

PALEOMAGNETIC INVESTIGATION OF
PRE-MISSOULA GRAVELS, PASCO BASIN AND
VICINITY, WASHINGTON

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ABSTRACT

Ninety-seven samples of Pre-Missoula Gravels were collected for paleomagnetic analysis from a corehole on the Hanford Site and from four surface exposures in the Pasco Basin and vicinity, southeastern Washington. The paleomagnetic results from corehole E-20 indicate the existence of reversed polarity below a depth of 40 feet. At two of the surface exposures (Yakima Bluffs and Marengo), the Pre-Missoula Gravels contain reversed-polarity remanent magnetizations of high stability upon alternating-field and thermal demagnetization. At the Marengo section, reversed polarity apparently endured long enough for deposition of two loesses and formation of several paleosols. These paleomagnetic results indicate that some Pre-Missoula Gravels beneath the Hanford Site almost certainly ($P > 97.4\%$) pre-date the Brunhes normal-polarity epoch, which began 730,000 years ago.

INTRODUCTION

The purpose of this study was to investigate whether paleomagnetism might elucidate the age of the Pre-Missoula Gravels, which underlie part of the Hanford Site. If these deposits are less than seven hundred thousand years old, they would probably contain only normal-polarity remanent magnetization, since the present normal-polarity epoch began about 730,000 years ago. On the other hand, if the Pre-Missoula Gravels are greater than 730,000 years old, they might contain reversed-polarity magnetization reflecting either deposition, weathering, or diagenesis in a reversed-polarity geomagnetic field.

To determine whether any of the Pre-Missoula Gravels contain reversed-polarity magnetizations, it was considered desirable to sample these sediments both in the subsurface of the Hanford Site and in nearby surface outcrops, where fully oriented samples could be obtained. Accordingly, 42 paleomagnetic samples were collected from corehole E-20 at the Skagit/Hanford Nuclear Project on the Hanford Site, and 55 samples were collected from Pre-Missoula Gravels at four surface exposures.

SAMPLE COLLECTION

Forty-two samples were collected for paleomagnetic analysis from depths between 24.8 and 63.1 feet in corehole E-20 on the Hanford Site (Figure 1). The sampled sediment ranged from predominantly fine- to medium-grained sand at the top to very coarse-grained, poorly sorted sand near the base.

Initially, 30 samples were collected by D. R. Van Alstine on June 11, 1981, within minutes after the core runs were brought to the surface. Cubical samples of sediment were carved using demagnetized stainless steel knives. The samples were encased either in 6-cubic-centimeter, non-magnetic plastic or quartz boxes. Plastic boxes (15 samples) were used for the coarsest lithologies, which were to be subjected only to alternating-field (AF) demagnetization; quartz containers (15 samples) were used for the finer-grained or more oxidized samples, which could then be subjected to thermal demagnetization. After placing each sample in its container, a 50% solution of sodium silicate was dripped onto the exposed surfaces to prevent grains from rotating during transport and subsequent laboratory analysis.

Samples were collected while the core was positioned horizontally in a fixed cradle. Consequently, any magnetization imparted to the sample while it was being carved would have an inclination no steeper than $\pm 21^\circ$ (the complement of the angle of the present geomagnetic field at the sampling site).

To verify results from these initial samples, 12 additional samples from E-20 were collected by D. R. Van Alstine on December 15, 1981. These samples were collected using similar sampling procedures but

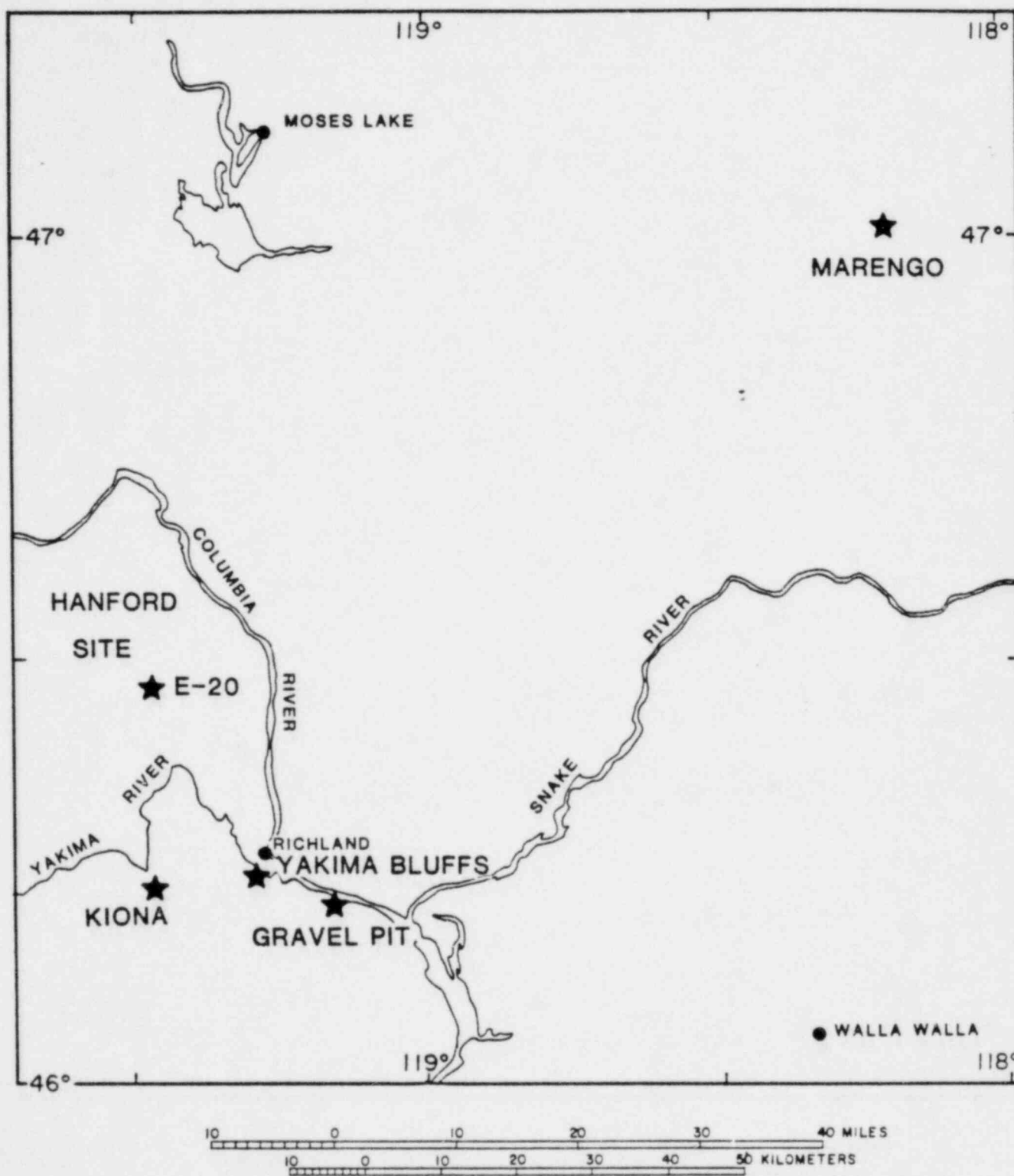


Figure 1: Index map of paleomagnetic sample localities (stars).

within the magnetically-shielded room of the Sierra Geophysics paleomagnetism laboratory. Because the ambient field in this room is $<0.4\%$ of the Earth's field, and because aluminum knives were used, no magnetic components are likely to have been imparted during sampling. All but one of the 12 samples were collected from core segments that had been wrapped in aluminum foil and then sealed in wax since the initial sampling on June 11, 1981.

The 55 surface-outcrop samples were collected at four exposures of Pre-Missoula Gravels in the Pasco Basin and vicinity (Figures 1 through 3). Sampling was conducted by D. R. Van Alstine and E. P. Chase of Sierra Geophysics on December 5-6, 1981. The sampling sites were selected after consultations with D. M. Caldwell and H. J. Delaney of Golder Associates and with A. M. Tallman, K. R. Fecht, and J. T. Lillie of Rockwell Hanford Operations.

Sampling procedures were identical to those used in the initial core hole sampling, except that the surface-outcrop samples were fully oriented using a Brunton compass and were carved from vertical faces. The horizontal and vertical separations between samples were measured with a meter tape.

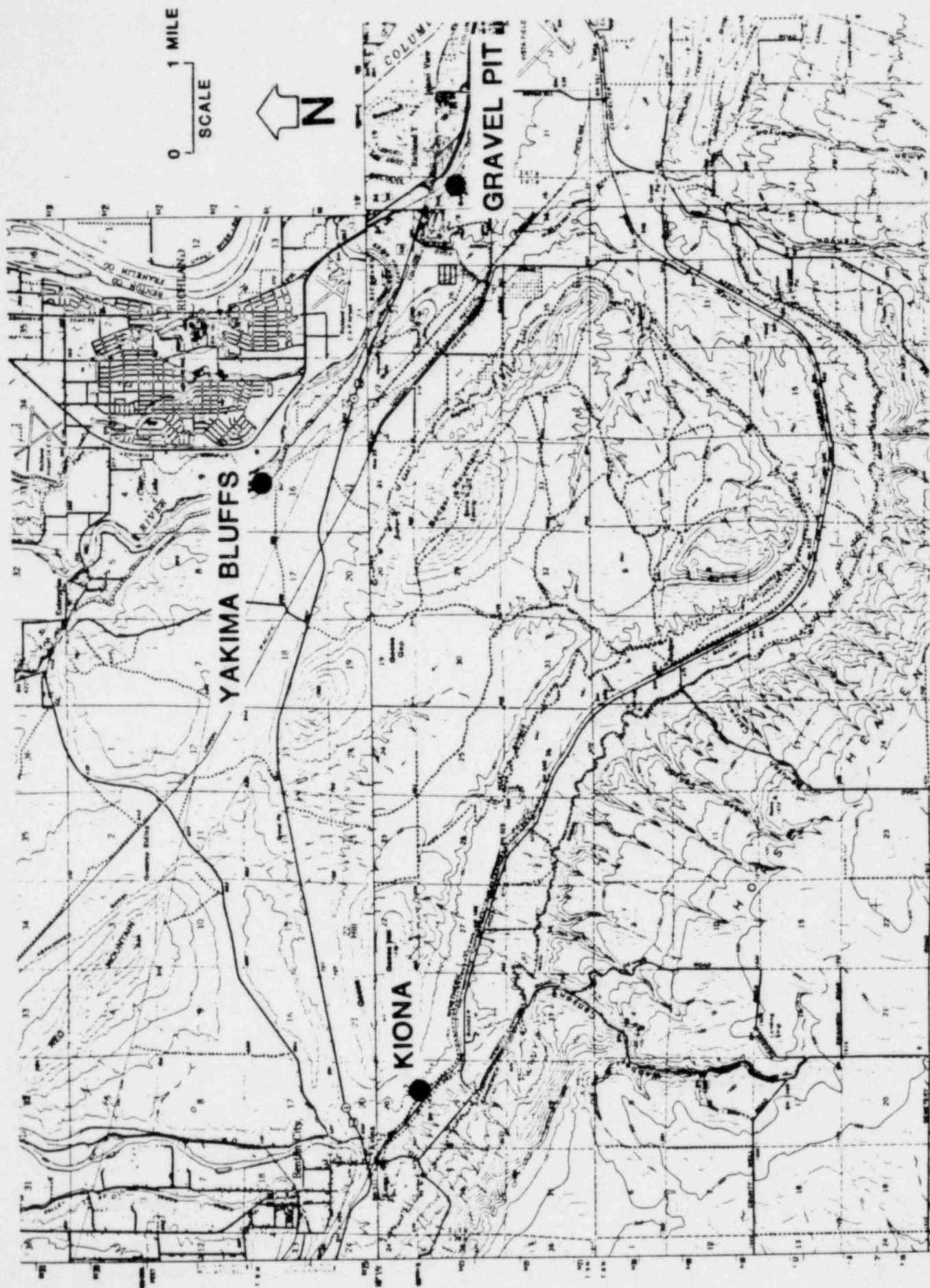


Figure 2: Location map of Kiona, Yakima Bluffs, and Gravel pit sample localities.

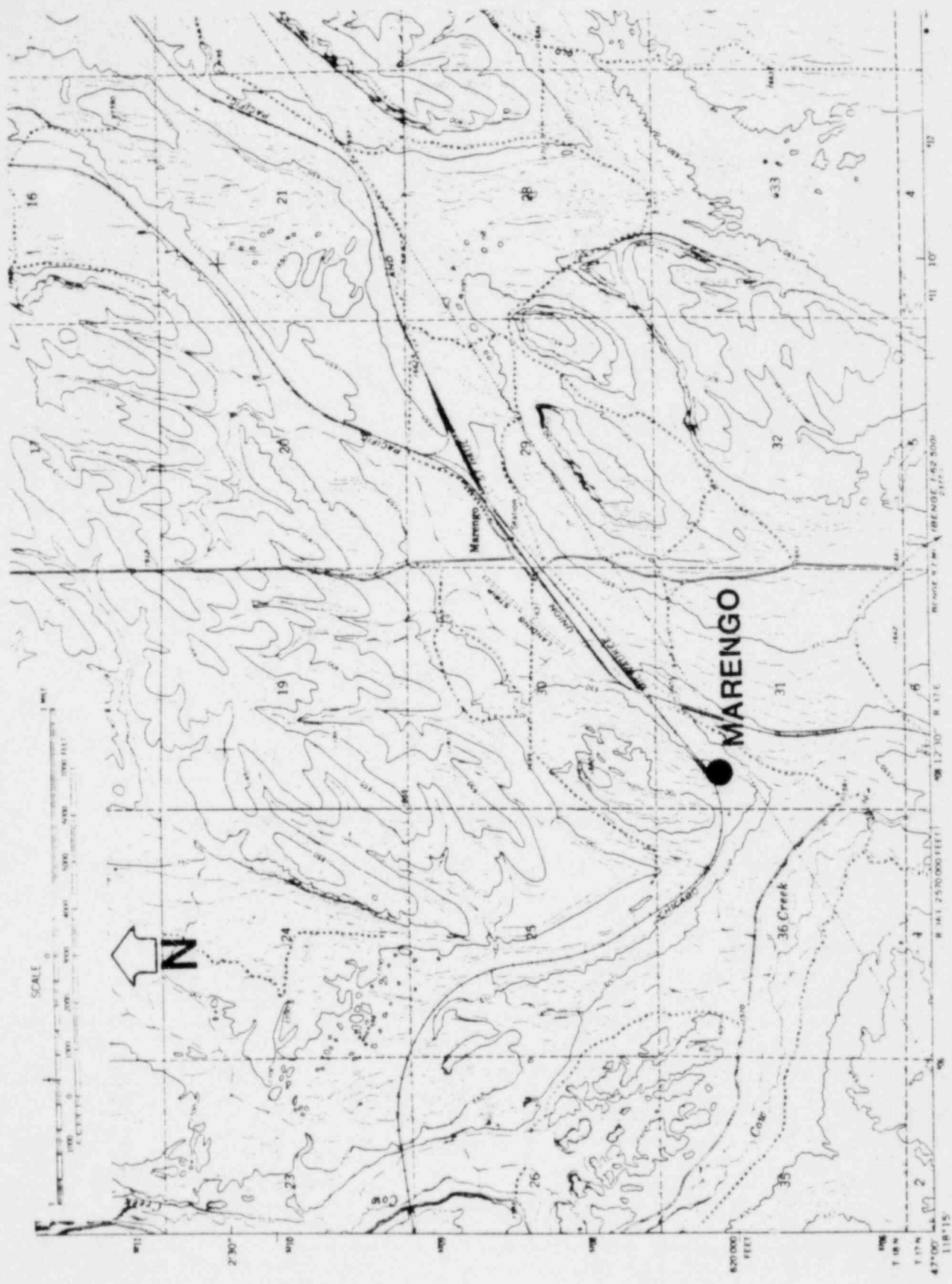


Figure 3: Location map of Marengo sample locality.

LABORATORY ANALYSIS

In the Sierra Geophysics paleomagnetism laboratory, an effort was made to isolate the primary detrital remanent magnetization (DRM) from any secondary magnetizations. For the initial E-20 samples, this consisted of first measuring the direction and intensity of natural remanent magnetization (NRM) of all 30 samples. Eighteen of the samples were then subjected to progressive alternating-field (AF) demagnetization at as many as 12 steps between 25 and 1,000 oersteds (1 oersted = 0.1 millitesla). Eleven other samples were subjected to progressive thermal demagnetization in 11 steps between 110° and 600°C. One sample disintegrated at an early stage of laboratory analysis.

For the later E-20 samples and for all surface-outcrop samples, the NRM and bulk magnetic susceptibility were first measured for all 67 samples. Half of these samples were then subjected to alternating-field (AF) demagnetization at 9 steps between 50 and 1,000 oersteds (Oe). The remaining samples were subjected to progressive thermal demagnetization in 9 steps between 150° and 660°C.

A total of 991 magnetic remanence measurements and 67 bulk magnetic susceptibility measurements were made of the 97 samples.

All paleomagnetic measurements were made on Sierra Geophysics' 3-axis, 6.3 cm-access superconducting (SQUID) magnetometer manufactured by Superconducting Technology, Inc. This instrument has a dynamic range between 10^{-8} and 10^{+1} emu. The magnetometer is interfaced to a mainframe computer, which permits real-time computation of magnetic directions, intensities, induced/remanent ratios, uniformity of

magnetization parameters, structural corrections, and virtual geomagnetic poles.

The superconducting magnetometer measurements are traceable to the National Bureau of Standards and to Sierra's own set of reference samples, which have been checked against three magnetometers at other laboratories. Reproducibility of any given measurement is generally within 1° in direction and 1% in intensity.

Alternating-field demagnetization was performed using a Schonstedt Model GSD-5 specimen demagnetizer, which provides 400 Hz fields up to 1,000 Oe. The demagnetizer tumbles the specimens around orthogonal axes while the peak field is decaying. During each decay cycle, the sense of rotation of the tumbler is periodically reversed; this cancels effects of rotational remanent magnetization (RRM) and results in smoother demagnetization paths.

Thermal demagnetization was performed using a custom-built, three-zone furnace with a very large isothermal region. Samples are heated and cooled in a magnetic field of less than 5 gammas (nT).

Magnetic susceptibility values were measured on the superconducting magnetometer. This is accomplished by applying a known field along one axis of the instrument, measuring a sample's magnetization in three different orientations with respect to this field, and then separating the remanent from the induced magnetization by vector subtraction. Magnetic susceptibilities were measured in a DC field of 0.55 Oe.

All measurements and demagnetization procedures were carried out in a 120-square-foot magnetically shielded room in which the ambient magnetic field is less than 0.4% of the Earth's magnetic field. This

improves the accuracy of the paleomagnetic analysis by minimizing the contribution of any viscous components of magnetization (VRM) to the magnetization of the sample.

DATA ANALYSIS

For each sample, vector analysis was performed to identify the multiple components of magnetization that might be present. Components of magnetization were identified visually as approximately linear stretches of points on the demagnetization diagrams, or as clusters of consecutive points on the demagnetization path that showed little change in direction or intensity. A least-squares line was then fitted through each line segment. Although a computer was used to calculate the least-squares lines, the endpoints of each segment were chosen by the investigator, unlike the computerized search method proposed by Kirschvink (1980). We have found that the computerized search invariably yields line segments that are biased by curved parts of the demagnetization paths. The advantage of calculating magnetization directions using least-squares lines is that scatter of directions due to effects of VRM or anhysteretic remanent magnetization (ARM) are minimized in the final computation of the mean direction for a site.

The component with the highest coercivity or blocking temperature was considered to be the "characteristic magnetization" (Zijderveld, 1967) of the sample. The characteristic magnetization directions were used to compute the mean paleomagnetic direction for each locality, together with its estimated 95% confidence limit, α_{95} (e.g., McElhinny,

1973). The mean and α_{95} are derived from the statistics of Fisher (1953), which measure dispersion on a sphere.

RESULTS

The results from this paleomagnetic investigation are summarized and interpreted below; they are presented in detail in the Appendix, which documents, in both tabulated and graphical form, the complete demagnetization history of each of the 97 samples analyzed in this study. The tables list the magnetization directions, corresponding virtual geomagnetic poles, intensities as a function of demagnetization step, subtracted vectors between demagnetization steps, bulk magnetic susceptibilities, and output from the statistical analysis program. The graphs show vector demagnetization information in the form of vector demagnetization diagrams, stereonet plots of directional change upon demagnetization, and normalized intensity versus demagnetization level.

COREHOLE E-20

The NRM directions of all but one of the initial 30 samples have positive inclinations, pointing downwards at moderate to steep angles (Figure 4). The one exception is sample #24 (49.7 feet), which contains a large basalt pebble about 2 cm in diameter. This sample was collected to test whether the drill string was imparting an appreciable magnetization to the core samples. Alternating-field demagnetization revealed that the drilling process was indeed imparting a downward-pointing (normal-polarity) magnetization to the samples, at least at the 49.7 foot level.

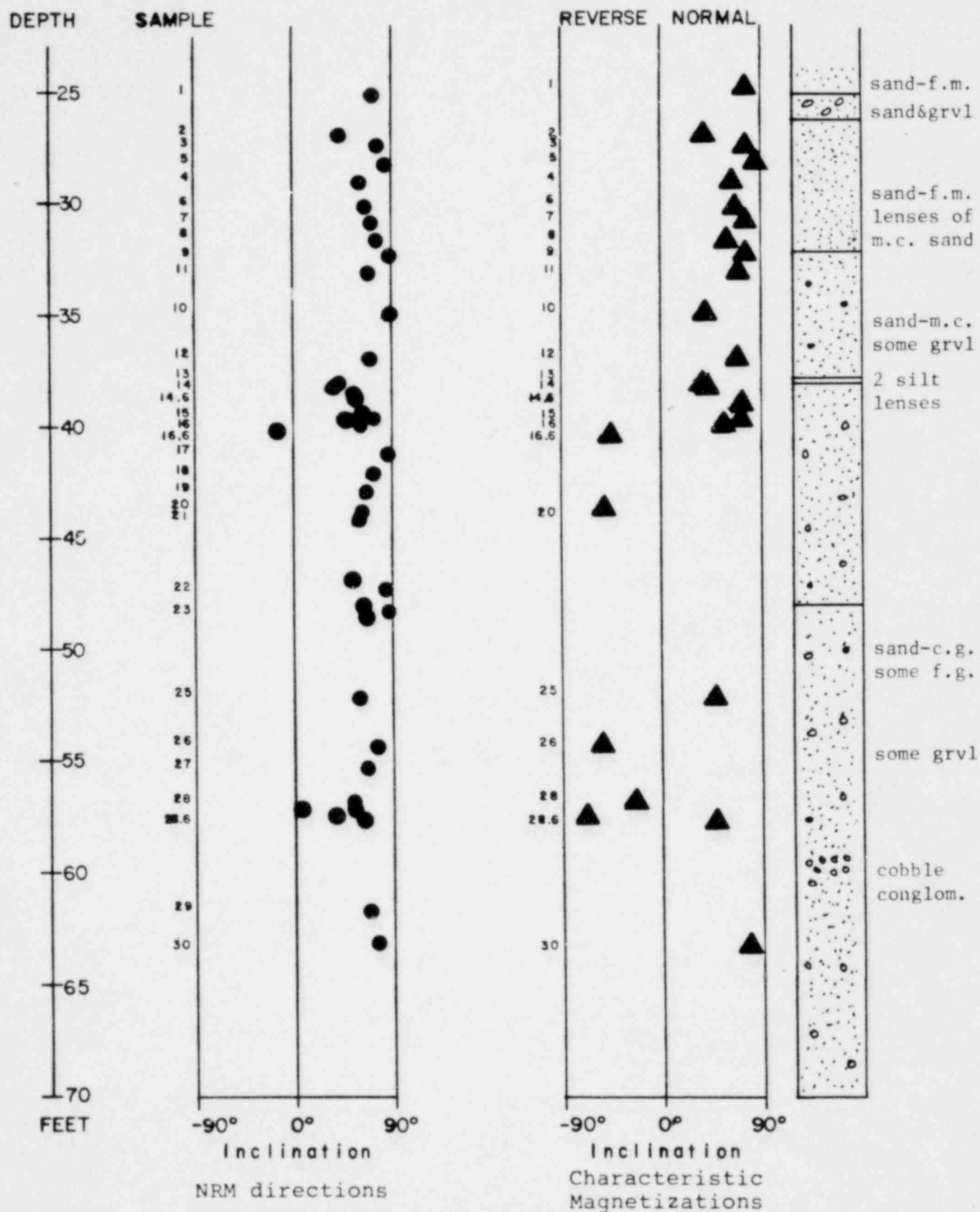


Figure 4 Remanent magnetization directions before (left) and after (right) alternating-field and thermal demagnetization of sediment samples from corehole E-20. For enhanced clarity, some sample numbers have been suppressed.

A downward-pointing magnetization with low coercivity (i.e., resistance to alternating magnetic fields) was most pervasive in the coarsest sediment samples. This vertically-downward magnetization is undoubtedly a drilling-induced remanent magnetization (DIRM), nearly ubiquitous in drillcore samples (cf. Johnson, 1979; Van Alstine and Gillett, 1981, 1982).

Because of the presence of normal-polarity DIRM in corehole E-20, the polarity of the primary DRM may have been obscured in many of the samples. However, the most accurate paleomagnetic record is generally preserved in finer-grained sediments. In corehole E-20, samples #1, 13, 14, and 15 apparently contain the highest silt fractions; these samples also contain the best records of a normal-polarity magnetization with high magnetic stability upon both AF and thermal demagnetization (median coercivity ~ 300 Oe and blocking temperature $\sim 400^\circ$ to 500°C). This is consistent with a normal-polarity DRM residing in magnetite and acquired penecontemporaneously with deposition. Although samples between #1 (24.8 feet) and #15 (39.6 feet) are coarser grained and contain more drilling remanence, their demagnetization paths generally exhibit positive inclinations trending toward the origin. Thus, the upper 40 feet of E-20 probably has penetrated only normally-magnetized sediments.

In the initial suite of samples, reversed-polarity magnetization was discovered below a depth of about 40 feet. A reversed component was best isolated in sample #20 (43.8 feet; after thermal demagnetization at 350° to 550°C) and in sample #26 (54.3 feet; after AF demagnetization at 200 to 1,000 Oe). The presence of a reversed-polarity magnetization was suggested in many other samples (particularly #17, #18, #22, #27,

and #28) by negative-inclination directions at higher demagnetization steps or by demagnetization paths that do not trend toward the origin. Many of the samples from the very-coarse-grained sands were magnetically unstable, and two samples have normal-polarity characteristic magnetizations. This may reflect a superposition of normal-polarity VRM and DIRM (residing in coarse grains of magnetite) on a previous reversed-polarity magnetization residing in fine-grained magnetite or in hematite.

To further substantiate the indications of reversed polarity in the initial paleomagnetic data, 12 additional samples were collected for paleomagnetic analysis from the E-20 core. Resampling was restricted to the few intervals in which the core had been sealed in wax and had not disaggregated into loose sand. Emphasis was placed on resampling near and below the 40-foot level, where the initial results had suggested a change from reversed to normal polarity.

A characteristic magnetization direction could be recognized in only 5 of these 12 samples. The other seven samples exhibited either unstable demagnetization behavior or superposition of multiple components. In the five samples yielding characteristic magnetizations, normal polarity was confirmed at 39.5 and 39.7 feet, and reversed polarity at 40.2 and 57.2 feet. A single, apparently normal-polarity sample at 57.4 feet probably reflects a predominance of secondary, normal-polarity VRM and DIRM.

YAKIMA BLUFFS SECTION

Ten oriented samples were collected from about 8 meters of Pre-Missoula Gravels at Yakima Bluffs. This section is the closest

sampled outcrop to the E-20 site. The uppermost sample (#1) is from a sand lens near the base of a coarse flood gravel; this gravel may not be a Pre-Missoula deposit. Eight other samples are from underlying, clays, silts, and sands deposited in fining-upwards sequences of graded beds. One sample (#9) was collected from one of many clastic dikes that cut the Yakima Bluffs section; these dikes are truncated by the overlying coarse flood gravel. Neither of the flood gravels that form the top and base of the Yakima Bluffs section contains enough fine-grained matrix to be sampled for paleomagnetic analysis.

All Pre-Missoula samples from Yakima Bluffs (including the clastic dike sample) yield reversed-polarity characteristic magnetizations. The only sample from this section with a normal-polarity characteristic magnetization is sample #1, from the younger coarse flood gravel.

Most of the reversed-polarity samples contain some degree of a secondary, normal-polarity magnetization. This magnetization could be removed, however, in alternating-fields as low as 50 Oe or at temperatures as low as 150°C (Figure 5); this normal-polarity component could be either a VRM residing in coarse-grained magnetite or a chemical remanent magnetization (CRM) residing in "limonite" (mostly goethite) produced by weathering.

The reversed-polarity magnetization that predominates in these sediments is probably a DRM residing in both magnetite and hematite. Alternating-field demagnetization shows that a major fraction of the reversed-polarity magnetization resides in fine-grained magnetite, since the median destructive fields (MDF; defined as the peak alternating-field required to reduce the NRM intensity by one-half) are typically

Figure 5. Vector demagnetization diagrams of representative samples from the Yakima Bluffs section.

Vector demagnetization diagrams display changes in both remanent magnetization direction and intensity upon progressive demagnetization. Shaded circles represent the endpoint of the magnetic vector projected onto the horizontal plane; the declination is the angle (measured clockwise from due north) between the north-south axis and the horizontal component. The distance from open circles to the origin is the total length of the magnetic vector; the angle between the abscissa and the ray from the origin through the open circle is the inclination. The demagnetization steps are indicated beside the figures (AF steps are labeled with $G = \text{gauss} = \text{oersted} = 0.1 \text{ millitesla}$; thermal steps are labeled with $T = ^\circ\text{C}$).

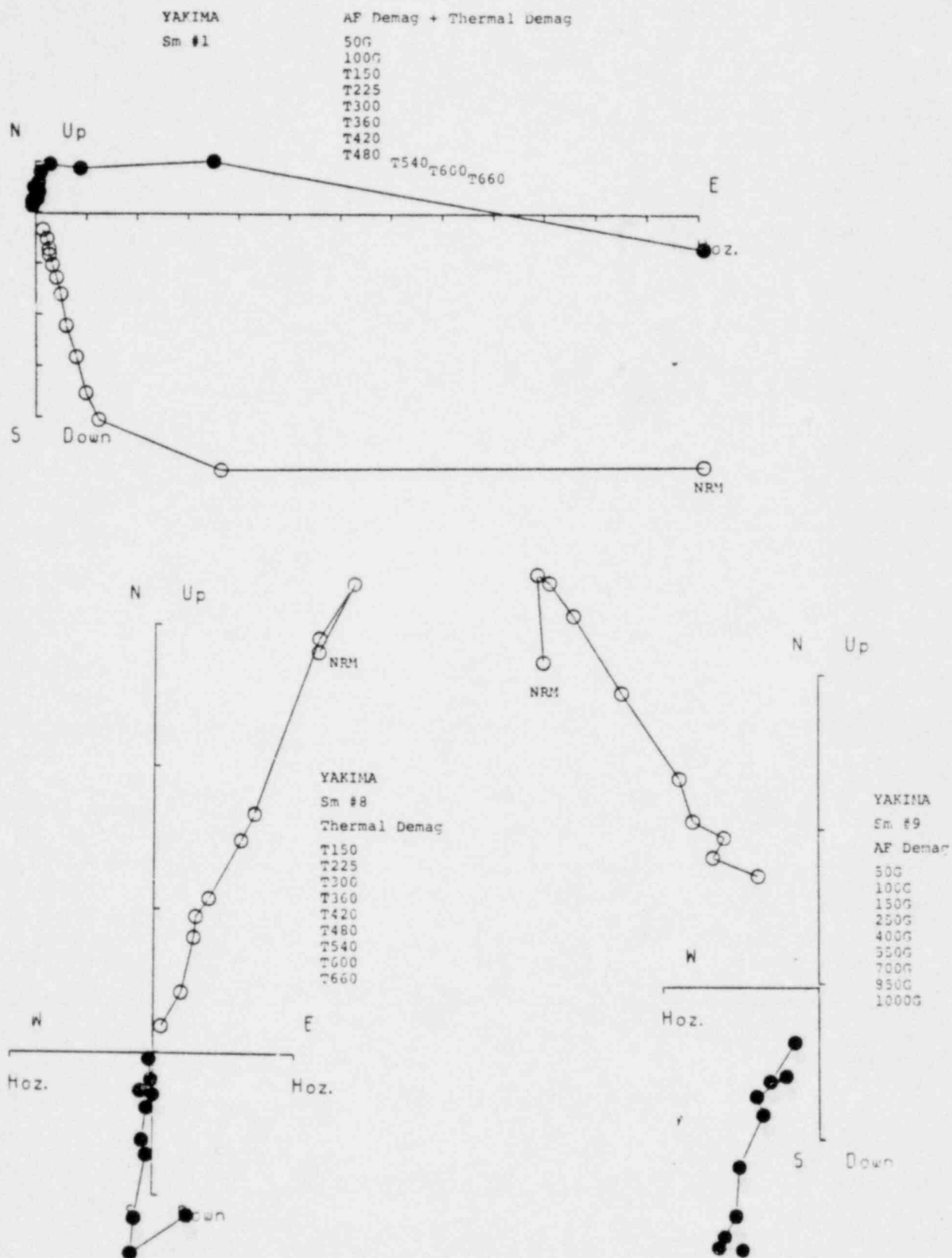


Figure 5

between 250 and 700 Oe. Thermal demagnetization reveals that some of the reversed-polarity magnetization resides in hematite, since between 10% and 40% of the NRM intensity remained at temperatures above the Curie point of magnetite ($\sim 580^{\circ}\text{C}$)

A mean direction ($D = 175.8^{\circ}$, $I = -58.6^{\circ}$, $\alpha_{95} = 10.0^{\circ}$), calculated from the nine reversed-polarity samples, is not significantly different from the reversed-polarity, axial-dipole-field direction ($D = 180.0^{\circ}$, $I = -64.0^{\circ}$) at this locality (Figure 6).

KIONA SECTION

Eight oriented samples were collected from about 6 meters of Pre-Missoula Gravels in a gravel pit near Kiona. In addition, two samples were collected from overlying loess deposits of Missoula or Holocene age.

All 10 samples from the Kiona section yield normal-polarity characteristic magnetizations. The two loess samples exhibit a stable magnetization with MDF of ~ 500 Oe and blocking temperature consistent with a magnetization residing in magnetite.

The eight Pre-Missoula samples are from two sandy interbeds in coarse flood gravel. The upper sand lens yields a characteristic magnetization with MDF of ~ 250 Oe (Figure 7) and blocking temperature consistent with a magnetization residing primarily (98%) in magnetite; less than 2% of the NRM intensity survived heating above the Curie point of magnetite, indicating that these samples contain little, if any, hematite. The linearity of the vector demagnetization diagram indicates that the samples contain only this single, normal-polarity magnetization.

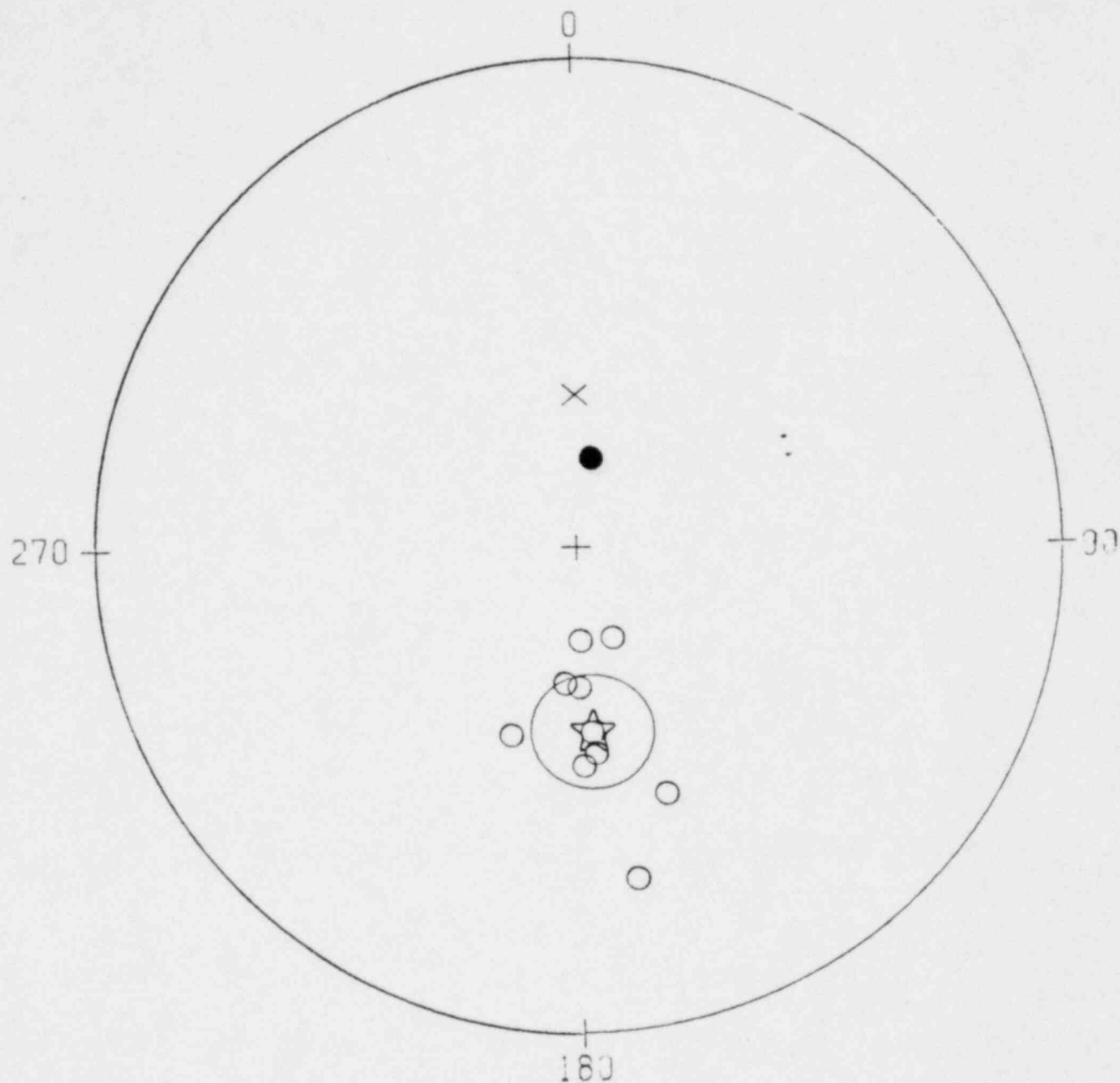


Figure 6: Stereographic projection showing least-squares-fitted magnetization directions from the Yakima Bluffs section. The X marks the direction of the present axial dipole field at the sampling site. Solid (open) circles are on the lower (upper) hemisphere, respectively (i.e., solid circles have normal polarity; open circles have reversed polarity). The large circle around the star is the 95% confidence circle (Fisher, 1953) surrounding the mean.

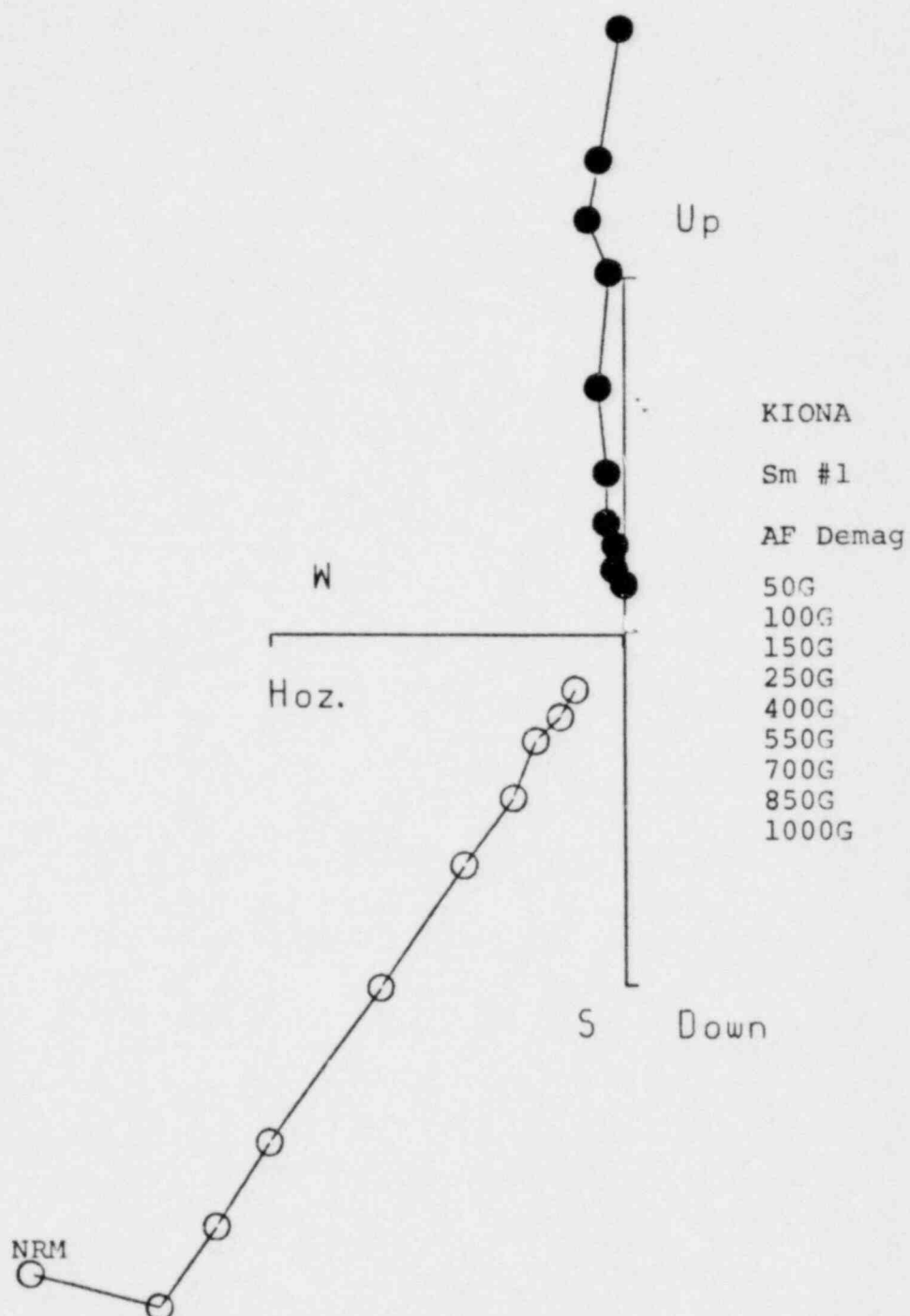


Figure 7: Vector demagnetization diagram of a representative sample from the Kiona section.

The six samples from the lower sand lens also exhibit normal-polarity characteristic magnetizations. The lower magnetic stability (MDF of 50 to 100 Oe) of these samples is consistent with the magnetization's residing primarily in relatively coarse-grained magnetite.

The eight samples of Pre-Missoula Gravels yield a mean paleomagnetic direction ($D = 3.9^\circ$, $I = +64.4^\circ$, $\alpha_{95} = 3.9^\circ$) which is not significantly different from the normal-polarity, axial-dipole-field direction ($D = 0.0^\circ$, $I = +64.0^\circ$) at this locality (Figure 8).

GRAVEL PIT SECTION

Ten oriented samples were collected from about 4 meters of Pre-Missoula Gravels at a gravel pit near Kennewick. As at the Kiona locality, all 10 samples yield normal-polarity characteristic magnetizations. AF demagnetization reveals that this component resides in magnetite of intermediate stability (MDF of 100 to 400 Oe). As much as 6% of the NRM intensity remains after thermal demagnetization to 600°C , indicating that some of this magnetization resides in hematite (Figure 9).

The 10 samples from the Gravel Pit section yield a mean paleomagnetic direction ($D = 8.3^\circ$, $I = +65.1^\circ$, $\alpha_{95} = 6.0^\circ$) which is not significantly different from the normal-polarity, axial-dipole-field direction at this locality (Figure 10).

MARENGO SECTION

Twenty-five oriented samples were collected from 4 meters of loess and calcic paleosol between two coarse flood gravels at Marengo (Figure 11).

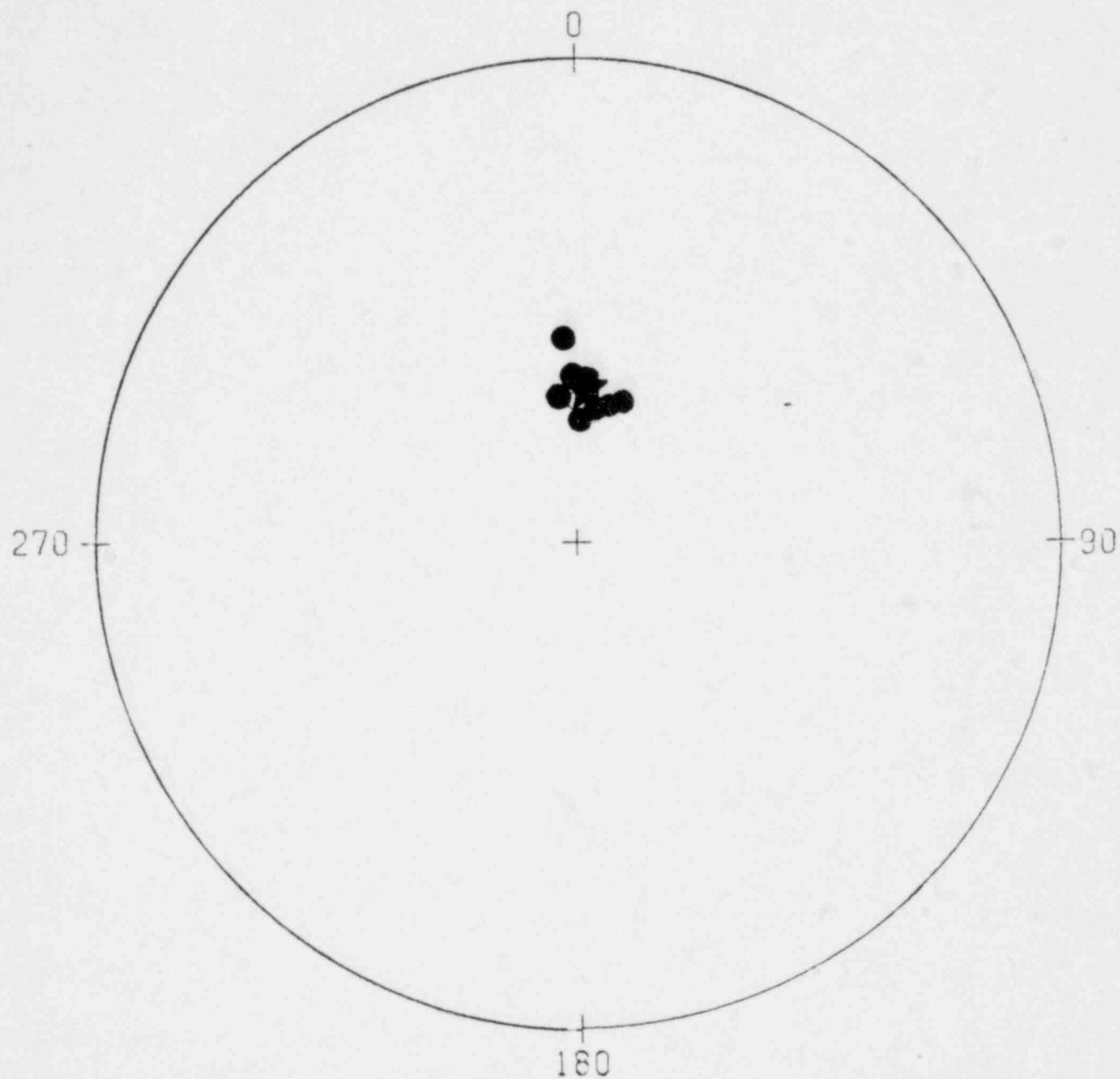


Figure 8: Stereographic projection of least-squares-fitted magnetization directions from the Kiona section.

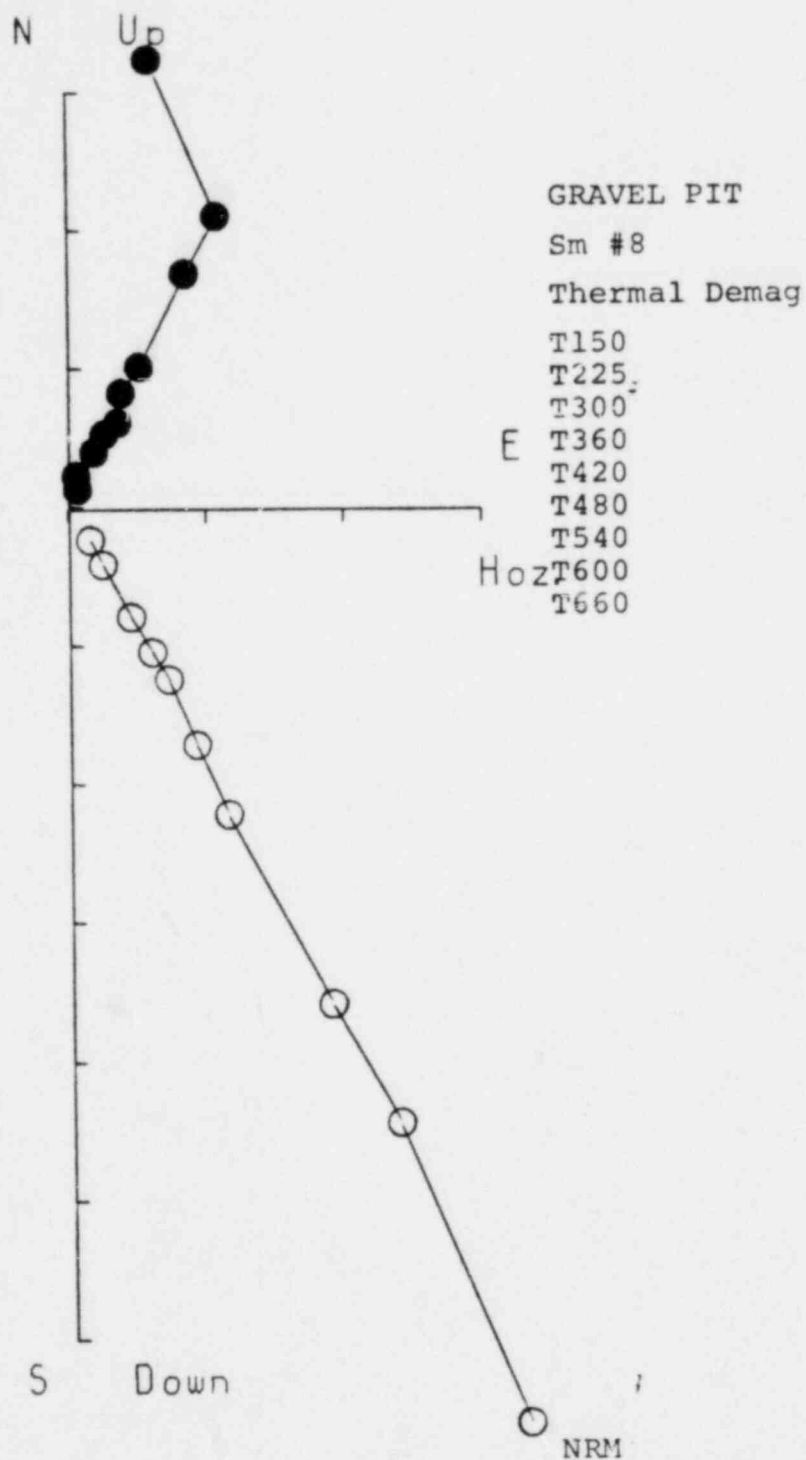


Figure 9: Vector demagnetization diagram of a representative sample from the Gravel Pit section.

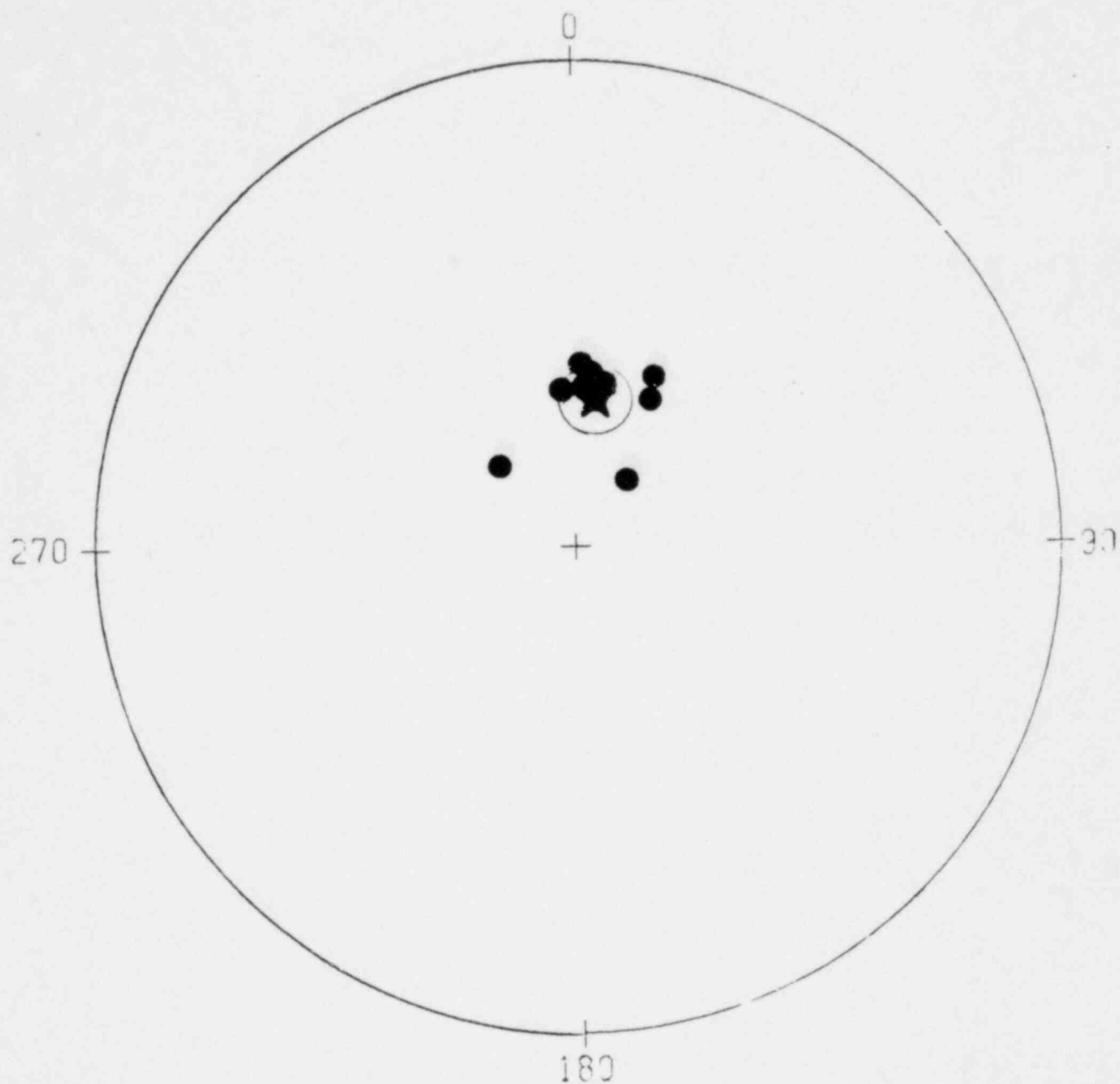


Figure 10: Stereographic projection of least-squares-fitted magnetization directions from the Gravel Pit section.

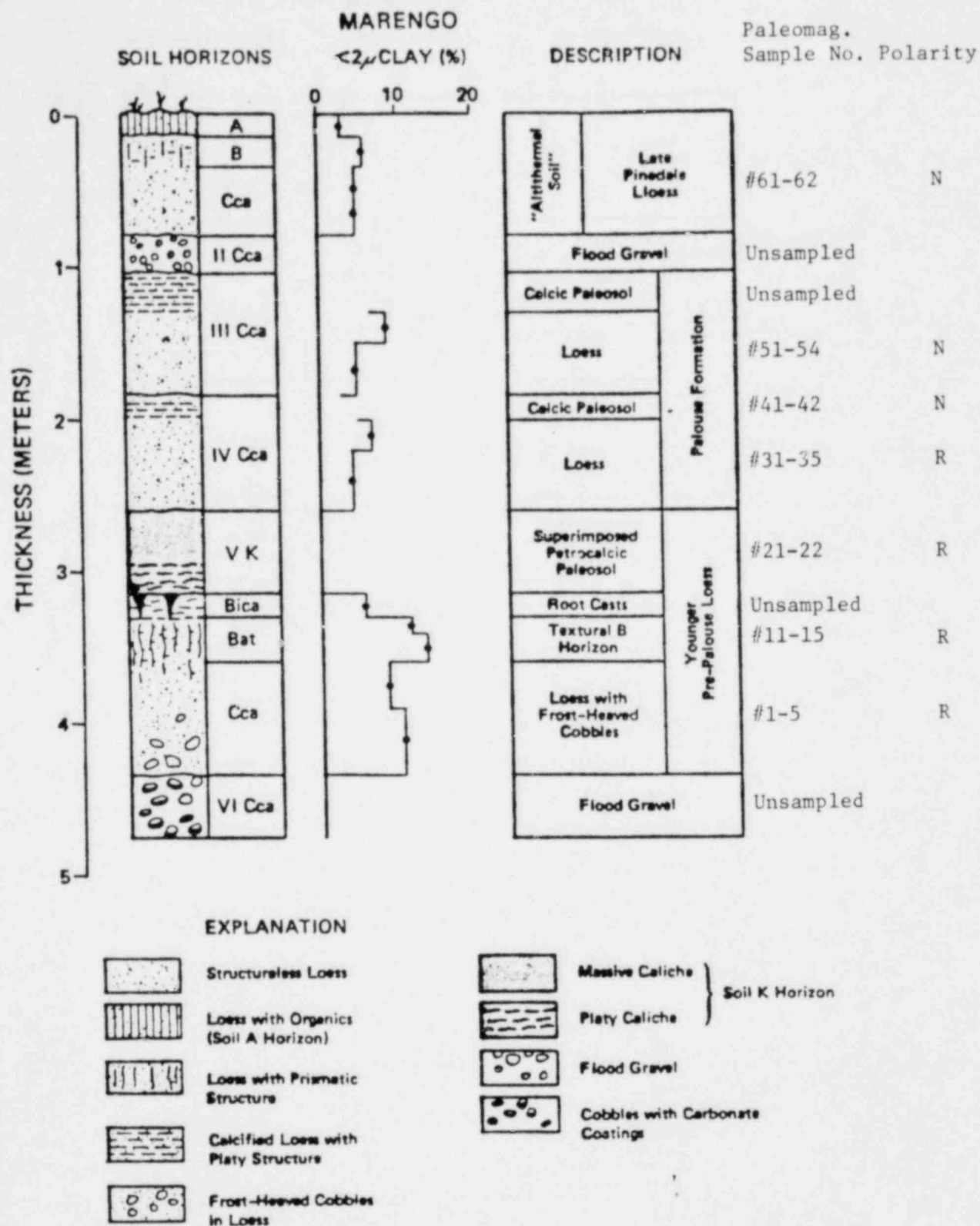


Figure 11: Stratigraphic position of the paleomagnetic samples collected at the Marengo section. Geology after Baker (1978).

The stratigraphically lower 17 samples all exhibit reversed-polarity characteristic magnetizations. Results of AF and thermal demagnetization indicate that the reversed-polarity magnetization resides primarily ($\sim 95\%$) in fine-grained magnetite (MDF of 250 to 700 Oe) and partly ($\sim 5\%$) in hematite (Figure 12). The four samples (#21, 22, 41, and 42) of "calicic paleosol" (Baker, 1978) evidently contain normal- and reversed-polarity magnetizations with overlapping stability spectra; neither AF nor thermal demagnetization can separate these two magnetizations.

The loess deposits immediately below (samples #51 to 54) and above (samples #61 and 62) the upper flood gravel both contain only normal-polarity magnetizations (Figure 12). Results of AF and thermal demagnetization reveal that $\sim 98\%$ of the magnetization resides in fine-grained magnetite (MDF of 250 to 400 Oe) and the remainder in hematite.

Excluding the paleosol samples, the reversed-polarity samples yield a mean direction ($D = 169.1^\circ$, $I = -60.8^\circ$, $\alpha_{95} = 3.6^\circ$) very close to the reversed-polarity, axial-dipole-field direction (Figure 13). The normal-polarity Pre-Missoula samples yield a mean direction ($D = 8.4^\circ$, $I = +65.1^\circ$, $\alpha_{95} = 3.7^\circ$) which is not significantly different from the normal-polarity, axial-dipole-field direction.

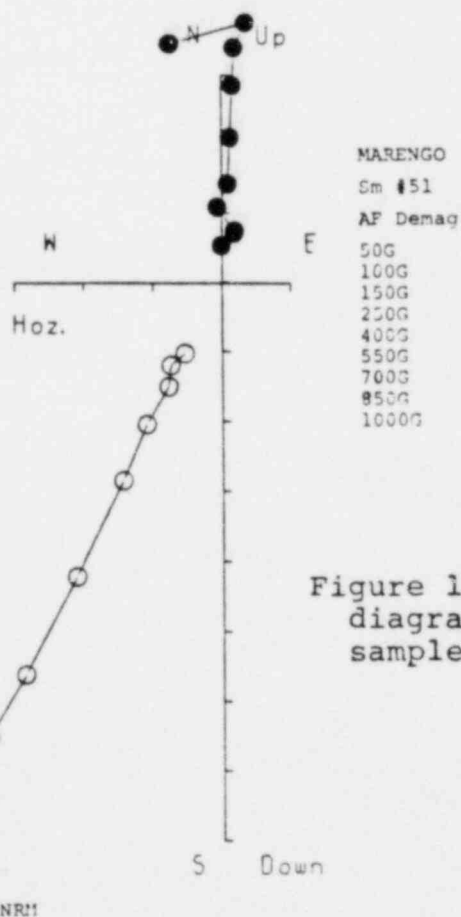
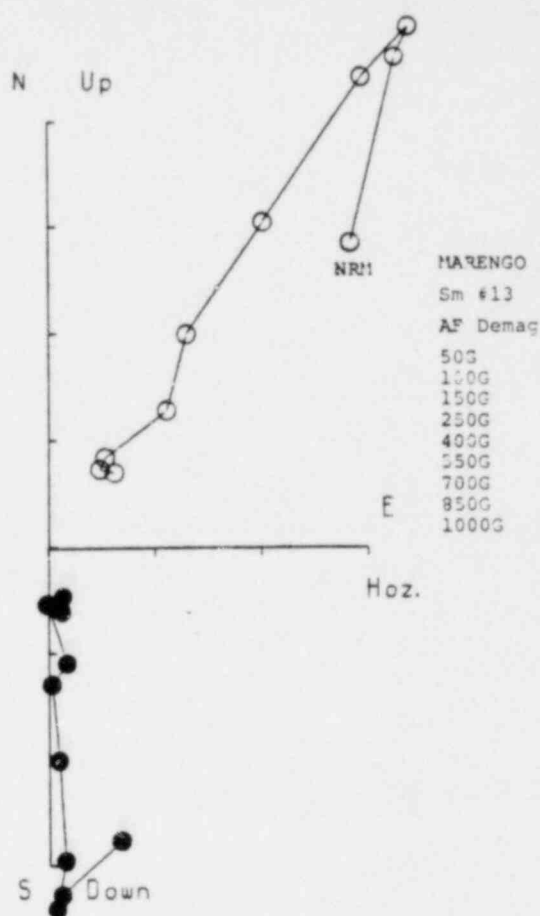
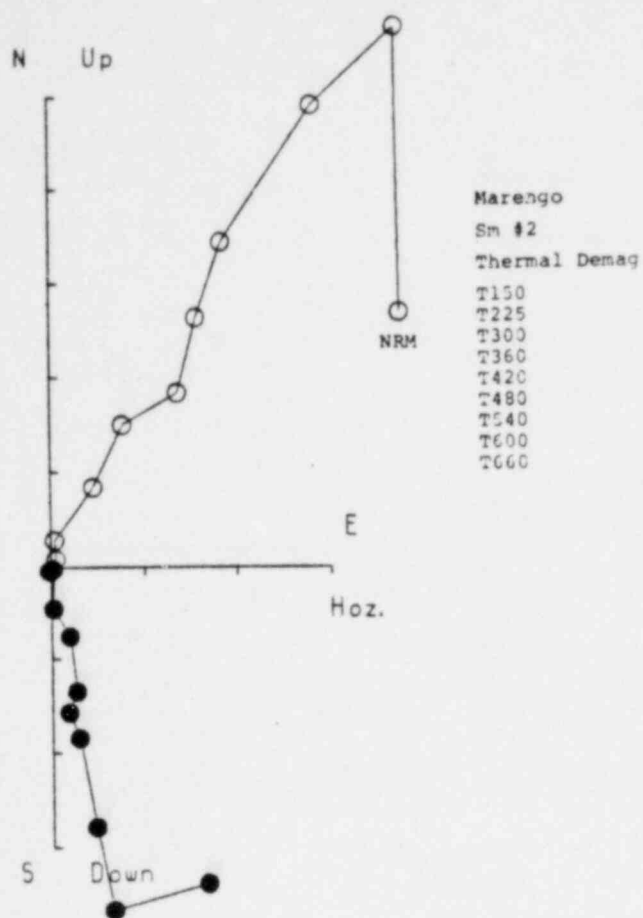


Figure 12: Vector demagnetization diagrams of representative samples from the Marengo section.

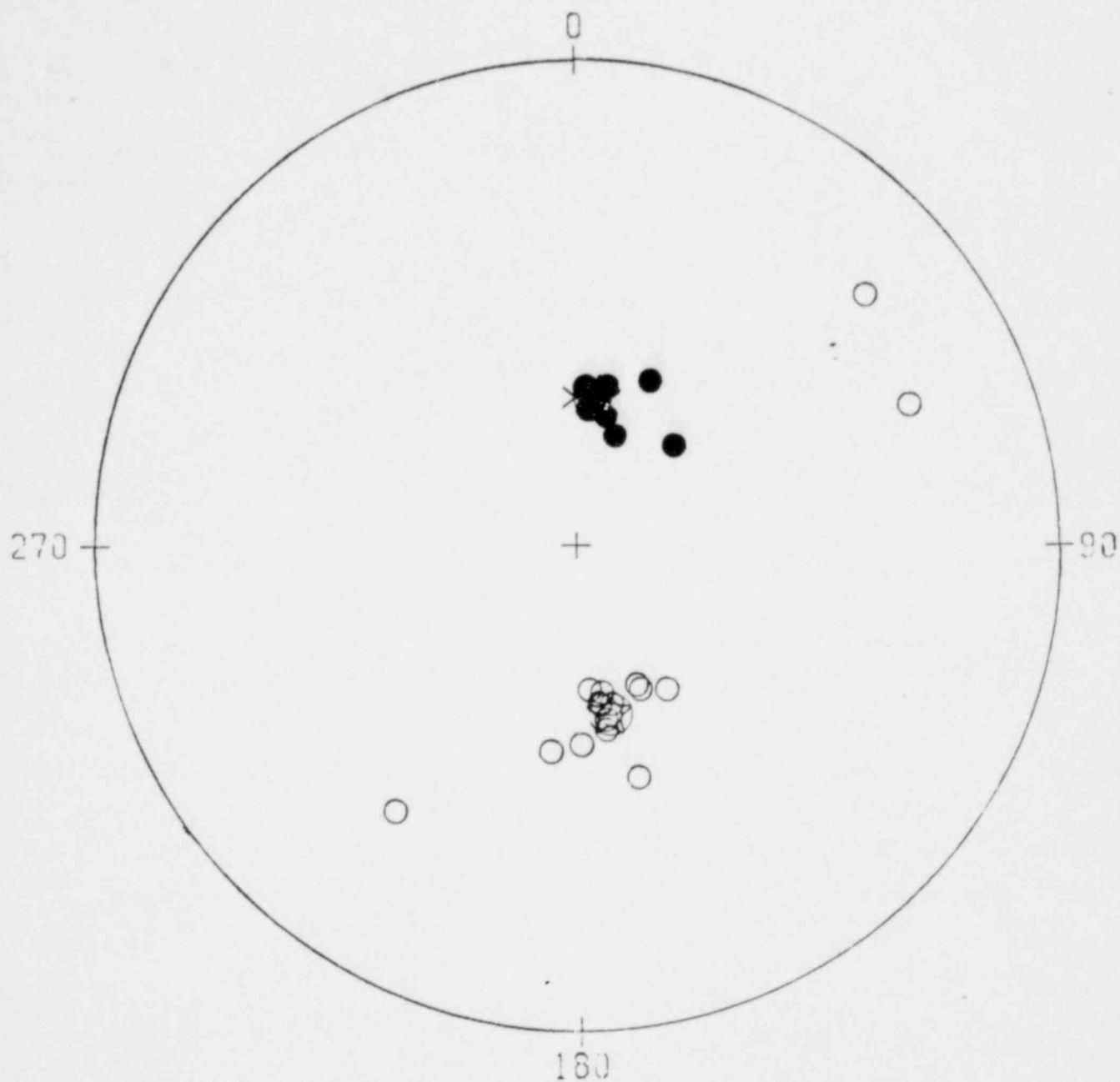


Figure 13: Stereographic projection of least-squares-fitted magnetization directions from the Marengo section.

DISCUSSION

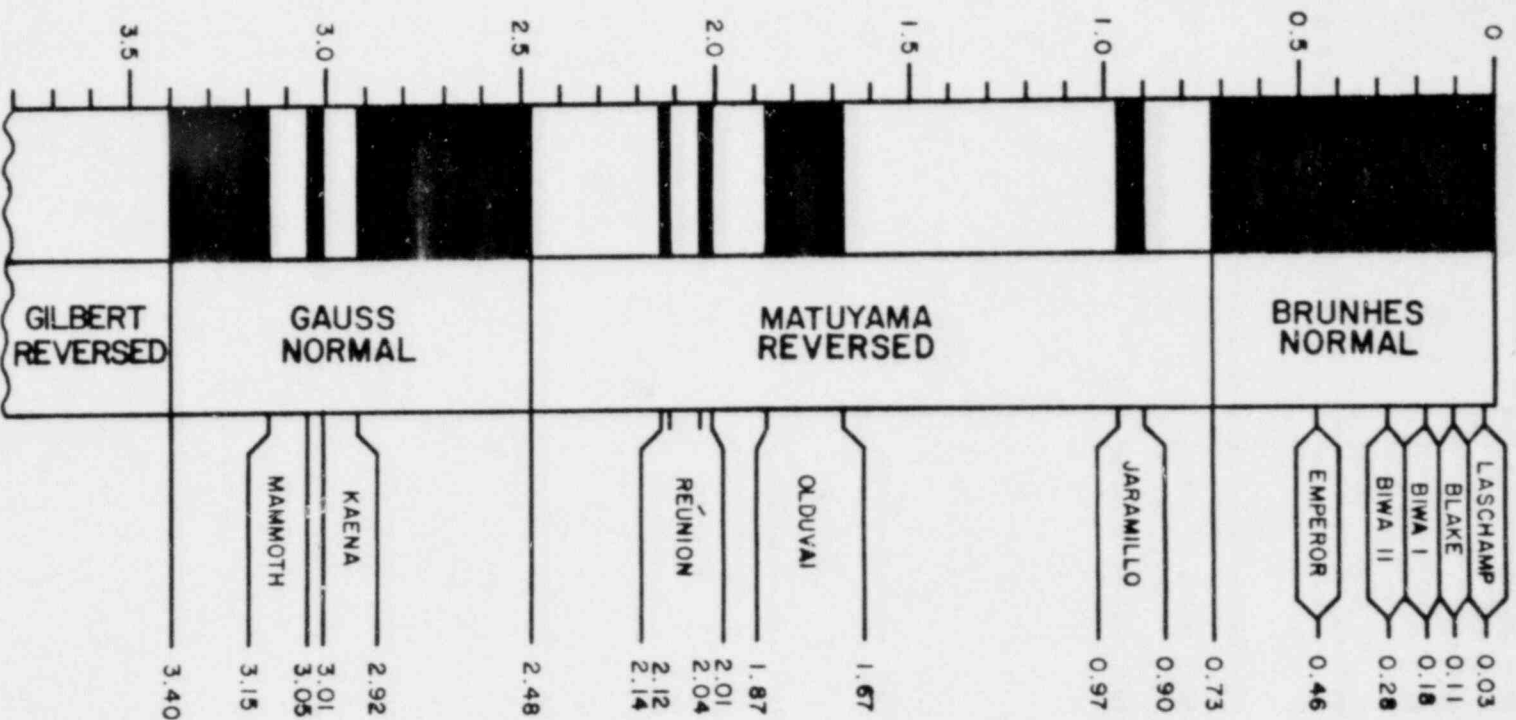
Paleomagnetic results of this study indicate that some of the Pre-Missoula Gravels of the Pasco Basin and vicinity contain reversed-polarity magnetizations. The first indication of reversed polarity was in the initial paleomagnetic results from corehole E-20, below a depth of 40 feet. Reversed-polarity magnetizations in the Pre-Missoula Gravels were confirmed both by resampling of the E-20 core and by paleomagnetic results from two of the four sampled surface-outcrop sections (Yakima Bluffs and Marengo).

In corehole E-20, the evidence for reversed-polarity below the 40-foot depth is based on the following observations. First, reversed-polarity magnetization was found or is suggested in a significant fraction of samples below this depth. Second, there is little possibility that any of the samples were inadvertently collected upside-down, because they also exhibit the low-coercivity DIRM pointing directly down-hole. Third, the paleomagnetic inclination, especially that of samples #16.6, 20, 26, 27, and 28.4 is considerably steeper than the $\pm 21^\circ$ inclination that might have been acquired during the sampling process. The stability of the reversed magnetization upon both AF and thermal demagnetization indicates that it resides either in fine-grained magnetite or in hematite.

Paleomagnetic results from corehole E-20, therefore, strongly suggest that a change from normal-polarity sediments (above) to reversed-polarity (below) occurs at a depth of 40.0 ± 0.3 feet. This depth, which also marks a change from siltier, finer-grained sediments above to coarse-grained sand and gravel below may represent the

Missoula/ Pre-Missoula contact. Indications of reversed polarity in the Pre-Missoula Gravels of E-20 are supported by the paleomagnetic results from the surface exposures. Two of the four surface-outcrop sections (Yakima Bluffs and Marengo) yield well-grouped, reversed-polarity magnetizations of high magnetic stability. Because the reversed-polarity magnetizations from the surface outcrops were found in fine sands and silts, it is likely that the generally poorer magnetic stability of the E-20 samples reflects their coarser grain-size.

The existence of reversed-polarity magnetization in the Pre-Missoula Gravels indicates that some of these deposits have an age greater than 730,000 years, the beginning of the most recent (Brunhes) normal-polarity epoch (Figure 14). This statement can be made with better than 97.4% confidence, by the following reasoning. It has been estimated by Champion and others (1981) that the cumulative length of reversed-polarity events within the Brunhes normal-polarity epoch is 19,000 years. The average duration of any single event, therefore, is between 4,000 years (if all five better-documented events actually occurred) and 19,000 years (if only one of these events actually occurred). The maximum probability that all three observations of reversed-polarity in the Pre-Missoula Gravels are younger than 730,000 years B.P. is, therefore, $19,000/730,000 = 2.6\%$. This most conservative probability assumes that there is only a single reversed-polarity event in the Brunhes, and that all three reversed magnetizations date from the same event (and hence are not independent observations). The 2.6% probability would be reduced (1) approximately linearly as the number of proven, Brunhes-age reversed-polarity events increases; and (2) exponentially if the reversed-polarity magnetizations in the



☒ NORMAL POLARITY
☐ REVERSED POLARITY

Figure 14: Geomagnetic polarity time scale for the past 3.8 million years. Compiled from Champion and others (1981) and Mankinen and Dalrymple (1979).

Pre-Missoula Gravels were demonstrably separated in time by >19,000 years (and hence should be regarded as independent observations).

Evidence of a >730,000-year-age for some Pre-Missoula Gravels is compelling if the reversed-polarity magnetizations were acquired over a time-span significantly greater than 19,000 years. This is indeed suggested by the geologic and paleomagnetic evidence from the Yakima Bluffs and Marengo sections. At Yakima Bluffs, the reversed-polarity magnetization of the clastic dike indicates either that the dike was emplaced penecontemporaneously with its surrounding sediments or that this time of reversed polarity was sufficiently long to encompass both deposition of the graded beds and later dike intrusion.

Even more convincing evidence of a >730,000 age for the Pre-Missoula Gravels is provided at the Marengo section, where reversed polarity seems to have endured long enough for emplacement of two loess deposits and development of several paleosols. As described by Baker (1978), a lower flood gravel at Marengo is overlain by a loess (with reversed polarity), capped by a petrocalcic horizon 60 cm thick. The pedocal soil (nearly pure carbonate) appears to have been superimposed on an older, pedalfer soil (with a strong illuvial textural B horizon and with associated root casts) and then eroded to its resistant carbonate layer prior to deposition of another loess. This second loess, also of reversed polarity, is overlain by another calcic horizon containing reversed-polarity magnetization. This stratigraphic sequence implies several dramatic climatic fluctuations between high temperatures and high humidity (which produce pedalfers) versus low temperatures and low rainfall (which produce pedocals). It seems extremely unlikely, therefore, that the deposition of the lower loess, formation of

the pedalfer and pedocal soils, subsequent erosion, deposition of the overlying loess, and formation of a second calcic horizon all occurred within 19,000 years. Separation of the two reversed-polarity loesses by >19,000 years implies that they could not both have been deposited during the same Brunhes-age event; the probability that these two loesses were deposited during two different events within the Brunhes is $\leq (9,500/730,000)^2 = 0.02\%$. Thus the geologic and paleomagnetic evidence indicates with near certainty that at least some of the Pre-Missoula Gravels are older than 730,000 years.

CONCLUSIONS

Paleomagnetic results from corehole E-20, at the Skagit/Hanford Nuclear Project on the Hanford Site, indicate the presence of reversed-polarity remanent magnetization in Pre-Missoula Gravels below a depth of 40 feet. The existence of reversed-polarity magnetization in Pre-Missoula Gravels of E-20 implies a high probability ($P > 97.4\%$) that these deposits are older than 730,000 years B.P.

The discovery of reversed-polarity in Pre-Missoula Gravels at two surface outcrops supports the conclusion that reversed-polarity Pre-Missoula Gravels underlie the Hanford Site near corehole E-20. The existence, at the Marengo section, of reversed-polarity magnetizations in a stratigraphic succession of loesses and paleosols implies with near certainty that at least some of the Pre-Missoula Gravels are older than 730,000 years.

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APPENDIX

INTRODUCTION

This Appendix presents the paleomagnetic data from samples of Pre-Missoula Gravels (both from surface outcrops and from corehole E-20) that were collected by Sierra Geophysics in June and December, 1981. Surface data are arranged by sampling locality and subsurface data according to corehole designation (E-20).

DESCRIPTION OF DATA FORMAT

Paleomagnetic results from each sample are listed individually on separate pages. Three plots are shown in the upper part of the page, and the data pertaining to the sample are tabulated in a number of columns below. The format of the tabulated data will be described first, followed by an explanation of the plots.

Tabulation Description

The first line lists general "locality" information, including an identifier (e.g. "Marengo"), as well as the latitude and longitude of the sampling site. Next, the total number of demagnetization steps for the sample is given. On the following line, "INTERVAL" refers to a stratigraphic interval. For subsurface samples, it is the depth (in feet below the surface) from which the sample was obtained. "STRIKE & DIP OF BEDDING" are also shown on this line, and all beds in this study are assumed to be flat-lying. The next line, if present, gives the Koenigsberger ratio of the sample, using the measured susceptibility and normalized to an ambient field of 0.5 Oe.

The following lines give the measurement data for the sample in a set of columns. The abbreviations above these columns are as follows: "SM#" is the sample number, including the "rock unit" prefix. "DEC G - INC G" and "DEC S - INC S" are the declination and inclination of the magnetization vector in coordinate systems uncorrected for ("geographic coordinates") and corrected for ("stratigraphic coordinates") bedding attitude. "INTENSITY" is the intensity of magnetization, in units of emu/cc. The columns labeled "DIFF VECT" and "JDIFF" are the directions and intensity of the vector removed between successive demagnetization steps. "V LAT" and "V LONG" are the latitude and longitude of the virtual geomagnetic pole calculated from the stratigraphic declination and inclination. "DEMAG" is the demagnetization step. "NRM" stands for "natural remanent magnetization"; i.e., the zeroth demagnetization step. Alternating-field demagnetization steps are in oersteds and have a suffix of "G" (for gauss). Thermal demagnetization steps are in degrees centigrade and are prefixed by "T". Chemical demagnetization steps are in hours in solution and have a prefix of "C" (for chemical).

The column labeled JH/JO is the ratio of the intensity of magnetization at the given demagnetization step to the NRM intensity. Finally, "CHI" is the bulk susceptibility, in dimensionless cgs units, and "C/CO" is the ratio of the susceptibility at any demagnetization step to the susceptibility at NRM. For these samples, susceptibility was measured at NRM only, so the entries for all positions following NRM are blank.

Types of Plots

In the lower left corner, above the tabulated data, a plot of the change in total magnetic intensity with demagnetization is given. The intensities are normalized to the NRM value. The data points are shown as shaded stars.

A "vector demagnetization diagram" of the sample is given slightly to the right and above the normalized intensity-ratio plot. In most cases, the plots overlap to some degree. Vector demagnetization diagrams (cf. Zijdeveld, 1967; Roy and Park, 1974) illustrate changes in both intensity and direction of magnetization upon progressive demagnetization. Shaded circles represent the endpoint of the magnetic vector projected onto the horizontal plane; the declination is the angle (measured clockwise from due north) between the north-south axis and the horizontal component. The distance from open circles to the origin is the total length of the magnetic vector; the angle between the abscissa and the ray from the origin through the open circle is the inclination. To avoid unnecessary clutter, the demagnetization step, except for the NRM, is not annotated by the points. The successive points inward from the NRM point are the demagnetization steps in the order listed in the tabulation. Linear stretches of the demagnetization path, which if present are apparent on these diagrams, indicate that a single component is being removed by demagnetization; hence, these diagrams allow different components of magnetization to be separated (e.g., Kirschvink, 1980).

The rightmost plot is a Lambert equal-area projection of the direction of the magnetic vector, illustrating the change in direction with demagnetization. On this plot, solid circles represent positions on the lower hemisphere (positive inclination), and solid triangles are on the upper hemisphere (negative inclination). The NRM point is identified; the other demagnetization steps follow this point in the order in the tabulation below.

STATISTICS OF FULLY-ORIENTED SAMPLES

Samples taken from surface outcrops are conventional paleomagnetic samples in that they are fully oriented. Hence, the traditional

statistical approaches of paleomagnetism can be employed, and paleomagnetic poles calculated.

Fisher Statistics

These statistics, which are the ones most commonly employed in paleomagnetism, were initially developed by Fisher (1953). N refers to the number of samples; R is the vector resultant obtained by treating each direction as a unit vector and summing them; "M.L.E. of κ " is the Maximum Likelihood Estimate of the concentration parameter κ ; " κ " is the unbiased estimate, given approximately by $(N-1)/(N-R)$. "Alpha-95" is the half-angle of the cone of 95% confidence, in degrees; "circular std. dev." is the circular standard deviation, also in degrees. "Declination" and "inclination" give the mean direction; "pole lat." and "pole long" give the latitude and longitude of the paleomagnetic pole calculated from the mean direction. "Paleolat" is the paleolatitude, calculated from the mean inclination. "dp" and "dm" are the semiaxes of the 95% confidence oval about the pole calculated from the alpha-95 circle about the mean direction (e.g., McElhinny, 1973). "Oval azimuth" is the azimuth of this oval with respect to a meridian; this azimuth extends from the sampling site toward the paleomagnetic pole.

Moment of Inertia Statistics

These statistics are beginning to be applied in paleomagnetism (e.g., Onstott, 1980), and they offer advantages over Fisher statistics in certain cases. They are based on the directions and relative magnitudes of the axes of a "moment of inertia" which can be visualized by imagining a point unit mass at the tip of each unit vector. When two axes are equal, corresponding to a circularly symmetric distribution of points, Dimroth-Watson statistics are appropriate; otherwise, Bingham statistics are used. An excellent summary of these distributions, with references and some worked examples, is in Mardia (1972).

Again, N is the number of samples. "Eigenvalues" are the eigenvalues of the moment-of-inertia matrix. "Uniform test statistic" tests whether the data are distributed randomly over the sphere (Mardia, 1972, p. 276-277); large values of this statistic suggest that the data are not random. "Dimroth-Watson k " is the concentration parameter for Dimroth-Watson statistics; "M.L.E.'s of Bingham parameters" are the maximum likelihood estimates of the two Bingham concentration parameters. "Std. dev. angles" and "confidence angles" give, respectively, the standard deviations and confidence intervals, in degrees, of the major and minor axes of the Bingham confidence ellipse. "Oval azimuth" is the azimuth of this ellipse, with respect to a meridian.

"Declination" through "paleolat" are as for the Fisher statistics; for

well-grouped data, these directions will be nearly the same as the corresponding Fisher estimates. Finally, two test statistics for rotational symmetry of the data are calculated (Mardia, 1972, p. 277-278), one for bipolar (axial) and the other for "girdle" (i.e., equatorial) symmetry. Small values of the bipolar statistic coupled with large values of the girdle statistic suggest that the data are axial with circular symmetry about the mean. In the case that these statistics indicate the data have rotational symmetry, a mean confidence angle ALPHA is calculated.

