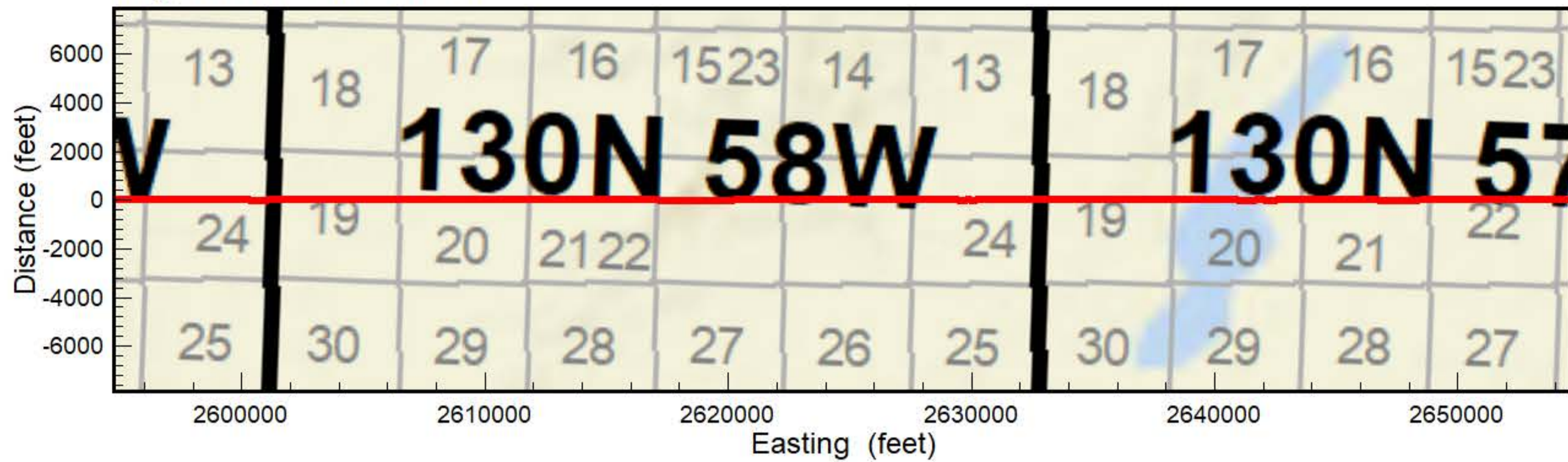


**AEM Inversion Line L6560**

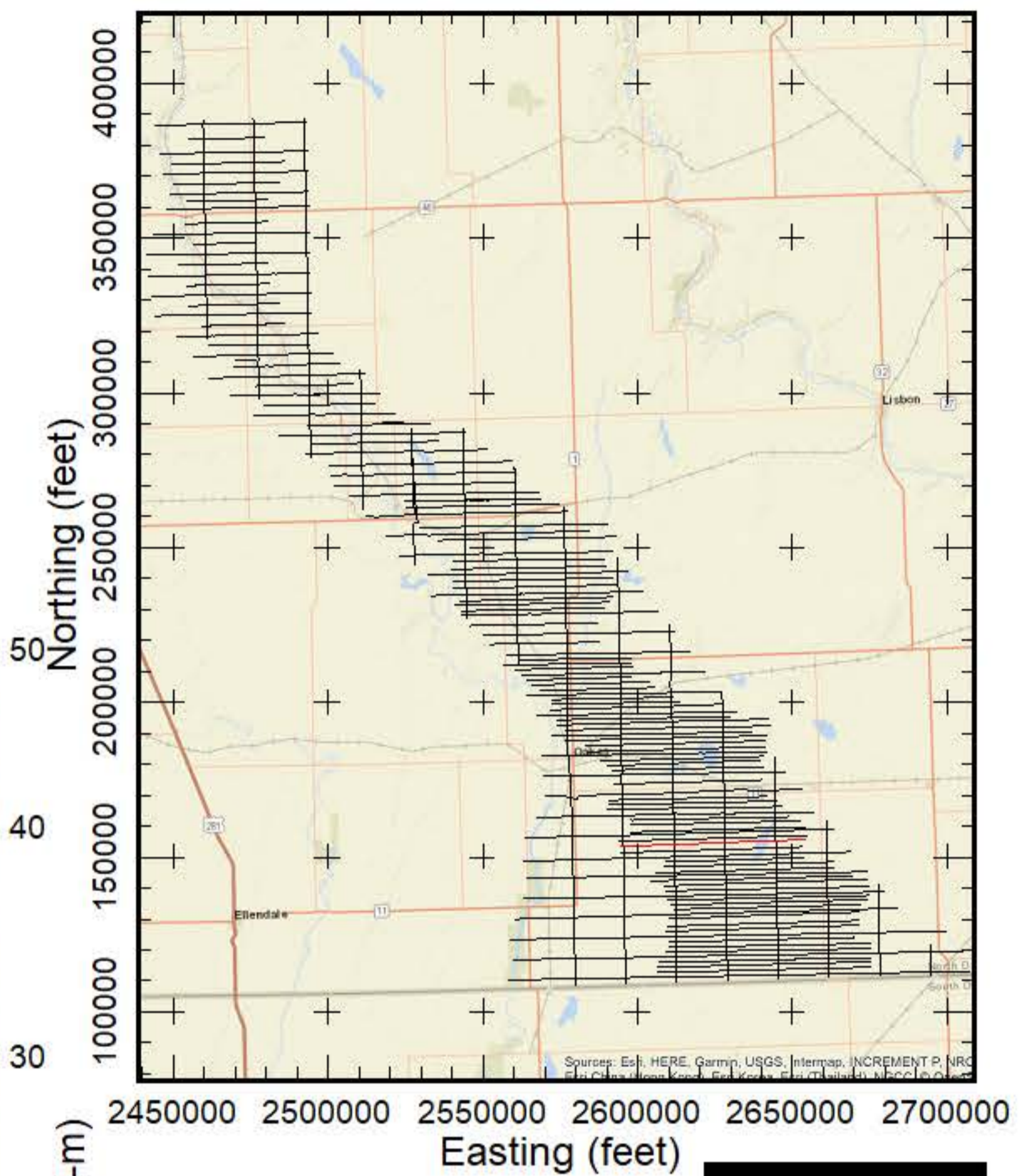




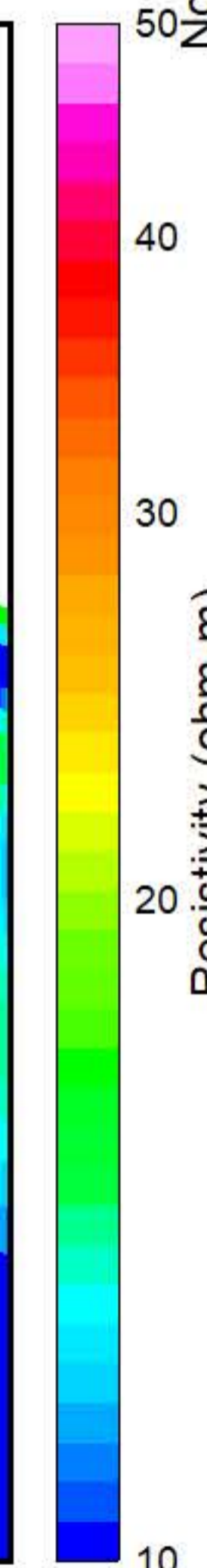
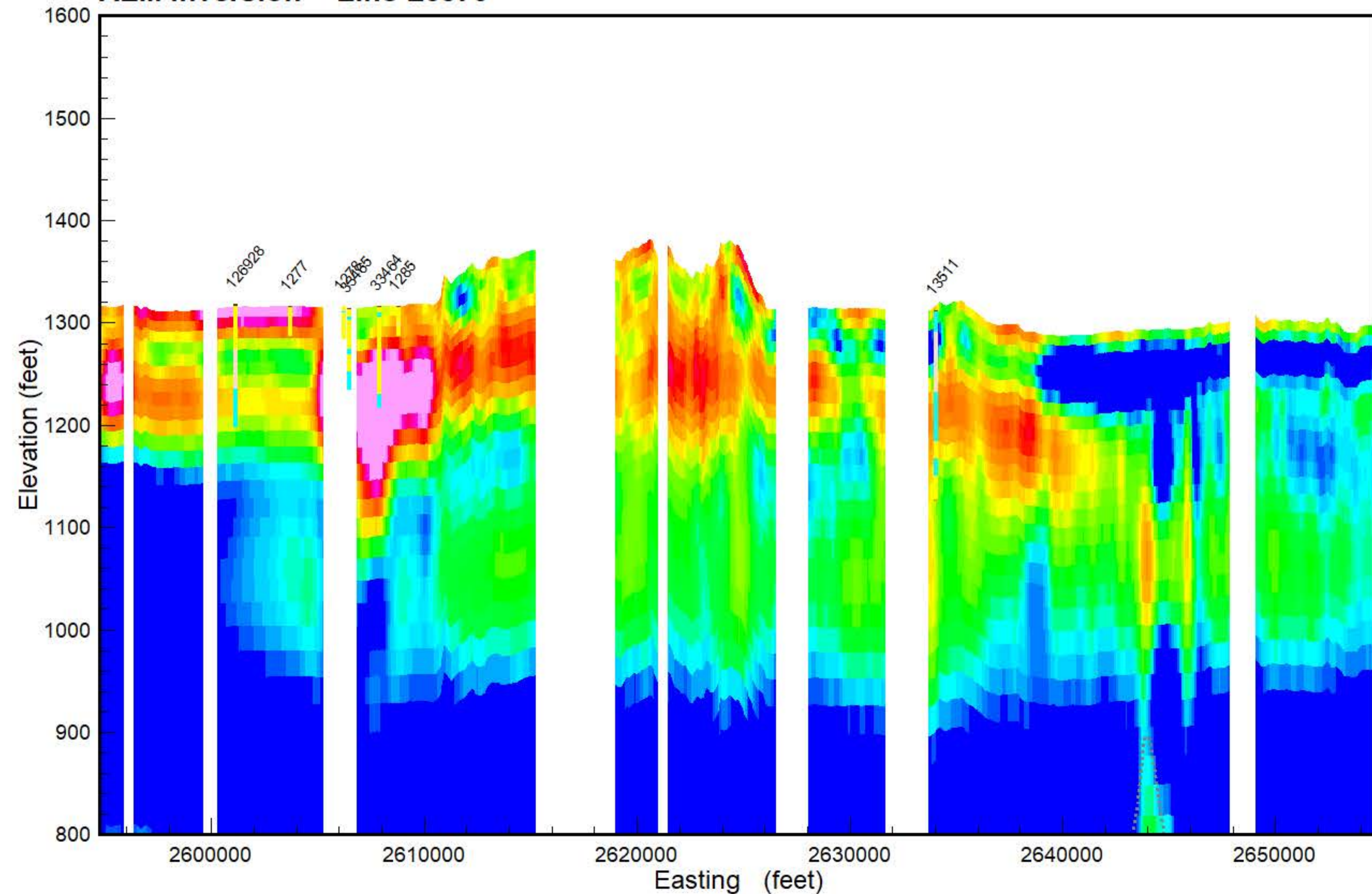
**Flight Path Line L6570**



**Spiritwood South Flight Area**



**AEM Inversion Line L6570**



**GEOTECH**

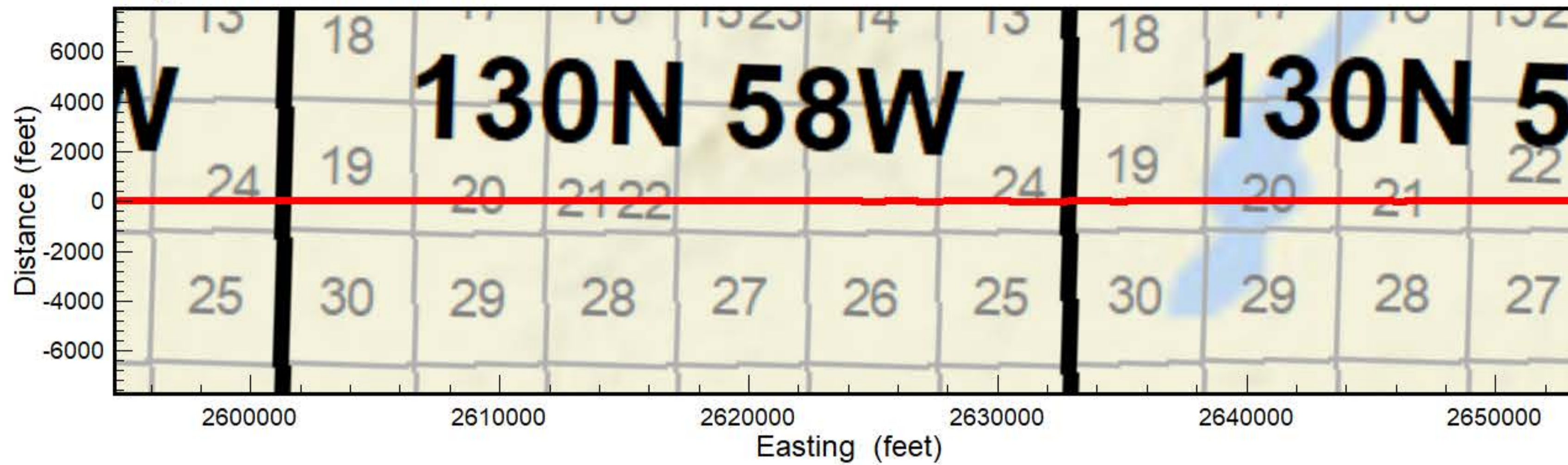
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

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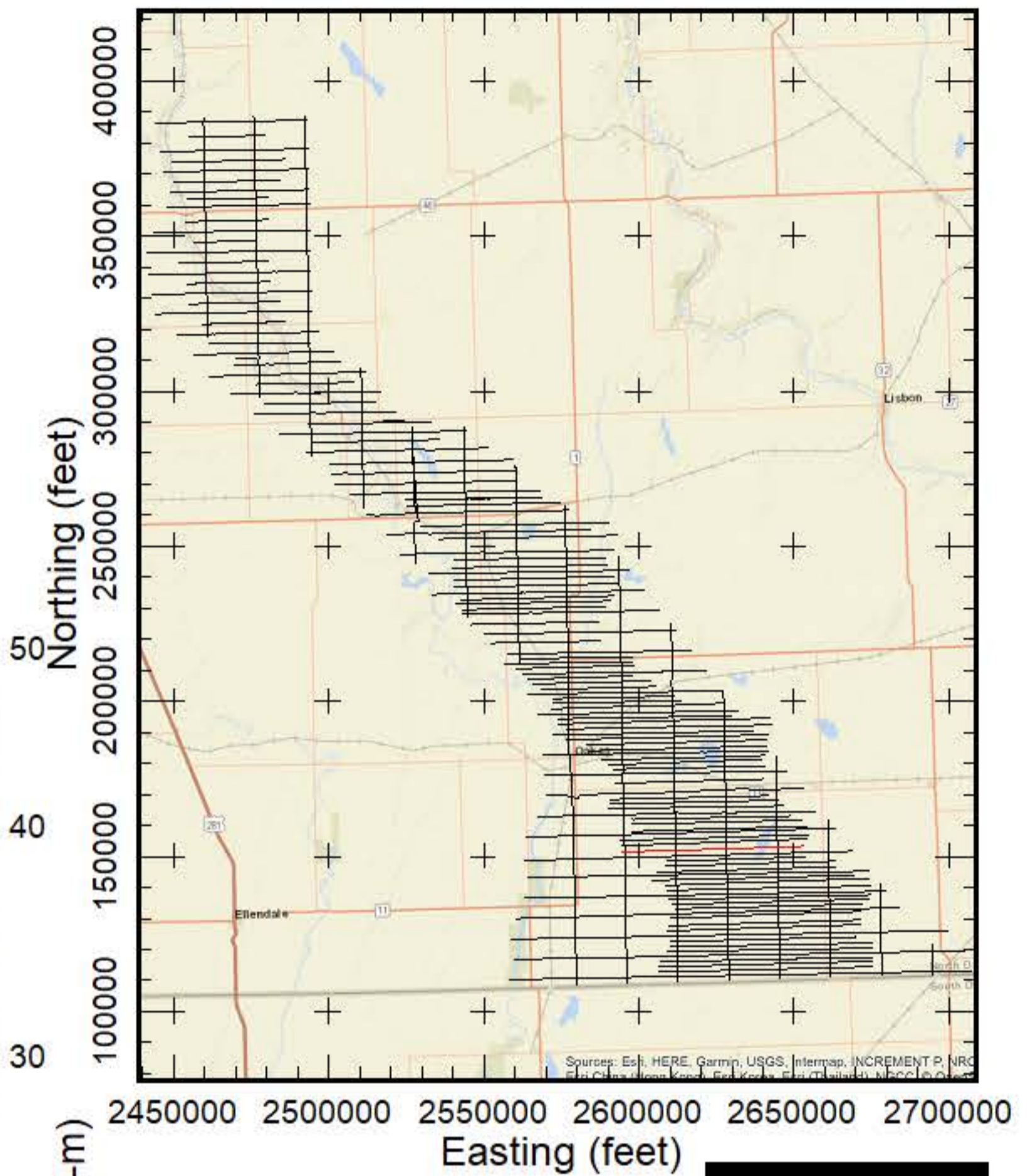
**AGF**  
Aqua Geo Frameworks



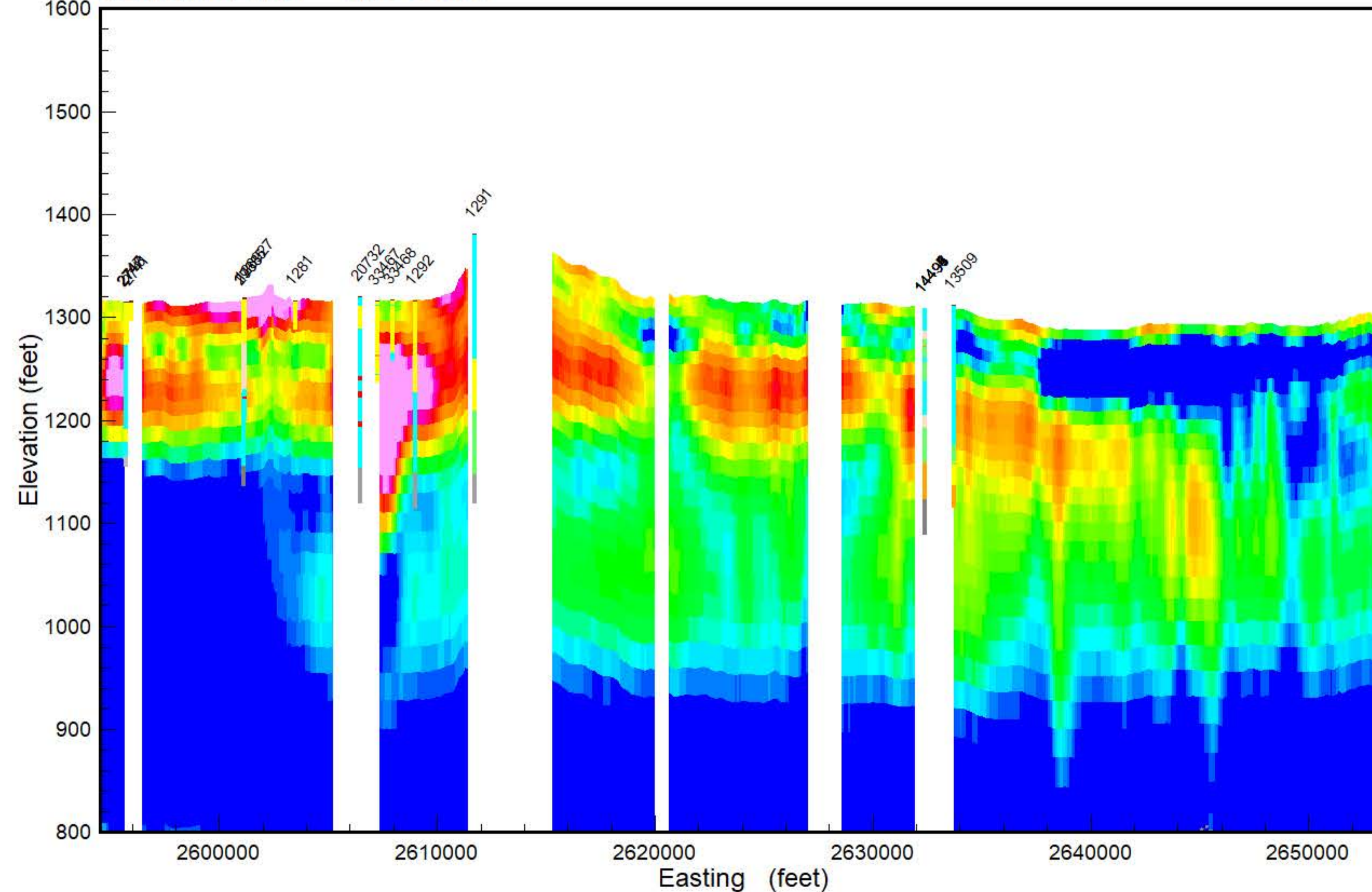
**Flight Path Line L6580**



**Spiritwood South Flight Area**



**AEM Inversion Line L6580**



**Resistivity (ohm-m)**

50  
40  
30  
20  
10

**GEOTECH**

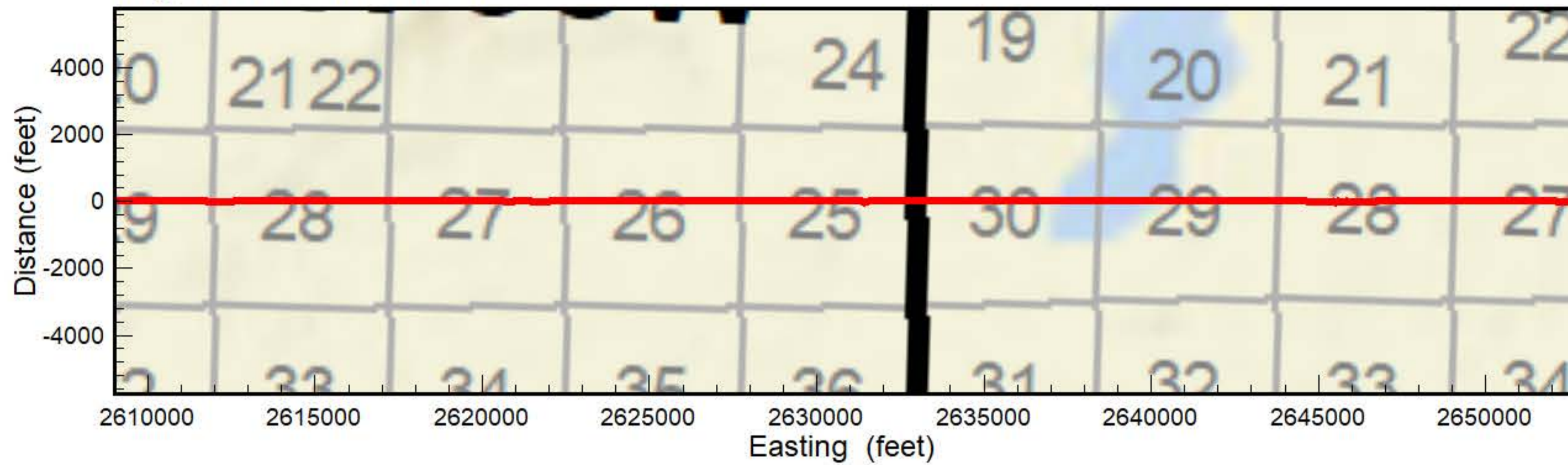
- PEAT
- LIGNITE
- COBBLES
- BOULDER
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- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

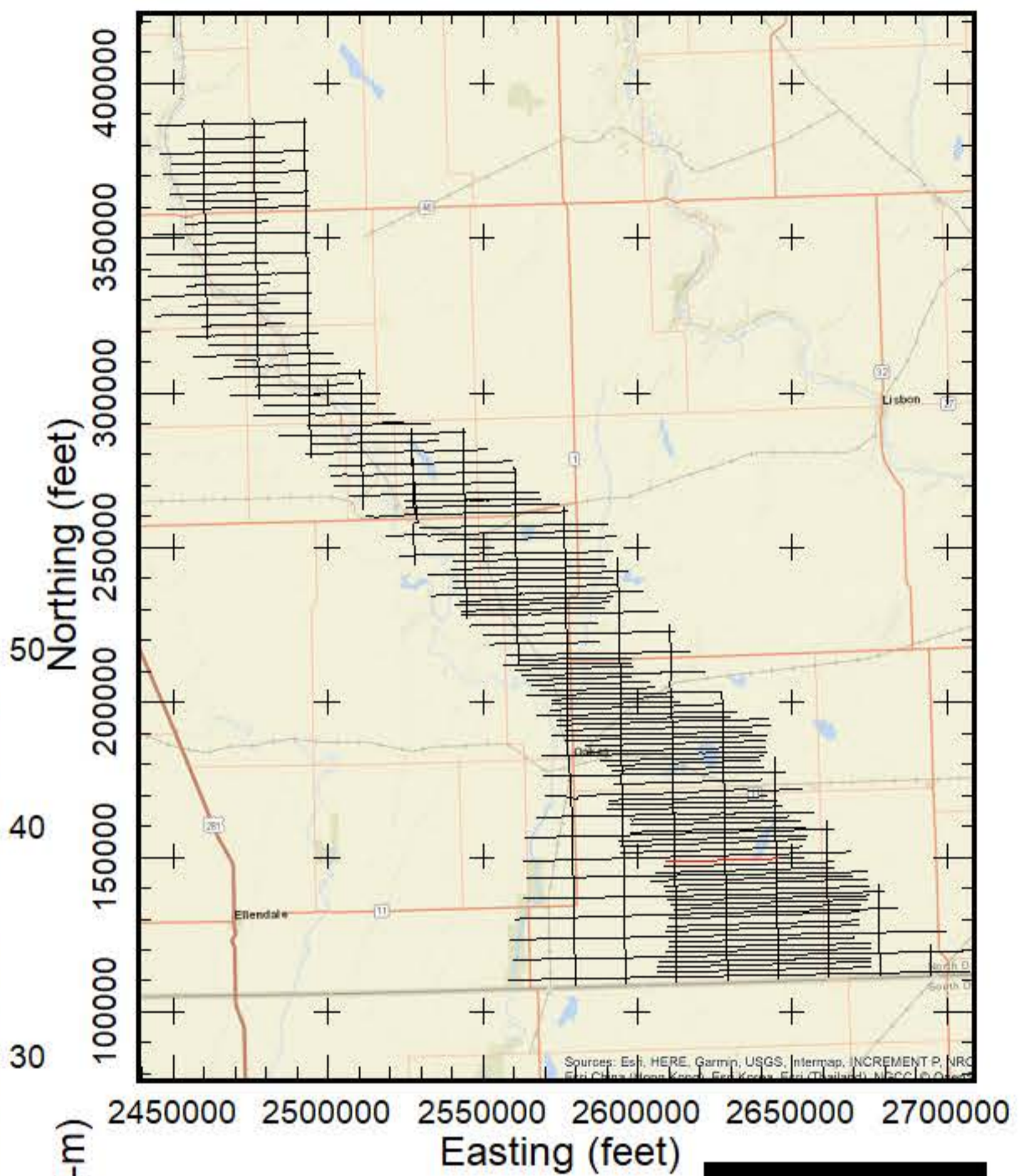
**AGF**  
Aqua Geo Frameworks



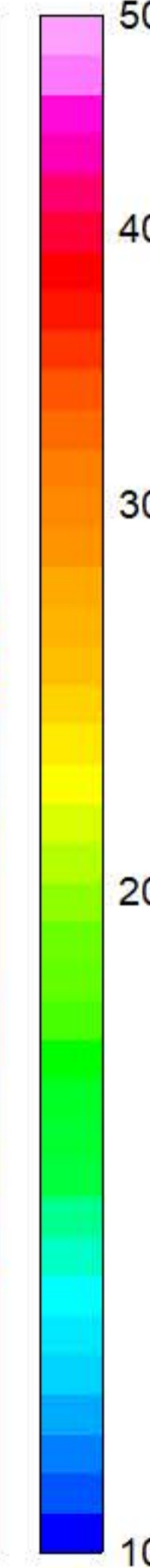
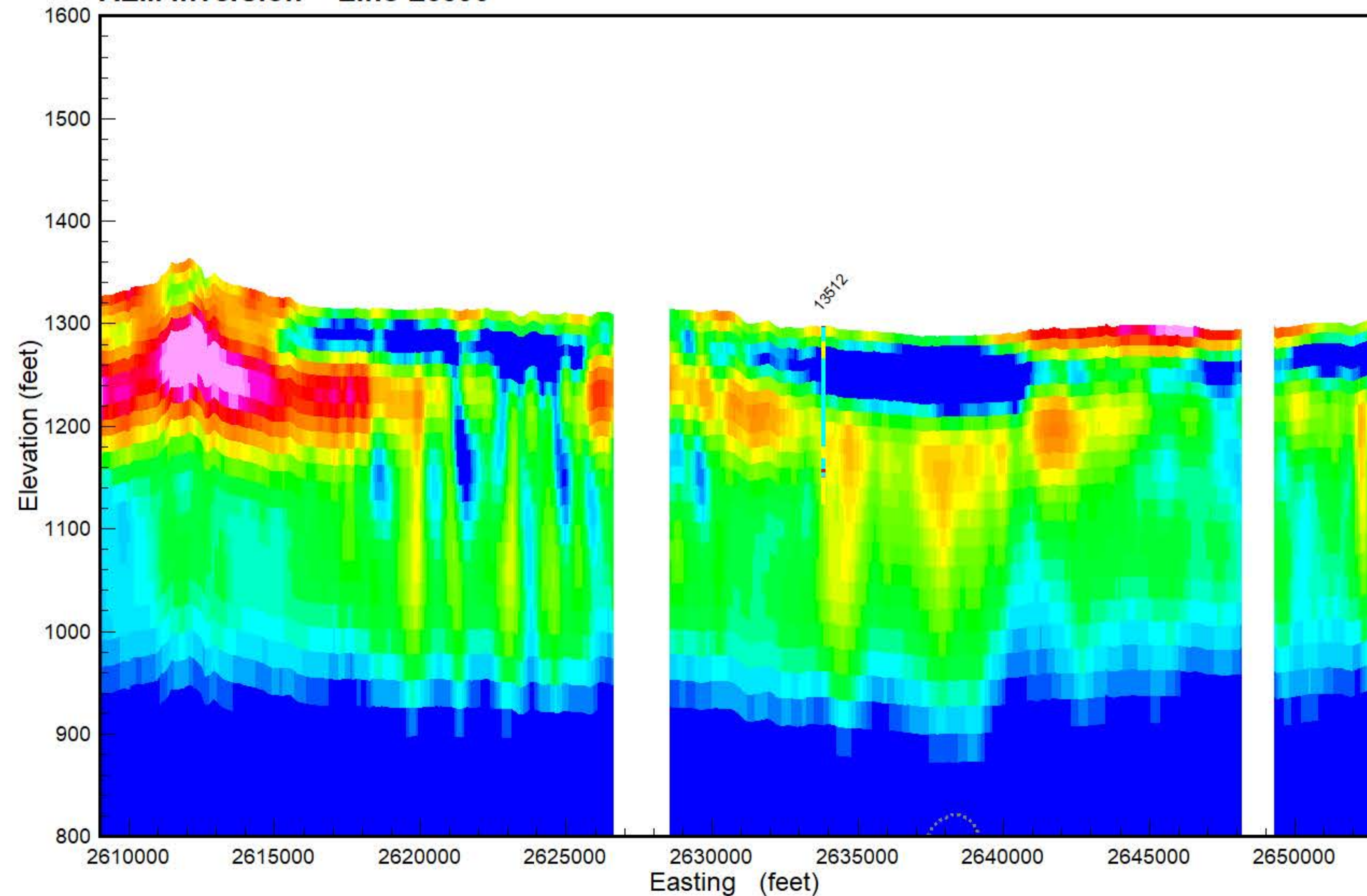
**Flight Path Line L6590**



