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EDUCATION

Ph.D., Department of Geology and Geophysics, University of California, Berkeley, 1995
Thesis Advisor: Donald J. DePaolo

M.Sc., Institute of Meteoritics, Department of Geology, University of New Mexico, 1989
Thesis Advisors: Klaus Keil, Horton Newsom

B.A., Colorado College, Cum Laude, with Honors in Geology, 1986

PROFESSIONAL EXPERIENCE**University of Wyoming, Laramie, Wyoming**

Associate Professor, Department of Geology and Geophysics (2009–present)

Woods Hole Oceanographic Institution, Woods Hole, Massachusetts

Associate Scientist with Tenure, Department of Geology and Geophysics (2007–2009)

Associate Scientist, Department of Geology and Geophysics (2002–2007)

Assistant Scientist, Department of Geology and Geophysics (1997–2002)

Institut Universitaire Européen de la Mer (IUEM), Brest, France

Visiting CNRS Fellow (2002)

Los Alamos National Laboratory, Los Alamos, New Mexico

Guest Scientist, Isotope and Nuclear Chemistry Group (1996–2005)

AWARDS and FELLOWSHIPS

Mellon Independent Study Awards, Woods Hole Oceanographic Institution (1999; 2001; 2006; 2008)

Postdoctoral Scholar Fellow, Woods Hole Oceanographic Institution (1995–1997)

IGPP Graduate Study Grant, Institute of Geophysics and Planetary Physics, UC, Berkeley (1991–1995)

Outstanding Graduate Student Instructor, University of California, Berkeley (1992)

Estwing Outstanding Senior, Colorado College (1986)

Getty Oil Fellowship, Colorado College (1984–1985)

RESEARCH INTERESTS

Application of U-series disequilibria, radiogenic isotope geochemistry, major- and trace- element geochemistry and the principles of physics and chemistry to a variety of fundamental problems in Earth and planetary sciences, including: accretionary and core-formation history and processes in planets; the origin and evolution of the Earth's mantle and continental crust; the generation and transport of basaltic magmas; the evolution of volcanic systems; radiometric methods for dating igneous and sedimentary rocks; and, isotope hydrology.

EDUCATIONAL ACTIVITIES

University of Wyoming Classes and Seminars

Introduction to Isotope Geology (Spring 2010)
Genesis, Impact and Predictability of Yellowstone Volcanic Systems (Fall 2009)
Basin and Range Volcanism (Spring 2010)
Planetary Volcanology (Spring 2010)
Ocean Tectonics (Spring 2010)

WHOI Classes and Seminars:

Solid Earth Geochemistry (2003, 2005, 2007)
Introduction to Isotope Chemistry (2003-present)
Introduction to Marine Geology and Geophysics (2002-present)
WHOI Geochemistry Seminar (1996 – 2003)

Students and Postdocs Advised/Supervised/Committees:

University of Wyoming

Tim Moloney, MSc student

WHOI

Advised

Evelyn Mervine, Ph.D. Candidate, October 2008
Chris Waters, Ph.D. Candidate, February 2007
Lynne Elkins, Ph.D., December, 2008
Sylvain Pichat, WHOI Postdoctoral Investigator, 2002-2003
Mathew Jull, WHOI Postdoctoral Investigator, 1998-2002

Supervised

Christian Miller, (Thesis Advisor: Bernhard Puecker-Ehrenrink) Ph.D. 2008
Matt Jackson, MIT/WHOI (Thesis Advisor: Stan Hart), Ph.D. 2007
Jeff Standish, MIT/WHOI (Thesis Advisor: Henry Dick), Ph.D. 2005
Alberto Saal- MIT/WHOI (Thesis Advisor: Stan Hart), Ph.D. 1998

WHOI Guest Students, Postdocs and Visiting Scientists:

Sylvain Pichat, École Normale Supérieure de Lyon (Thesis Advisor: Francis Albarede), Ph.D. 2001
Ramananda Chakrabarti, University of Rochester, N.Y. (Thesis Advisor: Asish Basau), Ph.D. 2006
Sarah Aciego, University of California, Berkeley, (Thesis Advisor: Don DePaolo), Ph.D. 2006
Darren Tolstrup, University of California, Santa Cruz, Ph.D. Candidate (Thesis Advisor: Jim Gill)
Peter Kelly, New Mexico Institute of Technology (Thesis Advisor: Philip Kyle), M.Sc. 2006
Chris Wyatt, University of South Carolina, Ph.D. Candidate (Thesis Advisor: Gene Yogodzinski)
Elizabet Head, Michigan Tech University, Ph.D. Candidate (Thesis Advisor: Bill Rose, Simon Carn)
Frank Tepley, University of Illinois, Urbana, visiting Postdoctoral Investigator
Mark Reagan, University of Iowa, Professor
Kari Cooper, University of California, Davis, Assistant Professor
Jennifer Garrison, University of Iowa, Margins Postdoctoral Fellow