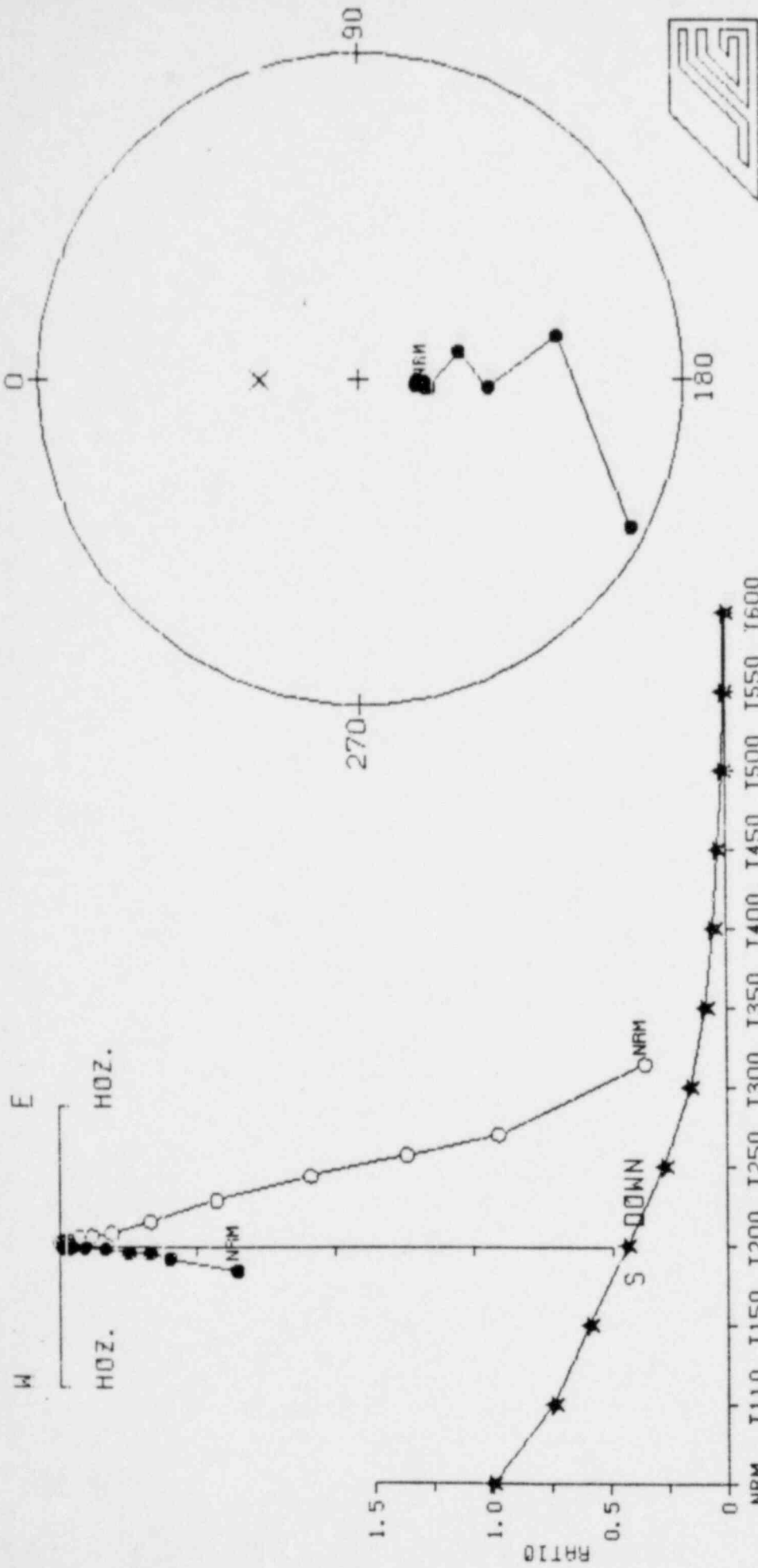
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E-20

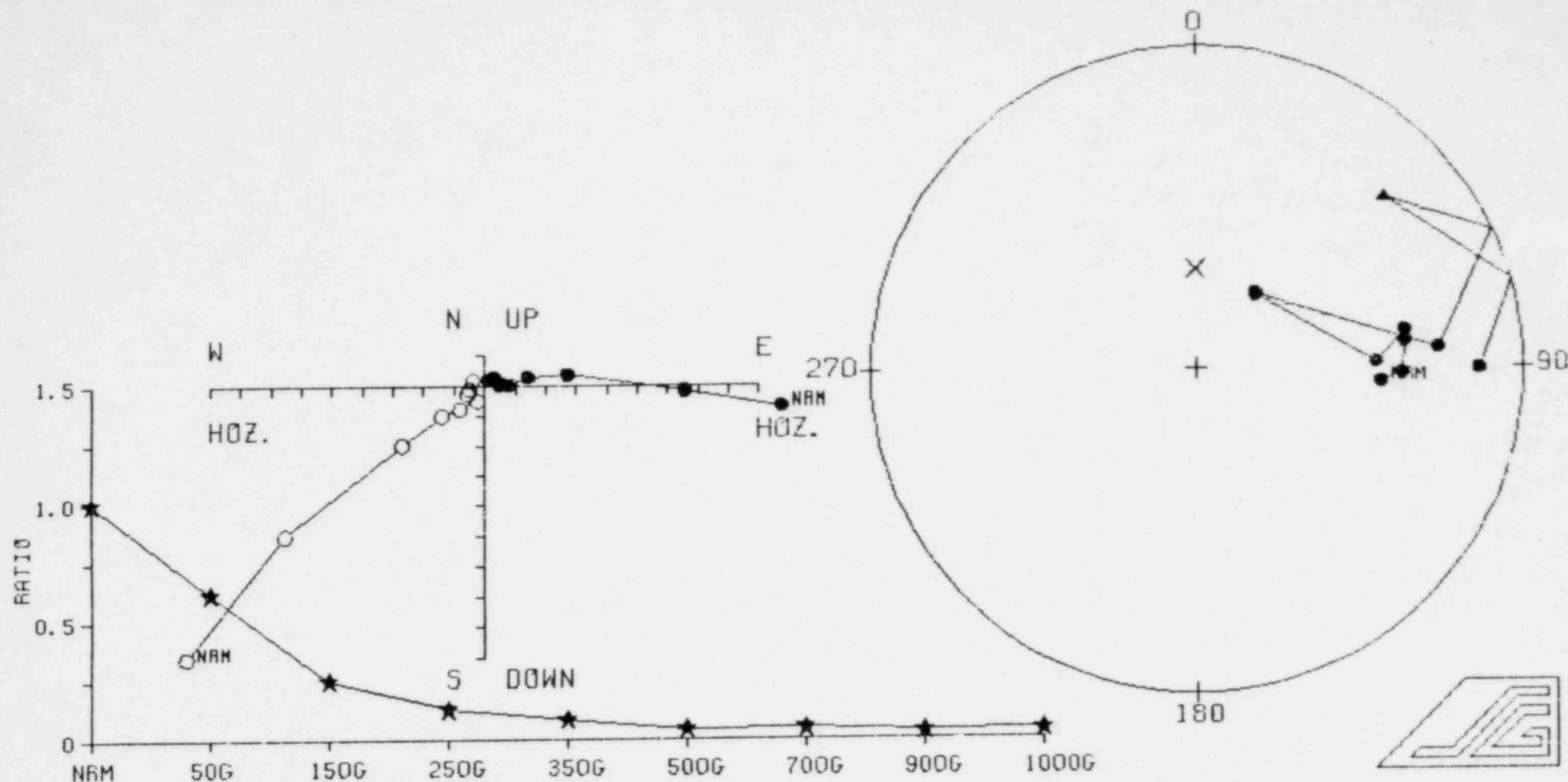
ORIGINAL SAMPLES OF

JUNE 11, 1981



Ratio plot is normalized. Site lat & long = 46.50 -119.50. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: E20	Interval = 12	Demag steps = 24	SM#	Dec	Inc	Strike	Dip	Diff	Int	Lat	Long	Intensity	demag	JH/JO	Chi	C/CO
PMG	1.000	187.3	6	75.3	72.9	190.0	0.0	0.0	0.00E-01	15.0	-123.3	4.43E-04	NRM	1.000		
PMG	1.000	185.6	6	75.3	75.8	190.0	0.0	0.0	1.17E-04	19.8	-122.2	3.28E-04	T110	0.740		
PMG	1.000	183.6	6	75.3	75.3	194.6	6	6	6.81E-03	18.9	-121.3	2.60E-04	T150	0.587		
PMG	1.000	184.6	6	74.4	74.4	180.3	3	3	7.11E-03	17.5	-121.9	1.89E-04	T200	0.427		
PMG	1.000	182.1	6	73.6	73.6	189.5	5	5	7.01E-03	16.0	-120.6	1.19E-04	T250	0.269		
PMG	1.000	183.6	6	74.4	74.4	180.3	3	3	2.07E-03	17.3	-119.6	6.83E-05	T300	0.154		
PMG	1.000	180.2	9	75.3	75.3	187.6	6	6	2.89E-03	18.8	-119.6	3.94E-05	T350	0.089		
PMG	1.000	185.6	6	72.9	72.9	187.6	6	6	1.52E-03	14.2	-122.8	2.43E-05	T400	0.055		
PMG	1.000	183.6	6	72.9	72.9	165.0	5	5	9.57E-06	2.7	-108.7	1.56E-06	T450	0.035		
PMG	1.000	164.6	6	63.3	63.3	145.4	4	4	8.97E-06	-5.4	-122.0	6.86E-06	T500	0.015		
PMG	1.000	167.7	4	37.8	37.8	123.3	3	3	3.71E-06	-21.4	-107.2	3.68E-06	T550	0.008		
PMG	1.000	208.4	4	5.5	5.5	123.3	3	3	2.81E-06	-34.8	-154.8	2.05E-06	T600	0.005		



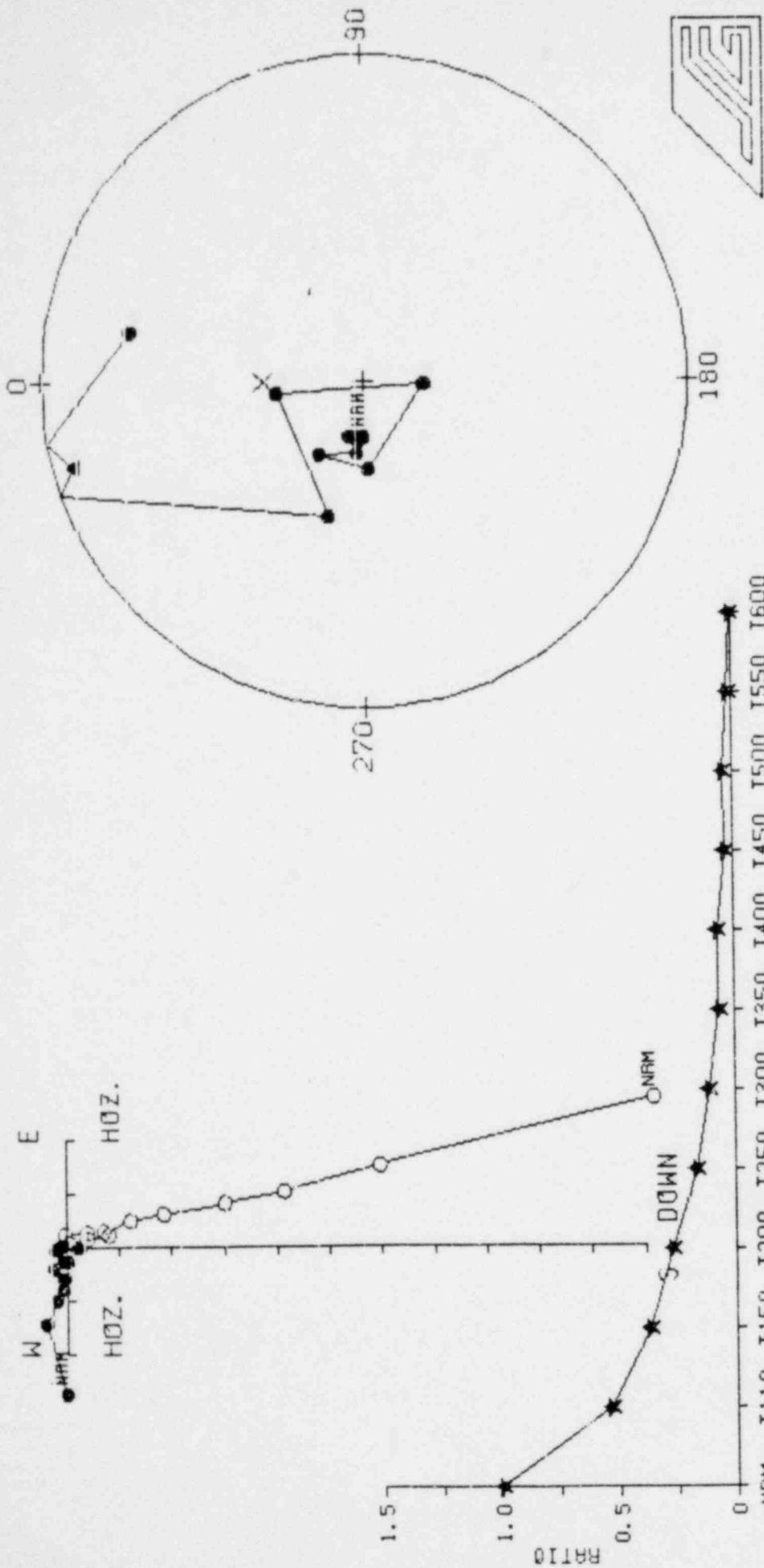
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Locality: E20 Site lat & long= 46.50 -119.50

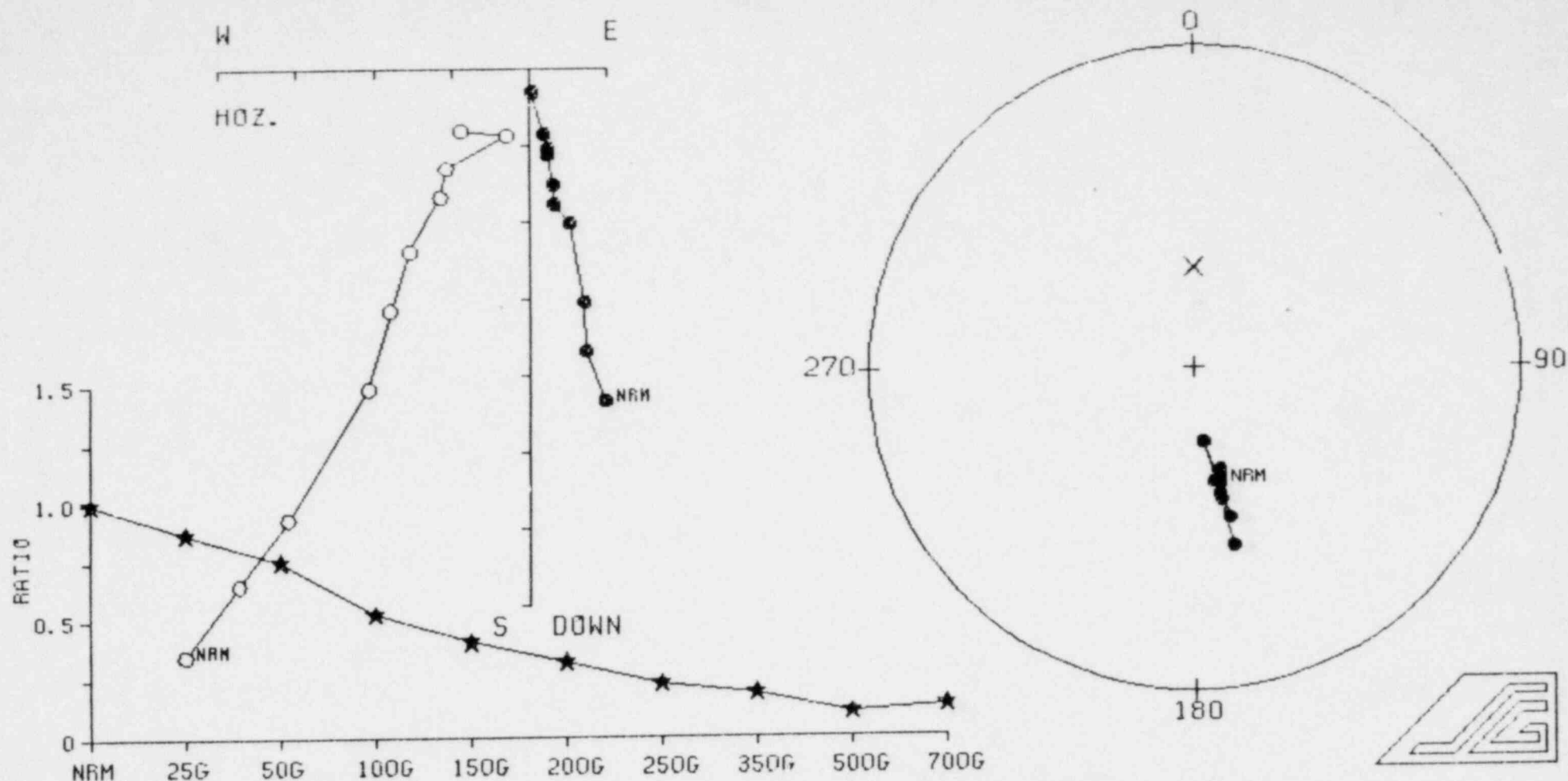
9 Demag steps for this sample.

Interval= 26.900 Strike & dip of bedding= 0.0 0.0

SM#	Dec	Inc	Diff	vect	Dec	Inc	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Cwi	C/CO
PMG	2.000	94.1	42.7	0.0	0.0	94.1	42.7	0.0	0.00E-01	15.0	-49.8	1.33E-04	NRM	1.000		
PMG	2.000	91.6	37.3	99.1	51.2	91.6	37.3	99.1	5.18E-05	13.9	-45.3	8.23E-05	50G	0.619		
PMG	2.000	82.3	36.2	98.1	37.6	82.3	36.2	98.1	4.91E-05	19.6	-38.3	3.37E-05	150G	0.253		
PMG	2.000	79.4	35.6	85.4	36.8	79.4	35.6	85.4	1.63E-05	21.3	-36.1	1.74E-05	250G	0.131		
PMG	2.000	88.1	44.2	68.3	20.1	88.1	44.2	68.3	6.74E-06	19.7	-46.7	1.12E-05	350G	0.084		
PMG	2.000	37.5	66.0	103.7	20.4	37.5	66.0	103.7	7.24E-06	64.8	-47.6	5.79E-06	500G	0.044		
PMG	2.000	85.1	26.8	288.3	29.0	85.1	26.8	288.3	5.04E-06	13.6	-35.9	6.32E-06	700G	0.048		
PMG	2.000	47.5	-23.2	128.5	52.4	47.5	-23.2	128.5	5.72E-06	17.6	-11.4	4.27E-06	900G	0.032		
PMG	2.000	90.2	14.7	321.5	-41.3	90.2	14.7	321.5	4.54E-06	5.2	-34.8	5.19E-06	1000G	0.039		



Coordinates of equal-area plot: Geog										Coordinates of vector diagram: Geog										Coordinates of equal-area plot: Geog									
Ratio plot is normalized	Site	Intensity	lat & long	Dec	Inc	S	Dec	Inc	S	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/C0												
PMG	27.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E-01	40.8	155.3	1.15E-04	NRM	1.000														
PMG	27.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38E-05	47.2	-159.2	4.15E-03	1110	0.535														
PMG	27.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.90E-05	45.4	-158.0	4.25E-03	1150	0.370														
PMG	27.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.15E-05	42.1	-159.0	3.11E-03	1200	0.270														
PMG	27.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.18E-05	40.3	-164.7	1.94E-03	1250	0.169														
PMG	27.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.93E-06	33.0	-175.9	1.30E-05	1300	0.113														
PMG	27.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.77E-06	33.0	-167.9	1.67E-06	1350	0.067														
PMG	27.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.53E-06	18.1	-120.8	8.27E-06	1400	0.072														
PMG	27.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.51E-06	83.0	-168.3	4.27E-06	1450	0.037														
PMG	27.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.57E-06	34.6	-80.9	4.77E-06	1500	0.041														
PMG	27.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.87E-06	38.0	39.5	2.31E-06	1550	0.020														
PMG	27.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.69E-06	56.3	39.5	1.10E-06	1600	0.010														



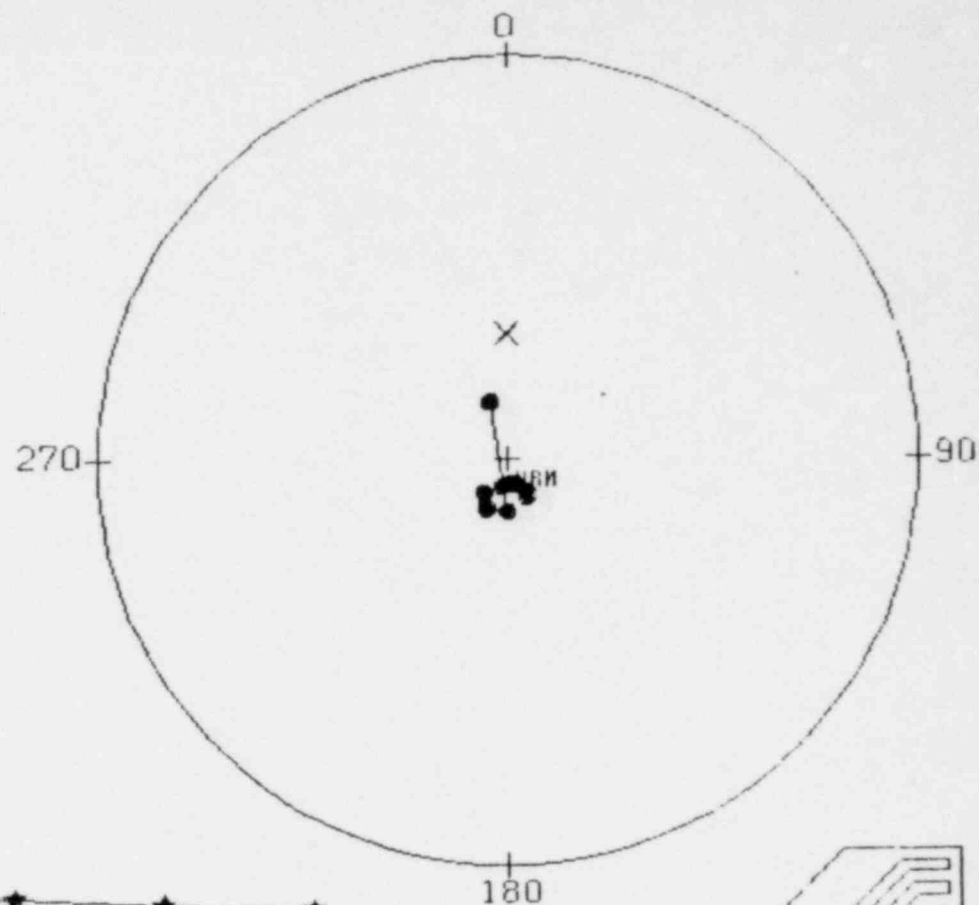
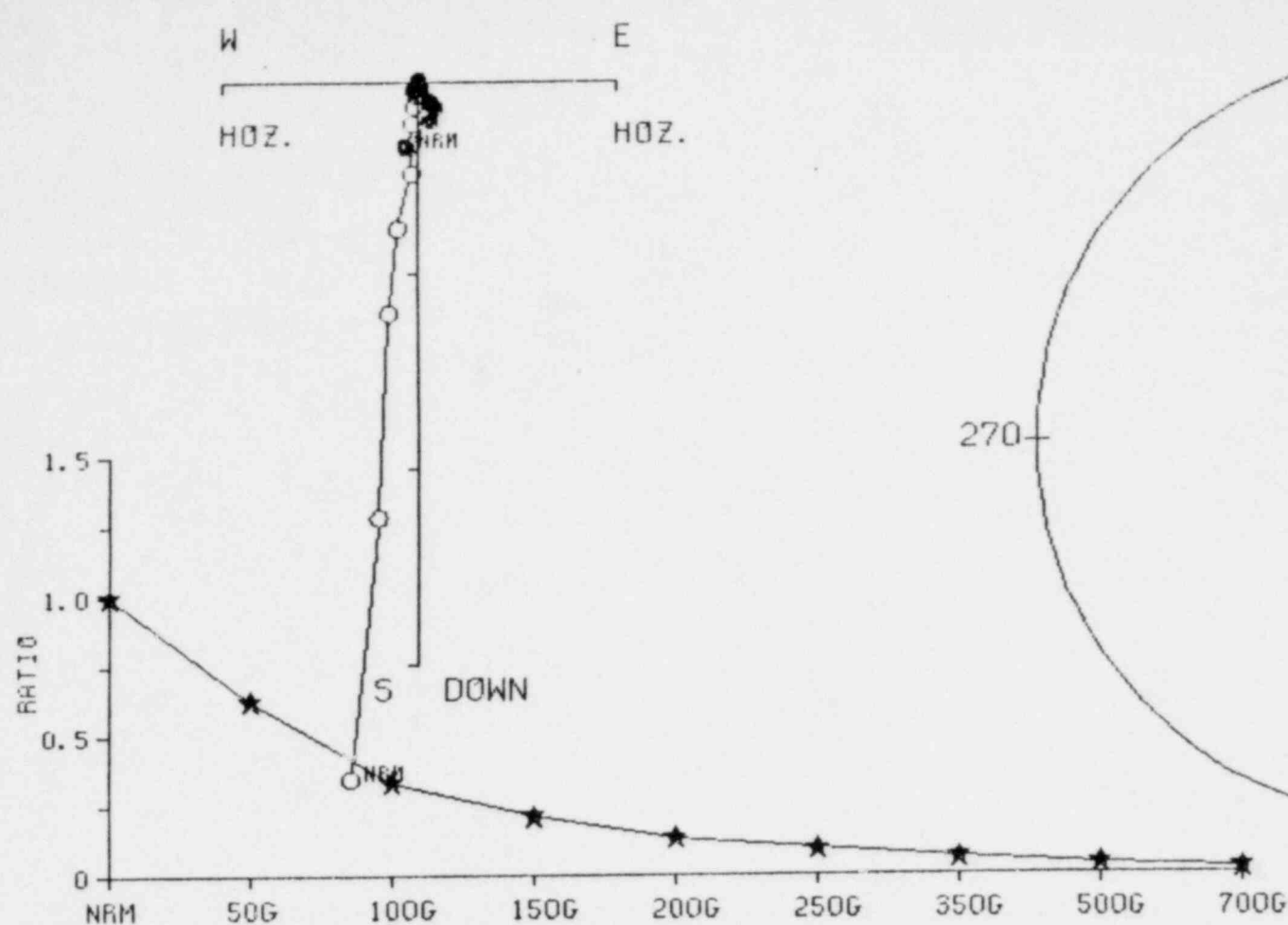
Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: E20 Site lat & long= 46.50 -119.50

10 Demag steps for this sample.

Interval= 29 000 Strike & dip of bedding= 0.0 0.0

	SMW	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	4.000	167.5	59.9	0.0	167.5	59.9	0.0	0.00E-01	-2.0	-110.1	8.86E-05	NRM	1.000		
PMG	4.000	168.8	60.9	160.5	168.8	60.9	160.5	1.16E-05	-1.0	-111.2	7.71E-05	25G	0.870		
PMG	4.000	167.0	62.1	177.6	167.0	62.1	177.6	1.07E-05	0.7	-110.1	6.66E-05	50G	0.752		
PMG	4.000	165.4	63.5	170.2	165.4	63.5	170.2	2.00E-05	2.5	-109.2	4.67E-05	100G	0.527		
PMG	4.000	169.9	60.3	140.0	169.9	60.3	140.0	1.09E-05	-1.8	-111.9	3.62E-05	150G	0.409		
PMG	4.000	168.6	57.1	177.8	168.6	57.1	177.8	8.01E-06	-5.2	-110.5	2.84E-05	200G	0.321		
PMG	4.000	168.7	55.6	168.3	168.7	55.6	168.3	8.12E-06	-6.8	-110.3	2.03E-05	250G	0.229		
PMG	4.000	167.1	50.5	189.5	167.1	50.5	189.5	3.88E-06	-11.3	-108.3	1.68E-05	350G	0.190		
PMG	4.000	173.1	71.1	164.8	173.1	71.1	164.8	8.82E-06	12.2	-115.5	9.21E-06	500G	0.104		
PMG	4.000	167.7	42.9	344.9	167.7	42.9	344.9	5.79E-06	-17.7	-107.8	1.19E-05	700G	0.134		



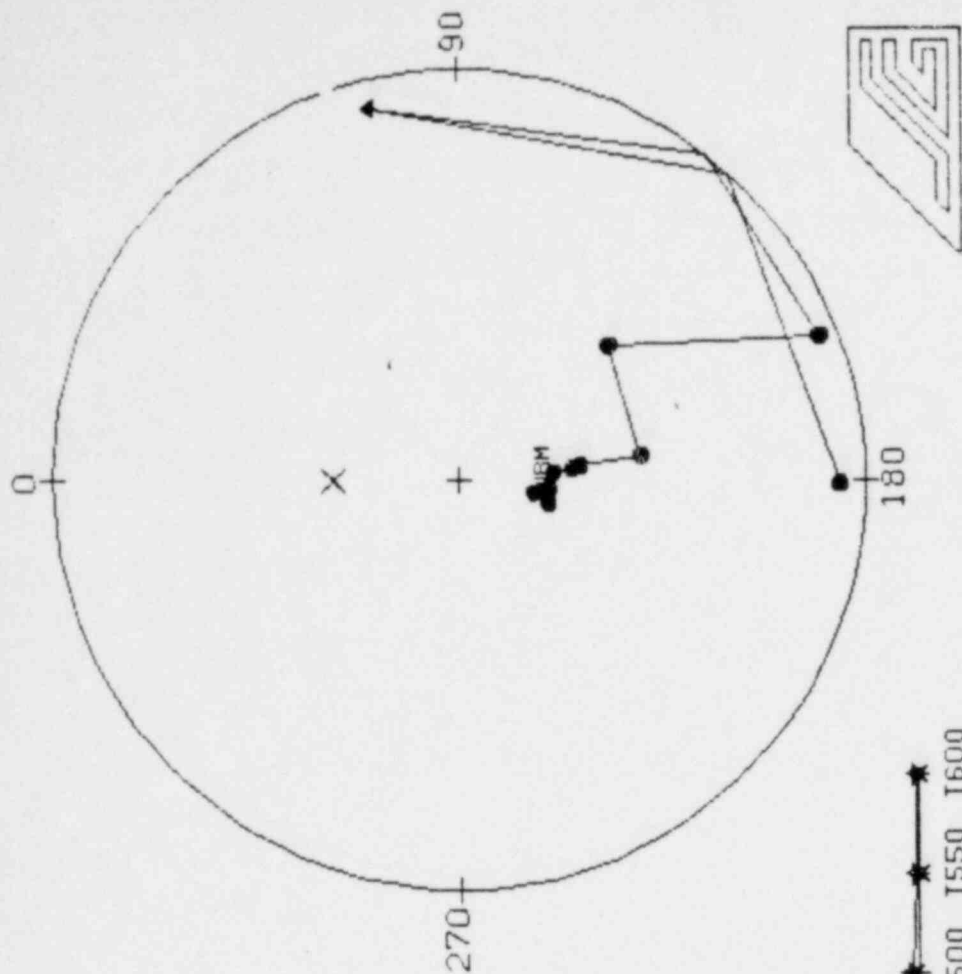
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Locality: E20 Site lat & long= 46.50 -119.50

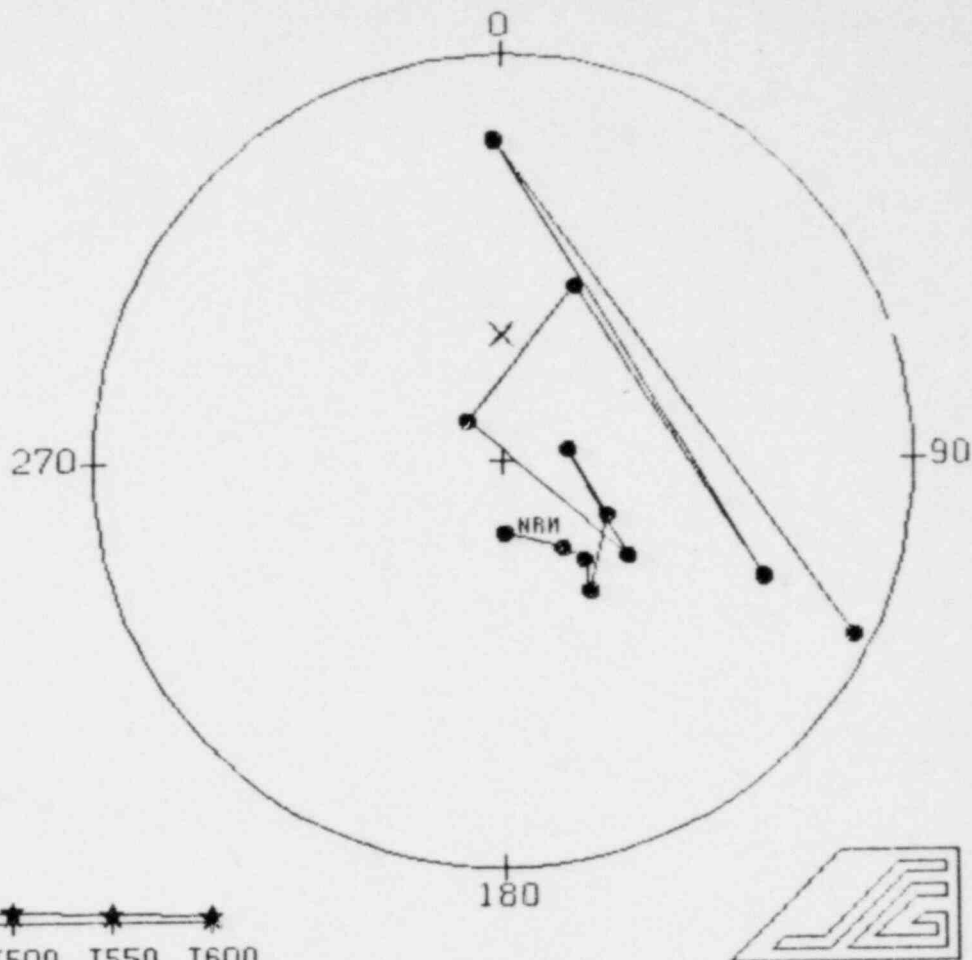
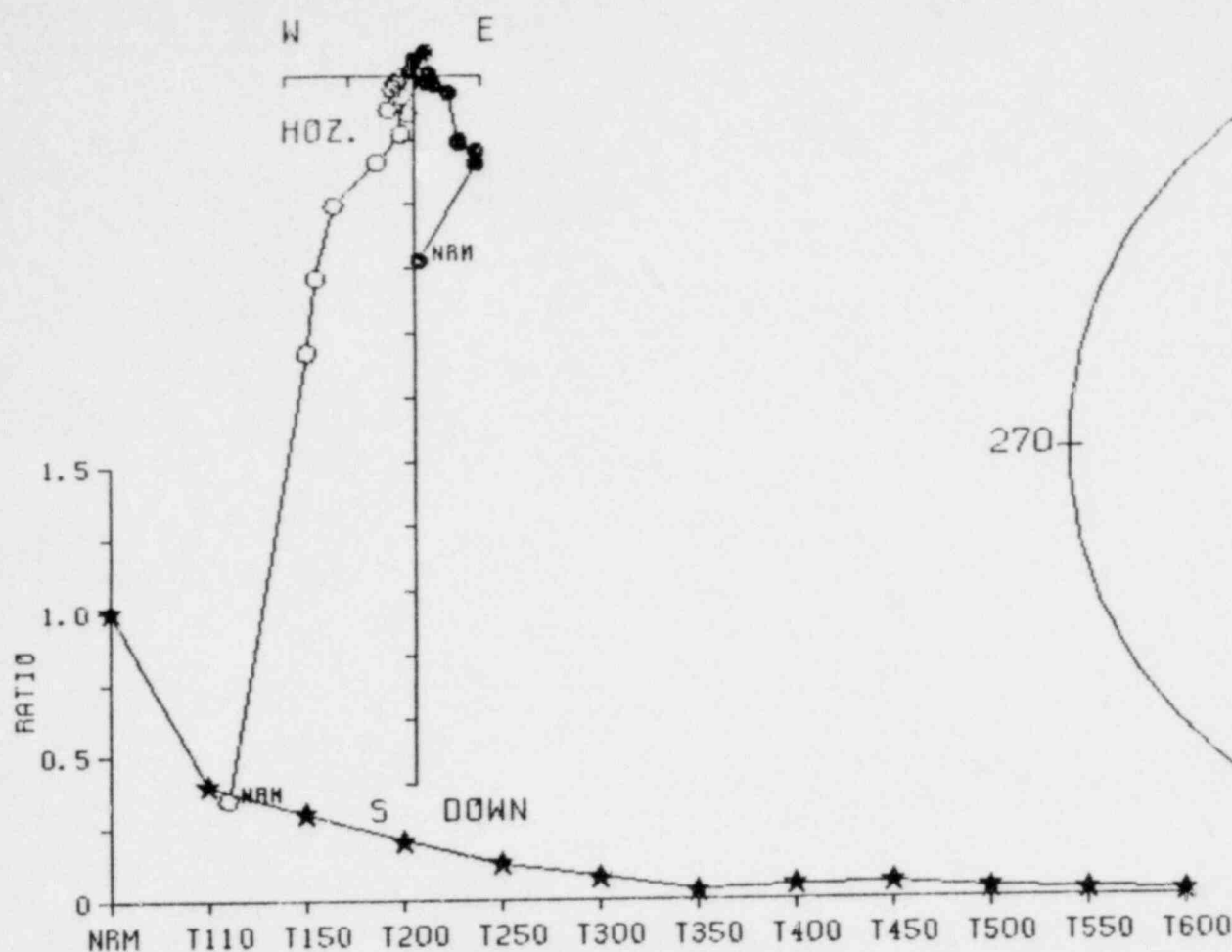
9 Demag steps for this sample.

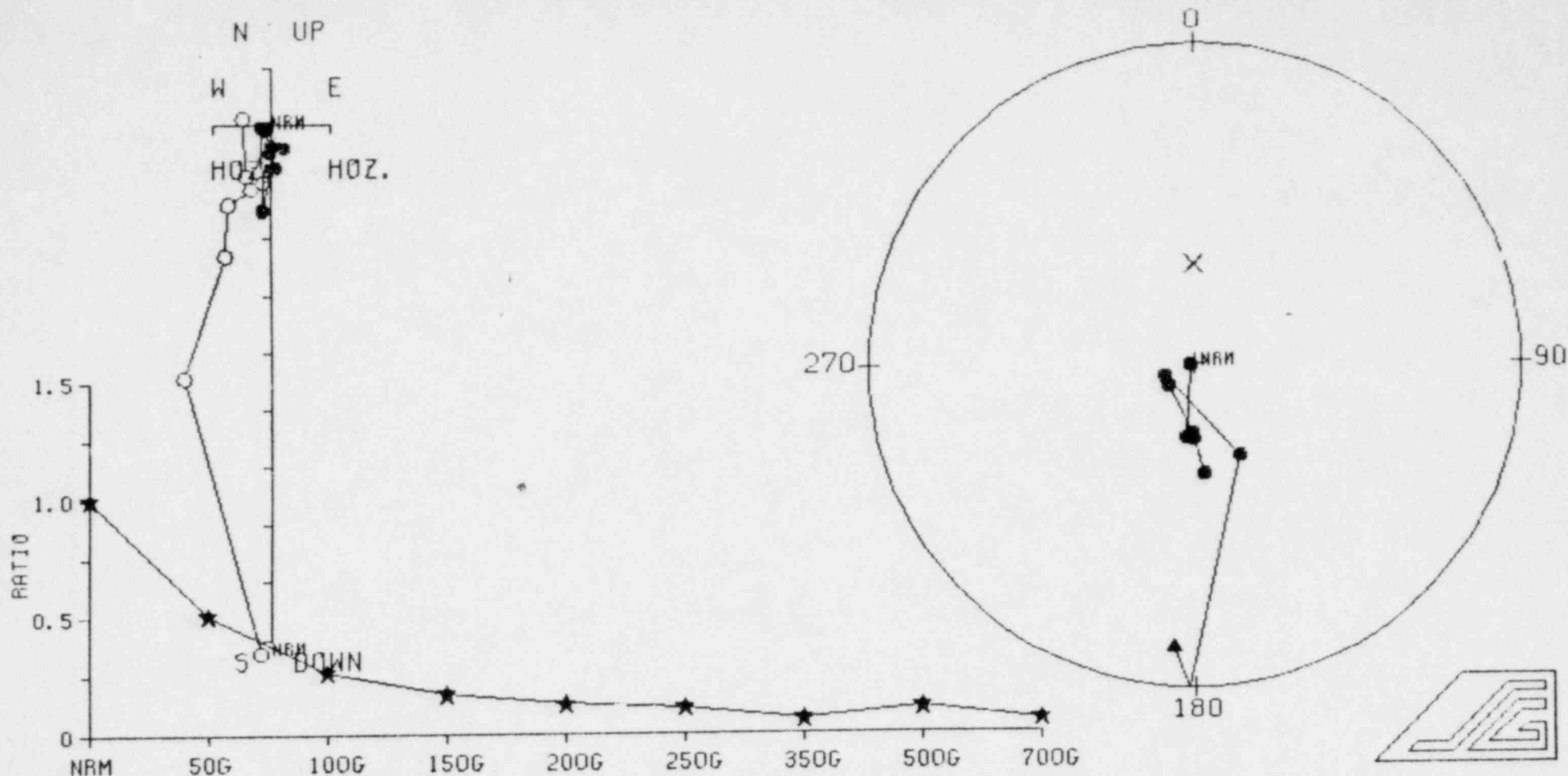
Interval= 28.200 Strike & dip of bedding= 0.0 0.0

	Dec	Inc	G	Diff	vect	Dec	S	Inc	S	Diff	vect	JDif?	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	5.000	191.9	84.5	0.0	0.0	191.9	84.5	0.0	0.0	0.00E-01	35.9	-122.2	3.61E-04	NRM	1.000				
PMG	5.000	164.9	84.7	222.5	82.1	164.9	84.7	222.5	82.1	1.36E-04	36.4	-116.1	2.26E-04	50G	0.626				
PMG	5.000	148.8	82.7	199.8	85.9	148.8	82.7	199.8	85.9	1.05E-04	33.9	-110.6	1.21E-04	100G	0.333				
PMG	5.000	152.9	81.7	138.2	84.3	152.9	81.7	138.2	84.3	4.38E-05	31.6	-110.9	7.72E-05	150G	0.214				
PMG	5.000	169.3	85.4	144.6	75.3	169.3	85.4	144.6	75.3	2.96E-05	37.5	-117.4	4.79E-05	200G	0.133				
PMG	5.000	214.0	82.0	87.7	76.7	214.0	82.0	87.7	76.7	1.46E-05	32.9	-129.9	3.39E-05	250G	0.094				
PMG	5.000	202.0	79.5	261.1	84.5	202.0	79.5	261.1	84.5	1.19E-05	27.4	-127.9	2.21E-05	350G	0.061				
PMG	5.000	179.1	79.7	227.6	76.8	179.1	79.7	227.6	76.8	9.18E-06	26.5	-119.2	1.30E-05	500G	0.036				
PMG	5.000	344.6	77.9	173.4	56.7	344.6	77.9	173.4	56.7	6.92E-06	68.2	-135.9	7.17E-06	700G	0.020				



Intensitu.	Coordinates of vector diagram:	Geog.
Coordinates of equal-area plot:	Geog.	Geog.





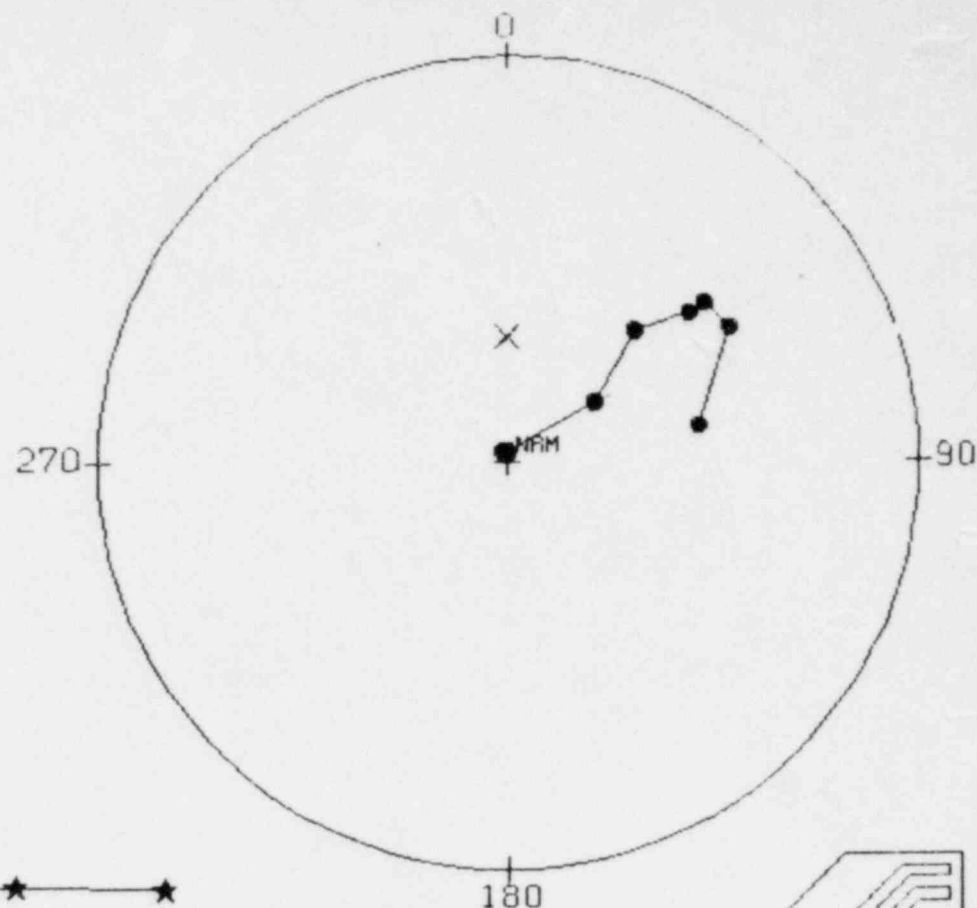
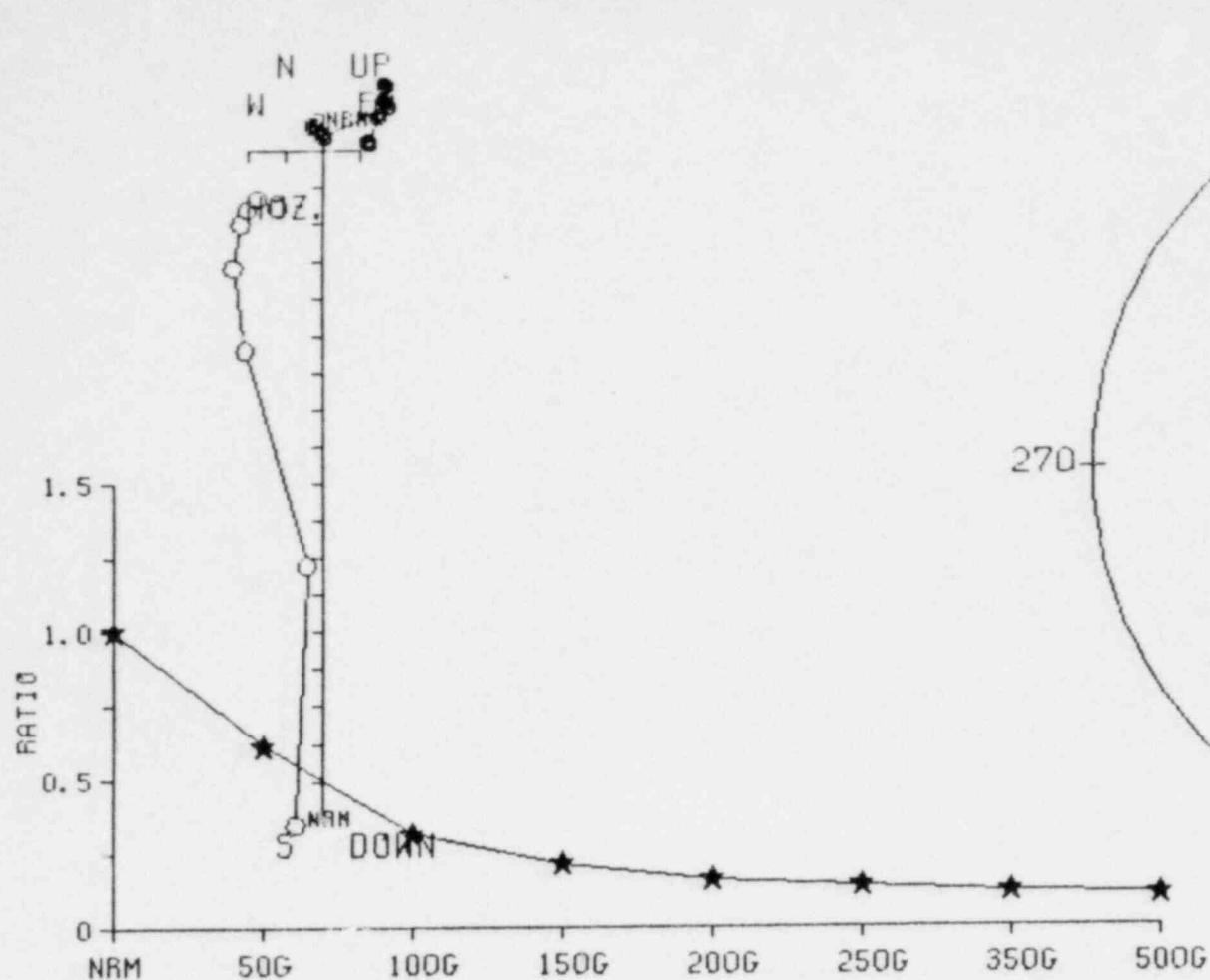
Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: E20 Site lat & long= 46.50 -119.50

9 Demag steps for this sample.

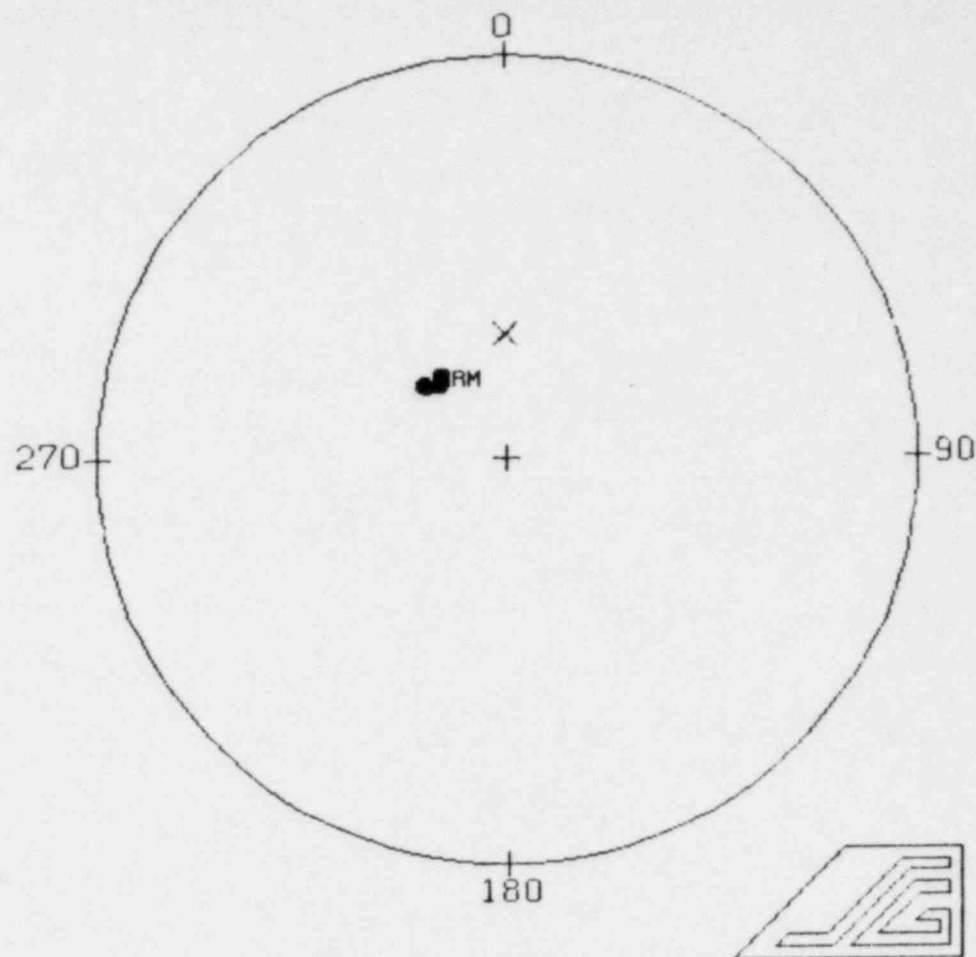
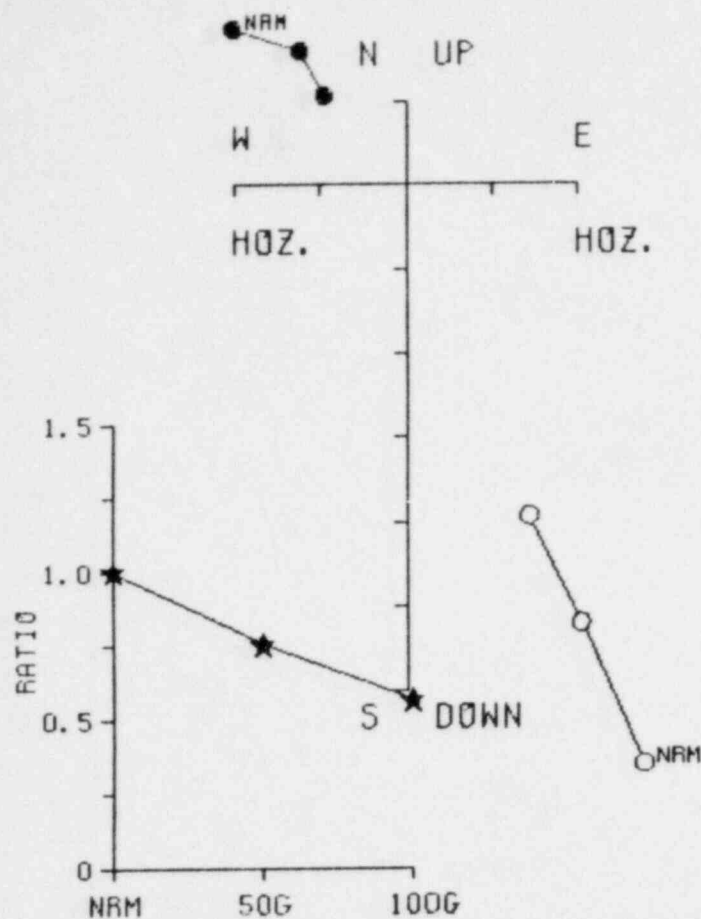
Interval= 32.300 Strike & dip of bedding= 0.0 0.0

	SM#	Dec G	Inc G	Diff	vect	Dec S	Inc S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	9.000	257.5	88.8	0.0	0.0	257.5	88.8	0.0	0.0	0.00E-01	45.9	-122.9	9.24E-05	NRM	1.000		
PMG	9.000	186.1	71.2	358.9	73.1	186.1	71.2	358.9	73.1	5.02E-05	12.4	-123.0	4.69E-05	50G	0.508		
PMG	9.000	180.7	71.0	192.0	71.2	180.7	71.0	192.0	71.2	2.25E-05	12.0	-119.9	2.44E-05	100G	0.264		
PMG	9.000	174.7	61.9	238.4	84.2	174.7	61.9	238.4	84.2	9.09E-06	-0.3	-115.6	1.59E-05	150G	0.172		
PMG	9.000	182.1	72.7	168.2	33.6	182.1	72.7	168.2	33.6	4.81E-06	14.6	-120.7	1.19E-05	200G	0.129		
PMG	9.000	230.3	81.6	158.2	22.9	230.3	81.6	158.2	22.9	3.01E-06	34.8	-134.9	1.03E-05	250G	0.111		
PMG	9.000	249.1	81.9	211.3	80.2	249.1	81.9	211.3	80.2	4.64E-06	39.1	-138.8	5.67E-06	350G	0.061		
PMG	9.000	153.8	64.0	323.8	-37.2	153.8	64.0	323.8	-37.2	5.74E-06	5.0	-101.5	1.01E-05	500G	0.109		
PMG	9.000	184.2	-13.3	67.7	76.3	184.2	-13.3	67.7	76.3	1.05E-05	-50.1	-125.9	5.07E-06	700G	0.055		



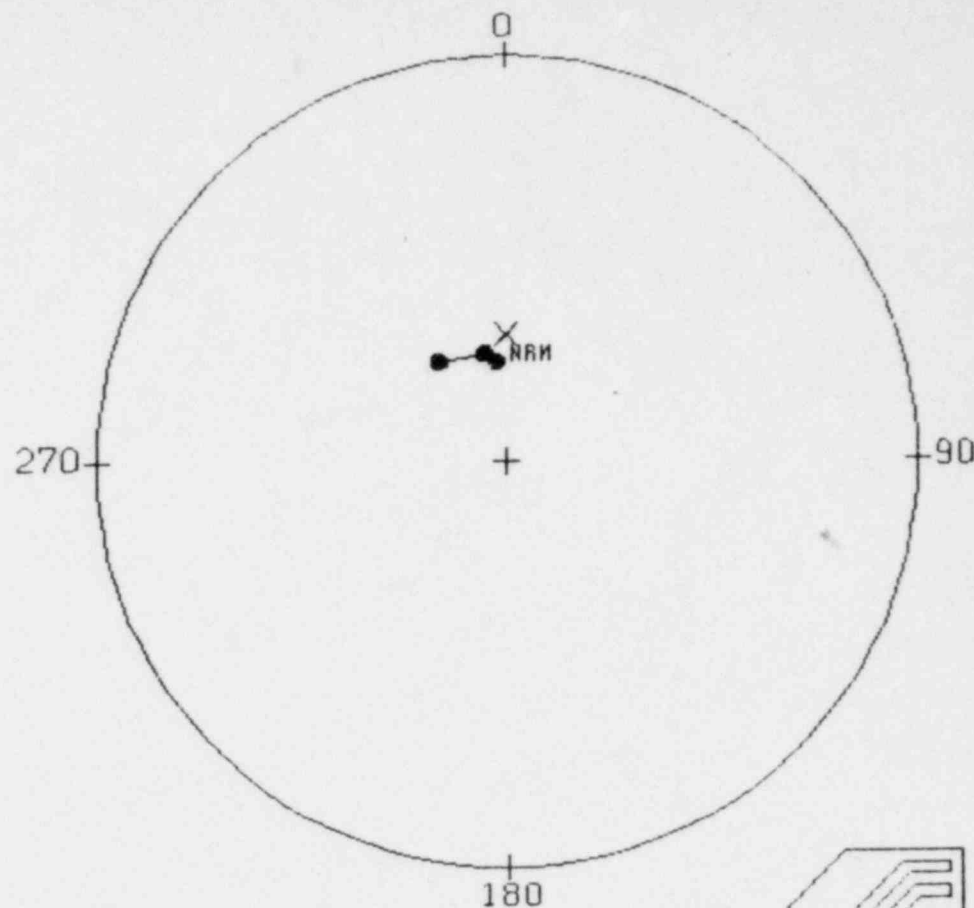
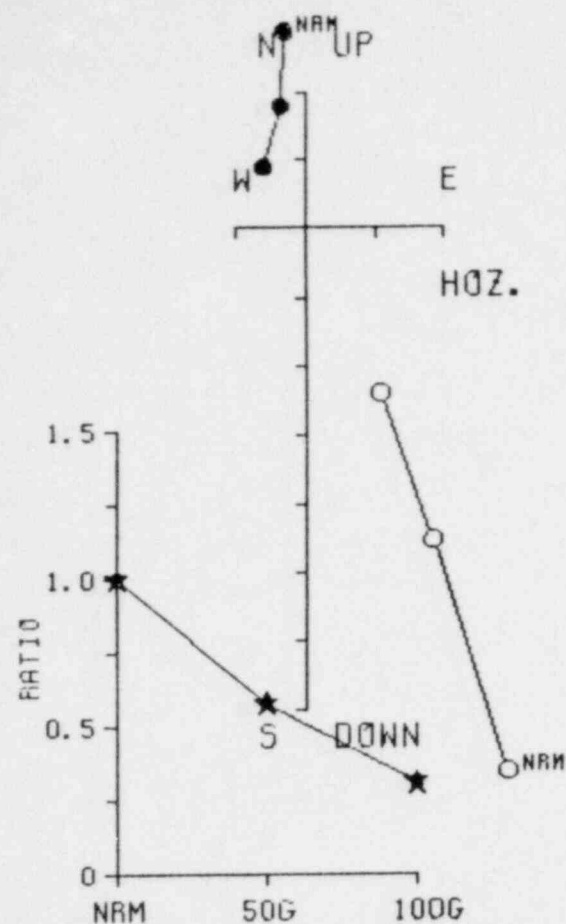
Ratio plot is normalized: Intensity.
 Locality: E20 Site lat & long= 46.50 -119.50
 8 Demag steps for this sample.
 Interval= 34.900 Strike & dip of bedding= 0.0 0.0
 SM#

	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	10.000	338.3	87.7	0.0	0.0	50.7	-122.1	1.82E-04	NRM	1.000	
PMG	10.000	3.9	87.9	312.1	86.7	50.7	-119.0	1.12E-04	50G	0.615	
PMG	10.000	55.2	69.0	245.2	72.4	54.6	-60.0	5.77E-05	100G	0.317	
PMG	10.000	43.5	53.1	174.5	75.8	54.8	-23.9	3.98E-05	150G	0.219	
PMG	10.000	50.1	42.2	353.5	74.6	44.5	-18.2	2.56E-05	200G	0.163	
PMG	10.000	50.8	38.2	41.6	66.9	42.1	-15.9	2.58E-05	250G	0.142	
PMG	10.000	58.2	36.8	13.6	37.9	36.4	-21.1	2.18E-05	350G	0.120	
PMG	10.000	79.1	50.8	20.9	-16.8	29.4	-45.7	1.97E-05	500G	0.108	

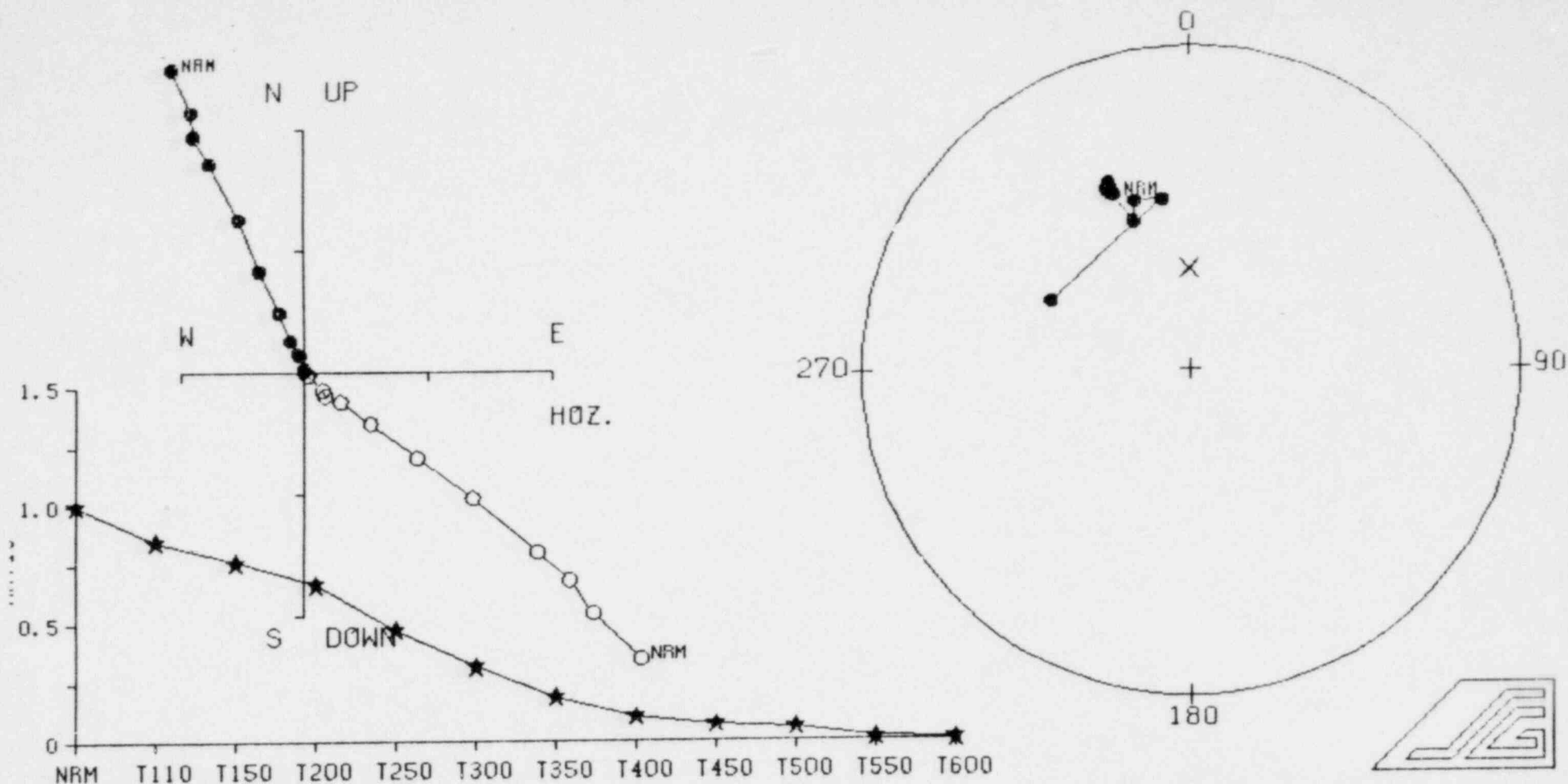


Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.
 Locality: E20 Site lat & long= 46.50 -119.50
 3 Demag steps for this sample.
 Interval= 33.100 Strike & dip of bedding= 0.0 0.0

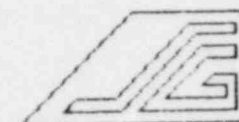
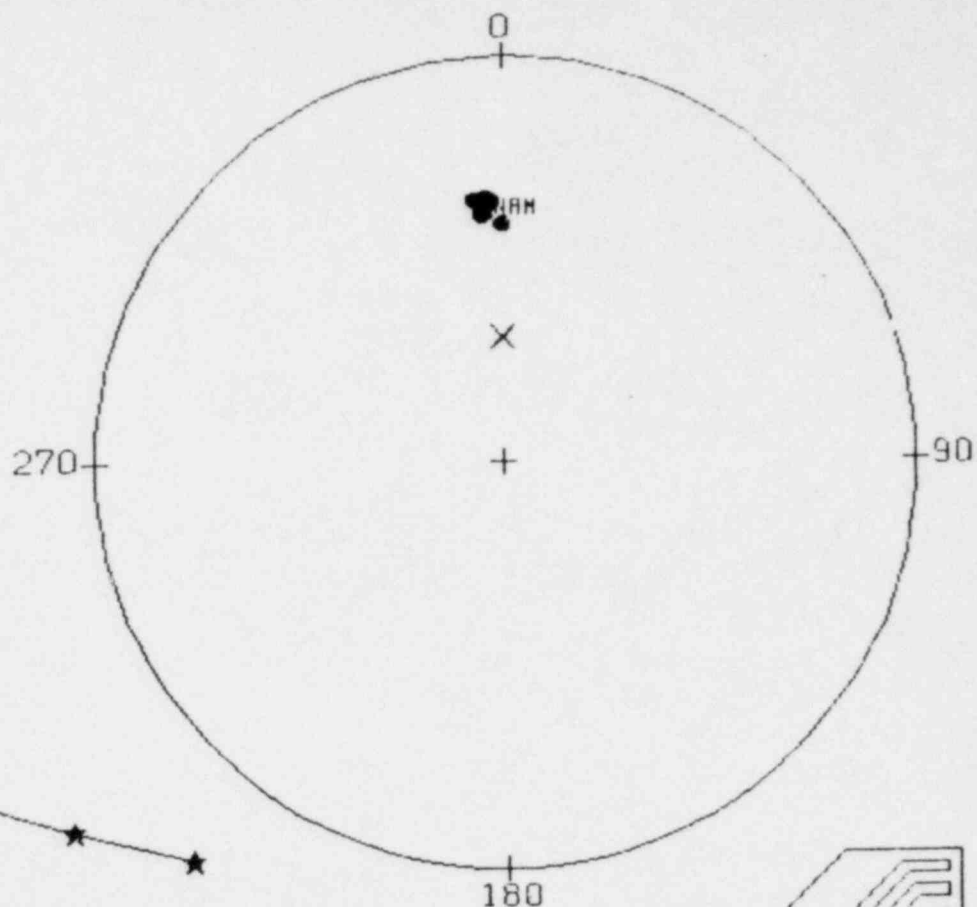
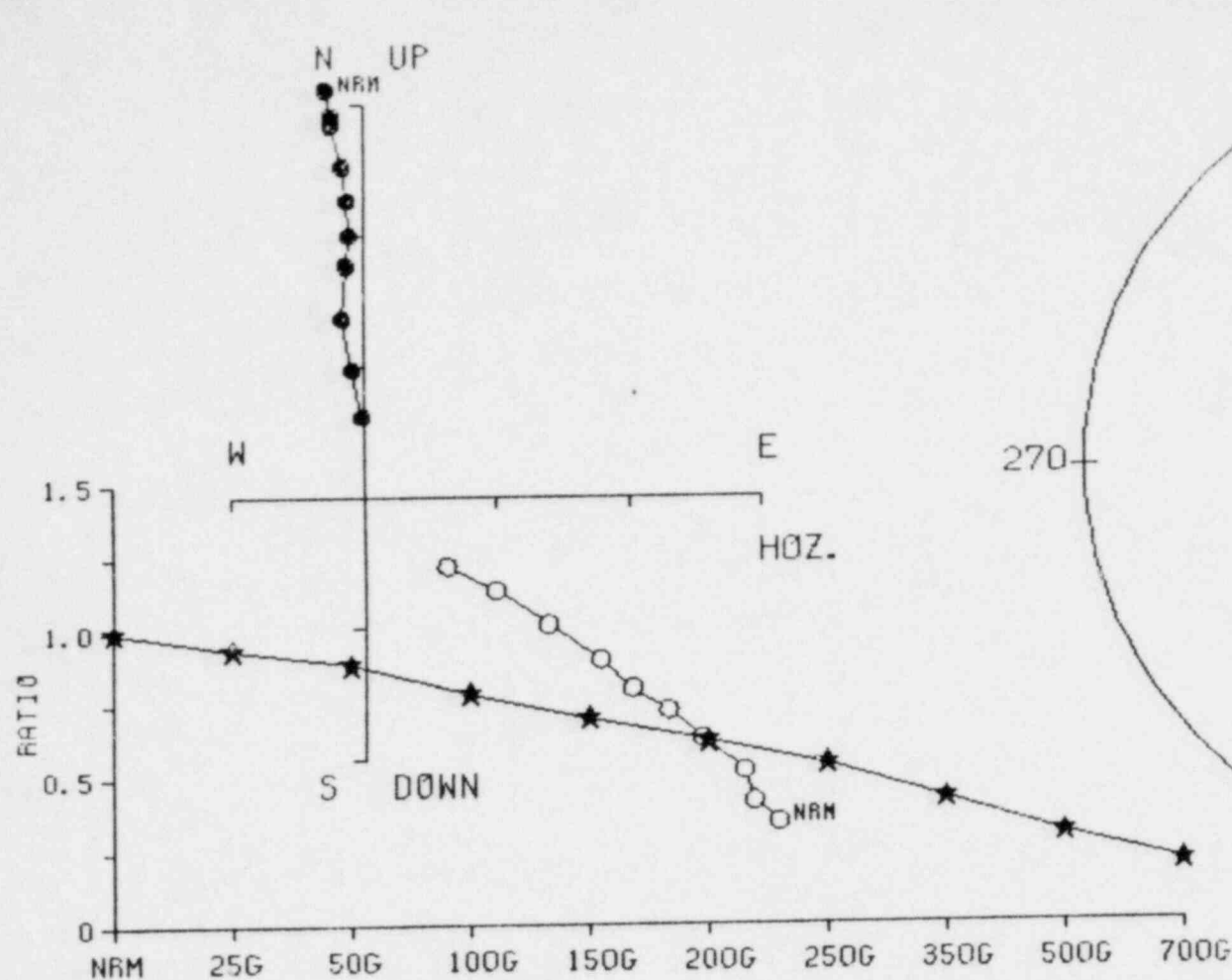
	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	11.000	312.8	68.1 0.0 0.0	312.8	68.1	0.0 0.0	0.00E-01	59.1	176.8	7.42E-05	NRM	1.000		
PMG	11.000	322.4	68.7 288.8 63.4	322.4	68.7	288.8 63.4	1.86E-05	65.1	177.1	5.60E-05	50G	0.755		
PMG	11.000	318.5	70.0 331.6 64.4	318.5	70.0	331.6 64.4	1.41E-05	62.8	-178.3	4.20E-05	100G	0.566		



Ratio plot is normalized. Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.
 Locality: E20 Site lat & long= 46.50 -119.50
 3 Demag steps for this sample.
 Interval= 36.900 Strike & dip of bedding= 0.0 0.0
 SMM Dec G Inc G Diff vect Dec S Inc S Diff vect JDiff V lat V long Intensity demag JH/JO Chi C/CO
 PMG 12.000 353.8 69.8 0.0 0.0 353.8 69.8 0.0 0.0 0.00E-01 81.9 -146.4 8.43E-05 NRM 1.000
 PMG 12.000 348.7 68.0 2.3 72.0 348.7 68.0 2.3 72.0 3.56E-05 81.3 -173.8 4.88E-05 50G 0.579
 PMG 12.000 325.9 65.9 14.9 66.3 325.9 65.9 14.9 66.3 2.33E-05 67.0 167.3 2.62E-05 100G 0.311



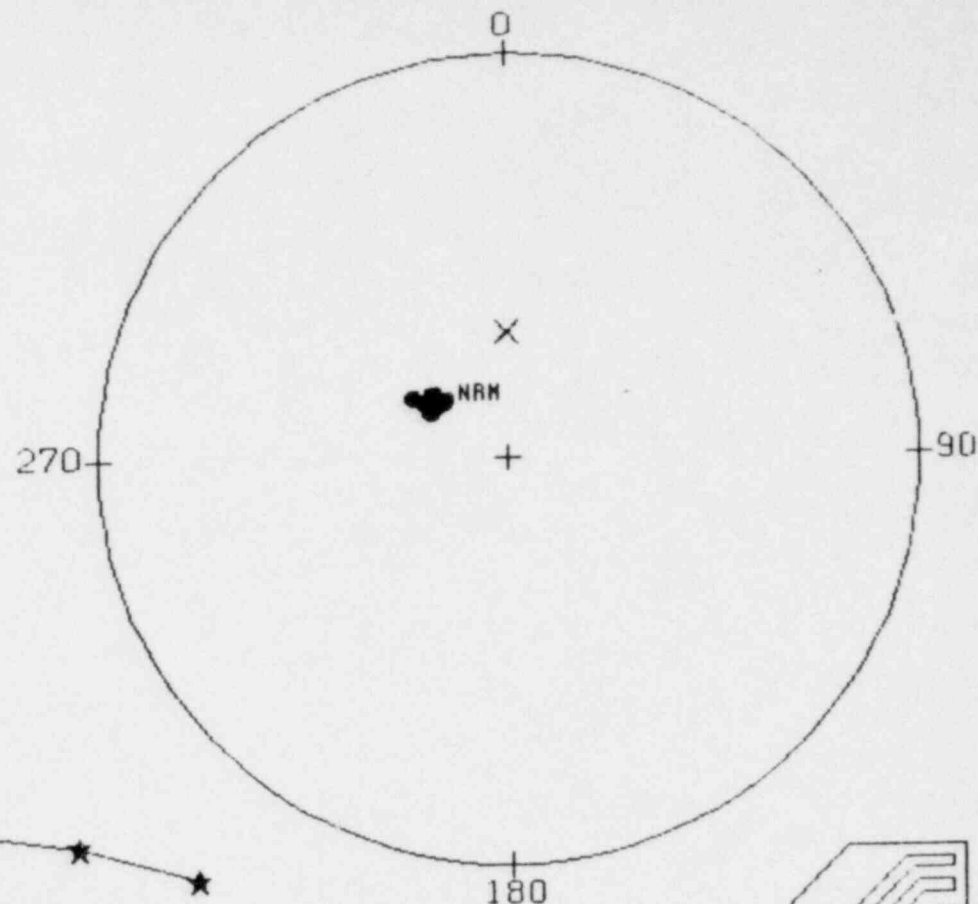
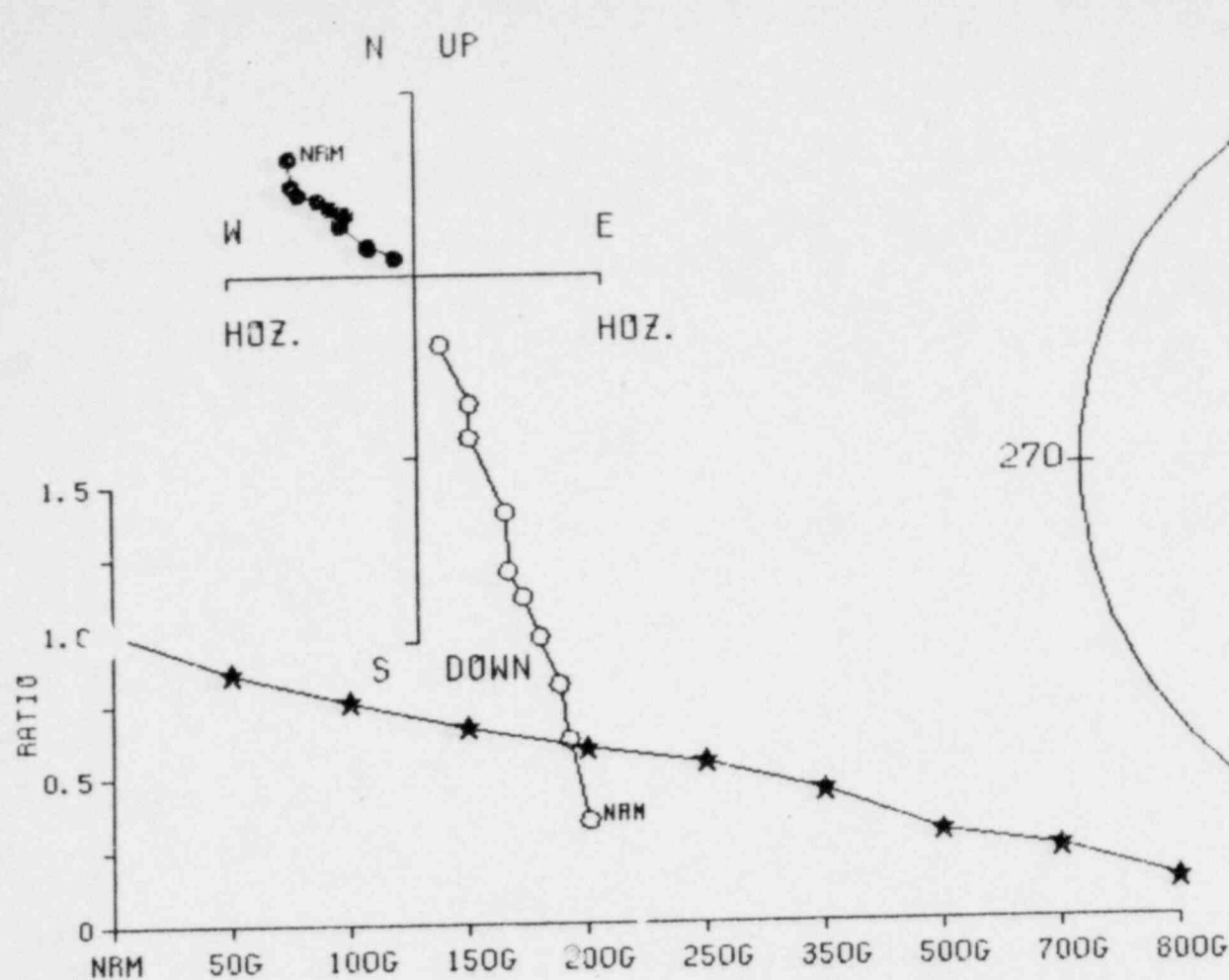
ratio plot is normalized: Intensity										Coordinates of vector diagram: Geog.				Coordinates of equal-area plot: Geog.			
locality: E20 Site lat & long=										46.50 -119.50							
12 Demag steps for this sample.																	
Interval= 38.000 Strike & dip of bedding=										0.0 0.0							
	SMW	Dec G	Inc G	Diff	vect	Dec S	Inc S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	13.000	336.7	41.0	0.0	0.0	336.7	41.0	0.0	0.0	0.00E-01	60.3	107.7	3.61E-04	NRM	1.000		
PMG	13.000	336.8	40.4	336.1	44.4	336.8	40.4	336.1	44.4	5.41E-05	60.0	107.0	3.07E-04	T110	0.850		
PMG	13.000	335.3	38.8	352.8	52.7	335.3	38.8	352.8	52.7	3.35E-05	58.3	108.0	2.75E-04	T150	0.762		
PMG	13.000	336.0	38.3	330.2	42.1	336.0	38.3	330.2	42.1	3.52E-05	58.4	106.7	2.40E-04	T200	0.665		
PMG	13.000	336.9	37.4	333.7	40.5	336.9	37.4	333.7	40.5	6.91E-05	58.3	104.7	1.71E-04	T250	0.474		
PMG	13.000	336.4	37.6	337.9	37.0	336.4	37.6	337.9	37.0	5.60E-05	58.2	105.5	1.15E-04	T300	0.319		
PMG	13.000	337.0	38.6	335.6	36.1	337.0	38.6	335.6	36.1	4.70E-05	59.0	105.4	6.80E-05	T350	0.188		
PMG	13.000	336.0	40.0	338.2	36.9	336.0	40.0	338.2	36.9	3.05E-05	59.4	107.9	3.75E-05	T400	0.104		
PMG	13.000	339.3	49.7	331.7	21.2	339.3	49.7	331.7	21.2	1.33E-05	67.4	113.0	2.53E-05	T450	0.070		
PMG	13.000	342.1	44.5	315.3	69.7	342.1	44.5	315.3	69.7	5.10E-06	65.2	101.7	2.07E-05	T500	0.057		
PMG	13.000	342.1	44.5	315.3	69.7	342.1	44.5	315.3	69.7	1.67E-05	69.4	84.0	4.02E-06	T550	0.011		
PMG	13.000	350.9	45.8	340.1	44.1	350.9	45.8	340.1	44.1	2.58E-06	40.3	156.4	2.15E-06	T600	0.006		
PMG	13.000	297.1	50.9	19.6	28.0	297.1	50.9	19.6	28.0								



Ratio plot is normalized: Intensity
 Locality: E20 Site lat & long= 46.50 -119.50
 10 Demag steps for this sample.
 Interval= 38.100 Strike & dip of bedding= 0.0 0.0

Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

	Dec	Inc	Diff	vect	Dec	Inc	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	14.000	354.9	38.6	0.0	354.9	38.6	0.0	0.0	0.00E-01	64.9	71.7	3.99E-04	NRM	1.000		
PMG	14.000	355.3	38.5	348.8	355.3	38.5	348.8	39.9	2.51E-05	64.9	70.8	3.74E-04	25G	0.937		
PMG	14.000	355.1	36.4	2.6	355.1	36.4	2.6	71.0	2.41E-05	63.4	70.9	3.54E-04	50G	0.887		
PMG	14.000	356.5	36.1	343.9	356.5	36.1	343.9	38.1	4.06E-05	63.4	67.9	3.14E-04	100G	0.787		
PMG	14.000	357.1	35.7	351.2	357.1	35.7	351.2	39.4	3.32E-05	63.2	66.6	2.81E-04	150G	0.704		
PMG	14.000	357.2	36.2	356.4	357.2	36.2	356.4	31.8	3.21E-05	63.5	66.5	2.49E-04	200G	0.624		
PMG	14.000	356.0	35.2	6.1	356.0	35.2	6.1	42.5	3.25E-05	62.7	68.8	2.17E-04	250G	0.544		
PMG	14.000	353.6	35.2	4.4	353.6	35.2	4.4	34.8	4.84E-05	62.4	73.7	1.69E-04	350G	0.424		
PMG	14.000	359.2	36.0	349.6	359.2	36.0	349.6	33.0	4.72E-05	63.2	70.6	1.22E-04	500G	0.306		
PMG	14.000	359.5	40.8	347.9	359.5	40.8	347.9	26.0	4.11E-05	66.8	61.8	8.22E-05	700G	0.206		



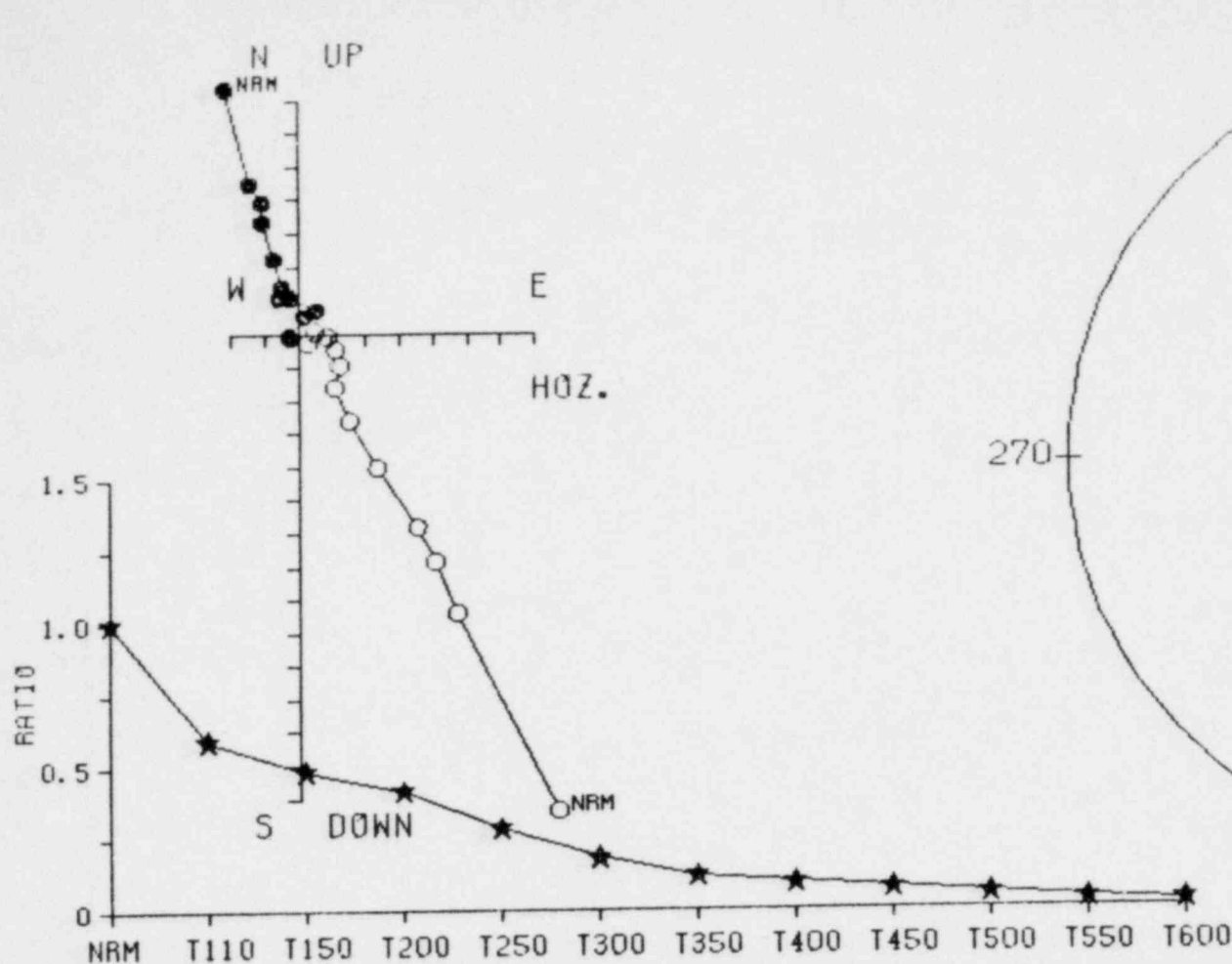
Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: E20 Site lat & long= 46.50 -119.50

