REPORT OF PETROGRAPHIC ANALYSIS

Project:
King Arthur Stone Investigation

Reported To:
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Attn: George C. Horwatt

Project No.: 10-22-999

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INTRODUCTION

This report presents the results of laboratory work performed by Scott Wolter on a large elongate shaped slab of rock with a two-lined inscription carved into it. The slab was reviewed by Wolter on March 6, 2022, and a small chip sample was obtained from the underside of the stone for testing. The scope of our work was limited to performing thin section analysis of the chip sample, and together with visual observations made in March, to try and determine the age of the weathering of the inscription.

BACKGROUND INFORMATION

The stone was found partially buried, face down and covered with moss, inside the ruins of St Peter-super-Montem Church at Mynydd y Gaer, in South Wales, northwest of Cardiff. It was discovered by Alan Wilson and Baram Blackett in 1985. It is understood the stone was kept in the possession of Wilson/Blackett from the time it was discovered until it was shipped to George Horwatt in Dallas, Pennsylvania, in 2017, where it remains as of the date of this report.

The stone is phallic shaped with dimensions of 4.92 feet long x 1.65 feet wide x ~4.25” thick and weighs approximately 300 pounds. The inscription was carved into a deeply weathered, natural formed slab of metagraywacke that appears to be indigenous to the Southern Wales region. Carved into one side are what have been interpreted to be four Latin words that reads as follows: "REX ARTORIVS FILI MAVRICIVS.” In English it reads, *“King Arthur, Son of Meurig.”* Researchers believe the stone was carved sometime between the 6th and 7th centuries and refers to an historical figure who lived at this time.

It is believed the church has been in ruins since at least circa 1800 leaving the inscription exposed to the elements for at least 200 years. Where it was located and under what possible weathering conditions it was exposed to prior to that is unknown.

The ruins of St Peter-super-Montem Church at Mynydd y Gaer, in South Wales. (Courtesy of George Horwatt)

The approximate location where the stone was discovered within the ruins of St Peter-super-Montem Church in 1985. (Courtesy of George Horwatt)

CONCLUSIONS

The following comments are based on observations and testing:

1. The inscribed stone is brownish-gray colored, highly weathered meta-graywacke. The approximately 5-foot-long slab is elongated in shape with bottom end having a trapezoidal shape approximately 16-20” wide. The upper end of the stone tapers beyond the wider bottom end from approximately 18” to 10” at the top. The slab exhibits differentially weathered, parallel layering of the strongly foliated rock. The stone has a noticeable overall phallic shape and may have been intentional selected for symbolic reasons.

The King Arthur Stone is approximately 5 feet long x 1.65 feet wide x 5” thick and weighs approximately 300 pounds. It is phallic shaped and may have been selected for symbolic reasons.

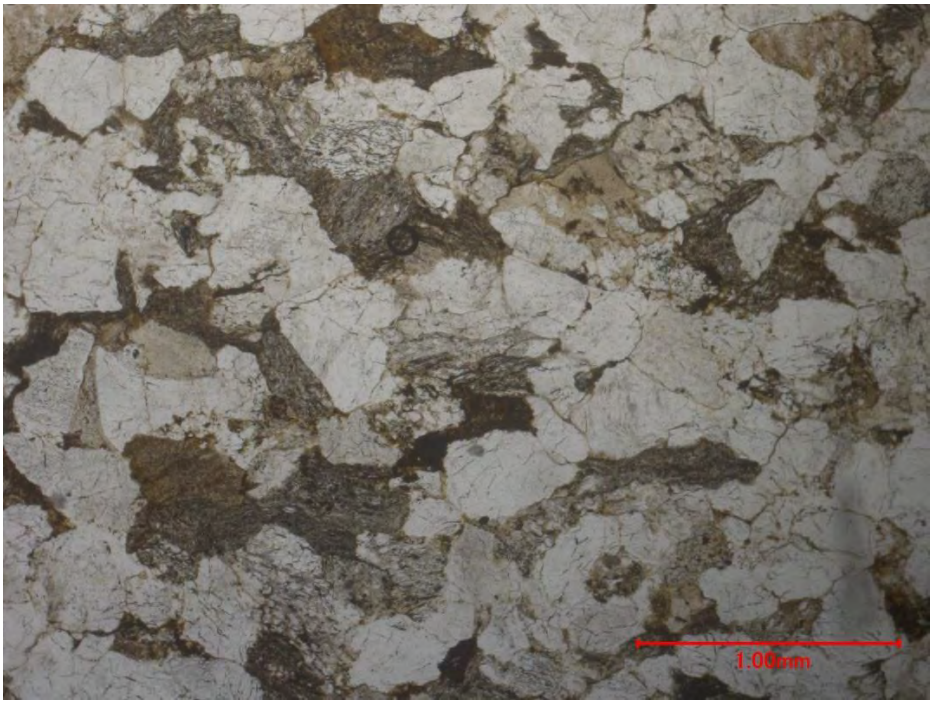
Two layers of deeply weathered weaker planes of the rock foliation run the entire length of the stone.

