

Joshua M. Smith
Curriculum Vitae

Research Specialist
Dept. of Earth Science and Environmental Change
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Education:

Indiana University, Bloomington, Geological Sciences, Ph.D., 2019
University of Nevada, Reno, Geology, M.S., 2014
Eastern Illinois University, Geology, B.S., 2012

Related Work Experience:

09/2021 – present	Research Specialist, Dept. of Geology/ESEC, UIUC
06/2021 – 08/2021	Lead Project Geologist, i-80 Gold Corp.
05/2019 – 05/2021	Project Geologist, Premier Gold Mines/i-80 Gold Corp.
08/2018 – 05/2019	TA, Dept. of Earth and Atmos. Sciences, Indiana University
08/2015 – 08/2018	RA, Dept. of Earth and Atmos. Sciences, Indiana University
01/2015 – 07/2015	Geologist, Elko Mining Group, Winnemucca, NV
05/2014 – 06/2014	TA, Field Camp, Geology Dept., Sacramento State University
08/2012 – 12/2014	RA, Dept. of Geological Sciences and Engineering, UNR
06/2012 – 08/2012	Geologist, Great Basin Gold, Ltd.

Professional Affiliations:

Society of Economic Geologists
Geological Society of Nevada

Papers and Abstracts:

Crowley, B.E., Simpson, E.M.B., Hammer, S.J., Smith, J.S., and Johnson, T.M. (2023) Comparison of powdered enamel sample pretreatment methods for strontium isotope analysis: *Frontiers in Environmental Chemistry*, v. 4, 18p.: doi: [10.3389/fenvc.2023.1114807](https://doi.org/10.3389/fenvc.2023.1114807)

Smith, J.M., Ripley, E.M., Li, C., and Shirey, S.B. (2022) Magmatic origin for the massive sulfide ores in the sedimentary country rocks of mafic-ultramafic intrusions in the Midcontinent Rift System: *Mineralium Deposita*, v. 57, p. 1189 – 1210: doi: <https://doi.org/10.1007/s00126-022-01095-2>

Smith, J.M., Ripley, E.M., Li, C., and Wasylenki, L.E. (2021) Cu and Ni Isotope Variations of Country Rock-Hosted Massive Sulfides Located Near Midcontinent Rift Intrusions: *Economic Geology*, v. 117, p. 195 – 211:
doi: <https://doi.org/10.5382/econgeo.4872>

Smith, J.M., Ripley, E.M., Li, C., Shirey, S.B., and Wernette, B.W. (In prep.) Non-magmatic origins of country rock-hosted massive sulfide(-oxides) beneath the Stillwater Complex, Montana: In prep, *Economic Geology*.

Smith, J.M., Muntean, J.L, and Vikre, P.G. (In prep) Controls of High Grades within the Clementine Vein System in the Hollister Low-Sulfidation Epithermal Au-Ag Deposit, NV: In prep, *Economic Geology*.

Smith, J.M., Ripley, E.M., Li, C., and Shirey, S.B., 2019, S, Pb, and Os isotopic studies of massive Ni-Cu±PGE sulfides hosted in metasedimentary country rocks of the Midcontinent Rift System, USA: Crossroads Geology Conference, Bloomington, IN 2019, Program with Abstracts, p. 35.

Smith, J.M., Ripley, E.M., Li, C., and Shirey, S.B., 2018, Origins of country rock-hosted massive sulphides beneath the Stillwater complex, MT, USA: 13th International Platinum Symposium, Polokwane, South Africa, Abstracts with Programs, p. 172 – 173.

Smith, J.M., Ripley, E.M., Li, C., and Shirey, S.B., 2018, S, Pb, and Os isotopic studies of massive Ni-Cu±PGE sulfides hosted in metasedimentary country rocks of the midcontinent rift system, USA: Geological Society of America Abstracts with Programs. Vol. 50, No. 6, ISSN 0016-7592, doi: 10.1130/abs/2018AM-320745.

Smith, J.M., Ripley, E.M., Li, C., and Shirey, S.B., 2018, Genetic controls of country rock-hosted massive sulfides beneath the Stillwater complex, MT, USA: Crossroads Conference 2018, Bloomington, IN, USA, Abstracts with Programs, p. 17 – 18.

Ripley, E.M., Wernette, B.W., Ayre, A., Li, C., Smith, J.M., Underwood, B.S., and Keays, R.R., 2017, Multiple S isotope studies of the Stillwater Complex and country rocks: An assessment of the role of crustal S in the origin of PGE enrichment found in the J-M Reef and related rocks: *Geochimica et Cosmochimica Acta*, v. 214, p. 226 – 245.

Smith, J.M., Ripley, E.M., and Li, C., 2017, Variable genetic models for the origin of country rock-hosted massive sulfides. In *Proceedings of the 14th Biennial SGA Meeting, Society of Geology Applied to Mineral Deposits*, Quebec City.

