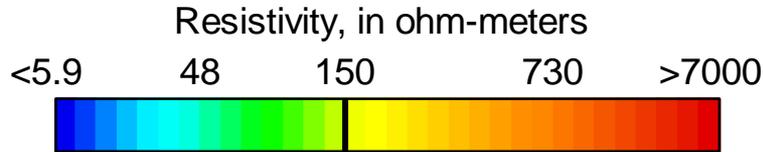
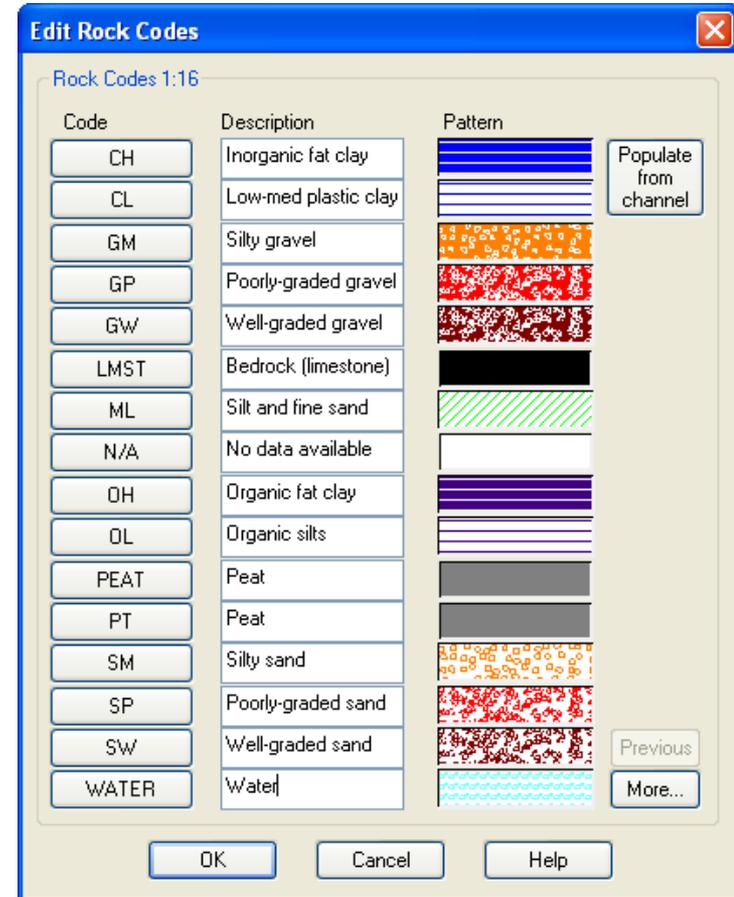


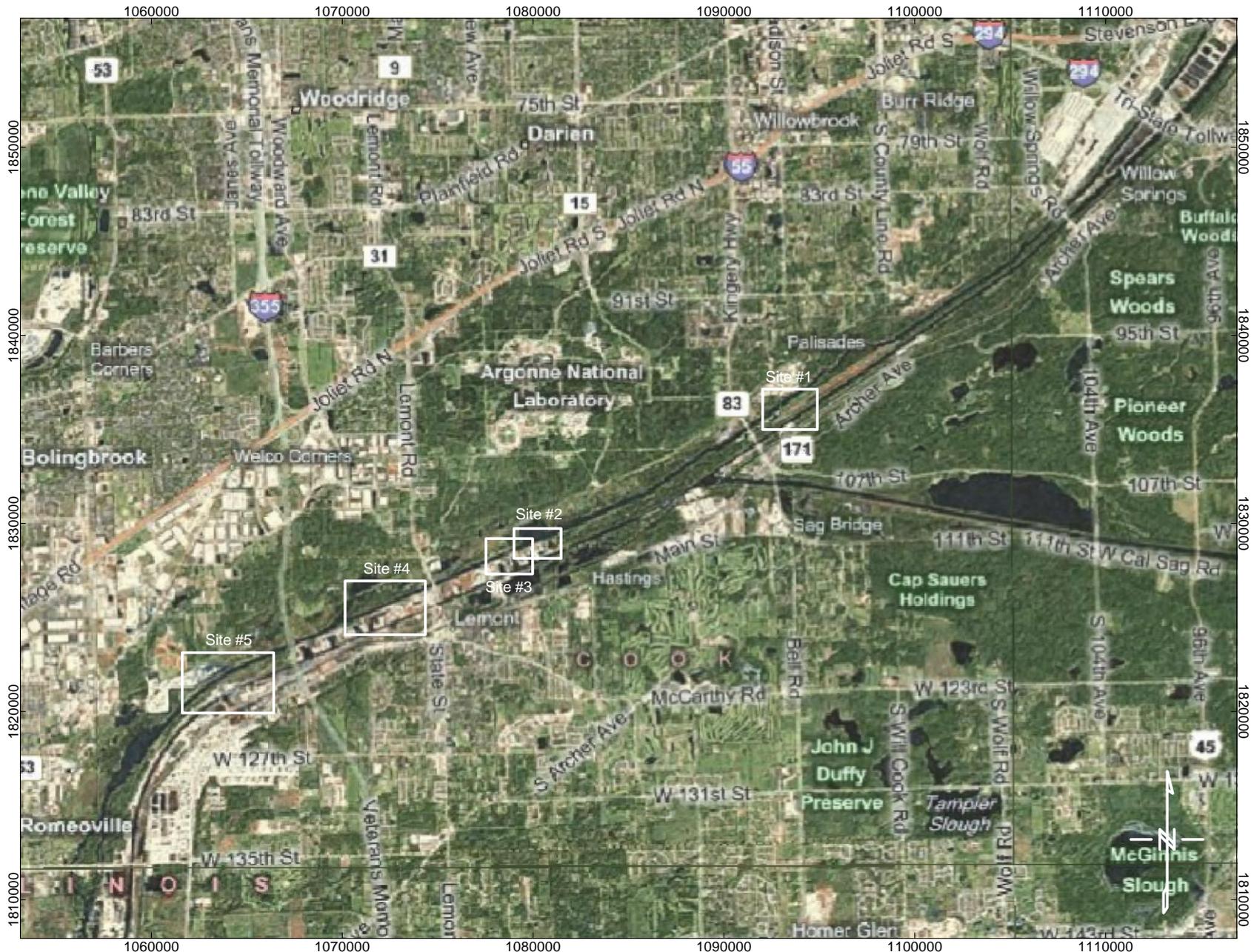
EXPLANATION



This resistivity scale is used for all direct-current resistivity profiles. The black line at 150 ohm-meters represents the estimated resistivity of contact between the limestone bedrock and the fill or other anomalous features found in the profiles. The actual resistivity of the limestone can be this value or higher.

