

## Supplementary File B

### Micro-textural controls on magma rheology and Vulcanian explosion cyclicity

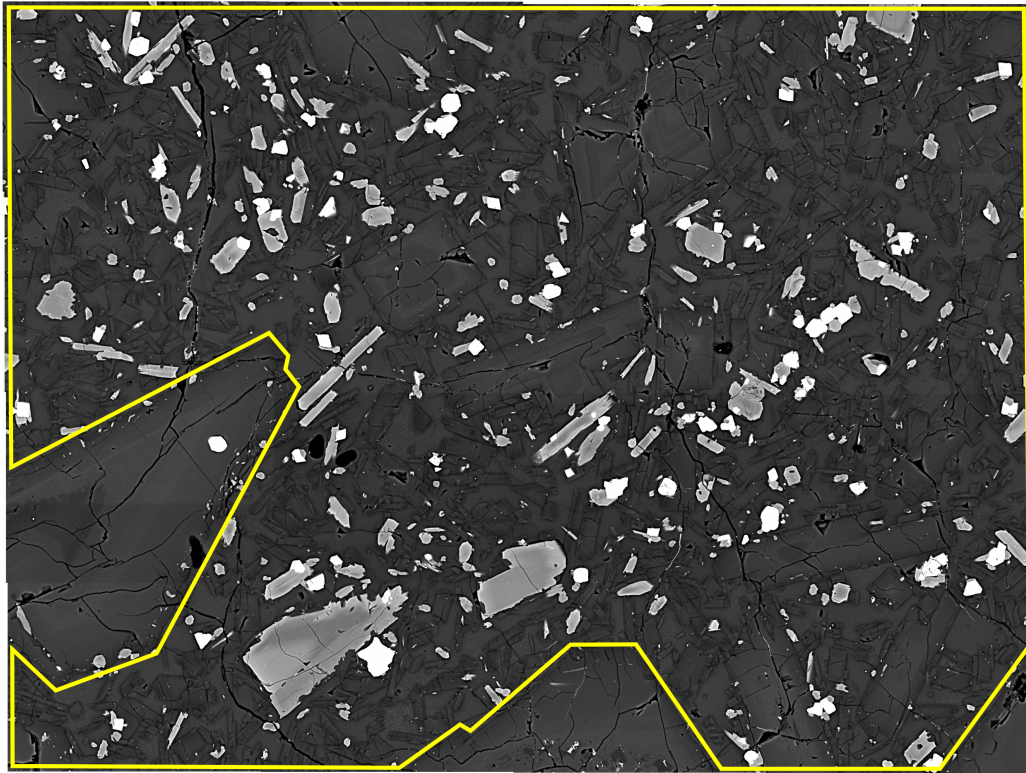
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This supplementary file provides BSE (back-scattered electron) images of the groundmass of each sample used for textural analysis, along with the corresponding tracings of plagioclase microlites. The analysed areas are indicated by the yellow polygon in each image. The analysed area, image length and number of whole crystals in the analysed area are indicated below each image.

**GAL4 BSE image**

Scoriaceous bomb

Explosion date: 2004-2010



Sample: GAL4

Image length: 0.785 mm

Analysed area: 0.395 mm<sup>2</sup>

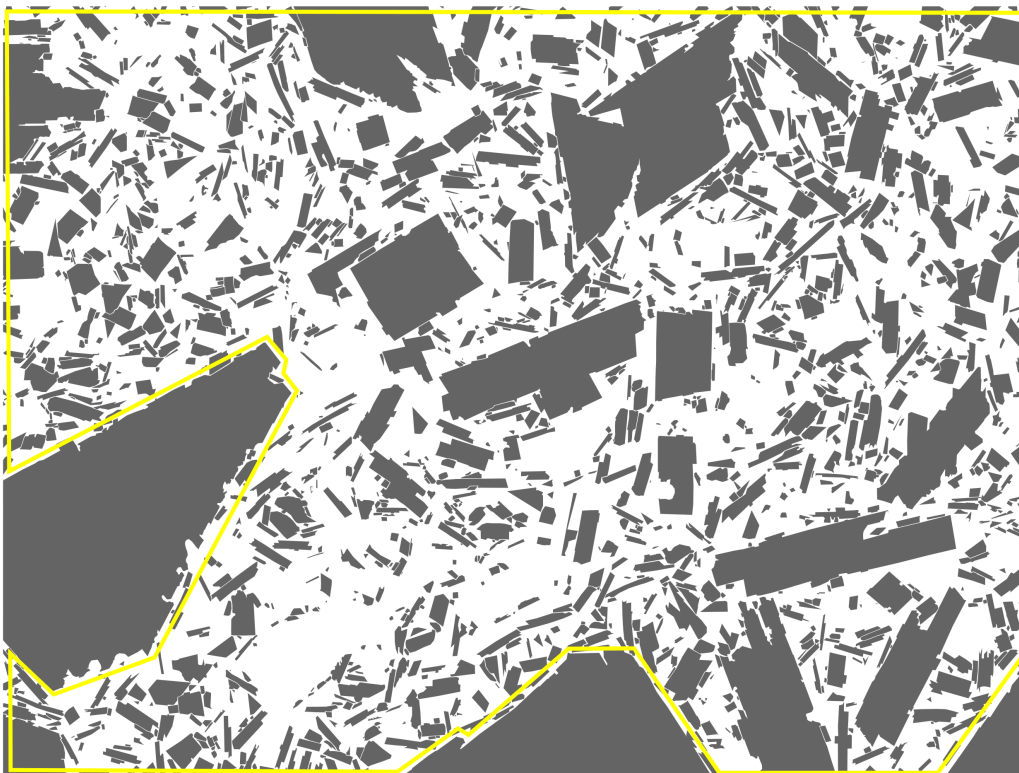
Number of feldspar crystals in analysed area (N): 1495



