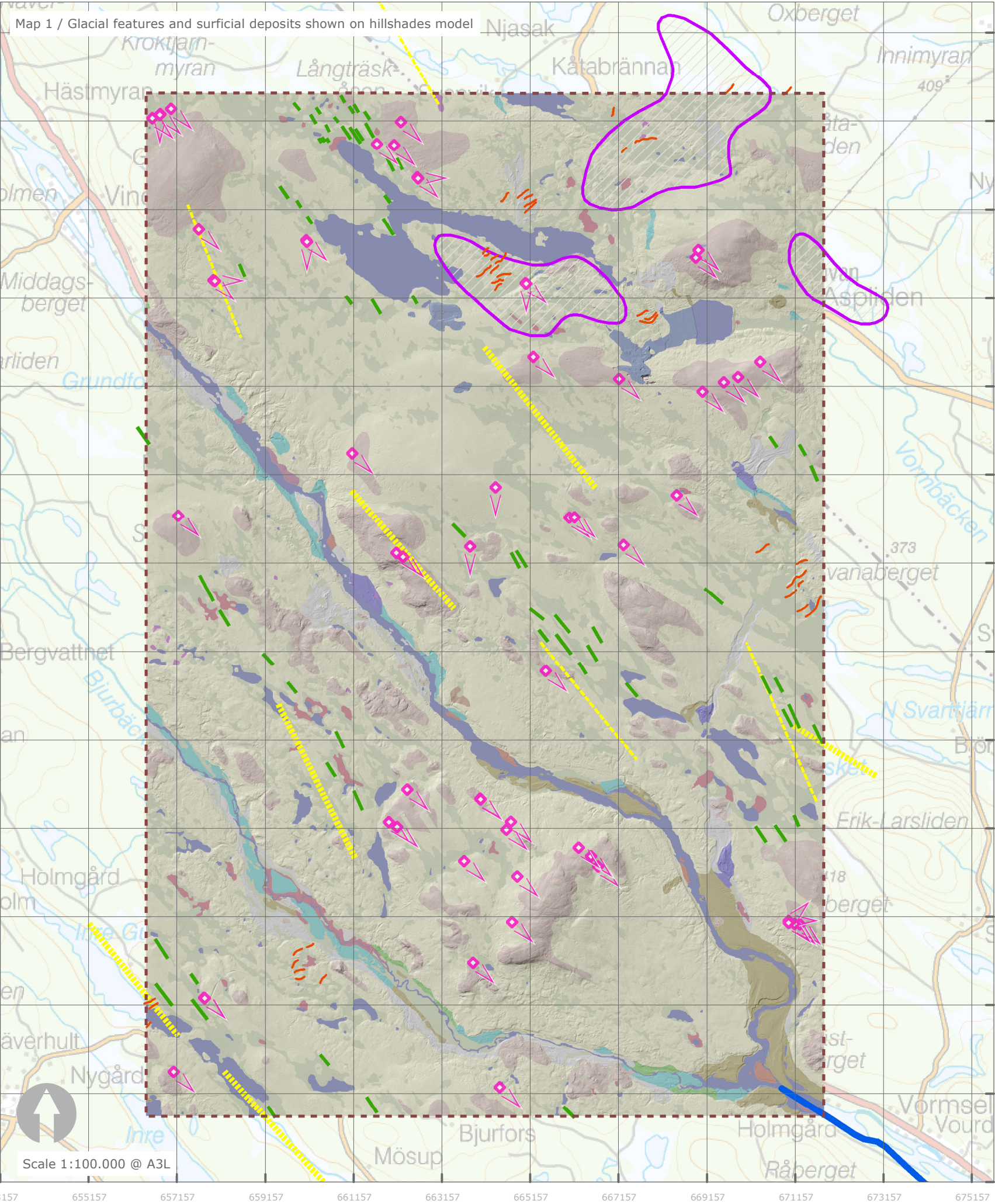


SPATIAL DISTRIBUTION OF GLACIAL FEATURES AND STRIATIONS IN VÄSTERBOTTEN COUNTY



Note 1

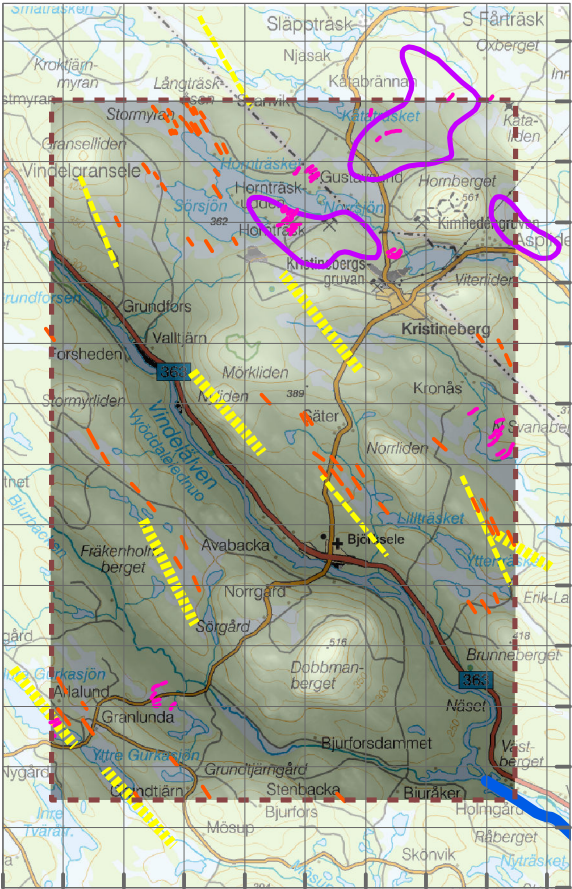
A correspondence between glacial surficial deposits and glacial features and striations can be clearly observed in map 1.

Glacial striations observation points, which have been digitised from SGU maps, suggest that a southwest direction of striations is clearly predominant. There are only few exceptions of points where south, east or northeast direction have been detected.

Additionally, glacial features such as drumlins, other lineations, and eskers also follow the movement direction. Also moraine ridges, whose perpendicular direction to the rest of features could be seen as a discrepancy, support the southeast movement, since this is the way these features are formed.

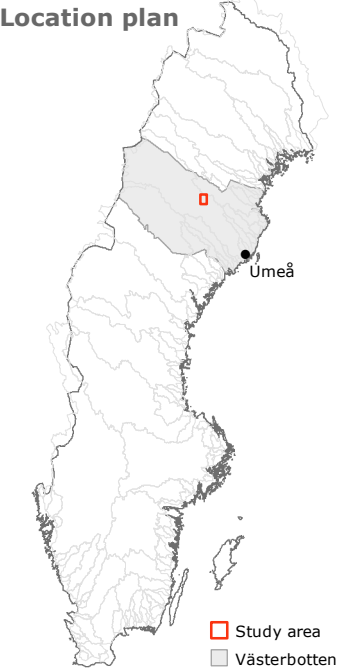
Regarding to ribbed moraines, it is hard to tell if these support the movement direction according to their shape. However, the fact that these areas are located almost totally over till, does support the glacial background.

Topographical map underlaid in Map 2 also fit glacial features and striations quite well. The currently existing river supports the glacial southeast direction movement.



Map 2 / Glacial features shown on elevation model
Scale 1:250.000 @ A3L

- Legend**
- Study area
 - Drumlins
 - Moraine ridge
 - Small lineations
 - Large lineations
 - Eskers
 - Ribbed moraines
 - Striations observation points
 - Movement direction
 - Northeast
 - East
 - Southeast
 - South
- Glacial surficial deposits**
- Bedrock
 - Boulder field
 - Filling
 - Glacial coarse silt-fine sand
 - Glaciofluvial sediment
 - Glaciofluvial sediment, gravel
 - Glaciofluvial sediment, sand
 - Till
 - Unclassified area
 - Silt
 - Peat
 - Peat, occasionally submerged
 - Water
 - Fluvial sediment
 - Fluvial sediment, sand



