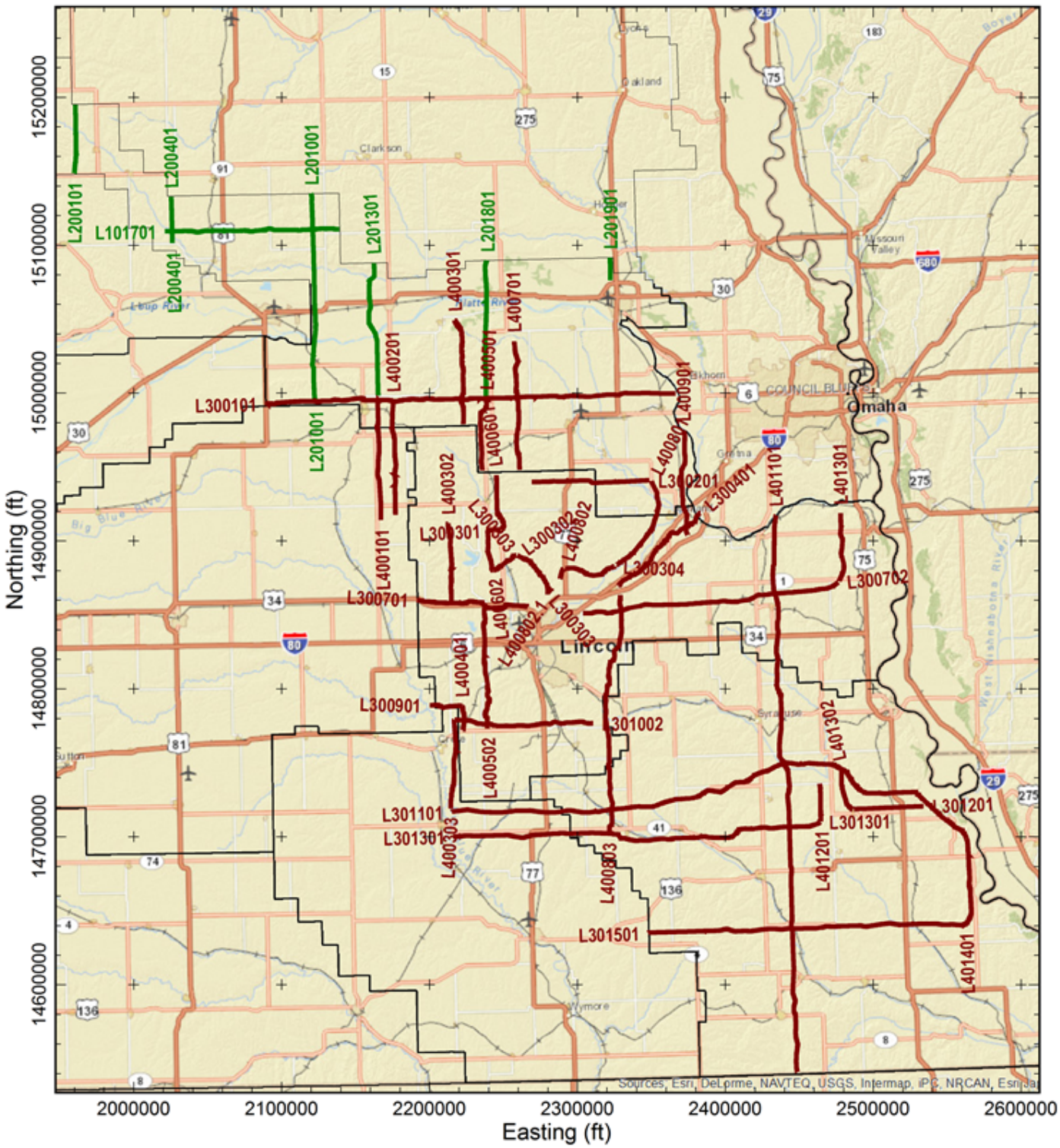
Appendix 1 – AEM Resistivity and Interpretative Profiles



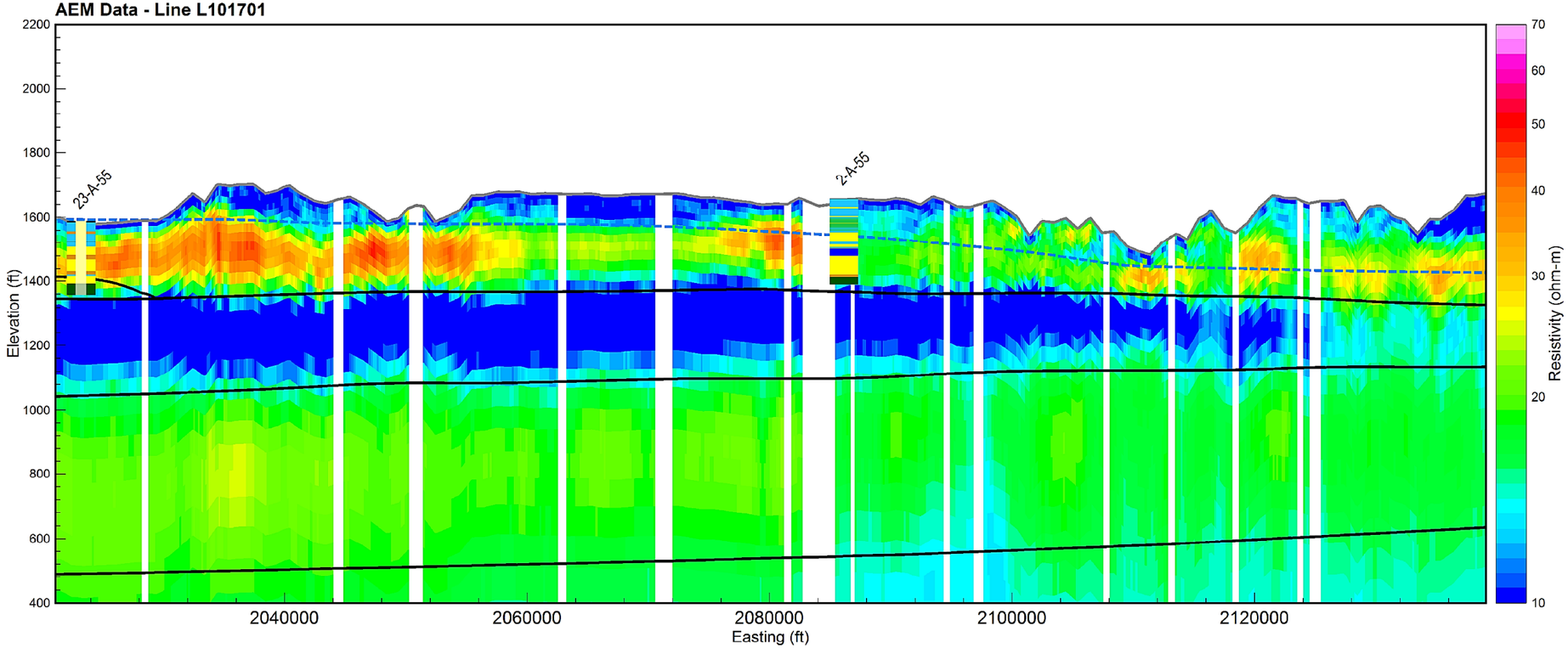
Legend

ENWRA Fall 2014 Flight Lines

ENRWA Spring 2015 Flight Lines

Natural Resources District Boundary

AEM Data - Line L101701



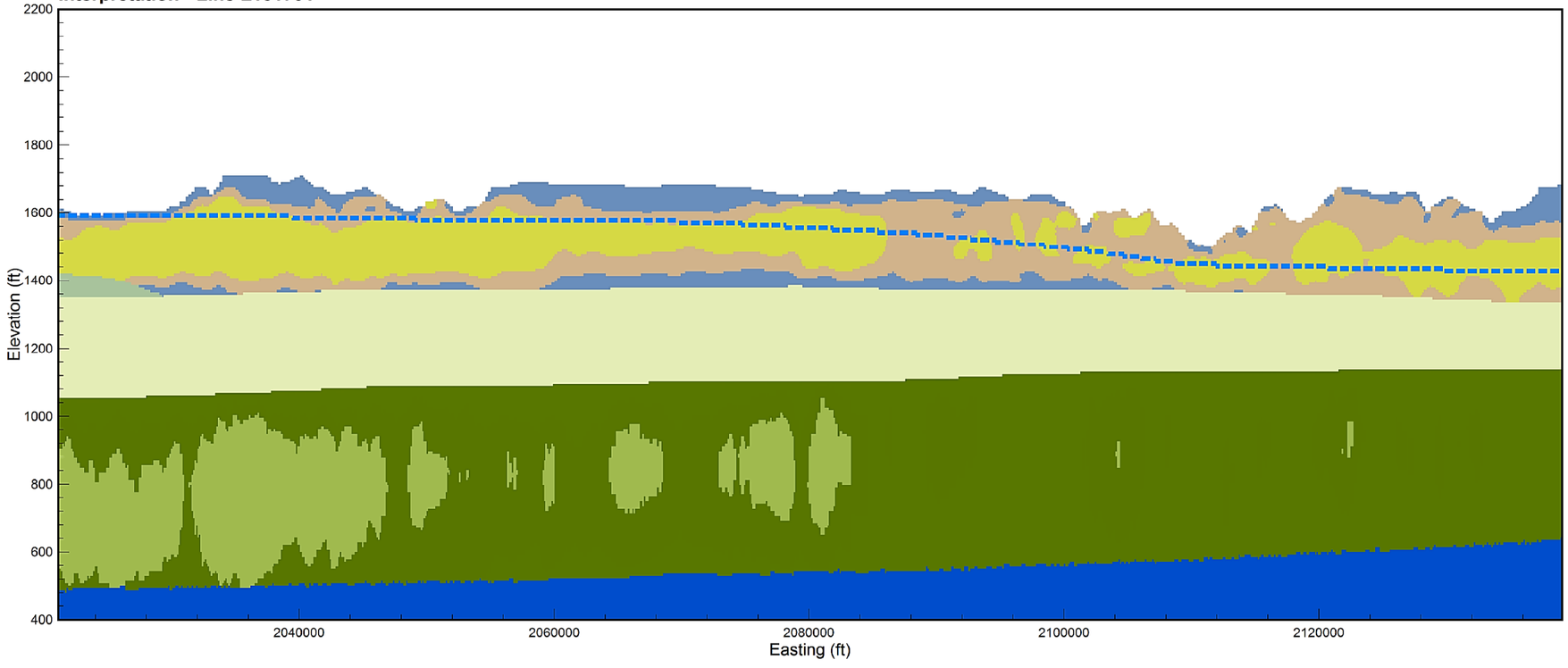
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L101701



Quaternary/Ogallala Aquifer Material Legend

- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

- Sandstone Dominant (>40 ohm-m)
- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

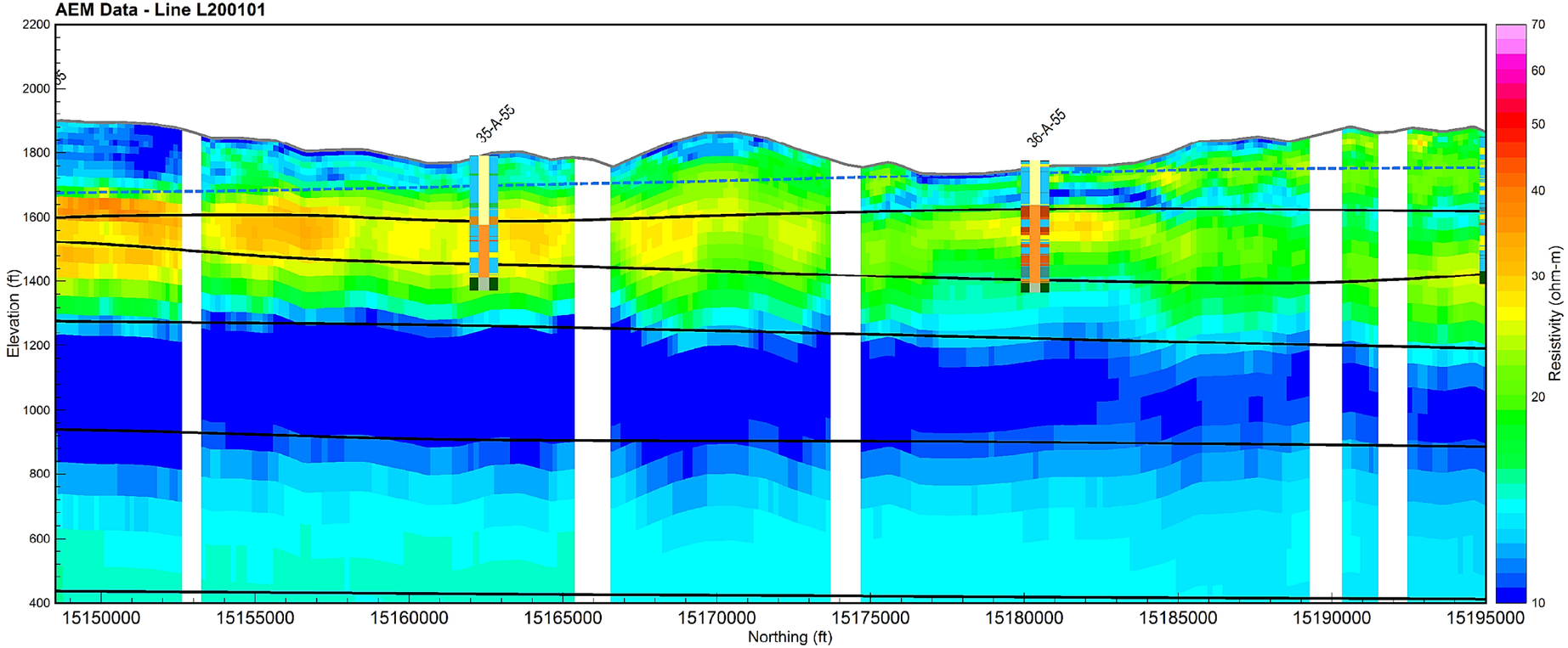
Eastern Nebraska Water Resources Assessment

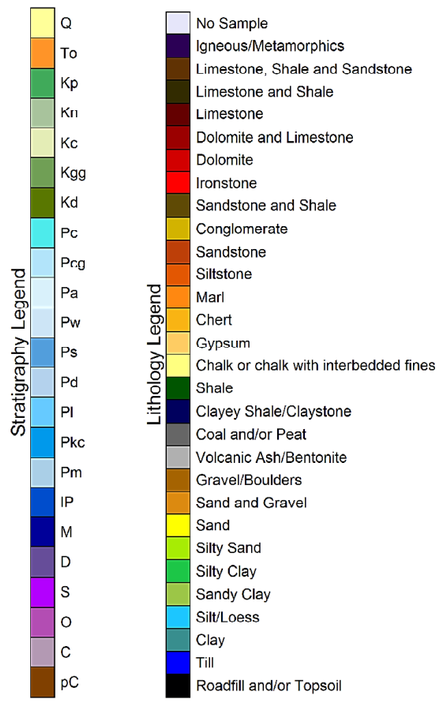
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

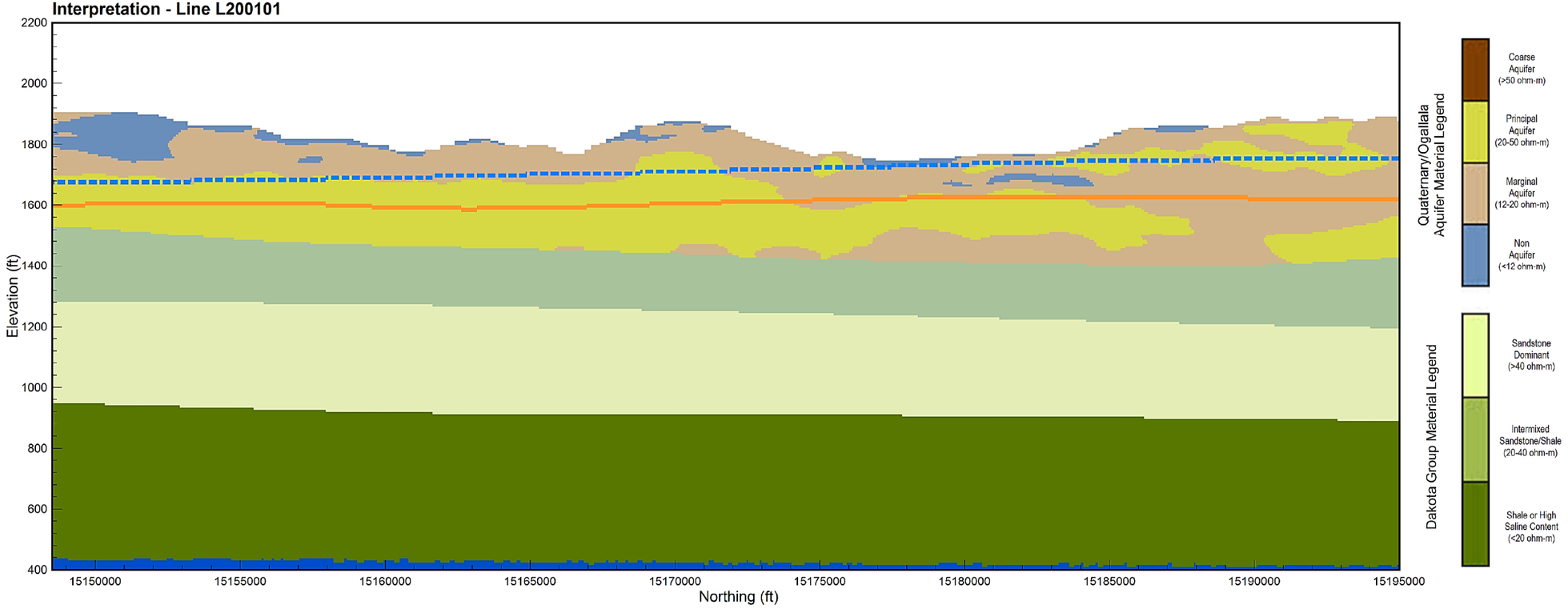
Southern ENWRA Project Area

Flight Line L101701

EXRI







Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

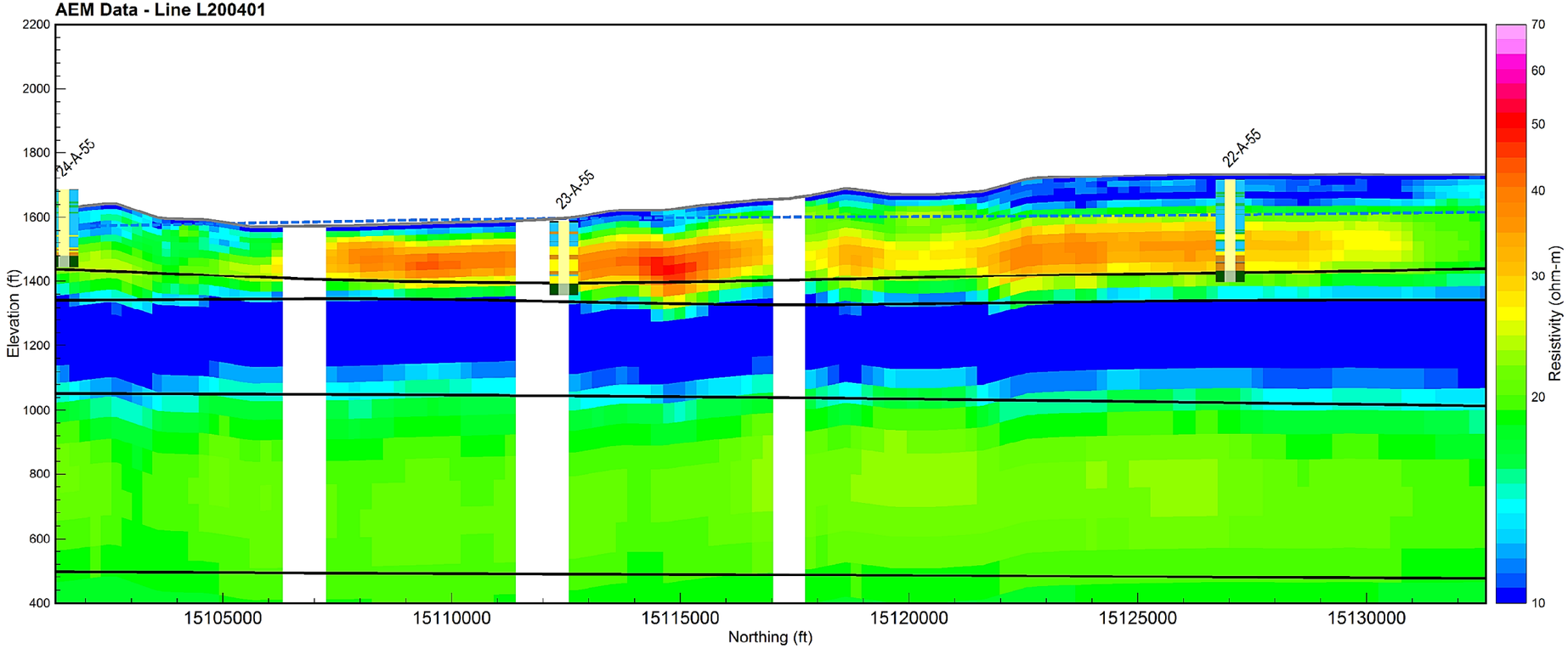
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

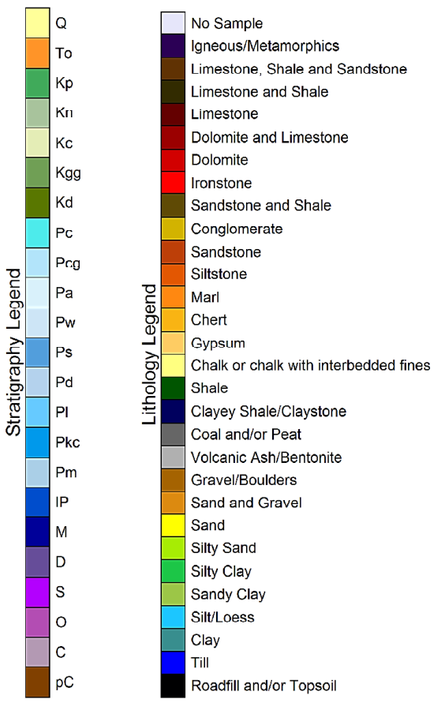
Southern ENWRA Project Area

Flight Line L200101

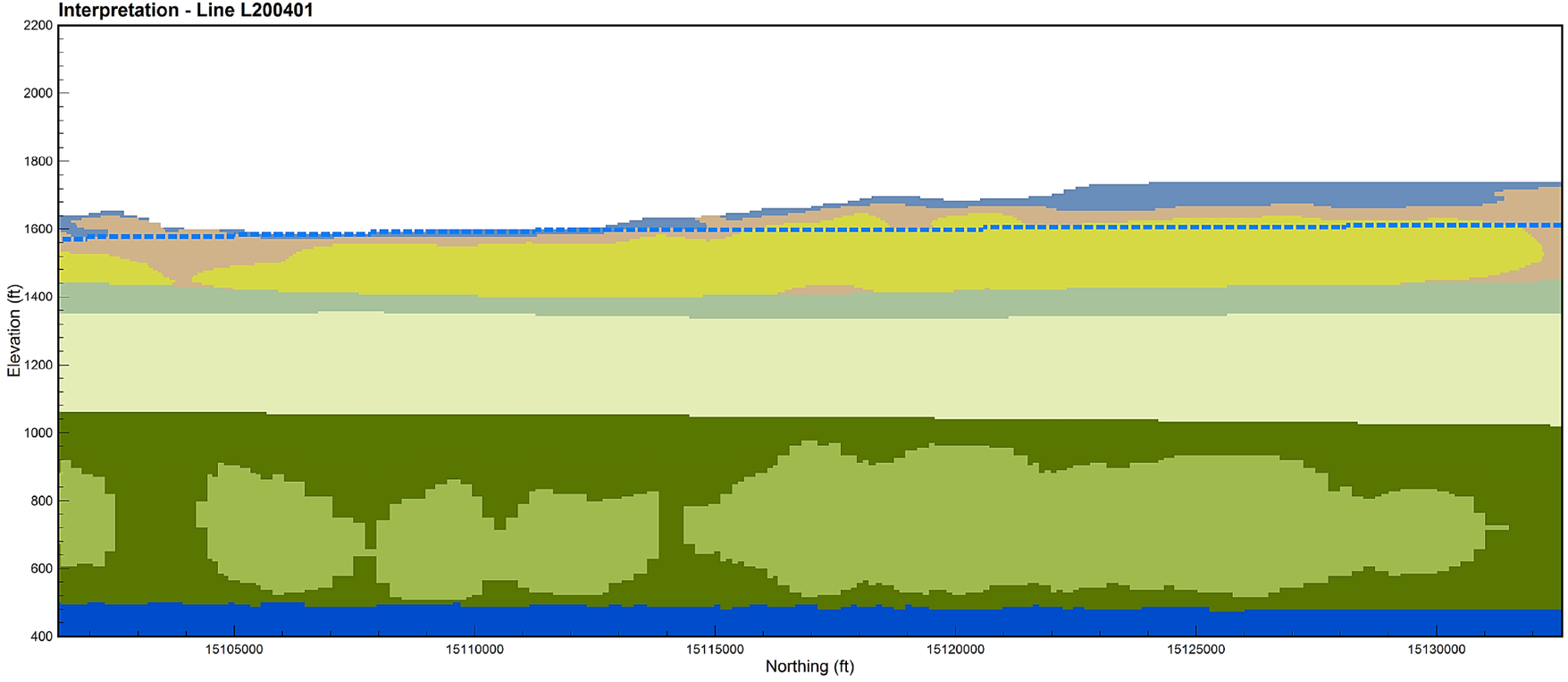
EXRI

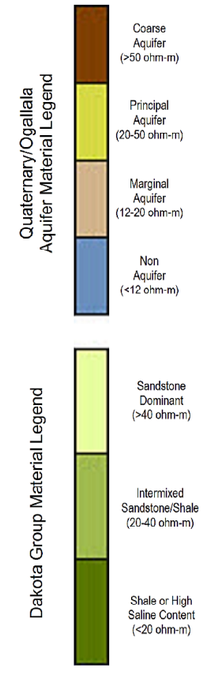
AEM Data - Line L200401





Interpretation - Line L200401





Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

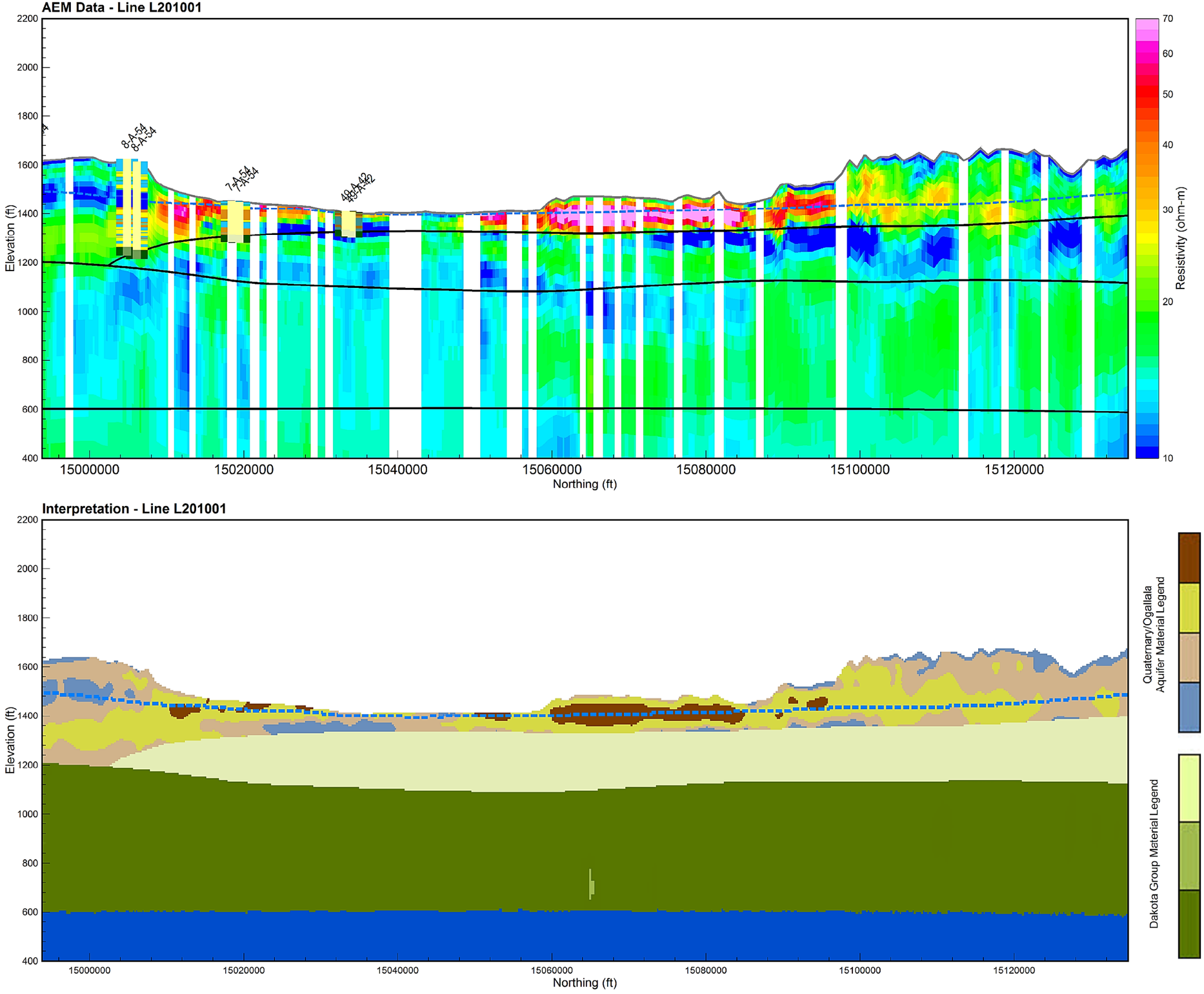
Eastern Nebraska Water Resources Assessment

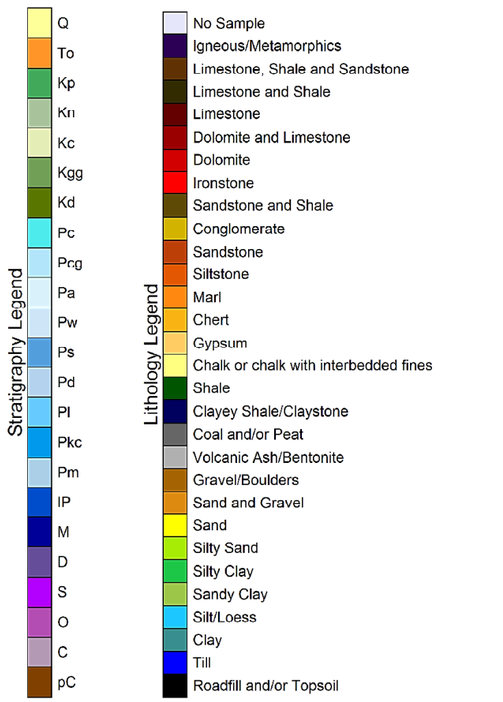
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

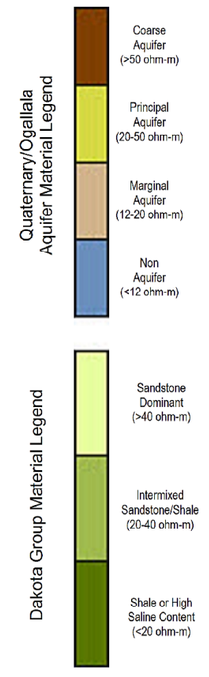
Southern ENWRA Project Area

Flight Line L200401

EXRI







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Eastern Nebraska Water Resources Assessment

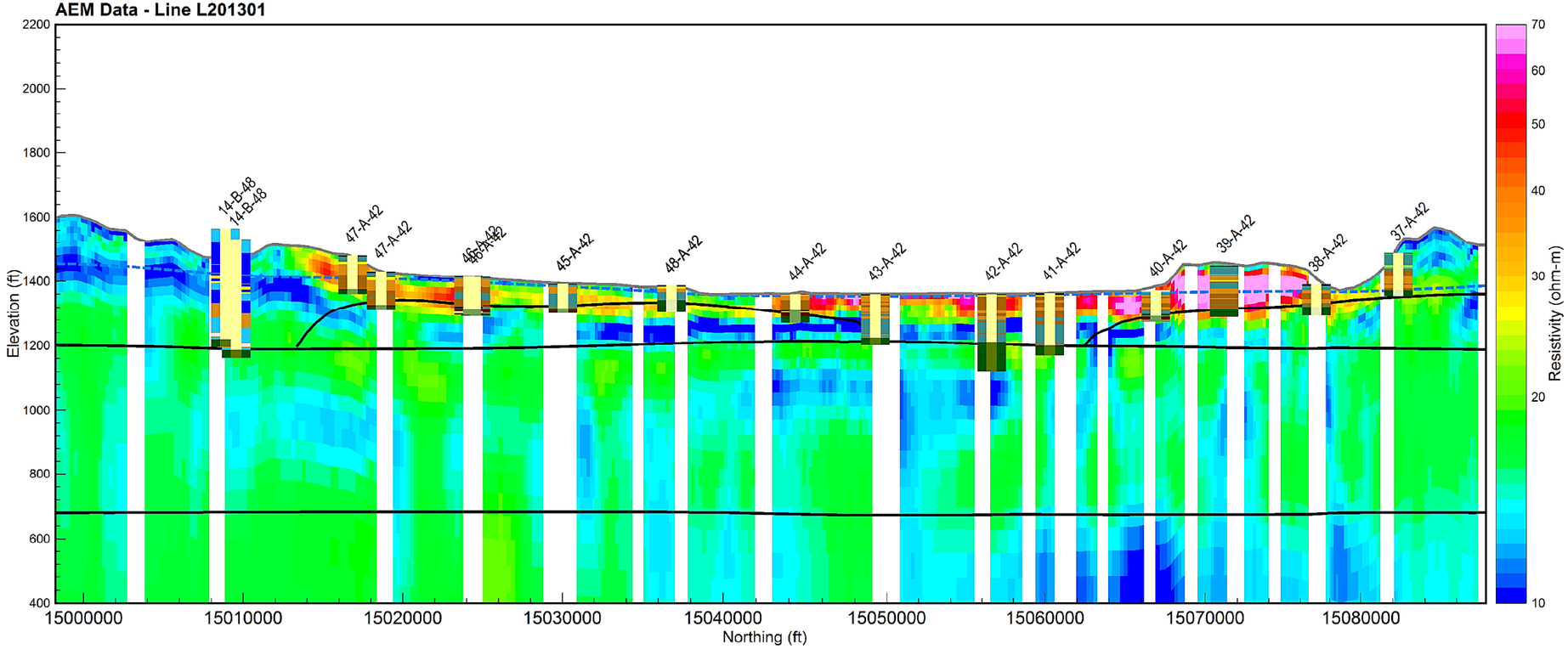
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

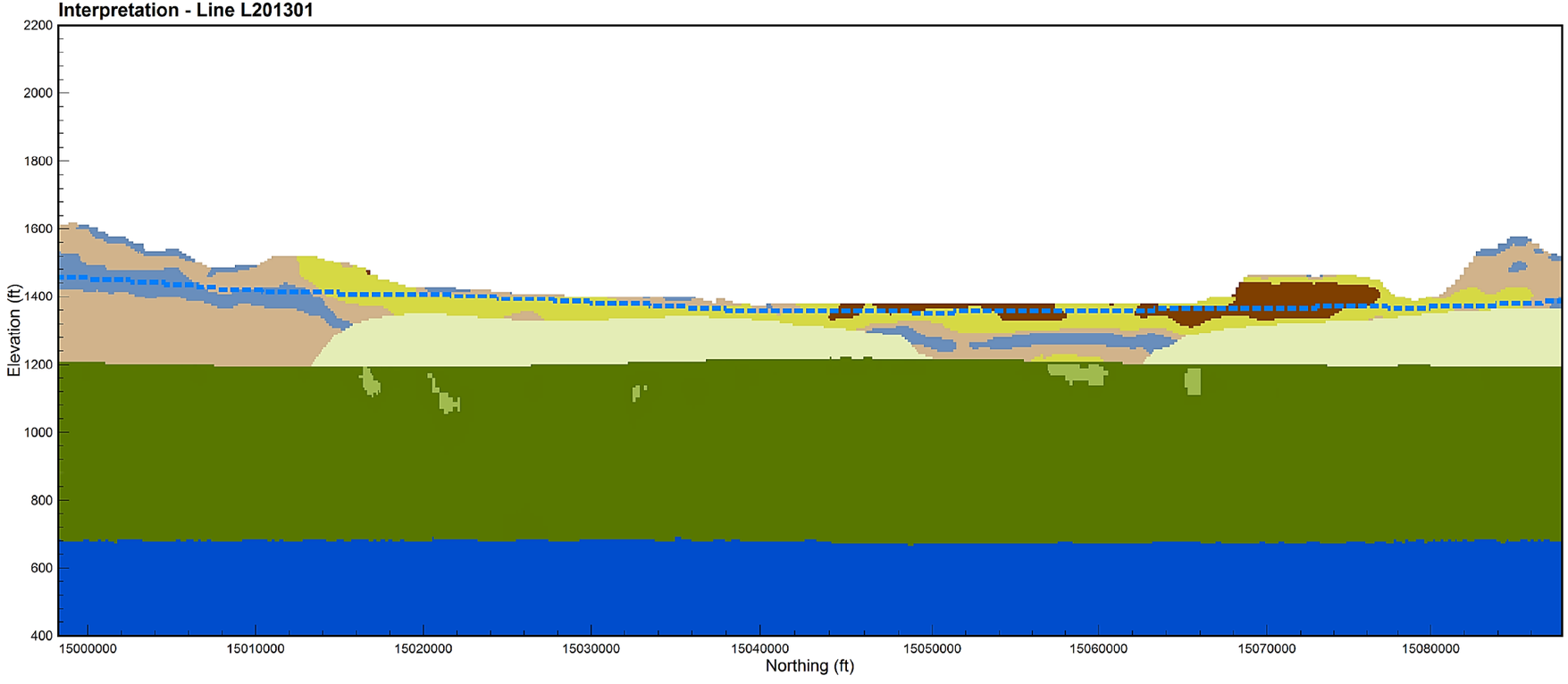
Flight Line L201001

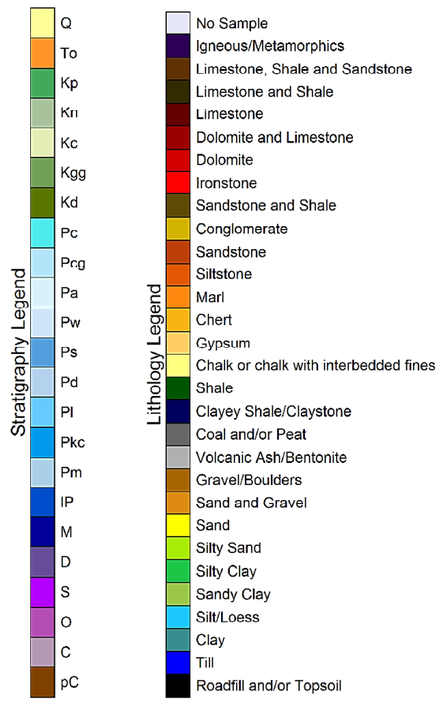
EXRI

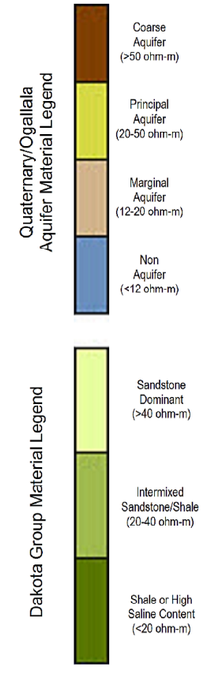
AEM Data - Line L201301



Interpretation - Line L201301







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Eastern Nebraska Water Resources Assessment

