

Chad J. Pritchard, PhD, LG
Associate Professor

Department of Geology - Eastern Washington University
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(509) 359.7026, cpritchard@ewu.edu

EDUCATION

- **Washington State University, Pullman, WA 99164-2812**
Ph.D. in Geology, Fall 2007 to Spring 2011 (GPA 3.86)
- **Humboldt State University, Arcata, CA 95521**
M.S. in Geology, Degree received June 2004 (GPA 3.95)
- **Portland State University, Portland, OR 97201**
B.S. in Geology, Degree received June 2001
- **University of Iceland, Reykjavik, Iceland**
Exchange program studying geothermal dynamics, Summer 2000

PUBLICATIONS

- Armstrong, A; Goodson, B; Pritchard, CJ (2017) Geology of Willow Lake Natural Aureole: for Spokane County Parks and Recreation Geologic Field Guide, 23 p., November 6, 2017. Available at: <https://www.spokanecounty.org/DocumentCenter/Home/View/17426>
- Morgavi, D; Arzilli, F; Pritchard, C; Perugini, D; Mancini, L; Larson, P; Dingwell, DB (2016) The Grizzly Lake Complex (Yellowstone Volcano, USA): Mixing between basalt and rhyolite unraveled by microanalysis and X-ray microtomography: *Lithos.* v 260, p. 457-474, doi:10.1016/j.lithos.2016.03.026.
- Pritchard, CJ; Cebula, L (2016) Geologic and anthropogenic history of the Palouse Falls area: Floods, fractures, clastic dikes, and the receding falls, in: Lewis, R.S., and Schmidt, KL, eds., *Exploring the Geology of the Inland Northwest: Geological Society of America Field Guide* 41, doi:10.1130/2016.0041(02).
- Kiver, E; Pritchard, C; Orndorff, R (2016) *Washington Rocks! A guide to geologic sites in the Evergreen State: Montana Press Publishing, Missoula Montana, 131 p.*
- Pritchard, CJ; Larson, PB; Spell, TL; Tarbert, KD (2013) Eruption-triggered mixing of extra-caldera basalt and rhyolite complexes along the East Gallatin-Washburn fault zone, Yellowstone National Park, WY, USA. *Lithos.* v. 175-176, p. 163-177. <http://dx.doi.org/10.1016/j.lithos.2013.04.022>.
- Pritchard, CJ; Larson, PB (2012) Genesis of the post-caldera eastern Upper Basin Member rhyolites, Yellowstone, WY, from volcanic stratigraphy, geochemistry, and radiogenic isotope modeling: *Contributions to Mineralogy and Petrology:* v. 164, no. 2, p. 205-228, doi:10.1007/s00410-012-0733-9.
- Ellis, BS; Mark, DF; Pritchard, CJ; Wolff, JA (2012) Temporal dissection of the Huckleberry Ridge Tuff using the $^{40}\text{Ar}/^{39}\text{Ar}$ dating technique: *Quaternary Geochronology:* v. 9, p. 34-41, doi: 10.1016/j.quageo.2012.01.006.
- Larson, PB; Phillips, A; John, D; Cosca, M; Pritchard, C; Andersen, A; Manion, J (2009) Older hydrothermal alteration in the Yellowstone Caldera: *Journal of Volcanology and Geophysical Research,* v 188, p.225-236, doi. 10.1016/j.jvolgeores.2009.07.017.
- Pritchard, C.J. (2006) Coseismic subsidence of Arcata Bay: *In Friends of the Pleistocene, Pacific Cell 2006 Guidebook, Signatures of quaternary crustal deformation and landscape evolution in the Mendocino deformation zone, NW California, Paper 3-2-B, p. 265-268.* http://www.fop.cascadiageo.org/pacific_cell/2006/FOP2006_guidebook.htm

PhD Dissertation & MS Thesis:

- Pritchard, CJ (2011) Post-Caldera volcanism in Yellowstone National Park: Petrogenesis of the intracaldera Upper Basin Member of the Plateau Rhyolite and Extra-Caldera mingled magma complexes: [Ph.D. Dissertation] Pullman, Washington, Washington State University, School of Earth and Environmental Sciences, 103 p.

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Pritchard, CJ (2004) Late Holocene relative sea-level changes, Arcata Bay, California: Evaluation of Freshwater syncline movement using coseismically buried soil horizons: [M.S. Thesis] Arcata, California, Humboldt State University, Department of Geology, 56 p.

COURSES TAUGHT AT EWU (unless noted otherwise)

GEOL 100 – Discovering Geology
GEO 101 – Introduction to Geology (Washington State University)
ITGS 110- Cataclysms on the Columbia
ITGS 110 Geological Journey to the Center of the Earth
GEOL 120 - The Physical Planet
GEOL 430 – Structural Geology I
GEOL 431 – Structural Geology II and Field Methods
GEOL 491 / 499 – Senior Thesis / Interdependent Study
GEOL 490 – Geology Field Camp EWU

Invited Reviewer/Referee for the following: VEULCO Project with Springer Publication (2016), GSA Field Guide (2016), Nature Scientific Reports (2015), Journal of Petrology (2015); Lithos (2015); Pure and Applied Geophysics (2014); NSF Grant Proposal (2014); Contributions to Mineralogy and Petrology (2013); Journal of Volcanology and Geothermal Research (2013)

