

MASTER

GJBx-10 '80

AERIAL GAMMA RAY AND MAGNETIC SURVEY

IDAHO PROJECT

HAILEY QUADRANGLE OF IDAHO

FINAL REPORT

VOLUME II

DO NOT MICROFILM
COVER

SURVEY AND
COMPILATION BY:

 **EG&G GEOMETRICS**
Sunnyvale, California
December, 1979

Work Performed Under
Bendix Field Engineering Corporation
Grand Junction Operations, Grand Junction, Colorado
Subcontract 79 - 323 - S
and
Bendix Contract DE-AC13-76GJ01664

Prepared for the
Department of Energy
Grand Junction Office
Grand Junction, Colorado 81502

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

MASTER

AERIAL GAMMA RAY AND MAGNETIC SURVEY
IDAHO PROJECT
HAILEY QUADRANGLE OF IDAHO

FINAL REPORT
VOLUME II

Prepared by
EG&G geoMetrics
Sunnyvale, California
December, 1979

Work Performed Under
Bendix Field Engineering Corporation
Grand Junction Operations, Grand Junction, Colorado
Subcontract #79-323-S
and
Bendix Contract DE-AC13-76GJ01664

Prepared for the
Department of Energy
Grand Junction Office
Grand Junction, Colorado 81502

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

ABSTRACT

The Hailey quadrangle in central Idaho lies at the boundary between the Northern Rocky Mountains and the western Cordilleran Physiographic Provinces. The area is dominated by intrusives of the Idaho and Sawtooth Batholiths, but contains considerable exposures of Tertiary and Quaternary volcanics, and Paleozoic sedimentary rocks.

Magnetic data apparently show some expression of the intrusives of the Idaho Batholith. Areas of faulted Paleozoic and Tertiary rocks appear to express themselves as roughly defined regions of high frequency/high amplitude wavelengths.

The Hailey quadrangle has been unproductive in terms of uranium mining, though some prospects do exist south of the town of Hailey. The quadrangle contains significant exposures of the Tertiary Challis Formation (primarily volcanics) which has been productive in other areas to the north.

A total of 161 anomalies are valid according to the criteria set forth in Volume I of this report. These anomalies are scattered throughout the quadrangle. The most distinctive groups of anomalies are associated with Tertiary igneous rocks in the mountainous areas.

TABLE OF CONTENTS

	Page Nos.
I. INTRODUCTION	1
General	1
Physiography	1
II GEOLOGY	1
Structure	1
Surface Geology	2
Uranium	3
III. INTERPRETATION OF GEOPHYSICAL DATA	3
Radiometrics Data	3
Magnetic Data	5
IV. BIBLIOGRAPHY	6
V. APPENDICES	
Appendix A - Flight Path and Geologic Map	1H
Appendix B - Profiles	2H
Appendix C - Standard Deviation Maps	66H
Appendix D - Map Unit Conversion Table and Histograms	72aH
Appendix E - Uranium Anomaly Summary and Statistical Tables	101H
Appendix F - Pseudo-Contour Maps	125H

LIST OF FIGURES

	Page Nos.
Figure 1 Location Map	1
Figure 2 Tectonic Structure Map	2
Figure 3 Uranium Anomaly/Interpretation Map	4

INTRODUCTION

General

The Hailey quadrangle covers a 7,000 square mile area in southern Idaho (See Figure 1).

The geologic base map used was provided by Bendix Corporation (produced by Geophoto Services, Inc., 1977). The geology was compiled at a scale of 1:250,000. Map unit descriptions, found in Appendix A, were taken directly from the map legend. The geologic map of the Hailey quadrangle compiled by the Idaho Bureau of Mines and Geology at a scale of 1:250,000 (Rember and Bennett, 1979) was used as a general reference but could not be digitized due to the large number of discontinuous contact lines. Supplementary geological information was taken from Fairbridge (1975) and Mallory (1972). The 1:250,000 scale Hailey topographic map (1970 version), along with flight recovery film, was used to delineate topographic and cultural features which were considered significant in the interpretation process.

Physiography

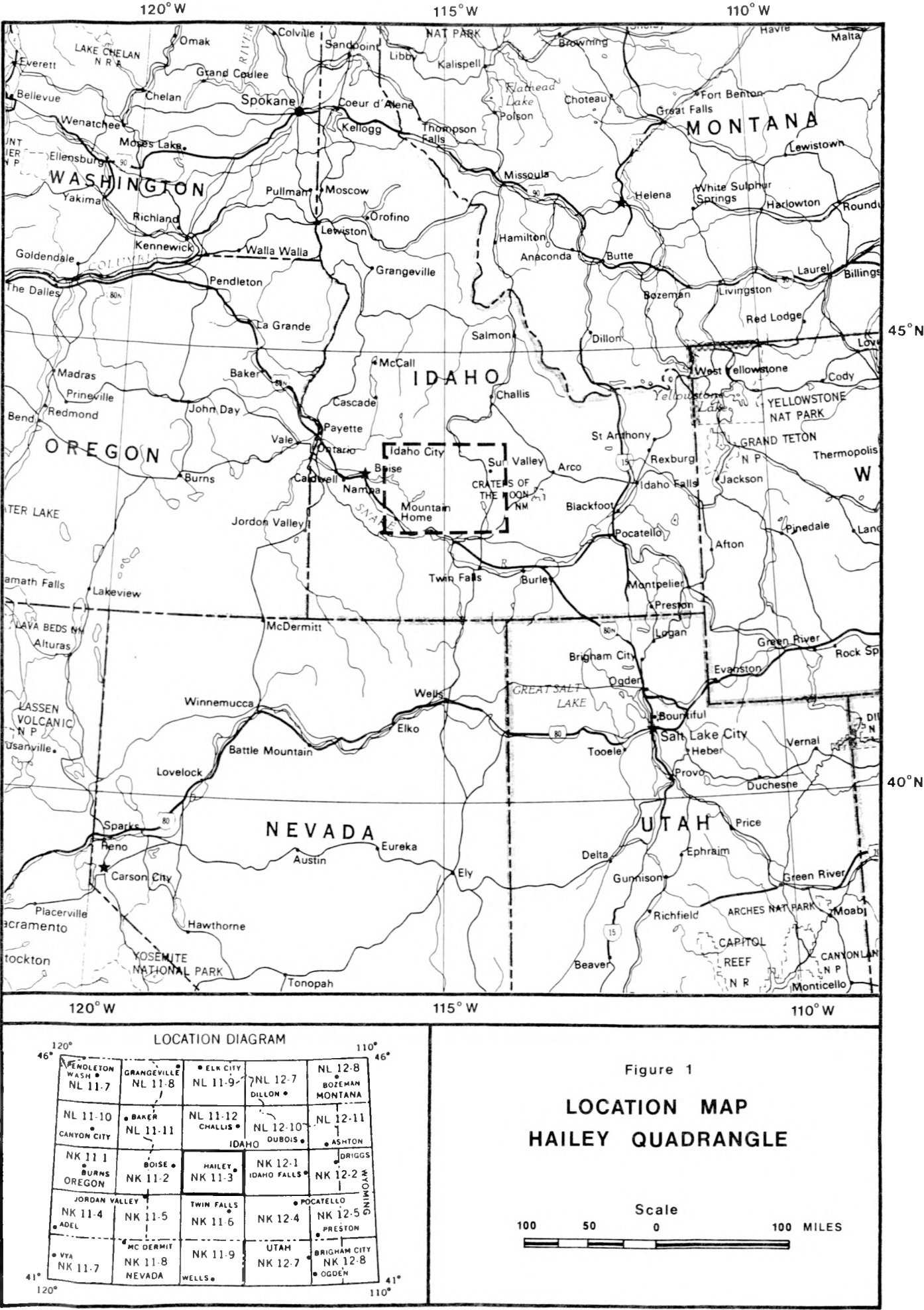
Two major physiographic provinces are present within the Hailey quadrangle. These are the Snake River Plain of the Pacific Cordilleran Province and the Sawtooth Mountains of the Northern Rocky Mountains Province. The mountainous areas cover 70% of the quadrangle, primarily in the northern half. The mountains grade gradually into the plains area to the south. Elevations in the mountains range from 5,000 feet in the Wood River Valley to more than 12,000 feet in the Boulder Mountains. Elevations in the plain range from 3,000 feet at the southwestern corner of the quadrangle to nearly 5,000 feet at the foot of the mountains at the quadrangle's eastern edge. Forested and barren glaciated mountainous areas dominate the quadrangle, but grade into sparse grassland and barren ground in the Snake River Plain area.

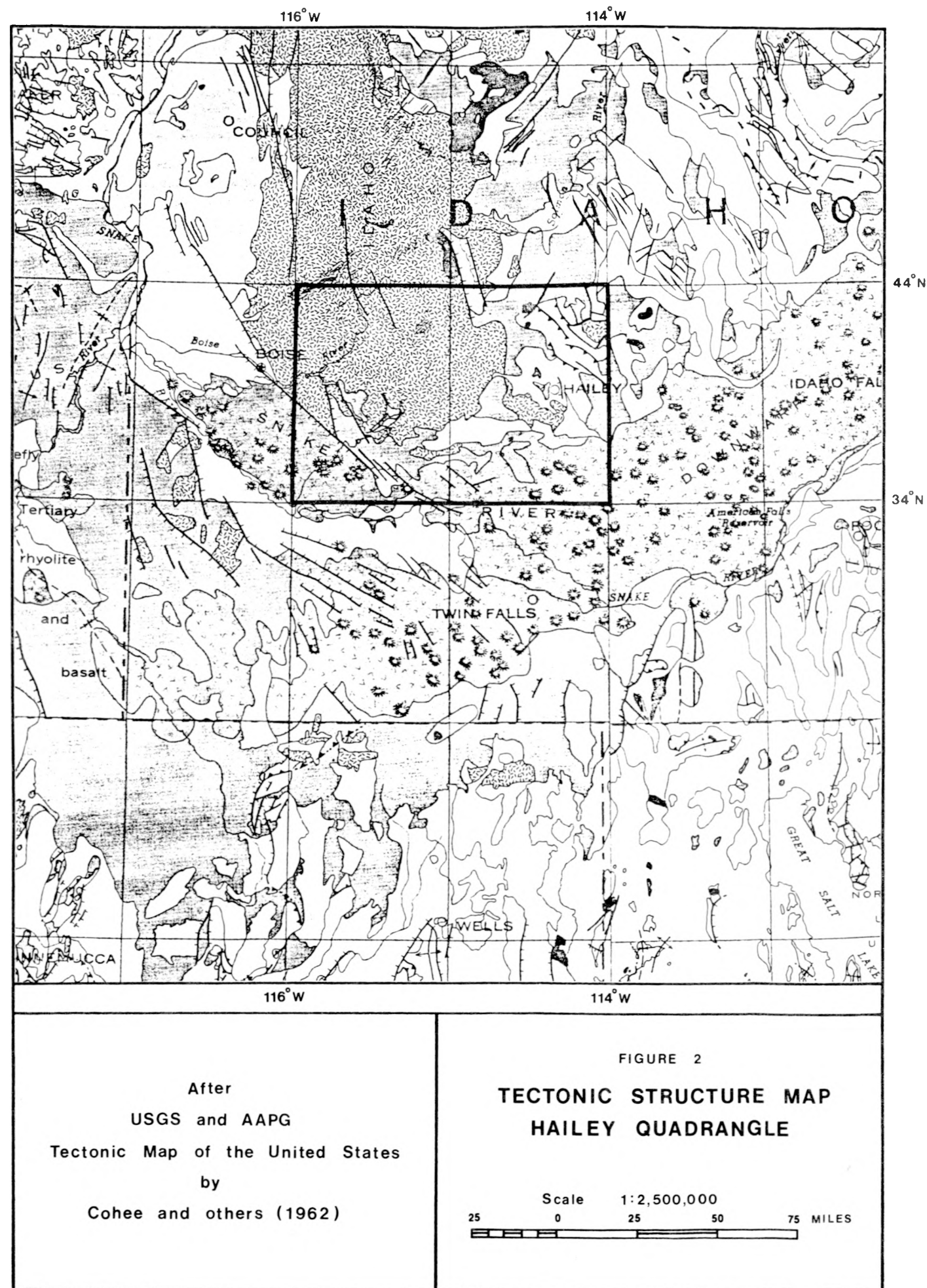
GEOLOGY

Structure

The basic structural configuration of the Hailey quadrangle and adjacent areas is shown in Figure 2.

The Idaho Batholith, and associated deformed and partially metamorphosed rocks in the Northern Rocky Mountains Province are part of the Pre-Late Cenozoic Orogenic Complex which extends along the entire west coast of North America. The southernmost extent of the main body of the Idaho Batholith lies in the Soldier Mountains in the center of Hailey quadrangle, but isolated exposures lie further south in





the Mount Bennett Hills area. However, areas to the south and west of the Soldier Mountains in the quadrangle are on the limb of a large structural depression. With the exception of the Danskin Mountains and the Mount Bennett Hills, rocks of the Pre-Late Cenozoic Orogenic Belt in these areas are buried under as much as 10,000 feet of Late Cenozoic plateau basalts of the Snake River Plain. Eruptions of plateau style volcanics have nearly separated the Mount Bennett Hills and the Danskin Mountains from the main block of the Northern Rocky Mountains within the quadrangle (the Camas and Smith Prairies), but the major part of the Snake River volcanics lies to the south, east, and west of the Hailey quadrangle.

As mapped by Rember and Bennett (1979), faulting occurs in Hailey primarily as a belt of normal faults, oriented westerly and north-westerly, which follows through the strike of the Danskin Mountains and the Mount Bennett Hills. The belt of faulting extends for approximately 80 miles, offsetting rocks ranging in age from Cretaceous to Quaternary. The hanging walls of these faults are usually on the south side, which suggests that they may relate to the continued structural downwarping of the Snake River Plateau area. Isolated groups of normal faults, oriented primarily northwesterly, have been mapped in the Sawtooth Mountains in the quadrangle. The northeastern corner of the Hailey quadrangle contains portions of a thrust sheet of either the Nevadan or Sevier Orogenic Belt. Some rocks of the Idaho Batholith appear to be offset by this faulting, but overlying Challis Volcanics (Challis Formation) appear to post-date the thrusting.

Surface Geology

The dominant rock types of the Hailey quadrangle are silicic alkaline intrusive rocks of the Cretaceous-Tertiary Idaho Batholith. Within the Sawtooth Mountains area in the northern half of the quadrangle, intrusive rocks related to this orogenic event cover 45% of the surface of the quadrangle. Much of the batholith in this area has not been subdivided petrographically; but where detailed mapping has occurred, diorites, quartz diorites, granodiorites, quartz monzonites, and pegmatites have all been distinguished. Rocks of the batholith are relatively low in mafic minerals (normally biotite). The intrusives normally appear fractured and deeply weathered at the surface, though fresh exposures can be found (Kern, 1959).

Paleozoic and some Precambrian rocks are found in association with the Idaho Batholith, and cover 10% of Hailey quadrangle in the north-eastern quadrant. A variety of rock types are present; ranging from clastic and carbonate sedimentary rocks to argillite, marbles, schists, and gneisses.

Superimposed on the Idaho Batholith and associated older rock units are intrusive and extrusive rocks of the Challis and Idavada series

of Eocene and Mio-Pliocene age respectively (Rember and Bennett, 1979). Challis rocks cover approximately 20% of the quadrangle, and are exposed in the Sawtooth Mountains. The Challis Formation is primarily composed of rhyolites, intermediate volcanics, basalts, and tuffs. Exposures of non-marine sediments are found at the base of the Challis flows (dominantly clastic fluviatile rocks). Scattered exposures of intrusives (sills, dikes, and stocks) formally called the Sawtooth Batholith (as described by Rember and Bennett, 1979) appear to be related to the Challis Volcanics. The main intrusive complex is found in the Trinity Mountain area. This large exposure was not on the map compiled by Geophoto Services, Inc. (1977). Other exposures include the dike swarms at Iron Mountain, the Sawtooth Range, and Boise Basin. Stocks and other small intrusive bodies are scattered throughout the northeastern quadrant in close association with the Challis Formation. A detailed description of the Challis Formation can be found in Kern (1979) as it relates to the Stanley Basin area just north of the Hailey quadrangle. Exposures of the Challis extrusive series (and associated sedimentary rocks) are limited to the northeastern quadrant of the Hailey quadrangle and the Mount Bennett Hills area. This spacial limitation may be due in part of erosion rather than exclusively by the original limits of deposition. The Challis Volcanics may have covered much of the Sawtooth Mountains in this area at the time of their deposition.

The younger Idavada Volcanics and related extrusive and sedimentary formations overlap the Challis series in the Mount Bennett Hills area, and extend westward into the Danskin Mountains where they directly overlie the Idaho Batholith. The volcanics are composed of rhyolite (as flows and tuffs) and basalts.

Subsequent volcanism in the area is essentially basaltic and primarily related to the Snake River Plain volcanic period (Pliocene to Quaternary). These basalts cover approximately 20% of the quadrangle. Some vents in the Sawtooth Mountains resulted in minor surficial exposures of these basalts in that area, but the Camas Prairie and the Snake River Plain are dominated by these plains basalts.

The remaining 5% of the quadrangle is mapped as Recent alluvium and related sediments in the Snake River Plain; and as alluvium, terrace gravels, and glacial deposits in the Sawtooth Mountains. Some of the moraine deposits in the Sawtooth Valley are fairly well preserved.

Uranium

Known uranium deposits in Hailey quadrangle are few and largely uneconomic. Uranium of supposed commercial grade occurs as uraninite and uranothorite in fractured monzonite of the Idaho Batholith in the Hailey Gold Belt area southwest of the town of Hailey (Cook, 1957).

One of the primary sources for commercial grade uranium ore found in Idaho is the Challis Formation. Uranophane was mined from iron-stained

rhyolites in Challis Volcanics south of Salmon City, and uranophane and autunite have been found in silicified fracture zones in the Stanley Basin area in close association with the Challis. The only producing placer deposit of uranium in the world in Bear Valley (approximately 40 miles northwest of Hailey quadrangle) is now thought to have its source in the Challis, or related intrusives of the Sawtooth Batholith (Bennett, personal communication, 1979).

INTERPRETATION OF GEOPHYSICAL DATA

Radiometric Data

A total of 161 groups of uranium (Bi214) anomalies meet the minimum statistical requirements set forth in the data interpretation section of Volume I. These are displayed, along with all other anomalous samples (which do not satisfy the minimum grouping criteria to define an anomaly) and other pertinent data, on the Uranium Anomaly/Interpretation Map (Figure 3). The potassium, uranium, thorium, and ratio pseudo-contour maps, which reflect radiometric responses for the entire quadrangle, are contained in Appendix F. Discussion of the abundances of potassium, uranium, and thorium are in terms of apparent equivalent percent and equivalent ppm. These equivalent units are derived from scaling of counts per second data by the sensitivities calculated for the detection system. They do not directly correspond to real geochemical data.

The average apparent uranium abundance within the Hailey quadrangle is 2.35 ppmU. This value is higher than the other three quadrangles of the Idaho survey. The average apparent potassium and thorium abundances are 2.13 equivalent percent and 10.94 ppmT respectively. Histograms of the concentrations and ratios of K,U, and T are shown in Appendix D. It is obvious from examination of these histograms that a large number of map units are bimodal or multimodal with respect to the potassium, uranium, thorium, and T/K ratio. It is probable that this results from inaccuracies in the geologic map used. The map compiled by Rember and Bennett (1979), which contains the latest information gathered in the area, shows only general resemblance to the map used. In many cases, outcrops of a distinct rock type do not appear at all on the geologic base map. One example of this is shown in Figure 3, where a large outcrop of Tertiary Sawtooth intrusives, completely missing from the Geophoto Services Map, is plotted by Rember and Bennett in the middle of a large area of Cretaceous Idaho Batholith. This region is of particular interest, since it has much higher apparent concentrations of K, U, and T than the surrounding igneous mass.

Because of discontinuous contact lines (a perfectly appropriate geologic map compilation technique in areas where geology is uncertain) the map by Rember and Bennett could not be digitized for incorporation into

HAILEY

URANIUM ANOMALY/ INTERPRETATION MAP

HAILEY QUADRANGLE
U.S. DEPARTMENT OF ENERGY

APPROXIMATE SCALE 1:500,000

EXPLANATION

□ - CITY OR TOWN

- - URANIUM SAMPLE MEETING FOLLOWING CRITERIA:
(1) $1.0 \leq U \leq \infty$
(2) $-1.0 \leq T \leq \infty$
(3) $1.0 \leq U/T \leq \infty$

IN STANDARD DEVIATION UNITS.
EACH SQUARE REPRESENTS 1 STANDARD DEVIATION.

■ - URANIUM ANOMALY:

A SINGLE SAMPLE OF 3 OR MORE STANDARD DEVIATIONS OR GROUP OF ADJOINING SAMPLES WHICH TOGETHER TOTAL 4 OR MORE STANDARD DEVIATIONS, $4.0 \leq \text{sum} \leq \infty$, WITH AT LEAST ONE SAMPLE OF 2 OR MORE STANDARD DEVIATIONS.

SURVEY AND
COMPILED BY

EG&G GEOMETRICS

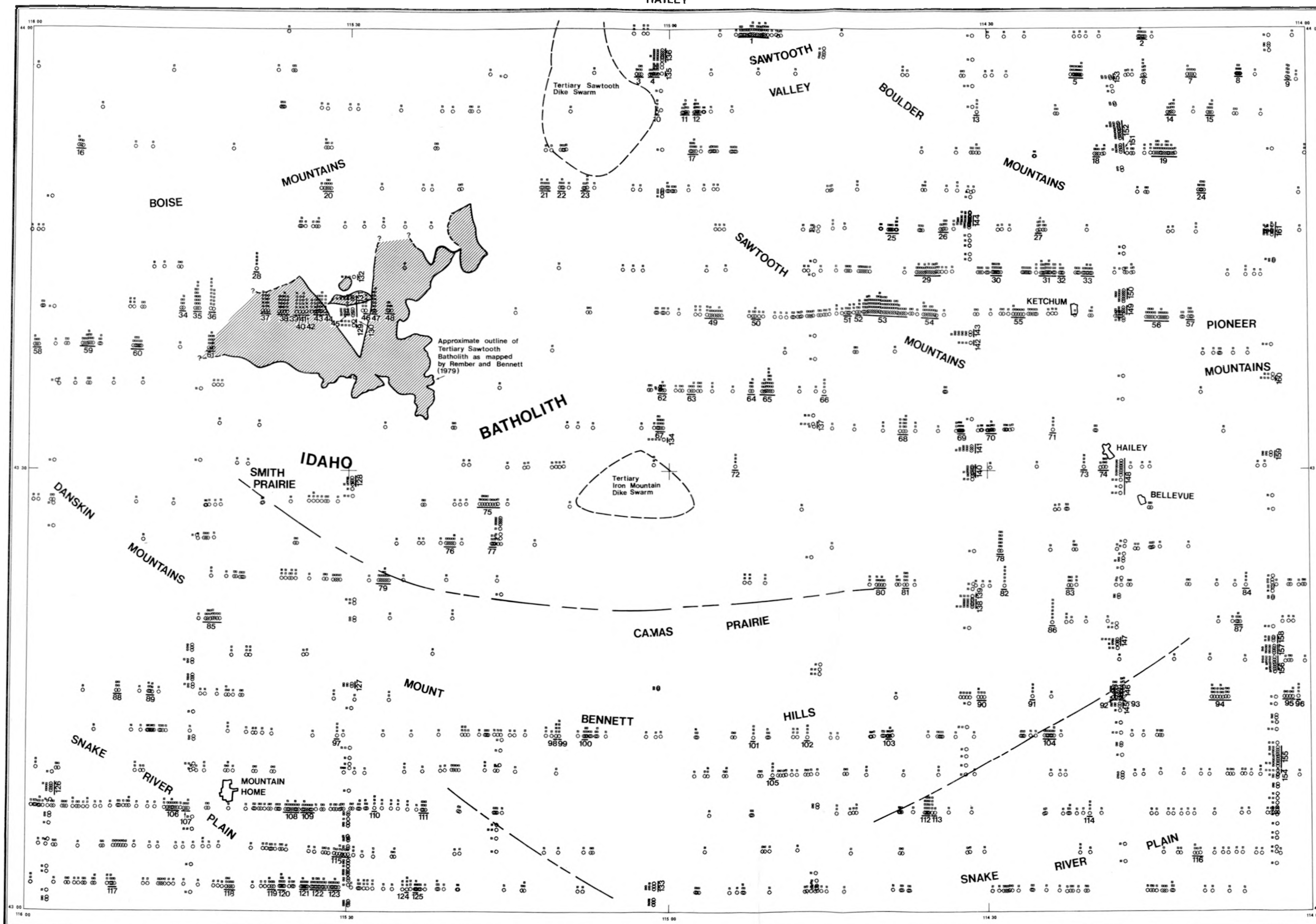


Figure 3 - Uranium Anomaly/Interpretation Map - Hailey Quadrangle

the radiometrics. A comparison of the radiometric data with their map is, however, interesting, because of the distinct radiometric responses displayed by some of the units. In some areas of the geologic map where no contacts have been drawn, such as in the Sawtooth Mountains, an abrupt change in the radiometric character makes it possible to draw tentative boundaries which could be field checked. More detailed radiometric mapping could be used to define and help to solve field problems in this area.

Map units with average apparent uranium concentrations higher than 3.0 ppmeU are TKIF (Tertiary-Cretaceous felsic intrusives), TAT (Tertiary ash flow tuffs), and TEIF (Tertiary silicic intrusives). All three of these units have abnormal distributions in the histograms which indicate that the average values are not truly reflective of the actual rock unit. In order to gain an accurate picture of which radiometric population is representative of the rock unit in question, the histograms must be compared to the two geologic maps for the Hailey quadrangle.

However it is apparent that there are four main contributors to the concentration values in all the histograms. Paleozoic sedimentary and metamorphic rocks appear to be dominantly low in radiogenic elements. Tertiary intrusives and extrusives appear high in K, U, and T and have increased T/K and U/T ratios. Rocks of the Idaho batholith and basalts of the Snake River Plain have concentration values only slightly higher than the Paleozoic sequence. Since the Tertiary igneous rocks are intimately associated with the Paleozoics, errors in geologic map compilation will almost certainly result in mixing of the two radically different populations within a digitized map unit.

The pseudo-contour maps provide a general picture of the radiometric response over the entire quadrangle. The regions delineated by apparent concentrations of thorium greater than 20.0 ppmeT and uranium greater than 4.0 ppmeU correspond well to Tertiary igneous rocks as mapped by Rember and Bennett. Specifically they correspond to Sawtooth and Iron Mountain dike swarms and a portion of the Sawtooth Batholith in the Boise Mountains, and to the Idavada Volcanics in the Danskin Mountains and the Mount Bennett Hills areas. In the Sawtooth Batholith (mapped as KIF-Cretaceous Idaho Batholith on the geologic base map), peak concentrations are as high as 10.4 ppmeU and 38.5 ppmeT. In the Danskin Mountains-Mount Bennett Hills area, peak concentrations range as high as 10.7 ppmeU and 48.9 ppmeT. Other map units in this area have similar peak concentrations. The potassium pseudo-contour map shows similar, but more moderate trends.

Anomalies are scattered throughout the quadrangle. The largest number of anomalous samples is associated with map unit KIF. This is an apparent reflection of its large surface area in conjunction with the stated inaccuracies in the map used. Anomalies in this unit are clustered into specific areas. Anomalies 28, 34-48, 61, and 129-132 cluster near the Sawtooth Batholith area in the Boise Mountains. Peak concentrations within this group range as high as 10.4 ppmeU in anomaly 36. Other small groups occur near the Sawtooth Dike Swarm

(anomalies 3, 4, 10-12, 17, 135 and 136 - peak concentrations of 9.9 ppmeU), west of the Iron Mountain Dike Swarm (anomalies 75-77, and 79 - peak concentrations of 4.3 ppmeU), and northeast of the Iron Mountain Dike Swarm (anomalies 62-67, 72, 134, and 137 - peak concentrations of 8.3 ppmeU).

The northeastern quadrant is filled with anomalies, primarily in Paleozoic and Cenozoic rocks. A wide range of peak count rates is found in the anomalies in this area. This is apparently due to a mixing of truly anomalous samples being mixed with samples which represent a different rock type than as mapped (as discussed previously). Some of the anomalies in this area lie over cultural features (anomalies 8, 15, 19, 27, 37, 33, 73, and 74) such as roads or towns. Others such as anomalies 73, 74, and 78 (peak concentration of 7.6 ppmeU) lie near areas prospected for uranium.

Anomalies in the Mount Bennett Hills area are few and scattered, but have peak concentration values that commonly exceed 7.0 ppmeU. The highest apparent concentrations are not found in anomalies in this area, perhaps due to high thorium concentrations (and resulting low U/T ratios) with respect to the map unit. A large number of anomalies are situated in the Snake River Plain areas east of the Mount Bennett Hills and south of the Danskin Mountains. Anomalies in these two areas have peak concentrations in the 3.0 to 4.5 ppmeU range.

Every sample shown in Figure 3 is statistically significant with respect to the average value of the associated computer map unit. However not all are a reflection of the radiometric response of the actual geologic rock type. The groups associated with the Tertiary igneous rocks as mapped by Rember and Bennett (1979) have high apparent concentration values of uranium and thorium with respect to the quadrangle as a whole, and thus merit the closest attention as far as uranium is concerned. It is also possible that detailed radiometric mapping might serve as a tool to fill in gaps in geologic information in this area.

Magnetic Data

The magnetic field pseudo-contour map appears in Appendix F. The quadrangle is dominated by intrusive and extrusive rocks of intermediate to silicic composition and Precambrian metamorphic rocks of various compositions. To a large extent the Idaho Batholith rocks, which cover most of the surface of the quadrangle, dominate the residual magnetic field picture with relatively low frequency and low amplitude wavelengths. Isolated areas of complexly faulted Paleozoic and Tertiary units, and the Quaternary Basalts of the Snake River Plain have slightly higher frequencies and amplitudes, with fairly definitive boundaries. The southern half of the quadrangle shows some linear magnetic field discontinuities which may correspond to the normal faulting along the northern border of the Snake River Plain.

BIBLIOGRAPHY

- Bennett, E.H., 1979, personal communication.
- Butler, A.P., Jr., Finch, W.I., and Twenhofel, W.S., 1962, Epigenetic Uranium Deposits in the United States: U.S. Geological Survey Mineral Resources Map MR-21 (with text), scale 1:3,000,000.
- Cook, E.F., 1957, Radioactive Minerals in Idaho: Idaho bureau of Mines and Geology Mineral Resources Report No. 8, 5 p.
- Fairbridge, R.W. (principal editor), 1975, Encyclopedia of World Regional Geology, Part 1: Western Hemisphere: Halsted Press, Stroudsburg, Pa., 704 p.
- Kern, B.F., 1959, Geology of Uranium Deposits Near Stanley, Custer County: Idaho Bureau of Mines and Geology Pamphlet No. 117, 40 p.
- Mitchell, U.E., and Bennett, E.H., 1979, Geologic Map of the Elk City Quadrangle, Idaho: Idaho Department of Lands, Bureau of Mines and Geology, Geologic Map Series, Scale 1:250,000.
- Mallory, W.W. (principal editor), 1972, Geologic Atlas of the Rocky Mountain Region: Rocky Mountain Association of Geologists, Denver, Colorado, 331 p., A.B. Hirschfield Press, Denver, Colorado.
- Rember, W.C., and Bennett, E.H., 1979, Geologic Map of the Hailey Quadrangle, Idaho: Idaho Department of Lands, Bureau of Mines and Geology Geologic Map scale 1:250,000.
- United States Geological Survey and American Association of Petroleum Geologists, 1962, Tectonic Map of the United States: U.S. Geological Survey Map, Scale 1:2,500,000.

APPENDIX A – Flight Path And Geologic Map

GEOLOGIC MAP EXPLANATION
HAILEY QUADRANGLE
(Geophoto Inc., 1977)

Qdt

DREDGE TAILINGS

Piled granitic rock fragments from earth moving equipment

Qal

ALLUVIUM

Recent alluvium and flood plain deposits. Deposits of sand, gravel, silt, pumice, and other pyroclastic debris form the flood plains and fill the channels of present streams. In places, talus and slope wash is included.

Qibu
Qibm
Qibl

LATE BASALT

Qibu — Recent basalt flows of the Snake River Group. Includes McKinney and Wendell Grade Basalts. McKinney Basalt is olivine rich, and Wendell Grade Basalt is a highly porphyritic plagioclase-olivine basalt. These extrusive lavas as those of Qibm and Qibl are typically distributed in low shield patterns from numerous vents, interbedded and marginal fresh water deposits common.

Qibm — Undifferentiated extrusive lava, generally dense to midly porphyritic olivine basalt of the Snake River Group. Interbedded fresh water sediments as terrace gravels (Crownest, Ten Mile, and Sugar Bowl gravels) and fluvial sediments of the Bonneville flood (Melon, Caldwell, and Nampa gravels). Qibm is the middle series of the Snake River Group and is Upper Pleistocene.

Qibl — Lower series of the Snake River Group. This includes distinctive lava flows from the Madson, Thousand Springs, Sand Springs, and Bancroft Springs Basalt. Age is Upper Pleistocene.

Qf

FANGLOMERATE

Pleistocene and recent gravels, fanglomerates, talus, and other poorly sorted, relatively unstratified deposits composed mostly of basalt and andesite fragments, and in the middle part of the quadrangle, granite fragments.

Qpd
Qpg
Qpa

TERRACE, PEDIMENT, AND LAG GRAVELS AND GLACIOFLUVIAL DEPOSITS

Qpd — Upper Pleistocene lacustrine and shoreline sediments of Lake Bonneville, including Nampa, Caldwell, and Melon gravels of the Snake River Group.

Qpg — Upper Pleistocene gravels and coarse, poorly sorted detritus, generally associated with glacial activity. Includes the Crownest gravel, Ten Mile gravel, and Sugar Bowl gravel of the Snake River Group. The dominant lithologies are quartzite, porphyry, and granite in pebbles, cobbles, and conglomerate.

Qpa — Older alluvium, mid to Lower Pleistocene in age. These water laid, generally stratified deposits may be associated with glacial outwash of flooding.

Qls

LANDSLIDE AND DEBRIS FLOW DEPOSITS

Unstratified mixtures of basaltic, andesitic and tuffaceous rocks. Age is mostly Pleistocene, including some Late Pliocene and Holocene ages.

Qgm

GLACIAL DEBRIS

Till and unsorted bouldery gravel, sand, and rock flour. Pleistocene age.

Qs

LACUSTRINE AND SEDIMENTARY ROCKS

Unconsolidated to semiconsolidated lacustrine clay, silt, and gravel, in places includes some fluvial and eolian deposits and discontinuous layers of peat. Age is mostly Middle or Late Pleistocene, but probably includes some Early Holocene deposits.

Qtb QTs

BASALT AND TUFFACEOUS SEDIMENTARY ROCKS

Qtb — Basalt flows in the Bruneau Formation, part of the Idaho Group. The volcanic materials consist of olivine basaltic lava and pyroclastic debris of olivine basalt derived from several volcanic centers.

QTs — Sedimentary deposits in the Bruneau Formation, part of the Idaho Group. The materials consist mainly of lake beds but include minor amounts of fine-grained stream deposits and pebble gravel. The composition is rhyolitic welded ash and lava, reflecting the Idavada Volcanics, Tat, as the principal source material.

Ts

SILT

Two principal facies occur in the Hailey Quadrangle. The flood plain facies, composed of calcareous silt and clay and preserved plant fragments occur in the southern part of the quadrangle around 115° longitude. This facies grades westward into massive tan silt with lithologic variety, and sufficiently consolidated to stand in cliffs 100 feet high. These facies belong to the Glenns Ferry Formation in the Idaho Group. The formation overlies the Banbury Basalt. Age is Upper Pliocene.

Tob

OLIVINE BASALT

Olivine basalt in columnar lava flows separated by occasional sand and silt beds. The unit, named the Banbury Basalt of the Idaho Group, overlies faulted Idavada Volcanics (Tat) that were eroded prior to burial by the Banbury materials. Age is Middle Pliocene.

Tat

SILICIC ASH FLOW TUFFS

The Idavada Volcanics (Tat) apply to various non-mineralized silicic volcanic rocks, chiefly welded ash flows but including some bedded vitric tuffs and lava flows, that unconformably overlie Miocene rocks. The ash flows are silicic latite. The ash flow and lava flows form resinous obsidian. The vitric tuffs are rhyolitic and consist of glass shards having the texture of sand. The Idavada Volcanics overlie Miocene rocks, and underlie the Banbury Basalt (Tob). Age is Lower to Middle Pliocene.

Trh

RHYOLITE

Extrusive rhyolitic rocks of Late Miocene age.

Tc

SILICIC AND BASALTIC FLOWS AND CLASTIC ROCKS

Mixed silicic and basaltic volcanic ejecta and flows, tuffs, volcanic sandstone, flow breccia, and reworked conglomerate. Unit belongs to Challis Volcanics of Eocene Age.

Teif
TKif
Ki
Kif mKif

INTRUSIVE ROCKS

All units belong to the intrusive Idaho Batholith. Teif represents an Eocene intrusion of granite and quartz monzonite, TKif is a Late Cretaceous or Lower Tertiary intrusion, Kif is a Cretaceous intrusion, mKif is metamorphosed granitic intrusive and generally is associated with intrusive margins. Ki is an intrusive rock that represents undifferentiated intrusive rock, generally intermediate in composition.

GEOLOGIC MAP EXPLANATION (Continued)

72H

PP

SANDSTONE AND LIMESTONE

Undifferentiated Permian and Pennsylvanian units. Sandstone and limestone intermixed with conglomeratic and shaley layers, and generally equivalent to the Wood River Formation in the Wells Formation interval.

PM

SANDSTONE AND LIMESTONE

Undifferentiated Pennsylvanian and Mississippian units, commonly of mixed shallow water lithologies, such as siltstone, argillite, conglomerate, limestone, and quartzitic sandstone. Units generally are equivalent to the Copper Basin Group.

M

MARINE CARBONATES

Undifferentiated Mississippian marine carbonate units composed of bioclastic limestone with chert layers and argillite and quartzite interbeds. Units are equivalent to the Copper Basin Group.

D

D-S

DOLOMITE

D Undifferentiated Upper and Middle Devonian bedded calcareous dolomite and dolomitic limestone with minor interbeds of siltstone and sandstone. Three Forks Shale and Jefferson Dolomite make up the units.

D-S Undifferentiated Silurian and Devonian dolomite, well bedded with silicified fossils. Laketown Dolomite.

mO

METAMORPHOSED ARGILLACEOUS ROCKS

Lower Ordovician metamorphosed argillaceous quartzite and argillite belonging to the Phi Kappa Formation.

mOC

METAMORPHOSED UNDIFFERENTIATED ROCKS

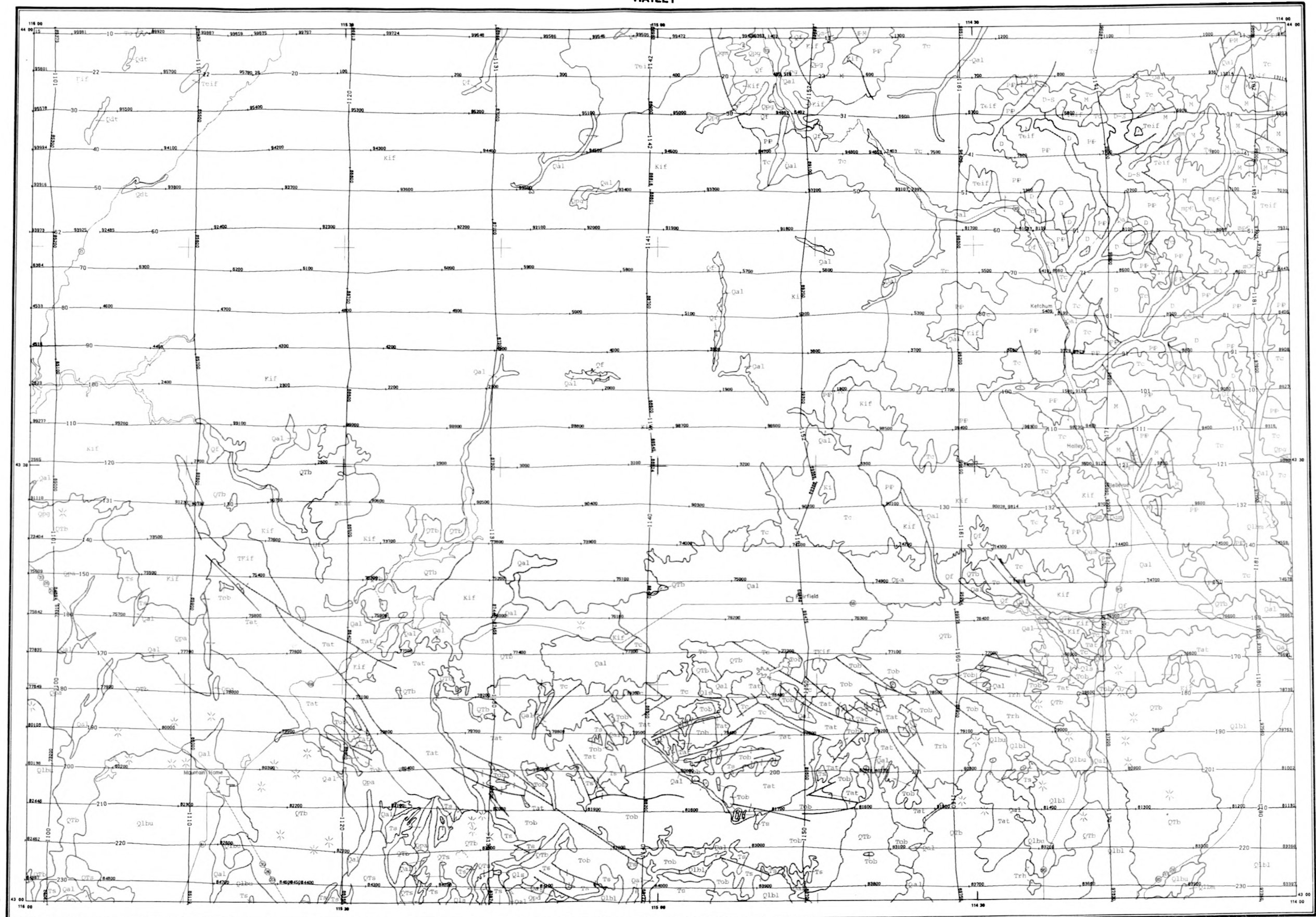
Metamorphosed undifferentiated Lower Ordovician and Cambrian marine sediments, dolomite, limestone, mudstone.

mPC

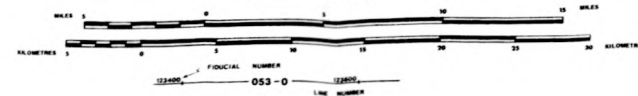
QUARTZITE AND SCHIST

Quartzite, green hornfels, and schist belonging to the Hyndman Formation. Pre-Cambrian in age.

HAILEY

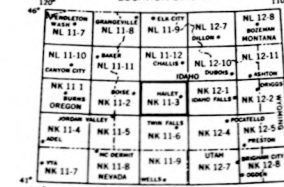


SCALE 1:500,000



FLIGHT LINE SPACING 3.0 MILES
FLIGHT ALTITUDE 400 FEET A.M.T.
FLOWN AND COMPILED 1979

LOCATION DIAGRAM



FLIGHT PATH RECOVERY

IDAHO PROJECT

U. S. DEPARTMENT OF ENERGY

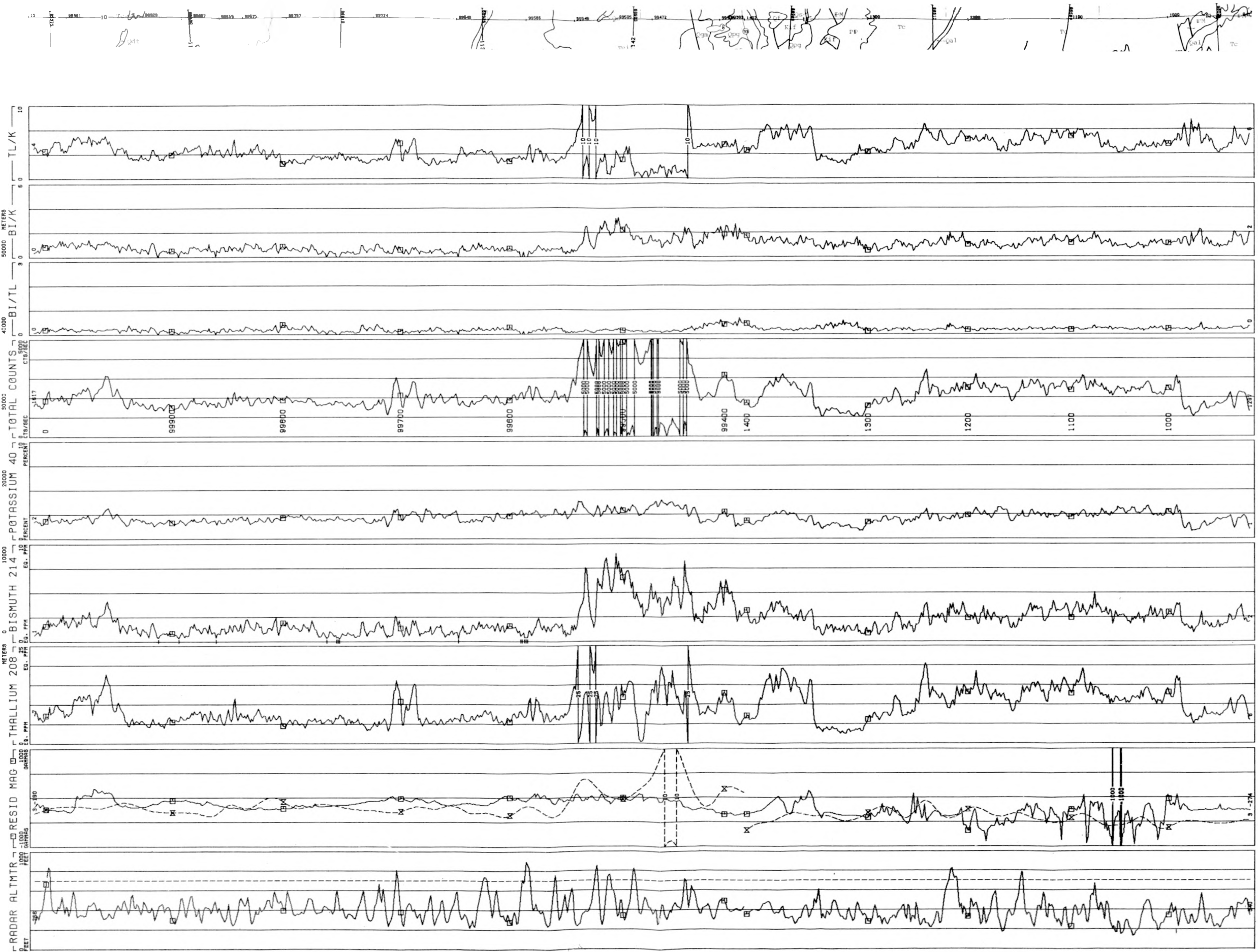
SURVEY AND
COMPILED BY:

EG&G GEOMETRICS

APPENDIX B – Profiles

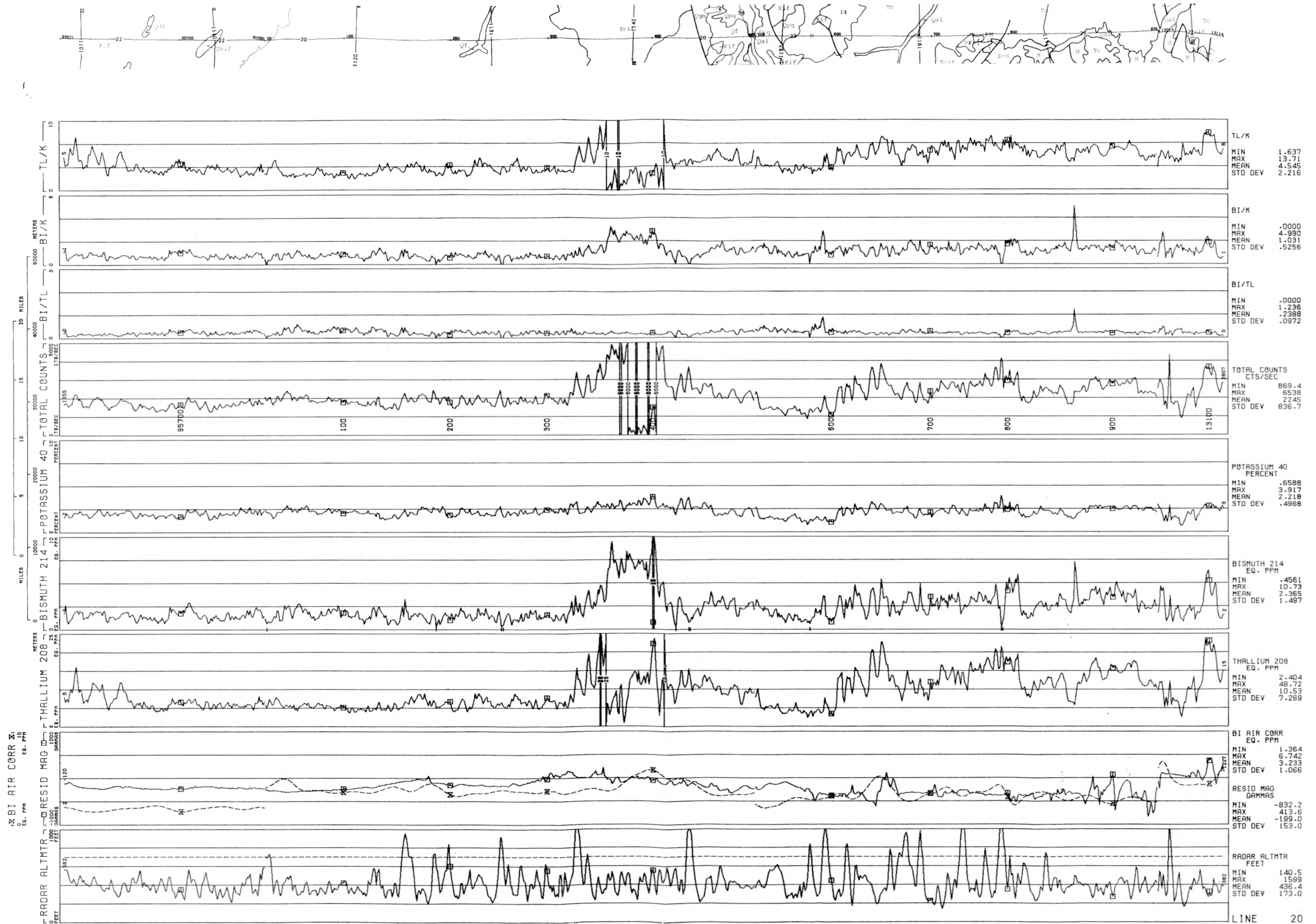
LINE 10
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79219

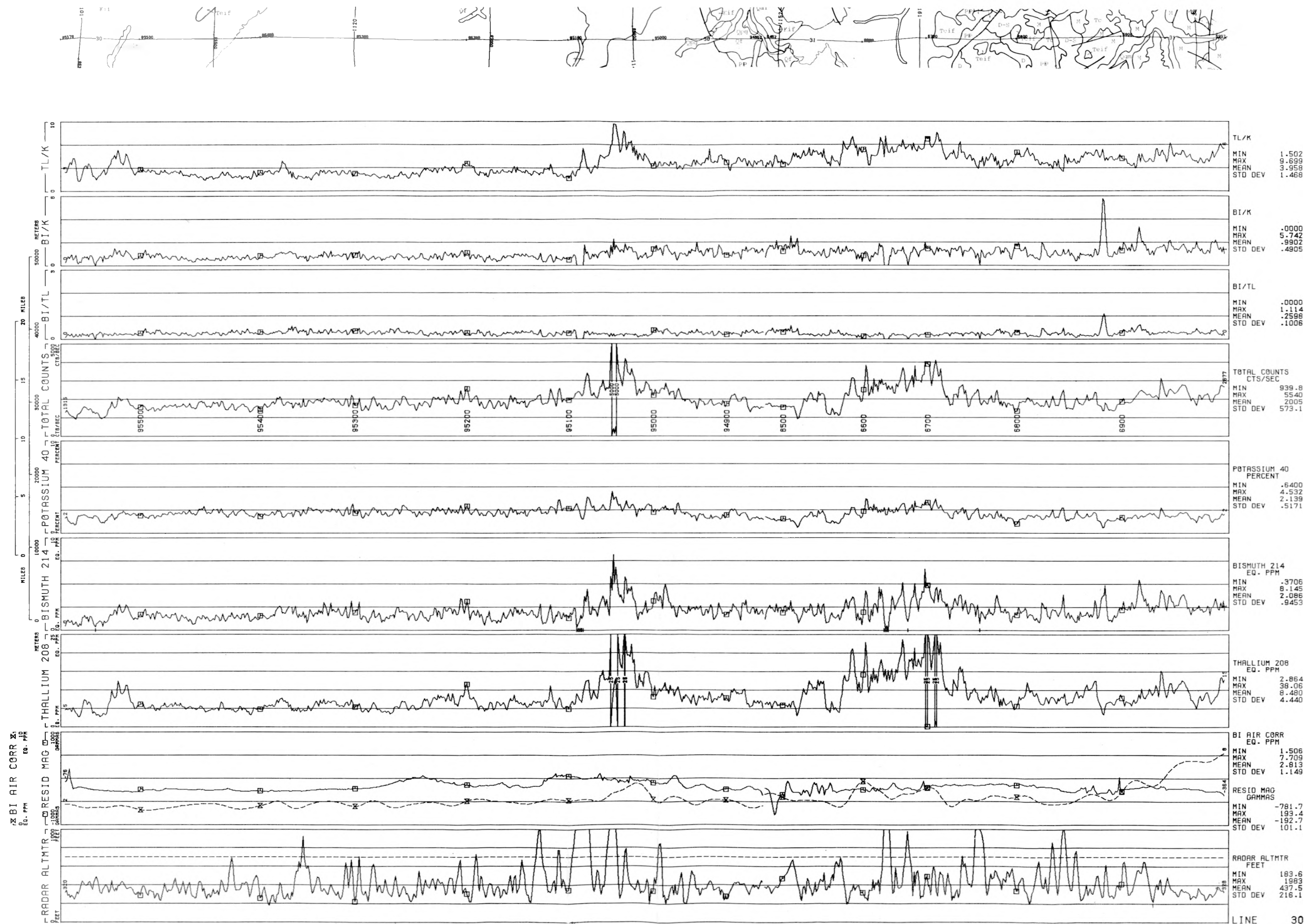
BI AIR CORR
EQ. PPM



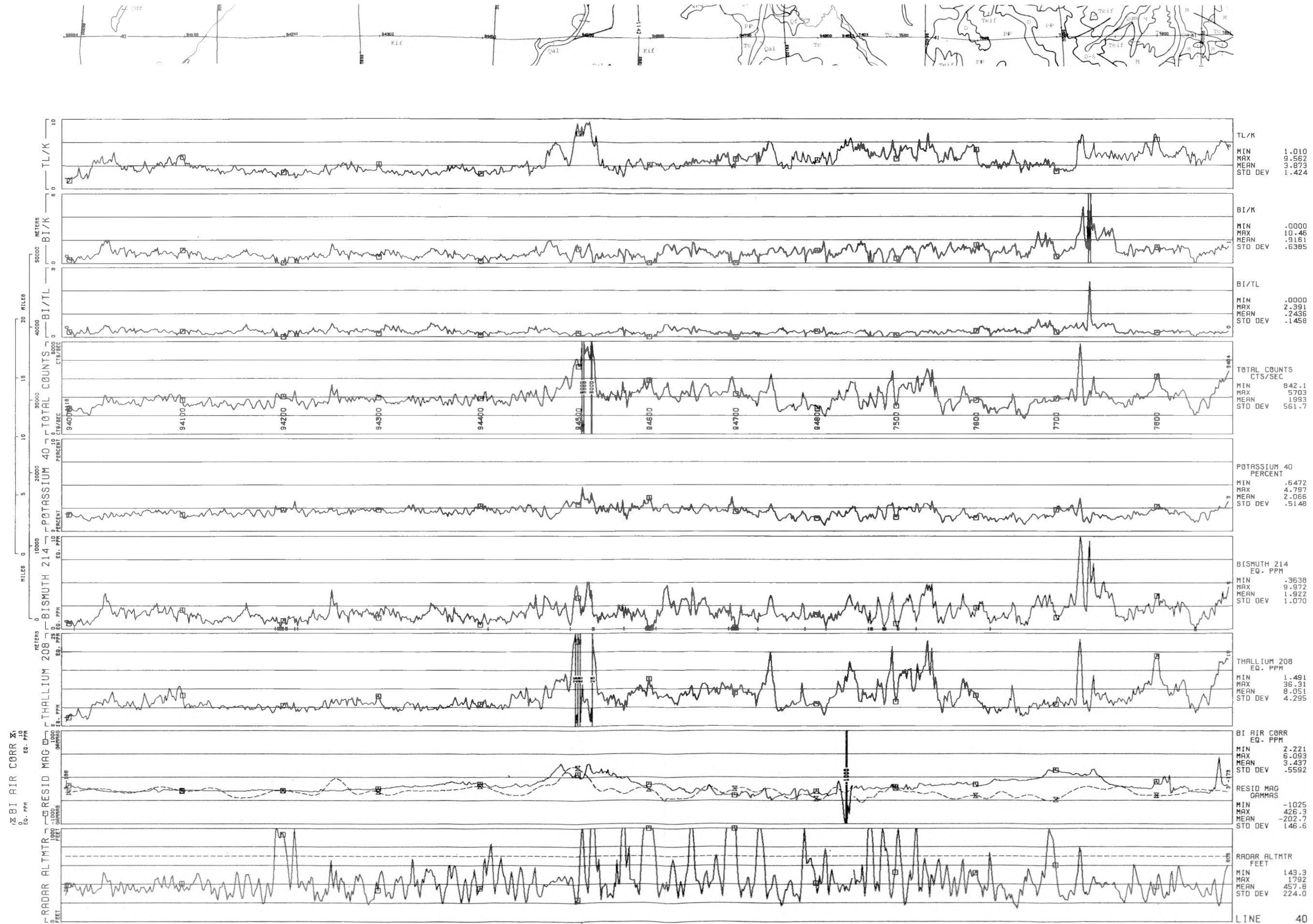
TL/K	MIN	1.764
	MAX	14.43
	MEAN	4.827
	STD DEV	2.413
BI/K	MIN	.0000
	MAX	3.224
	MEAN	.9684
	STD DEV	.5166
BI/TL	MIN	.0000
	MAX	.6639
	MEAN	.2084
	STD DEV	.0896
TOTAL COUNTS	MIN	1010
CTS/SEC	MAX	5948
	MEAN	2319
	STD DEV	944.9
POTASSIUM 40	MIN	.7919
PERCENT	MAX	3.953
	MEAN	2.235
	STD DEV	.5594
BISMUTH 214	MIN	.3996
EQ. PPM	MAX	8.965
	MEAN	2.235
	STD DEV	1.422
THALLIUM 208	MIN	2.595
EQ. PPM	MAX	44.70
	MEAN	11.42
	STD DEV	8.427
BI AIR CORR	MIN	1.483
EQ. PPM	MAX	10.56
	MEAN	3.788
	STD DEV	1.373
RESID MAG	MIN	-1254
GAMMAS	MAX	177.4
	MEAN	-208.4
	STD DEV	181.3
RADAR ALTITUDE	MIN	198.3
FEET	MAX	890.6
	MEAN	405.4
	STD DEV	120.1

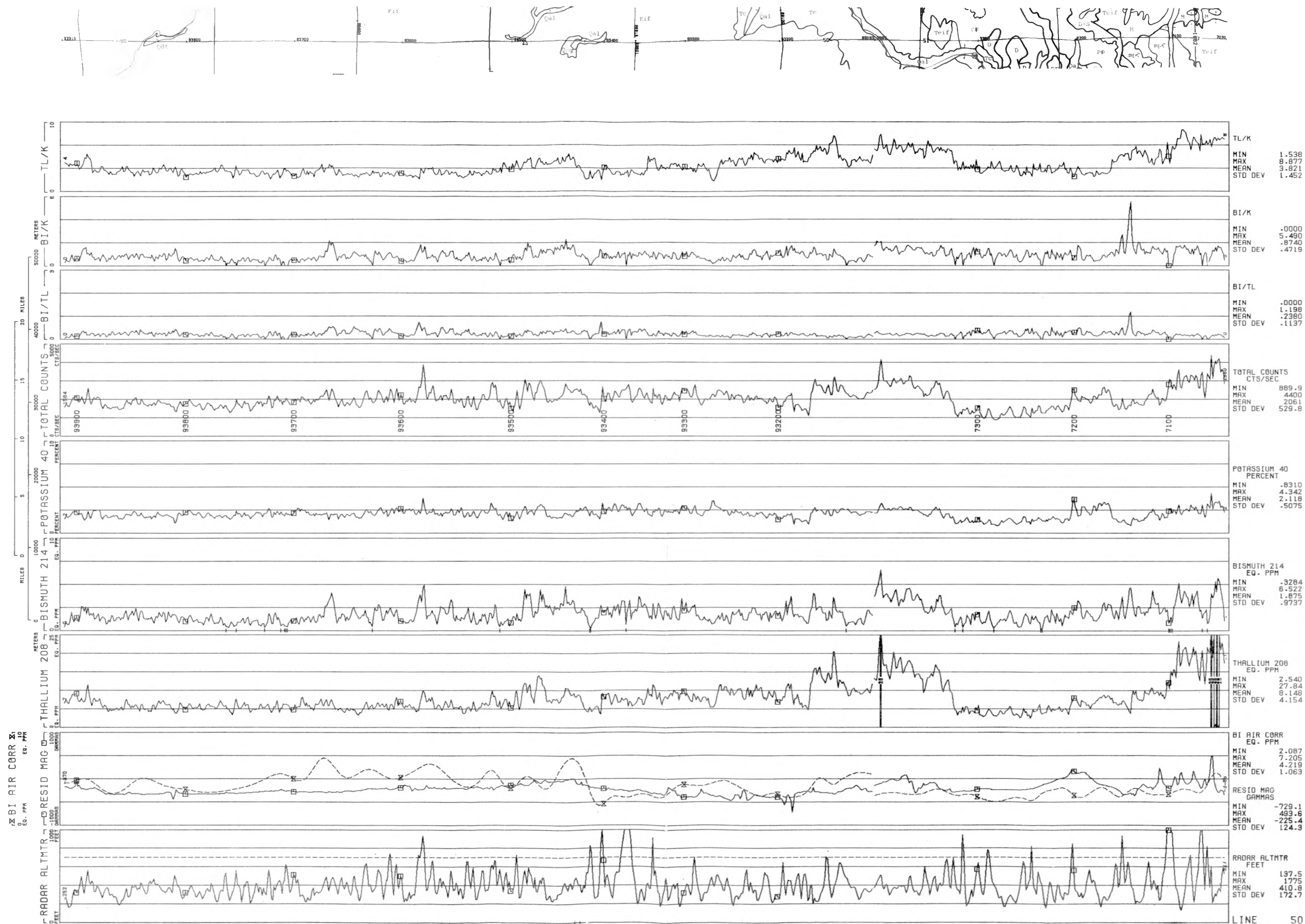
LINE 20 IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS DATA ACQUIRED 79218



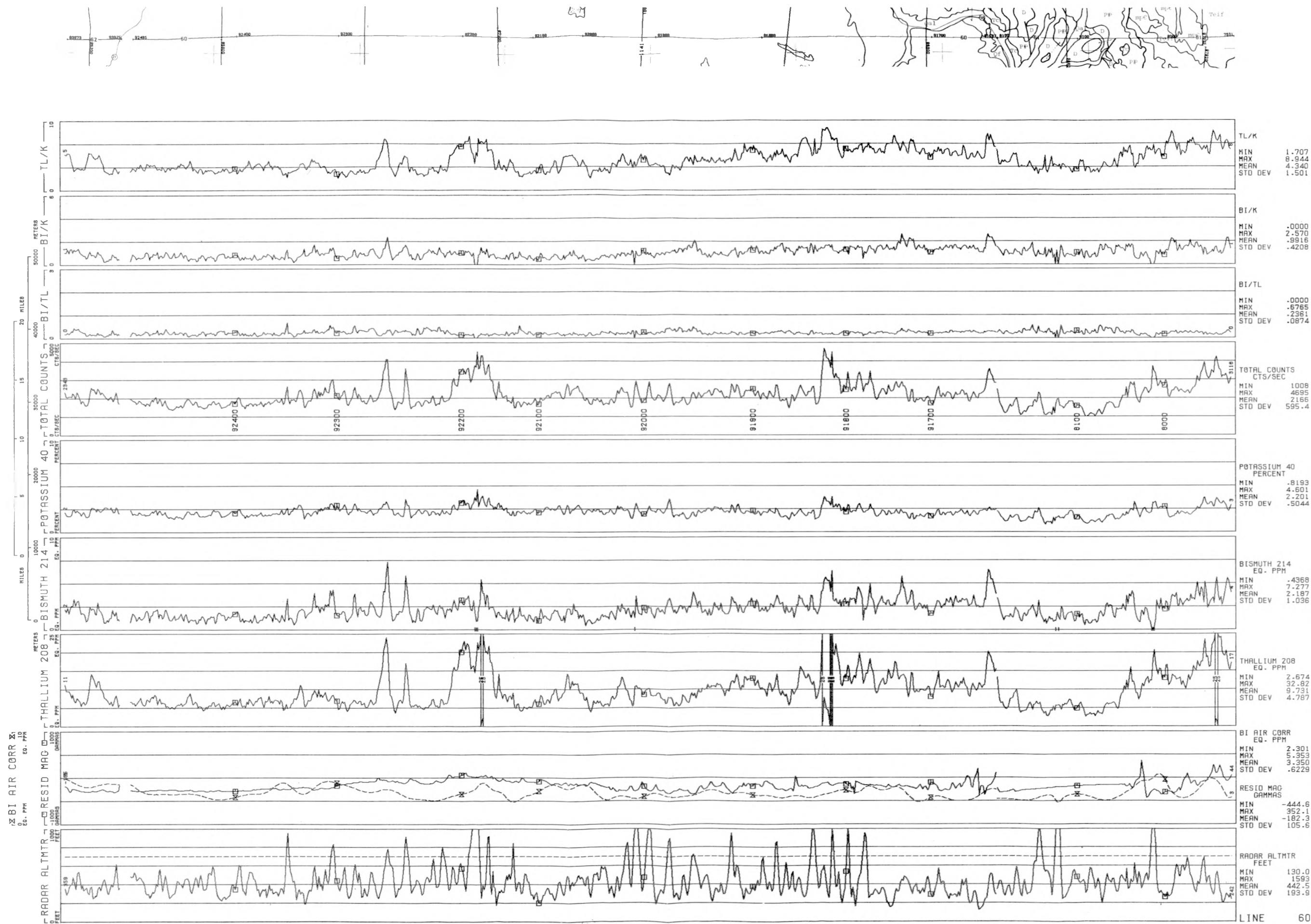


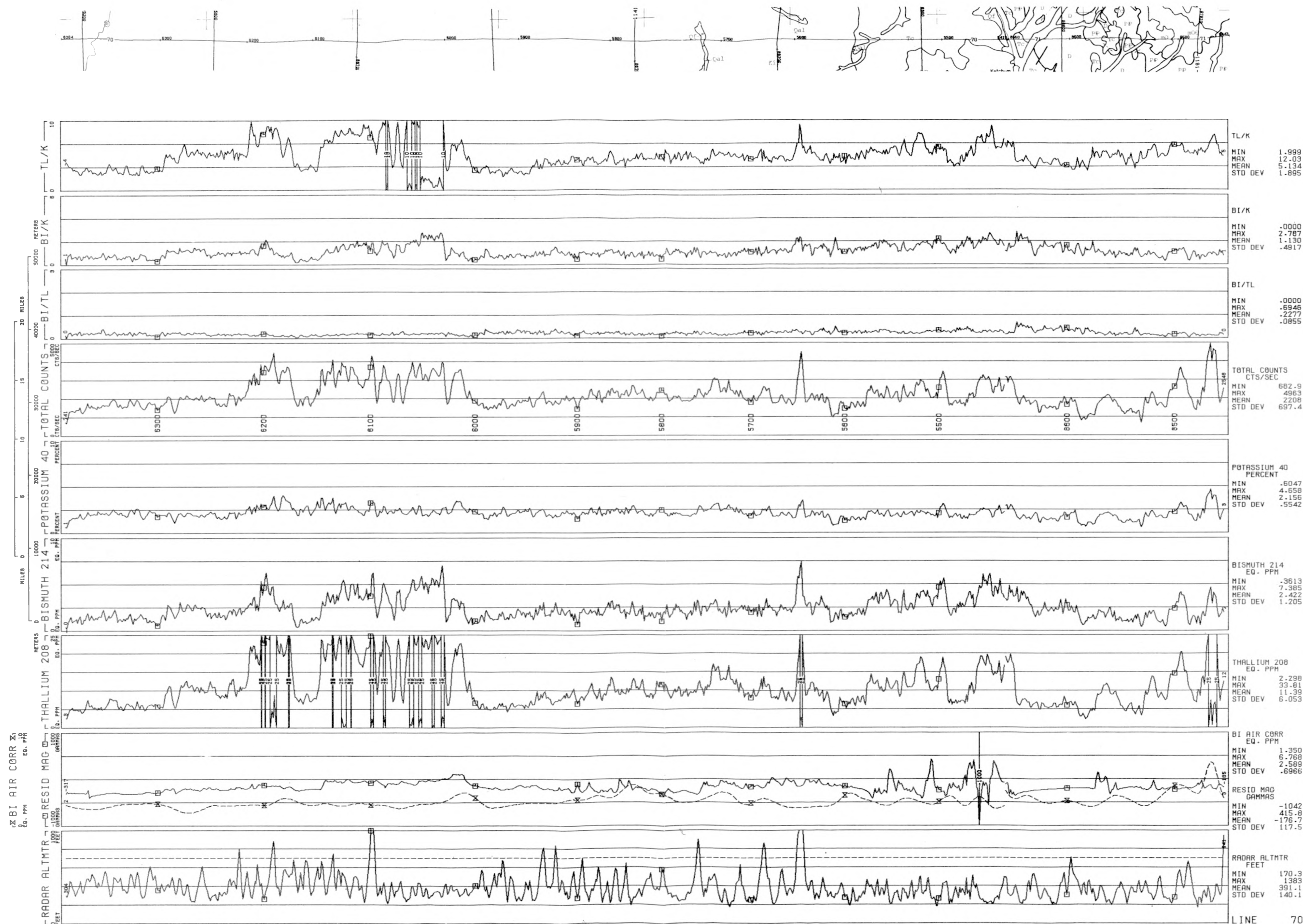
IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
40
DATA ACQUIRED 79217



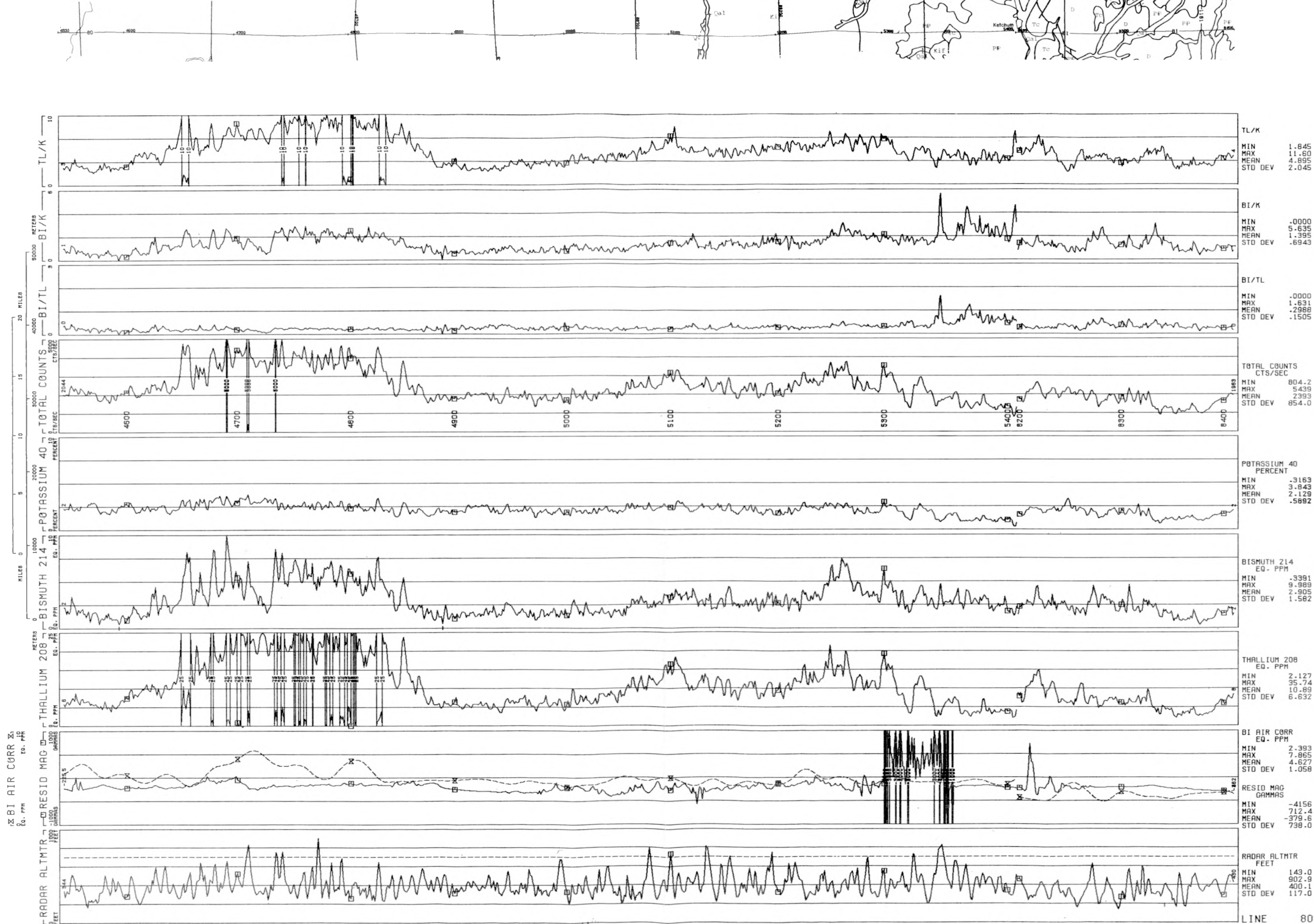


LINE 60
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79216

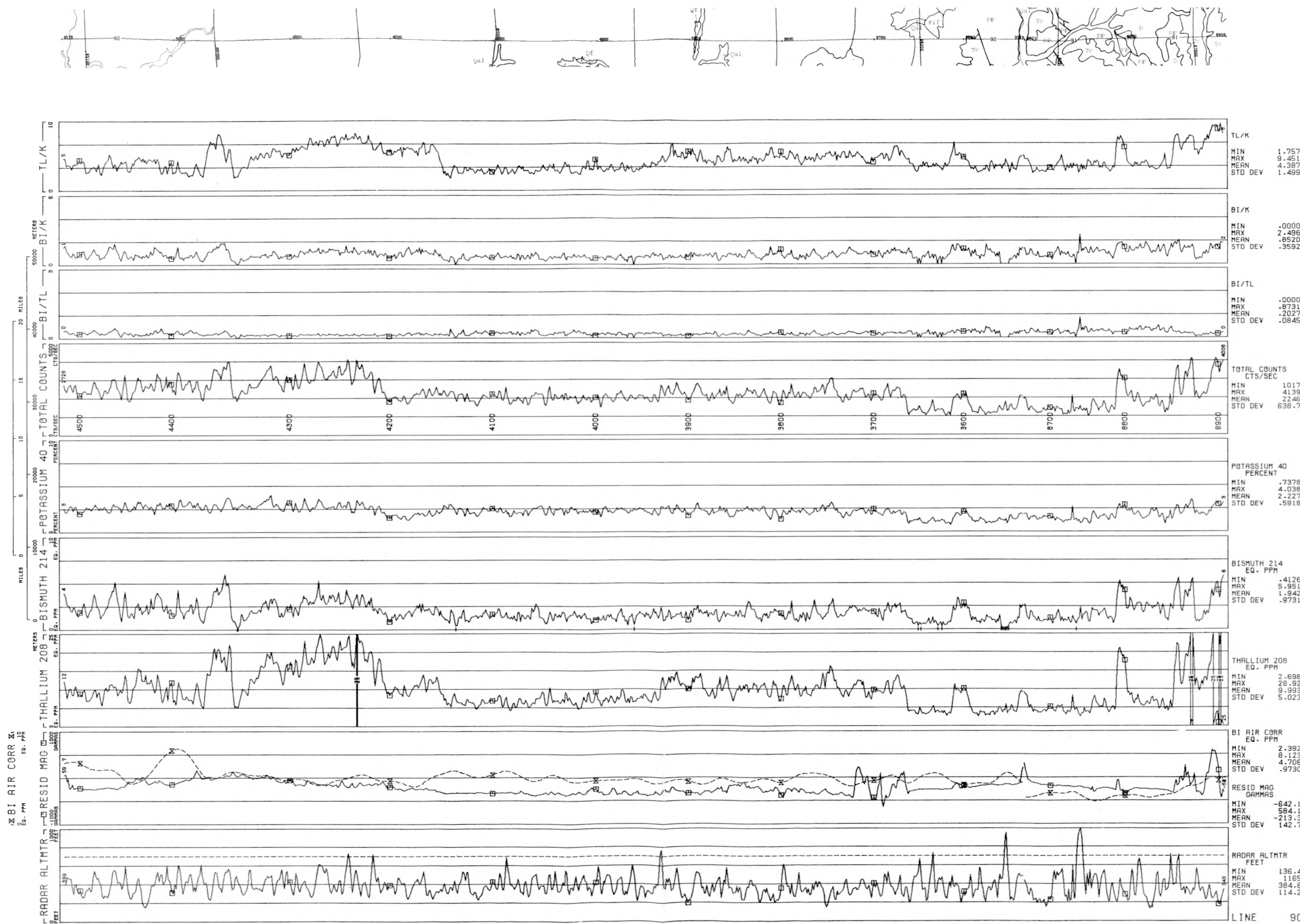




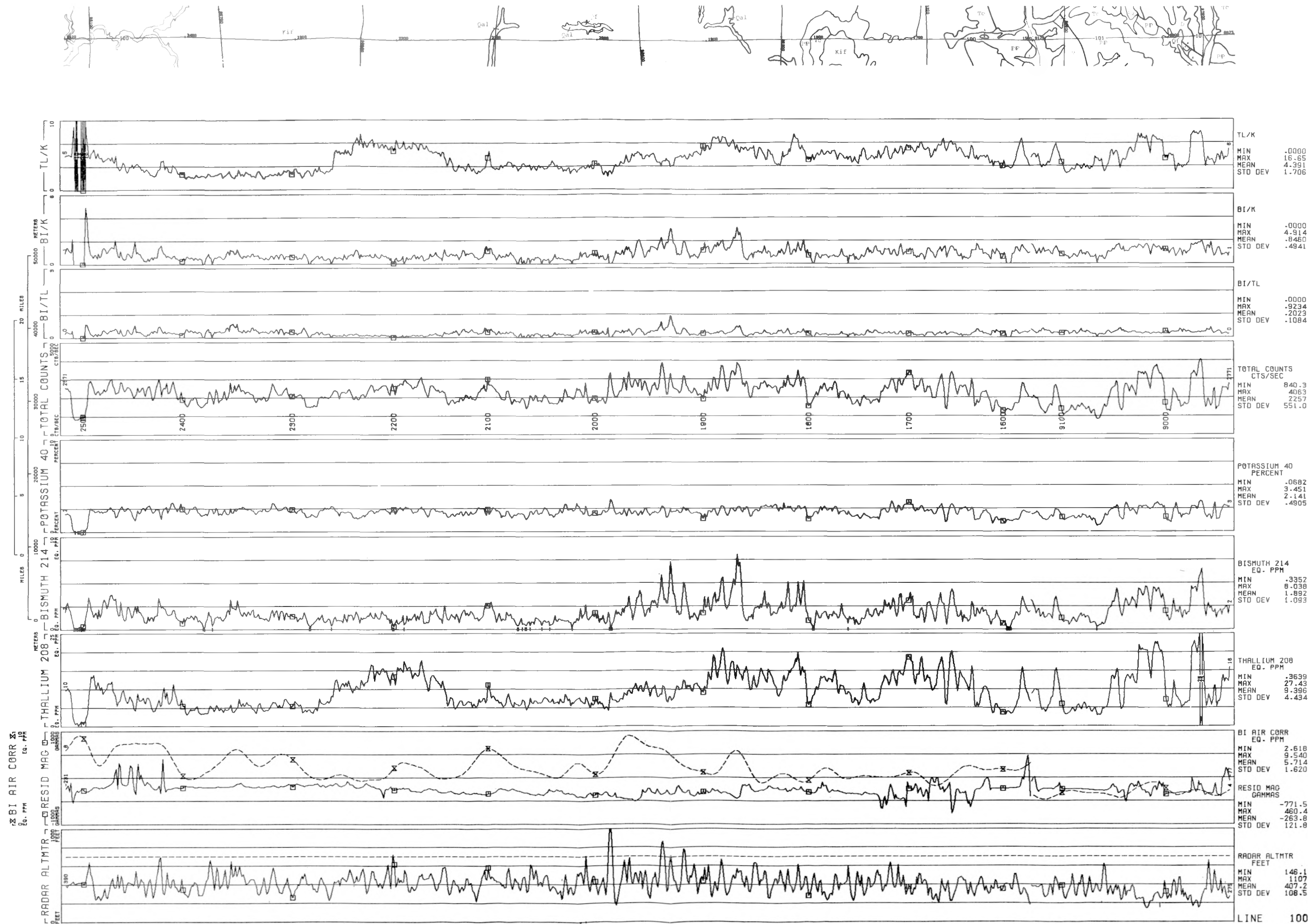
LINE 80 IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS DATA ACQUIRED 79220



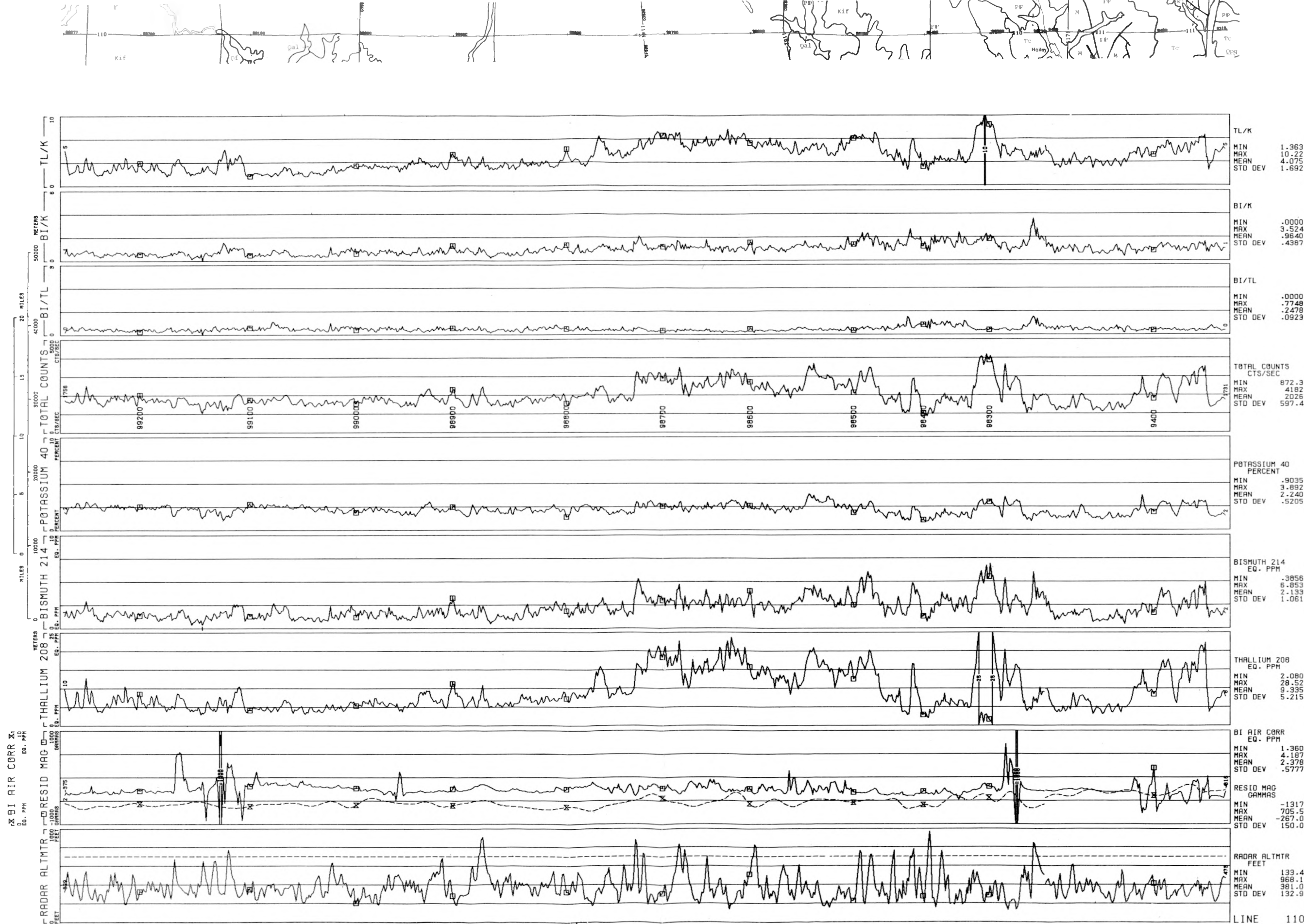
LINE 90 IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS DATA ACQUIRED 79220



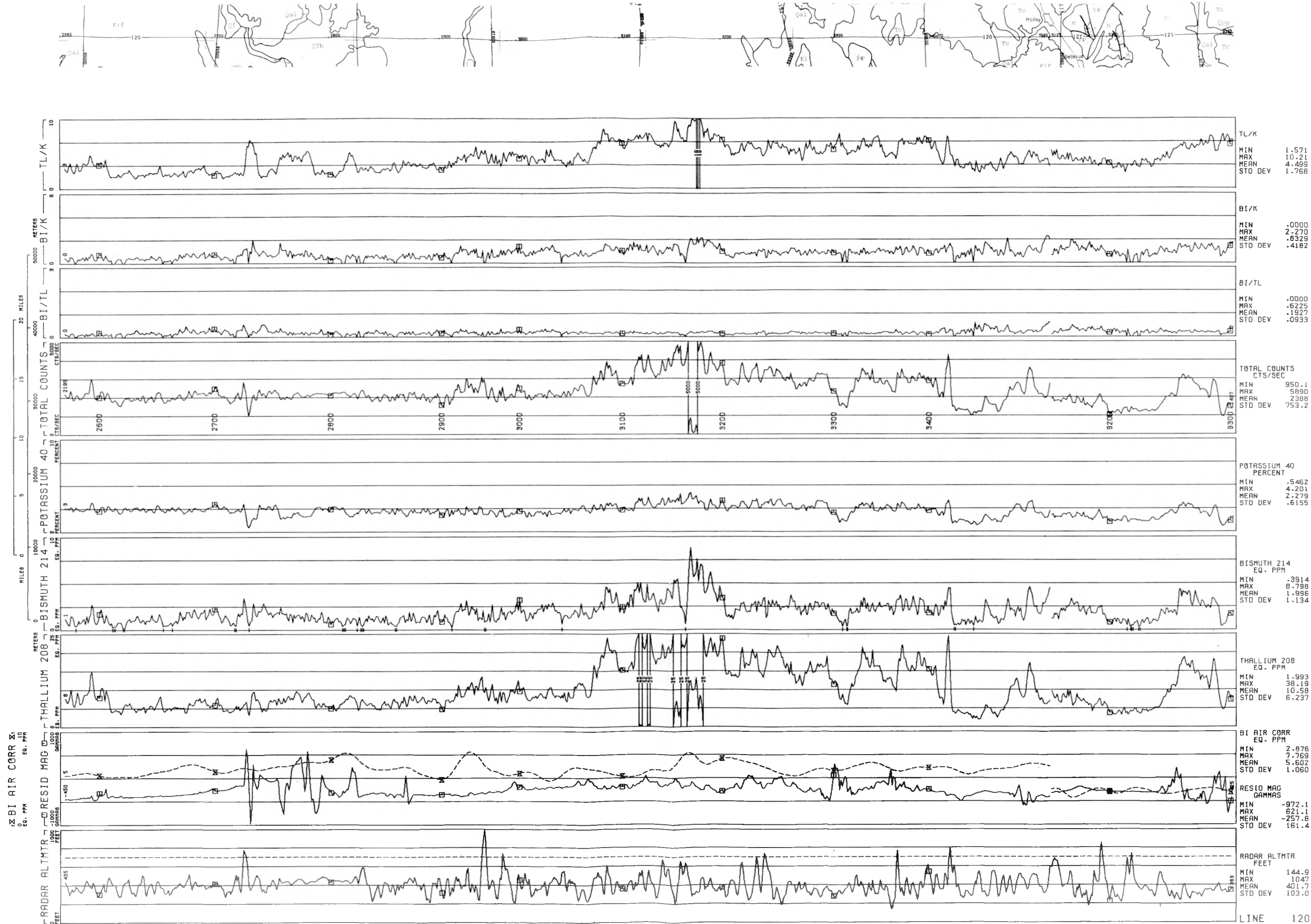
LINE 100
IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79220



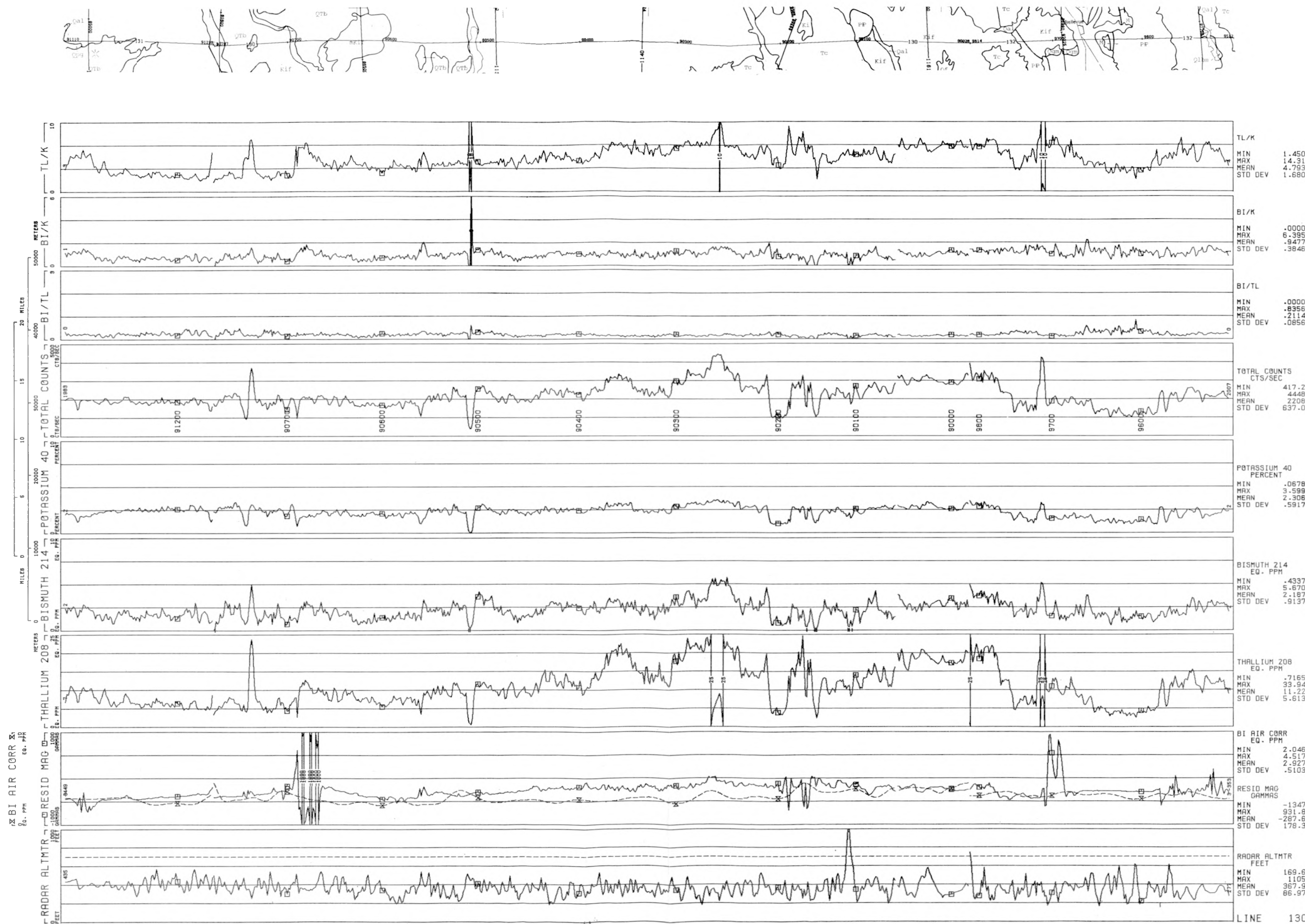
LINE 110
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79209



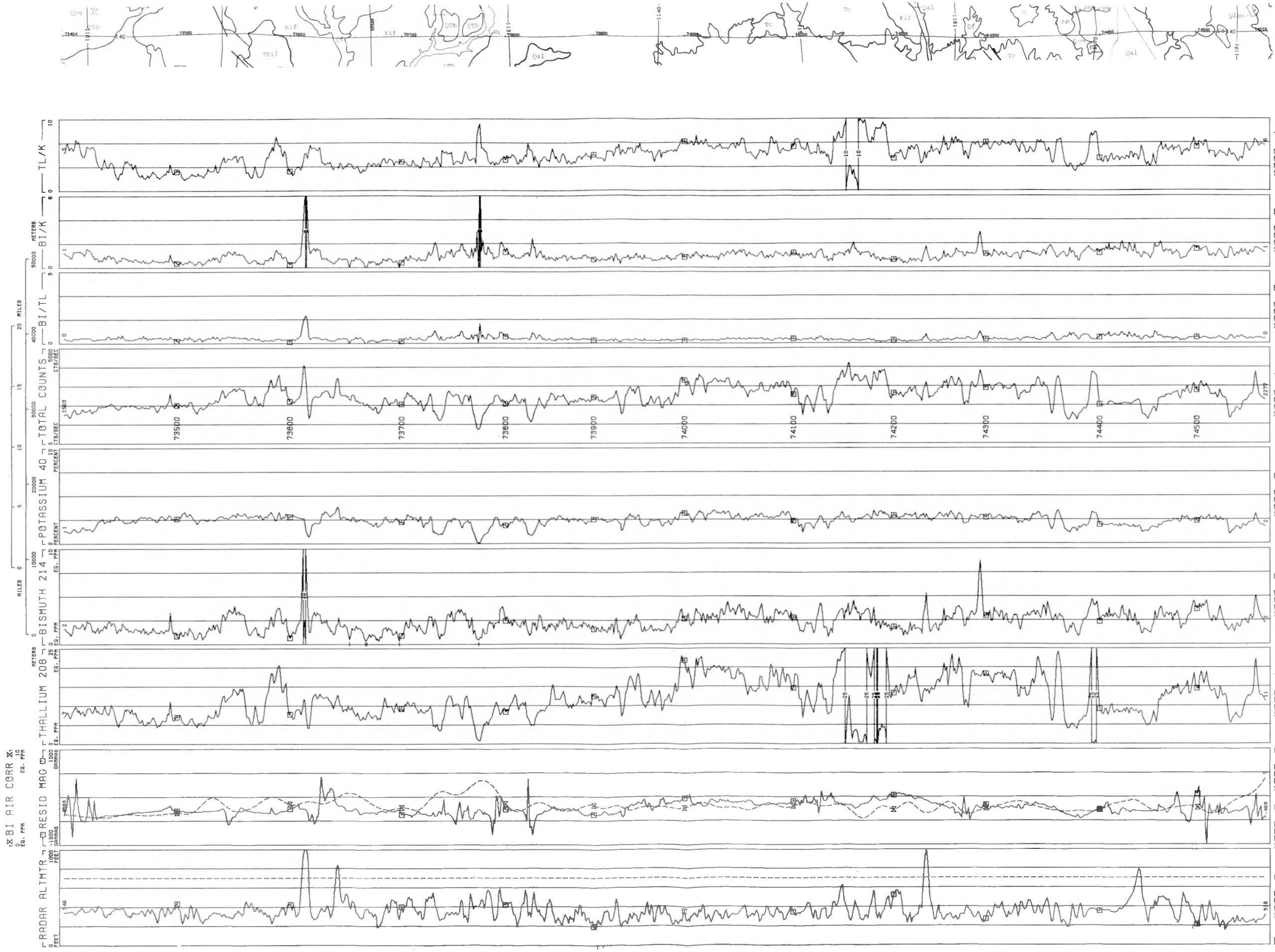
LINE 120
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79220



