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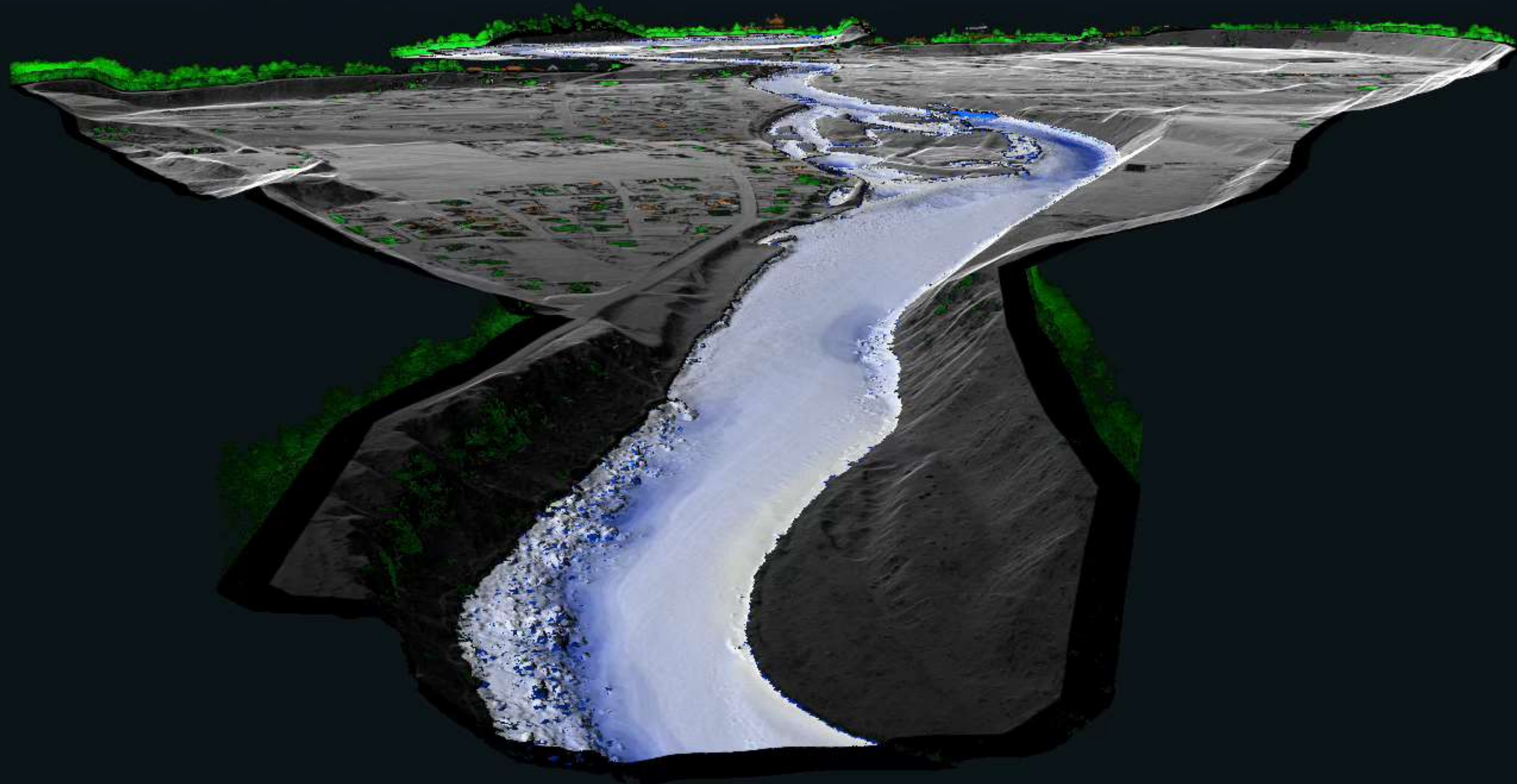


UAV borne **BATHYMETRY** mapping

QUALITY high SKY.

Bathymetry, DI David Monetti BSc

#bULS - UAV borne BATHYMETRY mapping



SERVICES high SKY.

UAS – OPERATIONS high SKY

Drone-Competence-Centre

- . Certified Drone-Service-Supplier
- . Focused on Europe-Market

MAPPING high SKY

Mapping Service and Documentation

- . ULS / MLS – drone / heli / car / boat
- . TLS – in combination with ALS / TLS

INSPECTION high SKY

Dokumentation, Berichtwesen

- . RGB, Multispektral
- . Thermographie

R&D high SKY

Partner in R&D Projects

- . AIT / AEE / FFG / AWS
- . Horizon 2020 / KIRAS / BRIDGE





#bULS - UAV borne BATHYMETRY mapping

UAS Plattform RIEGL VQ-840-G

- SA-HAMMER X8B-1 - octocopter
- weight 9.7 kg
- max. take-off-weight 42 kg
- voltage 12 S
- flight-endurance 10 to 45 min
- size ca. 135 x 135 x 75 cm
- full-redundancy-system : 2 flight-controllers



RIEGL VQ-840-G

- Laser – Wavelength 532nm, green
- max. Water Depth Penetration in Secchi Depths 2.5
- 12 kg / max 220 W
- 286 pts/m² : 120 m AGL – 8 m/s
- 17,5 cm footprint diameter



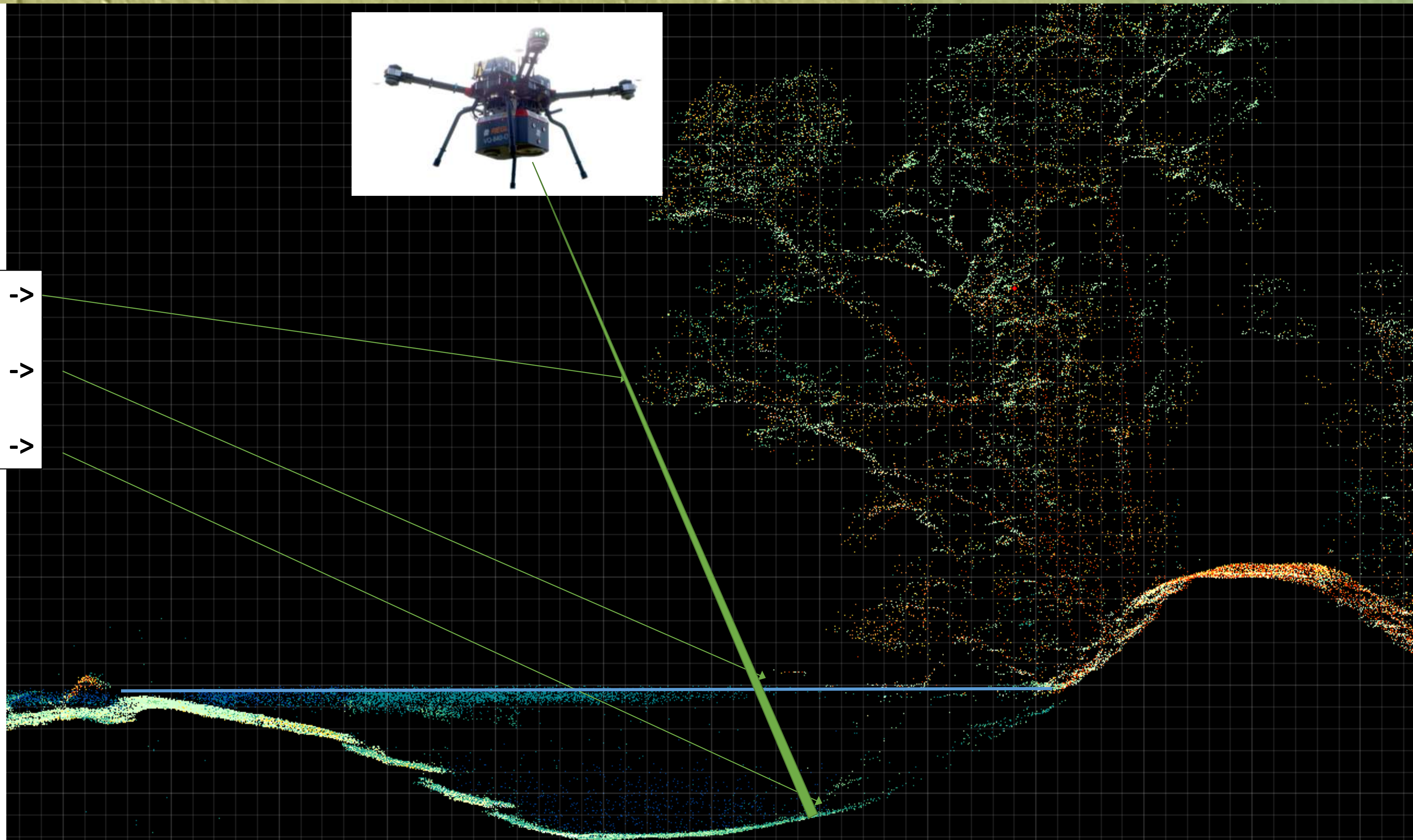
#bULS - UAV borne BATHYMETRY mapping

RIEGL VQ-840-G -> AS355

- Ecureuil 2
- reach 704 km
- flight-endurance ca. 3,5 h



#bULS - UAV borne BATHYMETRY mapping



first : tree echo ->

intermediate : watersurface echo ->

last : bottom echo ->



#bULS - UAV borne BATHYMETRY mapping



USE CASE

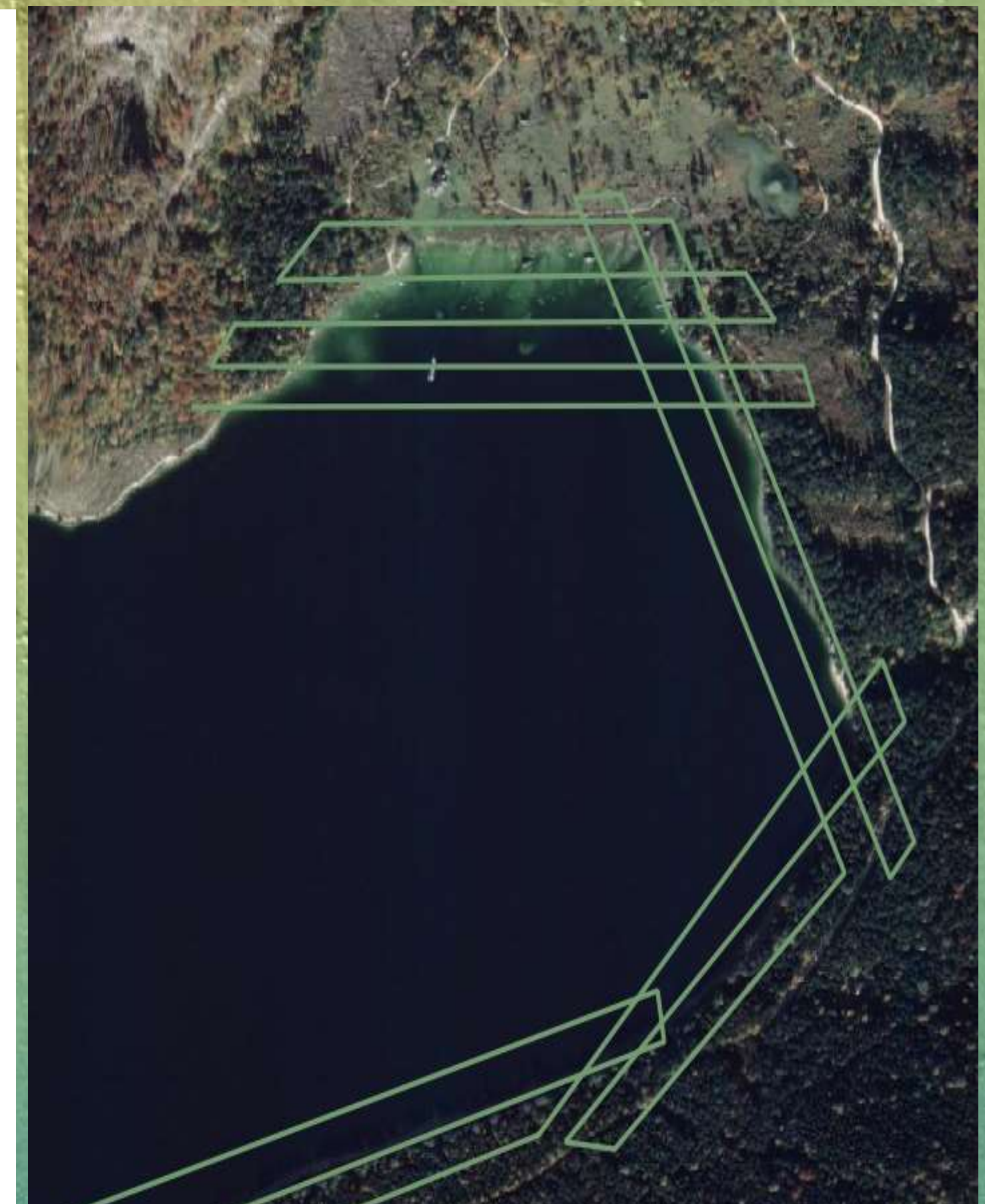
RIVER

DRONE PARAMETER

- Height AGL: 120 m
SPEED 8 m /s
- Max. FlightTime 18 min

SCANNER PARAMETER

- Swath With 87,4 m
 - PRR: 50 kHz
- Points Density: 71,5 pts/ m²
- Footprint Diameter: 0,087 m

