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860005

**MEMORANDUM:**

TO: E. Kimura DATE: Nov. 19, 1987

FROM: S. Price NTS: 93J/13 V-216

**RE: THE WINDY BIOGEOCHEM (TREE BARK) SURVEY**

---

During the trenching programme performed on the Windy Property in September 1987, a small tree bark sample survey was performed. The aim of this survey was to compare and correlate the results of the biogeochemical survey with the results of the soil geochemical survey, performed in September 1986 to determine if tree bark sampling would be useful on this property, in the future, as an exploration tool.

Some problems have been encountered with soil geochemistry on the property. Gold values are very erratic and spotty, with no discernable patterns. This may be related to the thickness of the till on the property. The IP survey of September, 1987, indicated a possible thickness of overburden in the south of over 60 m, though this is extreme. Most of the overburden on the property varies between 0.3 m and 10 m in thickness.

The tree bark sampling was performed across two known soil geochemical and geophysical anomalies. One line crossed the central Au-As anomaly (L10+600N) and one line crossed the tight IP anomaly in the centre of the southerly Cu-Au-Pd anomaly (L10+200N). A total of fifteen samples was collected from both lines. Samples were of either spruce or pine and were taken by scraping the dry, scaly bark off the tree with an axe. Approximately two cupfuls of material was taken at each site from ten different trees. Samples were then sent to Nuclear Activation Services Limited in Hamilton, Ontario where a seventeen element analysis was performed by the neutron activation method.

The results from the lab, along with some maps with comparison soil geochemistry (Au, Ag, As) are appended to this memo. The results are not spectacular, but do seem to mirror the soil geochemical results where these values are present. However, contrast in the biogoochem results is muoh lower than that in the soil geochem results.

One gold value is about sixteen times that of the background on L10+200N, at 2.4 ppb. The remainder of the samples range from 0.3 ppb to <0.2 ppb. The As results from L10+600N mimicked the soil geochem anomaly with a peak of over three times background.

Tree bark sampling, from the results of this small survey, seems to be somewhat successful at indicating geochemical anomalies. It appears, however, that as an exploration tool on the Windy property, soil sampling proves more effective and efficient.

Steve Price

Steve Price

SP/lea
11.19.87

NUCLEAR ACTIVATION SERVICES LIMITED

1280 MAIN STREET WEST, HAMILTON, ONTARIO, L8S 4K1

PHONE (416) 522-5666 TELEX 06-986947

# CERTIFICATE OF ANALYSIS

TO: CLARK GEOLOGICAL
ATTN: LLOYD CLARK
514 BATE CRESCENT
SASKATOON, SASKATCHEWAN
S7H 3A7

CUSTOMER NO. 550/01/01

DATE SUBMITTED
27-OCT-87

REPORT: 8909

FILE NUMBER: 10587

15 UNPREPARED SAMPLES

PROJECT# V-216

WERE ANALYZED AS FOLLOWS:

| ELEMENTS | DETECTION LIMIT | UNITS | METHOD | ELEMENTS | DETECTION LIMIT | UNITS | METHOD |
|---|---|---|---|---|---|---|---|
| AG | 0.3000 | PPM | HMNA | SB | 0.0100 | PPM | HMNA |
| AS | 0.0100 | PPM | HMNA | SE | 0.5000 | PPM | HMNA |
| AU | 0.1000 | PPB | HMNA | TA | 0.2000 | PPM | HMNA |
| BA | 20.0000 | PPM | HMNA | TH | 0.1000 | PPM | HMNA |
| BR | 0.0100 | PPM | HMNA | U | 0.0200 | PPM | HMNA |
| CO | 0.3000 | PPM | HMNA | W | 0.0500 | PPM | HMNA |
| CR | 0.3000 | PPM | HMNA | ZN | 2.0000 | PPM | HMNA |
| FE | 0.0050 | % | HMNA | IR | 2.0000 | PPB | HMNA |
| MO | 0.0500 | PPM | HMNA | | | | |

DATE 27-OCT-87

NUCLEAR ACTIVATION SERVICES LIMITED

CERTIFIED BY .....

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD ALL SAMPLES ***
IRRADIATED SAMPLES AFTER 30 DAYS. ANY OTHER MATERIAL AFTER 120 DAYS.

NUCLEAR ACTIVATION SERVICES LIMITED

DATE: 27-OCT-87 REPORT: 8909 FILE NUMBER: 10587 PAGE: 1

SAMPLE NUMBERS

| ELEMENT & UNITS | | !10+600N10+**080E | 10+600N10+**120E | 10+600N10+**160E | 10+600N10+**200E | 10+600N10+**240E | 10+600N10+**280E |
|---|---|---|---|---|---|---|---|
| AG | PPM | <0.3 | <0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| AS | PPM | 0.04 | 0.05 | 0.09 | 0.17 | 0.06 | 0.05 |
| AU | PPB | 0.1 | <0.1 | 0.2 | <0.1 | 0.1 | <0.1 |
| BA | PPM | 110 | 140 | <20 | <20 | <20 | 200 |
| BR | PPM | 1.8 | 2.8 | 3.6 | 3.8 | 3.4 | 4.4 |
| CO | PPM | <0.3 | <0.3 | 0.3 | 0.4 | 0.3 | 0.4 |
| CR | PPM | 0.3 | <0.3 | 0.3 | 0.3 | <0.3 | <0.3 |
| FE | % | <0.005 | 0.006 | 0.012 | 0.012 | 0.009 | 0.005 |
| MO | PPM | <0.05 | <0.05 | 0.06 | 0.06 | <0.05 | <0.05 |
| SB | PPM | <0.01 | 0.01 | 0.02 | 0.03 | 0.02 | 0.01 |
| SE | PPM | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TA | PPM | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| TH | PPM | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| U | PPM | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| W | PPM | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| ZN | PPM | 62 | 58 | 27 | 24 | 28 | 67 |
| IR | PPB | <2 | <2 | <2 | <2 | <2 | <2 |

