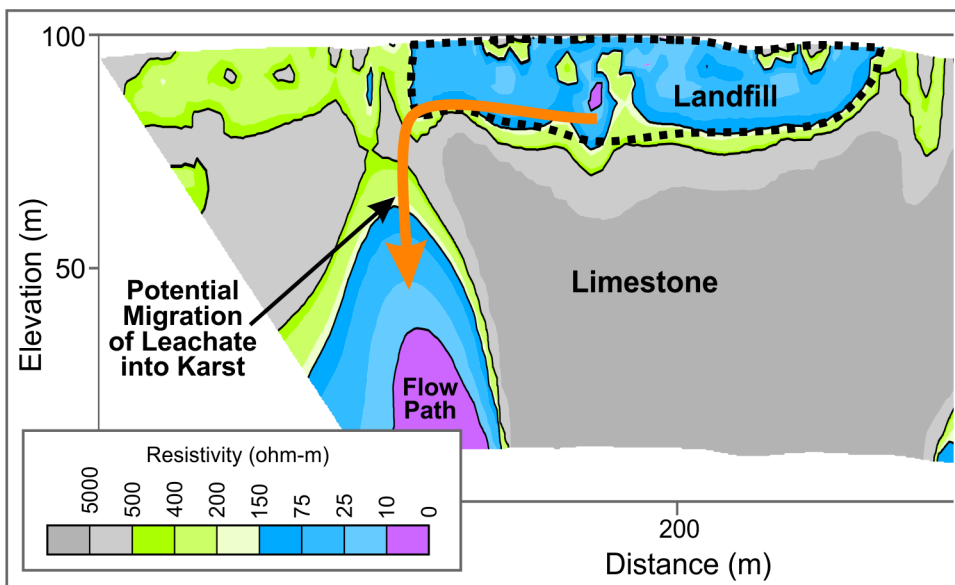


# CASE STUDY

## LEACHATE EXCURSION AT KARST LANDFILL



An unlined landfill had a history of operational and post-closure problems including problems maintaining the cap and cover, seeps, leachate, and groundwater contamination. The landfill is located in fossiliferous limestone which has karst dissolution features such as fissures, sinkholes, and caves. Surface seeps near the landfill had a pronounced oily sheen, and are attributed to contamination of the groundwater by the landfill.



Aestus' GeoTrax Survey™ scanning technology was used to delineate the landfill boundaries as well as the geologic conditions beneath the landfill to a depth of about 100 meters. The graphic above shows:

- Landfill extents with underlying competent limestone
- Karst void/cave likely containing leachate impacted groundwater

### Why is landfill leachate highly detectable in Aestus' imagery?

At the majority of landfills, leachate has a higher fluid electrical conductivity than the surrounding groundwater. This makes the flowpaths from landfills highly visible as electrically conductive pathways. A set of GeoTrax Surveys can allow the delineation of the flowpaths to evaluate remediation of the landfill prism and/or to target downgradient impacts.

## RESULTS

- GeoTrax Survey™ identified landfill extents and underlying geology/conditions
- Located leachate excursion in complex karst geology below landfill
- Safe and effective Ultra-HRSC without drilling through landfill prism
- More comprehensive depiction of site issues as compared to untargeted drilling

## WHAT MAKES AESTUS SUPERIOR

1. Far more accurate than traditional methods
2. Images enable targeted drilling, monitoring and remediation
3. Geology independent
4. Utilizing Oklahoma State University intellectual property
5. Faster site closure at a lower cost