# Brent Alan, Elliott

# **Professional Summary**

August 22, 2025

Business address: The University of Texas at Austin

Bureau of Economic Geology 10100 Burnet Rd., Bldg. 130

Austin, TX 78758

Telephone: (512) 471-1812

E-mail address: brent.elliot@beg.utexas.edu

# **Professional Preparation**

# Academic Background

Ph.D. Geology & Mineralogy, University of Helsinki, Finland, 2001

M.Sc. Geology & Mineralogy, University of Helsinki, Finland, 1997

B.A. Geology & Russian Language, Beloit College, Wisconsin, 1995

## **Professional Appointments**

Present Position: Research Associate, Bureau of Economic Geology, The University of Texas at Austin (August 2012 - Present).

Consultant, Northern Territory Oil - Texas, Inc. Wichita Falls, Texas (2009 - ). (1) Consultant on GIS applications and spatial analysis of the Petrolia Oil Field and Clay County company leases; (2) provide a historical, depositional and geologic summary of the leased area and economic analysis for production and growth outlook; (3) provide stratigraphic and geologic correlation of oil pay zones within lease block areas for future drill targets when economically feasible.

Research Geologist, Department of Natural Resources, Division of Geological and Geophysical Surveys Fairbanks, Alaska (2009 - ). (1) Map areas of interest to the State of Alaska and conduct research on bedrock and related features associated with the economic and scientific interest of the state; (2) produce scientific reports and maps and present material to the public at large and scientific/technical meetings as print and digital media, and oral presentations; (3) community service providing expert knowledge in the geosciences to local and regional organizations (gem and mineral clubs, school groups, local organizations and individuals, etc.) and disseminate information to guests seeking knowledge or information.

Associate Professor of Geology, Midwestern State University Wichita Falls, Texas (2006 - 2010). (1) Teaching upper-level and introductory geology courses: Physical Geology, Historical Geology, Mineralogy, Petrology, Structural Geology, Geology Seminar / Directed Research, Hydrology, Physical Science for Preservice Teachers, and Introduction to Geographic Information Systems; (2) university service in the form of memberships on university governing committees; (3) community service providing expert knowledge in the geosciences to local and regional organizations (gem and mineral clubs, school groups, local citizens, etc.) and the community at large; (4) development and advancement of research agendas and the procurement and management of research funds.

Associate Professor of Geology, University of North Alabama (tenured), Florence, Alabama (2001 - 2006). (1) Teaching upper-level geology courses and introductory level earth science courses, as well as science education courses for preservice teachers: Introduction to Earth Science, Physical Geology, Mineralogy, Petrology, Structural Geology, Special Topics in Earth Science, Directed Research, Science for Elementary Education Teachers, and Science for Secondary Education Teachers; (2) university service in the form of memberships on university

governing committees; (3) community service providing expert knowledge in the geosciences to local and regional organizations (gem and mineral clubs, school groups, local citizens, etc.) and the community at large; (4) development and advancement of research agendas and the procurement and management of research funds; (5) development and maintenance of departmental equipment, computer facilities (hardware and software), and website.

Researcher, Academy of Finland / University of Helsinki, Finland (1998 - 2001). Postgraduate research (Ph.D.) at the University of Helsinki, concentrating mainly on the petrogenesis of postkinematic rocks in the Central Finland Granitoid Complex of south-central Finland. Thesis consisted of field mapping, petrography, geochemical sampling and interpretation, mineral chemical studies and interpretation, radiogenic and stable isotope studies, and petrogenetic modeling.

# Professional Registrations and Certificates

Licensed and Exam-Certified Professional Geoscientist (TX #11997)

## Areas of Expertise

# Areas of Expertise

Abundant experience with PowerPoint presentation software, desktop publishing, and graphic illustration/manipulation software (e.g., Adobe and CorelDraw! Graphics suites)

Abundant knowledge and experience with word processing, database and spreadsheet software (e.g., Word, Access and Excel)

Basic knowledge in programming languages (Fortran, QBASIC, Pascal, C++, Visual Basic, JAVA)

Comfortable with all user platforms, Unix / Linux, Windows, Macintosh. Excellent knowledge in computer architecture and software problem-solving skills

Experience with MapInfo, ArcInfo and ArcView / ArcGIS desktop ESRI's GIS software and its applications

Experience with online course development, maintenance and the creation of online course supplements (e.g. WebCT, Blackboard, etc.)

Years experience writing and maintaining web pages

#### Awards

## Awards and Honorary Societies

Teaching Excellence Award, Geoscience Professor of the Year, 2008 - 2009

Teaching Excellence Award, Geoscience Professor of the Year, 2007 - 2008

Teaching Excellence Award, Geoscience Professor of the Year, 2006 - 2007

University Research Grant, 2007

University Research Grant, 2006

College of Arts & Sciences Faculty Development Grant, 2005

Tennessee Valley Authority Equipment Acquisition awarded Environmental Scanning Electron Microscope (ESEM) and PAD IV Scintag X-Ray Diffractometer (XRD), 2005

College of Arts & Sciences Faculty Development Grant, 2004

College of Arts & Sciences Faculty Development Grant, 2003

College of Arts & Sciences Faculty Development Grant, 2002

## Service

# **University Committees**

Member, Critical Minerals Dual EPS-BEG position hiring committee, August 1, 2023-Present

Member, Geology Grants and Awards Committee, The University of Texas at Austin, September 2015-Present

## **External Committees Participation**

College of Science and Math Representative, Faculty Senate, Midwestern State University Wichita Falls, Texas, 2009 - 2010

