

004986

ADDENDUM

TO

MINERAL RESERVE ASSESSMENT REPORT  
MARG PROPERTY - NOVEMBER 13, 1988

FOR

NDU RESOURCES LTD.  
MAYO MINING DISTRICT  
YUKON TERRITORY

BY

FRANZEN MINERAL ENGINEERING LTD.  
J.P. FRANZEN, P.ENG.

NORTH VANCOUVER, B.C.

OCTOBER 16, 1989

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|------------|---|

## INTRODUCTION

This addendum evaluates diamond drill hole assay results from a five hole program completed in 1989. These holes add to the 21 drill hole - 13,443 feet data base which the writer reported on in 1988 (Franzen, 1988).

Drill holes completed in 1989 are as follows:

| <u>Drill Section</u> | <u>Hole Number</u> | <u>Length (feet)</u> |
|----------------------|--------------------|----------------------|
| 1850E                | 89-37              | 812.8                |
| 2180E                | 89-36              | 998.8                |
| 2180E                | 89-38              | 1,384.7              |
| 2580E                | 89-34              | 1,456.6              |
| 2650E                | 89-35              | 1,313.7              |
| Total                | 5 holes            | 5,966.6              |

## PROCEDURE

Mineral reserve assessment procedures were described in detail in the writer's November 18, 1988 report and are summarized below.

Tonnages in each reserve block are calculated using volume and lithologic-interval weighted specific gravity values for each block. Lithologic units within the reserve blocks are assigned specific gravity values as follows:

| <u>Sulphide Lithology</u> | <u>Specific Gravity</u> |
|---------------------------|-------------------------|
| Massive                   | 4.25                    |
| Laminated                 | 3.75                    |
| Disseminated              | 3.25                    |
| Barren                    | 2.80                    |

Mineral reserves were calculated by the section method. Two categories of mineral reserves were considered:

**Drill Indicated:** Tonnage and grade are computed partly from specific drill hole values and partly from projection of these values for a distance of up to 115 feet (35 metres) from the drill hole values. Sampling is inappropriately spaced to outline the material completely or to establish its grade throughout.

**Inferred:** Tonnage and grade estimates are based on an assumed continuity of values 115 feet (35 metres) to 230 feet (70 metres) from a drill hole sample. These estimates are based on overall geological character of the deposit, as seen in level plans and for which there are no local samples or measurements.

Figures 1 to 6 show the location of calculated mineral reserve blocks in the deposit. Appendix A lists detailed tonnage and grade calculations for individual reserve blocks.

The mineral reserve area measures 1,540 feet along strike and up to 1,640 feet downdip from surface. All drill sections are at 230 foot intervals with the exception of the most westerly section (2180E) which is 620 feet from the nearest reserve section line (2370E).

## DISCUSSION

Table A summarizes undiluted tonnage and grades based on the most recent diamond drill information.

Undiluted mineral reserves are as follows:

| <u>Category</u>                | <u>Tons</u> | <u>%</u>  |           |           | <u>ounces/ton</u> |           |
|--------------------------------|-------------|-----------|-----------|-----------|-------------------|-----------|
|                                |             | <u>Cu</u> | <u>Pb</u> | <u>Zn</u> | <u>Ag</u>         | <u>Au</u> |
| Drill Indicated                | 2,558,120   | 1.83      | 2.67      | 4.99      | 1.94              | 0.033     |
| Drill Inferred                 | 1,278,520   | 1.59      | 2.68      | 5.03      | 1.88              | 0.037     |
| TOTAL                          | 3,836,640   | 1.76      | 2.68      | 5.01      | 1.92              | 0.034     |
| % Change over<br>1988 Estimate | 66.0        | (7.4)     | 3.5       | 0.4       | 2.7               | 21.4      |

The 1989 drill program increased reserves in all categories by 1,525,140 tons or 66% over the 1988 estimate. Reserve grades for base metals and silver are essentially unchanged; gold grade increased by 21%.

Cross Section 2180E contributed 77.4% of the additional reserve tonnage. Gold grades on this section line are significantly above average.

Mining and economic constraints have not been applied to the reserve estimate.

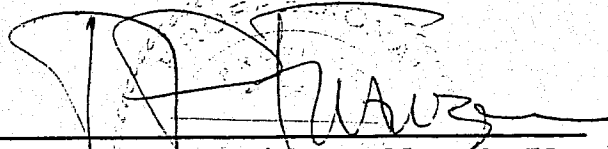
## REFERENCES

- FRANZEN, J.P. (1988) Preliminary Assessment of Mineral Reserves at the MARG Cu-Zn-Pb-Ag-Au Property, Mayo Mining District, Yukon Territory. Report for NDU Resources Ltd., pp. 7.
- FRANZEN, J.P. (1988) Assessment of Mineral Reserves at the MARG Cu-Zn-Pb-Ag-Au Property, Mayo Mining District, Yukon Territory. Report for NDU Resources Ltd., pp. 11.
- FRANZEN, J.P. (1988) Addendum to November 18, 1988 Mineral Reserve Assessment, MARG Property, Mayo Mining District, Yukon Territory. Report for NDU Resources Ltd., pp. 8.

## CERTIFICATE

I, Jeffrey Paul Franzen, P.Eng., of 4990 Cedarcrest Avenue, North Vancouver, B.C. do hereby certify that:

1. I am a Consulting Mining Geologist registered with the Association of Professional Engineers of British Columbia since 1982.
2. I am a graduate of the University of British Columbia with B.Sc. (1972) and Carleton University with M.Sc. (1974).
3. I have practiced my profession continuously since 1974. In Yukon: as Mine Geologist, Research Geologist and Chief Geologist, United Keno Hill Mines Limited, and Exploration Geologist, Cyprus Anvil Mining Corp. In British Columbia: Regional Geologist - Western Canada, Billiton Canada Ltd., Consultant - Franzen Mineral Engineering Ltd.
4. This report is based on a visit to the subject property on August 22 and 23, 1988; on the writer's 1988 reports on the subject property dated October 17, November 13 and December 12 and on the writer's evaluation of maps and data supplied by NDU Resources Ltd.
5. I have no interest, direct or indirect, in the MARG property or NDU Resources Ltd.
6. Permission is hereby granted to NDU Resources Ltd. to use this report in support of any Prospectus, Statement of Material Facts or Filing Statement to be submitted to the Superintendent of Brokers and the Vancouver Stock Exchange.

  
FRANZEN MINERAL ENGINEERING LTD.  
J.P. Franzen, P. Eng.

