

Staff Publications and Activities

Publications

Agency Activities—Fiscal Year 2004: Idaho Geological Survey Web site on Web page, “Agency Activities,” 2005.

Database of the Mines and Prospects of Idaho, compiled by Victoria E. Mitchell, Ruth E. Vance, Earl H. Bennett, and B. Benjamin E. Studer: Idaho Geological Survey Digital Database 1, 2005.

Elevated $^{87}\text{Sr}/^{86}\text{Sr}$ Ratios From Mafic Intrusions in the Atlanta Lobe of the Idaho Batholith, by Charles W. Russell and Janet Gabites: Idaho Geological Survey Technical Report 05-1, 2005, 60 p.

Fault and Earthquake Maps of Idaho, by R.M. Breckenridge and L.S. Stanford, in W.R. Lund, ed., Proceedings Volume Basin and Range Province Seismic Hazards Summit II, Western States Seismic Policy Council: Utah Geological Survey Miscellaneous Publication 05-2, CD.

Geologic Map of the Cottonwood Quadrangle, Idaho County, Idaho, by John D. Kauffman, Keegan L. Schmidt, Dean L. Garwood, and John H. Bush: Idaho Geological Survey Digital Web Map 29, 2004, scale 1:24,000.

Geologic Map of the Craigmont Quadrangle, Lewis and Idaho Counties, Idaho, by John H. Bush, John D. Kauffman, and Keegan L. Schmidt: Idaho Geological Survey Digital Web Map 27, 2004, scale 1:24,000.

Geologic Map of the Culdesac North Quadrangle, Nez Perce County, Idaho, by John D. Kauffman: Idaho Geological Survey Digital Web Map 36, 2004, scale 1:24,000.

Geologic Map of the Culdesac South Quadrangle, Nez Perce County, Idaho, by John D. Kauffman: Idaho Geological Survey Digital Web Map 37, 2005, scale 1:24,000.

Geologic Map of the Hope Quadrangle, Bonner County, Idaho, by Russell F. Burmester, Roy M. Breckenridge, Reed S. Lewis, and Mark D. McFadden: Idaho Geological Survey Digital Web Map 26, 2004, scale 1:24,000.

Geologic Map of the Keuterville Quadrangle, Lewis and Idaho Counties, Idaho, by Keegan L. Schmidt, Dean L. Garwood, and John D. Kauffman: Idaho Geological Survey Digital Web Map 38, 2005, scale 1:24,000.

Geologic Map of the Nez Perce Quadrangle, Lewis and Idaho Counties, Idaho, by John D. Kauffman, Keegan L. Schmidt, and John H. Bush: Idaho Geological Survey Digital Web Map 28, 2004, scale 1:24,000.

Geologic Map of the Orofino East Quadrangle, Clearwater and Lewis Counties, Idaho, by Reed S. Lewis, John D. Kauffman, Gary F. Davidson, and Russell F. Burmester: Idaho Geological Survey Geologic Map 39, 2005, scale 1:24,000.

Geologic Map of the Orofino West Quadrangle, Clearwater, Lewis, and Nez Perce Counties, Idaho, by John D. Kauffman, Gary F. Davidson, Reed S. Lewis, and Russell F. Burmester: Idaho Geological Survey Geologic Map 40, 2005, scale 1:24,000.

Geologic Map of the Peck Quadrangle, Clearwater, Lewis, and Nez Perce Counties, Idaho, by John D. Kauffman, Gary F. Davidson, Reed S. Lewis, and Russell F. Burmester: Idaho Geological Survey Geologic Map 38, 2005, scale 1:24,000.

Geologic Map of the Rudo Quadrangle, Clearwater County, Idaho, by R.S. Lewis, J.D. Kauffman, R.F. Burmester, J.H. Bush, and D.L. Garwood: Idaho Geological Survey Geologic Map 37, 2005, scale 1:24,000.

Geologic Map of the Scotchman Peak Quadrangle, Bonner County, Idaho, by Russell F. Burmester, Roy M. Breckenridge, Reed S.

