

**CURRICULUM VITAE**  
**SCOTT A. WOOD**

**Citizenship:** U.S.

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**EDUCATION**

Ph.D. - Geology, January 1985, Princeton University, Princeton (David A. Crerar, thesis supervisor).  
MA - Geology, May 1982, Princeton University, Princeton, N.J.  
BA (Honors) - Chemistry and Geology (Summa Cum Laude) Hamilton College, Clinton, N.Y. (Phi Beta Kappa, Sigma Xi).

**PROFESSIONAL EXPERIENCE**

July 2012 – present, Dean of the College of Science and Mathematics, North Dakota State University  
April 2008 – July 2012, Dean of the College of Science, University of Idaho  
July 2007 – April 2008, Interim Dean of the College of Science, University of Idaho  
December 2006 – June 2007, Associate Dean of the College of Science, University of Idaho  
September 2004 – present, Adjunct Professor of Environmental Science, University of Idaho  
August 1997 - present, Professor of Geochemistry with tenure, University of Idaho, Moscow  
September 2002 – May 2003, Quarter-time interim co-director of the Environmental Sciences Program, University of Idaho  
Summer 1994, January-July, 1999 – Visiting Scientist at Oak Ridge National Laboratory  
Summer 1992, 1993 – Visiting Scientist at Los Alamos National Laboratory  
January 1992 - present, Adjunct Professor, McGill University  
January 1992 - August 1997, Associate Professor with tenure, University of Idaho, Moscow  
June 1990 to December 1991, Associate Professor with tenure, McGill University  
January 1985 to June 1990, Assistant Professor, McGill University  
Fall 1981, Teaching Assistant in optical mineralogy, Princeton University  
August 1980 to December 1984, Research Assistant at Princeton University, high temperature experimental aqueous geochemistry under D.A. Crerar  
Summer 1979, Lando Research Fellow at the University of Minnesota, ESR spectroscopy studies on MgO under J.E. Wertz

**OTHER PROFESSIONAL ACTIVITIES**

May 20-25, 2005, Co-organizer of the 15th Annual V.M. Goldschmidt Meeting, Moscow, ID.

July 2002 to June 2003, July 2009 to June 2010, President of the University of Idaho Chapter of Sigma Xi.  
January 2000 to July 2006, member of Geochemistry Division Medal Committee, Geochemistry Division of the American Chemical Society.  
October 1999 to July 2006, Editor-in-Chief of Geochemical Transactions.  
January 1999 to 2002, member of Lindgren Award Committee of the Society of Economic Geologists (chair of committee starting January 2000).  
January 1999 to present, Special Publications Editor and Board of Director of the Geochemical Society.  
April 1989 to December 2000, Associate Editor of Geochimica et Cosmochimica Acta.  
January 1990 to December 1992, Councilor of the Mineralogical Association of Canada.

### **FOREIGN LANGUAGES**

*French* - reading, writing, speaking (relatively fluently); *German* - reading, speaking; *Spanish* - reading, speaking; *Russian* - reading

### **HONORS, AWARDS AND FELLOWSHIPS**

2006 Distinguished Service Award, Division of Geochemistry, American Chemical Society.  
2005 Inaugural Distinguished Faculty Award, College of Science, University of Idaho  
2004 Julian Boldy Award for best paper in economic geology at the annual Joint Meeting of the Geological Association of Canada and the Mineralogical Association of Canada  
2003-2004 Environmental Science Program Outstanding Faculty Award  
1998 University of Idaho Award for Excellence in Research  
1995 Meritorious Service Award (for performance as Associate Editor) - Geochemical Society.  
1993 Meritorious Service Award (for performance as Associate Editor)- Geochemical Society.  
Associated Western Universities - Dept. of Energy Summer Fellowship for research at Los Alamos National Laboratory - Summer 1993.  
Associated Western Universities - Dept. of Energy Summer Fellowship for research at Los Alamos National Laboratory - Summer 1992.  
Mineralogical Association of Canada Distinguished Lecturer, Western Ontario Universities, April, 1991.  
Canadian Institute of Mining and Metallurgy, Geology Division, Distinguished Lecturer, Prairie Universities, January, 1991.  
Exxon Teaching Fellowship, Princeton, 1982-1985.  
Root Fellowship in Science from Hamilton College, held during graduate study at Princeton, 1980-1982.  
CRC Freshman Chemistry Prize, Hamilton College, May 1977.

### **PROFESSIONAL ORGANIZATIONS**

American Chemical Society, 1982-1984, 2000-present.  
American Geophysical Union, 1982-1985, 1988-present.  
The Geochemical Society, 1983-present.

Sigma Xi, 1980-present.

Mineralogical Association of Canada, 1984-2008.

Association of Applied Geochemists (formerly Association of Exploration Geochemists, 1989-present  
(Fellow since 2002).

Society of Mining Engineers, 1990-91

Société de Géologie Appliquée, 1992-2008.

Society of Economic Geologists, 1992-present (Fellow since 2001).

## **RESEARCH INTERESTS**

Theoretical and experimental studies of the thermodynamics, kinetics and molecular mechanisms of aqueous processes and water-rock interactions, especially at elevated temperatures and pressures. Particular emphasis on metals and their speciation and transport. Solubility, calorimetric, spectroscopic, electrochemical, phase equilibrium and other experimental studies. Field-based studies of ore deposits, geothermal systems and the environment. Applications to ore deposits, hydrometallurgy, exploration geochemistry, environmental geochemistry, radioactive waste disposal and medical geology.

## **TEACHING**

### **Summary of courses taught:**

At McGill University (1985-1991)

Mineral Deposits  
Metamorphic Petrology  
Principles of Geochemistry  
Thermodynamics of Geological Systems  
Exploration Geochemistry  
Hydrothermal Geochemistry

At the University of Idaho (1992-present)

Principles of Geochemistry (GEOL 423)  
The Geochemistry of Natural Waters (GEOL 468/568)  
Advanced Geochemistry of Natural Waters (GEOL 478/578)  
High-Temperature Aqueous Geochemistry I (GEOL 457/557)  
High-Temperature Aqueous Geochemistry II (GEOL 458/558)  
Instrumental Techniques in Geochemistry (GEOL 487/587)  
Thermochemistry of Geological Systems (GEOL 455/555)  
Geological Reaction Rates and Diffusion (GEOL 456/556)

### **Details of teaching at the University of Idaho:**

My typical load at the University of Idaho has been 2 three-credit courses per semester, and frequently I have taught 3 three-credit courses. The percentage effort towards teaching in my annual position description has varied from 35-50%.

