

86-801-15364

Owner/Operator: COMINCO LTD.

EXPLORATION

WESTERN CANADA

NTS: 103P/14W, 103P/13E, 103P/11W, 103P/12E

ASSESSMENT REPORT

GEOLOGY AND GEOCHEMISTRY

OF

SAULT 1,3,4,5,7, AND 8 MINERAL CLAIMS

SKEENA M.D.

LATITUDE: 55°<sup>45.3'</sup>~~46'~~N, LONGITUDE: 129°<sup>27.0'</sup>~~29'~~W

WORK PERFORMED:

JULY 17 to AUGUST 18, 1986

DECEMBER 1986

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

J.D. BLACKWELL

15,364

AP-RECORDER
DEC 16 1986
MR. # _____ \$ _____
VANCOUVER, B.C.

**FILMED**

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ASSESSMENT REPORT  
GEOLOGY AND GEOCHEMISTRY OF  
SAULT 1,3,4,5,7 and 8 MINERAL CLAIMS

SUMMARY

The Sault claims are located 30 km north of Alice Arm, B.C. The property is underlain by an east-striking, 10° to 50° north dipping sequence of andesite and dacite pyroclastic tuff breccias, overlain by calcareous debris breccias, bedded base metal-rich pyritic tuff, barite/celestite beds, black limestone and rhyolitic tuff and breccia. These units are overlain, perhaps disconformably by basaltic flows and flow breccia. This pre-Middle Jurassic sequence is overlain unconformably by mid-Jurassic fossiliferous epiclastic breccia, arenaceous wacke and mudstone correlated to the Bowser Group. All units are greenschist to sub-greenschist metamorphic rank. Numerous north and north-east trending vertical faults cut the property.

A sulphate horizon has been located at five points along a 6.5 km trend. Detailed mapping of one area suggest a minimum 800 m long strip of prospective geology containing relatively continuous sulphate beds with scattered lenses of massive pyrite containing sphalerite and galena. High contrast soil geochemical anomalies support continuity and suggest possible extensions to this zone.

Further geological mapping, soil geochemistry, grid geophysics and diamond drilling is recommended.

INTRODUCTION

Located along the southern shore of Kitsault Lake, in NTS 103P/11W, 12E, 13E and 14W. Distance to town of Kitsault is 32 km, Terrace 200 km and Stewart, 40 km. Access by float plane or helicopter. Kitsault River Valley road comes to within 5 km of property, however this access route is in disrepair and no longer serviceable. (Figure 1).

Claim information is summarized as follows and shown on Figure 2.

2.

<u>Claim Name</u>	<u>Units</u>	<u>Record Date</u>
Sault 1	20	July 25,1984
Sault 3	6	July 25,1984
Sault 4	15	August 26,1985
Sault 5	3	August 26,1985
Sault 7	10	October 17,1985
Sault 8	8	October 17,1985

The claims are in the Skeena Mining Division.

On March 25,1985 the Sault 1 and 3 claims were transferred to Cominco Ltd. and on August 26,1985 the Sault 4 and 5 claims were also transferred to Cominco Ltd., 2200-200 Granville Street, Vancouver, B.C. V6C 1T2.

The Kitsault Valley has a long history of exploration and mining, centred upon silver veins at Torbrit and Dolly Varden. The Sault claims were staked in 1983, 1984 and 1985 to cover barite and realgar mineralization noted by Woodcock and Wychopen in 1966. In late 1984 Cominco optioned the property from Woodcock.

The 1986 programme builds upon the data base established and reported on for 1984 (Woodcock 1985) and 1985 (Blackwell 1986). During 1986 geological mapping at 1:5000 and 1:1000 scales was undertaken aimed at mapping the stratigraphy, establishing rock types, testing surface continuity of showings and host units and testing selected areas by a small soil sampling grid. In addition rock geochemistry and re-analysing 1985 soils for Ag, Cu and Ba were undertaken.

## GEOLOGY

The geology of the property is portrayed on Plates 3i and 3ii (1:5000). Recce scale mapping was done using a photo enlargement base. Mapping was done using an "as non-interpretive" legend as possible, utilizing a rock name (numeric designation) followed by a textural modifier (alphabetic). All features are based on field descriptions. Rock type is based on apparent modal composition, colour and density. Rhyolites mapped contain siliceous clots reminiscent of quartz eyes and siliceous clasts. Textural modifiers for pyroclastic and flow rocks are based on size classifications in international useage. Rock names for pyroclastic rocks are based on fragment composition not matrix.

To facilitate a geological description in the text, several rock packages are broken out and described here from oldest to youngest.

### Wacke and Conglomerate

Not studied during the 1986 programme, but outcropping along the southern edge of the property near the Trout Lakes. These rocks include grey to black, medium bedded greywacke, mudstone and conglomerate. These units are likely the oldest rocks on the property, dipping under the metavolcanic sequence.

3.

### Andesite to Dacite Pyroclastic Rocks:

This is the volumetrically most important rock package on the property, occurring as a thin band in the west, expanding eastward to form a thick sequence underlying and overlying the mineralized stratigraphy. The contact with underlying units has not been observed. Characteristic features are pale to apple green colour, abundant feldspar crystals and a major tuff to lapilli component.

Southwest of Grid Lake, this package comprises dacitic lapilli breccias occurring as massive thick units. Northwards to the Showing Lake area, lapilli tuff, tuff and subordinate waterlain tuff predominate as medium to thin bedded units.

South of the Discovery area, lapilli tuffs occur as massive, ridge forming units. Northward, to Kitsault and Apostrophe Lakes, medium to thick beds of crystal tuff and lapilli tuff predominate. East to the property boundary this package becomes coarser, comprising lapilli breccias and block breccias. In this latter area the separation of dacite breccias from diamictite becomes difficult due a increasingly heterolithic fragment component.

### Diamictite, Lithic Breccias, Limestone, Sulphate/Sulphide Rocks:

This rock package occurs as an east trending strip running through the centre of the property. Lithologies appear to both intermix and change in proportion along strike. The area southwest of Kitsault Lake and Showing Lake has coarse to medium grained diamictite\* resting sharply in dacitic tuffs. Diamictites in this area tend to be highly calcareous, containing abundant clasts of black limestone, dacite, pyrite and mudstone. These pass into and are overlain by thin bedded, massive outcrops of celestite-barite and massive pyrite (with sphalerite and galena) or into black, flaggy limestone. In this area a second very coarse diamictite unit separates rhyolitic tuffs from overlying basalt.

In the Quartz-Eye Lake and Discovery areas, coarse to medium grained calcareous diamictite and black limestone appears to underlie dacitic tuffs. The footwall contact appears to be a fault. Overlying and interdigitating with limestones in the northeast of this area, thin-bedded celestite with minor pyrite laminae (plus sphalerite) occurs as lenses up to 6 m thick. Overlying the sulphate lenses is a lithic breccia composed of a clast supported breccia with fragments of limestone, dacite, rhyolite, hematite-stained barite, pyrite and quartz porphyry up to 40 cm on an edge. The lithic breccia appears to contain an essential volcanic component of highly flattened rhyolite blocks.

\* The term diamictite is non-genetic and is herein used to cover a range of terrigenous unsorted, poorly bedded rocks displaying a wide range of particle sizes and clast lithology supported in a fine-grained matrix. On the Sault claims they may or may not be calcareous.

4.

East of Discovery a unit at least 35 metres thick of grey to black medium-bedded limestone with rare celestite layers (i.e. Tom showing) occurs. South of the Ian showing this unit changes rapidly to coarse diamictite with a high proportion of both limestone and dacite breccia debris.

At the Ian showing, coarse diamictite, thin bedded black limestone and thin lenses of celestite occur interbedded with dacite tuffs and breccias. A second area of very coarse diamictite occurs along a stream section 900 m to the west. This area has not been sufficiently mapped to establish a tie-in to the rest of this rock package on the property.

#### Rhyolite Tuffs

South and west of Kitsault Lake through Showing Lake to the West End Showing occurs a band of rhyolite tuff. This unit is composed of thin to medium-bedded tuff and lapilli tuff with minor waterlain tuff. It is characteristically yellowish coloured and contains varying proportions of broken quartz, feldspar and purple to bronze mica. It is commonly ankerite-altered and can be very siliceous. This unit has been field mapped as a rhyolite tuff, though derivation by hydrothermal alteration of a dacite tuff protolith cannot be discounted.

#### Basalt Flows and Breccias

Massive basalt flows and flow breccia occur north of Showing Lake and as an outlier north and east of Grid Lake. These rocks are characteristically maroon to deep green coloured, feldspar, magnetic and pyroxene-phyric, vesicular (chlorite and hematite infillings) and relatively non-descript. No pillows, bedded tuffs and breccias, or interflow sediments have been noted. Bedding attitudes most commonly observed are flat to northwards dipping at less than 20°. It is likely that this sequence rests with slight disconformity on underlying sediment and volcanic units.

#### Andesite to Rhyolite Lapilli Tuffs and Sedimentary Rocks

South of Quartz-Eye Lake and in the Summit Lake area a distinct appearing package of rocks caps local high ground. This package comprises brick red to maroon, rarely green, pink feldspar, mica and quartz-phyric lapilli tuffs, tuffs and thin bedded tuffaceous mudstones. Units are thin to medium bedded, traceable for short distances along strike, and are highly variable in composition. Most pyroclastic units appear to be of secondary or debris flow origin, based on fragment rounding, crude grading features and abundant interflow sediment. The relationship with other rock packages on the property is not clear. South of Quartz-Eye Lake it rests with apparent conformity in dacite tuffs. The north and west edge of this outlier is in fault contact with diamictite and lithic breccias or basalt respectively. North of Summit Lake contacts with dacite tuff were not observed, but appear to be in fault contact. A subaerial or very shallow marine depositional environment is suspected, but no unequivocal environmental indicators have been observed.

#### Bowser Group Sedimentary Rocks

Fossiliferous mudstone, debris breccia, black mudstone and arenaceous wacke correlated to the Bowser Group occurs along the northern portion of the map area. A Middle Jurassic age assignment is based on fossil fauna studies by

5.

Tipper of the GSC (Alldrick, personal communication). Fossiliferous mudstone and breccia outcrops on rocky points along the south shore of Kitsault Lake west of camp, and on islands northwest of camp. Along the north shore of Kitsault Lake, east of Apostrophe Lake, black mudstone units occurs. North of these exposures, and at the east end of Kitsault Lake, thick bedded arenaceous wacke and mudstone occur. Bowser rock west of Apostrophe Lake appear to rest unconformably on older metavolcanic rocks. To the east, the contact is a vertical fault.

#### Showing Lake Area

The area extending 1.5 km west from Canoe Cove on Kitsault Lake was mapped at 1:1000 (Plates 4i and 4ii) utilizing compass and topofil lines. The area of interest covers several sulphate/sulphide prospects (Lake and West End), and was selected for detail mapping based on its mineralization, fair exposure and relative accessibility. The area is covered by low swampy peat bogs, clumps and stands of hemlock/cedar, numerous small lakes and ponds, and about 20% outcrop. Mapping was undertaken utilizing the same legend as the 1:5000 property map and the following descriptions follow a similar format used under the property geology section.

#### Andesite to Dacite Pyroclastic Rocks

In the Grid Lake area, south of Showing Lake, extending west, outcropping dacite tuff and crystal tuff occurs. Minor, laminated waterlain tuff occurs south of Showing Lake. Rocks are typically mid to apple green, feldspar-crystal rich with rare quartz phenocrysts. Near the Lake Showing, and along the small bay immediately west, coarse white muscovite up to 4 mm is common. Rock attitude tend to be 065/10-40°N.

#### Lower Diamictite/Limestone/Mudstone Unit

A unit of interbedded diamictite, black limestone, and black mudstone starts 170 m southwest of Showing Lake, running along the south shore of the lake, then along Showing Creek to Canoe Cove on Kitsault Lake, a distance of 1100 metres. Black, pyritic mudstone occurs in the southwest corner of Showing Lake. This bed may subcrop along the entire package length, but weathers recessively and is not exposed at surface.

Calcareous, metalliferous diamictite occurs along the entire strip. Along the south shore of Showing Lake, and at the Lake Showing, this rock is a thick bedded, heterolithic breccia with clasts up to 20 m across. Clast lithology includes mudstone, pyritic tuff, dacite tuff and limestone. It is black to dark grey, fetid smelling, highly porous and pyritic. There is little fabric to the rock and fragments are randomly oriented. Outcrops are frequently coated in hydrozincite. Elsewhere this unit is finer-grained, with white dacite chips up to 2 cm in a gritty, calcareous matrix.

Black flaggy limestone, possibly interbedded with diamictite occurs within the entire package. Best exposures are immediately downstream from the Lake Showing and at Canoe Cove. This unit is black, pyritic, fetid and fine-grained. At the "Creek Pits" and Canoe Cove minor interbedded celestite occurs, and joints are filled with strontianite veinlets up to 15 cm thick.

6.

### Celestite/Barite Unit

At the east end of Showing Lake, up to 8 m of laminated celestite, barite, limestone and chert, containing laminae and lenses of pyrite and sphalerite rest on limestone and dacite tuff. This unit is thin to medium bedded, finely laminated, white to buff coloured and exceedingly fine-grained. This unit trends 090/20 to 38°N.

Other exposures of this unit occur further east at the "Creek Pits" and Canoe Cove.

### Rhyolite Tuff and Crystal Tuff

Massive units of rhyolite tuff and crystal tuff overlie diamictite/limestone/sulphate units. This unit appears to thicken westward. Near Canoe Cove it is highly calcite and silica altered, while west of Showing Lake it is ankeritic, contains bronze coloured mica and quartz veinlets. As previously mentioned, the term rhyolite is a mapping or field identification only, and hydrothermal alteration of a dacite protolith cannot be discounted.

### Upper Diamictite(s)

West of Showing Lake a 10 m thick, very coarse diamictite unit occurs overlain by rhyolite waterlain tuff and dacite tuff, striking 100/28°N. Fragments of dacite tuff, limestone and sulphate up to 60 cm across occur. This unit is a useful local marker, but its relationship to other diamictites is not clear.

A second higher and more stratigraphically continuous diamictite, 6 m thick occurs at the base of the basalt unit. This diamictite is very coarse (30 to 80 cm clasts), locally flattened and schistose, and appears conformable to the overlying basalt. It does not have a calcareous matrix and no mineralization has been noted in it.

### Basalt Unit

Massive, thick non-descript basalt flows, breccias and tuffs occur along the north edge of the map area, and south of Canoe Cove to east of Grid Lake. These rocks are usually dark green to maroon, have chlorite/hematite filled amygdules and appear relatively fresh. They appear to rest flatly on the underlying, north dipping rhyolite and sediment packages.

### Andesite to Rhyolite Lapilli Tuffs and Sedimentary Rocks

In the southwestern portion of the map area, thin bedded andesite lapillistone, lapilli tuff, grit and mudstone occur. These units are brick red, sometimes green, well bedded and modestly well exposed. A small, faulted(?) block of similar lithologies occurs along the northern shore of Canoe Cove.



## STRUCTURE

No major folds have been mapped on the property. Sulphate and limestone exposures are frequently crenulated, with  $010^{\circ}$  fold axis plunging 15 to  $20^{\circ}$  north. No major structure related to these minor folds has been established.

Numerous  $000$  to  $040^{\circ}$  trending vertical faults cut the property with apparent east-side up displacements. A pronounced airphoto linear passing through Grid Lake to Canoe Lake on Kitsault Lake is a fault zone, may have a significant throw (200 or 300 m), with east side down, accounting for the preservation of a basalt outlier in this area.

## MINERALIZATION

Descriptions of mineralization has been previously reported by Woodcock (1985) and Blackwell (1986). Additional results to report for 1986 include:

1. The "Creek Pits", old overgrown trenches found between the Lake showing and Canoe Cove, expose laminated celestite, barite, chert, limestone and pyrite with minor sphalerite and galena. The exposure is 3 m thick. Analyses are reported in Appendix E, see Plate 6 for sample location.

2. The Tom showing, located 600 m east of the Discovery area, where a low dry hillock contains rubble of massive and laminated pyritic celestite. There is little outcrop exposure in this area, and thickness or extent is unknown.

## GEOCHEMISTRY

### Soils

Soil grid areas are plotted on plate 3ii and results are plotted on plates 5i to 5v inclusive, with analytical data and analytical procedure tabulated in Appendix D. Grids are numbered one to five, from west to east. During the 1986 programme additional soil samples were collated on Grid 3, with new sampling done at grids 2 and 4. All 1985 soil samples were analysed for Ag, Ba and Cu. All new and previously existing data has been collected, digitized and replotted (Plates 5i to 5v), and the entire package is presented in this report. Descriptive summaries following are in addition to results reported by Blackwell (1986).

8.

(i) Grid 1, West End

Analyses of 1985 samples for Cu, Ba and Ag. Copper values are low, with a peak value of 25 ppm. Barium values range from 267 to 10567 ppm. Anomalous values cluster near outcropping barite-celestite-diamictite beds. Silver values range from detection limit (<0.4 ppm) to 2.9 ppm. High values occur near the west end, near Ba, Pb and Zn highs.

(ii) Grid 2, Showing Lake West

A new grid, established over an area of outcropping diamictite, limestone and dacite tuff. Modest to high contrast soil geochem anomalies in Pb,Zn,Ba and Ag occur over diamictite and limestone areas. Strong anomalies at the west edge and northeast corners of the grid are unaccounted for and require follow up sampling and prospecting.

(iii) Grid 3, Lake Showing

Five new lines established, plus new analyses of Cu,Ag,Ba. Strong, high Pb,Zn,Ag,Ba and As anomalies occur south of Showing Lake, near the Lake Showing, Creek Pits and Canoe Cove. the anomalies south of Showing Lake may reflect glacial dispersion from the Lake showing area. Other anomalies coincide with areas thought to be underlain by diamictite, sulphate or limestone. Copper values are flat, with a peak value of 44 ppm.

(iv) Grid 4, Grid Lake South

Two recce lines were run south from Grid Lake to check to basalt-dacite contact. The area is swampy, and no outcrop is present. One sample with coincident Cu (55 ppm), Ba (1514 ppm) and Zn (439 ppm) occurs.

(v) Grid 5, Discovery Grid

New analyses of 1785 samples for Cu,Ba and Ag. Copper values are flat, with a peak value of 39 ppm. Silver values up to 1.2 ppm occur at the north end of the grid, however they do not correlate to anomalous values in other elements. Barium values are remarkably elevated along the south and southwest portions of the grid. These coincide with anomalous As,Zn and Pb. Outcrop is poor, and this area is thought to be underlain by lithic breccia or diamictite.

9.

### Rocks

A selection of mapping samples collected during 1:1000 mapping has been analysed for Pb, Zn, Cu, Ag, Ba and Sr, and 14 were submitted for whole rock analysis. Sample locations are plotted on Plates 6i and 6ii, results and analytical procedure reported in Appendix E. At the time of reporting this data had not been processed and its significance awaits thin section study. The following comments can be made concerning the whole rock data.

(i) Sample DR 77, field mapped as a rhyolite-tuff, has an unacceptable LOI and total. It is suspected that the sample is extremely ankerite-altered.

(ii) Samples DR 37, DR 57, DR 4 probably accurately reflect basalt compositions. They are likely ferrotholeiitic basalts. High total iron reflects modal magnetite.

(iii) Samples of dacite and andesitic tuff appear to be chemically indistinguishable. They are all likely andesite. All rocks are relatively alkali rich.

### INTERPRETATION

Property and detail mapping suggest the Sault claims are underlain by a north dipping sequence, which from oldest to youngest comprises:

1. Wacke and Conglomerate
2. Andesite to dacite pyroclastic rocks, which are coarse near the base and to the east, fining upwards and west.
3. Diamictite, lithic breccia, limestone, sulphate/sulphide, which occurs as an intermixed band running easterly through the property. Five sulphate lenses, with minor base metal sulphides have been located. It is doubtful that these are interconnected.
4. These units are overlain perhaps disconformably by basaltic flows, and andesite to rhyolite pyroclastic and epiclastic units.
5. Bowser Group rocks unconformably overly units 1 to 4, and provide an upper age limit of middle Jurassic.

Metavolcanic and metasedimentary units of interest are tentively correlated to pre-Middle Jurassic Hazelton Group rocks. Mineralization is apparently stratabound. Elevated metal contents in sulphates, diamictites and limestone appear to be reflected in soil geochemistry. In the Showing Lake area, favourable geology can be traced 500 metres, and soil geochemistry results suggests a possible 300 m strike length worthy of follow-up exploration.

RECOMMENDATIONS

Additional geological mapping east of Discovery to the property boundary is required. Soil sampling between existing grid areas, and east and south of Discovery is necessary. Grid magnetometer and IP surveys may aid in targeting to selected zones in the mineralized section. The Lake Showing area is sufficiently mapped and prospected to be followed-up by diamond drilling.

REFERENCES

- BLACKWELL, J.D. (1986): Geology, Geochemistry and Geophysics of Sault 1,3,4, and 5 Mineral Claims; Assessment Report.
- WOODCOCK, J.R. (1985): Geology and Geochemistry Sault Claims; Assessment Report.

Report by: J. Blackwell  
J.D. BLACKWELL  
Project Geologist,  
Exploration.

Approved for  
Release by: W.J. Wolfe  
W.J. WOLFE,  
Manager, Exploration-  
Western Canada.

JDB/pm  
Distribution:  
Mining Recorder  
Western Canada

APPENDIX "A"

STATEMENT OF EXPENDITURES

Salaries:	J.D. Blackwell	30 days @ 228.00 =	\$ 6,840.00
	D. Rhodes	22 days @ 228.00 =	5,016.00
	H. Kang	22 days @ 119.00 =	2,618.00
	T.J. Fitzmaurice	25 days @ 139.00 =	2,780.00
	A. Roberts	6 days @ 171.00 =	1,026.00
	A. MacGregor	11 days @ 172.00 =	1,892.00
	R. Essey	4 days @ 80.00 =	<u>320.00</u>
			\$20,492.00
	Report Writing J.Blackwell 5 x 228 =		1,140.00
	Draughting and Reproduction		950.00
	Assays and Analyses		3,350.00
	Communications		2,085.00
	Geological Supplies and Services		1,490.00
	Mobilization/Demobilization		7,730.00
	Transportation		6,040.00
	Domicile		4,100.00
	Expediting		200.00
	Shipping		<u>1,370.00</u>
			\$48,947.00

12 December 1986

APPENDIX "B"

STATEMENT OF QUALIFICATIONS

I. JERRY D. BLACKWELL of the Village of Lions Bay, in the Province of British Columbia, hereby certify:

1. THAT I am a geologist residing at 253 Stewart Road, Lions Bay, British Columbia.
2. THAT I graduated with an Honours B.Sc. in Geology from the University of Western Ontario in 1974.
3. THAT I have practiced Geology with Cominco Ltd. from 1974 to 1986.

Signed: \_\_\_\_\_

*J. D. Blackwell*  
J. D. BLACKWELL

Project Geologist.

12 December 1986

APPENDIX "C"

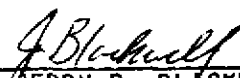
IN THE MATTER OF THE B.C. MINERAL ACT  
AND THE MATTER OF A GEOLOGICAL PROGRAMME  
CARRIED OUT ON THE SAULT 1,3,4,5,7 AND 8 CLAIMS  
AND LOCATED 30 KM N OF ALICE ARM, B.C.  
IN THE SKEENA MINING DIVISION OF THE  
PROVINCE OF BRITISH COLUMBIA, MORE PARTICULARLY

N.T.S. 103P/14

A F F I D A V I T

I, JERRY D. BLACKWELL, of the Village of Lions Bay in the Province of British Columbia, make oath and say:

1. THAT I am employed as a Geologist by Cominco Ltd. and, as such have a personal knowledge of the facts to which I hereinafter depose;
2. THAT annexed hereto is a true copy of expenditures incurred on a geological survey on the SAULT claims;
3. THAT the said expenditures were incurred between July 17 and August 18, 1986, for the purpose of mineral exploration of the above noted claims.

  
\_\_\_\_\_  
JERRY D. BLACKWELL  
Project Geologist,  
Exploration-

## APPENDIX "D"

### SOIL GEOCHEMICAL ANALYSES

#### Collection and Analytical Procedure

Most soils were collected from "B" horizon at a depth of 15 to 40 cm, some were collected from gleysols preserved under 80 to 160 cm of peat. Samples were collected by auger and shovel, stored in kraft paper bags, airdried, then sieved through 80 mesh. Coarse fraction was rejected, fines analysed for Cu, Pb, Zn, Ag, As and Ba by the Cominco Research Laboratory in Vancouver,

Cu, Pb, Zn, Ag analyses involve digestion with hot 20% HNO<sub>3</sub> followed by Atomic Absorption analysis. Detection limits are Cu -2 ppm, Pb -4 ppm, Ag -0.4 ppm. Arsenic is done by colourimetric with a 2 ppm detection limit. Barium is done by XRF on a pressed pelet, 20 ppm detection limit.