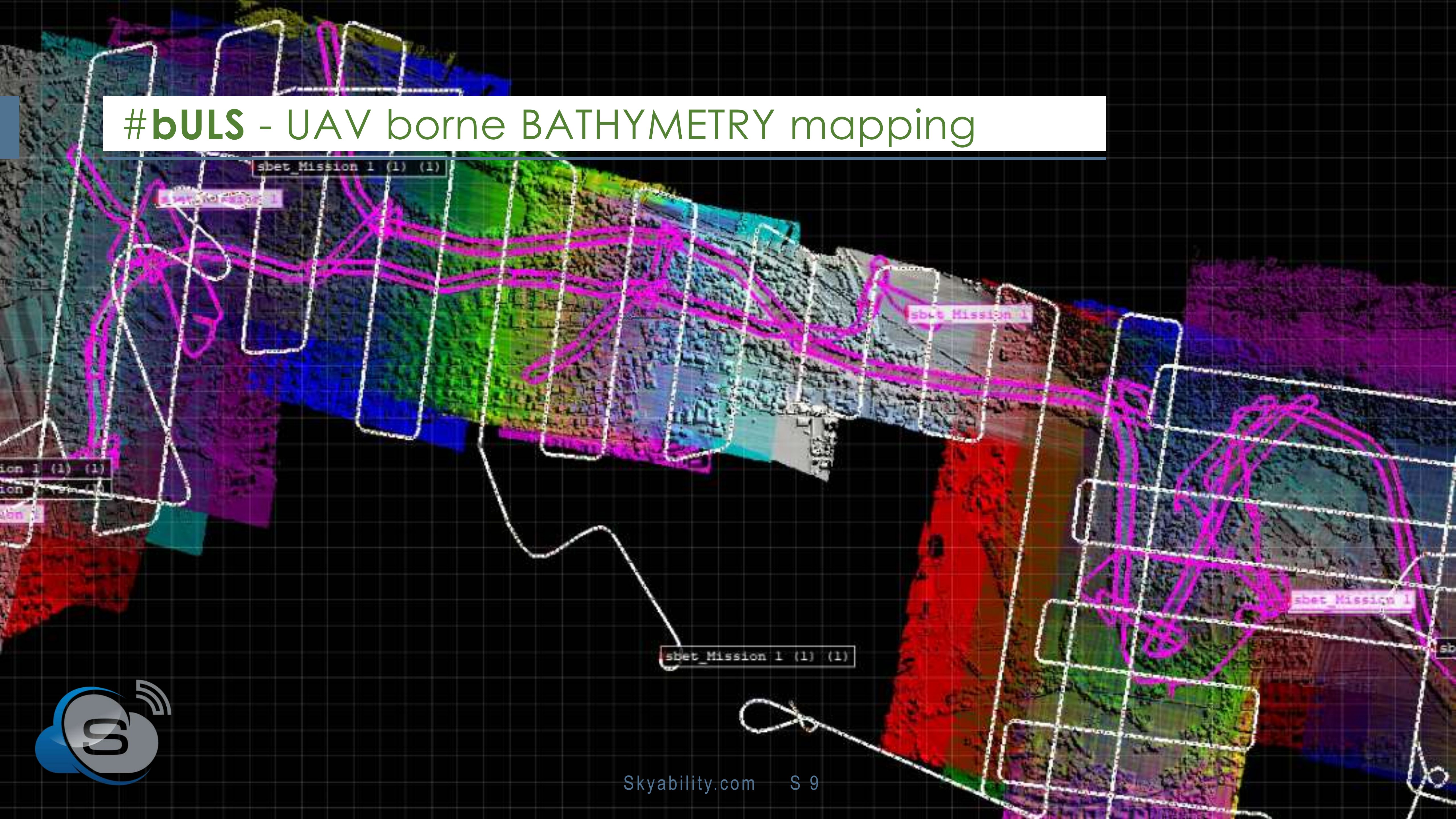


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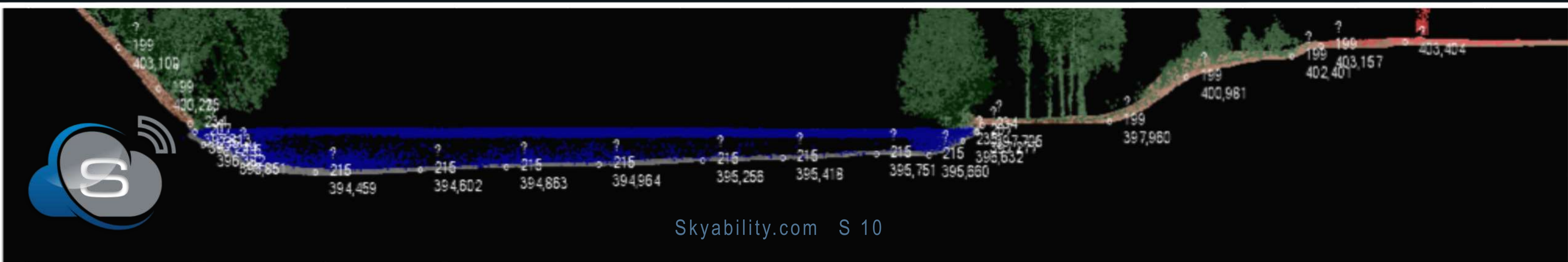
LAKE