10 Demag steps for this sample.

Interval= 39.600 Strike & dip of bedding= 0.0 0.0

SM#	Dec G	Inc G	Diff	vect	Dec S	Inc S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/J0	Chi	C/CO
PMG	15.000	313.9	72.8	0.0	313.9	72.8	0.0	0.0	0.00E-01	60.2	-169.3	3.11E-04	NRM	1.000		
PMG	15.000	307.0	72.2	354.9	307.0	72.2	354.9	71.2	4.63E-05	56.5	-170.9	2.66E-04	50G	0.855		
PMG	15.000	305.8	71.2	323.8	305.8	71.2	323.8	79.5	3.04E-05	55.7	-173.6	2.36E-04	100G	0.759		
PMG	15.000	308.8	71.6	287.7	308.8	71.6	287.7	67.0	2.83E-05	57.5	-172.9	2.08E-04	150G	0.669		
PMG	15.000	309.4	72.0	304.8	309.4	72.0	304.8	68.3	2.30E-05	57.8	-171.7	1.85E-04	200G	0.595		
PMG	15.000	311.7	73.1	295.7	311.7	73.1	295.7	59.7	1.65E-05	59.1	-168.5	1.69E-04	250G	0.543		
PMG	15.000	304.7	69.7	26.3	304.7	69.7	26.3	79.4	3.28E-05	54.7	-177.4	1.38E-04	350G	0.444		
PMG	15.000	302.1	72.2	308.5	302.1	72.2	308.5	64.5	4.56E-05	53.9	-170.6	9.27E-05	500G	0.298		
PMG	15.000	303.2	67.7	189.4	303.2	67.7	189.4	88.2	1.86E-05	53.2	178.4	7.53E-05	700G	0.242		
PMG	15.000	311.8	70.2	295.5	311.8	70.2	295.5	64.4	3.52E-05	59.0	-177.0	4.03E-05	800G	0.130		



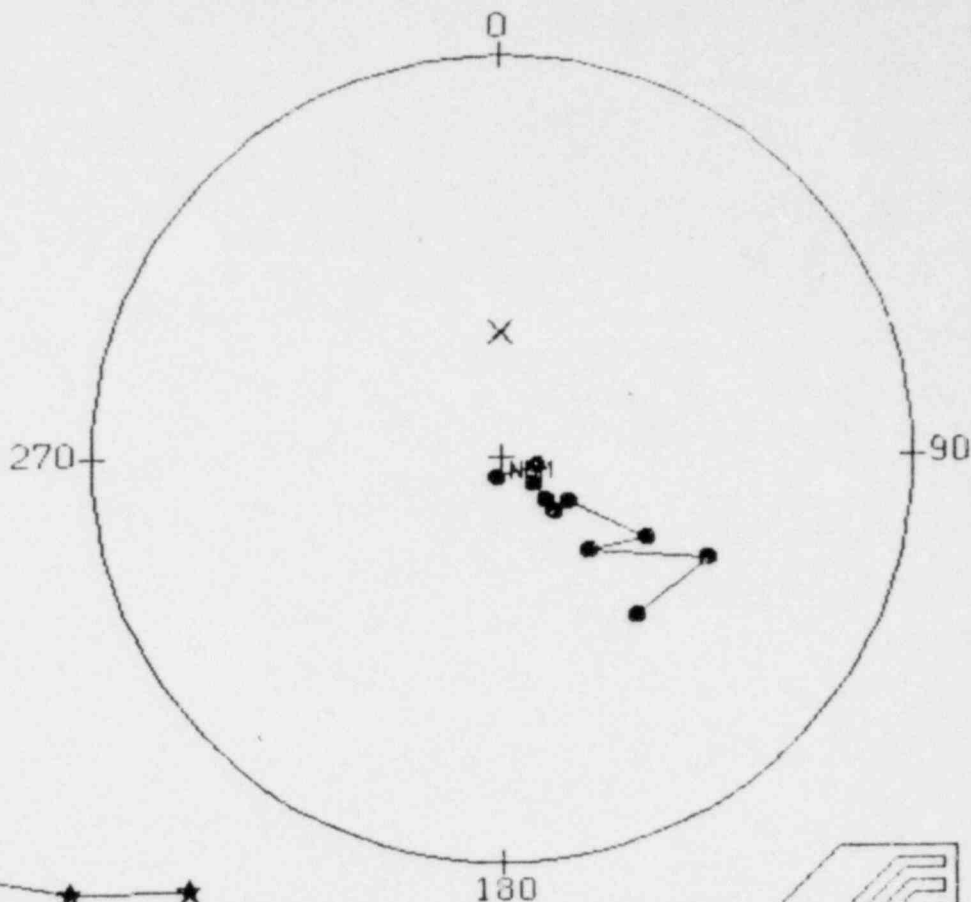
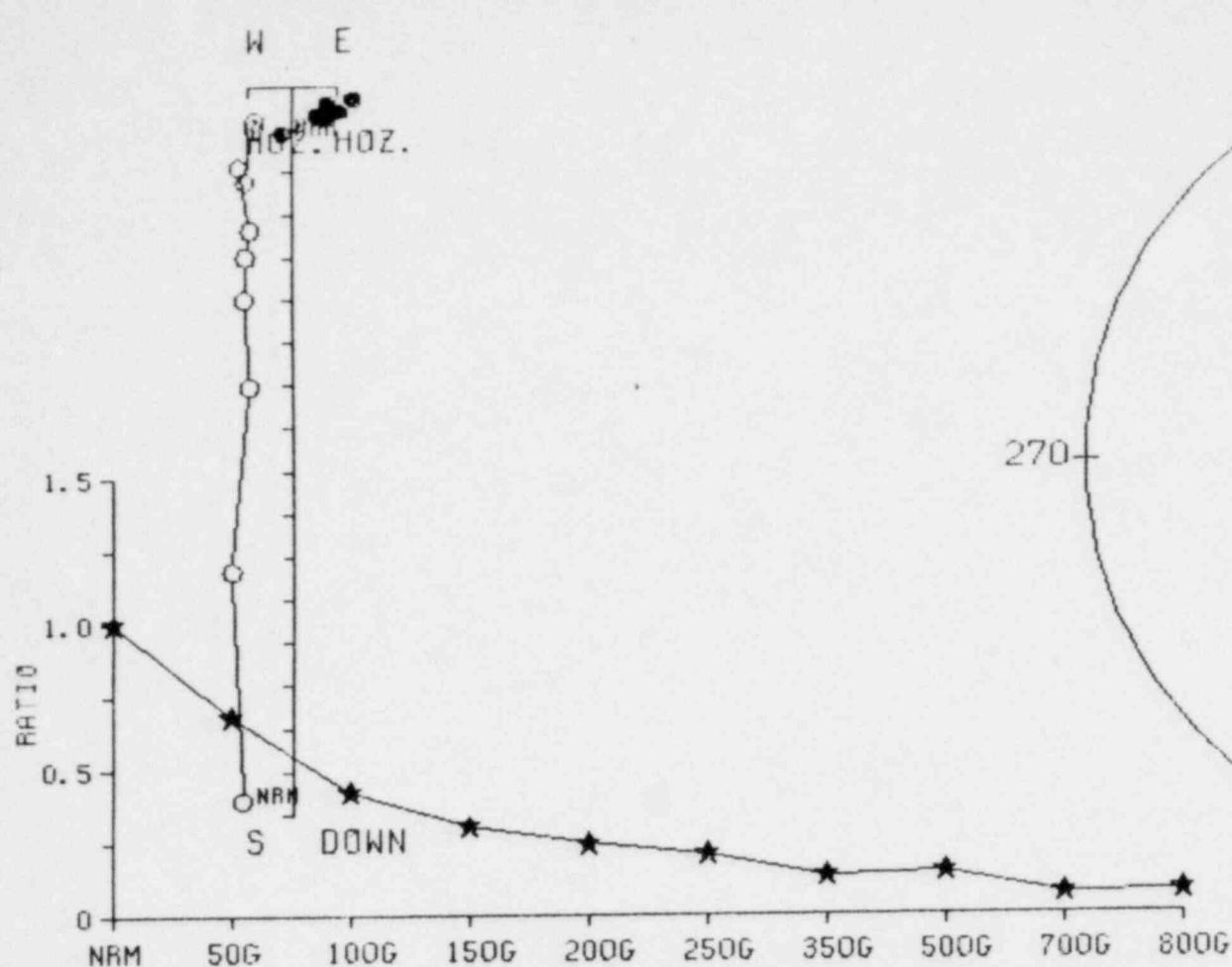
Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: E20 Site lat & long= 46.50 -119.50

12 Demag steps for this sample.

Interval= 39.900 S. like & dip of bedding= 0.0 0.0

PMG	Dec	Inc	S	Inc	S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	16.000	343.7	62.0	0.0	0.0	343.7	62.0	0.0	0.00E-01	78.0	140.6	1.63E-04	NRM	1.000	
PMG	16.000	342.2	60.7	346.1	63.8	342.2	60.7	346.1	6.67E-05	76.4	136.5	9.64E-05	T110	0.591	
PMG	16.000	345.3	59.4	324.3	65.5	345.3	59.4	324.3	1.72E-05	77.7	125.4	7.95E-05	T150	0.488	
PMG	16.000	342.6	58.9	2.4	61.1	342.6	58.9	2.4	1.17E-05	75.6	128.2	6.80E-05	T200	0.417	
PMG	16.000	342.4	59.8	343.0	57.0	342.4	59.8	343.0	2.16E-05	76.0	132.0	4.64E-05	T250	0.285	
PMG	16.000	341.5	60.2	344.0	59.1	341.5	60.2	344.0	1.64E-05	75.6	135.1	3.00E-05	T300	0.184	
PMG	16.000	347.9	56.3	326.1	66.0	347.9	56.3	326.1	1.10E-05	76.8	107.7	1.92E-05	T350	0.118	
PMG	16.000	330.8	38.0	91.7	60.9	330.8	38.0	91.7	7.50E-06	55.5	113.8	1.53E-05	T400	0.094	
PMG	16.000	347.7	22.3	266.2	54.1	347.7	22.3	266.2	6.05E-06	53.6	81.1	1.19E-05	T450	0.073	
PMG	16.000	36.0	4.4	297.7	24.9	36.0	4.4	297.7	9.16E-06	35.8	14.1	8.55E-06	T500	0.052	
PMG	16.000	15.1	-6.9	62.8	17.3	15.1	-6.9	62.8	4.31E-06	38.3	41.1	5.23E-06	T550	0.032	
PMG	16.000	250.8	46.2	33.0	-25.6	250.8	46.2	33.0	7.76E-06	7.8	-177.2	3.77E-06	T600	0.023	



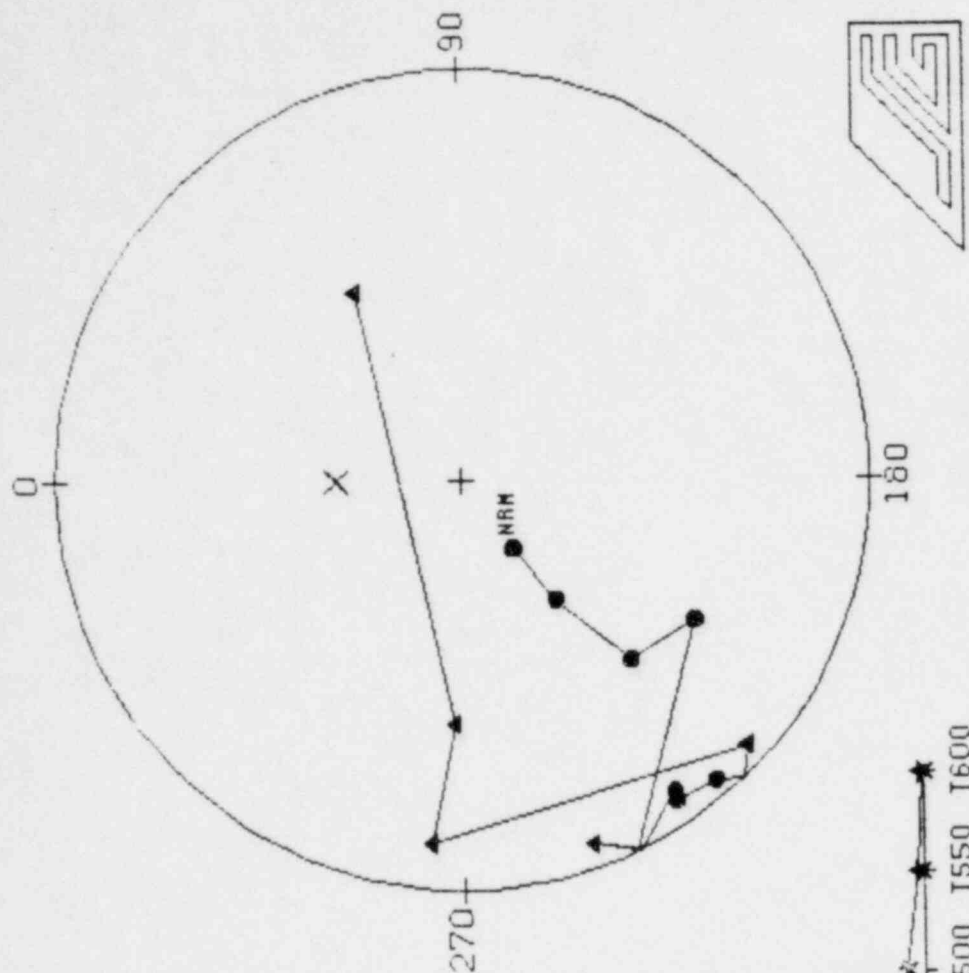
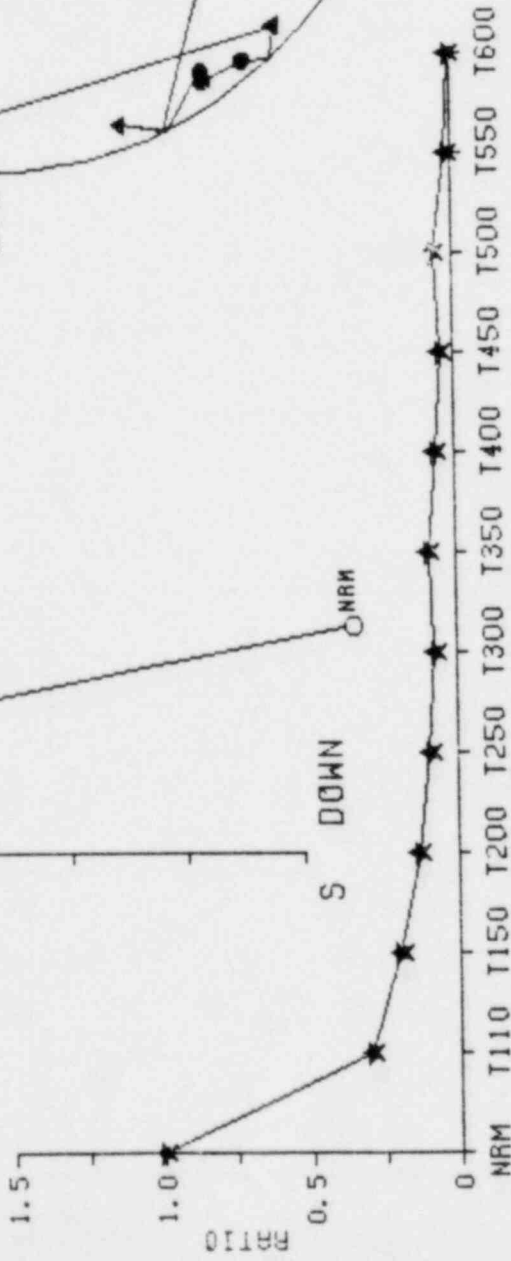
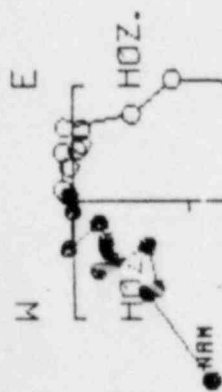
Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: E20 Site lat & long= 46.50 -119.50

10 Demag steps for this sample.

Interval= 41.200 Strike & dip of bedding= 0.0 0.0

SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	17.000	191.7	86.1	0.0	0.0	0.0	0.00E-01	39.0	-121.5	1.67E-04	NRM	1.000		
PMG	17.000	102.0	82.9	243.0	71.3	102.0	5.65E-05	42.0	-101.0	1.14E-04	50G	0.683		
PMG	17.000	129.9	81.9	60.4	80.7	129.9	4.35E-05	35.2	-104.6	7.09E-05	100G	0.425		
PMG	17.000	133.6	77.8	351.4	87.0	133.6	2.03E-05	28.6	-100.5	5.11E-05	150G	0.306		
PMG	17.000	133.7	75.0	59.0	87.5	133.7	1.01E-05	23.9	-98.4	4.13E-05	200G	0.247		
PMG	17.000	123.7	74.1	193.5	68.6	123.7	6.59E-06	26.2	-92.2	3.51E-05	250G	0.210		
PMG	17.000	119.3	56.6	284.2	79.3	119.3	1.53E-05	9.8	-74.7	2.24E-05	350G	0.134		
PMG	17.000	137.0	64.3	61.8	-43.2	137.0	5.32E-06	9.9	-90.8	2.48E-05	500G	0.149		
PMG	17.000	116.5	43.3	185.9	74.2	116.5	1.47E-05	1.8	-65.4	1.19E-05	700G	0.071		
PMG	17.000	140.0	47.6	34.5	-23.9	140.0	3.92E-06	-6.6	-84.9	1.32E-05	800G	0.079		

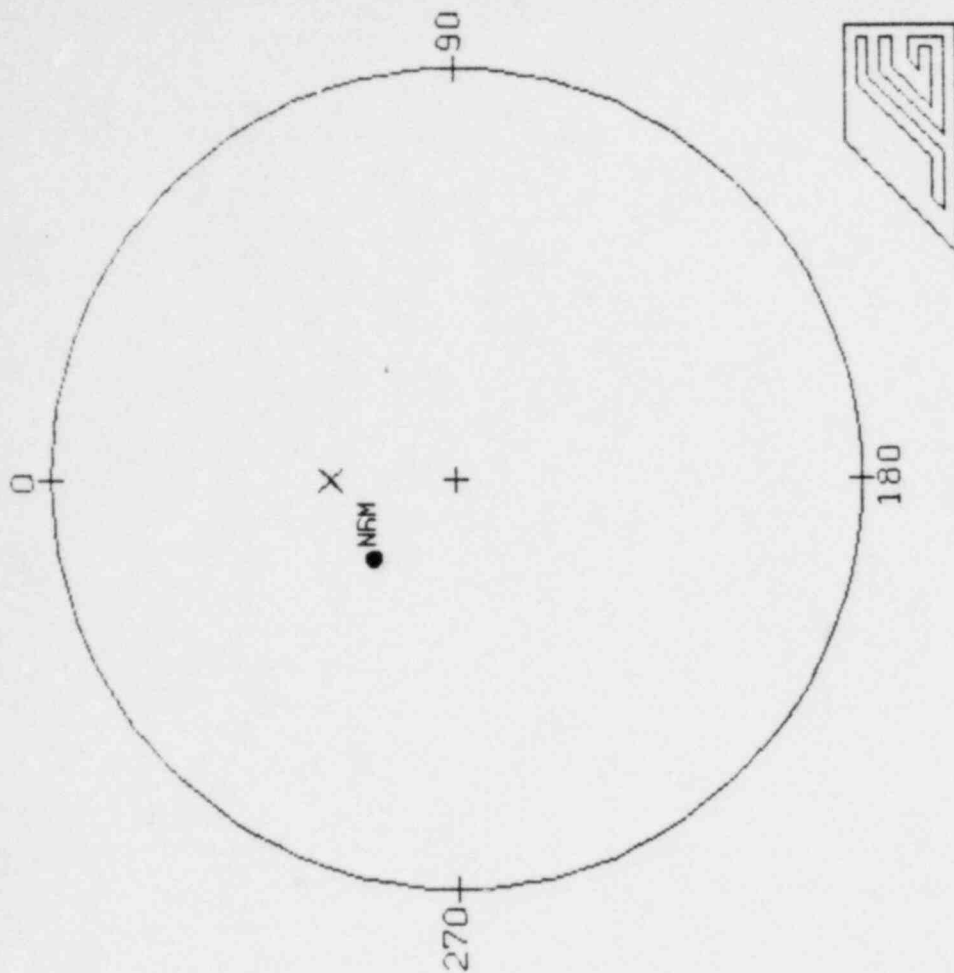
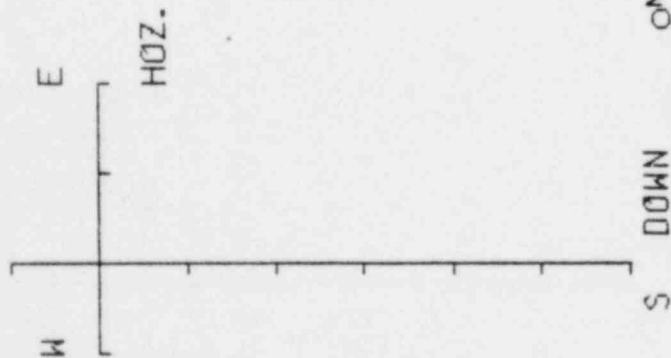


Coordinates of equal-area plot:		Geog	
Intensity	demag	JH/JO	C/CO
18.000	1110	1.000	
18.000	1150	0.298	
18.000	1200	0.134	
18.000	1250	0.094	
18.000	1300	0.073	
18.000	1350	0.092	
18.000	1400	0.066	
18.000	1450	0.044	
18.000	1500	0.064	
18.000	1550	0.019	
18.000	1600	0.009	

Coordinates of vector diagram:		Geog	
Intensity	demag	JH/JO	C/CO
18.000	1110	1.000	
18.000	1150	0.298	
18.000	1200	0.134	
18.000	1250	0.094	
18.000	1300	0.073	
18.000	1350	0.092	
18.000	1400	0.066	
18.000	1450	0.044	
18.000	1500	0.064	
18.000	1550	0.019	
18.000	1600	0.009	

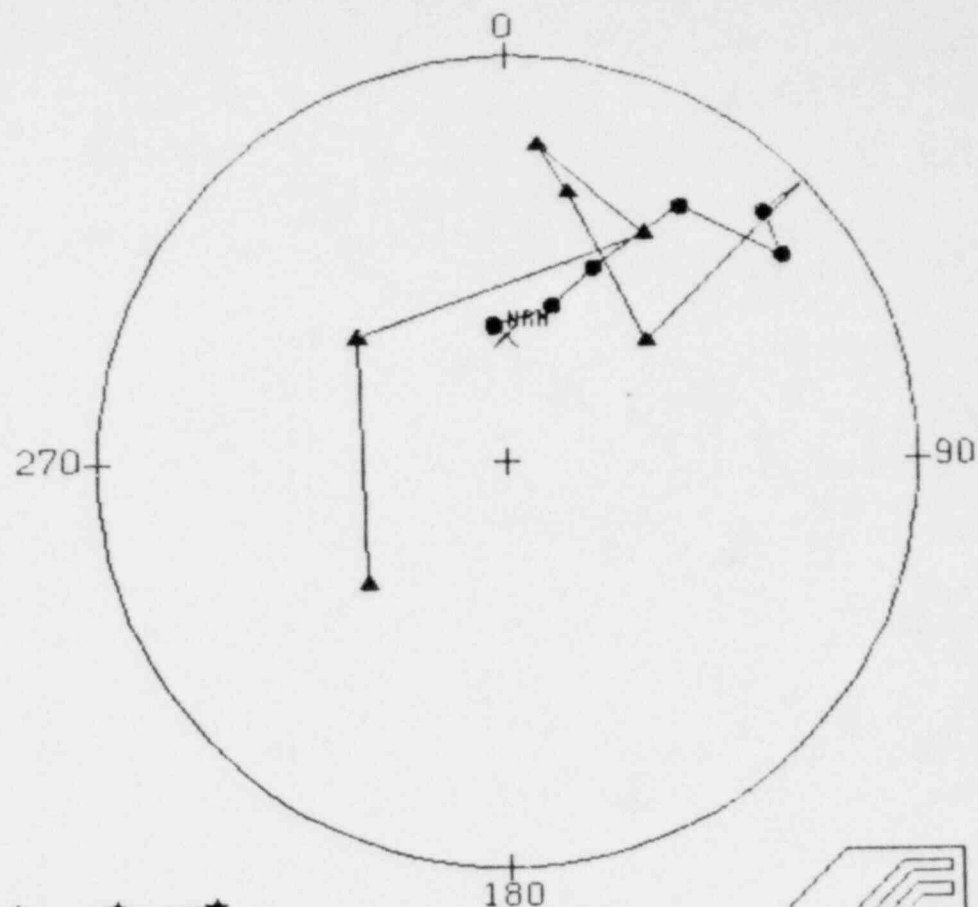
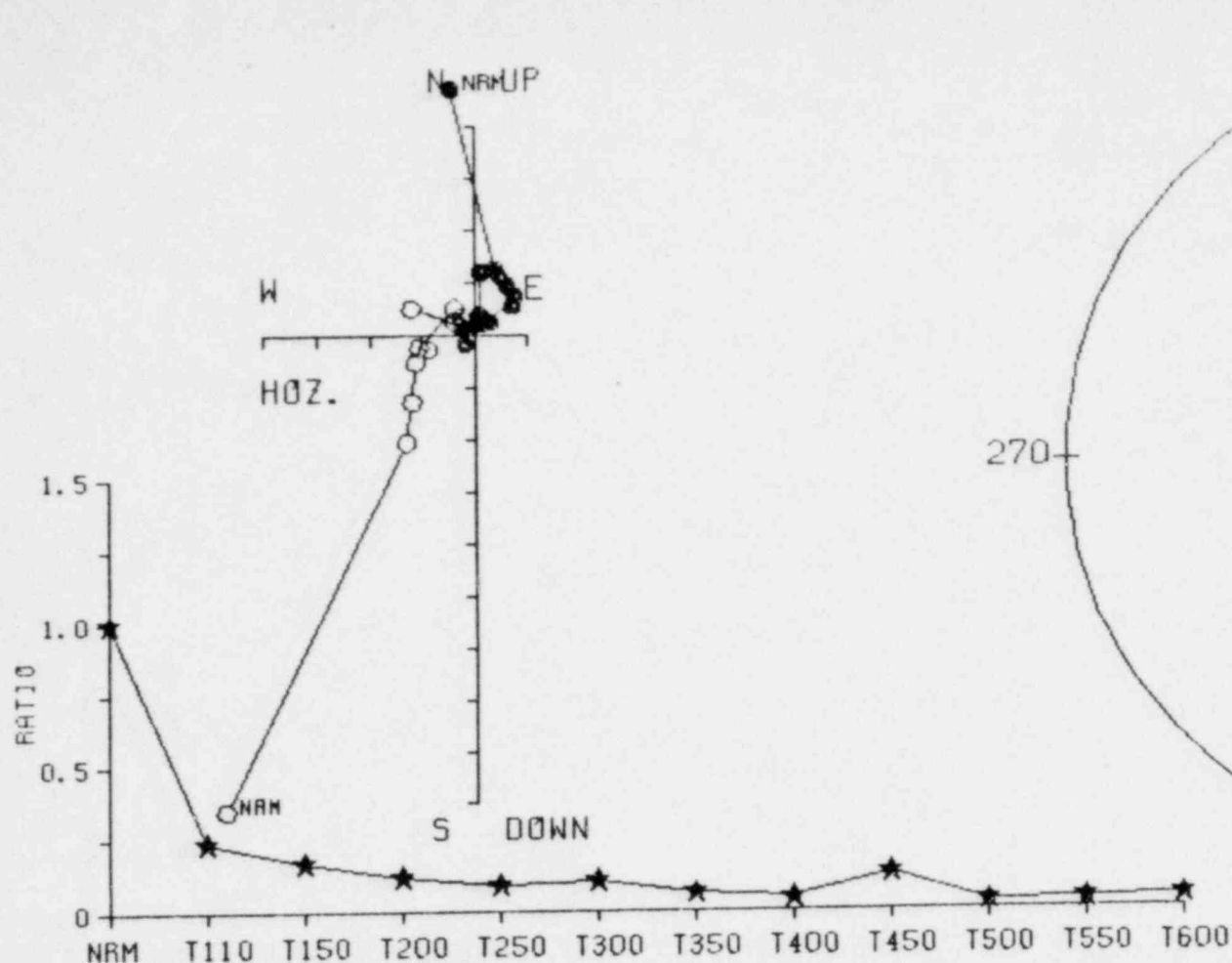
• NRM

N UP



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: E20 Site lat & long= 46.50 -119.50
 i Denag steps for this sample.
 Interval= 42.900 Strike & dip of bedding= 0.0 0.0
 SM# 19.000 Dec G Inc G Diff vect Dec S Inc S Diff vect JDiff V lat V long Intensity demag JH/JO Chi C/CO
 PMG 316.8 67.1 0.0 0.0 316.8 67.1 0.0 0.0 0.00E-01 61.4 173.1 6.91E-05 NRM 1.000



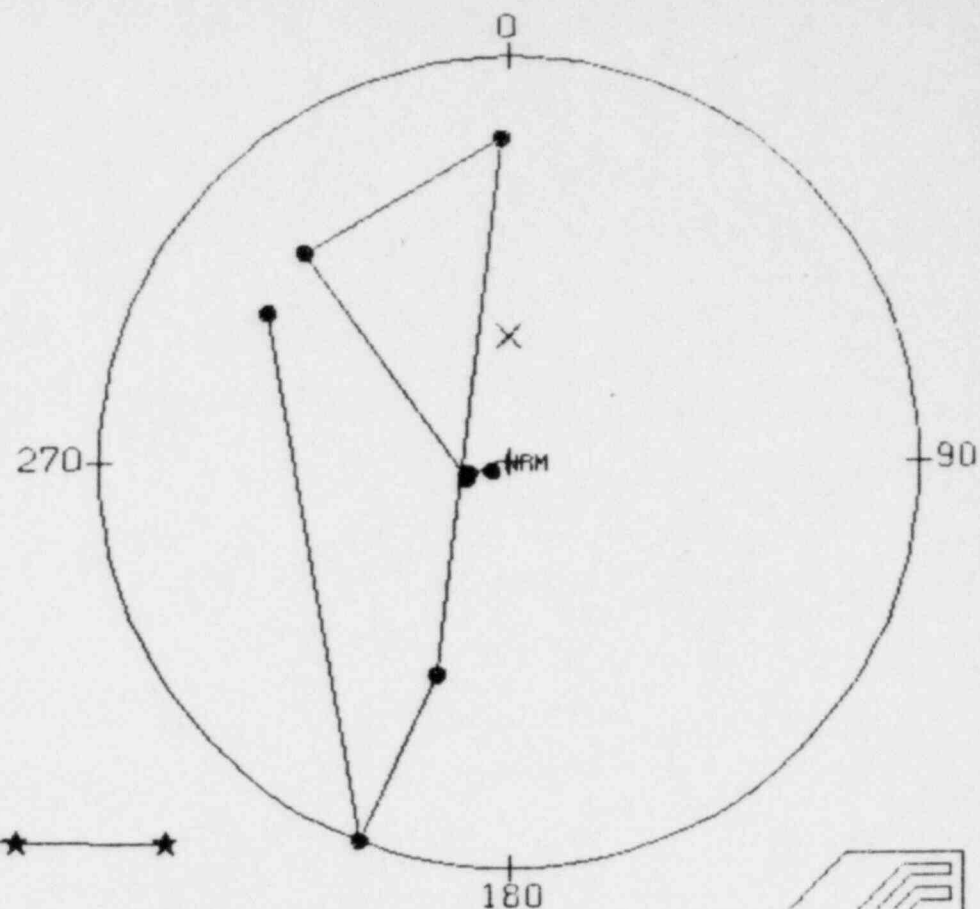
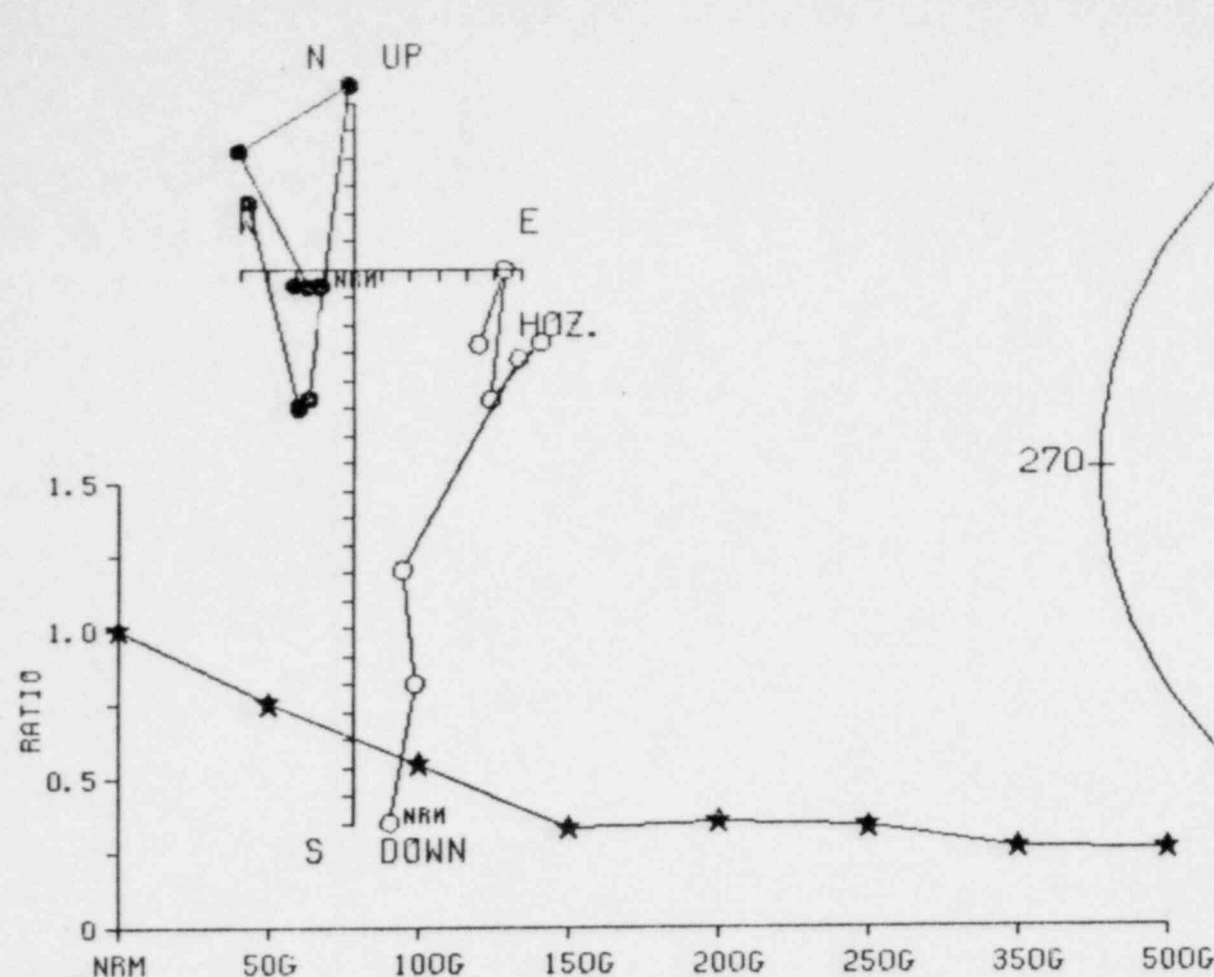
Ratio plot is normalized. Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: E20 Site lat & long= 46.50 -119.50

12 Demag steps for this sample.

Interval= 43.800 Strike & dip of bedding= 0.0 0.0

		Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	20.000	354.7	62.5	0.0	354.7	62.5	0.0	0.00E-01	85.4	116.6	1.03E-04	NRM	1.000		
PMG	20.000	16.1	57.4	347.0	16.1	57.4	347.0	7.93E-05	75.4	0.3	2.44E-05	T110	0.237		
PMG	20.000	23.9	46.9	324.8	23.9	46.9	324.8	8.05E-06	63.7	6.6	1.75E-05	T150	0.170		
PMG	20.000	34.3	25.2	320.6	34.3	25.2	320.6	7.87E-06	46.0	8.4	1.23E-05	T200	0.119		
PMG	20.000	53.2	17.1	345.8	53.2	17.1	345.8	4.61E-06	31.2	-7.2	9.45E-06	T250	0.092		
PMG	20.000	45.9	13.4	191.0	45.9	13.4	191.0	2.02E-06	34.2	1.0	1.09E-05	T300	0.106		
PMG	20.000	49.3	-52.8	44.0	49.3	-52.8	44.0	1.02E-05	-1.4	21.2	6.38E-06	T350	0.062		
PMG	20.000	13.0	-32.6	124.9	13.0	-32.6	124.9	3.51E-06	24.7	46.9	4.78E-06	T400	0.046		
PMG	20.000	5.8	-22.7	182.2	5.8	-22.7	182.2	8.38E-06	31.4	53.9	1.30E-05	T450	0.126		
PMG	20.000	31.1	-35.1	0.1	31.1	-35.1	0.1	1.05E-05	18.4	29.6	2.81E-06	T500	0.027		
PMG	20.000	310.2	-50.7	79.2	310.2	-50.7	79.2	3.11E-06	0.0	101.2	3.48E-06	T550	0.034		
PMG	20.000	228.5	-52.8	5.0	228.5	-52.8	5.0	3.26E-06	-51.3	152.6	4.33E-06	T600	0.042		



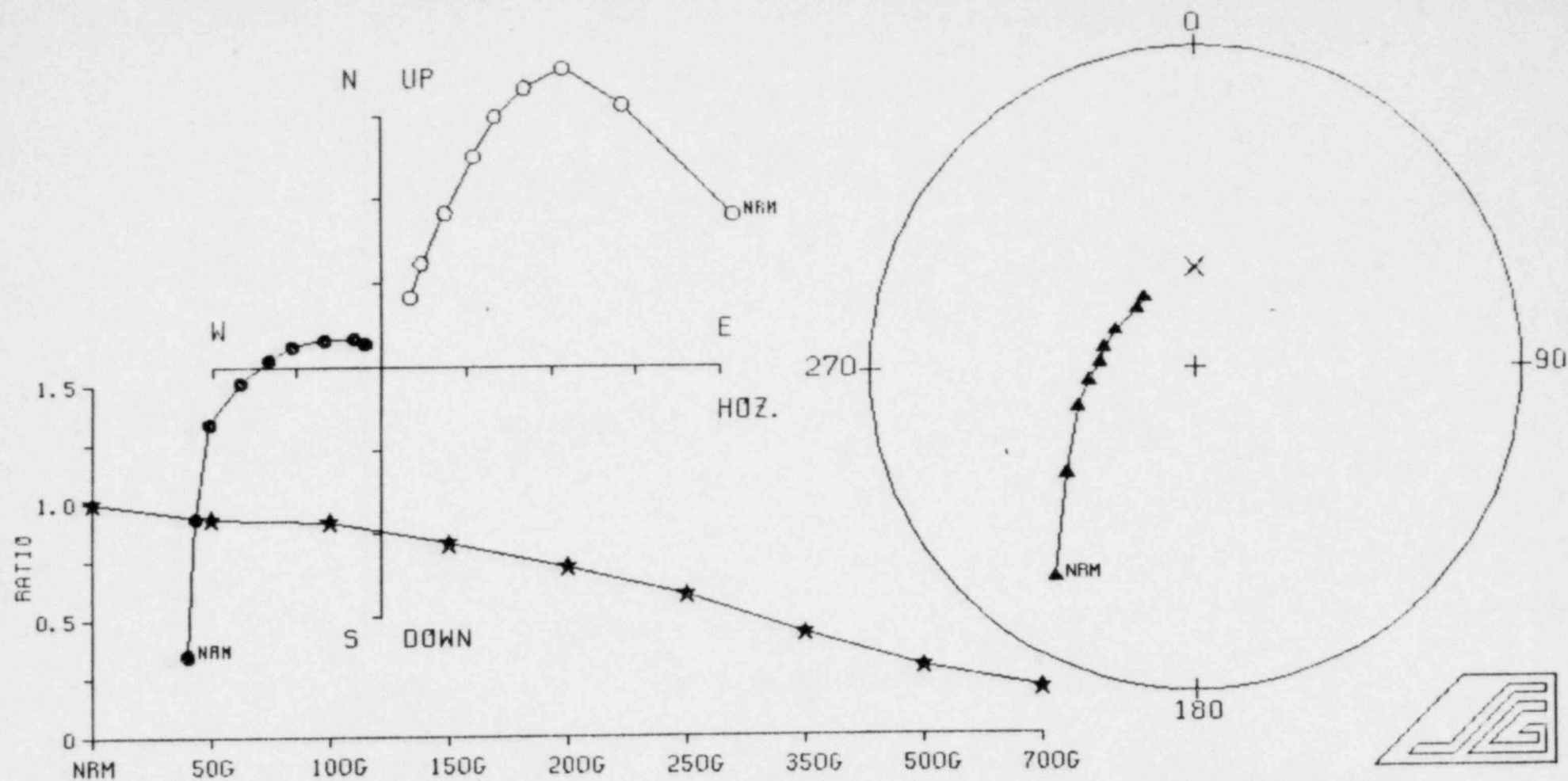
Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: E20 Site lat & long= 46.50 -119.50

8 Demag steps for this sample.

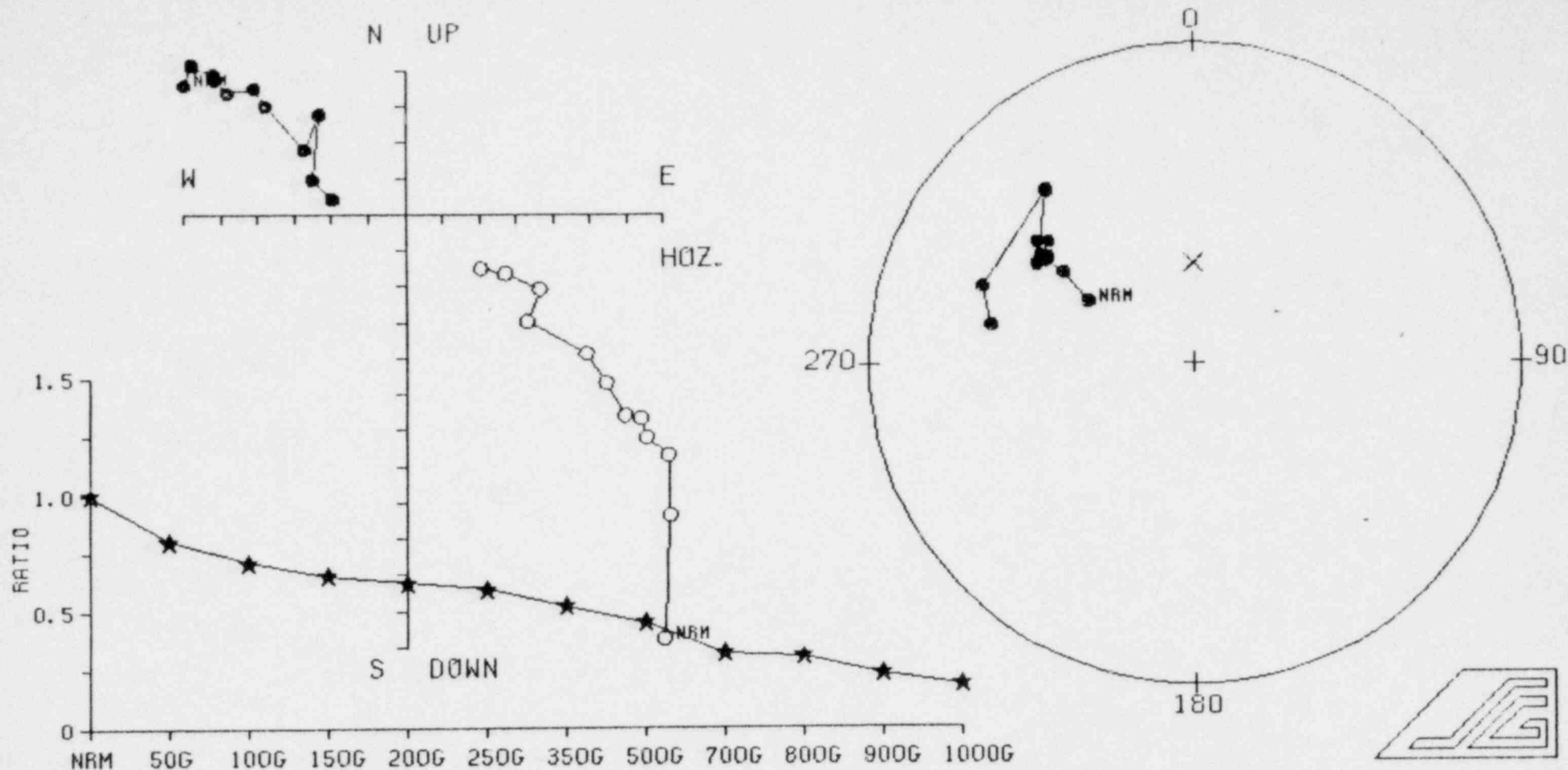
Interval= 48.300 Strike & dip of bedding= 0.0 0.0

	Dec C	Inc C	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	23.000	242.5	86.2	0.0	0.0	0.0	0.00E-01	42.6	-128.6	2.00E-04	NRM	1.000		
PMG	23.000	255.1	81.7	93.2	79.5	255.1	5.10E-05	40.3	-140.4	1.51E-04	50G	0.755		
PMG	23.000	249.2	80.9	276.8	83.2	249.2	4.11E-05	38.0	-140.8	1.10E-04	100G	0.550		
PMG	23.000	316.0	28.8	153.2	54.6	316.0	9.37E-05	42.1	124.9	6.69E-05	150G	0.334		
PMG	23.000	358.5	21.3	238.0	7.8	358.5	4.64E-05	54.5	63.0	7.14E-05	200G	0.357		
PMG	23.000	198.6	43.9	7.0	-10.5	198.6	1.16E-04	-15.8	-136.9	6.77E-05	250G	0.336		
PMG	23.000	201.5	0.0	49.3	83.6	201.5	4.72E-05	-39.8	-148.0	5.34E-05	350G	0.267		
PMG	23.000	302.3	31.3	166.2	-19.7	302.3	8.03E-05	34.3	138.6	5.20E-05	500G	0.260		



Ratio plot is normalized: Intensity
 Locality: E20 Site lat & long= 46.50 -119.50
 9 Demag steps for this sample
 Interval= 49.700 Strike & dip of bedding= 0.0 0.0
 SMW

	Dec	Inc	Diff	vect	Dec	Inc	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	24.000	213.6	-23.5	0.0	0.0	213.6	-23.5	0.0	0.00E-01	-45.6	-170.2	4.53E-04	NRM	1.000		
PMG	24.000	230.5	-47.7	183.5	38.7	230.5	-47.7	183.5	2.12E-04	-47.1	156.6	4.23E-04	50G	0.934		
PMG	24.000	251.7	-59.0	188.1	20.8	251.7	-59.0	188.1	1.23E-04	-39.1	130.6	4.16E-04	100G	0.918		
PMG	24.000	263.6	-63.2	216.5	-20.7	263.6	-63.2	216.5	6.44E-05	-34.4	119.4	3.74E-04	150G	0.826		
PMG	24.000	273.5	-66.0	231.9	-38.0	273.5	-66.0	231.9	5.55E-05	-30.9	111.2	3.28E-04	200G	0.724		
PMG	24.000	282.7	-66.5	239.1	-57.4	282.7	-66.5	239.1	5.74E-05	-26.6	106.3	2.74E-04	250G	0.605		
PMG	24.000	295.3	-67.9	258.7	-59.5	295.3	-67.9	258.7	7.87E-05	-22.2	98.5	1.98E-04	350G	0.437		
PMG	24.000	316.0	-69.3	267.2	-59.7	316.0	-69.3	267.2	6.94E-05	-16.3	86.3	1.32E-04	500G	0.291		
PMG	24.000	324.6	-68.1	295.8	-70.2	324.6	-68.1	295.8	4.28E-05	-12.3	82.3	8.97E-05	700G	0.198		



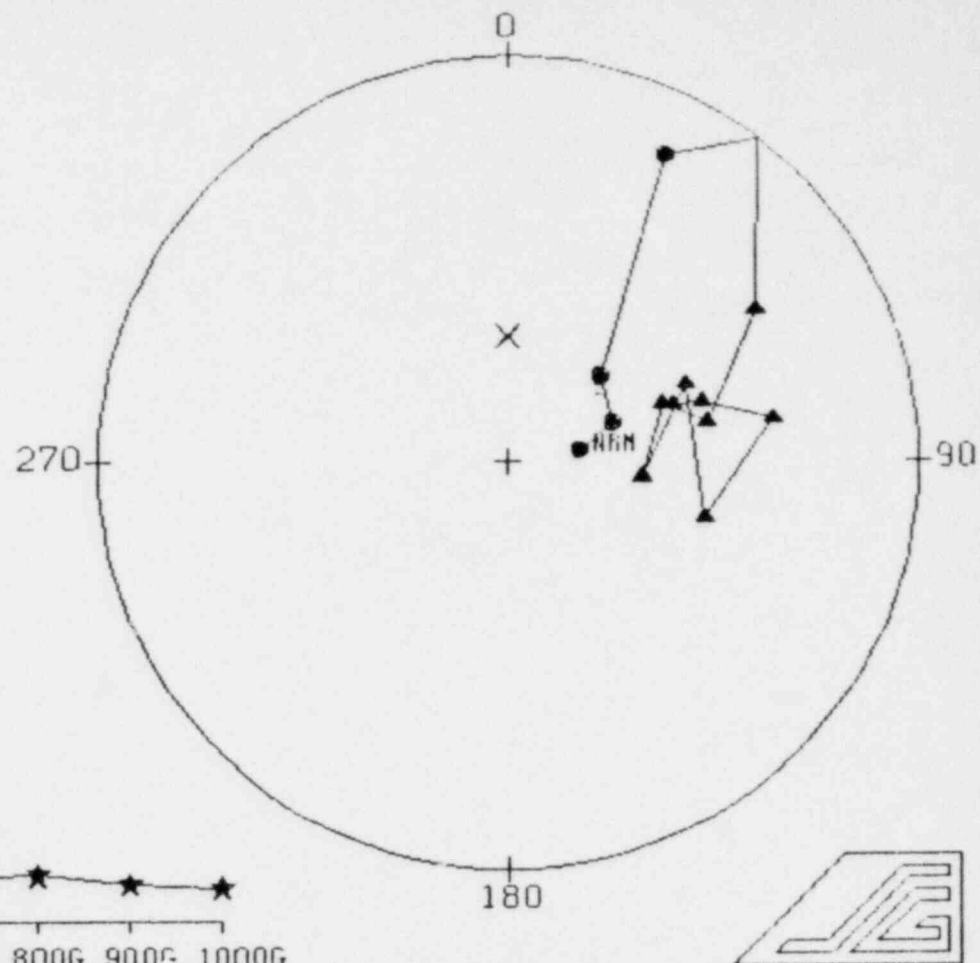
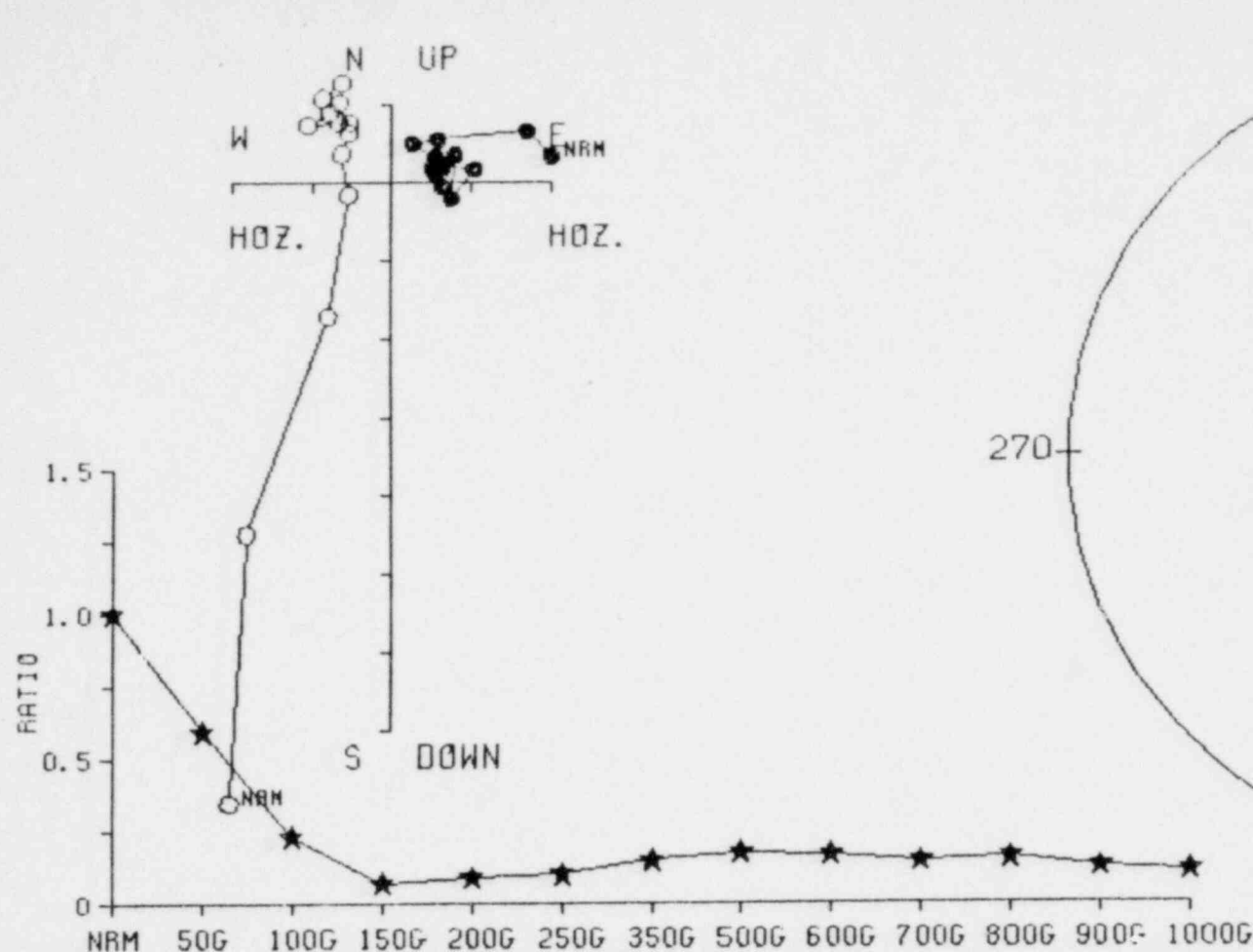
Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: E20 Site lat & long= 46.50 -119.50

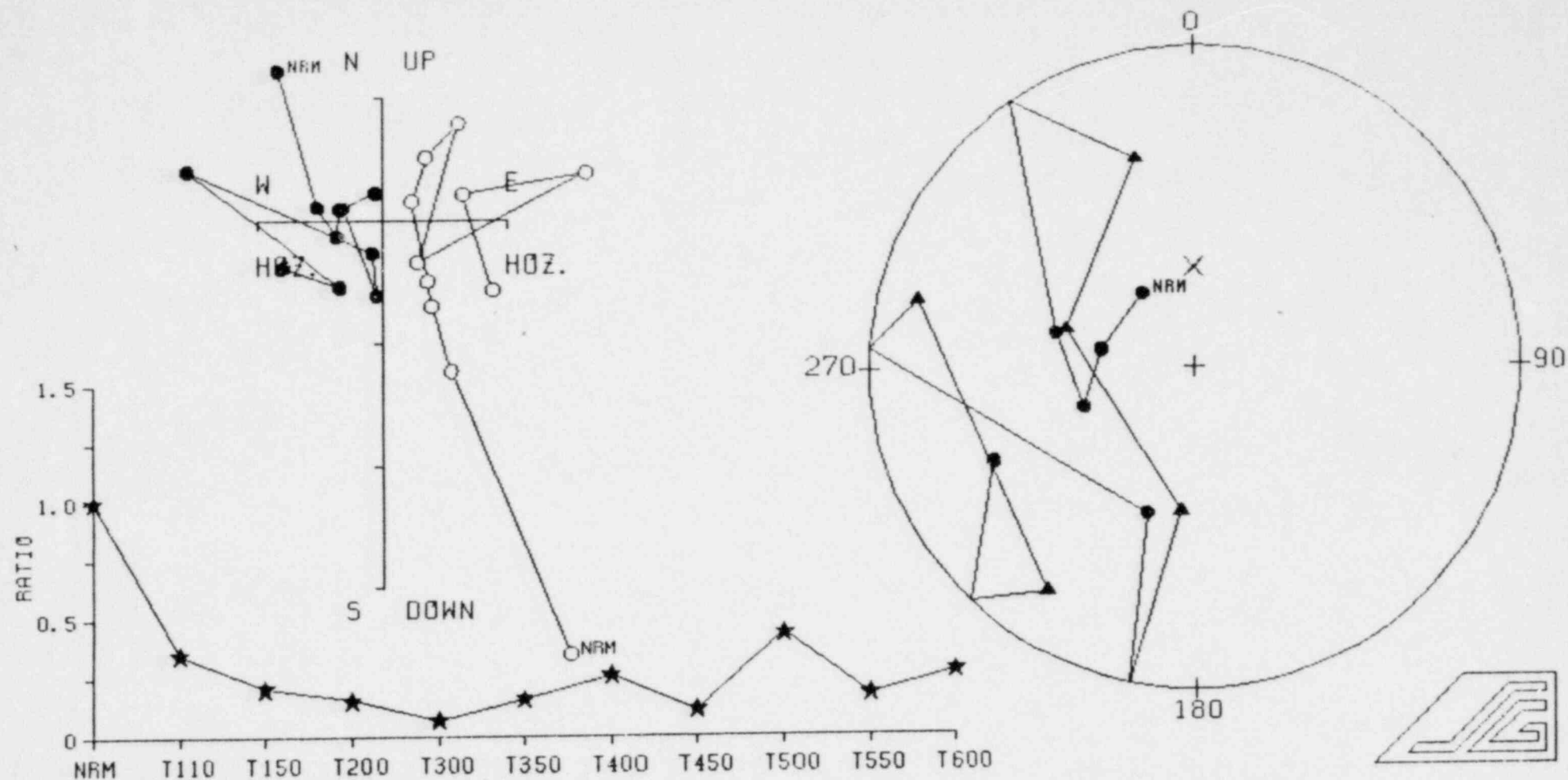
12 Demag steps for this sample.

Interval= 52.100 Strike & dip of bedding= 0.0 0.0

	SM#	Dec G	Inc G	Diff	vect	Dec S	Inc S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	25.000	301.0	59.2	0.0	0.0	301.0	59.2	0.0	0.0	0.00E-01	47.6	163.8	1.37E-04	NRM	1.000		
PMG	25.000	305.6	49.4	199.1	80.3	305.6	49.4	199.1	80.3	3.47E-05	45.3	149.0	1.10E-04	50G	0.803		
PMG	25.000	305.6	43.3	305.6	88.1	305.6	43.3	305.6	88.1	1.66E-05	42.2	143.6	9.76E-05	100G	0.712		
PMG	25.000	306.9	43.6	291.6	38.9	306.9	43.6	291.6	38.9	7.87E-06	43.2	142.9	8.99E-05	150G	0.656		
PMG	25.000	305.9	41.7	344.9	71.0	305.9	41.7	344.9	71.0	5.55E-06	41.6	142.2	8.53E-05	200G	0.623		
PMG	25.000	304.9	43.4	318.7	9.9	304.9	43.4	318.7	9.9	4.74E-06	41.7	144.3	8.14E-05	250G	0.594		
PMG	25.000	310.4	40.8	260.3	51.2	310.4	40.8	260.3	51.2	1.18E-05	44.2	137.7	7.15E-05	350G	0.522		
PMG	25.000	308.4	38.5	327.9	54.5	308.4	38.5	327.9	54.5	9.75E-06	41.7	137.9	6.23E-05	500G	0.455		
PMG	25.000	303.2	42.1	318.9	29.2	303.2	42.1	318.9	29.2	1.88E-05	40.0	144.6	4.42E-05	700G	0.323		
PMG	25.000	320.0	30.0	202.7	39.1	320.0	30.0	202.7	39.1	1.38E-05	45.0	121.5	4.19E-05	800G	0.306		
PMG	25.000	290.7	31.4	6.0	13.7	290.7	31.4	6.0	13.7	1.89E-05	26.4	147.7	3.16E-05	900G	0.231		
PMG	25.000	281.4	36.6	315.7	10.5	281.4	36.6	315.7	10.5	7.87E-06	22.4	157.0	2.52E-05	1000G	0.184		



Ratio plot is normalized: Intensity										Coordinates of vector diagram: Geog.					Coordinates of equal-area plot: Geog.					
Locality: E20 Site lat & long=										46.50 -119.50										
13 Demag steps for this sample.																				
Interval= 54.300 Strike & dip of bedding=										0.0 0.0										
SM#	Dec	G	Inc	G	Diff	vect	Dec	S	Inc	S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	26.000	80.7	75.6	0.0	0.0	0.0	80.7	75.6	0.0	0.0	0.0	0.0	0.00E-01	44.1	-80.7	8.17E-05	NRM	1.000		
PMG	26.000	69.0	68.0	136.7	82.6	69.0	68.0	136.7	82.6	3.44E-05	46.0	-62.0	4.86E-05	50G	0.595					
PMG	26.000	46.1	64.9	85.1	68.1	46.1	64.9	85.1	68.1	3.01E-05	58.8	-47.3	1.89E-05	100G	0.231					
PMG	26.000	26.8	16.6	79.6	77.9	26.8	16.6	79.6	77.9	1.58E-05	45.7	20.9	5.80E-06	150G	0.071					
PMG	26.000	58.1	-30.0	298.3	58.1	58.1	-30.0	298.3	58.1	6.30E-06	8.5	4.9	7.39E-06	200G	0.090					
PMG	26.000	78.4	-49.2	0.9	49.7	78.4	-49.2	0.9	49.7	3.52E-06	-14.1	-0.4	8.43E-06	250G	0.103					
PMG	26.000	68.9	-57.1	211.6	68.8	68.9	-57.1	211.6	68.8	4.14E-06	-14.3	10.8	1.22E-05	350G	0.149					
PMG	26.000	96.6	-63.1	355.5	38.6	96.6	-63.1	355.5	38.6	4.02E-06	-34.5	1.5	1.43E-05	500G	0.175					
PMG	26.000	66.0	-51.0	200.0	-23.1	66.0	-51.0	200.0	-23.1	4.98E-06	-8.2	8.8	1.39E-05	600G	0.170					
PMG	26.000	106.4	-48.6	4.4	-17.9	106.4	-48.6	4.4	-17.9	6.09E-06	-31.8	-18.6	1.19E-05	700G	0.146					
PMG	26.000	80.6	-34.9	216.2	-17.5	80.6	-34.9	216.2	-17.5	5.13E-06	-7.6	-9.5	1.29E-05	800G	0.158					
PMG	26.000	72.4	-49.2	94.0	4.8	72.4	-49.2	94.0	4.8	4.11E-06	-10.5	3.5	1.02E-05	900G	0.125					
PMG	26.000	70.5	-55.0	80.0	-3.7	70.5	-55.0	80.0	-3.7	1.34E-06	-13.6	8.4	9.32E-06	1000G	0.114					



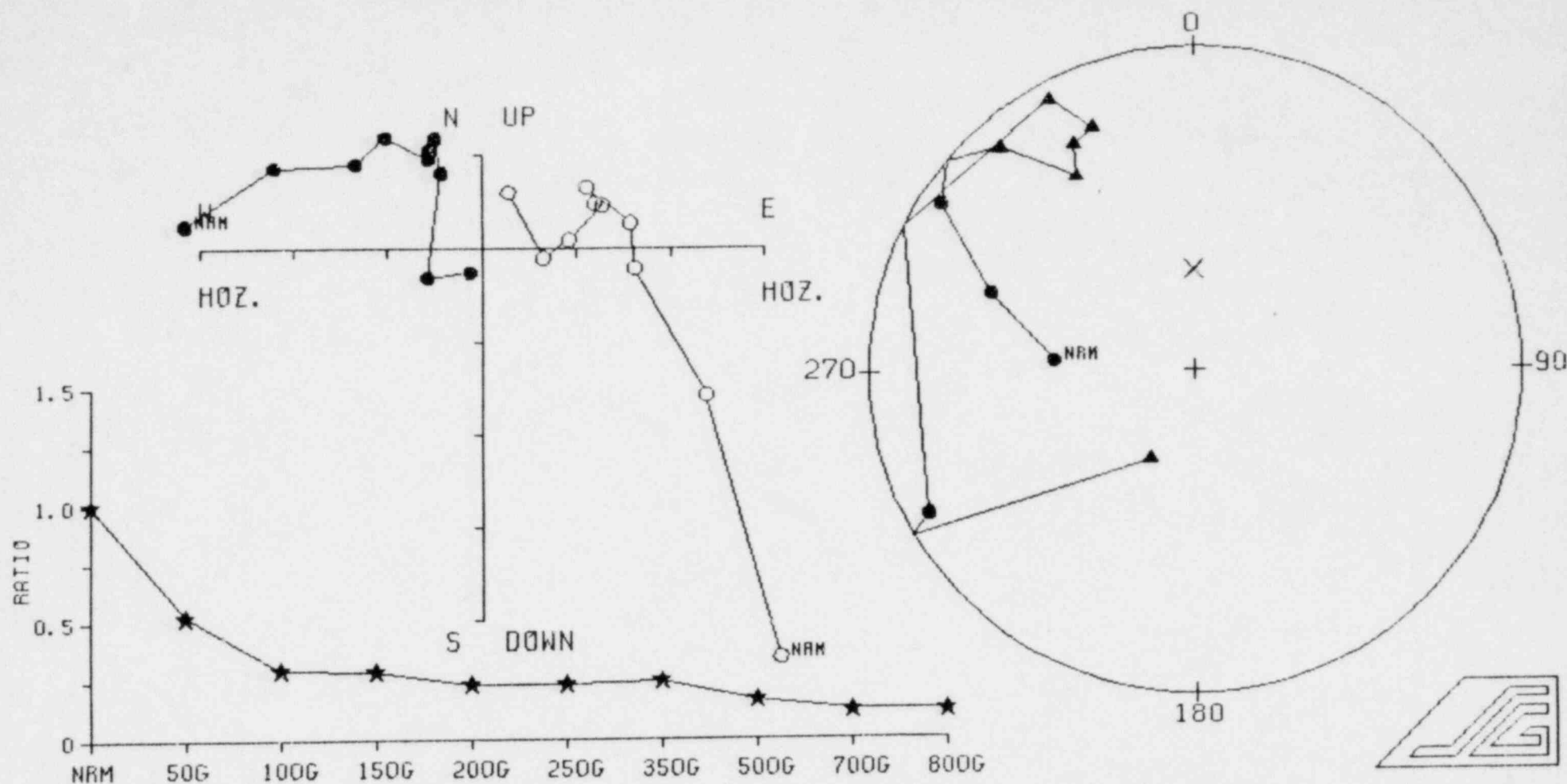
Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: E20 Site lat & long= 46.50 -119.50

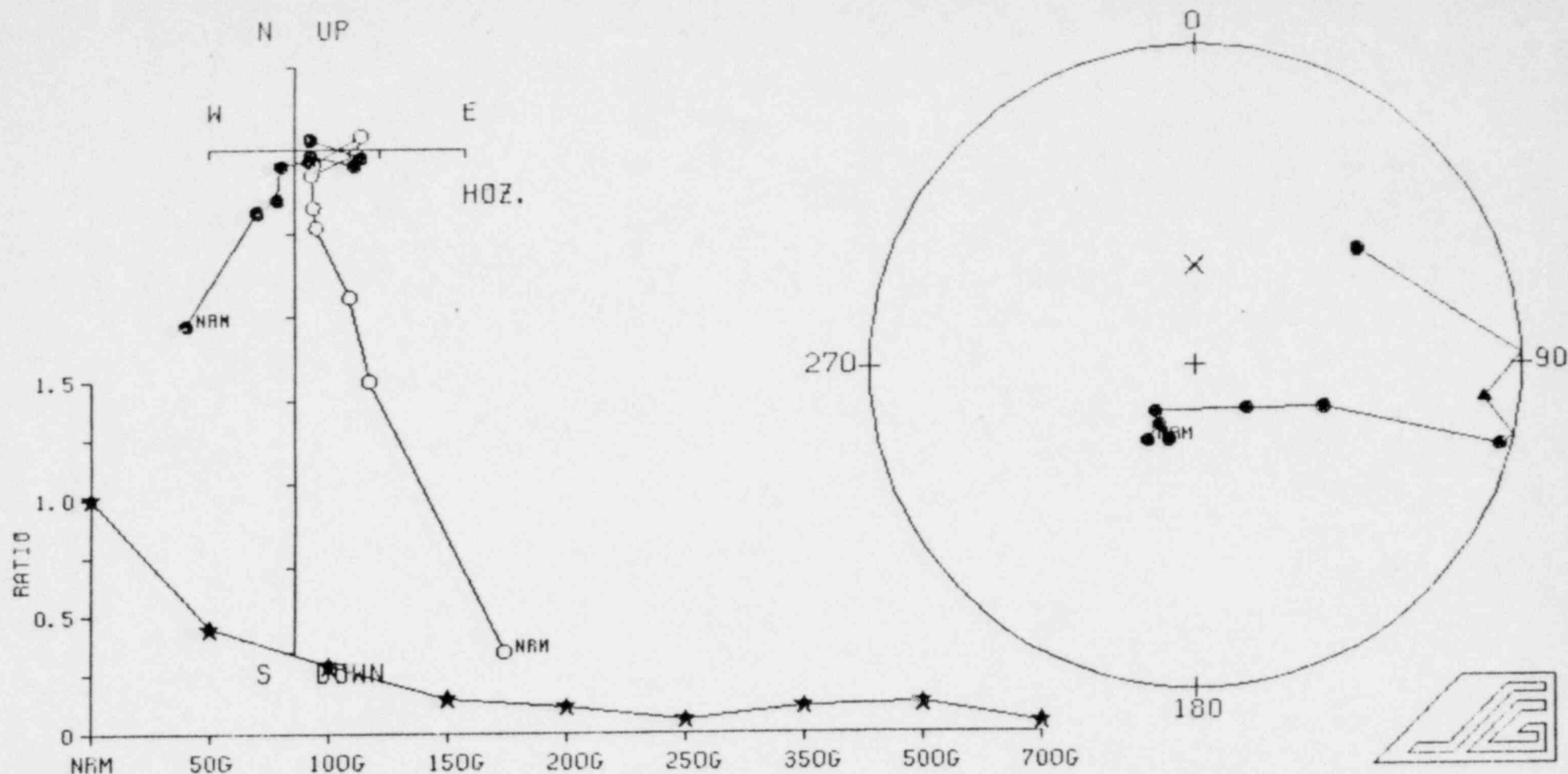
11 Demag steps for this sample.

Interval= 55.300 Strike & dip of bedding= 0.0 0.0

	Dec	C	Inc	S	Diff	vect	Dec	S	Inc	S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	27.000	325.3	67.1	0.0	0.0	0.0	325.3	67.1	0.0	0.0	0.0	0.0	0.00E-01	66.8	171.6	3.84E-05	NRM	1.000		
PMG	27.000	281.2	66.2	344.1	63.2	63.2	281.2	66.2	344.1	63.2	63.2	63.2	2.59E-05	39.3	-176.4	1.34E-05	T110	0.349		
PMG	27.000	250.3	60.5	325.6	61.8	61.8	250.3	60.5	325.6	61.8	61.8	61.8	6.07E-06	17.9	-167.3	7.94E-06	T150	0.207		
PMG	27.000	284.5	53.7	185.8	42.7	42.7	284.5	53.7	185.8	42.7	42.7	42.7	3.02E-06	33.4	167.0	6.03E-06	T200	0.157		
PMG	27.000	344.4	-33.2	245.0	63.8	63.8	344.4	-33.2	245.0	63.8	63.8	63.8	7.09E-06	23.9	76.7	2.75E-06	T300	0.072		
PMG	27.000	287.3	-56.1	65.5	50.9	50.9	287.3	-56.1	65.5	50.9	50.9	50.9	4.60E-06	-15.6	113.2	6.12E-06	T350	0.159		
PMG	27.000	185.4	-52.7	339.0	20.7	20.7	185.4	-52.7	339.0	20.7	20.7	20.7	8.04E-06	-76.1	-138.8	9.96E-06	T400	0.259		
PMG	27.000	198.0	50.3	175.0	-73.3	-73.3	198.0	50.3	175.0	-73.3	-73.3	-73.3	1.18E-05	-10.7	-135.1	4.36E-06	T450	0.114		
PMG	27.000	284.5	-13.1	114.3	23.6	23.6	284.5	-13.1	114.3	23.6	23.6	23.6	1.78E-05	5.0	135.4	1.67E-05	T500	0.435		
PMG	27.000	213.2	-18.2	307.5	-6.3	-6.3	213.2	-18.2	307.5	-6.3	-6.3	-6.3	1.55E-05	-43.3	-167.4	6.70E-06	T550	0.174		
PMG	27.000	245.0	32.6	110.0	-58.4	-58.4	245.0	32.6	110.0	-58.4	-58.4	-58.4	9.04E-06	-3.2	-179.3	1.04E-05	T600	0.271		



Ratio plot is normalized: Intensity.										Coordinates of vector diagram: Geog.			Coordinates of equal-area plot: Geog.							
Locality: E20 Site lat & long=										46.50 -119.50										
10 Demag steps for this sample.																				
Interval= 56.800 Strike & dip of bedding=										0.0 0.0										
SM#	Dec	G	Inc	S	Diff	vect	Dec	S	Inc	S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	28.000	274.5	54.3	0.0	0.0	0.0	274.5	54.3	0.0	0.0	0.0	0.0	0.00E-01	27.3	173.4	5.43E-05	NRM	1.000		
PMG	28.000	291.5	33.6	236.8	68.2	291.5	33.6	236.8	68.2	3.05E-05	27.9	148.2	2.85E-05	50G	0.525					
PMG	28.000	304.0	7.4	267.8	57.6	304.0	7.4	267.8	57.6	1.62E-05	25.5	126.9	1.63E-05	100G	0.300					
PMG	28.000	319.3	-9.8	226.9	48.5	319.3	-9.8	226.9	48.5	6.44E-06	27.2	107.5	1.60E-05	150G	0.295					
PMG	28.000	329.1	-30.5	297.8	36.5	329.1	-30.5	297.8	36.5	6.43E-06	21.2	92.4	1.29E-05	200G	0.238					
PMG	28.000	332.2	-22.0	187.1	-58.5	332.2	-22.0	187.1	-58.5	2.01E-06	26.9	91.3	1.29E-05	250G	0.238					
PMG	28.000	337.4	-19.9	208.4	-8.3	337.4	-19.9	208.4	-8.3	1.41E-06	29.8	86.3	1.36E-05	350G	0.250					
PMG	28.000	332.1	-5.9	350.4	-44.4	332.1	-5.9	350.4	-44.4	5.26E-06	34.7	95.2	9.21E-06	500G	0.170					
PMG	28.000	242.0	8.4	7.5	-9.6	242.0	8.4	7.5	-9.6	1.14E-05	-15.6	174.4	6.60E-06	700G	0.122					
PMG	28.000	206.3	-64.9	263.0	56.8	206.3	-64.9	263.0	56.8	8.31E-06	-72.1	139.5	6.61E-06	800G	0.122					



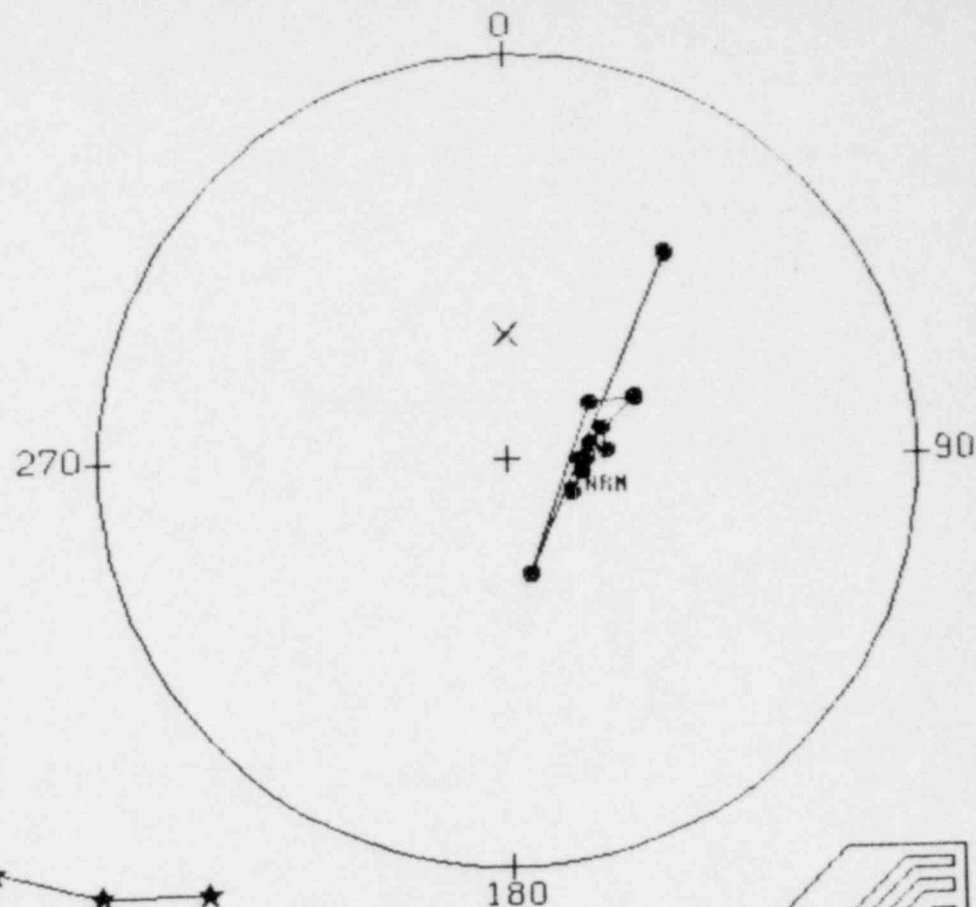
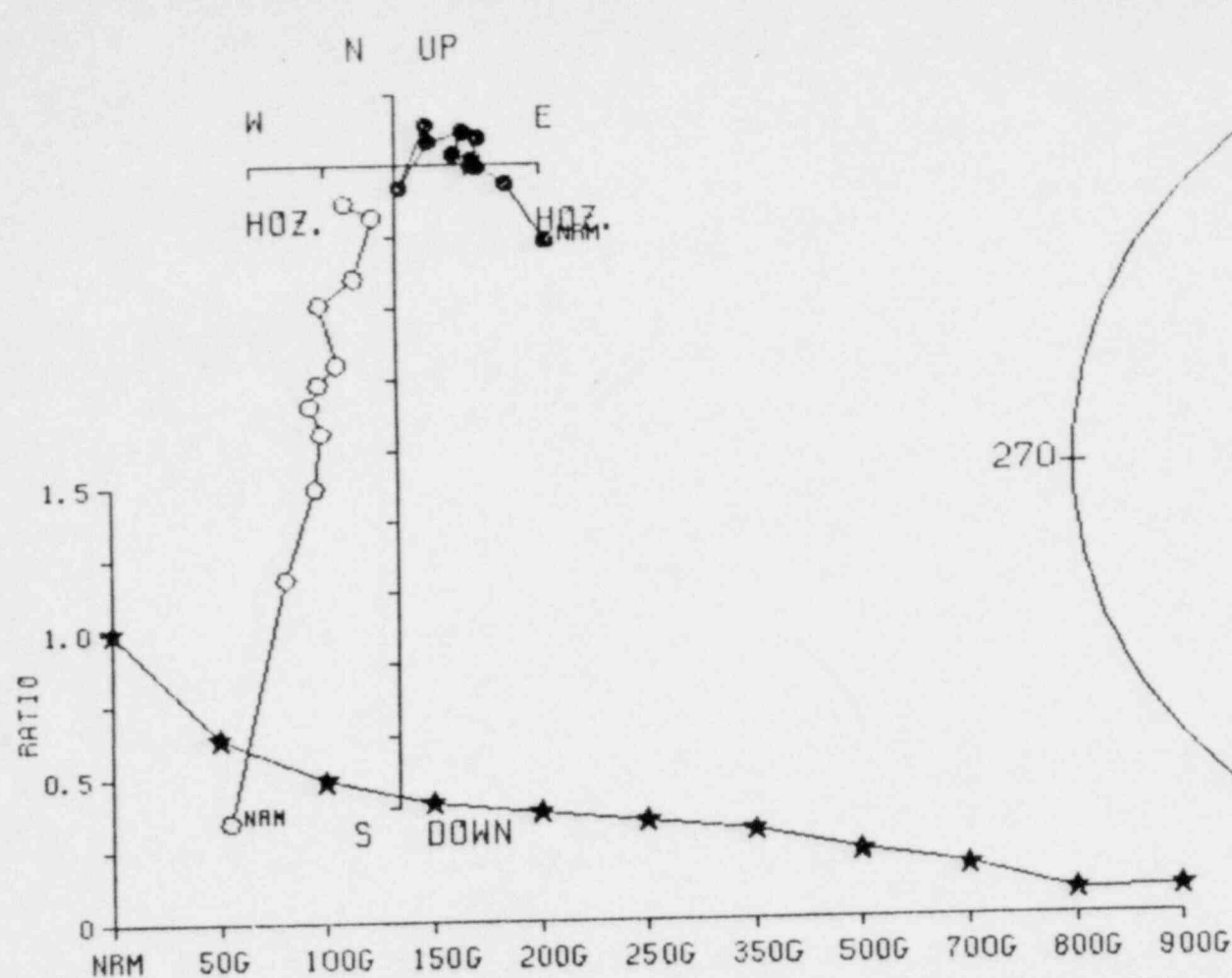
Ratio plot is normalized. Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: E20 Site lat & long= 46.50 -119.50

9 Demag steps for this sample.

Interval= 61.700 Strike & dip of bedding= 0.0 0.0

	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	29.000	211.5	67.7	0.0	211.5	67.7	0.00E-01	10.9	-139.2	6.49E-05	NRM	1.000		
PMG	29.000	210.1	72.6	212.3	210.1	72.6	3.60E-05	17.4	-135.7	2.91E-05	50G	0.448		
PMG	29.000	199.1	70.1	236.9	199.1	70.1	1.04E-05	11.8	-130.8	1.88E-05	100G	0.290		
PMG	29.000	220.1	74.9	186.5	220.1	74.9	9.32E-06	22.9	-138.9	9.67E-06	150G	0.149		
PMG	29.000	129.8	73.0	259.8	129.8	73.0	4.11E-06	22.9	-93.7	7.18E-06	200G	0.111		
PMG	29.000	108.2	55.7	203.5	108.2	55.7	3.98E-06	14.8	-67.1	3.59E-06	250G	0.055		
PMG	29.000	105.0	3.6	283.8	105.0	3.6	5.79E-06	-8.9	-41.7	7.25E-06	350G	0.112		
PMG	29.000	96.8	-11.8	220.5	96.8	-11.8	2.44E-06	-9.0	-30.3	8.02E-06	500G	0.124		
PMG	29.000	54.0	38.7	109.9	54.0	38.7	7.27E-06	40.2	-19.0	2.75E-06	700G	0.042		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

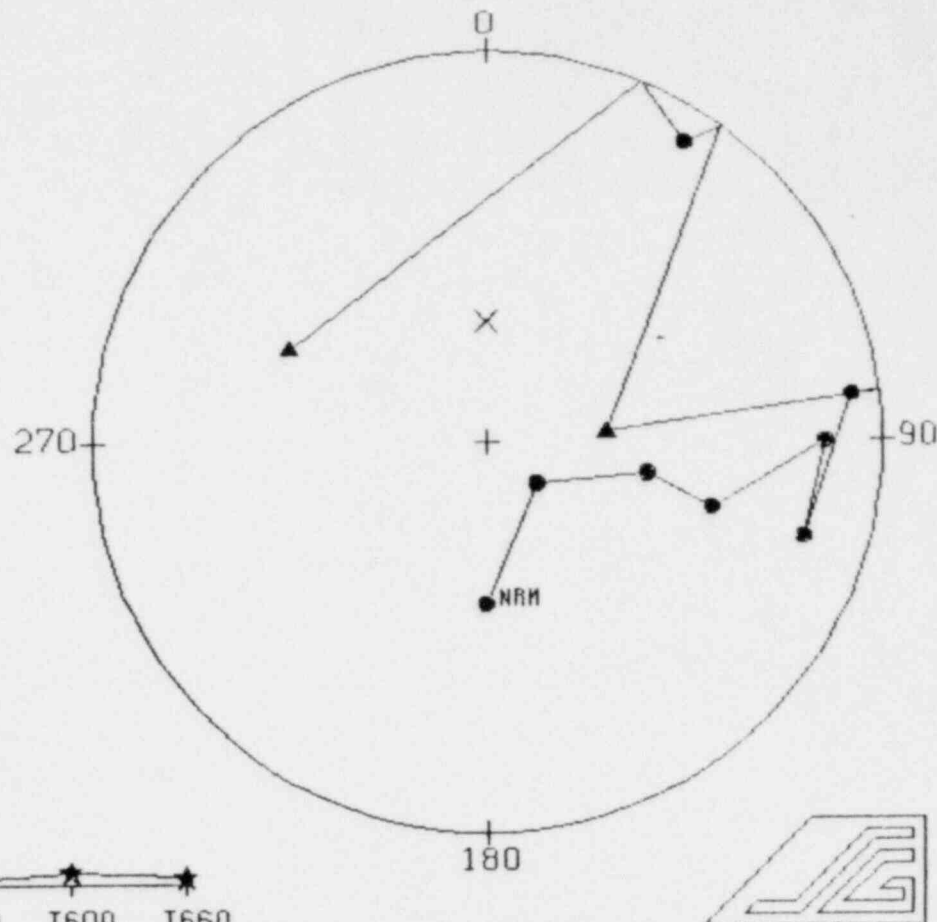
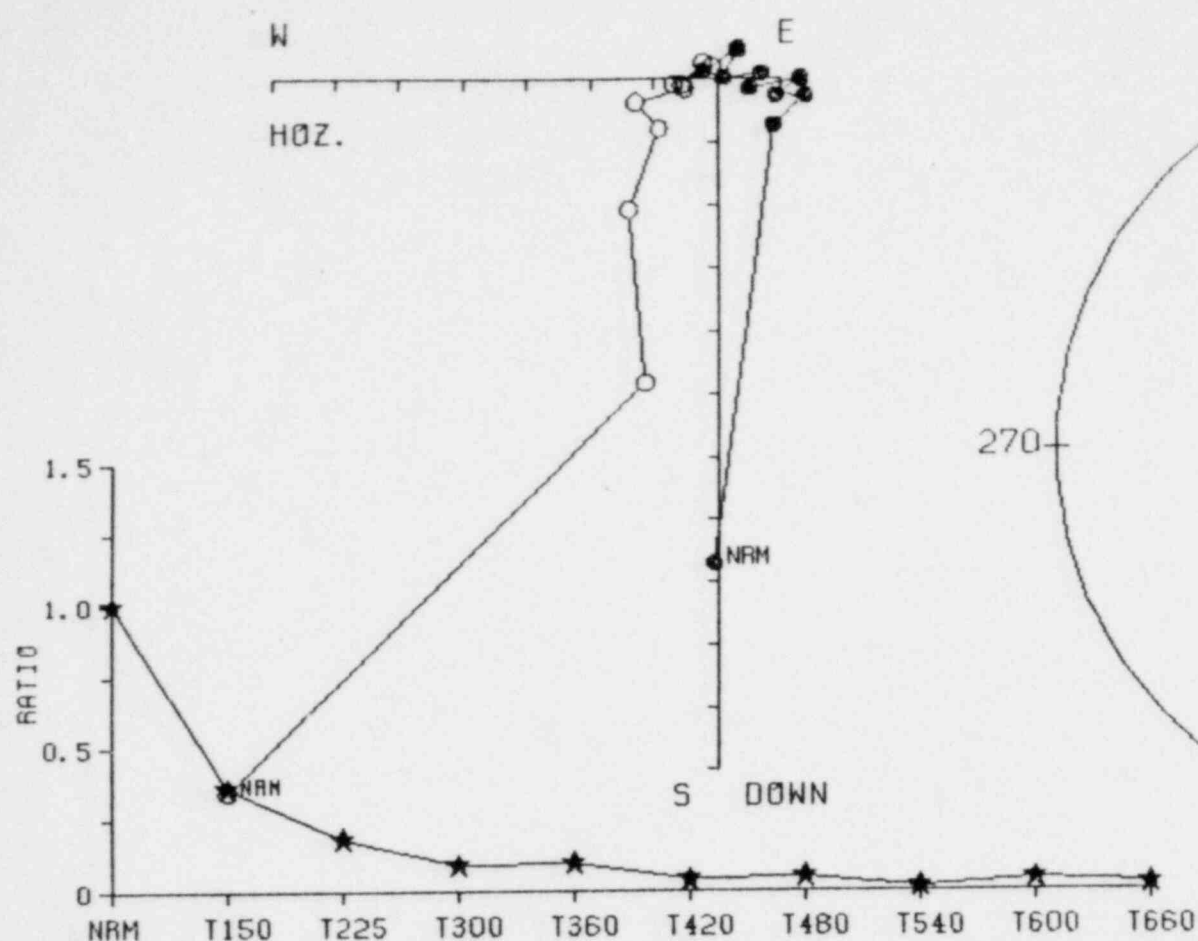
Locality: E20 Site lat & long= 46.50 -119.50

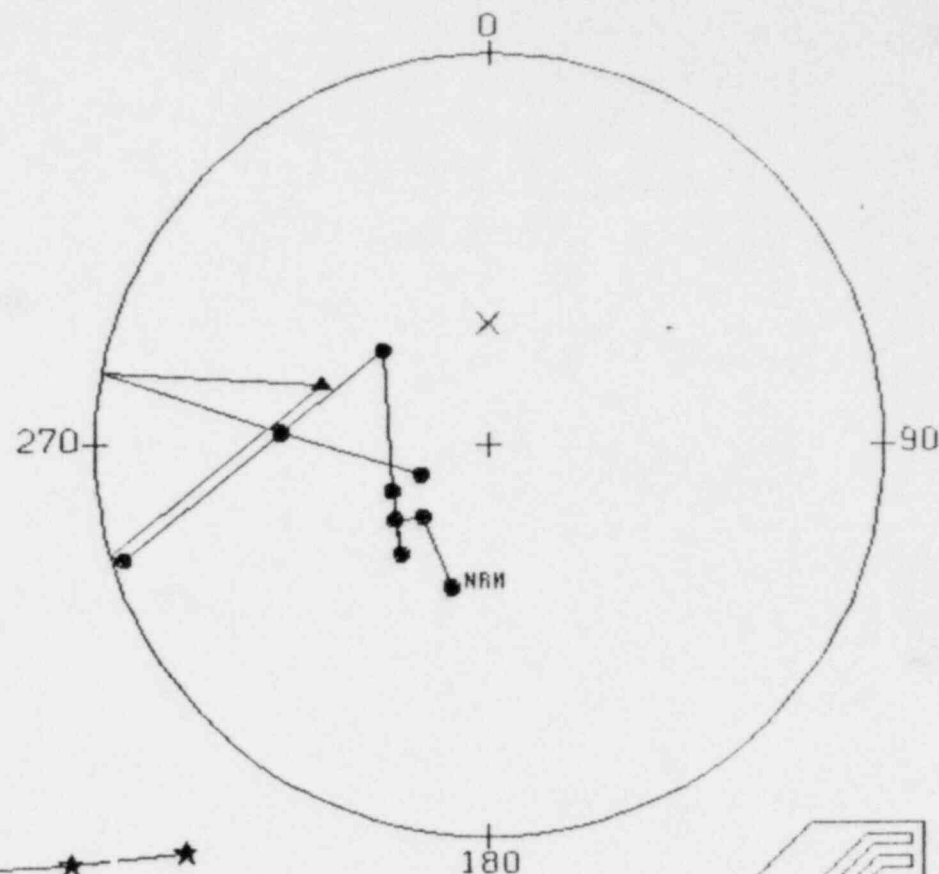
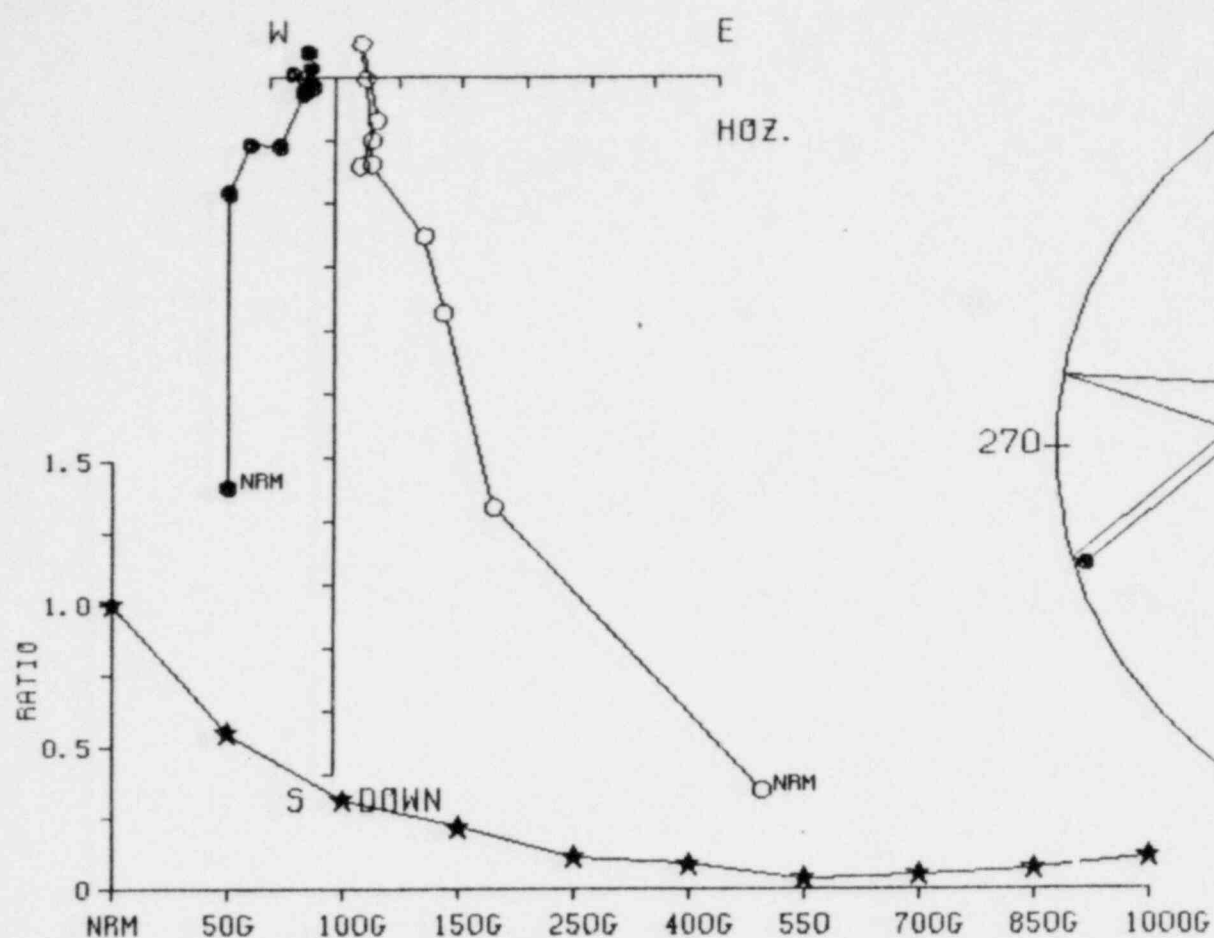
11 Demag steps for this sample.