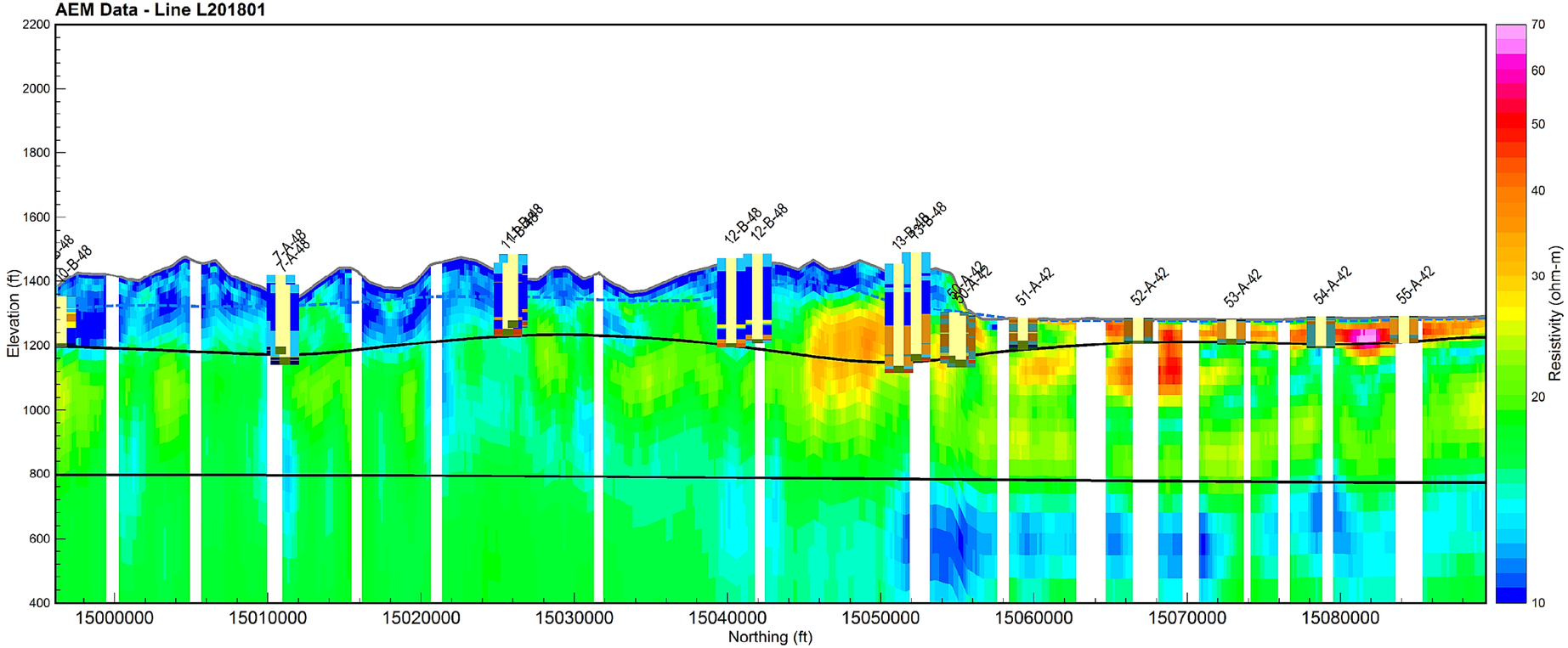
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L201301

EXRI

AEM Data - Line L201801



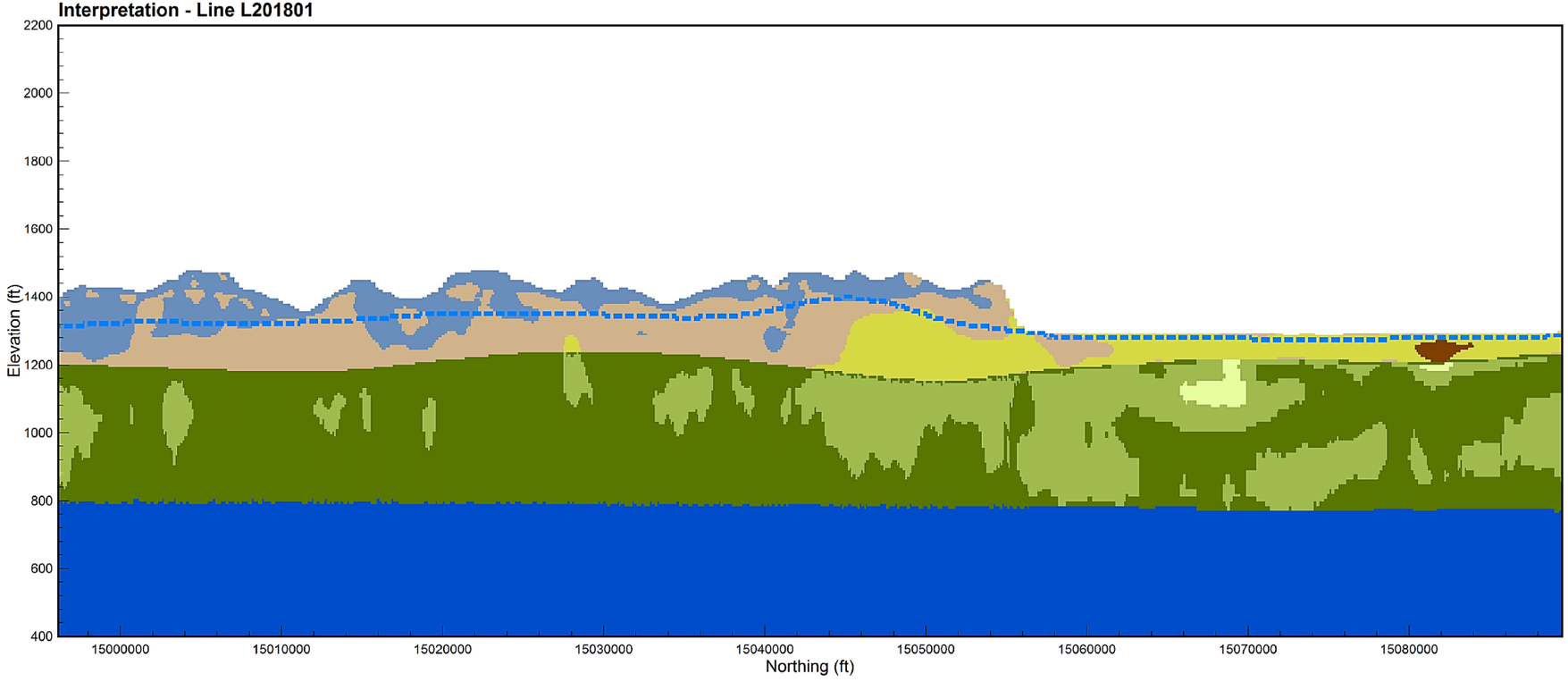
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L201801



Quaternary/Ogallala Aquifer Material Legend

- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

- Sandstone Dominant (>40 ohm-m)
- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

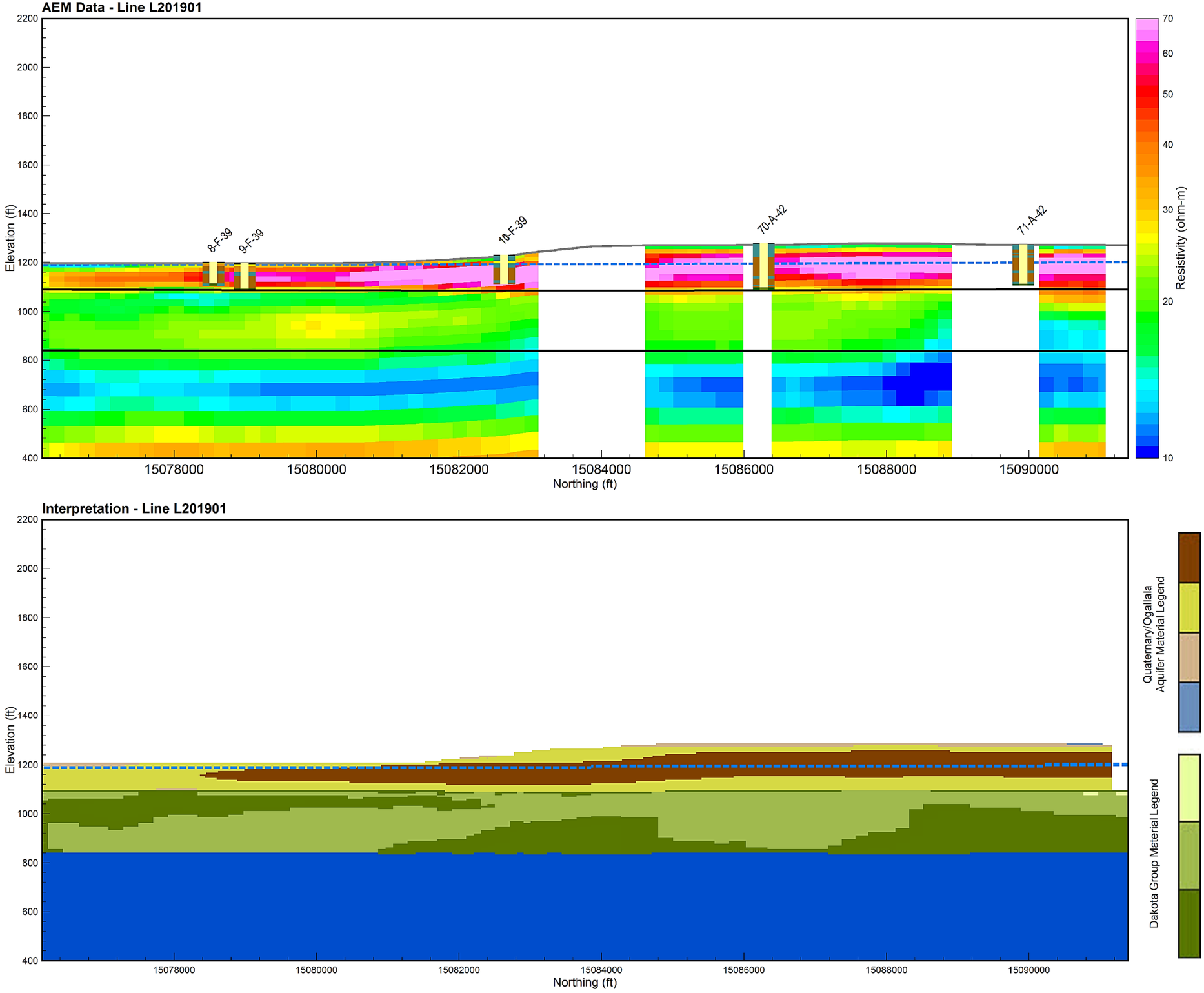
Eastern Nebraska Water Resources Assessment

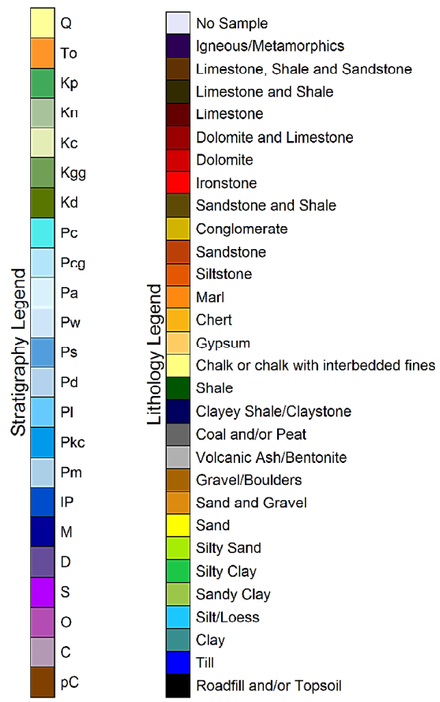
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L201801

EXRI





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Eastern Nebraska Water Resources Assessment

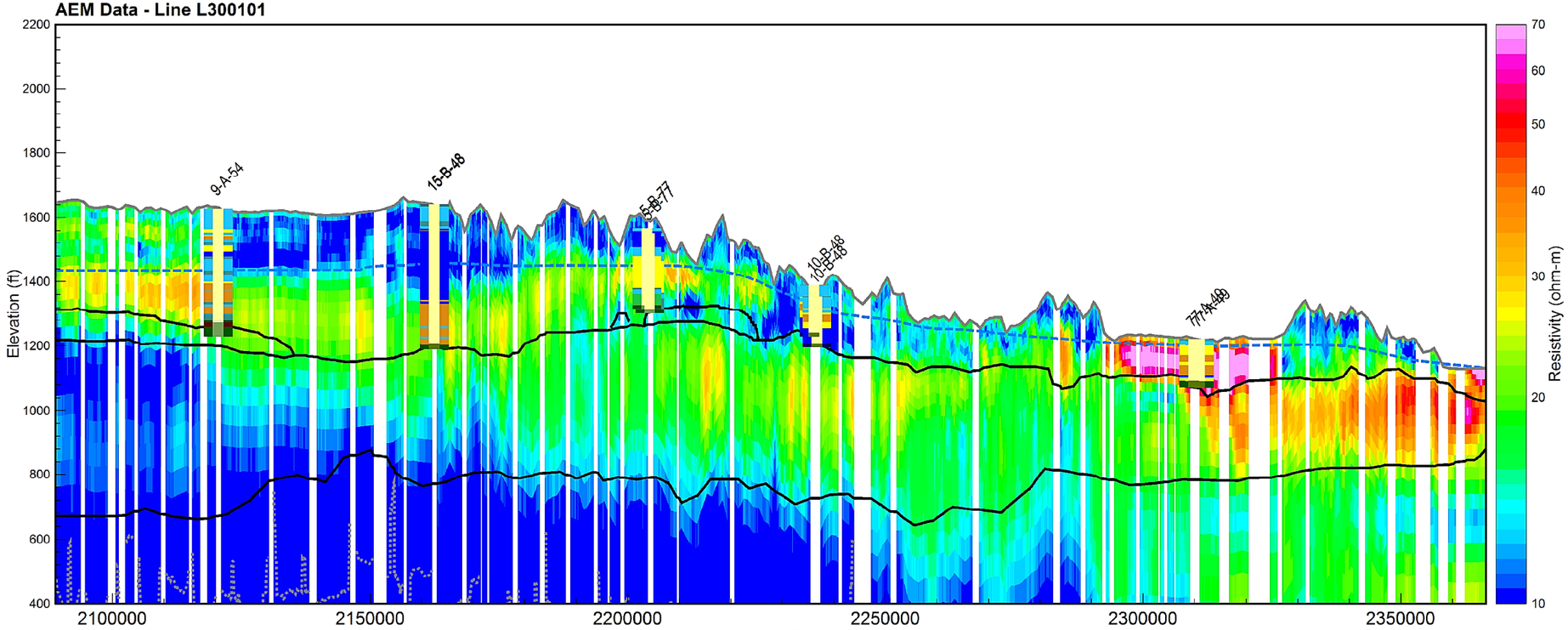
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L201901

EXRI

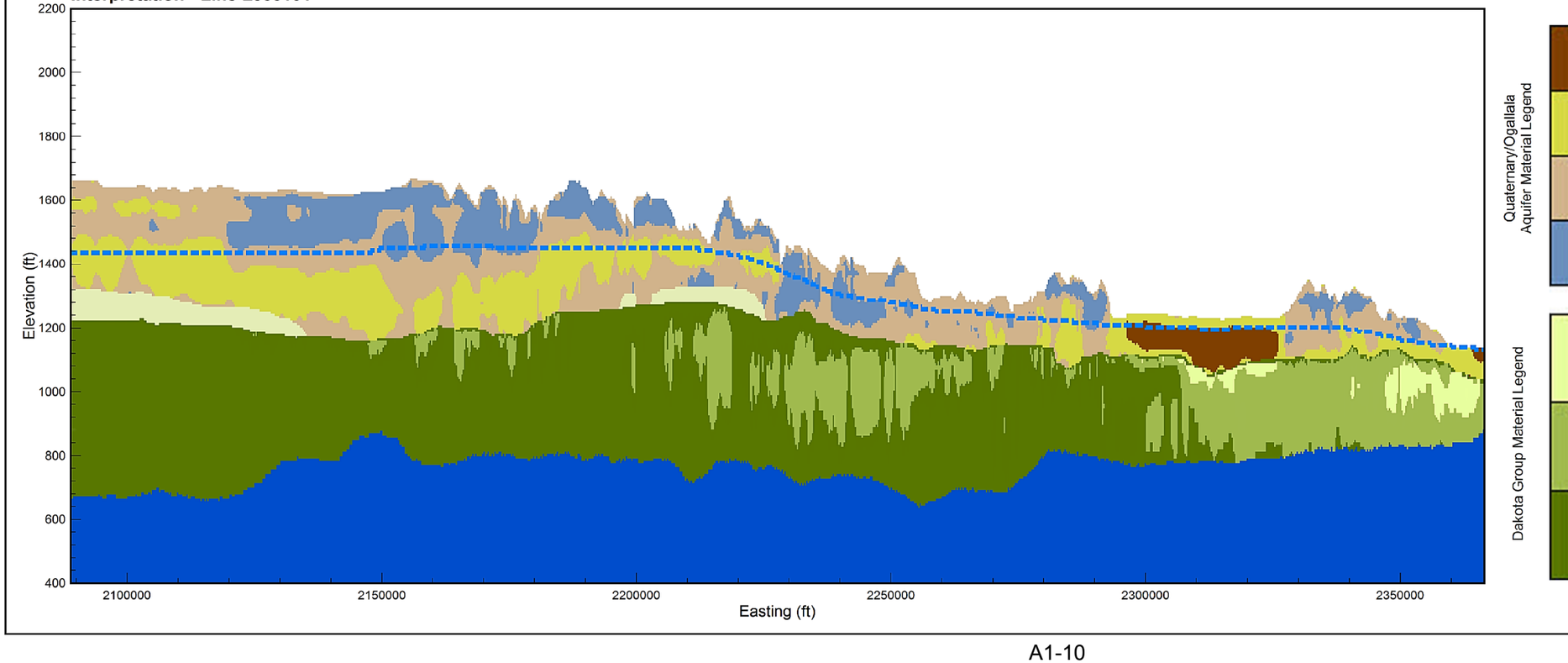
AEM Data - Line L300101



Stratigraphy Legend: Q, To, Kp, Kn, Kc, Kgg, Kd, Pc, Pcg, Pa, Pw, Ps, Pd, Pl, Pkc, Pm, IP, M, D, S, O, C, pC

Lithology Legend: No Sample; Igneous/Metamorphics; Limestone, Shale and Sandstone; Limestone and Shale; Limestone; Dolomite and Limestone; Dolomite; Ironstone; Sandstone and Shale; Conglomerate; Sandstone; Siltstone; Marl; Chert; Gypsum; Chalk or chalk with interbedded fines; Shale; Clayey Shale/Claystone; Coal and/or Peat; Volcanic Ash/Bentonite; Gravel/Boulders; Sand and Gravel; Sand; Silty Sand; Silty Clay; Sandy Clay; Silt/Loess; Clay; Till; Roadfill and/or Topsoil

Interpretation - Line L300101



Quaternary/Ogallala Aquifer Material Legend: Coarse Aquifer (>50 ohm-m); Principal Aquifer (20-50 ohm-m); Marginal Aquifer (12-20 ohm-m); Non Aquifer (<12 ohm-m)

Dakota Group Material Legend: Sandstone Dominant (>40 ohm-m); Intermixed Sandstone/Shale (20-40 ohm-m); Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

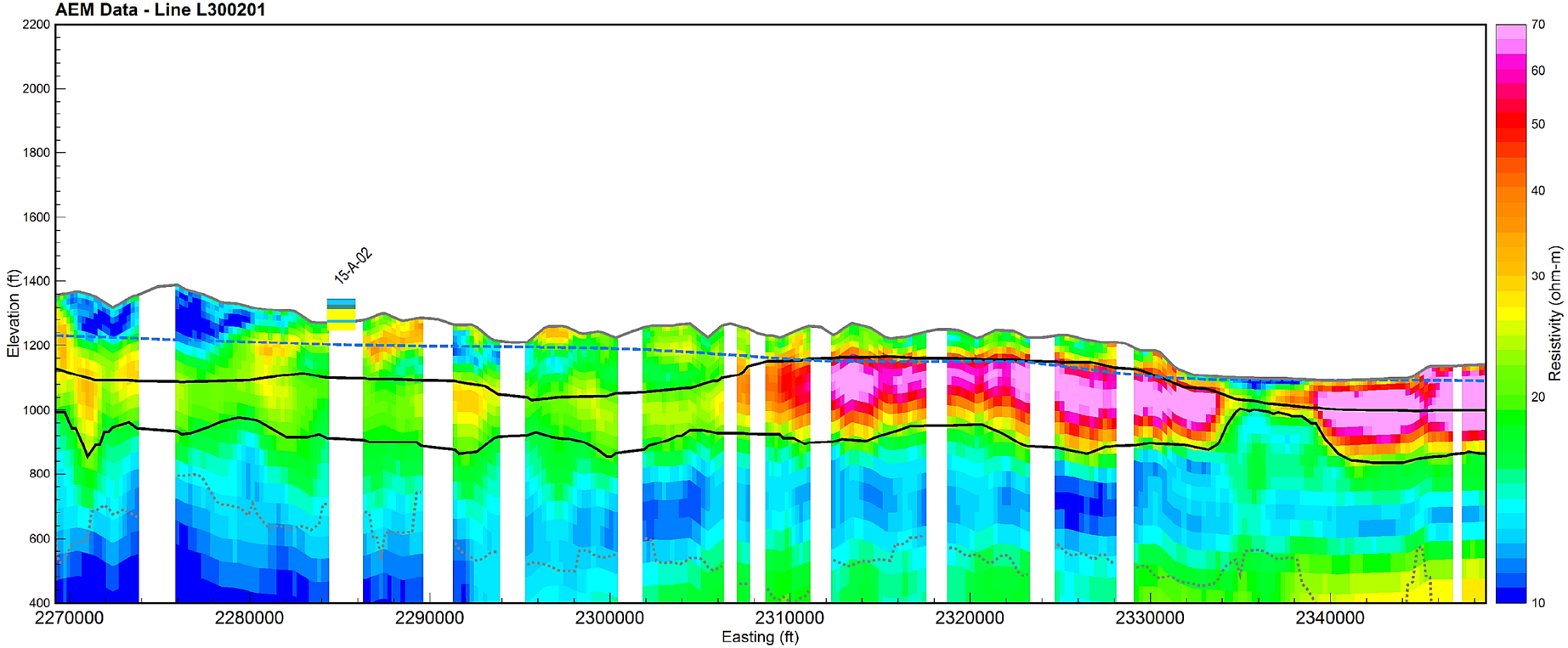
Eastern Nebraska Water Resources Assessment

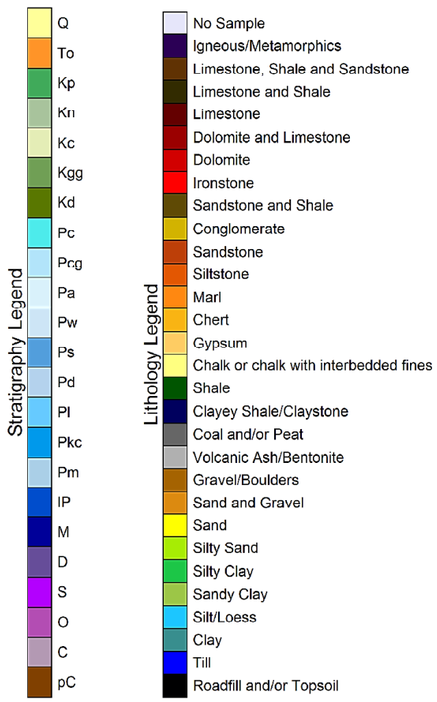
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

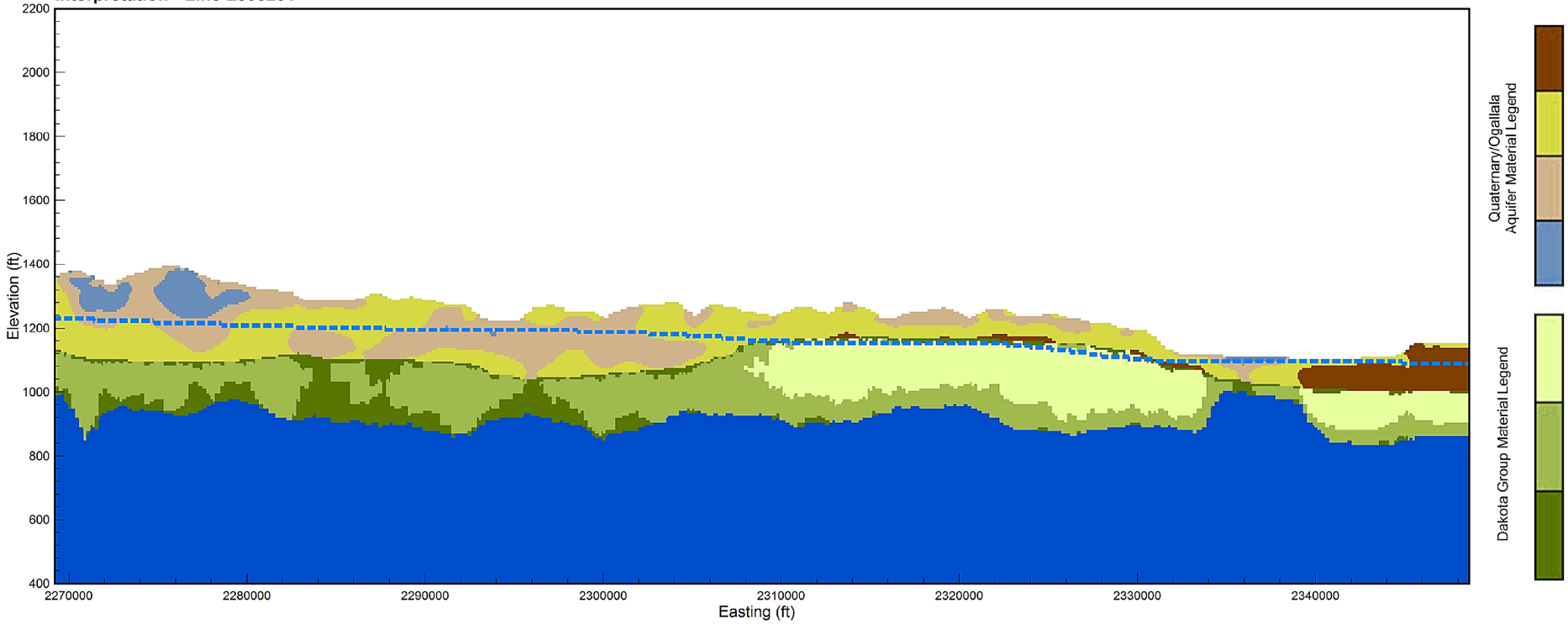
Southern ENWRA Project Area

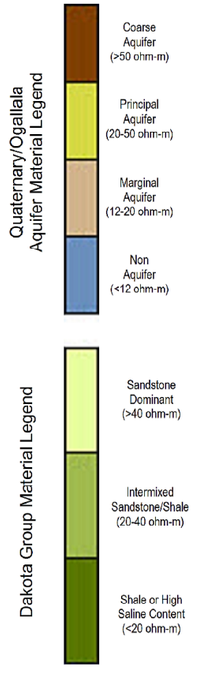
Flight Line L300101

EXRI









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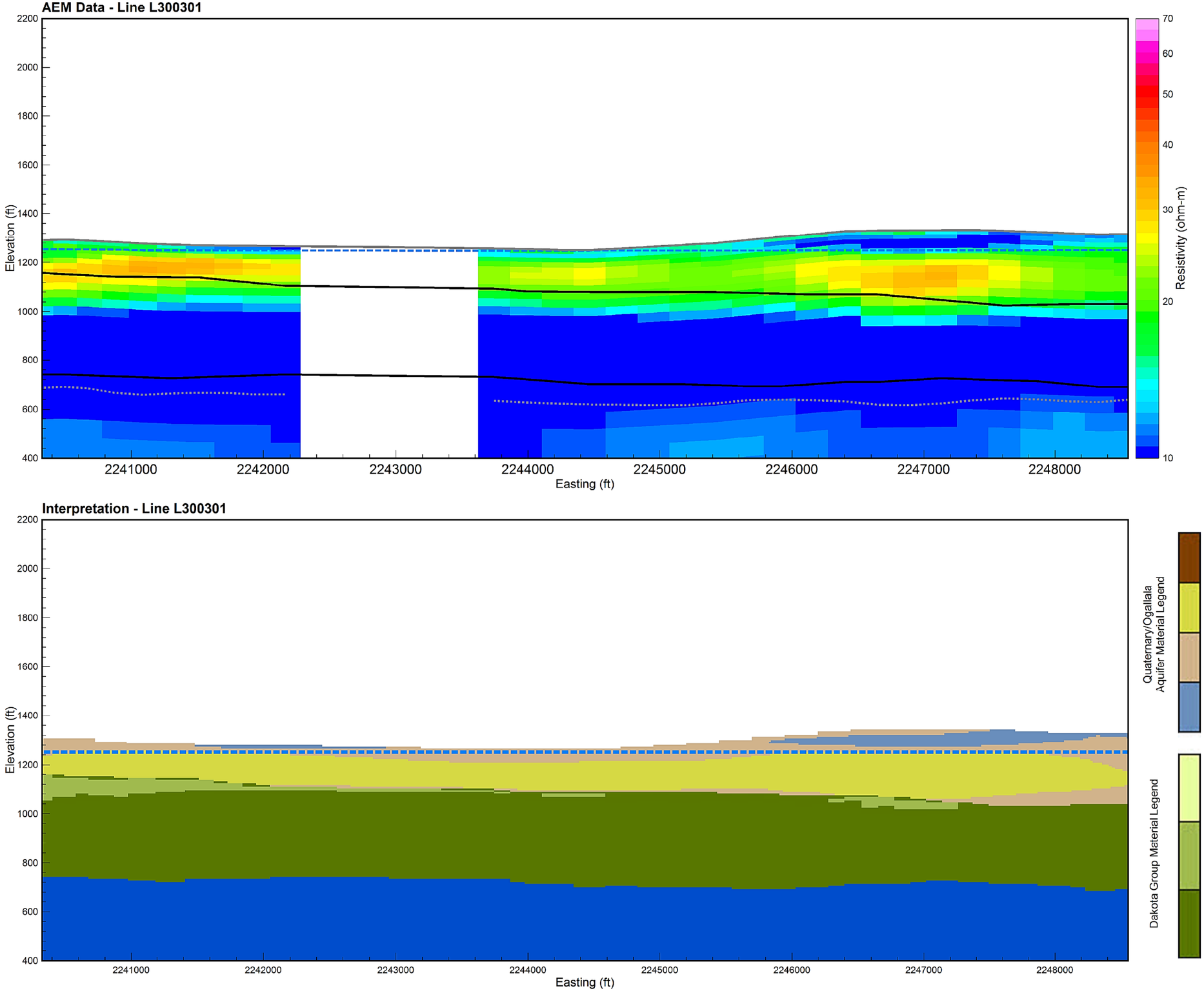
Eastern Nebraska Water Resources Assessment

Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L300201

EXRI



Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

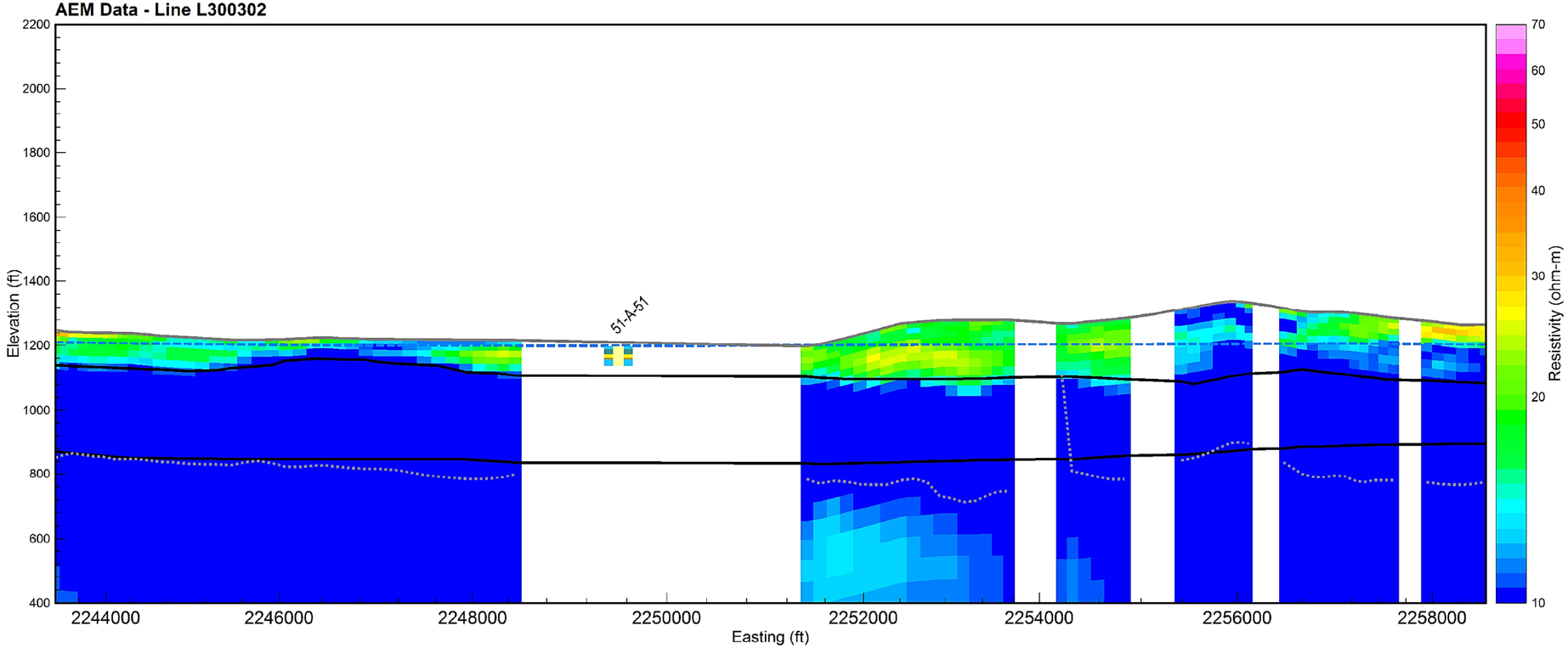
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L300301

EXRI

AEM Data - Line L300302



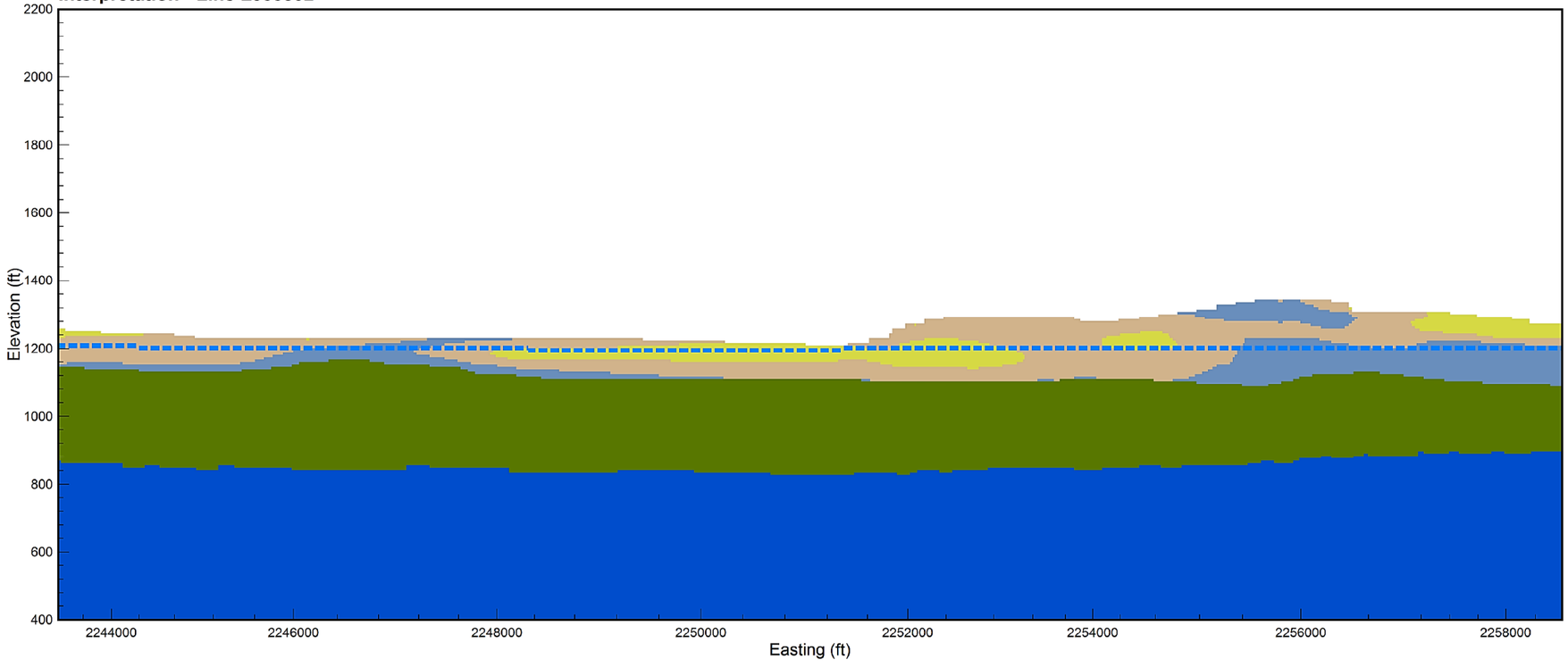
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L300302



