

APPENDIX M3

TAILINGS X-RAY DIFFRACTION AND ANALYSIS 2012

ANGAS PROCESSING FACILITY

MISCELLANEOUS PURPOSES LICENSE APPLICATION

2019/0826



ABN | 67 062 576 238

Unit 7 / 202-208 Glen Osmond Road | Fullarton SA 5063

Angus Mine Tailings

Material analysis from samples collected June 2012 by Russell Hanna, Roll-a-Pipe Pty Limited and analyzed by ExcelPlas geomembrane Testing, Edithvale, Victoria.

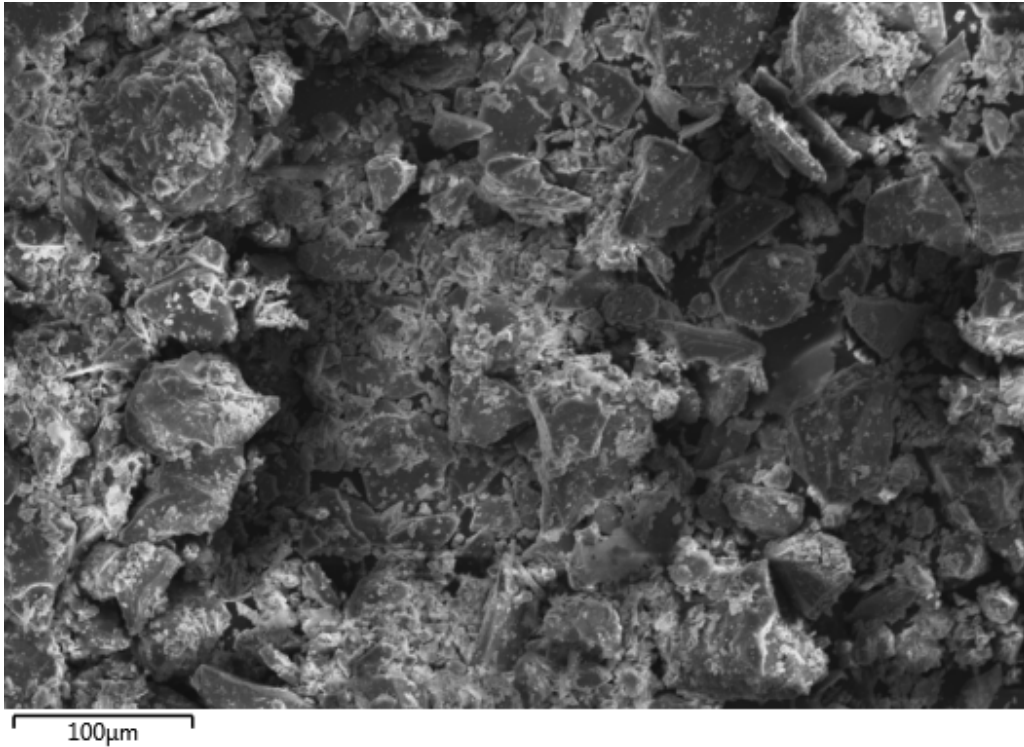


Figure 1: Secondary electron image.

