YEIP 00-002
2000
c.1

# Interpretation of Enzyme Leach[SM] Data for the A. Carlos Dozer prospect - Canyon Gold Property

by: Gregory T. Hill, Enzyme Laboratories, Inc.

28 January 2000

# Interpretation of Enzyme Leach℠ Data for the A. Carlos Dozer prospect - Canyon Gold Property

by: Gregory T. Hill, Enzyme Laboratories, Inc.

28 January 2000

**Summary**

One-hundred-nine *B*-horizon soil samples were collected from glacial overburden at the A. Carlos, Dozer prospect - Canyon Gold Property, Yukon Territory. A distinctive oxidation anomaly is best indicated by the oxidation suite elements Cl, Br, I, As, Mo, Sb, and Re; the REE; the lithophile elements Sr, Mn, Li; and the metals Ni and Cd. A northwest-trending altered fault zone is indicated by the Enzyme Leach℠ data. These data suggest that the most intense alteration and potential mineralization coincide with an inflection in the northwest structural trend. Targets at 9300-9400W/9975N and 9600W/9875N should be drill tested. A parallel structural zone to the south of the main zone identified in this study is indicated by a small number of elements. Additional sampling to the southwest of the current soil survey may be warranted to further assess the potential of this apparent structural zone parallel to the main zone identified in this study.

**Enzyme Leach℠ Patterns**

It is important to briefly reiterate the types of anomalies revealed by Enzyme Leach℠ analysis in areas covered by alluvial or glacial overburden, volcanic units, or barren bedrock. Oxidation anomalies tend to form two predominant patterns: oxidation halos and apical highs. A third designation, combination anomalies, is used when oxidation halos and apical anomalies are combined within the distribution of an element.

Oxidation anomaly patterns tend to be characterized by oxidation halos where reduced material in the subsurface is undergoing very subtle oxidation. These halos flank the reduced body, and a "central low" is found over a "reduced chimney" located between the reduced body and the surface. The elements in these halos characteristically include at least part of the oxidation suite: Cl, Br, I, Mo, As, Sb, W, Re, V, Se, Te, U, Th. Oxidation halos are typically asymmetrical, and may require comparison of a number of trace element patterns before they become apparent. Where a strong oxidation cell is present in the subsurface, nested halos are often present. Recognition of nested halo patterns can be of great assistance in vectoring toward the center of the anomaly. Some or all of the metals, rare earth elements, lithophile elements, and precious metals will also migrate into oxidation halos. Depletion zones are sometimes present within oxidation anomalies where lower than background values of some elements occur within central lows. Nested halos appear to indicate robust electrochemical cells driven by the oxidation of mineral accumulations in the subsurface. We believe that these features are caused by electrochemical mobilization and/or trapping of various chemical species, both vertically in the subsurface and horizontally at the surface and shallow subsurface. Depletion zones may be indicating the positions of electrical poles within electrochemical cells where the availability of electrons is so high that some elements are fixed in chemically resistate, stable phases and rendered immobile. In such a case, the contributions to the leachable concentrations for those elements by the local soil are reduced to very low levels. In areas outside of this low pole, the background levels of many or most elements are scavenged from the soil itself, along with anomalous concentrations that may have been derived from a subsurface or near-surface source. In order to detect nested halos and depletion zones, sample spacing must be sufficiently small, because the depletion zones and individual halos within a nested set can be quite narrow. A sample spacing of no more than 25-50% of the width of the subsurface deposit is usually necessary.

Apical anomaly patterns tend to form highs directly over the source of the anomaly rather than forming a halo around the source. The source of the anomaly can be a mineral body, or it can be a fault, unconformity or other feature that facilitates the movement of the trace elements to the surface. Many 'apical anomalies' are actually very narrow halos above veins or faults, but the true morphologies of these anomalies are only apparent if the sample spacing is small enough to adequately map the anomaly.

Combination anomalies contain an apical anomaly at the center which is surrounded by a halo or set of nested halos. As stated above, the 'apical anomaly' portions of combination anomalies may also be narrow halos that appear as apical highs because sample spacings are larger than the central lows surrounded by these very narrow halos.

Elemental zonations are apparent in many Enzyme Leach℠ surveys. Some of this zonation may be explained as reflections of primary zonation within the subsurface while other zoning is due to electrochemical processes. Factors such as the differences in the oxidation potentials or stabilities of various elements or various forms of the same element can produce surficial zoning. In the case of the halogens, case studies have shown that Cl, Br, and I can be sequentially zoned at the surface where there is no known primary zonation of these elements within the deposits themselves. Many other elements often show zonations relative to one another suggesting that electrochemical or other processes are acting on the geological systems to produce zoning at the surface. There are also many examples of Enzyme Leach℠ surveys in which primary zonation within a mineral deposit is reflected in the surface distributions of some elements, including base and precious metals.

Mineralized bodies tend to be geologically complex and the anomalies are frequently combined or partially overlap each other. For example, where a deeply buried reduced body is intersected by a fault, many of the oxidation suite elements will commonly form an extremely high contrast peak directly over the trace of the buried fault. This high contrast response may partially mask the oxidation anomaly. In other cases, some elements will migrate into the halo, while others are more enriched into an apical anomaly. The key to interpretation of Enzyme Leach℠ data is pattern recognition in multiple trace element plots in conjunction with other available geologic information. Thus, the interpretation of Enzyme Leach℠ data is enhanced by comparison with all other available project data.

## Design of Soil Survey

One-hundred-nine *B*-horizon soil samples were collected from glacial overburden on the A. Carlos, Dozer prospect - Canyon Gold property, Yukon Territory. Northeast trending lines were sampled at 25 m intervals with a spacing of 100 m between lines (Figure 1). No geologic information was supplied to the author.

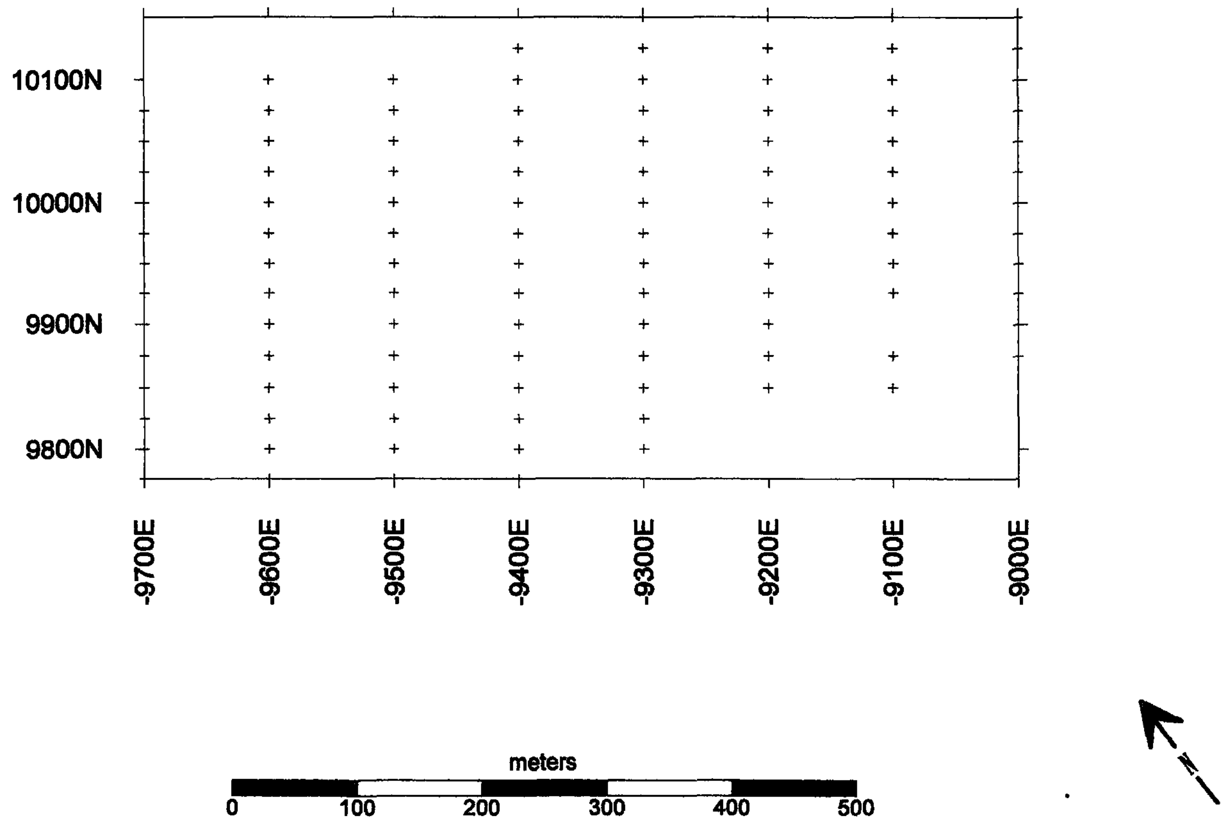



Figure 1. Sample location map.

## Interpretation

A well-developed oxidation halo is present on the Dozer property and is best defined by the distributions of the oxidation suite elements: Cl, Br, I, As, Mo, Sb, and Re. In addition, the rare earth elements (REE), as well as the lithophile elements Sr, Mn, Li, and the metals Ni, Cu, and Cd each form halo patterns around the oxidation suite central low shown in Figure 2.

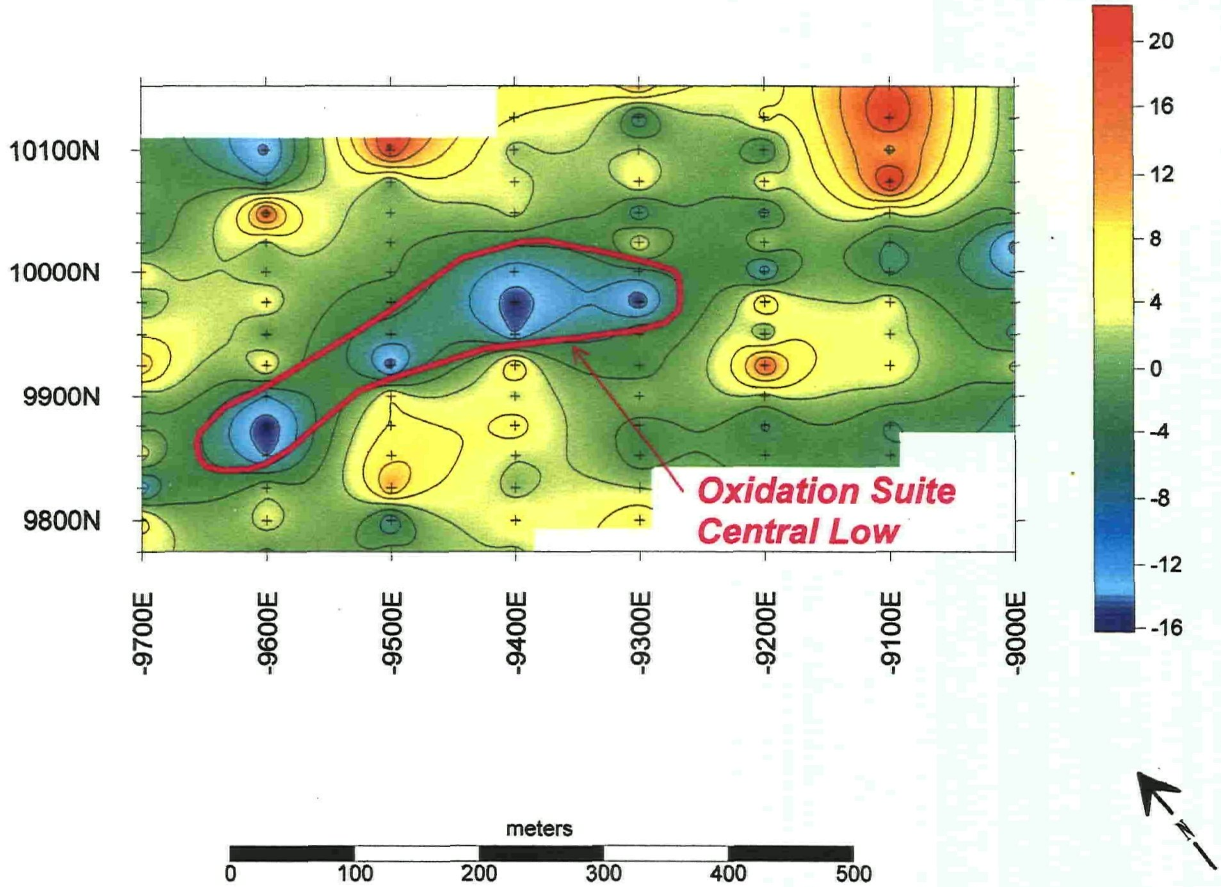



Figure 2. Sum of z-scores of Cl, Br, I, V, As, Sb, Mo, Re, Sr, Nd, Ni, Cu, Cd, Li, and Mn. The central low is strongly indicated by a depletion zone and well-developed halo. The data shown in this plot were normalized by calculating z-scores [z-score = (value of element - mean of element)/(standard deviation of element)]. These z-scores were then summed as a means of displaying the composite features noted among this group of elements.

Oxidation Suite Elements

Among the oxidation suite elements, I, Mo, Sb, and Re are strongly partitioned into distinctive halos around a west-northwest trending central low as shown in Figure 2. Some elements, including I and Sb, indicate this central low as depletions at the center of the elongate halos shown by these elements. Other members of the oxidation suite, including Cl, Br, and As are also depleted within the central low indicated in Figure 2, but these elements form less distinctive halos. These depletions are important in that they suggest that a strong electrochemical cell is active in the subsurface.

As shown by the As and Se distributions, the central lows formed by some elements extend to the southeast and exit the grid at the southeastern edge of the grid. These patterns suggest that a fault zone and/or lithologic contact underlies the As and Se central lows. This interpreted fault and/or contact extends into the region beneath the oxidation suite central low shown in Figure 2 where it bends to the west. A parallel fault zone may also control the distributions of some elements along the southwestern margin of the oxidation halo as suggested by the U distribution.

Metals

Cadmium and nickel are strongly partitioned into an oxidation halo. These elements form patterns similar to many of the oxidation suite element distributions. Cadmium is distributed into a relatively wide west-northwest trending halo. This pattern is similar to the Mo and Re patterns whereas the Ni halo surrounds a relatively narrow low that changes from a northwestern orientation near the center of the grid to a west-northwest trend in the western part of the grid, similar to the I, Sb, and As distributions. The low at 9600W/9875N may be isolated from the elongate northwest trending low to the southeast of this point as suggested by the distributions of several elements including Ni. This may represent an isolated mineralized body at the northwestern end of the central low defined in Figure 2.

The Cu distribution also suggests that a mineralized zone underlies a central low at 9600W/9875N. A broader low-contrast Cu halo is also present near the center of the grid. Lead, Zn, Co, Ga, and Sn each form different patterns but all of these elements form lows that coincide with potions or all of the oxidation suite central low shown in Figure 2. These distributions do not mimic the shapes seen among many of the oxidation suite or Ni and Cd halos and may reflect the dispersion patterns of these metals within a mineralizing system.

Bismuth does not form a distinctive halo but is most enriched within the oxidation halo along the northeastern margin of the oxidation suite central low.

Lithophile Elements

Manganese, Li, Cs, and Sr are enriched into halos around the oxidation suite central low. These halos are zoned relative to one another and Li and Cs show the highest degrees of structural control among the lithophile elements. The distributions of these elements may reflect alteration patterns in the subsurface. The relatively wide Sr halo could represent fairly widespread feldspar destruction outward from the margins of a concealed mineral body beneath the oxidation suite central low. This implies that feldspar-rich rocks are the most likely hosts for mineralization beneath this anomaly.

Barium forms an elongate halo surrounding a linear central low, both of which are offset to the south of the anomalies developed among many of the oxidation suite elements. The offset Ba anomaly appears to represent barium enrichments about a fault zone. This Ba anomaly could reflect a shallower or deeper portion of a dipping fault zone that is also responsible for the oxidation suite responses. Alternatively, a second fault zone to the south of and parallel to the interpreted fault beneath the oxidation suite central low could be responsible for controlling the Ba distribution.

Rare Earth Elements

The rare earth elements form distinctive narrow northwest-trending halos around linear northwest-trending central lows above an interpreted fault zone (Figure 3). The target at 9600W/9875N is also indicated by the REE distributions and is indicated by a higher-contrast halo among many of the REE. Some REE, such as Gd, are enriched into linear highs along the southwestern margin of the linear central low. This linear high projects into the small halo at 9600W/9875N suggesting that both the linear high and the small halo at 9600W/9875N occur along a fault in the subsurface.

The REE tend to behave similarly in geochemical systems and therefore, often form similar patterns. However, because the weights of these elements increase progressively from lanthanum (the lightest REE) to lutetium (the heaviest) some fractionation occurs among these elements leading to subtle differences in the patterns of some REE. Europium and cerium can

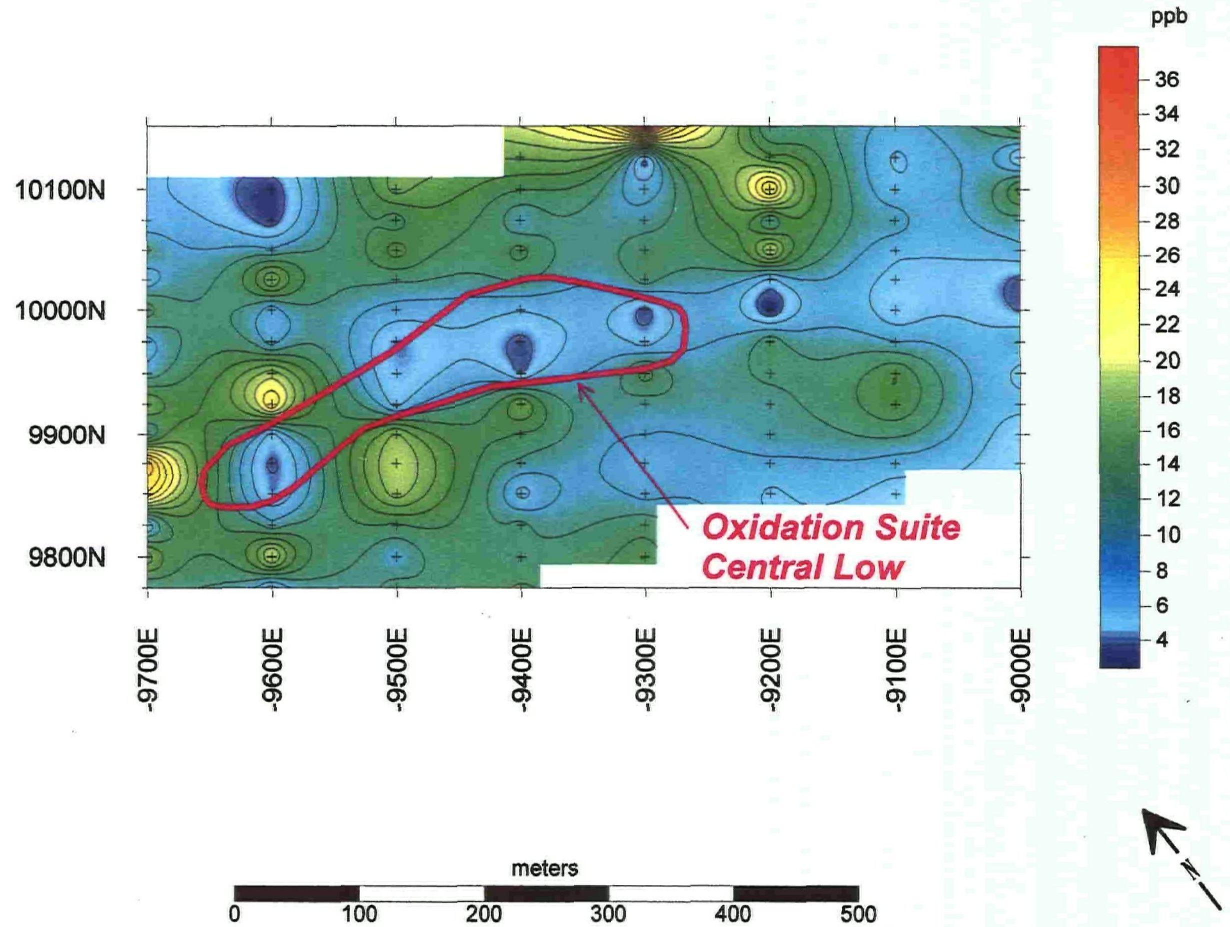



Figure 3. Distribution of lanthanum with superimposed outline of oxidation suite central low. The La distribution suggests that the interpreted structural zone extends to the southeast beyond the limits of the outline of the oxidation suite central low. The REE distributions also suggest that the halo/low pair centered at 9600W/9875N occur above an isolated pod of altered and possibly mineralized rocks.

also be fractionated from the other REE because Eu and Ce can exist in more than one valence state whereas all other REE are limited to a single valence state. Because of this, Eu is often fractionated into feldspars so that Eu concentrations are increased (relative to chondritic meteorite composition) compared to the other REE in these minerals. A factor termed the europium anomaly, denoted as Eu/Eu*, was calculated to determine if feldspar destruction through alteration could be detected. If so, a positive anomaly would be expected above the zone of feldspar alteration.