KIT OPTION-WD

KITSAULT LAKE

JOB V 86-03465  
 REPORT DATE 28 AUG 1986

LAB NO	FIELD NUMBER	Ag PPM	Cu PPM	Ba PPM
S8506540	B85101	<.4	11	756
S8506541	B85102	<.4	9	659
S8506542	B85103	<.4	19	612
S8506543	B85104	<.4	14	562
S8506544	B85105	<.4	33	654
S8506545	B85106	<.4	23	643
S8506546	B85107	<.4	34	800
S8506547	B85108	<.4	21	629
S8506548	B85109	<.4	28	731
S8506549	B85110	<.4	26	584
S8506550	B85111	<.4	15	572
S8506551	B85112	<.4	28	824
S8506552	B85113	<.4	14	510
S8506553	B85114	<.4	21	496
S8506554	B85115	<.4	30	791
S8506555	B85116	.6	23	711
S8506556	B85117	2.3	23	1228
S8506557	B85118	.9	10	769
S8506558	B85119	<.4	20	702
S8506559	B85120	<.4	25	728
S8506560	B85121	<.4	26	785
S8506561	B85122	<.4	16	667
S8506562	B85123	<.4	19	718
S8506563	B85124	<.4	16	733
S8506564	B85125	<.4	26	645
S8506565	B85126	<.4	11	861
S8506566	B85127	<.4	21	449
S8506567	B85128	<.4	22	861
S8506568	B85129	<.4	20	595
S8506569	B85130	<.4	33	693
S8506570	B85131	<.4	28	914
S8506571	B85132	<.4	13	861
S8506572	B85133	<.4	10	1149
S8506573	B85134	<.4	24	720
S8506574	B85135	<.4	16	536
S8506575	B85136	<.4	10	506
S8506576	B85137	<.4	12	2881
S8506577	B85138	<.4	19	626
S8506578	B85139	<.4	22	495
S8506579	B85140	<.4	15	455
S8506580	B85141	<.4	6	390
S8506581	B85142	<.4	20	731
S8506582	B85143	<.4	10	453
S8506583	B85144	<.4	8	645
S8506584	B85145	<.4	26	408
S8506585	B85146	<.4	17	503
S8506586	B85147	<.4	20	638
S8506587	B85148	<.4	8	502
S8506588	B85149	<.4	18	699
S8506589	B85150	<.4	9	7308
S8506590	B85151	1.1	14	3669

LAB NO	FIELD NUMBER	Ag PPM	Co PPM	Ba PPM
SR506591	B85152	7.8	38	1443
SR506592	B85153	21.2	35	1000
SR506593	B85154	2.3	25	968
SR506594	B85155	<.4	14	1102
SR506595	B85156	<.4	8	1233
SR506596	B85157	<.4	15	563
SR506597	B85158	<.4	18	444
SR506598	B85159	.4	15	527
SR506599	B85160	1	42	295
SR506600	B85161	.8	15	1895
SR506601	B85162	<.4	20	624
SR506602	B85163	<.4	17	525
SR506603	B85164	<.4	30	611
SR506604	B85165	<.4	18	525
SR506605	B85166	<.4	7	783
SR506606	B85167	<.4	16	846
SR506607	B85168	<.4	20	644
TSR506608	B85169	<.4	14	583
SR506609	B85170	<.4	5	622
SR506610	B85171	<.4	5	652
SR506611	B85172	<.4	16	547
SR506612	B85173	<.4	17	620
SR506613	B85174	2.8	11	943
SR506614	B85175	.8	15	10567
SR506615	B85176	<.4	5	3073
SR506616	B85177	<.4	14	774
SR506617	B85178	.6	12	550
SR506618	B85179	.4	14	866
SR506619	B85180	<.4	17	583
SR506620	B85181	<.4	8	1932
SR506621	B85182	<.4	12	414
SR506622	B85183	<.4	5	719
SR506623	B85184	1.1	25	599
SR506624	B85185	2.9	23	740
SR506625	B85186	.5	22	853
SR506626	B85187	<.4	12	1234
SR506627	B85188	<.4	16	970
SR506628	B85189	<.4	19	768
SR506629	B85190	.7	17	454
SR506630	B85191	<.4	16	755
SR506631	B85192	<.4	10	721
SR506632	B85193	1	19	267
SR506633	B85194	<.4	4	1076
SR506634	B85195	<.4	2	623
SR506635	B85196	.9	9	497
SR506636	B85197	<.4	12	654
SR506637	B85198	<.4	11	571
SR506638	B85199	<.4	15	807
SR506639	B85200	<.4	5	697
SR506640	B85201	<.4	3	538
SR506641	B85202	<.4	4	769
SR506642	B85203	<.4	21	311
SR506643	B85204	<.4	17	539
SR506644	B85205	<.4	6	617

LAB NO	FIELD NUMBER	AG PPM	CU PPM	BA PPM
SR506645	B85206	<.4	15	589
SR506646	B85207	<.4	14	425
SR506647	B85208	<.4	11	692
SR506648	B85209	<.4	31	374
SR506649	B85210	<.4	15	492
SR506650	B85211	<.4	20	4110
SR506651	B85212	<.4	28	667
SR506652	B85213	<.4	21	616
SR506653	B85214	<.4	32	1046
SR506654	B85215	<.4	11	510
SR506655	B85216	<.4	7	946
SR506656	B85217	<.4	11	2372
SR506657	B85218	<.4	28	638
SR506658	B85219	<.4	18	587
SR506659	B85220	<.4	19	594
SR506660	B85221	<.4	16	820
SR506661	B85222	<.4	29	829
SR506662	B85223	<.4	23	899
SR506663	B85224	.5	17	2509
SR506664	B85225	<.4	19	3075
SR506665	B85226	<.4	29	539
SR506666	B85227	<.4	10	E17734
SR506667	B85228	<.4	16	809
SR506668	B85229	<.4	15	4262
SR506669	B85230	<.4	27	2406
SR506670	B85231	<.4	15	1372
SR506671	B85232	<.4	17	7057
SR506672	B85233	<.4	7	7516
SR506673	B85234	<.4	10	5149
SR506674	B85235	<.4	9	3921
SR506675	B85236	<.4	18	759
SR506676	B85237	<.4	14	2399
SR506677	B85238	<.4	7	590
SR506678	B85239	<.4	3	494
SR506679	B85240	<.4	18	669
SR506680	B85241	<.4	33	534
SR506681	B85242	.5	15	438
SR506682	B85243	1	6	345
SR506683	B85244	<.4	19	495
SR506684	B85245	<.4	18	640
SR506685	B85246	<.4	8	466
SR506686	B85247	<.4	6	454
SR506687	B85248	<.4	21	320
SR506688	B85249	1.2	25	498
SR506689	B85250	.5	18	419
SR506690	B85251	<.4	14	456
SR506691	B85252	<.4	8	1443
SR506692	B85253	.5	25	653
SR506693	B85254	<.4	19	4154
SR506694	B85255	<.4	8	1006
SR506695	B85256	<.4	20	667
SR506696	B85257	<.4	16	4580
SR506697	B85258	<.4	6	680
SR506698	B85259	.5	11	438

LAR NO	FIELD NUMBER	Ag PPM	Co PPM	Ba PPM
↓ SB506699	B85260	<.4	4	410
SB506700	B85261	<.4	14	751
SB506701	B85262	<.4	12	1583
SB506702	B85263	<.4	17	775
SB506703	B85264	<.4	17	909
SB506704	B85265	.4	21	687
SB506705	B85266	.8	19	650
SB506706	B85267	.6	18	666
SB506707	B85268	<.4	15	717
SB506708	B85269	<.4	12	2257
SB506709	B85270	<.4	39	3498
SB506710	B85271	<.4	15	839
SB506711	B85272	<.4	19	597
SB506712	B85273	<.4	16	563
↓ SB506713	B85274	<.4	22	615
SB506714	B85275	<.4	24	1633
SB506715	B85276	<.4	17	871
SB506716	B85277	<.4	10	1546
SB506717	B85278	<.4	9	1629
SB506718	B85279	<.4	5	554
SB506719	B85280	<.4	9	616
SB506720	B85281	<.4	13	851
SB506721	B85282	<.4	20	605
SB506722	B85283	<.4	15	544
SB506723	B85284	<.4	5	1027
SB506724	B85285	<.4	19	964
SB506725	B85286	<.4	3	837
SB506726	B85287	<.4	14	724
SB506727	B85288	<.4	18	478
SB506728	B85289	<.4	5	2140
SB506729	B85290	<.4	5	1442
SB506730	B85291	<.4	13	886
SB506731	B85292	<.4	14	349
SB506732	B85293	<.4	16	1006
SB506733	B85294	<.4	16	579
SB506734	B85295	<.4	11	603
SB506735	B85296	<.4	5	337
SB506736	B85297	<.4	9	495
SB506737	B85298	.8	11	312
SB506738	B85299	<.4	7	551
↓ SB506739	B85300	<.4	4	382
SB506740	B85301	.9	20	1500
SB506741	B85302	<.4	25	977
SB506742	B85303	<.4	15	7004
SB506743	B85304	<.4	15	1609
SB506744	B85305	<.4	11	4200
SB506745	B85306	<.4	11	1070
SB506746	B85307	<.4	20	755
SB506747	B85308	<.4	17	646
SB506748	B85309	<.4	9	2483
SB506749	B85310	<.4	10	489
SB506750	B85311	1	17	502
SB506751	B85312	<.4	15	543
↓ SB506752	B85313	.5	38	717

LAB NO	FIELD NUMBER	Ag PPM	Cu PPM	Ba PPM
S8506753	B85314	<.4	25	499
S8506754	B85315	<.4	28	436
S8506755	B85316	<.4	12	952
S8506756	B85317	<.4	27	514
S8506757	B85318	<.4	22	541
S8506758	B85319	<.4	27	411
S8506759	B85320	<.4	20	497
S8506760	B85321	<.4	28	571
S8506761	B85322	<.4	17	1259
S8506762	B85323	<.4	25	998
S8506763	B85324	<.4	5	364
S8506764	B85325	<.4	16	457
S8506765	B85326	<.4	23	537
S8506766	B85327	<.4	19	751
↑ S8506767	B85328	1.2	20	529

I=INSUFFICIENT SAMPLE X=SMALL SAMPLE E=EXCEEDS CALIBRATION C=BEING CHECKED R=REVISED  
 IF REQUESTED ANALYSES ARE NOT SHOWN, RESULTS ARE TO FOLLOW

## ANALYTICAL METHODS

Ag 20% HNO3 DECOMPOSITION / AAS  
 Cu 20% HNO3 DECOMPOSITION / AAS  
 Ba X-RAY FLUORESCENCE / LOOSE POWDER



LAB NUMBER	FIELD NO	MAP ZONE	EAST	NORTH	Cd PPM	Pb PPM	Zn PPM	As PPM	Ba PPM	As PPM
SB605576	1796		L2+50E	N	26	114	830	6.4	1113	35
SB605577	1797		L2+50E	25N	29	68	489	6.4	1024	28
SB605578	1798		L2+50E	50N	19	6	49	6.4	474	17
SB605579	1799		L2+50E	75N	10	35	63	6.4	603	12
SB605580	1800		L2+50E	100N	28	18	2990	6.4	944	71
SB605581	1801		L2+00E	100N	4	157	25	6.4	535	10
SB605582	1802		L2+00E	75N	10	110	38	6.4	782	15
SB605583	1803		L2+00E	50N	6	10	14	6.4	610	15
SB605584	1804		L2+00E	25N	15	120	94	1.6	515	19
SB605585	1805		L2+00E	N	18	37	91	1.8	674	62
SB605586	1806		L2+00E	25S	13	18	36	.9	699	22
SB605587	1807		L2+00E	50S	17	52	82	.9	835	27
SB605588	1808		L2+00E	75S	11	72	190	6.4	1185	32
SB605589	1809		L2+00E	100S	13	10	87	.5	650	11
SB605590	1810		L2+50E	100S	1	5	10	6.4	687	4
SB605591	1811		L2+50E	75S	11	79	25	6.4	600	9
SB605592	1812		L2+50E	50S	13	30	13	.9	1	12
SB605593	1813		L2+50E	25S	20	112	125	1.4	1010	19
SB605594	1814		L2+25E	N	10	121	492	6.4	1290	101
SB605595	1815		L1+75E	N	21	78	510	.4	773	68
SB605596	1816		L1+50E	N	12	14	45	.5	1426	31
SB605597	1817		L1+50E	25N	4	5	10	6.4	485	7
SB605598	1818		L1+50E	50N	1	6	6	6.4	883	10
SB605599	1819		L1+50E	75N	5	12	13	6.4	562	7
SB605600	1820		L1+50E	100N	16	8	29	6.4	473	23
SB605601	1821		L1+00E	100N	8	19	22	6.4	551	15
SB605602	1822		L1+00E	75N	4	30	13	6.4	682	10
SB605603	1823		L1+00E	50N	18	600	98	1.1	387	21
SB605604	1824		L1+00E	25N	4	11	14	6.4	536	17
SB605605	1825		L1+00E	N	20	66	92	6.4	864	138
SB605606	1826		L1+00E	25S	12	109	299	.8	653	172
SB605607	1827		L1+00E	50S	9	8	37	6.4	1094	11
SB605608	1828		L1+00E	75S	3	5	13	6.4	963	9
SB605609	1829		L1+00E	100S	8	11	18	6.4	394	10
SB605610	1830		L1+50E	100S	7	24	32	6.4	542	13
SB605611	1831		L1+50E	75S	16	86	228	1.1	987	10
SB605612	1832		L1+50E	50S	12	144	154	.4	2873	88
SB605613	1833		L1+50E	25S	17	214	207	6.4	573	30
SB605614	1834		L1+25E	N	16	38	91	6.4	862	22
SB605615	1835		L0+25E	N	15	6	41	6.4	621	14
SB605616	1836		L0+50E	N	10	6	87	6.4	872	6
SB605617	1837		L0+50E	25N	17	10	123	.7	667	13
SB605618	1838		L0+50E	50N	2	5	6	6.4	554	12
SB605619	1839		L0+50E	75N	1	12	6	6.4	689	7
SB605620	1840		L0+50E	100N	2	13	8	6.4	770	6
SB605621	1841		L0+00E	100N	7	27	23	6.4	470	12
SB605622	1842		L0+00E	75N	8	31	33	6.4	491	7
SB605623	1843		L0+00E	50N	7	12	41	6.4	1660	7
SB605624	1844		L0+00E	25N	25	179	1640	1	1392	5
SB605625	1845		L0+00E	N	8	13	33	6.4	562	3
SB605626	1846		L0+25E	N	6	6	14	6.4	529	8
SB605627	1847		L0+00E	25S	1	25	15	6.4	639	12
SB605628	1848		L0+00E	50S	11	9	198	6.4	666	5
SB605629	1849		L0+00E	75S	73	14	162	.5	689	8
SB605630	1850		L0+00E	100S	3	31	15	.4	683	9
SB605631	1851		L0+50E	100S	13	40	30	6.4	730	11
SB605632	1852		L0+50E	75N	2	6	16	6.4	734	24
SB605633	1853		L0+50E	50N	22	14	109	6.4	667	62
SB605634	1854		L0+50E	25N	1	6	8	6.4	713	12

LAB NUMBER	FIELD		EAST	NORTH	Pb PPM	Zn PPM	Cu PPM	Ag PPM	As PPM	Ba PPM
	NO	MAP ZONE								
SB606276	1855		L1	6N	48	1120	29	6.4	344	2923
SB606277	1856		L1	50N	9	88	27	6.4	22	488
SB606278	1857		L1	100N	7	81	24	6.4	23	495
SB606279	1858		L1	150N	6	69	22	6.4	33	443
SB606280	1859		L1	200N	24	7400	19	7	332	7371
SB606281	1860		L1	250N	10	117	35	6.4	171	1493
SB606282	1861		L1	300N	24	65	9	6.4	380	2301
SB606283	1862		L1	354N	158	590	25	6.4	229	1084
SB606284	1863		L1	400N	487	1520	21	9.4	50	443
SB606285	1864		L1	450N	19	2430	11	8	6420	857
SB606286	1865		L1	490N	21	1200	7	8	348	1394
SB606287	1866		L1	530N	8	70	15	6.4	4	479
SB606288	1867		L2	0E	9	91	28	6.4	77	912
SB606289	1868		L2	50E	9	32	18	6.4	25	412
SB606290	1869		L2	100E	4	72	26	6.4	13	748
SB606291	1870		L2	200E	6	32	12	6.4	17	494
SB606292	1871		L2	250E	9	37	8	6.4	180	1861
SB606293	1872		L2	300E	13	67	21	6.4	144	479
SB606294	1873		L2	350E	4	47	22	6.4	20	591
SB606295	1874		L2	400E	4	38	9	6.4	18	484
SB606296	1875		L2	450E	4	84	24	6.4	34	849
SB606297	1876		L2	500E	8	33	15	6.4	23	512
SB606298	1877		L3	0E	4	49	19	6.4	4	475
SB606299	1878		L3	50E	7	42	14	6.4	5	784
SB606300	1879		L3	100E	9	98	45	6.4	12	934
SB606301	1880		L3	150E	9	48	18	6.4	10	752
SB606302	1881		L3	200E	13	439	35	8	2	1314
SB606303	1882		L3	250E	7	19	12	6.4	11	794
SB606304	1883		L3	300E	8	11	7	6.4	10	717
SB606305	1884		L4	0N	15	111	21	6.4	21	479
SB606306	1885		L4	50N	8	33	15	6.4	14	488
SB606307	1886		L4	100N	8	21	13	6.4	15	435
SB606308	1887		L4	150N	9	35	23	5	8	581
SB606309	1888		L4	200N	42	77	27	1.1	13	383
SB606310	1889		L4	250N	7	18	9	6.4	11	514
SB606311	1890		L4	300N	9	44	29	6.4	10	713
SB606312	1891		1850E	0N	11	69	24	6.4	10	493
SB606313	1892		1850E	25N	71	59	13	6.4	11	848
SB606314	1893		1850E	50N	8	71	22	6.4	17	499
SB606315	1894		1850E	75N	19	218	12	6.4	48	548
SB606316	1895		1850E	100N	7	97	20	6.4	14	389
SB606317	1896		1850E	125N	137	239	13	6.4	135	881
SB606318	1897		1950E	0N	8	75	25	6.4	24	752
SB606319	1898		1950E	25N	45	111	22	1.1	11	498
SB606320	1899		1950E	50N	15	48	21	6.4	14	458
SB606321	1900		1950E	75N	1488	149	28	8.2	19	5371
SB606322	1901		L5	50N	4	88	21	6.4	12	852
SB606323	1902		L5	100N	47	344	18	6.4	482	858
SB606324	1903		L5	150N	7	130	43	6.4	107	924
SB606325	1904		L5	200N	10	351	44	6.4	54	894
SB606326	1905		L5	250N	21	530	13	6.4	138	1975
SB606327	1906		L5	300N	15	78	12	6.4	19	734
SB606328	1907		L5	350N	1190	910	23	2.9	21	1114
SB606329	1908		L5	400N	39	247	12	6.4	15	781
SB606330	1909		L5	450N	83	141	5	6.4	113	2384

## APPENDIX "E"

### ROCK GEOCHEMICAL ANALYSES

Rocks sent in for analysis were free from weathered surface, lichen and soil. Samples for rock analyses were reasonably homogenous and "fresh" appearing. Whole rock analyses are done by XRF on a pressed pellet, except sodium on a fused disc. Detection limits are 0.1%.

Analyses for Pb, Zn, Ag and Cu are done by aqua regia decomposition followed by atomic absorption analyses. Detection limits are Pb -4 ppm, Zn -2 ppm, Ag -0.4 ppm and Cu -1 ppm. Barium and strontium analyses are done by XRF with 20 ppm and 2 ppm detection limits respectively. While every effort has been made to produce good strontium numbers, concentrations such as those encountered on the Sault claims are rarely dealt with in analytical laboratories, and reasonable standards at these levels are not available.



KIT OPTION - WHOLE ROCK ANALYSES

<u>Field No.</u>	<u>% SiO<sub>2</sub></u>	<u>% TiO<sub>2</sub></u>	<u>% Al<sub>2</sub>O<sub>3</sub></u>	<u>% Fe<sub>2</sub>O<sub>3</sub></u>	<u>% MgO</u>	<u>% CaO</u>	<u>% Na<sub>2</sub>O</u>	<u>% K<sub>2</sub>O</u>	<u>L.O.I.</u>	<u>Total</u>	<u>Field Name</u>
DR 77	37.16	0.62	14.23	11.03	4.25	13.82	2.27	1.04	13.54	97.96	1k Rhyolite tuff
DR 37	63.04	0.54	16.24	7.31	2.11	1.22	3.45	2.71	3.17	99.79	4k Basalt tuff
DR 38A	50.85	0.50	15.86	5.42	1.54	9.35	3.69	2.59	8.64	98.44	4i Basalt lapilli tuff
DR 68	59.68	0.73	17.79	6.54	1.29	2.28	5.19	1.96	3.94	99.40	2l Dacite crystal tuff
DR 61	53.36	0.66	16.77	7.86	1.39	6.16	2.99	4.59	5.18	98.96	2k Dacite tuff
DR 66	62.83	0.58	16.23	8.18	2.90	0.62	2.92	2.23	3.26	99.74	3k Andesite tuff
DR 57	48.69	0.98	17.34	11.10	4.91	5.64	3.93	1.59	5.07	99.25	4k Basalt tuff
DR 54	60.94	0.56	15.38	5.48	2.66	3.39	2.08	3.06	5.64	99.19	1k Rhyolite tuff
DR 16	59.12	0.61	15.98	7.81	3.02	3.16	1.86	2.60	5.42	99.58	1k Rhyolite tuff
DR 15	60.32	0.58	17.74	5.61	1.24	3.32	1.16	4.00	5.31	99.28	3k Andesite tuff
DR 4c	45.89	1.01	18.70	12.45	4.84	4.34	2.40	3.37	6.32	99.32	4k Basalt tuff
DR 70	63.50	0.54	16.35	6.50	1.96	1.66	1.83	3.09	4.17	99.60	3k Basalt tuff
DR 39	63.22	0.57	17.70	5.98	2.21	0.77	3.29	2.86	3.54	100.14	2l Dacite crystal tuff
DR 8	52.47	0.58	17.83	4.94	0.74	6.08	1.04	3.81	9.18	96.67	4k Basalt tuff

11 December 1986

11/10/86

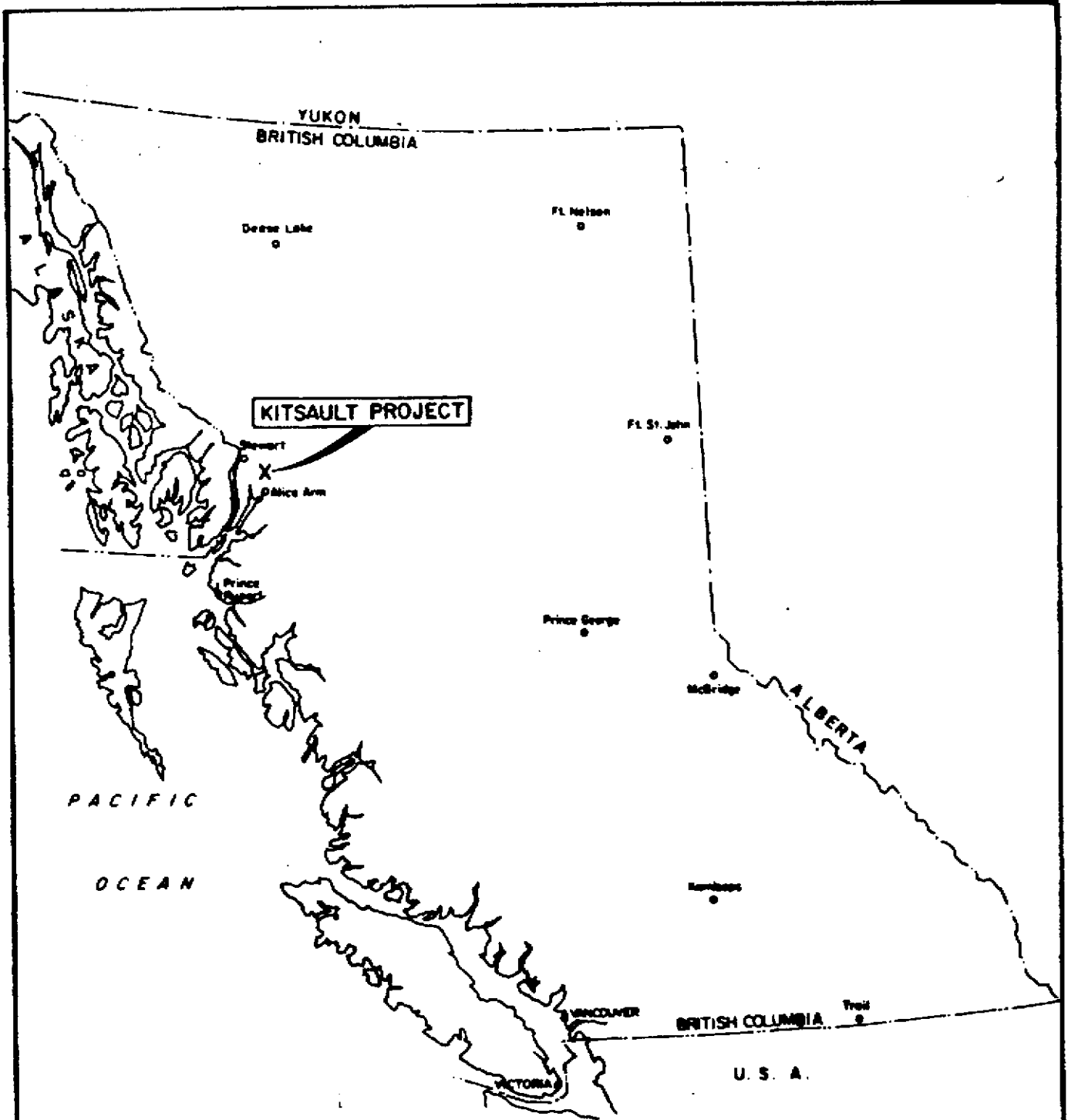
LAB NO	FIELD NUMBER	PS PPM	SN PPM	CU PPM	SG PPM	BA(4) PPM	SA PPM	NI(2) PPM
R8608875	DR 42	64	11	5	1.4	50	120	7
R8608876	DR 42	14	7	5	1.4	549	1343	3
R8608877	DR 41	6	52	19	1.4			
R8608878	DR 76A	14	145	26	1.4			7
R8608879	DR 76B	4	138	43	1.4			7
R8608880	DR 77	3	197	53	1.4	302	3203	11
R8608881	DR 60	14	122	4	1.4			14
R8608882	DR 46	14	101	29	1.4			
R8608883	DR 47	7	63	34	1.4			
R8608884	DR 27	14	114	38	1.4			
R8608885	DR 72B	14	56	28	1.4			
R8608886	DR 71	14	73	33	1.4			
R8608887	DR 28	12	84	10	1.4	990	555	14
R8608888	DR 25	24	59	52	1.4			
R8608889	DR 72A	14	152	31	1.4			
R8608890	DR 26	14	105	37	1.4			
R8608891	DR 36	6	80	35	1.4			9
R8608892	DR 31	14	99	6	1.4			12
R8608893	DR 37	14	77	32	1.4			16
R8608894	DR 48	14	79	22	1.4			14
R8608895	DR 38A	7	71	42	1.4			16
R8608896	DR 50	14	94	21	1.4			
R8608897	DR 35	14	79	23	1.4			
R8608898	DR 62	14	35	15	1.4			
R8608899	DR 67	14	68	11	1.4			14
R8608900	DR 68	14	68	11	1.4	525	832	14
R8608901	DR 61	14	85	2	1.4	3176	1257	7
R8608902	DR 66	14	108	29	1.4	1550	511	7
R8608903	DR 65	14	88	29	1.4			11
R8608904	DR 64	14	84	170	1.4			
R8608905	DR 58	7	93	19	1.4	1003	2619	11
R8608906	DR 75	8	136	15	1.4	556	781	4
R8608907	DR 83	6	631	14	1.4			
R8608908	DR 42Y	14	36	5	1.4			
R8608909	DR 2	688	6710	10	1.4	2270	E119817	15
R8608910	DR 57	14	110	23	1.4			14
R8608911	DR 11	14	70	6	1.4	5545	E146108	
R8608912	DR 10	10	66	13	1.4	2960	E22438	
R8608913	DR 9	14	81	4	1.4	2934	E15219	
R8608914	DR 21	8	109	44	1.4			8
R8608915	DR 43	14	98	11	1.4			10
R8608916	DR 54	14	76	30	1.4			13
R8608917	DR 16	14	112	31	1.4			12
R8608918	DR 31B	7	51	9	1.4			
R8608919	DR 59C	14	68	39	1.4			
R8608920	DR 59B	16	114	34	1.4			
R8608921	DR 40	14	93	38	1.4			14
R8608922	DR 13	14	308	9	1.4	718	1396	5
R8608923	DR 84	14	281	6	1.4	1141	1049	14
R8608924	DR 15	14	318	7	1.4	745	873	7
R8608925	DR 12	14	31	4	1.4	5981	E158337	

LAB NO	FIELD NUMBER	Pb PPM	Zn PPM	Cu PPM	Ag PPM	Ba(4) PPM	Sr PPM	Ni(2) PPM
R8608926	DR 22A	5	236	1	(.4	3109	E65529	
R8608927	DR 423	(4	117	35	(.4			
R8608928	DR 73	(4	120	13	(.4			5
R8608929	DR 40	(4	110	19	(.4			(4
R8608930	DR 21B	446	9810	11	.9	1866	E59702	
R8608931	DR 21C	890	E16800	7	(.4	1657	E10118	
R8608932	DR 21A	135	2190	4	(.4	4133	E136900	
R8608933	DR 33	(4	39	2	(.4	3005	E92380	
R8608934	DR 4D	(4	193	12	(.4			11
R8608935	DR 70	(4	126	58	(.4			5
R8608936	DR 49	(4	75	34	(.4			19
R8608937	DR 39	14	104	21	(.4	1084	696	(4
R8608938	DR 30	31	350	10	(.4			
R8608939	DR 29	7	217	4	(.4			
R8608940	DR 5	(4	120	51	(.4			10
R8608941	DR 29A	(4	82	4	(.4	187	4372	
R8608942	DR 19B	25	368	11	(.4			
R8608943	DR 14B	35	574	11	.8			
R8608944	DR 8	7	147	22	(.4			8
R8608945	J 11-1	78	2330	5	(.4	3559	E166025	
R8608946	J 11-2	307	5240	5	.7	3190	E114840	
R8608947	J 11-3	166	2800	4	.6	4767	E173325	
R8608948	J 11-4	470	7010	6	.5	1584	E11322	
R8608953	DR 5A	(4	113	23	.4			