2. The stone has an inscription carved into the upper end of the thin, tapering end of the slab with the two lines of text aligned parallel to the long axis of the stone. The carved lines are dominantly “V”-shaped with a gently rounded bottoms of the grooves produced by lengthy exposure to weathering.

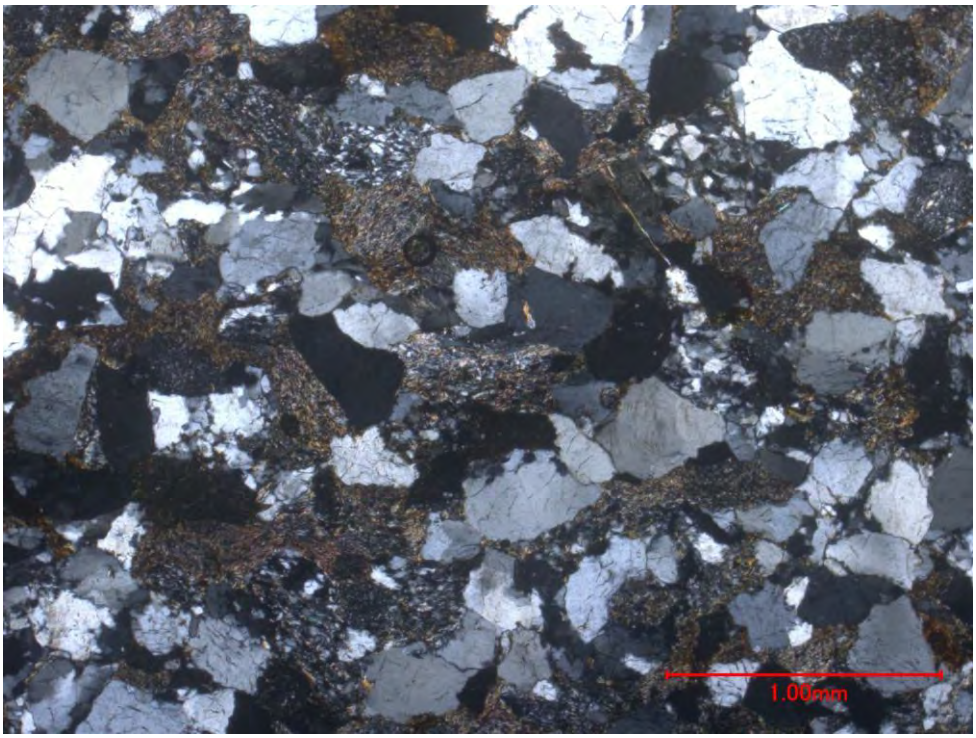
A two-lined inscription with Latin characters run parallel to the long axis of the slab was carved in the upper half of the stone.

3. The carved grooves of the inscription have weathered to the point they have achieved a similar weathering profile as the surrounding rock. This is consistent with a lengthy exposure which could easily be 200 years or more.

