

Queen Mary Corrosion and Maxon Imaging

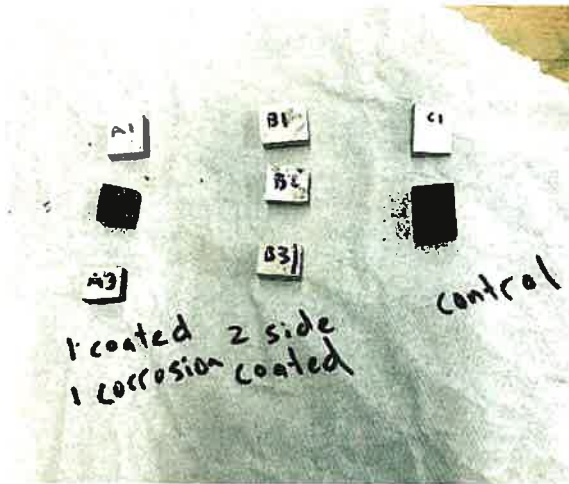
- Day 1 application of Maxon



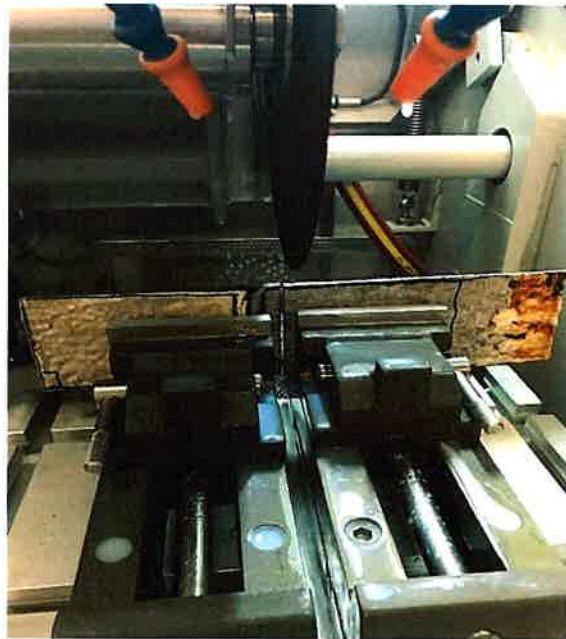


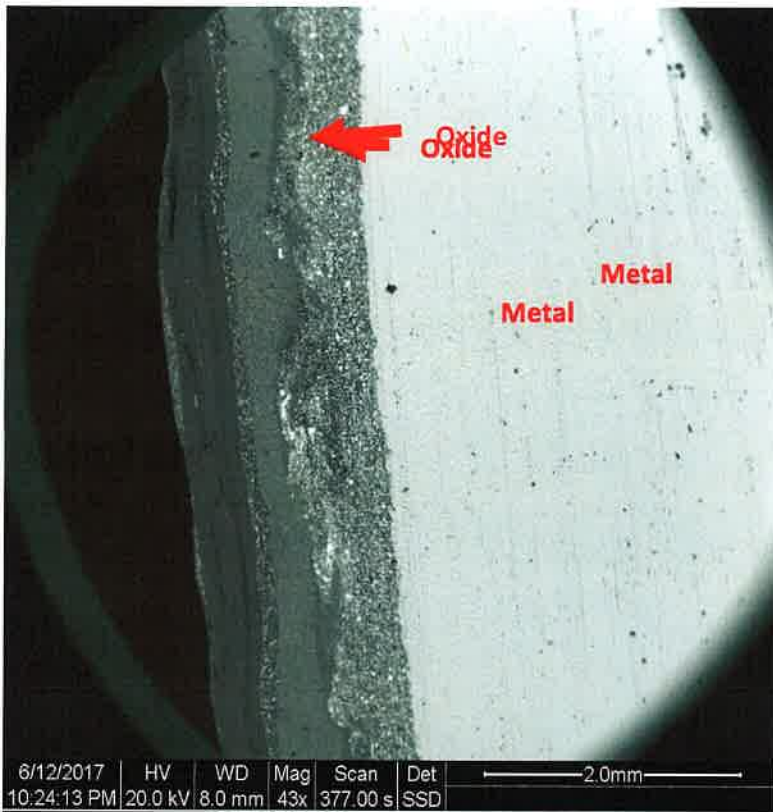
- Second application of Maxon. Two days after first application.