NUCLEAR ACTIVATION SERVICES LIMITED

DATE: 27-OCT-87 REPORT: 8909 FILE NUMBER: 10587 PAGE: 2

SAMPLE NUMBERS

| ELEMENT & UNITS | | !10+600N10+320E | **10+200N9+7**40E | **10+200N9+7**20E | **10+200N9+7**00E | **10+200N9+6**80E | **10+200N9+6**60E | ** |
|---|---|---|---|---|---|---|---|---|
| AG | PPM | <0.3 | <0.3 | <0.3 | <0.3 | <0.3 | <0.3 | |
| AS | PPM | 0.05 | 0.11 | 0.05 | 0.08 | 0.09 | 0.09 | |
| AU | PPB | 0.3 | <0.1 | <0.1 | <0.1 | <0.1 | 0.2 | |
| BA | PPM | 190 | 140 | 150 | 250 | 20 | <20 | |
| BR | PPM | 4.8 | 6.6 | 6.0 | 6.7 | 5.4 | 4.3 | |
| CO | PPM | 0.7 | 0.4 | 0.4 | 0.6 | 0.4 | 0.4 | |
| CR | PPM | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.3 | |
| FE | % | 0.006 | 0.007 | 0.006 | 0.007 | 0.008 | 0.006 | |
| MO | PPM | <0.05 | <0.05 | <0.05 | 0.06 | <0.05 | <0.05 | |
| SB | PPM | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | |
| SE | PPM | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | |
| TA | PPM | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | |
| TH | PPM | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | |
| U | PPM | <0.02 | <0.02 | <0.02 | <0.02 | 0.02 | <0.02 | |
| W | PPM | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | |
| ZN | PPM | 65 | 67 | 72 | 77 | 44 | 43 | |
| IR | PPB | <2 | <2 | <2 | <2 | <2 | <2 | |