GRANTS

- Awarded “*Avista – Geohazard Idaho & Risk*” contract to fund faculty and undergraduate research for research of geologic hazards for utilities located throughout western Idaho for Avista, **\$40,106** Spring – Fall 2018.
- Awarded “*Avista Geological Hazard Evaluation*” contract to fund faculty and undergraduate research for research of geologic hazards for utilities located throughout eastern and southern Washington for Avista, Budinger and Associates, **\$9,713** Summer-Spring 2017.
- Awarded grant for “*Connecting Spokane to Regional Geology with Detrital Zircons*” a Faculty Research and Creative Works Grant through Eastern Washington University, Office of the Provost, **\$10,000**, Summer 2017 through Spring 2018
- Awarded “*Infiltration Research for Downtown Area, Spokane, WA*” contract to fund faculty and undergraduate research of stormwater infiltration and subsurface projection of geologic contacts with the City of Spokane and Budinger and Associates, **\$1,505** Spring 2017.
- Principal Investigator for “*Geologic Research in Support of Mineral Resource Studies in the Inland Northwest*” a cooperative agreement with the U. S. Geological Survey, **\$35,000 per year**, Fall 2016 through Fall 2020, expected total of **\$175,000**
- Awarded grant for “*Establishing a Natural Geologic Laboratory at Spokane County Willow Lake Natural Area*” a Faculty Research and Creative Works Grant through Eastern Washington University, Office of the Provost, **\$10,000**, Summer 2016 through Spring 2017
- Awarded grant with Dr. Anna Dvorak (Geography) for “*LiDAR imaging of the Spokane fault with future uses in Geology, GIS, Geography Environmental Science and other departments at EWU.*” A Start Something Big Grant through Eastern Washington University Foundation, **\$3,000**, Summer 2014.
- Awarded grant for “*Deciphering the Cheney Fracture Zone Using Fracture Analysis*” a Faculty Research and Creative Works Grant through Eastern Washington University, Office of the Provost, **\$9,970**, Summer 2014 through Spring 2014
- Awarded “*Updating County Database*” contract to fund an undergraduate position with Spokane County to update a well-log database, Google Earth interface, and Rockworks

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modeling. \$2,908, provided for Winter 2014, \$1,000 for Spring 2014, \$2,182 for Summer 2014 **Total of \$6,090.**

- Awarded “*Google Earth Pro Grant for Educators*,” to supply 30 licenses of Google Earth Pro to the EWU Department of Geology, Google GeoGrant No. 3-494600001456, **equivalent to \$10,500**, 2013 re-instated 2014, 2015
- Awarded grant, “*Subsurface Projection of the Stratigraphy of the Columbia River Basalt Group and Paleochannel Units in the West Plains Area*” Research was a small part of a larger project funded by *Washington Department of Ecology Grant No. G1000326*, **\$22,500**, 2012-2013.
- Project Coordinator for grant, “*Mapping of geologic structures affecting water movement and flow in the West Plains area of Spokane County*.” Research was a small part of a larger project funded by *Washington Department of Ecology Grant No. G1000326*, **\$11,500**, 2011-2012.

PROFESSIONAL GROUPS & COMMITTEES

- Co-founder and co-editor for www.floodexplorer.org, displays location-based research on geology, history, and natural sciences of the Missoula Floods.
- Geological Society of America, 2007; American Geophysical Union, 2007; Mineralogical Society of America, 2007; Association of Environmental and Engineering Geologist, 2009; National Association of Geoscience Teachers, 2013
- United Faculty of Eastern, Steward –July 2014 to September 2017
- West Plains Hydrogeologic Framework Technical Advisory Committee, 2014-2015
- EWU Faculty Senate, Department of Geology Senator – Appointed September 2013

CERTIFICATIONS

Small unmanned aircraft system license with FAA (2017) - Licensed Geologist with the State of WA and ID (2010) - Mineral Inclusions Short Course, Mineralogical Society of America ReMi-69 (2008) - Radioactive Materials Short Course (2008) - Learning ArcGIS 9.0 (24 hours), USDA Soil Scientist ArcGIS training (2006) - Princeton Groundwater and Pollution Hydrology Course (2005) - Hazardous Waste Operations and Emergency Response (since 2005) - PADI Divemaster (SCUBA Diving Professional – 2001) - Eagle Scout (1993)

ABSTRACTS FROM MENTORED UNDERGRADUATE RESEARCH PROJECTS:

- Cleveland, A, Adams, D, Pritchard, CJ (2017) Geologic and Anthropogenic history of Spokane revealed by subsurface projections for stormwater disposal: Geological Society of America Abstracts with Programs. Vol. 49, No. 6 doi: 10.1130/abs/2017AM-299074, NCUR 2018, and EWU Research Symposium 2018 as well
- Edgley, J; Pritchard, CJ (2017) An isolated crush breccia in Magnison Butte or part of a larger fault system in eastern Washington: Geological Society of America Abstracts with Programs. Vol. 49, No. 6 doi: 10.1130/abs/2017AM-301551
- Evart, L; Pritchard, CJ (2017) Constraining Errors in field and lab geochemical analyses using an pXRF calibration for Columbia River Flood Basalt: Geological Society of America Abstracts with Programs. Vol. 49, No. 6 doi: 10.1130/abs/2017AM-301557
- Goodson, B; Armstrong, A; Pritchard, CJ (2017) Eocene deformation and assimilation in the Willow Lake Natural Area, Spokane County, Washington: Geological Society of America Abstracts with Programs. Vol. 49, No. 6 doi: 10.1130/abs/2017AM-301544 – Murdock National Meeting, 2017 as well
- Hanson, E, Pritchard, CJ (2017) Structural relationship between folding and faulting preserved in Proterozoic Buttes of the Medical Lake area, eastern Washington: Geological Society of America Abstracts with Programs. Vol. 49, No. 6 doi: 10.1130/abs/2017AM-301510

