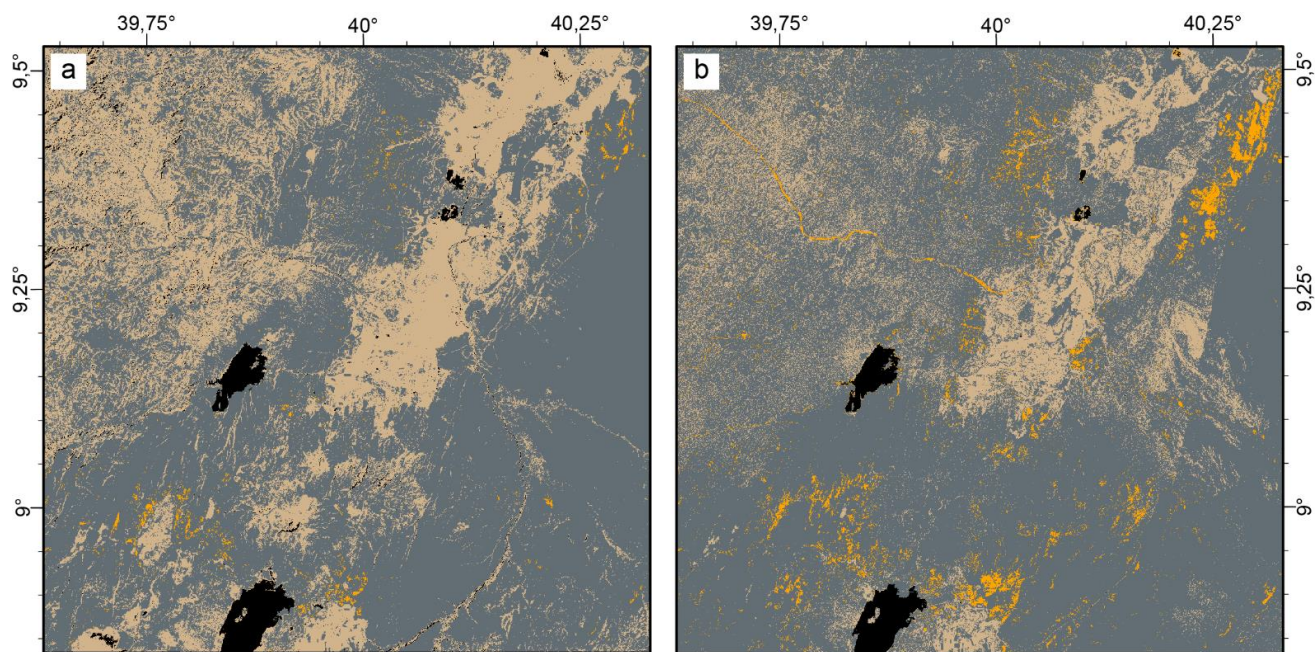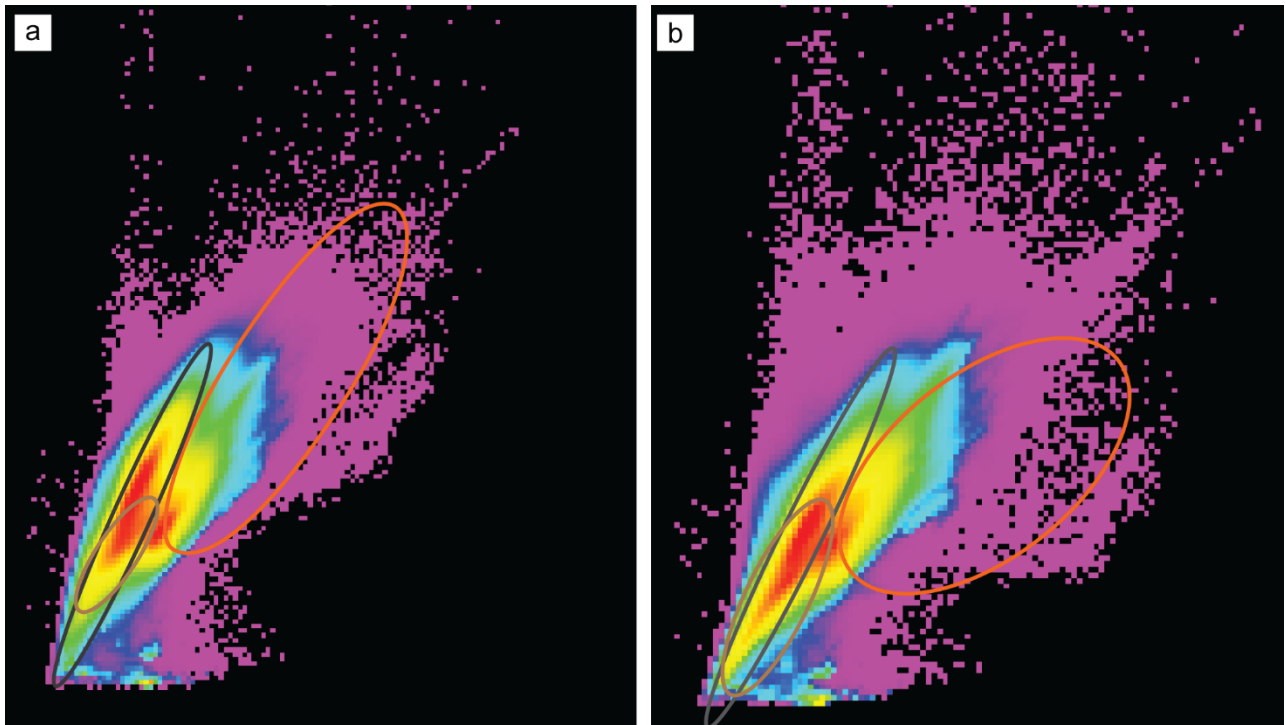# *Supplementary Material*

1   Supplementary Figures

Supplementary Figure 1. Comparison between results using a) minimum distance algorithm b) maximum likelihood. This test confirms the strength of the five classes classification and the using of the classification maps result from minimum distance algorithm.

Supplementary Figure 2. Feature spaces a) band 4 vs band 6: on x axis there are the pixels values of band 4 and on y axis there are the pixel values of band 6; b) band 4 vs band 7: on x axis there are the pixels values of band 4 and on y axis there are the pixel values of band 7. Orange ellipse represents the hydrothermal products, the gray ellipse represents the volcanic rocks and brown ellipse represents the sedimentary products.