NUCLEAR ACTIVATION SERVICES LIMITED

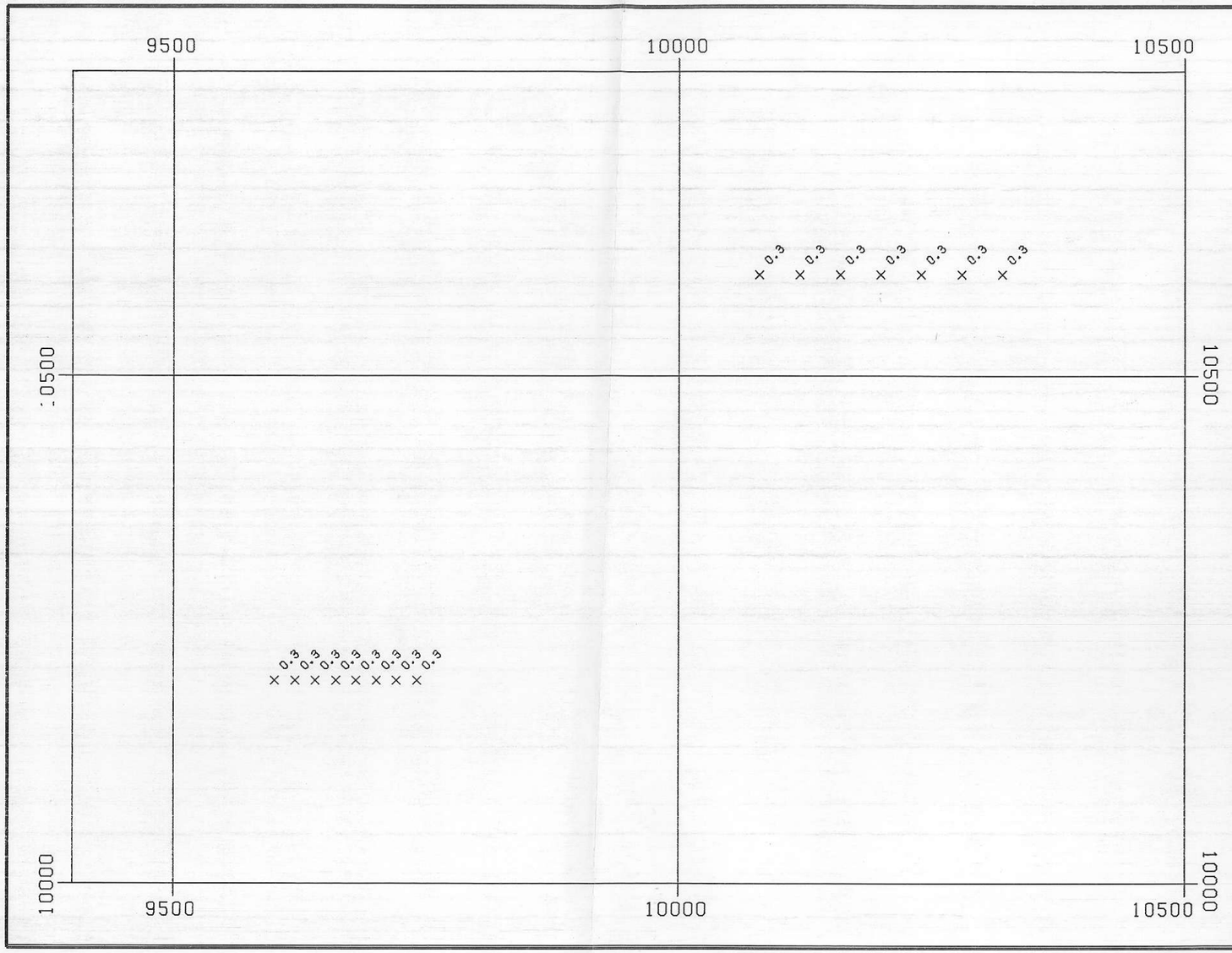


SAMPLE NUMBERS

| ELEMENT & UNITS | | !10+200N9+6**40E | 10+200N9+6**20E | 10+200N9+6**00E | ** |
|---|---|---|---|---|---|
| AG | PPM | <0.3 | <0.3 | <0.3 | |
| AS | PPM | 0.09 | 0.07 | 0.10 | |
| AU | PPB | 0.3 | 0.2 | 2.4 | |
| BA | PPM | <20 | 20 | 20 | |
| BR | PPM | 5.5 | 6.3 | 4.4 | |
| CO | PPM | <0.3 | 0.5 | 0.4 | |
| CR | PPM | <0.3 | <0.3 | <0.3 | |
| FE | % | 0.006 | 0.007 | 0.009 | |
| MO | PPM | <0.05 | <0.05 | <0.05 | |
| SB | PPM | 0.02 | 0.02 | 0.02 | |
| SE | PPM | <0.5 | <0.5 | <0.5 | |
| TA | PPM | <0.2 | <0.2 | <0.2 | |
| TH | PPM | <0.1 | <0.1 | <0.1 | |
| U | PPM | <0.02 | <0.02 | <0.02 | |
| W | PPM | <0.05 | <0.05 | <0.05 | |
| ZN | PPM | 39 | 36 | 43 | |
| IR | PPB | <2 | <2 | <2 | |

EXPLANATION OF CODES

VARIABLE DETECTION LIMITS DUE TO SAMPLE COMPOSITION

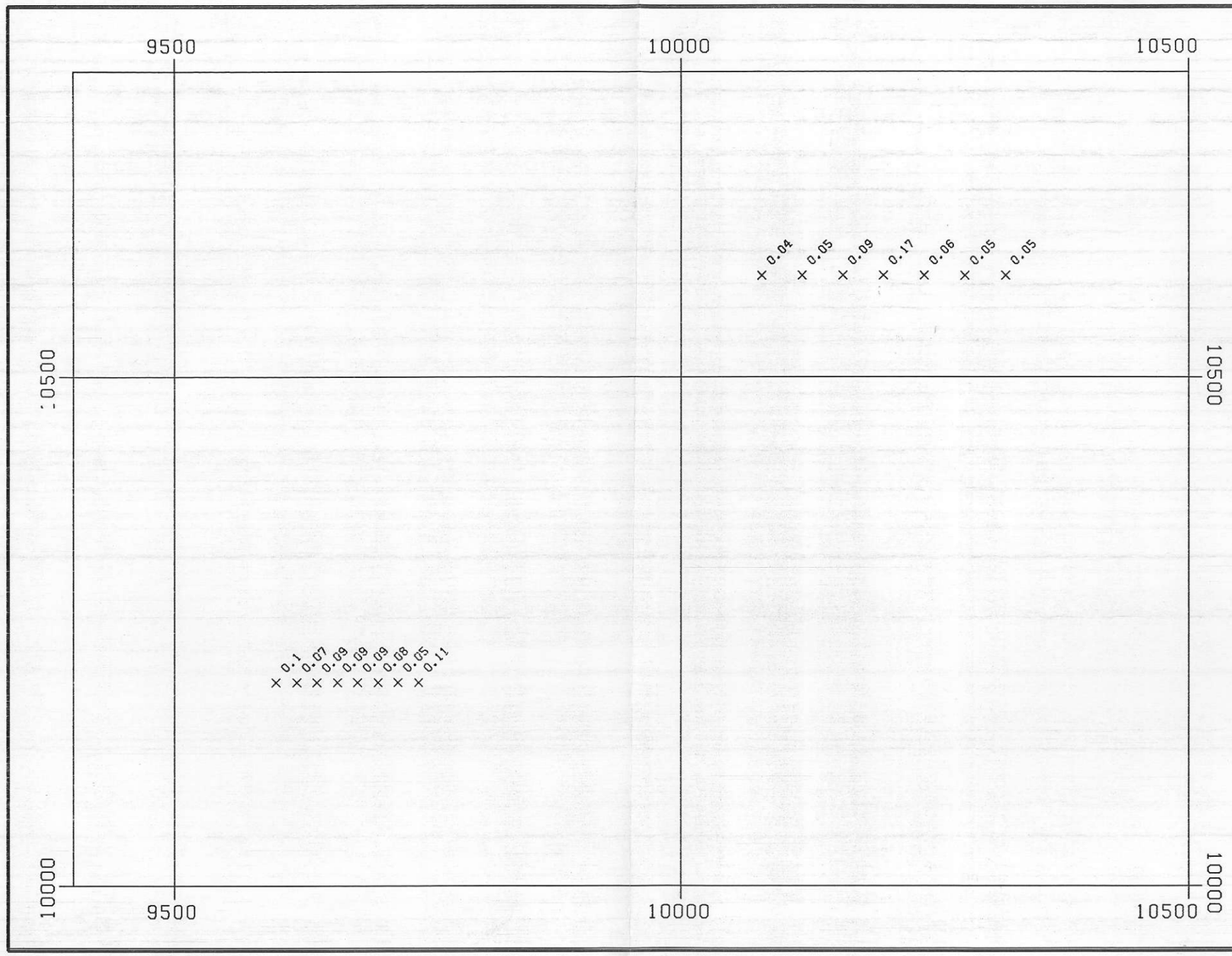



DATA PLOTTED ON THIS MAP:
DIRECTORY: /PLACER1 1E/EXPL/WINDY/GCHM

| | FIELD | FILE |
|---|---|---|
| × POINTS: | AG | BIOGEO |

Ag IN PPM

| PLACER DOME INC. | |
|---|---|
| DRAWN SMP | WINDY CLAIMS |
| DATE 87:11:09 | BIOGEOCHEM DATA - Ag |
| SCALE 1:5000 | |
| | NO. PLATE |