# **GAL4 Feldspar microlites**

Scoriaceous bomb

Explosion date: 2004-2010



Sample: GAL4

Image length: 0.785 mm

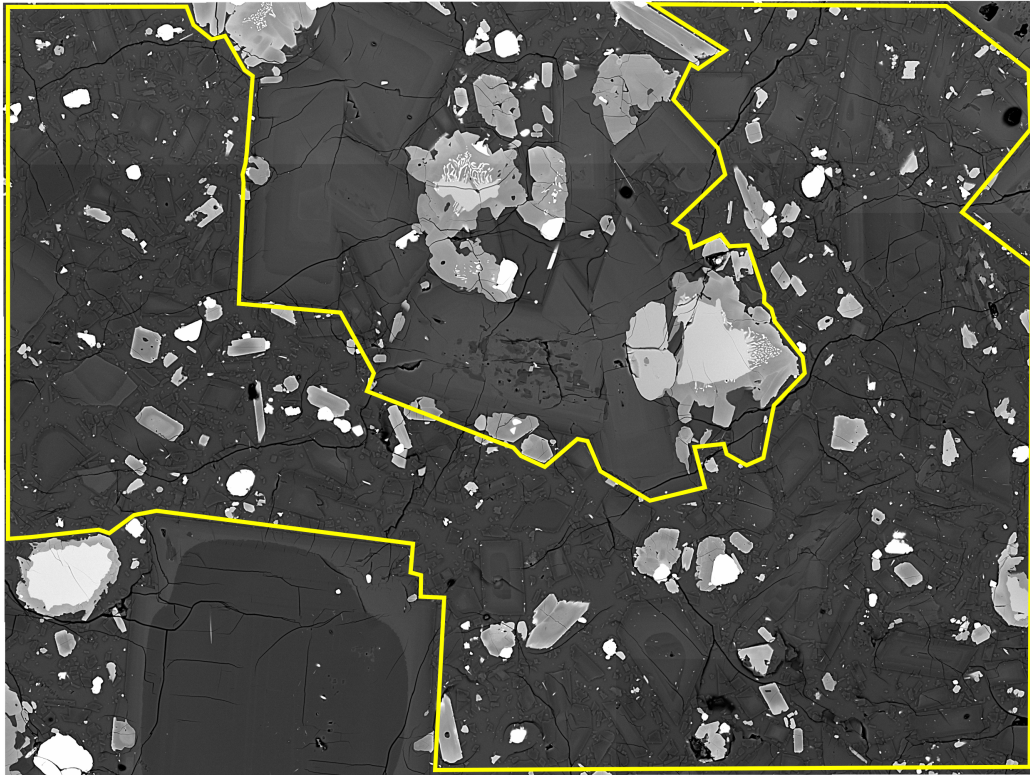
Analysed area: 0.395 mm<sup>2</sup>

Number of feldspar crystals in analysed area (N): 1495

### **GAL5 BSE image**

Dense bomb

Explosion date: 2004-2010



Sample: GAL5

Image length: 0.976 mm

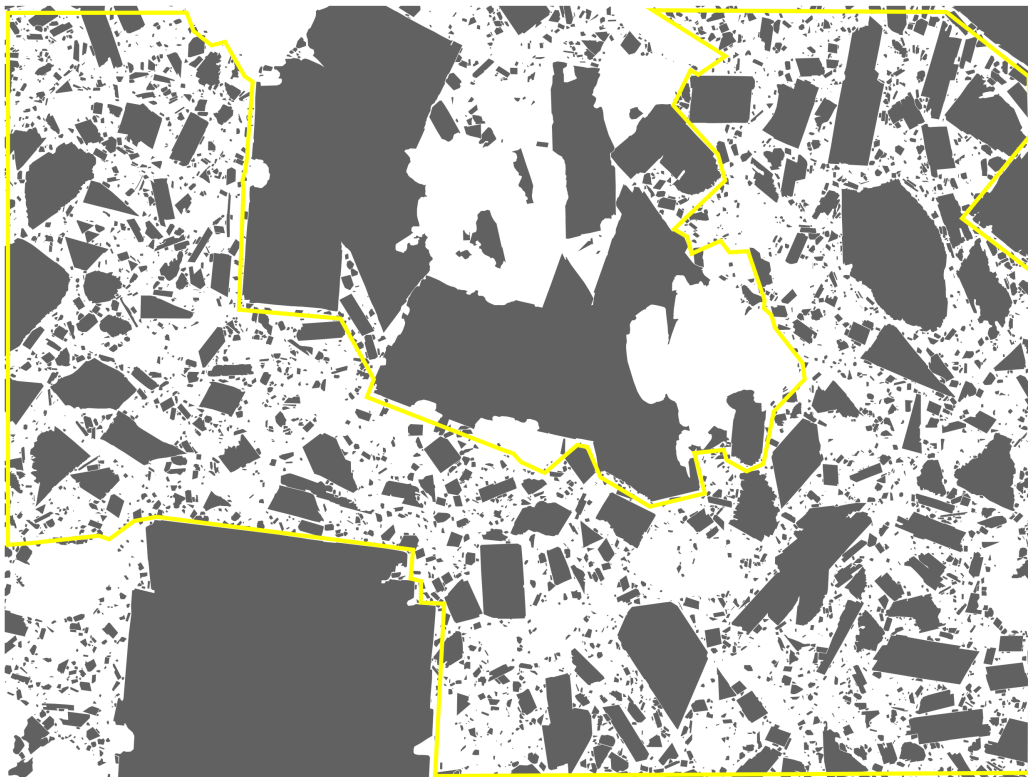
Analysed area: 0.410 mm<sup>2</sup>

Number of feldspar crystals in analysed area (N): 3315

## **GAL5 Feldspar microlites**

Dense bomb

Explosion date: 2004-2010