**Spiritwood South Flight Area**



**AEM Inversion Line L6590**



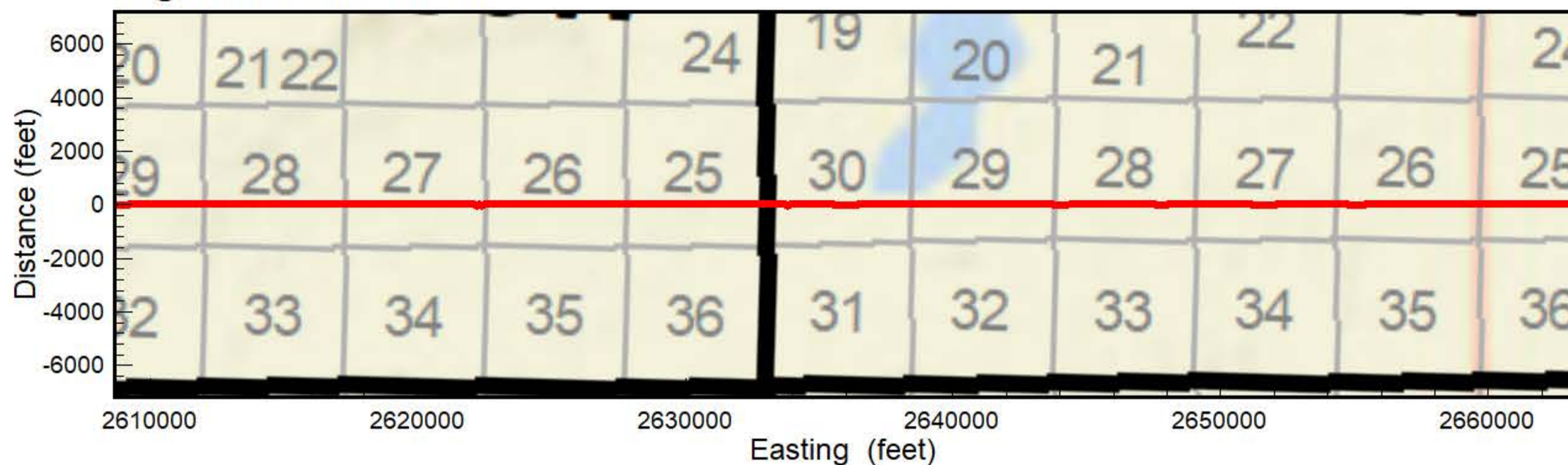
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

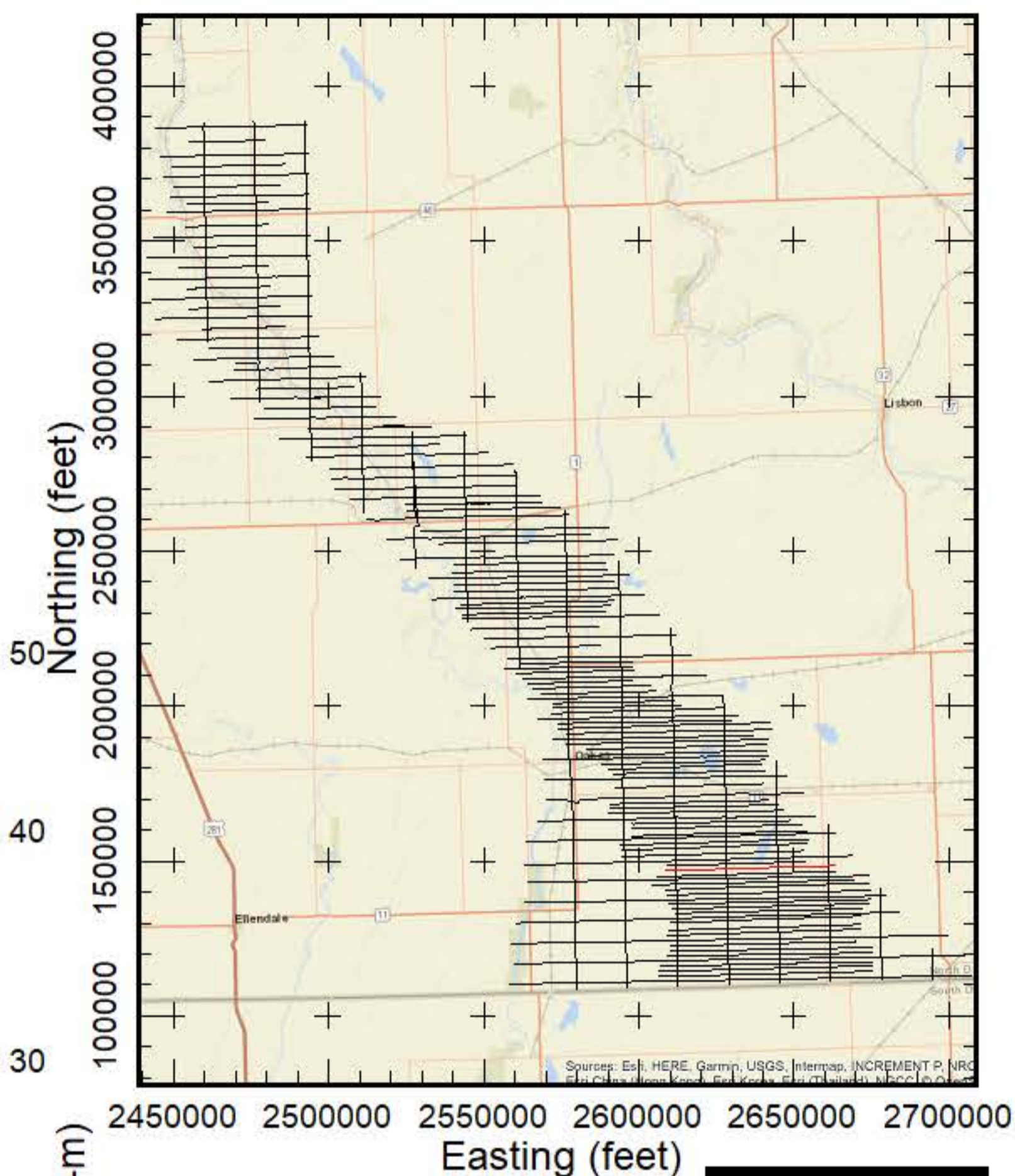




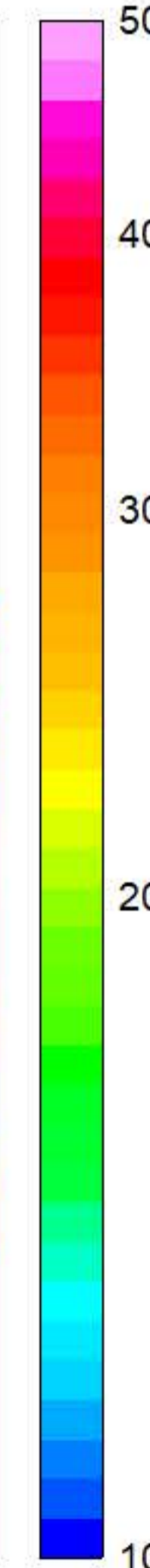
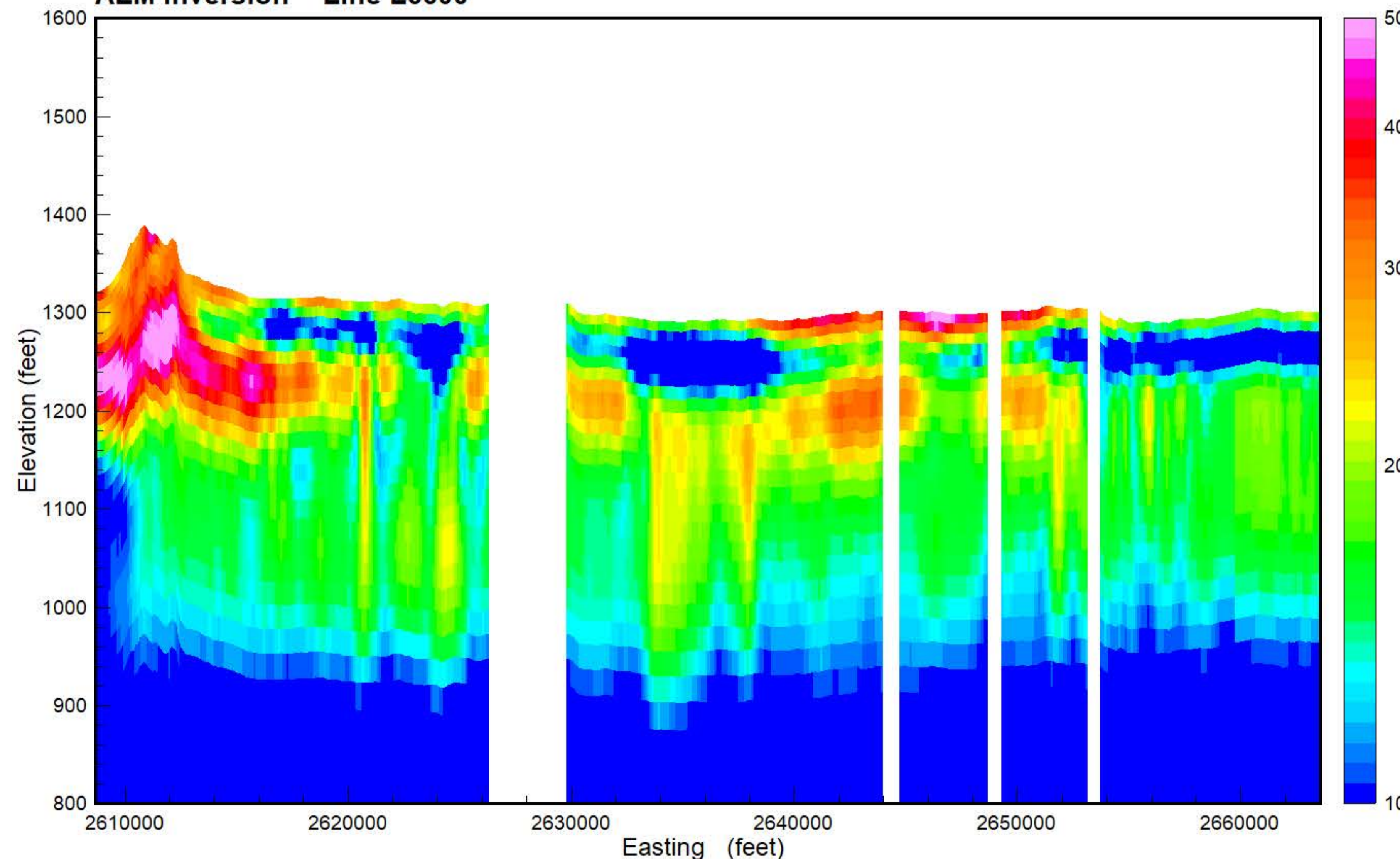
**Flight Path Line L6600**



**Spiritwood South Flight Area**



**AEM Inversion Line L6600**



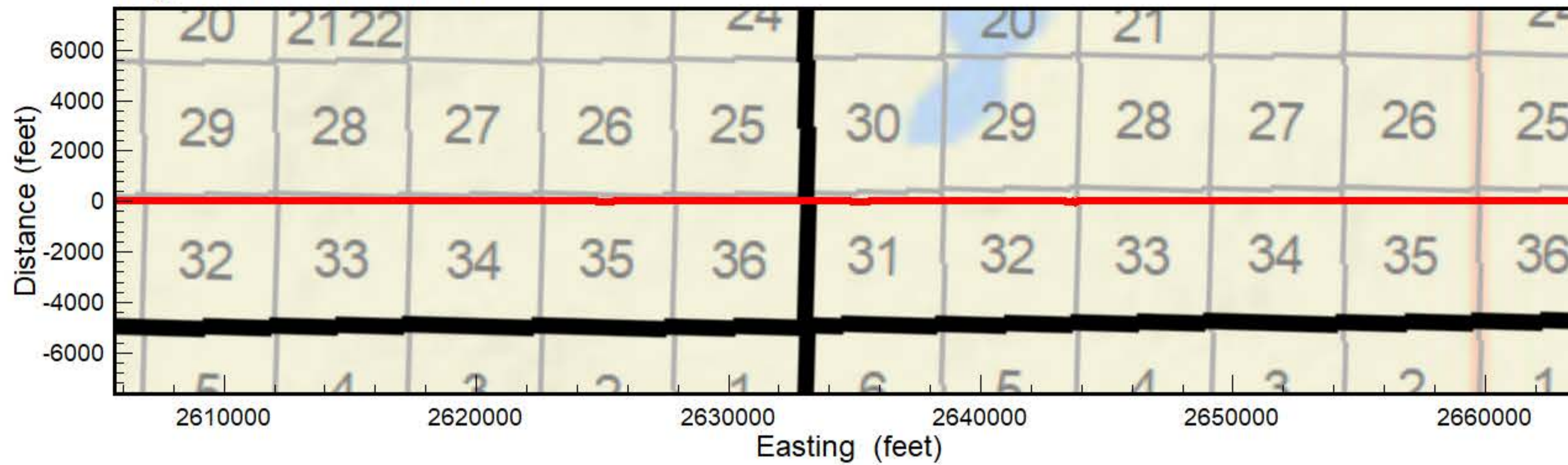
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

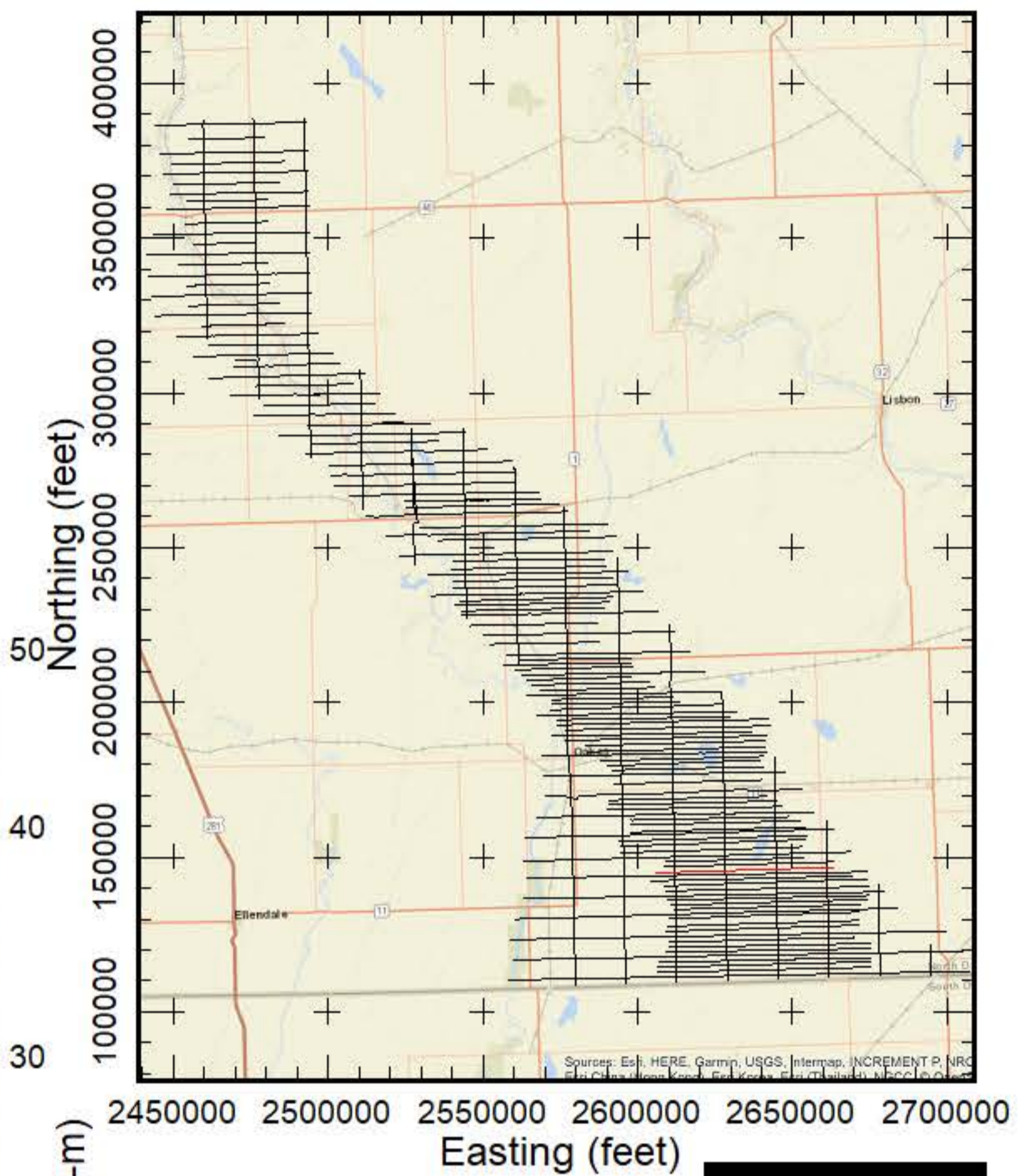




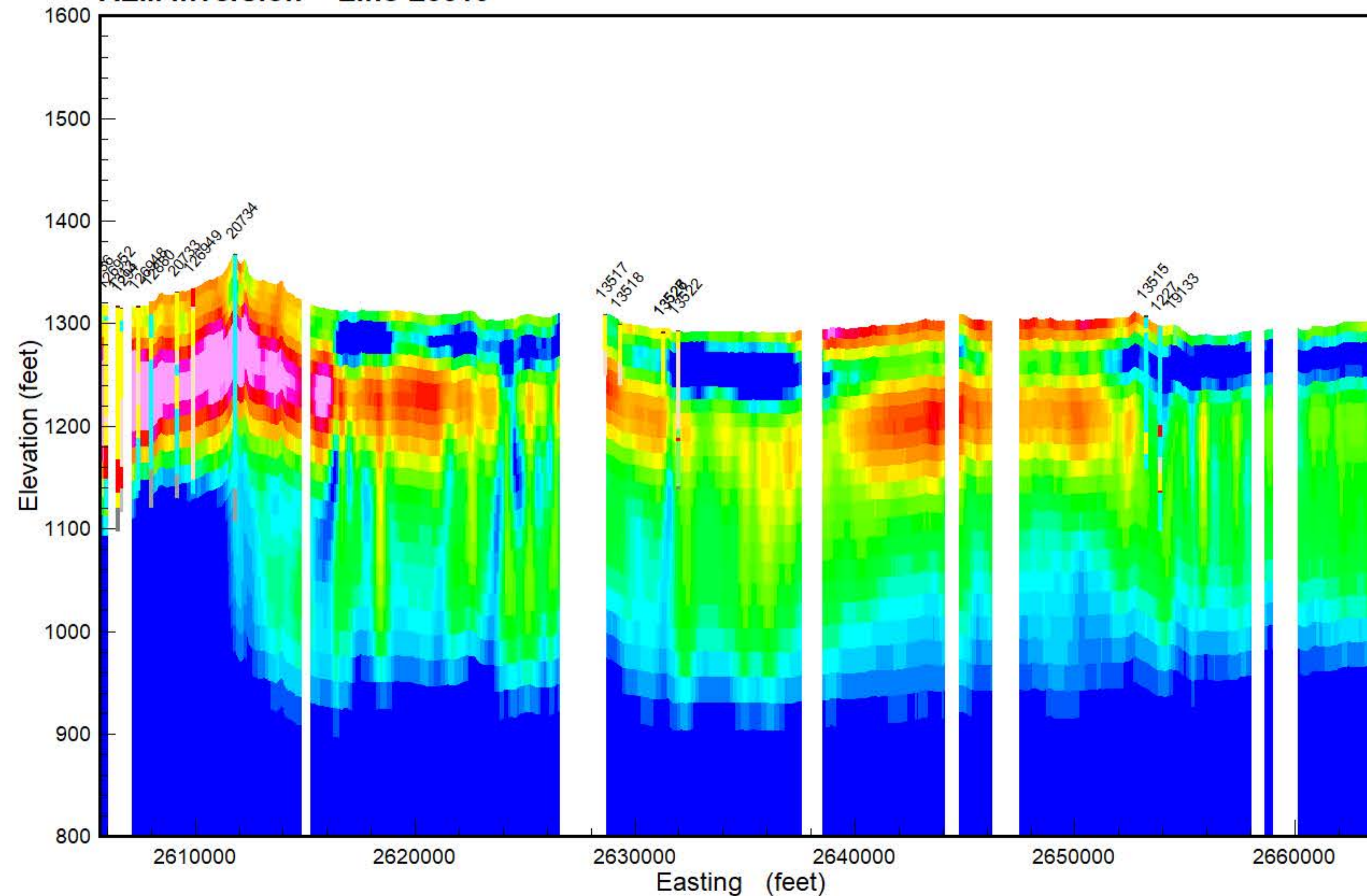
**Flight Path Line L6610**



**Spiritwood South Flight Area**



**AEM Inversion Line L6610**



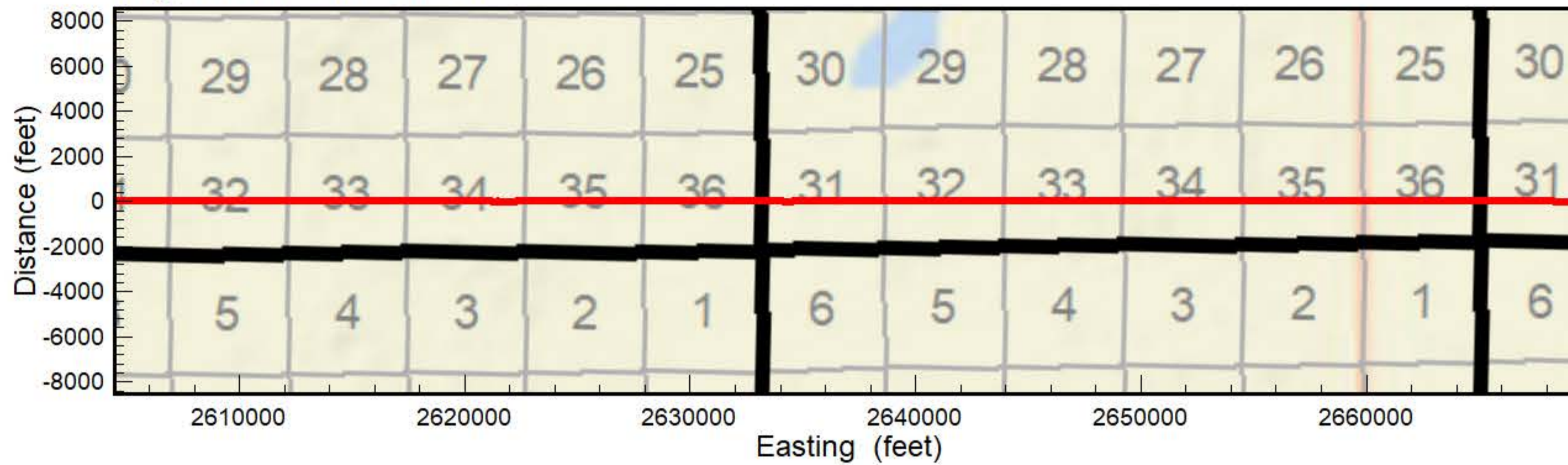
**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

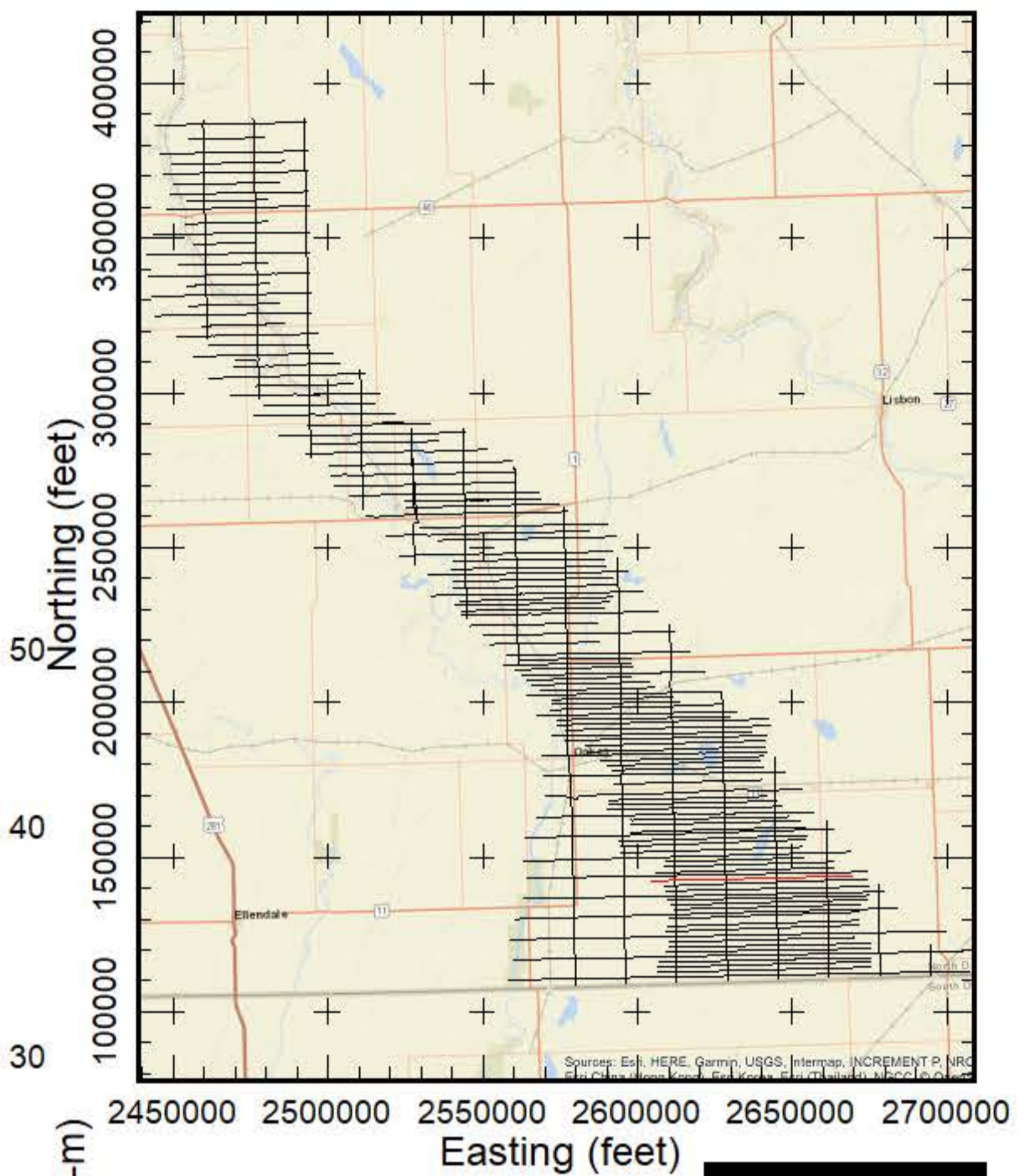
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE