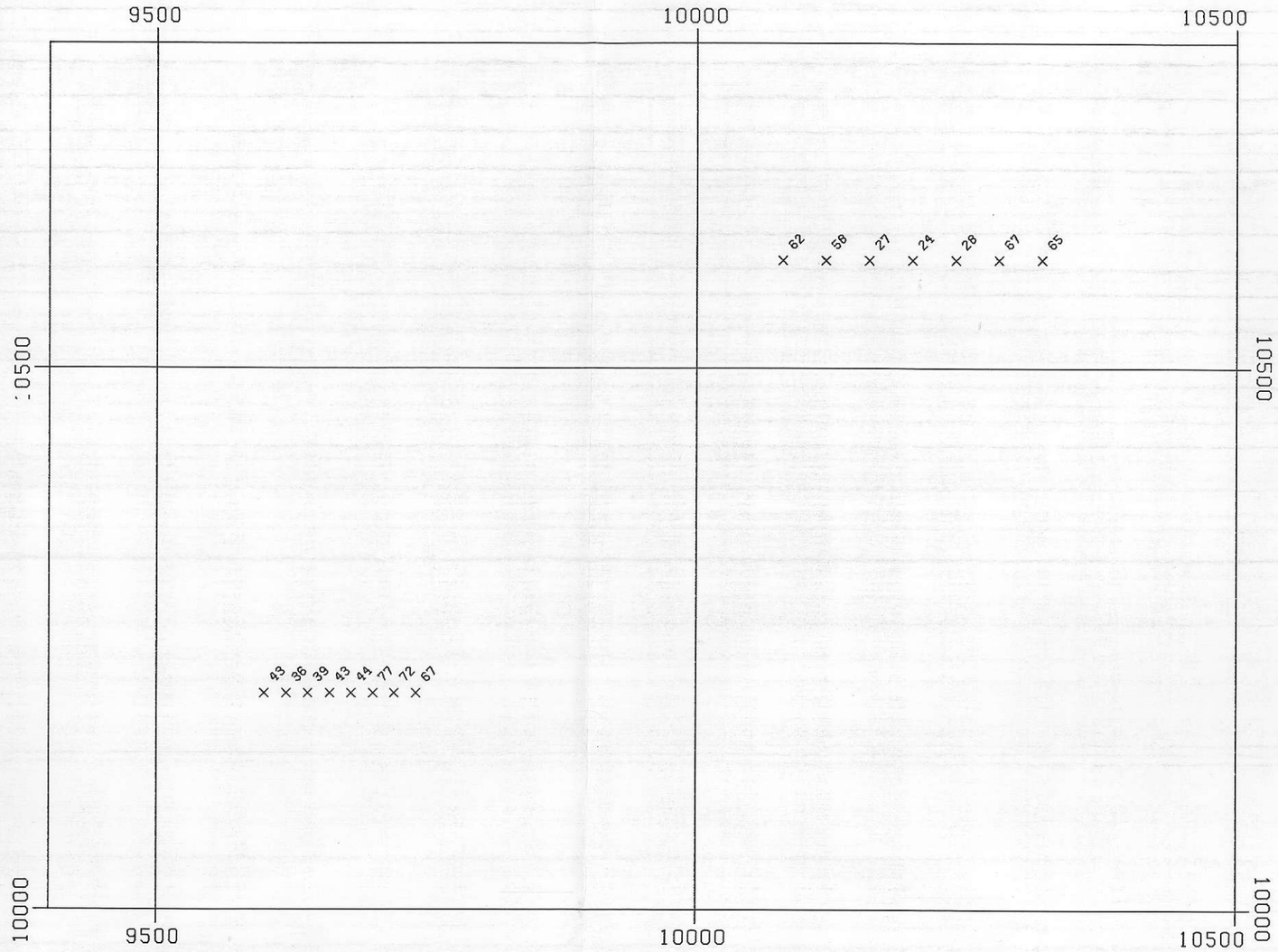



DATA PLOTTED ON THIS MAP:
DIRECTORY: /PLACER1 1E/EXPL/WINDY/GCHM

| | FIELD | FILE |
|---|---|---|
| X POINTS: | AS | BIOGEO |

As IN PPM

| PLACER DOME INC. | |
|---|---|
| DRAWN SMP | WINDY CLAIMS |
| DATE 87:11:09 | BIOGEOCHEM DATA- As |
| SCALE 1:5000 | |
| | NO. PLATE |

