|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Stratigraphic units** | | | **Litho units & grade of metamorphism** | **Additional information** | |
|  |
| DHARWAR SUPERGROUP (2600-2800 Ma) |  | | | Proterozoic mafic dykes  Charnockites (2500-2600 Ma)  Younger granites (2600 Ma) |  | |
| CHITRADURGA  GROUP | | Ranibennur Subgroup | Greywackes with BIF, polymict conglomerate, mafic-felsic volcanics.  Least metamorphosed, gentle deformation | Oldest detrital zircon reported in Gadag greenstone belt: 3542 ± 9 Ma (Sarma *et al*. 2012) | |
| Vanivilas Subgroup | Manganese and iron formations, stromatolitic carbonates, biogenic chert, pelites, quartzites and polymict conglomerates (basin margin).  Mafic-felsic volcanics with BIF, phyllites (basin centre)  Talya/Kaldurga Conglomerate = Metabasalts and siliceous phyllites of Jagar valley  Greenschist facies metamorphism, strong deformation |  | |
| Mulaingiri Formation  Santaveri Formation | *Disconformity* | | |
| BABABUDAN  GROUP | | BIF with phyllites and rare ultramafic-mafic sills  Metabasalts, felsic volcanics (Galipuje felsite), ultramafic schists, layered basic complexes, siliceous phyllites, cross-bedded quartzite (Kaimara, Tanigabail) | Oldest reported detrital zircon: 3634 ± 10 Ma (Bhaskar Rao *et al*. 2008) | |
|  | | | Allampura Formation  Kalasapura Formation | Metabasalts, gabbros, ultramafic schists, local BIF, phyllites, cross-bedded quartzite (Lakya)  Metabasalts, gabbros, ultramafic schists, phyllites, quartzites, basal quartz pebble conglomerate (Kartikere Conglomerate)  Greenschist to lower amphibolite facies of metamorphism |  | |
|  | | | *Deformed angular unconformity* | | | |
| Peninsular Gneiss with trondjhemite-granodiorite plutons (⁓3200 to ⁓3400 Ma)  Migmatite and amphibolite facies metamorphism | | | | | | Oldest generation: 3410 ± 3.6 Ma (Guitreau *et al.* 201*7*) |
| *Intrusive/Tectonic contact* | | | | | | |
| SARGUR GROUP  (3100-3300 Ma) | | Ultramafic -mafic intrusive complexes (Hole Narasipur, Nuggihalli etc.)  Cherts amd BIF  Basaltic and komatiitic amphibolites, serpentinised komatiites  Local marbles and calc-silicates rocks  Garnet biotite schist and para-gneiss (with kyanite, sillimanite, staurolite, graphite and corundum); rare cordierite-sillimanite-hypersthene gneiss  Fuchsite quartzite with chromite layers and barytes beds  Upper amphibolite to lower granulite facies metamorphism, intense deformation | | | Detrital zircons show age range of 3130-3580 Ma (Nutman *et al*. 1992)  Oldest reported zircon age: 3555 ± 95 Ma (Lancaster *et al*. 2015) | |
| *Intrusive/Tectonic contact* | | | | | | |
| Gorur Gneiss (3300-3400 Ma) | | | | | | |

Supplementary Table 1. Regional stratigraphy of the Western Dharwar craton (after Swami Nath & Ramakrishnan 1981; Viswanatha & Ramakrishnan 1981; Naqvi & Rogers 1987; Naqvi *et al*. 2009; and Guitreau *et al*. 2017)