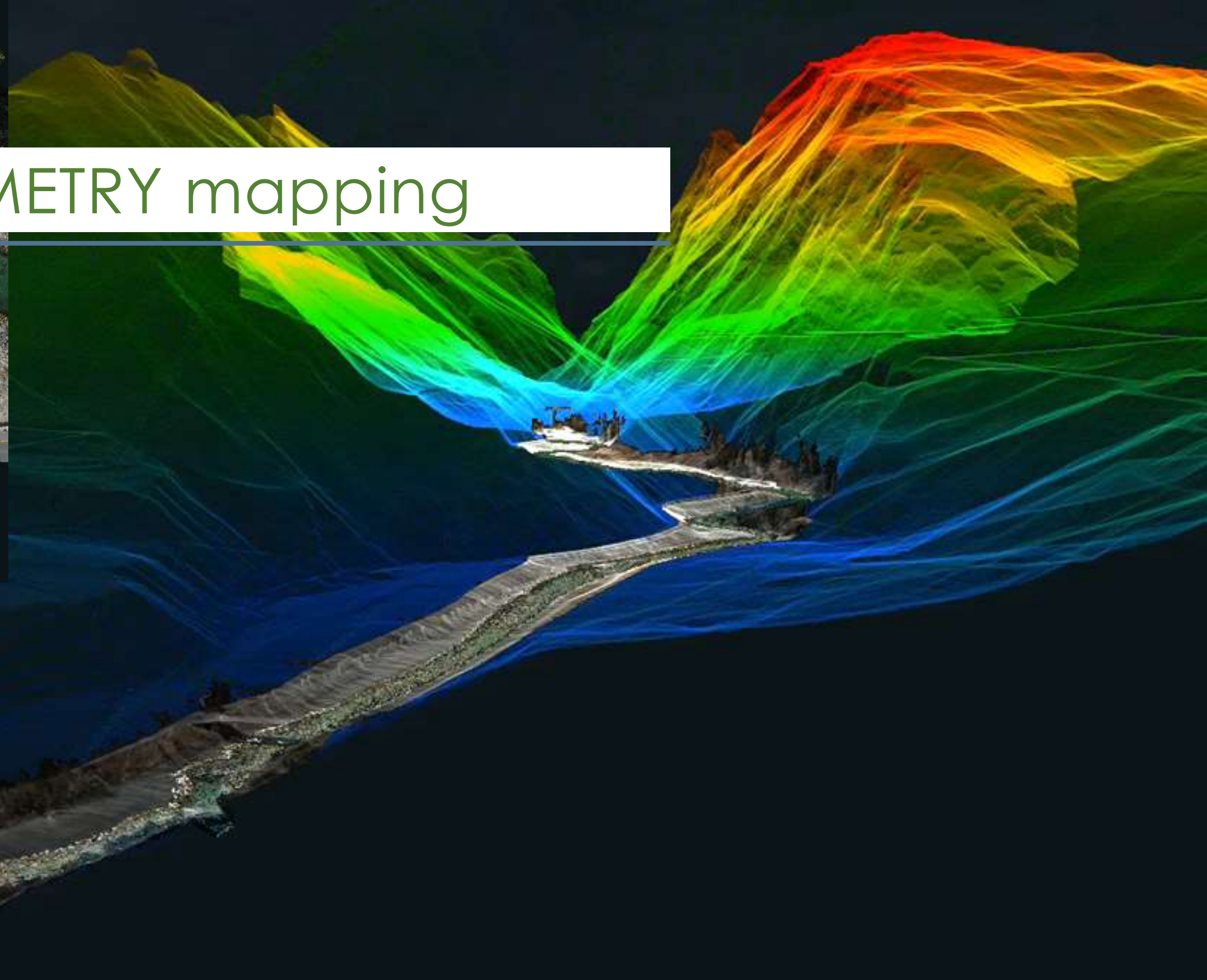
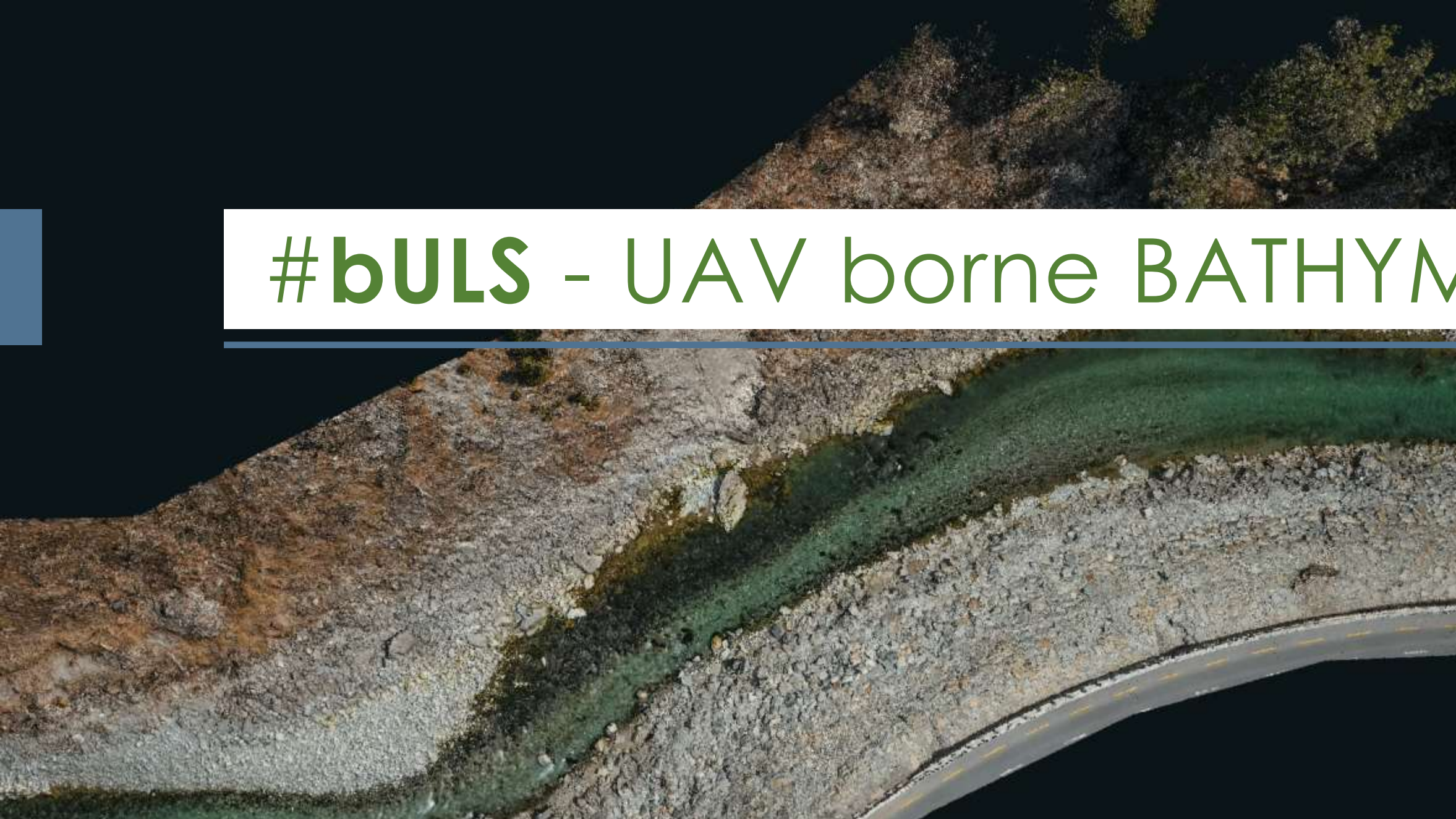
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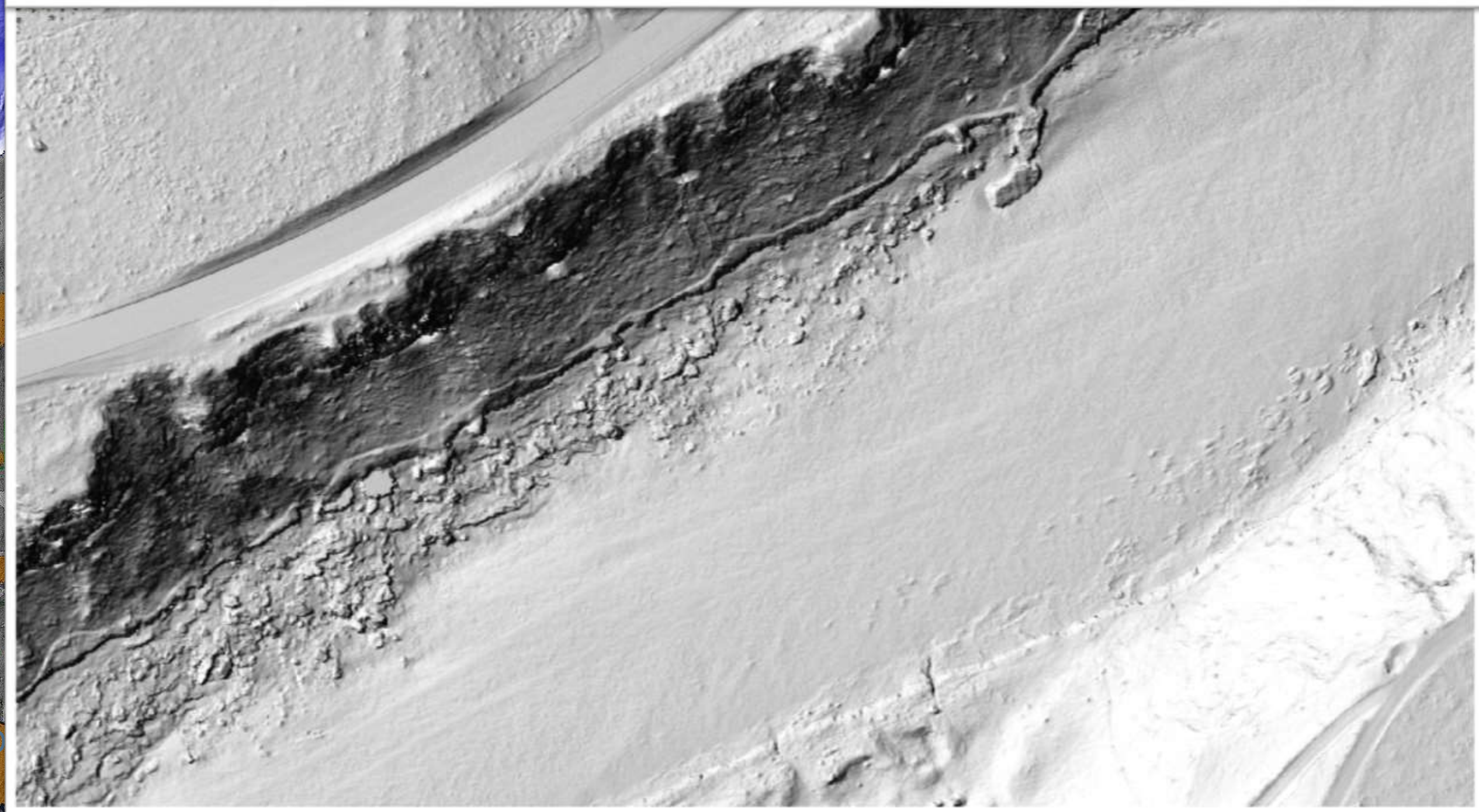
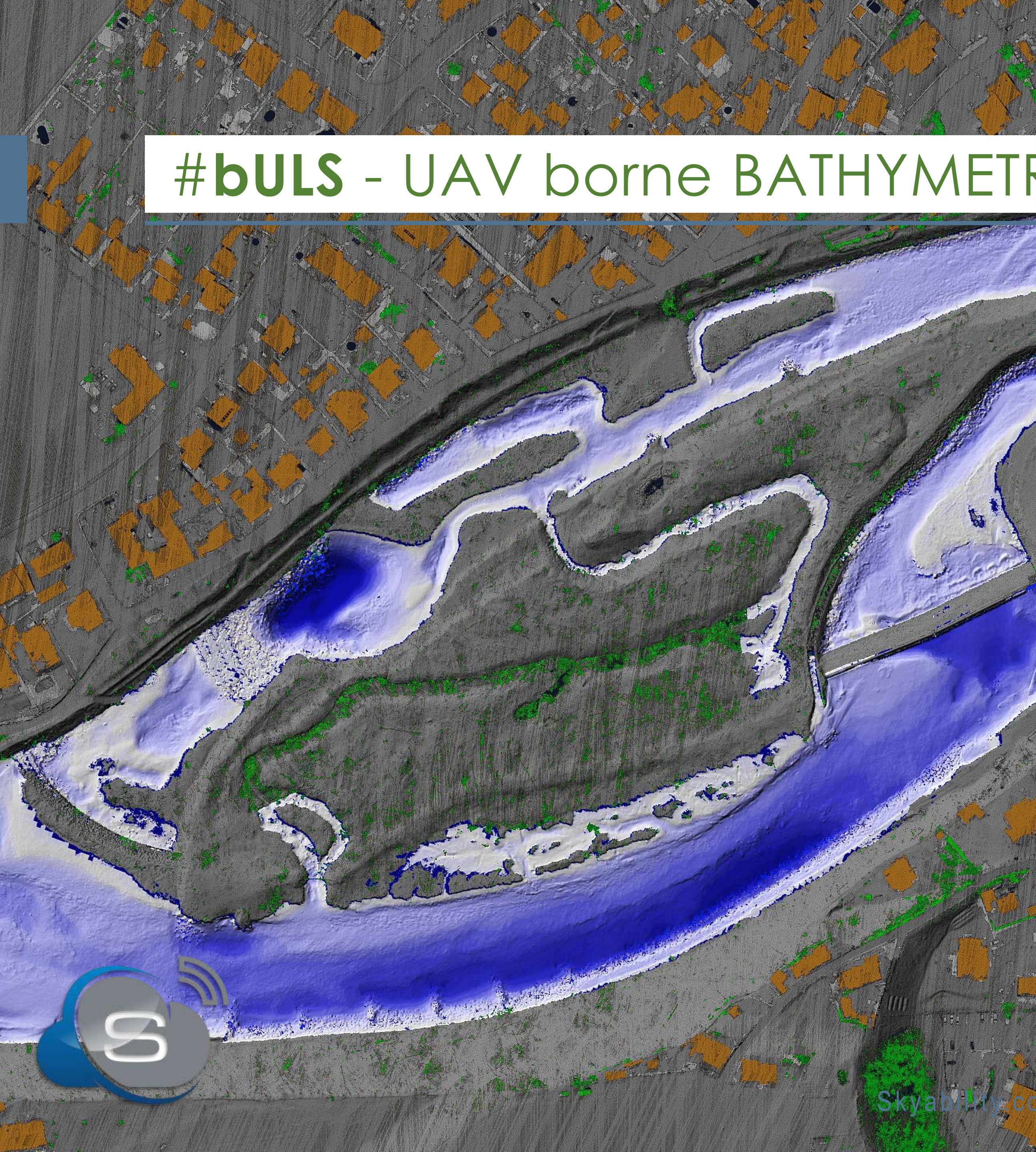
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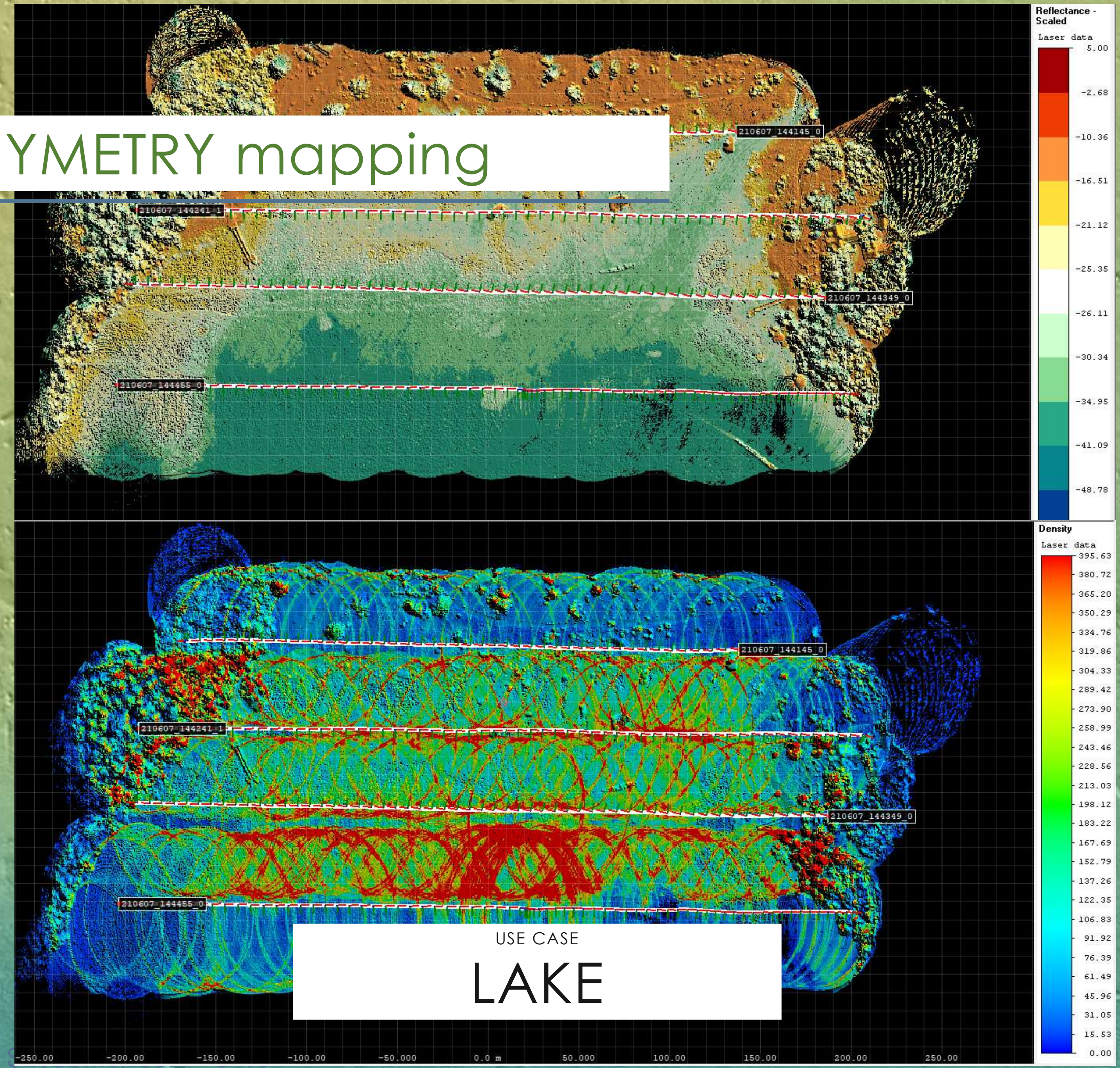
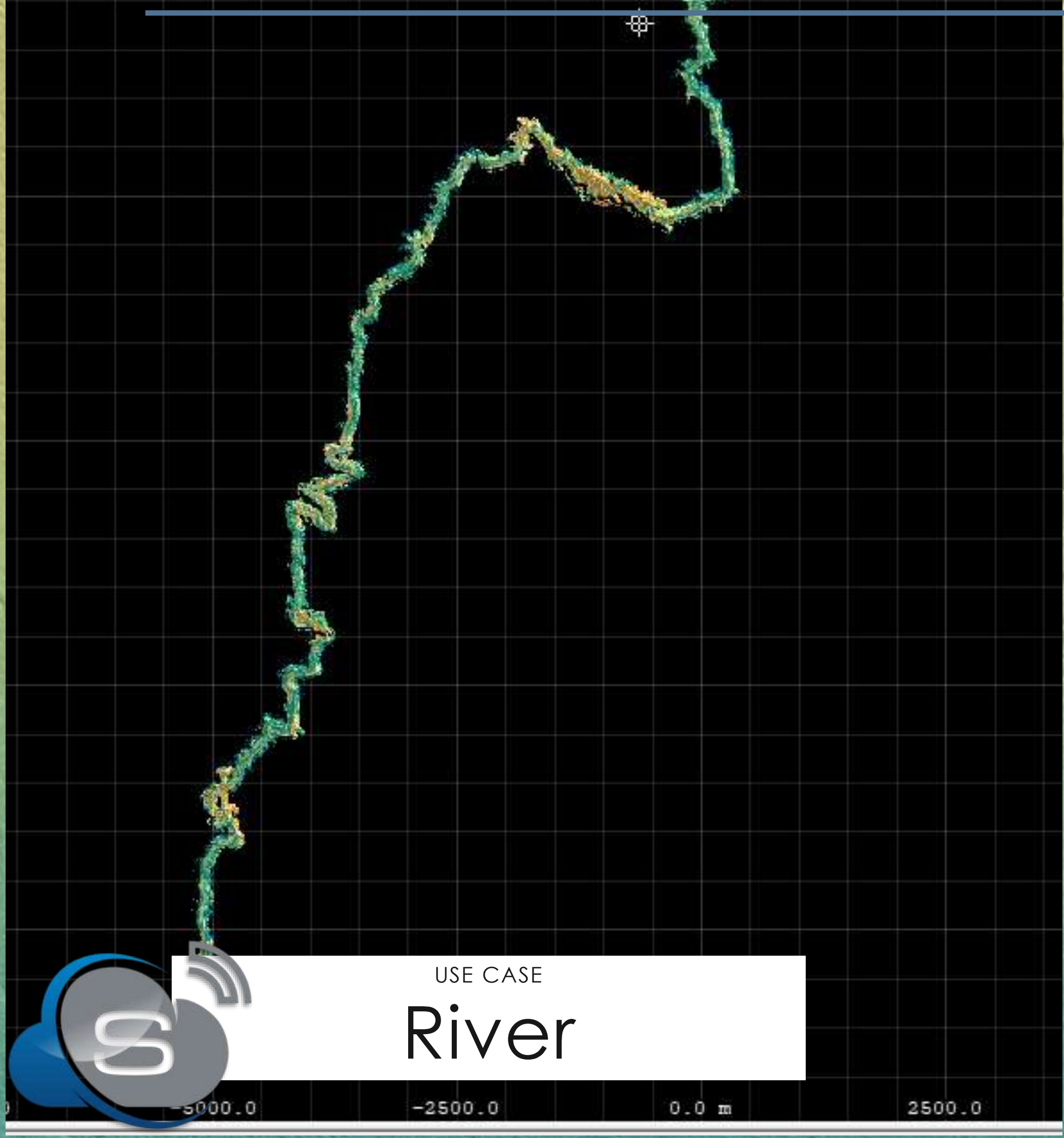