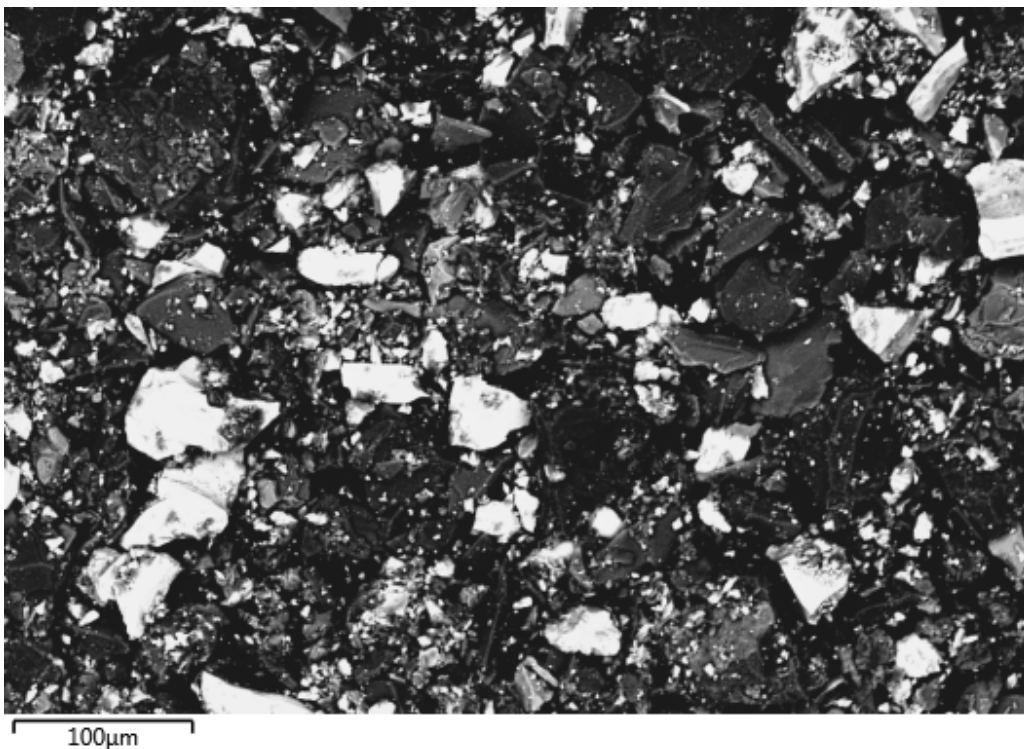


Figure 2: Back-scattered electron image. (White is iron particles)

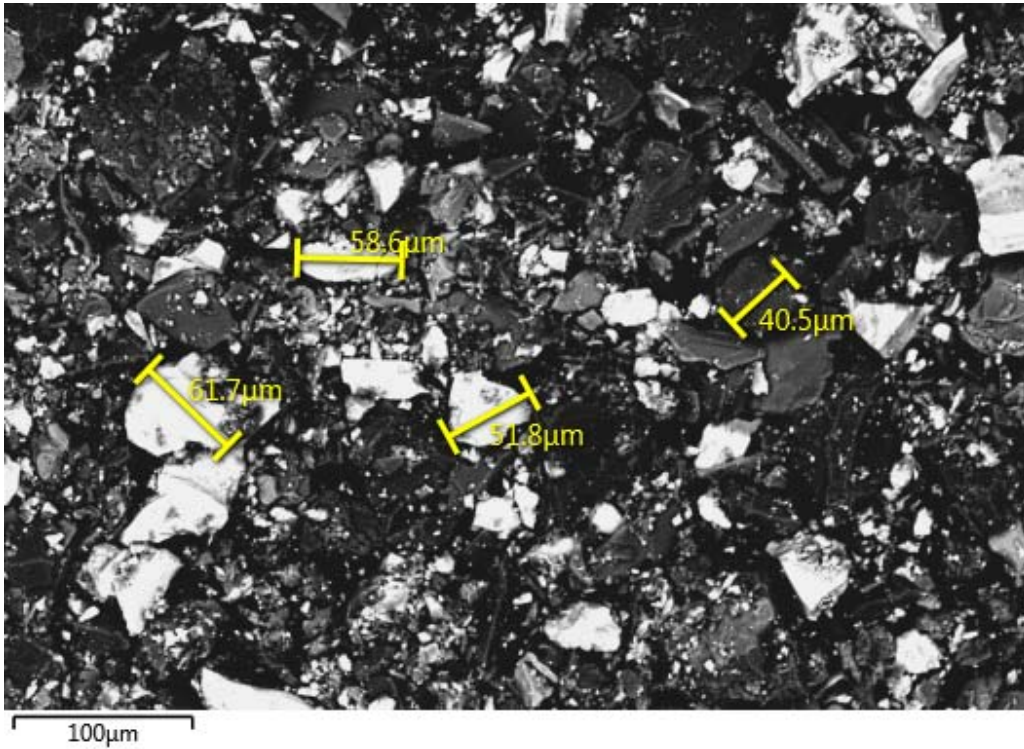


Figure 3: Back-scattered electron image showing the size of some of the larger particles.