Interval= 63.100 Strike & dip of bedding= 0.0 0.0

	Dec	G	Inc	G	Diff	vect	Dec	S	Inc	S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMG	30.000	116.9	75.7	0.0	0.0	0.0	116.9	75.7	0.0	0.0	0.0	0.0	0.00E-01	30.4	-91.6	9.49E-05	NRM	1.000		
PMG	30.000	99.4	74.9	145.9	74.0	74.0	99.4	74.9	145.9	74.0	74.0	3.53E-05	35.8	-84.2	6.01E-05	50G	0.633			
PMG	30.000	91.4	75.7	120.0	70.5	70.5	91.4	75.7	120.0	70.5	70.5	1.36E-05	39.7	-83.4	4.66E-05	100G	0.491			
PMG	30.000	90.0	74.3	106.4	82.6	82.6	90.0	74.3	106.4	82.6	82.6	7.68E-06	39.2	-80.2	3.90E-05	150G	0.411			
PMG	30.000	71.7	70.3	193.0	45.4	45.4	71.7	70.3	193.0	45.4	45.4	5.52E-06	45.7	-67.2	3.57E-05	200G	0.376			
PMG	30.000	85.3	70.4	11.6	46.3	46.3	85.3	70.4	11.6	46.3	46.3	4.27E-06	38.6	-71.8	3.24E-05	250G	0.341			
PMG	30.000	79.7	73.3	102.8	45.5	45.5	79.7	73.3	102.8	45.5	45.5	3.85E-06	43.3	-75.4	2.90E-05	350G	0.306			
PMG	30.000	64.0	61.6	202.4	67.6	67.6	64.0	61.6	202.4	67.6	67.6	8.92E-06	45.6	-49.0	2.22E-05	500G	0.234			
PMG	30.000	55.6	70.1	73.8	36.4	36.4	55.6	70.1	73.8	36.4	36.4	6.13E-06	54.7	-62.8	1.69E-05	700G	0.178			
PMG	30.000	169.5	66.5	33.0	48.1	48.1	169.5	66.5	33.0	48.1	48.1	1.14E-05	6.0	-112.6	8.04E-06	800G	0.085			
PMG	30.000	37.4	36.5	203.0	12.6	12.6	37.4	36.5	203.0	12.6	12.6	9.77E-06	49.9	-1.6	8.82E-06	900G	0.093			

RESAMPLES OF
DECEMBER 15, 1981





Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

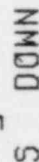
Locality: E20 Site lat & long= 46.50 -119.50

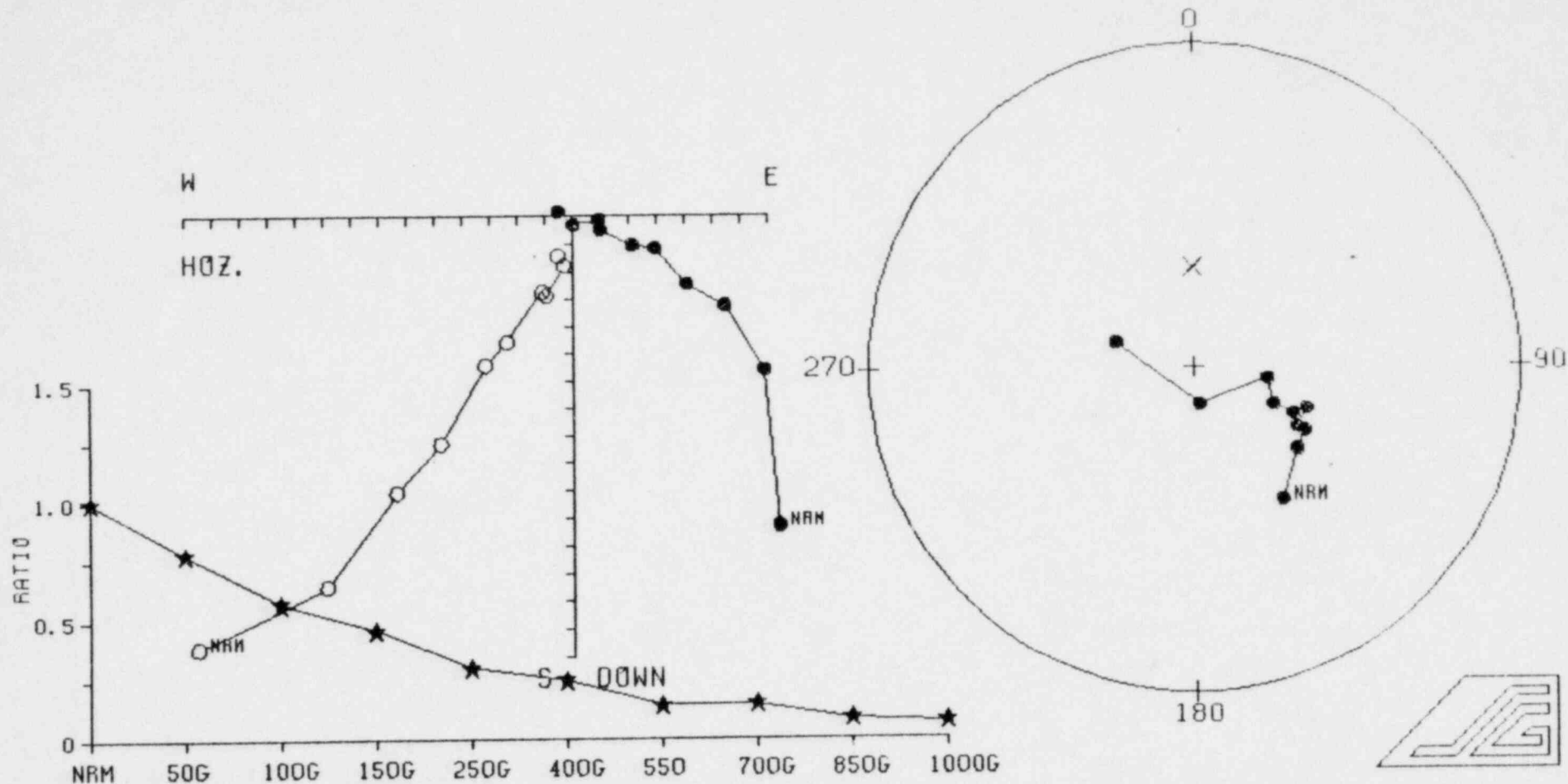
10 Demag steps for this sample.

Interval= 38.800 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.576 AT NRM

SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
MG	14.600	194.3	59.3	0.0	0.0	0.0	0.00E-01	-2.5	-130.4	1.31E-04	NRM	1.000	4.55E-04	1.000
MG	14.600	221.9	69.9	179.9	44.1	221.9	6.45E-05	16.4	-143.8	7.22E-05	50G	0.551		
MG	14.600	231.1	65.3	202.8	74.7	231.1	3.17E-05	13.9	-152.4	4.10E-05	100G	0.313		
MG	14.600	218.4	61.0	272.3	68.9	218.4	1.29E-05	4.8	-147.1	2.88E-05	150G	0.220		
MG	14.600	244.0	67.8	202.9	50.9	244.0	1.46E-05	21.8	-157.3	1.50E-05	250G	0.115		
MG	14.600	311.9	60.4	187.9	31.5	311.9	7.44E-06	55.5	-159.8	1.15E-05	400G	0.088		
MG	14.600	252.3	3.2	3.9	61.6	252.3	1.11E-05	-10.9	164.6	4.82E-06	550	0.037		
MG	14.600	289.8	-52.8	195.3	62.3	289.8	6.33E-06	-11.8	113.9	6.70E-06	700G	0.051		
MG	14.600	273.4	46.0	70.5	-76.4	273.4	1.25E-05	21.7	168.0	9.49E-06	850G	0.072		
MG	14.600	246.3	74.7	302.8	-63.9	246.3	8.19E-06	30.2	-150.1	1.47E-05	1000G	0.112		

Coordinates of equal-area plot: Geog.



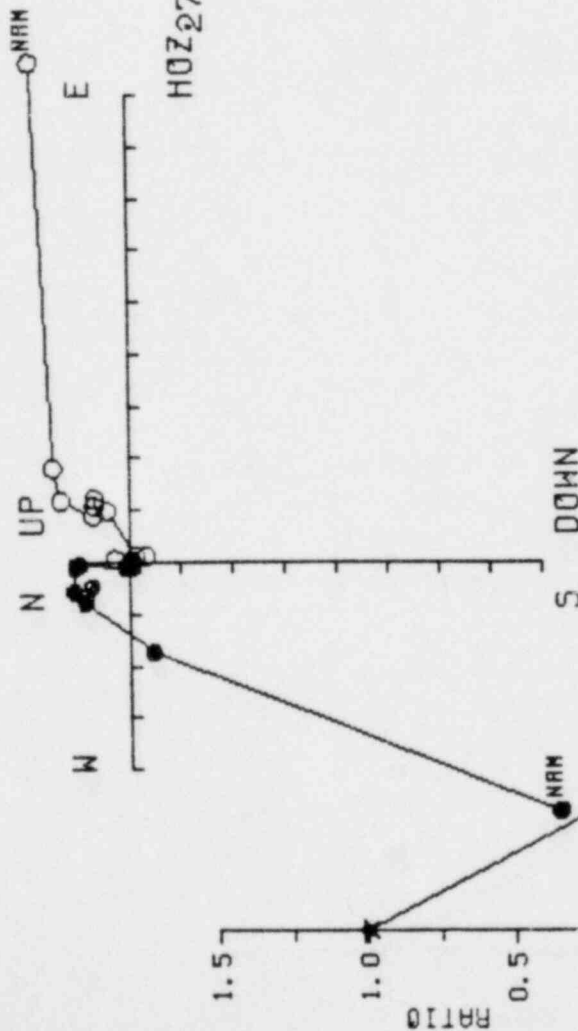
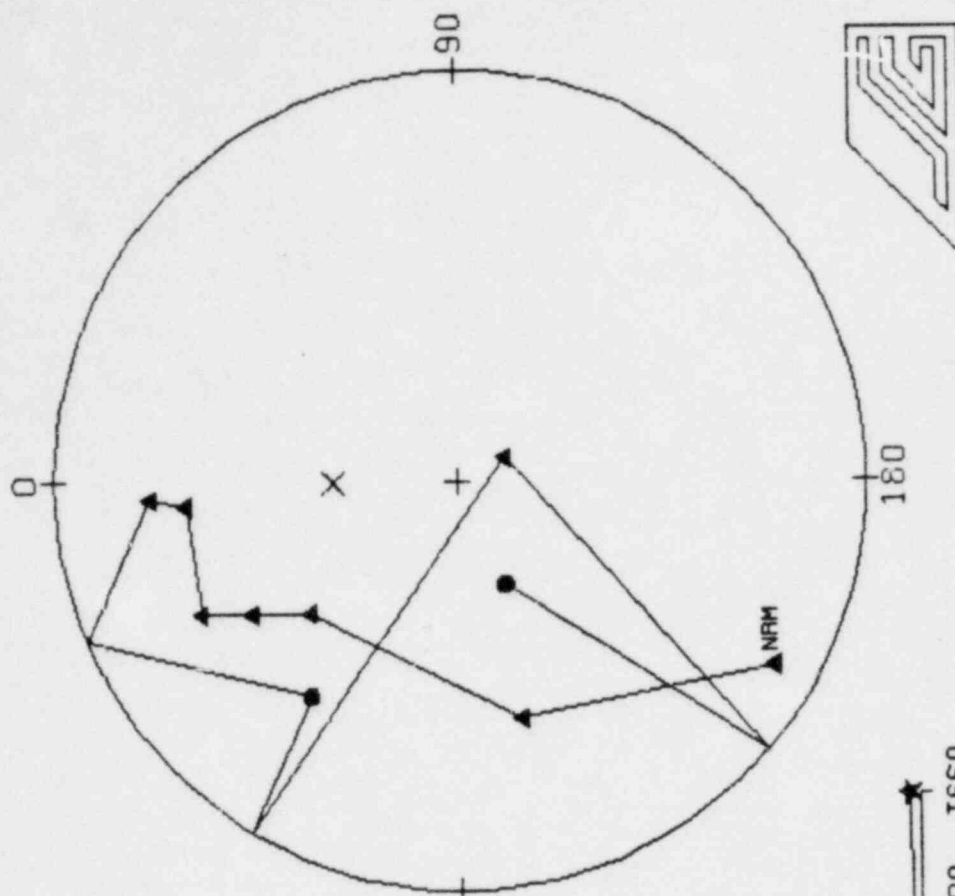
Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog.

Locality: E20 Site lat & long= 46.50 -119.50

10 Demag steps for this sample. Strike & dip of bedding= 0.0 0.0

Interval= 39.700 Koenigsberger ratio = 1.489 AT NRM

	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
MG	15.100	146.6	49.2	0.0	0.0	0.0	0.00E-01	-7.7	-90.7	2.07E-04	NRM	1.000	2.78E-04	1.000
MG	15.100	129.1	56.6	174.3	21.3	129.1	6.15E-05	5.3	-81.1	1.61E-04	50G	0.778		
MG	15.100	120.8	57.7	148.8	51.1	120.8	4.35E-05	10.0	-76.3	1.19E-04	100G	0.575		
MG	15.100	120.9	60.0	120.5	48.4	120.9	2.37E-05	11.9	-78.0	9.57E-05	150G	0.462		
MG	15.100	111.1	59.8	138.6	58.5	111.1	3.37E-05	16.5	-71.9	6.27E-05	250G	0.303		
MG	15.100	115.8	62.4	96.9	46.8	115.8	1.16E-05	16.5	-76.7	5.16E-05	400G	0.249		
MG	15.100	116.0	68.0	115.6	55.0	116.0	2.23E-05	22.0	-82.0	2.96E-05	550	0.143		
MG	15.100	98.9	71.4	173.4	-22.0	98.9	3.65E-06	32.8	-78.5	3.04E-05	700G	0.147		
MG	15.100	171.3	80.4	81.2	50.9	171.3	1.46E-05	27.9	-116.4	1.77E-05	850G	0.086		
MG	15.100	288.2	69.6	130.1	25.6	288.2	7.84E-06	45.3	-173.2	1.50E-05	1000G	0.072		



Coordinates of equal-area plot: Geog.

Coordinates of vector diagram: Geog.

Ratio plot is normalized. Site lat & long = 46.50 -119.50

Locality: E20

IO Demag steps for this sample

Interval = 40200 Strike & dip of bedding = 0.0 0.0

Koenigsberger ratio = 0.602 At NRM

Dec = 210.0 Inc = -11.4

255.0 Dec = -40.1 Inc = -49.6

319.0 Dec = -39.2 Inc = -39.2

333.0 Dec = -32.8 Inc = -32.8

354.0 Dec = -36.0 Inc = -36.0

366.0 Dec = -31.2 Inc = -31.2

379.0 Dec = -24.5 Inc = -24.5

393.0 Dec = -15.6 Inc = -15.6

407.0 Dec = -6.7 Inc = -6.7

421.0 Dec = 0.0 Inc = 0.0

435.0 Dec = 0.0 Inc = 0.0

449.0 Dec = 0.0 Inc = 0.0

463.0 Dec = 0.0 Inc = 0.0

477.0 Dec = 0.0 Inc = 0.0

491.0 Dec = 0.0 Inc = 0.0

CH1 3 26E-04 1.000

JH/JO 1.000

0.239

0.183

0.116

0.145

0.131

0.111

0.030

0.035

demag

NRM

T150

T125

T100

T75

T50

T25

T0

Intensity

9.82E-03

2.35E-03

1.80E-03

1.14E-03

1.42E-03

1.29E-03

1.09E-03

1.71E-04

3.42E-04

V long

-161.3

144.3

95.1

91.2

88.7

65.3

64.2

138.7

-158.2

V lat

-41.7

-26.4

4.6

13.3

23.3

30.3

38.4

-53.2

-22.1

JDiff

0.00E-01

8.47E-03

1.66E-03

7.27E-04

3.63E-04

2.63E-04

1.07E-05

4.57E-06

6.27E-06

Diff vect

0.0

-2.9

-4.9

-63.3

-4.0

0.9

-67.8

-31.4

-76.6

Inc S

-11.4

-40.1

-39.2

-32.8

-36.0

-31.2

-24.5

-15.6

-6.7

Dec S

210.0

255.0

319.0

333.0

354.0

366.0

379.0

393.0

407.0

Diff vect

0.0

201.3

216.0

229.4

166.0

273.1

336.3

312.9

87.6

Inc S

-11.4

-40.1

-39.2

-32.8

-36.0

-31.2

-24.5

-15.6

-6.7

Dec S

210.0

255.0

319.0

333.0

354.0

366.0

379.0

393.0

407.0

Diff vect

0.0

-2.9

-4.9

-63.3

-4.0

0.9

-67.8

-31.4

-76.6

Inc S

-11.4

-40.1

-39.2

-32.8

-36.0

-31.2

-24.5

-15.6

-6.7

Dec S

210.0

255.0

319.0

333.0

354.0

366.0

379.0

393.0

407.0

Diff vect

0.0

201.3

216.0

229.4

166.0

273.1

336.3

312.9

87.6

Inc S

-11.4

-40.1

-39.2

-32.8

-36.0

-31.2

-24.5

-15.6

-6.7

Dec S

210.0

255.0

319.0

333.0

354.0

366.0

379.0

393.0

407.0

Diff vect

0.0

201.3

216.0

229.4

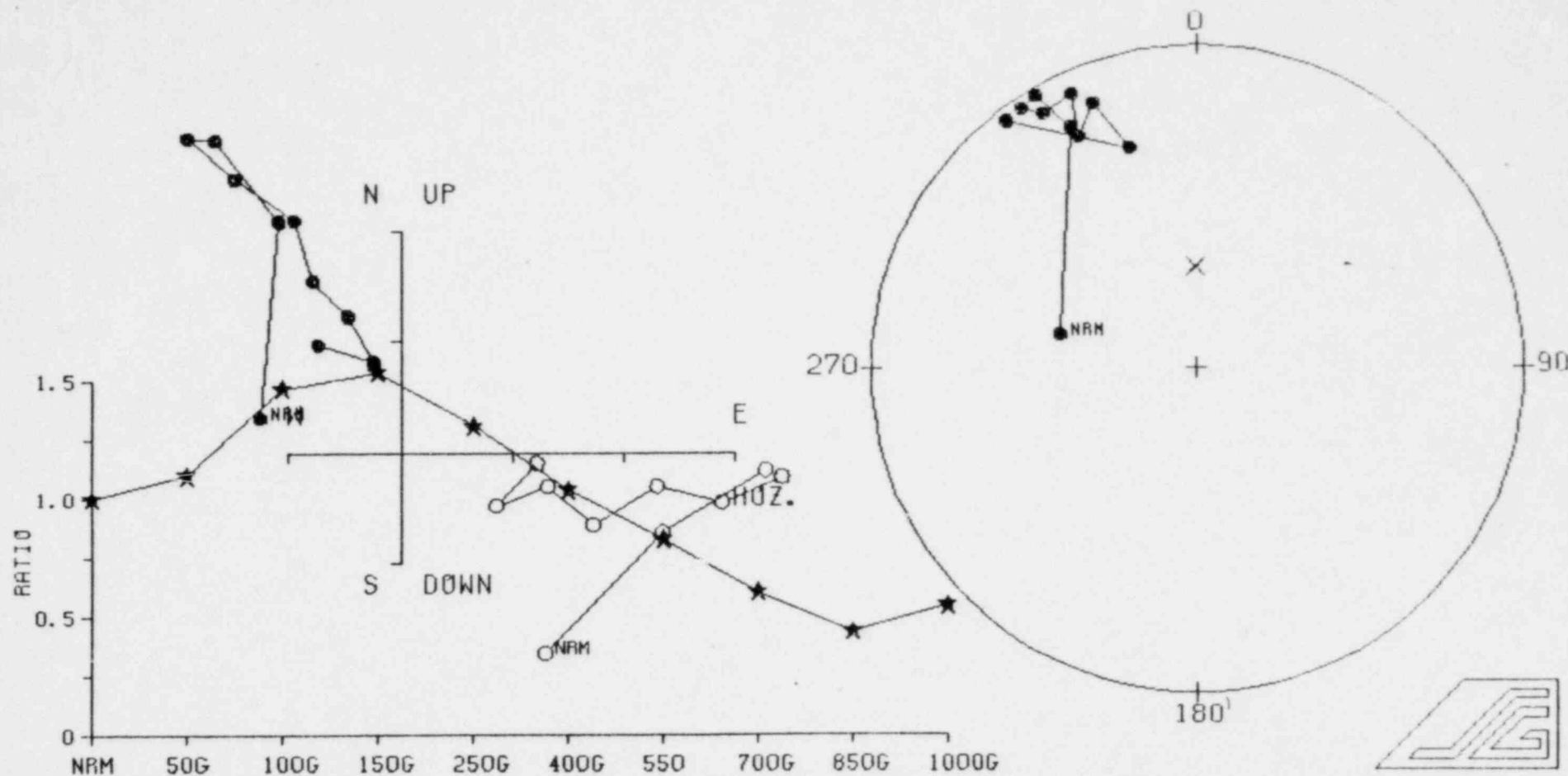
166.0

273.1

336.3

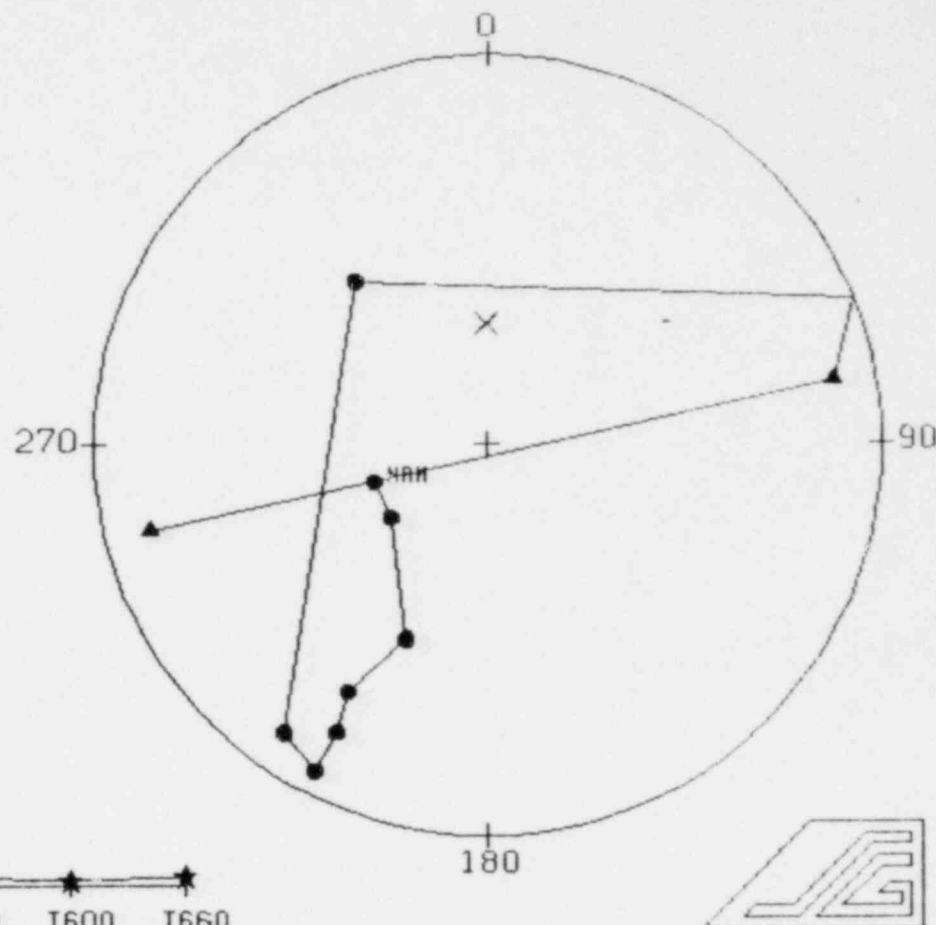
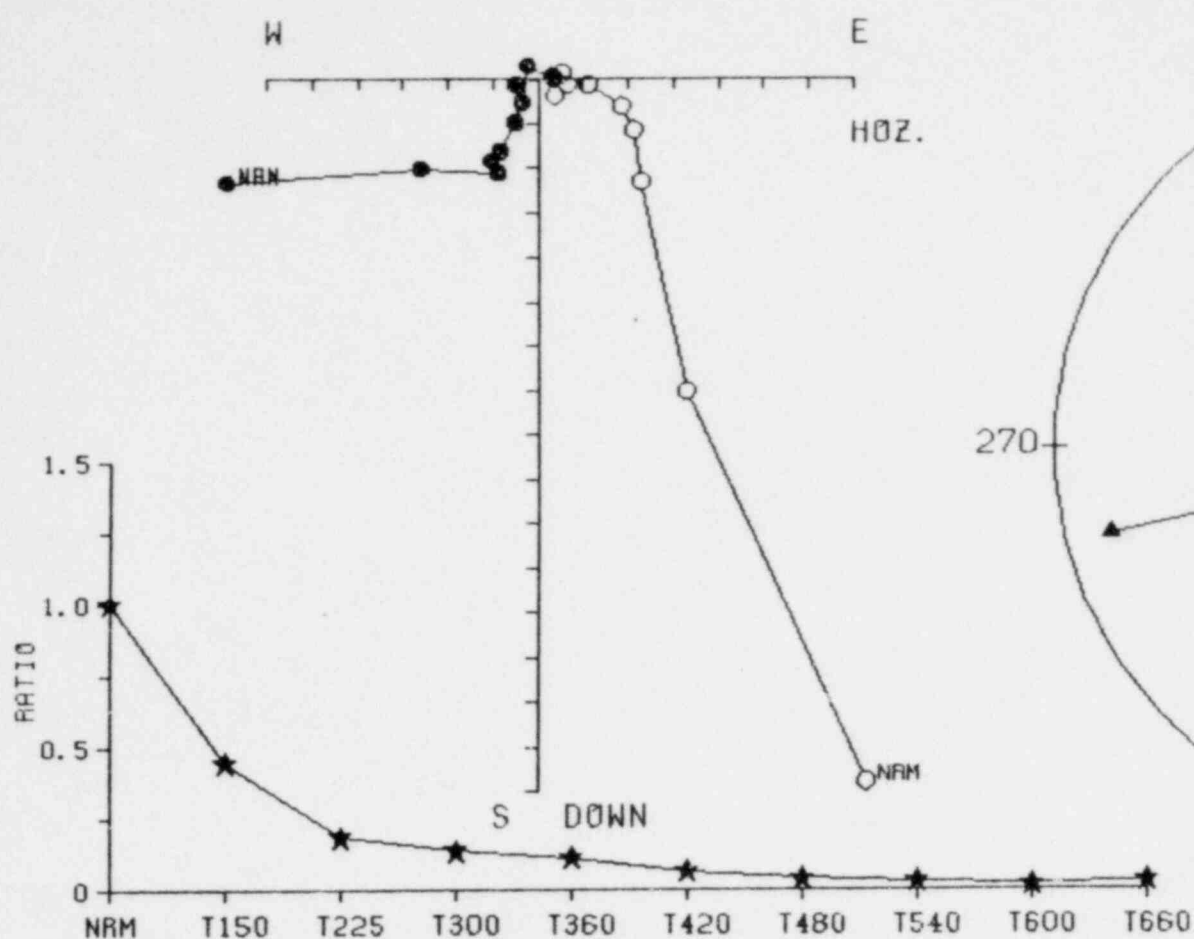
312.9

87.6

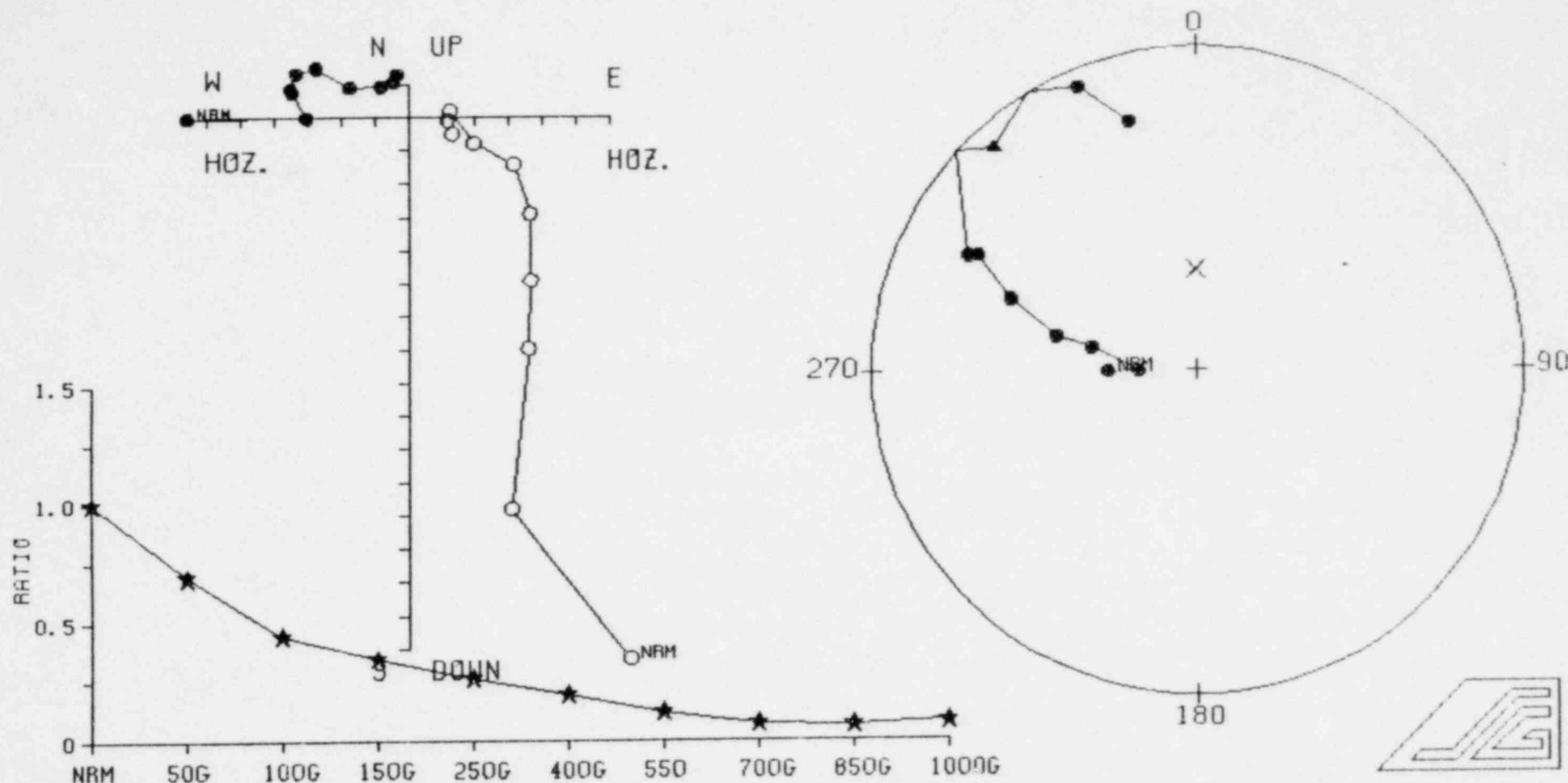


Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.
 Locality: E20 Site lat & long= 46.50 -119.50
 10 Demag steps for this sample.
 Interval= 46.900 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 0.132 AT NRM

SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
MG	21.500	283.8	54.5	0.0	0.0	0.0	0.00E-01	33.4	168.2	2.23E-05	NRM	1.000	3.38E-04	1.000
MG	21.500	332.4	17.2	185.4	31.4	332.4	2.09E-03	45.6	101.3	2.46E-05	50G	1.103		
MG	21.500	329.5	2.8	142.1	31.5	329.5	1.09E-03	37.6	100.3	3.27E-05	100G	1.466		
MG	21.500	326.0	3.7	95.2	-13.5	326.0	2.65E-06	36.4	104.6	3.43E-05	150G	1.538		
MG	21.500	328.8	9.0	311.4	-22.8	328.8	6.08E-06	40.1	103.0	2.92E-05	250G	1.309		
MG	21.500	335.4	7.6	305.0	12.9	335.4	6.72E-06	42.3	94.6	2.32E-05	400G	1.040		
MG	21.500	332.9	20.8	342.9	-31.3	332.9	6.75E-06	47.5	102.0	1.85E-05	550	0.830		
MG	21.500	338.5	13.1	315.9	38.6	338.5	5.63E-06	46.1	92.1	1.35E-05	700G	0.605		
MG	21.500	343.1	29.7	330.3	-20.5	343.1	5.07E-06	56.4	90.8	9.76E-06	850G	0.438		
MG	21.500	322.5	4.2	107.3	37.3	322.5	6.51E-06	34.9	108.4	1.22E-05	1000G	0.547		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.
 Locality: E20 Site lat & long= 46 50 -119 50
 10 Demag steps for this sample.
 Interval= 48.100 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 0.692 AT NRM
 SMM Dec G Inc G Diff vect Dec S Inc S Diff vect JDiff V lat V long Intensity demag JH/J0 Chi C/CO
 MG 22.500 251.3 65.2 0.0 0.0 251.3 65.2 0.0 0.0 0.00E-01 22.6 -163.6 1.74E-04 NRM 1.000 5.03E-04 1.000
 MG 22.500 232.0 64.8 265.9 63.8 232.0 64.8 265.9 63.8 9.79E-05 13.7 -153.3 7.75E-05 T150 0.445
 MG 22.500 202.2 45.2 272.9 69.7 202.2 45.2 272.9 69.7 5.02E-05 -14.1 -139.8 3.25E-05 T225 0.187
 MG 22.500 209.1 28.4 149.6 74.7 209.1 28.4 149.6 74.7 1.21E-05 -23.0 -150.2 2.40E-05 T300 0.138
 MG 22.500 207.4 18.3 221.0 63.3 207.4 18.3 221.0 63.3 5.92E-06 -29.0 -150.8 1.95E-05 T360 0.112
 MG 22.500 207.7 6.5 207.0 33.0 207.7 6.5 207.0 33.0 8.93E-06 -34.6 -153.3 1.11E-05 T420 0.064
 MG 22.500 214.9 11.2 197.4 -0.5 214.9 11.2 197.4 -0.5 4.60E-06 -29.4 -160.2 6.68E-06 T480 0.038
 MG 22.500 321.5 45.4 190.1 -16.1 321.5 45.4 190.1 -16.1 8.71E-05 54.0 131.2 5.21E-06 T540 0.030
 MG 22.500 79.4 -11.7 293.5 37.0 79.4 -11.7 293.5 37.0 7.21E-06 2.9 -17.8 3.12E-06 T600 0.018
 MG 22.500 255.6 -12.6 77.0 3.7 255.6 -12.6 77.0 3.7 8.28E-06 -14.5 156.6 5.34E-06 T660 0.031



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

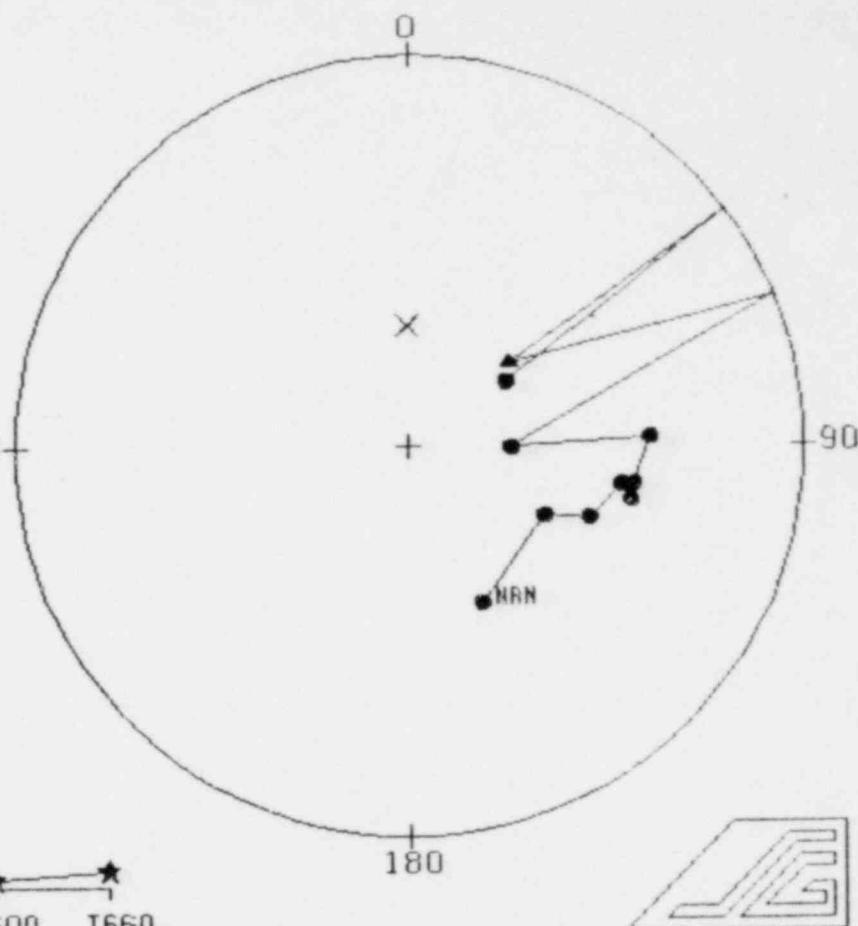
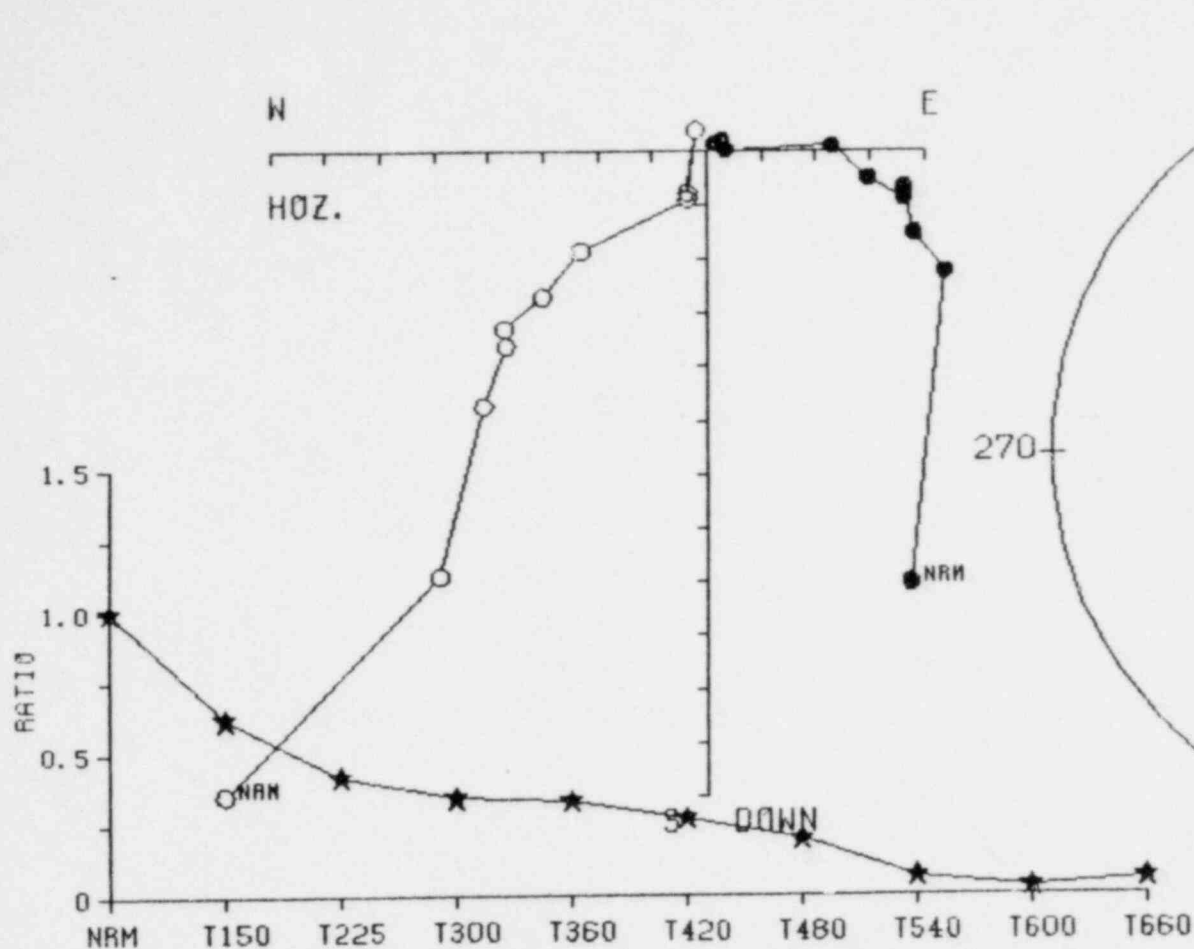
Locality: E20 Site lat & long= 46.50 -119.50

10 Demag steps for this sample.

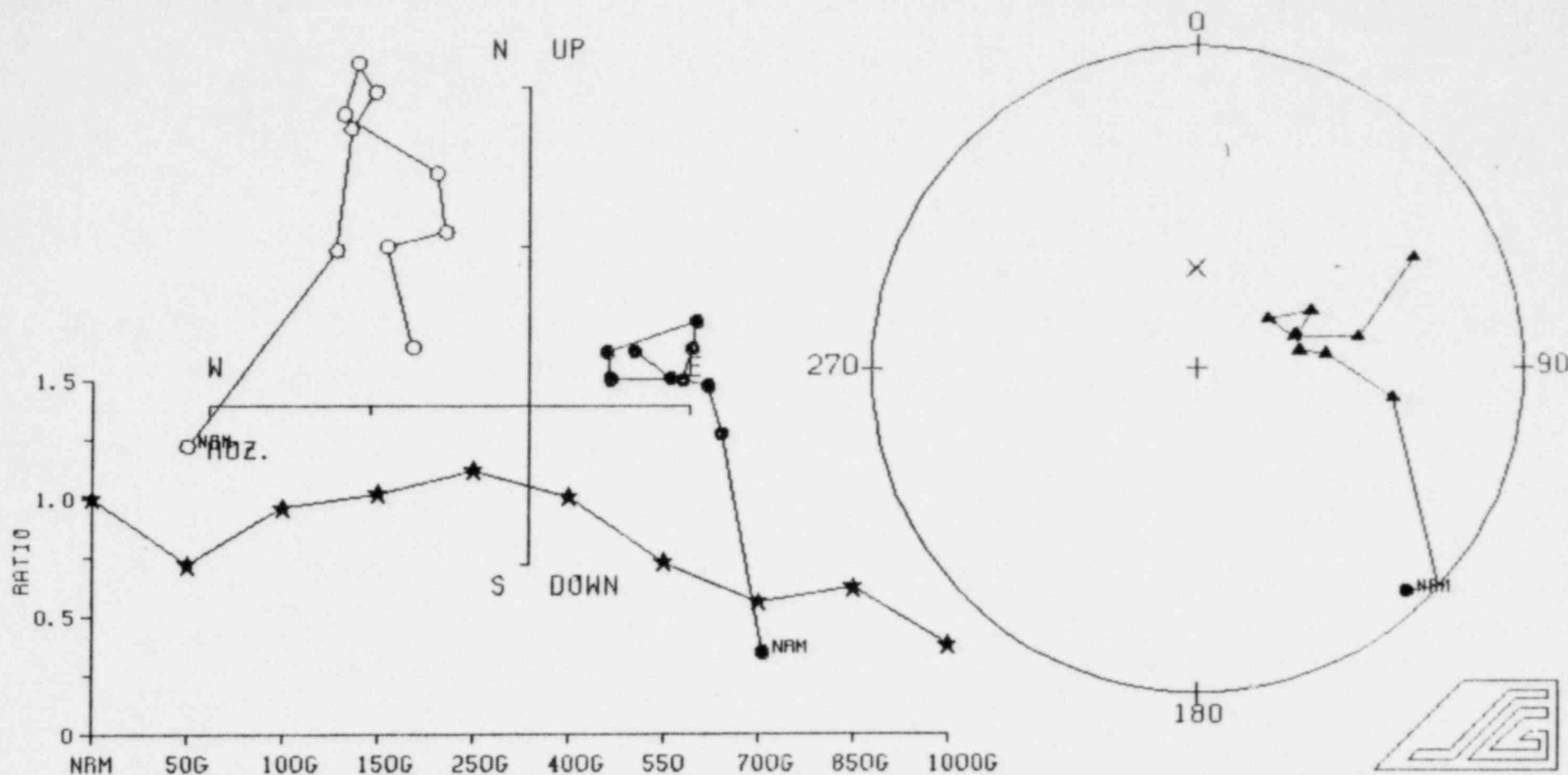
Interval= 48.500 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 1.323 AT NRM

SM	Dec	Inc	Diff	vect	Dec	Inc	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
MG	23.500	269.6	67.9	0.0	269.6	67.9	0.0	0.0	0.00E-01	34.0	-169.1	1.76E-04	NRM	1.000	2.66E-04	1.000
MG	23.500	269.8	75.5	269.4	269.8	75.5	269.4	51.6	3.74E-05	40.0	-156.4	1.22E-04	50G	0.693		
MG	23.500	282.3	62.9	150.4	282.3	62.9	150.4	79.6	4.90E-05	37.7	178.4	7.85E-05	100G	0.446		
MG	23.500	283.8	53.4	160.2	283.8	53.4	160.2	86.9	2.07E-05	32.8	167.2	6.10E-05	150G	0.347		
MG	23.500	291.3	38.6	198.8	291.3	38.6	198.8	76.7	2.06E-05	30.1	151.2	4.64E-05	250G	0.264		
MG	23.500	298.2	24.7	255.7	298.2	24.7	255.7	66.1	1.59E-05	28.7	138.7	3.44E-05	400G	0.195		
MG	23.500	297.1	22.2	300.0	297.1	22.2	300.0	28.6	1.34E-05	26.8	138.5	2.11E-05	550	0.120		
MG	23.500	317.9	-8.1	267.7	317.9	-8.1	267.7	47.2	1.33E-05	27.2	109.3	1.26E-05	700G	0.072		
MG	23.500	337.3	5.9	250.4	337.3	5.9	250.4	-35.6	5.10E-06	42.2	91.9	1.16E-05	850G	0.066		
MG	23.500	344.9	21.6	207.3	344.9	21.6	207.3	-60.5	4.59E-06	52.5	85.3	1.41E-05	1000G	0.080		

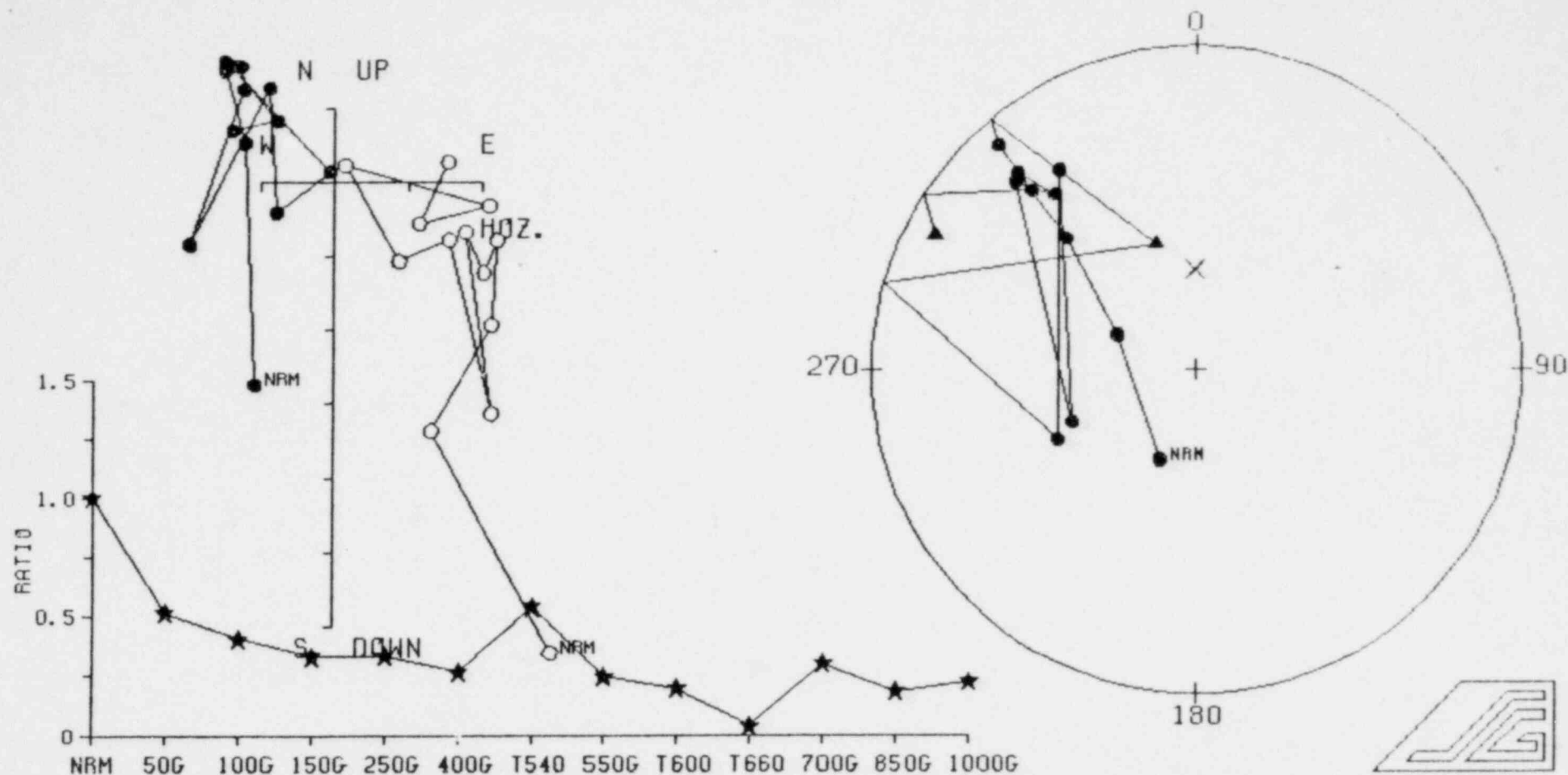


		Dec C	Inc C	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
SM		155.0	53.5	0.0 0.0	155.0	53.5	0.0 0.0	0.00E-01	-6.3	-98.9	1.49E-04	NRM	1.000	4.99E-04	1.000
MG	28.200	117.0	58.1	186.2 35.0	117.0	58.1	186.2 35.0	7.13E-05	12.2	-74.2	9.29E-05	T150	0.623		
MG	28.200	111.8	49.0	141.2 74.1	111.8	49.0	141.2 74.1	3.30E-05	8.1	-65.2	6.25E-05	T225	0.419		
MG	28.200	100.5	44.3	168.3 52.1	100.5	44.3	168.3 52.1	1.41E-05	11.8	-54.9	5.16E-05	T300	0.346		
MG	28.200	103.7	41.4	2.5 56.5	103.7	41.4	2.5 56.5	3.80E-06	8.3	-55.6	4.97E-05	T360	0.334		
MG	28.200	99.5	41.6	120.9 38.9	99.5	41.6	120.9 38.9	9.62E-06	11.0	-52.9	4.04E-05	T420	0.271		
MG	28.200	87.9	38.6	131.1 43.3	87.9	38.6	131.1 43.3	1.22E-05	17.0	-43.5	2.96E-05	T480	0.199		
MG	28.200	90.1	68.6	87.5 25.8	90.1	68.6	87.5 25.8	2.18E-05	34.8	-70.9	9.63E-06	T540	0.065		
MG	28.200	50.2	-62.8	120.7 79.3	50.2	-62.8	120.7 79.3	1.29E-05	-10.9	-26.4	4.15E-06	T600	0.028		
MG	28.200	56.0	65.6	242.7 -81.9	56.0	65.6	242.7 -81.9	1.15E-05	52.7	-52.7	8.49E-06	T660	0.057		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.
 Locality: E20 Site lat & long= 46.50 -119.50
 10 Demag steps for this sample.
 Interval= 57.200 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 0.216 AT NRM

SM	Dec	Inc	Diff	vect	Dec	Inc	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
MG	28.400	136.9	6.9	0.0	136.9	6.9	0.0	0.0	0.00E-01	-27.3	-69.4	2.15E-05	NRM	1.000	1.99E-04	1.000
MG	28.400	98.5	-39.0	169.1	41.3	98.5	-39.0	169.1	1.87E-05	-21.5	-19.7	1.55E-05	50G	0.721		
MG	28.400	83.6	-57.3	165.2	67.8	83.6	-57.3	165.2	8.28E-06	-22.6	2.3	2.07E-05	100G	0.963		
MG	28.400	80.3	-63.9	103.7	55.3	80.3	-63.9	103.7	2.84E-06	-25.9	10.4	2.20E-05	150G	1.023		
MG	28.400	70.9	-63.5	198.2	42.3	70.9	-63.5	198.2	2.69E-06	-20.7	15.0	2.41E-05	250G	1.121		
MG	28.400	63.1	-57.6	186.8	-61.6	63.1	-57.6	186.8	3.69E-06	-11.8	14.8	2.17E-05	400G	1.009		
MG	28.400	55.4	-68.2	70.7	-32.4	55.4	-68.2	70.7	6.99E-06	-18.8	27.6	1.57E-05	550G	0.730		
MG	28.400	71.7	-64.3	353.7	-65.5	71.7	-64.3	353.7	4.04E-06	-21.9	15.3	1.21E-05	700G	0.563		
MG	28.400	79.0	-48.3	269.2	-13.4	79.0	-48.3	269.2	3.87E-06	-14.0	-1.4	1.34E-05	850G	0.623		
MG	28.400	62.7	-26.2	126.3	-66.4	62.7	-26.2	126.3	6.99E-06	7.7	0.0	8.15E-06	1000G	0.379		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: E20 Site lat & long= 46.50 -119.50

13 Demag steps for this sample.

Interval= 57.600 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.154 AT NRM

SM	Dec G	Inc G	Diff	vect	Dec S	Inc S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
MG	28.800	201.3	65.3	0.0	201.3	65.3	0.0	0.0	0.00E-01	5.7	-133.8	7.00E-05	NRM	1.050	9.12E-04	1.000
MG	28.800	294.0	68.6	177.5	294.0	68.6	177.5	42.6	4.43E-05	48.1	-176.8	3.61E-05	50G	0.516		
MG	28.800	315.5	42.3	164.2	315.5	42.3	164.2	55.1	1.76E-05	48.4	134.2	2.85E-05	100G	0.407		
MG	28.800	317.8	19.2	182.8	317.8	19.2	182.8	84.1	1.16E-05	38.8	118.6	2.32E-05	150G	0.331		
MG	28.800	321.7	31.0	284.3	321.2	31.0	284.3	-64.2	4.97E-06	46.2	120.7	2.35E-05	250G	0.336		
MG	28.800	316.7	20.7	352.4	316.0	20.7	352.4	60.6	6.26E-06	38.4	121.0	1.88E-05	400G	0.269		
MG	28.800	246.7	55.9	19.0	246.7	55.9	19.0	-47.9	3.32E-05	12.2	-168.6	3.78E-05	T540	0.540		
MG	28.800	325.6	26.2	206.8	325.6	26.2	206.8	44.9	3.35E-05	46.4	113.3	1.73E-05	550G	0.247		
MG	28.800	242.9	50.4	356.6	242.9	50.4	356.6	-9.8	1.71E-05	6.2	-169.5	1.37E-05	T600	0.196		
MG	28.800	342.4	-56.2	233.6	342.4	-56.2	233.6	54.6	1.57E-05	5.2	74.6	2.69E-06	T660	0.038		
MG	28.800	318.6	8.3	136.8	318.6	8.3	136.8	-15.1	2.02E-05	34.6	113.8	2.11E-05	700G	0.301		
MG	28.800	317.5	25.7	319.9	317.5	25.7	319.9	-14.6	9.76E-06	41.5	121.9	1.27E-05	850G	0.181		
MG	28.800	297.4	-10.1	76.9	297.4	-10.1	76.9	53.7	1.02E-05	14.5	126.5	1.56E-05	1000G	0.223		

YAKIMA BLUFFS

LINES	SM#	TYPE	GDEC	GINC	SDEC	SINC	VLAT	VLDNG	JH	DEMAG
PMY	2.000	LIN SEG	175.2	-54.9	175.2	-54.9	-70.5	-99.3		1150 ORIGN
PMY	3.000	LIN SEG	160.5	-45.2	160.5	-45.2	-65.1	-74.2		1000 ORIGN
PMY	4.000	LIN SEG	178.7	-52.8	178.7	-52.8	-77.0	-114.4		1150 ORIGN
PMY	5.000	LIN SEG	170.2	-31.3	170.2	-31.3	-59.5	-100.4		500 ORIGN
PMY	6.000	LIN SEG	158.6	-73.7	158.6	-73.7	-71.6	25.3		1150 ORIGN
PMY	7.000	LIN SEG	178.0	-74.3	178.0	-74.3	-75.6	56.8		1000 ORIGN
PMY	8.000	LIN SEG	185.4	-66.9	185.4	-66.9	-89.1	106.9		1150 ORIGN
PMY	9.000	LIN SEG	199.8	-56.1	199.8	-56.1	-72.4	176.9		500 ORIGN
PMY	10.000	LIN SEG	179.3	-66.4	179.3	-66.4	-87.4	50.3		1150 ORIGN

***** STATISTICS ON LINE DATA *****

GEOGRAPHIC COORDINATES:

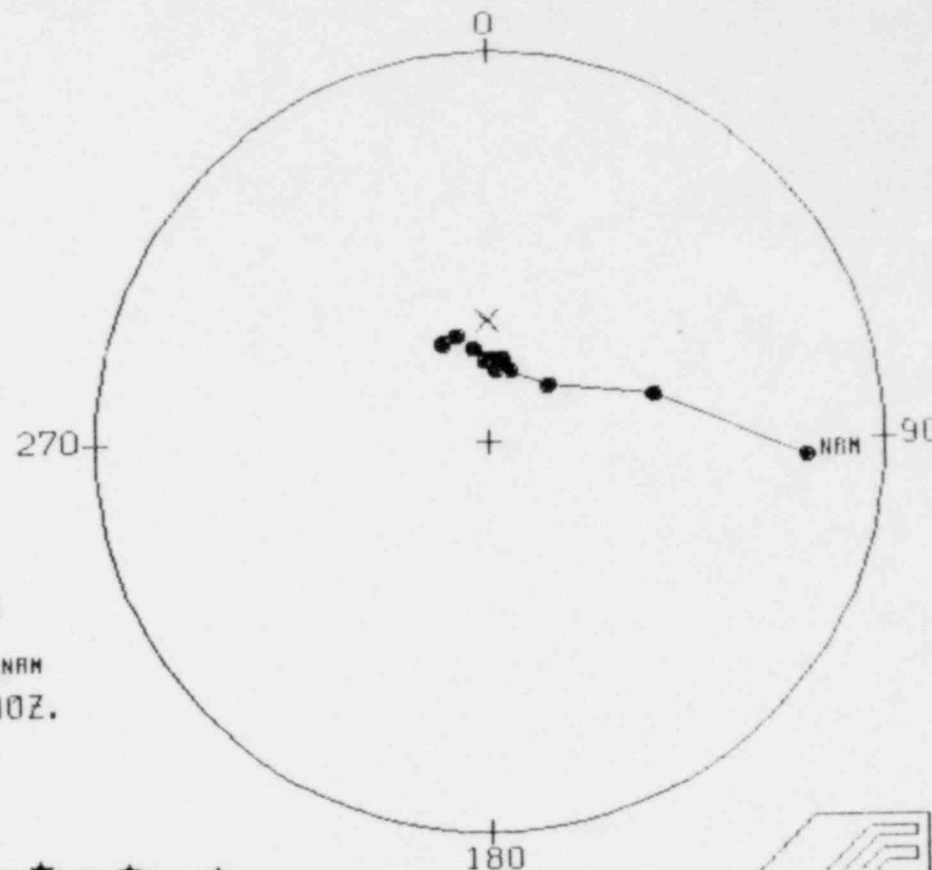
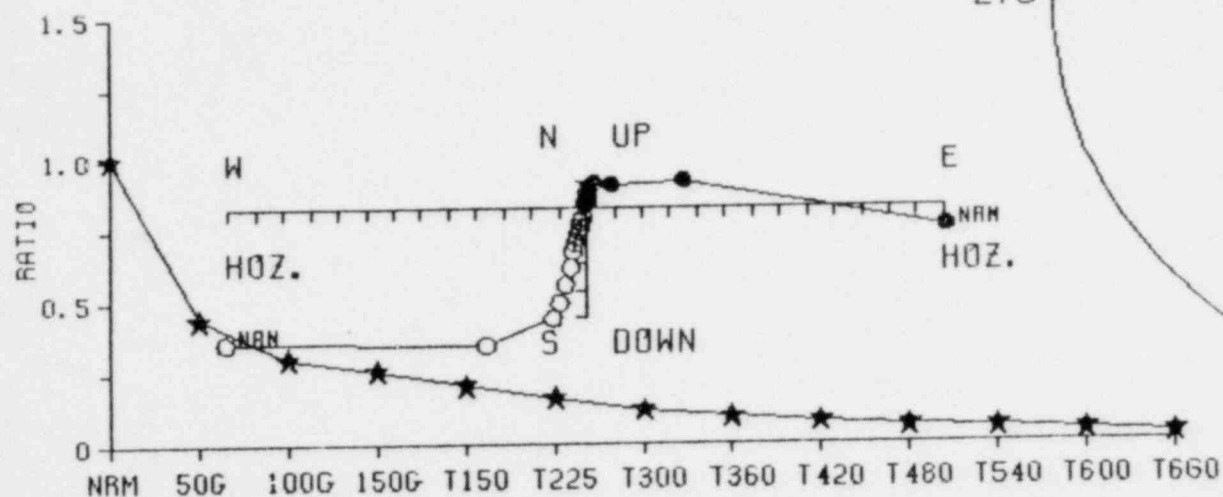
FISHER STATISTICS:
 N= 9 R= 8.7111 M.L.E. of kappa= 31.2 kappa= 27.7
 Alpha 95= 9.96 Circular std. dev.=15.40
 Declination= 175.8 Inclination= -58.6
 Pole lat= -82.3 Pole long= -94.0 Paleolat= -39.3
 dp= 11.0 dm= 14.8 Oval azimuth= 22.3
 MOMENT OF INERTIA STATISTICS:
 N= 9 Eigenvalues= 0.093 0.466 8.441
 Uniform test statistic= 37.06 Data not random at 1% level.
 Dimroth-Watson K= -16.68
 M.L.E.'s of Bingham parameters: K1= -48.81 K2= -10.28
 Oval azimuth= 10.7
 Std. dev. angles = 6.02 13.42
 Confidence angles: A952= 4.91 A953=10.95
 Declination= 176.0 Inclination= -58.8
 Pole lat= -82.6 Pole long= -94.1 Paleolat= -39.6
 Test statistics for circular symmetry: Bipolar= 7.18 Girdle= 40.99

STRATIGRAPHIC COORDINATES:

FISHER STATISTICS:
 N= 9 R= 8.7111 M.L.E. of kappa= 31.2 kappa= 27.7
 Alpha 95= 9.96 Circular std. dev.=15.40
 Declination= 175.8 Inclination= -58.6
 Pole lat= -82.3 Pole long= -94.0 Paleolat= -39.3
 dp= 11.0 dm= 14.8 Oval azimuth= 22.3
 MOMENT OF INERTIA STATISTICS:
 N= 9 Eigenvalues= 0.093 0.466 8.441
 Uniform test statistic= 37.06 Data not random at 1% level.
 Dimroth-Watson K= -16.68
 M.L.E.'s of Bingham parameters: K1= -48.81 K2= -10.28
 Oval azimuth= 10.7
 Std. dev. angles = 6.02 13.42
 Confidence angles: A952= 4.91 A953=10.95
 Declination= 176.0 Inclination= -58.8
 Pole lat= -82.6 Pole long= -94.1 Paleolat= -39.6
 Test statistics for circular symmetry: Bipolar= 7.18 Girdle= 40.99

VGP COORDINATES:
 FISHER STATISTICS:

N= 9 R= 8.6290 M.L.E. of kappa= 24.3 kappa= 21.6
Alpha 95=11.34 Circular std. dev.=17.47
Pole lat= -84.5 Pole long= -88.5
MOMENT OF INERTIA STATISTICS:
N= 9 Eigenvalues= 0.198 0.521 8.281
Uniform test statistic= 34.91 Data not random at 1% level.
Dimroth-Watson K= -13.13
M.L.E.'S of Bingham parameters: K1= -23.30 K2= -9.30
Oval azimuth= 17.5
Std. dev. angles = 8.86 14.31
Confidence angles: A952= 7.23 A953=11.67
Pole lat= -84.6 Pole long= -88.9
Test statistics for circular symmetry: Bipolar= 2.26 Girdle= 36.08
Test indicates symmetric bipolar dist. ALPHA= 9.45



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

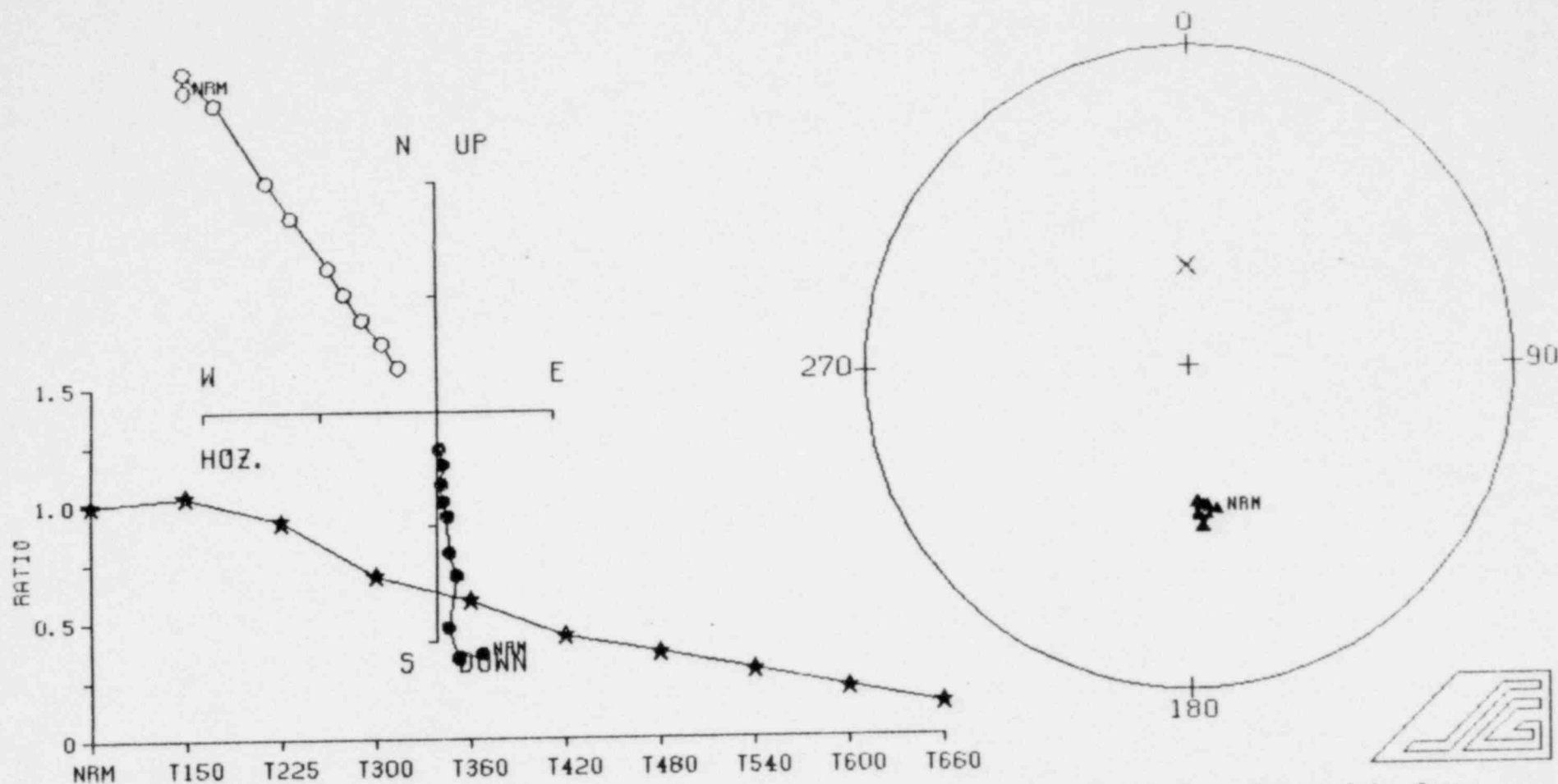
Locality: YAKIMA Site lat & long= 46.30 -119.20

13 Demag steps for this sample.

Interval= 0.000 Strike & dip of bedding= 0.0 0.0

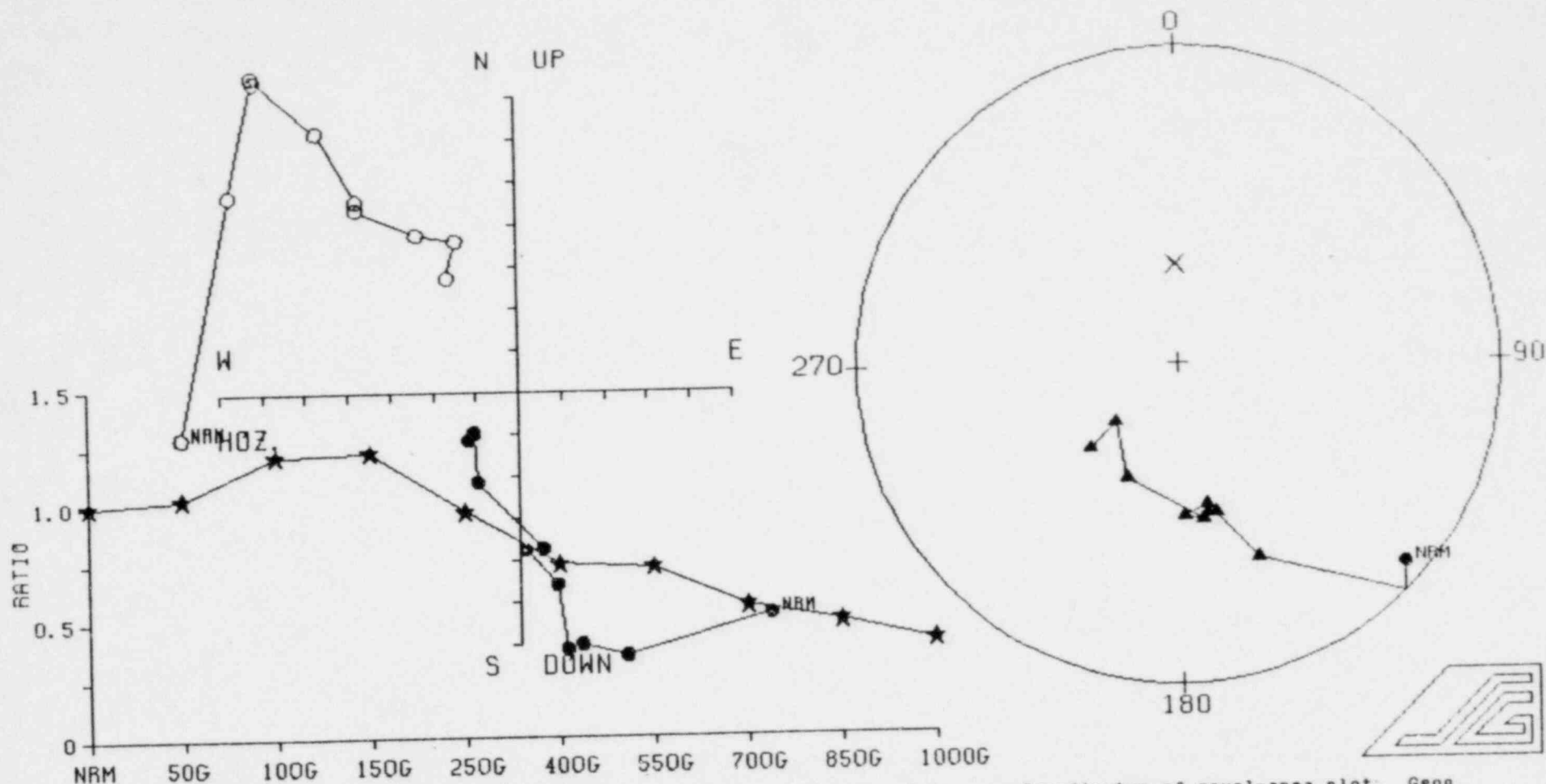
Koenigsberger ratio = 3.544 AT NRM

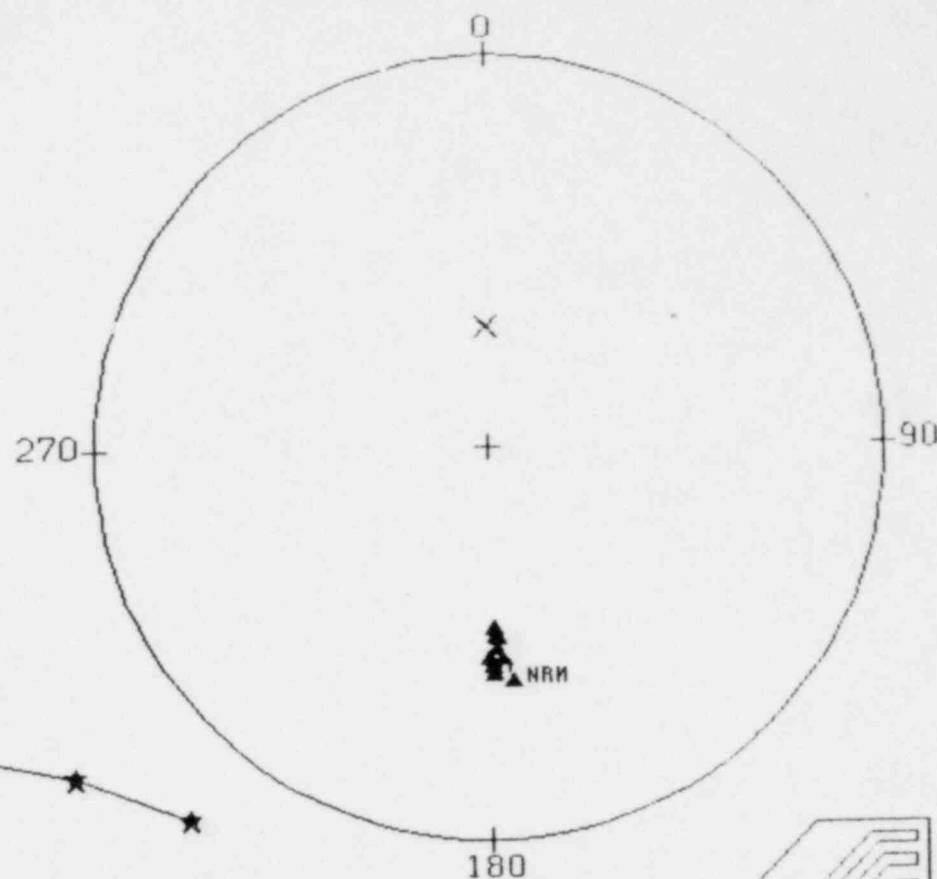
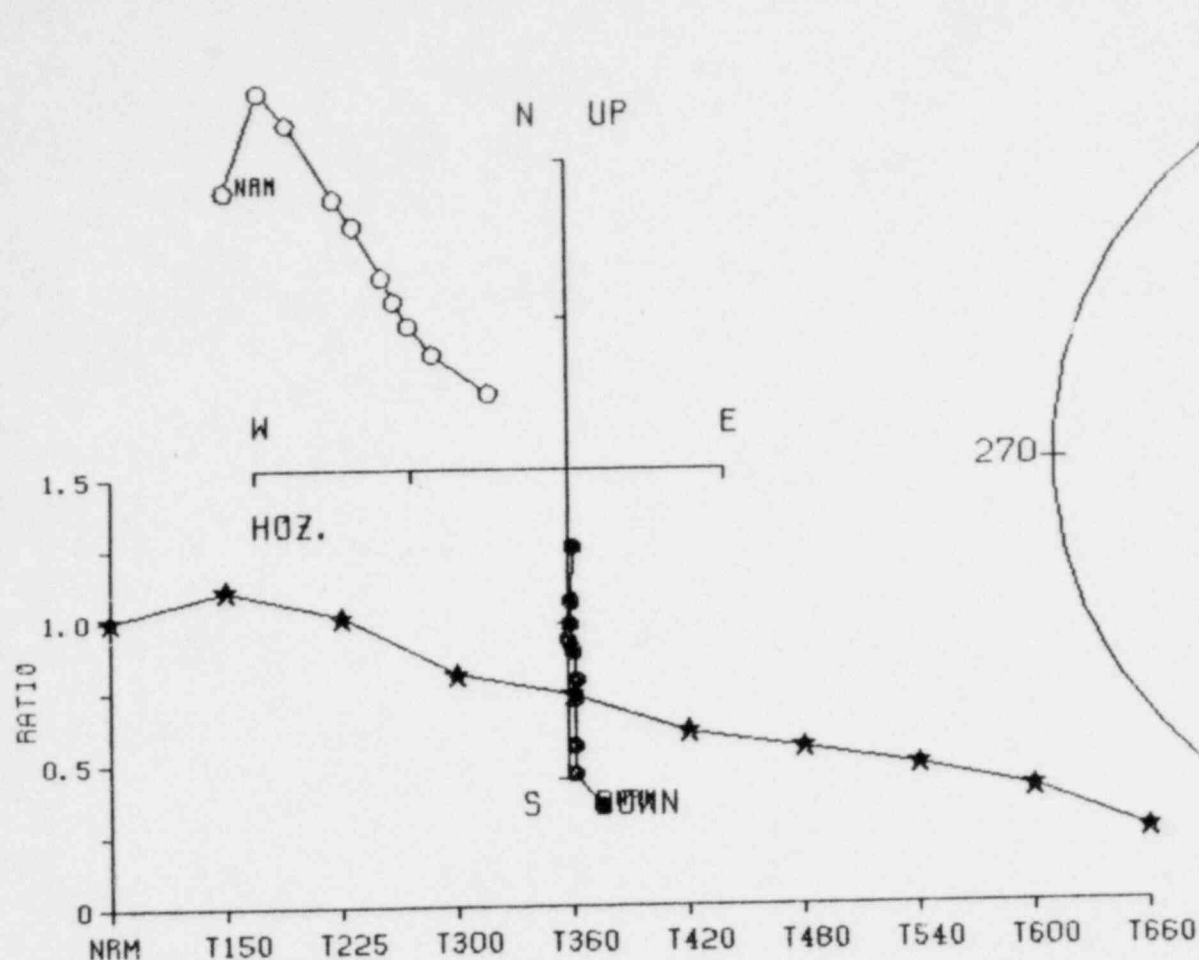
SMW	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMY	1.000	93.0	20.5	0.0	0.0	0.0	0.00E-01	5.6	-38.7	1.40E-04	NRM	1.000	7.90E-05	1.000
PMY	1.000	74.0	54.0	100.0	-0.6	74.0	9.75E-05	34.5	-45.2	6.18E-05	50G	0.441		
PMY	1.000	45.3	73.0	86.9	20.6	45.3	2.80E-05	60.4	-70.9	4.20E-05	100G	0.300		
PMY	1.000	17.0	74.4	97.0	41.2	17.0	7.90E-06	72.5	-90.9	3.63E-05	150G	0.259		
PMY	1.000	7.5	74.3	49.6	71.2	7.5	7.44E-06	75.0	-104.8	2.90E-05	T150	0.207		
PMY	1.000	5.7	74.9	13.0	72.0	5.7	6.31E-06	74.2	-109.2	2.27E-05	T225	0.162		
PMY	1.000	357.5	73.0	37.7	77.8	357.5	6.18E-06	77.7	-125.2	1.66E-05	T300	0.119		
PMY	1.000	10.1	72.4	314.1	68.2	10.1	3.44E-06	77.1	-94.2	1.33E-05	T360	0.095		
PMY	1.000	1.2	72.4	41.3	68.7	1.2	2.66E-06	78.7	-116.0	1.07E-05	T420	0.076		
PMY	1.000	7.8	72.2	334.8	70.9	7.8	2.09E-06	78.1	-98.5	8.64E-06	T480	0.062		
PMY	1.000	350.9	70.2	84.2	54.7	350.9	1.33E-06	80.2	-152.1	7.59E-06	T540	0.054		
PMY	1.000	343.8	66.8	25.8	76.7	343.8	2.07E-06	78.7	172.5	5.58E-06	T600	0.040		
PMY	1.000	335.6	67.3	358.3	64.7	335.6	1.90E-06	73.4	173.0	3.70E-06	T660	0.026		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.
 Locality: YAKIMA Site lat & long= 46.30 -119.20
 10 Demag steps for this sample.
 Interval= 6.000 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 1.705 At NRM