**Fall 2009**

GEOL/HYDR 464/564: The Geochemistry of Natural Waters

**Spring 2008**

GEOL/HYDR 578: Advanced Geochemistry of Natural Waters

**Spring 2007**

GEOL 587: Instrumental Techniques in Geochemistry

GEOL/HYDR 464/564: The Geochemistry of Natural Waters

**Fall 2006**

GEOL 423: Principles of Geochemistry

GEOL 455/555: Thermochemistry of Geological Processes

**Spring 2006**

GEOL 558: High-Temperature Aqueous Geochemistry II

GEOL 578: The Advanced Geochemistry of Natural Waters

**Fall 2005**

GEOL 423: Principles of Geochemistry

GEOL 557: High-Temperature Aqueous Geochemistry I

**Spring 2005**

GEOL 468/568: The Geochemistry of Natural Waters

**Fall 2004**

GEOL 423: Principles of Geochemistry

GEOL 455/555: Thermochemistry of Geological Processes

**Spring 2004**

GEOL 558: High-Temperature Aqueous Geochemistry II.

GEOL 578: The Advanced Geochemistry of Natural Waters

**Fall 2003**

GEOL 423: Principles of Geochemistry

GEOL 557: High-Temperature Aqueous Geochemistry I

**Spring 2003**

GEOL 468/568: The Geochemistry of Natural Waters

**Fall 2002**

GEOL 423: Principles of Geochemistry

**Spring 2002**

GEOL 478/578: Advanced Geochemistry of Natural Waters

GEOL 458/558: High-temperature Aqueous Geochemistry II

**Fall 2001**

GEOL 423: Principles of Geochemistry  
GEOL 457/557: High-temperature Aqueous Geochemistry I

**Spring 2001**

ENVS 404/504: The Geochemistry of Natural Waters  
GEOL 587: Instrumental Techniques in Geochemistry.  
GEOL 556: Geological Reaction Rates and Diffusion.

**Fall 2000**

GEOL 423: Principles of Geochemistry  
GEOL 455/555: Thermochemistry of Geological Processes

**Spring 2000**

GEOL 478/578: Low-temperature Aqueous Geochemistry  
GEOL 558: High-Temperature Aqueous Geochemistry II

**Fall 1999**

GEOL 423: Principles of Geochemistry  
GEOL 455/555: High-Temperature Aqueous Geochemistry I

**Spring 1999/Fall 1998**

Sabbatical Leave

**Spring 1998**

GEOL 587: Instrumental Techniques in Geochemistry  
GEOL 558: High-Temperature Aqueous Geochemistry II

**Fall 1997**

GEOL 386: Principles of Geochemistry  
GEOL 557: High-temperature Aqueous Geochemistry I

**Spring 1997**

GEOL 478/578: Low-temperature Aqueous Geochemistry  
GEOL 556: Geological Reaction Rates and Diffusion  
GEOL 501: Directed Study

**Fall 1996**

GEOL 386: Principles of Geochemistry  
GEOL 455/555: Thermochemistry of Geological Processes

**Spring 1996**

GEOL 478/578: Low-temperature Aqueous Geochemistry  
GEOL 458/558: High-temperature Aqueous Geochemistry II  
GEOL 587: Instrumental Techniques in Geochemistry

**Fall 1995**

GEOL 386: Principles of Geochemistry

GEOL 457/557: High Temperature Aqueous Geochemistry I

GEOL 502: Independent Study: Spectroscopic Techniques in Geochemistry

**Spring 1995**

GEOL 478/578: Low-temperature Aqueous Geochemistry

GEOL 456/556: Geological Reaction Rates and Diffusion

GEOL 499: Independent study: Problem in Hazardous Waste Management

**Fall 1994**

GEOL 386: Principles of Geochemistry

GEOL 455/555: Thermochemistry of Geological Systems

GEOL 499/502: Independent study: Analytical Methods in Geochemistry

**Spring 1994**

GEOL 478/578: Low-temperature Aqueous Geochemistry

GEOL 458/558: High-temperature Aqueous Geochemistry II

GEOL 499/502: Independent study: Problem in Hazardous Waste Management

**Fall 1993**

GEOL 386: Principles of Geochemistry

GEOL 457/557: High-temperature Aqueous Geochemistry I

**Spring 1993**

GEOL 478/578: Low-temperature Aqueous Geochemistry

GEOL 455/555: Geological Reaction Rates and Diffusion

**Fall 1992**

GEOL 386: Principles of Geochemistry

GEOL 555: Thermochemistry of Geological Processes

**Spring 1992**

GEOL 499/599: Kinetics and Thermodynamics of Aqueous Processes

**SERVICE****University-level service at UI:**

University Curriculum Committee

Scientific Misconduct Committee

Intellectual Property Committee

Graduate Council

Research Council

Strategic Plan Implementation Team for Goal 2: Scholarship and Creative Activity (Co-Chair)

Safety Committee

Environmental Science Curriculum Committee

Environmental Science Program Core Faculty  
Search Committee for the Dean of the College of Science  
College of Mines and Earth Resources Tenure and Promotion Committee (Chaired once)  
University Promotion Committee  
Selection Committee for the University of Idaho Award for Excellence in Research of Creative Activity

#### **Department-level service at UI:**

Chaired two third-year review committees  
Chaired one departmental tenure review committee  
Member of one and chair of a second faculty search committee  
Department head search committee  
Co-chair of interim department head search committee  
Departmental graduate admissions committee  
Organizer of departmental seminar series

### **PUBLICATIONS**

\*Student co-author

#### **FULL REFEREED JOURNAL PUBLICATIONS**

- 84)** Armstrong, C.R. and Wood, S.A. (2012) Effect of fulvic acid on neodymium uptake by goethite: *Jour. Colloid and Interfacial Sci.* (DOI: 10.1016/j.jcis.2012.07.060).
- 83)** Taunton, A.E., Gunter, M.E., Druschel, G.K., and **Wood, S.A.** (2010) Geochemistry in the lung: Reaction-path modeling and experimental examination of rock-forming minerals under physiologic conditions: *Amer. Mineral.* **95**, 1624-1635.
- 82)** Kruszewski, J.M. and **Wood, S.A.** (2009) Experimental measurement of the solubility of bismuth phases in water vapor from 220 °C to 300 °C: Implications for ore formation. *Appl. Geochem.* **24**, 493-503.
- 81)** Parker, S.R., Gammons, C.H., Pedrozo, F.L., and **Wood, S.A.** (2008) Diel changes in metal concentrations in a geogenically acidic river: Rio Agrio, Argentina. *Jour. Volcanol. Geotherm. Res.* **178**, 213-223 (doi: 0.1016/j.jvolgeores.2008.06.029).
- 80)** Migdisov, Art.A., Williams-Jones, A.E., Normand, C., and **Wood, S.A.** (2008) A spectrophotometric study of samarium (III) speciation in chloride solutions at elevated temperatures. *Geochim. Cosmochim. Acta* **72**, 1611-1625.
- 79)** Connon, S., Koski, A., Neal, A., **Wood, S.**, and Magnuson, T. (2008) Ecophysiology and geochemistry of microbial arsenic oxidation within a high arsenic, circumneutral hot spring system of the Alvord Desert. *FEMS Microbiol. Ecol.* **64**, 117-128.
- 78)** **Wood, S.A.** and Norman, C. (2008) Mobility of palladium chloride complexes in mafic rocks: insights from a flow-through experiment at 25 °C using air-saturated, acidic, and Cl-rich solutions. *Mineral. Petrol.* **92**, 81-97 (Published electronically on July 13, 2007; DOI 10.1007/s00710-007-0193-5).
- 77)** Redkin, A.F. and **Wood, S.A.** (2007) Uranium(VI) in aqueous solutions at 25°C and a pressure of 1 bar: Insight from experiments and calculations. *Geochem. Int.* **45**, 1111-1123.