Sample: GAL5

Image length: 0.976 mm

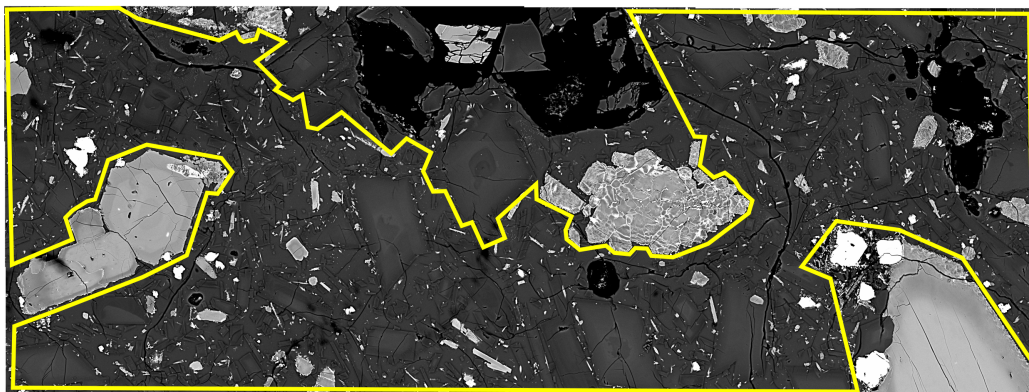
Analysed area: 0.410 mm<sup>2</sup>

Number of feldspar crystals in analysed area (N): 3315

### **GAL6 BSE image**

Scoriaceous bomb

Explosion date: 2004-2010



Sample: GAL6

Image length: 1.144 mm

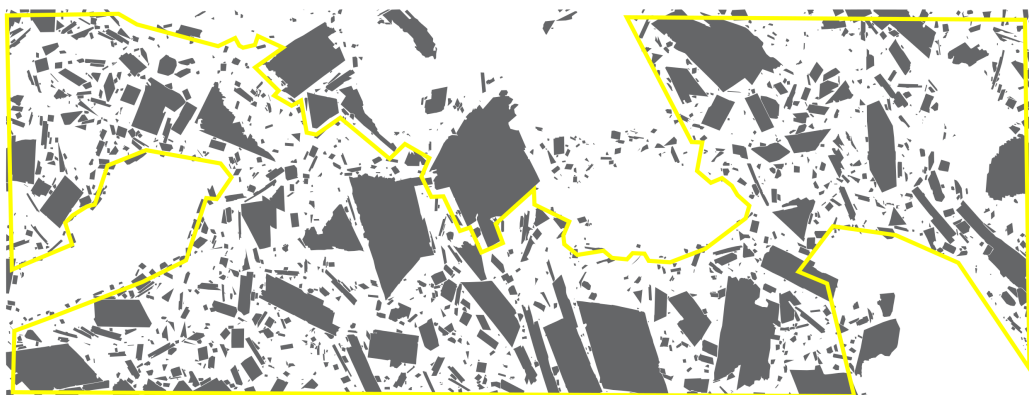
Analysed area: 0.286 mm<sup>2</sup>

Number of feldspar crystals in analysed area (N): 1091

### **GAL6 Feldspar microlites**

Scoriaceous bomb

Explosion date: 2004-2010



Sample: GAL6

Image length: 1.144 mm

Analysed area: 0.286 mm<sup>2</sup>