I=INSUFFICIENT SAMPLE X=SMALL SAMPLE E=EXCEEDS CALIBRATION (.=BEING CHECKED R=REVISED  
IF REQUESTED ANALYSES ARE NOT SHOWN \*RESULTS ARE TO FOLLOW

## ANALYTICAL METHODS

Pb AQUA REGIA DECOMPOSITION / AAS  
 Zn AQUA REGIA DECOMPOSITION / AAS  
 Cu AQUA REGIA DECOMPOSITION / AAS  
 Ag AQUA REGIA DECOMPOSITION / AAS  
 Ba(4) X-RAY FLUORESCENCE/FUSION  
 Sr X-RAY FLUORESCENCE/FUSION  
 Ni(2) HF - HCL04 DECOMPOSITION / AAS



**KITSALT PROJECT**

**COMINCO LTD.**

**KITSALT PROJECT  
LOCATION MAP**

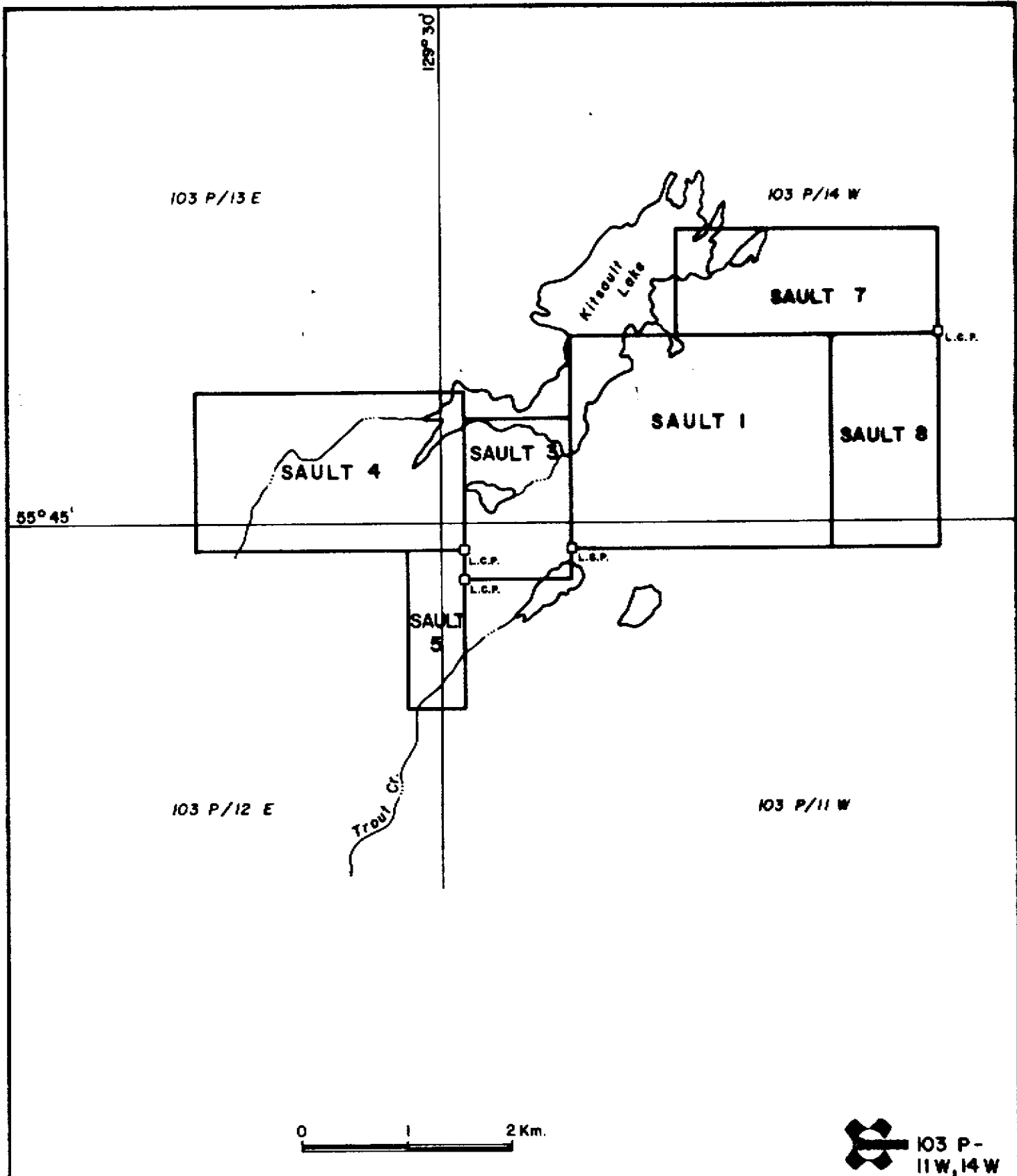
N.T.S. 103P-14 SKEENA M.D., B.C.



**J.R. WOODCOCK CONSULTANTS LTD.**

SEPT. 1985

**FIGURE NO. 1**



Drawn by: J. D. B.		Traced by: a. m. b.	
Revised by	Date	Revised by	Date

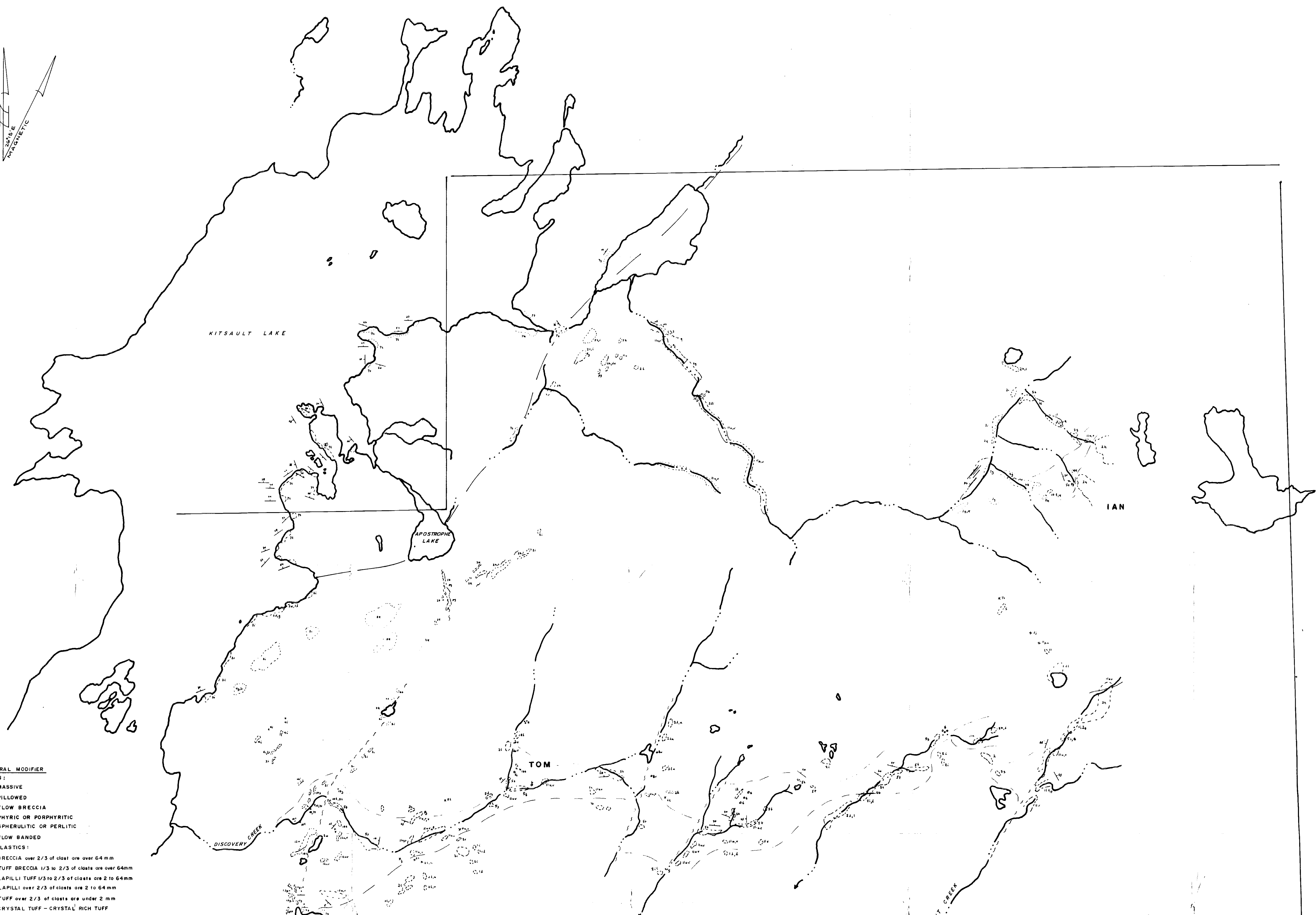
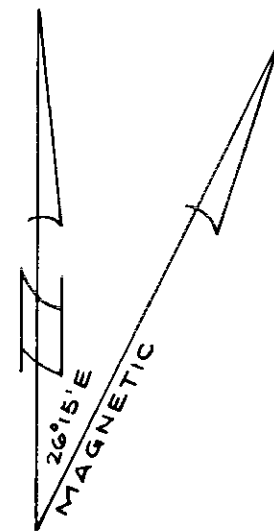
# KIT OPTION CLAIM MAP

SKEENA M.D., B.C.

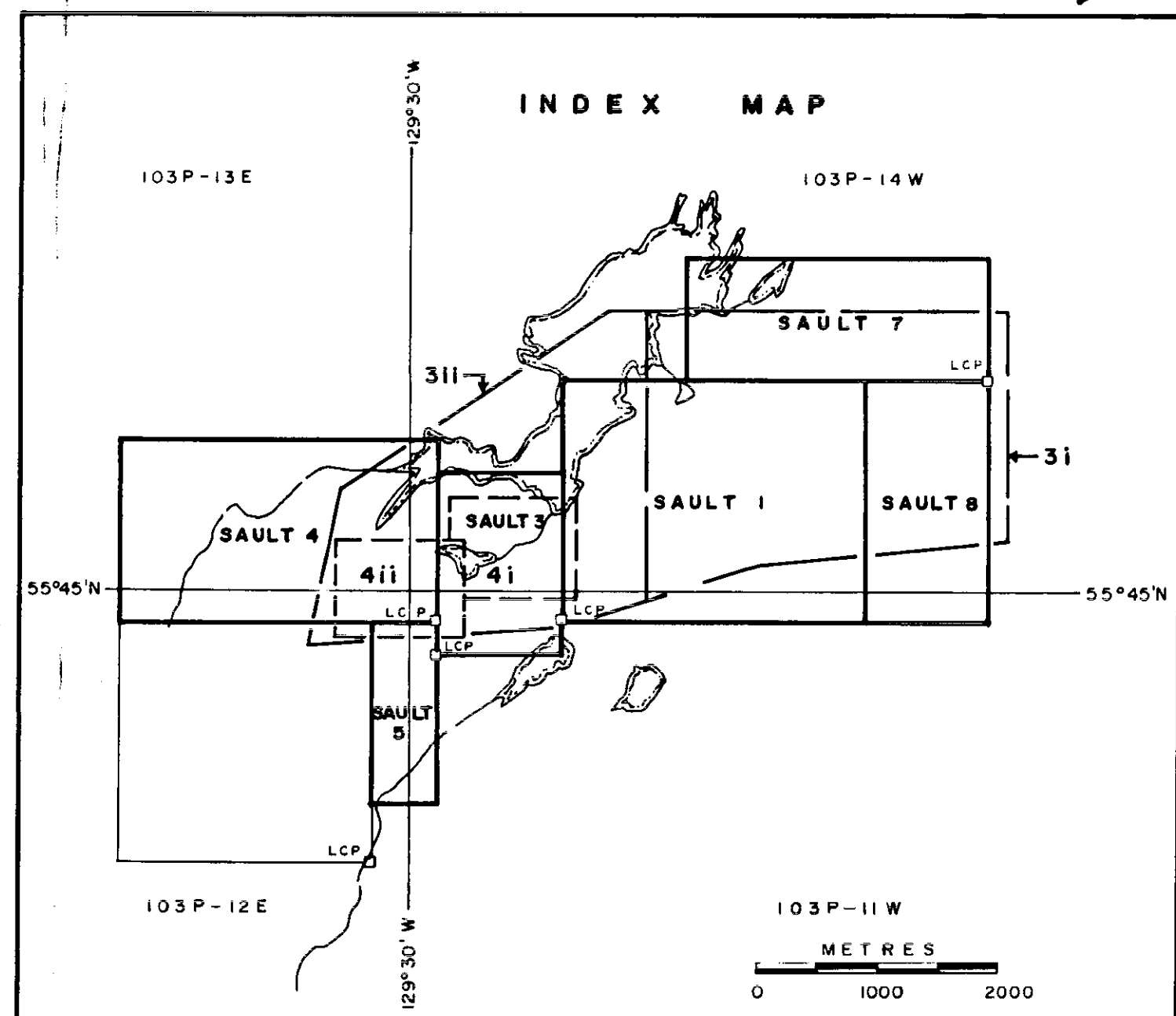
Scale: 1 : 50,000

Date: Dec., 1986

Plate: 2



- KITSAULT LEGEND**
- ROCK TYPE**
- VOLCANICS:**
- 1 RHYOLITE
  - 2 DACITE
  - 3 ANDESITE
  - 4 BASALT
- SEDIMENTS:**
- 5 LIMESTONE
  - 6 CHERT
  - 7 MUDSTONE / ARGILLITE
  - 8 WACKE
  - 9 CONGLOMERATE
  - 10 SULPHATE
  - 11 DIAMICTITE
  - 12 LITHIC BRECCIA
- INTRUSIVES:**
- 13 DIABASE
  - 14 QUARTZ ± FELDSPAR PORPHYRY
- TEXTURAL MODIFIER**
- FLAWS:**
- a MASSIVE
  - b PILLOWED
  - c FLOW BRECCIA
  - d PHYRIC OR PORPHYRITIC
  - e SPHERULITIC OR PERLITIC
  - f FLOW BANDED
- PYROCLASTICS:**
- g BRECCIA over 2/3 of clasts are over 64 mm
  - h TUFF BRECCIA 1/3 to 2/3 of clasts are over 64mm
  - i LAPILLI TUFF 1/3 to 2/3 of clasts are 2 to 64mm
  - j LAPILLI over 2/3 of clasts are 2 to 64mm
  - k TUFF over 2/3 of clasts are under 2 mm
  - l CRYSTAL TUFF - CRYSTAL RICH TUFF
  - m WATERLAIN TUFF
  - n ASH FLOW TUFF-ELONGATE CHLORITE FRAGMENTS
  - o ACCRETIONARY LAPILLI
- EPICLASTICS:**
- p GRADED BEDDING
  - q CARBONACEOUS / GRAPHITIC
  - r MASSIVE BEDDED over 30 cm
  - s MEDIUM BEDDED 10 to 30 cm
  - t THIN BEDDED less than 10cm
  - u CALCAREOUS
  - v GRAIN SIZE: COARSE > 64mm
  - x MEDIUM 4 to 64mm
  - y GRANULAR < 4 mm
- KITSAULT SYMBOLS**
- OUTCROP
  - x ISOLATED OUTCROP
  - \* FLOAT
  - ~ BEDDING ATTITUDE
  - ~ JOINT ATTITUDE
  - ~ SCHISTOSITY ATTITUDE
  - ~ PLUNGE ATTITUDE (minor folds, mineral lineations)
  - ⊥ TRENCH
  - ⊞ CLAIM POST
  - GEOLOGIC CONTACT
  - DEFINITE
  - - - INFERRED
- ABBREVIATIONS**
- HZ HYDROZINCITE
  - Gk GREENOCKITE
  - Sp SPHALERITE
  - Gal GALENA
  - Py PYRITE
  - Mo MOLYBDENITE
  - St STRONTIANITE
  - Jsp JASPER (HEMATITE)
  - qtz QUARTZ
  - F FOSSIL LOCALITY

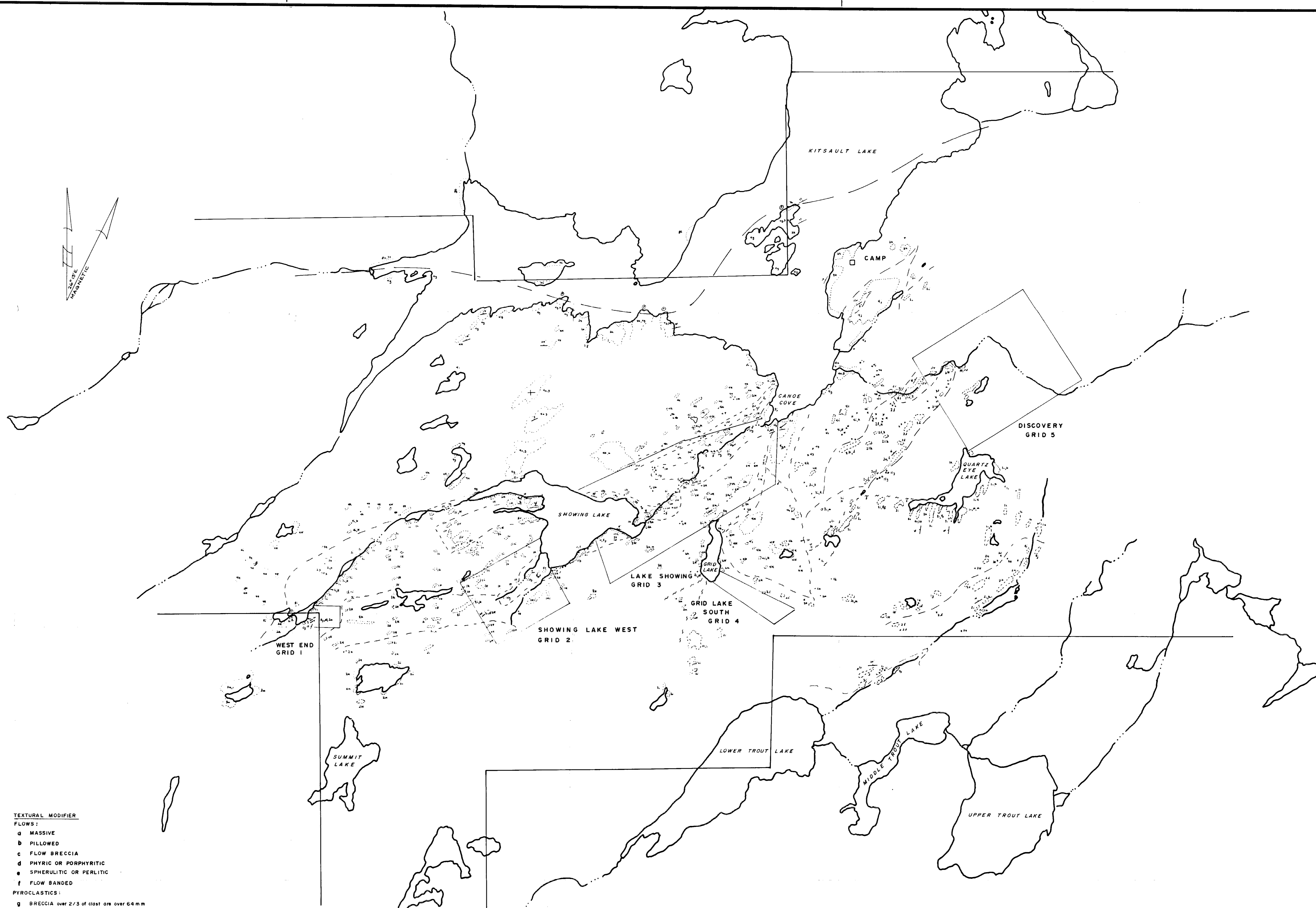


GEOLOGICAL BRANCH  
ASSESSMENT REPORT

15,364



<b>KIT OPTION</b>		NTS 103P-14	
Drawn by: J.D.B. gnt	Traced by:	EAST SHEET	
Checked by: Date:	Checked by: Date:	RECONNAISSANCE PROPERTY MAPPING	
		SKEENA M.D., B.C.	
Scale: 1: 5000		Date: DEC 1986	Plate: 31



**KITSAULT LEGEND**

- ROCK TYPE**  
**VOLCANICS:**  
 1 RHYOLITE  
 2 DACITE  
 3 ANDESITE  
 4 BASALT  
**SEDIMENTS:**  
 5 LIMESTONE  
 6 CHERT  
 7 MUDSTONE / ARGILLITE  
 8 WACKE  
 9 CONGLOMERATE  
 10 SULPHATE  
 11 DIAMICTITE  
 12 LITHIC BRECCIA  
**INTRUSIVES:**  
 13 DIABASE  
 14 QUARTZ FELDSPAR PORPHYRY

**TEXTURAL MODIFIER**

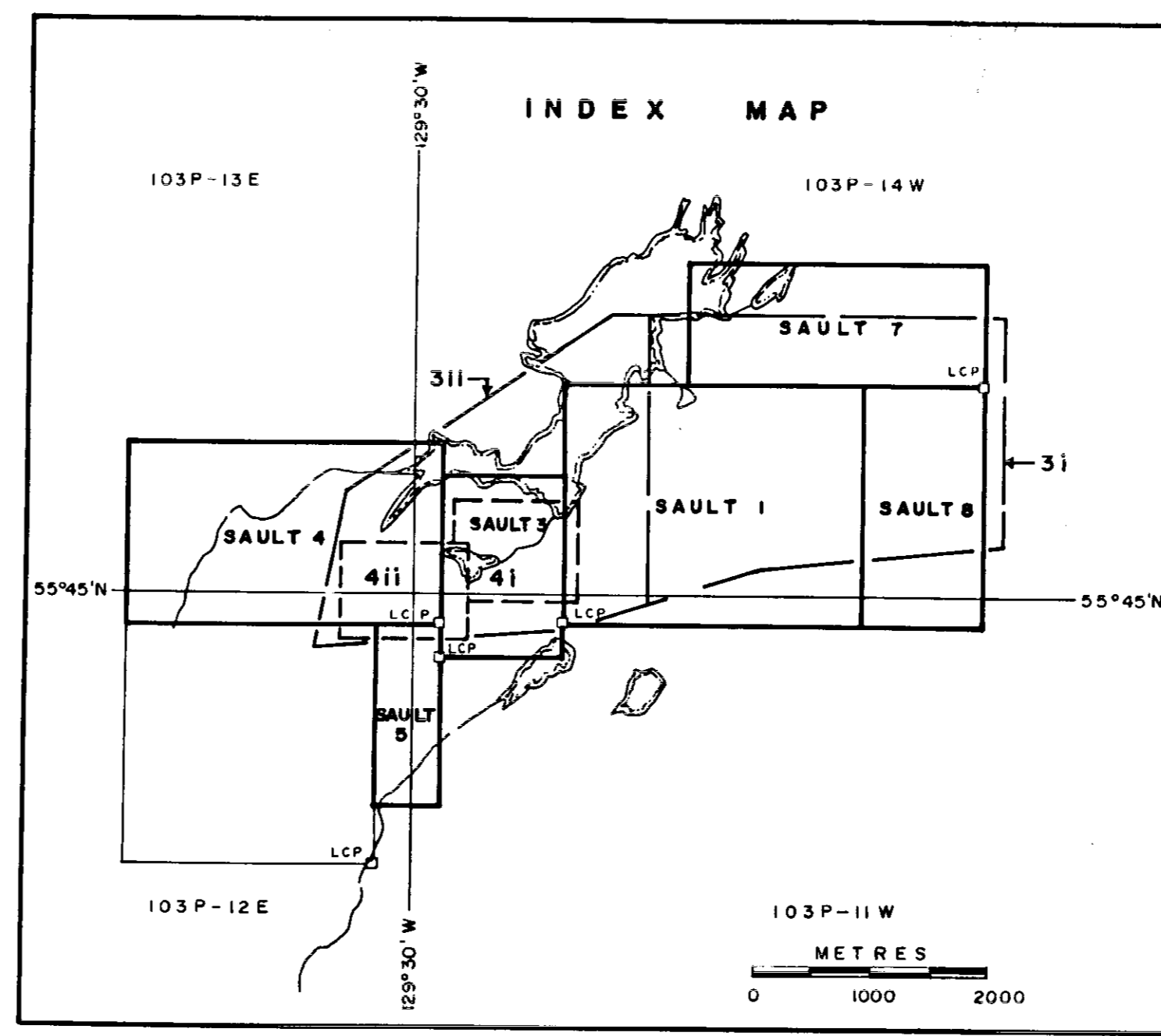
- FLOWS:**  
 a MASSIVE  
 b PILLOWED  
 c FLOW BRECCIA  
 d PHYRIC OR PORPHYRITIC  
 e SPHERULITIC OR PERLITIC  
 f FLOW BANDED  
**PYROCLASTICS:**  
 g BRECCIA over 2/3 of clasts are over 64mm  
 h TUFF BRECCIA 1/3 to 2/3 of clasts are over 64mm  
 i LAPILLI TUFF 1/3 to 2/3 of clasts are 2 to 64mm  
 j LAPILLI over 2/3 of clasts are 2 to 64mm  
 k TUFF over 2/3 of clasts are under 2mm  
 l CRYSTAL TUFF - CRYSTAL RICH TUFF  
 m WATERLAIN TUFF  
 n ASH FLOW TUFF - ELONGATE CHLORITE FRAGMENTS  
 o ACCRETIONARY LAPILLI  
**EPICLASTICS:**  
 p GRADED BEDDING  
 q CARBONACEOUS / GRAPHITIC  
 r MASSIVE BEDDED over 30cm  
 s MEDIUM BEDDED 10 to 30cm  
 t THIN BEDDED less than 10cm  
 u CALCAREOUS  
 v GRAIN SIZE: COARSE > 64mm  
 x MEDIUM 4 to 64mm  
 y GRANULAR < 4mm

**KITSAULT SYMBOLS**

- OUTCROP  
 \* ISOLATED OUTCROP  
 + FLOAT  
 / BEDDING ATTITUDE  
 \ JOINT ATTITUDE  
 ~ SCHISTOSITY ATTITUDE  
 ↘ PLUNGE ATTITUDE (minor folds, mineral lineations)  
 ( ) TRENCH  
 ⊕ CLAIM POST  
 — GEOLOGIC CONTACT  
 - - - INFERRED

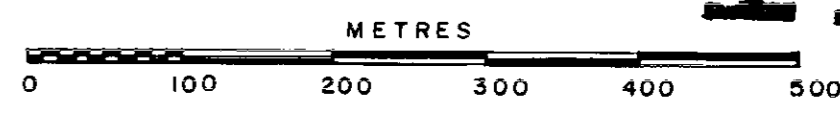
**ABBREVIATIONS**

- HZ HYDROZINCITE  
 GK GREENOCKITE  
 Sp SPHALERITE  
 Gal GALENA  
 Py PYRITE  
 Mo MOLYBDENITE  
 Str STRONTIANITE  
 Jsp JASPER (HEMATITE)  
 Qtz QUARTZ  
 F FOSSIL LOCALITY