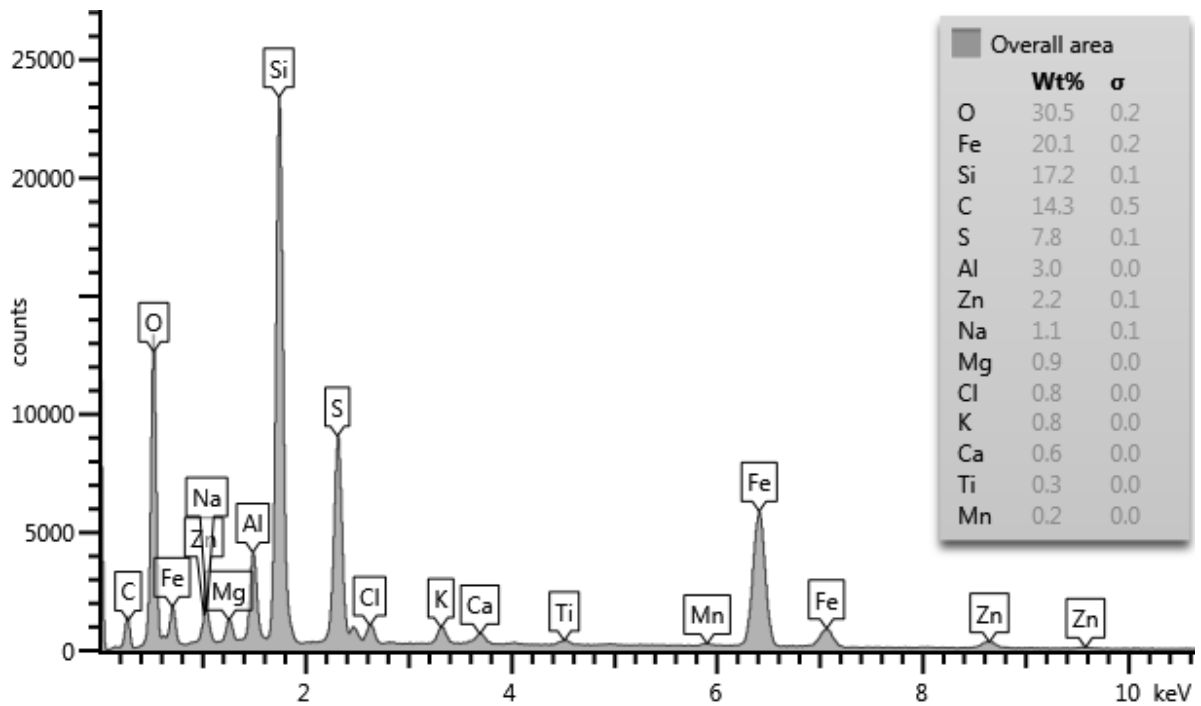
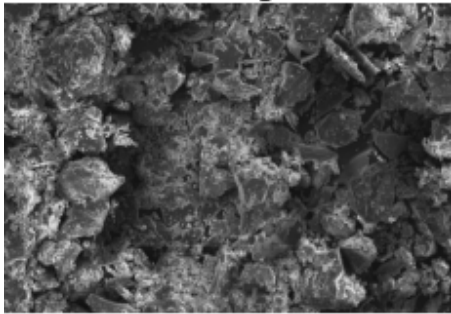