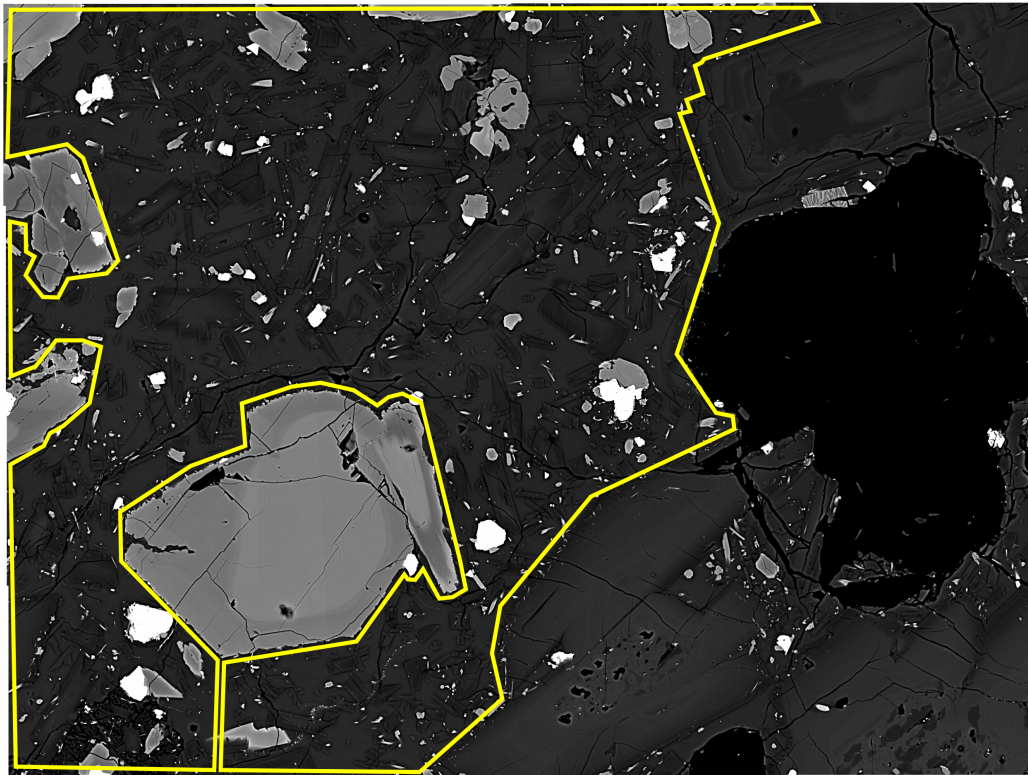
Number of feldspar crystals in analysed area (N): 1091



**GAL7 BSE image**

Scoriaceous bomb

Explosion date: 2004-2010



Sample: GAL7

Image length: 0.774 mm

Analysed area: 0.209 mm<sup>2</sup>

Number of feldspar crystals in analysed area (N): 763

### **GAL7 Feldspar microlites**

Scoriaceous bomb

Explosion date: 2004-2010



Sample: GAL7

Image length: 0.774 mm

Analysed area: 0.209 mm<sup>2</sup>

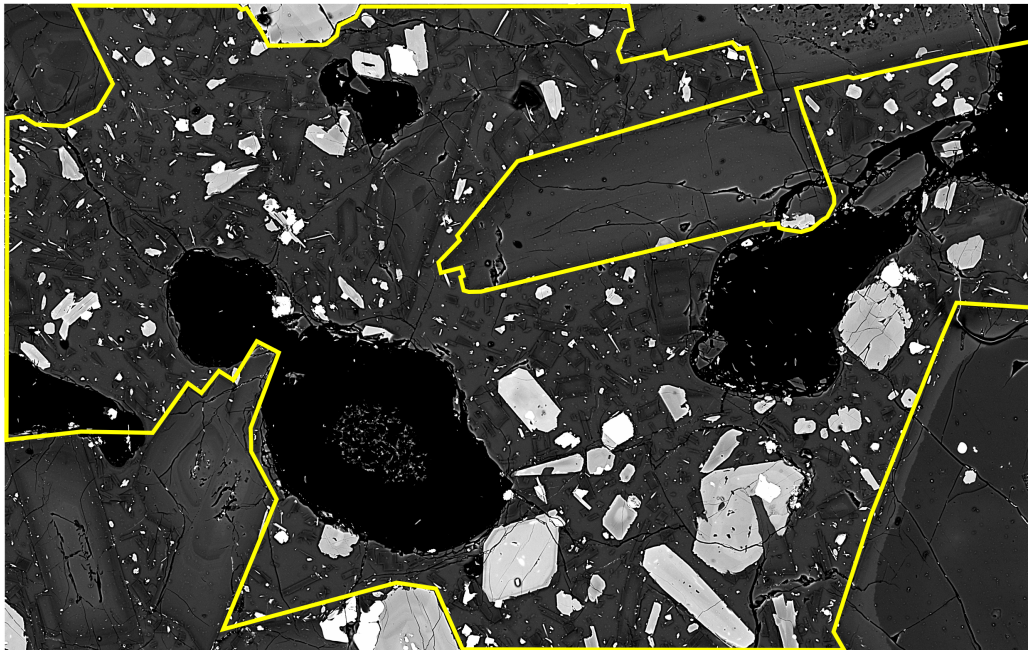
Number of feldspar crystals in analysed area (N): 763