Quaternary/Ogallala Aquifer Material Legend

- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

- Sandstone Dominant (>40 ohm-m)
- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

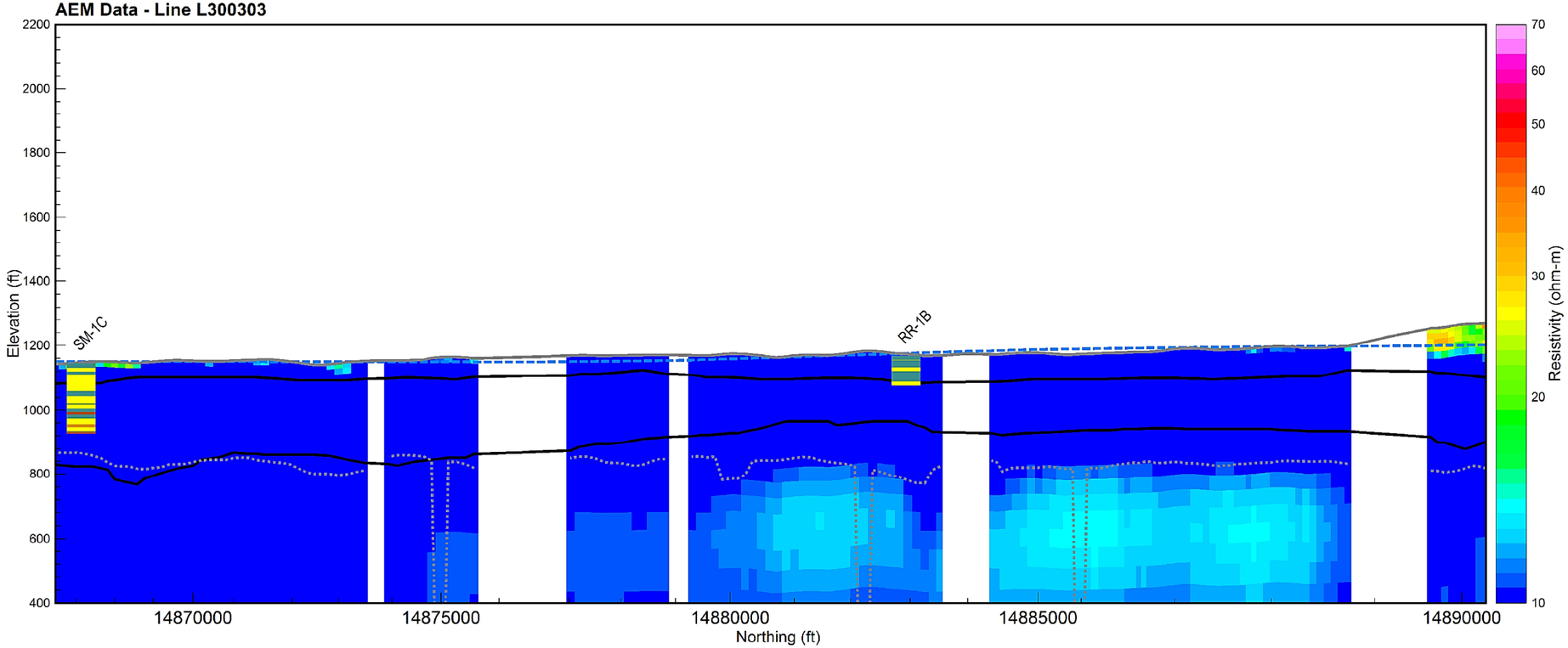
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L300302

EXRI

AEM Data - Line L300303



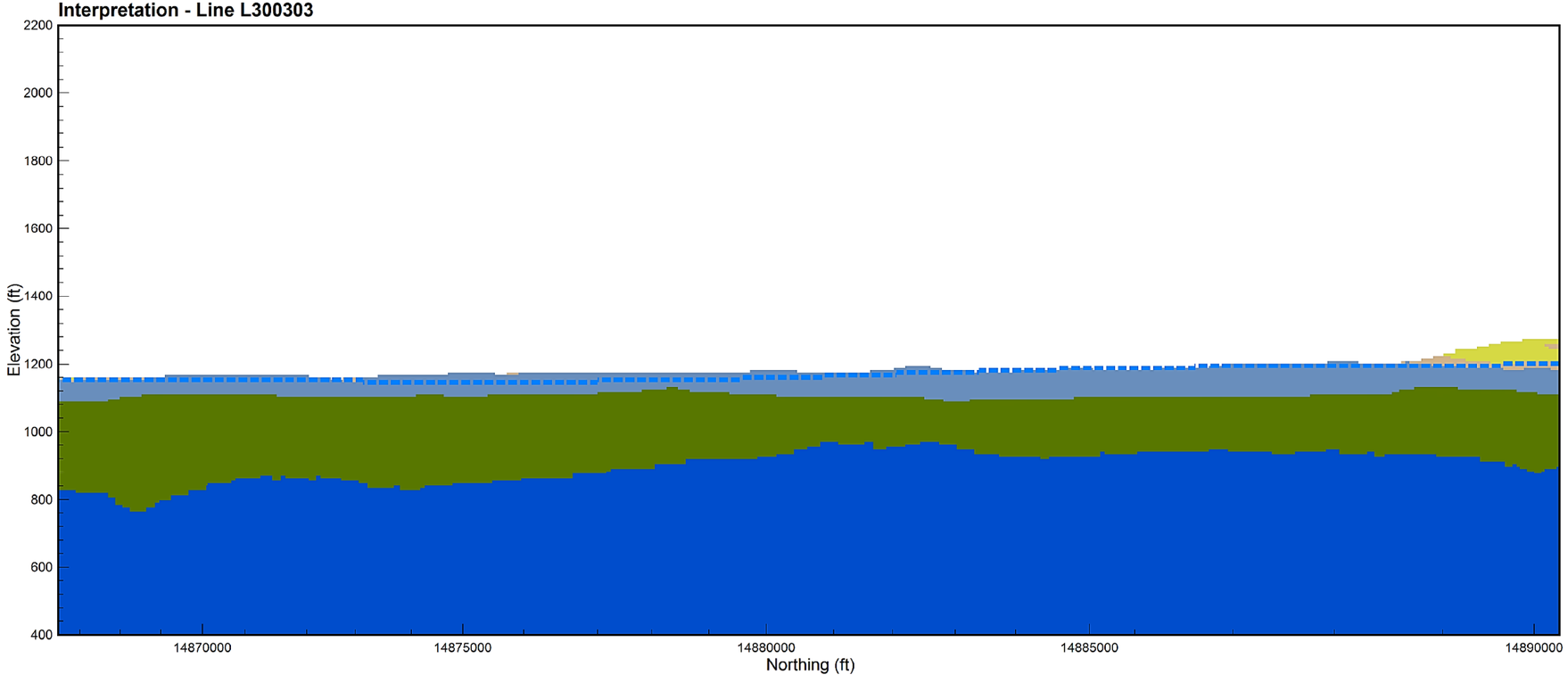
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- PI
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L300303



Quaternary/Ogallala Aquifer Material Legend

- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

- Sandstone Dominant (>40 ohm-m)
- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

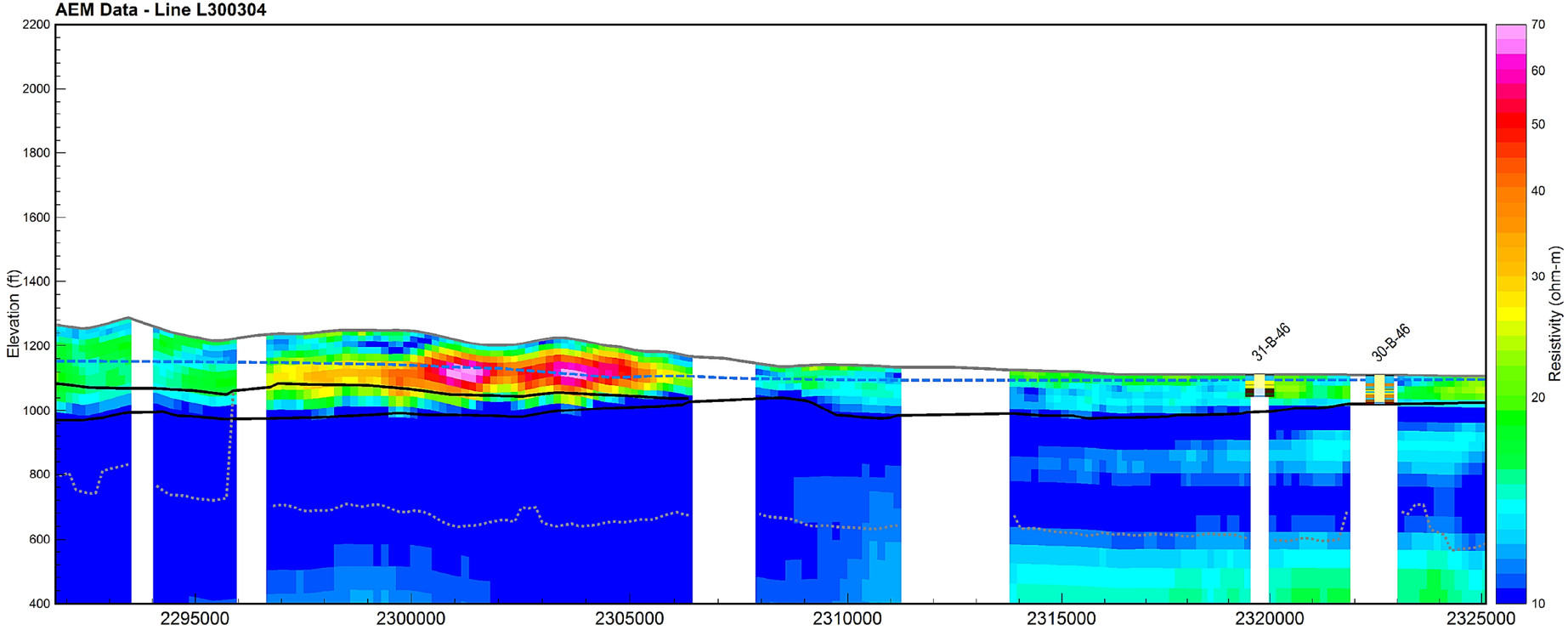
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L300303

EXRI

AEM Data - Line L300304



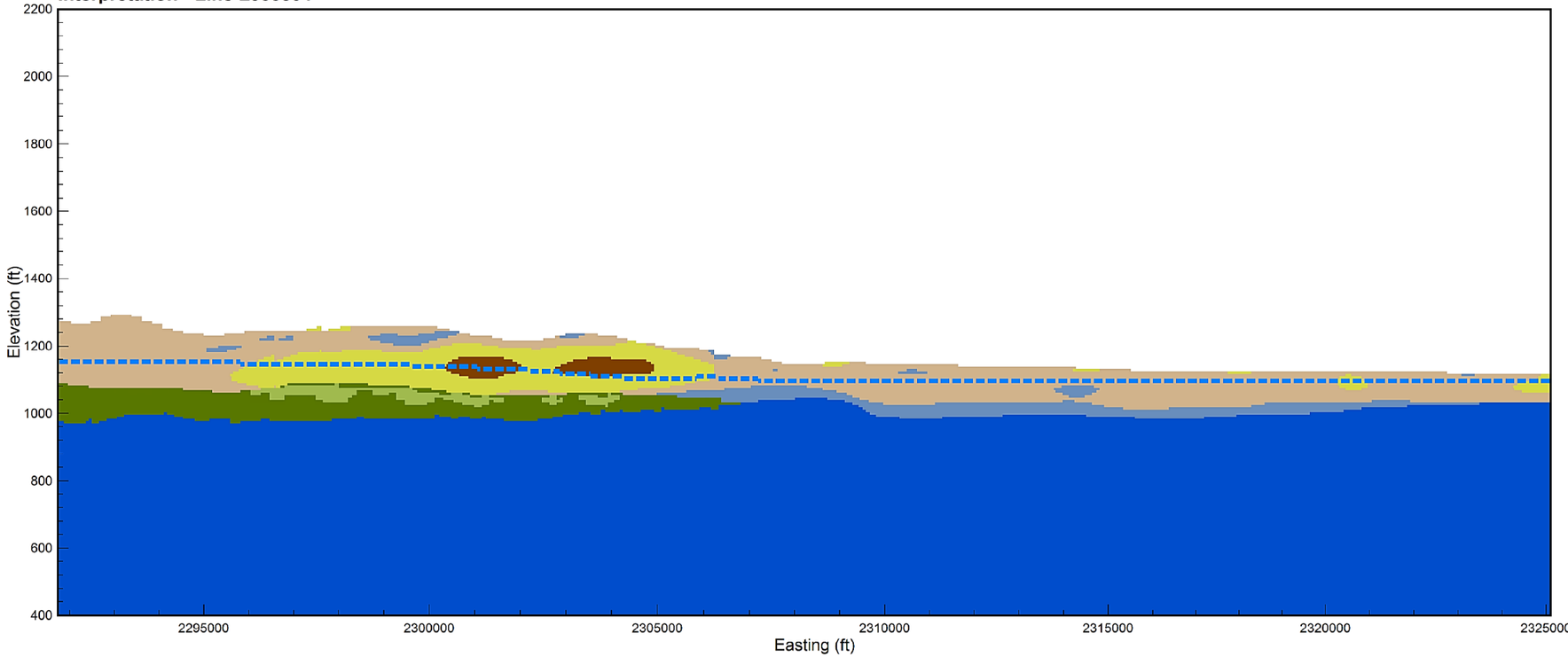
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
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- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
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- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L300304



Quaternary/Ogallala Aquifer Material Legend

- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

- Sandstone Dominant (>40 ohm-m)
- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

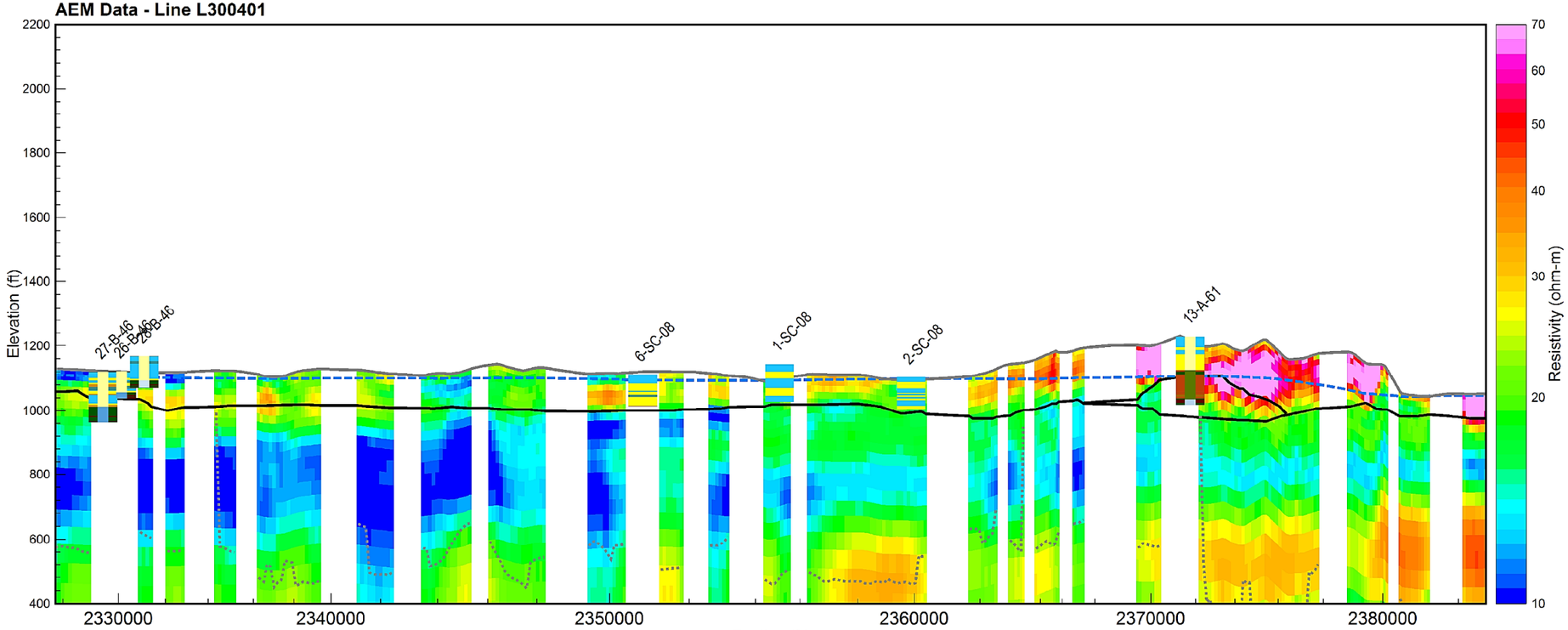
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

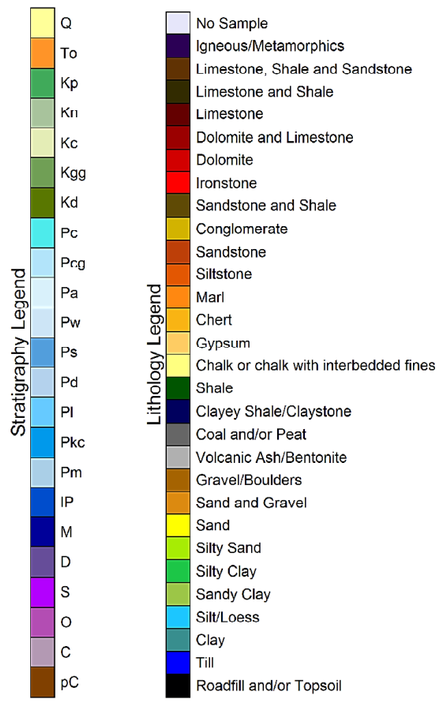
Southern ENWRA Project Area

Flight Line L300304

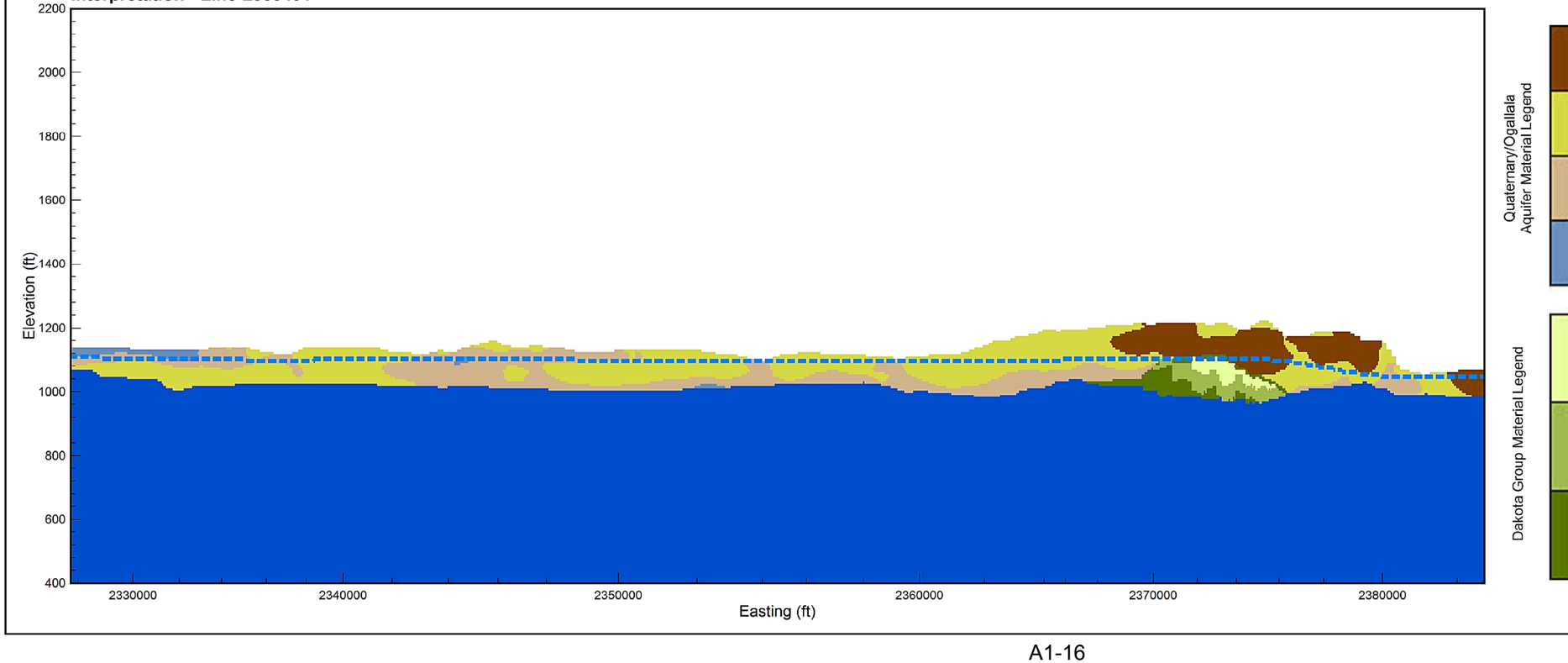
EXRI

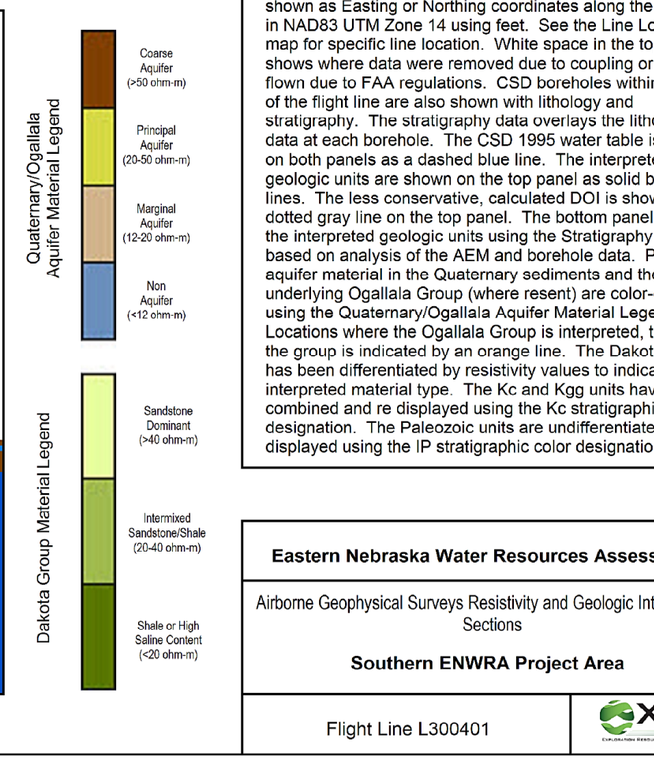
AEM Data - Line L300401





Interpretation - Line L300401





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Eastern Nebraska Water Resources Assessment

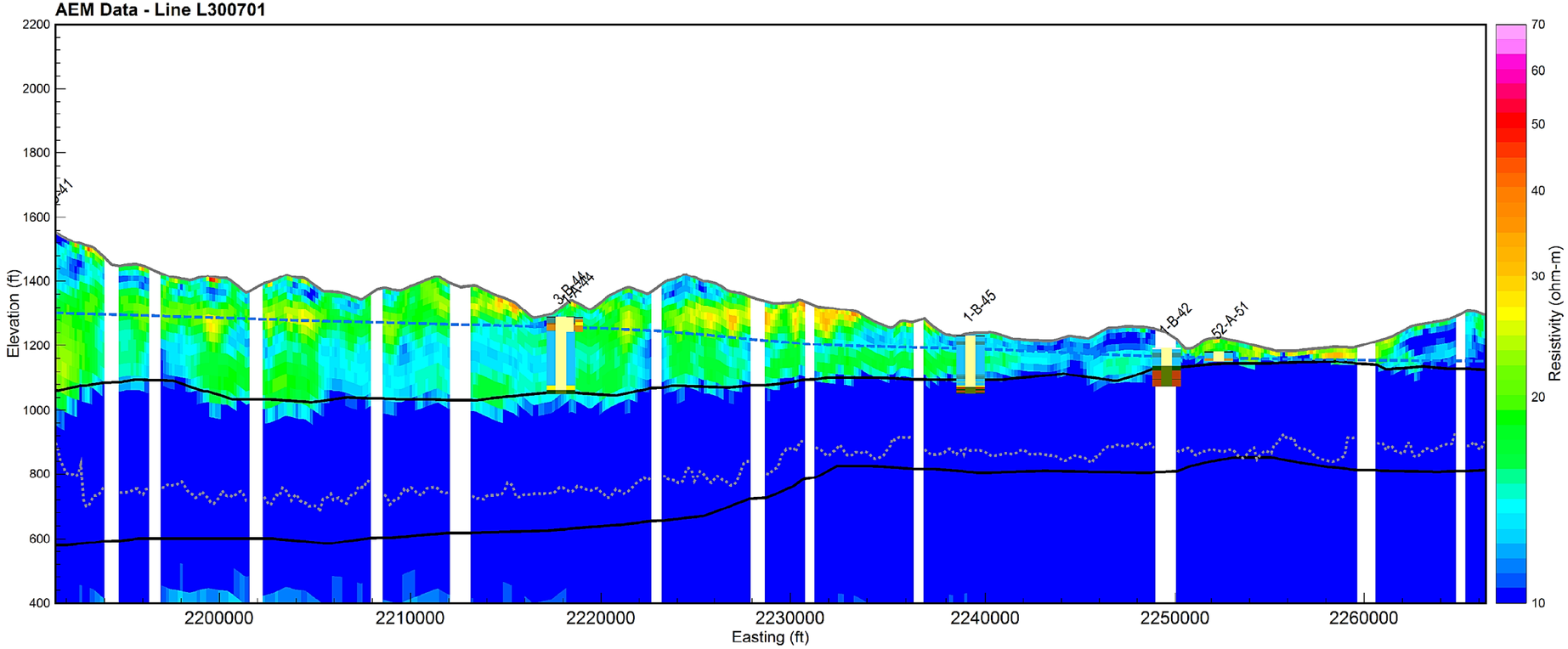
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

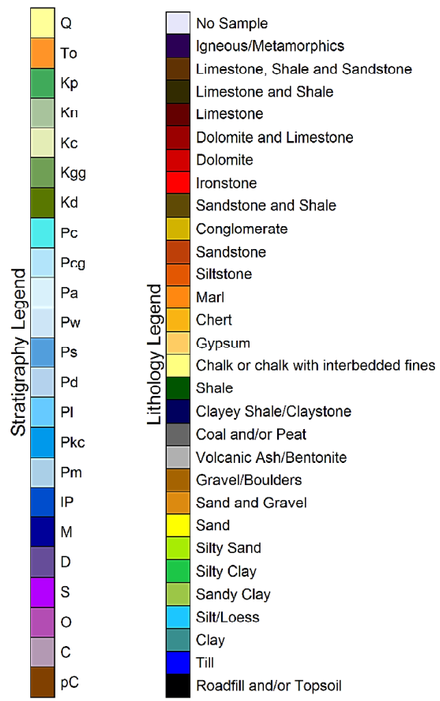
Southern ENWRA Project Area

Flight Line L300401

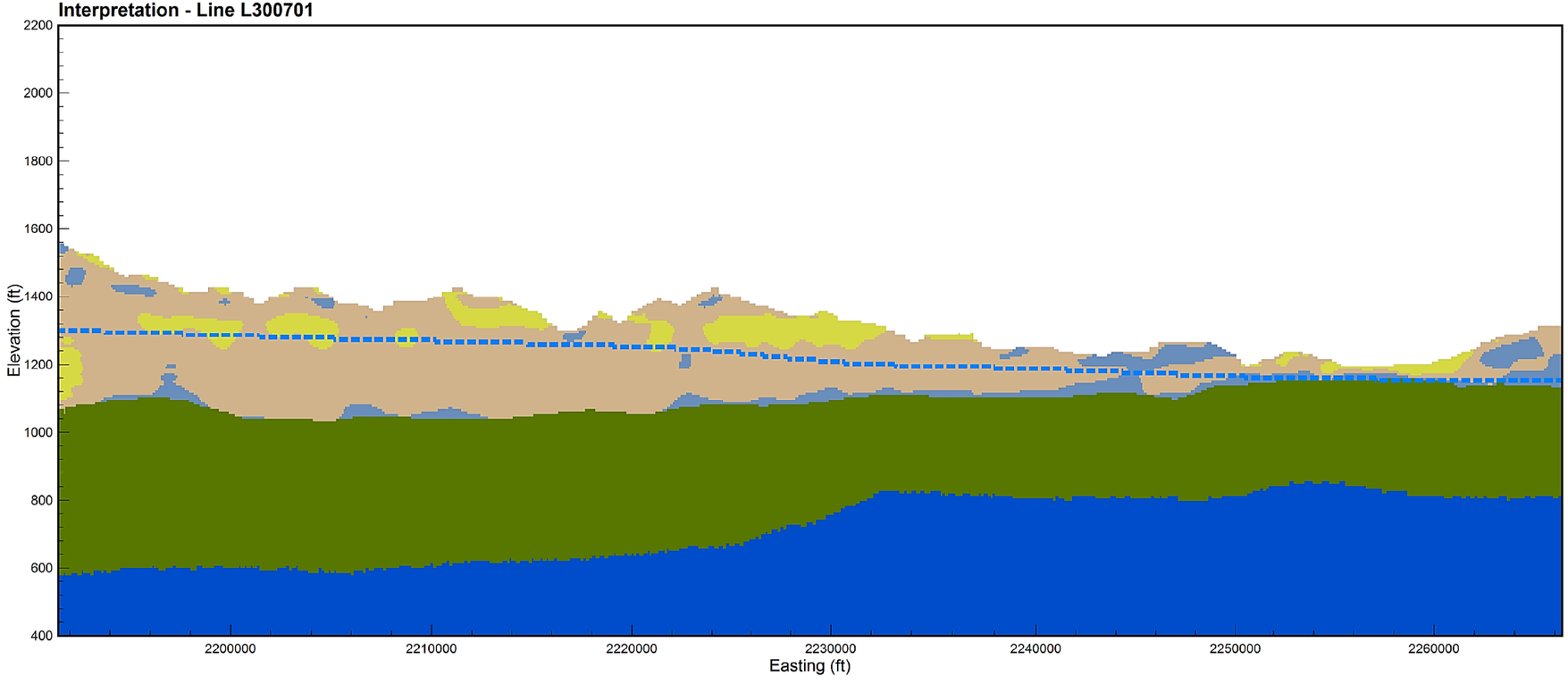
EXRI

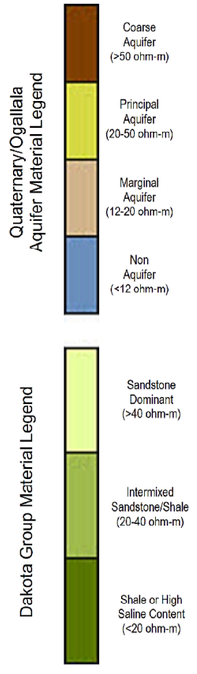
AEM Data - Line L300701





Interpretation - Line L300701





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Eastern Nebraska Water Resources Assessment

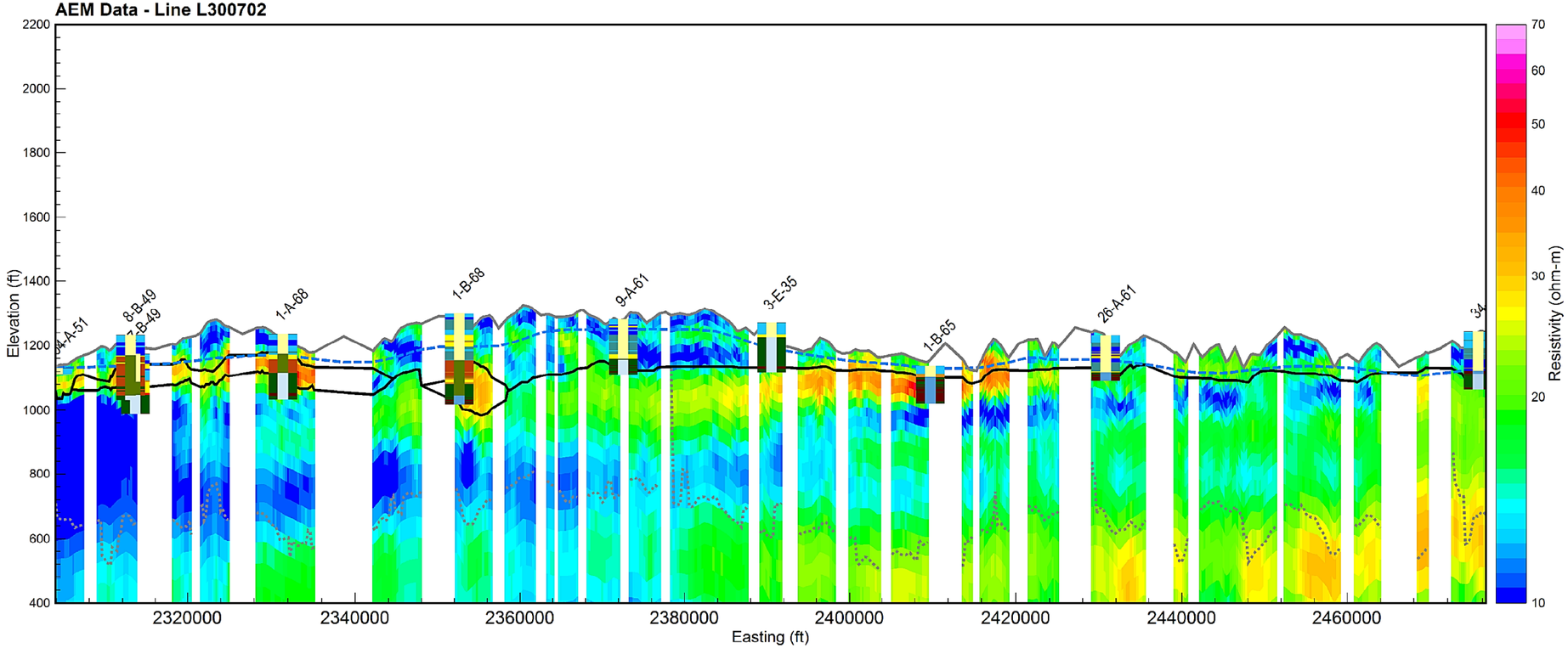
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