- 76) **Wood, S.A.**, Taunton\*, A.E., Normand, C., and Gunter, M.E. (2006) Fluid-mineral interaction in the lungs: Insights from reaction-path modeling. *Inhal. Toxicol.* **18**, 975-984.
- 75) Xiong\*, Y., **Wood, S.A.**, and Kruszewski\*, J. (2006) Hydrothermal transport and deposition of rhenium under subcritical conditions revisited. *Econ. Geol.* **101**, 471-478.
- 74) **Wood, S.A.** (2006) The behavior of rare earth elements in naturally and anthropogenically acidified waters. *Jour. Alloys Comps.* **418**, 161-165.
- 73) **Wood, S.A.** (2006) Rare earth element systematics of acidic geothermal waters from the Taupo Volcanic Zone, New Zealand. *Jour. Geochem. Explor.* **89**, 424-427.
- 72) **Wood, S.A.** and Samson, I.M. (2006) The aqueous geochemistry of gallium, germanium, indium and scandium. *Ore Geol. Rev.* **28**, 57-102.
- 71) Gammons, C.H., **Wood, S.A.**, Pedrozo, F., Varekamp, J.C., Nelson, B.J., Shope, C.L., and Baffico, G. (2005) Hydrogeochemistry and rare earth element behavior in a volcanically acidified watershed in Patagonia, Argentina. *Chem. Geol.* **222**, 249-267.
- 70) Gammons, C.H., **Wood, S.A.**, and Nimick, D.A. (2005) Diel behavior of rare earth elements in a mountain stream with acidic to neutral pH. *Geochim. Cosmochim. Acta* **69**, 3747-3758.
- 69) Cetiner\*, Z.S., **Wood, S.A.**, and Gammons, C.H. (2005) The aqueous geochemistry of the rare earth elements. Part XIV. The solubility of rare earth element phosphates from 23 to 150 °C. *Chem. Geol.* **217**, 147-169.
- 68) Samson, I.M., **Wood, S.A.**, and Finucane\*, K.G. (2004) Fluid inclusion characteristics and genesis of the fluorite-parisite mineralization in the Snowbird Deposit, Montana. *Econ. Geol.* **99**, 1727-1744.
- 67) Nelson\*, B.J., **Wood, S.A.** and Osiensky, J.L. (2004) Rare earth element geochemistry of groundwater in the Palouse Basin, Northern Idaho–Eastern Washington. *Geochem. Explor. Environ. Anal.* **4**, 227-242.
- 66) **Wood, S.A.** and van Middlesworth\*, J. (2004) The influence of acetate and oxalate as simple organic ligands on the behavior of palladium in surface environments. *Can. Min.* **42**, 411-421.
- 65) Nelson\*, B.J., **Wood, S.A.** and Osiensky, J.L. (2003) Partitioning of REE between solution and particulate matter in natural waters: a filtration study. *Jour. Solid State Chem.* **171**, 51-56.
- 64) **Wood, S.A.** and Shannon, W.M. (2003) Rare-earth elements in geothermal waters from Oregon, Nevada, and California. *Jour. Solid State Chem.* **171**, 246-253.
- 63) Gammons, C.H., **Wood, S.A.**, Jonas, J.P., and Madison, J.P. (2003) Geochemistry of the rare-earth elements and uranium in the acidic Berkeley Pit lake, Butte, Montana. *Chem. Geol.* **198**, 269-288.
- 62) Nicholson, K.N. and **Wood, S.A.** (2002) Aqueous geochemistry of rare earth elements and yttrium. XII: Potentiometric stability constant determination of Bis-Tris complexes with La, Nd, Eu, Gd, Yb, Dy, Er, Lu, and Y. *Jour. Sol. Chem.* **31**, 703-717.
- 61) **Wood, S.A.**, Tait, C.D., and Janecky, D.R. (2002) A Raman spectroscopic study of arsenite and thioarsenite species in aqueous solution at 25 °C. *Geochem. Trans.* **3**(4), 31-39.
- 60) Xiong\*, Y. and **Wood, S.A.** (2002) Experimental determination of the hydrothermal solubility of ReS<sub>2</sub> and the Re–ReO<sub>2</sub> buffer assemblage and transport of rhenium under supercritical conditions. *Geochem. Trans.* **3**(1), 1-10.
- 59) Xiong\*, Y. and **Wood, S.A.** (2001) Hydrothermal transport and deposition of rhenium under subcritical conditions (up to 200°C) in light of experimental studies. *Econ. Geol.* **96**, 1429-1444.