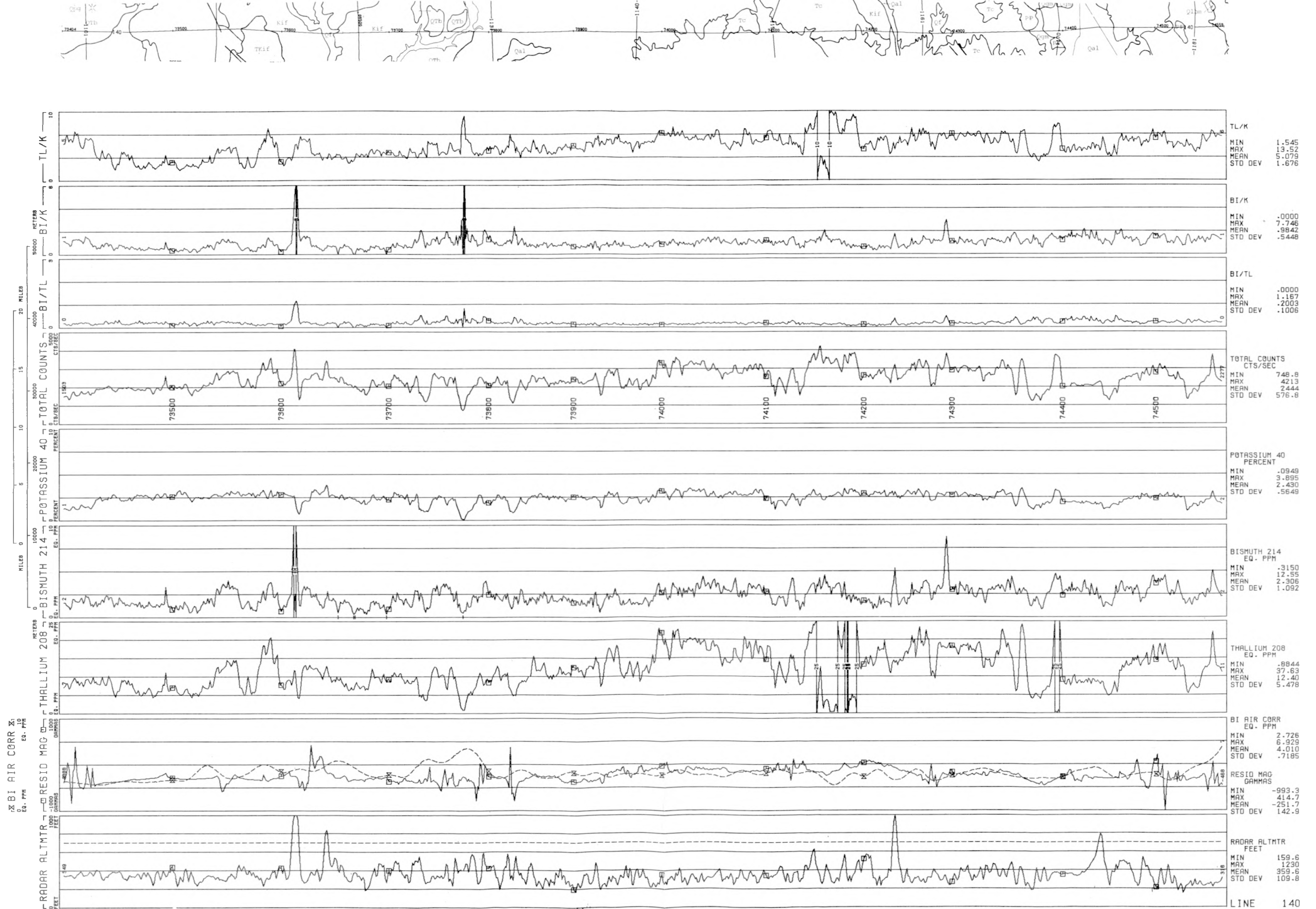
LINE 130
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79211

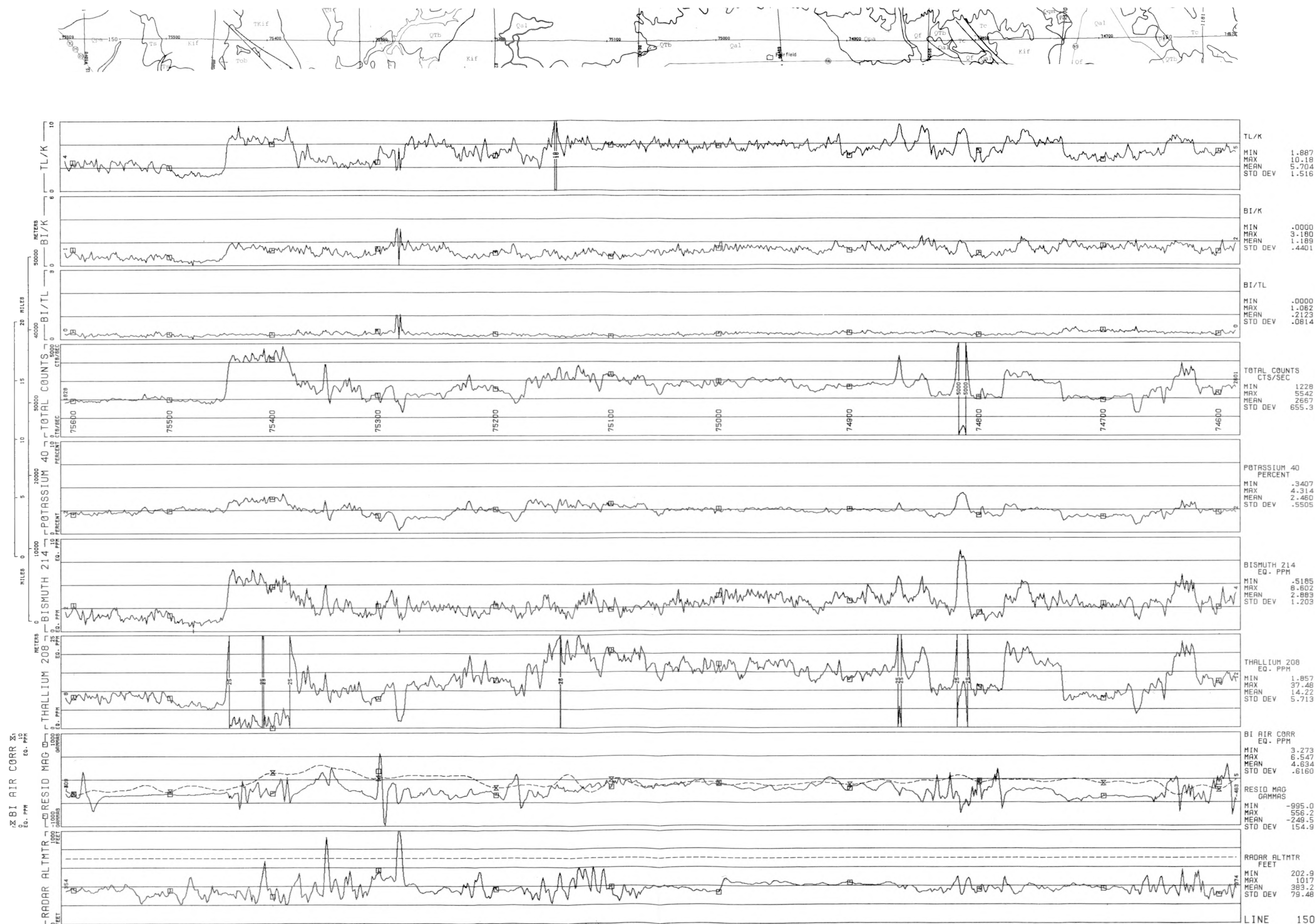


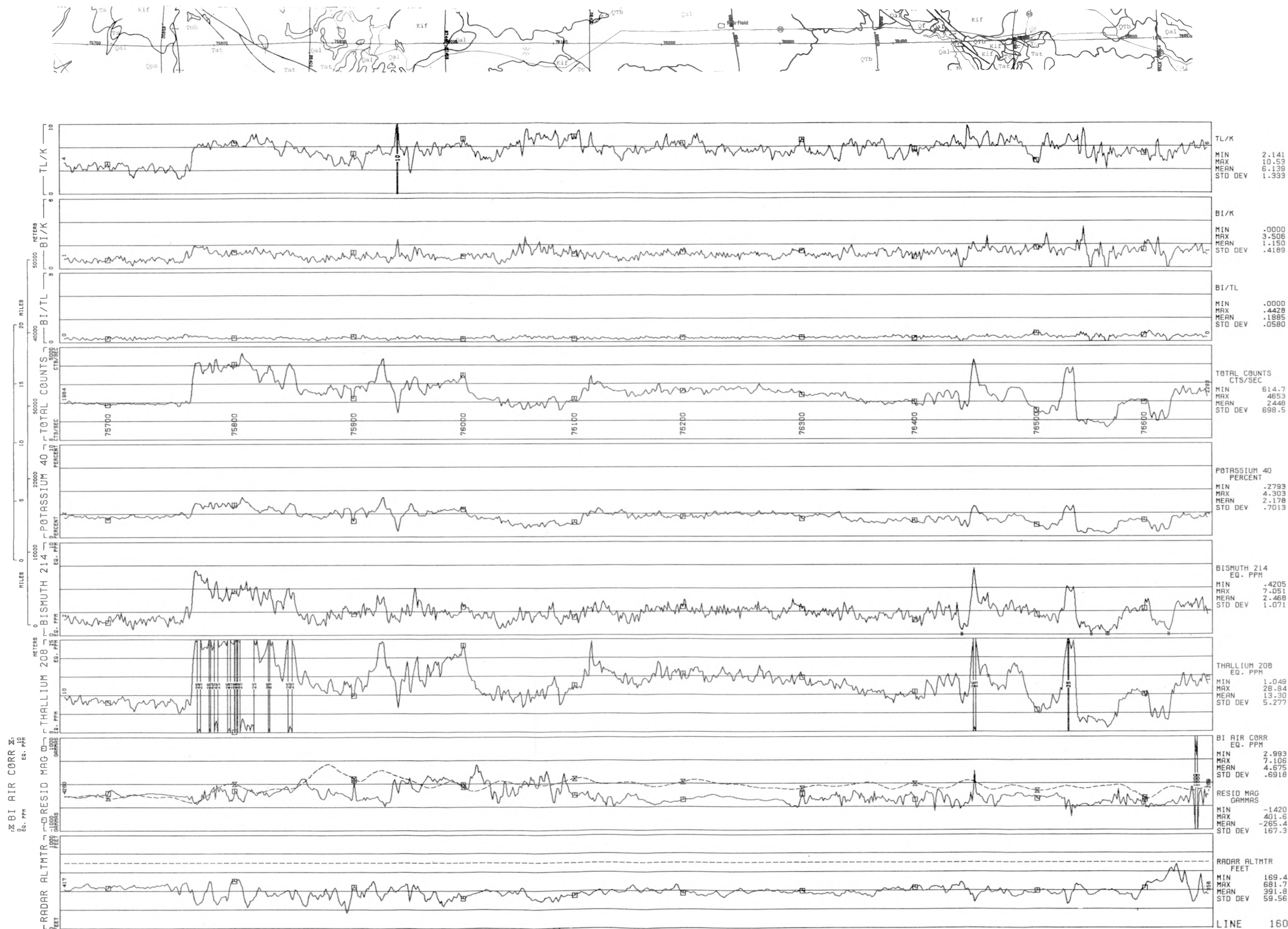
LINE 140
IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79209

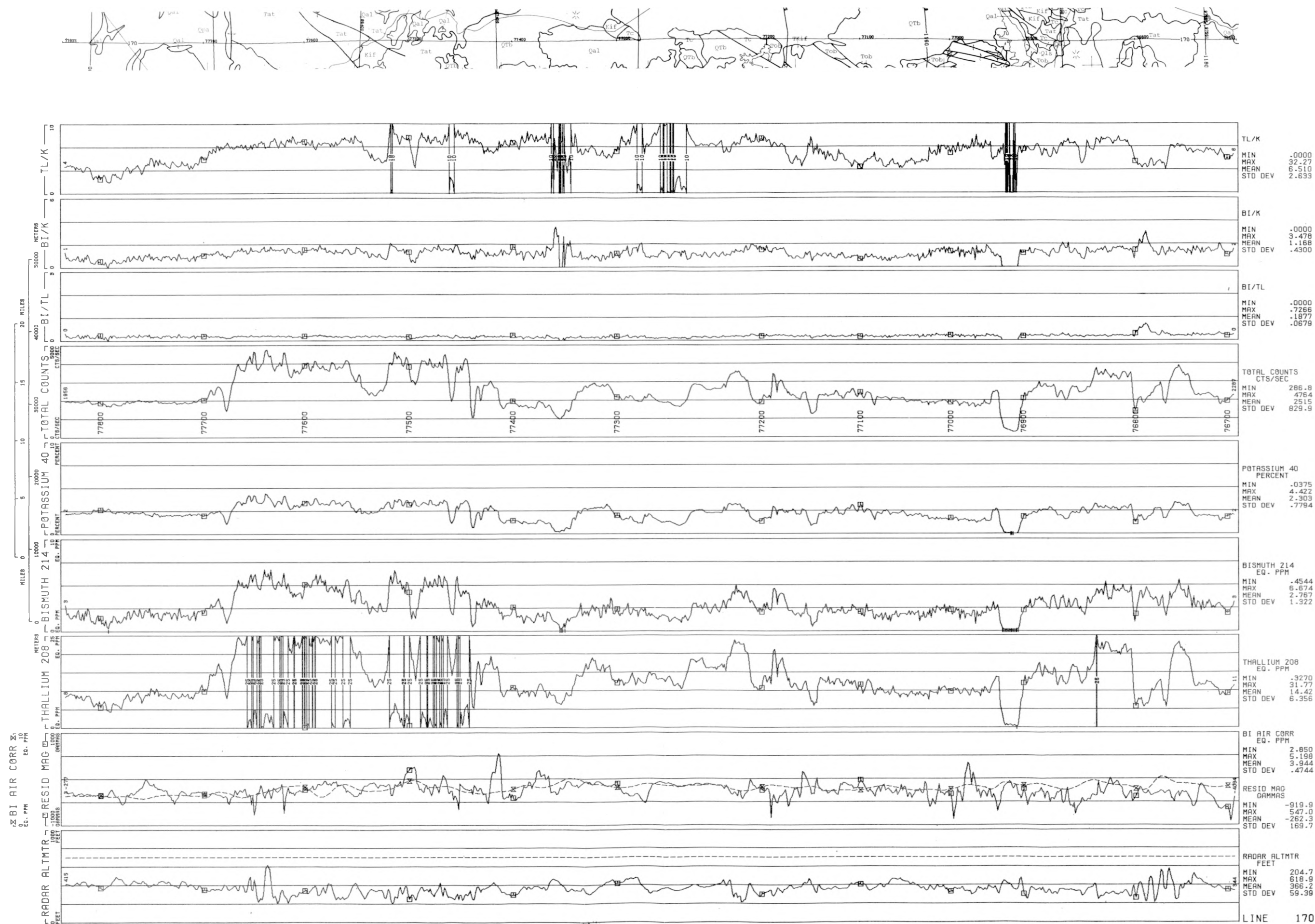


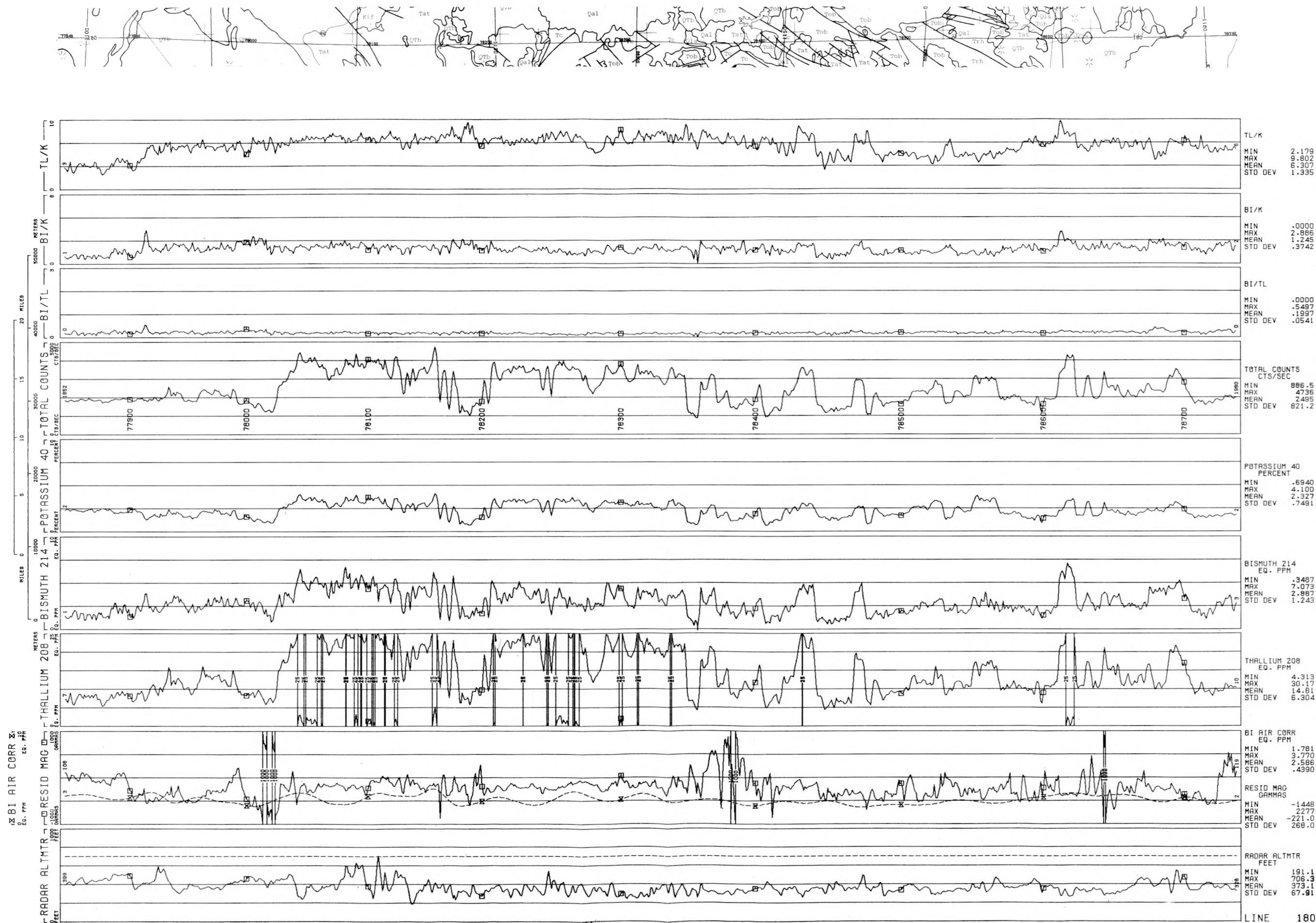
LINE 140
IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79209

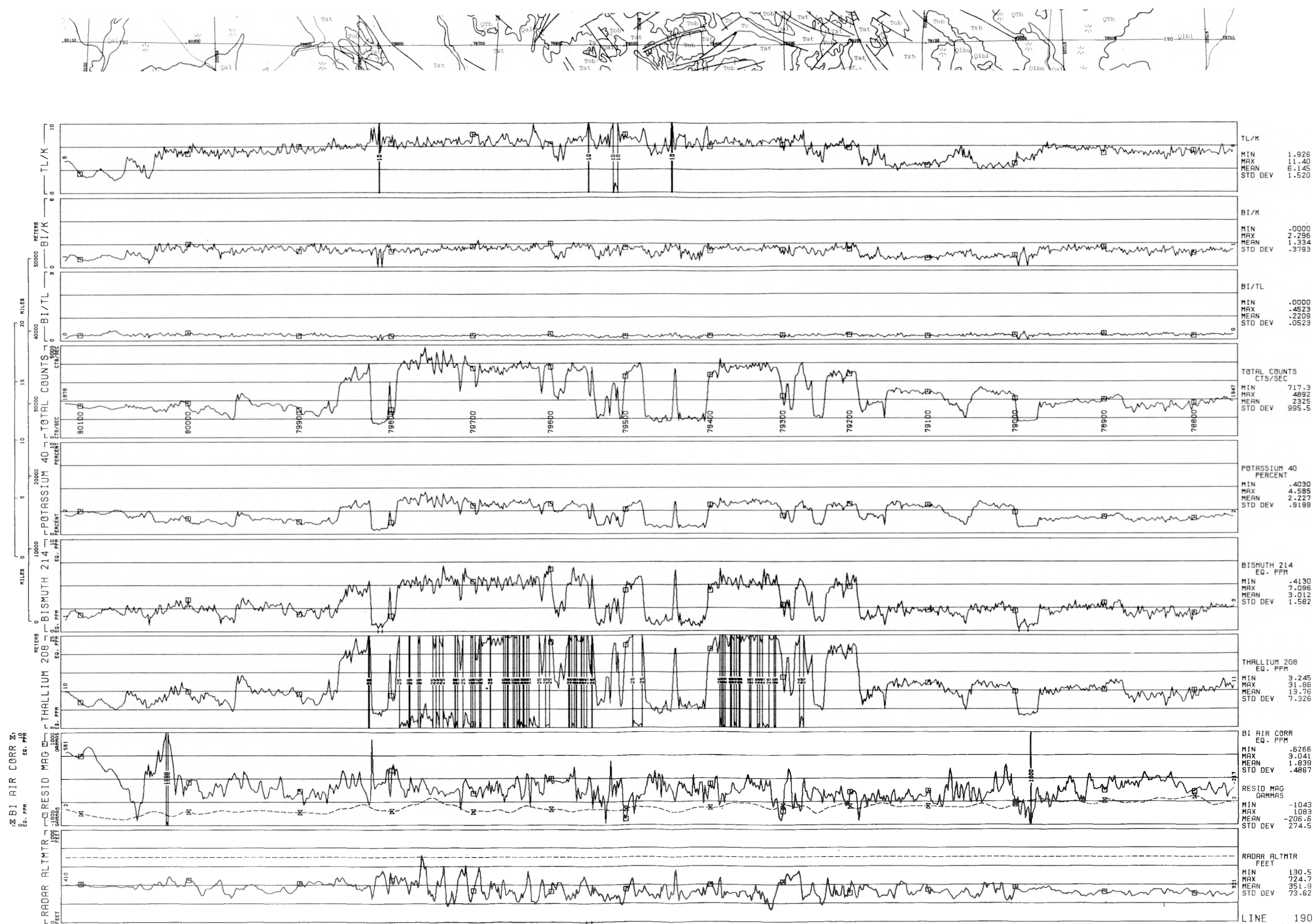




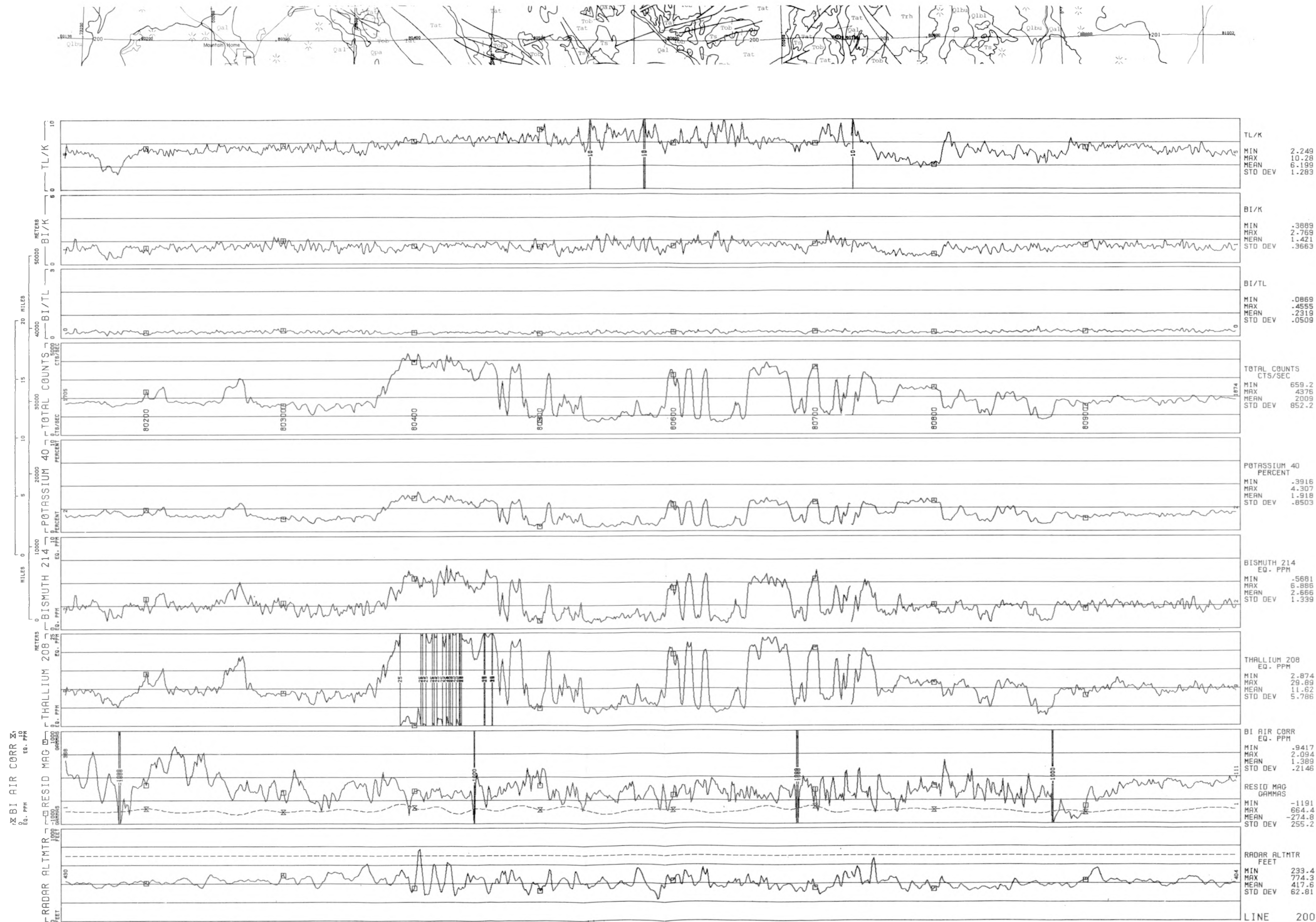




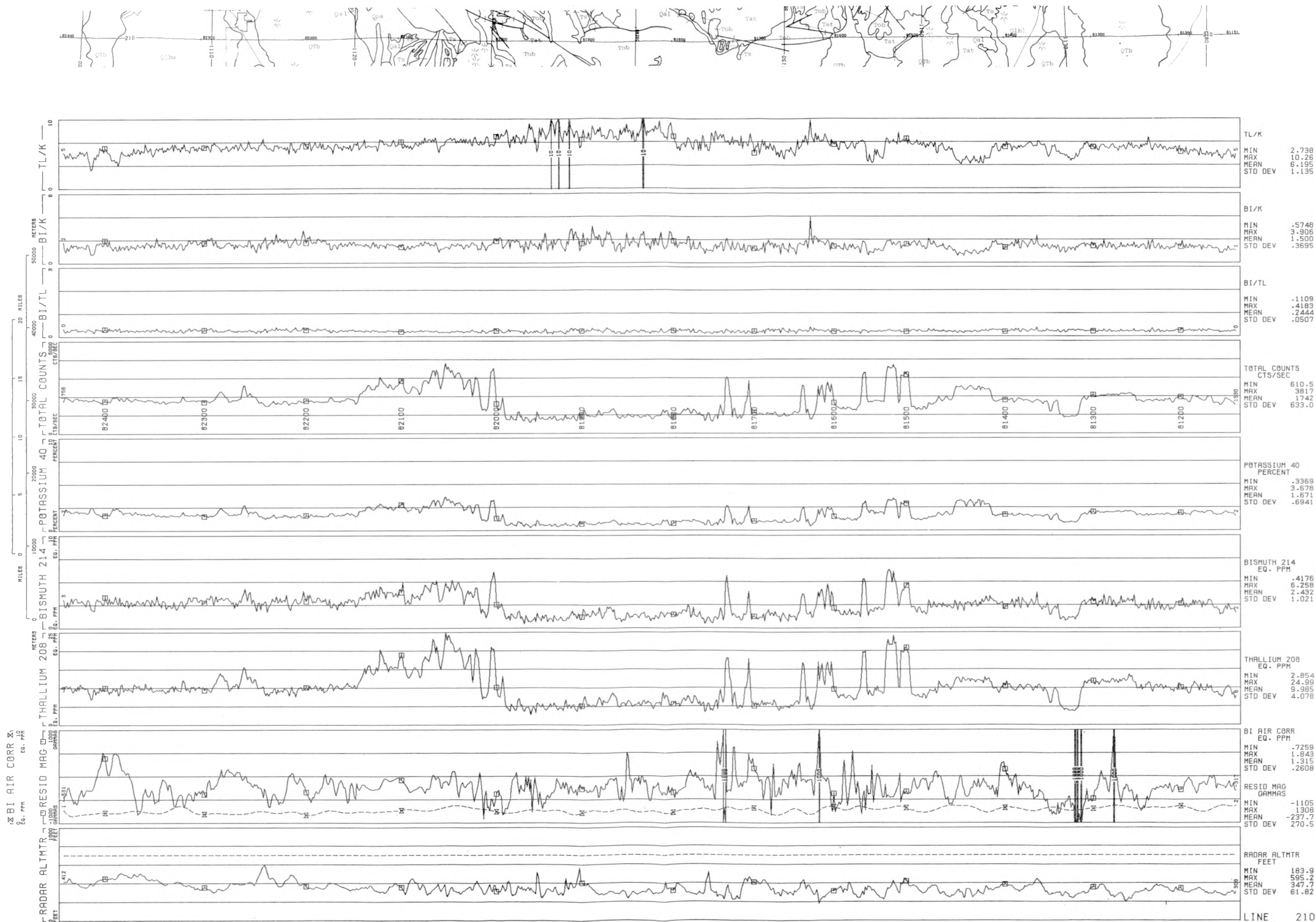




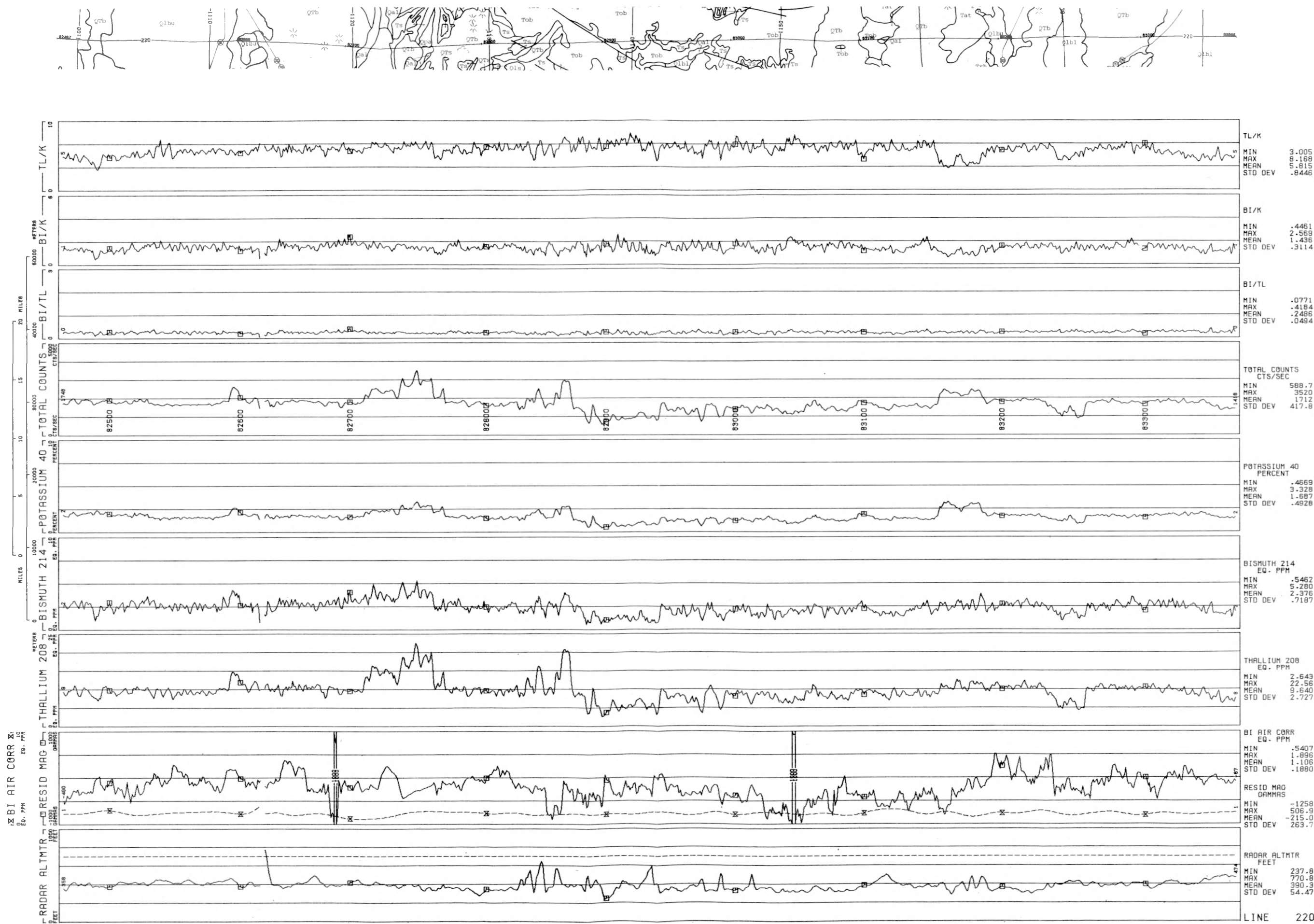
LINE 200
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79209



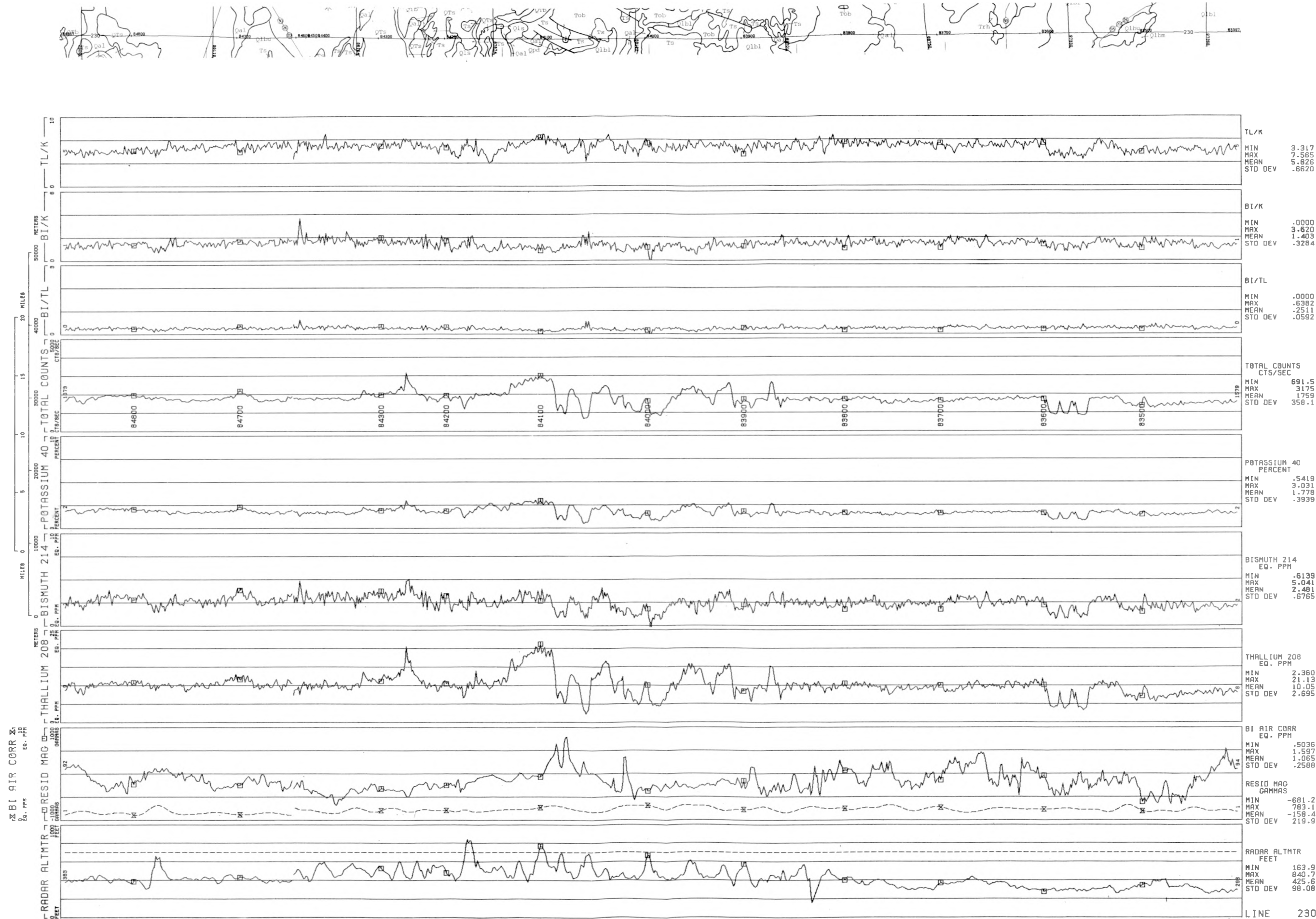
LINE 210
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79209



LINE 220 IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS DATA ACQUIRED 79209

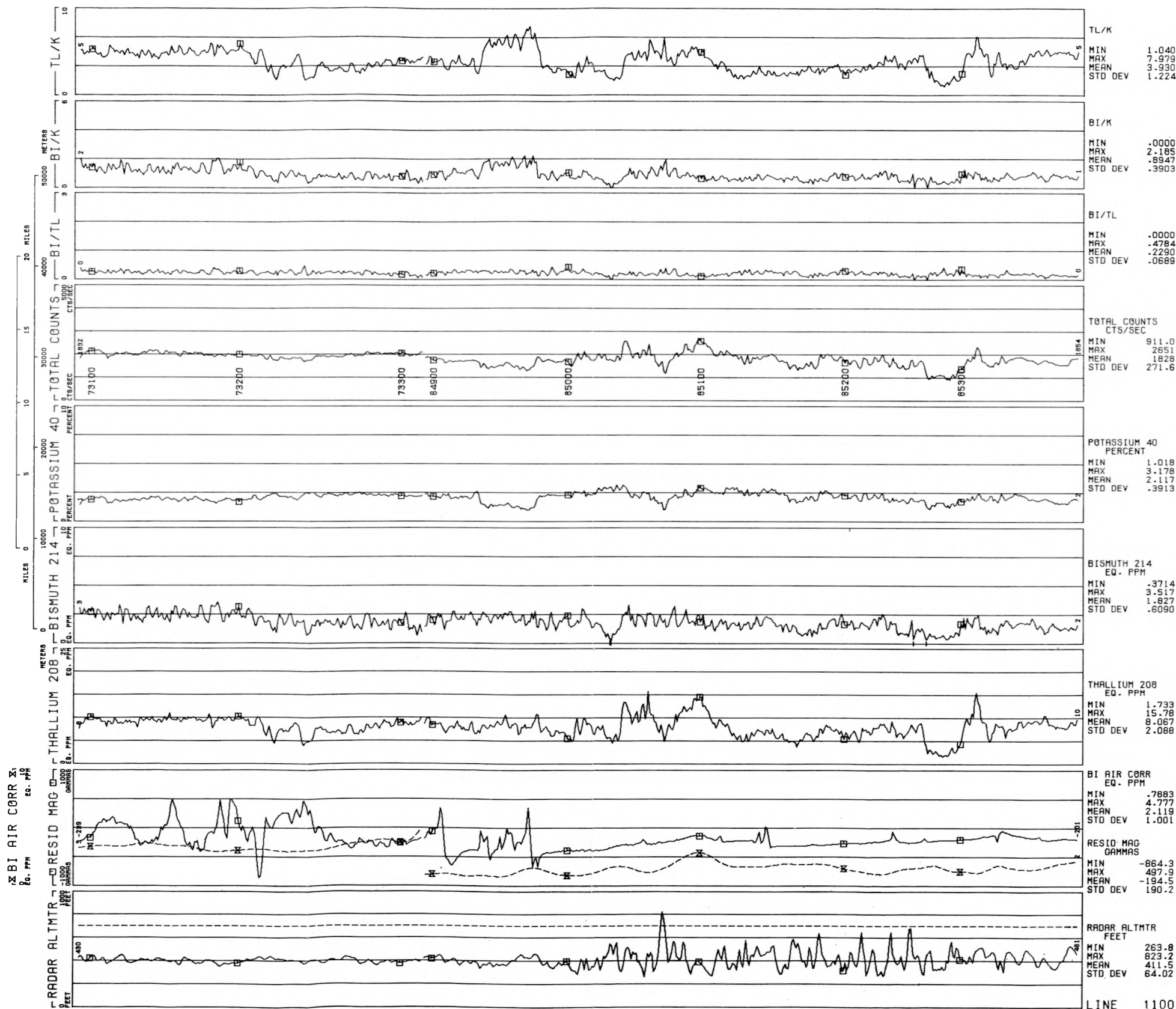


LINE 230
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79209



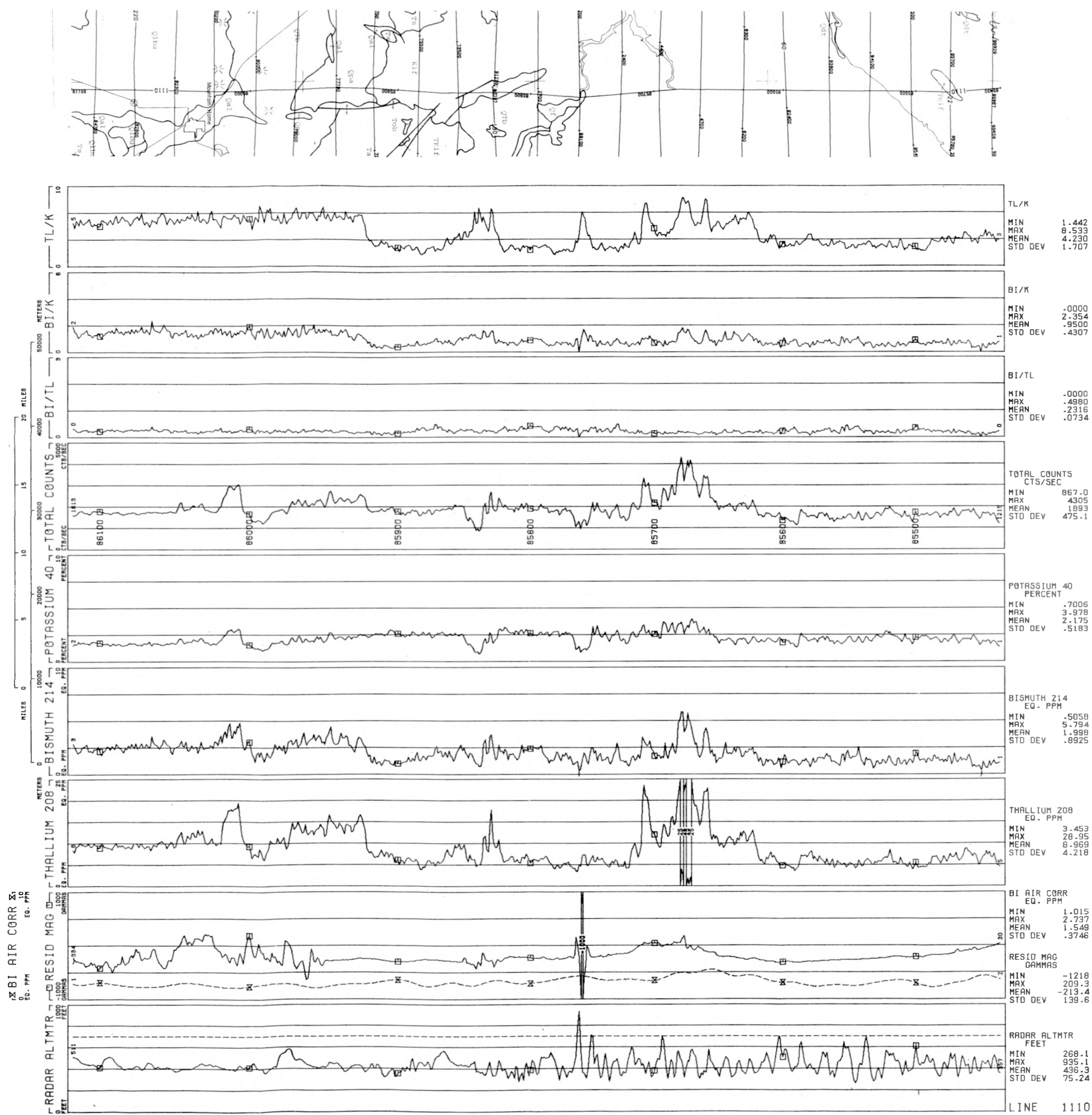
LINE 1100
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79210

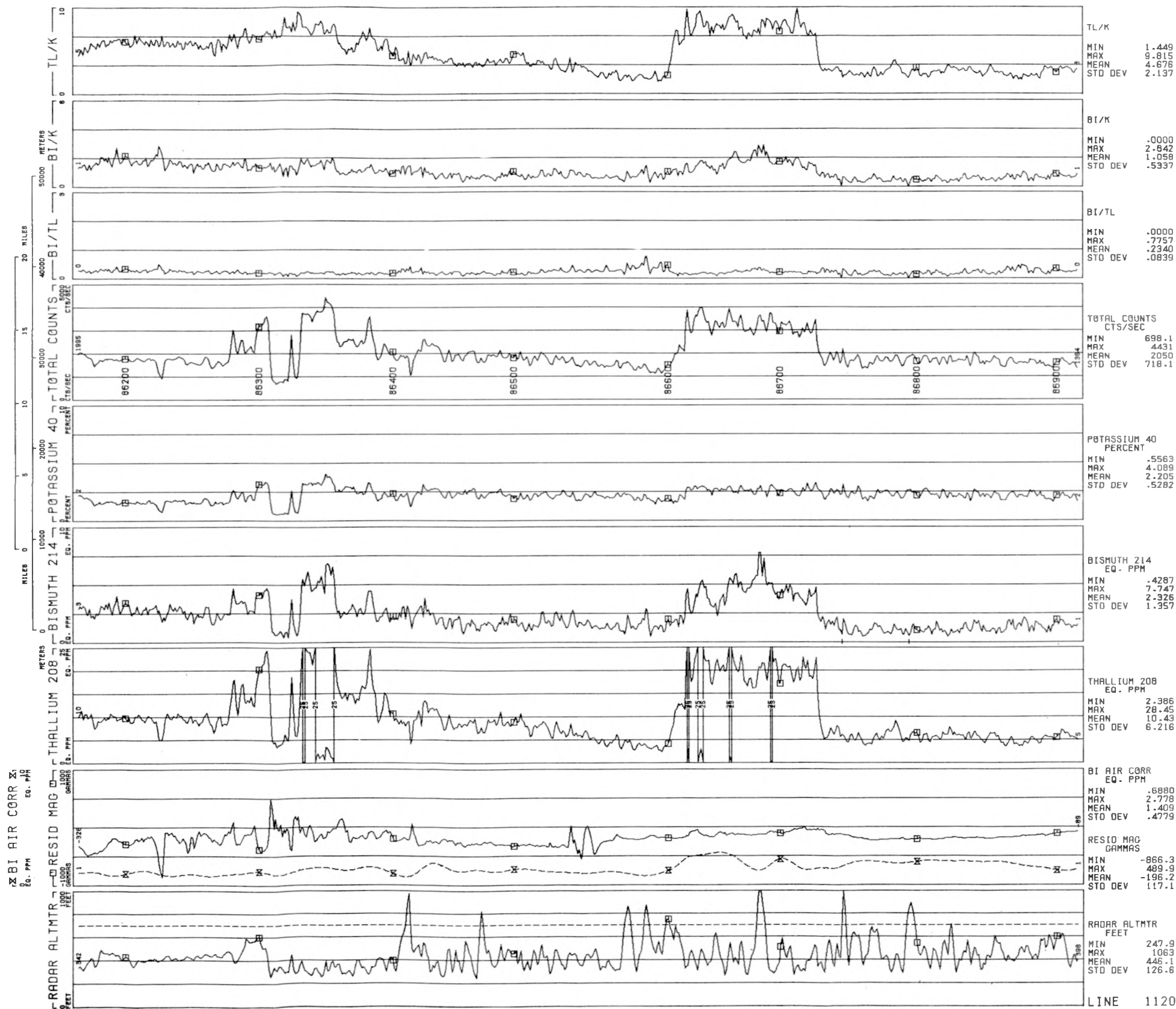
BI AIR CORR
EQ. PPM



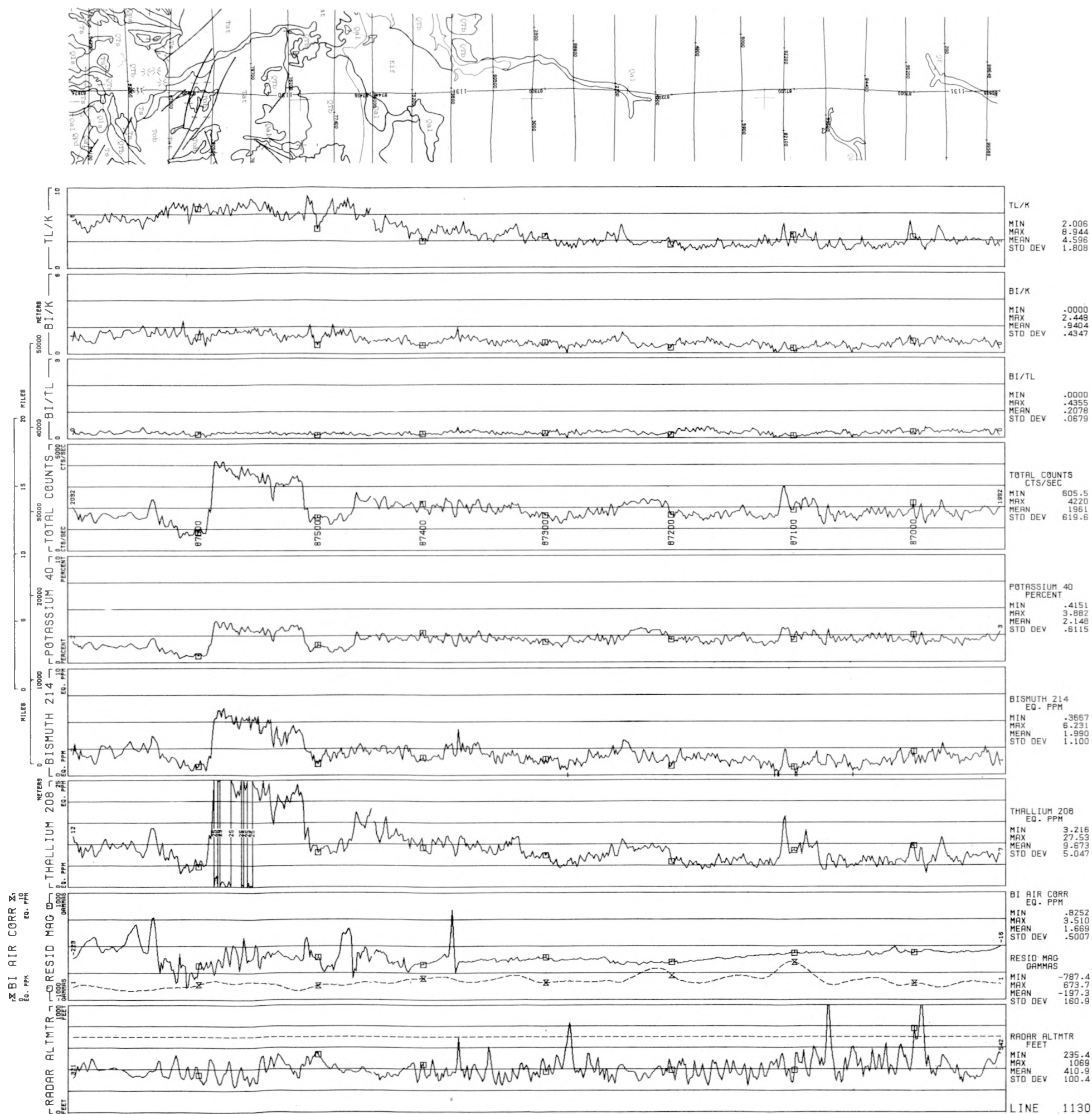
LINE 1100

LINE 1110
IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79210

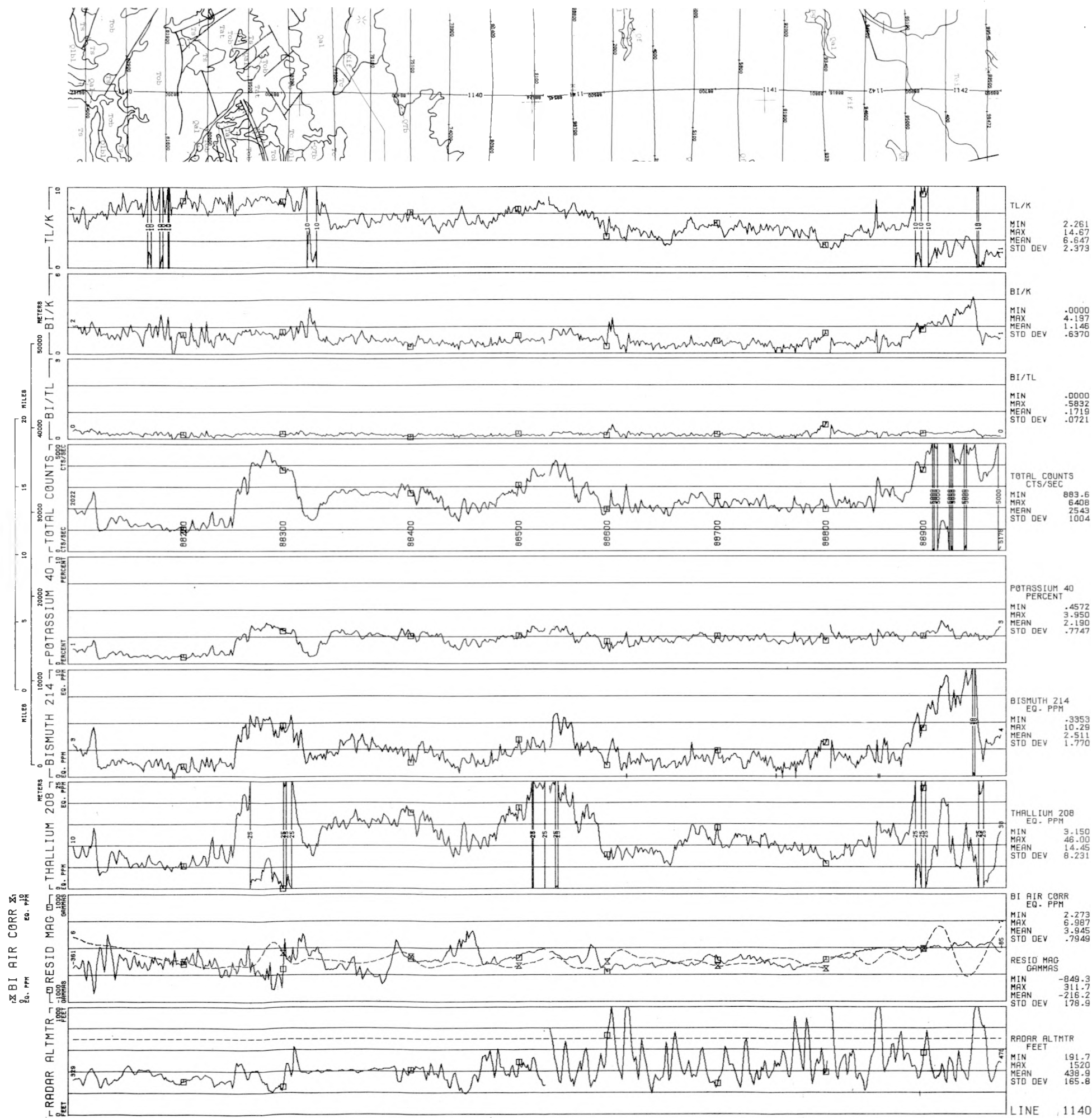


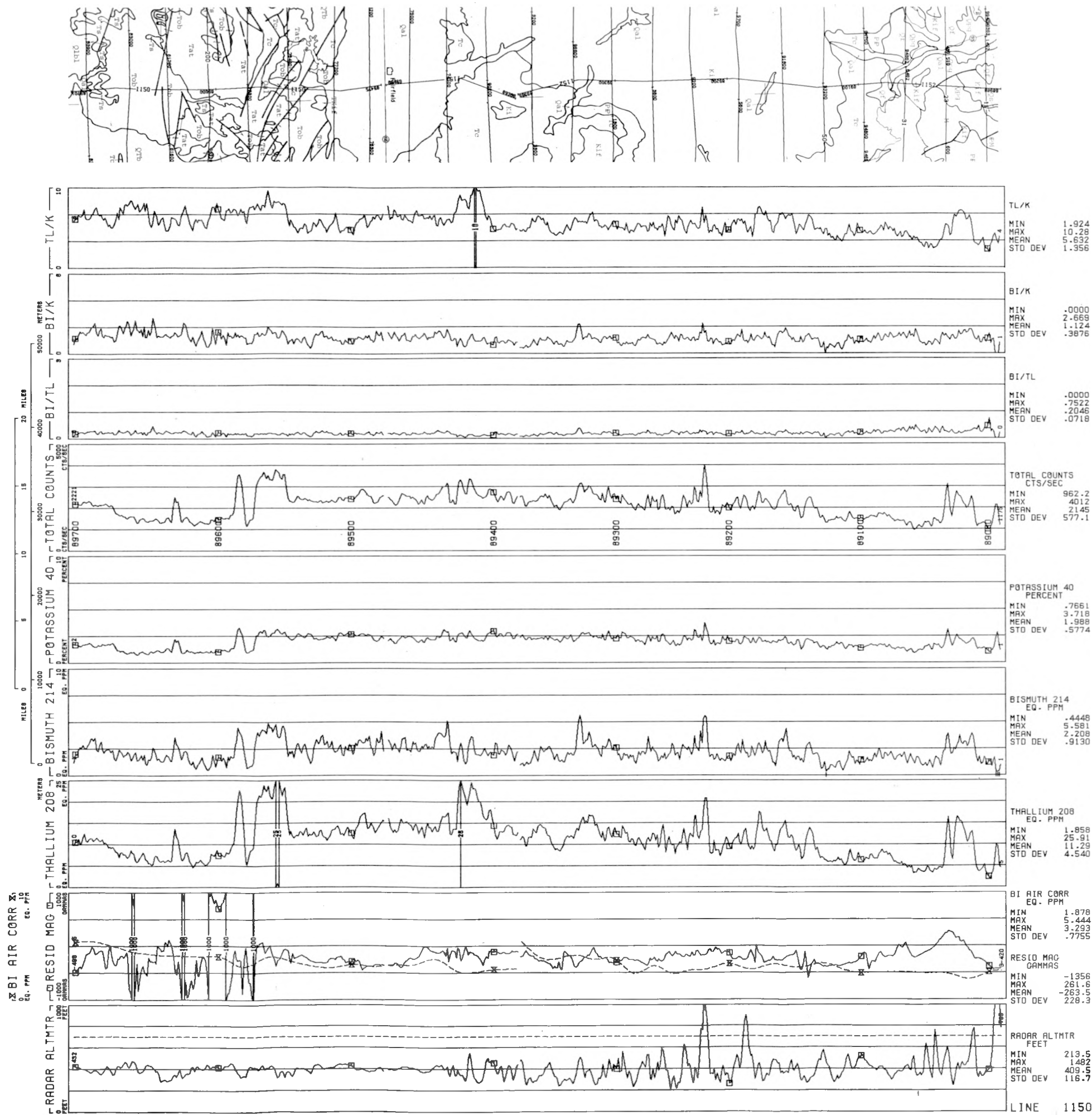


LINE 1130
IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79210

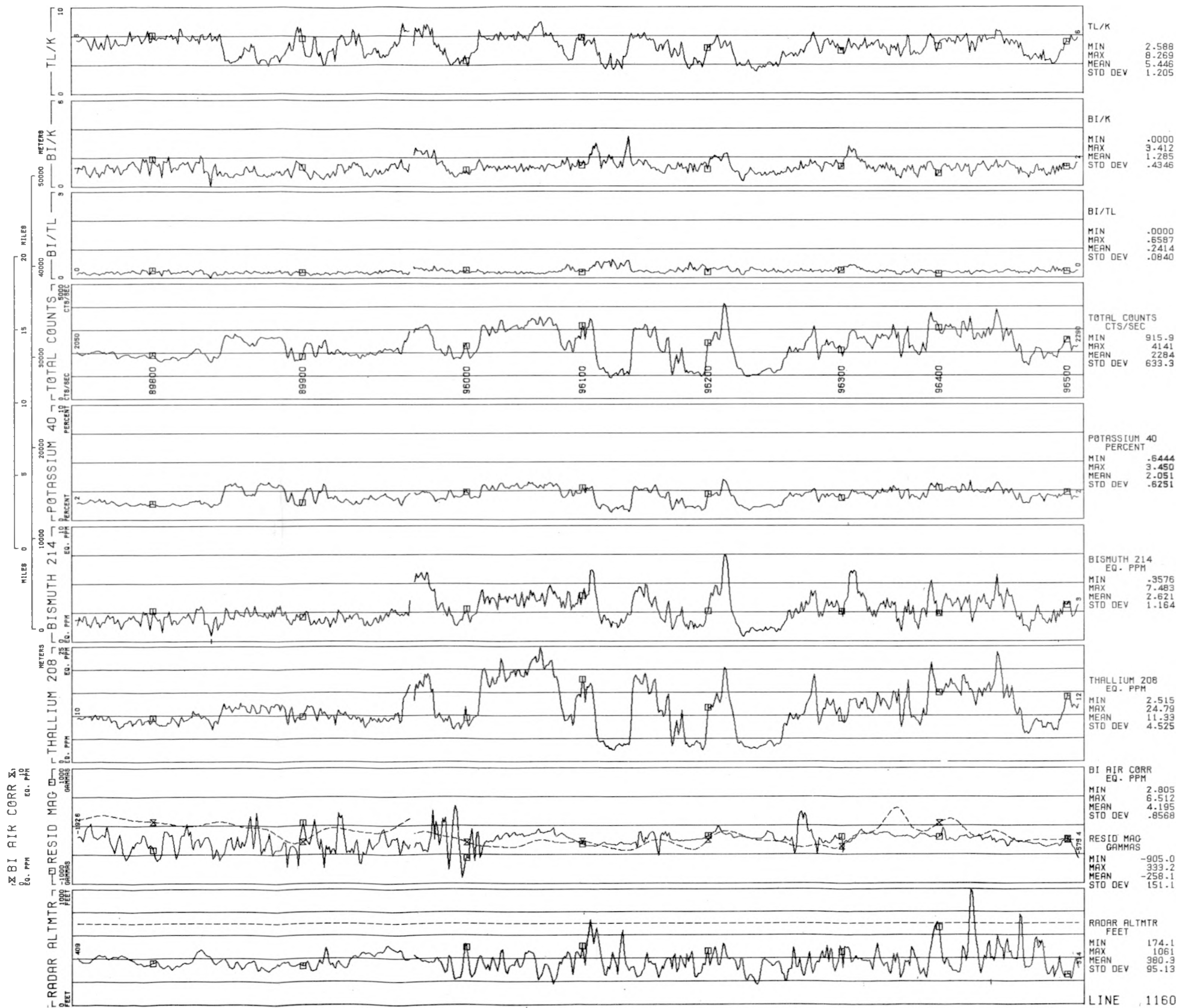


LINE 1140
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79211



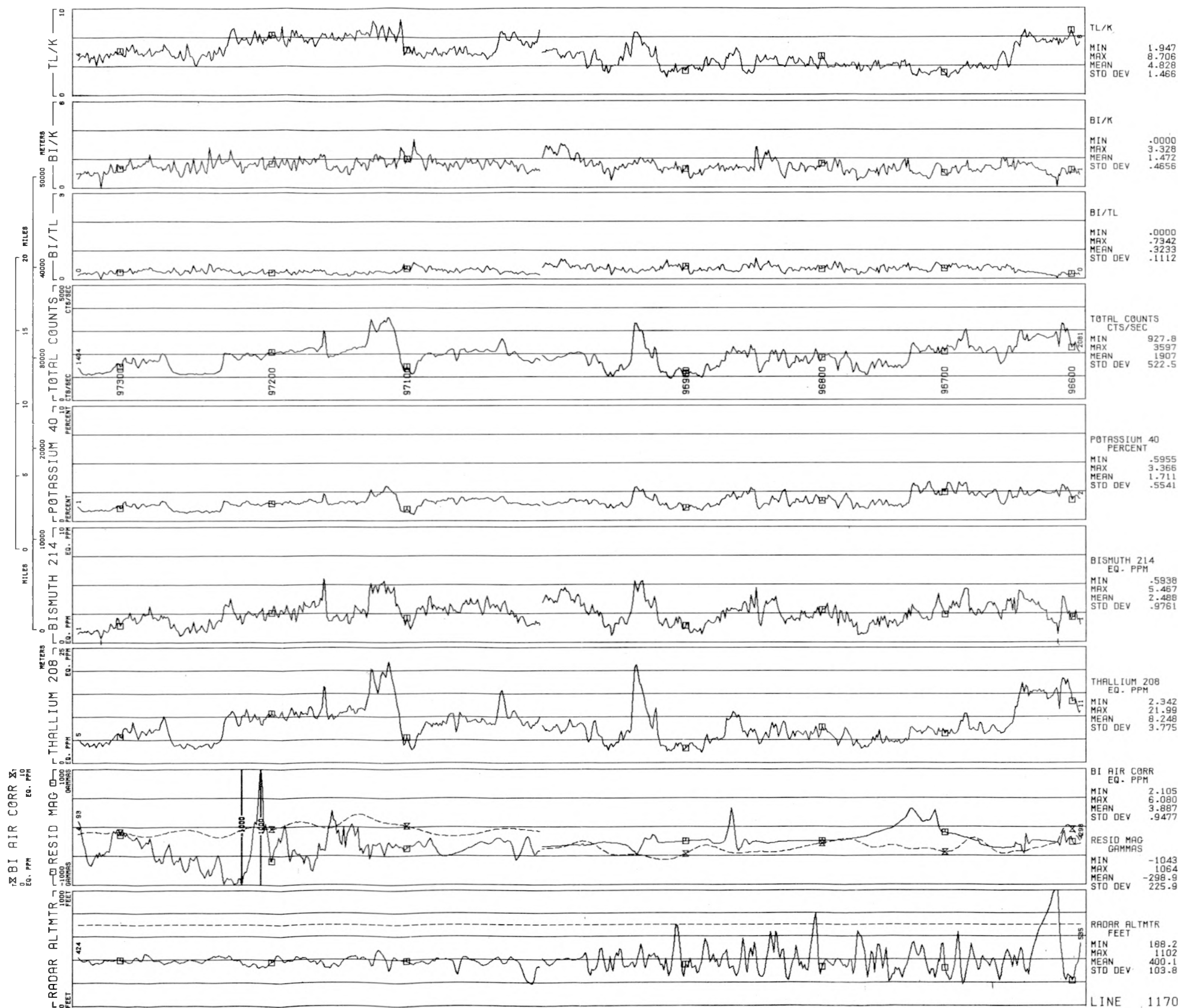


LINE 1160
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79211



LINE 1160

LINE 1170
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79218

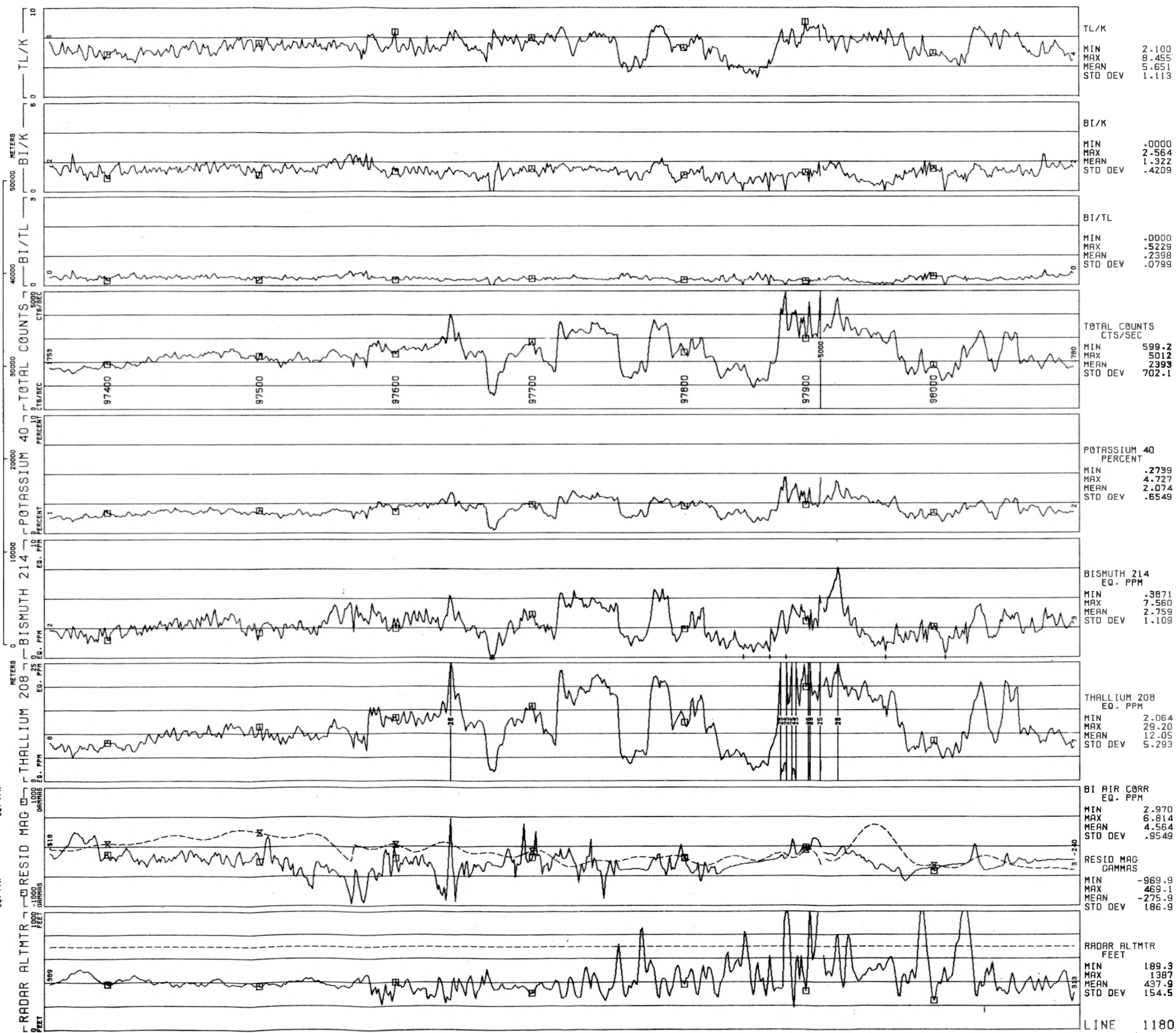


LINE 1170

IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS

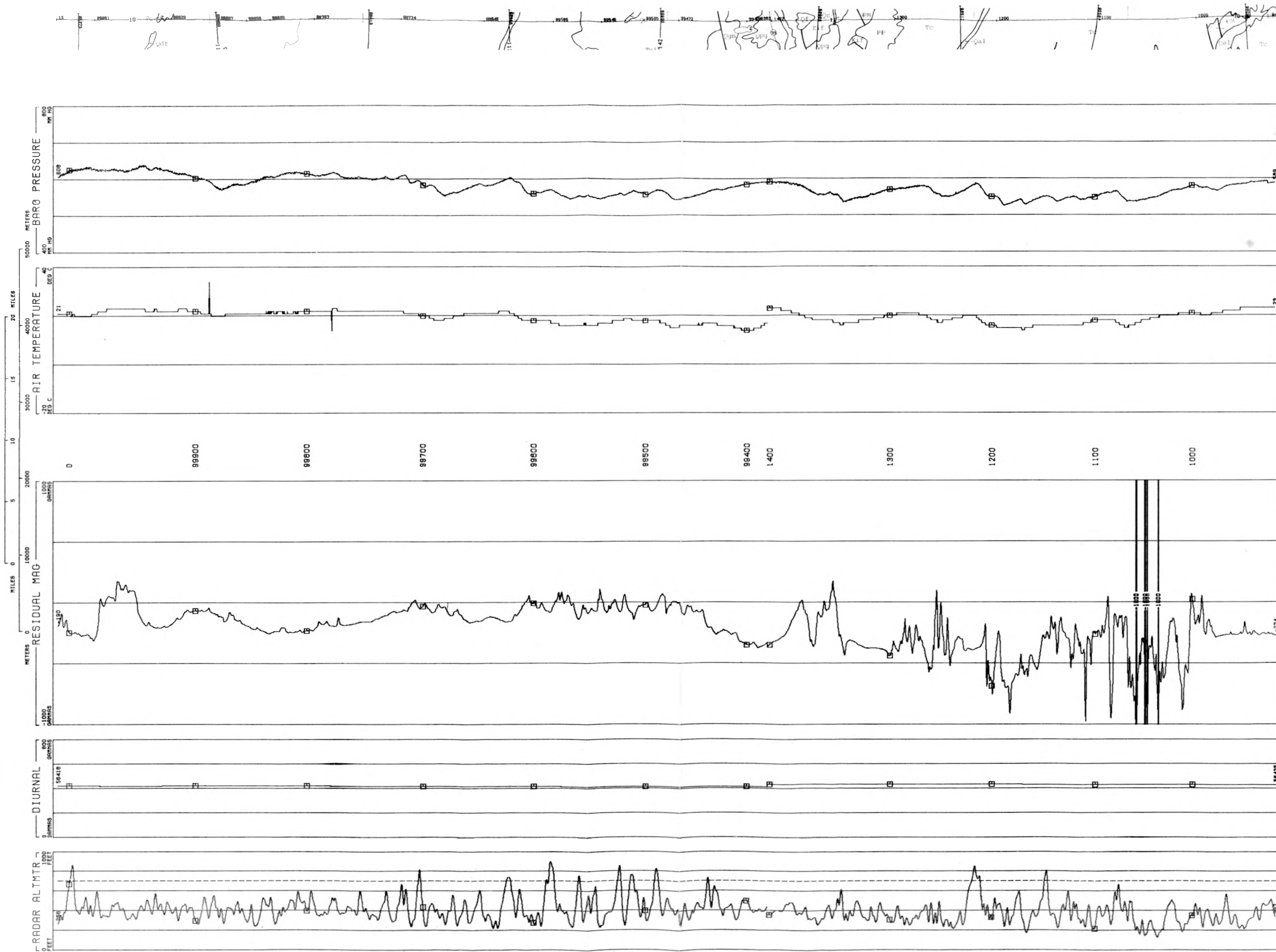
LINE 1180

BI AIR CORR
EQ. PPM

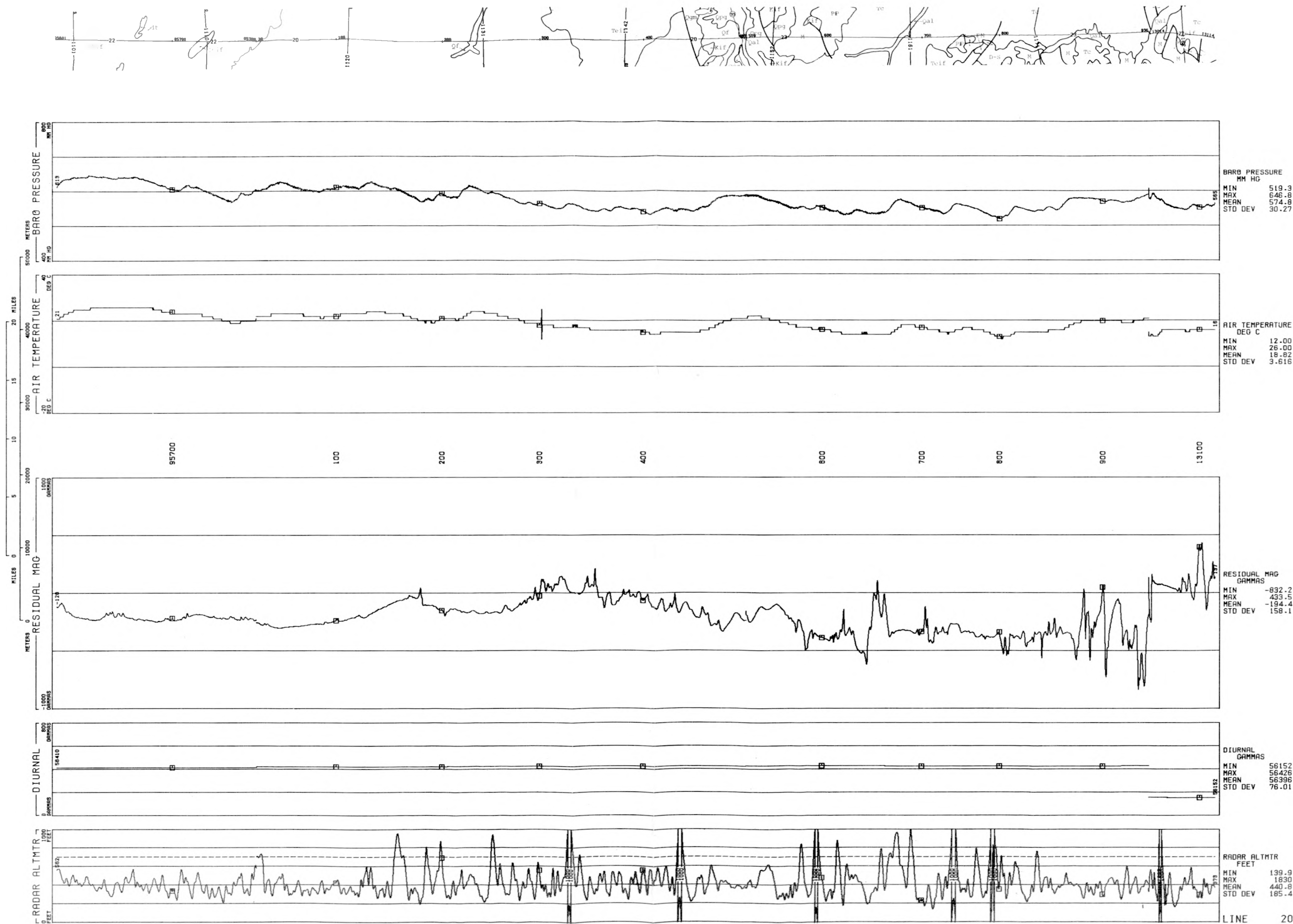


LINE 1180

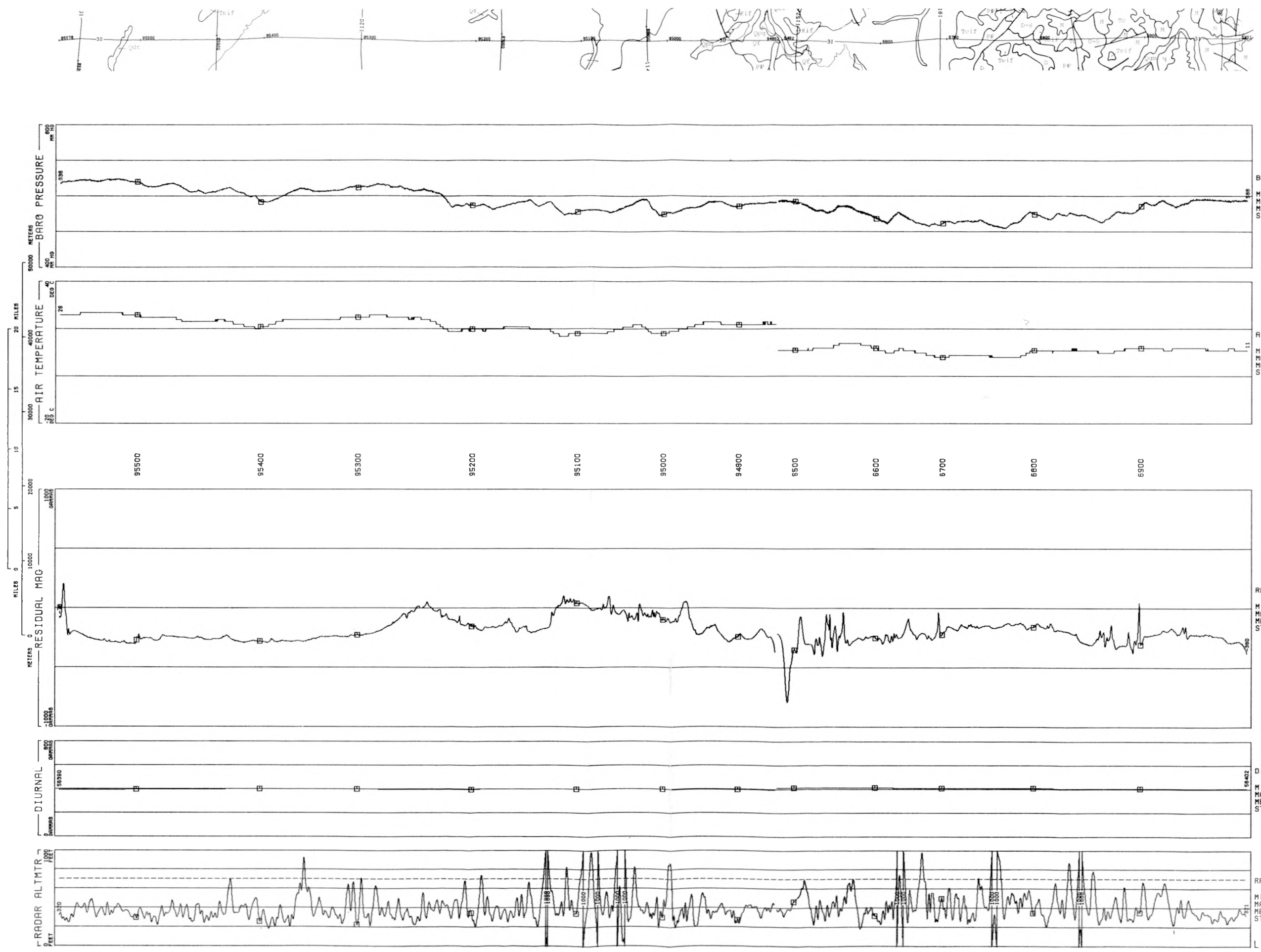
LINE 10
IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79219



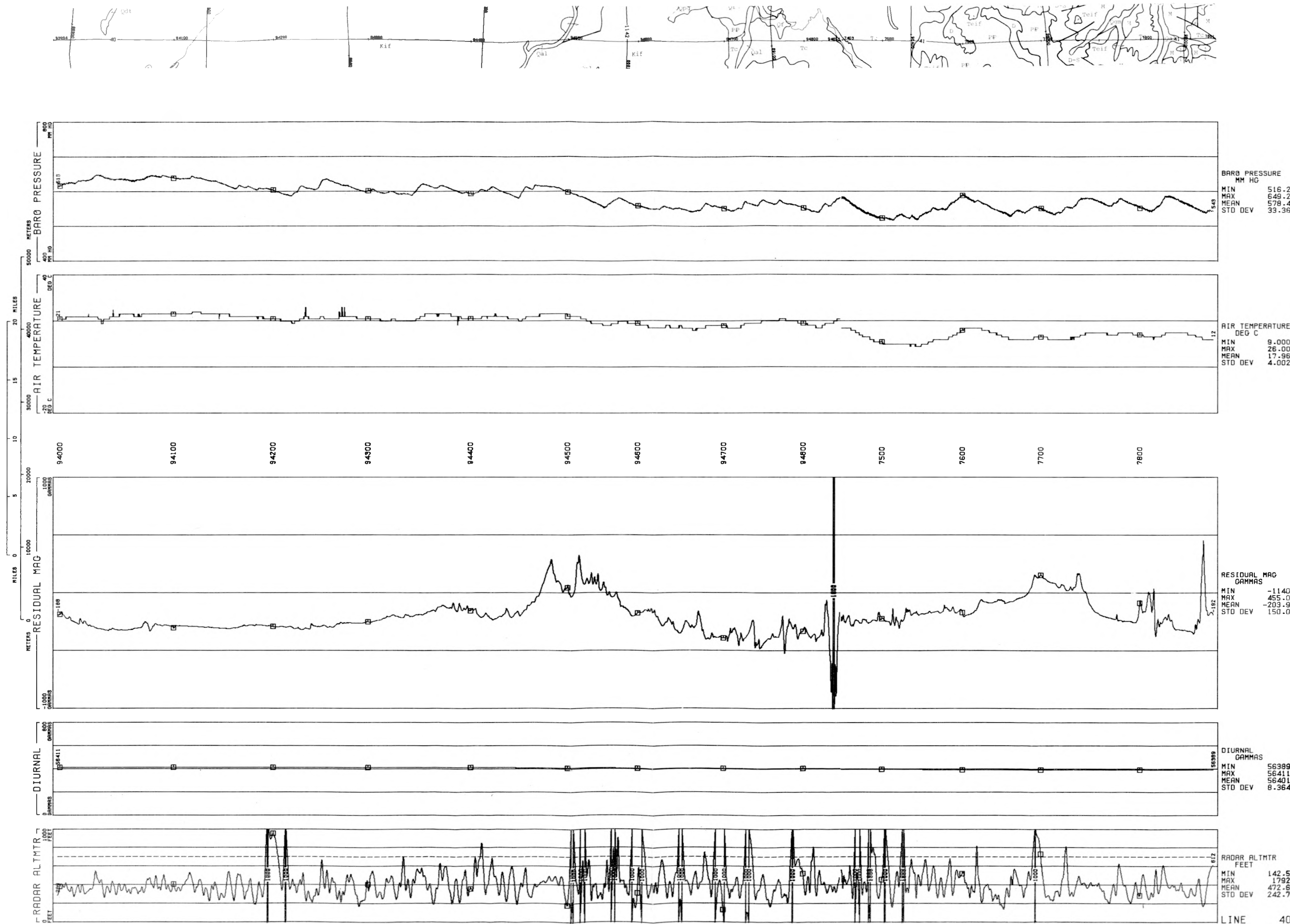
LINE 20
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79218



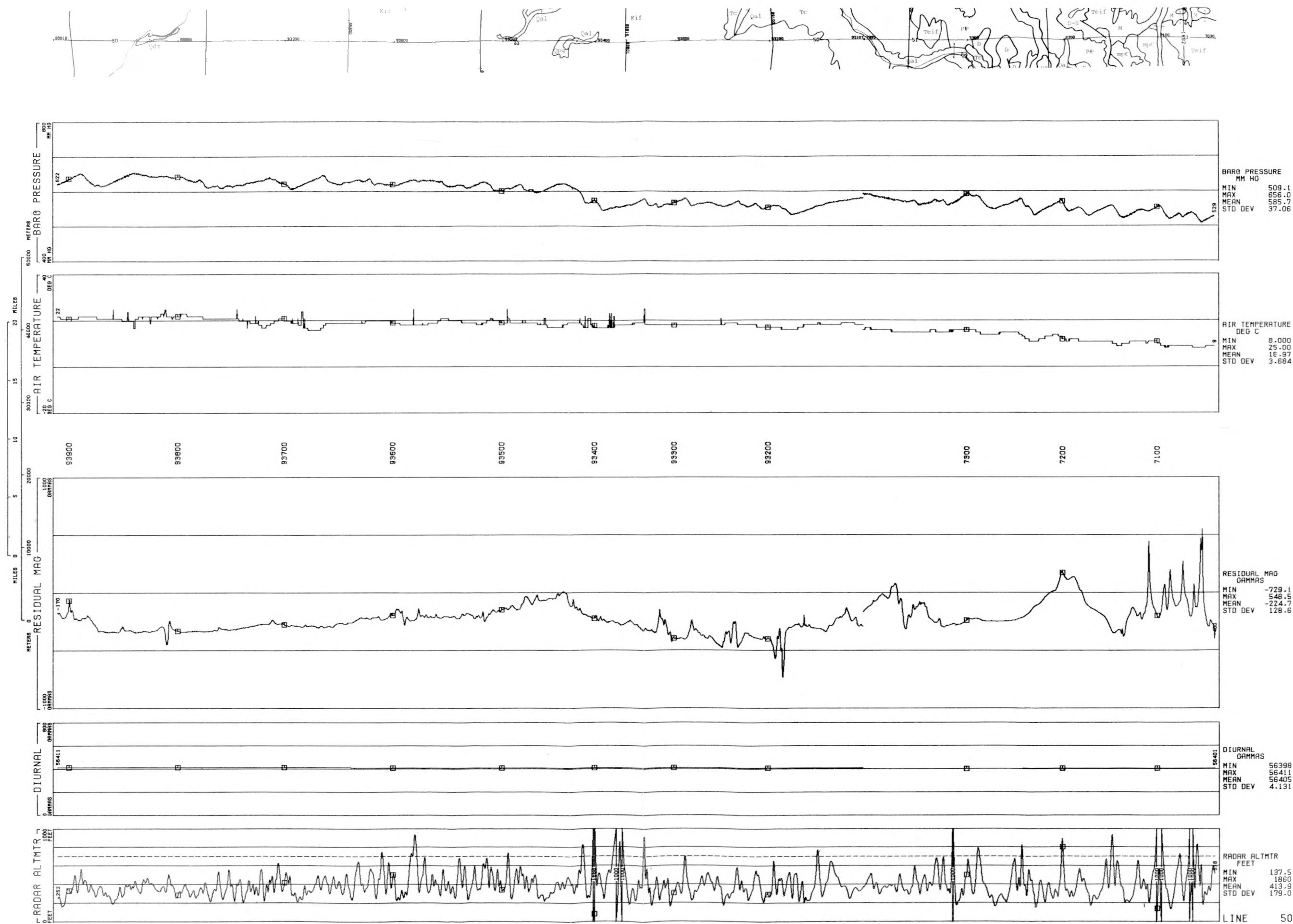
LINE 30
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79217



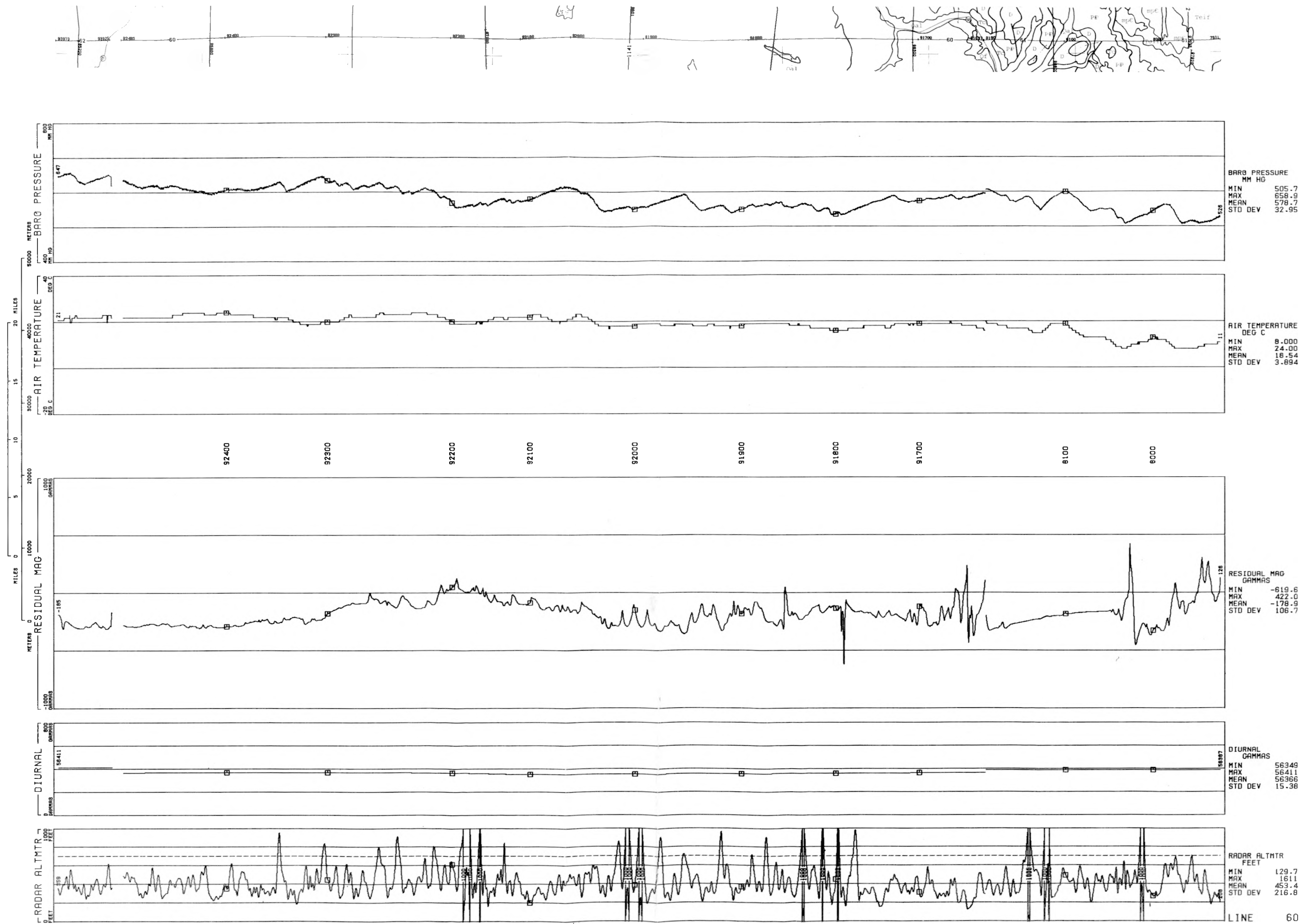
LINE 40
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79217



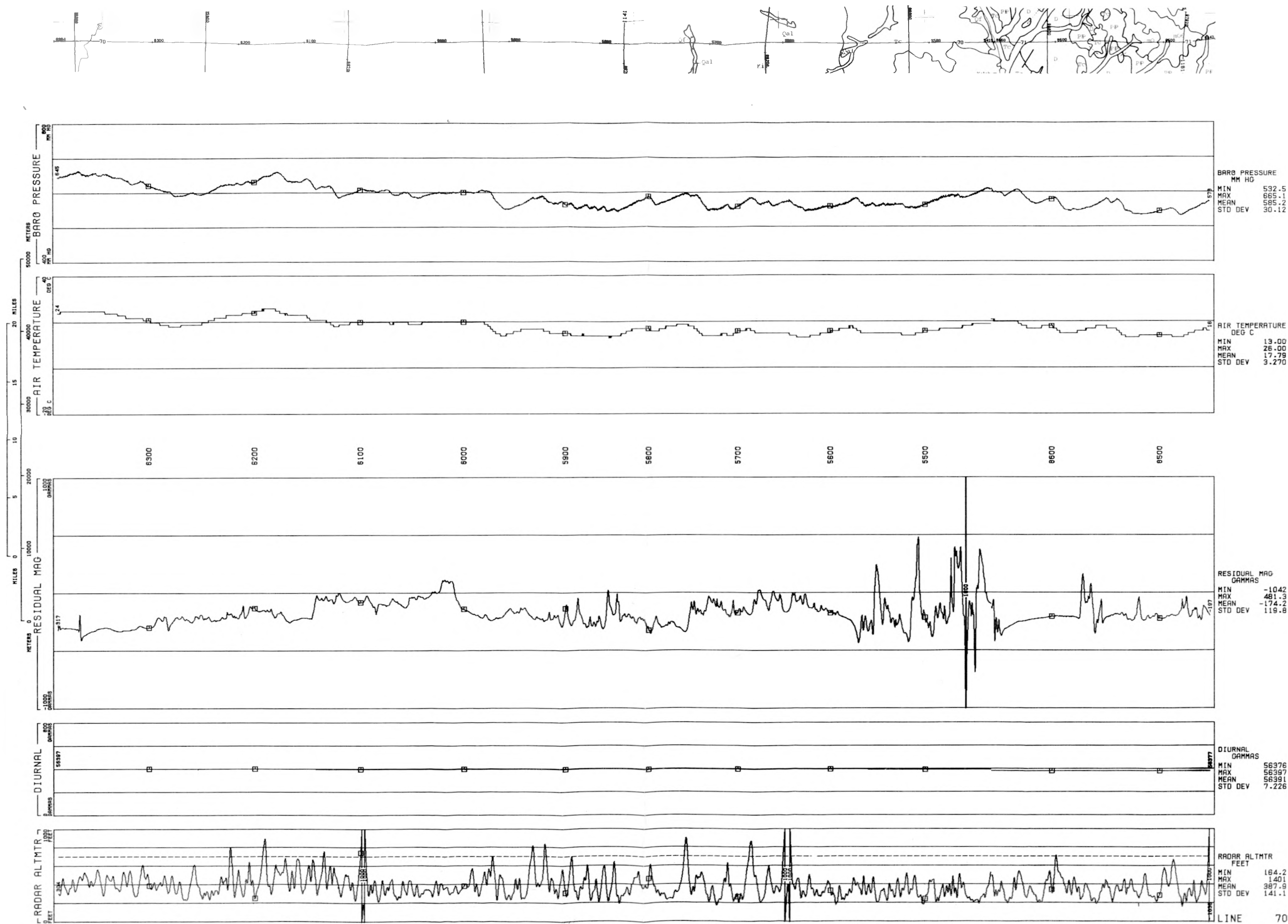
LINE 50
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79217



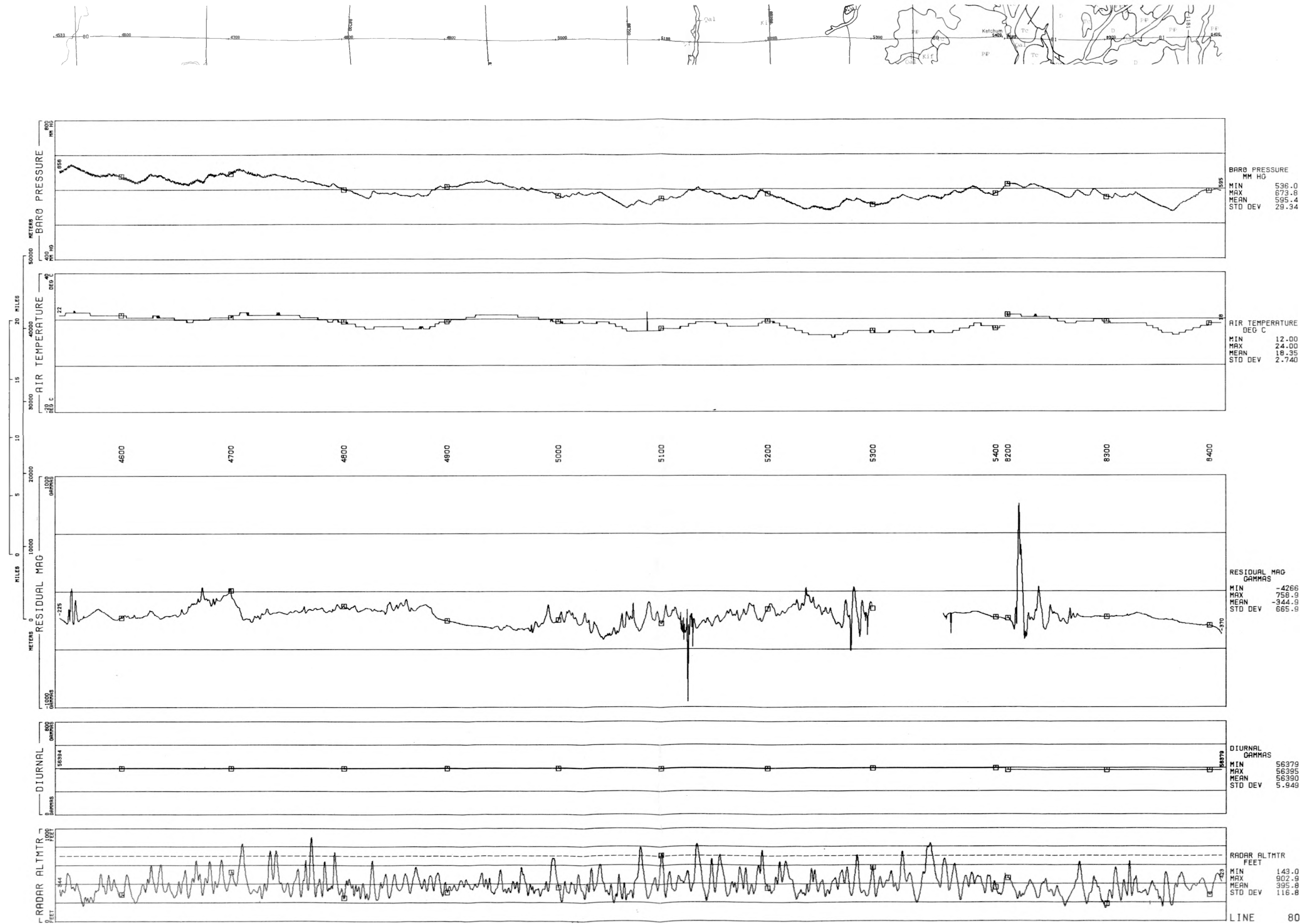
LINE 60
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79216