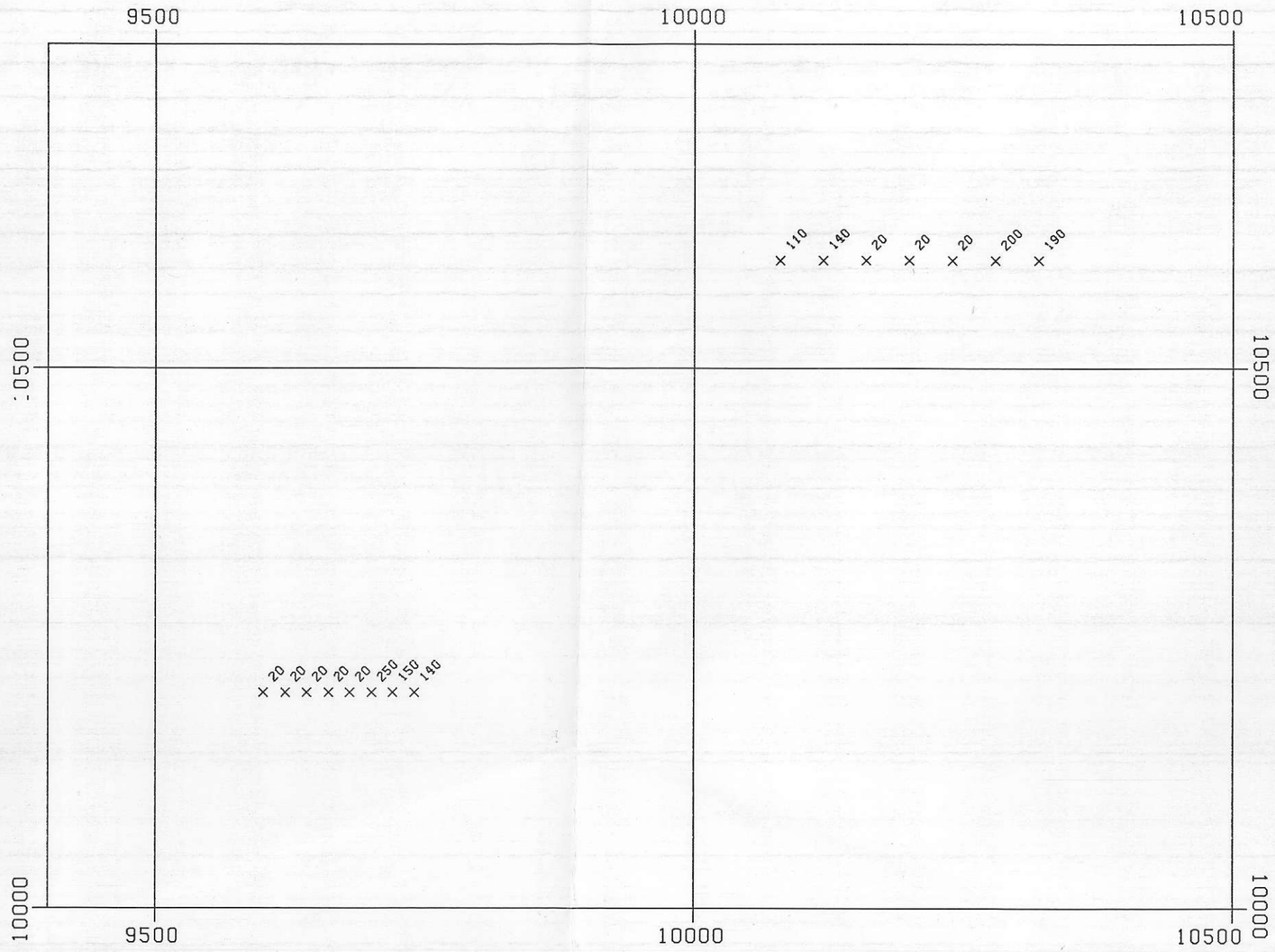



DATA PLOTTED ON THIS MAP:
DIRECTORY: /PLACER1 1E/EXPL/WINDY/GCHM

| | FIELD | FILE |
|---|---|---|
| × POINTS: | ZN | BIOGEO |

Zn IN PPM

| PLACER DOME INC. | |
|---|---|
| DRAWN SMP | WINDY CLAIMS |
| DATE 87:11:09 | BIOGEOCHEM DATA - Zn |
| SCALE 1:5000 | |
| | NO. PLATE |