	Dec	G	Inc	G	Diff	vect	Dec	S	Inc	S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMY	2.000	169.4	-52.4	0.0	0.0	0.0	169.4	-52.4	0.0	0.0	0.0	0.0	0.00E-01	-74.4	-84.1	3.53E-05	NRM	1.000	4.14E-05	1.000
PMY	2.000	174.7	-53.9	81.3	38.8	0.0	174.7	-53.9	81.3	38.8	0.0	0.0	2.56E-06	-77.4	-98.8	3.66E-05	T150	1.037		
PMY	2.000	176.8	-54.8	160.2	-45.1	0.0	176.8	-54.8	160.2	-45.1	0.0	0.0	3.91E-06	-78.8	-103.6	3.28E-05	T225	0.929		
PMY	2.000	173.2	-54.0	188.3	-56.5	0.0	173.2	-54.0	188.3	-56.5	0.0	0.0	8.28E-06	-77.1	-93.1	2.46E-05	T300	0.697		
PMY	2.000	174.9	-53.6	163.1	-55.8	0.0	174.9	-53.6	163.1	-55.8	0.0	0.0	3.72E-06	-77.3	-99.7	2.09E-05	T360	0.592		
PMY	2.000	174.4	-53.6	176.3	-53.6	0.0	174.4	-53.6	176.3	-53.6	0.0	0.0	5.40E-06	-77.2	-98.0	1.55E-05	T420	0.439		
PMY	2.000	176.0	-52.2	164.7	-60.1	0.0	176.0	-52.2	164.7	-60.1	0.0	0.0	2.63E-06	-76.1	-105.1	1.29E-05	T480	0.365		
PMY	2.000	176.2	-51.2	175.2	-56.0	0.0	176.2	-51.2	175.2	-56.0	0.0	0.0	2.71E-06	-75.3	-106.4	1.02E-05	T540	0.289		
PMY	2.000	176.2	-51.2	175.2	-56.0	0.0	176.2	-51.2	175.2	-56.0	0.0	0.0	2.72E-06	-75.0	-97.8	7.49E-06	T600	0.212		
PMY	2.000	173.6	-51.4	183.2	-50.4	0.0	173.6	-51.4	183.2	-50.4	0.0	0.0	2.54E-06	-72.6	-105.8	4.98E-06	T660	0.141		
PMY	2.000	175.4	-48.2	169.2	-57.6	0.0	175.4	-48.2	169.2	-57.6	0.0	0.0								





Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

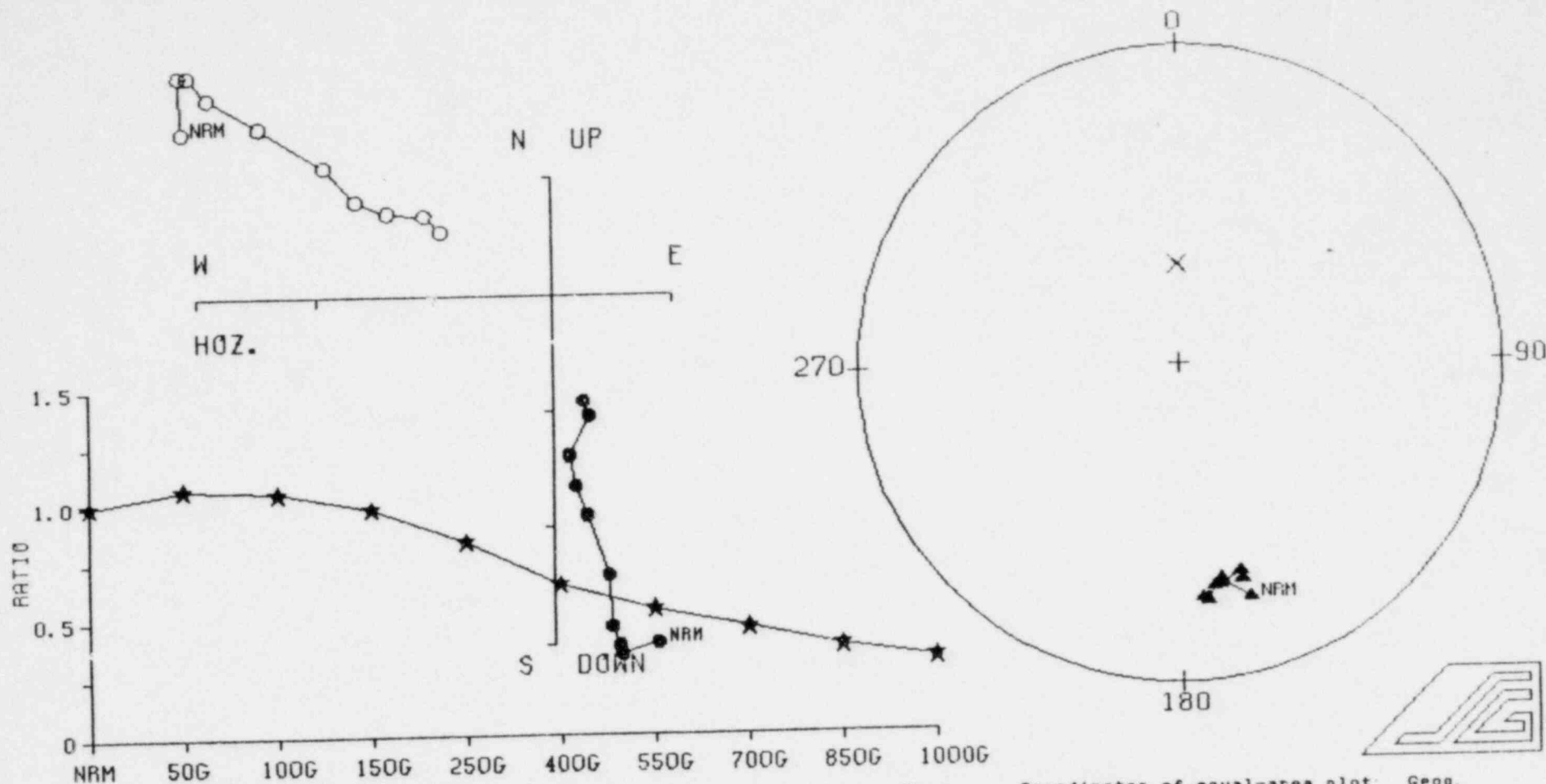
Locality: YAKIMA Site lat & long= 46.30 -119.20

10 Demag steps for this sample

Interval= 4.000 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.785 AT NRM

	Dec	Inc	Diff	vect	Dec	Inc	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMY	4.000	174.4	-39.6	0.0	0.0	174.4	-39.6	0.0	0.00E-01	-65.7	-106.5	2.84E-05	NRM	1.000	7.24E-05	1.000
PMY	4.000	178.8	-51.2	140.7	66.9	178.8	-51.2	140.7	6.93E-06	-75.5	-115.0	3.14E-05	T150	1.106		
PMY	4.000	178.7	-51.5	179.8	-48.0	178.7	-51.5	179.8	2.70E-06	-75.8	-114.5	2.87E-05	T225	1.011		
PMY	4.000	178.4	-49.8	180.2	-58.3	178.4	-49.8	180.2	5.75E-06	-74.3	-114.2	2.30E-05	T300	0.810		
PMY	4.000	178.3	-46.9	173.3	-55.4	177.6	-49.2	187.5	2.12E-06	-73.7	-111.7	2.09E-05	T360	0.736		
PMY	4.000	177.6	-49.2	187.5	-55.4	177.6	-49.2	187.5	3.78E-06	-71.8	-114.3	1.72E-05	T420	0.606		
PMY	4.000	178.3	-46.9	173.3	-59.6	178.3	-46.9	173.3	1.74E-06	-70.2	-119.8	1.56E-05	T480	0.549		
PMY	4.000	180.2	-44.9	150.9	-62.7	180.2	-44.9	150.9	1.86E-06	-68.8	-117.0	1.38E-05	T540	0.486		
PMY	4.000	179.1	-43.2	191.2	-57.1	179.1	-43.2	191.2	2.43E-06	-67.5	-116.5	1.14E-05	T600	0.401		
PMY	4.000	178.9	-41.4	180.2	-51.7	178.9	-41.4	180.2	4.35E-06	-69.8	-110.1	7.09E-06	T660	0.250		
PMY	4.000	176.5	-44.6	182.3	-36.1	176.5	-44.6	182.3								



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

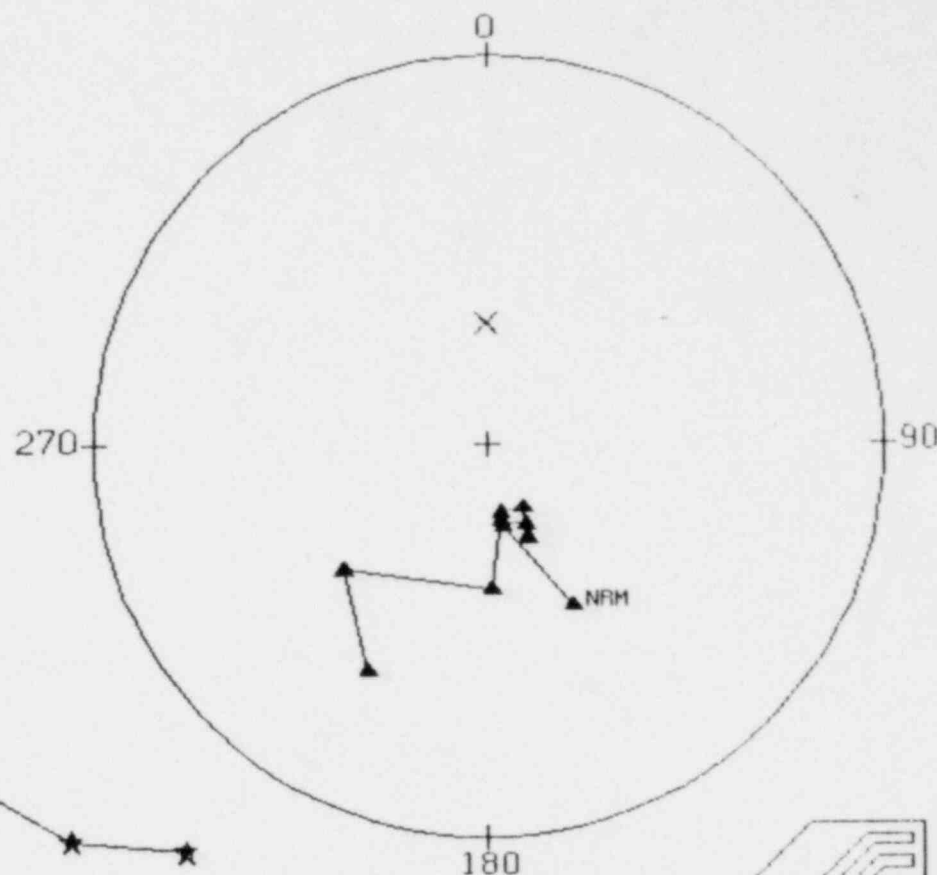
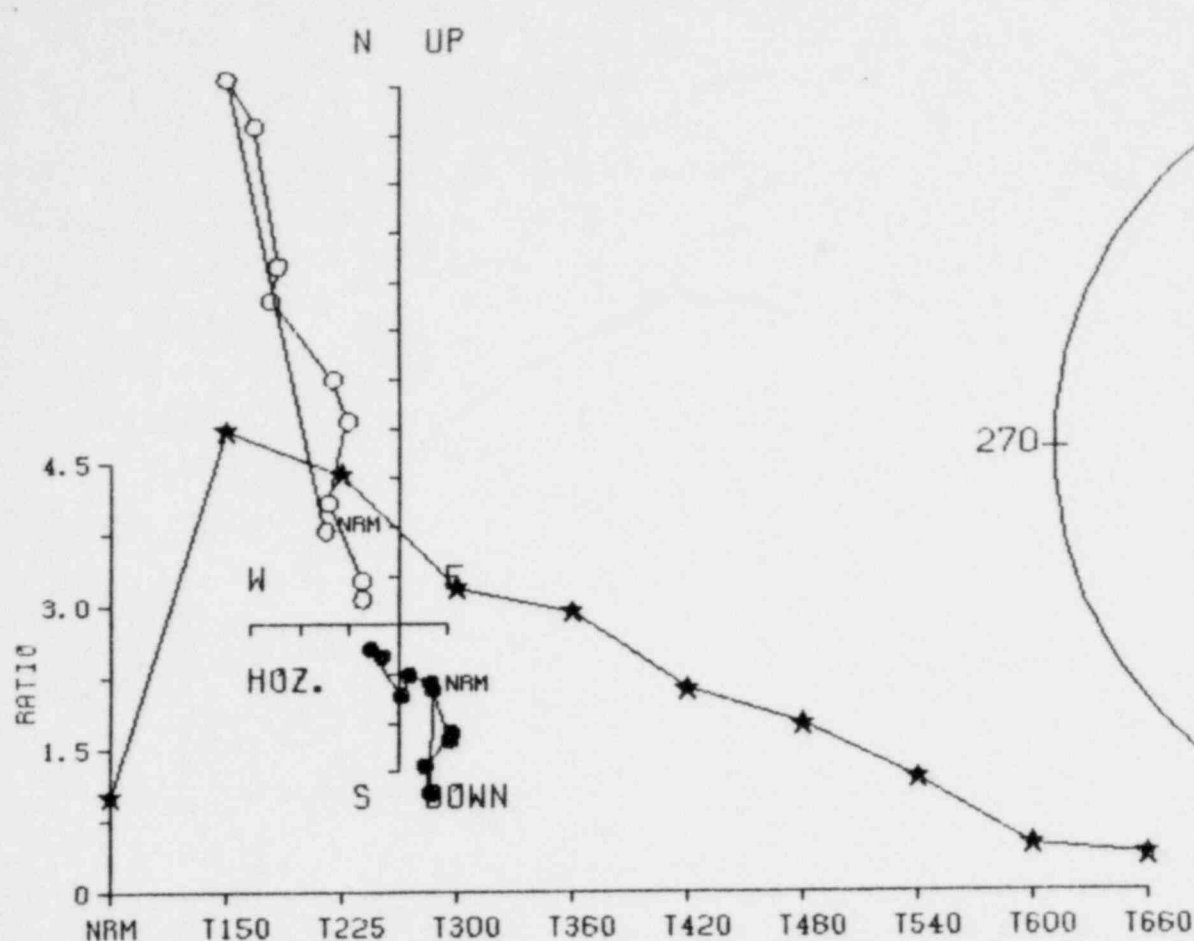
Locality: YAKIMA Site lat & long= 46.30 -119.20

10 Demag steps for this sample.

Interval= 4.500 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 1.134 AT NRM

SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMY	5.000	163.8	-24.3	0.0	0.0	0.0	0.00E-01	-53.7	-91.7	3.42E-05	NRM	1.000	6.03E-05	1.000
PMY	5.000	169.6	-31.0	73.0	56.4	5.73E-06	-59.2	-99.4	3.66E-05	50G	1.070			
PMY	5.000	169.7	-31.6	165.3	1.1	7.12E-07	-59.6	-99.5	3.60E-05	100G	1.053			
PMY	5.000	170.5	-30.3	156.6	-47.7	2.65E-06	-58.9	-101.3	3.35E-05	150G	0.980			
PMY	5.000	169.3	-30.3	177.3	-30.1	5.03E-06	-58.7	-99.1	2.85E-05	250G	0.833			
PMY	5.000	171.8	-29.8	160.6	-31.6	6.47E-06	-58.9	-103.8	2.21E-05	400G	0.646			
PMY	5.000	173.8	-26.1	159.6	-46.7	3.97E-06	-57.0	-108.1	1.84E-05	550G	0.538			
PMY	5.000	175.0	-26.9	167.4	-21.5	2.83E-06	-57.7	-110.1	1.56E-05	700G	0.456			
PMY	5.000	164.5	-32.4	205.9	-3.0	3.84E-06	-58.6	-90.0	1.28E-05	850G	0.374			
PMY	5.000	164.6	-30.0	163.8	-45.8	1.96E-06	-57.2	-91.0	1.09E-05	1000G	0.319			



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

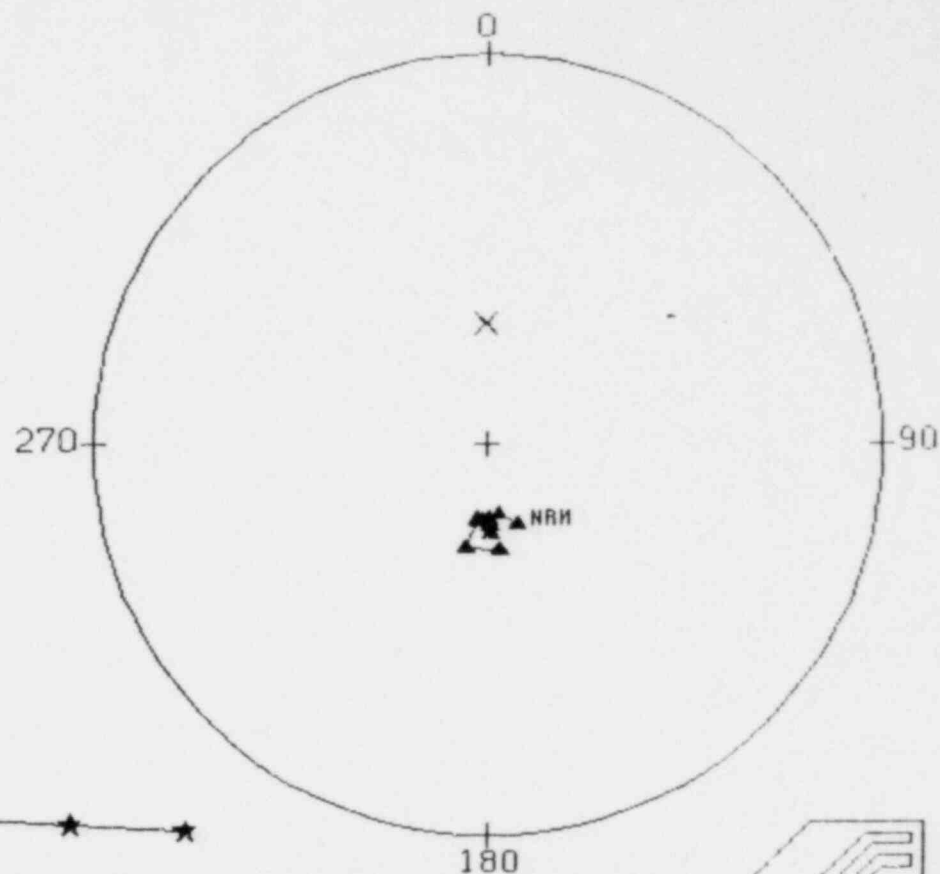
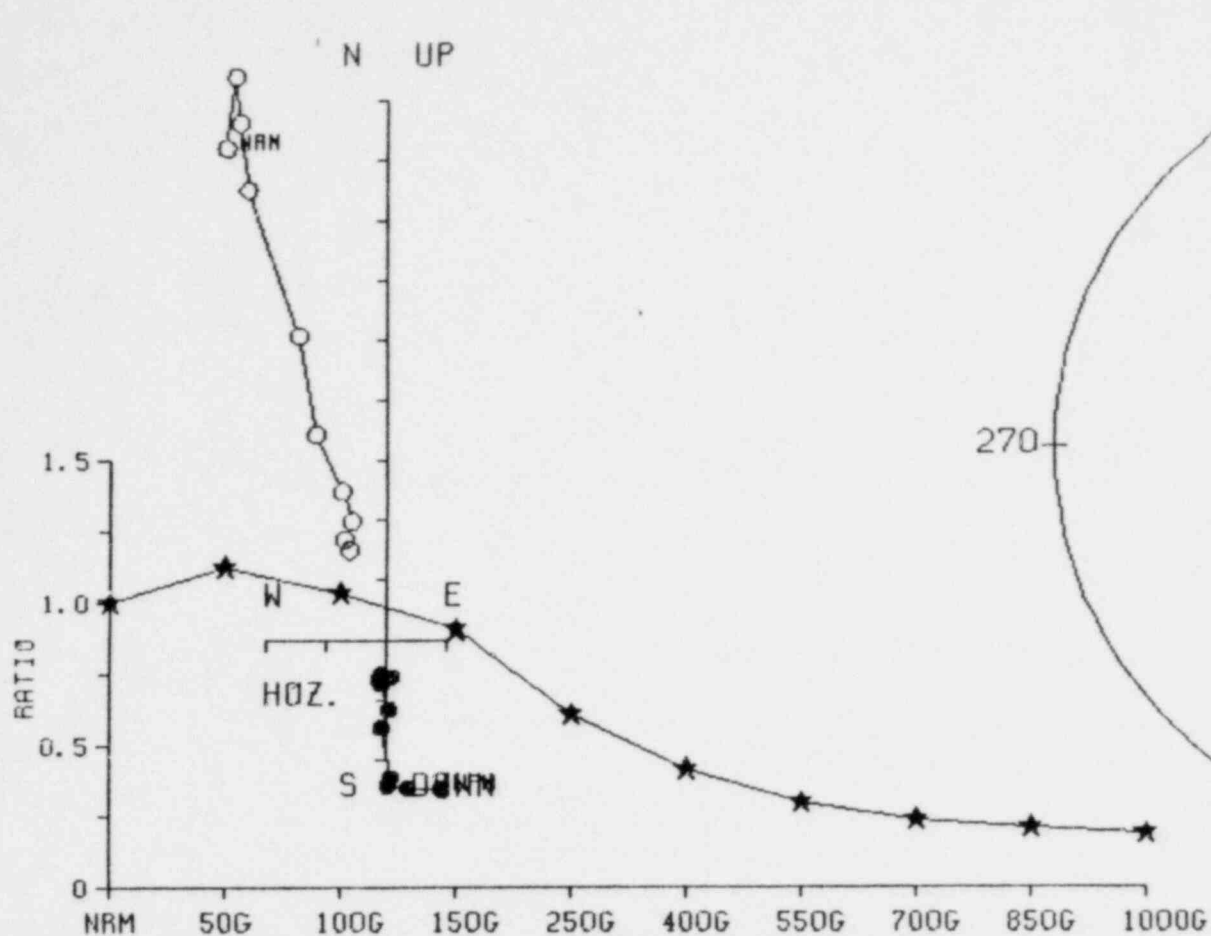
Locality: YAKIMA Site lat & long= 46.30 -119.20

10 Demag steps for this sample.

Interval= 0.000 Strike & dip of bedding= 0.0 0.0

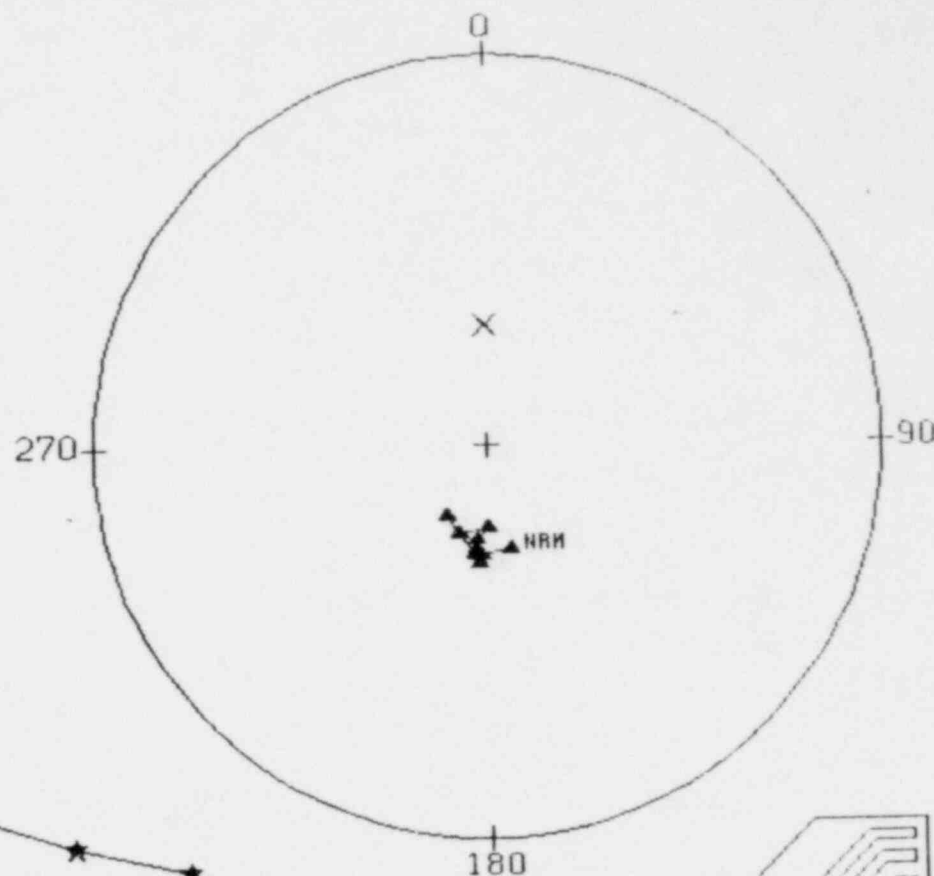
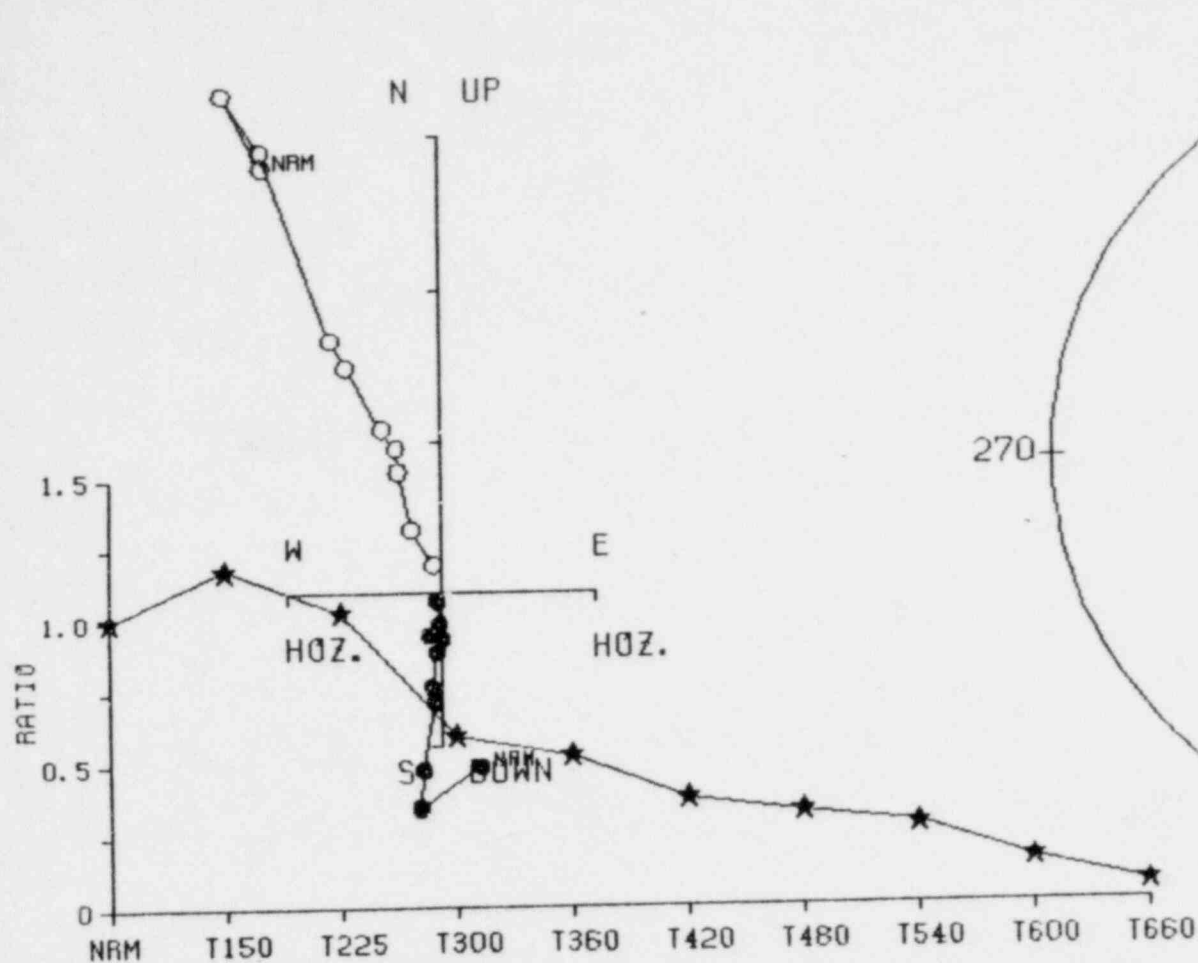
Koenigsberger ratio = 0.058 AT NRM

SM#	Dec	G	Inc	G	Diff	vect	Dec	S	Inc	S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMY	6.000	151.7	-51.8	0.0	0.0	0.0	151.7	-51.8	0.0	0.0	0.0	0.0	0.00E-01	-64.3	-51.9	2.42E-06	NRM	1.000	B.33E-05	1.000
PMY	6.000	169.3	-72.6	1.6	77.1	1.6	169.3	-72.6	1.6	77.1	1.6	77.1	9.50E-06	-76.7	35.3	1.17E-05	T150	4.835		
PMY	6.000	169.6	-73.9	167.7	-60.3	167.7	169.6	-73.9	167.7	-60.3	167.7	-60.3	1.13E-06	-74.9	40.5	1.06E-05	T225	4.380		
PMY	6.000	154.3	-71.5	218.0	-73.1	218.0	154.3	-71.5	218.0	-73.1	218.0	-73.1	2.98E-06	-71.3	12.0	7.73E-06	T300	3.194		
PMY	6.000	156.7	-68.7	14.6	-76.7	14.6	156.7	-68.7	14.6	-76.7	14.6	-76.7	7.26E-07	-73.8	0.0	7.11E-06	T360	2.938		
PMY	6.000	150.6	-74.9	163.3	-52.5	163.3	150.6	-74.9	163.3	-52.5	163.3	-52.5	2.06E-06	-67.3	23.6	5.17E-06	T420	2.136		
PMY	6.000	168.6	-75.7	107.1	-61.0	107.1	168.6	-75.7	107.1	-61.0	107.1	-61.0	9.76E-07	-72.1	43.8	4.27E-06	T480	1.764		
PMY	6.000	177.8	-59.8	20.5	-75.2	20.5	177.8	-59.8	20.5	-75.2	20.5	-75.2	1.71E-06	-84.1	-102.4	2.87E-06	T540	1.186		
PMY	6.000	228.7	-50.0	146.4	-54.4	146.4	228.7	-50.0	146.4	-54.4	146.4	-54.4	1.94E-06	-49.7	155.8	1.18E-06	T600	0.488		
PMY	6.000	207.6	-35.3	302.7	-54.6	302.7	207.6	-35.3	302.7	-54.6	302.7	-54.6	4.73E-07	-55.0	-168.6	8.97E-07	T660	0.371		

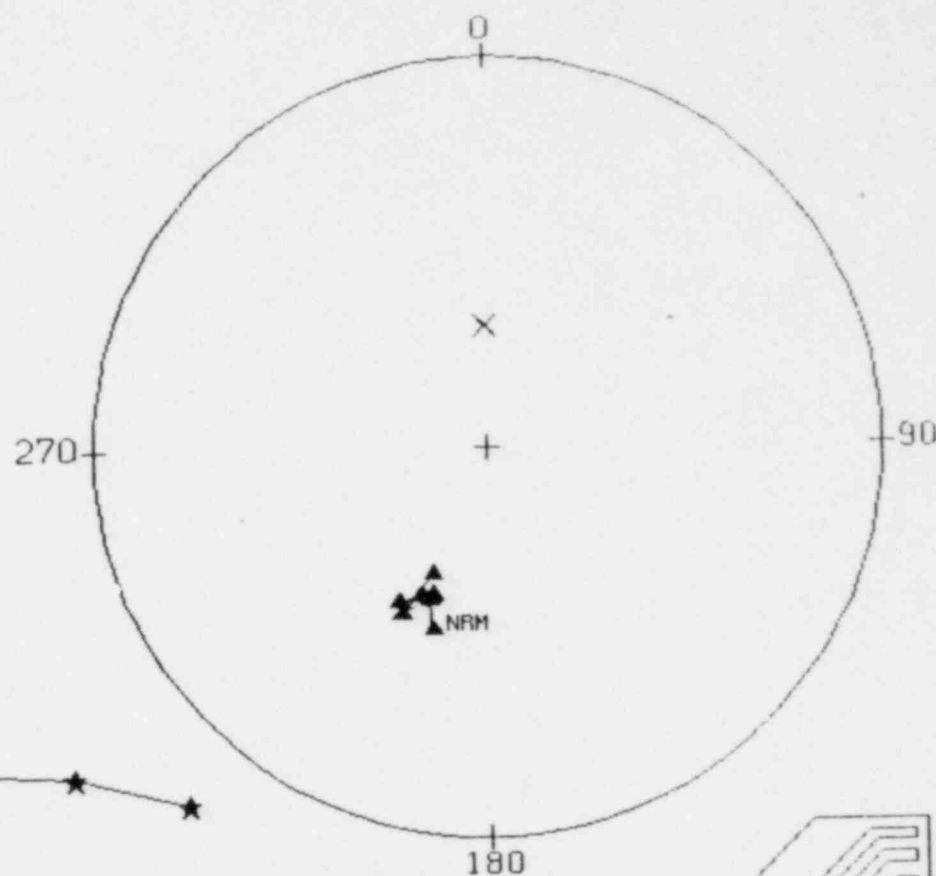
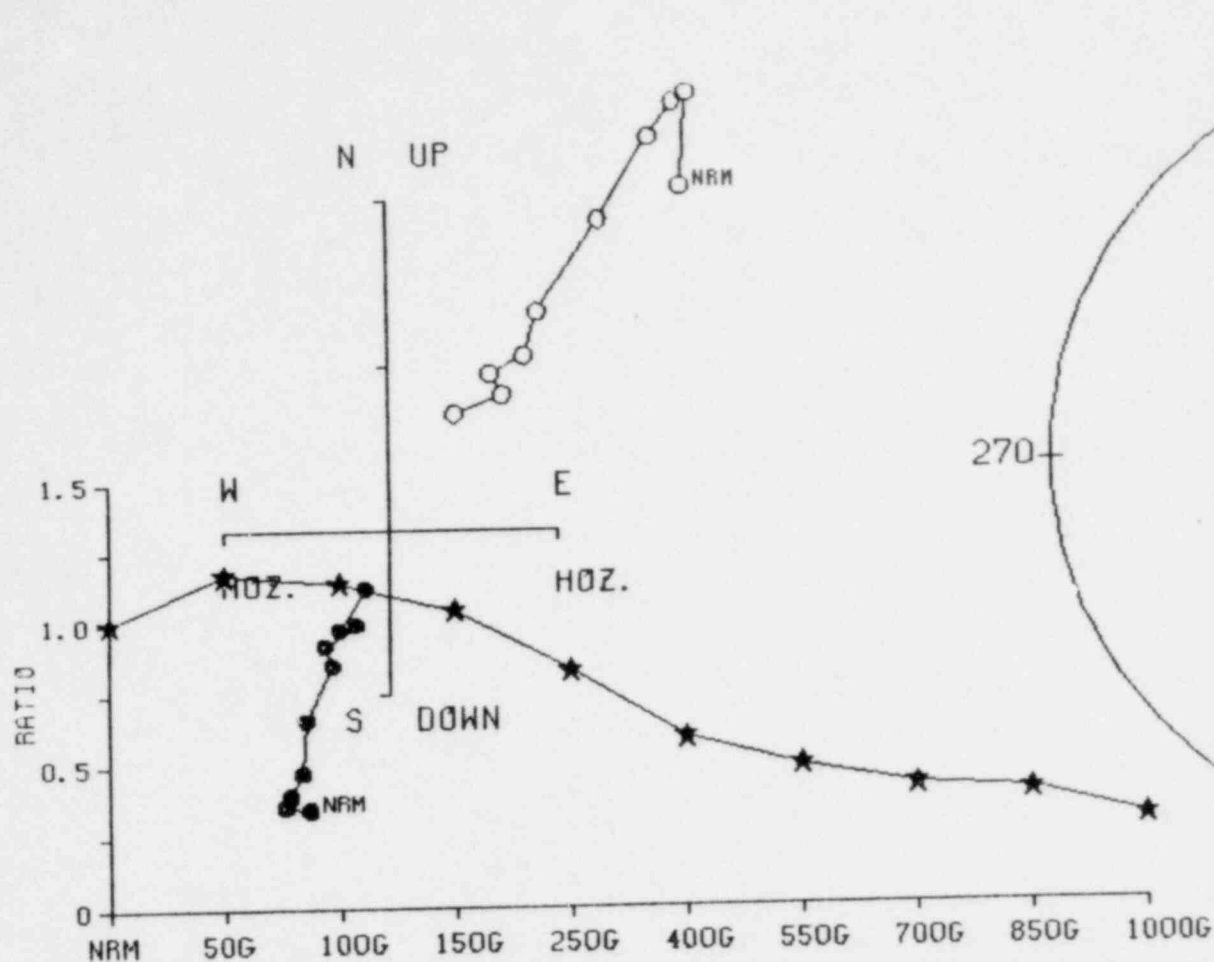


Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.
 Locality: YAKIMA Site lat & long= 46.30 -119.20
 10 Demag steps for this sample.
 Interval= 3.000 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 1.966 AT NRM

SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMY	7.000	159.5	-72.1	0.0	0.0	0.0	0.00E-01	-73.4	19.1	8.64E-05	NRM	1.000	8.79E-05	1.000
PMY	7.000	171.4	-75.1	91.4	64.8	1.31E-05	-73.6	46.4	9.73E-05	50G	1.126			
PMY	7.000	179.1	-74.2	95.4	-66.4	8.42E-06	-75.9	59.1	8.97E-05	100G	1.038			
PMY	7.000	178.2	-73.0	192.8	-82.3	1.13E-05	-77.7	56.5	7.85E-05	150G	0.909			
PMY	7.000	182.8	-74.0	170.3	-70.7	2.58E-05	-76.0	66.5	5.28E-05	250G	0.611			
PMY	7.000	177.9	-71.3	200.9	-79.1	1.69E-05	-80.3	53.8	3.61E-05	400G	0.418			
PMY	7.000	185.6	-73.5	165.1	-64.9	1.04E-05	-76.5	73.1	2.58E-05	550G	0.299			
PMY	7.000	187.5	-74.1	179.3	-71.0	5.21E-06	-75.3	75.5	2.06E-05	700G	0.238			
PMY	7.000	191.0	-67.8	26.9	-67.7	3.30E-06	-81.5	115.0	1.81E-05	850G	0.209			
PMY	7.000	173.4	-67.7	253.2	-40.1	2.75E-06	-83.9	17.8	1.62E-05	1000G	0.188			



SM#	Dec	Q	Inc	Q	Diff	vect	Dec	S	Inc	S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMY	8.000	167.6	-67.6	0.0	0.0	0.0	167.6	-67.6	0.0	0.0	0.0	0.0	0.00E-01	-80.8	2.7	3.04E-05	NRM	1.000	9.18E-05	1.000
PMY	8.000	185.9	-66.8	55.4	45.1	55.4	185.9	-66.8	55.4	45.1	55.4	45.1	6.77E-06	-85.0	111.1	3.58E-05	T150	1.178		
PMY	8.000	185.0	-68.2	185.4	-57.2	185.4	185.0	-68.2	185.4	-57.2	185.4	-57.2	4.57E-06	-83.6	96.2	3.13E-05	T225	1.030		
PMY	8.000	183.4	-66.9	190.1	-69.9	190.1	183.4	-66.9	190.1	-69.9	190.1	-69.9	1.31E-05	-86.0	94.0	1.82E-05	T300	0.599		
PMY	8.000	186.1	-70.2	187.7	-60.8	187.7	186.1	-70.2	187.7	-60.8	187.7	-60.8	2.14E-06	-84.0	106.0	1.61E-05	T360	0.530		
PMY	8.000	186.7	-67.3	163.7	-60.6	163.7	186.7	-67.3	163.7	-60.6	163.7	-60.6	4.64E-06	-81.1	84.7	1.15E-05	T420	0.378		
PMY	8.000	186.1	-70.2	187.7	-60.8	187.7	186.1	-70.2	187.7	-60.8	187.7	-60.8	1.62E-06	-78.2	58.8	1.00E-05	T480	0.329		
PMY	8.000	179.2	-72.7	206.8	-51.6	206.8	179.2	-72.7	206.8	-51.6	206.8	-51.6	1.75E-06	-76.2	106.6	8.55E-06	T540	0.281		
PMY	8.000	197.3	-70.6	106.5	-58.1	106.5	197.3	-70.6	106.5	-58.1	106.5	-58.1	3.98E-06	-87.4	129.5	4.65E-06	T600	0.153		
PMY	8.000	183.6	-65.2	223.4	-74.7	223.4	183.6	-65.2	223.4	-74.7	223.4	-74.7	2.81E-06	-68.5	104.2	1.91E-06	T660	0.063		
PMY	8.000	209.2	-73.2	174.3	-58.4	174.3	209.2	-73.2	174.3	-58.4	174.3	-58.4								



Ratio plot is normalized. Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

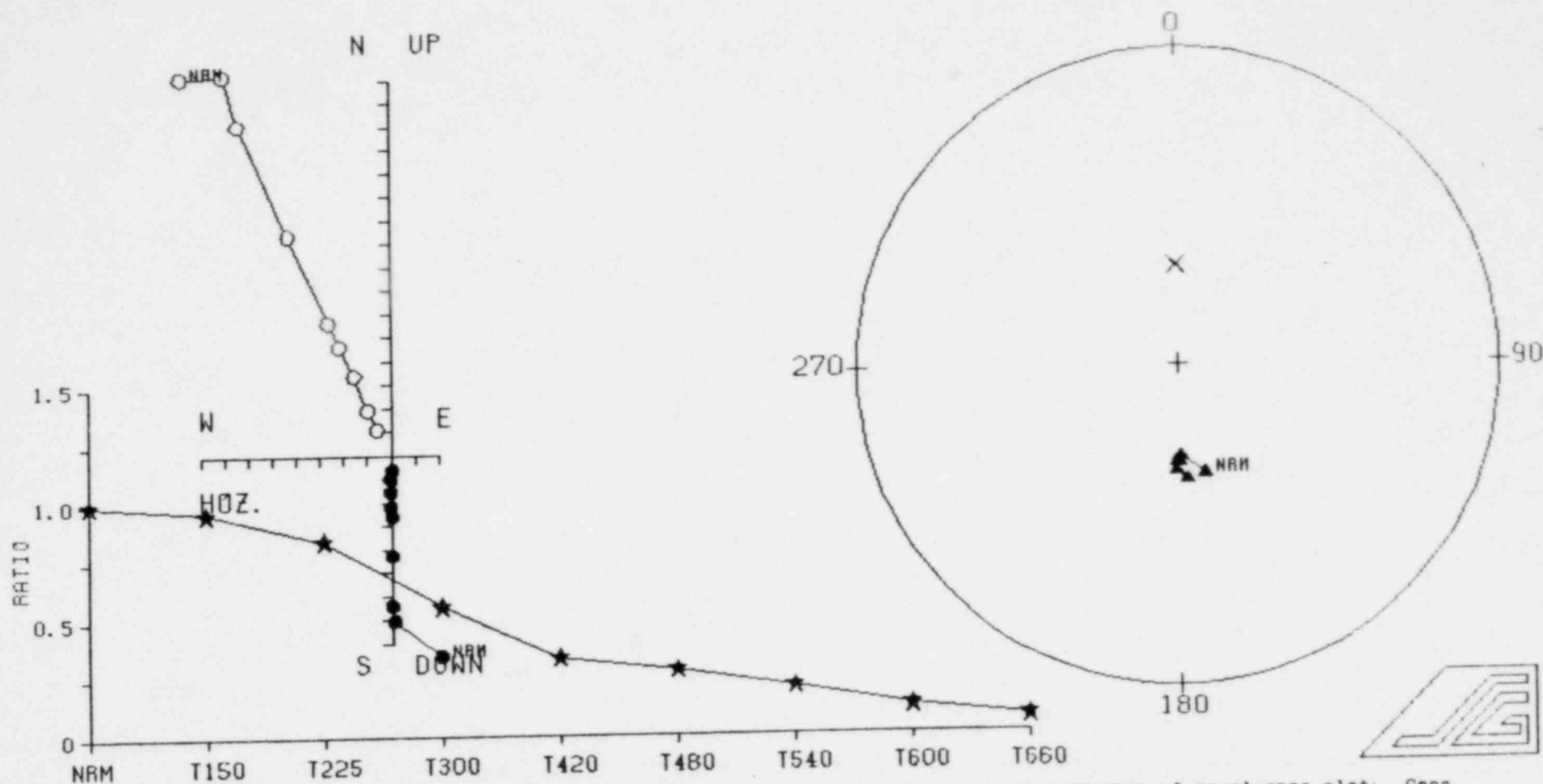
Locality: YAKIMA Site lat & long= 46.30 -119.20

10 Demag steps for this sample.

Interval= 0.000 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.870 AT NRM

	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CG
PMY	9.000	196.2	-49.5	0.0	0.0	0.0	0.00E-01	-69.7	-163.2	2.72E-05	NRM	1.000	6.25E-05	1.000
PMY	9.000	201.0	-55.6	95.2	74.8	95.2	5.84E-06	-71.3	176.4	3.19E-05	50G	1.173		
PMY	9.000	200.7	-56.2	207.6	-35.6	207.6	9.63E-07	-71.9	175.2	3.10E-05	100G	1.140		
PMY	9.000	199.9	-56.4	208.9	-33.7	199.9	2.61E-06	-72.5	176.0	2.84E-05	150G	1.044		
PMY	9.000	203.9	-55.9	183.9	-37.1	203.9	5.89E-06	-69.7	171.2	2.26E-05	250G	0.831		
PMY	9.000	203.5	-55.9	204.9	-35.9	203.5	6.60E-06	-69.9	171.6	1.60E-05	400G	0.588		
PMY	9.000	209.5	-52.4	160.2	-65.5	209.5	2.98E-06	-63.9	170.9	1.33E-05	550G	0.489		
PMY	9.000	209.5	-52.4	160.2	-65.5	209.5	2.53E-06	-72.9	173.7	1.13E-05	700G	0.415		
PMY	9.000	200.0	-57.2	235.4	-24.2	200.0	1.67E-06	-64.2	177.6	1.07E-05	850G	0.393		
PMY	9.000	207.0	-50.2	71.0	-49.9	207.0	3.20E-06	-73.0	156.5	8.05E-06	1000G	0.296		
PMY	9.000	203.1	-61.1	212.1	-21.5	203.1								



KIONA

LINES	SH#	TYPE	GDEC	GINC	SDEC	SINC	VLAT	VLONG	JH	DEMAG
PRK	1 000	LIN SEGM	356.6	55.4	356.6	55.4	79.3	75.4		SOG ORIGN
PRK	2 000	LIN SEGM	358.9	61.9	358.9	61.9	86.8	74.6		T150 ORIGN
PRK	3 000	LIN SEGM	2.0	69.5	2.0	69.5	83.0	-109.5		SOG ORIGN
PRK	4 000	LIN SEGM	3.9	62.3	3.9	62.3	86.1	13.8		T150 T540
PRK	5 000	LIN SEGM	8.3	67.5	8.3	67.5	83.1	-69.3		SOG ORIGN
PRK	6 000	LIN SEGM	353.4	65.5	353.4	65.5	85.3	169.7		T150 ORIGN
PRK	7 000	LIN SEGM	13.7	66.4	13.7	66.4	80.4	-50.3		SOG 700G
PRK	8 000	LIN SEGM	18.5	65.2	18.5	65.2	77.4	-40.7		T150 T540

**** STATISTICS ON LINE DATA ****

GEOGRAPHIC COORDINATES:

FISHER STATISTICS:
 N= 8 R= 7.9650 M.L.E. of kappa= 228.8 kappa= 200.2
 Alpha 95= 3.92 Circular stnd. dev.= 5.72
 Declination= 3.9 Inclination= 64.4
 Pole lat= 87.3 Pole long= -30.6 Paleolat= 46.3
 dp= 5.0 dm= 6.3 Oval azimuth= 91.7
 MOMENT OF INERTIA STATISTICS:
 N= 8 Eigenvalues= 0.017 0.053 7.933
 Uniform test statistic= 38.96 Data not random at 1% level.
 Pimroth-Watson K= -114.65
 H.L.E.'S of Bingham parameters: K1= -234.41 K2= -76.62
 Oval azimuth= 36.2
 Stnd. dev. angles = 2.66 4.66
 Confidence angles: A952= 2.30 A953= 4.04
 Declination= 4.0 Inclination= 64.4
 Pole lat= 87.3 Pole long= -30.9 Paleolat= 46.3
 Test statistics for circular symmetry: Bipolar= 2.80 Girdle= 301.78
 Test indicates symmetric bipolar dist. ALPHA= 3.17

STRATIGRAPHIC COORDINATES:

FISHER STATISTICS:
 N= 8 R= 7.9650 M.L.E. of kappa= 228.8 kappa= 200.2
 Alpha 95= 3.92 Circular stnd. dev.= 5.72
 Declination= 3.9 Inclination= 64.4
 Pole lat= 87.3 Pole long= -30.6 Paleolat= 46.3
 dp= 5.0 dm= 6.3 Oval azimuth= 91.7
 MOMENT OF INERTIA STATISTICS:
 N= 8 Eigenvalues= 0.017 0.053 7.930
 Uniform test statistic= 38.96 Data not random at 1% level.
 Pimroth-Watson K= -114.65
 H.L.E.'S of Bingham parameters: K1= -234.41 K2= -76.62
 Oval azimuth= 36.2
 Stnd. dev. angles = 2.66 4.66
 Confidence angles: A952= 2.30 A953= 4.04
 Declination= 4.0 Inclination= 64.4
 Pole lat= 87.3 Pole long= -30.9 Paleolat= 46.3
 Test statistics for circular symmetry: Bipolar= 2.80 Girdle= 301.78
 Test indicates symmetric bipolar dist. ALPHA= 3.17

VGP COORDINATES:

FISHER STATISTICS:

N= 8 R= 7.9325 M.L.E. of kappa= 118.5 kappa= 103.7
Alpha 95= 5.46 Circular std. dev.= 7.95
Pole lat= 87.1 Pole long= -36.0

MOMENT OF INERTIA STATISTICS:

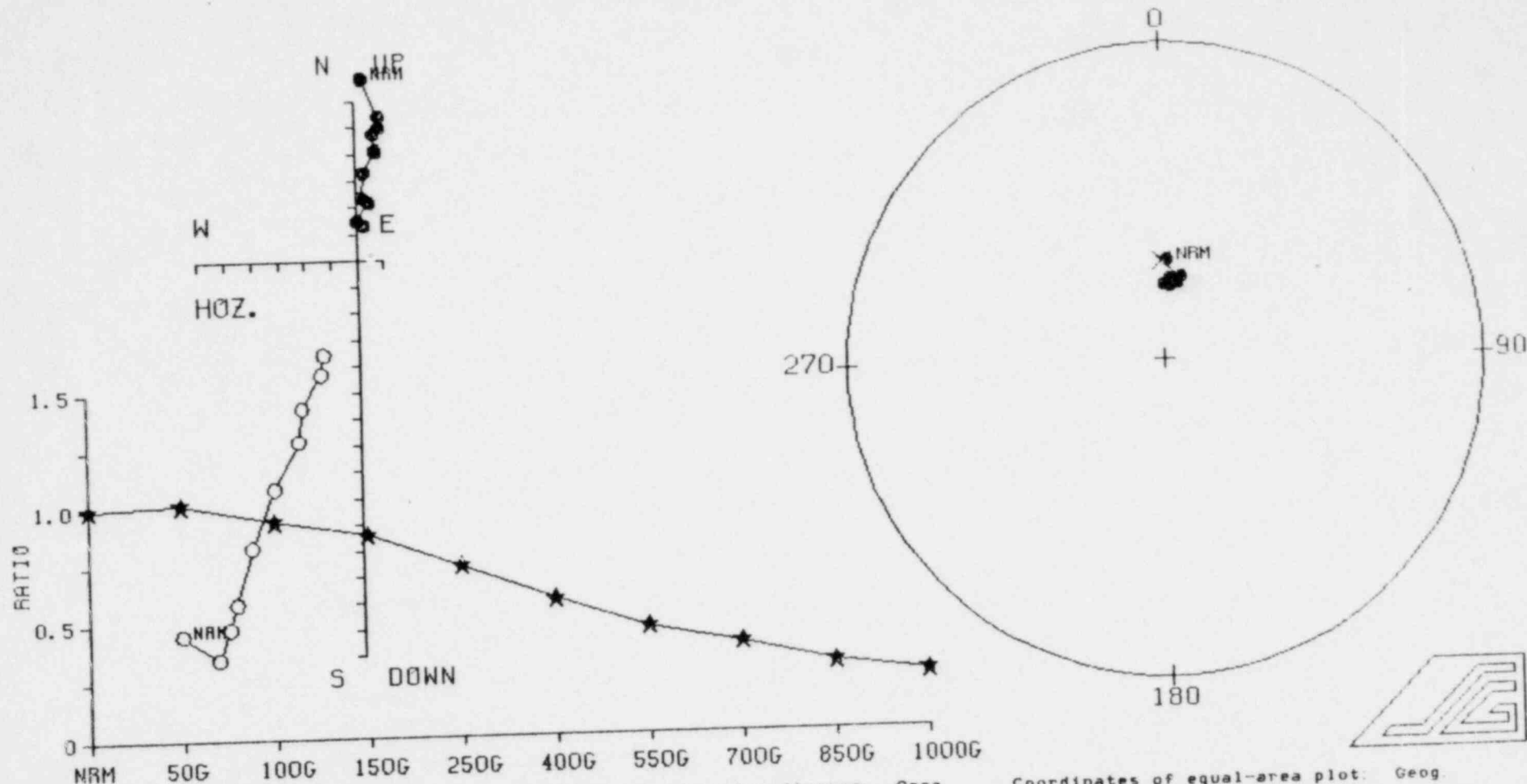
N= 8 Eigenvalues= 0.036 0.098 7.866
Uniform test statistic= 38.02 Data not random at 1% level.
Birnbaum-Watson K= -59.42
M.L.E.'S of Bingham parameters: K1= -110.83 K2= -41.40
Pole azimuth= 34.7

Std. dev. angles = 3.89 6.39

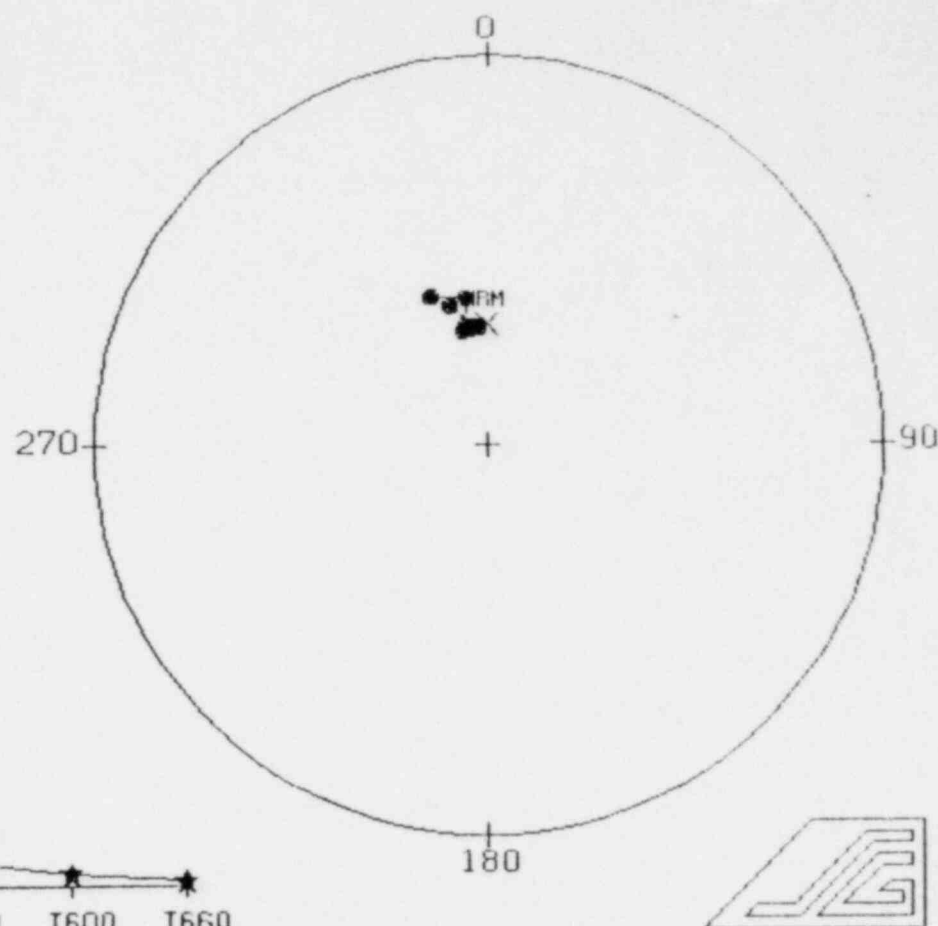
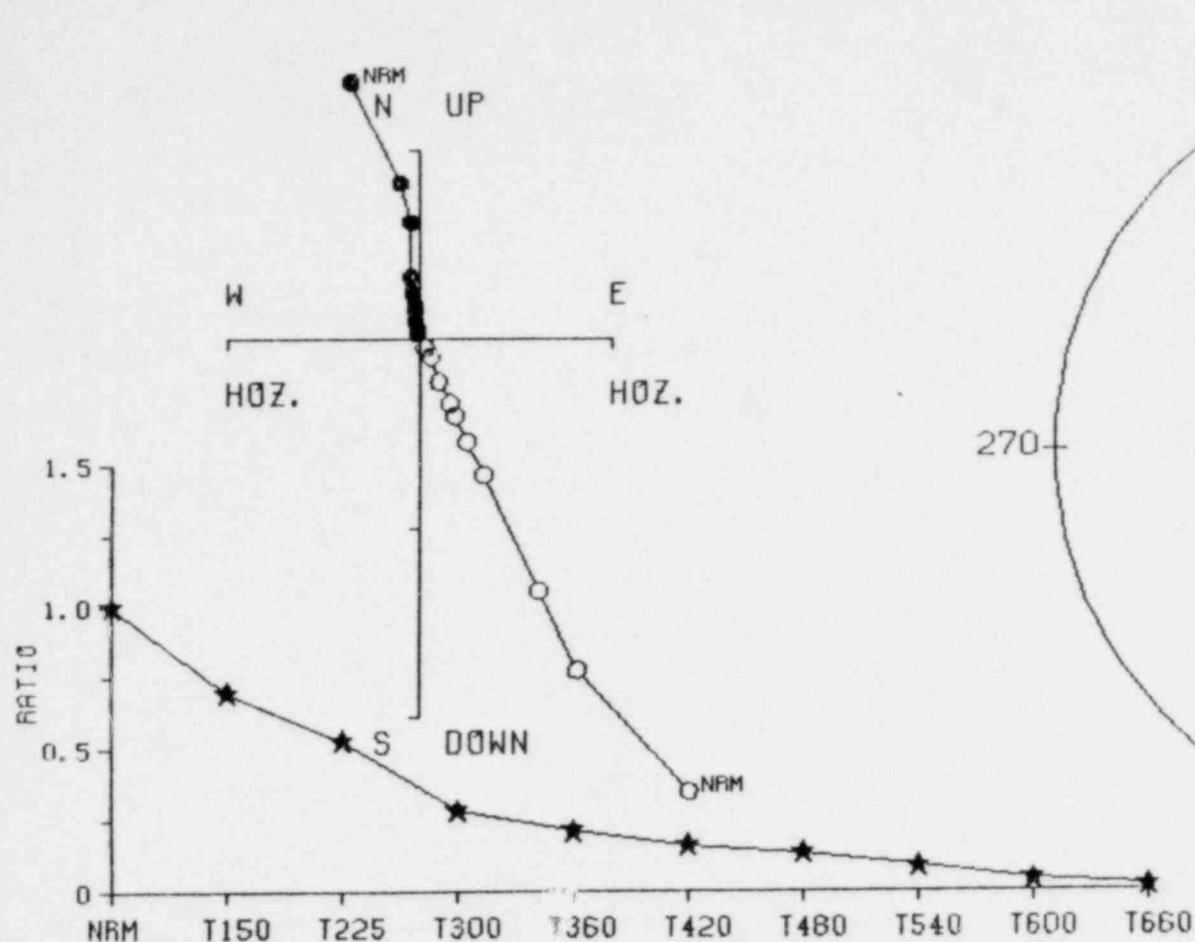
Confidence angles: A952= 3.37 A953= 5.53

Pole lat= 87.1 Pole long= -36.4

Test statistics for circular symmetry: Bipolar= 2.14 Girdle= 160.82
Test indicates symmetric bipolar dist. ALPHA= 4.45



	Dec	S	Inc	S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
TK	1.000	2.3	64.2	0.0	0.0	0.0	0.00E-01	88.4	-20.0	1.57E-04	NRM	1.000	8.82E-05	1.000
TK	1.000	9.7	70.0	335.7	-29.8	1.81E-05	80.1	-84.0	1.60E-04	50G	1.019			
TK	1.000	10.2	70.0	3.6	69.9	1.20E-05	79.9	-82.8	1.48E-04	100G	0.943			
TK	1.000	8.5	69.7	37.4	72.1	1.01E-05	80.9	-85.6	1.38E-04	150G	0.879			
TK	1.000	10.4	69.0	356.2	73.0	2.21E-05	80.8	-76.0	1.16E-04	250G	0.739			
TK	1.000	4.8	69.0	30.9	67.3	2.40E-05	83.0	-94.9	9.23E-05	400G	0.588			
TK	1.000	5.4	71.0	3.3	61.9	2.03E-05	80.2	-101.2	7.22E-05	550G	0.460			
TK	1.000	12.0	68.2	302.9	76.9	1.28E-05	80.6	-66.7	6.01E-05	700G	0.383			
TK	1.000	1.0	70.9	32.4	57.2	1.51E-05	81.0	-115.7	4.56E-05	850G	0.290			
TK	1.000	11.1	68.8	301.7	70.2	8.24E-06	80.7	-72.9	3.79E-05	1000G	0.241			



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

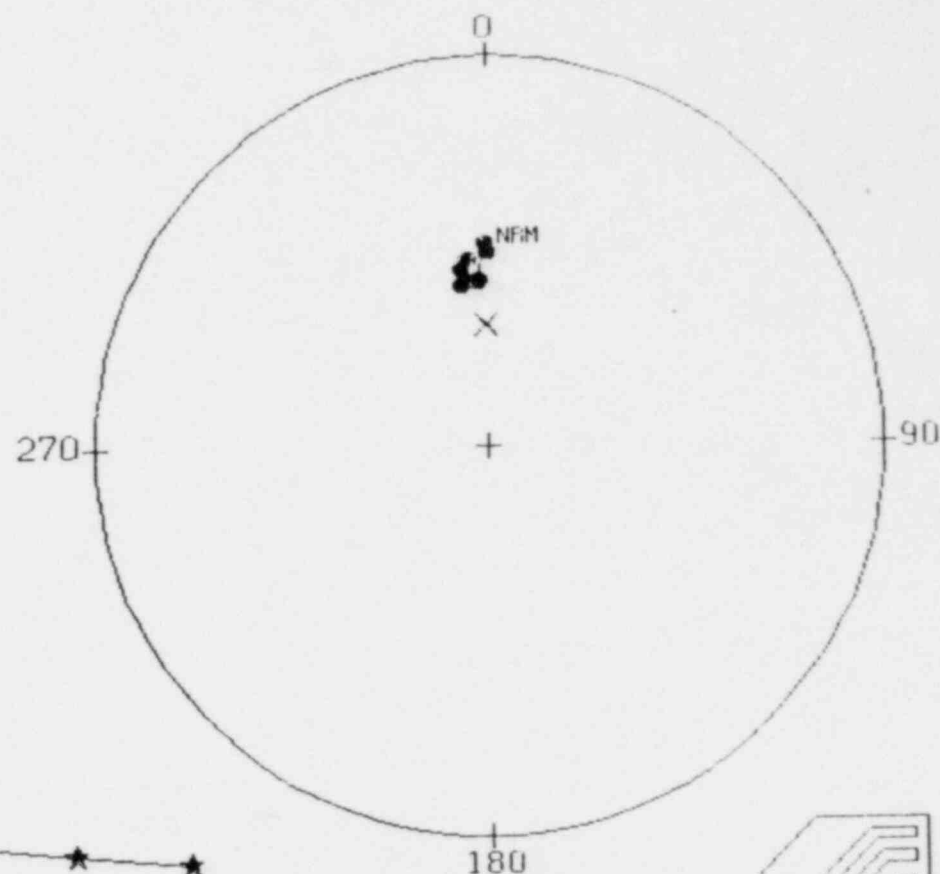
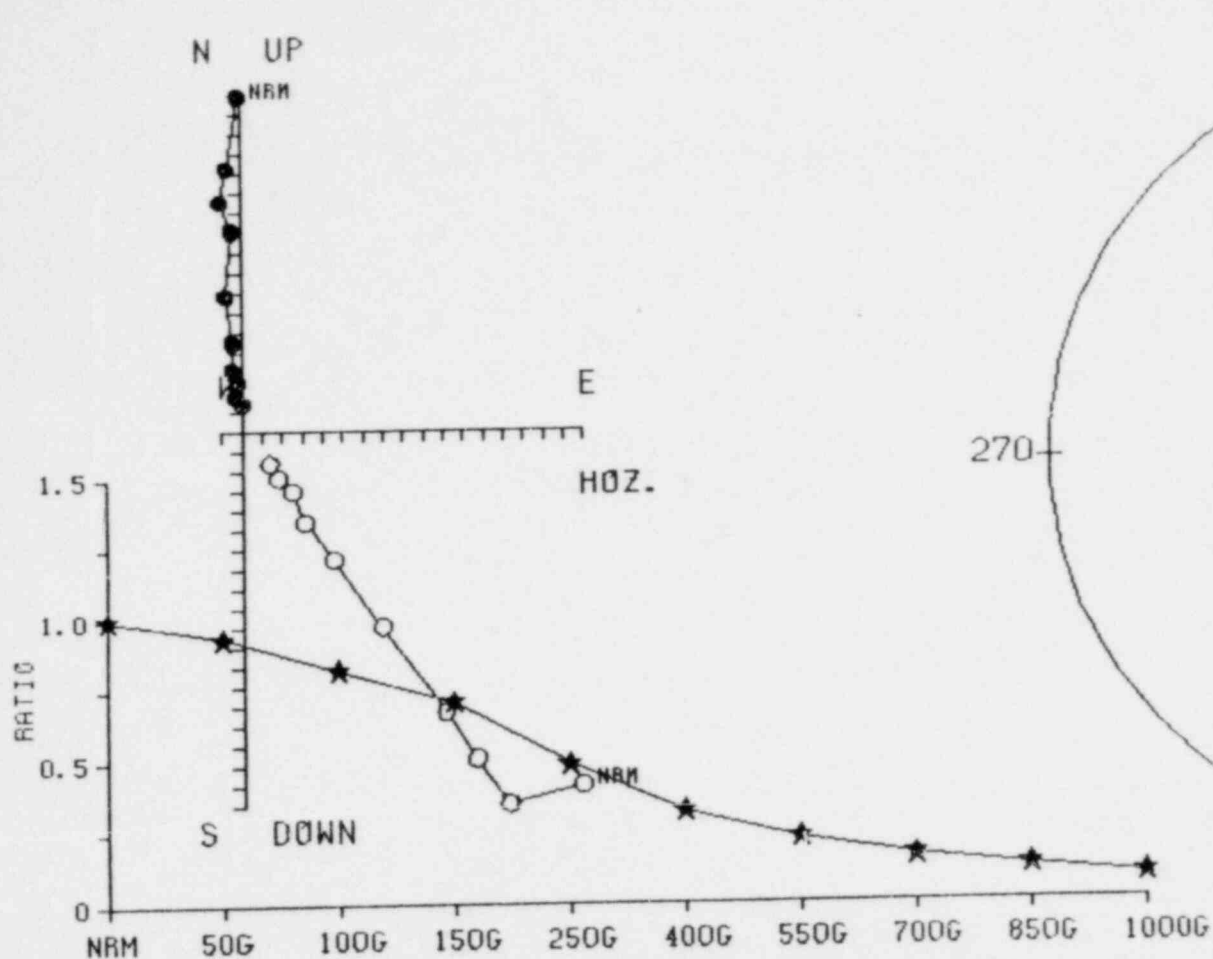
Locality: KIDNA Site lat & long= 46.30 -119.50

10 Demag steps for this sample.

Interval= 2.000 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 2.973 AT NRM

TK	SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
TK	2.000	345.3	59.6	0.0	345.3	59.6	0.0	0.00E-01	77.8	126.8	2.78E-04	NRM	1.000	1.87E-04	1.000
TK	2.000	352.9	64.8	334.8	352.9	64.8	334.8	8.78E-05	85.1	158.4	1.94E-04	T150	0.698		
TK	2.000	355.9	65.1	344.0	355.9	65.1	344.0	4.72E-05	87.1	168.9	1.47E-04	T225	0.529		
TK	2.000	352.6	65.2	359.7	352.6	65.2	359.7	6.81E-05	84.9	163.4	7.90E-05	T300	0.284		
TK	2.000	351.9	65.4	355.9	351.9	65.4	355.9	1.94E-05	84.1	164.8	5.96E-05	T360	0.214		
TK	2.000	351.9	65.3	350.3	351.9	65.3	350.3	1.47E-05	84.4	164.6	4.49E-05	T420	0.162		
TK	2.000	349.7	64.6	4.4	349.7	64.6	4.4	7.65E-06	82.9	155.7	3.73E-05	T480	0.134		
TK	2.000	347.9	65.6	352.8	347.9	65.6	352.8	1.28E-05	81.6	165.0	2.45E-05	T540	0.088		
TK	2.000	351.7	58.7	342.9	351.7	58.7	342.9	1.36E-05	80.8	105.0	1.11E-05	T600	0.040		
TK	2.000	339.2	56.5	3.3	339.2	56.5	3.3	6.02E-06	72.0	126.9	5.15E-06	T660	0.019		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

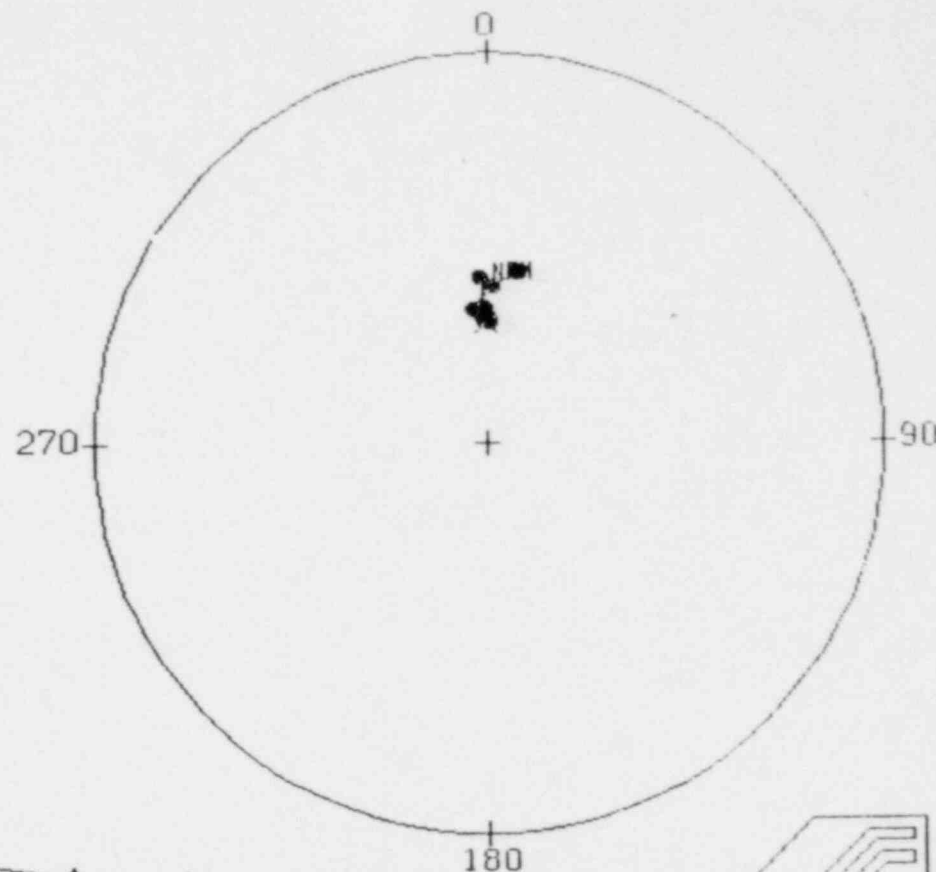
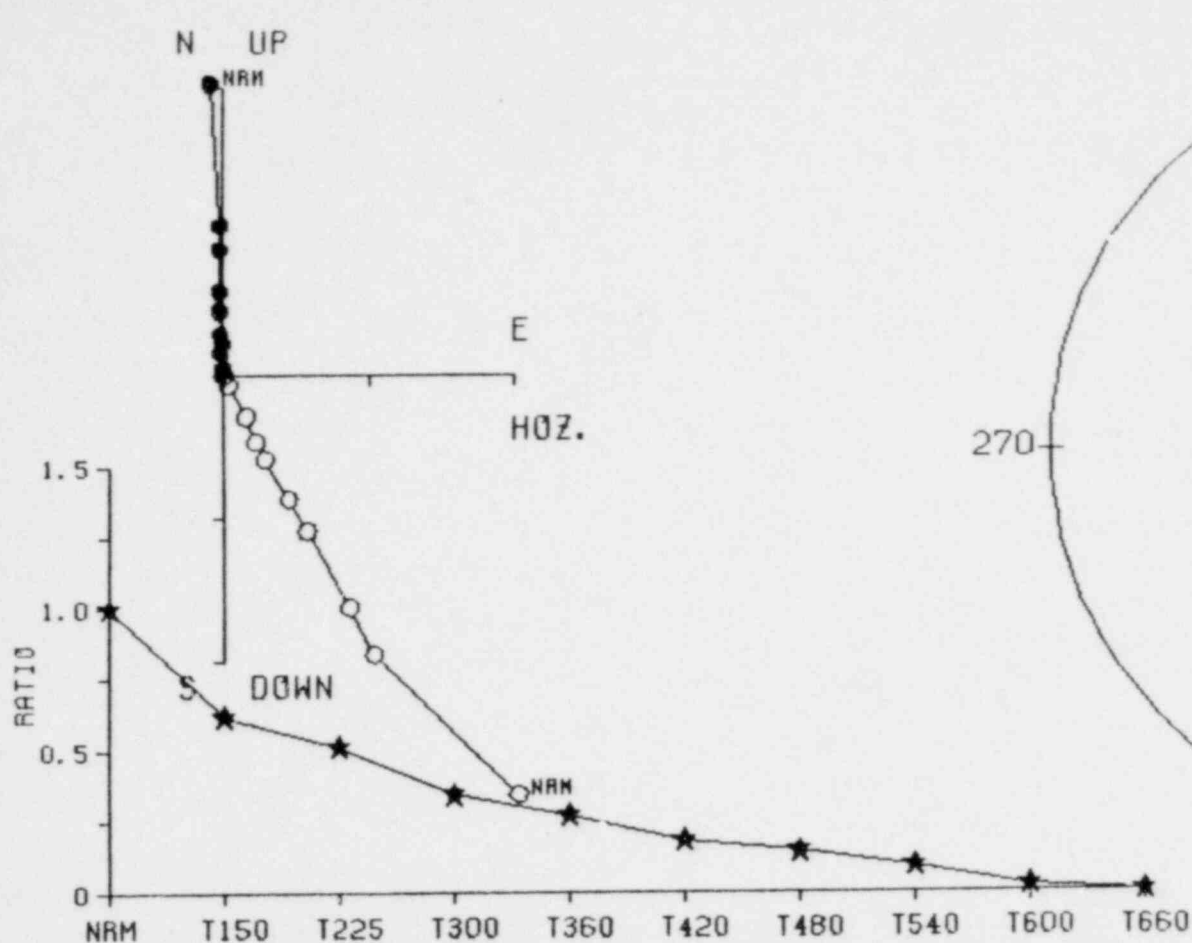
Locality: KIONA Site lat & long= 46.30 -119.50

10 Demag steps for this sample.

Interval= 10.000 Strike & dip of bedding= 0.0 0.0

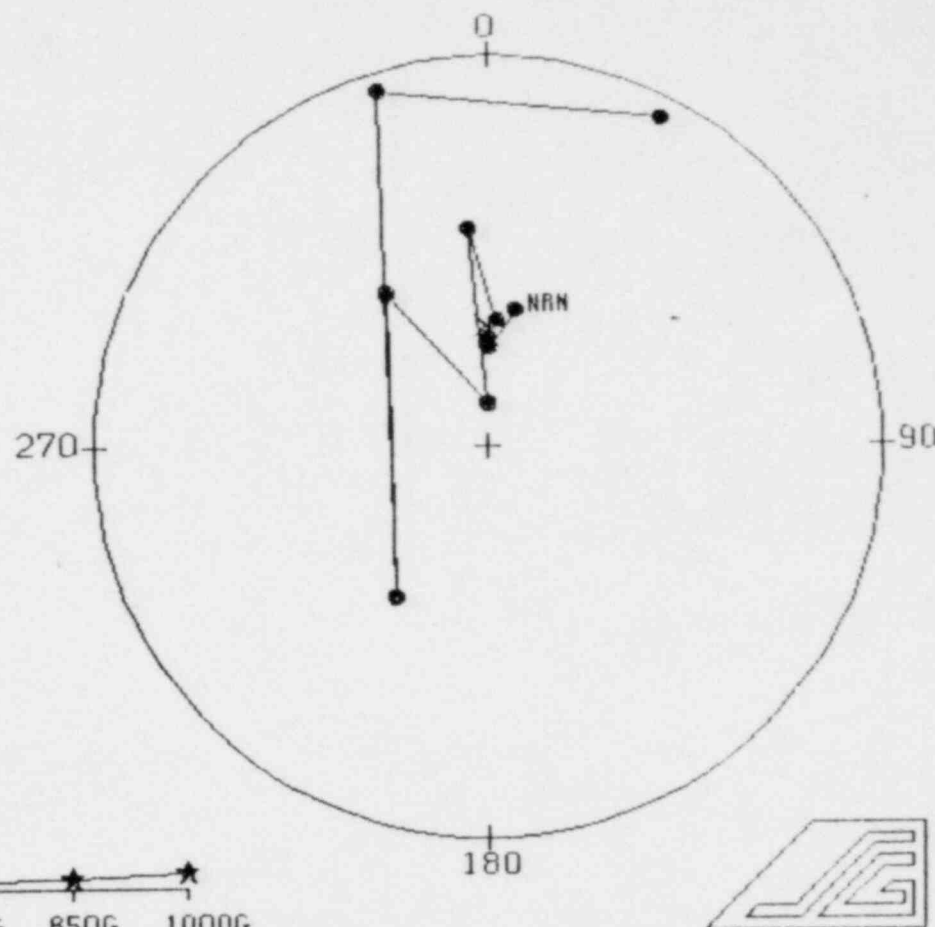
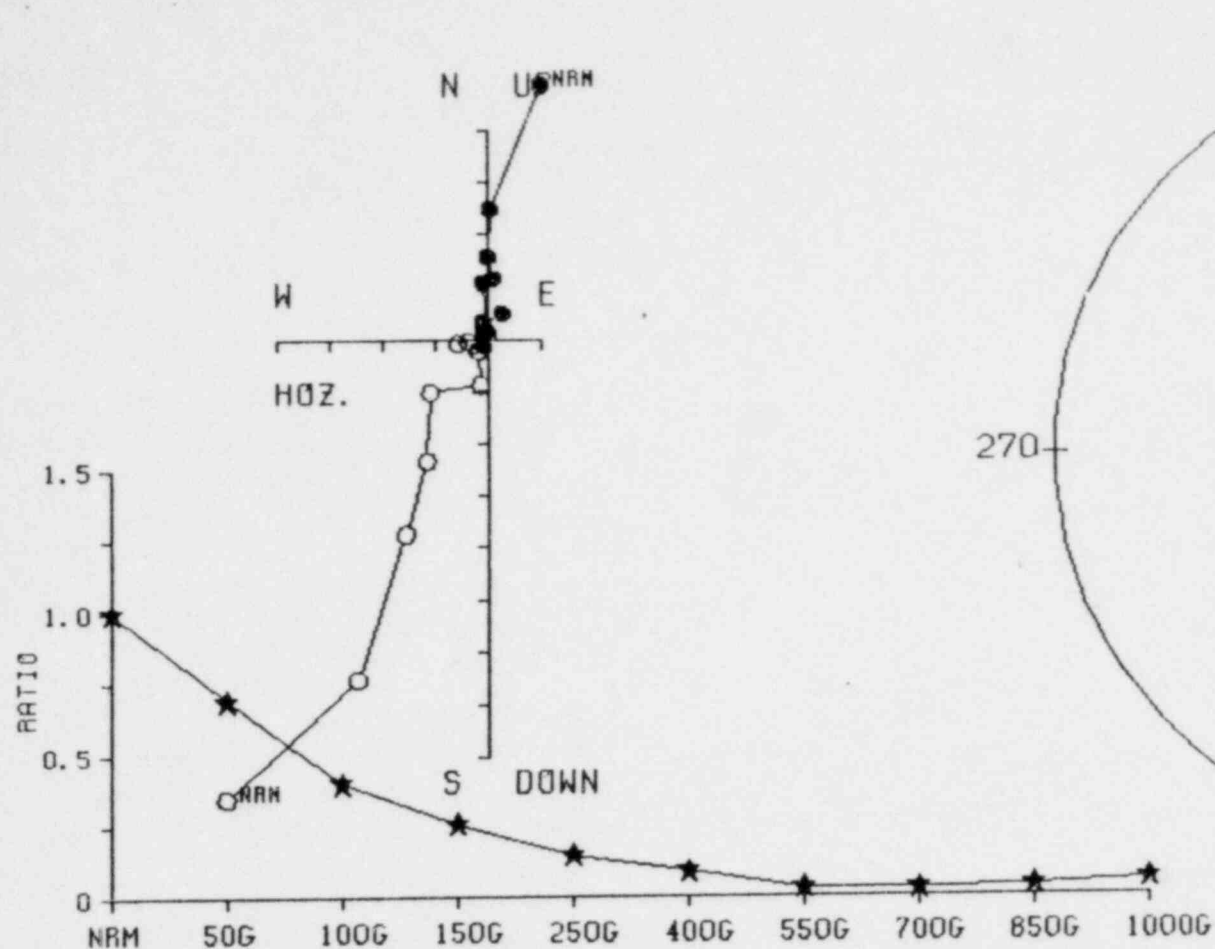
Koenigsberger ratio = 2.266 AT NRM

PMK	1.000	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMK	1.000	359.6	46.8	0.0	359.6	46.8	0.0	0.00E-01	71.7	61.7	2.47E-04	NRM	1.000	2.18E-04	1.000
PMK	1.000	356.9	55.0	9.2	356.9	55.0	9.2	3.84E-05	79.0	73.9	2.31E-04	50G	0.935		
PMK	1.000	354.9	55.1	10.8	354.9	55.1	10.8	2.83E-05	78.7	82.2	2.03E-04	100G	0.822		
PMK	1.000	357.5	54.7	338.0	357.5	54.7	338.0	2.85E-05	78.7	71.1	1.75E-04	150G	0.709		
PMK	1.000	353.8	55.1	5.4	353.8	55.1	5.4	5.43E-05	78.4	86.2	1.21E-04	250G	0.490		
PMK	1.000	353.8	55.1	353.8	353.8	55.1	353.8	4.19E-05	78.3	86.3	7.91E-05	400G	0.320		
PMK	1.000	351.2	55.7	359.6	351.2	55.7	359.6	2.35E-05	78.0	96.9	5.57E-05	550G	0.226		
PMK	1.000	354.3	50.3	339.5	354.3	50.3	339.5	1.73E-05	74.2	78.6	3.90E-05	700G	0.158		
PMK	1.000	351.6	52.3	1.4	351.6	52.3	1.4	9.53E-06	75.1	89.1	2.96E-05	850G	0.120		
PMK	1.000	0.1	48.8	327.2	0.1	48.8	327.2	9.14E-06	73.4	60.3	2.09E-05	1000G	0.085		