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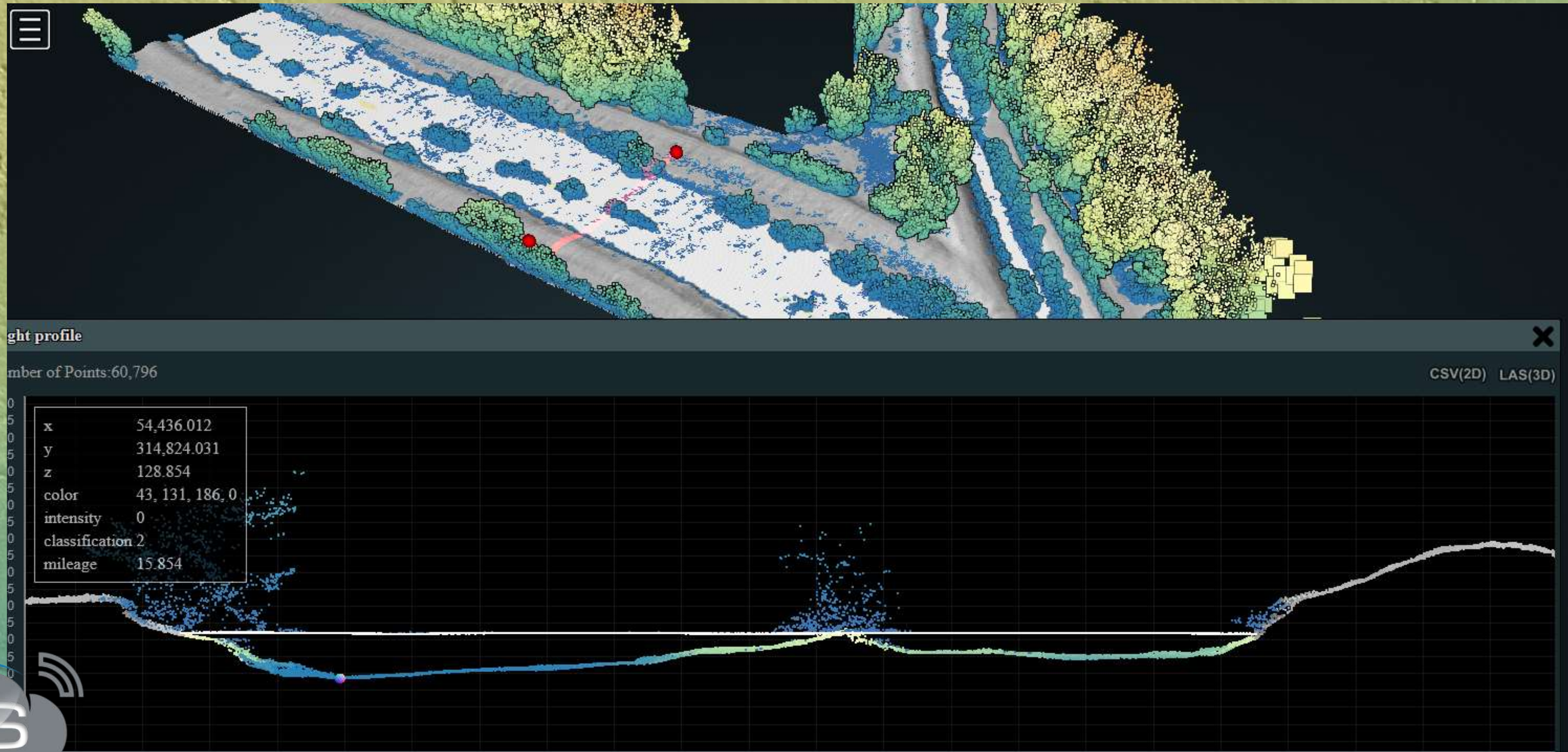
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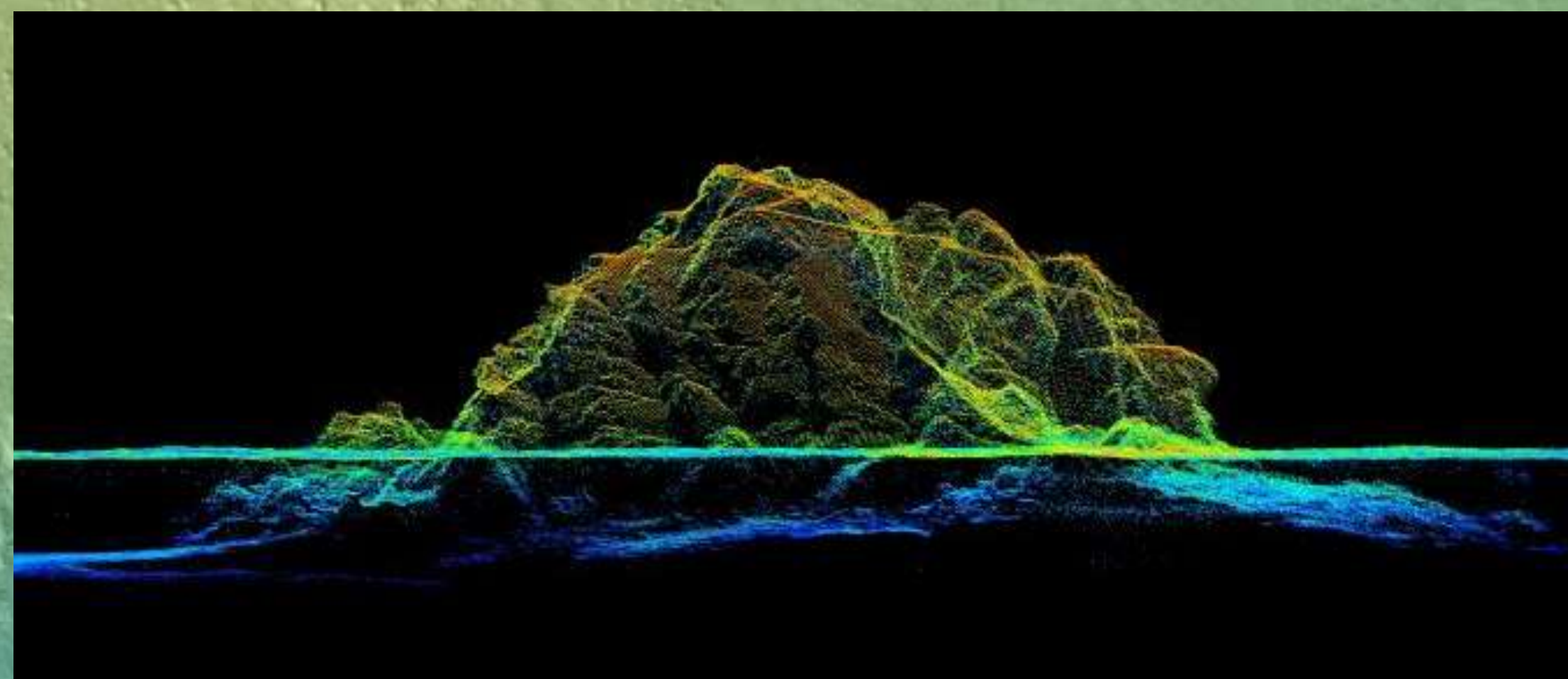
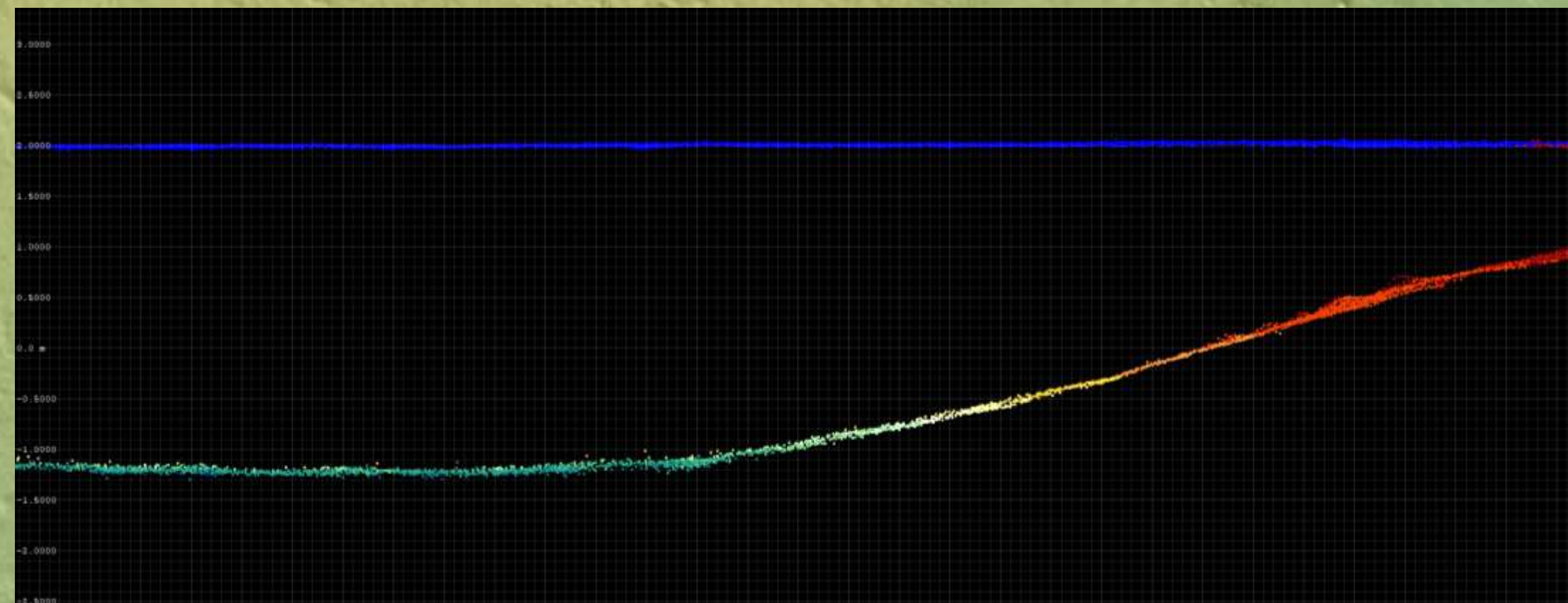
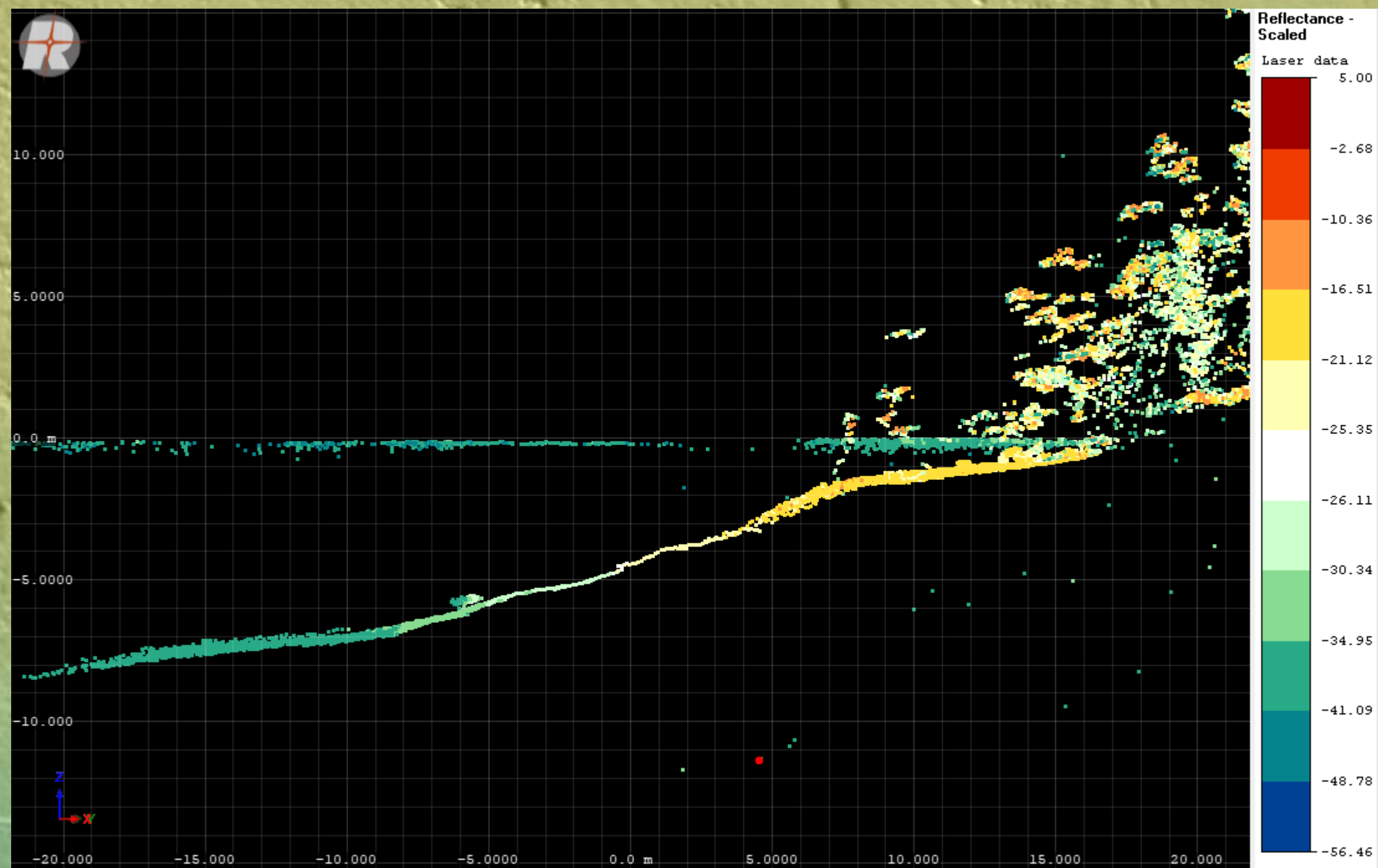
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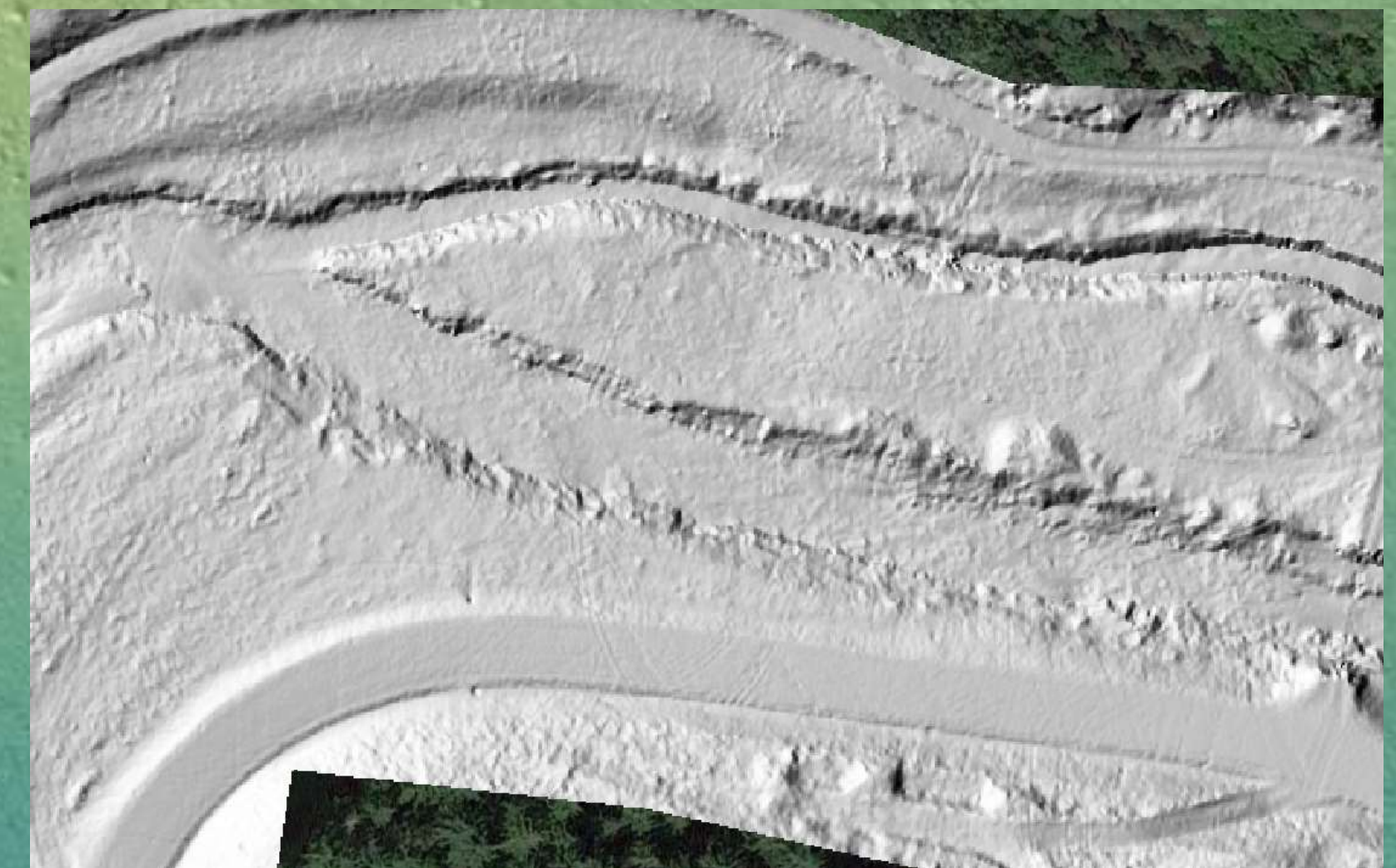