FIELD EXPERIENCE and CRUISE PARTICIPATION

Nyirangongo, Nyamuragira, DR Congo (2007)
Mt. Etna, Italy (2004; 2005; 2006)
Stromboli, Italy (2006)
Vulcan Masaya, Nicaragua (2003; 2006)
9-10°N East Pacific Rise, RV Atlantis, with DSV Alvin (2001; 2004)
Hekla, Thjeistarykur, Krafla Iceland (1999; 2003)
Mt. Erebus, Antarctica (austral summers 1988-89; 1989-90; 1990-91; 1993-94; 1994-95; 2002-03)
Oman Ophiolite, Oman (1997; 2009)
Kilauea, Mauna Loa, Hualalai, Mauna Kea and Haleakala, Hawaii (1992; 1993; 1997; 2008)

Transantarctic Mountains, Antarctica (austral summers 1991-92; 1995-96)
NASA Erebus Robotics Development Study, Mt. Erebus, Antarctica (austral summer, 1992-93)
Jemez Volcanic Field, New Mexico (1986)

INVITED KEYNOTE AND PLENARY TALKS

Titles listed in “Presented Papers with Published Abstracts”

Plenary Lecture, 16th International Symposium on Polar Sciences, Incheon Korea, June 2009
Keynote speaker, Goldschmidt, Cologne, Germany, 2007
Keynote speaker, International Conference on Evolution, Transfer and Releases of Magmas and Volcanic Gases, Academia Sinica, Taipei, 2007
Keynote speaker, International Association Volcanology and Chemistry of Earth’s Interior, Guangzhou, China, 2006
Keynote speaker, Goldschmidt, Moscow Idaho, USA, 2005
Plenary Lecture, UCSC Keck Laboratory Dedication and Symposium on Isotope Analysis, 2004
Invited talk, Spring EGS/AGU/EUG, Nice, France, 2003
Keynote speaker, Goldschmidt, Davos, Switzerland, 2002
Keynote speaker, Goldschmidt, Oxford, UK, 2000
Invited AGU talks: 1995; 1996; 1999; 2006

INVITED DEPARTMENT COLLOQUIUM TALKS

Cambridge University, UK (2008)
Oxford University, UK (November, 2008)
University of Iowa, IA (November, 2008)
Michigan Tech University (September 2008)
Boston University, MA (November, 2006)
Air Force Academy, CO (March, 2000; September, 2006)
Harvard University, MA (April, 1999; March, 2002; December, 2005)
Dartmouth College, NH (November, 2004)
University of Wyoming, WY (April, 2003; Sept 2008)
University of Mainz, Germany (March, 2003)
Institut Universitaire Européen de la Mer (IUEM), Brest, France (October, 2002)
University of Bristol, UK (October, 2001; November 2008)
École Normale Supérieure, Lyon, France (November, 1999; March, 2001)
Massachusetts Institute of Technology, MA (April, 2001; November 2005)
Colorado College, CO (September, 1996; October, 2001)
Brown University, RI (March, 1999)
University of Rochester, NY (March, 1999)
Institute of Geophysics and Planetary Physics, Los Alamos, NM (March, 1998; 2002)
Department of Terrestrial Magnetism, Carnegie, Washington DC (October, 1997)
New Mexico Institute of Technology and Mining, NM (April, 1997)
University of Hawaii, HI (April, 1993; March, 1997)
University of Maine, ME (November, 1996)
University of Rhode Island, RI (October, 1996; October 2001)
University of Florida, FL (April, 1996)
Florida State University, FL (April, 1996)
Hawaiian Volcano Observatory, HI (April, 1993; 1994)
University of Arizona, AZ (February, 1993)

PROFESSIONAL ACTIVITIES

U of Wyo Geology and Geophysics Advisory Committee (2009- present)
U of Wyo Geology and Geophysics Graduate Admissions Committee (2010-present)
WHOI Scientific Staff Executive Committee (2007-2009)
WHOI Radiation Safety Committee (2004-2009)
WHOI Geology and Geophysics Safety Committee (2002-2009)