Chair, College of Science and Math Research Committee, Midwestern State University Wichita Falls, Texas, 2008 - 2010

Member, University Research Committee, Midwestern State University Wichita Falls, Texas, 2008 - 2010

Member, College of Science and Math Research Committee, Midwestern State University Wichita Falls, Texas, 2007 - 2010

Chair, Geology Faculty Search Committee--Mineralogy / Petrology Position, Midwestern State University Wichita Falls, Texas, 2009

Chair, Geology Faculty Search Committee--Environmental Science / GIS / Remote Sensing Position, Midwestern State University Wichita Falls, Texas, 2008

Chair, Faculty Affairs Committee, University of North Alabama, 2005 - 2006

Chair, International Programs and Offerings Committee, University of North Alabama, 2005 - 2006

Member, Alabama Math Science & Technology Initiative (AMSTI) Advisory Council, University of North Alabama, 2005 - 2006

Member, Faculty Affairs Committee, University of North Alabama, 2004 - 2006

Member, International Programs and Offerings Committee, University of North Alabama, 2003 - 2006

Member, Ad-Hoc Environmental Science Degree Committee, University of North Alabama, 2002 - 2006

Chair, Geology Faculty Search Committee--Sedimentology / Stratigraphy / Paleontology Position, University of North Alabama, 2005

Vice Chair, International Programs and Offerings Committee, University of North Alabama, 2004 - 2005

Member, Teachers Education Council, University of North Alabama, 2002 - 2005

Chair, Geology Faculty Search Committee--Environmental Science / Hydrogeology Position, University of North Alabama, 2004

# Teaching and Advising

## University Courses Taught

Geology of Earth Resources: presented to The University of Texas at Austin, September-December 2015.

Physical Geology: presented to The University of Texas at Austin, June-August 2015.

Geology of Earth Resources: presented to The University of Texas at Austin, September-December 2014.

Physical Geology: presented to The University of Texas at Austin, June-August 2014.

Regional Studies in Mineral Resources: presented to The University of Texas at Austin, May-June 2014.

Geology of Earth Resources: presented to The University of Texas at Austin, September-December 2013.

Physical Geology: presented to The University of Texas at Austin, June-August 2013.

Physical Geology & Lab<br>

Historical Geology & Lab<br>

Mineralogy & Lab<br>

Petrology & Lab<br>

Structural Geology & Lab<br>

Geosciences Seminar<br>

Special Problems in Geosciences (directed research)<br>

Groundwater Hydrology & Lab<br>

Physical Science & Lab (for Pre-service Teachers)<br/>
<br/>
br>

Introduction to Geographic Information Systems & Lab<br/>
- Midwestern State University, Wichita Falls, Tex., 2006-2012.

Introduction to Earth Science & Lab <br/> <br/>

Physical Geology & Lab <br>

Mineralogy & Lab<br>

Science for Elementary Education Teachers (undergrad. & grad.)<br/>
br>

Petrology & Lab<br>

Science for Secondary Education Teachers & Lab (undergrad. & grad.)<br/>
<br/>
br>

Structural Geology & Lab<br>

Special Topics in Earth Science (undergraduate thesis projects)<br/>
<br/>br>

Problems in Elementary Science Education (graduate)<br/>
<br/>br>

Special Topics in Earth Science (graduate thesis topics)<br/>br><br/>: University of North Alabama, Florence, Ala., 2001-2006.

# Student Committee Supervision

Master's Thesis Committee, Mert Ugurhan, Cave Peak Porphyry Molybdenum Deposit, The University of Texas at Ausitn, 2018

Master's thesis, Rahul Verma, The University of Texas at Austin, 2016

#### Student Committee Participation

Master's thesis, Nathan Williams, The University of Texas at Austin, 2017

Doctoral thesis, James Lyons, The University of Texas at Austin, 2016

Master's thesis, Mathew Ledvina, The University of Texas at Austin, 2016

Master's thesis, McKenzie Hinds, The University of Texas at Austin, 2016

Master's thesis, Stefanie Frelinger, The University of Texas at Austin, 2015

Master's thesis, Christine O'Neill, The University of Texas at Austin, 2014

## Presentations

#### Presentations

GEOLOGY, GEOCHEMISTRY, AND GEOCHRONOLOGY OF THE REE-ENRICHED CAVE PEAK PORPHYRY MO-DEPOSIT, TRANS-PECOS TEXAS: presented at GSA Connects 2023, Pittsburgh, PA, October 18, 2023.

# Activities of a Professional Nature

## **Professional Societies**

American Association of Petroleum Geologists

Austin Geological Society

Geological Society of America

Geological Society of Finland

North Texas Gem and Mineral Society

North Texas Geological Society

Sigma Gamma Epsilon, National Geosciences Honor Society

Society of Economic Geologists

Society of Mining, Metallurgy and Exploration

Texas Board of Professional Geoscientists

#### Activities of a Professional Nature

Contracted to conduct departmental assessment and improvement study as an external reviewer for other state universities.

Elected division steward/onsite representative for conflict resolution, mediation, and contract policy arbitration, trained and certified.

# **Funding**

# Research Support

Research Associate: NSF - IRES: Closing Oceans: Assessing the Dynamics of Turkish Suture Zones, National Science Foundation (January 1, 2016-December 31, 2018; \$250,000).

Principal Investigator: Texas Sub-Surface Coal Mine Inventory, Department of Interior Office of Surface Mining Reclamation and Enforcement (OSMRE) (September 1, 2016-August 31, 2017; \$49,351).