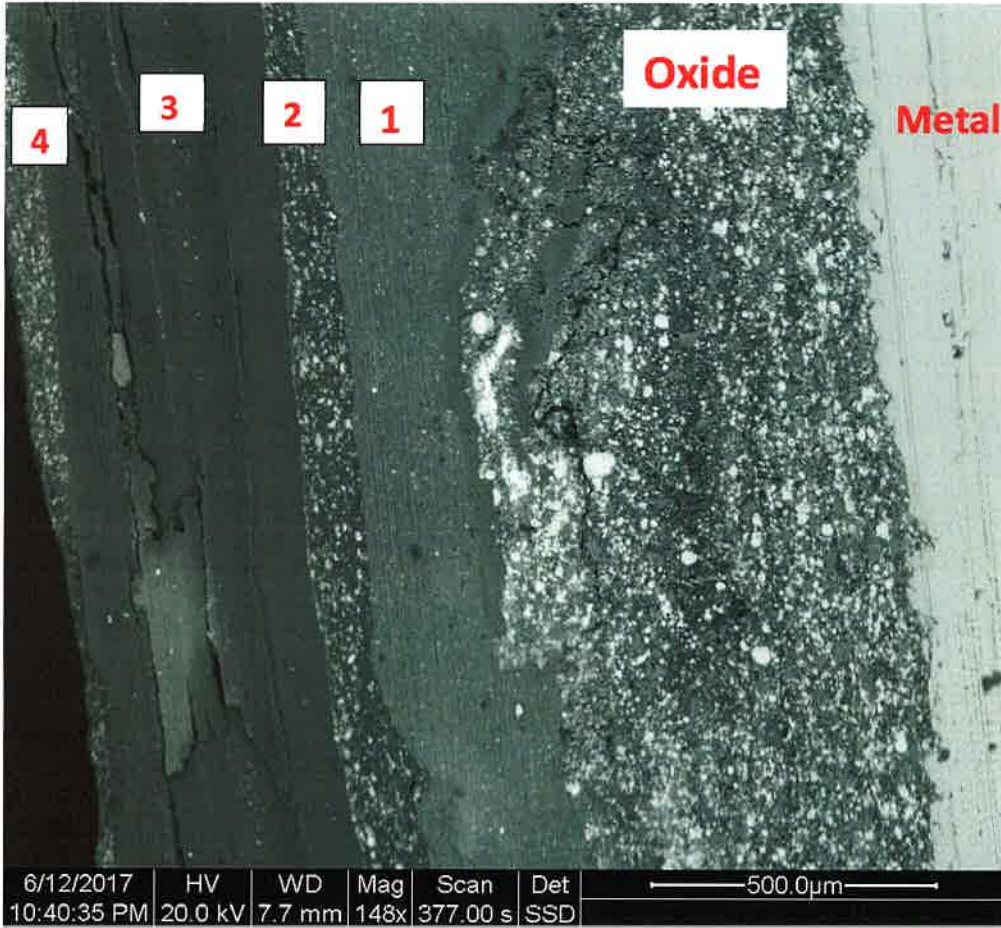
- Sample preparation from bulk sample
- "A" Series: 1 Maxon on paint coated face. 1 Corrosion face w/ Maxon coat.
- "B" Series: Both faces are painted, and have Maxon coat.
- "C" Series: Control sample. One side painted (no Maxon). One side rust (no Maxon).

