Utah Geological Survey – Recent NEHRP Projects Update

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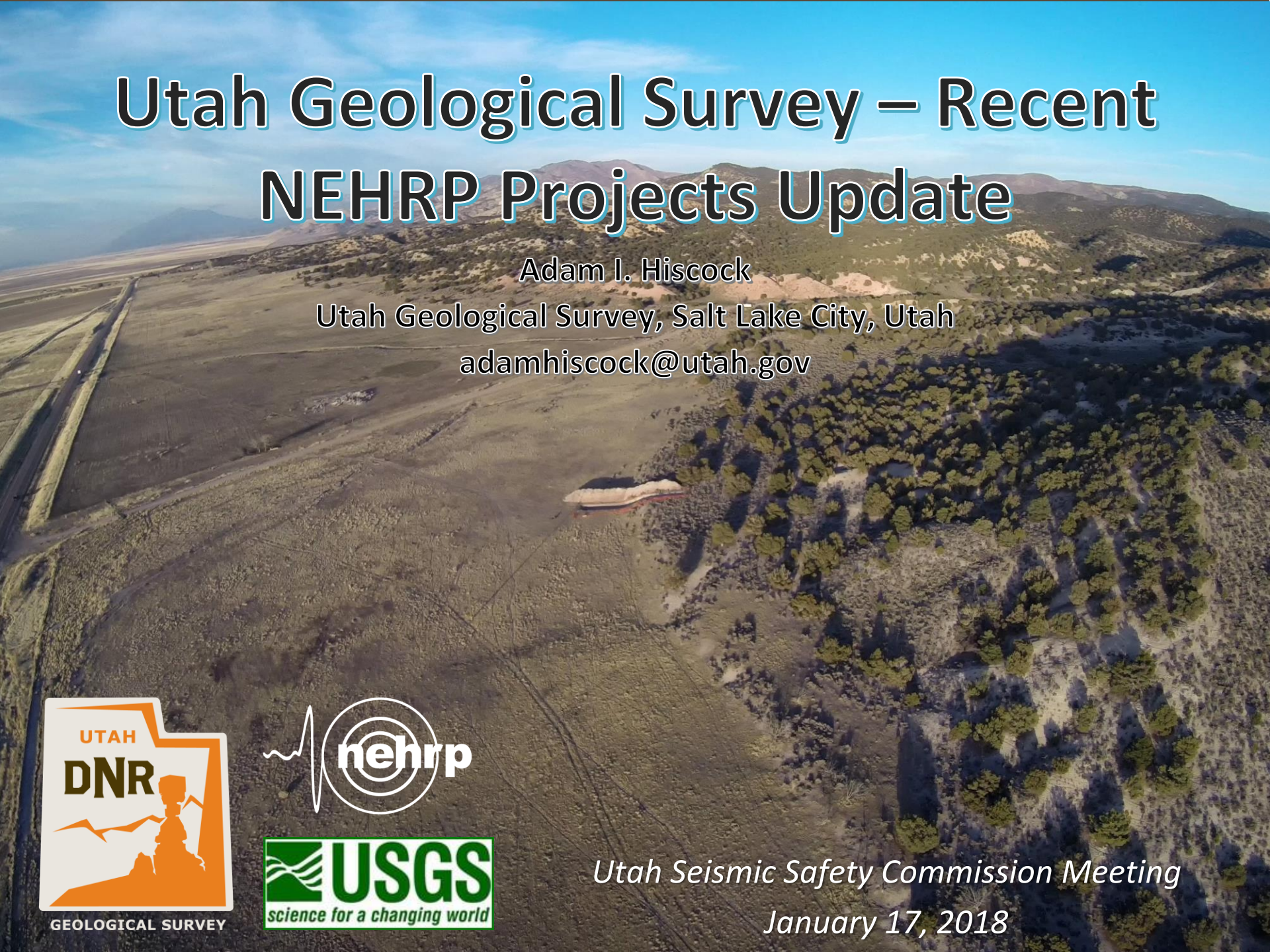
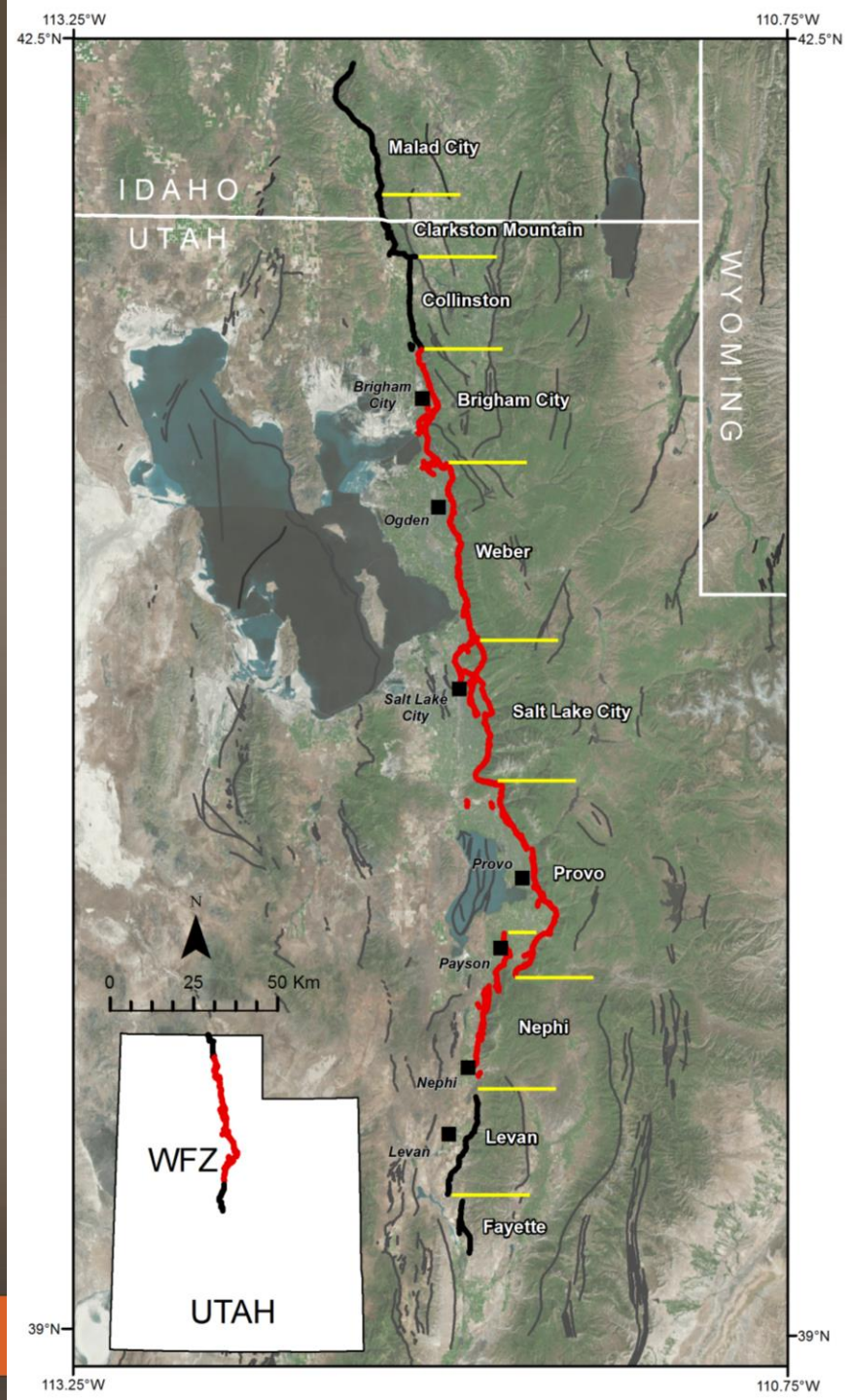


