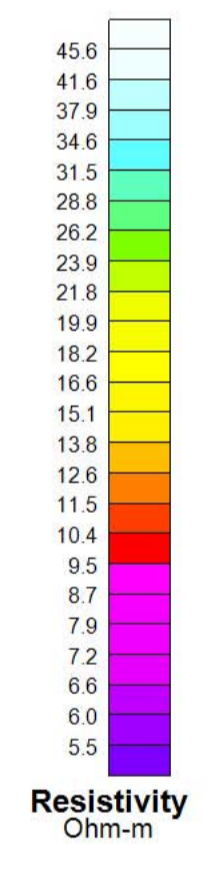


**SURVEY SPECIFICATIONS:**  
 Survey Date: October 22nd - 24th, 2016  
 Survey Base: Jamestown, North Dakota  
 Aircraft: Aerospatiale A-star 350 B3 C-FVTM  
 Survey Line Spacing: 400 metres  
 Survey Line Direction: N 107° E / N 287° E & N 145° E / N 325° E  
 Tie Line Spacing: n/a  
 Tie Line Direction: n/a  
 Average Aircraft Terrain Clearance: 65 metres  
 EM Transmitter Loop: Towed at an average terrain clearance of 31 metres below the helicopter  
 2 Magnetic Sensors: Towed at an average terrain clearance of 21 metres below the helicopter

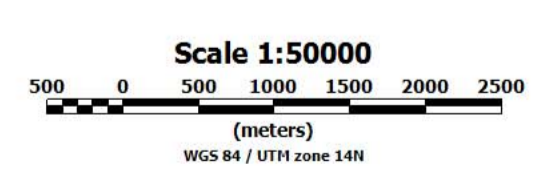
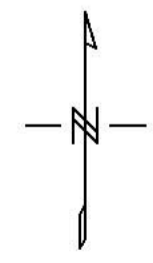
**INSTRUMENTS**  
 Geotech Time Domain Electromagnetic System (VTEM)  
 Concentric Rx/Tx Geometry  
 X-Coil Diameter 0.32m  
 Z-Coil Diameter 1.2m  
 Y-Coil Diameter 0.32m  
 Transmitter Loop: Diameter 26 Metres  
 Dipole Moment: 365,276 nIA  
 Transmitter Wave Form: Trapezoid, Pulse Width 7.11 ms, Base Frequency 30 Hz  
 Geometrics High Sensitivity Caesium 2 Magnetic Sensors  
 Mag Resolution: 0.02 nT at 10 samples/sec

**MAP PROJECTION**  
 Datum: WGS84  
 Projection: Universal Transverse Mercator  
 Central Meridian: 99°W (Zone 14N)  
 Central Scale Factor: 0.9996  
 False Easting/Northing: 500,000m/0m  
 Major Axis: 6378137  
 Inverse Flattening: 298.25722



**TOPOGRAPHIC LEGEND:**

- Roads
- +++ Railways
- +— Streams / Rivers
- Contours
- Lakes / Ponds
- City Boundaries



The topographic data base was derived from ND State Water Commission Data Portal  
 Background shading is derived from NASA SRTM (Shuttle Radar Topography Mission) data  
 Inset data derived from Geocommunes 1:250,000 Canadian National Topographic database  
 (www.geocomm.com/)(http://mapservice.swc.nd.gov)

**North Dakota State Water Commission**  
**Warwick-Low K Barrier**  
**Jamestown, North Dakota**

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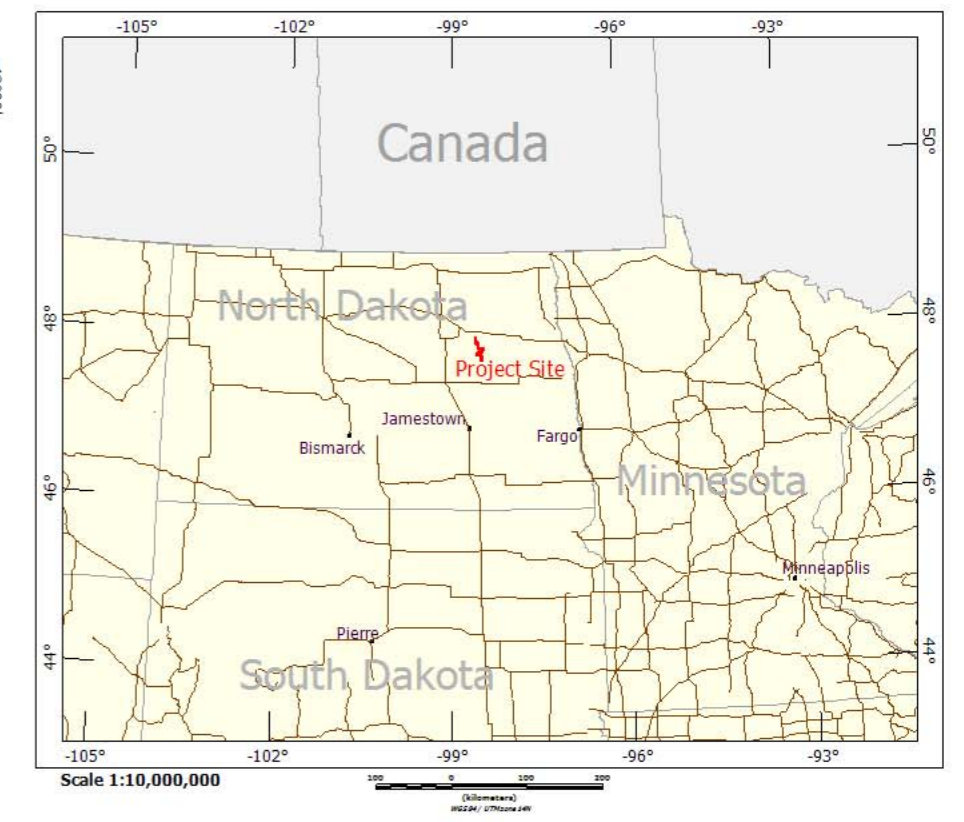
**Geotech VTEM System**  
**Resistivity**  
**Depth Slice 40 metres**

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 245 Industrial Parkway North,  
 Aurora, Ontario, Canada L4G 4C4  
 www.geotech.ca

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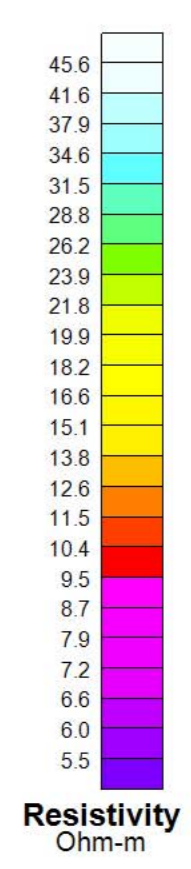
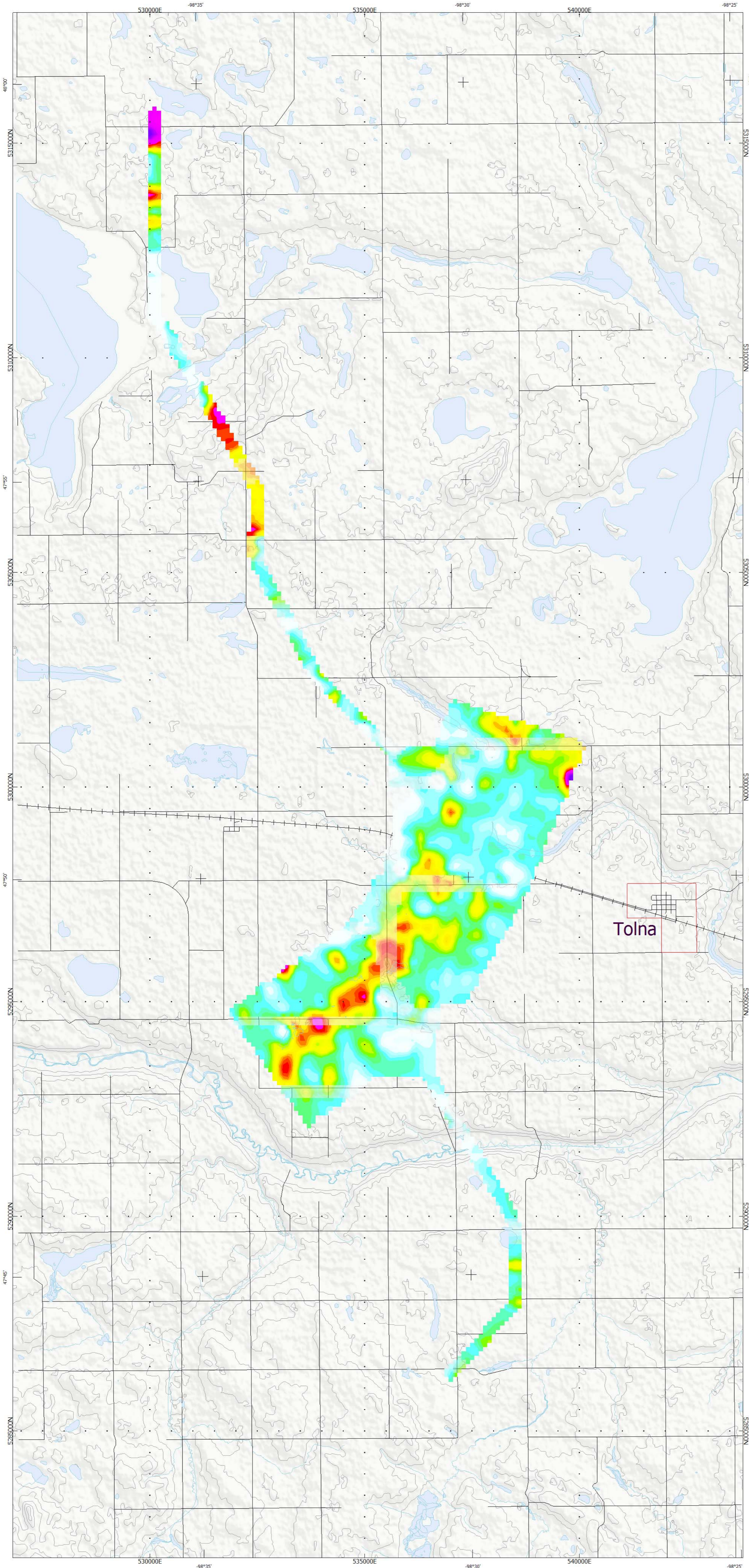
March 2017



**SURVEY SPECIFICATIONS:**  
 Survey Date: October 22nd - 24th, 2016  
 Survey Base: Jamestown, North Dakota  
 Aircraft: Aerospatiale A-star 350 B3 C-FVTM  
 Survey Line Spacing: 400 metres  
 Survey Line Direction: N 107° E / N 287° E & N 145° E / N 325° E  
 Tie Line Spacing: n/a  
 Tie Line Direction: n/a  
 Average Aircraft Terrain Clearance: 65 metres  
 EM Transmitter Loop: Towed at an average terrain clearance of 31 metres below the helicopter  
 2 Magnetic Sensors: Towed at an average terrain clearance of 21 metres below the helicopter

