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MOBILE METAL ION GEOCHEMICAL REPORT

on the

BEATON GROUP MINERAL CLAIMS

Kamloops Mining Division
British Columbia

N.T.S. 092I/10E
Latitude 50° 41'N
Longitude 120° 37'W

for
operator and owner

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Vancouver, B.C.
V6K 2S4

by

Charles Boitard
June 19, 2000

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1. Summary

1.1 The Beaton Group East and the Beaton Group West consists of 16 mineral claims, representing 105 units The property is located approximately 5 kilometres west of Afton Mine and 20 kilometres from the town of Kamloops, B.C. The claim is accessible rom the Trans-Canada Highway, then Greenstone Mountain Road and Duffy Lake Road.

1.2 The property is underlain by andesites of the Nicola Volcanics.

1.3 Induced Polarization Magnetometer Surveys, Soil Sampling and a few percussion drill holes have been carried out on the property, but no commercial mineralization has been encountered.

2. INTRODUCTION

2.1 This report has been prepared for assessment purposes.

2.2 Previous percussion drilling carried out on the property intercepted many zones of alteration, bleaching and quartz. Mobile Metal Ion (M.M.I.) Survey; is a new exploration tool, the soil sampling carried out on in this report is a followup from a previous survey to test the south end of the Beaton 2 and Beaton 6, Lines 1050S, 1250S, 1400S, 1550S, 1700S and part of the Rose # 10, Line 0 East.

2.3 The Beaton East and West Groups are registered under the name of Charles Boitard. The property lies approximately 20 kilometres west of Kamloops B.C.

3. LOCATION ACCESS AND PHYSIOGRAPHY

3.1 The Beaton property is located on the Thompson Plateau approximately 20 kilometres west of Kamloops, B.C. The claims are centered at 50° 41' north latitude and 120° 37' west longitude on NTS map sheet 0921I/10E. The claims are in the Kamloops Mining Division.

3.2 Access is provided by the Trans-Canada Highway and then south along the Greenstone Mountain Road which branches off the highway approximately two kilometres west of the Afton Mine. Good dirt roads provide access to most of the claim area.

3.3 The property lies between elevations 700 to 885 metres above sea level. Vegetation consists of pockets of Pine within grasslands. Water for all stages of exploration is available from Beaton Creek, the main drainage on the Beaton Claims. The climate is semi-arid with an average annual precipitation of 250 to 280 millimetres.

4. CLAIM STATUS

4.1 The Beaton property comprises 16 mineral claims totalling 105 units. Complete claim information is as follows:

NAME	UNITS	RECORD NO.	EXPIRY DATE*
BEATON #1	20	217820	JUNE 15, 2002
BEATON #2	20	217821	JUNE 15, 2002
BEATON #4	16	217973	MARCH 8, 2001
BEATON #5	3	217974	MARCH 8, 2001
BEATON #6	4	217971	MARCH 8, 2001
BEATON #7	2	217972	MARCH 8, 2001
DUFFY	20	355486	MAY 1, 2001
ROSE #1	12	316736	MARCH 23, 2001
ROSE #2	1	316737	MARCH 20, 2001
ROSE #3	1	316738	MARCH 20, 2001
ROSE #4	1	316739	MARCH 22, 2001
ROSE #5	1	316740	MARCH 23, 2001
ROSE #6	1	316741	MARCH 22, 2001
ROSE #7	1	316742	MARCH 23, 2001
ROSE #10	1	316745	MARCH 19, 2001
ROSE #11	1	316746	MARCH 19, 2001

Includes assessment currently being applied.

4.2 All the claims in the Beaton Group East and West are recorded under the name of Charles Boitard.

5. HISTORY

5.1 The Afton orebody, located five kilometres east of the Beaton claims, began production in 1977 and continued through 1991 when it was shut down for economic reasons. At start–up, Afton had drill proven ore reserves of 30.84 million tonnes grading 1.0% copper, 0.58 ppm gold and 4.19 ppm silver at a cut off grade of 0.25% copper (Carr & Reed, 1976). It is reported that underground reserves still exist and that with an improvement in copper and/or gold prices the mine could be re–opened.

5.2 In 1972, the TT claims were explored by Bow River Resources Ltd. A magnetic survey on the TT claims reportedly revealed Coast Intrusives, and Tertiary volcanics as well as Nicola Volcanics within portions of the present day Beaton claims (Sookochoff, 1992)

5.3 In 1980, Asarco completed a magnetometer survey on the Red 1–4 claims, two of which occupied a portion of the northeast corner of the present Beaton claims. The resultant magnetic highs were determined to be the result of outcroppings of Nicola volcanics. Percussion drilling in 1981 revealed chalcopyrite but no economic concentrations of copper were discovered.

5.4 In 1983, De Baca Resources explored the Akila claim which included the southwest corner of the present day Beaton Group Claims. One diamond drill hole was completed to test a silicified shear zone that strikes 070°. This hole reportedly returned assays of nominal copper and silver. It is reported in C..T. Pasieka, P. Eng. November 1983 Report, that the drill hole was in the vicinity of an existing shaft of 22.12 m. in depth and a selected sample with obvious sulphides yielded Mo 0.002%, Cu 2.18%, Au 0.025 ozs/ton, Ag 1.92 ozs/ton.

5.5 Since 1987 exploration on the Beaton claims has consisted of IP surveys, localized soil geochemical surveys and the drilling of nine percussion drill holes in 1992.

6. GEOLOGY

6.1 The Beaton claims lie within the Quesnel Trough, a 30 to 60 kilometre wide belt of Lower Mesozoic volcanic and related sedimentary rocks bounded by older sedimentary rocks of the Cache Creek Group to the east and younger Coast Intrusions to the west. In the area of the Beaton claims the Quesnel Trough is dominated by Upper Triassic Nicola Group andesites, basalts, tuffs and argillites. The Nicola Group is intruded by Upper Triassic – Lower Jurassic diorite, syenite and monzonite of the Iron Mask Batholith. This batholith represents a major northwest trending structure that crosscuts the north–northwesterly trending Nicola Volcanics. Portions of this area or obscured by later plateau lavas.

6.2 Bedrock exposure in this area amounts to only about ten percent, the rest being covered by glacial drift deposited from Pleistocene ice sheets that moved from northwest to southeast.

6.3 No systematic, property scale geological mapping has been carried out on the property. The Beaton Group of claims is underlain by andesite of the Nicola Group and quartz monzonite of the Iron Mask pluton. A rhyolite flow was observed.

7. M.M.I. SURVEY

This survey is an extension of the previous Reconnaissance M.M.I. Survey carried out over the Beaton Group in the year 1998..

7.1 During the period from August 8th to September 2, 1999, a soil sampling survey was carried out on the Rose 10 mineral claim using a hip chain and an axe. The blaze Line 0 was established from the ROSE 1 LCP going 135º. The Line is blazed to 600 metres east, with stations at 50 metre intervals and flagged with red and blue flags. 13 samples were collected on Line 0 at 50 metre intervals from the Rose 1 LCP to 600 east.

The samples were collected with a pick and small shovel dug from pits to the depth of approximately 25 cm., to sample the B Horizon. The soil was sieved with a plastic sieve and a pound of fine material was collected and placed in a plastic snap seal bag, clearly marked with the property name, the line and the station number. The small sample bags were then placed into a larger bag to be carried to the truck. At each station the pits were refilled and the tools used to collect the samples were brushed clean after each sample was taken to avoid contamination. The soil sampling survey had to be postponed due bad weather. After heavy rain showers, the Kamloops soil which is made of glacial till turns to mud and it is impossible to sieve the soil.

7.2 During the period from August 8th to September 2, 1999, a soil sampling survey was carried out on the Beaton #2 and #6 claims. The survey lines were established with a compass, hip chain and an axe. The base line is in the north/south direction starting from the Beaton 2 and Beaton 6 LCP. The survey lines are at 90º (east west direction). The lines are cut and blazed with stations at 50 metre intervals, marked with a red and blue flag with the Line and the station number written with a waterproof marker. A total of 107 samples were collected;

Re: Line 1050S,: 11 samples were collected from the base line to 500W, and 12 samples were collected from 1650E to 2200E.
Re: Line 1250S: 11 samples were collected from the base line to 500W and 20 samples were collected from the base line to 1000E.
Re: Line 1550S: 11 samples were collected from the base line to 500W, and 42 samples from the base line to 2100E.

7.3 The samples were collected with a pick and small shovel dug from pits to the depth of approximately 25 cm., to sample the B Horizon. The soil was sieved with a plastic sieve and a pound of fine material was collected and placed in a plastic snap seal bag, clearly marked with the property name, the line and the station number. The small sample bags were then placed into a larger bag to be carried to the truck. At each station the pits were refilled and the tools used to collect the samples were brushed clean after each sample was taken to avoid contamination.

7.4 Field work carried out from April 15, to April 20, 2000 on the Beaton #2 and Beaton #6. This soil sampling survey is the continuation of the previous years' survey to try and locate a mineralized zone. The survey lines were established with a compass, hip chain and an axe. The base line is in the north/south direction starting from the Beaton 2 and Beaton 6 LCP. The survey lines are at 90º (east west direction). The lines are cut and blazed with stations at 50 metre intervals, marked with a red and blue flag with the Line and the station number written with a waterproof marker. A total of 62 soil samples were collected from Line 1400S and 1700S;

Re: Line 1400S: 11 soil samples were collected from the base line to 500W and 20 samples were collected from the base line to 1000E.
Re: Line 1700S: 11 soil samples were collected from the base line to 500W and 20 samples were collected from the base line to 1000E.

The samples were collected with a pick and small shovel dug from pits to the depth of approximately 25 cm., to sample the B Horizon. The soil was sieved with a plastic sieve and a pound of fine material was collected and placed in a plastic snap seal bag, clearly marked with the property name, the line and the station number. The small sample bags were then placed into a larger bag to be carried to the truck. At each station the pits were refilled and the tools used to collect the samples were brushed clean after each sample was taken to avoid contamination.

7.5 A maximum of six sample bags were placed in a larger plastic bag and carried to the truck for transportation to Vancouver. The samples were then placed in cardboard boxes and shipped for assay to XRAL LABORATORIES, at 1885 Leslie Street , Don Mills, Ontario M3B 3J4.

7.6 Xral Labs assayed the samples with the method code M.M.I. A and B for nine elements: CU, PD, ZN, CD, CO, AU, AG, PD, NI.

7.7 RESULTS for Gold, Copper, Palladium and Silver, which are the most important minerals have been plotted on a chart to facilitate interpretation.

8. CONCLUSION

8.1 Re: Beaton 2 and the Beaton 6; the M.M.I. Survey indicates 3 zones of interest, named A, B and C, shown on the location map, 1:10,000

Zone A is shown on Line 1400S,at the Base Line, and on L. 1550S from 50 west to 50 east and on L. 1700S from 100 east to 150east. This anomaly is 100 metres wide at the widest point and 300 metres in length, and open to the south. The anomaly shows some good correlation for copper, gold ,silver and palladium. Additional sampling is presently underway with a closer grid of 75 metres between lines and with sampling at 25 metre intervals to establish the true width and length of the anomaly.

Zone B: This anomaly shows on L. 1550S at 250 west, and mostly on L. 1700S from 200 west ,to 300 west and is wide open to the south, additional sampling will indicate the size of the anomaly.

Zone C is probably a vein, but the direction of this anomaly probably indicates the trend of the mineralization of the Beaton Claim, it partly correlates with the direction of the Zone A. The anomaly shows on L. 1250S at 650 east ands on L. 1400S at 800 east.

The percussion drill hole 92–8 which is located approximately 100 metres northwest of the sample 650 east on Line 1250S (located in the same trend) intercepted a small zone mineralization from 350 to 360 feet. The mineralization was diluted with the rest of the 10 foot run, so it was decided to pan the representative sample from the 10 foot section to eliminate the waste rock. The sample was reduced to 3220 grams and sent to the lab. To try to detect if there was a trace of gold, the result of the assay was a surprise: 170,000 ppb of gold or 4.85 oz. per ton.(see Rossbacher Lab. assay sheet)

Rose 10 Claim: This area of the Beaton Group again revealed exceptionally high nickel values, correlating well with the copper values from 250 east to 500 east on Line 0. The Line 0 is only a test line, and more sampling is needed to establish if the high nickel values are meaningful.

9. REFERENCES

Carr, J.M. and Reed, A.J.	Afton: A Supergene Copper Deposit. Part of C.I.M., Special Volume 15: Porphyry Deposits of the Canadian Cordillera. 1976
Cockfield, W.E.	Geology and Mineral Deposits of Nicola Map Arc, British Columbia. Geological Survey of Canada, Memoir 249, 1961
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Sookochoff, L.	Compilation Report for Green Valley Mine Inc. on the Beaton Claims. Unpublished report, 1992
Reynolds, P.	Percussion Drilling Report on the Beaton Mineral Claims for Green Valley Mine Inc. September 8, 1993
Reynolds, P.	Diamond Drilling and Percussion Drilling Report on the Beaton Claims for Green Valley Mine Inc. May 31, 1995.
Boitard, C	Mobile Metal Ion Geochemical Report on the Beaton Mineral Claims, May 28, 1999
Boitard, C.	M.M.I. Geochemical Report on the Duffy Claim July 9, 1999

STATEMENT OF COSTS

ROSE #10 Mineral Claim, Kamloops Mining Division;
Field work carried out from August 8, 1999 to September 2, 1999

Vancouver/Kamloops return:

1 day, 2 men	$ 300.00	
4x4 truck rental	450.00	
Fuel	100.00	
Field work, 1 day 2 men	300.00	
Motel, 2 men, 1 day	130.00	
Restaurant expenses, 2 men 3 day	270.00	
Field supplies	15.00	
Shipping to Toronto	16.25	
Assay, 13 samples	445.12	
	$2,026.37	
		$ 2,026.37

BEATON 2 and BEATON 6 Mineral Claim, Kamloops
Mining Division. Field work carried out from
April 15, 2000– to April 20, 2000

Vancouver/Kamloops return

1 day 2 men	$ 300.00	
4x4 truck rental	450.00	
Fuel	150.00	
Field work, 2 men 4 days	1,200.00	
Motel for 2 men, 5 days	650.00	
Restaurant expenses, 2 men 6 days	540.00	
Field supplies	100.00	
Shipping to Toronto, 107 samples	133.75	
Assay 107 Samples, MMI A & B	3,663.68	
	$7,187.43	
		$7,187.43
		$9,213.80

STATEMENT OF COSTS

Brought forward	**$ 9,213.80**

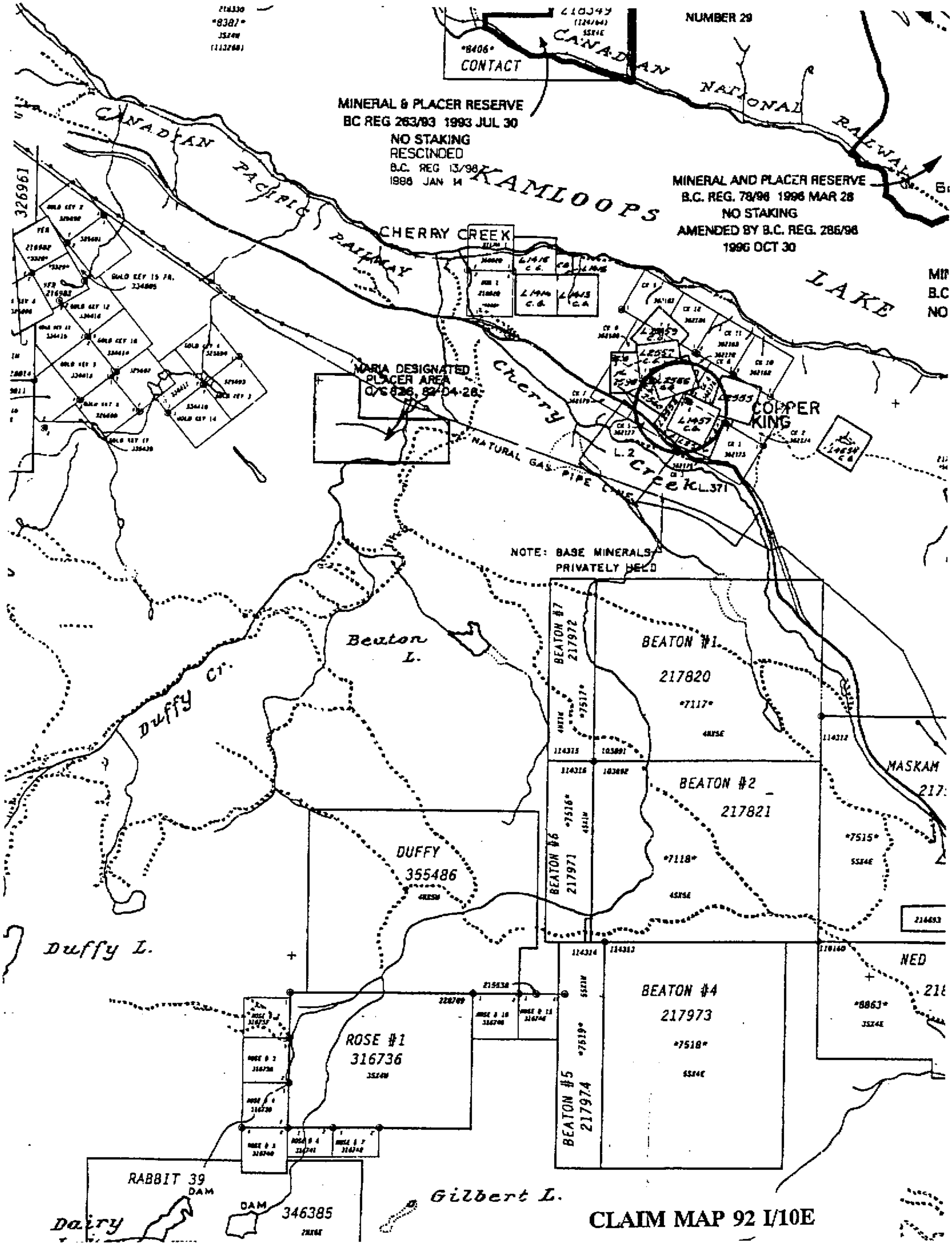
BEATON 2 AND BEATON 6 Mineral Claims, Kamloops Mining Division. Field work carried out April 15, 2000 to April, 20, 2000.

Vancouver/Kamloops return		
1 day 2 men	$ 300.00	
4x4 truck rental	450.00	
Fuel	100.00	
Field work, 2 days 2 men	600.00	
Motel for 2 days 2 men	390.00	
Restaurant expenses, 2 men 4 days	360.00	
Field supplies	30.00	
Shipping to Toronto, 62 samples	77.50	
Assay MMI A & B, 62 samples	2,118.88	
	$4,426.38	
		$ 4,426.38
		$13,640.18

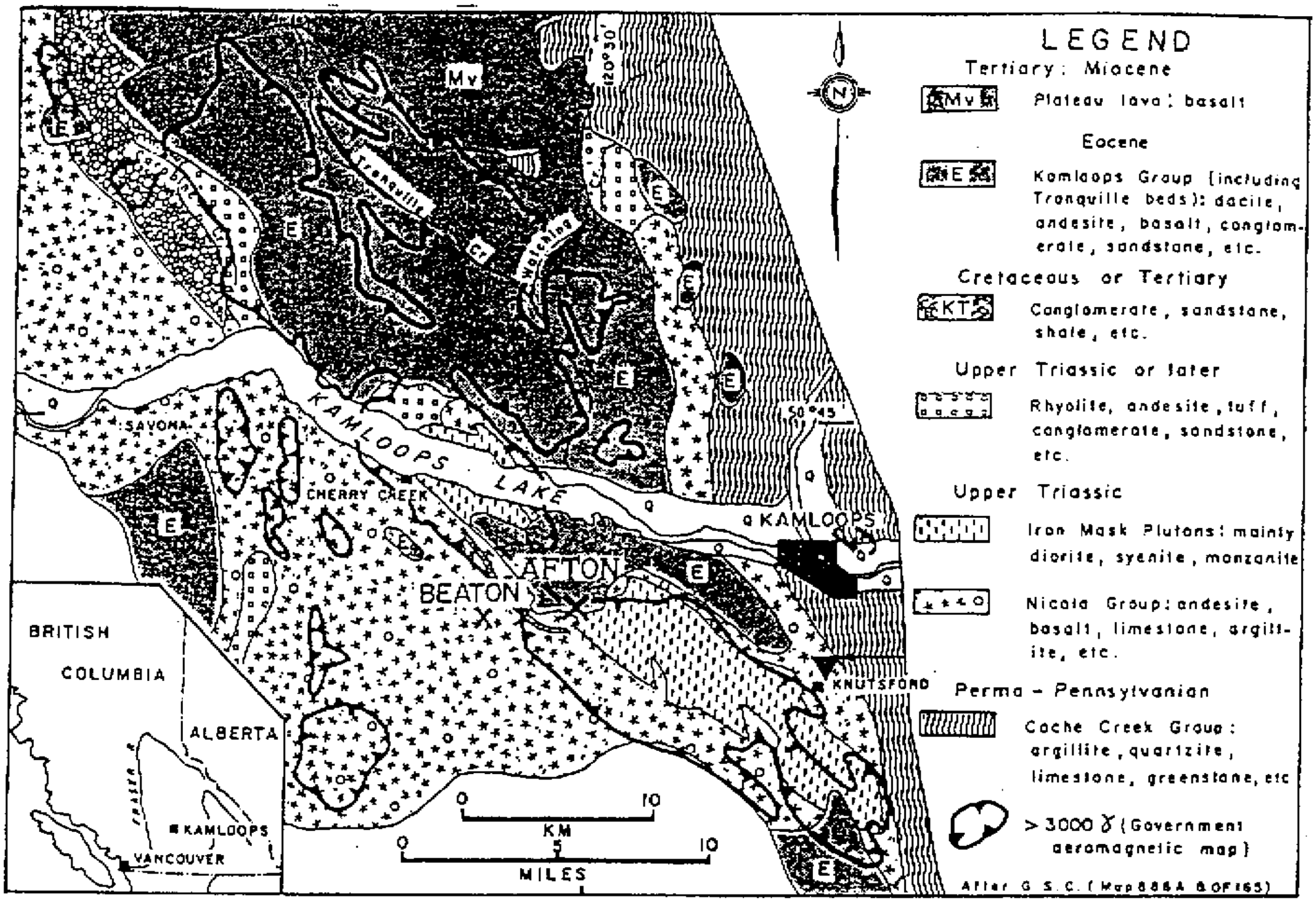
CHARLES BOITARD

LOCATION MAP

KAMLOOPS M.D.			NTS: 092I/10E
			FIG. NO.



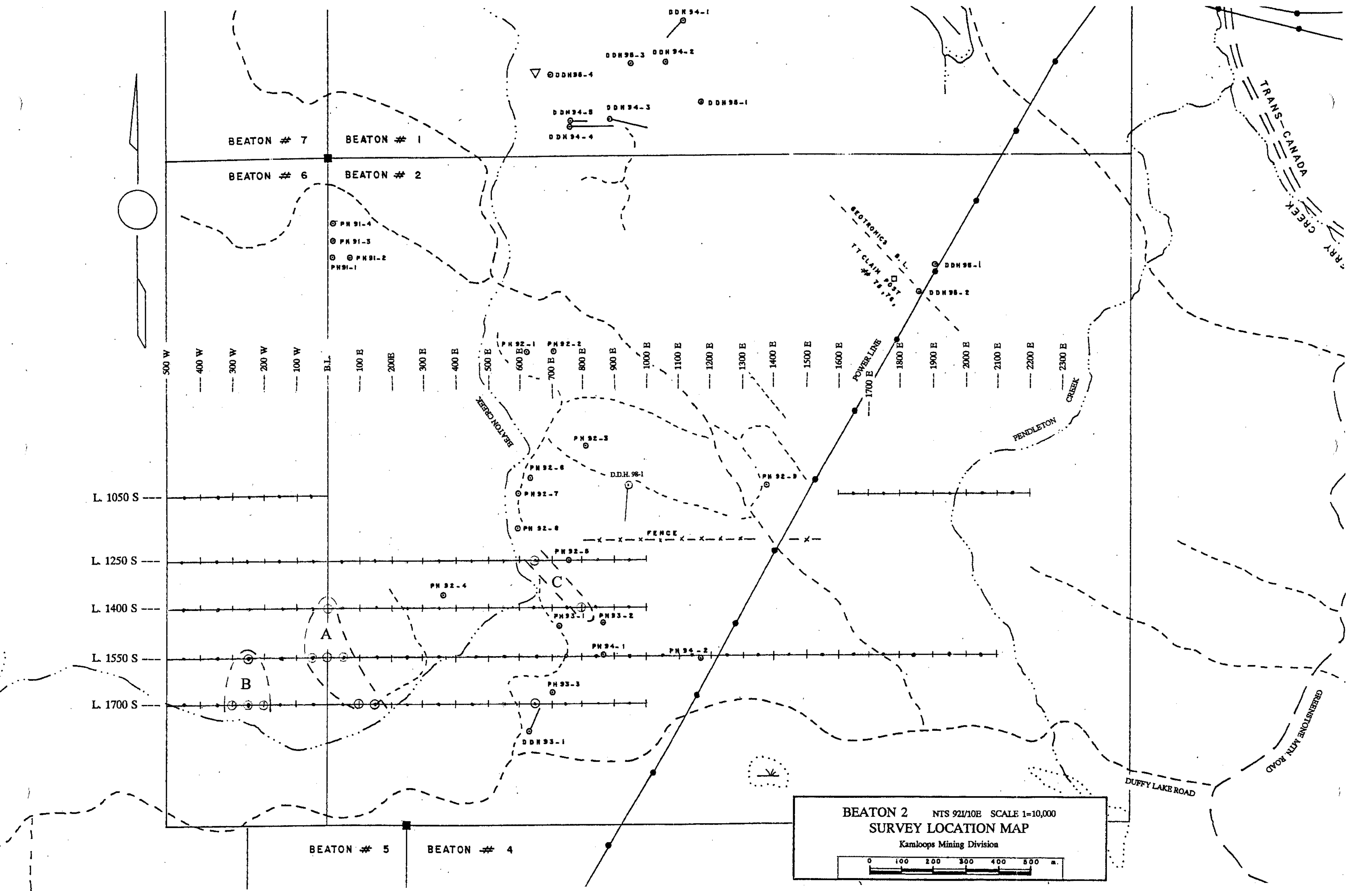
CLAIM MAP 92 I/10E



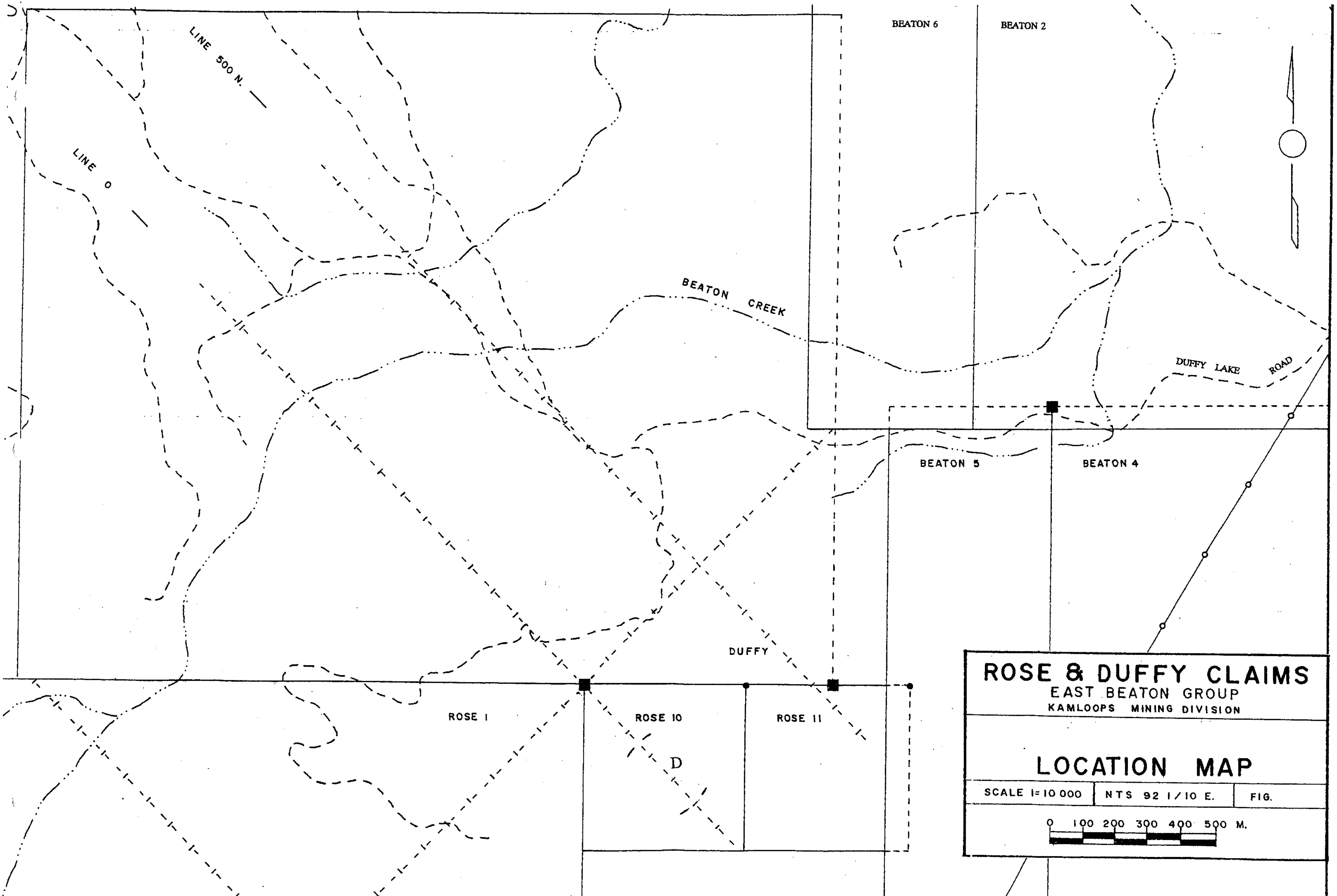
AFTER CARR & REED, 1976

REGIONAL GEOLOGY

KAMLOOPS M.D.			NTS: 092I/10E
SCALE AS SHOWN			FIG. NO.



BEATON # 7
BEATON # 1
BEATON # 6
BEATON # 2
BEATON # 5
BEATON # 4
DDH 94-1
DDH 94-2
DDH 98-3
DDH 98-4
DDH 98-1
DDH 94-5
DDH 94-3
DDH 94-4
PH 91-4
PH 91-3
PH 91-2
PH91-1
500 W
400 W
300 W
200 W
100 W
B.L.
100 E
200E
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
1100 E
1200 E
1300 E
1400 E
1500 E
1600 E
1700 E
1800 E
1900 E
2000 E
2100 E
2200 E
2300 E
PH 92-1
PH 92-2
PH 92-3
PH 92-6
PH 92-7
PH 92-8
PH 92-9
PH 92-5
PH 92-4
D.D.H. 98-1
FENCE
BEATON CREEK
POWER LINE
GEOTRONICS B.L.
TT CLAIM POST # 78,76,
DDH 98-1
DDH 98-2
TRANS-CANADA
CREEK
PENDLETON CREEK
L. 1050 S
L. 1250 S
L. 1400 S
L. 1550 S
L. 1700 S
A
B
C
PH 93-1
PH 93-2
PH 94-1
PH 94-2
PH 93-3
DDH 93-1
DUFFY LAKE ROAD
GREENSTONE MTN. ROAD
BEATON 2 NTS 92I/10E SCALE 1=10,000
SURVEY LOCATION MAP
Kamloops Mining Division
0 100 200 300 400 500 m.