- Lewis, and Mark D. McFadden: Idaho Geological Survey Digital Web Map 24, 2004, scale 1:24,000.
- Hydrogeologic Analysis of the Water Supply for Bancroft, Caribou County, Idaho*, by Michael J. Martin, Allan H. Wylie, and Bruce R. Otto: Idaho Geological Survey Information Circular 61, 2005, 10 p.
- Hydrogeologic Analysis of the Water Supply for Bloomington and Paris, Bear Lake County, Idaho*, by Allan H. Wylie, Bruce R. Otto, and Michael J. Martin: Idaho Geological Survey Information Circular 58, 2005, 10 p., 1 plate.
- Hydrogeologic Analysis of the Water Supply for Challis, Custer County, Idaho*, by Bruce R. Otto, Allan H. Wylie, and Michael J. Martin: Idaho Geological Survey Information Circular 60, 2005, 14 p., 1 plate.
- Hydrogeologic Analysis of the Water Supply for Franklin, Franklin County, Idaho*, by Bruce R. Otto, Allan H. Wylie, and Michael J. Martin: Idaho Geological Survey Information Circular 57, 2005, 9 p., 2 plates.
- Hydrogeologic Analysis of the Water Supply for Victor, Teton County, Idaho*, by Allan H. Wylie, Bruce R. Otto, and Michael J. Martin: Idaho Geological Survey Information Circular 59, 2005, 9 p., 2 plates.
- Idaho Mining and Exploration, 2004*, by Virginia S. Gillerman, Earl H. Bennett, and Michael J. Weaver: Mining Engineering, May, 2005, v. 57, no. 5, p. 78-83.
- Idaho Mining and Exploration, 2004*, by Virginia S. Gillerman, Earl H. Bennett, and Michael J. Weaver: Posted with permission from Mining Engineering at www.idahogeology.org.
- Idaho Report*, by R.M. Breckenridge, in Karl Muessig, ed., The State Geologists Journal, 2004: Association of American State Geologists, v. LVI, p. 31-35.
- List of Publications, 2005*, by Roger C. Stewart: Idaho Geological Survey booklet, 53 p.
- Mineral Industry of Idaho (2003)*, by V.S. Gillerman and U.S. Geological Survey staff: U.S. Geological Survey Minerals Yearbook Area Reports: Domestic 2003, 2005, v. II, p. 14-14.5.
- Site Inspection Report for the Abandoned and Inactive Mines in Idaho on and near U.S. Forest Service Lands (Region IV): U.S. Bureau of Land Management Properties, Mineral Hill and Camas Mining Districts, Hailey-Bellevue Area, Blaine County, Idaho*, by Victoria E. Mitchell and Earl H. Bennett: Idaho Geological Survey Staff Report 05-12, 2005, 143 p.
- Site Inspection Report for the Abandoned and Inactive Mines in Idaho on Land Administered by the U.S. Bureau of Land Management in the Pahsimeroi Valley, Lemhi County, Idaho*, by Virginia S. Gillerman: Idaho Geological Survey Staff Report 05-11, 2005, 58 p.
- Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Bureau of Land Management Property in the Challis Resource Area, Custer County, Idaho*, by Virginia S. Gillerman, Bruce R. Otto, Tamara S. Schiappa, and Tracy Morrison: Idaho Geological Survey Staff Report 05-10, 2005, 138 p.
- Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Bureau of Land Management Property in the Hailey-Bellevue Area: Bullion Gulch, Blaine County, Idaho*, by Virginia S. Gillerman and Forrest S. Griggs: Idaho Geological Survey Staff Report 05-1, 2005, 78 p.
- Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Bureau of Land Management Property in the Hailey-Bellevue Area: Bunker Hill Area, Blaine*

- County, Idaho*, by Victoria E. Mitchell and Virginia S. Gillerman: Idaho Geological Survey Staff Report 05-2, 2005, 46 p.
- Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Bureau of Land Management Property in the Hailey-Bellevue Area: Colorado and Star Gulches, Blaine County, Idaho*, by Victoria E. Mitchell and Virginia S. Gillerman: Idaho Geological Survey Staff Report 05-3, 2005, 94 p.
- Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Bureau of Land Management Property in the Hailey-Bellevue Area: Hailey Gold Belt, Blaine County, Idaho*, by Virginia S. Gillerman: Idaho Geological Survey Staff Report 05-4, 2005, 94 p.
- Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Bureau of Land Management Property in the Hailey-Bellevue Area: Minnie Moore Group, Blaine County, Idaho*, by Virginia S. Gillerman and Forrest S. Griggs: Idaho Geological Survey Staff Report 05-5, 2005, 79 p.
- Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Bureau of Land Management Property in the Hailey-Bellevue Area: Miscellaneous Sites, Blaine County, Idaho*, by Virginia S. Gillerman and Forrest S. Griggs: Idaho Geological Survey Staff Report 05-8, 2005, 59 p.
- Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Bureau of Land Management Property in the Hailey-Bellevue Area: Red Elephant Gulch, Blaine County, Idaho*, by Victoria E. Mitchell and Virginia S. Gillerman: Idaho Geological Survey Staff Report 05-6, 2005, 60 p.
- Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Bureau of Land Management Property in the Hailey-Bellevue Area: Upper Bullion Gulch, Blaine County, Idaho*, by Virginia S. Gillerman and Forrest S. Griggs: Idaho Geological Survey Staff Report 05-7, 2005, 48 p.
- Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Bureau of Land Management Property in the Mackay Region, Custer County, Idaho*, by Virginia S. Gillerman and Tamra A. Schiappa: Idaho Geological Survey Staff Report 05-9, 2005, 47 p.
- Surficial Geologic Map of Part of the Mount Coeur d'Alene Quadrangle, Kootenai County, Idaho*, by R.M. Breckenridge and K.L. Othberg: Idaho Geological Survey Digital Web Map 30, 2004, scale 1:24,000.
- Surficial Geologic Map of the Fernan Lake Quadrangle, Kootenai County, Idaho*, by R.M. Breckenridge and K.L. Othberg: Idaho Geological Survey Digital Web Map 31, 2004, scale 1:24,000.
- Surficial Geologic Map of the Lake Fork Quadrangle, Valley County, Idaho*, 2005, by R.M. Breckenridge and K.L. Othberg: Idaho Geological Survey Digital Web Map 34, scale 1:24,000.
- Surficial Geologic Map of the McCall Quadrangle, Valley and Adams Counties, Idaho*, by R.M. Breckenridge and K.L. Othberg: Idaho Geological Survey Digital Web Map 35, 2005, scale 1:24,000.
- Surficial Geologic Map of the Mica Bay Quadrangle, Kootenai County, Idaho*, by R.M. Breckenridge and K.L. Othberg: Idaho Geological Survey Digital Web Map 33, 2005, scale 1:24,000.
- Surficial Geologic Map of the Rockford Bay Quadrangle, Kootenai County, Idaho*, by R.M. Breckenridge and K.L. Othberg: Idaho Geological Survey Digital Web Map 32, 2005, scale 1:24,000.