- 58) Nicholson, K.N., Twamley, B. and **Wood, S.A.** (2001) [Bis(2-hydroxyethyl)amino]-tris(hydroxymethyl)methane (Bis-Tris), an important complexing agent. *Acta Cryst.* **E57**, o1133-o1135.
- 57) Palmer, D.A., Bénézeth, P., Wesolowski, D.J., **Wood, S.A.**, and Xiao, C. (2000) The solubility of metal oxides and hydroxides at high temperatures: Results and implications of recent ORNL measurements. *Power Plant Chem.* **2**, 517-521.
- 56) **Wood, S.A.** and Ricketts\*, A. (2000) Allanite-(Ce) from the Eocene Casto granite, Idaho: response to hydrothermal alteration. *Canadian Mineralogist* **38**, 81-100.
- 55) **Wood, S.A.**, Wesolowski, D.J. and Palmer, D.A. (2000) The aqueous geochemistry of the rare earth elements. IX. A potentiometric study of Nd<sup>3+</sup> complexation with acetate in 0.1 molal NaCl solution from 25°C to 225°C. *Chemical Geology* **167**, 231-253.
- 54) Gammons, C.H. and **Wood, S.A.** (2000) The aqueous geochemistry of REE: Part 8. Solubility of ytterbium oxalate and the stability of Yb(III)-oxalate complexes in water at 25°C to 80°C. *Chemical Geology* **166**, 103-124.
- 53) Xiong\*, Y. and **Wood, S.A.** (2000) Experimental quantification of hydrothermal solubility of platinum-group elements with special reference to porphyry copper environments. *Mineralogy and Petrology* **68**, 1-28.
- 52) **Wood, S.A.** and Samson, I.M. (2000) The hydrothermal geochemistry of tungsten in granitoid environments: I. Relative solubilities of ferberite and scheelite as a function of T, P, pH and m<sub>NaCl</sub>. *Econ. Geol.* **95**, 143-182.
- 51) Kulik, D.A., Aja, S.U., Sinitsyn, V.A., and **Wood, S.A.** (2000) Acid/base surface chemistry and sorption of some lanthanides on K<sup>+</sup> - saturated Marblehead illite: II. A multisite-surface complexation modeling. *Geochim. Cosmochim. Acta* **64**, 195-213.
- 50) Sinitsyn, V.A., Aja, S.U., Kulik, D.A., and **Wood, S.A.** (2000) Acid/base surface chemistry and sorption of some lanthanides on K<sup>+</sup> - saturated Marblehead illite: I. Results of an experimental investigation. *Geochim. Cosmochim. Acta* **64**, 185-194.
- 49) Baker, L.L., Agenbroad\*, D.J. and **Wood, S.A.** (2000) Experimental hydrothermal alteration of a martian analog basalt: Implications for martian meteorites. *Meteoritics & Planetary Science* **35**, 31-38.
- 48) van Middlesworth\*, J.M. and **Wood, S.A.** (1999) The stability of palladium(II) hydroxide and hydroxy-chloride complexes: An experimental solubility study at 25-85°C and 1 bar. *Geochim. Cosmochim. Acta* **63**, 1751-1765.
- 47) Xiong\*, Y. and **Wood, S.A.** (1999) Experimental determination of the solubility of ReO<sub>2</sub> and the dominant oxidation state of rhenium in hydrothermal solutions. *Chem. Geol.* **158**, 245-256.
- 46) Taner\*, H., Williams-Jones, A.E., and **Wood, S.A.** (1998) The nature, origin and physicochemical controls of hydrothermal Mo-Bi mineralization in the Cadillac deposit, Quebec, Canada. *Mineral. Deposita* **33**, 579-590.
- 45) van Middlesworth\*, P.E. and **Wood, S.A.** (1998) The aqueous geochemistry of the rare earth elements and yttrium: Part 7: REE, Th and U contents in thermal springs associated with the Idaho Batholith. *Appl. Geochem.* **13**, 861-884.
- 44) **Wood, S.A.**, van Middlesworth\*, P.E., Gibson\*, P. and Ricketts\*, A. (1997) The mobility of the REE, U, and Th in geological environments in Idaho and their relevance to radioactive waste disposal. *Jour. Alloys & Comp.* **249**, 136-141.
- 43) Gammons, C.H., **Wood, S.A.** and Williams-Jones, A.E. (1996) The aqueous geochemistry of the rare earth elements and yttrium: VI. Stability of neodymium chloride complexes at 25°C to 300°C. *Geochim. Cosmochim. Acta* **60**, 4615-4630.

- 42) **Wood, S.A.** (1996) The role of humic substances in the transport and fixation of metals of economic interest (Au, Pt, Pd, U, V). *Ore Geol. Rev.* **11**, 1-31.
- 41) Mulja\*, T., Williams-Jones, A.E., Martin, R.F., and **Wood, S.A.** (1996) Compositional variation and structural state of columbite-tantalite in rare-element granitic pegmatites of the Preissac-Lacorne batholith, Quebec, Canada. *Amer. Miner.* **81**, 146-157.
- 40) **Wood, S.A.**, Tait, C.D., Janecky, D.R. and Constantopoulos\*, T.L. (1995) The aqueous geochemistry of rare earth elements. V. Application of photoacoustic spectroscopy to speciation at low REE concentrations. *Geochim. Cosmochim. Acta* **59**, 5219-5222.
- 39) Aja\*, S.U., **Wood, S.A.**, and Williams-Jones, A.E. (1995) The aqueous geochemistry of Zr and the solubility of some zirconium-bearing minerals. *Appl. Geochem.* **10**, 603-620.
- 38) Mulja\*, T., Williams-Jones, A.E., **Wood, S.A.** and Boily, M. (1995) The rare-element-enriched monzogranite-pegmatite-quartz vein system in the Preissac-Lacorne Batholith, Quebec. I. Geology and mineralogy. *Can. Min.* **33**, 793-815.
- 37) Mulja\*, T., Williams-Jones, A.E., **Wood, S.A.** and Boily, M. (1995) The rare-element-enriched monzogranite-pegmatite-quartz vein system in the Preissac-Lacorne Batholith, Quebec. II. Geochemistry and paragenesis. *Can. Min.* **33**, 817-833.
- 36) Cook, N.J., **Wood, S.A.**, Gebert, W., Bernhardt, H.-J., and Medenbach, O. (1994) Crerarite, a new Pt-Bi-Pb-S mineral from the Cu-Ni-PGE deposit at Lac Sheen, Abitibi-Témiscamingue, Québec, Canada. *Neues Jahrb. Min. Monatsh.* **1994**, 567-575.
- 35) **Wood, S.A.**, Pan, P., Zhang, Y., and Mucci, A. (1994) The solubility of Pt and Pd sulfides and Au metal in aqueous bisulfide solutions. I. Results at 25°-90°C and 1 bar pressure. *Mineral. Dep.* **29**, 309-317.
- 34) Pan, P. and **Wood, S.A.** (1994) The solubility of Pt and Pd sulfides and Au metal in aqueous bisulfide solutions. II. Results at 200°-350°C and at saturated vapor pressure. *Mineral. Dep.* **29**, 373-390.
- 33) Cook, N.J. and **Wood, S.A.** (1994) Platinum-group minerals in the Lac Sheen Cu-Ni-PGE deposit, Quebec. *Can. Min.* **32**, 703-712.
- 32) **Wood, S.A.** and Williams-Jones, A.E. (1994) The aqueous geochemistry of the rare earth elements and yttrium. Part IV. Monazite solubility and REE mobility in exhalative massive sulfide-forming environments. *Chem. Geol.* **115**, 47-60.
- 31) **Wood, S.A.**, Tait, C.D., Vlassopoulos, D., and Janecky, D.R. (1994) Solubility and spectroscopic studies of the interaction of Pd with simple carboxylic acids and fulvic acid at low temperature. *Geochim. Cosmochim. Acta* **58**, 625-637.
- 30) **Wood, S.A.** (1993) The aqueous geochemistry of the rare earth elements: critical stability constants for complexes with simple carboxylic acids at 25°C and 1 bar and their application to nuclear waste management. *J. Geol. Engineering* **34**, 229-259.
- 29) **Wood, S.A.**, and Williams-Jones, A.E. (1993) Theoretical studies of the alteration of spodumene, petalite, eucryptite and pollucite in granitic pegmatites: I. Exchange reactions with alkali feldspars. *Contr. Mineral. Petrol.* **114**, 255-263.
- 28) Pan, P. and **Wood, S.A.** (1993) Gold bromide complexes in acidic aqueous solutions and at temperatures 25°-300°C: A laser Raman spectroscopic study. *J. Sol. Chem.* **22**, 163-172.
- 27) **Wood, S.A.**, Mountain\*, B.W. and Pan, P. (1992) Recent advances in the aqueous geochemistry of platinum, palladium and gold. *Can. Min.* **30**, 955-982.
- 26) Cook, N.J., **Wood, S.A.**, Zhang, Y. (1992) Transport and fixation of Au, Pt and Pd about a Cu-Ni-PGE occurrence in Quebec. *J. Geochem. Exp.* **46**, 187-228.