Research Associate: Texas Aggregate Mineral Resource Research, Texas Department of Transportation and the Center for Transportation Research (January 1-December 31, 2016; \$50,000).

#### **Publications**

## Peer Reviewed Journal Articles

Darvari, R., Nicot, J.-P., Scanlon, B. R., Kyle, J. R., Elliott, B. A., and Uhlman, K., 2024, Controls on lithium content of oilfield waters in Texas and neighboring states (USA): Journal of Geochemical Exploration, v. 257, no. 107363, 15 p., http://doi.org/10.1016/j.gexplo.2023.107363.

Hubbard, B. E., Gallegos, T. J., Stengel, V., Hoefen, T. M., Kokaly, R. F., and Elliott, B., 2024, Hyperspectral (VNIR-SWIR) analysis of roll front uranium host rocks and industrial minerals from Karnes and Live Oak Counties, Texas Coastal Plain: Journal of Geochemical Exploration, v. 257, no. 107370, 20 p., http://doi.org/10.1016/j.gexplo.2023.107370.

Ugurhan, M., Elliott, B. A., Kyle, J. R., Stockli, D. F., and Mathur, R., 2024, Geochemical evolution of the REE-enriched Cave Peak porphyry Mo-deposit, Trans-Pecos Texas, USA: Lithos, v. 464-465, no. 107434, 20 p., http://doi.org/10.1016/j.lithos.2023.107434.

Kyle, J. R., Stockli, D. F., McBride, E. F., and Elliott, B. A., 2023, Covering the Great Unconformity in southern Laurentia: detrital zircon studies of provenance evolution during Cambrian marine transgression (Llano Uplift, Texas): Geological Society of America Bulletin, v. 135, no. 5-6, p. 1163-1177, http://doi.org/10.1130/B36389.1.

Nicot, J.-P., Darvari, R., Eichhubl, P., Scanlon, B. R., Elliott, B. A., Bryndzia, T. L., Gale, J. F.

- W., and Fall, A., 2020, Origin of low salinity, high volume produced waters in the Wolfcamp Shale (Permian), Delaware Basin, USA: Applied Geochemistry, v. 122, no. 104771, 18 p., http://doi.org/10.1016/j.apgeochem.2020.104771.
- Williams, N. D., Elliott, B. A., and Kyle, J. R., 2020, A predictive geospatial exploration model for Mississippi Valley Type Pb-Zn mineralization in the Southeast Missouri Lead District: Natural Resources Research, v. 29, no. 1, p. 285-310, http://doi.org/10.1007/s11053-020-09618-2.
- Kyle, J. R., and Elliott, B. A., 2019, Past, present, and future of Texas industrial minerals: Mining, Metallurgy & Exploration, v. 36, no. 2, p. 475-486, http://doi.org/10.1007/s42461-019-0050-1.
- Piccione, G., Rasbury, E. T., Elliott, B. A., Kyle, J. R., Jaret, S. J., Acerbo, A. S., Lanzirotti, A., Northrup, P., Wooton, K., and Parrish, R. R., 2019, Vein fluorite U-Pb dating demonstrates post-6.2 Ma rare-earth element mobilization associated with Rio Grande rifting: Geosphere, v. 15, no. 6, p. 1958-1972, http://doi.org/10.1130/GES02139.1.
- Elliott, B. A., 2018, Petrogenesis of heavy rare earth element enriched rhyolite: source and magmatic evolution of the Round Top laccolith, Trans-Pecos, Texas: Minerals, Special Issue: Mineral Deposits of Critical Elements, v. 8, no. 10, 25 p., http://doi.org/10.3390/min8100423.
- O'Neill, L. C., Elliott, B. A., and Kyle, J. R., 2017, Mineralogy and crystallization history of a highly differentiated REE-enriched hypabyssal rhyolite: Round Top laccolith, Trans-Pecos, Texas: Mineralogy and Petrology, v. 111, no. 4, p. 569-592, http://doi.org/10.1007/s00710-017-0511-5.
- Elliott, B. A., Verma, R., and Kyle, J. R., 2016, Prospectivity modeling for Cambrian-Ordovician hydraulic fracturing sand resources around the Llano Uplift, Central Texas: Natural Resources Research, v. 25, no. 4, p. 389-415, http://doi.org/10.1007/s11053-016-9291-6.
- Buzas-Stephens, P., Buzas, M. A., and Elliott, B. A., 2011, Population response to fluctuating inflow into Nueces Bay, Texas: Journal of Foraminiferal Research, v. 41, no.1, p. 14-21.
- Elliott, B. A., Peck, W. H., Rämö, O. T., Vaasjoki, M., and Nironen, M., 2005, Magmatic zircon oxygen isotopes of 1.88-1.87 Ga orogenic and 1.65-1.54 Ga anorogenic magmatism in Finland: Mineralogy and Petrology, v. 85, p. 223-241.
- Elliott, B. A., 2003, Petrogenesis of the post-kinematic magmatism of the Central Finland Granitoid Complex II: sources and magmatic evolution: Journal of Petrology, v. 44, p. 1681-1701.
- Elliott, B. A., 2001, Crystallization conditions of the Wiborg rapakivi batholith, SE Finland: an evaluation of amphibole and biotite mineral chemistry: Mineralogy and Petrology, v. 72, p. 305-324.
- Rämö, O. T., Vaasjoki, M., Mänttäri, I., Elliott, B. A., and Nironen, M., 2001, Petrogenesis of the post-kinematic magmatism of the Central Finland Granitoid Complex I: radiogenic isotope constraints and implications of crustal evolution: Journal of Petrology, v. 42, p. 1971-1993.
- Nironen, M., Elliott, B. A., and Rämö, O. T., 2000, Geochemistry of 1.88-1.87 Ga post-kinematic intrusions of the Central Finland Granitoid Complex: a shift from C-type to A-type magmatism during lithospheric convergence: Lithos, v. 53, p. 37-58.
- Elliott, B. A., Rämö, O. T., and Nironen, M., 1998, Mineral chemistry constraints on the evolution of the 1.88-1.87 Ga post-kinematic granite plutons in the Central Finland Granitoid Complex: Lithos, v. 45, p. 109-129.