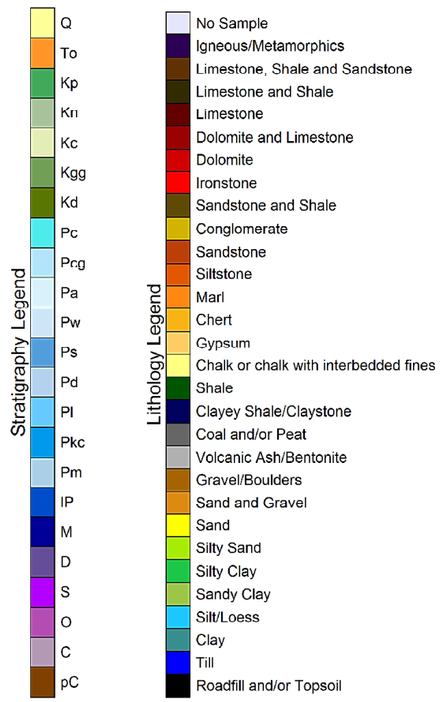
Southern ENWRA Project Area

Flight Line L300701

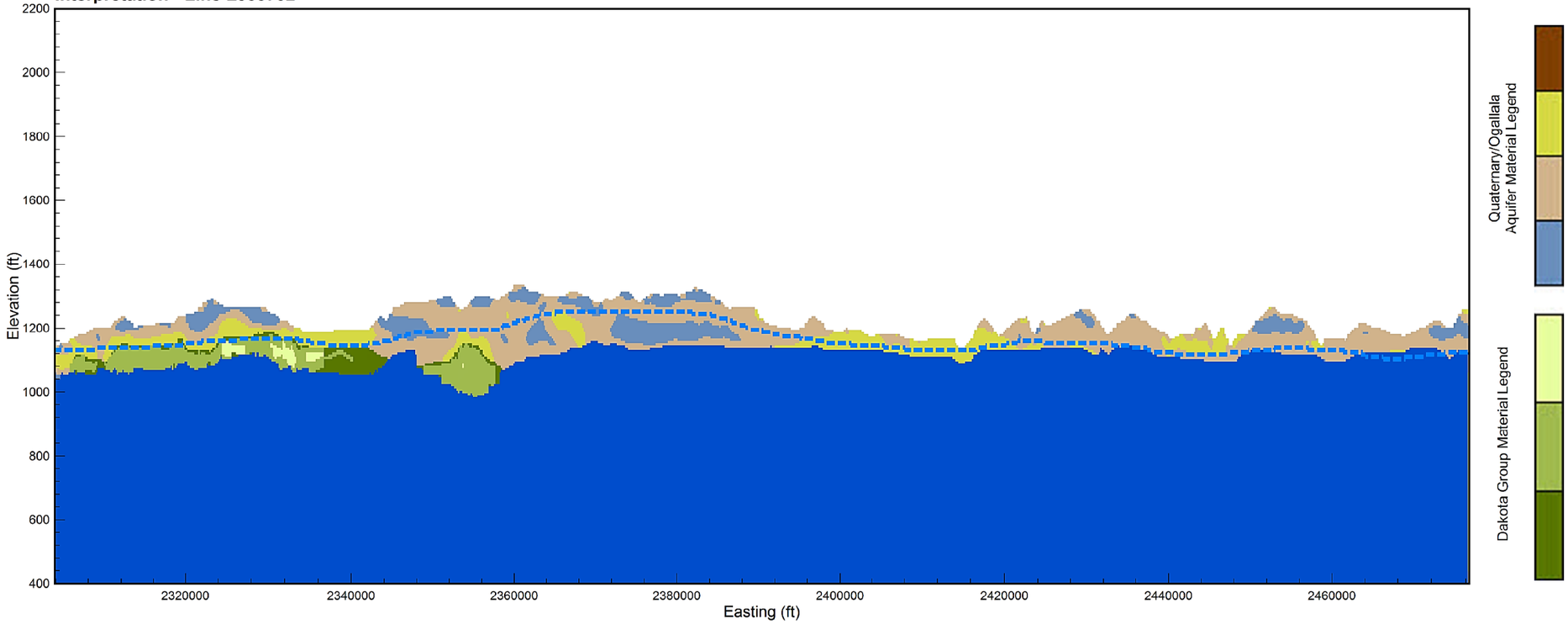
EXRI

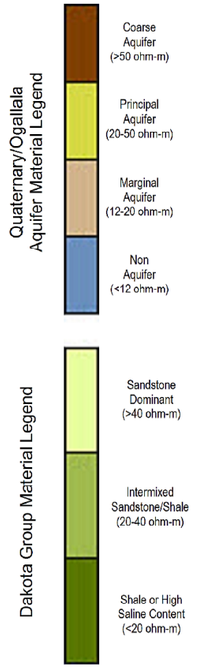
AEM Data - Line L300702





Interpretation - Line L300702





Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

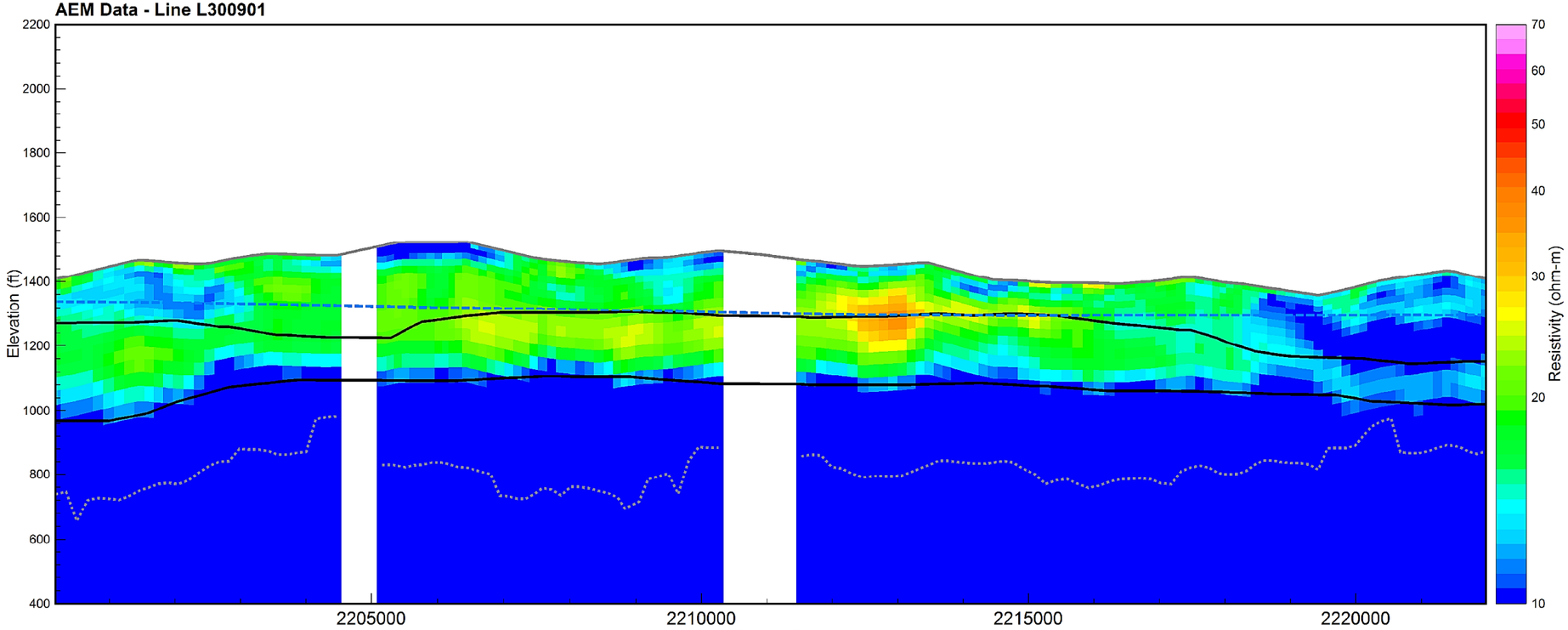
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L300702

EXRI

AEM Data - Line L300901



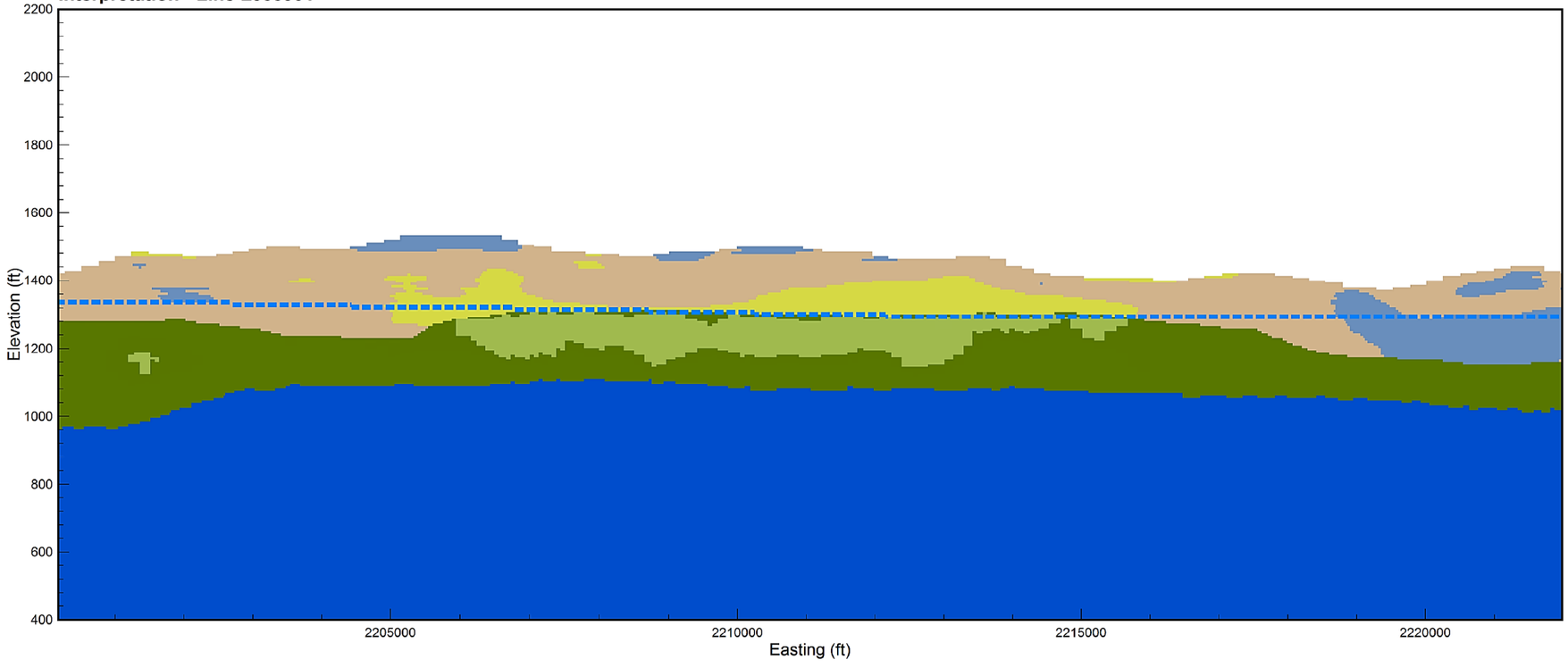
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L300901



Quaternary/Ogallala Aquifer Material Legend

- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

- Sandstone Dominant (>40 ohm-m)
- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

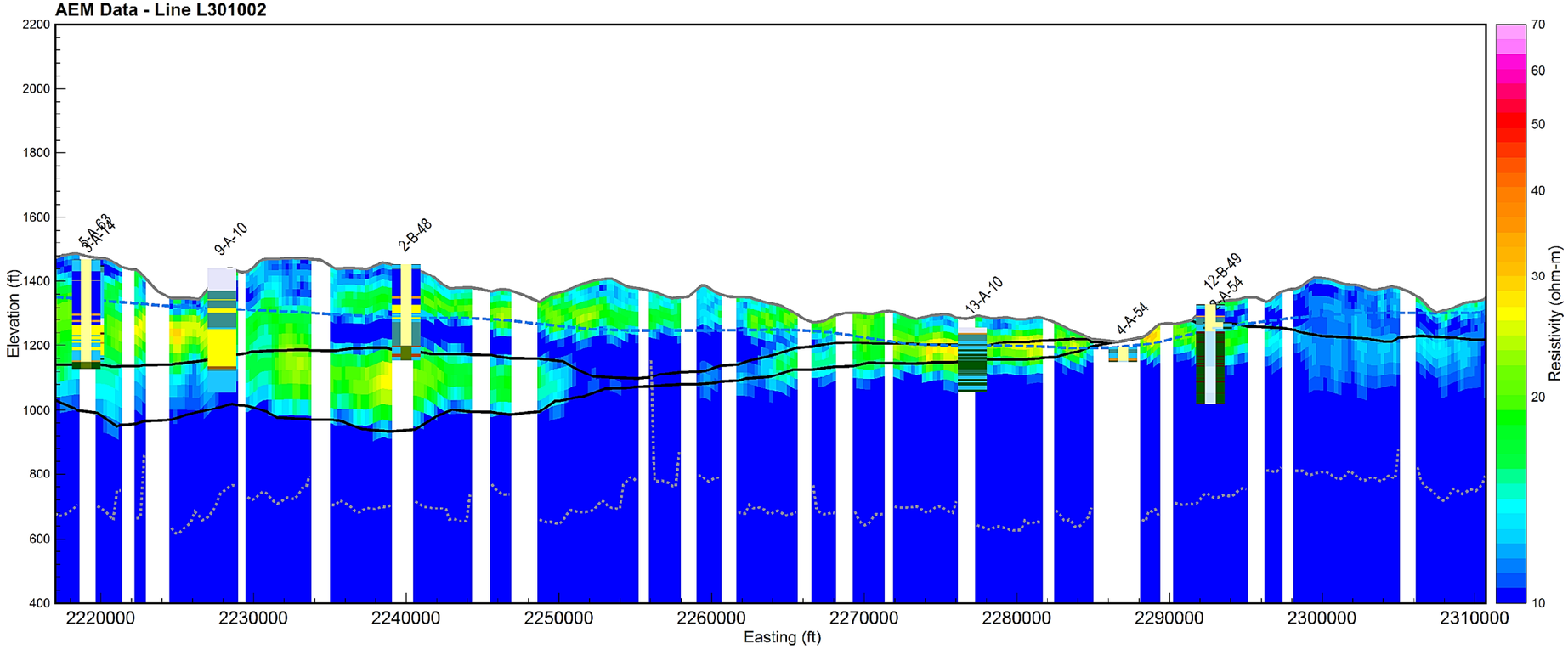
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

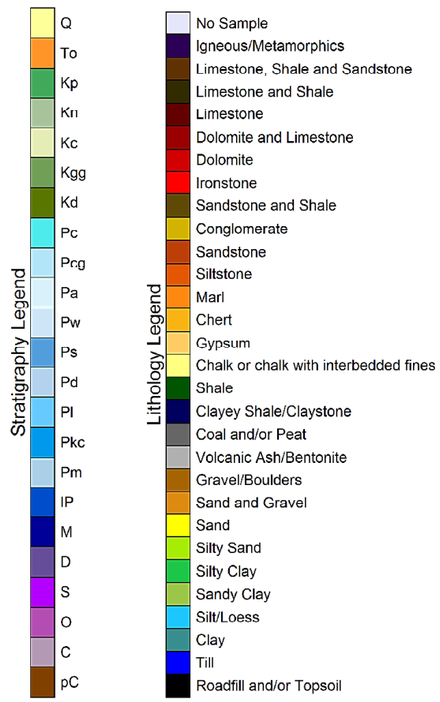
Southern ENWRA Project Area

Flight Line L300901

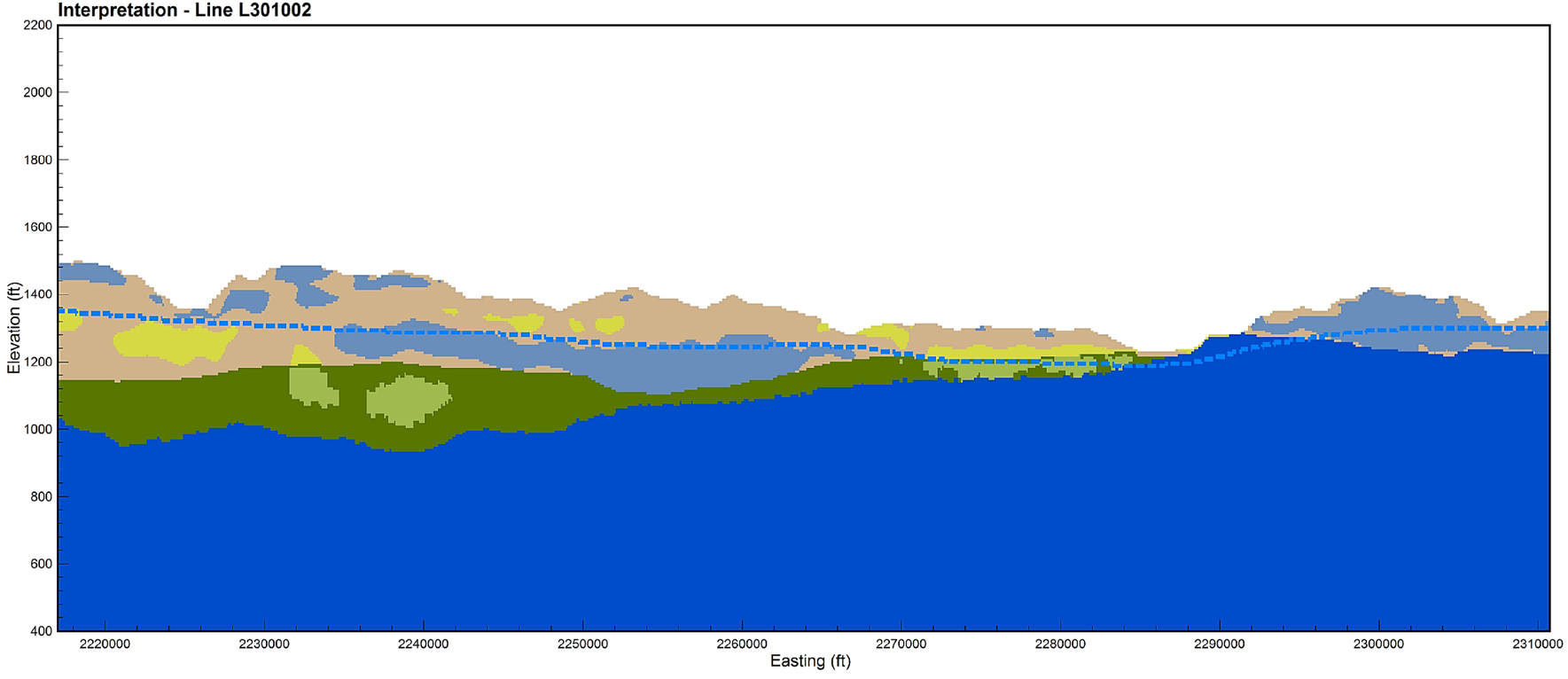
EXRI

AEM Data - Line L301002





Interpretation - Line L301002



Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

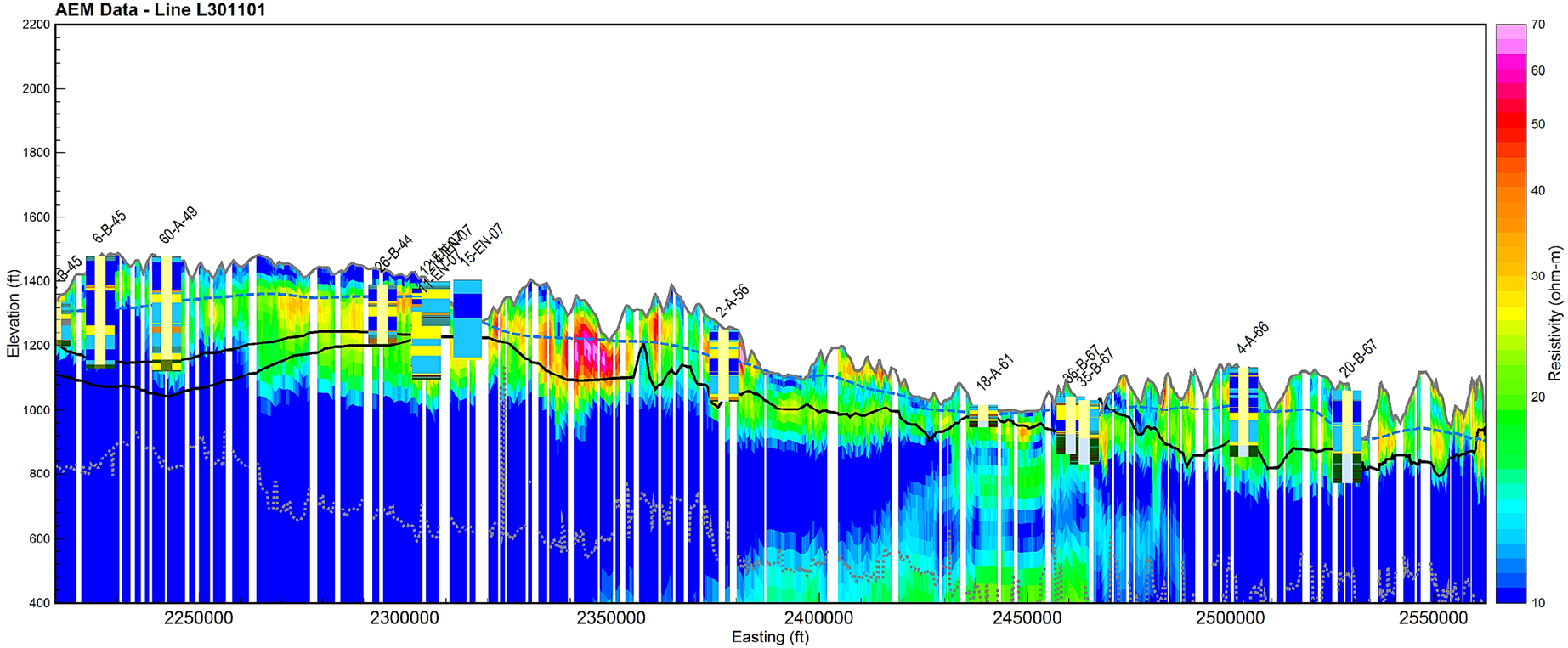
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

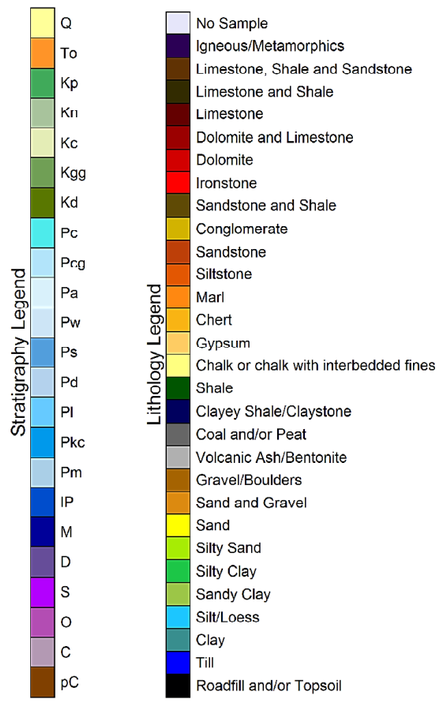
Southern ENWRA Project Area

Flight Line L301002

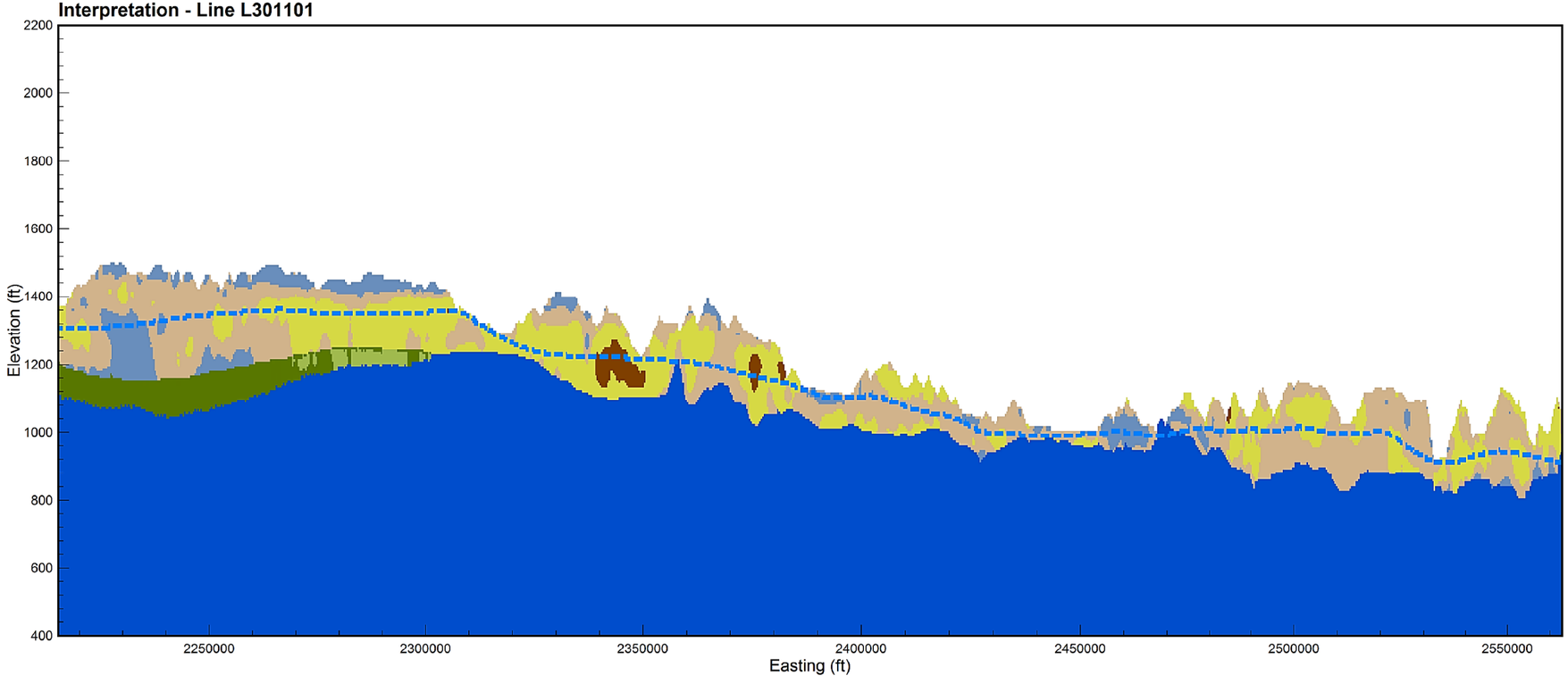
EXRI

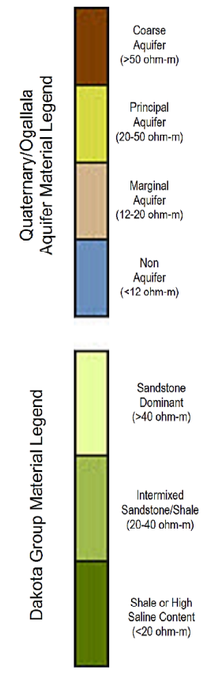
AEM Data - Line L301101





Interpretation - Line L301101





Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

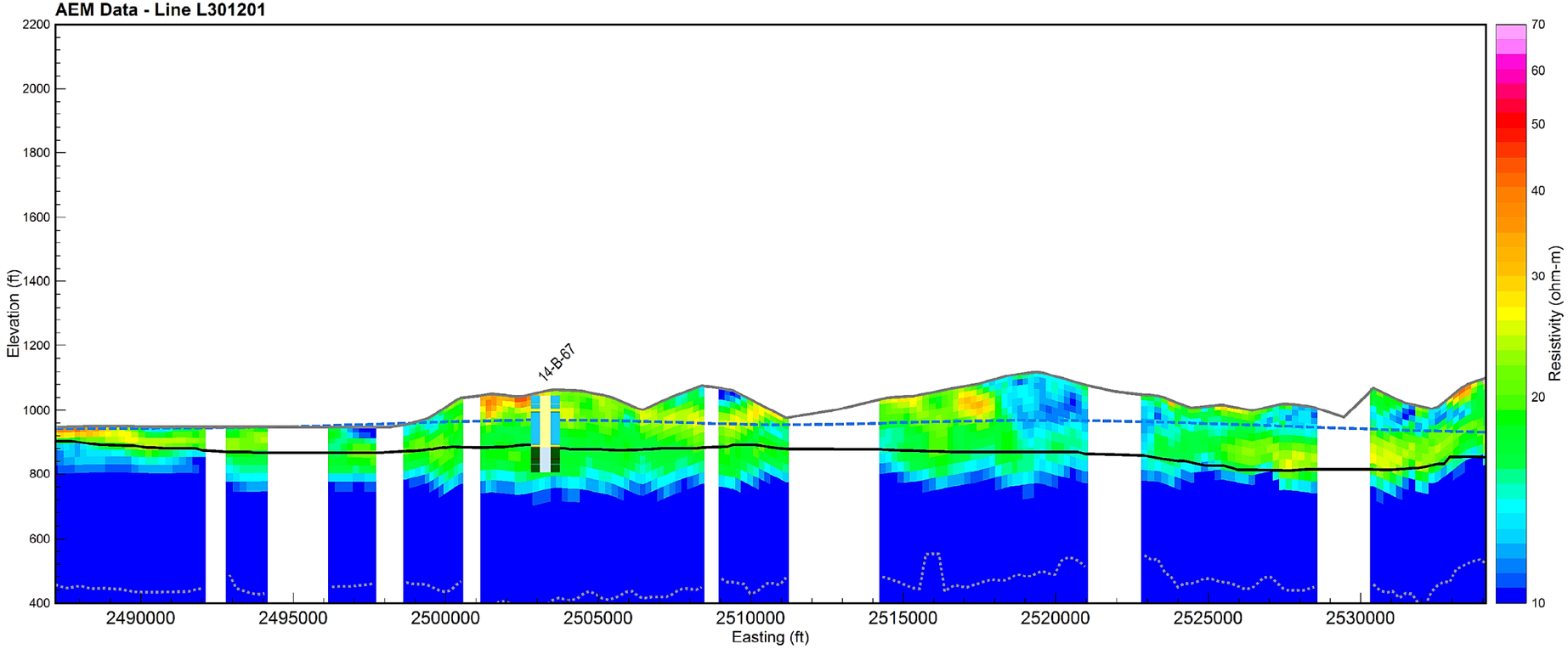
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

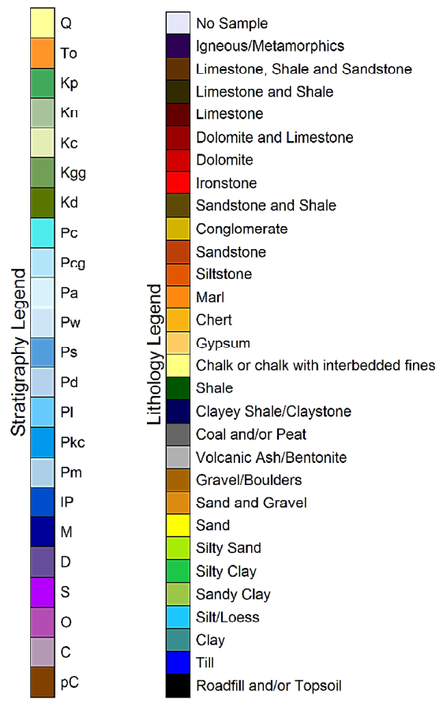
Southern ENWRA Project Area

Flight Line L301101

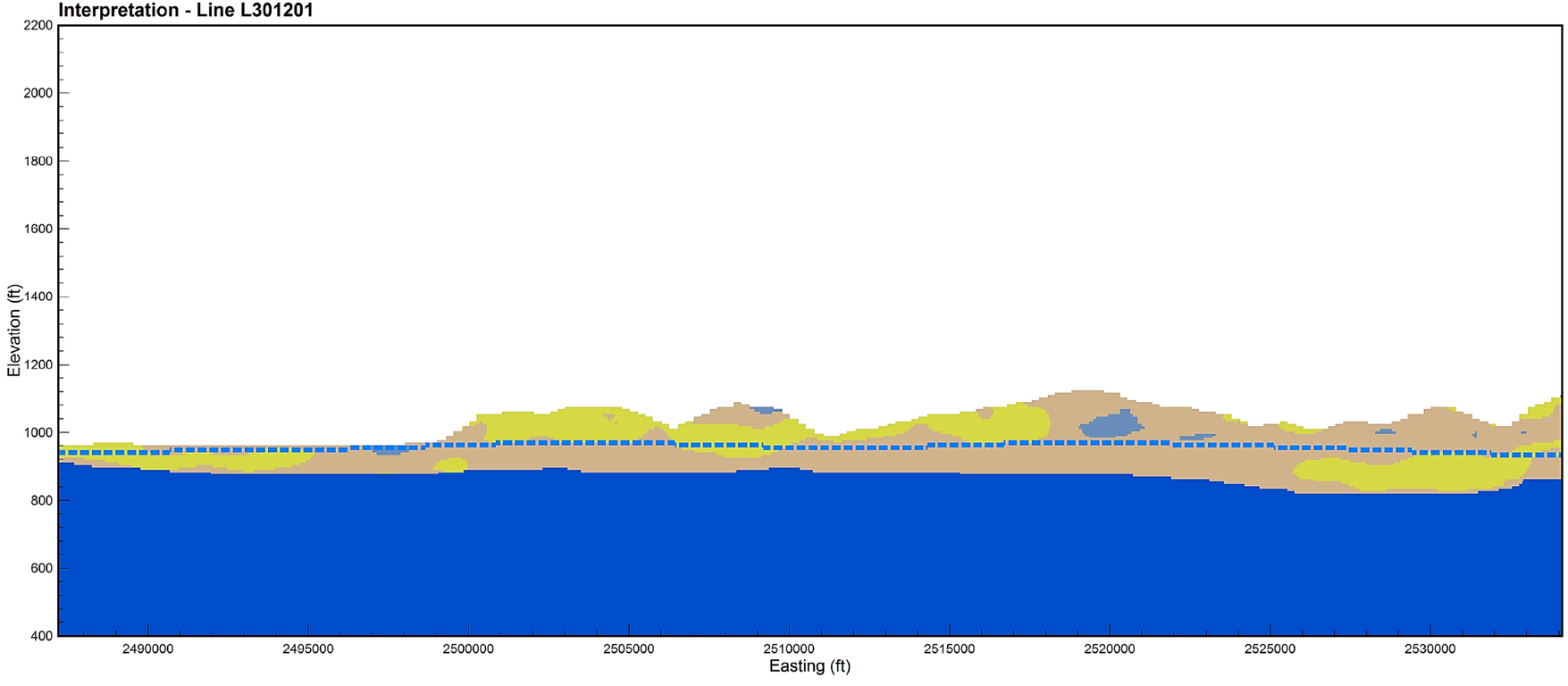
EXRI

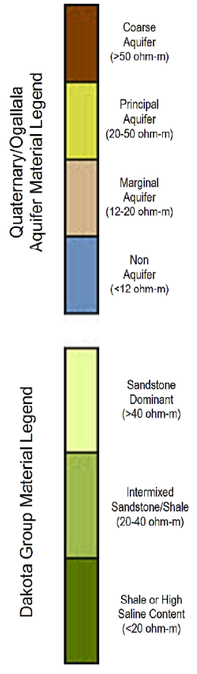
AEM Data - Line L301201





Interpretation - Line L301201





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Eastern Nebraska Water Resources Assessment

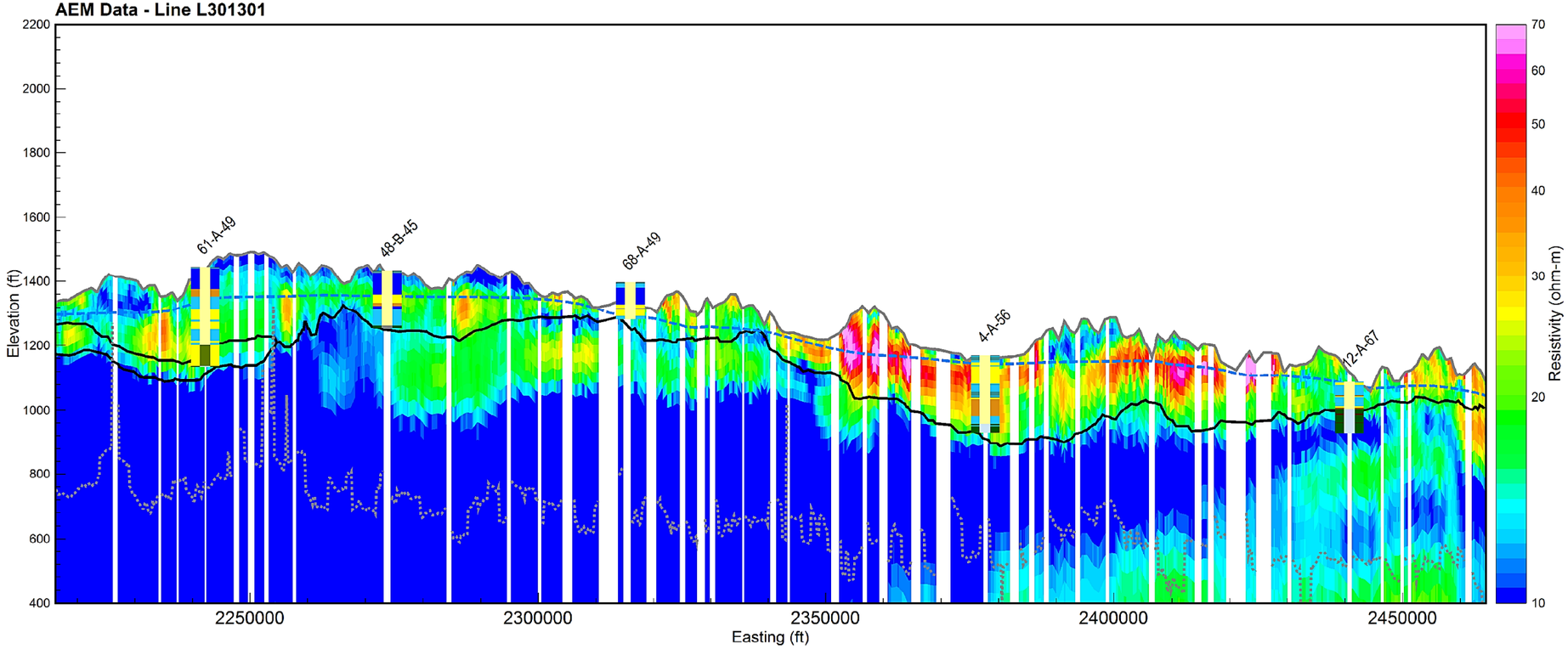
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

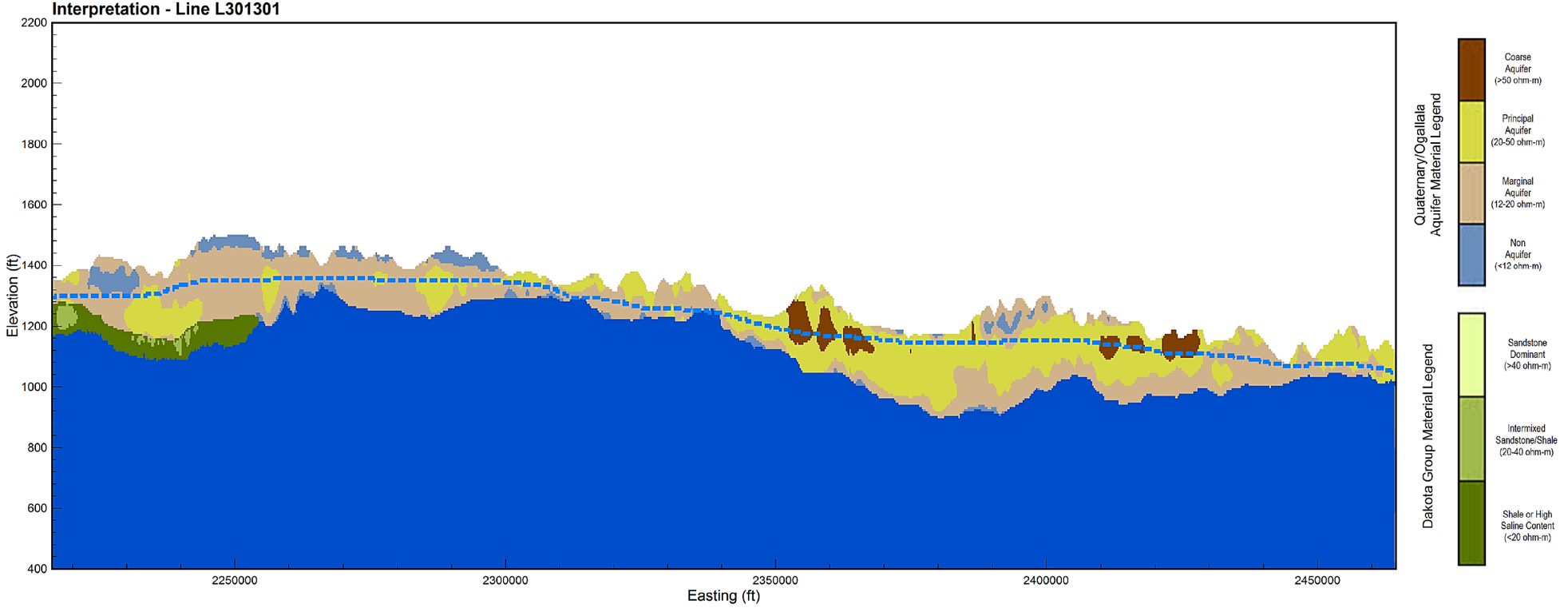
Flight Line L301201

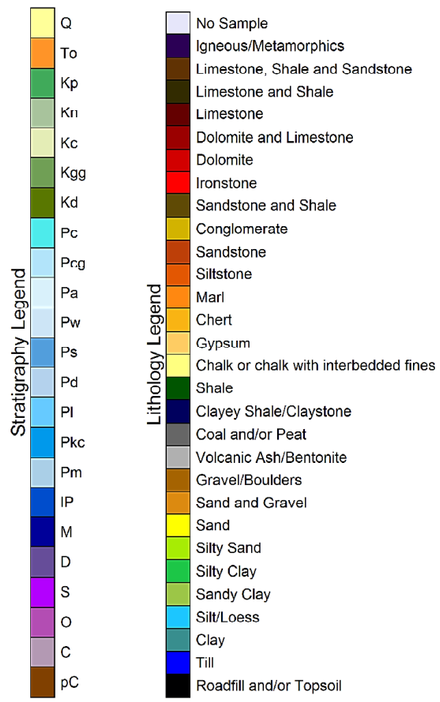
EXRI

AEM Data - Line L301301



Interpretation - Line L301301





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Eastern Nebraska Water Resources Assessment

