Title: Lithological Discrimination by Digital Processing: A Case Study in Serra do Ramalho, Bahia

Author(s): Waldir Renato Paradella, Icaro Vitorello, M.D. Monteiro

Abstract: Enhancement techniques and thematic classifications have been applied to the metasediments of Bambuí Super Group (Upper Proterozoic) in the Semi-Arid region of Serra do Ramalho, in the SW portion of the state of Bahia. Color composites of contrast stretched Band Ratios and Principal Components allow lithological discrimination through tonal gradations, of several metasedimentary sequences to a level superior to reconnaissance mapping. Supervised (maximum likelihood classifier) and non-supervised (K-means classifier) classifications of the limestone sequence, host to fluorite mineralization have shown satisfactory results.