CURRICULUM VITAE

Name: Scott A. Wood **Birth Date:** September 16, 1958
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:

September 2002 – May 2003, Quarter-time interim co-director of the Environmental Sciences Program, University of Idaho.
August 1997 - present, Professor with tenure, University of Idaho, Moscow.
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 1989, 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, President of the University of Idaho Chapter of Sigma Xi.

January 2000 to present, member of Geochemistry Division Medal Committee, Geochemistry Division of the American Chemical Society.
October 1999 to present, 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 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.
September 1989 to February 1992, Member of FCAR (Quebec) Research Grant selection committee.

Foreign languages:

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

Honors, awards and fellowships:

2004 Julian Boldy Award for best paper in economic geology at the annual GAC-MAC Meeting
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-present.
Association of Exploration Geochemists, 1989-present.
Society of Mining Engineers, 1990-91

Societé de Géologie Appliqué, 1992-present.
Society of Economic Geologists, 1992-present (named SEG Fellow in 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, radioactive waste disposal and other environmental problems.

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%.

Spring 2005
GEOL 468/568: The Geochemistry of Natural Waters (6 live students, 17 web-based).

Fall 2004
GEOL 423: Principles of Geochemistry (15 students).
GEOL 455/555: Thermochemistry of Geological Processes (5 students).

Spring 2004
GEOL 558: High-Temperature Aqueous Geochemistry II (5 students).
GEOL 578: The Advanced Geochemistry of Natural Waters (4 students).

Fall 2003
GEOL 423: Principles of Geochemistry (20 students).
GEOL 557: High-Temperature Aqueous Geochemistry I (6 students).

Spring 2003
GEOL 468/568: The Geochemistry of Natural Waters (19 students).

Fall 2002
GEOL 423: Principles of Geochemistry (28 students).

Spring 2002
GEOL 478/578: Advanced Geochemistry of Natural Waters (4 students).
GEOL 458/558: High-temperature Aqueous Geochemistry II (3 students).

Fall 2001
GEOL 423: Principles of Geochemistry (20 students).
GEOL 457/557: High-temperature Aqueous Geochemistry I (8 students).

Spring 2001ENVS 404/504: The Geochemistry of Natural Waters (14 students).
GEOL 587: Instrumental Techniques in Geochemistry.
GEOL 556: Geological Reaction Rates and Diffusion.

Fall 2000
GEOL 423: Principles of Geochemistry (34 students).
GEOL 455/555: Thermochemistry of Geological Processes (4 students).

Spring 2000
GEOL 478/578: Low-temperature Aqueous Geochemistry (7 students).
GEOL 558: High-Temperature Aqueous Geochemistry II (1 student).

Fall 1999
GEOL 423: Principles of Geochemistry (17 students).
GEOL 455/555: High-Temperature Aqueous Geochemistry I (2 students).

Spring 1999/Fall 1998
Sabbatical Leave

Spring 1998
GEOL 587: Instrumental Techniques in Geochemistry (6 students).
GEOL 558: High-Temperature Aqueous Geochemistry II (5 students).

Fall 1997
GEOL 386: Principles of Geochemistry (16 students).
GEOL 557: High-temperature Aqueous Geochemistry I (5 students).

Spring 1997
GEOL 478/578: Low-temperature Aqueous Geochemistry (3 students).
GEOL 556: Geological Reaction Rates and Diffusion (1 student).
GEOL 501: Directed Study (1 student).

Fall 1996
GEOL 386: Principles of Geochemistry (16 students).
GEOL 455/555: Thermochemistry of Geological Processes (4 students).

Spring 1996
GEOL 478/578: Low-temperature Aqueous Geochemistry (5 students).
GEOL 458/558: High-temperature Aqueous Geochemistry II (2 students).
GEOL 587: Instrumental Techniques in Geochemistry (9 students).

Fall 1995
GEOL 386: Principles of Geochemistry (24 students).
GEOL 457/557: High Temperature Aqueous Geochemistry I (3 students).
GEOL 502: Independent Study: Spectroscopic Techniques in Geochemistry (5 students).

Spring 1995
GEOL 478/578: Low-temperature Aqueous Geochemistry (3 students)
GEOL 456/556: Geological Reaction Rates and Diffusion (5 students).
GEOL 499: Independent study: Problem in Hazardous Waste Management (1 student).

Fall 1994
GEOL 386: Principles of Geochemistry (21 students).
GEOL 455/555: Thermochemistry of Geological Systems (4 students).
GEOL 499/502: Independent study: Analytical Methods in Geochemistry (6 students).

Spring 1994
GEOL 478/578: Low-temperature Aqueous Geochemistry (4 students).
GEOL 458/558: High-temperature Aqueous Geochemistry II (5 students).

GEOL 499/502: Independent study: Problem in Hazardous Waste Management (2 students).

Fall 1993
GEOL 386: Principles of Geochemistry (10 students).
GEOL 457/557: High-temperature Aqueous Geochemistry I (4 students).

Spring 1993
GEOL 478/578: Low-temperature Aqueous Geochemistry (6 students).
GEOL 455/555: Geological Reaction Rates and Diffusion (2 students).

Fall 1992
GEOL 386: Principles of Geochemistry (8 students)
GEOL 555: Thermochemistry of Geological Processes (2 students plus 1 audit).

Spring 1992
GEOL 499/599: Kinetics and Thermodynamics of Aqueous Processes (2 students).

PUBLICATIONS

FULL REFEREED JOURNAL PUBLICATIONS

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 ºC. 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_2 and the Re–ReO_2 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^{3+} 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_{NaCl}. 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^+ - 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^+ - 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_2 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 WO_3(s) and the thermodynamic properties of H_2WO_4(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 Pt^{2+} and 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.

14) Wood, S.A., Vlassopoulos, D. and Mucci, A. (1990) The effect of concentrated matrices on the determination of trace levels of Pt and Au in aqueous samples using solvent extraction/Zeeman graphite furnace atomic absorption and inductively coupled plasma mass spectrometry. Anal. Chim. Acta **229**, 227-238.

13) Wood, S.A. (1990) The aqueous geochemistry of the rare earth elements and yttrium. Part I. Review of available low temperature data for inorganic complexes and the inorganic REE speciation of natural waters. Chem. Geol. **82**, 159-186.

12) Vlassopoulos, D. and **Wood, S.A.** (1990) Au speciation in natural waters I. Solubility and hydrolysis reactions of Au in aqueous solution. Geochim. Cosmochim. Acta **54**, 3-12.

11) Wood, S.A., Mountain, B.W. and Fenlon, B.J. (1989) Thermodynamic constraints on the solubility of platinum and palladium in hydrothermal solutions: Reassessment of hydroxide, bisulfide and ammonia complexing. Econ. Geol. **84**, 2020-2028.

10) Wood, S.A. (1989) Raman spectroscopic determinations of speciation of ore metals in hydrothermal solutions. I. Speciation of antimony in aqueous alkaline sulfide solutions at 25°C. Geochim. Cosmochim. Acta **53**, 237-244.

