

Subsurface Pipe Assessment: *3D EM Technologies*

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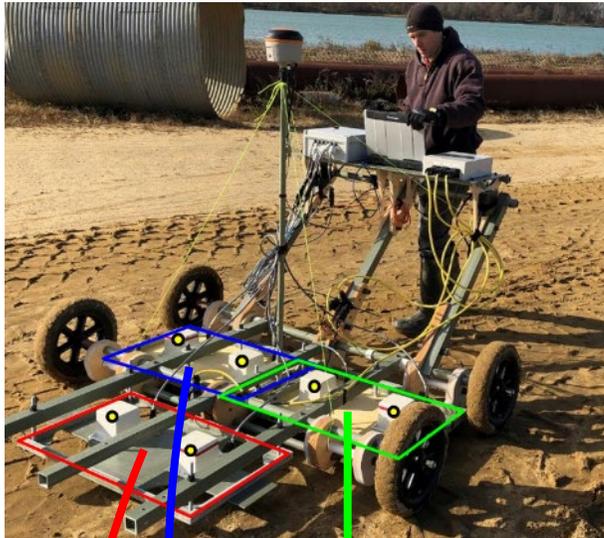
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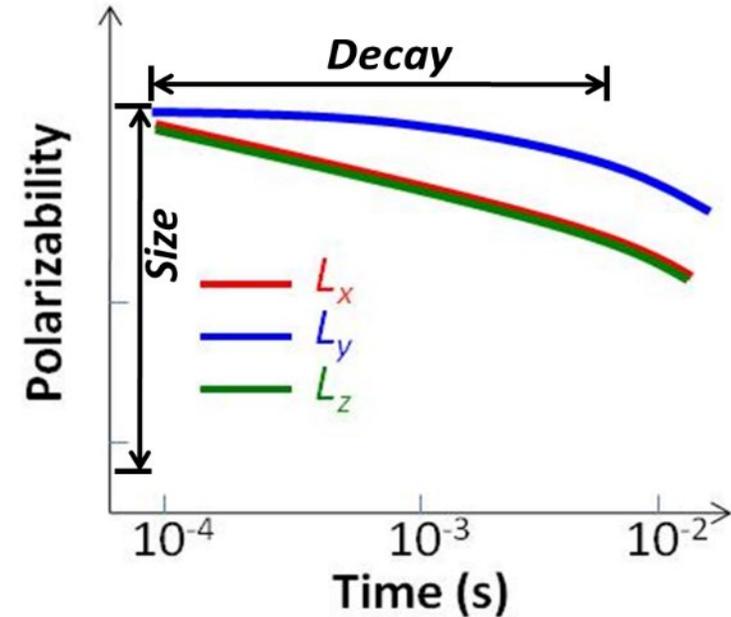
