



William Smith

Geologist



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willdsmith1995.github.io/willsgeo/

About Me

A hard-working, diligent individual with enthusiasm for problem-solving. I have strong communication and leadership skills, demonstrated in conference participation, publications, fieldwork, and sports coaching. I am punctual and value the importance of setting and executing deadlines. Pursuing academia has allowed me to hone my skills as an independent researcher, but I enjoy working as part of a multi-disciplinary team during exploration programmes and with research collaborators. Fieldwork programmes in northern Canada, southern Brazil, South Africa, and the United Kingdom have provided valuable fieldwork experience in different climates, each of which present different challenges.

Interests

As a geologist, my biggest passion is the outdoors; hiking, camping, and exploring. My hobbies include football, both competing and coaching youth sides. I also enjoy cooking and baking, and often experiment with new foods and techniques.

Education History

2017 - present PhD, Cardiff University

Specialising in magmatic ore deposits

2016 - 2017 MRes, University of Portsmouth

Specialising in ore deposit geology (76%)

2013 - 2016 BSc (Hons) Geology, University of Portsmouth

Specialising in geochemistry (78%)

2006 - 2013 Callington Community College and Sixth Form

Specialising in geography and physical sciences (A* to C)

Employment History

Summer 2018 Exploration Geologist, Northern Shield Resources

Exploration for magmatic sulphide occurrences in Canada

Summer 2017 Exploration Geologist, Cornwall Resources Limited

Characterisation of W-Sn-Cu ore deposits in England

Summer 2016 Chemical Engineer, Grinding Solutions

Metallurgical processing for Cu-Pb-Zn ore deposits

Summer 2016 Saint Mellion Resort, Cornwall

Barman, waiter, chef, and events staff

2015 - present Demonstrator, University of Portsmouth & Cardiff

Teaching units and fieldcourses in geology and exploration.

Fieldwork Experience

➤ **Cornwall, United Kingdom**
W-Sn-Cu-Zn-Pb ore deposits and surrounding geology

➤ **Labrador Trough, Canada**
Magmatic Ni-Cu-PGE sulphide prospecting

➤ **Bushveld Complex, South Africa**
PGE-Cu-Ni reef deposits and surrounding geology

➤ **Troodos Ophiolite, Cyprus**
VMS ore deposits and geodynamics

➤ **Ouro Preto, Brazil**
Volcano-sedimentary mapping undergraduate project

➤ Other trips include Brittany (France), Ullapool (Scotland), Portugese ore deposits, Leoban (Austria), Coed-y-Brenin (Wales)

Skills

Software

Proficient knowledge

Microsoft Office, CorelDraw, QGIS, GCDKit, MELTS programmes, ImageJ, AZtec

Working knowledge

ArcGIS, Leapfrog, Micromine, Inkscape, FieldMOVE, Thermocalc

Basic knowledge

MapInfo, Adobe Illustrator, IOGAS, MOVE, Global Mapper, SPSS

Programming

Proficient knowledge

R and R Studio, LaTeX

Working knowledge

Python (Jupyter, Spyder, Anaconda), Gitbash/Github

Basic knowledge

Matlab, VBA, HTML, Atom

Field & Analytical

Proficient knowledge

Geological mapping, structural data/ stereonet, rock and soil sampling, mineral separation apparatus (density and magnetism), crushing & milling apparatus (jaw crush, disc and ball mills), optical microscopy (transmitted and reflected light), scanning electron microscopy

Working knowledge

Core logging, portable and machine X-ray fluorescence, laser ablation and solution inductively-coupled mass spectrometry, electron microprobe (EPMA)

Basic knowledge

X-ray diffraction, U-Pb geochronology, Secondary ionisation mass spectrometry

References

➤ **Wolfgang Maier**
Cardiff University
maierw@cardiff.ac.uk

➤ **Ian Bliss**
Northern Shield Resources
ibliss@northern-shield.com

Additional references available on request

Honours and Awards

- CASE NERC DTP PhD research grant
- Mineralogical Society postgraduate bursary
- Hugh McKinstry SEG research grant
- University of Portsmouth postgraduate scholarship
- PESYB undergraduate mapping sponsorship
- TSG national mapping finalist
- Stewart R. Wallace SEG fieldwork grant
- University of Portsmouth highest averaging student

Memberships and Conference Participation

- SGA biennial conference, Glasgow 2019. Poster presentation
- Nickel (2020) & Platinum (2018) Symposium. Commended presenter.
- Geologists Association, London, 2017-2019. Commended presenter.
- Mineral Deposit Studies Group, 2017-2019. Annual presenter
- FINEX 2019 and PETEX 2017
- President and Treasurer of the SEG Student Chapter, Cardiff & Portsmouth
- Student member of the Mineralogical Society
- Student member of the IOMMM
- Student representative of the Applied Mineralogy Group

Qualifications and Course Participation

- Full clean UK driving license
- GIS and prospectivity mapping tutor for UNESCO workshops
- Exploration Geochemistry, Camborne School of Mines
- Micromine workshop, London
- Exploration geochemistry and sampling methods, Miskolc
- Exploration geochemistry and ore microscopy, Freiburg
- Midland valley MOVE and FieldMOVE workshop

Examples of research outputs

- Smith, W. D., et al. "Element mapping the Merensky Reef of the Bushveld Complex." Geoscience Frontiers (2020).
- Smith, W. D., et al. "The geology, geochemistry, and petrogenesis of the Huckleberry Cu-Ni-PGE prospect in the Labrador Trough, Canada: Perspectives for regional prospectivity." Ore Geology Reviews (2020)
- Smith, W. D., et al. "Zircon perspectives on the age and origin of evolved S-type granites from the Cornubian Batholith, Southwest England." Lithos (2019)