Figure 4 shows the Eu/Eu* distribution. A feldspar altered zone is suggested by the Eu/Eu* distribution which forms a high that coincides with the oxidation suite central low and extends to the southeast beyond the central low outline. The Eu/Eu* anomaly is not confined to the proposed altered structural zone but also extends laterally away from this proposed structure. The broadest portion of the Eu/Eu* anomaly occurs along line 9400W between 9925N and 10075N suggesting that wall rock alteration about a proposed mineralized fault is most extensive in this area. This region coincides with the oxidation suite central low and with an inflection in the pattern formed by Eu/Eu*.

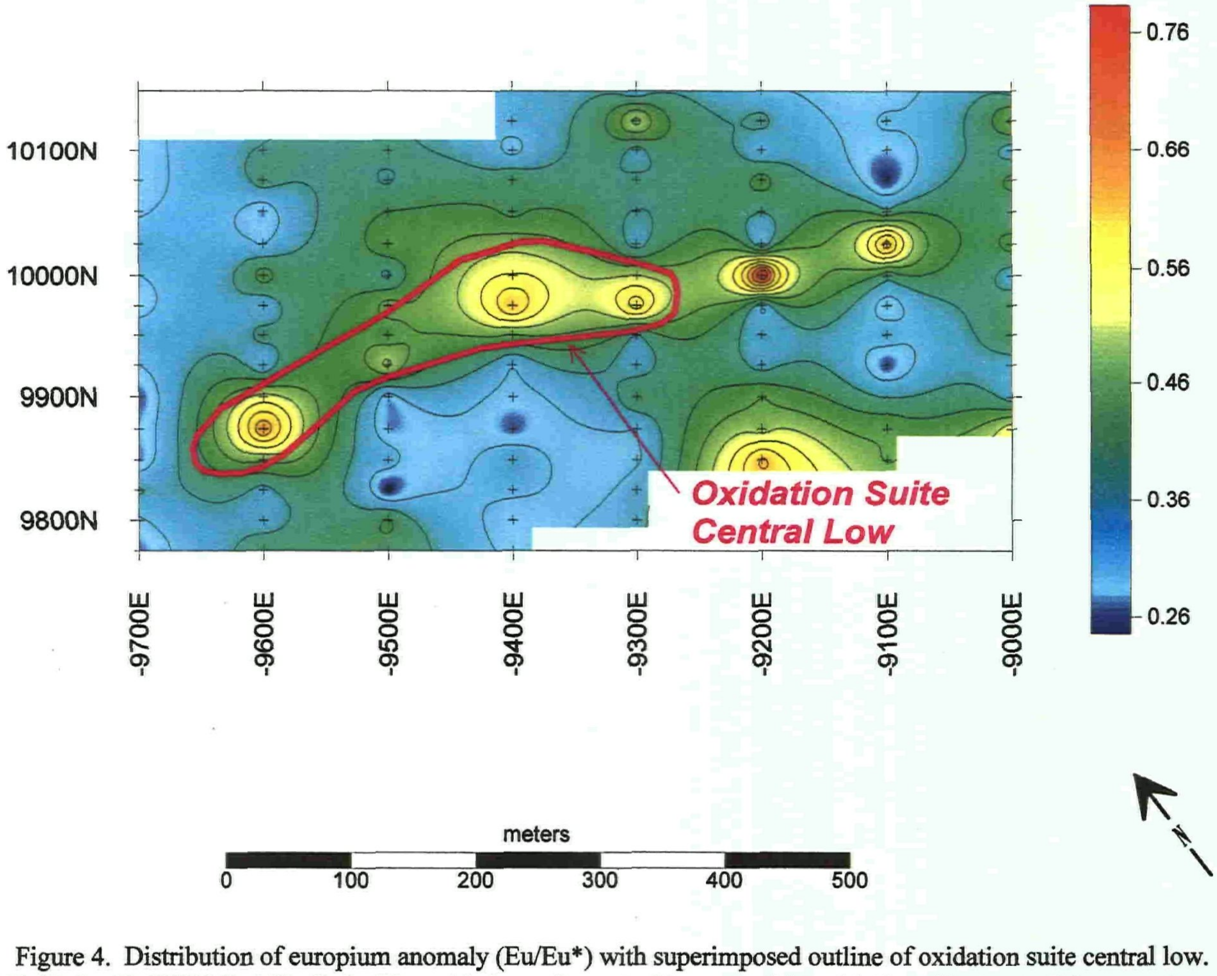



Figure 4. Distribution of europium anomaly (Eu/Eu*) with superimposed outline of oxidation suite central low. Eu/Eu* = Eu/(((Gd-Sm)/2)+Sm). The oxidation suite central low coincides with the widest part of the europium anomaly suggesting that alteration zones are wider in this region. The inflection in the northwest-trending interpreted fault zone is well indicated in this plot.

Figure 5 shows a structural interpretation based on these patterns in which a transtensional zone is developed along a right lateral fault zone where the inflection occurs. Such a zone would provide a conduit for hydrothermal fluids to flow through and deposit hydrothermal minerals. One would expect that the alteration zones surrounding an open conduit such as this would penetrate farther into wall rock than in areas where less open space is available, as is suggested by the Eu/Eu* distribution.

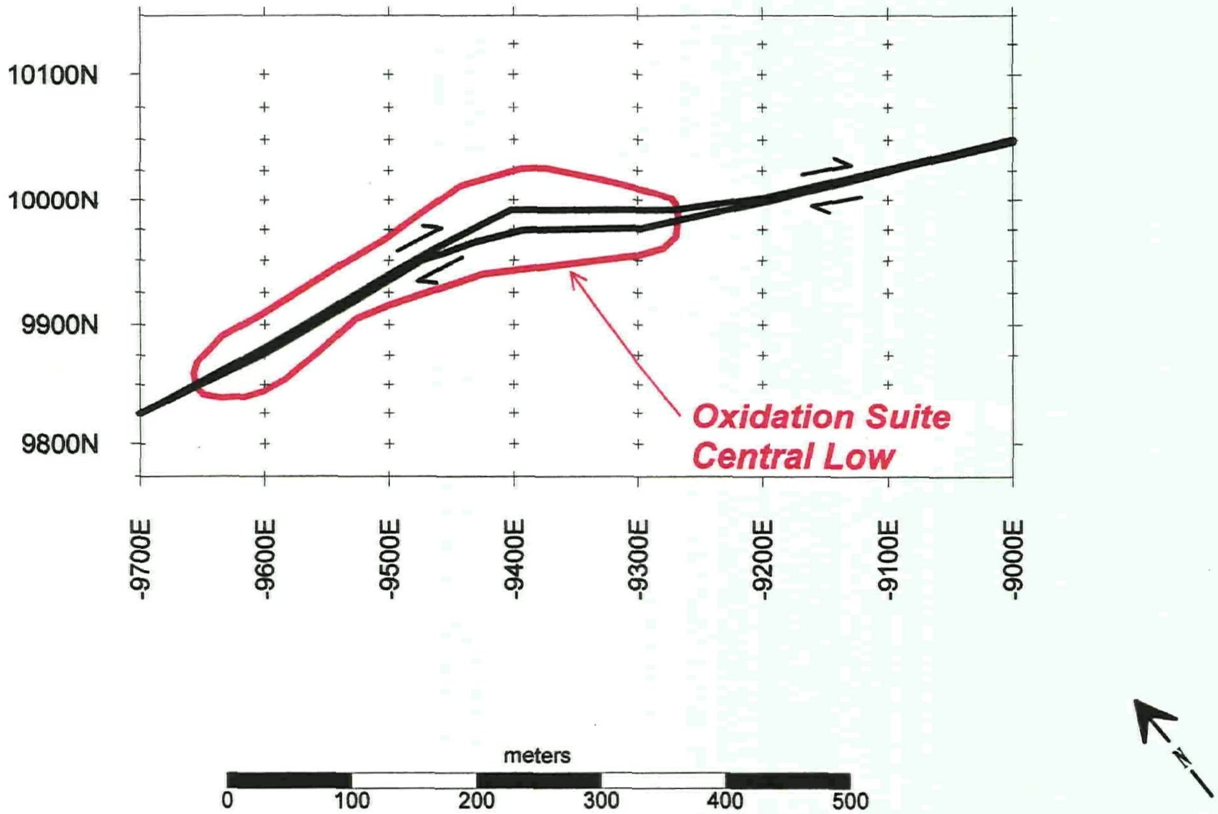



Figure 5. Structural interpretation based on oxidation suite and REE patterns. The eastern portion of the oxidation suite central low coincides with an inflection in the Eu/Eu* distribution suggesting that an open conduit within a transtensional structural zone could exist here.

High Field Strength Elements

Titanium forms linear highs that extend from the southeastern and northwestern ends of the oxidation suite central low suggesting that this oxidation anomaly is structurally controlled. The linear Ti highs yield to a diffuse broad halo in the region that coincides with the oxidation suite central low. Hafnium and Zr also form broad halos around the oxidation suite central low. However, the most distinctive portion of the Hf distribution is the depletion that coincides with the northeasternmost part of the isolated (?) central low at 9600W/9875N. This depletion, along with the moderate- to high-contrast halos among many elements surrounding 9600W/9875N, suggests the presence of a robust electrochemical cell in this area.

Precious Metals

Gold appears to be weakly enriched into an oxidation halo around the oxidation suite central low (Figure 6). Although this element does not appear to form strongly distinctive patterns by itself, it is excluded from the oxidation suite central low as is expected. Expansion of the soil grid may reveal that these gold detections are much more indicative of a mineralized zone than they appear to be in this plot, particularly if little or no gold was detected in the expanded portions of the grid. Silver was detected in a small number of samples and does not form distinctive patterns.

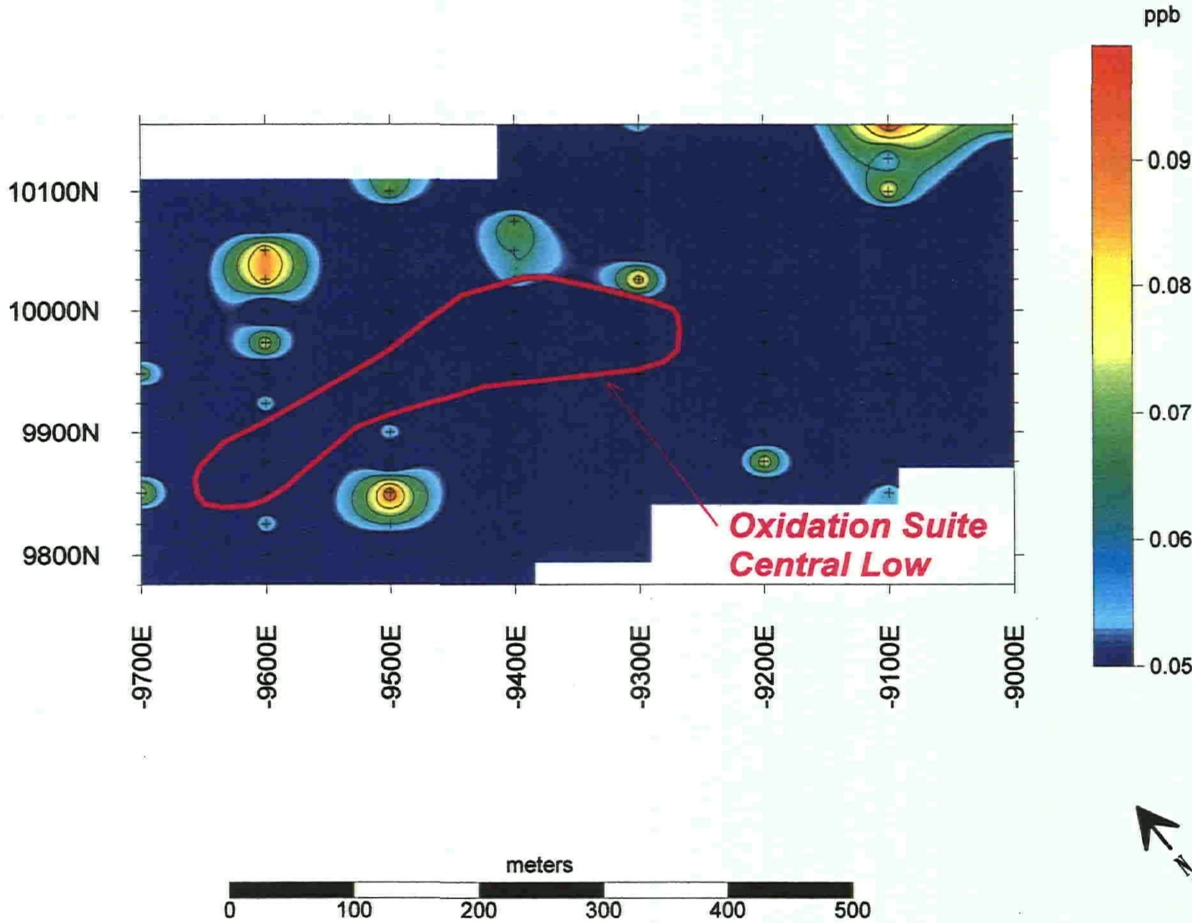



Figure 6. Distribution of gold with superimposed outline of oxidation suite central low. Gold is weakly enriched into an oxidation halo and, importantly, excluded from the oxidation suite central low.

## Conclusions and Recommendations

A well-developed moderate-contrast oxidation anomaly is present on the Dozer prospect - Canyon Gold property. The anomaly is best indicated by the oxidation suite elements Cl, Br, I, As, Mo, Sb, and Re; the REE; the lithophile elements Sr, Mn, Li; and the metals Ni, Cu, and Cd. The Enzyme Leach$^{SM}$ geochemistry suggests that a northwest-trending fault zone crosses beneath the sample grid and is altered along much of its length. These data suggest that the most intense alteration and mineralization coincide with an inflection in the northwest structural trend, in the eastern half of the oxidation suite central low, and in another smaller zone at the western end. Drill testing of targets at 9300-9400W/9975N and 9600W/9875N should be given highest priority. If initial drill results are encouraging, the Enzyme Leach$^{SM}$ data should be reviewed in the context of new geologic information provided by the drill holes, and the oxidation suite central low and interpreted fault zone should be used as a guide to additional drilling.

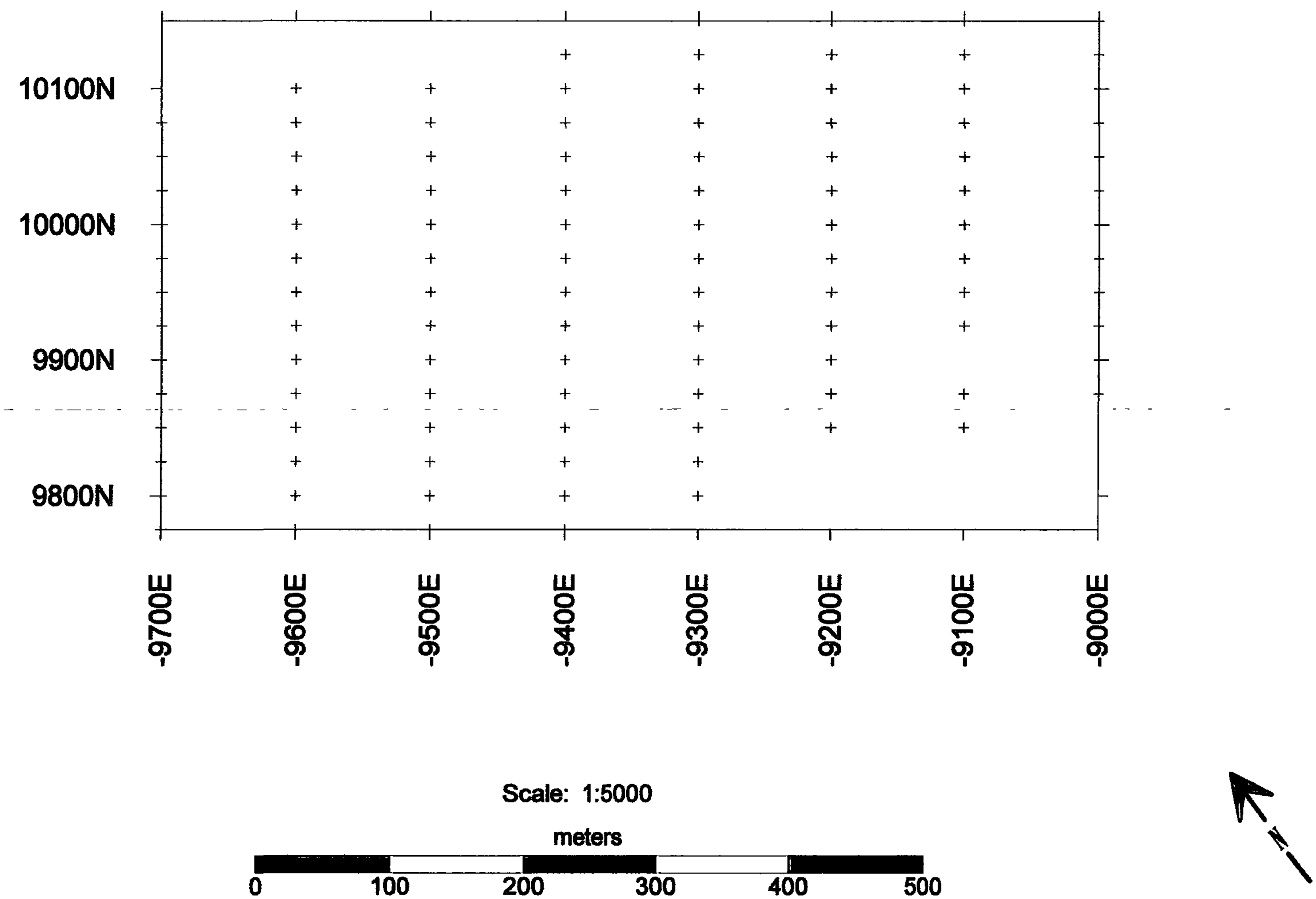
A parallel structure to the south of the oxidation suite central low is suggested by the distributions of several elements including Ba, some of the REE, and U. Although it has not been determined whether this represents a separate fault or simply an up- or down-dip portion of the main target structure suggested by the oxidation suite central low, this zone should be considered further. Additional sampling and Enzyme Leach$^{SM}$ analysis of soils to the southwest of the current grid is recommended. This would allow for the recognition of a halo around a parallel fault if such an anomaly exists as is suggested by some elements.