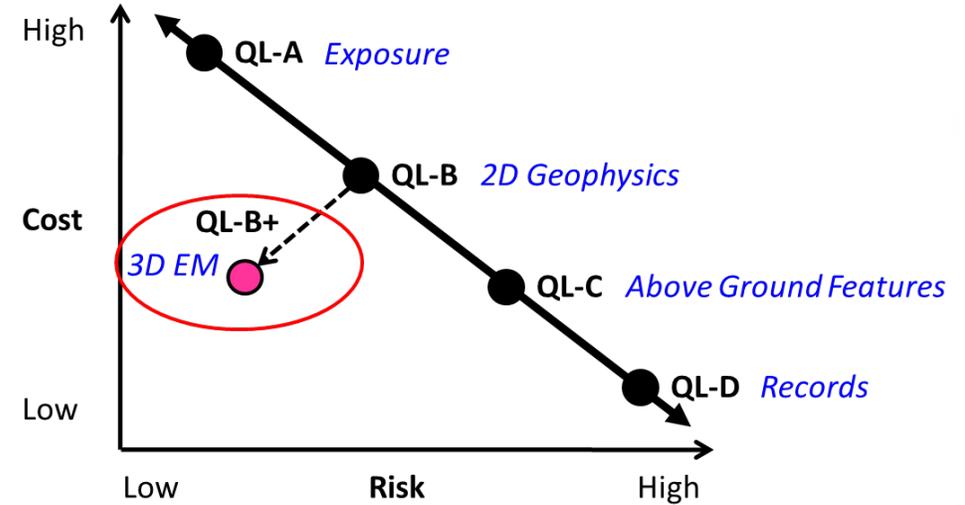
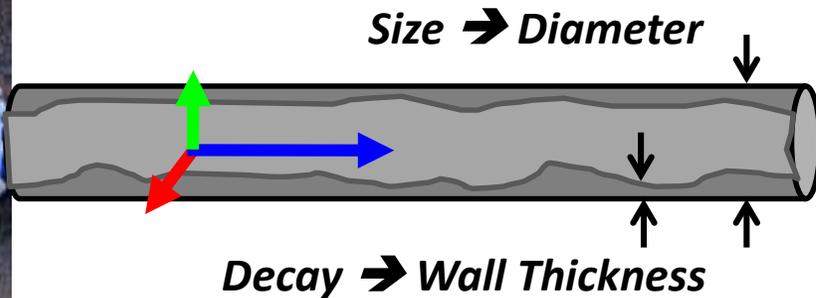
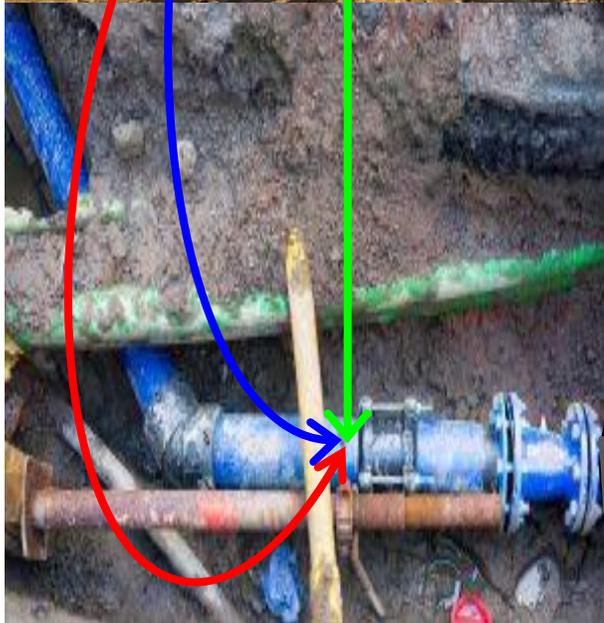
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3DEM Above Ground Pipe Characterization