- 25) Aja\*, S., **Wood, S.A.** and Williams-Jones, A.E. (1992) Estimating the thermodynamic properties of silicate minerals from the sum of polyhedral contributions. *Eur. J. Min.* **4**, 1251-1263.
- 24) **Wood, S.A.** (1992) Theoretical predictions of the speciation of beryllium in hydrothermal solutions and the solubility of bertrandite/phenakite. *Ore Geol. Rev.* **7**, 249-278.
- 23) Marr\*, R. and **Wood, S.A.** (1992) A preliminary petrogenetic grid for Na and Ca zirconosilicate minerals. *Am. Min.* **77**, 810-820.
- 22) **Wood, S.A.** (1992) Experimental determination of the solubility of  $\text{WO}_3(\text{s})$  and the thermodynamic properties of  $\text{H}_2\text{WO}_4(\text{aq})$  in the range 300-600°C at 1 kbar: Calculation of scheelite solubility. *Geochim. Cosmochim. Acta* **56**, 1827-1836.
- 21) Williams-Jones, A.E. and **Wood, S.A.** (1992) A preliminary petrogenetic grid for rare earth element fluorocarbonate and related minerals. *Geochim. Cosmochim. Acta* **56**, 725-738.
- 20) Pan, P. and **Wood, S.A.** (1991) Gold chloride complexes in very acidic aqueous solutions and at temperatures 25°C-300°C: A laser Raman spectroscopic study. *Geochim. Cosmochim. Acta* **55**, 2365-2371.
- 19) **Wood, S.A.** (1991) Experimental determination of the speciation and stability constants of hydroxide complexes of  $\text{Pt}^{2+}$  and  $\text{Pd}^{2+}$  at 25°C from the solubility of Pt and Pd in aqueous hydroxide solutions. *Geochim. Cosmochim. Acta* **55**, 1759-1767.
- 18) **Wood, S.A.** (1990) The aqueous geochemistry of the rare earth elements and yttrium. Part II. Theoretical predictions of speciation in hydrothermal solutions to 350°C at saturated water vapor pressure. *Chem. Geol.* **88**, 99-125.
- 17) **Wood, S.A.** and Vlassopoulos\*, D. (1990) The dispersion of Pt, Pd, and Au in surficial media about two PGE-Cu-Ni prospects in Quebec. *Can. Min.* **28**, 649-663.
- 16) **Wood, S.A.** (1990) The interaction of dissolved platinum with fulvic acid and simple organic acid analogues in aqueous solutions. *Can. Min.* **28**, 665-673.
- 15) Vlassopoulos\*, D., **Wood, S.A.** and Mucci, A. (1990) Au speciation in natural waters II. The importance of organic complexing: Experiments with some simple model ligands. *Geochim. Cosmochim. Acta* **54**, 1575-1586.
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- 167) Kissin, S.A., Normand, C. and **Wood, S.A.** (2006) Cobalt solubility at elevated temperatures in Co-CoO buffered solutions at fixed pH. 16<sup>th</sup> Annual V.M. Goldschmidt Conference, Melbourne, Australia, Aug. 27 – Sept. 1, 2006. *Geochim. Cosmochim. Acta* 70, A321.
- 166) **Wood, S.A.** (2006) Volcanos, acid mine drainage and diel (24-hour) cycling of rare earth elements in mountain streams. Invited lecture, Department of Chemistry, University of Idaho, September 26, 2006.
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- 163) **Wood, S.A.** and Normand, C. (2006) Mobility of palladium chloride complexes in mafic rocks: Results of laboratory flow-through experiments. GAC-MAC Conference. Montreal, Quebec, Canada, May 14-17, 2006. Abstracts, v. 31, p. 164.
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- 161) Anderson\*, T.R., Fairley, J.P. and **Wood, S.A.** (2005) A reconstruction of water-rock interactions based on chemical analyses of geothermal waters in the Alvord basin, Oregon, USA. Geological Society of America, Salt Lake City Annual Meeting, October 16–19, 2005, Paper No. 163-4.
- 160) Maher\*, K.C., **Wood, S.**, and Larson, P. (2005) Causes of variations in copper isotope ratios in the porphyry/skarn ore environment: sources or processes? Geological Society of America, Salt Lake City Annual Meeting, October 16–19, 2005, Paper No. 138-6.
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- 156) **Wood, S.A.** and Cetiner\*, Z.S. (2005) Solubility of CeO<sub>2</sub> as a function of pH and concentration of organic ligands. 24<sup>th</sup> Rare Earth Research Conference, Keystone, Colorado, June 26-30, 2005. Program and Abstracts, p. 123.

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- 153) Koski\*, A.K. and **Wood, S.A.** (2005) The geochemistry of the geothermal system in the Alvord Basin, Oregon. 15<sup>th</sup> Annual V.M. Goldschmidt Conference, Moscow, Idaho, USA, May 20-25, 2005. *Geochim. Cosmochim. Acta* 69, A844.
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- 36) **Wood, S.A.** (1991) Studies of the interaction of Pd<sup>2+</sup> with fulvic acid and simple organic analogues. GAC-MAC Conference, Toronto, May 1991, Abstr. w. Prog. **16**, A134.
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- 34) Williams-Jones, A.E. and **Wood, S.A.** (1990) A preliminary petrogenetic grid for rare earth element fluorocarbonate and related minerals. GSA Annual Mtg., Dallas, TX, GSA Abstr. w. Prog. **22**, A159.
- 33) Pan, P., **Wood, S.A.** and Mountain\*, B.W. (1990) Recent advances in the aqueous geochemistry of Pt and Pd. GAC-MAC Conference, May 1990.
- 32) **Wood, S.A.** (1990) Solubility and Raman spectroscopic studies of the speciation of tungsten and molybdenum in hydrothermal solutions. GAC-MAC Conference, May 1990.
- 31) **Wood, S.A.** (1990) The solubility of Pt and Pd in NaOH solutions and derivation of stability constants for Pt and Pd hydroxide complexes. Goldschmidt Conference, May 2-4, 1990.
- 30) Pan, P. and **Wood, S.A.** (1990) Solubilities of PtS<sub>2</sub>, PdS and Au in aqueous sulfate solutions and at temperatures 200°C - 350°C. Goldschmidt Conference, May 2-4, 1990.
- 29) Pan, P. and **Wood, S.A.** (1990) A study of gold halide (Cl, Br) complexes by laser Raman spectroscopy at temperatures 25-280°C. Goldschmidt Conference, May 2-4, 1990.
- 28) Cook, N.J. and **Wood, S.A.** (1990) Secondary dispersion and fixation of Pd, Pt and Au surrounding a Pt-Pd prospect in Quebec. Goldschmidt Conference, May 2-4, 1990.
- 27) **Wood, S.A.** (1990) Do tungsten chloride complexes contribute to the genesis of hydrothermal tungsten deposits? Goldschmidt Conference, May 2-4, 1990.
- 26) **Wood, S.A.** (1990) The hydrothermal geochemistry of the REE and Y. Invited lecture at UCLA, March 6, 1990.
- 25) **Wood, S.A.** (1990) Recent advances in the aqueous geochemistry of Pt and Pd. Invited lecture at The California Institute of Technology, March 5, 1990.
- 24) **Wood, S.A.**, Mountain\*, B.W. and Pan, P. (1990) Recent theoretical and experimental advances in the understanding of the hydrothermal geochemistry of the platinum group elements. 116th