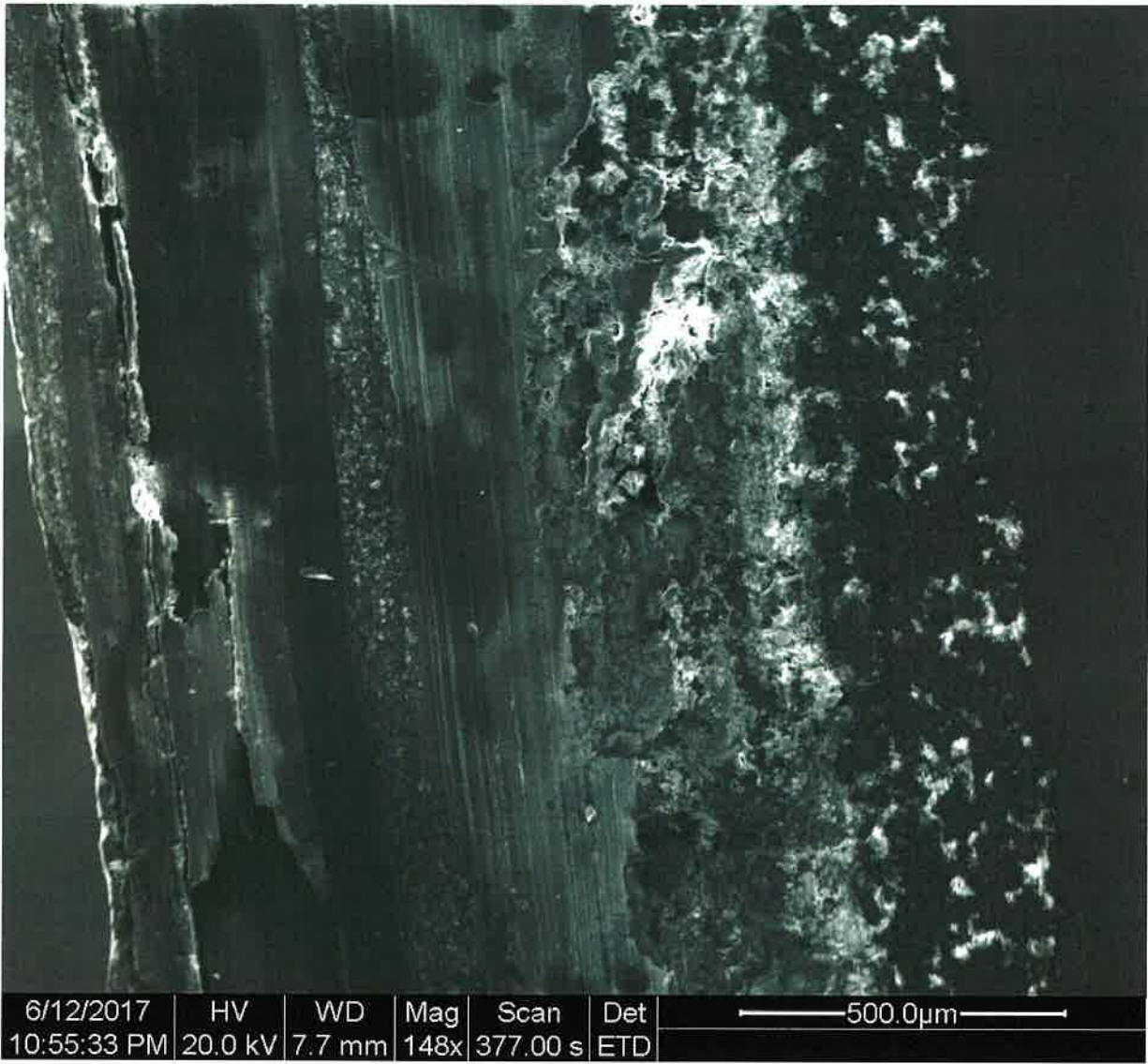




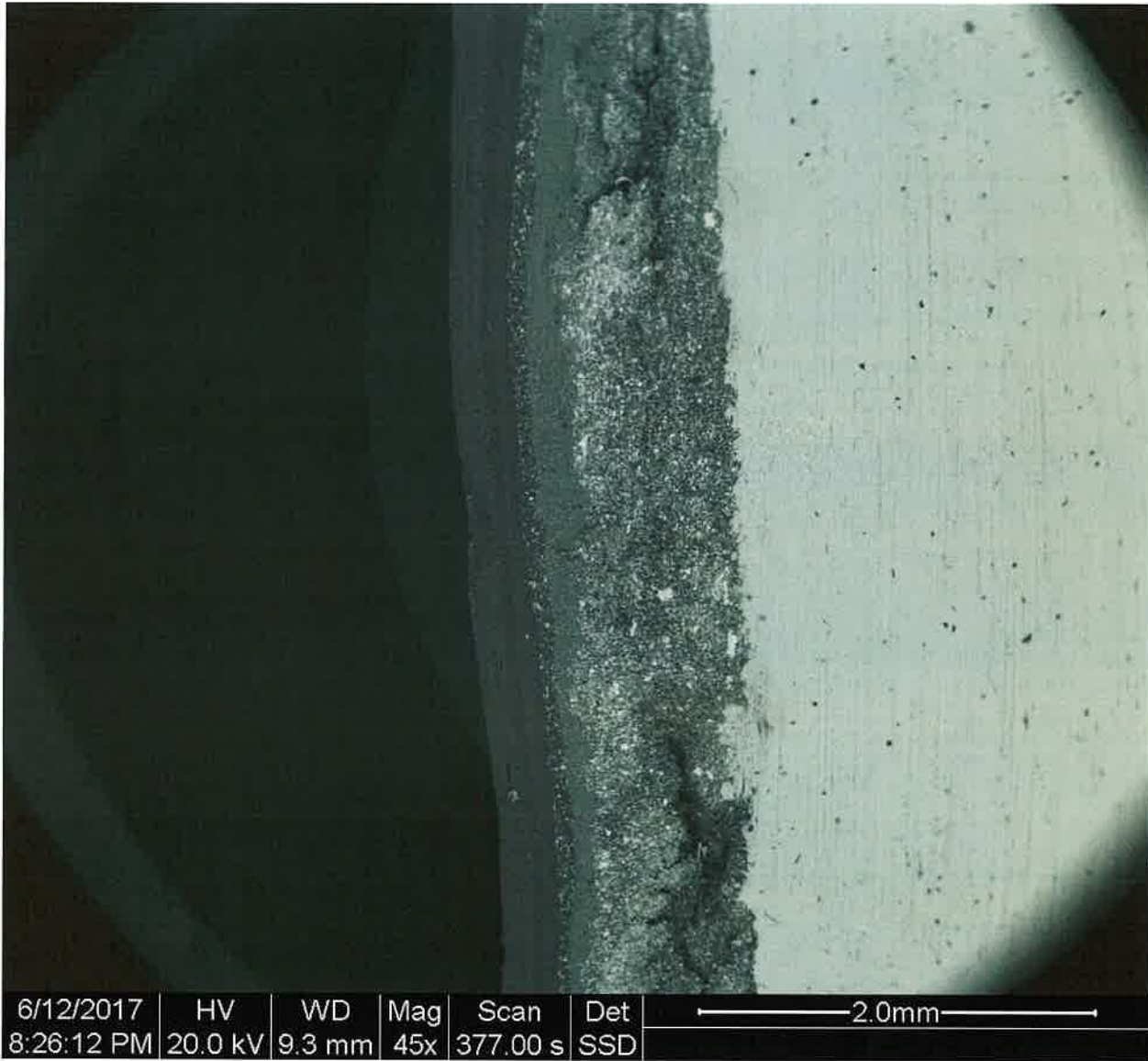
- C (control sample): ETD: shows surface topography and shape.
- SSD: Brighter the color, less electrically conductive so indicates oxide formation

- Need to conduct EDS analysis on the 3 unidentified regions to determine composition. Some oxide present in 2 of those layers at depth; less on surface.