North Vancouver, B.C.  
October 16, 1989

TABLE A

MARG PROPERTY

UNDILUTED TONS AND GRADE SUMMARY - OCTOBER 16, 1989

|   | <u>Cross Section<br/>2180 E</u> | <u>Cross Section<br/>2370 E</u> | <u>Cross Section<br/>2440 E</u> | <u>Cross Section<br/>2510 E</u> | <u>Cross Section<br/>2580 E</u> | <u>Cross Section<br/>2650 E</u> | <u>TOTAL<br/>ALL SECTION</u> |
|---|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|------------------------------|
| <b>DRILL INDICATED</b>                    |                                 |                                 |                                 |                                 |                                 |                                 |                              |
| Tons                                      | 501,217                         | 371,841                         | 709,418                         | 588,459                         | 302,400                         | 84,760                          | 2,558,120                    |
| Grade                                     |                                 |                                 |                                 |                                 |                                 |                                 |                              |
| %   |                                 |                                 |                                 |                                 |                                 |                                 |                              |
| Cu Pb Zn                                  | 1.50 2.66 4.74                  | 2.05 2.69 4.45                  | 2.19 2.76 5.38                  | 1.72 2.54 4.97                  | 1.60 2.49 4.85                  | 1.58 3.45 6.35                  | 1.83 2.67 4.9                |
| oz/ton                                    |                                 |                                 |                                 |                                 |                                 |                                 |                              |
| Ag Au                                     | 2.07 0.048                      | 1.68 0.023                      | 1.87 0.031                      | 2.18 0.032                      | 1.83 0.025                      | 1.65 0.035                      | 1.94 0.033                   |
| <b>DRILL INFERRED</b>                     |                                 |                                 |                                 |                                 |                                 |                                 |                              |
| Tons                                      | 679,758                         | 56,389                          | 174,988                         | 109,781                         | 130,200                         | 127,400                         | 1,278,520                    |
| Grade                                     |                                 |                                 |                                 |                                 |                                 |                                 |                              |
| %   |                                 |                                 |                                 |                                 |                                 |                                 |                              |
| Cu Pb Zn                                  | 1.50 2.66 4.74                  | 1.20 1.20 2.79                  | 2.18 2.57 5.48                  | 1.59 2.59 5.28                  | 1.49 2.94 5.39                  | 1.58 3.45 6.35                  | 1.59 2.68 5.0                |
| oz/ton                                    |                                 |                                 |                                 |                                 |                                 |                                 |                              |
| Ag Au                                     | 2.07 0.048                      | 0.72 0.010                      | 1.62 0.021                      | 2.08 0.033                      | 1.80 0.022                      | 1.65 0.035                      | 1.88 0.037                   |
| <b>TOTAL DRILL INDICATED AND INFERRED</b> |                                 |                                 |                                 |                                 |                                 |                                 |                              |
| Tons                                      | 1,181,000                       | 428,200                         | 884,400                         | 698,300                         | 432,600                         | 212,160                         | 3,836,640                    |
| Grade                                     |                                 |                                 |                                 |                                 |                                 |                                 |                              |
| %   |                                 |                                 |                                 |                                 |                                 |                                 |                              |
| Cu Pb Zn                                  | 1.50 2.66 4.74                  | 1.94 2.49 4.23                  | 2.19 2.72 5.40                  | 1.70 2.55 5.02                  | 1.57 2.63 5.01                  | 1.58 3.45 6.35                  | 1.76 2.68 5.0                |
| oz/ton                                    |                                 |                                 |                                 |                                 |                                 |                                 |                              |
| Ag Au                                     | 2.07 0.048                      | 1.55 0.021                      | 1.82 0.029                      | 2.16 0.032                      | 1.83 0.024                      | 1.65 0.035                      | 1.92 0.034                   |

FIGURES 1-6

UNDILUTED MINERAL RESERVE BLOCKS, SECTIONS  
2650E, 2580E, 2510E, 2440E, 2370E, 2180E

SOUTH

NORTH

89-35

800 N



DRILL INDICATED RESERVE BLOCK

DRILL INFERRED RESERVE BLOCK

1400 m

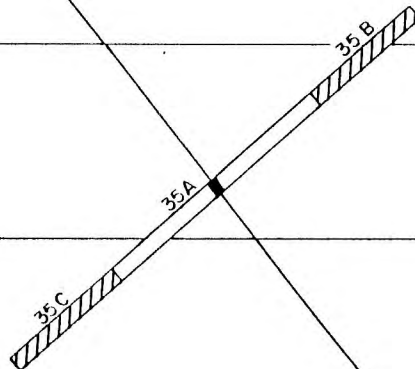
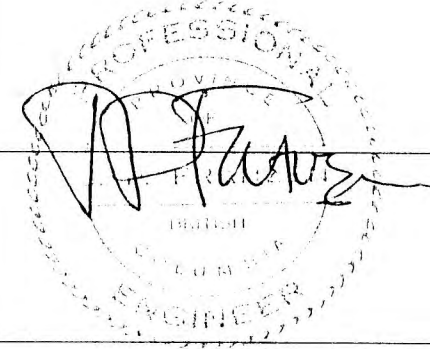
1400 m

1300 m

1300 m

1200 m

1200 m



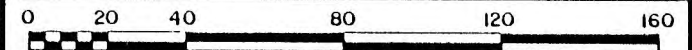
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NTS: 106 D/7