- AIME Annual Meeting, February 25-March 1, 1990. Prog. w. Abstr. p. 111 (invited presentation).
- 23) **Wood, S.A.** (1989) The solubility of Li-bearing minerals and the speciation of Li in hydrothermal solutions with applications to pegmatite evolution. Third International Symposium on Hydrothermal Reactions, Frunze, USSR. September 11-15, 1989.
  - 22) Kiddie\*, A.M. and **Wood, S.A.** (1989) Raman spectral studies on systematics of molybdate speciation at high temperatures and pressures. Third International Symposium on Hydrothermal Reactions, Frunze, USSR, September 11-15, 1989.
  - 21) Heinritzi, F., Williams-Jones, A.J. and **Wood, S.A.** (1989) Fluid inclusions in calcite and dolomite of the REE-zone in the St. Honore carbonatite complex, Quebec. GAC-MAC Prog. w. Abstr., v. 14, p. A20-21.
  - 20) **Wood, S.A.** (1989) The forms of transport of the REE and Y in hydrothermal solutions. GAC-MAC Prog. w. Abstr., v. 14, p. A21.
  - 19) **Wood, S.A.**, Vlassopoulos, D. and Kranidiotis\*, P. (1989) The volatility of high technology (Li, Be, Ga, Ge, REE, Nb, Ta) and related metals in magmatic systems: Applications to ore formation. GAC-MAC Prog. w. Abstr., v. 14, p. A32.
  - 18) Vlassopoulos\*, D., **Wood, S.A.**, and Mucci, A. (1989) Contents of Pt, Pd, and Au in lake and ground waters associated with two Pt-Pd showings in mafic rocks in Quebec. GAC-MAC Prog. w. Abstr., v. 14, p. A71.
  - 17) **Wood, S.A.** and Mountain\*, B.W. (1989) The hydrothermal transport of platinum and palladium: Thermodynamic constraints revisited. GAC-MAC Prog. w. Abstr., v. 14, p. A79.
  - 16) **Wood, S.A.** (1989) Experimental results bearing on the interaction of Pt with natural dissolved organic matter (fulvic acid). GAC-MAC Prog. w. Abstr., v. 14, p. A79.
  - 15) Taner\*, H., Williams-Jones, A.J. and **Wood, S.A.** (1989) The nature, origin, and physicochemical controls of hydrothermal Mo-Bi mineralization in the Cadillac and Preissac deposits, Quebec. GAC-MAC Prog. w. Abstr., v. 14, p. A70.
  - 14) Kiddie\*, A. and **Wood, S.A.** (1989) Raman spectral studies on aqueous polynuclear molybdate solutions at elevated temperatures and pressures. GAC-MAC Prog. w. Abstr., v. 14, p. A94.
  - 13) Vlassopoulos\*, D. and **Wood, S.A.** (1989) The speciation of Au in natural waters: The importance of hydrolysis reactions and dissolved organic ligands. GAC-MAC Prog. w. Abstr., v. 14, A94.
  - 12) Taner\*, H., Williams-Jones, A.E. and **Wood, S.A.** (1988) A fluid inclusion study of molybdenum mineralization in the Preissac Batholith, Quebec. GAC-MAC Prog. w. Abstr. v. 13, p. 122.
  - 11) Vlassopoulos\*, D. and **Wood, S.A.** (1988) Comparison of extraction techniques for Au and Pt in concentrated aqueous solutions and applications to graphite furnace atomic absorption spectrophotometry. EOS (AGU abstracts) v. 69 (April 19, 1988).
  - 10) Kranidiotis\*, P. and **Wood, S.A.** (1988) The solubility of Cu-Cu<sub>2</sub>O in hydrothermal chloride solutions from 150 to 350°C. Abstracts of the Goldschmidt Conference, The Geochemical Society Meeting, Baltimore, MD, May 11-13, 1988.
  - 9) Vlassopoulos\*, D., **Wood, S.A.** and Mucci, A. (1988) The solubility & speciation of gold in aqueous solutions containing organic ligands at 25°C. Abstracts of the Goldschmidt Conference, The Geochemical Society Meeting, Baltimore, MD, May 11-13, 1988.
  - 8) **Wood, S.A.** and Mucci, A. (1988) The solubility of platinum as bisulfide and hydroxide complexes at 25°C. Abstracts of the Goldschmidt Conference, The Geochemical Society Meeting, Baltimore, MD, May 11-13, 1988.

- 7) **Wood, S.A.** and Vlassopoulos\*, D. (1988) The hydrothermal solubility of tungsten oxides at 500°C and 1 kbar in HCl, NaCl, NaOH and pure water solutions. Abstracts of the Goldschmidt Conference, The Geochemical Society Meeting, Baltimore, MD, May 11-13, 1988.
- 6) Mountain\*, B.W., and **Wood, S.A.** (1987) Solubility and transport of PGE in hydrothermal solutions to 300°C: Thermodynamic calculations, Geo-platinum 87 symposium, Milton Keynes, U.K.
- 5) **Wood, S.A.**, and Mountain\*, B.W. (1987) Thermodynamic calculation of the solubility and transport of PGE in hydrothermal fluids at 300°C: Application to hydrothermal PGE deposits in shear zones in mafic and ultramafic rocks, *Terra Cognita*, v. 7, p. 318.
- 4) Mountain\*, B., and **Wood, S.A.** (1986) The transport of platinum and palladium in hydrothermal solutions, *GAC-MAC Prog. w. Abstr.*, v. 11, p. 104.
- 3) **Wood, S.A.** (1986) Experimental data bearing on the separation of gold and base metals in Archaean greenstone belts, *GAC-MAC Prog. w. Abstr.*, v. 11, p. 146.
- 2) **Wood, S.A.**, Crerar, D.A. and Borcsik, M. (1984) The speciation of eight ore metals in hydrothermal chloride solutions from 470 to 670 K as deduced from solubility experiments, *Prog. and Abstr. of Papers, IUPAC Conference on Chemical Thermodynamics and the 39th Calorimetry Conference, Joint Meeting, Hamilton, Ontario, August*, p. 111.
- 1) Crerar, D.A., **Wood, S.A.**, Brantley, S.L. and Bocarsly, A.B. (1984) Chemical controls on solubility of minerals in hydrothermal solutions, *GAC-MAC Prog. with Abstr.*, v. 9, p. 55.