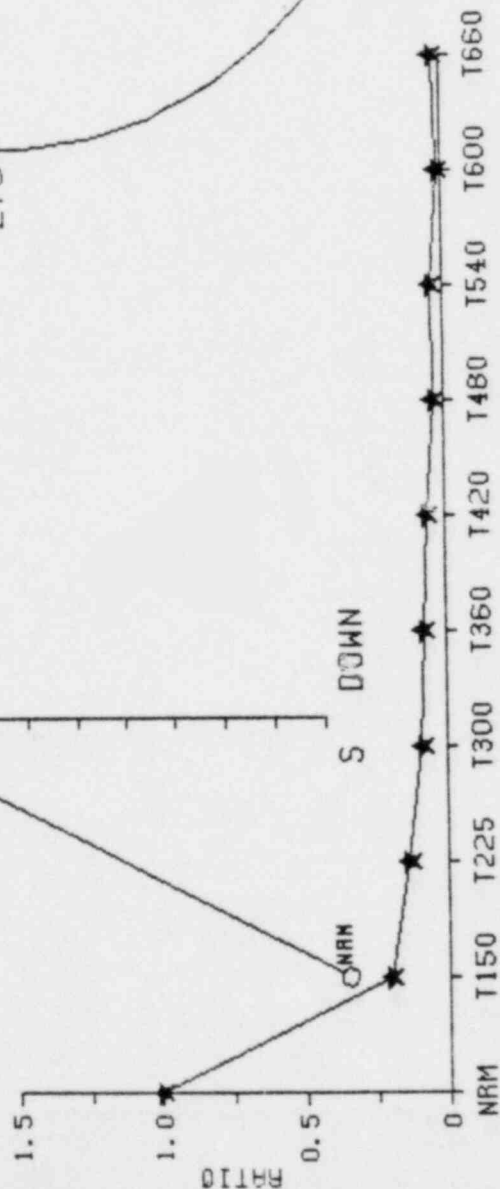
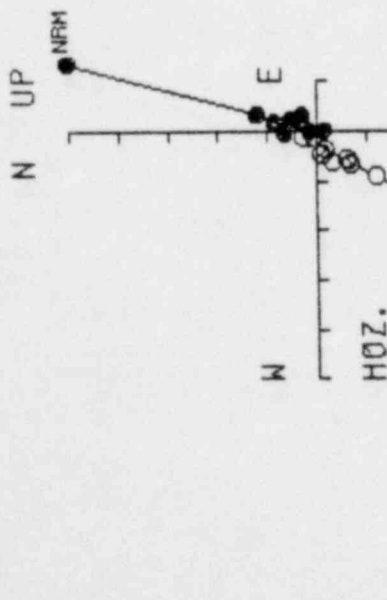
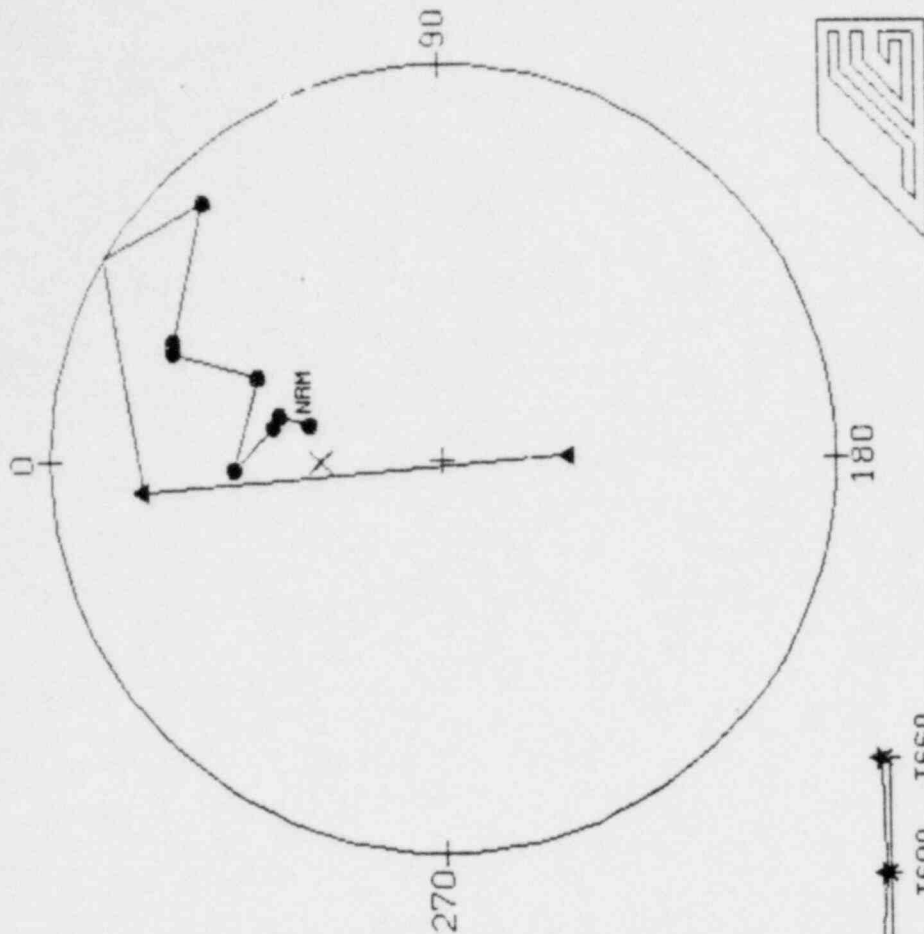


Ratio plot is normalized: Intensity
 Locality: KIONA Site lat & long= 46.30 -119.50
 10 Demag steps for this sample.
 Interval= 0.700 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 1.859 AT NRM

	Dec	Inc	Diff	vect	Dec	Inc	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/J0	Chi	C/CO
PMK	22.000	357.5	55.2	0.0	0.0	357.5	55.2	0.0	0.0	0.00E-01	79.3	71.4	3.56E-04	NRM	1.000	3.83E-04
PMK	22.000	359.2	62.0	355.7	44.3	359.2	62.0	355.7	44.3	1.39E-04	86.9	71.0	2.21E-04	T150	0.621	
PMK	22.000	358.7	61.8	1.8	63.0	358.7	61.8	1.8	63.0	3.70E-05	86.6	76.6	1.84E-04	T225	0.517	
PMK	22.000	358.0	62.0	0.1	61.4	358.0	62.0	0.1	61.4	6.10E-05	86.6	86.3	1.23E-04	T300	0.346	
PMK	22.000	357.6	62.6	359.4	59.7	357.6	62.6	359.4	59.7	2.57E-05	87.1	97.2	9.73E-05	T360	0.273	
PMK	22.000	357.5	63.6	357.8	60.6	357.5	63.6	357.8	60.6	3.24E-05	87.9	119.4	6.49E-05	T420	0.182	
PMK	22.000	0.7	64.4	347.1	60.0	0.7	64.4	347.1	60.0	1.37E-05	89.5	-16.4	5.13E-05	T480	0.144	
PMK	22.000	354.1	61.8	15.3	68.0	354.1	61.8	15.3	68.0	1.88E-05	84.6	113.9	3.27E-05	T540	0.092	
PMK	22.000	1.8	56.8	350.9	63.4	1.8	56.8	350.9	63.4	2.44E-05	81.0	51.2	8.35E-06	T600	0.023	
PMK	22.000	10.0	53.5	0.4	57.3	10.0	53.5	0.4	57.3	7.20E-06	75.6	25.2	1.16E-06	T660	0.003	

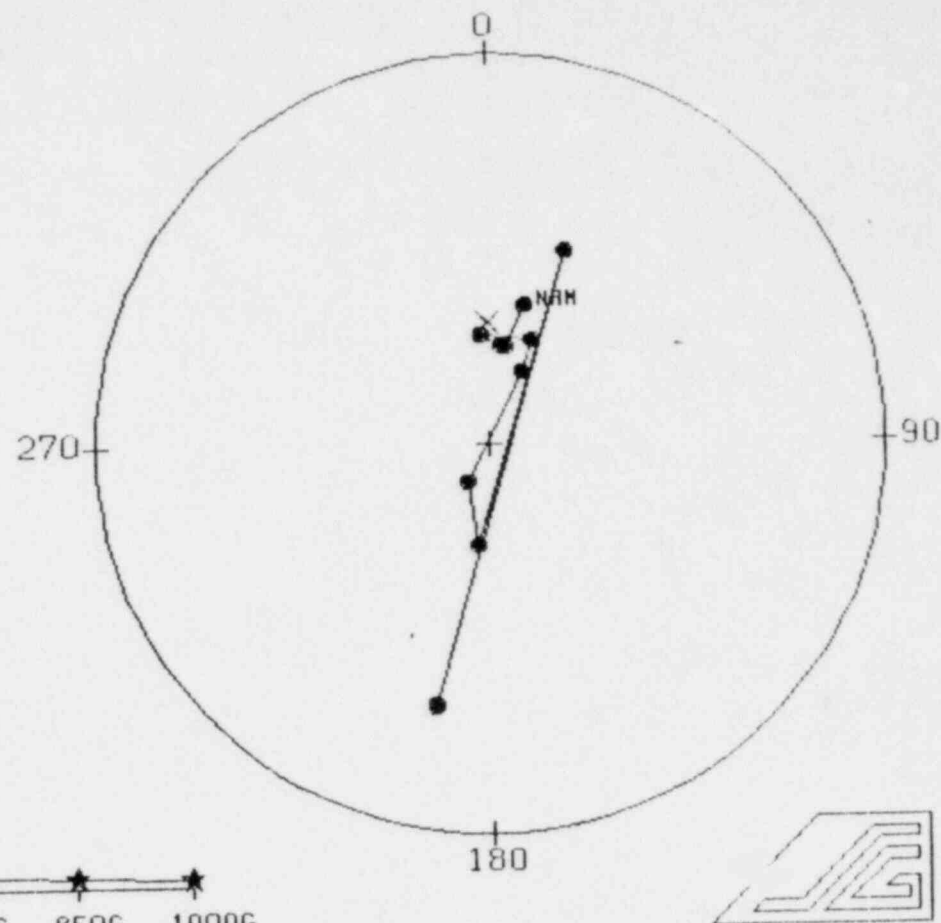


Ratio plot is normalized: Intensity.										Coordinates of vector diagram: Geog.				Coordinates of equal-area plot: Geog.									
Locality: KIONA Site lat & long=										46.30 -119.50													
10 Demag steps for this sample.																							
Interval= 3.000 Strike & dip of bedding=										0.0 0.0													
Koenigsberger ratio = 0.484 AT NRM																							
SM#																							
		Dec	Q	Inc	Q	Diff	vect			Dec	S	Inc	S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMK	3.000	11.6	60.6	0.0	0.0	0.0	0.0	11.6	60.6	0.0	0.0	0.0	0.0	0.00E-01	80.4	-4.5	1.01E-04	NRM	1.000	4.17E-04	1.000		
PMK	3.000	0.8	69.2	22.0	41.6	0.8	69.2	22.0	41.6	3.43E-05	83.6	-115.2	6.98E-05	50G	0.691								
PMK	3.000	359.7	67.3	2.7	71.8	359.7	67.3	2.7	71.8	2.94E-05	86.2	-122.2	4.05E-05	100G	0.401								
PMK	3.000	4.5	63.3	345.7	73.9	4.5	63.3	345.7	73.9	1.46E-05	86.5	-5.5	2.61E-05	150G	0.258								
PMK	3.000	355.1	43.2	66.8	81.2	355.1	43.2	66.8	81.2	1.32E-05	68.5	72.8	1.50E-05	250G	0.149								
PMK	3.000	1.5	81.0	354.2	8.2	1.5	81.0	354.2	8.2	9.64E-06	63.8	-118.5	7.00E-06	400G	0.085								
PMK	3.000	327.0	51.1	97.4	81.0	327.0	51.1	97.4	81.0	6.69E-06	60.9	132.4	2.93E-06	550G	0.029								
PMK	3.000	210.9	53.0	356.3	3.5	210.9	53.0	356.3	3.5	2.91E-06	-5.5	-144.9	2.63E-06	700G	0.026								
PMK	3.000	343.1	5.2	177.1	20.0	343.1	5.2	177.1	20.0	5.16E-06	43.9	84.2	3.66E-06	850G	0.036								
PMK	3.000	27.7	6.1	246.7	-4.0	27.7	6.1	246.7	-4.0	4.08E-06	40.5	22.9	5.79E-06	1000G	0.057								

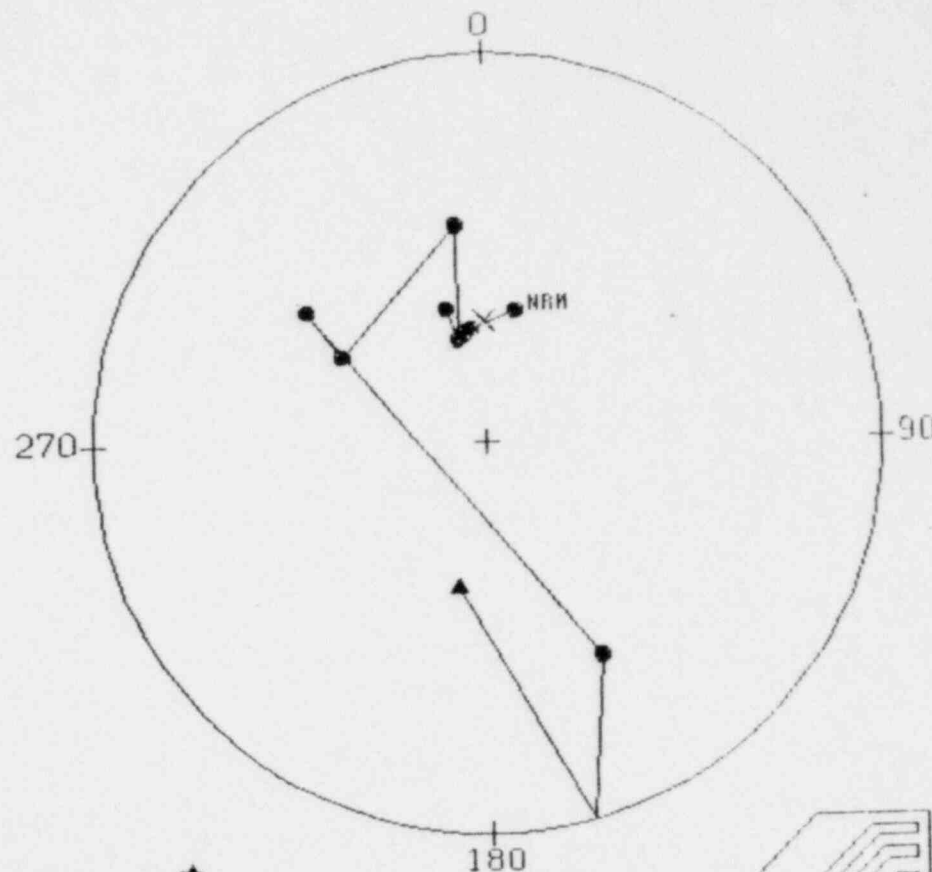
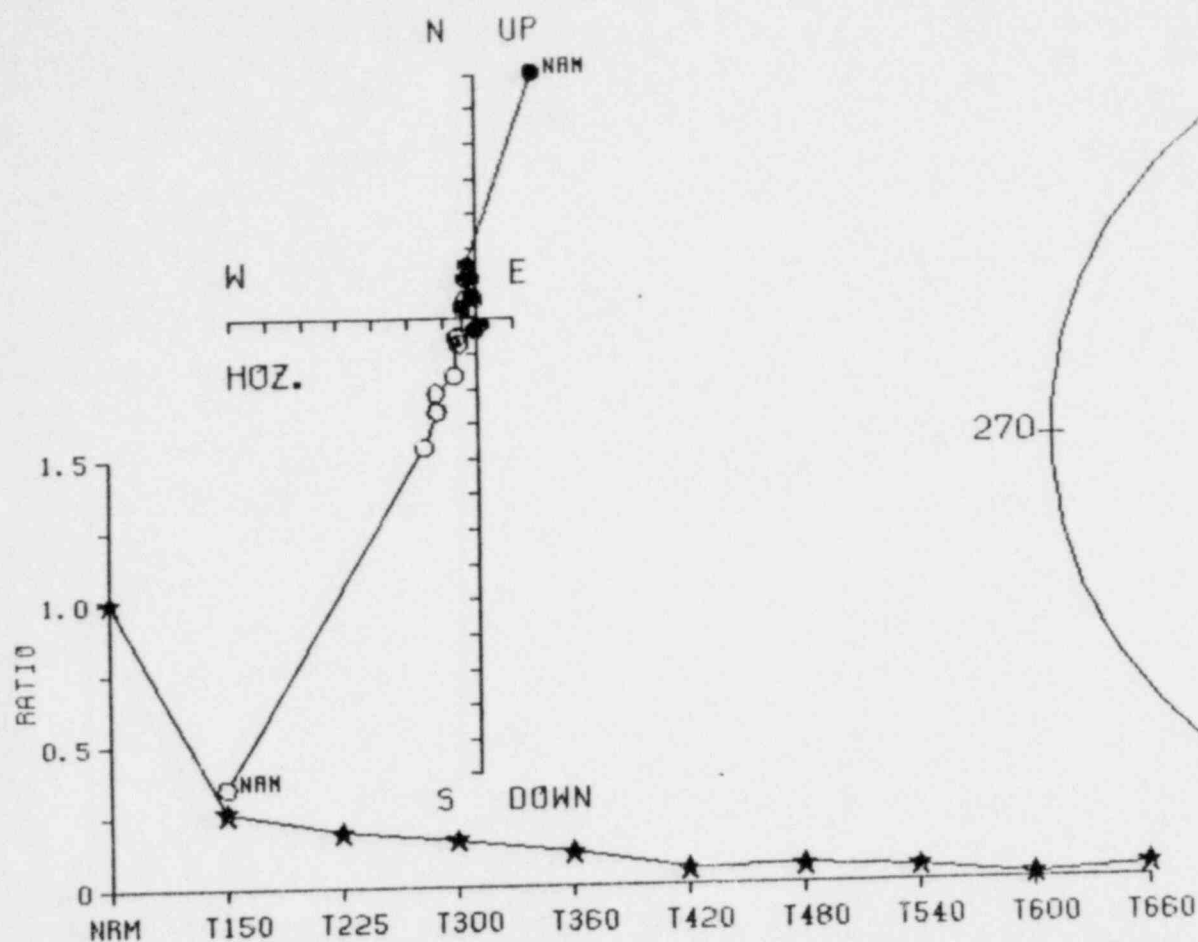


Ratio plot is normalized to 1.0 at 1150 SM. Localities: KIDNA, 10 Demag. steps for this sample. Interval: 1000 SM. Koenigsberger ratio = 0.000. Strike & dip of bedding = 0.0 0.0.

SM	Dec	Inc	Diff	Diff vect	Dec S	Inc S	Diff S	Diff vect S	JDiff	V lat	V long	Intensity	demag	JH/J0	Chi	C/CO
PMK	4.000	15.4	0.0	0.0	15.4	0.0	0.0	0.0	0.00E-01	78.5	-13.2	1.08E-04	NRM	1.000	3.90E-04	1.000
PMK	4.000	15.4	0.0	0.0	15.4	0.0	0.0	0.0	8.65E-05	73.8	22.0	2.17E-03	T150	0.201		
PMK	4.000	15.4	0.0	0.0	15.4	0.0	0.0	0.0	6.85E-05	73.2	22.0	1.49E-03	T225	0.138		
PMK	4.000	15.4	0.0	0.0	15.4	0.0	0.0	0.0	6.03E-05	70.6	22.0	9.39E-06	T300	0.087		
PMK	4.000	15.4	0.0	0.0	15.4	0.0	0.0	0.0	5.99E-05	64.0	22.0	8.41E-06	T360	0.078		
PMK	4.000	15.4	0.0	0.0	15.4	0.0	0.0	0.0	5.13E-05	53.2	22.0	8.41E-06	T420	0.062		
PMK	4.000	15.4	0.0	0.0	15.4	0.0	0.0	0.0	5.13E-05	53.2	22.0	8.41E-06	T480	0.042		
PMK	4.000	15.4	0.0	0.0	15.4	0.0	0.0	0.0	5.13E-05	53.2	22.0	8.41E-06	T540	0.042		
PMK	4.000	15.4	0.0	0.0	15.4	0.0	0.0	0.0	5.13E-05	53.2	22.0	8.41E-06	T600	0.015		
PMK	4.000	15.4	0.0	0.0	15.4	0.0	0.0	0.0	5.13E-05	53.2	22.0	8.41E-06	T660	0.029		



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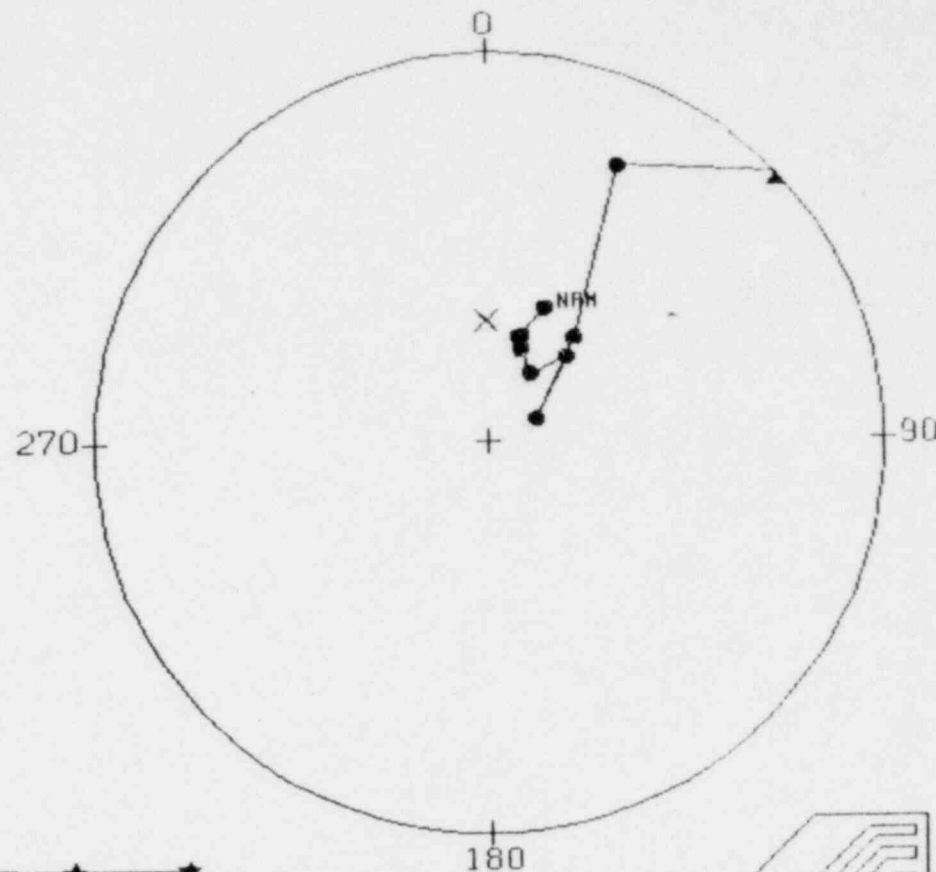
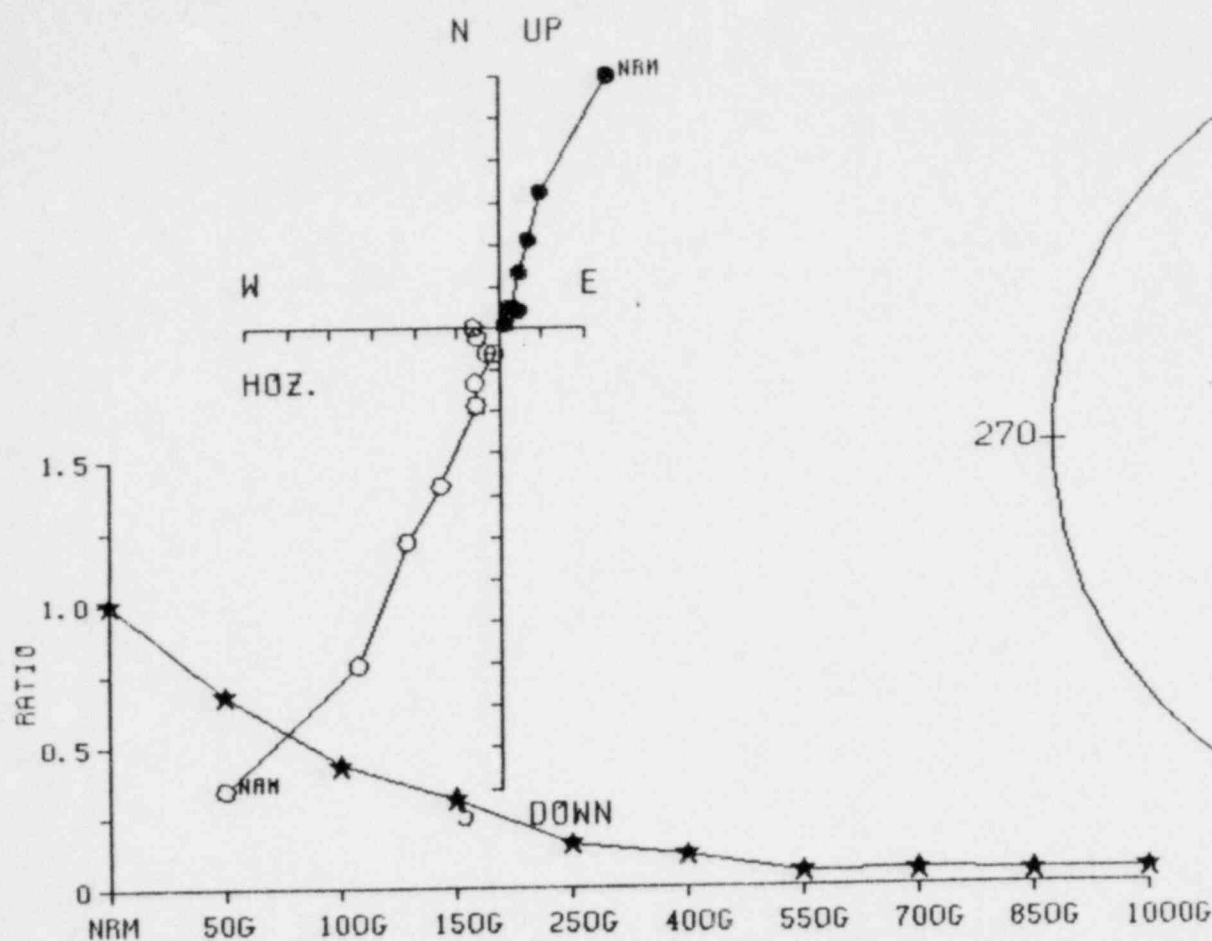
Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: KIONA Site lat & long= 46.30 -119.50

10 Demag steps for this sample. Interval= 0.000 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.539 AT NRM

SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMK	6.000	12.9	61.6	0.0	0.0	0.0	0.00E-01	80.2	-12.9	1.52E-04	NRM	1.000	5.64E-04	1.000
PMK	6.000	349.5	66.9	19.0	59.0	349.5	1.13E-04	82.3	179.1	3.99E-05	T150	0.262		
PMK	6.000	353.4	66.2	338.0	68.3	353.4	1.08E-05	85.0	179.3	2.91E-05	T225	0.191		
PMK	6.000	343.8	60.9	80.8	69.9	343.8	5.74E-06	77.6	135.8	2.43E-05	T300	0.160		
PMK	6.000	345.6	68.0	341.5	43.2	345.6	7.18E-06	79.4	-177.6	1.76E-05	T360	0.116		
PMK	6.000	352.4	43.2	303.7	84.5	352.4	1.09E-05	68.0	79.2	8.04E-06	T420	0.053		
PMK	6.000	300.9	54.9	49.3	-21.0	300.9	5.18E-06	45.1	158.5	9.00E-06	T480	0.059		
PMK	6.000	306.5	42.9	195.9	77.3	306.5	2.46E-06	42.6	142.8	7.29E-06	T540	0.048		
PMK	6.000	152.4	38.5	313.6	24.8	152.4	7.96E-06	-17.6	-92.6	2.60E-06	T600	0.017		
PMK	6.000	191.3	-59.0	47.3	73.2	191.3	7.50E-06	-79.4	-175.1	6.49E-06	T660	0.043		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

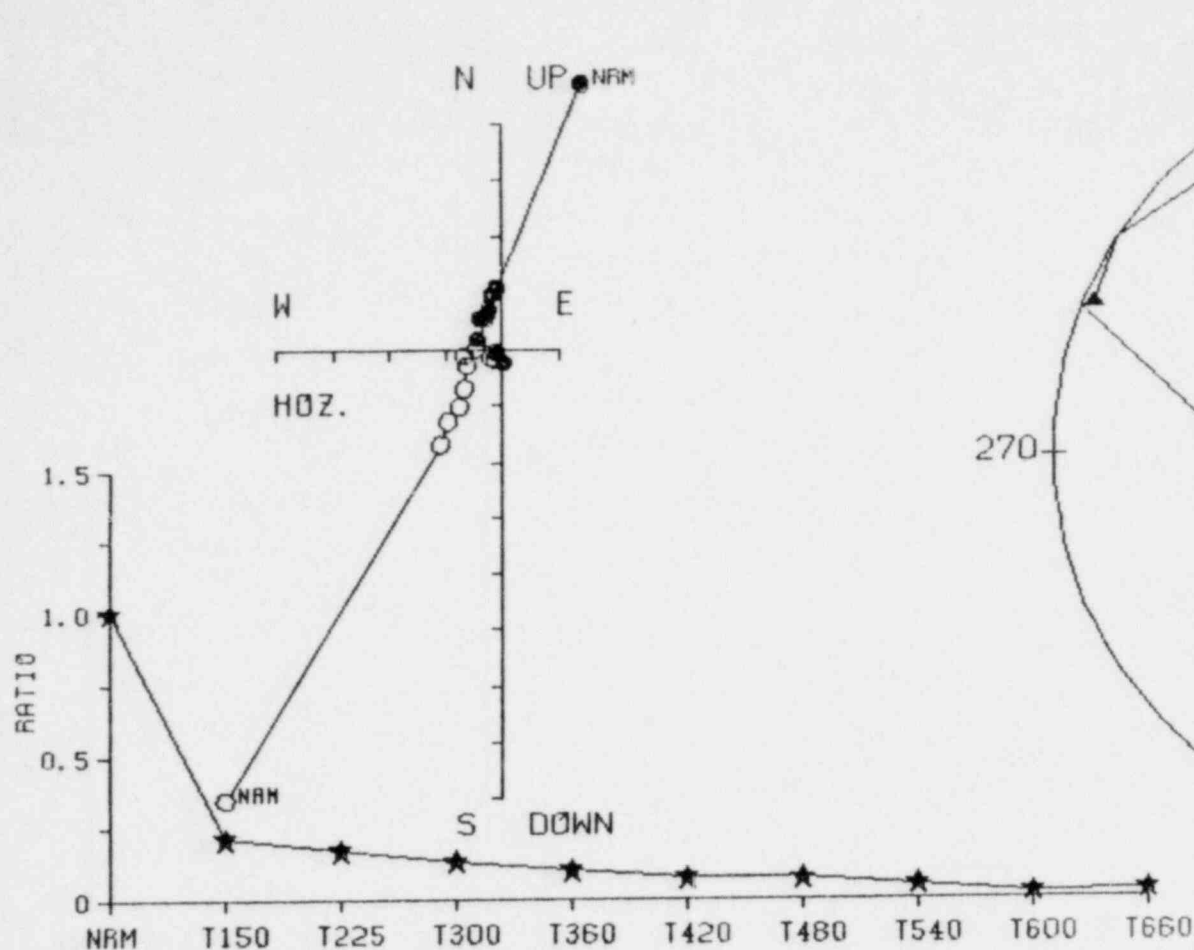
Locality: KIONA Site lat & long= 46.30 -119.50

10 Demag steps for this sample.

Interval= 2.400 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.631 At NRM

	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMK	7.000	22.9	59.4	0.0	0.0	0.0	0.00E-01	72.3	-17.7	1.28E-04	NRM	1.000	4.06E-04	1.000
PMK	7.000	16.5	67.2	29.7	43.2	4.37E-05	78.4	-54.1	8.71E-05	50G	0.680			
PMK	7.000	17.7	66.6	14.2	68.2	3.14E-05	77.8	-49.6	5.57E-05	100G	0.435			
PMK	7.000	19.7	69.5	14.2	58.9	1.55E-05	75.6	-65.6	4.04E-05	150G	0.316			
PMK	7.000	31.6	73.3	12.1	65.5	2.11E-05	67.3	-75.2	1.95E-05	250G	0.152			
PMK	7.000	42.7	66.0	296.3	78.7	5.73E-06	61.4	-49.3	1.43E-05	400G	0.112			
PMK	7.000	64.5	78.9	37.2	55.6	8.33E-06	51.4	-87.5	6.31E-06	550G	0.049			
PMK	7.000	39.6	61.9	205.9	5.1	2.17E-06	62.0	-37.5	6.80E-06	700G	0.053			
PMK	7.000	25.1	23.1	185.3	57.6	4.41E-06	49.7	20.6	5.79E-06	850G	0.043			
PMK	7.000	47.8	-1.5	287.0	45.5	3.41E-06	27.0	4.2	6.14E-06	1000G	0.048			



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: KIONA Site lat & long= 46.30 -119.50

10 Demag steps for this sample

Interval= 0.000 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.570 AT NRM

SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMK	8.000	16.4	58.6	0.0	0.0	0.0	0.00E-01	76.2	-5.2	9.40E-05	NRM	1.000	3.30E-04	1.000
PMK	8.000	353.7	56.7	22.7	58.4	353.7	7.45E-05	79.9	90.3	2.01E-05	T150	0.214		
PMK	8.000	347.8	52.6	32.7	67.8	347.8	4.25E-06	73.9	100.0	1.62E-05	T225	0.172		
PMK	8.000	341.5	53.3	7.7	47.7	341.5	3.63E-06	71.2	115.7	1.27E-05	T300	0.135		
PMK	8.000	322.7	45.6	43.3	52.7	322.7	4.10E-06	54.9	130.3	9.69E-06	T360	0.103		
PMK	8.000	331.4	24.2	254.8	75.3	331.4	4.16E-06	48.6	105.5	7.08E-06	T420	0.075		
PMK	8.000	334.7	8.7	197.4	73.5	334.7	1.93E-06	42.6	96.0	6.93E-06	T480	0.074		
PMK	8.000	293.3	-3.0	17.4	15.9	293.3	4.73E-06	14.7	132.2	4.68E-06	T540	0.050		
PMK	8.000	252.6	55.2	304.5	-26.2	252.6	4.32E-06	14.7	-172.7	2.02E-06	T600	0.021		
PMK	8.000	176.6	30.9	327.4	7.3	176.6	2.31E-06	-27.0	-115.8	2.66E-06	T660	0.028		

GRAVEL PIT

LINES:	SM#	TYPE	GDEC	GINC	SDEC	SINC	VLAT	VLONG	JH	DEMAG
PHGP	1.000	LIN SEGM	25.5	58.4	25.5	58.4	70.0	-17.3		50G ORIGN
PHGP	2.000	LIN SEGM	9.7	62.7	9.7	62.7	82.8	-14.8		T150 ORIGN
PHGP	3.000	LIN SEGM	38.6	76.0	38.6	76.0	62.6	-82.1		50G ORIGN
PHGP	4.000	LIN SEGM	2.3	59.2	2.3	59.2	83.5	45.0		T150 ORIGN
PHGP	5.000	LIN SEGM	3.7	63.1	3.7	63.1	86.9	2.7		50G ORIGN
PHGP	6.000	LIN SEGM	5.0	60.5	5.0	60.5	84.0	22.0		T150 ORIGN
PHGP	7.000	LIN SEGM	316.9	71.6	316.9	71.6	61.8	-172.5		50G ORIGN
PHGP	8.000	LIN SEGM	27.7	62.2	27.7	62.2	70.3	-31.1		T150 ORIGN
PHGP	9.000	LIN SEGM	11.0	62.2	11.0	62.2	81.7	-13.1		50G ORIGN
PHGP	10.000	LIN SEGM	355.6	63.6	355.6	63.6	86.7	133.9		T150 ORIGN

***** STATISTICS ON LINE DATA *****

GEOGRAPHIC COORDINATES:

FISHER STATISTICS:
N= 10 R= 9.8639 M.L.E. of kappa= 73.5 kappa= 66.1

Alpha 95= 5.98 Circular std. dev.= 9.95

Declination= 8.3 Inclination= 65.1

Pole lat= 84.2 Pole long= -40.2 Paleolat= 47.1

dp= 7.8 dm= 9.7 Oval azimuth= 85.1

MOMENT OF INERTIA STATISTICS:

N= 10 Eigenvalues= 0.096 0.172 9.733

Uniform test statistic= 46.07 Data not random at 1% level.

Dimroth-Watson K= -37.14

M.L.E.'s of Bingham parameters: K1= -52.82 K2= -29.62

Oval azimuth= 131.2

Std. dev. angles = 5.68 7.61

Confidence angles: A952= 4.39 A953= 5.89

Declination= 8.4 Inclination= 65.0

Pole lat= 84.2 Pole long= -38.9 Paleolat= 47.0

Test statistics for circular symmetry: Bipolar= 0.88 Girdle= 141.60

Test indicates symmetric bipolar dist. ALPHA= 5.14

STRATIGRAPHIC COORDINATES:

FISHER STATISTICS:
N= 10 R= 9.8639 M.L.E. of kappa= 73.5 kappa= 66.1

Alpha 95= 5.98 Circular std. dev.= 9.95

Declination= 8.3 Inclination= 65.1

Pole lat= 84.2 Pole long= -40.2 Paleolat= 47.1

dp= 7.8 dm= 9.7 Oval azimuth= 85.1

MOMENT OF INERTIA STATISTICS:

N= 10 Eigenvalues= 0.096 0.172 9.733

Uniform test statistic= 46.07 Data not random at 1% level.

Dimroth-Watson K= -37.14

M.L.E.'s of Bingham parameters: K1= -52.82 K2= -29.62

Oval azimuth= 131.2

Std. dev. angles = 5.68 7.61

Confidence angles: A952= 4.39 A953= 5.89

Declination= 8.4 Inclination= 65.0

Pole lat= 84.2 Pole long= -38.9 Paleolat= 47.0

Test statistics for circular symmetry: Bipolar= 0.88 Girdle= 141.60

Test indicates symmetric bipolar dist. ALPHA= 5.14

VCP COORDINATES

FISHER STATISTICS:

N= 10 R= 9.6647 M.L.E. of kappa= 29.8 kappa= 26.8
Alpha 95= 9.50 Circular std. dev.=15.64
Pole lat= 84.3 Pole long= -46.4

MOMENT OF INERTIA STATISTICS:

N= 10 Eigenvalues= 0.215 0.424 9.362
Uniform test statistic= 40.90 Data not random at 1% level.

Dimroth-Watson K= -16.25

M.L.E.'S of Bingham parameters: K1= -23.85 K2= -12.40

Oval azimuth= 148.1

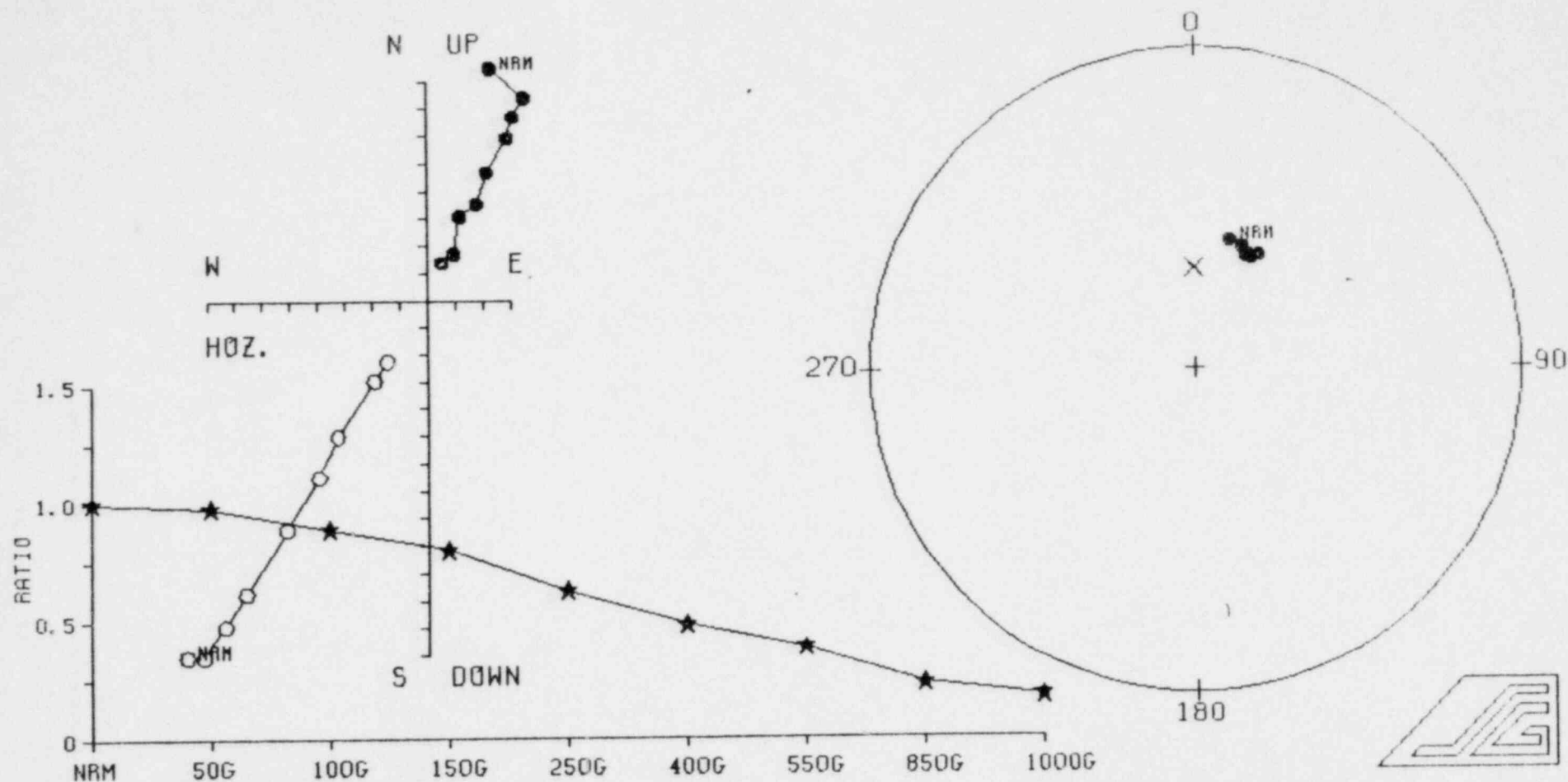
Std. dev. angles = 8.67 12.17

Confidence angles: A952= 6.71 A953= 9.42

Pole lat= 84.1 Pole long= -42.1

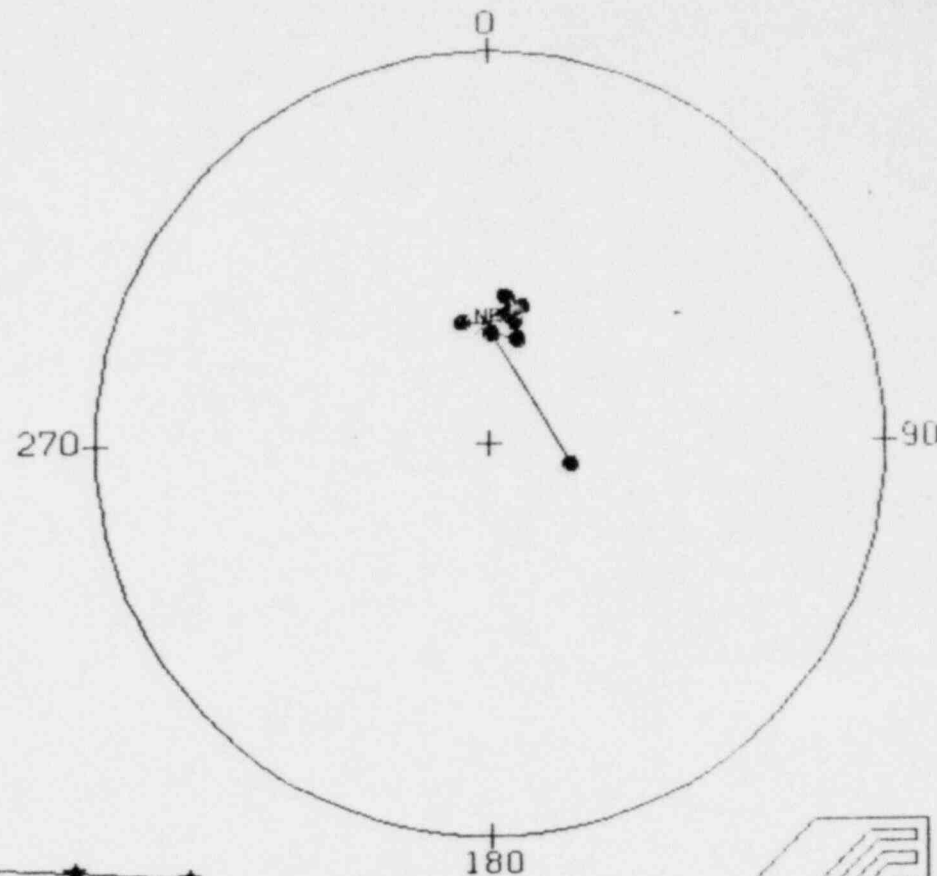
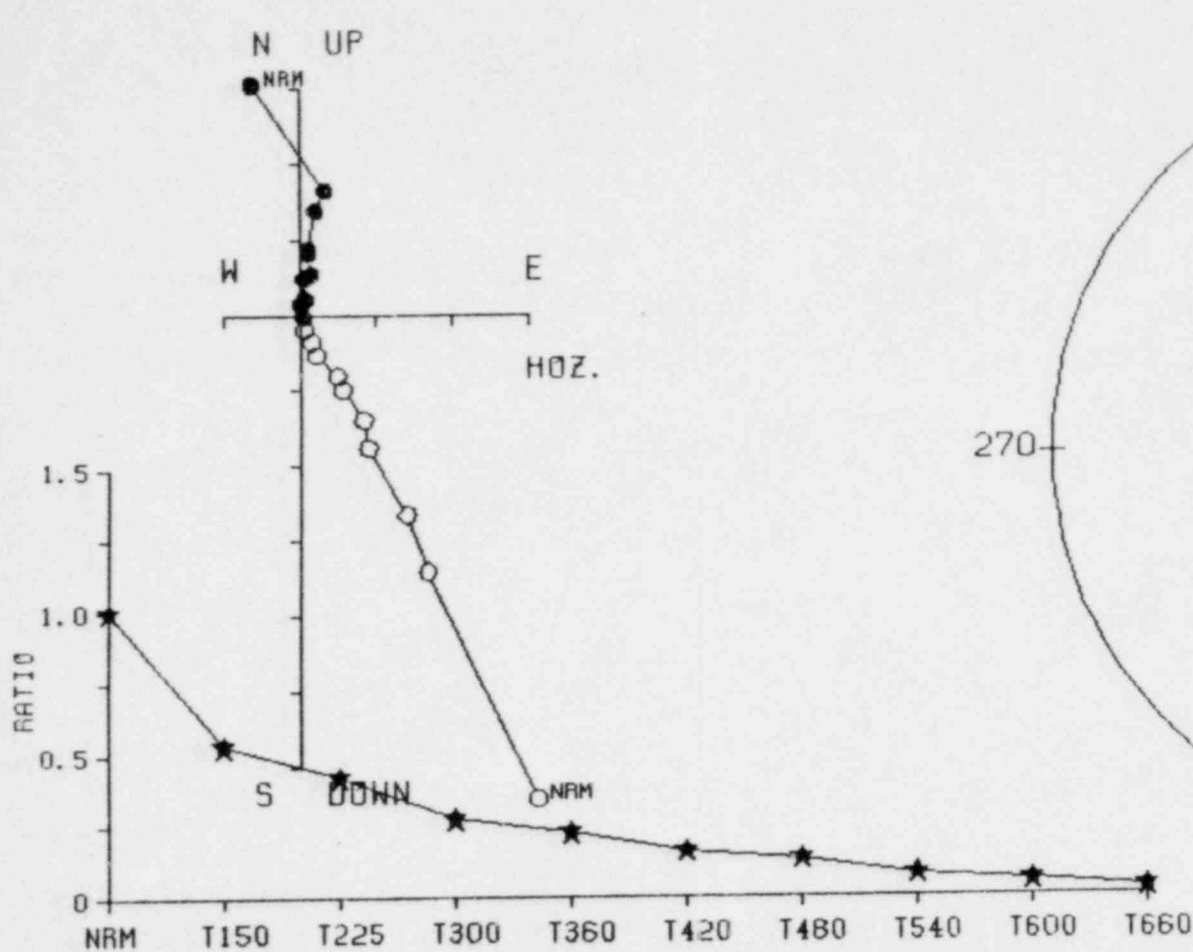
Test statistics for circular symmetry: Bipolar= 1.20 Girdle= 55.41

Test indicates symmetric bipolar dist. ALPHA= 8.07



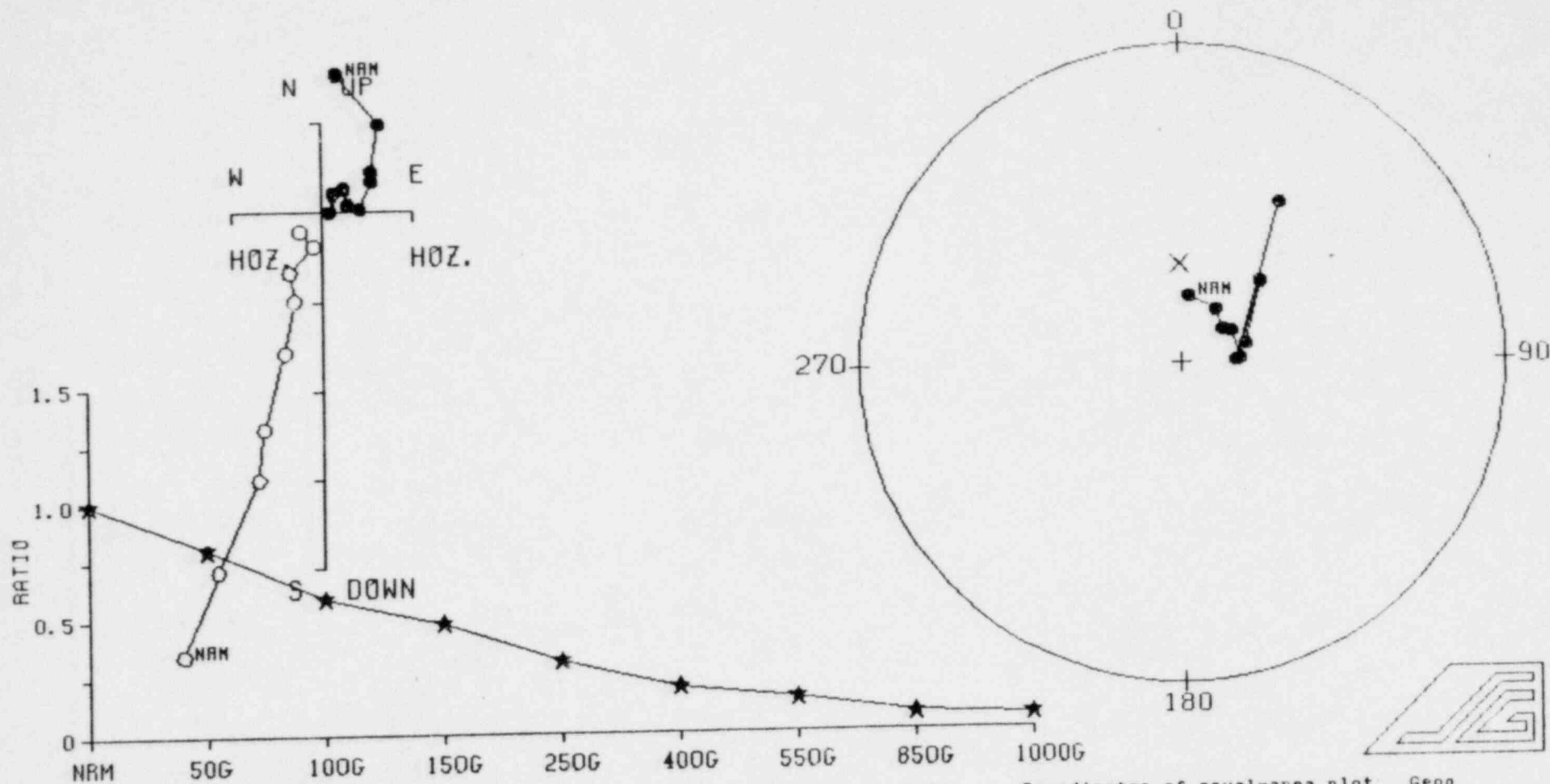
Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.
 Locality: GRAVELPIT Site lat & long= 46.30 -119.20
 9 Demag steps for this sample.
 Interval= 0.000 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 3.251 AT NRM

SMN	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMGP	1.000	15.0	56.1	0.0	0.0	0.0	0.00E-01	75.3	-6.3	1.57E-04	NRM	1.000	9.66E-05	1.000
PMGP	1.000	25.3	58.0	311.5	-1.0	1.63E-05	70.0	-16.0	1.54E-04	50G	0.981			
PMGP	1.000	24.8	58.2	30.0	55.9	1.40E-05	70.4	-16.0	1.40E-04	100G	0.892			
PMGP	1.000	26.0	58.4	14.7	55.9	1.41E-05	69.7	-17.8	1.26E-04	150G	0.803			
PMGP	1.000	24.7	58.6	30.5	57.6	2.76E-05	70.6	-16.8	9.84E-05	250G	0.627			
PMGP	1.000	26.7	58.6	18.0	58.4	2.26E-05	69.3	-19.1	7.59E-05	400G	0.483			
PMGP	1.000	20.8	56.7	53.2	62.6	1.65E-05	72.2	-6.2	6.00E-05	550G	0.382			
PMGP	1.000	29.0	56.9	9.4	55.5	2.47E-05	66.8	-17.4	3.56E-05	850G	0.227			
PMGP	1.000	20.7	56.8	53.2	53.9	8.85E-06	72.3	-6.5	2.71E-05	1000G	0.173			



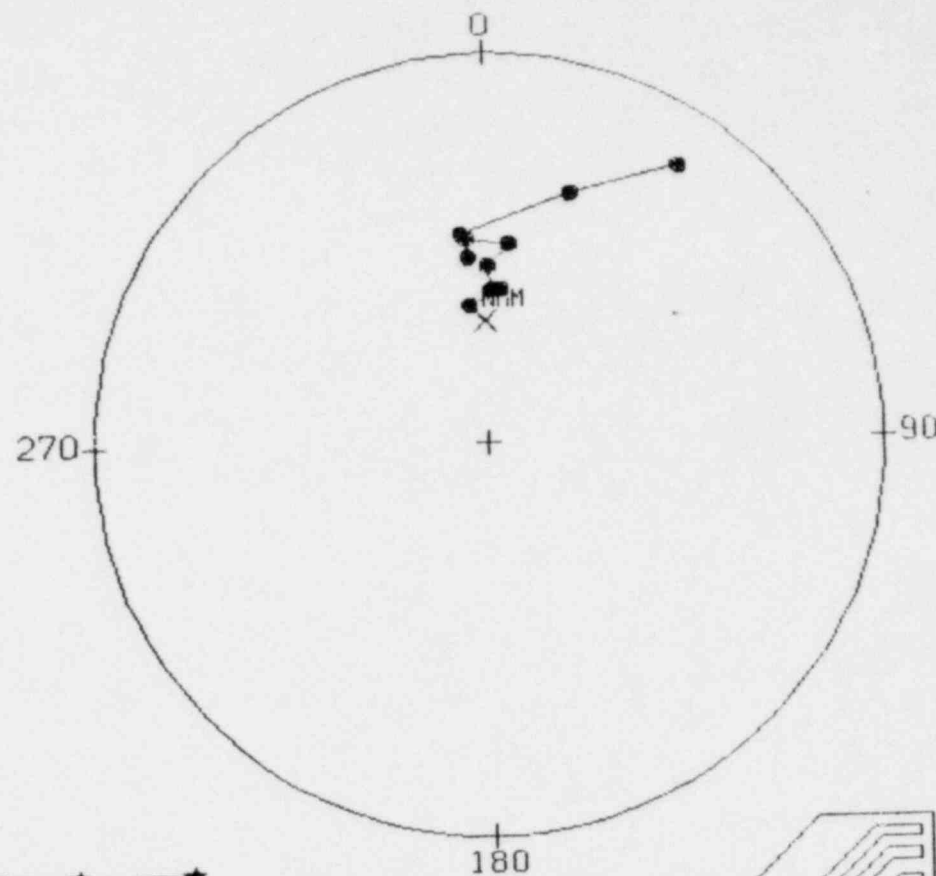
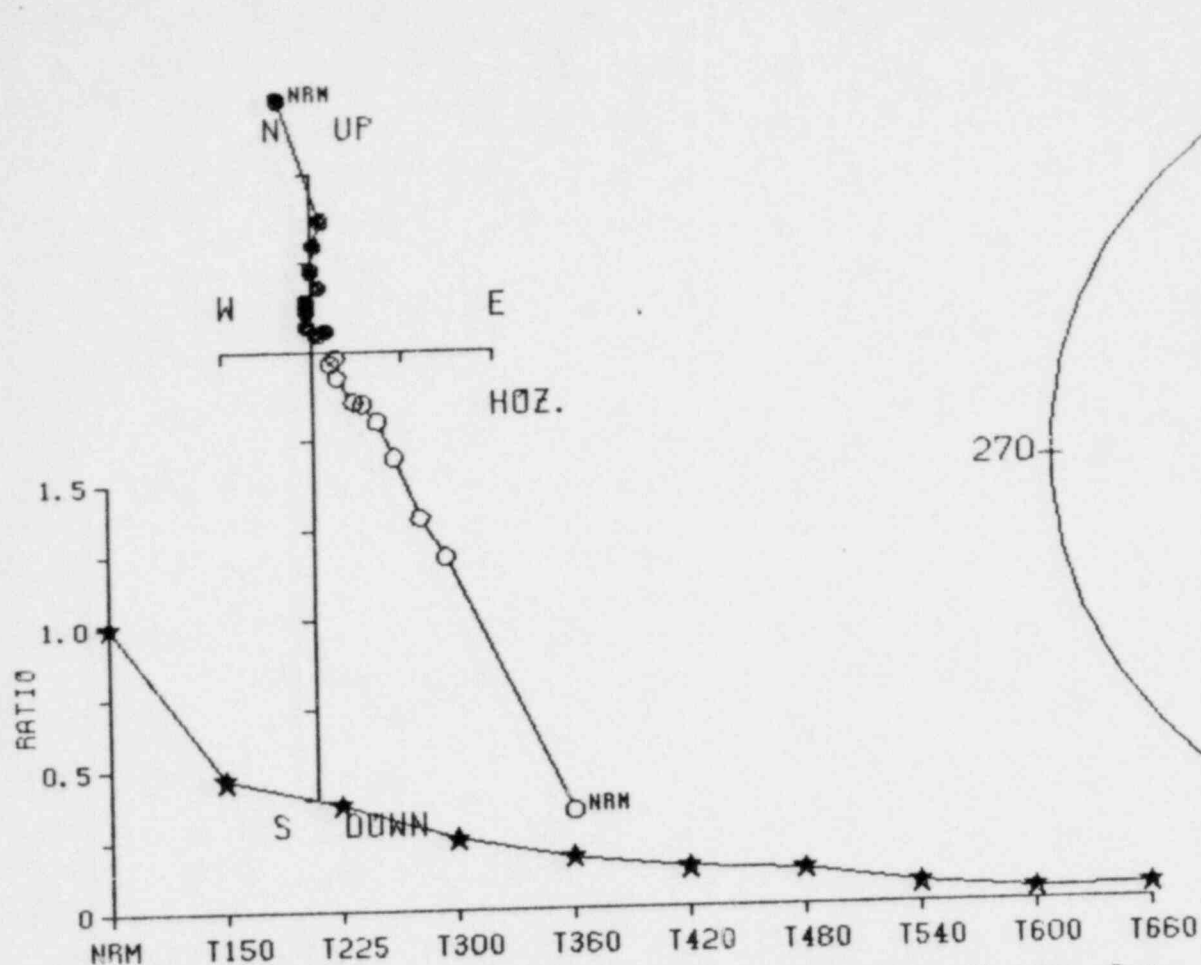
Ratio plot is normalized: Intensity
 Locality: GRAVELPIT Site lat & long= 46.30 -119.20
 10 Demag steps for this sample.
 Interval= 0.900 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 0.706 AT NRM

Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/J0	Chi	C/CO
348.3	64.1	0.0	0.0	81.9	151.7	7.13E-05	NRM	1.000	2.02E-04	1.000
11.7	63.8	325.4	60.4	81.8	-27.3	3.80E-05	T150	0.533		
8.5	62.3	27.2	68.6	83.4	-8.1	3.01E-05	T225	0.422		
6.9	63.1	11.3	60.7	84.9	-11.9	1.97E-05	T300	0.276		
7.6	59.2	357.6	80.3	81.6	16.8	1.62E-05	T360	0.227		
14.0	60.3	354.4	55.5	78.7	-7.8	1.14E-05	T420	0.160		
6.3	58.8	52.8	60.5	81.8	24.2	9.42E-06	T480	0.132		
15.4	67.3	359.1	45.9	79.1	-55.1	5.66E-06	T540	0.079		
1.4	66.8	42.5	64.6	86.7	-103.3	3.84E-06	T600	0.054		
103.9	72.5	343.0	45.7	31.5	-81.7	1.85E-06	T660	0.026		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.
 Locality: GRAVELPIT Site lat & long= 46.30 -119.20
 9 Demag steps for this sample.
 Interval= 1.500 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 0.512 AT NRM
 SM#

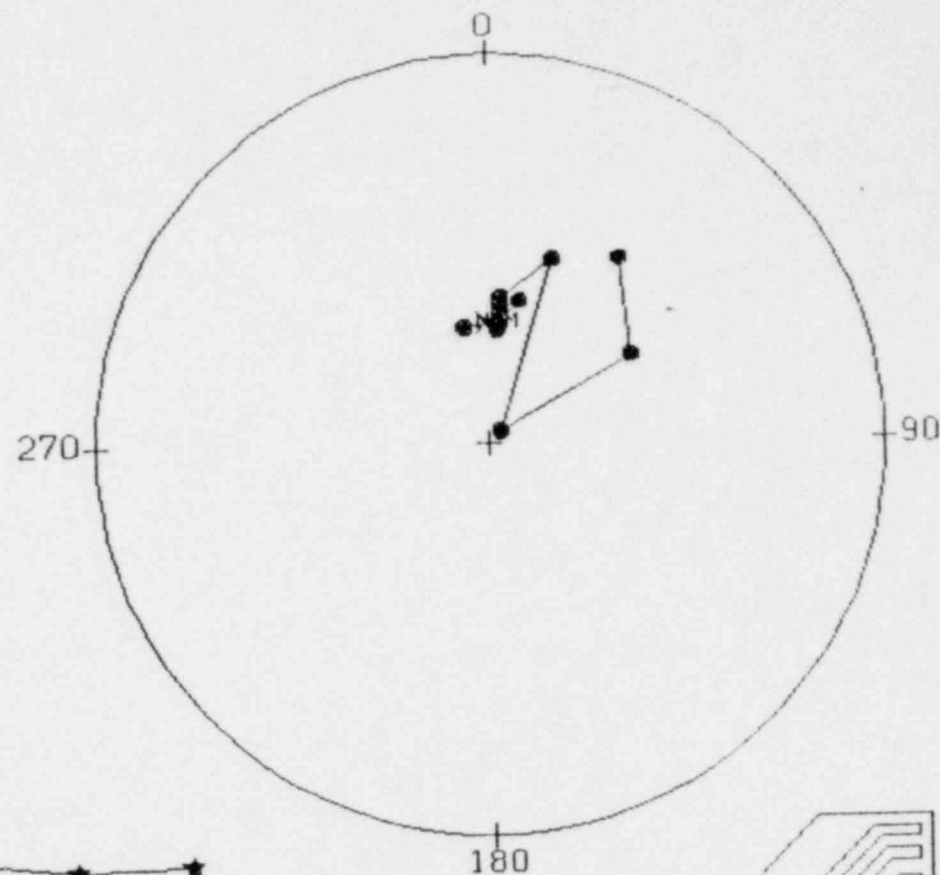
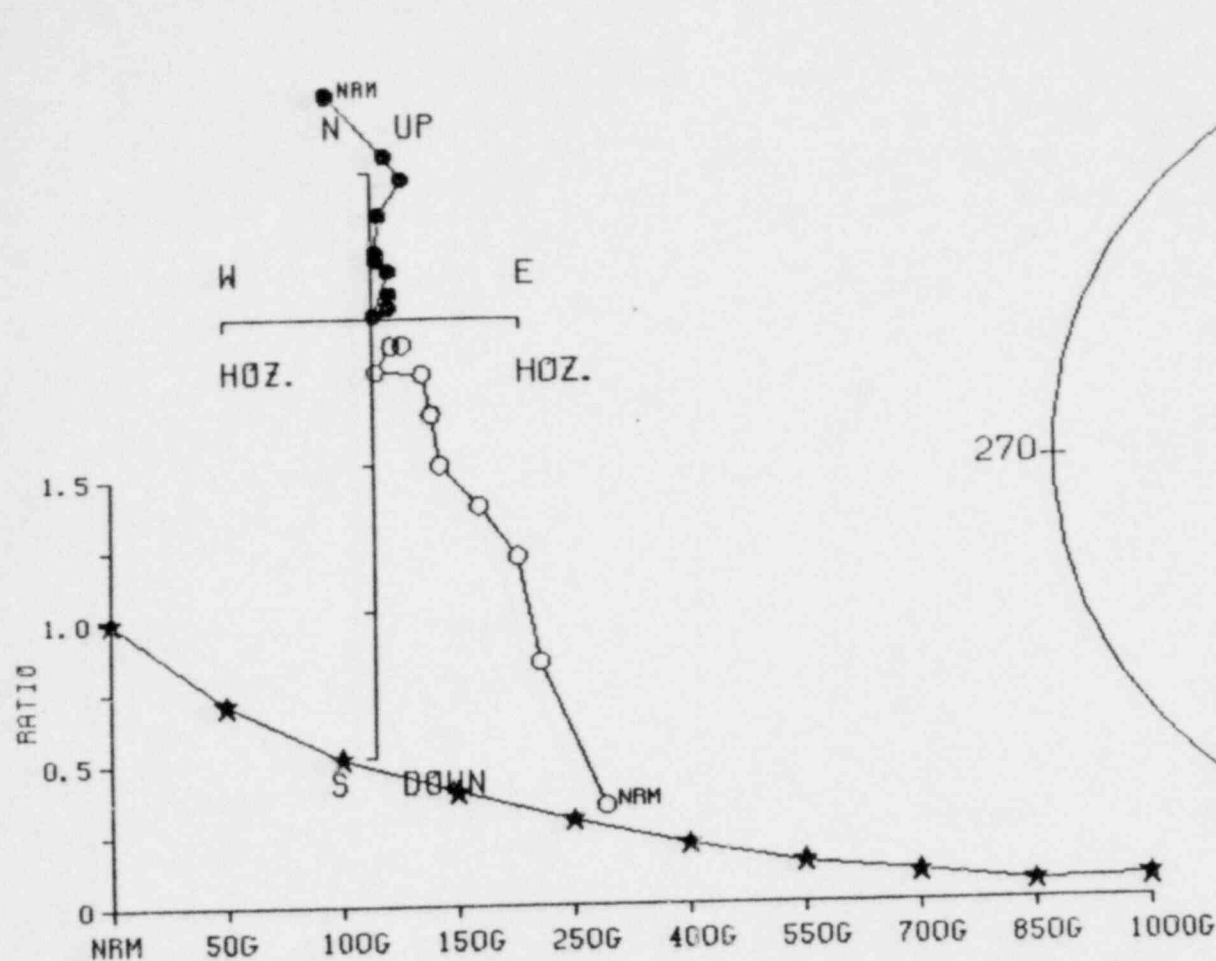
	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMGP	3.000	6.6	72.6	0.0	0.0	0.0	0.00E-01	77.7	-102.4	5.22E-05	NRM	1.000	2.04E-04	1.000
PMGP	3.000	33.0	73.8	321.1	52.4	33.0	1.20E-05	66.4	-76.3	4.20E-05	50G	0.805		
PMGP	3.000	50.8	76.6	9.1	62.6	50.8	1.17E-05	57.2	-81.1	3.08E-05	100G	0.590		
PMGP	3.000	58.1	75.0	0.9	79.3	58.1	5.82E-06	54.1	-76.0	2.51E-05	150G	0.481		
PMGP	3.000	85.3	75.0	23.0	68.5	85.3	9.14E-06	41.6	-80.2	1.63E-05	250G	0.312		
PMGP	3.000	73.5	72.9	111.6	76.7	73.5	6.06E-06	45.9	-73.0	1.03E-05	400G	0.197		
PMGP	3.000	44.2	61.0	168.2	61.4	44.2	3.73E-06	58.4	-37.8	7.51E-06	550G	0.144		
PMGP	3.000	87.7	76.0	32.0	43.1	87.7	4.16E-06	41.2	-82.8	3.84E-06	850G	0.074		
PMGP	3.000	32.0	40.8	190.2	38.0	32.0	2.63E-06	55.5	1.6	3.23E-06	1000G	0.062		



Ratio plot is normalized: Intensity.
 Locality: GRAVELPIT Site lat & long= 46.30 -119.20
 10 Demag steps for this sample.
 Interval= 0.600 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 0.705 AT NRM

Coordinates of equal-area plot: Geog.

	Dec	S	Inc	S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMGP	4.000	353.2	61.0	0.0	0.0	0.0	0.00E-01	83.5	112.1	5.89E-05	NRM	1.000	1.67E-04	1.000
PMGP	4.000	353.2	61.0	0.0	0.0	0.0	0.00E-01	83.5	112.1	5.89E-05	T150	0.463		
PMGP	4.000	353.2	61.0	0.0	0.0	0.0	0.00E-01	83.5	112.1	5.89E-05	T225	0.375		
PMGP	4.000	353.2	61.0	0.0	0.0	0.0	0.00E-01	83.5	112.1	5.89E-05	T300	0.255		
PMGP	4.000	353.2	61.0	0.0	0.0	0.0	0.00E-01	83.5	112.1	5.89E-05	T360	0.182		
PMGP	4.000	353.2	61.0	0.0	0.0	0.0	0.00E-01	83.5	112.1	5.89E-05	T420	0.137		
PMGP	4.000	353.2	61.0	0.0	0.0	0.0	0.00E-01	83.5	112.1	5.89E-05	T480	0.125		
PMGP	4.000	353.2	61.0	0.0	0.0	0.0	0.00E-01	83.5	112.1	5.89E-05	T540	0.068		
PMGP	4.000	353.2	61.0	0.0	0.0	0.0	0.00E-01	83.5	112.1	5.89E-05	T600	0.042		
PMGP	4.000	353.2	61.0	0.0	0.0	0.0	0.00E-01	83.5	112.1	5.89E-05	T660	0.049		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

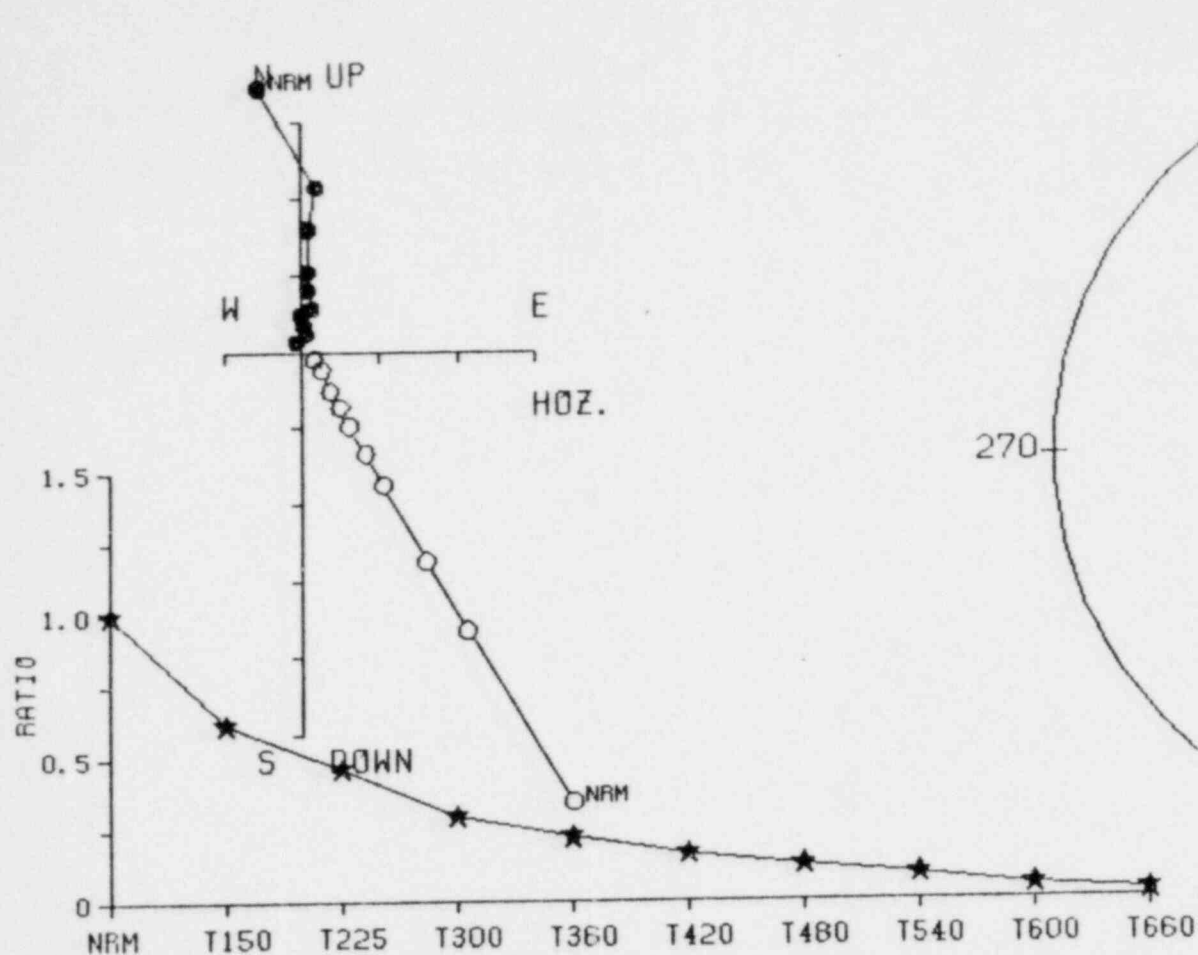
Locality: GRAVELPIT Site lat & long= 46.30 -119.20

10 Demag steps for this sample. Strike & dip of bedding= 0.0 0.0

Interval= 0.900

Koenigsberger ratio = 0.504 AT NRM

PMGP	SMW	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMGP	5.000	349.1	65.1	0.0	349.1	65.1	0.0	0.00E-01	82.5	161.3	3.68E-05	NRM	1.000	1.46E-04	1.000
PMGP	5.000	4.9	64.7	316.9	4.9	64.7	316.9	1.14E-05	86.6	-36.7	2.60E-05	50G	0.707		
PMGP	5.000	12.3	59.3	324.3	12.3	59.3	324.3	7.43E-06	79.0	0.3	1.90E-05	100G	0.516		
PMGP	5.000	4.9	61.3	31.6	4.9	61.3	31.6	4.48E-06	84.8	16.8	1.47E-05	150G	0.399		
PMGP	5.000	4.3	66.1	5.6	4.3	66.1	5.6	3.85E-06	86.3	-66.7	1.10E-05	250G	0.299		
PMGP	5.000	3.0	59.1	0.7	3.0	59.1	0.7	3.50E-06	62.7	29.5	7.68E-06	400G	0.209		
PMGP	5.000	19.3	48.6	311.8	19.3	48.6	311.8	2.91E-06	67.5	12.1	5.17E-06	550G	0.140		
PMGP	5.000	42.8	86.5	17.7	42.8	86.5	17.7	3.22E-06	51.2	-111.6	3.71E-06	700G	0.101		
PMGP	5.000	58.2	54.9	241.4	58.2	54.9	241.4	2.14E-06	45.7	-36.6	2.28E-06	850G	0.062		
PMGP	5.000	35.2	41.5	184.2	35.2	41.5	184.2	9.96E-07	54.0	-2.9	2.75E-06	1000G	0.075		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

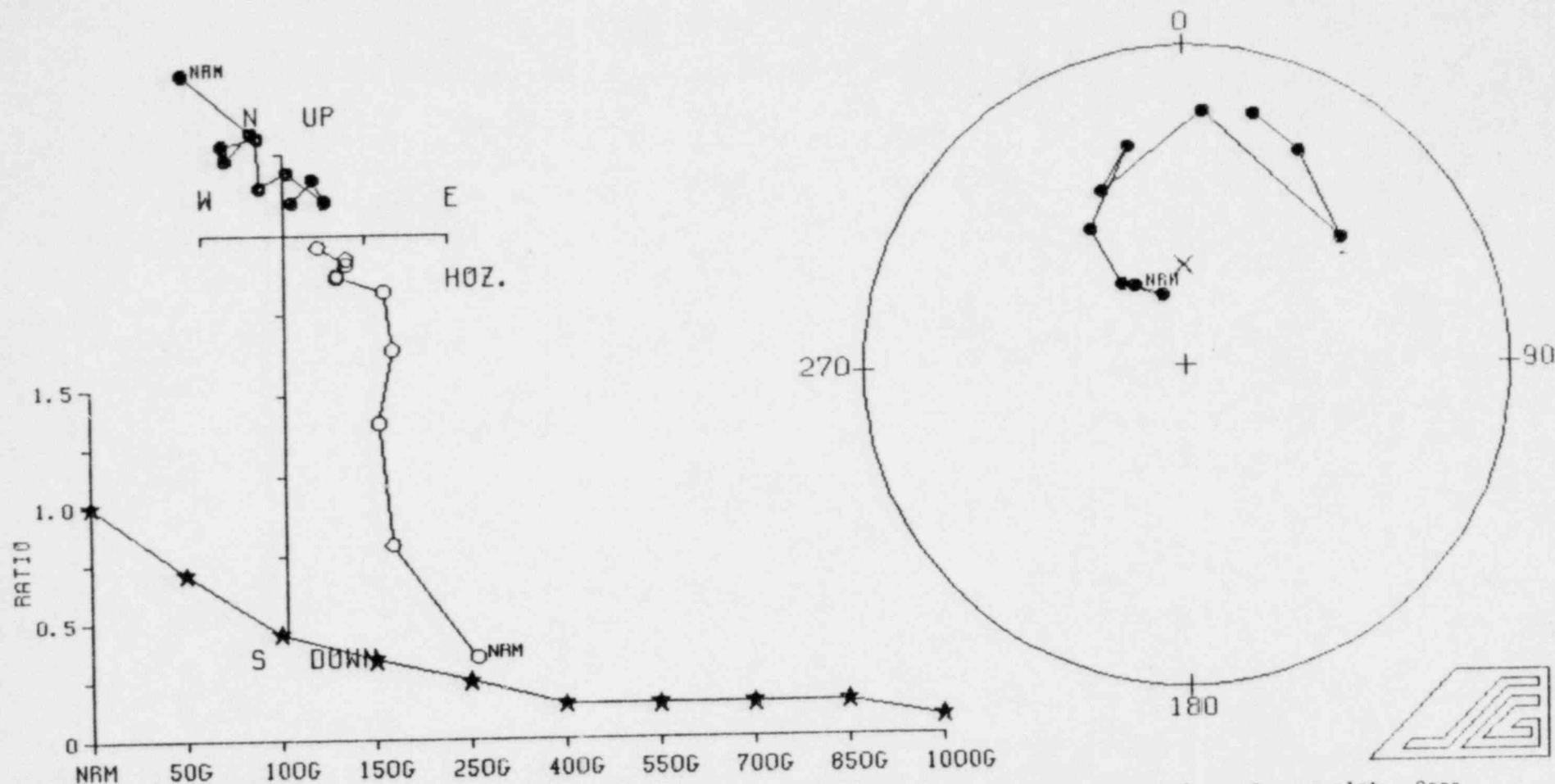
Locality: GRAVELPIT Site lat & long= 46.30 -119.20

10 Demag steps for this sample.

Interval= 1.400 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 1.052 AT NRM

SM#	Dec G	Inc G	Diff	vect	Dec S	Inc S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMGP	6.000	350.9	59.4	0.0	350.9	59.4	0.0	0.0	0.00E-01	81.1	111.4	6.84E-05	NRM	1.000	1.30E-04	1.000
PMGP	6.000	5.2	59.7	330.5	5.2	59.7	330.5	56.0	2.70E-05	83.1	26.0	4.23E-05	T150	0.618		
PMGP	6.000	2.7	59.8	12.6	2.7	59.8	12.6	59.1	1.05E-05	84.0	40.4	3.18E-05	T225	0.465		
PMGP	6.000	4.7	59.3	359.0	4.7	59.3	359.0	60.6	1.14E-05	82.9	30.2	2.04E-05	T300	0.298		
PMGP	6.000	5.7	58.8	1.2	5.7	58.8	1.2	60.9	4.81E-06	82.0	27.1	1.56E-05	T360	0.228		
PMGP	6.000	12.0	58.4	348.7	12.0	58.4	348.7	58.3	4.27E-06	78.6	5.7	1.14E-05	T420	0.167		
PMGP	6.000	358.9	56.1	54.5	358.9	56.1	54.5	56.0	2.93E-06	80.3	66.0	8.77E-06	T480	0.128		
PMGP	6.000	4.0	54.7	344.6	4.0	54.7	344.6	58.6	2.50E-06	78.5	44.2	6.30E-06	T540	0.092		
PMGP	6.000	10.3	44.4	351.0	10.3	44.4	351.0	66.0	2.97E-06	68.1	35.1	3.47E-06	T600	0.051		
PMGP	6.000	331.8	32.1	47.6	331.8	32.1	47.6	42.4	2.16E-06	52.9	109.1	1.83E-06	T660	0.027		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

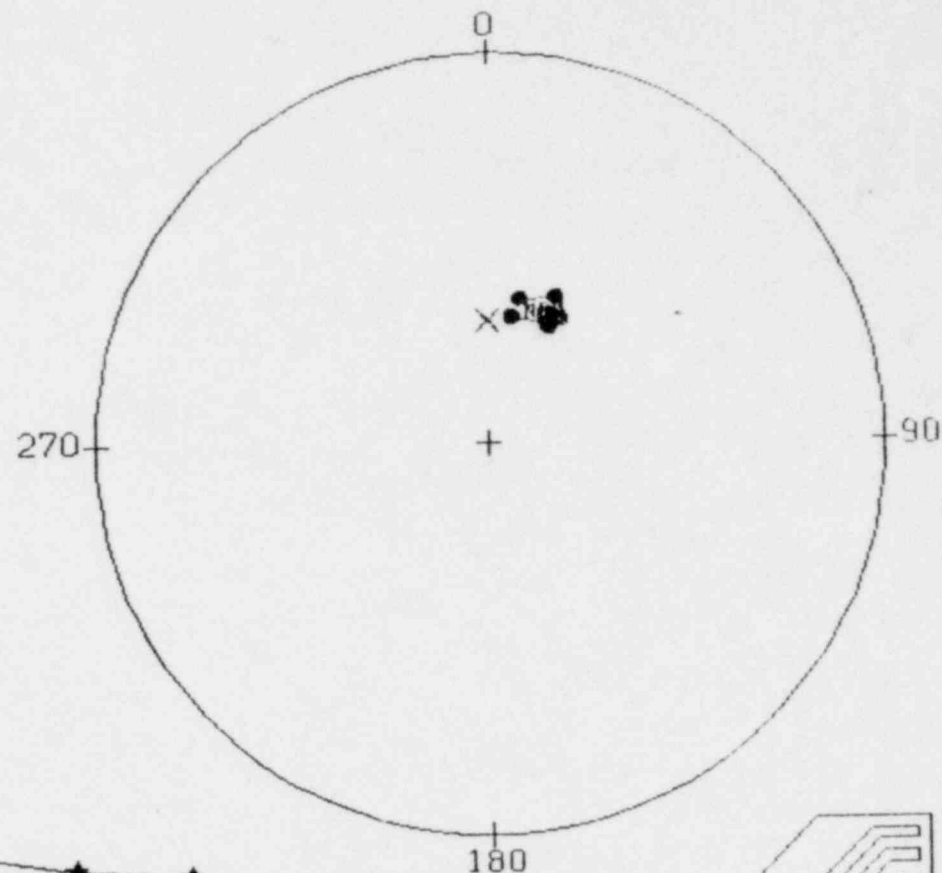
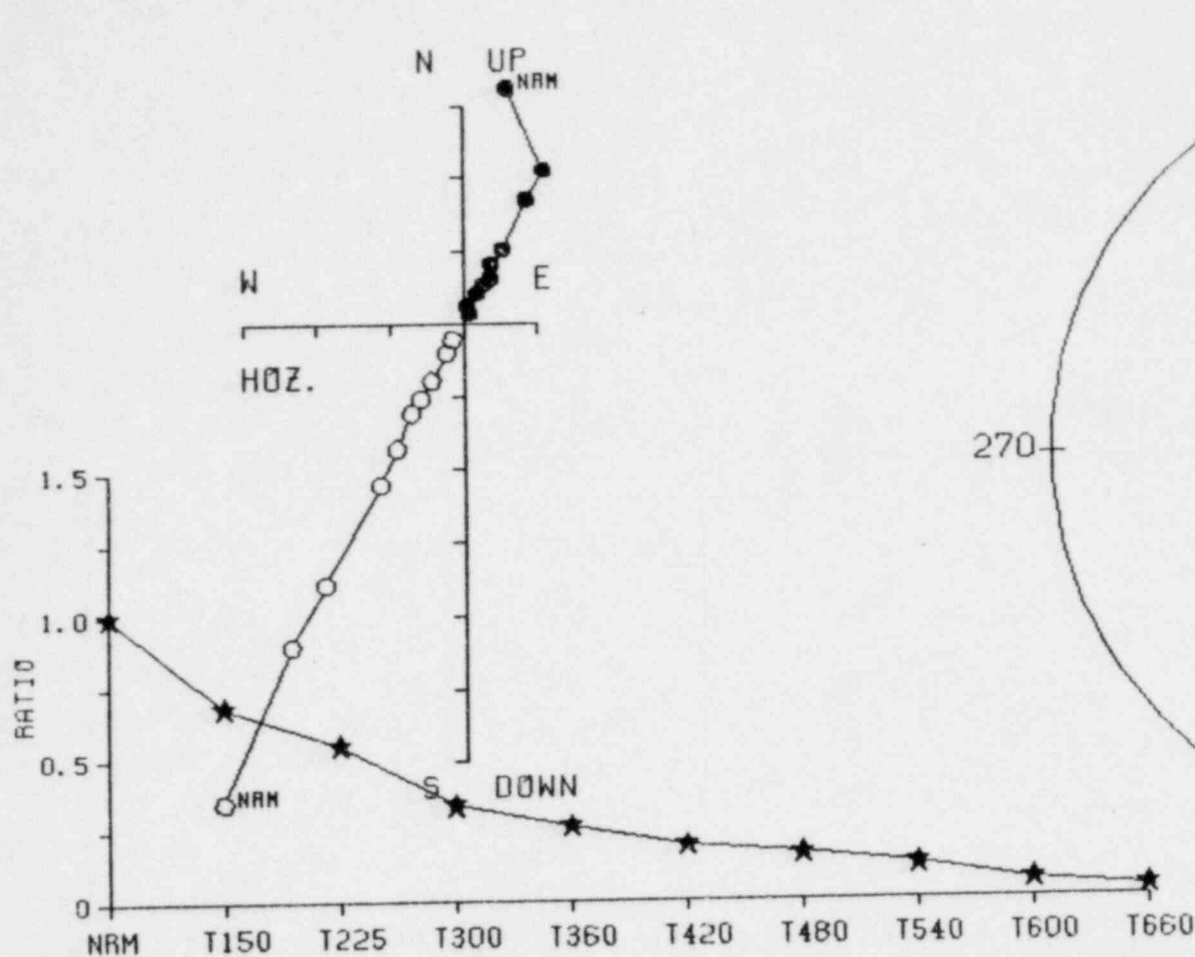
Locality: GRAVELPIT Site lat & long= 46.30 -119.20

10 Demag steps for this sample.

Interval= 1.000 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.331 AT NRM

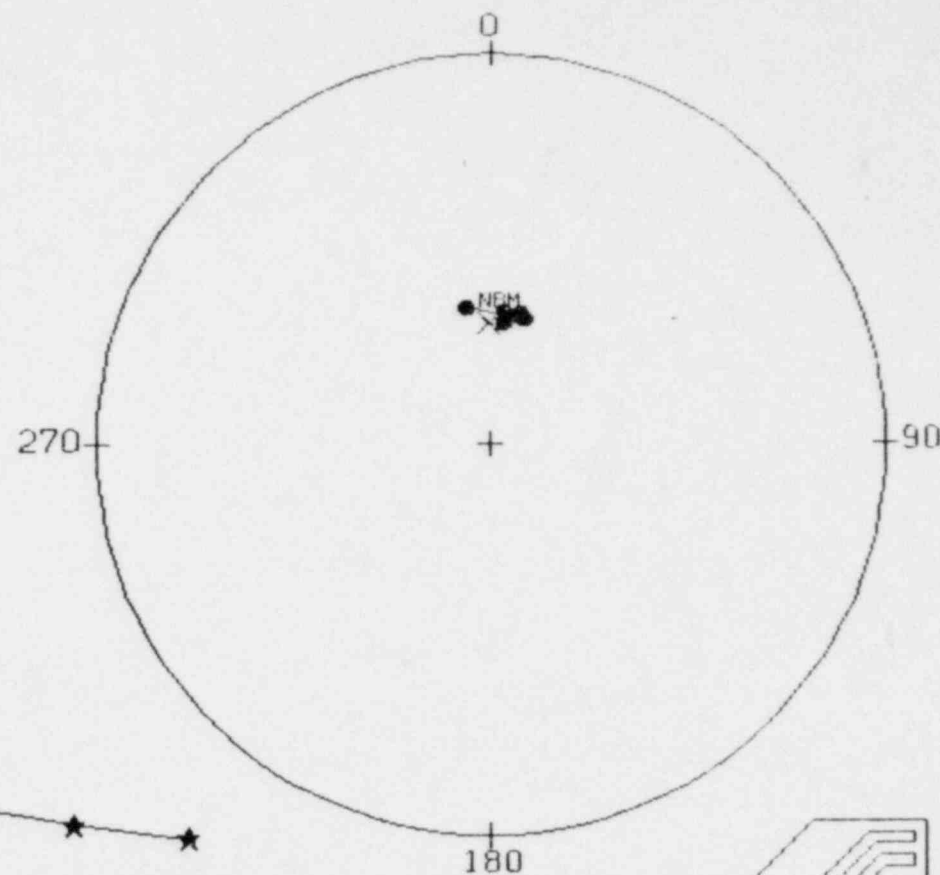
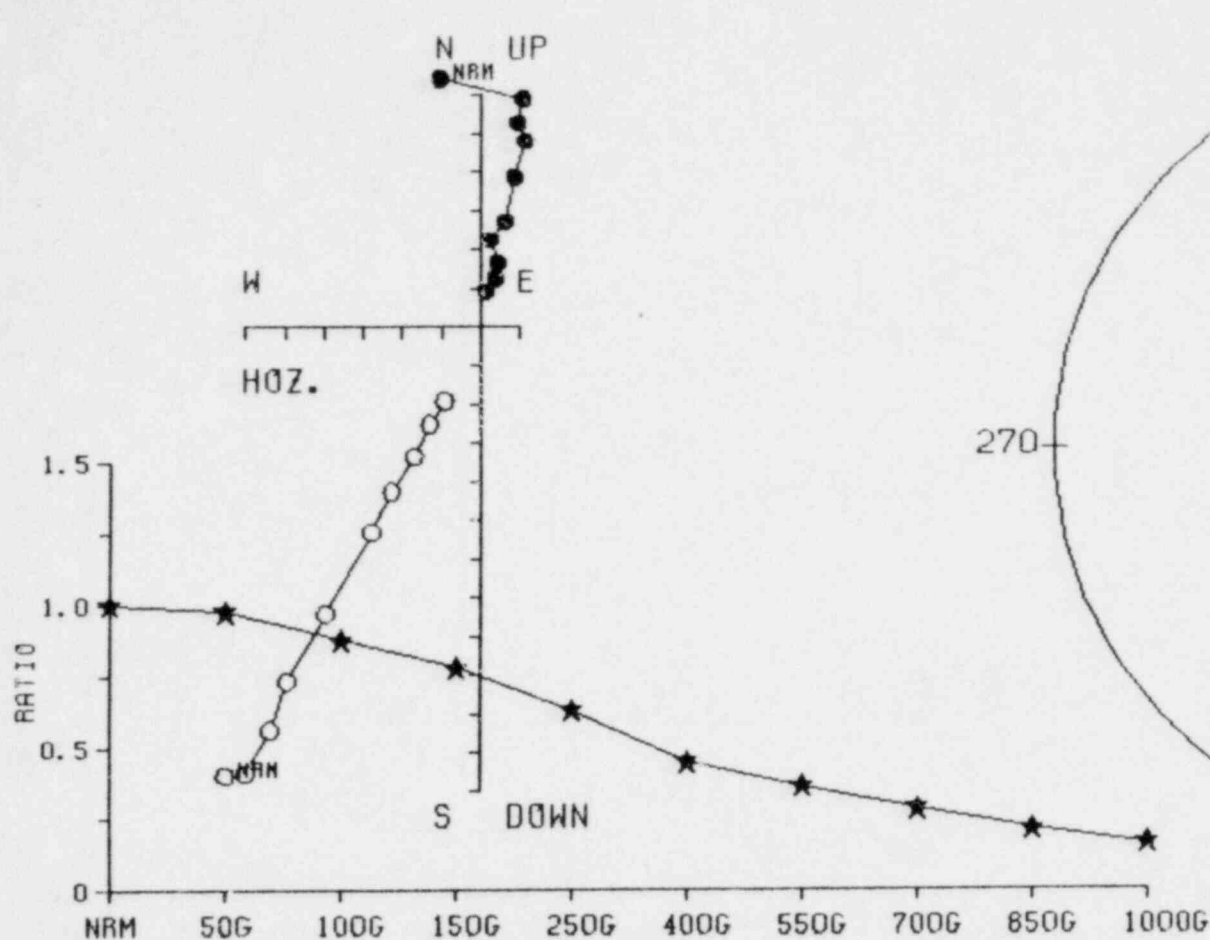
SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	Lat	Long	Intensity	demag	JH/JO	Chi	C/CO
PMGP	7.000	328.3	66.1	0.0	0.0	0.0	0.00E-01	65.6	168.1	5.75E-05	NRM	1.000	3.47E-04	1.000
PMGP	7.000	342.7	71.2	311.2	51.7	342.7	1.79E-05	75.6	-161.6	4.07E-05	50G	0.708		
PMGP	7.000	322.9	63.8	42.5	73.4	322.9	1.58E-05	64.4	162.6	2.61E-05	100G	0.454		
PMGP	7.000	326.0	47.2	165.7	78.5	326.0	9.30E-06	58.0	128.8	1.95E-05	150G	0.339		
PMGP	7.000	345.9	30.0	257.9	58.0	345.9	8.90E-06	57.6	86.6	1.42E-05	250G	0.247		
PMGP	7.000	335.1	39.4	357.4	16.4	335.1	6.32E-06	58.7	109.4	8.37E-06	400G	0.146		
PMGP	7.000	4.3	21.6	241.0	30.9	4.3	4.40E-06	54.7	53.5	8.30E-06	550G	0.144		
PMGP	7.000	30.8	37.7	308.3	-19.3	50.8	6.07E-06	41.9	-15.5	8.28E-06	700G	0.144		
PMGP	7.000	28.3	25.4	152.4	24.6	28.3	3.33E-06	49.4	15.8	8.58E-06	850G	0.149		
PMGP	7.000	15.7	19.8	42.3	29.9	15.7	4.36E-06	51.5	35.5	4.45E-06	1000G	0.077		



Ratio plot is normalized: Intensity.
 Locality: GRAVELPIT Site lat & long= 46.30 -119.20
 10 Demag steps for this sample.
 Interval= 0.600 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 1.746 AT NRM

Coordinates of equal-area plot: Geog.