UNDILUTED MINERAL RESERVE BLOCKS  
SECTION 2650 E

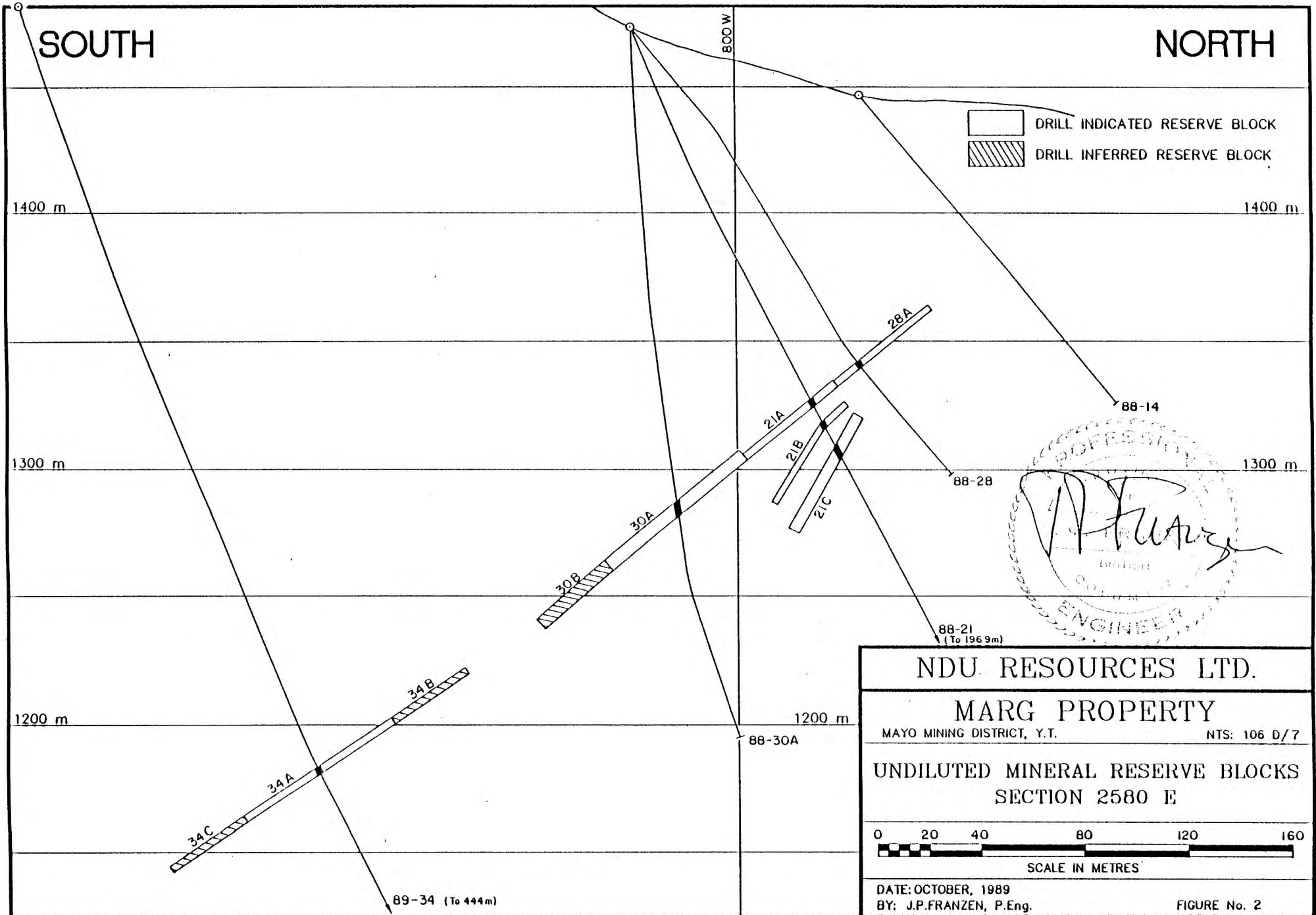


SCALE IN METRES

DATE: OCTOBER, 1989  
BY: J.P. FRANZEN, P.Eng.

FIGURE No. 1

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MAYO MINING DISTRICT, Y.T. NTS: 106 D/7

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**UNDILUTED MINERAL RESERVE BLOCKS  
SECTION 2580 E**

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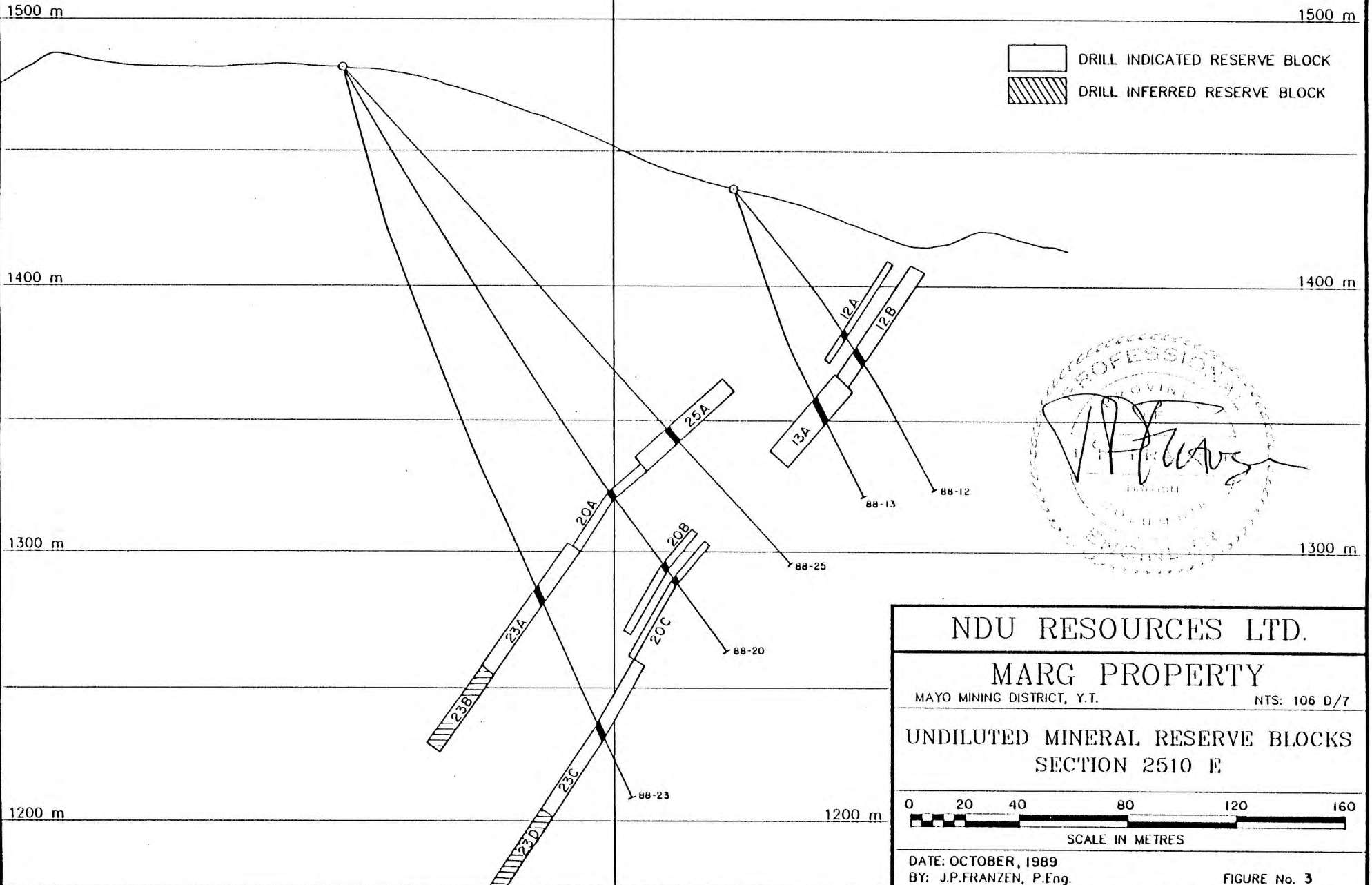
0    20    40    80    120    160  
  
 SCALE IN METRES

DATE: OCTOBER, 1989 FIGURE No. 2  
 BY: J.P.FRANZEN, P.Eng.

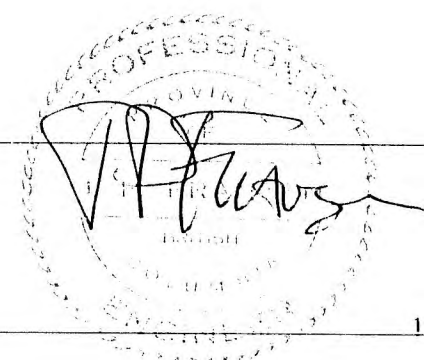
*Prepared by: RWR MINERAL GRAPHICS LTD.*

SOUTH

NORTH



DRILL INDICATED RESERVE BLOCK  
 DRILL INFERRED RESERVE BLOCK



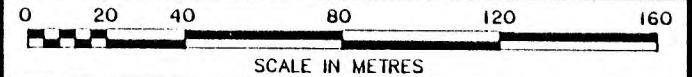
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UNDILUTED MINERAL RESERVE BLOCKS  
SECTION 2510 E