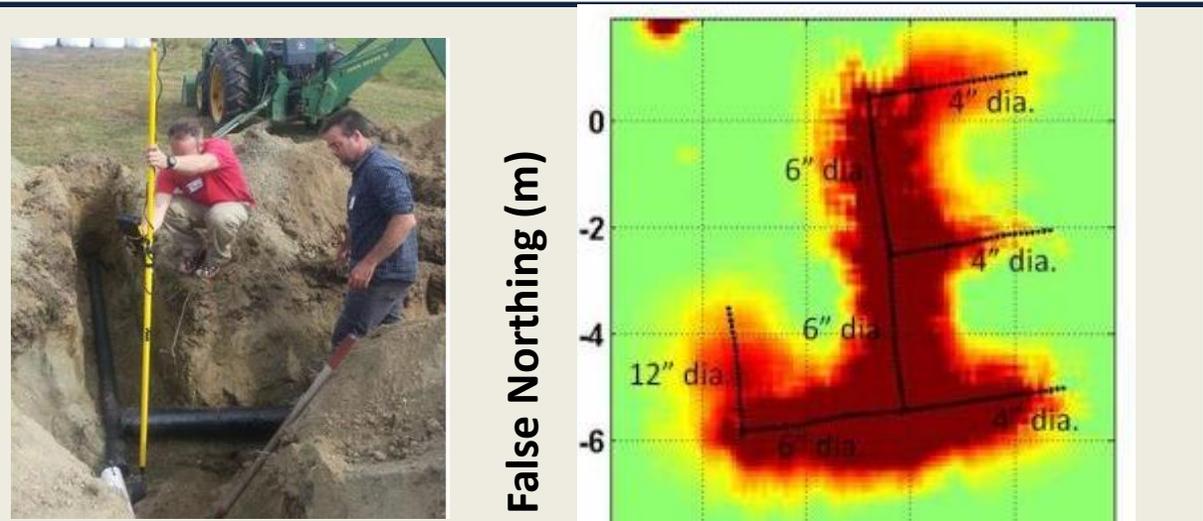
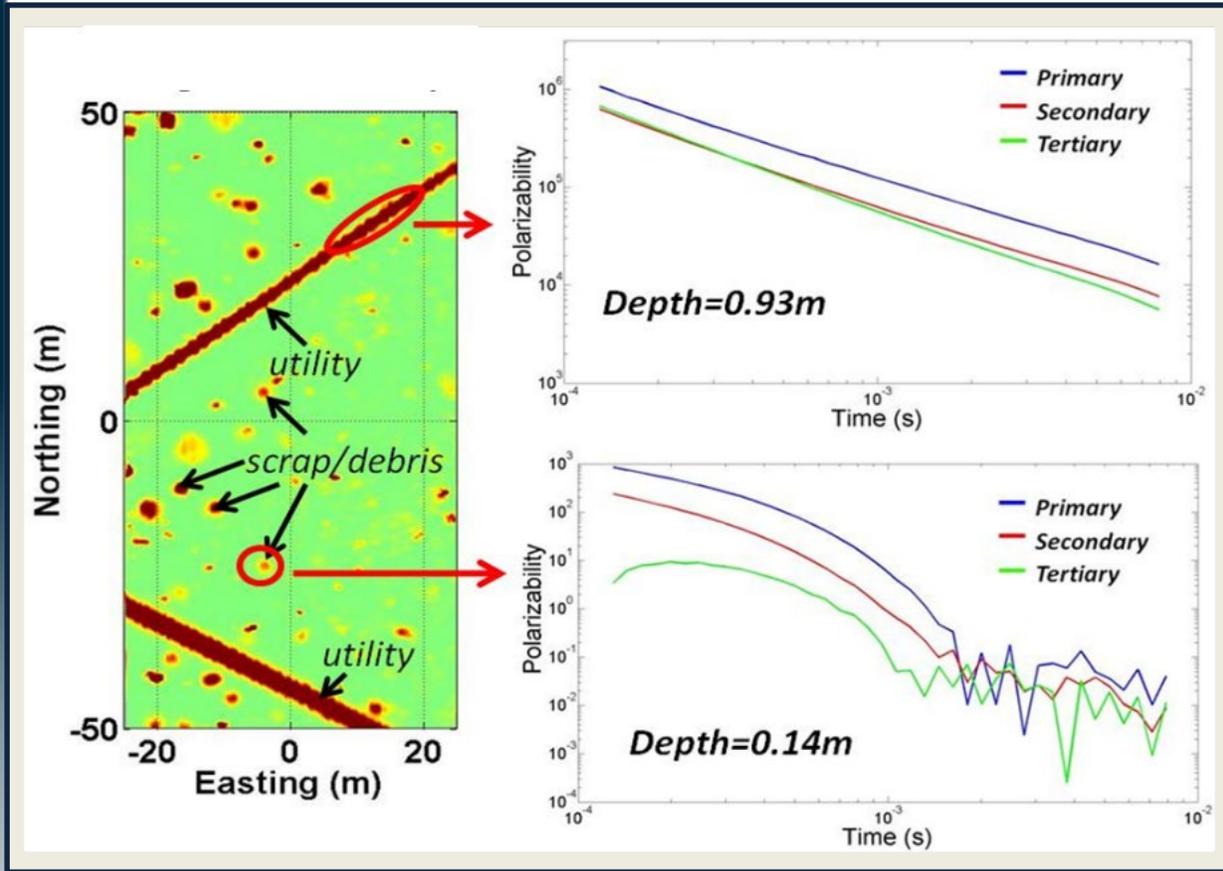