Utah Seismic Safety Commission Meeting
January 17, 2018

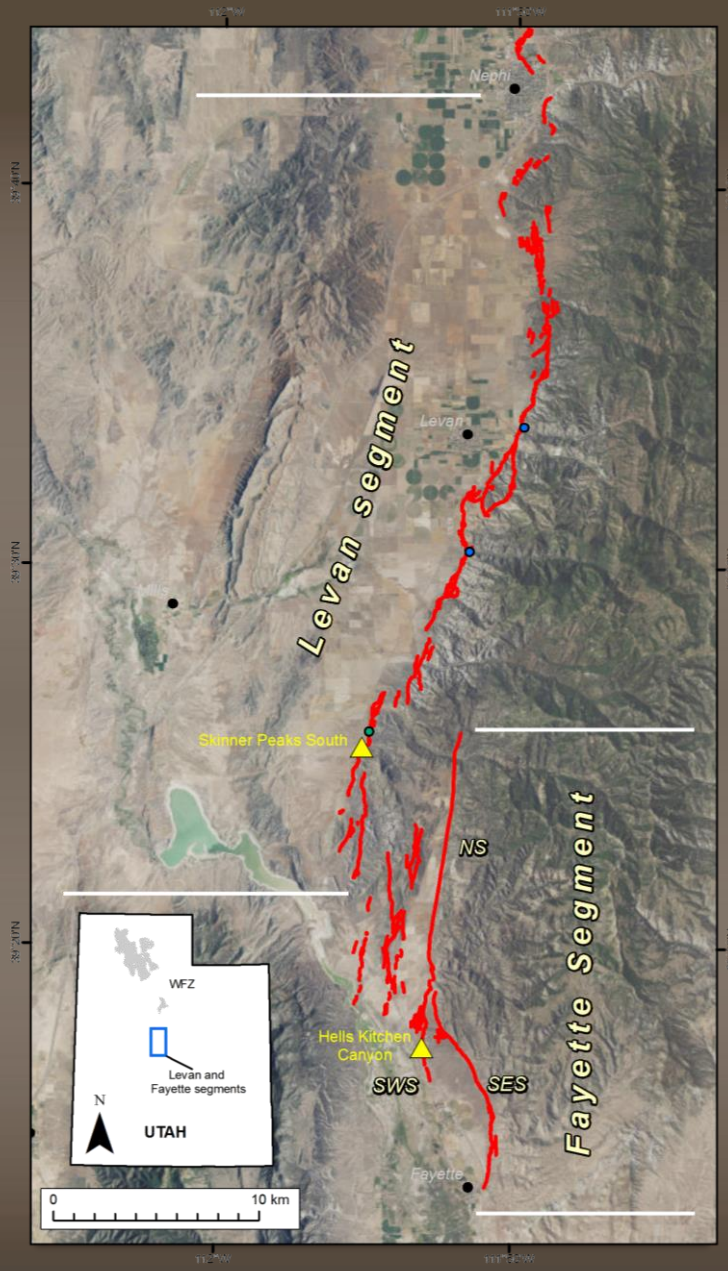
Levan and Fayette Trenching

- Southernmost 2 segments of the WFZ
- Very little paleoseismic data
- First trench on Fayette segment
- Both segments show evidence of Holocene rupture
- Plentiful sites available for trenching due to rural setting