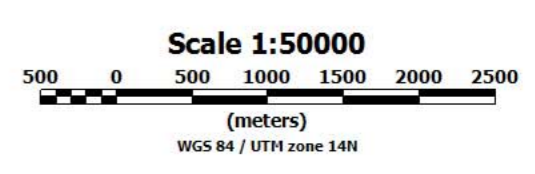
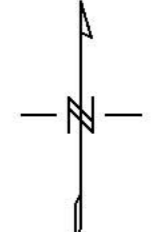
**INSTRUMENTS**  
 Geotech Time Domain Electromagnetic System (VTEM)  
 Concentric Rx/Tx Geometry  
 X-Coil Diameter 0.32m  
 Z-Coil Diameter 1.2m  
 Y-Coil Diameter 0.32m  
 Transmitter Loop: Diameter 26 Metres  
 Dipole Moment: 365,276 nA  
 Transmitter Wave Form: Trapezoid, Pulse Width 7.11 ms, Base Frequency 30 Hz  
 Geometrics High Sensitivity Caesium 2 Magnetic Sensors  
 Mag Resolution: 0.02 nT at 10 samples/sec

**MAP PROJECTION**  
 Datum: WGS84  
 Projection: Universal Transverse Mercator  
 Central Meridian: 99°W (Zone 14N)  
 Central Scale Factor: 0.9996  
 False Easting/Northing: 500,000m/0m  
 Major Axis: 6378137  
 Inverse Flattening: 298.25722



**TOPOGRAPHIC LEGEND:**

- Roads
- +++ Railways
- Streams / Rivers
- Contours
- Lakes / Ponds
- City Boundaries



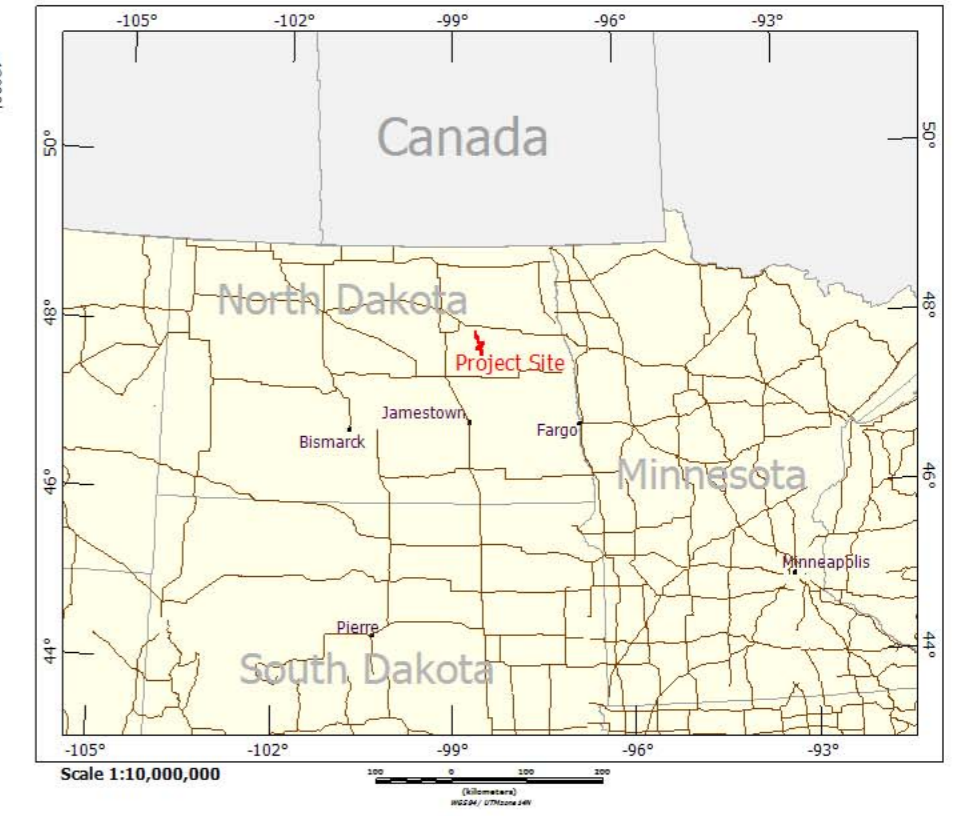
The topographic data base was derived from ND State Water Commission Data Portal  
 Background shading is derived from NASA SRTM (Shuttle Radar Topography Mission) data  
 Inset data derived from Geocommunities 1:250,000 Canadian National Topographic database  
 ([www.geocomm.com/](http://www.geocomm.com/)) (<http://mapservices.swc.nd.gov/>)

**North Dakota State Water Commission**  
**Warwick-Low K Barrier**  
**Jamestown, North Dakota**

**Geotech VTEM System**  
**Resistivity**  
**Depth Slice 50 metres**

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 245 Industrial Parkway North,  
 Aurora, Ontario, Canada L4G 4C4  
[www.geotech.ca](http://www.geotech.ca)

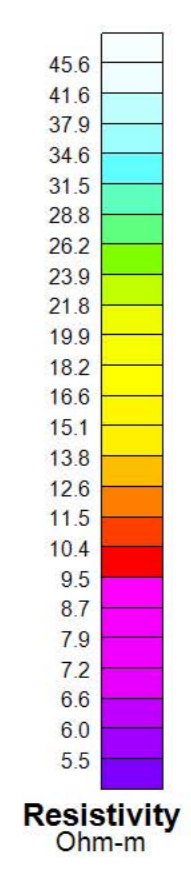
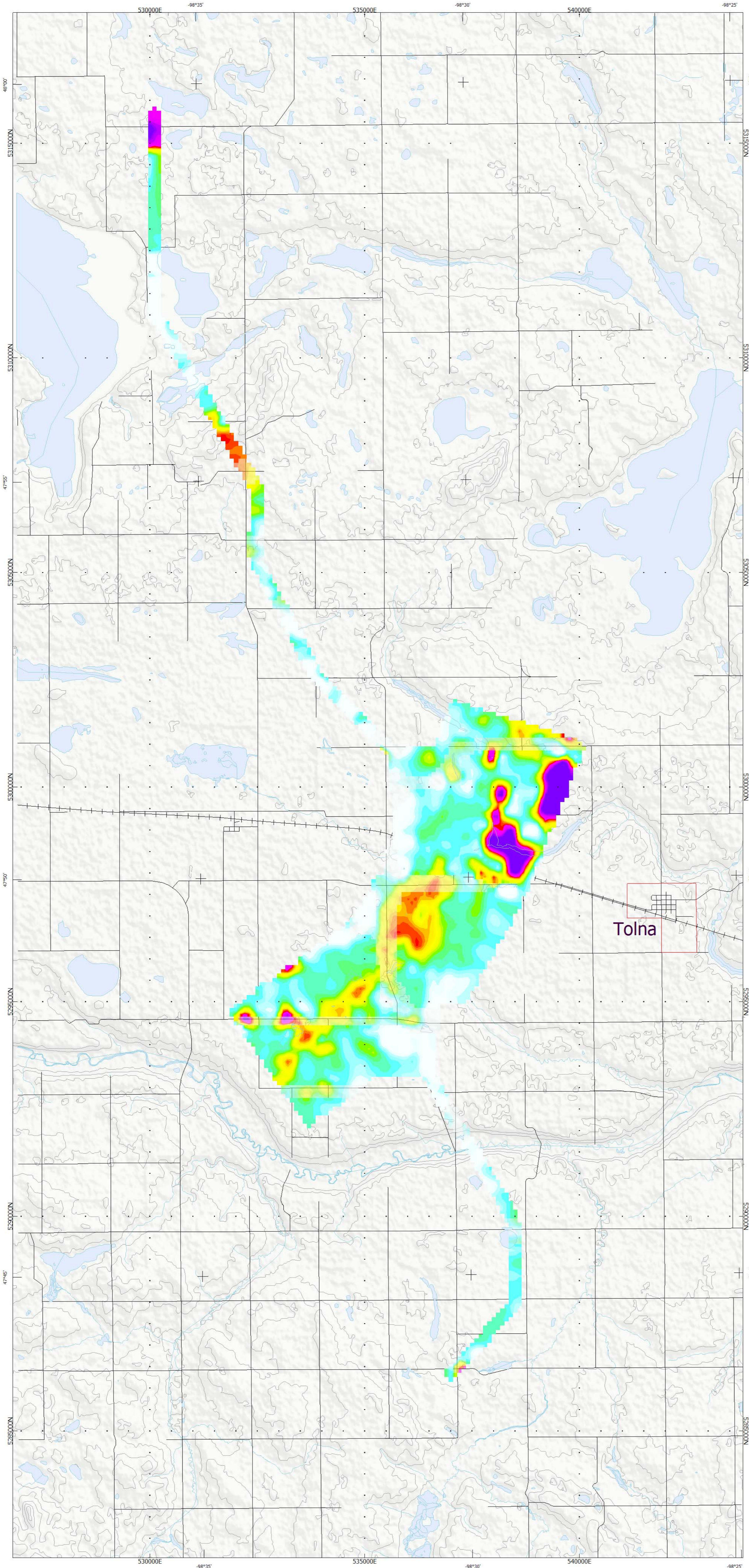
March 2017



**SURVEY SPECIFICATIONS:**  
 Survey Date: October 22nd - 24th, 2016  
 Survey Base: Jamestown, North Dakota  
 Aircraft: Aerospatiale A-star 350 B3 C-FVTM  
 Survey Line Spacing: 400 metres  
 Survey Line Direction: N 107° E / N 287° E & N 145° E / N 325° E  
 Tie Line Spacing: n/a  
 Tie Line Direction: n/a  
 Average Aircraft Terrain Clearance: 65 metres  
 EM Transmitter Loop: Towed at an average terrain clearance of 31 metres below the helicopter  
 2 Magnetic Sensors: Towed at an average terrain clearance of 21 metres below the helicopter

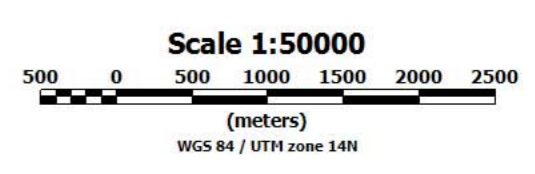
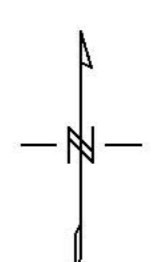
**INSTRUMENTS**  
 Geotech Time Domain Electromagnetic System (VTEM)  
 Concentric Rx/Tx Geometry  
 X-Coil Diameter 0.32m  
 Z-Coil Diameter 1.2m  
 Y-Coil Diameter 0.32m  
 Transmitter Loop: Diameter 26 Metres  
 Dipole Moment: 365,276 nA  
 Transmitter Wave Form: Trapezoid, Pulse Width 7.11 ms, Base Frequency 30 Hz  
 Geometrics High Sensitivity Caesium 2 Magnetic Sensors  
 Mag Resolution: 0.02 nT at 10 samples/sec

**MAP PROJECTION**  
 Datum: WGS84  
 Projection: Universal Transverse Mercator  
 Central Meridian: 99°W (Zone 14N)  
 Central Scale Factor: 0.9996  
 False Easting/Northing: 500,000m/0m  
 Major Axis: 6378137  
 Inverse Flattening: 298.25722



**TOPOGRAPHIC LEGEND:**

- Roads
- +++ Railways
- Streams / Rivers
- Contours
- Lakes / Ponds
- City Boundaries



The topographic data base was derived from ND State Water Commission Data Portal  
 Background shading is derived from NASA SRTM (Shuttle Radar Topography Mission) data  
 Inset data derived from Geocommunities 1:250,000 Canadian National Topographic database  
 ([www.geocomm.com/](http://www.geocomm.com/)) (<http://mapservics.svc.nd.gov/>)