3D EM reduce risk & cost via complete 3D mapping capabilities, composition, & condition assessments

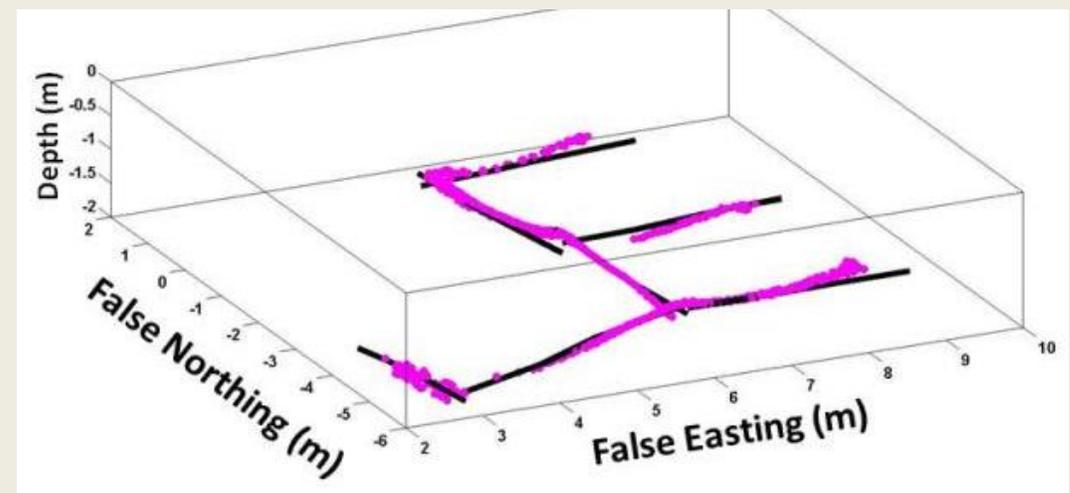
- Intrinsic properties → invariant of pipe depth or orientation;
- High fidelity localization (XYZ and orientation), size-shape & material characterization



3DEM: Utility Network Mapping

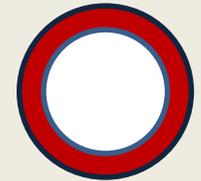
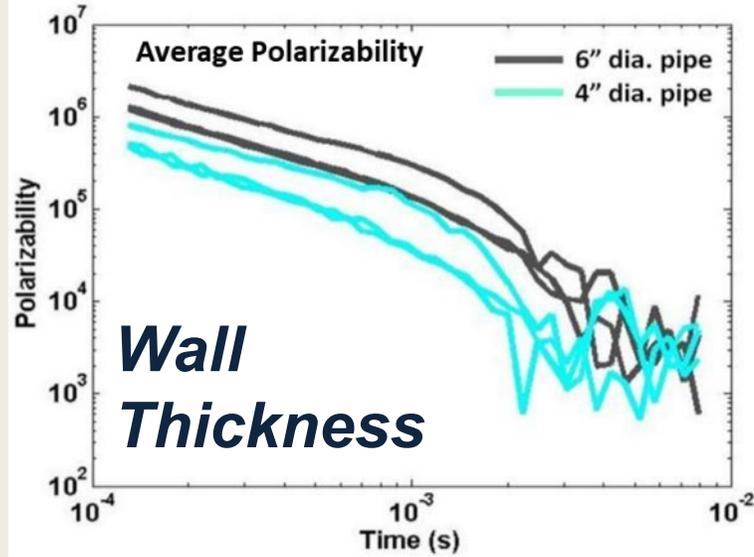


3D Pipe Locations:
X, Y and Z



- Typical localization accuracy <5cm to 2m depth
- 3DEM location/orientation, size/shape features robust in presence of multiple objects

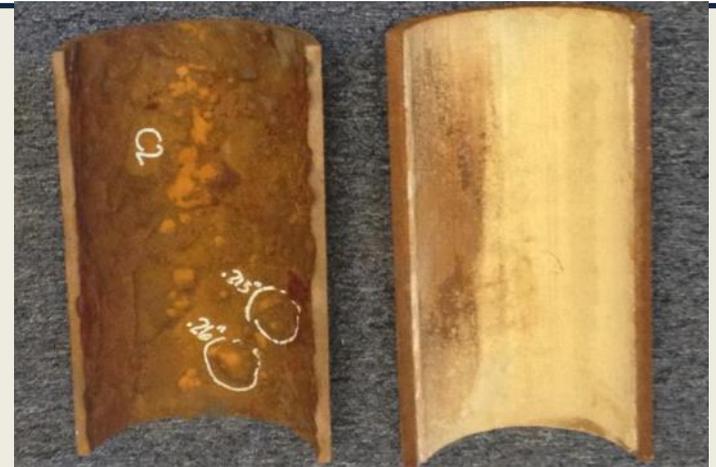
3DEM: Composition & Condition



intact (6")



deteriorated (6")



Reduced wall thickness due to spalling & pitting