WHOI ICPMS/PIMMS Oversight Committee (2001–2009; “Committee Chair, 2001-2004; 2008-2009)
WHOI Post-Doctoral Mentoring Committee (2006-2009)
WHOI Geology and Geophysics, Internal Merit Review Committee (2002; 2003)
WHOI Geology and Geophysics “Space Committee” (2004, 2008)
Convecting Mantle Symposium, Goldschmidt Intern. Program Committee, Melbourne, AUS, 2006
Session Organizer and Convener, Goldschmidt 2006, “*Integrated Studies of MORB Petrogenesis: Sources, Melting Processes, and Timescales.*”

PROFESSIONAL ACTIVITIES- continued

Participant RIDGE Y2K Implementation Plan Workshop, Albuquerque, NM, 2002
Invited Discussion Leader RIDGE Y2K Educational Workshop, Long Beach, CA, 2002
Session Chair, Fall AGU, 1997, “*Volcanology II: Timing of Magmatic Processes.*”
Session Organizer and Convener, Goldschmidt, 1999, “*Mantle Melting: Sources, Timescales, Melt Migration and Melt-solid Interaction.*”
Session Chair, MELT Workshop, 1996

PROFESSIONAL AFFILIATIONS

Geological Society of America, Member (2005-present)
American Geophysical Union, Life Member (1994-present)
IAVCEI, Life Member (2007-present)

COMMUNITY SERVICE

Rocky Mountain Field Institute, Member of the Board of Directors (1996-present) <http://www.rmfi.org/>
Ritt Kellogg Memorial Fund, Colorado College, Advisory Committee (1999- present; Chair, 2000-2007)
<http://www.rittkelloggfund.org>
Big Brothers & Big Sisters of Cape Cod and the Islands, Member of the Board of Directors (1996-2001)

PUBLIC OUTREACH, EDUCATION AND SERVICE

Featured Scientist on Discovery Channel, Against the Elements, Masaya, March 6, 2009
Featured Scientist in children’s book “Lava Scientists: Careers on the Edge of Volcanoes.” Enslow Publishers Inc., 2009 (author Sara Latta) <http://www.saralatta.com/>
New Scientist, Interview, December, 2008 <http://www.newscientist.com/article/mg20026877.200-the-man-who-collects-molten-lava-for-a-living.html?full=true>
New Scientist, July 2008, "Into the Mouth of Hell."
Oceanus, Fall, 2006, “*Into the 'Mouth of Hell': A journey into the crater of an active volcano.*”
<http://www.who.edu/oceanus/viewArticle.do?id=13350§ionid=1000>
Popular Mechanics, SA, November, 2006, “*Into the 'Mouth of Hell'.*”
National Geographic Magazine, October, 2004, “*Sniffing for Clues to the Dinosaurs Demise.*”
Miracle Continent Antarctica- Mt Erebus. Initially Broadcast on NHK Public Television, Japan, 2001
Senior Citizen and Elementary, Middle and High School Lectures on Volcanology and Geology
High School Science Fair Judge, Falmouth MA, Berkeley CA, and Oakland CA

CORORATE AFFILIATIONS

Opticad Corporation, Owner, 2008-present <http://www.opticad.com/apps.html>
Opticad Corporation, Member of the Board of Directors (1990-present)

For CLIMBING RESUME and OUTDOOR EDUCATION AND GUIDING EXPERIENCE see:
http://geology.uwyo.edu/?q=sims_mountresume

PUBLICATIONS IN REFEREED JOURNALS AND BOOKS

41) *Waters, C.L., K. W.W. Sims, M. R. Perfit, J. Blichert-Toft, and J. Blusztajn (submitted). “Linking volcanic resurfacing and magmatic cycling: evidence from isotopically enriched basalts at 9-10°N East Pacific Rise.” Submitted to Journal of Petrology.

