

STREAM SEDIMENT SURVEY OF HEAVY MINERALS OF UPPER WALAWE BASIN IN SOUTH CENTRAL SRI LANKA

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This Stream Sediment Survey was carried out to identify heavy mineral distribution and their provenance in the Upper Walawe basin in Sri Lanka. The Walawe Ganga Basin is one of the most economically and geologically important river systems in the south of Sri Lanka. It has recorded economically important minerals, gold and gem minerals. For this study 56 sediment samples were collected from upper part of the Walawe basin of Walawe Ganga and Weli Oya, from confluences of third order streams. Sediment samples were initially panned in the field to decrease the sample weight to 5kg. In the laboratory, samples were separated by Wilfley tabling, magnetic and heavy liquid separations to isolate the different minerals for final microscopic examination. It revealed that, those samples around Weli Oya contained noticeable percentages of gold, heavy minerals and rare earth minerals. Gold was observed in six locations as gold nuggets, in areas around Rajawaka, Wiganakkubura, Wahathupitiya, and Udakanda in Balangoda area. Highest gold weight is recorded in location number 52, as 24 mg. As heavy minerals ilmenite, garnet, magnetite, rutile, sillimanite, thoriumite, zircon, pyrite, sphene, kyanite, monazite, tourmaline, corundum have been recorded. Spinel, corundum and tourmaline are important gem minerals found in this area. Appearance of thoriumite and monazite gives evidence for radioactive elements bearing minerals. Further petrological and chemical analysis should be carried out during the next stage of the study.

Keywords: Heavy mineral, Walawe basin