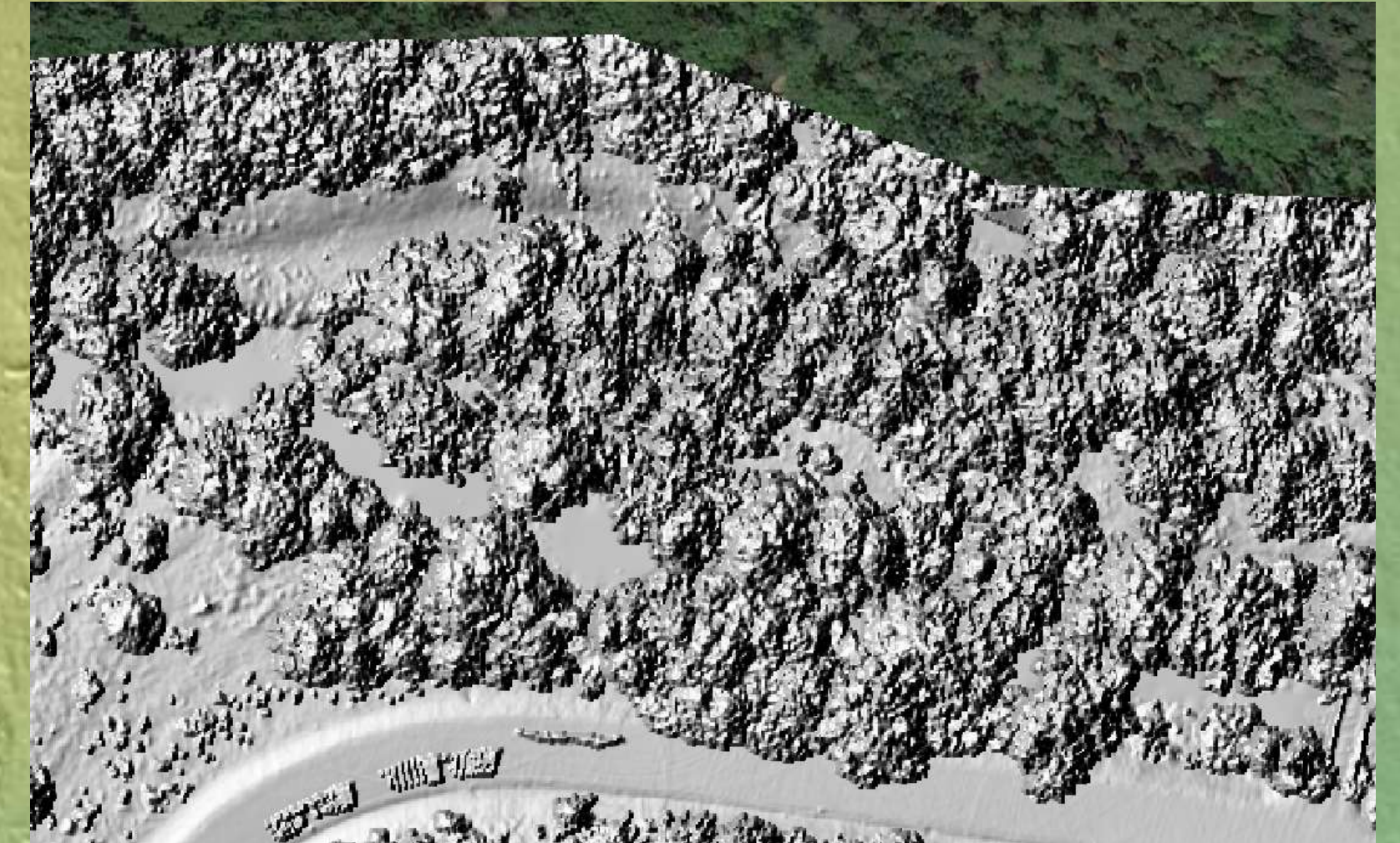
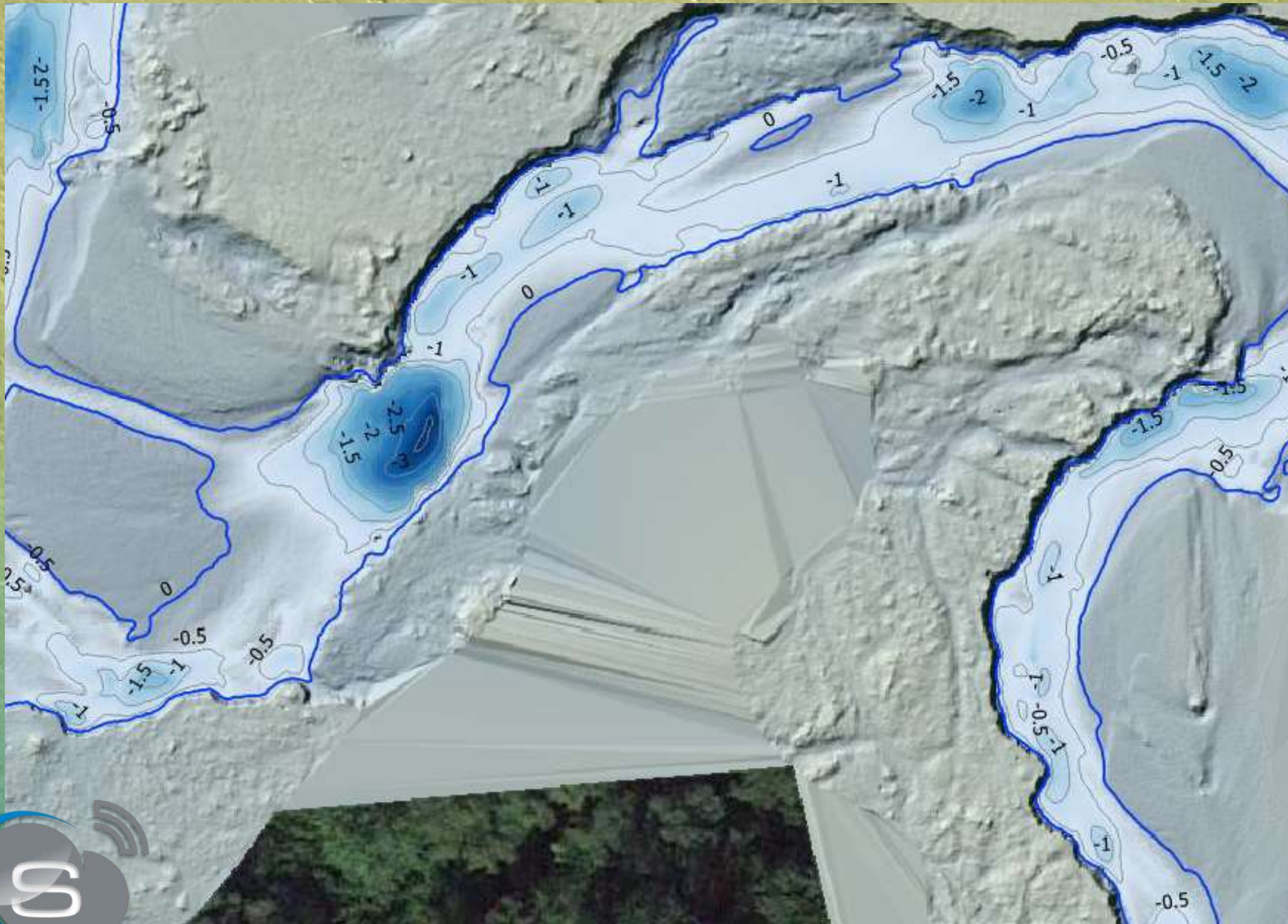
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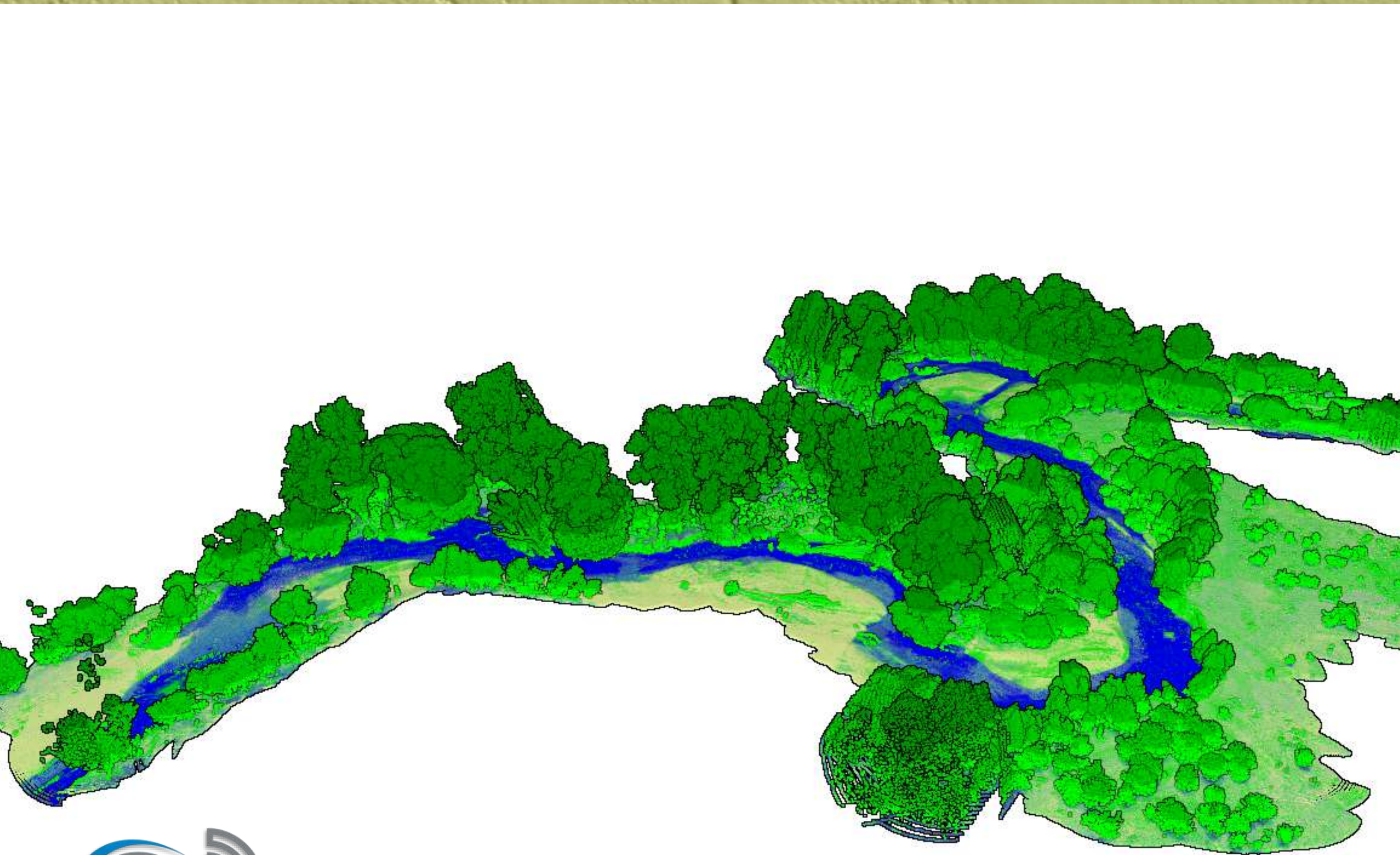
VQ-840-G high-resolution point cloud: view of Les Deux Frères rock formation and seafloor terrain, maximum depths achieved 17.5m. (Quelle: Riegli)