- 40) *Standish, J.J. and K.W.W. Sims (accepted). “*Young Volcanism and Rift Valley Construction at an Ultraslow Spreading Ridge.*” Submitted to Nature Geoscience.
- 39) *Aciego, S.M., F. Jourdan, D.J. DePaolo, B.M. Kennedy, P.R. Renne, and K. W. W. Sims (2010) Combined U-Th/He and $^{40}\text{Ar}/^{39}\text{Ar}$ Geochronology of Post-shield Lavas from the Mauna Kea and Kohala volcanoes, Hawaii. *Geochimica Cosmochimica Acta*, 74, 1620-1635.
- 38) Cooper, K. M., J. M. Eiler, K.W.W. Sims, C. H. Langmuir (2009). Distribution of recycled crust within the upper mantle: Insights from the oxygen isotope composition of MORB from the Australian-Antarctic Discordance. *Geochemistry, Geophysics and Geosystems*, 10, 12, Q12004; doi:10.1029/2009GC002728
- 37) *Chakrabarti, R., K.W.W. Sims; A.R Basu; Mark Reagan; and J. Durieux (2009). *Timescales of Magmatic Processes and Eruption Ages of the Nyiragongo volcanics from ^{238}U - ^{230}Th - ^{226}Ra - ^{210}Pb disequilibria.* *Earth Planet Sci. Lett.* 288, 149–157 doi:10.1016/j.epsl.2009.09.017
- 36) *Kelly, P.J., P.R. Kyle, N.W. Dunbar, and K.W.W. Sims (2008). “*Geochemistry and mineralogy of the phonolite lava lake, Mount Erebus volcano, Antarctica: 1972 – 2004 and comparison with older lavas.*” Invited article to special volume on Mt Erebus in *Journal of Volcan. Geothermal Res.* 177, 589-605.
- 35) Sims, K.W.W., J. Blichert-Toft, P.R. Kyle, S. Pichat, J. Bluzstajn, P.J. Kelly, L.A. Ball, and G. D. Layne (2008). “*A Sr, Nd, Hf, and Pb isotope perspective on the genesis and long-term evolution of alkaline magmas from Erebus volcano, Antarctica.*” Invited article to special volume on Mt Erebus in *Journal of Volcan. Geothermal Res.* 177, 606-618.
- 34) Reagan, M.K., S. Turner, M.K. Legg, K.W.W. Sims and V.L. Hards (2008). “ *^{238}U and ^{232}Th decay series constraints on the timescales of crystal fractionation to produce the phonolite erupted in 2004 near Tristan da Cunha, South Atlantic.*” *Geochim. Cosmochim. Acta*, 72, 17, 4367-4378.
- 33) Sims, K.W.W., S.R. Hart, M.K. Reagan, J. Bluzstajn, H. Staudigel, R.A. Sohn, G.D. Layne, L.A. Ball and J. Andrews (2008). “ *^{238}U - ^{230}Th - ^{226}Ra - ^{210}Pb - ^{210}Po , ^{232}Th - ^{228}Ra and ^{235}U - ^{231}Pa constraints on the ages and petrogenesis of Vailulu and Malumalu Lavas, Samoa.*” *Geochemistry, Geophysics and Geosystems*, 9, Q04003, doi:10.1029/2007GC001651
- 32) Sims, K.W.W., J. Gill, A. Dossetto, D. Hoffmann, C.C. Lundstrom, R. Williams, L.A. Ball, D. Tollstrup, S.P. Turner, J. Prytulak, J. Glessner, J.J. Standish, and T. Elliott (2008). “*An inter-laboratory assessment of the Th Isotopic Composition of Synthetic and Rock standards.*” *Geostandards and Analytical Research*, 32, 1, 65-91.
- 31) *Elkins, L., G.A. Gaetani, and K.W.W. Sims (2008). “*Partitioning of U and Th during garnet pyroxenite melting: constraints on sources of alkaline ocean island basalts.*” *Earth and Planetary Science Letters*, 265, 270-286, doi:10.1016/j.epsl.2007.10.034.
- 30) Ball, L.A., K.W.W. Sims, and J. Schwieters (2008). “*Measurement of $^{234}\text{U}/^{238}\text{U}$ and $^{230}\text{Th}/^{232}\text{Th}$ in volcanic rocks using the Neptune PIMMS.*” *Journal Analytical Atomic Spectrometry*, 23, 173-180. doi: 10.1039/b703193a
- 29) Turner, S.P., K.W.W. Sims, and M.K. Reagan (2007). “*A ^{210}Pb - ^{226}Ra - ^{230}Th - ^{238}U study of Klyuchevskoy and Bezymianny volcanoes, Kamchatka.*” *Geochimica Cosmochimica Acta*, 71, 4771-4785. doi: 10.1016/j.gca.2007.08.006.
- 28) Giammanco, K.W.W. Sims and S., M. Neri (2007). “*Shallow rock stresses and gas transport at Mt. Etna (Italy) monitored through ^{220}Rn , ^{222}Rn and soil CO_2 emissions in soil and fumaroles.*” *Geochemistry, Geophysics and Geosystems*, 8, Q10001, doi:1029/2007GC00164