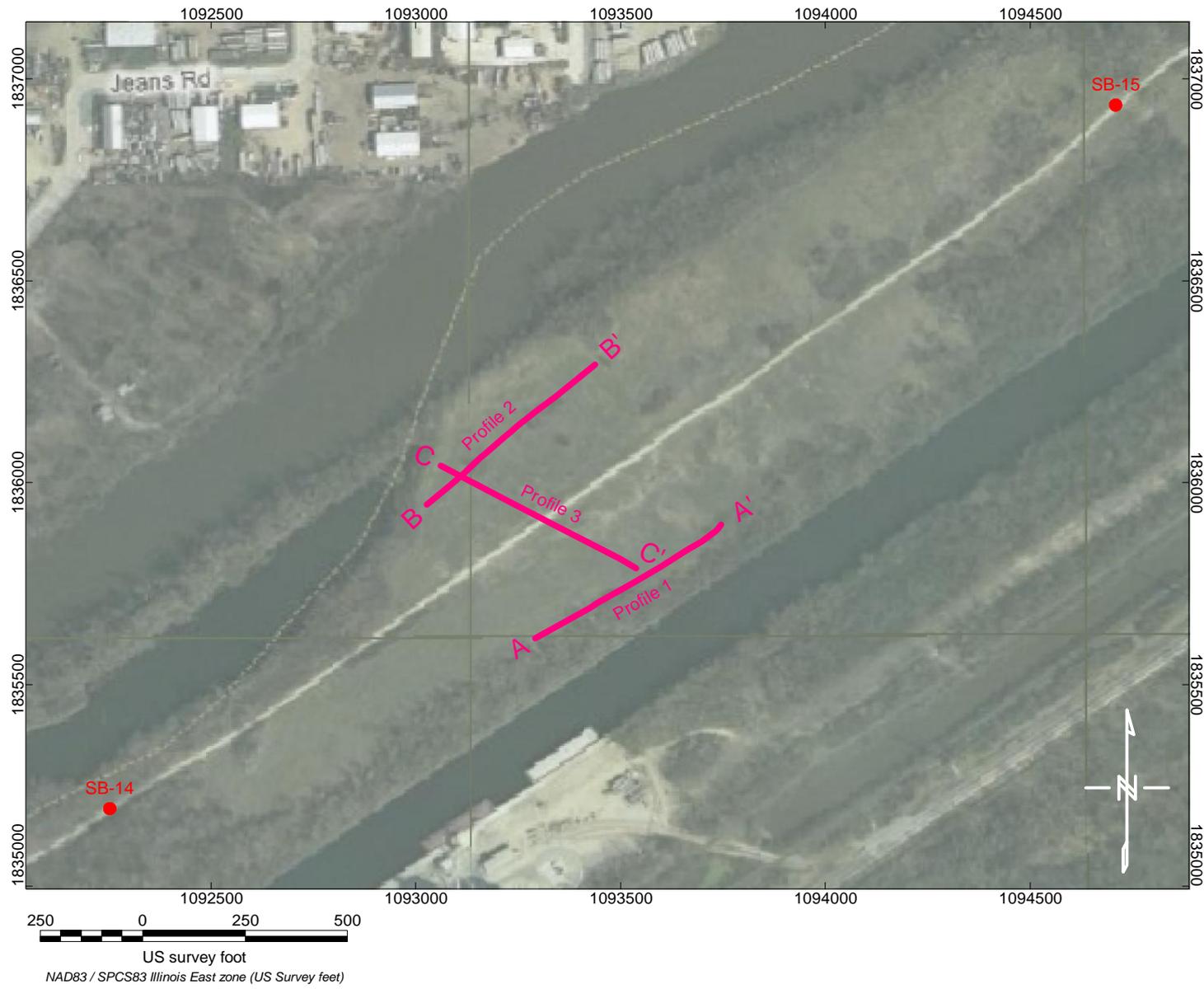


Codes were taken from the AECOM Soil Classification System found in the *Subsurface Investigation: Dispersal Barrier Efficacy Study – Overflow Bypass* by the U.S. Army Corps of Engineers. A more complete description of these codes can be found on page 18 of that report.



NAD83 / SPCS83 Illinois East zone (US Survey feet)

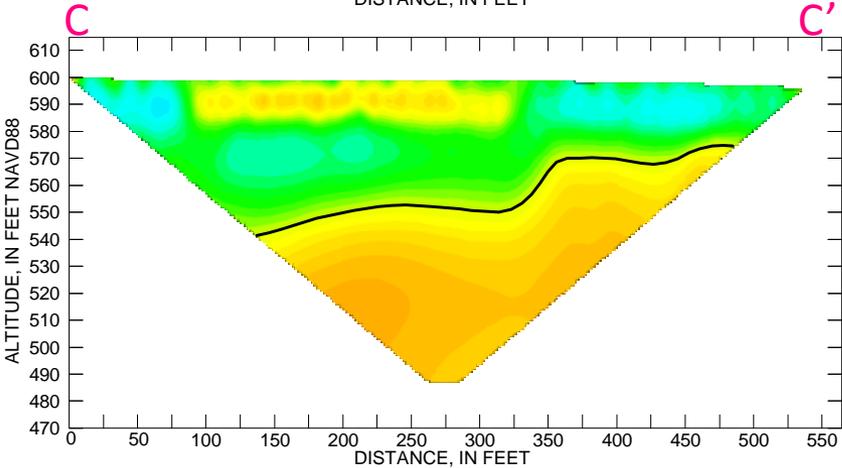
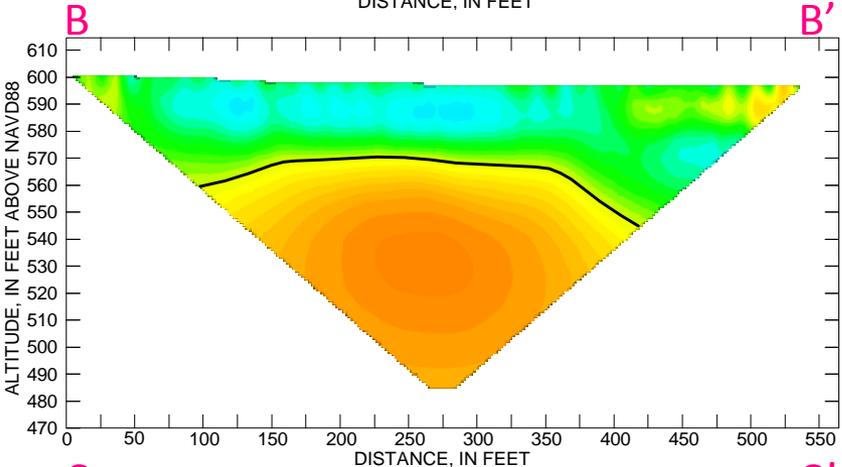
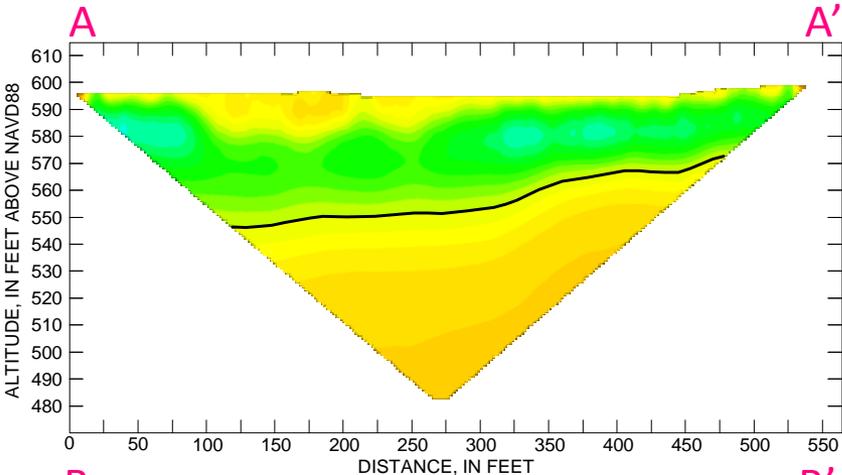