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FIGURE No. 3

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SOUTH

NORTH

1500 m

1500 m

1400 m

1400 m



1300 m

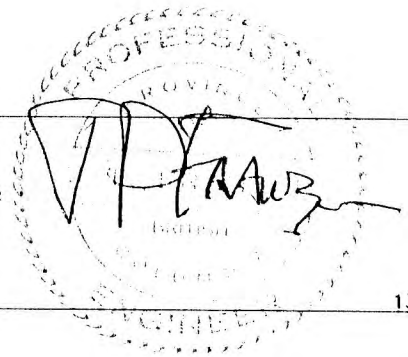
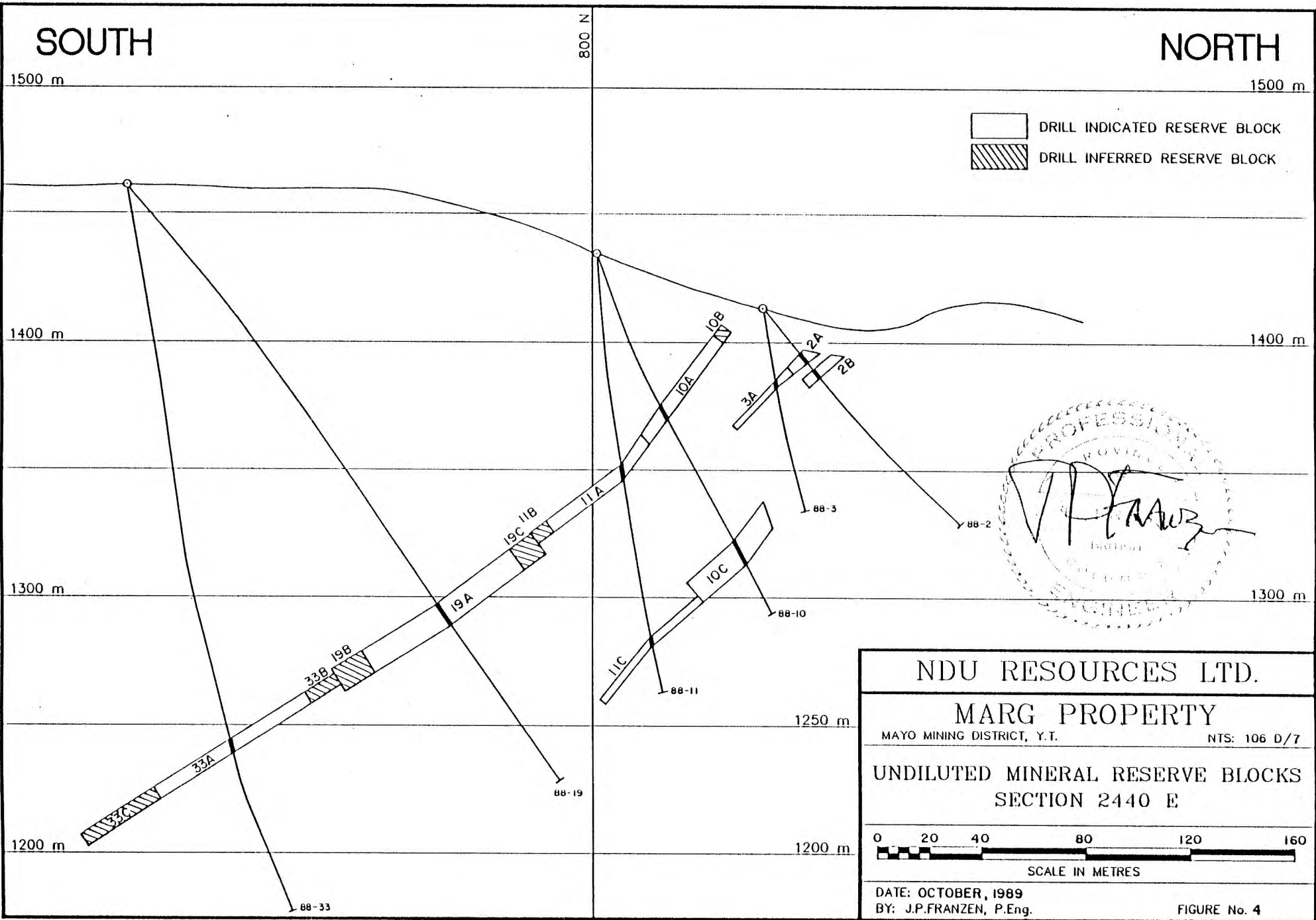
1300 m

1200 m

1200 m

800 N

-  DRILL INDICATED RESERVE BLOCK
-  DRILL INFERRED RESERVE BLOCK



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UNDILUTED MINERAL RESERVE BLOCKS  
SECTION 2440 E



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FIGURE No. 4

Prepared by: RWR MINERAL GRAPHICS LTD.

SOUTH

NORTH

800 N

1500 m

1500 m

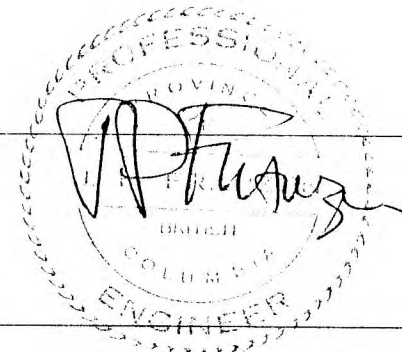
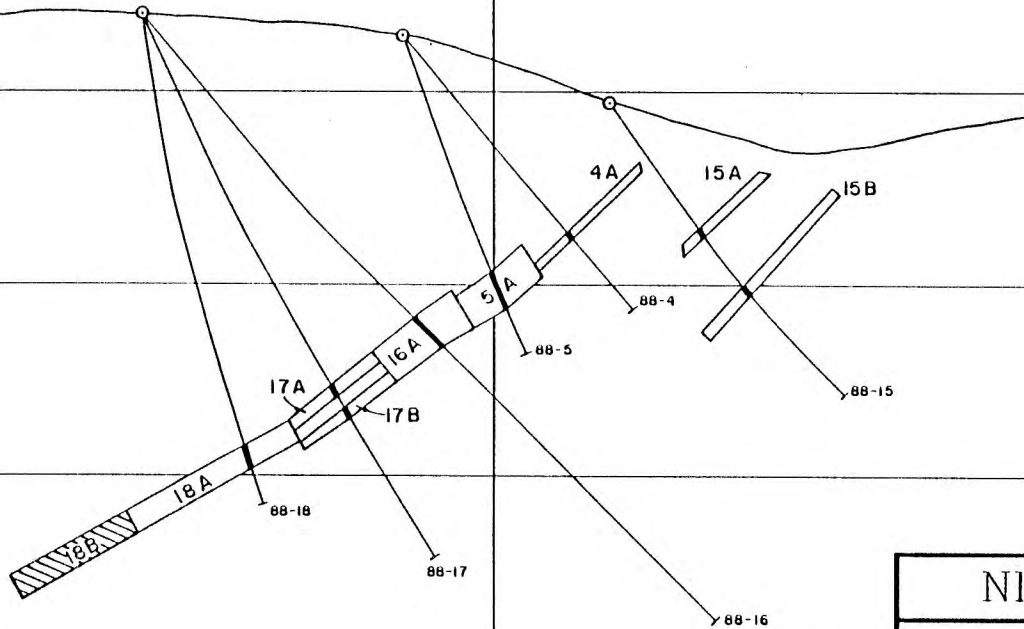
DRILL INDICATED RESERVE BLOCK
   
 DRILL INFERRED RESERVE BLOCK

1400 m

1400 m

1300 m

1300 m



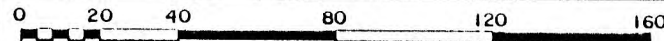
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MAYO MINING DISTRICT, Y.T.