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- Larson, K, Pritchard, CJ (2017) Deciphering Cretaceous and Eocene granitoids in the Spokane areas: Geological Society of America Abstracts with Programs. Vol. 49, No. 6 doi: 10.1130/abs/2017AM-301521
- Stephens, T, Pritchard, CJ, O'Sullivan, P (2107) U-Pb geochronology of Silver Hill, Spokane County, Washington: Geological Society of America Abstracts with Programs. Vol. 49, No. 6 doi: 10.1130/abs/2017AM-298572 - Murdock National Meeting, 2017, NCUR 2018, and EWU Research Symposium 2018 as well
- Huddleston, KA, Pritchard, CJ (2017) Comparison of two cretaceous age granites along the Spokane River using estimated age, mineral composition, and applicable geothermobarometry: , GSA Rocky Mountain Section 69th Annual Meeting, Calgary, Canada Geological Society of America Abstract with Programs, v. 49, no. 5, doi:10.1130/abs/2017RM-293242
- Edgley, J; Pritchard, CJ (2017) Geologic reconnaissance of Magnison Butte, Medical Lake, Washington: 20th Annual EWU Student Research and Creative Works Symposium, May 2017, Cheney, WA
- Evart, L; Pritchard, CJ (2017) Analyzing local basalts using portable XRF on fresh and weathered surfaces: 20th Annual EWU Student Research and Creative Works Symposium, May 2017, Cheney, WA
- Fitzgerald, A; Pritchard, CJ (2017) Medical Lake, Diving into the Geology: 20th Annual EWU Student Research and Creative Works Symposium, May 2017, Cheney, WA
- Goodson, B; Armstrong, A; Pritchard, CJ (2017) Preliminary structural interpretation of the Willow Lake aureole: 20th Annual EWU Student Research and Creative Works Symposium, May 2017, Cheney, WA
- Hansen, E; Duckett, K; Pritchard, CJ (2017) Faulted Buttes of the Medical Lake Area: 20th Annual EWU Student Research and Creative Works Symposium, May 2017, Cheney, WA
- Huddleston, KA; Pritchard, CJ (2017) Comparison of Dam Rocks along the Spokane River: 20th Annual EWU Student Research and Creative Works Symposium, May 2017, Cheney, WA
- Larson, K; Pritchard, CJ (2017) Deciphering of Cretaceous and Eocene granitoids in the Spokane area: 20th Annual EWU Student Research and Creative Works Symposium, May 2017, Cheney, WA
- Thompson, B; Pritchard, CJ (2017) Look out for the Latah: 20th Annual EWU Student Research and Creative Works Symposium, May 2017, Cheney, WA
- Williamson, L; Pritchard, CJ (2017) Hawk Creek's winding recession based on portable x-ray fluorescence: 20th Annual EWU Student Research and Creative Works Symposium, May 2017, Cheney, WA
- Adams, D; Pritchard, C (2016) Three Dimensional Modeling of Paleochannels of the West Plains: 19th Annual EWU Student Research and Creative Works Symposium, May 2016, Cheney, WA
- Armstrong, A; Goodson, B.; Pritchard, C (2016) Preliminary identification and classification of the rocky types of Willow Lake, eastern Washington: Geological Society of America Rocky Mountain Section Meeting, May 2016, Moscow, ID - Geological Society of America Abstracts with Programs, v. 28, no. 6, doi: 10.1130/abs/2016RM-276043
- Blackwood, J; Pritchard, C (2016) Rock Lake: Columbia River Basalt Group: 19th Annual EWU Student Research and Creative Works Symposium, May 2016, Cheney, WA
- Evart, L; Pritchard, C (2016) Geochemical and field identification of a landslide at Steamboat Rock, Washington using Portable X-ray fluorescence: Spokane Intercollegiate Research Conference, April 2016, Whitworth University, Spokane, WA; 19th Annual EWU Student Research and Creative Works Symposium, May 2016, Cheney, WA & Geological Society of America Abstracts with Programs, v. 28, no. 6, doi: 10.1130/abs/2016RM-276156.