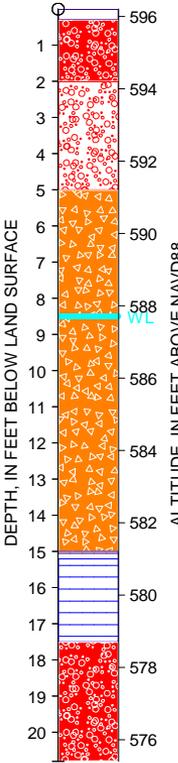
Site #1

Site #1

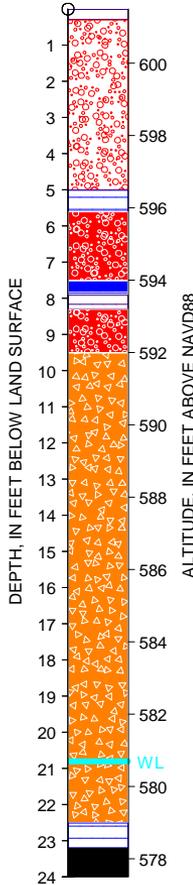
Bedrock is consistent across the site.
 No apparent horizontal or vertical anomalous features exist.

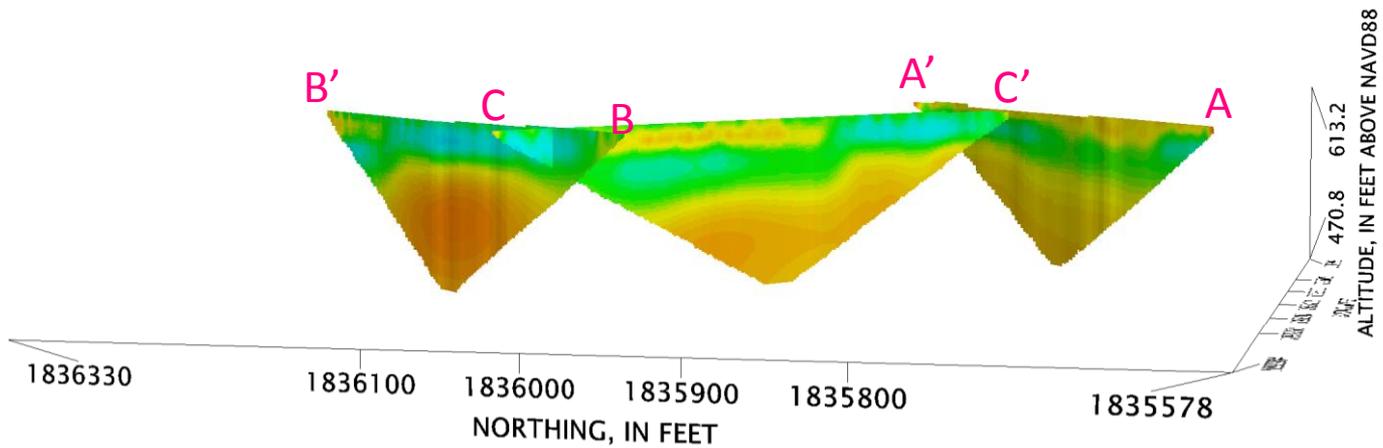
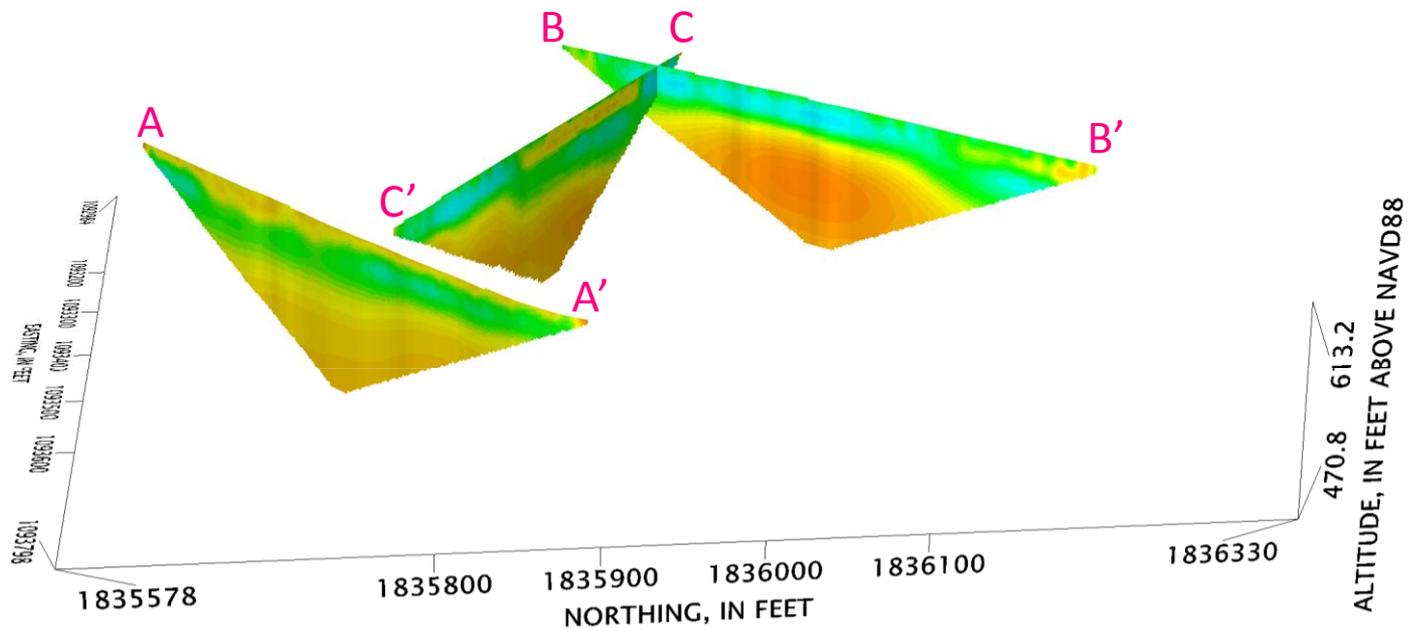