LINE 500 N.
LINE 0
BEATON 6
BEATON 2
BEATON CREEK
DUFFY LAKE ROAD
BEATON 5
BEATON 4
DUFFY
ROSE I
ROSE 10
ROSE 11
D
ROSE & DUFFY CLAIMS
EAST BEATON GROUP
KAMLOOPS MINING DIVISION
LOCATION MAP
SCALE 1=10 000
NTS 92 I/10 E.
FIG.
0 100 200 300 400 500 M.

1.0 INTRODUCTION

'Mobile Metal Ions' is a term used to describe ions which have moved in the weathering zone and that are only weakly or loosely attached to surface soil particles. It is a widely-held belief that these Mobile Metal Ions are transported from deeply-buried ore bodies to the surface. Studies from Australia and overseas have shown that such Mobile Metal Ions are useful in locating buried mineralization. Mobile Metal Ions are generally at very low concentrations in the soil. To successfully interpret these weak signals, a series of very carefully quality controlled steps have been developed that, when put together, constitute an integrated package **'The MMI Process'.**

The steps which are necessary to ensure the successful application of Mobile Metal Ion geochemistry for mineral exploration include:

- A field, commodity and exploration situation appropriate for application of MMI geochemistry;
- An understanding of landform and regolith relationships;
- Application of appropriate specialized digestions;
- Access to advanced ICP-MS analytical equipment/techniques; and
- Correct interpretation of the partial extraction analytical data.

Detailed information on a number of these steps, remains confidential. At this point in the development of MMI technology and its role in exploration, orientation surveys are recommended, where possible, to develop a level of confidence for any particular prospect or project area.

Currently, the optimum application for MMI geochemistry is to define specific mineralization targets for detailed drilling, making broad reconnaissance RAB programmes redundant. In this scenario, the assumption is that a number of target areas have been defined and MMI is used to prioritize and more accurately define targets for RC drill programmes.

Developmental work is ongoing to allow extension of the technique to a regional application, and ultimately a target definition role is envisaged. Research is also underway to explore its applicability down hole.

Integral to the successful transition to these new applications will be the continued development in the understanding of Mobile Metal Ion anomalies and a competitive cost structure allowing the technique to deliver cost effective exploration programmes aimed at reducing first pass drilling campaigns. Both matters have been addressed via ongoing research programmes, and the initiative to Licence commercial laboratories to undertake MMI digestions and analyses on a non-exclusive basis.

2.0 BACKGROUND INFORMATION

The key attributes of Mobile Metal Ion surface soil geochemical anomalies include:

- Constrained, precise anomalies, vertically above mineralization and occasionally at up-dip projection positions on the surface;
- Commodity elements respond reducing the need for pathfinders;
- The anomalies can precisely target base metals mineralization at significant depths (greater than 700 m);
- The incidence of false anomalies is very low in comparison to conventional geochemistry;
- Surface soil anomalies are repeatable and persist over time; and
- Anomalies have a better signal to noise ratio related to mineralization in a much wider range of regolith units when compared with conventional techniques.

The Mobile Metal Ion geochemical technique has been developed over the past six years and resulted from a series of 13 case studies where the attributes summarized above were first observed. After this initial field testing in Australia and off-shore, a larger scale research and development initiative was instigated culminating in the establishment of The Geochemistry Research Centre at Technology Park in Perth. In an effort to understand and effectively apply MMI geochemistry to mineral exploration, its first project, The Mechanism of Formation of Mobile Metal Ion Anomalies, was supported by 11 mining companies, WAMTECH and the Western Australian State Government.

It is important to realize that the MMI approach to geochemical exploration is significantly different to that used in conventional surveys. The principal aim of the process is to remove the smallest amount of metal ions from the exterior of soil particles whilst leaving the substrate unaffected. This is the essential difference between MMI and other partial digestion techniques that specifically attack substrates, such as iron oxides and manganese oxides. This approach optimizes the use of improved analytical instrumentation with lower detection limits now available. While absolute metal concentration levels are significantly less than those from 'total digestions', the signal to noise ratios are significantly enhanced using MMI procedures.

Early case studies clearly suggested that, on an empirical basis, better contrast was achieved over a number of different styles of mineralization using MMI when compared to conventional (total) techniques. It was postulated that the very loosely-attached ions were sourced from mineralization and that input from other sources of metals, for example lateritic or lithological contributions would be minimized.

Currently the element suite for MMI analysis includes the following nine elements:

Cu, Pb, Zn, Ni, Cd, Au, Ag, Co, and Pd.

The concept of the MMI Process has been introduced to reinforce the requirement that the method is not simply an analytical technique. It is a series of integrated steps that, when combined correctly and intelligently, is proving to be a powerful addition to the existing exploration geochemistry techniques.

A cautionary note: as initial scepticism starts to abate, history confirms the tendency to regard a new technique as a panacea and usually it is grossly mis-applied. MMI technology will be no different. There is a current practical limit to its usefulness and cost effective application. As MMI TECHNOLOGY's on-going research progresses and a better understanding of the technique continues to develop, those limits will be revised, extended and up-dated in this manual.

3.0 APPROPRIATE LANDFORM AND REGOLITH SITUATIONS

Mobile Metal Ion geochemistry has proved successful in a broad range of landform situations including relict, erosional, and depositional regimes. It is also proving effective in lateritic terrains by identifying primary sources of mineralization from the surface within broader conventional anomalies influenced by specific regolith units.

Surface Mobile Metal Ion geochemistry essentially responds to sources of mineralization, so that weakly-mineralized structures, like subsurface supergene mineralization blankets, are defined at a lower contrast level than the primary zones from which they are derived.

3.1 Relict and Erosional Regimes

Surface regolith units developed on relict and erosional landforms respond well to MMI geochemistry. The key advantage is a superior signal to noise ratio over mineralization. Compared to conventional geochemistry, it allows better focusing on follow-up exploration, either further surface sampling or more precise target drilling. Conventional responses are usually broader and maxima are often not directly over mineralization, particularly in deeply-weathered terrains. MMI responses are more constrained, and provided that the correct background levels are applied when calculating MMI Response Ratio values during interpretation, commodity element anomalies are usually closely related to primary mineralization.

This does not automatically ensure that a commercially-viable deposit is identified beneath each MMI anomaly. However, the success rate for ore-grade drill intercepts early within an exploration programme can be significantly improved.

At an operational level, MMI samples can easily be collected from the surface of these regimes in a straightforward manner as discussed below.

3.2 Depositional Regimes

Surface soils on depositional regimes need to be addressed with extra care. Case studies have shown clearly that the MMI technique extends the range of effective surface soil geochemistry further into more complex transported regolith units, when compared to conventional geochemical techniques. Again it is the superior *signal to noise* or *anomaly to background* responses provided by MMI geochemistry that allow the technique to identify and highlight anomalous responses from mineralization while reducing the effects of spurious background levels.

Terrains with colluvial soils, where coarser components are obvious, usually respond well to the MMI technique. In terrains with extensive alluvium, particularly within larger tracts of sheetwash with intermittent flood activity, care is required with any geochemical technique. MMI anomalies in this terrain type can be of the order of 1 ppb or less. At these analytical levels, great care must be taken to ensure quality of data, and correct interpretation.

An effective *orientation study* is strongly recommended if possible to provide data before embarking on a survey.

4.0 ORIENTATION STUDIES

Although MMI geochemistry is a powerful technique, it should not be regarded as a panacea for exploration. Field inspection can be important to establish whether any major landform or regolith changes are likely to influence the MMI results. Other relevant background material that can contribute to a successful MMI survey programme and interpretation includes: geological maps, aerial photographs, geophysical data including aeromagnetic maps and any interpretation thereof, conventional geochemistry results showing broader anomalies or corridors, and styles of any known mineralization.

As with any geochemical survey, an orientation programme can provide valuable information if a suitable target can be accessed and soils collected at the surface. Prior to any orientation, it is also important for the explorationist to define the parameters for minimum target size, especially when considering sample spacing for future exploration surveys. An important feature of MMI geochemistry is that it essentially responds to primary mineralization. Weakly-mineralized structures may not respond clearly or distinctly to an MMI programme so an orientation should preferably test a target considered significant.

A 50-metre interval sample spacing along lines is recommended for orientation surveys.

To obtain the maximum benefit from the analytical data generated using commercial MMI analyses, response ratios (discussed below) should be calculated. Background samples provide the necessary data to allow meaningful response ratios to be calculated and therefore orientation sampling must include soils collected off the known mineralization.

5.0 SAMPLE DENSITY AND GRID ORIENTATION

Density of sampling is largely influenced by the type and style of mineralization being sought. Narrow higher grade styles require a maximum of 50-m sample intervals along lines spaced according to the required strike length of mineralization considered as an economic target within the specific project area. If the minimum strike length is 200 m, then the maximum line spacing should be 400 m. This is assuming that the target mineralization is likely to produce a geochemical halo, giving rise to an anomaly that may extend further than 200 m (for example along strike of a mineralized structure). However, it is recommended that the line spacing be equal or less than the target mineralization length. Generally for gold targets a sample spacing of 100 m x 50 m will allow a focused drill programme to commence eliminating blanket RAB drilling.

Larger sedimentary styles (for example Mississippi Valley style) can have expanded sample patterns. However, in these cases it is vital that background is also sampled. Very specific targets, for example massive Ni sulphides along basal contacts, have in the past required 25 m x 25 m spacing to allow detailed anomaly definition prior to the first phase of drilling. This pattern density may represent the second or third infill phase of MMI sampling after an initial broader-spaced programme to identify contacts.

One important aspect of incorporating MMI geochemistry into an exploration programme is that it can substantially reduce drilling costs (see Figure 1). If anomalies remain strong along significant strike lengths and more precise targets are desired, it is still more cost effective to undertake infill surface sampling at 50 m x 50 m spacing within the anomalous trend rather than to blanket drill.

5.1 Sampling Grids

Pre-designated sample grids and numbers should be established prior to sampling to avoid irregular sample spacing/numbering which disrupts later data interpretation and any subsequent follow-up work. Sampling should be conducted in a methodical way, preferrably starting from the lowest easting and northing and working upwards. Avoid allocating negative eastings and northings for sample co-ordinates.

For orientation, survey traverses across known targets are ideal. These traverses can be assessed independently; however, it is imperative that background samples are collected for the general area, even at the expense of maintaining a consistent spacing along the line once the mineralized zone has been covered.

6.0 SAMPLE COLLECTION

6.1 Equipment

- A 30-cm diameter plastic garden sieve or kitchen colander with minus 5-mm apertures, available from hardware and super markets, is ideal for sample collection;
- Plastic collection dish with similar diameter and a kitchen floor brush used for cleaning the sieve and dish between samples;
- A bare steel (no paint) garden spade; and
- Plastic snap seal bags, **do not use calico.**

6.2 Sample specification

A 500-gram sample is collected and stored in a plastic bag (a 90 x 150-mm plastic snap seal sample bag is recommended). Once sealed in the snap seal plastic bags, samples should be placed in polyweave sample dispatch bags (maximium 40 per bag). Stored in this manner, samples can be carried on tray-back vehicles during summer without problems and be stored for long periods.

6.3 Sample site

Sample sites should be undisturbed and preferably away from any major contamination: creek beds, drainage, drilling lines, pads, roads, etc. Wind borne contamination should also be eliminated during sample collection by sampling just below the surface.

6.4 Sample collection

It is imperative that during sample collection and handling **no jewellery should be worn,** (for example rings, bracelets, and chains), as this can be a possible major source of contamination. It is advisable that all field and laboratory staff be informed.

The initial step in taking an MMI soil sample requires the surface soil layer to be scraped away eliminating organic matter, debris, and any possible contamination. In undisturbed environments samples are collected approximately 150 to 200 mm below the surface. Before actually taking the soil sample material, the sieve and collection dish should be brushed to eliminate residue from previous samples and preferably flushed with the soil from the new sample site.

XRAL XRAL Laboratories
A Division of SGS Canada Inc.

1885 Leslie Street
Don Mills, Ontario
Canada M3B 3J4
Telephone (416) 445-5755
Fax (416) 445-4152

CERTIFICATE OF ANALYSIS

Work Order: 059401

To: **Green Valley Mine Incorporated**
Attn: **Charles Boitard**

Date : 24/05/00

2245 West 13th Avenue,
VANCOUVER
B.C., CANADA V6K 2S4

Copy 1 to :

Copy 2 to :

P.O. No. :
Project No. :
No. of Samples : 125 SOIL(MMI)
Date Submitted : 26/04/00
Report Comprises : Cover Sheet plus
Pages 1 to 4

Distribution of unused material:
Pulps: Discarded After 90 Days Unless Instructed!!!
Rejects: Discarded After 90 Days Unless Instructed!!!

Certified By :

Dr. Hugh de Souza, General Manager
XRAL Laboratories

ISO 9002 REGISTERED

Report Footer:

L.N.R.	= Listed not received	I.S.	= Insufficient Sample
n.a.	= Not applicable	--	= No result
*INF	= Composition of this sample makes detection impossible by this method		

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 059401 **Date:** 24/05/00 **FINAL**

Element.	Cu	Zn	Cd	Pb	Au	Co	Ni	Pd	Ag
Method.	MMI-A	MMI-A	MMI-A	MMI-A	MMI-B	MMI-B	MMI-B	MMI-B	MMI-B
Det.Lim.	5	5	10	20	0.25	1	5	0.25	0.25
Units.	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
L-1250S-550W	185	238	<10	36	0.39	26	469	<0.25	9.11
L-1250S-500W	673	739	11	37	0.40	23	489	<0.25	8.56
L-1250S-450W	302	574	18	<20	0.49	6	357	<0.25	8.15
L-1250S-400W	163	209	<10	<20	0.57	4	390	<0.25	8.01
L-1250S-350W	279	609	13	<20	<0.25	3	422	<0.25	4.64
L-1250S-300W	892	262	<10	<20	1.39	40	631	<0.25	5.00
L-1250S-250W	320	257	12	<20	0.39	10	578	<0.25	5.05
L-1250S-200W	154	436	<10	105	<0.25	1	370	<0.25	2.95
L-1250S-150W	627	397	<10	<20	0.41	10	351	<0.25	9.08
L-1250S-100W	262	1310	14	<20	<0.25	3	290	<0.25	3.65
L-1250S-50W	160	425	<10	56	<0.25	4	326	<0.25	5.30
L-1250S-0	634	2630	13	<20	<0.25	13	211	<0.25	5.42
L-1250S-50E	819	206	<10	<20	0.33	31	372	<0.25	16.3
L-1250S-100E	410	176	<10	<20	0.31	7	285	<0.25	12.3
L-1250S-150E	466	222	<10	<20	0.50	6	189	<0.25	6.65
L-1250S-200E	172	400	<10	97	<0.25	2	190	<0.25	6.46
L-1250S-250E	865	122	<10	72	2.01	15	246	0.29	12.4
L-1250S-300E	404	104	<10	42	0.30	4	417	<0.25	8.14
L-1250S-350E	978	112	<10	57	0.72	18	285	<0.25	8.26
L-1250S-400E	401	159	20	<20	<0.25	3	315	<0.25	4.00
L-1250S-450E	464	250	13	86	0.43	2	456	<0.25	5.85
L-1250S-500E	582	220	16	<20	0.59	5	269	<0.25	5.14
L-1250S-550E	467	304	<10	<20	0.66	3	366	<0.25	6.94
L-1250S-600E	51	15	<10	<20	0.44	2	1350	<0.25	10.2
L-1250S-650E	1090	139	<10	65	3.34	15	498	0.31	17.4
L-1250S-700E	554	93	<10	52	1.01	11	577	<0.25	7.72
L-1250S-750E	335	806	<10	<20	<0.25	8	311	<0.25	5.06
L-1250S-800E	417	205	<10	<20	0.30	5	426	<0.25	5.64
L-1250S-850E	279	1320	17	<20	0.29	3	382	<0.25	3.46
L-1250S-900E	1040	127	<10	123	2.75	24	361	<0.25	4.85
L-1250S-950E	487	237	15	<20	1.10	24	359	<0.25	4.63
L-1250S-1000E	209	198	<10	25	0.31	18	249	<0.25	3.94
L-1400S-500W	1030	278	19	<20	2.57	42	703	0.43	25.4
L-1400S-450W	720	227	<10	50	1.86	35	627	<0.25	9.31
L-1400S-400W	234	583	<10	<20	0.33	11	472	<0.25	4.74
L-1400S-350W	461	225	<10	<20	1.02	25	549	<0.25	6.77
L-1400S-300W	448	371	10	<20	0.30	14	512	<0.25	9.52
L-1400S-250W	200	92	<10	<20	2.41	9	635	0.34	27.0
L-1400S-200W	832	395	<10	106	0.53	11	77	<0.25	9.53
L-1400S-150W	218	613	<10	<20	<0.25	3	427	0.32	3.90
L-1400S-100W	458	371	<10	101	0.42	14	403	<0.25	4.95
L-1400S-50W	394	595	13	131	<0.25	3	315	<0.25	3.78
L-1400S-B-L-O	522	132	<10	<20	1.78	11	259	0.92	40.4
L-1400S-50E	218	631	<10	<20	<0.25	2	358	<0.25	4.74
L-1400S-100E	1050	175	<10	<20	1.22	53	508	<0.25	7.86

Work Order: 059401 **Date:** 24/05/00 **FINAL**

Element.	Cu	Zn	Cd	Pb	Au	Co	Ni	Pd	Ag
Method.	MMI-A	MMI-A	MMI-A	MMI-A	MMI-B	MMI-B	MMI-B	MMI-B	MMI-B
Det.Lim.	5	5	10	20	0.25	1	5	0.25	0.25
Units.	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
L-1400S-150E	604	220	<10	<20	0.40	35	244	<0.25	3.75
L-1400S-200E	1080	135	<10	<20	<0.25	11	300	0.25	6.00
L-1400S-250E	341	334	<10	63	<0.25	8	318	<0.25	7.71
L-1400S-300E	202	175	<10	81	<0.25	19	341	<0.25	3.90
L-1400S-350E	1440	68	<10	<20	0.54	18	236	0.61	7.25
L-1400S-400E	760	123	<10	<20	0.46	45	488	0.47	7.51
L-1400S-450E	227	302	<10	<20	<0.25	4	402	<0.25	3.42
L-1400S-500E	978	137	<10	<20	0.28	7	547	0.82	17.8
L-1400S-550E	42	24	<10	<20	<0.25	4	664	0.49	19.9
L-1400S-600E	<5	22	<10	<20	<0.25	6	1780	0.34	0.59
L-1400S-650E	<5	72	<10	<20	<0.25	20	3220	0.75	0.53
L-1400S-700E	<5	27	<10	<20	<0.25	16	1520	<0.25	0.63
L-1400S-750E	1080	168	13	58	<0.25	15	68	<0.25	11.7
L-1400S-800E	1960	141	<10	31	0.56	33	53	<0.25	24.5
L-1400S-850E	864	89	<10	168	1.05	52	427	<0.25	5.16
L-1400S-900E	454	482	<10	<20	<0.25	6	306	<0.25	2.58
L-1400S-950E	1280	301	15	<20	0.65	31	216	<0.25	3.76
L-1400S-1000E	447	141	<10	<20	<0.25	6	384	<0.25	6.05
L-1550S-500W	405	407	<10	54	<0.25	8	285	<0.25	12.0
L-1550S-450W	540	212	<10	95	0.39	17	470	<0.25	10.3
L-1550S-400W	353	249	<10	<20	<0.25	4	296	<0.25	5.79
L-1550S-350W	424	253	<10	<20	<0.25	12	289	<0.25	8.55
L-1550S-300W	401	215	<10	<20	0.27	25	672	<0.25	3.36
L-1550S-250W	667	124	<10	76	1.31	25	604	<0.25	7.84
L-1550S-200W	317	401	<10	20	0.28	3	694	<0.25	5.77
L-1550S-150W	522	243	<10	27	0.54	4	927	<0.25	6.85
L-1550S-100W	289	401	<10	55	0.26	5	575	<0.25	8.61
L-1550S-50W	1330	244	<10	39	1.05	13	248	<0.25	17.4
L-1550S-BL-0	1040	126	<10	23	1.01	26	264	0.26	10.0
L-1550S-50E	1980	148	<10	<20	1.97	29	554	0.45	17.2
L-1550S-100E	528	328	13	30	<0.25	11	398	<0.25	4.79
L-1550S-150E	302	710	<10	<20	<0.25	2	445	<0.25	4.60
L-1550S-200E	271	94	<10	137	<0.25	3	805	<0.25	3.75
L-1550S-250E	687	567	<10	<20	0.76	14	406	<0.25	12.1
L-1550S-300E	259	274	<10	<20	<0.25	6	519	<0.25	7.63
L-1550S-350E	188	44	<10	<20	1.44	5	1260	<0.25	18.2
L-1550S-400E	136	33	<10	<20	1.63	6	1280	0.43	24.2
L-1550S-450E	132	192	<10	<20	0.42	6	2560	<0.25	12.8
L-1550S-500E	110	100	<10	79	<0.25	4	4200	<0.25	5.84
L-1550S-550E	550	111	<10	<20	0.35	12	2550	<0.25	11.3
L-1550S-600E	10	22	<10	<20	0.41	10	1950	<0.25	7.80
L-1550S-650E	<5	10	<10	24	<0.25	9	1080	0.39	3.00
L-1550S-700E	189	243	<10	62	0.34	6	387	<0.25	10.1
L-1550S-750E	319	227	<10	<20	<0.25	2	492	<0.25	7.05
L-1550S-800E	278	70	<10	93	0.41	9	479	<0.25	5.87

XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 059401 **Date:** 24/05/00 **FINAL**

Element.	Cu	Zn	Cd	Pb	Au	Co	Ni	Pd	Ag
Method.	MMI-A	MMI-A	MMI-A	MMI-A	MMI-B	MMI-B	MMI-B	MMI-B	MMI-B
Det.Lim.	5	5	10	20	0.25	1	5	0.25	0.25
Units.	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
L-1550S-850E	406	331	13	37	0.35	11	264	<0.25	7.93
L-1550S-900E	218	567	<10	51	<0.25	9	280	<0.25	3.67
L-1550S-950E	132	302	<10	<20	0.29	5	389	<0.25	6.68
L-1550S-1000E	215	704	<10	<20	<0.25	15	335	<0.25	5.85
L-1700S-50WW	150	191	<10	52	<0.25	2	2490	<0.25	6.55
L-1700S-450W	234	101	<10	<20	0.45	11	759	<0.25	6.74
L-1700S-400W	616	182	<10	41	0.42	5	3070	<0.25	9.57
L-1700S-350W	121	27	<10	<20	0.91	4	2030	0.56	18.8
L-1700S-300W	399	55	<10	<20	1.70	5	1600	0.60	21.2
L-1700S-250W	62	24	<10	22	0.99	4	2010	0.51	22.4
L-1700S-200W	795	149	<10	<20	1.62	18	476	0.39	15.9
L-1700S-150W	142	150	<10	<20	<0.25	4	549	<0.25	8.93
L-1700S-100W	253	599	<10	<20	<0.25	6	416	<0.25	7.14
L-1700S-50W	257	479	<10	<20	<0.25	2	665	<0.25	11.0
L-1700S-BL-O	263	102	<10	68	<0.25	15	6720	<0.25	12.3
L-1700S-50E	684	112	<10	<20	1.58	44	2460	0.36	12.5
L-1700S-100E	1170	208	<10	51	1.35	25	666	0.41	10.0
L-1700S-150E	1890	186	<10	<20	4.01	41	739	1.43	58.5
L-1700S-200E	272	72	<10	<20	0.58	8	1370	0.28	7.92
L-1700S-250E	303	65	<10	<20	0.95	5	1550	0.44	8.64
L-1700S-300E	128	41	<10	<20	0.78	2	2680	0.44	11.8
L-1700S-350E	133	39	<10	<20	1.06	4	1460	0.45	16.2
L-1700S-400E	267	35	<10	<20	1.17	2	931	0.58	15.3
L-1700S-450E	76	18	<10	<20	0.51	7	572	<0.25	14.2
L-1700S-500E	573	246	<10	123	0.48	24	571	<0.25	12.5
L-1700S-550E	320	339	<10	<20	<0.25	2	531	<0.25	4.17
L-1700S-600E	374	142	<10	<20	0.26	9	640	<0.25	6.05
L-1700S-650E	1740	248	12	<20	1.48	22	285	0.45	12.8
L-1700S-700E	1030	94	<10	<20	0.88	50	576	<0.25	6.97
L-1700S-750E	634	123	<10	<20	0.38	5	388	<0.25	8.92
L-1700S-800E	508	171	<10	31	0.39	9	409	<0.25	8.22
L-1700S-850E	318	132	11	<20	0.51	6	623	<0.25	5.97
L-1700S-900E	280	235	<10	68	<0.25	12	272	<0.25	6.88
L-1700S-950E	929	84	11	<20	2.84	36	301	<0.25	13.6
L-1700S-1000E	346	104	<10	<20	0.50	16	436	<0.25	5.00
*Dup L-1250S-550W	149	197	<10	46	<0.25	22	405	<0.25	7.04
*Dup L-1250S-50E	715	172	<10	47	<0.25	37	372	<0.25	13.4
*Dup L-1250S-650E	1040	123	<10	99	3.05	17	512	<0.25	17.0
*Dup L-1400S-300W	392	321	<10	<20	0.30	12	452	<0.25	11.6
*Dup L-1400S-300E	196	162	<10	21	<0.25	23	386	<0.25	3.87
*Dup L-1400S-900E	409	450	<10	<20	<0.25	6	311	<0.25	2.95
*Dup L-1550S-50W	1330	231	<10	102	1.20	15	287	<0.25	19.8
*Dup L-1550S-550E	575	111	<10	<20	0.80	14	2930	<0.25	12.8
*Dup L-1700S-400W	569	156	<10	<20	0.44	5	3130	0.30	8.90
*Dup L-1700S-200E	244	66	<10	<20	0.53	7	1230	<0.25	7.09

XRAL Laboratories
A Division of SGS Canada Inc.

1885 Leslie Street
Don Mills, Ontario
Canada M3B 3J4
Telephone (416) 445-5755
Fax (416) 445-4152

CERTIFICATE OF ANALYSIS

Work Order: 056337

To: **Green Valley Mine Incorporated**
Attn: Charles Boitard

Date : 30/08/99

2245 West 13th Avenue,
VANCOUVER
B.C., CANADA V6K 2S4

Copy 1 to :

Copy 2 to :

P.O. No. :
Project No. :
No. of Samples : 34 SOIL
Date Submitted : 16/08/99
Report Comprises : Cover Sheet plus
Pages 1 to 2

Distribution of unused material:
Pulps: STORE
Rejects: STORE

Certified By :

Dr. Hugh de Souza, General Manager
XRAL Laboratories

ISO 9002 REGISTERED

Report Footer:

L.N.R.	= Listed not received	I.S.	= Insufficient Sample
n.a.	= Not applicable	--	= No result
*INF	= Composition of this sample makes detection impossible by this method		

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

XRAL XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 056337 **Date:** 30/08/99 **FINAL**

Element.	Cu	Zn	Cd	Pb	Au	Co	Ni	Pd	Ag
Method.	MMI-A	MMI-A	MMI-A	MMI-A	MMI-B	MMI-B	MMI-B	MMI-B	MMI-B
Det.Lim.	5	5	10	20	0.25	1	5	0.25	0.25
Units.	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
L1050S 1650 E	816	63	< 10	21	0.66	3	188	0.25	10.6
L1050S 1700 E	591	54	14	57	0.71	17	282	<0.25	5.75
L1050S 1750 E	613	159	12	< 20	0.41	11	479	<0.25	6.32
L1050S 1800 E	503	122	12	90	0.47	26	244	<0.25	7.61
*Dup L1300E 4550 N	529	129	17	29	0.27	7	400	<0.25	6.82
*Dup L1600E 4700 N	383	549	< 10	<20	0.30	22	681	<0.25	8.95
*Dup L1800E 4750 N	469	113	11	60	0.88	3	916	0.27	13.5

XRAL **XRAL Laboratories**
A Division of SGS Canada Inc.

1885 Leslie Street
Don Mills, Ontario
Canada M3B 3J4
Telephone (416) 445-5755
Fax (416) 445-4152

CERTIFICATE OF ANALYSIS

Work Order: 058820

To: **Green Valley Mine Incorporated**
Attn: **Charles Boitard**

Date : 27/03/00

2245 West 13th Avenue,
VANCOUVER
B.C., CANADA V6K 2S4

Copy 1 to :

Copy 2 to :

P.O. No.	:	
Project No.	:	
No. of Samples	:	13 SOIL(MMI)
Date Submitted	:	02/03/00
Report Comprises	:	Cover Sheet plus Pages 1 to 1

Distribution of unused material:
Pulps: No instructions.
Rejects: No instructions.

Certified By :

Dr. Hugh de Souza, General Manager
XRAL Laboratories

ISO 9002 REGISTERED

Report Footer:

L.N.R.	= Listed not received	I.S.	= Insufficient Sample
n.a.	= Not applicable	--	= No result
*INF	= Composition of this sample makes detection impossible by this method		

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 058820 **Date:** 27/03/00 **FINAL**

Element.	Cu	Zn	Cd	Pb	Au	Co	Ni	Pd	Ag
Method.	MMI-A	MMI-A	MMI-A	MMI-A	MMI-B	MMI-B	MMI-B	MMI-B	MMI-B
Det.Lim.	5	5	10	20	0.25	1	5	0.25	0.25
Units.	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
ROSE-L.O-BL-0	104	152	<10	32	<0.25	2	5440	<0.25	2.85
ROSE-L.O-50E	132	97	<10	76	0.26	3	3570	<0.25	6.69
ROSE-L.O-100E	8	10	<10	<20	<0.25	89	2560	0.40	2.81
ROSE-L.O-150E	6	11	<10	<20	<0.25	14	2430	0.60	4.25
ROSE-L.O-200E	29	35	<10	<20	0.91	3	1320	0.34	13.1
ROSE-L.O-250E	658	157	<10	34	0.79	9	5470	0.26	13.6
ROSE-L.O-300E	356	246	<10	<20	0.45	6	7190	<0.25	11.5
ROSE-L.O-350E	715	198	<10	95	0.87	35	7670	<0.25	7.41
ROSE-L.O-400E	233	178	<10	60	<0.25	8	5770	<0.25	6.75
ROSE-L.O-450E	119	170	<10	92	<0.25	3	5500	<0.25	5.75
ROSE-L.O-500E	178	119	<10	51	<0.25	12	5530	<0.25	6.52
ROSE-L.O-550E	106	105	<10	<20	0.58	13	1960	<0.25	7.35
ROSE-L.O-600E	94	597	<10	38	<0.25	2	2060	<0.25	4.87
*Dup ROSE-L.O-BL-0	91	152	<10	36	<0.25	3	5940	<0.25	2.61
*Dup ROSE-L.O-600E	92	560	<10	40	<0.25	2	1930	<0.25	4.63

XRAL **XRAL Laboratories**
A Division of SGS Canada Inc.