Abstracts

Age, Chemical, and Isotopic Complexity in Magmatic Belts Along the Orofino Segment of the Western Idaho Suture Zone (WISZ), by Keegan L. Schmidt and Reed S. Lewis: *Geochimica et Cosmochimica Acta*, Abstracts of the 15th Annual V.M. Goldschmidt Conference, University of Idaho, May, 2005, p. A247.

Comparison Between Remote Sensing Classification and Stochastic Simulation Techniques for Predicting Areas of Weed Invasion, by N. Singh, J.A. Welhan, and N. Glenn: Geological Society of America Annual Meeting, Abstracts with Program, Denver, Colorado, November, 2004, v. 36, no. 7, paper 53-6.

Dating Alluvial Sediments With Cosmogenic Nuclides, by W.M. Phillips, L.S. Barham, and P.W. Kubik: *Geochimica et Cosmochimica Acta*, Abstracts of the 15th Annual V.M. Goldschmidt Conference, University of Idaho, May, 2005, p. A166.

Eocene Plutonic Rocks of North-Central Idaho, by Thomas P. Frost and Reed S. Lewis: 15th Annual V.M. Goldschmidt Conference, University of Idaho, May, 2005, p. 249.

Geostatistical Modeling of the Eastern Snake River Plain Aquifer, by R. Farabaugh, J.A. Welhan, and M. Merrick: Geological Society of America Annual Meeting, Abstracts with Program, Denver, Colorado, November, 2004, v. 36, no. 7, paper 49-18.

Preliminary Results of Geostatistical Modeling of the ESRP Aquifer, by R. Farabaugh and J.A. Welhan: Inland Northwest Research Alliance, Subsurface Science Symposium, Spokane, Washington, September; www.inra.org/.

Probability Mapping As a Tool to Portray and Prioritize Water Quality Trends, by J.A. Welhan: Agriculture and Water Quality in

the Pacific Northwest and Idaho Ground Water Connections Conference Proceedings, Boise, October, p. 62; www.agwaterqualitynw.org/.

Sodic and Potassic Suites of the Cretaceous Idaho Batholith, by Reed S. Lewis: 15th Annual V.M. Goldschmidt Conference, University of Idaho, May, 2005, p. 249.

Spatial-Temporal Geostatistics for Ground Water Quality Networks, by J.A. Welhan and T. Masiane: Inland Northwest Research Alliance, Subsurface Science Symposium, Spokane, Washington, September; www.inra.org/.

Surficial Geologic Maps Help Counties Understand Geologic Hazards in Idaho, by Kurt L. Othberg, Loudon R. Stanford, and Roy M. Breckenridge: Geological Society of America Abstracts with Programs, 2004, v. 36, no. 7, paper 249-35.

Reports and Presentations

Age, Chemical, and Isotopic Complexity in Magmatic Belts Along the Orofino Segment of the Western Idaho Suture Zone (WISZ), by Keegan L. Schmidt and Reed S. Lewis: 15th Annual V.M. Goldschmidt Conference, University of Idaho, May.

Annual Report of the Idaho Geological Survey, Fiscal Year 2004: December.

Clark Fork Ice Dam and Missoula Flood Outburst Areas, Idaho, by Roy M. Breckenridge and R.S. Lewis: Ice Age Floods Institute field trip, May.

Comparison Between Remote Sensing Classification and Stochastic Simulation Techniques for Predicting Areas of Weed Invasion, by N. Singh, J.A. Welhan, and N. Glenn: Geological Society of America Annual Meeting, Denver, Colorado, November.