#### Non Peer Reviewed Journal Articles

Elliott, B. A., Verma, R., and Kyle, J. R., 2016, Prospectivity modeling for Cambrian-Ordovician hydraulic fracturing sand resources around the Llano Uplift, Central Texas: Natural Resources Research, v. 25, no. 4, p. 389-415, http://doi.org/10.1007/s11053-016-9291-6.

Elliott, B. A., 1999, Colour masks in digital image analysis: a technique for modal analyses of quartz saturated plutonic rocks: Bulletin of the Geological Society of Finland, no. 71, part 2, p. 233-241.

## Non Peer Reviewed Atlases and Maps

- Elliott, B. A., 2023, Geologic Map of the Small Quadrangle, Texas: Bureau of Economic Geology, OFM0274, 1:24000.
- Elliott, B. A., Childress, T., and Andrews, J. R., 2023, Geologic Map of the Cerro Diablo Quadrangle, Texas: Bureau of Economic Geology, OFM0280, 1:24000.
- Elliott, B. A., Childress, T., and Andrews, J. R., 2023, Geologic Map of the Sixteen Mountains Quadrangle, Texas: Bureau of Economic Geology, OFM0279, 1:24000.
- Elliott, B. A., 2018, Geologic map of the Somerset Quadrangle, Texas: The University of Texas at Austin, Bureau of Economic Geology, Open File Map, no. OFM0236D.
- Elliott, B. A., 2017, Geologic Map of the Pontotoc Quadrangle: The University of Texas at Austin, Bureau of Economic Geology, Open File Map, 1:24,000.
- Elliott, B. A., 2016, Geologic map of the Fredonia Quadrangle, Texas: The University of Texas at Austin, Bureau of Economic Geology, Open File Map, 1:24000.
- Elliott, B. A., 2016, Geologic map of the White Hills Quadrangle, Texas: The University of Texas at Austin, Bureau of Economic Geology, Open File Map, 1:24000.
- Elliott, B. A., 2015, Geologic map of the Silver King Canyon Quadrangle: The University of Texas at Austin, Bureau of Economic Geology, Open File Map, no. OFM0223, 1:24000.
- Elliott, B. A., 2015, Geologic map of the Spice Rock Quadrangle: The University of Texas at Austin, Bureau of Economic Geology, Open File Map, no. OFM0222, 1:24000.
- Elliott, B. A., 2014, Geologic map of the Gunsight Hills South Quadrangle: The University of Texas at Austin, Bureau of Economic Geology, Open File Map, no. OFM0211, 1:24000.
- Elliott, B. A., 2014, Geologic map of the Lasca Quadrangle: The University of Texas at Austin, Bureau of Economic Geology, Open File Map, no. OFM0212, 1:24000.
- Elliott, B. A., 2014, Geologic map of the Losoya Quadrangle, Texas: The University of Texas at Austin, Bureau of Economic Geology, Open File Map, no. OFM0213, 1:24000.
- Elliott, B. A., 2013, Geologic map of the Poteet Quadrangle, Texas: The University of Texas at Austin, Bureau of Economic Geology, Open File Map, no. OFM0207, 1:24000.
- Elliott, B. A., 2013, Geologic map of the Thelma Quadrangle, Texas: The University of Texas at Austin, Bureau of Economic Geology, Open file Map, no. OFM0208, 1:24000.

#### Guidebooks

- Elliott, B. A., 2018, 54th Forum on the Geology of Industrial Minerals, April 16-20, Austin, Tex.: Bureau of Economic Geology, The University of Texas at Austin, Conference abstracts and field trip guidebook, p. 100.
- Rämö, O. T., Nironen, M., Kosunen, P., and Elliott, B. A., 1999, Proterozoic granites of south-central Finland--traverse across a paleoproterozoic terrane boundary: University of Helsinki Press Field Trip Guidebook, ISBN 951-45-8871-1.

## Conference Proceedings

Elliott, B. A., and Verma, R., 2015, Identifying New Resource Prospects and Resource Assessment with Geospatial Modeling Techniques: The Central Texas Frac Sand District, Society for Mining Metallurgy and Exploration, Open File Report, v. 16, no. 2, Minneapolis, MN, 13 p.

Verma, R., and Elliott, B. A., 2015, Identifying new resource prospects and resources assessment with geospatial modeling techniques: the Central Texas frac sand district, 51st Forum on the Geology of Industrial Minerals, Minnesota.