- 27) *Moune, S., F. Faure, P.-J. Gauthier, and K.W.W. Sims (2007). "*Pele's hairs and tears: natural probe of volcanic plume.*" *Journal of Volcanology and Geothermal Research*, 164, 244-253, doi:10.1016/j.jvolgeores.2007.05.07.
- 26) Sims, K.W.W., R.P. Ackert, Jr., F. Ramos, R.A. Sohn, M.T. Murrell, and D. J. DePaolo (2007). "*Determining eruption ages and erosion rates of Quaternary basaltic volcanism from combined U-series disequilibria and cosmogenic exposure ages.*" *Geology*, vol 35, pp 471-474, doi:10.1130/G23381A.1.
- 25) *Aciego, S.M., D.J. DePaolo, B.M. Kennedy, M.P. Lamb, K.W.W. Sims, and W. Dietrich (2007). "*Combining [³He] cosmogenic dating with U-Th/He eruption ages using olivine in basalt.*" *Earth and Planetary Science Letters*, vol 254, number 3-4, pp 288-302, doi: 10.1016/j.epsl.2006.11.039.
- 24) Sims, K.W.W. and S. R. Hart (2006). "*Comparison of Th, Sr, Nd and Pb Isotopes in Oceanic Basalts: Implications for Mantle Heterogeneity and Magma Genesis.*" *Earth and Planetary Science Letters*, vol 245, pp 743-761, doi: 10.1016/j.epsl.2006.02.030.
- 23) Sohn, R.A. and K.W.W. Sims (2005). "*Bending as a mechanism for triggering off-axis volcanism on the East Pacific Rise.*" *Geology*, vol 33, number 2, 93-96, doi: 10.1130/G21116.1.
- 22) *Pichat, S., K.W.W. Sims, R. François, J.F. McManus, S. Brown-Legger, and F. Albarède (2004). "*Lower export production during glacial periods in the equatorial Pacific as derived from (²³¹Pa/²³⁰Th) measurements in deep-sea sediments.*" *Paleoceanography*, vol 19, PA 4023.
- 21) Drakos, P., K.W.W. Sims, J. Riesterer, J. Blusztajn, and J. Lazarus (2004). "*Chemical and Isotopic Constraints On Source-Waters and Connectivity Of Basin-Fill Aquifers in the Southern San Luis Basin, New Mexico.*" Invited, peer reviewed article for New Mexico Geological Society Guidebook, *Geology of the Taos Region*, pp 405-414.
- 20) Tepley, F. J. III, C.C. Lundstrom, K.W.W. Sims, and R. Hékinian (2004). "*U-series Disequilibria in MORB From the Garrett Transform and Implications for Mantle Melting.*" *Earth and Planetary Science Letters*, vol 223, number 1-2, pp 79-97.
- 19) Sims, K.W.W., J. Blichert-Toft, D.J. Fornari, M.R. Perfit, S.J. Goldstein, P. Johnson, D.J. DePaolo, and P. Michaels (2003). "*Aberrant Youth: Chemical and isotopic constraints on the young off-axis lavas of the East Pacific Rise.*" *Geochemistry, Geophysics, and Geosystems*, vol 4, number 10, p 8621, doi:10.1029/2002GC000443.
- 18) Reagan, M.K., K.W.W. Sims, J. Enrich, R.B. Thomas, H. Cheng, R.L. Edwards, G.D. Layne, and L.A. Ball (2003). "*Old rhyolite progeny from young mafic parents in North American continental arcs.*" *Journal of Petrology*, vol 44, number 9, pp 1703-1726.
- 17) Bourdon, B. and K.W.W. Sims (2003). "*U-series constraints on intraplate magmatism.*" In *Uranium Series Geochemistry*, eds. B. Bourdon, G.M. Henderson, C.C. Lundstrom and S.P. Turner; *Reviews in Mineralogy and Geochemistry*, vol 52, pp 215-253.
- 16) Cooper, K., S.J. Goldstein, K.W.W. Sims, and M.T. Murrell (2003). "*Uranium-Series Chronology of Gorda Ridge Volcanism: New evidence from the 1996 Eruption.*" *Earth and Planetary Science Letters*, vol 206, number 3, pp 459-475, doi:10.1016/S0012-821X(02)01083-X.
- 15) Jull, M., P. Kelemen, and K.W.W. Sims (2002). "*Melt migration and uranium series disequilibria: the combined effect of porous and conduit flow.*" *Geochimica et Cosmochimica Acta*, vol 66, number 23, pp 4133-4148.

