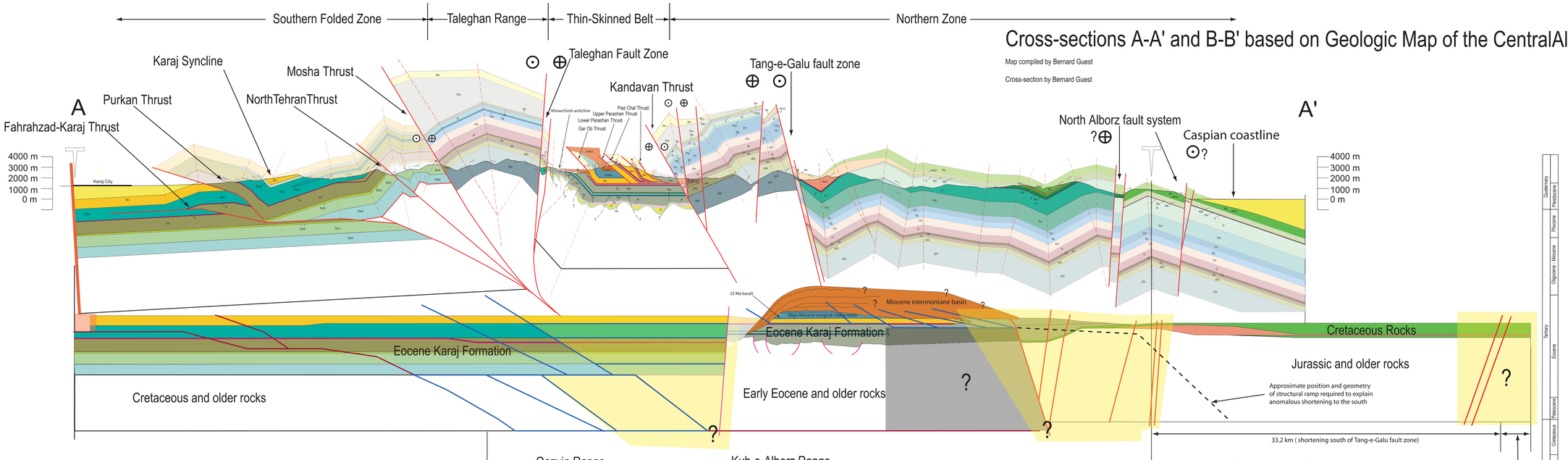
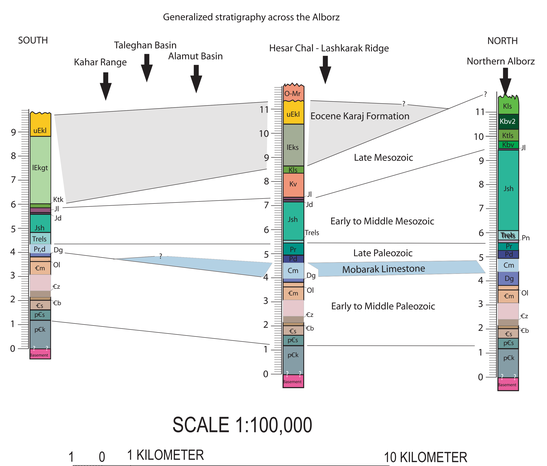
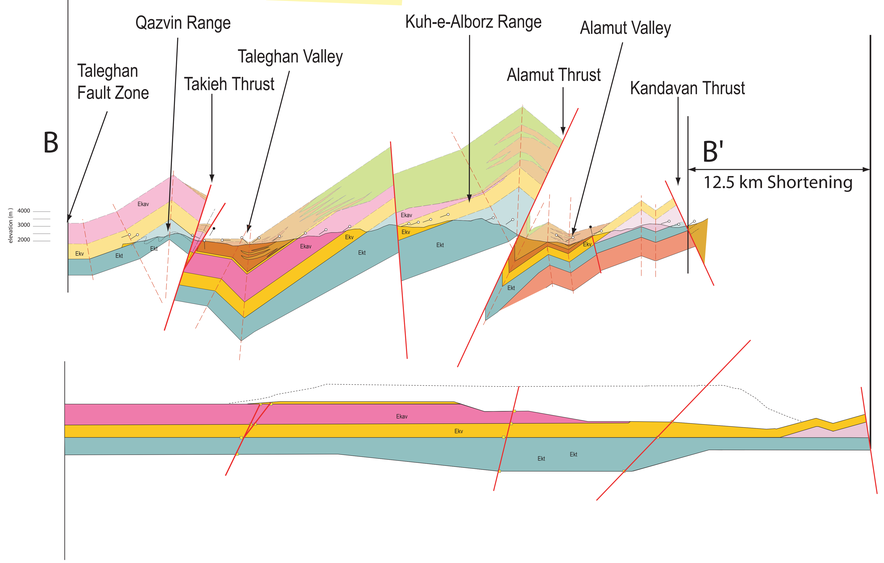
Cross-sections A-A' and B-B' based on Geologic Map of the CentralAlborz Mountains, Northern Iran

Map compiled by Bernard Guest

Cross-section by Bernard Guest







Contact
Fault
Eocene normal fault
Mid(?) Miocene fault
Late Miocene to Recent thrust faults
Fold axial surface

Region affected by strike-slip deformation

Region where a gap is left as shortening is restored due to unaccounted for shortening to the south of the cross-section

Footwall material reqired by hanging-wall shortening but not present in the cross-section