**North Dakota State Water Commission**  
**Warwick-Low K Barrier**  
**Jamestown, North Dakota**

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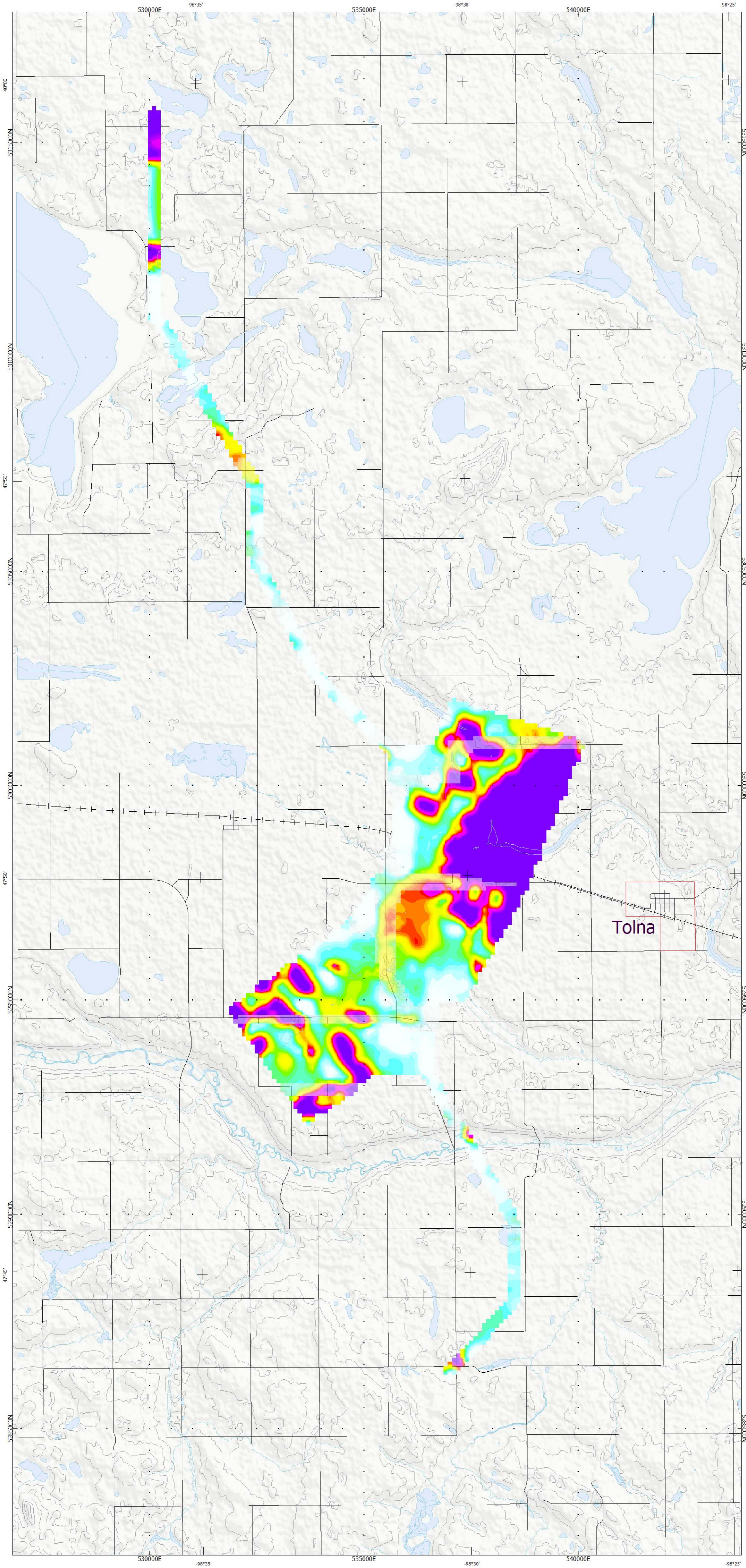
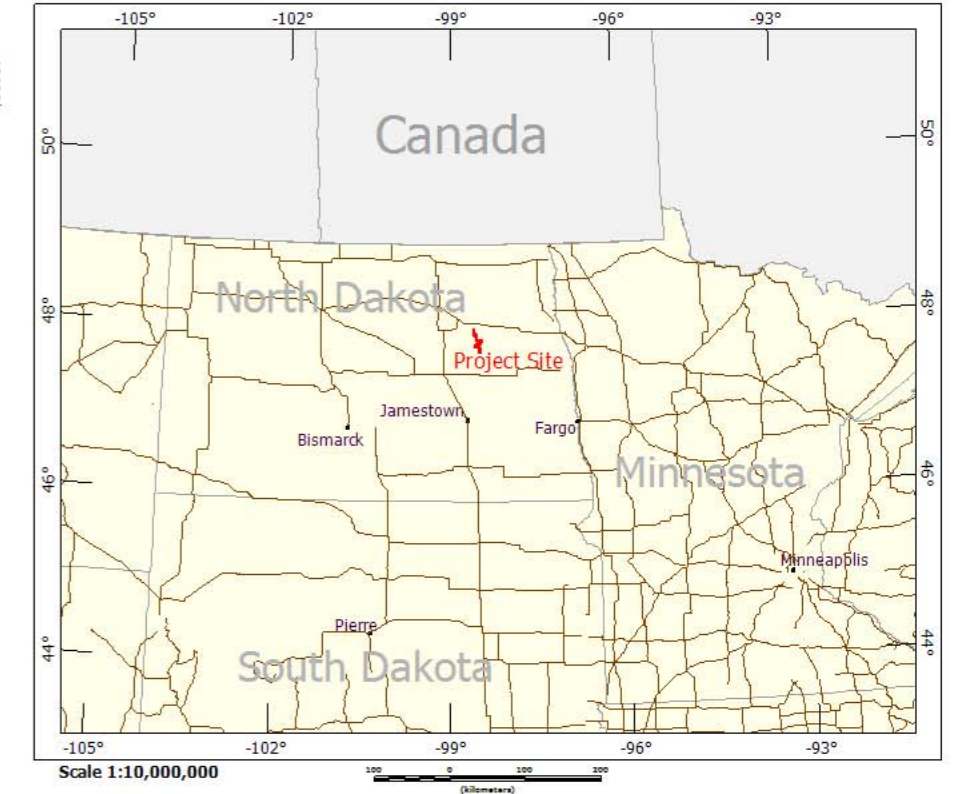
**Geotech VTEM System**  
**Resistivity**  
**Depth Slice 60 metres**

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Flown by Geotech Ltd.  
 245 Industrial Parkway North,  
 Aurora, Ontario, Canada L4G 4C4  
[www.geotech.ca](http://www.geotech.ca)

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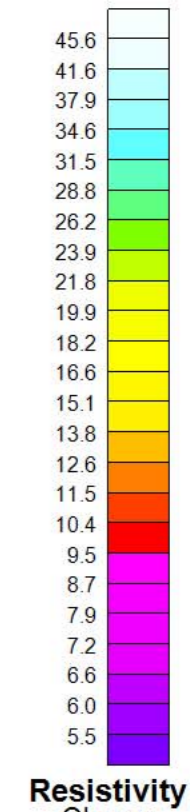
March 2017



**SURVEY SPECIFICATIONS:**  
 Survey Date: October 22nd - 24th, 2016  
 Survey Base: Jamestown, North Dakota  
 Aircraft: Aerospatiale A-star 350 B3 C-FVTM  
 Survey Line Spacing: 400 metres  
 Survey Line Direction: N 107° E / N 287° E & N 145° E / N 325° E  
 Tie Line Spacing: n/a  
 Tie Line Direction: n/a  
 Average Aircraft Terrain Clearance: 65 metres  
 EM Transmitter Loop: Towed at an average terrain clearance of 31 metres below the helicopter  
 2 Magnetic Sensors: Towed at an average terrain clearance of 21 metres below the helicopter

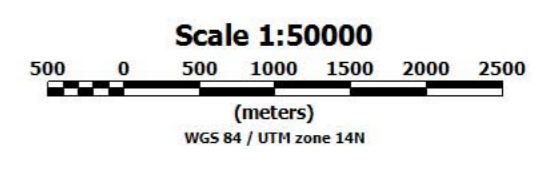
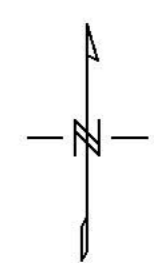
**INSTRUMENTS**  
 Geotech Time Domain Electromagnetic System (VTEM)  
 Concentric Rx/Tx Geometry  
 X-Coil Diameter 0.32m  
 Z-Coil Diameter 1.2m  
 Y-Coil Diameter 0.32m  
 Transmitter Loop: Diameter 26 Metres  
 Dipole Moment: 365,276 nIA  
 Transmitter Wave Form: Trapezoid, Pulse Width 7.11 ms, Base Frequency 30 Hz  
 Geometrics High Sensitivity Caesium 2 Magnetic Sensors  
 Mag Resolution: 0.02 nT at 10 samples/sec

**MAP PROJECTION**  
 Datum: WGS84  
 Projection: Universal Transverse Mercator  
 Central Meridian: 99°W (Zone 14N)  
 Central Scale Factor: 0.9996  
 False Easting/Northing: 500,000m/0m  
 Major Axis: 6378137  
 Inverse Flattening: 298.25722



**TOPOGRAPHIC LEGEND:**

- Roads
- +++ Railways
- Streams / Rivers
- Contours
- Lakes / Ponds
- City Boundaries



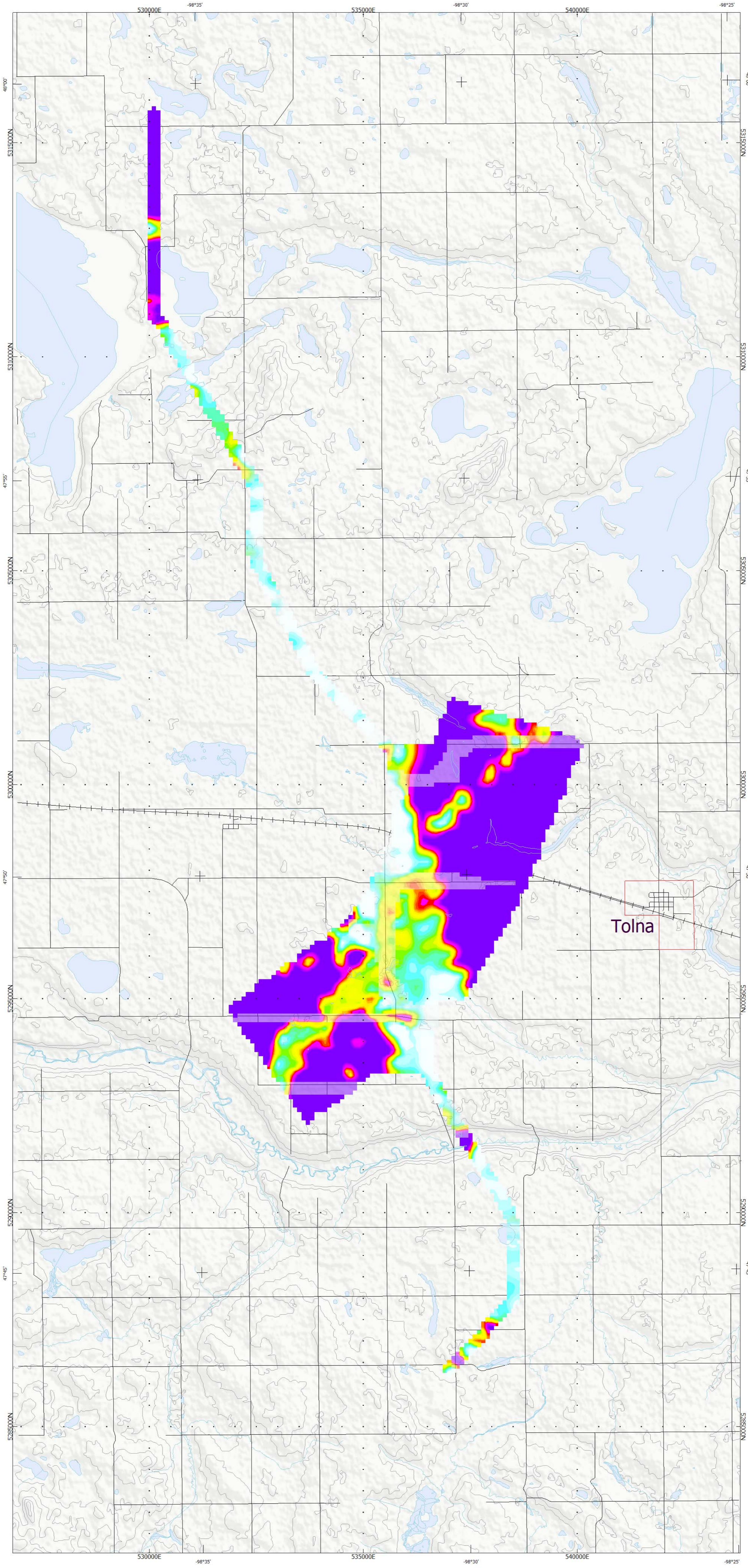
The topographic data base was derived from ND State Water Commission Data Portal  
 Background shading is derived from NASA SRTM (Shuttle Radar Topography Mission) data  
 Inset data derived from Geocommunities 1:250,000 Canadian National Topographic database  
 (www.geocomm.com)(http://mapservice.swc.nd.gov)