1885 Leslie Street
Don Mills, Ontario
Canada M3B 3J4
Telephone (416) 445-5755
Fax (416) 445-4152

CERTIFICATE OF ANALYSIS

Work Order: 058819

To: **Green Valley Mine Incorporated**
Attn: **Charles Boitard**

Date : 27/03/00

2245 West 13th Avenue,
VANCOUVER
B.C., CANADA V6K 2S4

Copy 1 to :

Copy 2 to :

P.O. No. :
Project No. :
No. of Samples : 42 SOIL(MMI)
Date Submitted : 02/03/00
Report Comprises : Cover Sheet plus
Pages 1 to 2

Distribution of unused material:
Pulps: No instructions.
Rejects: No instructions.

Certified By :

Dr. Hugh de Souza, General Manager
XRAL Laboratories

ISO 9002 REGISTERED

Report Footer: L.N.R. = Listed not received; I.S. = Insufficient Sample
n.a. = Not applicable; -- = No result
*INF = Composition of this sample makes detection impossible by this method
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

XRAL XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 058819 **Date:** 27/03/00 **FINAL**

Element.	Cu	Zn	Cd	Pb	Au	Co	Ni	Pd	Ag
Method.	MMI-A	MMI-A	MMI-A	MMI-A	MMI-B	MMI-B	MMI-B	MMI-B	MMI-B
Det.Lim.	5	5	10	20	0.25	1	5	0.25	0.25
Units.	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
BEATON2:L1050S-500W	453	131	13	148	1.06	17	644	<0.25	6.34
BEATON2:L1050S-450W	294	370	15	44	0.37	6	319	<0.25	4.34
BEATON2:L1050S-400W	316	137	<10	97	<0.25	9	629	<0.25	3.26
BEATON2:L1050S-350W	338	757	12	44	0.27	5	329	<0.25	4.74
BEATON2:L1050S-300W	444	260	11	70	0.45	15	315	<0.25	7.36
BEATON2:L1050S-250W	861	143	12	87	2.46	26	468	<0.25	9.61
BEATON2:L1050S-200W	636	154	12	57	1.50	19	341	<0.25	6.33
BEATON2:L1050S-150W	616	162	<10	<20	0.80	19	612	<0.25	7.95
BEATON2:L1050S-100W	373	280	18	67	<0.25	11	303	<0.25	6.68
BEATON2:L1050S-50W	581	284	13	46	0.50	28	345	<0.25	9.97
BEATON2:L1050S-BLO	306	173	<10	65	0.39	12	568	<0.25	5.19
BEATON2:L1050S-1850E	527	85	<10	127	0.48	20	405	<0.25	6.78
BEATON2:L1050S-1900E	883	291	18	165	0.74	14	336	<0.25	14.0
BEATON2:L1050S-1950E	624	363	15	24	0.89	17	368	<0.25	6.60
BEATON2:L1050S-2000E	266	210	12	88	<0.25	4	393	<0.25	2.65
BEATON2:L1050S-2050E	1010	101	15	27	1.41	7	194	<0.25	6.62
BEATON2:L1050S-2100E	1420	126	13	166	2.74	10	218	0.67	10.9
BEATON2:L1050S-2150E	675	130	16	30	0.56	12	252	<0.25	7.18
BEATON2:L1050S-2200E	541	423	10	62	0.73	6	258	<0.25	8.22
BEATON2:L1550S-1000E	341	147	11	46	<0.25	8	519	<0.25	5.79
BEATON2:L1550S-1050E	538	170	<10	49	0.27	4	421	<0.25	4.33
BEATON2:L1550S-1100E	819	143	14	80	0.74	19	511	<0.25	6.95
BEATON2:L1550S-1150E	347	166	12	44	<0.25	13	359	<0.25	8.10
BEATON2:L1550S-1200E	178	734	17	146	<0.25	8	229	<0.25	4.21
BEATON2:L1550S-1250E	383	108	<10	49	0.48	10	845	<0.25	11.3
BEATON2:L1550S-1300E	833	146	17	71	0.88	19	551	0.35	5.52
BEATON2:L1550S-1350E	749	116	<10	60	1.05	16	442	0.31	10.7
BEATON2:L1550S-1400E	469	137	20	<20	0.50	6	303	<0.25	9.48
BEATON2:L1550S-1450E	689	86	<10	136	0.49	3	185	<0.25	7.58
BEATON2:L1550S-1500E	590	143	12	110	0.87	11	406	<0.25	7.51
BEATON2:L1550S-1550E	256	57	<10	50	<0.25	5	328	<0.25	5.95
BEATON2:L1550S-1600E	278	100	18	<20	<0.25	4	252	<0.25	6.99
BEATON2:L1550S-1650E	781	68	<10	58	0.55	13	241	<0.25	8.37
BEATON2:L1550S-1700E	527	213	<10	102	0.48	19	708	<0.25	6.30
BEATON2:L1550S-1750E	336	223	15	53	<0.25	5	298	<0.25	6.65
BEATON2:L1550S-1800E	431	156	<10	83	0.32	6	306	<0.25	6.70
BEATON2:L1550S-1850E	74	32	<10	99	0.73	<1	187	0.39	30.0
BEATON2:L1550S-1900E	894	125	13	<20	0.96	7	211	0.27	12.9
BEATON2:L1550S-1950E	828	125	19	<20	0.57	14	281	<0.25	8.25
BEATON2:L1550S-2000E	472	107	14	41	0.65	8	496	<0.25	7.70
BEATON2:L1550S-2050E	<5	7	<10	<20	0.26	2	514	<0.25	4.79
BEATON2:L1550S-2100E	1040	371	19	109	1.08	17	287	0.53	4.71
*Dup BEATON2:L1050S-	426	120	11	118	0.85	16	672	<0.25	6.47
*Dup BEATON2:L1050S-	895	270	16	149	0.87	17	406	<0.25	16.0
*Dup BEATON2:L1550S-	375	110	11	57	0.53	12	941	<0.25	11.8

ROSSBACHER LABORATORY LTD.

CERTIFICATE OF ANALYSIS

2225 Springer Ave., Burnaby,
British Columbia, Can. V5B 3N1
Ph:(604)299-6910 Fax:299-6252

To : ~~LAKEWOOD MINING LTD.~~ Green Valley
2245 W 13TH AVE.,
VANCOUVER, B.C.

Project: PHB PANNED CONS.

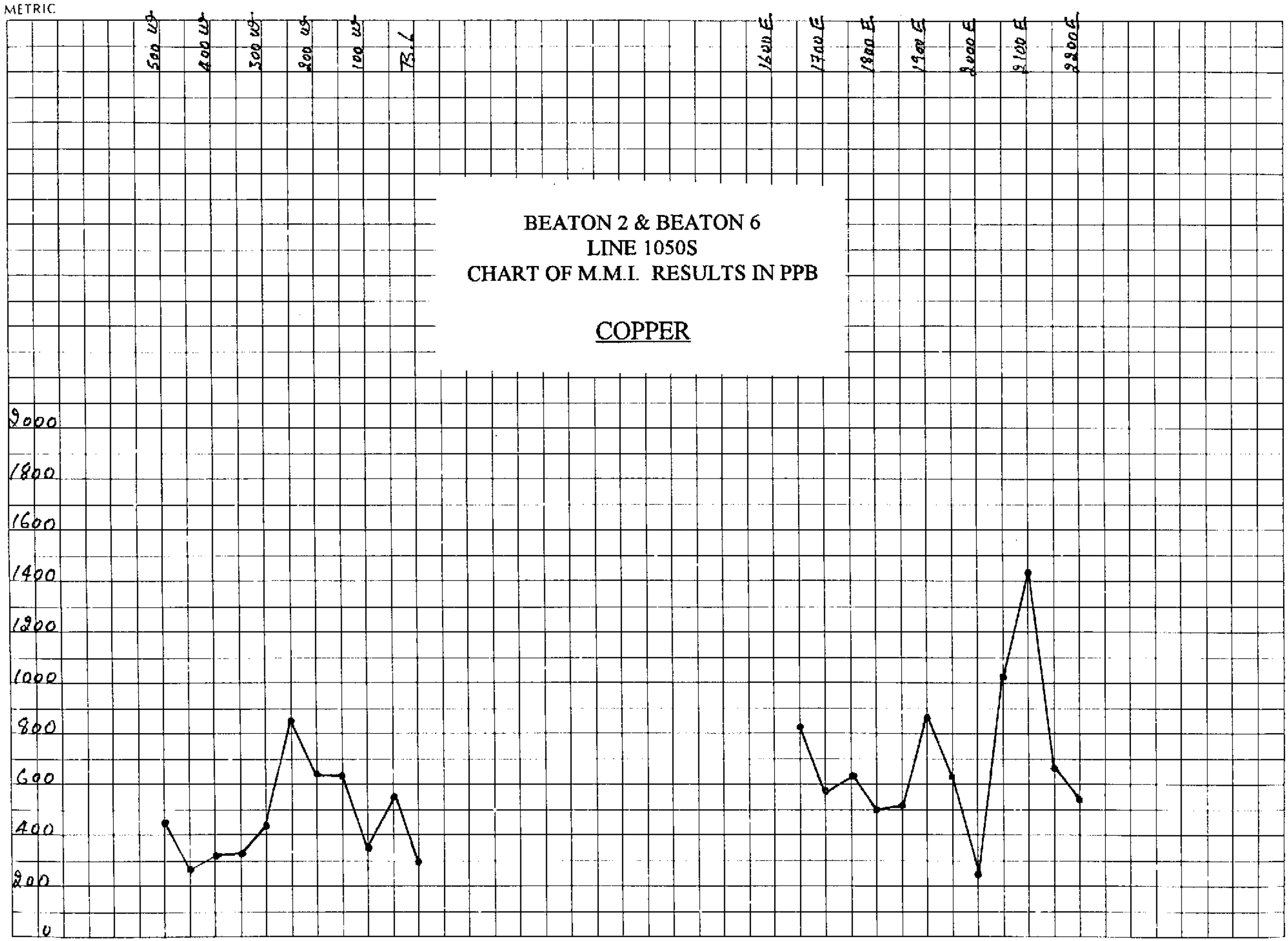
Type of Analysis: Geochemical

Certificate: 92462 PC
Invoice: 40056
Date Entered: 92-12-16
File Name: MEN92462.PC
Page No.: 1

PRE FIX	SAMPLE NAME	Tot Wt Sample	wt.gm. PanCon	PPB Au		oz/t Au
PC	B92-7 PAN 400 - 410		26.91	10		
PC	B92-8 PAN 300 - 310		0.35	70		
PC	B92-8 PAN 320 - 330		35.03	< 5		
PC	B92-8 PAN 330 - 340		40.04	< 5		
PC	B92-8 PAN 340 - 350		23.43	5		
PC	B92-8 PAN 350 - 360	3220g	28.52	170000	*)	4.85
PC	B92-8 PAN 360 - 370		37.02	10		
PC	B92-8 PAN 370 - 380		15.48	1200		
PC	B92-8 PAN 380 - 390		31.60	60		

Gold analysis on panned concentrates.
*) oz/t gold value as converted from PPB result.

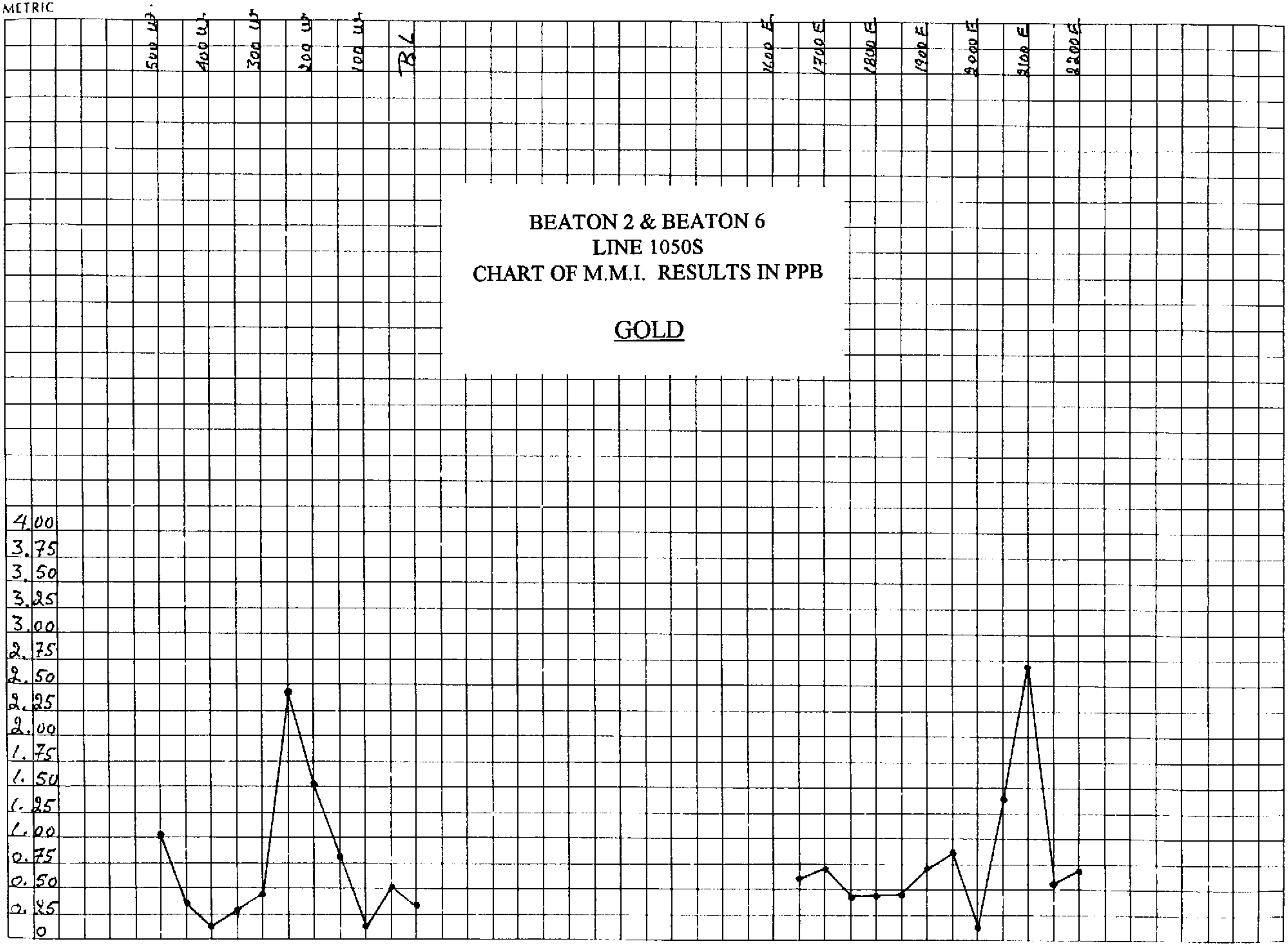
CERTIFIED BY : [signature]



BEATON 2 & BEATON 6
LINE 1050S
CHART OF M.M.I. RESULTS IN PPB

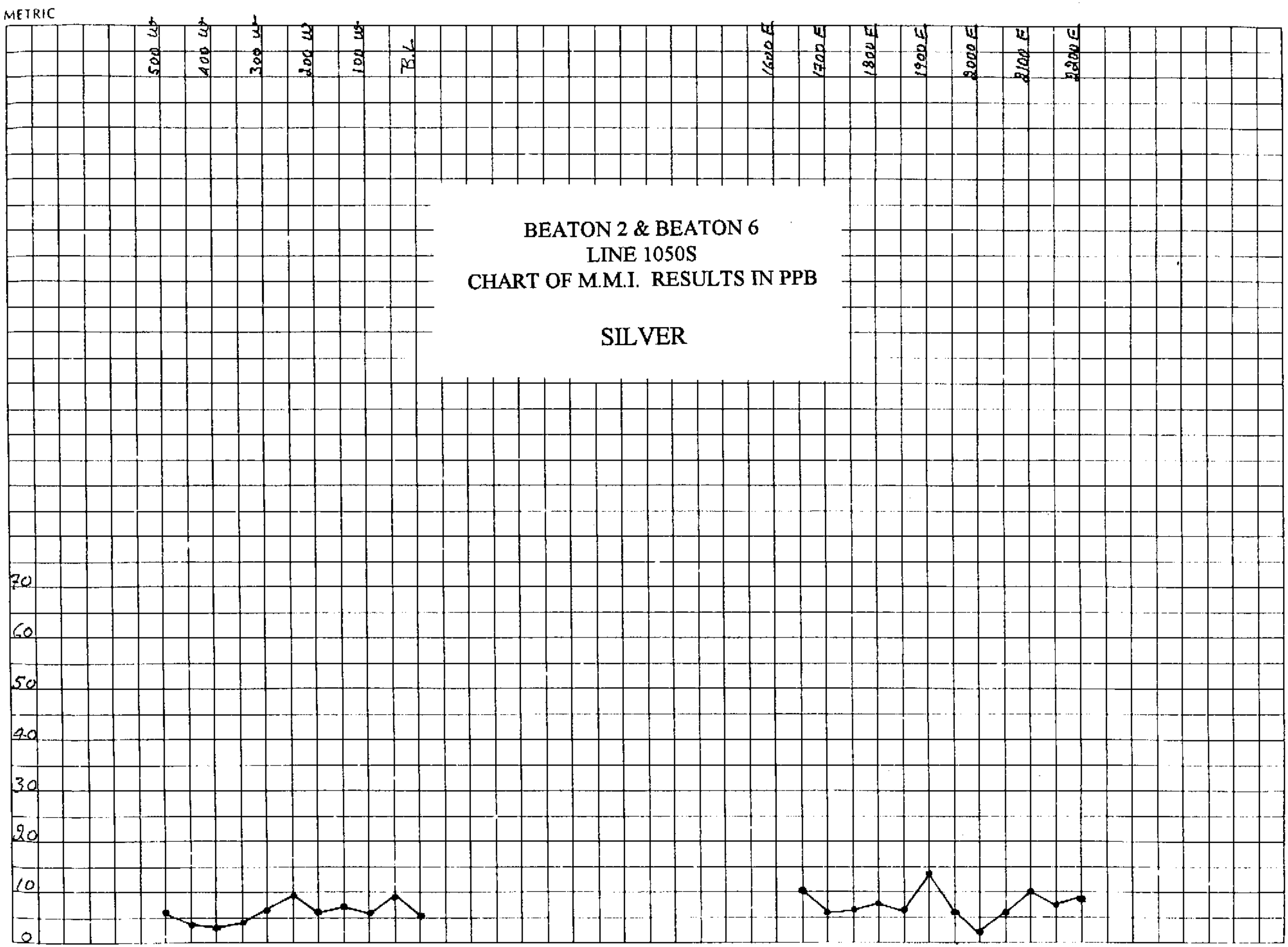
COPPER

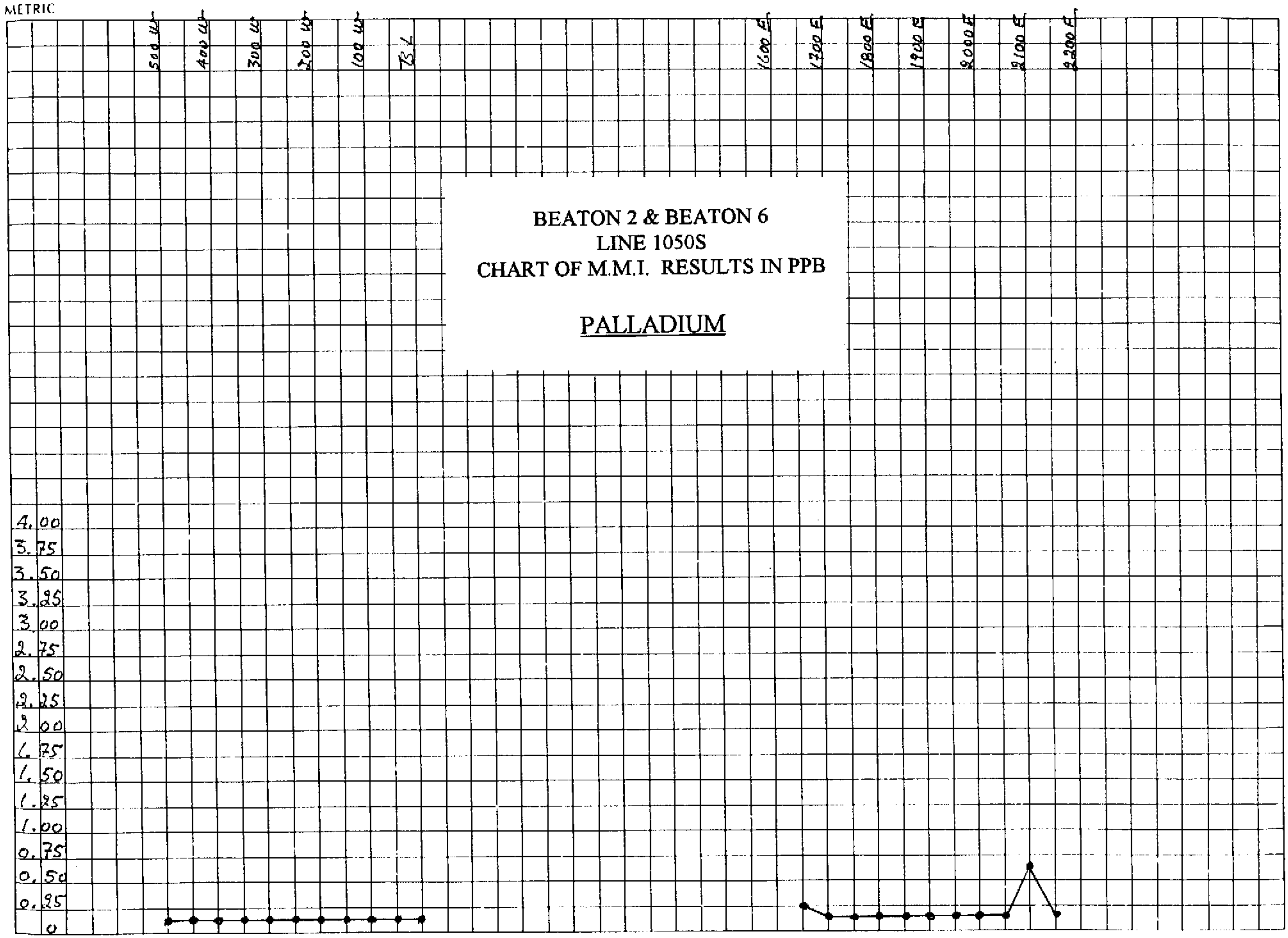
METRIC



BEATON 2 & BEATON 6
LINE 1050S
CHART OF M.M.I. RESULTS IN PPB

GOLD


METRIC
500 W
400 W
300 W
200 W
100 W
B.L.
1600 E
1700 E
1800 E
1900 E
2000 E
2100 E
2200 E
BEATON 2 & BEATON 6
LINE 1050S
CHART OF M.M.I. RESULTS IN PPB
SILVER
70
60
50
40
30
20
10
0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400 W
300 W
200 W
100 W
BL
1600 E
1700 E
1800 E
1900 E
2000 E
2100 E
2200 E
BEATON 2 & BEATON 6
LINE 1050S
CHART OF M.M.I. RESULTS IN PPB
PALLADIUM
4.00
3.75
3.50
3.25
3.00
2.75
2.50
2.25
2.00
1.75
1.50
1.25
1.00
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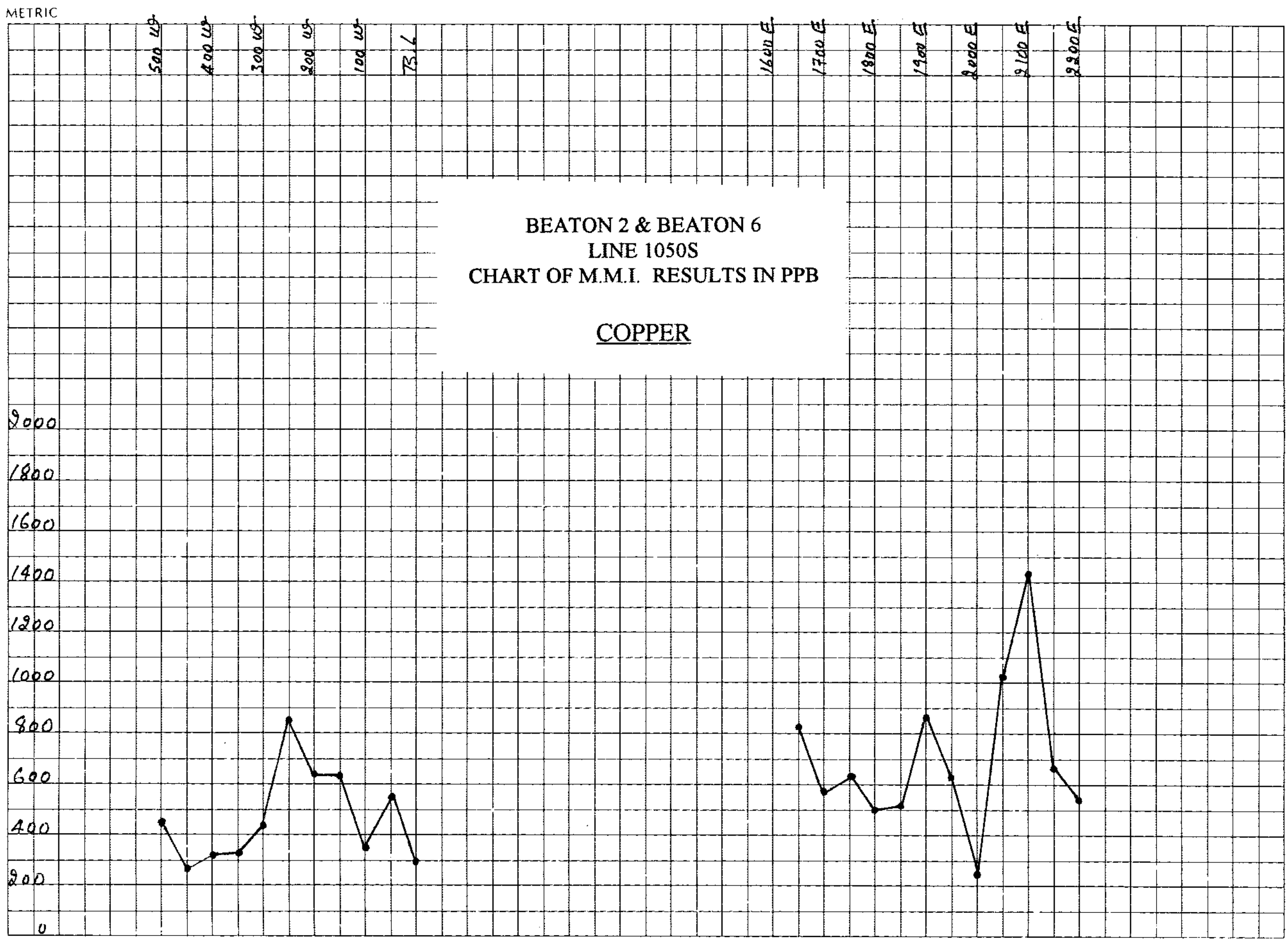
0.50
0.25
0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200 W
100 W
BL
1600 E
1700 E
1800 E
1900 E
2000 E
2100 E
2200 E
BEATON 2 & BEATON 6
LINE 1050S
CHART OF M.M.I. RESULTS IN PPB
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2000
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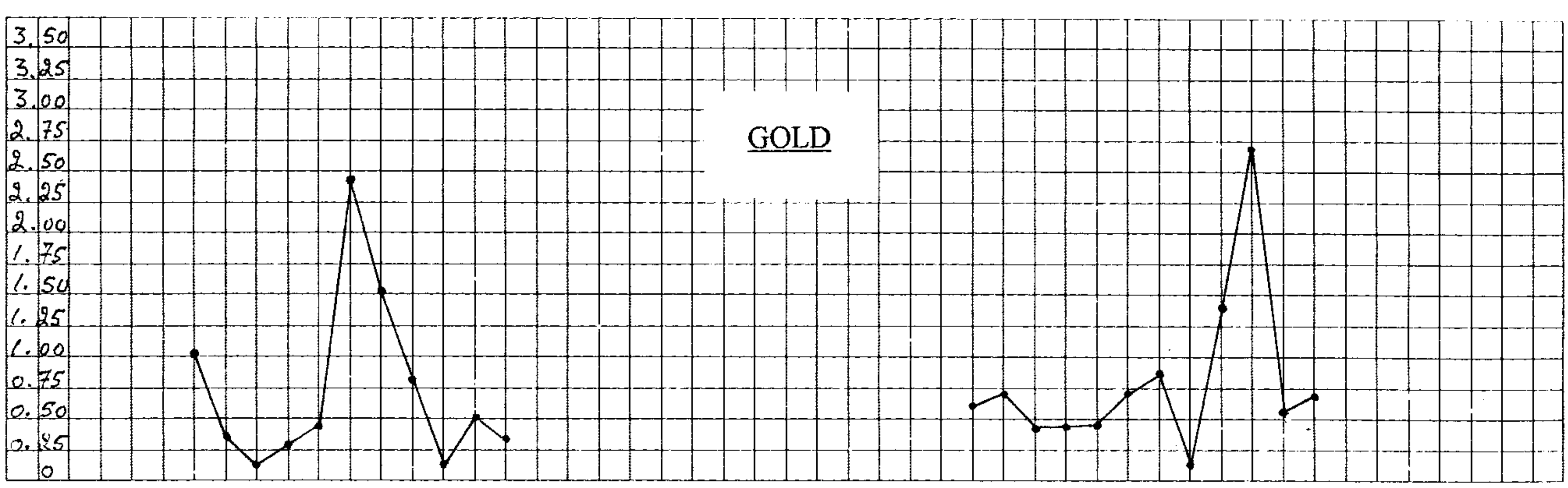
1600
1400
1200
1000
800
600
400
200
0