EXPLANATION

Quaternary — Qal: Loose alluvium in river channels

Tertiary — Oligocene, Miocene

O-Mr: RED FORMATION, sandstone silts and minor pebble conglomerate
O-Mgr: RED FORMATION, gypsiferous silt stones and minor shales
O-Mrc1: RED FORMATION, basal and marginal fanglomerate, also grades laterally into O-Mr, and commonly contains growth stratification.
O-Mgc3: RED FORMATION, brown conglomerate dominated by Eocene Karaj volcanic and clastic, mesozoic and paleozoic clasts
O-Mgc: RED FORMATION, green conglomerate (dominated by Eocene Karaj green tuff clasts)
O-Mrc2: RED FORMATION, red conglomerate (dominated by Eocene Karaj volcanic clasts)
O-Mrss: LOWER RED FORMATION, travertines, silts, sands and shales interbedded with basalt flows (32.8 Ma)
Ob: Olivine basalt flows (Ar/Ar groundmass age: 32.8 Ma)
Tak: ALAM KUH GRANITE (6.8 Ma)
Ts: Tertiary sill

Tertiary — Eocene

Ekc: KARAJ FORMATION, upper conglomerates and agglomerates
Ekav: KARAJ FORMATION, analcime bearing lavas
Ekv: KARAJ FORMATION, volcanics, modtley trachy andesite lava flows
Eks: KARAJ FORMATION, green to grey lithic sandstones
Ekah: KARAJ FORMATION, undifferentiated shales and tuffaceous shales
Ekls: KARAJ FORMATION, limestones (locally numulitic)
Ekg: KARAJ FORMATION, massive gypsum
Ekut: KARAJ FORMATION, upper greenturff units, undevided
Ekut3, 2, 1: KARAJ FORMATION, upper greenturff units devided into units 1, 2, and 3
Eka: KARAJ FORMATION, Asara Shale; EAb: Asara Shale basal tuffaceous unit
Ekmt: KARAJ FORMATION, middle green tuffaceous unit and three marker horizons;
Ekmt3, Ekmt2 and Ekmt1 composed of distinctive subaqueous bright green ashfall deposits.
Ekgt: KARAJ FORMATION, undevided green tuffaceous shales, may correlate with Ekmt
Ekgt1 and Ekgt2: KARAJ FORMATION, distinctive subaqueous bright green ashfall deposits may correlate with Ekmt1, 2, or 3.
Ekgt3: KARAJ FORMATION, an ignimbrite sheet which grades laterally from a coarse crystal and clast rich tan lapilli tuff to fine grained green subaqueous ash, may correlate with Ekmt 1, 2, or 3
Ekkh: KARAJ FORMATION, lower tuffaceous shale unit
Ekbv: KARAJ FORMATION, basalt lavas undevided; Eb: small basaltic to andesitic flows and plugs
Ez: ZIARAT FORMATION, nummulitic limestone
Ta: AKAPOL GRANODIORITE (56 Ma)
P-Ef: FAJAN FORMATION, conglomerate
P-Eb: basic lavas

Tertiary — Paleocene

Kvc: Tuffaceous sandstone, marl, calcareous sandstone, andesite and quartz andesite
Kls: Limestone
Kbv2: Basaltic, volcanic, and pyroclastics
Kts: Tuffaceous limestone
Kbv: Basaltic volcanics
Kn: NUSHA GRANITE (99 +/-1.5 Ma)

Mesozoic — Cretaceous

Jd: DALICHAI FORMATION, ammonite bearing marl and limestone
Jl: Basaltic lavas
Jds: Undifferentiated limestones

Mesozoic — Jurassic

Js: SHEMSHAK FORMATION, shale, sandstone, siltstone, conglomerate

Mesozoic — Triassic

Trs: ELIKA FORMATION, thick bedded to massive dolomite and dolomitic limestone

Paleozoic — Permian

Pn: NESAN FORMATION, limestones, marly and sandy shales
Pr: RUTEH FORMATION, dolomitic limestone
Pd: DORUD FORMATION, shale, sandstone, limestone, siltstone, quartzite
Pd,r: DORUD-RUTEH UNDEVIDED

Paleozoic — Carboniferous

Cm: MOBARAK LIMESTONE, undifferentiated fossiliferous grey limestone
Cm2: MOBARAK LIMESTONE, massive, feature-forming grey limestone
Cm1: MOBARAK LIMESTONE, well-bedded grey or dark grey limestone or shaley limestone

Paleozoic — Devonian

Dg: GERUD FORMATION, sandstone, shale, and limestone

Paleozoic — Ordovician

Ol: LASHKERAK FORMATION, pink dolomite, limestone, shale, topped by grey sandstone

Paleozoic — Cambrian

Cl: LALUN FORMATION, red sandstone, topped by white quartzite
Clq: LALUN FORMATION TOP QUARTZITE, white quartzite
Cz: ZAGUN FORMATION, siltstone, mudstone, and red sandstone
Cb: BARUT FORMATION, sandstone, dolomite, and black shale

Precambrian

pCs: SOLTANIEH FORMATION, undifferentiated dolomite and shale
Csd2: SOLTANIEH FORMATION, cliff-forming upper dolomite member
Csa: SOLTANIEH FORMATION, upper shale member
Csd1: SOLTANIEH FORMATION, middle dolomite member
pCss: SOLTANIEH FORMATION, lower shale member
pCsd: SOLTANIEH FORMATION, lower cherty dolomite member

pCk: KAHAR FORMATION, undifferentiated shale, sandstone, and minor dolomite
pCks: KAHAR FORMATION, shale
pCkd: KAHAR FORMATION, dolomite
pCkssd: KAHAR FORMATION, shale and dolomite

PLATE 2

Bernard Guest