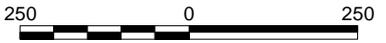
SB-14



SB-15





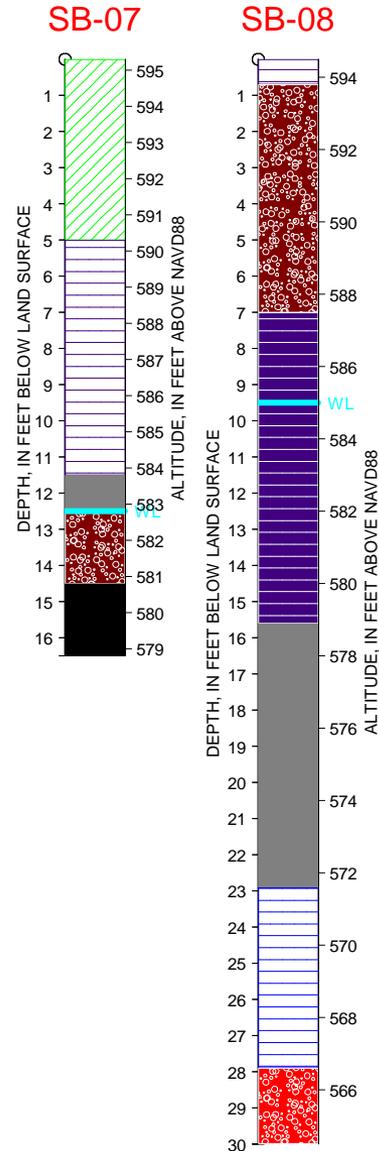
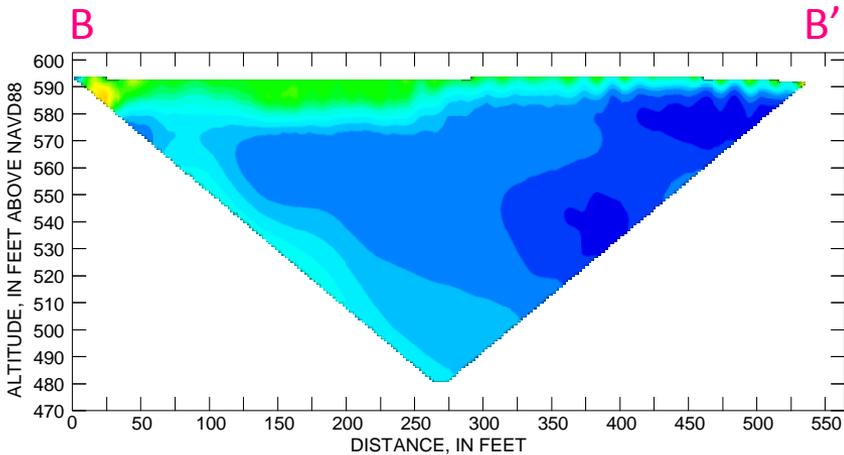
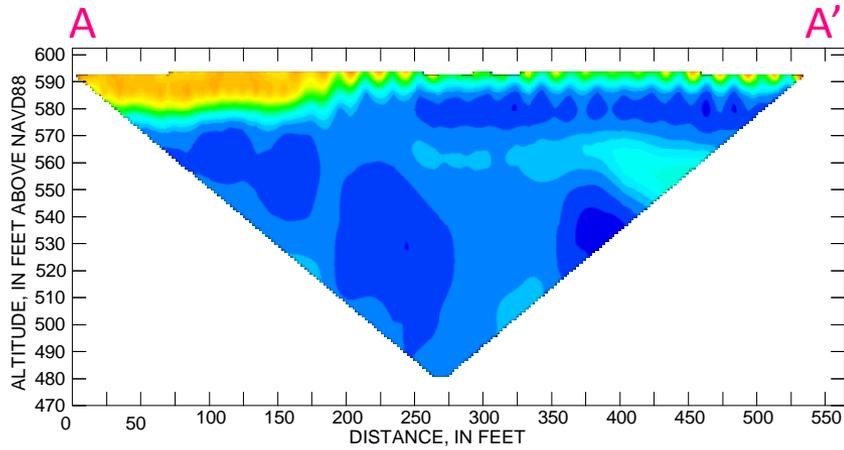


NAD83 / SPCS83 Illinois East zone (US Survey feet)