GOLD
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3.00
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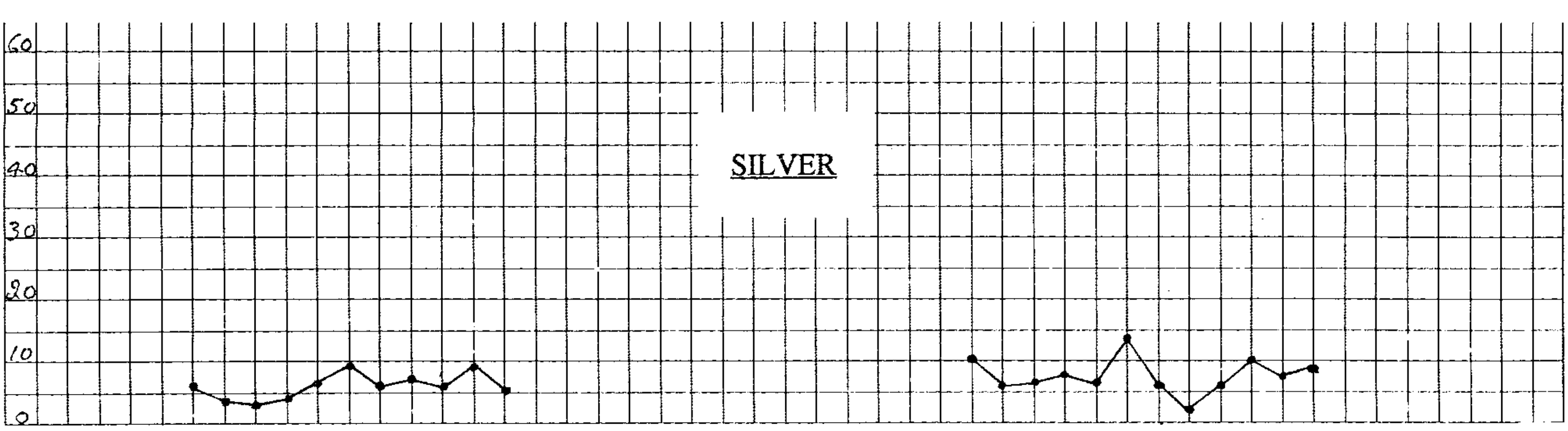
1.00
0.75
0.50
0.25
0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10
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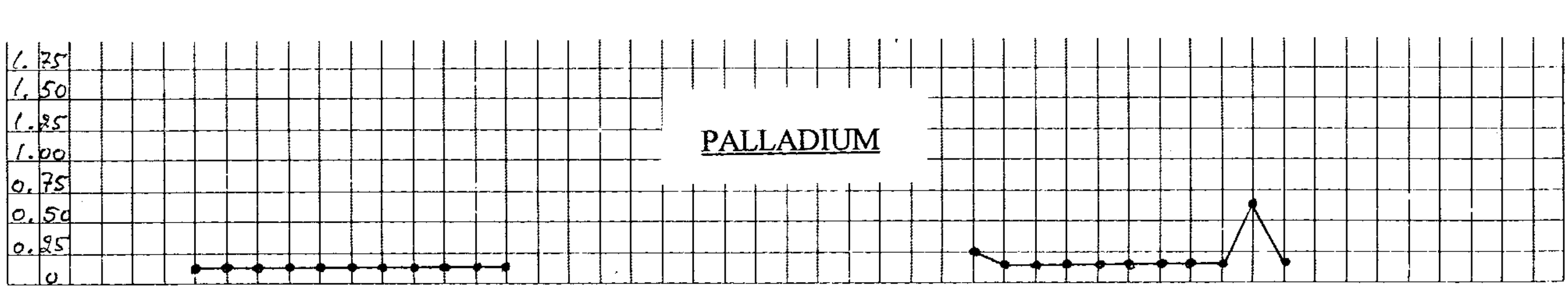
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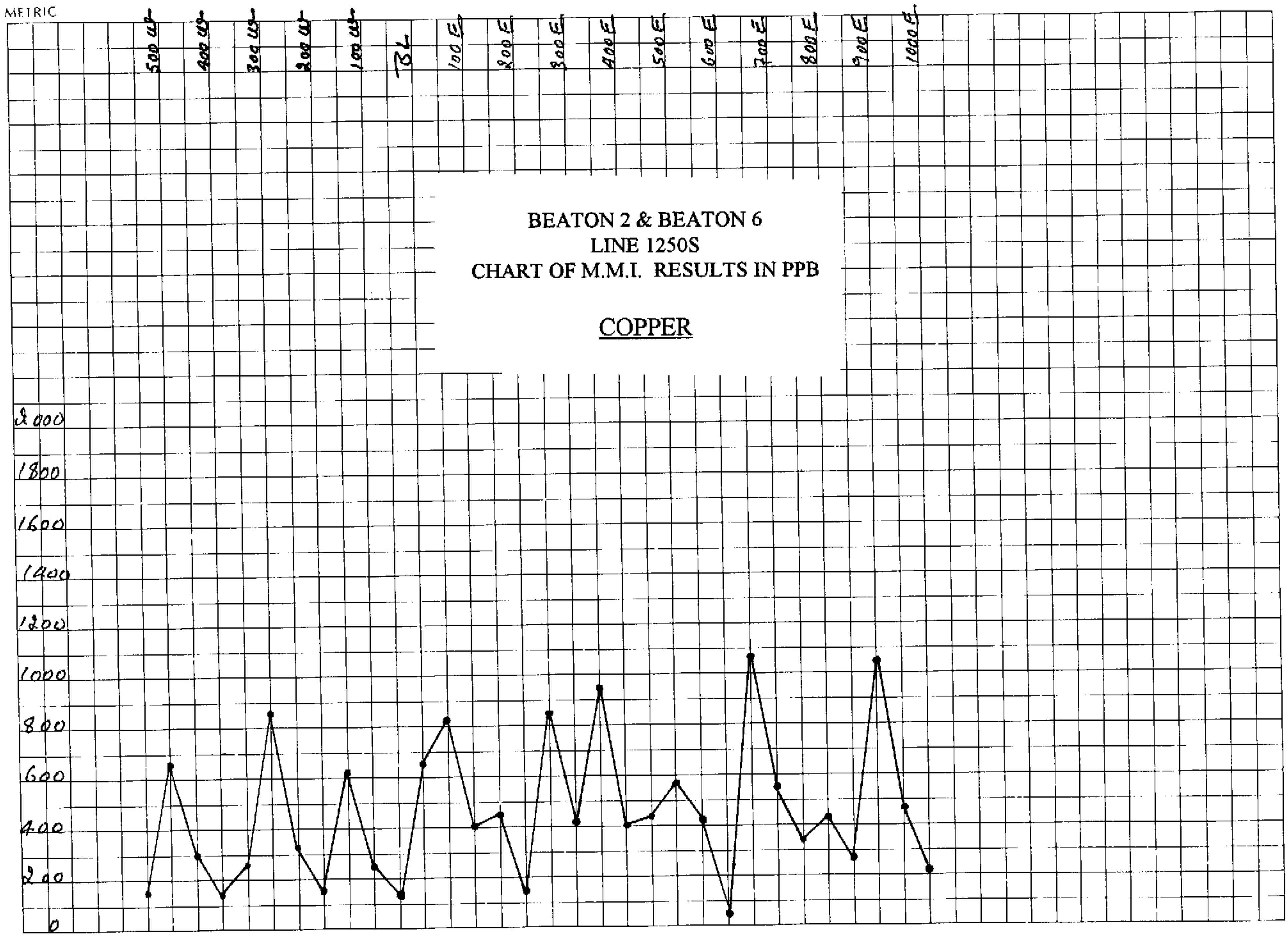
1.25
1.00
0.75
0.50
0.25
0


METRIC
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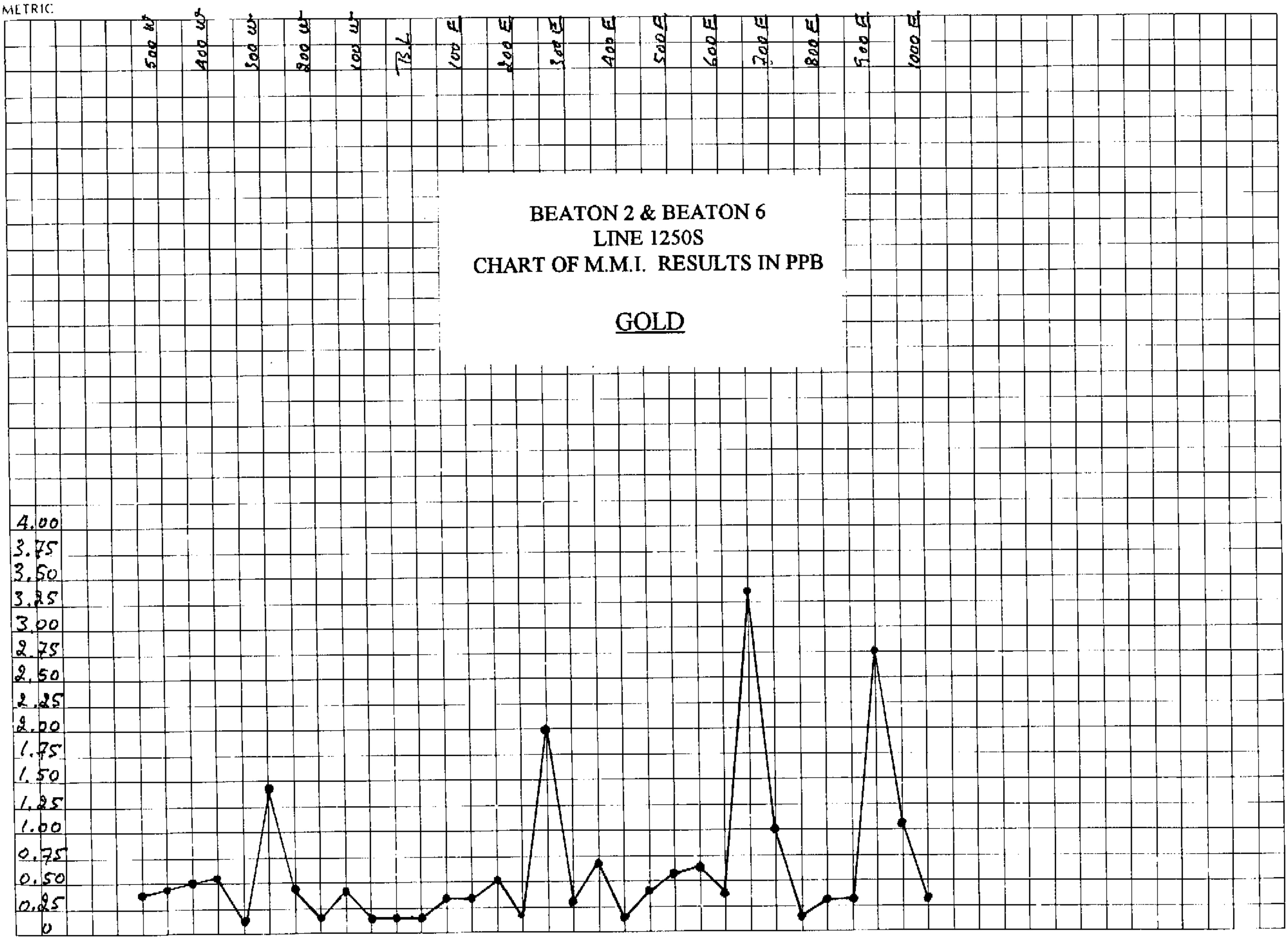
300 W
200 W
100 W
BL
100 E
200 E
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
BEATON 2 & BEATON 6
LINE 1250S
CHART OF M.M.I. RESULTS IN PPB
COPPER
2000
1800
1600
1400
1200
1000
800
600
400
200
0


METRIC
BEATON 2 & BEATON 6
LINE 1250S
CHART OF M.M.I. RESULTS IN PPB
GOLD
500 W
400 W
300 W
200 W
100 W
BL
100 E
200 E
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
4.00
3.75
3.50
3.25
3.00
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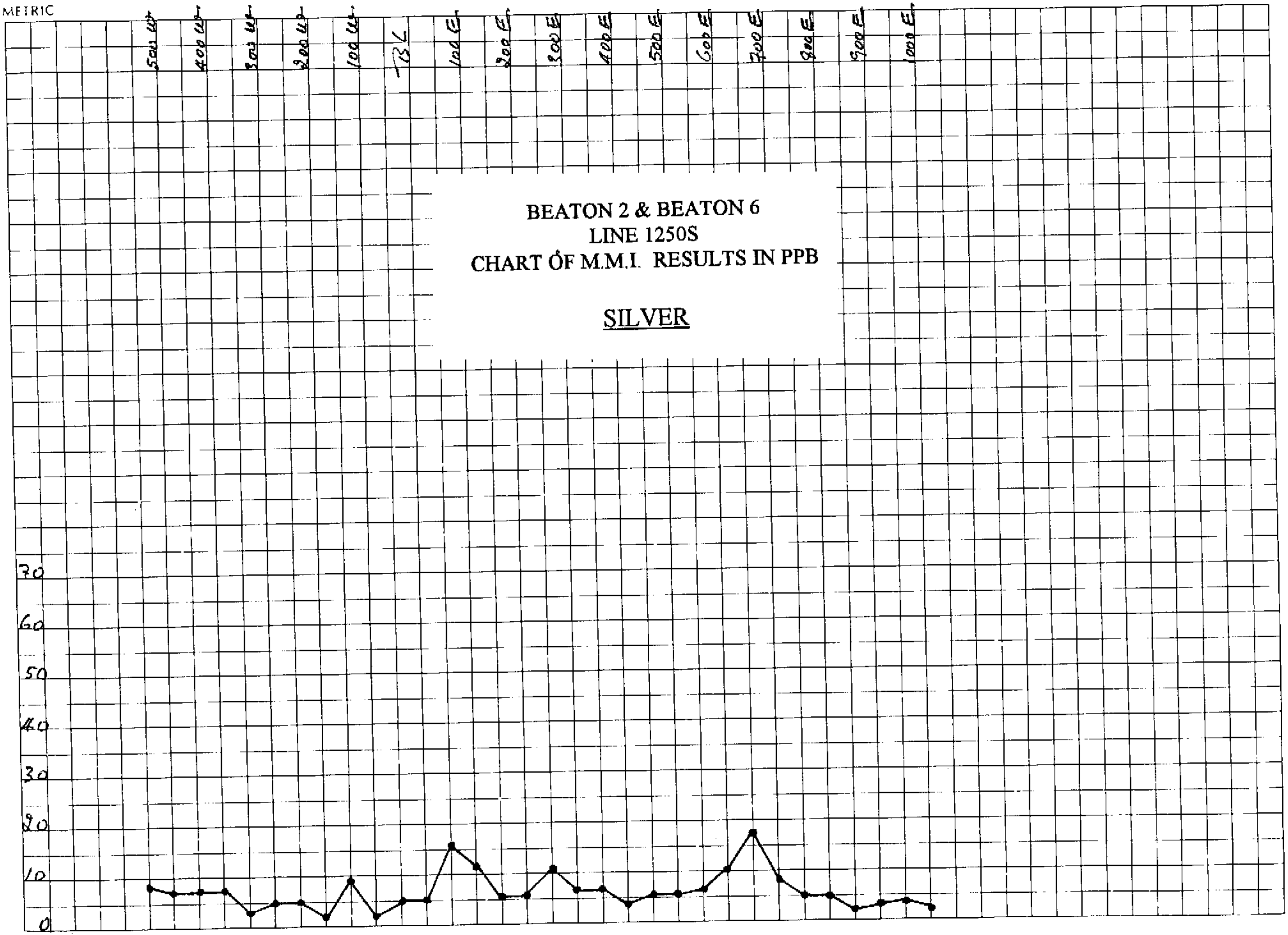
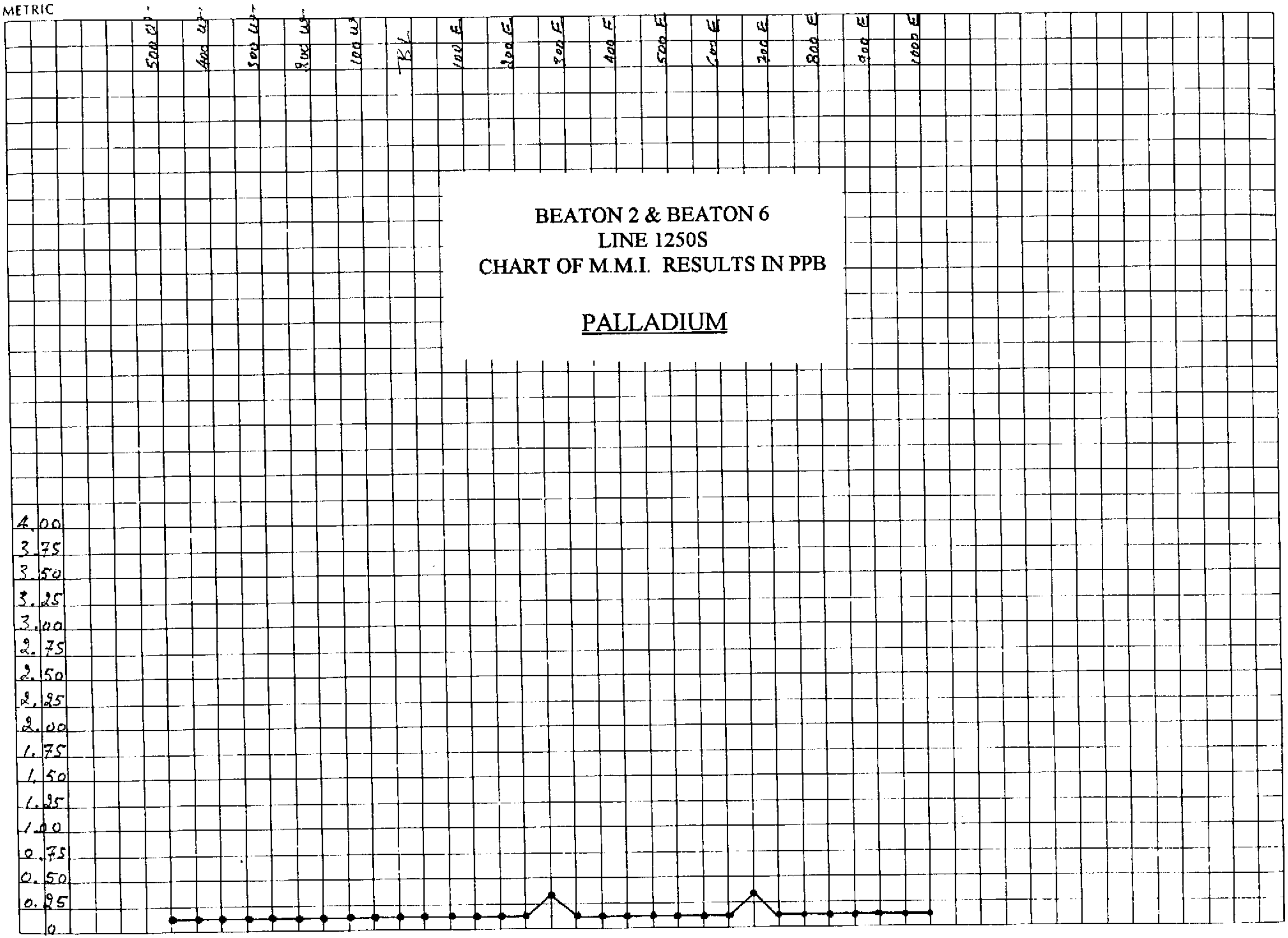
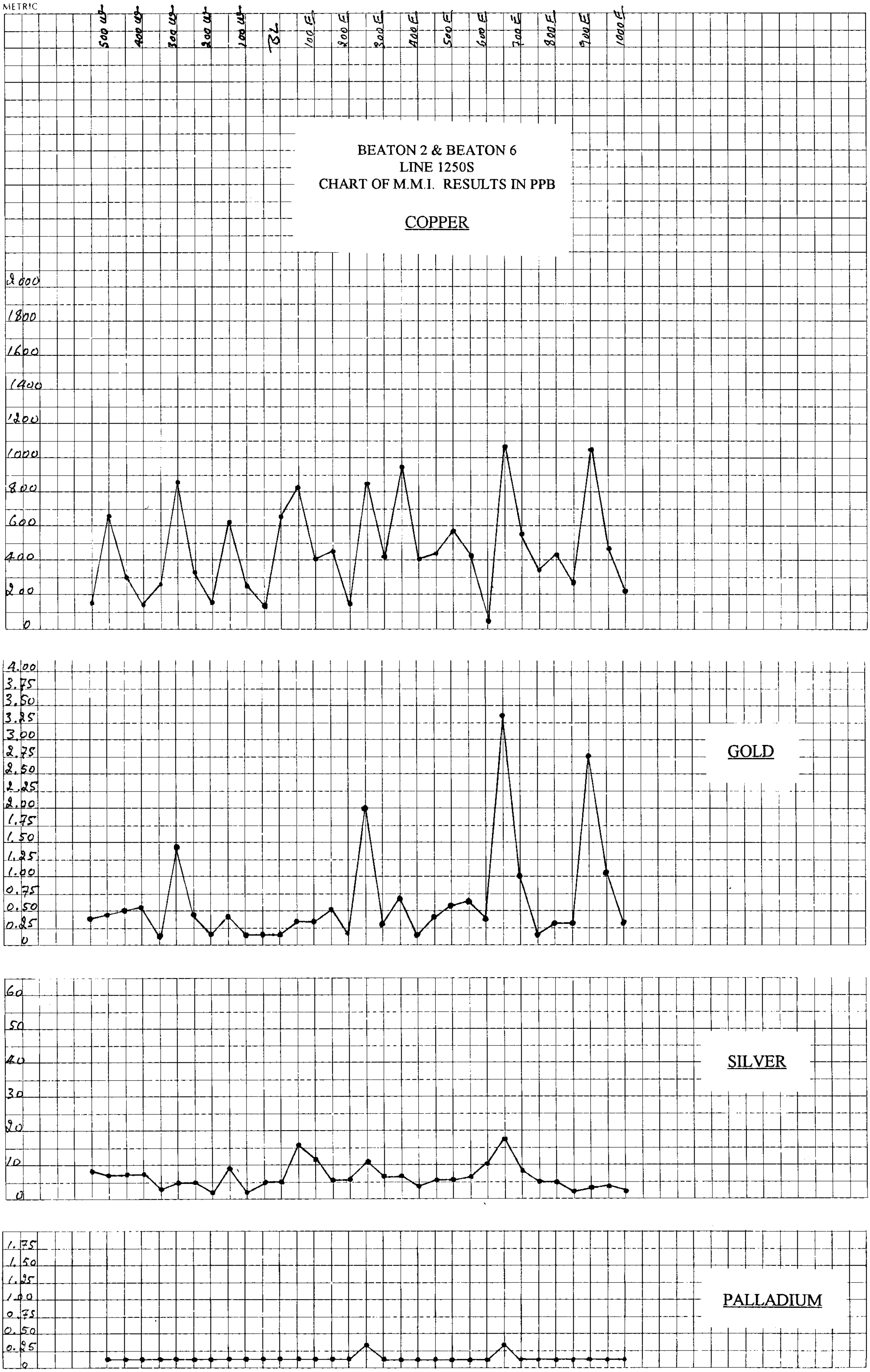

METRIC
BEATON 2 & BEATON 6
LINE 1250S
CHART OF M.M.I. RESULTS IN PPB
SILVER
500 W
400 W
300 W
200 W
100 W
BL
100 E
200 E
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
70
60
50
40
30
20
10
0

METRIC

BEATON 2 & BEATON 6
LINE 1250S
CHART OF M.M.I. RESULTS IN PPB

PALLADIUM

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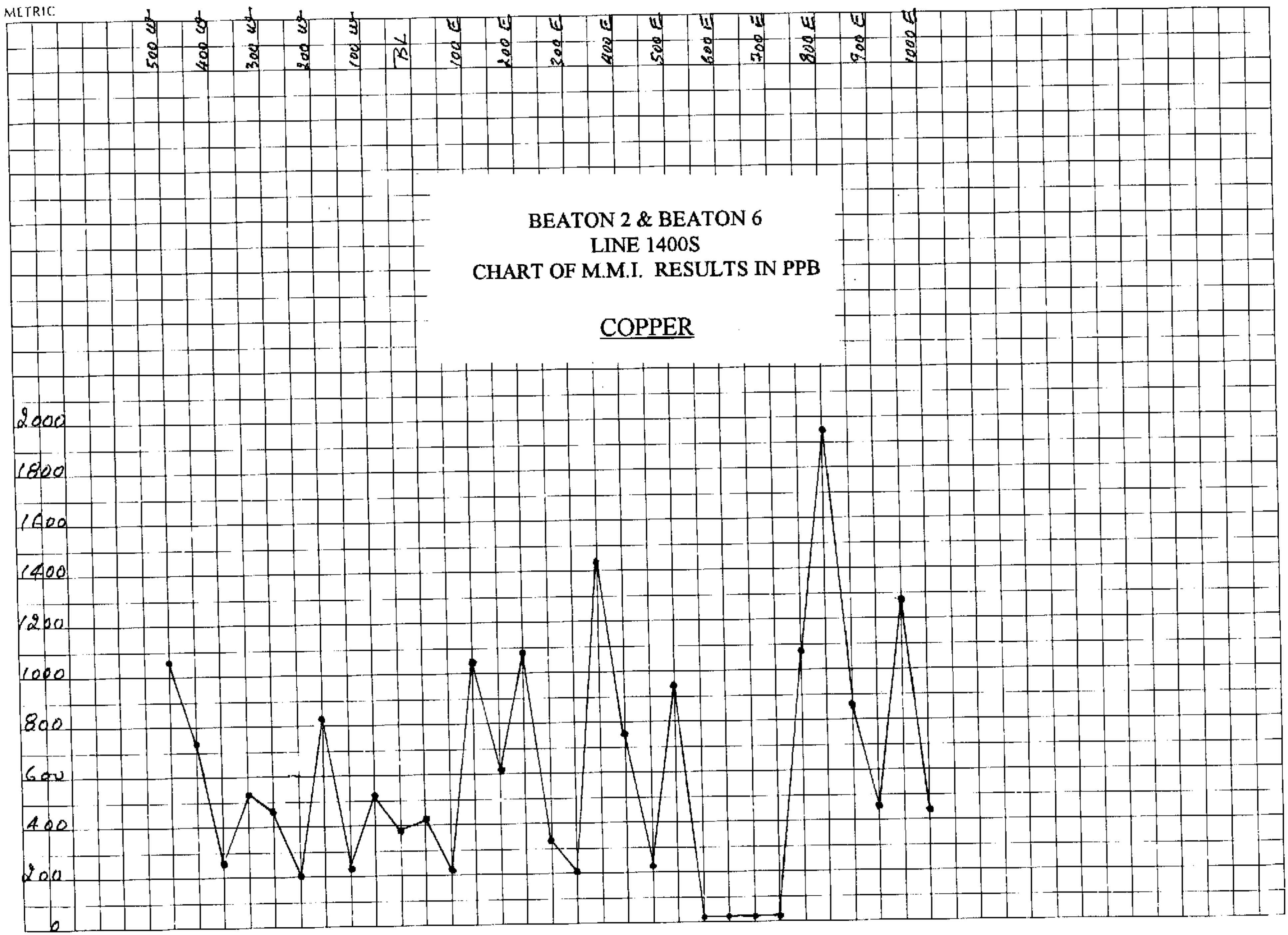
300 W
200 W
100 W
BL
100 E
200 E
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
BEATON 2 & BEATON 6
LINE 1250S
CHART OF M.M.I. RESULTS IN PPB
COPPER
2000
1800
1600
1400
1200
1000
800
600
400
200
0
4.00
3.75
3.50
3.25
3.00
2.75
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0
GOLD
60
50
40
30
20
10
0
SILVER
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0
PALLADIUM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200 W
100 W
BL
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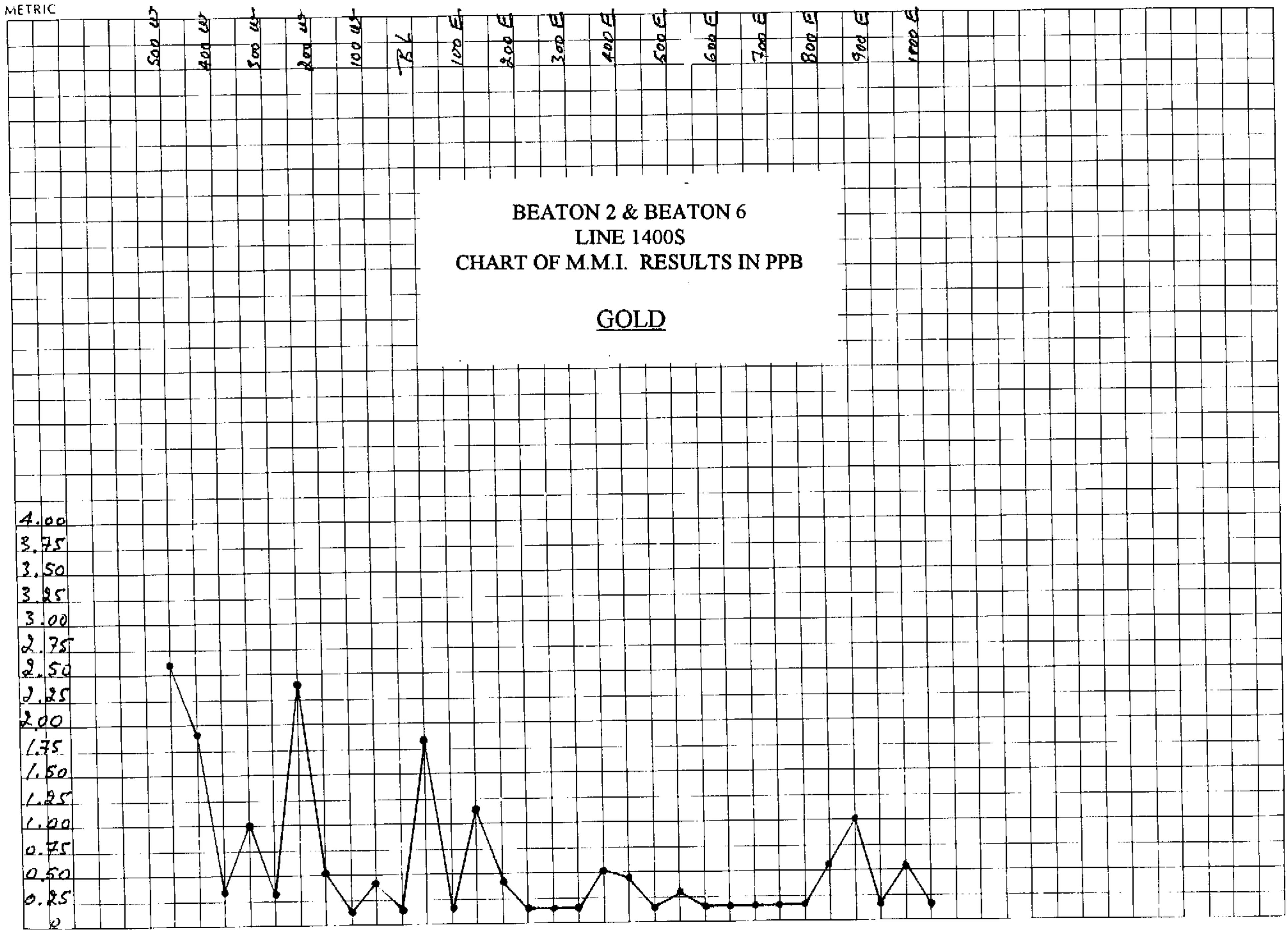
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
BEATON 2 & BEATON 6
LINE 1400S
CHART OF M.M.I. RESULTS IN PPB
COPPER
2000
1800
1600
1400
1200
1000
800
600
400
200
0