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- Garcia, L; Buchanan, J; Pritchard, C (2016) Origins of rip-up clasts in Missoula Floods deposits of the West Plains, eastern Washington: Geological Society of America Rocky Mountain Section Meeting, May 2016, Moscow, ID - Geological Society of America Abstracts with Programs, v. 28, no. 6, doi: 10.1130/abs/2016RM-276177
- Goodson, B; Armstrong, A; Pritchard C (2016) Preliminary mapping and structural interpretation of an aureole in eastern Washington: Spokane Intercollegiate Research Conference, April 2016, Whitworth University, Spokane, WA Geological Society of America Rocky Mountain Section Meeting, May 2016, Moscow, ID - Geological Society of America Abstracts with Programs, v. 28, no. 6, doi: 10.1130/abs/2016RM-276179
- Hansen, E; Schneider, J; Pritchard, C (2016) Geochemistry of Pre-Miocene Sedimentary Rocks of eastern Washington using Portable XRF: 19th Annual EWU Student Research and Creative Works Symposium, May 2016, Cheney, WA
- Hennings, C; Lund, B; Pritchard, C (2015) Vertical propagation of lateral slip in basement rock as instigator for the Cheney Fracture Zone, eastern Washington: A fracture analysis, Abstract, National Conference on Undergraduate Research (NCUR), April 2015, Cheney, WA
- Luppens, J; Pritchard, C (2015) Investigation of nitrate hotspots in Spokane County, Abstract, Northwest Science Conference, April 2015, Pasco, WA & National Conference on Undergraduate Research (NCUR), April 2015, Cheney, WA
- Arms, Z; Ulakovich, A; Pritchard, C (2014) Cheney Fracture Zone: Abstract, 12th Annual SIRC, April 2014, Gonzaga, Spokane, WA & 17th Annual EWU Student Research and Creative Works Symposium (EWU Symposium), May 2014, Cheney, WA.
- Bearup, C; Daley, R; Pritchard, C (2014) Possible Splay of the Spokane and Latah Fault Systems: Examination of a thrust fault in Hangman Valley: Abstract, 12th Annual SIRC, April 2014, Gonzaga, Spokane, WA.
- Campbell, N.; Warren, J.; Pritchard, C. (2014) Shear zone at Needham Hill – Evidence of a metamorphic core complex, Spokane County, WA: Abstract, 17th Annual EWU Symposium, Cheney, WA.
- Daley, R; Bearup, C; Pritchard, C (2014) Thrust fault in Hangman Valley: A possible splay of the Spokane and Latah fault systems: Abstract, Joint Meeting 66th Rocky Mountain and 110th Cordilleran Section meetings, Geological Society of America (GSA), May 2014, Bozeman, MT.
- Daley, R; Campbell, D; Bearup, C; Pritchard, C (2014) Origins of Hangman Creek deformation at Champion Park, Spokane, WA: Abstract, 17th Annual EWU Symposium, Cheney, WA.
- Garland, N; Schillhammer, S; Sorensen, C; Uecker, T; Pritchard, C (2014) Formation of Basalt Rings in Odessa, WA: Abstract, 12th Annual SIRC, April 2014, Gonzaga, Spokane, WA & 17th Annual EWU Symposium, May 2014, Cheney, WA.
- Haston, A; Adams, D; Pritchard, C (2014) The use of photographic interpretation to determine the compositional volume of mixed magma from basalt and rhyolite complexes at Yellowstone National Park: Abstract, 12th Annual SIRC, April 2014, Gonzaga, Spokane, WA, Joint Meeting 66th Rocky Mountain and 110th Cordilleran Section meetings, GSA, May 2014, Bozeman, MT & Talk, 17th Annual EWU Symposium, Cheney, WA.
- Hatch, S; Faulds, A; Pritchard, C (2014) Structural analysis and Columbia River Basalt Group Stratigraphy of the Palouse Falls area, eastern Washington: Abstract, 12th Annual SIRC, April 2014, Gonzaga, Spokane, WA; Joint Meeting 66th Rocky Mountain and 110th Cordilleran Section meetings, GSA, May 2014, Bozeman, MT & 17th Annual EWU Symposium, May 2014, Cheney, WA.
- Hayes, J; Belock; Pritchard, C (2014) Analysis of the available research on the Spokane Fault: Abstract, 17th Annual EWU Symposium, May 2014, Cheney, WA.