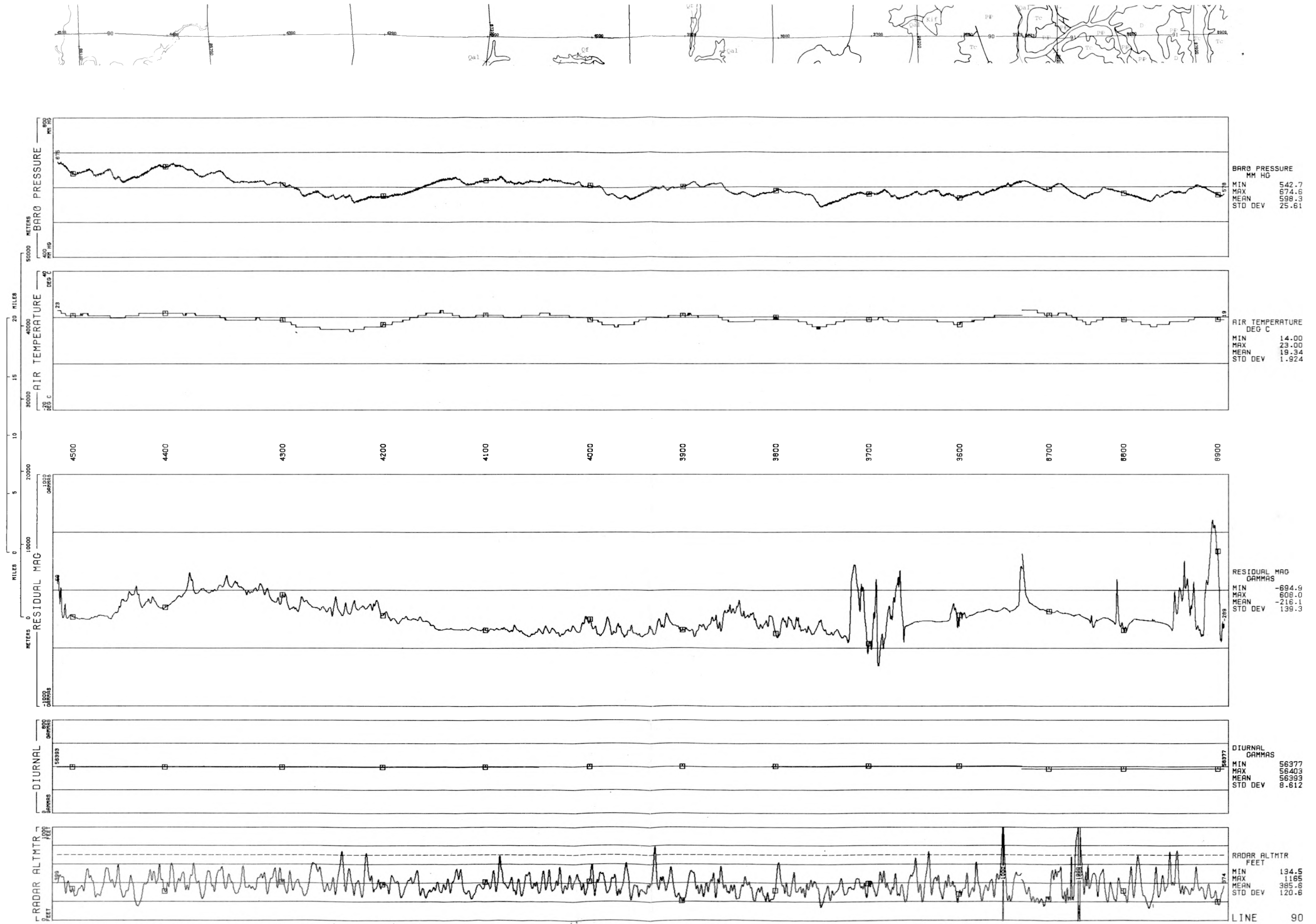
70
LINE 70
IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79220



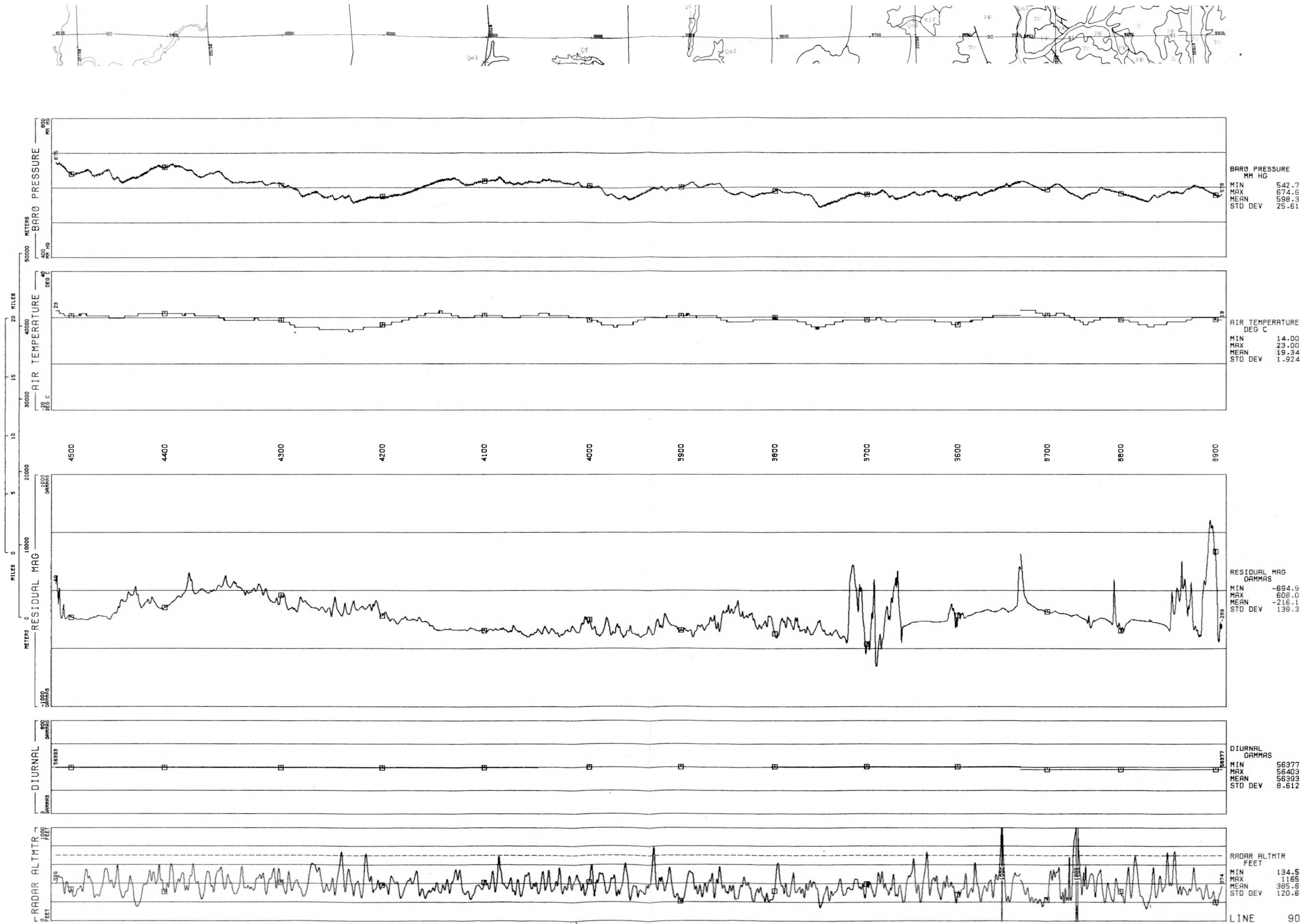
LINE 80
IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79220



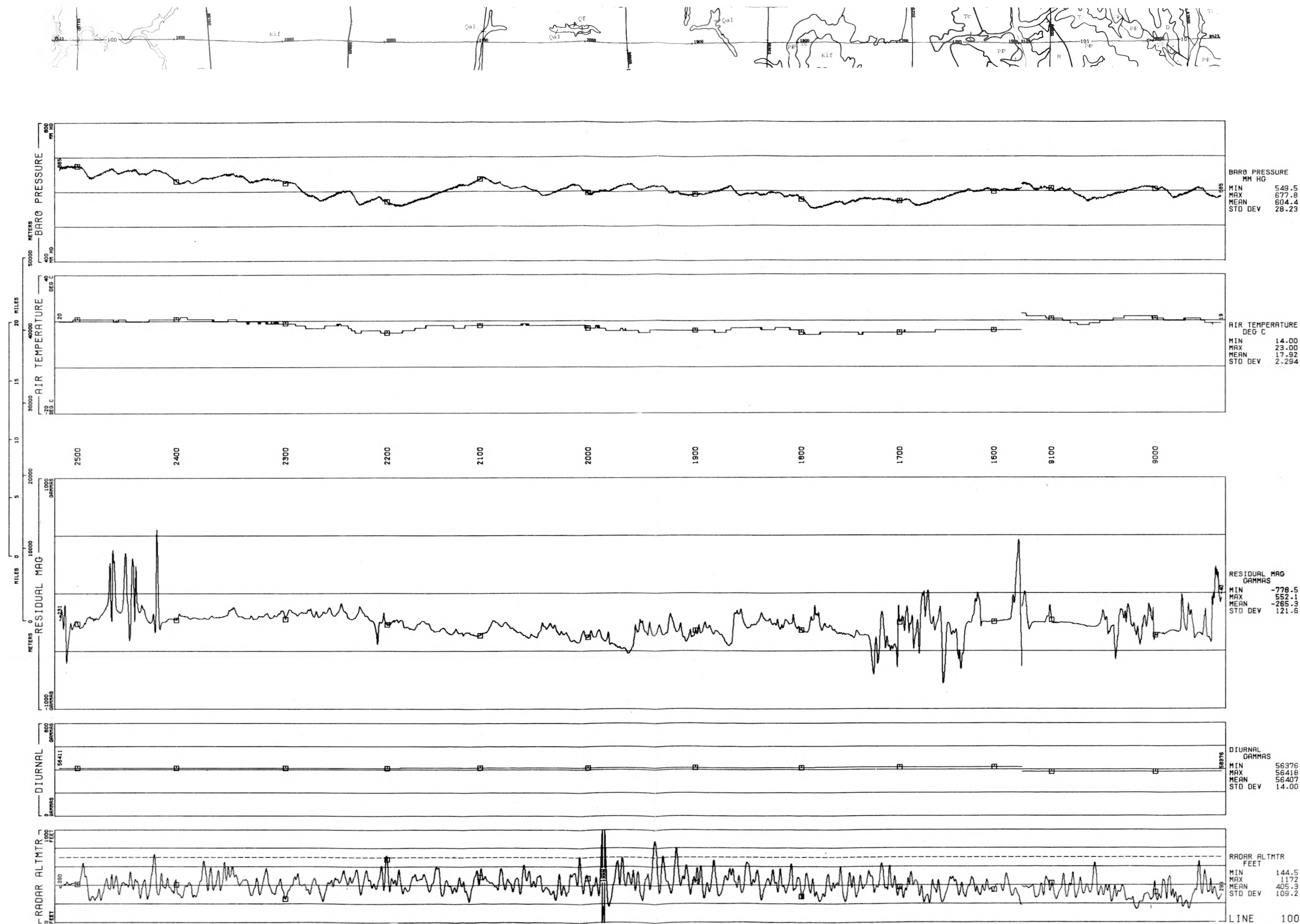
LINE 90
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79220



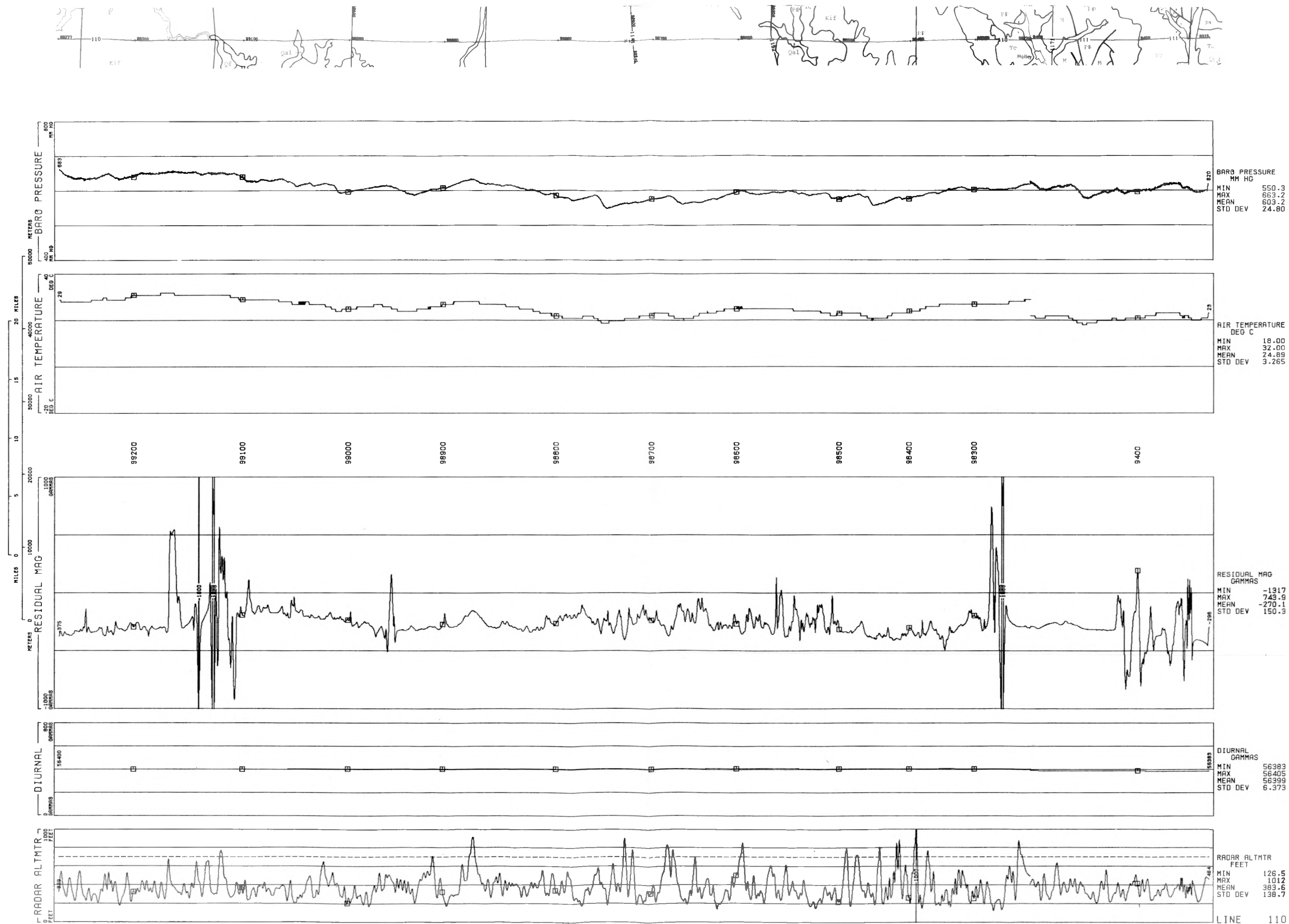
LINE 90
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79220



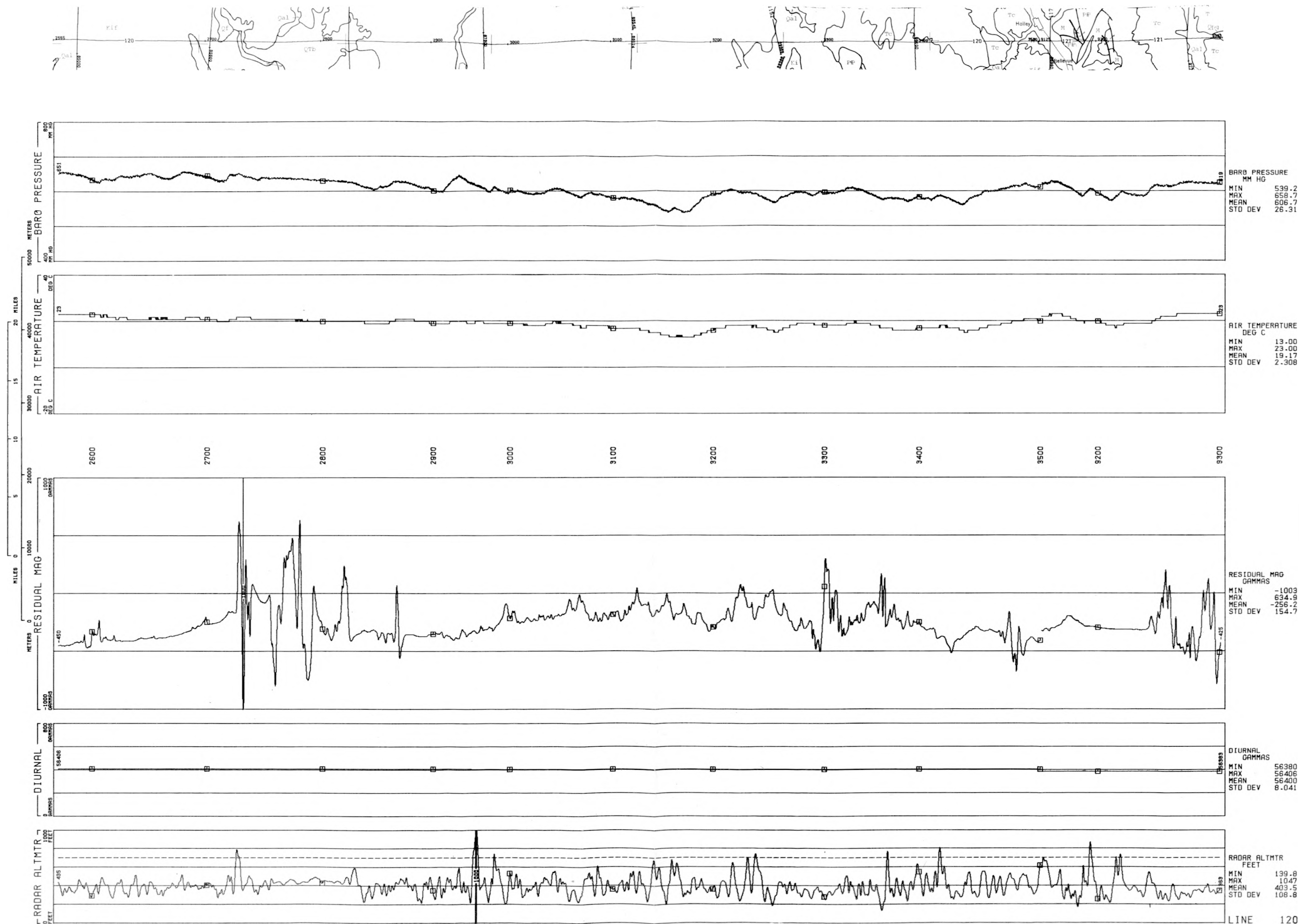
LINE 100
IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79220



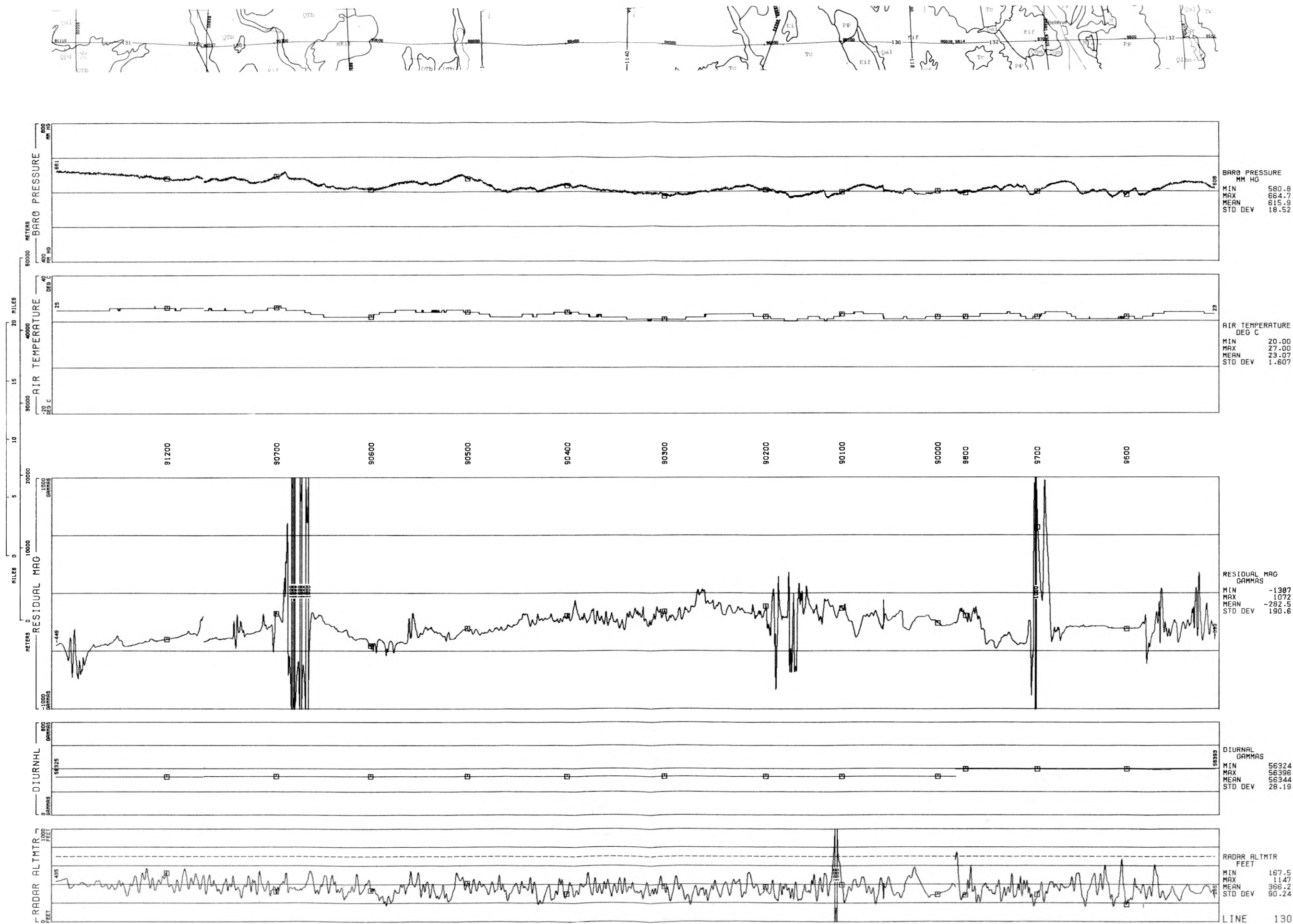
LINE 110
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79209



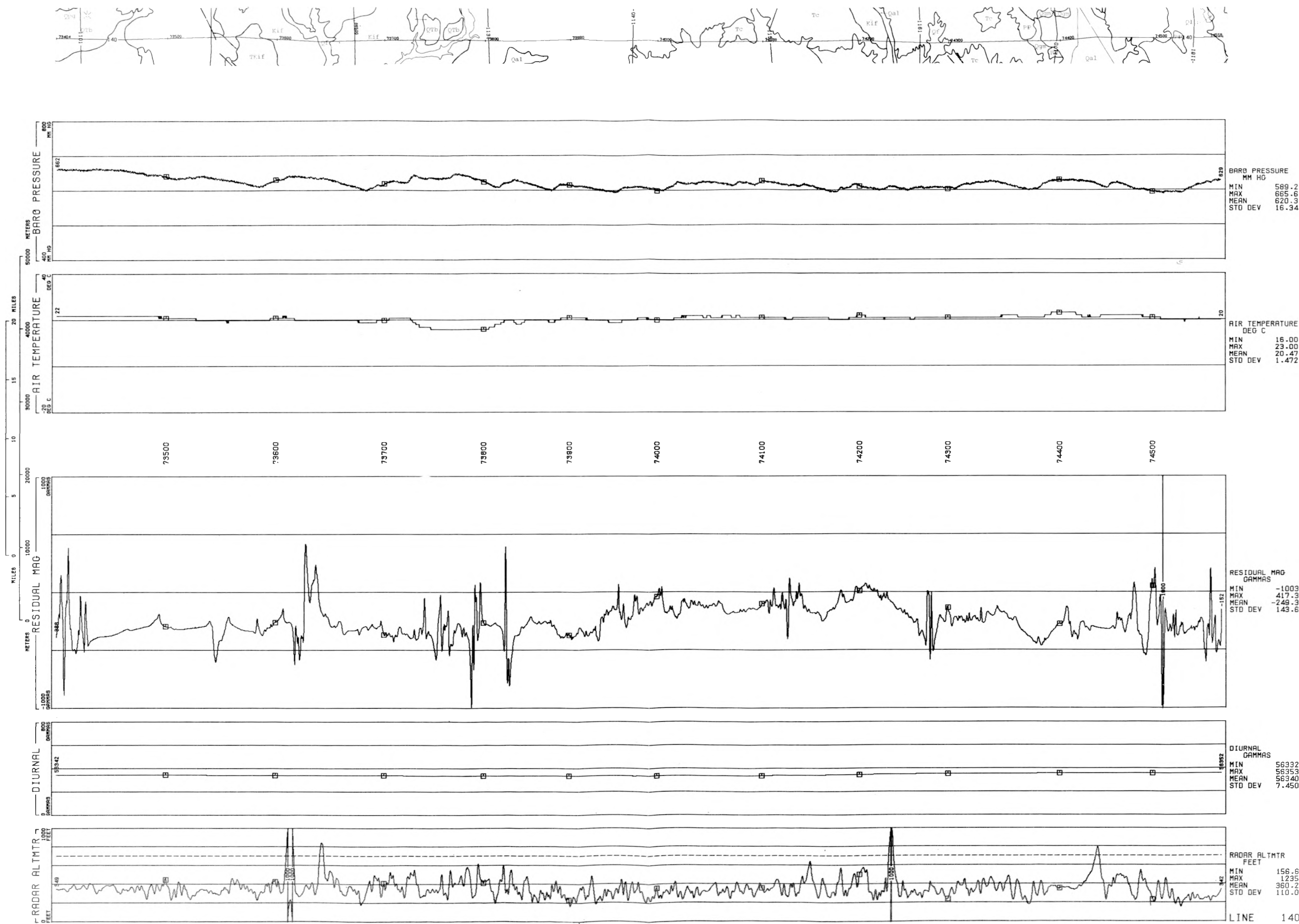
IDAHO SURVEY - LINE 120
HAILEY NIMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79220



LINE 130
IDAHO SURVEY - HAILEY, NIMS, NK 11-3 GEOMETRICS
DATA ACQUIRED 79211

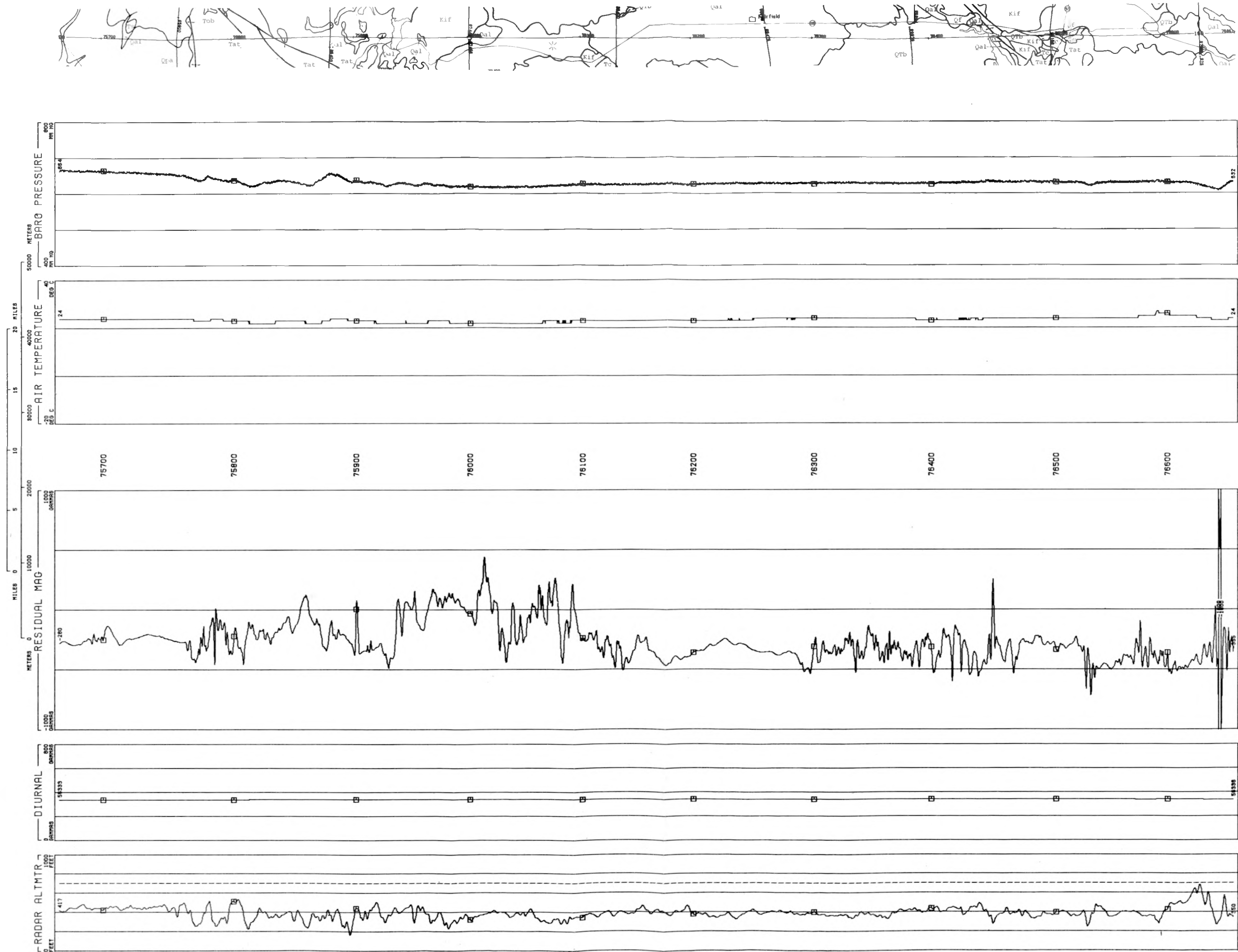


IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
LINE 140
DATA ACQUIRED 79209





LINE 160
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79209



BARO PRESSURE
MM HG
MIN 607.1
MAX 669.5
MEAN 631.7
STD DEV 11.53

AIR TEMPERATURE
DEG C
MIN 22.00
MAX 27.00
MEAN 23.38
STD DEV .8448

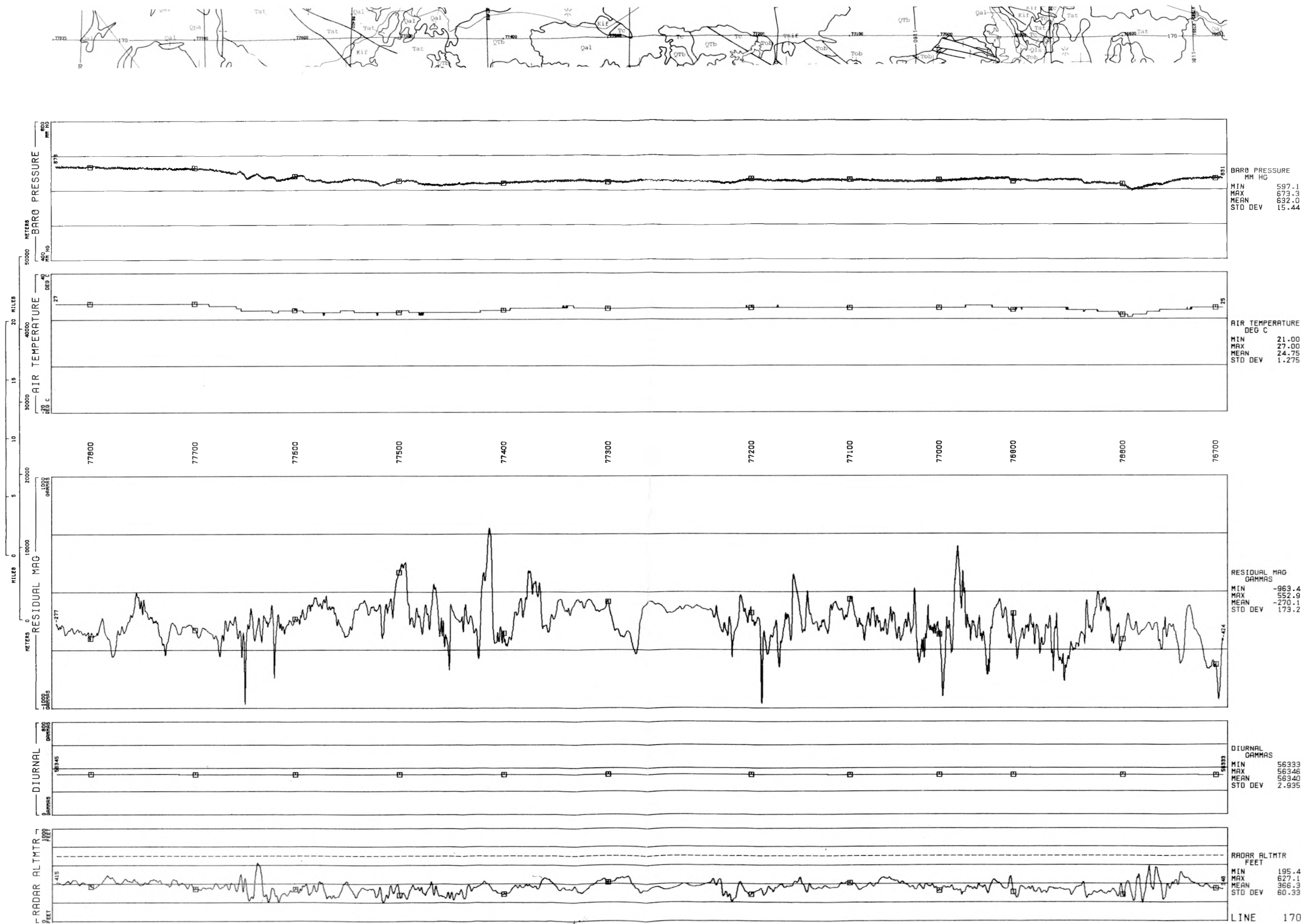
RESIDUAL MAG
GAMMAS
MIN -1492
MAX 440.9
MEAN -268.0
STD DEV 169.2

DIURNAL
GAMMAS
MIN 56333
MAX 56339
MEAN 56336
STD DEV 1.627

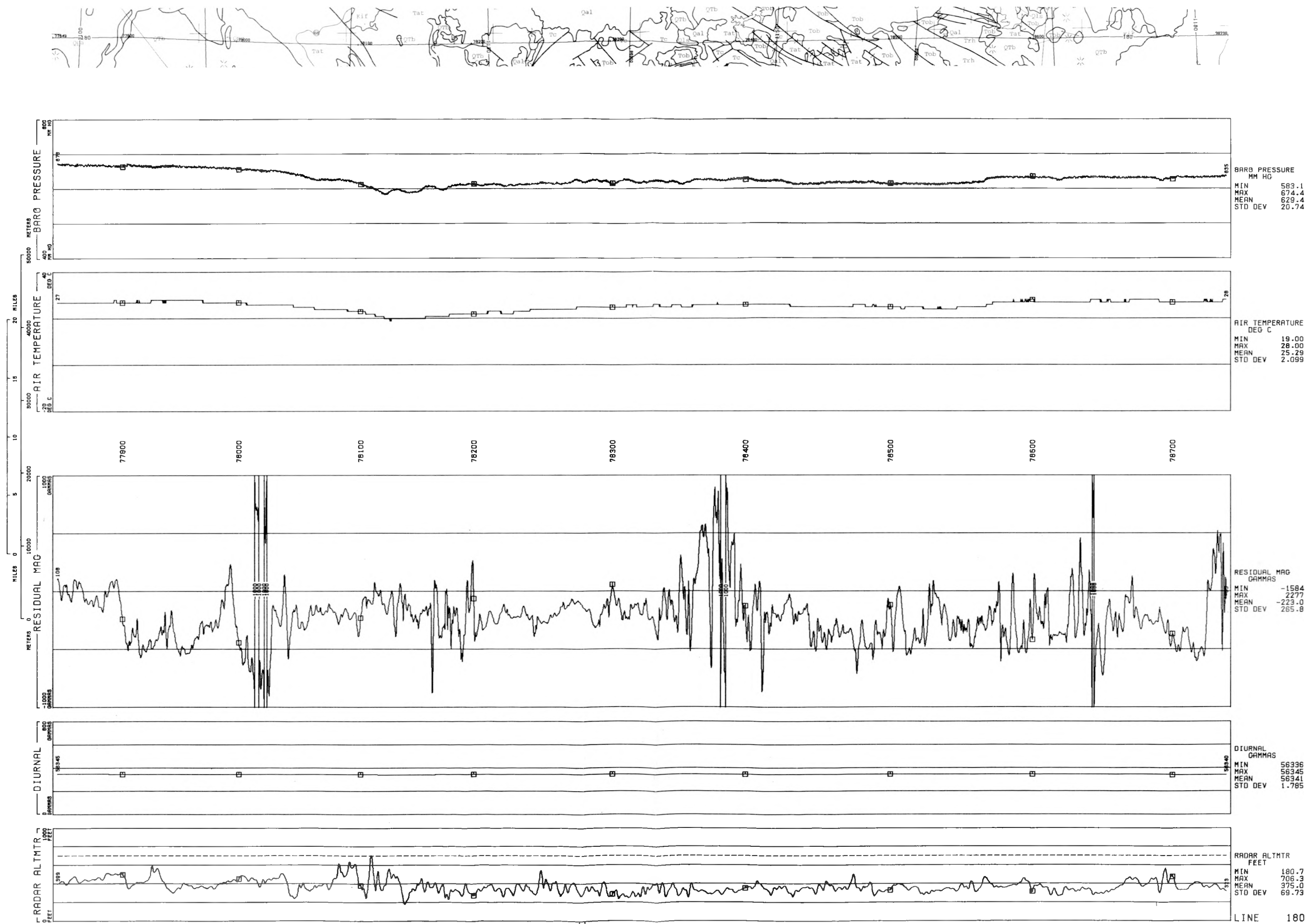
RADAR ALTMTR
FEET
MIN 141.7
MAX 166.8
MEAN 150.0
STD DEV 60.09

LINE 160

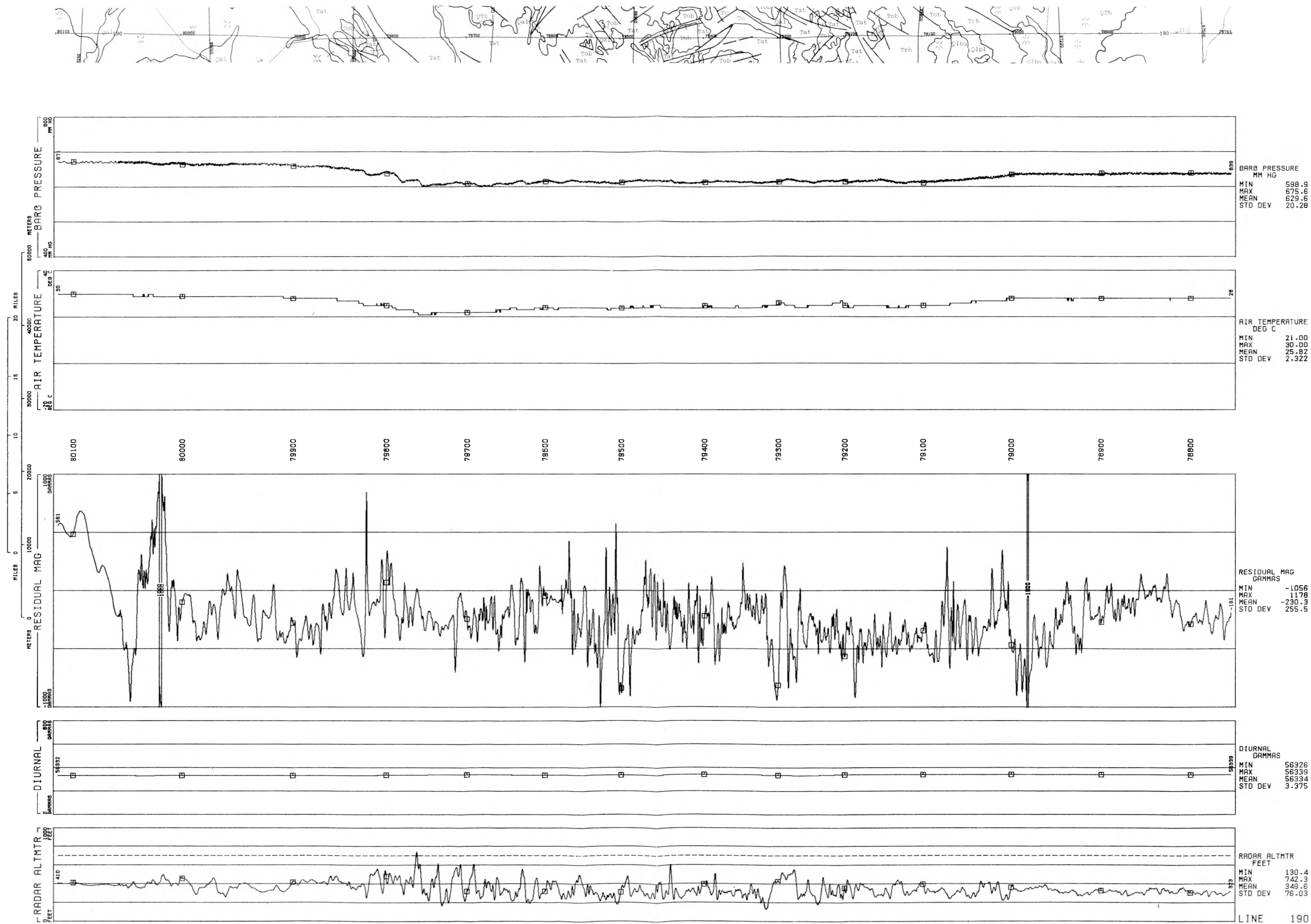
LINE 170
IDAHO SURVEY - HAILEY NIMS, NK 11-3 GEOMETRICS
DATA ACQUIRED 79209



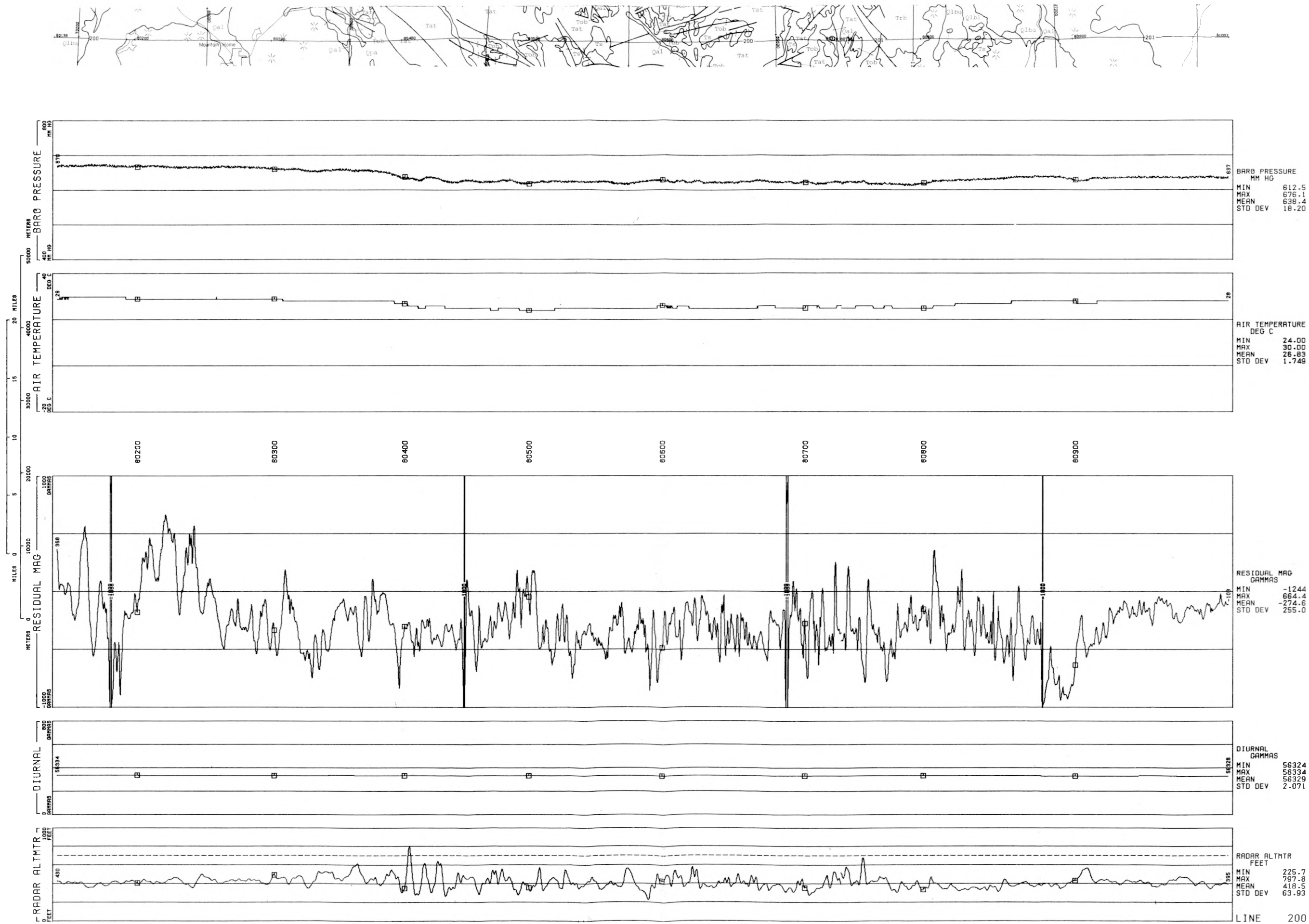
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
LINE 180
DATA ACQUIRED 79209



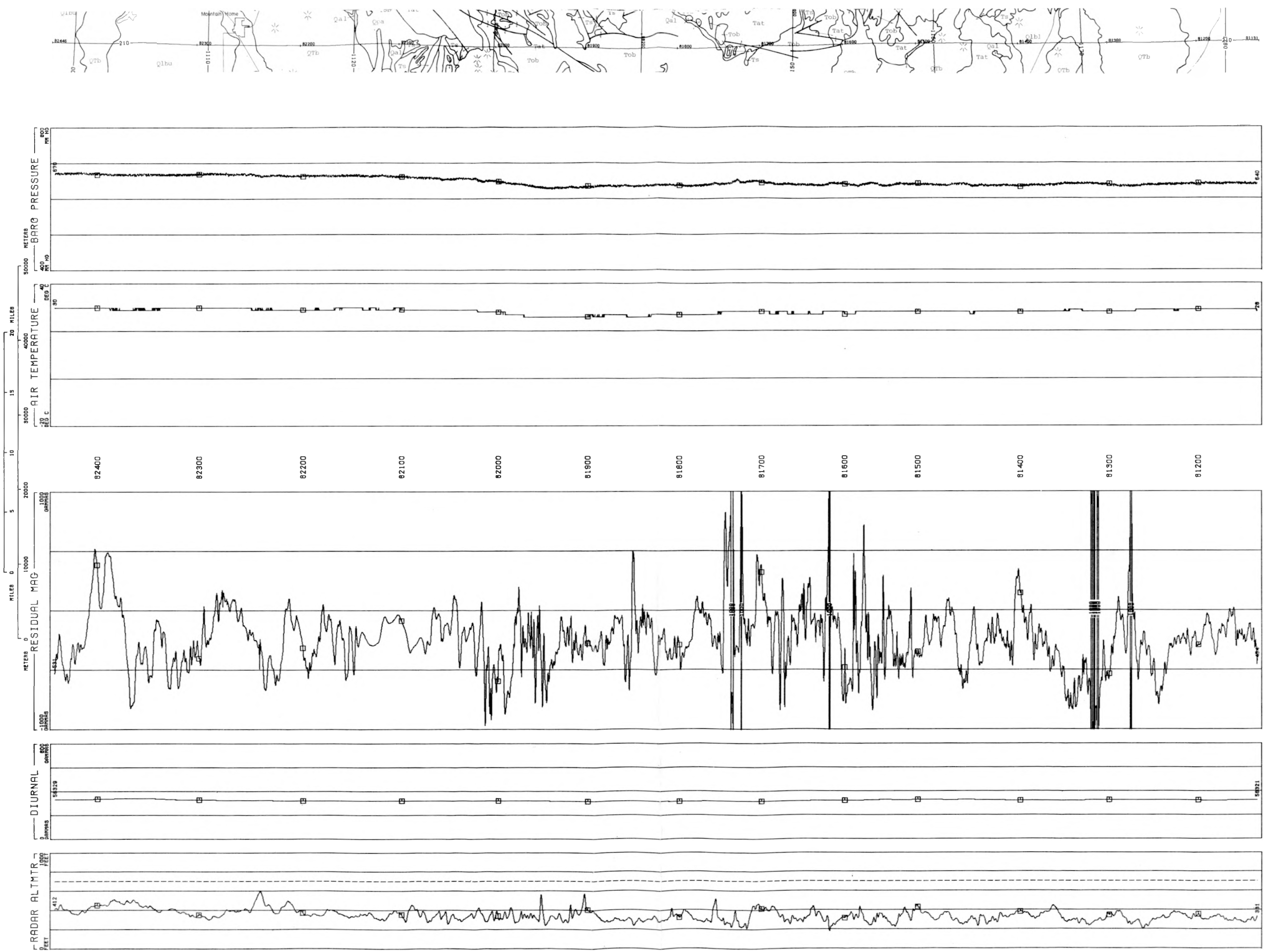
LINE 190
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79209



LINE 200
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79209



LINE 210
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79209



BARO PRESSURE
MM HG
MIN 627.7
MAX 676.1
MEAN 647.8
STD DEV 13.46

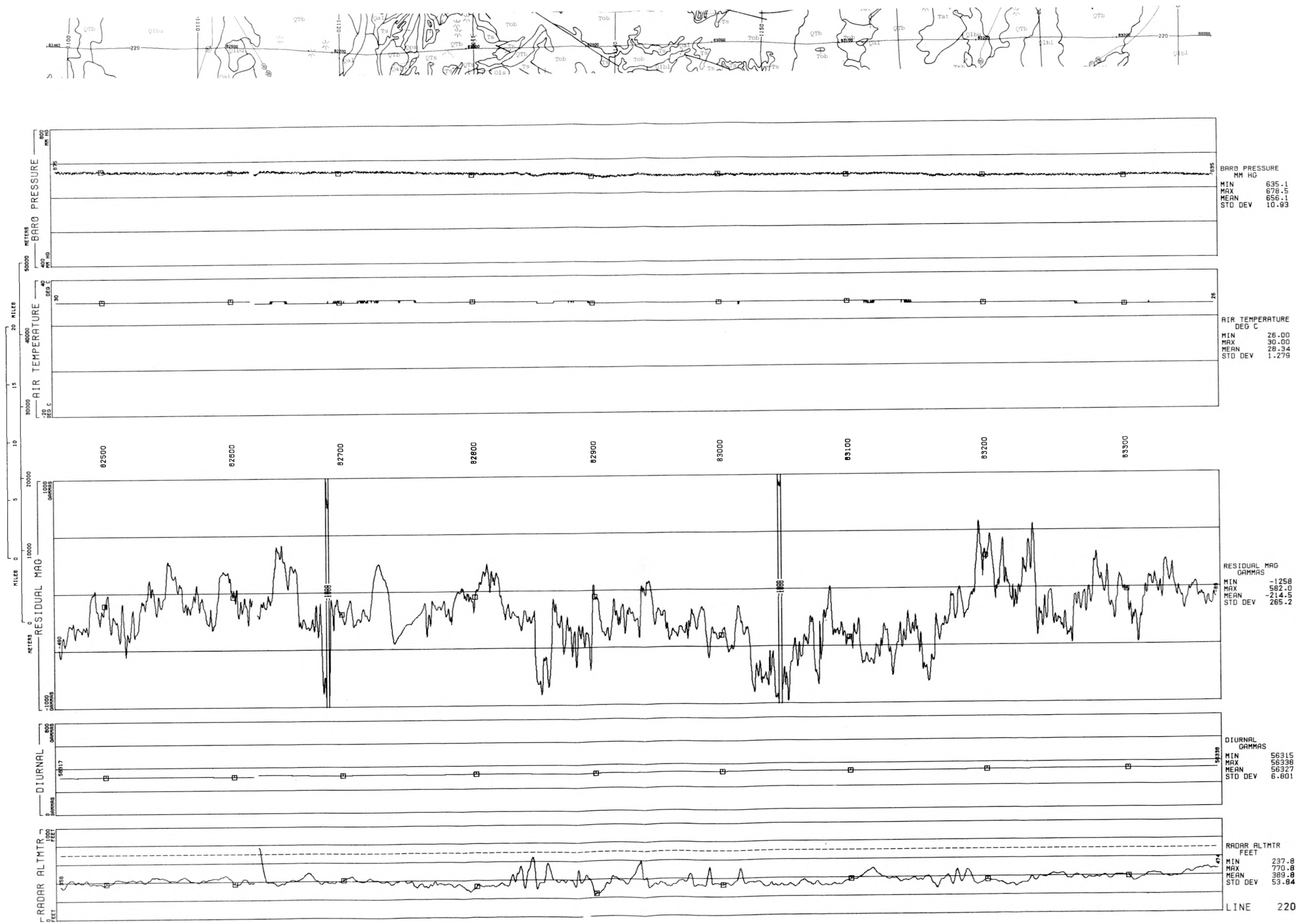
AIR TEMPERATURE
DEG C
MIN 26.00
MAX 30.00
MEAN 28.28
STD DEV 1.150

RESIDUAL MAG
GAMMAS
MIN -1135
MAX 1510
MEAN -239.5
STD DEV 274.2

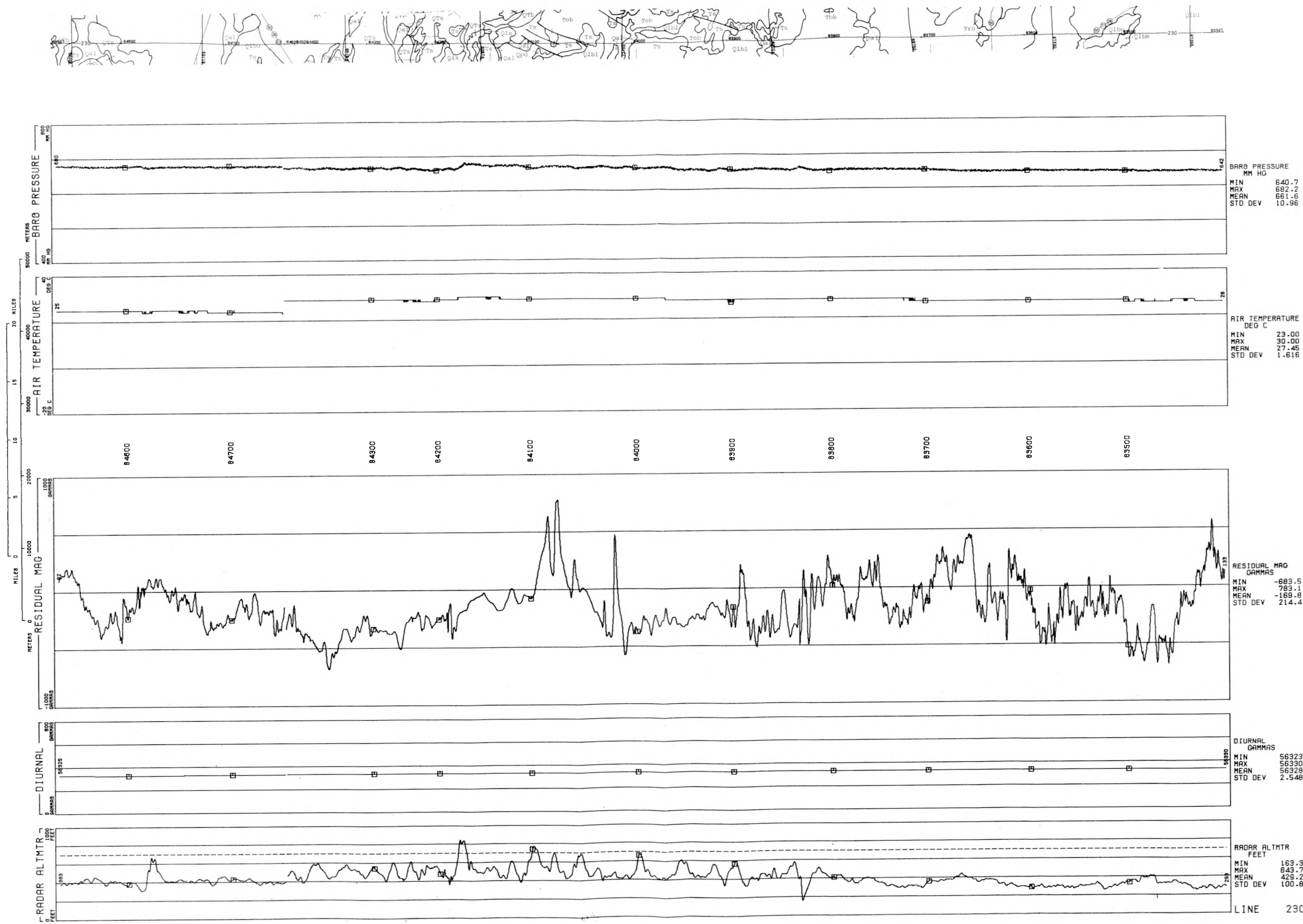
DIURNAL
GAMMAS
MIN 56309
MAX 56338
MEAN 56319
STD DEV 5.777

RADAR ALTMTR
FEET
MIN 183.5
MAX 596.2
MEAN 346.0
STD DEV 61.67

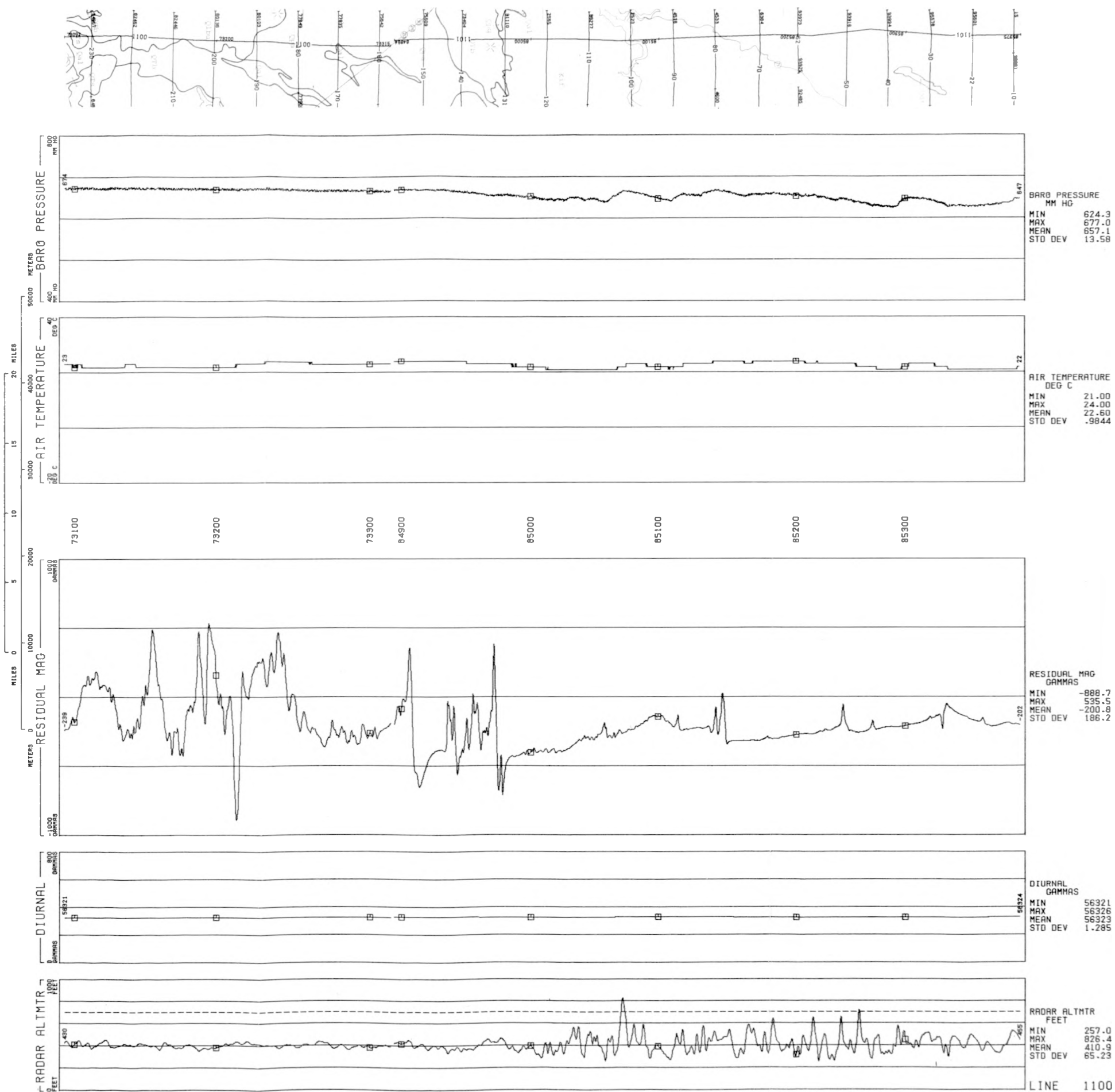
LINE 220
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79209



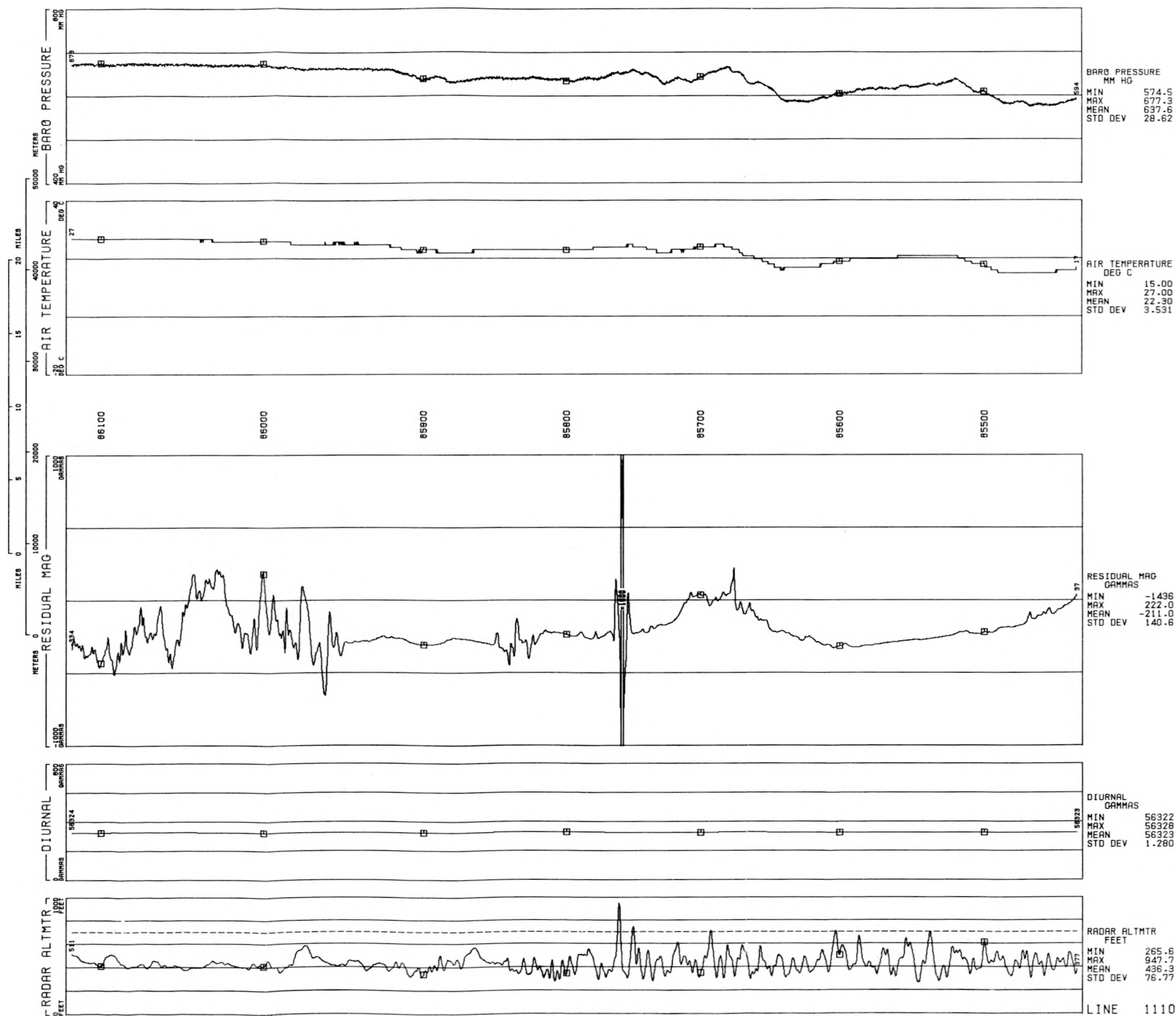
LINE 230
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79209



LINE 1100
IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79210

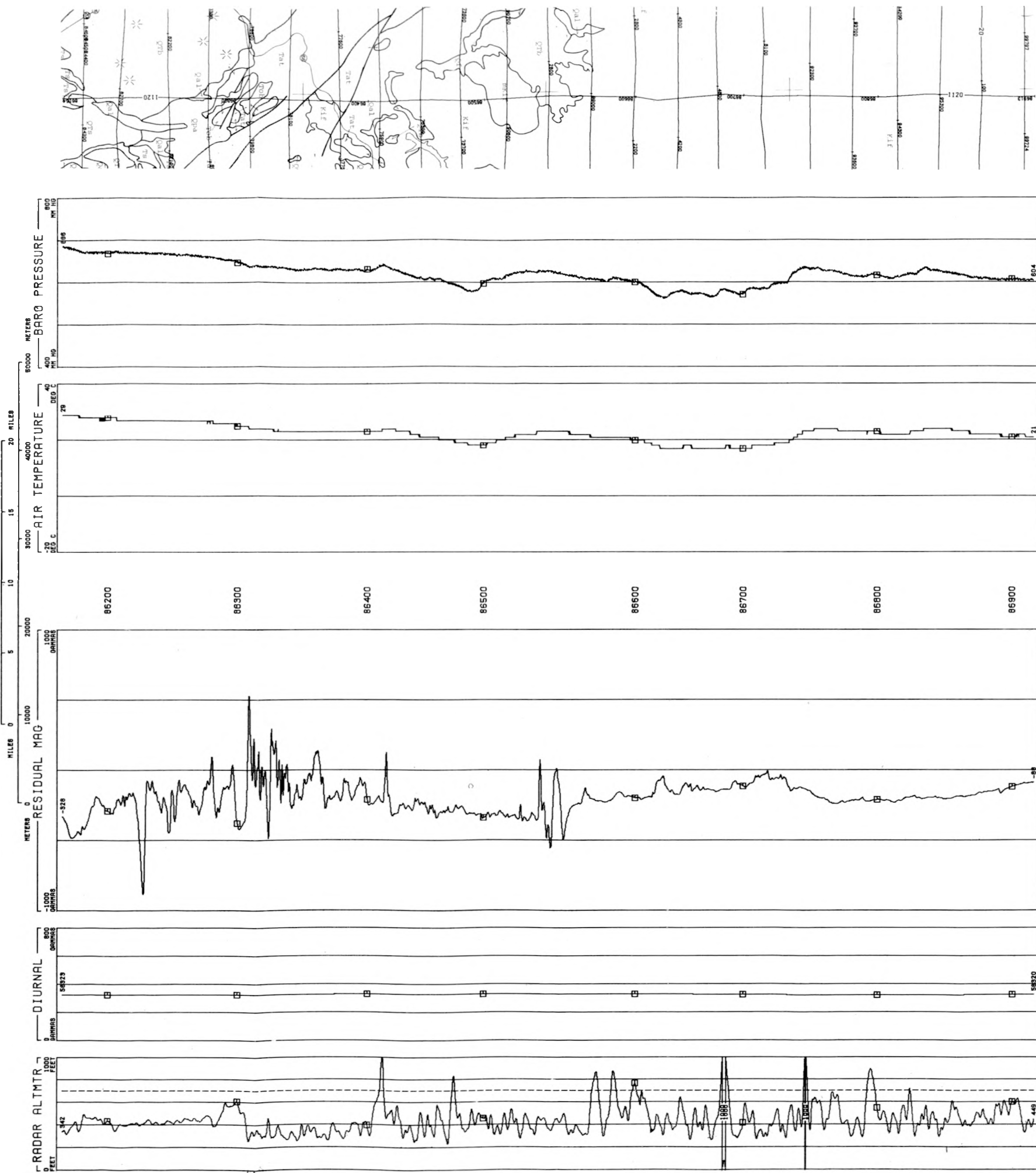


IDAHO SURVEY - LINE 1110
HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79210



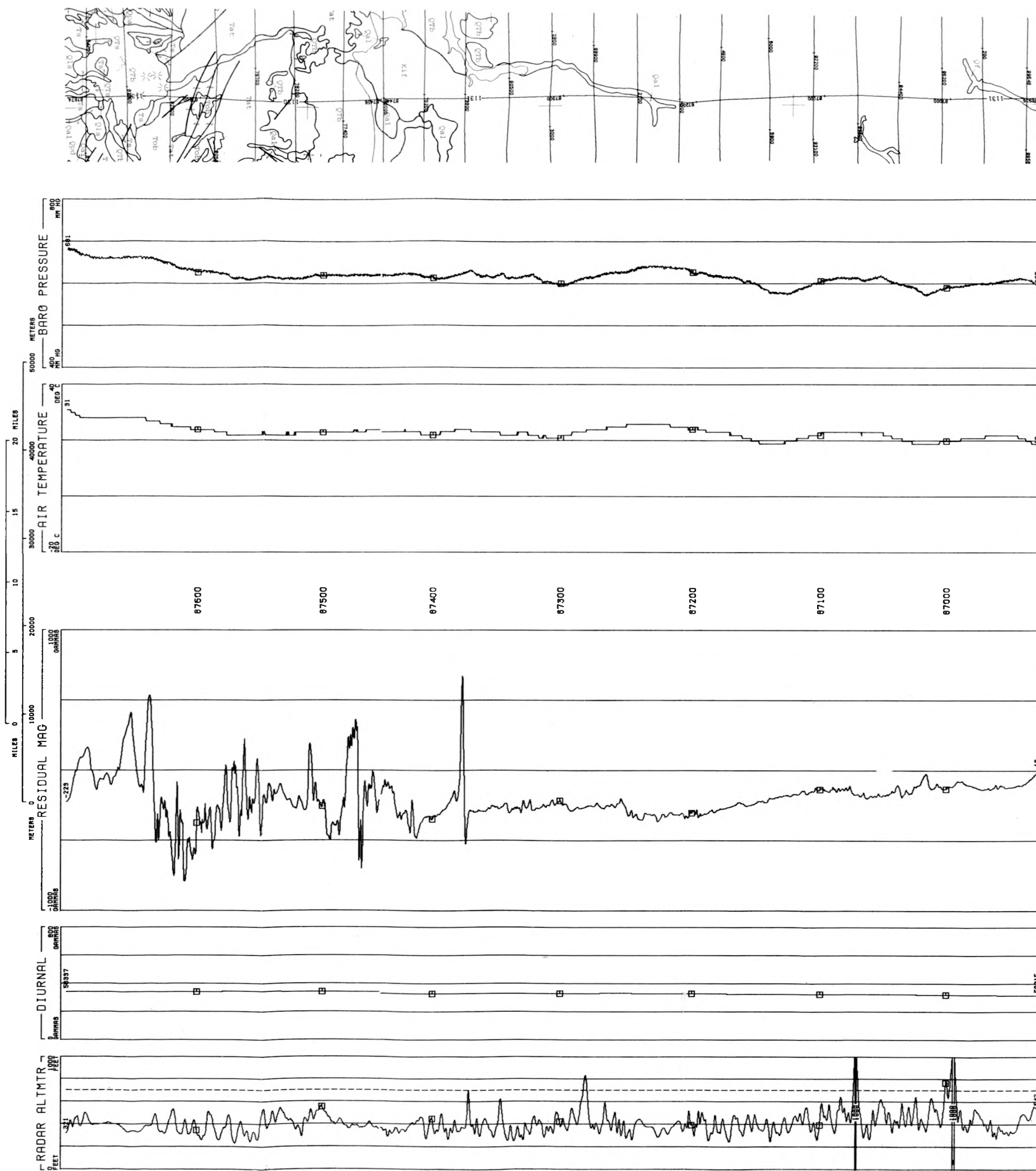
LINE 1110

LINE 1120
IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79210



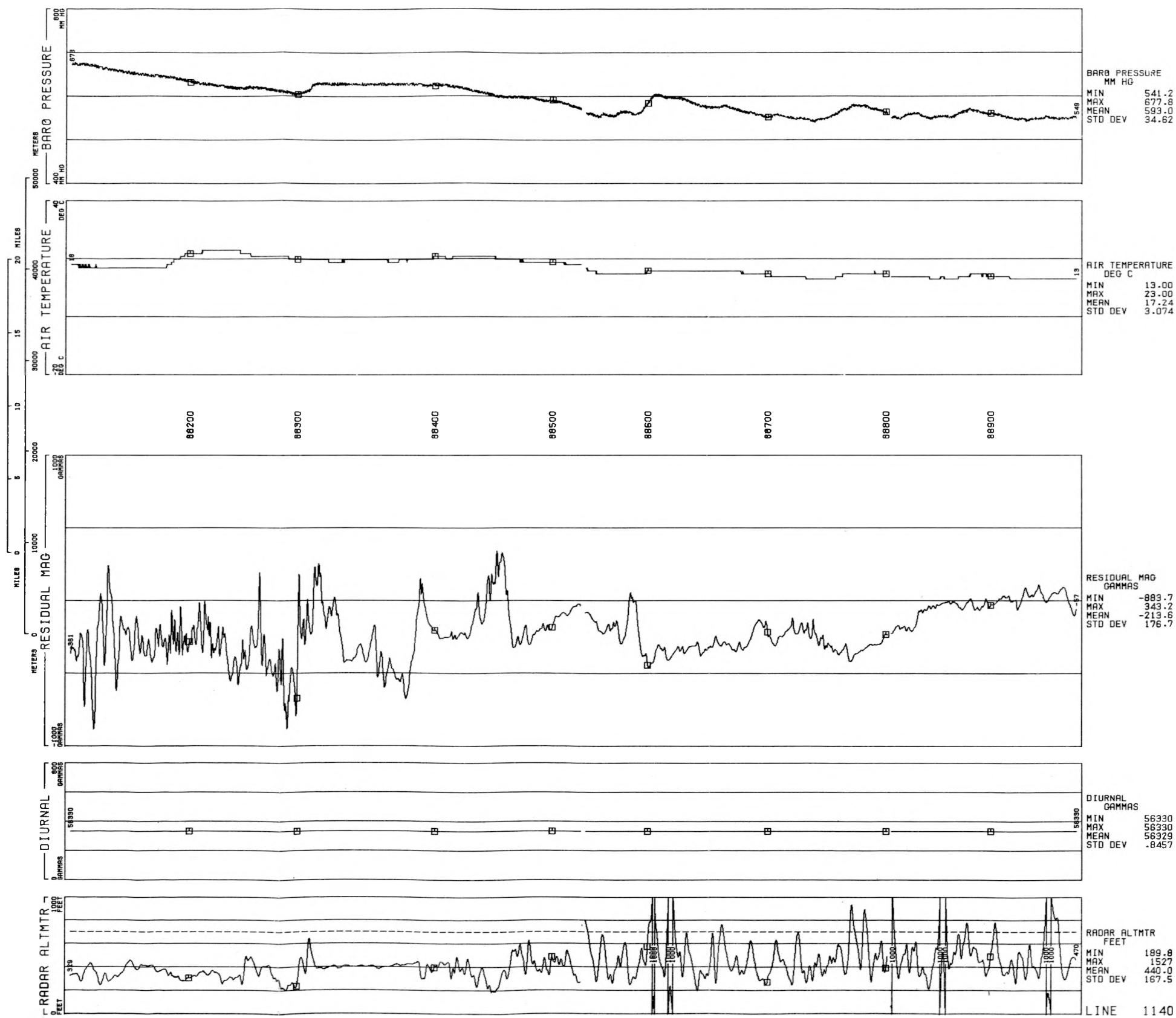
LINE 1120

LINE 1130
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79210

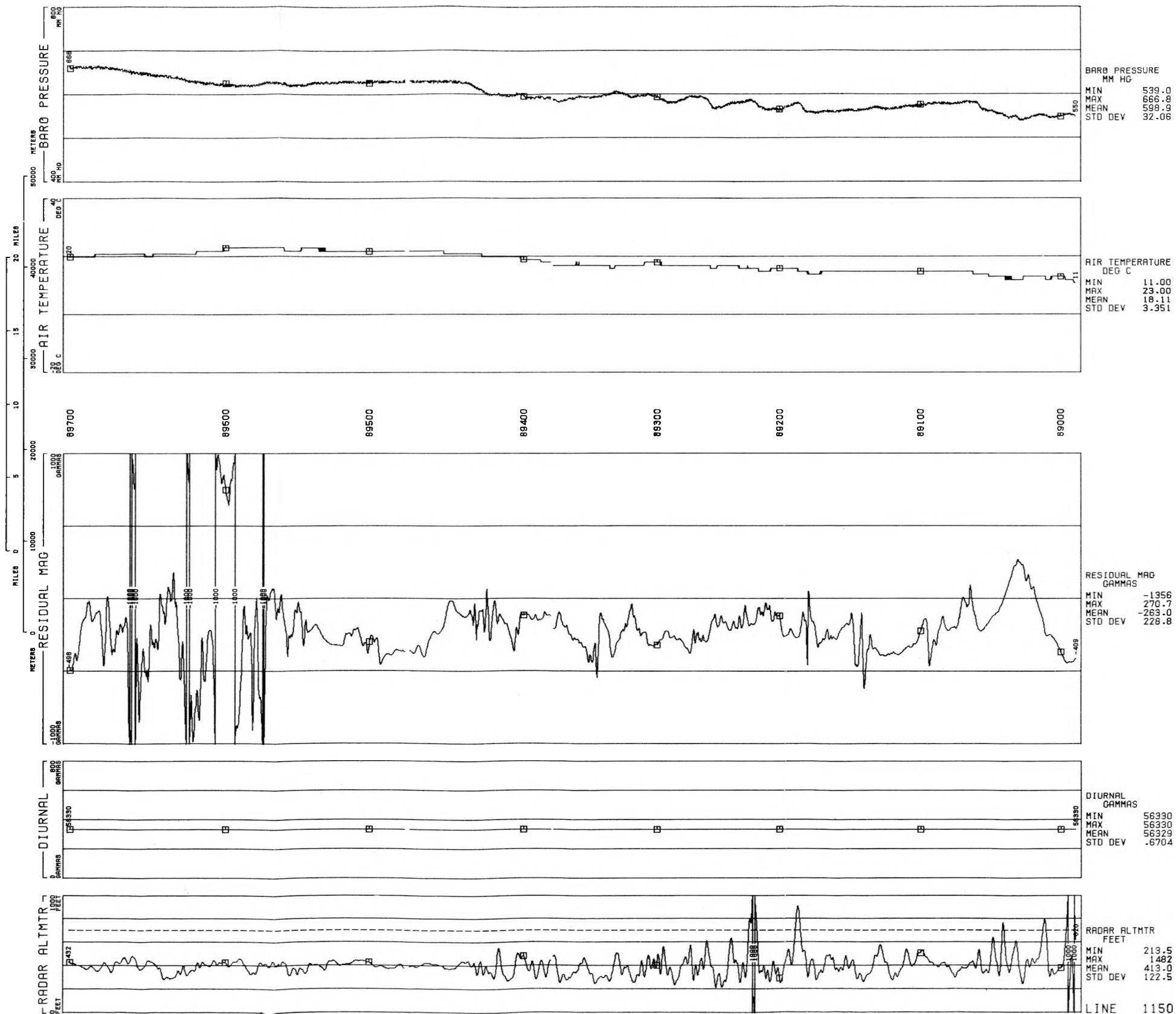


LINE 1130

IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
 LINE 1140
 DATA ACQUIRED 79211



IDAHO SURVEY - HAILEY NIMS NK 11-3 GEOMETRICS
LINE 1150
DATA ACQUIRED 79211



LINE 1160
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79211

0 5 10 15 20 MILES

0 10000 20000 30000 40000 50000 METERS

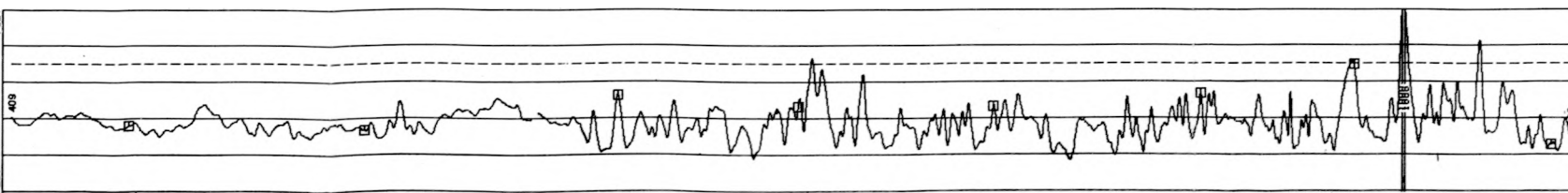
RADAR ALTMTR
FEET

DIURNAL
GAMMAS

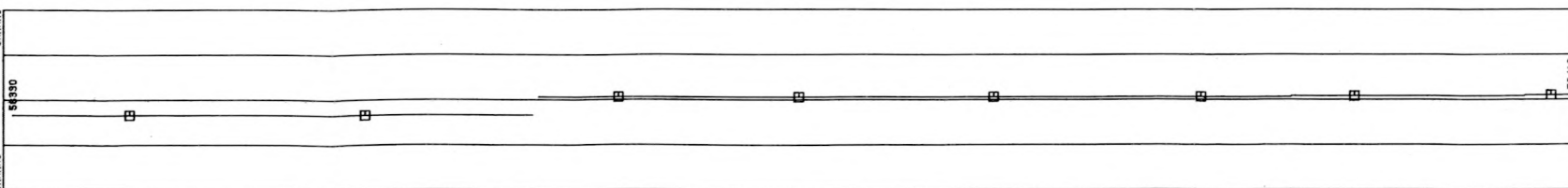
RESIDUAL MAG
GAMMAS

AIR TEMPERATURE
DEG C

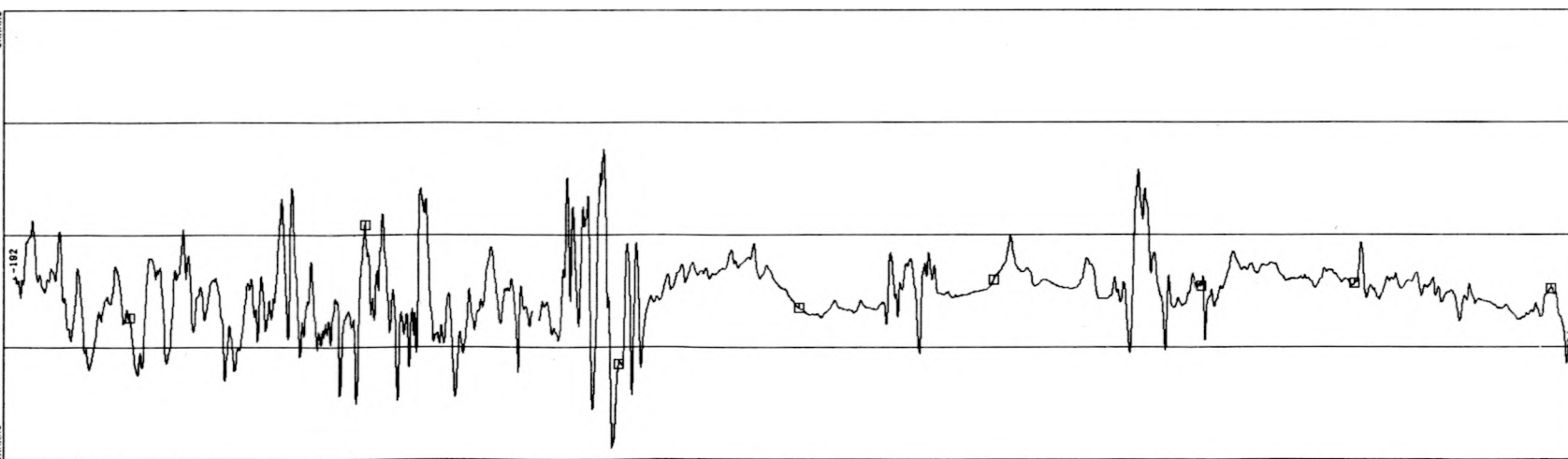
BARO PRESSURE
MM HG



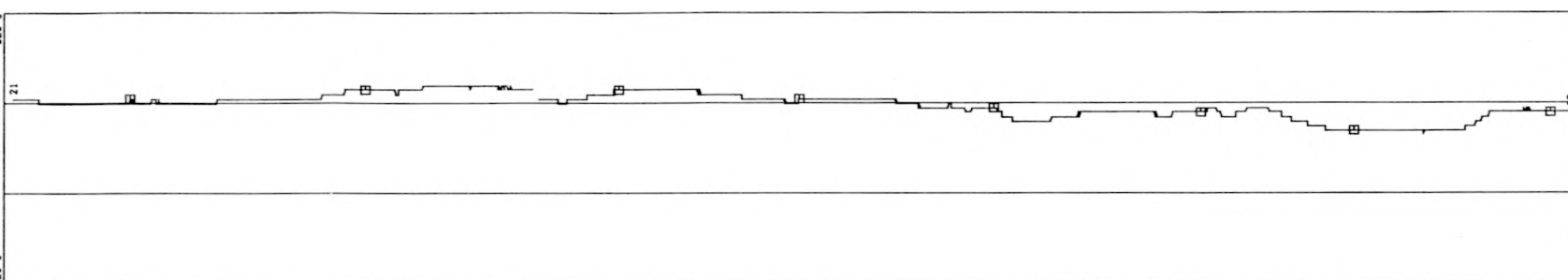
RADAR ALTMTR
FEET
MIN 173.9
MAX 1069
MEAN 379.9
STD DEV 96.06



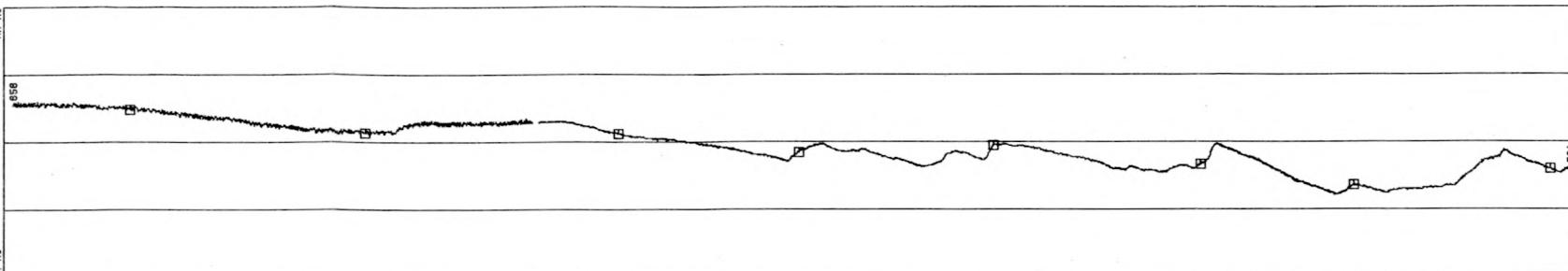
DIURNAL
GAMMAS
MIN 56330
MAX 56416
MEAN 56387
STD DEV 37.04



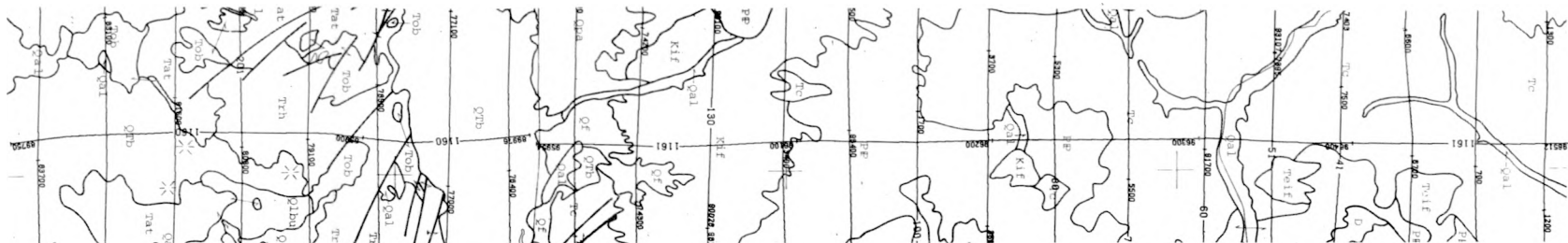
RESIDUAL MAG
GAMMAS
MIN -945.2
MAX 383.0
MEAN -253.4
STD DEV 151.3



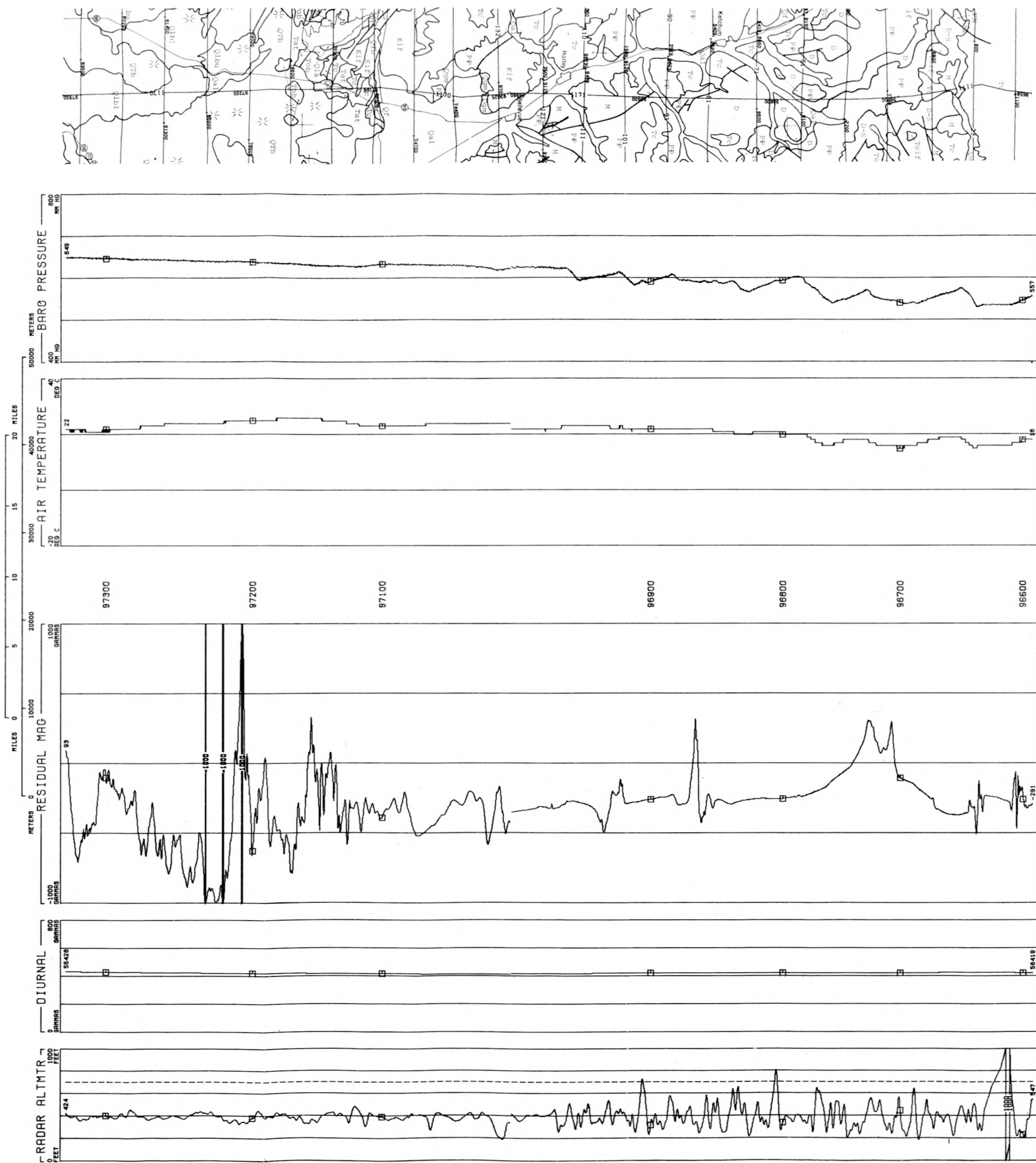
AIR TEMPERATURE
DEG C
MIN 13.00
MAX 24.00
MEAN 19.54
STD DEV 2.751



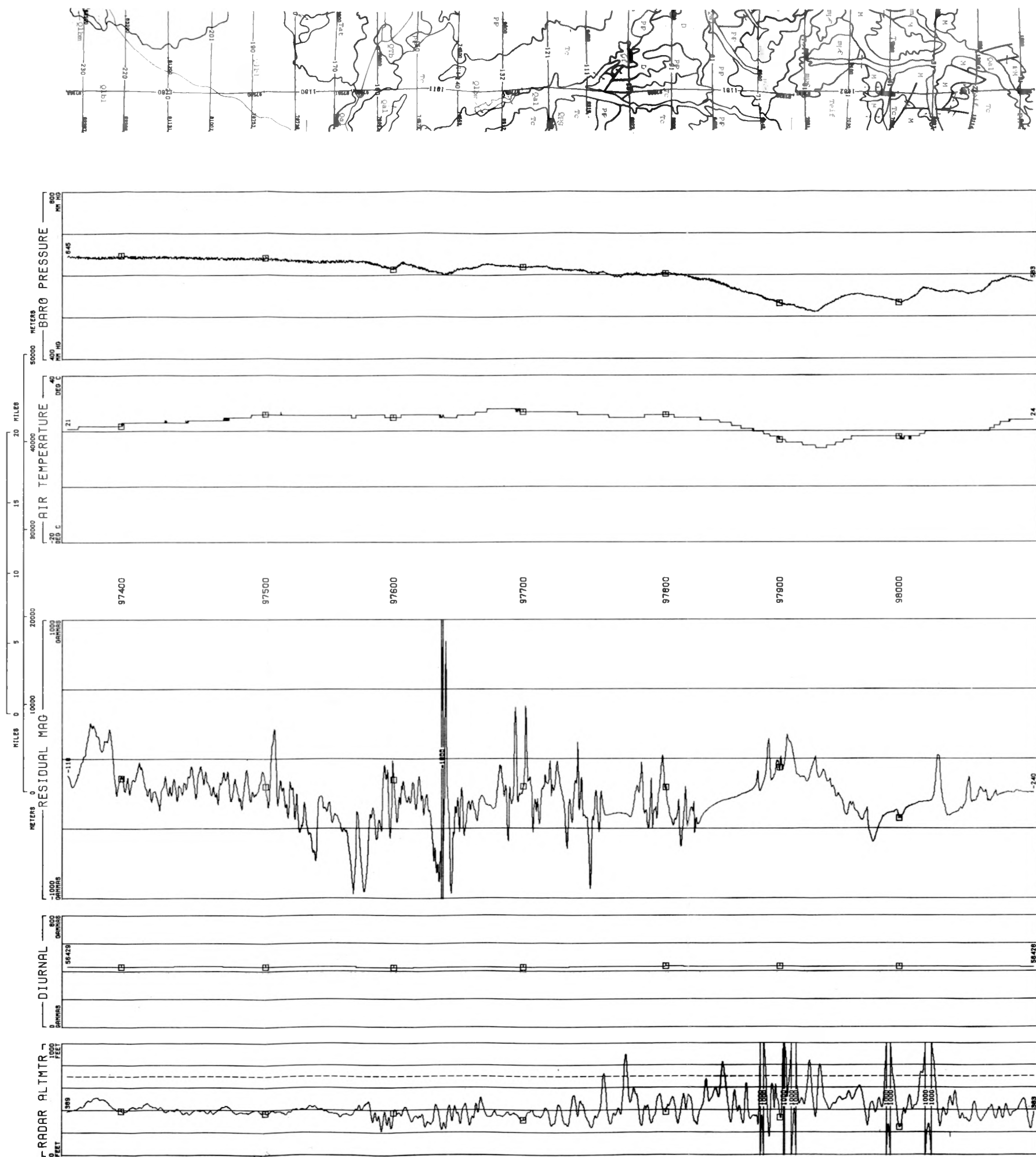
BARO PRESSURE
MM HG
MIN 522.1
MAX 660.6
MEAN 592.6
STD DEV 35.09



LINE 1170
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79218



LINE 1180
IDAHO SURVEY - HAILEY NTMS NK 11-3 GEOMETRICS
DATA ACQUIRED 79218



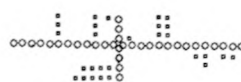
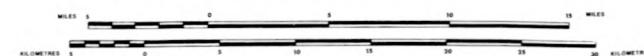
LINE 1180

APPENDIX C – Standard Deviation Maps

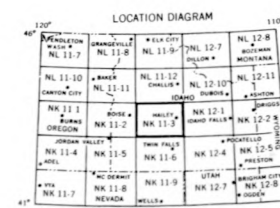
HAILEY



SCALE 1:500,000



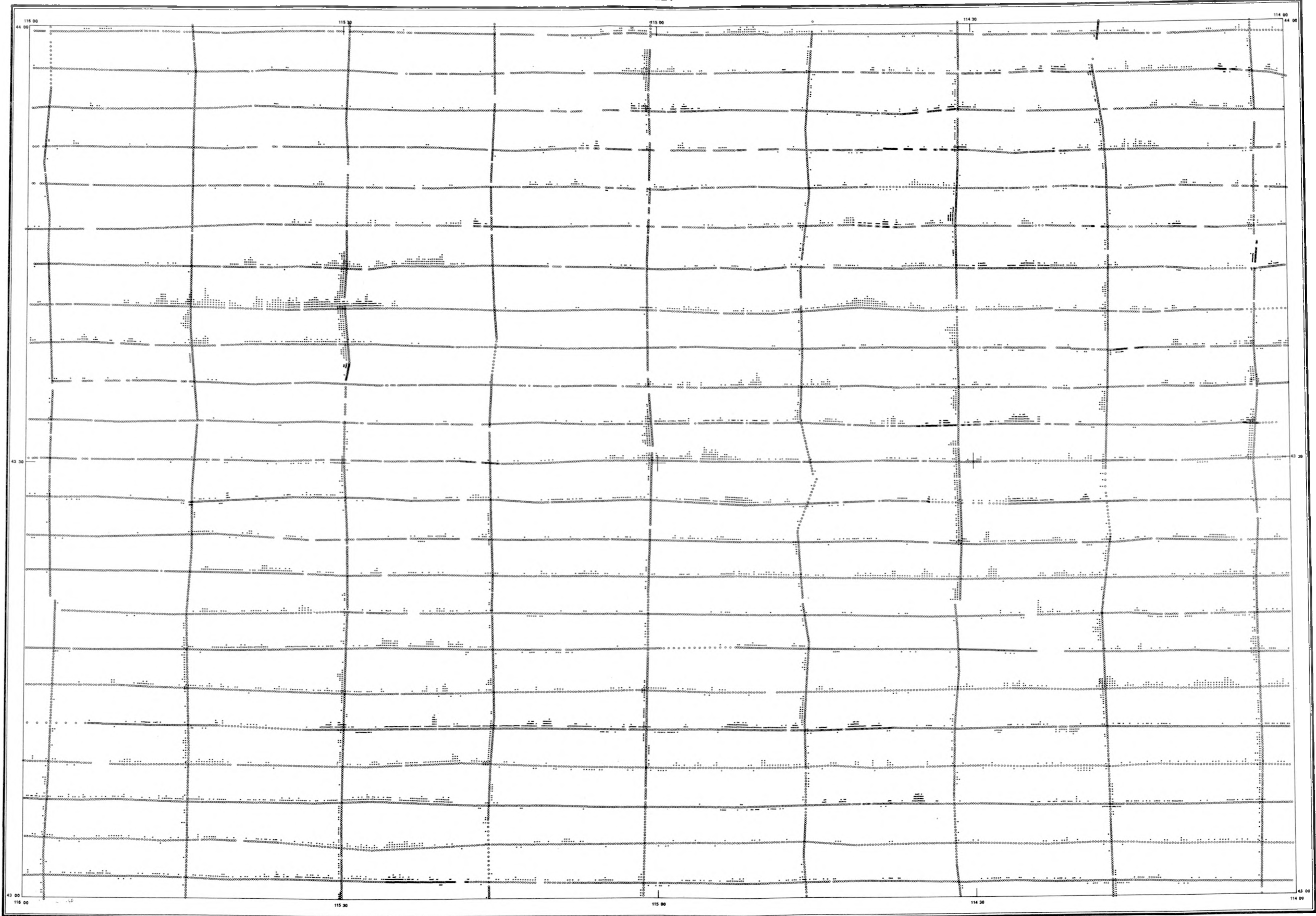
○ - DATA STATISTICALLY ADEQUATE
 ● - DATA STATISTICALLY INADEQUATE
 ✕ - 1 σ ABOUT MEASURE OF CENTRAL TENDENCY
 NOTE: ON E-W LINES, +σ TO NORTH, -σ TO SOUTH.
 ON N-S LINES, +σ TO WEST, -σ TO EAST.