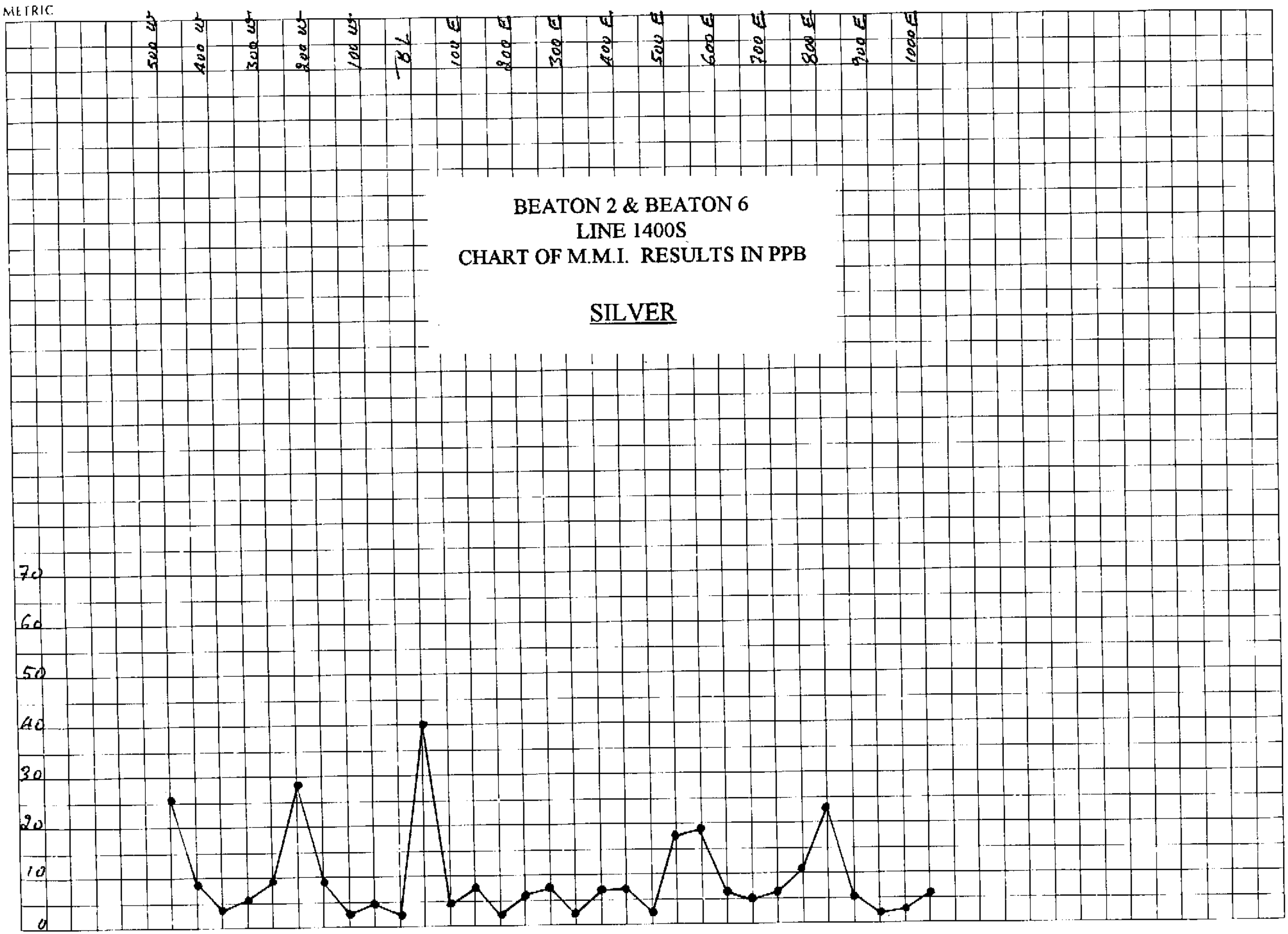
BEATON 2 & BEATON 6
LINE 1400S
CHART OF M.M.I. RESULTS IN PPB

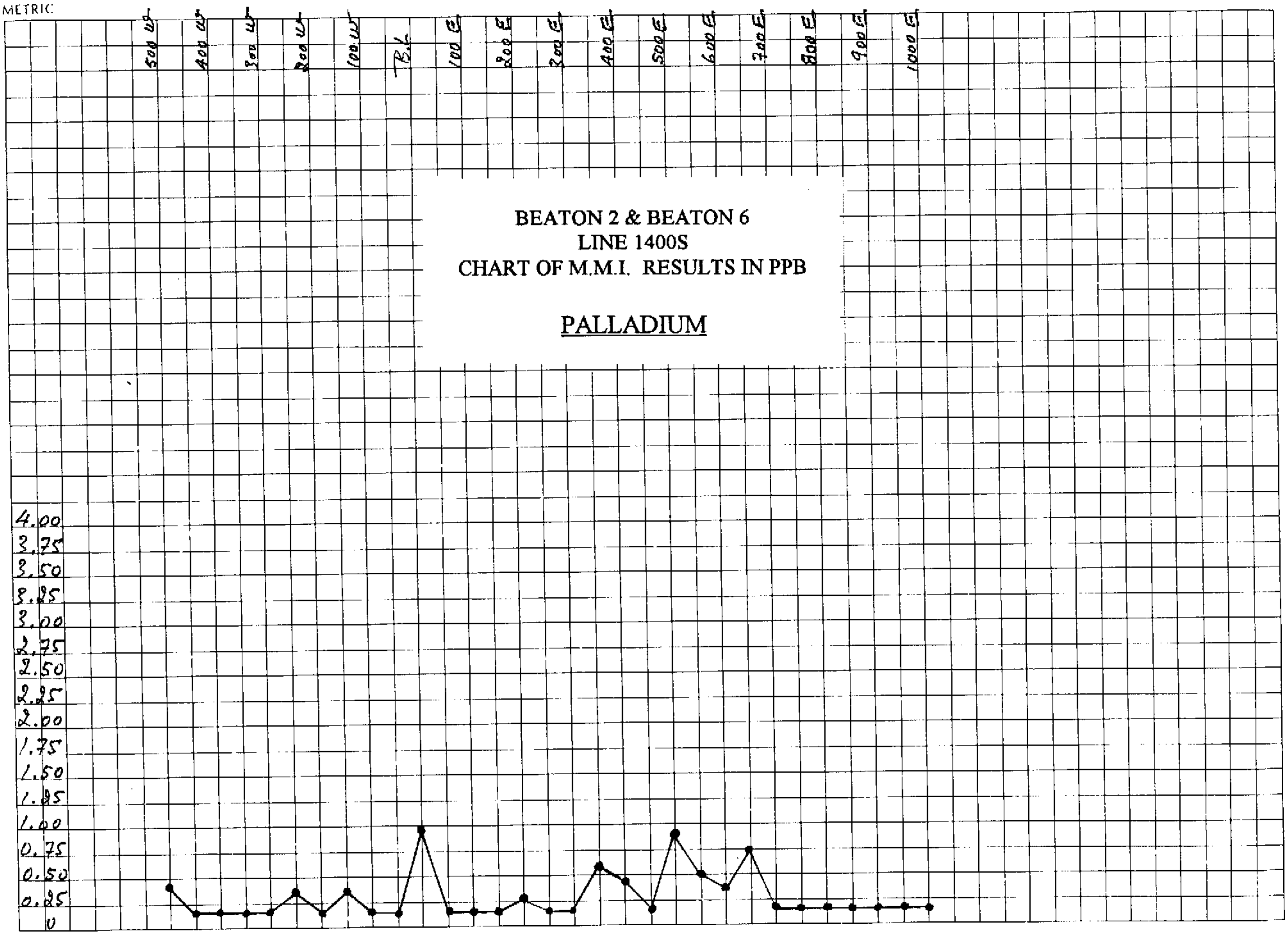
GOLD



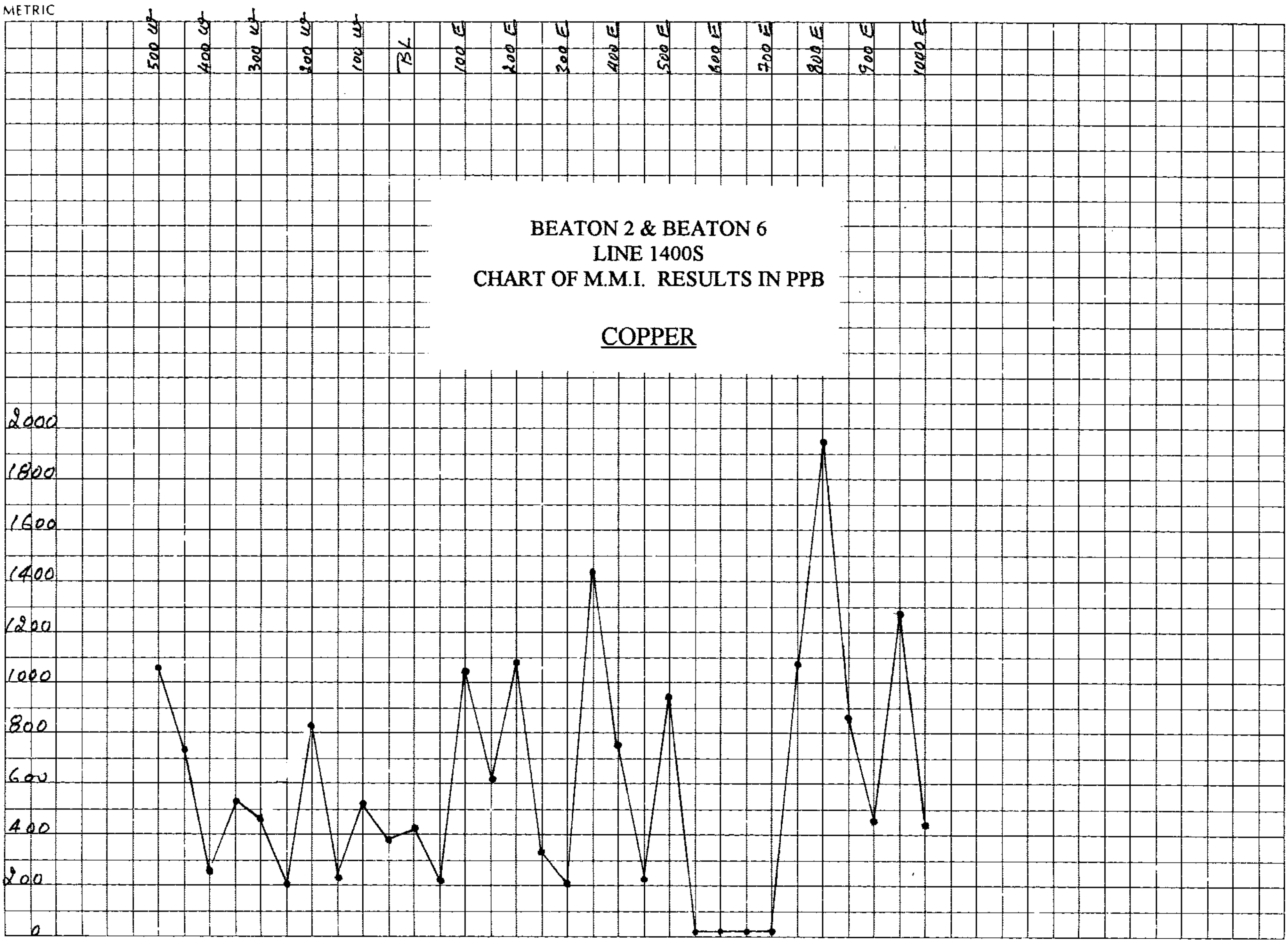
BEATON 2 & BEATON 6
LINE 1400S
CHART OF M.M.I. RESULTS IN PPB

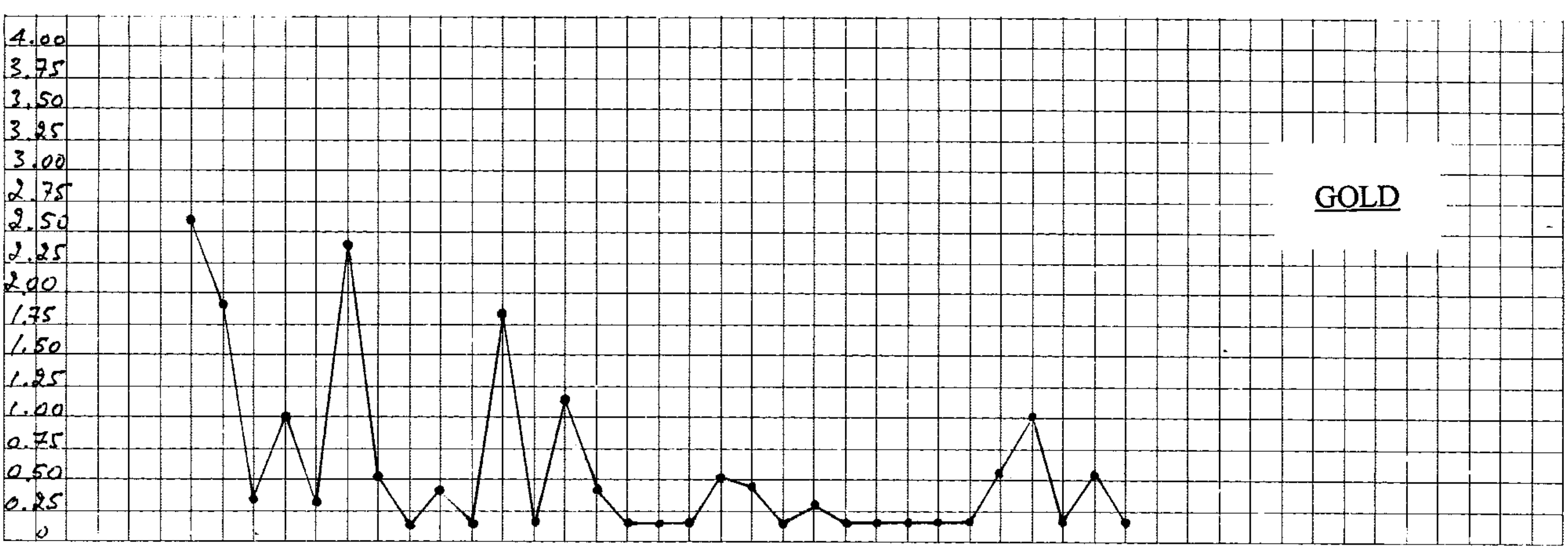
SILVER

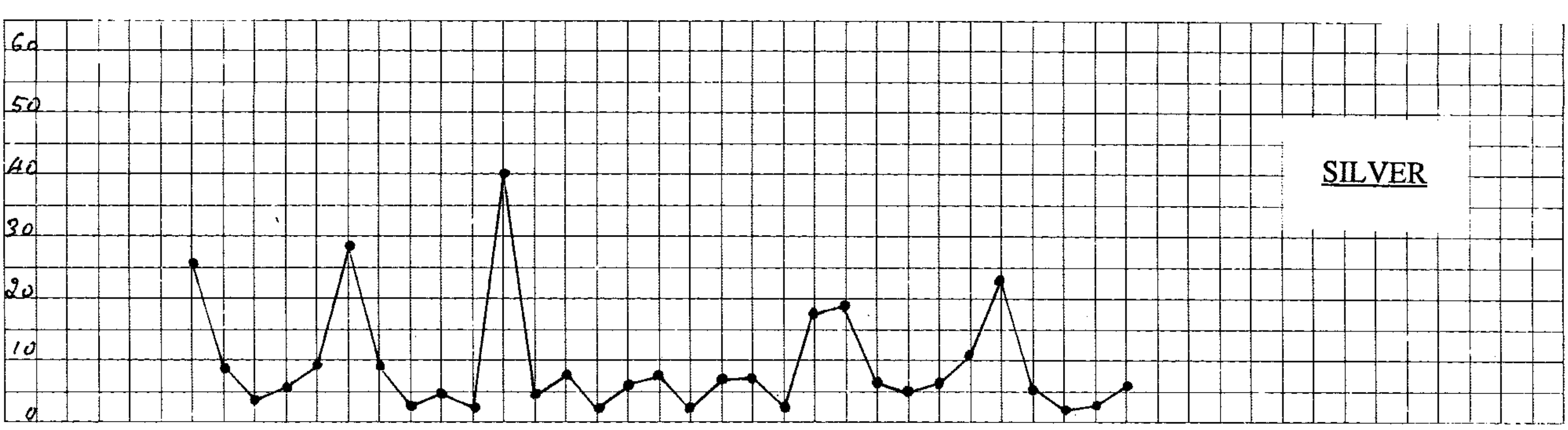


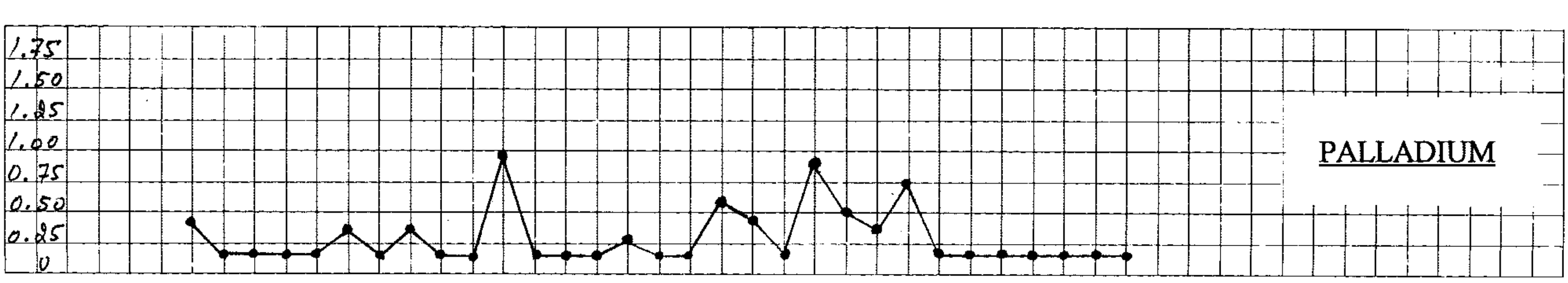

METRIC
500 W
400 W
300 W
200 W
100 W
B.L.
100 E
200 E
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
BEATON 2 & BEATON 6
LINE 1400S
CHART OF M.M.I. RESULTS IN PPB
PALLADIUM
4.00
3.75
3.50
3.25
3.00
2.75
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0

BEATON 2 & BEATON 6
LINE 1400S
CHART OF M.M.I. RESULTS IN PPB



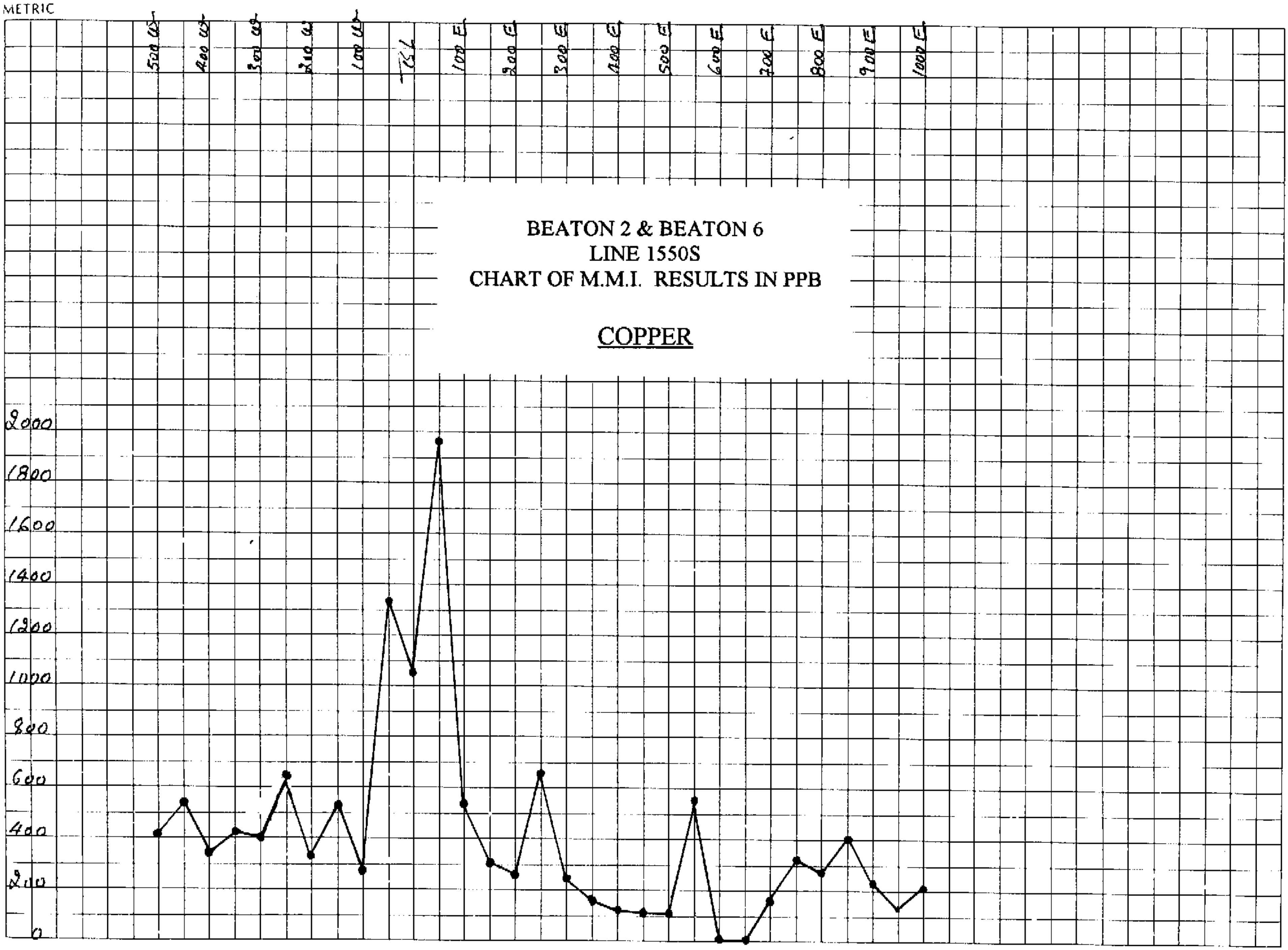






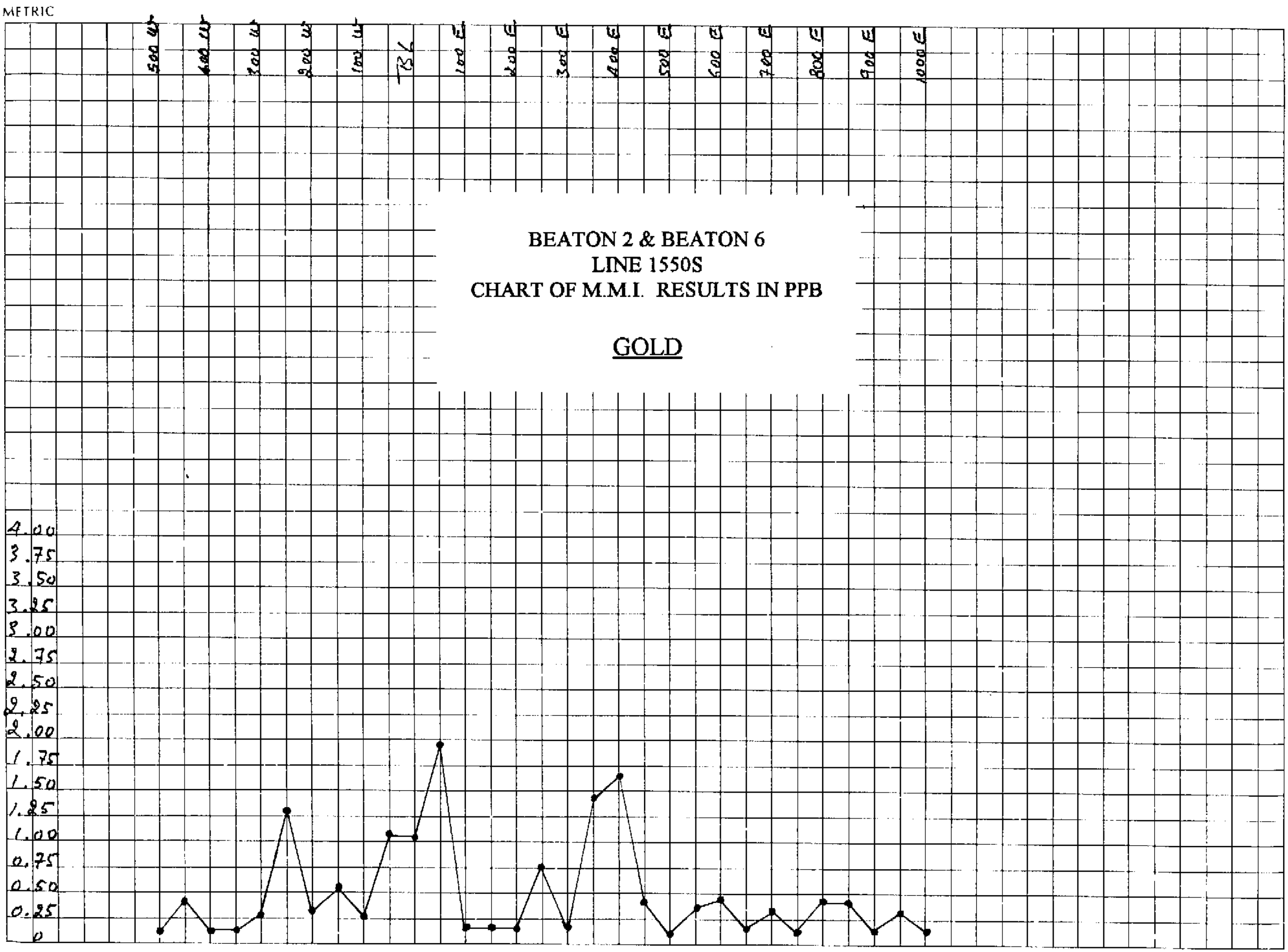
BEATON 2 & BEATON 6
LINE 1550S
CHART OF M.M.I. RESULTS IN PPB

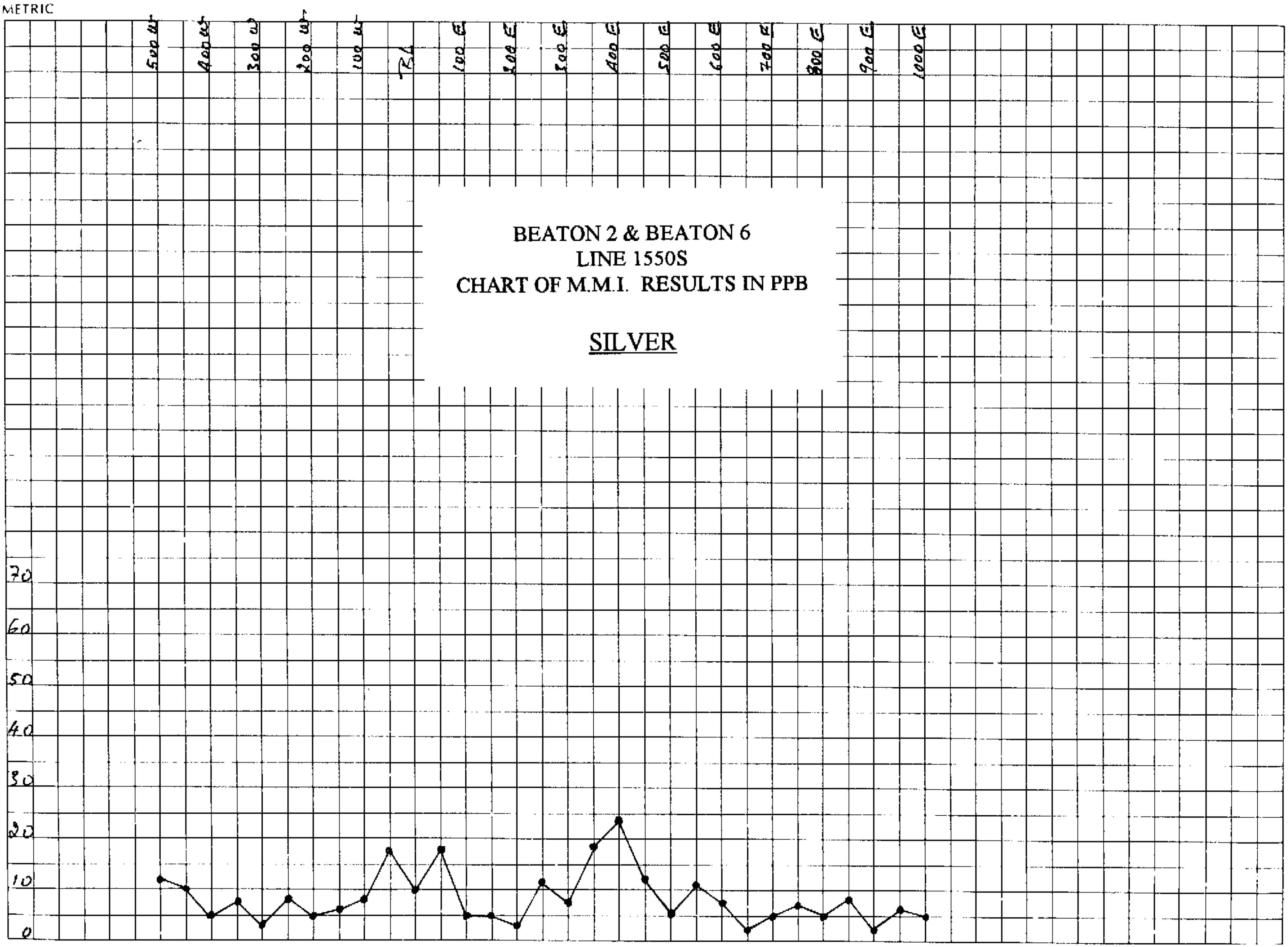
COPPER



BEATON 2 & BEATON 6
LINE 1550S
CHART OF M.M.I. RESULTS IN PPB

GOLD

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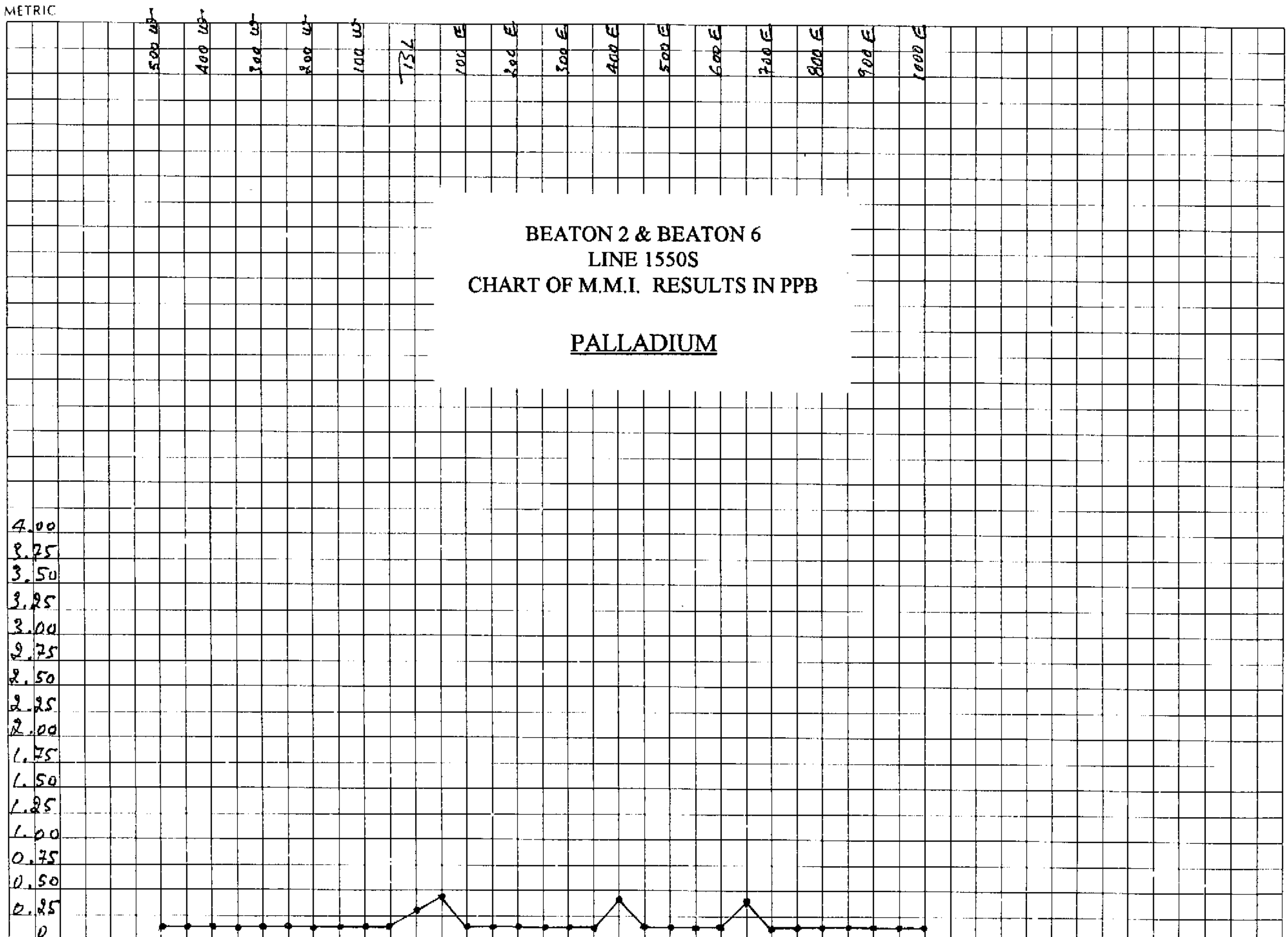
500 W
400 W
300 W
200 W
100 W
BL
100 E
200 E
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
BEATON 2 & BEATON 6
LINE 1550S
CHART OF M.M.I. RESULTS IN PPB
SILVER
70
60
50
40
30
20
10
0