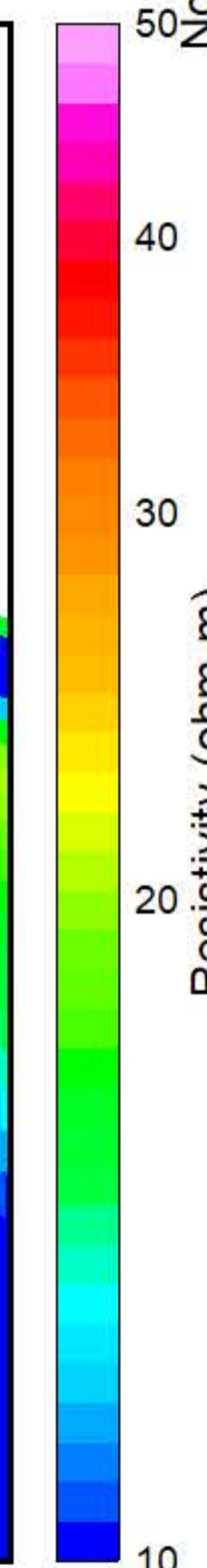
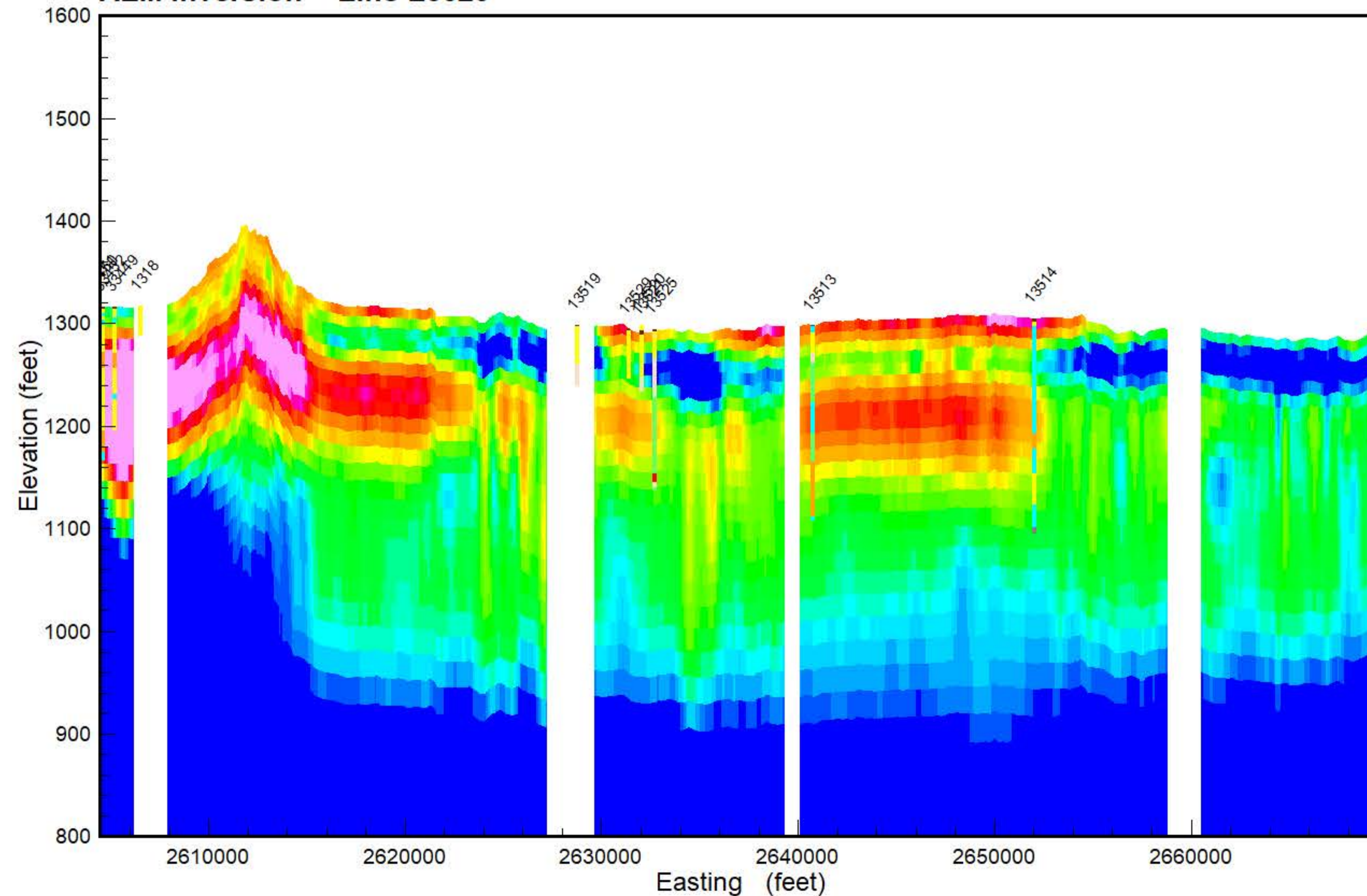
**Flight Path Line L6620**



**Spiritwood South Flight Area**



**AEM Inversion Line L6620**

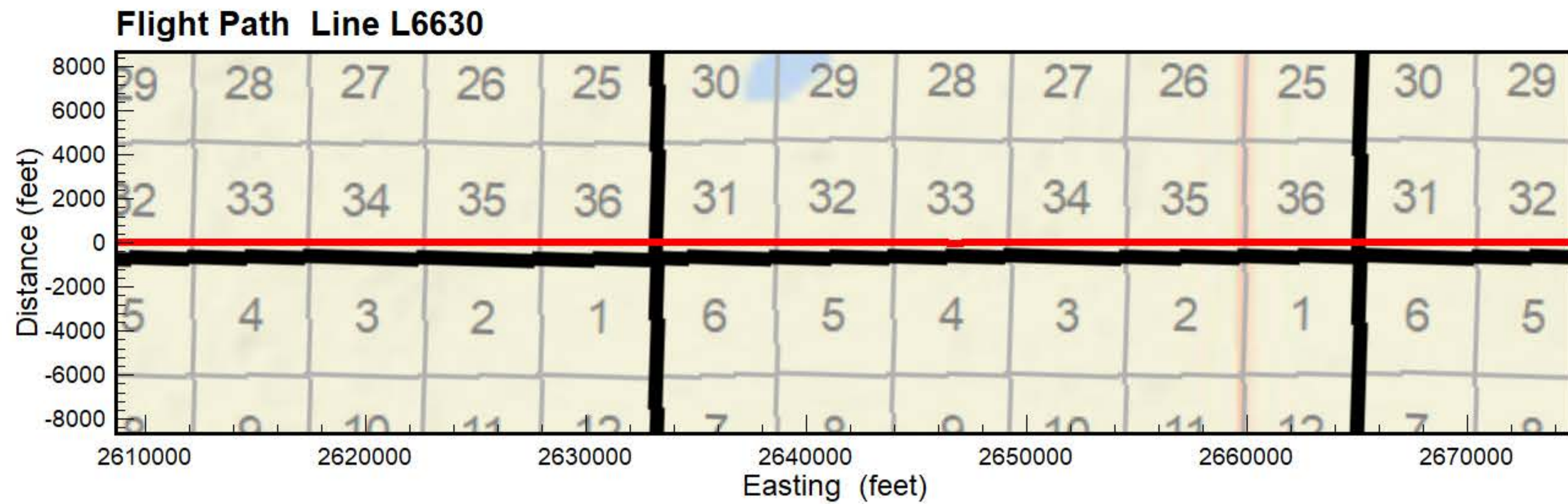


- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

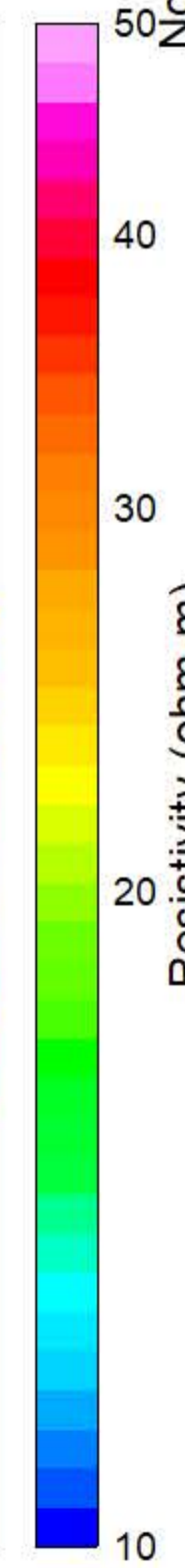
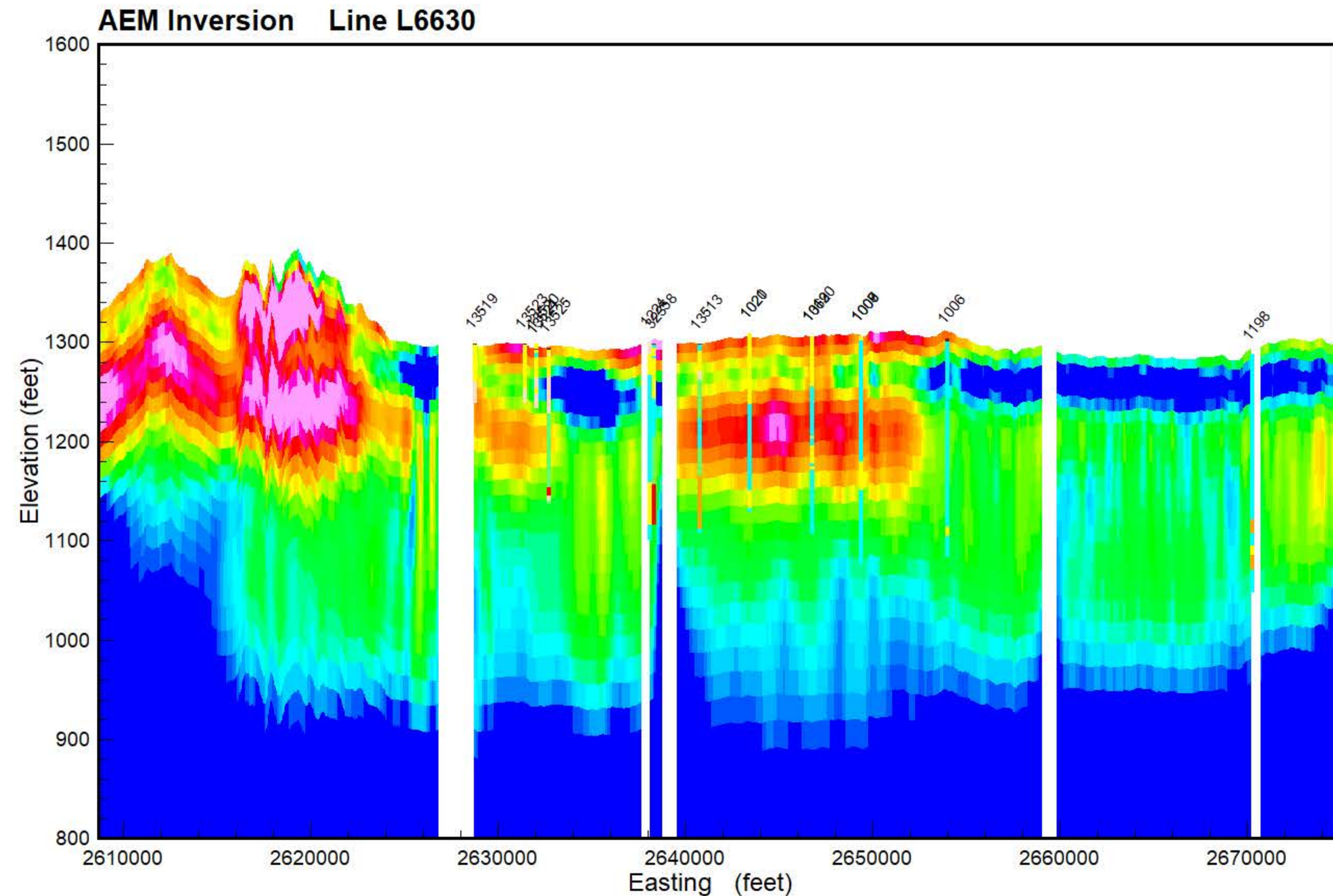
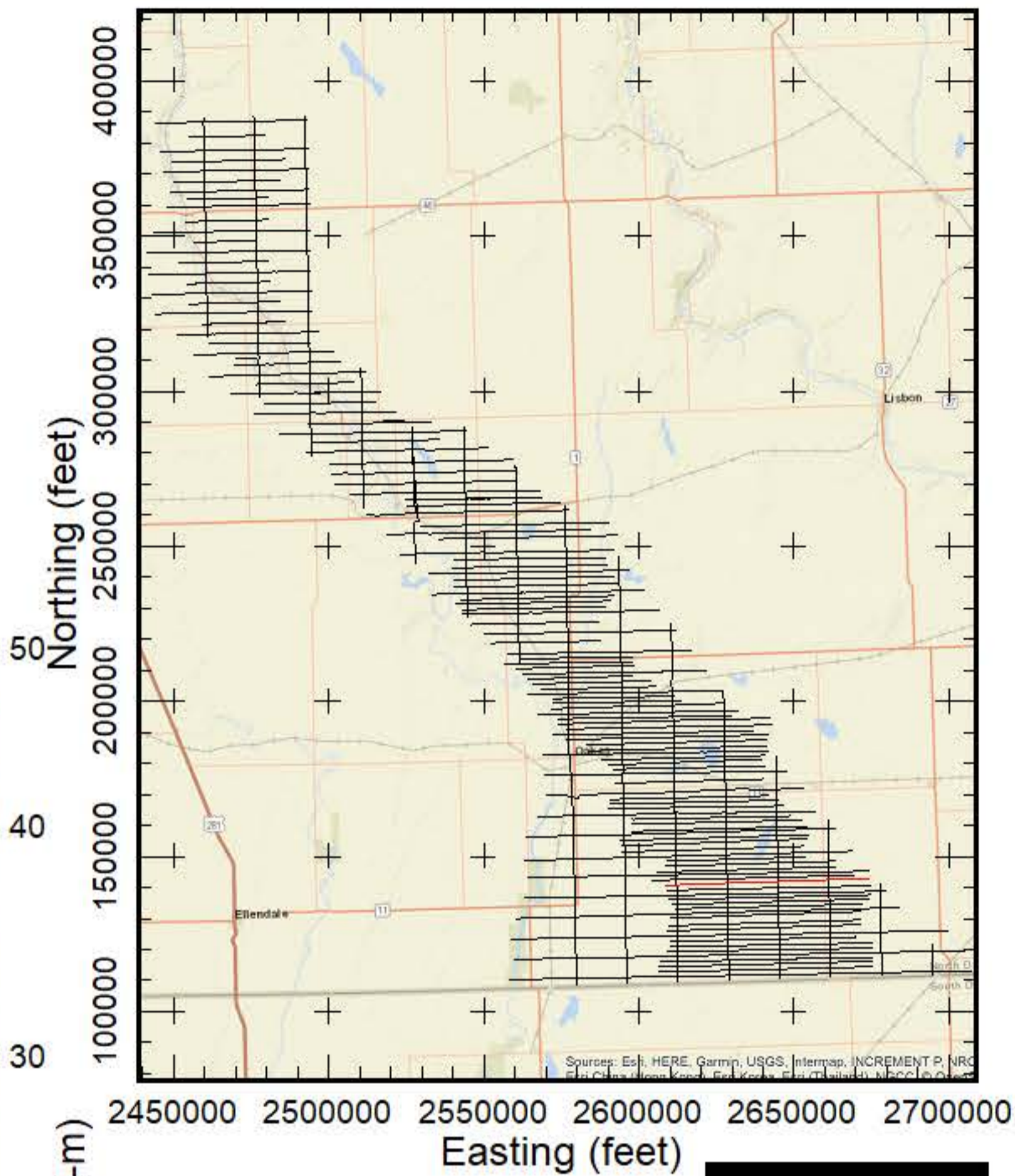
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.







Spiritwood South Flight Area



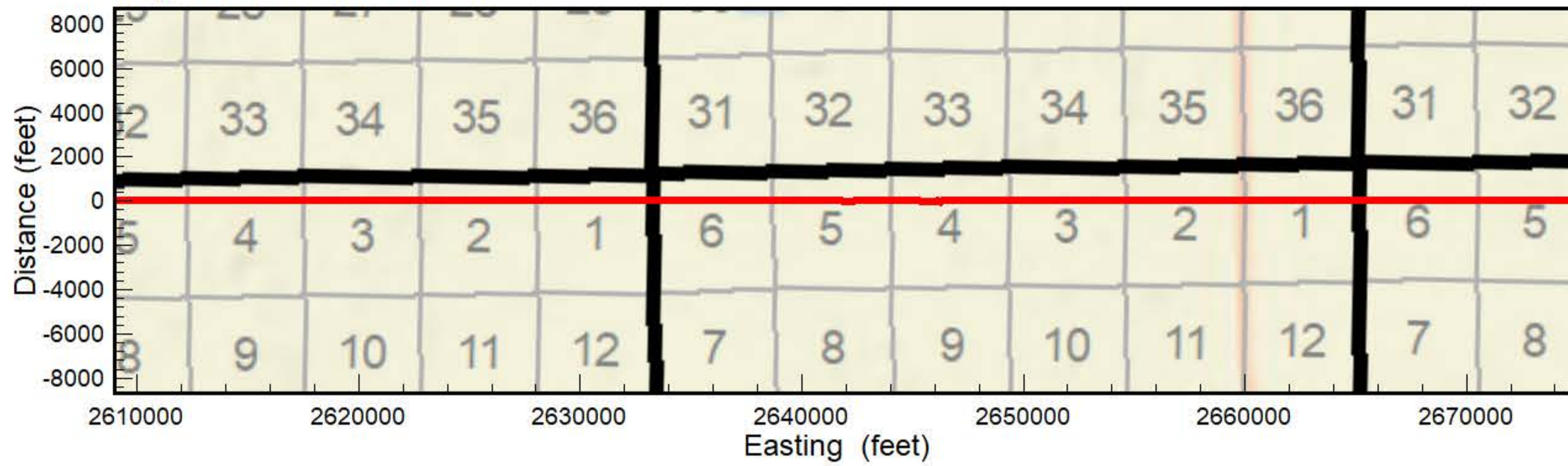
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

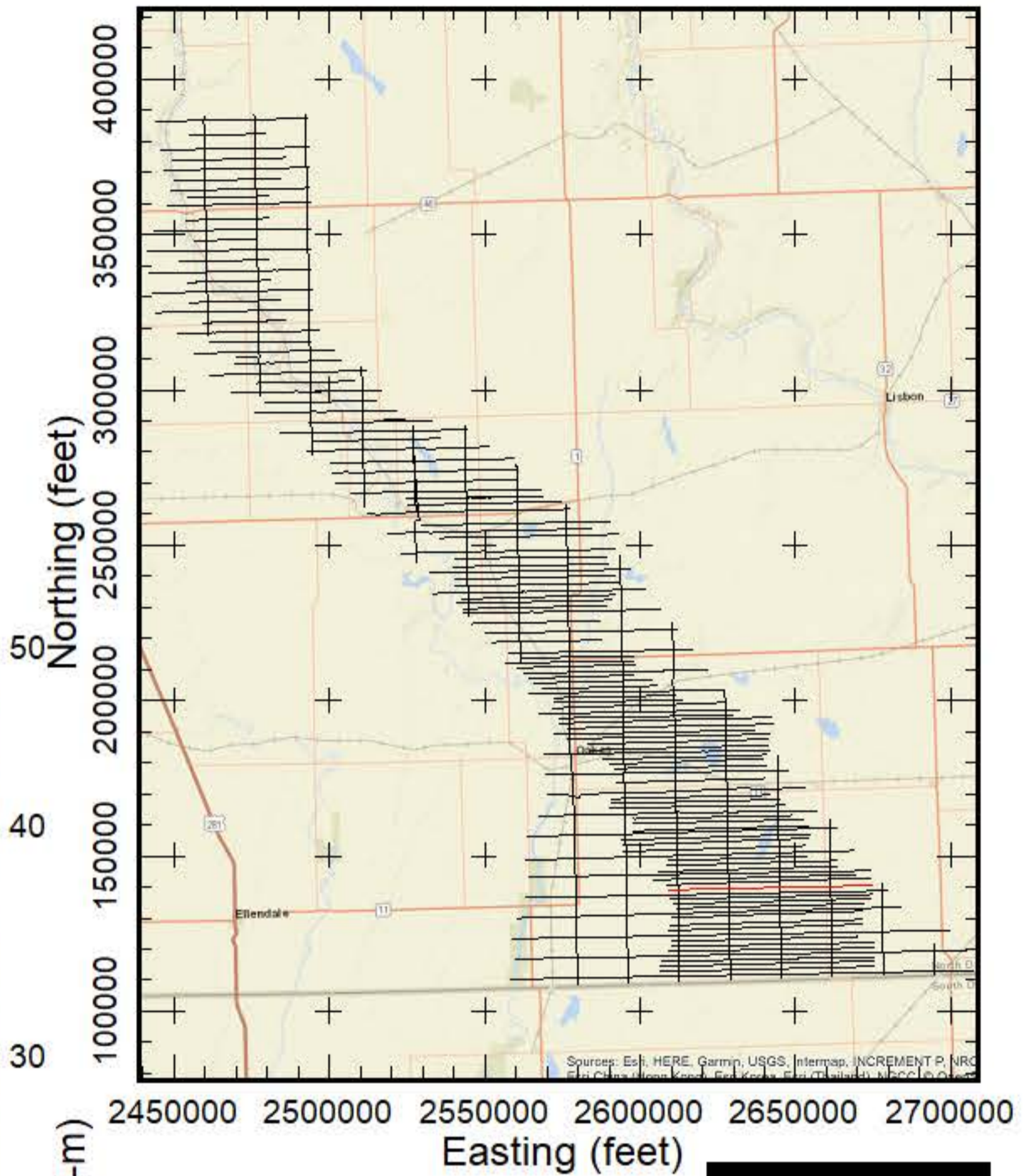




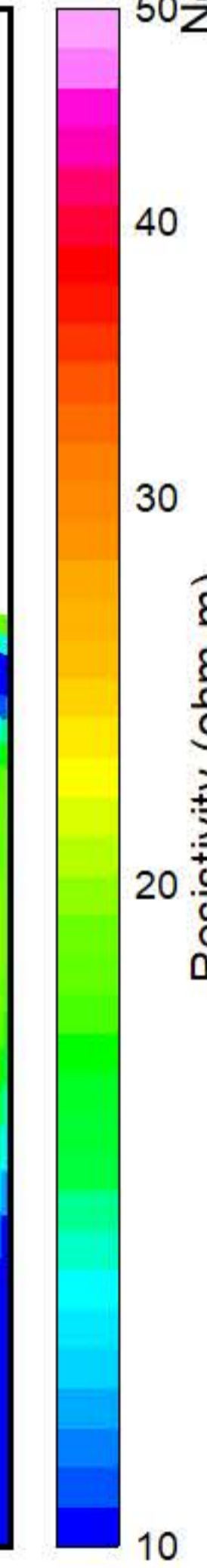
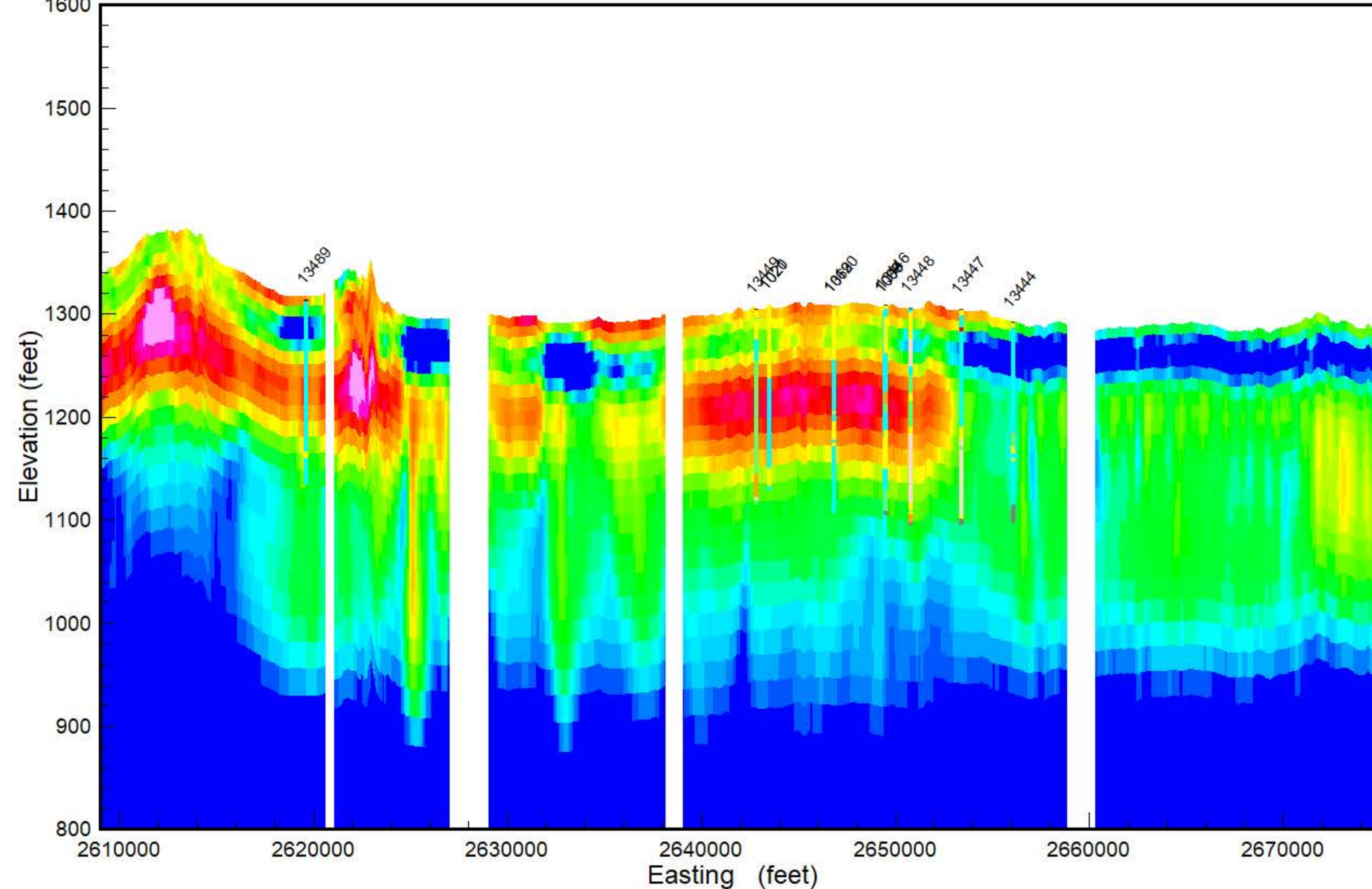
**Flight Path Line L6640**