Dating Alluvial Sediments With Cosmogenic Nuclides, by W.M. Phillips, L.S. Barham,

- and P.W. Kubik: 15th Annual V.M. Goldschmidt Conference, University of Idaho, May.
- Dating Sediments and Geomorphic Surfaces with Terrestrial Cosmogenic Nuclides*, by W.M. Phillips: Seminar, Department of Earth and Environmental Sciences, Tulane University, New Orleans, Louisiana, February.
- Dating Sediments with Cosmogenic Nuclides*, by W.M. Phillips: Joint Seminar, Department of Geological Sciences, University of Idaho, and Department of Geology, Washington State University, February.
- Deeply Weathered Rock and Ancient Soils in North Idaho*, by K.L. Othberg: Intermountain Forest Tree Nutrition Cooperative Annual Meeting, Moscow, April.
- Earthquakes and the December, 2004, Tsunami*, by V.S. Gillerman: Idaho Water Resources Research Institute, Project WET class, Boise, January.
- Eocene Plutonic Rocks of North-Central Idaho*, by Thomas P. Frost and Reed S. Lewis: 15th Annual V.M. Goldschmidt Conference, University of Idaho, May.
- Geohydrologic Data Needs for Septic Management*, by J.A. Welhan: Greater Portneuf Water Resource Partnership steering committee, Pocatello, August.
- Geologic Field Trip Guide to the Clark Fork Ice Dam and Missoula Flood Outburst Areas, Idaho*, by Roy M. Breckenridge and R.S. Lewis: Ice Age Floods Institute, 17 p.
- Geologic Map of the Cabinet Quadrangle, Idaho*, by Mark D. McFaddan, Roy M. Breckenridge, Russell F. Burmester, and Reed S. Lewis: Idaho Geological Survey unpublished map, scale 1:24,000, April.
- Geologic Map of the Culdesac North Quadrangle, Nez Perce County, Idaho*, by John D. Kauffman: Idaho Geological Survey unpublished map, scale 1:24,000, April.
- Geologic Map of the Culdesac South Quadrangle, Nez Perce County, Idaho*, by John D. Kauffman: Idaho Geological Survey unpublished map, scale 1:24,000, April.
- Geologic Map of the Derr Point Quadrangle, Idaho*, by Russell F. Burmester, Roy M. Breckenridge, Mark D. McFaddan, and Reed S. Lewis: Idaho Geological Survey unpublished map, scale 1:24,000, April.
- Geologic Map of the Lewiston Orchards North Quadrangle and Part of the Clarkston Quadrangle, Nez Perce County, Idaho*, by Dean L. Garwood and John H. Bush: Idaho Geological Survey unpublished map, scale 1:24,000, April.
- Geologic Map of the Trout Peak Quadrangle, Idaho*, by Reed S. Lewis, Roy M. Breckenridge, Mark D. McFaddan, and Russell F. Burmester: Idaho Geological Survey unpublished map, scale 1:24,000, April.
- Geologic Map of the Twin Falls 30 x 60 Minute Quadrangle, Idaho*, by John D. Kauffman, Kurt L. Othberg, Virginia S. Gillerman, and Dean L. Garwood: Idaho Geological Survey unpublished map, 1:100,000 scale, April.
- Geology and Geologic Hazards of Long Valley*, by R.M. Breckenridge and K.L. Othberg: Field Workshop for Teachers, Cascade, July.
- Geology of Canyon County's Wine Grape Growing Regions*, by V.S. Gillerman: Annual Meeting of Idaho Grape Growers and Wine Producers Commission, Caldwell, March.
- Geostatistical Analysis and Modeling of Spatial Data*, by J.A. Welhan: Technical workshop, 2005 Intermountain GIS Users Conference, Pocatello, April.
- Geostatistical Analysis of Water Quality Databases: Finding the Kernels Among the Chaff*, by J.A. Welhan: Guest lecture, Engineering

