

APPENDIX FIVE

Microcomputer Software and Hardware

APPENDIX 5: MICROCOMPUTER SOFTWARE AND HARDWARE USED IN THE TEPHRA PROJECT

This appendix is a direct reflection of the increasing dependence of researchers on microcomputers and their related software. We couldn't have done it without the temperamental little marvels. All computer-based analysis of data, as well as the production of the Tephra Overview, was handled with an IBM XT-compatible equipped with a 65MB hard disk, an 8087 coprocessor, a mouse, and 1MB of extended memory. The overview was printed with an HPIIP LaserJet with 1MB RAM installed. Most of the photographs in the overview were scanned with an HP ScanJet and printed (with WordPerfect 5.1) on the HPIIP laser printer.

The following IBM PC software was used for the many computer-based phases of data analysis and report production:

AS-EASY-AS 4.0 *

Trius, Inc. ■ 231 Sutton St., Suite 2D-31 ■ North Andover, MA 01845

This spreadsheet is included with supplementary diskette files in the back pocket of the Tephra Overview. The following AS-EASY-AS files and worksheets are located on the supplementary data disk:

ASEASY.EXE	Main Program
ASEASY.MSG	Opening Message Screen
ASEASY.HLP	Help File
ASEASY.PRT	Printer Control File
HTREE.EXE	Runs Help File
LANDSCAPE.EXE	Sideways-Like Add-On
READ.ME	Start-Up Instructions
ZOOM.EXE	Add-On Accessory
AAS.WKS	AAS (Atomic Absorption) Geochemical Data
EPMA.WKS	EPMA (Electron Microprobe) Geochemical Data

To run the spreadsheet and load the data files:

1. Insert the Supplementary Data disk.
2. Type GO, then <RETURN>.
3. Type 2 at the introduction screen to load the spreadsheet.
4. Press the backslash (/) key to activate up the menu window.
5. Press F (for File) to bring up the File Menu.
6. Press R (for Retrieve) - use the cursor to move the highlighted cell to the name of the worksheet you want to load (AAS.WKS or EPMA.WKS) and press <RETURN>.

To exit the spreadsheet, press the backslash key (/), then E (for Exit), then Y (for Yes). For help while in the spreadsheet, use the F1 key.

CALIB 2.0 (Quaternary Isotope Laboratories, University of Washington) *
Quaternary Isotope Laboratories ■ University of Washington ■ Seattle, WA
Dendrochronologic calibration of radiocarbon dates.

GPP (Geochemical Program Package)
Center for Volcanology ■ University of Oregon ■ Eugene, OR 97403
Exploratory data analysis of geochemical data.

MVSP (Multivariate Statistical Package) 2.0 *
Warren L. Kovach ■ Institute of Earth Studies ■ University College of Wales ■
Aberystwyth, Wales SY23 3DB ■ U.K.
Cluster analysis and dendrograms for geochemical data analysis.

NCSS (Number Cruncher Statistical System) 5.1
Jerry L. Hintze ■ 865 East 400 North ■ Kaysville, UT 84037
General statistical and exploratory data analysis of geochemical data.

PIZAZZ PLUS
Application Techniques, Inc. ■ 10 Lomar Park Drive ■ Pepperell, MA 01463
Rescaling and printing of captured screen images.

QUATTRO PRO 2.0
Borland ■ 1800 Green Hills Road ■ Scotts Valley, CA 95067
Spreadsheet used for the tabulation and basic statistical analysis of all geochemical data. The graphics capabilities of the spreadsheet were used for the production of many of the scatterplots and ternary plots (see TRIANGLE.WK1).

SIDEWAYS 3.21
Funk Software ■ 222 Third St. ■ Cambridge, MA 02142
Printing of spreadsheet tables with laser printer.

SURFER 4.05
Golden Software ■ P.O. Box 281 ■ Golden, CO 80402
Perspective diagrams (Crater Lake images).

TRIANGLE.WK1 *
Peter S. Mustard ■ Geological Survey of Canada ■ 100 West Pender Street ■
Vancouver, B.C. ■ Canada
Spreadsheet layout and macros used with Quattro Pro to produce ternary plots of chemical data (Mustard and Richardson, 1990).

WORDPERFECT 5.1

WordPerfect Corporation ■ 1555 N. Technology Way ■ Orem, UT ■ 84057

Word processing and overall production of the overview (including the printing of all graphics images).

* Public domain or shareware software

Oregon Tephra Bibliography Information System

We have also included an on-disk indexed bibliography for Oregon tephra sources. This bibliography was developed independently from the investigation reported here and is included to provide an additional resource for Willamette National Forest tephra researchers (Skinner, 1990). The files for the Oregon Tephra Bibliography are located on the 3-1/2" supplementary data disk in the back of the Tephra Overview.

To use the Oregon Tephra Bibliography, insert the diskette, type GO, then <RETURN>. This will load a menu-driven shell from which the bibliography, as well as the supplementary data files previously described, can be loaded.