**GAL8 BSE image**

Scoriaceous bomb

Explosion date: 2004-2010



Sample: GAL8

Image length: 1.1 mm

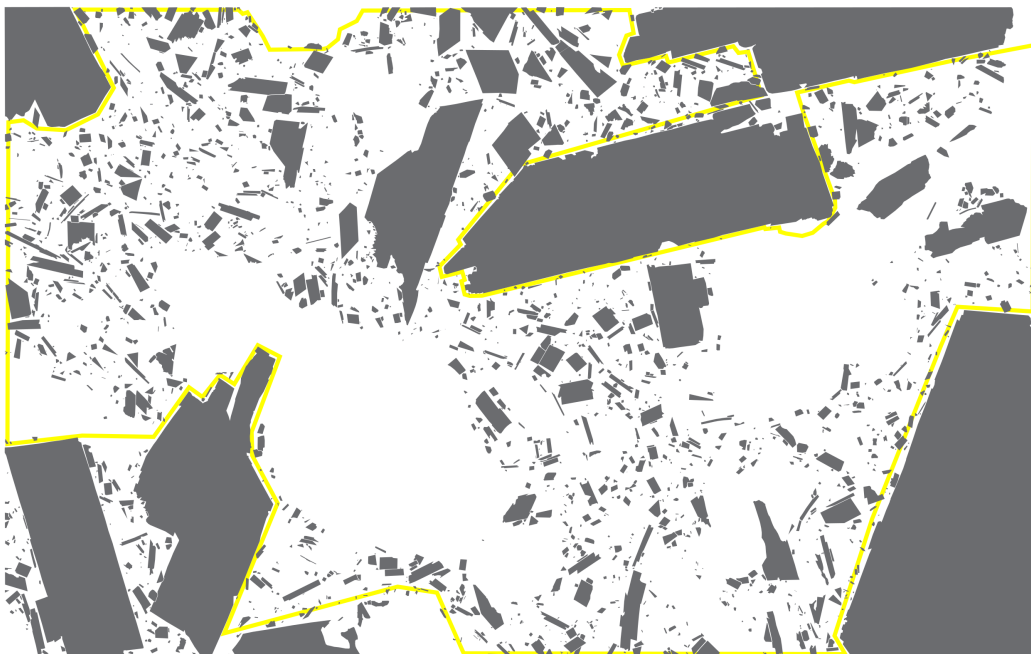
Analysed area: 0.516 mm<sup>2</sup>

Number of feldspar crystals in analysed area (N): 1782

### **GAL8 Feldspar microlites**

Scoriaceous bomb

Explosion date: 2004-2010



Sample: GAL8

Image length: 1.1 mm

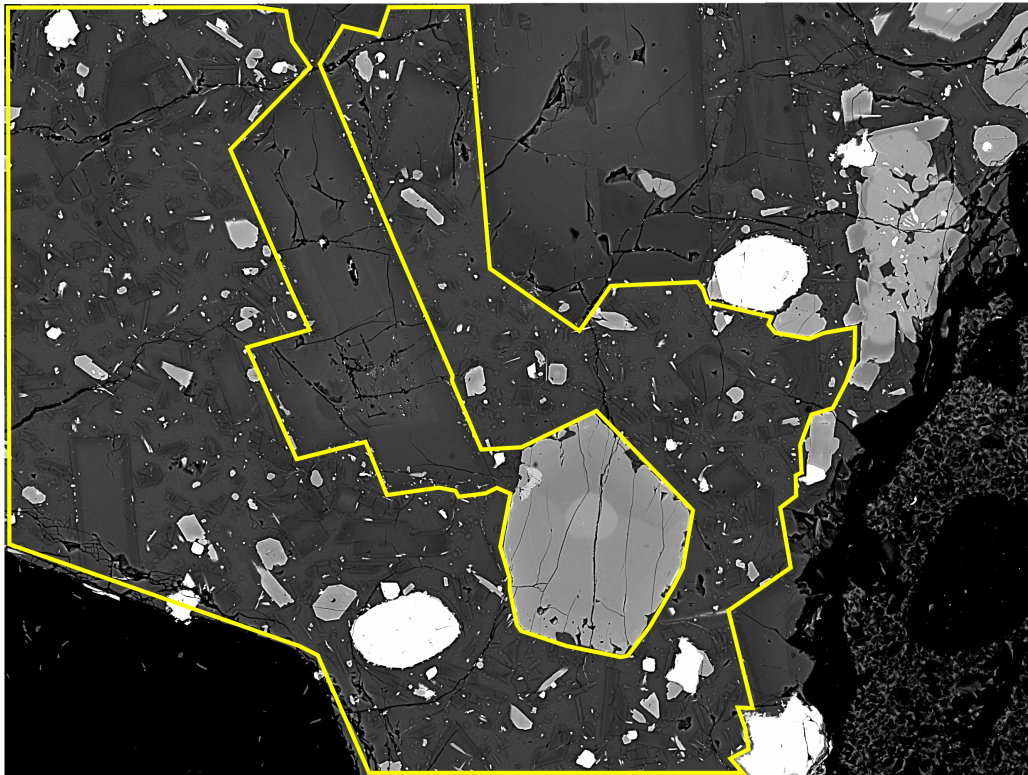