- 14) Sims, K.W.W., S.J. Goldstein, J. Blichert-Toft, M.R. Perfit, P. Kelemen, D.J. Fornari, P. Michael, M.T. Murrell, S.R. Hart, D.J. DePaolo, G.D. Layne, and M. Jull (2002). “*Chemical and isotopic constraints on the generation and transport of melt beneath the East Pacific Rise.*” *Geochimica et Cosmochimica Acta*, vol 66, number 19, pp 3481-3504, doi:10.1016/S0016-7037(02)00909-2.
- 13) Choi, M.S., R. Francois, K.W.W. Sims, M.P. Bacon, S. Legger-Brown, A.P. Fleenor, L.A. Ball, D. Schneider and S. Pichat (2001). “*Rapid determination of ²³⁰Th and ²³¹Pa in seawater by Inductively coupled plasma mass spectrometry.*” *Marine Chemistry*, vol 76, pp 99-112.
- 12) Layne, G.D. and K.W.W. Sims (2000). “*Analysis of ²³²Th/²³⁰Th in volcanic rocks by Secondary Ionization Mass Spectrometry.*” *International Journal of Mass Spectrometry*, vol 203, number 1-3, pp 187-198.
- 11) Hart, S.R., H. Staudigel, A.A.P. Koppers, J. Blusztajn, E.T Baker, R. Workman, M. Jackson, E. Hauri, K.W.W. Sims, D.J. Fornari, A. Saal and S. Lyons (2000). “*Vailulu’u Undersea Volcano: The New Samoa.*” *Geochemistry, Geophysics, and Geosystems*, vol 1, Paper number 2000GC000108.
- 10) Sims, K.W.W., M.T. Murrell, D.J. DePaolo, W.S. Baldrige, S.J. Goldstein, D. Clague and M. Jull (1999). “*Porosity of the melting zone and variations in the solid mantle upwelling rate beneath Hawaii: Inferences from ²³⁸U-²³⁰Th-²²⁶Ra and ²³⁵U-²³¹Pa disequilibria.*” *Geochimica et Cosmochimica Acta*, vol 63, number 23, pp 4119-4138, doi: 10.1016/S0016-7037(99)00313-0 (*invited paper for a Special volume in honor of Claude Allegre*).
- 9) *Stracke, A., V.J.M. Salters and K.W.W. Sims (1999). “*Assessing the role of pyroxenite in the source of Hawaiian basalts: Hf-Nd-Th isotope evidence.*” *Geochemistry, Geophysics, and Geosystems*, vol 1, Paper number 1999GC000013.
- 8) Sims, K.W.W. and D.J. DePaolo (1997). “*Inferences about mantle magma sources from incompatible element concentration ratios in oceanic basalts.*” *Geochimica et Cosmochimica Acta*, vol 61, number 4, pp 765-784, doi: 10.1016/S0016-7037(96)00372-9.
- 7) Newsom, H.E., K.W.W. Sims, P.D. Noll, W.L. Jaeger, S.A. Maehr, and T.B. Bassera (1996). “*The depletion of W in the bulk-silicate Earth: constraints on core formation.*” *Geochimica et Cosmochimica Acta*, vol 60, number 7, pp 1155-1169.
- 6) Sims, K.W.W., D.J. DePaolo, M.T. Murrell, W.S. Baldrige, S.J. Goldstein, and D. Clague (1995). “*Mechanisms of magma generation beneath Hawaii and Mid-Ocean ridges: U-Th and Sm-Nd isotopic evidence.*” *Science*, vol 267, pp 508-512, doi: 10.1126/science.267.5197.508.
- 5) Newsom, H.E. and K.W.W. Sims (1991). “*Core formation during early accretion of the Earth.*” *Science*, vol 252, pp 926-933, doi: 10.1126/science.252.5008.926.
- 4) Sims, K.W.W., and E.S. Gladney (1991). “*Determination of As, Sb, W and Mo in silicate matrices by epithermal neutron activation and inorganic ion exchange.*” *Analytica Chimica Acta*, vol 251, pp 297-303.
- 3) Sims, K.W.W., H.E. Newsom, and E.S. Gladney (1990). “*Chemical fractionation during formation of the Earth’s core and continental crust: Clues from As, Sb, W and Mo.*” In *Origin of the Earth*, J. Jones and H.E. Newsom (eds.) New York : Oxford University Press; Houston, Lunar and Planetary Institute. 1990, ISBN 0-19-506619-7.
- 2) Sims, K.W.W., E.S. Gladney, C.C. Lundstrom, and N.W. Bower (1988). “*Elemental concentrations in Japanese silicate rock standards: a comparison with the literature.*” *Geostandards Newsletter*, vol 12, pp 379-389.
- 1) Cohen, A.S., D.S. Ferguson, P.M. Gram, S.L. Hubler, and K.W.W. Sims (1986). “*The Distribution of*

Coarse Grained Sediments in Modern Lake Turkana, Kenya: Implications for Clastic Sedimentation Models of Rift Lakes.” In *Sedimentation in the African Rift Systems*, L.E. Frostik (ed.), Geologic Society of London, Special Publication 23, pp 212-223.