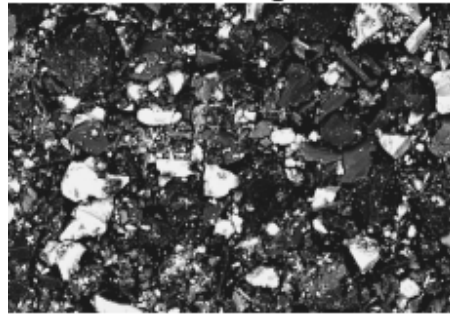
Figure 3: Analysis of the overall area of Figures 1 and 2; (Iron oxide, iron silicate)

Selective x-ray map of elements

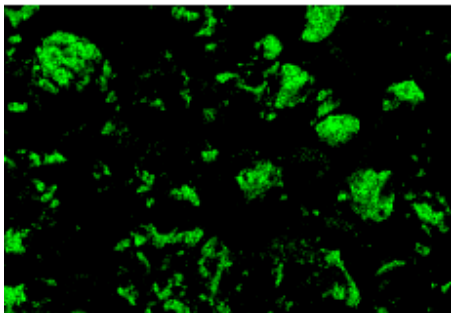
SE image



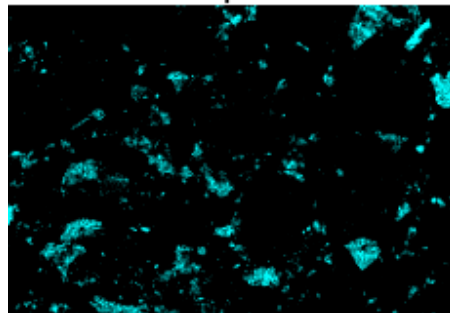
BSE image



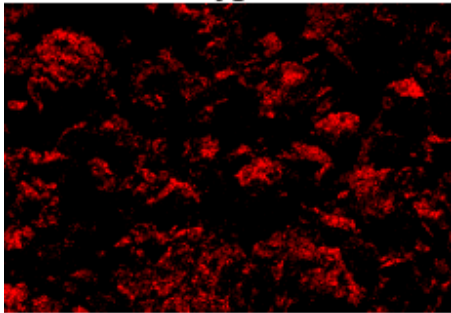
Silicon