Analysed area: 0.516 mm<sup>2</sup>

Number of feldspar crystals in analysed area (N): 1782

**GAL14 BSE image**

Scoriaceous bomb

Explosion date: 2004-2010



Sample: GAL14

Image length: 0.782 mm

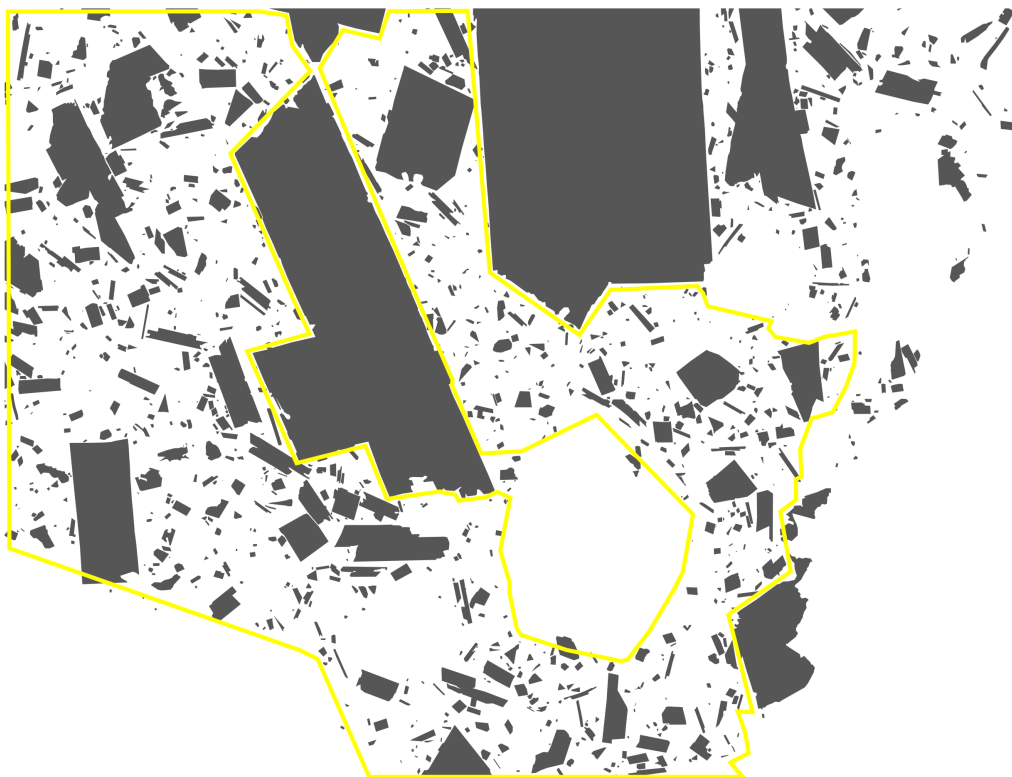
Analysed area: 0.198 mm<sup>2</sup>

Number of feldspar crystals in analysed area (N): 830

# **GAL14 Feldspar microlites**

Scoriaceous bomb