Note 2

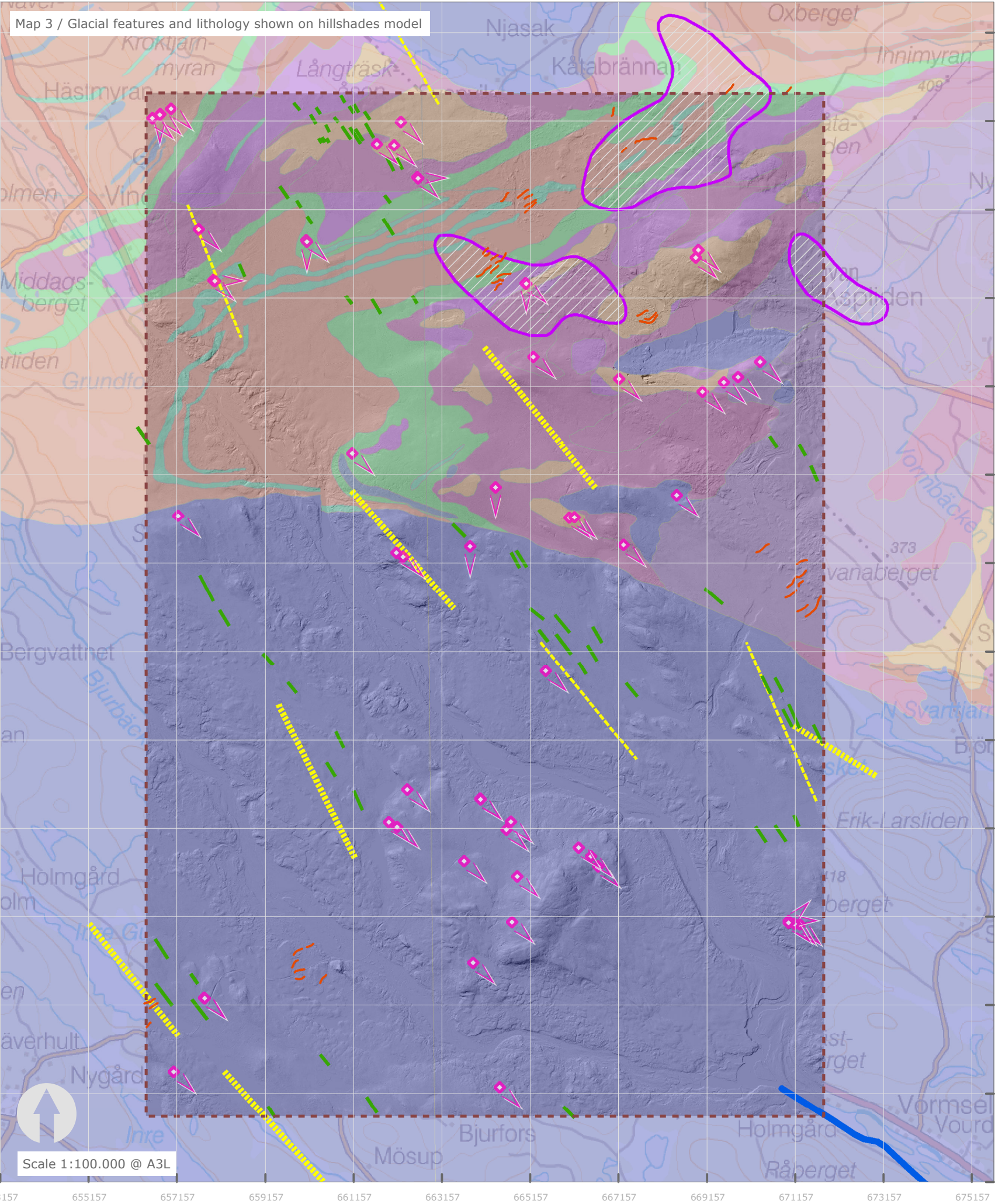
All maps have a 2000 x 2000 meters grid.

Map 1 layout is an overlay of a glacial surficial deposits map and a DEM hillshades model. A topographical map has been used as a background.

Map 2 layout is an overlay of a topographical map and a DEM.