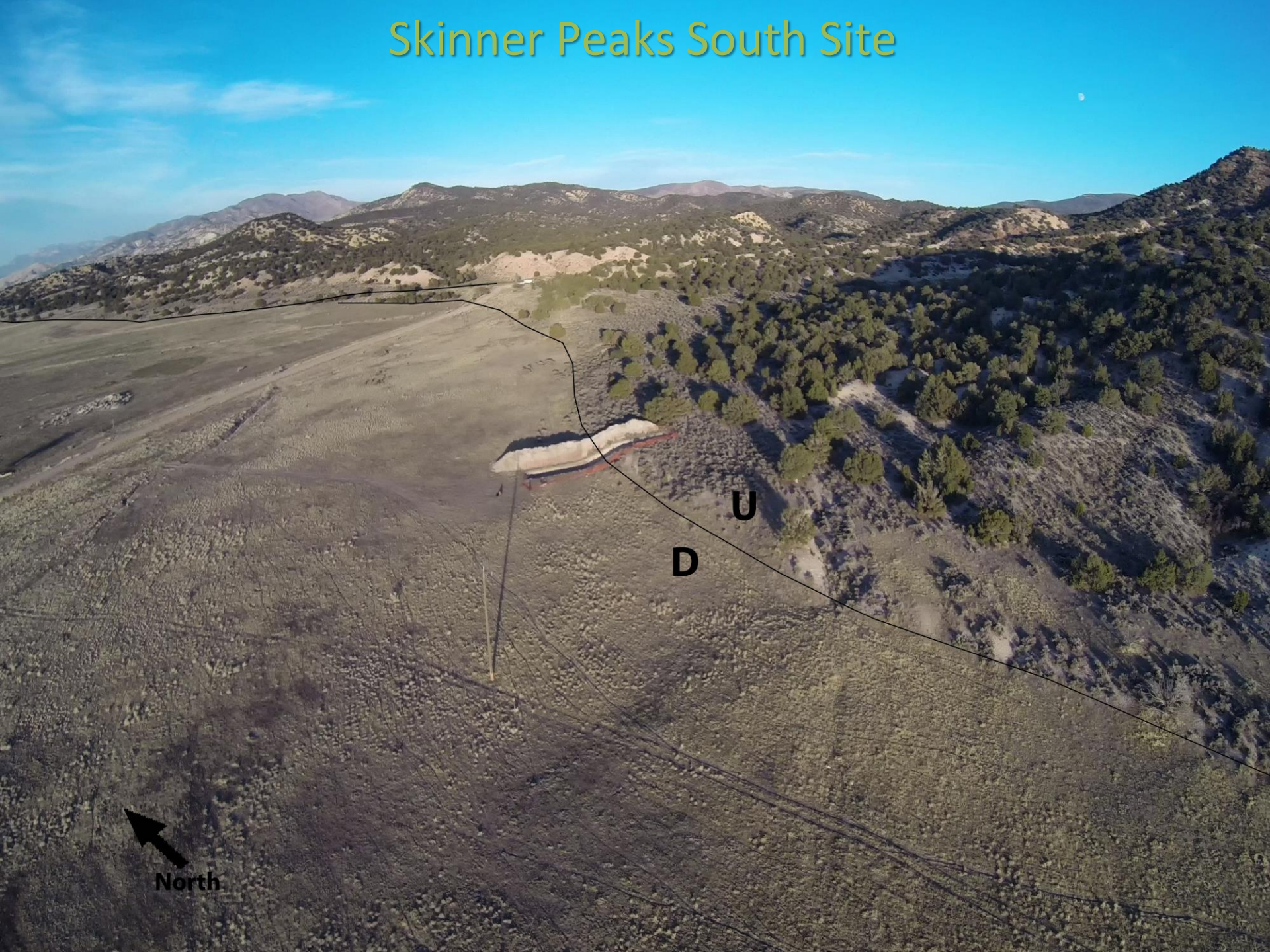
Levan and Fayette Trenching

- Selected 2 sites – Skinner Peaks South and Hells Kitchen Canyon
- Sites on private and public land (BLM)
- Excavated 1 trench at each site on October 10, 2017; backfilled on November 1, 2017



Skinner Peaks South Site

Skinner Peaks South Site



Skinner Peaks South Site

Skinner Peaks South Site

Hells Kitchen Canyon Site

Hells Kitchen Canyon Site

Hells Kitchen Canyon Site

Summary & Conclusions

- Evidence for 2 earthquakes at the Skinner Peaks Site (Levan Segment)
- Evidence for 1 earthquake at the Hells Kitchen Canyon Site (Fayette Segment)
- Next Steps:
  - Process C-14 and OSL samples for earthquake timing
  - Evaluate rupture models Levan and Fayette segments of the WFZ utilizing this new data

UGS

Greg McDonald
Mike Hylland
Emily Kleber
Ben Erickson
Gregg Beukelman
Adam McKean
Rich Giraud