## Contract Reports

- Kyle, J. R., Hoffman, C., Short, S., Averett, A. R., Elliott, B. A., and DeJarnett, B. B., 2024, Compilation of Geologic Samples and Information Produced during Historic Minerals Exploration in Texas, Relevant to U.S. Critical Minerals Resource Assessment: The University of Texas at Austin, Jackson School of Geosciences, Bureau of Economic Geology, Contract Report for FY 2021 & FY 2022 prepared for U.S. Geological Survey National Geological and Geophysical Data Preservation Program, under contract no. G21AP10637 and G22AP00423, 61 p.
- Paine, J. G., Andrews, J. R., Caudle, T., Elliott, B. A., Grunau, B., Helper, M. A., Hunt, B., McCall, L., Morris, J., Werner, C. W., and Woodruff, C. M., Jr., 2024, Texas STATEMAP program summary, 2023-2024: The University of Texas at Austin, Bureau of Economic Geology, Final Technical Report prepared for U.S. Geological Survey, under contract no. G23AC000581, 35 p.
- Elliott, B. A., DeJarnett, B. B., Kyle, J. R., Andrews, J. R., Averett, A. R., and Childress, T., 2023, CONTRACT REPORT FOR FY 2019 & FY 2020 NATIONAL GEOLOGICAL & GEOPHYSICAL DATA PRESERVATION PROJECT
- NGDPP G19AS00009 & G20AS00008: Final Report prepared for NGGDPP, under contract no. G19AS00009, G20AS00008, 46 p.
- Paine, J. G., Andrews, J. R., Caudle, T., Elliott, B. A., Grunau, B., Helper, M. A., Hunt, B., Morris, J., Werner, C. W., Woodruff, C. M., Jr., and McCall, L., 2023, Texas STATEMAP program summary, FY22 (2022-2023): The University of Texas at Austin, Bureau of Economic Geology, Final Technical Report prepared for U.S. Geological Survey, under contract no. G22AC00495, 35 p.
- Paine, J. G., Caudle, T. L., Costard, L., Elliott, B. A., and Woodruff, C. M., Jr., 2020, Texas STATEMAP program summary, FY19 (2019-2020): The University of Texas at Austin, Bureau of Economic Geology, final technical report prepared for U.S. Geological Survey, under contract no. G19AC00225, 19 p.
- Paine, J. G., Caudle, T., Elliott, B. A., Woodruff, C. M., Jr., and Costard, L., 2019, Texas STATEMAP program summary, FY18 (2018-2019): Bureau of Economic Geology, The University of Texas at Austin, Final Technical Report prepared for U.S. Geological Survey, under contract no. G18AC00195, 17 p.
- Ambrose, W. A., Smith, D. C., Cutright, B. L., Scanlon, B. R., Reedy, R. C., Elliott, B. A., Paine, J. G., Foss, M. M., Tremblay, T. A., Wolaver, B. D., Loucks, R. G., Frébourg, G., Hentz, T. F., Ogiesoba, O. C., Olariu, M. I., Fu, Q., Zeng, H., E. L. Frost, III, Hamlin, H. S., Nance, H. S., Duncan, I. J., Hammes, U., Rogers, H., Clift, S. J., Sivil, J. E., Zhang, T., Reed, R. M., Baumgardner, R. W., Jr., Eastwood, R., Breton, C., Rowe, H. D., Carr, D. L., Dunlap, D. B., Gale, J. F. W., and Peng, S., 2014, State of Texas Advanced Resource Recovery (STARR) progress report: Bureau of Economic Geology, Biennium prepared for Texas State Comptroller of Public Accounts, 90 p.
- Griesel, G. A., Szumigala, D. J., Freeman, L. K., Newberry, R. J., Elliott, B. A., and Werdon, M. B., 2010, Major-oxide, minor-oxide, trace-element, and geochemical data from rocks collected in 2010 in the Tolovana mining district, Livengood B-3 and B-4 quadrangles, Alaska: Raw Data File 2010-3: prepared for Alaska Division of Geological & Geophysical Surveys, 31 p.

## **Published Reports**

Ambrose, W. A., Smith, D. C., Young, M. H., Scanlon, B. R., Reedy, R. C., Collins, E. W., Elliott, B. A., Wolaver, B. D., Paine, J. G., Hentz, T. F., Frébourg, G., Loucks, R. G., Reed, R. M., Ogiesoba, O. C., Olariu, M. I., Fu, Q., Zeng, H., Duncan, I. J., Rogers, H., Clift, S. J., Foss, M.

M., Sivil, J. E., Zhang, T., Baumgardner, R. W., Jr., Eastwood, R., Breton, C., Brooks, D. L., Rowe, H. D., Carr, D. L., Dunlap, D. B., Gale, J. F. W., He, Y., Ko, L., Phelps, R., and Peng, S., 2016, State of Texas Advanced Resource Recovery (STARR) progress report: Bureau of Economic Geology, Biennium prepared for Texas State Comptroller of Public Accounts: 82 p.

Elliott, B. A., 2016, full list of authors: Ambrose, W. A., Smith, D. C., Young, M. H., Scanlon, B. R., Reedy, R. C., Collins, E. W., Elliott,

B. A., Wolaver, B. D., Paine, J. G., Hentz, T. F., Frébourg, G., Loucks, R. G., Reed, R. M..

Ogiesoba, O. C., Olariu, M. I., Fu, Q., Zeng, H., Duncan, I. J., Rogers, H., Clift, S. J., Foss, M. M., Sivil, J. E., Zhang, T., Baumgardner, R. W., Jr., Eastwood, R., Breton, C., Brooks, D. L.,

Rowe, H. D., Carr, D. L., Dunlap, D. B., Gale, J. F. W., He, Y., Ko, L., Phelps, R., and Peng, S., 2016, State of Texas Advanced Resource Recovery (STARR) progress report: Bureau of Economic Geology, Biennium Report prepared for Texas State Comptroller of Public Accounts: 82 p.