Explosion date: 2004-2010



Sample: GAL14

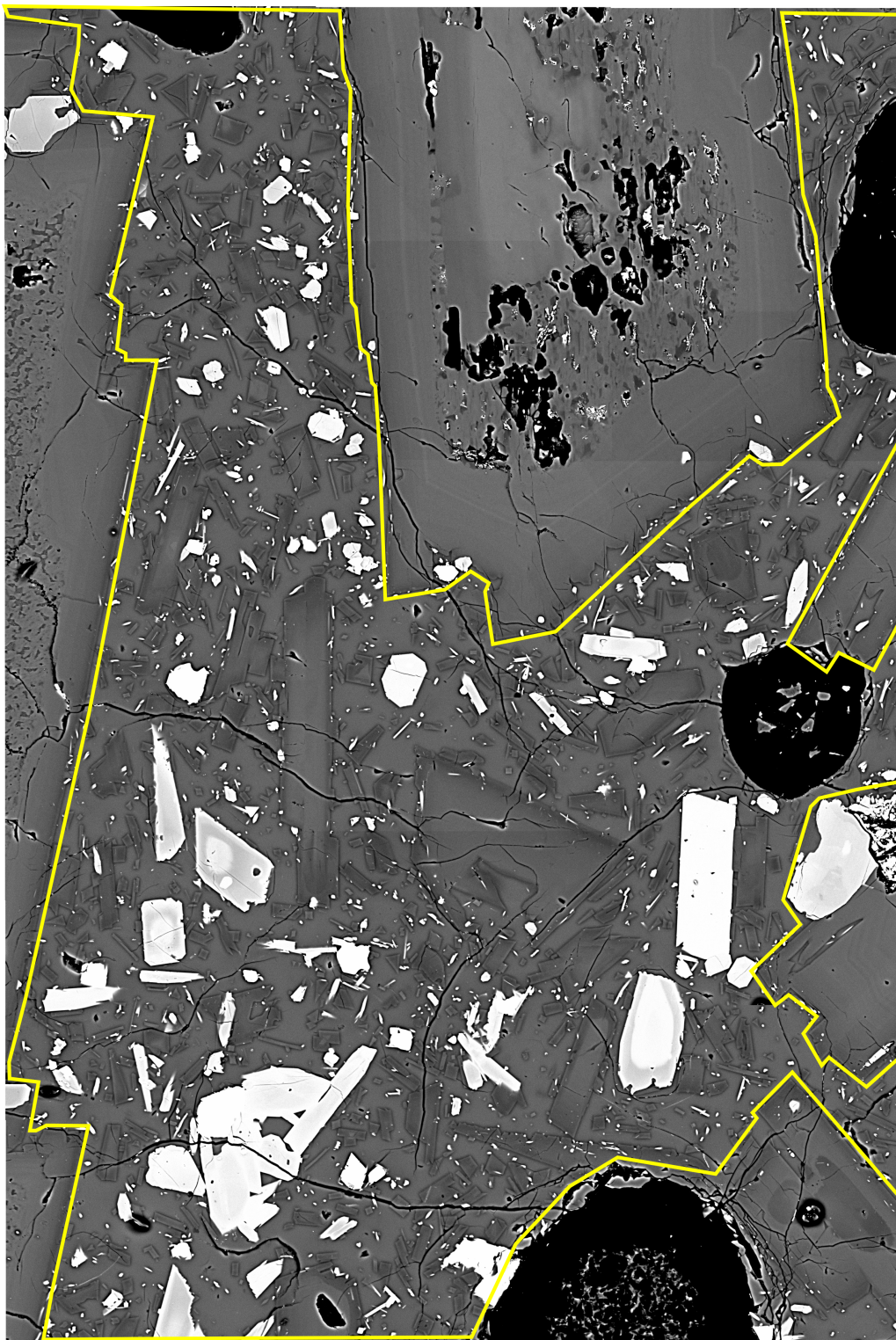
Image length: 0.782 mm

Analysed area: 0.198 mm<sup>2</sup>

Number of feldspar crystals in analysed area (N): 830



**GAL16 BSE image**  
Scoriaceous bomb  
Explosion date: 2004-2010



Sample: GAL16  
Image length: 0.585 mm  
Analysed area: 0.281 mm<sup>2</sup>  
Number of feldspar crystals in analysed area (N): 1143