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- Holman, C; Lloyd, R; Orndorff, R; Pritchard, C (2014) Seismic testing of selected soils in Spokane County: Abstract - poster, Joint Meeting 66th Rocky Mountain and 110th Cordilleran Section meetings, GSA, May 2014, Bozeman, MT.
- Jensen, D and Pritchard, C (2014) Possible core complex south of the priest river complex in Bonnie Lake, eastern Washington: Abstract, 12th Annual SIRC, April 2014, Gonzaga, Spokane, WA; Joint Meeting 66th Rocky Mountain and 110th Cordilleran Section meetings, GSA, May 2014, Bozeman, MT & 17th Annual EWU Symposium, May 2014, Cheney, WA
- Lloyd, R and Pritchard, C (2014) Microfracture patterns in basalt cores as an analog for the Cheney Fracture Zone: Abstract, 12th Annual SIRC, April 2014, Gonzaga, Spokane, WA
- Perham, A; Butz, N.; Peters, J; Pritchard, C (2014) Kinematic analysis of the Beacon Hill mylonite, Spokane, WA: Abstract, 17th Annual EWU Symposium, Cheney, WA.
- Pritzl, J and Pritchard, C (2014) Mapping of Tower Mountain/ Rocks of Sharon: Abstract, 12th Annual SIRC, April 2014, Gonzaga, Spokane, WA & 17th Annual EWU Symposium, May 2014, Cheney, WA
- Ahern, G; Kostka, S; Pritchard, C (2013) Sandbox modeling of faulting in compressional regimes: 16th Annual EWU Research and Creative Works Symposium, May 2013, Cheney, WA.
- Arms, Z; Gosal, S; Ulakovich, A; Pritchard, C (2013) Groundwater interaction between Columbia River Basalt Group and paleodrainage aquifers, West Plains, Washington: Abstract, 11th Annual Spokane Intercollegiate Research Conference (SIRC), April 2013, Spokane, WA & 16th Annual EWU Research and Creative Works Symposium, May 2013, Cheney, WA.
- Kostka, S; Ahern, G; Pritchard, C (2013) A model of orogenic settings: Abstract, 11th Annual SIRC, April 2013, Spokane, WA
- Landkammer, M; Thompson, A; Pritchard, C (2013) Structural Orientation Analysis from the Beacon Hill Area of the Spokane Dome: Abstract, 11th Annual SIRC, April 2013, Spokane, WA & 16th Annual EWU Research and Creative Works Symposium, May 2013, Cheney, WA.
- Schilter, J; Nesinger, R.; Pritchard, C (2013) Modeling of strike-slip faults: 16th Annual EWU Research and Creative Works Symposium, May 2013, Cheney, WA.
- Snyder, L; Pritchard, C (2013) Geologic Reconnaissance of Tower Mt./Iller Creek Conservation Area: 16th Annual EWU Research and Creative Works Symposium, May 2013, Cheney, WA.
- Ulakovich, A; Arms, Z; Gosal, S; Pritchard, C (2013) Stratigraphy of the Columbia River Basalt Group in the West Plains, eastern Washington: Abstract, 11th Annual SIRC, April 2013, Spokane, WA & 16th Annual EWU Research and Creative Works Symposium, May 2013, Cheney, WA.
- Shillhammer, S; Pritchard, C (2013) Window into the Cenozoic tectonic history of eastern Washington: geochronology and microstructures of an intruded fault plane: Abstract, 27th National Conference on Undergraduate Research (NCUR), April 2013, La Crosse, Wisconsin
- Brundige, S; Suter, T; Hartley, E; Pritchard, C (2012) Strain analysis of the Metaline limestone utilizing deformed trilobites: Abstract, National Association of Geoscience Teachers, Pacific Northwest Section, 2012 Annual Conference, Spokane, WA.
- Campbell, H; Pritchard, C (2012) U-Pb ages of plutons near Long Lake dam and Little Falls dam, Lake Spokane, Washington: Abstract, National Association of Geoscience Teachers, Pacific Northwest Section, 2012 Annual Conference, Spokane, WA. & 15th Annual EWU Research and Creative Work Symposium, May 2012.
- Crim, C, Smith, D, McCollum, L, Pritchard, C (2012) Large landslide discovered using stratigraphy of the Columbia River basalts, Deep Creek, Riverside State Park, Spokane, WA: 15th Annual EWU Research and Creative Work Symposium, May 2012.

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Thurston, J; Campbell, H; Crim, C; Pritchard, C (2012) Structural analysis of the Cheney Fracture Zone: Abstract, National Association of Geoscience Teachers, Pacific Northwest Section, 2012 Annual Conference, Spokane, WA. & 15th Annual EWU Research and Creative Work Symposium, May 2012.

ABSTRACTS & TALKS:

- Pritchard, CJ; O'Sullivan, P, Lewis, RS; (2017) Late Miocene vapor-phase enrichment of REE in basaltic enclaves: Geological Society of America Abstracts with Programs. Vol. 49, No. 6 doi: 10.1130/abs/2017AM-299129
- Pritchard, CJ; Lewis, RS; O'Sullivan, P (2017) Bubble segregation transport and vapor phase LREE enrichment of mafic enclaves: International Association of Volcanology and Chemistry of the Earth's Interior Annual Meeting, August 2017, Portland, OR
- Pritchard, CJ; Loyd, R. (2016) Cheney and Palouse Falls Fracture Zones, eastern Washington with analogies to fractured basalt cores: Geological Society of America Abstracts with Programs, v. 28, no. 6, doi: 10.1130/abs/2016RM-276049
- Pritchard, CJ; Cebula, L. (2016) Exploring the geology and history of Missoula Floods through undergraduate research projects, www.floodexplorer.org: Geological Society of America Abstracts with Programs, v. 28, no. 6, doi: 10.1130/abs/2016RM-276047
- Pritchard, C.J., Hennings, C., Lund, B., Ernst, S. (2015) Possible Influences of the Cheney Fracture Zone and paleodrainages on basalt aquifers of the West Plains, eastern Washington: *Abstract - Talk*, Northwest Scientific Association 86th Annual Conference, April 2015, Pasco, WA
- Morgavi, D; Arzilli, F; Pritchard, CJ; Petrelli, M.; Larson, PB; Dingwell, DB.; Perugini, D. (2015) Magma mixing and crystallization between basaltic and rhyolitic melts: *Abstract*, Goldschmidt 25th Anniversary Conference, August 2015, Prague, Czech Republic
- Morgavi, D; Arzilli, F; Pritchard, CJ; Perugini, D; Mancini, L; Larson, PB; Dingwell, DB (2015) Magma mixing in the Yellowstone Plateau Volcanic Field brought to light by X-ray microtomography and chemical analysis: *Abstract*, European Geosciences Union, General Assembly, April 2015, Vienna, Austria.
- Pritchard, CJ; Larson, PB; Morgavi, D; Perugini, D; Arzilli, F; Mancini, L; Dingwell, DB (2014) Preliminary field, petrologic, experimental mixing and x-ray computed microtomography results from the mixed basalt and rhyolite complexes along the East Gallatin-Washburn Fault Zone, Yellowstone National Park, WY, USA: *Abstract - Talk*, Joint Meeting 66th Rocky Mountain and 110th Cordilleran Section meetings, Geological Society of America, May 2014, Bozeman, MT.
- Morgavi, D; Arzilli, F; Pritchard, CJ; Perugini, D; Mancini, L; Larson, PB; Dingwell, DB (2014) 3D morphochemistry of basaltic/rhyolitic mixed eruptions revealed via microanalysis and X-ray microtomography (12447). *Abstract*, American Geophysical Union National Meeting, Dec. 2014, San Francisco, CA.
- Di Genova, D; Morgavi, Hess, KU; Pritchard, CJ; Borovkov, N; Perugini, D; Larson, PB; Dingwell, DB (2014) Raman investigation of magma mingling experiments as a tool for tracking the chemical and structural evolution of melt (15212). *Abstract*, American Geophysical Union National Meeting, Dec. 2014, San Francisco, CA.
- Morgavi, D; Perugini, D; Pritchard, CJ; De Campos, CP; Larson, PB; Dingwell, DB (2013) Experimental constraints on mixing between basaltic and rhyolitic magmas (2072-1). *Abstract*, International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI), Scientific Assembly July, 2013, Kagoshima, Japan.
- Pritchard, CJ, Ellis, BS, Larson, PB, Mark, DF (2011) New High Precision 40Ar/39Ar measurements of the Huckleberry Ridge Tuff: Member C – A caldera forming post-caldera rhyolite,