**Spiritwood South Flight Area**



**AEM Inversion Line L6640**



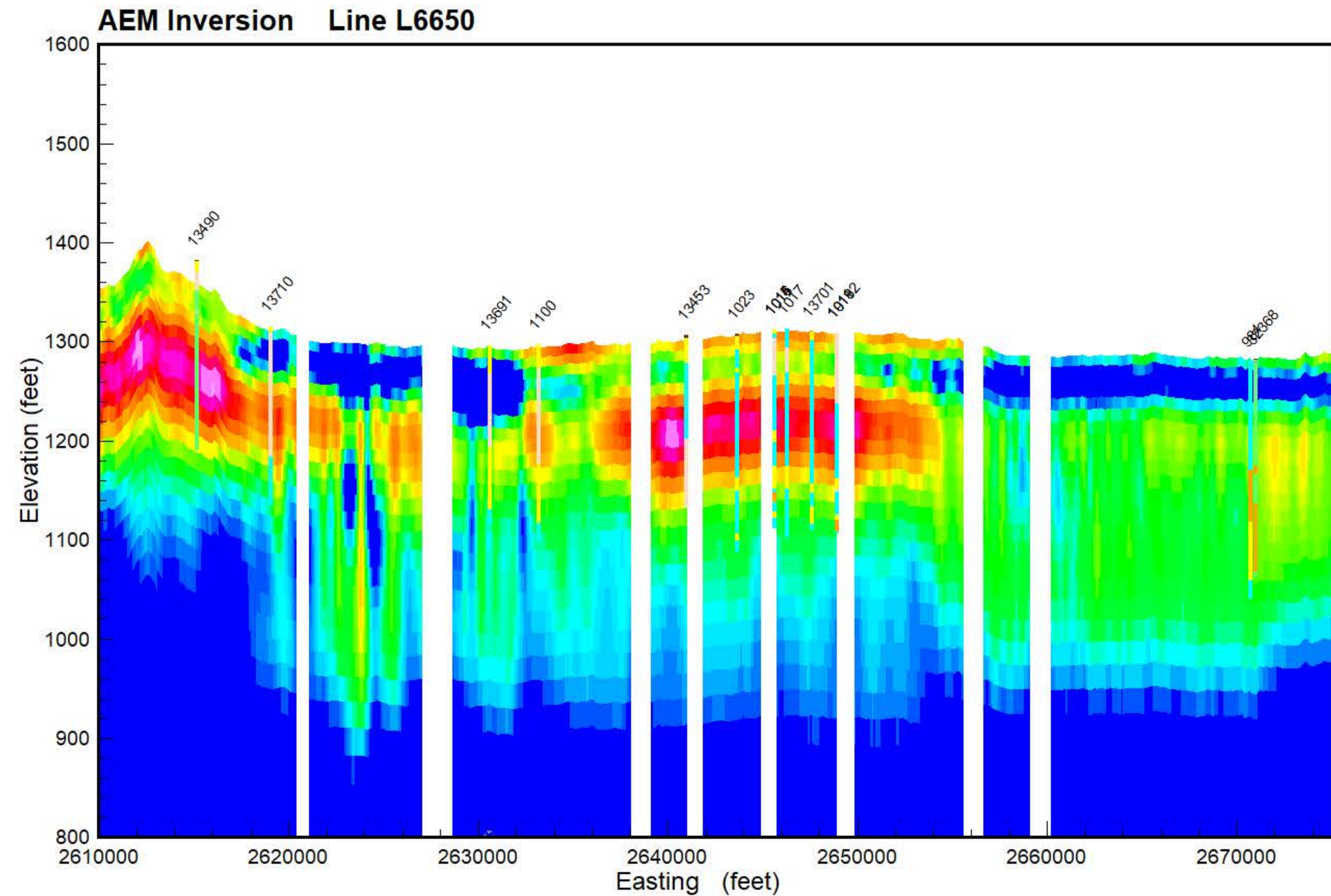
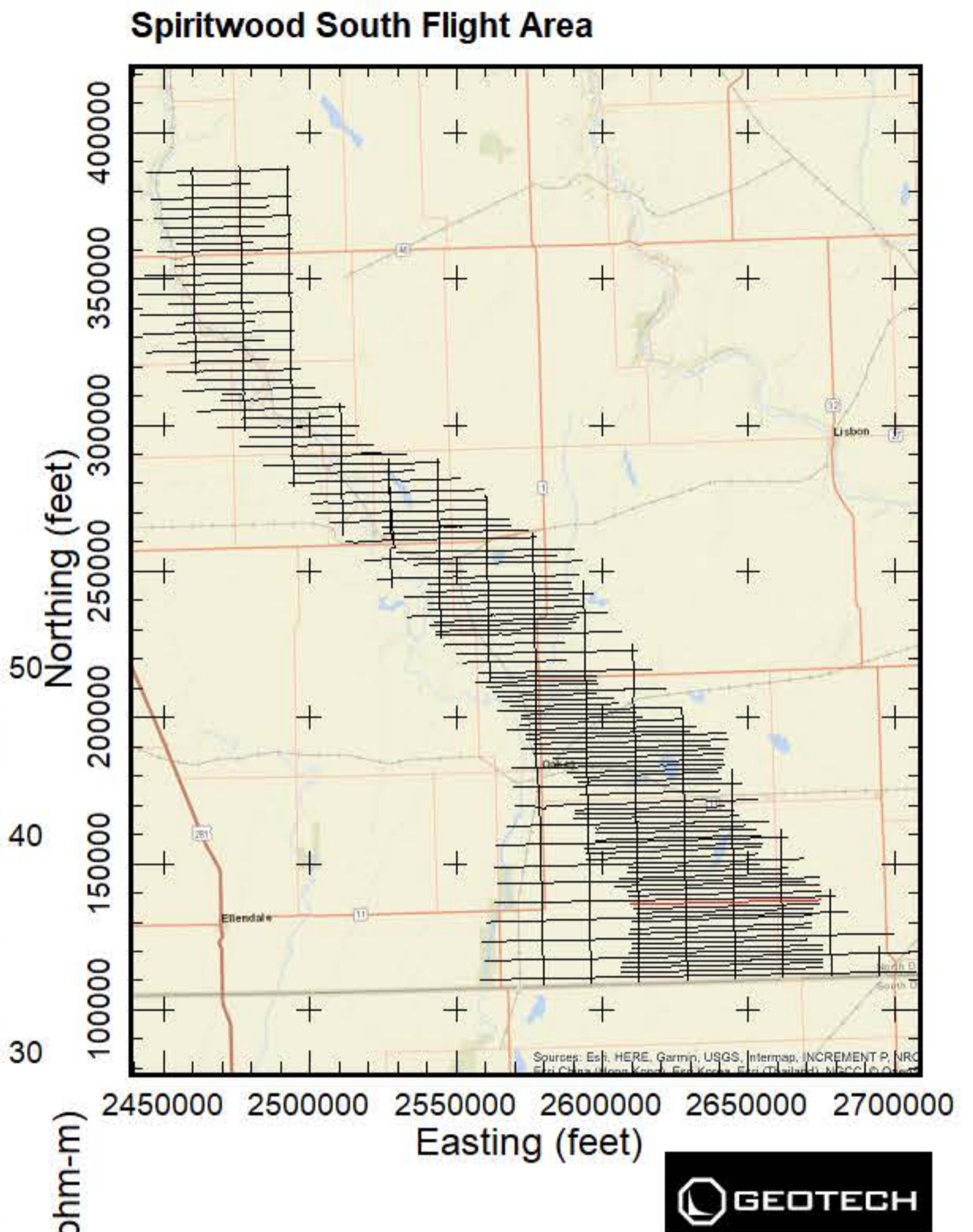
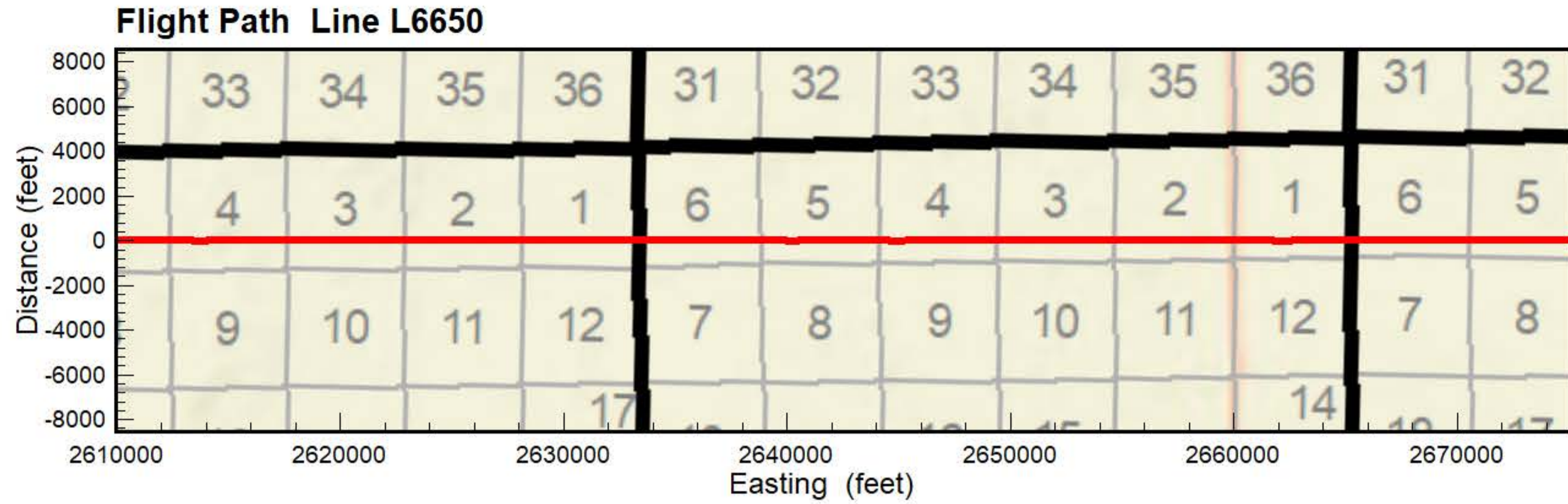
**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

PEAT
LIGNITE
COBBLES
BOULDER
ROCK
PRECAMBRIAN
WEATHERED GRANITE
SANDSTONE
LIMESTONE
SILTSTONE
CLAYSTONE
SHALE
BEDROCK
GRAVEL
SAND & GRAVEL
SAND
INTERBEDDED
SILT
CLAY
TILL
FILL
TOPSOIL
NOSAMPLE

**AGF**  
Aqua Geo Frameworks



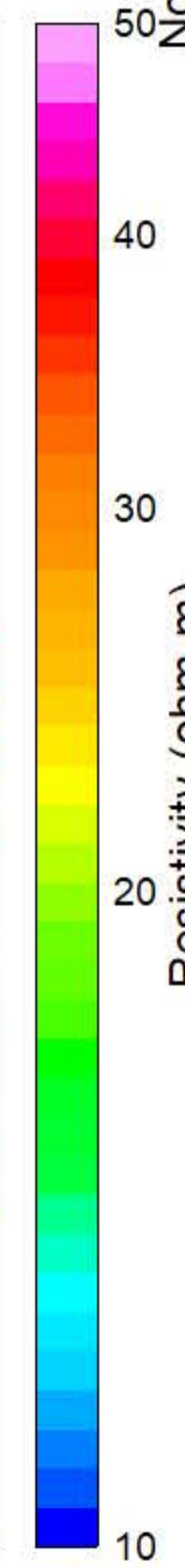
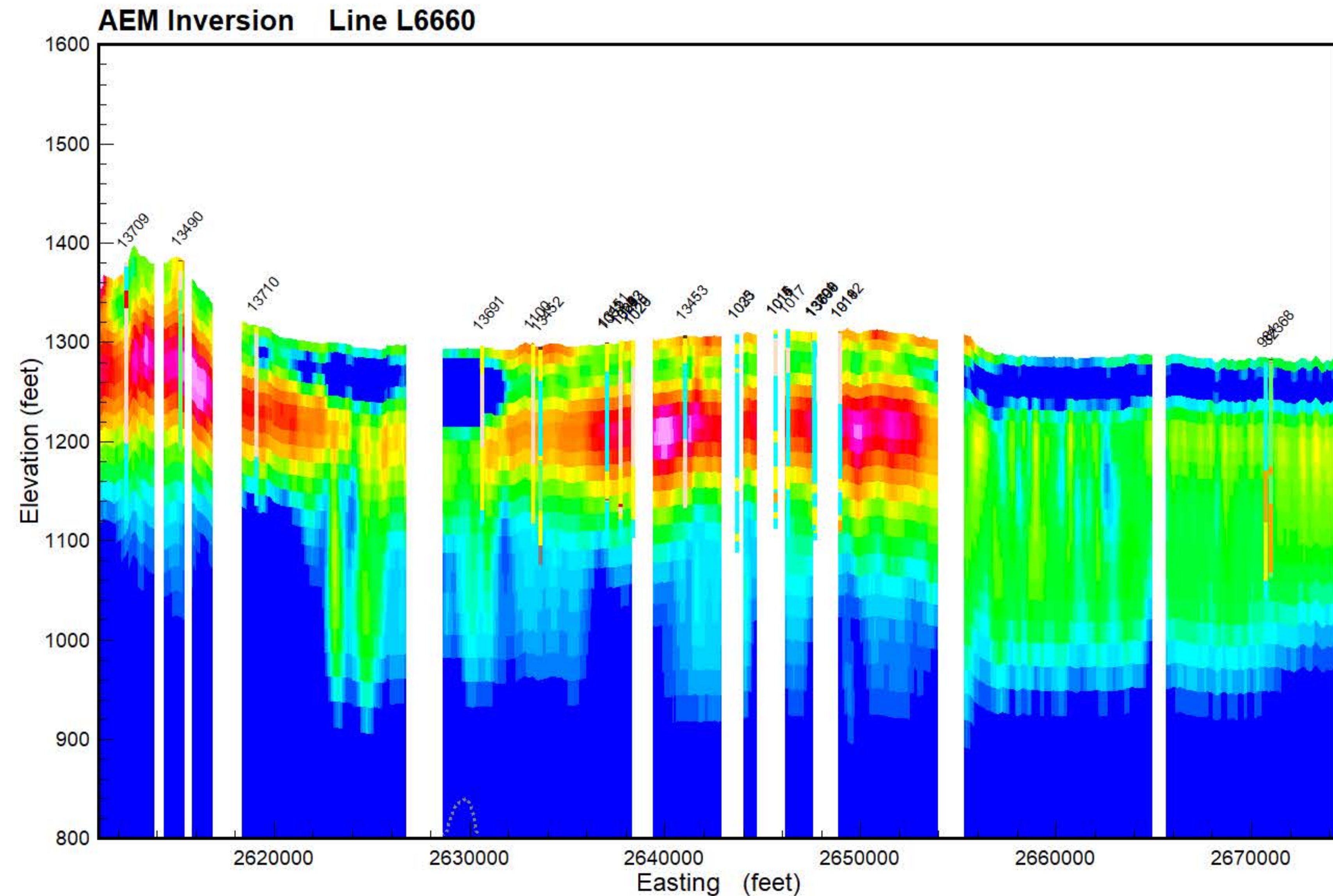
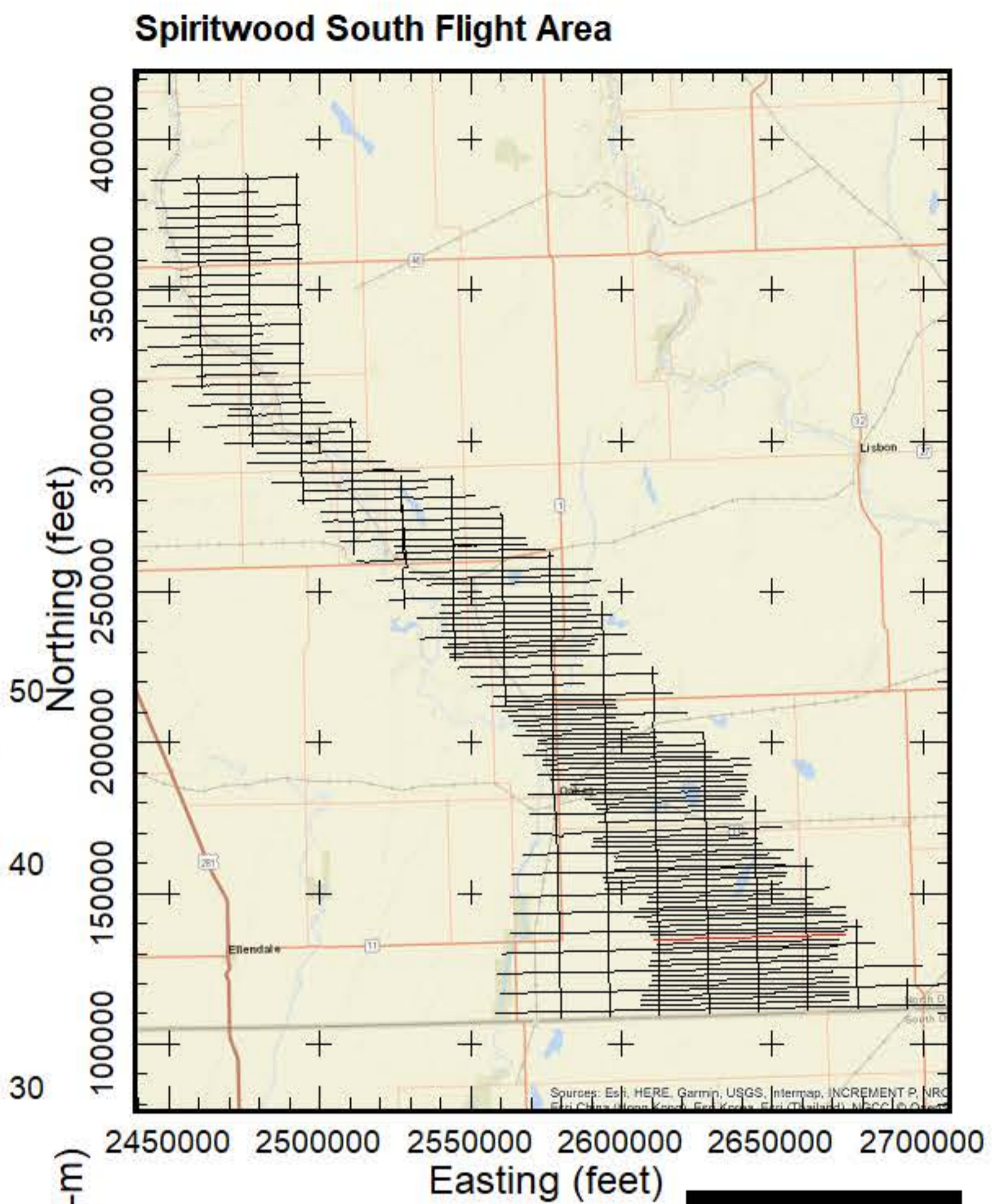
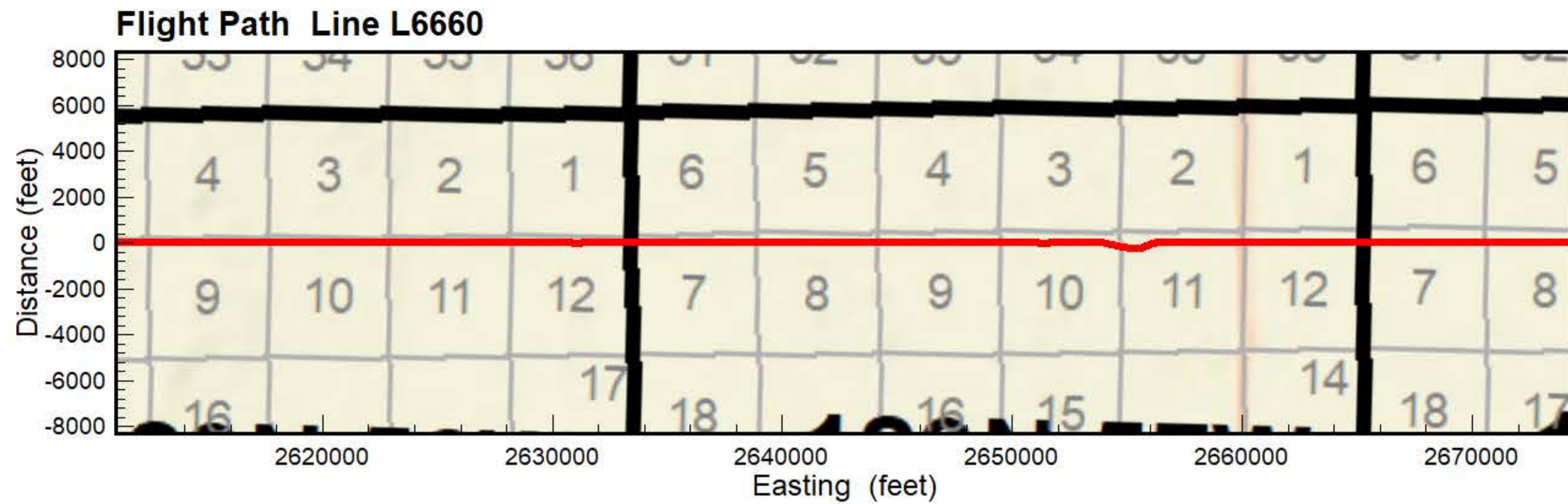


- Resistivity (ohm-m)
- PEAT
  - LIGNITE
  - COBBLES
  - BOULDER
  - ROCK
  - PRECAMBRIAN
  - WEATHERED GRANITE
  - SANDSTONE
  - LIMESTONE
  - SILTSTONE
  - CLAYSTONE
  - SHALE
  - BEDROCK
  - GRAVEL
  - SAND & GRAVEL
  - SAND
  - INTERBEDDED
  - SILT
  - CLAY
  - TILL
  - FILL
  - TOPSOIL
  - NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.







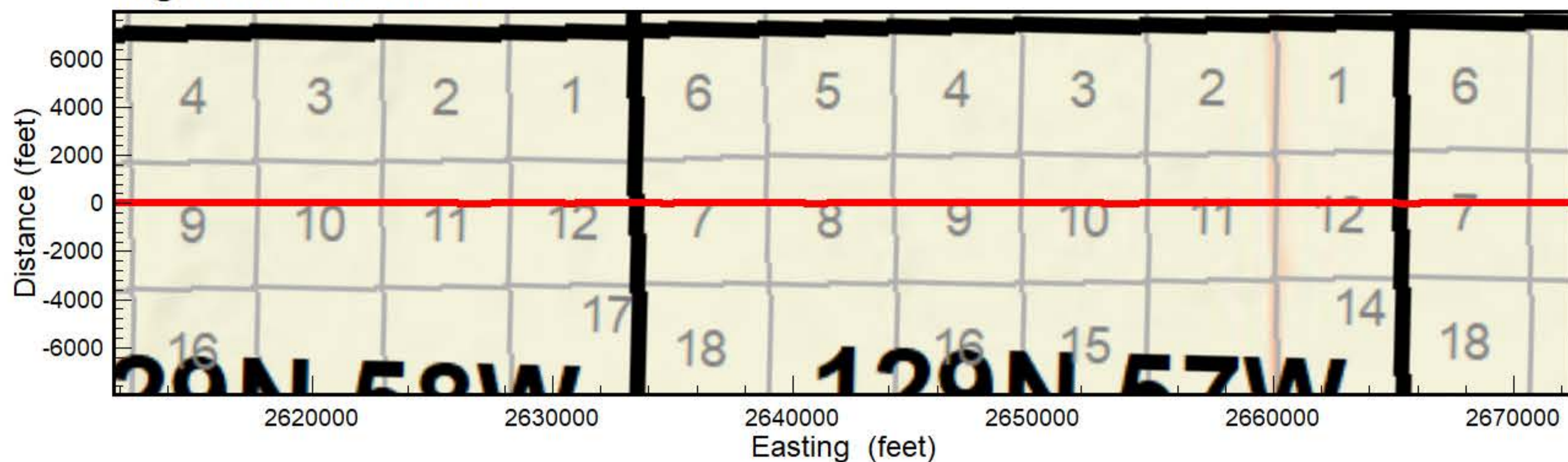
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

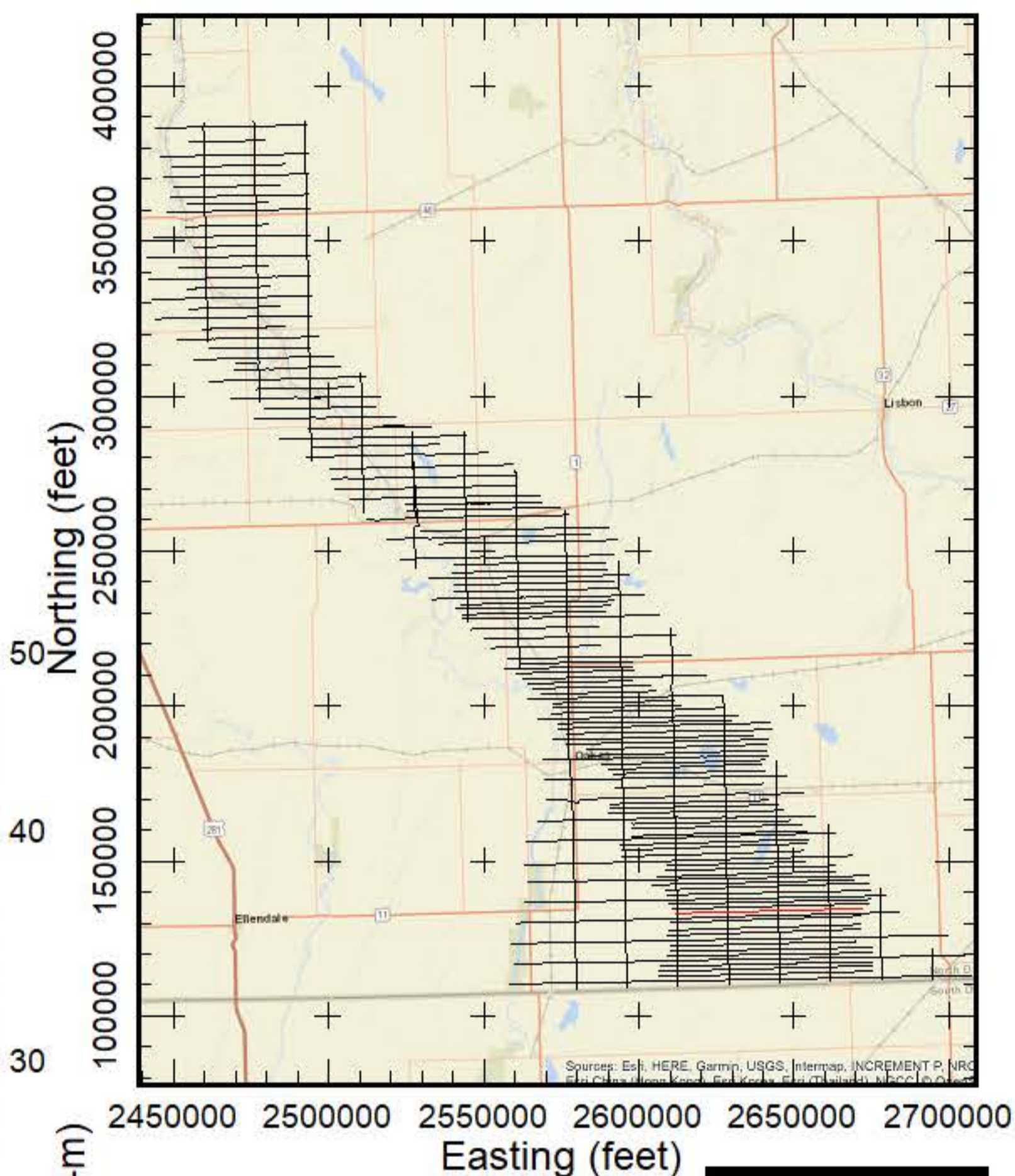




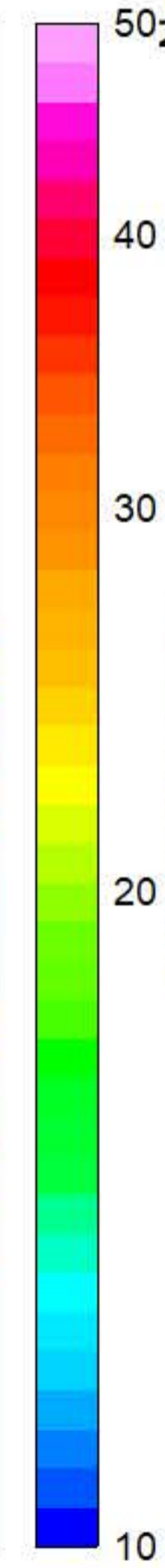
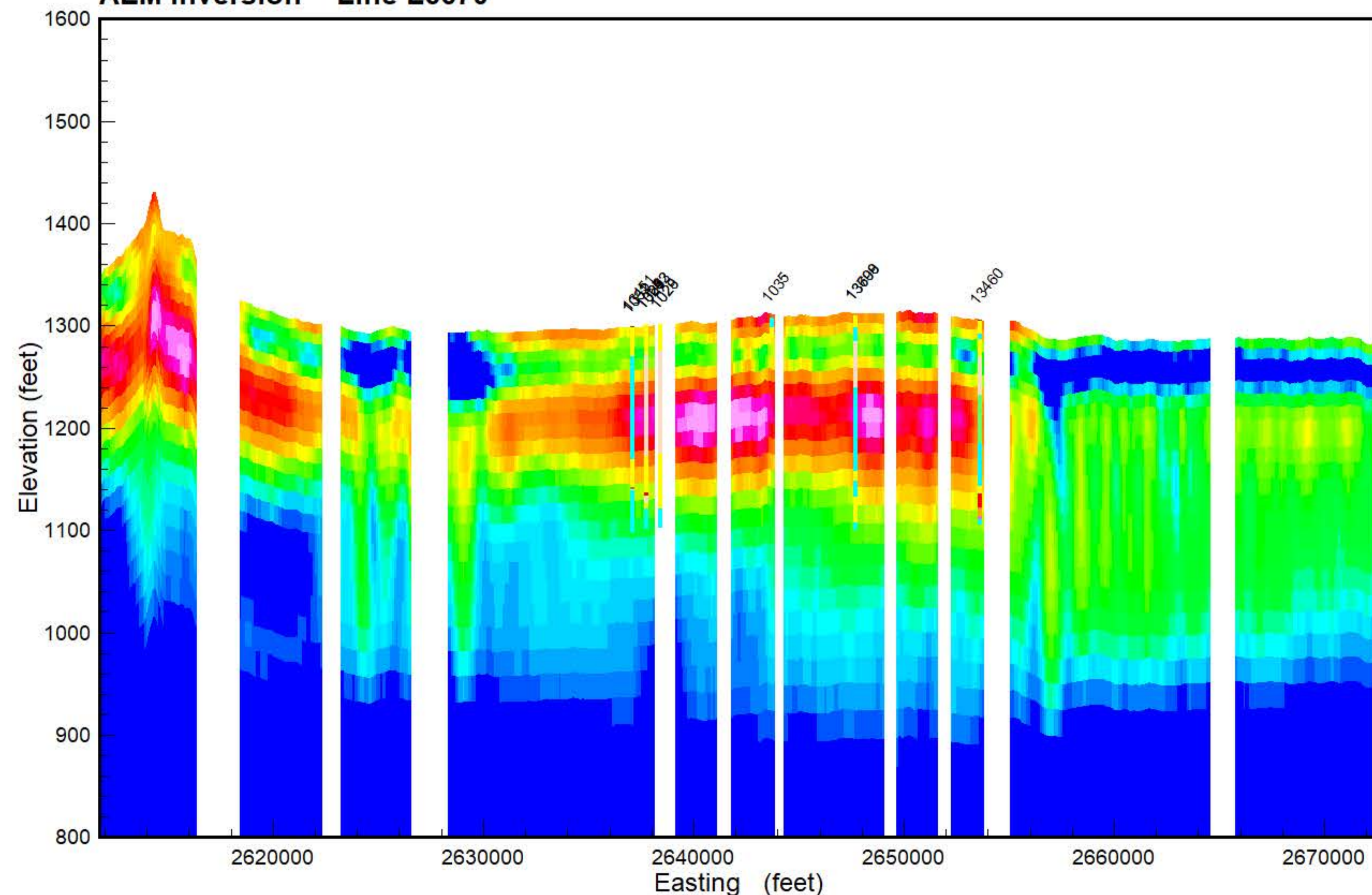
**Flight Path Line L6670**