9) Wood, S.A. and Vlassopoulos, D. (1989) Experimental determination of the hydrothermal solubility and speciation of tungsten at 500°C and 1 kbar. Geochim. Cosmochim. Acta **53**, 303-312.

8) Mountain, B.W. and **Wood, S.A.** (1988) Chemical controls on the solubility, transport and deposition of platinum and palladium in hydrothermal solutions: A thermodynamic approach. Econ. Geol. **83**, 492-510.

7) Wood, S.A. (1987) Thermodynamic calculations of the volatility of the platinum group elements (PGE): The PGE content of fluids at magmatic temperatures. Geochim. Cosmochim. Acta **51**, 3041-3050.

6) Wood, S.A., Crerar, D.A., and Borcsik, M.P. (1987) Solubility of the assemblage pyrite-pyrrhotite-magnetite-sphalerite-galena-gold-stibnite-bismuthinite-argentite-molybdenite in H_2O-NaCl-CO_2 solutions from 200 to 350°C. Econ. Geol. **82**, 1864-1887.

5) Wood, S.A. (1987) Application of a multiphase ore mineral solubility experiment to the separation of base metal and gold mineralization in Archaean greenstone terrains. Econ. Geol. **82**, 1044-1048.

4) Crerar, D.A., **Wood, S.A.**, Brantley, S.L. and Bocarsly, A.B. (1985) Chemical controls on solubility of ore-forming minerals in hydrothermal solutions. Can. Min. **23**, 333-352.

3) Wood, S.A. and Crerar, D.A. (1985) A numerical method for obtaining multiple linear regression parameters with physically realistic signs and magnitudes: Applications to the determination of equilibrium constants from solubility data. Geochim. Cosmochim. Acta **49**, 165-172.

2) Wood, S.A., Crerar, D.A., Brantley, S.L. and Borcsik, M. (1984) Mean molal stoichiometric activity coefficients of alkali halides and related electrolytes in hydrothermal solutions. Amer. Jour. Sci. **284**, 668-705.

1) Wood, S.A. and Spera, F.J. (1984) Adiabatic decompression of aqueous solutions: Applications to hydrothermal fluid migration in the crust. GEOLOGY **12**, 707-710.

REFEREED CHAPTERS IN BOOKS OR MONOGRAPHS

9) Wood, S.A. (2003) The geochemistry of rare earth elements and yttrium in geothermal waters. In S.F. Simmons and I. Graham, eds., *Volcanic, Geothermal, and Ore-Forming Fluids: Rulers and Witnesses of Processes within the Earth.* Soc. Econ. Geol. Spec. Publ. No. 10, p. 133-158.

8) Wood, S.A. (2002) The aqueous geochemistry of the platinum-group elements with applications to ore deposits. In L.J. Cabri, ed., *The Geology, Geochemistry, Mineralogy and Mineral Beneficiation of Platinum-Group Elements.* Can. Inst. Min. Metall. Pet. Spec. Vol. 54, p. 211-249.

7) Wood, S.A., Palmer, D.A., Wesolowski, D.J., and Bénézeth, P. (2002) The aqueous geochemistry of the rare earth elements and yttrium. Part XI. The solubility of $Nd(OH)_3$ and hydrolysis of Nd^{3+} from 30 to 290 °C at saturated water vapor pressure with in-situ pH_m measurement. In R. Hellmann and S.A. Wood, ed., *Water-Rock Interactions, Ore Deposits, and Environmental Geochemistry: A Tribute to David A. Crerar*. Geochemical Society Special Publication, v. 7, p. 229-256.

6) Ding, R. and **Wood, S.A.** (2002) The aqueous geochemistry of the rare earth elements and yttrium. Part X. Potentiometric determination of stability constants of acetate complexes of La^{3+}, Nd^{3+}, Gd^{3+} and Yb^{3+} at 25-70 °C and 1 bar. In R. Hellmann and S.A. Wood, ed., *Water-Rock Interactions, Ore Deposits, and Environmental Geochemistry: A Tribute to David A. Crerar*. Geochemical Society Special Publication, v. 7, p. 209-227.

5) Gammons, C.H., **Wood, S.A.**, and Li, Y. (2002) Complexation of the rare earth elements with aqueous chloride at 200 °C and 300 °C and saturated water vapor pressure. In R. Hellmann and S.A. Wood, ed., *Water-Rock Interactions, Ore Deposits, and Environmental Geochemistry: A Tribute to David A. Crerar*. Geochemical Society Special Publication, v. 7, p. 191-207.

4) Wood, S.A. (2000) Organic matter: Supergene enrichment and dispersion. In T.H. Giordano, R.M. Kettler and S.A. Wood, eds., *Ore Genesis and Exploration: The Roles of Organic Matter*. Reviews in Economic Geology, v. 9, p. 157-192.

3) Wood, S.A. and Samson, I.M. (1998) Solubility of ore minerals and complexation of ore metals in hydrothermal solutions. In J. Richards and P. Larson, eds., *Techniques in Hydrothermal Ore Deposits.* Reviews in Economic Geology, v. 10, p. 33-80.

2) Wood, S.A. (1998) Calculation of activity-activity and log f_{O_2}-pH diagrams. In J. Richards and P. Larson, eds., *Techniques in Hydrothermal Ore Deposits.* Reviews in Economic Geology, v. 10, p. 81-96.

1) Williams-Jones, A.E., **Wood, S.A.**, Mountain, B.W. and Gammons, C.H. (1994) Experimental water-rock interaction: Applications to ore-forming hydrothermal systems. In D.R. Lentz, ed., *Alteration and Alteration Processes Associated With Ore-forming Systems*, Geol. Assoc. Can. Short Course Notes, Vol. 11, 131-160.

REFEREED CONFERENCE PROCEEDINGS

19) Koski, A.K. and **Wood, S.A.** (2004) The geochemistry of geothermal waters in the Alvord Basin, southeastern Oregon. In Wanty, R.B. and Seal, R.R. III, eds., *Water-Rock Interaction*. Proceedings of the Eleventh International Symposium on Water-Rock Interaction WRI-11, v. 1. Saratoga Springs, New York, 27 June-2 July, 2004. A.A. Balkema, Leiden, the Netherlands, p. 149-152.

18) Bénézeth, P., Palmer, D.A., Wesolowski, D.J., Xiao, C., **and Wood, S.A.** (2001) Solubility and reaction rates of oxides and hydroxides to high temperatures with *in situ* pH measurement. In Cidu, R., ed., *Water-Rock Interaction*. Proceedings of the Tenth International Symposium on Water-Rock Interaction WRI-10, Villasimus, Italy, 10-15 July 2001. A.A. Balkema, Lisse, the Netherlands, p. 235-238.