	Dec	Inc	Diff	vect	Dec	Inc	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMGP	8.000	10.5	63.4	0.0	0.0	10.5	63.4	0.0	0.00E-01	82.5	-22.6	7.34E-05	NRM	1.000	8.41E-05	1.000
PMGP	8.000	27.4	61.8	336.5	60.2	27.4	61.8	336.5	2.49E-05	70.4	-29.6	5.01E-05	T150	0.683		
PMGP	8.000	26.8	62.1	29.8	60.5	26.8	62.1	29.8	9.71E-06	70.8	-30.1	4.04E-05	T225	0.550		
PMGP	8.000	24.7	62.6	26.6	61.3	24.7	62.6	26.6	1.55E-05	71.0	-31.9	2.49E-05	T300	0.339		
PMGP	8.000	24.7	61.8	35.6	65.1	24.7	61.8	35.6	5.52E-06	72.2	-27.6	1.94E-05	T360	0.264		
PMGP	8.000	30.0	60.0	6.8	65.5	30.0	60.0	6.8	5.18E-06	67.8	-26.1	1.43E-05	T420	0.195		
PMGP	8.000	25.8	60.3	49.6	56.5	25.8	60.3	49.6	2.35E-06	70.8	-23.4	1.20E-05	T480	0.163		
PMGP	8.000	24.2	60.6	30.5	59.3	24.2	60.6	30.5	2.96E-06	72.0	-22.7	9.04E-06	T540	0.123		
PMGP	8.000	12.4	59.2	37.7	60.9	12.4	59.2	37.7	4.36E-06	79.0	1.1	4.74E-06	T600	0.065		
PMGP	8.000	24.9	56.3	353.2	60.9	24.9	56.3	353.2	2.05E-06	69.2	-11.0	2.74E-06	T660	0.037		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

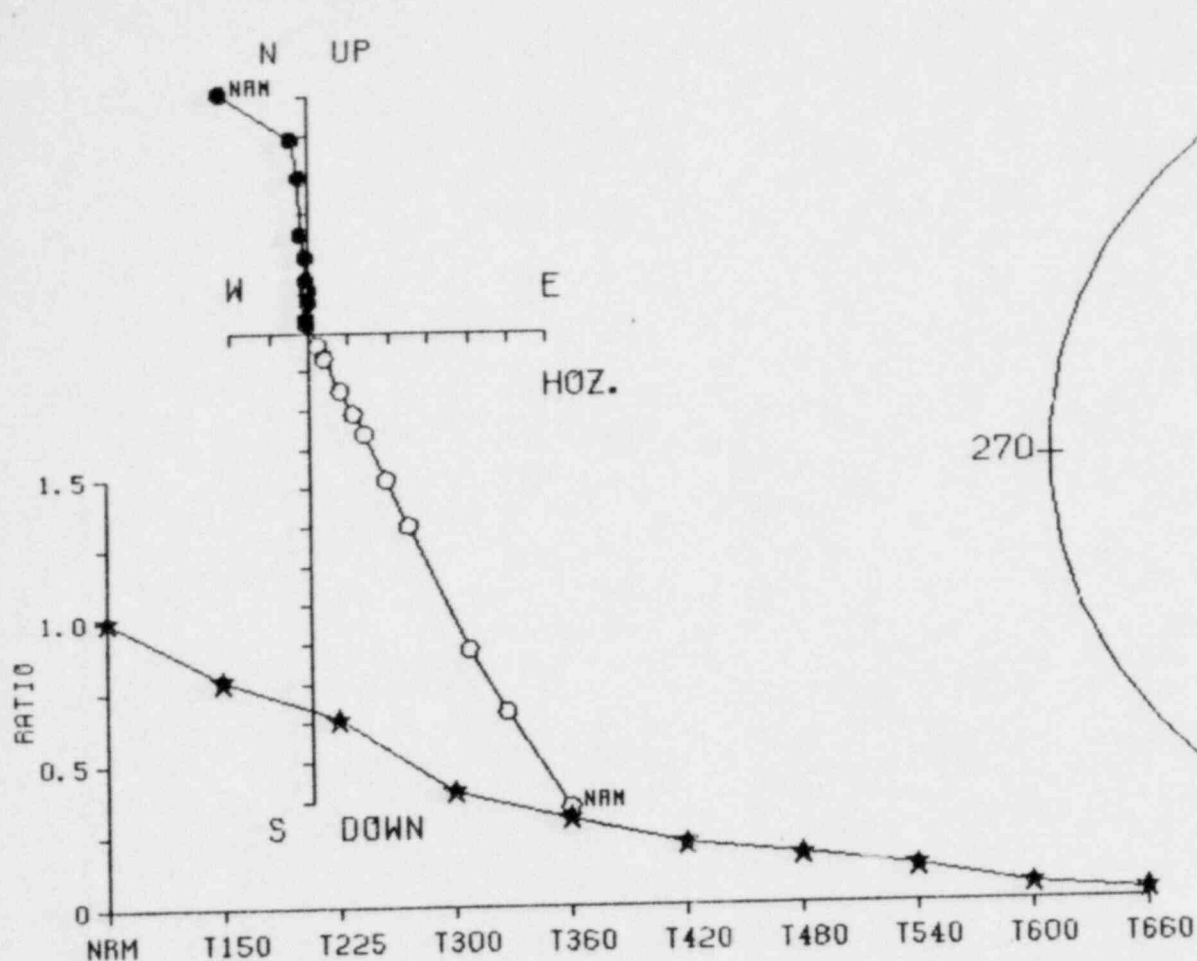
Locality: GRAVELPIT Site lat & long= 46.30 -119.20

10 Demag steps for this sample.

Interval= 0.800 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 2.094 AT NRM

SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMGP	9.000	350.6	60.7	0.0	0.0	0.0	0.00E-01	81.8	120.0	1.33E-04	NRM	1.000	1.27E-04	1.000
PMGP	9.000	10.3	62.5	283.6	1.8	1.8	2.20E-05	82.3	-13.8	1.30E-04	50G	0.977		
PMGP	9.000	10.0	62.7	12.8	60.7	60.7	1.30E-05	82.7	-15.8	1.17E-04	100G	0.880		
PMGP	9.000	13.2	61.6	337.1	67.8	67.8	1.35E-05	80.0	-13.5	1.04E-04	150G	0.782		
PMGP	9.000	12.3	61.9	16.8	60.3	60.3	2.00E-05	80.7	-13.7	8.40E-05	250G	0.632		
PMGP	9.000	12.2	62.2	12.5	61.2	61.2	2.42E-05	80.9	-15.4	5.98E-05	400G	0.450		
PMGP	9.000	5.8	61.8	38.2	60.7	60.7	1.18E-05	84.7	7.9	4.83E-05	550G	0.363		
PMGP	9.000	14.0	62.9	343.2	55.0	55.0	1.11E-05	80.0	-23.2	3.76E-05	700G	0.283		
PMGP	9.000	15.6	62.7	9.0	63.4	63.4	9.31E-06	78.8	-23.3	2.83E-05	850G	0.213		
PMGP	9.000	6.4	64.5	36.4	54.5	54.5	7.16E-06	85.6	-31.7	2.14E-05	1000G	0.161		



Ratio plot is normalized. Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: GRAVELPIT Site lat & long= 46.30 -119.20

10 Demag steps for this sample.

Interval= 0.300 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 2.680 AT NRM

	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMGP	10.000	339.8	61.8	0.0	0.0	0.0	0.00E-01	75.3	145.1	1.38E-04	NRM	1.000	1.03E-04	1.000
PMGP	10.000	355.0	63.1	303.5	48.2	3.28E-05	86.1	125.7	1.09E-04	T150	0.790			
PMGP	10.000	355.7	64.0	348.0	58.4	1.85E-05	87.7	137.0	9.06E-05	T225	0.657			
PMGP	10.000	355.8	63.5	358.2	64.8	3.50E-05	86.8	129.1	5.56E-05	T300	0.403			
PMGP	10.000	357.9	63.1	348.8	64.6	1.33E-05	87.7	103.1	4.23E-05	T360	0.307			
PMGP	10.000	357.3	62.5	356.9	64.5	1.28E-05	87.3	87.9	2.95E-05	T420	0.214			
PMGP	10.000	358.3	62.5	356.6	63.7	5.90E-06	87.0	79.3	2.36E-05	T480	0.171			
PMGP	10.000	358.7	62.2	356.6	61.1	6.50E-06	87.6	64.6	1.71E-05	T540	0.124			
PMGP	10.000	359.8	62.6	355.9	61.1	9.52E-06	83.5	101.0	7.60E-06	T600	0.055			
PMGP	10.000	354.5	60.3	4.6	64.3	3.49E-06	75.9	116.5	4.16E-06	T660	0.030			
PMGP	10.000	345.4	56.8	7.9	63.5									

MARENGO

LINES:		TYPE	GDEC	GINC	SDEC	SINC	VLAT	VLONG	JH	DEMAG
SM#										
PMM	1.000	LIN SEGM	165.3	-49.0	165.3	-49.0	-69.5	-79.3		150G ORIGN
PMM	2.000	LIN SEGM	170.8	-60.1	170.8	-60.1	-81.1	-67.3		T225 ORIGN
PMM	3.000	LIN SEGM	170.8	-64.8	170.8	-64.8	-83.7	-26.8		100G ORIGN
PMM	4.000	LIN SEGM	171.3	-58.4	171.3	-58.4	-79.9	-76.2		T150 ORIGN
PMM	5.000	LIN SEGM	187.4	-54.6	187.4	-54.6	-76.9	-145.9		T225 ORIGN
PMM	11.000	LIN SEGM	168.0	-62.6	168.0	-62.6	-81.1	-43.7		100G ORIGN
PMM	12.000	LIN SEGM	175.6	-65.5	175.6	-65.5	-86.9	-12.4		T150 ORIGN
PMM	13.000	LIN SEGM	179.2	-56.1	179.2	-56.1	-79.6	-114.6		100G ORIGN
PMM	14.000	LIN SEGM	172.2	-63.1	172.2	-63.1	-84.1	-49.1		T150 ORIGN
PMM	31.000	LIN SEGM	171.9	-62.7	171.9	-62.7	-83.6	-52.6		150G ORIGN
PMM	33.000	LIN SEGM	156.8	-64.4	156.8	-64.4	-74.1	-22.7		150G ORIGN
PMM	34.000	LIN SEGM	148.0	-61.3	148.0	-61.3	-67.0	-28.0		T300 ORIGN
PMM	35.000	LIN SEGM	156.3	-63.4	156.3	-63.4	-73.5	-26.6		150G ORIGN

**** STATISTICS ON LINE DATA ****

GEOGRAPHIC COORDINATES:

FISHER STATISTICS:

N= 13 R= 12.9105 M.L.E. of kappa= 145.3 kappa= 134.1

Alpha 95= 3.59 Circular std. dev.= 6.99

Declination= 169.1 Inclination= -60.8

Pole lat= -80.7 Pole long= -57.8 Paleolat= -41.9

dp= 4.2 dm= 5.5 Oval azimuth= 52.8

MOMENT OF INERTIA STATISTICS:

N= 13 Eigenvalues= 0.061 0.117 12.822

Uniform test statistic= 62.36 Data not random at 1% level.

Dimroth-Watson K= -72.93

M.L.E.'S of Bingham parameters: K1= -106.94 K2= -56.26

Oval azimuth= 126.6

Std. dev. angles = 3.95 5.46

Confidence angles: A952= 2.68 A953= 3.71

Declination= 169.1 Inclination= -60.9

Pole lat= -80.7 Pole long= -57.7 Paleolat= -41.9

Test statistics for circular symmetry: Bipolar= 1.41 Girdle= 357.38

Test indicates symmetric bipolar dist. ALPHA= 3.20

STRATIGRAPHIC COORDINATES:

FISHER STATISTICS:

N= 13 R= 12.9105 M.L.E. of kappa= 145.3 kappa= 134.1

Alpha 95= 3.59 Circular std. dev.= 6.99

Declination= 169.1 Inclination= -60.8

Pole lat= -80.7 Pole long= -57.8 Paleolat= -41.9

dp= 4.2 dm= 5.5 Oval azimuth= 52.8

MOMENT OF INERTIA STATISTICS:

N= 13 Eigenvalues= 0.061 0.117 12.822

Uniform test statistic= 62.36 Data not random at 1% level.

Dimroth-Watson K= -72.93

M.L.E.'S of Bingham parameters: K1= -106.94 K2= -56.26

Oval azimuth= 126.6

Std. dev. angles = 3.95 5.46

Confidence angles: A952= 2.68 A953= 3.71

Declination= 169.1 Inclination= -60.9

Pole lat= -80.7 Pole long= -57.7 Paleolat= -41.9
Test statistics for circular symmetry: Bipolar= 1.41 Girdle= 357.38
Test indicates symmetric bipolar dist. ALPHA= 3.20

VGP COORDINATES.

FISHER STATISTICS:

N= 13 R= 12.8420 M.L.E. of kappa= 82.3 kappa= 75.9
Alpha 95= 4.79 Circular std. dev.= 9.29
Pole lat= -80.8 Pole long= -55.9

MOMENT OF INERTIA STATISTICS:

H= 13 Eigenvalues= 0.080 0.232 12.688
Uniform test statistic= 60.41 Data not random at 1% level.
Dimroth-Watson K= -41.42
M.L.E.'S of Bingham parameters: K1= -81.39 K2= -28.59
Oval azimuth= 125.9

Std. dev. angles = 4.56 7.74

Confidence angles: A952= 3.10 A953= 5.25

Pole lat= -80.8 Pole long= -55.8

Test statistics for circular symmetry: Bipolar= 3.99 Girdle= 178.05
Test indicates symmetric bipolar dist. ALPHA= 4.17

LINES.										DEMAG	
	SM#	TYPE	GDEC	GINC	SDEC	SINC	VLAT	VLONG	JH		
PHM	51.000	LIN SEGM	3.7	63.2	3.7	63.2	86.6	11.2		50G	ORIGN
PHM	52.000	LIN SEGM	13.4	67.6	13.4	67.6	80.5	-54.6		T150	ORIGN
PHM	53.000	LIN SEGM	11.4	62.5	11.4	62.5	81.4	-10.8		50G	ORIGN
PHM	54.000	LIN SEGM	5.5	67.0	5.5	67.0	85.5	-65.9		T150	ORIGN

***** STATISTICS ON LINE DATA *****

GEOGRAPHIC COORDINATES:

FISHER STATISTICS:

N= 4 R= 3.9952 M.L.E. of kappa= 832.0 kappa= 624.0

Alpha 95= 3.68 Circular std. dev.= 3.24

Declination= 8.4 Inclination= 65.1

Pole lat= 84.3 Pole long= -32.9 Paleolat= 47.2

dp= 4.8 dm= 6.0 Oval azimuth= 91.4

MOMENT OF INERTIA STATISTICS:

N= 4 Eigenvalues= 0.003 0.006 3.990

Uniform test statistic= 19.86 Data not random at 1% level.

Dimroth-Watson K= -416.14

M.L.E. 'S of Bingham parameters: K1= -630.81 K2= -309.92

Oval azimuth= 17.0

Std. dev. angles = 1.62 2.31

Confidence angles: A952= 1.98 A953= 2.82

Declination= 8.4 Inclination= 65.1

Pole lat= 84.3 Pole long= -32.9 Paleolat= 47.2

Test statistics for circular symmetry: Bipolar= 0.53 Girdle= 617.34

Test indicates symmetric bipolar dist. ALPHA= 2.40

STRATIGRAPHIC COORDINATES.

FISHER STATISTICS:

N= 4 R= 3.9952 M.L.E. of kappa= 832.0 kappa= 624.0

Alpha 95= 3.68 Circular std. dev.= 3.24

Declination= 8.4 Inclination= 65.1

Pole lat= 84.3 Pole long= -32.9 Paleolat= 47.2

dp= 4.8 dm= 6.0 Oval azimuth= 91.4

MOMENT OF INERTIA STATISTICS:

N= 4 Eigenvalues= 0.003 0.006 3.990

Uniform test statistic= 19.86 Data not random at 1% level.

Dimroth-Watson K= -416.14

M.L.E. 'S of Bingham parameters: K1= -630.81 K2= -309.92

Oval azimuth= 17.0

Std. dev. angles = 1.62 2.31

Confidence angles: A952= 1.98 A953= 2.82

Declination= 8.4 Inclination= 65.1

Pole lat= 84.3 Pole long= -32.9 Paleolat= 47.2

Test statistics for circular symmetry: Bipolar= 0.53 Girdle= 617.34

Test indicates symmetric bipolar dist. ALPHA= 2.40

VGP COORDINATES.

FISHER STATISTICS:

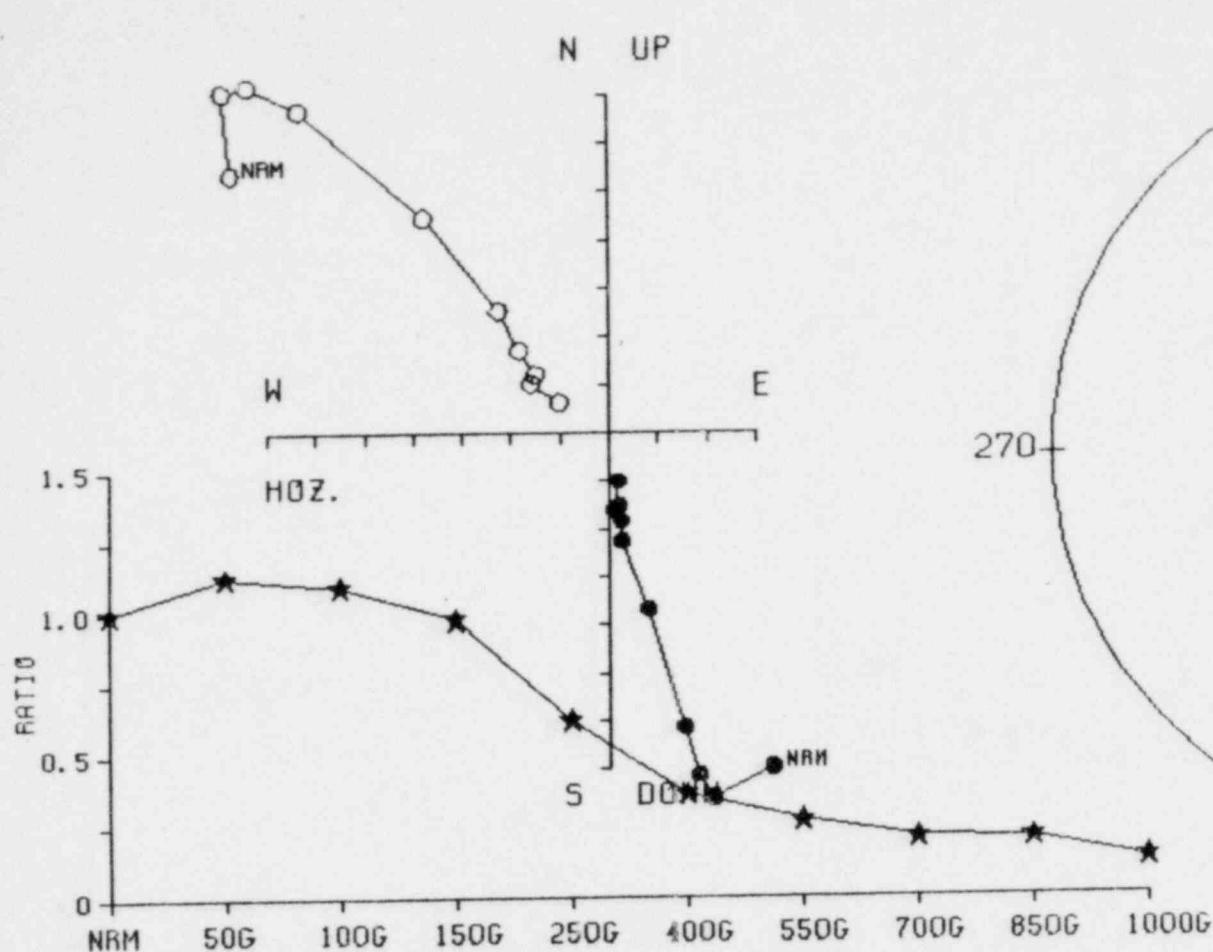
N= 4 R= 3.9903 M.L.E. of kappa= 413.7 kappa= 310.3

Alpha 95= 5.22 Circular std. dev.= 4.60

Pole lat= 84.2 Pole long= -33.8

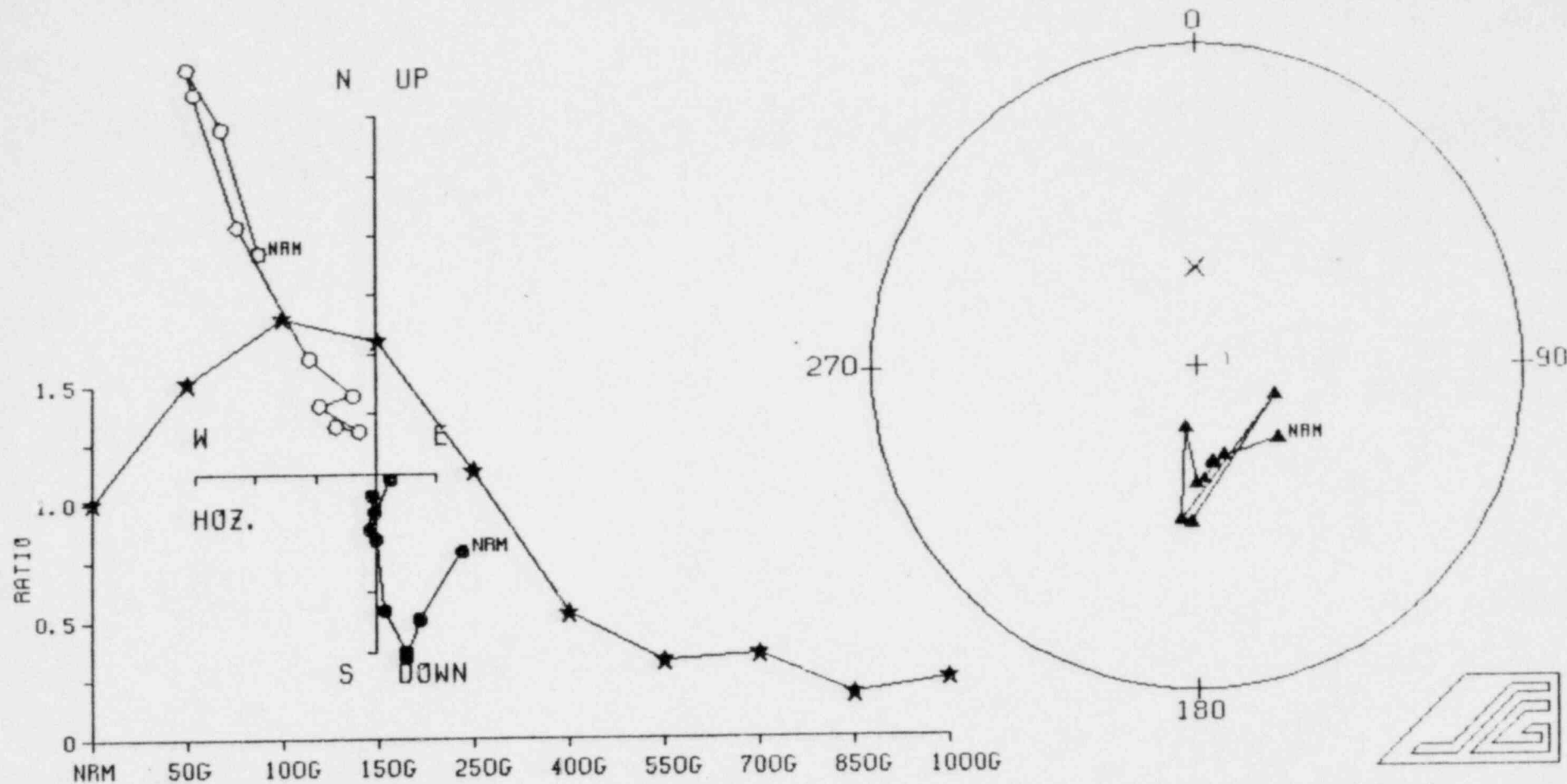
MOMENT OF INERTIA STATISTICS:

N= 4 Eigenvalues= 0.008 0.012 3.981
Uniform test statistic= 19.71 Data not random at 1% level.
Dunnett-Watson K= -206.89
M.L.E.'s of Bingham parameters: K1= -266.56 K2= -169.91
Oval azimuth= 54.4
Std. dev. angles = 2.49 3.12
Confidence angles: A952= 3.05 A953= 3.82
Pole lat= 84.2 Pole long= -33.8
Test statistics for circular symmetry: Bipolar= 0.21 Girdle= 337.17
Test indicates symmetric bipolar dist. ALPHA= 3.43



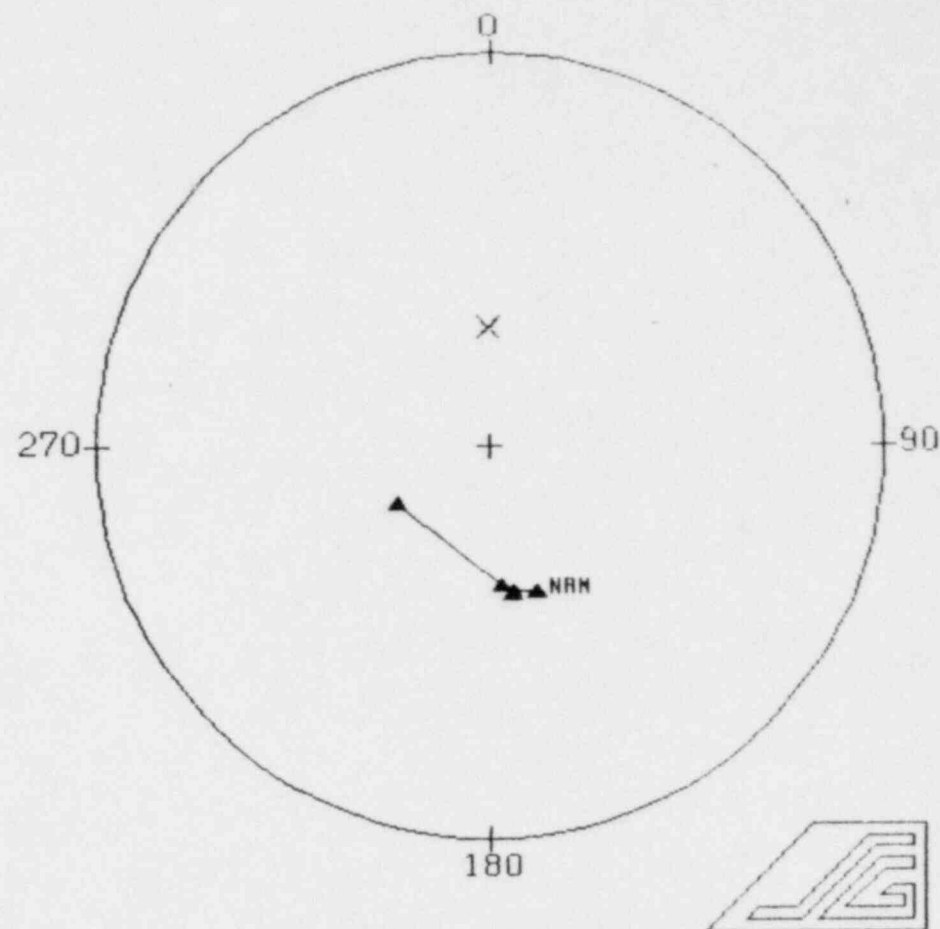
Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.
 Locality: MARENGO Site lat & long= 47.00 -118.20
 10 Demag steps for this sample.
 Interval= 0.000 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 0.650 AT NRM

SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	1.000	154.5	-34.8	0.0	0.0	0.0	0.00E-01	-55.2	-72.6	9.42E-05	NRM	1.000	2.90E-04	1.000
PMM	1.000	164.4	-41.9	62.9	51.5	62.9	2.18E-05	-64.0	-84.2	1.06E-04	50G	1.125		
PMM	1.000	165.5	-44.3	149.2	12.0	165.5	5.50E-06	-66.1	-84.4	1.03E-04	100G	1.093		
PMM	1.000	166.0	-46.6	162.5	-25.6	166.0	1.16E-05	-67.9	-83.4	9.21E-05	150G	0.978		
PMM	1.000	167.8	-49.8	163.4	-41.1	167.8	3.41E-05	-71.1	-84.0	5.83E-05	250G	0.619		
PMM	1.000	173.6	-48.2	159.2	-51.5	173.6	2.45E-05	-71.5	-100.4	3.40E-05	400G	0.361		
PMM	1.000	172.0	-38.7	175.3	-56.1	172.0	9.23E-06	-67.1	-100.7	2.52E-05	550G	0.268		
PMM	1.000	175.9	-32.3	43.1	-34.6	175.9	6.01E-06	-64.0	-101.0	1.94E-05	700G	0.206		
PMM	1.000	168.9	-31.5	187.8	-32.8	168.9	2.42E-06	-60.3	-110.2	1.90E-05	850G	0.202		
PMM	1.000	168.9	-31.5	187.8	-32.8	168.9	7.18E-06	-58.6	-97.5	1.20E-05	1000G	0.127		

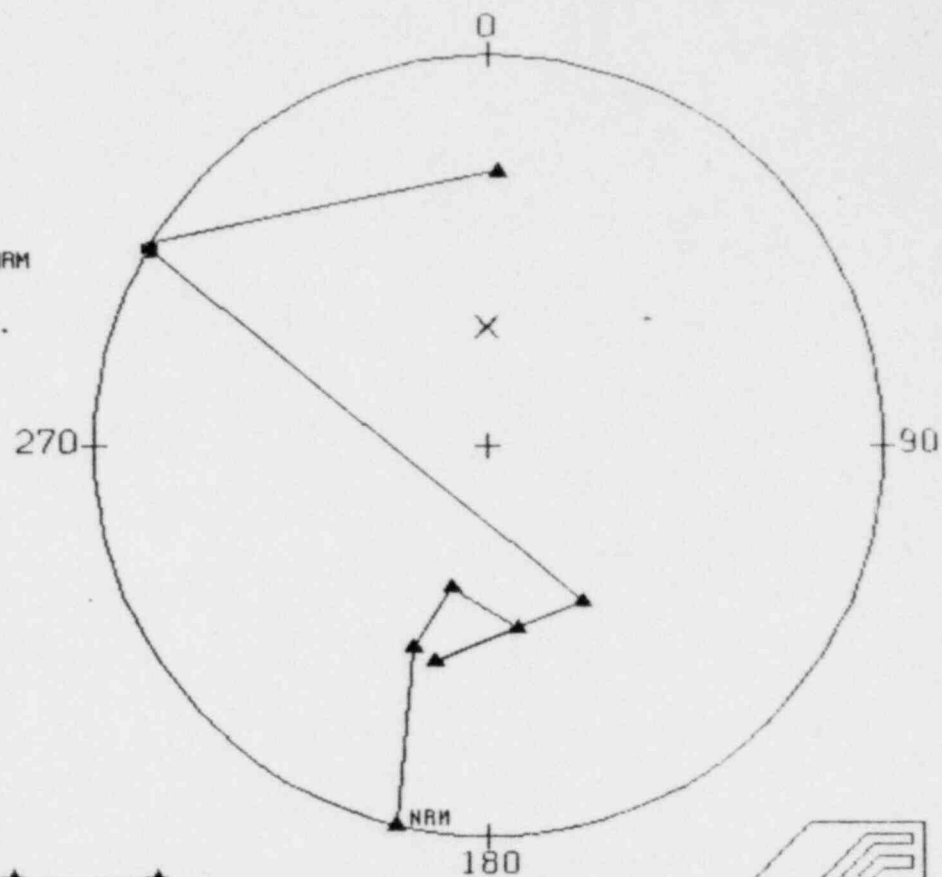
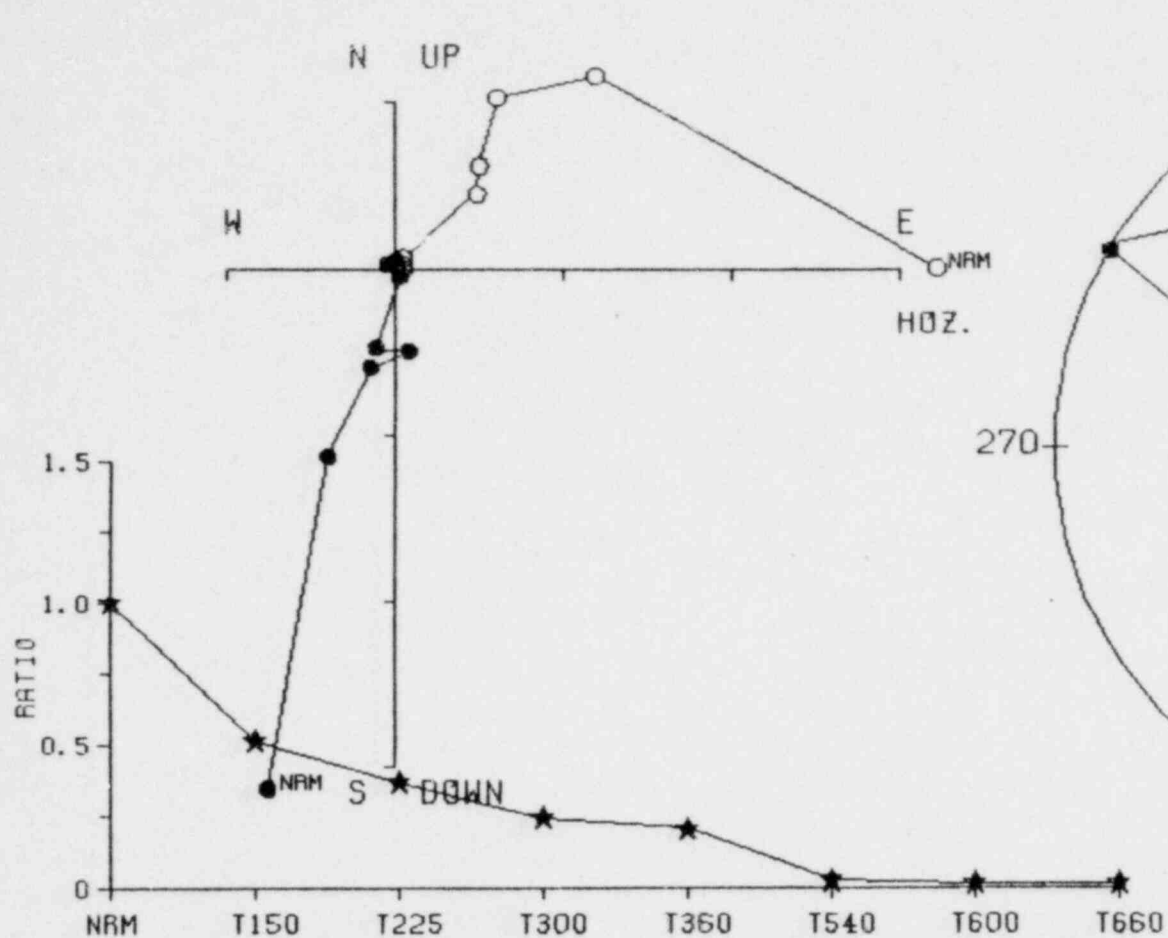


Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.
 Locality: MARENGO Site lat & long= 47.00 -118.20
 10 Demag steps for this sample.
 Interval= 0.000 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 0.256 AI NRM

SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	3.000	132.6	-62.4	0.0	0.0	0.0	0.00E-01	-57.1	-16.1	4.19E-05	NRM	1.000	3.27E-04	1.000
PMM	3.000	163.6	-66.2	31.8	57.3	31.8	2.48E-05	-78.9	-14.1	6.34E-05	50G	1.513		
PMM	3.000	170.7	-65.3	18.9	56.3	18.9	1.21E-05	-83.6	-21.2	7.49E-05	100G	1.798		
PMM	3.000	170.8	-64.7	167.9	-75.3	167.9	4.27E-06	-83.7	-28.2	7.07E-05	150G	1.687		
PMM	3.000	176.4	-61.0	153.7	-71.2	153.7	2.36E-05	-84.4	-89.4	4.75E-05	250G	1.134		
PMM	3.000	180.1	-60.1	173.0	-61.7	173.0	2.52E-05	-84.0	-119.2	2.23E-05	400G	0.532		
PMM	3.000	190.1	-73.9	175.0	-40.1	175.0	9.72E-06	-73.6	82.9	1.36E-05	550G	0.325		
PMM	3.000	185.7	-50.2	2.8	-16.5	2.8	5.97E-06	-73.4	-135.6	1.48E-05	700G	0.353		
PMM	3.000	111.4	-69.1	202.1	-25.7	111.4	1.01E-05	-47.1	5.8	7.48E-06	850G	0.179		
PMM	3.000	181.8	-49.8	25.6	7.4	181.8	6.27E-06	-73.6	-123.6	1.02E-05	1000G	0.243		

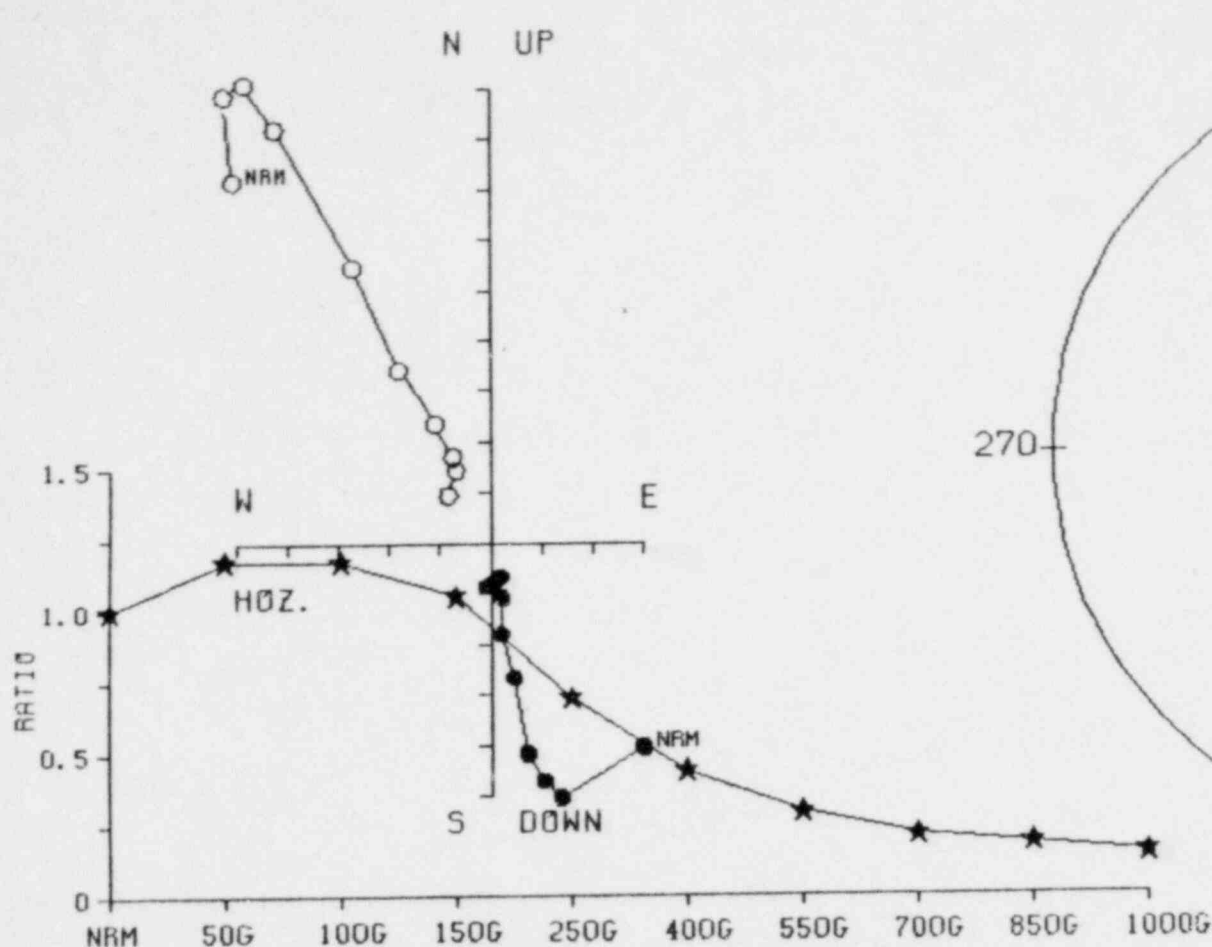


PALEOMAGNETICS LABORATORY



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.
 Locality: MARENGO Site lat & long= 47.00 -118.20
 B Demag steps for this sample.
 Interval= 0.000 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 0.206 AT NRM

SMW	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	5.000	193.5	-0.2	0.0	0.0	0.0	0.00E-01	-41.7	-136.4	3.22E-05	NRM	1.000	3.13E-04	1.000
PMM	5.000	199.6	-44.1	189.9	29.3	2.34E-05	-63.8	-161.2	1.66E-05	T150	0.516			
PMM	5.000	193.9	-59.3	205.5	-12.6	6.05E-06	-77.8	-178.7	1.19E-05	T225	0.370			
PMM	5.000	170.6	-50.7	247.4	-59.0	4.79E-06	-72.8	-89.9	7.92E-06	T300	0.246			
PMM	5.000	193.3	-42.4	96.1	-40.7	2.57E-06	-65.1	-148.1	6.60E-06	T360	0.205			
PMM	5.000	149.0	-51.5	197.9	-40.0	5.90E-06	-62.2	-49.3	8.40E-07	T540	0.026			
PMM	5.000	300.5	0.5	134.6	-32.9	1.22E-06	20.4	128.6	5.31E-07	T600	0.016			
PMM	5.000	2.2	-30.5	246.6	28.8	5.91E-07	26.6	59.5	5.52E-07	T660	0.017			



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

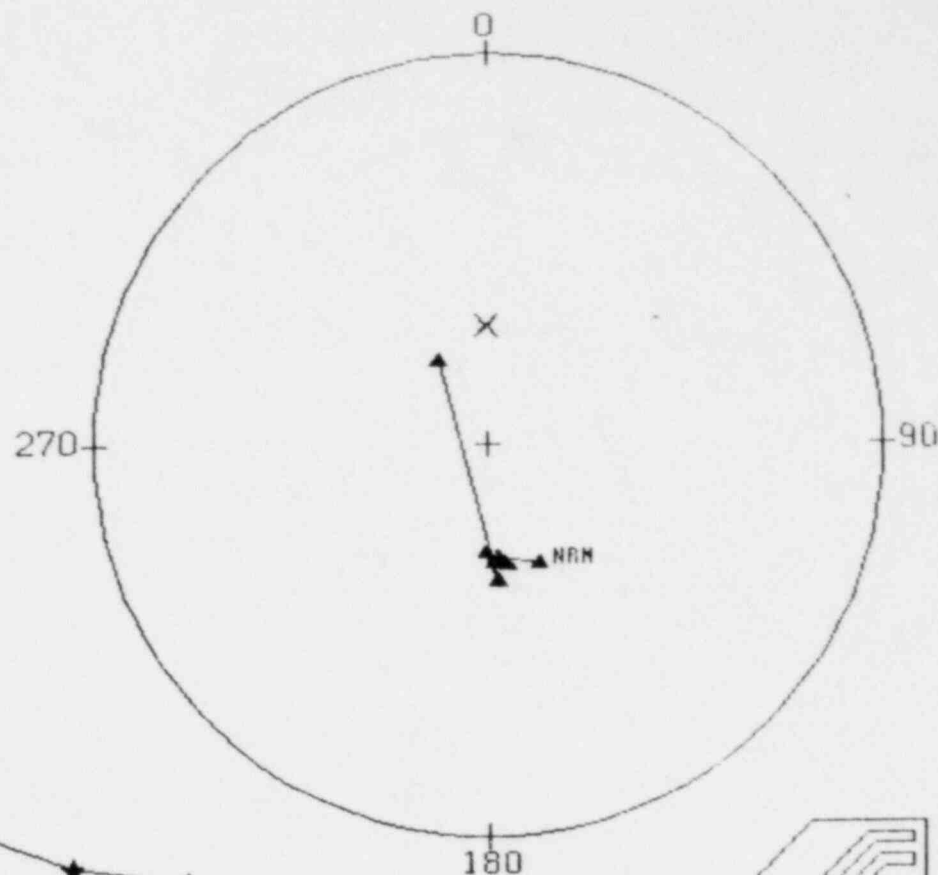
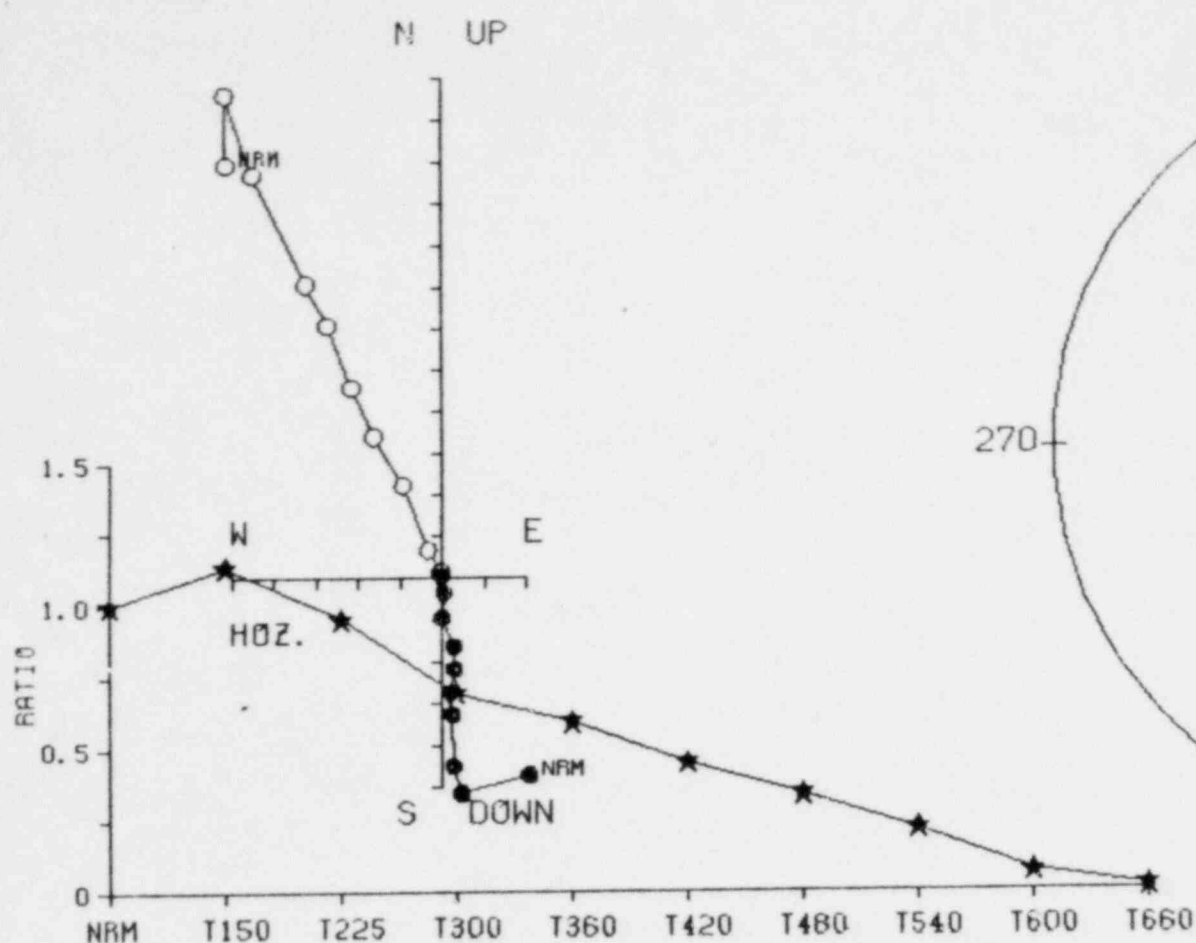
Locality: MARENGO Site lat & long= 47.00 -118.20

10 Demag steps for this sample.

Interval= 1.500 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.800 AT NRM

SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMH	11.000	143.4	-54.9	0.0	0.0	0.0	0.00E-01	-60.5	-37.9	8.76E-05	NRM	1.000	2.19E-04	1.000
PMH	11.000	143.4	-54.9	58.9	42.1	58.9	2.56E-05	-77.2	-53.2	1.03E-04	50G	1.176		
PMH	11.000	164.7	-59.6	134.1	25.3	134.1	5.12E-06	-80.4	-46.3	1.03E-04	100G	1.176		
PMH	11.000	167.5	-62.1	149.2	-54.4	149.2	1.09E-05	-82.6	-46.7	9.24E-05	150G	1.055		
PMH	11.000	170.2	-62.8	169.5	-61.1	169.5	3.16E-05	-83.3	-39.2	6.08E-05	250G	0.694		
PMH	11.000	170.6	-63.7	173.9	-65.9	173.9	2.23E-05	-84.5	-64.5	3.86E-05	400G	0.441		
PMH	11.000	173.9	-62.3	169.1	-55.3	169.1	1.29E-05	-82.6	-21.2	2.59E-05	550G	0.296		
PMH	11.000	169.1	-55.3	175.0	-66.6	175.0	7.37E-06	-86.1	5.9	1.86E-05	700G	0.212		
PMH	11.000	162.8	-64.7	239.0	-58.3	162.8	3.06E-06	-78.3	-24.1	1.60E-05	850G	0.183		
PMH	11.000	184.7	-48.9	56.5	-56.5	184.7	5.87E-06	-72.5	-131.8	1.27E-05	1000G	0.145		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

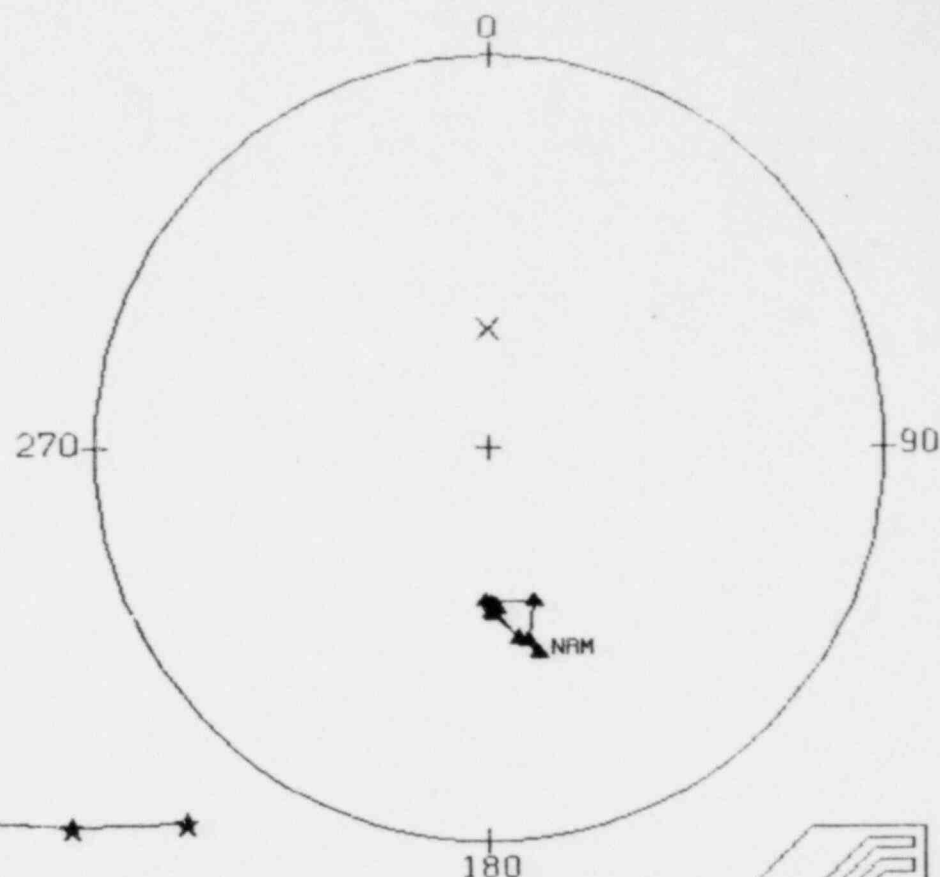
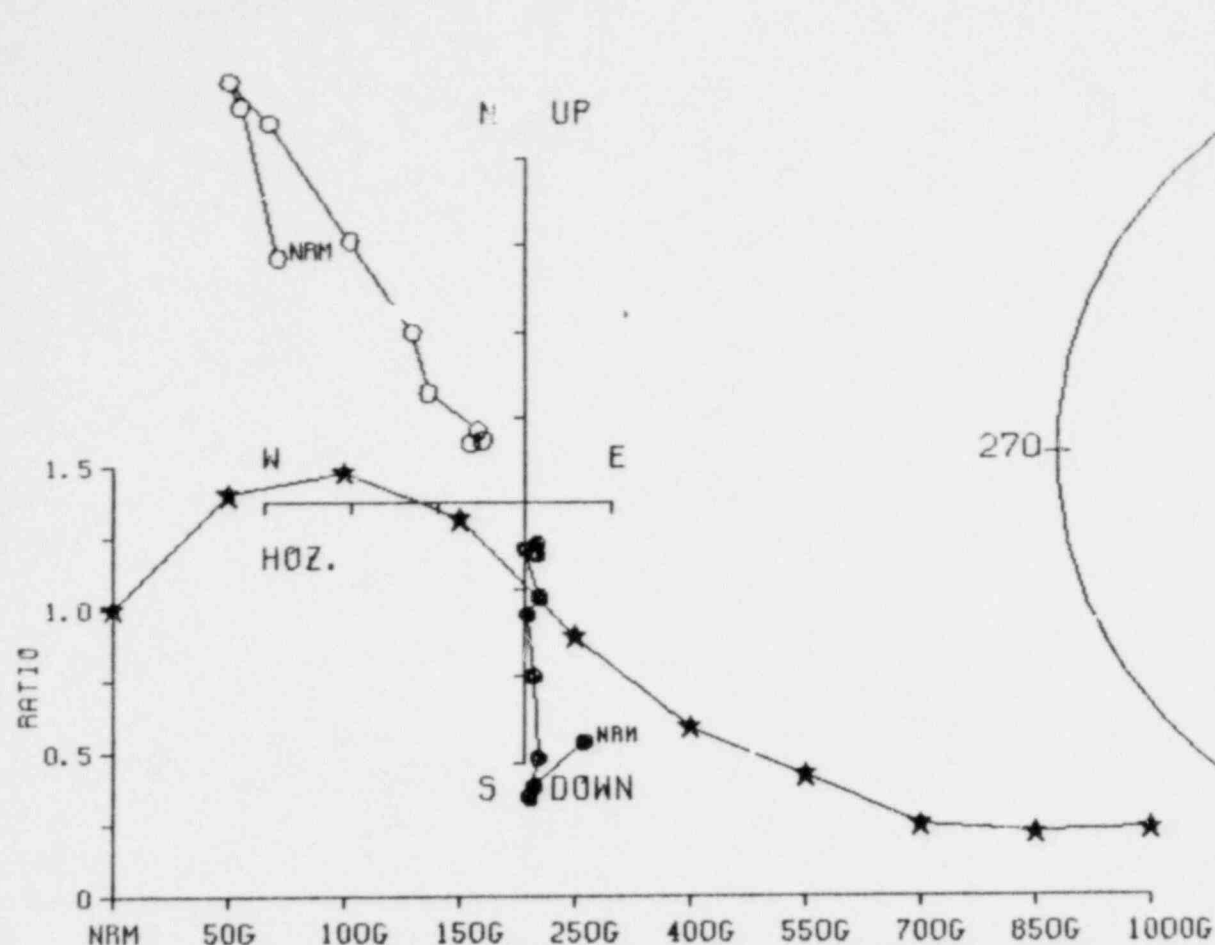
Locality: MARENGO Site lat & long= 47.00 -118.20

10 Demag steps for this sample.

Interval= 0.000 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.991 AT NRM

SM	Dec	Inc	Diff	vect	Dec	Inc	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PHM	12.000	156.6	-62.7	0.0	0.0	156.6	-62.7	0.0	0.00E-01	-73.4	-29.9	1.12E-04	NRM	1.000	2.26E-04	1.000
PHM	12.000	174.9	-66.0	74.8	45.2	174.9	-66.0	74.8	2.33E-03	-86.3	-5.0	1.27E-04	T150	1.134		
PHM	12.000	176.9	-65.1	161.6	-70.2	176.9	-65.1	161.6	2.02E-03	-87.9	-22.1	1.07E-04	T225	0.955		
PHM	12.000	175.9	-65.3	179.5	-64.5	175.9	-65.3	179.5	2.91E-03	-87.2	-18.6	7.79E-05	T300	0.696		
PHM	12.000	175.7	-65.7	177.0	-62.9	175.7	-65.7	177.0	1.11E-03	-87.0	-8.6	6.68E-05	T360	0.596		
PHM	12.000	172.4	-64.6	187.8	-68.6	172.4	-64.6	187.8	1.63E-03	-84.8	-31.5	5.06E-05	T420	0.452		
PHM	12.000	170.9	-64.1	177.2	-66.0	170.9	-64.1	177.2	1.27E-03	-83.6	-35.7	3.79E-05	T480	0.338		
PHM	12.000	181.0	-67.0	158.0	-57.8	181.0	-67.0	158.0	1.40E-03	-87.2	74.7	2.42E-05	T540	0.216		
PHM	12.000	175.8	-61.2	184.2	-69.5	175.8	-61.2	184.2	1.68E-03	-84.4	-84.5	7.44E-06	T600	0.066		
PHM	12.000	329.8	-70.0	172.9	-52.7	329.8	-70.0	172.9	6.60E-06	-14.1	79.6	1.35E-06	T660	0.012		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

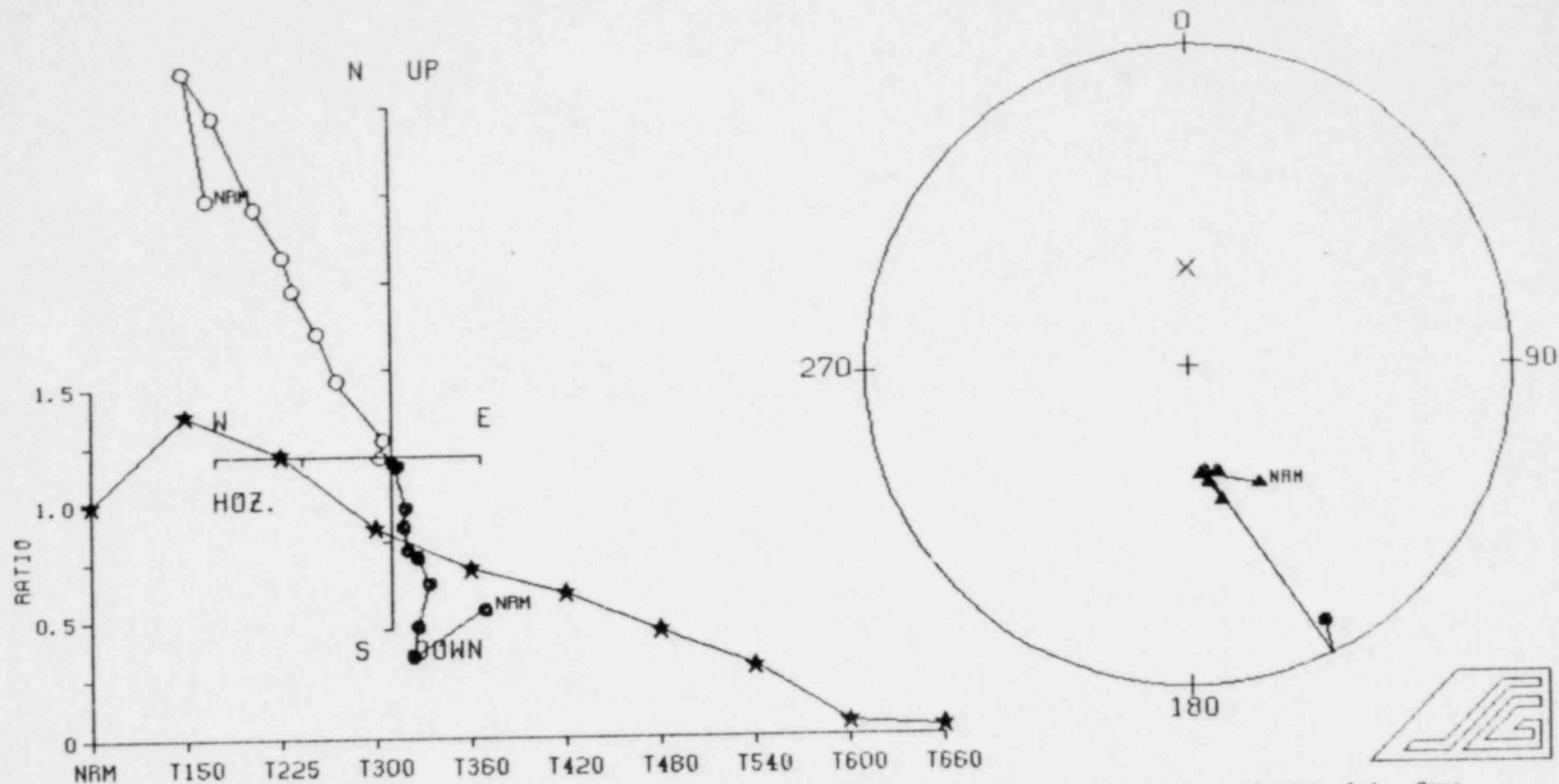
Locality: MARENGO Site lat & long= 47.00 -118.20

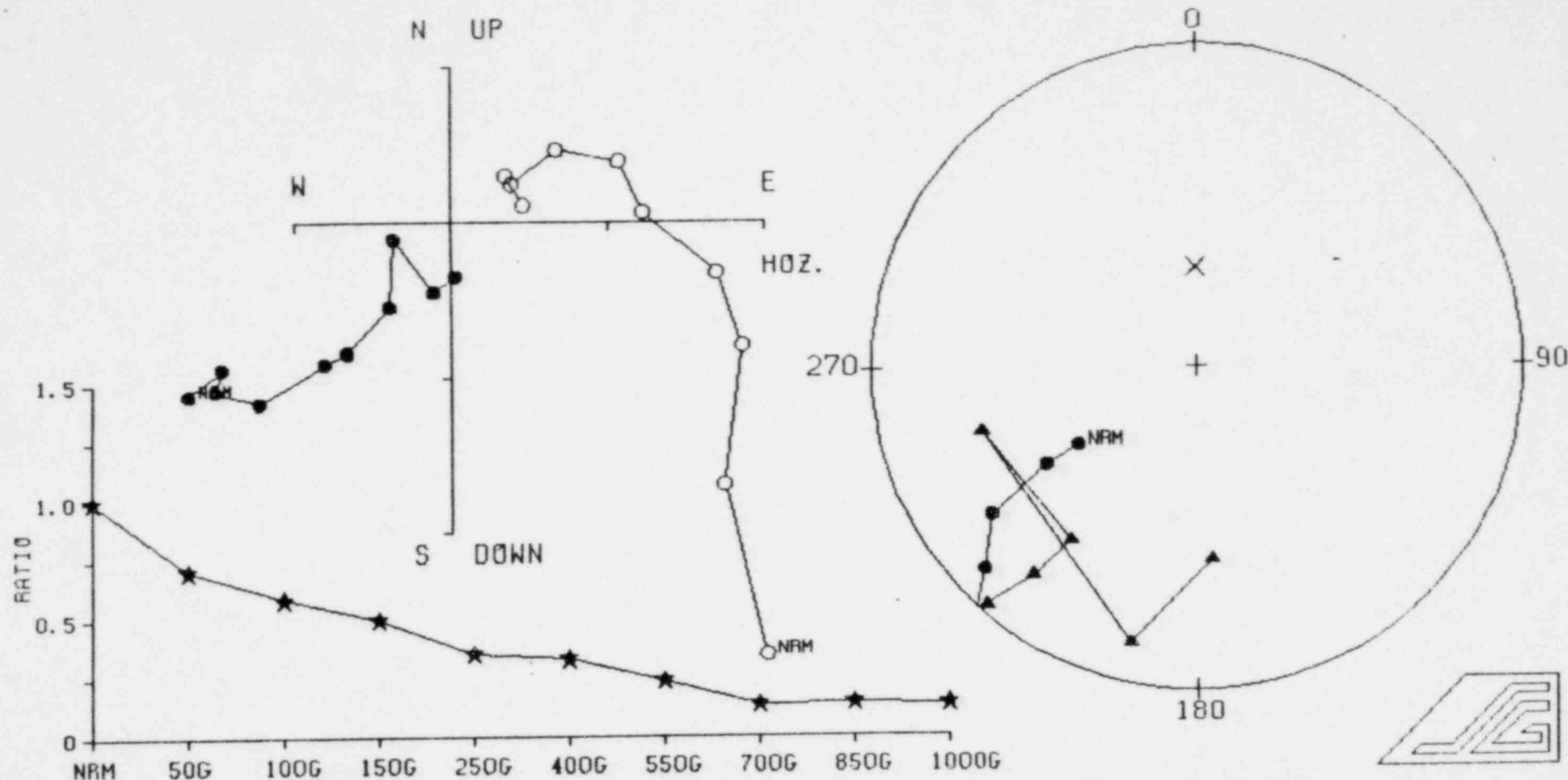
10 Demag steps for this sample

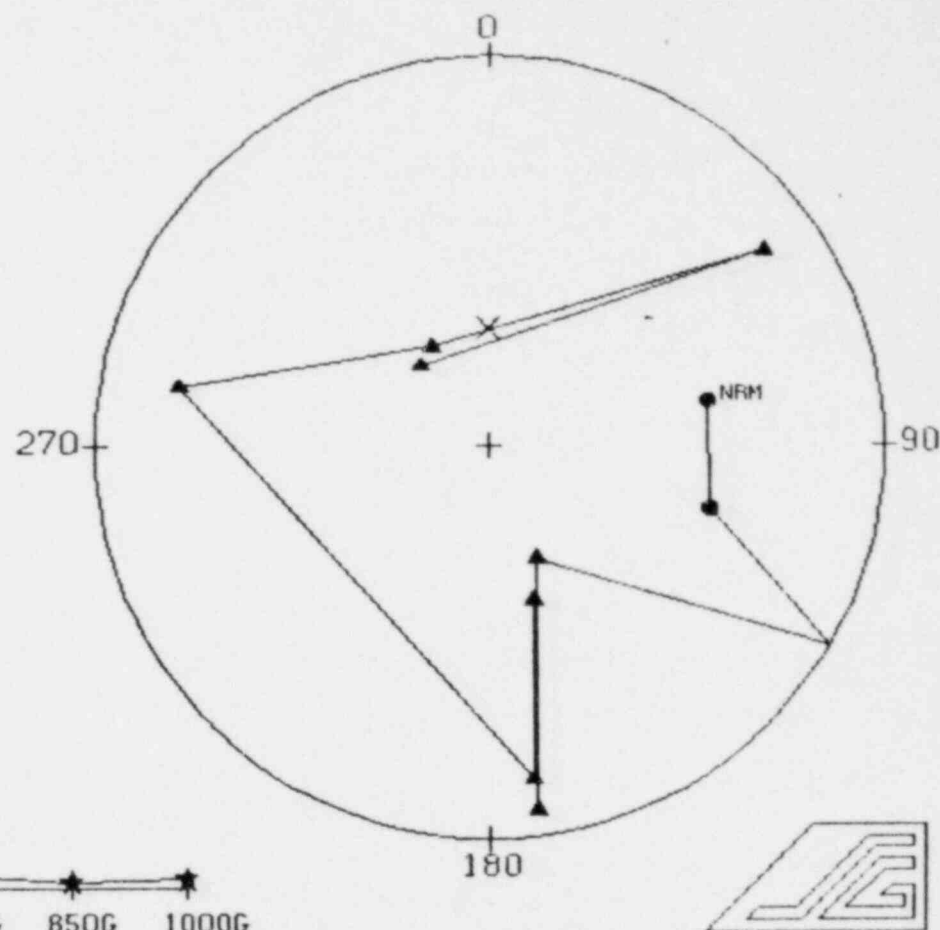
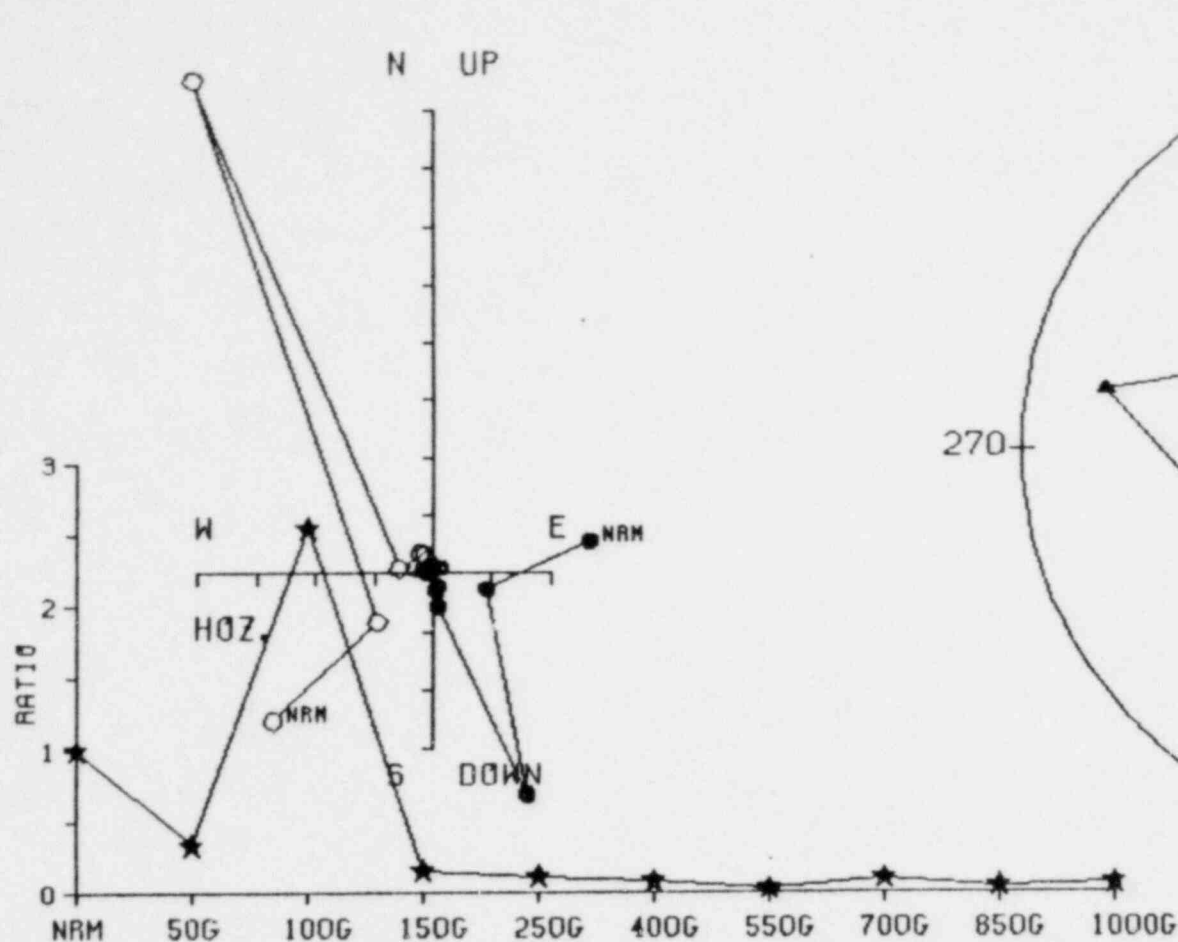
Interval= 0.000 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.395 AT NRM

SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	13.000	166.2	-45.1	0.0	0.0	0.0	0.00E-01	-67.0	-85.3	4.03E-05	NRM	1.000	2.04E-04	1.000
PMM	13.000	178.0	-54.6	48.0	66.5	178.0	1.91E-05	-78.0	-110.1	5.65E-05	50G	1.402		
PMM	13.000	178.9	-55.2	20.6	64.3	178.9	3.20E-06	-78.7	-113.5	5.96E-05	100G	1.479		
PMM	13.000	177.0	-56.2	191.2	-46.3	177.0	6.66E-06	-79.5	-105.0	5.31E-05	150G	1.318		
PMM	13.000	177.2	-56.5	176.6	-55.5	177.2	1.66E-05	-79.8	-105.4	3.65E-05	250G	0.906		
PMM	13.000	178.7	-57.0	174.5	-55.5	178.7	1.27E-05	-80.5	-112.2	2.38E-05	400G	0.591		
PMM	13.000	171.0	-49.2	216.0	-70.9	171.0	7.50E-06	-71.7	-92.7	1.70E-05	550G	0.422		
PMM	13.000	181.3	-57.6	161.7	-36.8	181.3	7.39E-06	-81.2	-125.0	1.00E-05	700G	0.248		
PMM	13.000	163.4	-56.3	246.5	-33.5	163.4	1.99E-06	-74.1	-61.8	8.83E-06	850G	0.219		
PMM	13.000	168.3	-48.5	5.7	-12.9	168.3	1.43E-06	-70.2	-86.7	9.38E-06	1000G	0.233		







Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

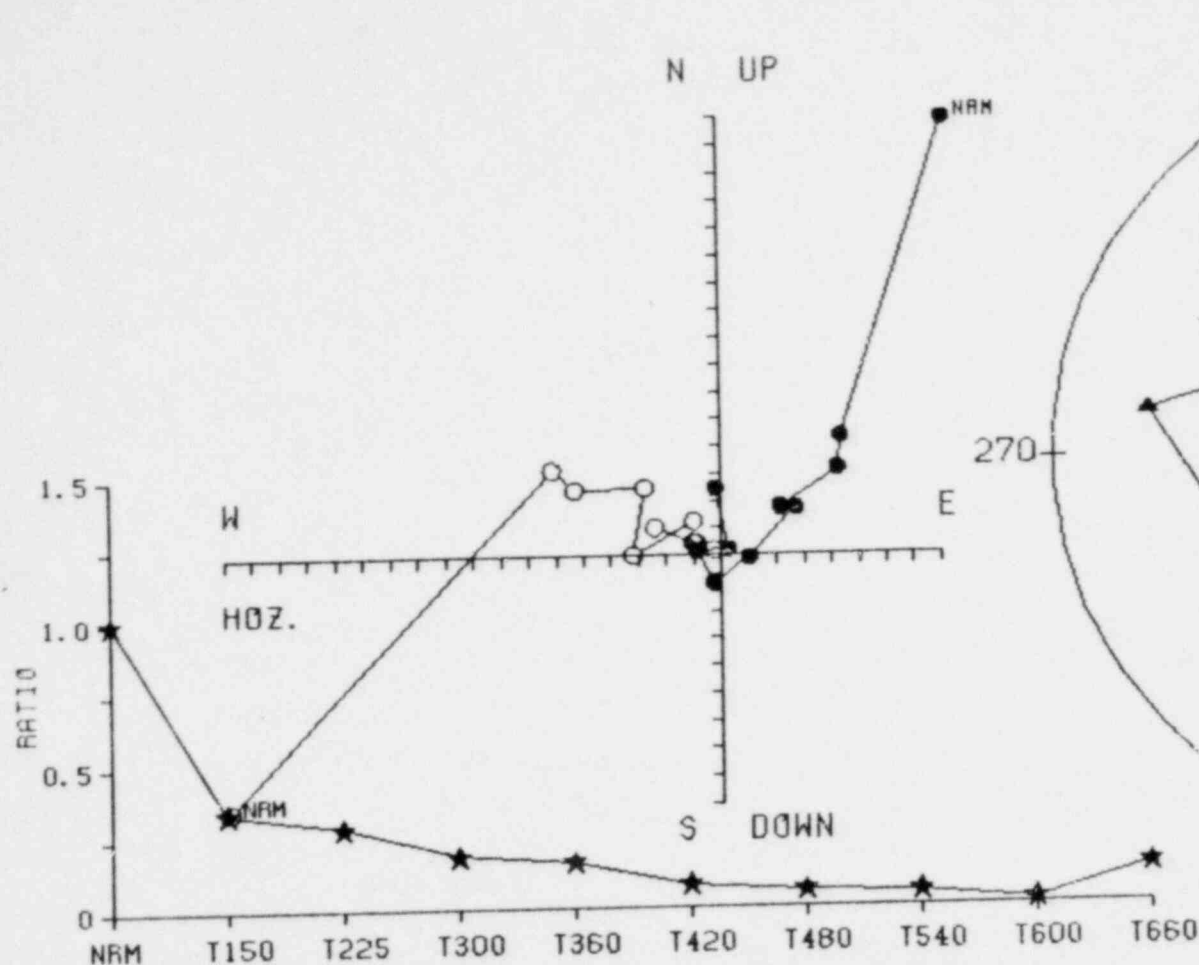
Locality: MARENGO Site lat & long= 47.00 -118.20

10 Demag steps for this sample.

Interval= 0.500 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.244 AT NRM

SM	Dec	Inc	Diff	vect	Dec	Inc	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	21.000	78.2	42.9	0.0	78.2	42.9	0.0	0.0	0.00E-01	25.8	-37.9	3.70E-05	NRM	1.000	3.03E-04	1.000
PMM	21.000	106.1	41.3	64.9	106.1	41.3	64.9	41.2	2.56E-05	7.0	-55.8	1.26E-05	50G	0.341		
PMM	21.000	157.0	-64.3	348.9	157.0	-64.3	348.9	69.1	1.00E-04	-74.2	-23.2	9.44E-05	100G	2.551		
PMM	21.000	172.4	-7.2	154.5	172.4	-7.2	154.5	-67.2	9.15E-05	-46.1	-107.2	5.82E-06	150G	0.157		
PMM	21.000	163.7	-56.1	178.2	163.7	-56.1	178.2	38.2	4.44E-06	-74.1	-63.0	4.18E-06	250G	0.113		
PMM	21.000	172.3	-15.6	22.3	172.3	-15.6	22.3	-75.3	2.75E-06	-50.4	-106.2	3.02E-06	400G	0.082		
PMM	21.000	281.0	-21.1	156.2	281.0	-21.1	156.2	-7.4	3.38E-06	-0.6	136.4	1.05E-06	550G	0.028		
PMM	21.000	330.8	-66.0	193.0	330.8	-66.0	193.0	69.0	3.10E-06	-8.6	81.0	3.58E-06	700G	0.097		
PMM	21.000	54.0	-15.3	277.7	54.0	-15.3	277.7	-53.3	3.50E-06	17.3	4.6	1.75E-06	850G	0.047		
PMM	21.000	320.3	-68.0	82.0	320.3	-68.0	82.0	43.0	2.71E-06	-13.8	86.2	2.49E-06	1000G	0.067		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