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BL
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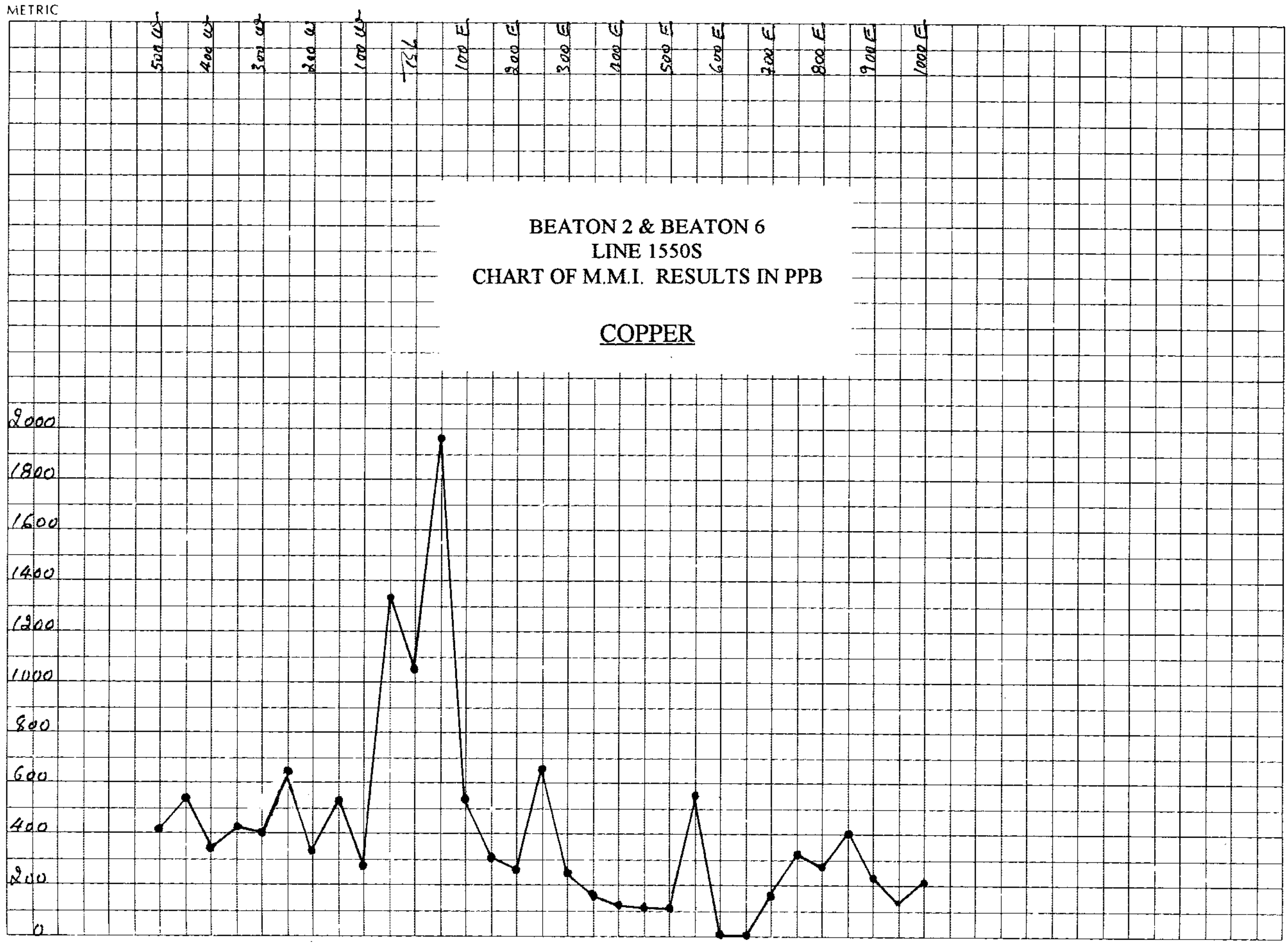
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
BEATON 2 & BEATON 6
LINE 1550S
CHART OF M.M.I. RESULTS IN PPB
PALLADIUM
4.00
3.75
3.50
3.25
3.00
2.75
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0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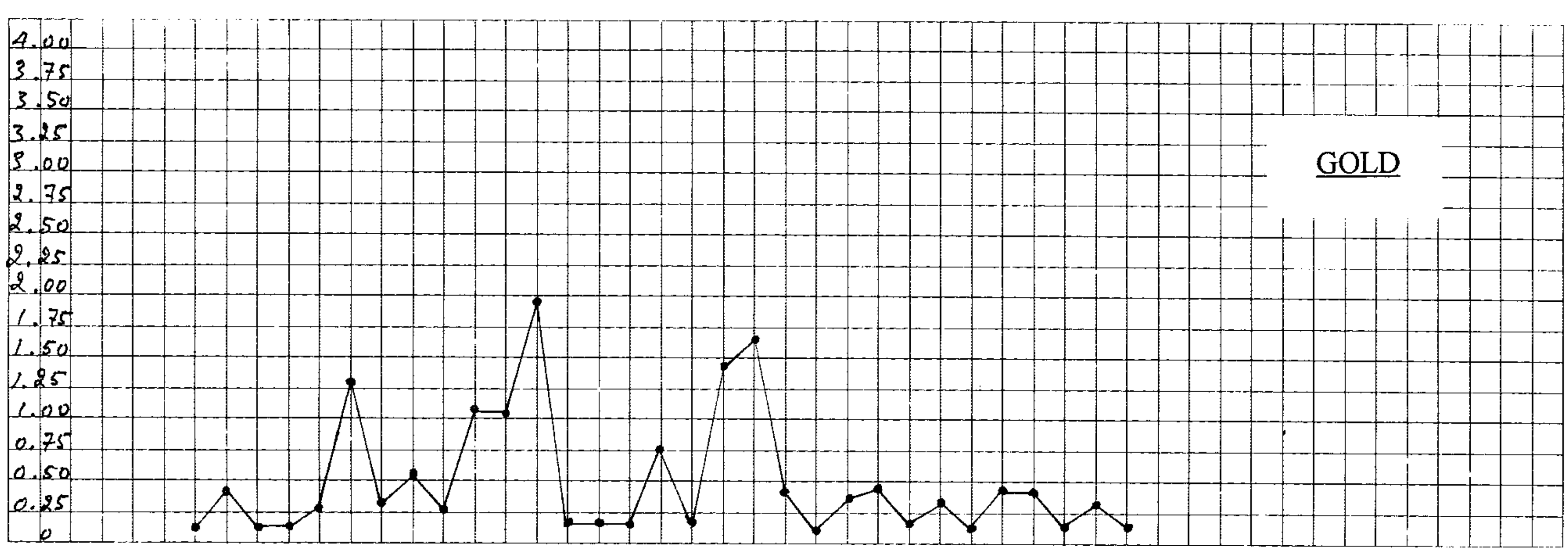
500 W
400 W
300 W
200 W
100 W
TL
100 E
200 E
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
BEATON 2 & BEATON 6
LINE 1550S
CHART OF M.M.I. RESULTS IN PPB
COPPER
2000
1800
1600
1400
1200
1000
800
600
400
200
0


GOLD
4.00
3.75
3.50
3.25
3.00
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2.00
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1.25
1.00
0.75
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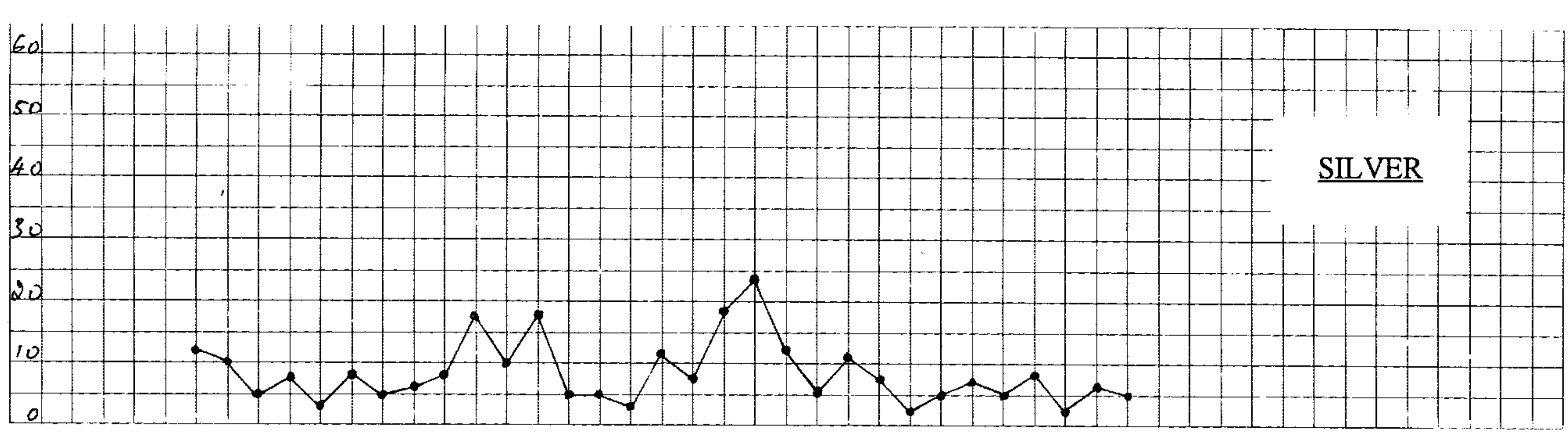
SILVER
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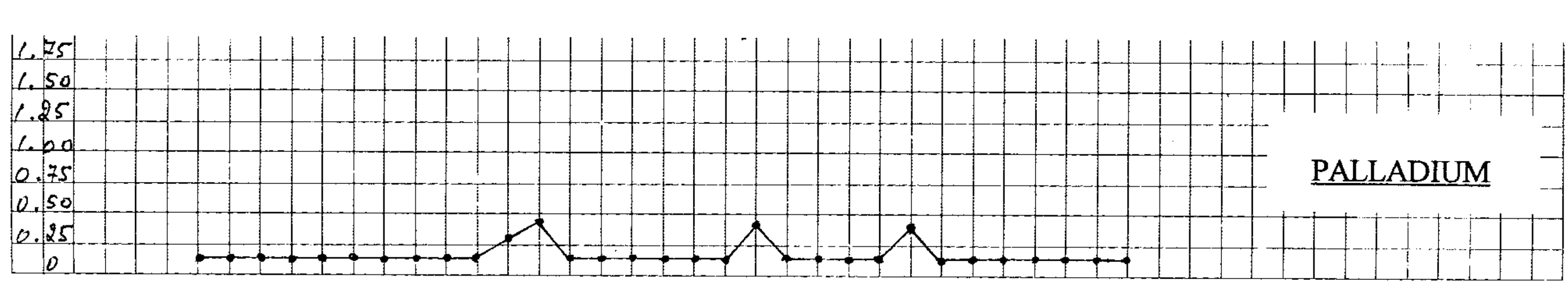
30
20
10
0

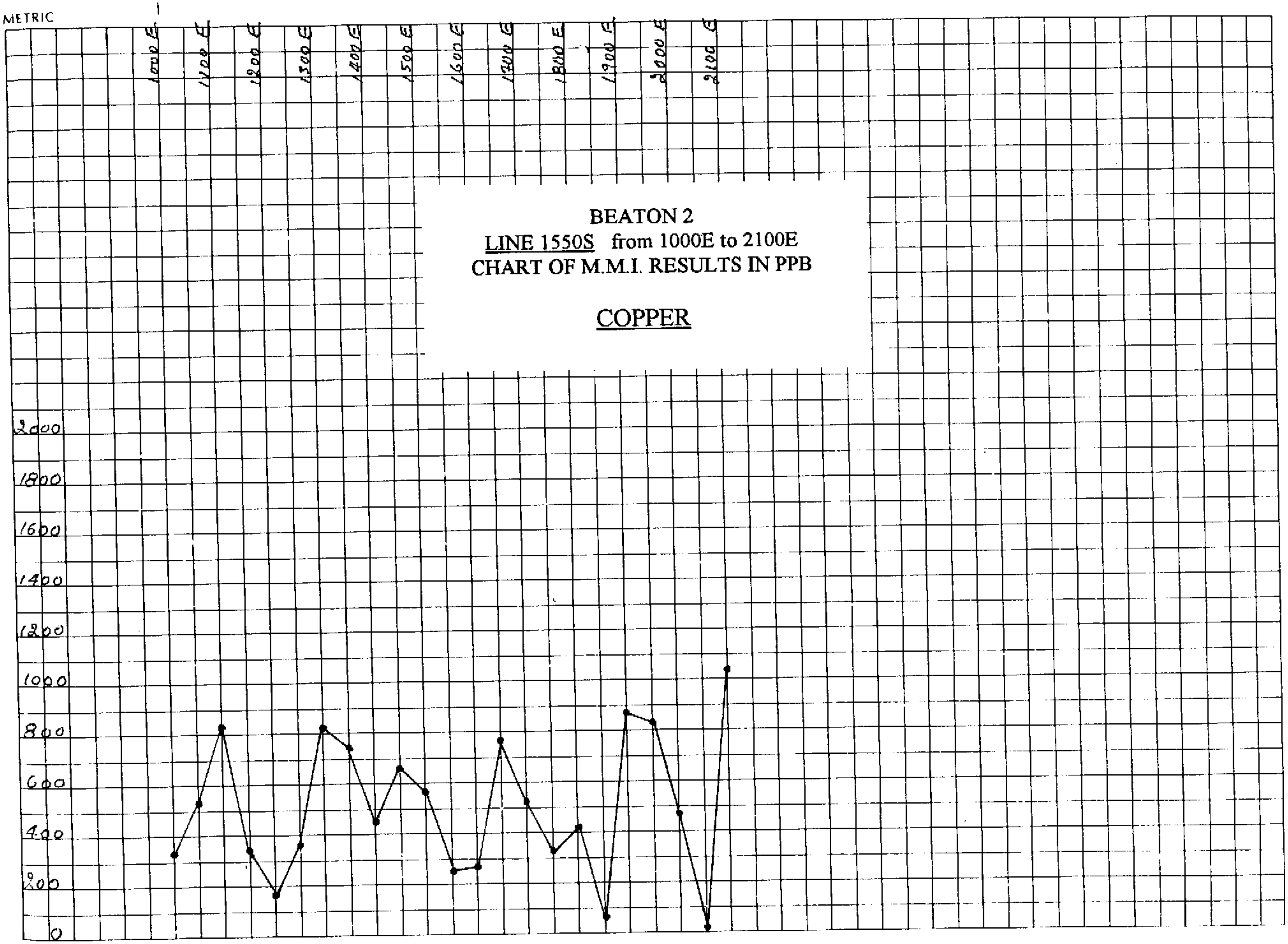

PALLADIUM
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0

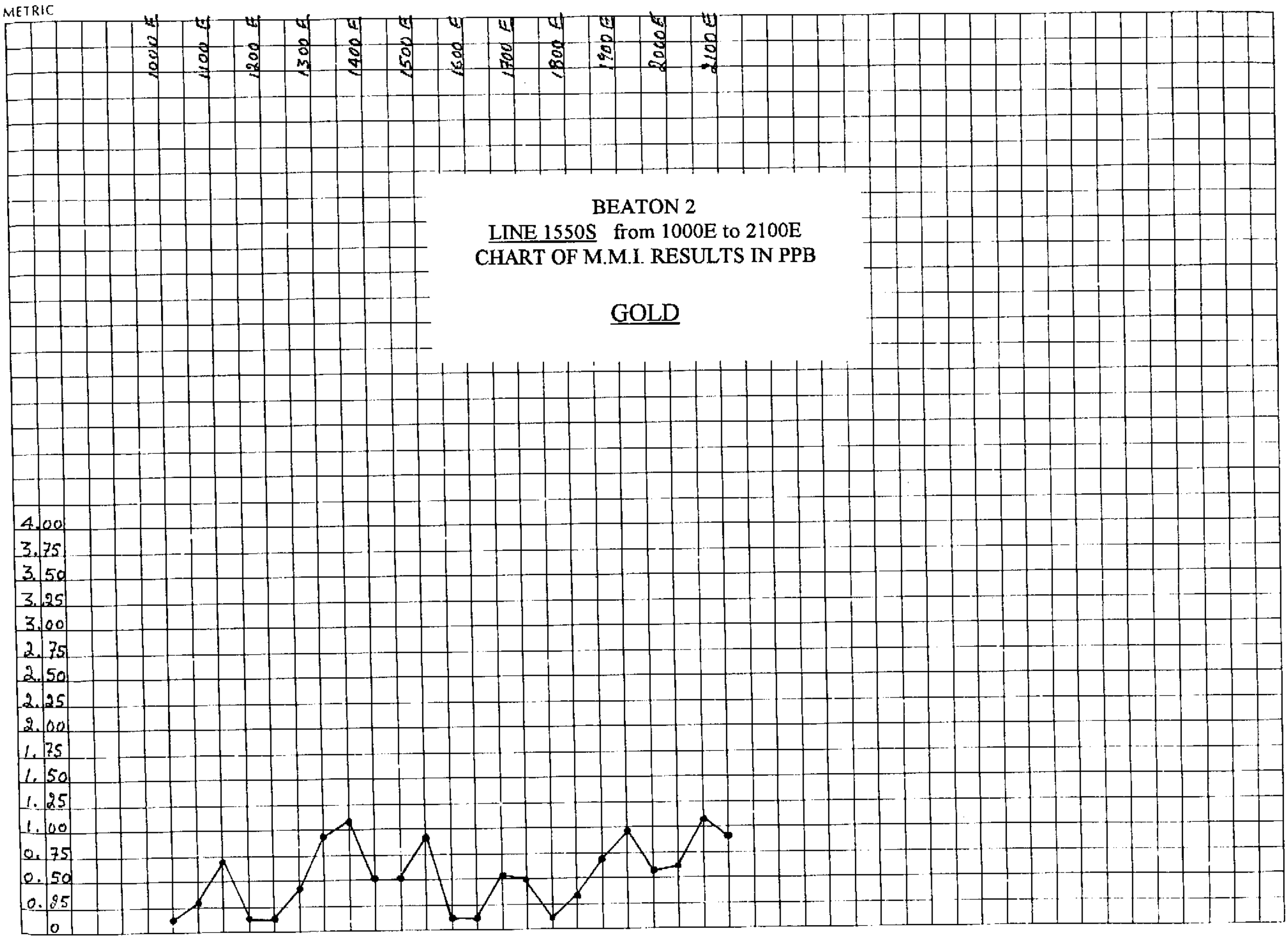
BEATON 2

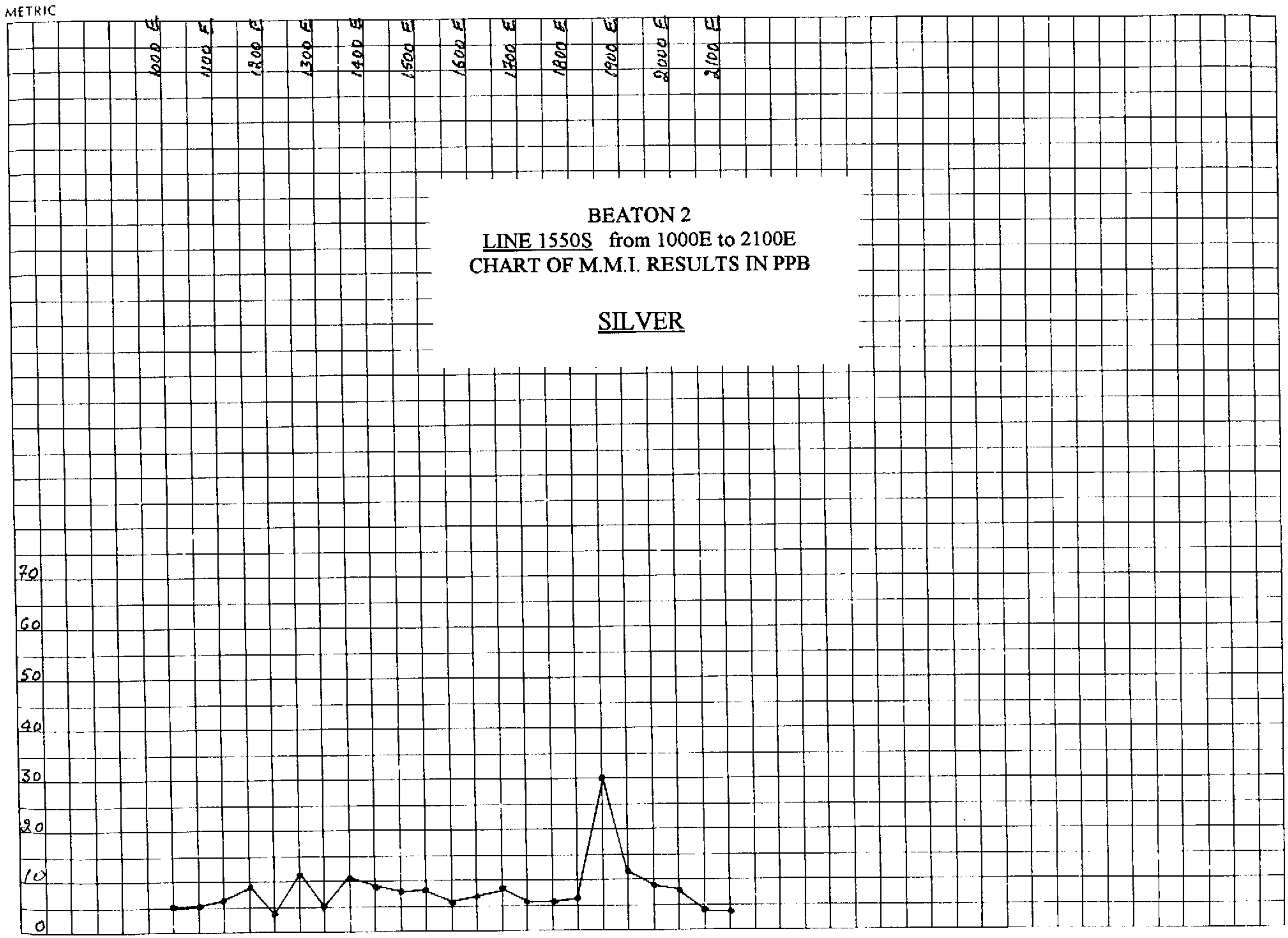
LINE 1550S from 1000E to 2100E

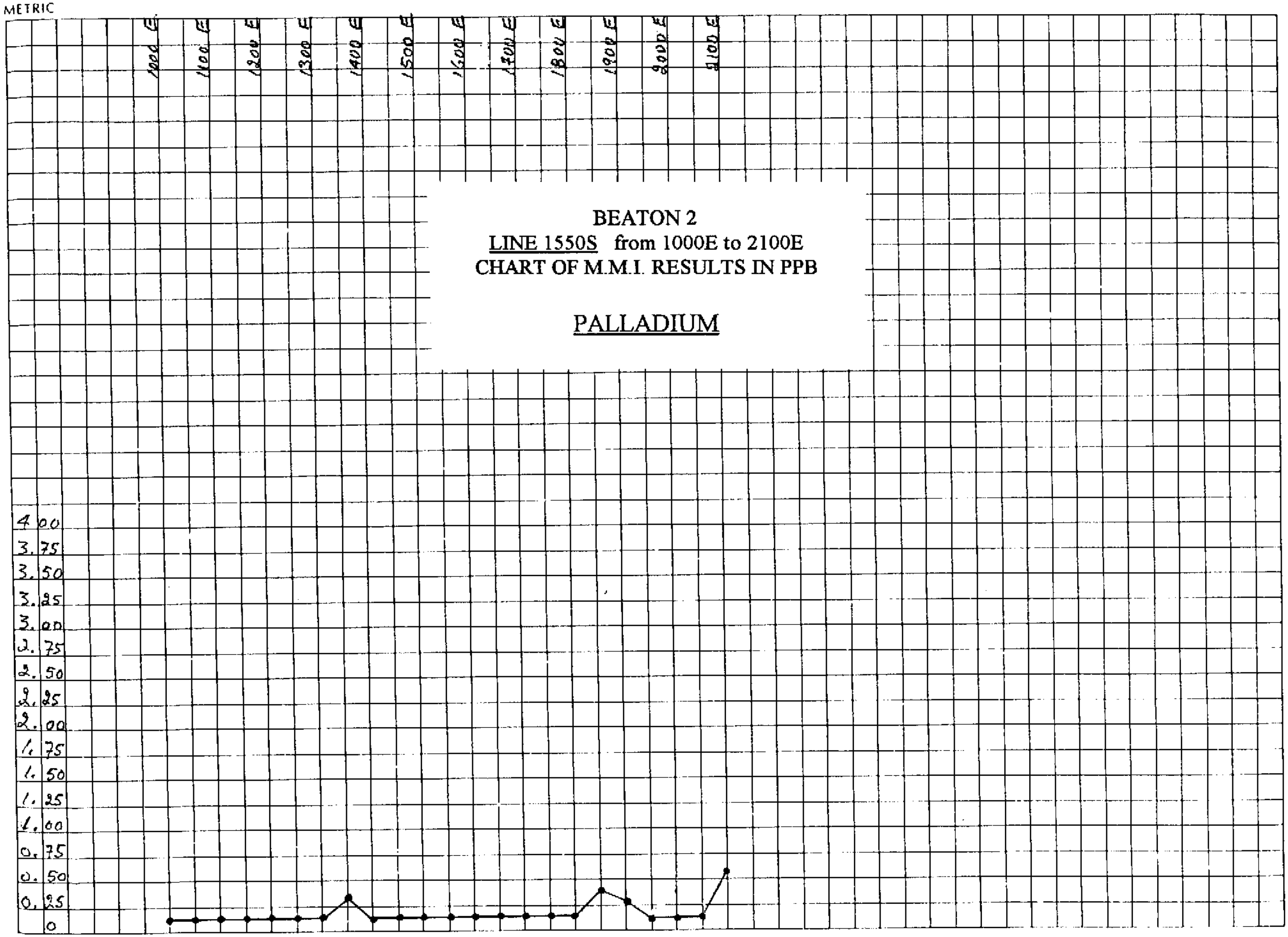
CHART OF M.M.I. RESULTS IN PPB

COPPER

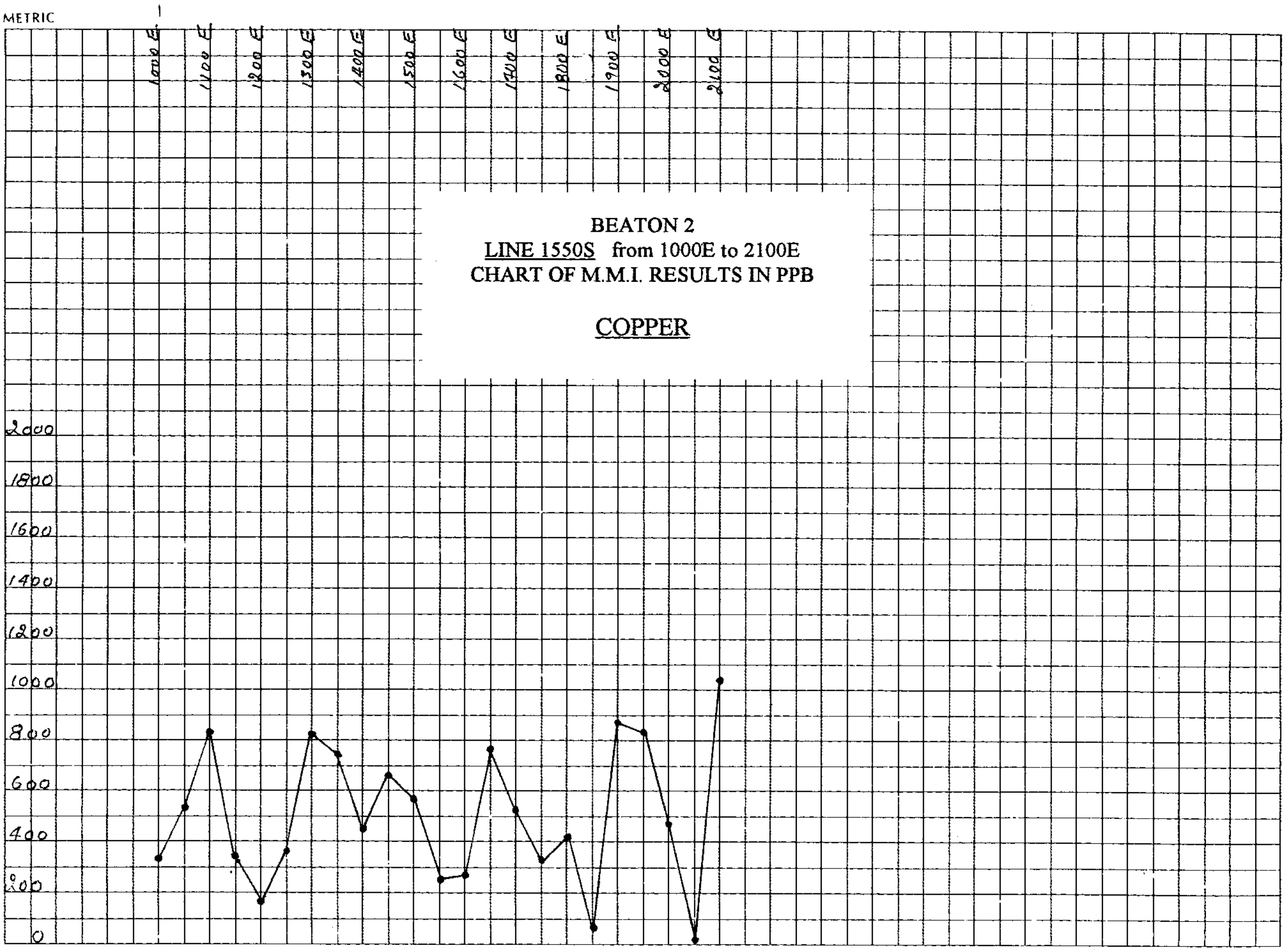


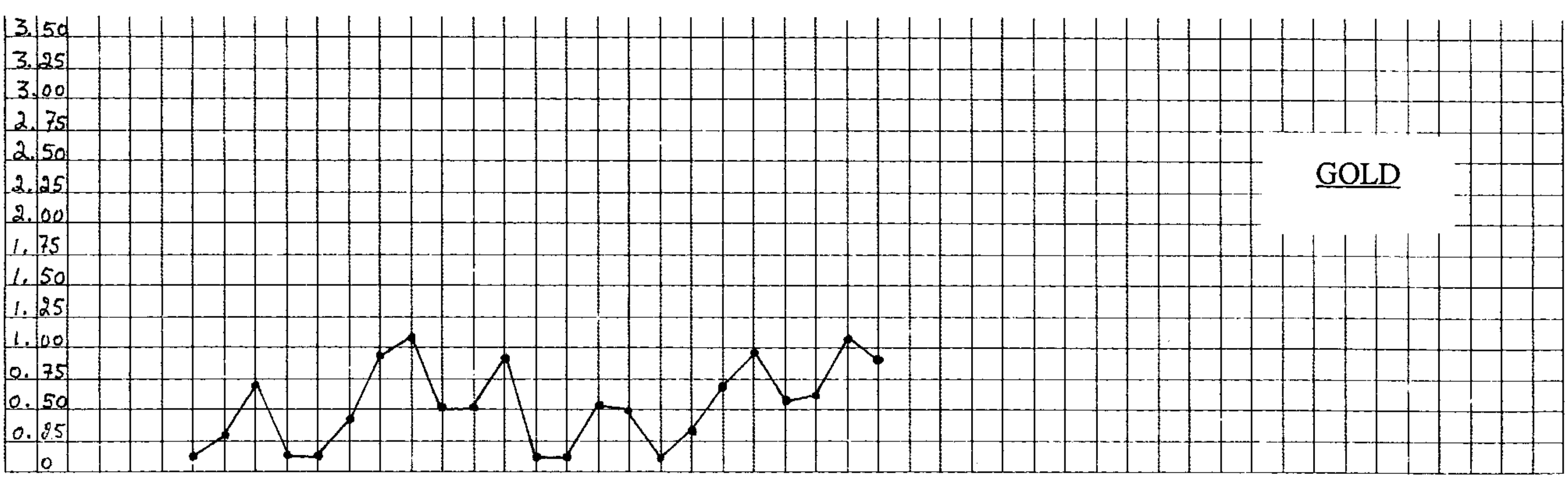

METRIC
1000 E
1100 E
1200 E
1300 E
1400 E
1500 E
1600 E
1700 E
1800 E
1900 E
2000 E
2100 E
BEATON 2
LINE 1550S from 1000E to 2100E
CHART OF M.M.I. RESULTS IN PPB
GOLD
4.00
3.75
3.50
3.25
3.00
2.75
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0