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach℠ data

### Sample Location Map

Drawn by: G.T. Hill Date: December 20, 2000



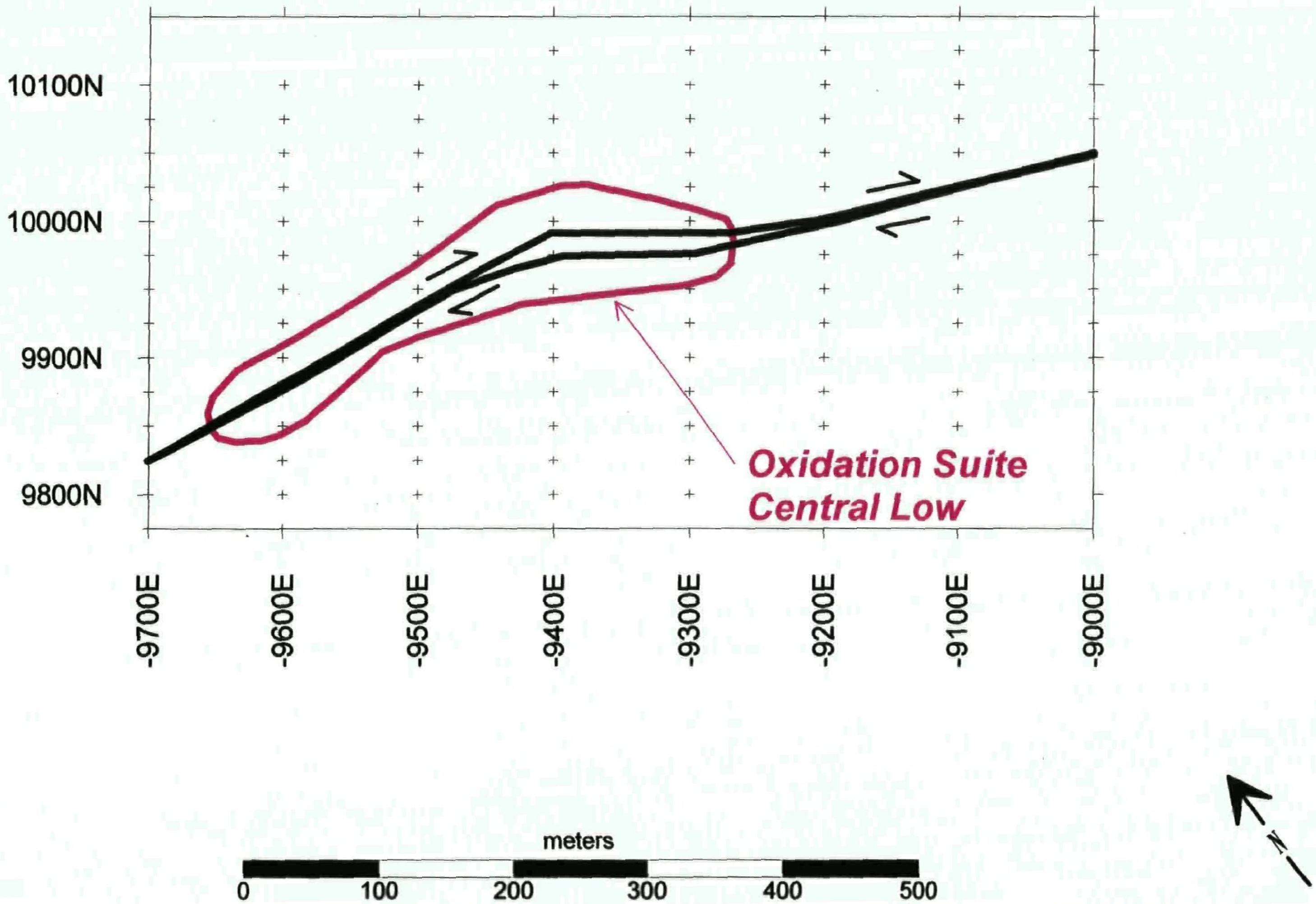

Enzyme Laboratories, Inc.

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Structural Interpretation

Drawn by: G.T. Hill    Date: December 20, 2000

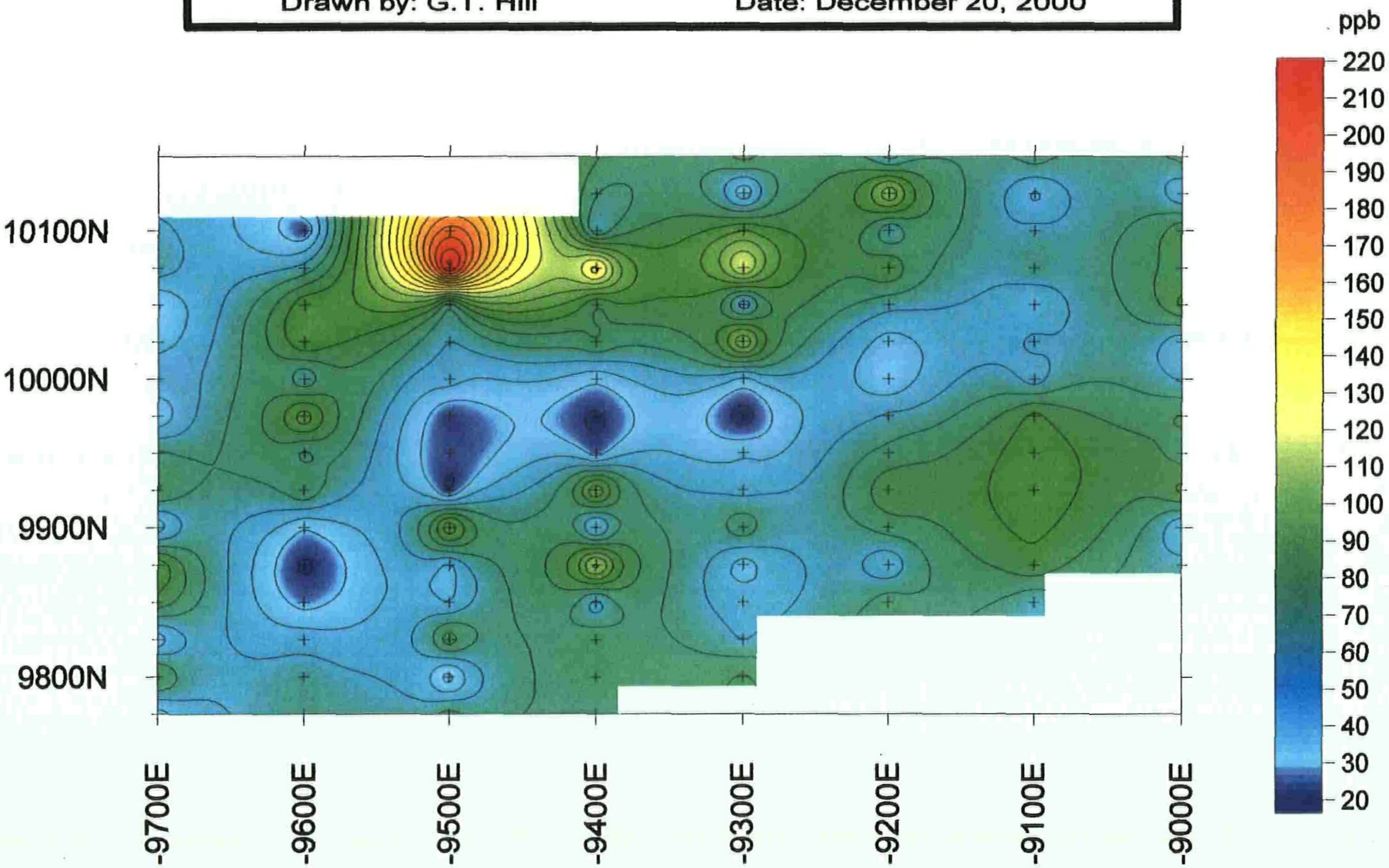



Actlabs

Enzyme Laboratories, Inc.

data from 20875rpt

| Dozer Prospect - Canyon Gold Property |
| --- |
| Enzyme Leach℠ data |
| Element Group: Oxidation Suite        Element: Iodine |
| Drawn by: G.T. Hill        Date: December 20, 2000 |




Scale: 1:5000



Enzyme Laboratories, Inc.

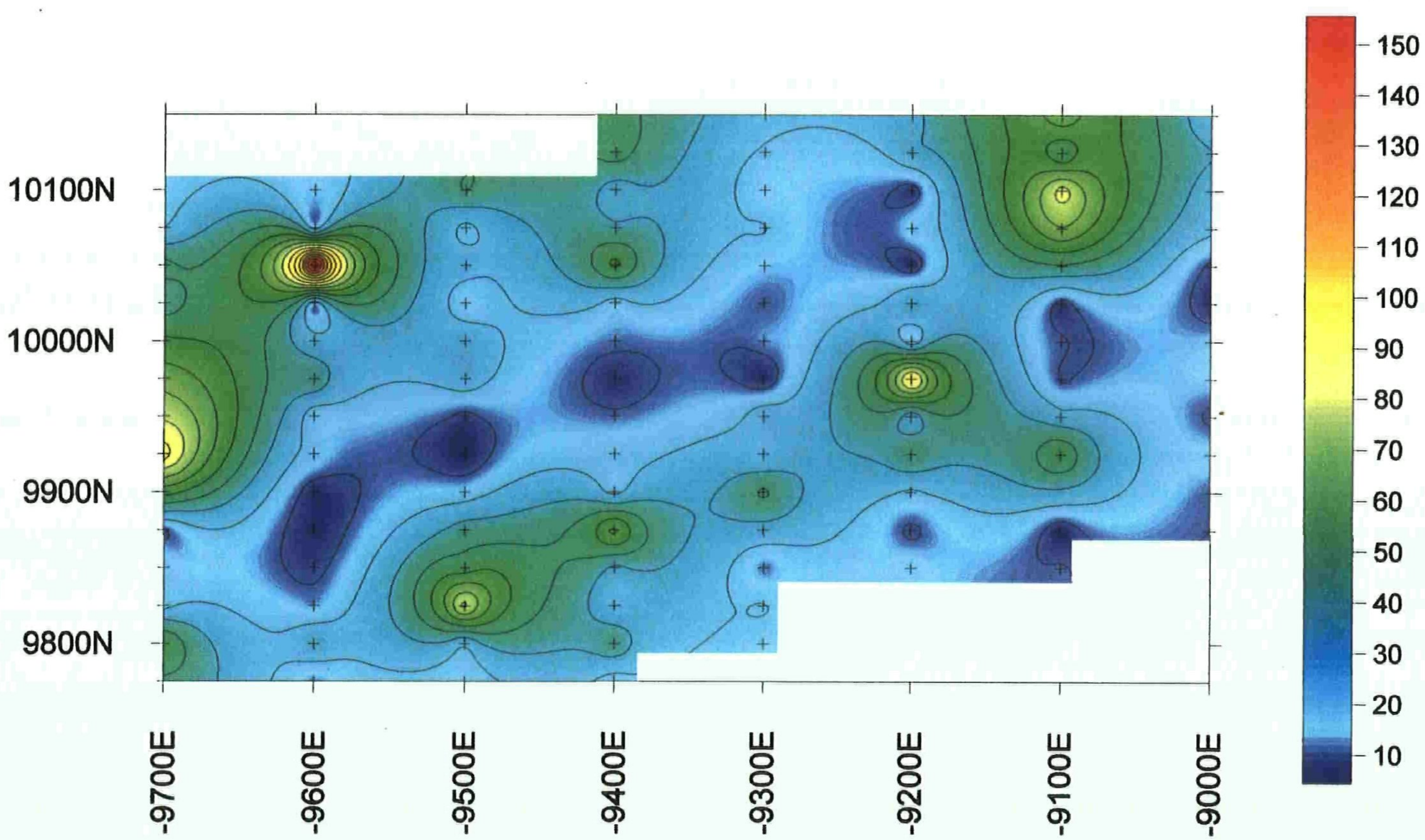
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Oxidation Suite    Element: Molybdenum

Drawn by: G.T. Hill    Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

N

Enzyme Laboratories, Inc.

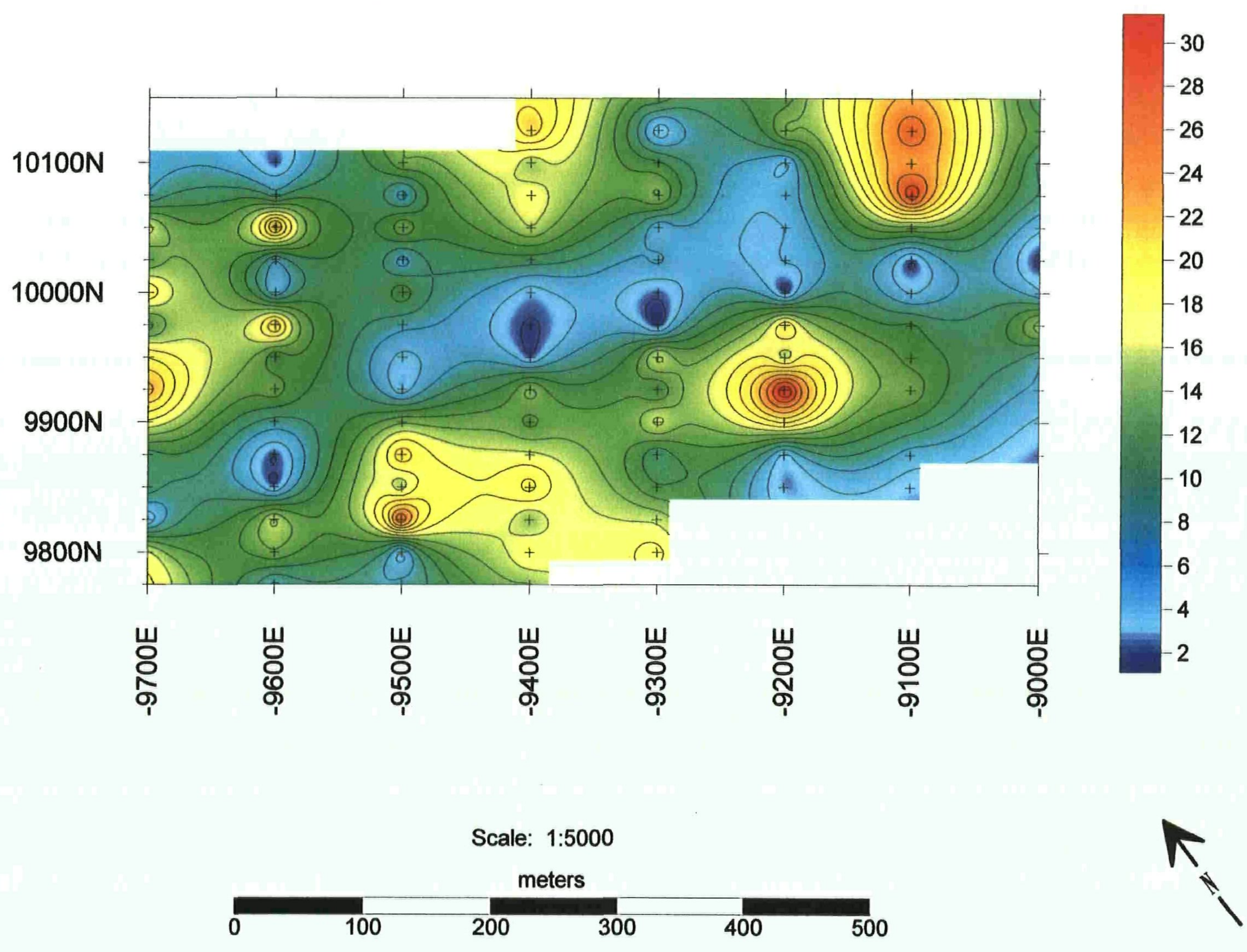
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Oxidation Suite Element: Antimony

Drawn by: G.T. Hill Date: December 20, 2000




Enzyme Laboratories, Inc.

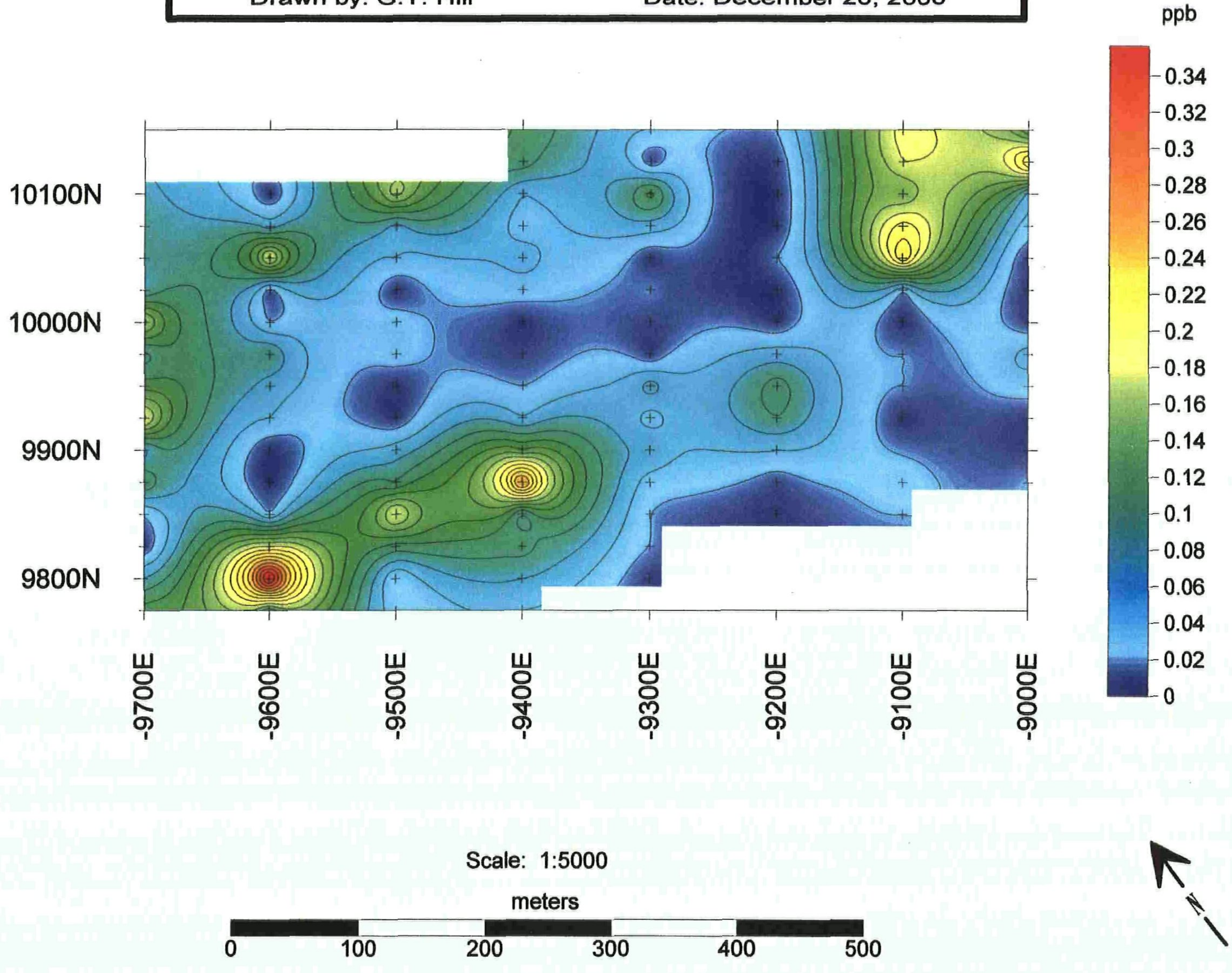
data from 20875rpt

## Dozer Prospect - Canyon Gold Property

**Enzyme Leach[SM] data**

Element Group: Oxidation Suite Element: Rhenium

Drawn by: G.T. Hill Date: December 20, 2000




Enzyme Laboratories, Inc.

