

became excessive. Fortunately, all personnel inside the tanks had been equipped with breathing apparatus as the tanks were loaded leisurely under their own power.

There was no question that only a general exhaust system would work, so these first tests were discontinued forthwith. Various combinations of high-velocity general ventilation then were tried. After extensive tests and data analysis, a ductless system consisting of eight high-speed, high-capacity exhaust fans was installed in the overhead of the tank space with rectangular openings for air intake scattered around outboard of the circular exhaust openings. This configuration provided an adequate and thorough air-cleaning system which worked very well in the actual LSTs.

All those concerned with the project understood that after the completion of these tests the mock-up would be used for training and other purposes.

Rear Adm. Schuyler N. Pyne, USN (Ret.), now deceased, was in charge of the LST mock-up project as a lieutenant commander. He prepared this article in August 1976. It was submitted to Army History by his daughter, Sally P. Kennedy, while she was serving with the Defense Advisory Committee on Women in the Services (DACOWITS), on behalf of the Army's Deputy Chief of Staff for Personnel, Human Resources Directorate.

Wilderness/Spotsylvania Staff Ride Guide

Ted Ballard

In the spring of 1864 General Robert E. Lee and Lt. Gen. Ulysses S. Grant were both at the height of their careers. In their first contest of wills, the two would begin the last year of the war with two of the conflict's bloodiest battles, Wilderness and Spotsylvania, Virginia. An examination of these two battles and the commanders involved is a study in the operational and tactical levels of the war, leadership and command at senior levels, and the courage of individual soldiers.

The Wilderness and Spotsylvania battlefields are included in the Fredericksburg/Spotsylvania National Military Park, and a staff ride covering both sites can be made in one day. The information which follows is intended to assist interested individuals in designing and leading such a staff ride.

A publication to assist in organizing the project is *The Staff Ride*, by William G. Robertson, published by the U.S. Army Center of Military History, Washington. This booklet provides guidance to organize a staff ride, lists various functions (e.g., site selection, study phases) associated with staff riding, and establishes flexible standards for a successful exercise. Copies are available to Army account holders from the U.S. Army Publications Center, 2800 Eastern Boulevard, Baltimore MD 21220-2896. The order number is CMH publication 70-21.

A variety of publications concerning the battlefields

are available for purchase at visitor centers located in the Fredericksburg/Spotsylvania National Military Park. The Fredericksburg Battlefield Visitor Center is located at 1013 Lafayette Boulevard, Fredericksburg. The telephone number is (703) 373-6122. The Chancellorsville Visitor Center is located 10 miles west of Fredericksburg, on Va. Route 3. The telephone number is (703) 786-2880. These locations are open 7 days a week, 8:00 a.m. to 5:00 p.m., except Christmas, New Years, and Thanksgiving. Additional information regarding Fredericksburg/Spotsylvania National Military Park is available from the Superintendent, P.O. Box 679, Fredericksburg, Virginia 22404.

Modern 1:24,000-scale topographical maps of the battlefield area are available for sale from the U.S. Geological Survey, Denver, Colorado 80225 or Reston, Virginia 22092. The cost is \$2.50 per map. The Chancellorsville and Mine Run quadrangles cover the Wilderness battle, the Spotsylvania and Brokenburg quadrangles cover the Battle of Spotsylvania.

Sets of black and white National Park Service maps showing detailed troop dispositions at either Wilderness or Spotsylvania are available from the Fredericksburg and Chancellorsville visitor centers. The cost of the 5-sheet Wilderness map is \$6.00; the 10-sheet Spotsylvania map is \$10.00.

A few published sources of information which might be helpful in developing a Wilderness/Spotsylvania staff ride are listed below. Copies of these publications should be available from commercial bookstores or, if out of print, through interlibrary loan:

Cornwell, James Marshall. *Grant as a Military Commander*. New York: Van Nostrand Reinhold Company, 1970, pp. 131-62.

Dowdey, Clifford. *Lee's Last Campaign: The Story of Lee and His Men Against Grant—1864*. Boston: Little, Brown and Company, 1960.

——— and Louis H. Manarin, eds. *The Wartime Papers of R. E. Lee*. Boston: Little, Brown and Company, 1961, pp. 710-36.

Fiebegeer, Col. G. J. *Campaigns of the American Civil War*. New York: U.S. Military Academy Press, 1914.

Fuller, J. F. C. *Grant and Lee: A Study in Personality and Generalship*. Bloomington: Indiana University Press, 1957.

Grant, Ulysses S. *The Personal Memoirs of Ulysses S. Grant*. New York: Charles Webster and Company, 1886, vol. 2, pp. 177-243.

Johnson, Robert U. and Buel, Clarence, eds. *Battles and Leaders of the Civil War*. Grant-Lee Edition. New York: The Century Company, 1884, vol. 4, pp. 97-178.

Matter, William D. *If It Takes All Summer: The Battle of Spotsylvania*. Chapel Hill: University of North Carolina Press, 1988.

Porter, Horace. *Campaigning with Grant*. Bloomington: Indiana University Press, 1965.

Steere, Edward. *The Wilderness Campaign*. Harrisburg: The Stackpole Company, 1960.

Trudeau, Noah Andre. *Bloody Roads South: The Wilderness to Cold Harbor, May-June 1864*. New York: Ballantine Books, 1989.

U.S. War Department. *War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies*. Washington: Government Printing Office, 1889. Series 1, vol. 36, pts. 1-3.

Larry A. ("Ted") Ballard is a historian in the Center's Field and International Division, with a special interest in the Civil War. Mr. Ballard conducts or assists with a number of Civil War staff rides each staff ride season.

Electronic Access to MHI Refbibs

The U.S. Army Military History Institute (MHI) has nearly 3,000 reference bibliographies (refbibs) covering numerous subjects and identifying the pertinent sources located at MHI. These refbibs are available via electronic mail and the Defense Data Network (DDN).

With access to the DDN, the procedure involves sending mail to: info@carlisle-emh2.army.mil and identifying a particular refbib to be returned to you. This is done by entering in the "Subject" field the refbib filename plus the suffix `.asc`. Leave the text portion of your message blank and send it.

If successful—which usually depends upon using the *exact* refbib filename and remembering to add the `.asc`—the message you sent will be returned with the requested refbib, which you then can print or transfer to your word processing system. All refbibs are available in the ASCII format (hence the `.asc` suffix). Each refbib file requires a separate request or mailing.

For electronic help and an introduction, send first for the file name `USAMHI` to which you add `.asc`; thus, `USAMHI.asc`. For help by phone, call Mr. Dennis Vetock, 717-245-3168 or DSN 242-3168.