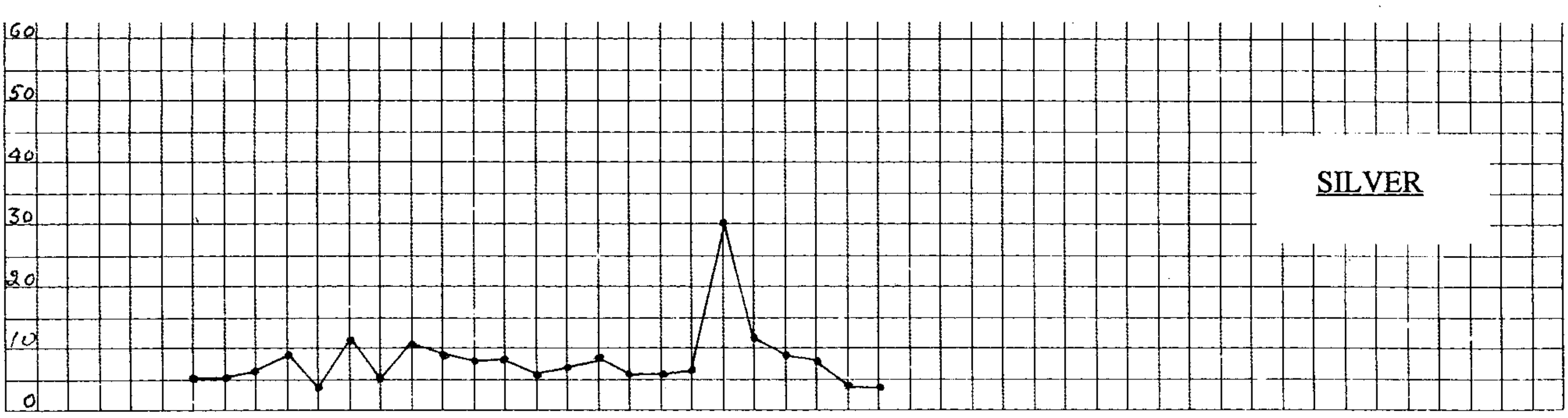

METRIC
BEATON 2
LINE 1550S from 1000E to 2100E
CHART OF M.M.I. RESULTS IN PPB
SILVER
1000 E
1100 E
1200 E
1300 E
1400 E
1500 E
1600 E
1700 E
1800 E
1900 E
2000 E
2100 E
70
60
50
40
30
20
10
0

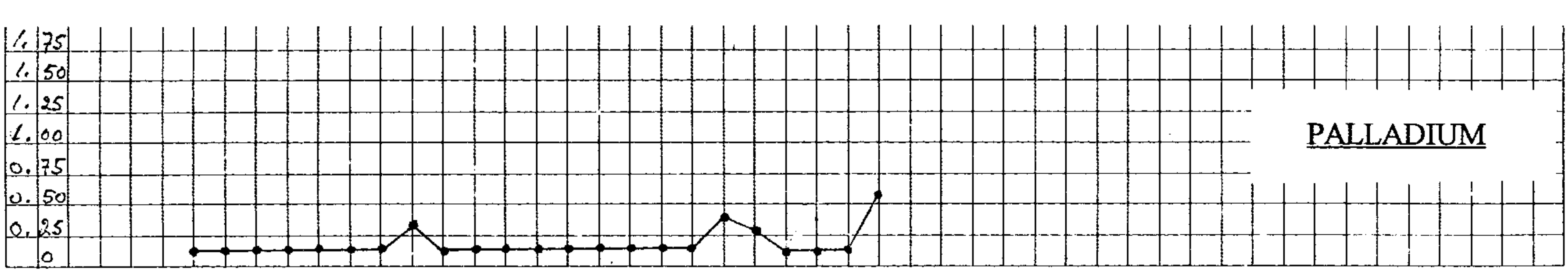


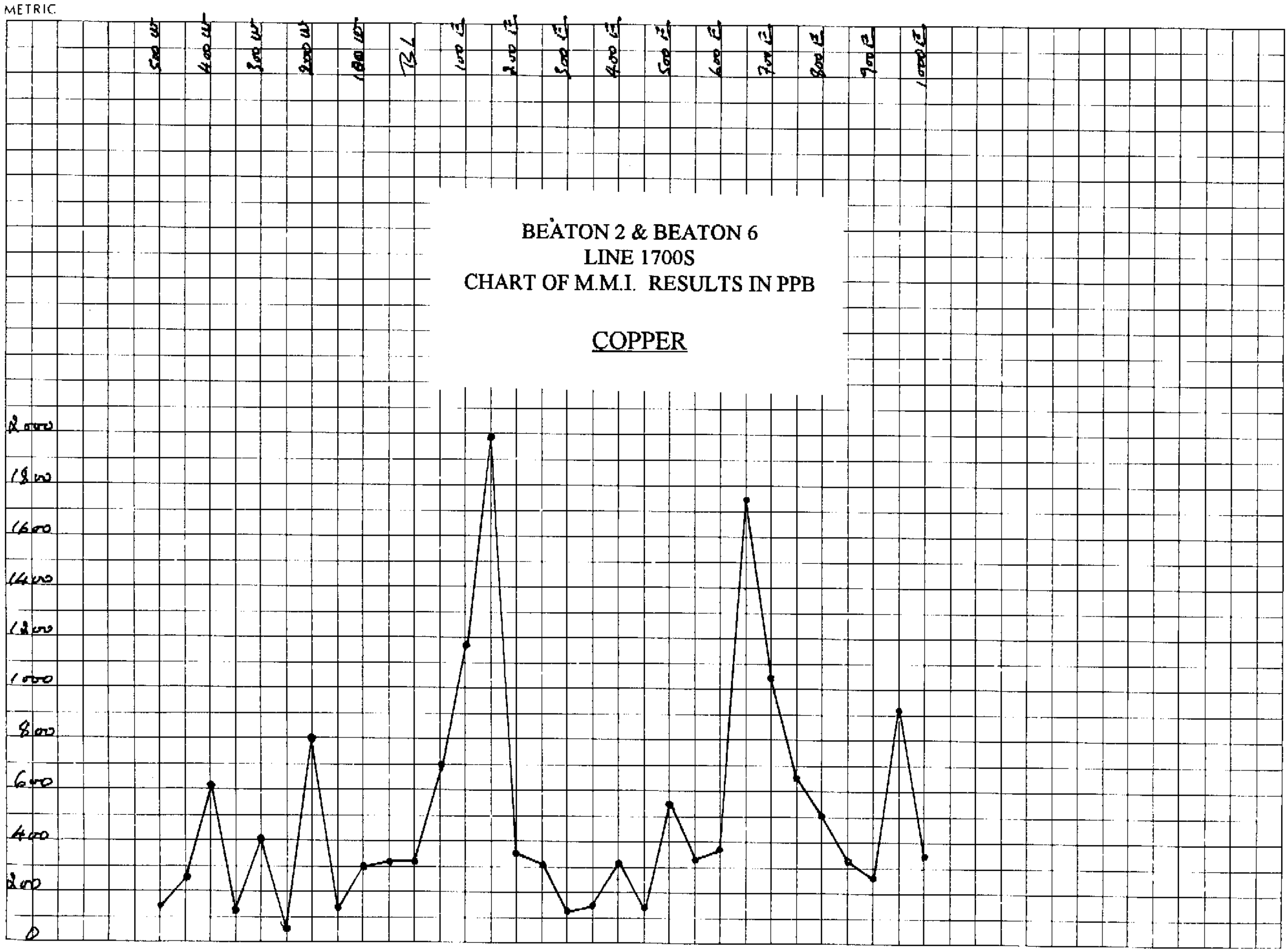
METRIC
1000 E
1100 E
1200 E
1300 E
1400 E
1500 E
1600 E
1700 E
1800 E
1900 E
2000 E
2100 E
BEATON 2
LINE 1550S from 1000E to 2100E
CHART OF M.M.I. RESULTS IN PPB
PALLADIUM
4.00
3.75
3.50
3.25
3.00
2.75
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0

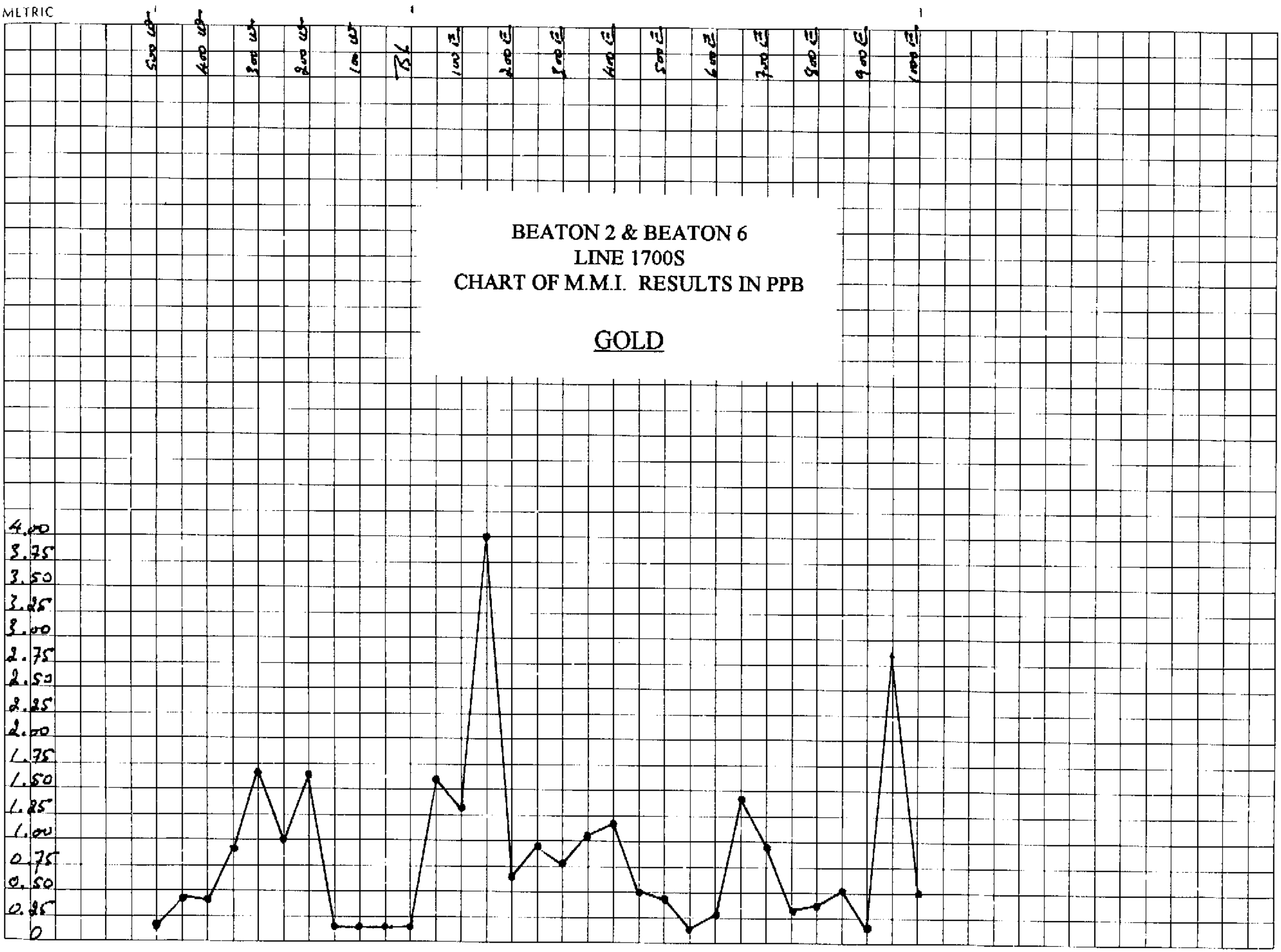

METRIC
1000 E
1100 E
1200 E
1300 E
1400 E
1500 E
1600 E
1700 E
1800 E
1900 E
2000 E
2100 E
BEATON 2
LINE 1550S from 1000E to 2100E
CHART OF M.M.I. RESULTS IN PPB
COPPER
2000
1800
1600
1400
1200
1000
800
600
400
200
0

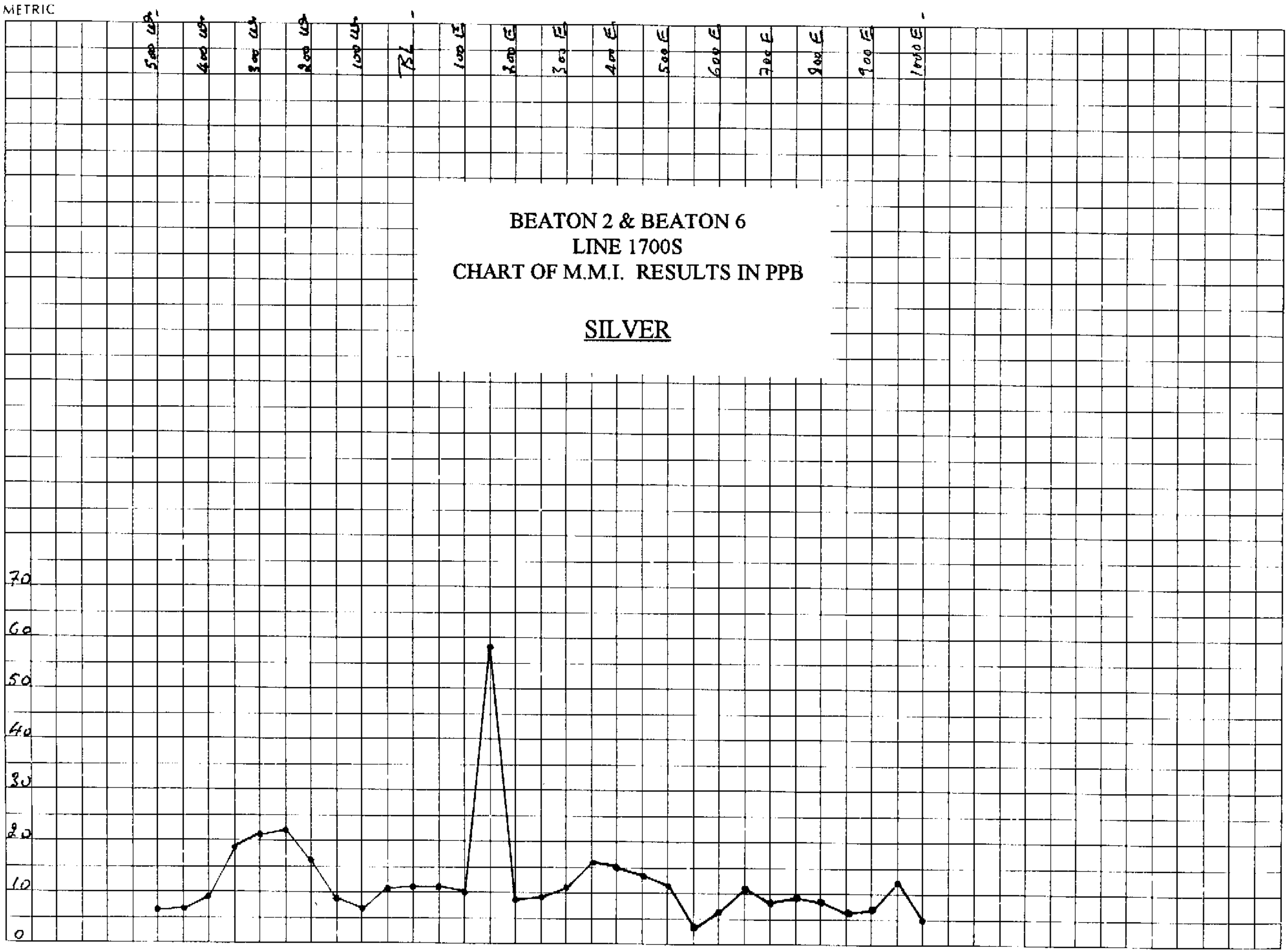

GOLD
3.50
3.25
3.00
2.75
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0


SILVER
60
50
40
30
20
10
0


PALLADIUM
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0


METRIC
BEATON 2 & BEATON 6
LINE 1700S
CHART OF M.M.I. RESULTS IN PPB
COPPER
500 W
400 W
300 W
200 W
100 W
BL
100 E
200 E
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
2000
1800
1600
1400
1200
1000
800
600
400
200
0

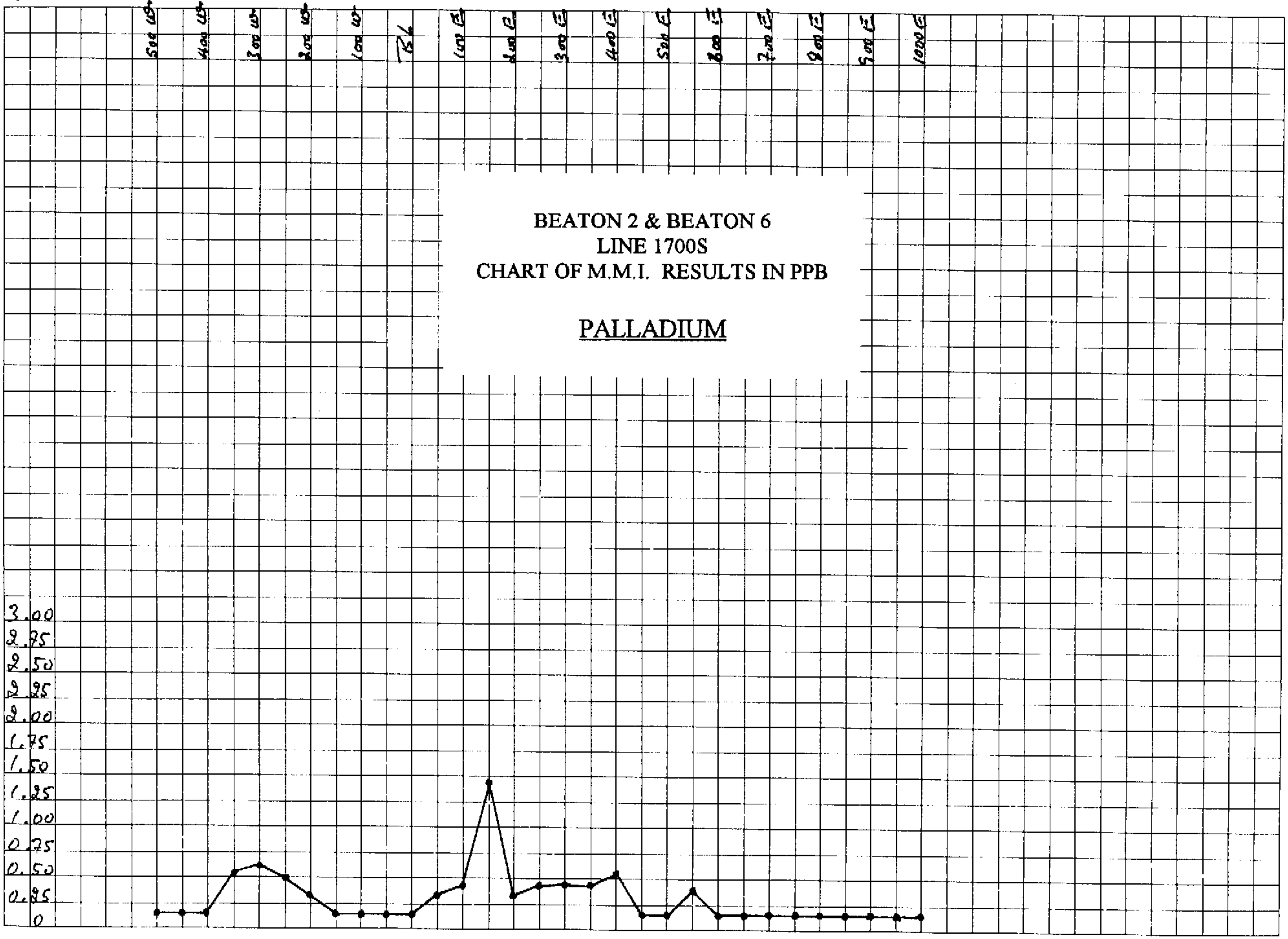

METRIC
BEATON 2 & BEATON 6
LINE 1700S
CHART OF M.M.I. RESULTS IN PPB
GOLD
500 W
400 W
300 W
200 W
100 W
BL
100 E
200 E
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
4.00
3.75
3.50
3.25
3.00
2.75
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0


METRIC
BEATON 2 & BEATON 6
LINE 1700S
CHART OF M.M.I. RESULTS IN PPB
SILVER
500 W
400 W
300 W
200 W
100 W
BL
100 E
200 E
300 E
400 E
500 E
600 E
700 E
800 E
900 E
1000 E
70
60
50
40
30
20
10
0