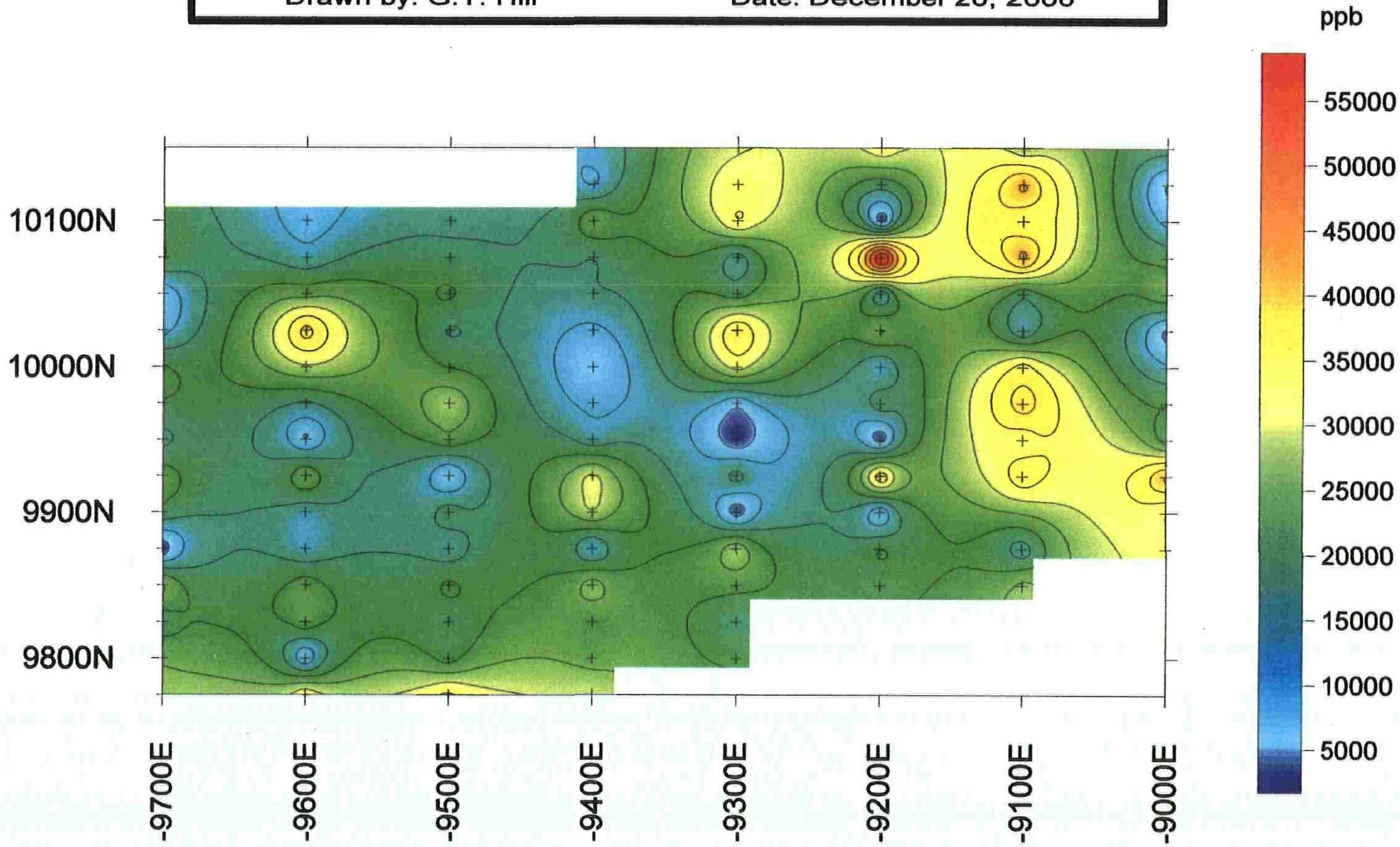
data from 20875rpt

**Dozer Prospect - Canyon Gold Property**

**Enzyme Leach℠ data**

Element Group: Oxidation Suite    Element: Chlorine

Drawn by: G.T. Hill    Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

N

Enzyme Laboratories, Inc.

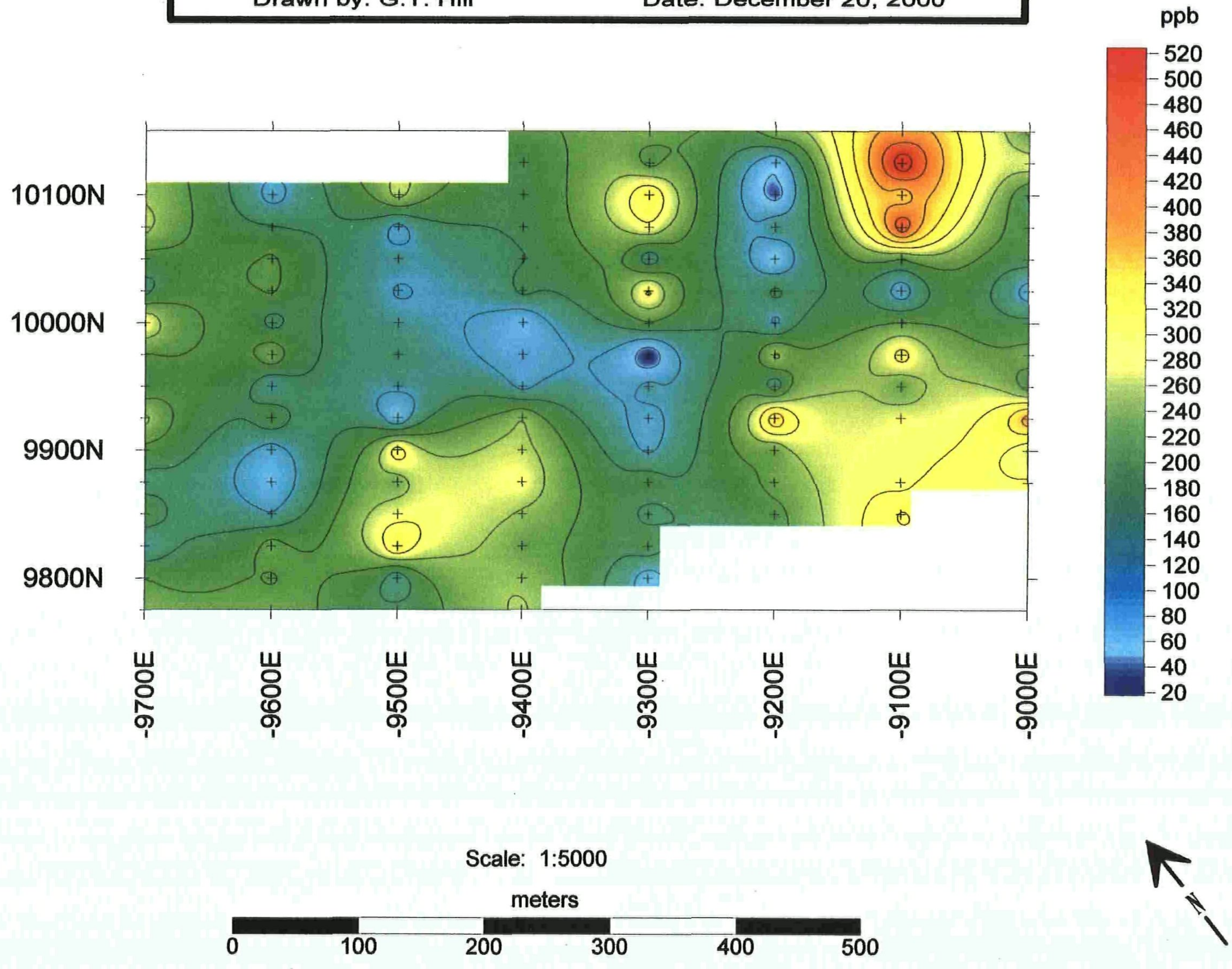
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Oxidation Suite Element: Bromine

Drawn by: G.T. Hill Date: December 20, 2000




Actlabs
Enzyme Laboratories, Inc.

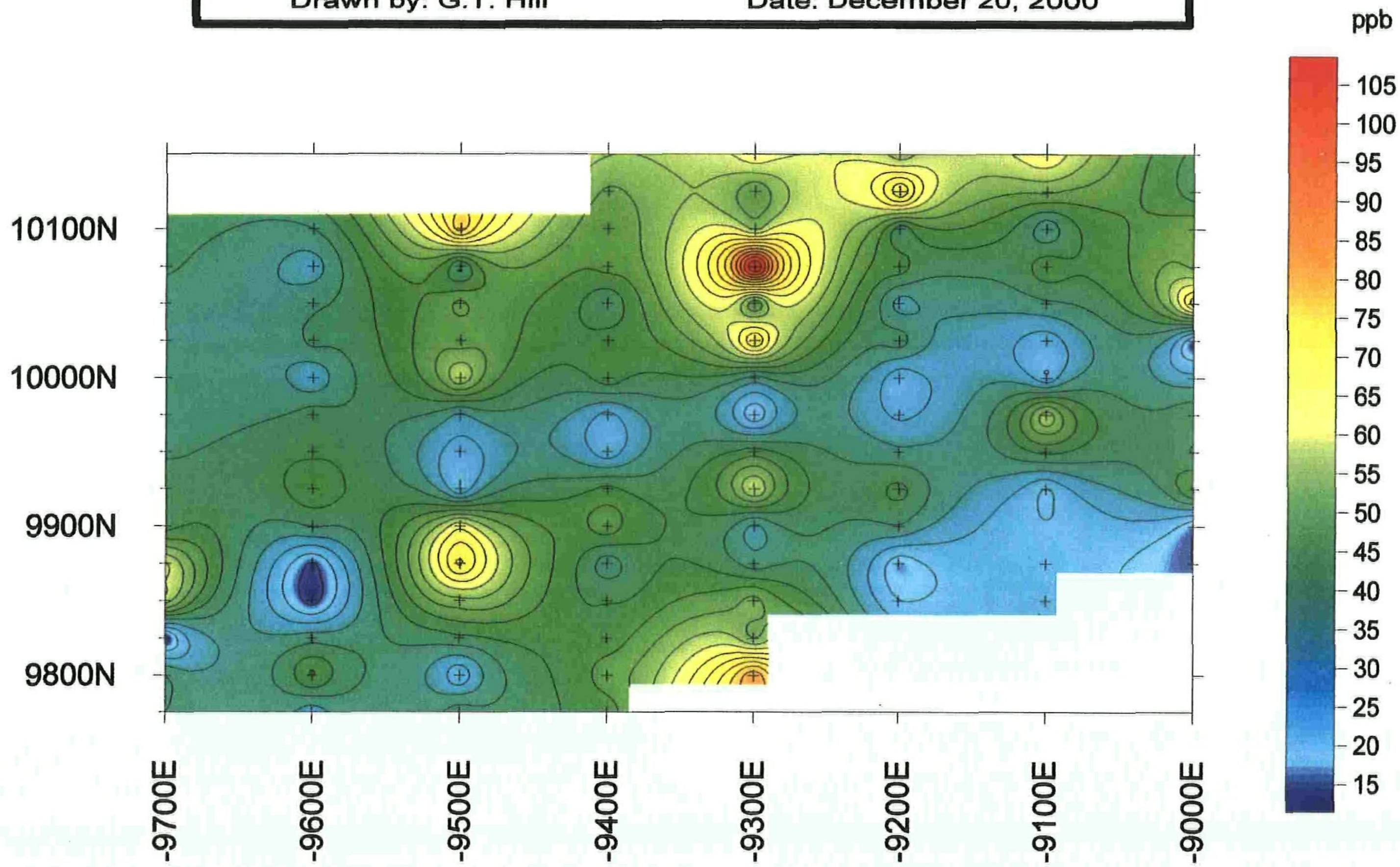
data from 20875rpt

**Dozer Prospect - Canyon Gold Property**

**Enzyme Leach[SM] data**

Element Group: Oxidation Suite Element: Arsenic

Drawn by: G.T. Hill Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

N

Enzyme Laboratories, Inc.

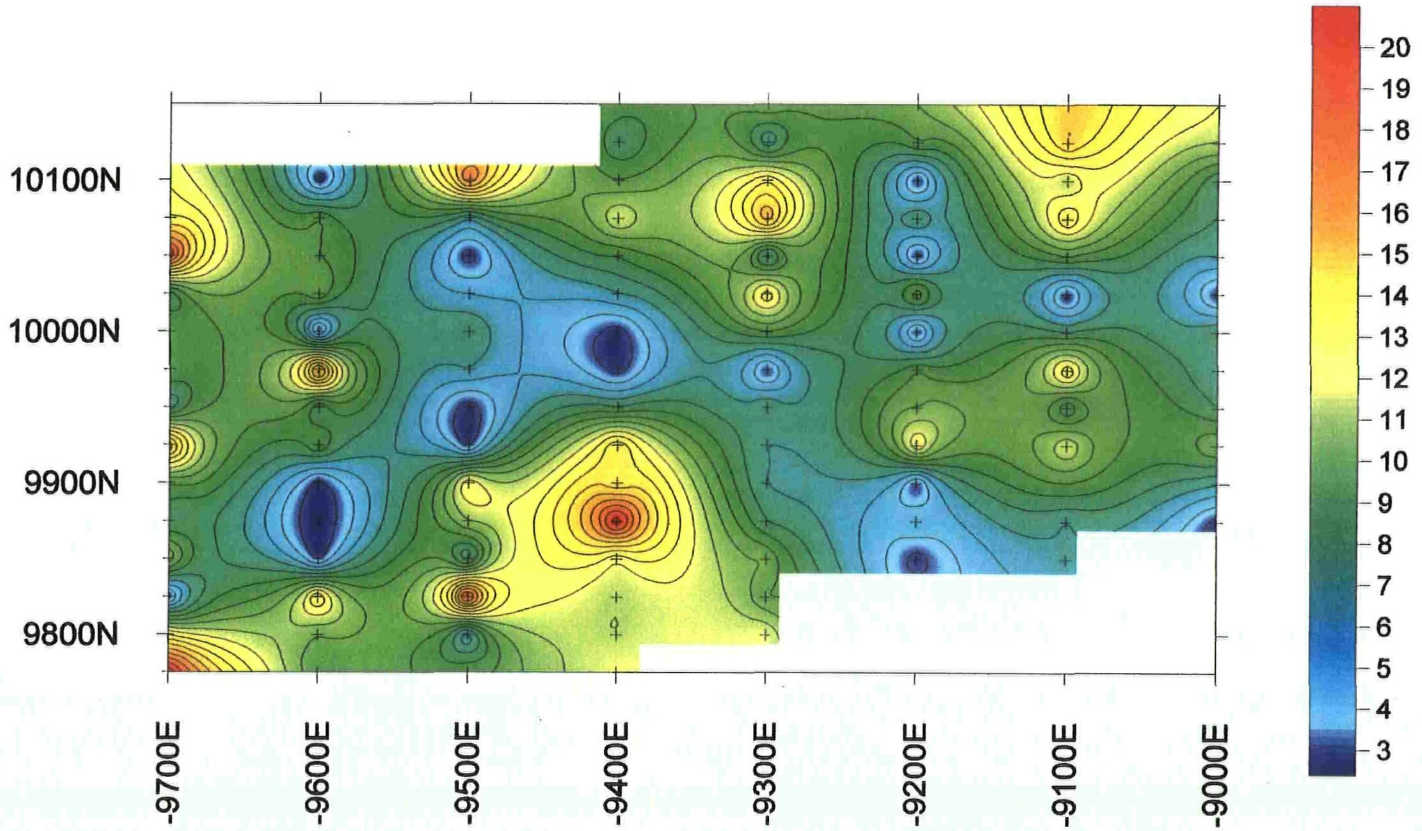
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Oxidation Suite Element: Selenium

Drawn by: G.T. Hill Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

Enzyme Laboratories, Inc.

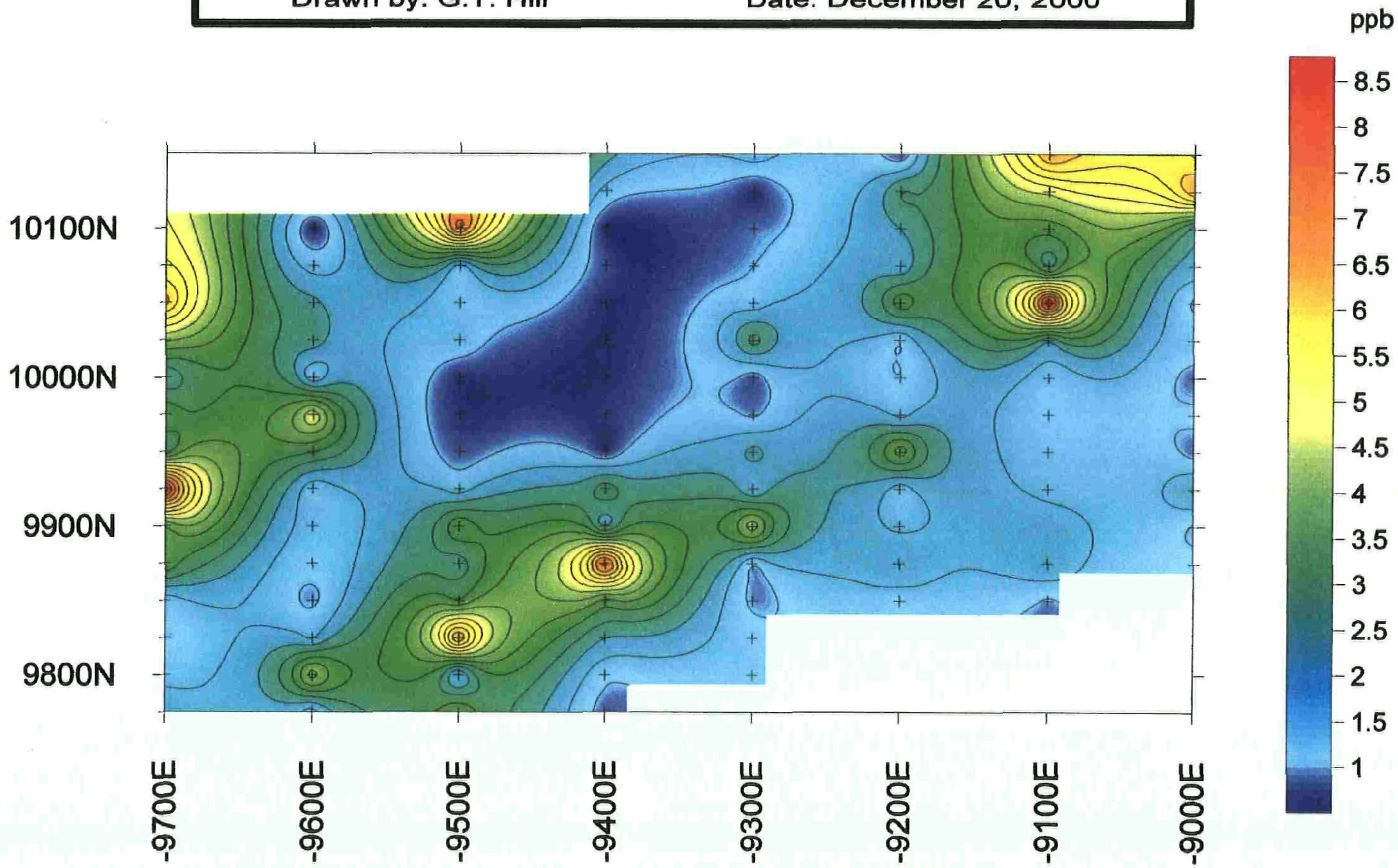
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach℠ data

Element Group: Oxidation Suite  Element: Uranium

Drawn by: G.T. Hill  Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

Enzyme Laboratories, Inc.