Smith, J., Ripley, E., Li, C., Wernette, B., and Taranovic, V., 2016, S, Os, and Cu isotope variations between sheet- and conduit-style Ni-Cu-PGE mineralization in the Midcontinent Rift System, USA; *2016 Annual GSA Abstracts with Programs*.

Wernette, B., Ripley, E., Li, C., Smith, J., and Zhou, Y., 2016, Variations in the distribution of Platinum-group elements associated with varying degrees of silicate alteration within the J-M Reef of the Stillwater Complex, Montana, USA; *2016 Annual GSA Abstracts with Programs*.

Smith, J., Ripley, E., and Li, C., 2016, Petrographic and isotopic studies of sediment-hosted Ni-Cu-PGE massive sulfides associated with layered intrusions of the Stillwater Complex and the Midcontinent Rift System, USA; 2016 *GSA Penrose Conference on Layered Mafic Intrusions and Associated Economic Deposits*.

Ripley, E., Wernette, B., Smith, J., Li, C., Underwood, B., and Ayre, A., 2016, Multiple sulfur isotope evidence for a lack of crustal sulfur in the J-M reef of the Stillwater Complex, Montana, USA; 2016 *GSA Penrose Conference on Layered Mafic Intrusions and Associated Economic Deposits*.

Smith, J., Prokopf, D., Ripley, E., Li, C., 2016, Sulfur isotope studies of Ni-Cu-PGE sulfide mineralization hosted in metasedimentary country rocks of the Midcontinent Rift System and the Stillwater Complex, USA; *13th International Ni-Cu-PGE Symposium*.

Wernette, B., Ripley, E., Li, C., Smith, J., Underwood, B., Ayre, A., 2016, Multiple S isotope studies of PGE enrichment in the J-M Reef, Stillwater Complex, Montana; *13th International Ni-Cu-PGE Symposium*.

Ripley, E., Li, C., Smith, J., Wernette, B., and Taranovic, V., 2016, S, Os and Cu isotope variations between sheet- and conduit-style Ni-Cu-PGE mineralization in the Midcontinent Rift System, USA; *13th International Ni-Cu-PGE Symposium*.

Smith, J., Ripley, E., Li, C., Dong, S., and Wasylenki, L., 2016, Cu isotope variations between Ni-Cu mineralized intrusions of picritic and high-Al olivine tholeiite descent in the Midcontinent Rift System, North America; *2016 North-Central GSA Abstracts with Programs*.

Prokopf, D., Smith, J., Ripley, E., and Li, C., 2016, Sulfur isotope studies of Ni-Cu-PGE sulfide mineralization hosted in metasedimentary country rocks of the Duluth Complex, Eagle Intrusion and Tamarack Igneous Complex, Midcontinent Rift; *2016 North-Central GSA Abstracts with Programs*.

Smith, J.M., Muntean, J.L., and Vikre, P.G., 2015, Controls on high grade Au-Ag mineralization within the Clementine vein system in the Hollister low-sulfidation epithermal deposit, NV; *GSA Symposium 2015, Poster Session/Abstracts with Programs*.

Smith, J.M., Muntean, J.L., and Vikre, P.G., 2014, Controls on high grades within the Clementine vein system at the Hollister low-sulfidation epithermal gold-silver deposit, Nevada; *SEG Keystone Conference 2014, Poster Session/Abstracts with Programs*.

Smith, J.M. and Chesner, C.A., 2012, The growth history of quartz crystals from the Youngest Toba Tuff, Sumatra, Indonesia; *GSA Abstracts with Programs*, v. 44, no. 5, p. 9

Journal Reviews:

Economic Geology
Mineralium Deposita
Geochimica et Cosmochimica Acta
Geology

Funded Grants:

Controls on high grades within the Clementine vein system at the Hollister low-sulfidation epithermal gold-silver deposit, Nevada. PI: Smith, UNR. SEG Foundation, Inc., Newmont Mining Corporation Fund, May 2013 – December, 2013: \$2,500.00

The growth history of quartz crystals from the Youngest Toba Tuff, Sumatra, Indonesia. PI: Smith, EIU. EIU Honors College, Undergraduate Student Research Committee, August 2011 – May 2012: \$500.00

Mining Company Support:

Controls on High Grades within the Clementine Vein System at the Hollister Low-Sulfidation Epithermal Gold-Silver Deposit, Nevada. Great Basin Gold, Ltd., August 2012 – December 2014.

Teaching Experience:

UIUC: Ore Deposits

Indiana University: TA for Earth Materials and Oceanography

Sacramento State University: TA for Geology Field Camp

EIU: Undergraduate TA for Mineralogy, Petrology, and Intro. to Earth Science

Awards:

2024 UIUC List of Teachers Ranked as Excellent by Their Students (Spring, 2024)

2019 Outstanding associate instructor, IU, Dept. of Earth and Atmospheric Sciences

2018 Best Ph.D. student presentation, IU Crossroads Conference

2012 Errett and Mazie Warner Presidential Award, EIU, Geology/Geography Dept.