NTS: 106 D/7

UNDILUTED MINERAL RESERVE BLOCKS  
SECTION 2370 E

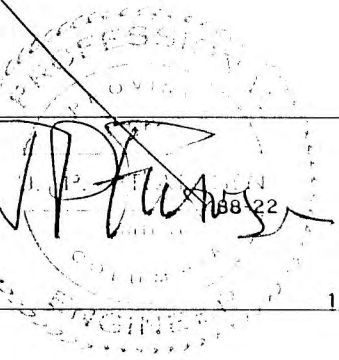
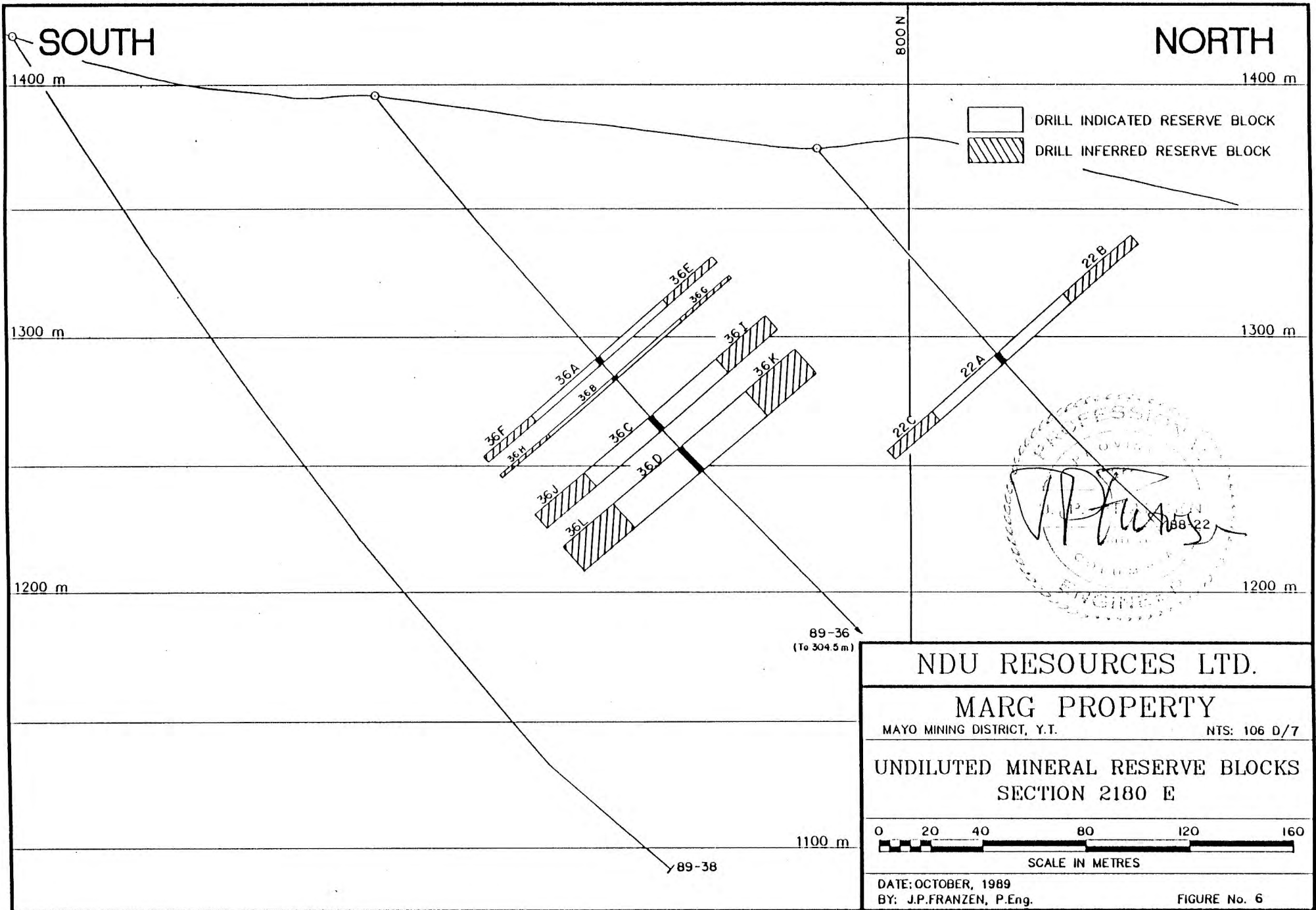


SCALE IN METRES

DATE: OCTOBER, 1989  
BY: J.P.FRANZEN, P.Eng.

FIGURE No. 5

Prepared by: RWR MINERAL GRAPHICS LTD.



APPENDIX A

UNDILUTED TONNAGE AND GRADE CALCULATIONS  
CROSS SECTIONS 2650E, 2580E, 2510E, 2440E, 2370E, 2180E

**MARG PROPERTY**  
**UNDILUTED MINERAL RESERVES**  
**October 16, 1989**  
**Cross Section 2650 E**

| Block   | Drill Hole | Interval (m) |       | Width (m) | True Width (m) | Length (m) | Infl (m) | Volume (m <sup>3</sup> ) | Specific Gravity | Tons   | %    |      |      | oz/ton |       |
|---|------------|--------------|-------|-----------|----------------|------------|----------|--------------------------|------------------|--------|------|------|------|--------|-------|
|   |            | From         | To    |           |                |            |          |                          |                  |        | Cu   | Pb   | Zn   | Ag     | Au    |
| <b>DRILL INDICATED</b>                          |            |              |       |           |                |            |          |                          |                  |        |      |      |      |        |       |
| 35A   | 89-35      | 292.5        | 296.2 | 3.7       | 3.7            | 70         | 70       | 18130                    | 4.25             | 84760  | 1.58 | 3.45 | 6.35 | 1.65   | 0.035 |
| <b>TOTAL DRILL INDICATED</b>                    |            |              |       |           |                |            |          | 18130                    | 4.25             | 84760  | 1.58 | 3.45 | 6.35 | 1.65   | 0.035 |
| <b>DRILL INFERRED</b>                           |            |              |       |           |                |            |          |                          |                  |        |      |      |      |        |       |
| 35B   | 89-35      | 292.5        | 296.2 | 3.7       | 3.7            | 35         | 105      | 13600                    | 4.25             | 63700  | 1.58 | 3.45 | 6.35 | 1.65   | 0.035 |
| 35C   | 89-35      | 292.5        | 296.2 | 3.7       | 3.7            | 35         | 105      | 13600                    | 4.25             | 63700  | 1.58 | 3.45 | 6.35 | 1.65   | 0.035 |
| <b>TOTAL DRILL INFERRED</b>                     |            |              |       |           |                |            |          | 27200                    | 4.25             | 127400 | 1.58 | 3.45 | 6.35 | 1.65   | 0.035 |
| <b>GRAND TOTAL DRILL INDICATED AND INFERRED</b> |            |              |       |           |                |            |          |                          |                  | 212160 | 1.58 | 3.45 | 6.35 | 1.65   | 0.035 |