POTASSIUM STANDARD DEVIATION MAP

IDAHO PROJECT

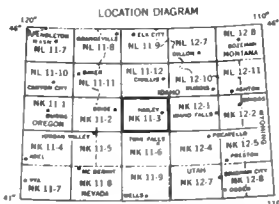
U. S. DEPARTMENT OF ENERGY



SCALE 1:500,000



NOTE: ON E-W LINES, +σ TO NORTH, -σ TO SOUTH.
ON N-S LINES, +σ TO WEST, -σ TO EAST.



URANIUM STANDARD DEVIATION MAP

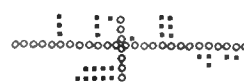
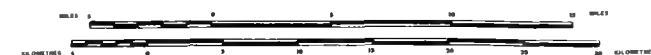
IDAHO PROJECT

U. S. DEPARTMENT OF ENERGY

HAILEY

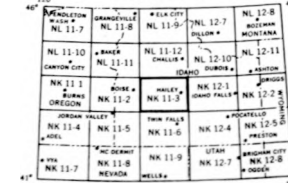


SCALE 1:500,000



NOTE: ON E-W LINES, + to NORTH, - to SOUTH.
ON N-S LINES, + to WEST, - to EAST.

LOCATION DIAGRAM



THORIUM STANDARD DEVIATION MAP

IDAHO PROJECT

U. S. DEPARTMENT OF ENERGY

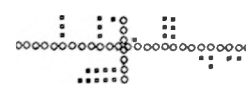
SURVEY AND
COMPILED BY

EG&G GEOMETRICS

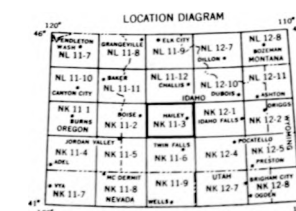
HAILEY



SCALE 1:500,000



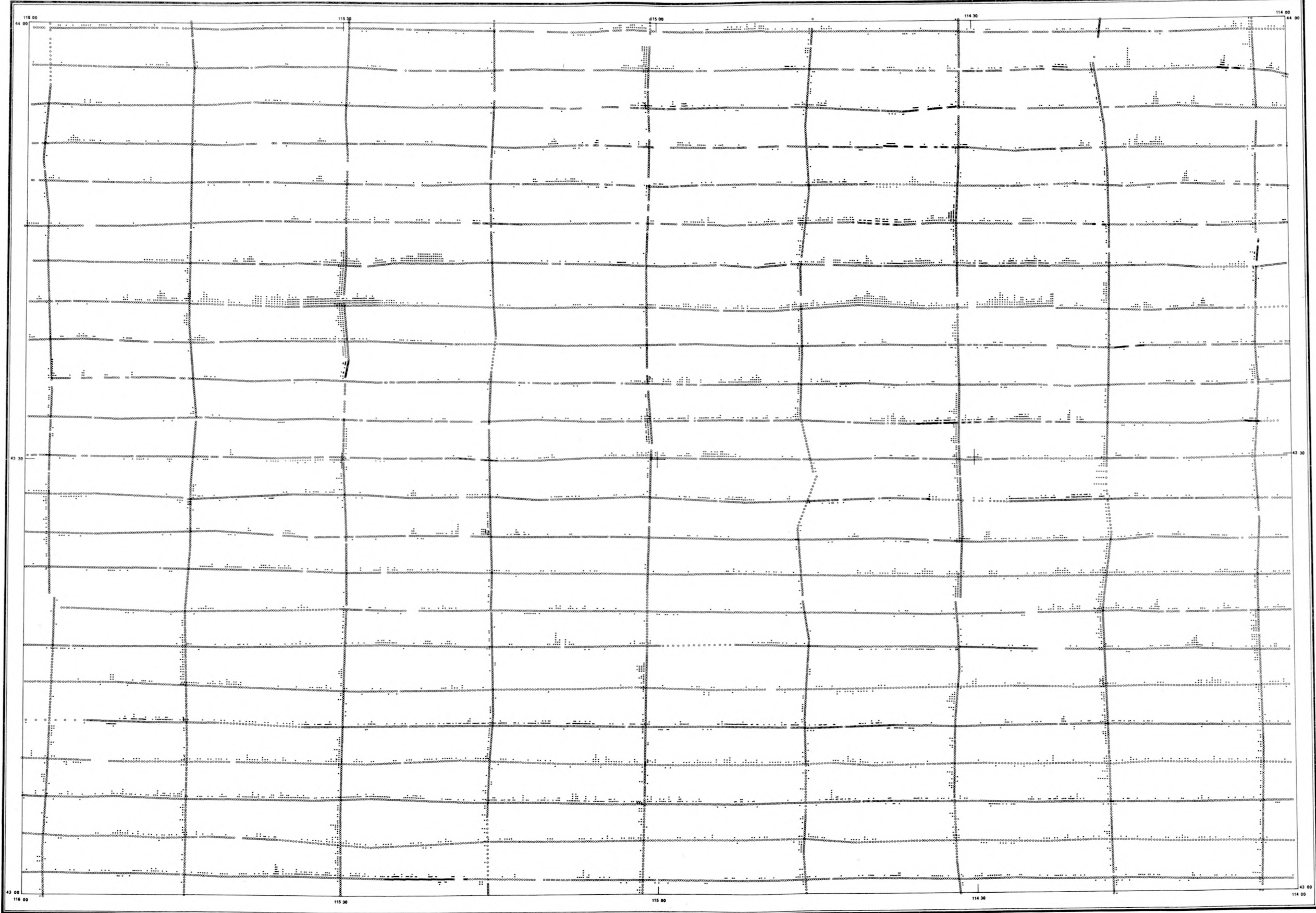
NOTE: ON E-W LINES, +σ TO NORTH, -σ TO SOUTH.
ON N-S LINES, +σ TO WEST, -σ TO EAST.



THORIUM/POTASSIUM STANDARD DEVIATION MAP

IDAHO PROJECT

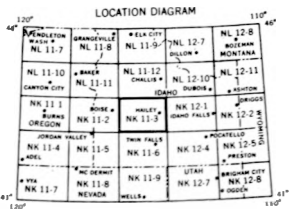
U. S. DEPARTMENT OF ENERGY



SCALE 1:500,000



○ - DATA STATISTICALLY ADEQUATE
● - DATA STATISTICALLY INADEQUATE
• - 1 σ ABOUT MEASURE OF CENTRAL TENDENCY
NOTE: ON E-W LINES, +σ TO NORTH, -σ TO SOUTH.
ON N-S LINES, +σ TO WEST, -σ TO EAST.

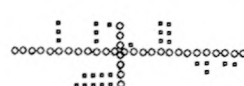
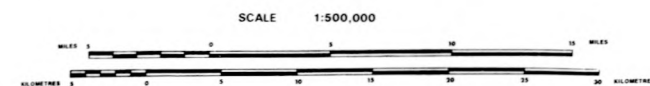


URANIUM/POTASSIUM STANDARD DEVIATION MAP

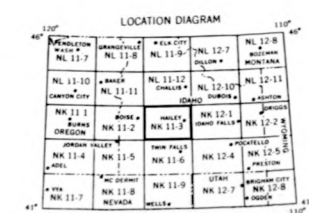
IDAHO PROJECT

U. S. DEPARTMENT OF ENERGY

HAILEY



O - DATA STATISTICALLY ADEQUATE
 • - DATA STATISTICALLY INADEQUATE
 —•— 1 σ ABOUT MEASURE OF CENTRAL TENDENCY
 NOTE: ON E-W LINES, + σ TO NORTH, - σ TO SOUTH.
 ON N-S LINES, + σ TO WEST, - σ TO EAST.



URANIUM/THORIUM STANDARD DEVIATION MAP

IDAHO PROJECT

U. S. DEPARTMENT OF ENERGY

APPENDIX D – Computer Map Units And Histograms

COMPUTER MAP UNIT SYMBOL CONVERSION TABLE

<u>COMPUTER MAP UNIT SYMBOL</u>	<u>GEOLOGIC MAP UNIT SYMBOL</u>	<u>COMPUTER MAP UNIT SYMBOL</u>	<u>GEOLOGIC MAP UNIT SYMBOL</u>
QAL	Qal	TAT	Tat
QLBU	Qlbu	TRH	Trh
QLBM	Qlbm	TC	Tc
QLBL	Qlbl	TEIF	Teif
QF	Qf	TKIF	TKif
QPA	Qpa	KIF	Kif
*QPD	Qpd	MKIF	mKif
QPG	Qpg	PP	PP
QLS	Qls	PM	Pm
*QS	Qs	M	M
QGM	Qgm	D	D
QDT	Qdt	D-S	D-S
QTS	Qts	MOC	MOC
QTB	Qtb	MO	MO
TOB	Tob	MPC	mpC
TS	Ts		

NOTES: On the following pages, histograms for each computer map unit are included in the same order as they appear on the above list.

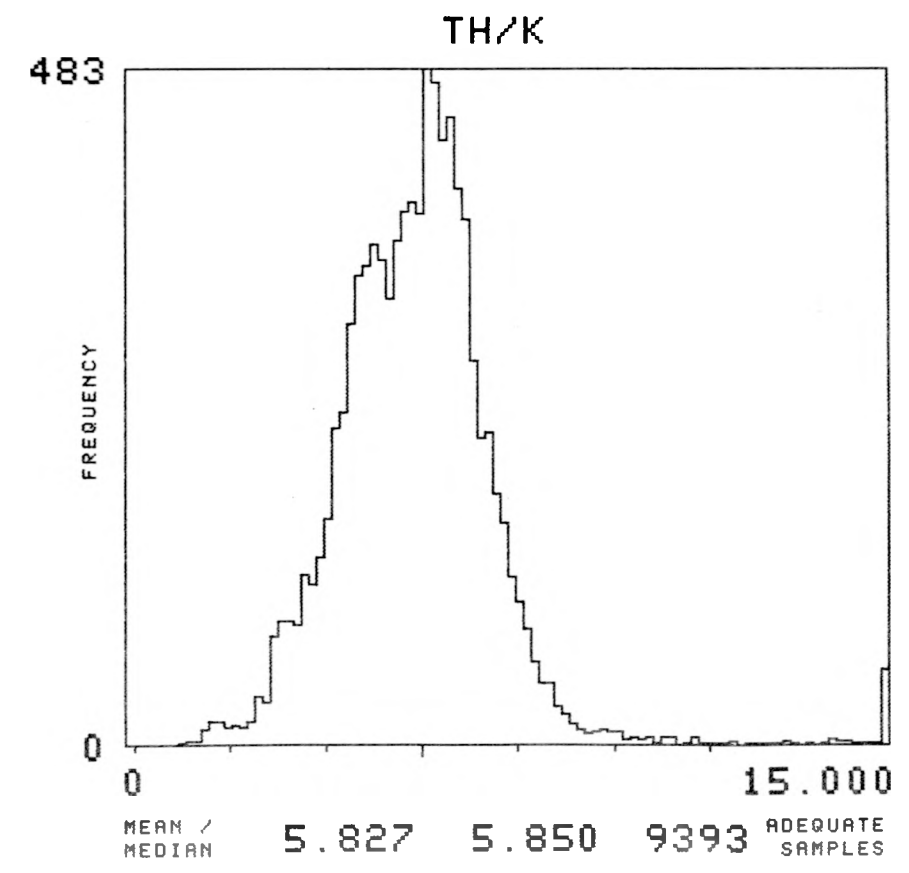
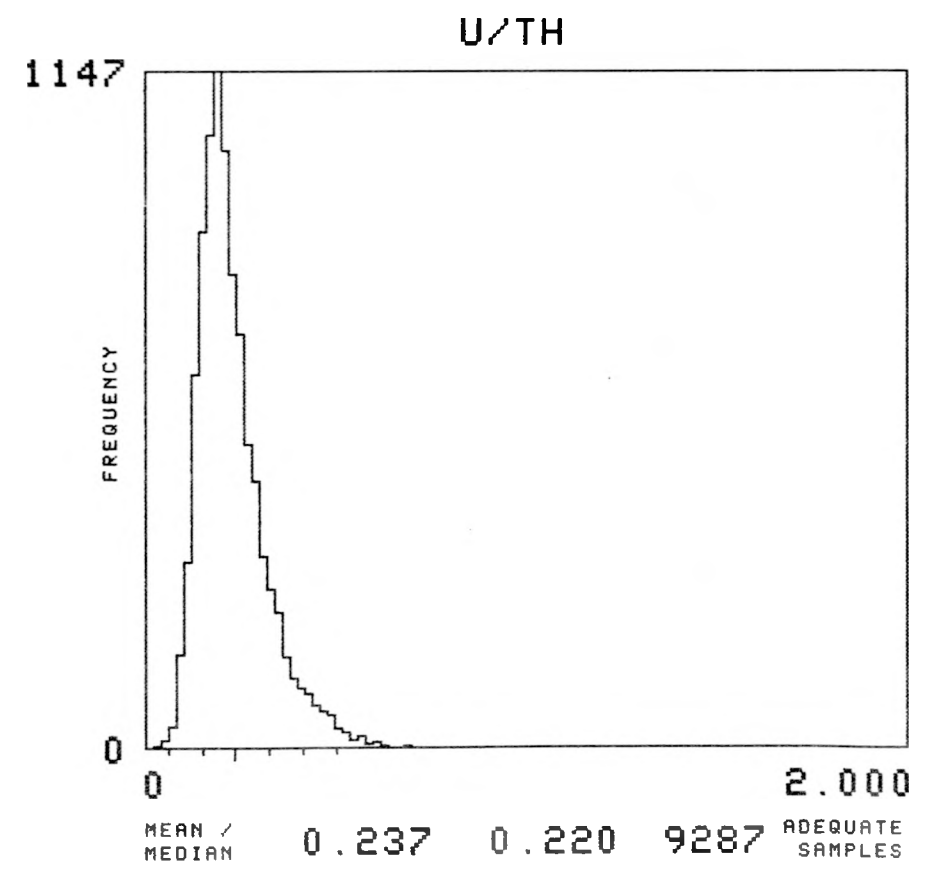
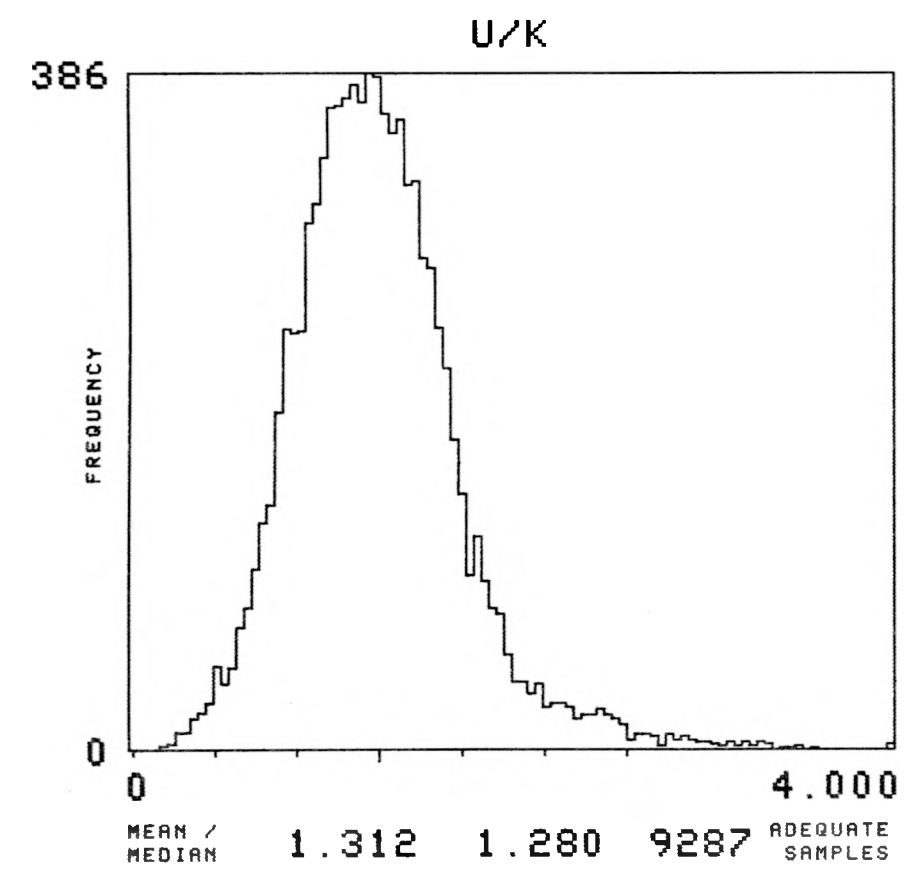
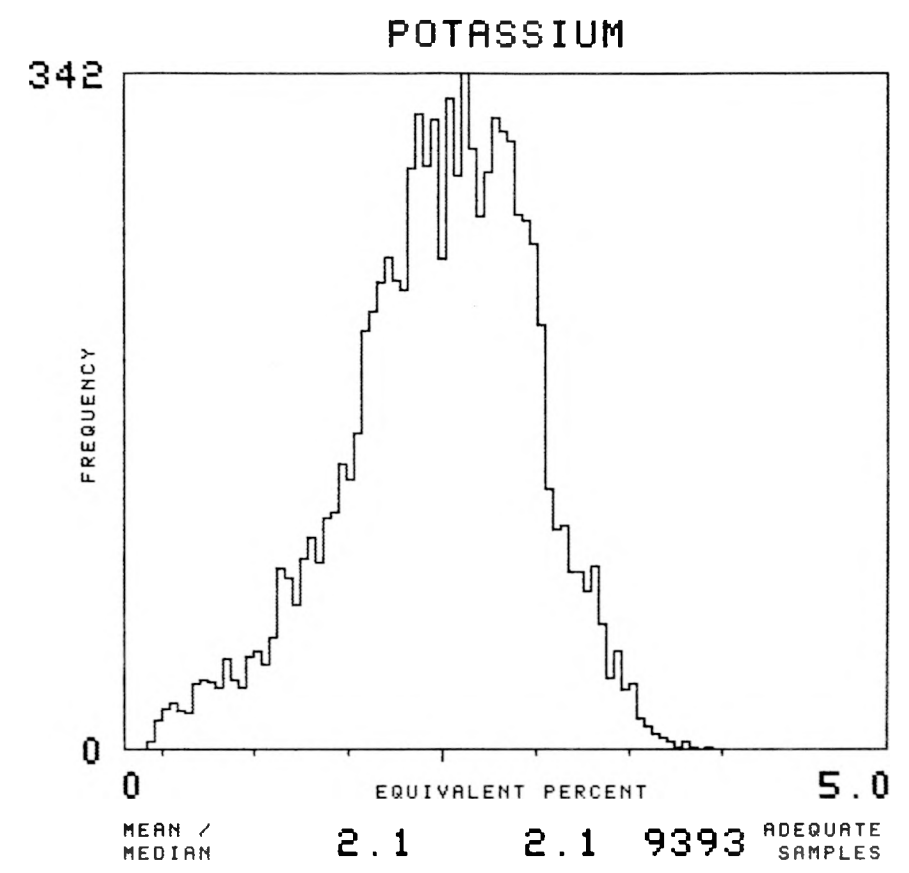
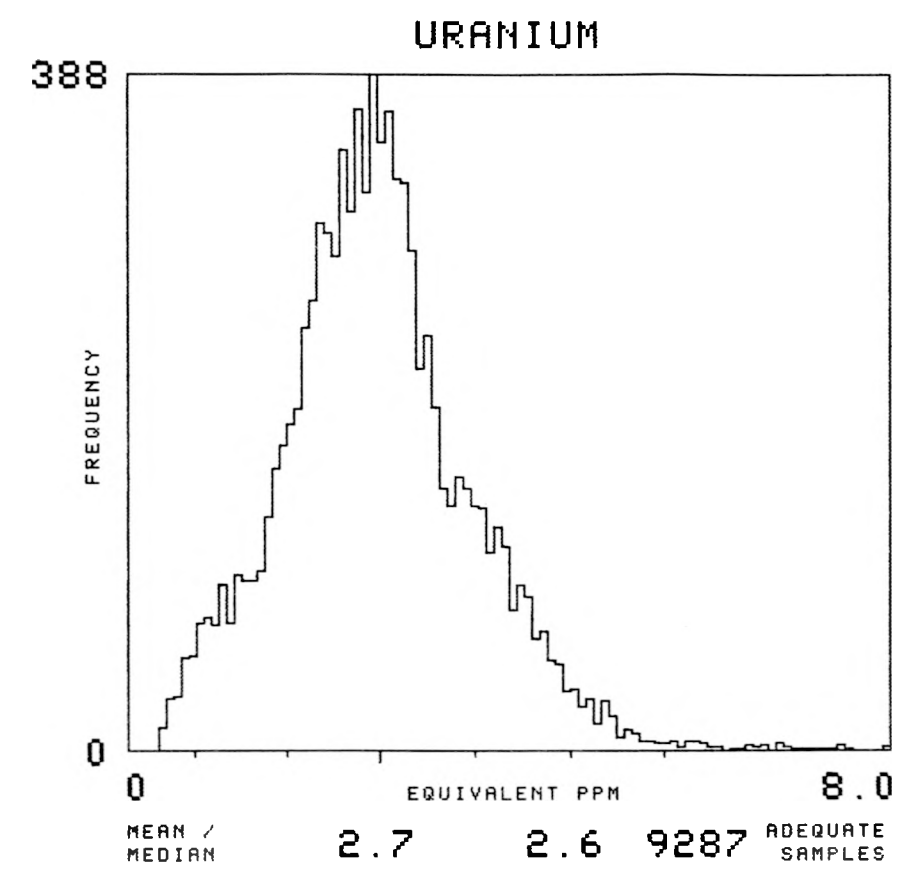
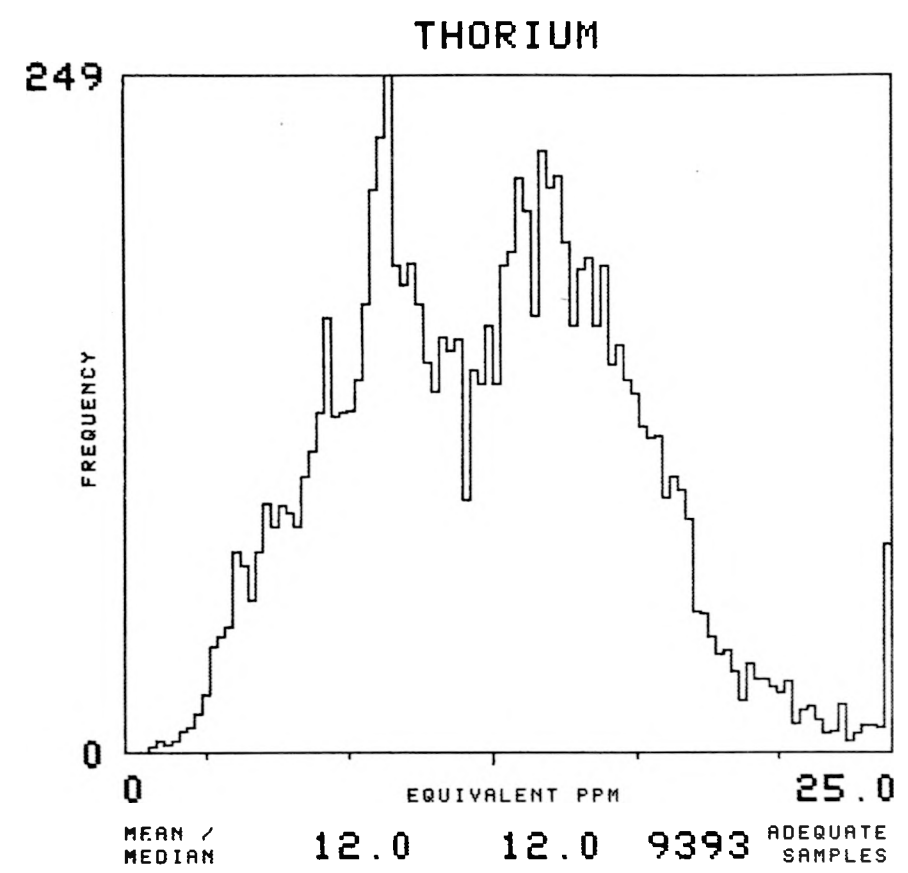
Geologic descriptions of the original geologic map units are in Appendix A.

Areas over water or cultural features were assigned separate map unit symbols and were removed from the data block during processing.

*A statistical analysis was not done due to an inadequate number of samples. Therefore, there are no histograms for units marked in this way.

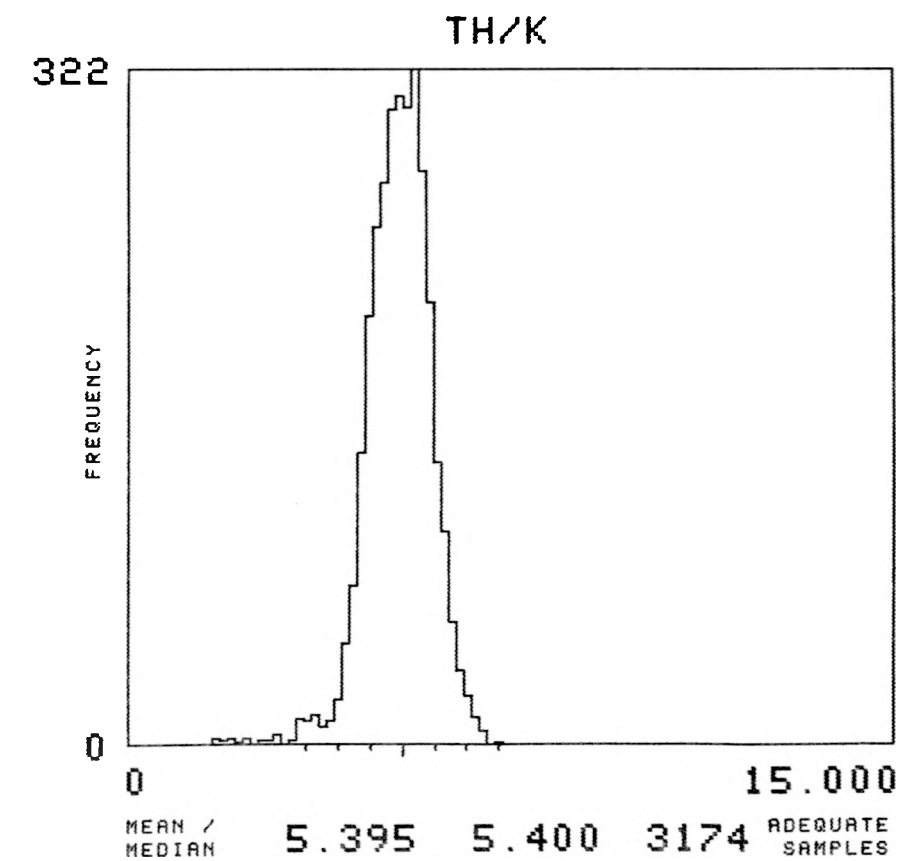
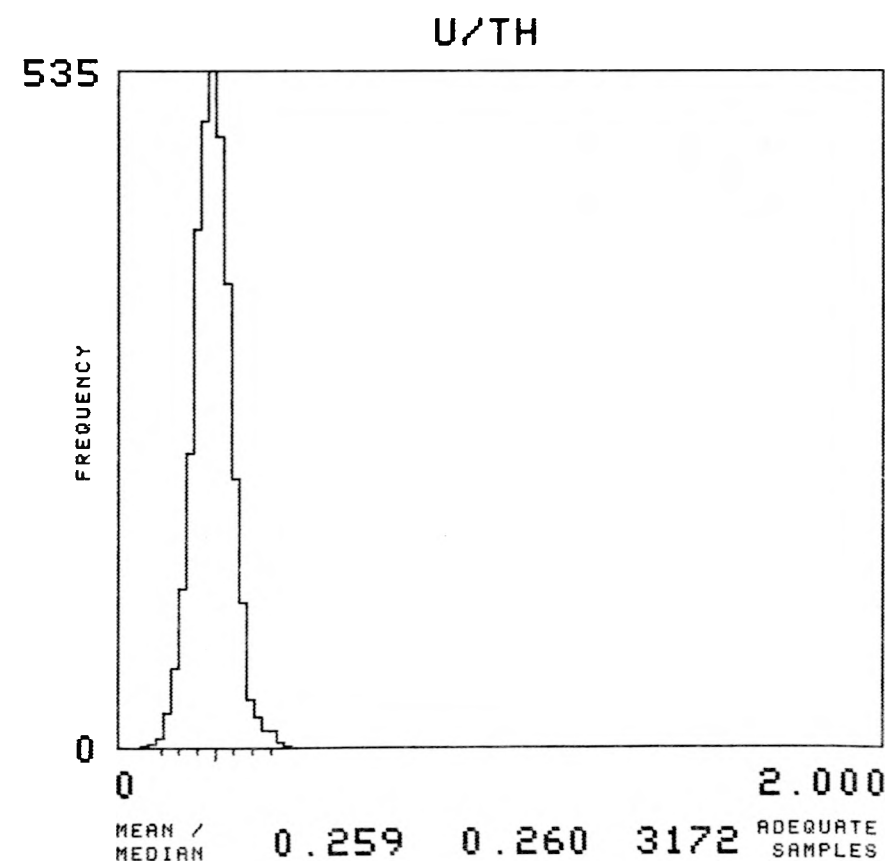
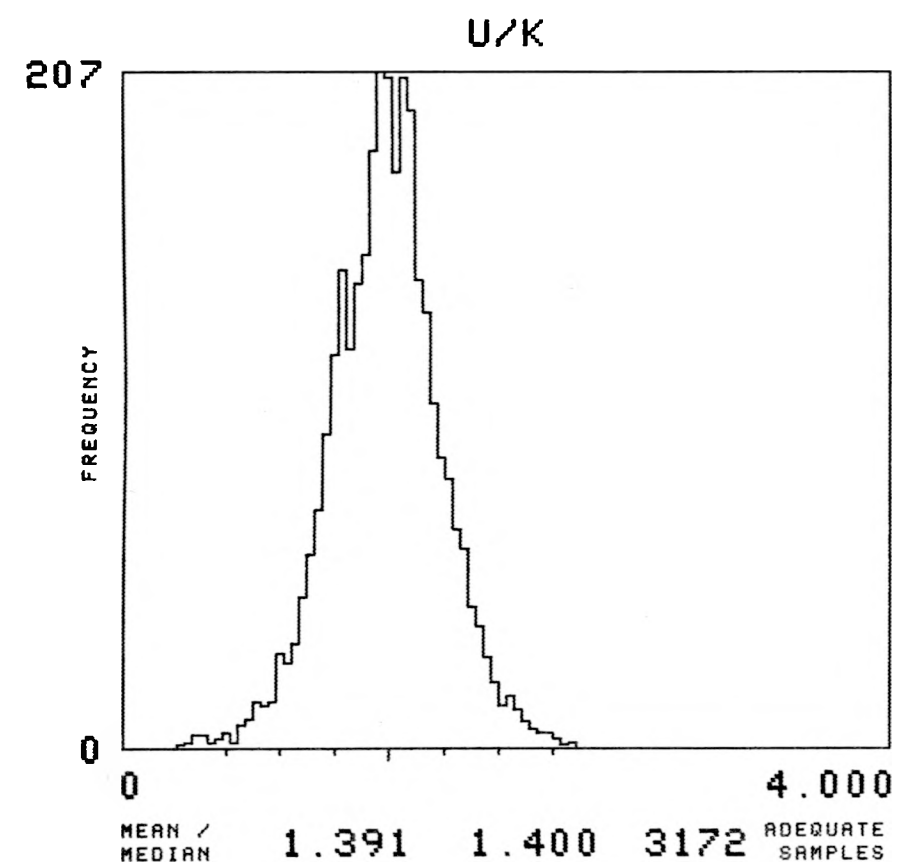
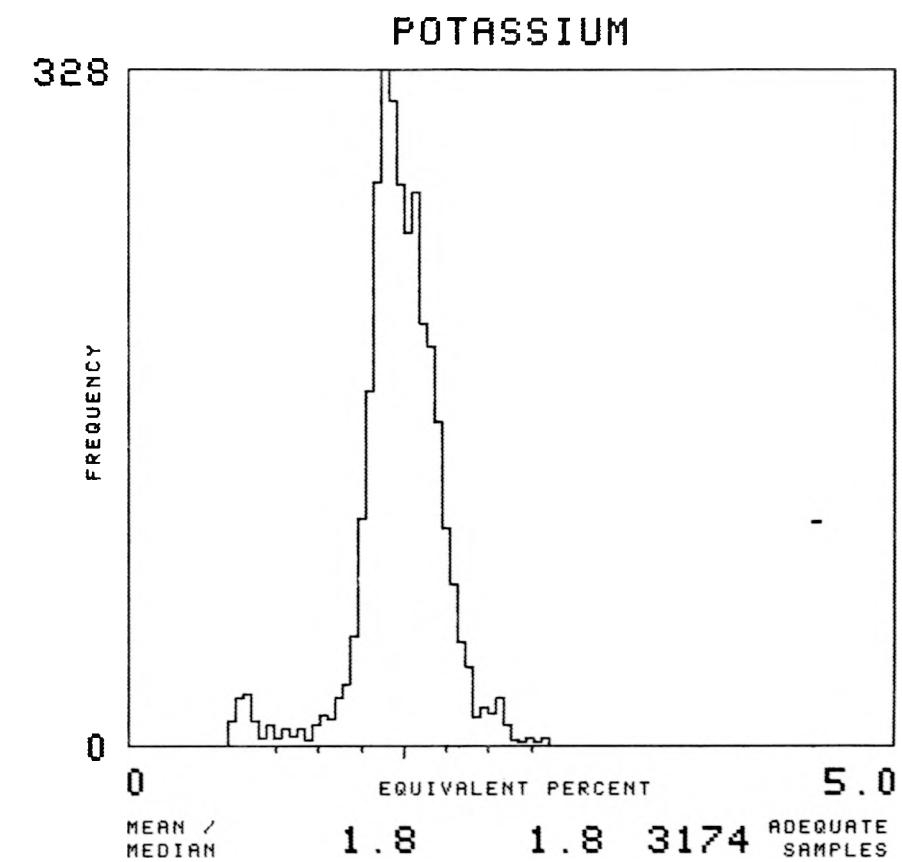
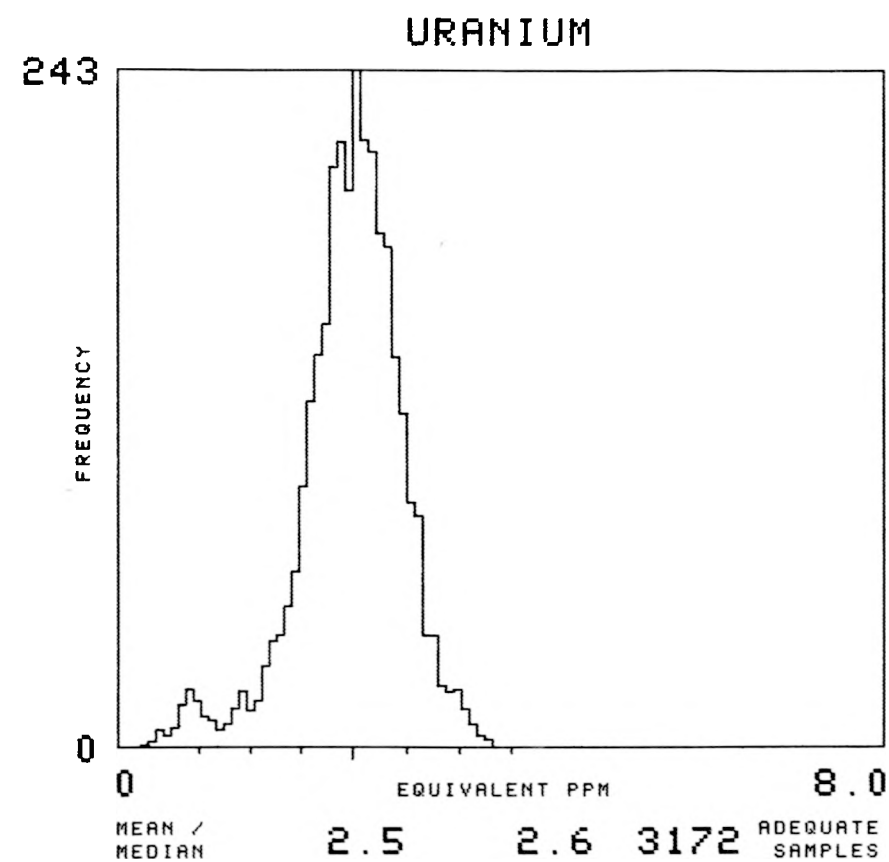
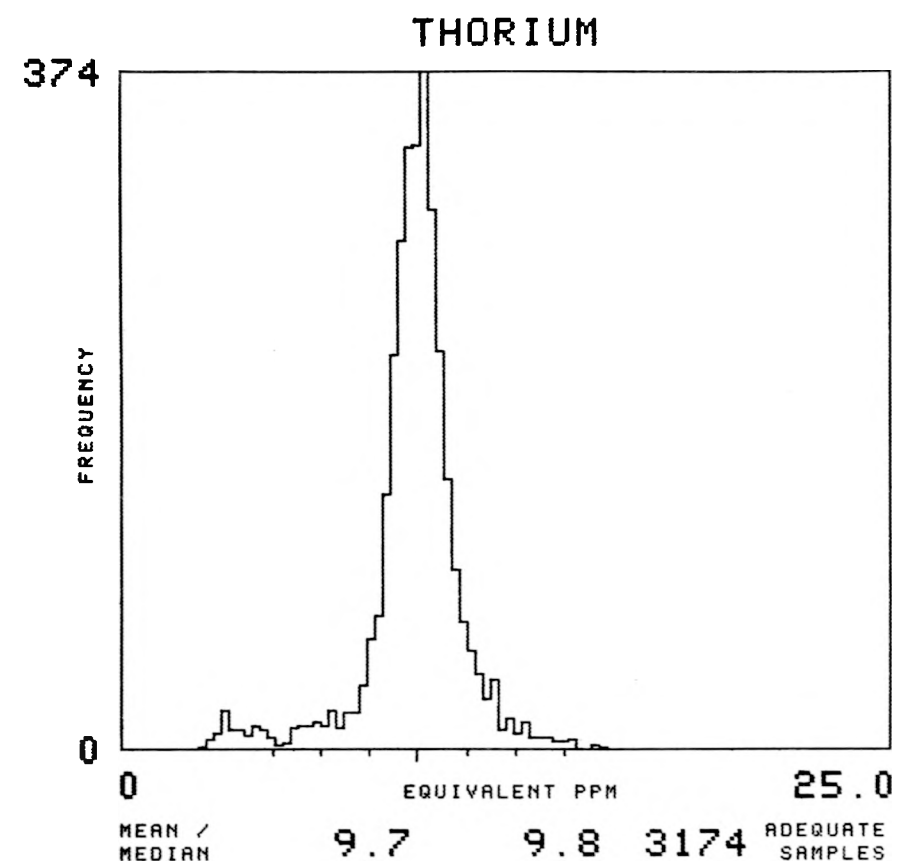
NTMS NK 11-3 HAILEY

MAP UNIT : QAL TOTAL NUMBER OF SAMPLES 9632



NTMS NK 11-3 HAILEY

MAP UNIT : QLBU TOTAL NUMBER OF SAMPLES 3174

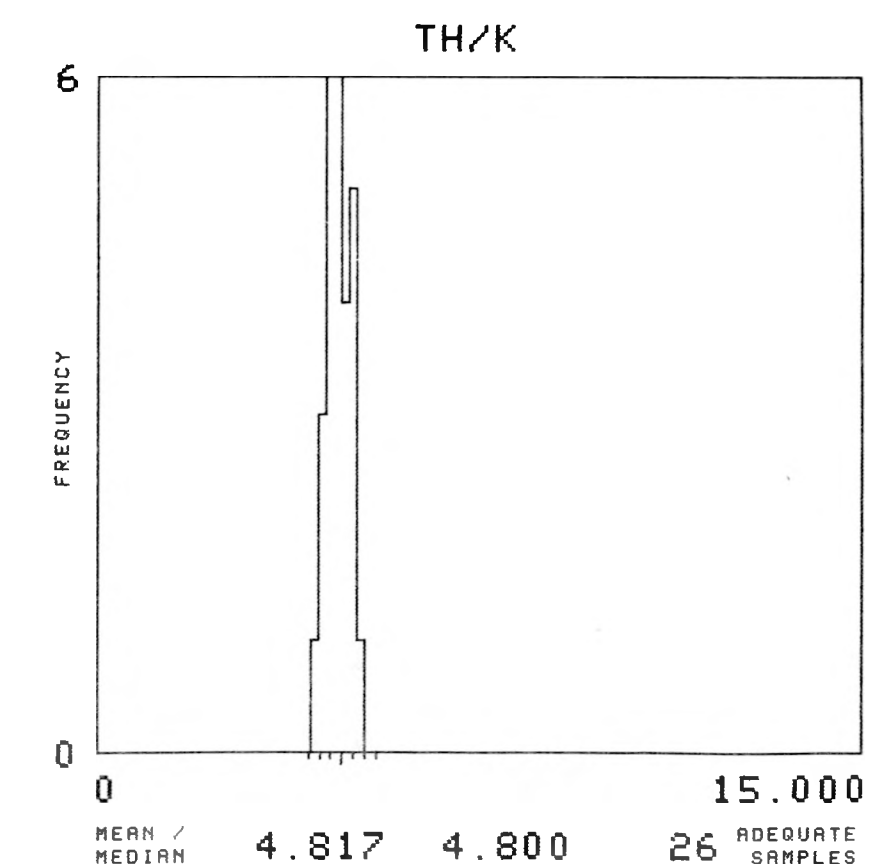
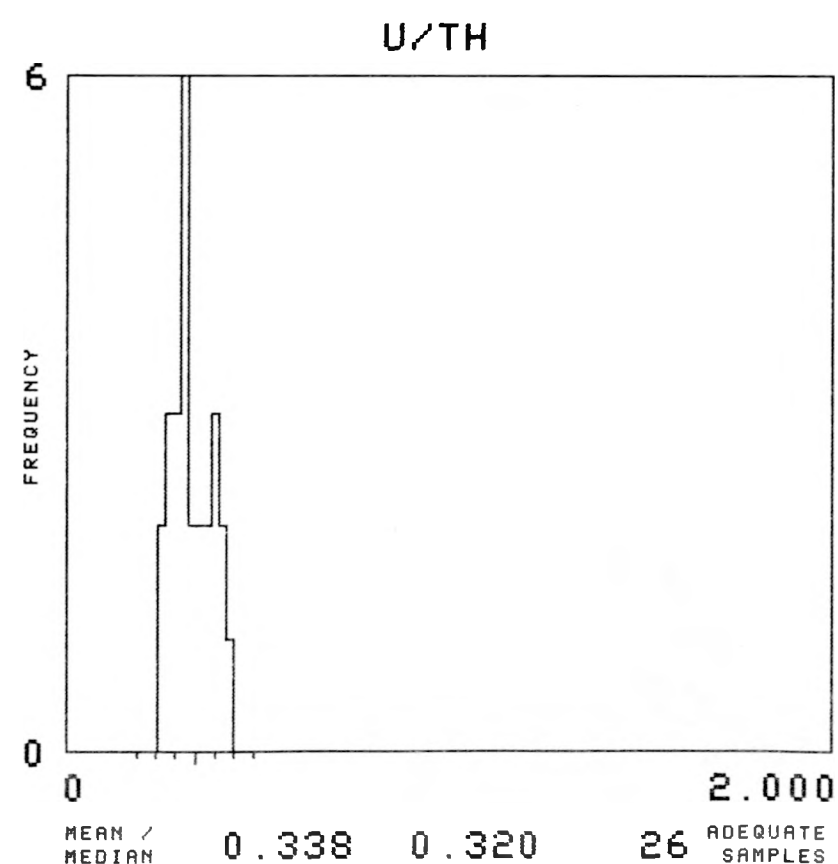
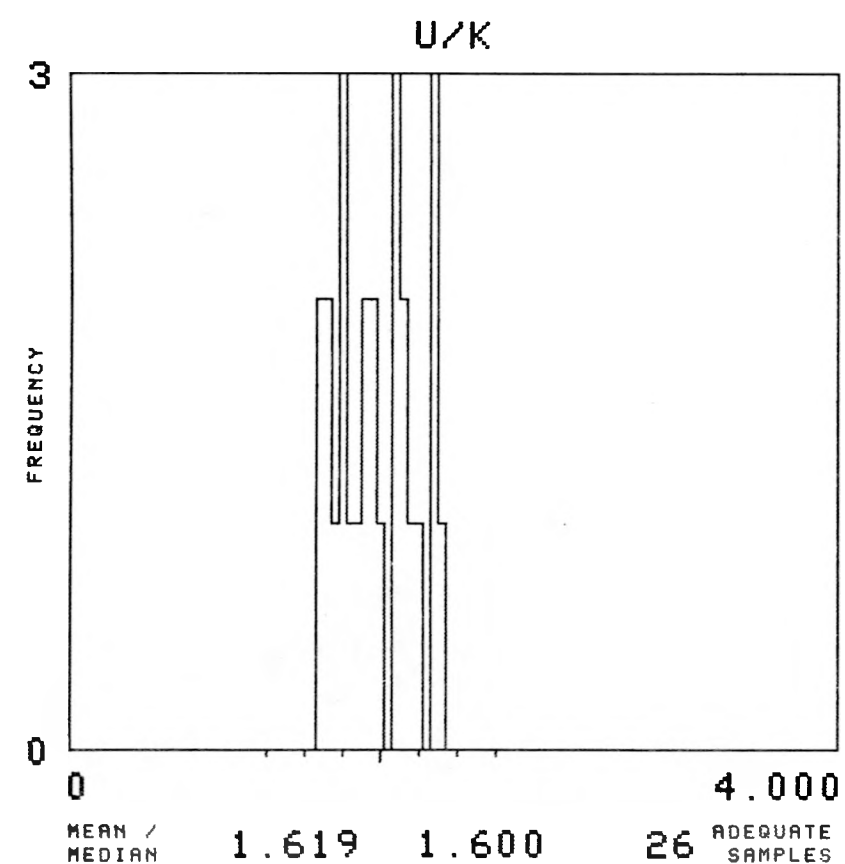
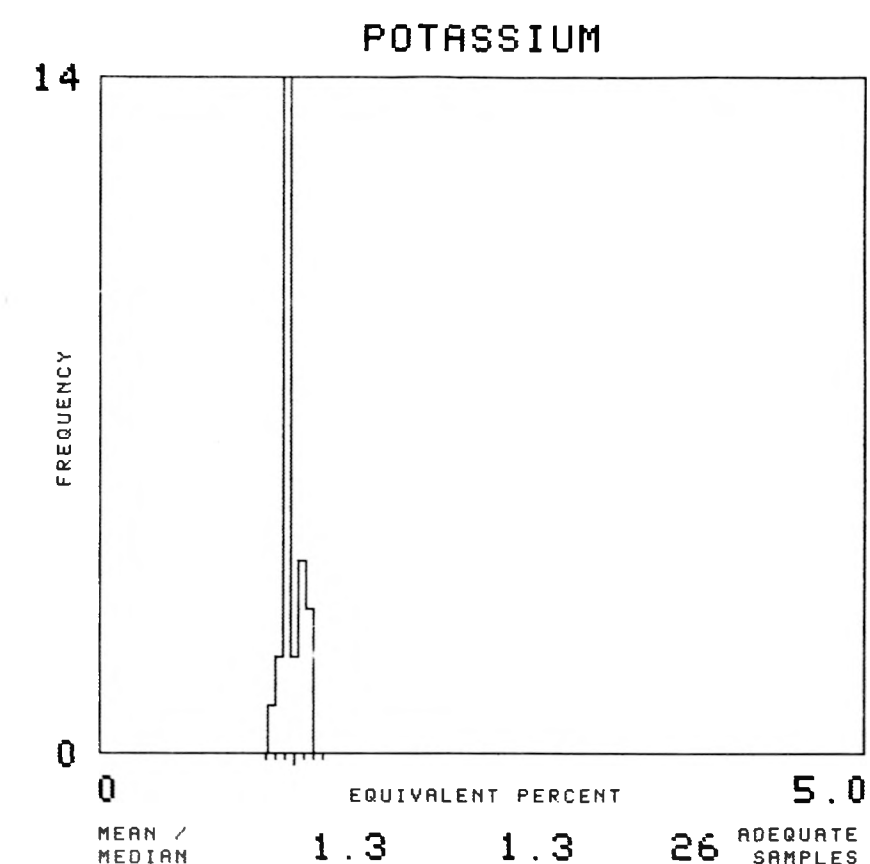
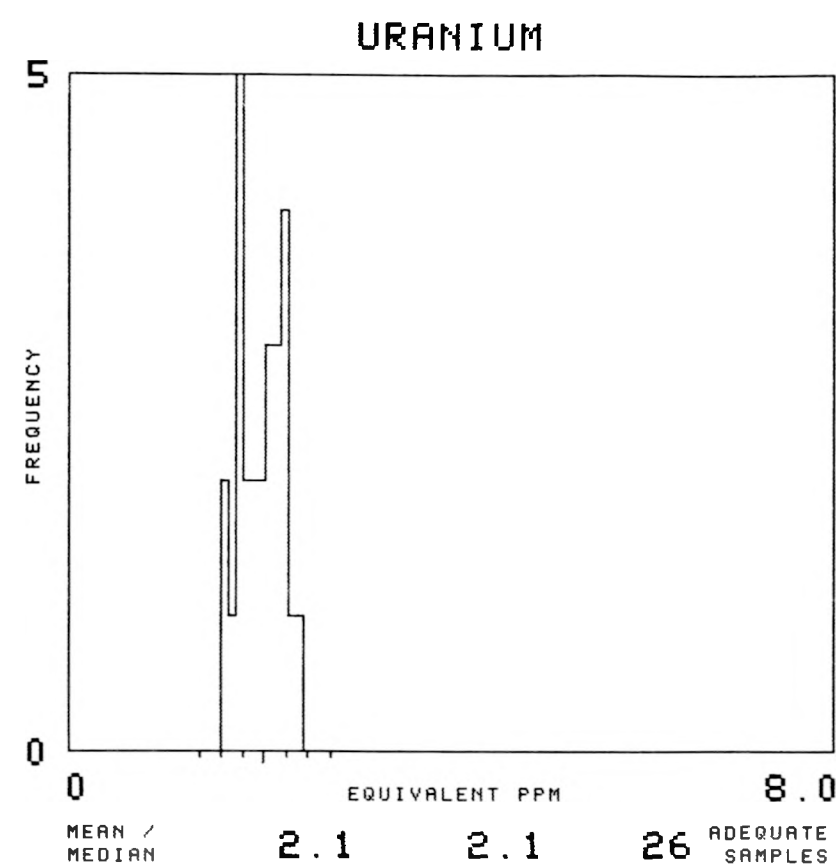
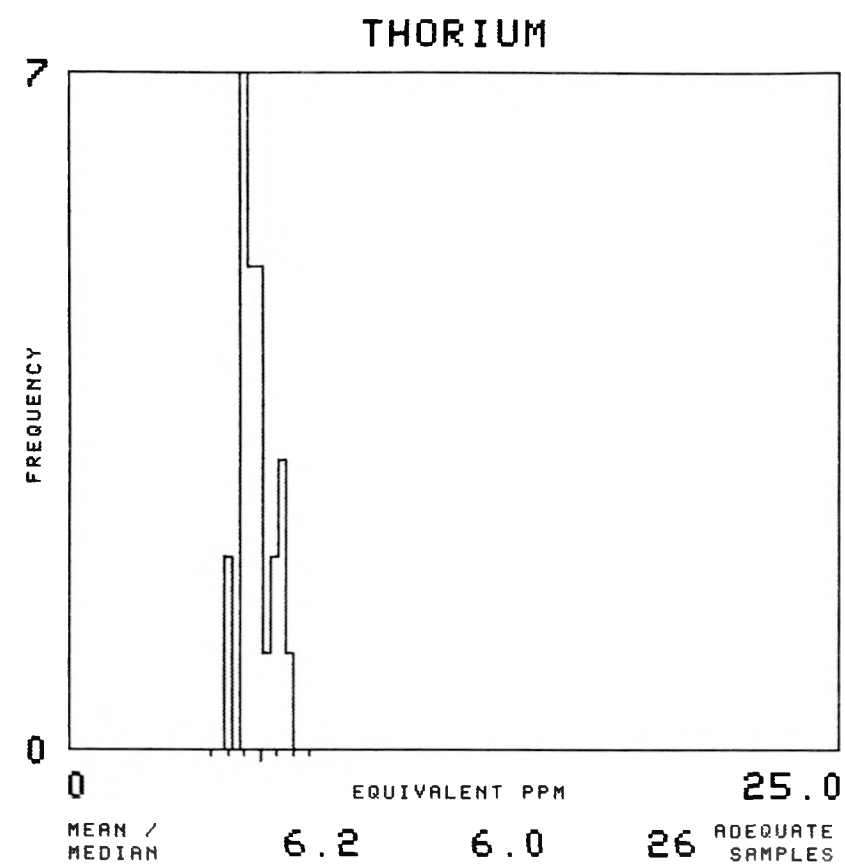


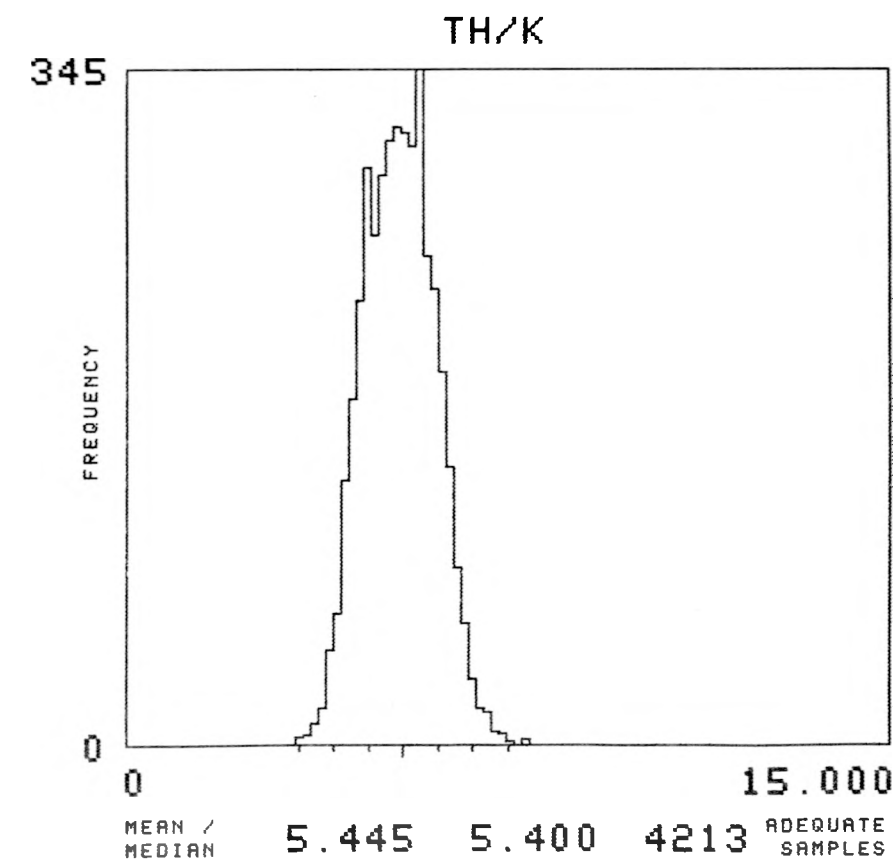
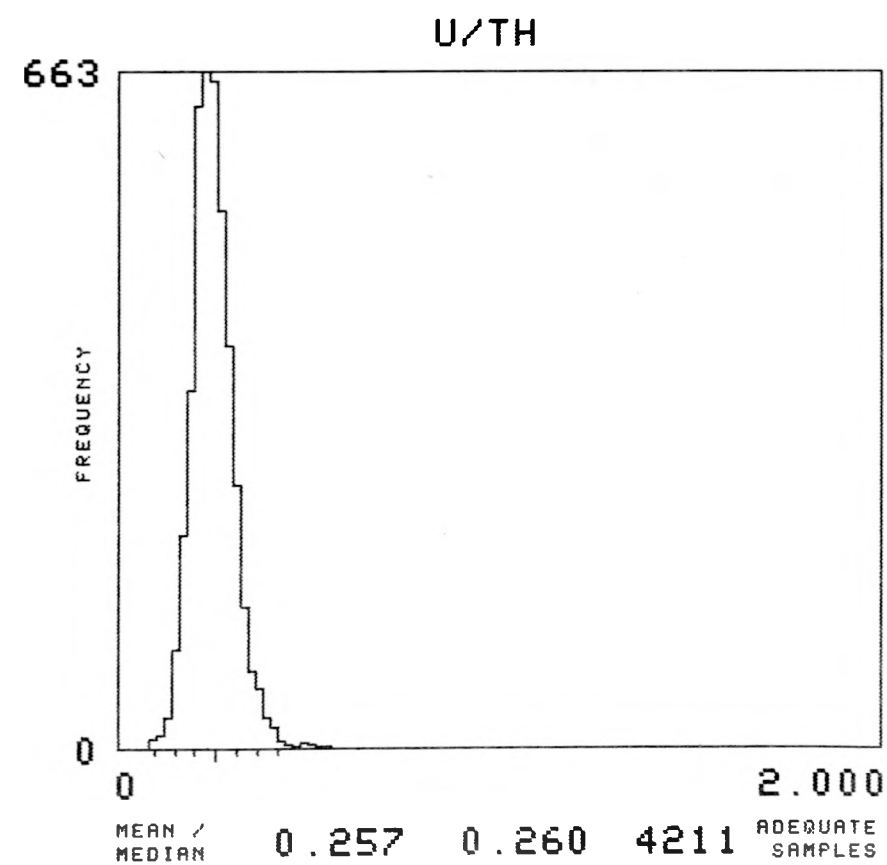
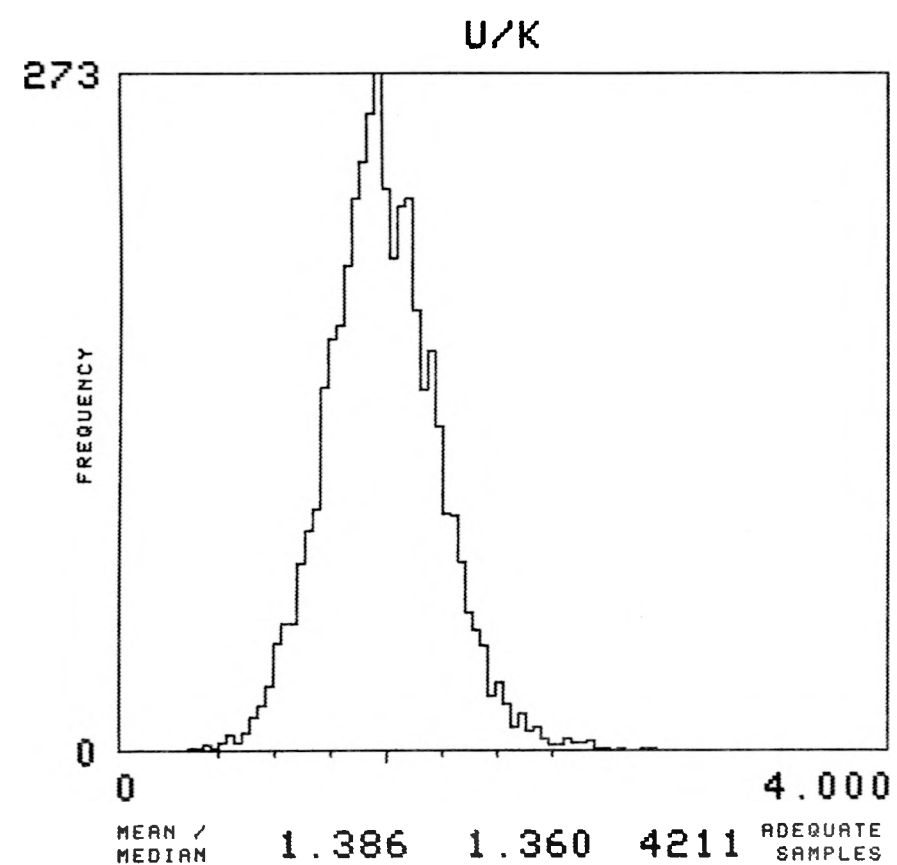
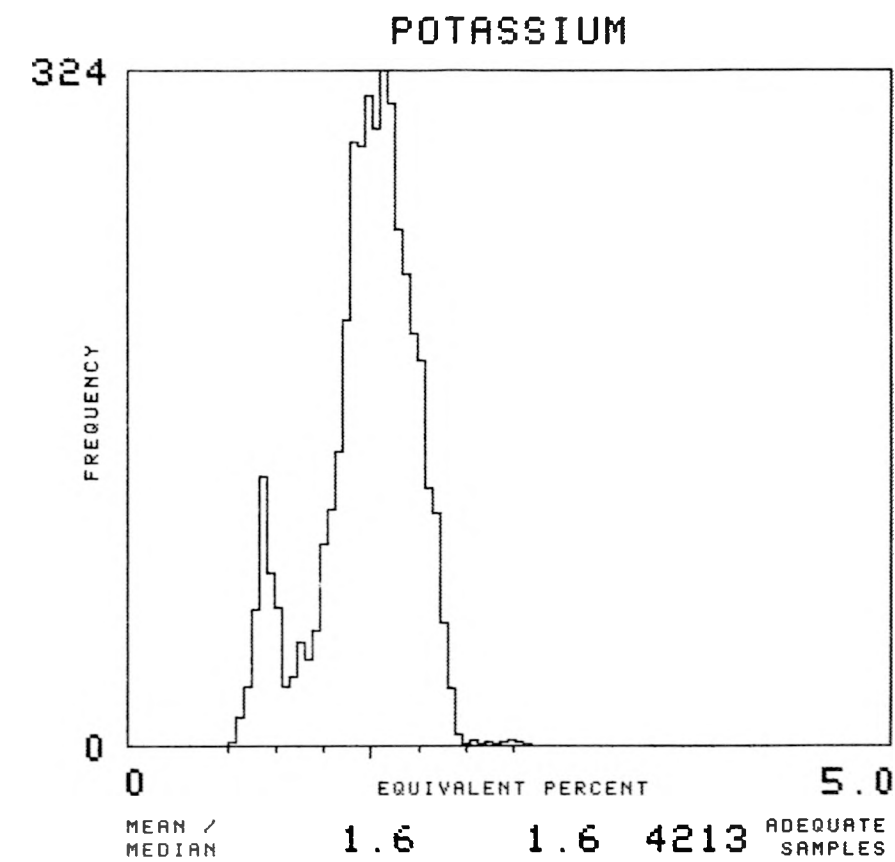
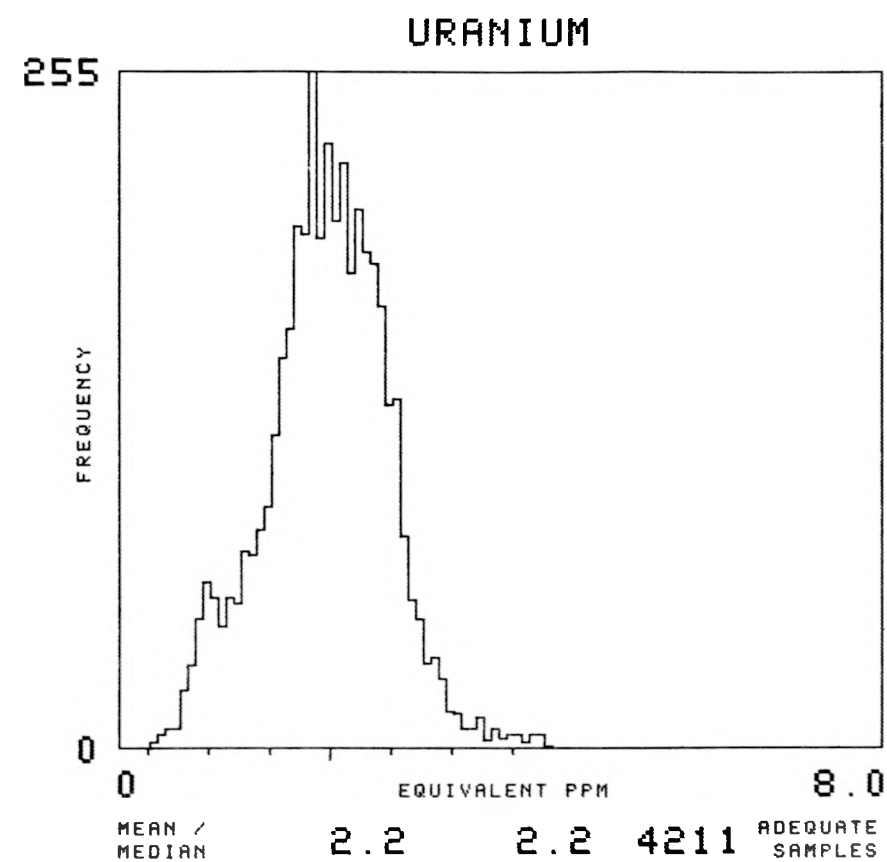
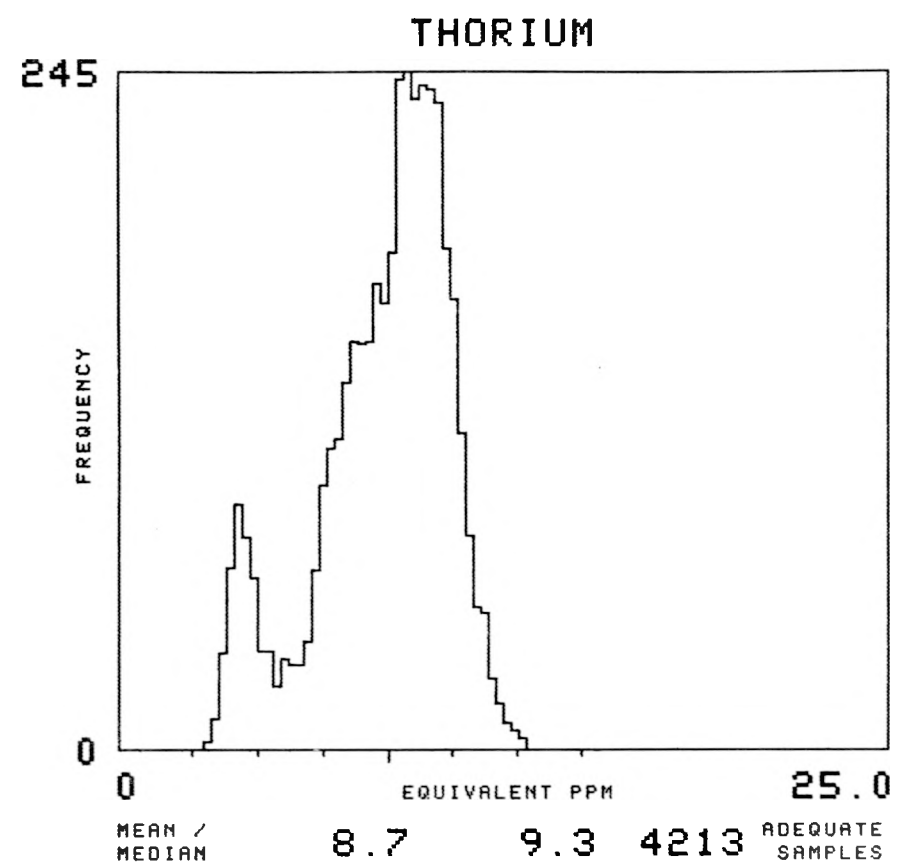
NTMS NK 11-3 HAILEY

MAP UNIT : QLBM

TOTAL NUMBER
OF SAMPLES

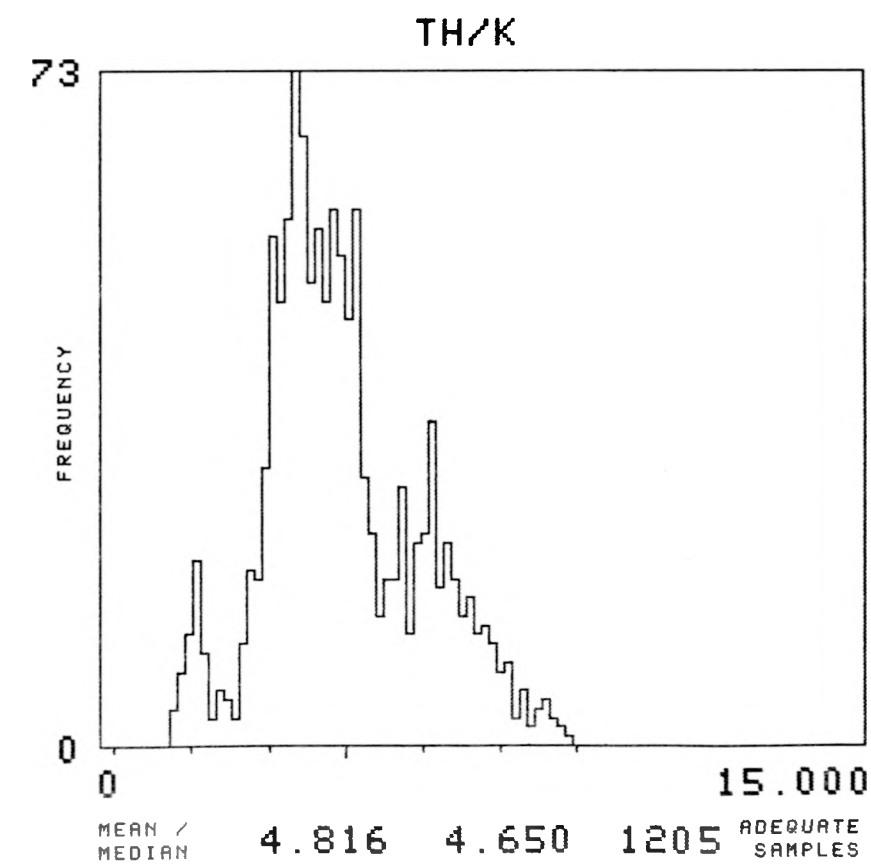
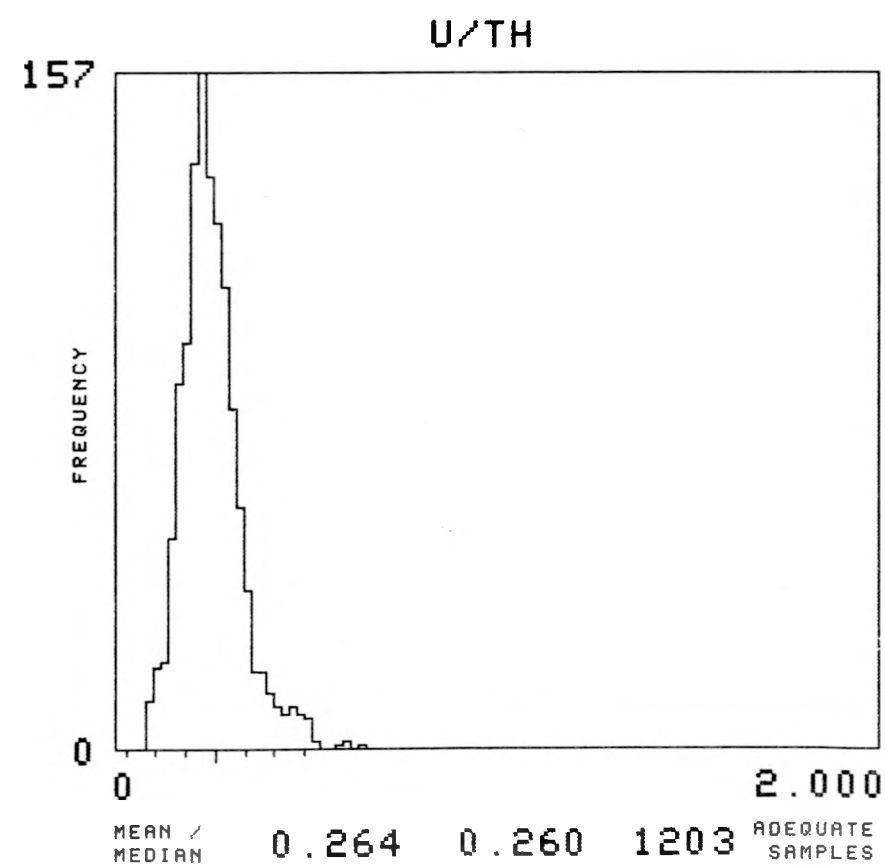
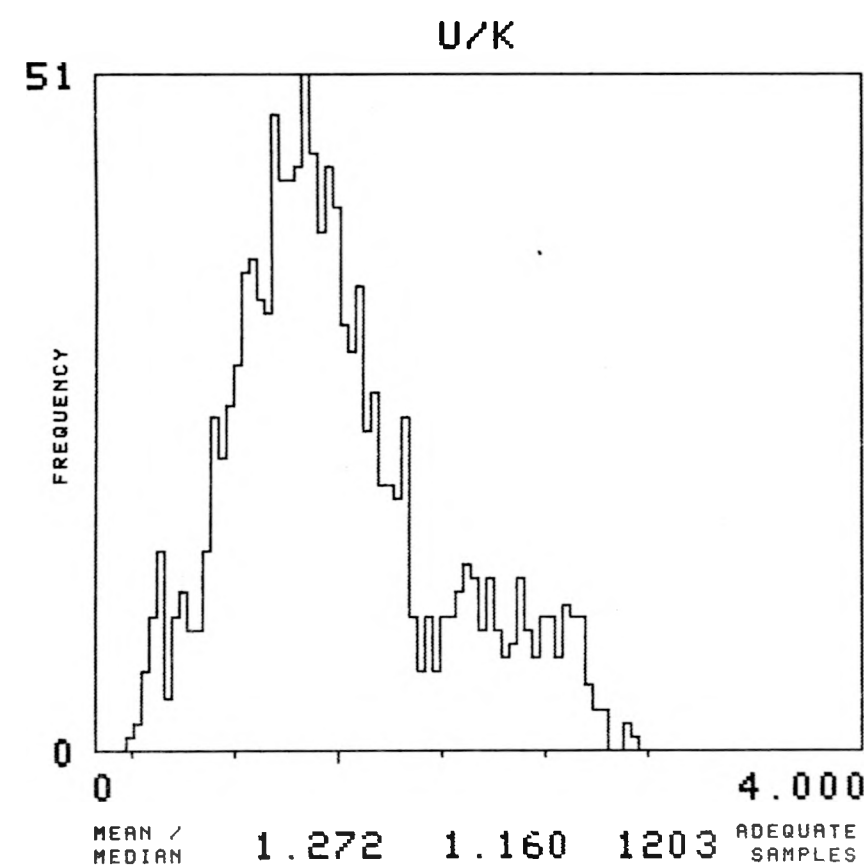
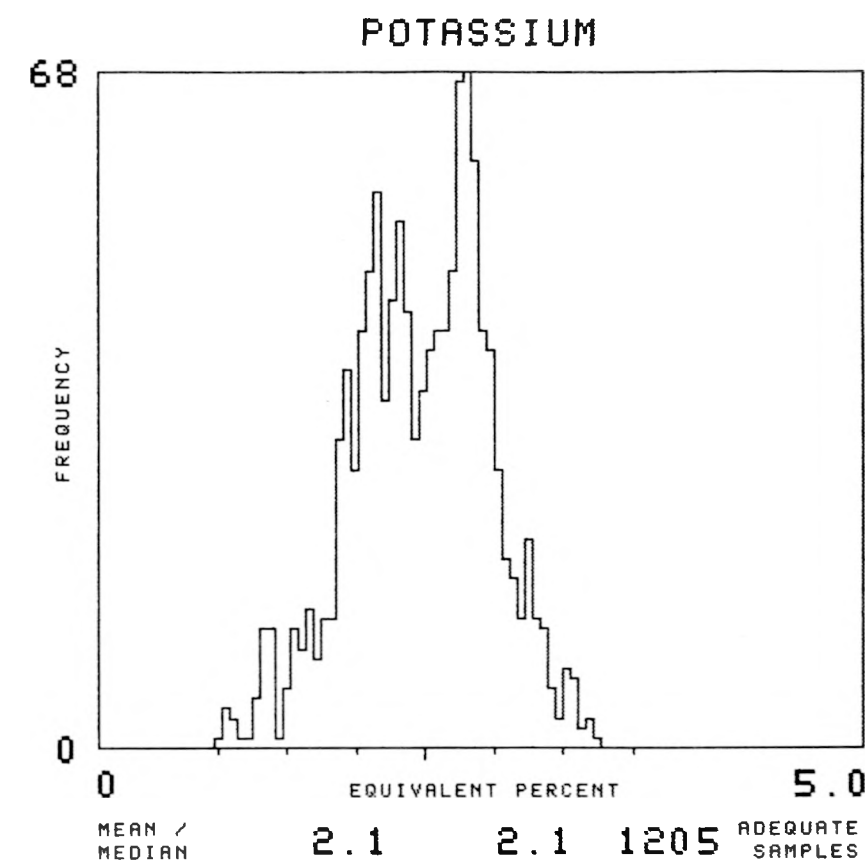
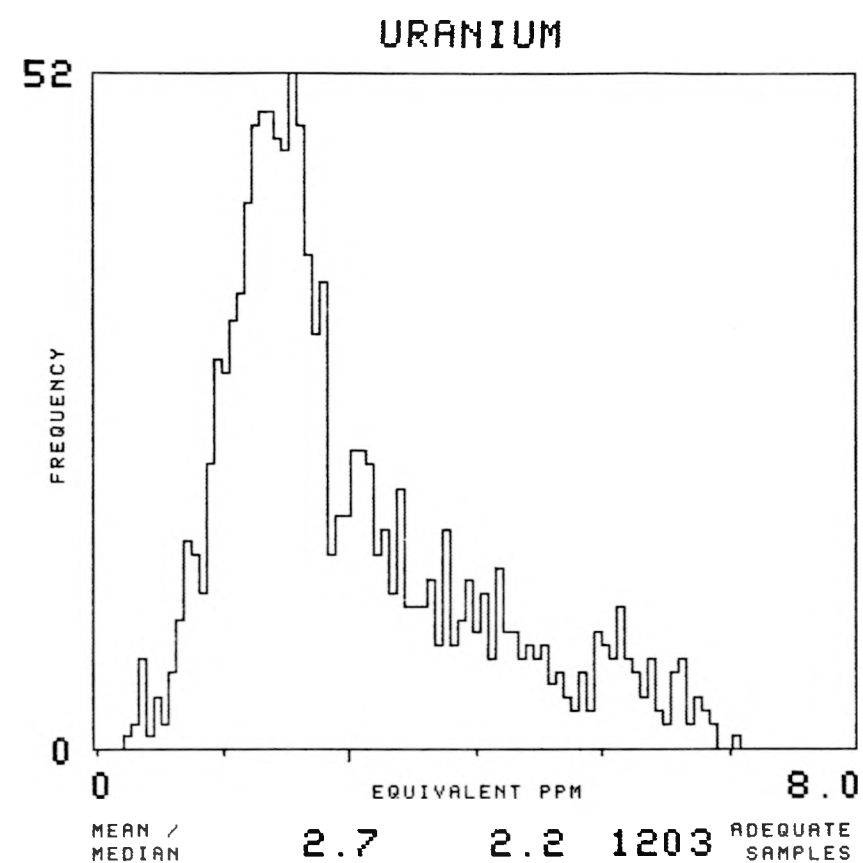
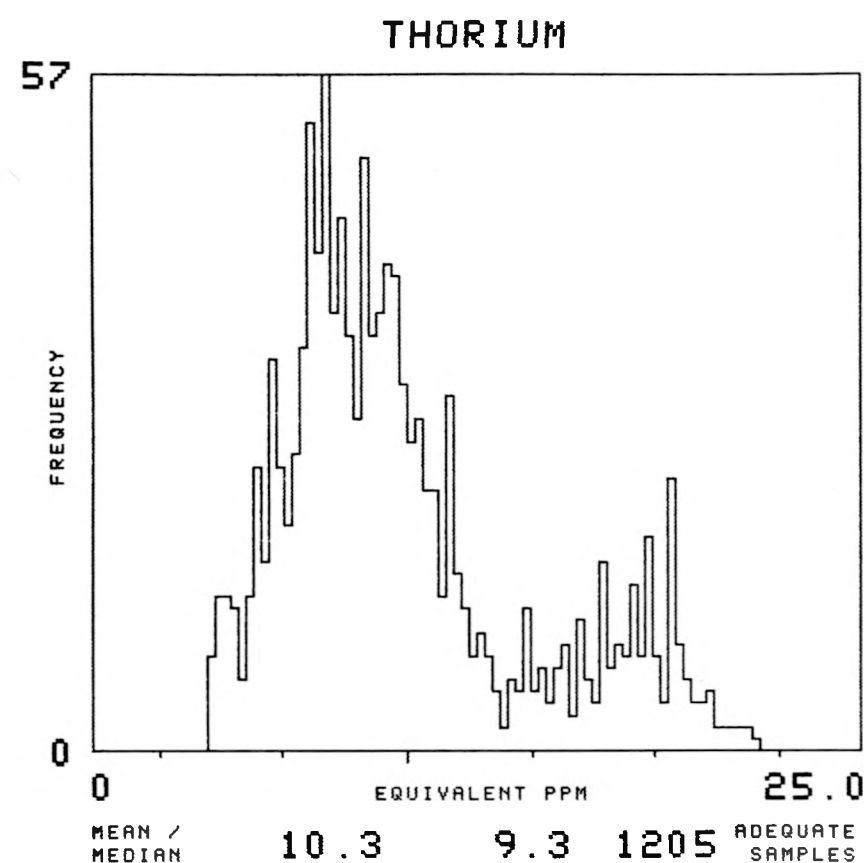
26

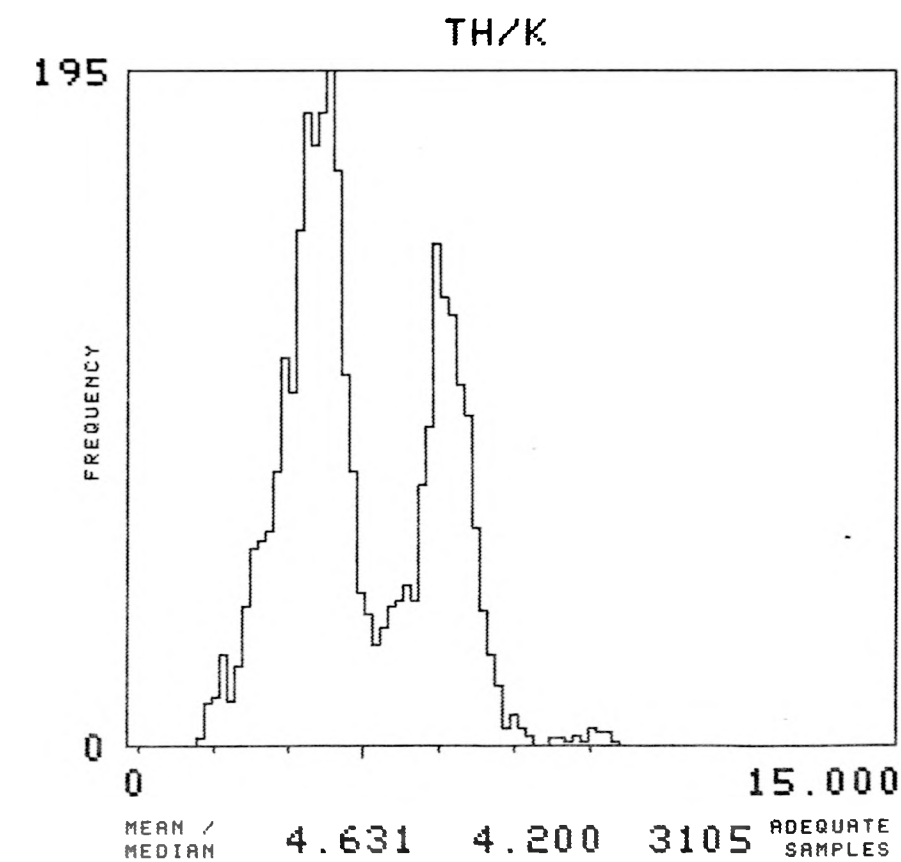
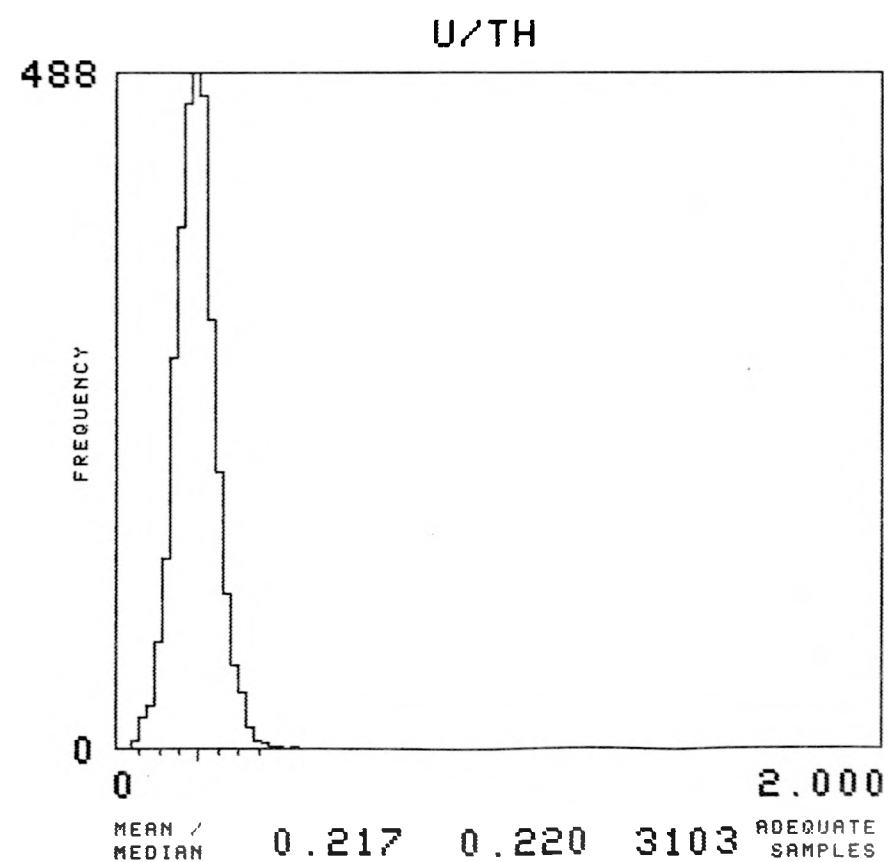
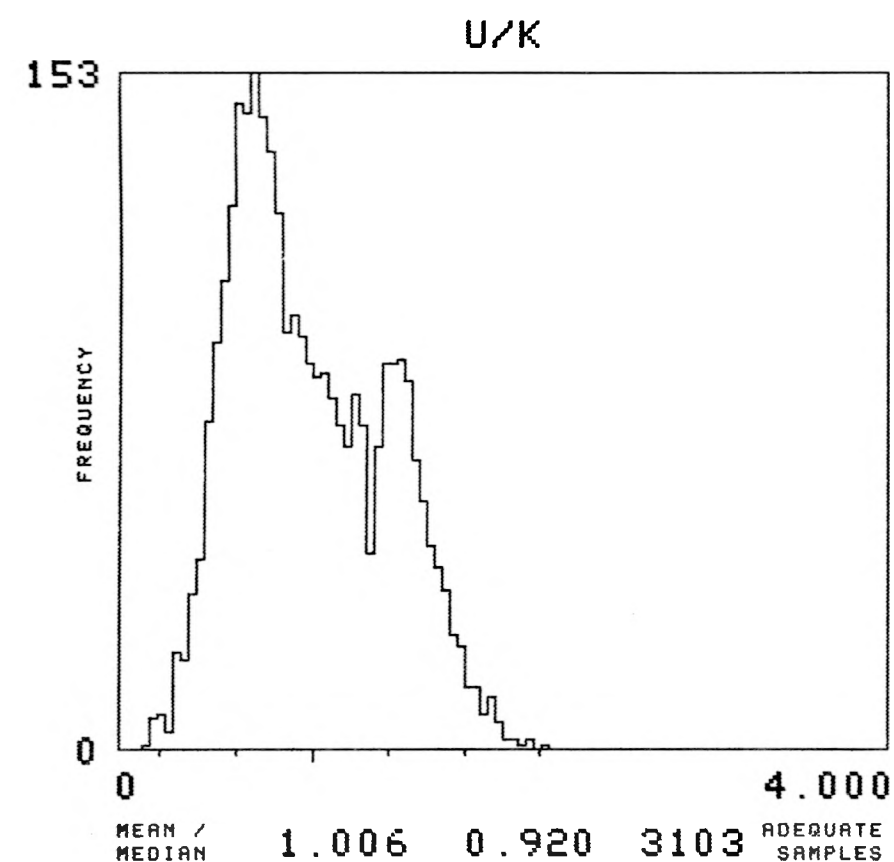
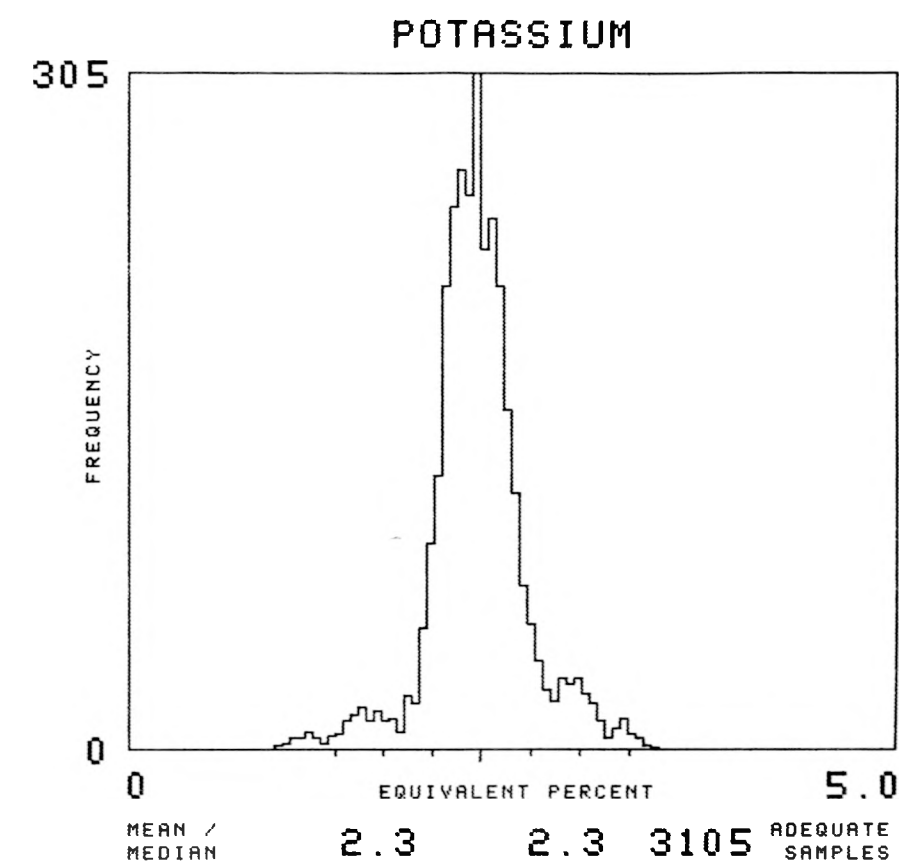
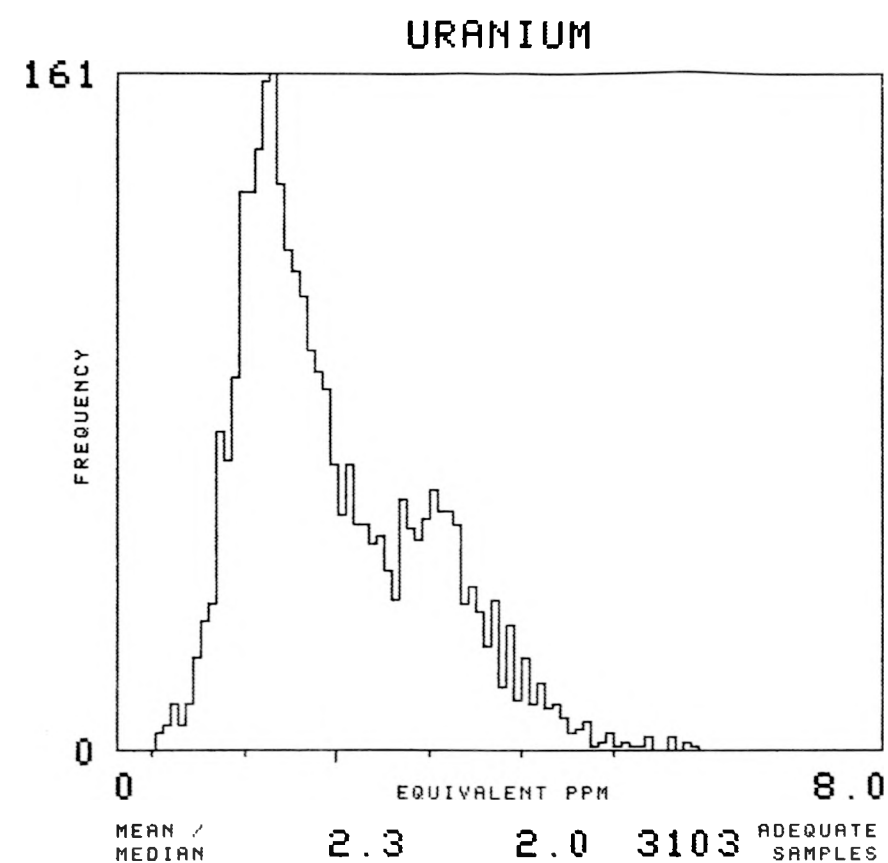
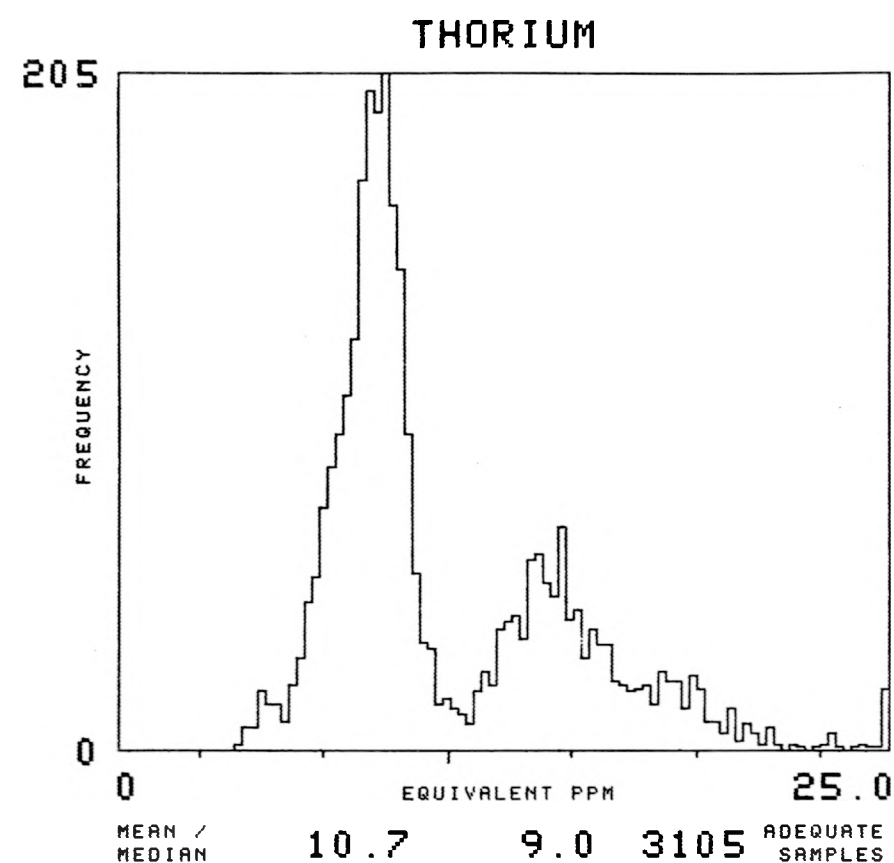