Site #2

Site #2

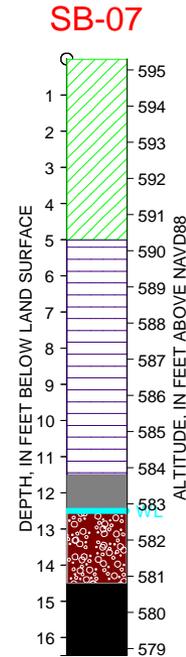
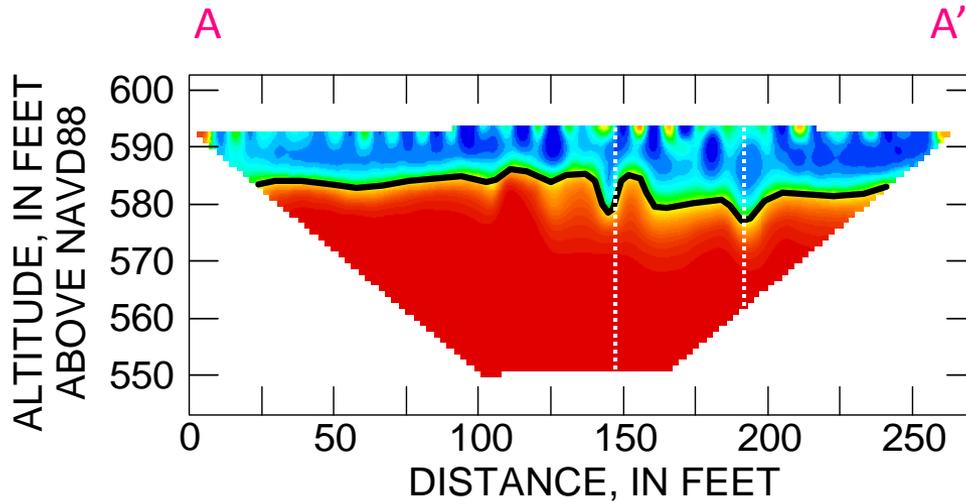


Bedrock is most likely absent at this site. SB-08 which is right next to the two profiles showed fill from surface to a depth of 30 feet and never hit bedrock. DC profiles appear to show that the fill continues down to more than 100 feet. There is a possibility that the near surface low resistive clays and silts are drowning out the highly resistive bedrock which may explain the small resistivity increase at an altitude of about 520 feet above NAVD88.



Site #3

Site #3

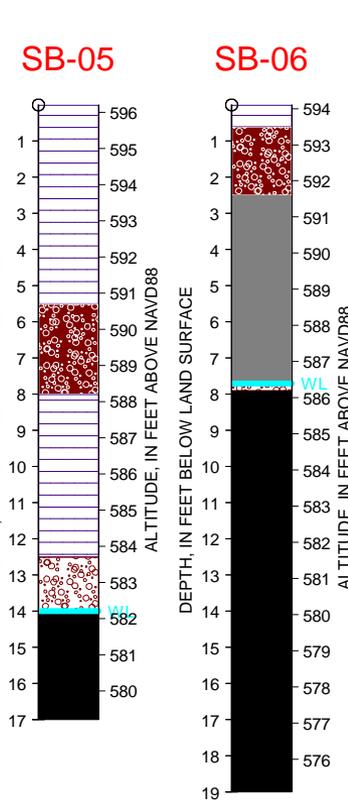
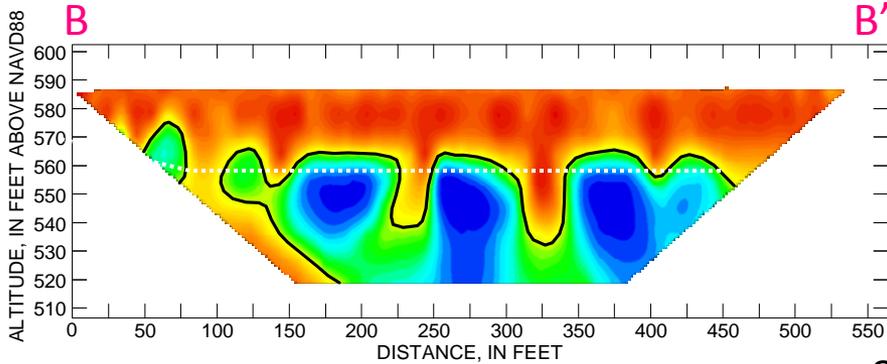
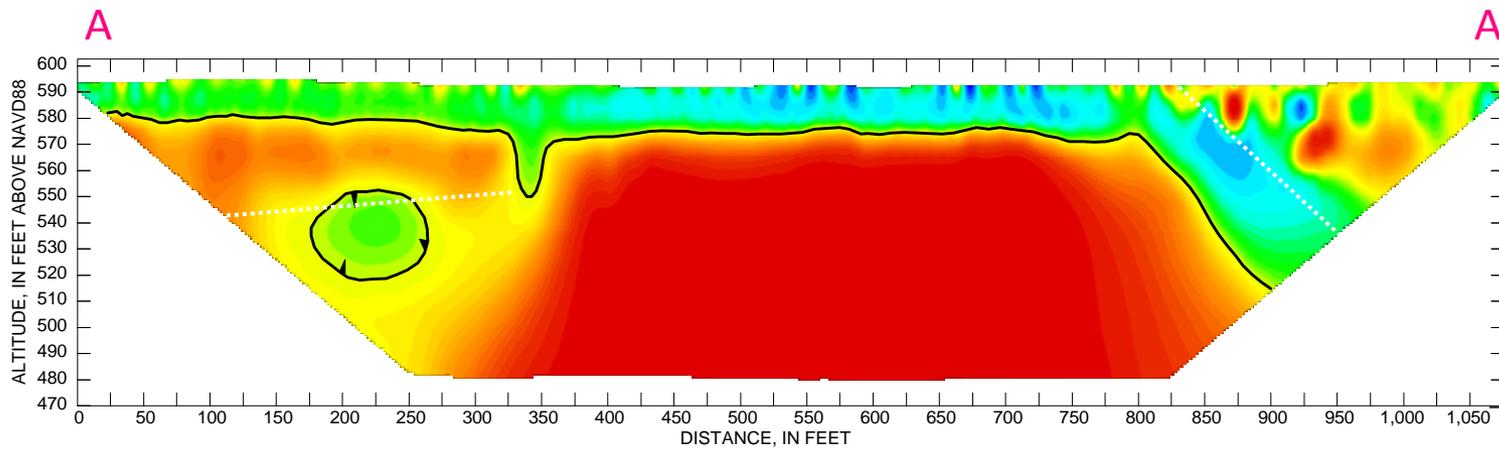


Bedrock can be observed across the whole profile with a bedrock altitude of about 584 feet at the beginning of the profile and drops to an altitude of 580 feet at approximately 160 feet from the beginning of the profile.

There are two vertical anomalous features found in the profile with the first feature found at about 145 feet from the beginning of the profile and the second feature found at about 192 feet from the beginning of the profile. These features may represent small vertical fractures within the bedrock with the first feature being a more prominent than the second feature.



Site #4



Site #4

There are many observable anomalous features (white lines) found at this site.