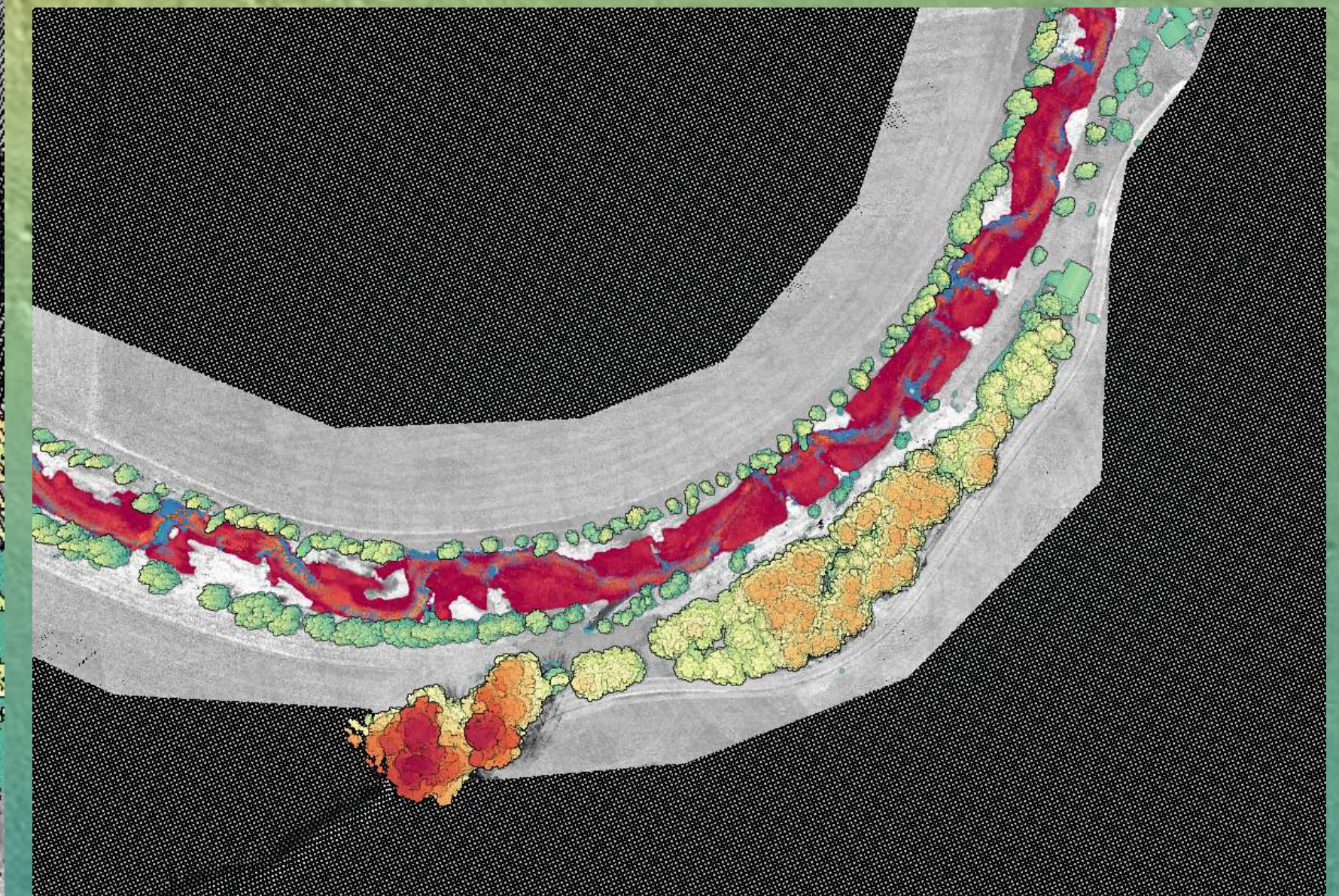
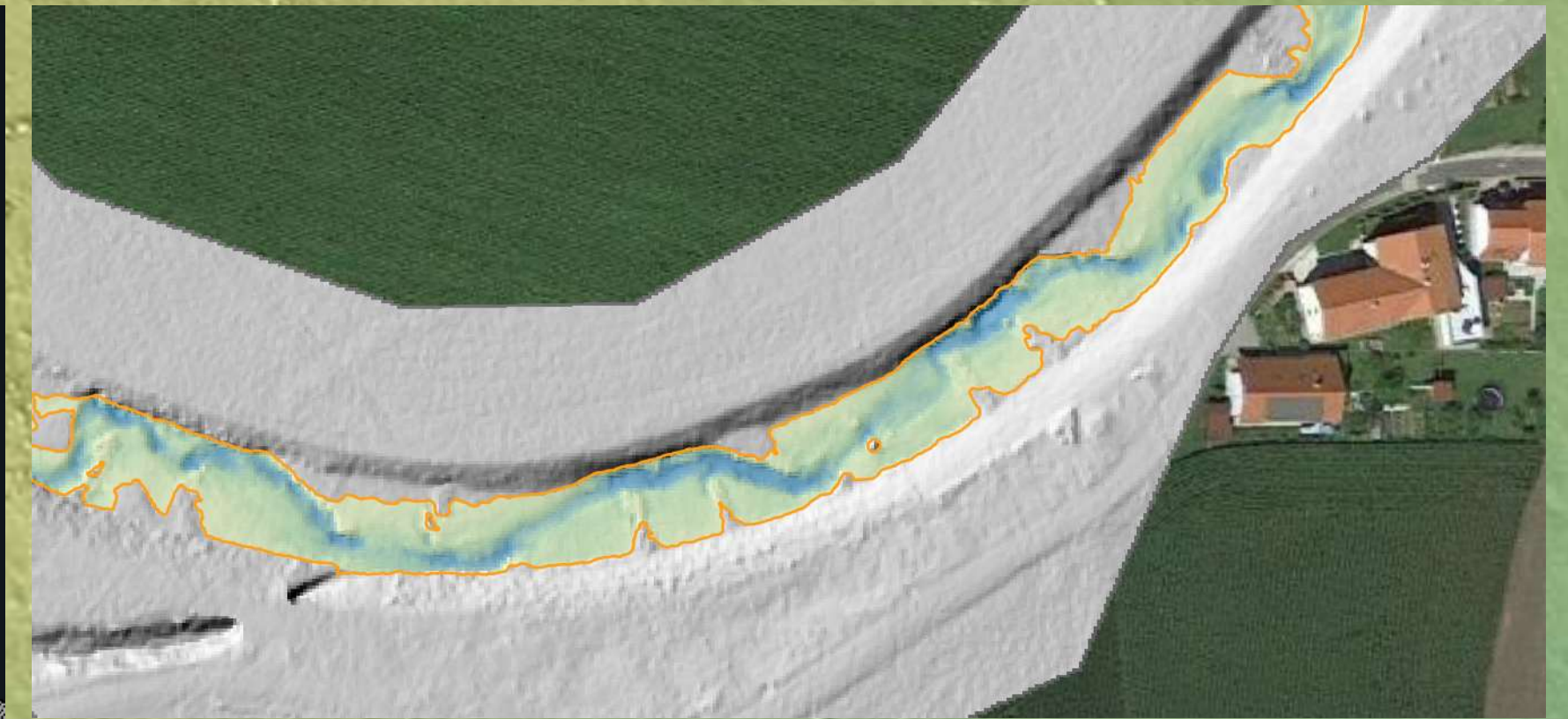
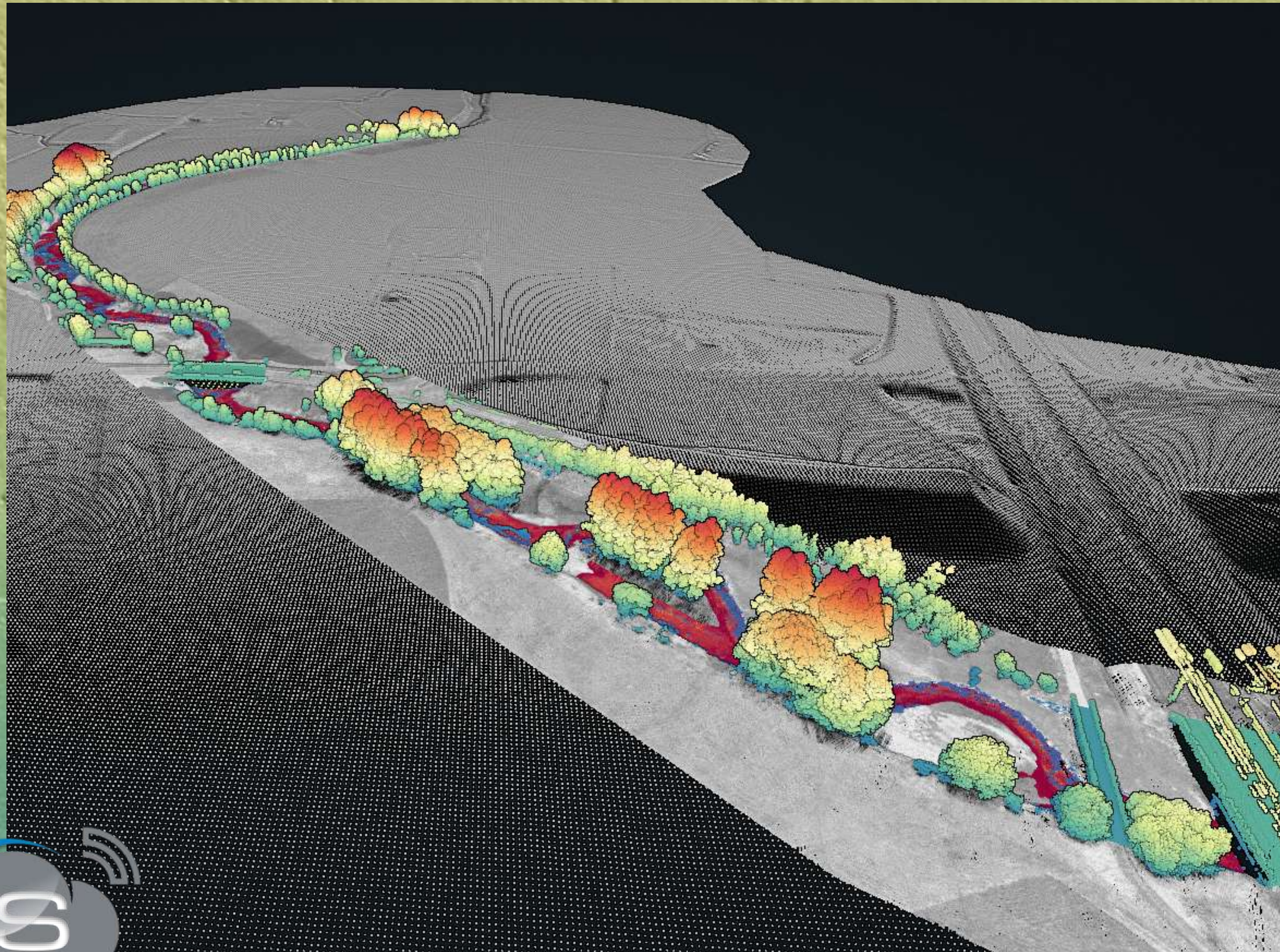
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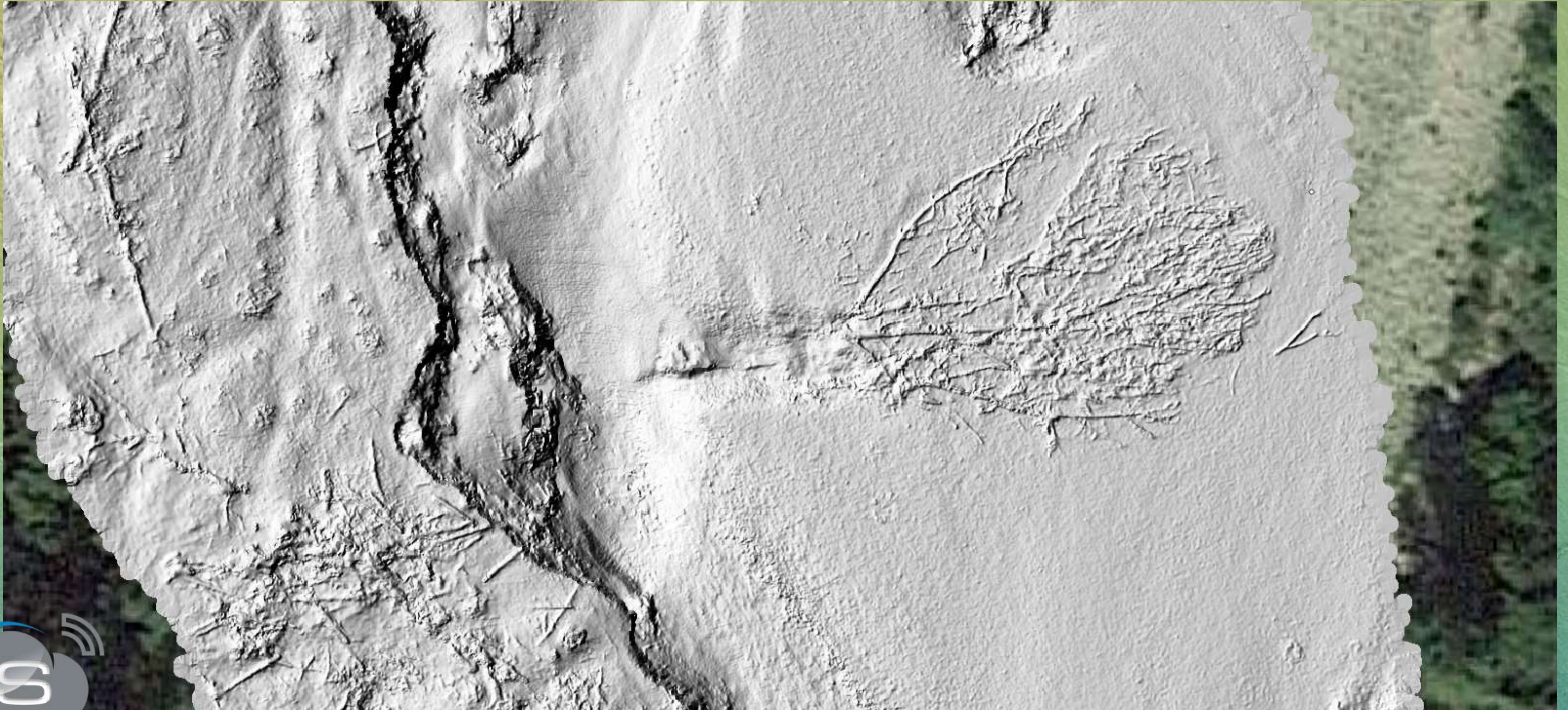
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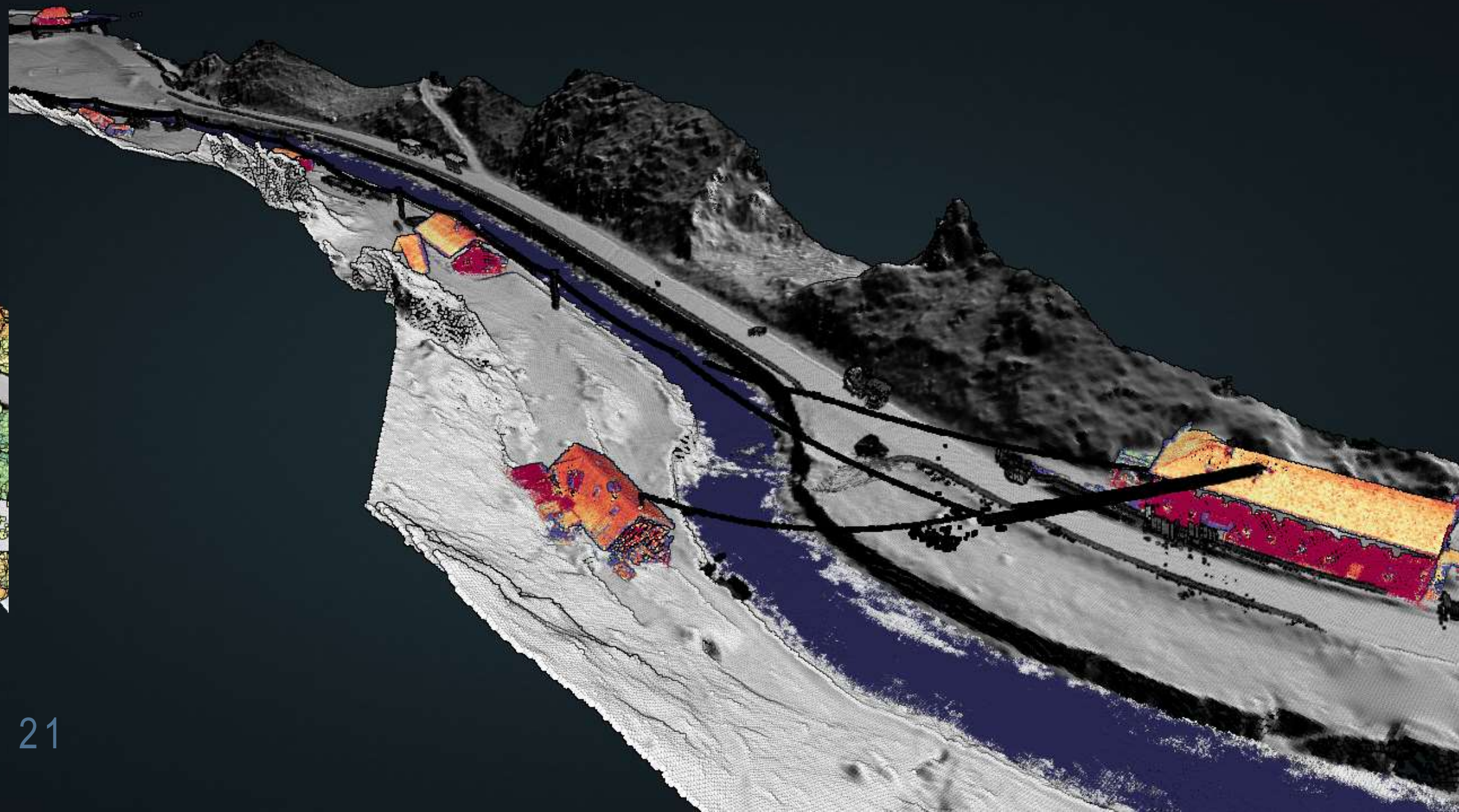