NON-PEER REVIEWED PUBLICATIONS AND CONSULTING REPORTS FROM GROUND WATER CONTRACTS

Drakos, P., J. Lazarus, J. Riesterer, K.W.W. Sims, and M. Hodgins (2006). “*Subsurface Stratigraphy, the Effects of Faults on Groundwater Flow, Chemical and Isotopic Constraints on Source-Waters and Connectivity of Basin-Fill Aquifers in the Southern San Luis Basin, New Mexico.*” Report of the 2006 Ground Water Summit, National Ground Water Association.

Drakos, P., K.W.W. Sims, J. Riesterer and J. Lazarus (2006). “*Source-Waters And Connectivity Of Basin-Fill Aquifers in The San Juan Basin, New Mexico: Constraints from U-series disequilibria, Tritium and Sr, O and H isotopes.*” Invited, peer reviewed article for Desert Society Guidebooks, San Juan Basin Geology, pp 268-279.

Sims, K.W.W. (2006). “*Geology of New Mexico.*” In *Rock Climbing New Mexico* by Dennis Jackson, Falcon Press Co., Inc, Helena Montana, ISBN 10:00-7627-3132-9.

Sims, K.W.W., and C. Barlow (2005). Various new routes on Huamashraju, *The American Alpine Journal*, “The World’s Most Significant Climbs”, 79, vol 47, pp 264-265. (Description of the first ascent of the West Face of Huamashraju (5,434 meters)).

Drakos, P., J. Lazarus, J. Riesterer, M. Hodgins and K.W.W. Sims (2005). “*Structural controls on ground water flow and recharge into the southern San Luis Basin near Taos, NM.*” USGS field report on San Luis basin Hydrology.

Drakos, P., J. Riesterer, J. Lazarus, and K.W.W. Sims (2003). “*Evaluation of Pumping Effects at Zuni Salt Lake in the Atarque Sandstone Aquifer from Fence Lake Mine.*” Unpublished Glorieta Geoscience, Inc. consulting report, 19 p. plus Appendices.

Sims, K.W.W. (1996). “*Geology of New Mexico and Texas.*” In *Rock Climbing New Mexico and Texas* by Dennis Jackson, Falcon Press Co., Inc, Helena Montana, ISBN 1-56044-483-5.

FUNDED RESEARCH GRANTS:

Department of Energy

J Kasuba, KWW Sims - Measurements of ^{222}Rn , ^{220}Rn , and CO_2 emissions in natural CO_2 fields in Wyoming: MVA techniques for determining gas transport and caprock integrity. DOE DE-FE0002112 (2010-2013), \$299,588

National Science Foundation

KWW Sims. Collaborative Research: A ^{210}Pb paradox? (NSF-EAR 083887800), \$145,900 (in collaboration with Mark Reagan)

KWW Sims. Collaborative Research: U-series constraints on the ages and petrogenesis of Lau Basin Lavas (NSF OCE-073248000) \$76,444 (in collaboration with Charlie Langmuir)

K.W.W. Sims and A. Shaw, “Virunga Volcanic SO_2 Emissions Research (VISOR) Project” Subcontract

with Michigan Tech, MI (in collaboration with Simon Carn)

B. Ehrenbrink, S. Hart, K.W.W. Sims, O Rouxel, S. Thorrold – Continued Technician Support for the WHOI ICPMS Facility (NSF EAR-0651366) \$89,343.

K.W.W. Sims, A. Soule. “U-series age constraints applied to oceanic crustal genesis at 9-10°N EPR (NSF-OCE 060383800, \$234,163).

K.W.W. Sims, “Collaborative Research: Anatomy of an Overlapping Spreading Center: Geochemical and Geological Study of the EPR 9°03'N OSC (in Collaboration with E. Klien, M. Perfit; NSF-OCE 062705300, \$124,083).

K.W.W. Sims, B. Ehrenbrink, “Volcanic sources of volatile Platinum Group Elements” (NSF-EAR, 063824101, \$270,000).