Profile 8 (A-A')

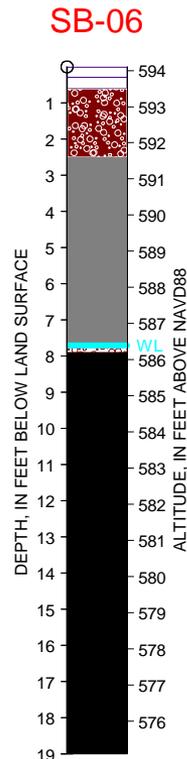
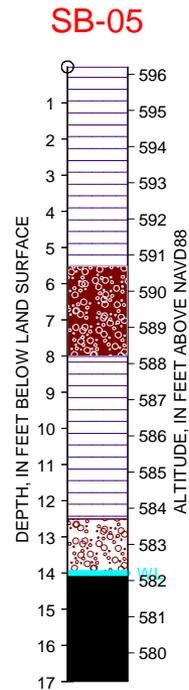
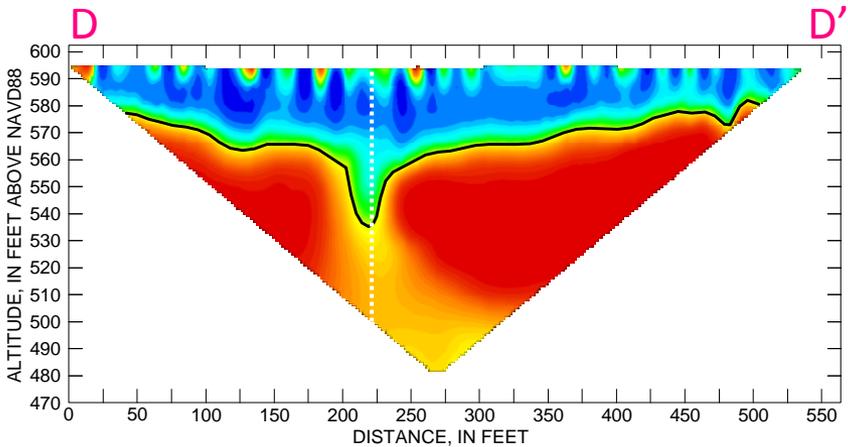
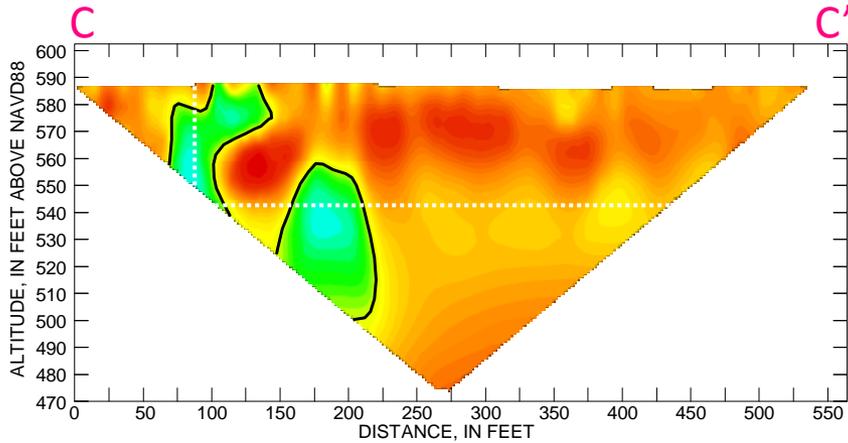
There is a vertical anomalous feature at about 340 feet along the profile. There is also a horizontal anomalous feature at an altitude of about 540 feet above NAVD88 which starts at the beginning of the profile and ends at the vertical anomalous feature found at 340 feet. There is also a diagonal anomalous feature found at about 820 feet along the profile with an approximate angle of about 25 degrees from the land surface. These anomalies could be associated with fractures but at the beginning of the profile. There was a power line running parallel with the profile from the beginning of the profile to about 350 feet along the profile. There was also a thunderstorm near the area during collection of the last segment of the profile from about 820 feet to the end of the profile. Both external sources of energy could have skewed the results. However, due to the anomalous features found at the nearby profiles, these features cannot be ignored.

Profile 9 (B-B')

There is a horizontal anomalous feature found across the total length of the profile at an approximate altitude of 562 feet above NAVD88 with the anomalous feature rising up to an approximate altitude of 571 feet above NAVD88 near the beginning of the profile. The darker blue zones found in the profile could represent larger fractures or a more weathered zone comprised of multiple fractures.



Site #4 (cont.)