17) Wood, S.A., Baker, L.L., and Shannon, W.M. (2001) Heavy metals in mine drainage from the Pine Creek area, Coeur d'Alene River Valley, Idaho, USA. In Cidu, R., ed., *Water-Rock Interaction*. Proceedings of the Tenth International Symposium on Water-Rock Interaction WRI-10, Villasimus, Italy, 10-15 July 2001. A.A. Balkema, Lisse, the Netherlands, p. 1289-1292.

16) Shannon, W.M., **Wood, S.A.**, Brown, K., and Arehart, G. (2001) REE contents and speciation in geothermal fluids from New Zealand. In Cidu, R., ed., *Water-Rock Interaction*. Proceedings of the Tenth International Symposium on Water-Rock Interaction WRI-10, Villasimus, Italy, 10-15 July 2001. A.A. Balkema, Lisse, the Netherlands, p. 1001-1004.

15) Wood, S.A. (2000) Complexation of Pd by natural organic ligands. 31st International Geological Congress, August 6-17, 2000. Abstracts volume (CD-ROM), 4 pp.

14) Shannon, W.M., **Wood, S.A.**, Brown, K., and Arehart, G. (1999) Preliminary measurements of concentrations of lanthanide elements in geothermal fluids from the Taupo Volcanic Zone, New Zealand. Proceedings, Twenty-Fourth Workshop on Geothermal Reservoir Engineering, Stanford University, Stanford, California, January 25-27, 1999. Stanford Geothermal Program Workshop Report SGP-TR-162, p. 227-235.

13) Xiong, X. and **Wood, S.A.** (1998) Experimental evidence for the mobility of Os under hydrothermal conditions. 8th International Platinum Symposium Abstracts, June 28-July 3, 1998, Rustenburg, South Africa. South African Institute of Mining and Metallurgy, Symposium Series S18, 457-459.

12) Wood, S.A. (1998) The hydrothermal geochemistry of Pt and Pd: The relative roles of chloride and bisulfide complexes. 8th International Platinum Symposium Abstracts, June 28-July 3, 1998, Rustenburg, South Africa. South African Institute of Mining and Metallurgy, Symposium Series S18, 453-456.

11) Pickrell, J.M. and **Wood, S.A.** (1998) Thermodynamics of Pd(II)-hydroxide and –hydroxychloride complexes at 25°C and 1 bar: Implications for the speciation of Pd in seawater. 8th International Platinum Symposium Abstracts, June 28-July 3, 1998, Rustenburg, South Africa. South African Institute of Mining and Metallurgy, Symposium Series S18, 331-334.

10) Wood, S.A., Tait, C.D., and Janecky, D.R. (1998) A Raman spectroscopic study of thio-arsenite and arsenite species in low-temperature aqueous solutions. In G.B. Arehart and J.R. Hulston, eds., *Water-Rock Interaction* Proc. 9th International Symposium on Water-Rock Interaction – WRI-9, Taupo, New Zealand, Mar. 30-Apr. 3, 1998, 863-865.

9) Ding, R., Gammons, C.H., and **Wood, S.A.** (1998) Solubility and potentiometric studies of REE complexation with simple carboxylate (acetate, oxalate) ligands from 25° to 80°C. In G.B. Arehart and J.R. Hulston, eds., *Water-Rock Interaction* Proc. 9th International Symposium on Water-Rock Interaction – WRI-9, Taupo, New Zealand, Mar. 30-Apr. 3, 1998, 831-834.

8) Samson, I.M. and **Wood, S.A.** (1997) The relative solubilities of ferberite and scheelite as a function of temperature, pressure, pH and salinity: Applications to granitoid-related tungsten deposits. In H. Papunen, ed., *Mineral Deposits: Research and Exploration - Where Do They Meet?* Proc. 4th Biennial Meeting of the Soc. Geol. Appl., Turku, Finland, Aug. 11-13, 1997, 967-970.

7) Gibson, P.E. and **Wood, S.A.** (1997) Geochemistry and mineralogy of the Lemhi Pass Th-REE deposits. In H. Papunen, ed., *Mineral Deposits: Research and Exploration - Where Do They Meet?* Proc. 4th Biennial Meeting of the Soc. Geol. Appl., Turku, Finland, Aug. 11-13, 1997, 945-948.

6) Aja, S.U., **Wood, S.A.** and Williams-Jones, A.E. (1997) The solubility of some alkali-bearing Zr minerals in hydrothermal solutions. Mat. Res. Soc. Symp. Proc. Vol. **432**, 69-74.

5) Wood, S.A. and Williams-Jones, A.E. (1993) Theoretical calculation of the solubility of monazite in hydrothermal solutions: Applications to REE mobility during massive sulphide formation. In P.F. Hach-Ali, J. Torres-Ruiz and F. Gervilla, eds., *Current Research in Geology Applied to Ore Deposits.*

Proc. of the 2nd. Biennial Meeting of the Soc. Geol. Appl., Granada, Spain, Sept. 9-11, 1993, 393-396.

4) Cook, N.J., **Wood, S.A.**, Bernhardt, H.J. & Medenbach, O. (1993) Mineralogy of platinum and palladium in the Lac Sheen Ni-Cu-PGE showing, Abitibi-Temiscamingue, Quebec, Canada. In P.F. Hach-Ali, J. Torres-Ruiz and F. Gervilla, eds., *Current Research in Geology Applied to Ore Deposits*. Proc. of the 2nd. Biennial Meeting of the Soc. Geol. Appl., Granada, Spain, Sept. 9-11, 1993, 433-436.

3) Wood, S.A. (1992) Solubility of Pt, Pd sulfides and Au in aqueous bisulfide solutions to 350°C. In Y.K. Kharaka and A.S. Maest, eds., *Water-rock Interaction, v.2, Moderate and High-Temperature Environments*. Proc. of the 7th Int. Symp. Water-Rock Interaction, Park City, Utah, July 13-18, 1992, 1017-1020.

2) Wood, S.A. (1991) Speciation of Be and solubility of bertrandite/phenakite minerals in hydrothermal solutions. In M. Pagel and J.L. Leroy, eds., *Source, Transport and Deposition of Metals*. Proc. 25th Anniv. Mtg., Soc. Geol. Appl., Nancy, Aug. 30 -Sept. 3, 1991, 147-150.

1) Mountain, B.W., and **Wood, S.A.** (1988) Solubility and transport of platinum-group elements in hydrothermal solutions: Thermodynamic and physical chemical constraints. In P. Potts and H. Prichard, eds., Proceedings of the Geo-platinum 87 Symposium. Milton Keynes, England, April 1987. Elsevier, p. 57-82.

THESES

18) Gustafson, J. (2003) Selenium Geochemistry in the Ore, Mill, and Tailings Pond at the Red Dog Mine, Western Brooks Range, Alaska. M.Sc. Thesis, University of Idaho.

17) Nelson, B.J. (2003) Rare earth element geochemistry as a tool for hydrogeochemical investigations in natural systems. M.Sc. Thesis, University of Idaho, 227 p.

16) Cetiner, Z.S. (2003) Experimental investigation of the solubility of the REE phosphate minerals monazite/xenotime and chloride complexation in hydrothermal solutions at 23°C, 50°C, 150°C, and saturated water vapor pressure. Ph.D. Thesis, University of Idaho, 154 p.