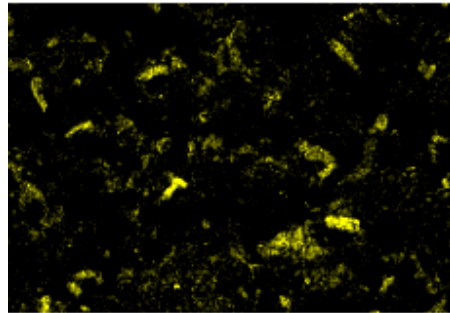
Sulphur



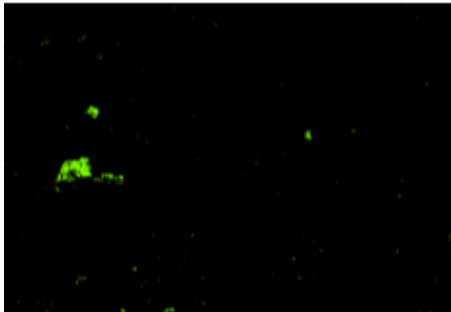
Oxygen



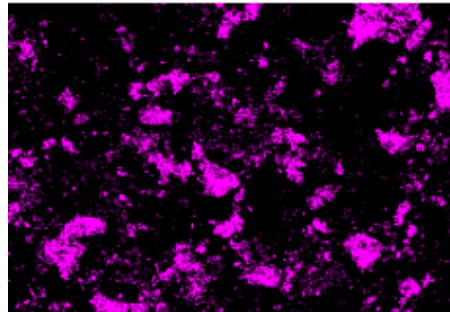
Aluminium



Sodium



Iron



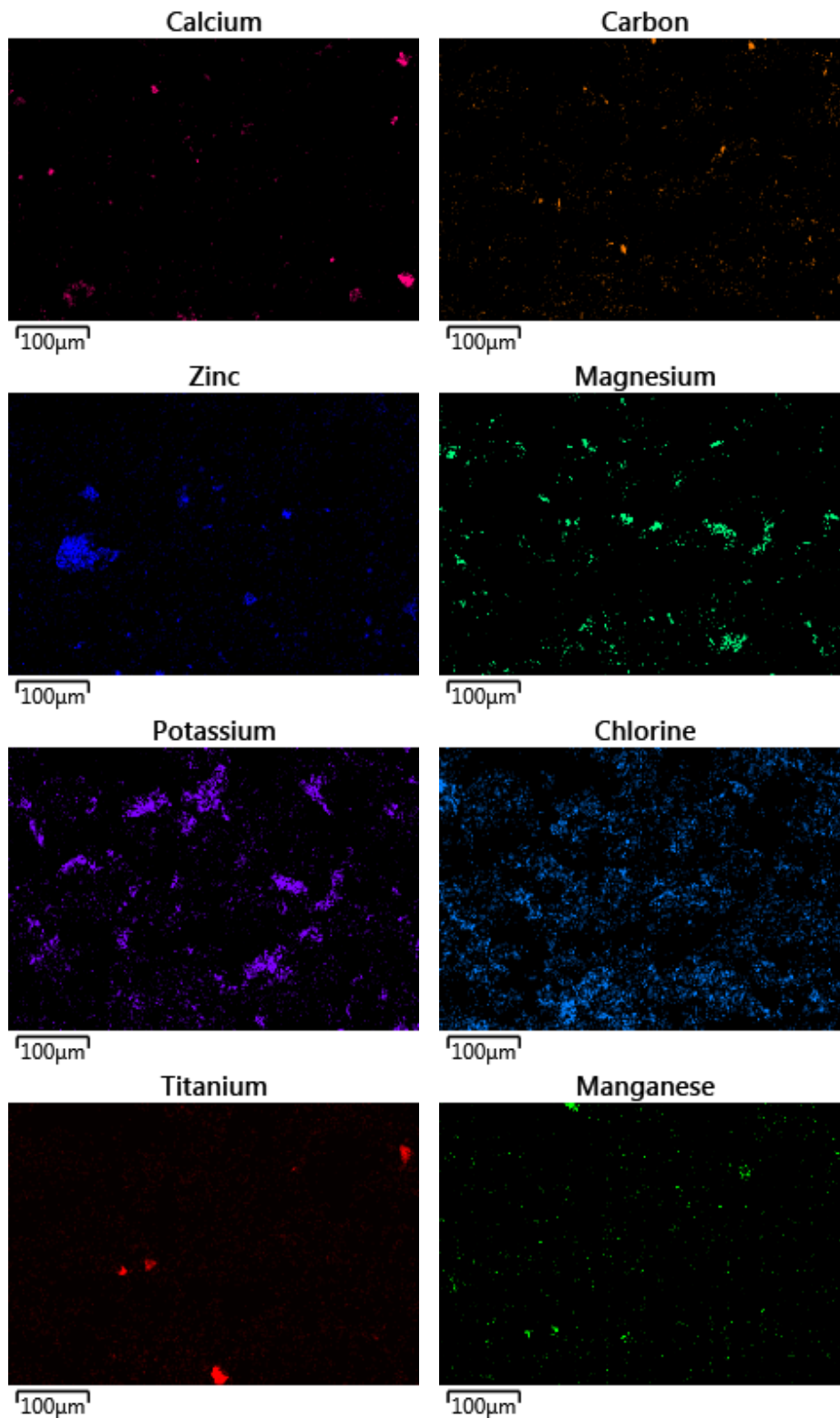


Figure 4: X-ray maps showing the distribution of the elements detected.

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