- Seminar 651, Idaho State University, January.
- Glacial Geology and History of the Sawtooth Mountains and White Cloud Peaks Area*, by L.R. Stanford: Wild Idaho Conservation Conference field trip, Sawtooth Valley, May.
- Ground-Water Management Needs in the Portneuf River Basin*, by J.A. Welhan: Greater Portneuf Watershed Resource Partnership, Pocatello, February.
- Ground-Water Recharge, Residential Septic Systems, and Drinking Water Quality in the Lower Portneuf River Valley*, by J.A. Welhan: Idaho Society of Professional Engineers Annual Meeting, Pocatello, April.
- Idaho Mining and Exploration, 2004*, by V.S. Gillerman: Northwest Mining Association 110th Annual Meeting, Spokane, Washington, December.
- Information Needs in Septic Planning*, by J.A. Welhan: Twin Falls Public Health District environmental health training session, Twin Falls, March.
- Information Needs in Septic Planning and Design*, by J.A. Welhan: Idaho Environmental Health Association, Area C Meeting, Pocatello, October.
- Information Needs in Septic Planning and Design for Ground-Water Protection*, by J.A. Welhan: Pocatello City Council study session, Pocatello, July.
- Map Production and Data Distribution the Idaho Way: An Update*, by J.S. Freed and L.R. Stanford: Digital Mapping Techniques Workshop, 2005, Baton Rouge, Louisiana, April.
- New Developments in a New Century for Idaho's Precious Metal Districts, 2005*, by Virginia S. Gillerman and Victoria E. Mitchell: Geological Society of Nevada Symposium 2005, May, Reno, Nevada.
- Ore Deposits of the Mt. Isa Region, Australia: Proterozoic Connections to Idaho?* by V.S. Gillerman: Seminar, Department of Geosciences, Boise State University, February.
- Overview of Geostatistical Modeling of the ESRP Subsurface*, by J.A. Welhan: Idaho National Laboratory Water Resources Committee, Idaho Falls, October.
- Probability Mapping as a Tool to Portray and Prioritize Water Quality Trends*, by J.A. Welhan: Agriculture and Water Quality in the Pacific Northwest and Idaho Ground Water Connections Conference, Boise, October.
- Proposed Guidelines for a Tiered System of Water Supply Planning Requirements for New Developments*, by J.A. Welhan: Bannock County water planning officials, Pocatello, November.
- Site Inspection Report for Abandoned and Inactive Mines on Lands Administered by the U.S. Bureau of Land Management in the Boise Resource Area, Idaho: Boise Foothills, Ada County, and Osborne Mine, Gem County*, by Dave E. Leppert and Virginia S. Gillerman: U.S. Bureau of Land Management, April, 184-page report and CD.
- Site Inspection Report for Abandoned and Inactive Mines on Lands Administered by the U.S. Bureau of Land Management in the Challis Resource Area, Idaho: Lemhi and Custer County*, by Dave E. Leppert and Virginia S. Gillerman: U.S. Bureau of Land Management, April, 130-page report and CD.
- Sodic and Potassic Suites of the Cretaceous Idaho Batholith*, by Reed S. Lewis: 15th Annual V.M. Goldschmidt Conference, University of Idaho, May.
- Spatial-Temporal Geostatistics for Ground-Water Quality Networks*, by J.A. Welhan: Subsurface Science Symposium, Inland Northwest Research Alliance, Spokane,

September.

Spring Thaw: Regional Industry Awareness, by M.J. Weaver: Mine Safety and Health Administration, Twin Falls, February; Salem, Oregon, April.

Status of Geologic Mapping in North Idaho, by K.L. Othberg: Intermountain Forest Tree Nutrition Cooperative Annual Meeting, Moscow, April.

Surficial Geologic Map of the Cascade Quadrangle, Valley County Idaho, by Roy M. Breckenridge and Kurt L. Othberg: Idaho Geological Survey unpublished map, scale 1:24,000, April.

Surficial Geologic Map of the Donnelly Quadrangle, Valley County Idaho, by Roy M. Breckenridge and Kurt L. Othberg: Idaho Geological Survey unpublished map, scale 1:24,000, April.

Surficial Geologic Map of the Meadows Quadrangle, Valley County Idaho, by Roy M. Breckenridge and Kurt L. Othberg: Idaho Geological Survey unpublished map, scale 1:24,000, April.

Surficial Geologic Map of the No Business Mountain Quadrangle, Valley County Idaho, by Roy M. Breckenridge and Kurt L. Othberg: Idaho Geological Survey unpublished map, scale 1:24,000, April.

Surficial Geologic Maps Help Counties Understand Geologic Hazards in Idaho, by Kurt L. Othberg, Loudon R. Stanford, and Roy M. Breckenridge: Geologic Society of America Annual Meeting, Denver, Colorado, November.

What is Geostatistics? by J.A. Welhan: Geology 599 Seminar, Department of Geosciences, Idaho State University, November.

Professional Activities

Advisory board meeting, Idaho Geological Survey, Boise, June (R.M. Breckenridge, C.D.

Fullerton V.S. Gillerman, K.L. Othberg, W.M. Phillips, L.R. Stanford, J.A. Welhan). Association of American State Geologists, annual meeting, St. Charles, Illinois, June (R.M. Breckenridge).

Association of American State Geologists, liaison meeting, Washington, D.C., March (R.M. Breckenridge).

Association of American State Geologists, mid-year meeting, Denver, Colorado, November (R.M. Breckenridge, L.R. Stanford).

Association of American State Geologists, western cluster meeting, St. Charles, Illinois, June (R.M. Breckenridge).

Chair, Special Symposium S-17, "Cosmogenic Nuclides and Surface Process Research: New Developments and Applications," 15th Annual V.M. Goldschmidt Conference, University of Idaho, May (W.M. Phillips).

Co-chair, "Evolution of the Mesozoic continental margin," 15th Annual V.M. Goldschmidt Conference, University of Idaho, May (R.S. Lewis).

