

Determine the Presence of Gold and its distribution in  
Upper Nilwala River Basin, Southern part of Sri Lanka.

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by

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## **Abstract**

Gold (Au) is a native metal has a higher value for it. Investments made on gold prospecting are only second to oil exploration. Billions and Billions of rupees will be spent for the soil analysis done for gold prospecting. This research was carried out to find gold in upper Nilwala River and possible areas that gold can be found. In this study, distributions of indicator elements of gold were studied to identify potential gold enrichments in the upper Nilwala River Basin.

30 samples of river sediments and 10 samples of gem pit sediments were collected within upper Nilwala River Basin. These samples were prepared to carry out mineralogical analysis and XRF analysis. Then the data was interpreted find out the distribution of the gold.

Within 40 gem pit samples and river sediment samples, gold was able to find in NWM-10 location by mineralogical analysis. Using XRF analysis gold was able to find in NW-2, NW-8, NWM-4, NWM-8 and NWM-10 locations. As, Pb, Co, Ni and Cu indicator elements and pyrite grains were used to identify possible areas that can find gold. According to it NW-23, NWM-2, NWM-5, NWM-6 and NWM-9 locations were identified as possible areas that we can find gold.

This study reveals, gold is present in the upper Nilwala River Basin. Mainly these gold particles can be found in the gem pits so there is a higher possibility to find gold in gem pits sediments than river sediments.