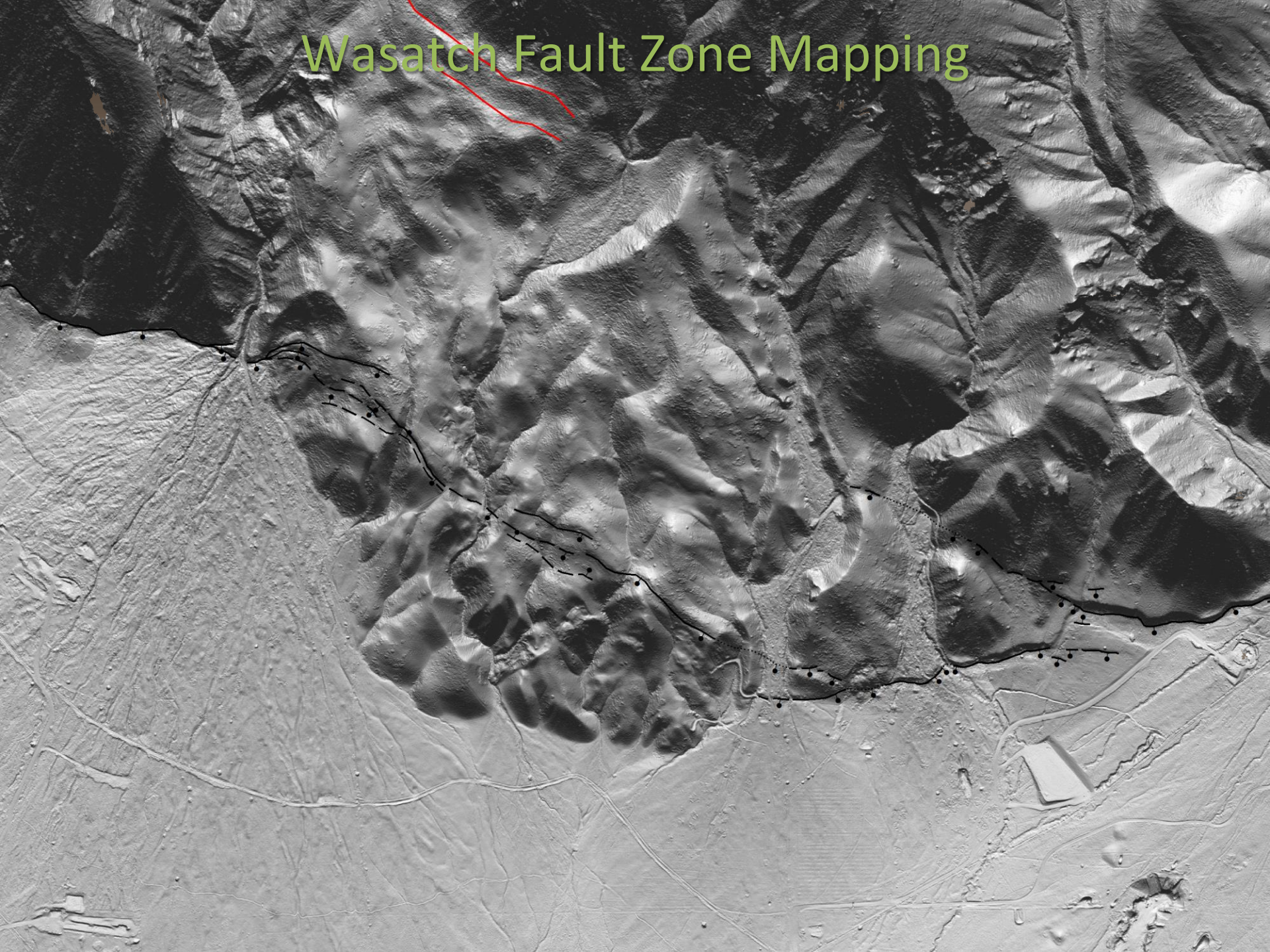
USGS

Chris DuRoss
Ryan Gold
Jamie Delano

Other

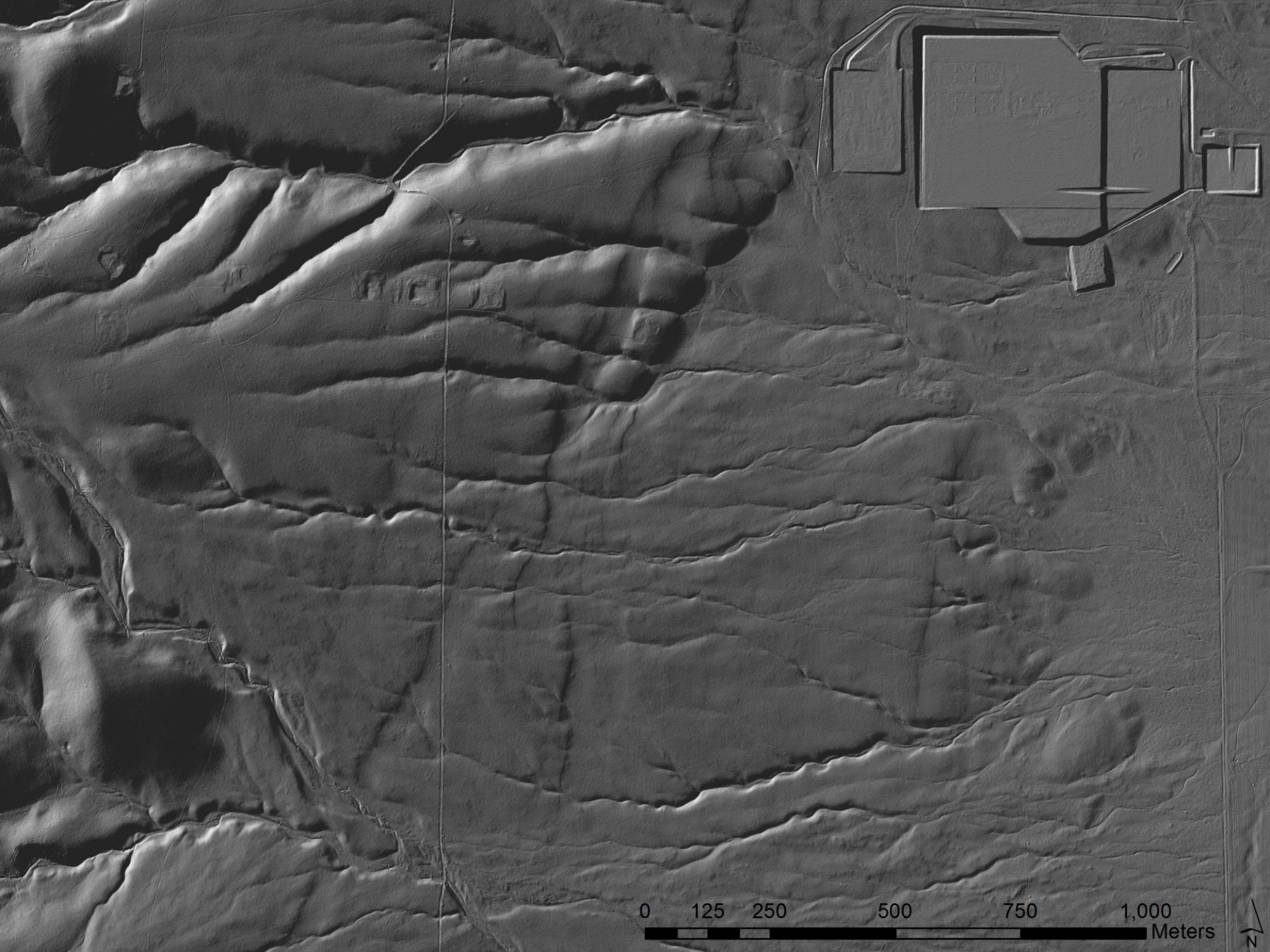
Kelsey Zabrusky - BLM Richfield Field Office
Madsen Family Trust
Skyline Excavators – Todd Nielson