**Spiritwood South Flight Area**



**AEM Inversion Line L6670**

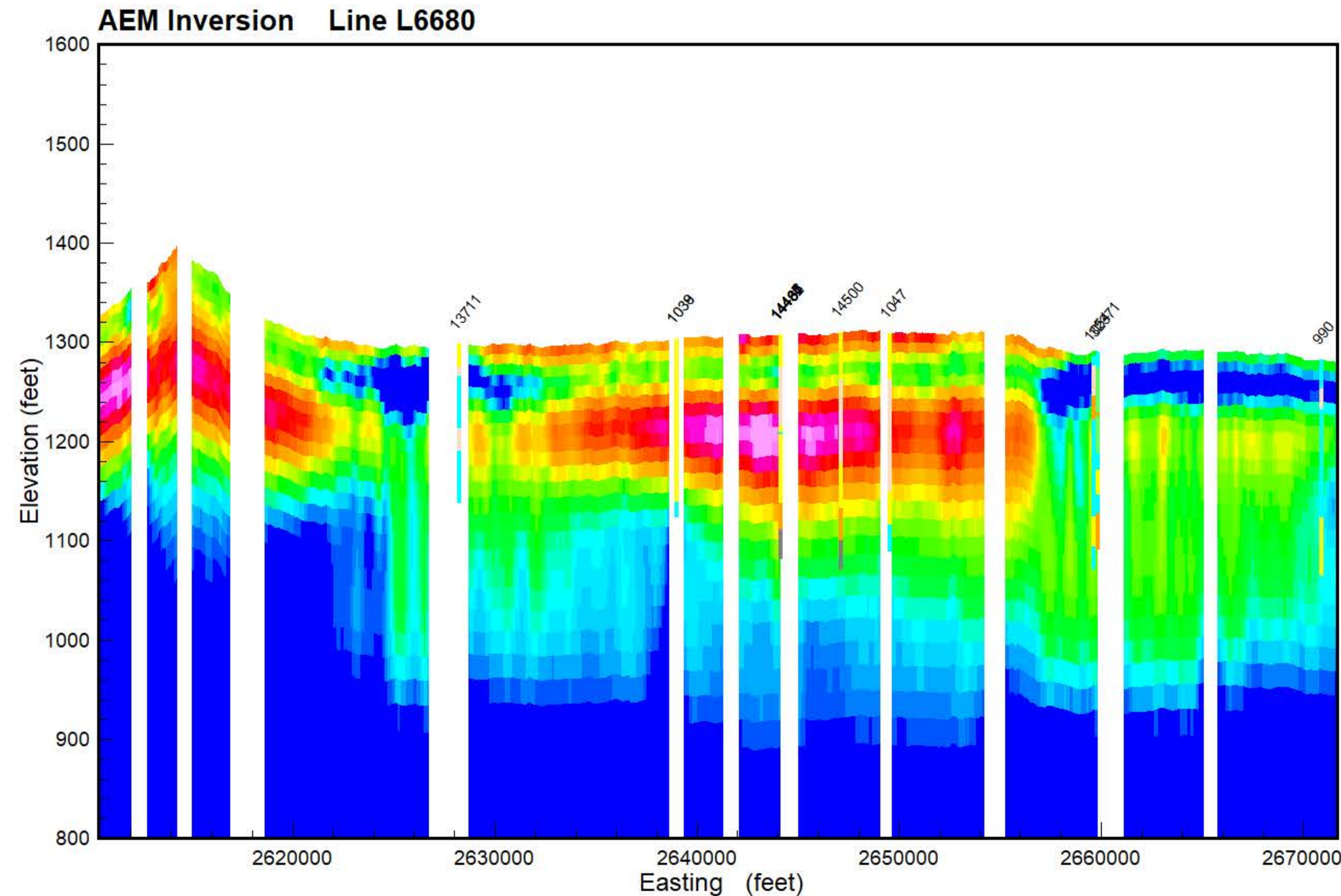
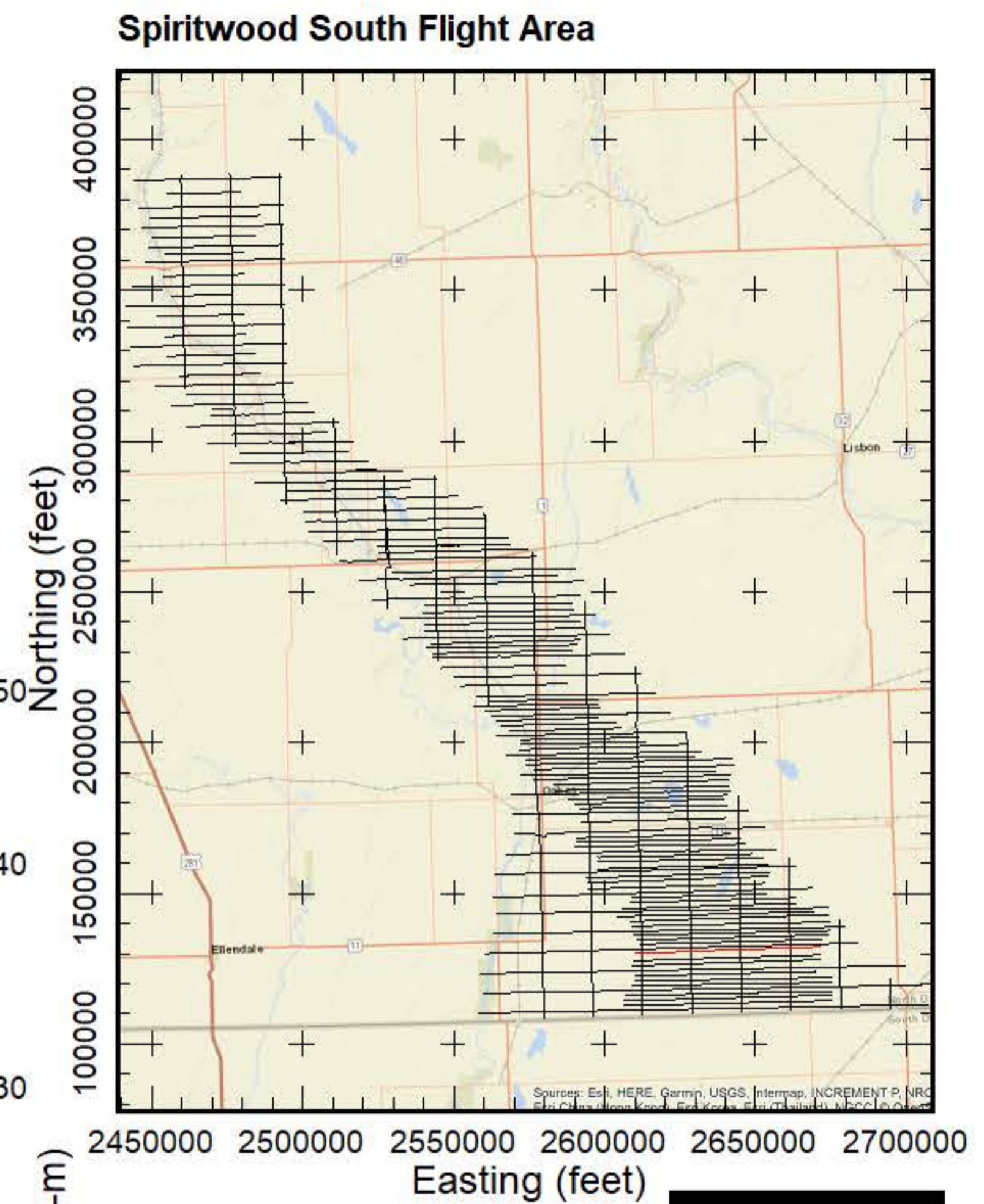
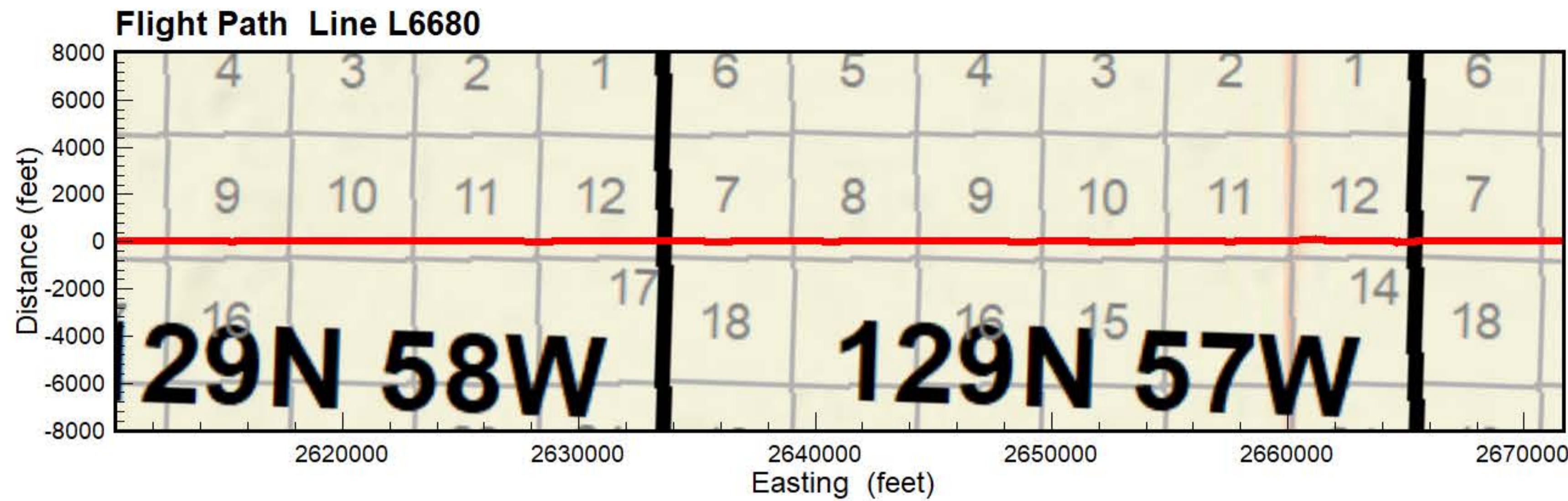


- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
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- GRAVEL
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- INTERBEDDED
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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.





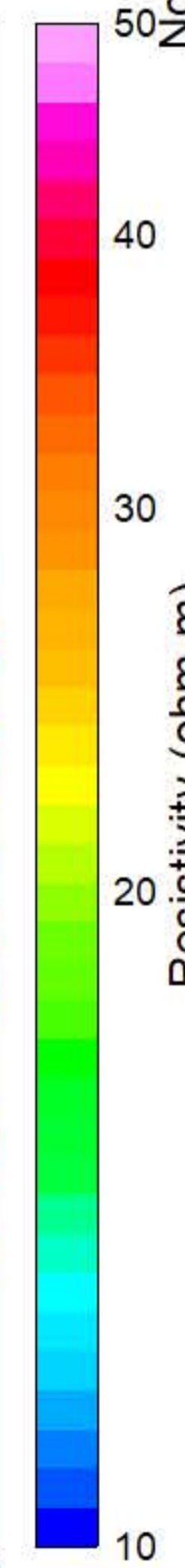
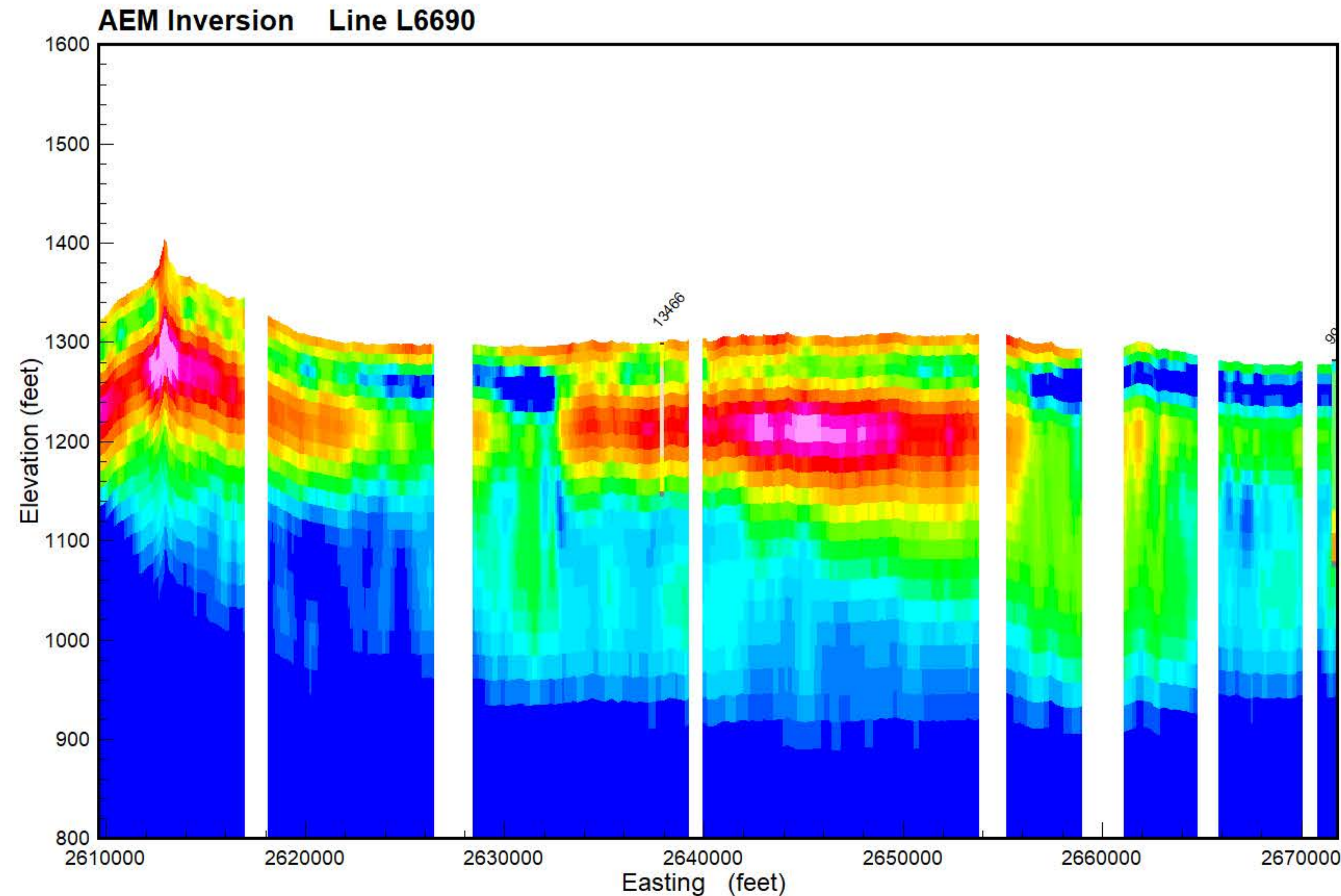
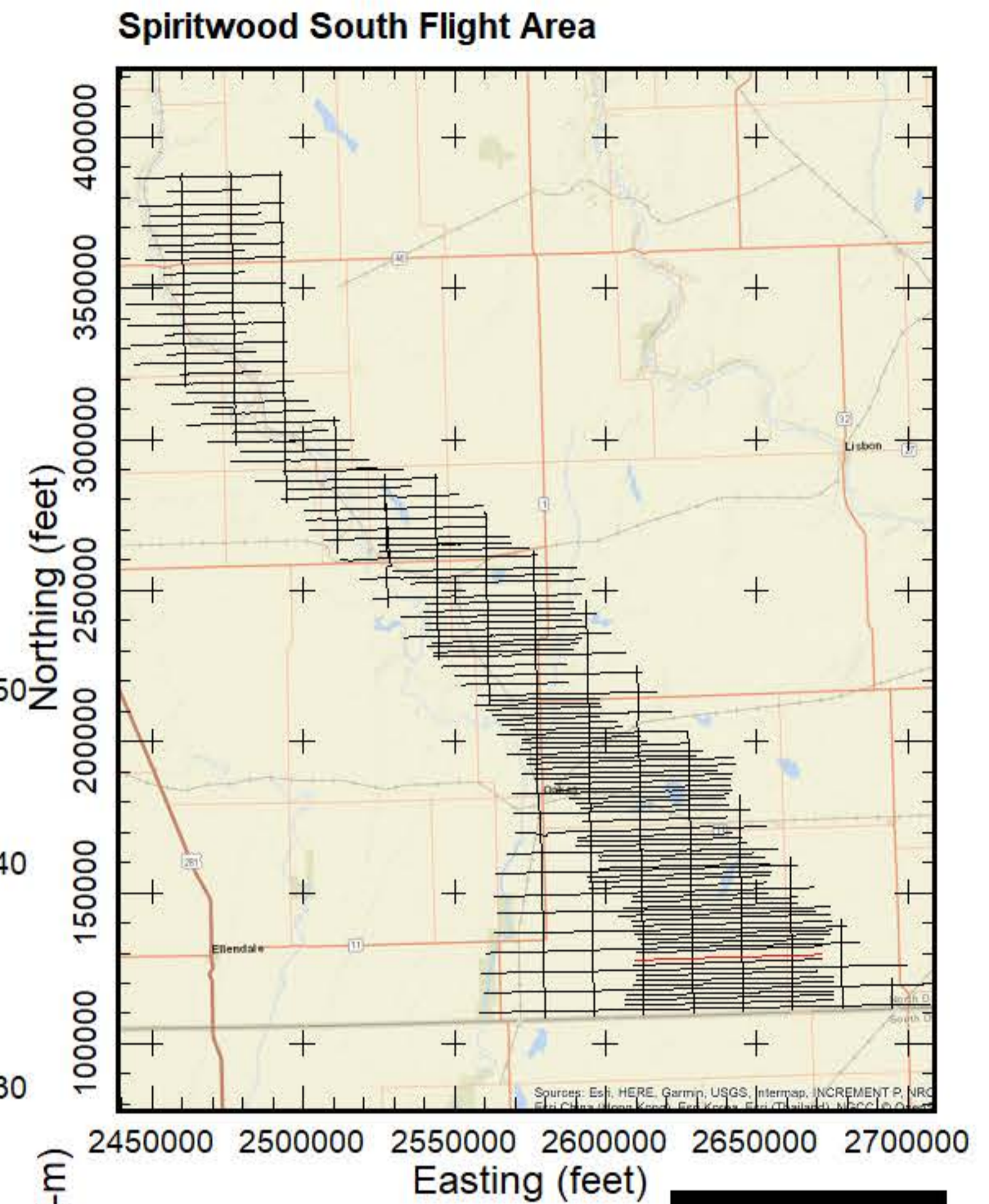
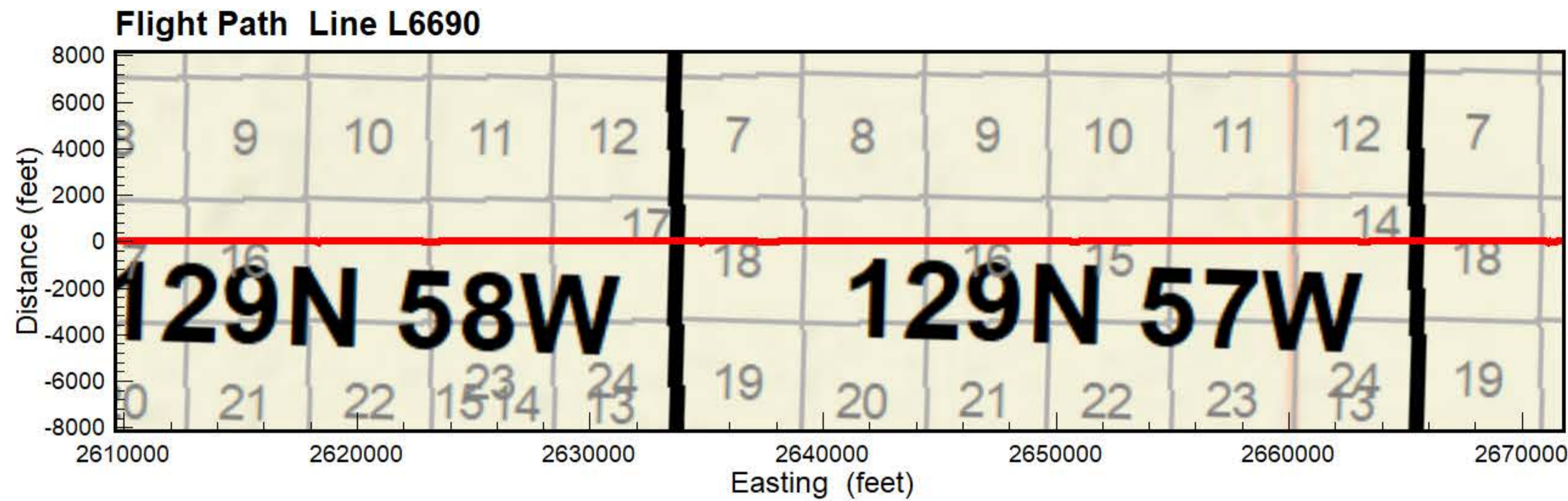


- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.





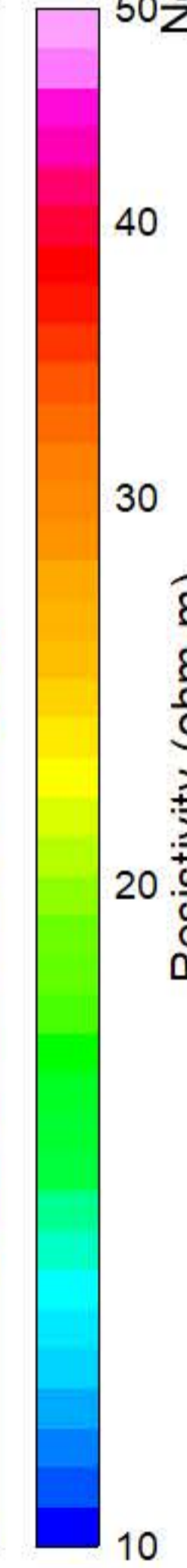
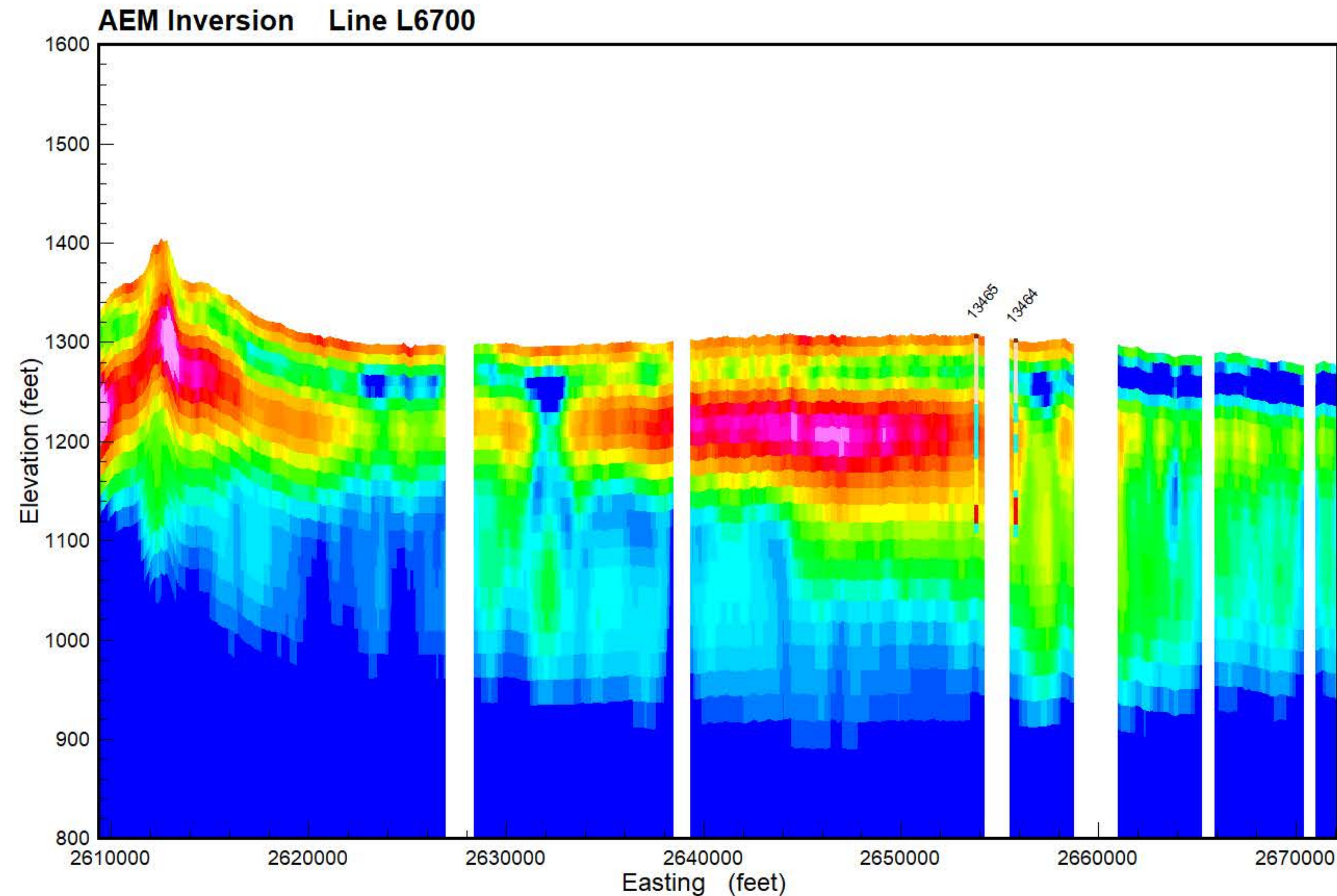
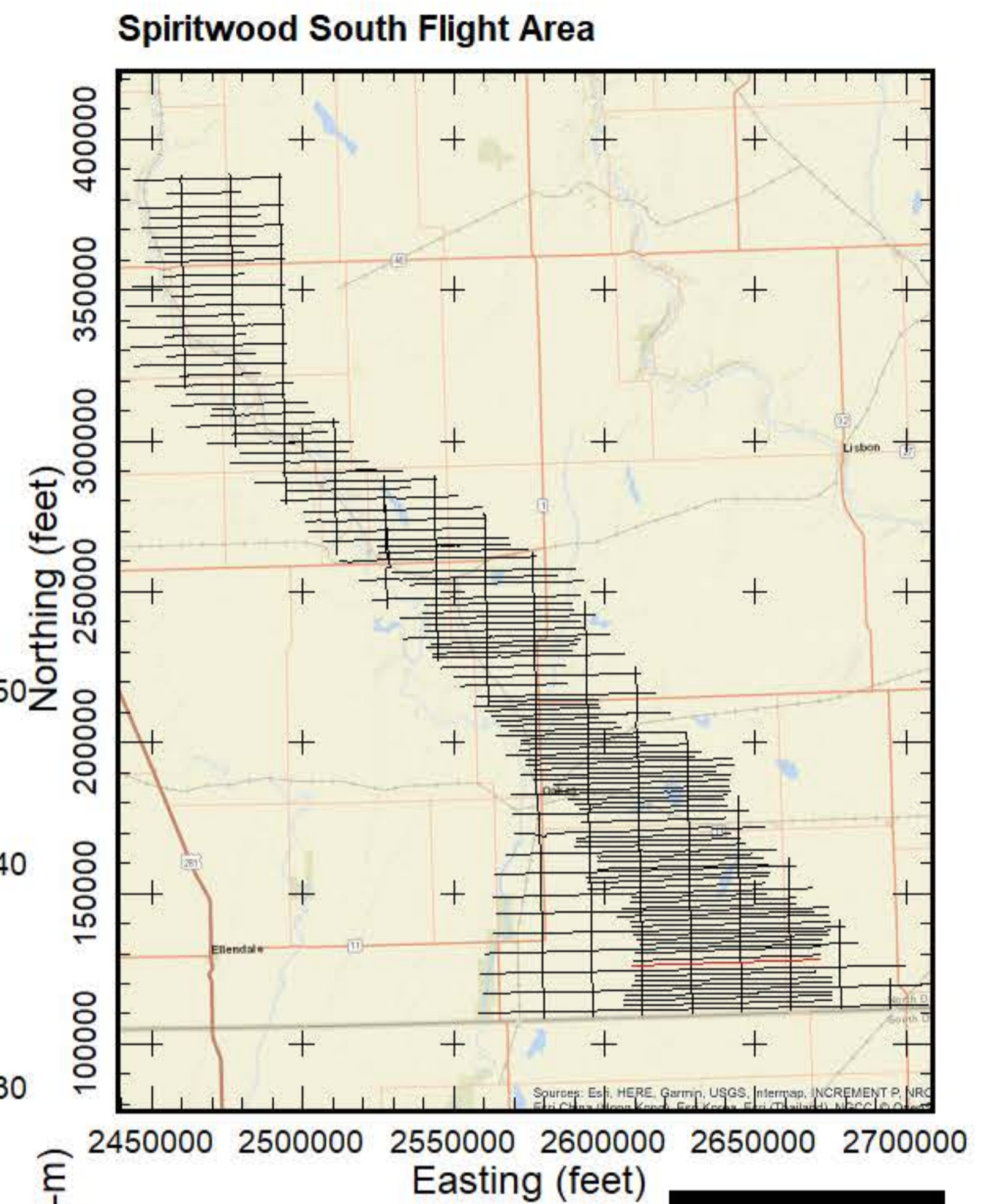
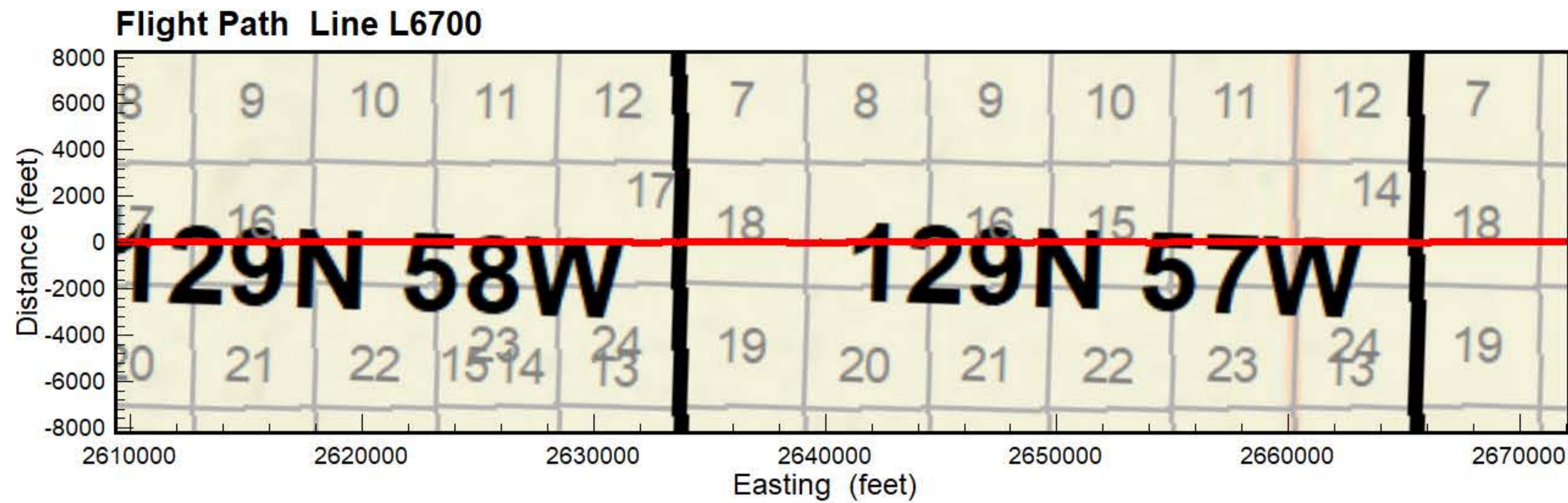


- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
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- SANDSTONE
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- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.