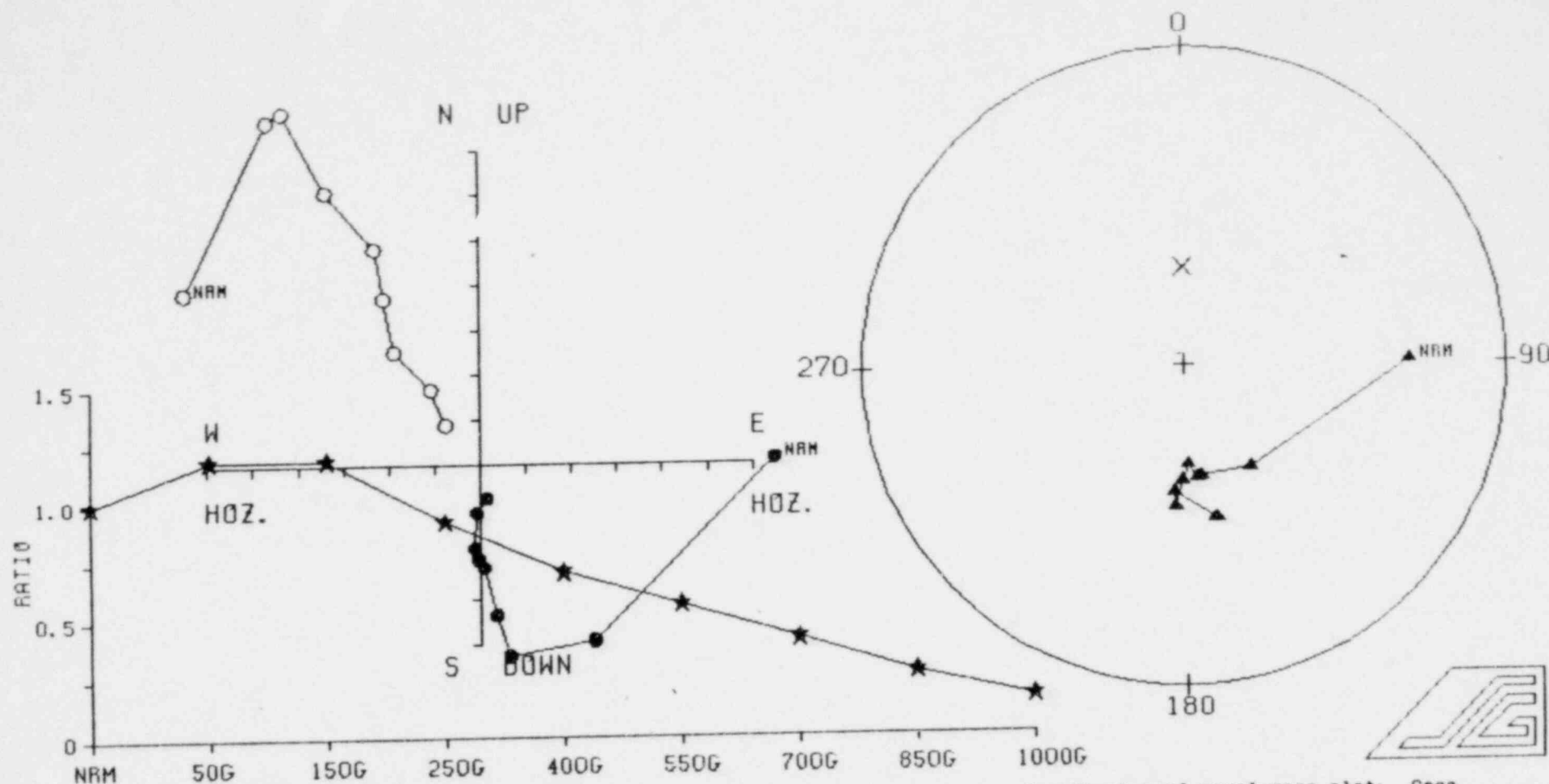
Locality: MARENGO Site lat & long= 47.00 -118.20

10 Demag steps for this sample

Interval= 0.000 Strike & dip of bedding= 0.0 0.0

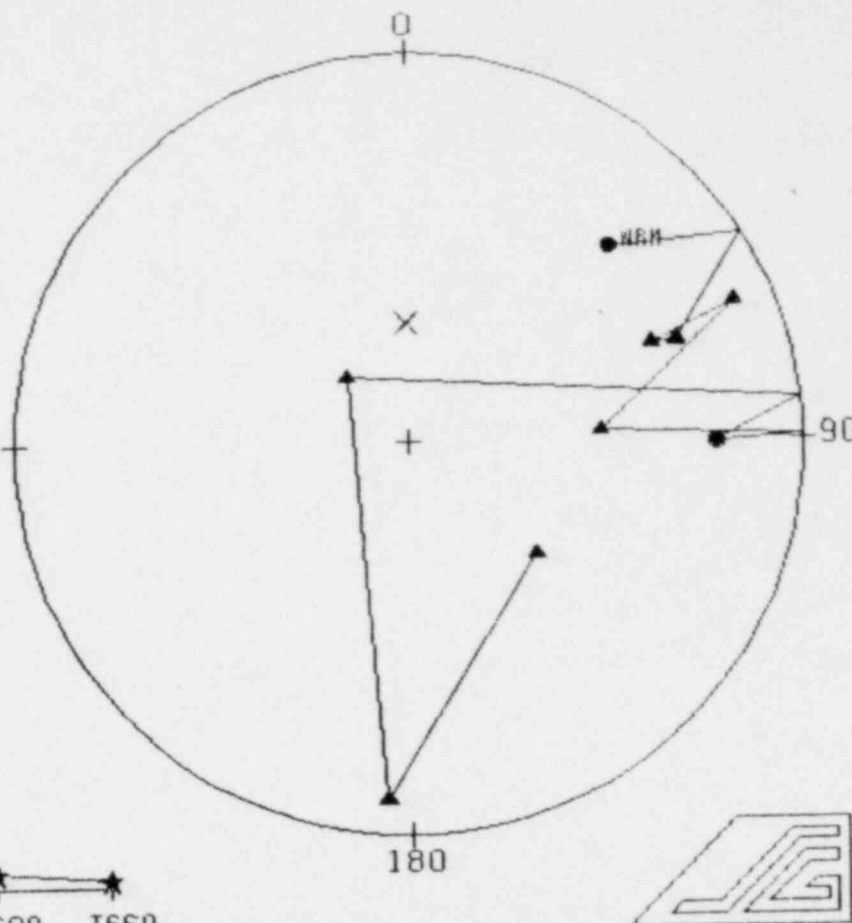
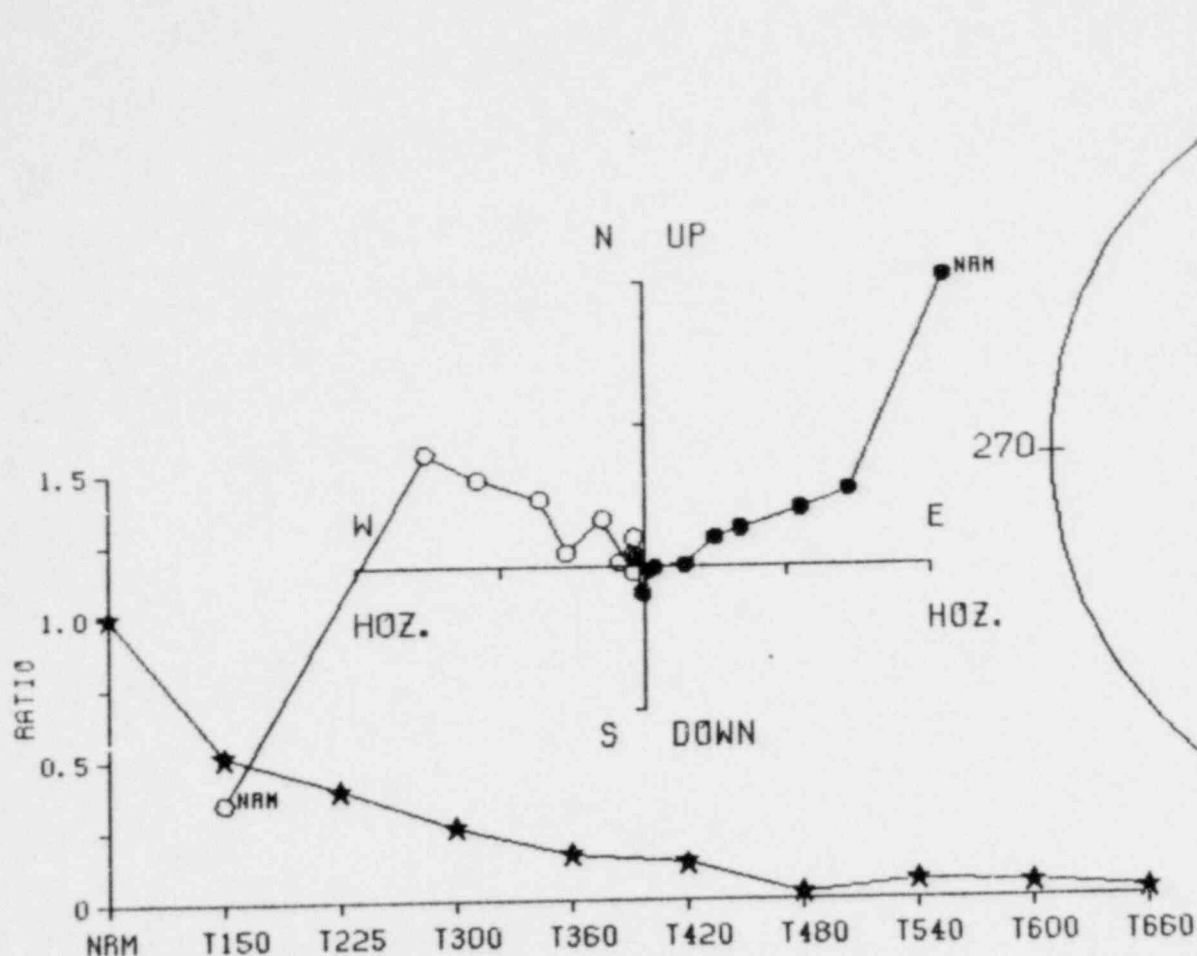
Koenigsberger ratio = 0.359 AT NRM

	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	22.000	27.2	27.1	0.0	0.0	0.0	0.00E-01	50.3	17.9	2.01E-05	NRM	1.000	1.12E-04	1.000
PMM	22.000	45.1	-27.3	18.3	45.3	45.3	1.73E-05	16.5	16.1	6.90E-06	T150	0.343		
PMM	22.000	53.3	-24.6	5.3	-32.4	53.3	1.39E-06	13.5	8.3	5.81E-06	T225	0.289		
PMM	22.000	50.9	-41.8	55.9	1.4	50.9	2.52E-06	5.4	16.4	3.72E-06	T300	0.185		
PMM	22.000	57.7	-0.3	273.4	-77.1	57.7	2.53E-06	21.3	-3.3	3.21E-06	T360	0.160		
PMM	22.000	94.5	-50.5	43.5	26.1	94.5	2.76E-06	-25.1	-8.6	1.59E-06	T420	0.079		
PMM	22.000	193.6	-21.5	53.3	-27.6	193.6	1.76E-05	-52.3	-140.3	1.12E-06	T480	0.036		
PMM	22.000	278.8	-24.3	149.1	0.7	278.8	1.35E-06	136.7	136.7	1.04E-06	T540	0.032		
PMM	22.000	44.7	-33.1	267.0	-11.9	44.7	1.17E-06	13.5	18.3	3.43E-07	T600	0.017		
PMM	22.000	354.9	-22.3	165.3	19.8	354.9	2.41E-06	31.2	67.7	2.64E-06	T660	0.131		

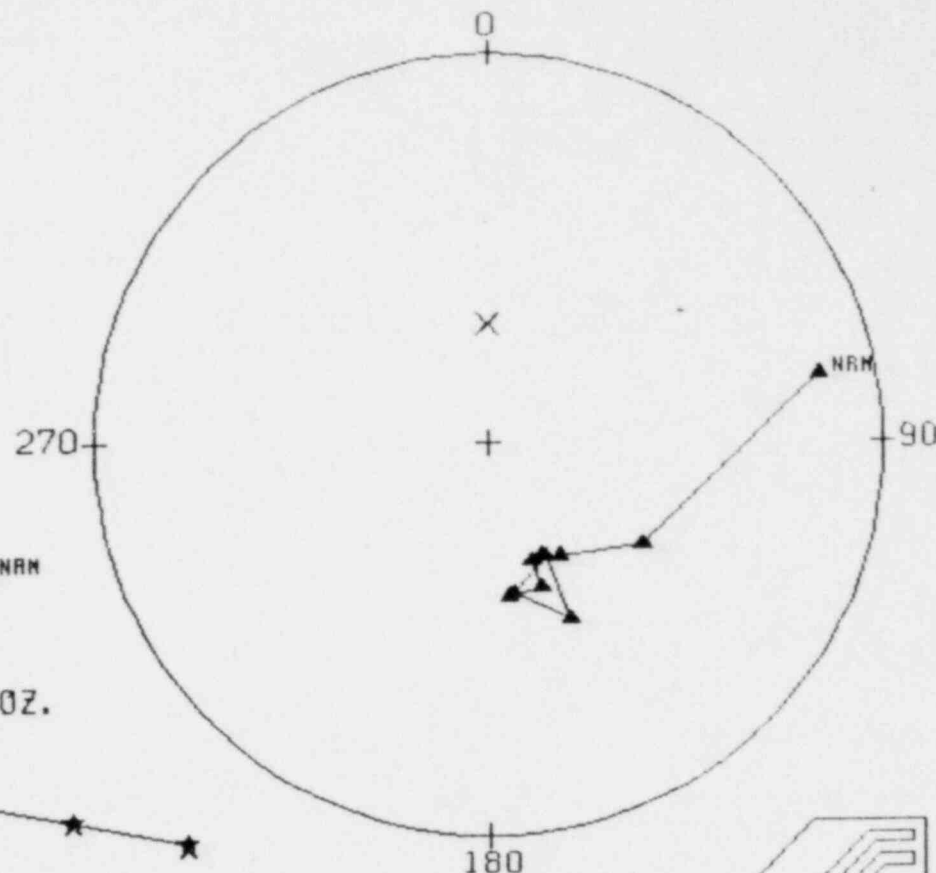
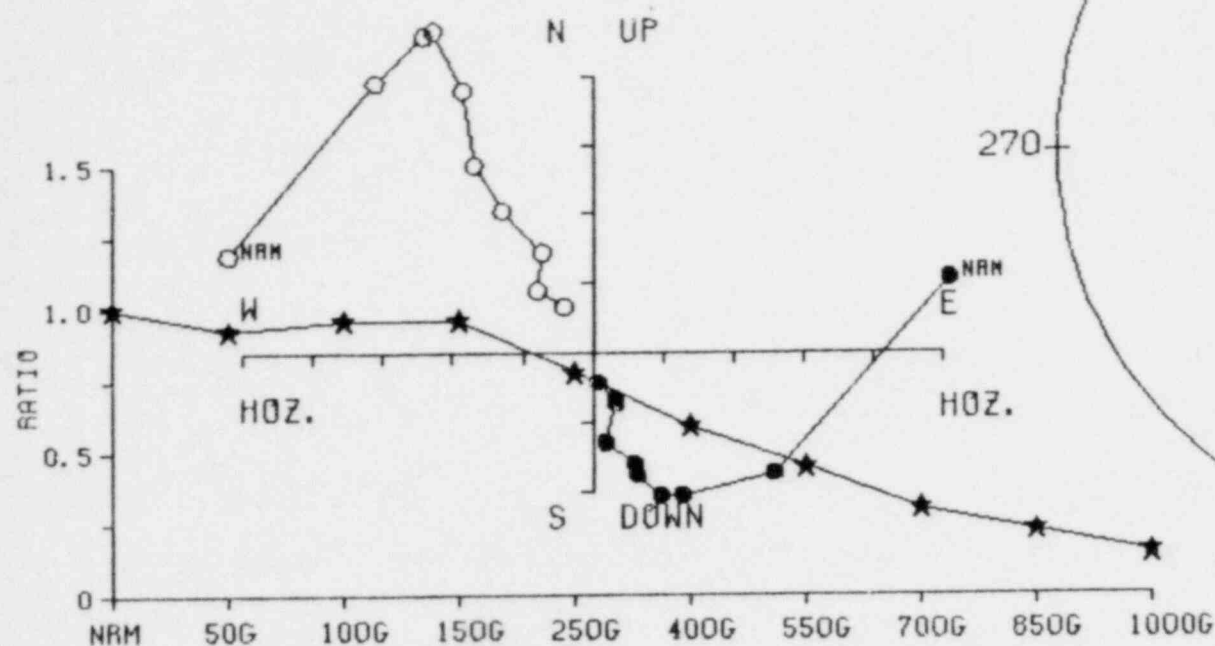


Ratio plot is normalized: Intensity. Site lat & long= 47.00 -118.20
 Locality: MARENGO
 9 Demag steps for this sample.
 Interval= 1.000 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 0.513 AT NRM

SM	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	Diff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	31.000	89.2	-30.6	0.0	0.0	0.0	0.00E-01	-11.4	-16.2	7.54E-05	NRM	1.000	2.94E-04	1.000
PMM	31.000	147.6	-58.7	44.8	34.0	147.6	6.84E-03	-65.4	-34.1	8.97E-05	50G	1.190		
PMM	31.000	171.6	-61.3	80.1	6.1	171.6	1.91E-05	-82.4	-63.0	8.97E-05	150G	1.190		
PMM	31.000	173.8	-61.0	163.7	-62.1	173.8	2.02E-05	-83.4	-74.0	6.96E-05	250G	0.923		
PMM	31.000	178.3	-64.5	164.4	-49.2	178.3	1.67E-05	-88.7	-58.6	5.33E-05	400G	0.707		
PMM	31.000	181.4	-60.4	147.8	-78.5	181.4	1.13E-05	-84.2	-128.7	4.26E-05	550G	0.565		
PMM	31.000	183.6	-53.4	164.7	-78.2	183.6	1.22E-05	-76.6	-131.3	3.13E-05	700G	0.415		
PMM	31.000	184.5	-57.4	182.4	-46.4	184.5	1.14E-05	-80.4	-137.7	2.00E-05	850G	0.265		
PMM	31.000	168.5	-49.6	214.8	-62.9	168.5	9.01E-06	-71.2	-86.0	1.16E-05	1000G	0.154		



		Dec	G	Inc	G	Diff	vect	Dec	S	Inc	S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	32.000	45.8	29.3	0.0	0.0	45.8	29.3	0.0	0.0	45.8	29.3	0.0	0.0	0.00E-01	40.9	-4.3	3.36E-05	NRM	1.000	1.74E-04	1.000
PMM	32.000	69.2	-27.7	24.3	56.0	69.2	-27.7	24.3	56.0	69.2	-27.7	24.3	56.0	2.95E-05	2.8	-3.1	1.72E-05	T150	0.512		
PMM	32.000	69.4	-28.0	68.5	-26.7	69.4	-28.0	68.5	-26.7	69.4	-28.0	68.5	-26.7	4.00E-06	2.5	-3.1	1.32E-05	T225	0.393		
PMM	32.000	68.0	-33.5	71.7	-17.7	68.0	-33.5	71.7	-17.7	68.0	-33.5	71.7	-17.7	4.66E-06	0.7	0.1	8.66E-06	T300	0.258		
PMM	32.000	66.7	-10.7	71.7	-63.6	66.7	-10.7	71.7	-63.6	66.7	-10.7	71.7	-63.6	4.21E-06	11.5	-7.1	5.45E-06	T360	0.162		
PMM	32.000	87.0	-49.5	46.4	39.3	87.0	-49.5	46.4	39.3	87.0	-49.5	46.4	39.3	3.69E-06	-19.3	-4.6	4.40E-06	T420	0.131		
PMM	32.000	87.0	-49.5	46.4	39.3	87.0	-49.5	46.4	39.3	87.0	-49.5	46.4	39.3	4.23E-06	8.5	-36.5	8.12E-07	T480	0.024		
PMM	32.000	90.3	22.8	85.8	-60.0	90.3	22.8	85.8	-60.0	90.3	22.8	85.8	-60.0	2.72E-06	-19.1	85.2	2.18E-06	T540	0.065		
PMM	32.000	317.5	-71.5	112.9	61.0	317.5	-71.5	112.9	61.0	317.5	-71.5	112.9	61.0	2.89E-06	-47.8	-123.9	1.79E-06	T600	0.053		
PMM	32.000	183.8	-9.9	351.2	-37.5	183.8	-9.9	351.2	-37.5	183.8	-9.9	351.2	-37.5	1.56E-06	-52.2	-28.8	8.51E-07	T660	0.025		



Ratio plot is normalized. Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

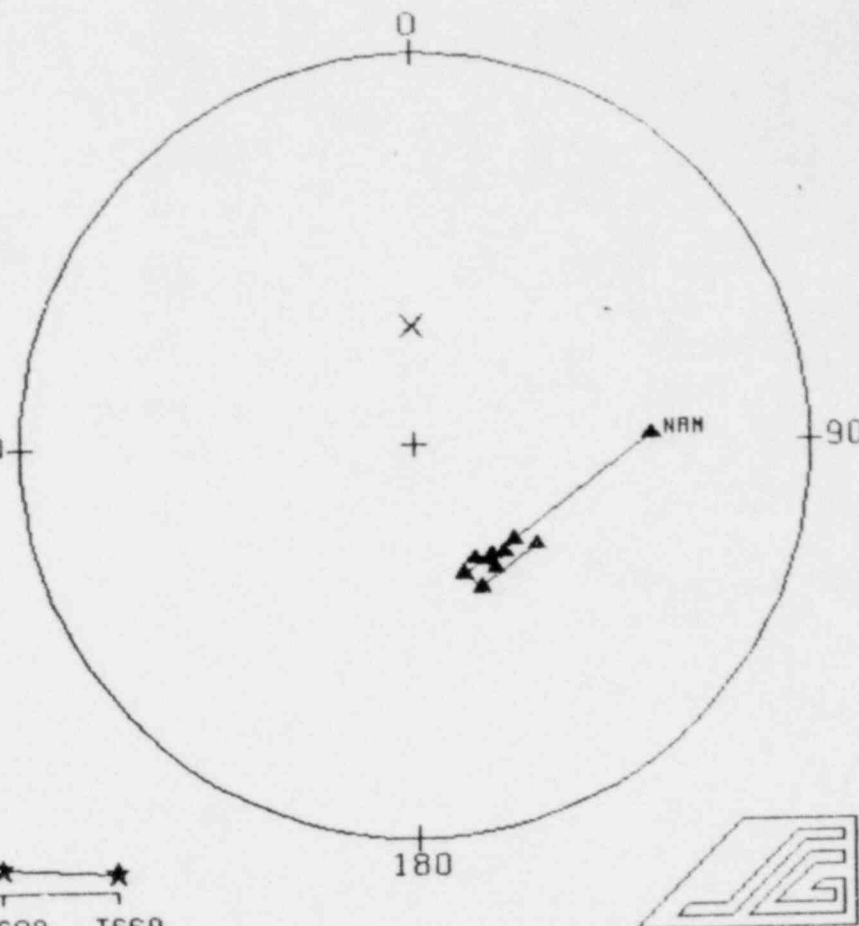
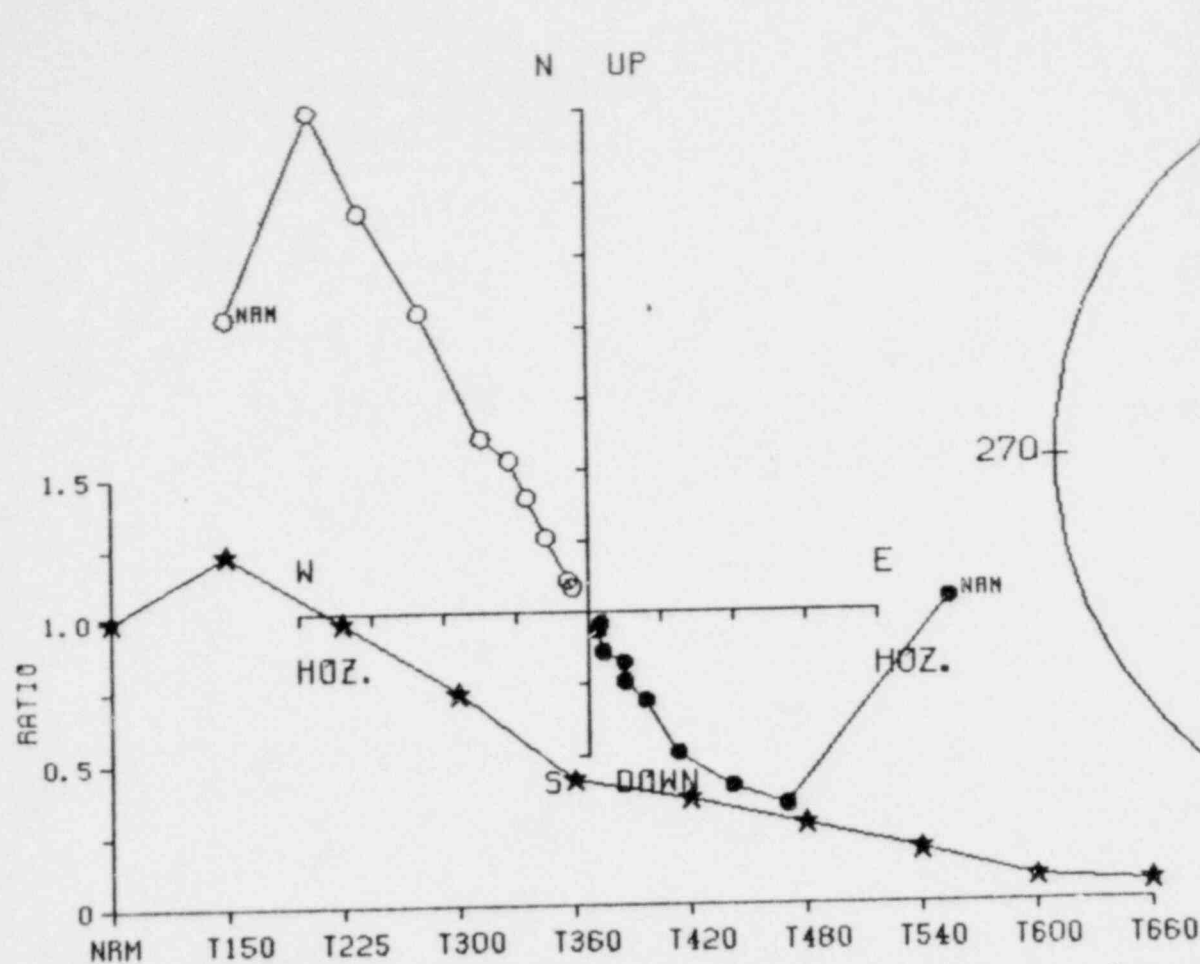
Locality: MARENGO Site lat & long= 47.00 -118.20

10 Demag steps for this sample.

Interval= 0.000 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.482 AT NRM

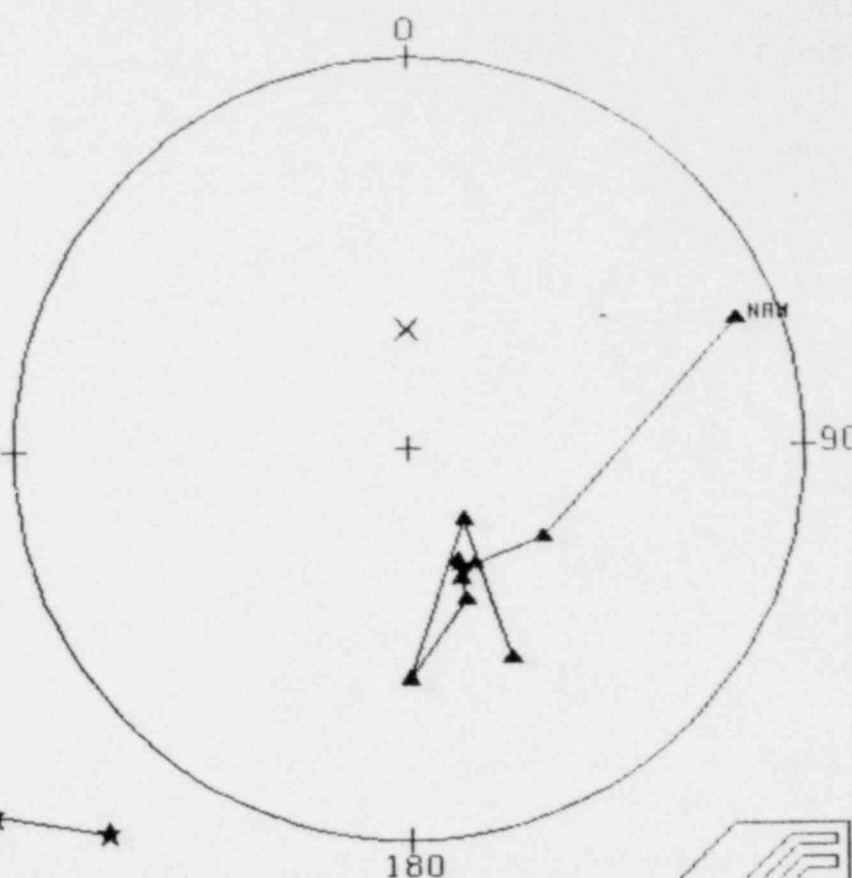
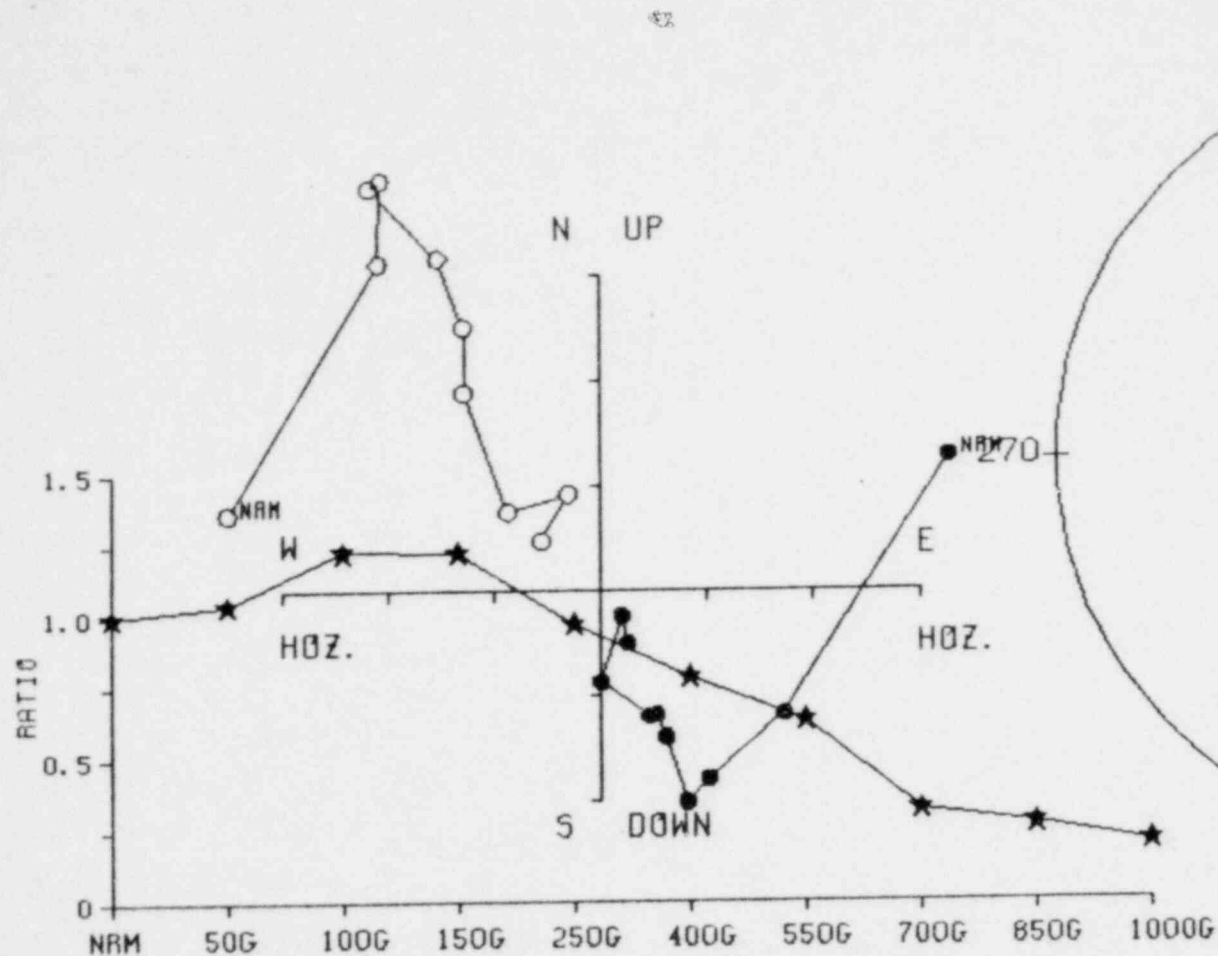
	Dec G	Inc G	Diff	vect	Dec S	Inc S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	33.000	78.2	-15.1	0.0	78.2	-15.1	0.0	0.0	0.00E-01	2.3	-14.3	5.40E-05	NRM	1.000	2.24E-04	1.000
PMM	33.000	123.9	-51.4	42.0	123.9	-51.4	42.0	33.5	4.52E-05	-45.3	-26.8	4.99E-05	50G	0.924		
PMM	33.000	148.1	-62.1	76.1	148.1	-62.1	76.1	26.8	1.50E-05	-67.4	-25.6	5.18E-05	100G	0.959		
PMM	33.000	154.9	-64.0	90.3	154.9	-64.0	90.3	13.8	3.27E-06	-72.7	-23.1	5.18E-05	150G	0.959		
PMM	33.000	160.2	-63.7	132.0	160.2	-63.7	132.0	-63.0	9.79E-06	-76.2	-28.0	4.22E-05	250G	0.781		
PMM	33.000	159.9	-57.9	163.2	159.9	-57.9	163.2	-81.0	1.09E-05	-73.0	-50.8	3.20E-05	400G	0.593		
PMM	33.000	172.2	-57.6	127.4	172.2	-57.6	127.4	-52.4	8.43E-06	-79.5	-82.3	2.42E-05	550G	0.448		
PMM	33.000	153.7	-63.3	193.1	153.7	-63.3	193.1	-42.6	8.81E-06	-71.6	-25.4	1.62E-05	700G	0.300		
PMM	33.000	155.3	-49.0	354.1	155.3	-49.0	354.1	-83.4	5.45E-06	-64.4	-61.2	1.20E-05	850G	0.222		
PMM	33.000	170.5	-58.1	139.9	170.5	-58.1	139.9	-31.2	4.74E-06	-79.3	-74.6	7.78E-06	1000G	0.144		



Ratio plot is normalized: Intensity.
 Locality: MARENGO Site lat & long= 47.00 -118.20
 10 Demag steps for this sample.
 Interval= 0.000 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 0.528 AT NRM

Coordinates of vector diagram: Geog.
 Coordinates of equal-area plot: Geog.

	Dec	S	Inc	S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	34.000	88.1	-39.8	0.0	0.0	0.0	0.00E-01	-15.1	-11.1	6.49E-05	NRM	1.000	2.46E-04	1.000
PMM	34.000	134.5	-61.4	38.4	38.2	134.5	4.62E-05	-57.8	-19.2	7.99E-05	T150	1.231		
PMM	34.000	140.7	-60.7	108.9	-61.2	140.7	1.63E-05	-61.7	-24.5	6.41E-05	T225	0.988		
PMM	34.000	147.8	-61.3	122.2	-57.0	147.8	1.65E-05	-66.9	-27.7	4.80E-05	T300	0.740		
PMM	34.000	147.5	-59.0	148.3	-64.6	147.5	1.97E-05	-65.5	-33.4	2.84E-05	T360	0.438		
PMM	34.000	152.7	-63.0	133.1	-37.7	152.7	4.99E-06	-70.8	-25.8	2.39E-05	T420	0.368		
PMM	34.000	145.2	-62.0	177.8	-63.3	145.2	5.85E-06	-65.4	-24.1	1.82E-05	T480	0.280		
PMM	34.000	159.4	-61.1	118.7	-59.6	159.4	6.35E-06	-74.6	-38.8	1.21E-05	T540	0.186		
PMM	34.000	155.2	-57.0	163.6	-64.3	155.2	6.74E-06	-69.5	-46.6	5.39E-06	T600	0.083		
PMM	34.000	129.8	-57.1	202.7	-37.7	129.8	1.67E-06	-52.4	-23.7	4.17E-06	T660	0.064		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

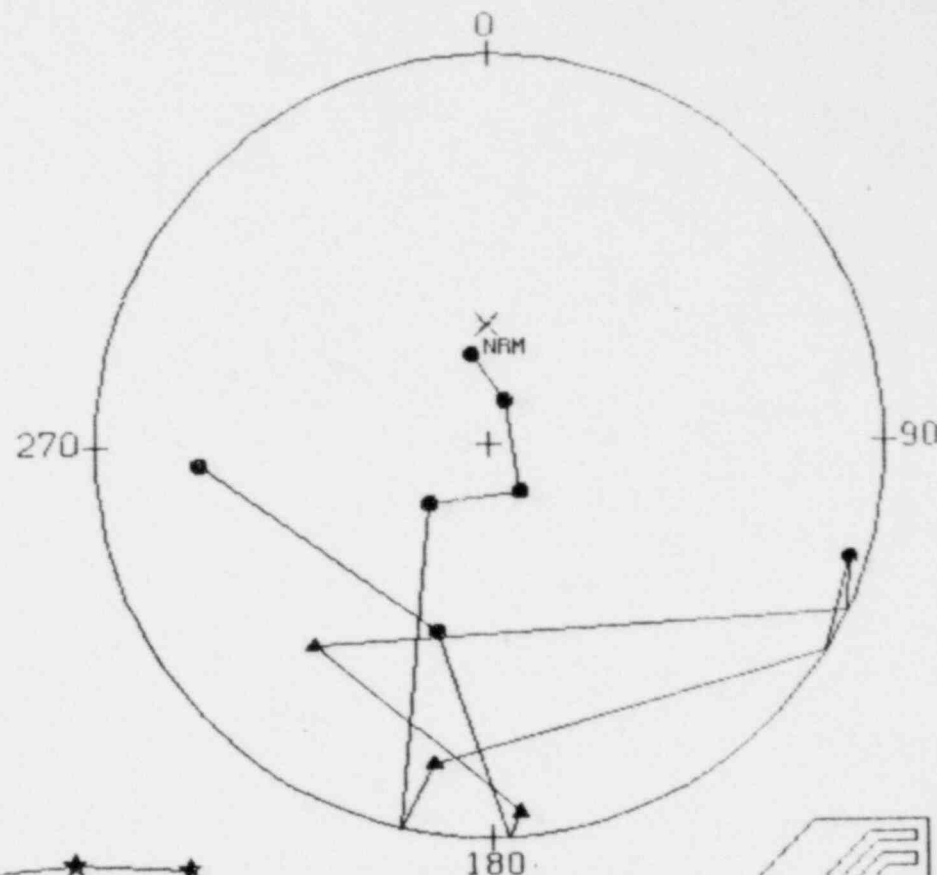
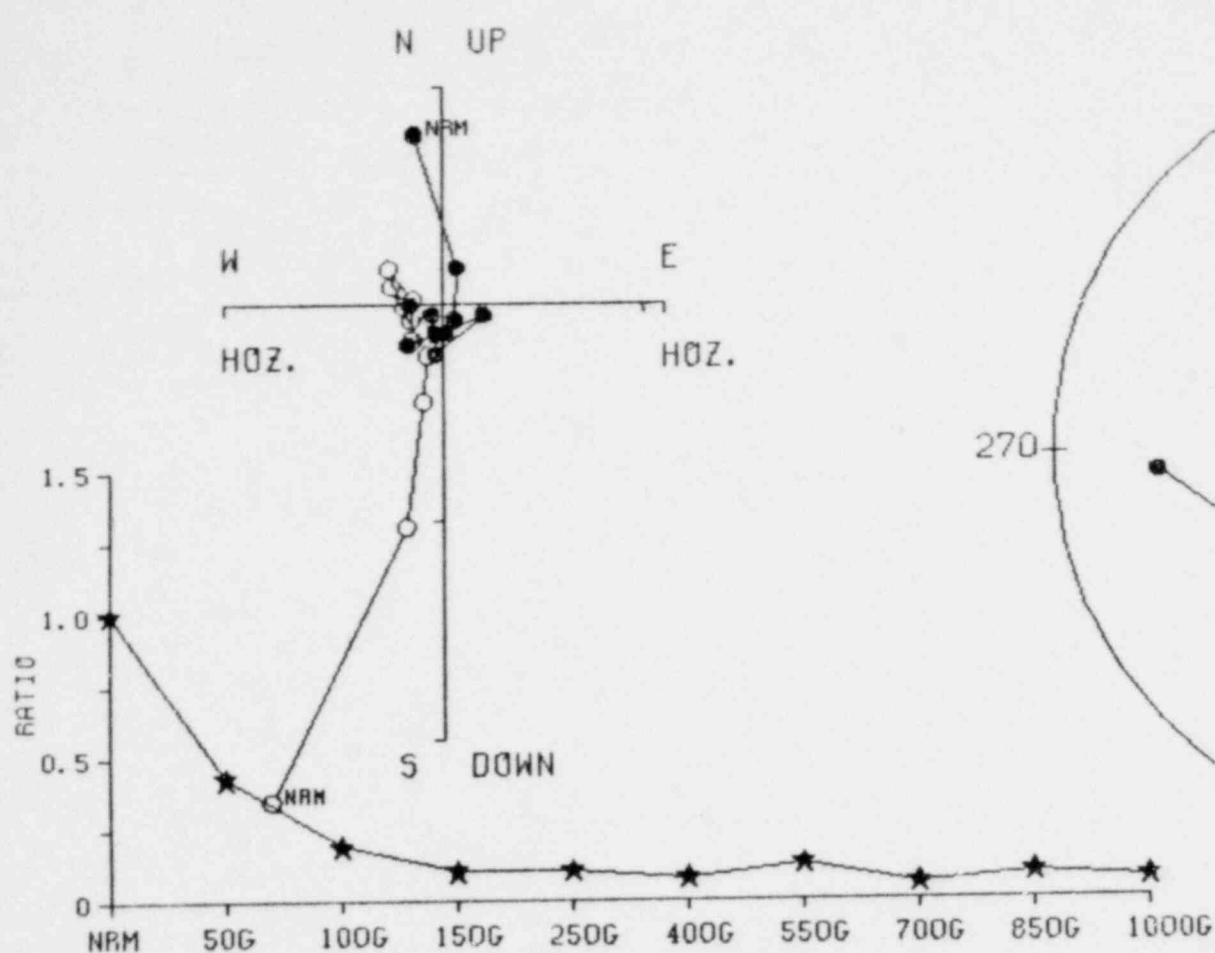
Locality: MARENGO Site lat & long: 47.00 -118.20

10 Demag steps for this sample

Interval: 0.000 Strike & dip of bedding: 0.0 0.0

Koenigsberger ratio = 0.346 At NRM

SM#	Dec G	Inc G	Diff vect	Dec S	Inc S	Diff vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	35.000	68.7	-11.9	0.0	0.0	0.0	0.00E-01	9.8	-8.3	3.60E-05	NRM	1.000	2.08E-04	1.000
PMM	35.000	124.4	-56.1	32.3	39.1	32.3	3.75E-05	-48.2	-21.8	3.75E-05	50G	1.042		
PMM	35.000	150.7	-62.1	48.9	40.0	48.9	1.24E-05	-69.2	-27.4	4.42E-05	100G	1.228		
PMM	35.000	158.4	-60.4	43.5	-13.2	43.5	3.14E-06	-73.6	-40.4	4.41E-05	150G	1.225		
PMM	35.000	156.5	-64.2	162.8	-45.9	156.5	9.39E-06	-73.9	-23.2	3.51E-05	250G	0.975		
PMM	35.000	156.4	-62.9	157.0	-69.6	156.4	6.84E-06	-73.4	-28.8	2.83E-05	400G	0.786		
PMM	35.000	159.4	-55.8	74.4	-83.9	159.4	6.37E-06	-71.4	-55.7	2.28E-05	550G	0.633		
PMM	35.000	179.9	-40.4	125.8	-64.1	179.9	1.27E-05	-66.0	-117.9	1.15E-05	700G	0.319		
PMM	35.000	142.4	-71.0	197.0	14.6	142.4	6.76E-06	-65.3	5.9	9.69E-06	850G	0.269		
PMM	35.000	154.2	-39.9	348.6	-59.9	154.2	5.18E-06	-58.1	-68.9	7.30E-06	1000G	0.203		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

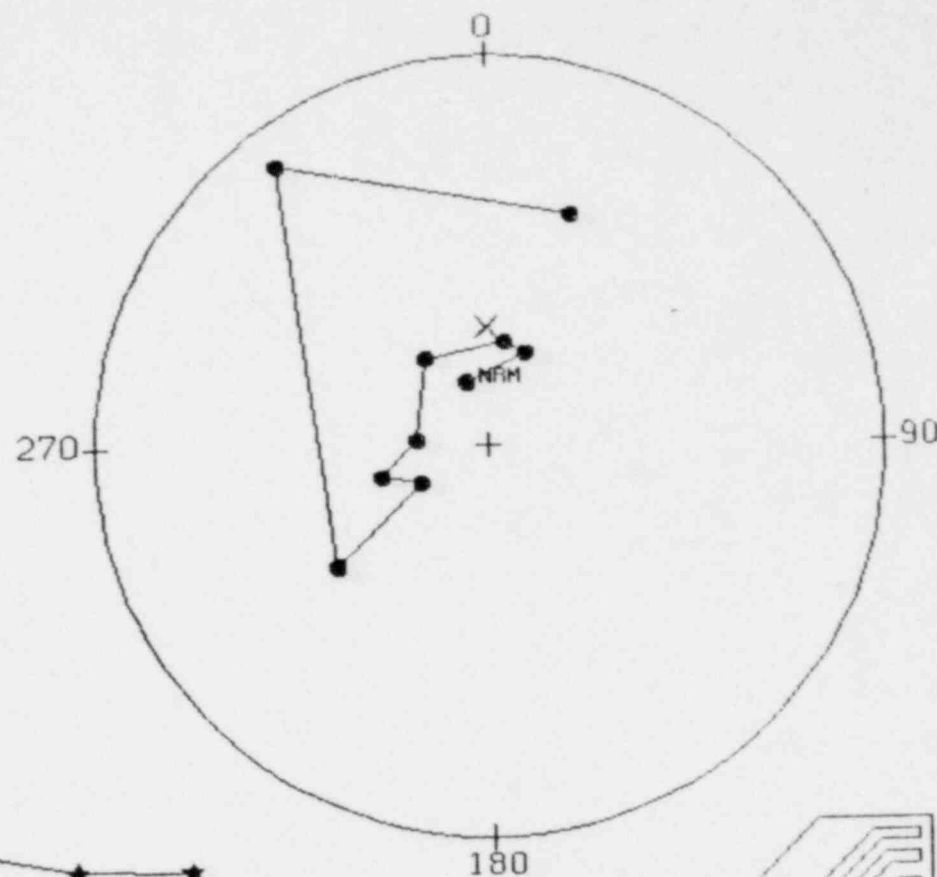
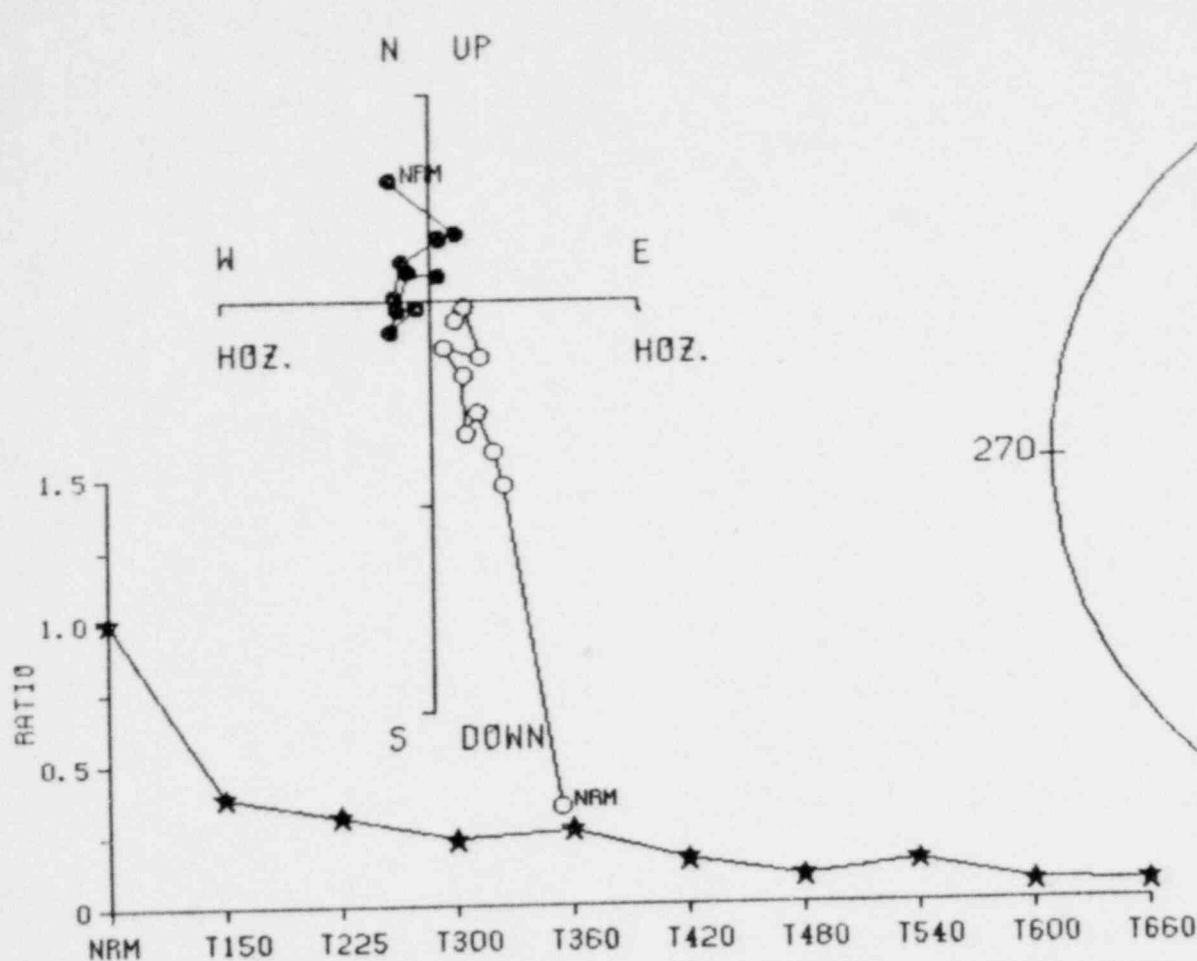
Locality: MARENGO Site lat & long= 47.00 -118.20

10 Demag steps for this sample

Interval= 1.000 Strike & dip of bedding= 0.0 0.0

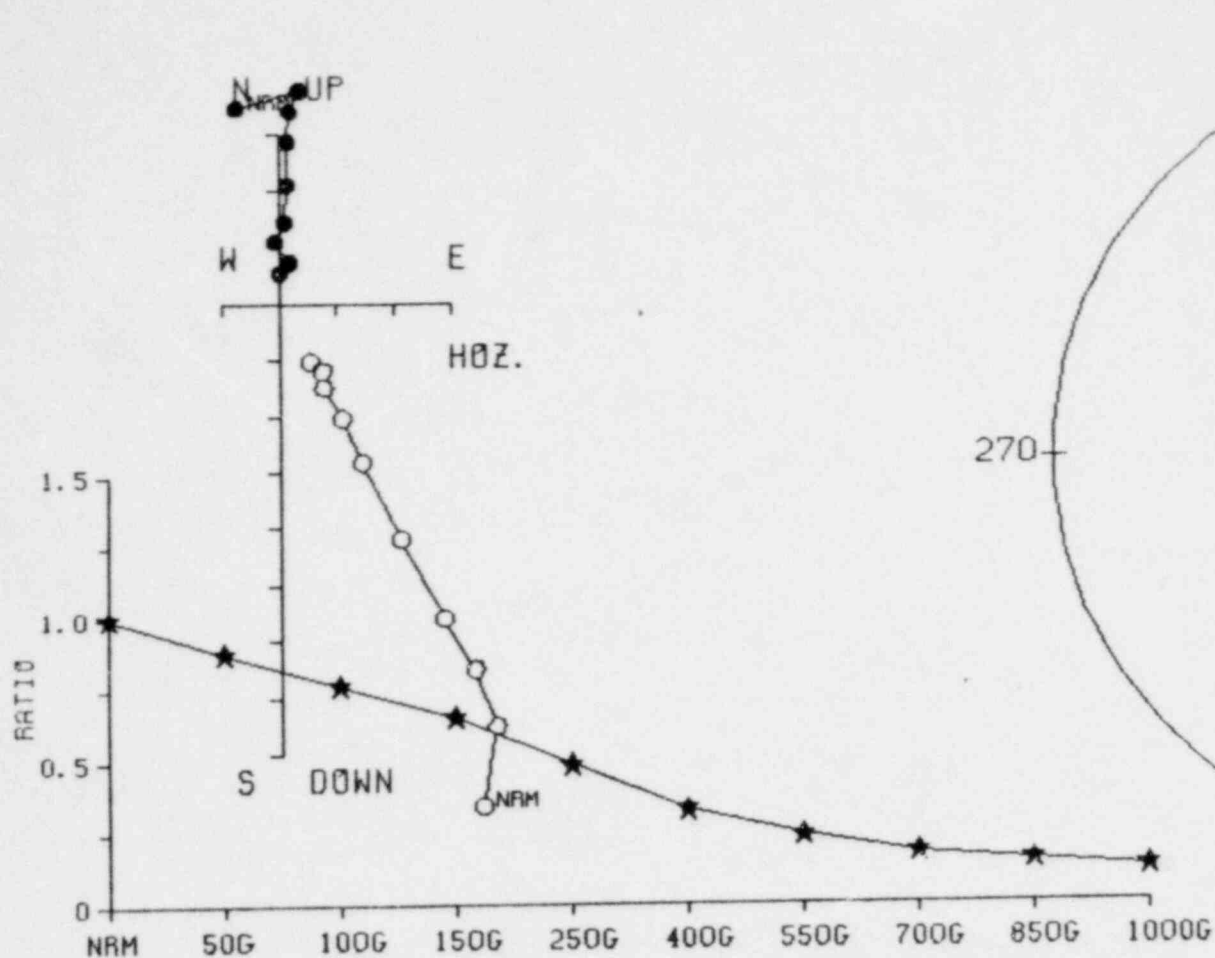
Koenigsberger ratio = 0.325 AT NRM

SM	Dec G	Inc G	Diff	vect	Dec S	Inc S	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	41.000	350.3	70.9	0.0	350.3	70.9	0.0	0.0	0.00E-01	79.8	-151.0	2.42E-05	NRM	1.000	1.49E-04	1.000
PMM	41.000	20.2	80.3	342.5	20.2	80.3	342.5	62.9	1.42E-05	64.0	-103.4	1.04E-05	50G	0.430		
PMM	41.000	146.4	78.4	2.1	146.4	78.4	2.1	67.0	6.20E-06	27.4	-104.5	4.64E-06	100G	0.192		
PMM	41.000	225.2	72.7	103.8	225.2	72.7	103.8	63.7	2.42E-06	21.5	-142.0	2.49E-06	150G	0.103		
PMM	41.000	190.0	-18.7	356.5	190.0	-18.7	356.5	60.2	3.67E-06	-51.7	-134.3	2.51E-06	250G	0.104		
PMM	41.000	107.9	5.0	231.2	107.9	5.0	231.2	-19.0	2.98E-06	-10.2	-43.2	1.88E-06	400G	0.078		
PMM	41.000	221.1	-32.8	68.9	221.1	-32.8	68.9	25.9	4.11E-06	-45.5	178.5	3.01E-06	550G	0.124		
PMM	41.000	175.6	-6.9	253.6	175.6	-6.9	253.6	-38.4	2.35E-06	-46.3	-111.8	1.40E-06	700G	0.058		
PMM	41.000	195.4	49.2	87.8	195.4	49.2	87.8	-75.1	1.92E-06	-11.7	-131.8	2.23E-06	850G	0.092		
PMM	41.000	266.5	27.0	138.9	266.5	27.0	138.9	27.5	1.96E-06	8.0	164.2	1.72E-06	1000G	0.071		

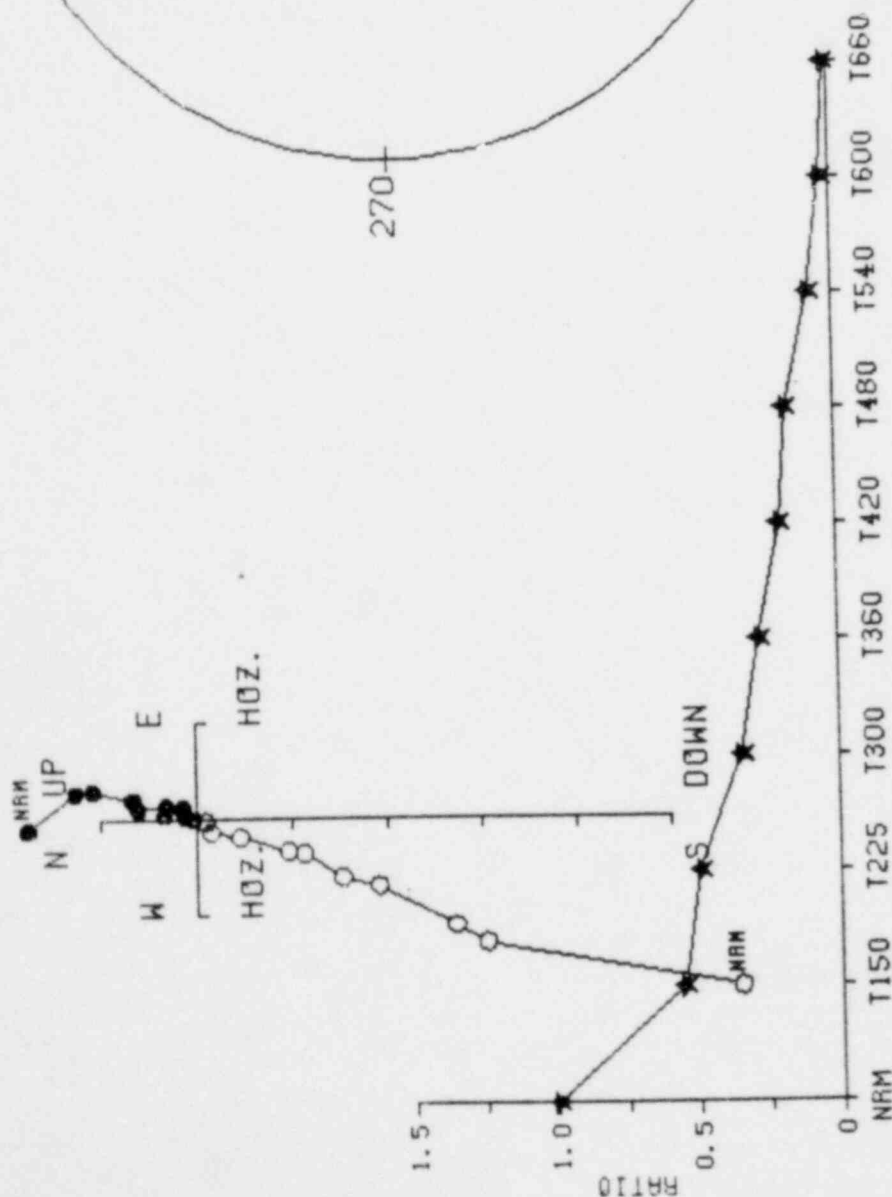
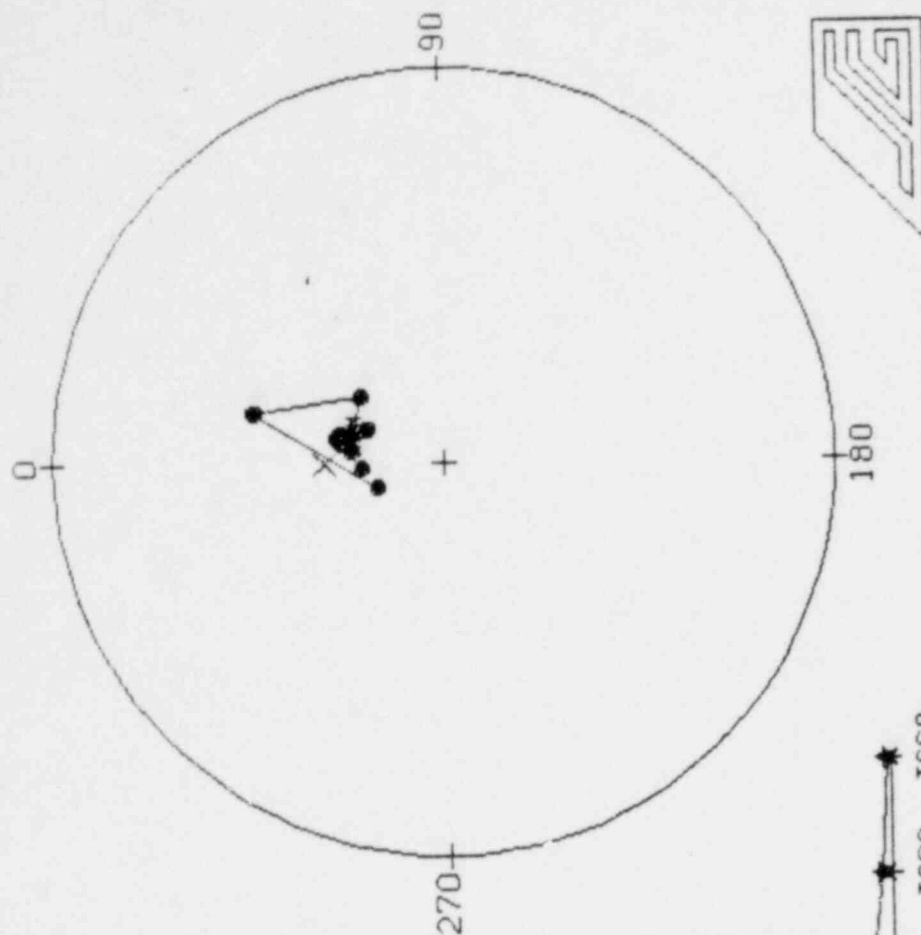


Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog.
 Locality: MARENGO Site lat & long= 47.00 -118.20
 10 Demag steps for this sample
 Interval= 0.000 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 0.388 AT NRM

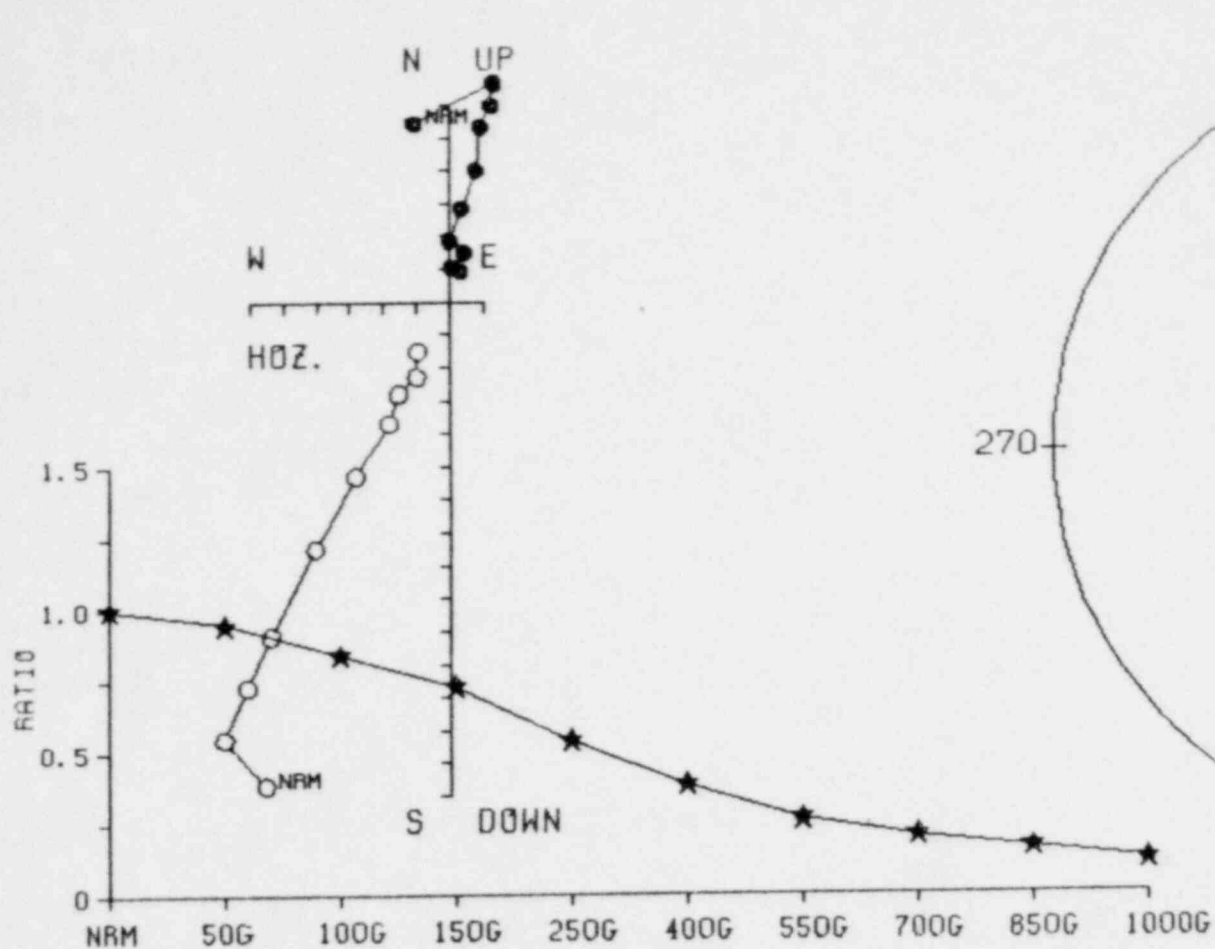
Quality: MARENGO		Site: 250000		Date: 1998-08-10		Time: 10:00		10 Demag steps for this sample		Strike & dip of bedding=		0.0 0.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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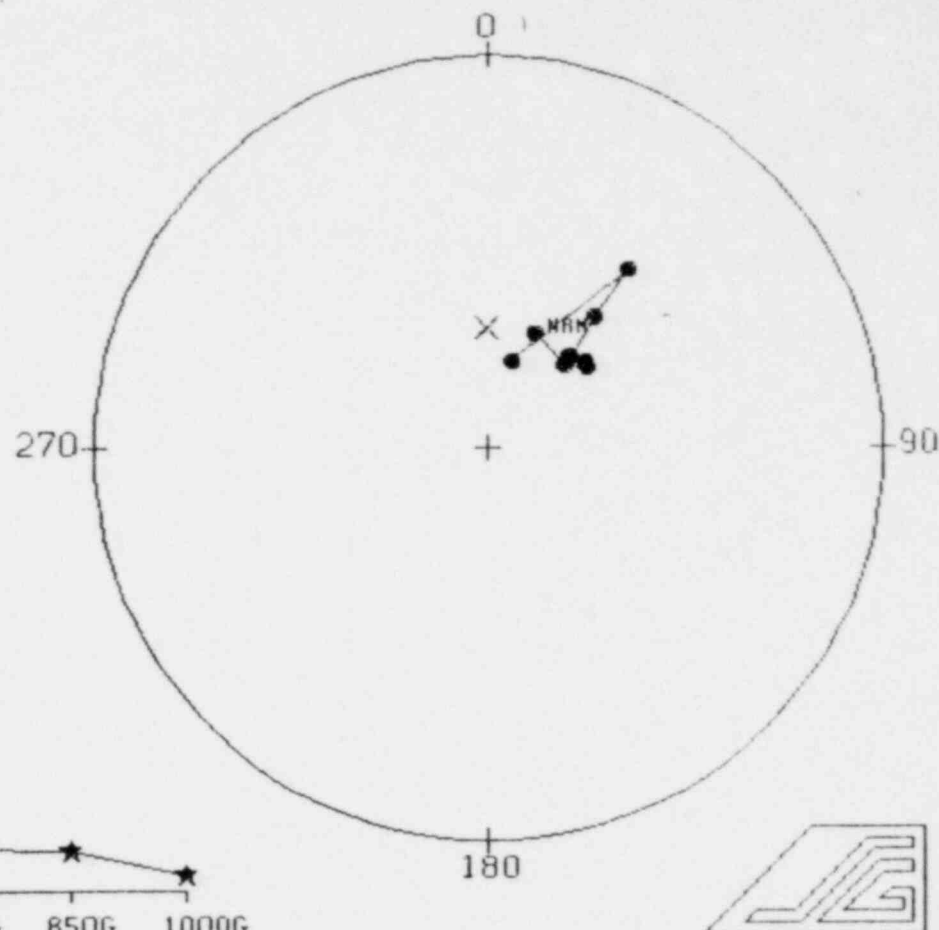
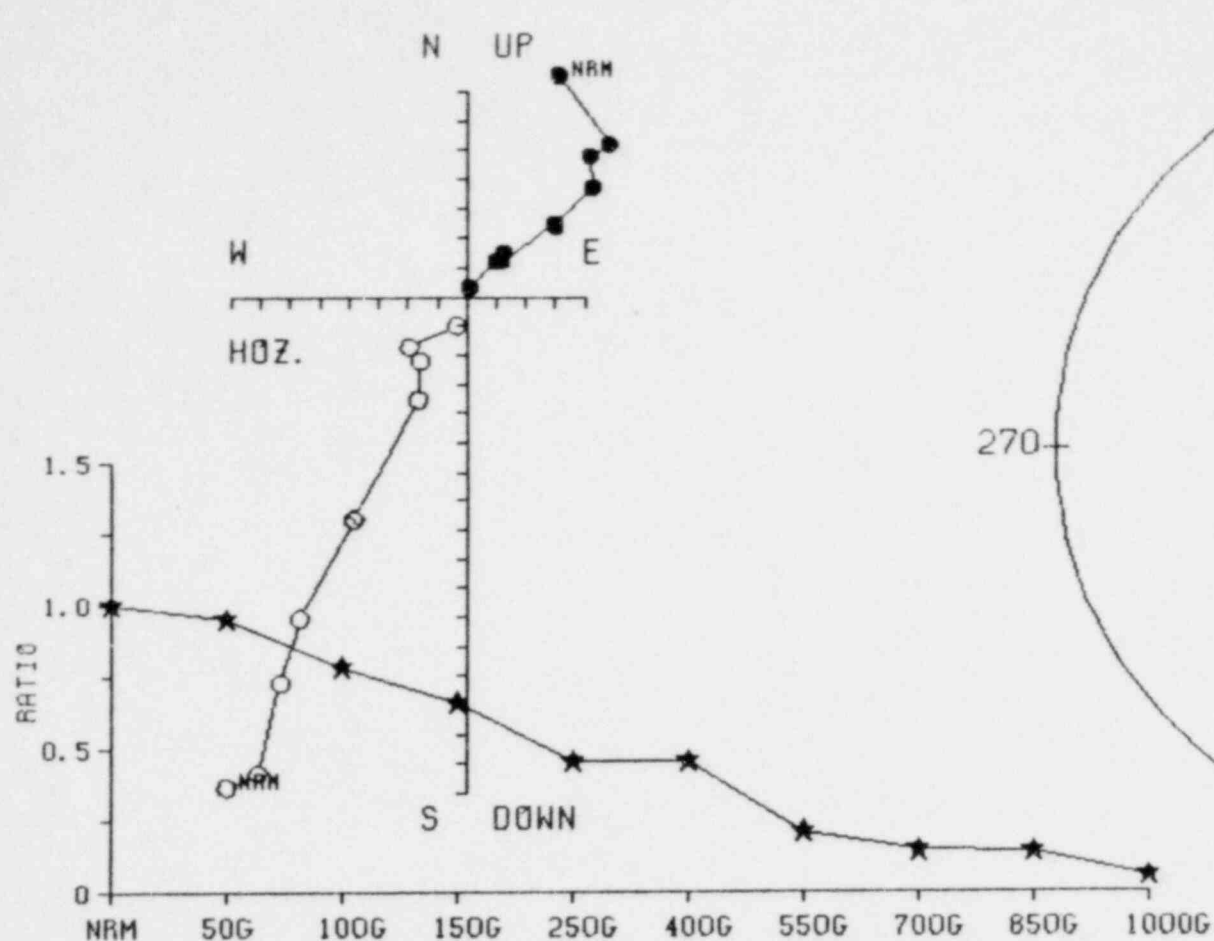
Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.
 Locality: MARENGO Site lat & long= 47.00 -118.20
 10 Demag steps for this sample.
 Interval= 1.000 Strike & dip of bedding= 0.0 0.0
 Koenigsberger ratio = 1.177 AT NRM
 Sme Dec 0 Inc 0 Diff vect Dec S Inc S Diff vect JDiff V lat V long Intensity demag JH/JO Chi C/CO
 PMM 51.000 348.0 68.4 0.0 0.0 348.0 68.4 0.0 0.0 0.00E-01 80.9 -172.8 9.59E-05 NRM 1.000 1.63E-04 1.000
 PMM 51.000 3.4 63.3 254.2 51.1 3.4 63.3 254.2 51.1 1.80E-03 85.7 -0.8 8.41E-05 50G 0.877
 PMM 51.000 3.2 62.4 24.3 68.2 3.2 62.4 24.3 68.2 1.09E-03 86.1 26.4 7.34E-05 100G 0.765
 PMM 51.000 3.1 63.0 3.7 58.8 3.1 63.0 3.7 58.8 1.05E-03 86.7 20.0 6.29E-05 150G 0.656
 PMM 51.000 3.3 63.4 2.5 61.8 3.3 63.4 2.5 61.8 1.59E-03 86.9 12.7 4.70E-05 250G 0.490
 PMM 51.000 3.6 63.2 2.7 63.8 3.6 63.2 2.7 63.8 1.52E-03 86.6 12.4 3.18E-05 400G 0.332
 PMM 51.000 3.6 63.2 2.7 63.8 3.6 63.2 2.7 63.8 8.85E-06 83.3 92.1 2.31E-05 550G 0.241
 PMM 51.000 356.8 61.7 24.1 65.3 356.8 61.7 24.1 65.3 6.87E-06 79.7 -16.2 1.68E-05 700G 0.175
 PMM 51.000 14.1 62.6 324.0 51.9 14.1 62.6 324.0 51.9 3.06E-06 76.7 3.3 1.40E-05 850G 0.146
 PMM 51.000 14.1 58.0 14.1 84.1 14.1 58.0 14.1 84.1 3.10E-06 86.4 63.9 1.15E-05 1000G 0.120



Ratio plot is normalized	Intensity	Lat & Long	Coordinates of vector diagram	Geog.	Coordinates of equal-area plot	Geog.
Locality	MARENGO					
IO Demag	steps					
Interval	0.000					
Koenigsberger ratio	0.000					
Sm						
Dec	354	000	Dec	354	000	
Inc	152	000	Inc	152	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
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IRM	0	000	IRM	0	000	
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vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
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Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
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Al	322	000	Al	322	000	
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Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
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vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
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Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
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vec	740	000	vec	740	000	
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Dip	67	000	Dip	67	000	
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IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
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Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
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Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
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Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
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vec	740	000	vec	740	000	
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Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
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Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
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Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	
Al	322	000	Al	322	000	
IRM	0	000	IRM	0	000	
Diff	0	000	Diff	0	000	
vec	740	000	vec	740	000	
Dec	124	000	Dec	124	000	
Inc	49	000	Inc	49	000	
Dip	67	000	Dip	67	000	



	Dec	Inc	Diff	vect	Dec	Inc	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	53.000	349.0	69.3	0.0	0.0	349.0	69.3	0.0	0.0	0.00E-01	80.8	-164.3	1.57E-04	NRM	1.000	2.28E-04
PMM	53.000	11.1	62.9	242.9	28.1	11.1	62.9	242.9	28.1	3.02E-03	81.8	-13.2	1.49E-04	50G	0.949	
PMM	53.000	11.8	62.4	4.8	66.6	11.8	62.4	4.8	66.6	1.71E-03	81.1	-11.1	1.32E-04	100G	0.841	
PMM	53.000	9.9	62.0	25.8	64.3	9.9	62.0	25.8	64.3	1.71E-03	82.1	-3.4	1.15E-04	150G	0.732	
PMM	53.000	11.2	61.6	6.0	63.1	11.2	61.6	6.0	63.1	2.98E-03	81.0	-4.3	8.52E-05	250G	0.543	
PMM	53.000	6.7	61.7	21.7	60.8	6.7	61.7	21.7	60.8	2.52E-03	83.7	10.6	6.01E-05	400G	0.383	
PMM	53.000	359.9	63.4	18.8	57.1	359.9	63.4	18.8	57.1	1.92E-03	87.9	64.0	4.12E-05	550G	0.262	
PMM	53.000	16.1	61.2	309.7	57.2	16.1	61.2	309.7	57.2	1.04E-03	77.6	-11.6	3.21E-05	700G	0.204	
PMM	53.000	2.4	66.1	39.2	40.8	2.4	66.1	39.2	40.8	8.07E-06	87.9	-69.9	2.50E-05	850G	0.159	
PMM	53.000	18.8	57.4	287.0	59.2	18.8	57.4	287.0	59.2	8.05E-06	73.6	-2.0	1.82E-05	1000G	0.116	



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

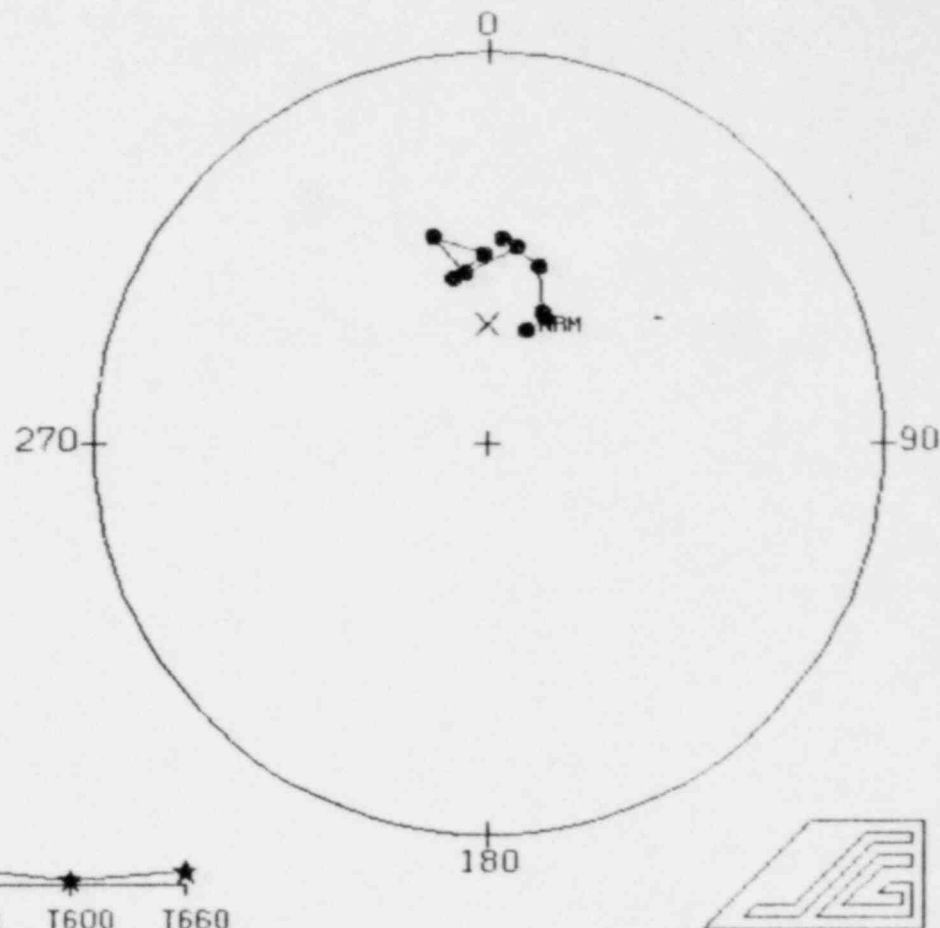
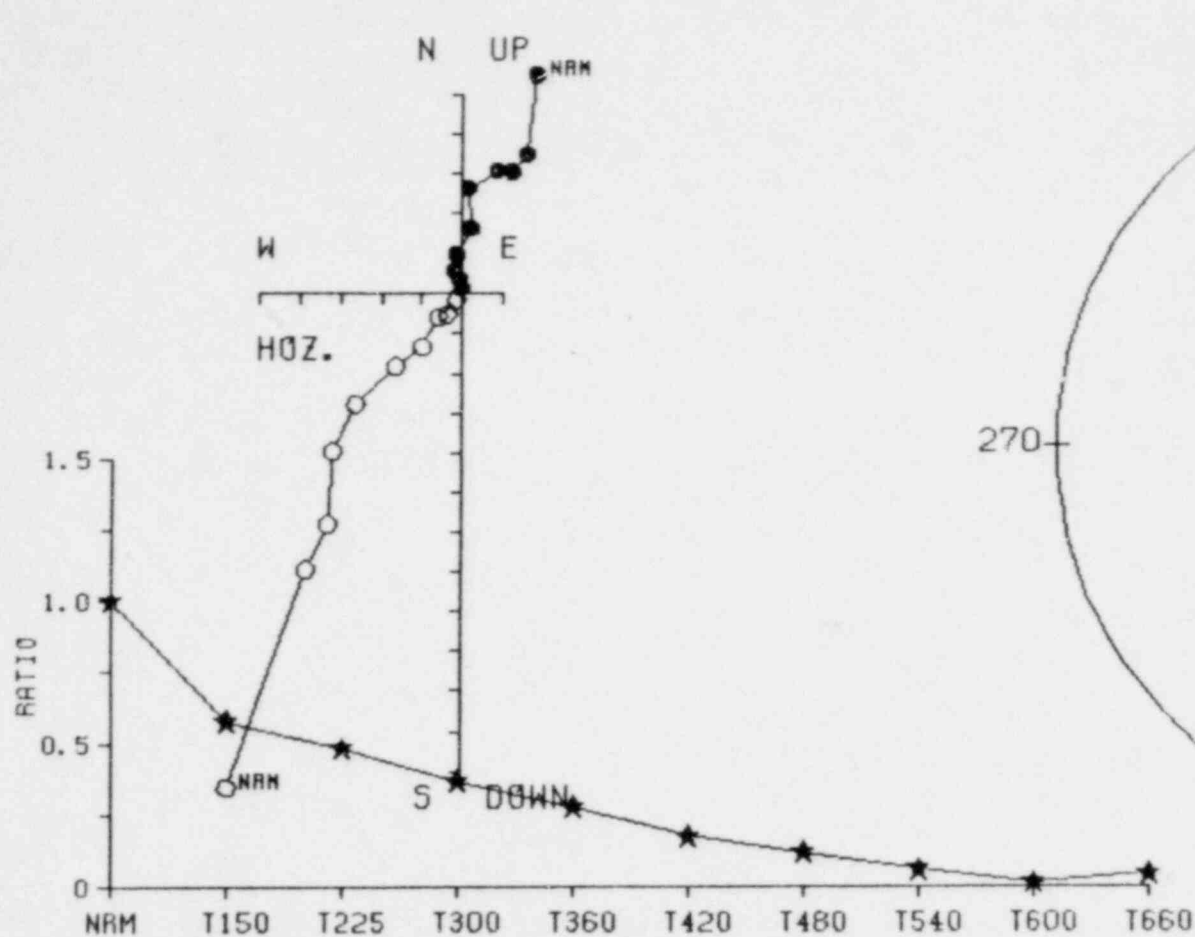
Locality: MARENGO Site lat & long= 47.00 -118.20

10 Demag steps for this sample.

Interval= 1.000 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.935 AT NRM

SM#	Dec	Inc	Diff	vect	Dec	Inc	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM 61.000	22.4	64.1	0.0	0.0	22.4	64.1	0.0	0.0	0.00E-01	74.6	-32.2	1.87E-04	NRM	1.000	4.00E-04	1.000
PMM 61.000	42.8	66.5	323.9	9.7	42.8	66.5	323.9	9.7	2.94E-05	61.7	-88.2	1.78E-04	50G	0.952		
PMM 61.000	41.2	64.4	56.1	75.9	41.2	64.4	56.1	75.9	3.16E-05	62.0	-41.9	1.47E-04	100G	0.786		
PMM 61.000	48.9	62.9	356.1	64.3	48.9	62.9	356.1	64.3	2.46E-05	56.3	-42.1	1.24E-04	150G	0.663		
PMM 61.000	50.7	63.4	45.1	61.7	50.7	63.4	45.1	61.7	3.83E-05	55.3	-43.9	8.57E-05	250G	0.458		
PMM 61.000	50.1	63.2	169.3	25.9	50.1	63.2	169.3	25.9	5.12E-07	55.6	-43.2	8.56E-05	400G	0.458		
PMM 61.000	43.1	64.6	55.4	61.8	43.1	64.6	55.4	61.8	4.66E-05	60.9	-43.2	3.91E-05	550G	0.209		
PMM 61.000	39.2	54.5	88.1	83.5	39.2	54.5	88.1	83.5	1.33E-05	58.5	-20.1	2.71E-05	700G	0.145		
PMM 61.000	38.1	41.5	213.6	51.3	38.1	41.5	213.6	51.3	6.11E-06	51.9	-4.3	2.61E-05	850G	0.140		
PMM 61.000	16.0	71.3	42.5	24.0	16.0	71.3	42.5	24.0	1.80E-05	76.7	-75.9	1.05E-05	1000G	0.056		



Ratio plot is normalized: Intensity. Coordinates of vector diagram: Geog. Coordinates of equal-area plot: Geog.

Locality: MARENGO Site lat & long= 47.00 -118.20

10 Demag steps for this sample.

Interval= 0.000 Strike & dip of bedding= 0.0 0.0

Koenigsberger ratio = 0.560 AT NRM

	Dec	Inc	Diff	vect	Dec	Inc	Diff	vect	JDiff	V lat	V long	Intensity	demag	JH/JO	Chi	C/CO
PMM	62.000	18.6	65.0	0.0	0.0	18.6	65.0	0.0	0.00E-01	77.3	-34.9	1.37E-04	NRM	1.000	4.89E-04	1.000
PMM	62.000	24.7	61.0	6.9	69.9	24.7	61.0	6.9	5.85E-05	71.8	-21.6	7.92E-05	T150	0.578		
PMM	62.000	22.2	60.3	39.5	63.8	22.2	60.3	39.5	1.27E-05	73.1	-16.2	6.66E-05	T225	0.486		
PMM	62.000	15.9	51.0	93.0	78.6	15.9	51.0	93.0	1.87E-05	70.4	17.6	5.08E-05	T300	0.371		
PMM	62.000	3.7	46.6	57.6	54.3	3.7	46.6	57.6	1.43E-05	70.7	51.9	3.83E-05	T360	0.280		
PMM	62.000	8.1	47.9	356.6	44.0	8.1	47.9	356.6	1.40E-05	70.9	39.7	2.44E-05	T420	0.178		
PMM	62.000	352.3	53.7	28.7	33.1	352.3	53.7	28.7	8.95E-06	76.0	89.0	1.64E-05	T480	0.120		
PMM	62.000	345.2	44.5	3.1	62.2	345.2	44.5	3.1	8.38E-06	66.1	96.2	8.29E-06	T540	0.061		
PMM	62.000	358.4	49.9	341.7	42.6	358.4	49.9	341.7	6.40E-06	73.6	66.7	1.93E-06	T600	0.014		
PMM	62.000	347.9	54.4	162.6	-56.1	347.9	54.4	162.6	4.37E-06	74.9	103.0	6.27E-06	T660	0.046		