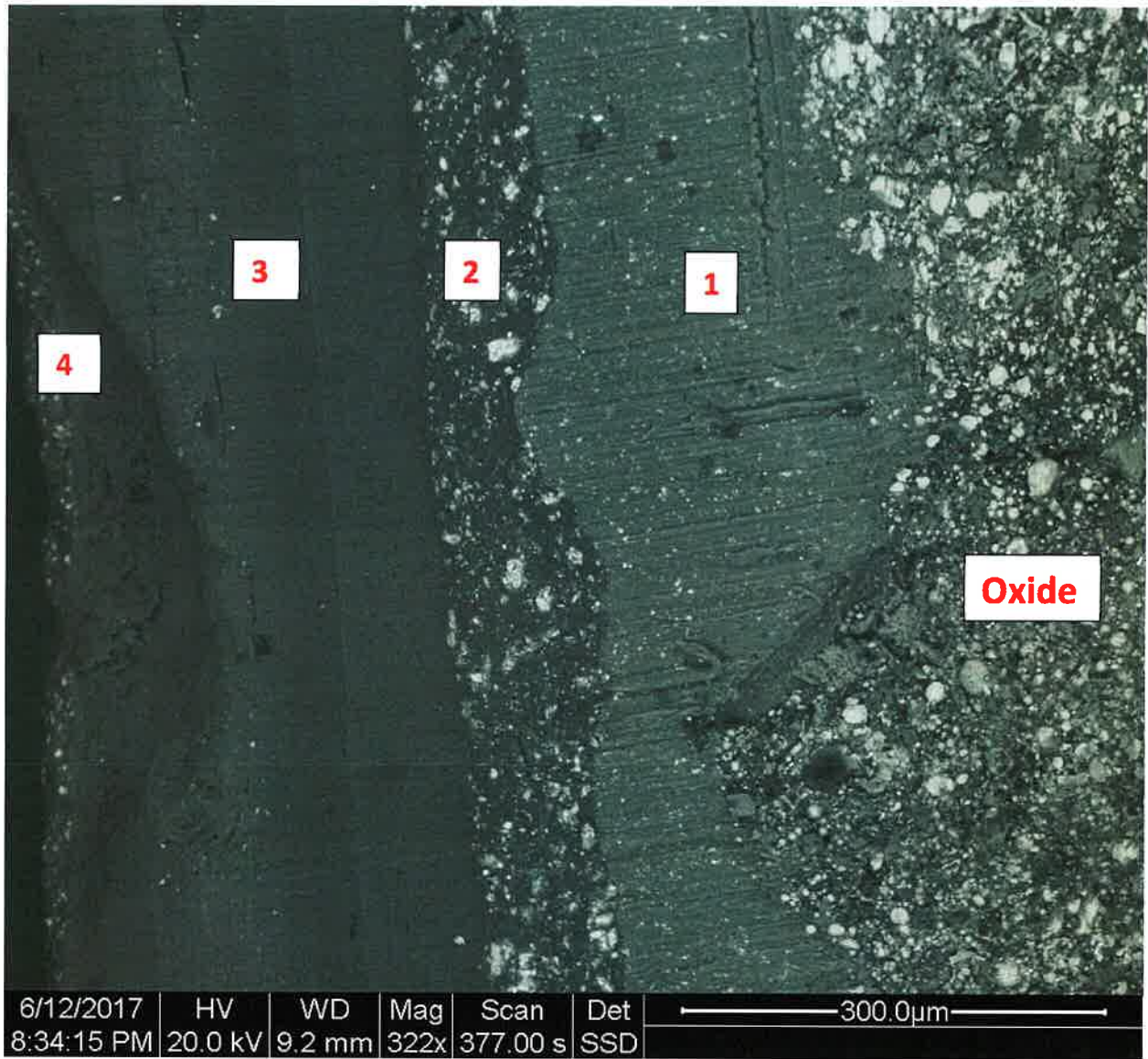




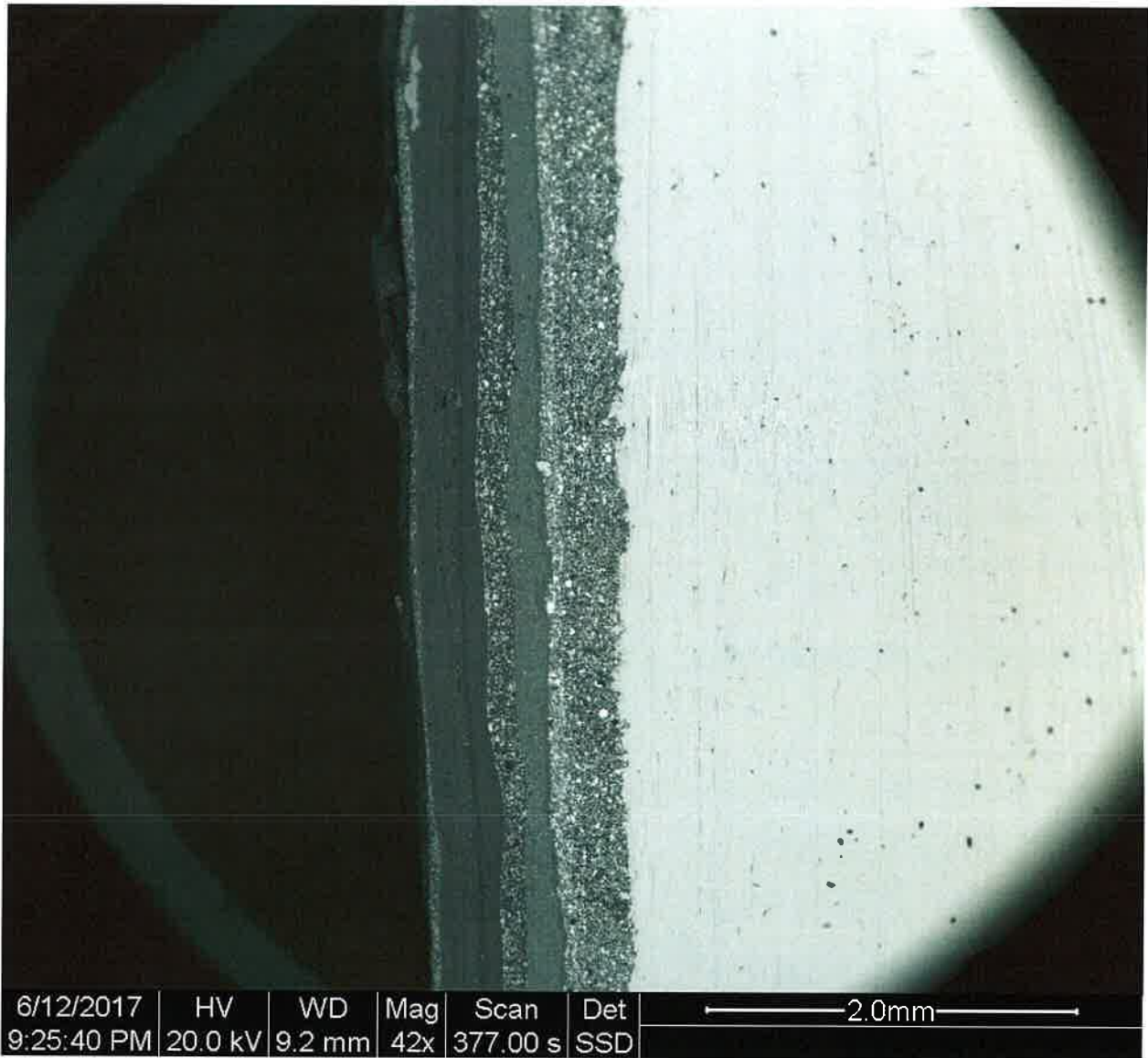
- C sample at same magnification but with ETD