15) Drozdova, Z. (2002) Sorption of Nd and Gd onto kaolinite: The effect of organic ligands. M.Sc. Thesis, University of Idaho, 56 p.

14) Mather, C. (1999) Geochemical model of the Coeur Rochester Ag-Au mine, Rochester District, Nevada. M.Sc. Thesis, University of Idaho,

13) Xiong, Y. (1999) Experimental study of the solubility of rhenium, osmium and palladium in subcritical and supercritical KCl solutions to 500°C. Ph.D. Thesis, University of Idaho, 224 p.

12) Gibson, P.E. (1998) Origin of the Lemhi Pass REE-Th deposits, Idaho/Montana: Petrology, mineralogy, paragenesis, whole-rock chemistry and isotope evidence. M.Sc. Thesis, University of Idaho, 320 p.

11) Ding, R. (1999) Potentiometric studies of REE complexation in aqueous acetate solutions from 25° to 70°C. Ph.D. Thesis, University of Idaho, 177 p.

10) Holick, P.A. (1999) Copper-mineralizing fluids of the Morenci porphyry copper deposit, Greenlee County, Arizona. M.Sc. Thesis, University of Idaho, 106 p.

9) Finucane, K.G. (1998) An investigation of the fluid inclusions of the Snowbird fluorite-REE deposit, Mineral County, Montana, M.Sc. Thesis, University of Idaho, 113 p.

8) Pickrell, J. (1997) Stability constants of Pd^{2+} complexes from 25°C to 85°C. M.Sc. Thesis, University of Idaho, 120 p.

7) van Middlesworth, P.E. (1997) Determination of REE, Th and U concentrations in thermal waters of the Lochsa, Salmon and Stanley regions of the Bitterroot Lobe of the Idaho Batholith. M.Sc. Thesis, University of Idaho, 190 p.

6) Ricketts, A. (1995) - The alteration of allanites in the Casto granite pluton, central Idaho. M.Sc. Thesis, University of Idaho, 220 p.

5) Fournier, A. (1993) - Geochemistry of REE deposits in the St. Honore carbonatite. M.Sc. Thesis, McGill University.

4) Marr, R. (1992) Phase equilibria of Ca and Na zirconosilicates. M.Sc. Thesis, McGill University, 58 p.

3) Vlassopoulos, D. (1989) Some experimental studies bearing on the solubility and speciation of gold in natural waters. M.Sc. Thesis, McGill University, 82 p.

2) Taner, H. (1989) The nature, origin and physicochemical controls of hydrothermal Mo-Bi mineralization in the Cadillac and Preissac Deposits, Quebec. M.Sc. Thesis, McGill University, 137 p.

1) Wood, S.A. (1985) Some Aspects of the Physical Chemistry of Hydrothermal Ore-Forming Solutions. Ph.D. Thesis, Princeton University.

REPORTS

2) Wood, S.A. and Baker, L.L. (2000) Experimental study of metal corrosion in supercritical brines: Applications to supercritical water oxidation of hazardous wastes. Final project report to the U.S. Army Research Office.

1) Wood, S.A. and Mather, C.M. (1999) Geochemical model of the Coeur Rochester Ag-Au Mine, Rochester District, Nevada. Confidential report to Coeur Rochester, Inc., June 1999.

SEMINAR AND CONFERENCE PRESENTATIONS

141) Wood, S.A. and Cetiner, Z.S. (2004) Calculation of the solubility of $NdPO_4$ (monazite) at hydrothermal conditions using recently obtained thermodynamic data. Geol. Soc. Amer. Prog. w. Abstr. No. 150-1.

140) Cetiner, Z.S. and **Wood, S.A.** (2004) Measurements of the solubility of CeO_2 in $NaNO_3$ solutions: Hydrolysis of Ce(IV) and complexation by organic ligands. Geol. Soc. Amer. Prog. w. Abstr. No. 149-1.

139) Normand, C., **Wood, S.A.**, and Roach, L.D. (2004) Effect of the siderophore desferrioxamine-B on the mobility of Pd. 14th Annual V.M. Goldschmidt Conference, Copenhagen, Denmark, June 5-11, 2004. Geochim. Cosmochim. Acta, v. 68, p. A359.

138) Wood, S.A. (2004) The hydrothermal geochemistry of the rare earth elements. GAC-MAC Conference, May 12-14, 2004. CD-ROM, Abstract No. SS10-15, p. 211.

137) Samson, I.M., **Wood, S.A.**, and Finucance, K.G. (2004) Fluid inclusion characteristics and genesis of the REE (parisite) mineralization in the Snowbird deposit, Montana. GAC-MAC Conference, May 12-14, 2004. CD-ROM, Abstract No. SS10-17, p. 213.

136) Normand, C. and **Wood, S.A.** (2004) Interactions of asbestiform minerals in the lungs: New insights From reaction path modeling. GAC-MAC Conference, May 12-14, 2004. CD-ROM, Abstract No. GS03-04, p. 390.

135) Vasseli, O., Mattash, M.A., Minnisale, A., **Wood, S.A.**, and Cetiner, Z. (2003) Geothermal resources of Yemen and their geothermometric characteristics. Geol. Soc. Amer. Prog. w. Abstr. CD-ROM Abstr. 235-7.

134) Gammons, C.H., Nimick, D.A., Parker, S.R., and **Wood, S.A.** (2003) Diel fluctuation of heavy metals and rare earth elements in a Mountain stream with acidic to neutral pH. Geol. Soc. Amer. Prog. w. Abstr. CD-ROM Abstr. 232-1.

133) Cetiner, Z.S., **Wood, S.A.** and Gammons, C.H. (2003) Experimental study of the solubility of REE phosphates in aqueous chloride solutions from 23 to 150ºC. Geol. Soc. Amer. Prog. w. Abstr. CD-ROM Abstr. 199-5.

132) Cao, H. and **Wood, S.A.** (2003) The solubility of CeO_2 in $NaNO_3$ medium. Geol. Soc. Amer. Prog. w. Abstr. CD-ROM Abstr. 96-14.

131) Nelson, B.J., **Wood, S.A.** and Owens, J. (2003) Geochemistry of acid mine drainage in the Pine Creek basin, northern Idaho. Geol. Soc. Amer. Prog. w. Abstr. CD-ROM Abstr. 96-5.

130) Redkin, A.F., **Wood, S.A.**, Redden, G., Hull, L.C. (2003) Adsorption of gadolinium on the surface of goethite in the system NaCl-H_2O-Ar-CO_2 at 25°C. Geol. Soc. Amer. Prog. w. Abstr. CD-ROM Abstr. 38-1.

129) Koski, A. and **Wood, S.A.** (2003) Aqueous geochemistry of thermal waters in the Alvord Basin, Oregon. Geol. Soc. Amer. Prog. w. Abstr. CD-ROM Abstr. 166-8.

