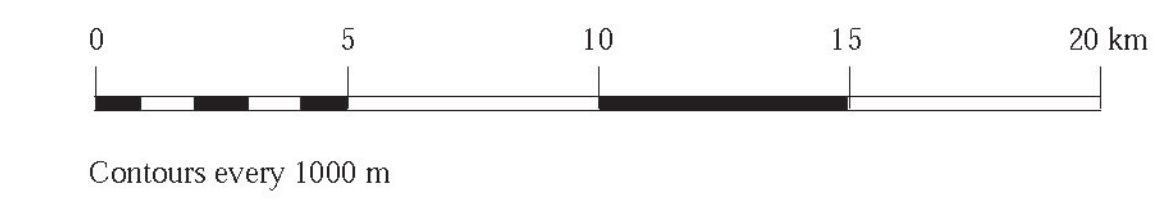


# Geological map of Hunza to Baltistan Karakorum - Kohistan - Ladakh - Himalaya North Pakistan

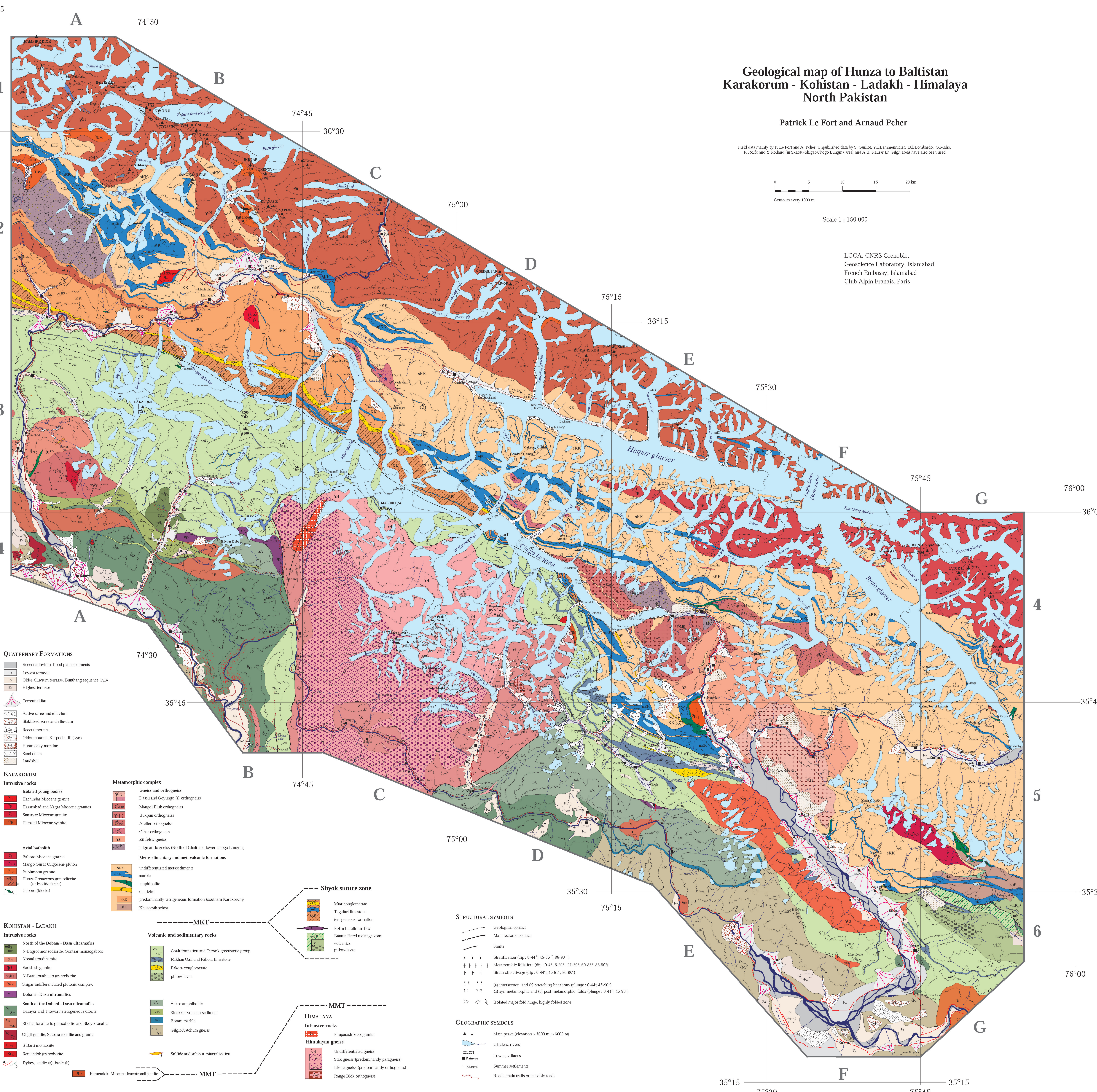
Patrick Le Fort and Arnaud Pcher

Field data mainly by P. Le Fort and A. Pcher. Unpublished data by S. Guillot, Y. El Emmenier, B. El Lombardo, G. Maho, F. Rolfo and Y. Rolland (in Skardu-Shigar-Chago Lungma area) and A.B. Kausar (in Gilgit area) have also been used.