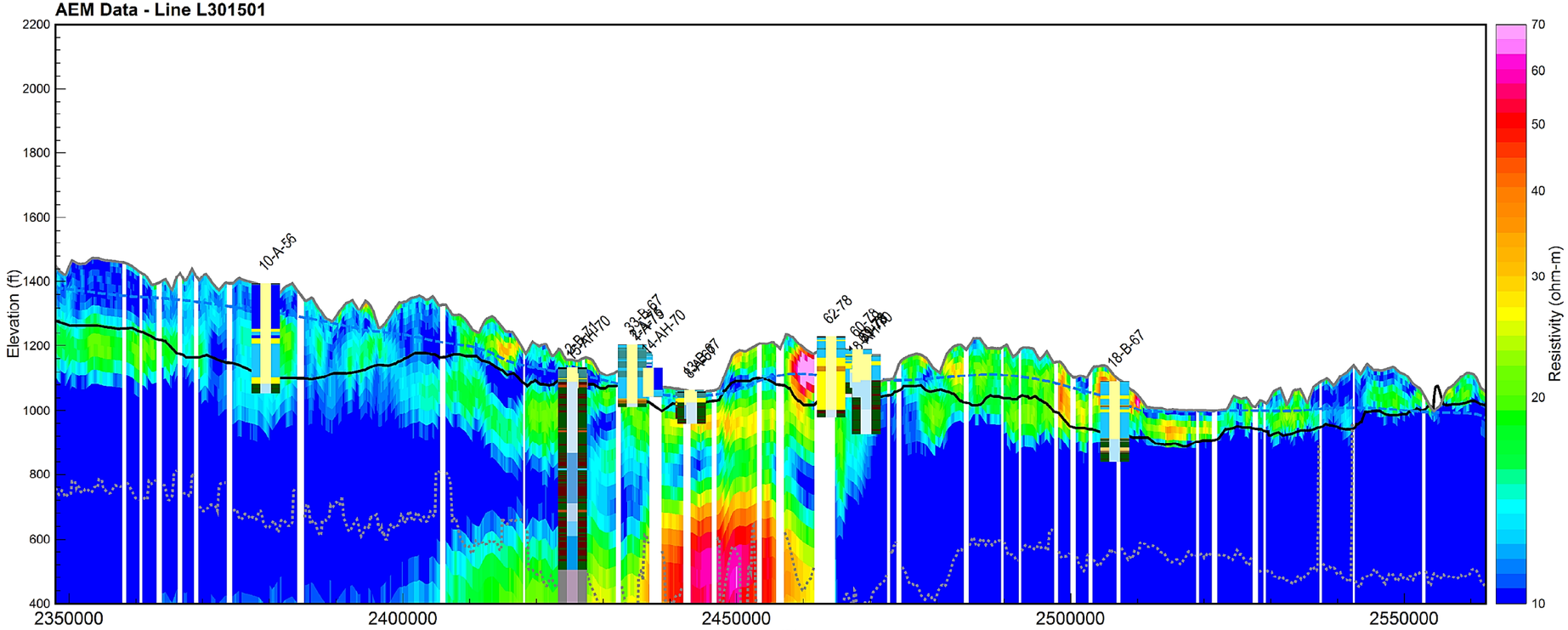
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

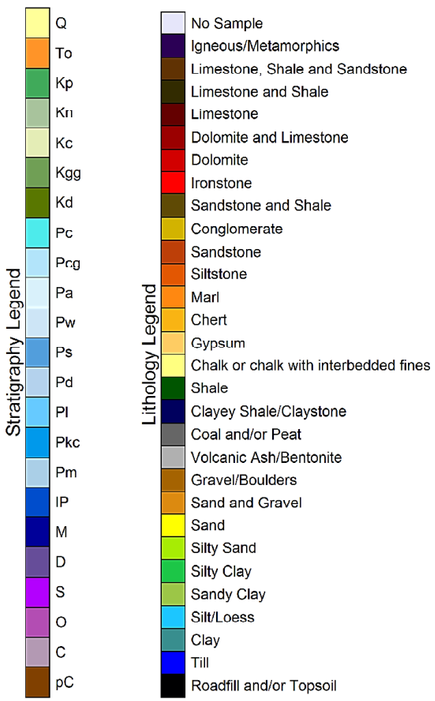
Southern ENWRA Project Area

Flight Line L301301

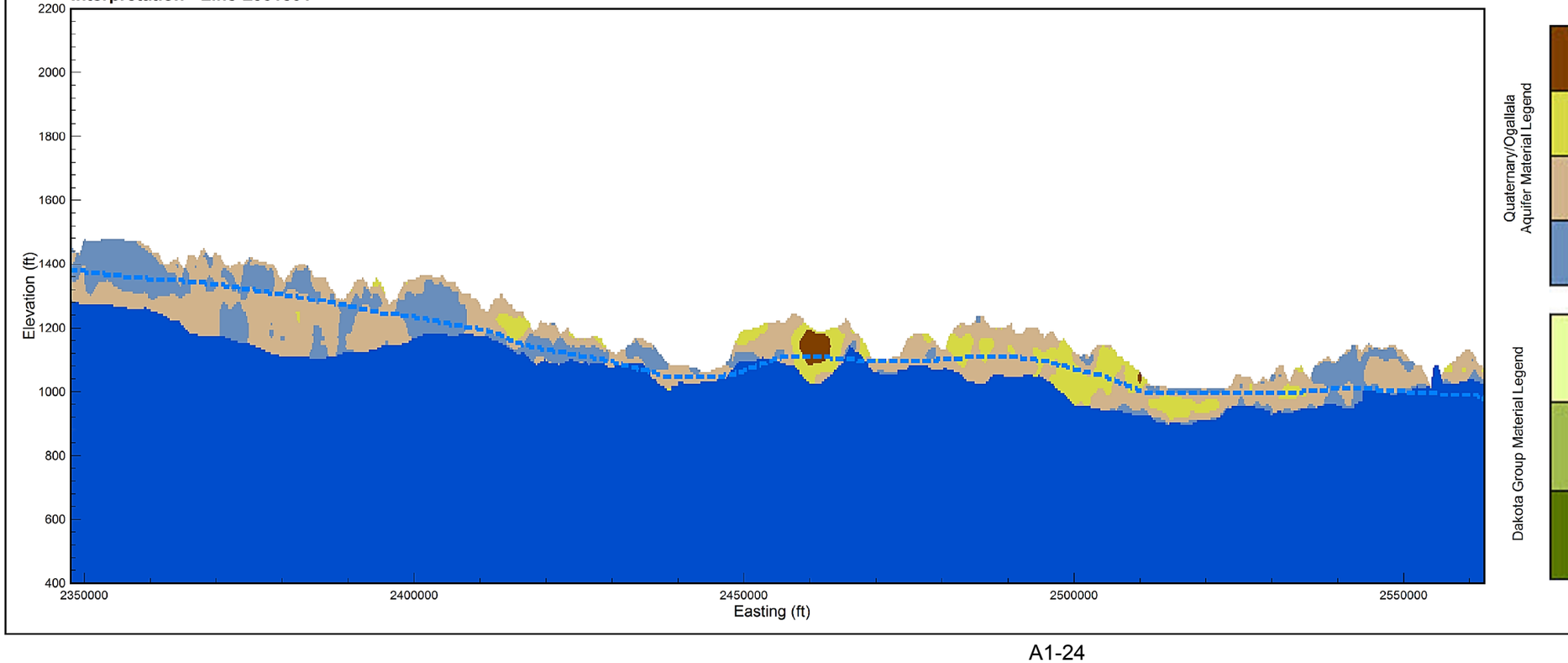
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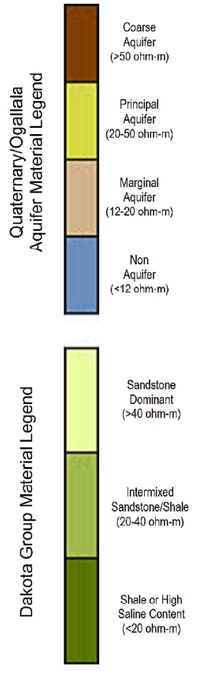
AEM Data - Line L301501





Interpretation - Line L301501





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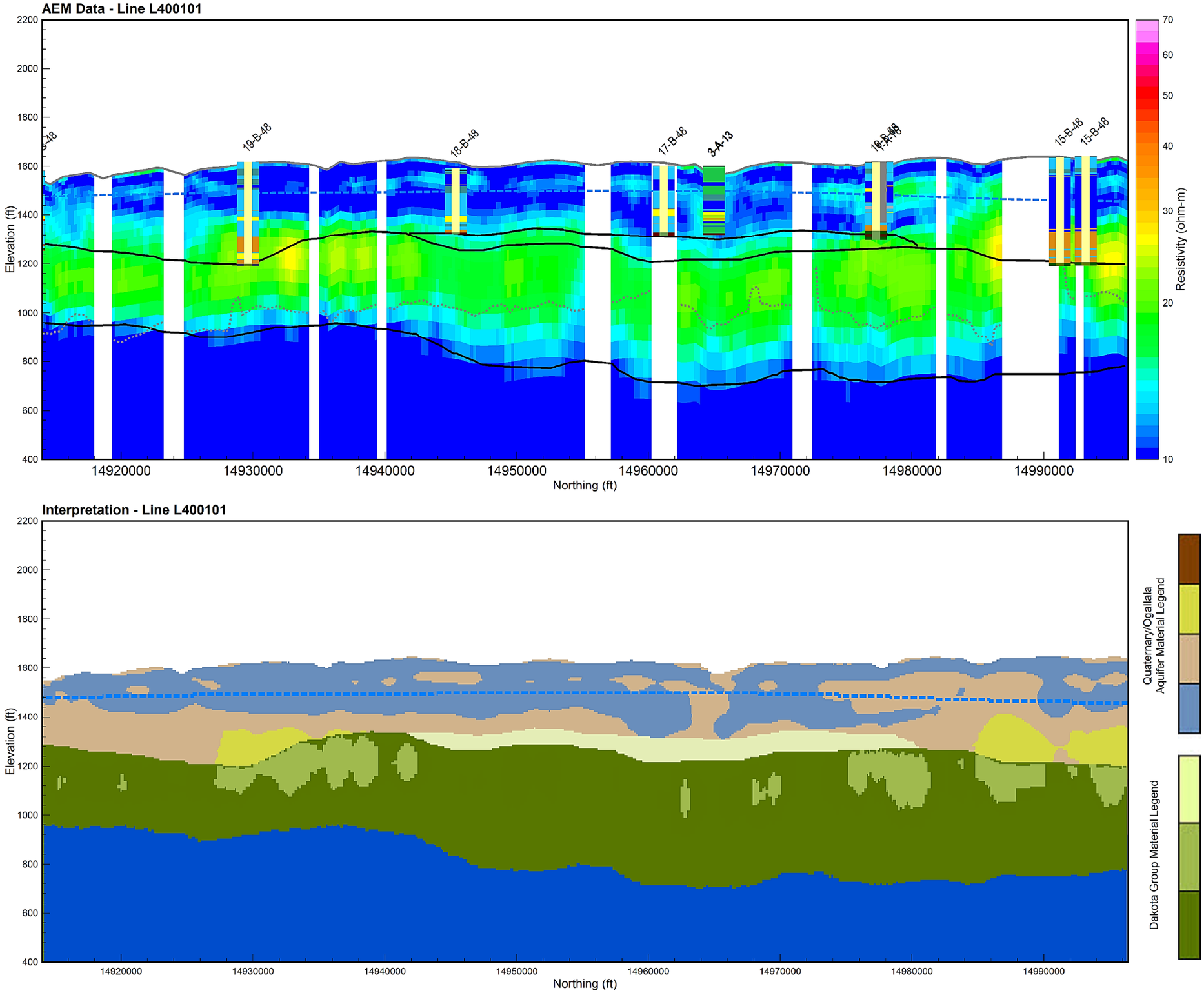
Eastern Nebraska Water Resources Assessment

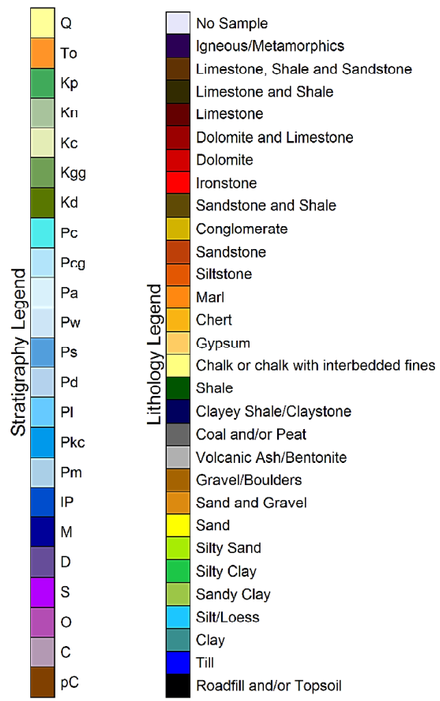
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

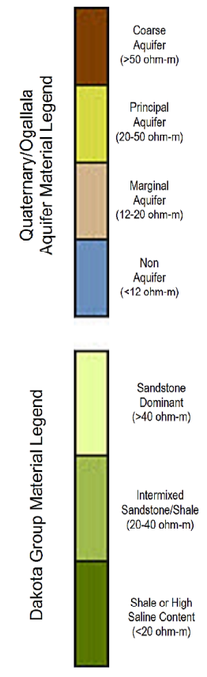
Southern ENWRA Project Area

Flight Line L301501

EXRI







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Eastern Nebraska Water Resources Assessment

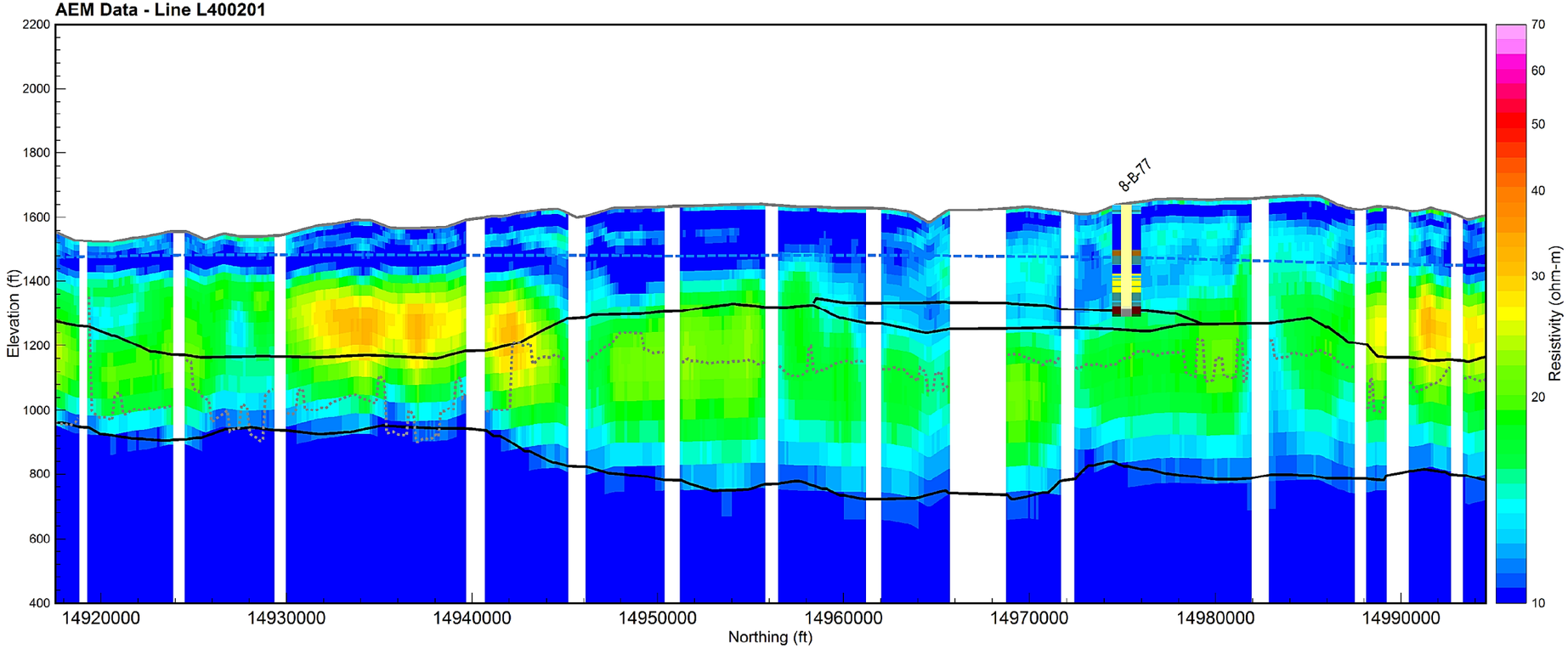
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L400101

EXRI

AEM Data - Line L400201



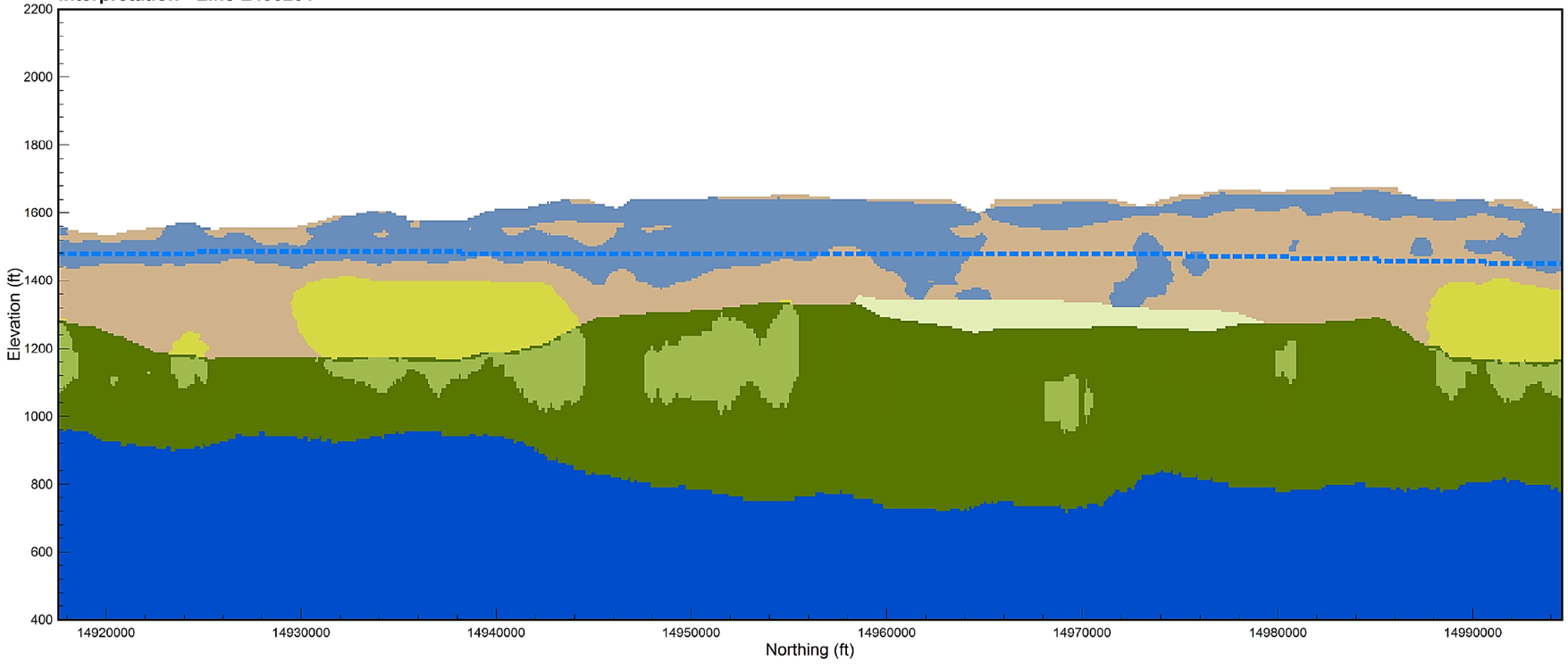
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L400201



Quaternary/Ogallala Aquifer Material Legend

- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

- Sandstone Dominant (>40 ohm-m)
- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

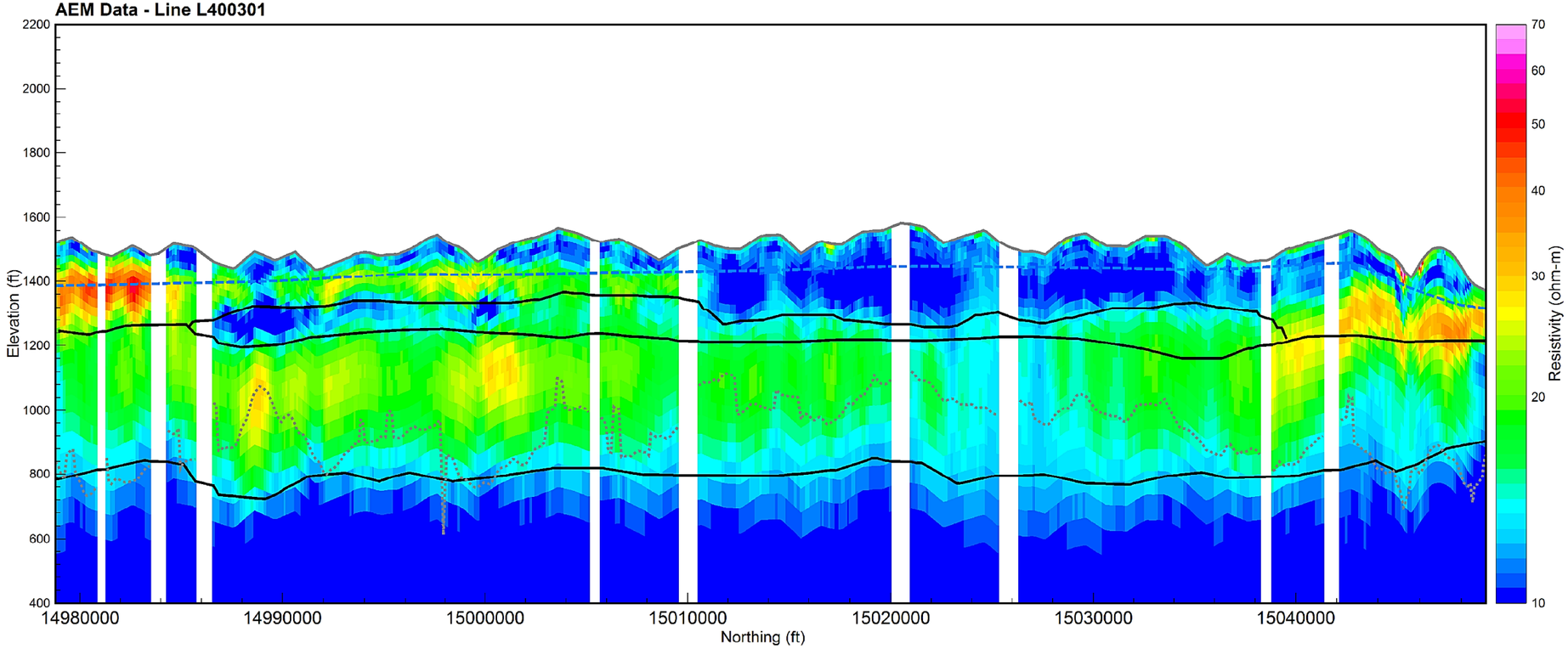
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L400201

EXRI

AEM Data - Line L400301



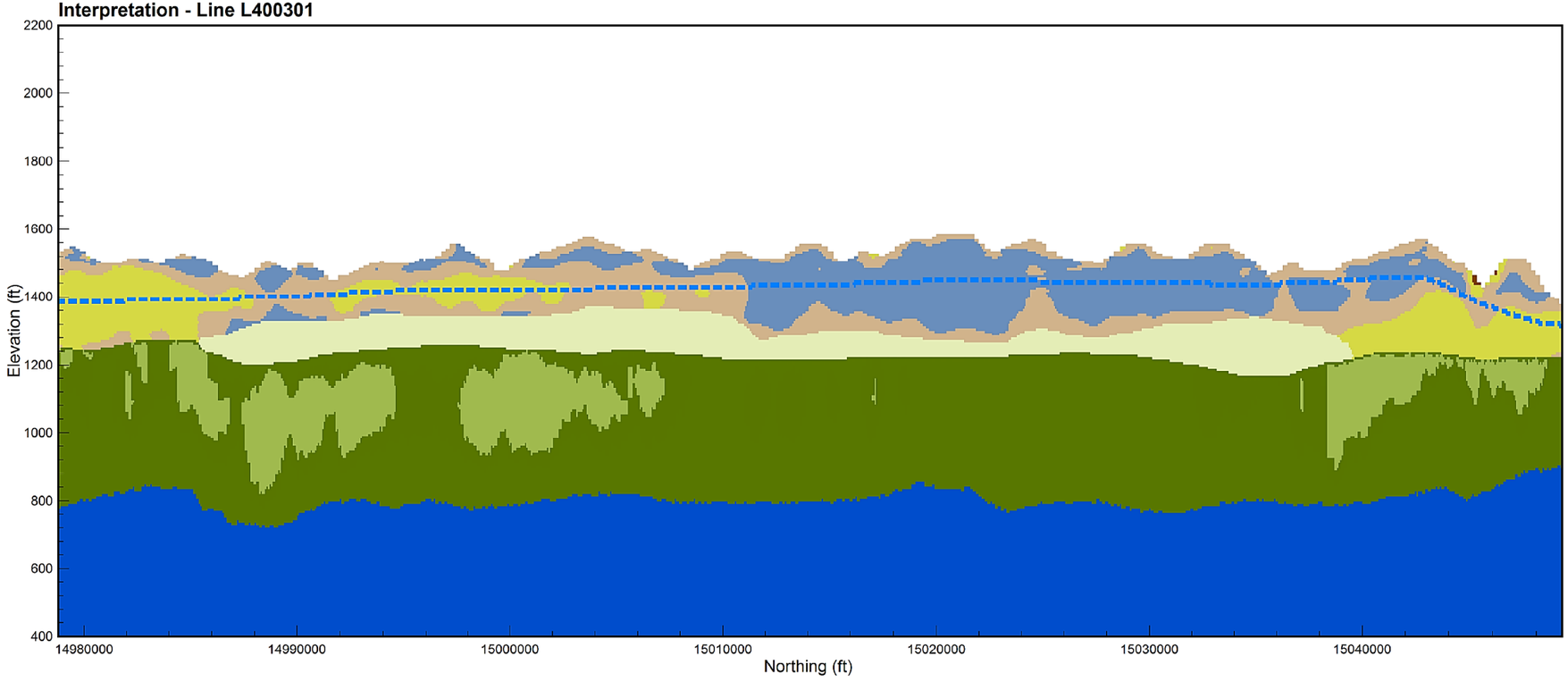
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
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- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L400301



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- Coarse Aquifer (>50 ohm-m)
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Eastern Nebraska Water Resources Assessment

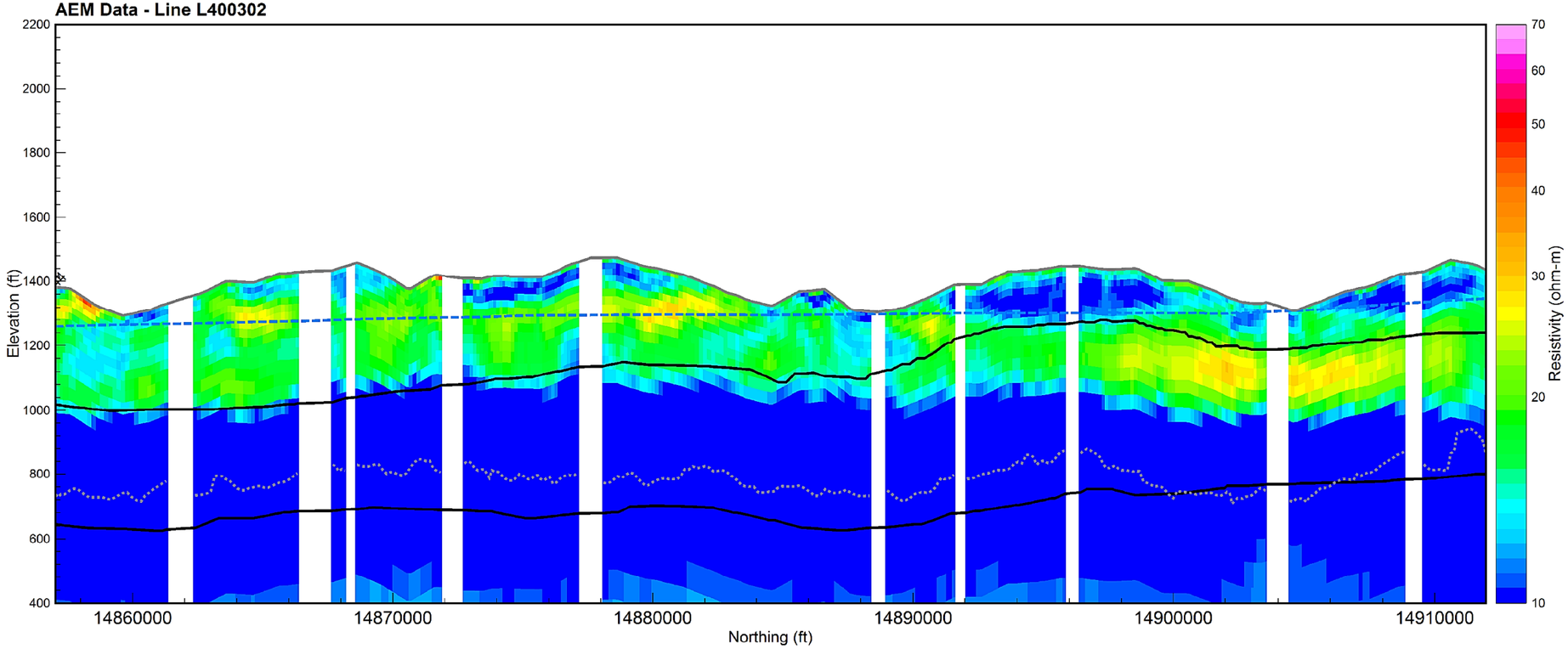
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

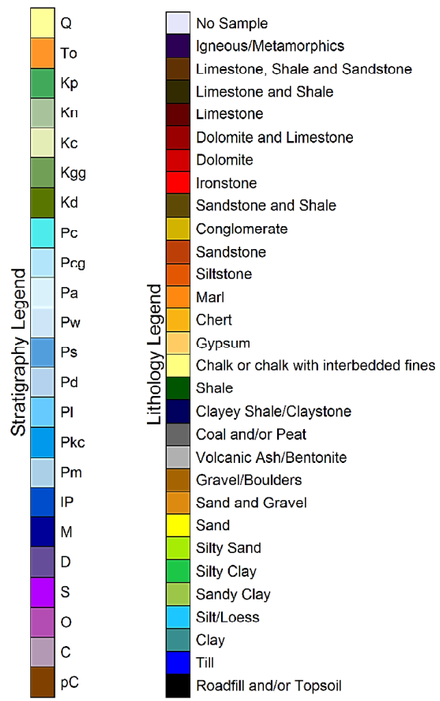
Southern ENWRA Project Area

Flight Line L400301

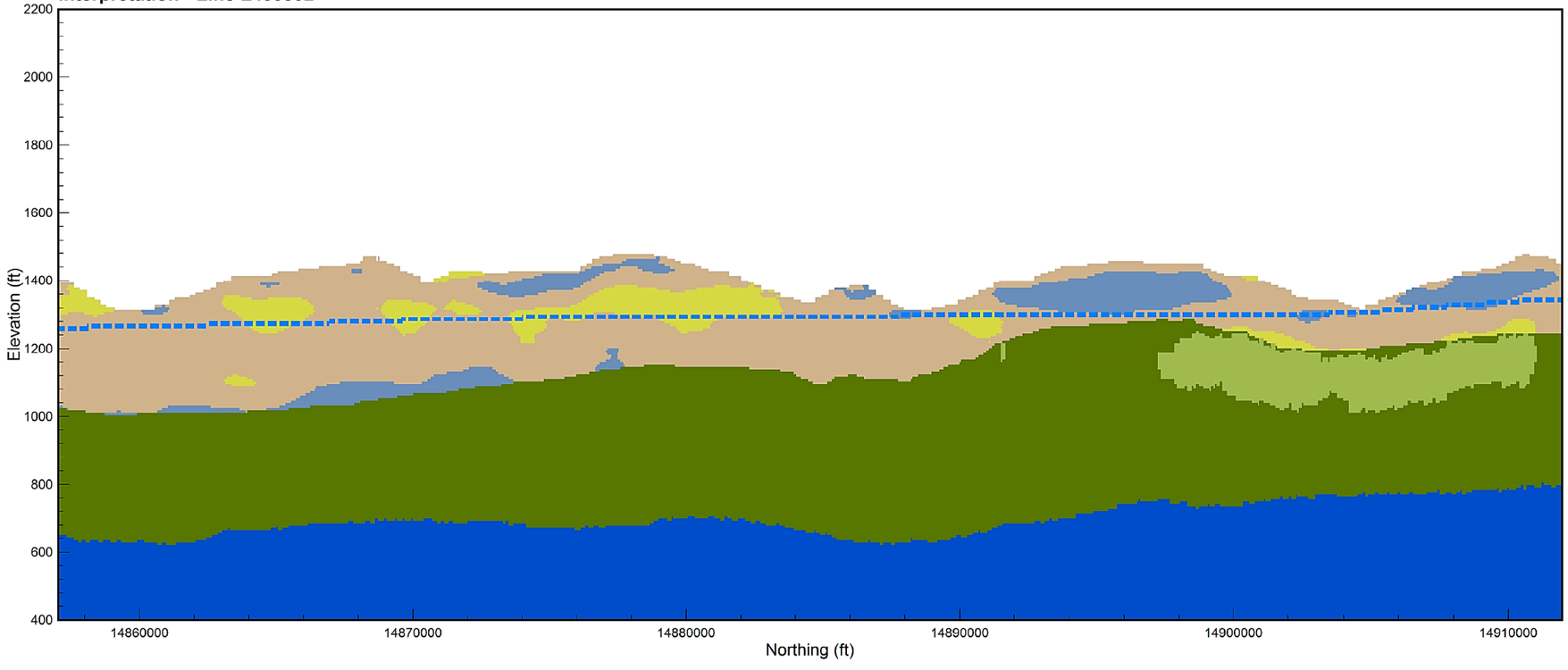
EXRI

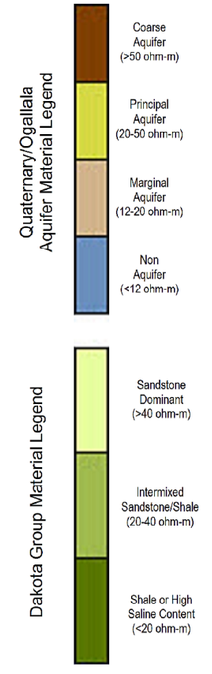
AEM Data - Line L400302





Interpretation - Line L400302





Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

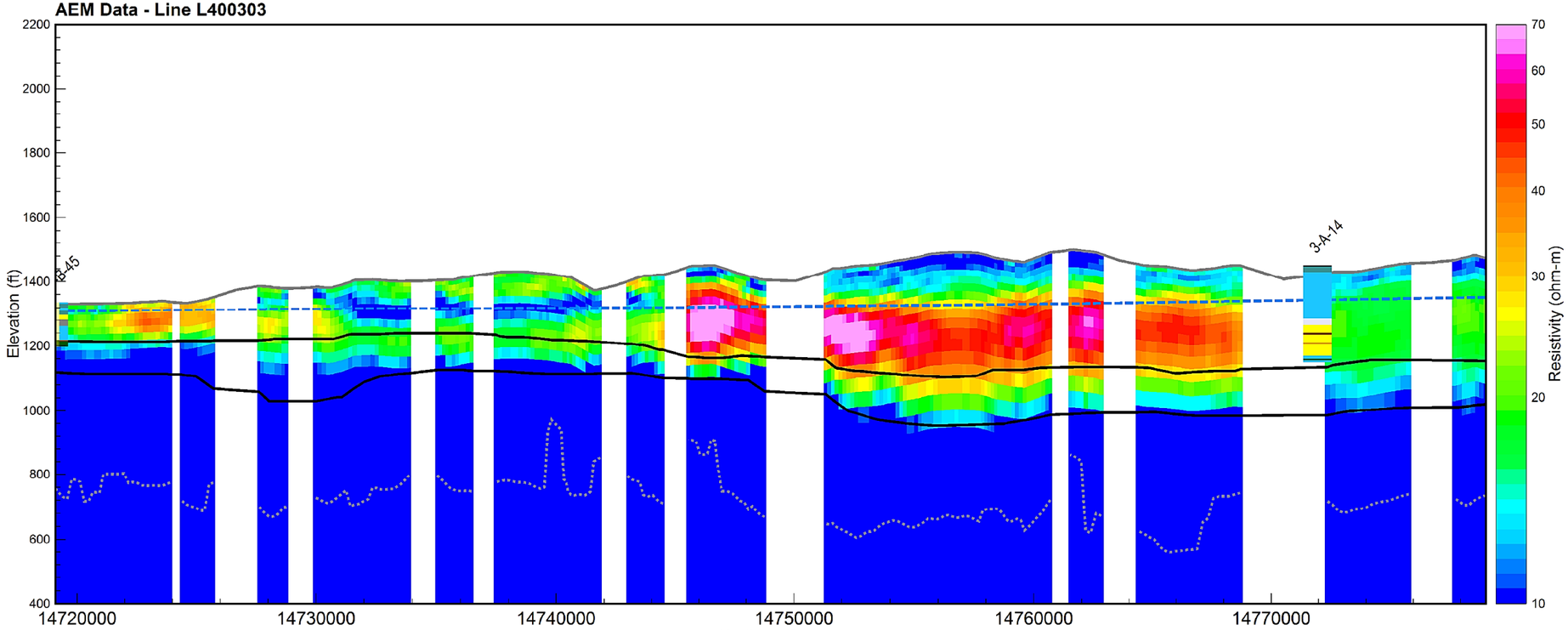
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L400302

