

21ST CENTURY EXPLORATION GEOCHEMISTRY – THE GOOD, THE BAD AND THE UGLY

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The “Good, the Bad and the Ugly” film of 1966 revolves around gunslingers competing to find fortune of gold amid the chaos of the American Civil War. This scenario is not dissimilar to current exploration geochemists’ objectives in the turbulence of an extended economic down turn. The film is also distinct in the use of long shots and close-up cinematography, as well as violence, tension, and stylistic gunfights. Again, not dissimilar to the multiple exploration scales we work with, the pressure to get results and the various technical tools one employs to achieve these results. The 21st century has seen some major developments that have shaped the manner in which exploration geochemistry is conducted. Some of these are good, some are negative and some are downright ugly. More recent advances and future developments can be categorized in four key areas, 1) understanding metal mobility and mechanisms, 2) rapid geochemical analyses, 3) data access, integration and interoperability, and 4) innovation in laboratory-based methods. This presentation will highlight examples in these key areas with the related comparison to the good, bad and ugly aspects of each. Finally, we will look to avoid the hangman’s noose by recognizing the challenges and identify the frontiers that the exploration geochemistry community needs to traverse to find the next deposit (or buried cache of Confederate gold).