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- Yellowstone, WY, USA. *Abstract & Talk*, Geological Society of America, National Meeting, Minneapolis, Oct. 2011.
- Larson, PB; Pritchard, CJ (2011) Geochemical changes due to propylitization in the Eocene Sawtooth Ring Zone, Idaho Batholith, USA: Abstract, Geological Society of America, National Meeting, Minneapolis, Oct. 2011.
- Larson, PB; Pritchard, CJ (2010) The geochemical signature of propylitic alteration in the Idaho Batholith: Abstract, Goldschmidt Geochemistry International Conference, 2010.
- Pritchard, CJ; Larson, PB (2010) Isotopic modeling and the formation of the post-caldera eastern Upper Basin Member rhyolites, Yellowstone, WY: *Abstract*, American Geophysical Union National Meeting, 2010, San Francisco, CA.
- Pritchard, CJ and Larson, PB (2009) Isotopic shifts of Yellowstone and the eastern Upper Basin Member of the Plateau Rhyolites, Yellowstone Caldera, WY: *Abstract & Talk*, Geological Society of America Penrose Conference: Low delta 18-O rhyolites and crustal melting: Growth and redistribution of the continental crust, September 2009.

INVITED PRESENTATIONS

- Pritchard, CJ; Keatch, S; and Lutey, T (2018) EWU Policies for the Field, AGU Heads and Chairs program and the American Geosciences Institute, webinar on Implementing Effective Field Camp and Field Course Policies and Procedures, online webinar
<https://www.americangeosciences.org/workforce/webinars/implementing-effective-field-camp-policies-and-procedures> April 20, 2018
- Pritchard, CJ (2017) Geology of the Cheney and Palouse Falls fracture zones: Invited Talk, Wenatchee Valley Museum, WA, Dec. 13, 2017.
- Pritchard, CJ (2017) Earthquakes and tectonic history of “Washington Rocks!”: Invited Talk, Othello Sandhill Crane Festival, Othello, Washington, March 25, 2017.
- Pritchard, CJ (2017) Three dimensional projections of paleochannels in the west plains of eastern Washington: *Invited Talk*, Columbia Basin Geologic Society, Scotty’s Doghouse, Spokane, WA March 22, 2017.
- Pritchard, CJ (2017) Natural hazards of Washington Rocks!: *Invited Talk*, Auntie’s Bookstore, Spokane, WA, Feb. 9, 2017
- Pritchard, CJ (2017) Tectonics of Washington Rocks!: *Invited Talk*, Lake Lewis Chapter of the Ice Age Floods Institute, Benton County Public Utility District, Kennewick, WA , Jan. 31. 2017
- Pritchard, CJ (2016) Tectonics of Washington Rocks!: *Invited Talk*, Wenatchee Valley Erratics Chapter of the Ice Age Floods Institute, Wenatchee Valley Museum, WA, Dec. 13, 2016
- Pritchard, CJ (2016) Three-dimensional models of Paleochannels, West Plains for eastern Washington: social benefits from deposits of the Missoula Floods: *Invited Talk*, Washington State University & University of Idaho Seminar Series, Pullman, WA, Sept. 1, 2016
- Pritchard, CJ (2014) Magma Mixing in the east Gallatin-Washburn fault zone of Yellowstone, WY. Talk, Winter quarter EWU Geology Seminar, February 18, 2014
- Pritchard, CJ (2013) Subsurface Projection of the Stratigraphy of the Columbia River Basalt Group and Paleodrainages in the West Plains Area: Invited Talk & Professional Report, WRIA 54 Watershed Implementation Team Meeting, Airway Heights Water Reclamation Facility, September, 2013, Airway Heights, WA
- Pritchard, CJ (2013) Magma Mixing in Yellowstone and from Experiments: Invited Talk, Spokane Falls Community College Geology Department, May 17, 2013, Spokane, WA
- Pritchard, CJ (2013) Geology of the Cheney & Palouse Falls fracture zones. Invited Talk, Ice Age Flood Institute Meeting, March 7, 2013, Cheney, WA
- Pritchard, CJ (2012) When the Yellowstone Supervolcano blows again, how will Spokane fare? Invited Talk, Sigma Xi Banquet & Speaker, October 22, 2012, Cheney, WA

