

# Former Nebraska Ordnance Plant Helicopter Electromagnetic and Magnetic Geophysical Survey



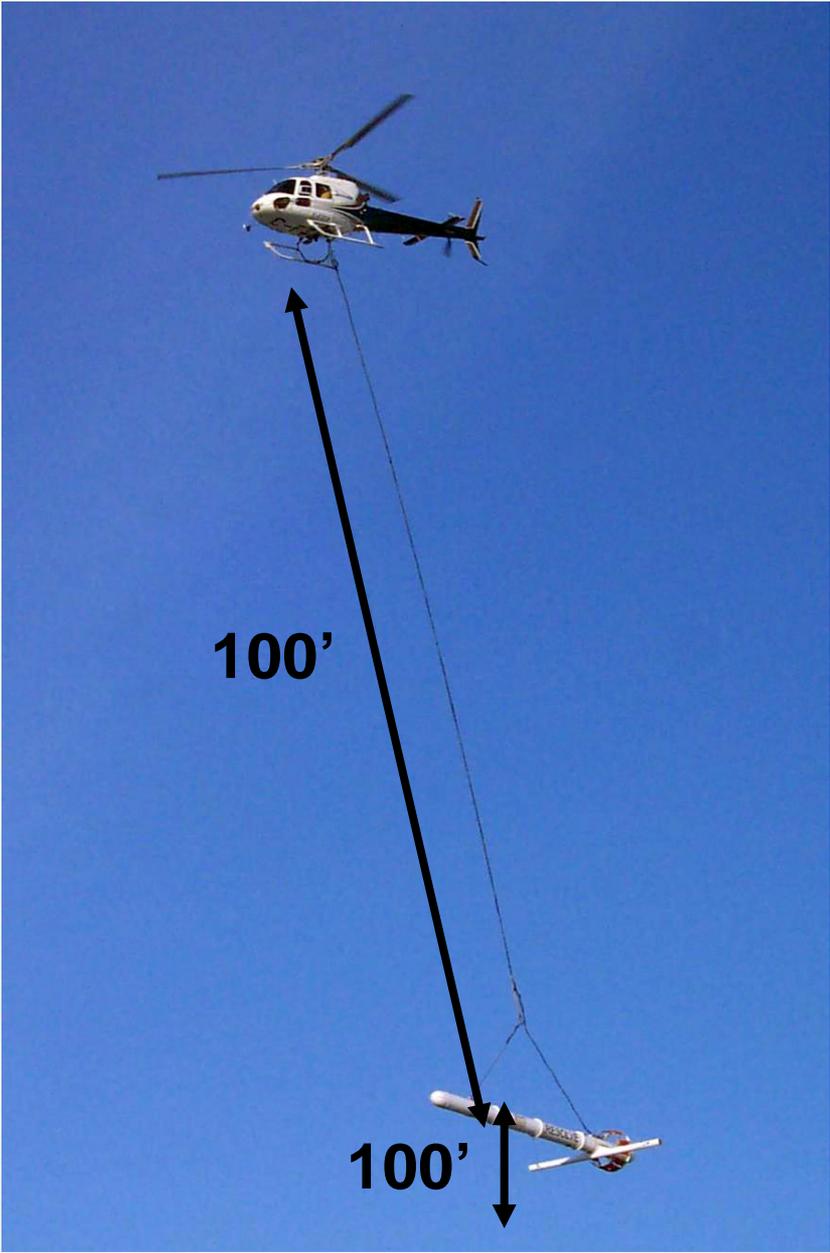
July 18, 2012