**MARG PROPERTY  
UNDILUTED MINERAL RESERVES**

October 16, 1989

Cross Section 2580 E

| Block   | Drill Hole | Interval (m) |       | Width (m) | True Width (m) | Length (m) | Infl (m) | Volume (m <sup>3</sup> ) | Specific Gravity | Tons   | %    |      |      | oz/ton |       |
|---|------------|--------------|-------|-----------|----------------|------------|----------|--------------------------|------------------|--------|------|------|------|--------|-------|
|   |            | From         | To    |           |                |            |          |                          |                  |        | Cu   | Pb   | Zn   | Ag     | Au    |
| <b>DRILL INDICATED</b>                          |            |              |       |           |                |            |          |                          |                  |        |      |      |      |        |       |
| 21A   | 88-21      | 161.5        | 164.8 | 3.3       | 3.3            | 46         | 70       | 10626                    | 4.22             | 49429  | 2.56 | 2.48 | 5.25 | 2.11   | 0.034 |
| 21B   | 88-21      | 171.7        | 174.2 | 2.5       | 2.4            | 48         | 70       | 8064                     | 4.25             | 37778  | 1.46 | 2.10 | 4.10 | 1.78   | 0.022 |
| 21C   | 88-21      | 182.4        | 187.5 | 5.1       | 3.8            | 48         | 70       | 12768                    | 4.20             | 59111  | 1.50 | 2.32 | 4.84 | 1.97   | 0.031 |
| 28A   | 88-28      | 156.9        | 160.0 | 3.1       | 3.1            | 46         | 70       | 9982                     | 3.29             | 36200  | 1.39 | 1.81 | 3.46 | 1.49   | 0.015 |
| 30A   | 88-30      | 188.6        | 192.2 | 3.6       | 3.0            | 69         | 70       | 14490                    | 4.20             | 67084  | 1.05 | 2.85 | 5.21 | 1.70   | 0.027 |
| 34A   | 89-34      | 320.2        | 322.5 | 2.3       | 2.3            | 70         | 70       | 11270                    | 4.25             | 52687  | 1.77 | 3.00 | 5.50 | 1.86   | 0.018 |
| <b>TOTAL DRILL INDICATED</b>                    |            |              |       |           |                |            |          | 67200                    | 4.08             | 302400 | 1.60 | 2.49 | 4.85 | 1.83   | 0.025 |
| <b>DRILL INFERRED</b>                           |            |              |       |           |                |            |          |                          |                  |        |      |      |      |        |       |
| 30B   | 88-30      | 188.6        | 192.2 | 3.6       | 3.0            | 35         | 105      | 11025                    | 4.20             | 51042  | 1.05 | 2.85 | 5.21 | 1.70   | 0.027 |
| 34B   | 89-34      | 320.2        | 322.5 | 2.3       | 2.3            | 35         | 105      | 8453                     | 4.25             | 39600  | 1.77 | 3.00 | 5.50 | 1.86   | 0.018 |
| 34C   | 89-34      | 320.2        | 322.5 | 2.3       | 2.3            | 35         | 105      | 8453                     | 4.25             | 39600  | 1.77 | 3.00 | 5.50 | 1.86   | 0.018 |
| <b>TOTAL DRILL INFERRED</b>                     |            |              |       |           |                |            |          | 27931                    | 4.23             | 130200 | 1.49 | 2.94 | 5.39 | 1.80   | 0.022 |
| <b>GRAND TOTAL DRILL INDICATED AND INFERRED</b> |            |              |       |           |                |            |          |                          |                  | 432600 | 1.57 | 2.63 | 5.01 | 1.83   | 0.024 |

**MARG PROPERTY**  
**UNDILUTED MINERAL RESERVES**

October 16, 1989

Cross Section 2510 E

| Block   | Drill Hole | Interval (m) |       | Width (m) | True Width (m) | Length (m) | Infl (in) | Volume (m <sup>3</sup> ) | Specific Gravity | Tons          | %           |             |               | oz/ton      |              |      |      |       |
|---|------------|--------------|-------|-----------|----------------|------------|-----------|--------------------------|------------------|---------------|-------------|-------------|---------------|-------------|--------------|------|------|-------|
|   |            | From         | To    |           |                |            |           |                          |                  |               | Cu          | Pb          | Zn            | Ag          | Au           |      |      |       |
| <b>DRILL INDICATED</b>                          |            |              |       |           |                |            |           |                          |                  |               |             |             |               |             |              |      |      |       |
| 12A   | 88-12      | 65.0         | 68.7  | 3.7       | 3.0            | 43         | 70        | 9030                     | 4.00             | 39815         | 3.14        | 4.84        | 9.21          | 3.18        | 0.053        |      |      |       |
| 12B   | 88-12      | 73.9         | 79.8  | 6.0       | 5.5            | 50         | 70        | 19250                    | 4.00             | 84877         | 2.03        | 3.31        | 5.85          | 3.09        | 0.042        |      |      |       |
| 13A   | 88-13      | 82.3         | 94.0  | 11.7      | 10.3           | 38         | 70        | 27398                    | 3.77             | 113857        | 1.41        | 2.52        | 4.45          | 2.25        | 0.031        |      |      |       |
| 20A   | 88-20A     | 187.2        | 189.3 | 2.1       | 2.1            | 39         | 70        | 5733                     | 3.40             | 21486         | 1.74        | 1.87        | 3.97          | 1.91        | 0.034        |      |      |       |
| 20B   | 88-20B     | 221.3        | 223.5 | 2.2       | 2.2            | 45         | 70        | 6930                     | 3.61             | 27577         | 1.26        | 2.10        | 4.04          | 1.55        | 0.018        |      |      |       |
| 20C   | 88-20C     | 226.7        | 229.2 | 2.5       | 2.5            | 50         | 70        | 8750                     | 3.35             | 32311         | 0.93        | 1.77        | 3.23          | 1.41        | 0.014        |      |      |       |
| 23A   | 88-23A     | 209.2        | 215.1 | 5.9       | 5.0            | 56         | 70        | 19600                    | 4.25             | 91822         | 1.91        | 3.07        | 6.49          | 2.20        | 0.028        |      |      |       |
| 23C   | 88-23C     | 263.8        | 269.2 | 5.3       | 5.0            | 66         | 70        | 23100                    | 3.88             | 98797         | 1.24        | 2.07        | 3.95          | 1.94        | 0.038        |      |      |       |
| 25A   | 88-25A     | 181.5        | 187.5 | 6.0       | 6.0            | 45         | 70        | 18900                    | 3.74             | 77917         | 1.98        | 1.22        | 3.40          | 1.47        | 0.023        |      |      |       |
| <b>TOTAL DRILL INDICATED</b>                    |            |              |       |           |                |            |           | 138691                   | 3.85             | <b>588459</b> | 1.72        | 2.54        | 4.97          | 2.18        | 0.032        |      |      |       |
| <b>DRILL INFERRED</b>                           |            |              |       |           |                |            |           |                          |                  |               |             |             |               |             |              |      |      |       |
| 23B   | 88-23      | 209.2        | 215.1 | 5.9       | 5.0            | 35         | 70        | 12250                    | 4.25             | 57388         | 1.91        | 3.07        | 6.49          | 2.20        | 0.028        |      |      |       |
| 23D   | 88-23      | 263.8        | 269.2 | 5.4       | 5.0            | 35         | 70        | 12250                    | 3.88             | 52392         | 1.24        | 2.07        | 3.95          | 1.94        | 0.038        |      |      |       |
| <b>TOTAL DRILL INFERRED</b>                     |            |              |       |           |                |            |           | 5.0                      | 35               | 70            | 24500       | 4.07        | <b>109781</b> | 1.59        | 2.59         | 5.28 | 2.08 | 0.033 |
| <b>GRAND TOTAL DRILL INDICATED AND INFERRED</b> |            |              |       |           |                |            |           |                          |                  | <b>698300</b> | <b>1.70</b> | <b>2.55</b> | <b>5.02</b>   | <b>2.16</b> | <b>0.032</b> |      |      |       |