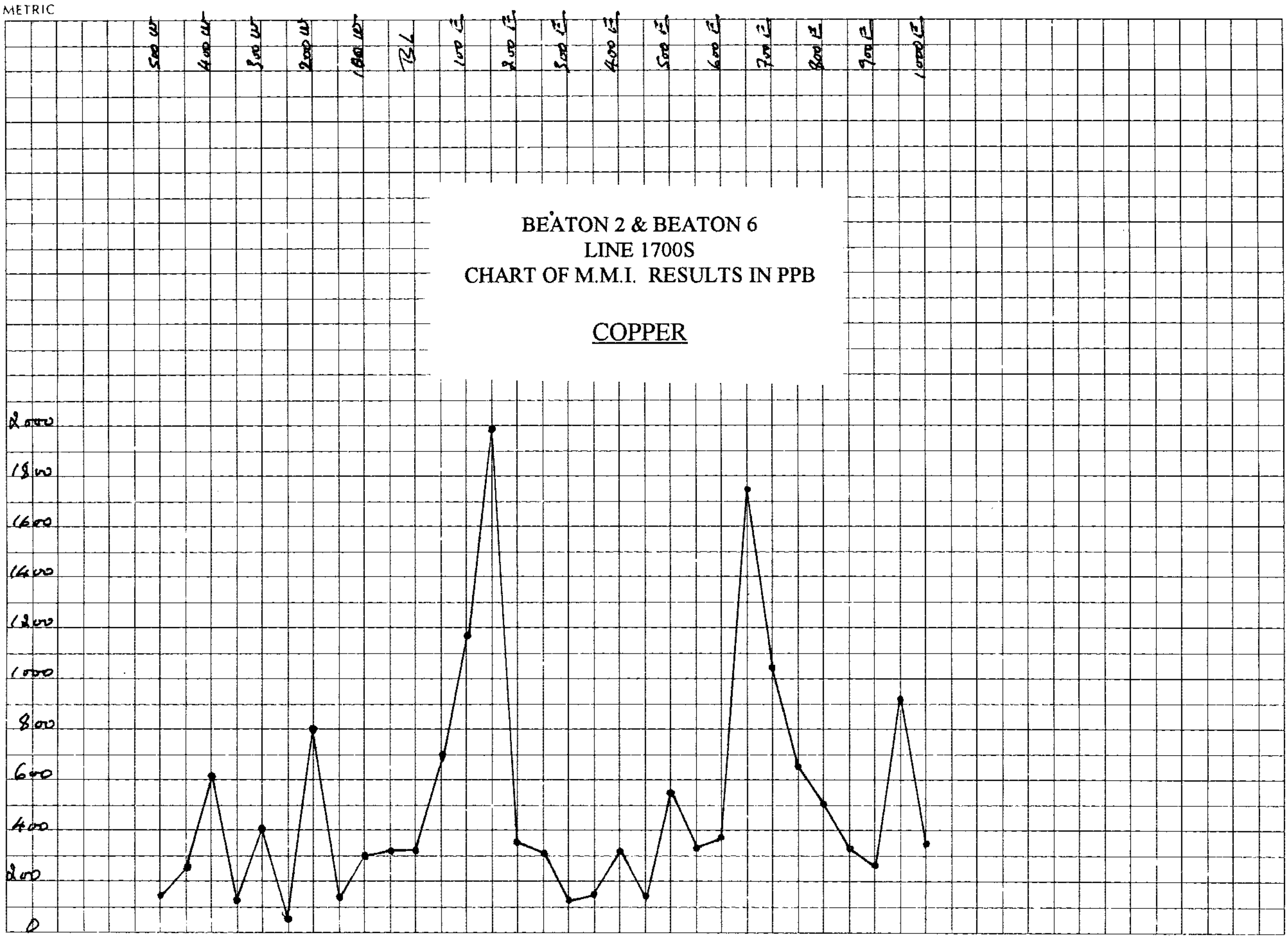
METRIC

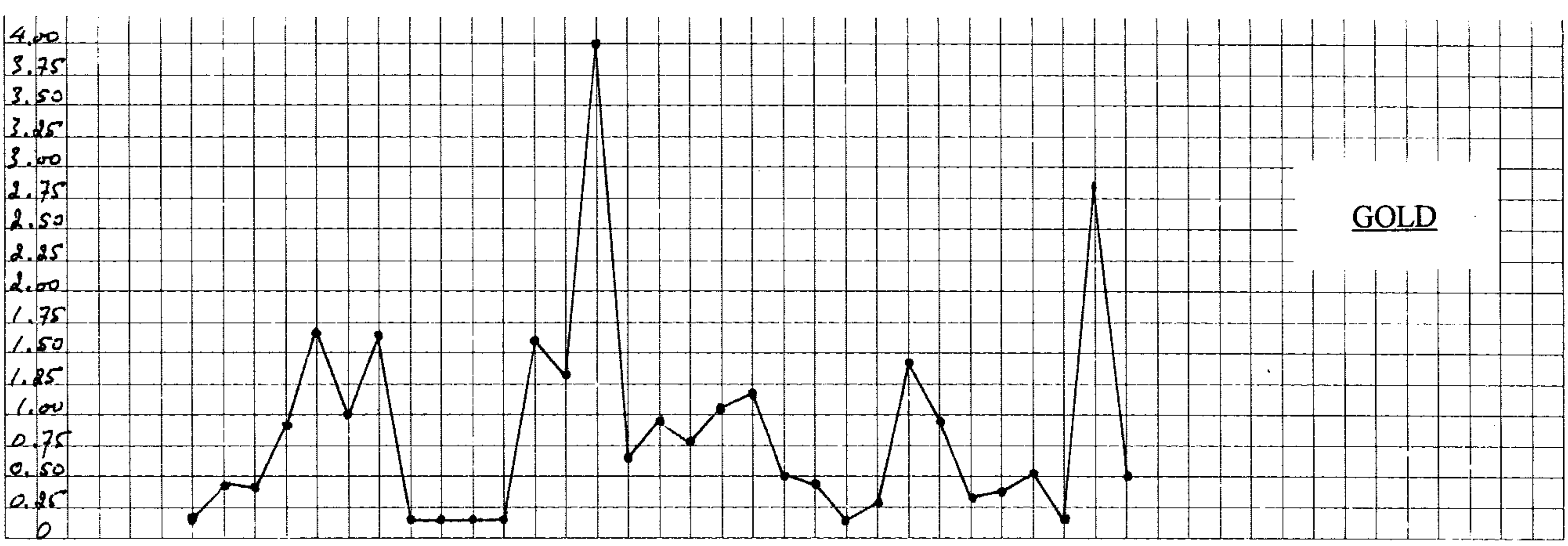
BEATON 2 & BEATON 6
LINE 1700S
CHART OF M.M.I. RESULTS IN PPB

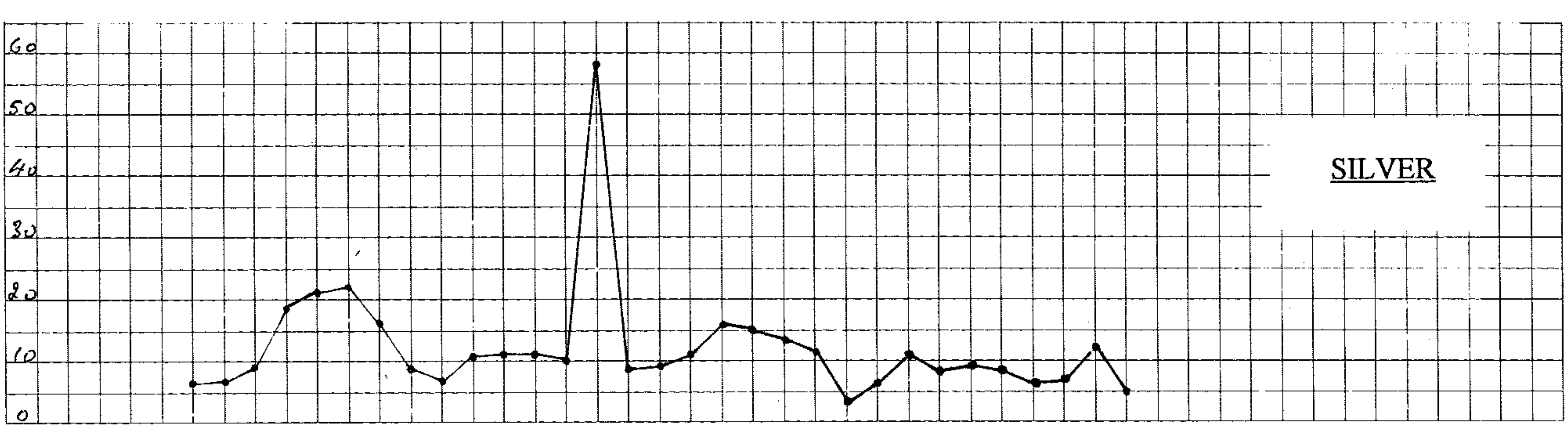
PALLADIUM

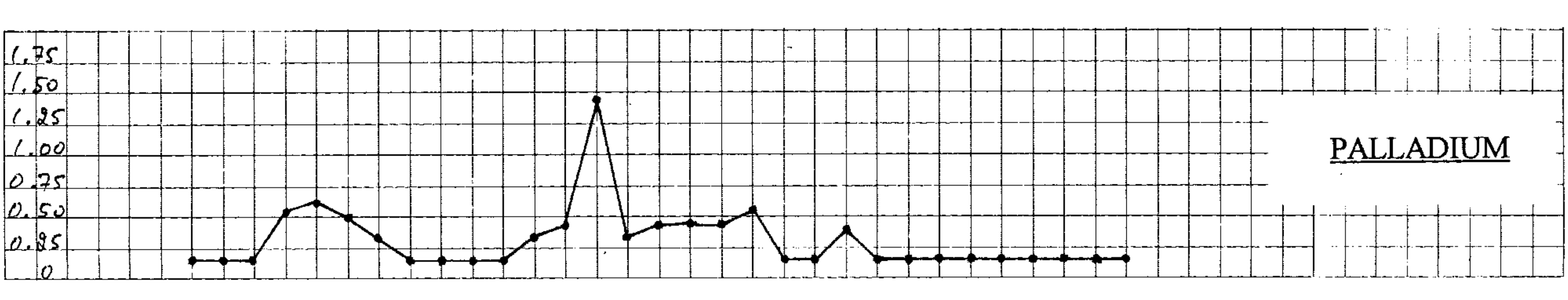


BEATON 2 & BEATON 6
LINE 1700S
CHART OF M.M.I. RESULTS IN PPB





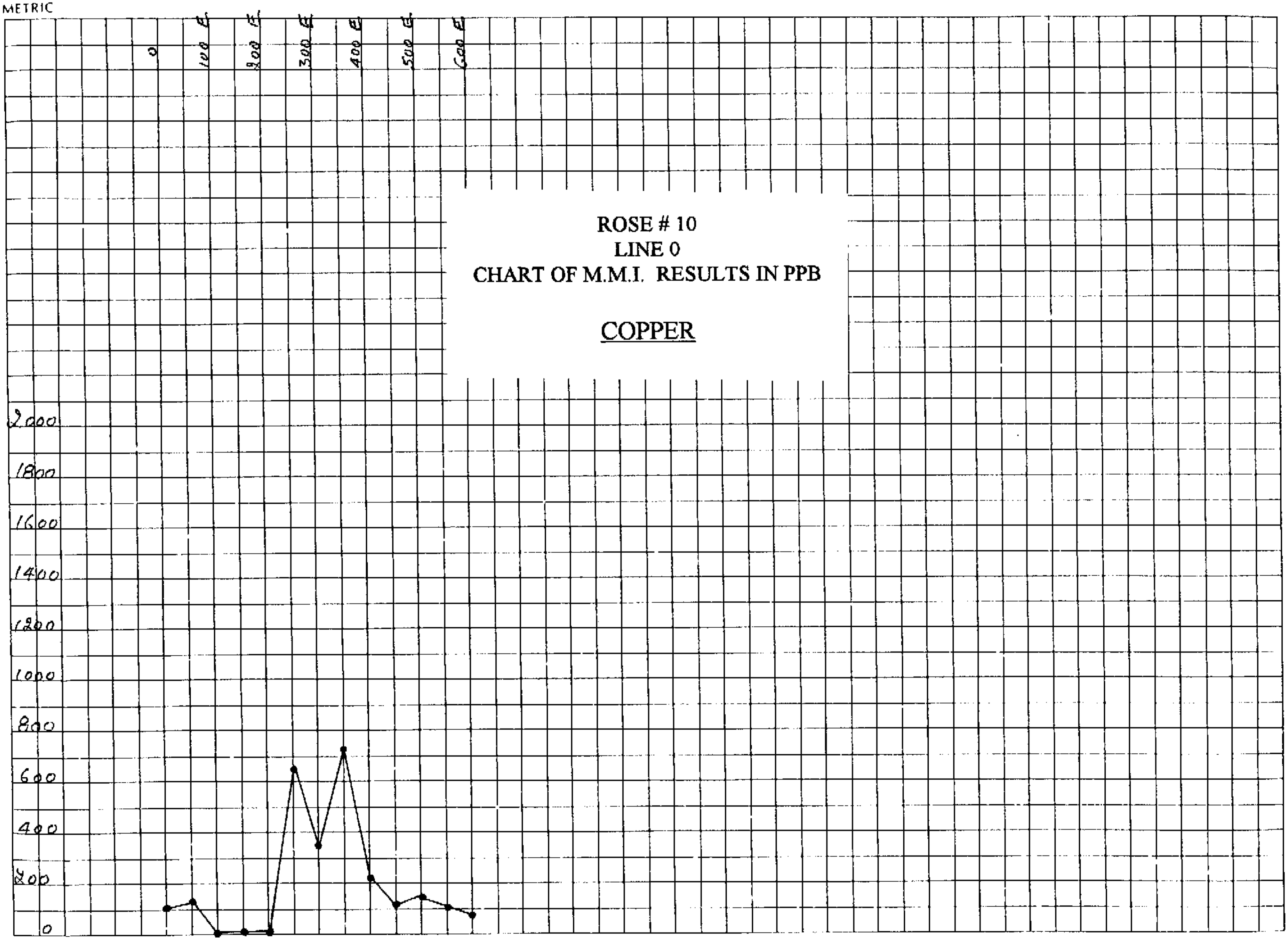


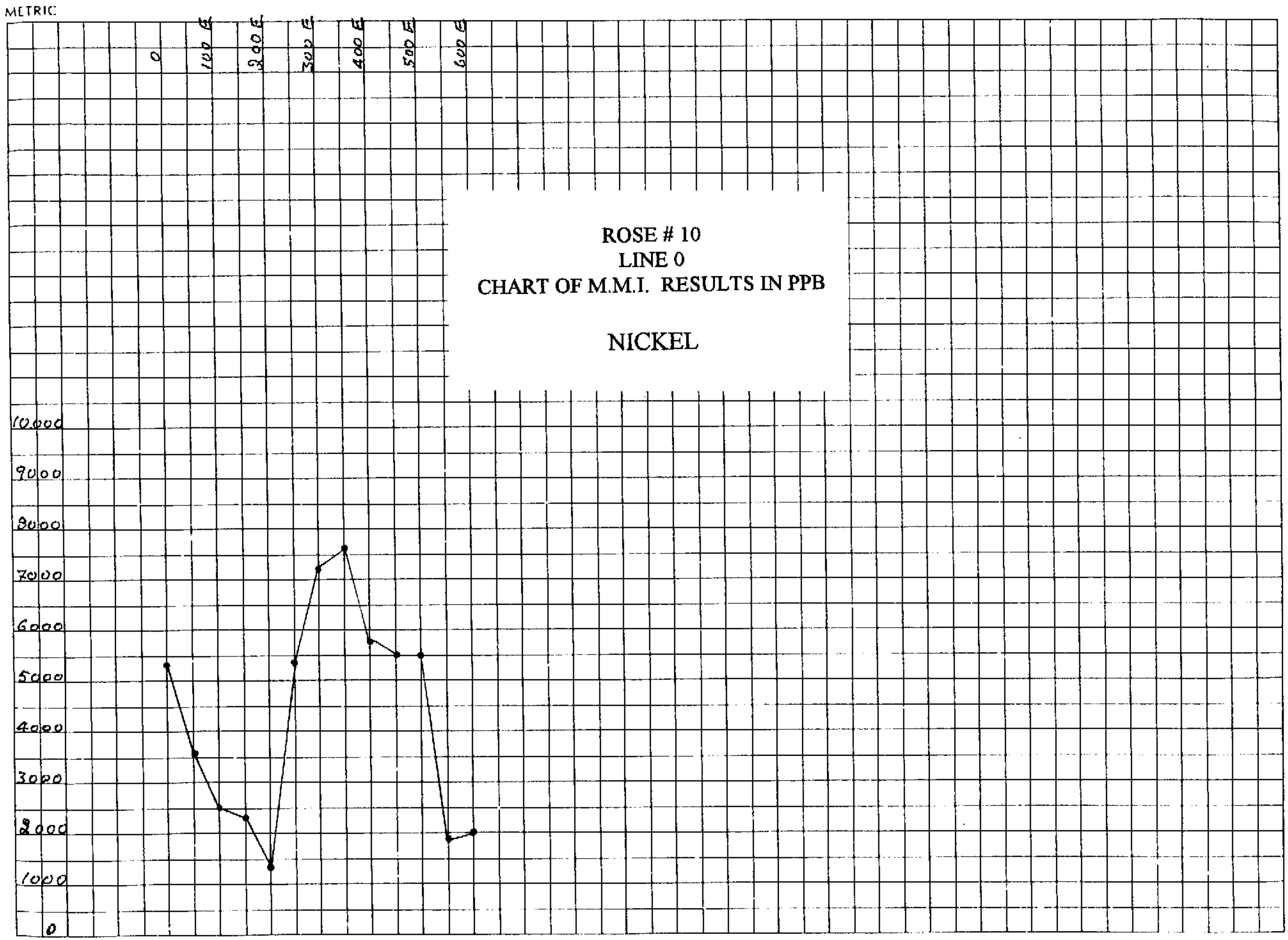


METRIC

ROSE # 10
LINE 0
CHART OF M.M.I. RESULTS IN PPB

<u>COPPER</u>

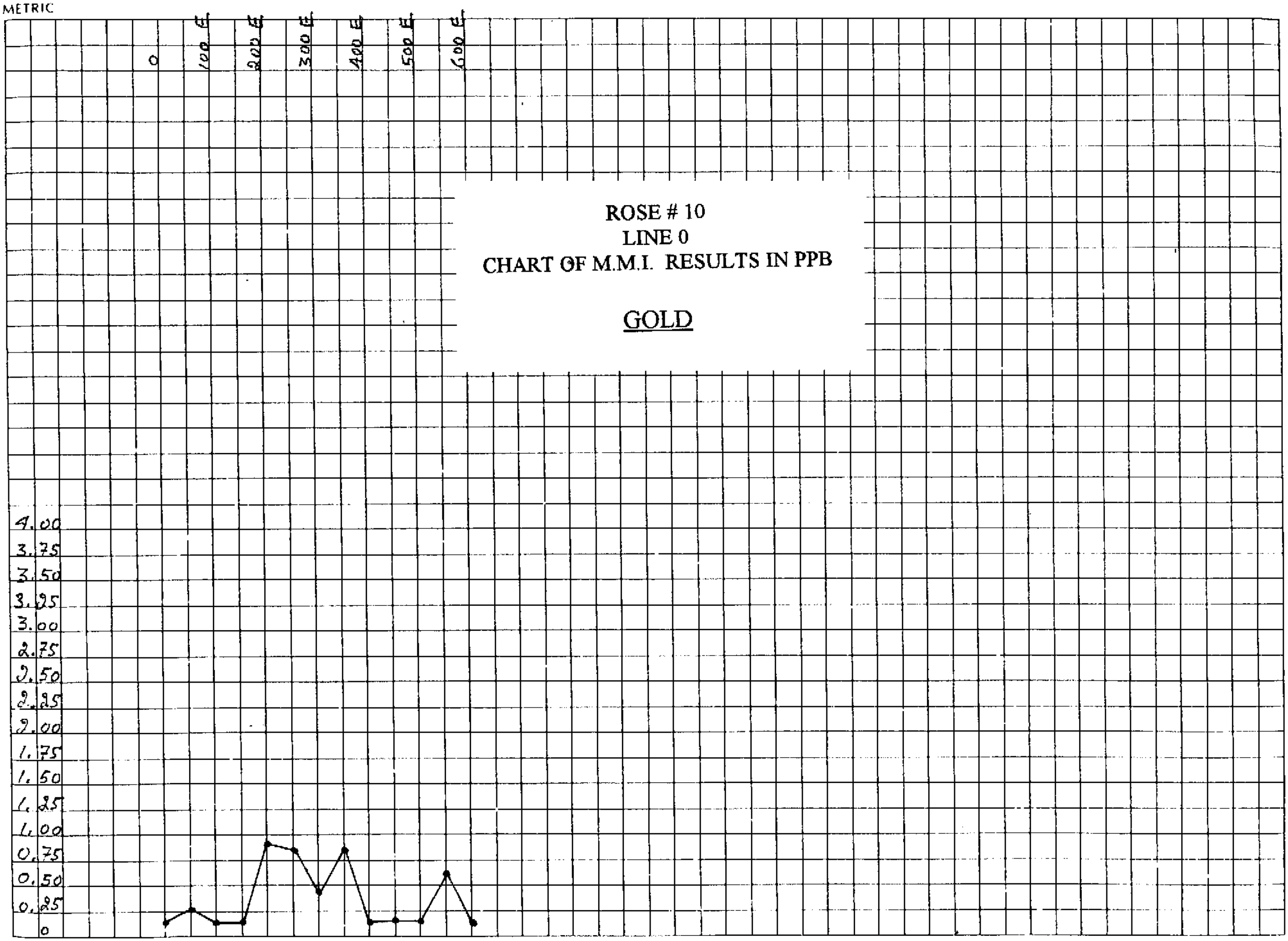


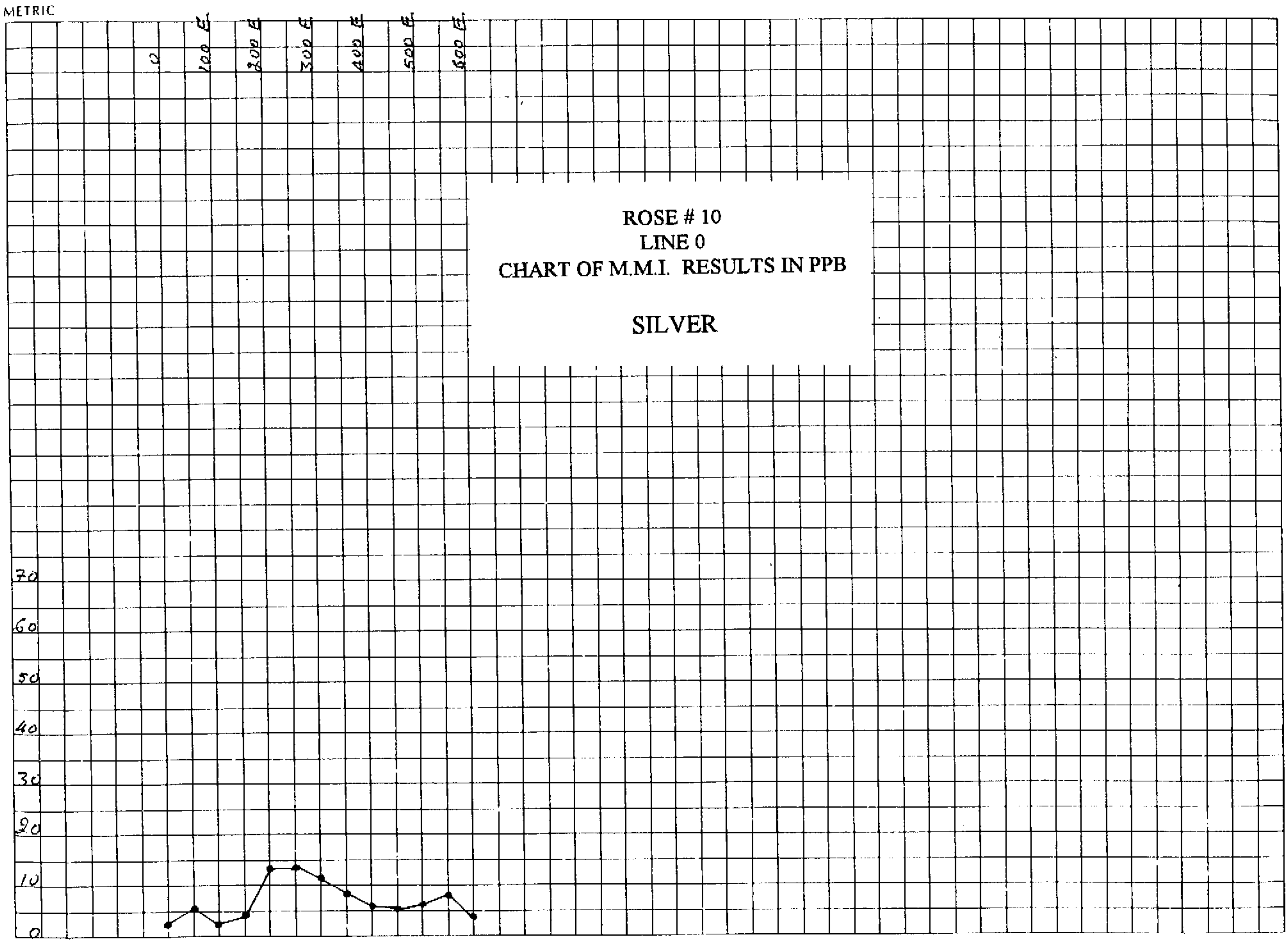


METRIC
0
100 E
200 E
300 E
400 E
500 E
600 E
ROSE # 10
LINE 0
CHART OF M.M.I. RESULTS IN PPB
NICKEL
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0

ROSE # 10
LINE 0
CHART OF M.M.I. RESULTS IN PPB

GOLD



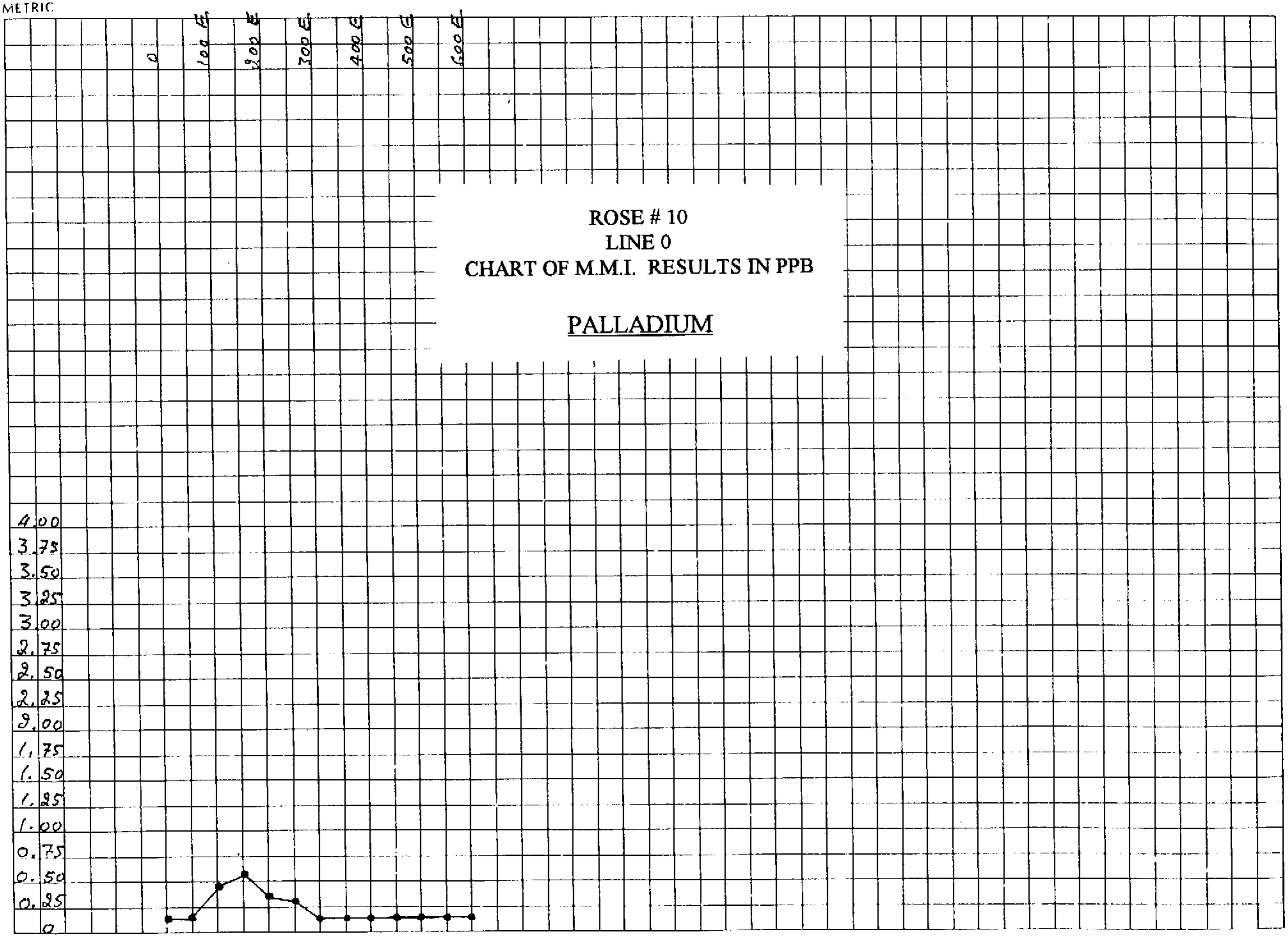


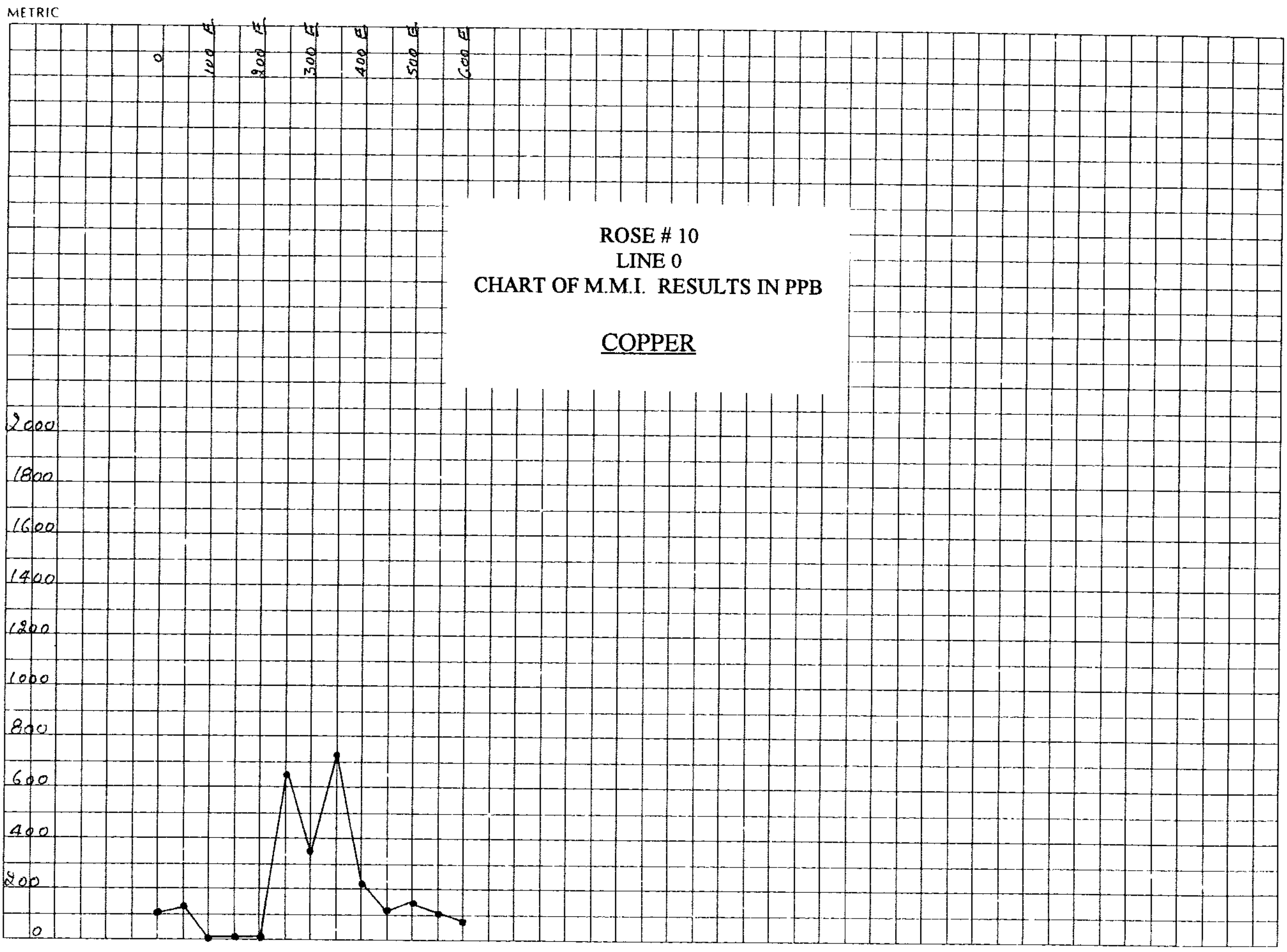
METRIC
0
100 E
200 E
300 E
400 E
500 E
600 E
ROSE # 10
LINE 0
CHART OF M.M.I. RESULTS IN PPB
SILVER
70
60
50
40
30
20
10
0

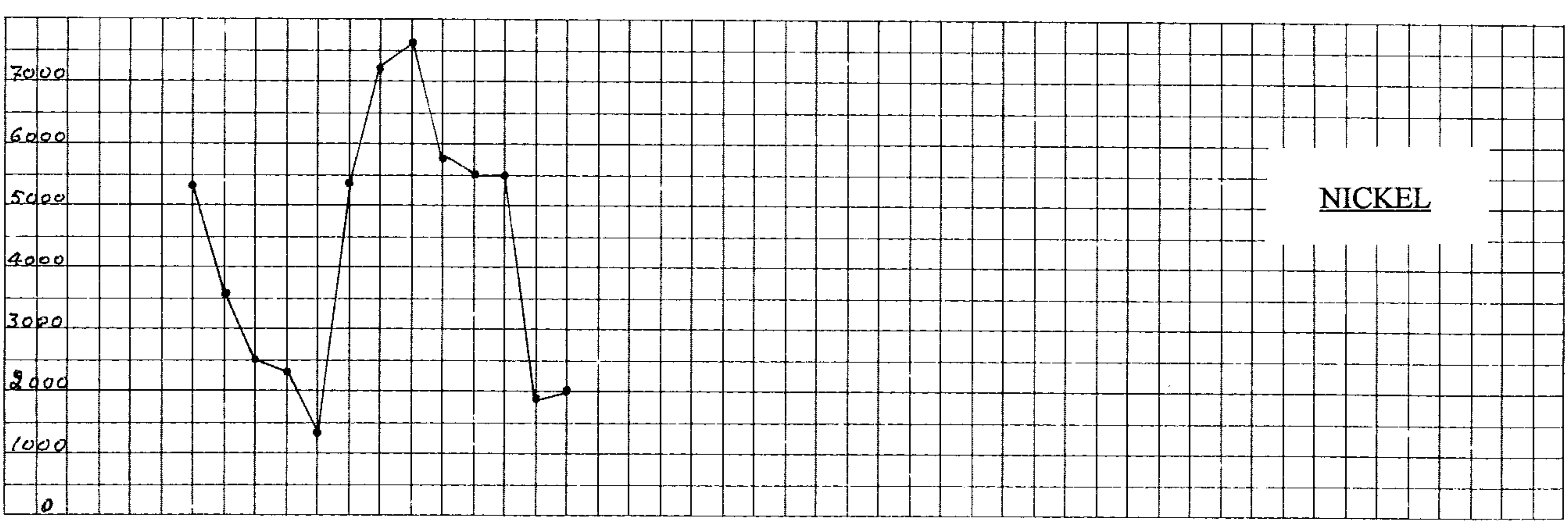
METRIC

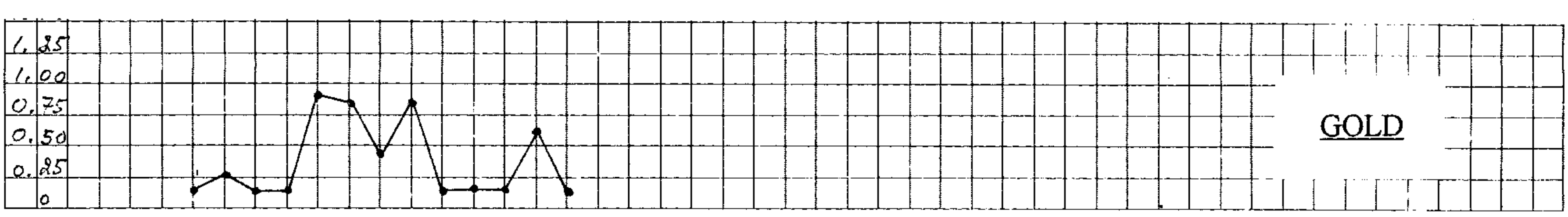
ROSE # 10
LINE 0
CHART OF M.M.I. RESULTS IN PPB

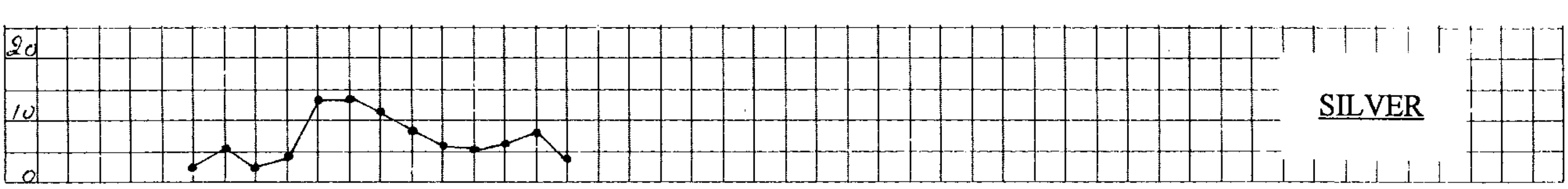
PALLADIUM

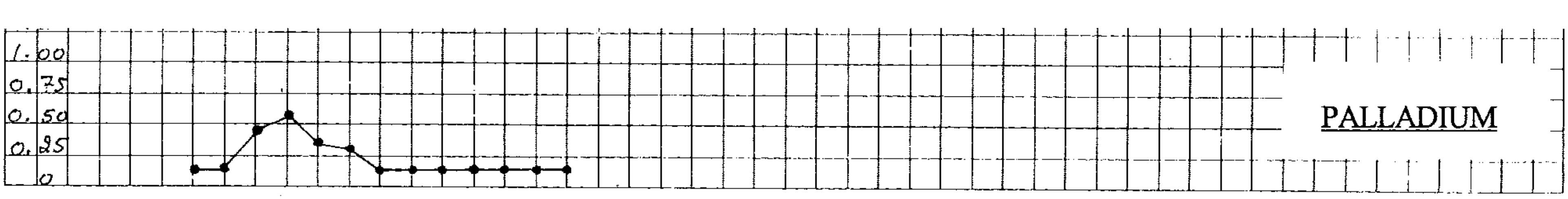



METRIC
0
100 E
200 E
300 E
400 E
500 E
600 E
ROSE # 10
LINE 0
CHART OF M.M.I. RESULTS IN PPB
COPPER
2000
1800
1600
1400
1200
1000
800
600
400
200
0


7000
6000
5000
4000
3000
2000
1000
0
NICKEL


1.25
1.00
0.75
0.50
0.25
0
GOLD


20
10
0
SILVER


1.00
0.75
0.50
0.25
0
PALLADIUM