**North Dakota State Water Commission**  
**Warwick-Low K Barrier**  
**Jamestown, North Dakota**

Geotech VTEM System  
**Resistivity**  
**Depth Slice 70 metres**

Field and processed by Geotech Ltd.  
 245 Industrial Parkway North,  
 Aurora, Ontario, Canada L4G 4C4  
 www.geotech.ca

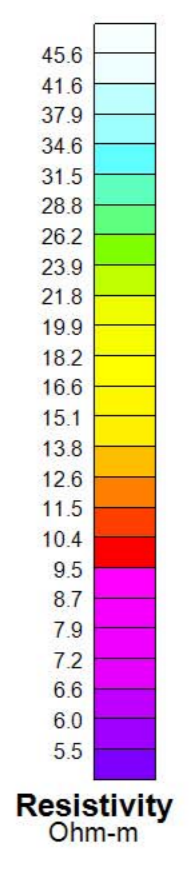
March 2017



**SURVEY SPECIFICATIONS:**  
 Survey Date: October 22nd - 24th, 2016  
 Survey Base: Jamestown, North Dakota  
 Aircraft: Aerospatiale A-star 350 B3 C-FVTM  
 Survey Line Spacing: 400 metres  
 Survey Line Direction: N 107° E / N 287° E & N 145° E / N 325° E  
 Tie Line Spacing: n/a  
 Tie Line Direction: n/a  
 Average Aircraft Terrain Clearance: 65 metres  
 EM Transmitter Loop: Towed at an average terrain clearance of 31 metres below the helicopter  
 2 Magnetic Sensors: Towed at an average terrain clearance of 21 metres below the helicopter

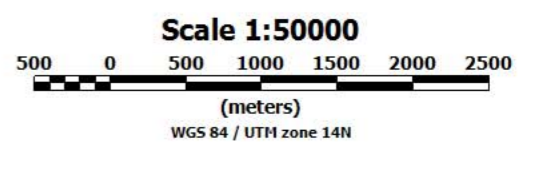
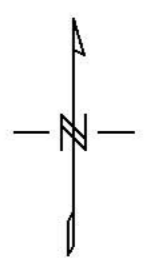
**INSTRUMENTS**  
 Geotech Time Domain Electromagnetic System (VTEM)  
 Concentric Rx/Tx Geometry  
 X-Coil Diameter 0.32m  
 Z-Coil Diameter 1.2m  
 Y-Coil Diameter 0.32m  
 Transmitter Loop: Diameter 26 Metres  
 Dipole Moment: 365,276 nA  
 Transmitter Wave Form: Trapezoid, Pulse Width 7.11 ms, Base Frequency 30 Hz  
 Geometrics High Sensitivity Caesium 2 Magnetic Sensors  
 Mag Resolution: 0.02 nT at 10 samples/sec

**MAP PROJECTION**  
 Datum: WGS84  
 Projection: Universal Transverse Mercator  
 Central Meridian: 99°W (Zone 14N)  
 Central Scale Factor: 0.9996  
 False Easting/Northing: 500,000m/0m  
 Major Axis: 6378137  
 Inverse Flattening: 298.25722



**TOPOGRAPHIC LEGEND:**

- Roads
- +— Railways
- Streams / Rivers
- Contours
- Lakes / Ponds
- City Boundaries



The topographic data base was derived from ND State Water Commission Data Portal  
 Background shading is derived from NASA SRTM (Shuttle Radar Topography Mission) data  
 Inset data derived from Geocommunities 1:250,000 Canadian National Topographic database  
 (www.geocomm.com/htp/magservice.swc.nd.gov)

**North Dakota State Water Commission**  
**Warwick-Low K Barrier**  
**Jamestown, North Dakota**

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**Geotech VTEM System**  
**Resistivity**  
**Depth Slice 80 metres**

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Flown and processed by Geotech Ltd.  
 245 Industrial Parkway North,  
 Aurora, Ontario, Canada L4G 4C4  
 www.geotech.ca

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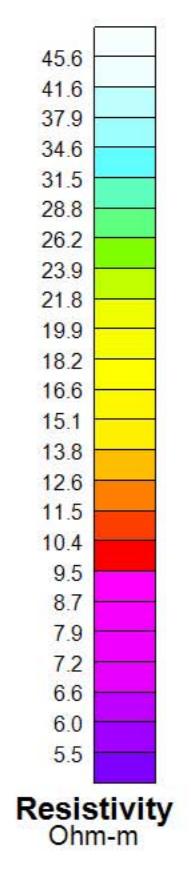
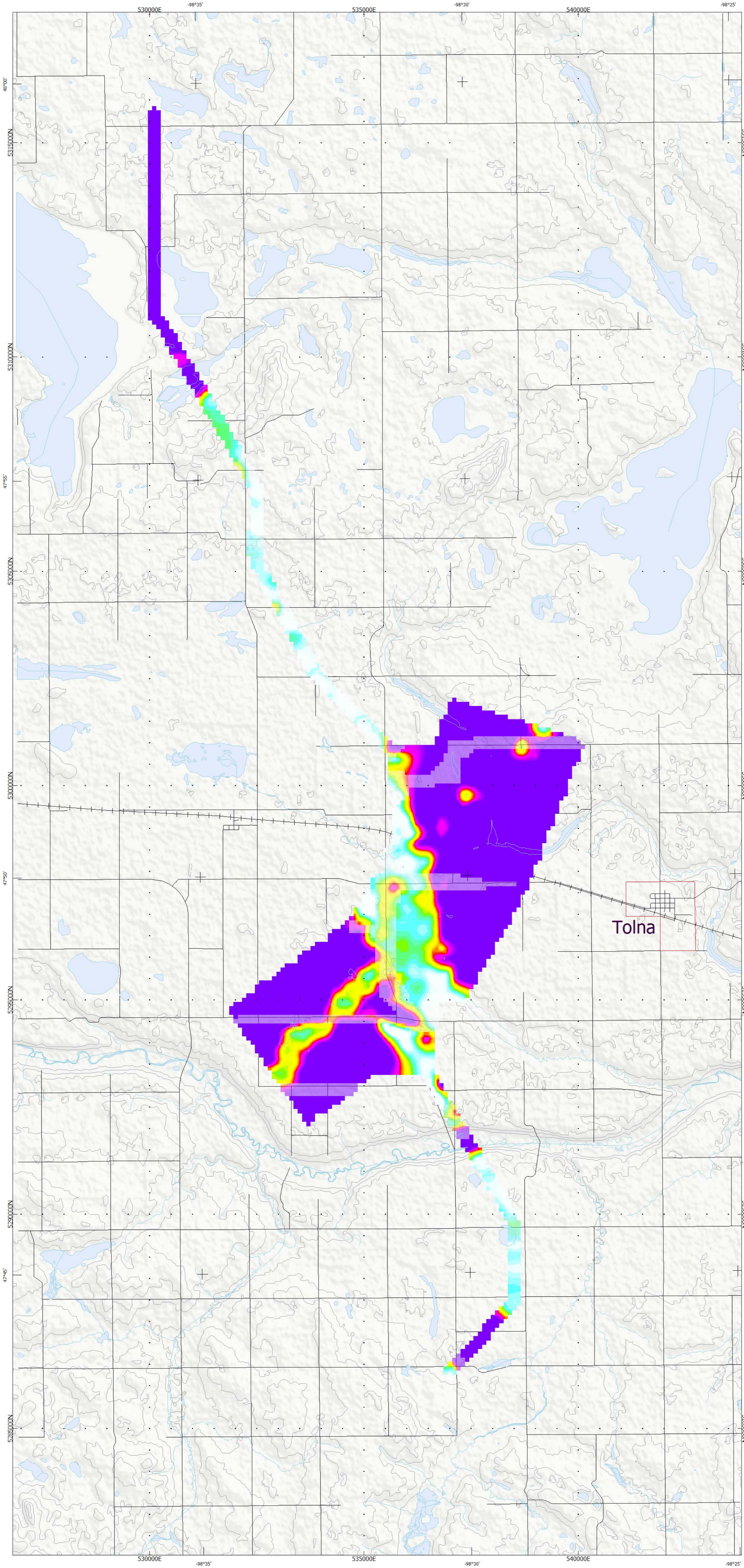
March 2017



**SURVEY SPECIFICATIONS:**  
 Survey Date: October 22nd - 24th, 2016  
 Survey Base: Jamestown, North Dakota  
 Aircraft: Aerospatiale A-star 350 B3 C-FVTM  
 Survey Line Spacing: 400 metres  
 Survey Line Direction: N 107° E / N 287° E & N 145° E / N 325° E  
 Tie Line Spacing: n/a  
 Tie Line Direction: n/a  
 Average Aircraft Terrain Clearance: 65 metres  
 EM Transmitter Loop: Towed at an average terrain clearance of 31 metres below the helicopter  
 2 Magnetic Sensors: Towed at an average terrain clearance of 21 metres below the helicopter

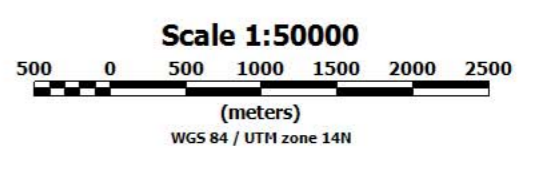
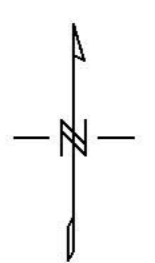
**INSTRUMENTS**  
 Geotech Time Domain Electromagnetic System (VTEM)  
 Concentric Rx/Tx Geometry  
 X-Coil Diameter 0.32m  
 Z-Coil Diameter 1.2m  
 Y-Coil Diameter 0.32m  
 Transmitter Loop: Diameter 26 Metres  
 Dipole Moment: 365,276 nA  
 Transmitter Wave Form: Trapezoid, Pulse Width 7.11 ms, Base Frequency 30 Hz  
 Geometrics High Sensitivity Caesium 2 Magnetic Sensors  
 Mag Resolution: 0.02 nT at 10 samples/sec