EXRI

AEM Data - Line L400303



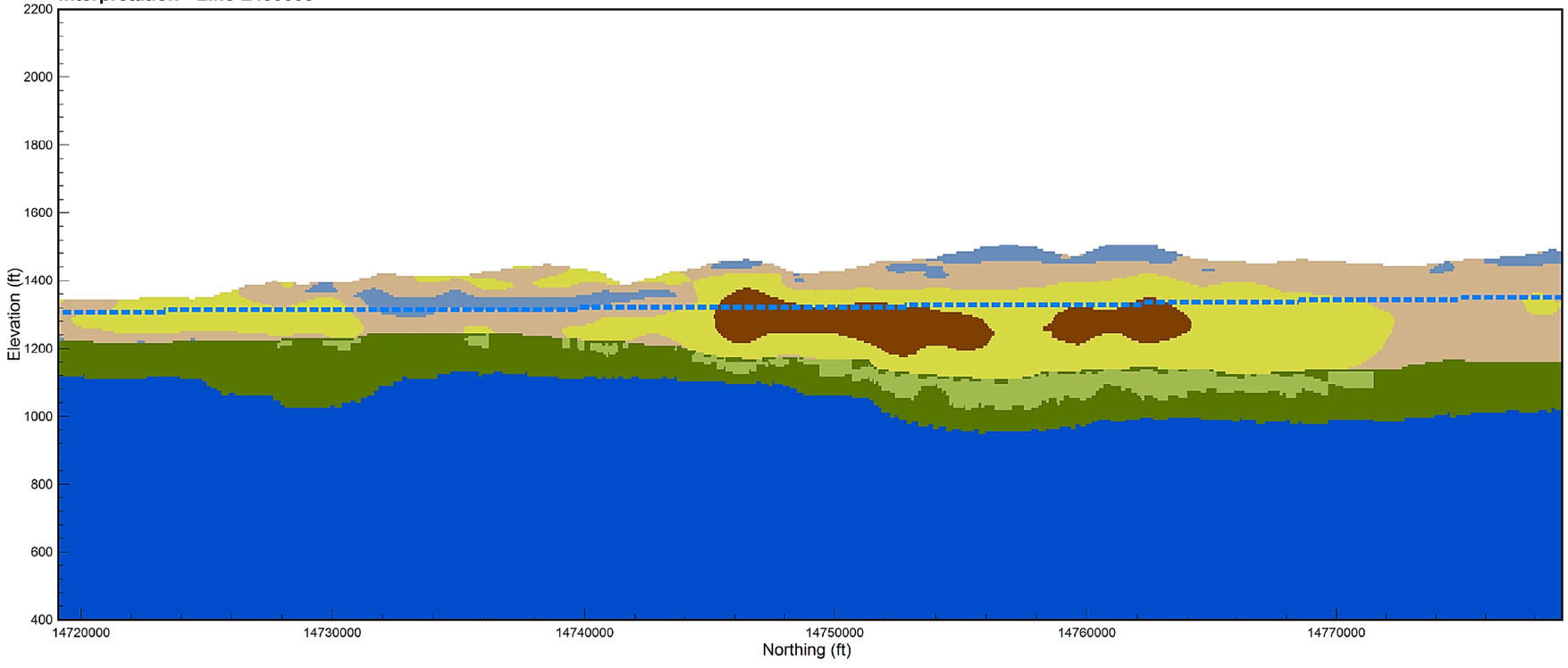
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L400303



Quaternary/Ogallala Aquifer Material Legend

- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

- Sandstone Dominant (>40 ohm-m)
- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

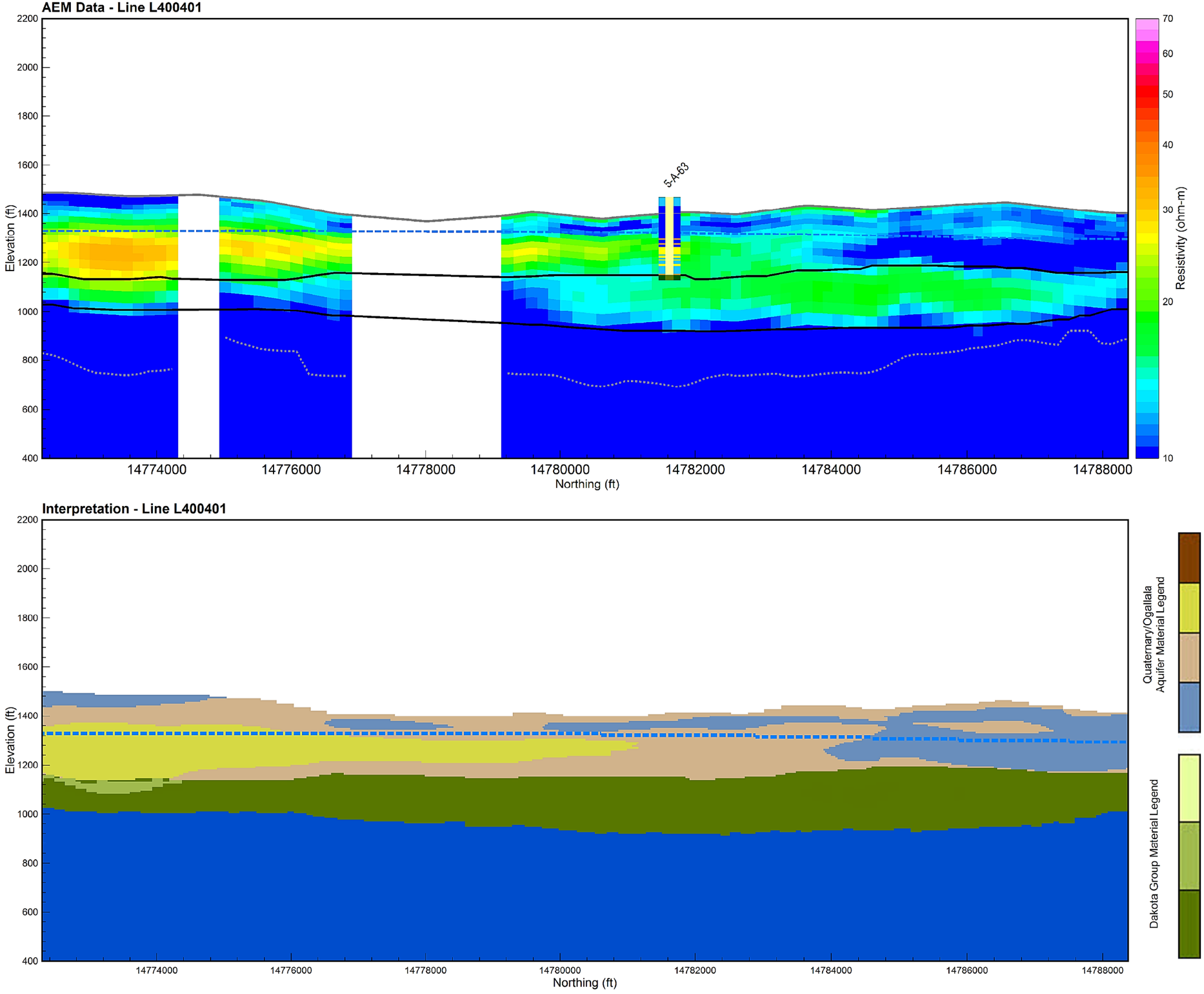
Eastern Nebraska Water Resources Assessment

Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L400303

EXRI



Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
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- Clay
- Till
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- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

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- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

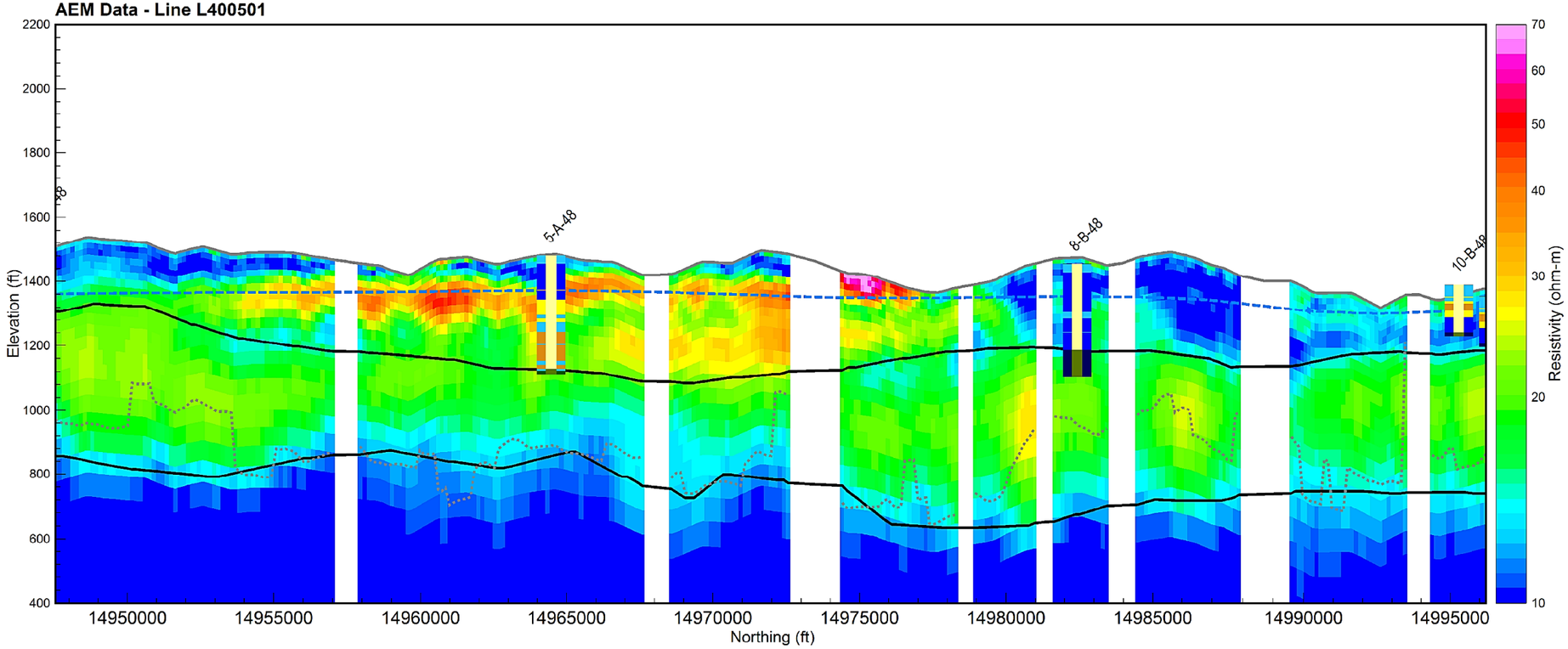
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

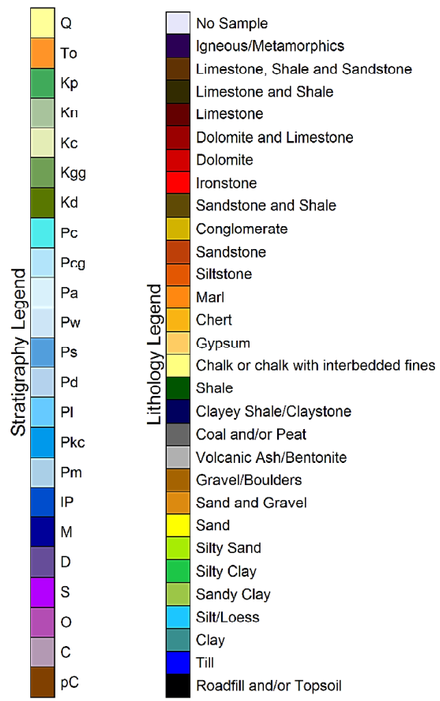
Southern ENWRA Project Area

Flight Line L400401

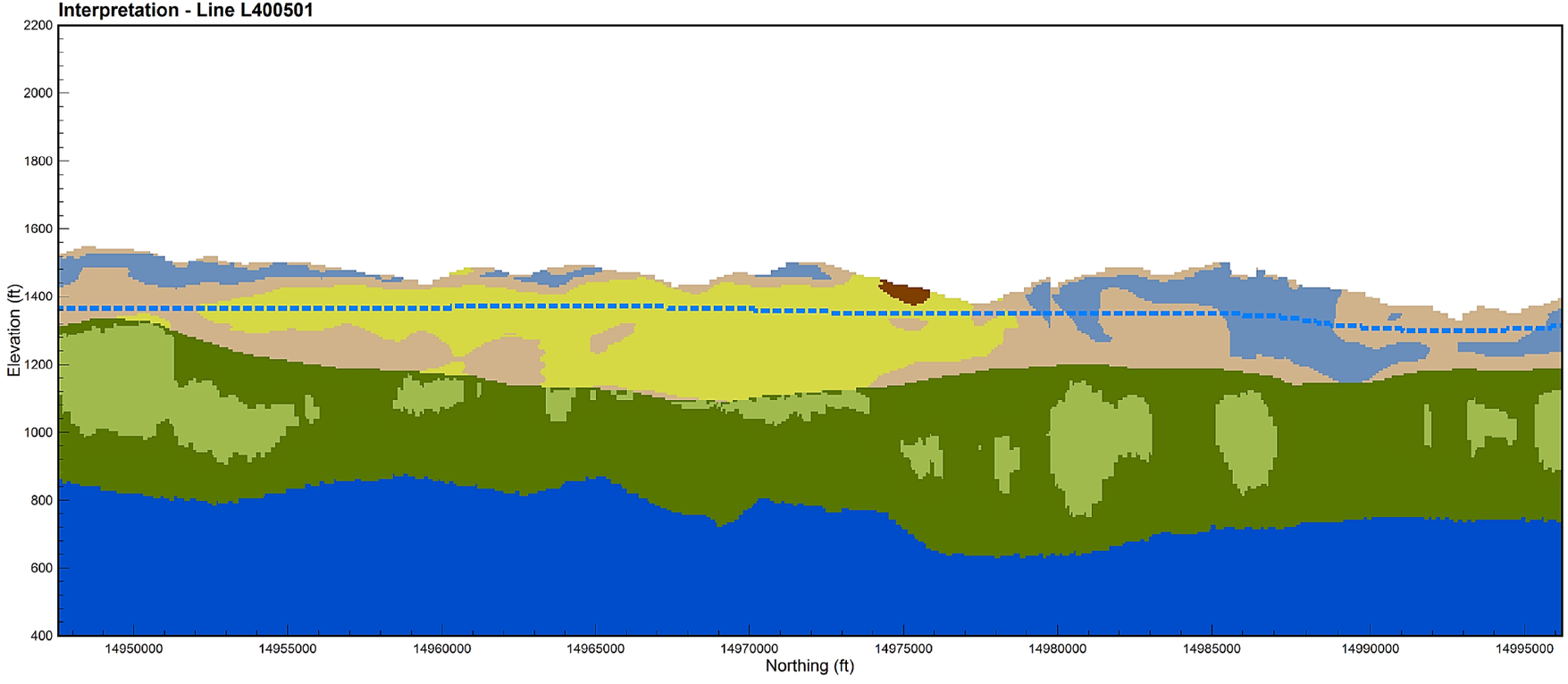
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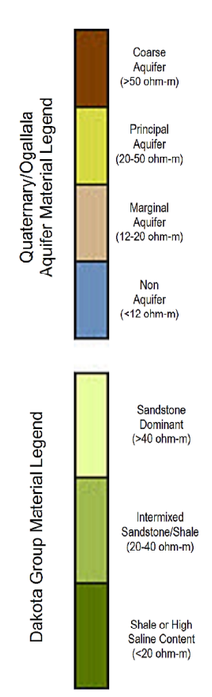
AEM Data - Line L400501





Interpretation - Line L400501





Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

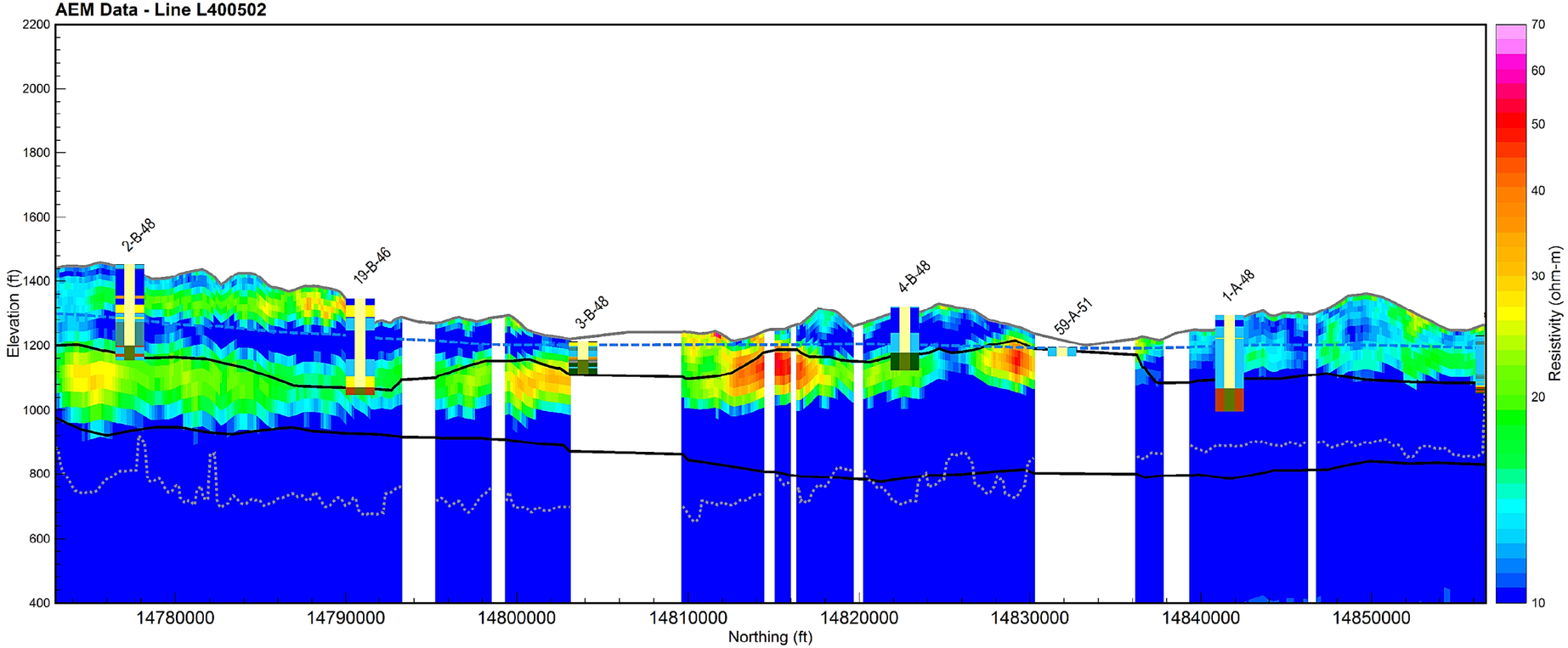
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

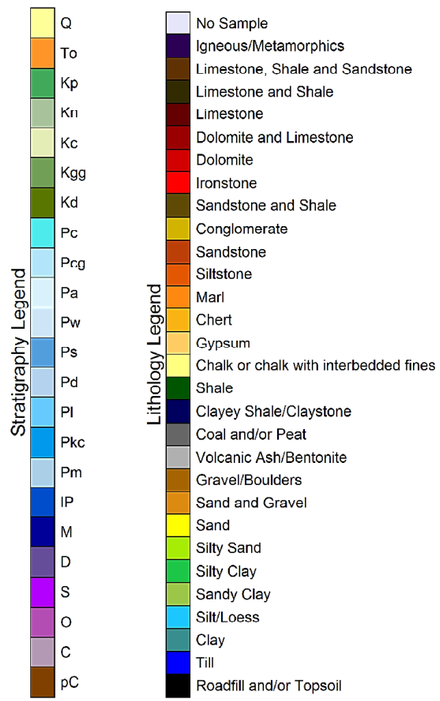
Southern ENWRA Project Area

Flight Line L400501

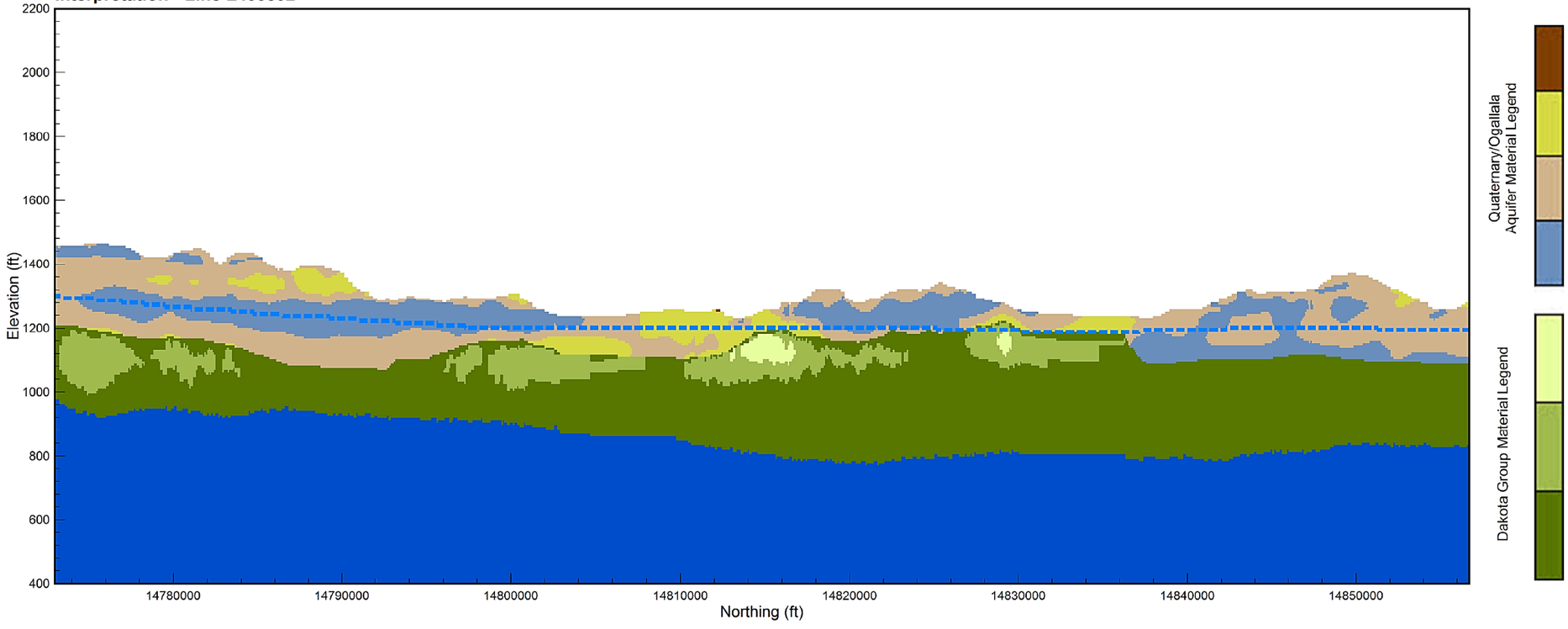
EXRI

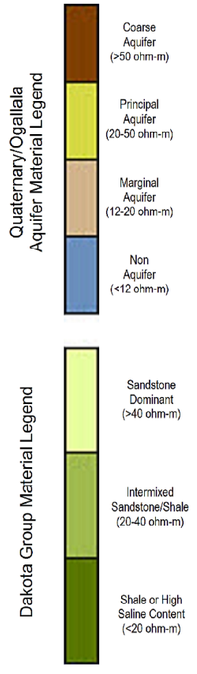
AEM Data - Line L400502





Interpretation - Line L400502





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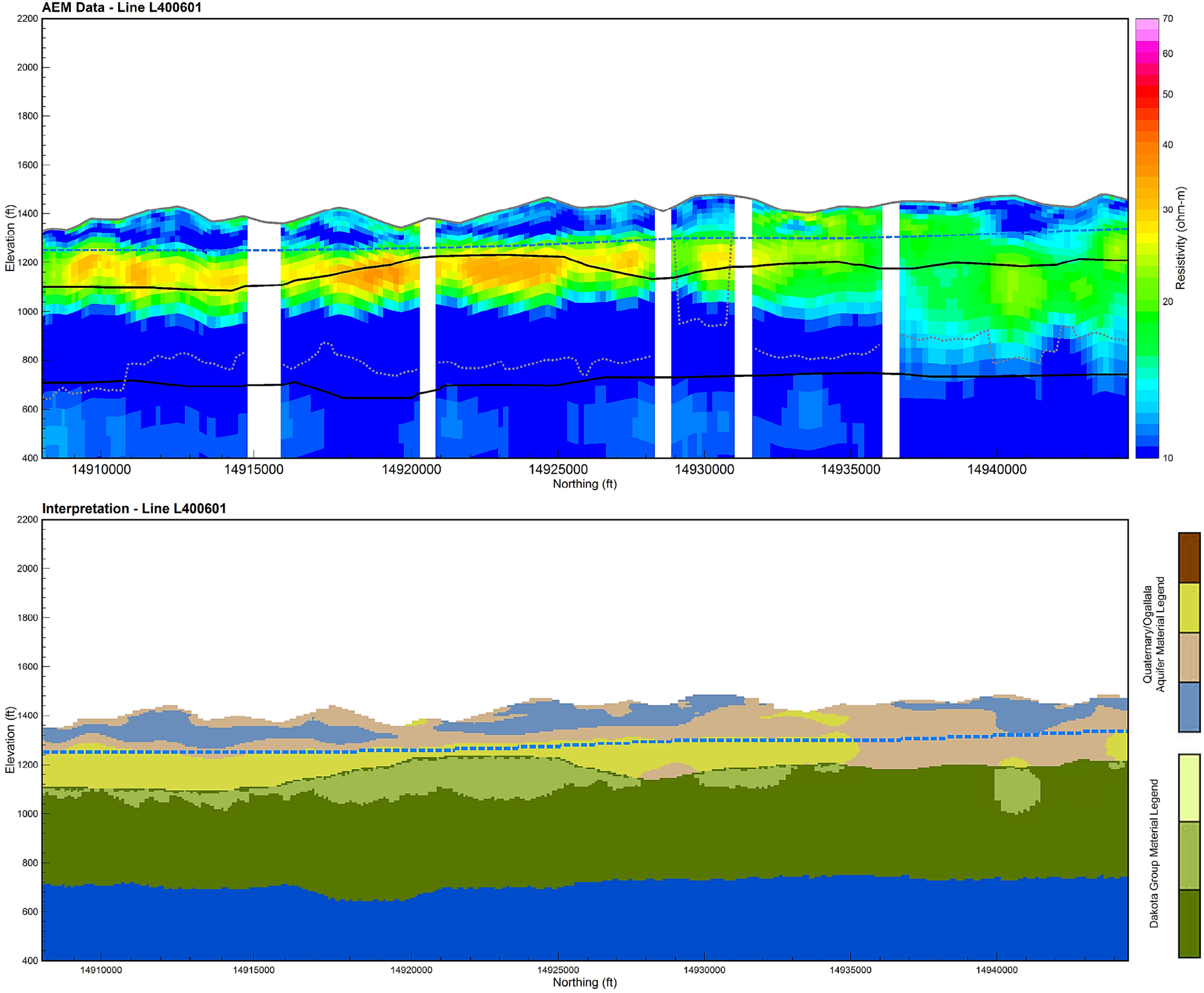
Eastern Nebraska Water Resources Assessment

Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L400502

EXRI



Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
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- Ironstone
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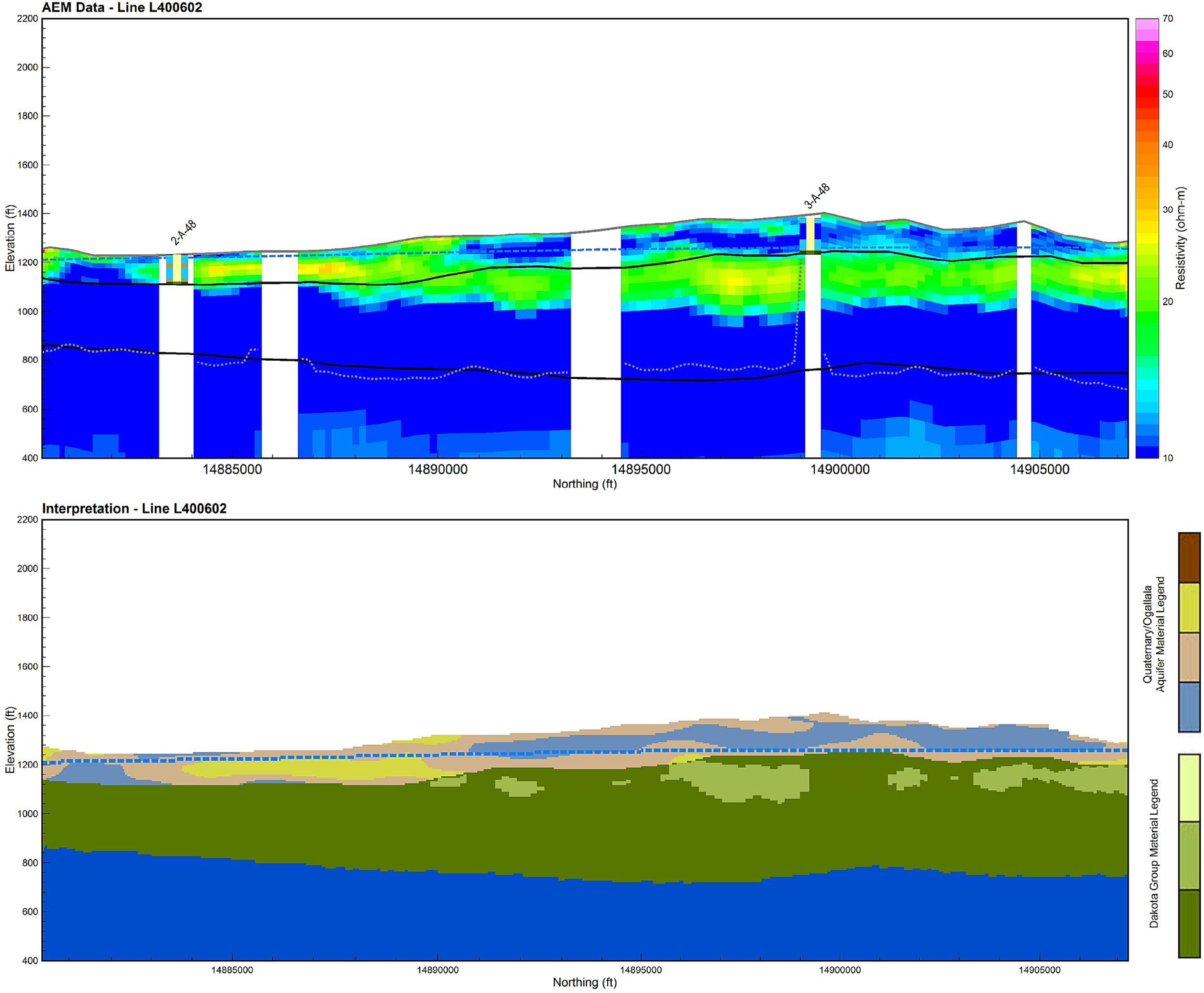
Eastern Nebraska Water Resources Assessment

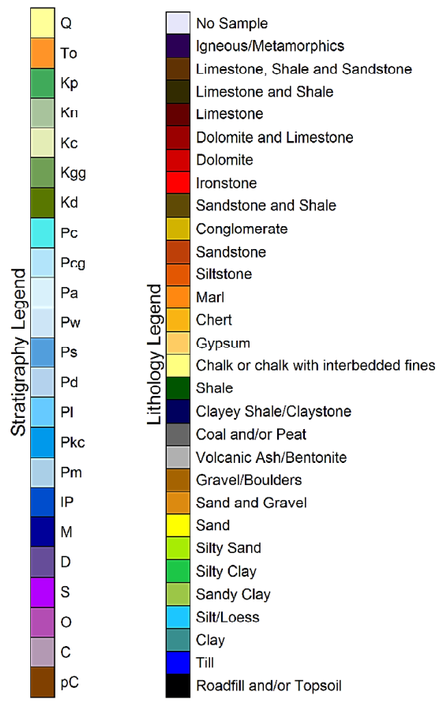
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L400601

EXRI





Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

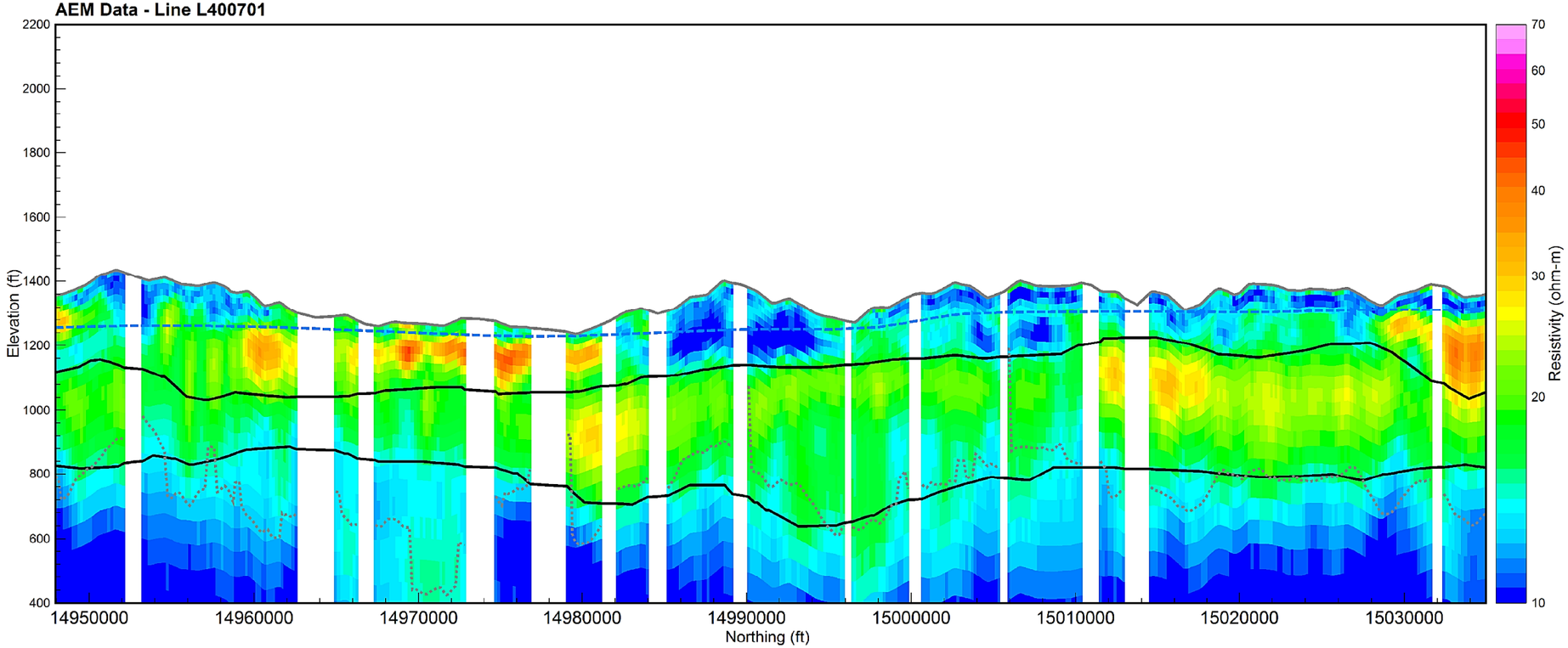
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L400602

