Paleomagnetic Tables on CD-ROM
Explanatory Notes

Progressive thermal demagnetization of approximately 1000 minicores from several Leg 171B sites were completed at the University of Michigan and the University of Oxford by Leon Bardot, James Ogg and John Foster during May-June, 1997. The minicores were either extruded from plastic cylinders (in soft sediment) or drill pressed (in harder sediment) during shipboard sampling. All demagnetization data was merged, and the combined results (all demagnetization steps) and preliminary interpretations are presented in the tables on this CD-ROM. Polarity interpretations from these results are presented in the magnetostratigraphy figures of the Leg 171B sites and were instrumental in assignment of polarity chrons.

The paleomagnetic measurements for each discrete sample are tabulated in Table "1" of each hole (tab-delimited ASCII format). A summary of the preliminary polarity interpretations with a graphical representation is in Table "2" of each hole (PDF format). Characteristic directions had not been computed for the array of samples prior to the submission of the Initial Reports volume.

To obtain later Excel versions of these tables which incorporate post-cruise characteristic directions and additional sample measurements, contact James Ogg:

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The columns in the pairs of Tables have the following format:

(1) Seq.# – An earlier numbering of the shipboard sampling by Bardot and Ogg.

(2) Code – Whether the original sample was collected under shipboard codes of Bardot ("LEON") or Ogg.

(3) Leg, Site, Hole, Core – Standard designations.

(4) Type – "H" is an advanced piston core, "X" is an extended core barrel cores, and "R" is a rotary core.

(5) Section, cm – Standard designations.

(6) Depth – Meters below seafloor (mbsf), according to shipboard databases.

(7) Priority to Run – Internal working designation. Samples which were not yet run were assigned a priority from 1 (most important) to 3 (least important) according to whether they would help delineate a polarity zone. These samples are also color-coded as red, yellow, or green, respectively, in the Excel table listings.

(8) Run Name – A simple coding of Core-Section.cm which was used as sample names during cryogenic measurements.

(9) TT – Thermal demagnetization step. "0" is NRM, and all other values are °C.

(10) Int – Intensity in mA/m. Sample volumes were all assigned as approximately 10.6 cm^3, and there was no attempt to correct the intensities for the few smaller samples.

(11) Decl, Incl – Declination and Inclination of the paleomagnetic vector relative to the axis of the ODP hole. In the

declination system, North “0” declination is arbitrarily assigned to the direction of minicoring toward the outside of the shipboard working half. Effectively, the “field data” was entered as “azimuth = 0, dip = 0, bedding correction = 0”. These declinations, being relative to the working half, are opposite the standard ODP coordinates in the shipboard pass-through cryogenic, which are relative to the double lines on the bottom of the archive half.

Note: The first line of “Decl - Incl” tabulation for each sample may include a residual line from the magnetometer program repeating the Run Name and field data.

(12) a-95 – Angular precision of vectors (alpha-95, or radius of the 95% confidence circle). The paleomagnetic samples were measured in either 3 orientations on the 3-axis magnetometer at the University of Michigan, or in 8 orientations on the 2-axis magnetometer at the University of Oxford. These multiple measurements enabled computation of the errors on the mean vector.

(13) Michigan error – The computer program used during the University of Michigan analyses also gave a value reflecting the variation in measured intensities during the three independent measurements on the 3-axis magnetometer. This error parameter was useful in evaluating viscous remanent magnetizations (VRM) and contributions from the sample holder for weak samples.

(14) Polarity Column – Preliminary polarity assignments. Black is Normal polarity, White is Reversed polarity, Cross-hatchured is Indeterminant or uncertain polarity. For some samples, an uncertainty in the polarity assignments is denoted by a shading as dark-gray (questionable Normal polarity) or by a light-speckle (questionable Reversed polarity). This graphical column is only shown in Table 2 (PDF format).

(15) Polarity Chron – Assignments of polarity zones to the magnetic polarity time scale. These correlations are based upon the summary magnetostratigraphy figures for each Hole.

(16) Sample Comment – Our remarks about sample demagnetization behavior, measurement problems, logic in assigning polarity interpretations, or other information. Many of these comments are from our internal working consideration or observations, and are not intended as a formal presentation or discussion.

(17) Core Coordinates (Decl, Incl) – The corresponding paleomagnetic vectors relative to the minicore coordinates, in either the University of Michigan or University of Oxford magnetometer systems.