Wasatch Fault Zone Mapping



Wasatch Fault Zone Mapping

- 30 7.5-minute quadrangles in Utah; additional 5 quads in Idaho
- Final mapping will be incorporated into the UGS *Utah Quaternary Fault and Fold Database*
- Detailed mapping at 1:10,000 scale
- LIDAR data, aerial photography, and field reconnaissance
- Delineate surface-fault-rupture hazard special study areas
- Identify future paleoseismic trench sites
- Adam Hiscock, Greg McDonald, Emily Kleber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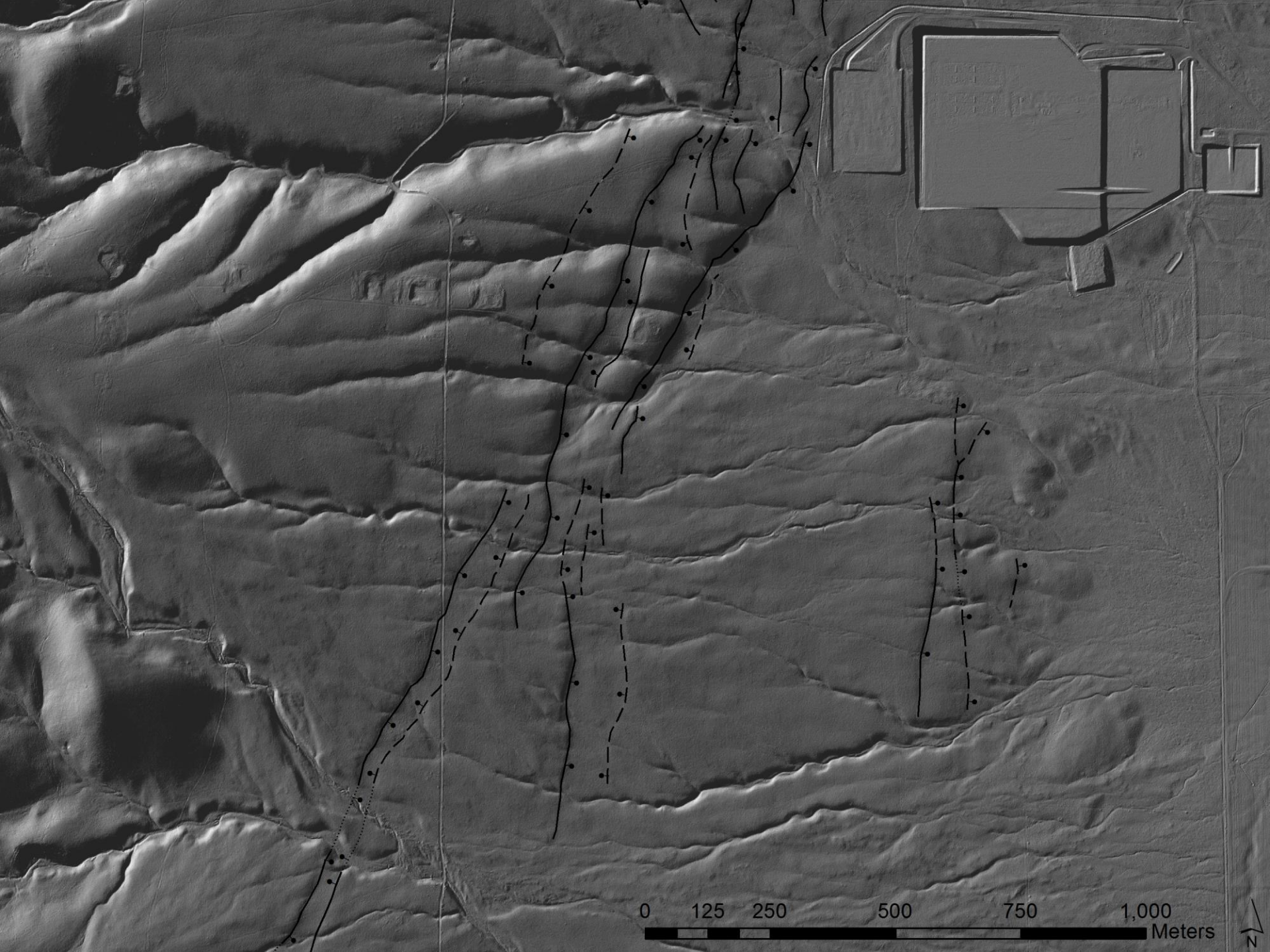
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