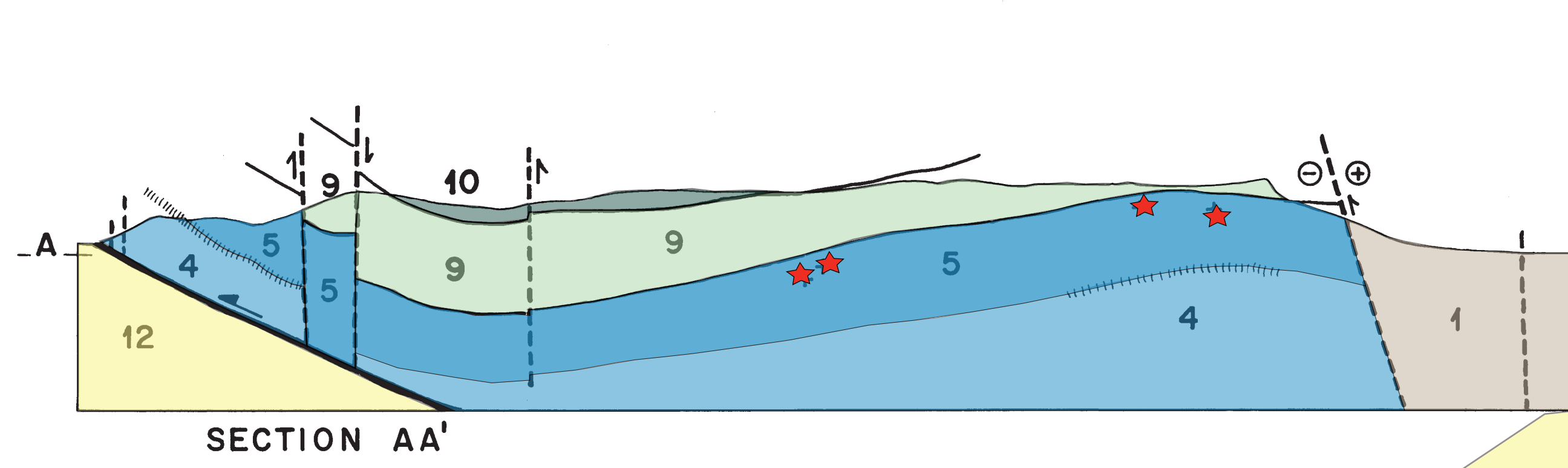


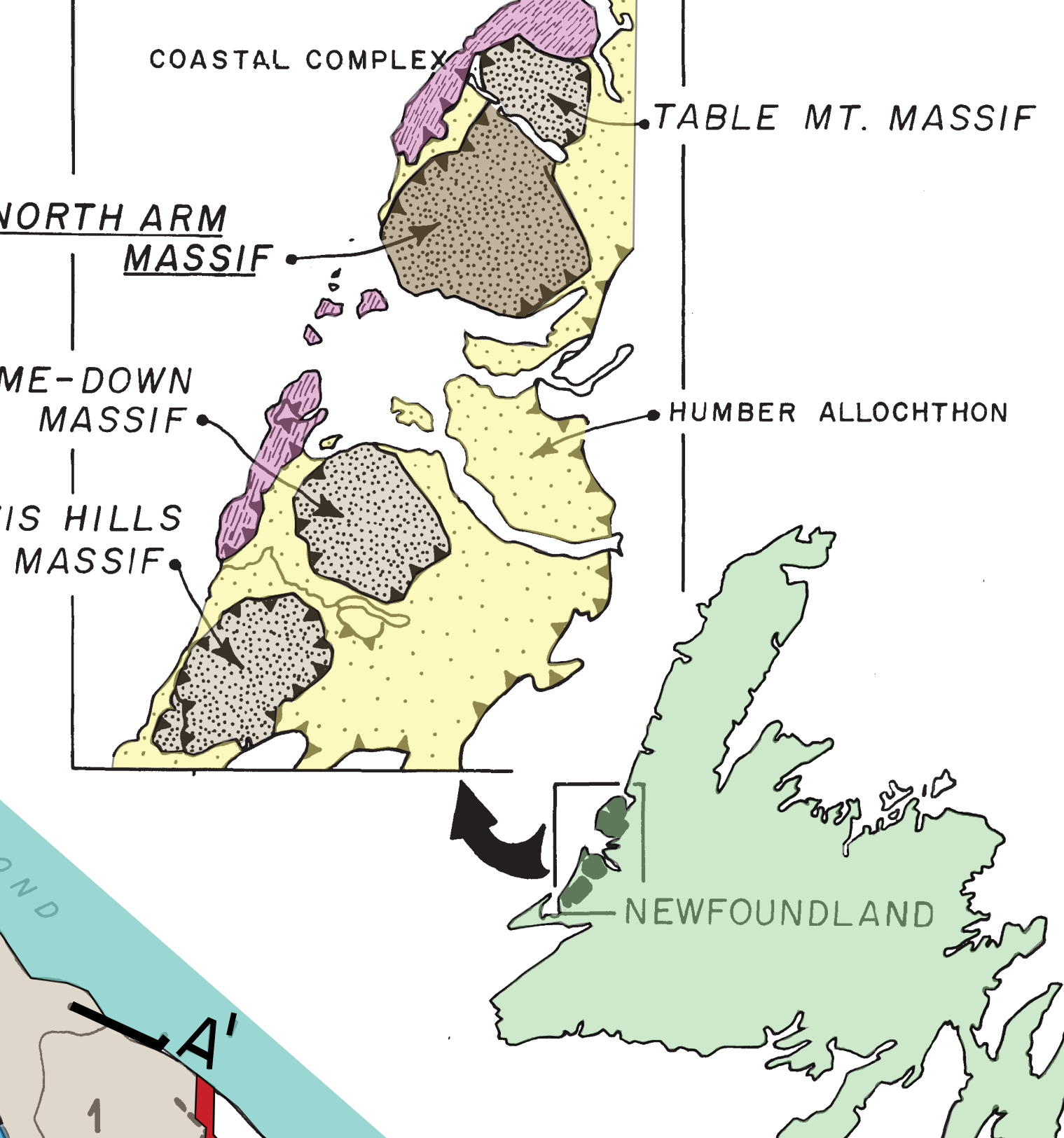
GEOLOGICAL MAP
OF THE
NORTH ARM MASSIF
BAY OF ISLANDS OPHIOLITE COMPLEX
NEWFOUNDLAND, CANADA