**MAP PROJECTION**  
 Datum: WGS84  
 Projection: Universal Transverse Mercator  
 Central Meridian: 99°W (Zone 14N)  
 Central Scale Factor: 0.9996  
 False Easting/Northing: 500,000m/0m  
 Major Axis: 6378137  
 Inverse Flattening: 298.25722



**TOPOGRAPHIC LEGEND:**

- Roads
- +++ Railways
- Streams / Rivers
- Contours
- Lakes / Ponds
- City Boundaries



The topographic data base was derived from ND State Water Commission Data Portal  
 Background shading is derived from NASA SRTM (Shuttle Radar Topography Mission) data  
 Inset data derived from Geocommunities 1:250,000 Canadian National Topographic database  
 (www.geocomm.com/http://mapservice.svnc.nd.gov)

**North Dakota State Water Commission**  
**Warwick-Low K Barrier**  
**Jamestown, North Dakota**

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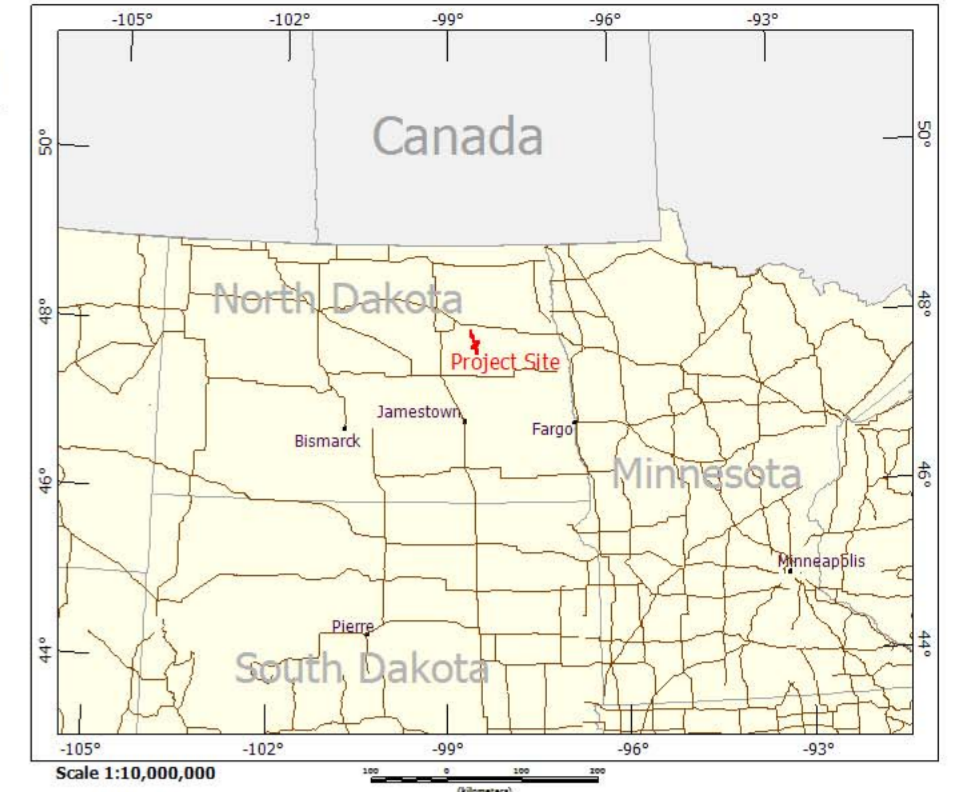
**Geotech VTEM System**  
**Resistivity**  
**Depth Slice 90 metres**

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Flown and processed by Geotech Ltd.  
 245 Industrial Parkway North,  
 Aurora, Ontario, Canada L4G 4C4  
 www.geotech.ca

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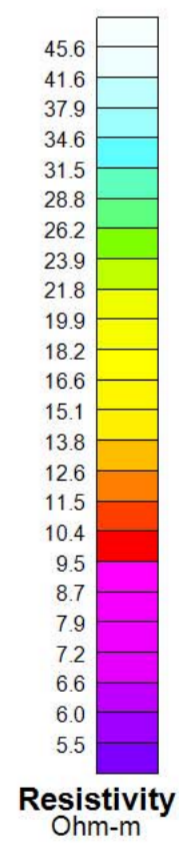
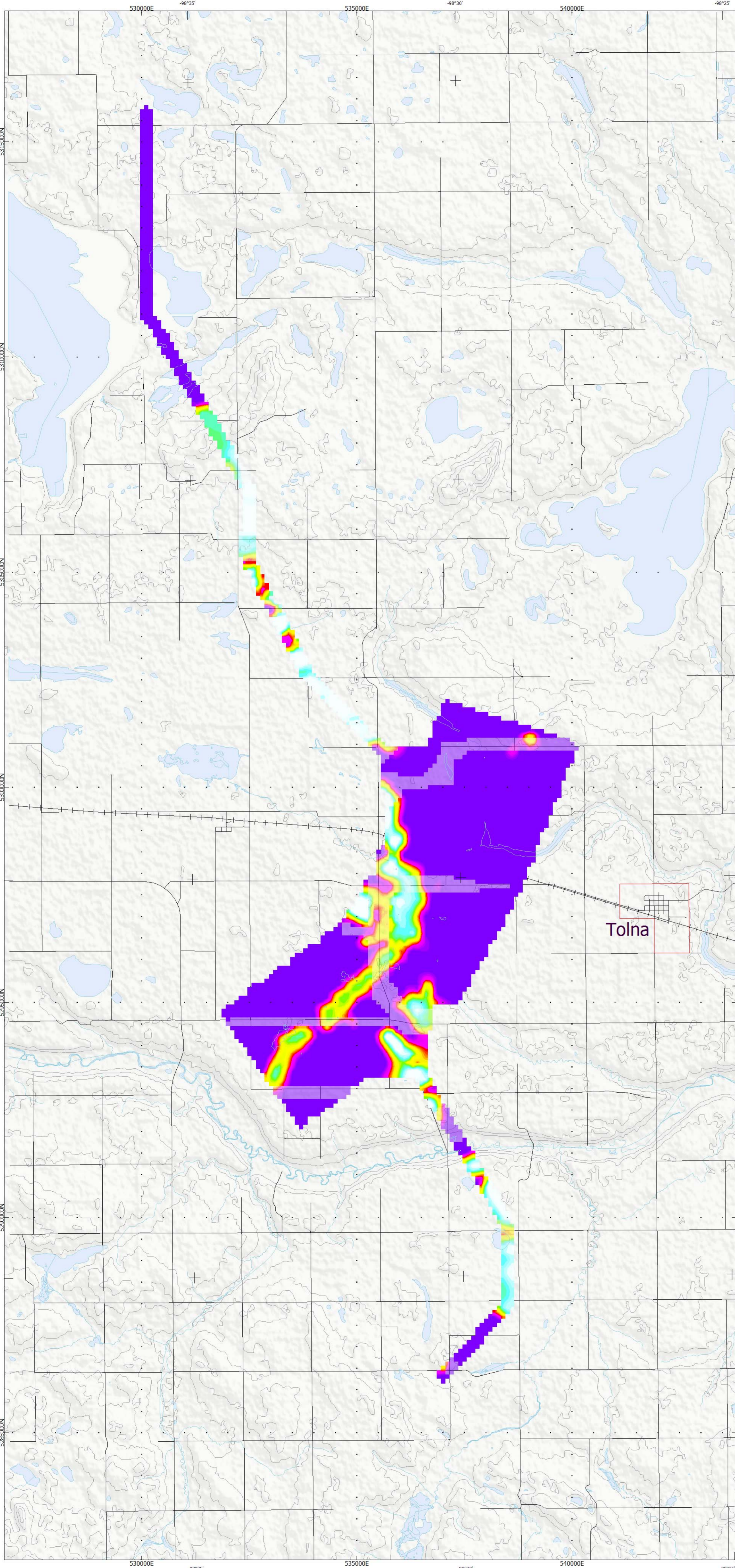
March 2017



**SURVEY SPECIFICATIONS:**  
 Survey Date: October 22nd - 24th, 2016  
 Survey Base: Jamestown, North Dakota  
 Aircraft: Aerospatiale A-star 350 B3 C-FVTM  
 Survey Line Spacing: 400 metres  
 Survey Line Direction: N 107° E / N 287° E & N 145° E / N 325° E  
 Tie Line Spacing: n/a  
 Tie Line Direction: n/a  
 Average Aircraft Terrain Clearance: 65 metres  
 EM Transmitter Loop: Towed at an average terrain clearance of 31 metres below the helicopter  
 2 Magnetic Sensors: Towed at an average terrain clearance of 21 metres below the helicopter

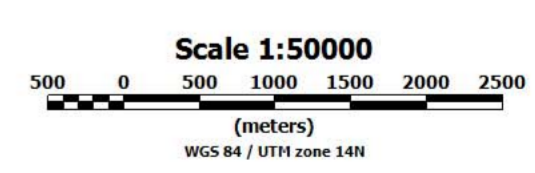
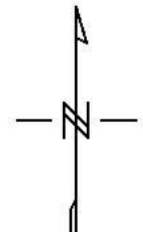
**INSTRUMENTS**  
 Geotech Time Domain Electromagnetic System (VTM)  
 Concentric Rx/Tx Geometry  
 X-Coil Diameter 0.32m  
 Z-Coil Diameter 1.2m  
 Y-Coil Diameter 0.32m  
 Transmitter Loop: Diameter 26 Metres  
 Dipole Moment: 365,276 nA  
 Transmitter Wave Form: Triangular, Pulse Width 7.11 ms, Base Frequency 30 Hz  
 Geometrics High Sensitivity Caesium 2 Magnetic Sensors  
 Mag Resolution: 0.02 nT at 10 samples/sec

**MAP PROJECTION**  
 Datum: WGS84  
 Projection: Universal Transverse Mercator  
 Central Meridian: 99°W (Zone 14N)  
 Central Scale Factor: 0.9996  
 False Easting/Northing: 500,000m/0m  
 Major Axis: 6378137  
 Inverse Flattening: 298.25722



**TOPOGRAPHIC LEGEND:**

- Roads
- +—+— Railways
- Stream / Rivers
- Contours
- Lakes / Ponds
- City Boundaries