US Army Corps of Engineers

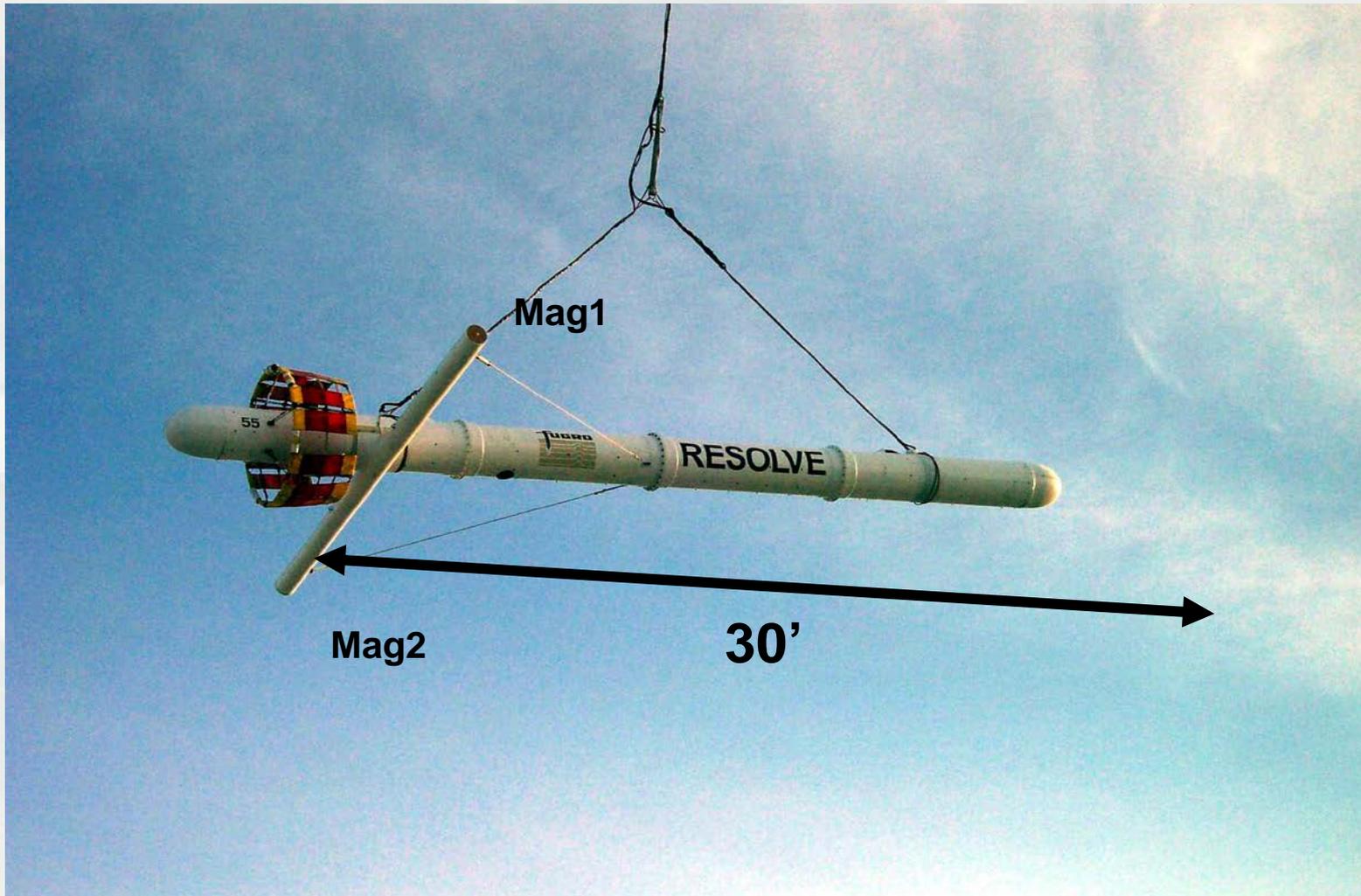
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# RESOLVE System