**MARG PROPERTY**  
**UNDILUTED MINERAL RESERVES**

October 16, 1989

Cross Section 2440 E

| Block   | Drill Hole | Interval (m) |       | Width (m) | True Width (m) | Length (m) | Infl (m) | Volume (m <sup>3</sup> ) | Specific Gravity | Tons          | %           |             |             | oz/ton      |              |
|---|------------|--------------|-------|-----------|----------------|------------|----------|--------------------------|------------------|---------------|-------------|-------------|-------------|-------------|--------------|
|   |            | From         | To    |           |                |            |          |                          |                  |               | Cu          | Pb          | Zn          | Ag          | Au           |
| <b>DRILL INDICATED</b>                          |            |              |       |           |                |            |          |                          |                  |               |             |             |             |             |              |
| 2A  | 88-2       | 18.9         | 25.1  | 6.2       | 4.0            | 11         | 70       | 3080                     | 2.99             | 10151         | 0.26        | 5.77        | 0.02        | 9.30        | 0.050        |
| 2B  | 88-2       | 28.2         | 32.6  | 4.4       | 4.4            | 16         | 70       | 4928                     | 3.66             | 19882         | 3.99        | 1.74        | 3.44        | 1.66        | 0.029        |
| 3A  | 88-3       | 28.3         | 29.4  | 1.1       | 0.7            | 31         | 70       | 1519                     | 4.25             | 7116          | 5.41        | 3.05        | 6.72        | 2.97        | 0.010        |
| 10A   | 88-10      | 62.7         | 68.6  | 5.9       | 5.4            | 48         | 70       | 18144                    | 4.25             | 85001         | 2.92        | 3.33        | 5.80        | 1.81        | 0.048        |
| 10C   | 88-10      | 123.3        | 133.6 | 10.3      | 10.0           | 42         | 70       | 29400                    | 3.90             | 126390        | 1.32        | 2.50        | 4.45        | 1.91        | 0.047        |
| 11A   | 88-11      | 82.2         | 87.8  | 5.6       | 4.7            | 51         | 70       | 16779                    | 4.18             | 77311         | 2.24        | 3.05        | 5.87        | 1.16        | 0.027        |
| 11C   | 88-11      | 150.0        | 152.9 | 2.9       | 2.3            | 55         | 70       | 8855                     | 4.25             | 41484         | 1.52        | 3.17        | 5.57        | 2.47        | 0.050        |
| 19A   | 88-19      | 203.7        | 214.9 | 11.2      | 11.2           | 70         | 70       | 54880                    | 4.12             | 249236        | 2.55        | 2.71        | 6.26        | 1.86        | 0.022        |
| 33A   | 88-33      | 222.5        | 227.2 | 4.7       | 4.5            | 70         | 70       | 22050                    | 3.82             | 92848         | 1.57        | 2.19        | 4.29        | 1.36        | 0.016        |
| <b>TOTAL DRILL INDICATED</b>                    |            |              |       |           |                |            |          | 159635                   | 4.03             | <b>709418</b> | 2.19        | 2.76        | 5.38        | 1.87        | 0.031        |
| <b>DRILL INFERRED</b>                           |            |              |       |           |                |            |          |                          |                  |               |             |             |             |             |              |
| 10B   | 88-10      | 62.7         | 68.6  | 5.9       | 5.4            | 5          | 70       | 1890                     | 4.25             | 8854          | 2.92        | 3.33        | 5.80        | 1.81        | 0.048        |
| 11B   | 88-11      | 82.2         | 87.8  | 5.6       | 4.7            | 8          | 70       | 2632                     | 4.18             | 12127         | 2.24        | 3.05        | 5.87        | 1.16        | 0.027        |
| 19B   | 88-19      | 203.7        | 214.9 | 11.2      | 11.2           | 14         | 70       | 10976                    | 4.12             | 49847         | 2.55        | 2.71        | 6.26        | 1.86        | 0.022        |
| 19C   | 88-19      | 203.7        | 214.9 | 11.2      | 11.2           | 11         | 70       | 8624                     | 4.12             | 39166         | 2.55        | 2.71        | 6.26        | 1.86        | 0.022        |
| 33B   | 88-33      | 222.5        | 227.2 | 4.7       | 4.5            | 14         | 70       | 4410                     | 3.82             | 18570         | 1.57        | 2.19        | 4.29        | 1.36        | 0.016        |
| 33C   | 88-33      | 222.5        | 227.2 | 4.7       | 4.5            | 35         | 70       | 11025                    | 3.82             | 46424         | 1.57        | 2.19        | 4.29        | 1.36        | 0.016        |
| <b>TOTAL DRILL INFERRED</b>                     |            |              |       |           |                |            |          | 39557                    | 4.01             | <b>174988</b> | 2.18        | 2.57        | 5.48        | 1.62        | 0.021        |
| <b>GRAND TOTAL DRILL INDICATED AND INFERRED</b> |            |              |       |           |                |            |          |                          |                  | <b>884400</b> | <b>2.19</b> | <b>2.72</b> | <b>5.40</b> | <b>1.82</b> | <b>0.029</b> |