EXRI

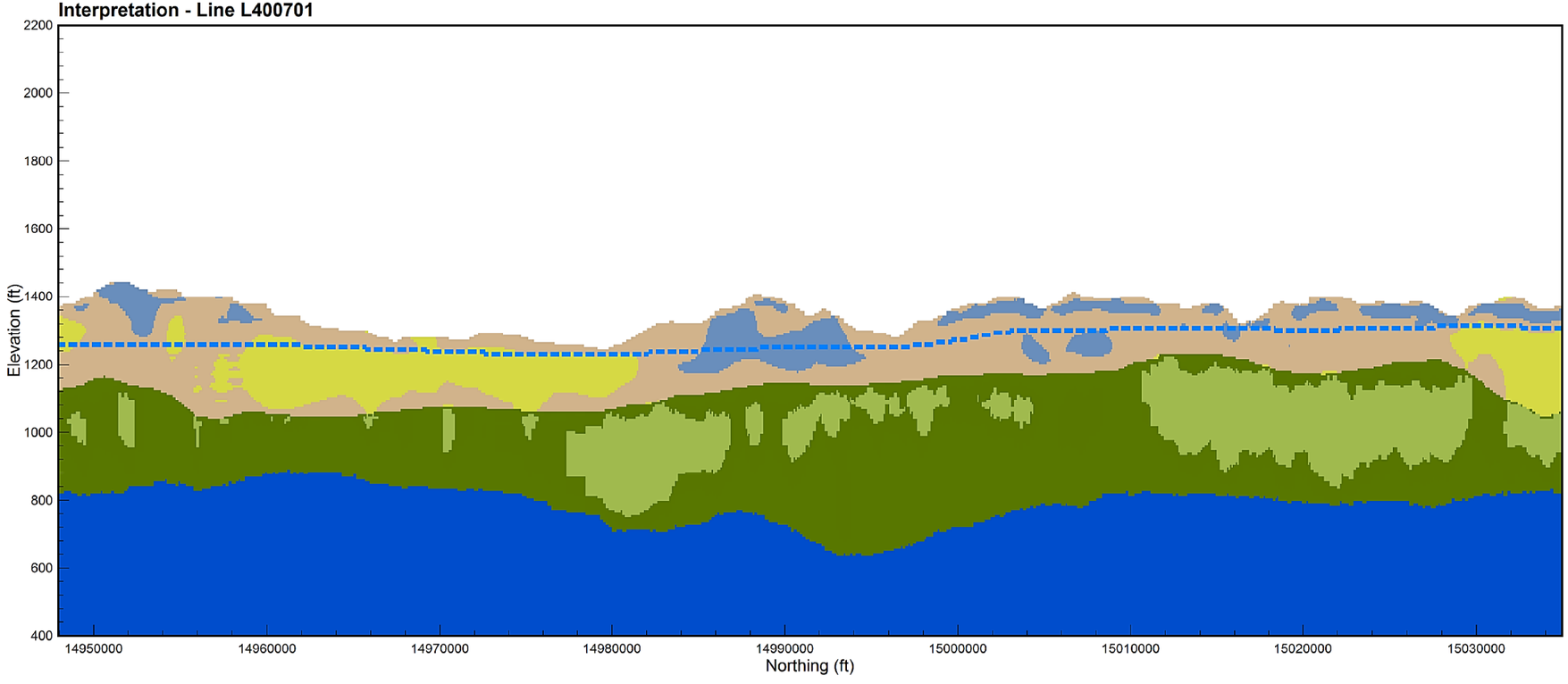
AEM Data - Line L400701



Stratigraphy Legend: Q, To, Kp, Kn, Kc, Kgg, Kd, Pc, Pcg, Pa, Pw, Ps, Pd, Pl, Pkc, Pm, IP, M, D, S, O, C, pC

Lithology Legend: No Sample, Igneous/Metamorphics, Limestone, Shale and Sandstone, Limestone and Shale, Limestone, Dolomite and Limestone, Dolomite, Ironstone, Sandstone and Shale, Conglomerate, Sandstone, Siltstone, Marl, Chert, Gypsum, Chalk or chalk with interbedded fines, Shale, Clayey Shale/Claystone, Coal and/or Peat, Volcanic Ash/Bentonite, Gravel/Boulders, Sand and Gravel, Sand, Silty Sand, Silty Clay, Sandy Clay, Silt/Loess, Clay, Till, Roadfill and/or Topsoil

Interpretation - Line L400701



Quaternary/Ogallala Aquifer Material Legend:
- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend:
- Sandstone Dominant (>40 ohm-m)
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Eastern Nebraska Water Resources Assessment

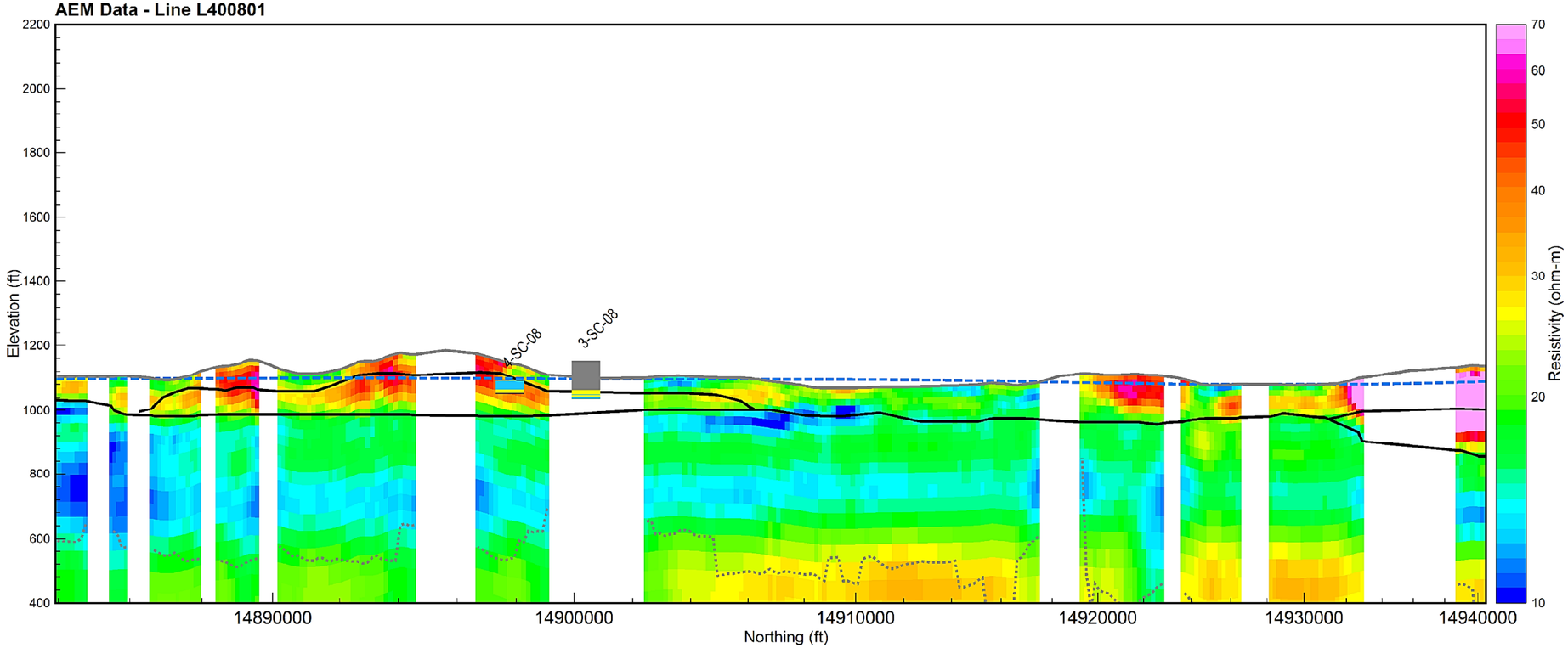
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

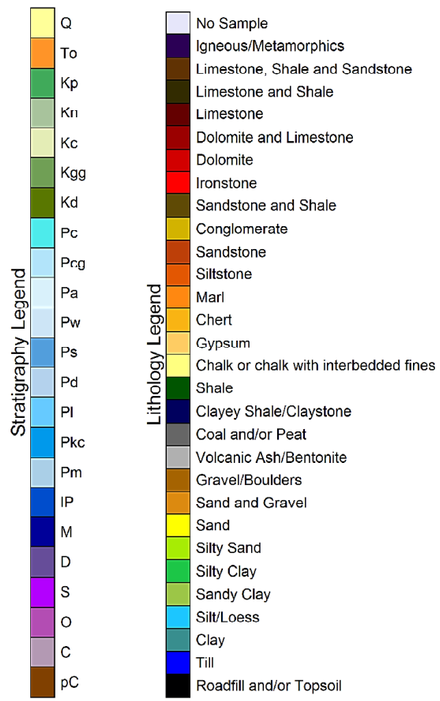
Southern ENWRA Project Area

Flight Line L400701

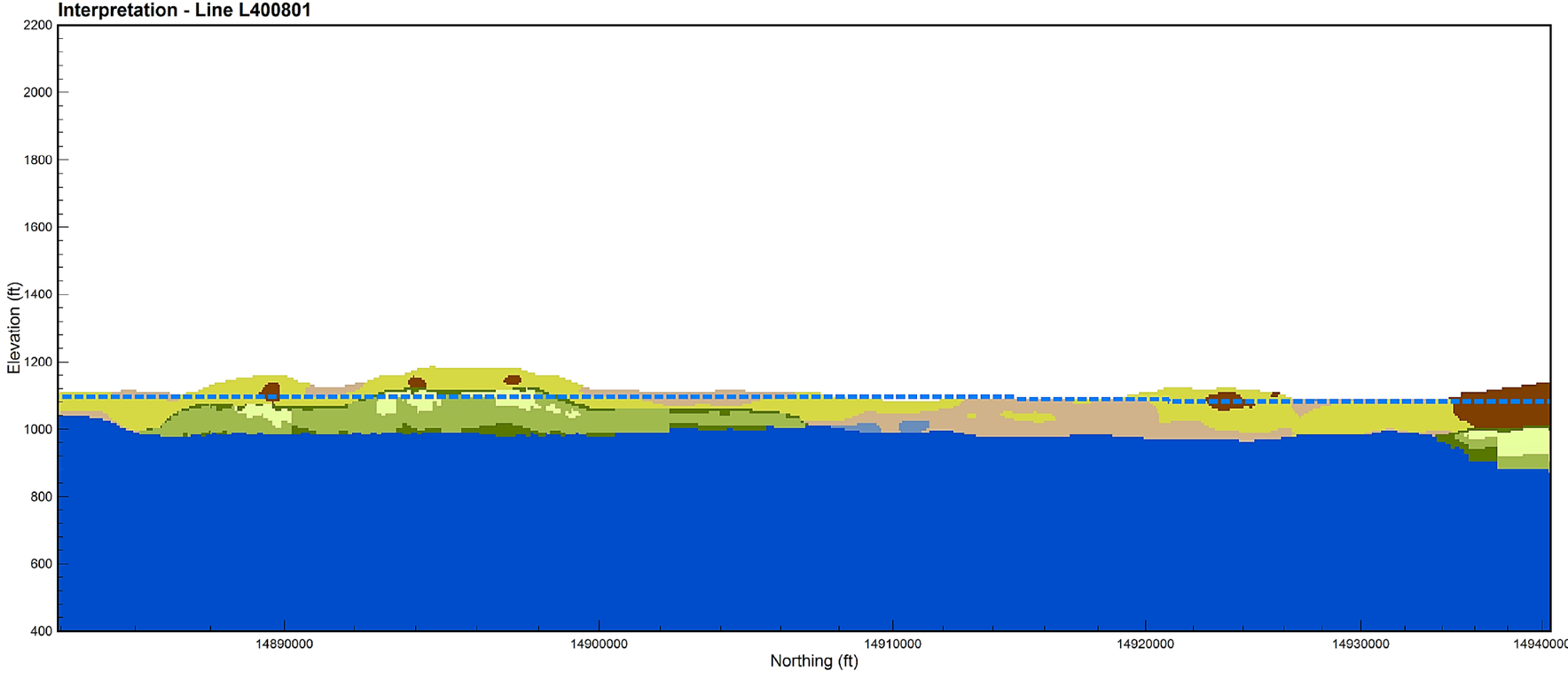
EXRI

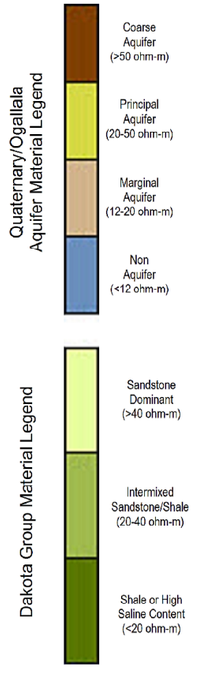
AEM Data - Line L400801





Interpretation - Line L400801





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Eastern Nebraska Water Resources Assessment

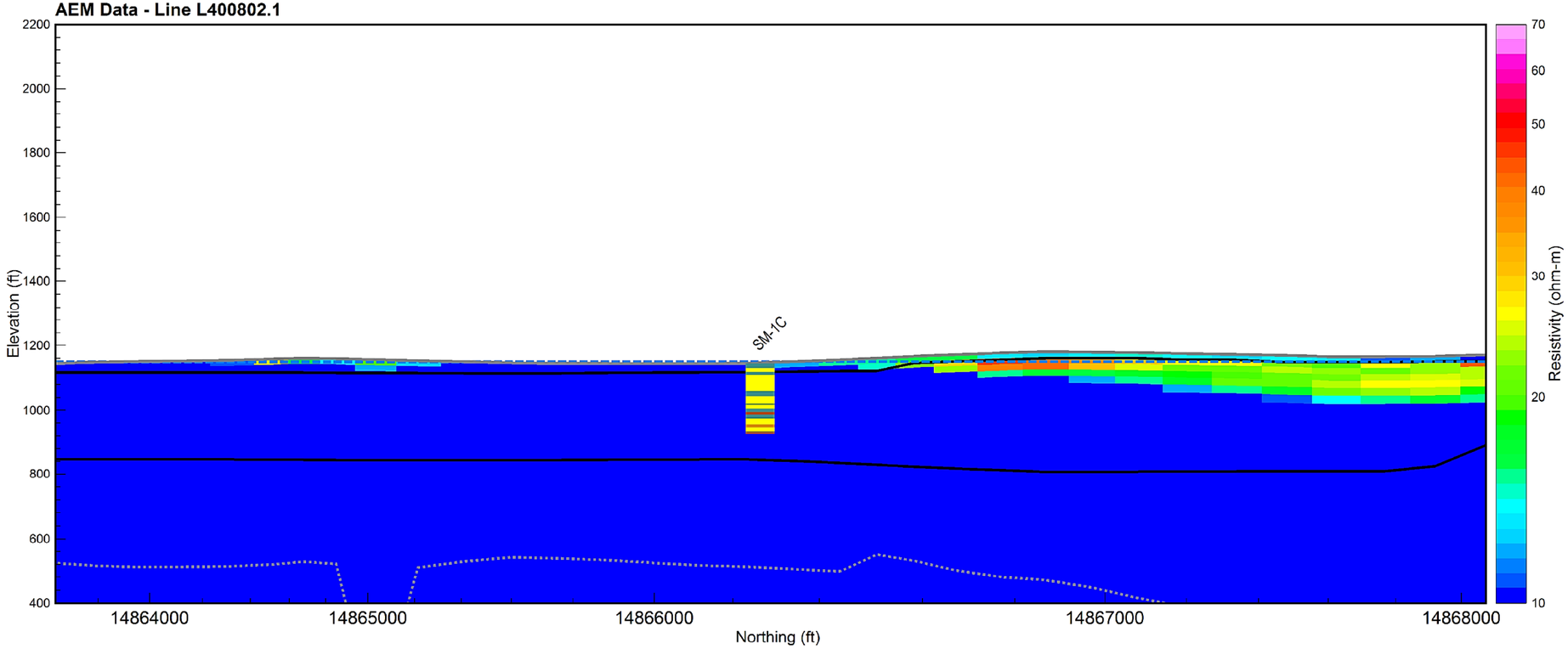
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

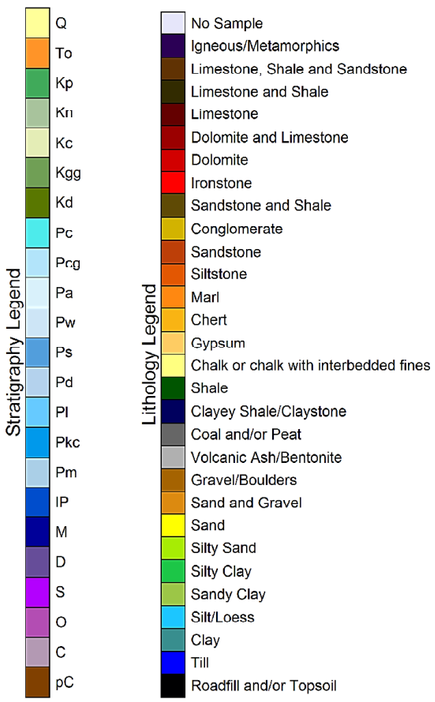
Southern ENWRA Project Area

Flight Line L400801

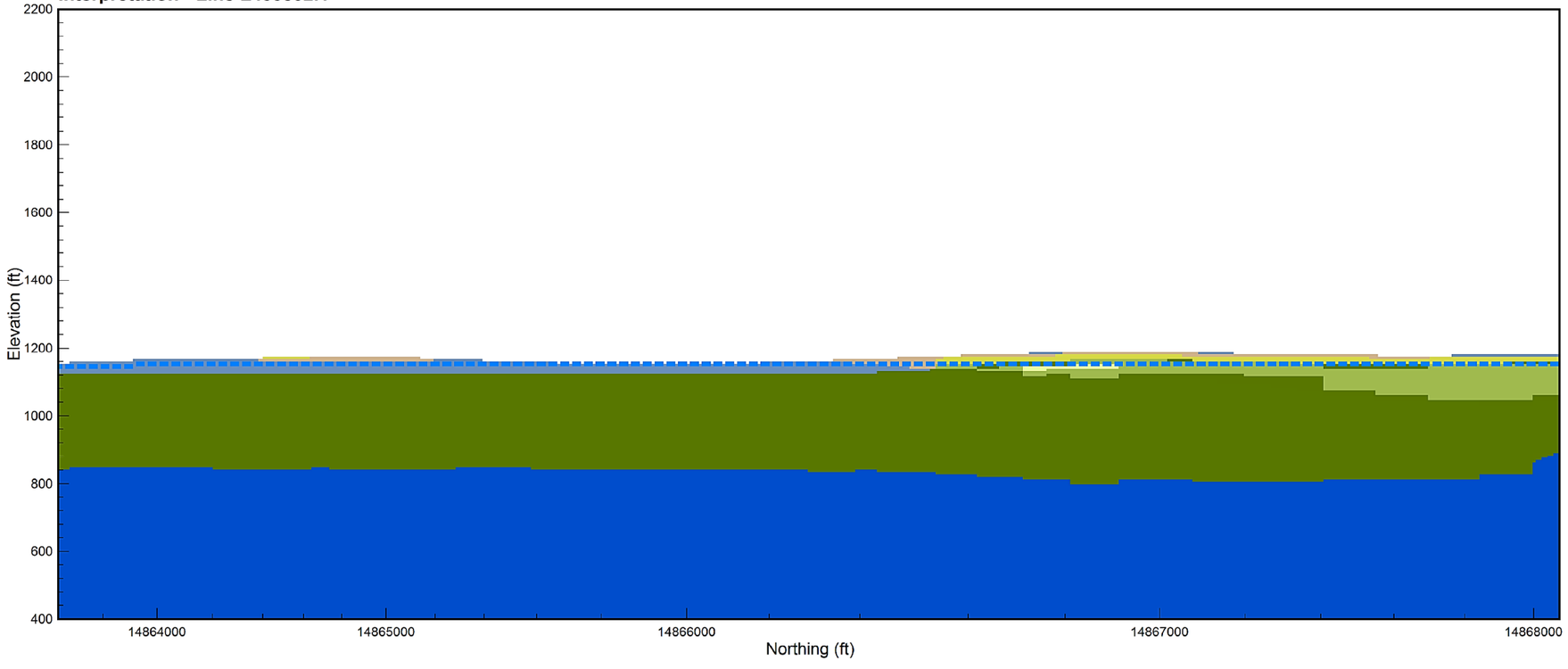
EXRI

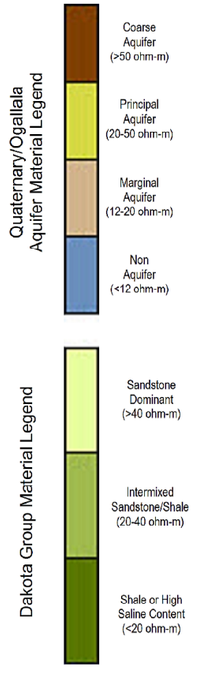
AEM Data - Line L400802.1





Interpretation - Line L400802.1





Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

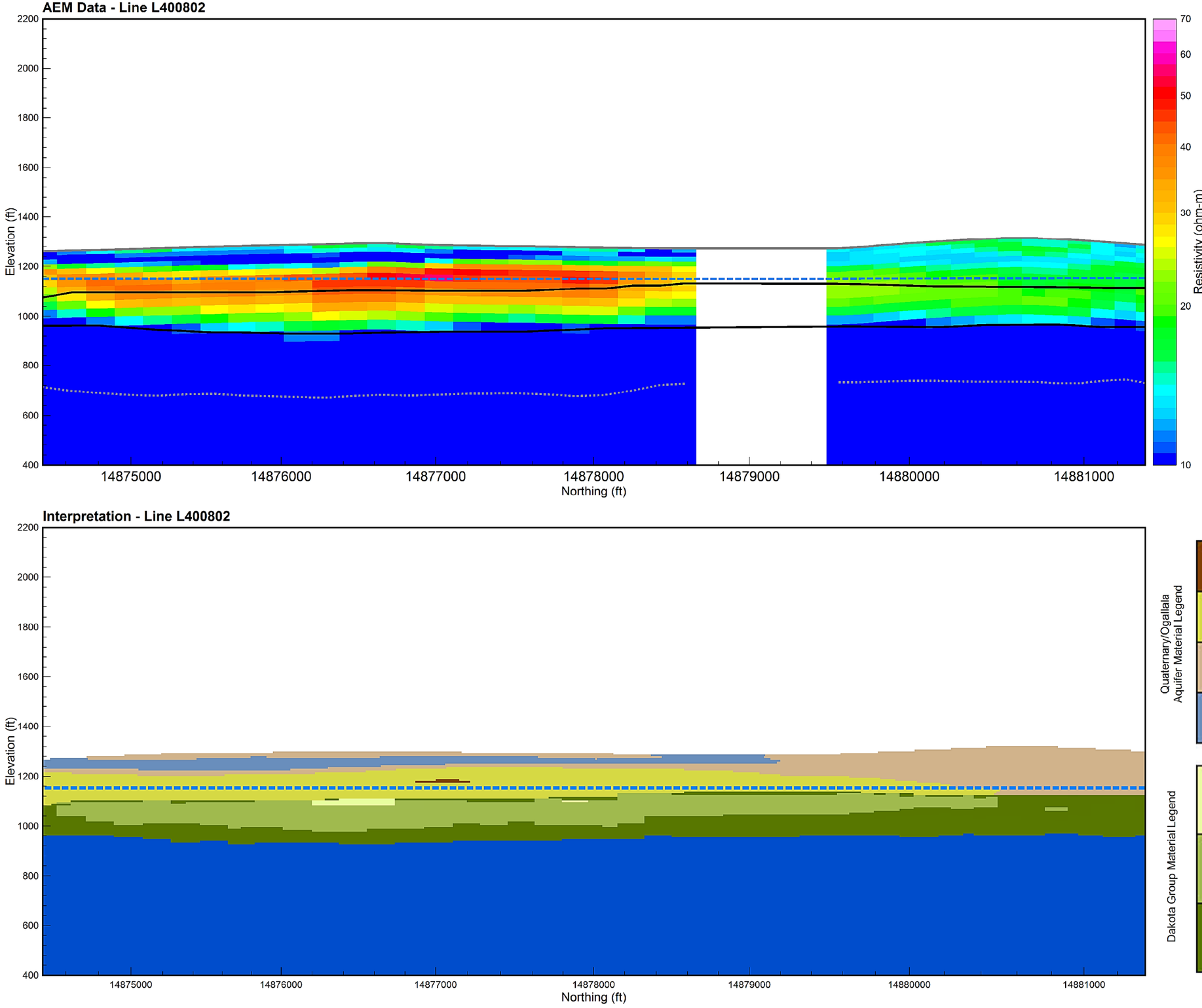
Eastern Nebraska Water Resources Assessment

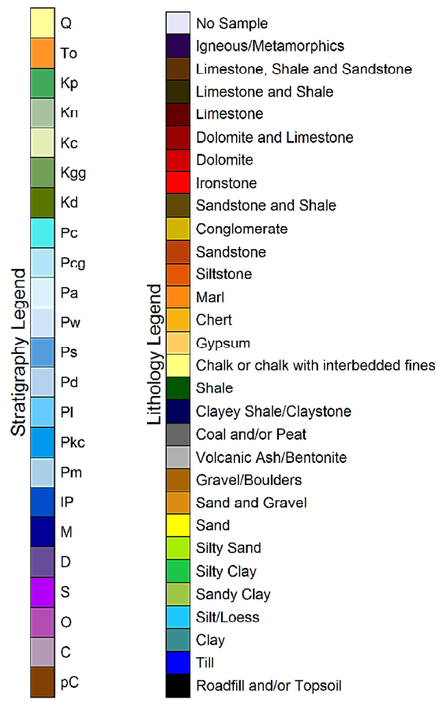
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L400802.1

EXRI





Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

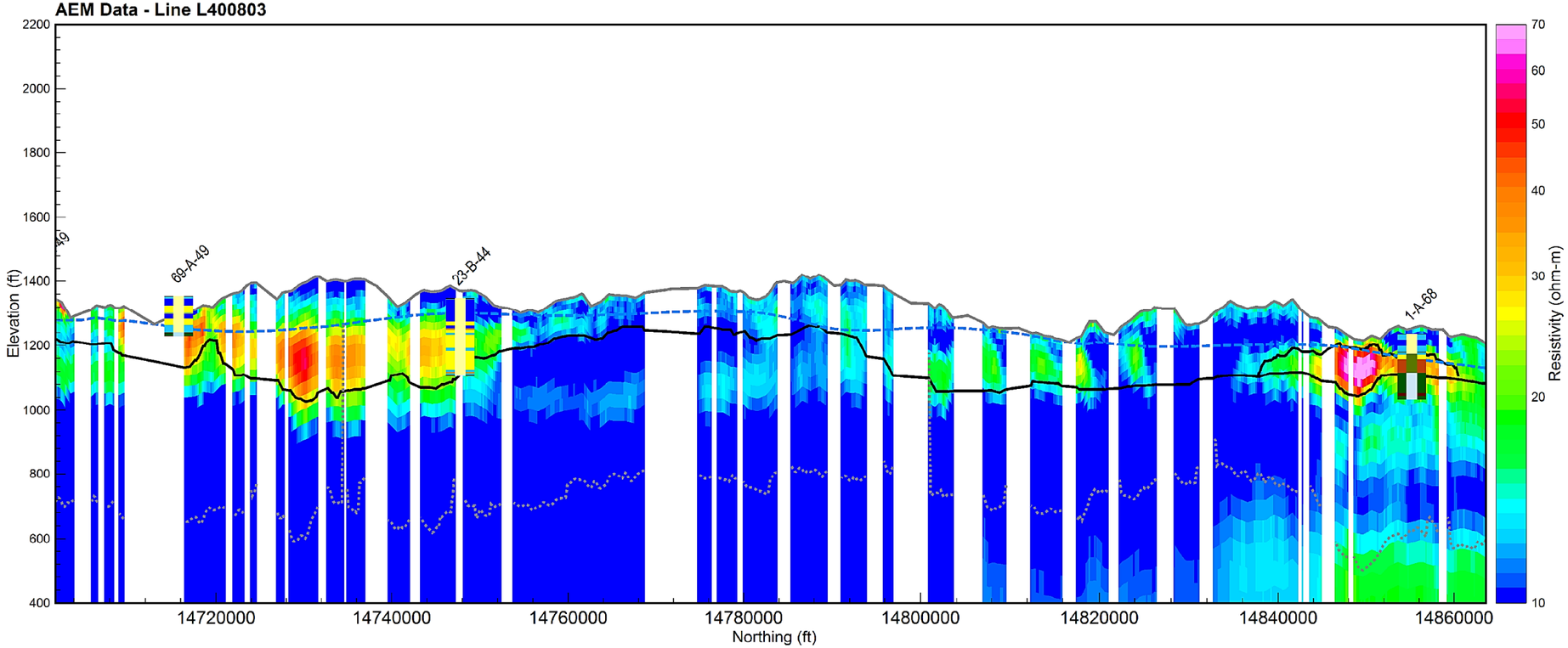
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L400802

EXRI

AEM Data - Line L400803



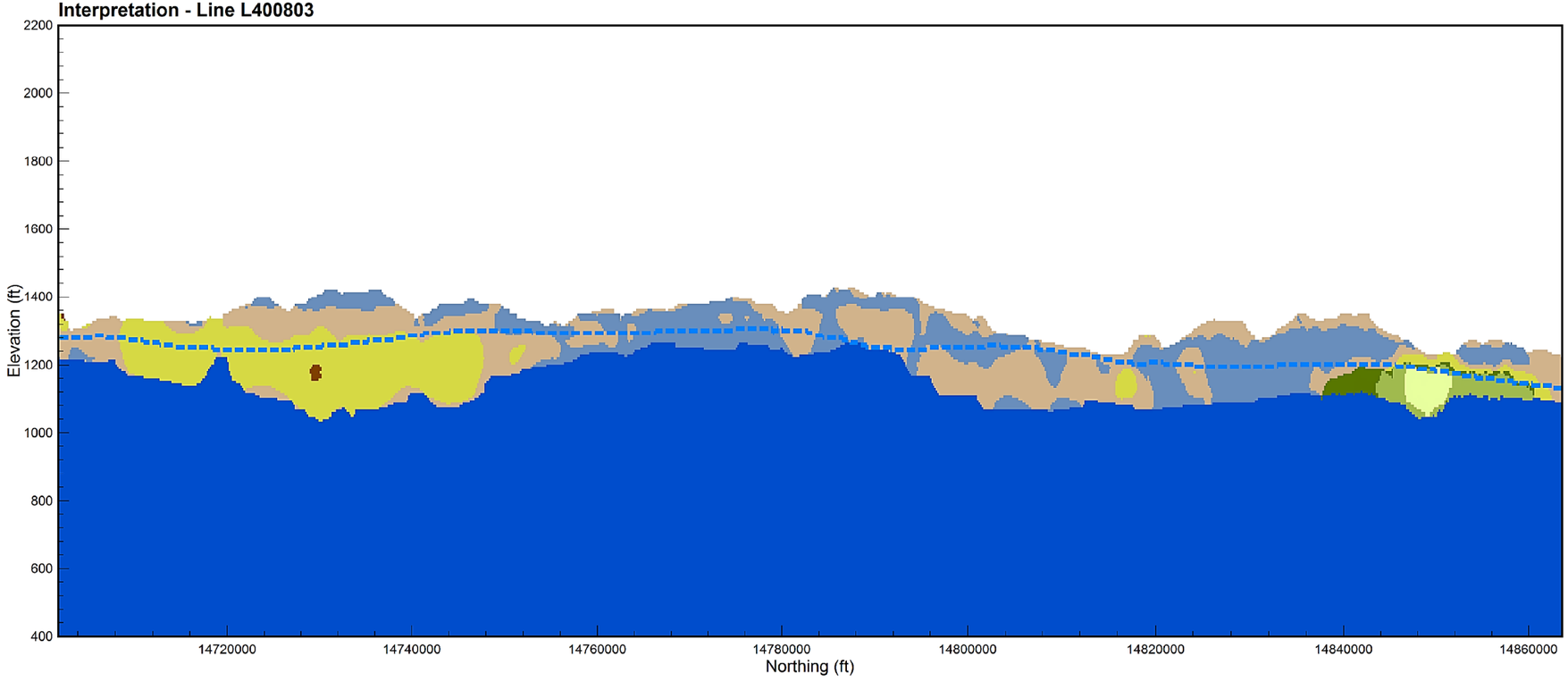
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L400803



Quaternary/Ogallala Aquifer Material Legend

- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

- Sandstone Dominant (>40 ohm-m)
- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

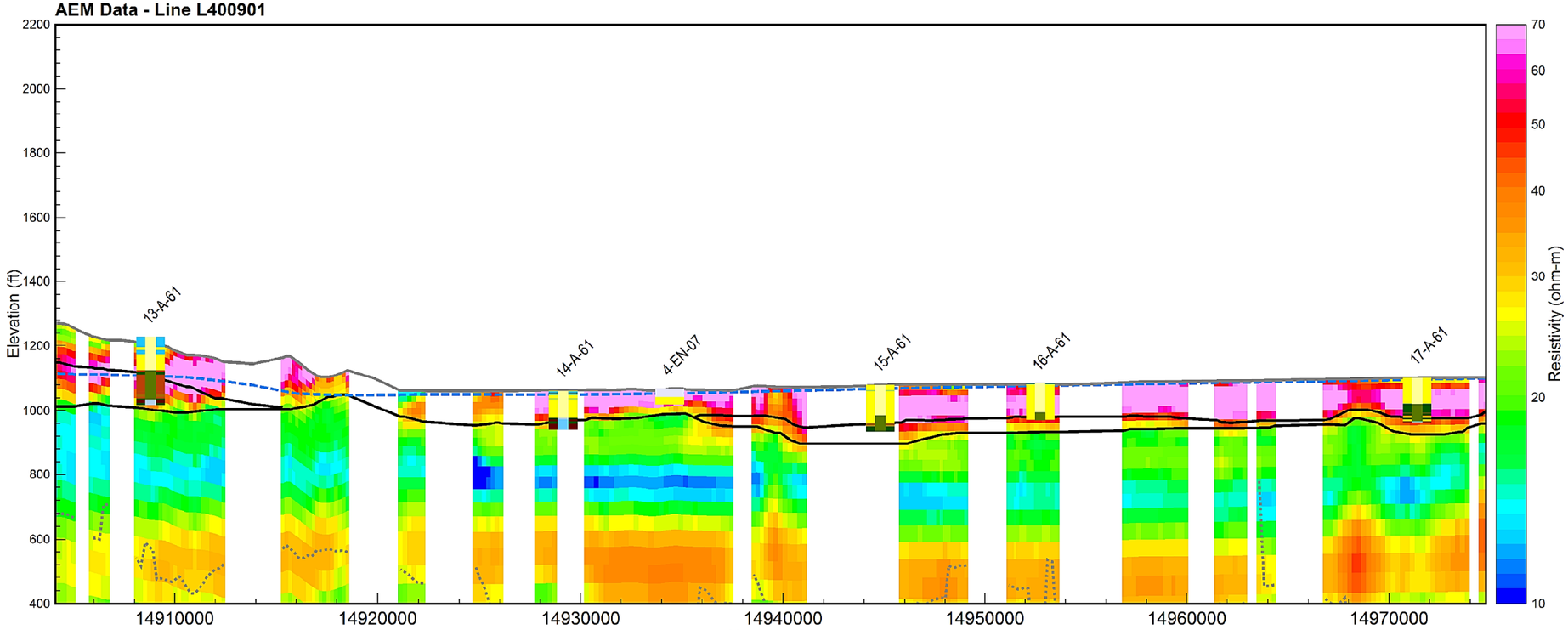
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

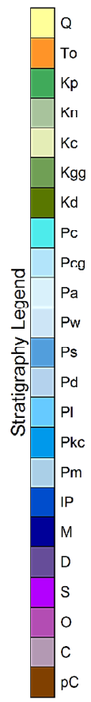
Southern ENWRA Project Area

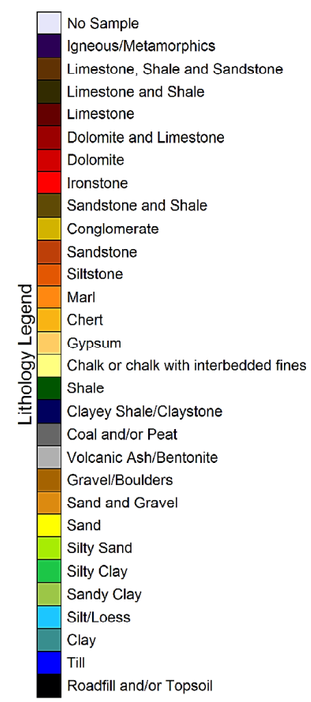
Flight Line L400803

EXRI

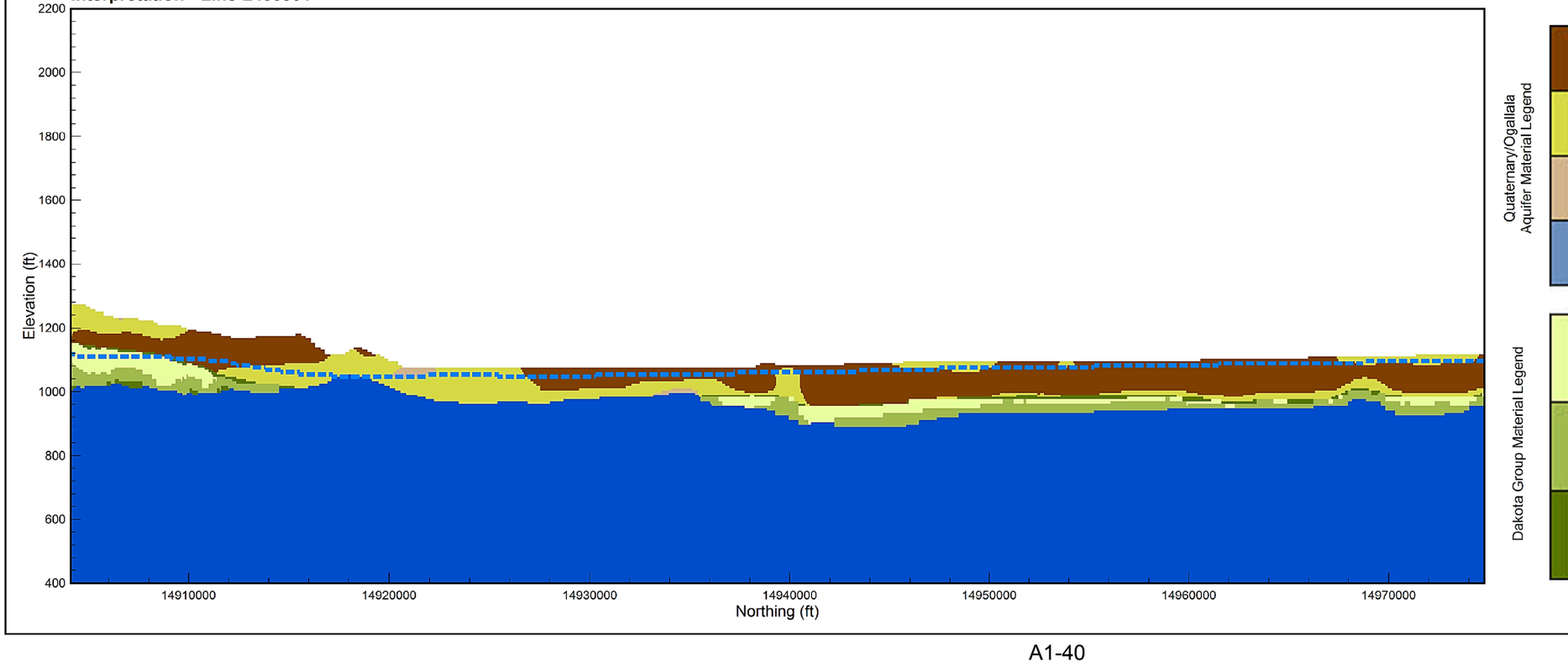
AEM Data - Line L400901

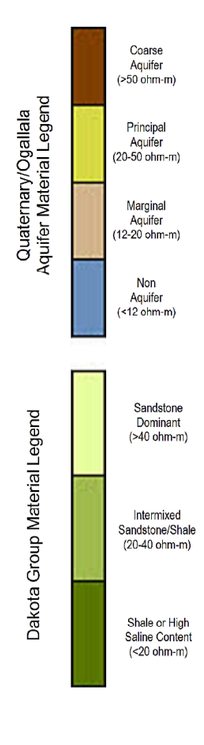






Interpretation - Line L400901





Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

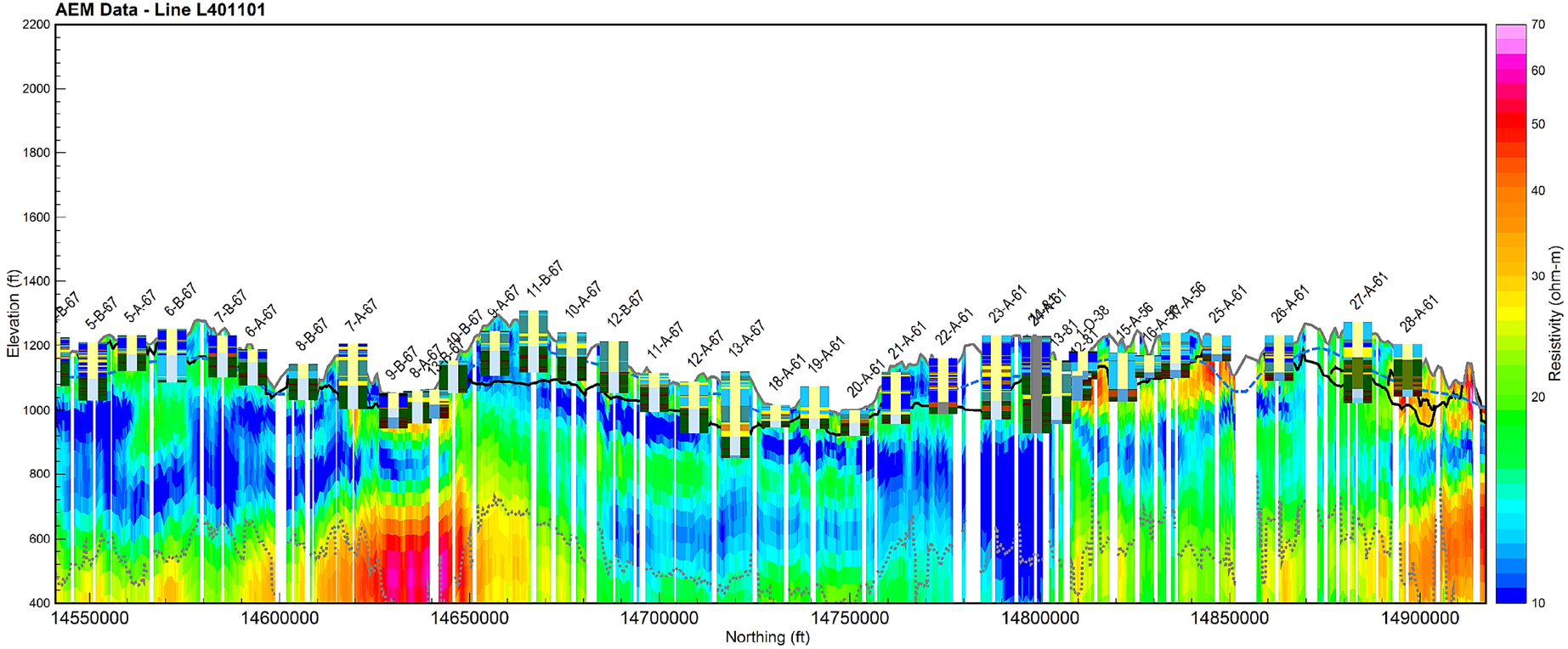
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L400901