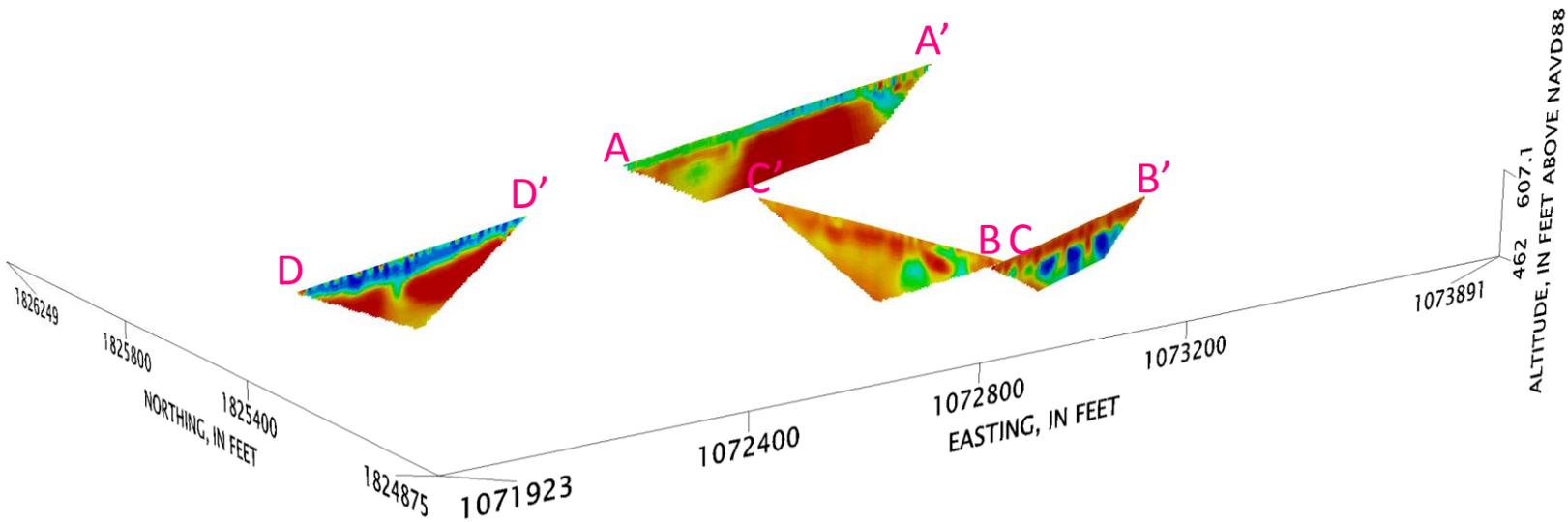
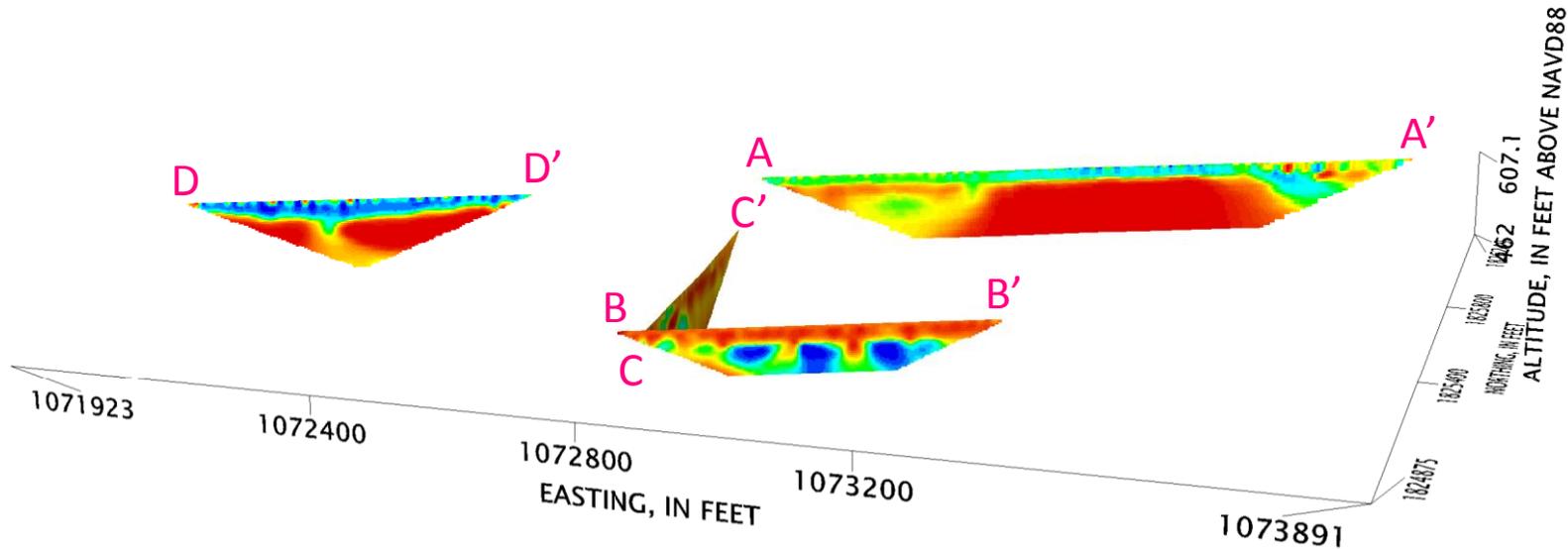


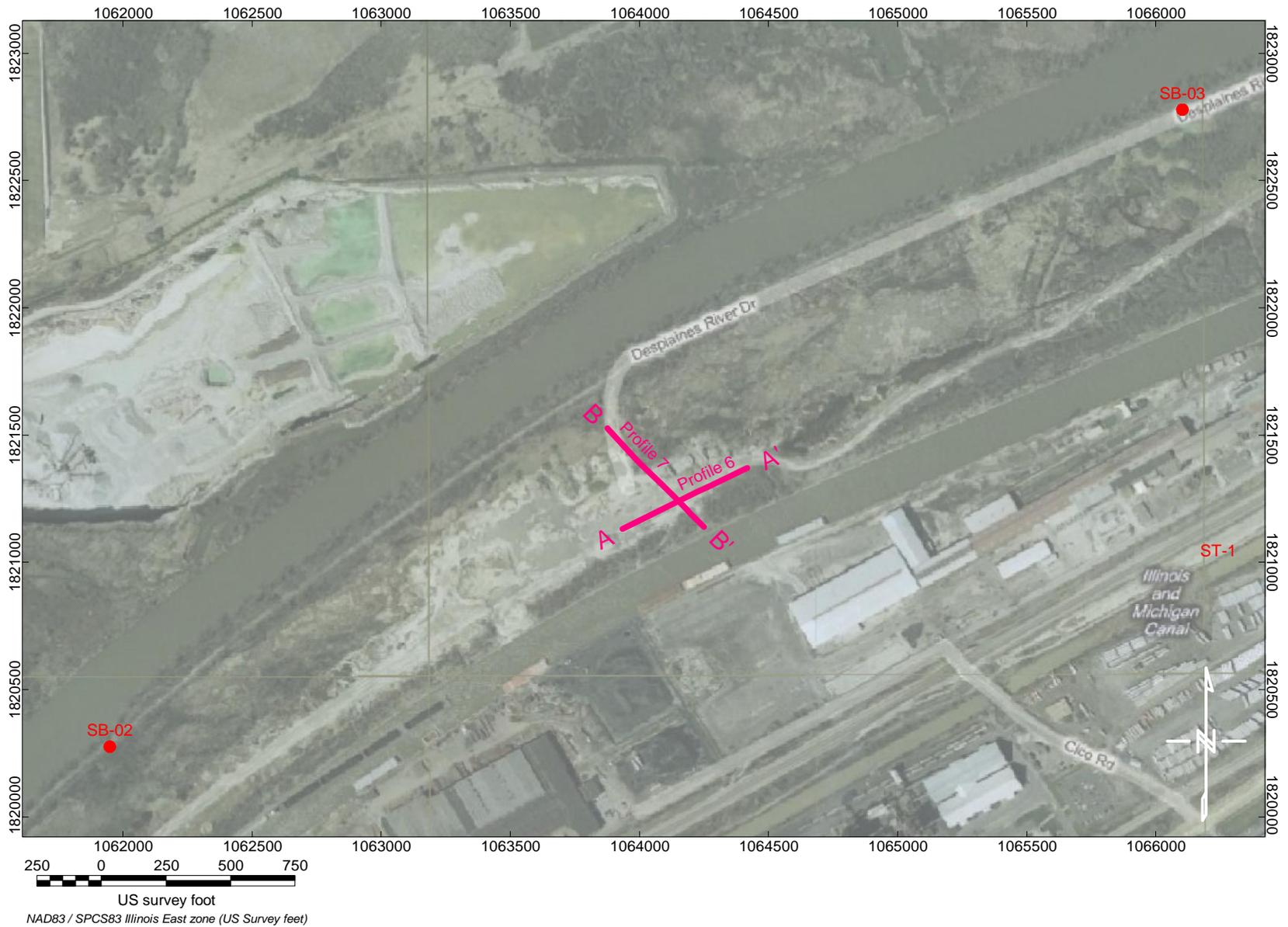
Profile 10 (C-C')