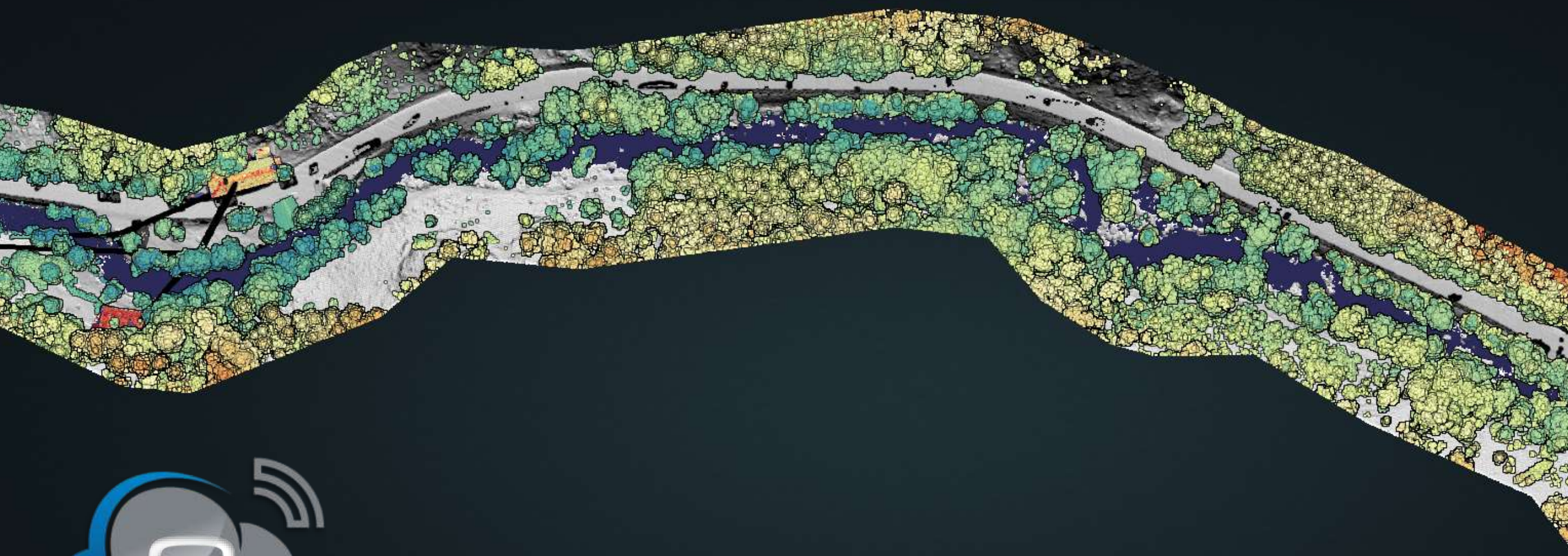
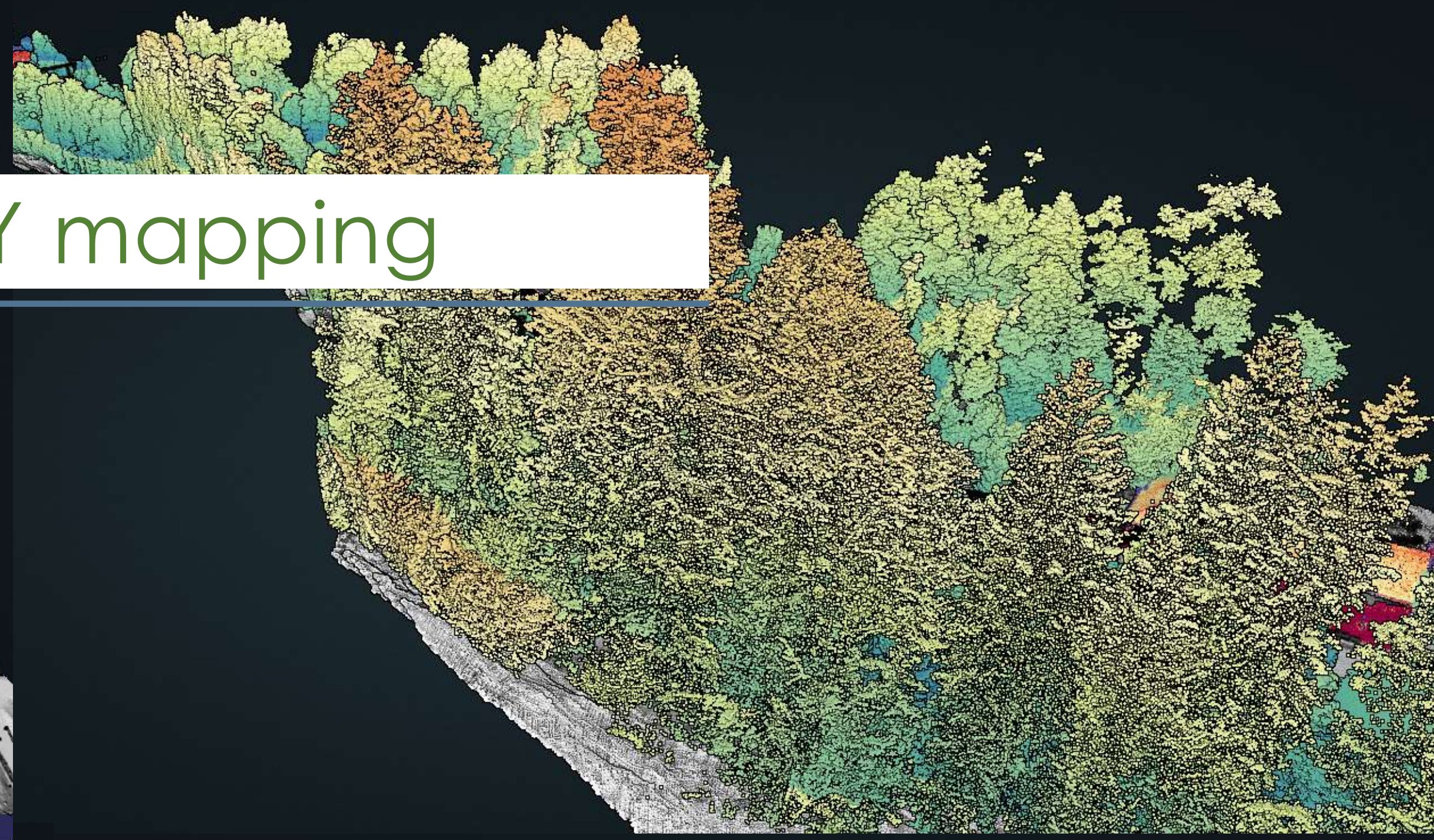
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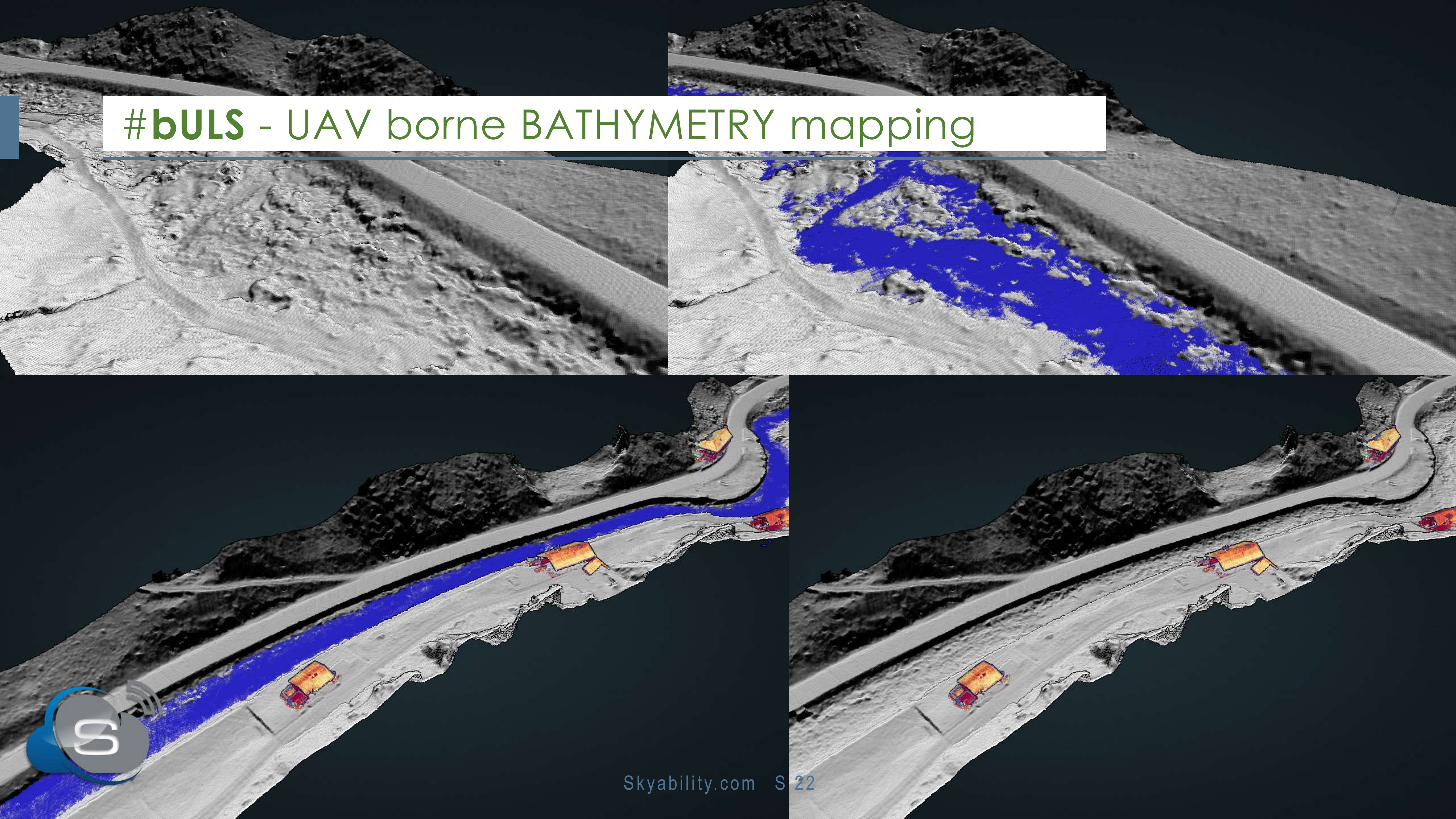
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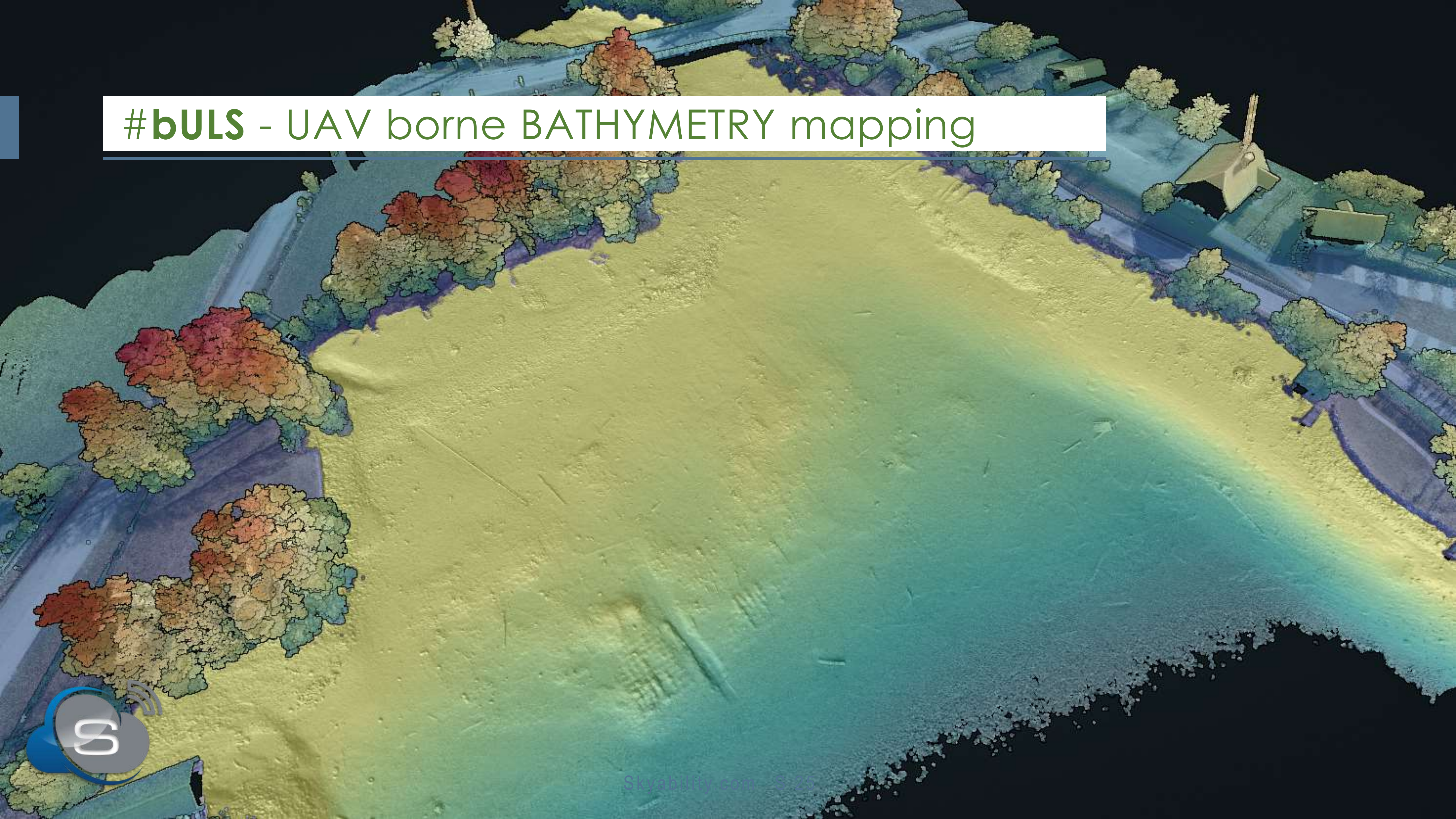