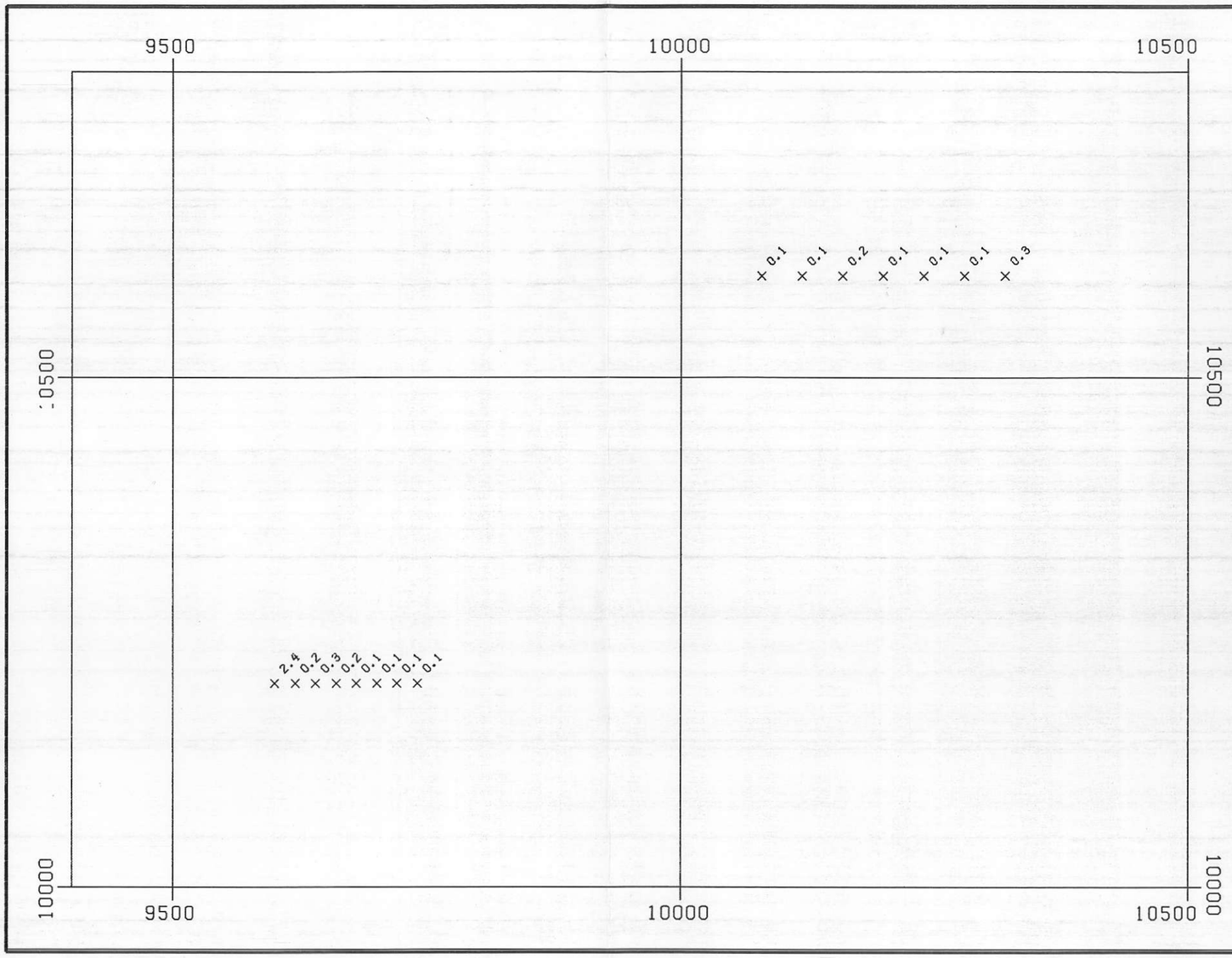

DATA PLOTTED ON THIS MAP:
DIRECTORY: /PLACER1 1E/EXPL/WINDY/GCHM

| | FIELD | FILE |
|---|---|---|
| × POINTS: | BA | BIOGEO |

Ba IN PPM

# PLACER DOME INC.

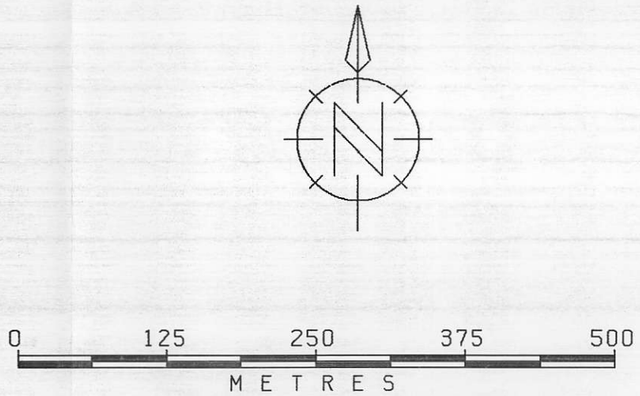
| | |
|---|---|
| DRAWN SMP | WINDY CLAIMS |
| DATE 87:11:09 | BIOGEOCHEM DATA-Ba |
| SCALE 1:5000 | |
| | NO. PLATE |