NTMS NK 11-3 HAILEY

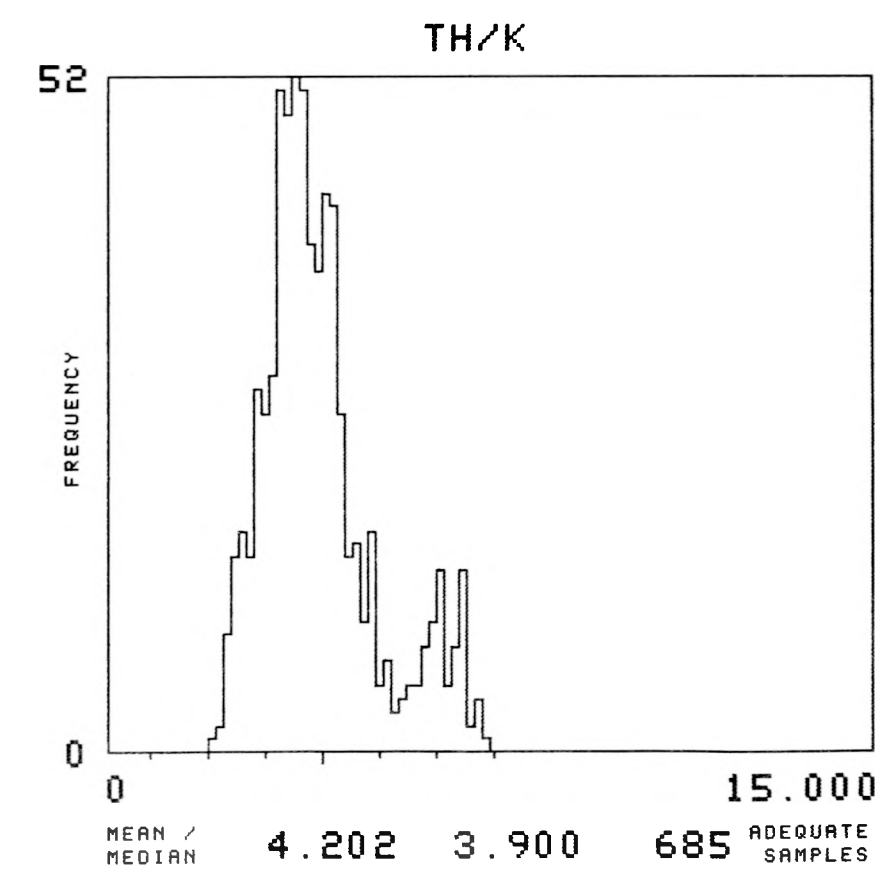
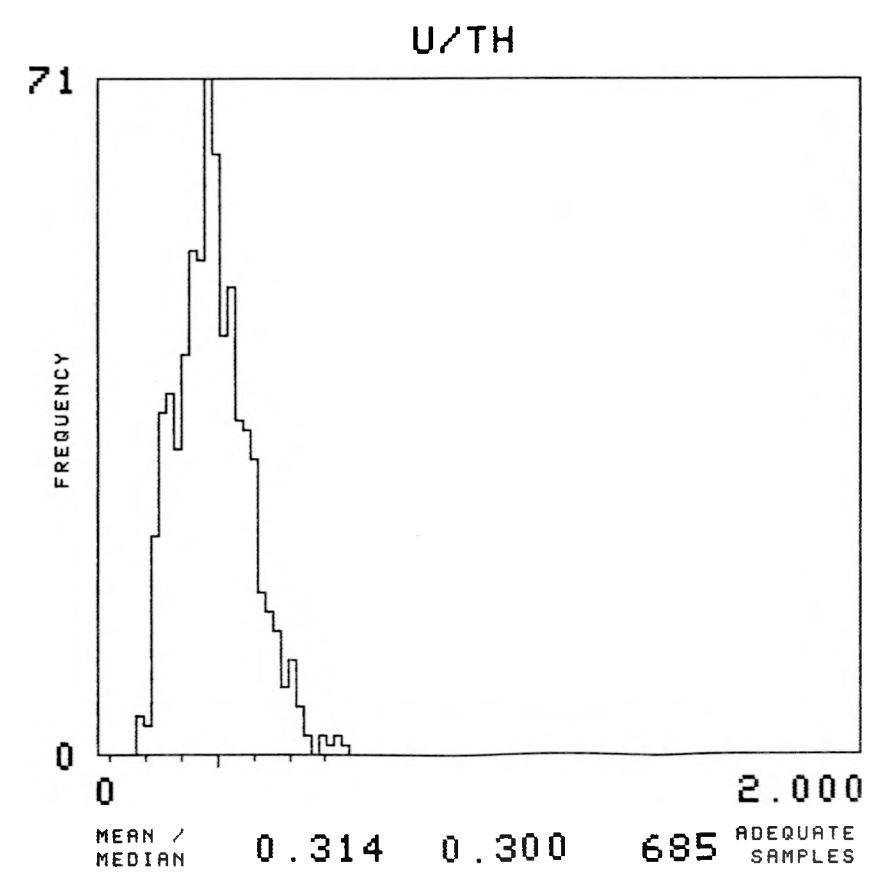
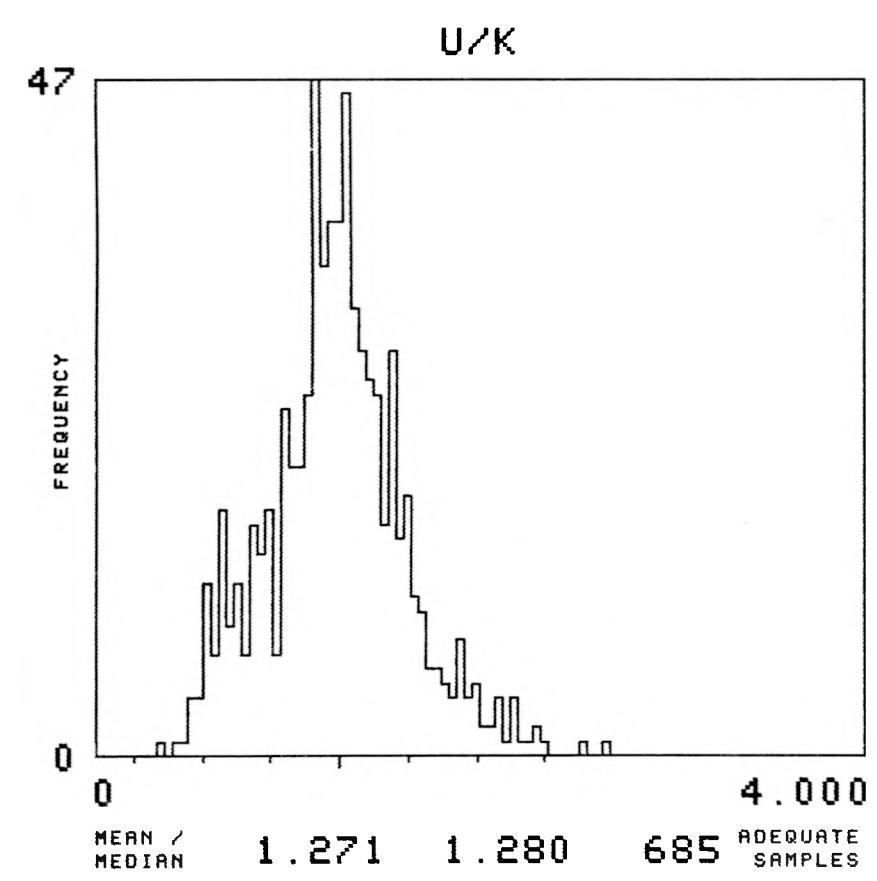
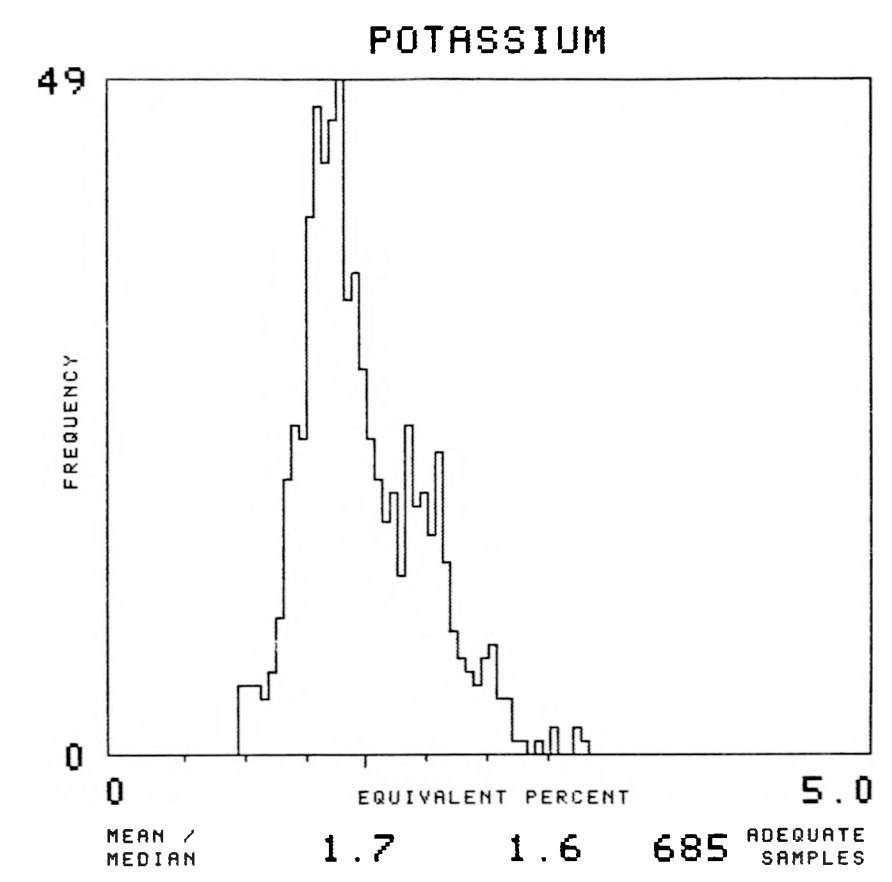
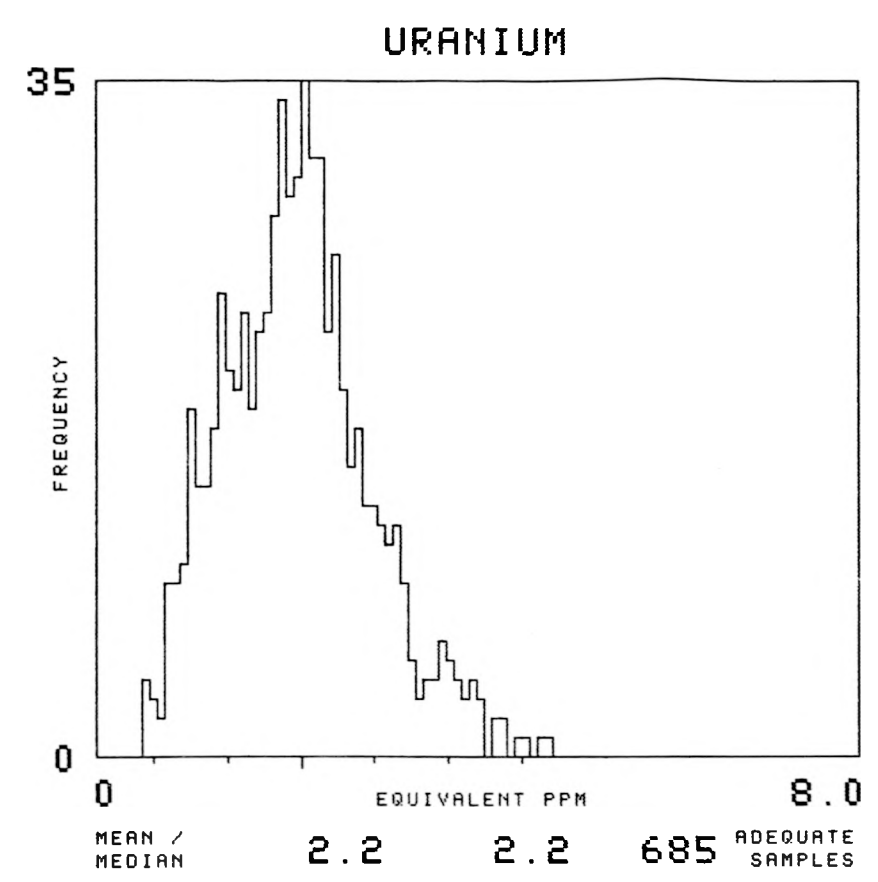
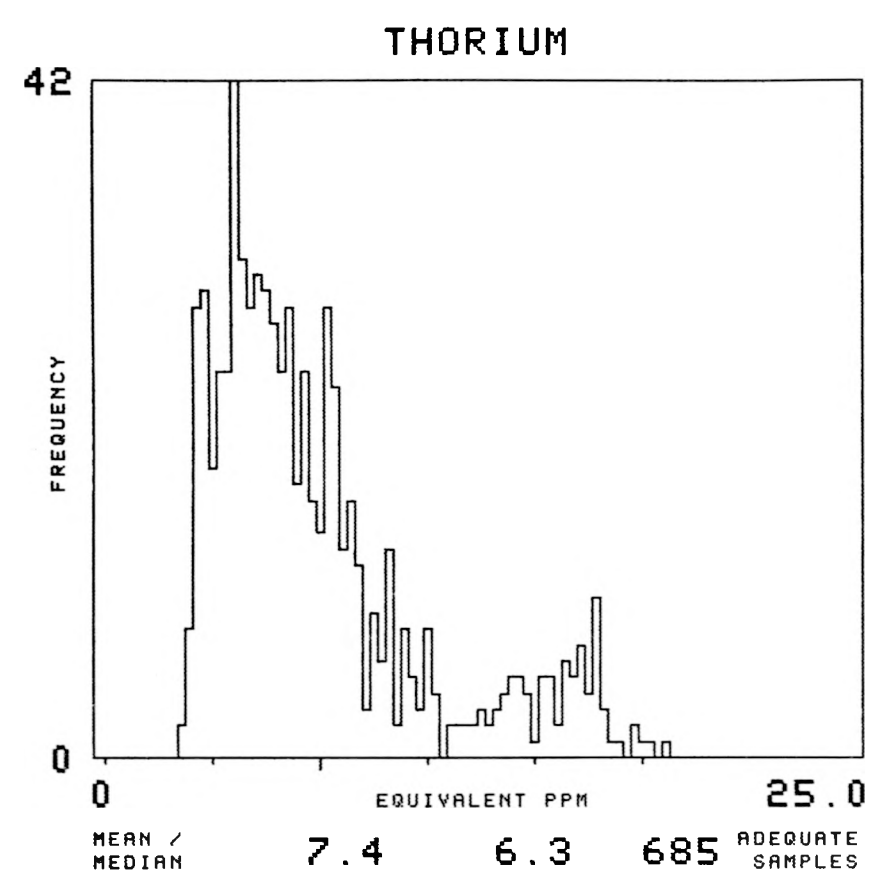
MAP UNIT : QF TOTAL NUMBER OF SAMPLES 1260

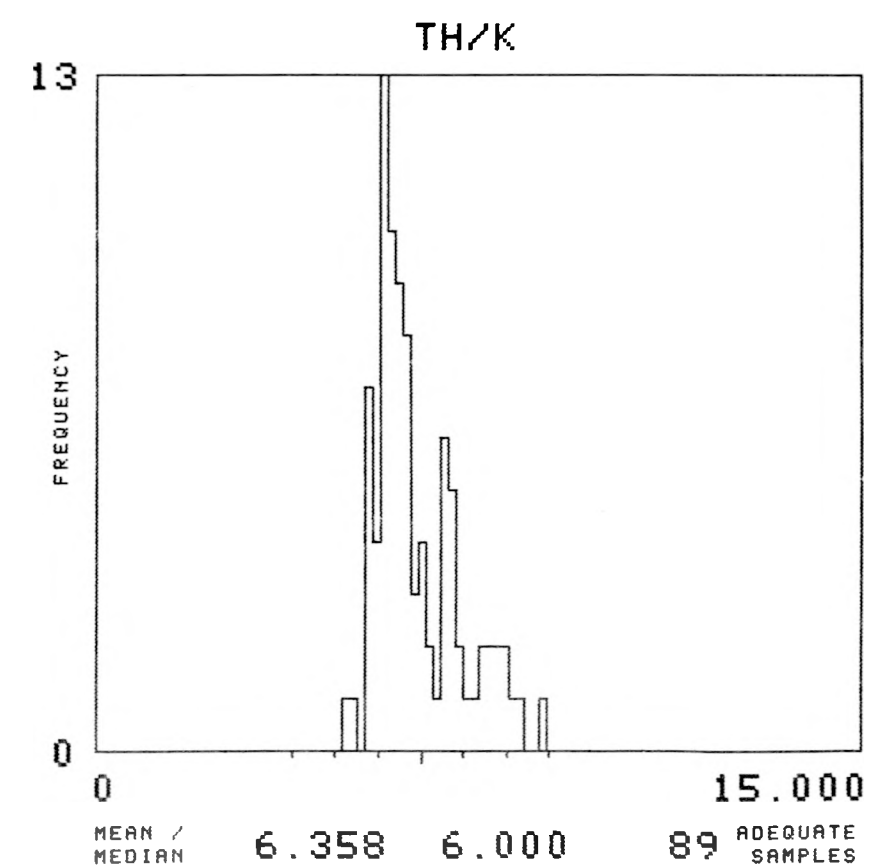
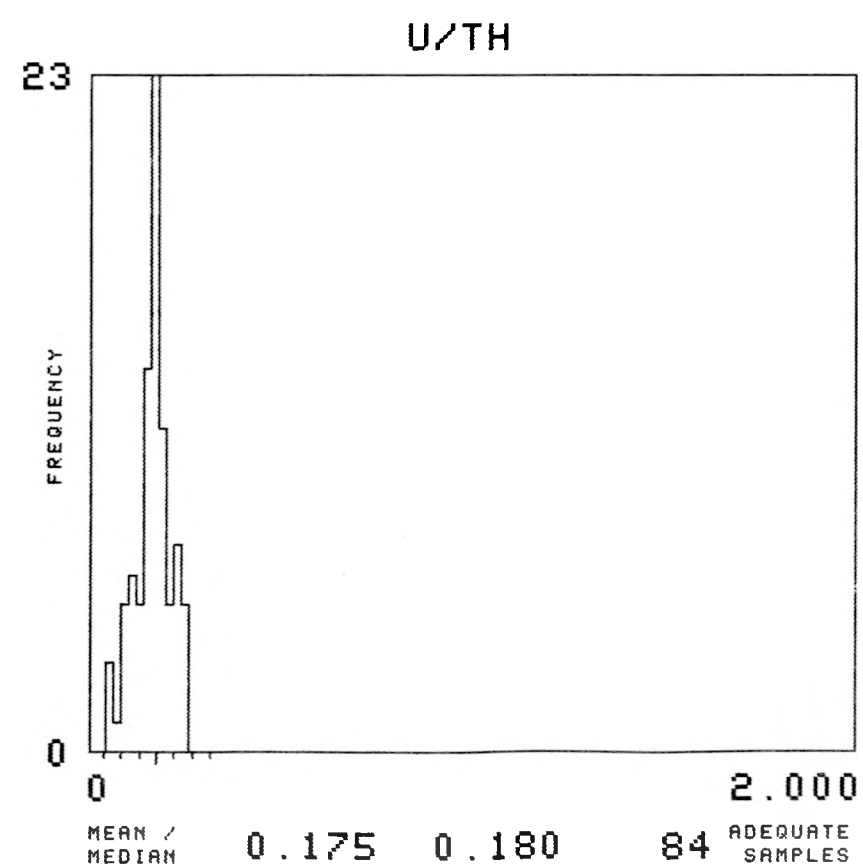
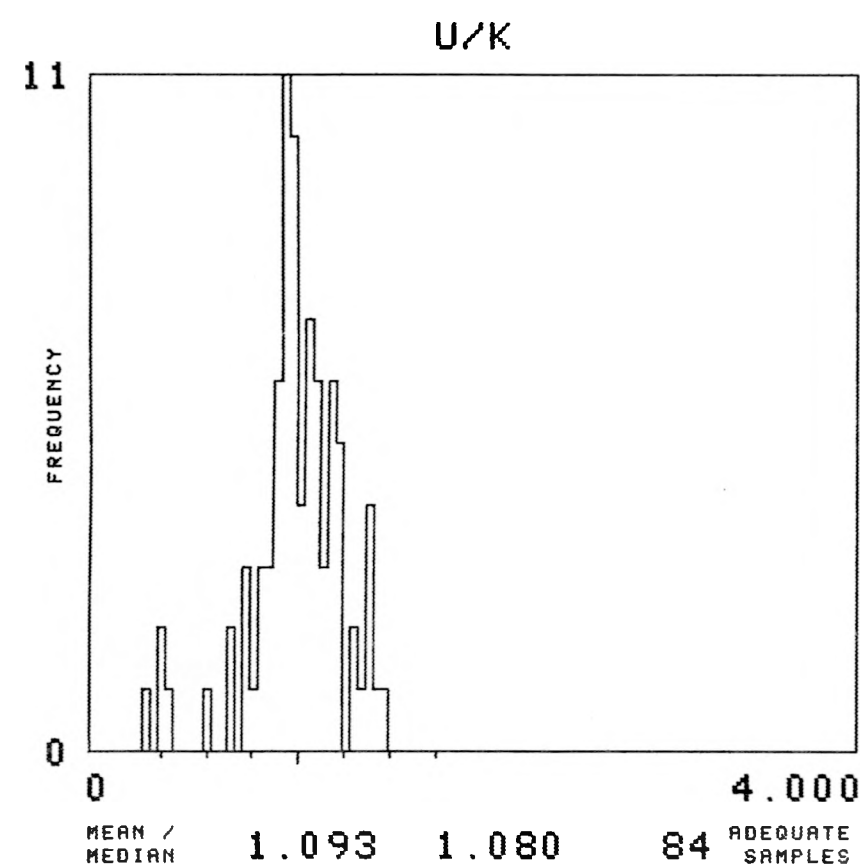
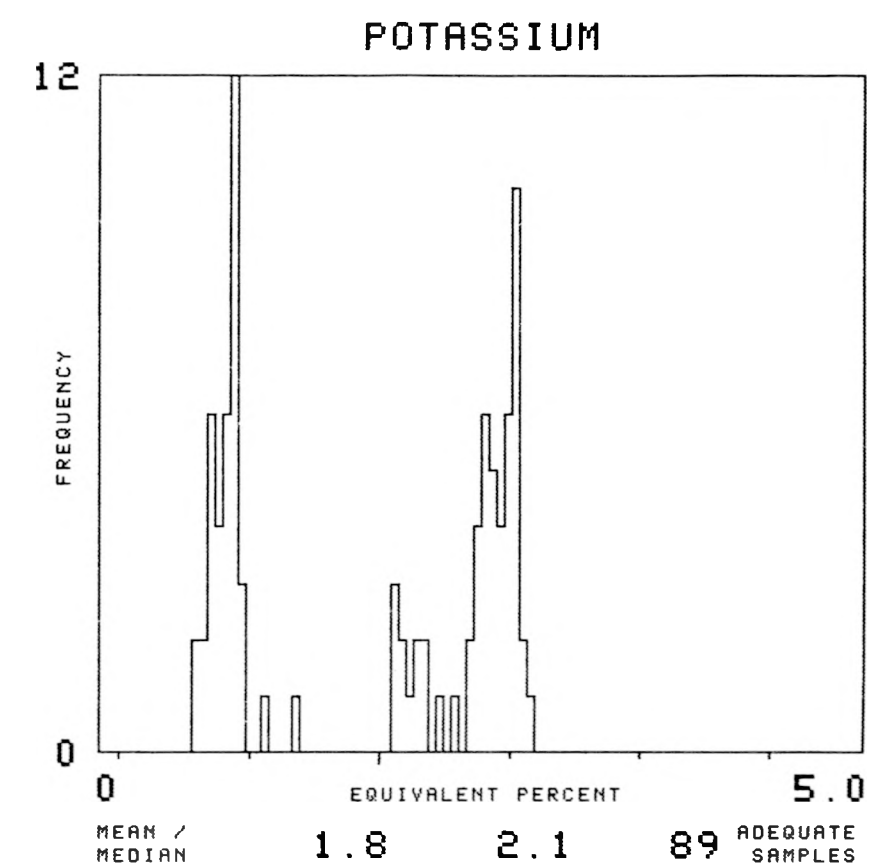
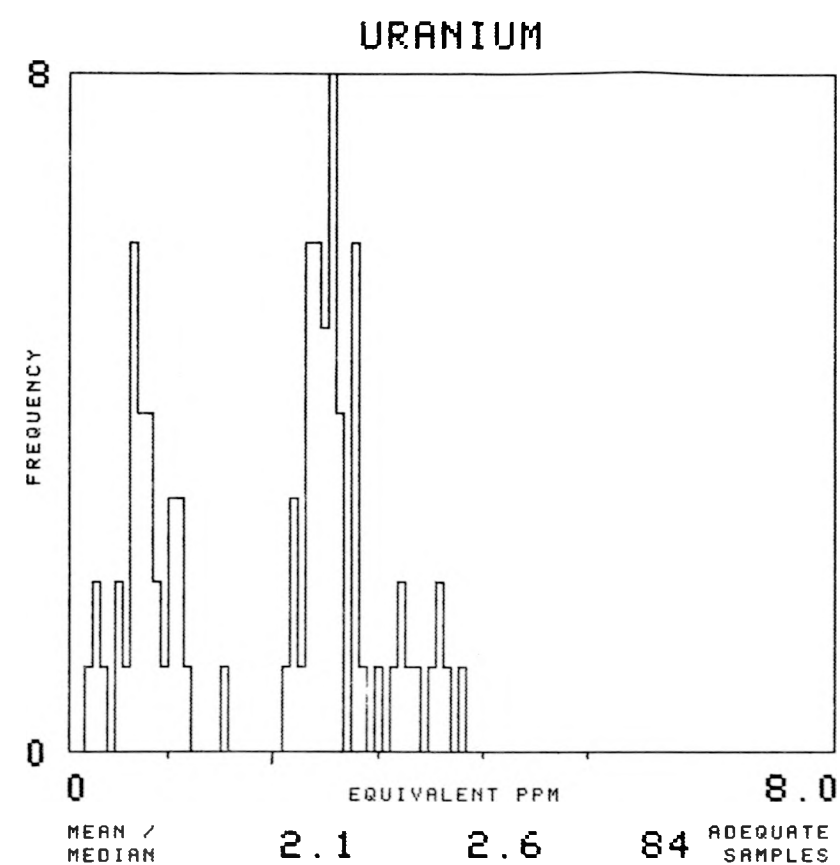
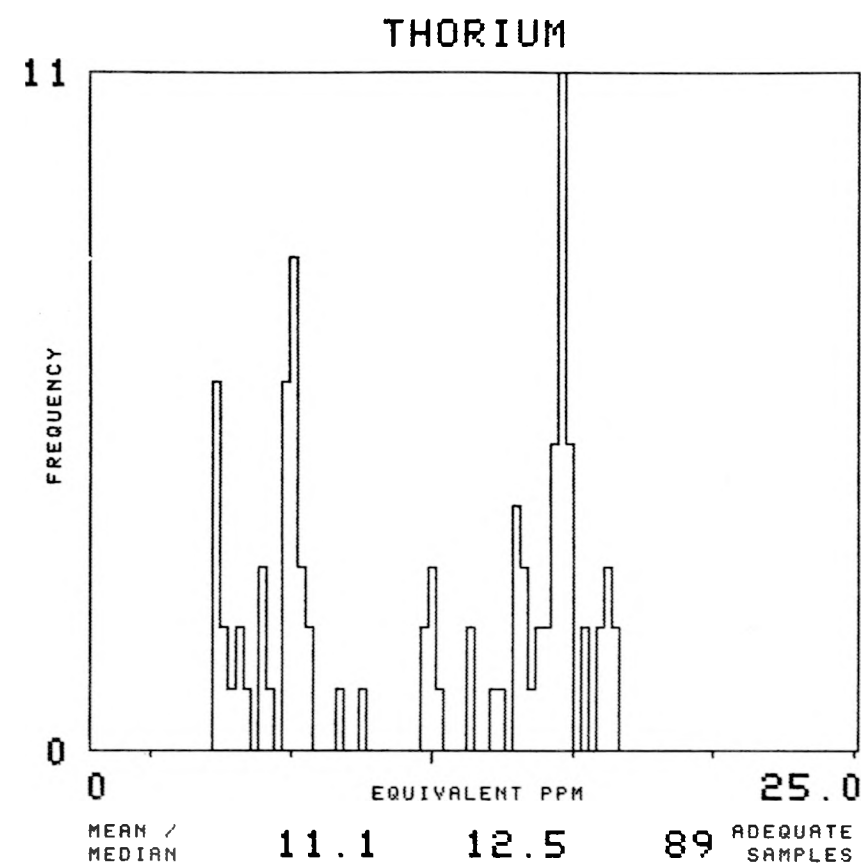




NTMS NK 11-3 HAILEY

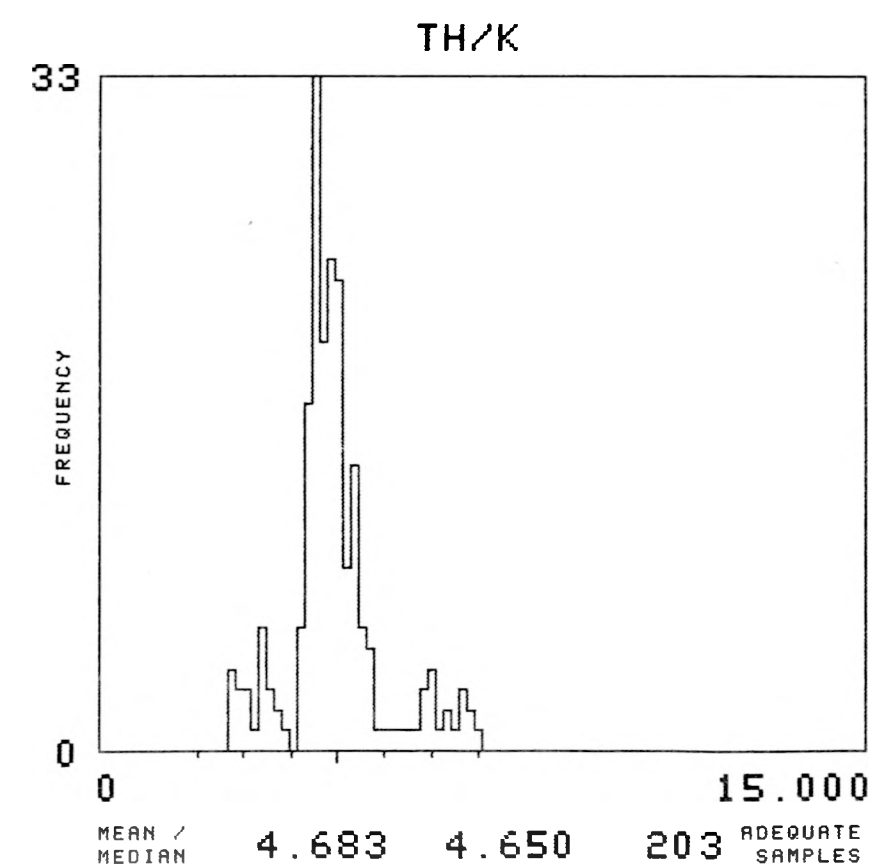
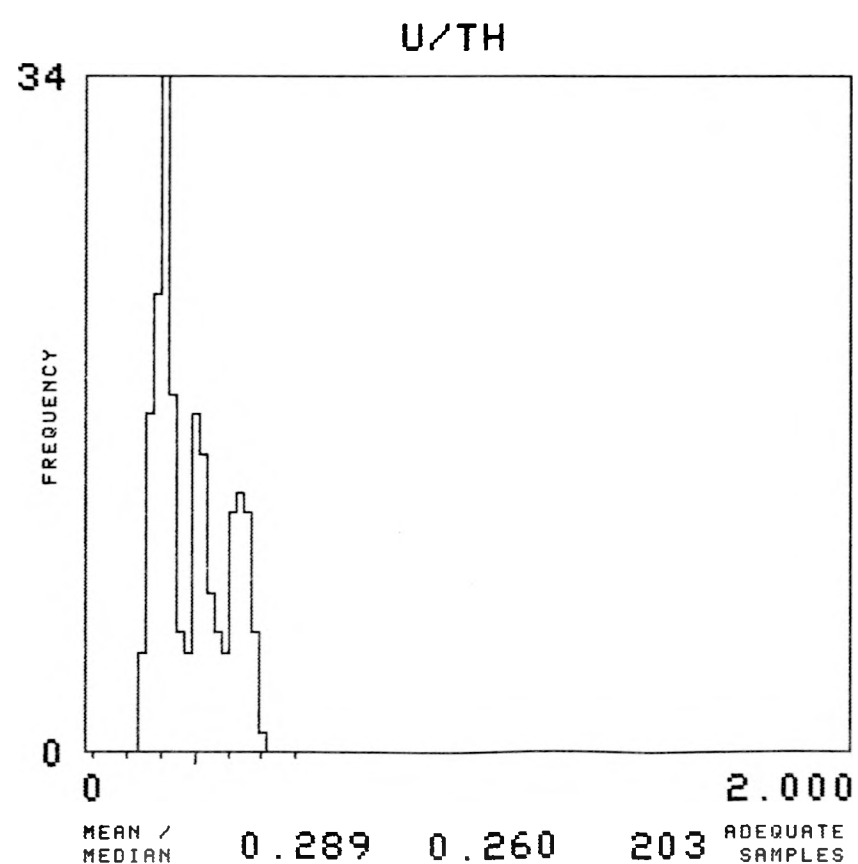
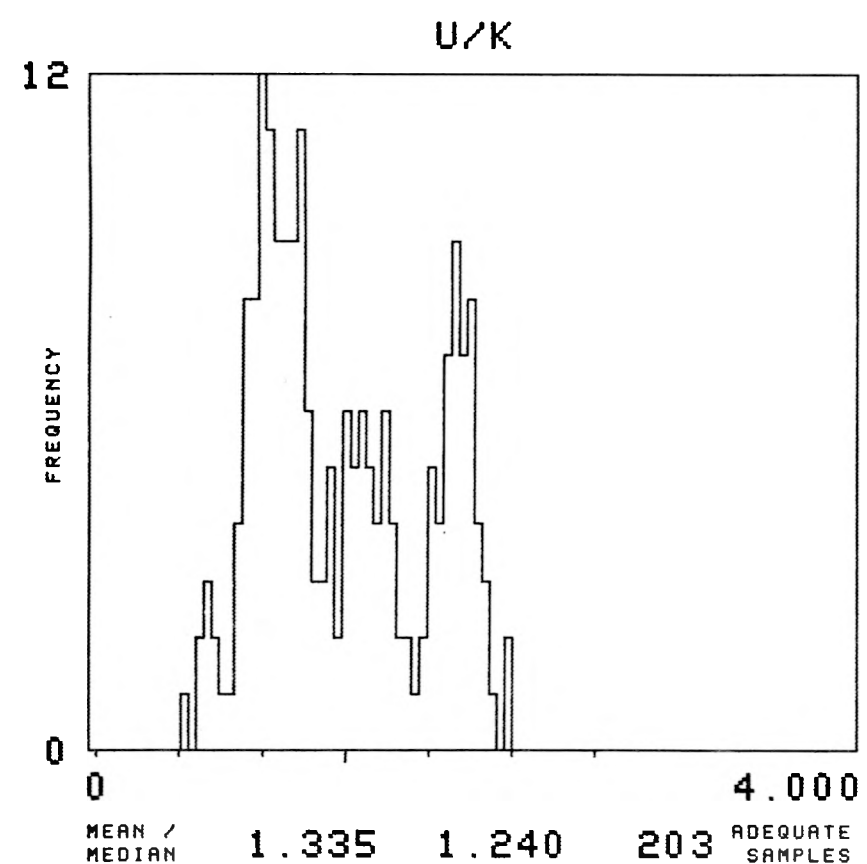
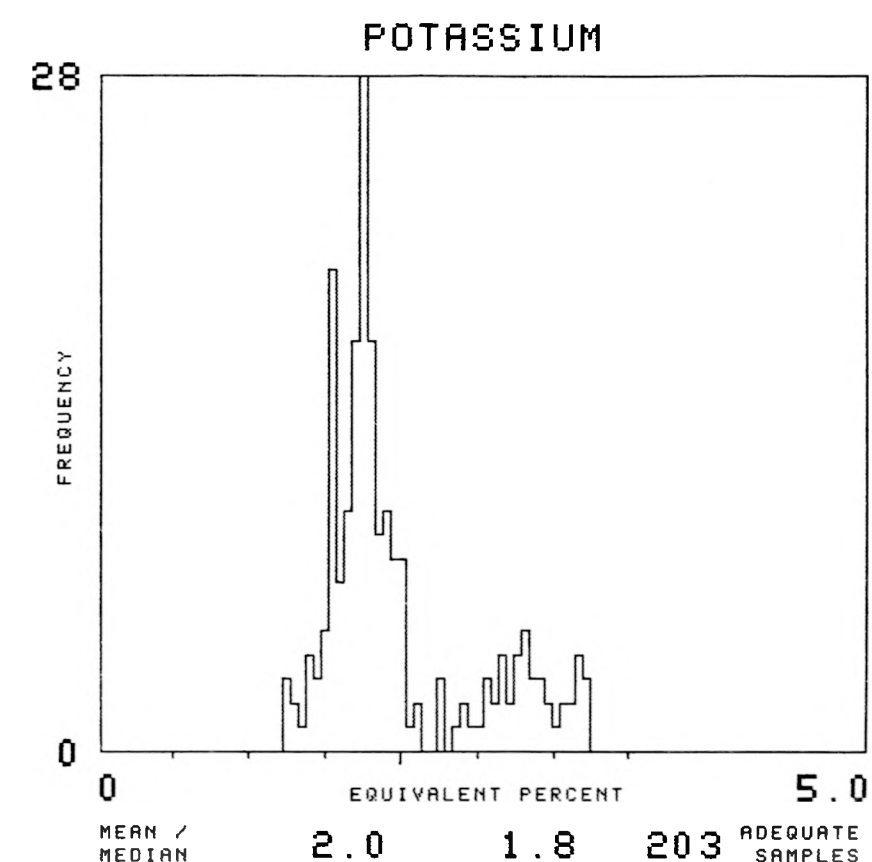
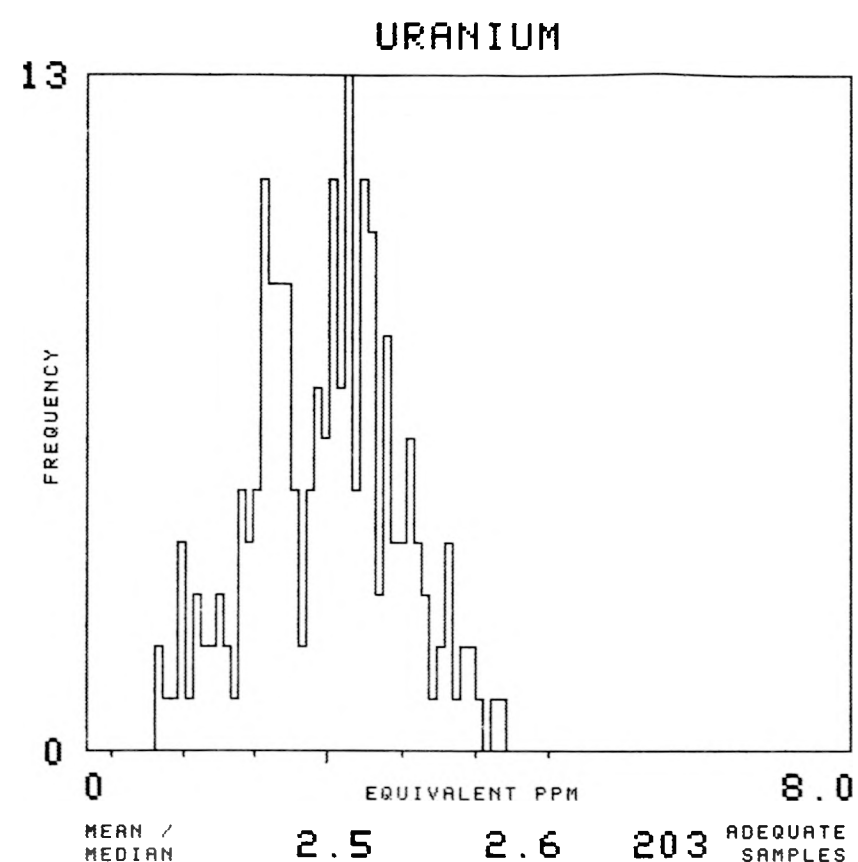
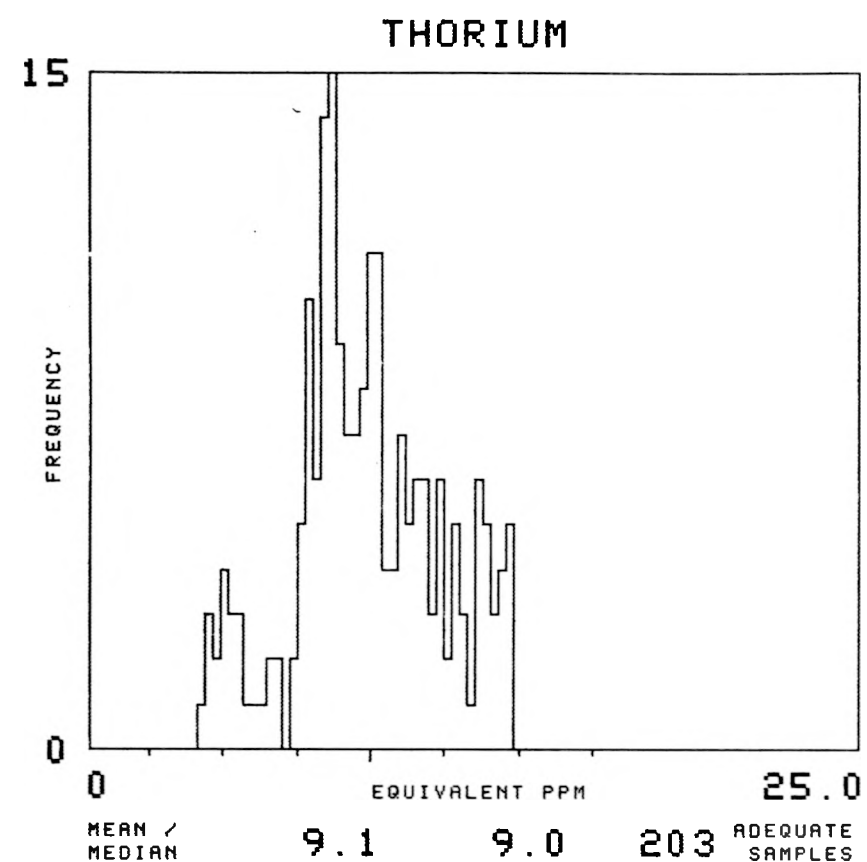
MAP UNIT : QPG TOTAL NUMBER OF SAMPLES 690





NTMS NK 11-3 HAILEY

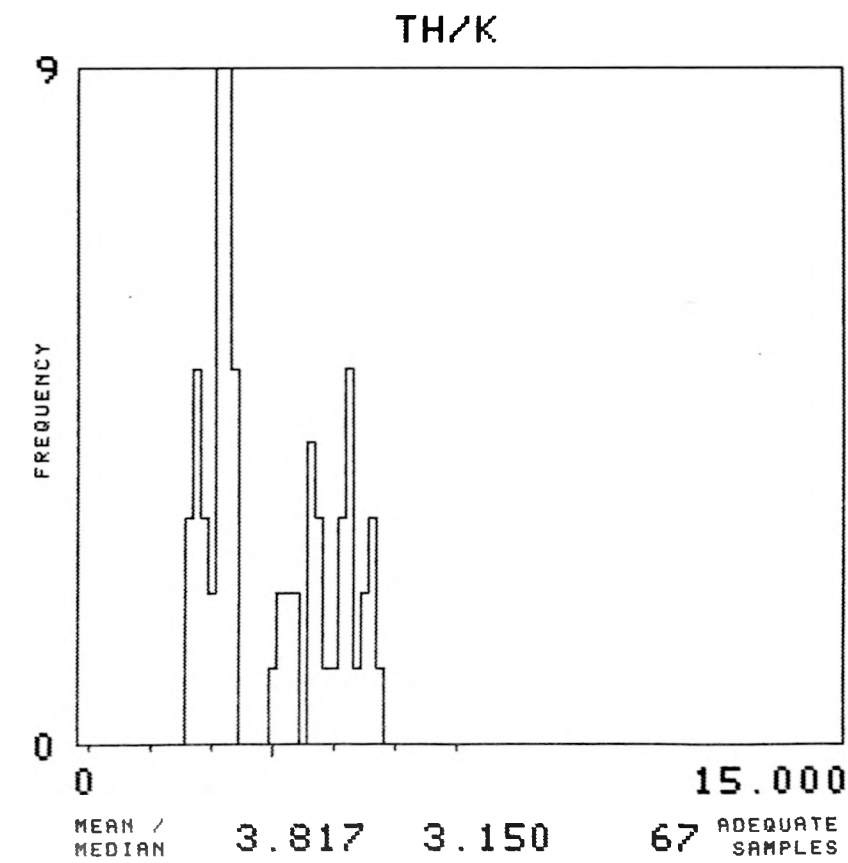
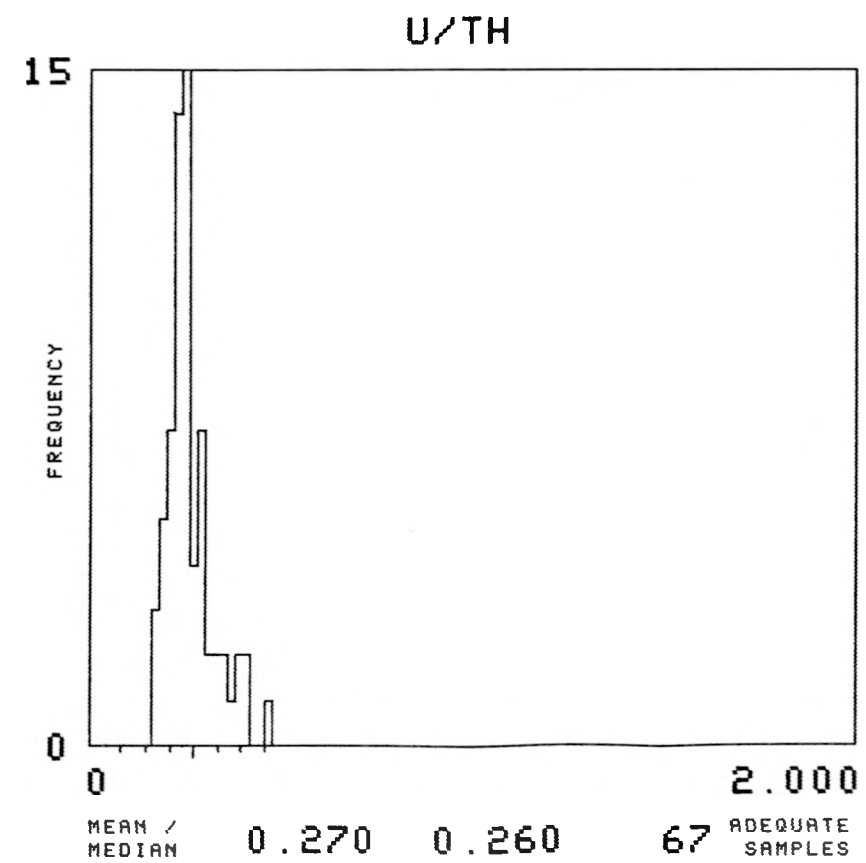
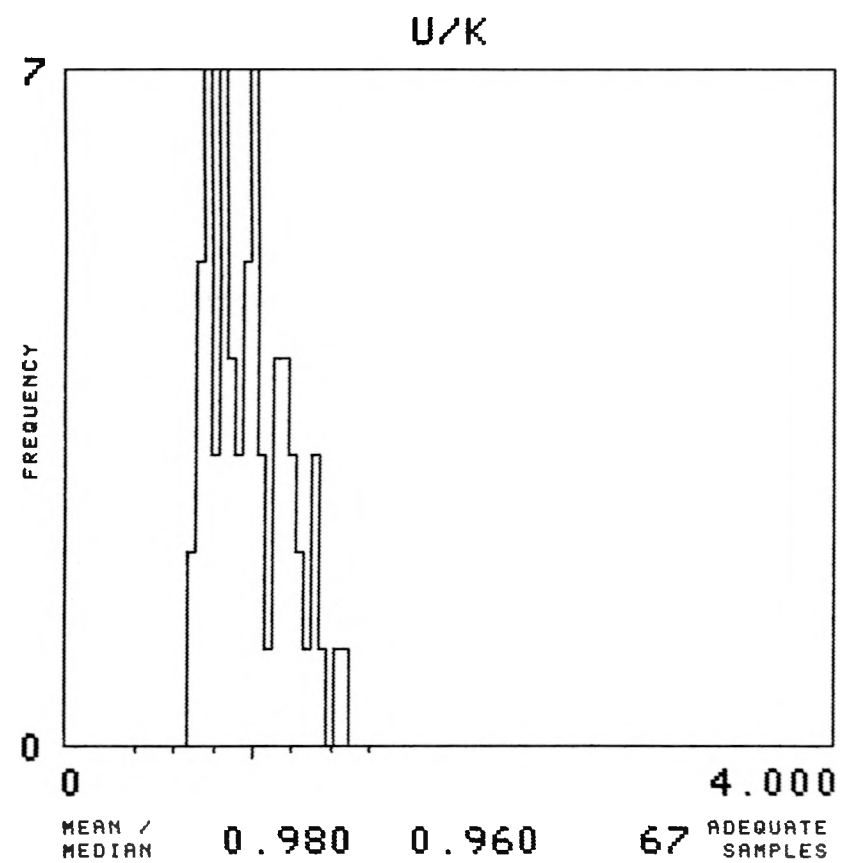
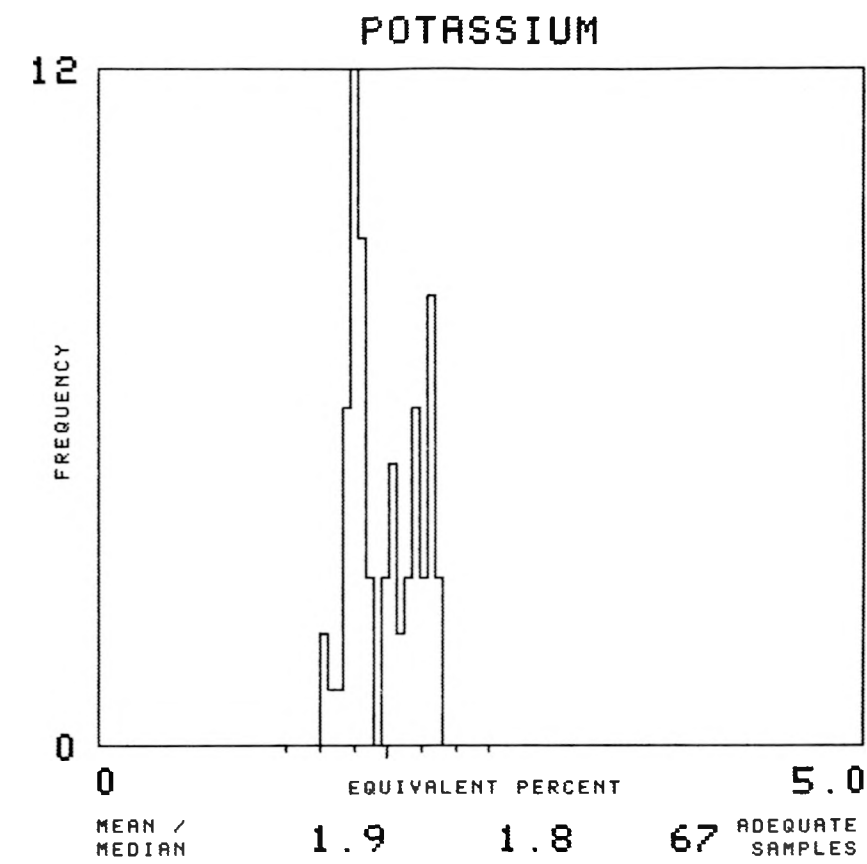
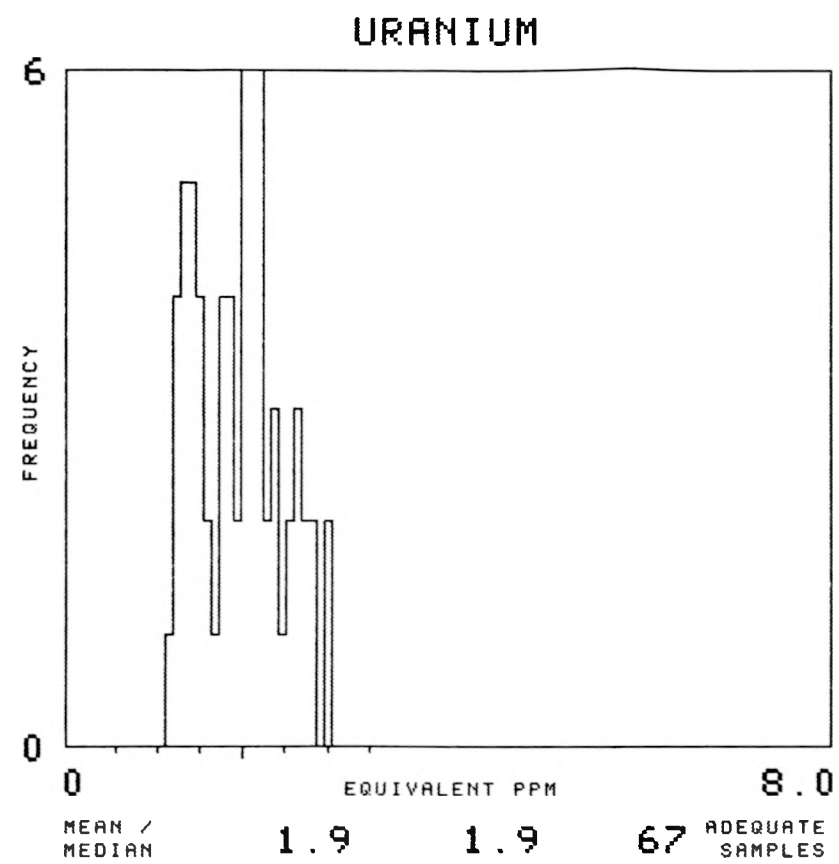
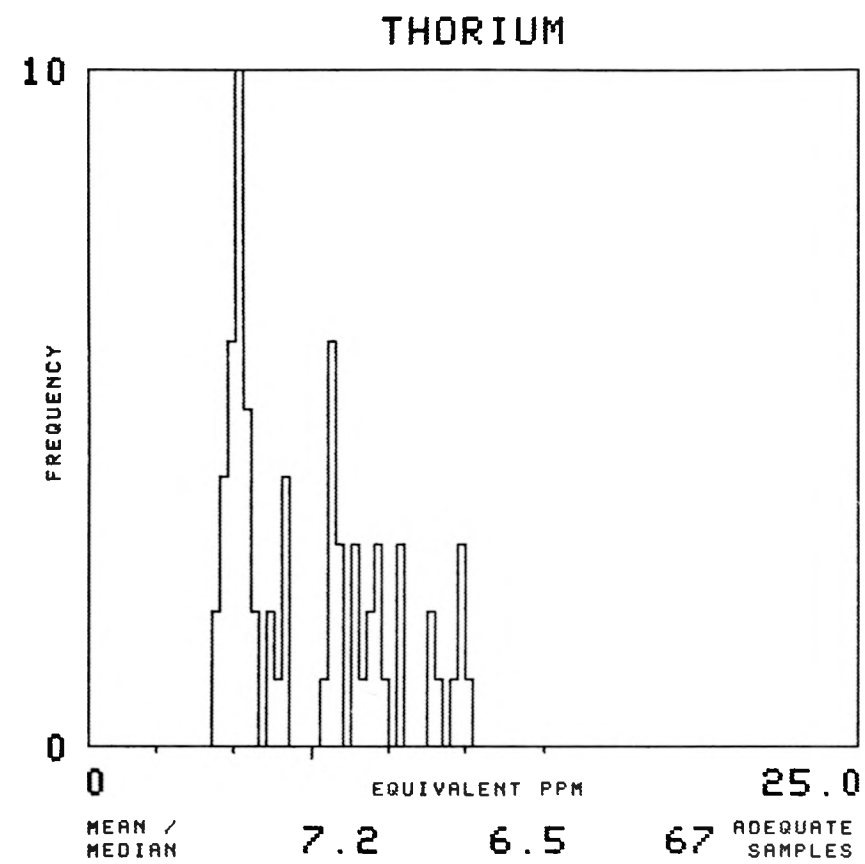
MAP UNIT : QGM TOTAL NUMBER OF SAMPLES 203



NTMS NK 11-3 HAILEY

MAP UNIT : QDT

TOTAL NUMBER
OF SAMPLES 67

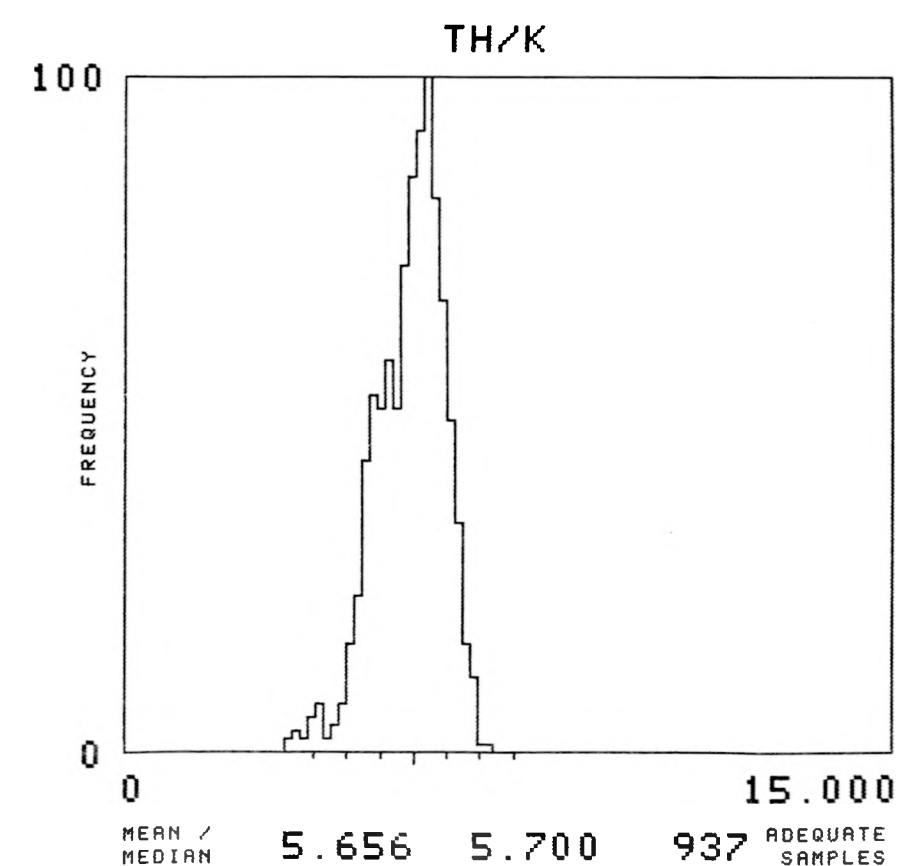
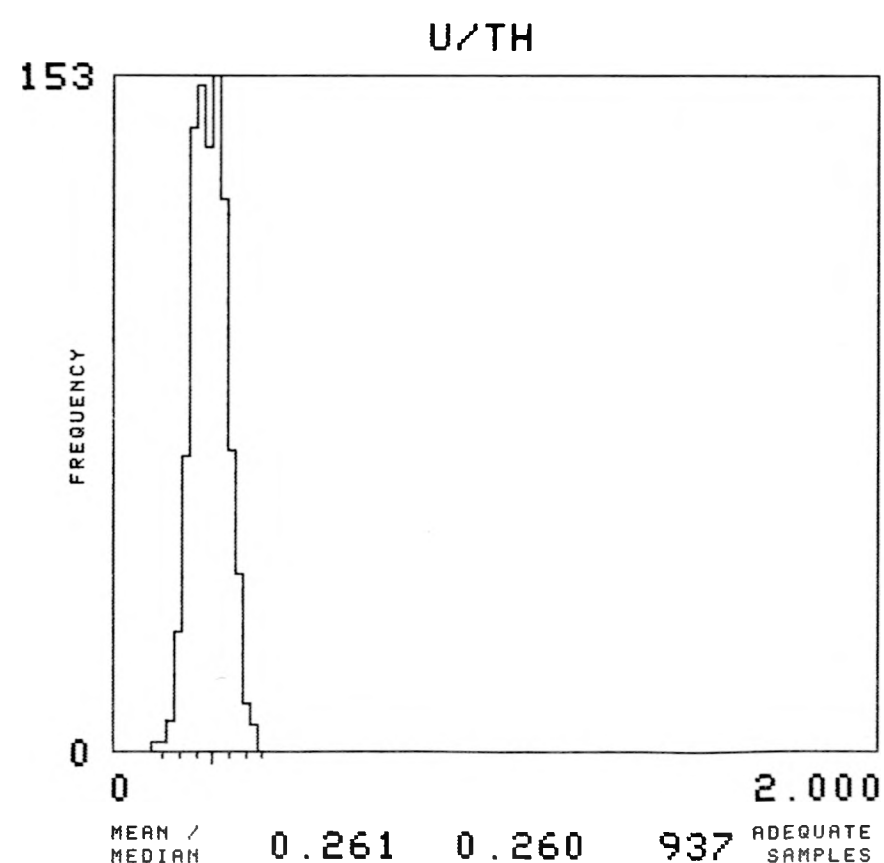
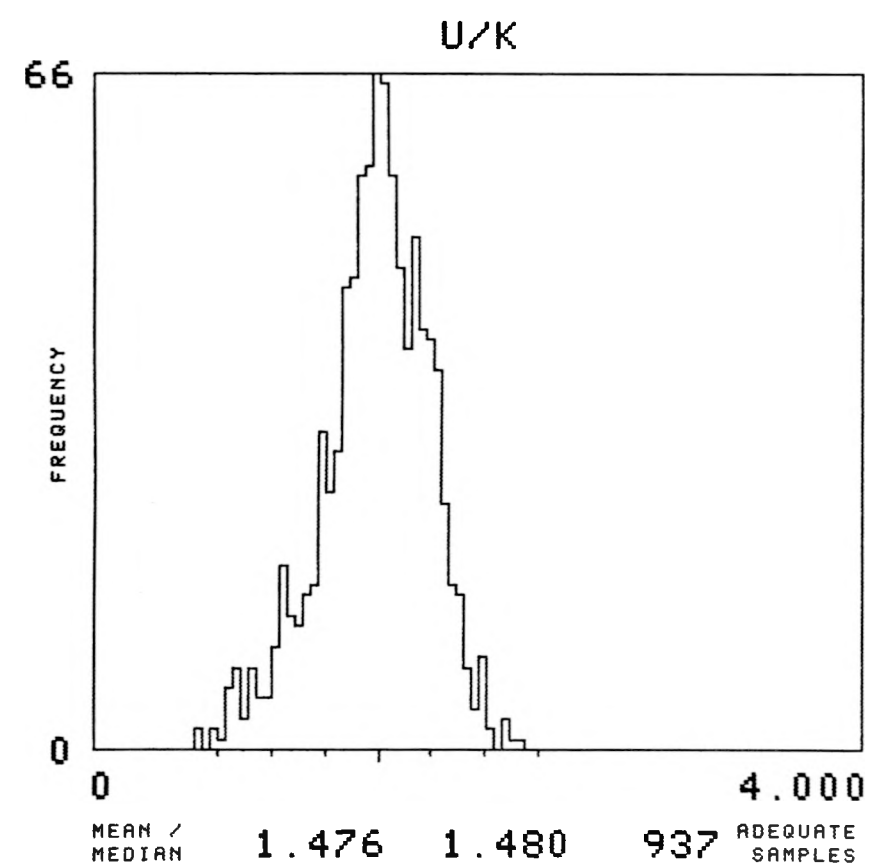
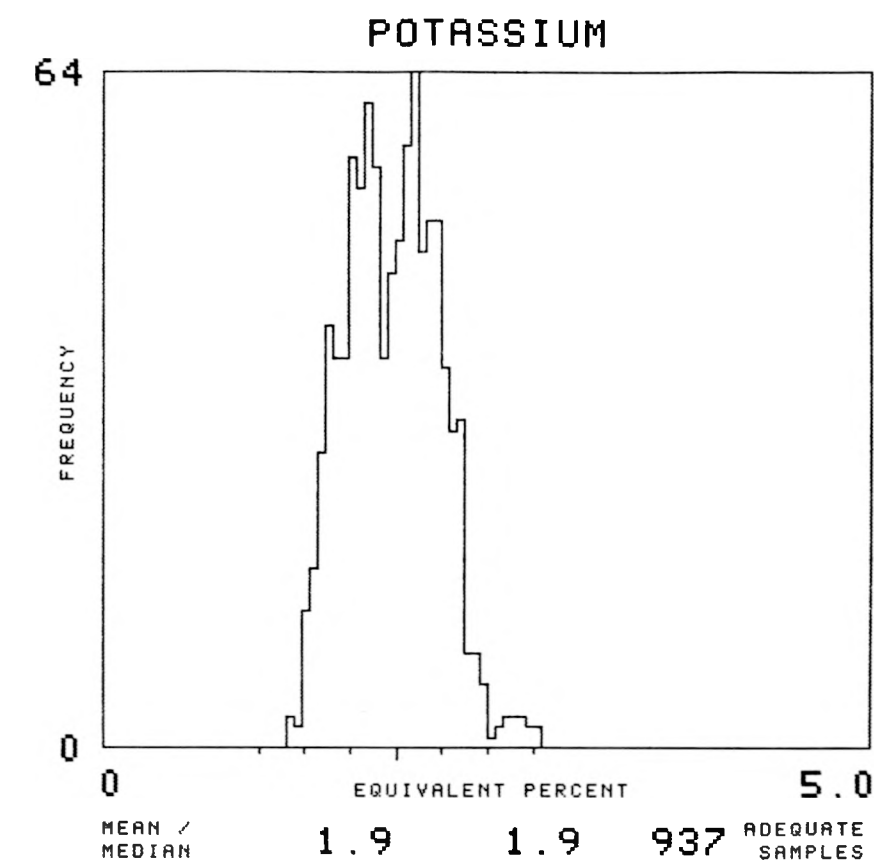
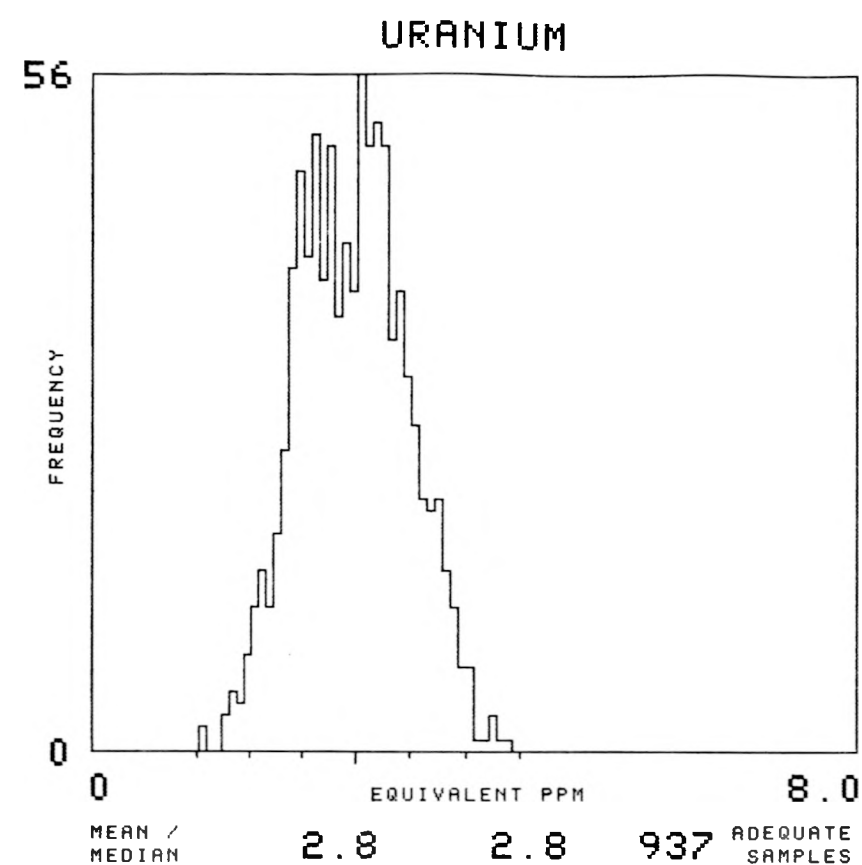
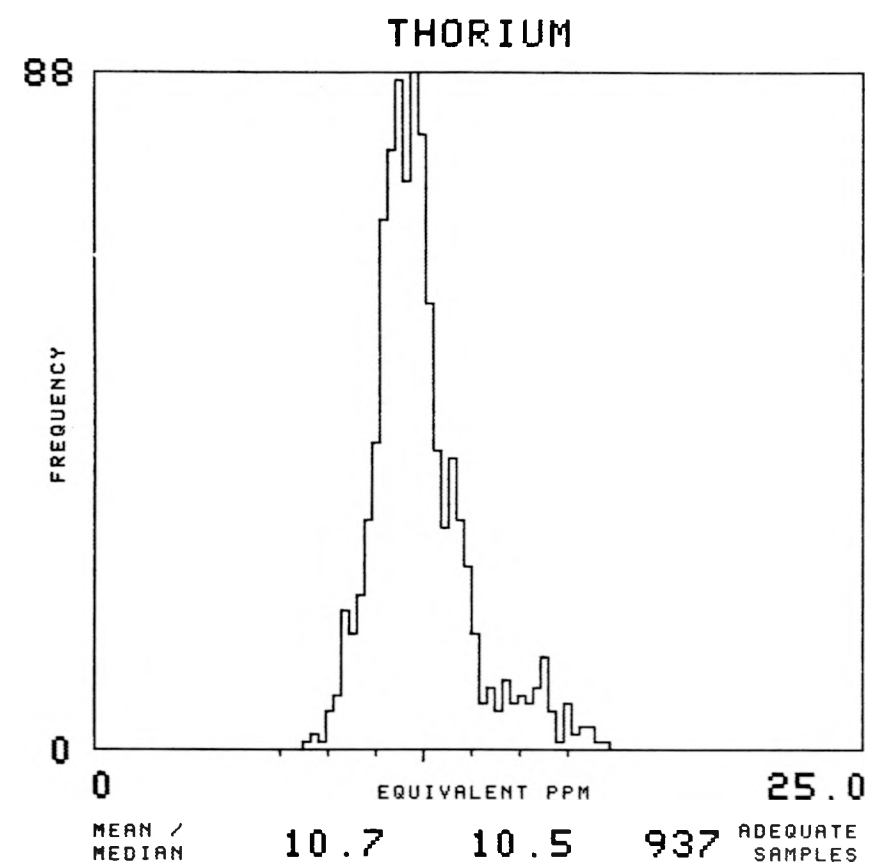


NTMS NK 11-3 HAILEY

MAP UNIT : QTS

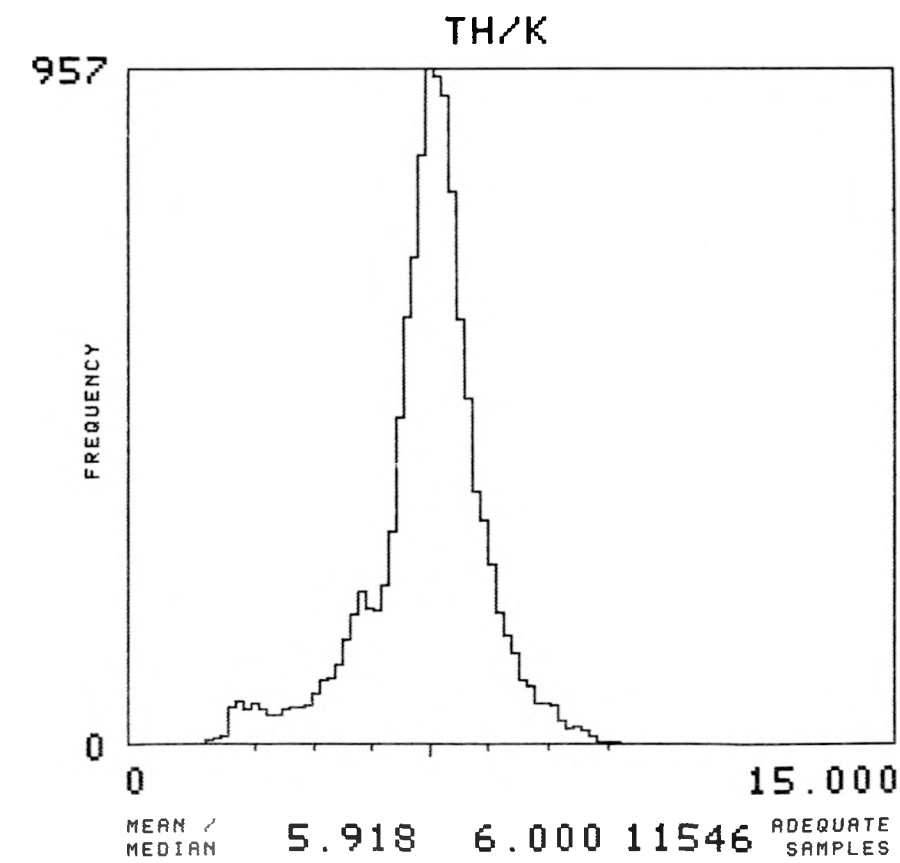
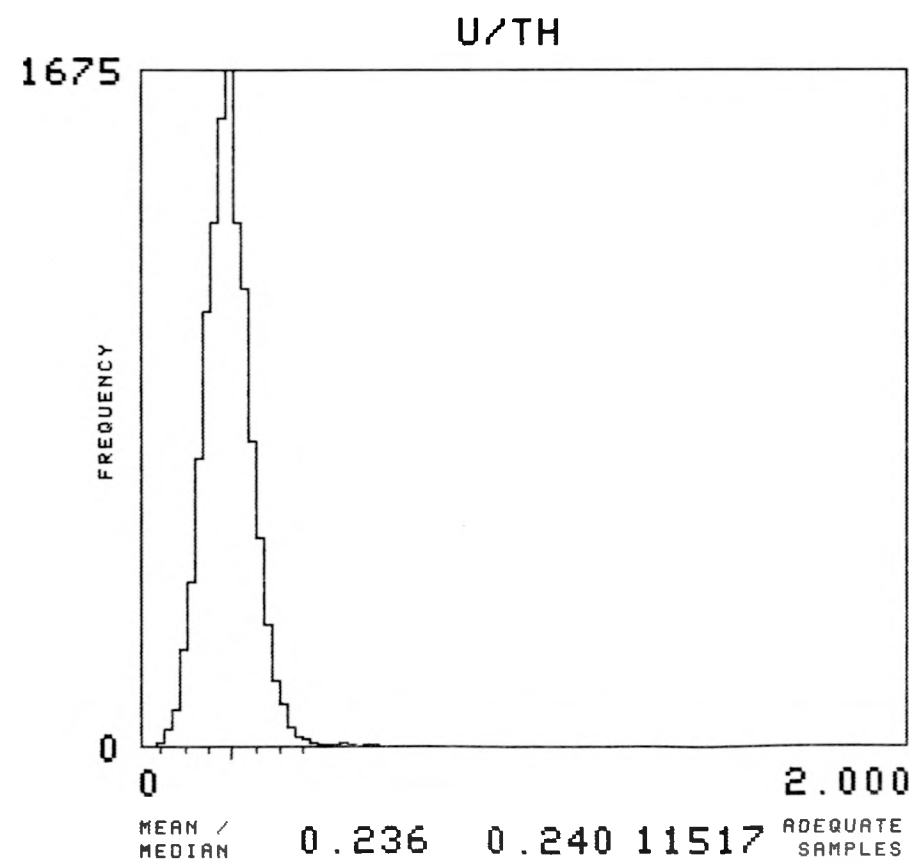
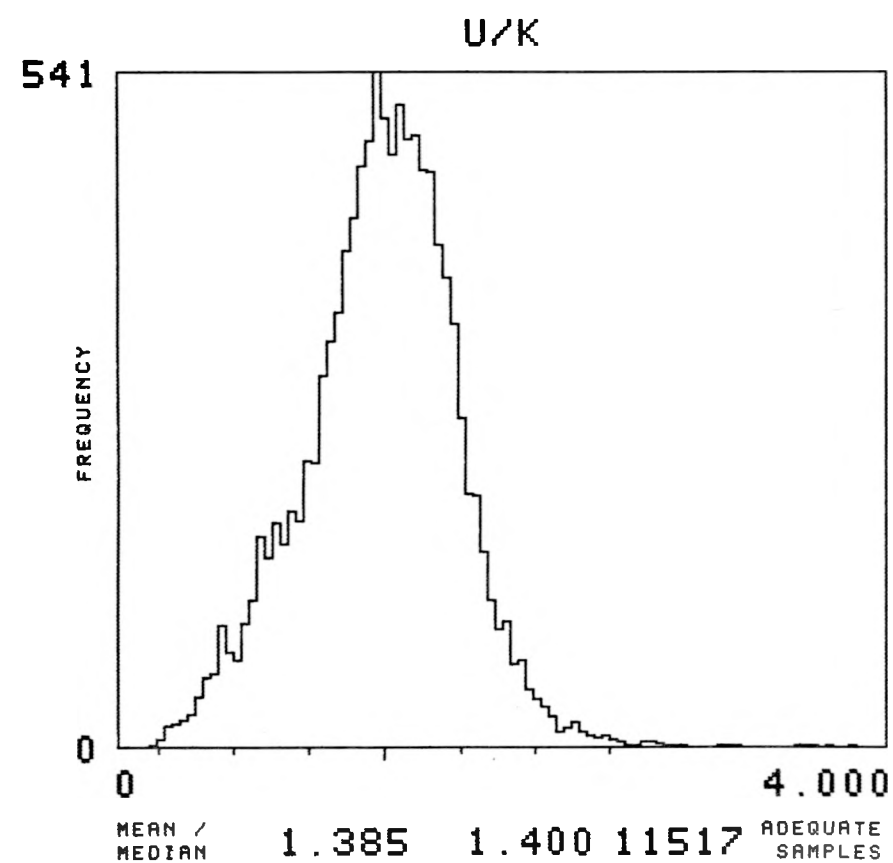
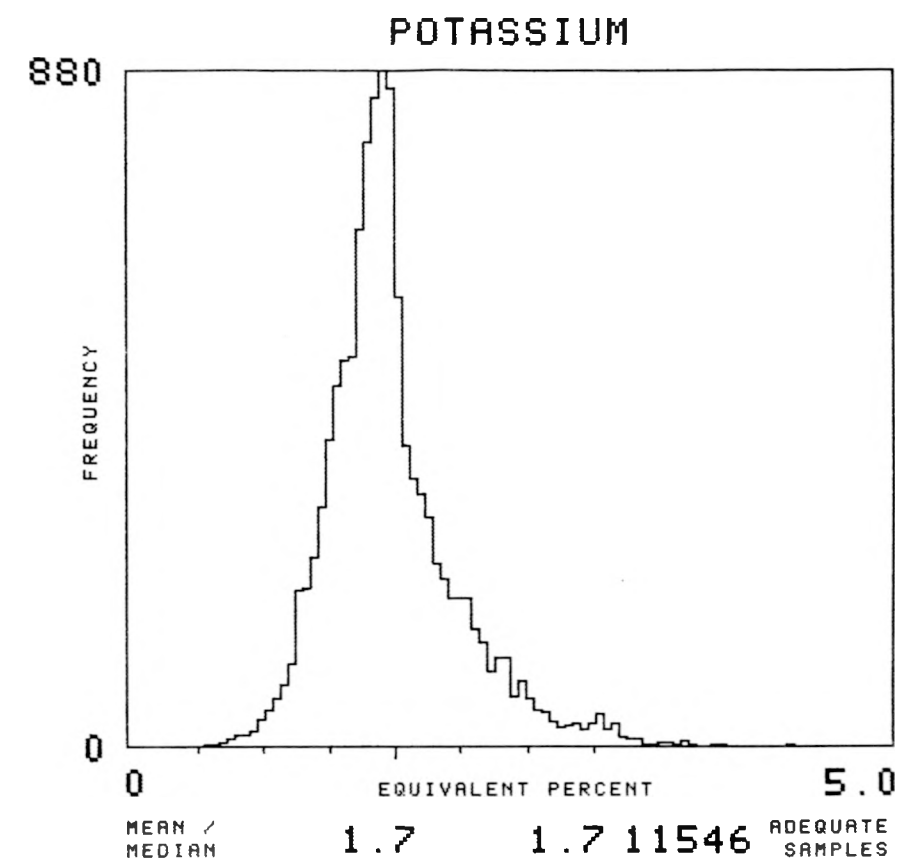
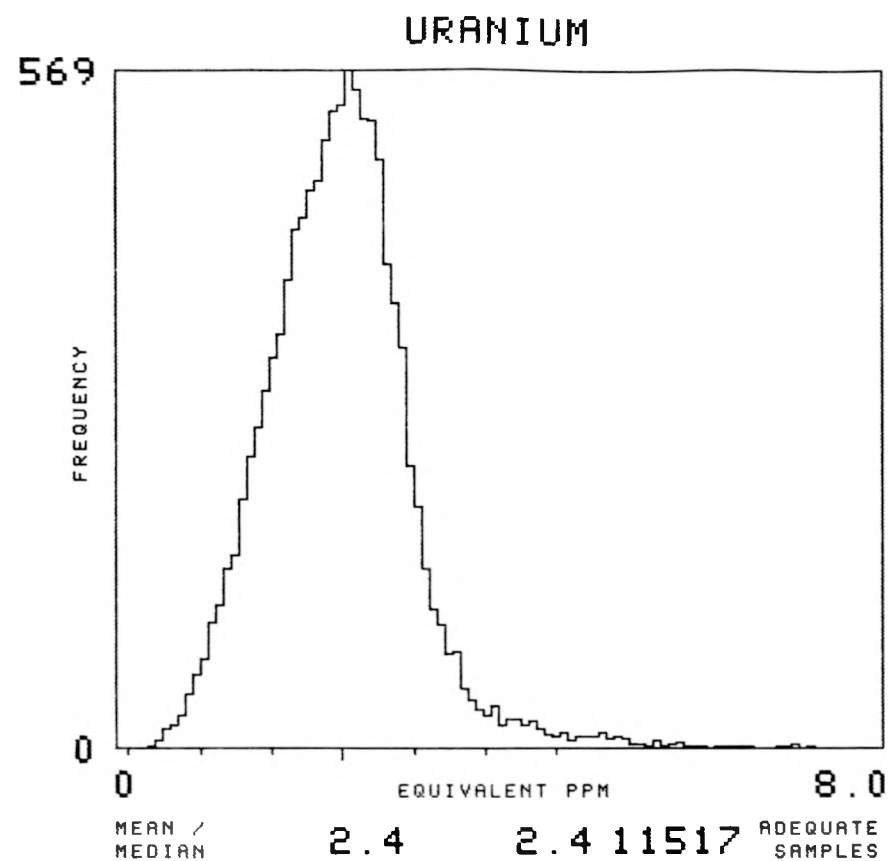
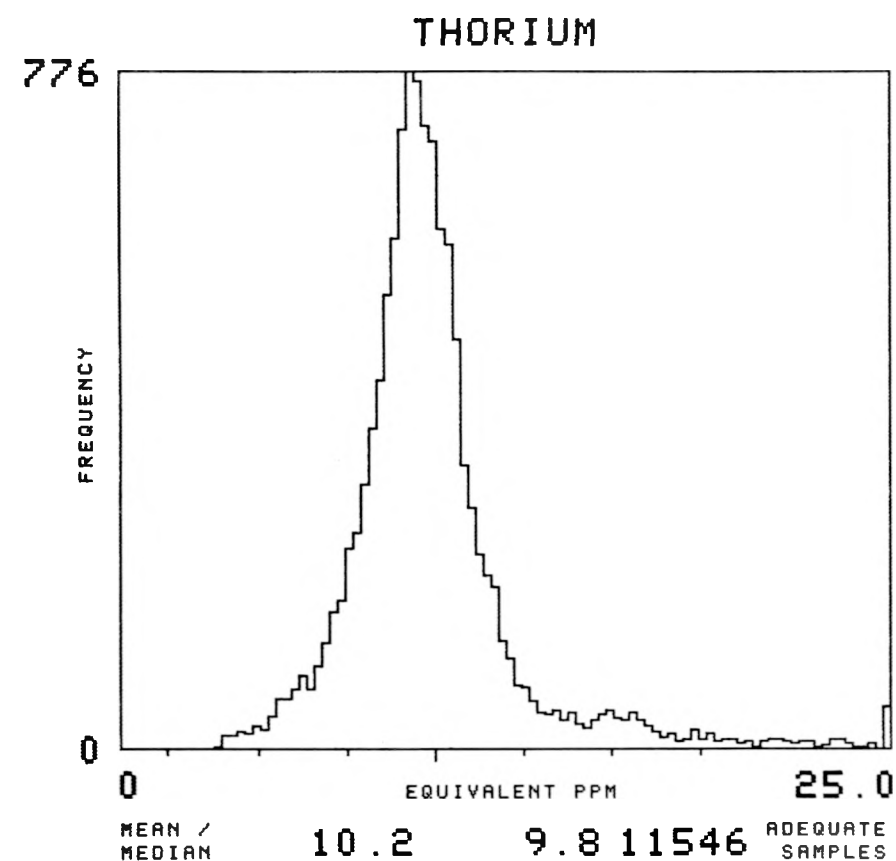
TOTAL NUMBER
OF SAMPLES