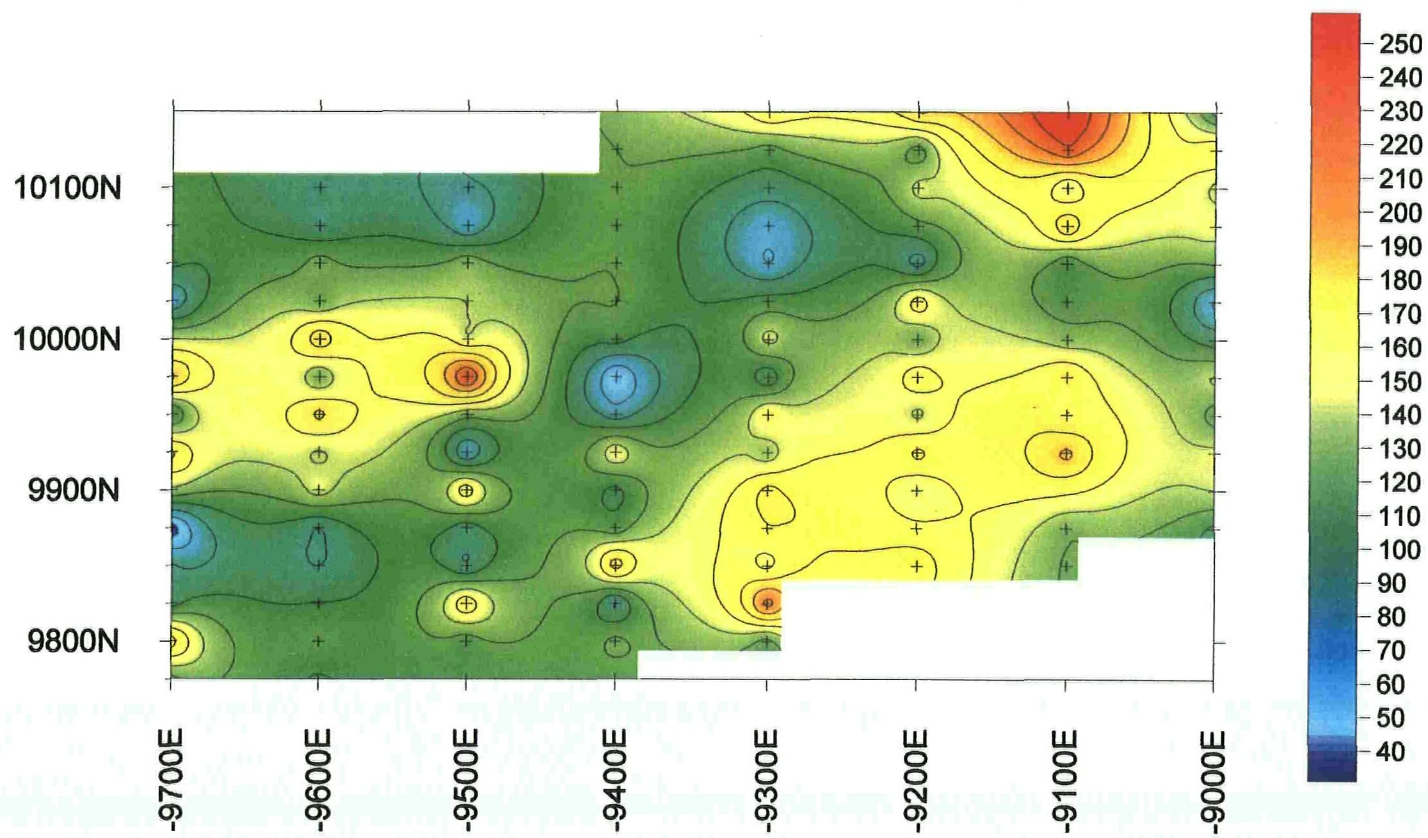
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Oxidation Suite    Element: Vanadium

Drawn by: G.T. Hill    Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

Enzyme Laboratories, Inc.

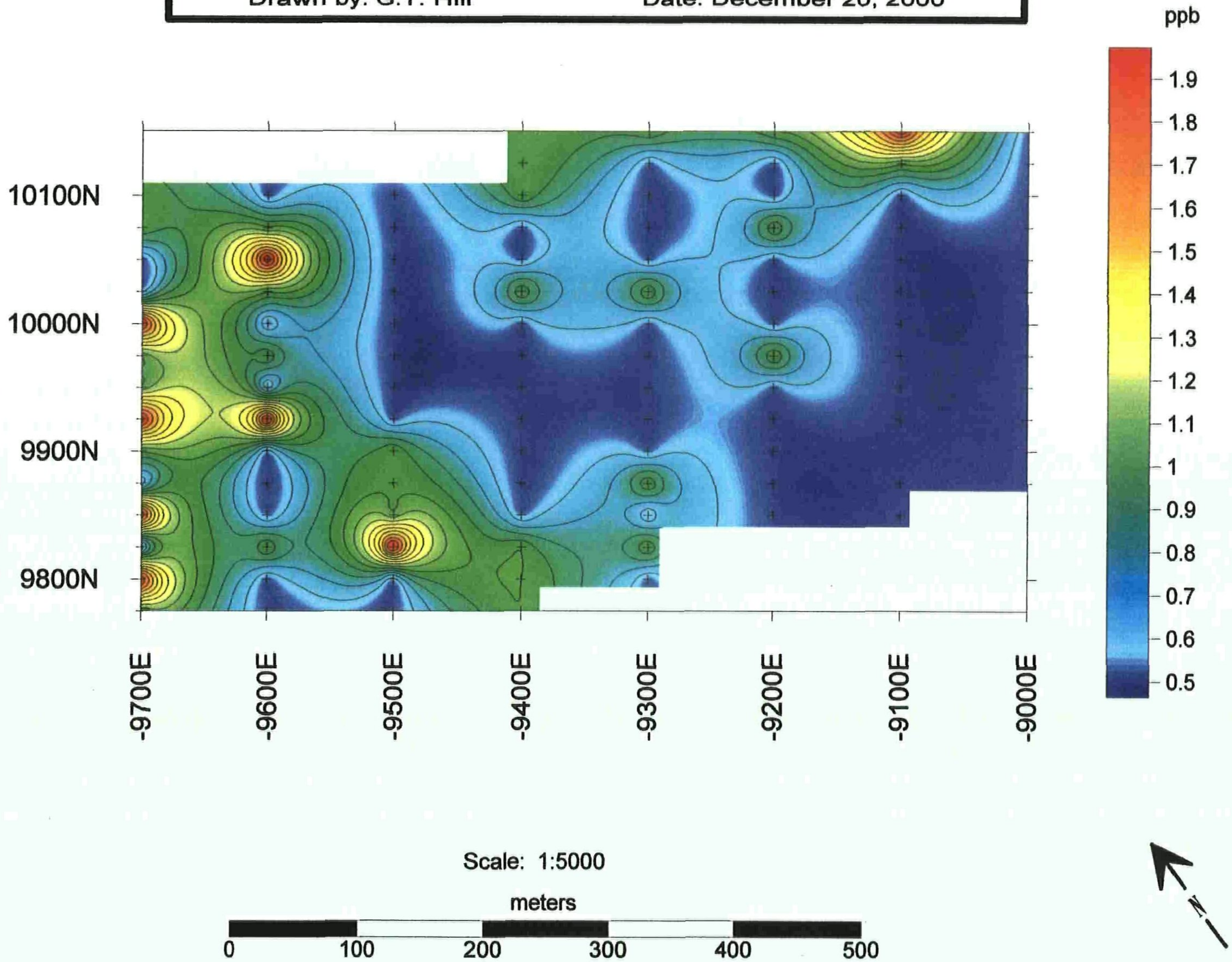
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Oxidation Suite  Element: Tungsten

Drawn by: G.T. Hill  Date: December 20, 2000




Enzyme Laboratories, Inc.

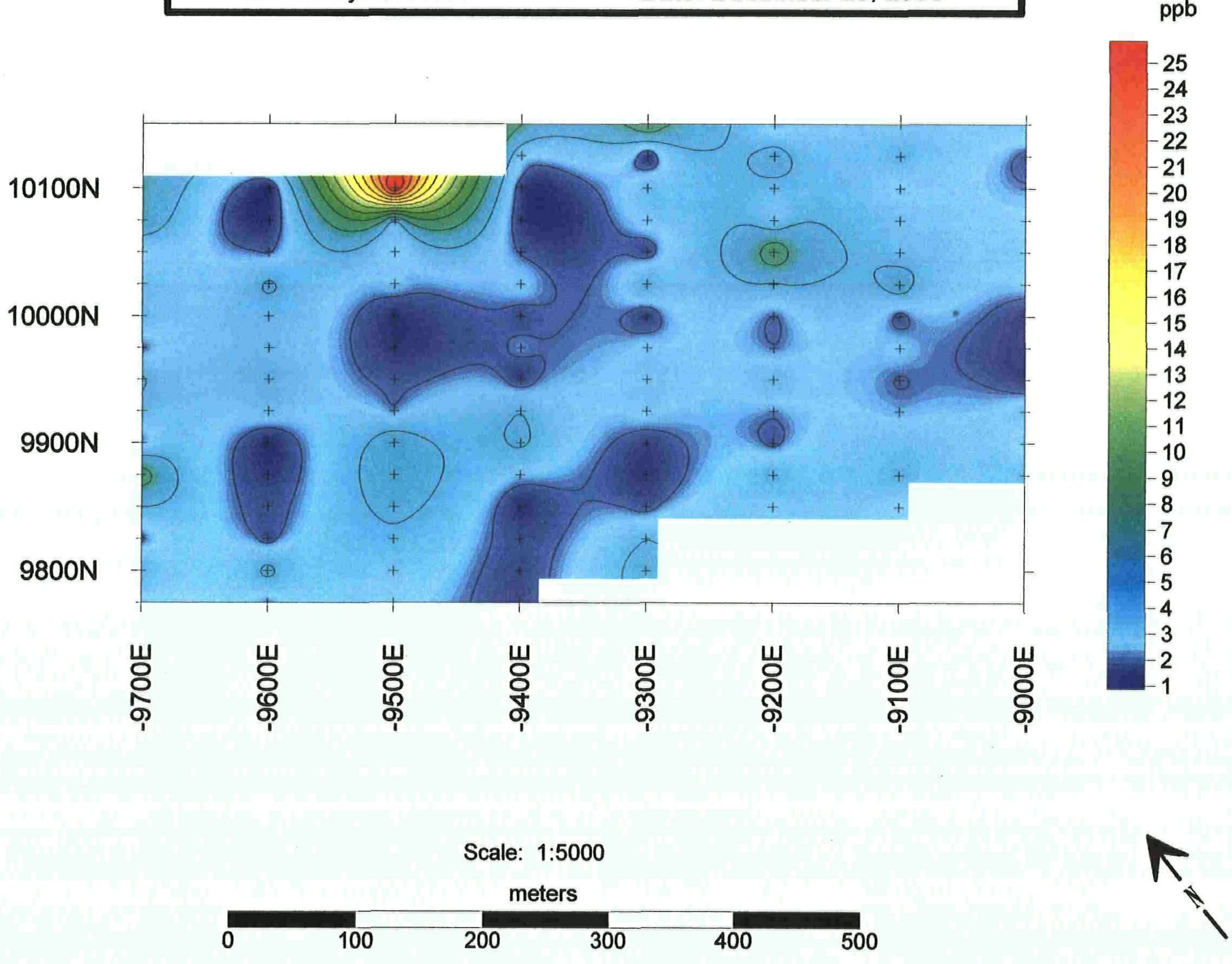
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Oxidation Suite | Element: Thorium

Drawn by: G.T. Hill | Date: December 20, 2000




Actlabs

Enzyme Laboratories, Inc.

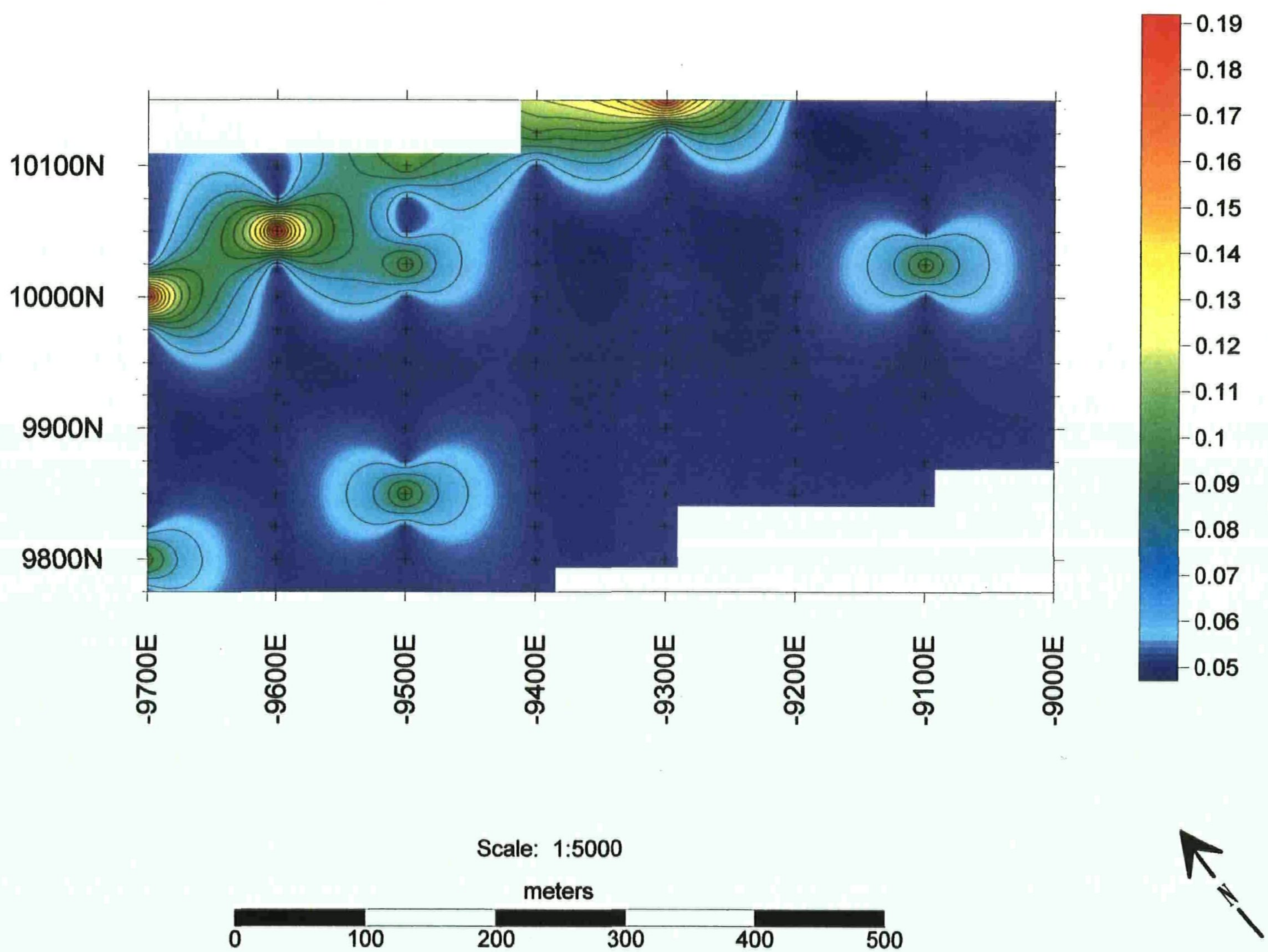
data from 20875rpt

**Dozer Prospect - Canyon Gold Property**

**Enzyme Leach[SM] data**

Element Group: Metals    Element: Thallium

Drawn by: G.T. Hill    Date: December 20, 2000




Enzyme Laboratories, Inc.

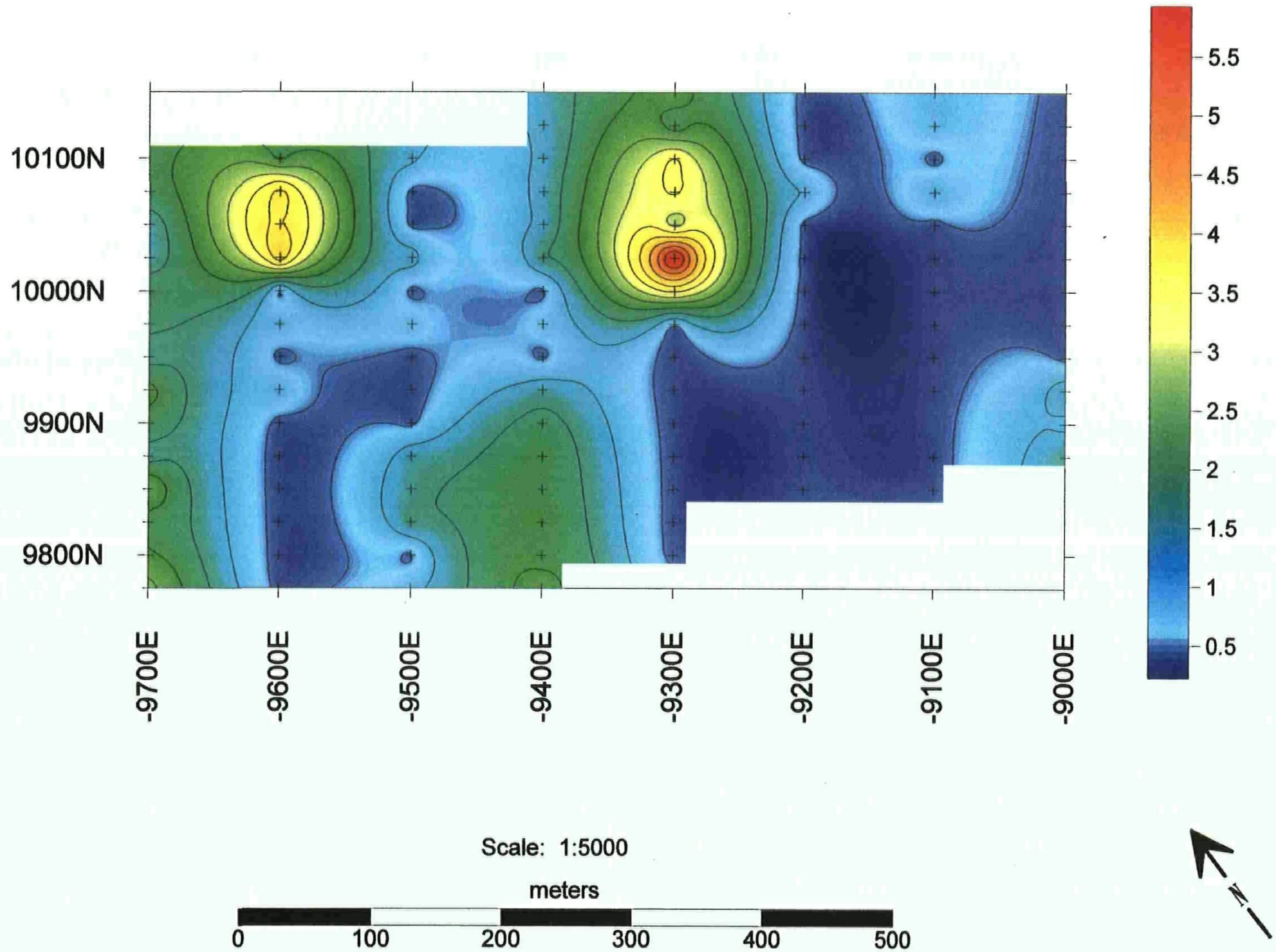
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Metals    Element: Bismuth

