

Occurrence Of Gold Mineralisation in Chikkasiddavana-Halli,Chitradurga Schist Belt Dharwar Craton, INDIA

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Chitradurga schist belt runs approximately NNW-SSE to N-S over a distance of about 450Km extending from Gadag in the north to Srirangapatnam in the south in Karnataka state. Chikkasiddavanahalli (C.S.Halli) forms an integral part of the outer dominantly sulphide facies BIF(SBIF),with minor oxide (OBIF) and interbedded Fe rich phyllites, all hosted in metabasalts. A 14 point formula, three stage systematic grid sampling and deep trenching, along the exposed conjugated quartz veins has yielded a 700/80 m gold mineralised zone with values ranging from 0.2 to 5.0 gpt. Deep trenching along the strike length of the BIF has yielded 0.4-3.0 gpt and a significant feature is that the role of the path finder elements As,Sb,Bi,Ag,Cu,Co,&Ni has been found during exploration to be good indicators coinciding well with the depth wise persistence of gold in relation to the background anomaly values. Cross cutting quartz veins \pm sulphides have been studied to understand the mineralized auriferous quartz vein system and role of fluids in comparison to the unmineralized quartz veins. A drilling programme is in progress and results are encouraging on the core samples by using Fire- assay & AAS methods. Minerological studies reveal that it is dominated most commonly by pyrite and pyrrhotite. Arsenopyrite is the next common sulphide with minor galena, sphalerite, chalcopyrite and often tellurides. Mineralised SBIF show 10μ fine yellow specks of gold having high reflectivity. Range estimation of the ore body varies from 7-12mt with an average width of 9.6mt and grade of 6 gpt on the basis of bore hole data.