Elliott, B. A., 2016, full list of authors: Collins, E.W., Paine, J. G., Elliott, B. A., and Woodruff, C. M., Jr., Texas STATEMAP Program Final

Report FY16 (2016-2017): The University of Texas at Austin, Bureau of Economic Geology,

Final Report prepared for U.S. Geological Survey, under contract no. G16AC00194, 2016.

Freeman, L. K., Gillis, R. J., Elliott, B. A., and Wypych, A., 2016, Major-oxide and trace-element geochemical data from rocks collected in 2010 in the Tyonek Quadrangle: Alaska: Alaska Division of Geological & Geophysical Surveys, Raw Data File 2016-5, 2 p.

Twelker, E., Athey, J. E., Newberry, R. J., Griesel, G. A., Szumigala, D. J., Freeman, L. K., Elliott, B. A., Werdon, M. B., and Stevens, D.S.P., 2016, Geologic map of portions of the Livengood B-3, B-4, C-3, and C-4 quadrangles, Tolovana mining district, Alaska: Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2016-5, 39 p.

Ambrose, W. A., Smith, D. C., Cutright, B. L., Scanlon, B. R., Reedy, R. C., Elliott, B. A., Paine, J. G., Foss, M. M., Tremblay, T. A., Wolaver, B. D., Loucks, R. G., Frébourg, G., Hentz, T. F., Ogiesoba, O. C., Olariu, M. I., Fu, Q., Zeng, H., Frost, E. L., III, Hamlin, H. S., Nance, H. S., Duncan, I. J., Hammes, U., Rogers, H., III, Clift, S. J., Sivil, J. E., Zhang, X., Reed, R. M., Baumgardner, R. W., Jr., Eastwood, R, Breton, C., Brooks, D. L., Rowe, H. D., Carr, D. L., Dunlap, D. B., Gale, J. F. W., and Peng, S., 2014, State of Texas Advanced Resource Recovery progress report and CD-ROM: Bureau of Economic Geology, The University of Texas at Austin,90 p.

Werdon, M. B., Freeman, L. K., Szumigala, D. J., Newberry, R. J., Andrew, J. E., Speeter, G. G., Solie, D. N., Hubbard, T. D., Griesel, G. A., and Elliott, B. A., 2014, Major-oxide, minor-oxide, and trace-element geochemical data from rocks collected in the Alaska Highway corridor, Mount Hayes, Tanacross, and Nabesna quadrangles, Alaska, in 2006, 2008, 2009, and 2010: Alaska Division of Geological & Geophysical Surveys, Raw Data File 2014-4, 3 p.

Lough, T. A., Freeman, L. K., Elliott, B. A., Griesel, G. A., Newberry, R. J., and Szumigala, D. J., 2011, Geochemical, major-oxide, minor-oxide, trace element, and carbon data from rocks collected in 2011 in the Moran area, Tanana and Melozitna quadrangles, Alaska: Alaska Division of Geological & Geophysical Surveys, Raw Data File, v. 2011, no. 4, 118 p.

Griesel, G. A., Szumigala, D. J., Freeman, L. K., Newberry, R. J., and Elliott, B. A., 2010, Major-oxide, minor-oxide, trace-element, and geochemical data from rocks collected in 2010 in the Tolovana mining district, Livengood B-3 and B-4 quadrangles, Alaska: Alaska Division of Geological & Geophysical Surveys, v. 2010, no. 3, 31 p.

# **Published Abstracts**

Elliott, B. A., Darvari, R., Nicot, J.-P., and Loewy, S.L., 2024, Lithium Sources of Oilfield Waters