128) Roach, L.D., Normand, C. and **Wood, S.A.** (2003) Effect of the siderophore desferrioxamine B on the mobility of palladium. Geol. Soc. Amer. Prog. w. Abstr. CD-ROM Abstr. 96-12.

127) Wood, S.A., Brown, K., and Arehart, G. (2003) REE in continental geothermal systems of New Zealand. Abstracts of the 13th Annual V.M. Goldschmidt Conference. Geochim. Cosmochim. Acta, v. 67, p. 536.

126) Ogata, T., Ishiyama, D., **Wood, S.A.**, and Mizuta, T. (2003) Complexation of REE and W in magmatic fluid coexisting with granitic magma based on thermodynamic calculation. Abstracts of the 13th Annual V.M. Goldschmidt Conference. Geochim. Cosmochim. Acta, v. 67, p. A346.

125) Wood, S.A. and Samson, I.M. (2003) The aqueous geochemistry of Sc. Scandium 2003: An international Symposium on the Mineralogy and Geochemistry of Scandium. Abstracts and Proceedings of the Geological Society of Norway No. 2, p. 55.

124) Wood, S.A. and Normand, C. (2003) The hydrothermal geochemistry of Pt and Pd. GAC-MAC Conference, Vancouver, British Columbia, May 25-28, 2003. CD-ROM, Abstract No. 64.

123) Wood, S.A. (2003) Experimental investigations of the solubility and speciation of Au, Ag and Cu in hydrothermal systems relevant to porphyry and epithermal environments. GAC-MAC Conference, Vancouver, British Columbia, May 25-28, 2003. CD-ROM, Abstract No. 26.

122) Redkin, A.F. and **Wood, S.A.** (2003) Adsorption of Gd(III) onto goethite and nontronite: applications to nuclear waste disposal. GAC-MAC Conference, Vancouver, British Columbia, May 25-28, 2003. CD-ROM, Abstract No. 22.

121) Wood, S.A. (2002) The behavior of Pt, Pd and Os in hydrothermal solutions: applications to hydrothermal PGE deposits. Rice University, Houston, TX, November 18, 2002.

120) Wood, S.A. (2002) The role of complexation by natural organic matter in transporting Pt and Pd in surficial environments. 9th International Platinum Symposium, Billings, Montana, July 21-25, 2002, Extended Abstracts, p. 479-481.

119) Armstrong, B.J., **Wood, S.A.**, and Osiensky, J.L. (2002) Rare earth elements as geochemical tracers of groundwater recharge. 23rd Rare Earth Element Research Conference, University of California at Davis, July 13-18, 2000, Prog. and Abstr. p. 78-79.

118) Wood, S.A., Shannon, W., Arehart, G., and Brown, K. (2002) The behavior of the REE in geothermal systems. 23rd Rare Earth Element Research Conference, University of California at Davis, July 13-18, 2000, Prog. and Abstr. p. 52.

117) Day, S.J.R. and **Wood, S.A.** (2002) The new wave in geochemical publishing – electronic journals. Geochim. Cosmochim. Acta **66**, p. A172.

116) Wood, S.A. and Samson, I.M. (2002) The hydrothermal geochemistry of tungsten in granitoid environments: Solubilities of ferberite and scheelite as a function of T, P, pH and salinity. Geochim. Cosmochim. Acta **66**, p. A844.

115) Taunton, A.E., **Wood, S.A.**, and Gunter, M.E. (2002) The thermodynamics of asbestos mineral dissolution and conversion in the human lung. Geochim. Cosmochim. Acta **66**, p. A765.

114) Wood, S.A., Tait, C.D., and Janecky, D.R. (2001) Applications of photoacoustic spectroscopy to aqueous geochemistry. In Eleventh Annual V.M. Goldschmidt Conference, Abstract #3251. LPI Contribution No. 1088, Lunar and Planetary Institute, Houston (CD-ROM).

113) Wood, S.A. and Xiong, Y. (2001) Experimental studies of the speciation and solubility of Os and Re in Hydrothermal solutions. In Eleventh Annual V.M. Goldschmidt Conference, Abstract #3252. LPI Contribution No. 1088, Lunar and Planetary Institute, Houston (CD-ROM).

112) Wood, S.A. (2000) The geochemistry of the rare earth elements in geothermal systems from New Zealand, the Philippines, and the western U.S. Presentation at the University of Nevada-Reno, November 9, 2000.

111) Baker, L.L. and **Wood, S.A.** (2000) Aqueous alteration of Mars analog rocks. Geol. Soc. Amer. Prog. w. Abstr., v. 32(7), p. A-239.

110) Cetiner, Z. and **Wood, S.A.** (2000) Solubility of REE phosphate minerals and stability constants of REE chloride complexes in hydrothermal solutions. Geol. Soc. Amer. Prog. w. Abstr., v. 32(7), p. A-211.

109) Wood, S.A., Shannon, W.M., Baker, L.L. (2000) REE contents of mine drainage from the Pine Creek area, Coeur d'Alene River Valley, Idaho, USA. Geol. Soc. Amer. Prog. w. Abstr., v. 32(7), p. A-188.

108) Shannon, W.M., **Wood, S.A.**, Brown, K. and Arehart, G. (2000) REE contents and speciation in geothermal fluids from New Zealand and the Philippines. Geol. Soc. Amer. Prog. w. Abstr., v. 32(7), p. A-188.

107) Baker, L., Gustafson, J., **Wood, S.** and Geist, D. (2000) Selenium chemistry in the Red Dog Mine ore, mill and tailings pond. Geol. Soc. Amer. Prog. w. Abstr., v. 32 (7), A-191.

106) Wood, S.A., Shannon, W.M., Brown, K. and Arehart, G. (2000) Rare earth element (REE) contents of geothermal fluids from selected geologic environments. 31st International Geological Congress, Rio de Janeiro, Brazil, August 6-17, 2000. Abstracts volume (CD-ROM).

105) Wood, S.A. and Ricketts, A. (2000) The chemical and mineralogical response of allanite to hydrothermal alteration, Casto Granite, Idaho. 31st International Geological Congress, Rio de Janeiro, Brazil, August 6-17, 2000. Abstracts volume (CD-ROM).

104) Wood, S.A., Wesolowski, D.J., Palmer, D.A. and Bénézeth, P. (2000) Solubility of crystalline neodymium hydroxide and hydrolysis of the trivalent Nd ion from 30° to 290°C. 31st International Geological Congress, Rio de Janeiro, Brazil, August 6-17, 2000. Abstracts volume (CD-ROM).

103) Wood, S.A. and Samson, I.M. (2000) Relative hydrothermal solubilities of ferberite and scheelite in granitoid environments. 31st International Geological Congress, Rio de Janeiro, Brazil, August 6-17, 2000. Abstracts volume (CD-ROM).

102) Wood, S.A. (2000) Hydrothermal geochemistry of Pt and Pd: Relative roles of chloride and bisulfide complexes. 31st International Geological Congress, Rio de Janeiro, Brazil, August 6-17, 2000. Abstracts volume (CD-ROM).