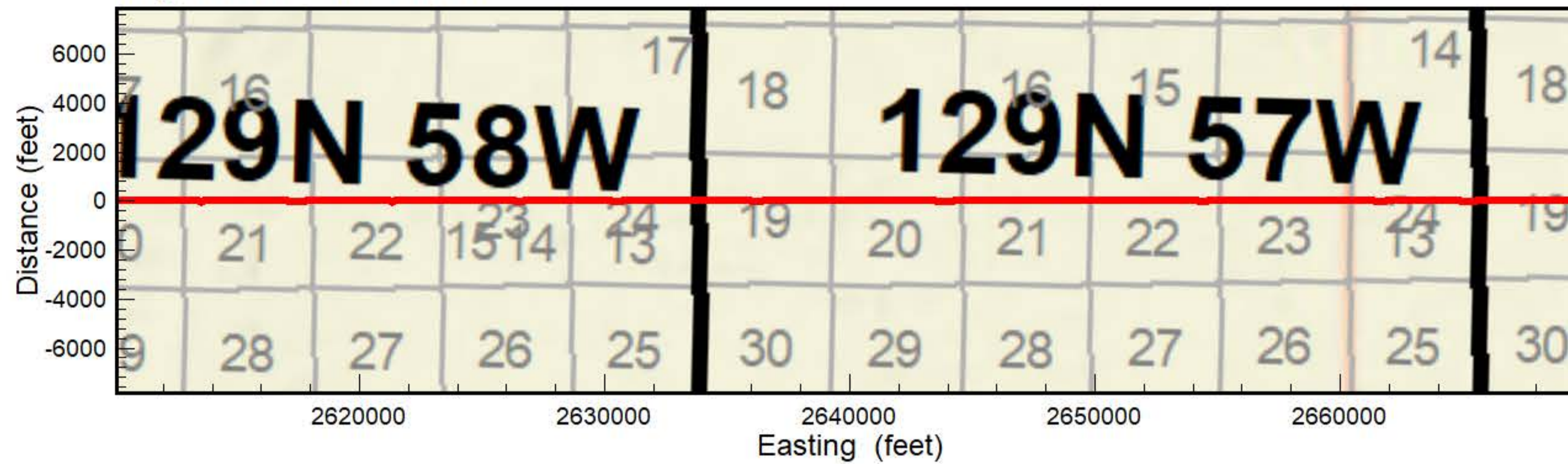
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
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- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

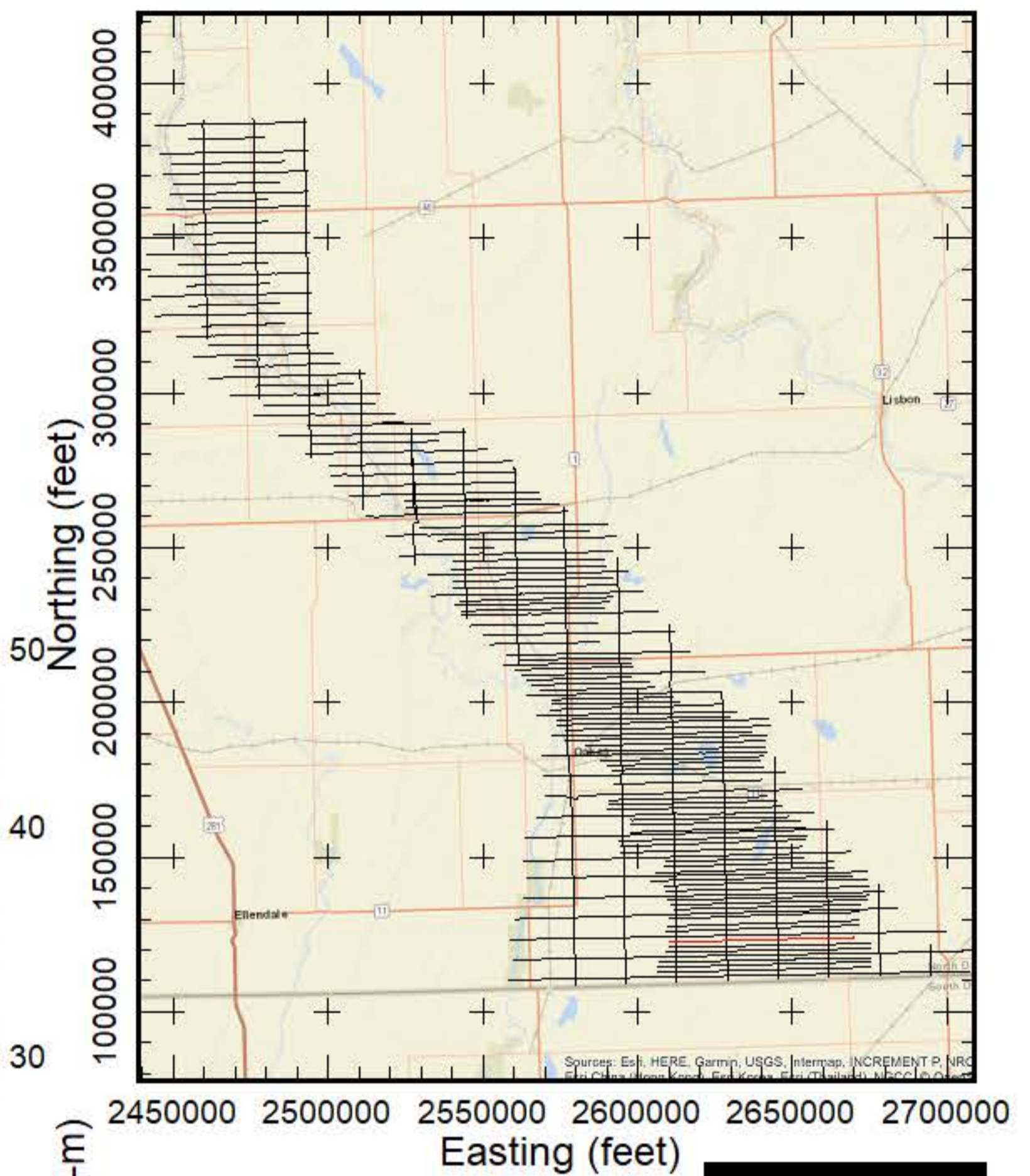




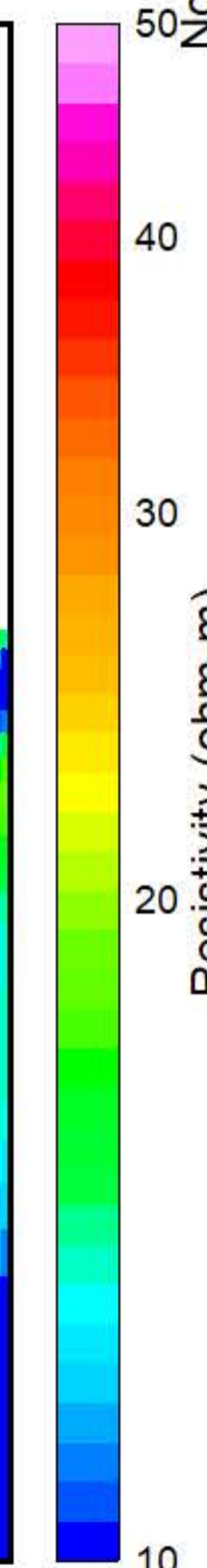
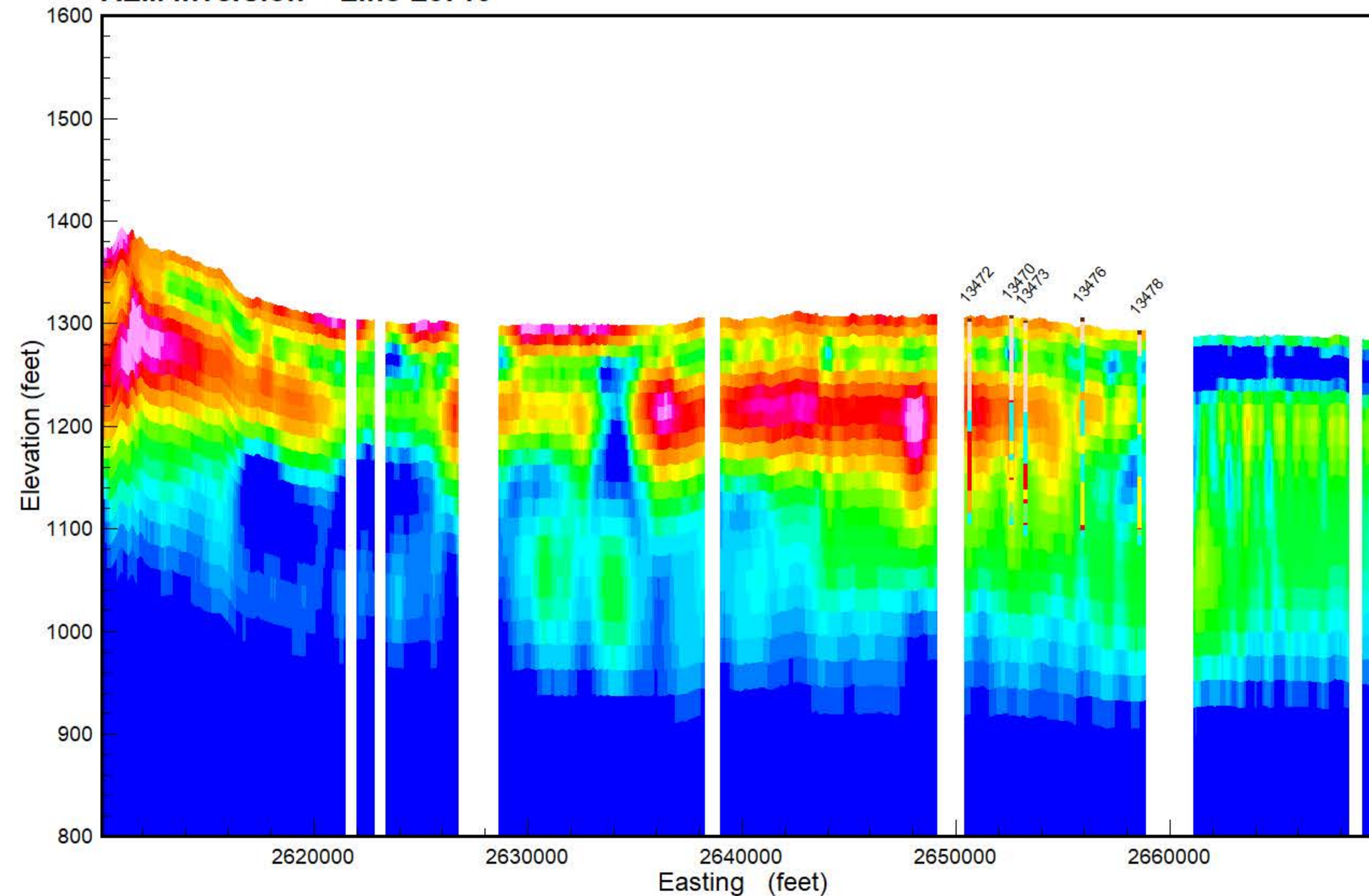
**Flight Path Line L6710**



**Spiritwood South Flight Area**



**AEM Inversion Line L6710**



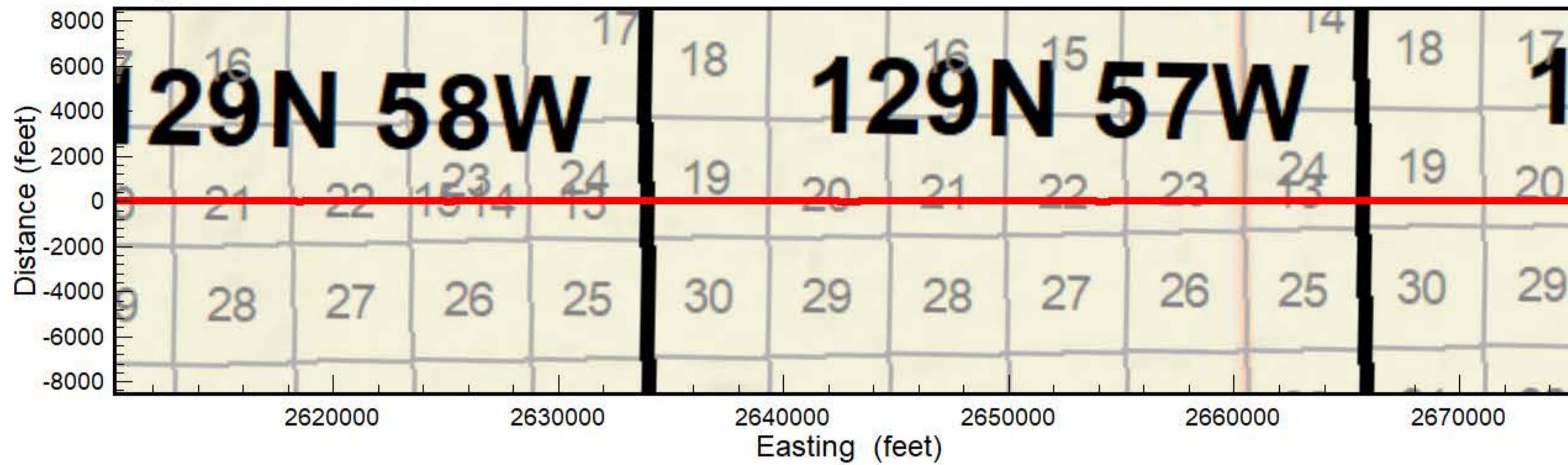
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

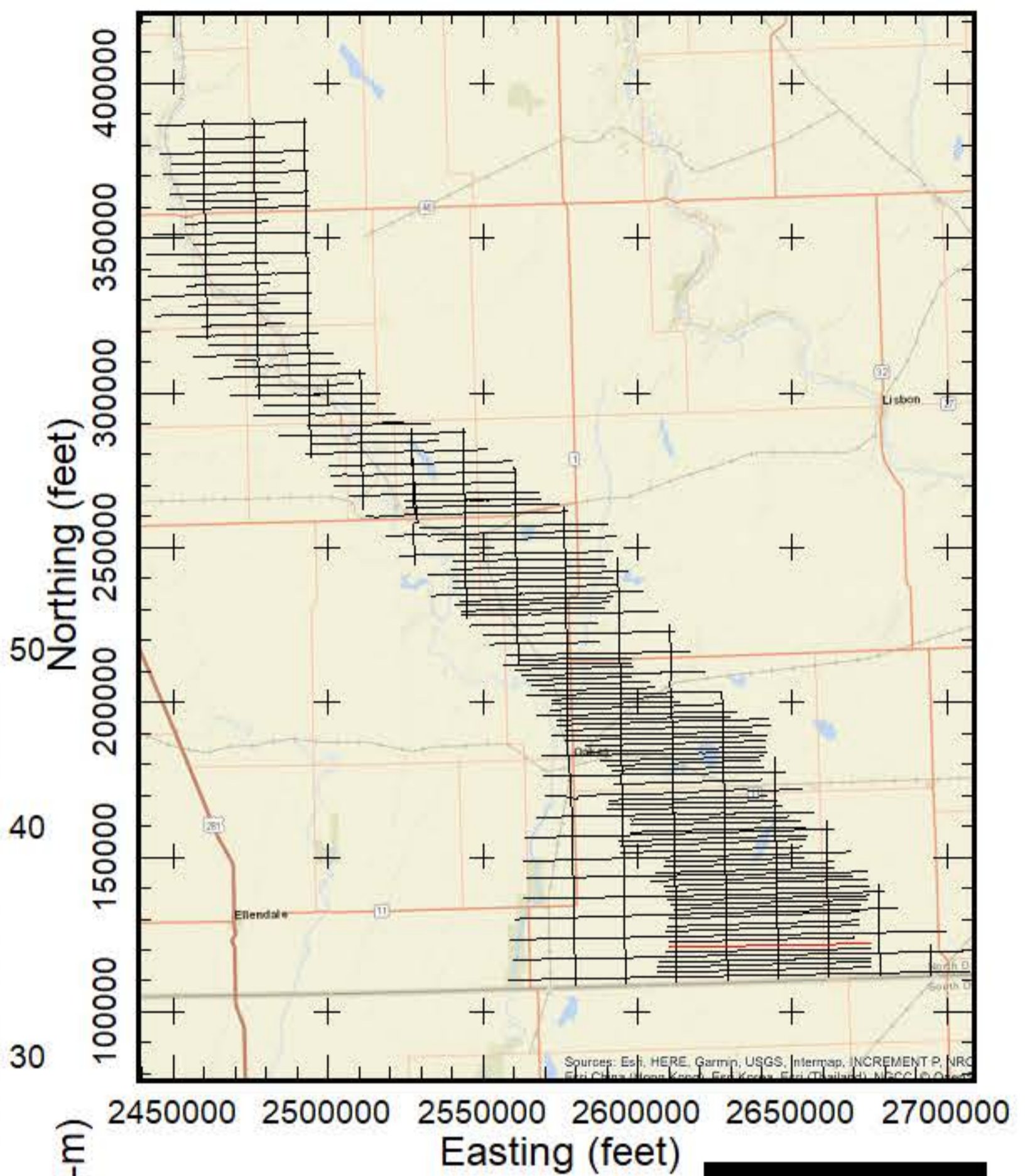




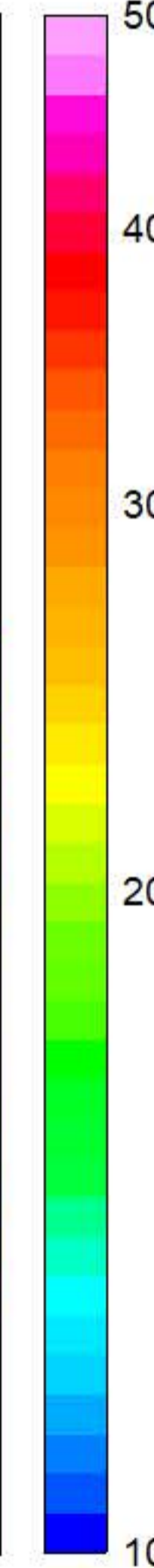
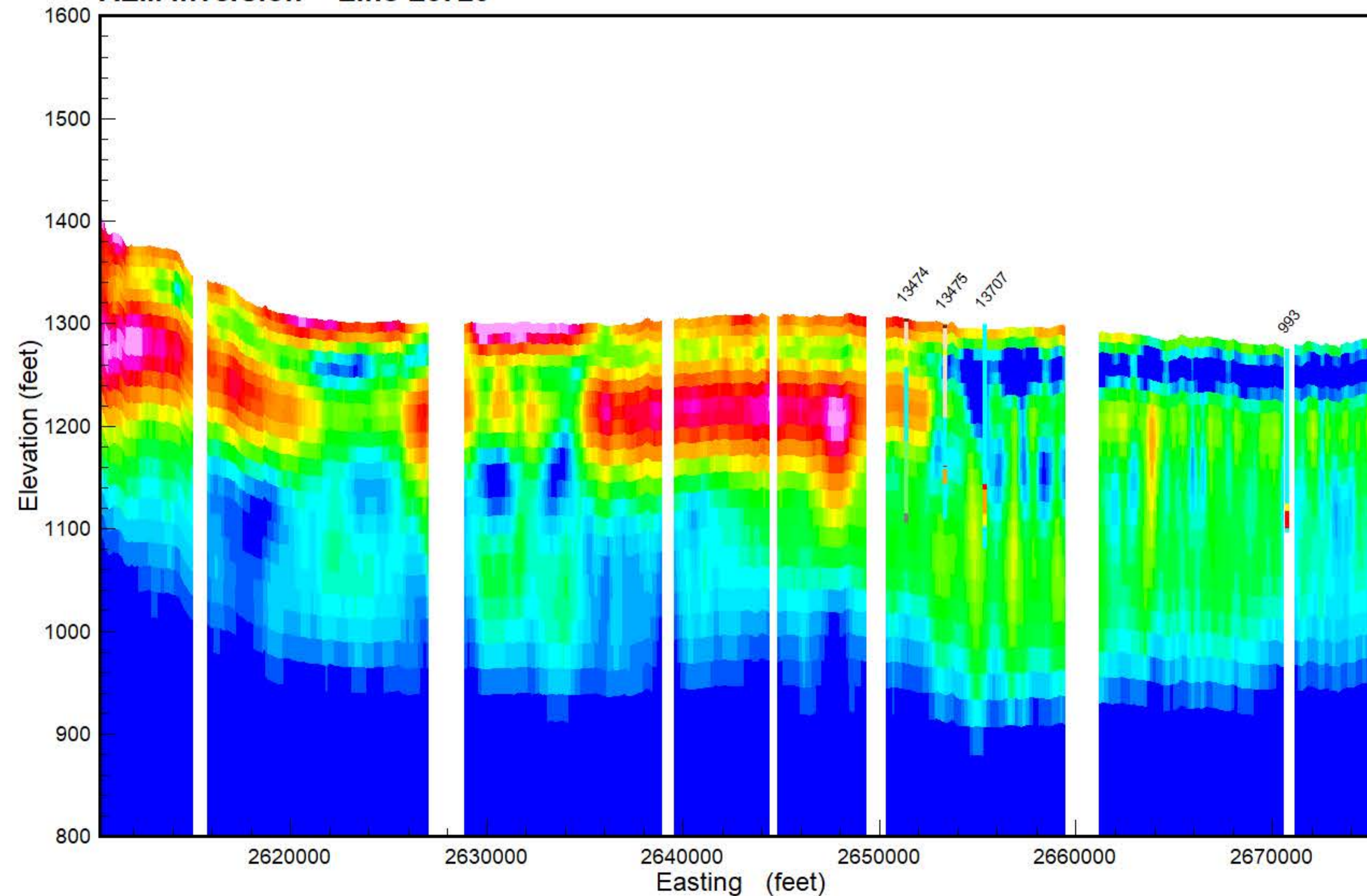
**Flight Path Line L6720**



**Spiritwood South Flight Area**



**AEM Inversion Line L6720**

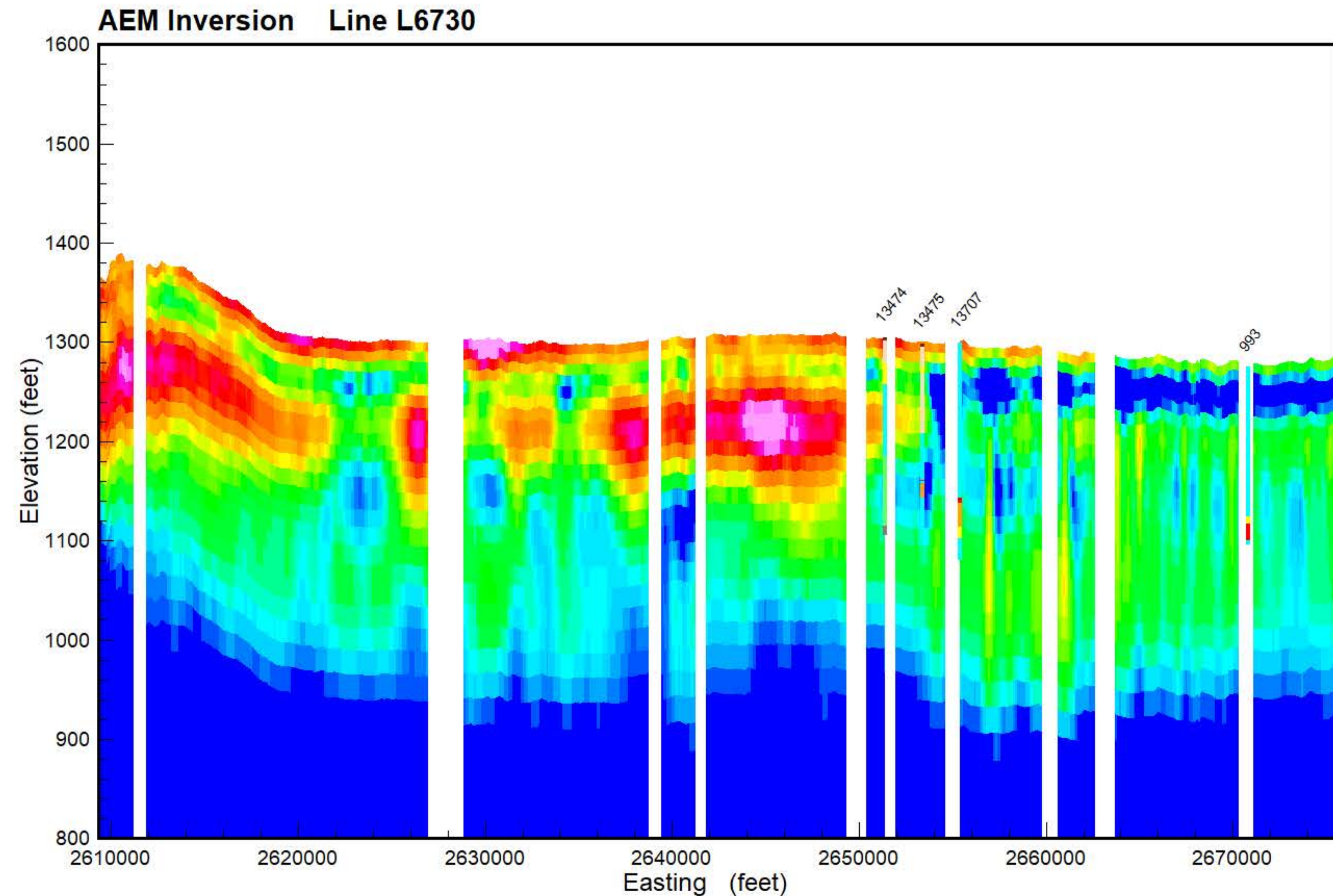
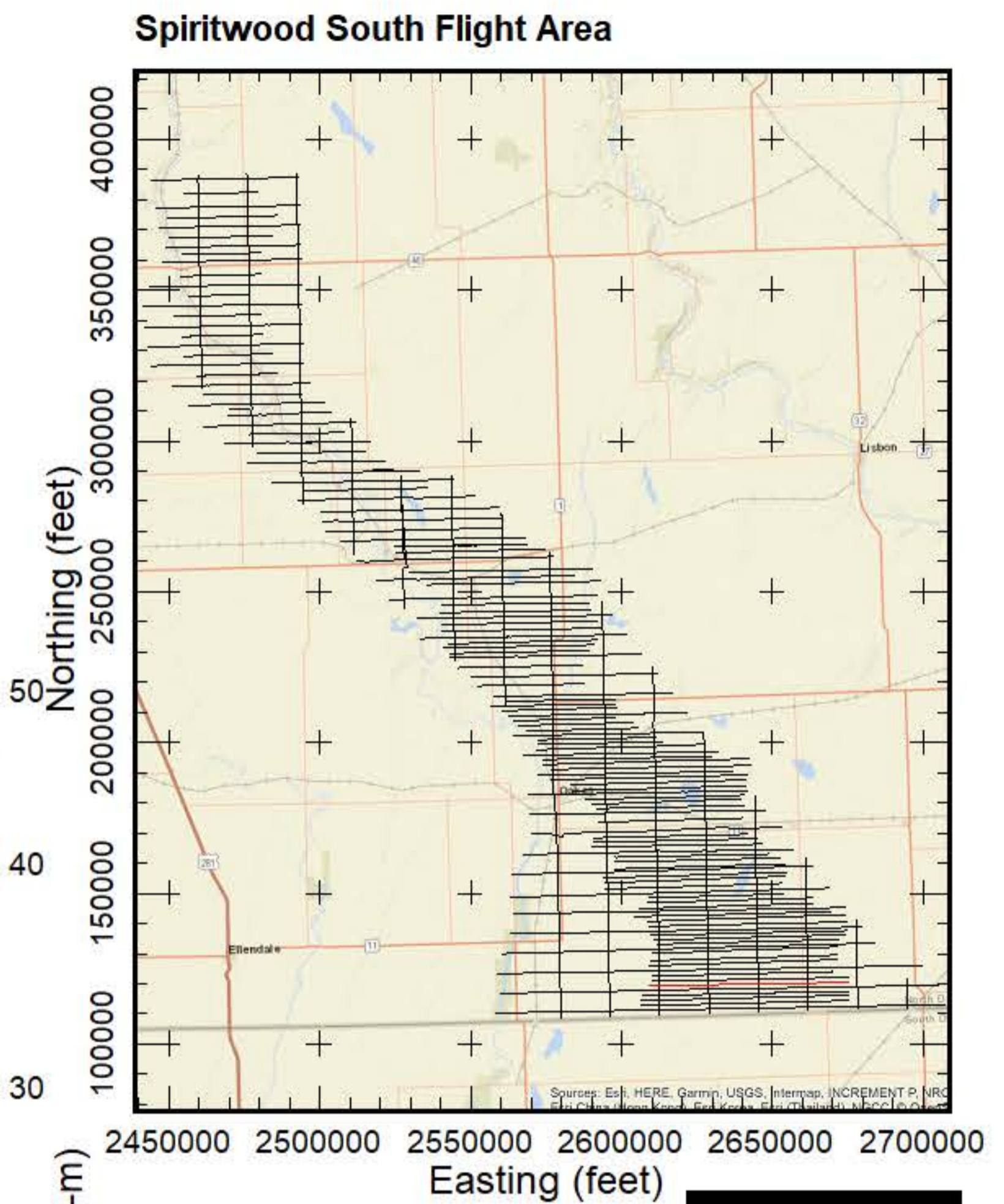
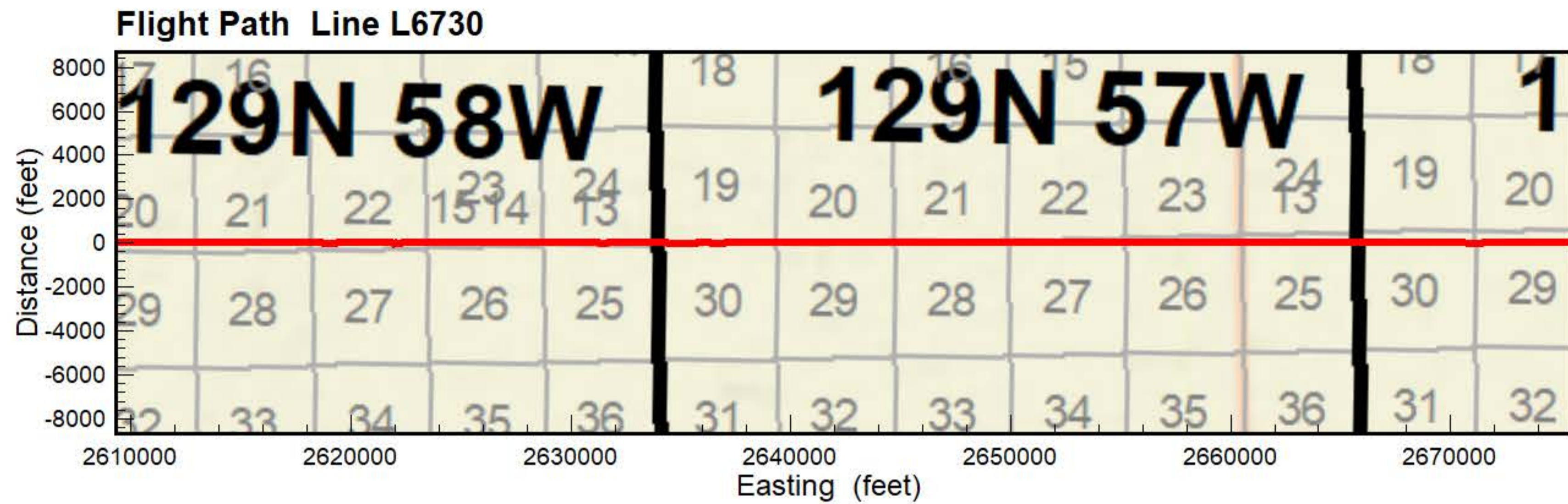


- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.