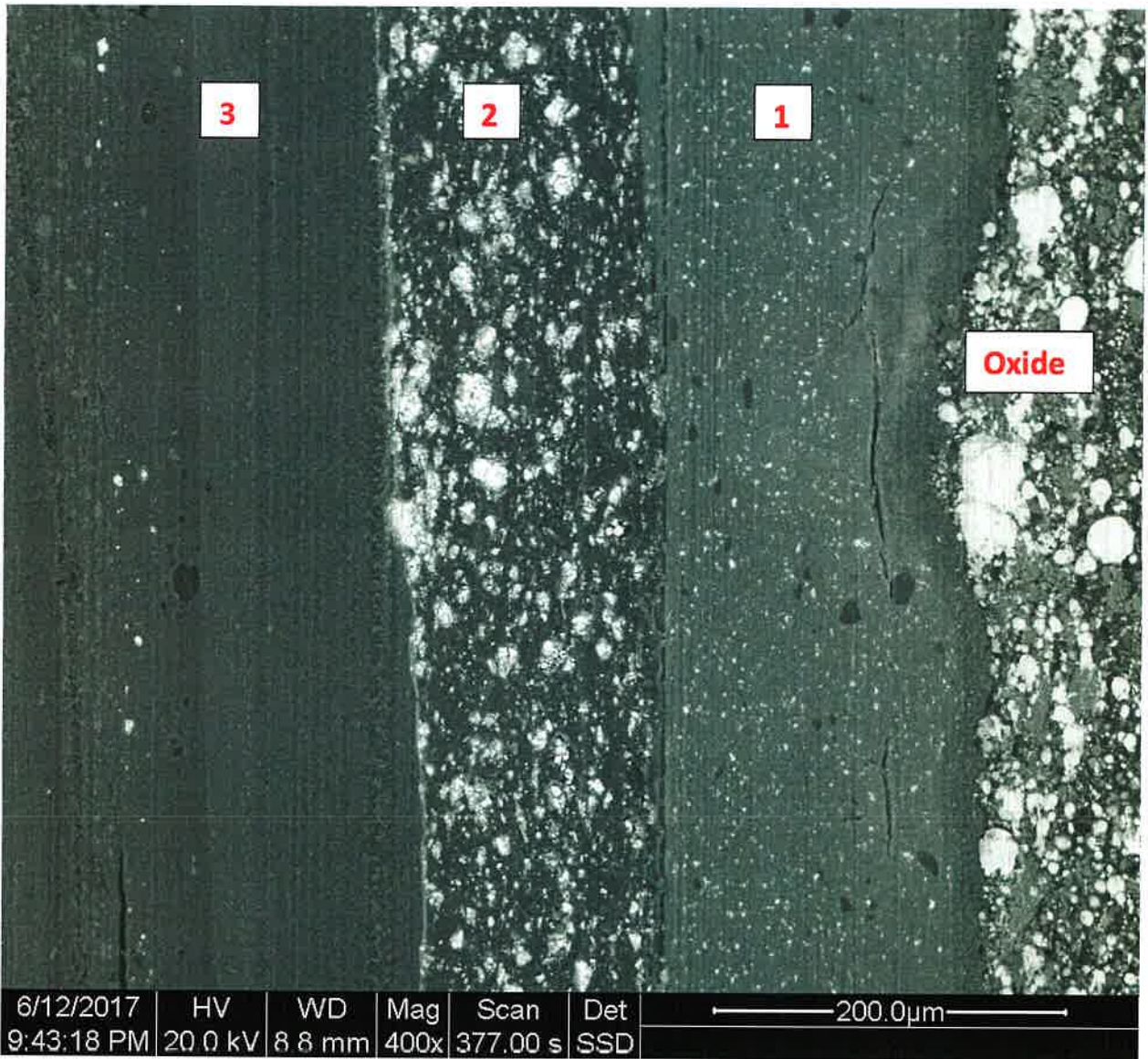
- A series sample – 1 Maxon on Oxide Face. 1 Maxon on Paint Face
- This sample does not have exterior oxide layer as C series did which was labeled "4".



- "A" sample. Exterior oxide layer actually present at greater magnification, denoted by "4".



- B series sample – 2 Maxon on Paint Faces
- Thicker “2” region. Why?
- No exterior oxide likely due to paint layer.



- Significant thickness differences in this sample relative to A and C.
- Missing exterior oxide "4"