- in Texas and Neighboring States (abs.): Geological Society of America Abstracts, v. 56.
- Darvari, R., Elliott, B. A., and Nicot, J.-P., 2019, Unconventional play produced water: a geochemical journey across Texas (abs.): Abstract H51L-1641, presented at AGU 2019 Fall Meeting, San Francisco, Calif., December 9-13.
- Elliott, B. A., 2019, Physical properties and characteristics of Permian Basin frac sand: when is frac sand "good enough"? (abs.): Society for Mining, Metallurgy & Exploration (SME) Annual Meeting, Feb 25-27, Denver, Colo.
- Elliott, B. A., Ugurhan, M., and Kyle, J. R., 2019, Characterization of the Marble Canyon granitoids and Cave Peak rhyolite in Trans-Pecos, Texas: insights into the petrogenesis of high-silica Y+REE-enriched magmas (abs.): Geological Society of America 53rd South-Central/53rd North-Central/71st Rocky Mountain Joint Section Meeting, Abstracts with Programs, v. 51, no. 2, http://doi.org/10.1130/abs/2019SC-327363, paper no. 27-7.
- Kyle, J. R., and Elliott, B. A., 2019, Past, present, and future of Texas industrial minerals (ext. abs.): Mining Engineering, v. 71, no. 5, p. 11-12.
- Nicot, J.-P., Darvari, R., and Elliott, B. A., 2019, An analysis of produced water of the Delaware Basin Wolfcamp Formation (abs.): no. H51L-1642, Abstract H51L-1642, presented at AGU 2019 Fall Meeting, San Francisco, Calif., December 9-13.
- Piccione, G., Rasbury, E. T., Elliott, B. A., Kyle, J. R., Jaret, S. J., Acerbo, A. S., Lanzirotti, A., Northrup, P., Wooten, K., and Parrish, R. R., 2019, Geochemistry and U-Pb dating of fluorite and nacrite from the Round Top rhyolite: constraints on magmatism and tectonism in Trans-Pecos Texas (abs.): Geological Society of America Abstracts, Joint 53rd South-Central/53rd North-Central/71st Rocky Mtn Section Meeting, 25-27 March, Manhattan, Kans.
- Catlos. E. J., Tandon, S., Etzel, T. M., Kohut, M., Borska, I., Elliott, B. A., Stockli, D., Aguilera, K., and Yin. Z., 2018, Comparing in situ U-Pb zircon and Th-Pb monazite ages from High Tatra granitoids, Slovakia. 5th Central-European Mineralogical Conference and 7th Mineral Sciences in the Carpathians Conference, Banská Stiavnica, June 26-30, 2018 (abs.).
- Collins, E. W., Paine, J. G., Elliott, B. A., Woodruff, C. M., Jr., and Costard, L., 2018, STATEMAP Program Geologic Mapping In Texas (abs.): Geological Society of America Abstracts with Programs, v. 50, no. 1, http://doi.org/10.1130/abs/2018SC-309882.
- Elliott, B. A., 2018, The West Texas sand rush (abs.): 54th Forum on the Geology of Industrial Minerals, Austin, Tex., Bureau of Economic Geology, The University of Texas at Austin, p. 39.
- Etzel, T. M., Catlos, E. J., Kohut, M., Broska, I., Elliott, B. A., Stockli, D., Miggins, D., Tandon, S., Aguilera, K., and Yin, Z., 2018, Dating the High Tatra Mountains, Slovakia: tectonic implications. 5th Central-European Mineralogical Conference and 7th Mineral Sciences in the Carpathians Conference Banská Stiavnica, June 26-30, 2018 (abs.).
- Elliott, B. A., 2017, Aggregate resources of Texas (abs.): CECON Texas Section annual meeting, San Marcos, Tex.
- Verma, R., and Elliott, B. A., 2017, Qualitative analysis of sand resources in Texas for hydraulic fracturing (abs.): AEG 60th annual meeting in Colorado Springs, Colo.; co-sponsored by FGIM.
- Elliott, B. A., and Verma, R., 2016, Resource assessment, evaluation, and distribution economics of Central Texas industrial sand (abs.): 2016 Forum on the Geology of Industrial Minerals (Louisville, KY).
- Elliott, B. A., Mihalasky, M. J., and Hall, S. M., 2016, Part 1: An assessment of undiscovered uranium resources in the Texas Gulf Coast: Geologic context (abs.): Abstract Proceedings 2016 Gulf Coast Association of Geological Societies (Corpus Christi, TX).
- Elliott, B. A., Mihalasky, M. J., and Hall, S. M., 2016, Uranium resources of Texas (abs.): 2016

- Forum on the Geology of Industrial Minerals (Louisville, KY).
- Mihalasky, M. J., Elliott, B. A., and Hall, S. M., 2016, Part 2: An assessment of undiscovered uranium resources in the Texas Gulf Coast: Resource identification and evaluation (abs.): Abstract Proceedings 2016 Gulf Coast Association of Geological Societies (Corpus Christi, TX).
- Elliott, B. A., 2015, Central Texas Industrial Silica Sands (abs.): Society for Mining and Metallurgy and Forum on the Geology of Industrial Minerals Annual Meeting, Minneapolis, Minn.
- Elliott, B. A., 2014, Mineral Resources of Texas (abs.): American Exploration and Mining Association Abstracts, 120th annual meeting, Reno, Nev.
- Elliott, B. A., O'Neill, L. C., and Kyle, J. R., 2014, Magmatic evolution and hydrothermal alteration of the REE-enriched Round Top rhyolite laccolith, Trans-Pecos Texas (abs.): Geological Society of America Abstracts, Abstract 228-6.
- Frelinger, S. N., Kyle, J. R., and Elliott, B. A., 2014, Scanning electron microscopy cathodoluminescence of vein quartz from the Red Hills porphyry Mo-Cu deposit, West Texas (abs.): Society of Economic Geology Abstract Volume.
- Petit, B.S., Catlos, E.J., and Elliott, B. A., 2014, Understanding the role of strike-slip faulting as oceans close, North Central Turkey (abs.): Geological Society of America Abstracts, Abstract 208-26.
- Elliott, B. A., O'Neill, L. C., and Kyle, J. R., 2013, Magmatic evolution of the early Tertiary rhyolite and associated intrusive rocks of Sierra Blanca and
- Round Top in the Trans-Pecos region of Texas (abs.): Geological Society of America Abstracts, Abstract 190-8.
- Griesel, G. A., Newberry, R. J., Freeman, L. K., Elliott, B. A., Szumigala, D. J., Lough, T. A., and Werdon, M. B., 2012, Moran area, Ruby and Tozitna terranes, central-interior Alaska: A mystery wrapped in an enigma (abs.): Cordilleran Workshop Abstract Program.
- Griesel, G. A., Newberry, R. J., Freeman, L. K., Elliott, B. A., Szumigala, D. J., Lough, T. A., and Werdon, M. B., 2012, Moran area, Ruby and Tozitna terranes, central-interior Alaska: A mystery wrapped in an enigma (including new data with updated results on economic potential) (abs.): Alaskan Miners Association Abstract Program.
- Szumigala, D. J., Griesel, G. A., Newberry, R. J., Freeman, L. K., Elliott, B. A., and Werdon, M. B., 2010, Mineral resource studies in the Tolovana Mining District--is the Money Knob gold deposit a rogue elephant or is the rest of the herd nearby? (abs.), in Alaskan Miners Association Abstract Program.
- Elliott, B. A., 2006, Oxygen fugacity in the Wiborg Batholith, Southeast Finland: a Mössbauer study of biotite and amphibole (abs.), in Symposium on Magmatism, Crustal Evolution and Metallogenesis of the Amazonian Craton, Belem, Brazil, Abstract Volume, p. 49.
- Elliott, B. A., Peck, W. H., Rämö, O. T., Vaasjoki, M., and Nironen, M., 2005, Oxygen isotopes in zircon from A-type granites in southern Finland: an indicator of separate terrains? (abs.), in 15th Annual Goldschmidt Conference, Moscow, Idaho.
- Rämö, O. T., Elliott, B. A., Peck, W. H., Johanson, B., and Alviola, R., 2005, A-type granites and AMCG suites: an isotopic study from SE Finland (abs.), in 15th Annual Goldschmidt Conference, Moscow, Idaho.
- Elliott, Brent A., Rämö, O. T., Nironen, M., Wolak, J., and Kurhila, M., 2003, The structural evolution of lateorogenic microcline granites: an example of pre- and post-accretionary orientation, Lahti-Ahvenisto region, southern Finland (abs.), in 26th Winter Meeting, Uppsala, Sweden.
- Rämö, O. T., Kurhila, M., Nironen, M., Vaasjoki, M., Mänttäri, I., and Elliott, B. A., 2003, Nd isotope variation in the lateorogenic microcline granites and their synorogenic country rock