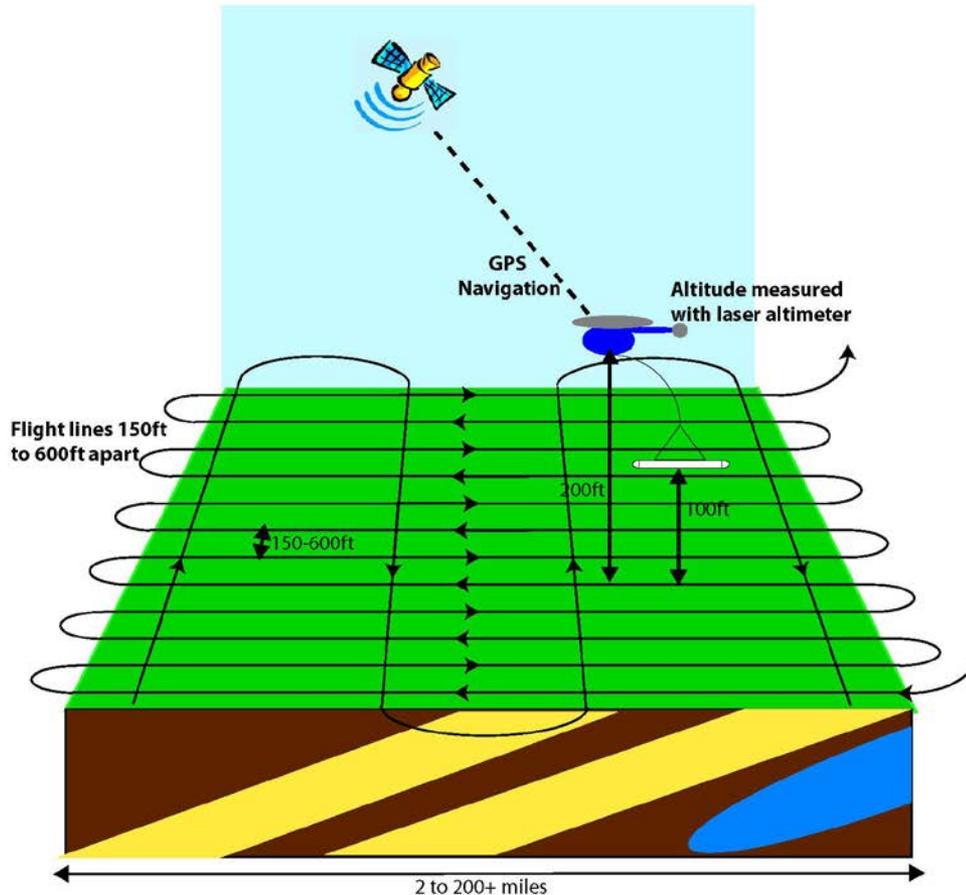


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# What is a Helicopter Electromagnetic and Magnetic Geophysical Survey?