937



NTMS NK 11-3 HAILEY

MAP UNIT : QTB

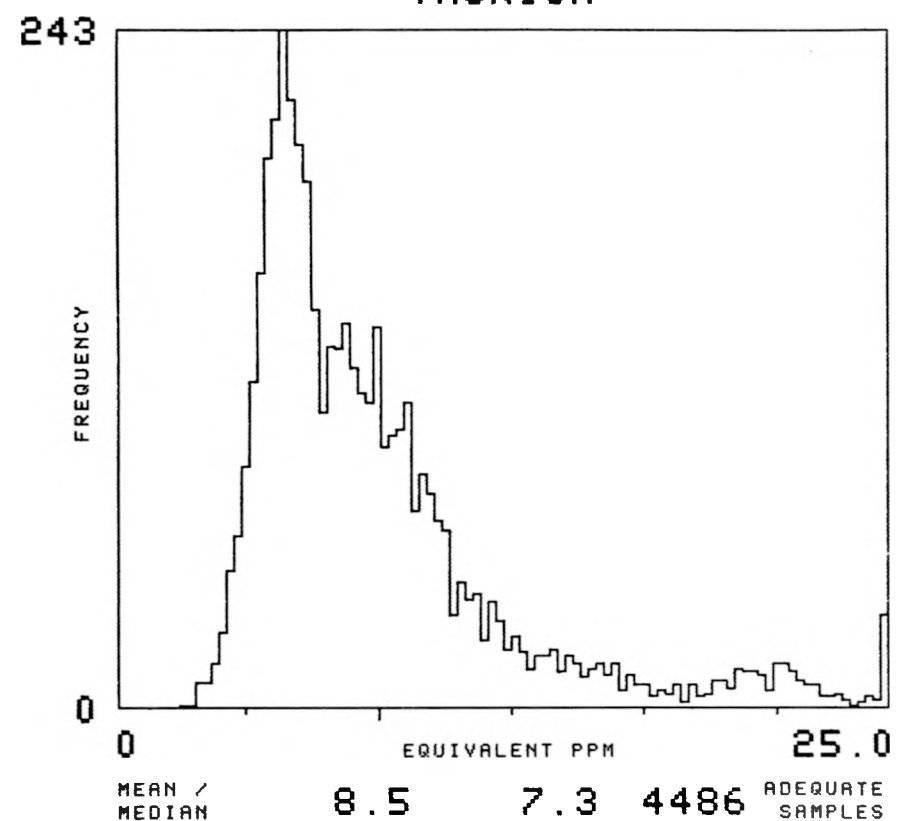
TOTAL NUMBER
OF SAMPLES 11609

NTMS NK 11-3 HAILEY

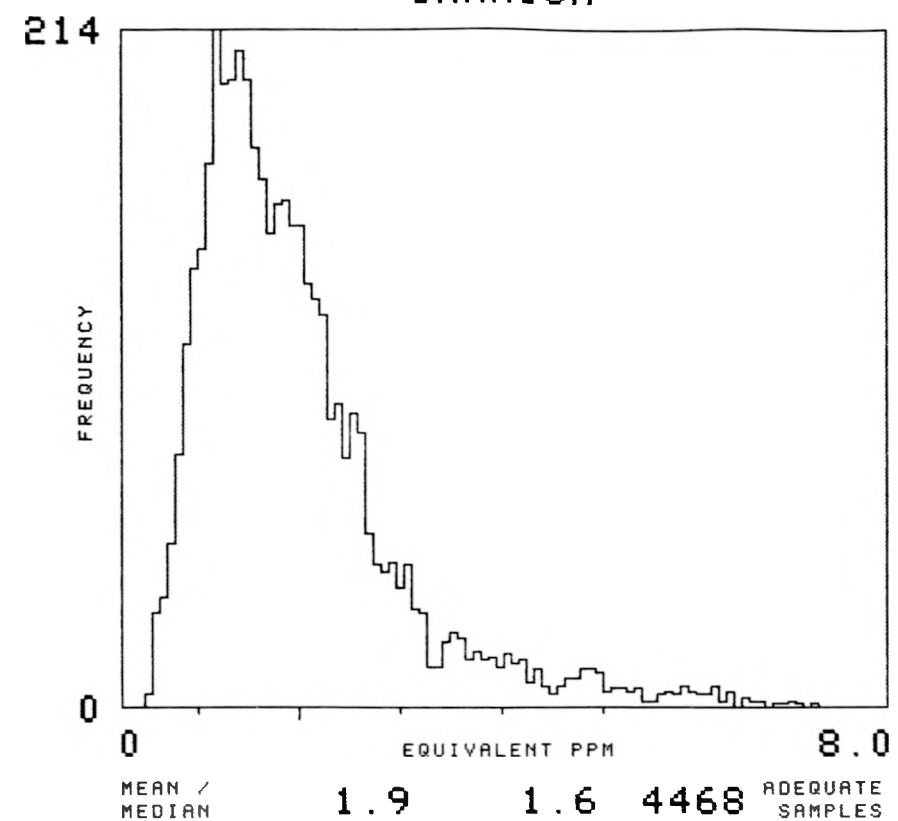
MAP UNIT : TOB

TOTAL NUMBER
OF SAMPLES 4511

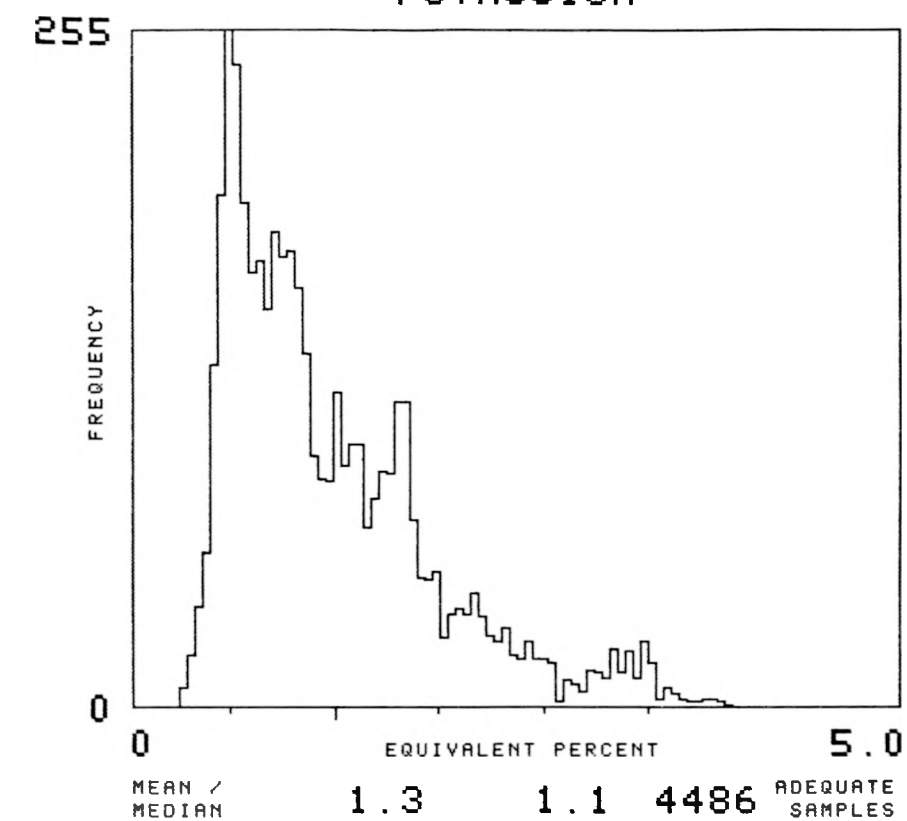
THORIUM



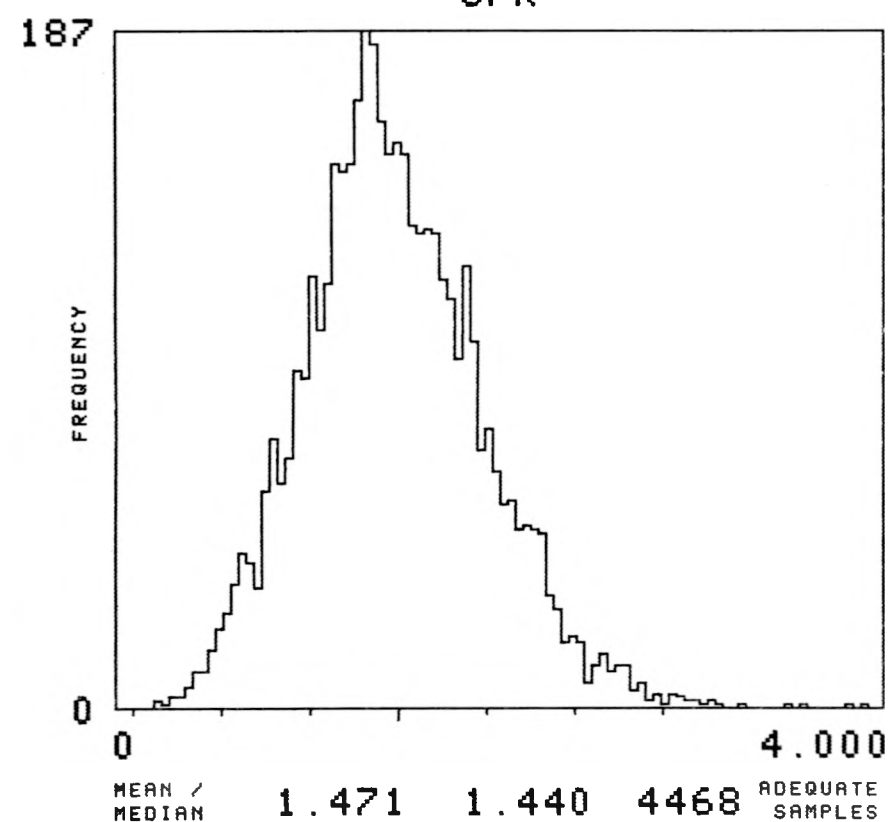
URANIUM



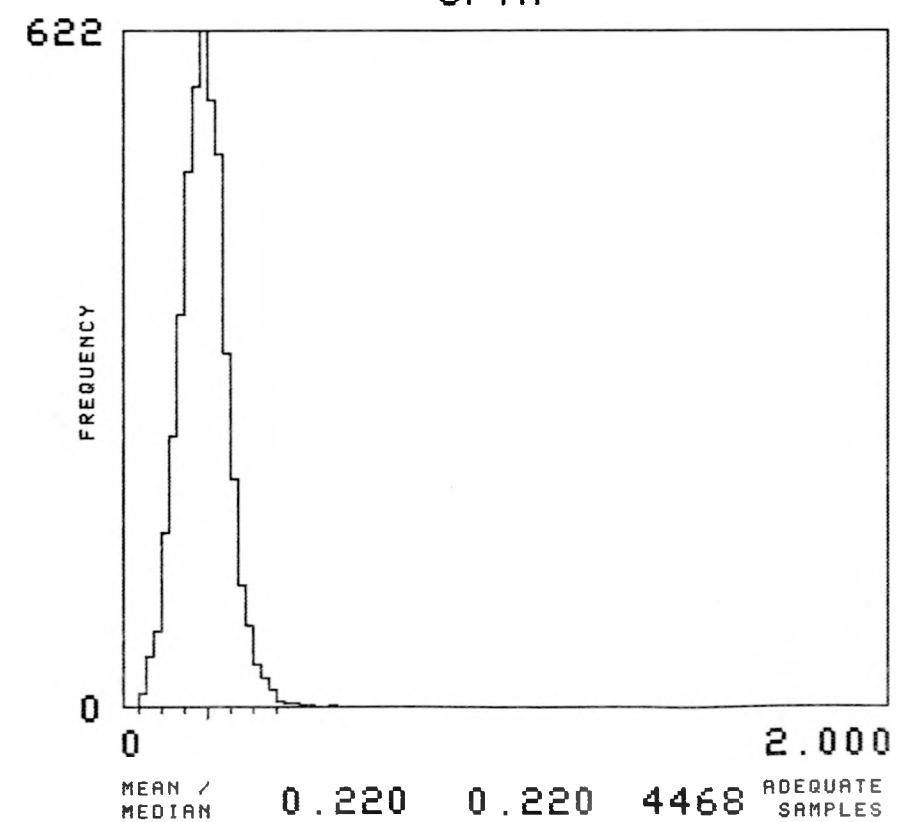
POTASSIUM



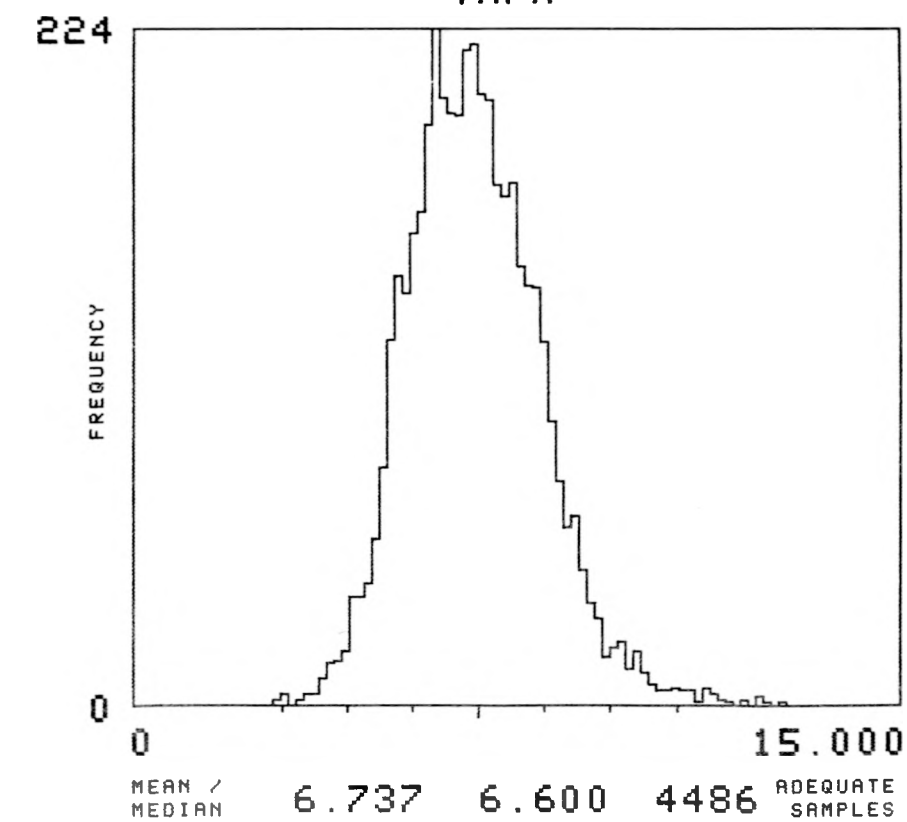
U/K



U/TH

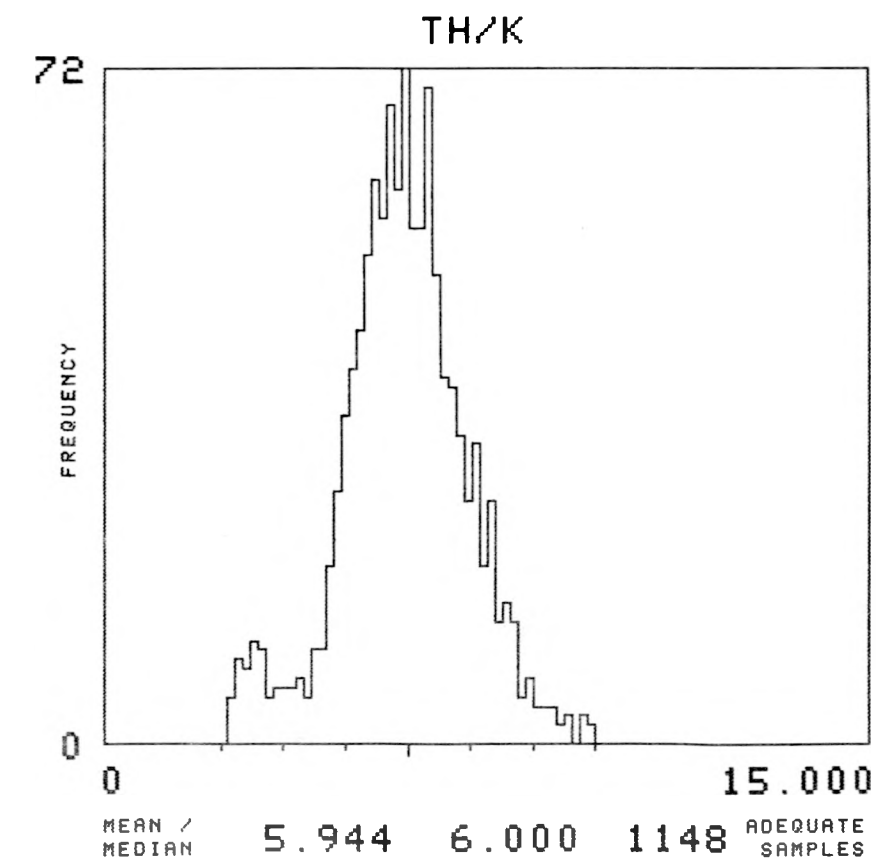
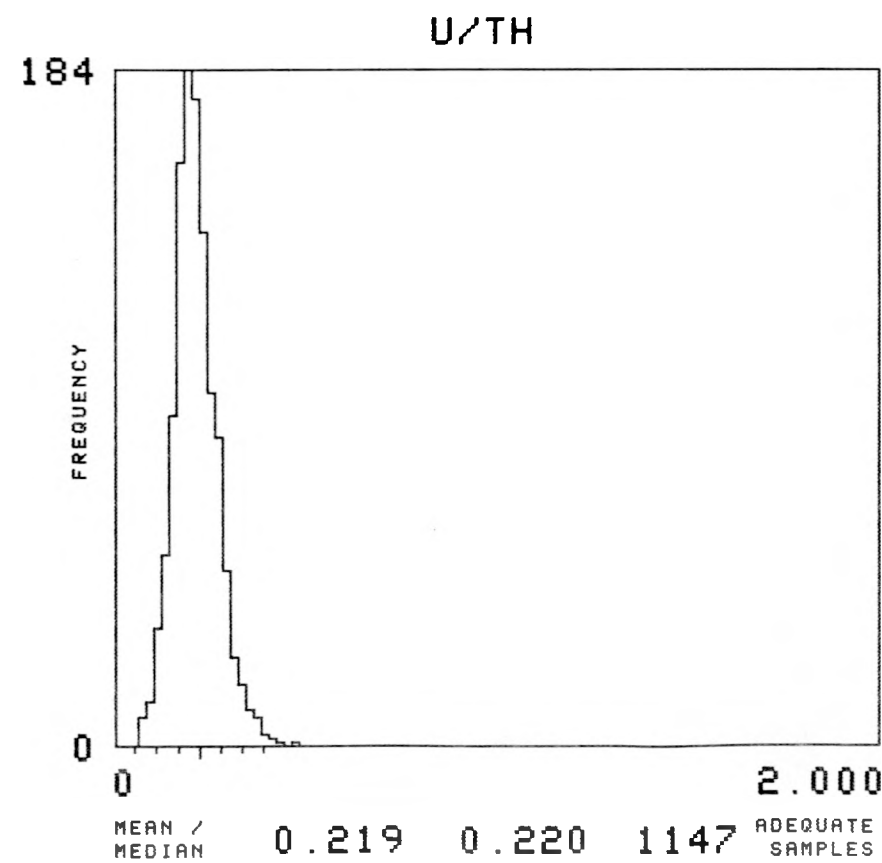
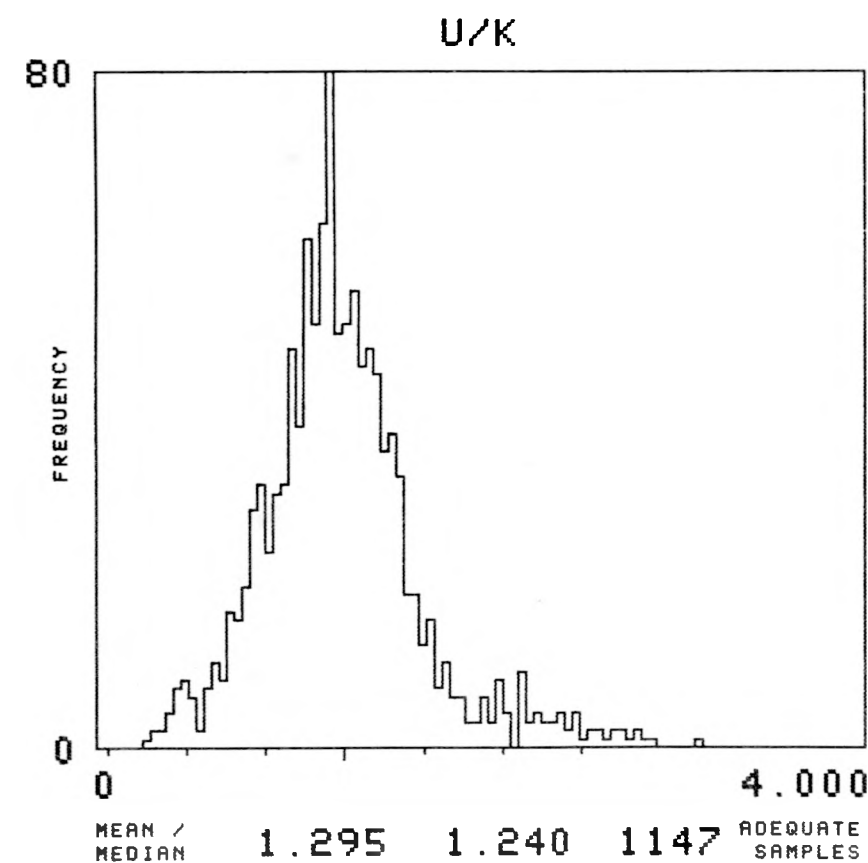
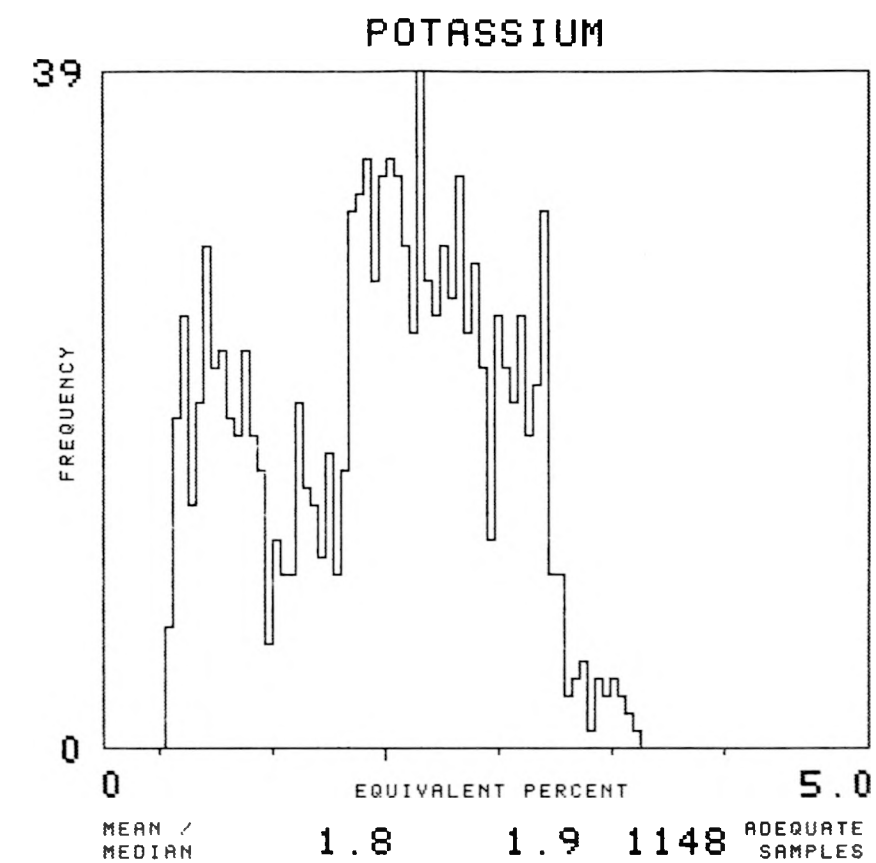
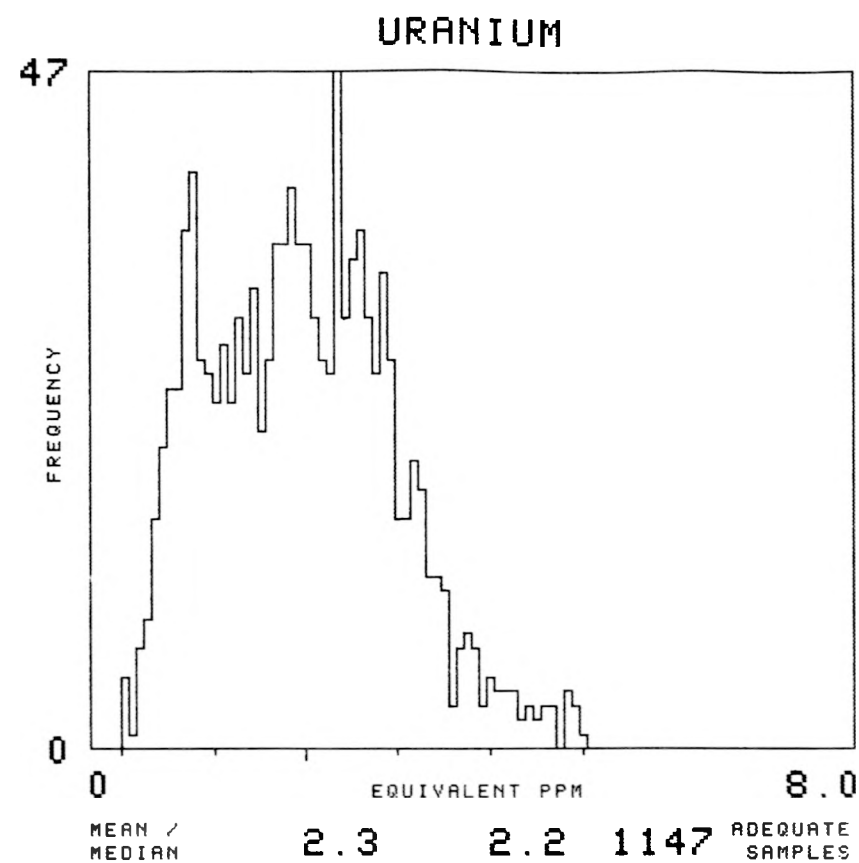
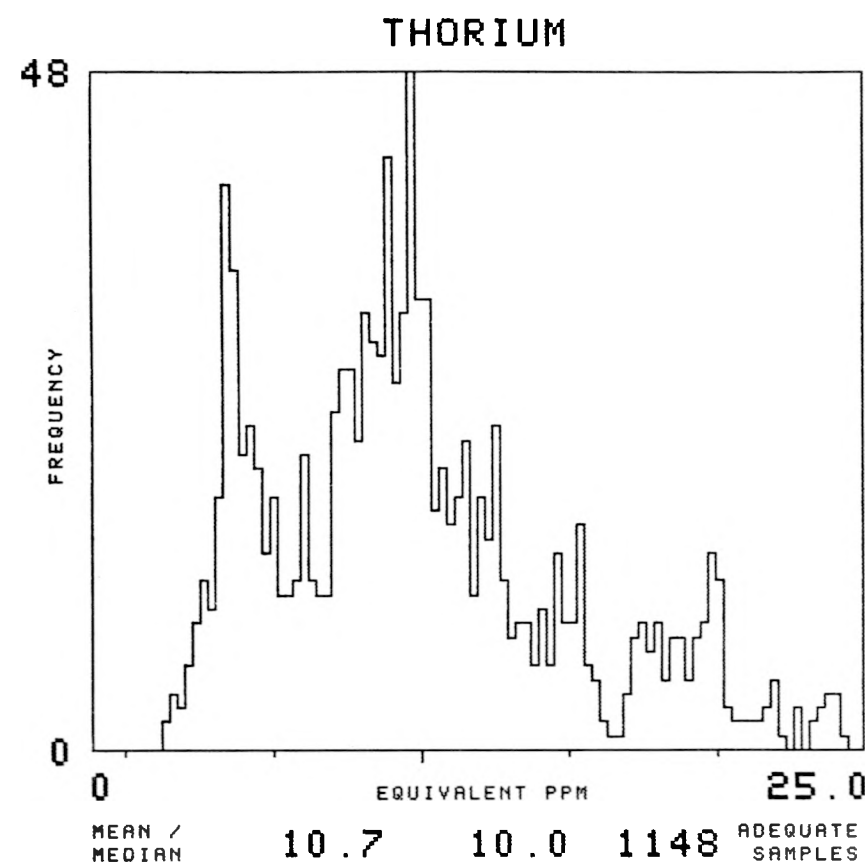


TH/K

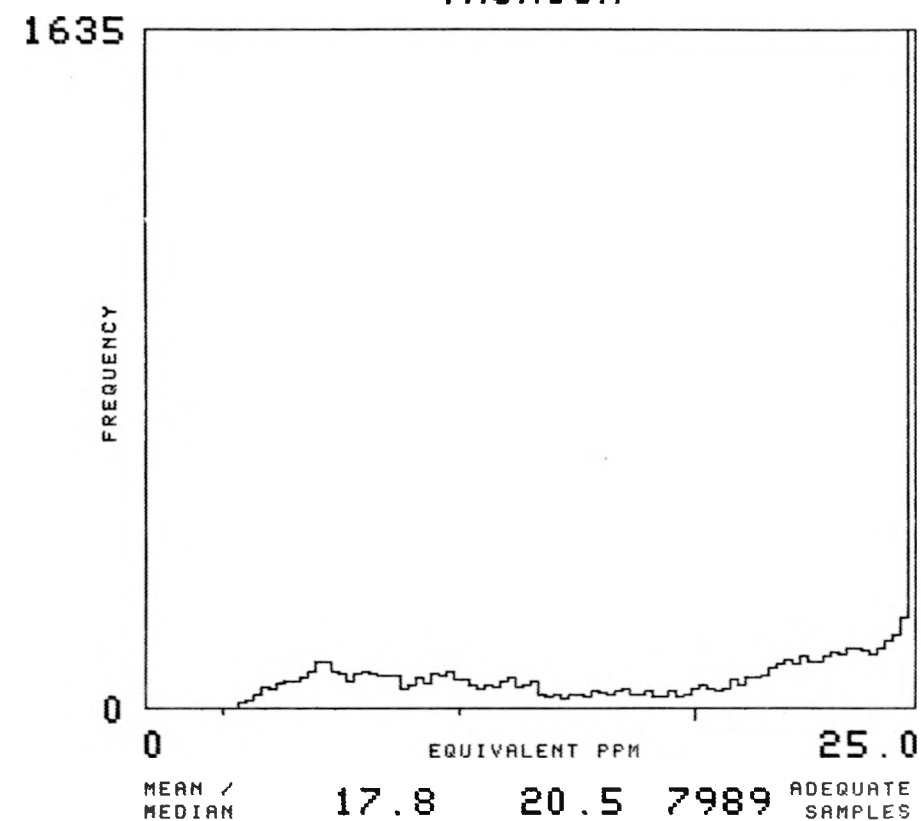


NTMS NK 11-3 HAILEY

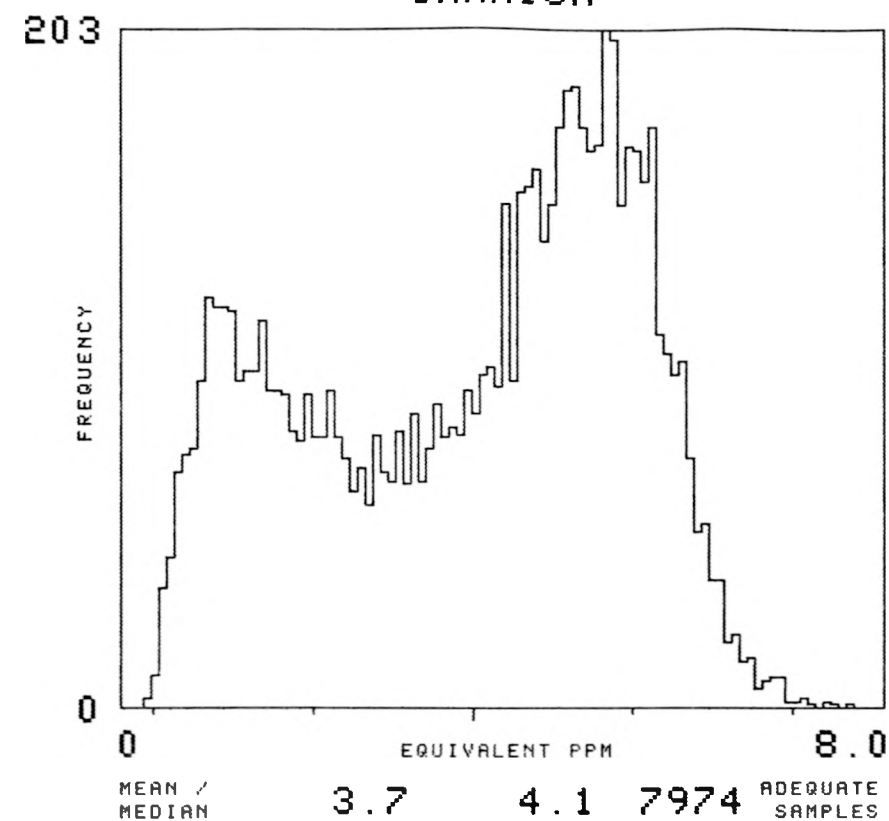
MAP UNIT : TS TOTAL NUMBER OF SAMPLES 1167



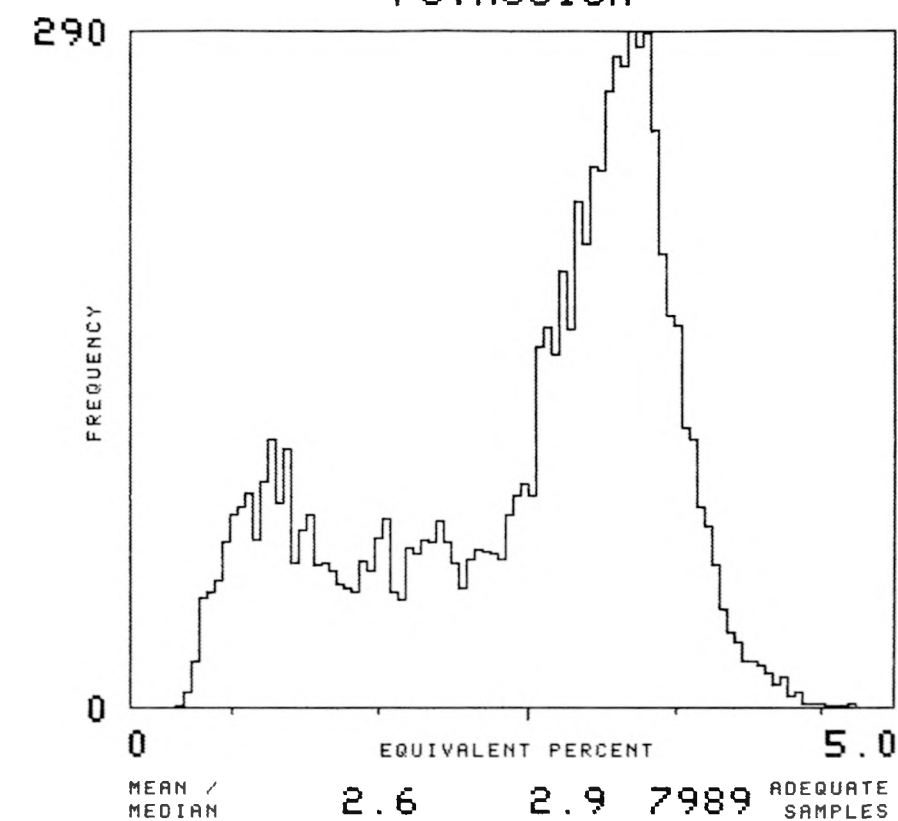
THORIUM



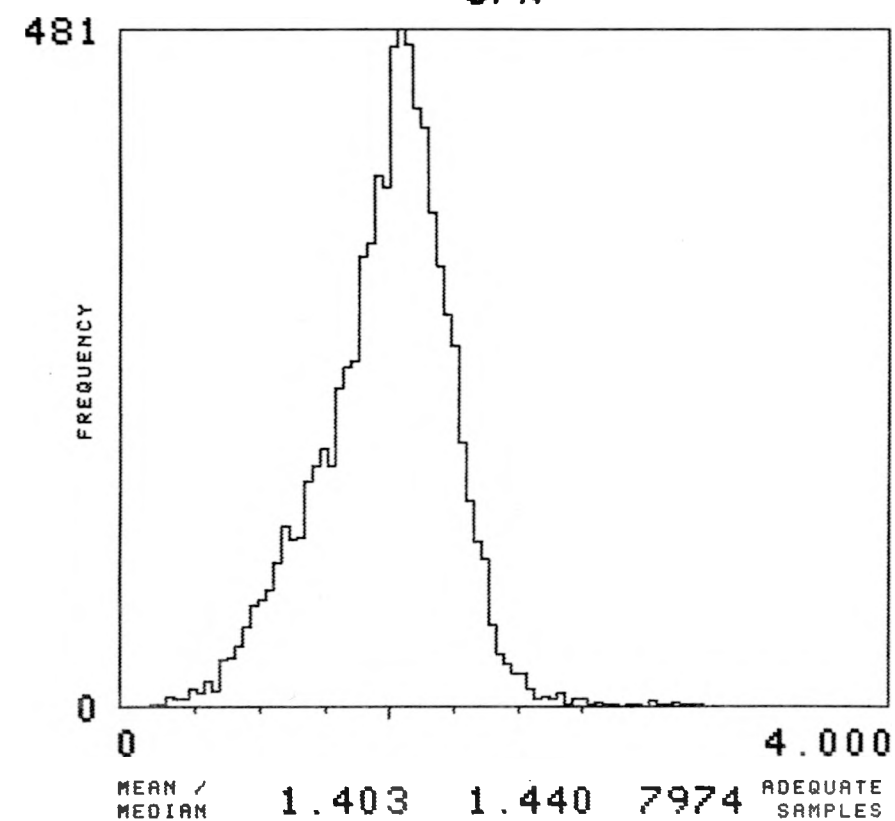
URANIUM



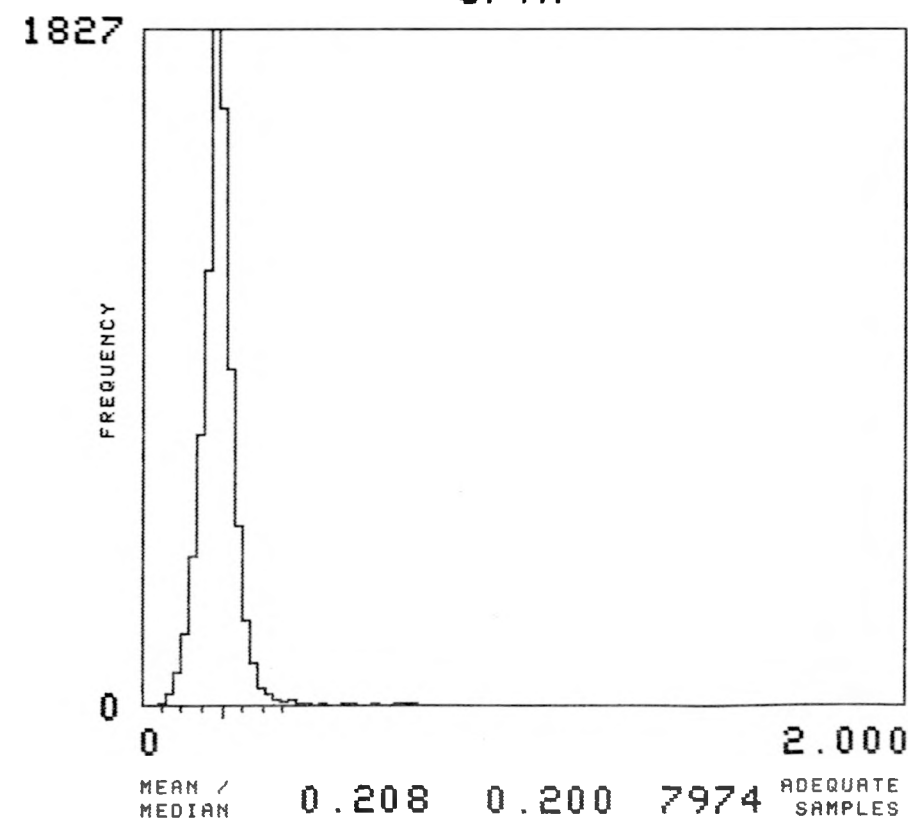
POTASSIUM



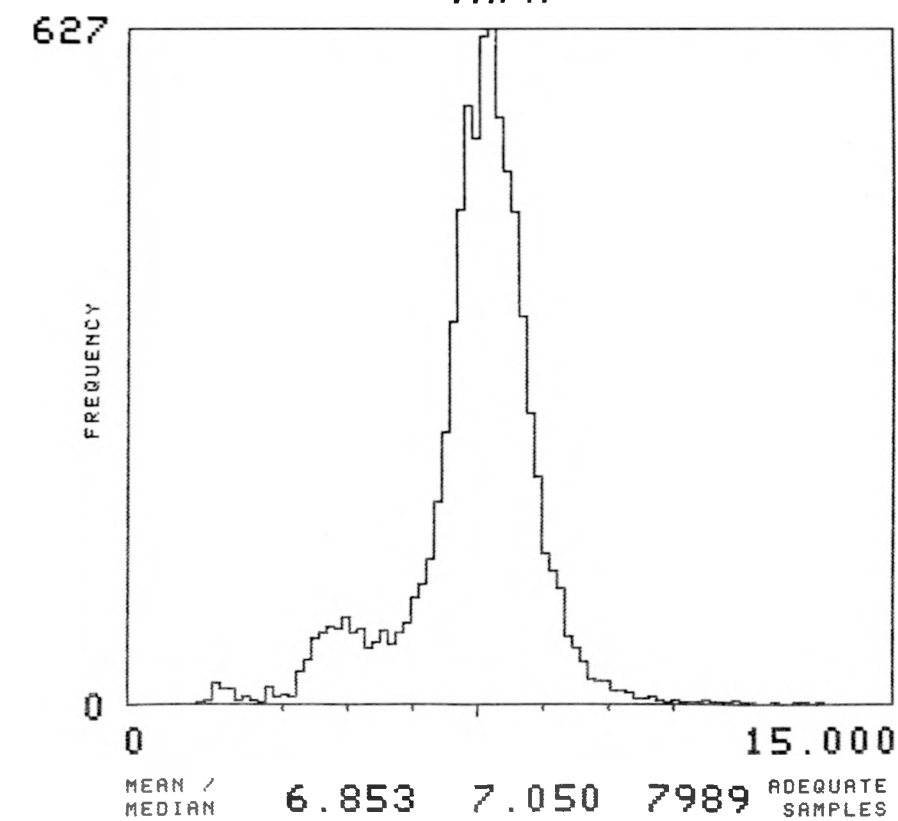
U/K

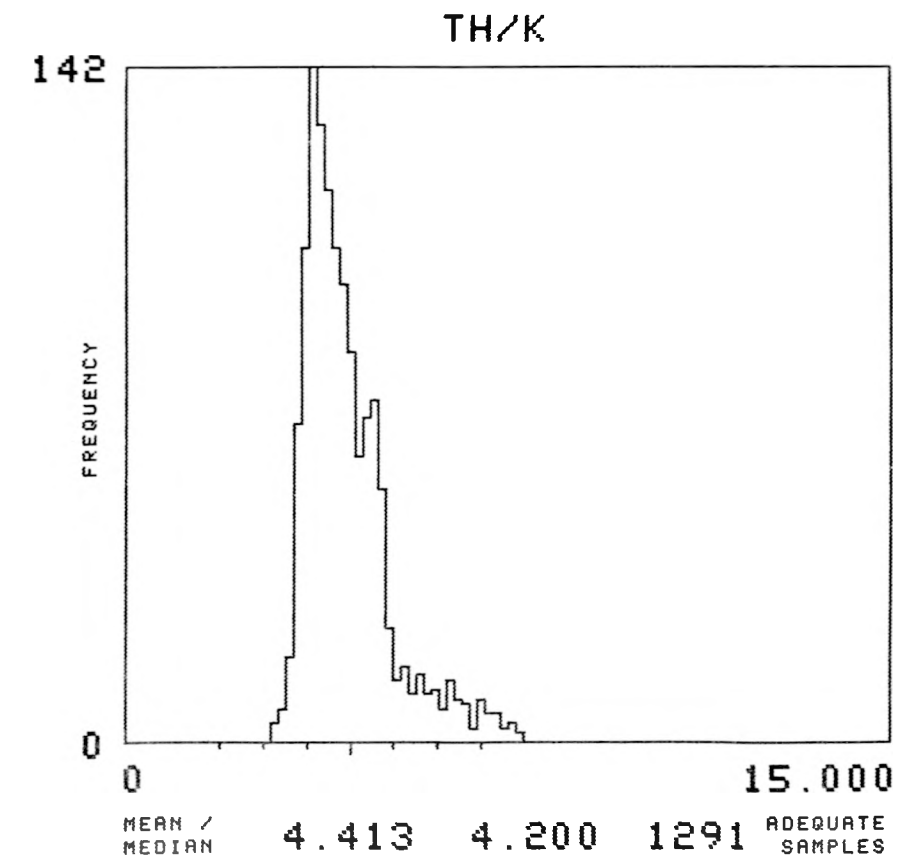
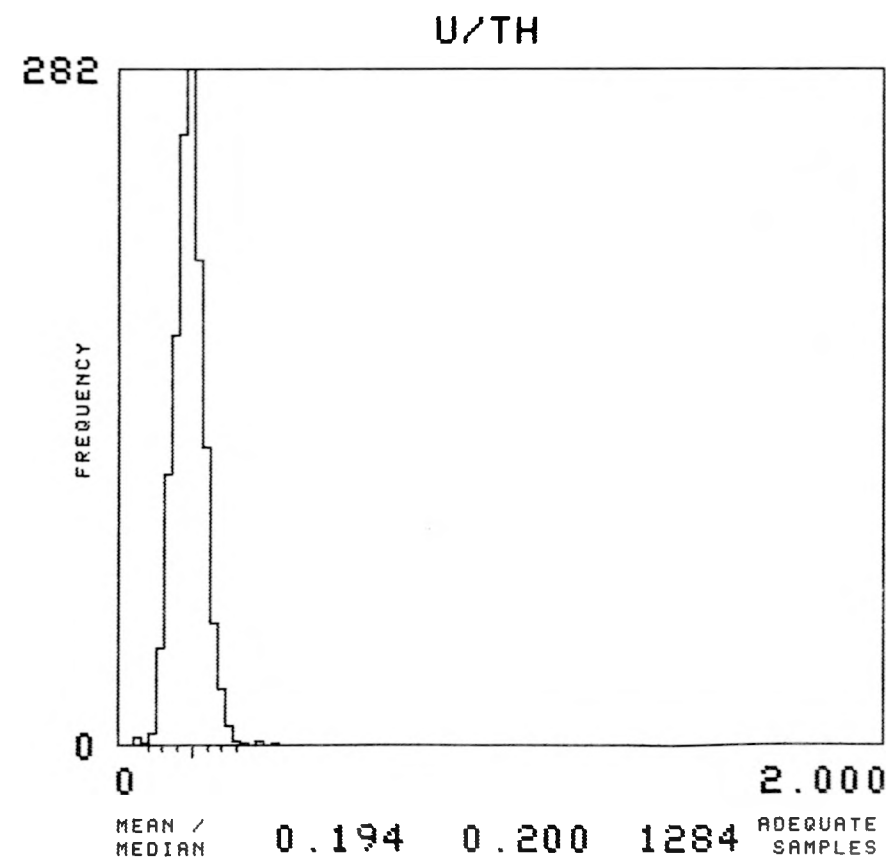
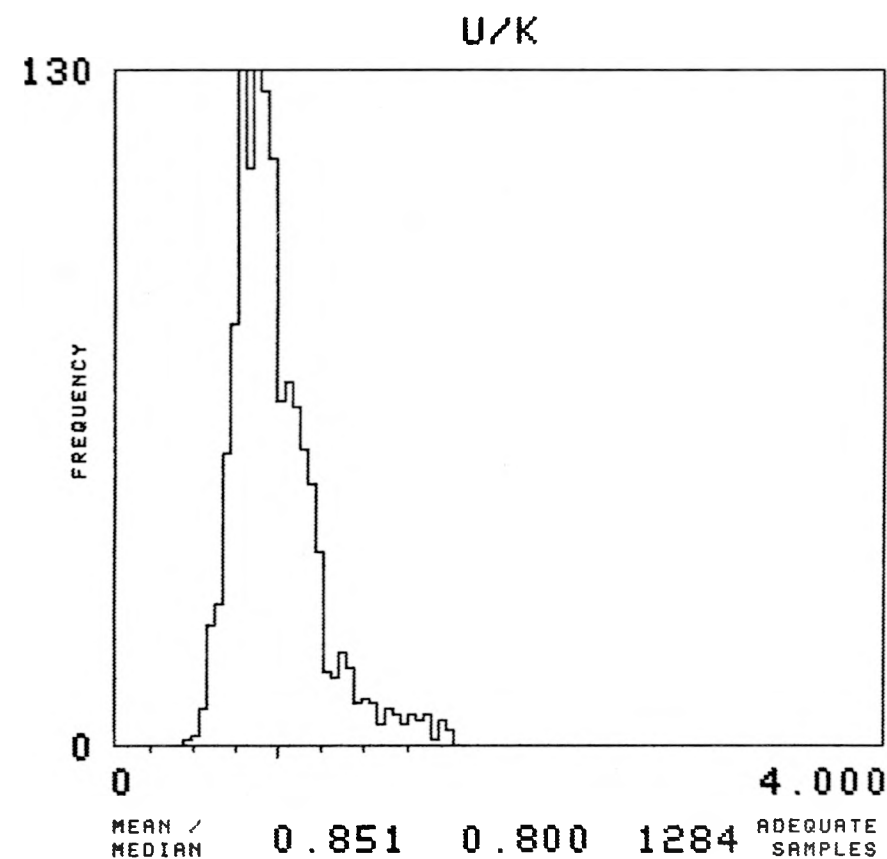
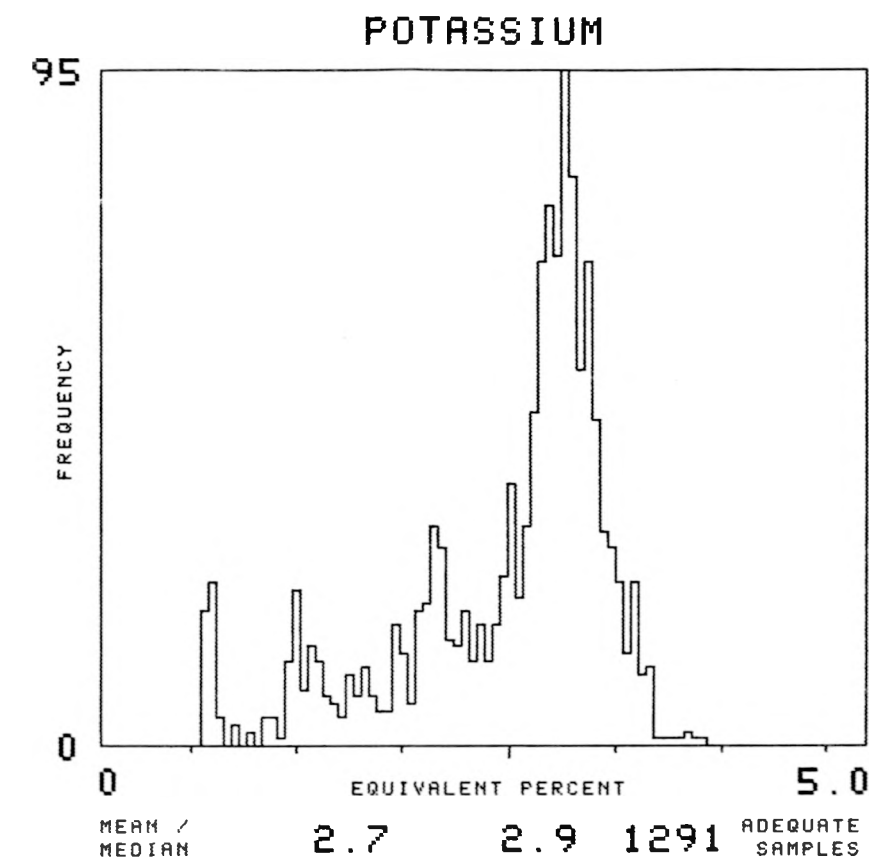
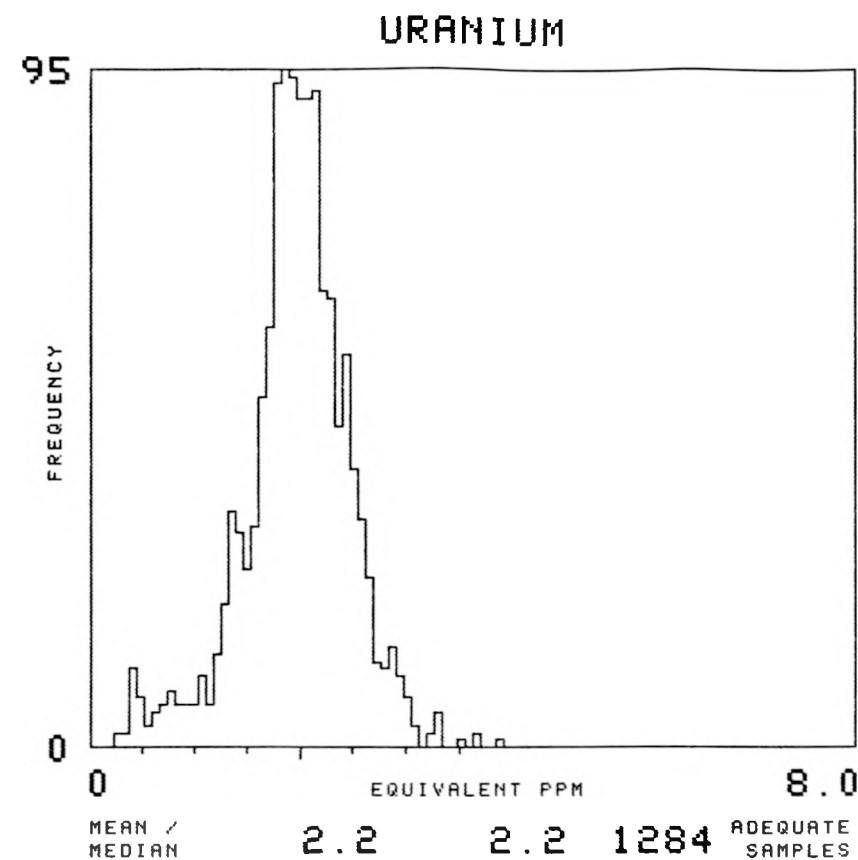
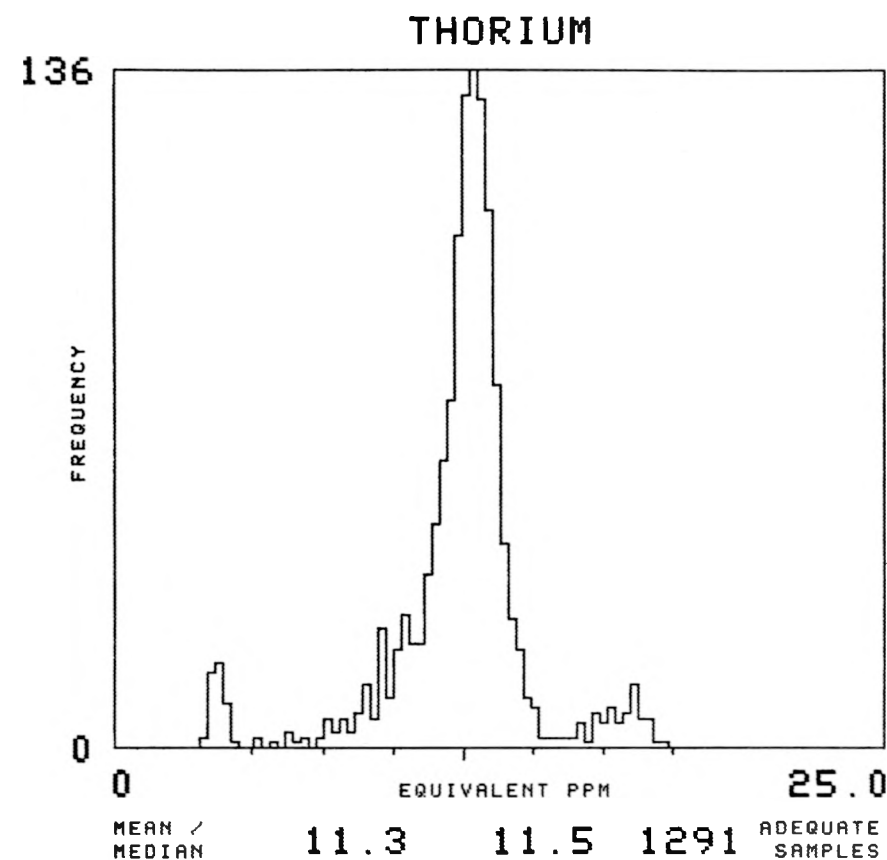


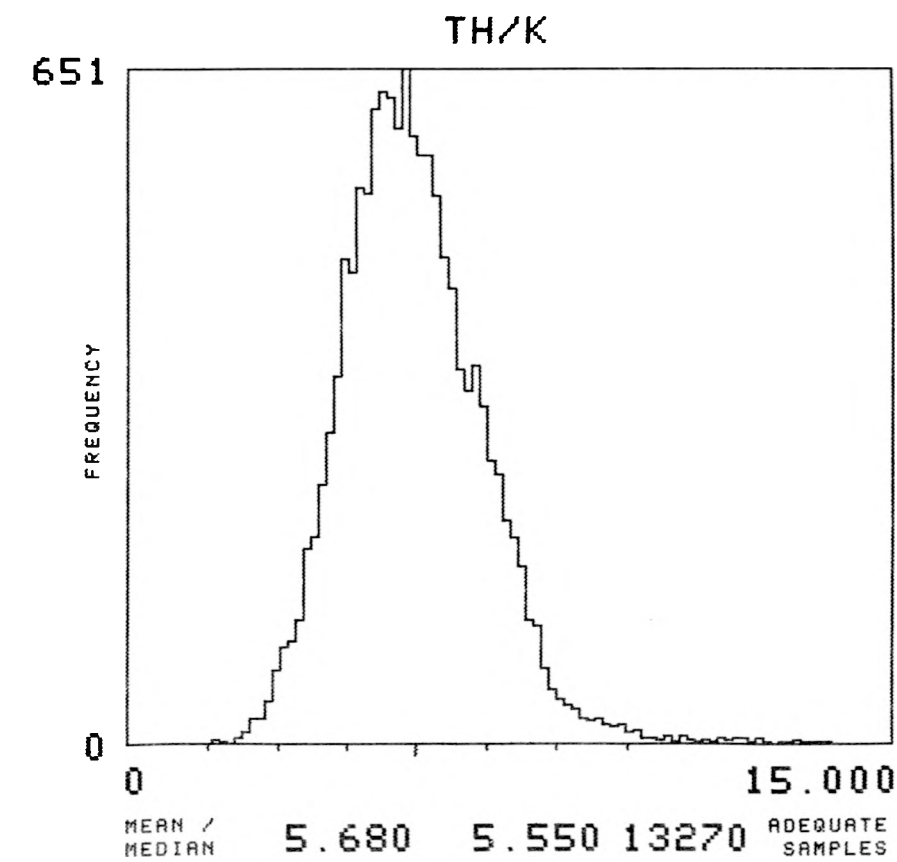
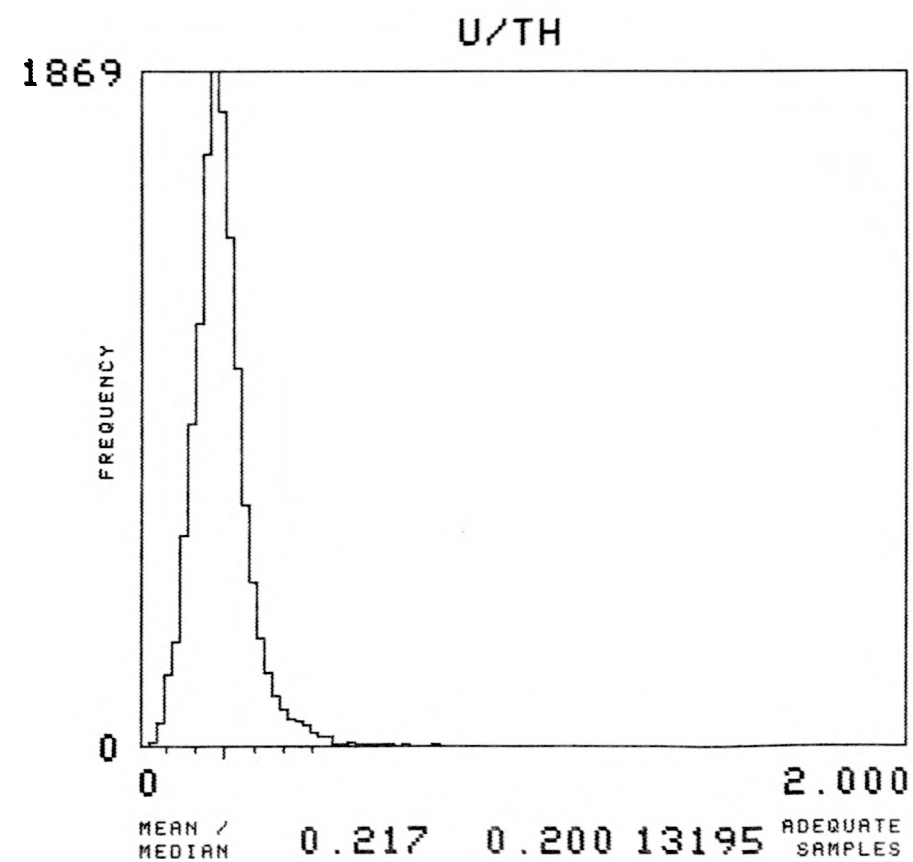
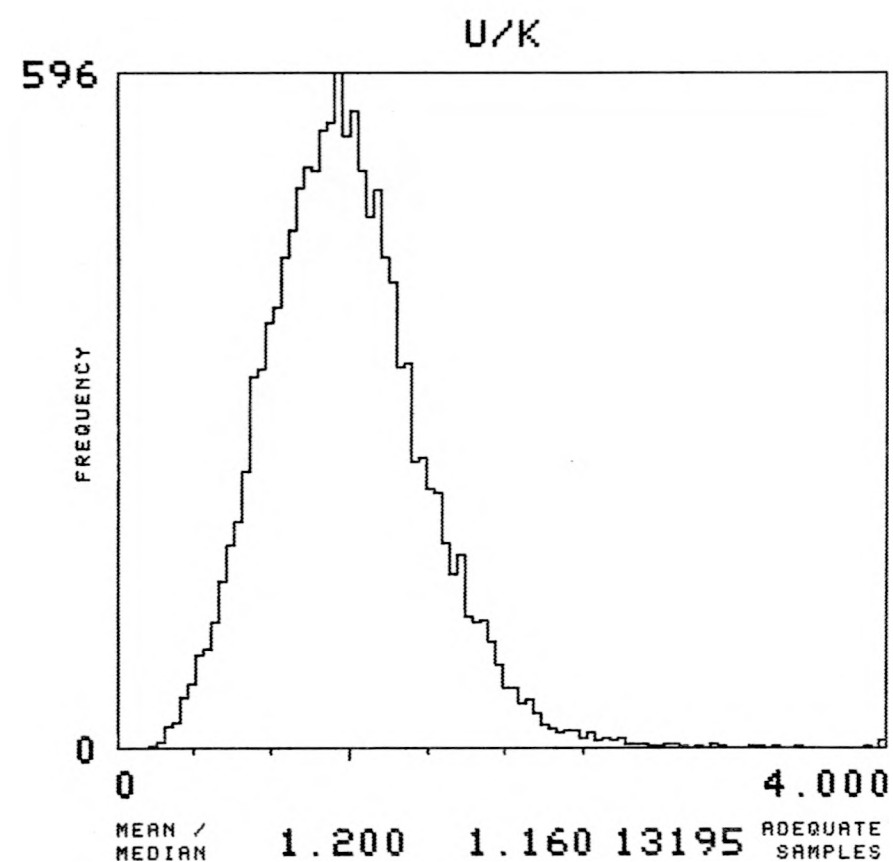
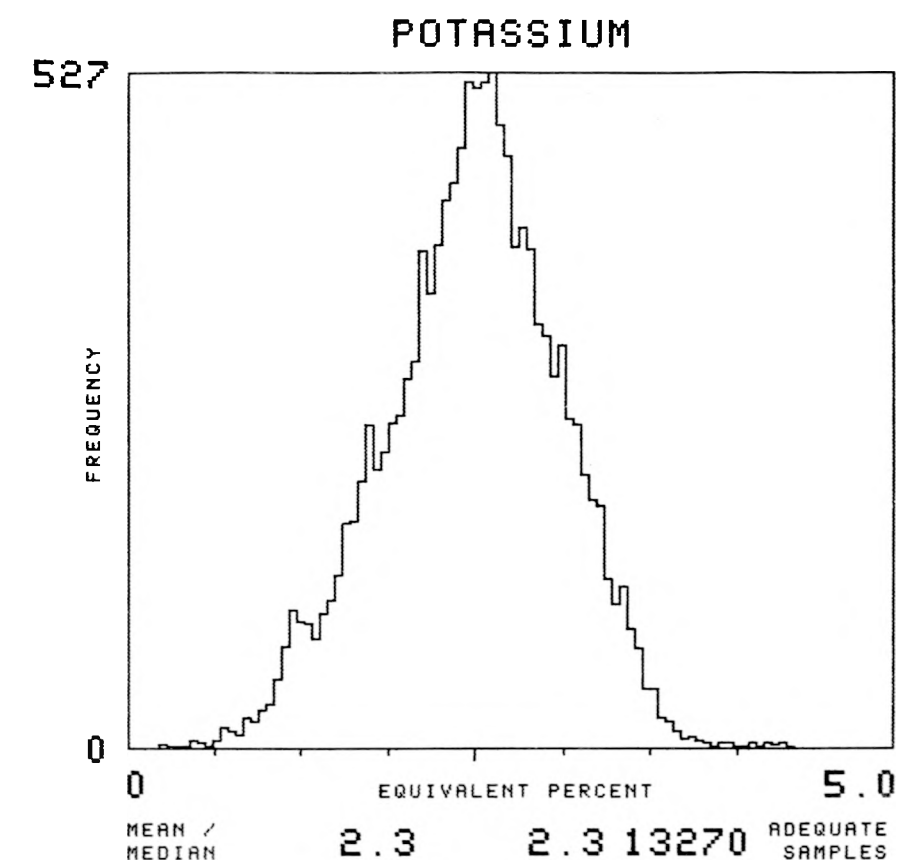
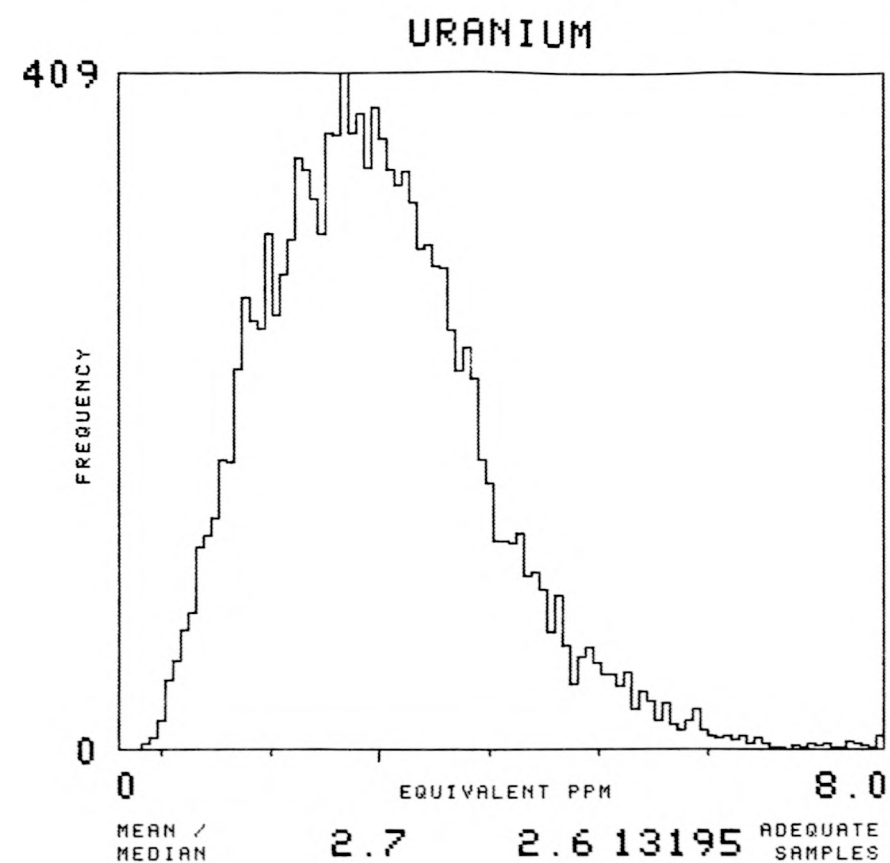
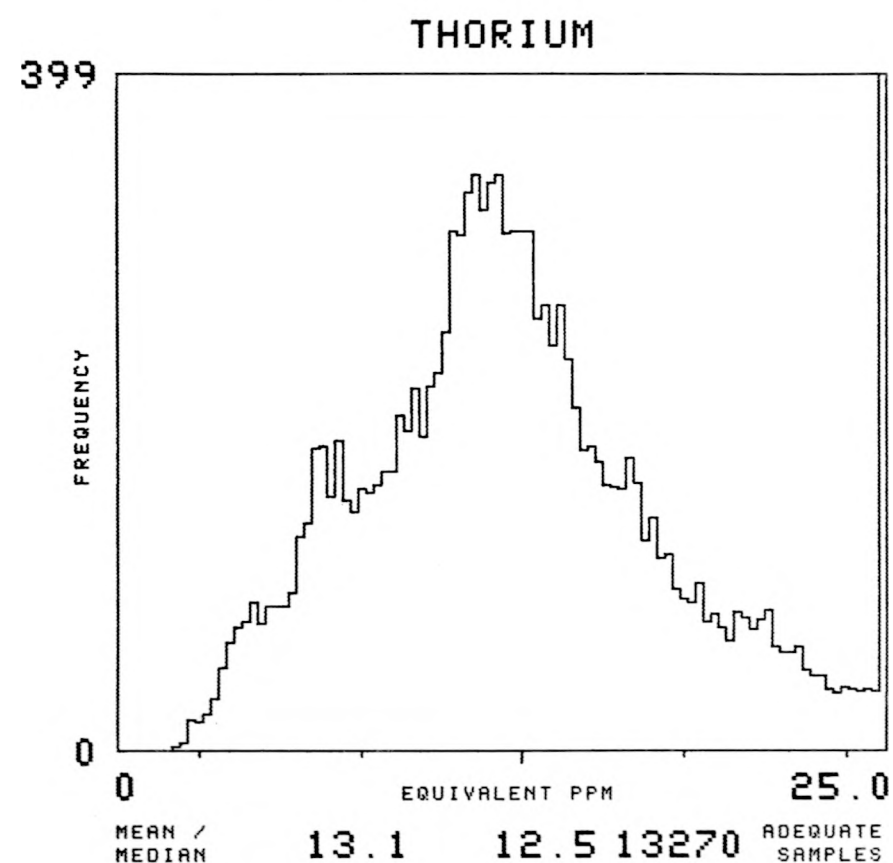
U/TH



TH/K



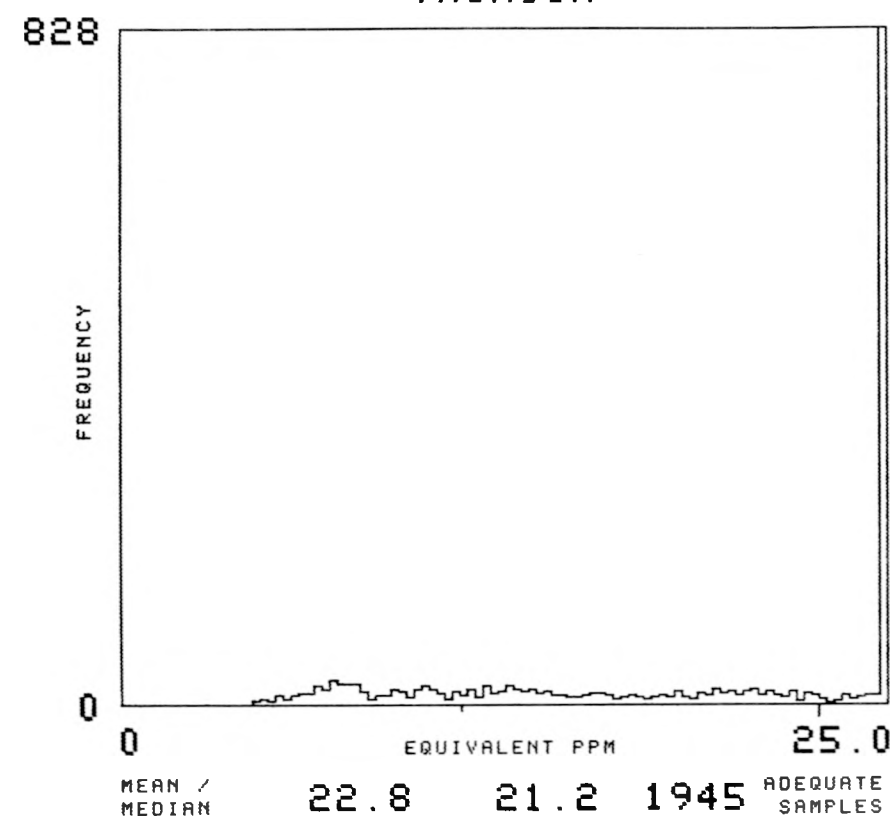




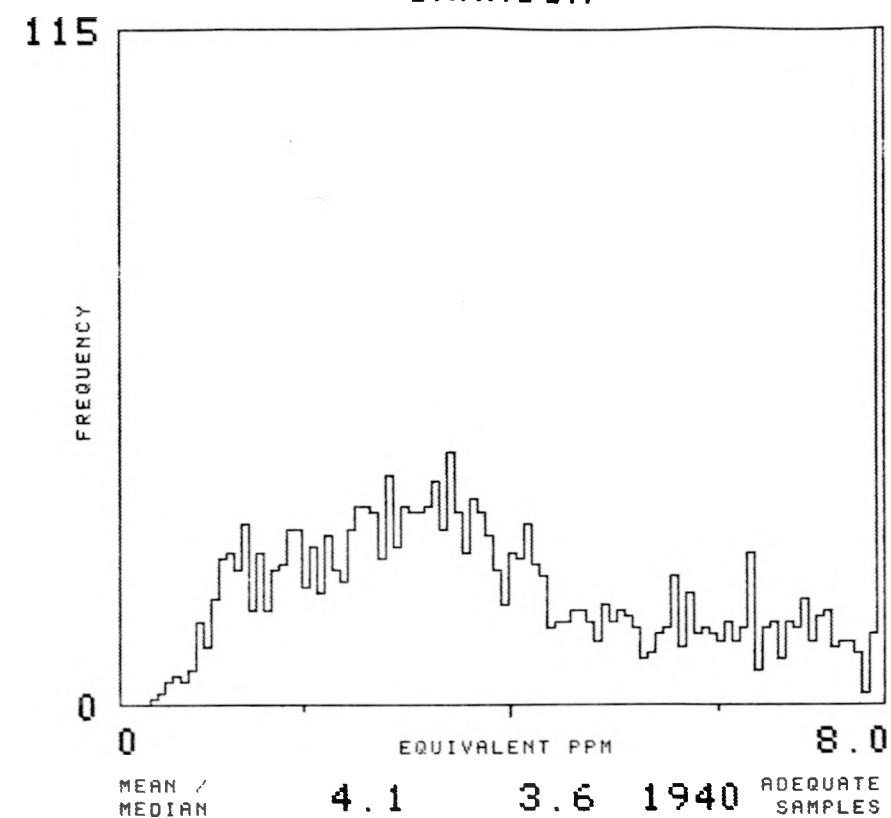
NTMS NK 11-3 HAILEY

MAP UNIT : TEIF TOTAL NUMBER OF SAMPLES 2226

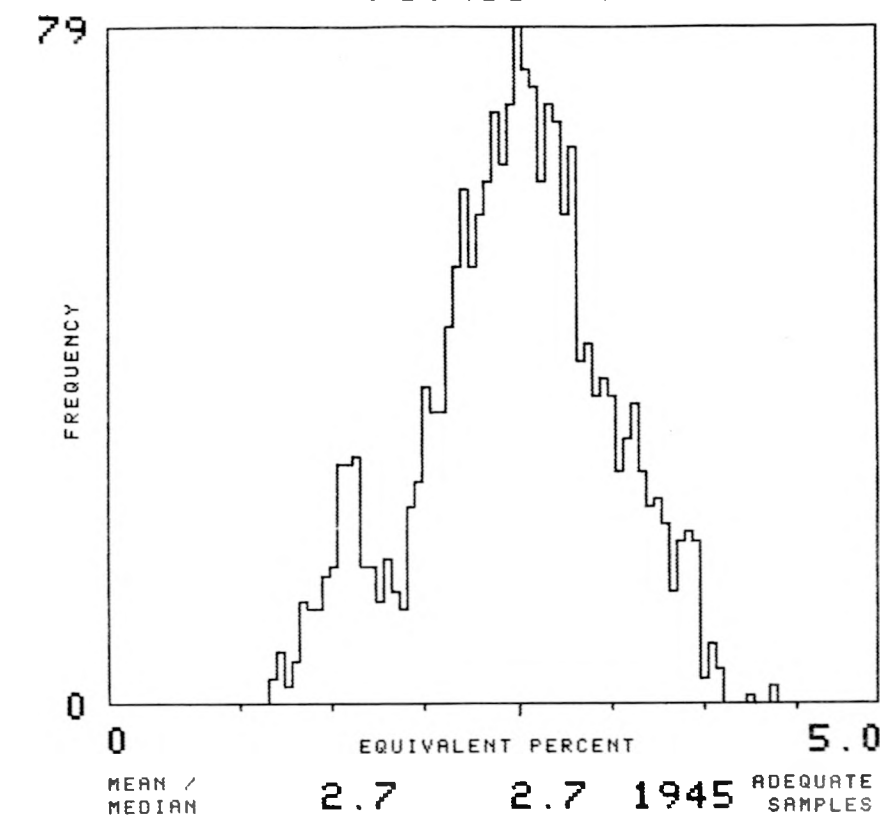
THORIUM



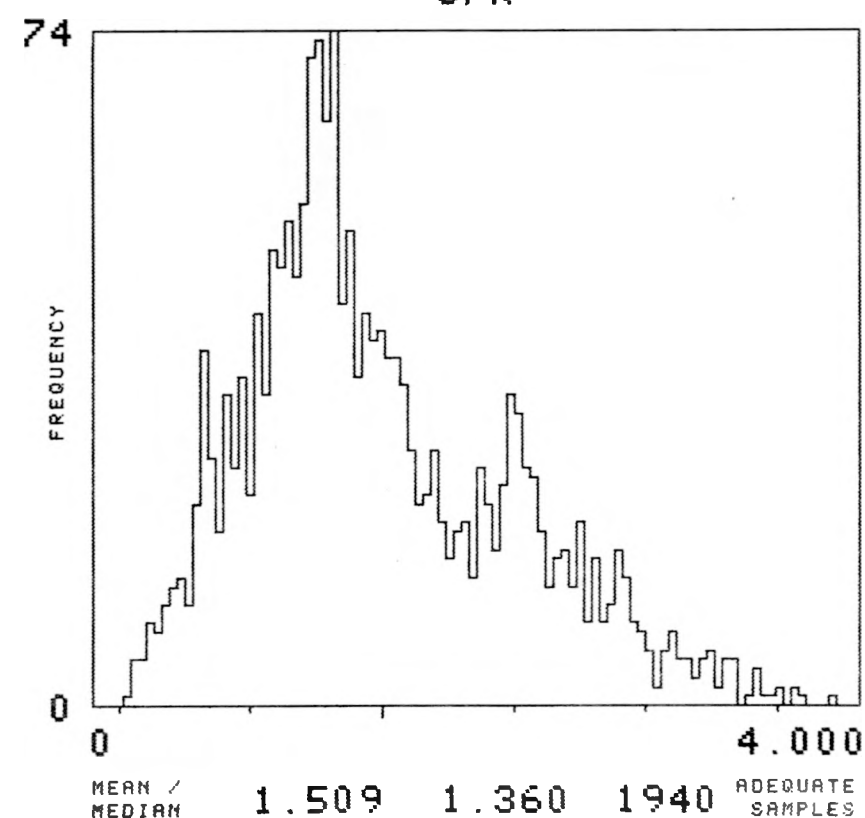
URANIUM



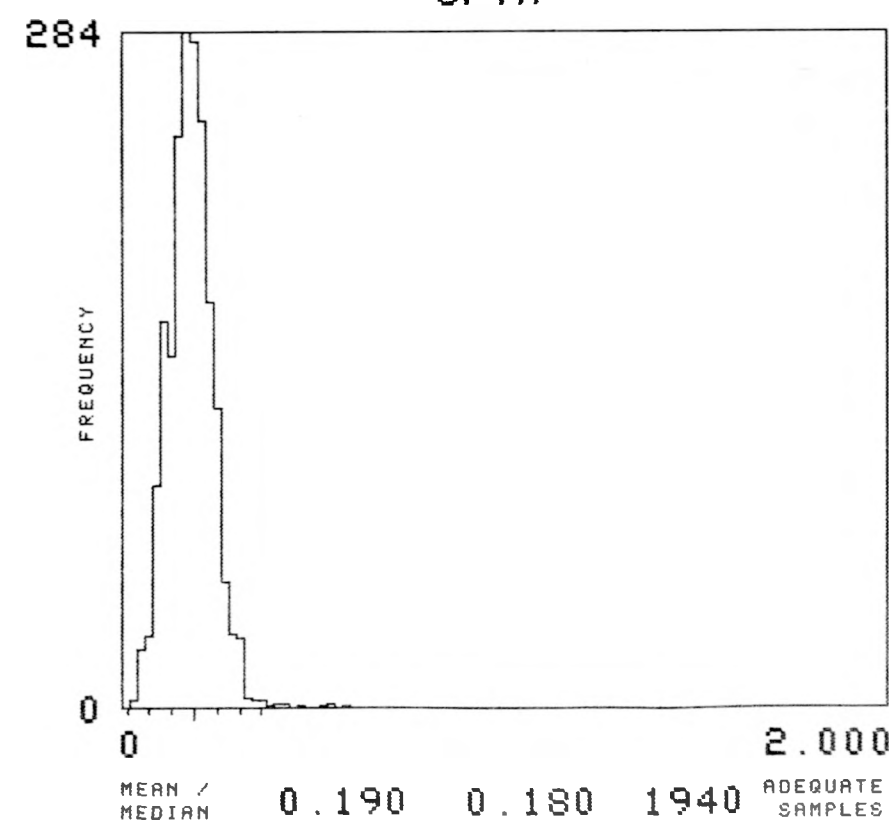
POTASSIUM



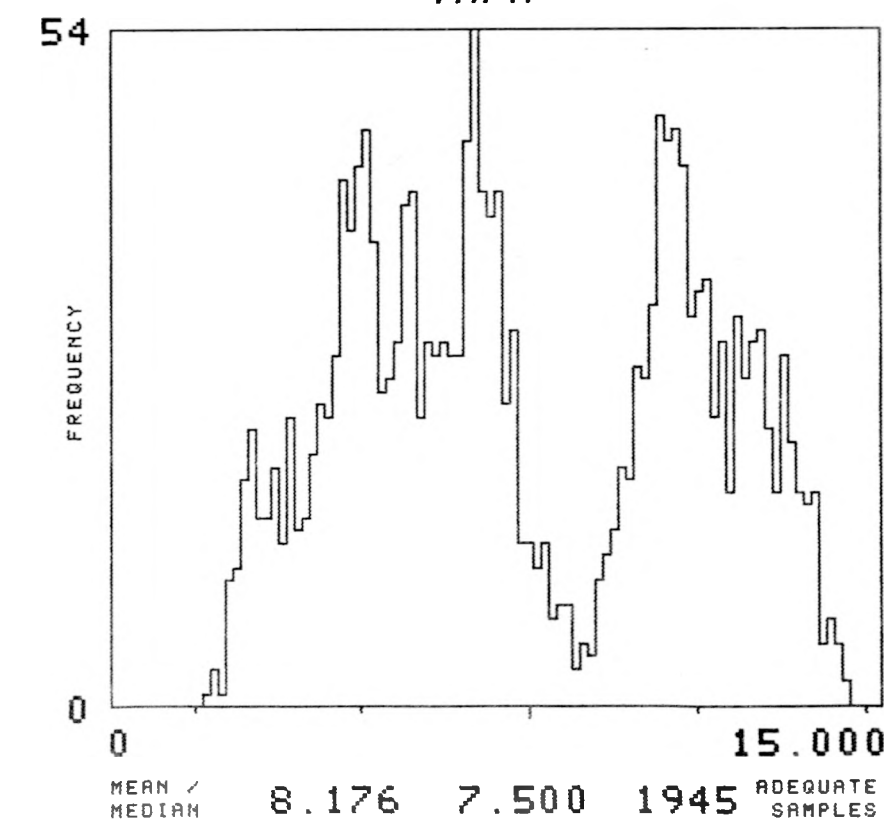
U/K

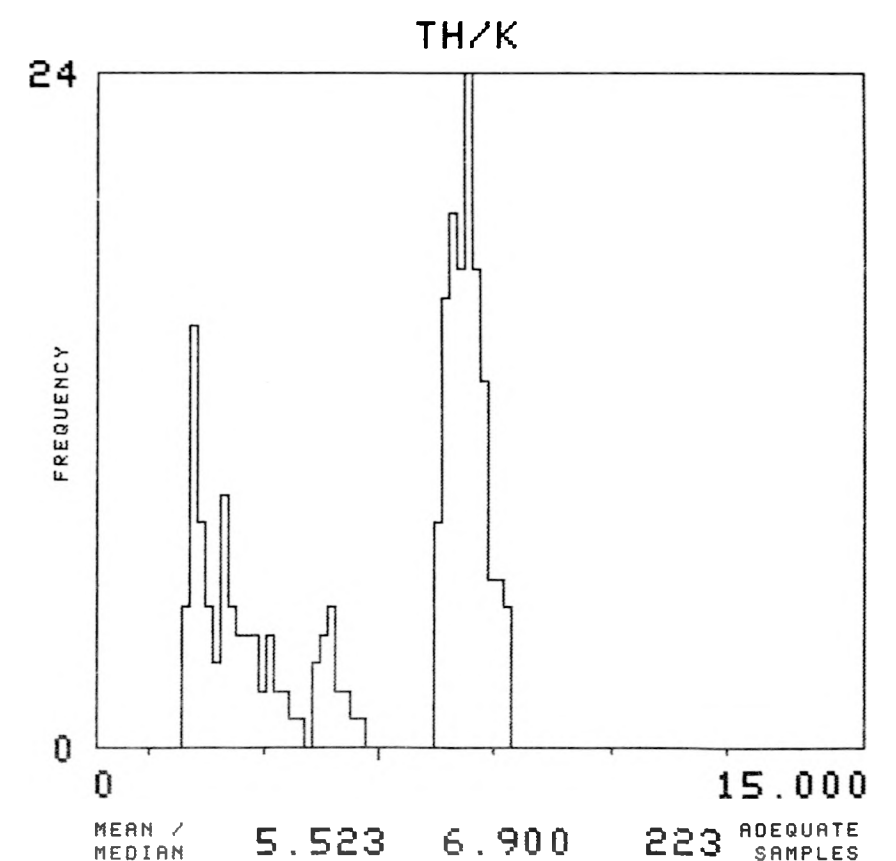
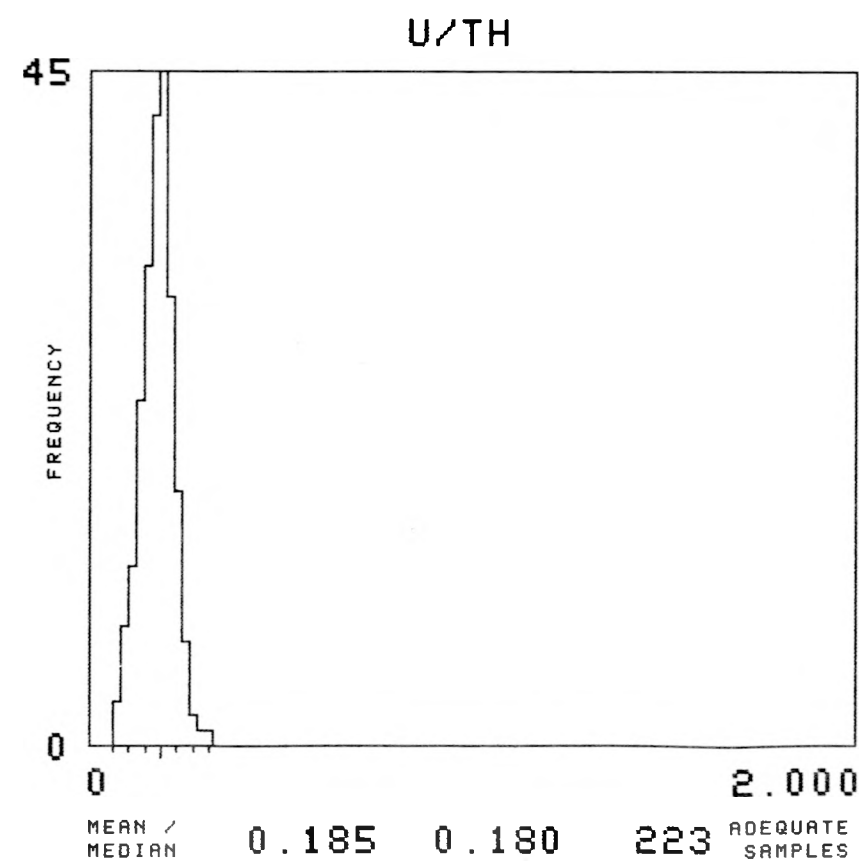
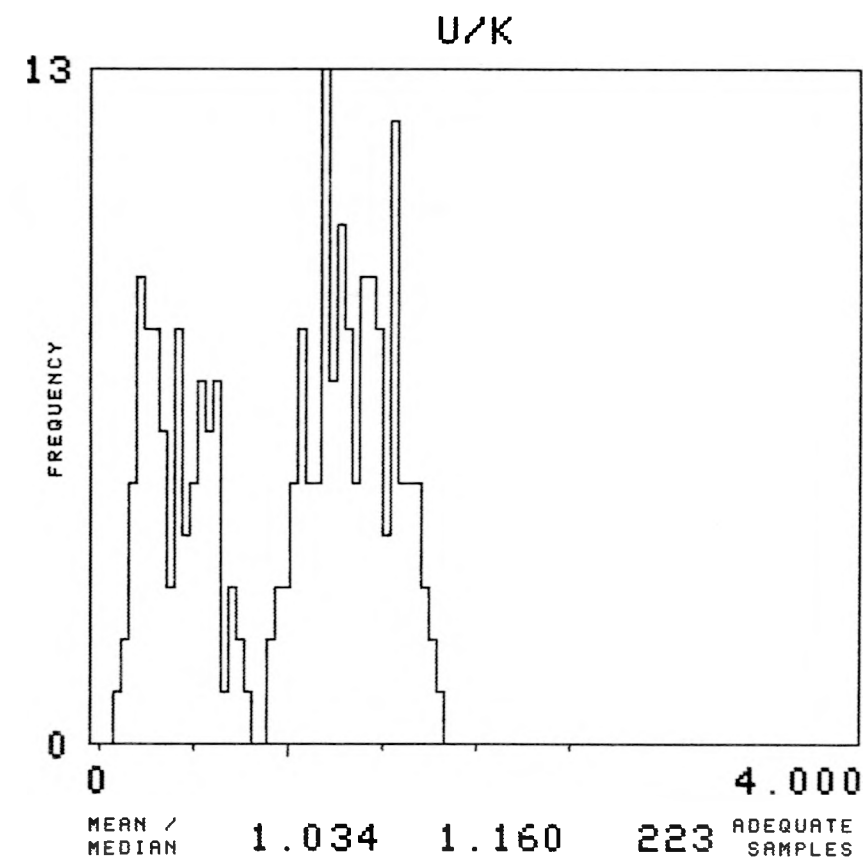
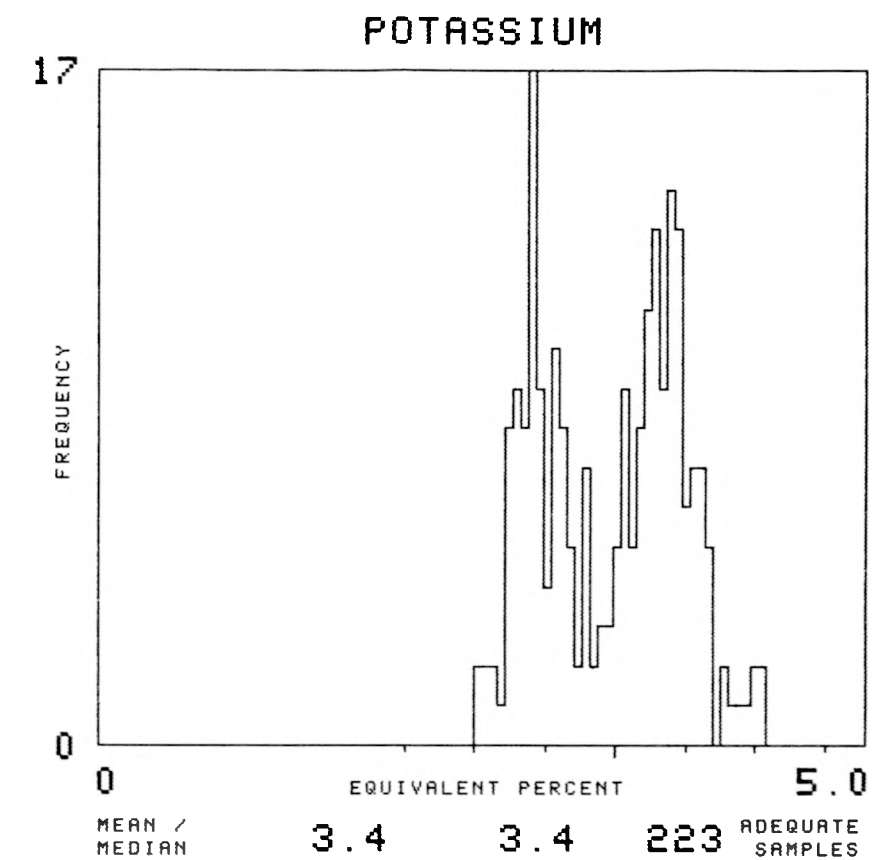
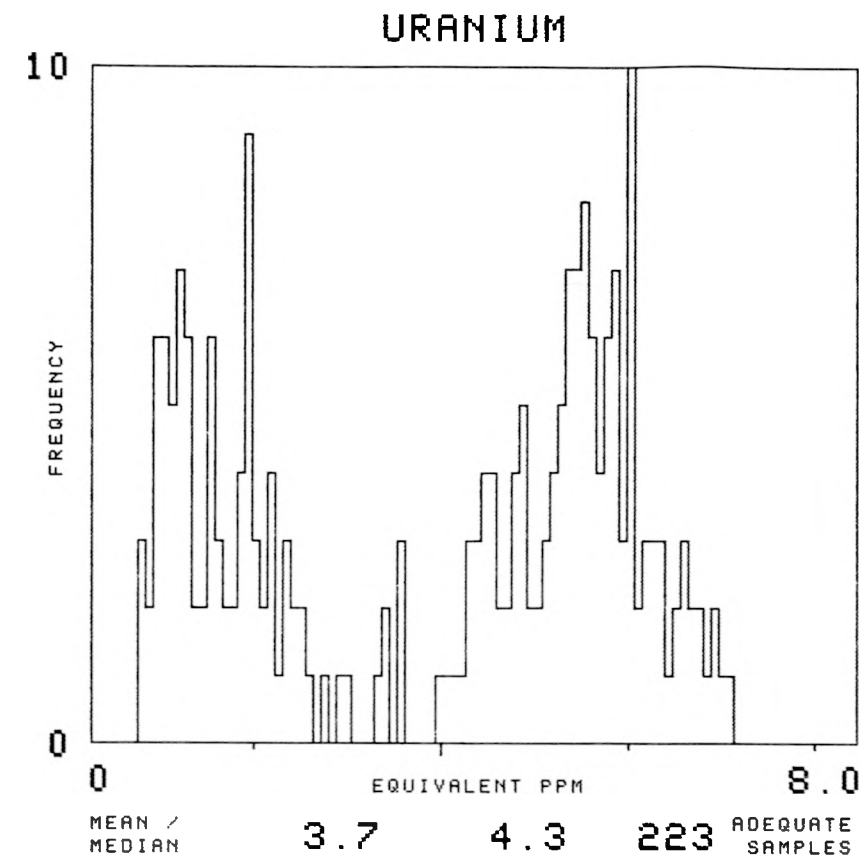
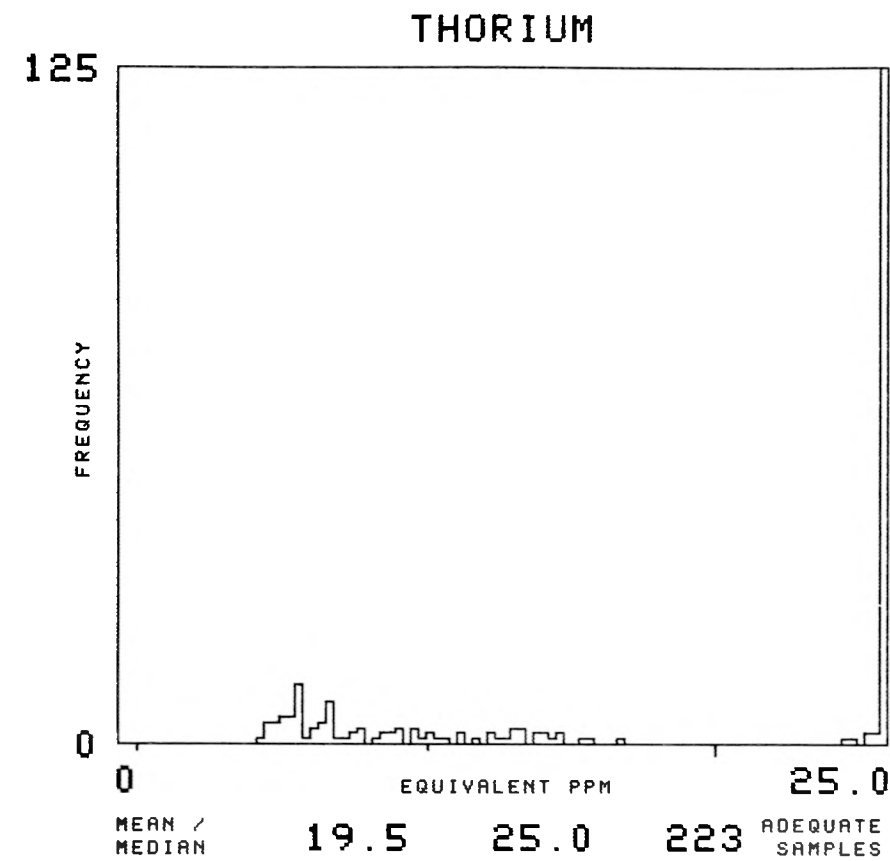


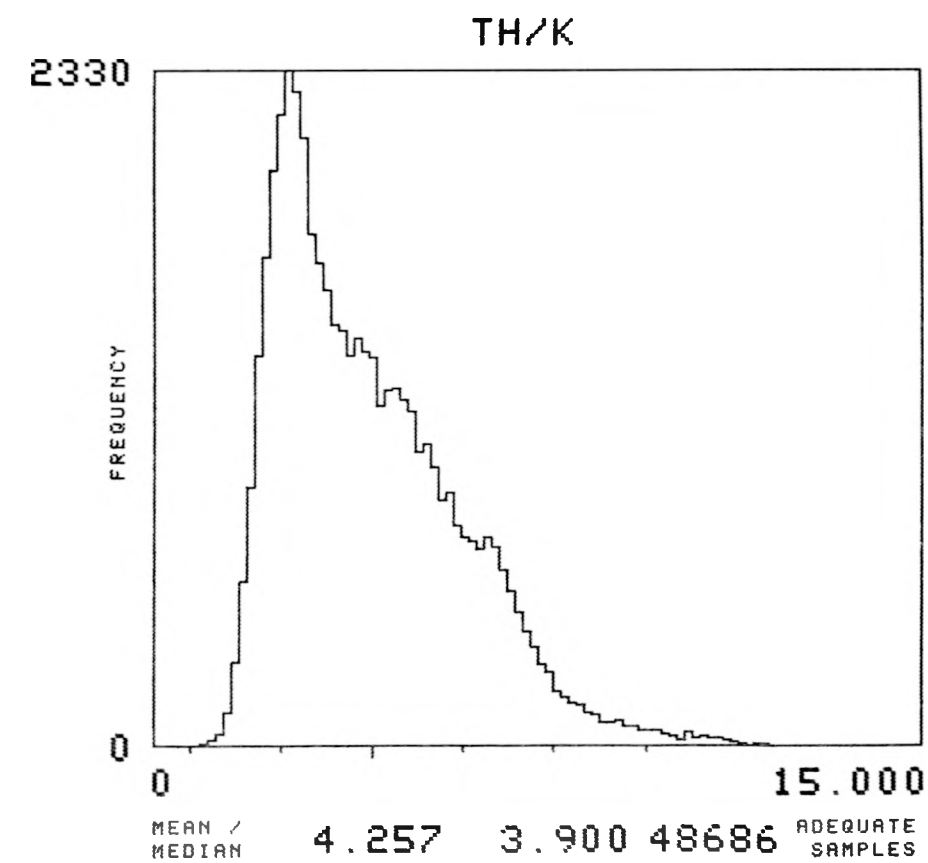
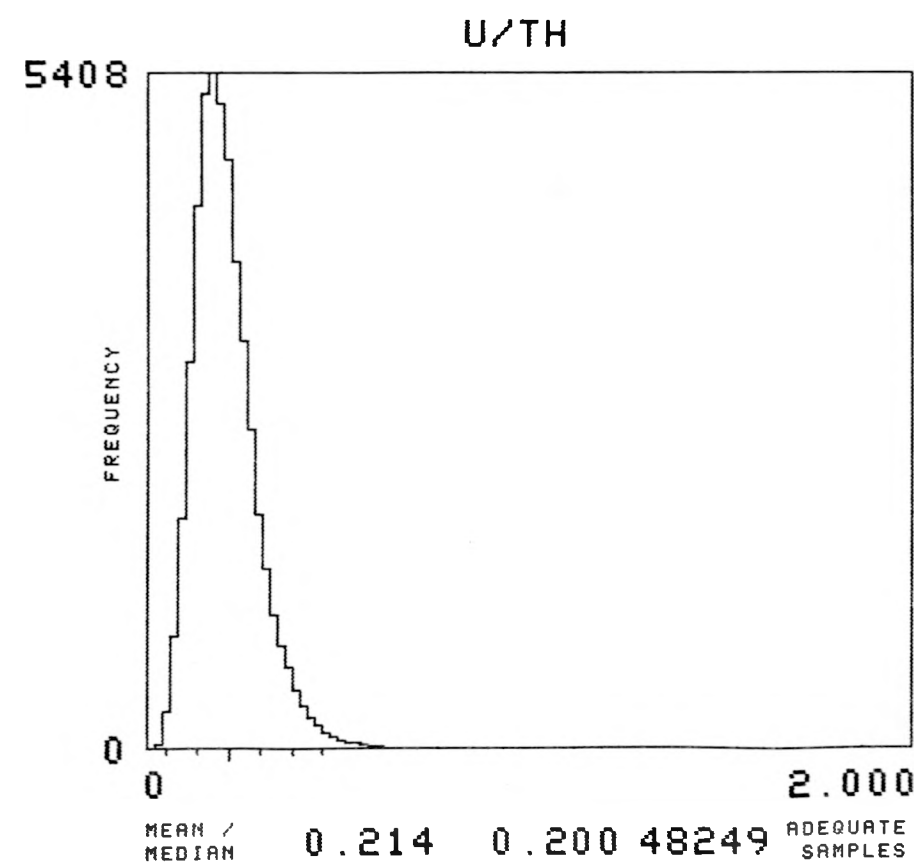
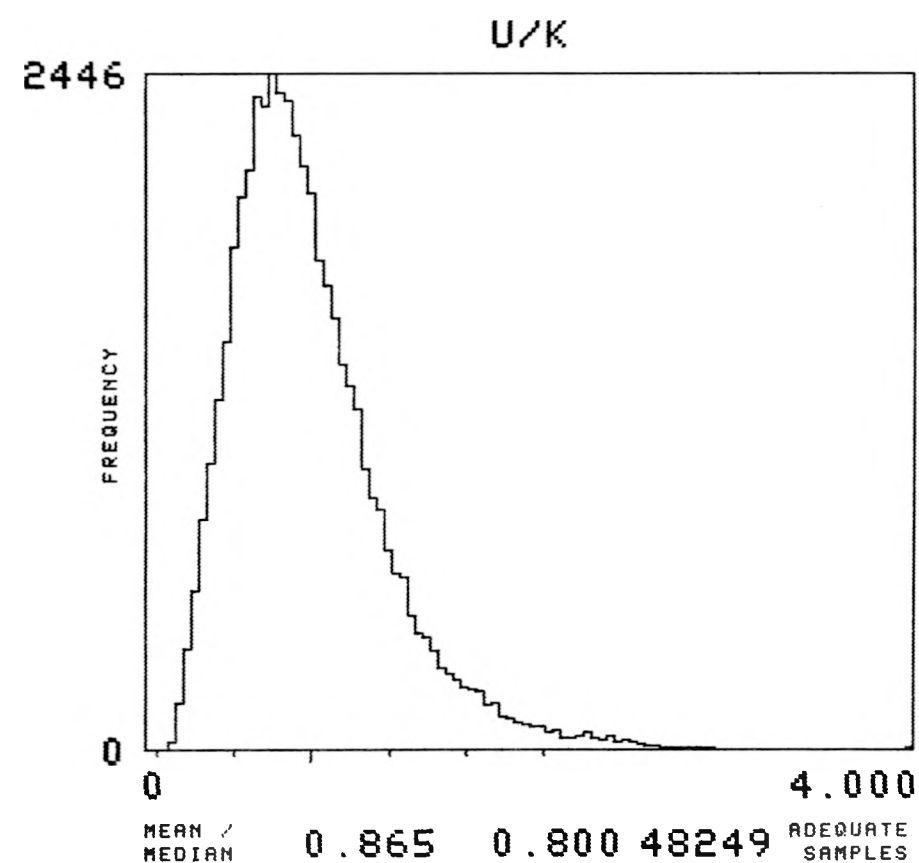
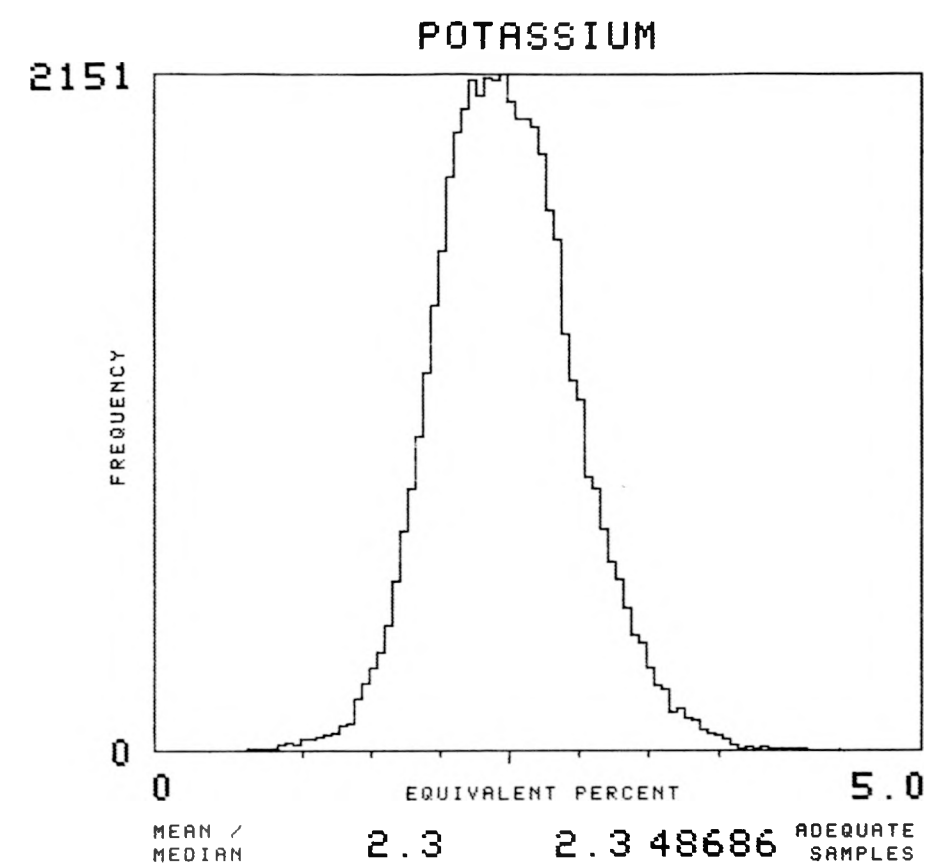
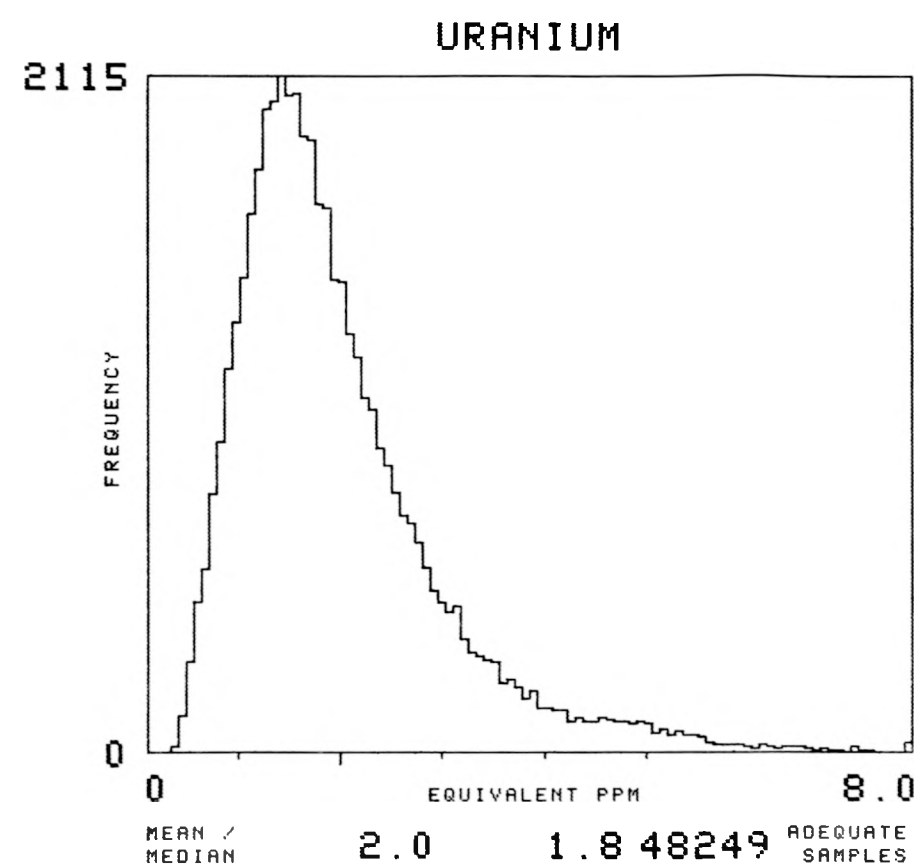
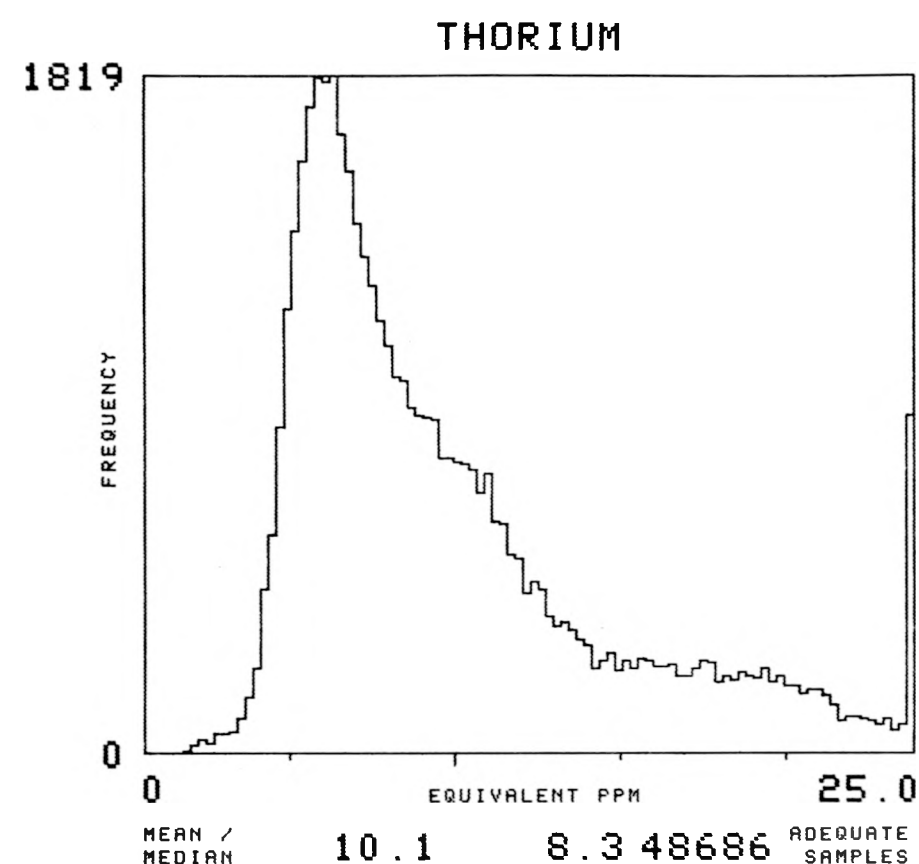
U/TH