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- Pritchard, CJ (2012) Geology and hydrology of the Cheney and Palouse Falls fracture zones: Invited Talk, Spokane-West Rotary meeting, September 25, 2012, Spokane, WA
- Pritchard, CJ (2012) Structural Influences on Geomorphology and Hydrology of the Cheney Fracture Zone and Palouse Falls Area: *Invited Talk*, Washington State University & University of Idaho Seminar Series, August 30, 2012, Pullman, WA
- Pritchard, CJ (2012) Geologic Structures Affecting Water Movement and Flow Direction in the CRBG West Plains Aquifer, WRIA 54: *Invited Talk* & Professional Report, WRIA 54 Watershed Implementation Team Meeting, Spokane County Utilities Department, July 2012, Spokane, WA

COMMUNITY EVENTS

- Volunteer Judge and helped recruit judges for Franklin Elementary Science Fair, March 7, 2018
- Trashcano and Washington Geology presentation for Lakeside Elementary Science Night, February 27, 2018
- Hydrology and Local Geology presentation and exhibits at Reardan Middle School for three of Ms. Littleton's classes, January 19, 2018.
- Medical Lake Rocks! Geology presentation and exhibits at the Medical Lake Library, January 8, 2018
- Chemistry Rocks! At the Spokane City Library, general geology presentation and exhibits, collaborated with Ashley Lamm from Chemistry Department, October 21, 2017
- Field Trip leader for Spokane Area Steptoes for the Belt Symposium, Sept 17, 2017
- Judge for Regional and State Science Olympiad, Dynamic Planet, GeoLogic Mapping, and Road Scholar, 2012 through present

MEDIA ENCOUNTERS

- The Spokesman Review, Palouse Falls a 'site of wonder' for thousands of years – By Becky Kramer, Cover article **Front Page**, May 21, 2016. Short video also produced. <http://www.spokesman.com/stories/2016/may/20/washingtons-palouse-falls-a-site-of-wonder-for-tho/>
- The River Journal, *Whole Lotta Shaken: What is Happening on the Hope Fault* – By Trish Gannon, Cover article – p. 6-9, December 2015 https://issuu.com/trishgannon/docs/riverjournal_dec2015
- Spokesman Review, *EWU geologist measures 'Bloomsquake'* – By Rachel Alexander. Published on **Front Page**, May 4, 2015. This story was also picked up by TV Channel 6. <http://www.spokesman.com/stories/2015/may/04/ewu-geologist-measures-bloomsquake/>
- The Easterner (EWU newspaper), *Idaho's Silver Valley, a common epicenter for earthquakes* – By Katie Dunn, Page 2, May 6, 2015, volume 66, issue 26. <http://easterneronline.com/35694/news/idahos-silver-valley-a-common-epicenter-for-earthquakes/#sthash.l4MW7WL5.dpbs>
- KXLY (Channel 4) for a news segment on TV about the Spokane fault, Geologists discover new quake fault line in Spokane, interviewed by Jeff Humphrey. Aired on January 2, 2014: <http://www.kxly.com/news/spokane-news/geologists-discover-new-quake-fault-line-in-spokane/23746464>
- KXLY (Channel 4) for a news segment on TV, Mt. St. Helens celebrates relatively quiet decade, interviewed by John Hendricks. Aired on October 1st 2014:

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<http://www.kxly.com/news/spokane-news/mt-st-helens-celebrates-relatively-quiet-decade/28363866>

