

PROFESSIONAL DEVELOPMENT OPPORTUNITY  
National Park Service  
U.S. Department of Interior

MIDWEST ARCHEOLOGICAL CENTER

*Current Archeological Prospection Advances  
for Non-destructive Investigations in the 21st Century*

May 19-23, 2008

LOCATION: Biesterfeldt Site (The Archaeological Conservancy),  
Ransom County, North Dakota

**DESCRIPTION:** This workshop is designed to provide a practical application of geophysical equipment and aerial photographic techniques available for the identification, evaluation, and ultimately, the conservation and protection of cultural resources. The field exercises associated with the course will concentrate on the application of these techniques to archeological investigations. Instruction will be given in the use, processing, and interpretation of data from magnetometers, conductivity meters, resistivity meters, ground penetrating radar, metal detectors, and magnetic susceptibility instruments and their applications to non-destructive subsurface investigations. The major emphasis of the training will be on the field use of the equipment. Instruction will also be offered in the use of and interpretation of aerial photographic techniques, and in the use of low altitude large scale aerial reconnaissance. Special topics for this year will include soil magnetism and the effects of plowing on geophysical signatures and site integrity.

Geophysical techniques provide a means of non-destructive investigations for archeological surveys. These techniques utilize physical principles to study the earth through indirect interpretation of the earth's physical properties. Geophysicists interpret the Earth's physical characteristics using physical, electrical, and/or chemical measurements. Active geophysical techniques are based on responses from an induced signal used to detect contrasts in different material properties. Such techniques include **electromagnetics (EM)**, **ground penetrating radar (GPR)**, **metal detectors**, **electrical resistivity**, and **seismic**. Passive techniques are based on responses from the natural conditions. These techniques include **magnetics**, **gravity**, and **self potential (SP)**. The course will provide an opportunity to learn about non-destructive geophysical techniques for archeological investigations including advantages and disadvantages of such techniques.

**CO-SPONSORS:** The Archaeological Conservancy, Minnesota State University-Moorhead, the State Historical Society of North Dakota, and the National Park Service-Midwest Archeological Center.

**PARTICIPANTS:** Federal, State, and Local governmental cultural resource managers and specialists (i.e., archeologists, historians, architects, and contracting personnel) as well as private contractors, university professors and students, and international cultural resource personnel, with specific responsibilities concerning the identification, evaluation, conservation, protection, and management of archeological and other cultural resources across the nation. **Due to limitations of space, participation in the workshop is limited to 50 participants.**

**POTENTIAL INSTRUCTORS:** Course instructors in the past have included Dr. Lewis Somers, Geoscan Research USA; Dr. Bruce Bevan, Geosight; Dr. Jarrod Burks, Ohio Valley Archaeological Consultants, Ltd.; Dr. John Weymouth, University of Nebraska; Mr. G. Clark Davenport, Geoforensics International; Dr. Rinita Dalan, Minnesota State University-Moorhead; Dr. Dean Goodman, Geophysical Archaeometry Laboratory, Dr. Douglas Scott (retired), Midwest Archeological Center; Dr. Kenneth Kvamme, University of Arkansas; Dr. Larry Conyers, University of Denver; and Dr. Berle Clay, Cultural Resource Analysts.

**COURSE DATES:** The workshop is planned for May 19-23, 2008. Additional information on the workshop and lodging is available from the National Park Service (Steven De Vore, Course Coordinator--phone: (402) 437-5392, ext. 141). Lectures will be at O'Kelly's Event Center with the field exercises at the Biesterfeldt Site. Lodging will be at the Best Western Kelly Inn, Fargo, North Dakota.

**APPLICATION:** There is a \$475.00 charge for course tuition. Non-Government personnel complete the attached nomination form and send a check or money order to the National Park Service, Midwest Archeological Center, ATTN: Steven De Vore, Federal Building, Room 474, 100 Centennial Mall North, Lincoln, Nebraska 68508-3873. Checks/money orders must be payable to the National Park Service. Federal personnel complete the attached nomination form and send to the address mentioned above. Please submit a 10-part SF-182 Training Form through your local Training Office. All nomination forms must be in by **COB April 25, 2008**. Participants will be notified by May 2, 2008, as to their acceptance to the workshop. Questions should be directed to Steven De Vore at (402) 437-5392, ext. 141).

**APPLICATION FORM**



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**Name:** \_\_\_\_\_ **PHONE:** \_\_\_\_\_

**Address:** \_\_\_\_\_

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**Email:** \_\_\_\_\_

**City:** \_\_\_\_\_ **State:** \_\_\_\_\_ **Zip:** \_\_\_\_\_

**Title/Position:** \_\_\_\_\_

**Course Title:** Current Archeological Prospection Advances for Non-destructive Investigations in the 21<sup>st</sup> Century

**Course Dates:** May 19-23, 2008

(see back)

**WHY I FEEL THE TRAINING IS BENEFICIAL TO ME (AND TO THE GOVERNMENT/ORGANIZATION):**

**WHY THE SUPERVISOR FEELS THE TRAINING IS BENEFICIAL TO THE EMPLOYEE (AND THE GOVERNMENT/ORGANIZATION) IN THE PERFORMANCE OF HIS/HER JOB:**

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Immediate Supervisor

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Date

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Agency Chief/Departmental Supervisor

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Date