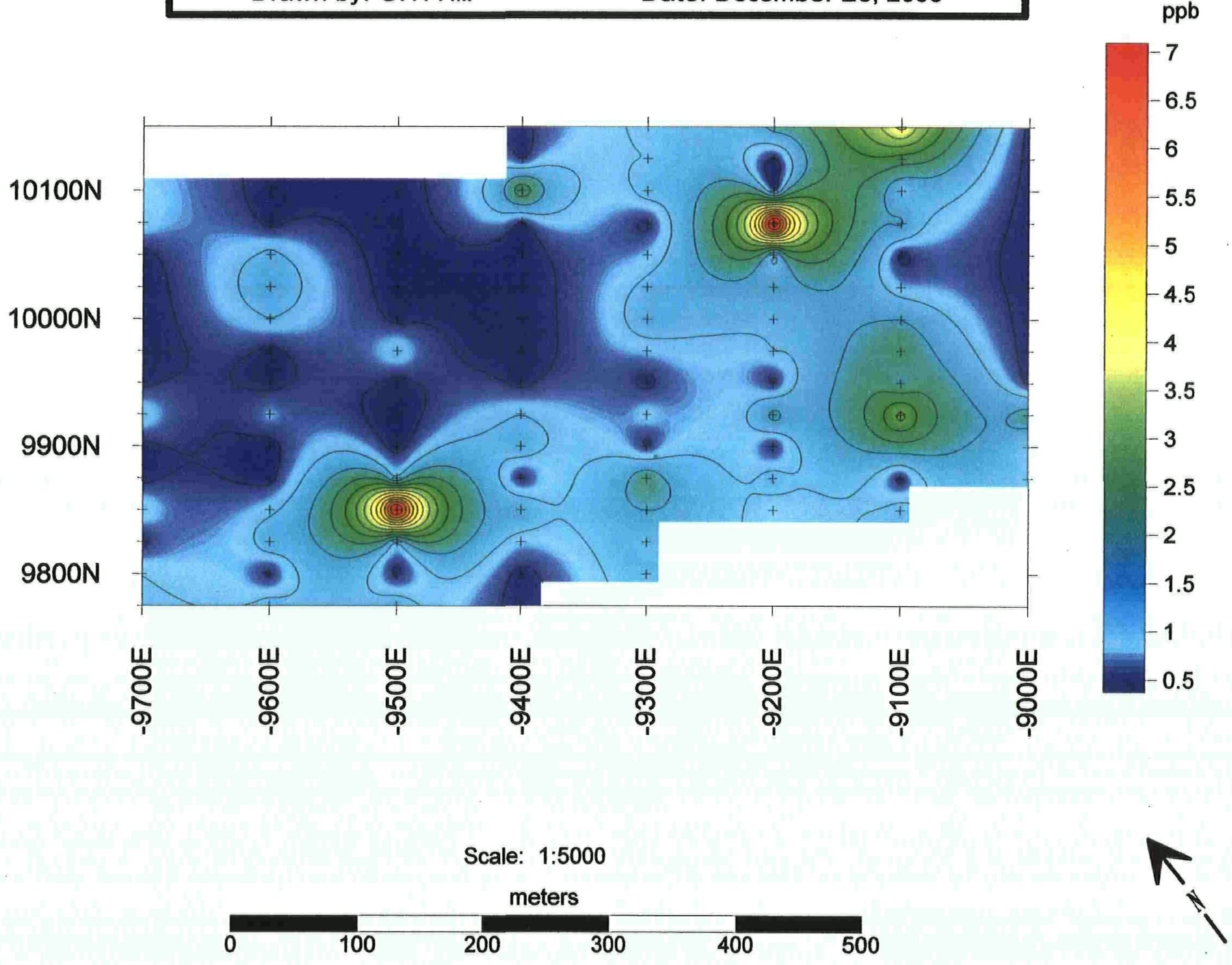
Drawn by: G.T. Hill    Date: December 20, 2000




Enzyme Laboratories, Inc.

data from 20875rpt

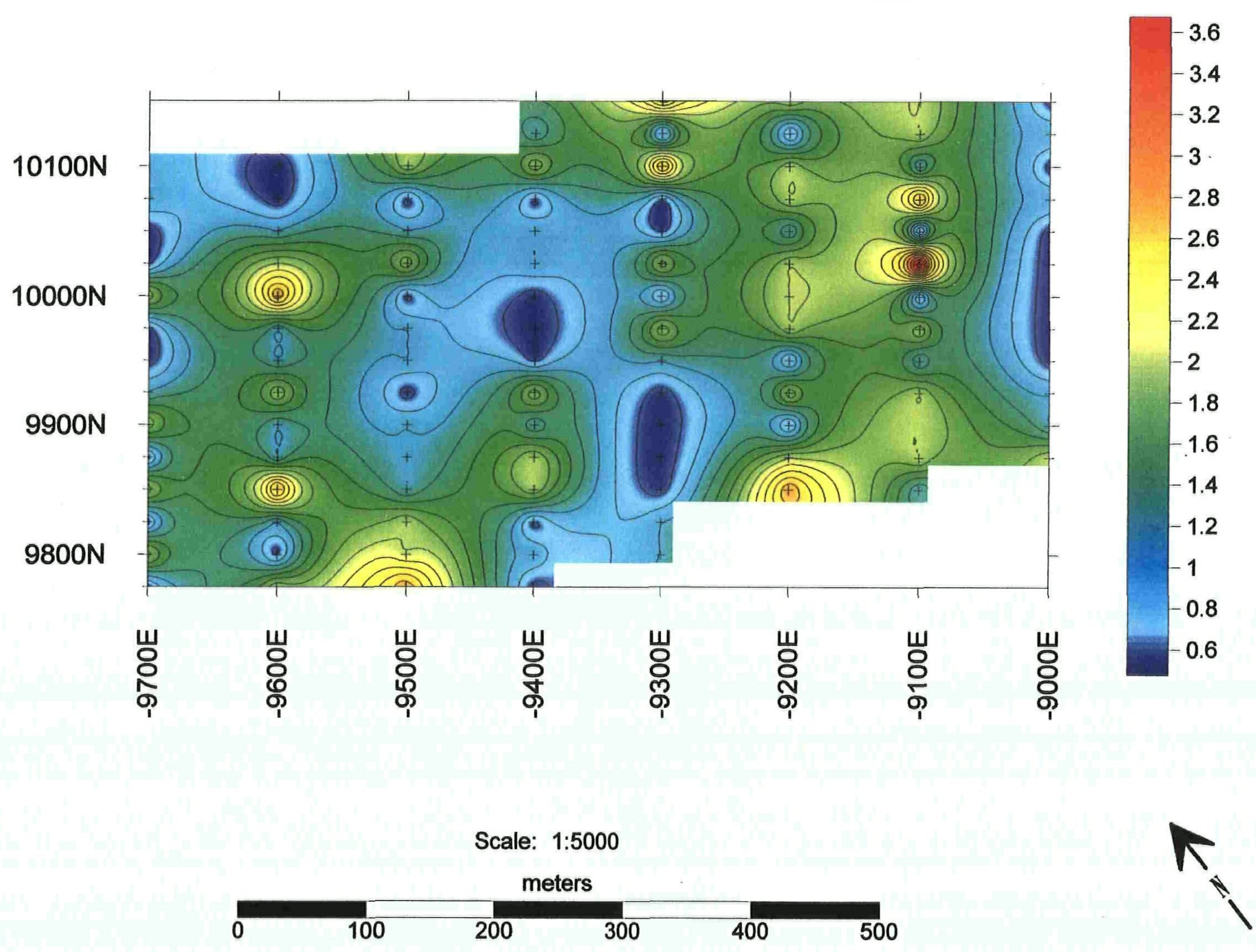
| Dozer Prospect - Canyon Gold Property |
| --- |
| Enzyme Leach℠ data |
| Element Group: Metals Element: Tin |
| Drawn by: G.T. Hill Date: December 20, 2000 |




Actlabs
Enzyme Laboratories, Inc.

data from 20875rpt

| Dozer Prospect - Canyon Gold Property |
| --- |
| Enzyme Leach[SM] data |
| Element Group: Metals     Element: Gallium |
| Drawn by: G.T. Hill     Date: December 20, 2000 |




Enzyme Laboratories, Inc.

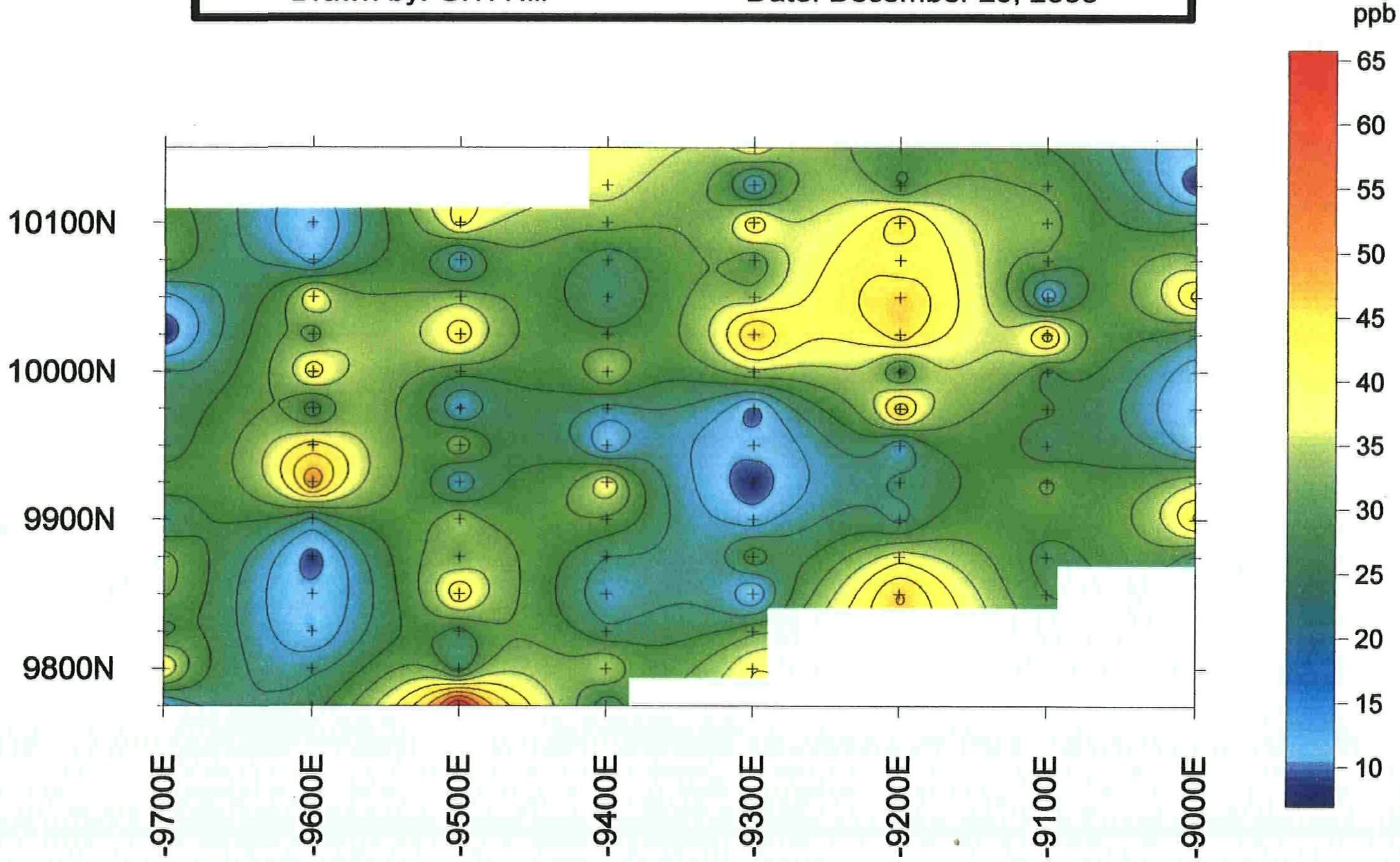
data from 20875rpt

**Dozer Prospect - Canyon Gold Property**

**Enzyme Leach℠ data**

Element Group: Metals  Element: Cobalt

Drawn by: G.T. Hill  Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

N

Enzyme Laboratories, Inc.

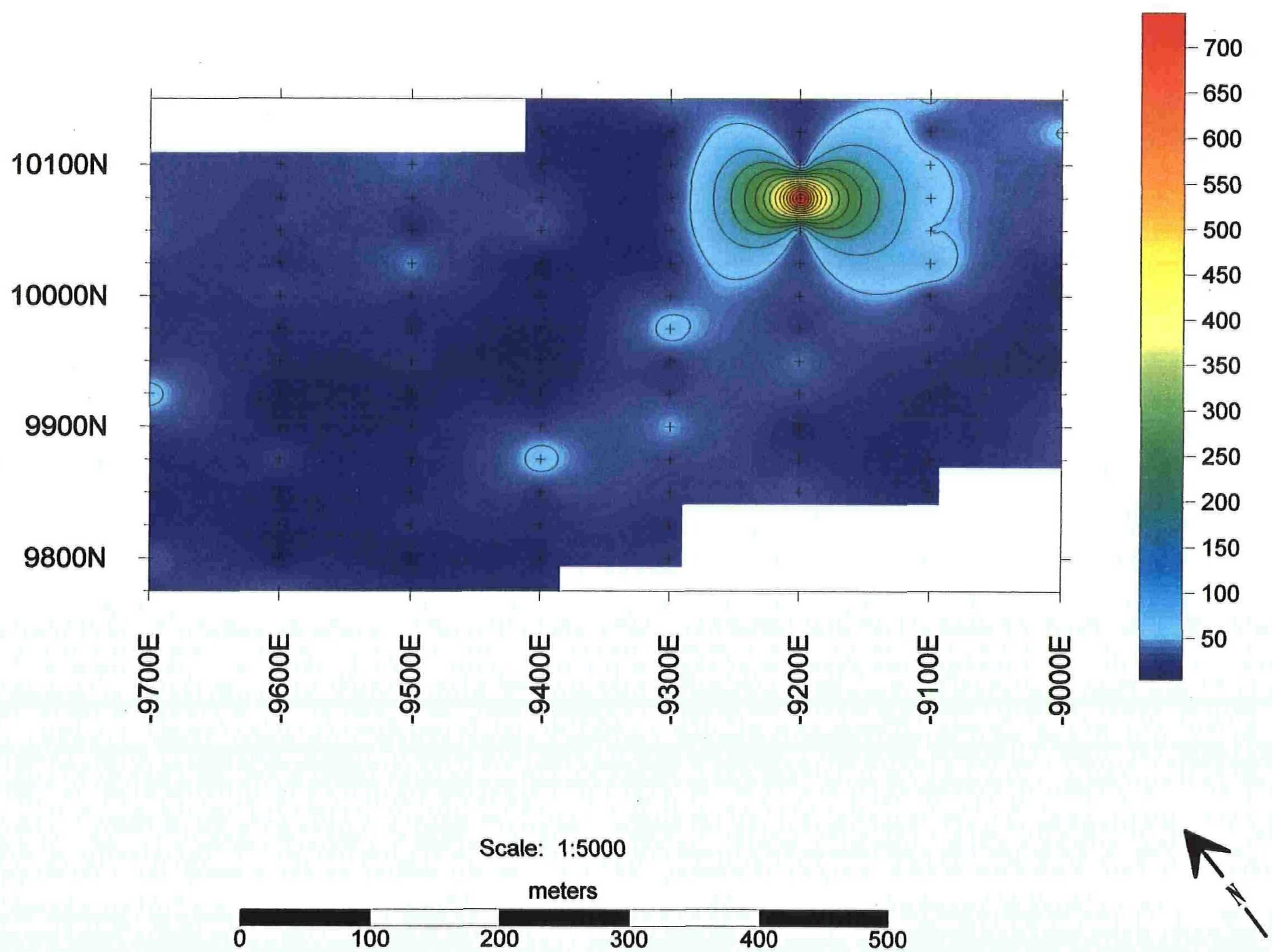
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach℠ data

Element Group: Metals    Element: Zinc

Drawn by: G.T. Hill    Date: December 20, 2000




Enzyme Laboratories, Inc.

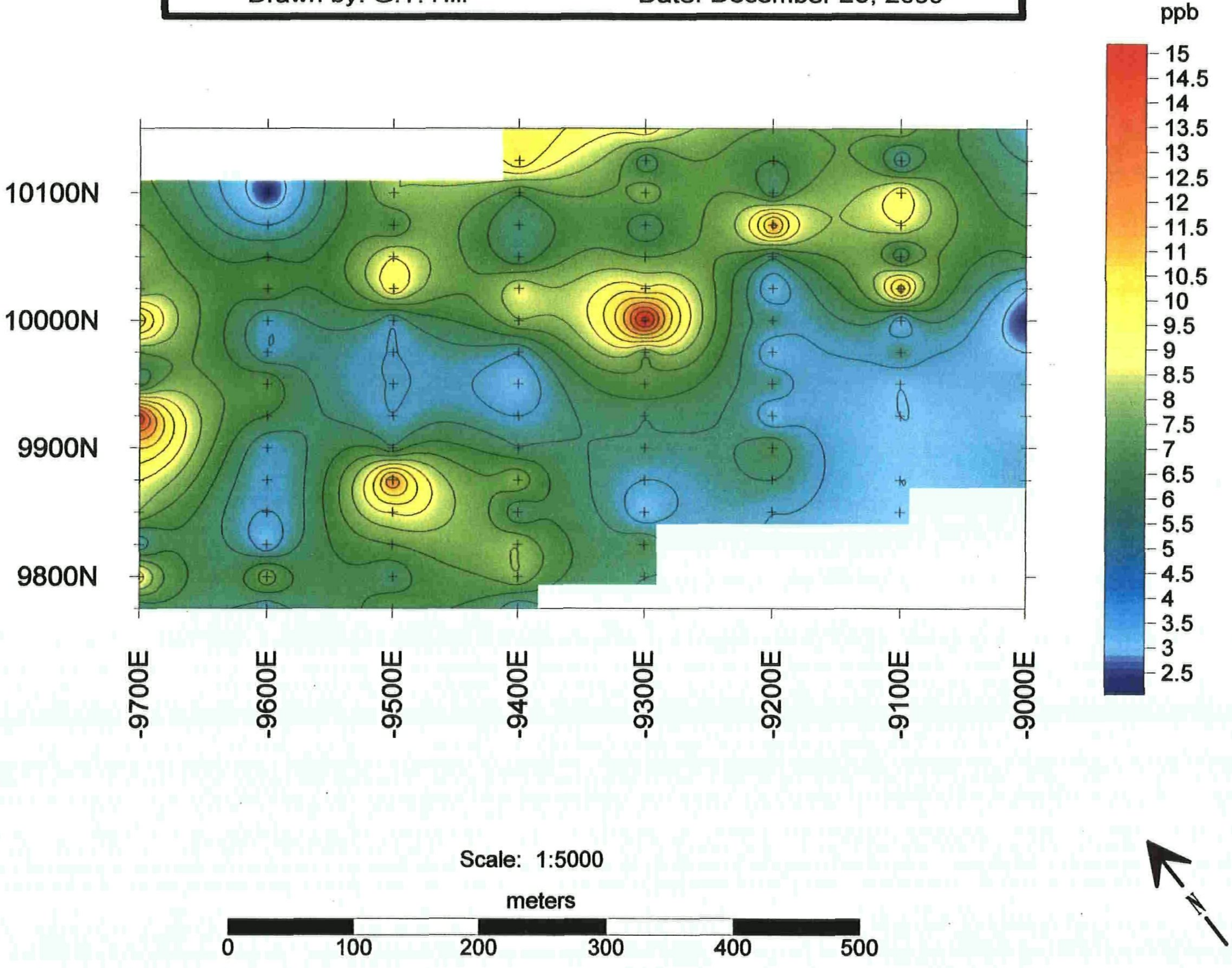
data from 20875rpt

**Dozer Prospect - Canyon Gold Property**

**Enzyme Leach℠ data**

Element Group: Metals Element: Lead

Drawn by: G.T. Hill Date: December 20, 2000




Actlabs

Enzyme Laboratories, Inc.