There is a horizontal anomalous feature found across the total length of the profile with the feature being more prominent (less resistive and more blue and green in color) near the beginning of the profile and becoming less prominent (more resistive and more yellow and orange in color) towards the end of the profile. This could represent a fracture or fracture zone that decreases in size toward the end of the profile (or further north on the site). There is also a vertical anomalous feature found at about 85 feet from the beginning of the profile.

Profile 11 (D-D')

There is a vertical anomalous feature found at approximately 220 feet from the beginning of the profile. This feature could be representative of a vertical fracture found at the site, but the profile was collected near (within 5 feet) from a chain linked fence which could skew the results. But similar to Profile 8, this feature cannot be ignored due to the other anomalous features found on nearby profiles.

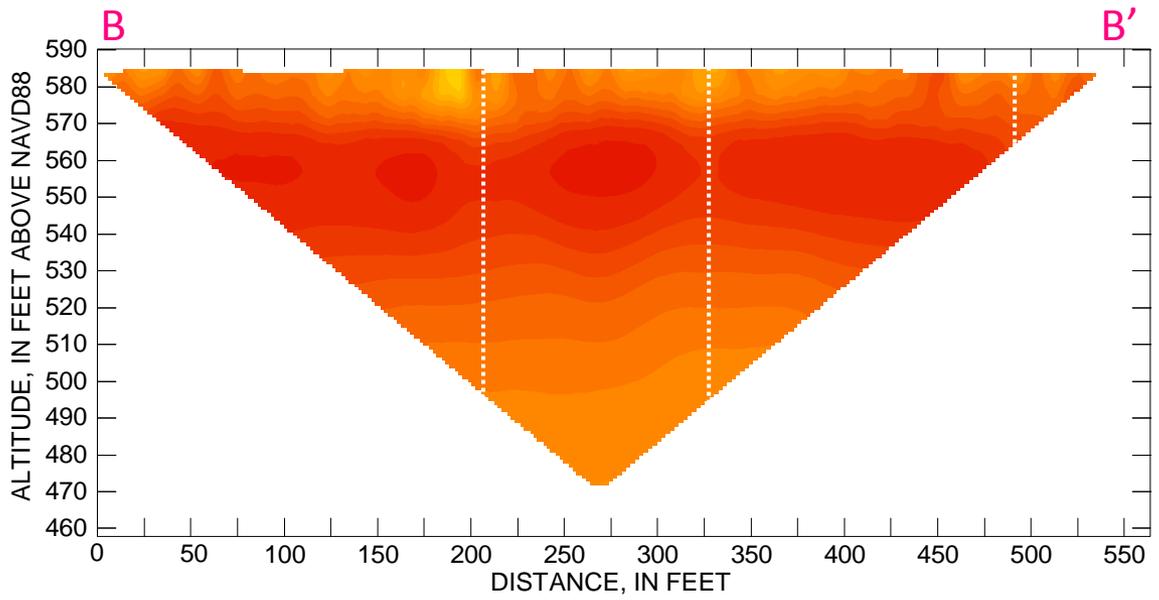
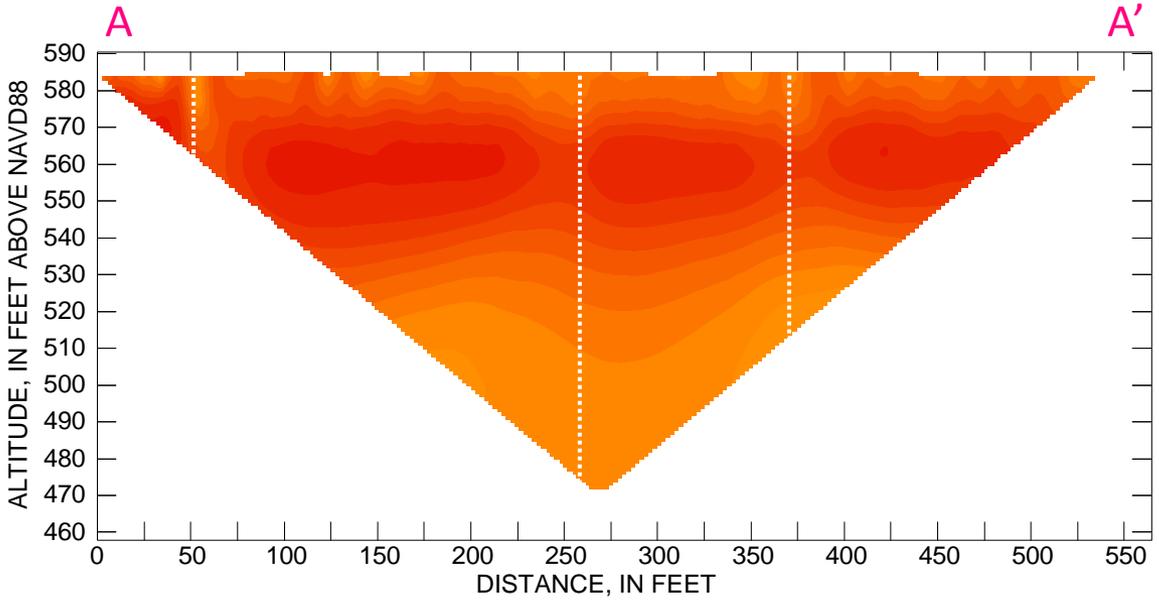




Site #5

Site #5

Bedrock is met at surface.
 This is verified by the boring logs which show the bedrock altitude to be approximately 582 feet above NAVD88. There are some observable vertical features (white vertical lines on the profiles) which may represent fractures, but if they are fractures they would be insignificant in size.



SB-02

SB-03