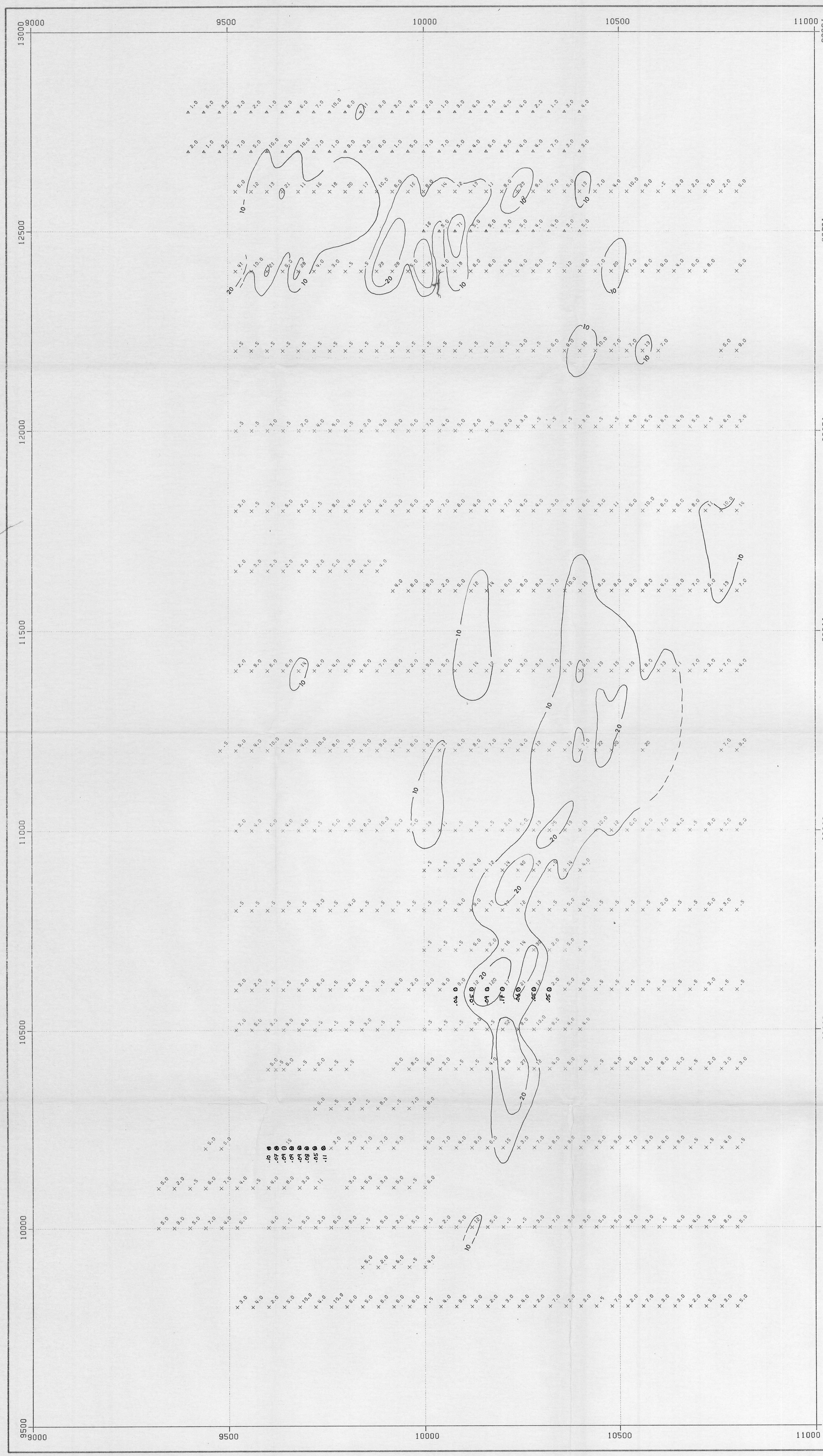

DATA PLOTTED ON THIS MAP:
DIRECTORY: /PLACER1 1E/EXPL/WINDY/GCHM

| | FIELD | FILE |
|---|---|---|
| X POINTS: | AU | BIOGEO |

Au IN PPB




| PLACER DOME INC. | |
|---|---|
| DRAWN SMP | WINDY CLAIMS |
| DATE 87:11:09 | BIOGEOCHEM DATA - AU |
| SCALE 1:5000 | |
| | NO. PLATE |




LEGEND

CONTOUR INTERVAL – 10 and 20 PPM As

⊗ TREE BARK SAMPLE STATION
PPM As

inches
0 1 2
0 1 2 3 4 5
centimetres

BRITISH COLUMBIA GEOLOGICAL SURVEY

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

DATA PLOTTED ON THIS MAP:

| | FIELD | FILE |
|---|---|---|
| × POINTS: | AS | EXPLØRV-216.GEØCHEM |
| ▲ POINTS: | AS | EXPLØRV-216.GEØCHEM87 |

DIRECTION ØF NØRTH AT CENTRE ØF MAP

N

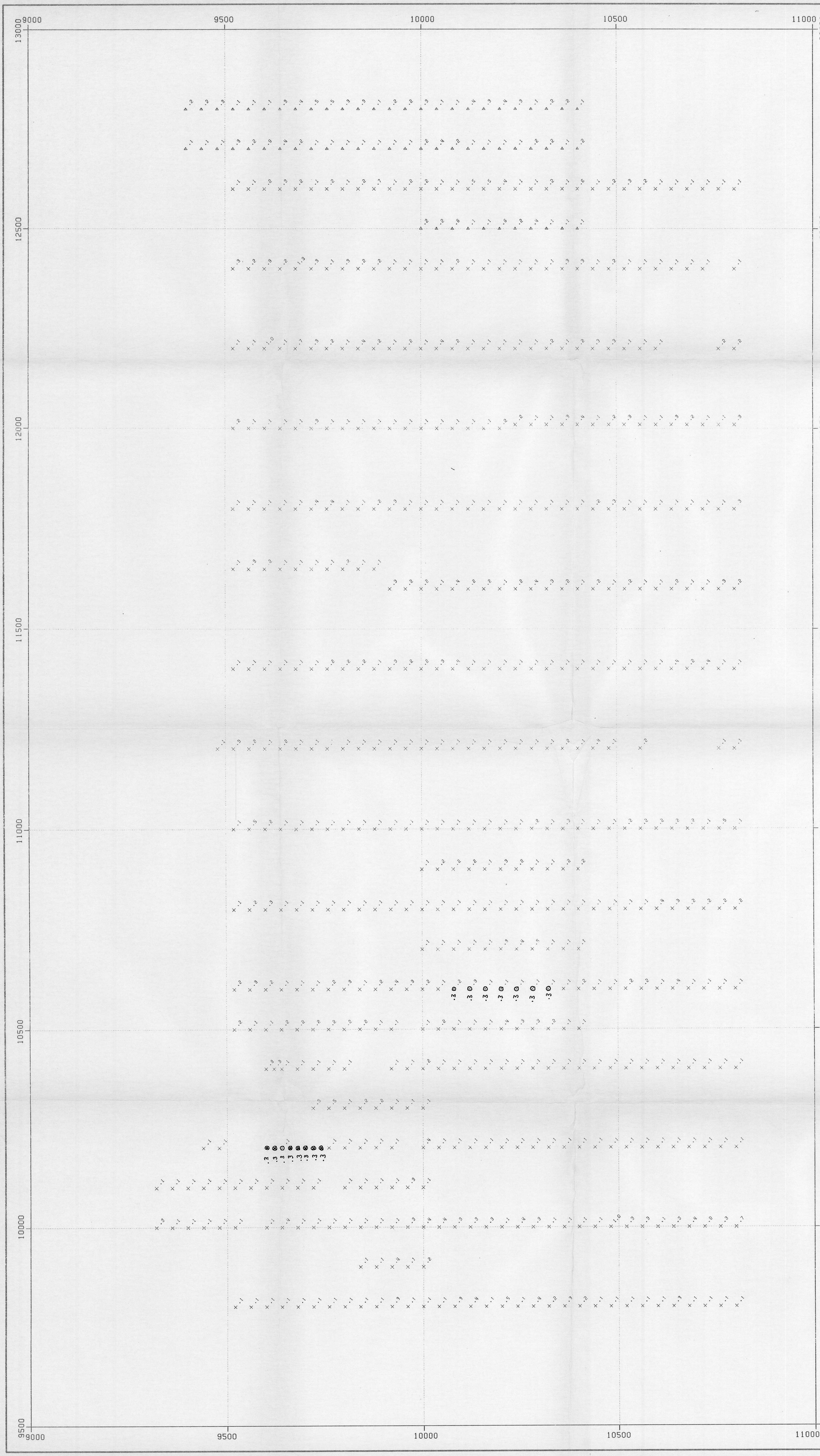
0 125 250 375 500
METRES

PLACER DØME INC.