101) Wood, S.A. (2000) The role of complexation by natural organic ligands in the environmental geochemistry of Pd. 31st International Geological Congress, Rio de Janeiro, Brazil, August 6-17, 2000. Abstracts volume (CD-ROM).

100) Wood, S.A. (2000) The hydrothermal geochemistry of Pt and Pd: the relative roles of chloride and bisulfide complexes. 31st International Geological Congress, Rio de Janeiro, Brazil, August 6-17, 2000. Abstracts volume (CD-ROM).

99) Gunter, M.E. and **Wood, S.A.** (2000) Can chrysotile alter to tremolite in the human lung? EOS (Trans. Amer. Geophys. Union), v. 81, S45.

98) Wood, S.A. and Xiong, Y. (2000) Experimental evidence bearing on the mobility of Re and Os under hydrothermal conditions. EOS (Trans. Amer. Geophys. Union), v. 81, S427.

97) Mather, C.M., **Wood, S.A.**, and Samson, I.M. (2000) Geochemical model of the Coeur Rochester Ag-Au Mine, Rochester District, Nevada. Geology and Ore Deposits 2000: The Great Basin and Beyond, Prog. W. Abstr., Geol. Soc. Nevada Symposium 2000, Reno/Sparks, May 2000, p. 62.

96) Wood, S.A., Shannon, W.M. and Baker, L.L. (2000) REE contents of mine drainage from the Pine Creek area, Coeur d'Alene River Valley, Idaho, USA. Geol. Soc. Amer. Prog. w. Abstr., v. 32(5), p. A-43.

95) Wood, S.A., Baker, L.L. and Shannon, W.M. (2000) Metals in mine drainage waters from the Pine Creek area, Coeur d'Alene River Valley, Idaho. Geol. Soc. Amer. Prog. w. Abstr., v. 32(5), p. A-43.

94) Baker, L.L., Gustafson, J. and **Wood, S.A.** (2000) Geochemical controls on Se solubility in the tailings impoundment of the Red Dog Mine. Geol. Soc. Amer. Prog. w. Abstr., v. 32(5), p. A-2.

93) Shannon, W.M., **Wood, S.A.**, Brown, K., Arehart, G., and Wright, M. (1999) REE contents of geothermal fluids from selected geologic environments. EOS (Trans. Amer. Geophys. Union), v. 80, p. F1187.

92) Wood, S.A. and Ricketts, A. (1999) The chemical and mineralogical response of allanite to hydrothermal alteration, Casto Granite, Idaho. EOS (Trans. Amer. Geophys. Union), v. 80, p. F1185.

91) Mather, C.M., **Wood, S.A.** and Samson, I.M. (1999) Geochemical model of the Coeur Rochester Ag-Au mine, Rochester District, Nevada. Geol. Soc. Amer. Prog. w. Abstr., v. 31, p. A-404.

90) Holick, P.A. and **Wood, S.A.** (1999) Fluid-inclusion study of the Morenci porphyry copper deposit, Arizona: Metal content of the ore-forming brine. Geol. Soc. Amer. Prog. w. Abstr., v. 31, p. A-404.

89) Shannon, W.M., **Wood, S.A.**, Brown, K. and Arehart, G. (1999) REE contents of geothermal fluids from several geologic environments. Geol. Soc. Amer. Prog. w. Abstr., v. 31, p. A-351-A-352.

88) Wood, S.A., Wesolowski, D.J., Palmer, D.A. and Bénézeth, P. (1999) The solubility of crystalline $Nd(OH)_3$ and hydrolysis of Nd^{3+} from 30° to 290°C with in-situ pH measurement. Geol. Soc. Amer. Prog. w. Abstr., v. 31, p. A-221.

87) Baker, L.L., Gustafson, J. and **Wood, S.A.** (1999) Selenium release kinetics, transport, and fate during flotation of Zn-Pb ores. Geol. Soc. Amer. Prog. w. Abstr., v. 31, p. A-28.

86) Wood, S.A., Palmer, D.A., Wesolowski, D.J. (1999) Determination of the solubility of crystalline $Nd(OH)_3$ in sodium triflate solutions from 30° to 250°C with *in situ* pH measurement. Ninth Annual V.M. Goldschmidt Conference Abstracts, August 22-27, 1999, Harvard University, Cambridge, Massachusetts. Lunar and Planetary Institute Contribution No. 791, Houston, TX, p. 329-330.

85) Wood, S.A., Anovitz, L.M., Elam, J.M., Cole, D.R., Riciputi, L.R. and Bénézeth, P. (1999) The effect of fulvic acid on the extent and rate of dissolution of obsidian. Ninth Annual V.M. Goldschmidt Conference Abstracts, August 22-27, 1999, Harvard University, Cambridge, Massachusetts. Lunar and Planetary Institute Contribution No. 791, Houston, TX, p. 329.

84) Wood, S.A. and Ricketts, A. (1999) The chemical and mineralogical response of allanite to hydrothermal alteration, Casto Granite, Idaho. Ninth Annual V.M. Goldschmidt Conference Abstracts, August 22-27, 1999, Harvard University, Cambridge, Massachusetts. Lunar and Planetary Institute Contribution No. 791, Houston, TX, p. 328.

83) Ishiyama, D., Sato, H., Mizuta, T., Kimura, J., and **Wood, S.A.** (1998) An experiment on quantitative chemical analysis of an individual fluid inclusion using LA-ICP-MS. Geol. Soc. Amer. Prog. w. Abstr., v. 30, p. A-370.

82) Wood, S.A., Finucane, K.G., and Samson, I.M. (1998) Fluid inclusion microthermometry of minerals of the Snowbird deposit, Mineral County, Montana. Geol. Soc. Amer. Prog. w. Abstr., v. 30, p. A-20.

81) Wood, S.A. (1998) Solubility studies of REE oxalate systems in aqueous solutions: Applications to geochemistry and radioactive waste management. Presentation at the University of Windsor, October 21, 1998.

80) Wood, S.A. (1998) The solubility of siderophile elements (Pt, Pd, Os and Re) in hydrothermal solutions. Abstracts of the 17th General Meeting of the International Mineralogical Association, August 9-14, 1998, Toronto, Canada, A-135.

79) Gibson, P.E. and **Wood, S.A.** (1997) Mineralogy, geochemistry and mobility of the REE and thorium at Lemhi Pass, Idaho. Geol. Soc. Amer. Prog. w. Abstr., v. 29, A-50.

78) Wood, S.A., Tait, C.D., and Janecky, D.R. (1997) Raman spectroscopic studies of thio-arsenites. Geol. Soc. Amer. Prog. w. Abstr., v. 29, p. A-322.

77) Xiong, Y. and **Wood, S.A.** (1997) Experimental determination of probable oxidation state(s) of rhenium under hydrothermal conditions. Geol. Soc. Amer. Prog. w. Abstr., v.29, p. A26.