Committee member, Association of American State Geologists, 2005 auditing committee (R.M. Breckenridge).

Co-supervisor, Digital Geologic Mapping Lab, Idaho Geological Survey-Department of Geosciences, Idaho State University (J.A. Welhan).

Delegate, Geoscience, Western States Seismic Policy Council (W.M. Phillips).

Discussion leader, Inland Northwest Research Alliance graduate seminar, September (J.A. Welhan).

EARTHSCOPE meeting, Idaho-U.S. Array, Idaho Geological Survey and Idaho Bureau of Disaster Services, February (R.M. Breckenridge).

Field trip, Geological Society of Nevada Symposium, Reno, Nevada, May (V.S. Gillerman).

Field trip and State Geologists' briefing, National Park Service, Yellowstone National Park, September (R.M. Breckenridge).

Field trip co-coordinator, Inland Northwest Research Alliance Subsurface Science graduate program (J.A. Welhan).

Field trip leader, "Plutonic History of the Northwest Border Zone and Main Bitterroot Lobe of the Idaho Batholith," 15th Annual V.M. Goldschmidt Conference, University of Idaho, May (R.S. Lewis).

Field trip leaders, Ice Age Floods Institute Field trip, Sandpoint, May (R.M. Breckenridge, R.S. Lewis).

Field trip preview, 2005 Field Workshop for Teachers, Borah Peak area, April (W.M. Phillips, D.L. Garwood).

Field Workshop for Teachers, Cascade, July (R.M. Breckenridge, K.L. Othberg, M.J. Weaver, G.A. Worthington).

Geological Society of America Annual Meeting, Denver, Colorado, November (R.M. Breckenridge, L.R. Stanford).

Geological Society of Nevada Symposium, Reno, Nevada, May (V.S. Gillerman).

Guest lecturer, Geology Seminar 599, November; Engineering Seminar 651, January; Idaho State University (J.A. Welhan).

Idaho Association of Professional Geologists meetings, Boise (V.S. Gillerman).

Idaho Bureau of Homeland Security, State Agency Emergency Coordination working group meetings, Boise, monthly (V.S. Gillerman).

Idaho Earth Science Teachers Association and Idaho Science Teachers Association annual conference, Lewiston, October (W.M. Phillips, G.A. Worthington).

Idaho Earth Science Teachers Association, business meetings, Cascade, July (R.M. Breckenridge, K.L. Othberg, G.A. Worthington); Lewiston, October (W.M. Phillips, G.A. Worthington).

Idaho Earth Science Teachers Association, steering committee, Moscow, November (R.M. Breckenridge, K.L. Othberg, G.A. Worthington).

Idaho Environmental Forum meetings, Boise (V.S. Gillerman).

Idaho Geologic Mapping advisory committee (IGMAC) meeting, Boise, June (R.M. Breckenridge, V.S. Gillerman, W.M. Phillips, K.L. Othberg, L.R. Stanford).

Idaho Geologic Mapping advisory committee (IGMAC) teleconference, Boise and Moscow, September and October (R.M. Breckenridge, K.L. Othberg).

Idaho Geospacial Committee, Boise, May and March (L.R. Stanford).

Idaho Geothermal Working Group, Boise, January and April (V.S. Gillerman).

Instructor, Mine Safety Training sessions, Mine Safety and Health Administration (M.J. Weaver).

Instructor, one-day technical workshop, 2005 Intermountain GIS Users Conference, Pocatello, April (J.A. Welhan).

Instructors, Geology 404 and 504, Geology and geologic hazards of Long Valley, Department of Geological Sciences, University of Idaho, July (R.M. Breckenridge, K.L. Othberg).

Intermountain Forest Tree Nutrition Cooperative, annual meeting, Moscow, April (K.L. Othberg).

Intermountain Forest Tree Nutrition Cooperative, northern Idaho field trip, Moscow, June (R.S. Lewis, K.L. Othberg, W.M. Phillips).

Intermountain GIS User's Conference, Northern Rockies Chapter of Urban Regional Information Systems Association (URISA), Pocatello, April (D.L. Garwood).

