

Laboratory Analysis Reveals Direct Evidence of Precolonial Gold Recovery in the Archaeology of Zimbabwe's Eastern Highlands

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The Nyanga districts of the Eastern Highlands of Zimbabwe between the Makaha and Penhalonga goldbelts are not known for the occurrence of gold. Paradoxically, and supported by recent discoveries of primary sources, today's undercover gold panners are living testimony to the presence of gold in a landscape modified by hillslope terracing about which oral tradition is silent. The anomaly of much quartz rubble on the terraces and evidence of ore dressing as work in progress in and around hundreds of associated 'pit structures' is not considered in previous research. For nearly a century archaeologists have promoted the 'pit structures' as pens for a hypothesised breed of dwarf cattle, stallfed to provide manure to enrich the infertile hillslopes for terrace cultivation. In 2005 when Kritzinger was granted a Research Council of Zimbabwe permit to study the Nyanga archaeology from a mining perspective this dominant theory was challenged by empirical field observation and a self-funded pilot of geochemical sampling across a 65-km radius. Samples from 27 'pit structures' assaying 0.04-1.78g/t Au identify them as gravity-concentration apparatus. Residual values of 0.04-2.04g/t Au from portable grindstones, rock-outcrop milling sites and dumps of sorted quartz exhibit widespread liberation of gold from quartz gangue. This direct evidence of gold recovery is supported by mineralogical clues that placer ore was trapped by the riffle effect of the stone-walled terracing. The opinion of an early-mining landscape expert that the proximity of archaeological water channels with geomorphologically puzzling 'erosion gullies' is a 'very serious possibility' of hydraulic removal of overburden ('hushing') connects with mineral exploitation in the past.