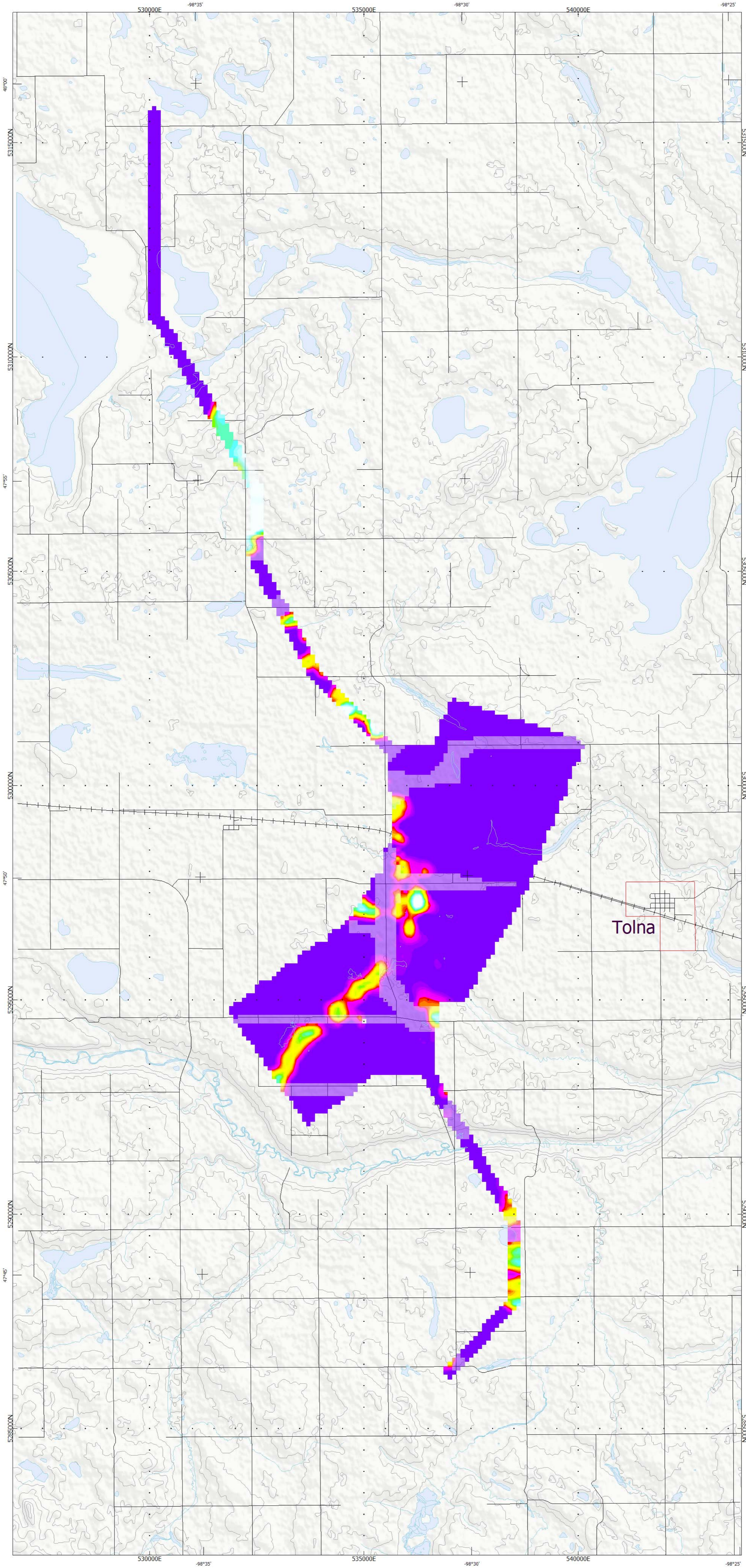
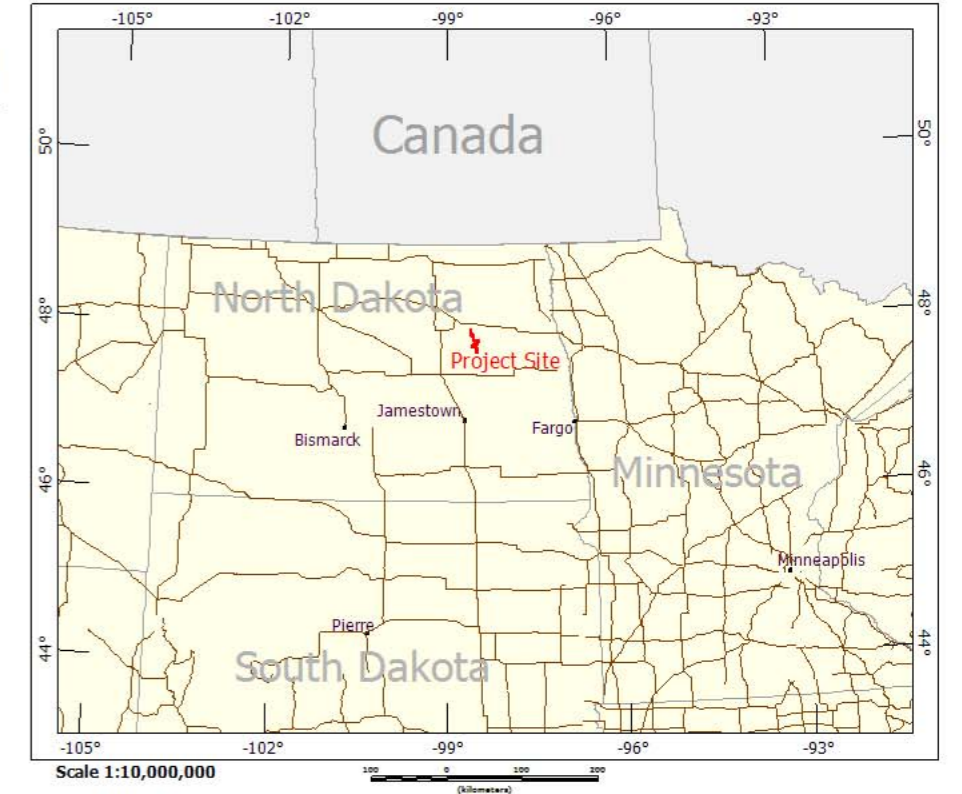
The topographic data base was derived from ND State Water Commission Data Portal  
 Background shading is derived from NASA SRTM (Shuttle Radar Topography Mission) data  
 Inset data derived from Geocommunities 1:250,000 Canadian National Topographic database  
 (www.geocomm.com) (http://mapservice.swc.nd.gov)

**North Dakota State Water Commission**  
**Warwick-Low K Barrier**  
**Jamestown, North Dakota**

**Geotech VTEM System**  
**Resistivity**  
**Depth Slice 100 metres**

Flown and processed by Geotech Ltd.  
 245 Industrial Parkway North,  
 Aurora, Ontario, Canada L4G 4C4  
 www.geotech.ca

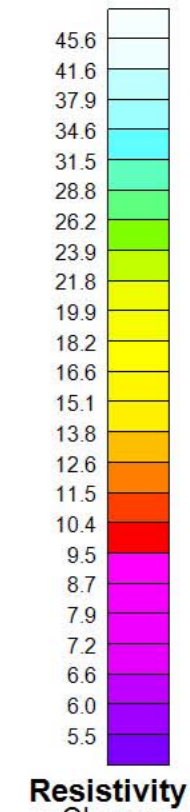
March 2017



**SURVEY SPECIFICATIONS:**  
 Survey Date: October 22nd - 24th, 2016  
 Survey Base: Jamestown, North Dakota  
 Aircraft: Aerospatiale A-star 350 B3 C-FVTM  
 Survey Line Spacing: 400 metres  
 Survey Line Direction: N 107° E / N 287° E & N 145° E / N 325° E  
 Tie Line Spacing: n/a  
 Tie Line Direction: n/a  
 Average Aircraft Terrain Clearance: 65 metres  
 EM Transmitter Loop: Towed at an average terrain clearance of 31 metres below the helicopter  
 2 Magnetic Sensors: Towed at an average terrain clearance of 21 metres below the helicopter

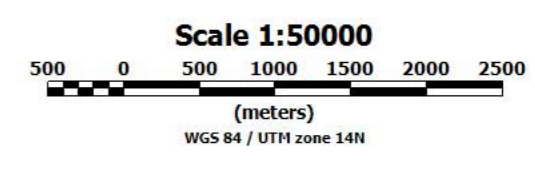
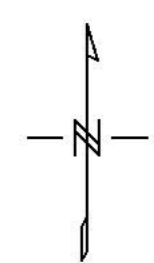
**INSTRUMENTS**  
 Geotech Time Domain Electromagnetic System (VTEM)  
 Concentric Rx/Tx Geometry  
 X-Coil Diameter 0.32m  
 Z-Coil Diameter 1.2m  
 Y-Coil Diameter 0.32m  
 Transmitter Loop: Diameter 26 Metres  
 Dipole Moment: 365,276 nA  
 Transmitter Wave Form: Trapezoid, Pulse Width 7.11 ms, Base Frequency 30 Hz  
 Geometrics High Sensitivity Caesium 2 Magnetic Sensors  
 Mag Resolution: 0.02 nT at 10 samples/sec

**MAP PROJECTION**  
 Datum: WGS84  
 Projection: Universal Transverse Mercator  
 Central Meridian: 99°W (Zone 14N)  
 Central Scale Factor: 0.9996  
 False Easting/Northing: 500,000m/0m  
 Major Axis: 6378137  
 Inverse Flattening: 298.25722



**TOPOGRAPHIC LEGEND:**

- Roads
- +++ Railways
- Streams / Rivers
- Contours
- Lakes / Ponds
- City Boundaries



The topographic data base was derived from ND State Water Commission Data Portal  
 Background shading is derived from NASA SRTM (Shuttle Radar Topography Mission) data  
 Inset data derived from Geocommunities 1:250,000 Canadian National Topographic database  
 (www.geocomm.com)(http://mapservice.swc.nd.gov)

**North Dakota State Water Commission**  
**Warwick-Low K Barrier**  
**Jamestown, North Dakota**

Geotech VTEM System  
**Resistivity**  
**Depth Slice 110 metres**

Field and processed by Geotech Ltd.  
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 Aurora, Ontario, Canada L4G 4C4  
 www.geotech.ca

March 2017

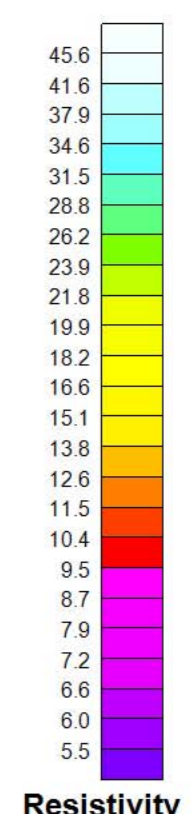
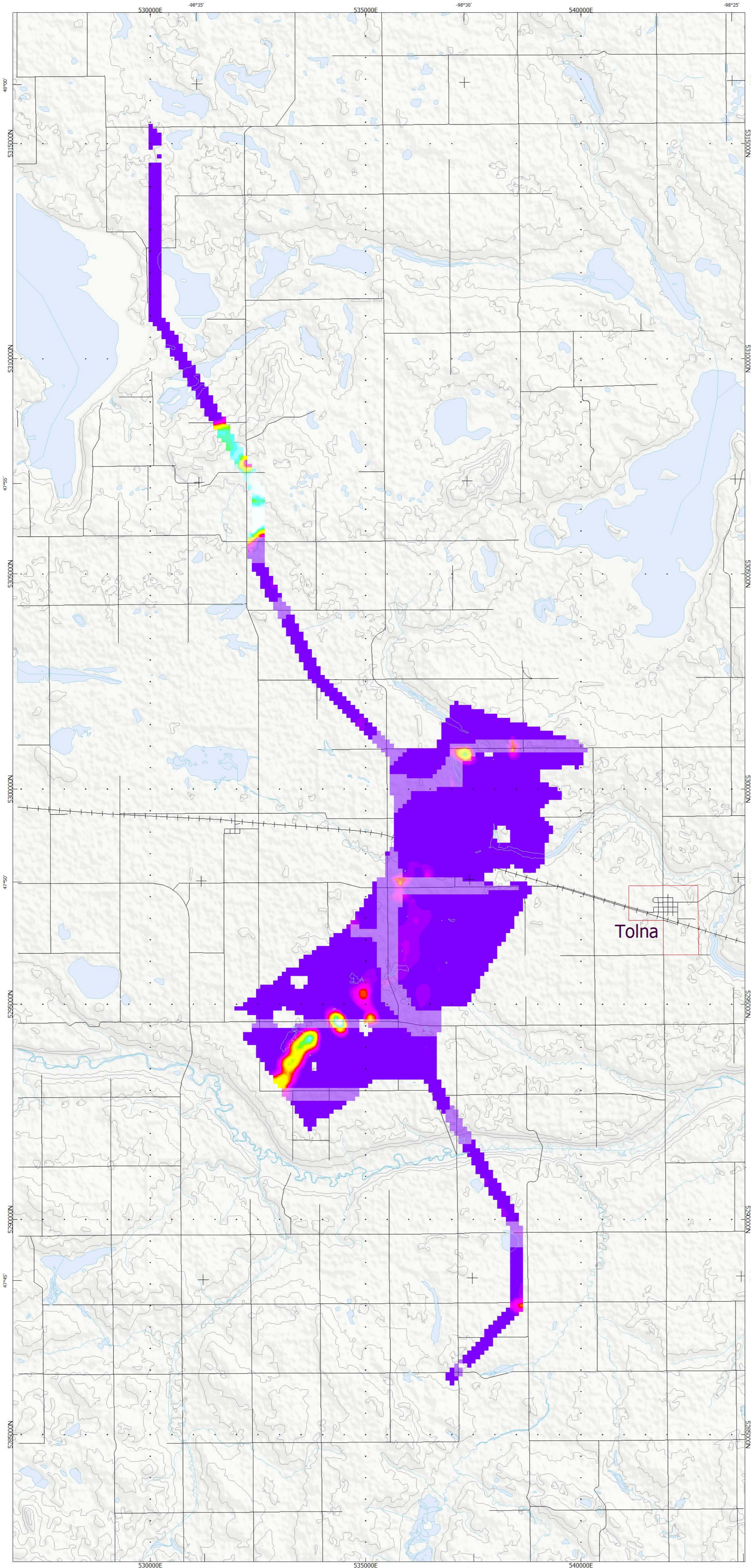