RECENT TECHNICAL REPORTS

- EWU** - Adams, D., Lehn, D., Pritchard, C.J., and Finnegan, J., Avista WA Long-Term Geohazard Identification and Hazard Ranking Project, Results of Geotechnical Geohazard Evaluation Analysis and Report, Budinger and Associates, Inc. project number S17158, December 2017
- EWU** - Finnegan, J., Pritchard, C.J., Adams, D., and Cleveland, A., Hydrogeologic Research of Existing Subsurface Exploration Studies in Basin for Infiltration Research for Downtown Area, Spokane WA, Budinger and Associates, Inc. project number H17202, June 2017
- Finnegan, J., Christensen, R.W., and Pritchard, C.J., Results of Preliminary Geotechnical Evaluation for the Porcupine Bay Slide, Lincoln County, Washington, Budinger and Associates, Inc. project number S17232 June 2017
- Finnegan, J., Budinger, B., and Pritchard, C.J., Results of Geotechnical Reconnaissance for Latah Creek Road Slide, Spokane County, Washington, Budinger and Associates, Inc. project number S17391 June 2017
- Finnegan, J., Budinger, B., and Pritchard, C.J., Results of Geotechnical Reconnaissance for Euclid Road Slide, Spokane County, Washington, Budinger and Associates, Inc. project number S17363 June 2017
- Black, T. and Pritchard, C.J., Results of Preliminary Field and Laboratory Testing for the Beck Road Pit Qualification, State Line, Idaho, Budinger and Associates, Inc. project number M17264 May 2017
- Pritchard, C.J. and Finnegan, J., Hydrogeology Review for Aquifer Susceptibility Classification for Property on East Palouse Highway, Valleyford, WA, Budinger and Associates Inc. project number G16105, March 2016.
- Callendar, D., Pritchard, C.J., and Burchett, S., Hydrogeologic Characterization Report for Repair Airfield Drainage System, Fairchild AFB, WA, Budinger and Associates Inc. project number H14452, March 2015.
- Pritchard, C.J. and Finnegan, J., Latah Pit Reclamation, Latah, Washington, Geotechnical Evaluation of Pit-Reclamation Plan, technical report submitted to Spokane County Engineering and Roads, Budinger and Associates Inc. project number S13223, September 2013.
- Pritchard, C.J. and Burchett, S., Aspen Summit Canopy EcoPark, Liberty Lake, Spokane County, Washington, Results of Preliminary Geologic-Hazard Evaluation, technical report submitted to Epiphany Applied Concepts Inc., Budinger and Associates Inc. project number G13337, July 2013.
- EWU** - Pritchard, C.J. Subsurface Projection of the Stratigraphy of the Columbia River Basalt Group and Paleodrainage Units in the West Plains Area, technical report submitted to WRIA 54 Watershed Planning Group, June 2013.
- EWU** – McCollum, M and Pritchard, C.J., Delineating geologic structures affecting water movement and flow in the West Plains area of Spokane County, technical report submitted to WRIA 54 Planning Group, June 2012

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REPRESENTATIVE EXPERIENCE

Eastern Washington University, Department of Geology, 130 Science Building, Cheney, Washington 99004-2439

Dates Employed: September 2011 to present

Position: ASSOCIATE PROFESSOR

Eastern Washington University, University College, Washington 99004

Dates Employed: July 2017 to June 2019

Position: DIRECTOR OF THE GENERAL EDUCATION PROGRAM/ FYE DIRECTOR

Budinger and Associates, Inc., 1101 North Fancher Rd, Spokane, Washington 99212

Dates Employed: September 2005 to December 2011 – continue on a project basis

Position: SENIOR GEOLOGIST

Washington State University, School of Earth and Environmental Sciences

Pullman, Washington 99164-2812

Dates Employed: August 2007 to December 2010

Position: GEOLOGY 101 AND FIELD CAMP INSTRUCTOR / TEACHING ASSISTANT

Spokane County Conservation District / National Resource Conservation Services

210 North Havana, Spokane, WA 99202 / 8815 East Mission, Suite B, Spokane, WA 99212

Dates Employed: December 2005 to September 2006

Position: SOIL SCIENTIST – SPOKANE COUNTY SOIL SURVEY

State of Hawaii Department of Health - Solid and Hazardous Waste Branch

919 Ala Moana Boulevard, Suite 212, Honolulu, Hawaii 96713

Dates Employed: January 2005 – August 2005

Position: ENVIRONMENTAL HEALTH SPECIALIST

Mid Pacific Testing and Inspection

94-547 Ukee Street, Suite 200, Waipahu, Hawaii 96797

Dates Employed: August 2004 – January 2005

Position: LAB MANAGER AND STAFF GEOLOGIST

Humboldt State University

Department of Geology, Founders Hall, Arcata, California 95521

Dates Employed: September 2002 – July 2004

Position: TEACHING & RESEARCH ASSISTANT

Six Rivers National Forest Service, Eureka, California

1330 Bayshore Way, Eureka, California 95501

Dates Employed: February 2003 – March 2003

Position: INTERN LANDSLIDE MAPPING

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REFERENCES

Dr. Harvey Kelsey, Adjunct Professor and Research Associate at Humboldt State University whose research focuses on active geomorphology and coastal tectonics of the western US and Japan. Dr. Kelsey was the chair of my MS thesis committee. *Phone: (707) 826-3991, e-mail: bmke1@humboldt.edu, 1 Harpst Street, Arcata, CA 95521*

Dr. George Luiz Luvizotto, Professor at Unesp – Rio Claro, SP Brazil whose research focuses on structural geology, metamorphic petrology, and hydrocarbon reserves. Dr. Luvizotto and I worked together during the 2012 EWU Field Camp class. *Phone: 00 55 19 3526 92 68, e-mail: george.luvizotto@gmail.com*

Dr. Peter Larson, LG, Professor, Washington State University whose research focuses on geochemistry and petrology of volcanic rocks and hydrothermal alteration in Yellowstone National Park and the Western US. Dr. Larson was the chair of my Ph.D. committee. *Phone: (509) 335-3095, e-mail: plarson@wsu.edu*

Stephen Burchett, PE, Engineer, Co-owner and Principal Engineer with Budinger and Associates, Inc. focusing on complex geotechnical and hydrogeologic problems as well as environmentally contaminated sites throughout Washington, Idaho, Oregon, and Montana *Phone: (509) 535-8841, e-mail: sburchett@budingerinc.com*