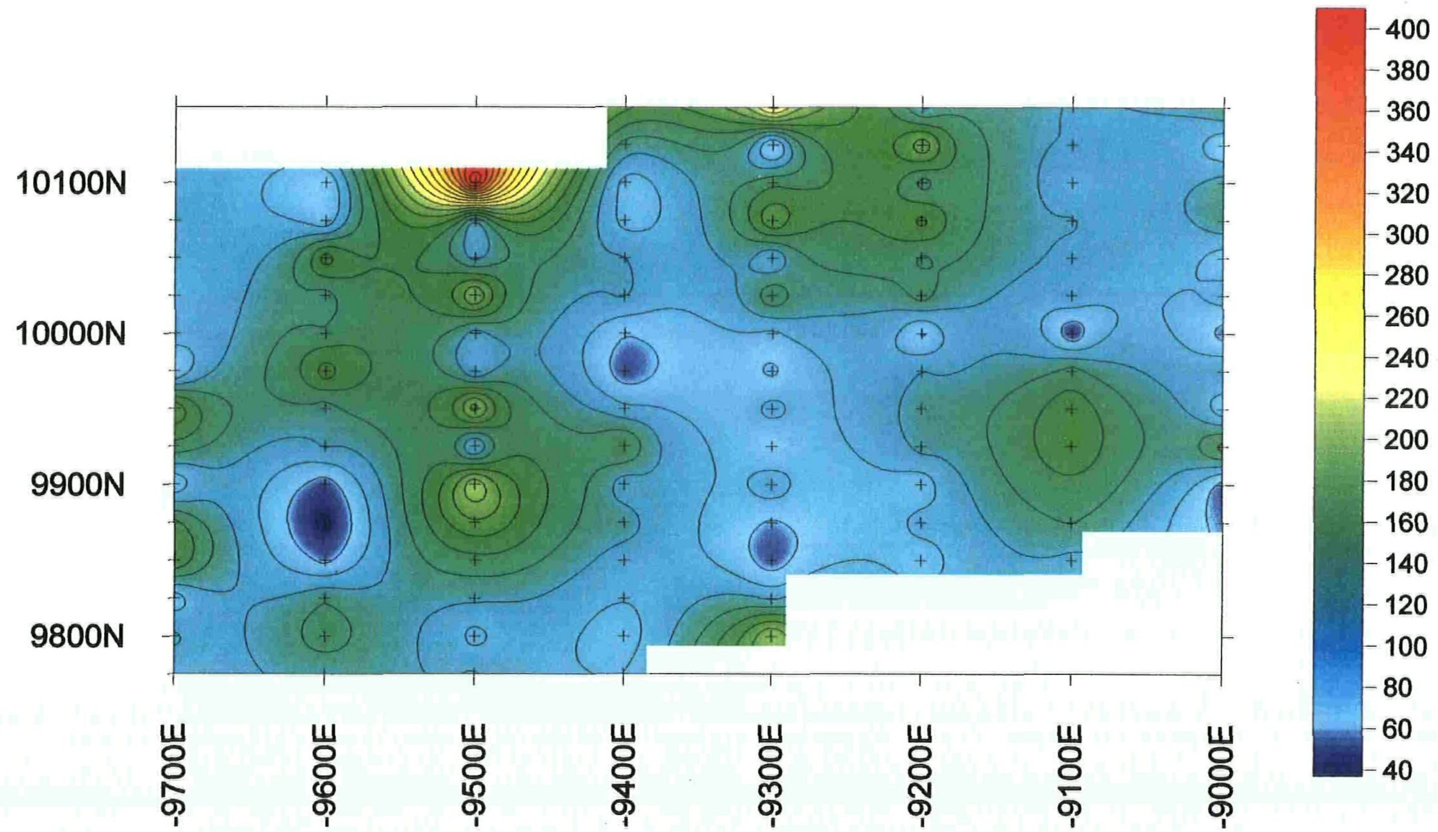
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach℠ data

Element Group: Metals    Element: Copper

Drawn by: G.T. Hill    Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500


Enzyme Laboratories, Inc.

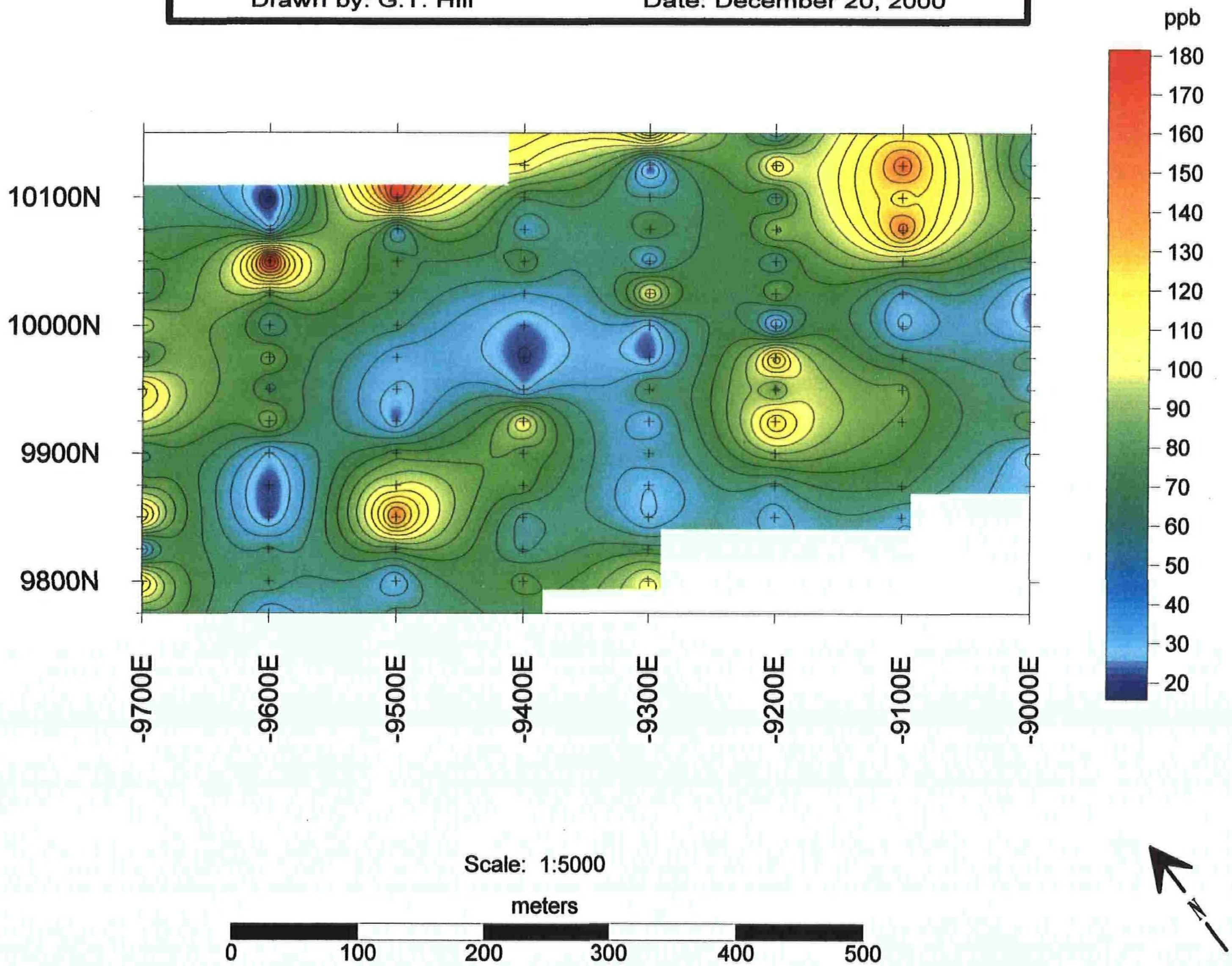
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Metals    Element: Nickel

Drawn by: G.T. Hill    Date: December 20, 2000




Enzyme Laboratories, Inc.

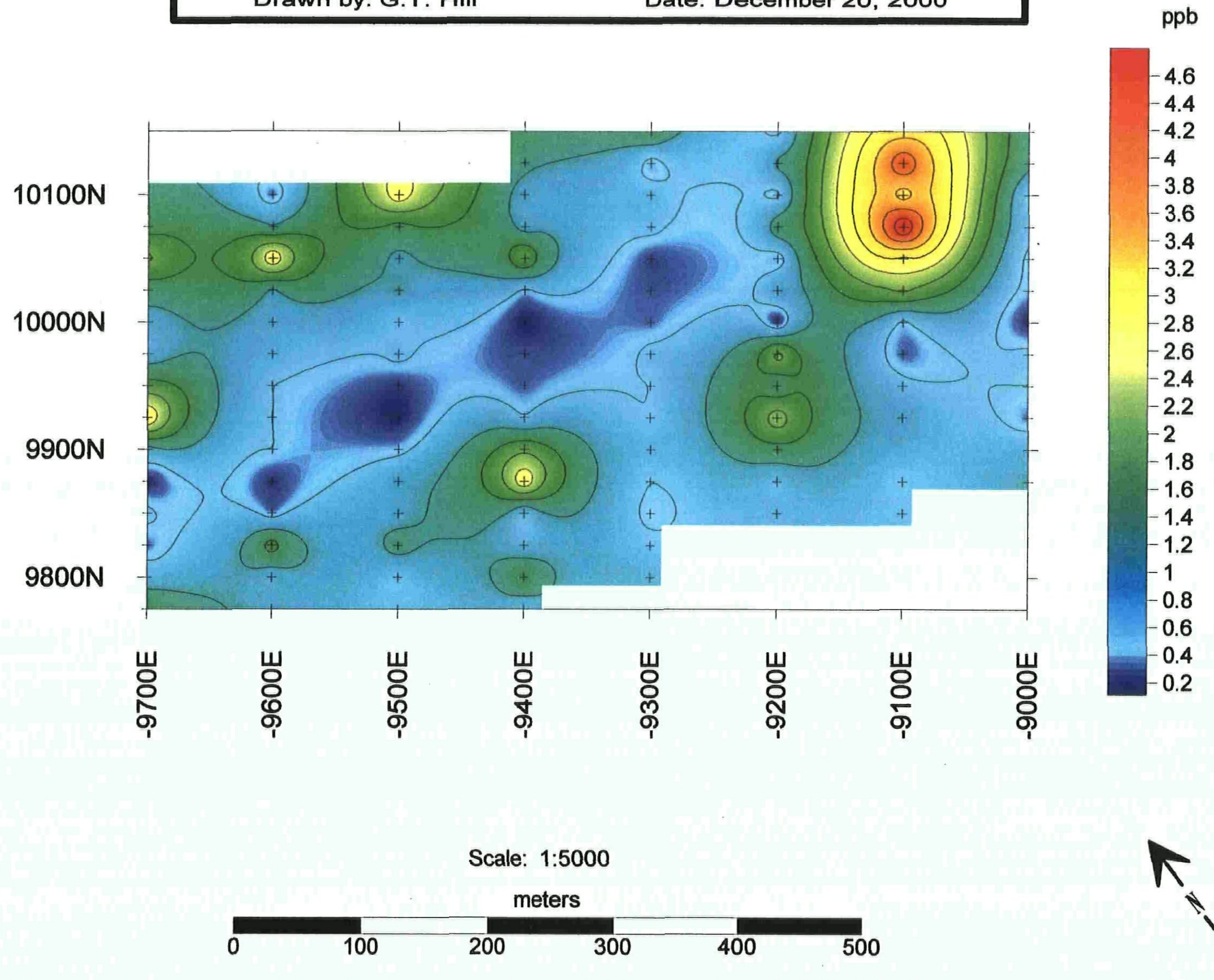
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Metals Element: Cadmium

Drawn by: G.T. Hill Date: December 20, 2000




Enzyme Laboratories, Inc.

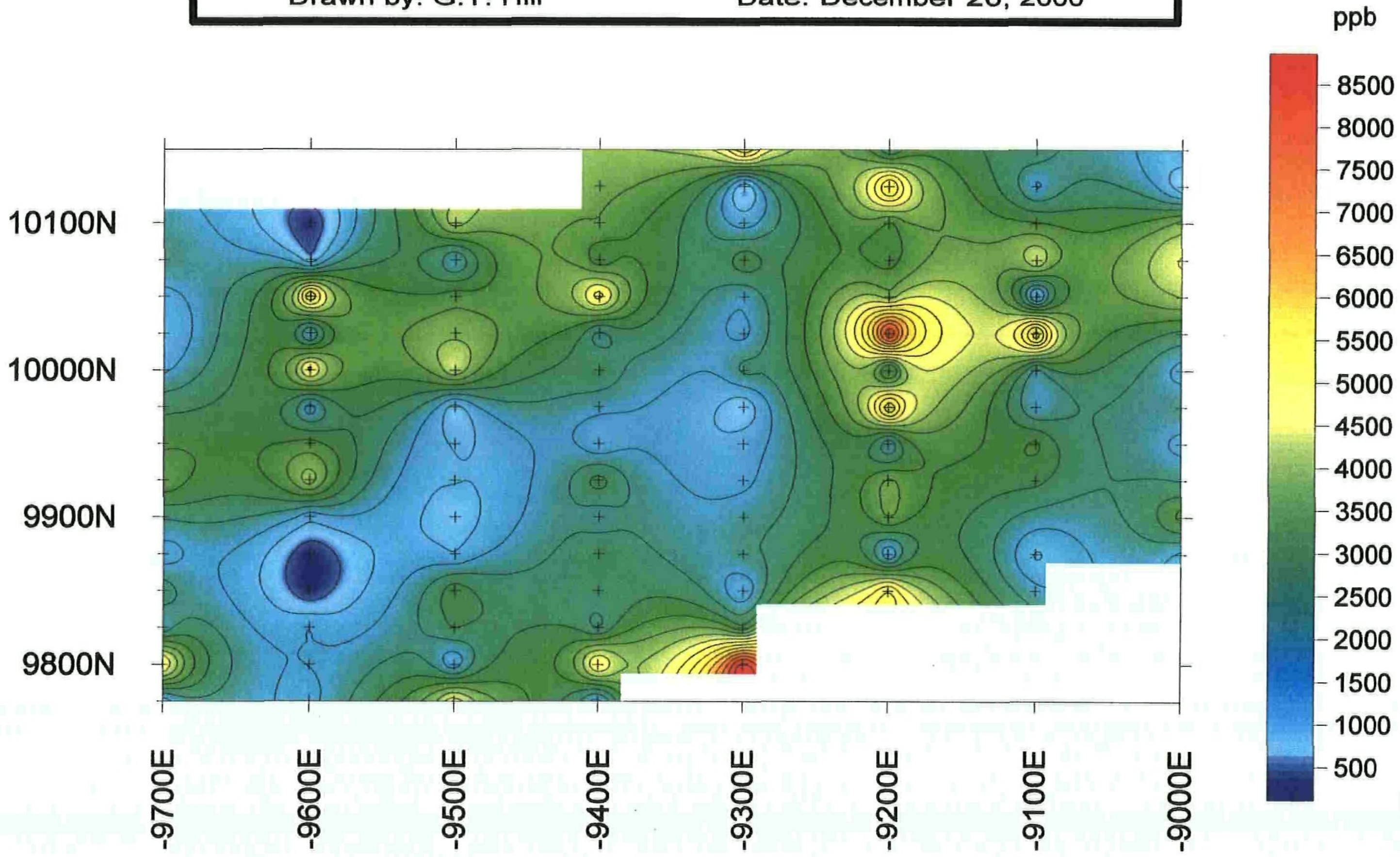
data from 20875rpt

## Dozer Prospect - Canyon Gold Property

### Enzyme Leach[SM] data

Element Group: Lithophile Element: Manganese

Drawn by: G.T. Hill Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

N

Enzyme Laboratories, Inc.

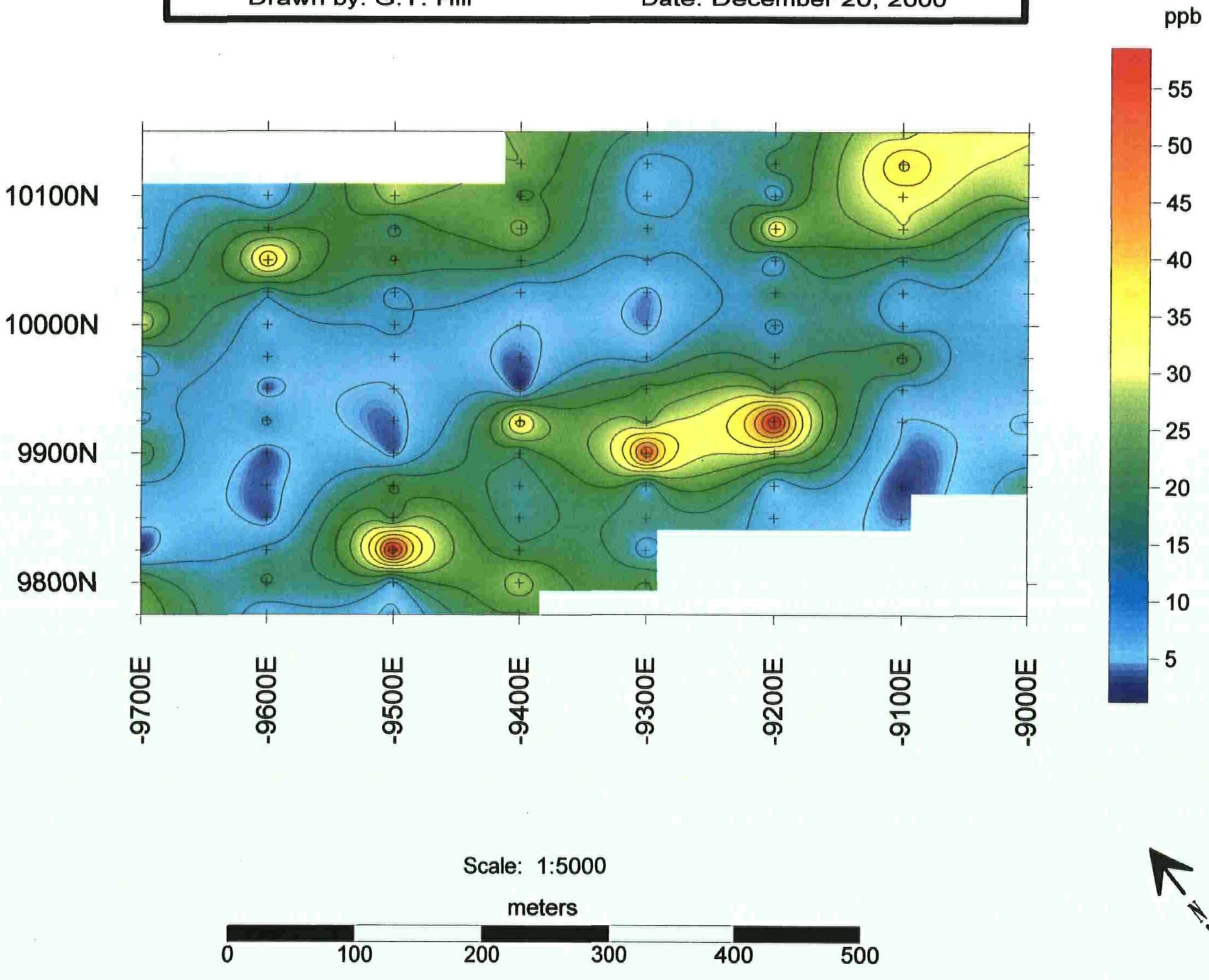
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach℠ data

Element Group: Lithophile     Element: Lithium

Drawn by: G.T. Hill     Date: December 20, 2000




Actlabs

Enzyme Laboratories, Inc.