76) Xiong, Y. and **Wood, S.A.** (1997) An experimental study of the solubility of rhenium in supercritical KCl solutions. Proceedings of the Fifth International Symposium on Hydrothermal Reactions, Gatlinburg, Tennessee, July 20-24, 1997, p. 198-200.

75) Baker, L.L and **Wood, S.A.** (1997) Measurement of corrosion rates of metals and metal alloys in supercritical oxygen-bearing brines: Applications to SCWO reactor design. Proceedings of the Fifth International Symposium on Hydrothermal Reactions, Gatlinburg, Tennessee, July 20-24, 1997, p. 259.

74) Ding, R. and **Wood, S.A.** (1997) The potentiometric determination of stability constants for lanthanum acetate complexes in aqueous solutions to 85°C. Proceedings of the Seventh Annual Goldschmidt Conference, July 2-6, 1997, Tucson, Arizona, p. 58-59.

73) Gibson, P.E., **Wood, S.A.** and Lang, L. (1997) Geochemistry and mineralogy of the Lemhi Pass rare-earth-element/thorium deposits: An example of rare-earth-element/thorium mobility. Proceedings of the Seventh Annual Goldschmidt Conference, July 2-6, 1997, Tucson, Arizona, p. 80-81.

72) Wood, S.A. (1997) Calculation of the volatility of copper chlorides at elevated temperatures and pressures: Why is copper enriched in the vapor phases of fluid inclusions? Proceedings of the Seventh Annual Goldschmidt Conference, July 2-6, 1997, Tucson, Arizona, p. 220-221.

71) Wood, S.A. (1997) Calculation of the distribution of cobalt chloride complexes and the solubility of cobalt sulfides in hydrothermal solutions to 350°C. Proceedings of the Seventh Annual Goldschmidt Conference, July 2-6, 1997, Tucson, Arizona, p. 220.

70) Wood, S.A. (1997) REE, Th and U in geothermal fluids from central Idaho. Presentation at Selwyn Mines, Australia, January 10, 1997.

69) Wood, S.A. (1997) REE, Th and U in geothermal fluids from central Idaho. Presentation at Institute of Geological & Nuclear Sciences, Taupo, New Zealand, January 16, 1997.

68) Pickrell, J.M. and **Wood, S.A.** (1996) Stability constants of palladium-hydroxide complexes as a function of ionic strength (0.1-1 M) and temperature (25-85°C). Geol. Soc. Amer. Prog. w. Abstr., v. 28, A-148.

67) Wood, S.A. and van Middlesworth, P.E. (1996) Geochemistry of REE, U and Th in thermal waters on the periphery of the Idaho Batholith: Part 2. REE speciation and monazite solubility modeling. Geol. Soc. Amer. Prog. w. Abstr., v. 28, A-468.

66) van Middlesworth, P.E. and **Wood, S.A.** (1996) Geochemistry of REE, U and Th in thermal waters on the periphery of the Idaho Batholith: Part 1. Analytical methods and results. Geol. Soc. Amer. Prog. w. Abstr., v. 28, A-468.

65) Wood, S.A. (1996) Studies of the mobility of REE, U, and Th in geological environments and their relevance to radioactive waste disposal. Invited lecture at University of Windsor, Windsor, ON, November 21, 1996.

64) Wood, S.A. (1996) Studies of the mobility of REE, U, and Th in geological environments and their relevance to radioactive waste disposal. Invited lecture at University of Nebraska, Lincoln, NE, September 6, 1996.

63) Wood, S.A. (1996) Studies of the mobility of REE, U, and Th in geological environments and their relevance to radioactive waste disposal. Twenty-first Rare Earth Element Research Conference, July 7-12, 1996, Duluth, Minnesota (Invited).

62) Wood, S.A. (1995) Recent advances in the aqueous geochemistry of Pt and Pd. American Chemical Society Fall Meeting - Chicago, Illinois, August 20-24, 1995.

61) Pickrell, J.M. and **Wood, S.A.** (1995) Hydrolysis of Pd^{2+} in aqueous solution. American Chemical Society Fall Meeting - Chicago, Illinois, August 20-24, 1995.

60) Wood, S.A. (1995) UV-visible absorption spectroscopic study of Pd-oxalate complexes: Applications to the migration of Pd in surficial media. American Chemical Society Fall Meeting - Chicago, Illinois, August 20-24, 1995.

59) Wood, S.A., Tait, C.D., and Janecky, D.R. (1995) Photoacoustic spectroscopic studies of sparingly soluble REE complexes. 41st International Conference on Spectroscopy and Analytical Techniques, August 14-16, 1995. Windsor, Ontario, Canada

58) Wood, S.A., Tait, C.D., and Janecky, D.R. (1995) Raman spectroscopic studies of thioarsenite species. 41st International Conference on Spectroscopy and Analytical Techniques, August 14-16, 1995. Windsor, Ontario, Canada

57) Gammons, C.H., **Wood, S.A.**, and Williams-Jones, A.E. (1995) Stability of Nd-chloride complexes at elevated temperature. Geol. Soc. Amer. Prog. w. Abstr., v. 27, A-309.

56) Wood, S.A., Wesolowski, D.J. and Palmer, D.A. (1995) The potentiometric determination of stability constants of Nd acetate complexes from 25° to 250°C. Geol. Soc. Amer. Prog. w. Abstr., v. 27, A-309.

55) Wood, S.A. (1995) Solubility constraints on the size of hydrothermal ore deposits. In A.H. Clark, ed., Giant Ore Deposits - II. Controls on the Scale of Orogenic Magmatic-Hydrothermal Mineralization - Proceedings. Kingston, Ontario, April 25-27, 1995, 262-299 (invited).

54) Van Middlesworth, P. and **Wood, S.A.** (1995) Determination of REE, U and Th content in thermal waters from the Challis-Salmon region of Idaho, USA. Geol. Assoc. Can. - Min. Assoc. Can. Ann. Mtg. Abstr. **20**, A-71.

53) Wood, S.A., Wesolowski, D.J., and Palmer, D.A. (1995) The potentiometric determination of stability constants of Nd acetate complexes from 25° to 250°C. Geol. Assoc. Can. - Min. Assoc. Can. Ann. Mtg. Abstr. **20**, A-111.

52) Wood, S.A., Tait, C.D., and Janecky, D.R. (1994) Photoacoustic spectroscopic studies of sparingly soluble rare earth element complexes. Geol. Soc. Amer. Prog. w. Abstr., A-201.

51) Aja, S.U., **Wood, S.A.**, & Williams-Jones, A.E. (1993) Synthesis and solubility of neodymium hydroxybastnaesite. 4th Int. Symp. Hydrothermal Reactions, Nancy, France (Aug. 31 - Sept. 3, 1993), Institute Lorrain des Geosciences, Nancy, p. 3.

50) Wood, S.A. (1993) Calculation of the solubility of scheelite and wolframite in hydrothermal brines. 4th Int. Symp. Hydrothermal Reactions, Nancy, France (Aug. 31 - Sept. 3, 1993), Institute Lorrain des Geosciences, Nancy, p. 275.