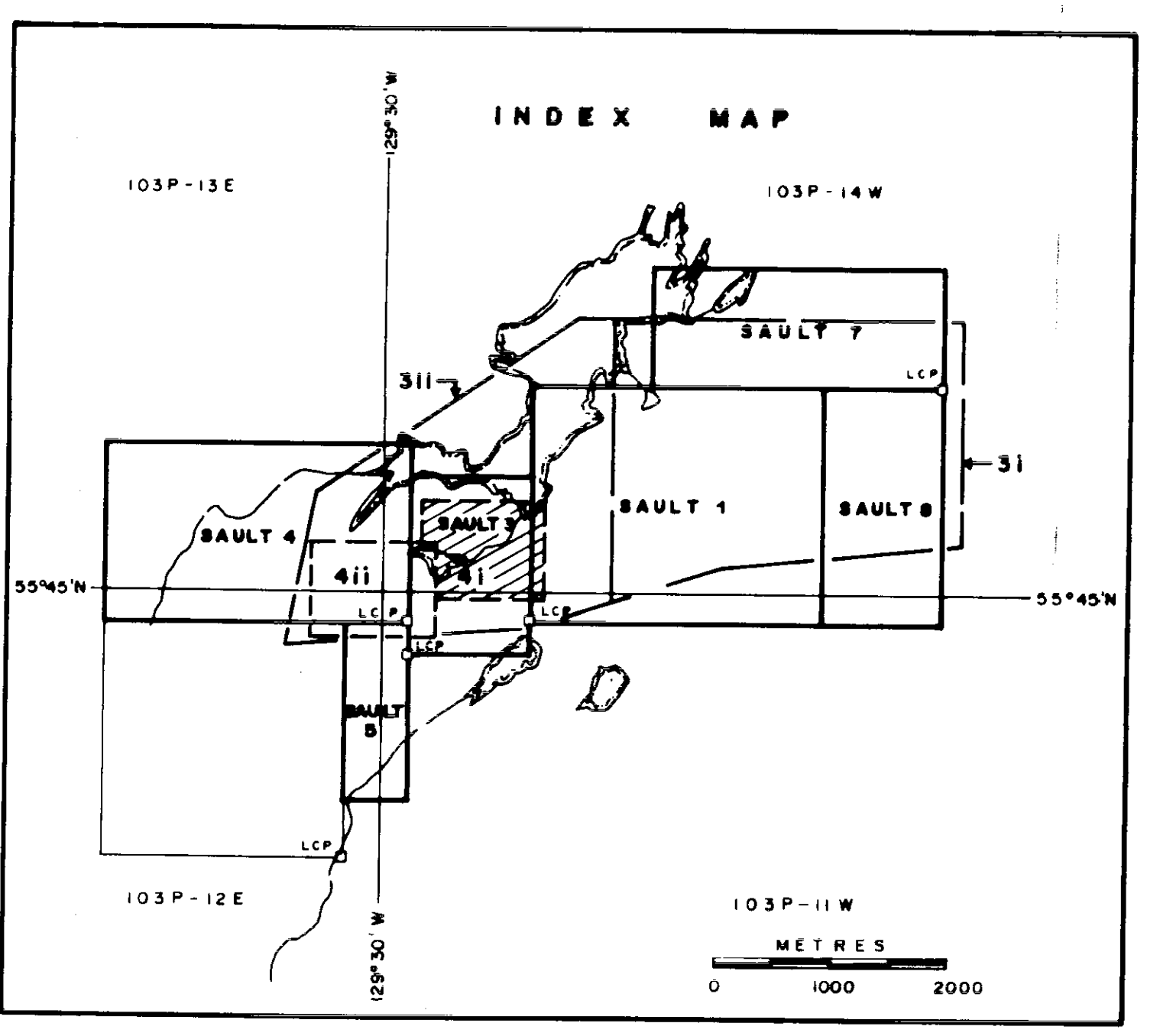
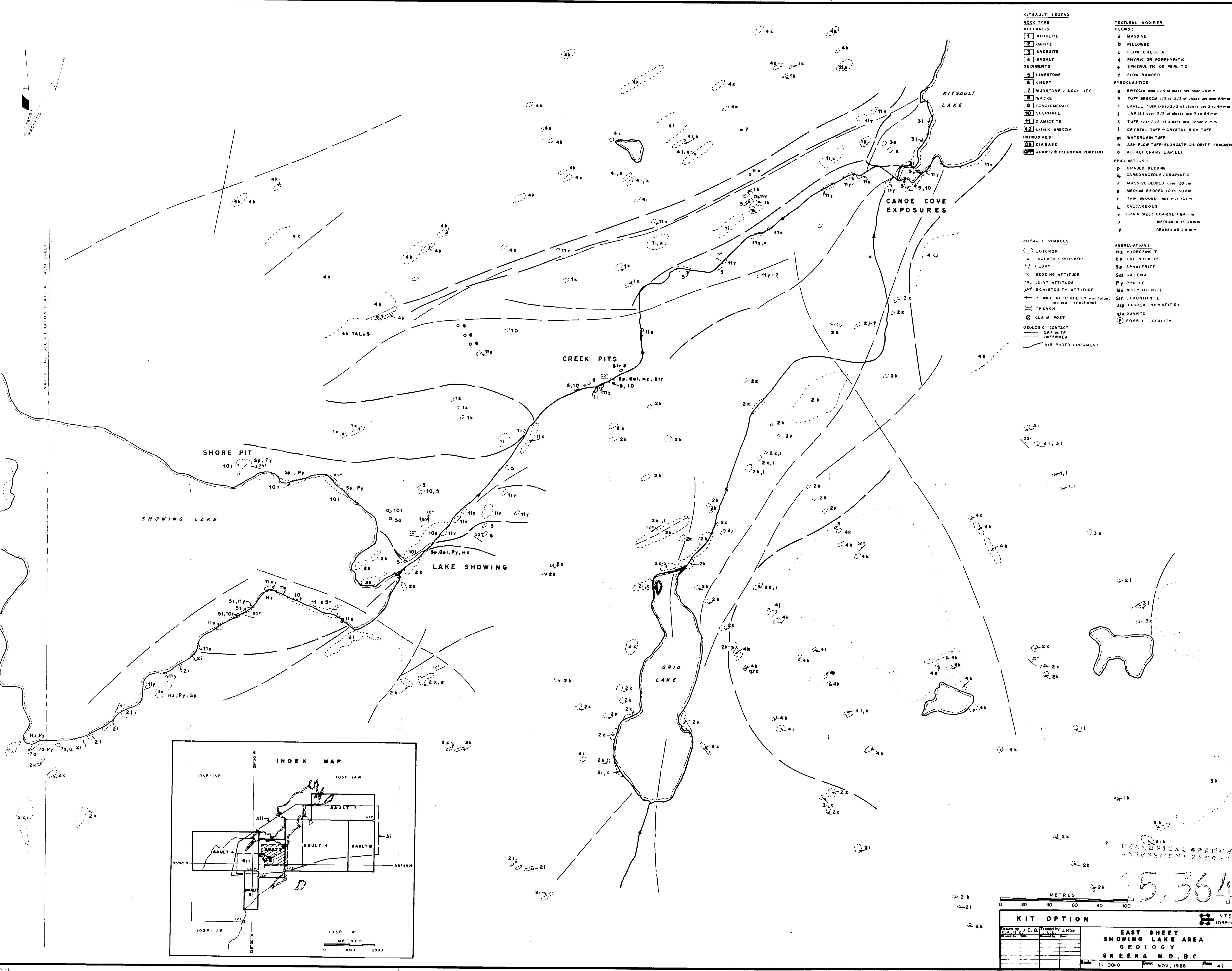
GEOLOGICAL BRANCH  
 ASSESSMENT REPORT

15,364



<b>KIT OPTION</b>		N.T.S. 103P-1412 13, 14
Drawn by: J.D.B./J.H.F.	Traced by: J.H.F.	
Checked by: J.H.F.	Revised by: J.H.F.	<b>WEST SHEET</b> <b>RECONNAISSANCE PROPERTY MAPPING</b> <b>SKEENA M.D., B.C.</b>
Scale: 1:5000	Date: DEC 1986	Plate: 511

- KITSALT LEGEND**
- ROCK TYPE**
- VOLCANICS:**
- 1 RHYOLITE
  - 2 DACITE
  - 3 ANDESITE
  - 4 BASALT
- SEDIMENTS:**
- 5 LIMESTONE
  - 6 CHERT
  - 7 MUDSTONE / ARGILLITE
  - 8 WACKE
  - 9 CONGLOMERATE
  - 10 SULPHATE
  - 11 DIAMICTITE
  - 12 LITHIC BRECCIA
- INTRUSIVES:**
- 13 DIABASE
  - 14 QUARTZ / FELDSPAR PORPHYRY
- TEXTURAL MODIFIER**
- FLAWS:**
- a MASSIVE
  - b PILLOWED
  - c FLOW BRECCIA
  - d PHYRIC OR PORPHYRITIC
  - e SPHERULITIC OR PERLITIC
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- g BRECCIA over 2/3 of clasts are over 64 mm
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  - j LAPILLI over 2/3 of clasts are 2 to 64 mm
  - k TUFF over 2/3 of clasts are under 2 mm
  - l CRYSTAL TUFF - CRYSTAL RICH TUFF
  - m WATERLAIN TUFF
  - n ASH FLOW TUFF-ELONGATE CHLORITE FRAGMENTS
  - o ACCRETIONARY LAPILLI
- EPICLASTICS:**
- p GRADED BEDDING
  - q CARBONACEOUS / GRAPHITIC
  - r MASSIVE BEDDED over 30 cm
  - s MEDIUM BEDDED 10 to 30 cm
  - t THIN BEDDED less than 10 cm
  - u CALCAREOUS
  - v GRAIN SIZE: COARSE > 64 mm
  - x MEDIUM 4 to 64 mm
  - y GRANULAR < 4 mm
- KITSALT SYMBOLS**
- OUTCROP
  - × ISOLATED OUTCROP
  - △ FLOAT
  - ∠ BEDDING ATTITUDE
  - ∩ JOINT ATTITUDE
  - ∪ SCHISTOSITY ATTITUDE
  - ∠ PLUNGE ATTITUDE (minor folds, mineral lineations)
  - ∩ TRENCH
  - CLAIM POST
  - GEOLOGIC CONTACT
  - DEFINITE
  - - - - - INFERRED
  - AIR PHOTO LINEAMENT
- ABBREVIATIONS**
- HZ HYDROZINGITE
  - EX GREENOCKITE
  - SP SPHALERITE
  - Gal GALENA
  - Py PYRITE
  - Mo MOLYBDENITE
  - Str STRONTIANITE
  - Jsp JASPER (HEMATITE)
  - Qtz QUARTZ
  - Fossil LOCALITY



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

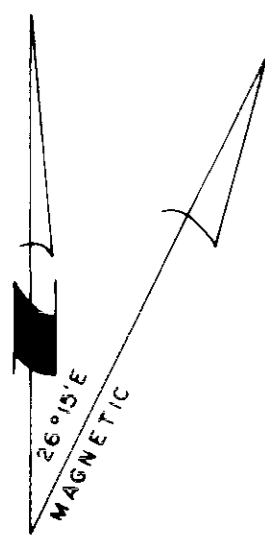
15,364

METRES

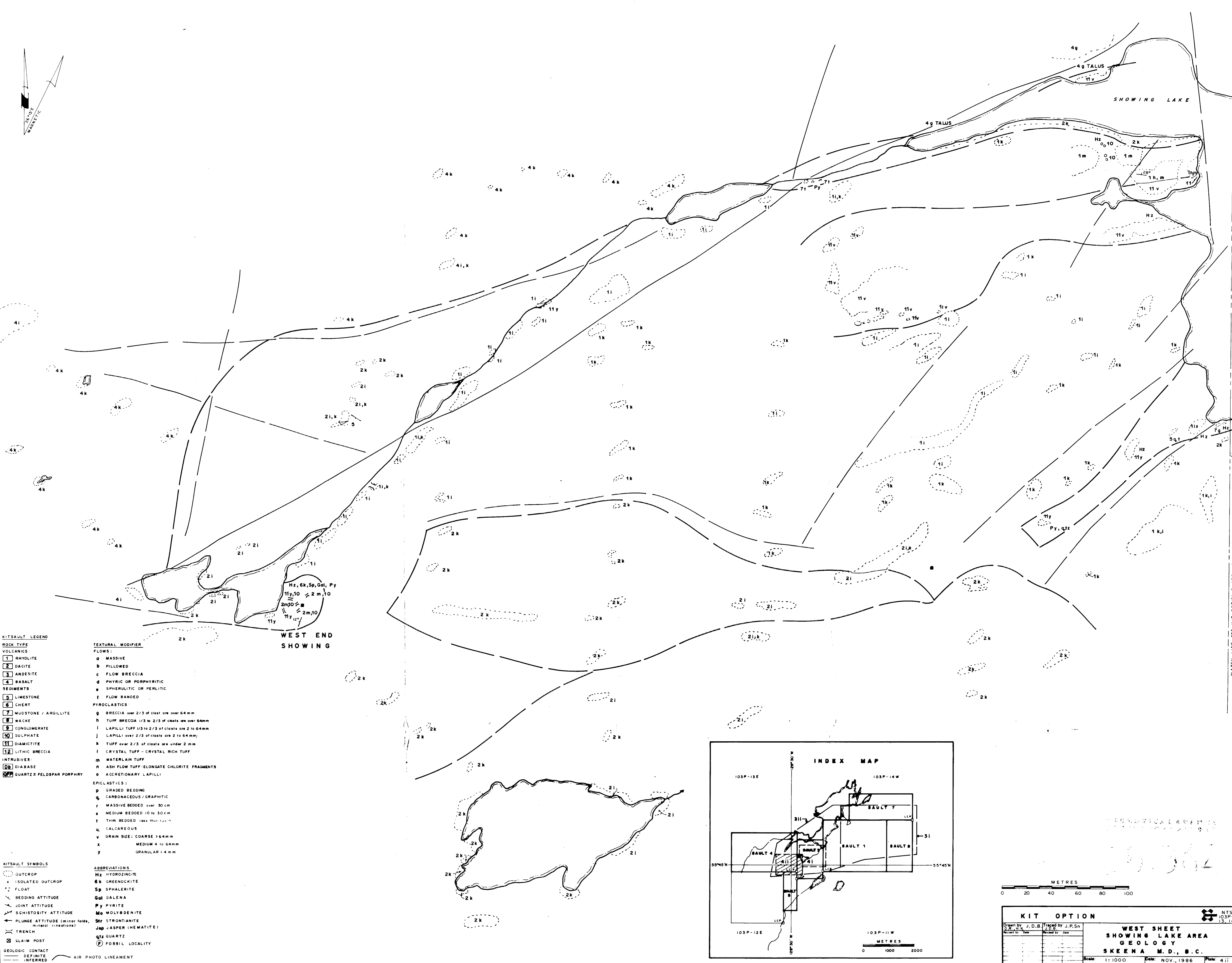
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KIT OPTION		NTS
Drawn by: J.D.B.	Traced by: J.R.S.	103P-14
Checked by: J.D.B.	Checked by: J.R.S.	
<b>EAST SHEET</b>		
<b>SHOWING LAKE AREA</b>		
<b>GEOLOGY</b>		
<b>SKEENA M.D., B.C.</b>		
Scale: 1:100-0	Date: NOV. 1986	Page: 41



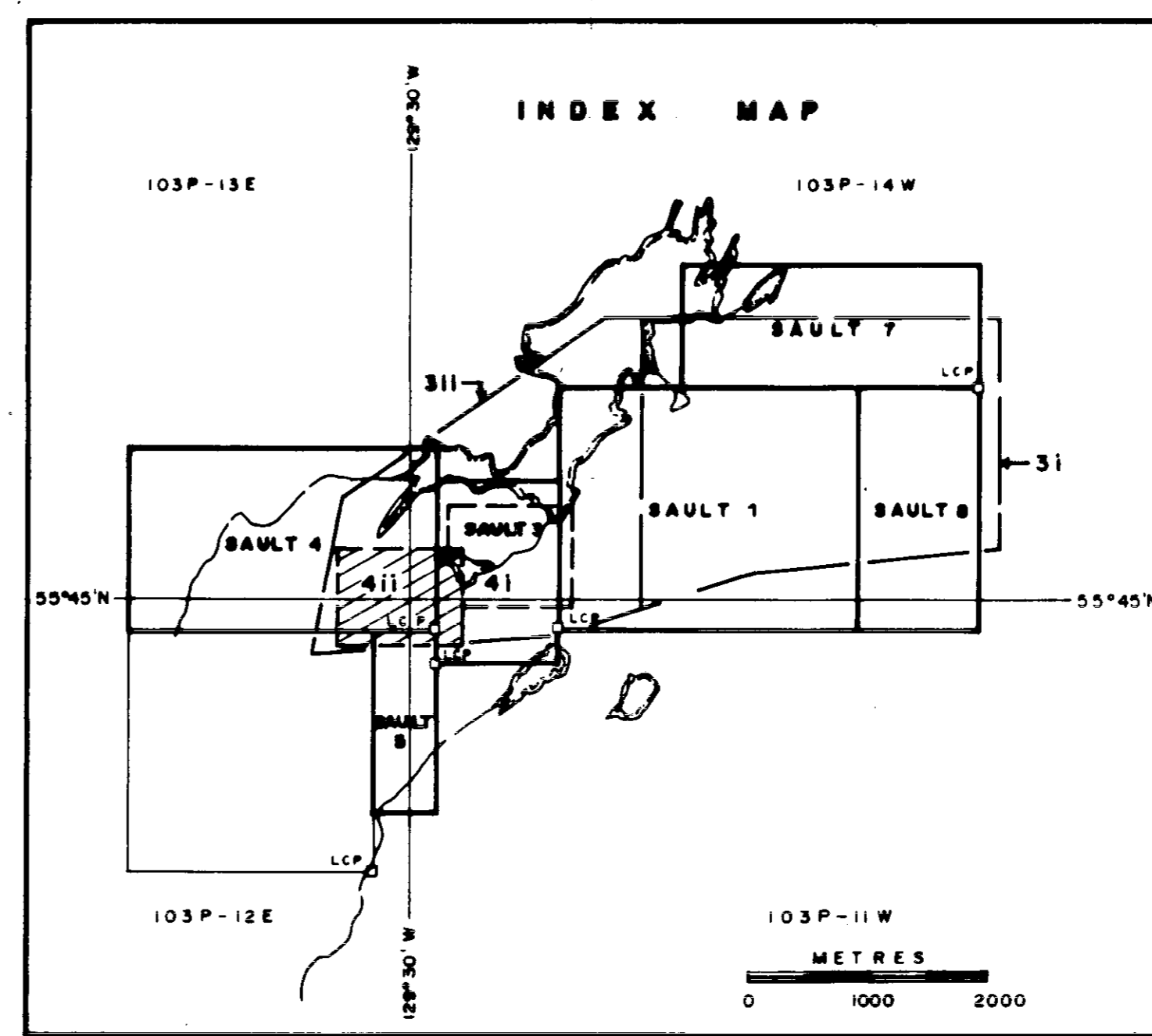


SHOWING LAKE



- KITSALT LEGEND**
- ROCK TYPE**
- VOLCANICS**
- 1 RHVOLITE
  - 2 DACITE
  - 3 ANDESITE
  - 4 BASALT
- SEDIMENTS**
- 5 LIMESTONE
  - 6 CHERT
  - 7 MUDSTONE / ARGILLITE
  - 8 WACKE
  - 9 CONGLOMERATE
  - 10 SULPHATE
  - 11 DIAMICTITE
  - 12 LITHIC BRECCIA
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  - 14 QUARTZ FELDSPAR PORPHYRY
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  - k TUFF over 2/3 of clasts ore under 2 mm
  - l CRYSTAL TUFF - CRYSTAL RICH TUFF
  - m WATERLAIN TUFF
  - n ASH FLOW TUFF - ELONGATE CHLORITE FRAGMENTS
  - o ACCRETIONARY LAPILLI
- EPICLASTICS:**
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  - q CARBONACEOUS / GRAPHITIC
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  - v GRAIN SIZE: COARSE > 64 mm
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  - y GRANULAR < 4 mm
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  - ⊗ ISOLATED OUTCROP
  - ⊕ FLOAT
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  - JOINT ATTITUDE
  - SCHISTOSITY ATTITUDE
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  - SP SPHALERITE
  - Gal GALENA
  - Py PYRITE
  - Mg MOLYBDENITE
  - Str STRONTIANITE
  - Jsp JASPER (HEMATITE)
  - Qtz QUARTZ
  - F FOSSIL LOCALITY
- GEOLOGIC CONTACT**
- DEFINITE
  - - - INFERRED
- AIR PHOTO LINEAMENT**