K.W.W. Sims, “Collaborative Research: Evaluating the Competing Roles of Garnet and Fluid in Controlling U-Th Disequilibria in Lavas of the Aleutian Island Arc (NSF EAR-0610671, \$69,974; in collaboration with G. Yogodzinski).

K.W.W. Sims, “A slow spreading ridge: ^{238}U and ^{230}Th excesses in Kolbeinsey Ridge basalts (NSF OCE-0422278, \$290,687).

B. Ehrenbrink, K.W.W. Sims, R. Francois, S. Hart, S. Thorrold - Technician Support for the WHOI ICPMS Facility (NSF EAR0318137) \$224,200.

K.W.W. Sims Collaborative Research: Timescales of magmatic differentiation and crustal assimilation beneath Iceland: Combined U-series and oxygen isotope studies (NSF EAR-0307123) \$34,814, (in collaboration with K. Cooper).

K.W.W. Sims and M. Charette “SGER: Melt Generation and Transport during Basalt Petrogenesis: Constraints from Measurements of ^{227}Ac - ^{231}Pa Activity Ratios”, NSF OCE- 0228677, \$57,006.

K.W.W. Sims, and D.J. Fornari “Spatial and Temporal Variations in Mid-Ocean Ridge Basalt Geochemistry along and across the East Pacific Rise ” NSF OCE-0137325, \$179,630.

K.W.W. Sims, Collaborative Research: “U-Series Isotopic Constraints on the Rates Of Magma Genesis, Evolution and Degassing At Mt Erebus, Antarctica”, NSF OPP-0126269, \$117,582, (in collaboration with P. Kyle).

K.W.W. Sims, S.R. Hart and D.J. Fornari “U-Series Analyses of Young Lavas from the East Pacific Rise 9°48'N to 9°52'N: Using Lavas from the 1991 Eruption as a Baseline to Constrain the Nature and Timing of MORB Petrogenesis” NSF OCE-9730967, \$180,890.

K.W.W. Sims, “Melt Generation and Transport Beneath Hawaii: Characterizing the Zero Age Plume”, NSF EAR-9909473, \$148,004.

K.W.W. Sims, S.R. Hart, G.E. Ravizza, B. Peucker-Ehrenbrink and M. Kurz “Acquisition of a MC ICPMS for the Woods Hole Oceanographic Institution Dedicated to the Study of Earth and Ocean Sciences”, NSF OCE-0079733, \$547,011.

K.W.W. Sims “Collaborative Research: U-Series Constraints on Rhyolite Genesis at Medicine Lake Volcano”, NSF EAR-0000886, \$41,262, (in collaboration with M. Reagan).

K.W.W. Sims “Collaborative Research: A Coupled Geodynamic/Geochemical Study of the Hawaiian Plume”, NSF EAR-0001924, \$65,000, (in collaboration with D.J. DePaolo, J. Bryce, M Jull and N. Ribe).

K.W.W. Sims, F. Albarede, R. Francois. "U.S. (WHOI) -France (Ecole Normale Superiour) Cooperative Research: The Actinides Proxys of Nutrients and the Tuning of Thermohaline Circulation during the Last Glacial Maximum", NSF INT-9726941, \$48,000.

WHOI:

K.W.W. Sims, “Dating terrestrial carbonates in the Samail Ophiolite with implications for carbon sequestration.” WHOI Mellon Award, \$47,728.

M. Tivey and K.W.W. Sims, “Constraining the Age and Evolution of an Axial Volcanic Ridge on the Mid Atlantic Ridge.” Deep Ocean Exploration Institute, \$54,294.

K.W.W. Sims, Olivier Rouxel “Using Nickel as a New Isotope Tracer of Oceanic Processes” WHOI Mellon Award, \$48,875.

K.W.W. Sims and M. Jull “Investigation of an Exposed Vertical Lava Sequence in a Post-Glacial Shield Volcano in the Northern Rift Zone of Iceland”, WHOI Mellon Award, \$30,000.

K.W.W. Sims, and M. Charette “Melt Generation and Transport during Basalt Petrogenesis: Constraints from Measurements of ^{227}Ac - ^{231}Pa Activity Ratios”, WHOI Mellon Award, \$29,830.

K.W.W. Sims and S.R. Hart, “Mentorship proposal for Acquisition of a MC ICPMS for the Woods Hole Oceanographic Institution Dedicated to the Study of Earth and Ocean Sciences, WHOI”, WHOI Mentorship Grant, \$57,567.