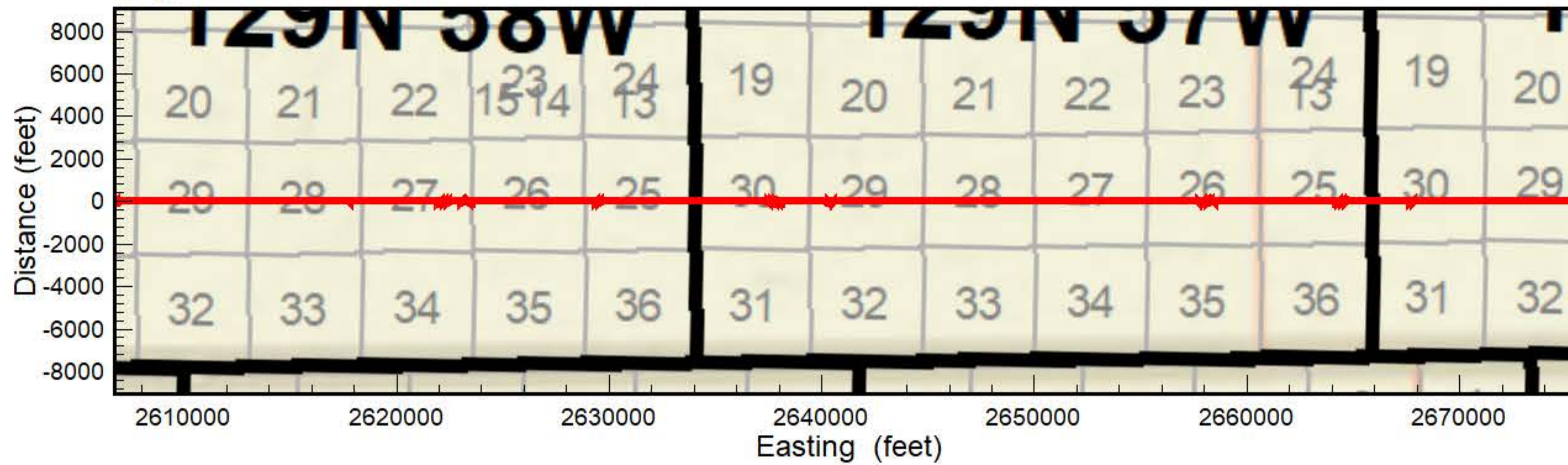
**GEOTECH**

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within ¼ mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

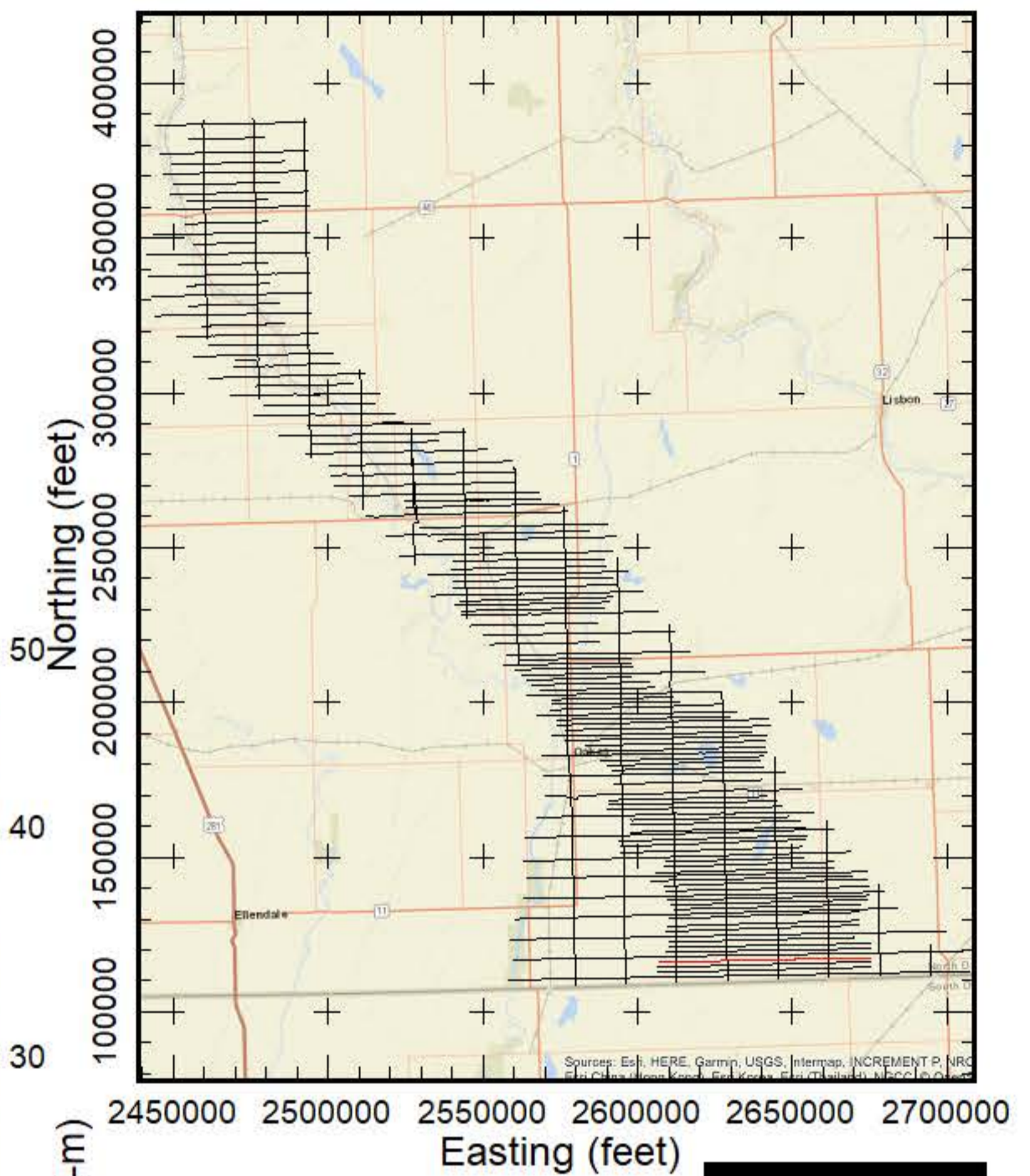
- PEAT
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- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE



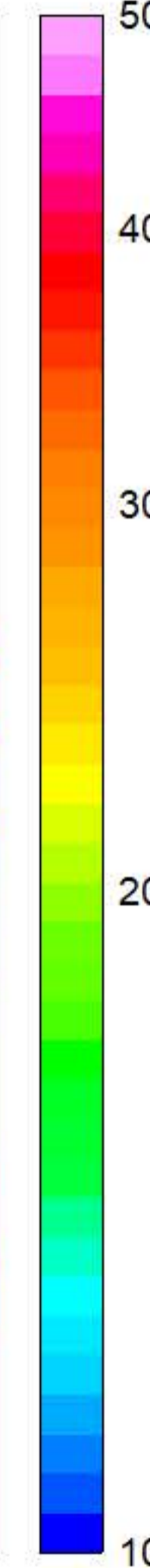
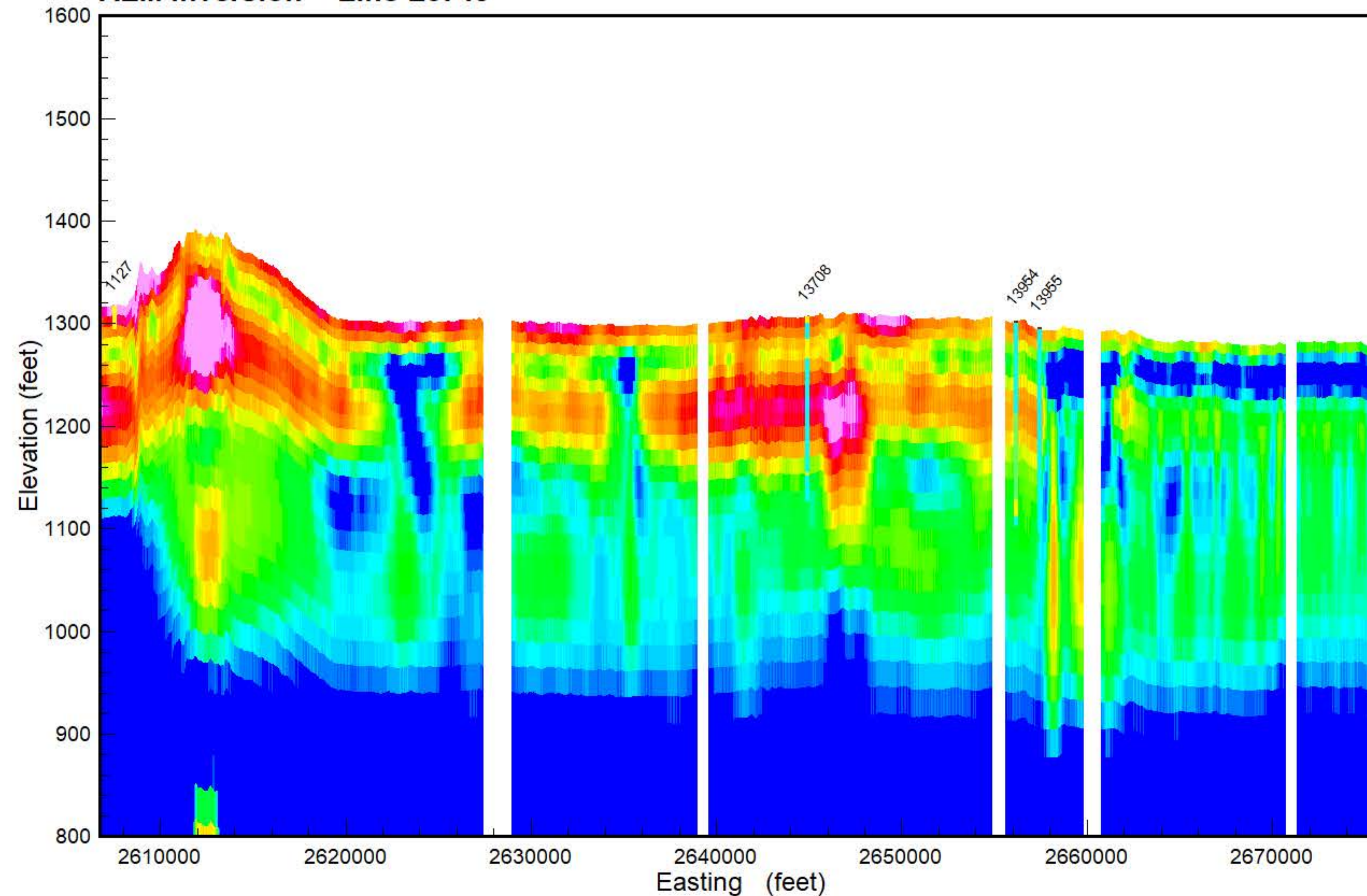
**Flight Path Line L6745**



**Spiritwood South Flight Area**



**AEM Inversion Line L6745**



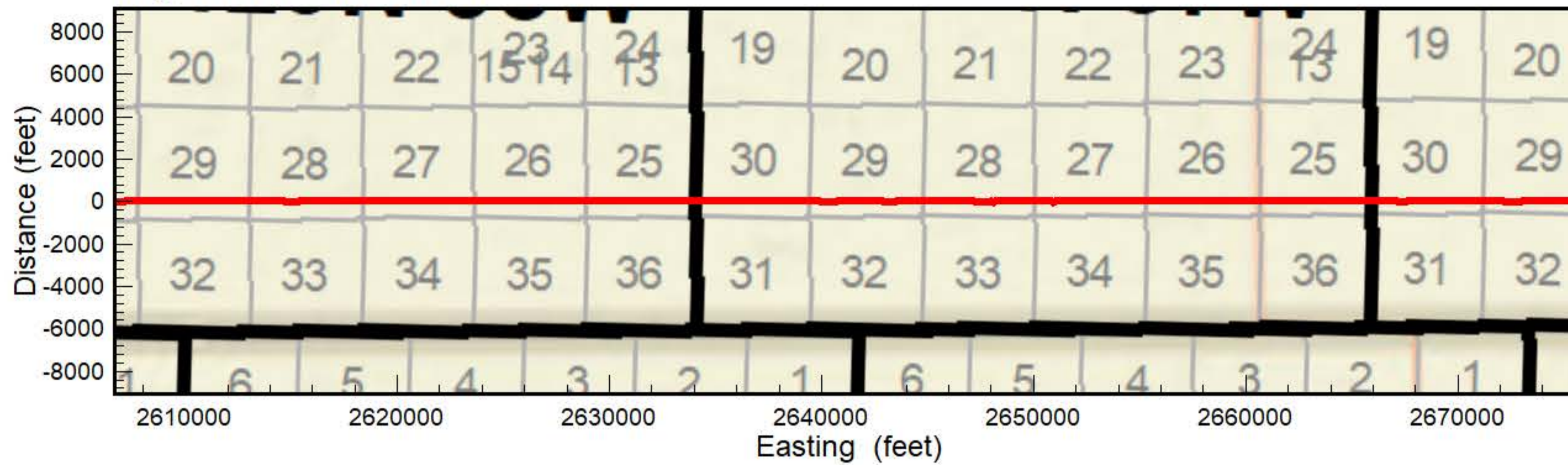
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

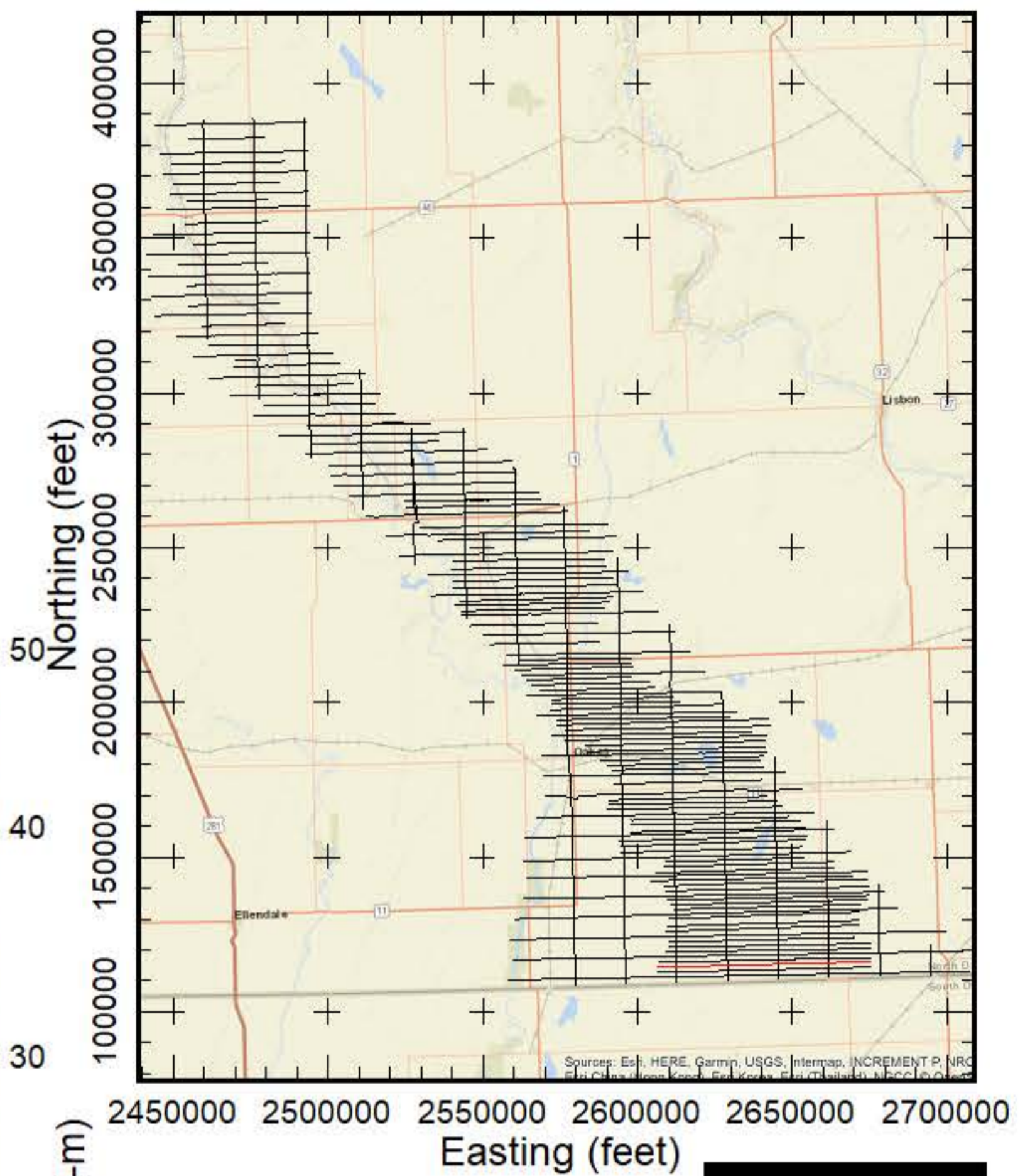




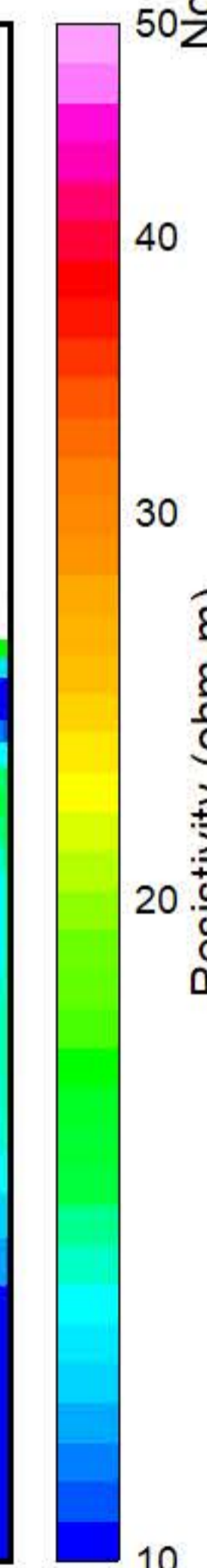
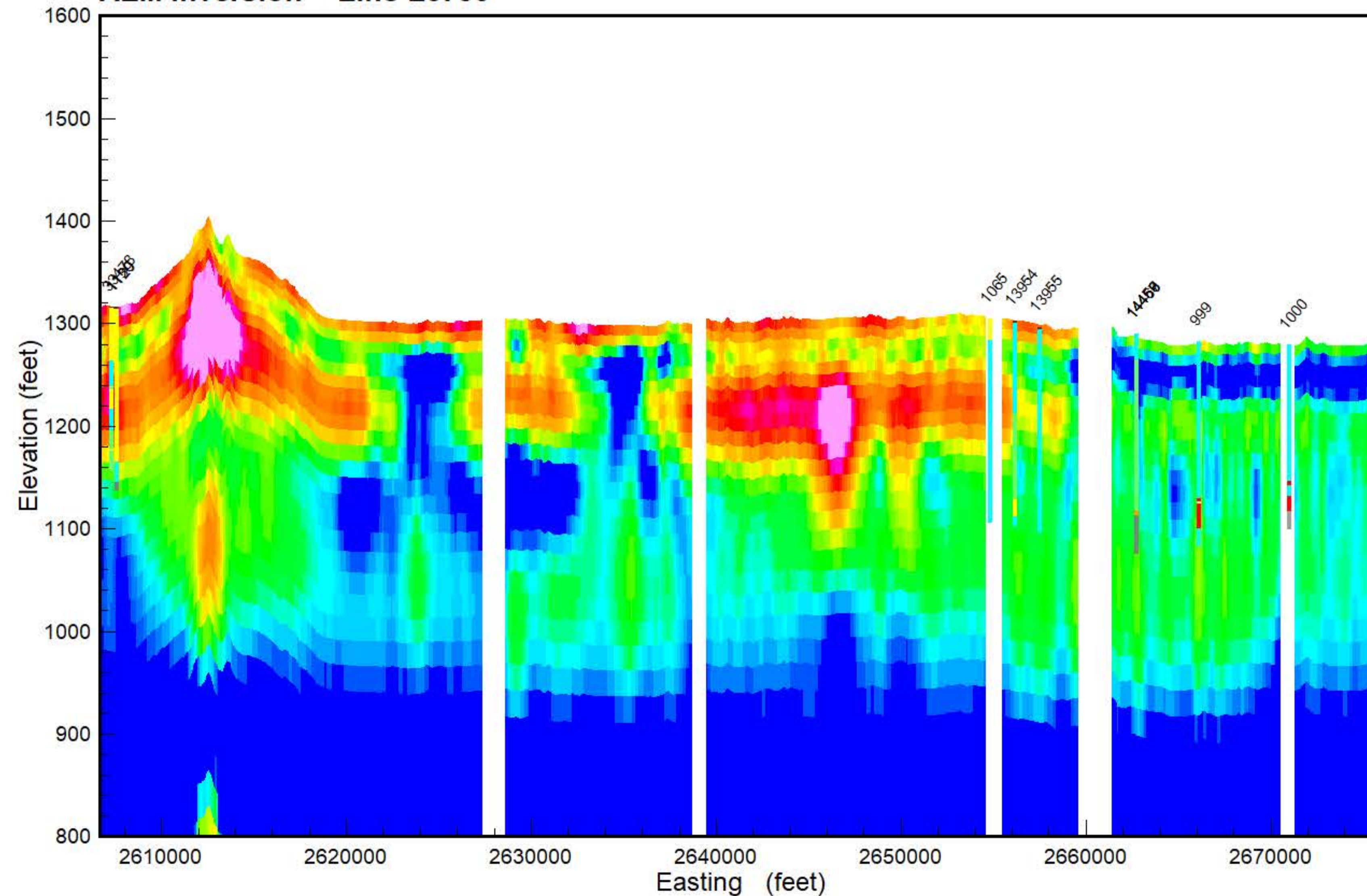
**Flight Path Line L6750**



**Spiritwood South Flight Area**



**AEM Inversion Line L6750**



**GEOTECH**

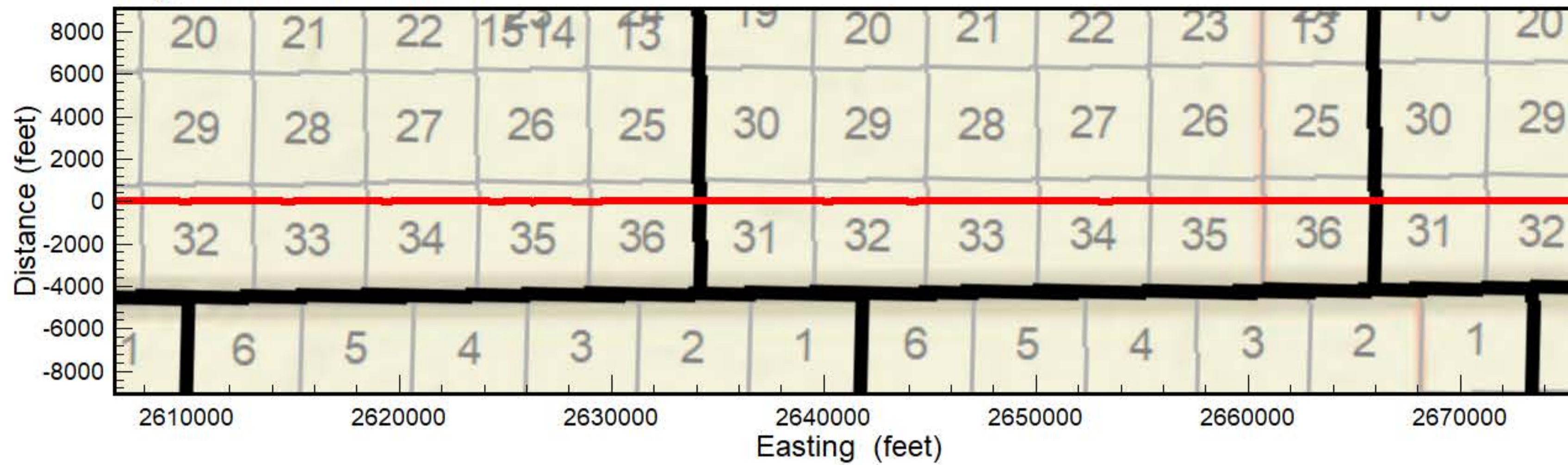
Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