TH/K

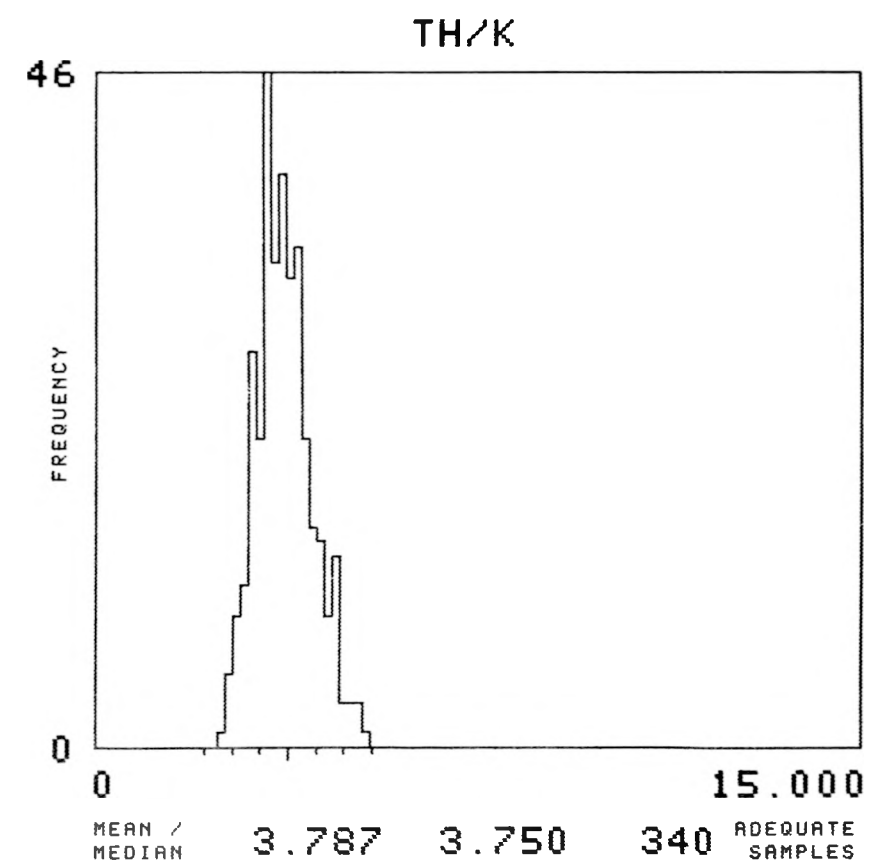
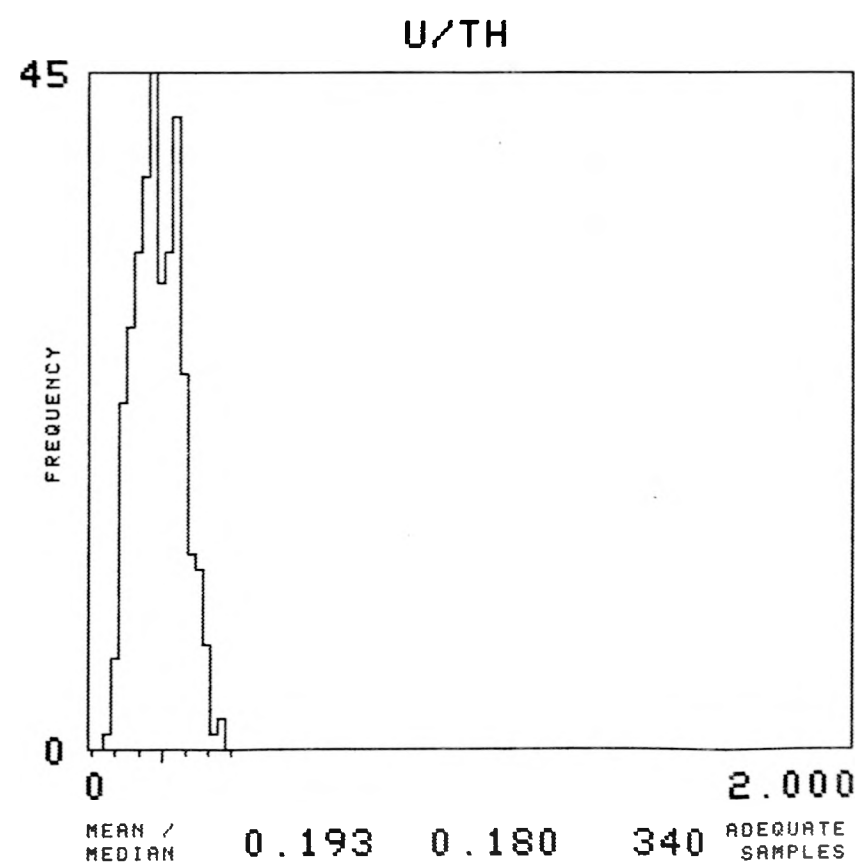
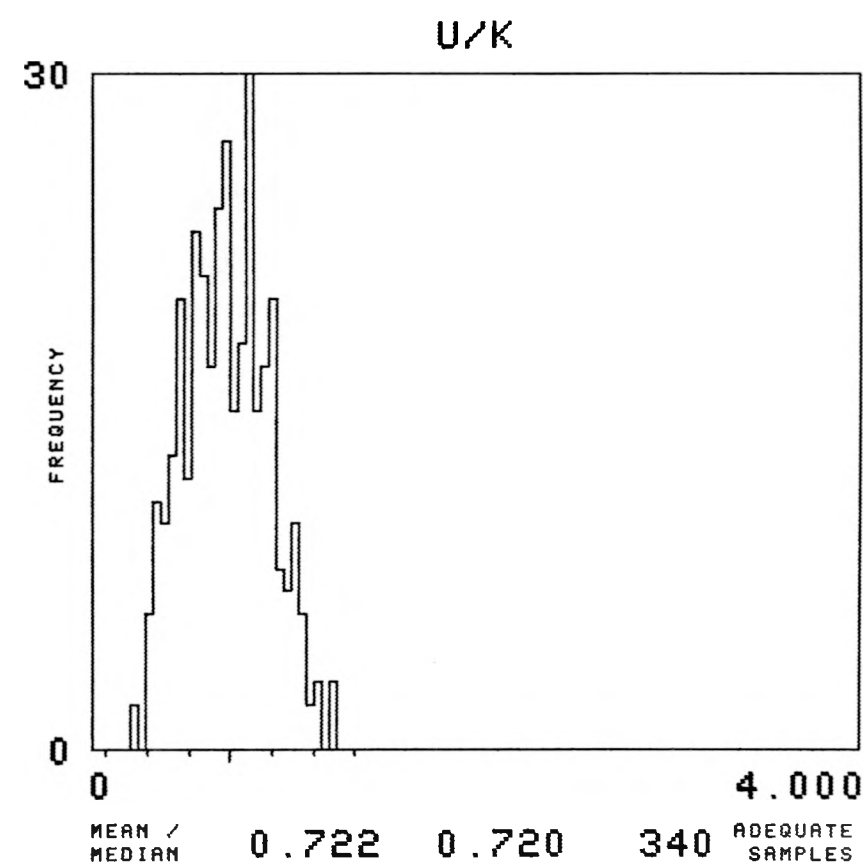
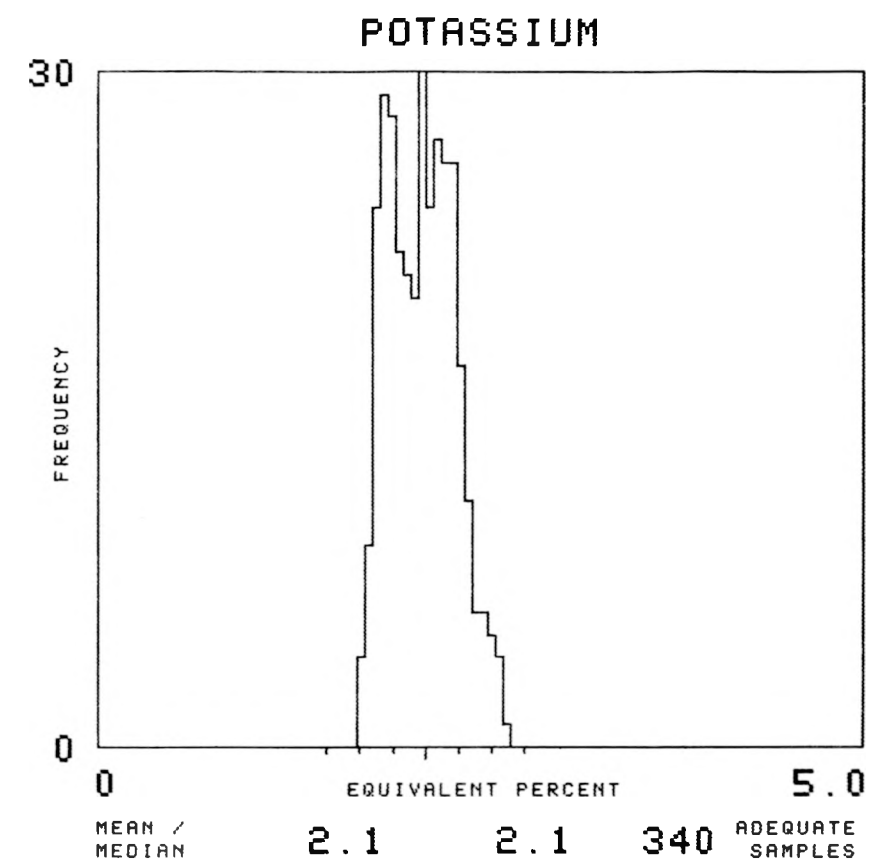
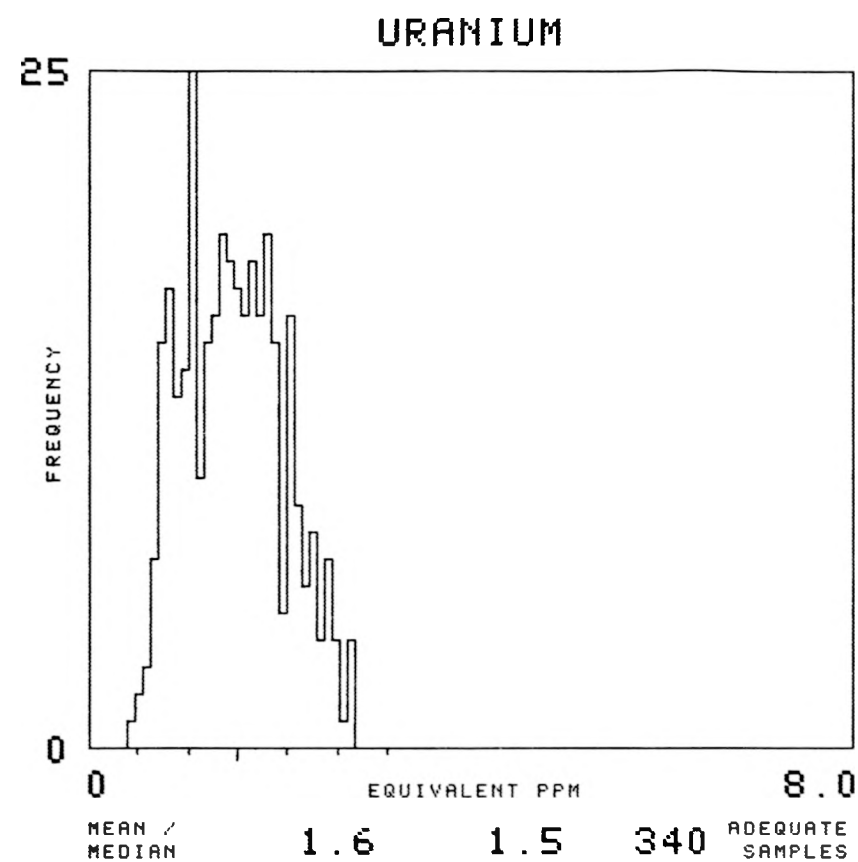
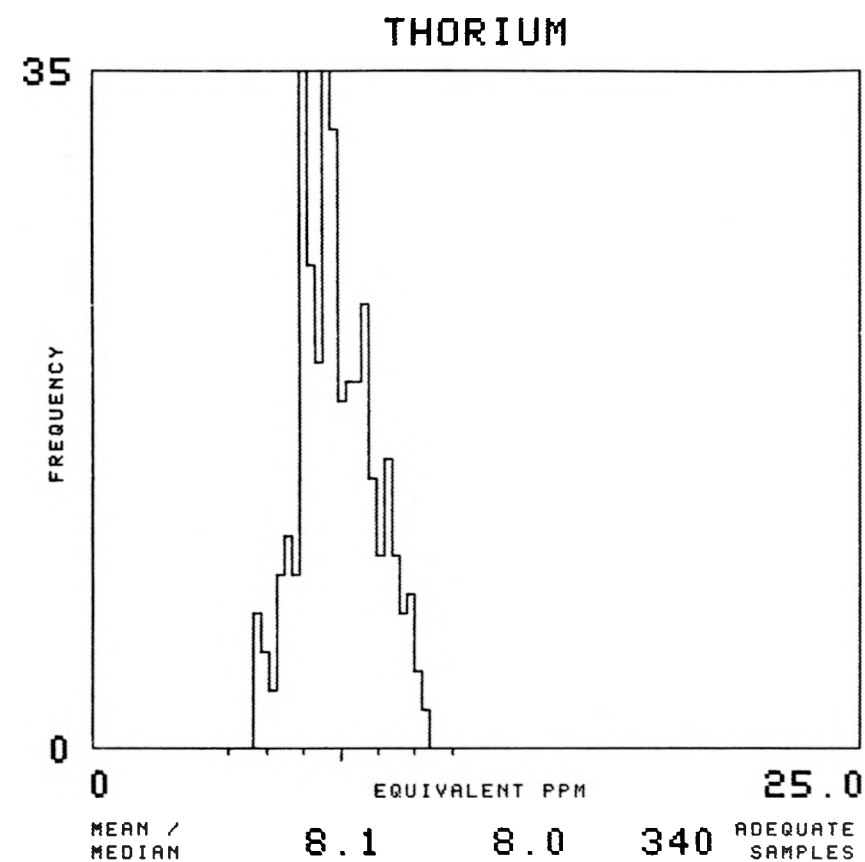






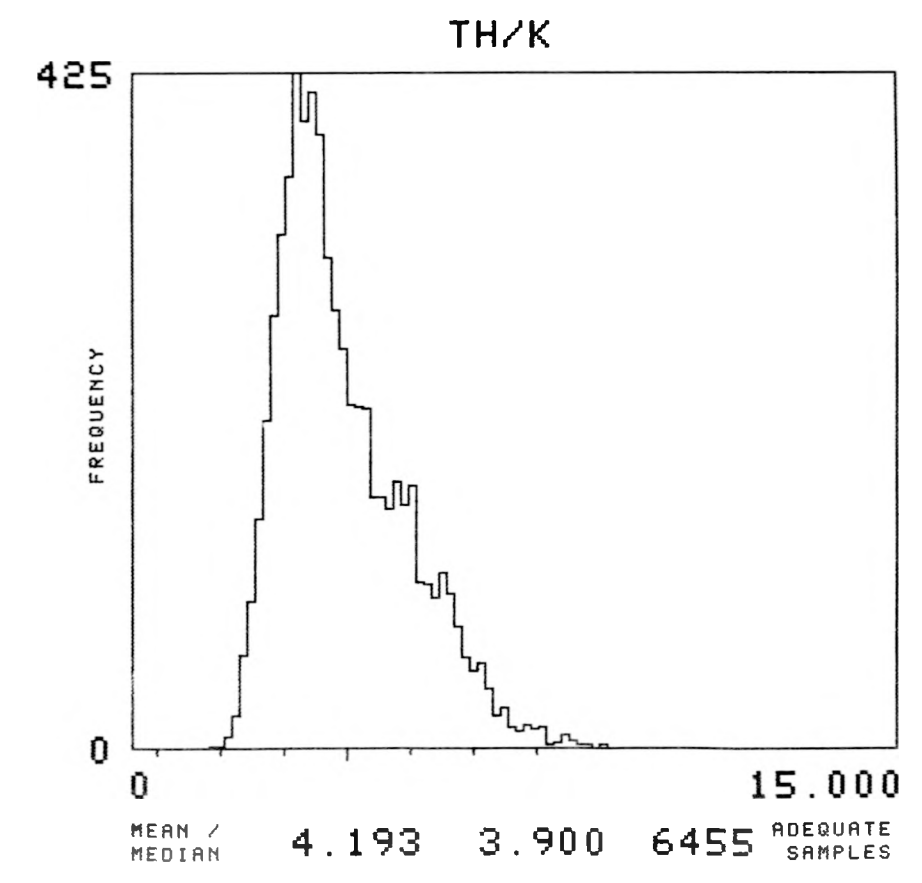
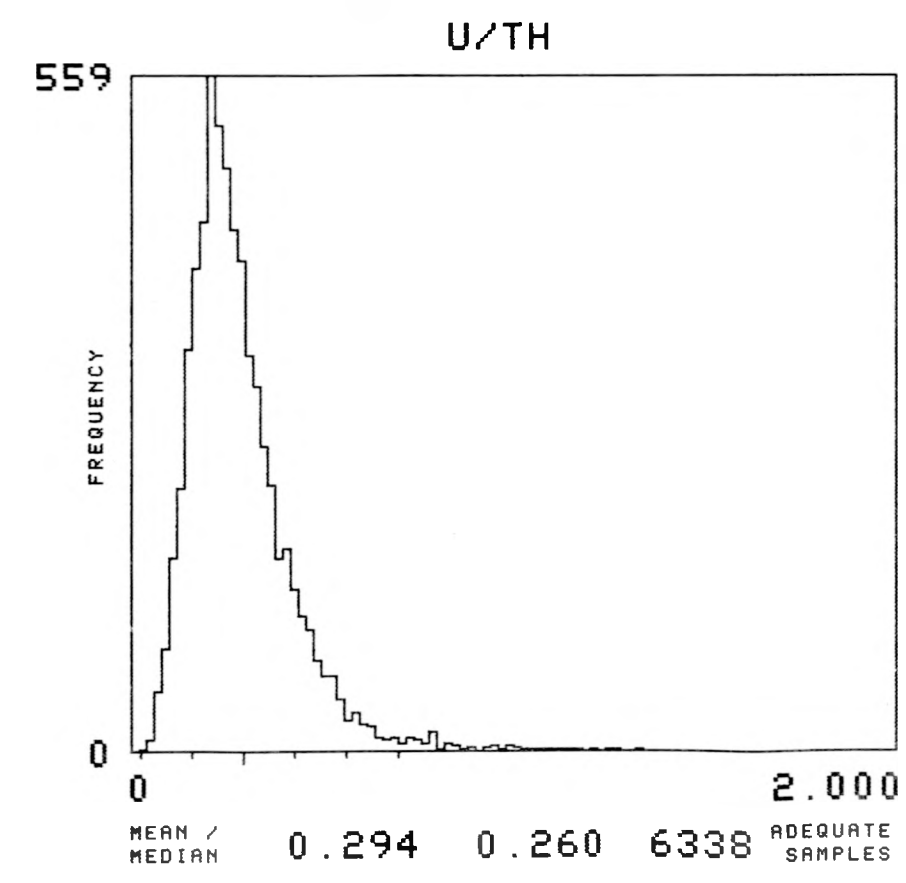
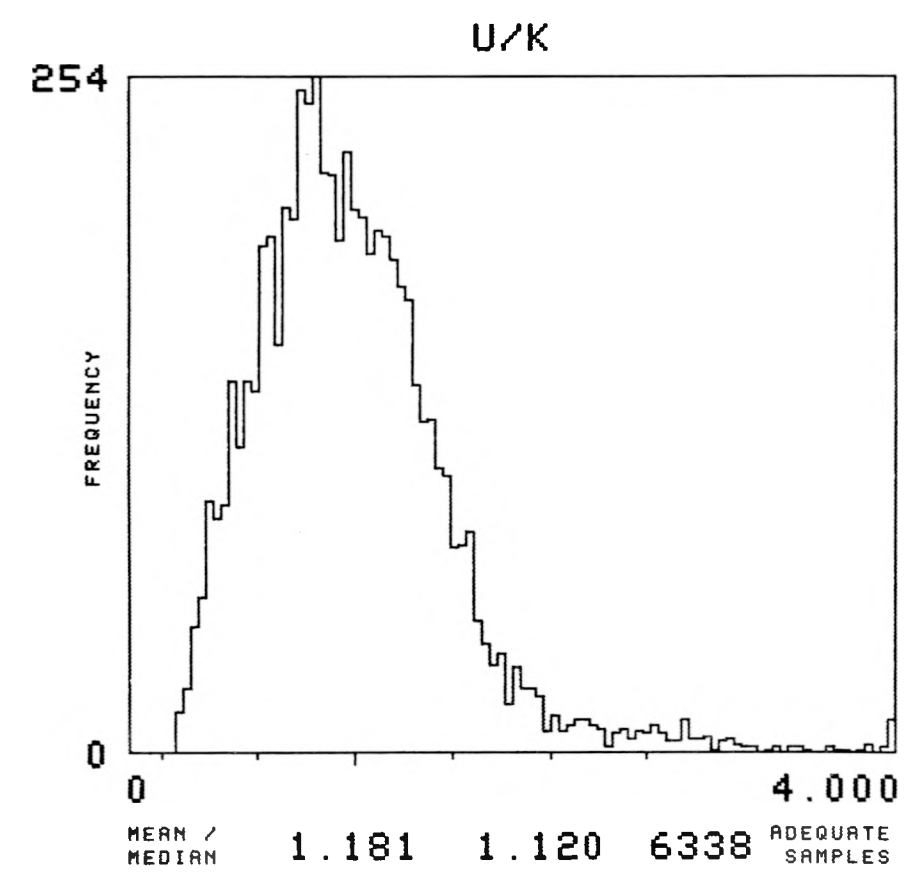
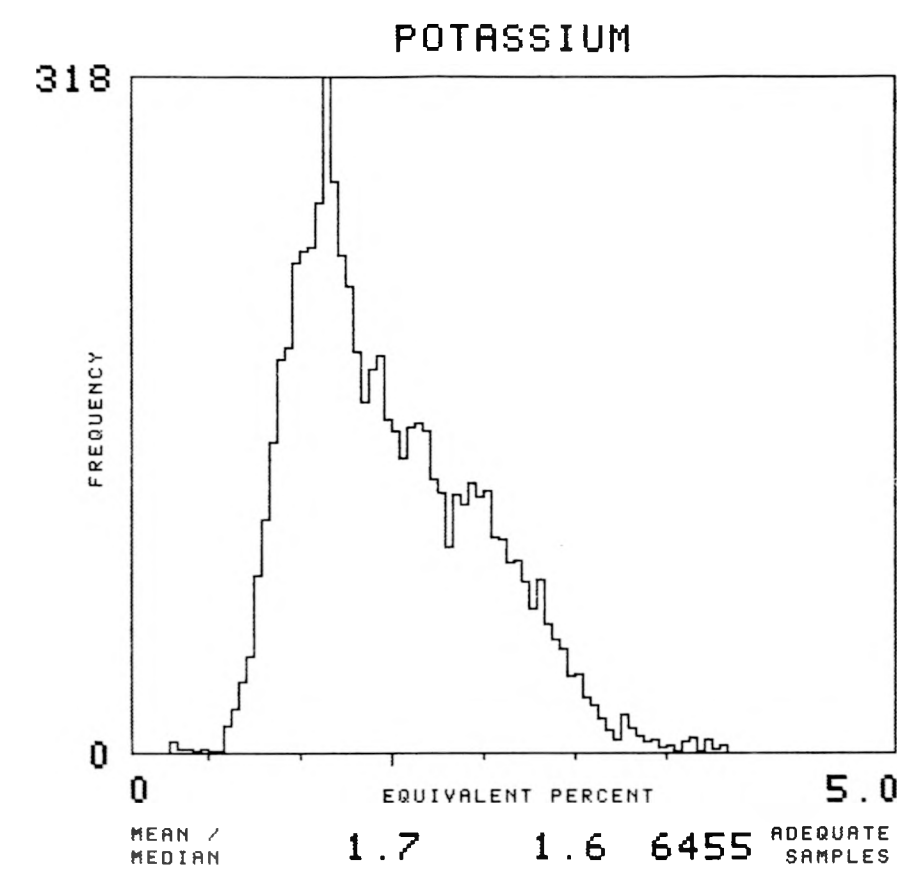
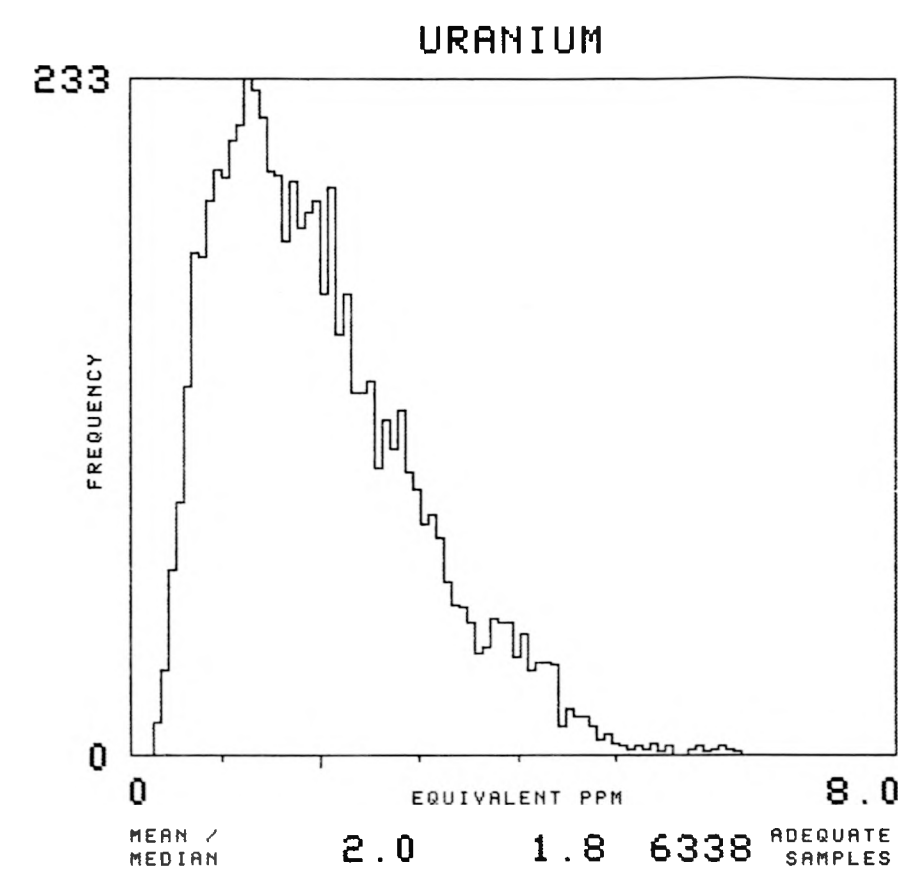
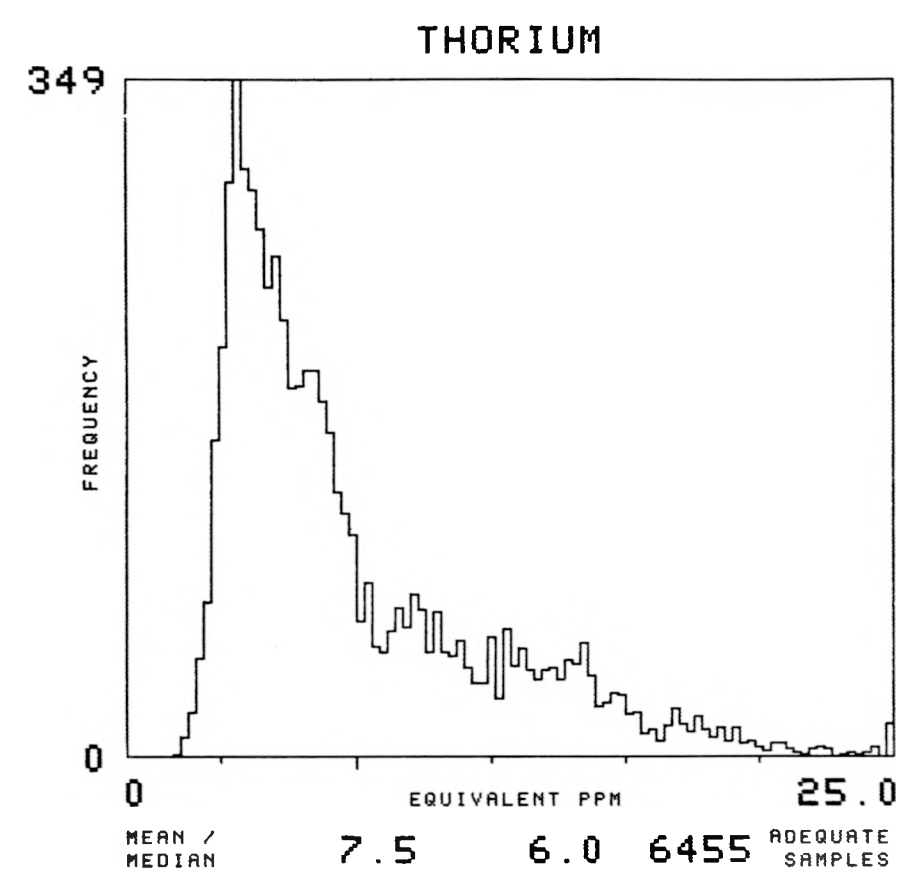
NTMS NK 11-3 HAILEY

MAP UNIT : MKIF TOTAL NUMBER OF SAMPLES 340



NTMS NK 11-3 HAILEY

MAP UNIT : PP TOTAL NUMBER OF SAMPLES 7070



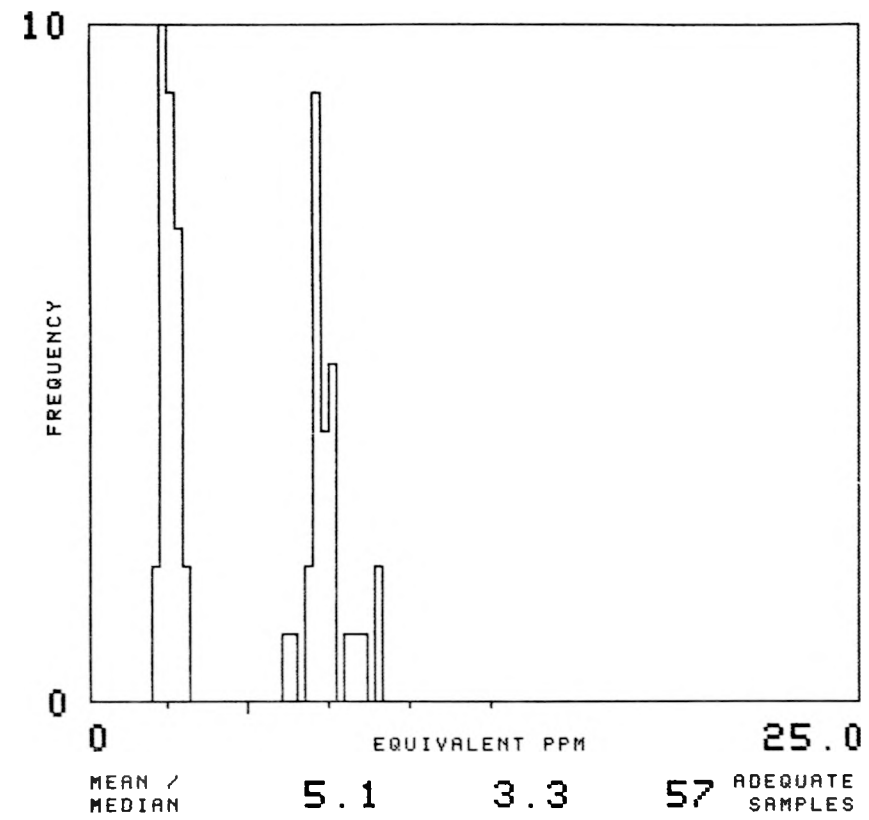
NTMS NK 11-3 HAILEY

MAP UNIT : PM

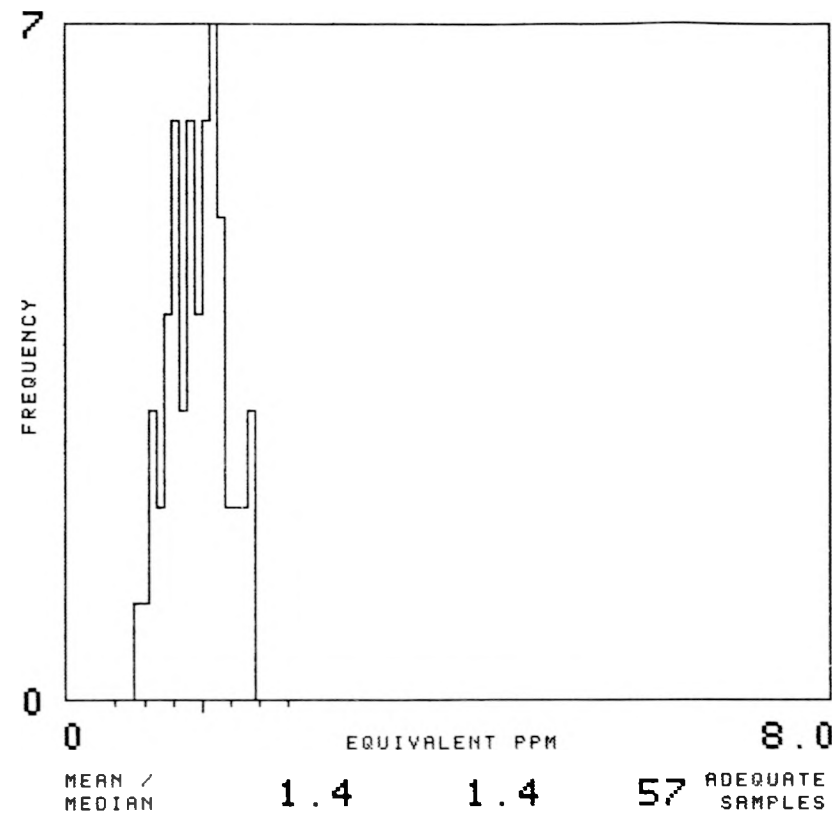
TOTAL NUMBER
OF SAMPLES

57

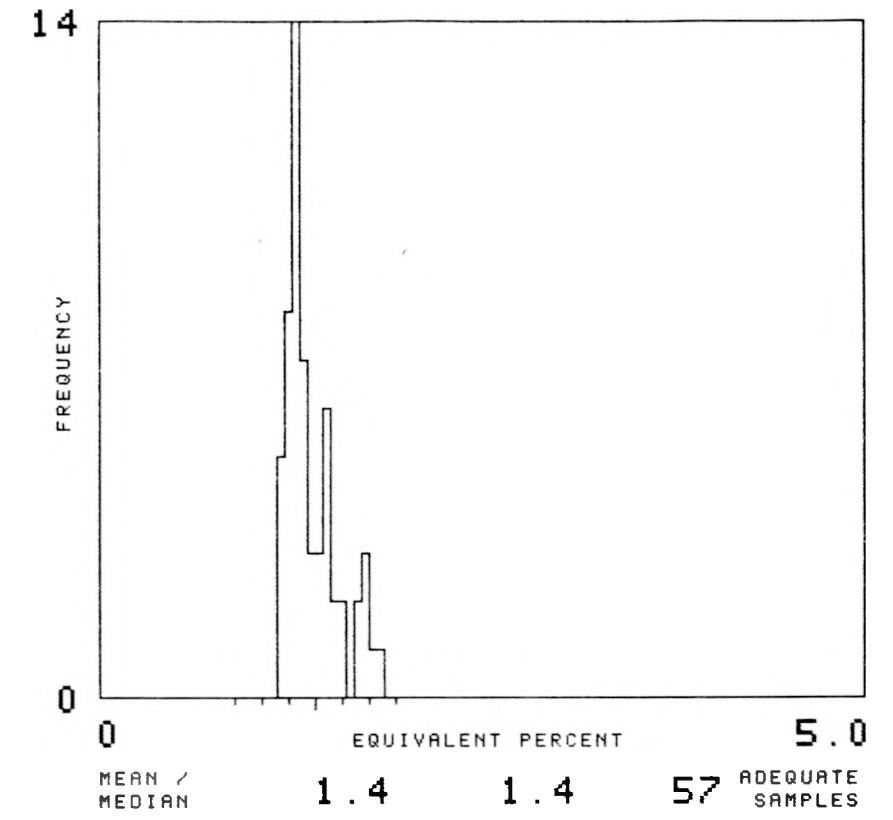
THORIUM



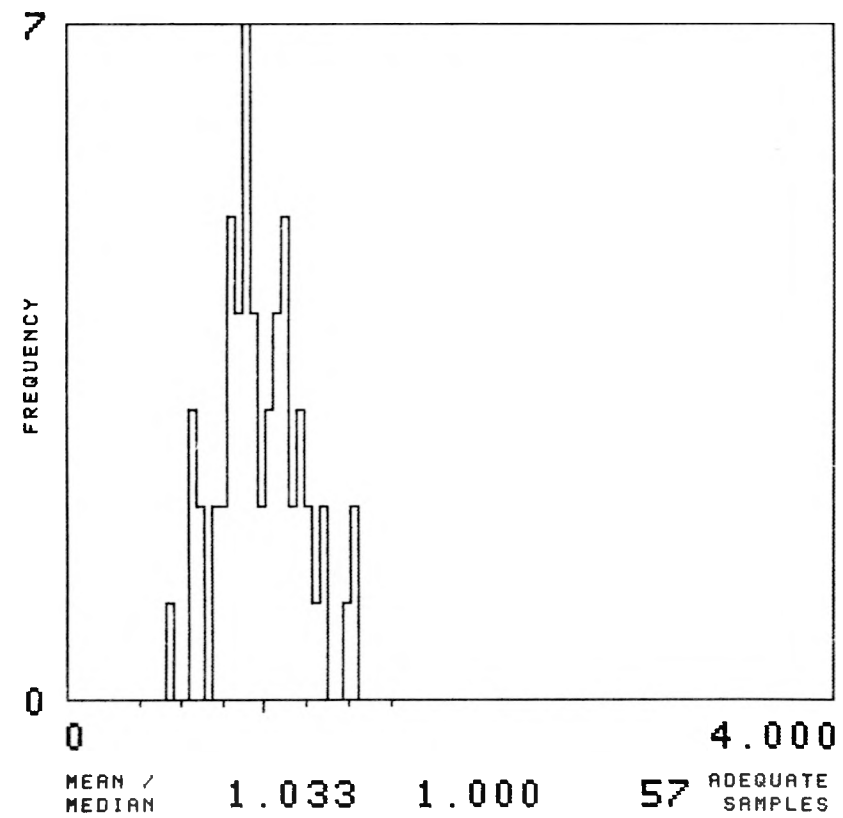
URANIUM



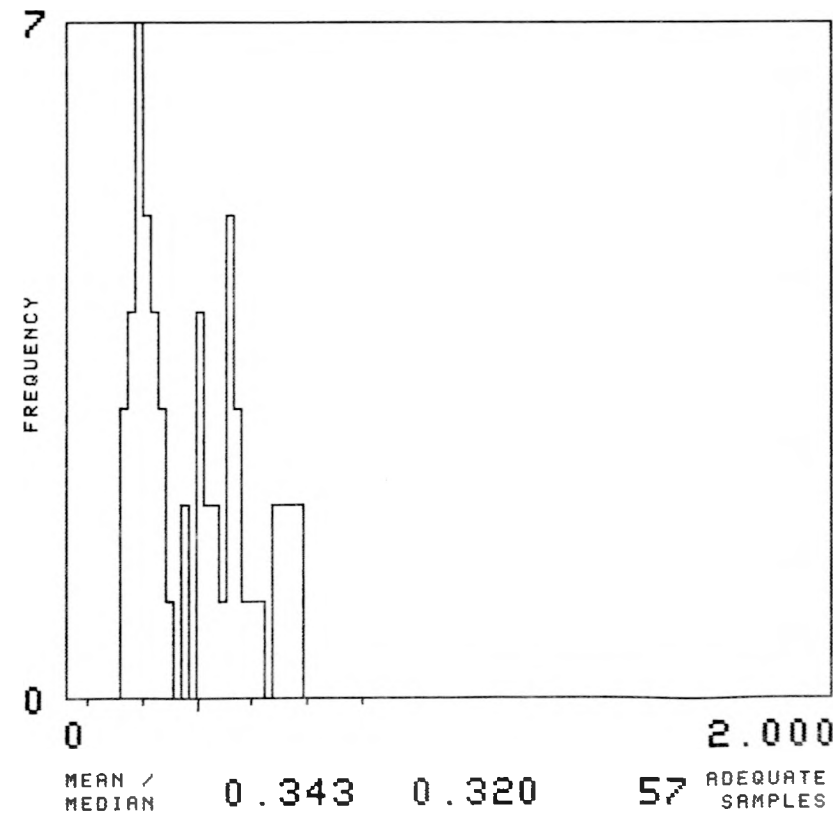
POTASSIUM



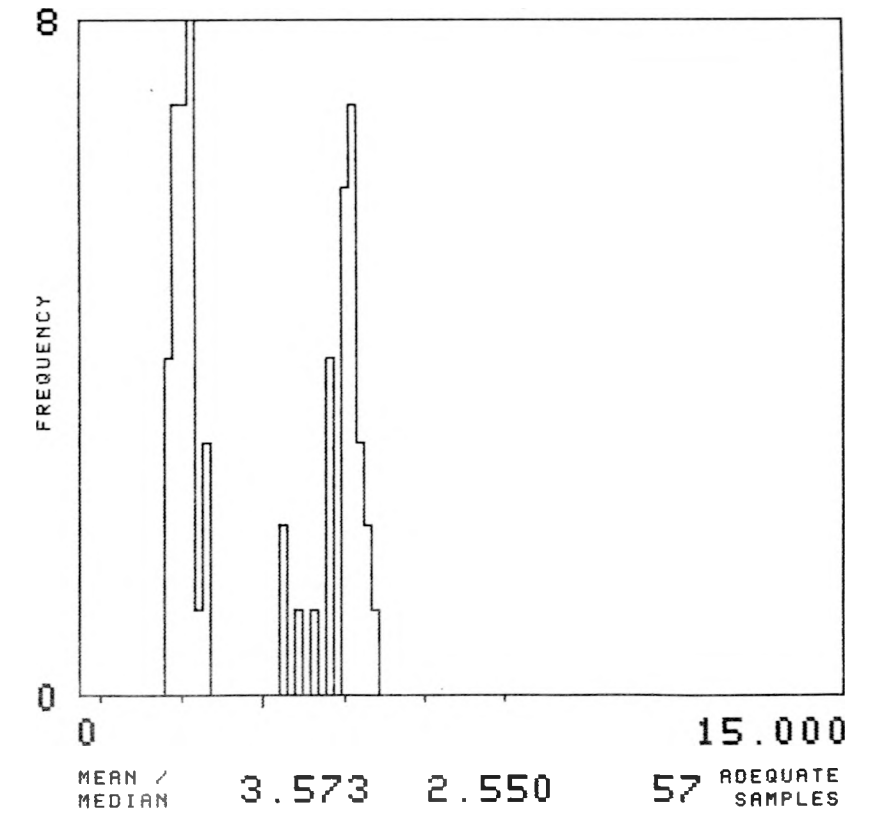
U/K



U/TH

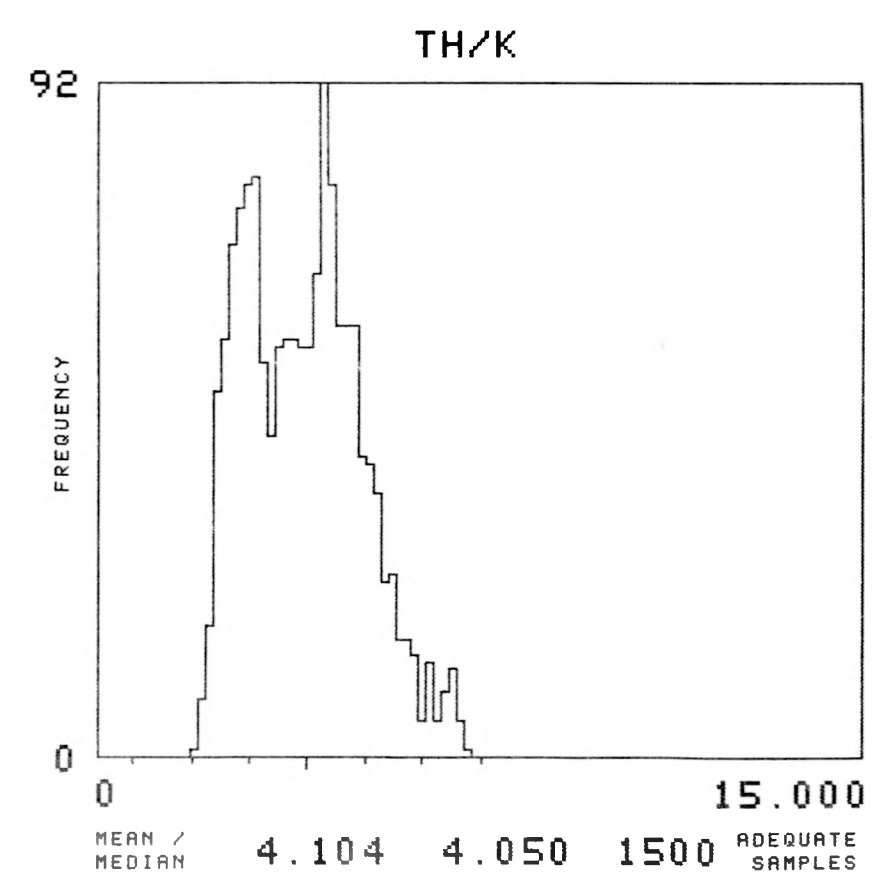
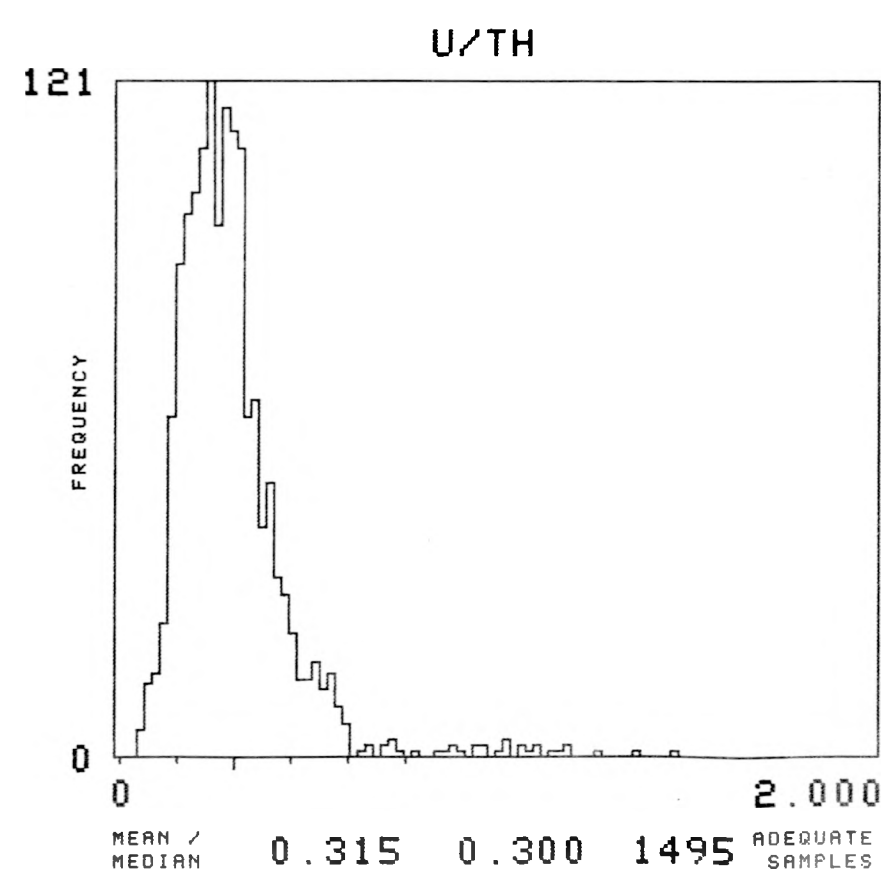
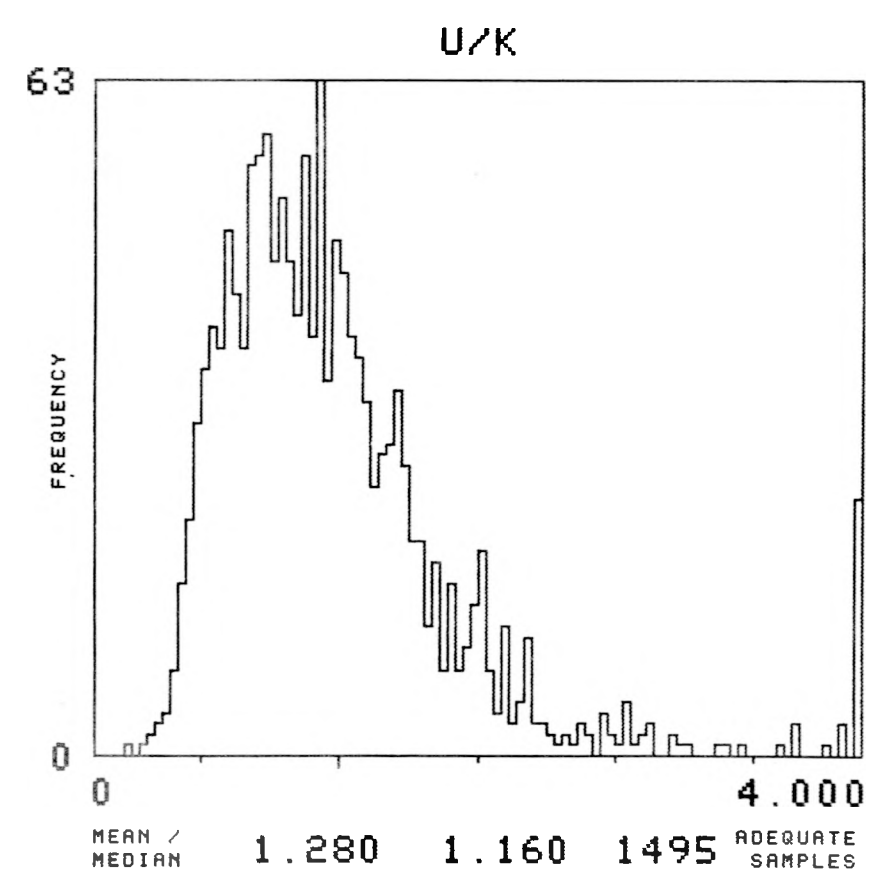
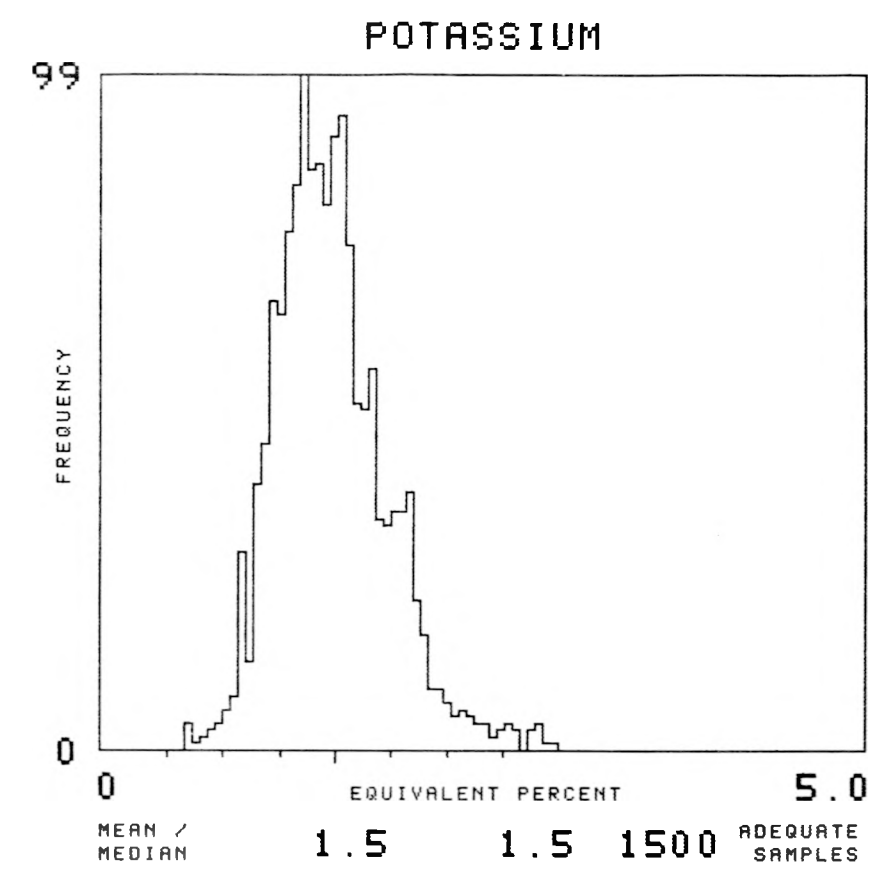
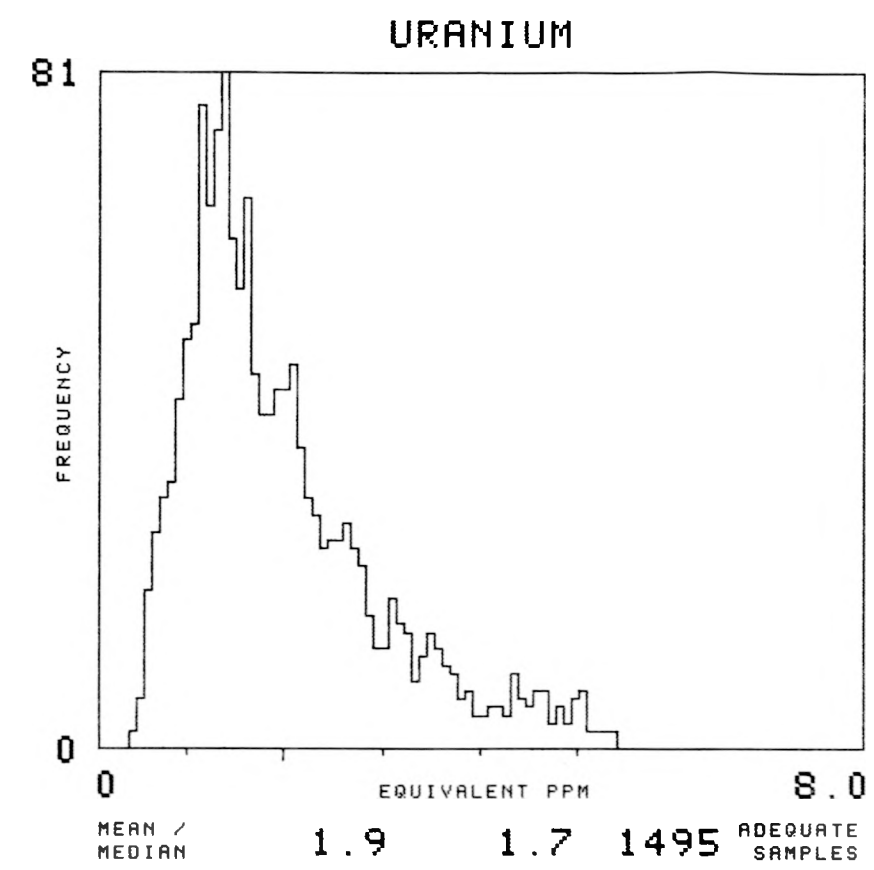
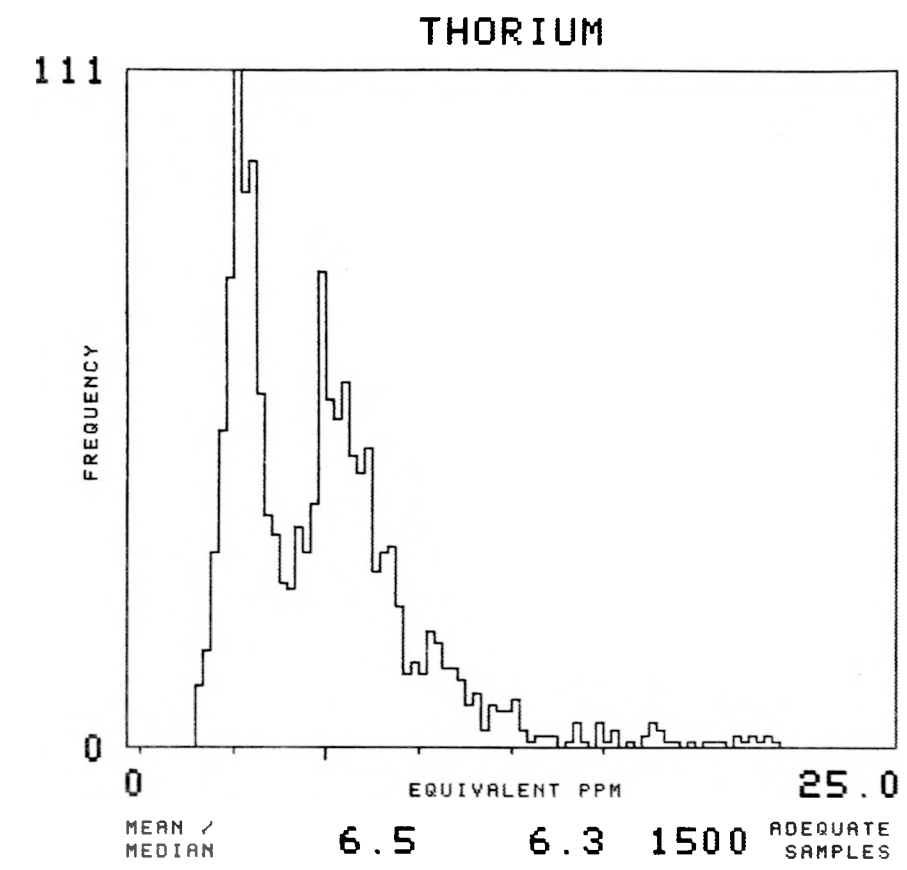


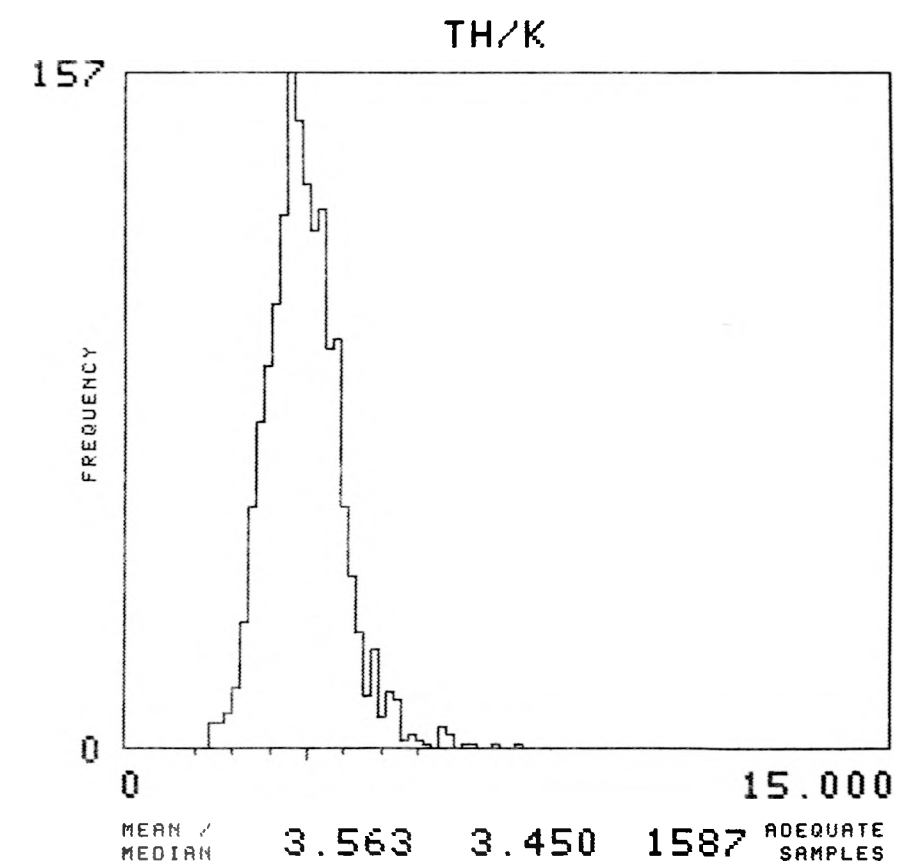
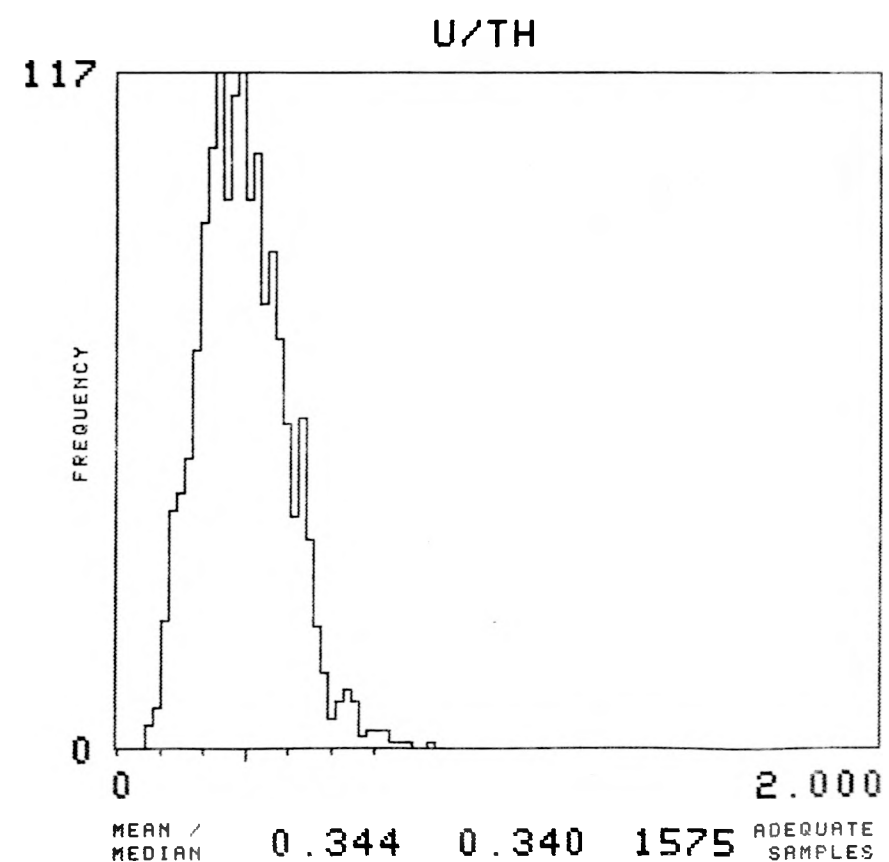
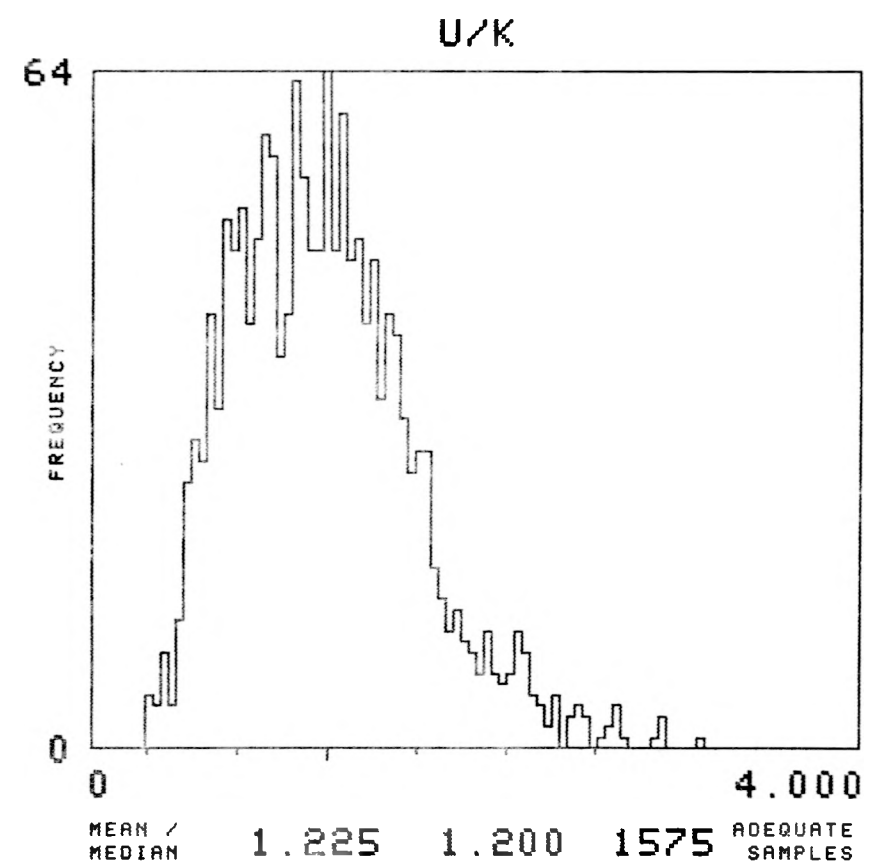
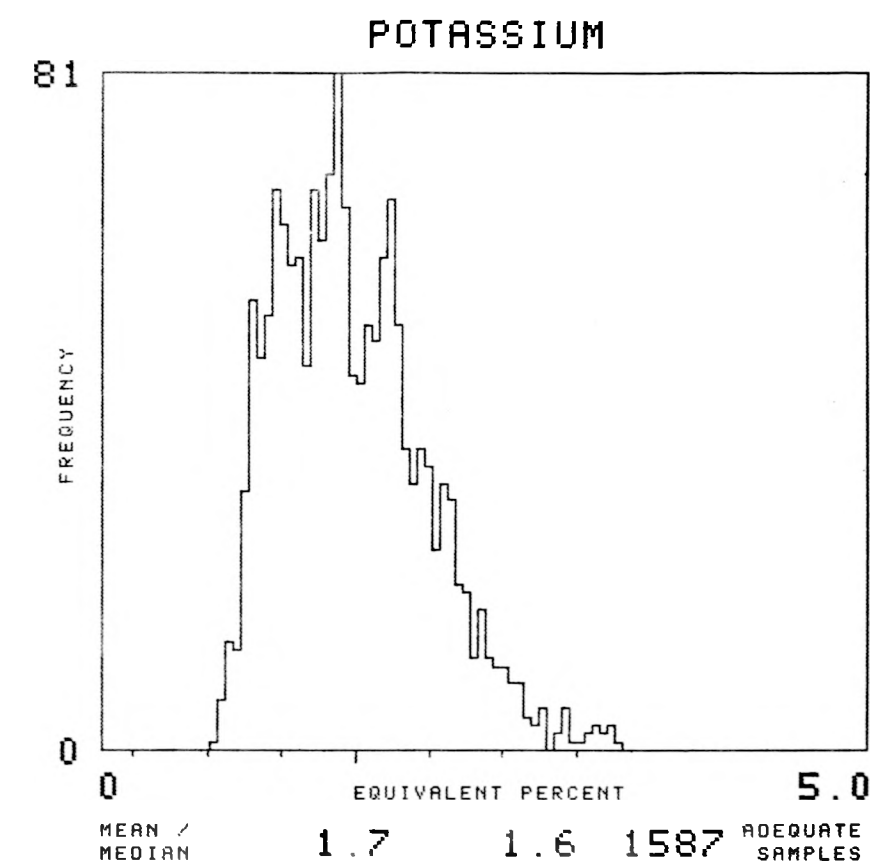
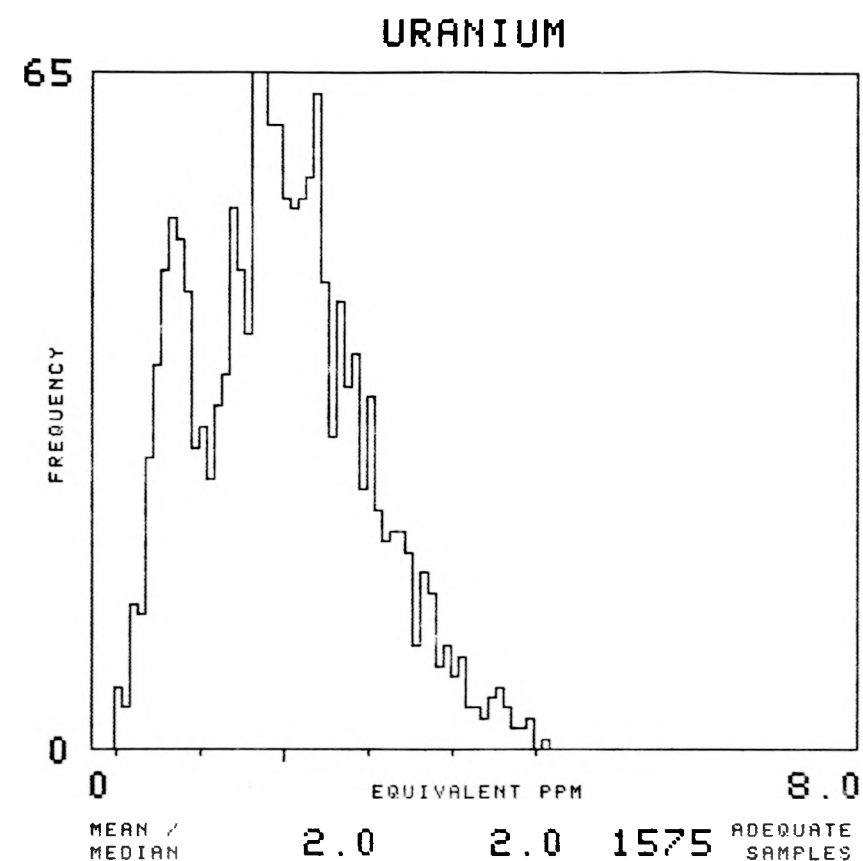
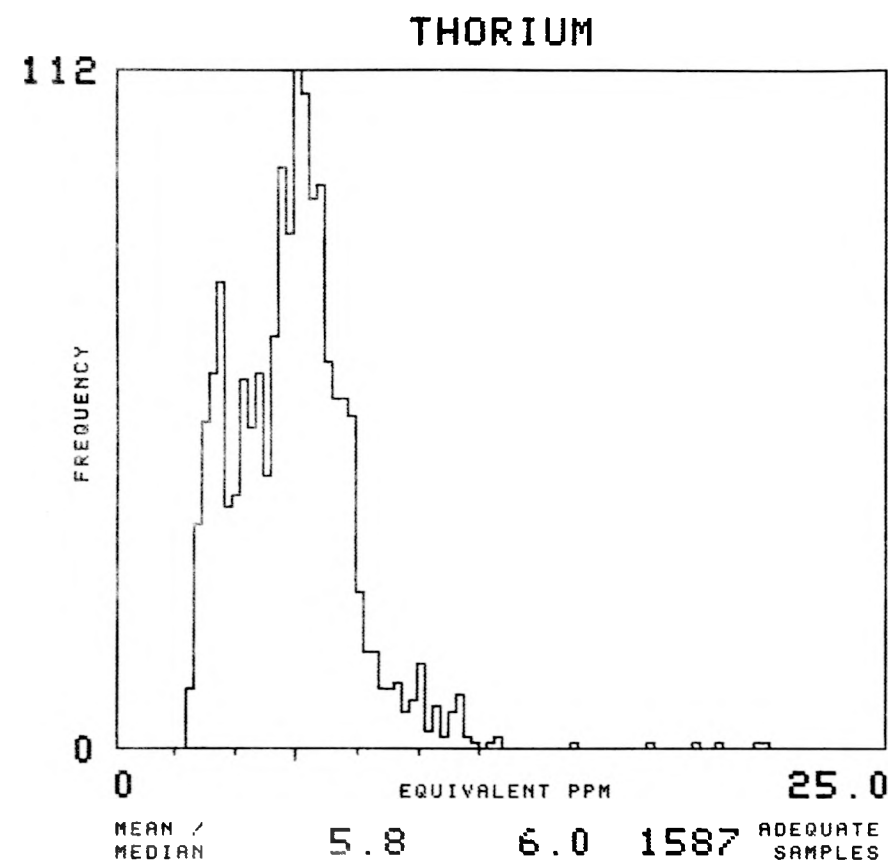
TH/K



NTMS NK 11-3 HAILEY

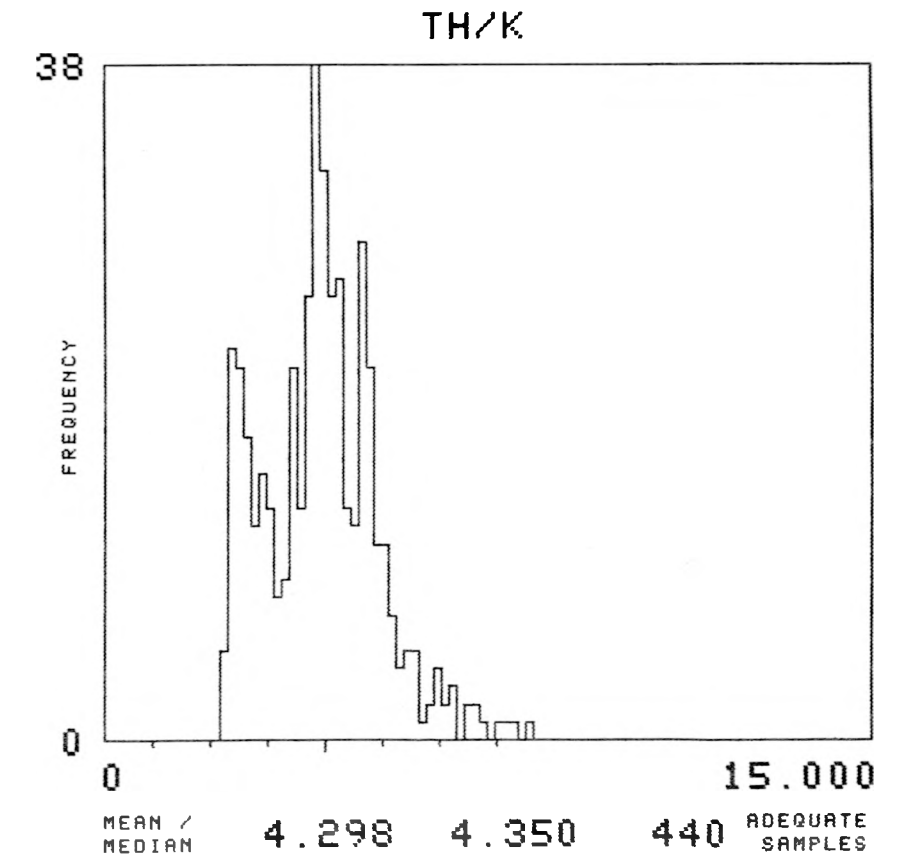
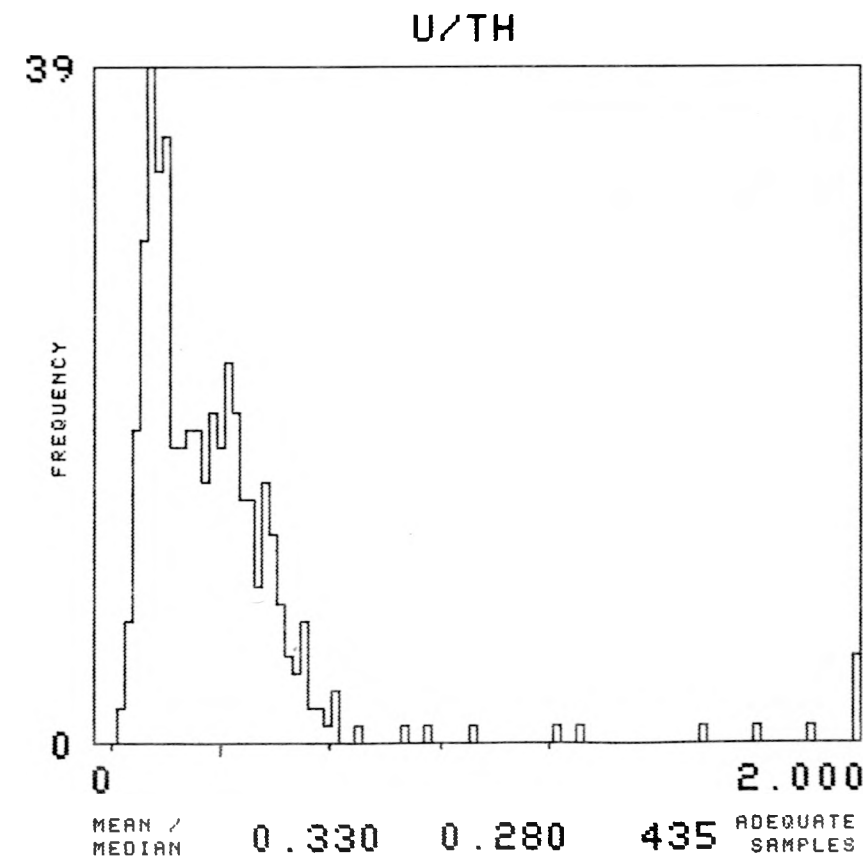
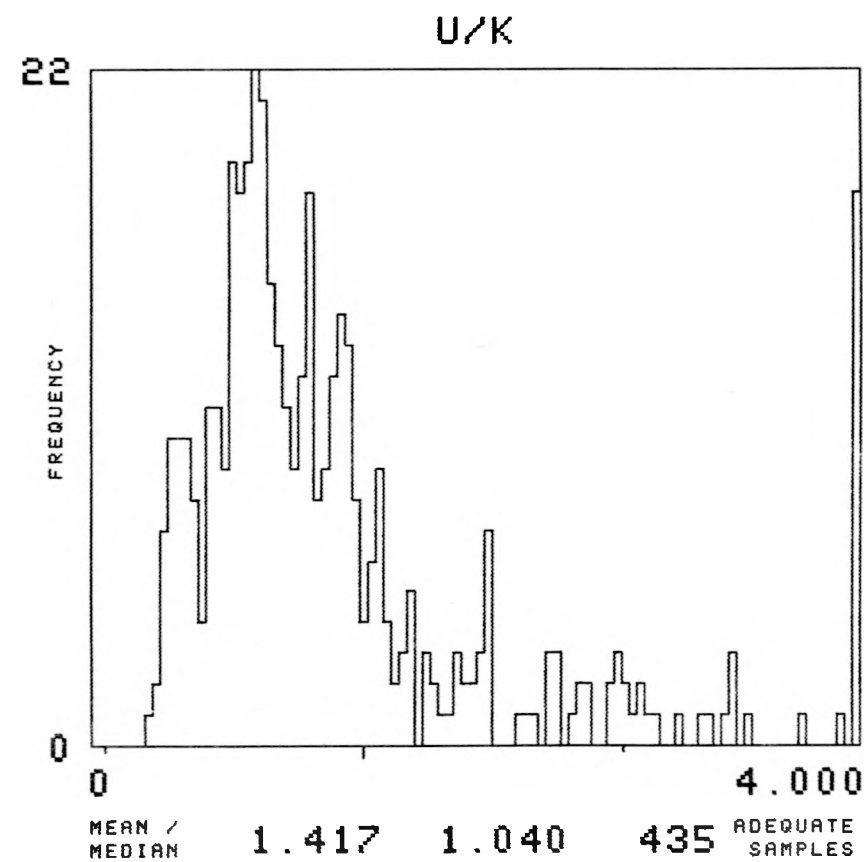
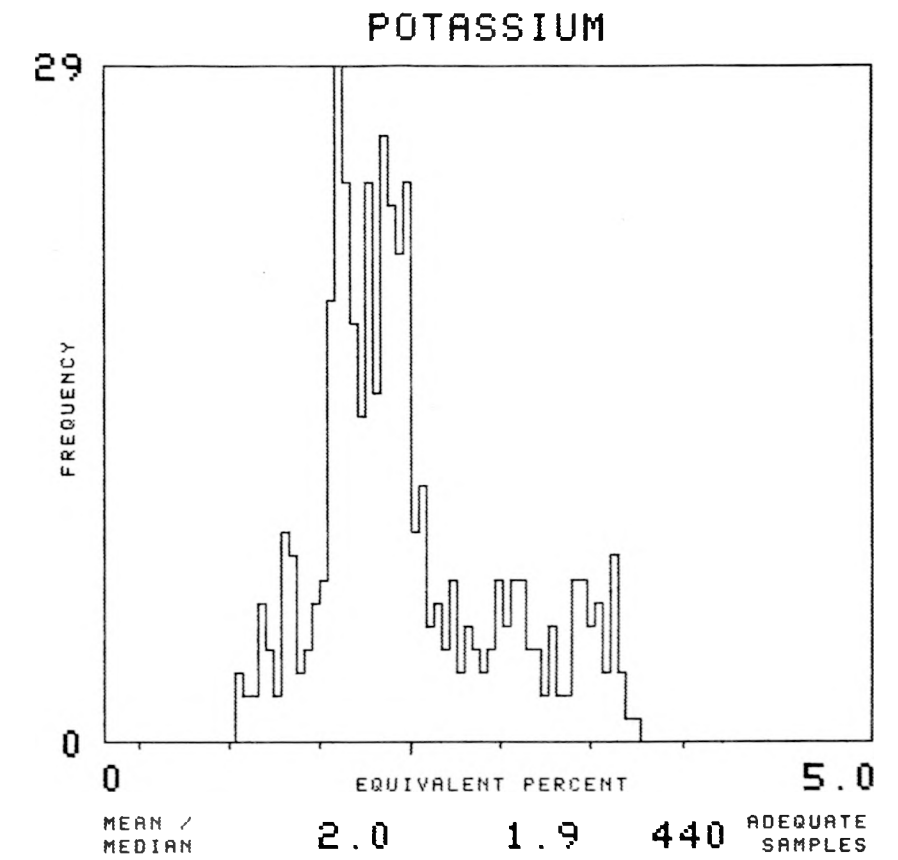
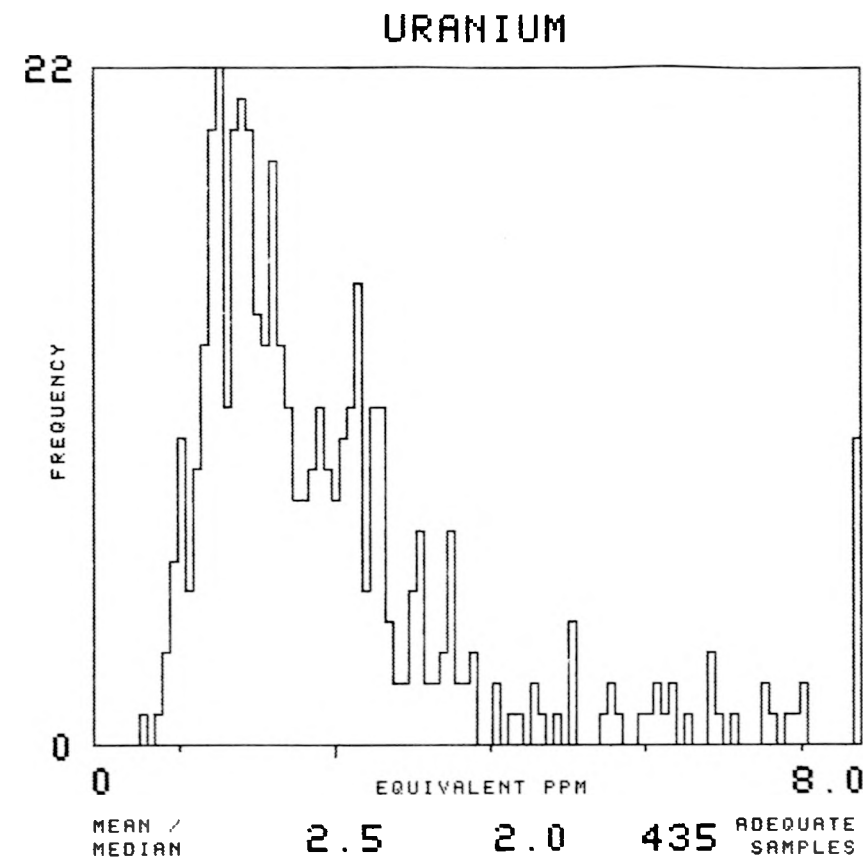
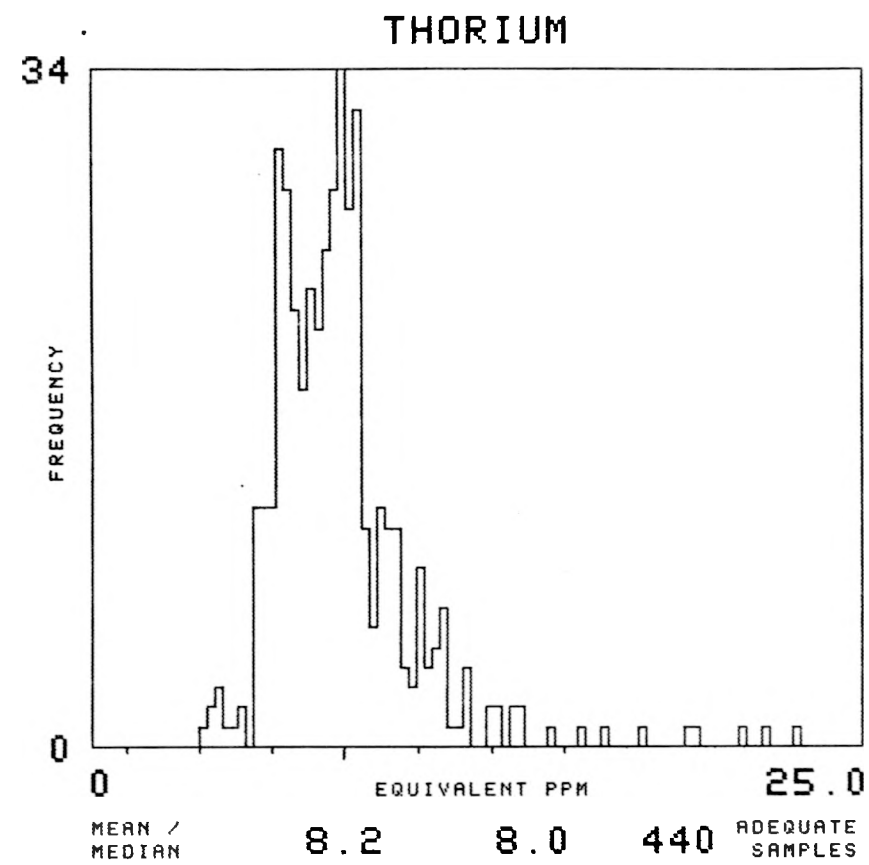
MAP UNIT : M TOTAL NUMBER OF SAMPLES 1595