DRAWN RC
DATE 87/10/06
SCALE 1:5000
REVISED: 87/11/12

WINDY PRØJECT
ARSENIC IN SØILS
AND TREE BARK

NO. PLATE




LEGEND

⊗ TREE BARK SAMPLE STATION
PPM Ag

inches
0 1 2
0 1 2 3 4 5
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

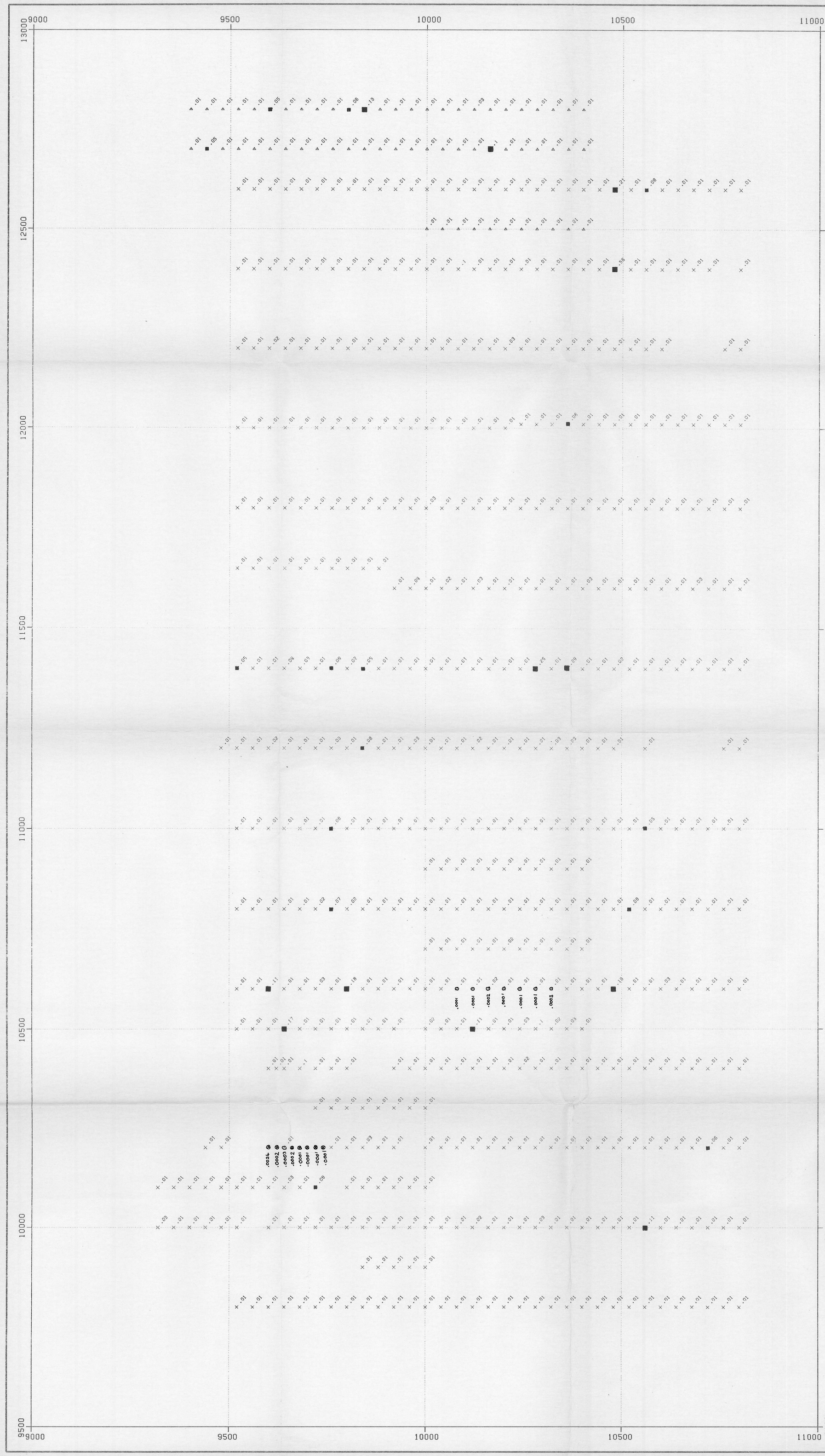
DATA PLOTTED ON THIS MAP:

| | FIELD | FILE |
|---|---|---|
| × POINTS: | AG | EXPL×V-216.GEOCHEM |
| △ POINTS: | AG | EXPL×V-216.GEOCHEM87 |

DIRECTION OF NORTH AT CENTRE OF MAP

0 125 250 375 500
METRES

| PLACER DOME INC. | |
|---|---|
| DRAWN RC | WINDY PROJECT |
| DATE 87/10/06 | SILVER IN SOILS |
| SCALE 1:5000 | AND TREE BARK |
| REVISED: 87/11/12 | NO. PLATE |




LEGEND

■ .05–.09 PPM Au

■ .10– + PPM Au

⊗ TREE BARK SAMPLE STATION PPM Au

inches

0 1 2

0 1 2 3 4 5

centimetres

BRITISH COLUMBIA GEOLOGICAL SURVEY

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

DATA PLOTTED ON THIS MAP:

| | FIELD | FILE |
|---|---|---|
| × POINTS: | AU | EXPL×V-216.GEOCHEM |
| ▲ POINTS: | AU | EXPL×V-216.GEOCHEM87 |

DIRECTION OF NORTH AT CENTRE OF MAP

0 125 250 375 500

METRES

PLACER DOME INC.

DRAWN RC

DATE 87/10/06

SCALE 1:5000

REVISED: 87/11/12

WINDY PROJECT

GOLD IN SOILS

AND TREE BARK

NO. PLATE