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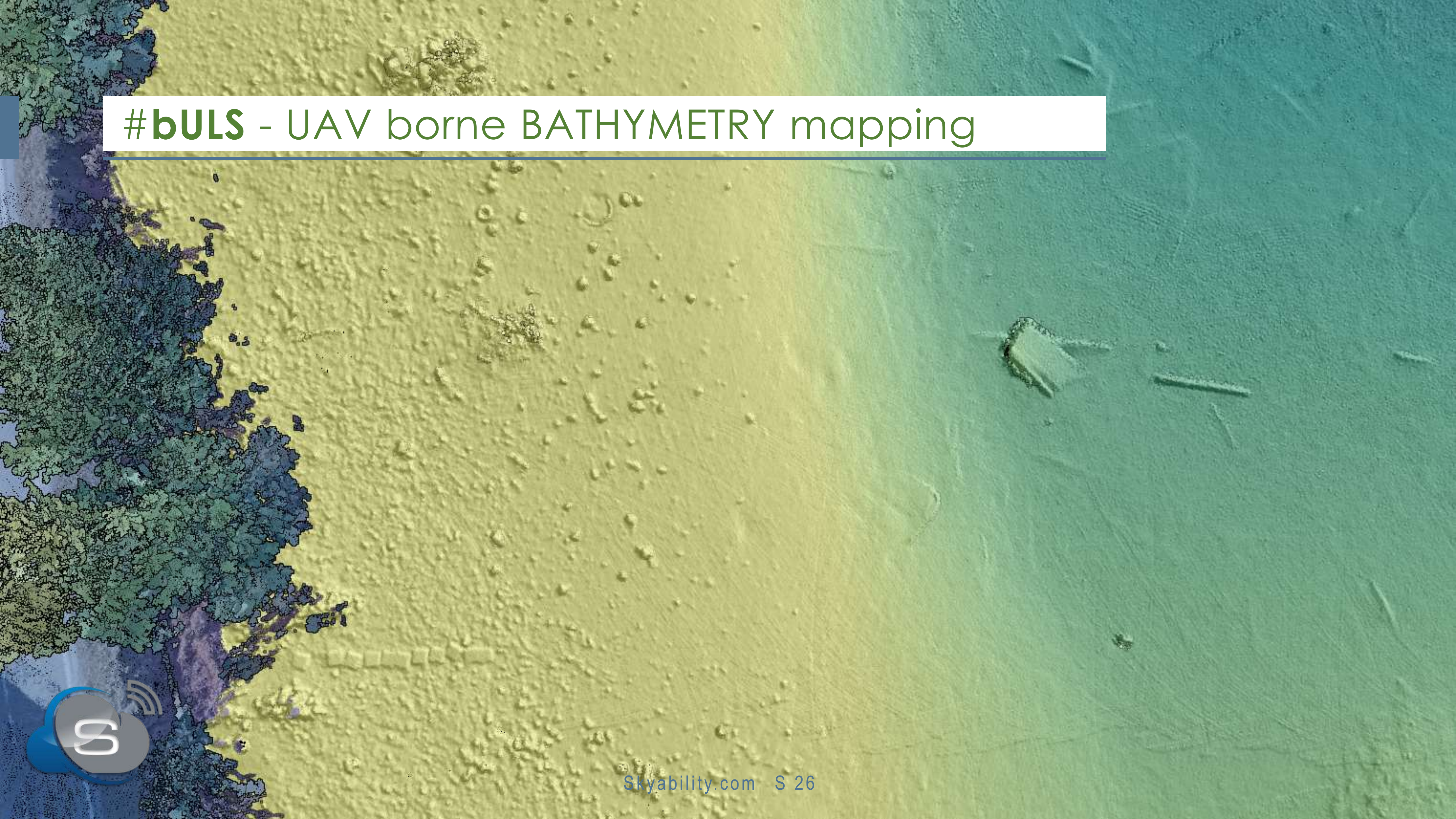
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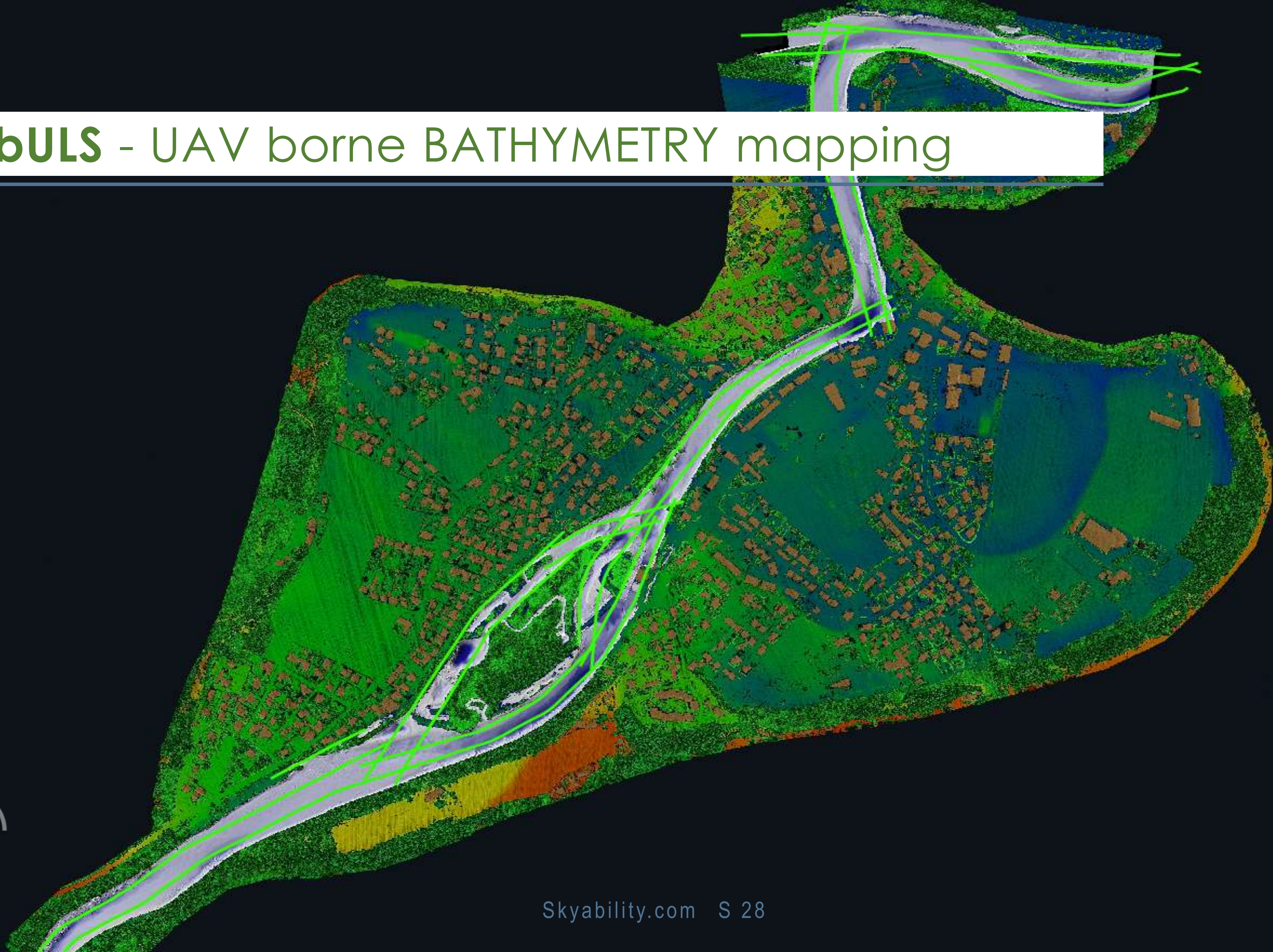
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