BY
JOHN F. CASEY & ERIC J. ROSENCRANTZ

1981



SECTION AA'



COASTAL COMPLEX
TABLE MT. MASSIF
NORTH ARM MASSIF
BLOW-ME-DOWN MASSIF
LEWIS HILLS MASSIF
HUMBER ALLOCHTHON
NEWFOUNDLAND

BLOW ME DOWN BROOK FORMATION
Turbidite sandstones and shales (Lower Cambrian)

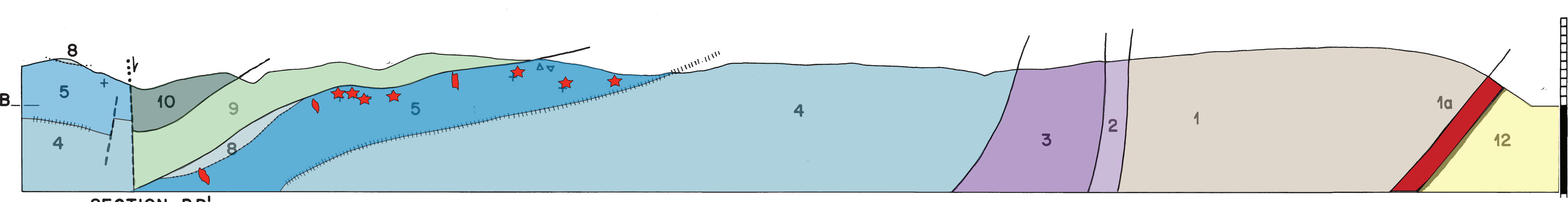
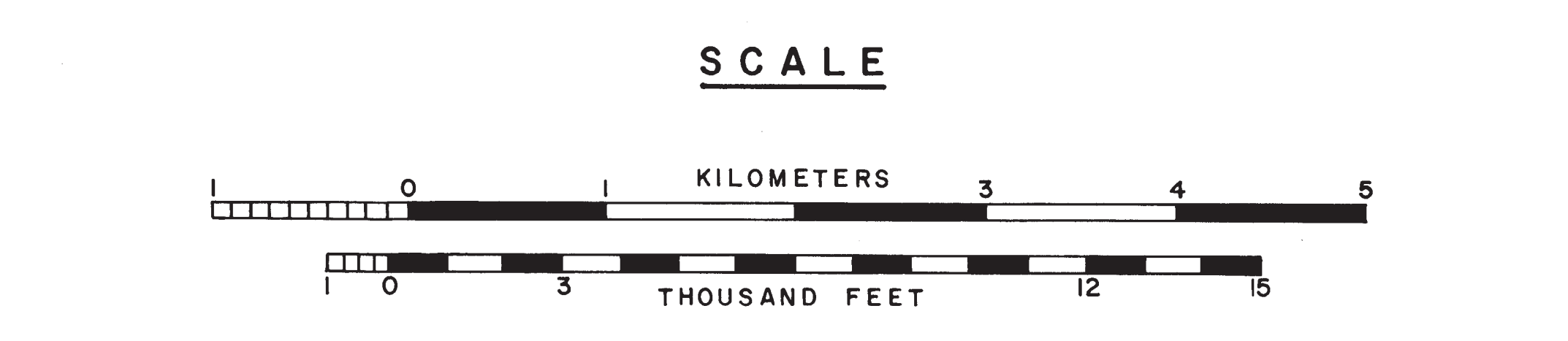
SUBOPHIOLITIC BASALTS (alkalic to tholeiitic), volcanicogenic sediments and pink micritic limestone.
SUBOPHIOLITIC MELANGE and BROKEN FORMATION including polymict clasts and blocks of ophiolite lithologies, mafic volcanics, and sandstones of Blow Me Down Brook Formation in scaly shale matrix.