WEST END SHOWING



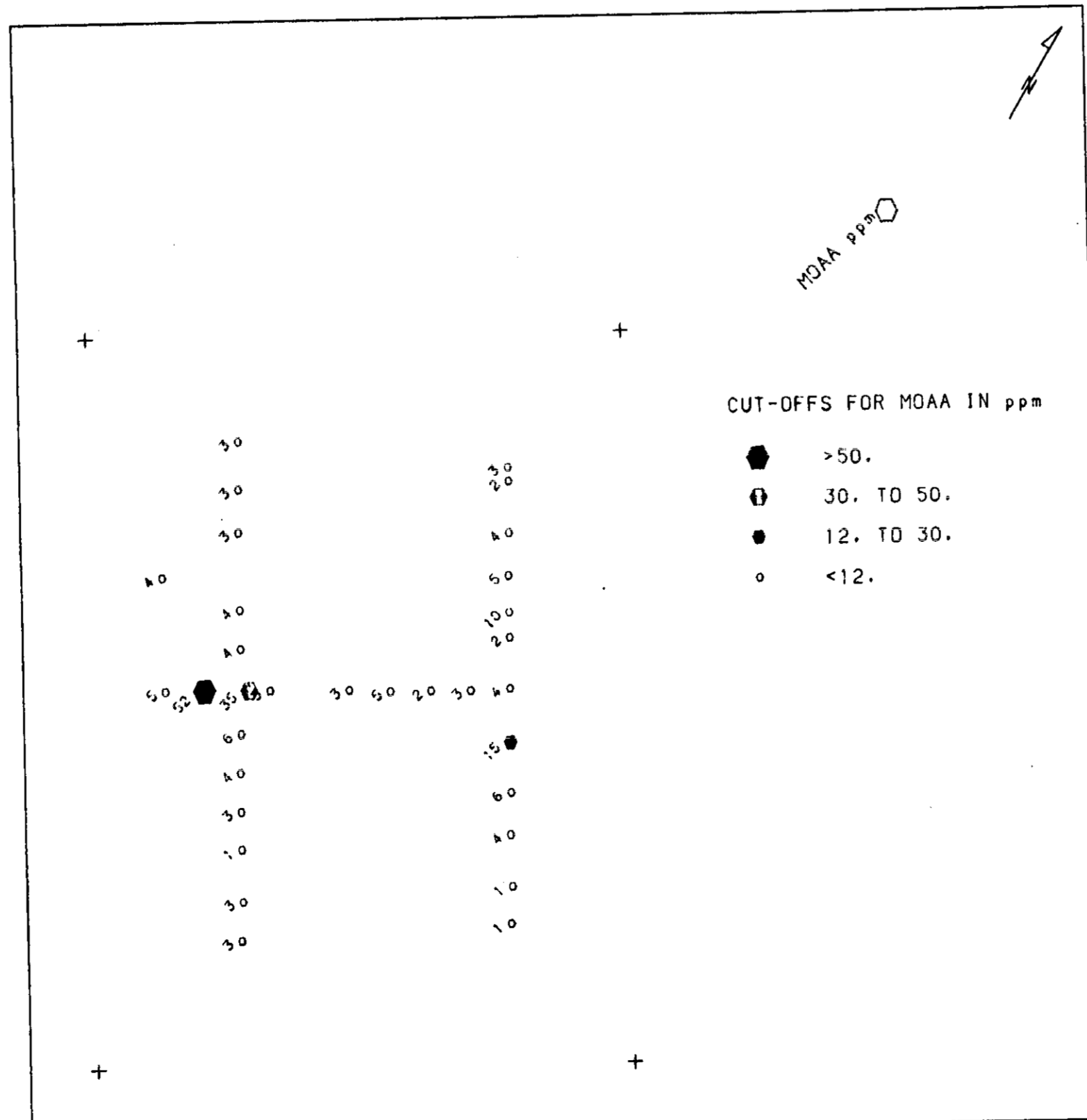
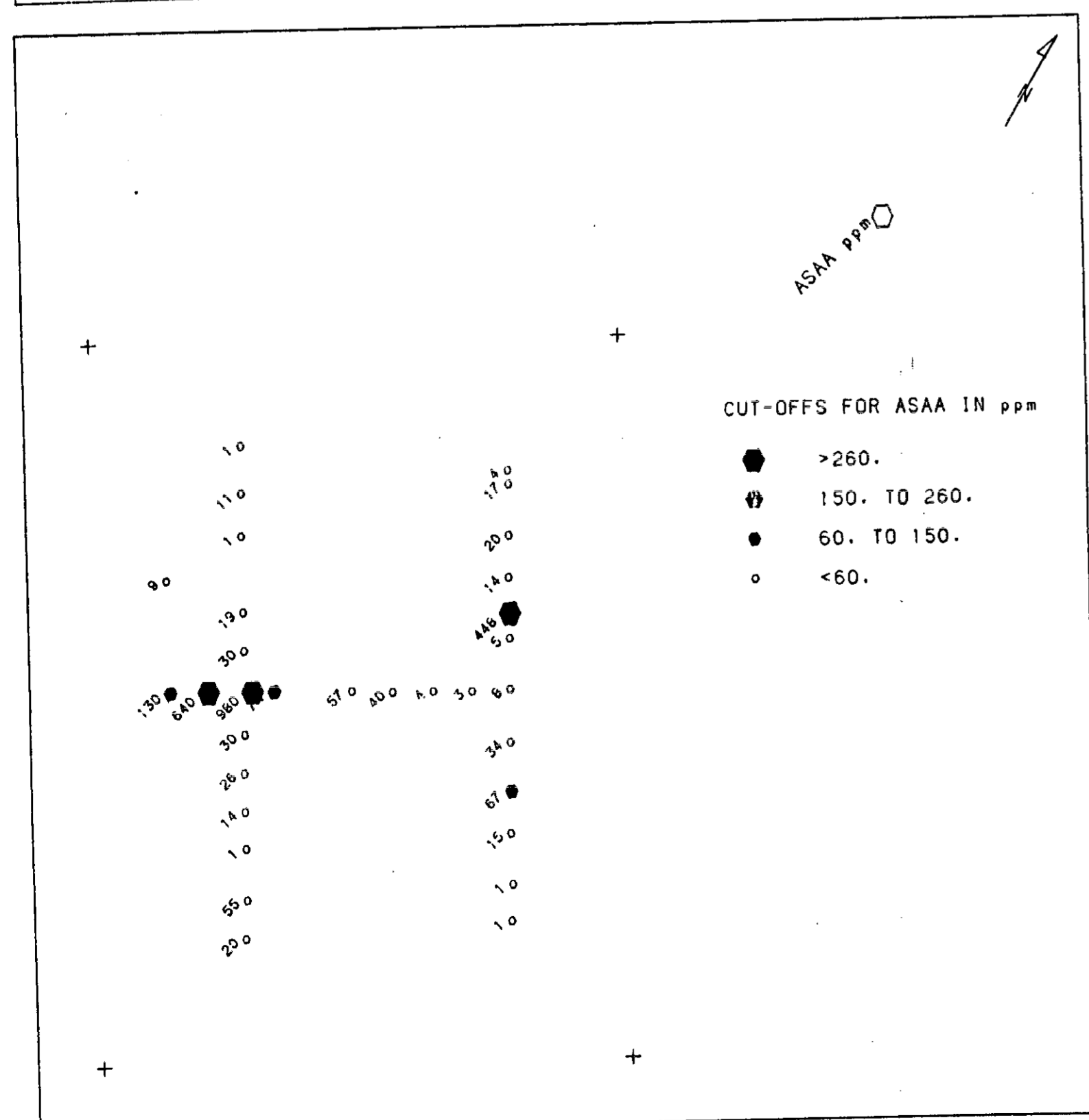
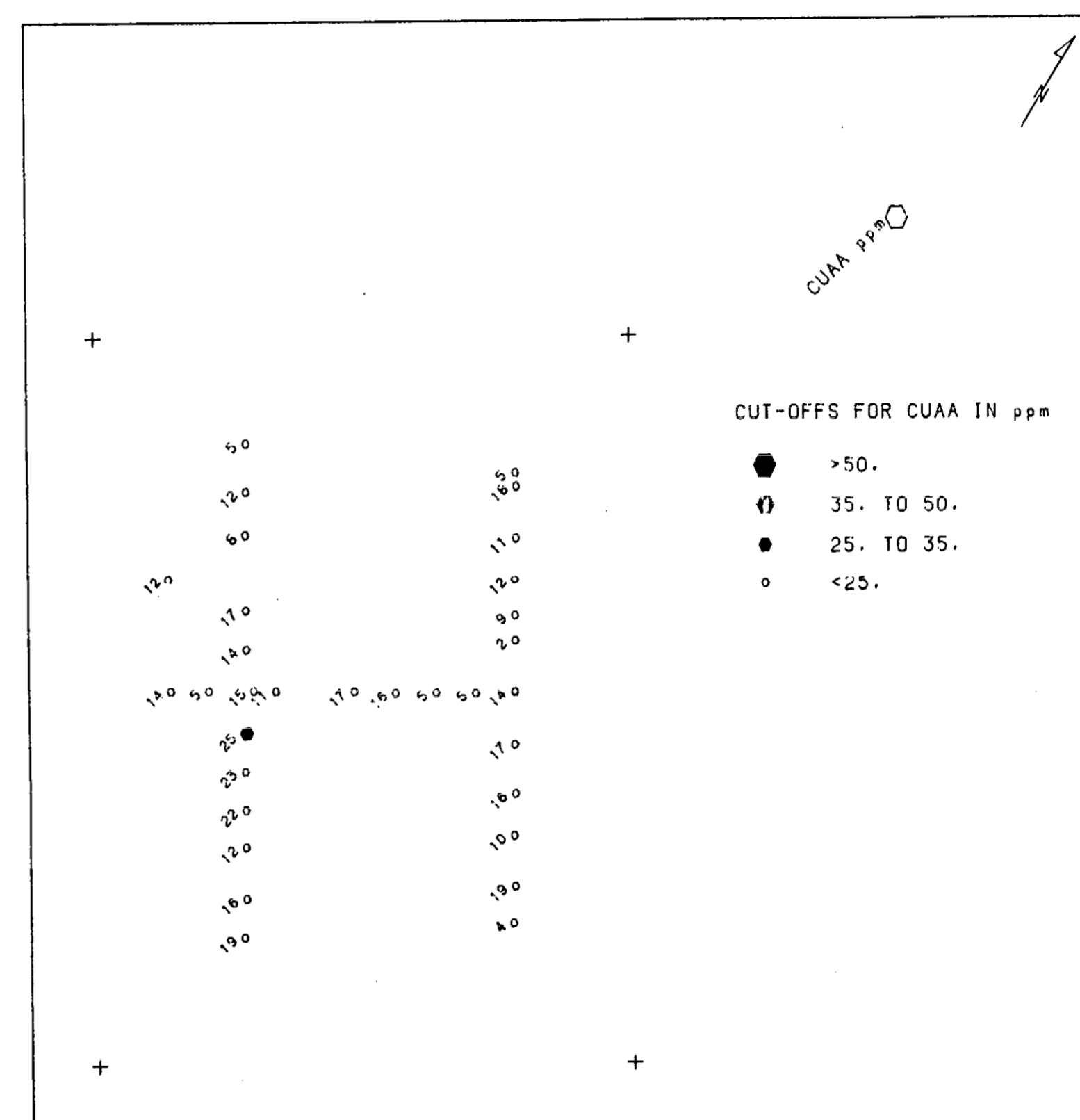
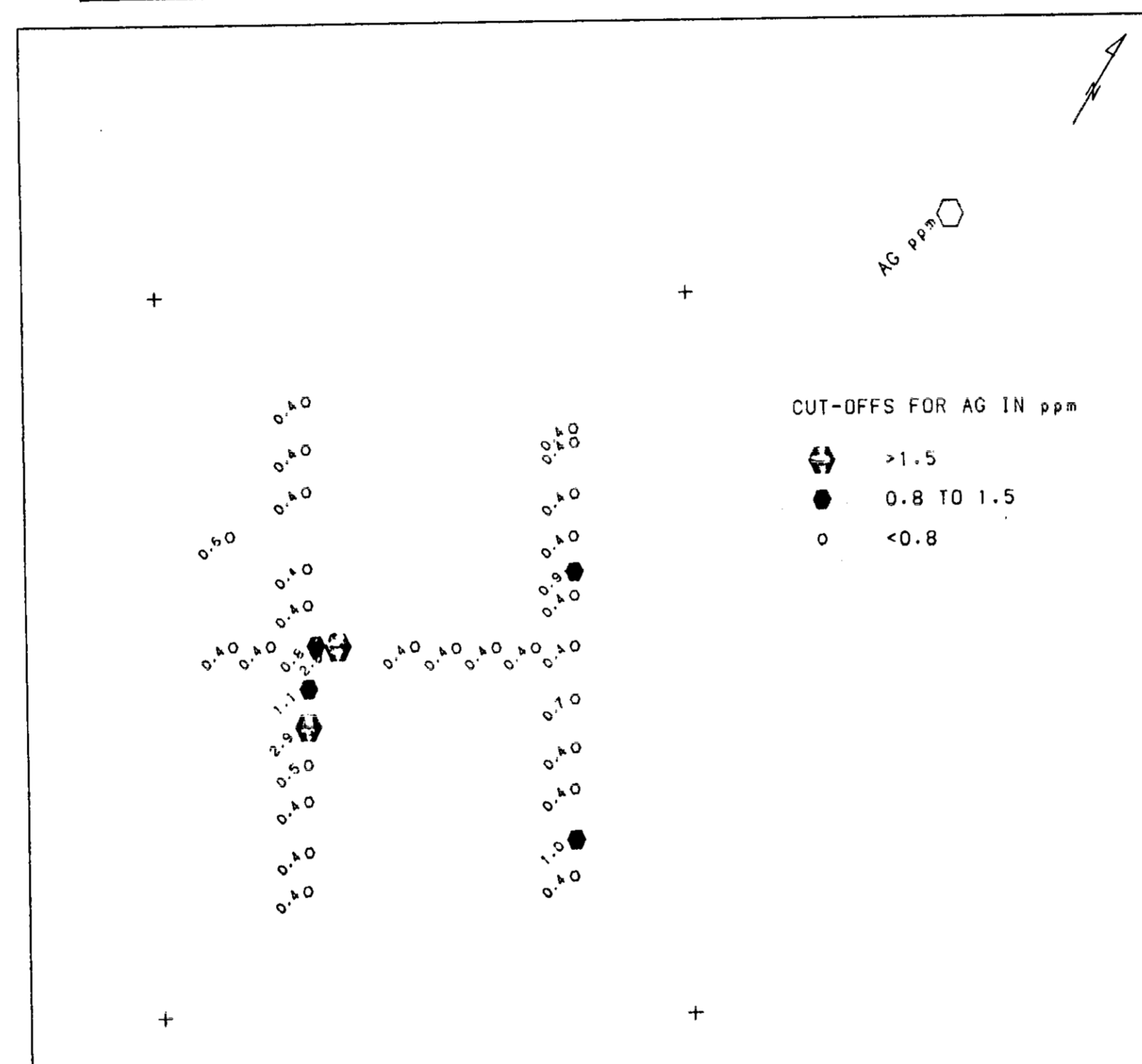
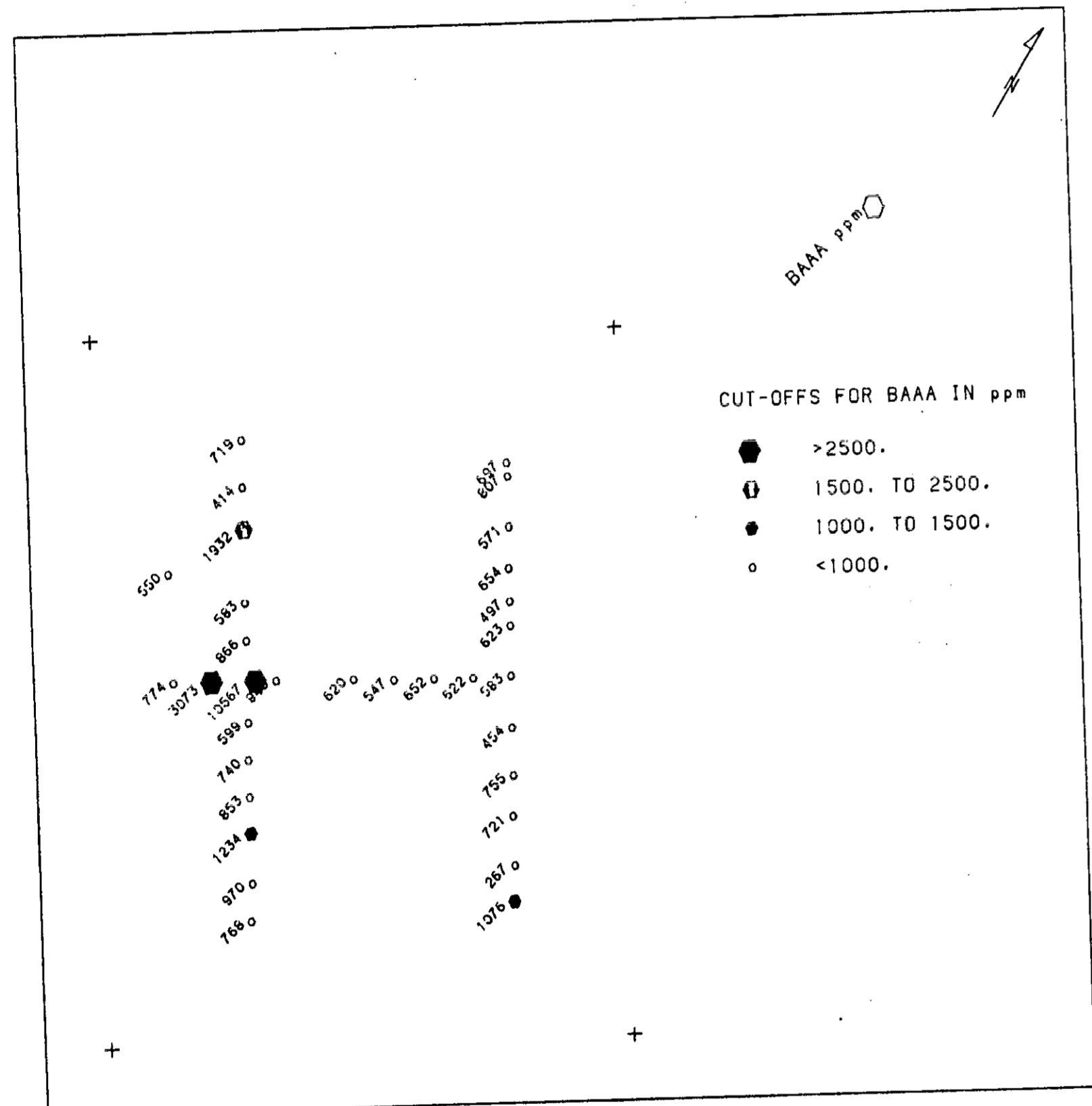
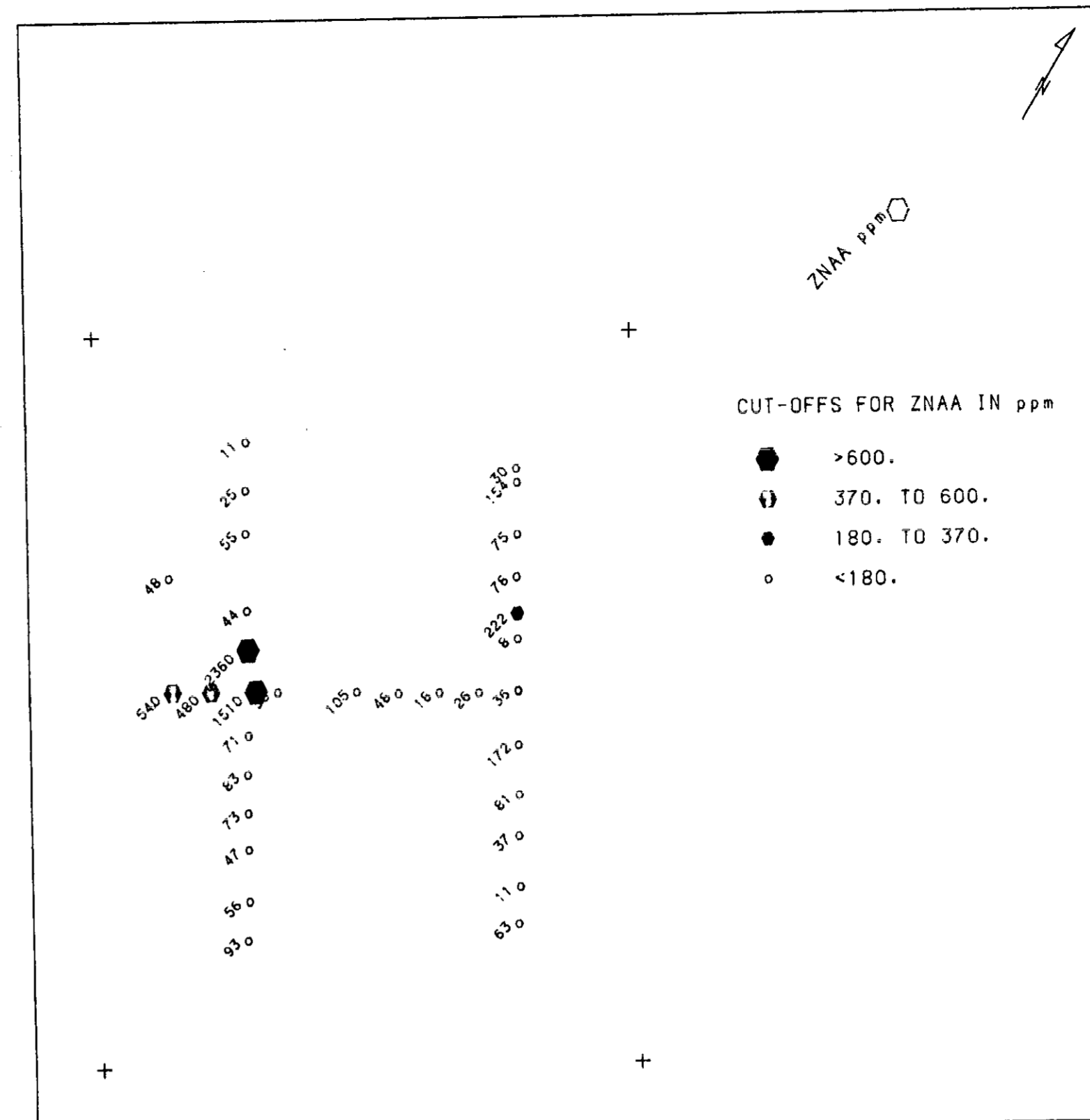
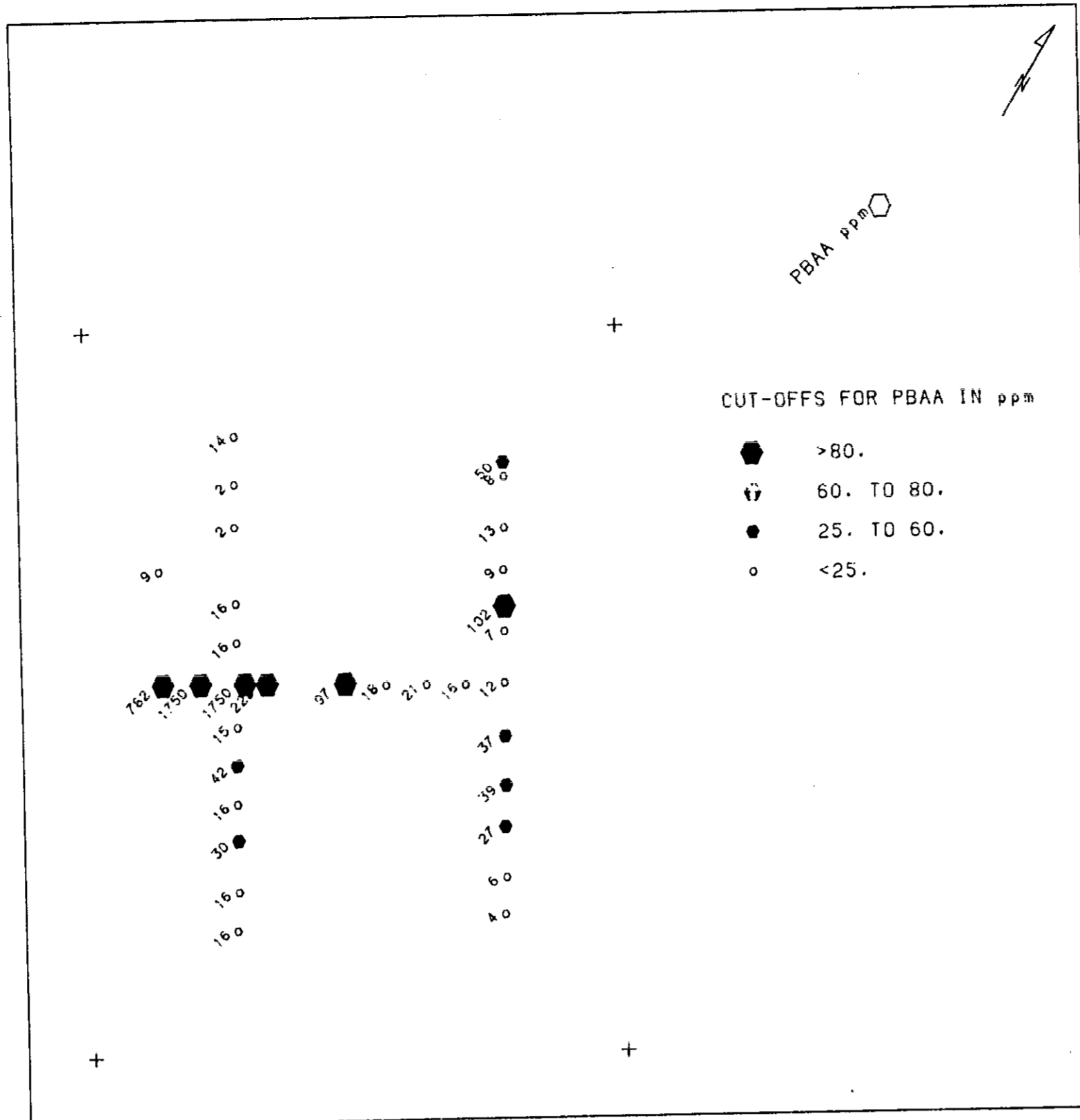
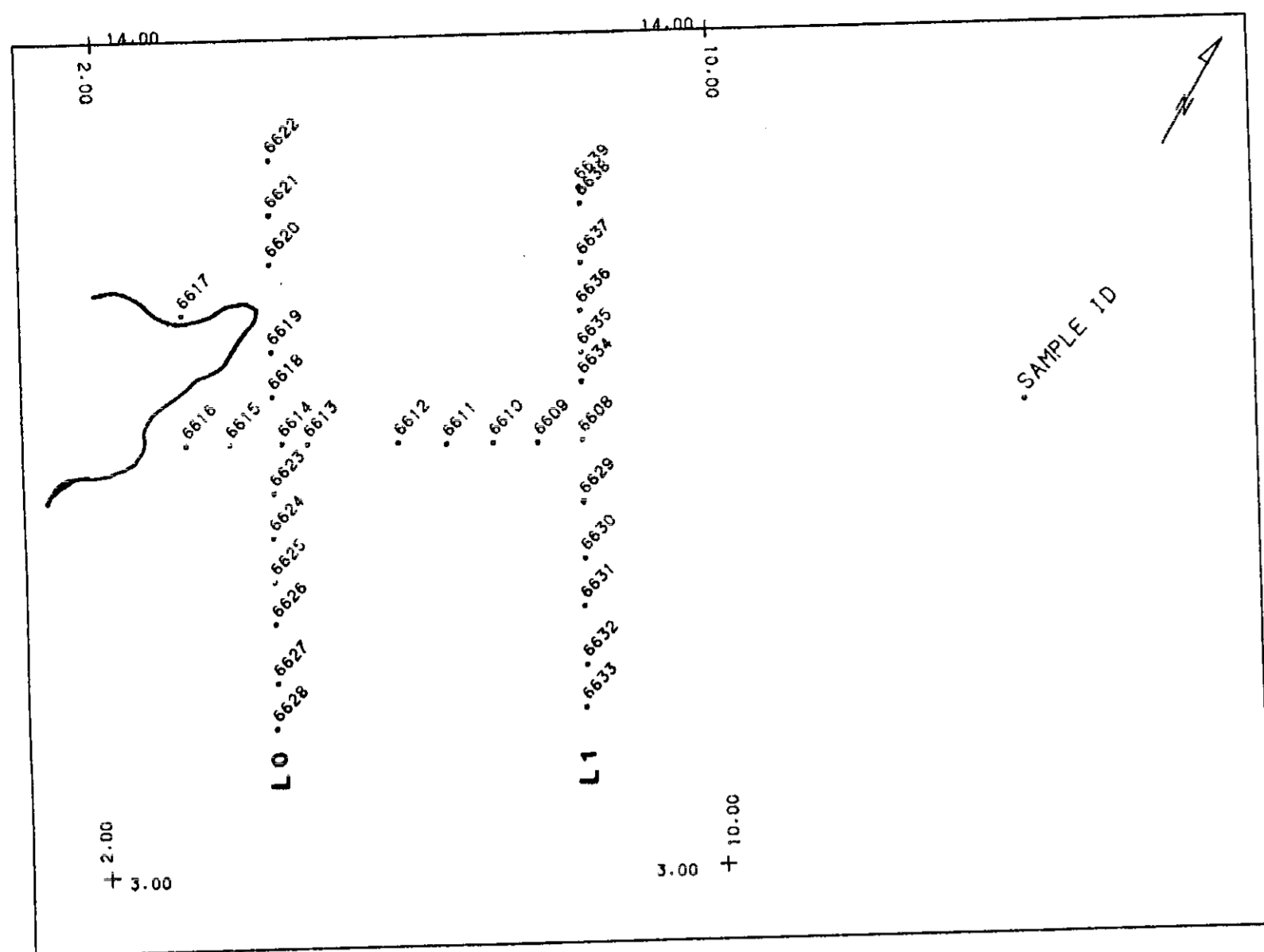
**KIT OPTION**

Drawn by: J.D.B. Traced by: J.P.S.  
 Checked by: Date: Revised by: Date:

**WEST SHEET SHOWING LAKE AREA GEOLOGY SKEENA M.D., B.C.**

Scale: 1:1000 Date: NOV, 1986 Plate: 4ii

MATCH LINE SEE KIT OPTION PLATE 41 (LEAST SHEET)