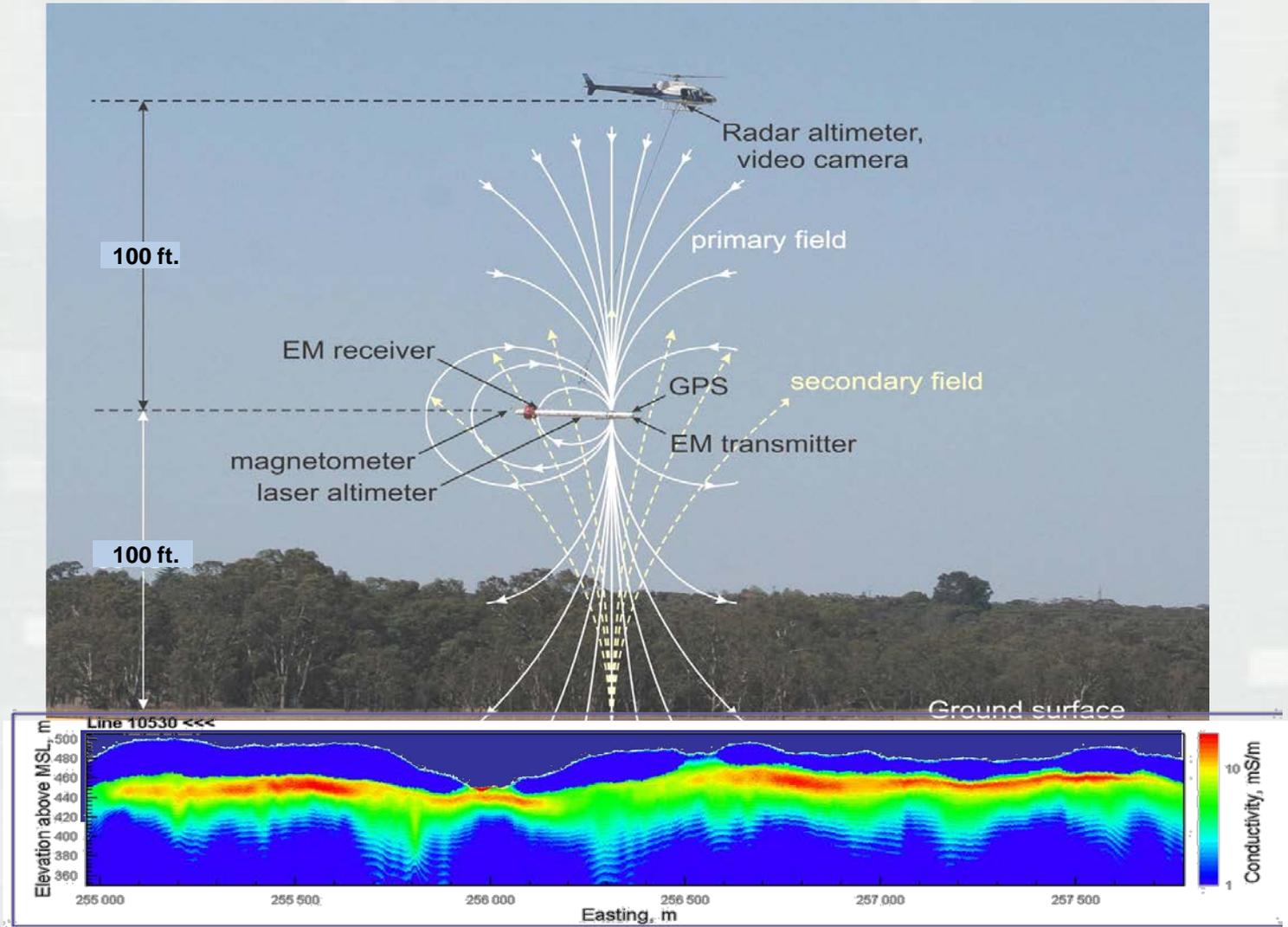


**Typically Fly 124 to 250 miles per day**

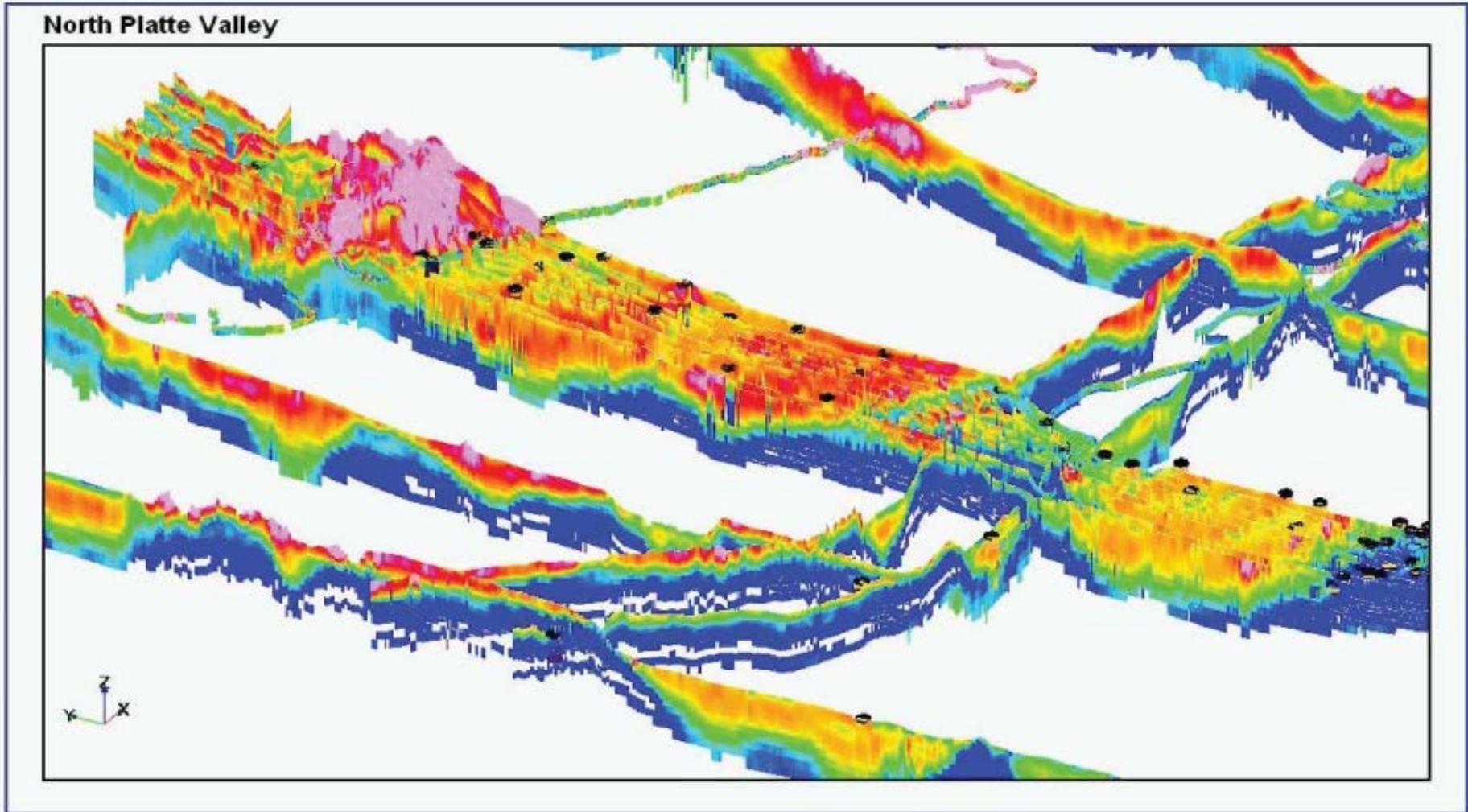


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# Electromagnetic Principles



# Typical Vertical Sections Show Soil Types and Water Table.



Abraham, J.D., Cannia, J.C., Bedrosian, P.A., Johnson, M.R., Ball, L.B., and Sibray, S.S., 2011, Airborne Electromagnetic Mapping of the Base of the Aquifer in Areas of Western Nebraska: U.S. Geological Survey Scientific Investigations Report 2011-5219