EXRI

AEM Data - Line L401101



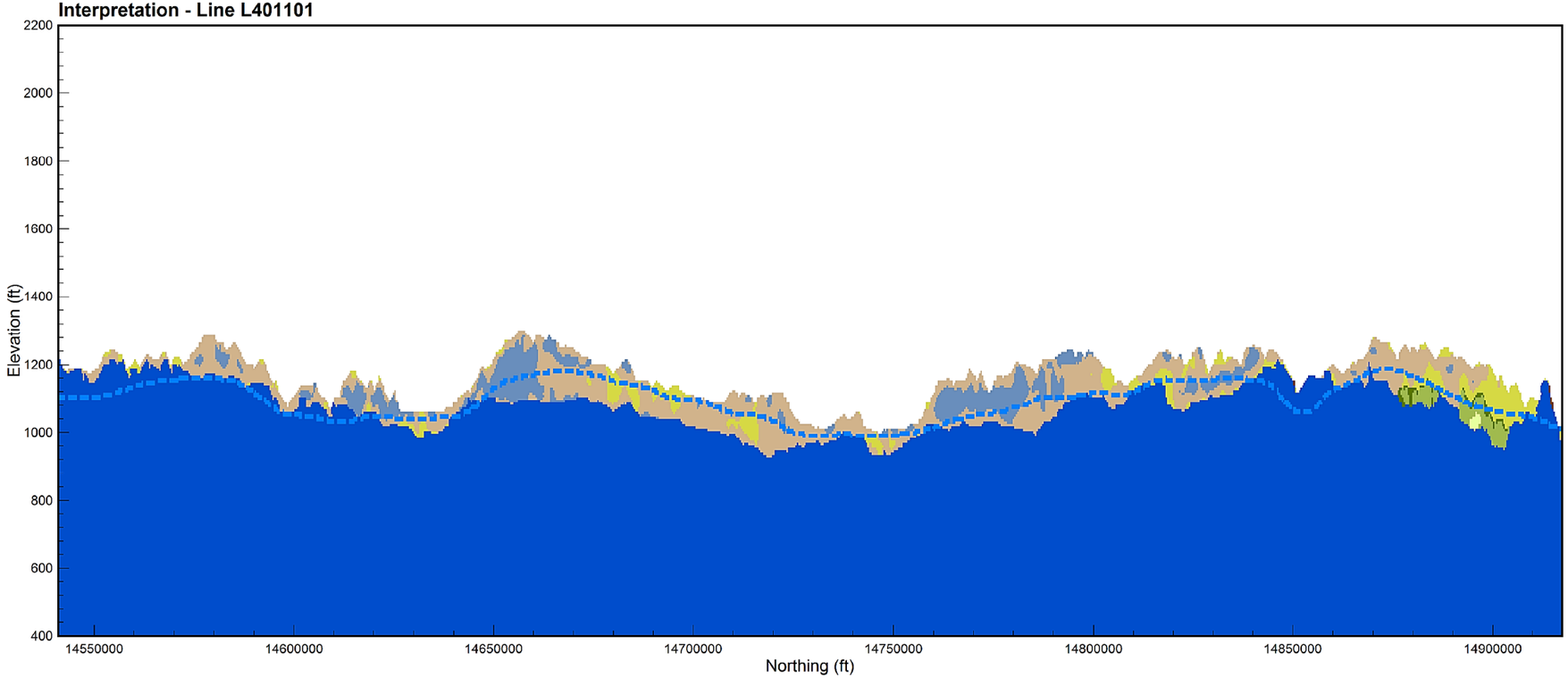
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L401101



Quaternary/Ogallala Aquifer Material Legend

- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

- Sandstone Dominant (>40 ohm-m)
- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

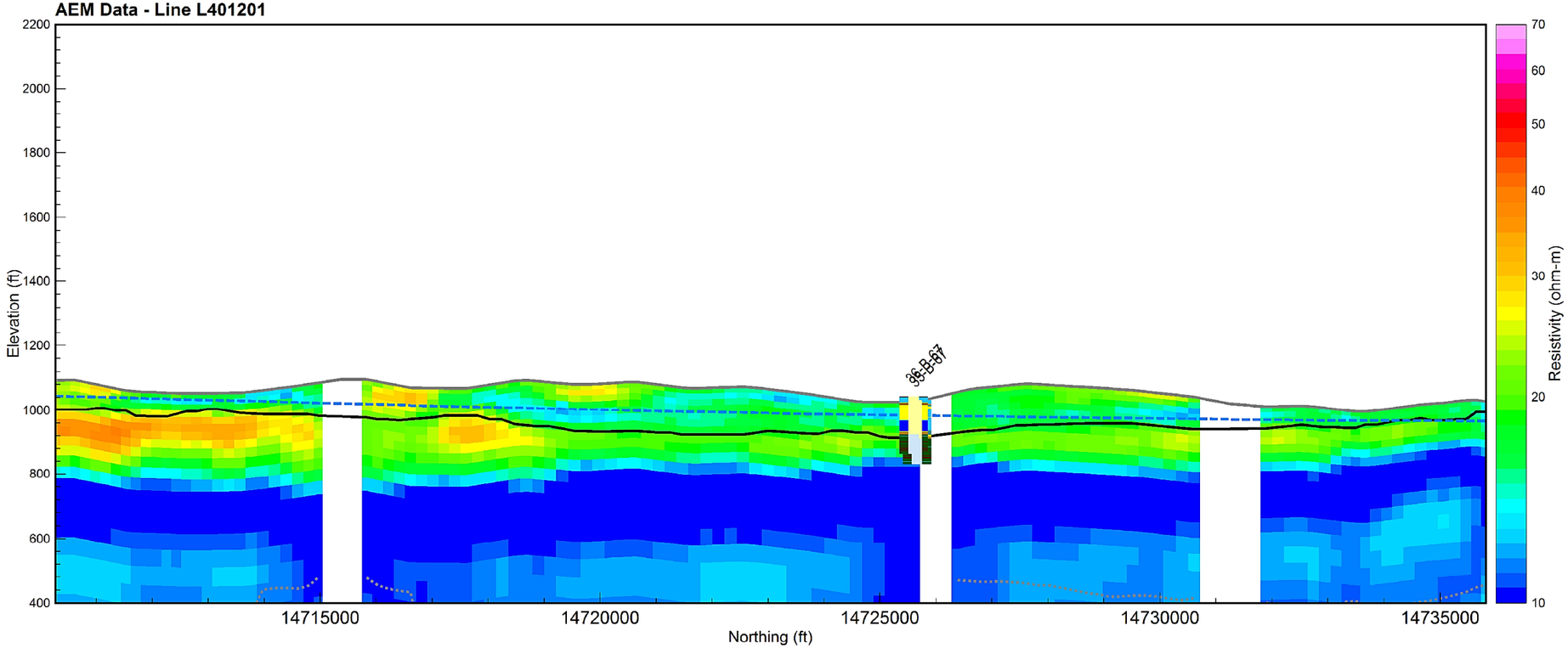
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L401101

EXRI

AEM Data - Line L401201



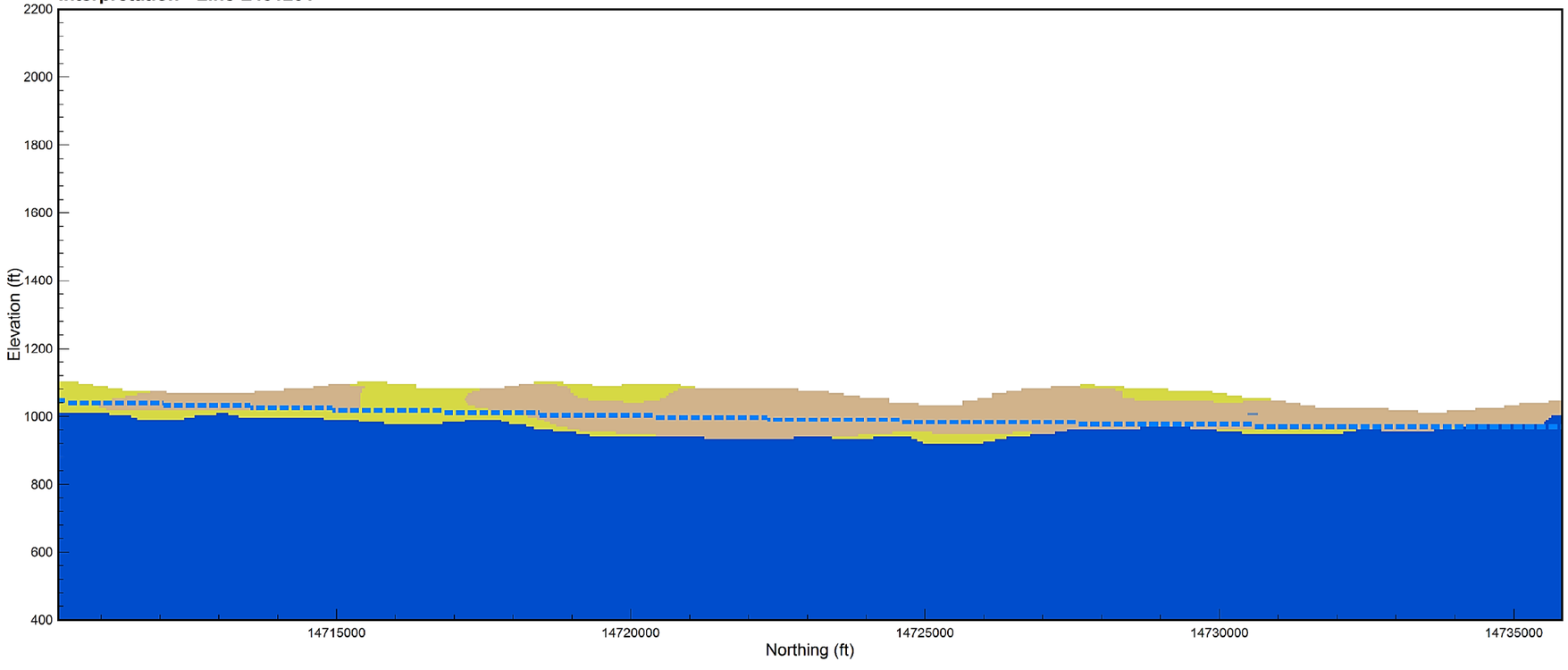
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L401201



Quaternary/Ogallala Aquifer Material Legend

- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

- Sandstone Dominant (>40 ohm-m)
- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

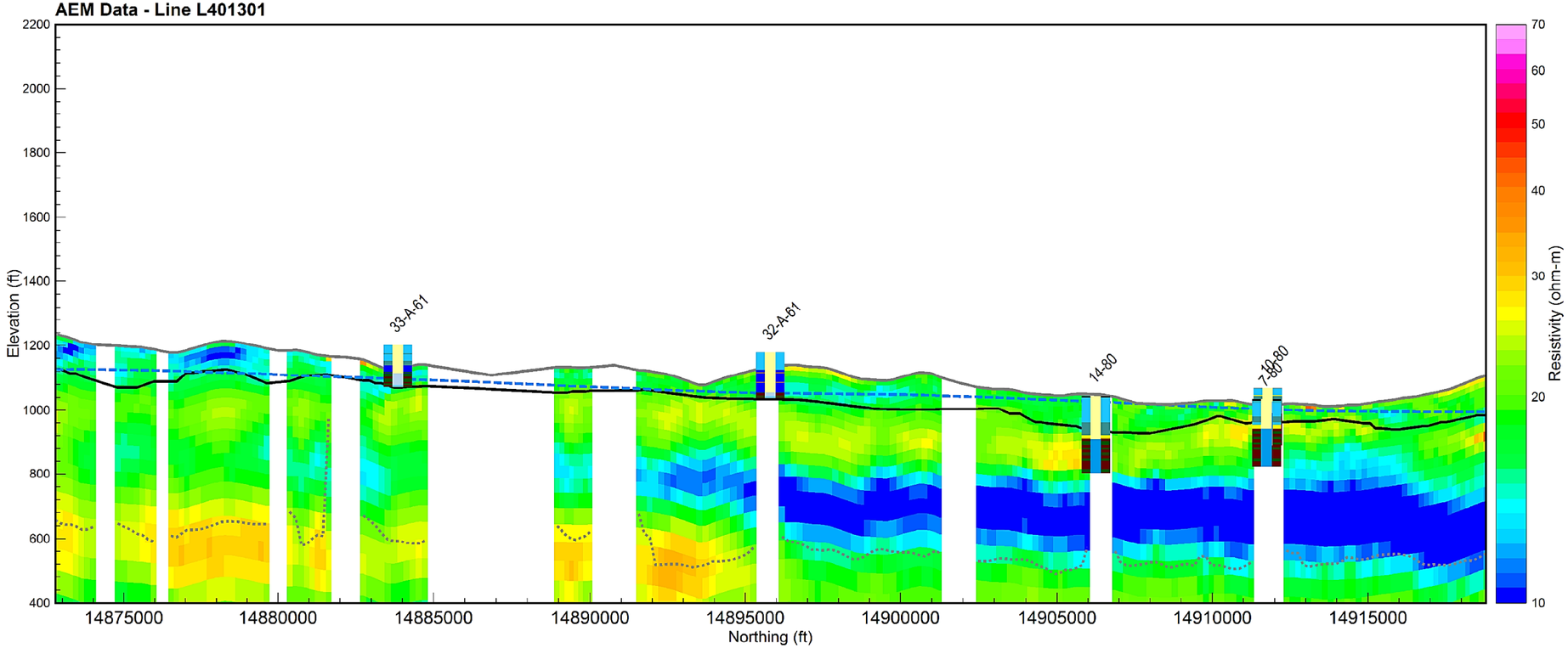
Eastern Nebraska Water Resources Assessment

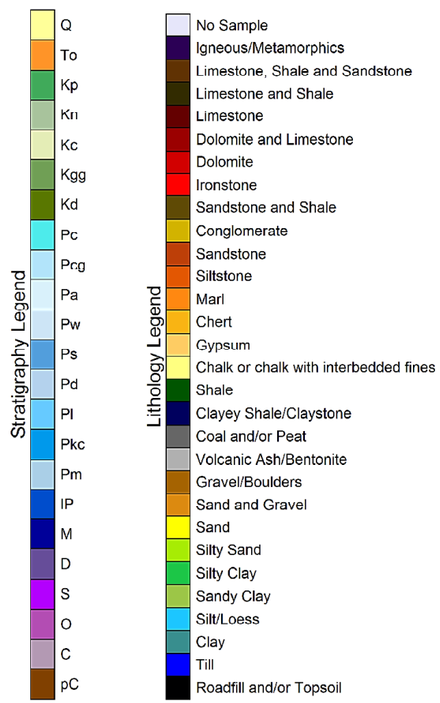
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

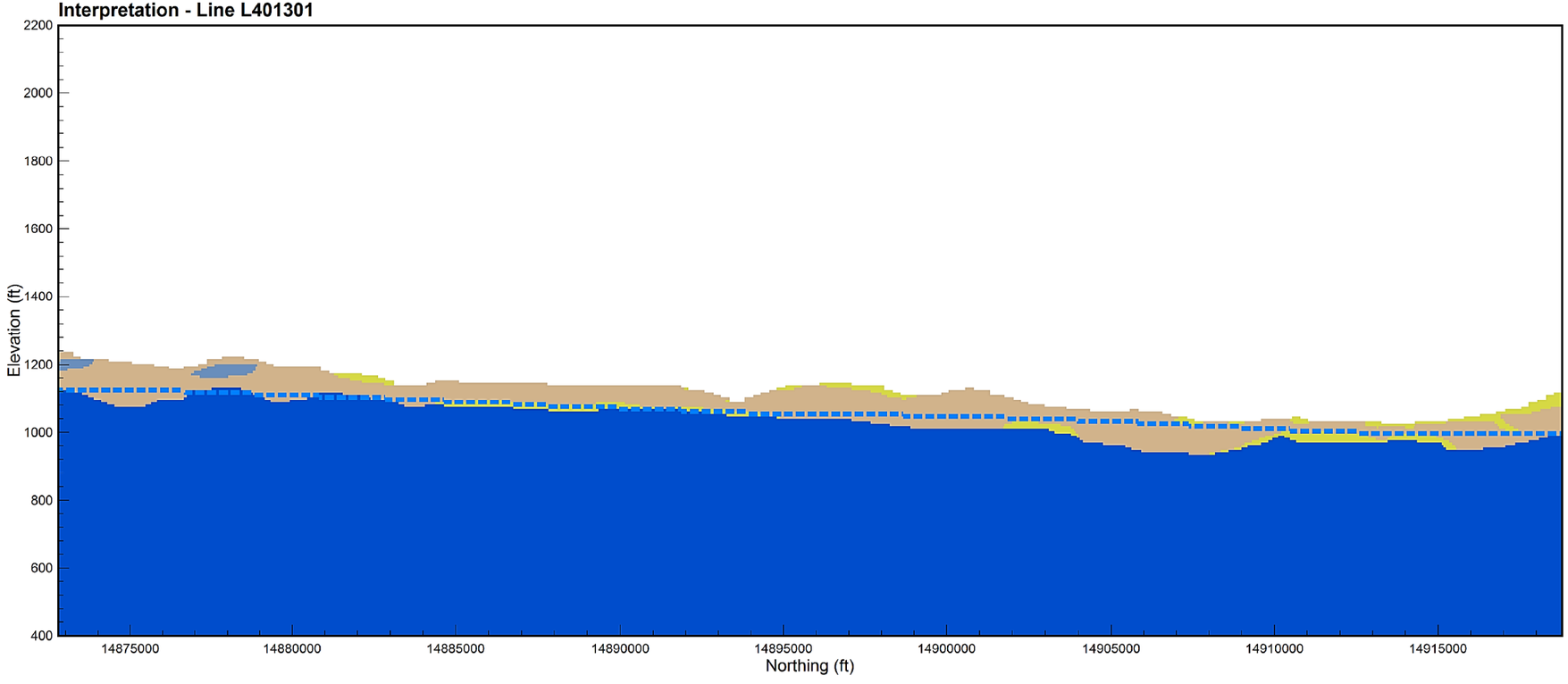
Southern ENWRA Project Area

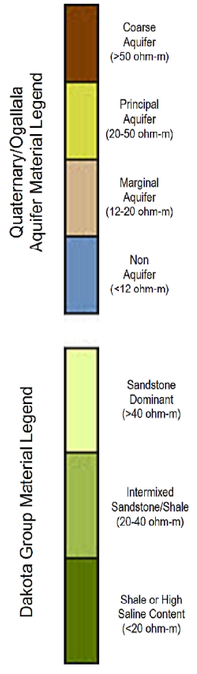
Flight Line L401201

EXRI









Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

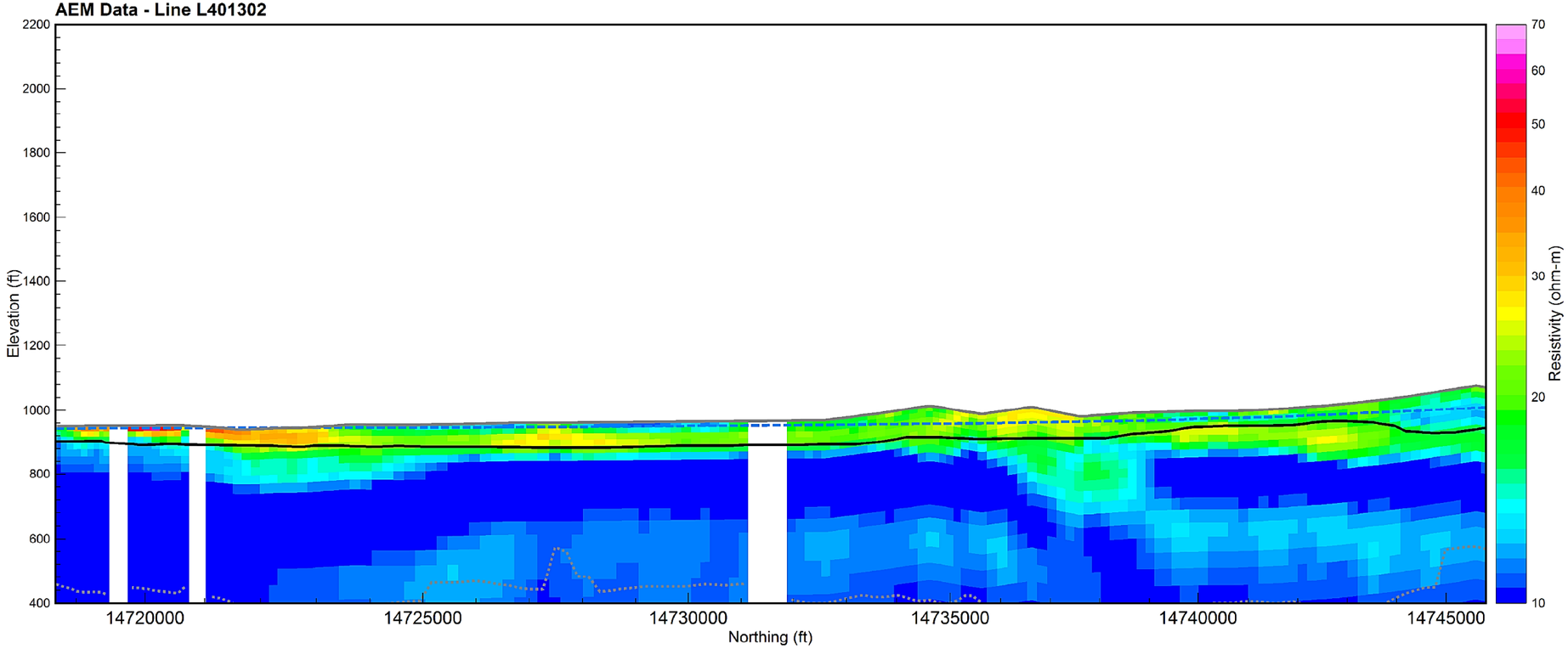
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L401301

EXRI

AEM Data - Line L401302



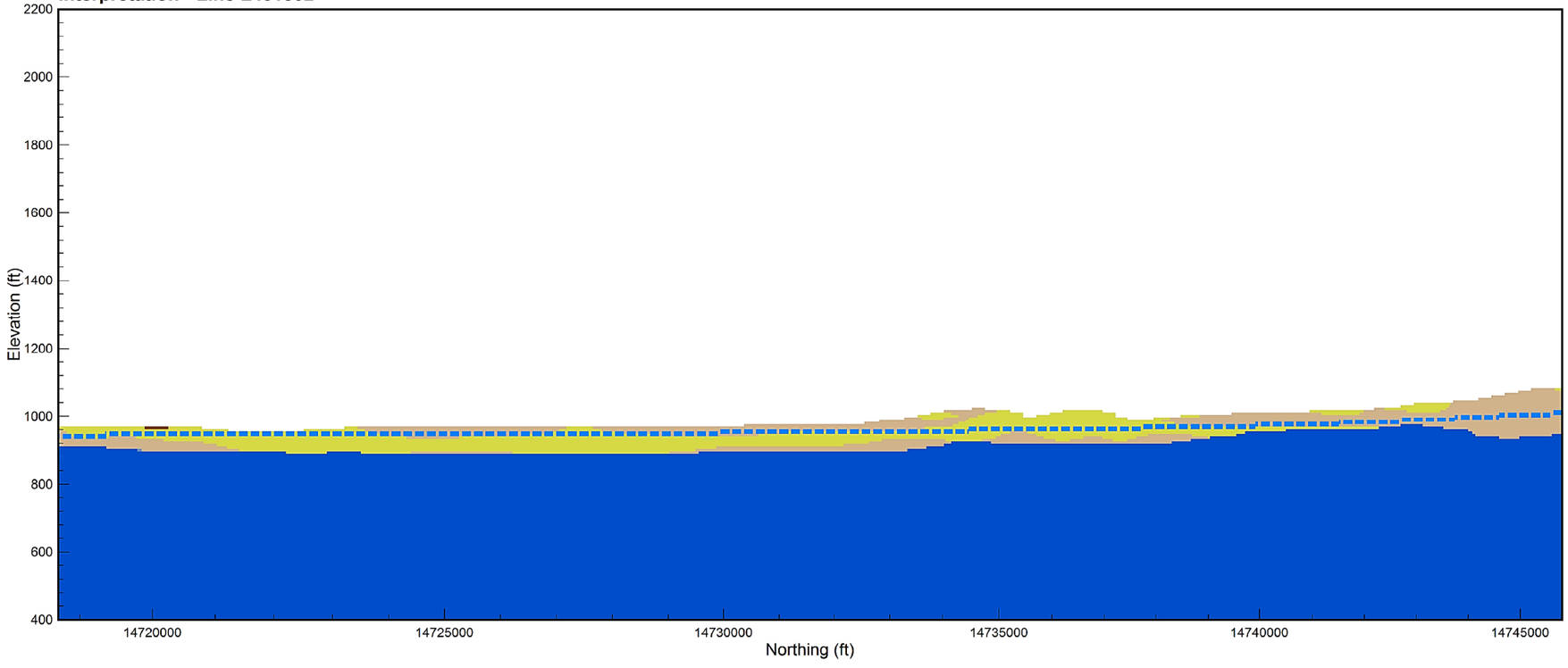
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L401302



Quaternary/Ogallala Aquifer Material Legend

- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

- Sandstone Dominant (>40 ohm-m)
- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

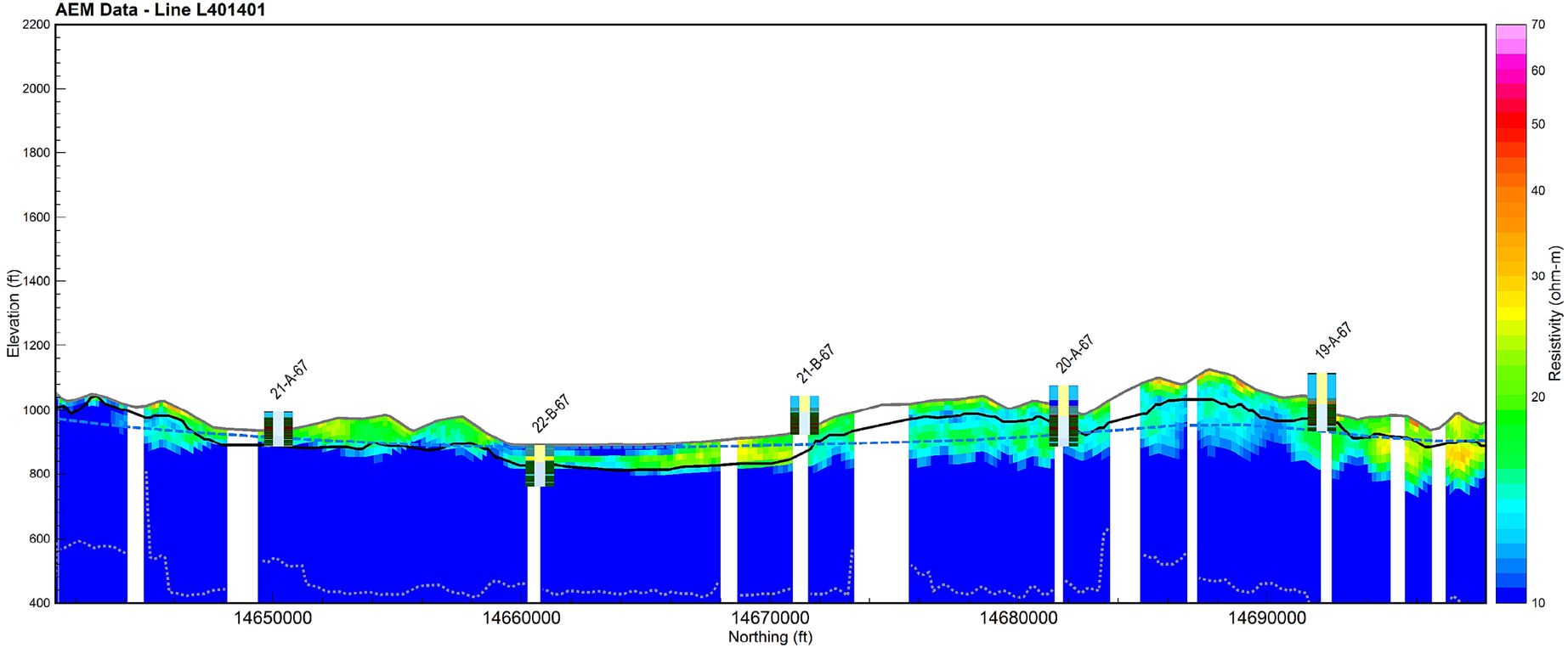
Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L401302

EXRI

AEM Data - Line L401401



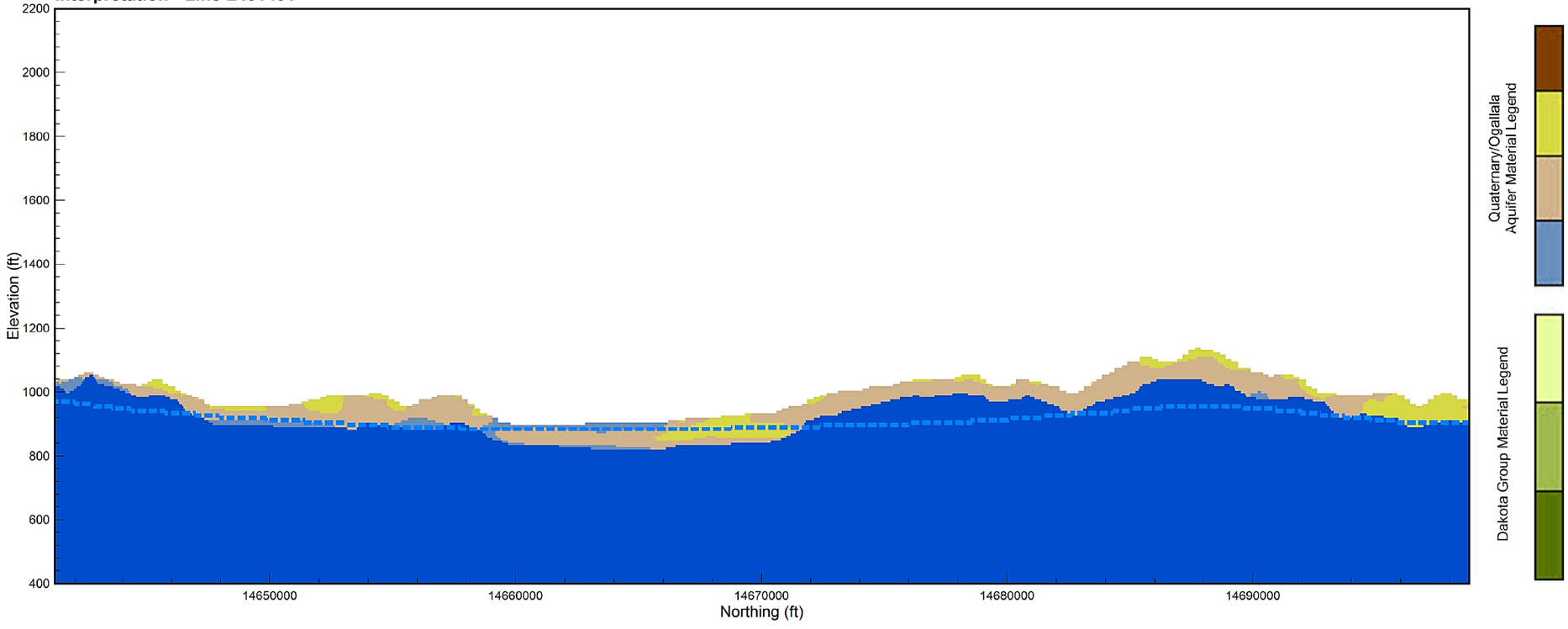
Stratigraphy Legend

- Q
- To
- Kp
- Kn
- Kc
- Kgg
- Kd
- Pc
- Pcg
- Pa
- Pw
- Ps
- Pd
- Pl
- Pkc
- Pm
- IP
- M
- D
- S
- O
- C
- pC

Lithology Legend

- No Sample
- Igneous/Metamorphics
- Limestone, Shale and Sandstone
- Limestone and Shale
- Limestone
- Dolomite and Limestone
- Dolomite
- Ironstone
- Sandstone and Shale
- Conglomerate
- Sandstone
- Siltstone
- Marl
- Chert
- Gypsum
- Chalk or chalk with interbedded fines
- Shale
- Clayey Shale/Claystone
- Coal and/or Peat
- Volcanic Ash/Bentonite
- Gravel/Boulders
- Sand and Gravel
- Sand
- Silty Sand
- Silty Clay
- Sandy Clay
- Silt/Loess
- Clay
- Till
- Roadfill and/or Topsoil

Interpretation - Line L401401



Quaternary/Ogallala Aquifer Material Legend

- Coarse Aquifer (>50 ohm-m)
- Principal Aquifer (20-50 ohm-m)
- Marginal Aquifer (12-20 ohm-m)
- Non Aquifer (<12 ohm-m)

Dakota Group Material Legend

- Sandstone Dominant (>40 ohm-m)
- Intermixed Sandstone/Shale (20-40 ohm-m)
- Shale or High Saline Content (<20 ohm-m)

Explanation: The top panel shows the inverted AEM sections from the southern project area flight lines. The x-axis is shown as Easting or Northing coordinates along the flight line in NAD83 UTM Zone 14 using feet. See the Line Location map for specific line location. White space in the top panel shows where data were removed due to coupling or were not flown due to FAA regulations. CSD boreholes within 1 mile of the flight line are also shown with lithology and stratigraphy. The stratigraphy data overlays the lithology data at each borehole. The CSD 1995 water table is shown on both panels as a dashed blue line. The interpreted geologic units are shown on the top panel as solid black lines. The less conservative, calculated DOI is shown as a dotted gray line on the top panel. The bottom panel shows the interpreted geologic units using the Stratigraphy Legend based on analysis of the AEM and borehole data. Potential aquifer material in the Quaternary sediments and the underlying Ogallala Group (where resent) are color-coded using the Quaternary/Ogallala Aquifer Material Legend. Locations where the Ogallala Group is interpreted, the top of the group is indicated by an orange line. The Dakota Group has been differentiated by resistivity values to indicate interpreted material type. The Kc and Kgg units have been combined and re displayed using the Kc stratigraphic color designation. The Paleozoic units are undifferentiated and displayed using the IP stratigraphic color designation.

Eastern Nebraska Water Resources Assessment

Airborne Geophysical Surveys Resistivity and Geologic Interpretation Sections

Southern ENWRA Project Area

Flight Line L401401

EXRI