

MAPPING TECHNOLOGY

QUATERNARY GEOLOGY

Mapping technology through time

Future – adding depth to geological maps

Stratigraphy has always been an integral part of Quaternary mapping and is critical to fully understand geology of an area. However, standardized ways of (digitally) storing stratigraphic data has been lacking in Norway. Work is now well underway to establish a national database for storing stratigraphic-, geophysical- and bore hole observations. When this database is in place, new ways of querying and visualizing geology in 3D will be possible.

Present – multiple digital datasets, including LiDAR, digital photogrammetry and field observations

All interpretation and data capture is now done in a digital environment and observations are directly stored in the geodatabase. New datasets include digital (false-) color infrared photographs and LiDAR. These new dataset contains superior information, compared to black and white photographs, that can directly be used in geological interpretation and map production. Observations and data capture in the field is still of course crucial and is also done in a digital environment.

Past – black and white aerial photographs and analog map production

Quaternary mapping was until quite recently based on field observations supported by analog aerial photography interpretation. Observations where noted on manuscript maps and field slips that were later digitized into the NGU geodatabase. The workflow was intuitive but hindered by the limited information that could be extracted from black and white aerial photographs. In addition, thematic and geometric precision was lost in the analog transformation of observations from aerial photographs and field slips into the database.



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