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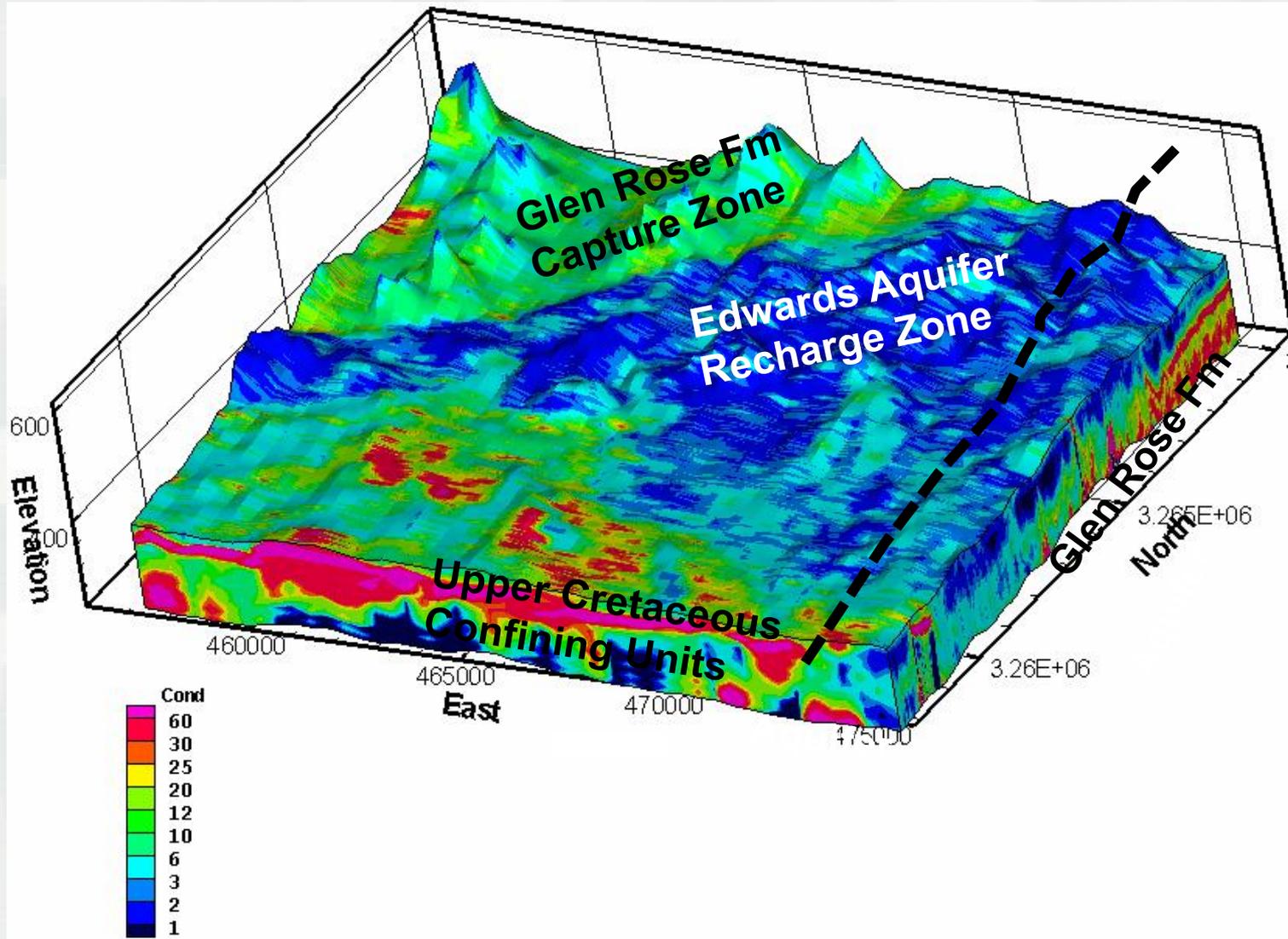
# The Helicopter Electromagnetic and Magnetic Geophysical Survey at the Former Nebraska Ordnance Plant

**The survey is scheduled to begin October 2012**

- The purpose is to map the subsurface properties.
- Data gathered will be interpreted and results utilized to further define existing geologic conditions of the plumes.
- The survey will provide details on the bedrock geology and determine the presence and thickness of clay layers.
- The three dimensional pictures will provide information about subsurface geologic features.
- Data will be used to further our understanding of the subsurface features and their impact on containment.



# Mapping Aquifers in 3D



# Aquifer Mapping: Example from Texas Project