Judge, 17th Annual Coeur d'Alene District Mining Competition, Jean Day Park, Os-

burn, August (M.J. Weaver).
 Judge, 18th Central Mine Rescue Competition.
 Osburn, May (M.J. Weaver).
 Member, Alpine Club of Canada (R.M. Breckenridge).
 Member, American Geophysical Union (J.A. Welhan).
 Member, American Quaternary Association (R.M. Breckenridge).
 Member, Association of American State Geologists (R.M. Breckenridge).
 Member, Association of Earth Science Editors (R.C. Stewart).
 Member, Basin and Range Committee, Western States Seismic Policy Council (R.M. Breckenridge).
 Member (ex officio), board of directors, Western States Seismic Policy Council (R.M. Breckenridge).
 Member (lifetime), Certified Mine Safety Professional (M.J. Weaver).
 Member, Geological Society of Nevada (V.S. Gillerman).
 Member, Ground-Water Monitoring Technical Committee, Idaho Department of Environmental Quality (J.A. Welhan).
 Member, Idaho Geospacial Committee (L.R. Stanford).
 Member, Prospectors and Developers Association of Canada (V.S. Gillerman).
 Member, Science language technical team, North American geologic map data model project (R.S. Lewis).
 Member, Seismological Society of America (R.M. Breckenridge).
 Member, Society of Economic Geologists (V.S. Gillerman).
 Member, steering committee, North American Digital Geologic Map Data Model (L.R. Stanford).
 Member, Storm Water Technical Advisory Committee, Pocatello (J.A. Welhan).
 Member, U.S. Mine Rescue Association (M.J. Weaver).
 Member and co-chair, Ground Water Guardian, Portneuf Chapter (J.A. Welhan).
 Member and co-facilitator, steering committee, Greater Portneuf Water Resources Partnership (J.A. Welhan).
 Members, EDMAP review board, Idaho Geological Survey (R.M. Breckenridge, K.L. Othberg).
 Members, Geological Society of America (R.M. Breckenridge, V.S. Gillerman, R.S. Lewis, V.E. Mitchell, K.L. Othberg).
 Members, Idaho Earth Science Teachers Association (R.M. Breckenridge, K.L. Othberg, W.M. Phillips, G.A. Worthington).
 Members, Northwest Mining Association (V.S. Gillerman, R.S. Lewis).
 Members, Society for Mining, Metallurgy, and Exploration, Inc. (V.S. Gillerman, M.J. Weaver).
 Members, steering committee, Idaho Earth Science Teachers Association (R.M. Breckenridge, K.L. Othberg, W.M. Phillips, G.A. Worthington).
 Members, Tobacco Root Geological Society (V.S. Gillerman, R.S. Lewis).
 Mine Safety and Health Administration, State grants business meeting, Beckley, West Virginia, May (M.J. Weaver).
 National Earthquake Consortia meeting, Washington, D.C., March (R.M. Breckenridge).
 Northwest Mining Association 110th Annual Meeting, Spokane, Washington, December (V.S. Gillerman, R.S. Lewis, M.J. Weaver).
 Organizer, Western Cluster meeting, Association of American State Geologists, St. Charles, Illinois, June (R.M. Breckenridge).
 Organizers, 2004 Field Workshop for Teachers, "Geology and Geologic Hazards of Long Valley," Cascade, July (R.M. Breckenridge, K.L. Othberg).

Organizers, 2005 Field Workshop for Teachers, "Geology and Geologic Hazards of the Lost River Area," Cascade, July (W.M. Phillips, R.M. Breckenridge, K.L. Othberg).

Post-conference field trip, "The Columbia River Basalt Group in Southeastern Washington and Northeastern Oregon," 15th Annual V.M. Goldschmidt Conference, University of Idaho, May (D.L. Garwood, J.D. Kauffman).

Pre-conference field trip, "Plutonic History of the Northwest Border Zone and Main Bitterroot Lobe of the Idaho Batholith," 15th Annual V.M. Goldschmidt Conference, University of Idaho, May (D.L. Garwood).

Prospectors and Developers Association of Canada Convention, Toronto, Canada, March (V.S. Gillerman).

Recertification, Abandoned Mine Rescue Specialist, Central Mine Rescue (M.J. Weaver).

Representative, Department of Geological Sciences, University of Idaho (R.M. Breckenridge).

Representative, Department of Geosciences, Boise State University (V.S. Gillerman).

Representative, Department of Geosciences, Idaho State University (J.A. Welhan).

Representative, Eastern Idaho Geologic Mapping Scoping meeting, Idaho Falls, January (J.A. Welhan).

Representative, School of Graduate Studies, Idaho State University Graduate Faculty (J.A. Welhan).

Representative, Western Region (2004-2007), STATEMAP peer review panel, National Cooperative Geologic Mapping Program, U.S. Geological Survey-Association of American State Geologists (R.M. Breckenridge).

Reviewer, Geology/Geography Program Review, North Idaho College, Coeur d'Alene, April (W.M. Phillips).

Secretary, Belt Association Board of Directors (R.S. Lewis).

Society of Economic Geologists, Fellow, Past Vice-President, and Program Committee Chair (V.S. Gillerman).

Society of Economic Geologists council and program committee meetings, Toronto, Canada, March (V.S. Gillerman).

STATEMAP review panel meeting, U.S. Geological Survey, Reston, Virginia, December (R.M. Breckenridge).

Steering committee meetings, North American Digital Geologic Map Data Model, Denver, Colorado, November; Baton Rouge, Louisiana, April (L.R. Stanford).

Technical advisor, Bannock County water planning officials (J.A. Welhan).