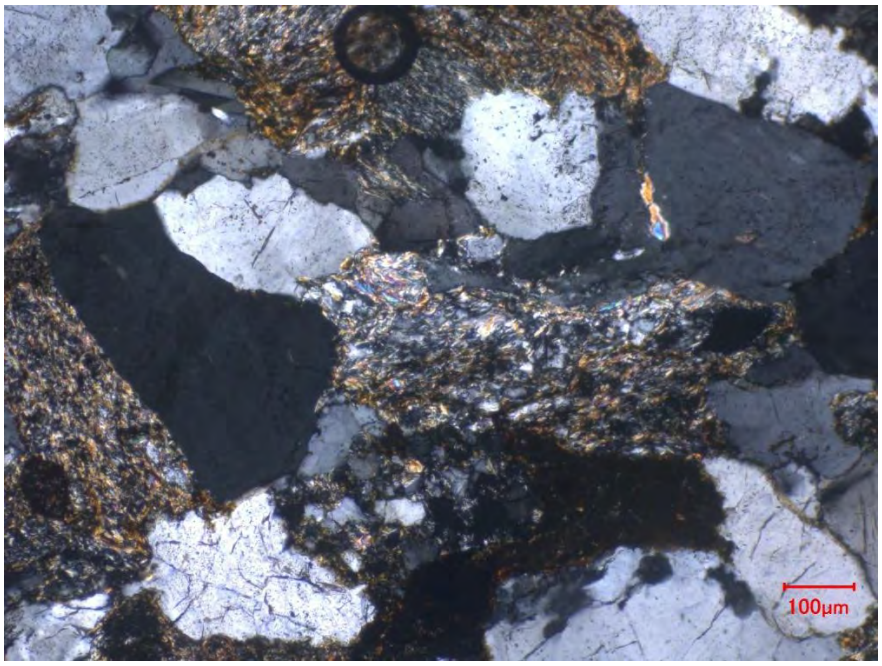
Pictures taken showing a closer view of the carved letters exhibit the same appearance of weathering as the surrounding rock that is consistent with the reported exposure to the elements of at least 200 years.



Plane polarized light view of the sutured boundaries of the un-weathered minerals comprising the metagraywacke rock type used to carve the inscription. (40X)



Cross polarized view of the un-weathered minerals comprising the stone such as strained quartz, feldspar, lithics and fine-grained micas including biotite, muscovite, and sericite. (40X)



Cross polarized light view of fine-grained un-weathered minerals comprising the stone such as strained quartz, feldspar, lithics and fine-grained micas including biotite, muscovite, and sericite. (100X)

SAMPLE IDENTIFICATION

Sample Type: Inscribed Stone Slab

Sample ID	Dimensions
King Arthur Stone	4.92’ (59-5/8”) long x 1.65’ (19-3/4”) wide x ~4.25” thick

TEST PROCEDURES

Laboratory testing was performed on April 15, 2022, and subsequent dates. Our procedures were as follows:

1.0 Petrographic Analysis

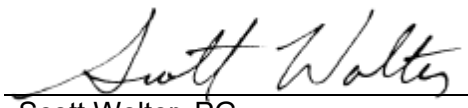
A petrographic analysis was performed in accordance with "Petrographic Examination of Rock," ASTM C295-latest revision. The petrographic analysis consisted of reviewing rock qualities on a whole basis on saw cut, lapped, and fractured sections. Reflected light microscopy was performed under an Olympus SZX-12 binocular stereozoom microscope at magnifications up to 100x.

The composition of the rock was documented by viewing a thin section of the concrete under a Nikon E600 polarizing light microscope at magnifications of up to 600x. An additional, smaller, saw cut subdivision of the rock sample is epoxy impregnated, highly polished, and then attached to a glass slide using an optically clear epoxy. Excess sample is saw cut from the glass and the thin slice remaining on the slide is lapped and polished until the rock sample reaches 25 microns or less in thickness. Thin section analysis allows for the observation and identification of rock minerology, structural and textural features.

REMARKS

The test sample will be retained for a period of at least sixty days from the date of this report. Unless further instructions are received by that time, the sample may be discarded. Test results relate only to the items tested.

Report Prepared By:



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