#### OTHER PUBLICATIONS

- 9) **Wood, S.A.** (2009) Gold: A review of the October issue of *Elements Magazine* (v. 5, no. 5). *Soc. Econ. Geol. Newsl.* No. 79, p. 28-29.
- 8) **Wood, S.A.** (2004) The hydrothermal geochemistry of the rare earth elements. *The Gangee* (Newsletter of the Mineral Deposits Division of the Geological Association of Canada) **81**, p. 1, 5-7.
- 7) **Wood, S.A.** (1996) Book review. "Thermodynamics, 3rd. ed." by K.S. Pitzer. *Geochim. Cosmochim. Acta* **60**, 1271-1272.
- 6) **Wood, S.A.** (1995) Book review. "Advanced Mineralogy, Volume 2. Methods and Instrumentations: Results and Recent Developments" by A.S. Marfunin. *Geochim. Cosmochim. Acta* **59**, 4326.
- 5) **Wood, S.A.** (1989) Experimental investigations of hydrothermal processes: Applications to ore deposit genesis. *Geochim. Cosmochim. Acta* **53**, 227 (Introduction to special section of GCA dedicated to proceedings of the Third International Conference of the Mineral Exploration Research Institute, Montreal).
- 4) **Wood, S.A.** (1989) Book review. "Metal speciation: Theory, analysis and application", by J.R. Kramer and H.E. Allen. *Geochim. Cosmochim. Acta* **53**, 1481.
- 3) Williams-Jones, A.E. and **Wood, S.A.** (1991) Comment on "Fluid inclusion studies of the Rodeo de Los Molles REE and Th deposit, Las Chacras Batholith, Central Argentina." by R. Lira and E.M. Ripley. *Geochim. Cosmochim. Acta* **55**, 2063-2064
- 2) **Wood, S.A.** (1991) Comment on "Metal speciation and solubility in saline hydrothermal fluids: An empirical approach based on geothermal brine data." by M.A. McKibben and A.E. Williams. *Econ. Geol.* **86**, 685-689.

- 1) **Wood, S.A.** and Mountain\*, B.W. (1991) Hydrothermal solubility of palladium in chloride solutions from 300° to 700°C: Preliminary experimental results -- A discussion. *Econ. Geo.* **86**, 1562-1563.

## GRANT HISTORY

Investigators	Agency, Type of Grant, Title	Total Amount	Dates of tenure
Wood, S.A.	NSERC - Operating - "Solubility of ore-forming minerals in hydrothermal solutions"	<i>\$34,000</i>	5/85-4/87
Wood, S.A.	NSERC - Operating - "Solubility of ore-forming minerals in hydrothermal solutions"	<i>\$36,000</i>	5/87-4/89
Wood, S.A.	NSERC - Operating - "Solubility of ore-forming minerals in hydrothermal solutions"	<i>\$63,000</i>	5/89-4/92
Wood, S.A.	NSERC - Operating - "The nature & thermodynamics of ore metals in hydrothermal solutions"	<i>\$32,000</i>	5/92-4/94
Wood, S.A.	NSERC - Equipment - "Hydrothermal solubility apparatus"	<i>\$24,500</i>	5/85-4/86
Mucci, <u>Wood, S.A.</u> , et al.	NSERC - Equipment - "Atomic absorption spectrometer with flame and Zeeman graphite furnace"	<i>\$130,000</i>	5/87-4/88
<u>Wood, S.A.</u> , Mucci, et al.	NSERC - Equipment - "High temperature/high pressure solubility apparatus"	<i>\$48,314</i>	5/88-4/89
Mucci, <u>Wood, S.A.</u> , et al.	NSERC - Equipment - "Gradient ion chromatography unit"	<i>\$61,800</i>	5/90-4/91
Williams-Jones, <u>Wood, S.A.</u> , et al.	NSERC - Strategic - "The genesis of Y, Zr, and REE deposits: Implications for exploration"	<i>\$310,350</i>	5/88-4/91
<u>Wood, S.A.</u> , Williams-Jones, et al.	NSERC - Equipment - "Hydrothermal flow-through apparatus"	<i>\$50,532</i>	5/88-4/89
<u>Wood, S.A.</u> , Baker, et al.	NSERC - Infrastructure - "High temperature experimental geochemistry laboratory"	<i>\$84,000</i>	5/90-4/93
Wood, S.A.	FCAR - New Researcher - "The solubility and transport of strategic and high technology metals in hydrothermal solutions"	<i>\$33,000</i>	5/89-4/92
Williams-Jones, <u>Wood, S.A.</u> , et al.	FCAR - Team Grant - "Controls on the concentration of strategic and high technology metals in and around granitoid intrusions"	<i>\$81,000</i>	5/86-4/89
Williams-Jones, <u>Wood, S.A.</u> , et al.	FCAR - Team Grant - "Controls on the concentration of strategic and high technology metals in and around granitoid intrusions"	<i>\$150,000</i>	5/89-4/92
Williams-Jones, <u>Wood, S.A.</u> , et al.	FCAR - Equipment - "Hydrothermal flow-through apparatus"	<i>\$14,675</i>	5/86-4/87
Williams-Jones, <u>Wood, S.A.</u> , et al.	FCAR - Team Grant - "The geochemistry of ore deposits of strategic and high technology metals associated with granitoids and carbonatites: implications for mineral exploration and materials science"	<i>\$105,000</i>	5/92/4/95

Fox, <u>Wood, S.A.</u> , Webber	EMR - Research Agreement - "Transport and fixation of gold in groundwater, soils and lake sediments: applications to geochemical exploration"	\$10,000	4/86-3/87
Williams-Jones, <u>Wood, S.A.</u> , Boily	EMR - Research Agreement - "The Quebec Lithium Mine - A laboratory for the study of pegmatite-hosted lithium mineralization"	\$20,000	4/89-3/91
Williams-Jones, <u>Wood, S.A.</u> , Boily	EMR - Research Agreement - "Study of the REE zone of the St-Honoré carbonatite complex"	\$26,000	4/90-3/92
Wood, S.A.	MERQ - Research Contract - "Groundwater, lake water and river water transport of Pt and Pd: Application to geochemical exploration"	\$96,000	6/88-5/90
Wood, S.A.	DSS/GSC - Research Contract - "Hydrothermal solubility and transport of Pt, Pd, and Au"	\$120,000	5/88-4/91
<u>Wood, S.A.</u> , Mucci	ACS-PRF - "The hydrothermal geochemistry of Pt and Pd complexes with sulfur-containing ligands: Applications to the genesis of Pt-Pd ore deposits"	\$40,000	8/90-7/92
Wood, S.A.	ACS-PRF - "Experimental investigation of the thermodynamics and structures of aqueous REE complexes with carboxylic acid anions at elevated temperatures"	\$50,000	1/93-8/95
Wood, S.A.	ACS-PRF - "Thermodynamics of REE complexes with simple carboxylic acid anions at elevated temperatures"	\$50,000	1/96-8/98
Wood, S.A.	SBOE - "Thermodynamics of REE and Y complexes with carbonate and oxalate"	\$32,700	7/92-6/93
Wood, S.A.	SBOE - "A geochemical study of the origin of the Lemhi Pass deposits, Idaho/Montana"	\$34,195	7/96-6/97
von Braun, M. et al. – PI (Wood, S.A. one of 14 co-PI's)	SBOE – "A model for conservation and efficient use of Idaho's academic research: Statewide graduate environmental science course offerings"	\$99,168	7/00-6/02
<u>Wood, S.A.</u> , Williams-Jones, Samson	NATO - Collaborative Research Grant - "Role of hydrothermal processes in rare metal (REE, Zr, Be, Li) deposit genesis"	\$12,500	8/92-2/96
<u>Wood, S.A.</u> , Williams-Jones, Samson	NATO - Collaborative Research Grant - "Integrated study of precious metal (Au, Ag, PGE) deposit formation"	\$6,000	9/96-8/97
Wood, S.A.	NAS-DOE - Radioactive Waste Management Program - Collaboration with Former Soviet Union Colleagues - G. Kolonin	\$25,000	3/94-9/95
Wood, S.A.	NSF - "SGER - Novel applications of spectroscopy to the study of inorganic rare earth elements in hydrothermal solutions"	\$25,000	7/93-12/94
<u>Wood, S.A.</u> , Geist	NSF - Equipment - "Acquisition of a graphite furnace atomic absorption spectrometer and a	\$85,000	7/93-12/94