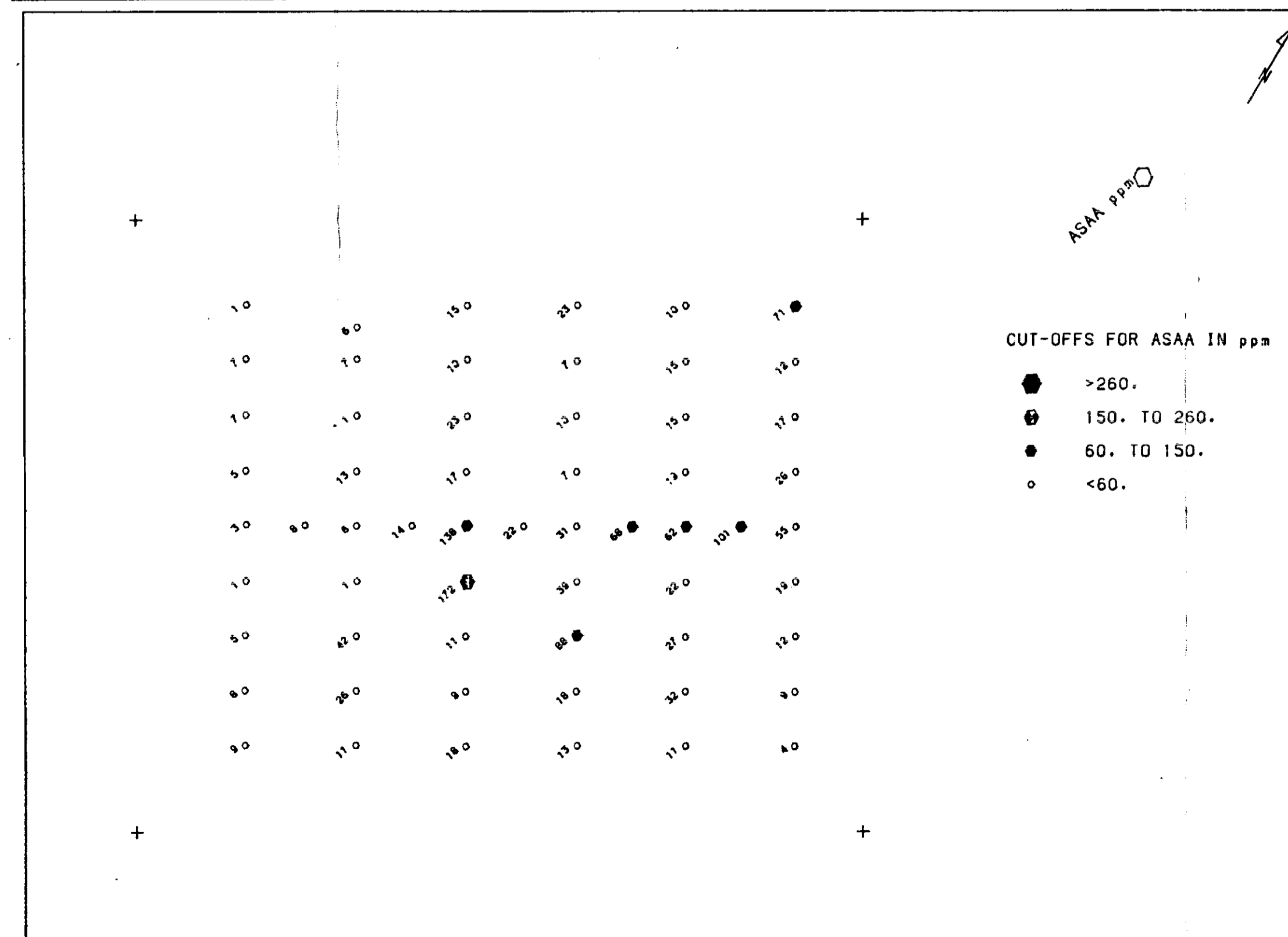
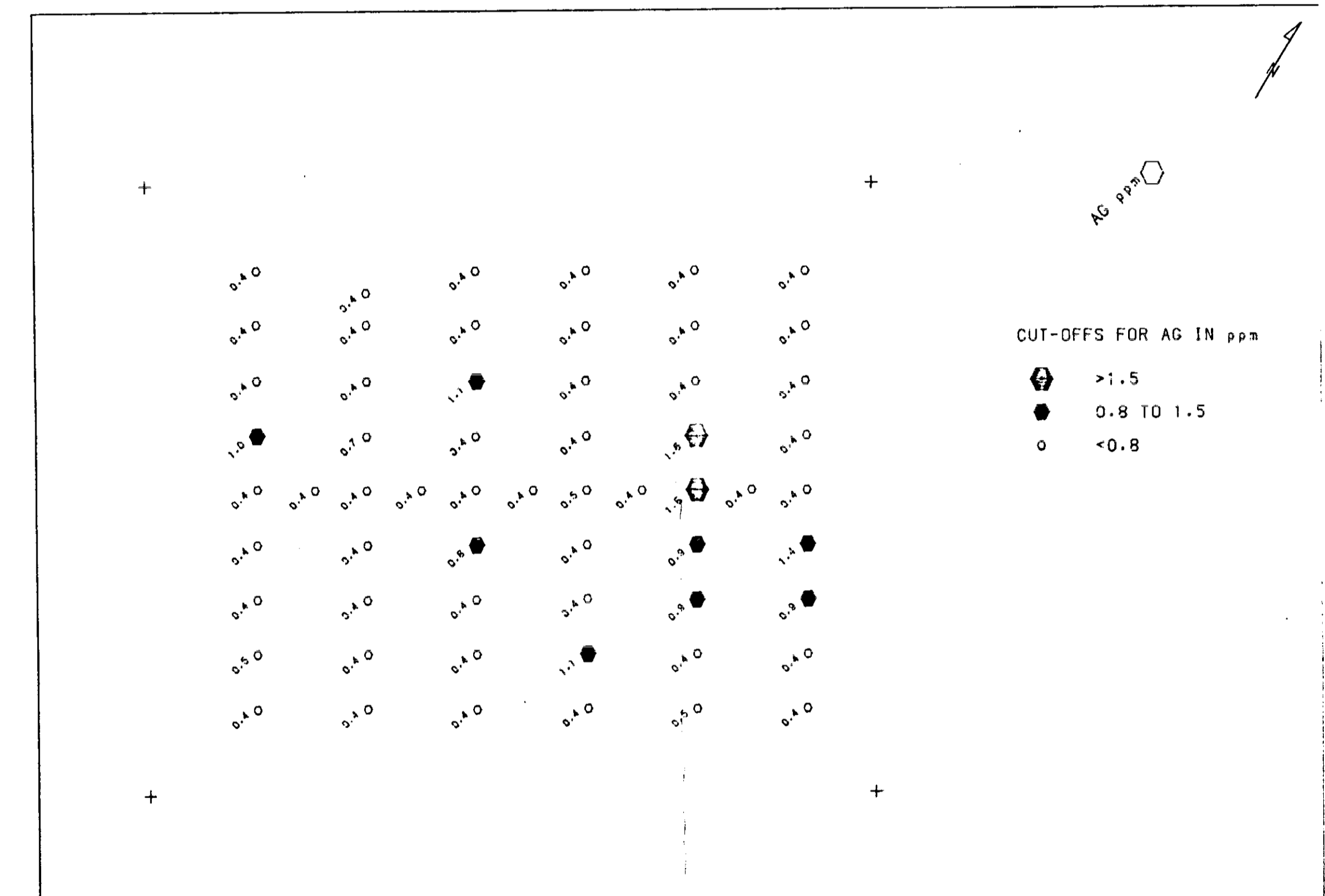
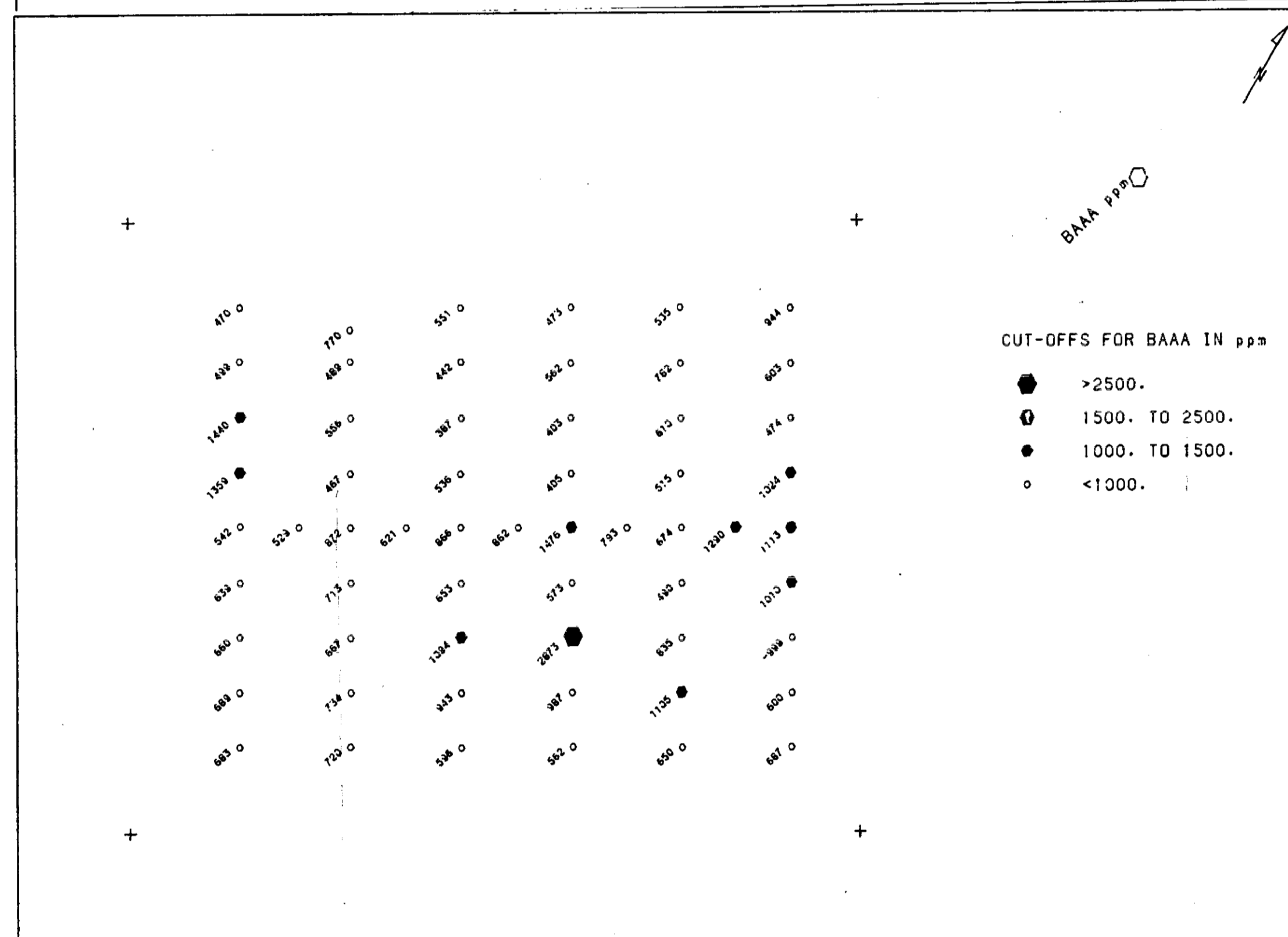
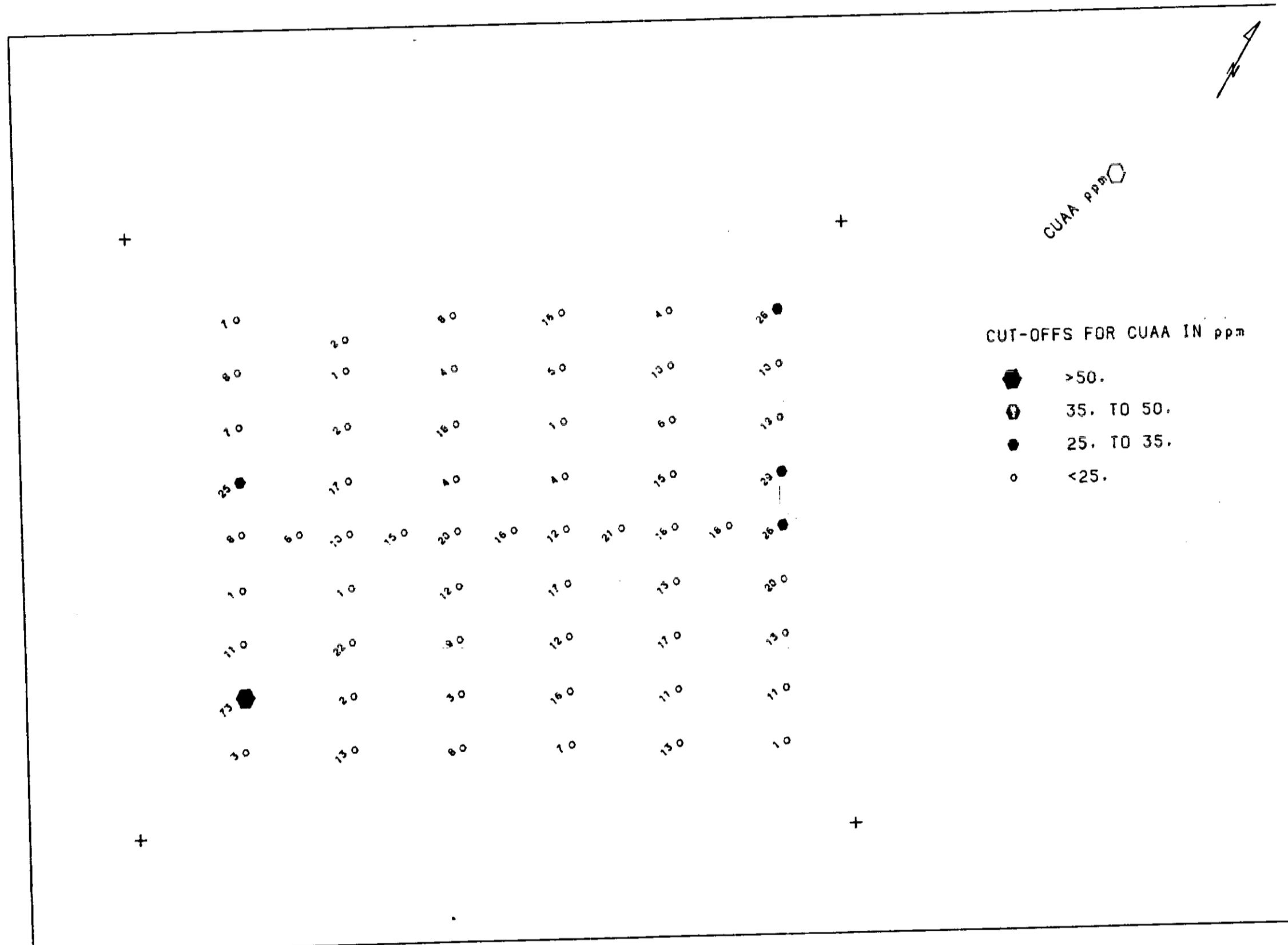
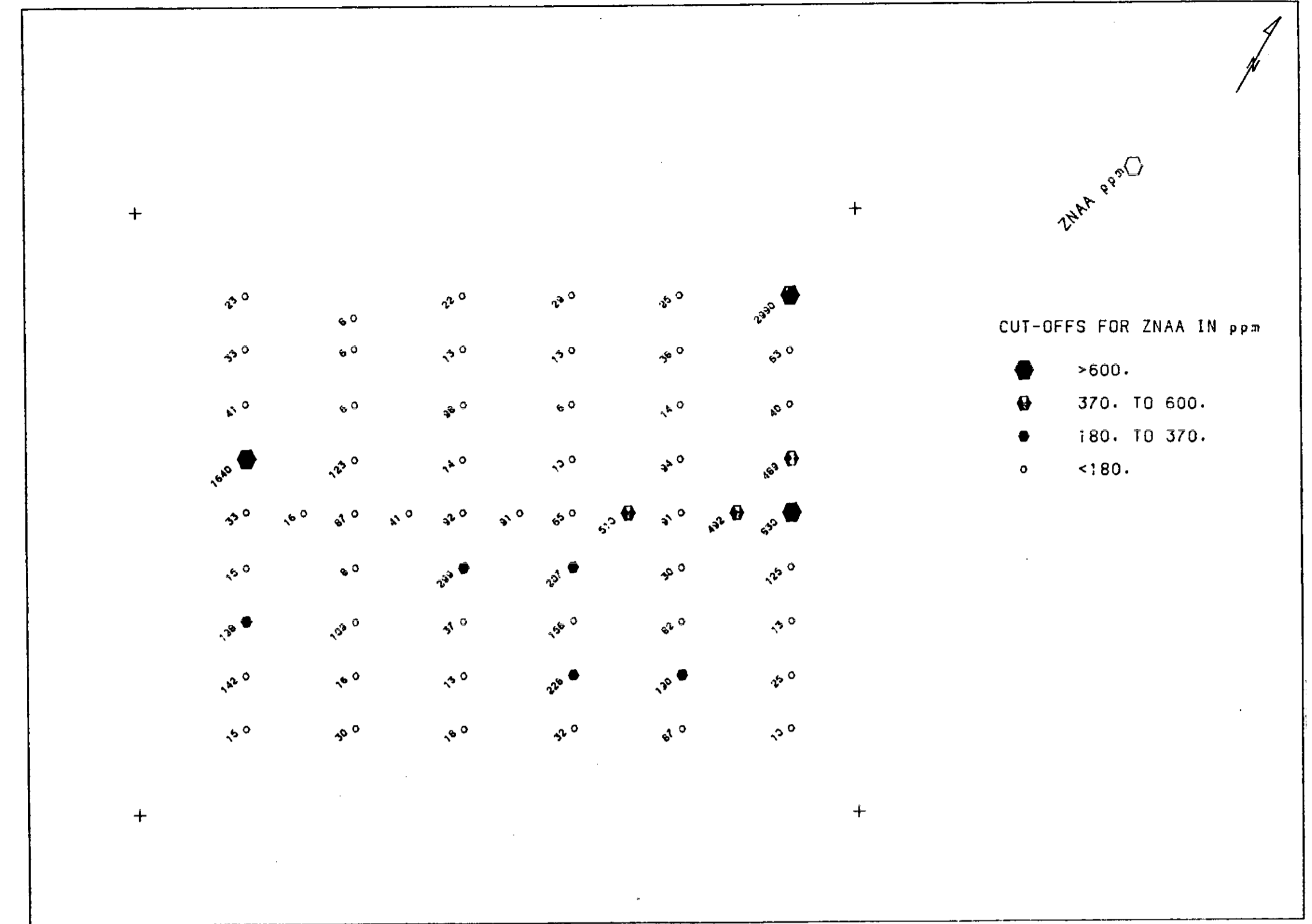
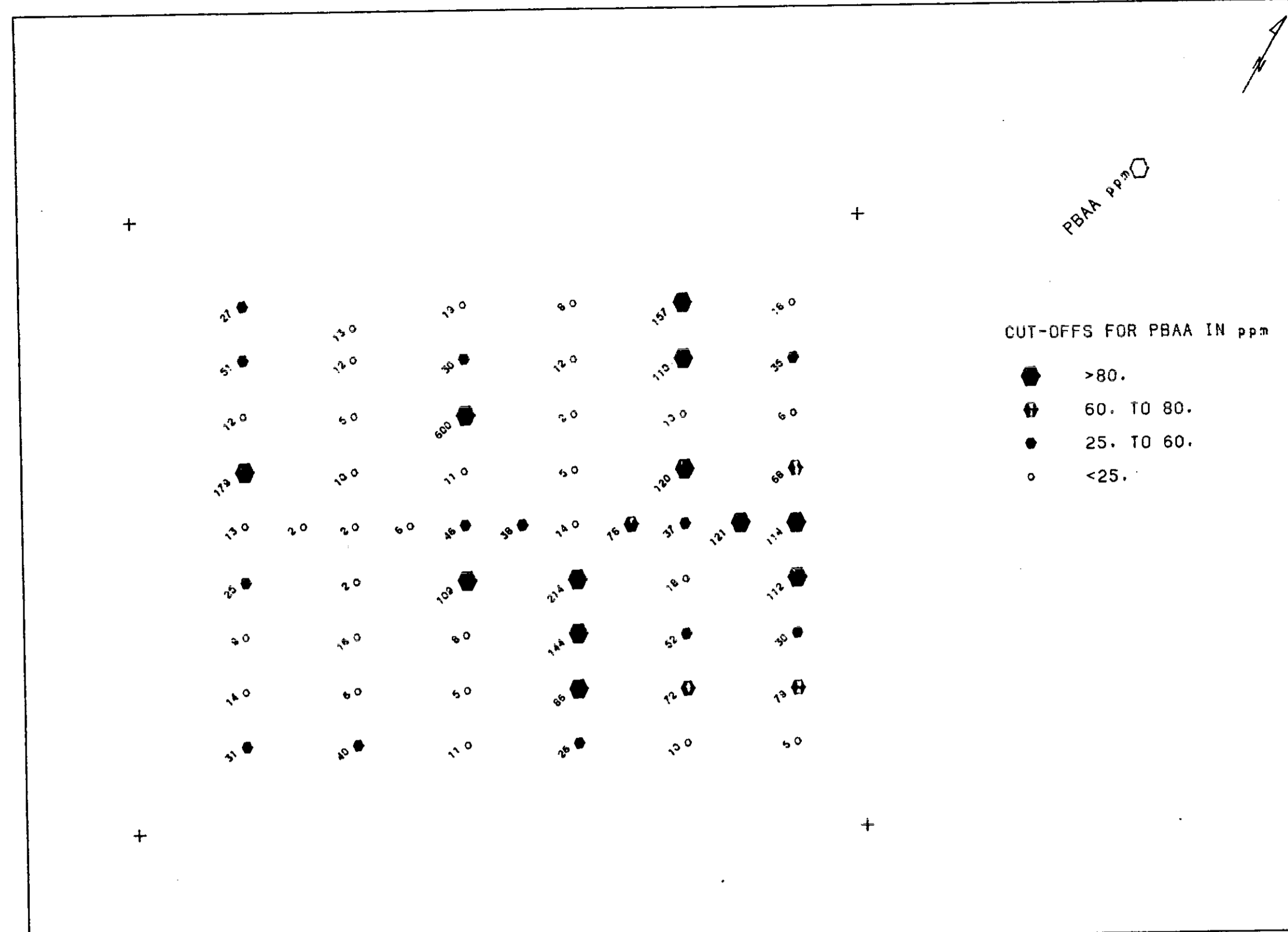
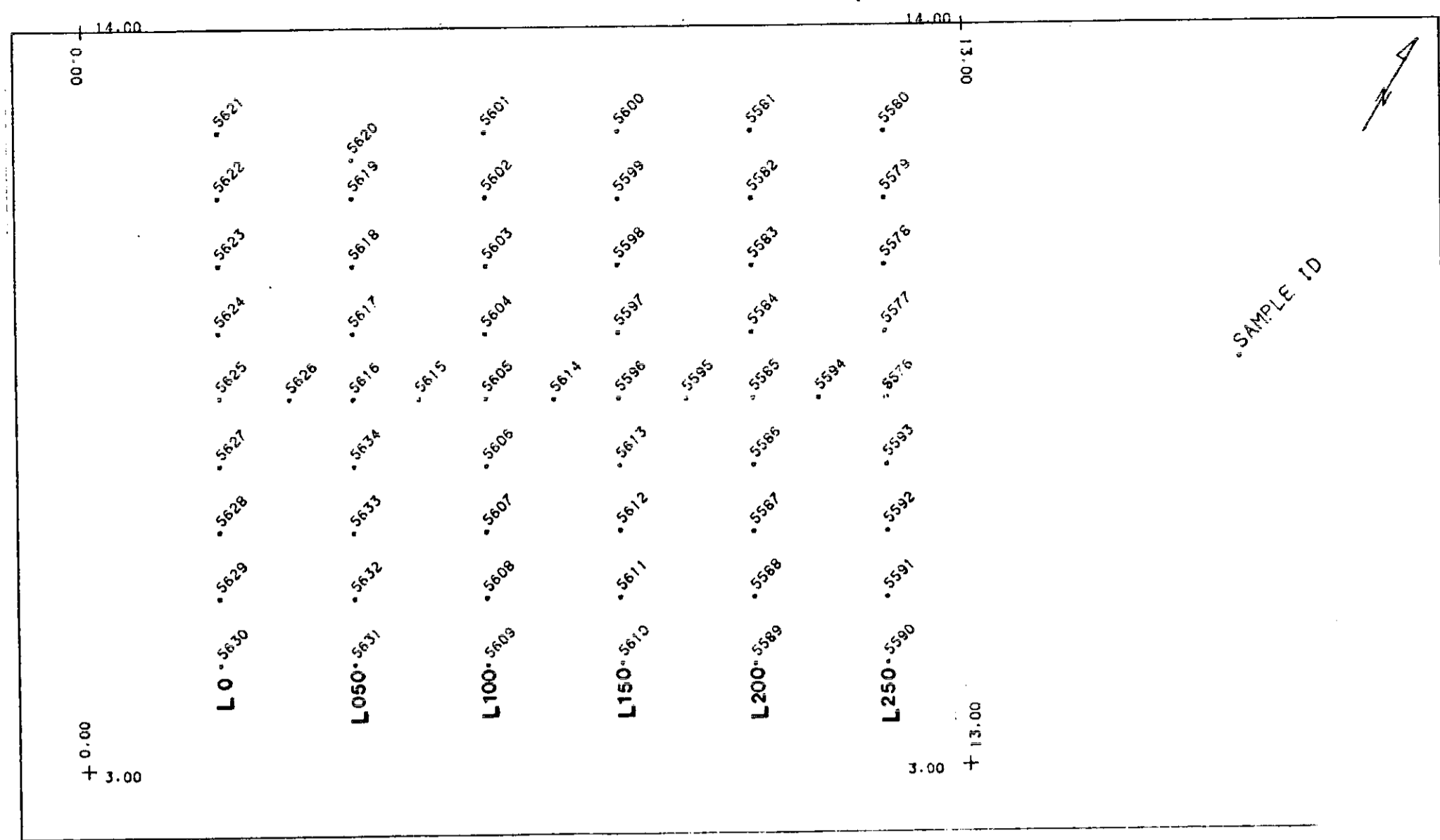


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KIT OPTION	
Drawn by: JDB	Traced by:
Checked by:	Approved by:
Date:	Date:
SOIL GEOCHEMISTRY GRID 1 "WEST END"	
Scale: 1:2000	Date: 12-86
Page: 51	

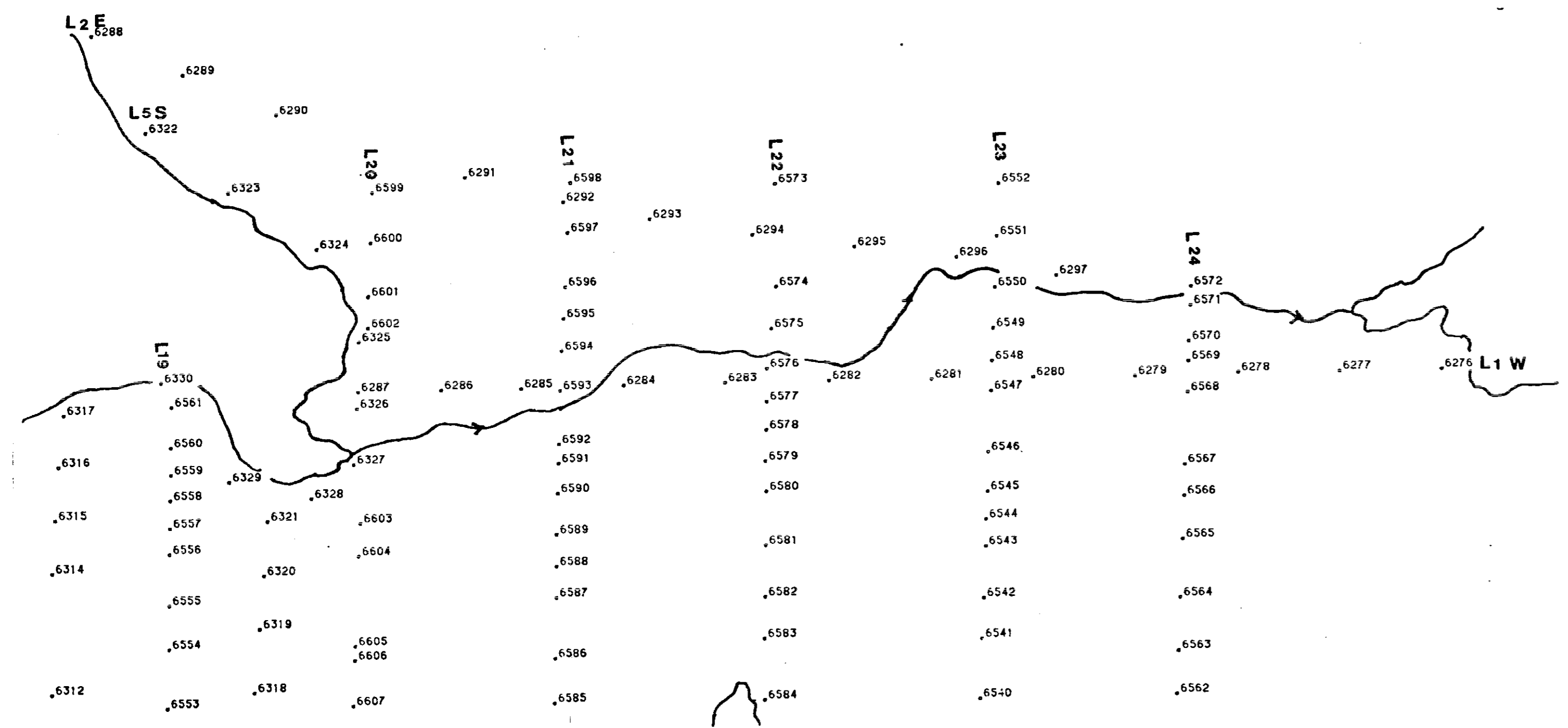


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KIT OPTION	
Drawn by: JDR	Traced by:
Checked by: GDR	Reviewed by: GDR
SOIL GEOCHEMISTRY GRID 2 SHOWING LAKE WEST	
Scale: 1:2000	Date: 12-86
Plate: 511	



SAMPLE ID

BAA PPM

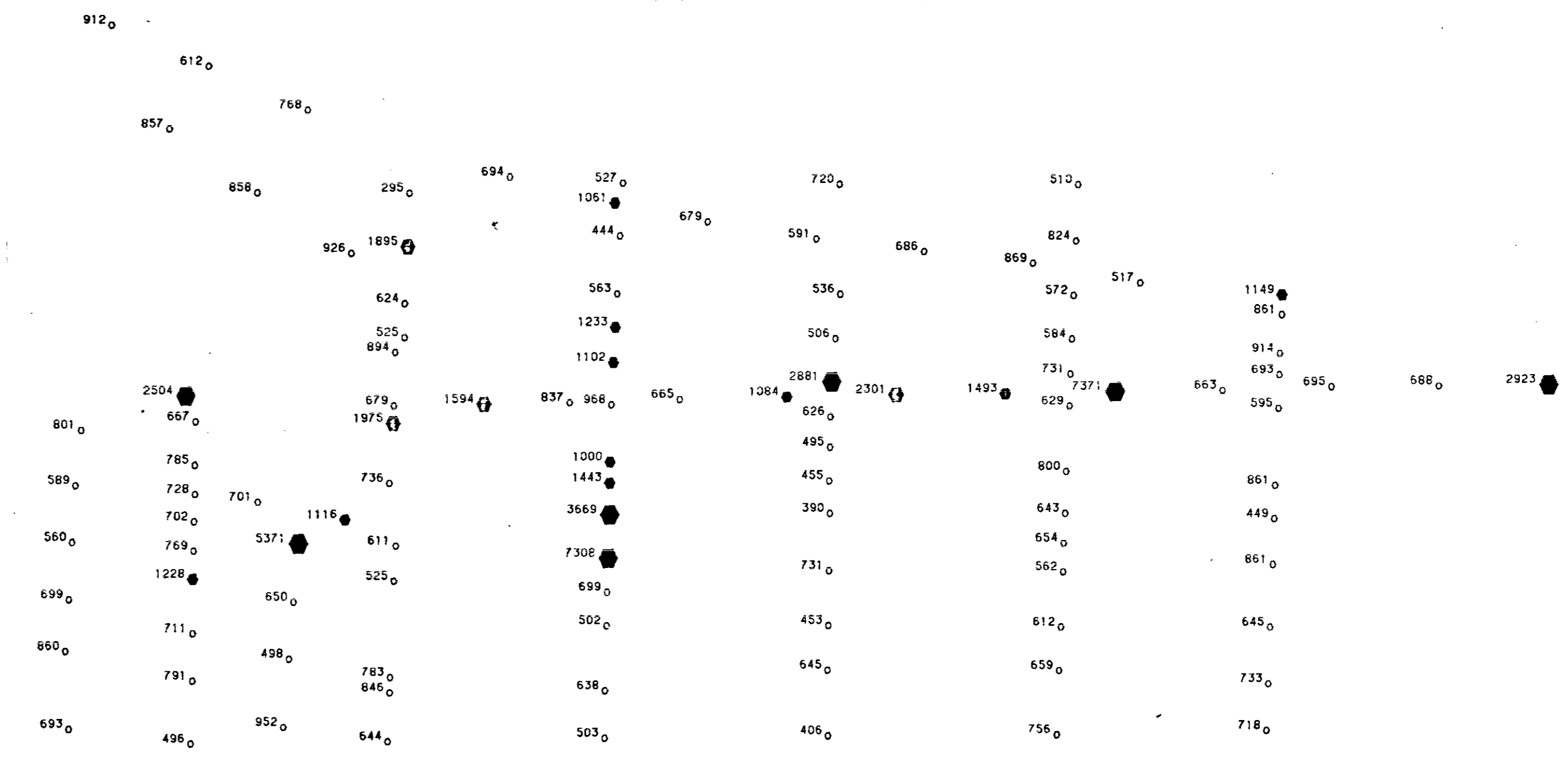
CUT-OFFS FOR BAA IN PPM  
 ● >80.  
 ○ 60. TO 80.  
 ● 25. TO 60.  
 ○ <25.