**SURVEY SPECIFICATIONS:**  
 Survey Date: October 22nd - 24th, 2016  
 Survey Base: Jamestown, North Dakota  
 Aircraft: Aerospatiale A-star 350 B3 C-FVTM  
 Survey Line Spacing: 400 metres  
 Survey Line Direction: N 107° E / N 287° E & N 145° E / N 325° E  
 Tie Line Spacing: n/a  
 Tie Line Direction: n/a  
 Average Aircraft Terrain Clearance: 65 metres  
 EM Transmitter Loop: Towed at an average terrain clearance of 31 metres below the helicopter  
 2 Magnetic Sensors: Towed at an average terrain clearance of 21 metres below the helicopter

**INSTRUMENTS**  
 Geotech Time Domain Electromagnetic System (VTEM)  
 Concentric Rx/Tx Geometry  
 X-Coil Diameter 0.32m  
 Z-Coil Diameter 1.2m  
 Y-Coil Diameter 0.32m  
 Transmitter Loop: Diameter 26 Metres  
 Dipole Moment: 365,276 nA  
 Transmitter Wave Form: Trapezoid, Pulse Width 7.11 ms, Base Frequency 30 Hz  
 Geometrics High Sensitivity Caesium 2 Magnetic Sensors  
 Mag Resolution: 0.02 nT at 10 samples/sec

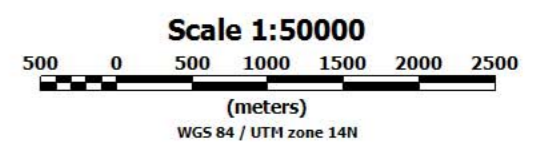
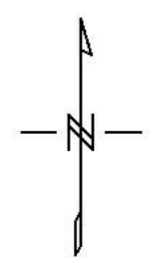
**MAP PROJECTION**  
 Datum: WGS84  
 Projection: Universal Transverse Mercator  
 Central Meridian: 99°W (Zone 14N)  
 Central Scale Factor: 0.9996  
 False Easting/Northing: 500,000m/0m  
 Major Axis: 6378137  
 Inverse Flattening: 298.25722



**Resistivity**  
Ohm-m

**TOPOGRAPHIC LEGEND:**

- Roads
- +—+— Railways
- Streams / Rivers
- Contours
- Lakes / Ponds
- City Boundaries



The topographic data base was derived from ND State Water Commission Data Portal  
 Background shading is derived from NASA SRTM (Shuttle Radar Topography Mission) data  
 Inset data derived from Geocommunes 1:250,000 Canadian National Topographic database  
 (www.geocomm.com/http://mapservise.svc.nd.gov)

**North Dakota State Water Commission**  
**Warwick-Low K Barrier**  
**Jamestown, North Dakota**

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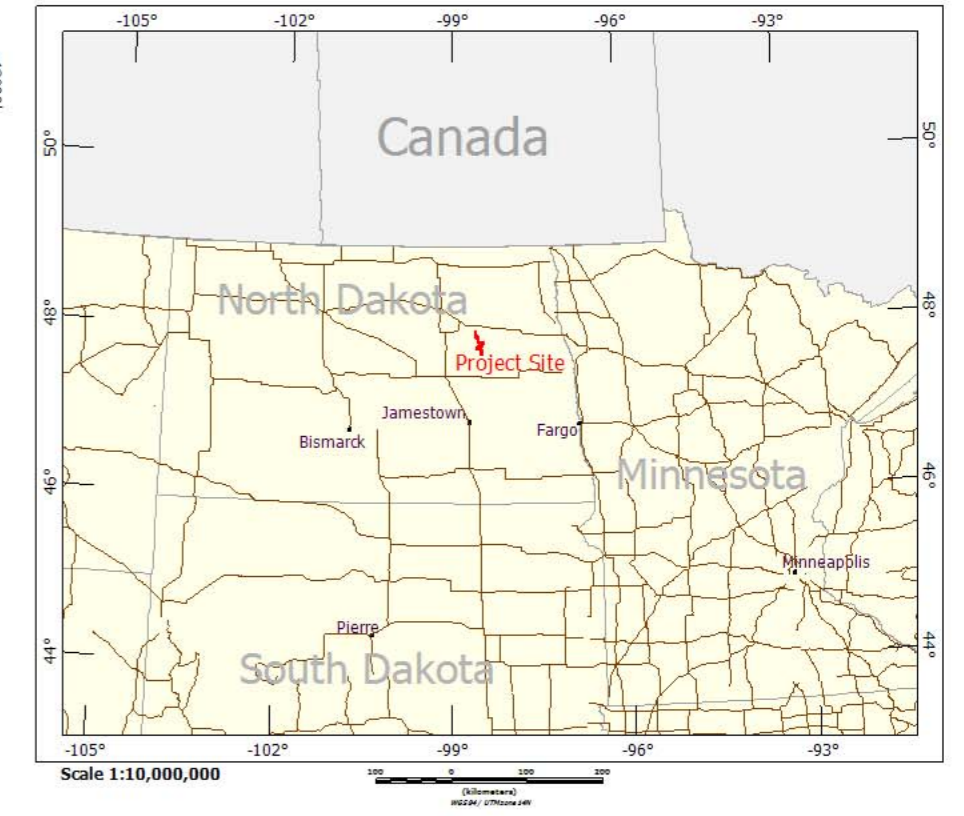
**Geotech VTEM System**  
**Resistivity**  
**Depth Slice 120 metres**

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 Aurora, Ontario, Canada L4G 4C4  
 www.geotech.ca

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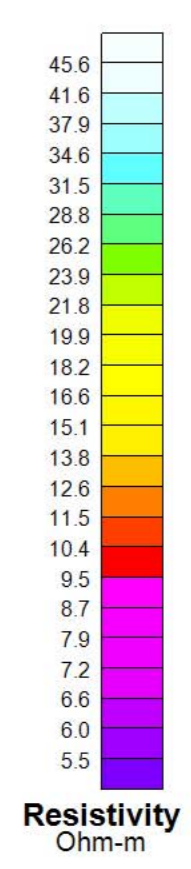
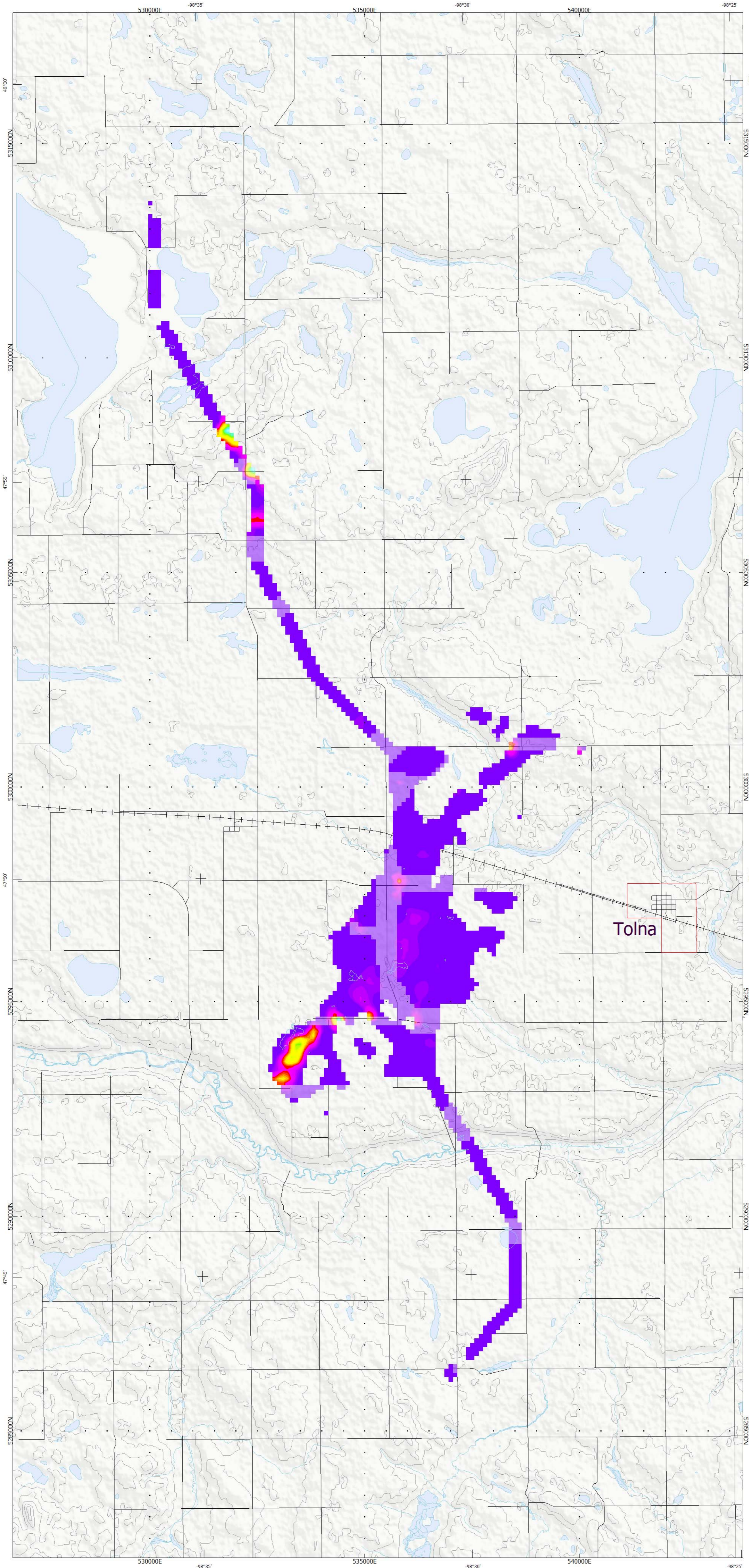
March 2017