	gradient ion chromatograph"		
Wood, S.A.	NSF - "Stoichiometry and thermodynamics of Pd hydroxide complexes and PGE bisulfide complexes"	\$99,500	7/94-6/96
Wood, S.A.	NSF - "The behavior of rhenium and osmium in hydrothermal solutions: An experimental reconnaissance study"	\$78,000	1/97-12/98
Wood, S.A., Gammons, C.H.	NSF - "Collaborative Research: Experimental determination of REE-chloride complex stability constants and monazite solubilities in hydrothermal solutions"	\$70,813	6/97-5/00
Wood, S.A.	NSF - "Measurement of the solubilities of scheelite and ferberite in hydrothermal solutions with in-situ pH measurement"	\$205,066	1/01-12/04
Wood, S.A.	NSF - EPSCoR Minigrant - "A spectrophotometric study of simple carboxylate complexes of Pd: Applications to the mobility of Pd in the surficial environment"	\$3,000	6/94-5/95
Wood, S.A.	NSF - EPSCoR Minigrant - "Transport of copper in porphyry-type ore-forming fluids: The Morenci, Arizona deposit as a natural laboratory"	\$3,000	6/96-5/97
Wood, S.A.	NSF - EPSCoR Minigrant - "Controls on Ag/Au ratios in volcanic-hosted epithermal systems: Evidence from the Coeur Rochester Deposit, Nevada "	\$3,000	6/97-5/98
von Braun, M., Wood, S.A.	NSF – "REU Site: Summer Environmental Research Experiences for Underrepresented Groups"	\$246,145	6/01-5/04
Wood, S.A.	NSF – "Experimental determination of the solubility of PGE in hydrothermal chloride solutions"	\$299,923	12/02-11/05
Wood, S.A.	NSF – "Collaborative Research: Pressure decrease as a cause of quartz and molybdenite vein mineral precipitation in magmatic-hydrothermal systems"	\$151,335	2/05-1/08
Wood, S.A., Childers, S., Fairley, J., Geist, D., Gunter, M.	NSF - "Acquisition of an inductively coupled plasma-atomic emission spectrometer and an ion chromatograph"	\$121,711	1/06-6/07
Childers, S., Wood, S.A.	NSF - "Biological and Geochemical Influences on Arsenic Speciation in a Geothermal Environment"	\$189,522	6/06-6/08
Wood, S.A.	Phelps-Dodge Corp. - "Transport of copper in porphyry-type ore-forming fluids: The Morenci, Arizona deposit as a natural laboratory"	\$16,500	6/96-5/97
Wood, S.A.	DoD-EPSCoR - "Metal corrosion in supercritical brines: Applications to hydrothermal oxidation of DoD hazardous wastes"	\$251,118	9/96-8/99
Wood, S.A.	DOE - "Behavior of rare earth elements in geothermal systems: A new exploration/exploitation	\$385,604	1/98-12/01

	tool"		
Wood, S.A.	DOE-EMSP- "Developing a fundamental basis for the characterization, separation and disposal of plutonium and other actinides in high level radioactive waste"	\$203,000	10/98-9/01
Wood, S.A.	DOE-EMSP- "Developing a fundamental basis for the characterization, separation and disposal of plutonium and other actinides in high level radioactive waste"	\$210,000	10/01-9/04
Wood, S.A.	DOE-EPSCoR- "The effect of organic ligands on the sorption of neodymium, gadolinium and uranium onto nontronite and goethite: Development of a surface complexation model to predict mobility in the vadose zone."	\$326,671	4/03-3/07
<u>Wood, S.A.</u> , Baker, L.L.	NASA (Idaho Space Grant Consortium) - "Experimental study of hydrothermal activity on Mars: Implications for SNC meteorites and Martian soil compositions "	\$10,000	7/97-2/98
Wood, S.A.	Coeur Rochester, Inc. - "A geochemical model of the Coeur Rochester Deposit"	\$14,421	6/97-5/98
Wood, S.A., Hull, L.C.	Inland Northwest Research Alliance (INRA) - "A comprehensive thermodynamic and mechanistic model for the prediction of the sorption of rare earth elements (REE) and hexavalent uranium onto goethite and nontronite for application to nuclear waste management"	\$144,456	8/01-7/03
Wood, S.A., Fendorf, S.E.	Barrick Goldstrike Mines (administered by BLM) - "The geochemistry of arsenic in aqueous solutions"	\$150,000	9/96-8/99
Wood, S.A., Gunter, M.E.	NIH – "The lung: A reaction chamber for minerals"	\$144,076	4/02-3/05
Hull, L.C., Wood, S.A., Schaefer, A.	CAES LDRD – "Porosity evolution during in-situ oil shale retorting"	\$49,900	7/07-12/07

NSERC - Natural Sciences and Engineering Research Council, Canada; FCAR - Fonds pour la Formation des Chercheurs et a l'Aide, de la Recherche, Quebec; EMR - Energy, Mines and Resources, Canada; MERQ - Ministry of Energy and Resources, Quebec; DSS - Department of Supply and Services, Canada; GSC - Geological Survey of Canada; ACS-PRF - American Chemical Society - Petroleum Research Fund; NSF - Natural Science Foundation; SBOE - State Board of Education, Idaho; NAS - National Academy of Sciences; DOE- U.S. Department of Energy; DoD - U.S. Department of Defense; BLM - Bureau of Land Management; NIH – National Institutes of Health.

Note: Canadian grants do not include overhead for indirect costs. This is paid directly to Canadian Universities through another fund. Amounts in Canadian Dollars shown in italics.