CUAA PPM

CUT-OFFS FOR CUAA IN PPM  
 ● >50.  
 ○ 35. TO 50.  
 ● 25. TO 35.  
 ○ <25.

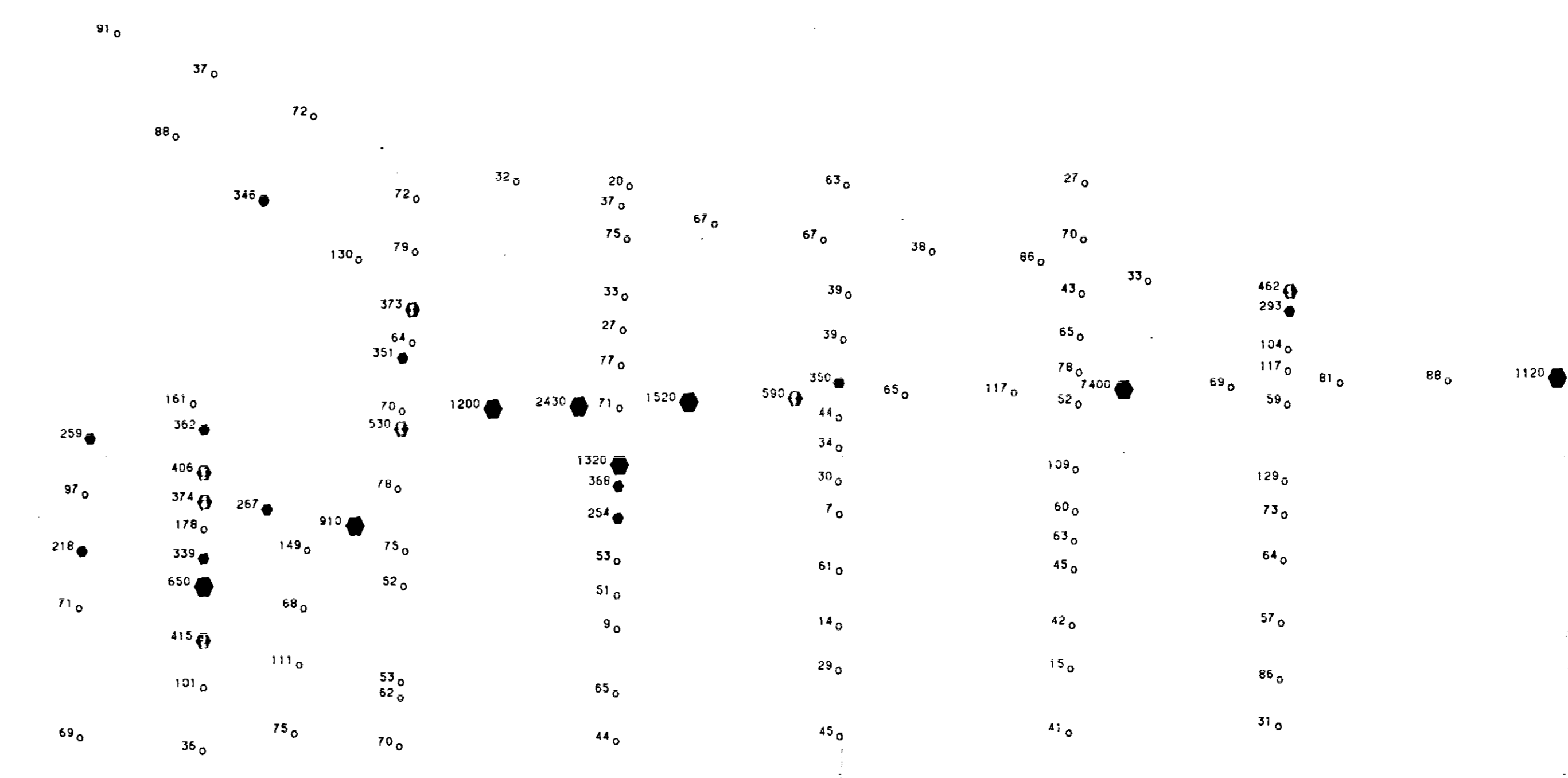
AG PPM

CUT-OFFS FOR AG IN PPM  
 ○ >1.5  
 ● 0.8 TO 1.5  
 ○ <0.8



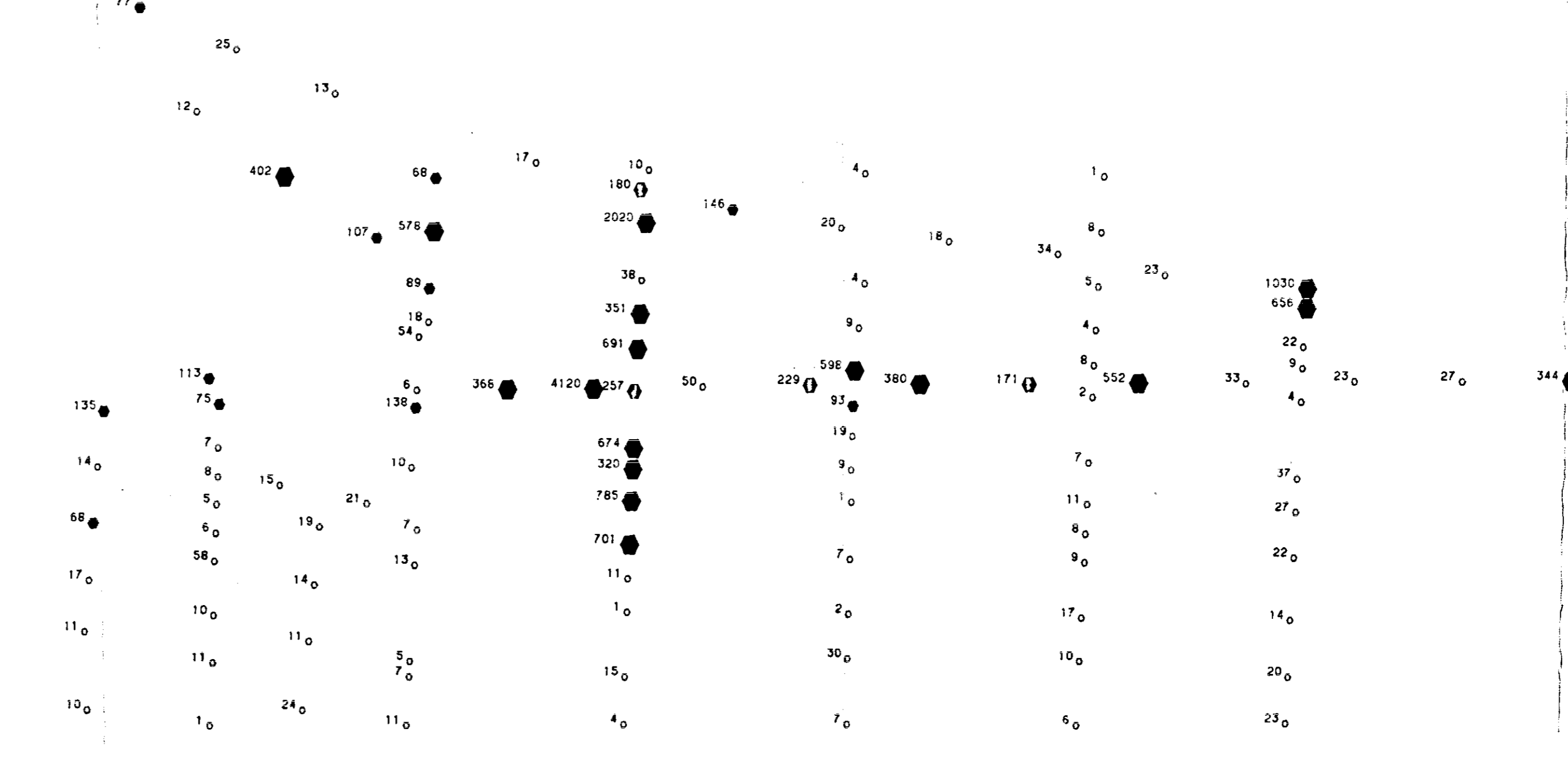
BAA PPM

CUT-OFFS FOR BAA IN ppm  
 ● >2500.  
 ○ 1500. TO 2500.  
 ● 1000. TO 1500.  
 ○ <1000.



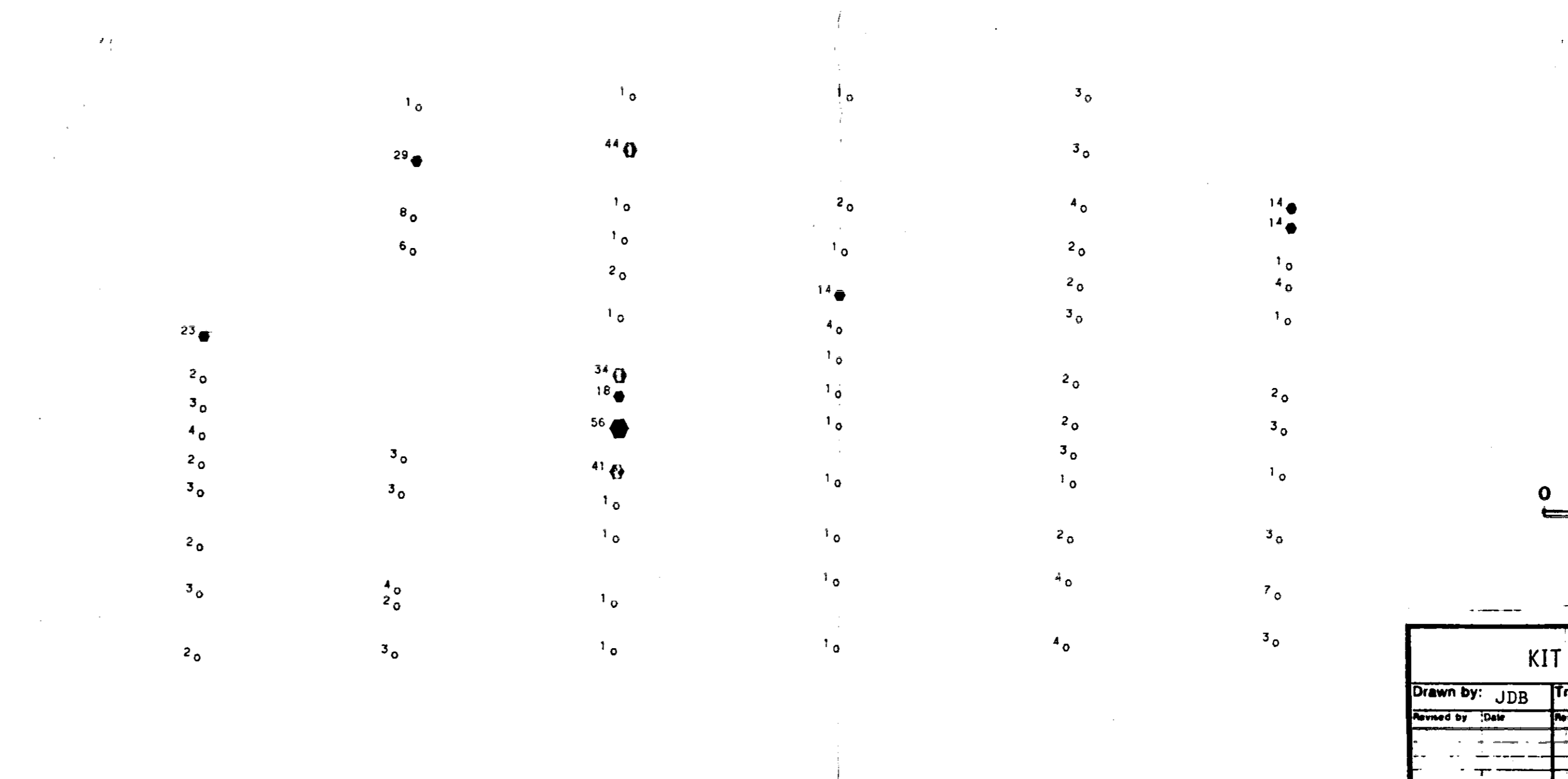
PBAA PPM

CUT-OFFS FOR PBAA IN PPM  
 ● >600.  
 ○ 370. TO 600.  
 ● 180. TO 370.  
 ○ <180.



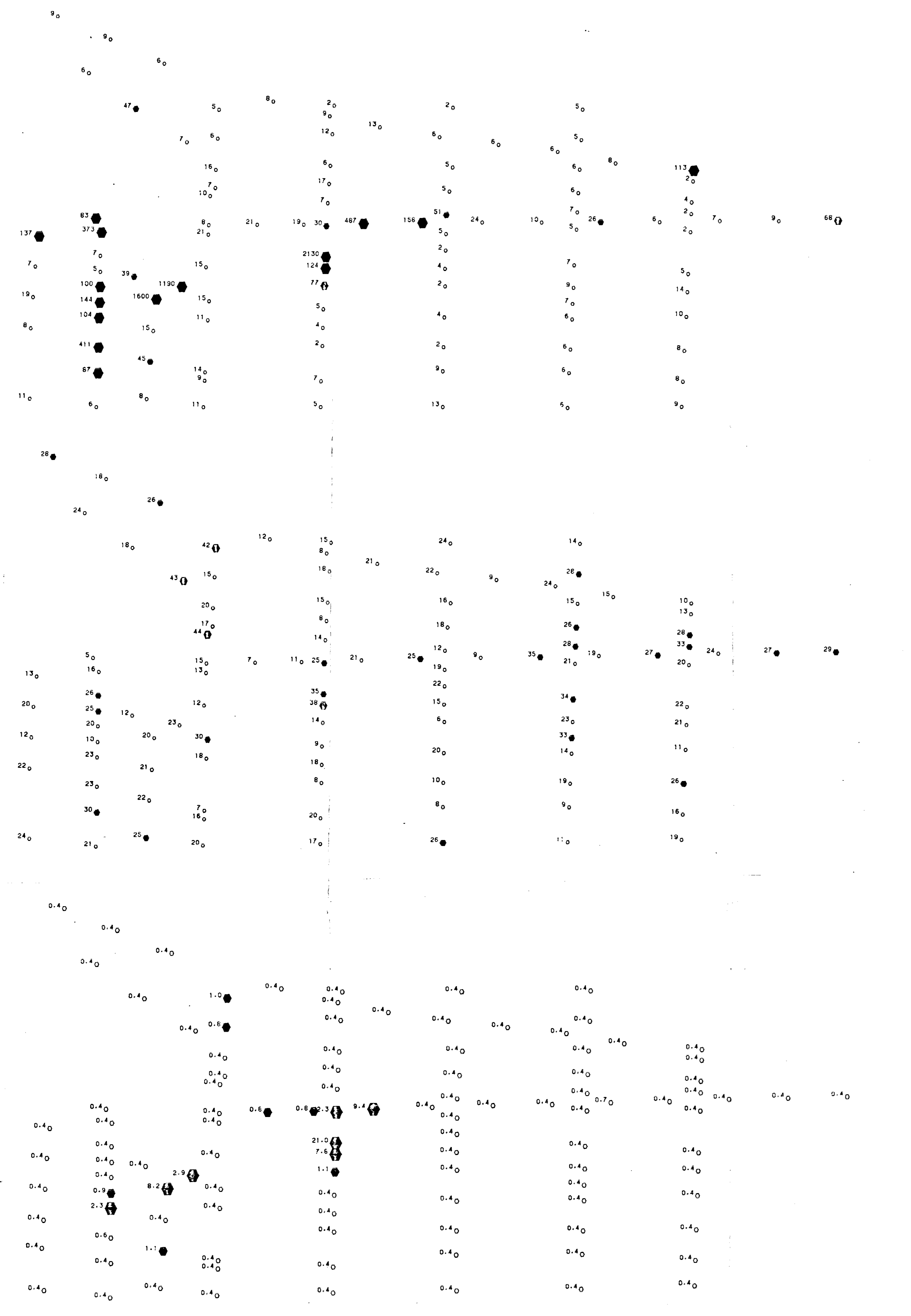
CUAA PPM

CUT-OFFS FOR CUAA IN ppm  
 ● >260.  
 ○ 150. TO 260.  
 ● 60. TO 150.  
 ○ <60.



AG PPM

CUT-OFFS FOR AG IN ppm  
 ● >50.  
 ○ 30. TO 50.  
 ● 12. TO 30.  
 ○ <12.