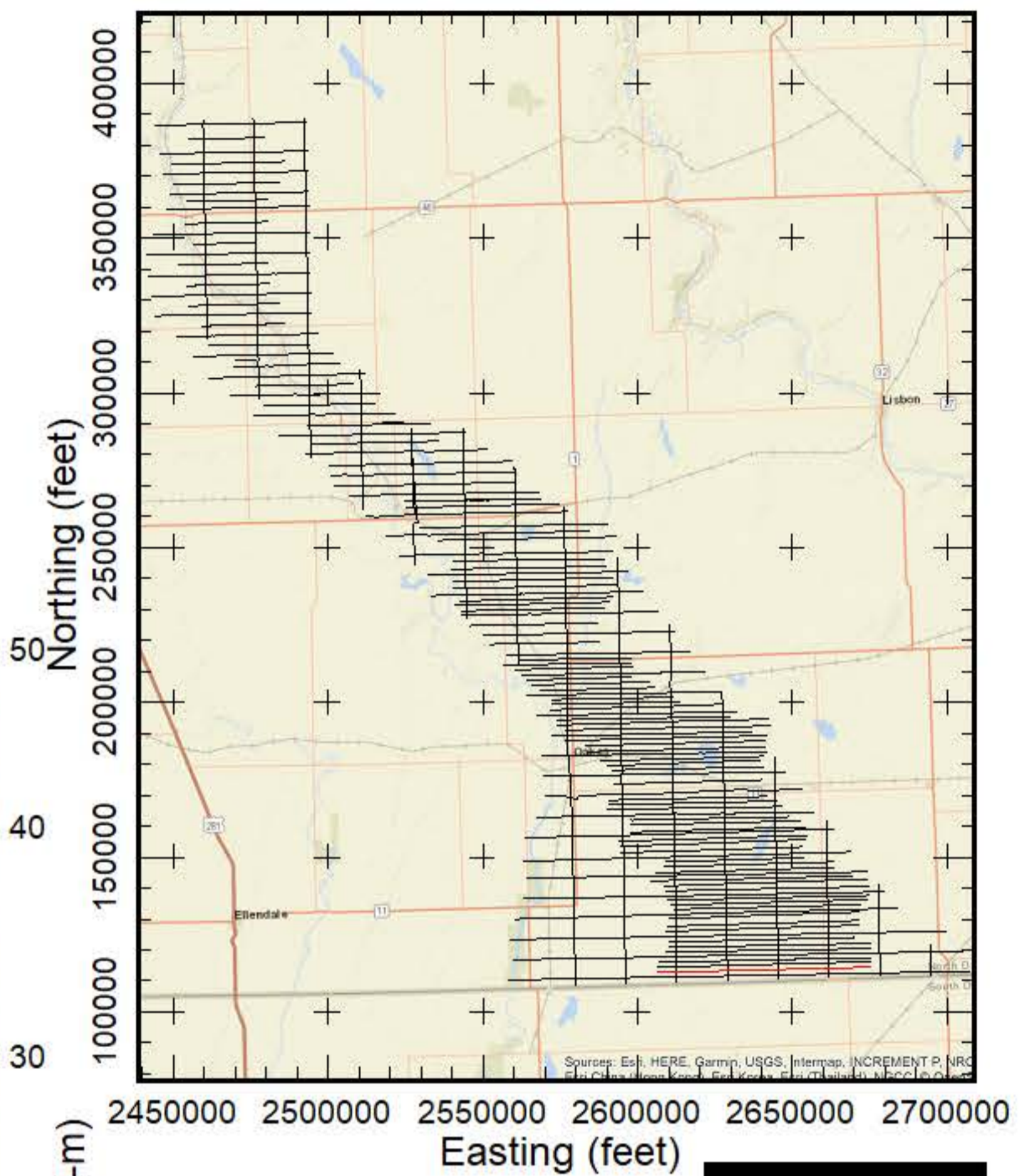
**AGF**  
Aqua Geo Frameworks



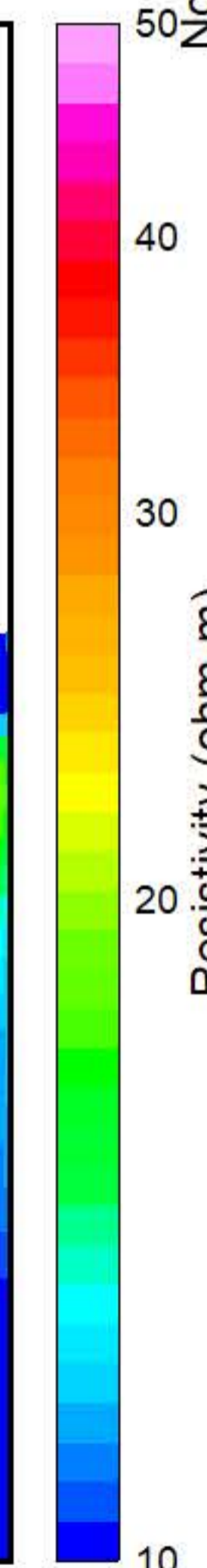
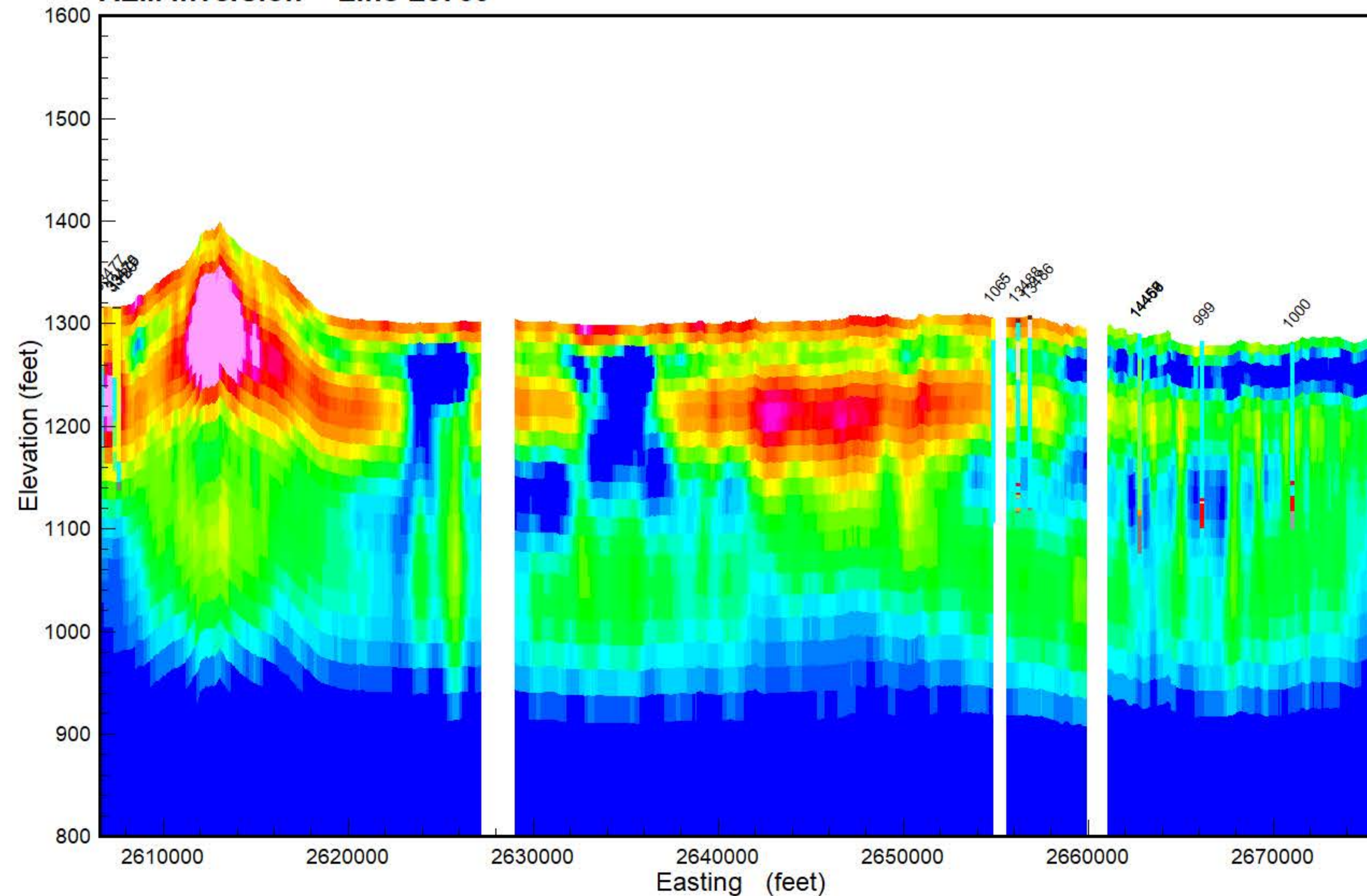
**Flight Path Line L6760**



**Spiritwood South Flight Area**



**AEM Inversion Line L6760**



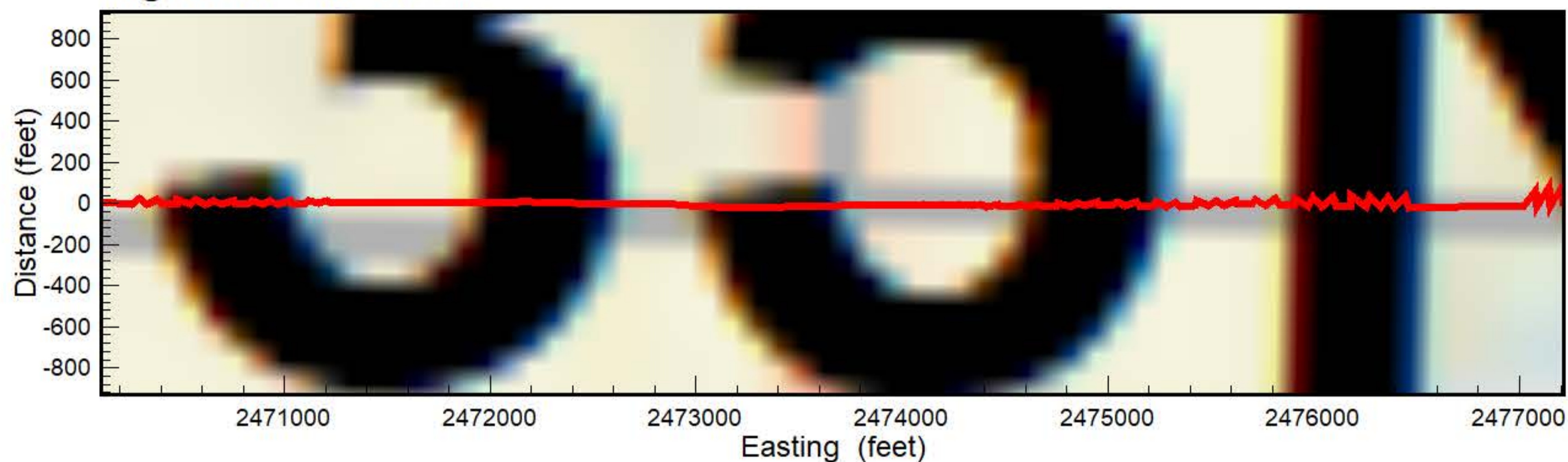
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

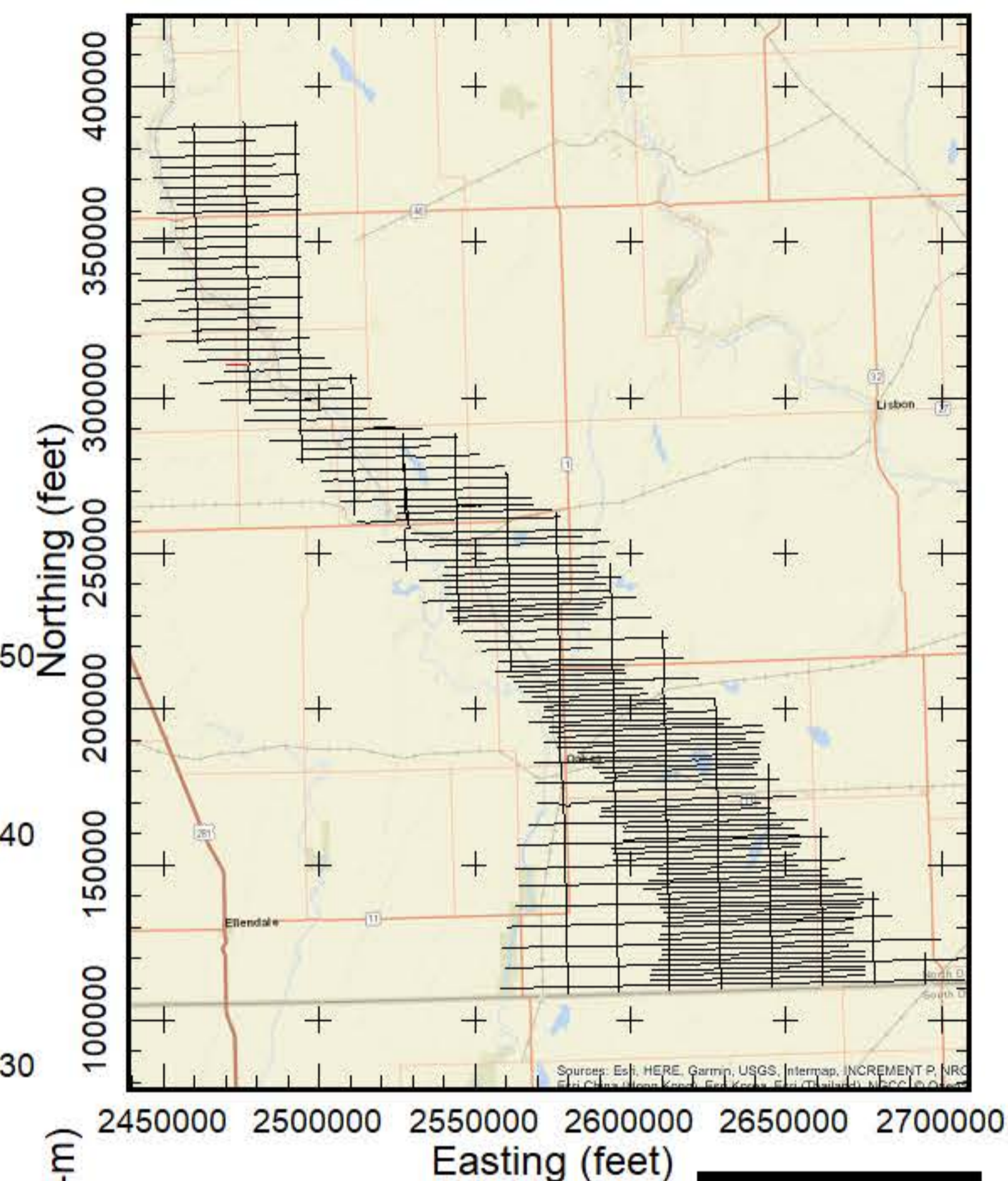




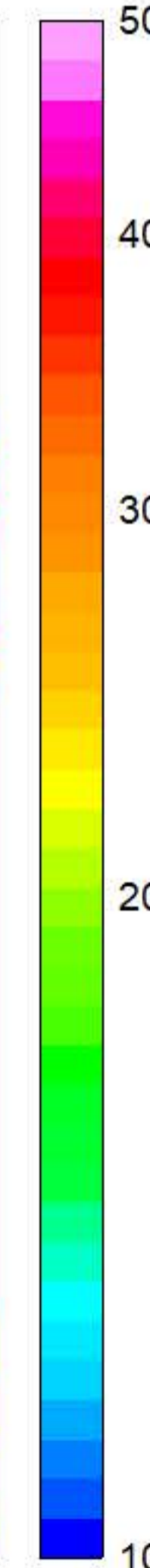
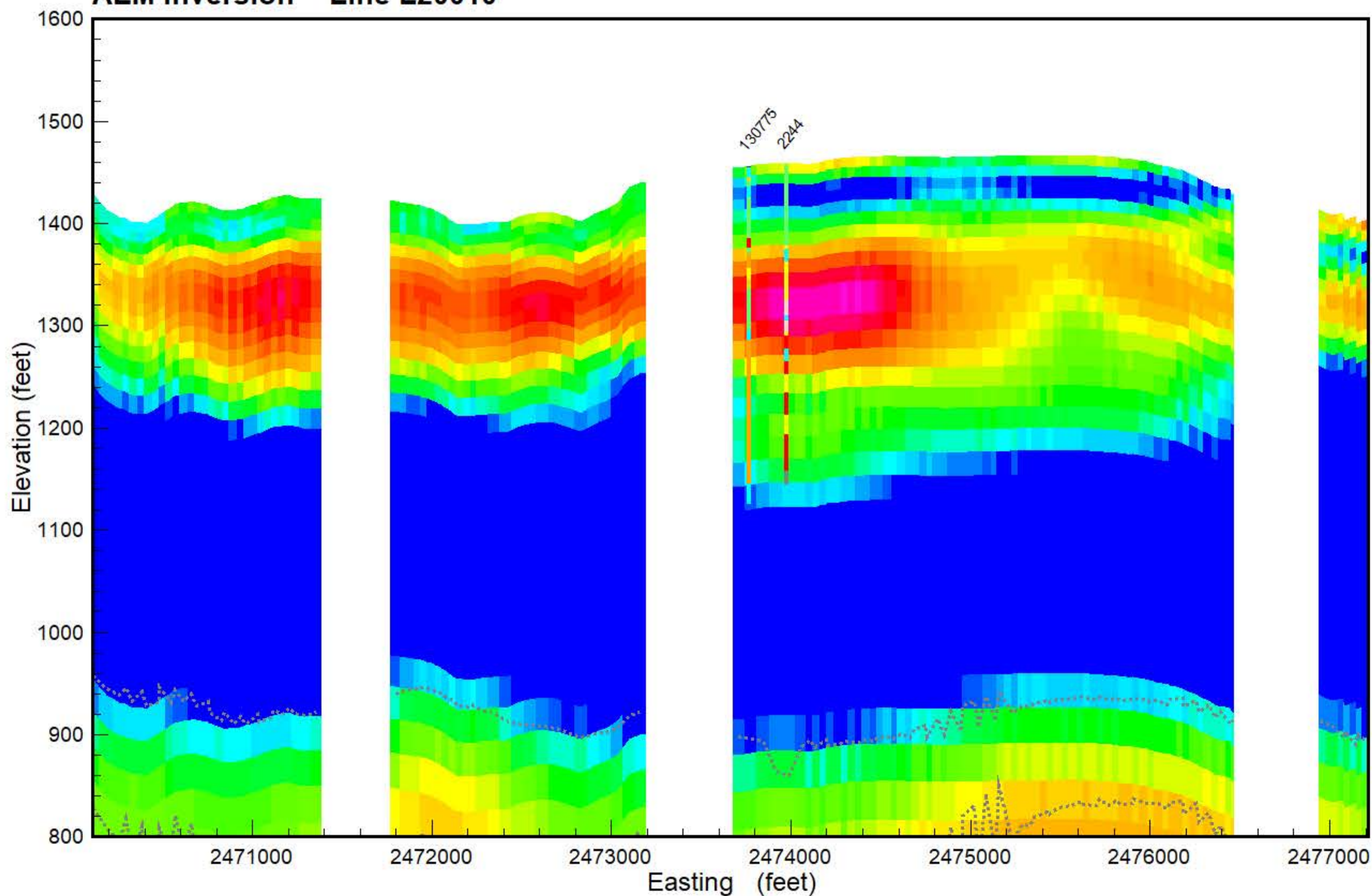
**Flight Path Line L20010**



**Spiritwood South Flight Area**



**AEM Inversion Line L20010**



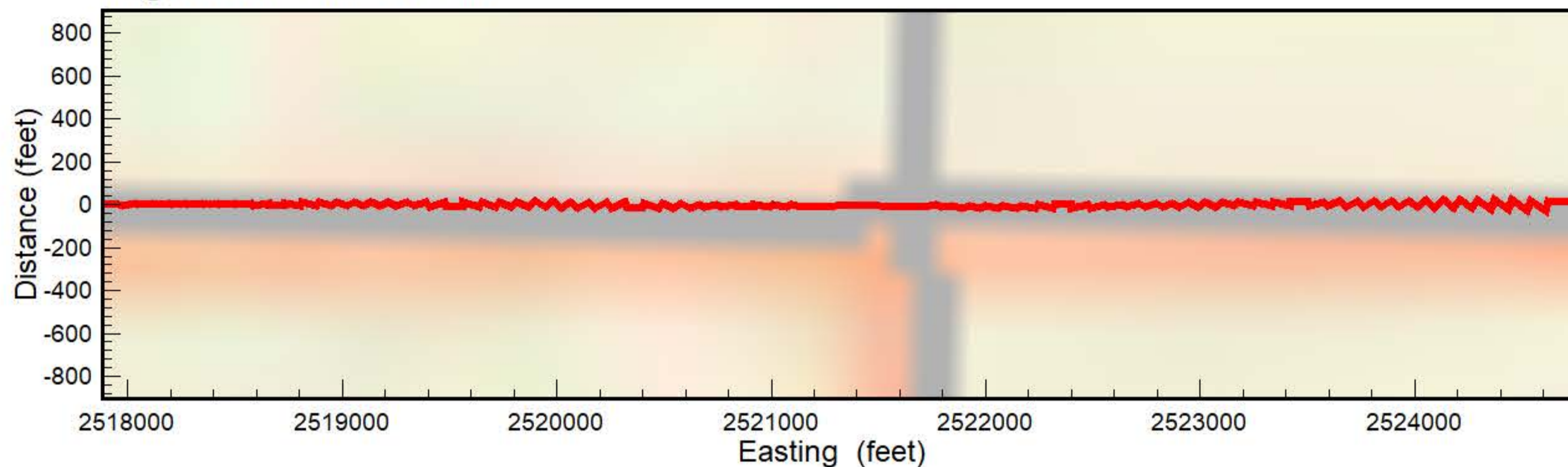
- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
- FILL
- TOPSOIL
- NOSAMPLE

Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.

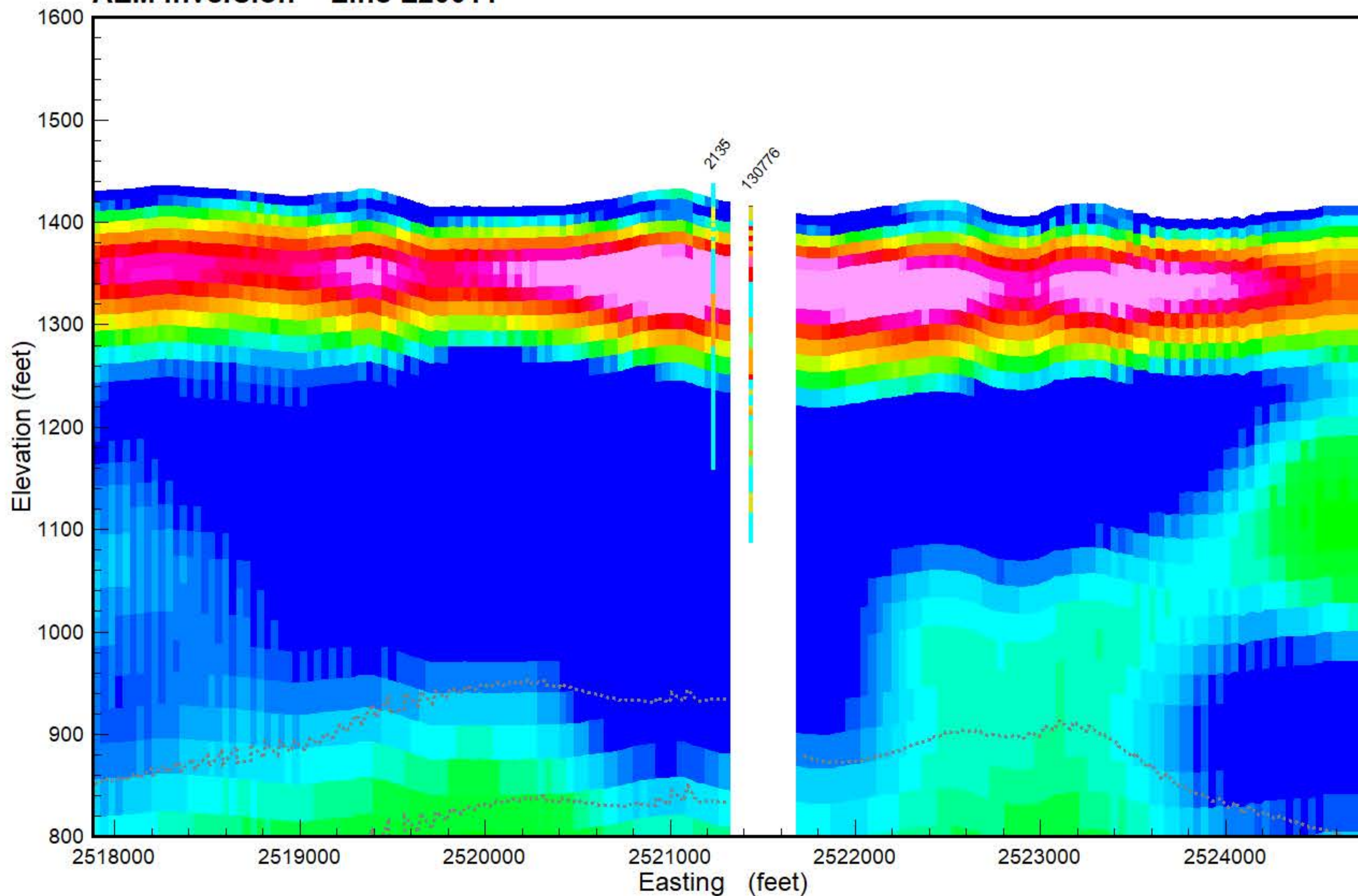




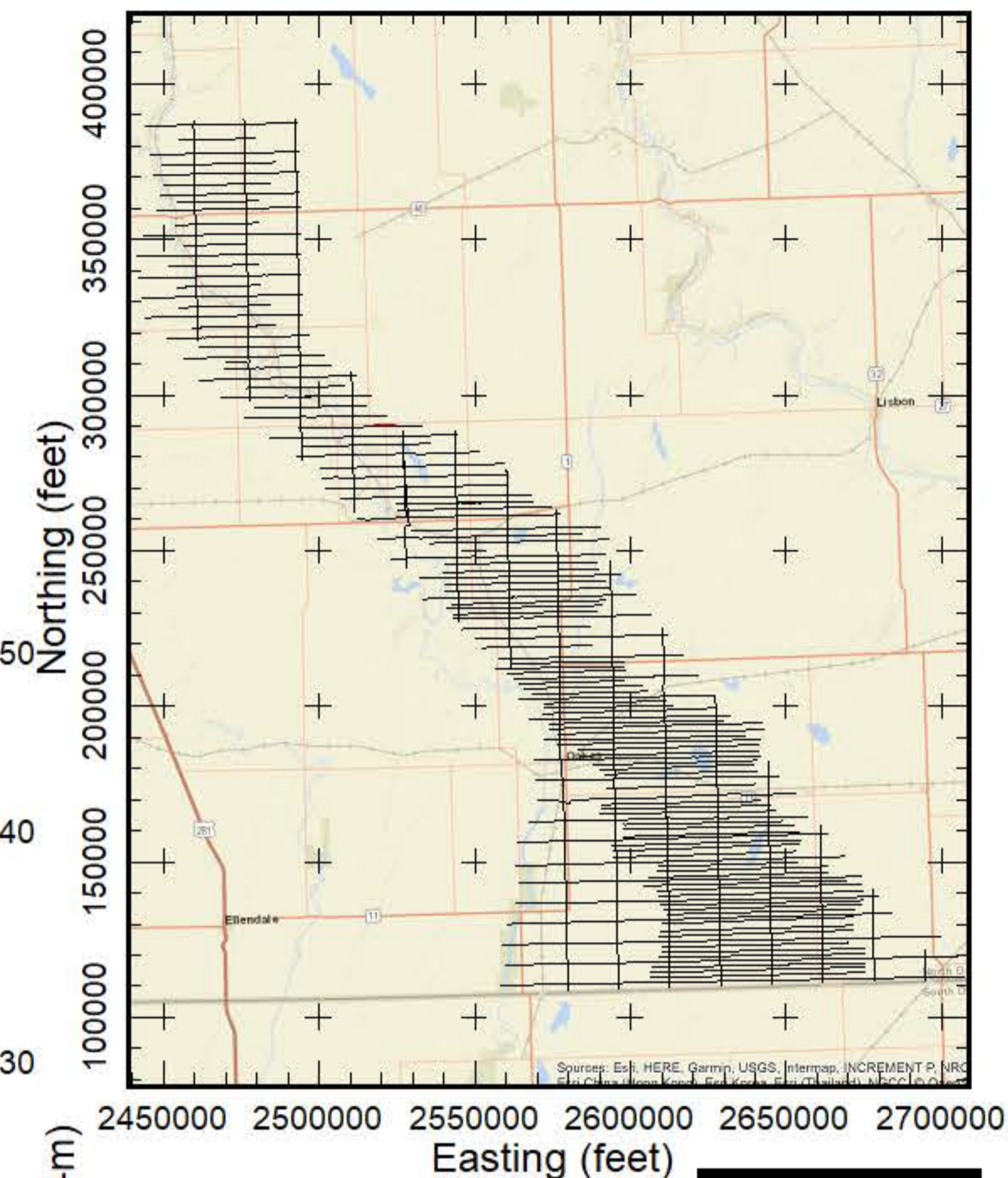
**Flight Path Line L20011**



**AEM Inversion Line L20011**



**Spiritwood South Flight Area**



- PEAT
- LIGNITE
- COBBLES
- BOULDER
- ROCK
- PRECAMBRIAN
- WEATHERED GRANITE
- SANDSTONE
- LIMESTONE
- SILTSTONE
- CLAYSTONE
- SHALE
- BEDROCK
- GRAVEL
- SAND & GRAVEL
- SAND
- INTERBEDDED
- SILT
- CLAY
- TILL
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Results of the final inversion of Airborne Electromagnetic (AEM) data collected along flight lines within the Spiritwood South flight area from October 21, 2018 to March 23, 2019. The inversions shown are Spatially-Constrained using the Aarhus Geo Software Workbench version 5.8.3 and 6.0.0. Boreholes are from the North Dakota State Water Commission Map service download October 2018 and are plotted within 1/4 mile from the flight line. Gray dashed lines are the upper and lower depth of investigation. Map projection is NAD83 State Plane North Dakota South (Int. feet), vertical datum NAVD88 (feet). Prepared for the North Dakota State Water Commission under contract to Geotech LTD by Aqua Geo Frameworks, LLC.





# Appendix 1:

## 2D Profiles – Simple for the Spiritwood South Area

### Page

A1B-Smpl-2 – A1B-Smpl-139      2D profiles for the Spiritwood South AEM survey area with only the inverted resistivity profiles.