Technical advisor, land acquisition to protect ground-water resources, city of Pocatello (J.A. Welhan).

Technical advisor, Shoshone-Bannock Tribes' Water Resources Department (J.A. Welhan).

Technical advisor, Union Pacific Railroad subsurface site characterization, Idaho Department of Environmental Quality (J.A. Welhan).

Technical advisor, siting of replacement water supply well, city of Pocatello (J.A. Welhan).

Technical representative, Pocatello's Intergovernmental Water Advisory Group (J.A. Welhan).

Tobacco Root Geological Society annual meeting, August (R.S. Lewis).

Western Phosphate Mining and Processing Conference, Pocatello, June (V.S. Gillerman).

Western States Seismic Policy Council, Board of Directors meetings, Washington, D.C.,

March; Salt Lake City, June (R.M. Breckenridge).
Workshop, Digital Mapping Techniques, Baton Rouge, Louisiana, April (J.S. Freed, L.R. Stanford).
Workshop, Sampling Protocols and Calibration Sites, Cosmic-Ray Produced Nuclide Systematics on Earth Project (CRONUS-Earth), Coeur d'Alene, May (W.M. Phillips).

Media Interview

Flooded With History: National Ice Age Floods Geologic Trail, by Eric Barker: Lewiston Tribune, February 10, 2005 (R.M. Breckenridge).

Graduate Thesis Committees

Renee Farabaugh, Ph.D., Geosciences, Idaho State University (J.A. Welhan).
Chris Jenkins, Ph.D., Geosciences, Idaho State University (J.A. Welhan).
Tiisetso Masiane, M.S., Environmental Engineering, Idaho State University (J.A. Welhan).
John Mazurek, M.S., Geosciences, Idaho State University (J.A. Welhan).
Chris Meehan, M.S., Geosciences, Idaho State University (J.A. Welhan).
Tom Rackow, M.S., Environmental Engineering, Idaho State University (J.A. Welhan).
Matthew Hoffer, M.S., Geology, University of Idaho (R.S. Lewis).

Grants and Contracts

Abandoned and Inactive Mine Inventory: R.S. Lewis (U.S. Forest Service, Region 1, September 2001-September 2006, \$82,593).
Belt-Purcell Basement Domains: R.S. Lewis (U.S. Geological Survey, Mineral Resources External Research Program, September

2004-September 2005, \$15,000).
Compilation of GIS Coverage of Oil and Gas Wells and Areas of Potential Interest, Coeur d'Alene and Cottonwood BLM Offices: V.S. Gillerman (U.S. Bureau of Land Management, August 2004-September 2005, \$5,000).
Digital Geology of Idaho: R.S. Lewis (National Science Foundation, subcontract with Idaho State University, June 2004-May 2006, \$20,000).
Geologic Mapping in the Coolin 7.5' Quadrangle: R.S. Lewis (Idaho Department of Lands, May 2004-April 2005, \$5,000).
Geostatistical Analysis of Sediment Architecture in the Big Lost River Volcanic Trough: J.A. Welhan (U.S. Geological Survey, September 2003-August 2004, \$70,000).
Idaho Geological Survey Support of Idaho Bureau of Land Management's Abandoned Mine Lands Program: V.S. Gillerman (U.S. Bureau of Land Management, July 2003-December 2005, \$40,000).
Idaho Mine Safety Training Program: M.J. Weaver (Mine Safety and Health Administration, October 2003-September 2004, \$89,007; supplemental grant for vehicle, \$21,500).
Idaho Mine Safety Training Program: M.J. Weaver (Mine Safety and Health Administration, October 2004-September 2005, \$89,007).
Minesite Database: R.S. Lewis (U.S. Forest Service, Region 4, June 2003-December 2005, \$205,000).
Mitigation of Idaho Geologic Hazards, Earthquake Education Workshop: R.M. Breckenridge and K.L. Othberg (Idaho Bureau of Disaster Services, May-September 2004, \$45,000).
Mitigation of Idaho Geologic Hazards, Earthquake Education Workshop: R.M. Breck-

enridge, K.L. Othberg, and W.M. Phillips (Idaho Bureau of Disaster Services, March-October 2005, \$45,000).

STATEMAP Project, Geologic Mapping in the Orofino, Long Valley, Sandpoint, and Idaho Falls Project Areas: K.L. Othberg, R.M. Breckenridge, R.S. Lewis, J.D. Kauffman, and W.M. Phillips (U.S. Geological Survey, May 2005-April 2006, \$191,188).

STATEMAP Project, Geologic Mapping in the Twin Falls, Orofino, McCall-Cascade, and Sandpoint Project Areas: K.L. Othberg, R.M. Breckenridge, R.S. Lewis, and V.S. Gillerman (U.S. Geological Survey, May 2004-April 2005, \$220,375).

Water Quality Monitoring Analyses: J.A. Welhan (Three Rivers Resource, Conservation and Development District, July 2004-October 2004, \$3,000).