METAMORPHIC SOLE (subcreted 2 pyroxene-garnet granulite, amphibolite, and greenschist facies metabasites, metapelites and metapsammities).

LITHOLOGY

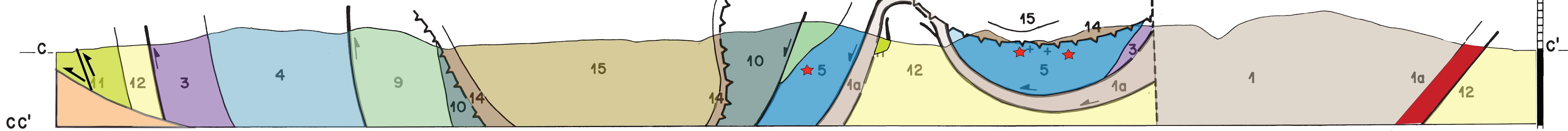
- | | |
|----------------|---|
| 13 | PARALLOCHTHON |
| <550-510 Ma | 16. SUMMERHOUSE BROOK FM.
Purple-red pebbly calcareous sandstone. |
| ~550 Ma | 15. JAWS BROOK FORMATION
Red, green, grey & black shales and mudstones. |
| ~480? - 460 Ma | 14. CRABB POINT FORMATION
Chaotic ophiolite breccia. |
| ~488 Ma | 10. BASALTS ; pillow lavas, flow lavas and breccia, plus intercalated red cherts. Metamorphosed. |
| | 9. DIABASE AS 100% (SHEETED) DIKES. Metamorphosed. 9a: massive intrusive diabase. Metamorphosed. |
| | 8. Gabbro with >10% diabase. Metamorphosed. |
| | 7. Intrusive trondhjemite, quartz diorite (small plugs, veins.) |
| | 6. Intrusive feldspathic dunite, wehrlite. |
| | 5. Hornblende gabbro, hornblende, and amphibolite. |
| | 4. MASSIVE NON-LAYERED GABBRO. Locally metamorphosed. |
| | 3. LAYERED GABBROIC ROCKS. |
| | 2. LAYERED ULTRAMAFIC ROCKS (Enstatite poor); includes dunite, clinopyroxenites, wehrlite. |
| | 1. HARZBURGITE TECTONITE ; includes minor dunite, orthopyroxenite. 1a: local LHERZOLITE |

- MAP SYMBOLS**
- Major ponds and streams.
 - Trace of basal thrust surface: barbs on overthrust block; dips noted where known. Note that current attitudes may be steep.
 - Traces of major faults and shear zones; dips noted where known. Undifferentiated as to age or origin.
 - Mylonite Zones (amphibolite to greenschist facies)
 - Traces of lithological contacts.
 - Trace of diffuse transition from non-layered to layered gabbroic rocks.
 - Trace of gradational transition from gabbro containing >10% to gabbro containing <10% dikes.
 - Trace of contact between massive and sheeted diabase.
 - Trace of erosional unconformity.
 - Strike and dip of diabase dikes.
 - Inclined vertical overturned
 - Strike and dip of sedimentary bedding.
 - Strike and dip of volcanics layering.
 - Strike and dip of compositional layering in gabbroic and ultramafic rocks.
 - Strike and dip of compositional layering in harzburgite tectonite.
 - Strike and dip of weak foliation defined by preferred orientations of mineral grains.
 - Strike and dip of strong foliation defined by preferred orientations of mineral grains or aggregates.
 - Trend and plunge of lineations defined by preferred orientations of mineral grains or aggregates.
 - Trend and plunge of mesoscopic fold axes; undifferentiated as to origin or age.
 - Locations of diabase xenoliths in gabbro.
 - Fossil localities.

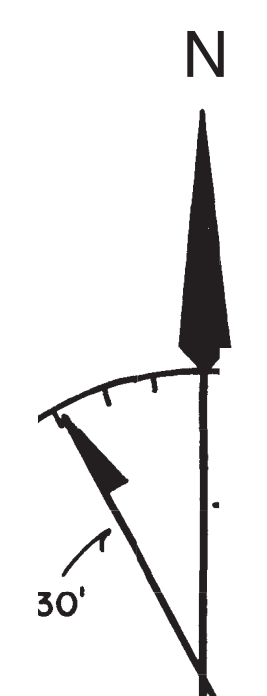


SECTION BB'

No vertical exaggeration on cross sections.



SECTION CC'



30°