- granitoids in southern Finland (abs.), in 26th Winter Meeting, Uppsala, Sweden.
- Elliott, B. A., Peck, W. H., Rämö, O. T., Vaasjoki, M., and Valley, J. W., 2001, Reconstruction of terrane boundaries in the Finnish Svecofennian: oxygen isotopes from zircon (abs.): Geological Society of America Abstracts with Programs, v. 33, no. 6, p. 264-265.
- Klimm, K., Elliott, B. A., Holtz, F., Johannes, W., King, P. L., and Chappell, B. W., 2001, Water contents and differentiation of A-type granitic magmas (abs.), in European Union of Geosciences Abstract Volume 11.
- Elliott, B. A., 2000, Closed system processes in granitic systems: the Jämsä pluton of central Finland (abs.), in 31st International Geological Congress, Rio De Janeiro, Brazil, Abstract Volume, CD.
- Elliott, B. A., 2000, The 1.88-1.87 Ga post-kinematic granitoids of the Central Finland Granitoid Complex (abs.), in A NorFa sponsored Nordic Network on the transition from orogenic to anorogenic magmatism in the Fennoscandian shield, Excursion Guide and Abstracts, p. 10-11.
- Elliott, B. A., 2000, Thermobarometric constraints on the formation of the Wiborg batholith, southeast Finland (abs.), in Rapakivi Granites and Associated Mineralization: IGCP Project 373 Field Conference in southern Finland, July 3-7, Excursion Guide and Abstracts, p. 38-39.
- Elliott, B. A., Rämö, O. T., and Nironen, M., 1999, Post-kinematic and rapakivi granitoids in the Finnish Svecofennian: evidence for two microcontinents (abs.), in 4th Hutton Symposium on Granites and Granite Related Rocks, Clermont-Ferrand, France, p. 143.
- Nironen, M., Elliott, B. A., and Rämö, O. T., 1999, Geochemistry of the post-kinematic plutons of the Central Finland Granitoid Complex: a shift from 1.88 Ga C-type to 1.87 Ga A-type magmatism (abs.), in 4th Hutton Symposium on Granites and Granite Related Rocks, Clermont-Ferrand, France, p. 172.
- Elliott, B. A., Nironen, M., and Rämö, O. T., 1998, 1.88-1.87 Ga post-kinematic pyroxene-bearing plutons of the Central Finland Granitoid Complex: contrasting A-type and C-type affinities (abs.), in International Granite Correlation Project 426 Field Conference, Wisconsin, U.S.A.
- Elliott, B. A., Rämö, O. T., and Nironen, M., 1998, Petrogenesis of the post-kinematic granites of the Central Finland Granitoid Complex: mineral chemical constraints (abs.), in Anorogenic and Other Granites of Proterozoic Domains, Estonia, p. 17-19.
- Nironen, M., Elliott, B. A., and Rämö, O. T., 1998, Geochemical characteristics of the post-kinematic granites of the Central Finland Granitoid Complex: implications for extension during lithospheric convergence (abs.), in Anorogenic and Other Granites of Proterozoic Domains, Estonia, p. 37-38.
- Nironen, M., Elliott, B. A., and Rämö, O. T., 1998, The 1.88-1.87 Ga post-kinematic plutons of the Central Finland Granitoid Complex: a shift in the age of C-type and A-type magmatism during lithospheric convergence (abs.), in International Granite Correlation Project 426 Field Conference, Wisconsin, U.S.A.
- Rämö, O. T., Elliott, B. A., and Nironen, M., 1998, Petrogenesis of the post-kinematic granites of the Central Finland Granitoid Complex: Preliminary Pb and Nd isotopic constraints (abs.), in Anorogenic and Other Granites of Proterozoic Domains, Estonia, p. 42-44
- Rämö, O. T., Nironen, M., and Elliott, B. A., 1998, Nd and Pb isotopic composition of post-kinematic and rapakivi granitoids in the Finnish Svecofennian: evidence for two microcontinents (abs.), in International Granite Correlation Project 426 Field Conference, Wisconsin, U.S.A.
- Elliott, B. A., Nironen, M., and Rämö, O. T., 1997, Mineralogy, geochemistry, and Nd and Pb isotope geology of the post-tectonic 1.87 Ga granitoids in the CFGC, Finland (abs.), in European Union of Geosciences Terra Nova, No. 9, p. 459.