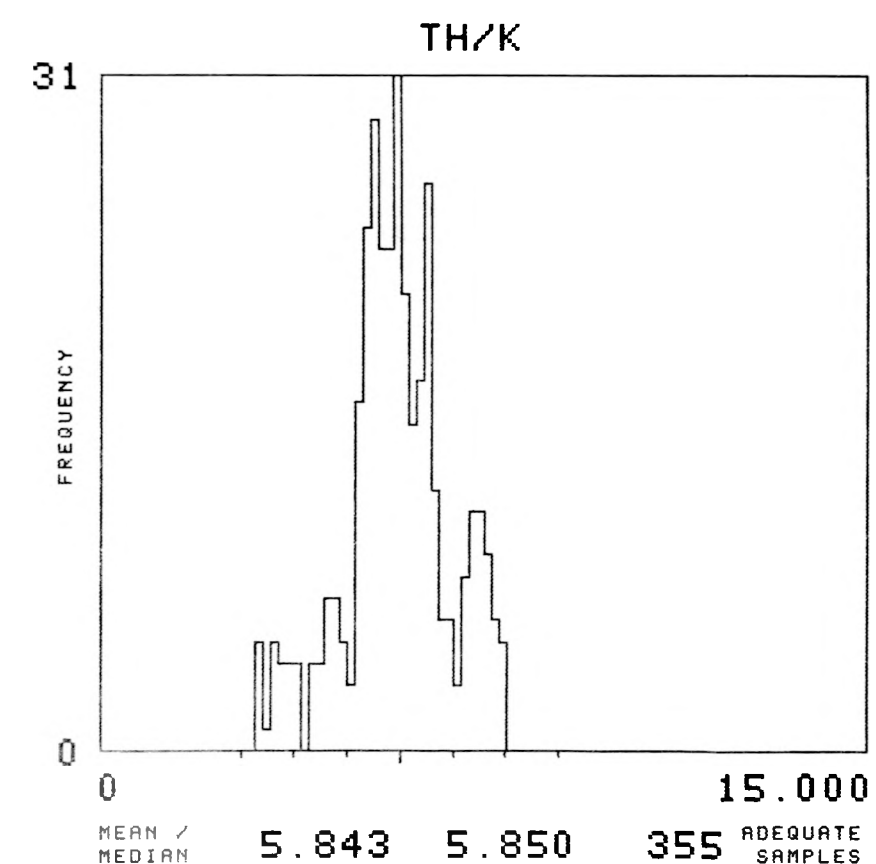
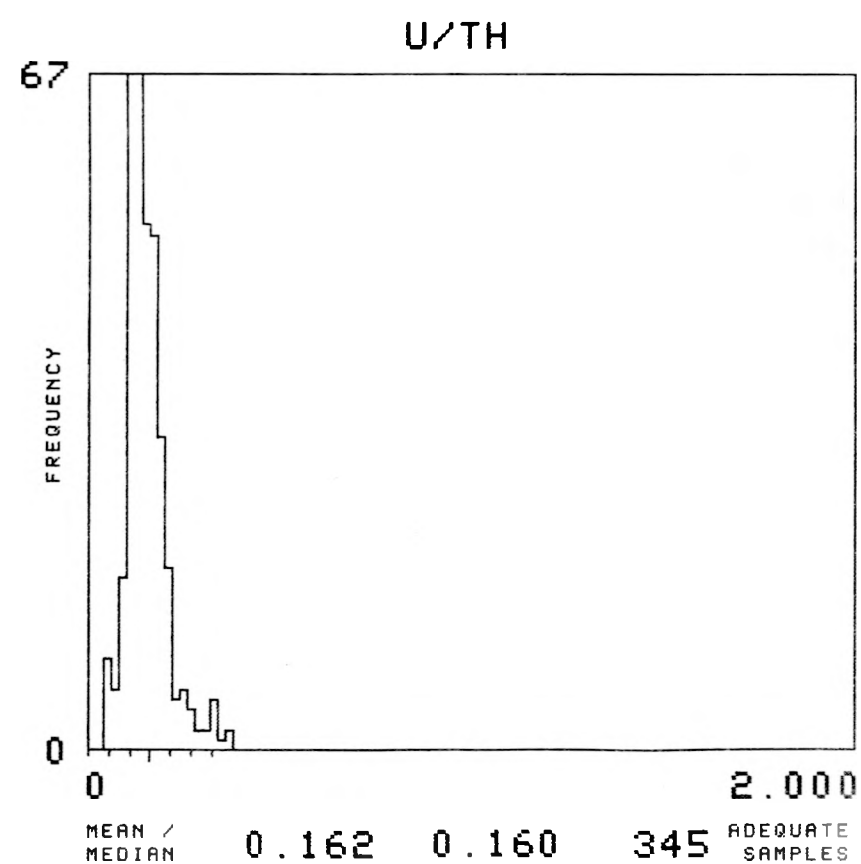
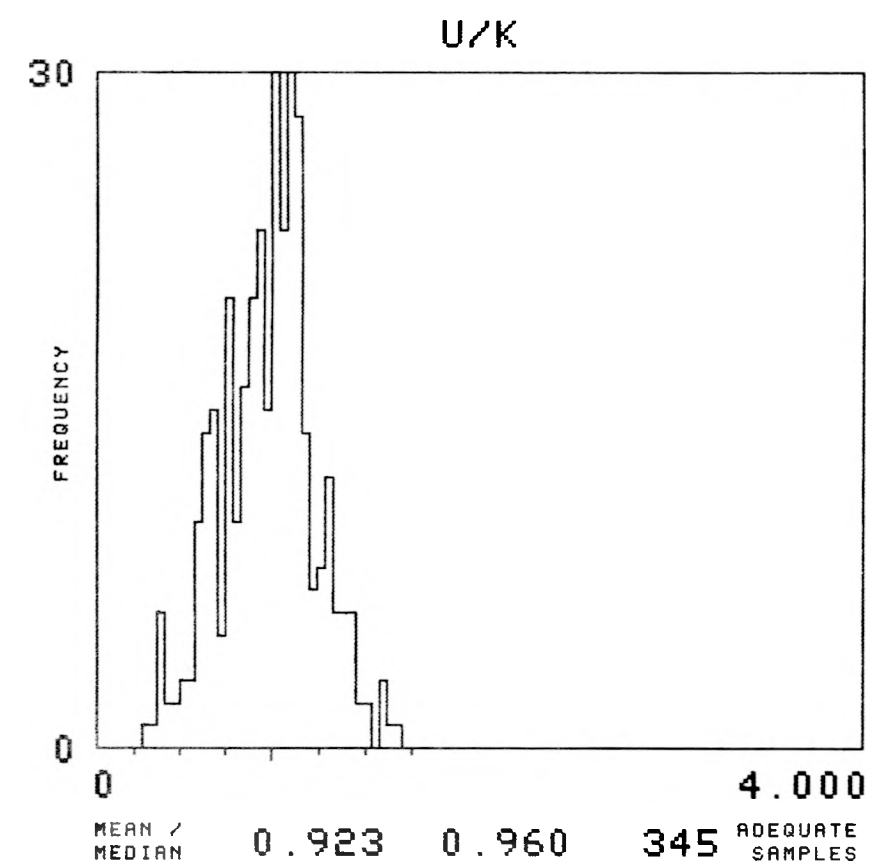
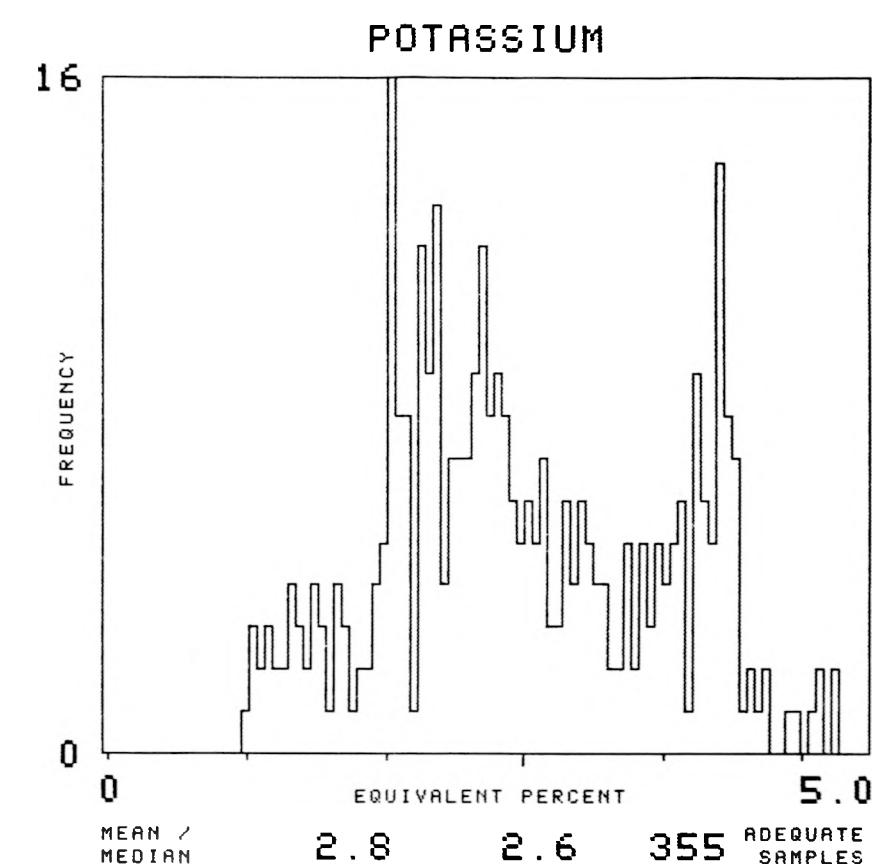
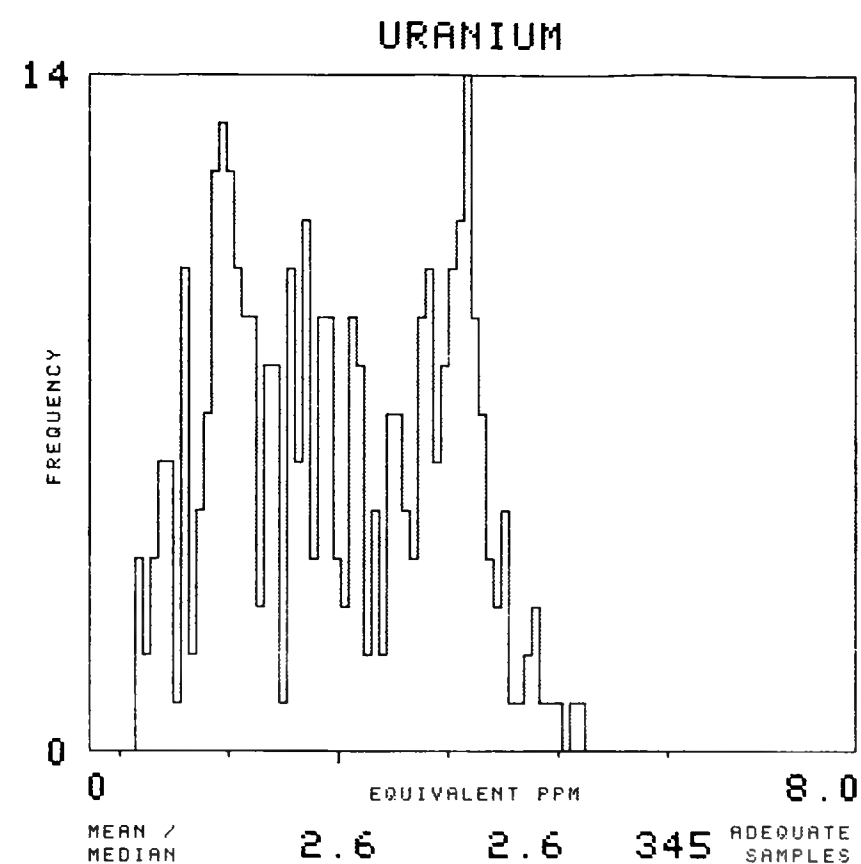
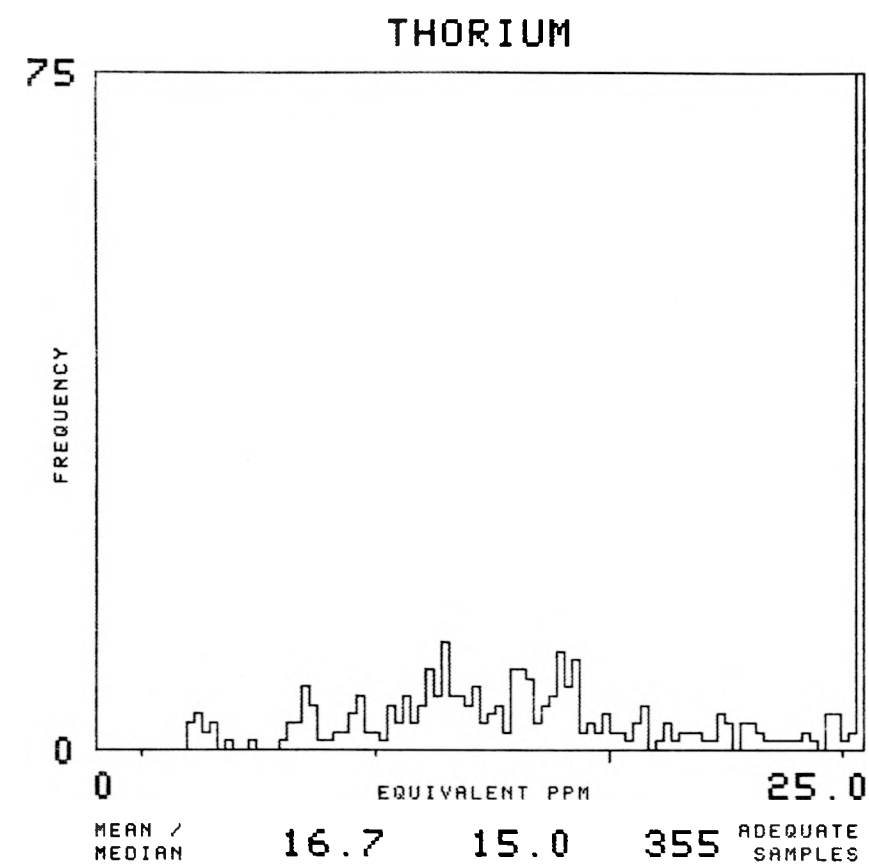




NTMS NK 11-3 HAILEY

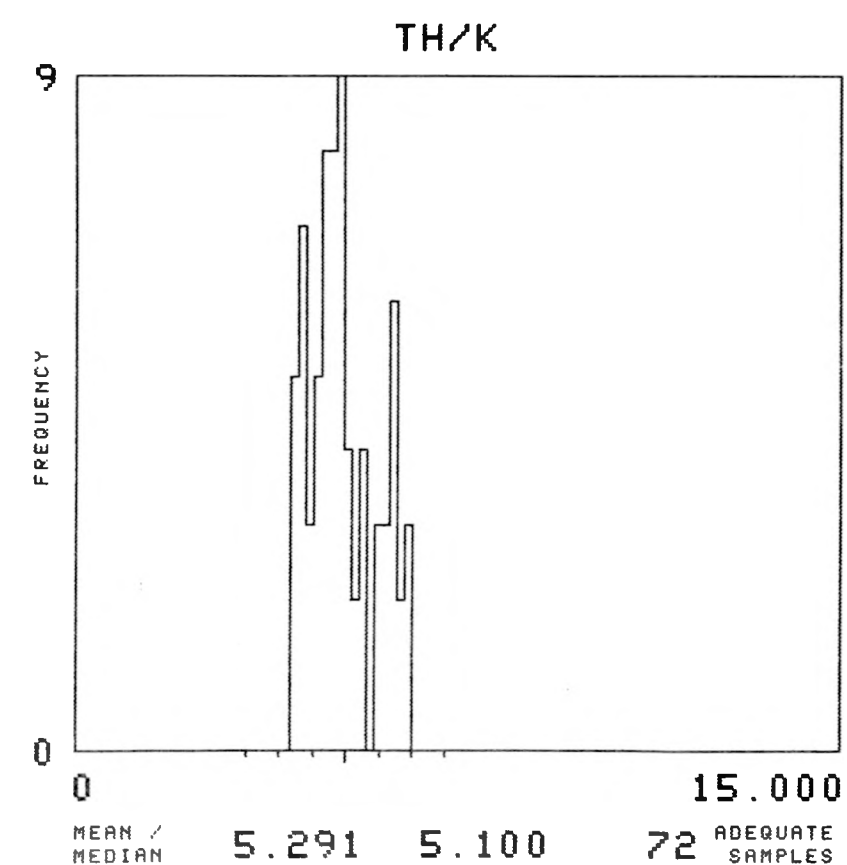
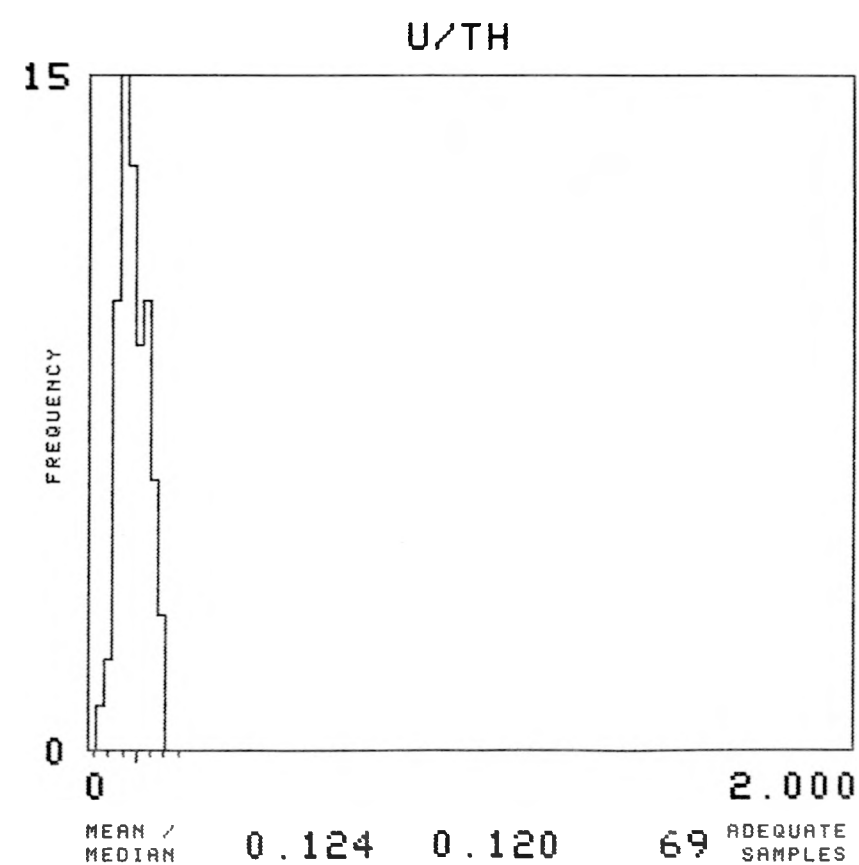
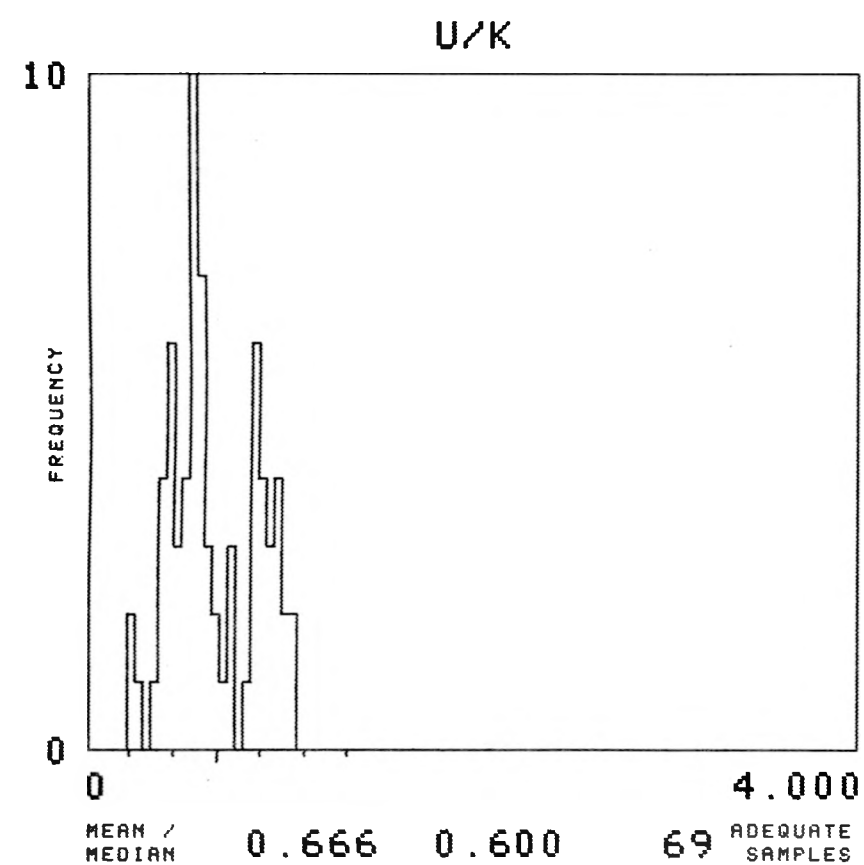
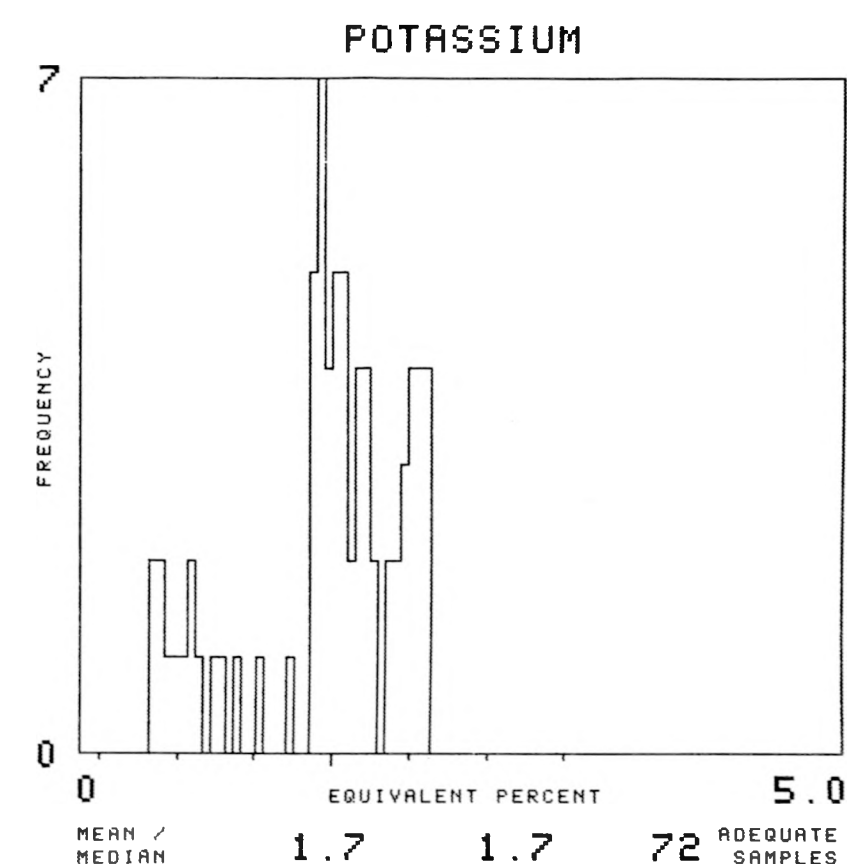
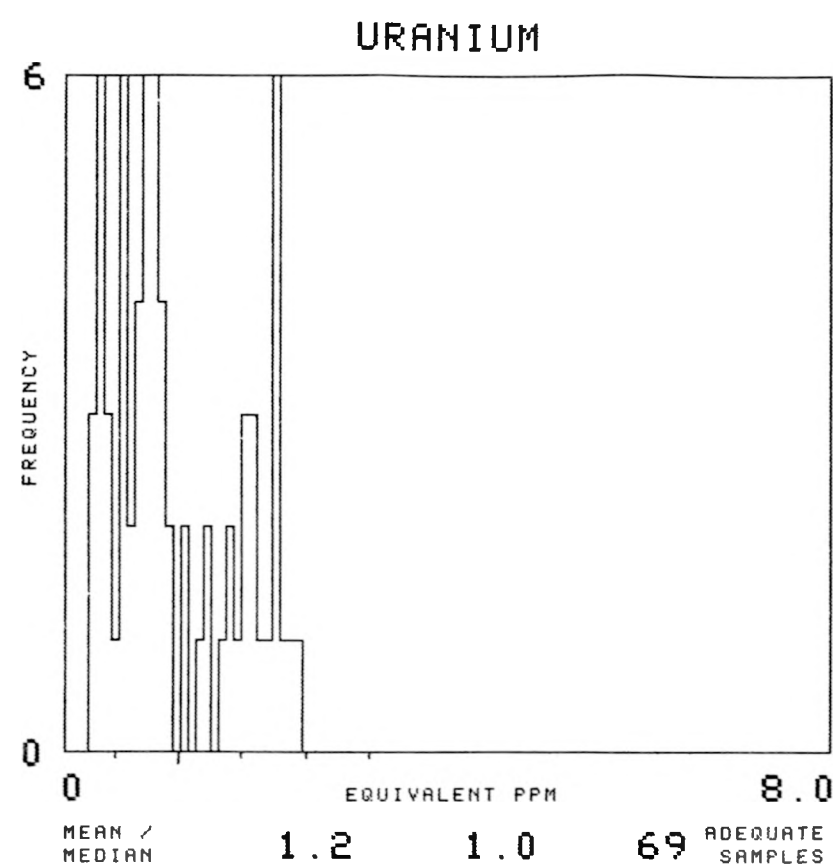
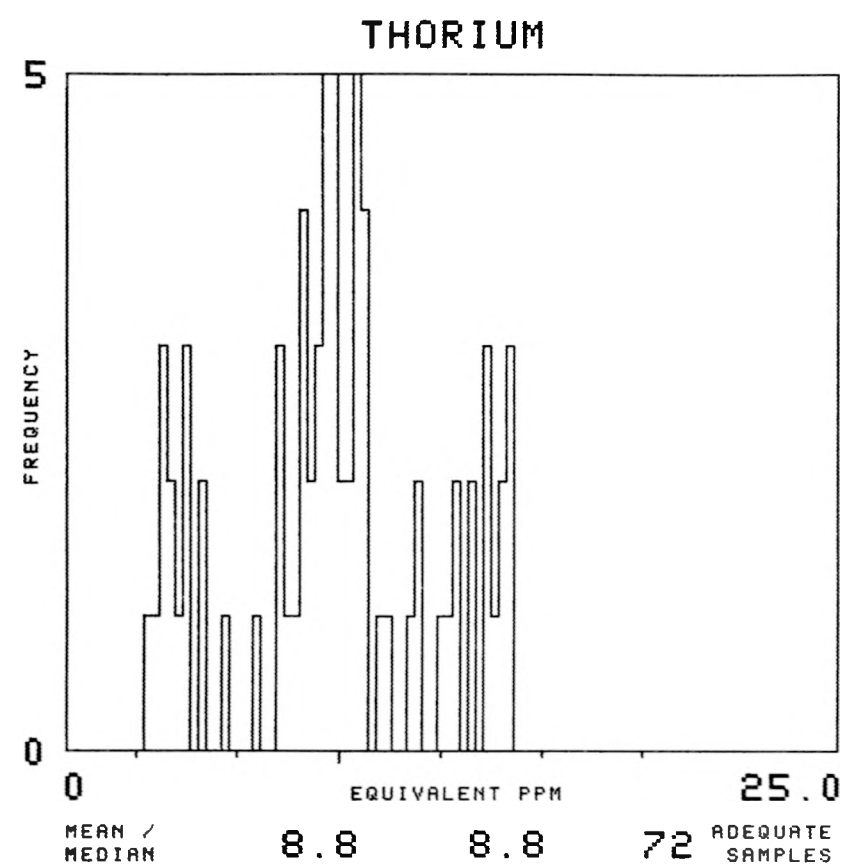
MAP UNIT : D-S

TOTAL NUMBER
OF SAMPLES 485



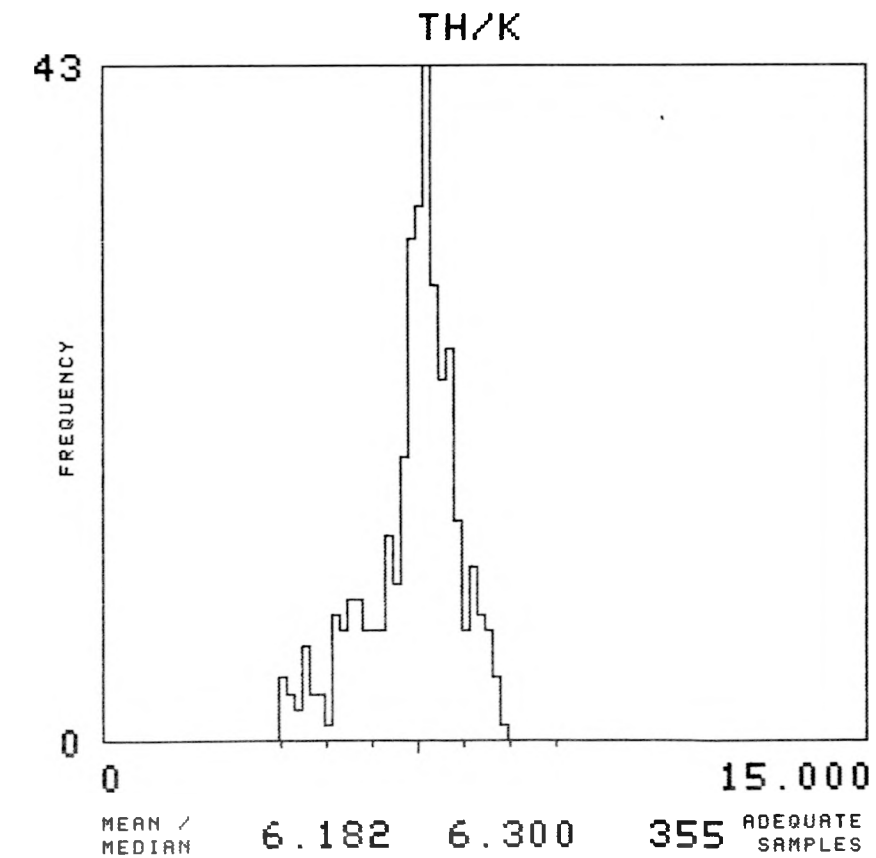
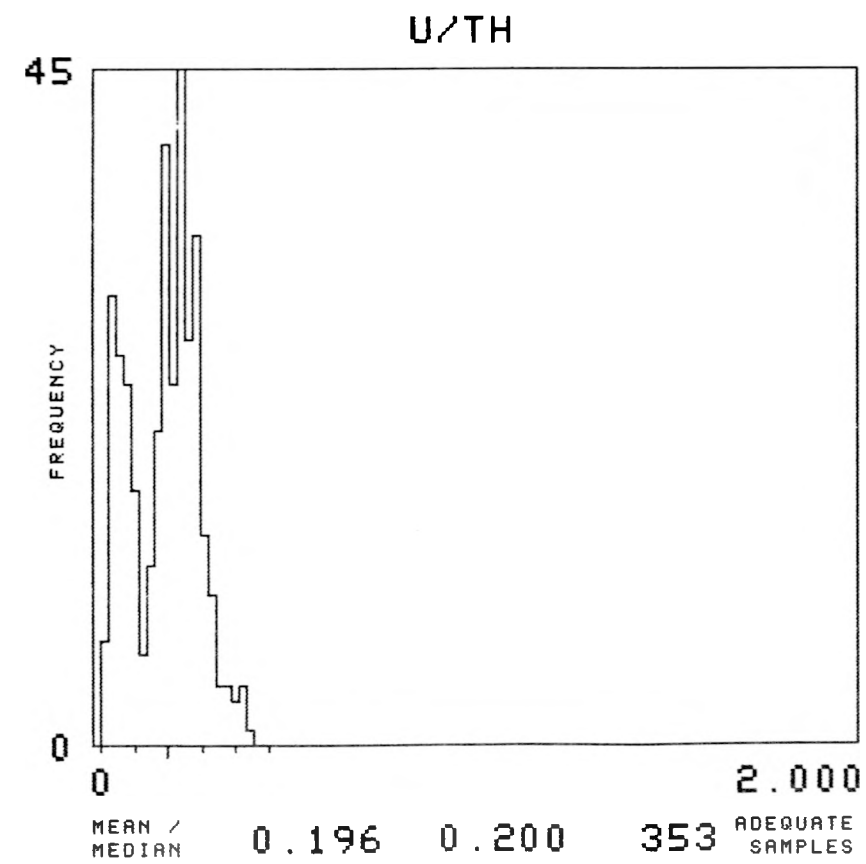
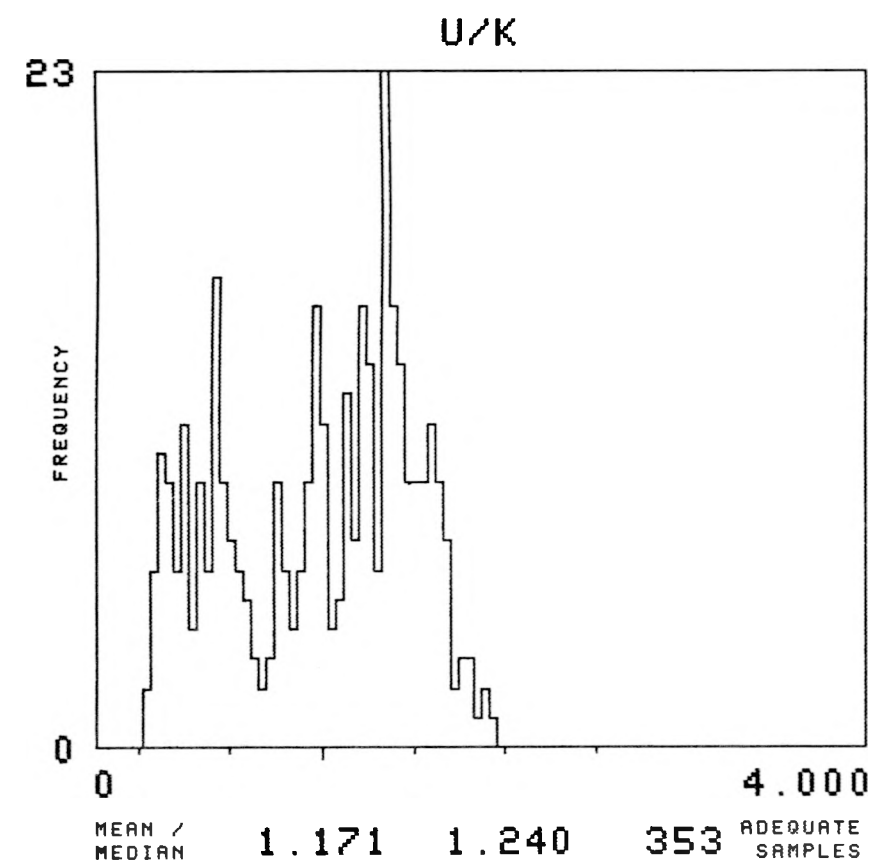
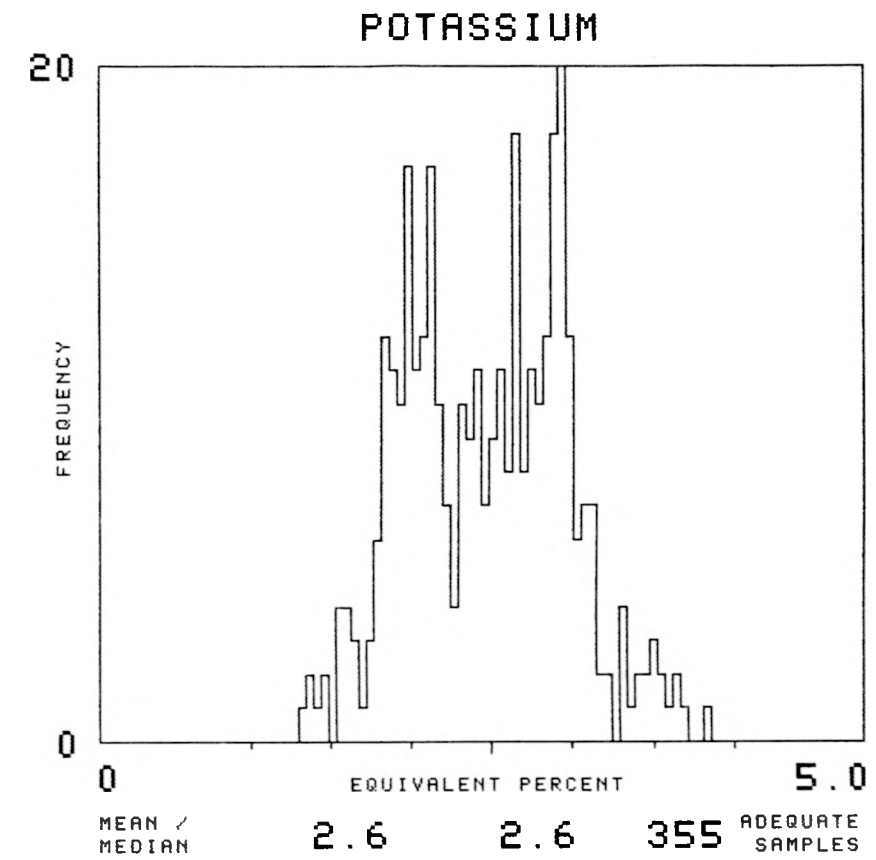
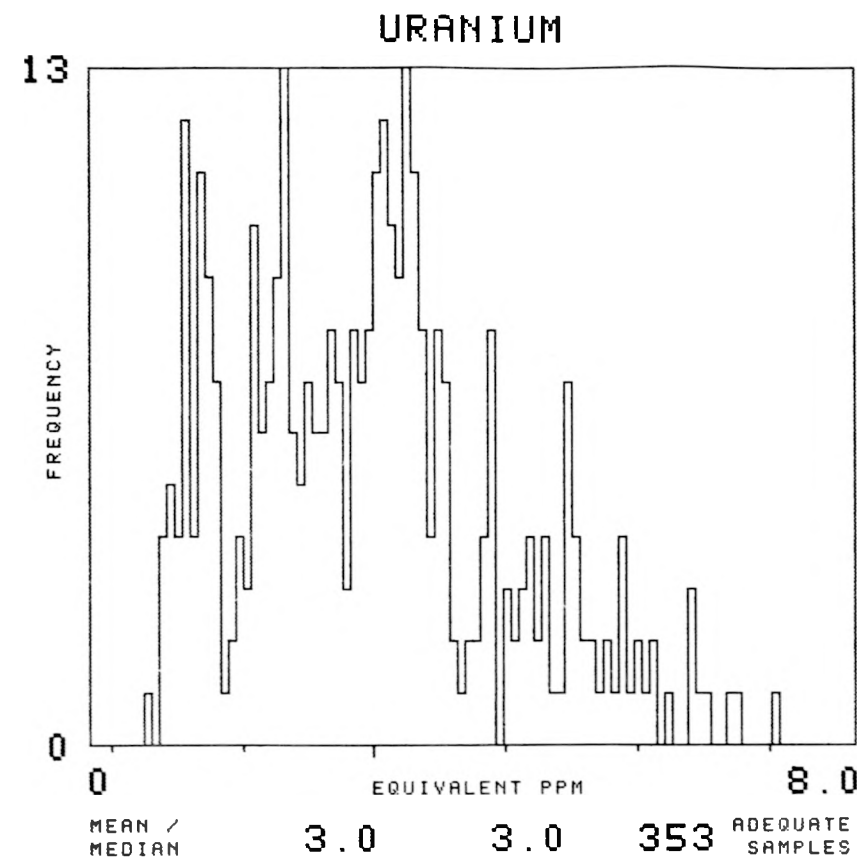
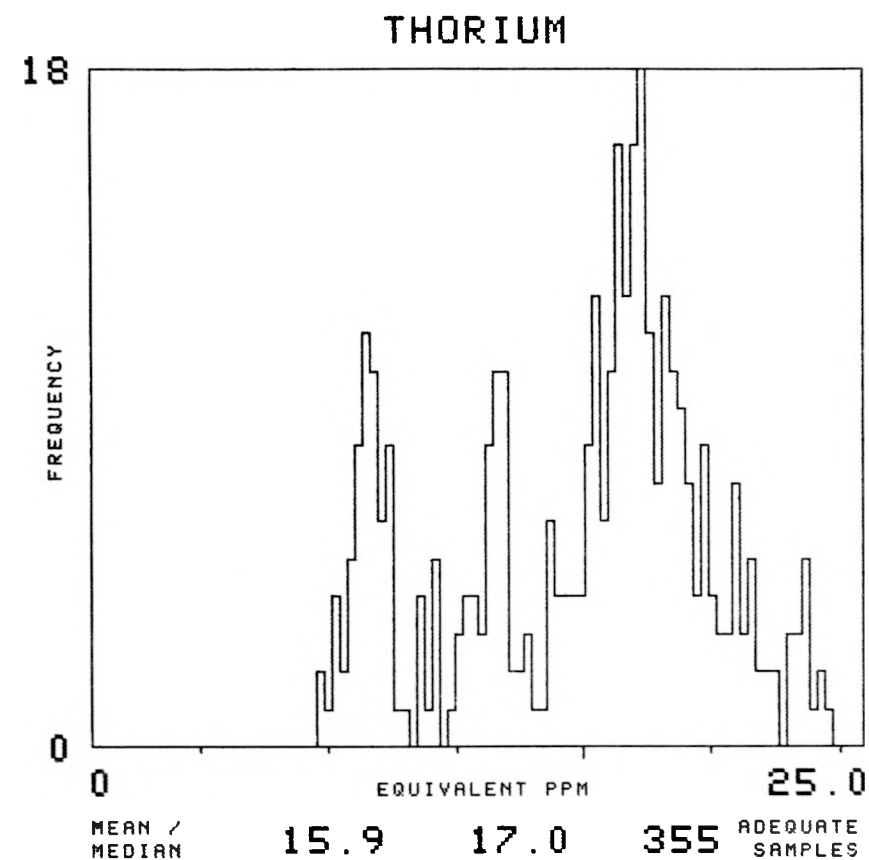
NTMS NK 11-3 HAILEY

MAP UNIT : MO TOTAL NUMBER OF SAMPLES 72



NTMS NK 11-3 HAILEY

MAP UNIT : MPC

TOTAL NUMBER
OF SAMPLES 407

APPENDIX E – Statistical Tables

ANOMALY SUMMARY TABLE

ANOMALY	FLIGHT	COMPUTER	MAP	UNIT	AND NO.	PEAK	NUMBER OF SAMPLES WITH A STANDARD DEVIATION OF :							
					ANOMALOUS SAMPLES IN UNIT	PPM	1	2	3	4	5	6	7	>7
1	10	QGM	/	4	GF / 9 CPG / 2	6.1	5	7	3	0	0	0	0	0
2	10	TC	/	5	/ 2 / 0	4.5	4	1	0	0	0	0	0	0
3	20	TEIF	/	3	/ 0 / 0	9.0	1	2	2	0	0	0	0	0
4	20	TEIF	/	5	/ 0 / 0	8.5	2	3	2	0	0	0	0	0
5	20	TC	/	7	/ 0 / 0	5.0	1	5	1	0	0	0	0	0
6	20	TC	/	2	/ 0 / 0	7.2	0	1	0	1	0	0	0	0
7	20	TC	/	4	/ 0 / 0	5.3	3	1	0	0	0	0	0	0
8	20	TC	/	4	QAL / 2 / 0	5.1	4	2	0	0	0	0	0	0
9	20	TC	/	2	/ 0 / 0	6.4	0	0	2	0	0	0	0	0
10	30	KIF	/	1	/ 0 / 0	4.8	0	0	1	0	0	0	0	0
11	30	KIF	/	5	/ 0 / 0	4.8	3	1	1	0	0	0	0	0
12	30	KIF	/	5	/ 0 / 0	4.9	1	3	1	0	0	0	0	0
13	30	TC	/	1	/ 0 / 0	6.6	0	0	1	0	0	0	0	0
14	30	M	/	4	/ 0 / 0	4.7	1	2	1	0	0	0	0	0
15	30	QAL	/	2	M / 1 / 0	5.1	1	1	1	0	0	0	0	0
16	40	KIF	/	3	/ 0 / 0	4.2	2	1	0	0	0	0	0	0
17	40	KIF	/	4	/ 0 / 0	5.0	1	2	1	0	0	0	0	0
18	40	D	/	2	PP / 1 / 0	3.6	2	1	0	0	0	0	0	0
19	40	D-S	/	2	M / 0 / 4	7.1	5	2	4	2	0	0	0	0
20	50	KIF	/	4	/ 0 / 0	4.0	2	2	0	0	0	0	0	0
21	50	QAL	/	3	KIF / 2 / 0	4.3	3	2	0	0	0	0	0	0
22	50	KIF	/	3	/ 0 / 0	3.9	2	1	0	0	0	0	0	0
23	50	KIF	/	2	CPG / 1 / 0	4.3	2	0	1	0	0	0	0	0
24	50	M	/	4	/ 0 / 0	4.4	1	3	0	0	0	0	0	0
25	60	KIF	/	6	/ 0 / 0	4.0	4	1	1	0	0	0	0	0
26	60	TC	/	4	/ 0 / 0	5.2	2	2	0	0	0	0	0	0
27	60	GF	/	2	/ 0 / 0	6.5	0	1	1	0	0	0	0	0
28	70	KIF	/	1	/ 0 / 0	6.3	0	0	0	1	0	0	0	0
29	70	KIF	/	12	/ 0 / 0	4.3	5	5	0	0	0	0	0	0
30	70	TC	/	8	/ 0 / 0	5.3	3	5	0	0	0	0	0	0
31	70	TC	/	9	/ 0 / 0	6.1	1	6	2	0	0	0	0	0
32	70	GF	/	3	/ 0 / 0	5.5	2	1	0	0	0	0	0	0
33	70	TC	/	2	D / 4 / 0	4.2	4	2	0	0	0	0	0	0
34	80	KIF	/	2	/ 0 / 0	5.7	0	1	1	0	0	0	0	0
35	80	KIF	/	3	/ 0 / 0	9.2	0	0	1	0	1	0	1	0
36	80	KIF	/	2	/ 0 / 0	10.4	0	0	0	0	1	0	0	1
37	80	KIF	/	3	/ 0 / 0	7.9	0	0	0	2	1	0	0	0
38	80	KIF	/	4	/ 0 / 0	7.5	0	0	0	3	1	0	0	0
39	80	KIF	/	1	/ 0 / 0	7.5	0	0	0	0	1	0	0	0
40	80	KIF	/	1	/ 0 / 0	6.7	0	0	0	1	0	0	0	0
41	80	KIF	/	1	/ 0 / 0	7.1	0	0	0	0	1	0	0	0
42	80	KIF	/	2	/ 0 / 0	5.6	0	0	2	0	0	0	0	0
43	80	KIF	/	5	/ 0 / 0	6.9	0	0	1	3	1	0	0	0
44	80	KIF	/	1	/ 0 / 0	6.5	0	0	0	1	0	0	0	0
45	80	KIF	/	1	/ 0 / 0	6.4	0	0	0	1	0	0	0	0
46	80	KIF	/	1	/ 0 / 0	6.5	0	0	0	1	0	0	0	0
47	80	KIF	/	2	/ 0 / 0	8.1	0	0	0	0	1	1	0	0
48	80	KIF	/	3	/ 0 / 0	4.3	1	2	0	0	0	0	0	0
49	80	KIF	/	7	/ 0 / 0	3.8	4	3	0	0	0	0	0	0
50	80	KIF	/	3	/ 0 / 0	3.7	2	1	0	0	0	0	0	0

ANOMALY SUMMARY TABLE

ANOMALY	FLIGHT	COMPUTER	MAP	UNIT AND NO.	PEAK	NUMBER OF SAMPLES WITH A										
				ANOMALOUS SAMPLES IN UNIT	PPM	STANDARD DEVIATION OF :										
						1	2	3	4	5	6	7	>7			
51	80	KIF	/	3	/	0	/	0	3.0	2	1	0	0	0	0	0
52	80	KIF	/	2	/	0	/	0	4.8	1	0	1	0	0	0	0
53	80	KIF	/	18	TC	/	0	/	0	7.5	3	3	8	6	1	0
54	80	TC	/	7	/	0	/	0	6.7	3	3	1	0	0	0	0
55	80	PP	/	5	/	0	/	0	4.3	4	1	0	0	0	0	0
56	80	D	/	10	/	0	/	0	3.9	6	4	0	0	0	0	0
57	80	D	/	3	/	0	/	0	4.0	1	2	0	0	0	0	0
58	90	KIF	/	3	/	0	/	0	3.0	2	1	0	0	0	0	0
59	90	KIF	/	6	/	0	/	0	5.1	3	2	1	0	0	0	0
60	90	KIF	/	6	/	0	/	0	4.0	3	3	0	0	0	0	0
61	90	KIF	/	3	/	0	/	0	5.8	0	0	2	1	0	0	0
62	100	KIF	/	3	/	0	/	0	3.7	2	1	0	0	0	0	0
63	100	KIF	/	7	/	0	/	0	4.2	4	3	0	0	0	0	0
64	100	KIF	/	2	/	0	/	0	5.6	0	1	1	0	0	0	0
65	100	KIF	/	2	DAL	/	4	/	0	8.3	0	3	1	1	0	0
66	100	KIF	/	1	/	0	/	0	5.1	0	0	1	0	0	0	0
67	110	KIF	/	5	/	0	/	0	5.1	1	2	2	0	0	0	0
68	110	KIF	/	3	/	0	/	0	6.0	0	0	2	1	0	0	0
69	110	PP	/	5	/	0	/	0	3.8	2	3	0	0	0	0	0
70	110	PP	/	6	/	0	/	0	3.7	5	1	0	0	0	0	0
71	110	KIF	/	1	/	0	/	0	4.0	0	0	1	0	0	0	0
72	120	KIF	/	1	/	0	/	0	5.7	0	0	1	0	0	0	0
73	120	DAL	/	1	/	0	/	0	5.2	0	0	1	0	0	0	0
74	120	M	/	3	/	0	/	0	4.4	1	2	0	0	0	0	0
75	130	KIF	/	8	/	0	/	0	3.9	5	3	0	0	0	0	0
76	140	KIF	/	2	QTR	/	3	/	0	3.5	4	1	0	0	0	0
77	140	KIF	/	3	/	0	/	0	4.0	1	2	0	0	0	0	0
78	140	KIF	/	2	/	0	/	0	7.6	0	0	0	0	2	0	0
79	150	QTR	/	5	KIF	/	1	/	0	4.3	0	1	1	0	0	0
80	150	QPA	/	4	/	0	/	0	4.0	2	2	0	0	0	0	0
81	150	QPA	/	2	/	0	/	0	5.0	0	0	2	0	0	0	0
82	150	TC	/	1	/	0	/	0	5.6	0	0	0	0	1	0	0
83	150	TC	/	2	/	0	/	0	5.2	0	2	0	0	0	0	0
84	150	TC	/	1	/	0	/	0	6.0	0	0	1	0	0	0	0
85	160	TAT	/	7	/	0	/	0	7.1	4	3	0	0	0	0	0
86	160	QTB	/	1	/	0	/	0	7.1	0	0	0	0	0	1	0
87	160	QTB	/	3	/	0	/	0	4.2	2	1	0	0	0	0	0
88	160	QTB	/	2	/	0	/	0	3.7	0	2	0	0	0	0	0
89	180	QTR	/	3	/	0	/	0	3.0	1	2	0	0	0	0	0
90	180	TRH	/	3	/	0	/	0	3.3	2	1	0	0	0	0	0
91	180	TRH	/	1	/	0	/	0	3.7	0	0	1	0	0	0	0
92	180	QTR	/	1	TOR	/	1	/	0	6.4	0	0	0	2	0	0
93	180	TOR	/	2	/	0	/	0	7.1	0	0	0	0	2	0	0
94	180	QTB	/	4	KIF	/	3	/	0	4.4	0	5	2	0	0	0
95	180	QLBL	/	4	/	0	/	0	3.3	3	1	0	0	0	0	0
96	180	QLBL	/	1	/	0	/	0	3.8	0	0	1	0	0	0	0
97	190	QPA	/	1	/	0	/	0	5.4	0	0	1	0	0	0	0
98	190	TC	/	1	/	0	/	0	6.5	0	0	1	0	0	0	0
99	190	TC	/	1	/	0	/	0	7.4	0	0	0	1	0	0	0
100	190	TAT	/	3	/	0	/	0	6.0	1	2	0	0	0	0	0

ANOMALY SUMMARY TABLE

ANOMALY	FLIGHT	COMPUTER MAP UNIT AND NO. ANOMALOUS SAMPLES IN UNIT								PEAK PPM	NUMBER OF SAMPLES WITH A STANDARD DEVIATION OF :							
											1	2	3	4	5	6	7	>7
101	190	TC	/	1	/	0	/	0		5.7	0	0	1	0	0	0	0	0
102	190	TC	/	1	/	0	/	0		5.9	0	0	1	0	0	0	0	0
103	C 190	TAT	/	3	/	0	/	0		6.2	2	1	0	0	0	0	0	0
104	190	TRH	/	6	/	0	/	0		3.3	5	1	0	0	0	0	0	0
105	200	TOR	/	1	/	0	/	0		4.8	0	0	1	0	0	0	0	0
106	C 210	QLBU	/	6	/	0	/	0		3.5	5	1	0	0	0	0	0	0
107	C 210	QLBU	/	3	/	0	/	0		3.6	2	1	0	0	0	0	0	0
108	210	QTB	/	8	/	0	/	0		3.7	6	2	0	0	0	0	0	0
109	210	QTB	/	6	/	0	/	0		3.5	5	1	0	0	0	0	0	0
110	210	QPA	/	1	/	0	/	0		4.8	0	0	1	0	0	0	0	0
111	210	QPA	/	3	/	0	/	0		4.6	0	3	0	0	0	0	0	0
112	210	TOR	/	4	/	0	/	0		6.3	0	0	1	3	0	0	0	0
113	210	TOR	/	1	/	0	/	0		6.1	0	0	0	1	0	0	0	0
114	210	QLBL	/	1	/	0	/	0		3.8	0	0	1	0	0	0	0	0
115	220	QTB	/	6	/	0	/	0		4.0	5	1	0	0	0	0	0	0
116	220	QTB	/	3	/	0	/	0		3.6	2	1	0	0	0	0	0	0
117	230	QLBU	/	3	/	0	/	0		3.4	2	1	0	0	0	0	0	0
118	230	QLBL	/	4	/	0	/	0		3.4	2	2	0	0	0	0	0	0
119	C 230	QTB	/	3	/	0	/	0		3.6	2	1	0	0	0	0	0	0
120	C 230	QTB	/	4	/	0	/	0		4.4	2	1	1	0	0	0	0	0
121	230	QTB	/	5	/	0	/	0		3.8	4	1	0	0	0	0	0	0
122	230	QTB	/	9	/	0	/	0		4.0	5	4	0	0	0	0	0	0
123	230	QTB	/	6	/	0	/	0		3.7	5	1	0	0	0	0	0	0
124	230	QTS	/	1	/	0	/	0		4.3	0	0	1	0	0	0	0	0
125	230	QTS	/	2	TS	/	1	/	0	3.7	2	1	0	0	0	0	0	0
126	1100	QLBU	/	4	/	0	/	0		3.5	3	1	0	0	0	0	0	0
127	1120	TAT	/	2	/	0	/	0		7.0	0	2	0	0	0	0	0	0
128	1120	HKIF	/	4	/	0	/	0		2.7	3	1	0	0	0	0	0	0
129	1120	KIF	/	1	/	0	/	0		5.7	0	0	1	0	0	0	0	0
130	1120	KIF	/	1	/	0	/	0		5.6	0	0	1	0	0	0	0	0
131	1120	KIF	/	6	/	0	/	0		5.8	0	0	5	1	0	0	0	0
132	1120	KIF	/	1	/	0	/	0		5.0	0	0	1	0	0	0	0	0
133	1140	TOR	/	3	/	0	/	0		4.4	1	2	0	0	0	0	0	0
134	1140	KIF	/	1	/	0	/	0		5.8	0	0	0	1	0	0	0	0
135	1140	TEIF	/	1	/	0	/	0		9.9	0	0	1	0	0	0	0	0
136	1140	TEIF	/	6	/	0	/	0		9.6	0	5	1	0	0	0	0	0
137	1150	KIF	/	2	/	0	/	0		5.3	1	0	1	0	0	0	0	0
138	C 1160	QTB	/	1	QF	/	4	/	0	5.9	0	4	0	1	0	0	0	0
139	C 1160	QF	/	1	/	0	/	0		6.4	0	0	1	0	0	0	0	0
140	1160	KIF	/	6	/	0	/	0		4.4	5	1	0	0	0	0	0	0
141	1160	PP	/	3	/	0	/	0		6.2	0	1	1	1	0	0	0	0
142	1160	PP	/	1	/	0	/	0		5.1	0	0	1	0	0	0	0	0
143	1160	QAL	/	2	/	0	/	0		7.5	0	0	0	1	1	0	0	0
144	C 1160	TC	/	5	QAL	/	4	/	0	6.0	2	2	5	0	0	0	0	0
145	1170	QLBL	/	2	/	0	/	0		3.3	0	2	0	0	0	0	0	0
146	1170	TOR	/	6	/	0	/	0		4.4	2	4	0	0	0	0	0	0
147	1170	TC	/	2	QTB	/	1	/	0	5.2	1	1	0	1	0	0	0	0
148	C 1170	KIF	/	2	QAL	/	0	/	0	4.6	0	2	0	0	0	0	0	0
149	C 1170	D	/	4	/	0	/	0		4.2	2	2	0	0	0	0	0	0
150	C 1170	D	/	6	/	0	/	0		4.0	3	3	0	0	0	0	0	0

ANOMALY SUMMARY TABLE

ANOMALY	FLIGHT	COMPUTER MAP UNIT AND NO. ANOMALOUS SAMPLES IN UNIT						PEAK PPM	NUMBER OF SAMPLES WITH A STANDARD DEVIATION OF :							
									1	2	3	4	5	6	7	>7
151	1170	PP	/	4	/	0	/	0	3.9	3	1	0	0	0	0	0
152	1170	PP	/	9	/	0	/	0	5.0	6	2	1	0	0	0	0
153	1170	TC	/	2	/	0	/	0	4.7	0	2	0	0	0	0	0
154 C	1180	QLBL	/	1	/	0	/	0	4.0	0	0	1	0	0	0	0
155 C	1180	QLBL	/	9	/	0	/	0	4.1	5	3	1	0	0	0	0
156	1180	QLBL	/	7	/	0	/	0	4.3	2	2	3	0	0	0	0
157	1180	QLBL	/	3	QAL	/	1	/	0	4.6	0	2	2	0	0	0
158 C	1180	QAL	/	3	/	0	/	0	4.4	1	2	0	0	0	0	0
159	1180	QAL	/	2	/	0	/	0	5.0	0	2	0	0	0	0	0
160	1180	TC	/	1	/	0	/	0	5.9	0	0	1	0	0	0	0
161	1180	MPC	/	4	/	0	/	0	6.3	0	4	0	0	0	0	0

NOTES: M INDICATES THAT THE ANOMALY LIES OVER
A URANIUM MINE OR PROSPECT.

C INDICATES THAT THE ANOMALY LIES OVER A CULTURAL FEATURE.

W INDICATES POSSIBLE INTERFERENCE BY WEATHER PHENOMENA.

		ROCK UNIT GAL						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	.2453	.8563	1.4673	2.0783	2.6893	3.3003	3.9113
BI214	DIST NORMAL	-.2922	.6931	1.6784	2.6637	3.6490	4.6343	5.6196
TL208	DIST NORMAL	-2.0281	2.6461	7.3203	11.9945	16.6687	21.3429	26.0171
U/K	DIST NORMAL	.0244	.4535	.8826	1.3117	1.7408	2.1699	2.5990
U/TH	DIST NORMAL	-.0292	.0595	.1482	.2369	.3256	.4143	.5030
TH/K	DIST NORMAL	.1953	2.0725	3.9497	5.8269	7.7041	9.5813	11.4585

		ROCK UNIT QLABU						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	.9636	1.2419	1.5202	1.7985	2.0768	2.3551	2.6334
BI214	DIST NORMAL	.8583	1.4020	1.9457	2.4894	3.0331	3.5768	4.1205
TL208	DIST NORMAL	4.9501	6.5181	8.0861	9.6541	11.2221	12.7901	14.3581
U/K	DIST NORMAL	.5386	.8228	1.1070	1.3912	1.6754	1.9596	2.2438
U/TH	DIST NORMAL	.1128	.1614	.2100	.2586	.3072	.3558	.4044
TH/K	DIST NORMAL	3.5046	4.1348	4.7650	5.3952	6.0254	6.6556	7.2858

		ROCK UNIT QLBH						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	1.0899	1.1529	1.2159	1.2789	1.3419	1.4049	1.4679
BI214	DIST NORMAL	1.3704	1.6020	1.8336	2.0652	2.2968	2.5284	2.7600
TL208	DIST NORMAL	4.5764	5.1072	5.6380	6.1688	6.6996	7.2304	7.7612
U/K	DIST NORMAL	1.0173	1.2178	1.4183	1.6188	1.8193	2.0198	2.2203
U/TH	DIST NORMAL	.1829	.2345	.2861	.3377	.3893	.4409	.4925
TH/K	DIST NORMAL	4.1460	4.3697	4.5934	4.8171	5.0408	5.2645	5.4882

		ROCK UNIT QLABL						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	.6499	.9641	1.2783	1.5925	1.9067	2.2209	2.5351
BI214	DIST NORMAL	.2925	.9339	1.5753	2.2167	2.8581	3.4995	4.1409
TL208	DIST NORMAL	2.3693	4.4875	6.6057	8.7239	10.8421	12.9603	15.0785
U/K	DIST NORMAL	.5158	.8059	1.0960	1.3861	1.6762	1.9663	2.2564
U/TH	DIST NORMAL	.0945	.1485	.2025	.2565	.3105	.3645	.4185
TH/K	DIST NORMAL	3.3592	4.0543	4.7494	5.4445	6.1396	6.8347	7.5298

		ROCK UNIT QF						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	.7711	1.2280	1.6849	2.1418	2.5987	3.0556	3.5125
BI214	DIST NORMAL	-1.2794	.0494	1.3782	2.7070	4.0358	5.3646	6.6934
TL208	DIST NORMAL	-1.8614	2.1764	4.2142	10.2520	14.2898	18.3276	22.3654
U/K	DIST NORMAL	-.3478	.1920	.7318	1.2716	1.8114	2.3512	2.8910
U/TH	DIST NORMAL	.0280	.1067	.1854	.2641	.3428	.4215	.5002
TH/K	DIST NORMAL	.2459	1.7692	3.2925	4.8158	6.3391	7.8624	9.3857

		ROCK UNIT QPA						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	1.3504	1.6681	1.9858	2.3035	2.6212	2.9389	3.2566
BI214	DIST NORMAL	-.6045	.3644	1.3333	2.3022	3.2711	4.2400	5.2089
TL208	DIST NORMAL	-1.4301	2.6024	6.6349	10.6674	14.6999	18.7324	22.7649
U/K	DIST NORMAL	-.1828	.2135	.6098	1.0061	1.4024	1.7987	2.1950
U/TH	DIST NORMAL	.0609	.1130	.1651	.2172	.2693	.3214	.3735
TH/K	DIST NORMAL	.2106	1.6841	3.1576	4.6311	6.1046	7.5781	9.0516

		ROCK UNIT QPG						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	.5015	.8982	1.2949	1.6916	2.0883	2.4850	2.8817
BI214	DIST NORMAL	-.1722	.6026	1.3774	2.1522	2.9270	3.7018	4.4766
TL208	DIST NORMAL	-3.1514	.3565	3.8644	7.3723	10.8802	14.3881	17.8960
U/K	DIST NORMAL	.1982	.5557	.9132	1.2707	1.6282	1.9857	2.3432
U/TH	DIST NORMAL	.0306	.1250	.2194	.3138	.4082	.5026	.5970
TH/K	DIST NORMAL	.8222	1.9487	3.0752	4.2017	5.3282	6.4547	7.5812

		ROCK UNIT QLS						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	-.7315	.1219	.9753	1.8287	2.6821	3.5355	4.3889
BI214	DIST NORMAL	-1.1564	-.0575	1.0414	2.1403	3.2392	4.3381	5.4370
TL208	DIST NORMAL	-2.5732	2.0009	6.5750	11.1491	15.7232	20.2973	24.8714
U/K	DIST NORMAL	.3767	.6154	.8541	1.0928	1.3315	1.5702	1.8089
U/TH	DIST NORMAL	.0357	.0821	.1285	.1749	.2213	.2677	.3141
TH/K	DIST NORMAL	3.8127	4.6611	5.5095	6.3579	7.2063	8.0547	8.9031

			ROCK UNIT		PP							
			-3	-2	-1	0	+1	+2	+3			
K40	DIST	NORMAL	-.0951	.5046	1.1043	1.7040	2.3037	2.9034	3.5031			
BI214	DIST	NORMAL	-1.0937	-.0631	.9675	1.9981	3.0287	4.0593	5.0899			
TL208	DIST	NORMAL	-5.6974	-1.3076	3.0822	7.4720	11.8618	16.2516	20.6414			
U/K	DIST	NORMAL	-.3426	.1651	.6728	1.1805	1.6882	2.1959	2.7036			
U/TH	DIST	NORMAL	-.1120	.0232	.1584	.2936	.4288	.5640	.6992			
TH/K	DIST	NORMAL	.4738	1.7134	2.9530	4.1926	5.4322	6.6718	7.9114			

			ROCK UNIT		KIF							
			-3	-2	-1	0	+1	+2	+3			
K40	DIST	NORMAL	.9633	1.4142	1.8651	2.3160	2.7669	3.2178	3.6687			
BI214	DIST	NORMAL	-1.2043	-.1320	.9403	2.0126	3.0849	4.1572	5.2295			
TL208	DIST	NORMAL	-6.1246	-.7310	4.4626	10.0562	15.4498	20.8434	26.2370			
U/K	DIST	NORMAL	-.3378	.0630	.4638	.8646	1.2654	1.6662	2.0670			
U/TH	DIST	NORMAL	-.0327	.0495	.1317	.2139	.2961	.3783	.4605			
TH/K	DIST	NORMAL	-1.0710	.7051	2.4812	4.2573	6.0334	7.8095	9.5856			

			ROCK UNIT		TOR							
			-3	-2	-1	0	+1	+2	+3			
K40	DIST	NORMAL	-.7392	-.0569	.6254	1.3077	1.9900	2.6723	3.3546			
BI214	DIST	NORMAL	-1.3265	-.2653	.7959	1.8571	2.9183	3.9795	5.0407			
TL208	DIST	NORMAL	-4.4808	-.1676	4.1456	8.4588	12.7720	17.0852	21.3984			
U/K	DIST	NORMAL	.0864	.5478	1.0092	1.4706	1.9320	2.3934	2.8548			
U/TH	DIST	NORMAL	.0386	.0990	.1594	.2198	.2802	.3406	.4010			
TH/K	DIST	NORMAL	2.8708	4.1596	5.4484	6.7372	8.0260	9.3148	10.6036			

			ROCK UNIT		TC							
			-3	-2	-1	0	+1	+2	+3			
K40	DIST	NORMAL	.5581	1.1270	1.6959	2.2648	2.8337	3.4026	3.9715			
BI214	DIST	NORMAL	-.7130	.4335	1.5800	2.7265	3.8730	5.0195	6.1660			
TL208	DIST	NORMAL	-2.6427	2.6171	7.8769	13.1367	18.3965	23.6563	28.9161			
U/K	DIST	NORMAL	-.0206	.3863	.7932	1.2001	1.6070	2.0139	2.4208			
U/TH	DIST	NORMAL	-.0138	.0630	.1398	.2166	.2934	.3702	.4470			
TH/K	DIST	NORMAL	1.5806	2.9471	4.3136	5.6801	7.0466	8.4131	9.7796			

			ROCK UNIT		QTR							
			-3	-2	-1	0	+1	+2	+3			
K40	DIST	NORMAL	.4632	.8921	1.3210	1.7499	2.1788	2.6077	3.0366			
BI214	DIST	NORMAL	.1277	.8735	1.6193	2.3651	3.1109	3.8567	4.6025			
TL208	DIST	NORMAL	1.5234	4.4073	7.2912	10.1751	13.0590	15.9429	18.8268			
U/K	DIST	NORMAL	.2068	.5994	.9920	1.3846	1.7772	2.1698	2.5624			
U/TH	DIST	NORMAL	.0514	.1130	.1746	.2362	.2978	.3594	.4210			
TH/K	DIST	NORMAL	2.4743	3.6223	4.7703	5.9183	7.0663	8.2143	9.3623			

			ROCK UNIT		TAT							
			-3	-2	-1	0	+1	+2	+3			
K40	DIST	NORMAL	-.3060	.6613	1.6286	2.5959	3.5632	4.5305	5.4978			
BI214	DIST	NORMAL	-1.3231	.3492	2.0215	3.6938	5.3661	7.0384	8.7107			
TL208	DIST	NORMAL	-5.1264	2.5310	10.1884	17.8458	25.5032	33.1606	40.8180			
U/K	DIST	NORMAL	.3929	.7295	1.0661	1.4027	1.7393	2.0759	2.4125			
U/TH	DIST	NORMAL	.0486	.1016	.1546	.2076	.2606	.3136	.3666			
TH/K	DIST	NORMAL	3.0253	4.3011	5.5769	6.8527	8.1285	9.4043	10.6801			

			ROCK UNIT		TS							
			-3	-2	-1	0	+1	+2	+3			
K40	DIST	NORMAL	-.3809	.3585	1.0979	1.8373	2.5767	3.3161	4.0555			
BI214	DIST	NORMAL	-.6454	.3234	1.2922	2.2610	3.2298	4.1986	5.1674			
TL208	DIST	NORMAL	-3.7526	1.0554	5.8634	10.6714	15.4794	20.2874	25.0954			
U/K	DIST	NORMAL	.0600	.4715	.8830	1.2945	1.7060	2.1175	2.5290			
U/TH	DIST	NORMAL	.0513	.1072	.1631	.2190	.2749	.3308	.3867			
TH/K	DIST	NORMAL	2.2785	3.5003	4.7221	5.9439	7.1657	8.3875	9.6093			

			ROCK UNIT		MKIF							
			-3	-2	-1	0	+1	+2	+3			
K40	DIST	NORMAL	1.5041	1.7184	1.9327	2.1470	2.3613	2.5756	2.7899			
BI214	DIST	NORMAL	-.0175	.5090	1.0355	1.5620	2.0885	2.6150	3.1415			
TL208	DIST	NORMAL	4.4547	5.6693	6.8839	8.0985	9.3131	10.5277	11.7423			
U/K	DIST	NORMAL	.0718	.2887	.5056	.7225	.9394	1.1563	1.3732			
U/TH	DIST	NORMAL	.0111	.0719	.1327	.1935	.2543	.3151	.3759			
TH/K	DIST	NORMAL	2.1497	2.6953	3.2409	3.7865	4.3321	4.8777	5.4233			

		ROCK UNIT M						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	.4394	.8059	1.1724	1.5389	1.9054	2.2719	2.6384
BI214	DIST NORMAL	-1.1298	-.1043	.9212	1.9467	2.9722	3.9977	5.0232
TL208	DIST NORMAL	-2.5499	.4606	3.4711	6.4816	9.4921	12.5026	15.5131
U/K	DIST NORMAL	-.8836	-.1625	.5586	1.2797	2.0008	2.7219	3.4430
U/TH	DIST NORMAL	-.1318	.0173	.1664	.3155	.4646	.6137	.7628
TH/K	DIST NORMAL	.6847	1.8244	2.9641	4.1038	5.2435	6.3832	7.5229
		ROCK UNIT D						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	.2016	.6849	1.1682	1.6515	2.1348	2.6181	3.1014
BI214	DIST NORMAL	-.6249	.2560	1.1369	2.0178	2.8987	3.7796	4.6605
TL208	DIST NORMAL	-.0779	1.8951	3.8681	5.8411	7.8141	9.7871	11.7601
U/K	DIST NORMAL	-.1778	.2899	.7576	1.2253	1.6930	2.1607	2.6284
U/TH	DIST NORMAL	.0066	.1191	.2316	.3441	.4566	.5691	.6816
TH/K	DIST NORMAL	1.3962	2.1186	2.8410	3.5634	4.2858	5.0082	5.7306
		ROCK UNIT PM						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	.8793	1.0528	1.2263	1.3998	1.5733	1.7468	1.9203
BI214	DIST NORMAL	.5300	.8325	1.1350	1.4375	1.7400	2.0425	2.3450
TL208	DIST NORMAL	-2.6935	-.0811	2.5313	5.1437	7.7561	10.3685	12.9809
U/K	DIST NORMAL	.3818	.5990	.8162	1.0334	1.2506	1.4678	1.6850
U/TH	DIST NORMAL	-.0914	.0533	.1980	.3427	.4874	.6321	.7768
TH/K	DIST NORMAL	-1.1861	.4003	1.9867	3.5731	5.1595	6.7459	8.3323
		ROCK UNIT D-8						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	.2201	.8123	1.4045	1.9967	2.5889	3.1811	3.7733
BI214	DIST NORMAL	-2.3317	-.7122	.9073	2.5268	4.1463	5.7658	7.3853
TL208	DIST NORMAL	1.1218	3.4873	5.8528	8.2183	10.5838	12.9493	15.3148
U/K	DIST NORMAL	-2.6386	-1.2867	.0652	1.4171	2.7690	4.1209	5.4728
U/TH	DIST NORMAL	-.5314	-.2444	.0426	.3296	.6166	.9036	1.1906
TH/K	DIST NORMAL	.9247	2.0492	3.1737	4.2982	5.4227	6.5472	7.6717
		ROCK UNIT MPC						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	.9826	1.5099	2.0372	2.5645	3.0918	3.6191	4.1464
BI214	DIST NORMAL	-1.1619	.2146	1.5911	2.9676	4.3441	5.7206	7.0971
TL208	DIST NORMAL	3.5108	7.6529	11.7950	15.9371	20.0792	24.2213	28.3634
U/K	DIST NORMAL	-.2581	.2182	.6945	1.1708	1.6471	2.1234	2.5997
U/TH	DIST NORMAL	-.0659	.0214	.1087	.1960	.2833	.3706	.4579
TH/K	DIST NORMAL	3.4807	4.3810	5.2813	6.1816	7.0819	7.9822	8.8825
		ROCK UNIT TETF						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	.8615	1.4645	2.0675	2.6705	3.2735	3.8765	4.4795
BI214	DIST NORMAL	-2.4073	-.2385	1.9303	4.0991	6.2679	8.4367	10.6055
TL208	DIST NORMAL	-12.3783	-.6632	11.0519	22.7670	34.4821	46.1972	57.9123
U/K	DIST NORMAL	-.5507	.1358	.8223	1.5088	2.1953	2.8818	3.5683
U/TH	DIST NORMAL	.0136	.0725	.1314	.1903	.2492	.3081	.3670
TH/K	DIST NORMAL	-1.5973	1.6604	4.9181	8.1758	11.4335	14.6912	17.9489
		ROCK UNIT QGM						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	.4794	.9751	1.4708	1.9665	2.4622	2.9579	3.4536
BI214	DIST NORMAL	.2582	1.0221	1.7860	2.5499	3.3138	4.0777	4.8416
TL208	DIST NORMAL	1.9392	4.3366	6.7340	9.1314	11.5288	13.9262	16.3236
U/K	DIST NORMAL	.0442	.4746	.9050	1.3354	1.7658	2.1962	2.6266
U/TH	DIST NORMAL	.0207	.1100	.1993	.2886	.3779	.4672	.5565
TH/K	DIST NORMAL	1.9436	2.8566	3.7696	4.6826	5.5956	6.5086	7.4216
		ROCK UNIT QDT						
		-3	-2	-1	0	+1	+2	+3
K40	DIST NORMAL	1.2268	1.4481	1.6694	1.8907	2.1120	2.3333	2.5546
BI214	DIST NORMAL	.5143	.9617	1.4091	1.8565	2.3039	2.7513	3.1987
TL208	DIST NORMAL	-.3157	2.2013	4.7183	7.2353	9.7523	12.2693	14.7863
U/K	DIST NORMAL	.3714	.5743	.7772	.9801	1.1830	1.3859	1.5888
U/TH	DIST NORMAL	.0822	.1449	.2076	.2703	.3330	.3957	.4584
TH/K	DIST NORMAL	.2174	1.4174	2.6174	3.8174	5.0174	6.2174	7.4174

			ROCK UNIT MOC						
			-3	-2	-1	0	+1	+2	+3
K40	DIST	NORMAL	.0370	.9427	1.8484	2.7541	3.6598	4.5655	5.4712
BI214	DIST	NORMAL	-.8353	.3147	1.4647	2.6147	3.7647	4.9147	6.0647
TL208	DIST	NORMAL	-6.0764	1.5256	9.1276	16.7296	24.3316	31.9336	39.5356
U/K	DIST	NORMAL	.1961	.4384	.6807	.9230	1.1653	1.4076	1.6499
U/TH	DIST	NORMAL	.0010	.0546	.1082	.1618	.2154	.2690	.3226
TH/K	DIST	NORMAL	2.7277	3.7662	4.8047	5.8432	6.8817	7.9202	8.9587

			ROCK UNIT MO						
			-3	-2	-1	0	+1	+2	+3
K40	DIST	NORMAL	.1221	.6316	1.1411	1.6506	2.1601	2.6696	3.1791
BI214	DIST	NORMAL	-.8096	-.1456	.5184	1.1824	1.8464	2.5104	3.1744
TL208	DIST	NORMAL	-1.0765	2.2227	5.5219	8.8211	12.1203	15.4195	18.7187
U/K	DIST	NORMAL	-.0124	.2136	.4396	.6656	.8916	1.1176	1.3436
U/TH	DIST	NORMAL	.0159	.0521	.0883	.1245	.1607	.1969	.2331
TH/K	DIST	NORMAL	3.3303	3.9839	4.6375	5.2911	5.9447	6.5983	7.2519

			ROCK UNIT TKTF						
			-3	-2	-1	0	+1	+2	+3
K40	DIST	NORMAL	1.9938	2.4507	2.9076	3.3645	3.8214	4.2783	4.7352
BI214	DIST	NORMAL	-2.2110	-.2553	1.7004	3.6561	5.6118	7.5675	9.5232
TL208	DIST	NORMAL	-8.7760	.6336	10.0432	19.4528	28.8624	38.2720	47.6816
U/K	DIST	NORMAL	-.4354	.0545	.5444	1.0343	1.5242	2.0141	2.5040
U/TH	DIST	NORMAL	.0583	.1004	.1425	.1846	.2267	.2688	.3109
TH/K	DIST	NORMAL	-1.2523	1.0060	3.2643	5.5226	7.7809	10.0392	12.2975

			ROCK UNIT TRH						
			-3	-2	-1	0	+1	+2	+3
K40	DIST	NORMAL	.5815	1.2745	1.9675	2.6605	3.3535	4.0465	4.7395
BI214	DIST	NORMAL	.5332	1.0870	1.6408	2.1946	2.7484	3.3022	3.8560
TL208	DIST	NORMAL	4.4643	6.7444	9.0245	11.3046	13.5847	15.8648	18.1449
U/K	DIST	NORMAL	.1052	.4070	.6288	.8506	1.0724	1.2942	1.5160
U/TH	DIST	NORMAL	.0776	.1165	.1554	.1943	.2332	.2721	.3110
TH/K	DIST	NORMAL	1.8515	2.7053	3.5591	4.4129	5.2667	6.1205	6.9743

			ROCK UNIT QTS						
			-3	-2	-1	0	+1	+2	+3
K40	DIST	NORMAL	1.0192	1.3151	1.6110	1.9069	2.2028	2.4987	2.7946
BI214	DIST	NORMAL	1.0934	1.6574	2.2214	2.7854	3.3494	3.9134	4.4774
TL208	DIST	NORMAL	6.0049	7.5655	9.1261	10.6867	12.2473	13.8079	15.3685
U/K	DIST	NORMAL	.6436	.9212	1.1988	1.4764	1.7540	2.0316	2.3092
U/TH	DIST	NORMAL	.1306	.1742	.2178	.2614	.3050	.3486	.3922
TH/K	DIST	NORMAL	3.7079	4.3574	5.0069	5.6564	6.3059	6.9554	7.6049

[illegible]

49

[illegible]

[illegible]

[illegible]

[illegible]

LINE BASED MEAN CONCENTRATIONS AND RATIOS PER ROCK TYPE

[illegible]

[illegible]

LINE BASED MEAN CONCENTRATIONS AND RATIOS PER ROCK TYPE

	K40	B1214	TL208	U/K	U/TH	TH/K		K40	B1214	TL208	U/K	U/TH	TH/K
GAL	2,247	3,055	13,860	1,376	.234	6,078		2,029	2,244	12,369	1,183	,195	6,102
QLBU	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
QLBM	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
QLBL	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
QF	2,290	3,635	15,568	1,592	,235	6,798		1,313	1,826	8,735	1,387	,208	6,670
QPA	2,346	2,435	11,233	1,023	,213	4,729		2,235	1,636	8,222	,737	,200	3,702
QPG	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
QLS	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
PP	1,780	2,505	10,361	1,400	,246	5,753		,000	,000	,000	,000	,000	,000
KIF	2,671	2,348	13,997	,894	,179	5,195		2,628	2,415	15,178	,934	,164	5,790
T0B	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
YC	2,611	3,542	16,746	1,337	,210	6,270		2,227	3,205	14,996	1,448	,216	6,727
QTB	1,791	2,506	10,930	1,410	,233	6,155		1,665	2,148	11,235	1,303	,192	6,832
TAT	3,439	5,542	25,875	1,614	,214	7,534		3,282	4,491	22,887	1,368	,199	6,947
TS	2,576	1,742	8,372	,685	,214	3,279		,000	,000	,000	,000	,000	,000
MKIF	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
M	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
D	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
PM	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
D+S	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
MPC	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
TEIF	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
QGM	1,633	2,848	7,997	1,764	,360	4,902		,000	,000	,000	,000	,000	,000
QDT	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
MOC	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
MO	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
TKIF	3,703	5,146	27,062	1,405	,192	7,318		,000	,000	,000	,000	,000	,000
TRH	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
QTS	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000

170

187

[illegible]

LINE BASED MEAN CONCENTRATIONS
AND RATIOS PER ROCK TYPE

	210						220					
	K40	B7214	TL208	U/K	U/TH	TH/K	K40	B7214	TL208	U/K	U/TH	TH/K
QAL	2,414	3,287	14,836	1,357	.222	6,106	2,367	3,596	13,868	1,525	,260	5,874
QLBU	1,839	2,789	10,160	1,534	.277	5,565	1,819	2,584	9,848	1,435	,265	5,451
QLBM	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
QLBL	1,641	2,247	8,989	1,363	.251	5,444	1,668	2,207	8,536	1,326	,260	5,111
QF	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
QPA	2,473	3,744	15,875	1,517	.238	6,405	2,848	3,966	18,567	1,395	,214	6,526
QPG	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
QLS	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
PP	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
KIF	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
TOB	1,008	1,608	6,882	1,652	.232	7,156	1,275	1,825	8,040	1,460	,231	6,366
TC	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
QTB	1,687	2,523	9,891	1,508	.256	5,927	1,734	2,590	10,163	1,513	,257	5,913
TAT	2,024	2,633	11,800	1,327	.219	6,092	2,645	2,565	10,782	1,001	,238	4,189
TS	2,016	2,906	13,489	1,594	.230	6,852	1,568	1,876	9,601	1,223	,208	5,998
MKIF	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
M	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
D	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
PM	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
D-S	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
MPC	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
TEIF	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
QGM	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
QDY	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
MOC	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
MO	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
TKIF	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
TRH	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
QTS	,000	,000	,000	,000	,000	,000	1,767	2,586	10,548	1,479	,246	6,002

LINE BASED MEAN CONCENTRATIONS
AND RATIOS PER ROCK TYPE

	230						1100					
	K40	BT214	TL208	U/K	U/TH	TH/K	K40	BT214	TL208	U/K	U/TH	TH/K
QAL	2.036	3.112	12.142	1.474	.249	5.941	.000	.000	.000	.000	.000	.000
QLBU	1.814	2.460	9.727	1.362	.244	5.366	1.950	2.376	9.267	1.240	.257	4.804
QLBM	1.279	2.065	6.169	1.619	.338	4.817	.000	.000	.000	.000	.000	.000
QLBL	1.516	2.022	7.933	1.323	.256	5.189	.000	.000	.000	.000	.000	.000
QF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QPA	.000	.000	.000	.000	.000	.000	2.262	1.817	7.810	.812	.236	3.484
QPG	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QLS	2.521	2.938	14.778	1.171	.200	5.868	.000	.000	.000	.000	.000	.000
PP	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
KIF	.000	.000	.000	.000	.000	.000	2.199	1.541	7.577	.700	.211	3.453
T0B	1.764	2.187	10.156	1.269	.225	5.710	.000	.000	.000	.000	.000	.000
TC	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QT0	1.679	2.601	9.748	1.558	.269	5.823	1.422	2.215	8.411	1.590	.265	6.042
TAT	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
TS	1.941	2.407	11.559	1.252	.215	5.883	1.986	2.736	9.909	1.383	.276	5.001
MKIF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
M	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
D	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
PM	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
D-S	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MPC	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
TEIF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QGM	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QDT	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MOC	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MO	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
TKIF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
TRH	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QTS	2.028	2.936	10.960	1.462	.268	5.443	.000	.000	.000	.000	.000	.000

LINE BASED MEAN CONCENTRATIONS
AND RATIOS PER ROCK TYPE

	1110						1120					
	K40	B1214	TL208	U/K	U/TH	TH/K	K40	B1214	TL208	U/K	U/TH	TH/K
QAL	2,790	3,960	16,972	1,421	.234	6,090	1,595	2,205	9,263	1,384	.241	5,786
QLBU	1,750	2,521	9,972	1,453	.255	5,708	.000	.000	.000	.000	.000	.000
QLBM	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QLBL	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QF	.978	1,243	6,324	1,245	.188	6,415	.000	.000	.000	.000	.000	.000
QPA	2,213	3,163	13,891	1,444	.229	6,298	2,235	3,380	14,745	1,522	.231	6,619
QPG	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QLS	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
PP	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
KIF	2,340	1,645	7,976	.698	.224	3,372	2,332	2,190	10,683	.915	.217	4,424
TOB	.000	.000	.000	.000	.000	.000	1,015	1,309	7,394	1,211	.170	7,225
TC	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QTB	1,582	2,219	9,569	1,426	.237	6,073	1,772	2,362	8,435	1,409	.282	4,971
TAT	1,954	1,901	8,152	1,026	.237	4,630	2,886	4,057	20,218	1,372	.195	7,089
TS	.000	.000	.000	.000	.000	.000	2,243	3,077	10,759	1,372	.287	4,797
MKIF	.000	.000	.000	.000	.000	.000	2,169	1,693	7,954	.780	.216	3,681
M	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
D	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
PM	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
D-S	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MPC	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
TEIF	2,139	1,350	6,858	.633	.197	3,226	.000	.000	.000	.000	.000	.000
QGM	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QDT	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MOC	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MO	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
TKIF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
TRH	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QTS	.000	.000	.000	.000	.000	.000	1,708	2,642	9,488	1,564	.280	5,582

LINE BASED MEAN CONCENTRATIONS
AND RATIOS PER ROCK TYPE

	1130						1140					
	K40	B1214	TL208	U/K	U/TH	TH/K	K40	B1214	TL208	U/K	U/TH	TH/K
QAL	2.295	2.622	9.514	1.152	.276	4.191	2.060	2.524	13.826	1.366	.186	7.335
QLBU	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QLBM	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QLBL	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QF	2.305	1.965	7.528	.853	.261	5.279	.000	.000	.000	.000	.000	.000
QPA	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QPG	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QLS	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
PP	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
KIF	2.218	1.614	7.917	.736	.212	3.562	2.368	2.003	12.686	.826	.160	5.283
T08	1.402	1.785	10.134	1.202	.164	7.357	.828	1.279	6.217	1.493	.196	7.795
TC	.000	.000	.000	.000	.000	.000	2.726	3.655	19.314	1.406	.193	7.186
QTB	1.668	2.268	11.239	1.404	.208	6.839	.000	.000	.000	.000	.000	.000
TAT	2.594	3.838	18.658	1.482	.204	7.237	2.439	3.418	20.176	1.332	.161	8.241
TS	1.682	1.937	9.239	1.148	.208	5.493	1.067	1.508	7.810	1.418	.194	7.300
MKIF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
M	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
D	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
PM	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
D=S	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MPC	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
TEIF	.000	.000	.000	.000	.000	.000	2.832	6.435	33.364	2.284	.192	11.808
QGM	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QDT	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MOC	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MO	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
TKIF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
TRH	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
QTS	1.577	2.450	9.478	1.548	.259	5.997	.000	.000	.000	.000	.000	.000

1169

[illegible]

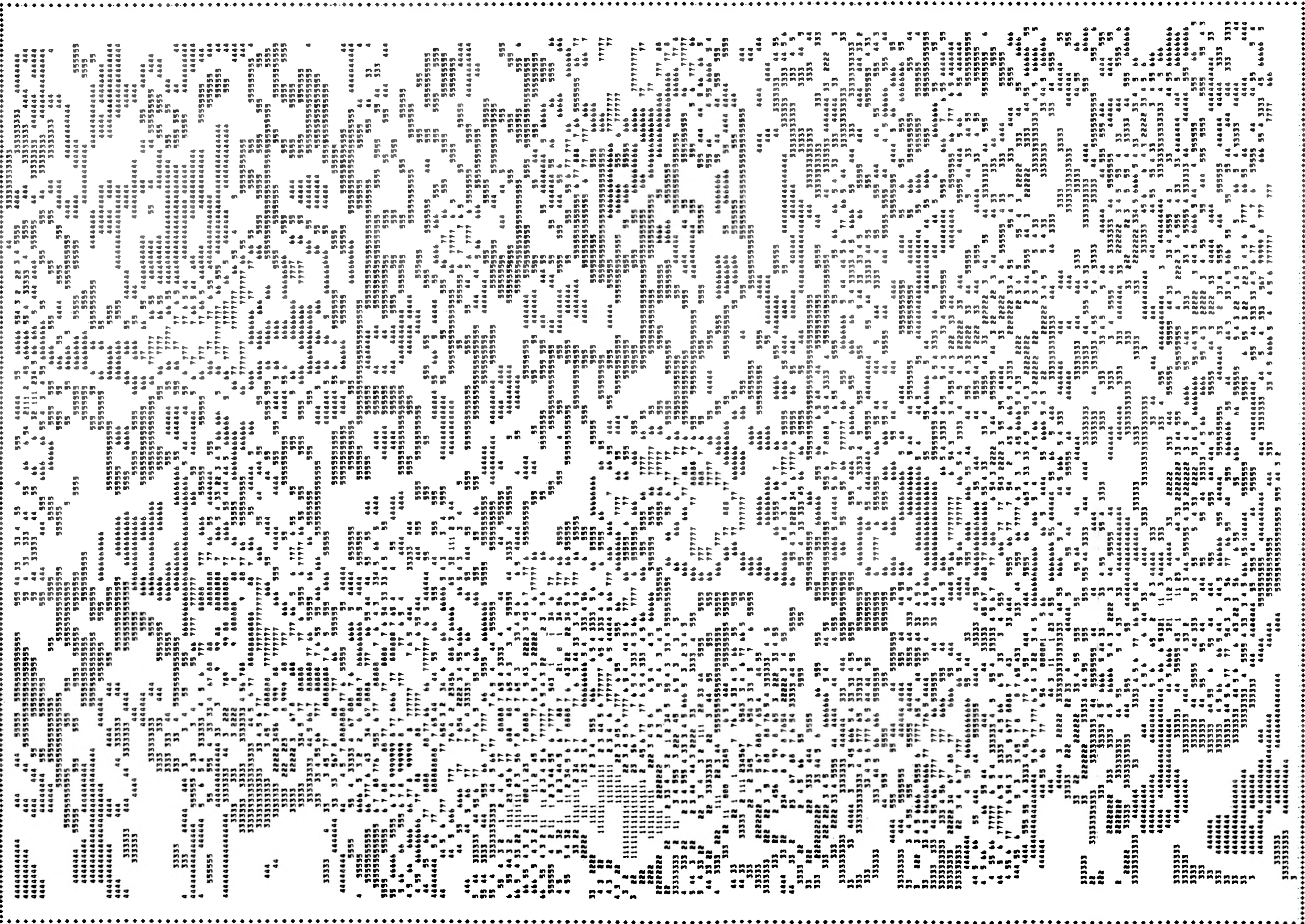
117a

	K40	BI214	TL208	U/K	U/TH	TH/K
QAL	1,594	2,677	7,767	1,701	.366	4.845
QLBU	.000	.000	.000	.000	.000	.000
QLBM	.000	.000	.000	.000	.000	.000
QLBL	1,291	1,887	7,266	1,439	.267	5.463
QF	.000	.000	.000	.000	.000	.000
QPA	.000	.000	.000	.000	.000	.000
QPG	.000	.000	.000	.000	.000	.000
QLS	.000	.000	.000	.000	.000	.000
PP	2,044	2,433	6,484	1,240	.378	3.323
KIF	1,446	2,452	8,881	1,708	.286	6.181
T0B	1,799	3,504	11,759	1,945	.299	6.516
TC	2,264	3,118	13,187	1,384	.255	5.857
QTB	2,692	4,762	19,195	1,791	.249	7.187
TAT	.000	.000	.000	.000	.000	.000
TS	.000	.000	.000	.000	.000	.000
HKIF	.000	.000	.000	.000	.000	.000
M	1,537	2,228	6,795	1,381	.358	4.055
O	1,766	2,326	6,367	1,334	.365	3.653
PM	.000	.000	.000	.000	.000	.000
D-S	2,231	3,065	7,760	1,397	.394	3.572
MPC	.000	.000	.000	.000	.000	.000
TEIF	.000	.000	.000	.000	.000	.000
QGM	1,548	2,437	10,683	1,575	.228	6.901
QDT	.000	.000	.000	.000	.000	.000
MOC	.000	.000	.000	.000	.000	.000
MO	.000	.000	.000	.000	.000	.000
TKIF	.000	.000	.000	.000	.000	.000
TRH	.000	.000	.000	.000	.000	.000
QTS	.000	.000	.000	.000	.000	.000

K/40	BT214	TL208	U/K	U/TH	TH/K
2,292	3,544	14,534	1,566	1,259	6,235
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000
1,700	2,619	9,284	1,539	1,284	5,461
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000
1,374	1,194	4,601	1,878	1,267	3,306
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000
2,193	2,830	12,776	1,264	1,222	5,759
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000
1,475	1,797	7,025	1,213	1,261	4,750
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000
2,858	2,616	18,584	1,875	1,136	6,534
2,451	3,131	17,360	1,295	1,186	7,043
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000
2,833	3,078	17,335	1,061	1,195	5,710
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000
,000	,000	,000	,000	,000	,000

APPENDIX F – Psuedo Contour Maps

HAILEY



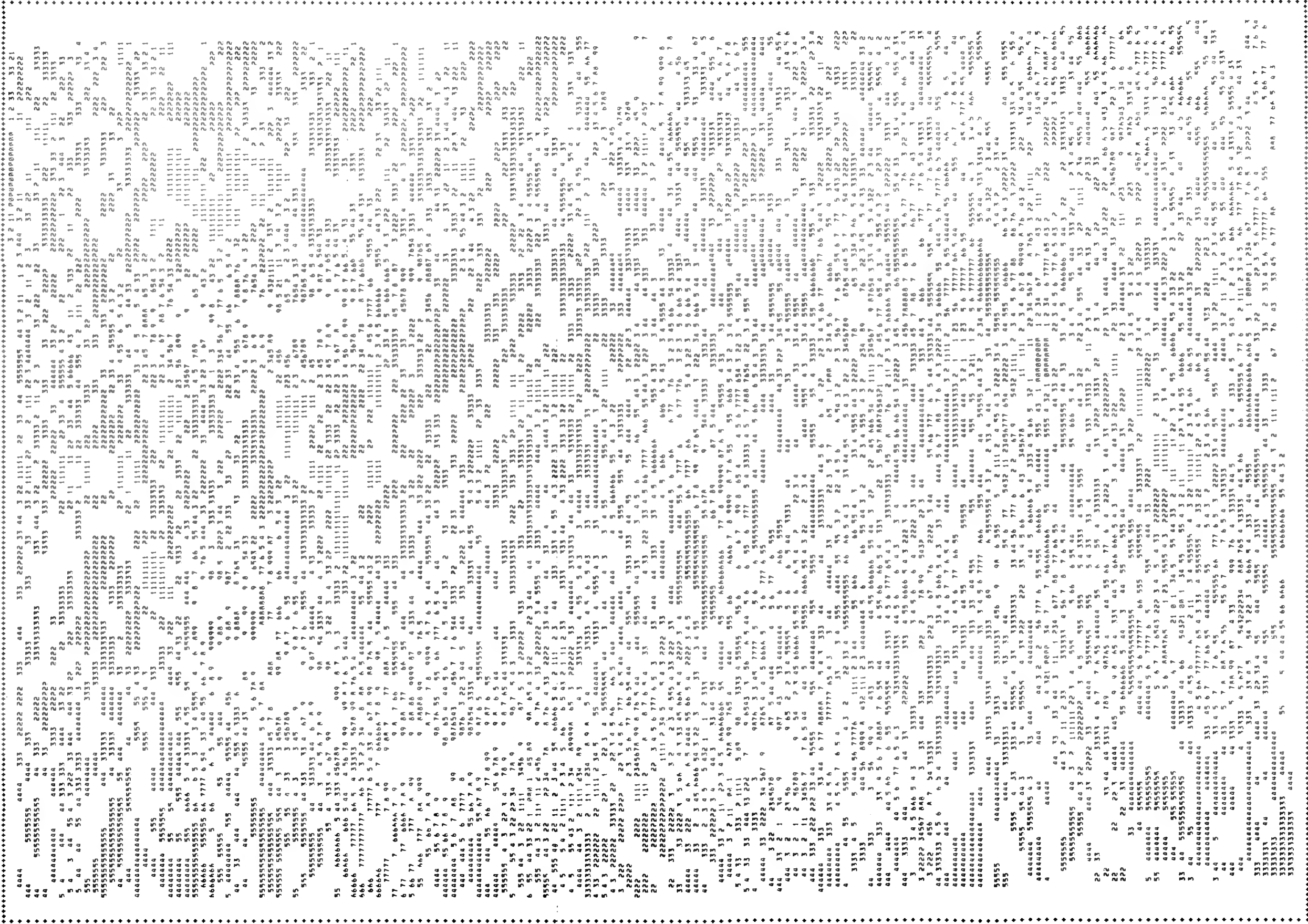
Potassium Pseudo-Contour Map - Hailey Quadrangle

SCALE IN EQUIVALENT PERCENT

EXPLANATION

PRINT CHARACTER	VALUE
0	1.0
1	1.0
2	1.0
3	1.0
4	1.0
5	1.0
6	1.0
7	1.0
8	1.0
9	1.0
10	1.0
11	1.0
12	1.0
13	1.0
14	1.0
15	1.0
16	1.0
17	1.0
18	1.0
19	1.0
20	1.0
21	1.0
22	1.0
23	1.0
24	1.0
25	1.0
26	1.0
27	1.0
28	1.0
29	1.0
30	1.0
31	1.0
32	1.0
33	1.0
34	1.0
35	1.0
36	1.0
37	1.0
38	1.0
39	1.0
40	1.0
41	1.0
42	1.0
43	1.0
44	1.0
45	1.0
46	1.0
47	1.0
48	1.0
49	1.0
50	1.0
51	1.0
52	1.0
53	1.0
54	1.0
55	1.0
56	1.0
57	1.0
58	1.0
59	1.0
60	1.0
61	1.0
62	1.0
63	1.0
64	1.0
65	1.0
66	1.0
67	1.0

HAILEY



Uranium Pseudo-Contour Map - Hailey Quadrangle

SCALE IN EQUIVALENT PPM

EXPLANATION	
PRINT CHARACTER	VALUE

Thorium/Potassium Pseudo-Contour Map - Hailey Quadrangle

1



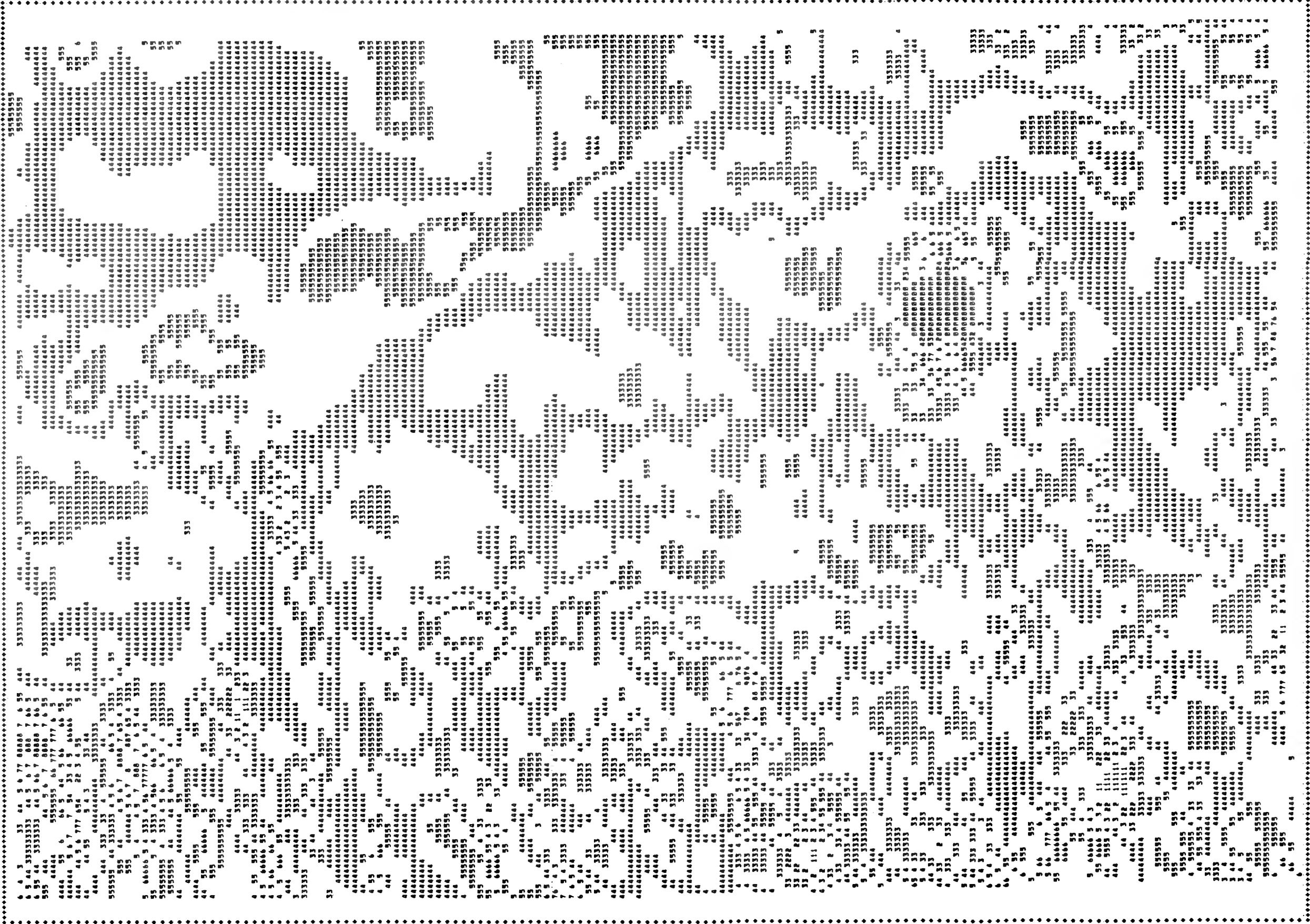
EXPLANATION	
PRINT CHARACTER	VALUE



PRINT CHARACTER	VALUE
0	.1
	.1
1	.2
	.3
2	.3
	.3
3	.4
	.4
4	.5
	.5
5	.6
	.6
6	.7
	.8
7	.8
	.8
8	.9
	1.0
9	1.0
	GT 1.0

Uranium/Thorium Pseudo-Contour Map - Hailey Quadrangle

HAILEY



Residual Magnetic Pseudo-Contour Map - Hailey Quadrangle

EXPLANATION

PRINT CHARACTER	VALUE
0	LE +1000.0
1	-900.0 -800.0
2	-700.0 -600.0
3	-500.0 -400.0
4	-300.0 -200.0
5	-100.0
6	100.0 200.0
7	300.0 400.0
8	500.0 600.0
9	700.0 800.0
0T	800.0

SCALE IN GAMMAS