49) Wood, S.A. and Tait, C.D. (1993) Theoretical and experimental studies of rare earth element complexes with carboxylic acid anions: Geological applications. Book of Abstracts, 205th National Mtg. Amer. Chem. Soc., March 28-April 2, 1993, Denver, CO (invited).

48) Wood, S.A., Tait, C.D. & Janecky, D.R. (1993) Spectroscopic investigations of aqueous REE complexes with acetate and oxalate to 130°C. EOS (Trans. Amer. Geophys. Union), 74, p. 328.

47) Wood, S.A. (1993) The role of humic and fulvic acids in the transport of Pt, Pd, and Au. Geol. Soc. Amer. Prog. w. Abstr.

46) Shibue, Y. and **Wood, S.A.** (1992) Solubility of fluorite in supercritical aqueous fluid. EOS Abstracts **73**, 353-354.

45) Wood, S.A. (1992) Raman spectroscopic investigations of the speciation of As in alkaline sulfide solutions at 25°C. 29th Int. Geol. Congress, Abstracts, v. 3, 762.

44) Wood, S.A. (1992) Theoretical prediction of the stabilities of rare earth element complexes with carboxylic acid anions: Application to nuclear waste disposal. 29th Int. Geol. Congress, Abstracts, v. 1, 222.

43) Williams-Jones, A.E. and **Wood, S.A.** (1992) Theoretical calculation of ion activity relationships involving spodumene, petalite and pollucite: Application to granitic pegmatites. 29th Int. Geol. Congress, Abstracts, v. 1, 200.

42) Aja, S.U., **Wood, S.A.** and Williams-Jones, A.E. (1991) The solubility of alkali-bearing zirconium minerals between 25 and 200°C. GSA Annual Mtg., San Diego, CA, GSA Abstr. w. Prog. **23**, A214.

41) Wood, S.A., Tait, C.D., Janecky, D., and Vlassopoulos, D. (1991) The interaction of Pd^{2+} with fulvic acid and simple organic acids - Solubility and spectroscopic studies. GSA Annual Mtg., San Diego, CA, GSA Abstr. w. Prog. **23**, A214.

40) Wood, S.A., Mountain, B.W. and Pan, P. (1991) Hydrothermal transport of Pt and Pd - The relative importance of chloride vs. bisulfide complexes. GSA Annual Mtg., San Diego, CA, GSA Abstr. w. Prog. **23**, A214.

39) Aja, S., **Wood, S.A.** and Williams-Jones, A.E. (1991) Polyhedral models of thermodynamic properties: A refinement. GAC-MAC Conference, Toronto, May 1991, Abstr. w. Prog. **16**, A1.

38) Marr, R. and **Wood, S.A.** (1991) Preliminary petrogenetic grids for sodium, potassium and calcium zirconosilicates. GAC-MAC Conference, Toronto, May 1991, Abstr. w. Prog. **16**, A80.

37) Wood, S.A. (1991) Theoretical prediction of the speciation and solubility of beryllium in hydrothermal solutions to 300°C. GAC-MAC Conference, Toronto, May 1991, Abstr. w. Prog. **16**, A134.

36) Wood, S.A. (1991) Studies of the interaction of Pd^{2+} with fulvic acid and simple organic analogues. GAC-MAC Conference, Toronto, May 1991, Abstr. w. Prog. **16**, A134.

35) Kranidiotis, P. and **Wood, S.A.** (1990) Copper solubility in hydrothermal chloride solutions from 200 to 400°C. GSA Annual Mtg., Dallas, TX, GSA Abstr. w. Prog. **22**, A157.

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_2, 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 spectropohotometry. EOS (AGU abstracts) v. 69 (April 19, 1988).

10) Kranidiotis, P. and **Wood, S.A.** (1988) The solubility of Cu-Cu_2O in hydrothermal chloride solutions from 150 to 350^{o}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^{o}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^{o}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^{o}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^{o}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

8) Wood, S.A. (2004) The hydrothermal geochemistry of the rare earth elements. The Gangue (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"	*$34,000*	5/85-4/87
Wood, S.A.	NSERC - Operating - "Solubility of ore-forming minerals in hydrothermal solutions"	*$36,000*	5/87-4/89
Wood, S.A.	NSERC - Operating - "Solubility of ore-forming minerals in hydrothermal solutions"	*$63,000*	5/89-4/92
Wood, S.A.	NSERC - Operating - "The nature & thermodynamics of ore metals in hydrothermal solutions"	*$32,000*	5/92-4/94
Wood, S.A.	NSERC - Equipment - "Hydrothermal solubility apparatus"	*$24,500*	5/85-4/86
Mucci, Wood, S.A., et al.	NSERC - Equipment - "Atomic absorption spectrometer with flame and Zeeman graphite furnace"	*$130,000*	5/87-4/88
Wood, S.A., Mucci, et al.	NSERC - Equipment - "High temperature/high pressure solubility apparatus"	*$48,314*	5/88-4/89
Mucci, Wood, S.A., et al.	NSERC - Equipment - "Gradient ion chromatography unit"	*$61,800*	5/90-4/91
Williams-Jones, Wood, S.A., et al.	NSERC - Strategic - "The genesis of Y, Zr, and REE deposits: Implications for exploration"	*$310,350*	5/88-4/91
Wood, S.A., Williams-Jones, et al.	NSERC - Equipment - "Hydrothermal flow-through apparatus"	*$50,532*	5/88-4/89
Wood, S.A., Baker, et al.	NSERC - Infrastructure - "High temperature experimental geochemistry laboratory"	*$84,000*	5/90-4/93
Wood, S.A.	FCAR - New Researcher - "The solubility and transport of strategic and high technology metals in hydrothermal solutions"	*$33,000*	5/89-4/92
Williams-Jones, Wood, S.A., et al.	FCAR - Team Grant - "Controls on the concentration of strategic and high technology metals in and around granitoid intrusions"	*$81,000*	5/86-4/89
Williams-Jones, Wood, S.A., et al.	FCAR - Team Grant - "Controls on the concentration of strategic and high technology metals in and around granitoid intrusions"	*$150,000*	5/89-4/92
Williams-Jones, Wood, S.A., et al.	FCAR - Equipment - "Hydrothermal flow-through apparatus"	*$14,675*	5/86-4/87
Williams-Jones, Wood, S.A., 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"	*$105,000*	5/92/4/95

Fox, Wood, S.A., 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, Wood, S.A., 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, Wood, S.A., 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
Wood, S.A., 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
Wood, S.A., 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
Wood, S.A., 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
Wood, S.A., 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.	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 tool"	$385,604	1/98-12/01
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"	$203,000	10/98-9/01
Wood, S.A.	DOE-EMSP- "Developing a fundamental basis for the characterization, separation and disposal of	$210,000	10/01-9/04

	plutonium and other actinides in high level radioactive waste"		
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	4/03-3/06
Wood, S.A., 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

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.