Scale 1 : 150 000

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### QUATERNARY FORMATIONS

- Recent alluvium, flood plain sediments
- Fz Lowest terrace
- Fy Older alluvium terrace, Bumhang sequence (FyB)
- Fx Highest terrace
- Torrenial fan
- Active scree and elluvium
- Stabilised scree and elluvium
- Recent moraine
- Older moraine, Karpochi till (GyK)
- Hummocky moraine
- Sand dunes
- Landslide

### KARAKORUM

- #### Intrusive rocks
- Isolated young bodies
  - Hachindar Miocene granite
  - Hasanabad and Nagar Miocene granites
  - Sumayar Miocene granite
  - Hemasil Miocene syenite
- #### Axial batholith
- Baltoro Miocene granite
  - Mango Gutar Oligocene pluton
  - Bulmichin granite
  - Hunza Cretaceous granodiorite (a : biotitic facies)
  - Gabro (blocks)

### Metamorphic complex

- Gneiss and orthogneiss
  - Dassu and Goyungo (a) orthogneiss
  - Mangol Bluk orthogneiss
  - Bukpun orthogneiss
  - Arelter orthogneiss
  - Other orthogneiss
  - Zil fabric gneiss
  - migmatitic gneiss (North of Chalt and lower Chago Lungma)
- #### Metasedimentary and metavolcanic formations
- undifferentiated metasediments
  - marble
  - amphibolite
  - quartzite
  - predominantly terrigenous formation (southern Karakorum)
  - Khuson schist

### KOHISTAN - LADAKH

- #### Intrusive rocks
- ##### North of the Dobani - Dasu ultramafics
- N-Bagrot monzodiorite, Goutsar monzogabbro
  - Nomal trondjemite
  - Badshah granite
  - N-Barti tonalite to granodiorite
  - Shigar undifferentiated plutonic complex
  - Dobani - Dasu ultramafics
- ##### South of the Dobani - Dasu ultramafics
- Duniyor and Thowar heterogeneous diorite
  - Bilchar tonalite to granodiorite and Sikoyo tonalite
  - Gilgit granite, Saipara tonalite and granite
  - S-Barti monzonite
  - Remendok granodiorite
  - Dykes, acidic (a), basic (b)

### Volcanic and sedimentary rocks

- Chalt formation and Turmik greenstone group
- Rakhan Gali and Pakora limestone
- Pakora conglomerate
- pillow-lavas
- Askor amphibolite
- Sinakkar volcano-sediment
- Boram marble
- Gilgit-Katchara gneiss
- Sulfide and sulphur mineralization

### Shyok suture zone

- Miar conglomerate
- Tagafari limestone
- terrigeneous formation
- Polan La ultramafics
- Bauma Harel me'large zone
- volcanics
- pillow-lavas

### Himalaya

- #### Intrusive rocks
- Phuqarash leucogranite
- #### Himalayan gneiss
- Undifferentiated gneiss
  - Stak gneiss (predominantly paragneiss)
  - Iskera gneiss (predominantly orthogneiss)
  - Range Bluk orthogneiss

### STRUCTURAL SYMBOLS

- Geological contact
- Main tectonic contact
- Faults
- Satiffication (dip : 0.44°, 45.85°, 86.90°)
- Metamorphic foliation (dip : 0.4°, 5.30°, 31.50°, 60.85°, 86.90°)
- Strain-slip cleavage (dip : 0.44°, 45.85°, 86.90°)
- (a) intersection and (b) stretching lineations (plunge : 0.44°, 45.90°)
- (a) syn-metamorphic and (b) post-metamorphic folds (plunge : 0.44°, 45.90°)
- Isolated major fold hinge, highly folded zone

### GEOGRAPHIC SYMBOLS

- Main peaks (elevation > 7000 m, > 6000 m)
- Glaciers, rivers
- Towns, villages
- Summer settlements
- Roads, main trails or jeepable roads