# **GAL16 Feldspar microlites**

Scoriaceous bomb

Explosion date: 2004-2010



Sample: GAL16

Image length: 0.585 mm

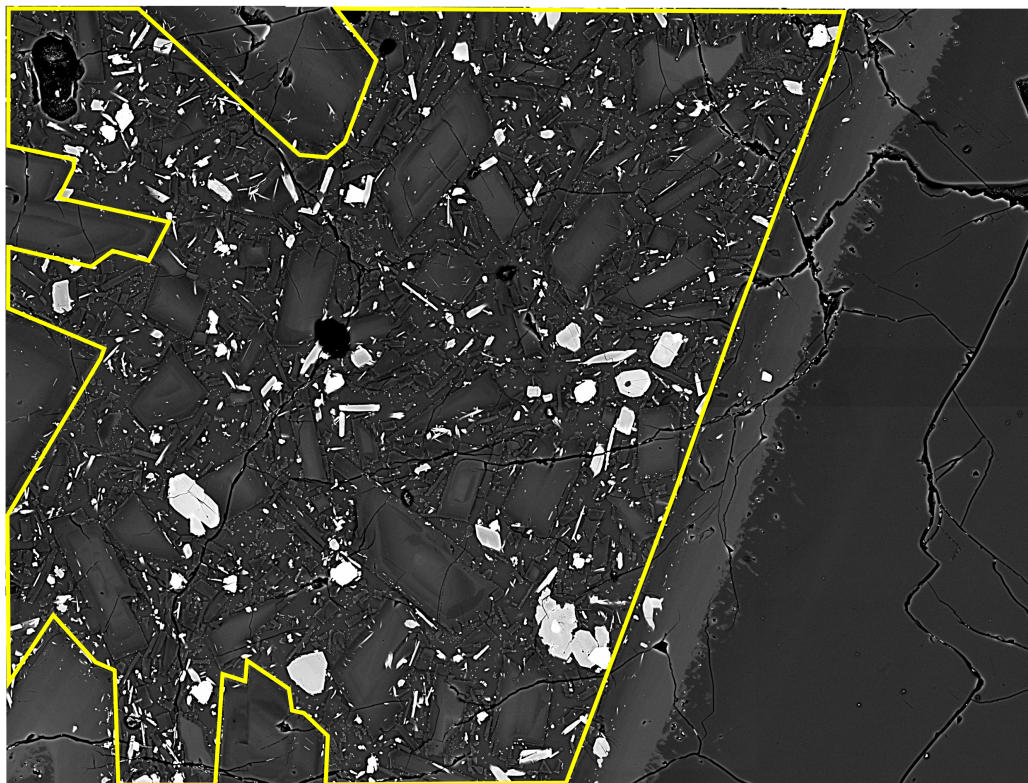
Analysed area: 0.281 mm<sup>2</sup>

Number of feldspar crystals in analysed area (N): 1143

**GAL18 BSE image**

Scoriaceous bomb

Explosion date: 2004-2010



Sample: GAL18

Image length: 0.747 mm

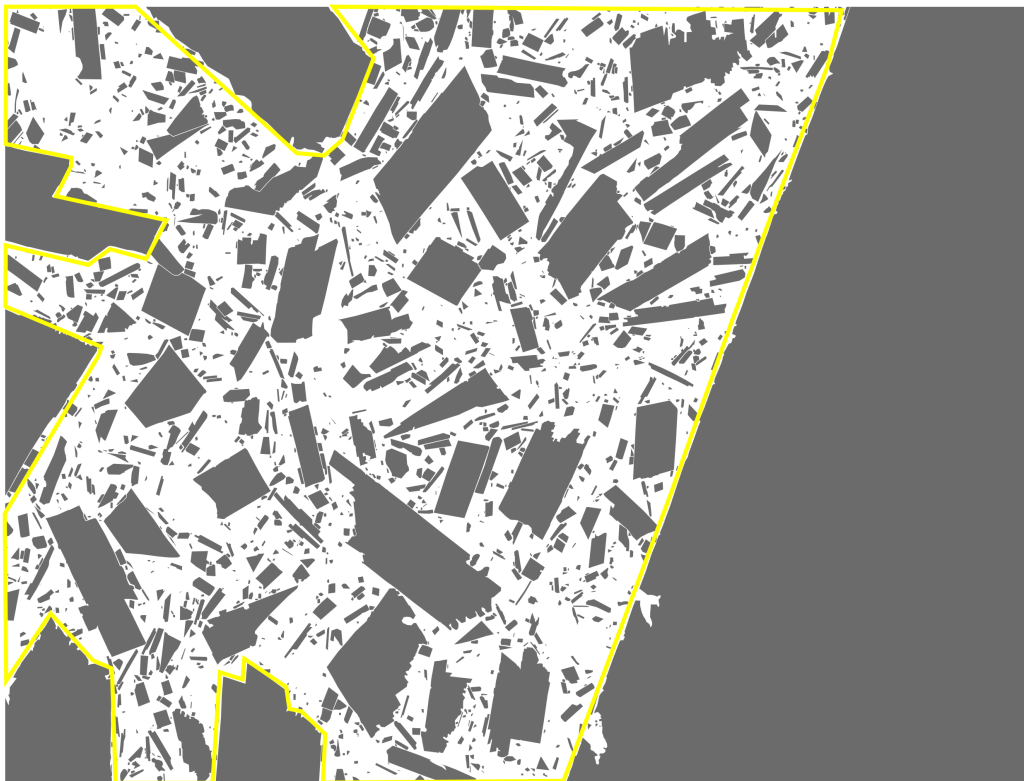
Analysed area: 0.249 mm<sup>2</sup>

Number of feldspar crystals in analysed area (N): 1550

### **GAL18 Feldspar microlites**

Scoriaceous bomb

Explosion date: 2004-2010



Sample: GAL18

Image length: 0.747 mm

Analysed area: 0.249 mm<sup>2</sup>

Number of feldspar crystals in analysed area (N): 1550