Title:	Glacial features and surficial deposits
Drawing Nr:	Lab4.3.1
Revision / Date:	Rev. 01 / First issue / 2018.03.11
Author:	Pedro J. Muñoz Rodríguez
Data source:	LAB4 data from GIS1 course @ Umeå University
Coordinate system:	SWEREF99_TM
Scale:	1:100.000 / 1:250.000 @ A3L

SPATIAL DISTRIBUTION OF GLACIAL FEATURES AND STRIATIONS IN VÄSTERBOTTEN COUNTY



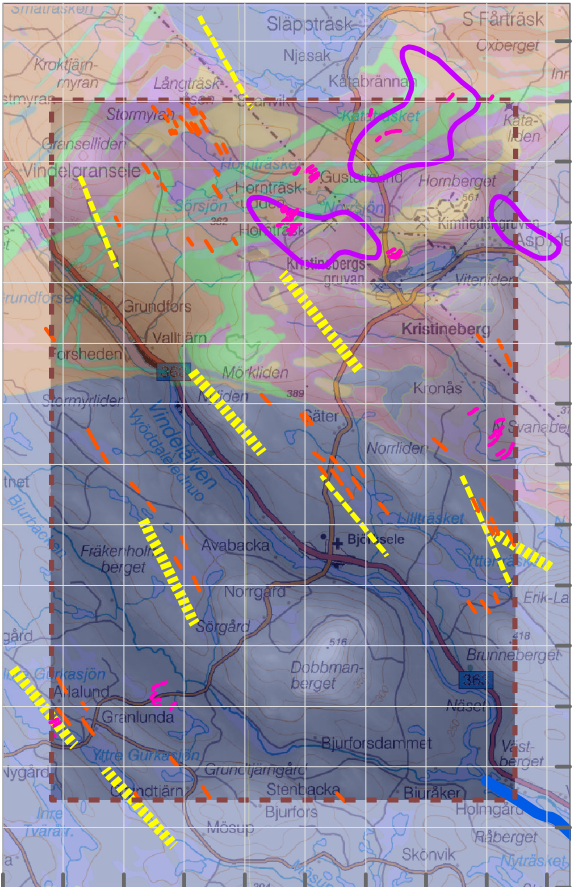
Note 3

No correspondence between lithology and glacial features and striations can be observed in map 3.

Glacial striations observation points, which have been digitised from SGU maps, do not seem to follow the glacial movement direction.

Glacial features do not seem to have any correspondence to lithology either. Although there are moraine ridges to the north of the study area that could seem to fit lithology, these features do not have apparently any correspondence to the materials underneath.

Map 4, in which lithology and DEM are overlaid, does not seem to show any correspondence between features and lithology either.



Map 4 / Glacial features and lithology shown on DEM
Scale 1:250.000 @ A3L

Legend

Study area

Drumlins

Moraine ridge

Small lineations

Large lineations

Eskers

Ribbed moraines

Striations observation points

Movement direction

Northeast

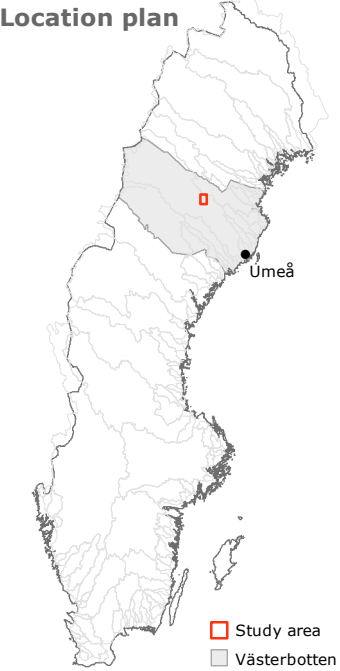
East

Southeast

South

Lithology

- Basalt-andesite
- Dacite-rhyolite
- Diabase
- Gabbro-diorite
- Granite
- Granodiorite-granite
- Hydrothermally-altered rock
- Monzodiorite-granodiorite
- Rhyolite
- Syenite-granite
- Tonalite-granodiorite
- Ultramafic intrusive rocks
- Ultramafic volcanic rocks
- Greywacke



Note 4

All maps have a 2000 x 2000 meters grid.

Map 3 layout is an overlay of a lithology map and a DEM hillshades model. A topographical map has been used as a background.

Map 4 layout is an overlay of a lithology map, a topographical map, and a DEM.

Title:	Glacial features and lithology
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Author:	Pedro J. Muñoz Rodríguez
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