**MARG PROPERTY  
UNDILUTED MINERAL RESERVES**

October 16, 1989

Cross Section 2370 E

| Block   | Drill Hole | Interval (m) |       | Width (m) | True Width (m) | Length (m) | Infl (m) | Volume (m <sup>3</sup> ) | Specific Gravity | Tons          | %           |             |             | oz/ton      |              |
|---|------------|--------------|-------|-----------|----------------|------------|----------|--------------------------|------------------|---------------|-------------|-------------|-------------|-------------|--------------|
|   |            | From         | To    |           |                |            |          |                          |                  |               | Cu          | Pb          | Zn          | Ag          | Au           |
| <b>DRILL INDICATED</b>                          |            |              |       |           |                |            |          |                          |                  |               |             |             |             |             |              |
| 4A  | 88-4       | 65.2         | 68.3  | 3.1       | 3.1            | 38         | 70       | 8246                     | 3.10             | 28178         | 0.14        | 6.18        | 0.02        | 2.81        | 0.027        |
| 5A  | 88-5       | 64.1         | 74.8  | 10.7      | 10.7           | 22         | 70       | 16478                    | 4.25             | 77196         | 3.32        | 3.68        | 6.59        | 2.08        | 0.030        |
| 15A   | 88-15      | 39.5         | 41.2  | 1.7       | 1.7            | 30         | 70       | 3570                     | 4.07             | 16016         | 3.35        | 2.52        | 4.64        | 2.36        | 0.033        |
| 15B   | 88-15      | 58.8         | 61.2  | 2.4       | 2.4            | 50         | 70       | 8400                     | 4.05             | 37500         | 1.65        | 2.66        | 5.20        | 2.22        | 0.032        |
| 16A   | 88-16      | 104.0        | 114.9 | 10.9      | 10.5           | 25         | 70       | 18375                    | 3.73             | 75550         | 2.54        | 2.48        | 5.31        | 1.76        | 0.022        |
| 17A   | 88-17      | 108.0        | 111.9 | 3.9       | 3.9            | 28         | 70       | 7644                     | 3.93             | 33114         | 2.15        | 2.98        | 6.14        | 1.80        | 0.024        |
| 17B   | 88-17      | 115.0        | 118.3 | 3.3       | 3.3            | 29         | 70       | 6699                     | 3.65             | 26953         | 1.18        | 0.83        | 2.08        | 0.52        | 0.014        |
| 18A   | 88-18      | 114.3        | 120.7 | 6.4       | 6.0            | 48         | 70       | 20160                    | 3.48             | 77334         | 1.20        | 1.21        | 2.79        | 0.72        | 0.010        |
| <b>TOTAL DRILL INDICATED</b>                    |            |              |       |           |                |            |          | 89572                    | 3.77             | <b>371841</b> | 2.05        | 2.69        | 4.45        | 1.68        | 0.023        |
| <b>DRILL INFERRED</b>                           |            |              |       |           |                |            |          |                          |                  |               |             |             |             |             |              |
| 18B   | 88-18      | 114.3        | 120.7 | 6.4       | 6.0            | 35         | 70       | 14700                    | 3.48             | 56389         | 1.20        | 1.20        | 2.79        | 0.72        | 0.010        |
| <b>TOTAL DRILL INFERRED</b>                     |            |              |       |           |                |            |          | 14700                    | 3.48             | <b>56389</b>  | 1.20        | 1.20        | 2.79        | 0.72        | 0.010        |
| <b>GRAND TOTAL DRILL INDICATED AND INFERRED</b> |            |              |       |           |                |            |          |                          |                  | <b>428200</b> | <b>1.94</b> | <b>2.49</b> | <b>4.23</b> | <b>1.55</b> | <b>0.021</b> |

**MARG PROPERTY**  
**UNDILUTED MINERAL RESERVES**

October 16, 1989

Cross Section 2180 E

| Block   | Drill Hole | Interval (m) |       | Width (m) | True Width (m) | Length (m) | Infl (m) | Volume (m <sup>3</sup> ) | Specific Gravity | Tons           | %           |             |             | oz/ton      |              |
|---|------------|--------------|-------|-----------|----------------|------------|----------|--------------------------|------------------|----------------|-------------|-------------|-------------|-------------|--------------|
|   |            | From         | To    |           |                |            |          |                          |                  |                | Cu          | Pb          | Zn          | Ag          | Au           |
| <b>DRILL INDICATED</b>                          |            |              |       |           |                |            |          |                          |                  |                |             |             |             |             |              |
| 22A   | 89-22      | 107.7        | 111.3 | 3.6       | 3.6            | 70         | 70       | 17640                    | 4.25             | 82639          | 1.97        | 2.87        | 5.64        | 2.00        | 0.026        |
| 36A   | 89-36      | 139.5        | 141.4 | 1.9       | 1.9            | 70         | 70       | 9310                     | 4.25             | 43524          | 1.45        | 3.65        | 4.67        | 2.60        | 0.056        |
| 36B   | 89-36      | 148.5        | 149.4 | 0.9       | 0.9            | 70         | 70       | 4410                     | 4.25             | 20660          | 2.21        | 5.29        | 9.63        | 3.73        | 0.072        |
| 36C   | 89-36      | 170.1        | 177.2 | 7.1       | 7.1            | 70         | 70       | 34790                    | 3.75             | 143809         | 1.15        | 2.43        | 4.36        | 1.88        | 0.063        |
| 36D   | 89-36      | 188.9        | 200.3 | 11.4      | 11.4           | 70         | 70       | 55860                    | 3.42             | 210585         | 1.47        | 2.27        | 4.15        | 1.95        | 0.043        |
| <b>TOTAL DRILL INDICATED</b>                    |            |              |       |           |                |            |          | 122010                   | 3.73             | <b>501217</b>  | 1.50        | 2.66        | 4.74        | 2.07        | 0.048        |
| <b>DRILL INFERRED</b>                           |            |              |       |           |                |            |          |                          |                  |                |             |             |             |             |              |
| 22B   | 89-22      | 107.7        | 111.3 | 3.6       | 3.6            | 35         | 125      | 15750                    | 4.25             | 73786          | 1.97        | 2.87        | 5.64        | 2.00        | 0.026        |
| 22C   | 89-22      | 107.7        | 111.3 | 3.6       | 3.6            | 24         | 125      | 10800                    | 4.25             | 50596          | 1.97        | 2.87        | 5.64        | 2.00        | 0.026        |
| 36E   | 89-36      | 139.5        | 141.4 | 1.9       | 1.9            | 26         | 125      | 6175                     | 4.25             | 28928          | 1.45        | 3.65        | 4.67        | 2.60        | 0.056        |
| 36F   | 89-36      | 139.5        | 141.4 | 1.9       | 1.9            | 26         | 125      | 6175                     | 4.25             | 28928          | 1.45        | 3.65        | 4.67        | 2.60        | 0.056        |
| 36G   | 89-36      | 148.5        | 149.4 | 0.9       | 0.9            | 26         | 125      | 2925                     | 4.25             | 13703          | 2.21        | 5.29        | 9.63        | 3.73        | 0.072        |
| 36H   | 89-36      | 148.5        | 149.4 | 0.9       | 0.9            | 26         | 125      | 2925                     | 4.25             | 13703          | 2.21        | 5.29        | 9.63        | 3.73        | 0.072        |
| 36I   | 89-36      | 170.1        | 177.2 | 7.1       | 7.1            | 26         | 125      | 23075                    | 3.75             | 95383          | 1.15        | 2.43        | 4.36        | 1.88        | 0.063        |
| 36J   | 89-36      | 170.1        | 177.2 | 7.1       | 7.1            | 26         | 125      | 23075                    | 3.75             | 95383          | 1.15        | 2.43        | 4.36        | 1.88        | 0.063        |
| 36K   | 89-36      | 188.9        | 200.3 | 11.4      | 11.4           | 26         | 125      | 37050                    | 3.42             | 139674         | 1.47        | 2.27        | 4.15        | 1.95        | 0.043        |
| 36L   | 89-36      | 188.9        | 200.3 | 11.4      | 11.4           | 26         | 125      | 37050                    | 3.42             | 139674         | 1.47        | 2.27        | 4.15        | 1.95        | 0.043        |
| <b>TOTAL DRILL INFERRED</b>                     |            |              |       |           |                |            |          | 165000                   | 3.74             | <b>679758</b>  | 1.50        | 2.66        | 4.74        | 2.07        | 0.048        |
| <b>GRAND TOTAL DRILL INDICATED AND INFERRED</b> |            |              |       |           |                |            |          |                          |                  | <b>1181000</b> | <b>1.50</b> | <b>2.66</b> | <b>4.74</b> | <b>2.07</b> | <b>0.048</b> |