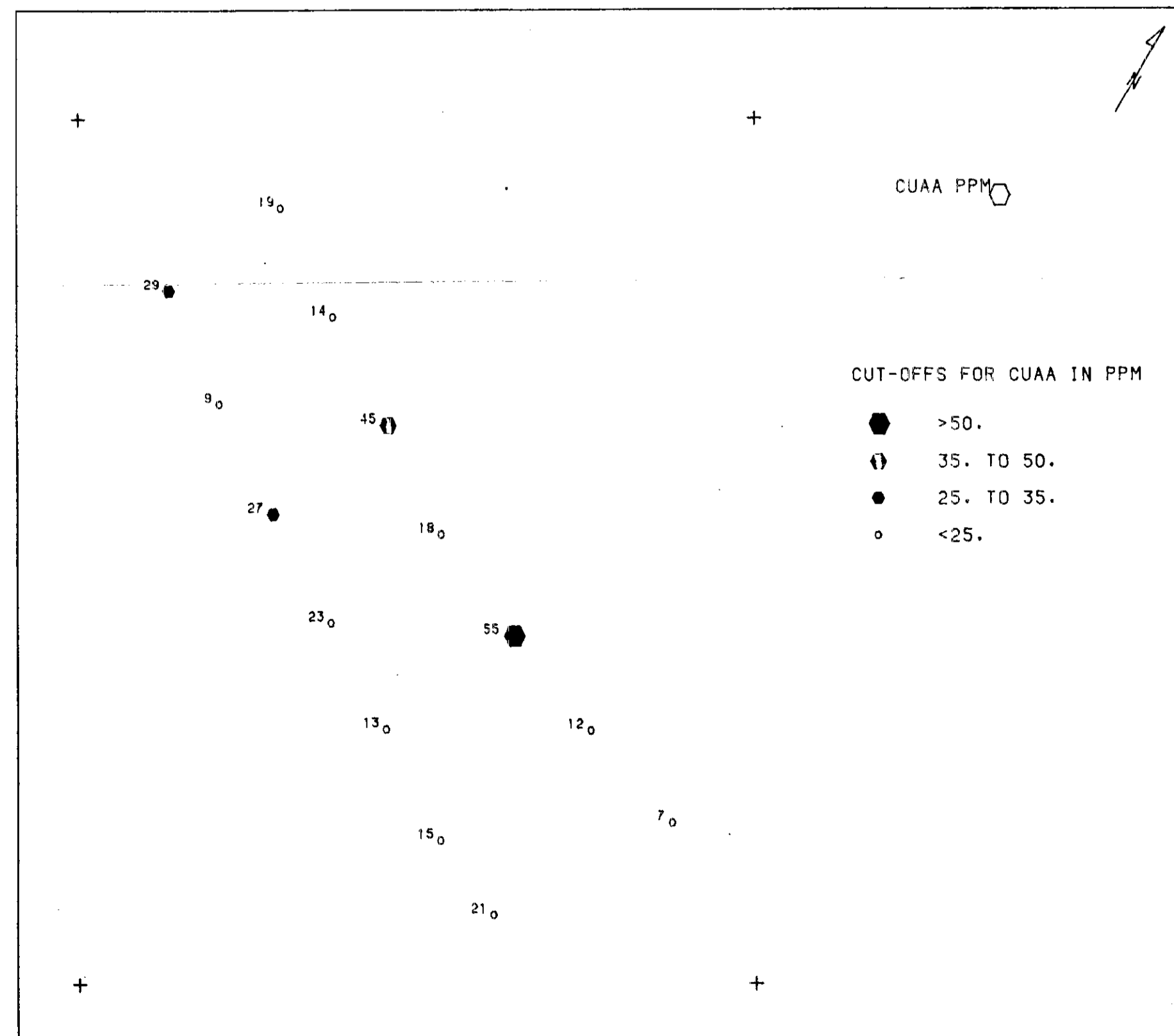
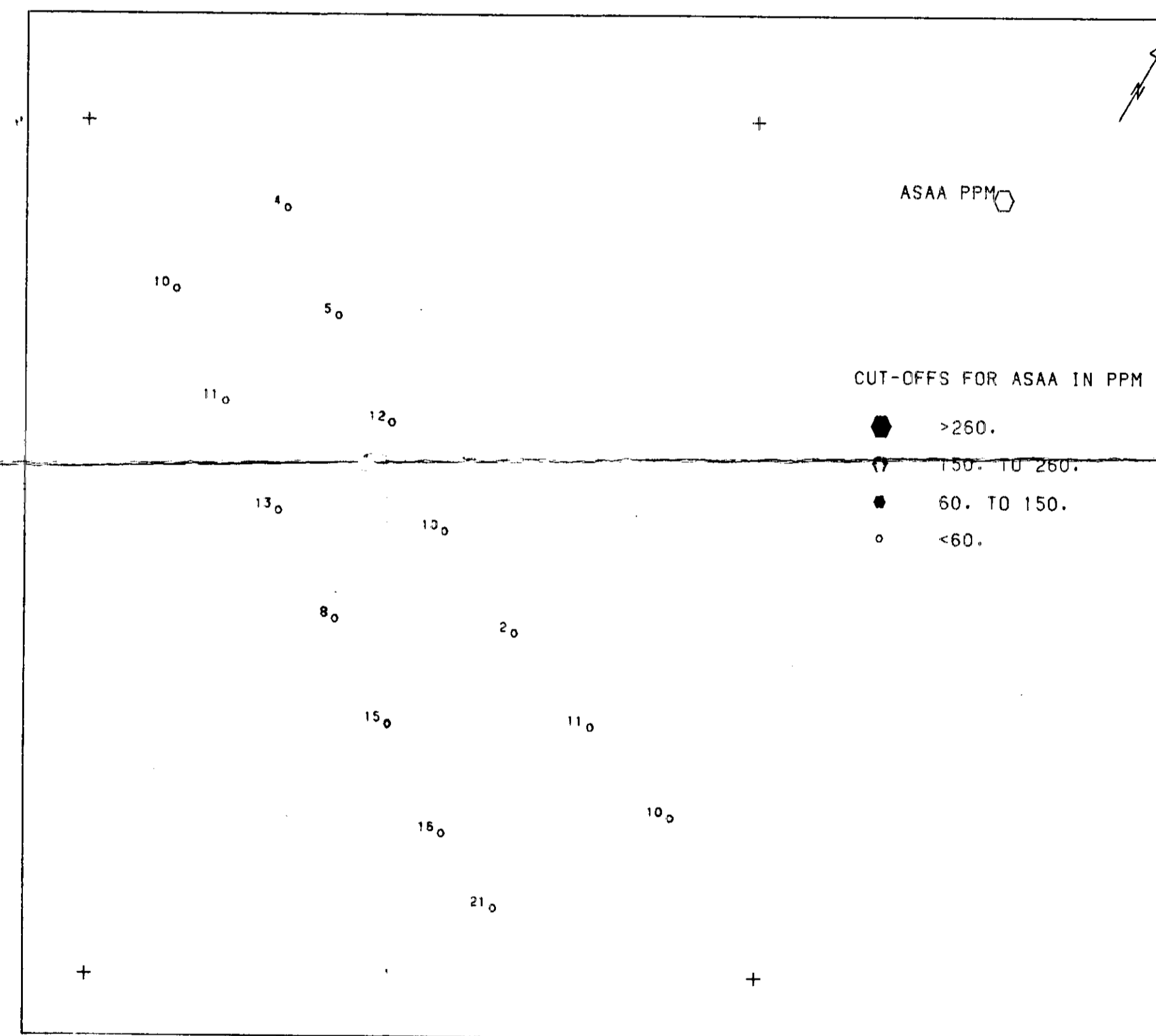
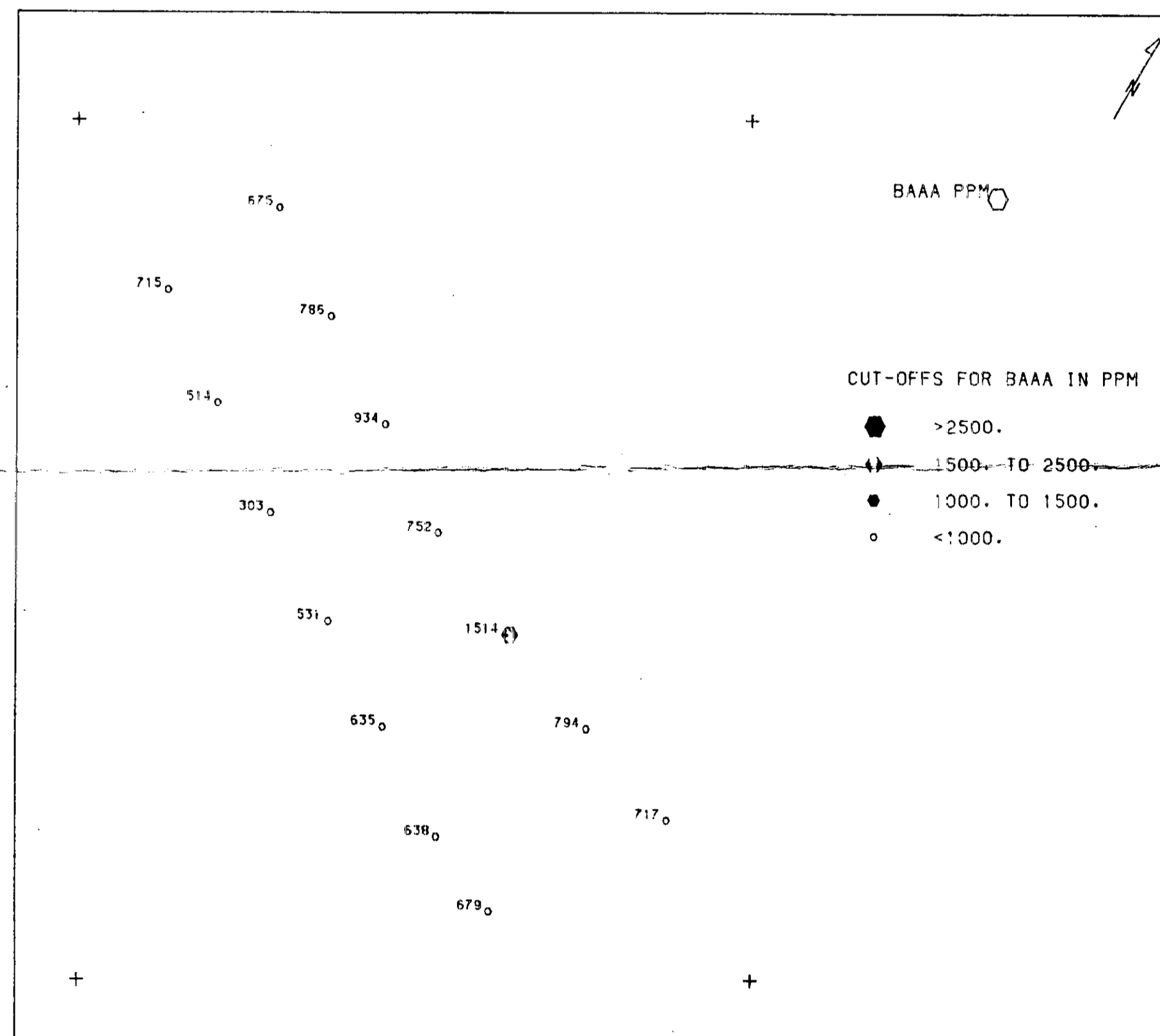
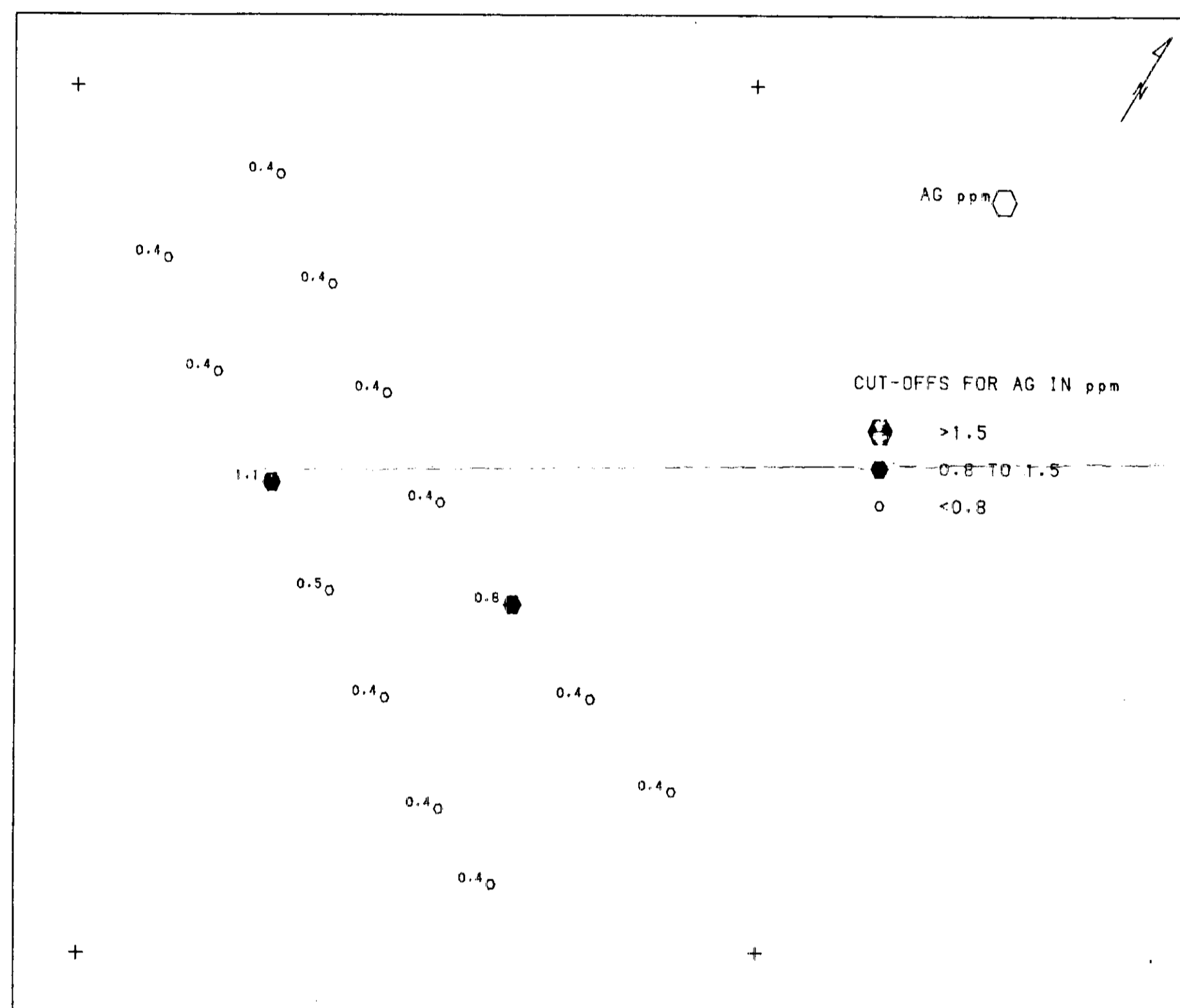
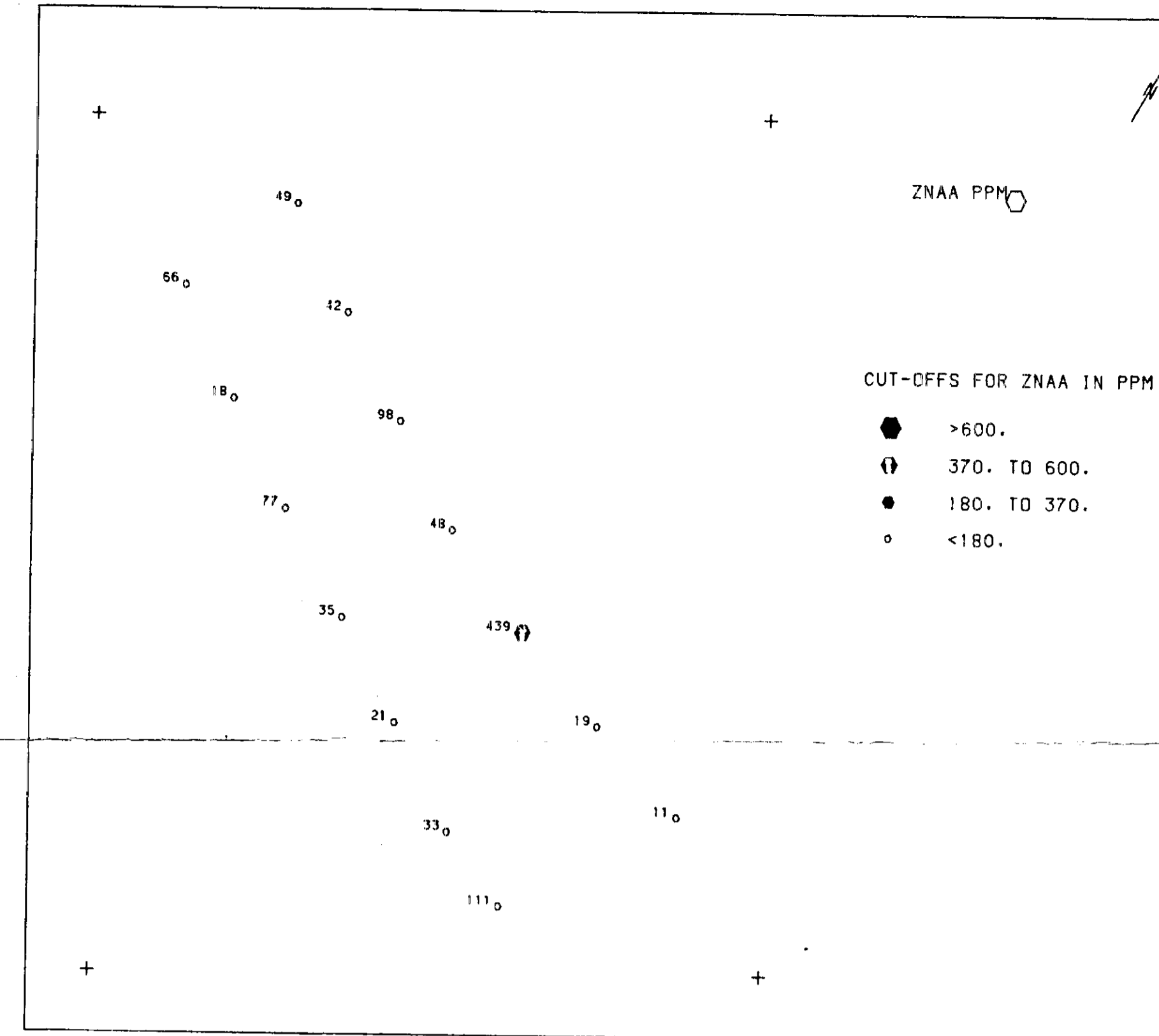
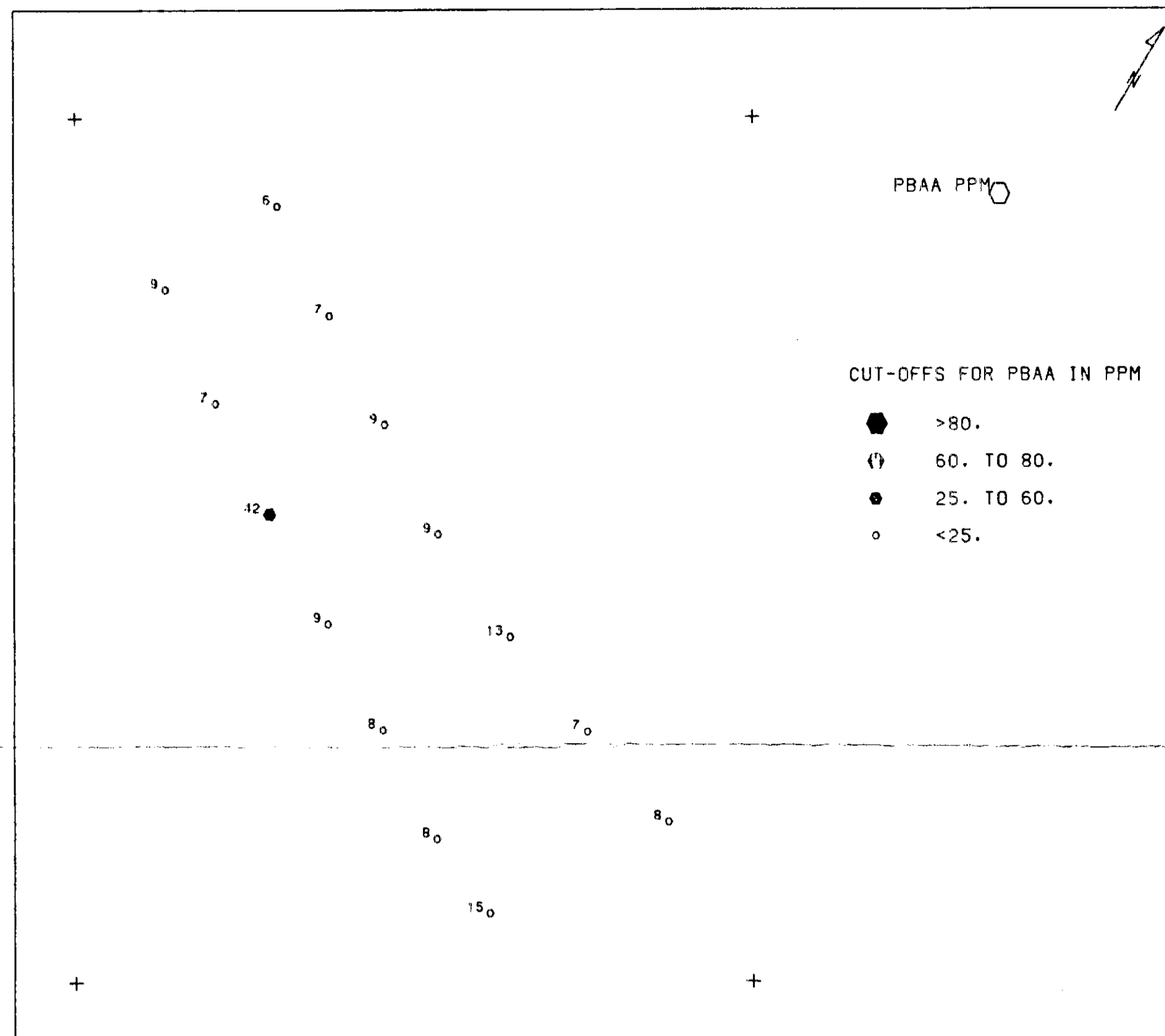
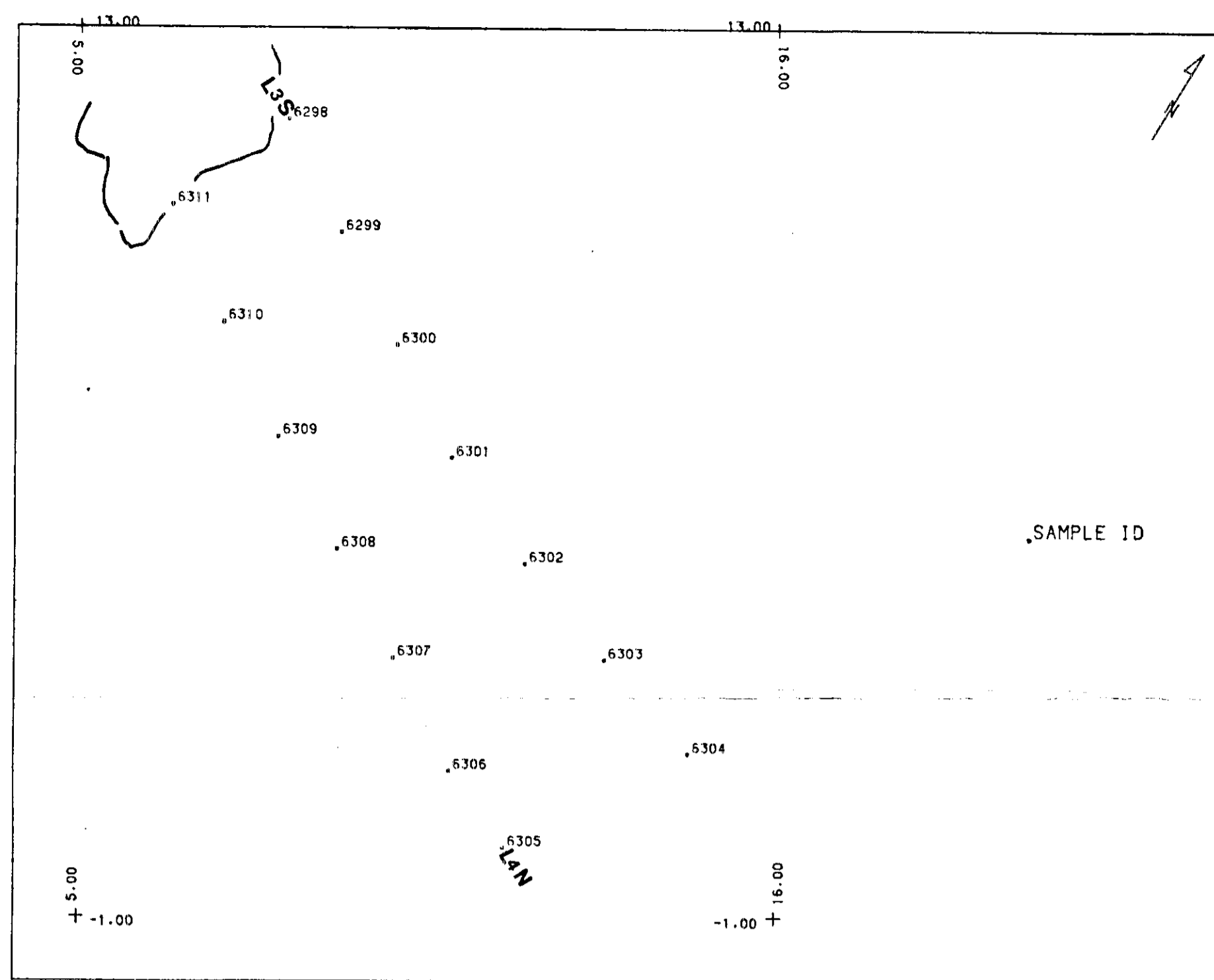


ASAA PPM

CUT-OFFS FOR ASAA IN ppm  
 ● >50.  
 ○ 30. TO 50.  
 ● 12. TO 30.  
 ○ <12.

KIT OPTION			
Drawn by: JDB	Traced by:	SOIL GEOCHEMISTRY	
Revised by:	Revised by:	GRID 3	
		LAKE SHOWING	
Scale: 1:2000	Date: 12-86	Plate: 5111	

15,364  
 200  
 meters



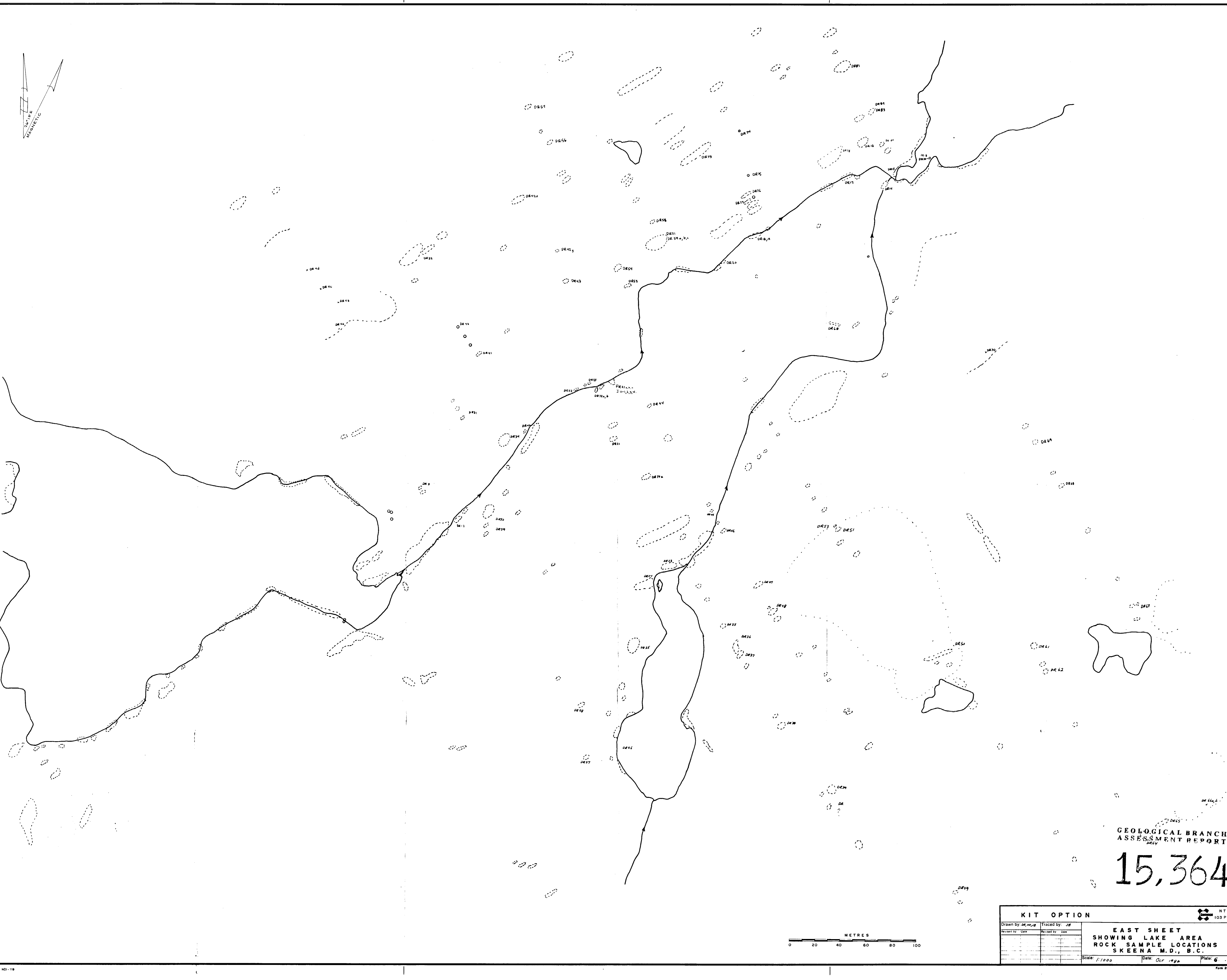
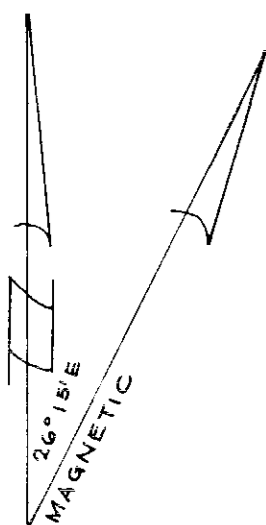
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ASSESSMENT REPORT**

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KIT OPTION		
Drawn by: JDB	Traced by:	
Revised by: _____	Revised by: _____	
_____	_____	
SOIL GEOCHEMISTRY GRID 4 GRID LAKE SOUTH		Scale: 1:2000
		Date: 12-86
		Plate: 5 IV



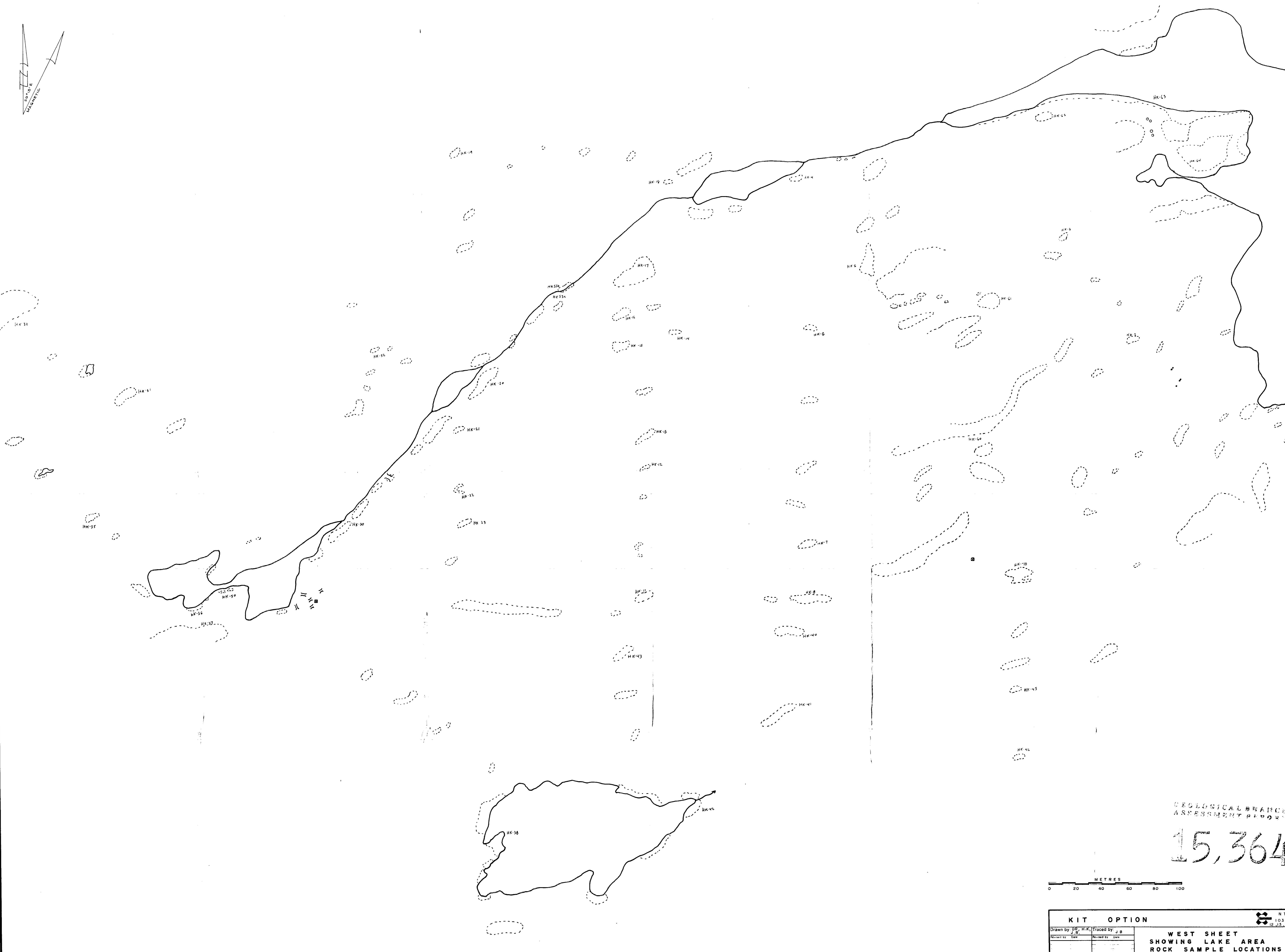
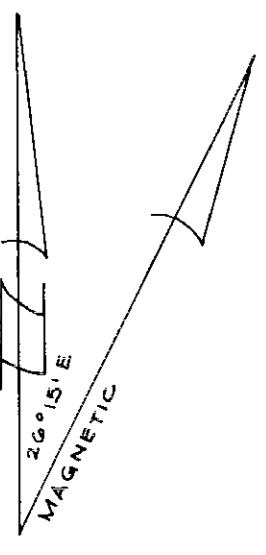


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KIT OPTION		NTS 103 P-14	
Drawn by: <i>DE/10/10</i>	Traced by: <i>JR</i>		
Revised by: <i>DE</i>	Revised by: <i>DE</i>		
		EAST SHEET SHOWING LAKE AREA ROCK SAMPLE LOCATIONS SKEENA M.D., B.C.	
		Scale: 1/1000	Date: <i>Oct 1972</i>
		Plate: <i>6</i>	





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KIT OPTION		Drawn by: D.R. H.K. Traced by: J.B.	
Revised by	Date	Revised by	Date

WEST SHEET  
SHOWING LAKE AREA  
ROCK SAMPLE LOCATIONS  
SKEENA M.D., B.C.

Scale: 1:1000 Date: DEC 1986 Plate: 6 of 11