**SURVEY SPECIFICATIONS:**  
 Survey Date: October 22nd - 24th, 2016  
 Survey Base: Jamestown, North Dakota  
 Aircraft: Aerospatiale A-star 350 B3 C-FVTM  
 Survey Line Spacing: 400 metres  
 Survey Line Direction: N 107° E / N 287° E & N 145° E / N 325° E  
 Tie Line Spacing: n/a  
 Tie Line Direction: n/a  
 Average Aircraft Terrain Clearance: 65 metres  
 EM Transmitter Loop: Towed at an average terrain clearance of 31 metres below the helicopter  
 2 Magnetic Sensors: Towed at an average terrain clearance of 21 metres below the helicopter

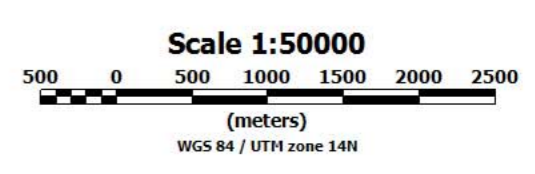
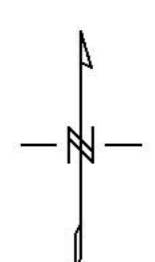
**INSTRUMENTS**  
 Geotech Time Domain Electromagnetic System (VTEM)  
 Concentric Rx/Tx Geometry  
 X-Coil Diameter 0.32m  
 Z-Coil Diameter 1.2m  
 Y-Coil Diameter 0.32m  
 Transmitter Loop: Diameter 26 Metres  
 Dipole Moment: 365,276 nA  
 Transmitter Wave Form: Trapezoid, Pulse Width 7.11 ms, Base Frequency 30 Hz  
 Geometrics High Sensitivity Caesium 2 Magnetic Sensors  
 Mag Resolution: 0.02 nT at 10 samples/sec

**MAP PROJECTION**  
 Datum: WGS84  
 Projection: Universal Transverse Mercator  
 Central Meridian: 99°W (Zone 14N)  
 Central Scale Factor: 0.9996  
 False Easting/Northing: 500,000m/0m  
 Major Axis: 6378137  
 Inverse Flattening: 198.25722



**TOPOGRAPHIC LEGEND:**

- Roads
- +++ Railways
- Streams / Rivers
- Contours
- Lakes / Ponds
- City Boundaries



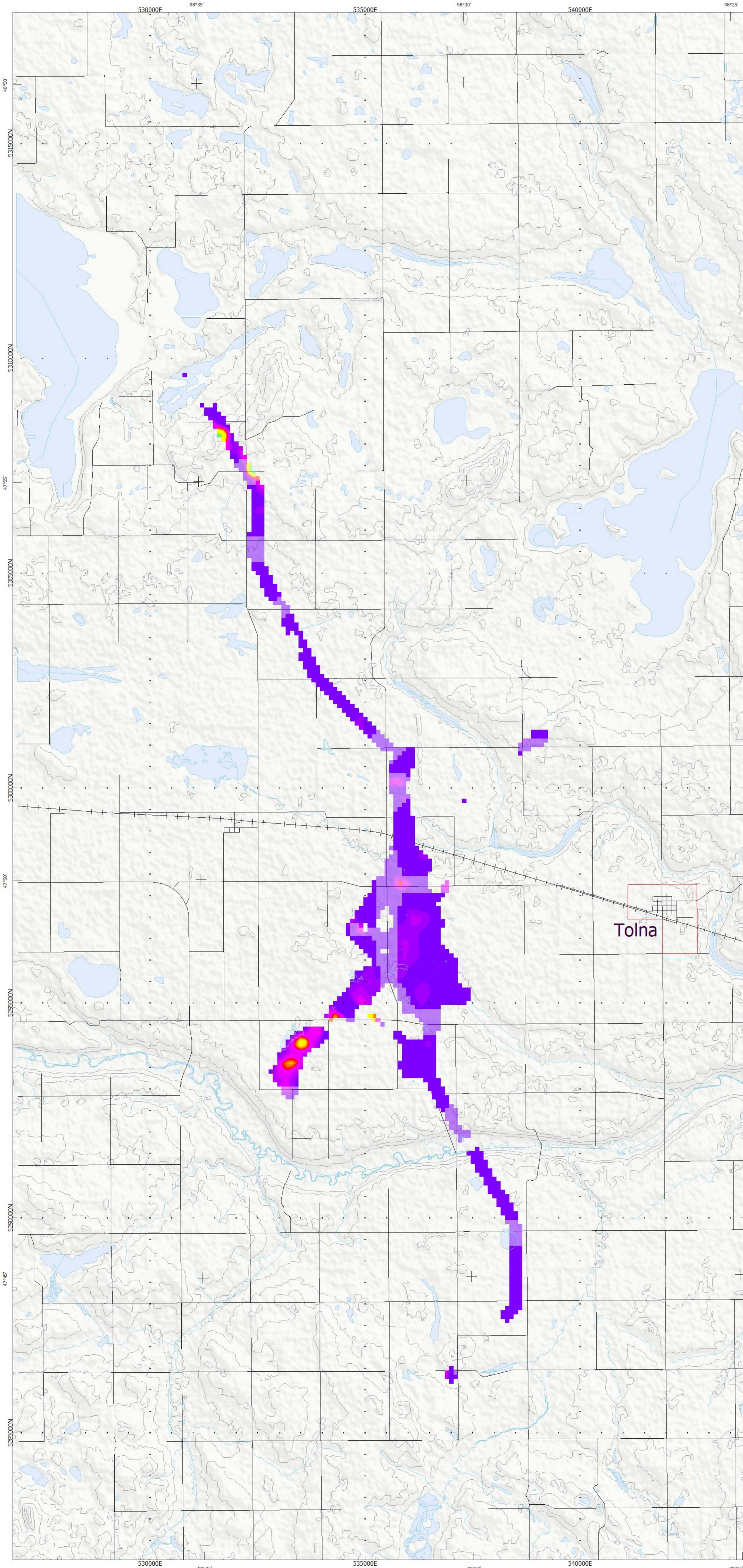
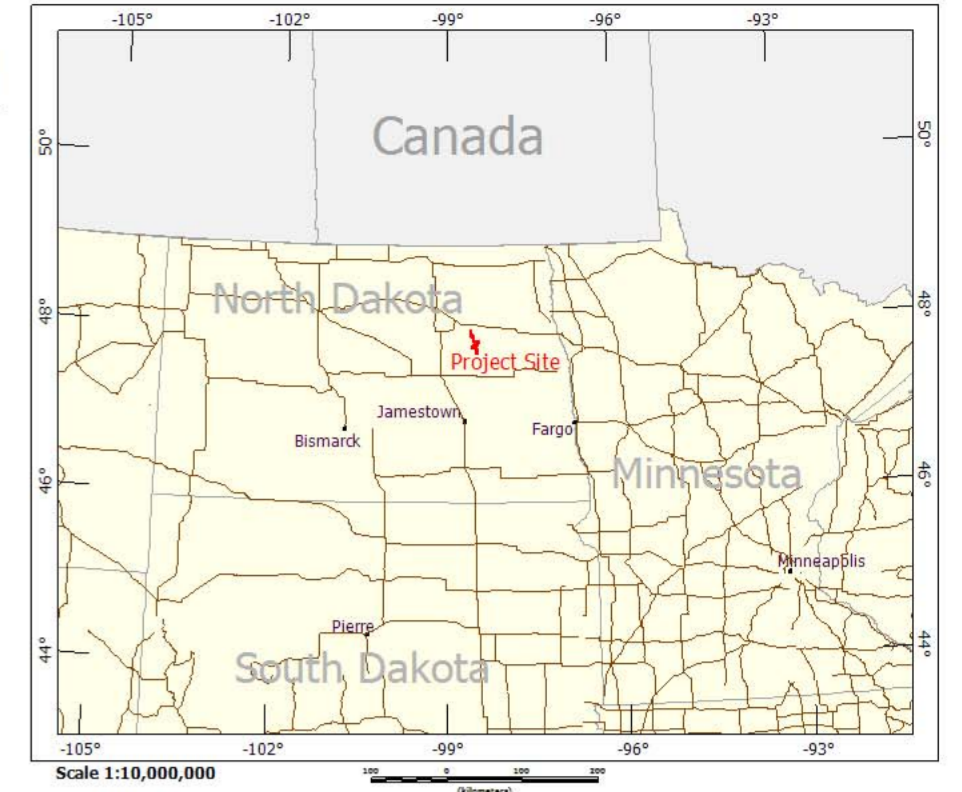
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 Background shading is derived from NASA SRTM (Shuttle Radar Topography Mission) data  
 Inset data derived from Geocommunities 1:250,000 Canadian National Topographic database  
 (www.geocomm.com/http://mapservices.svc.nd.gov)

**North Dakota State Water Commission**  
**Warwick-Low K Barrier**  
**Jamestown, North Dakota**

**Geotech VTEM System**  
**Resistivity**  
**Depth Slice 130 metres**

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 www.geotech.ca

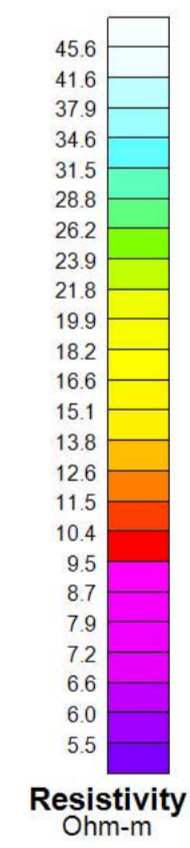
March 2017



**SURVEY SPECIFICATIONS:**  
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 Survey Base: Jamestown, North Dakota  
 Aircraft: Aerospatiale A-star 350 B3 C-FVTM  
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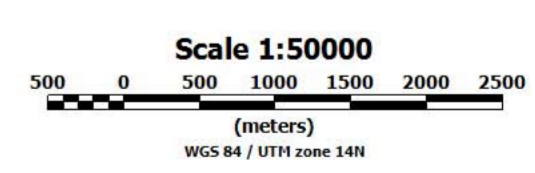
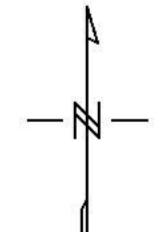
**INSTRUMENTS**  
 Geotech Time Domain Electromagnetic System (VTM)  
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 Z-Coil Diameter 1.2m  
 Y-Coil Diameter 0.32m  
 Transmitter Loop: Diameter 26 Metres  
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 Transmitter Wave Form: Trapezoid, Pulse Width 7.11 ms, Base Frequency 30 Hz  
 Geometrics High Sensitivity Caesium 2 Magnetic Sensors  
 Mag Resolution: 0.02 nT at 10 samples/sec

**MAP PROJECTION**  
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 Projection: Universal Transverse Mercator  
 Central Meridian: 99°W (Zone 14N)  
 Central Scale Factor: 0.9996  
 False Easting/Northing: 500,000m/0m  
 Major Axis: 6378137  
 Inverse Flattening: 298.25722



**TOPOGRAPHIC LEGEND:**

- Roads
- + + + Railways
- Streams / Rivers
- Contours
- Lakes / Ponds
- City Boundaries



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 Inset data derived from Geocommunities 1:250,000 Canadian National Topographic database  
 (www.geocomm.com/http://mapservice.svc.nd.gov)

**North Dakota State Water Commission**  
**Warwick-Low K Barrier**  
**Jamestown, North Dakota**

**Geotech VTEM System**  
**Resistivity**  
**Depth Slice 140 metres**

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 www.geotech.ca

March 2017