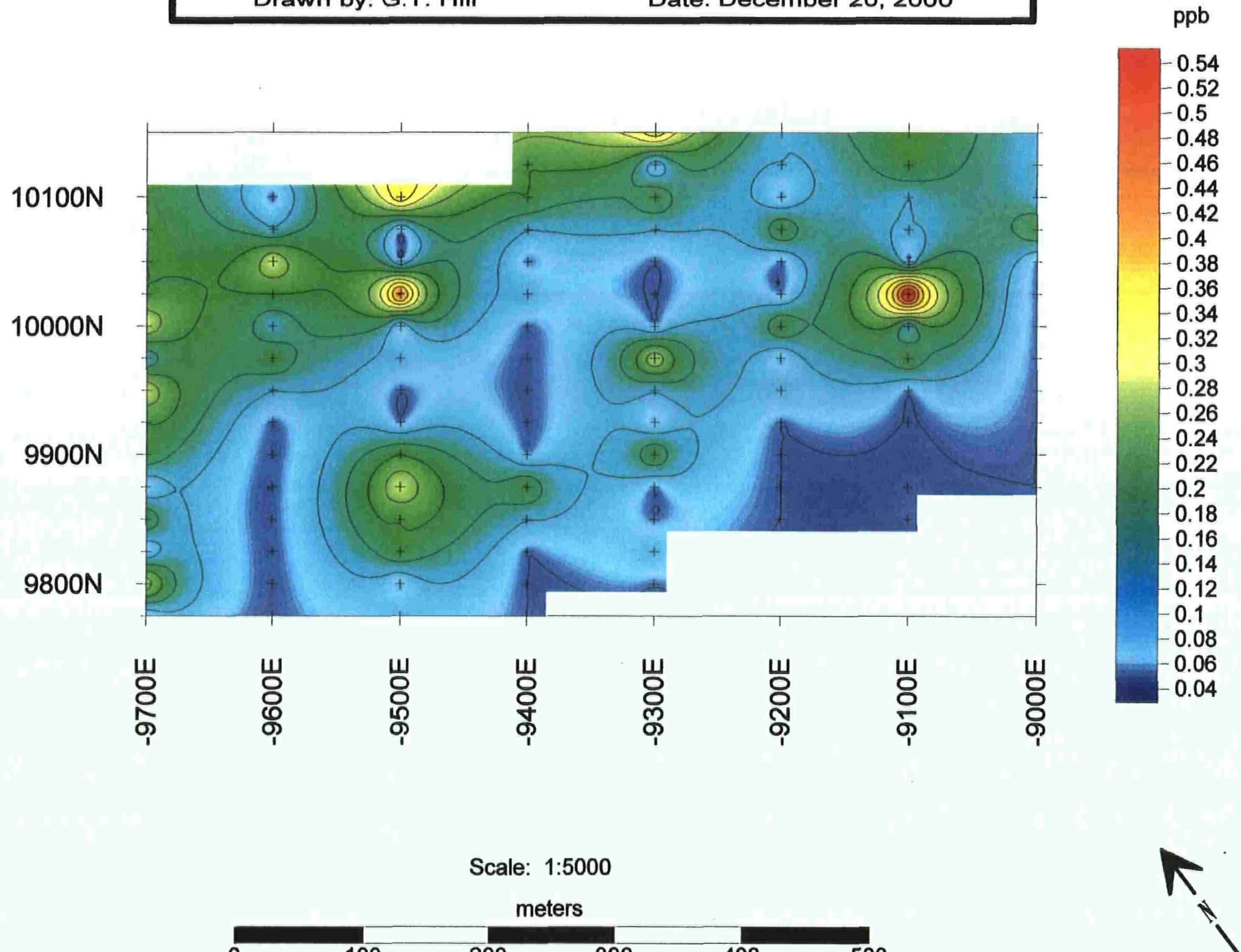
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Lithophile Element: Cesium

Drawn by: G.T. Hill Date: December 20, 2000




Actlabs
Enzyme Laboratories, Inc.

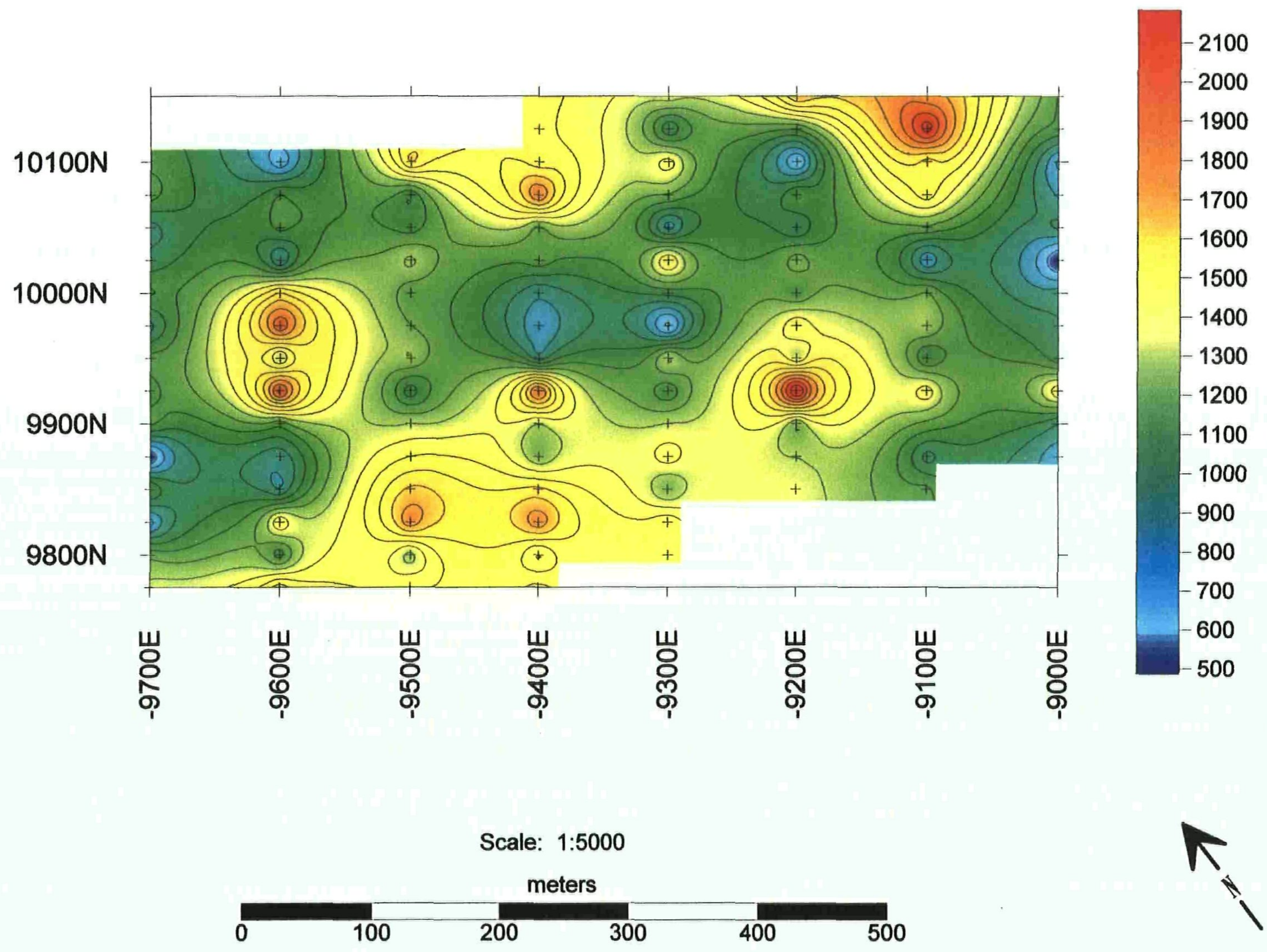
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach℠ data

Element Group: Lithophile    Element: Strontium

Drawn by: G.T. Hill    Date: December 20, 2000




Enzyme Laboratories, Inc.

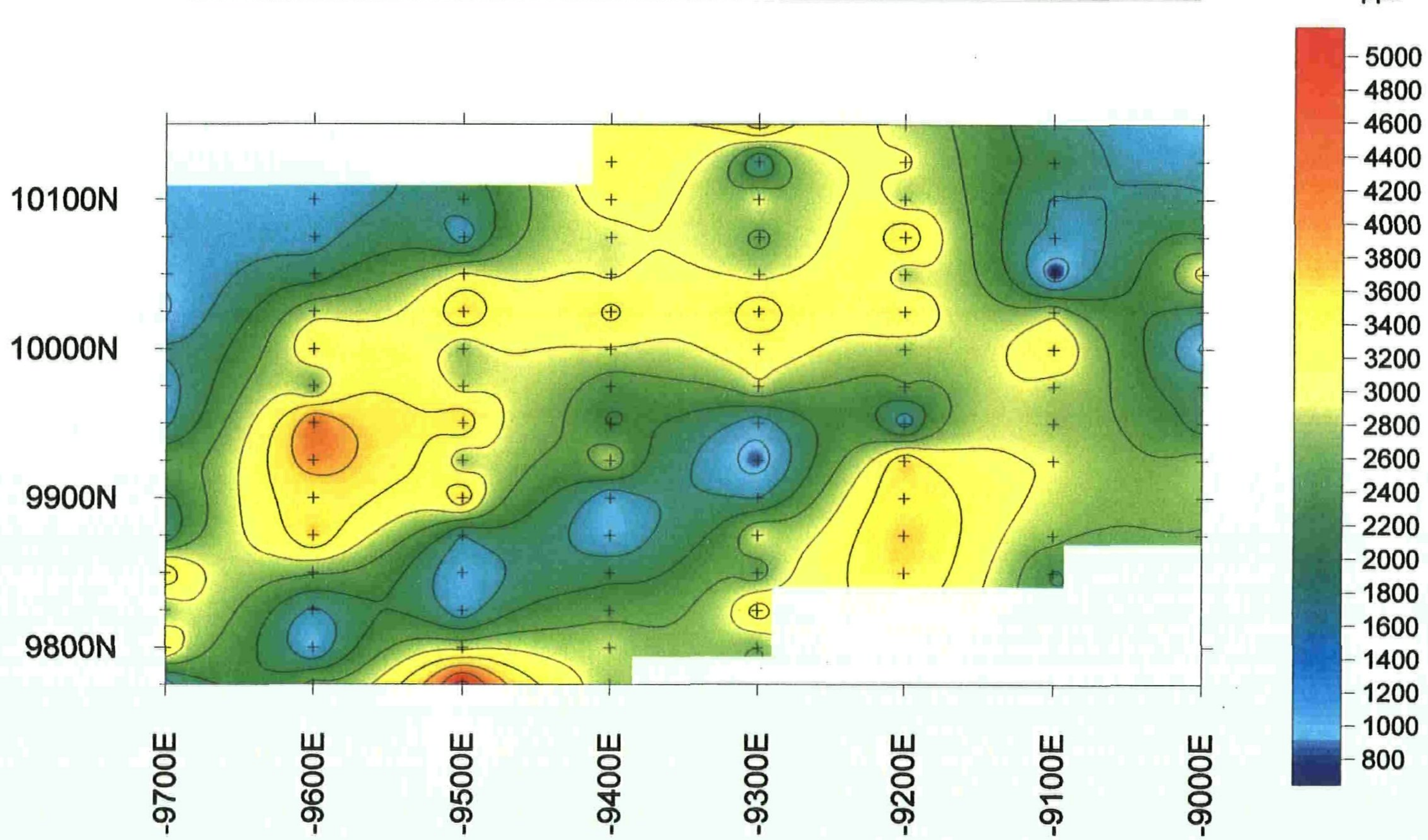
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Lithophile Element: Barium

Drawn by: G.T. Hill Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

N

Enzyme Laboratories, Inc.

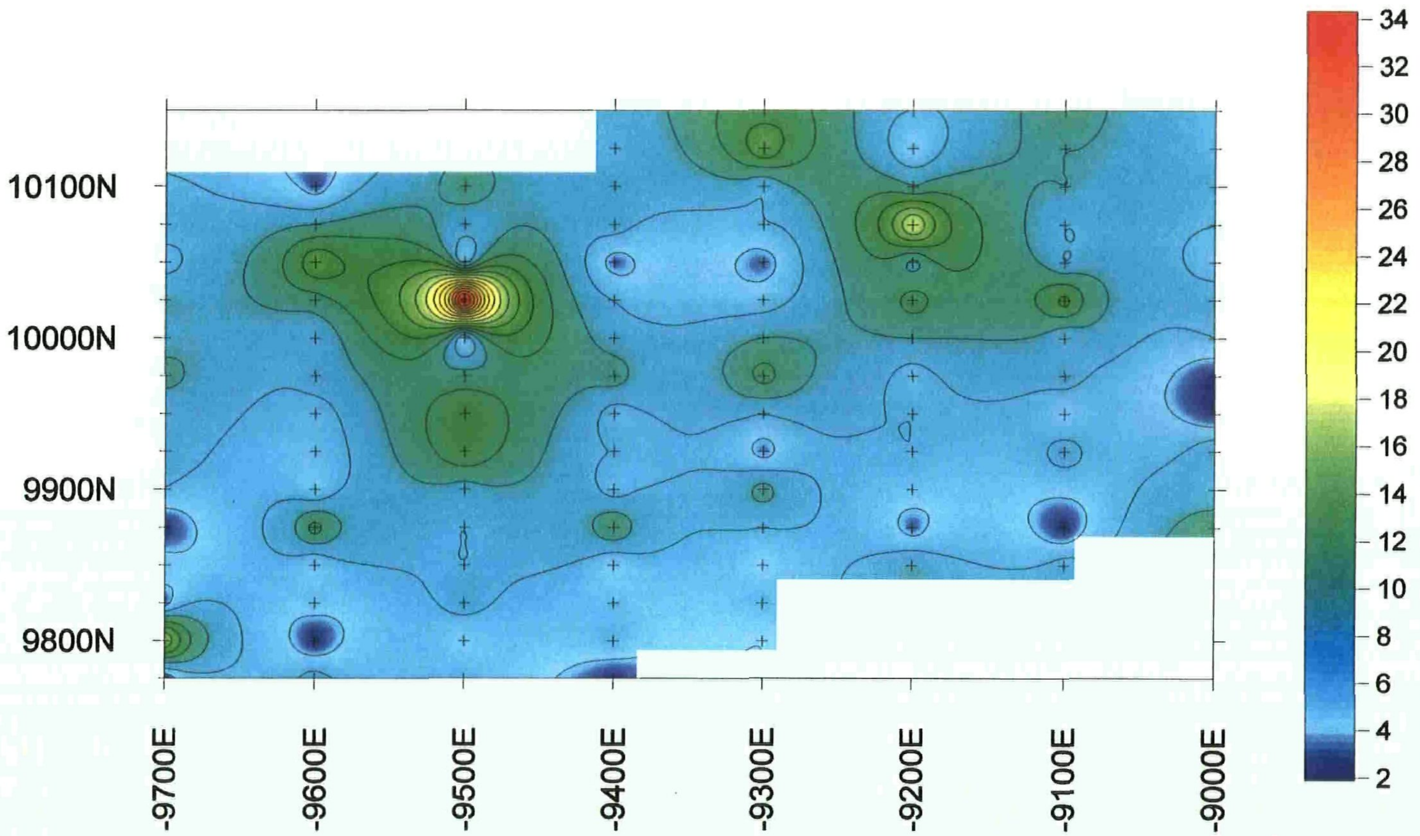
data from 20875rpt

## Dozer Prospect - Canyon Gold Property

### Enzyme Leach[SM] data

Element Group: Lithophile    Element: Rubidium

Drawn by: G.T. Hill    Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

Actlabs

Enzyme Laboratories, Inc.

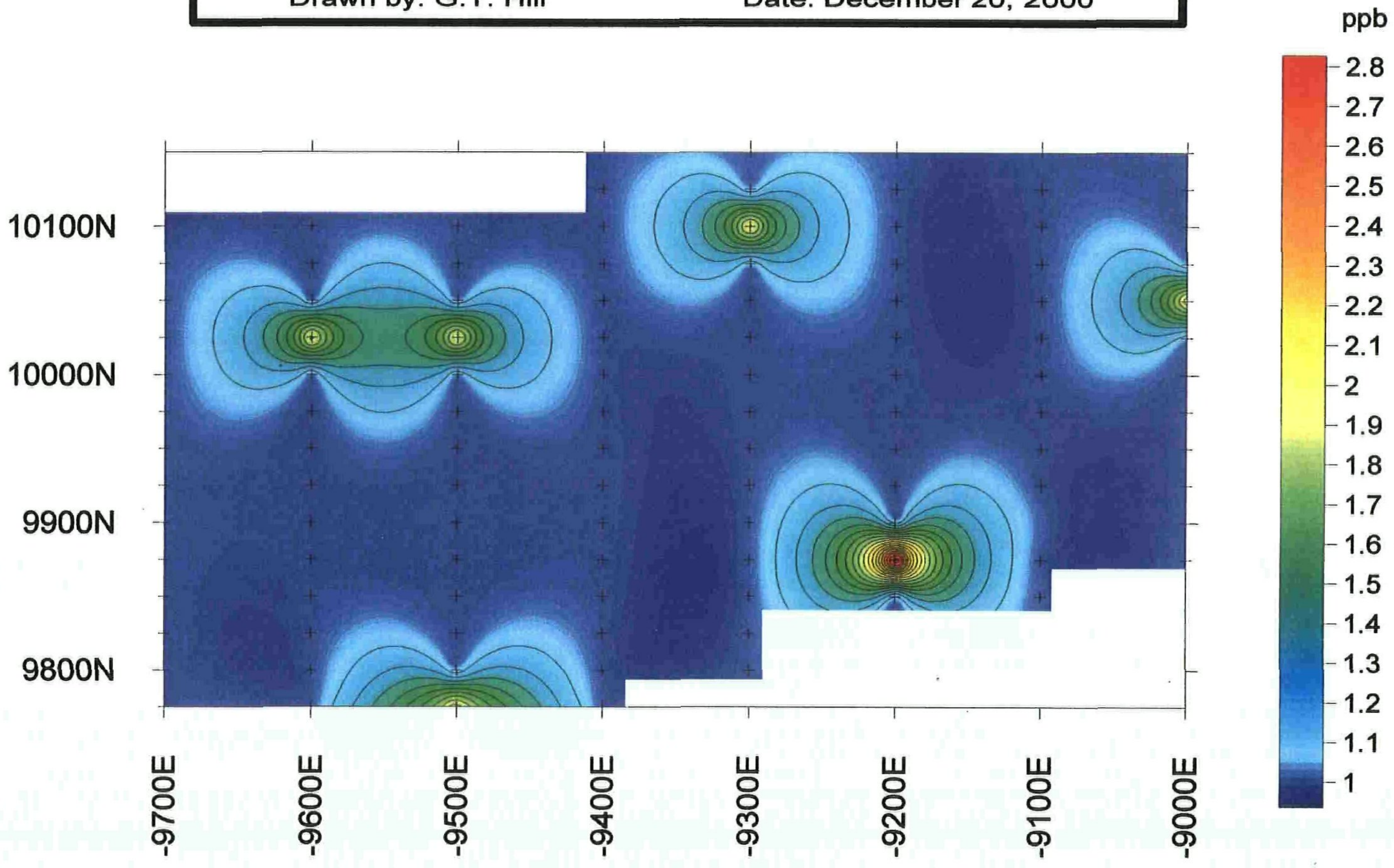
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach℠ data

Element Group: Lithophile — Element: Beryllium

Drawn by: G.T. Hill — Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

N

Enzyme Laboratories, Inc.

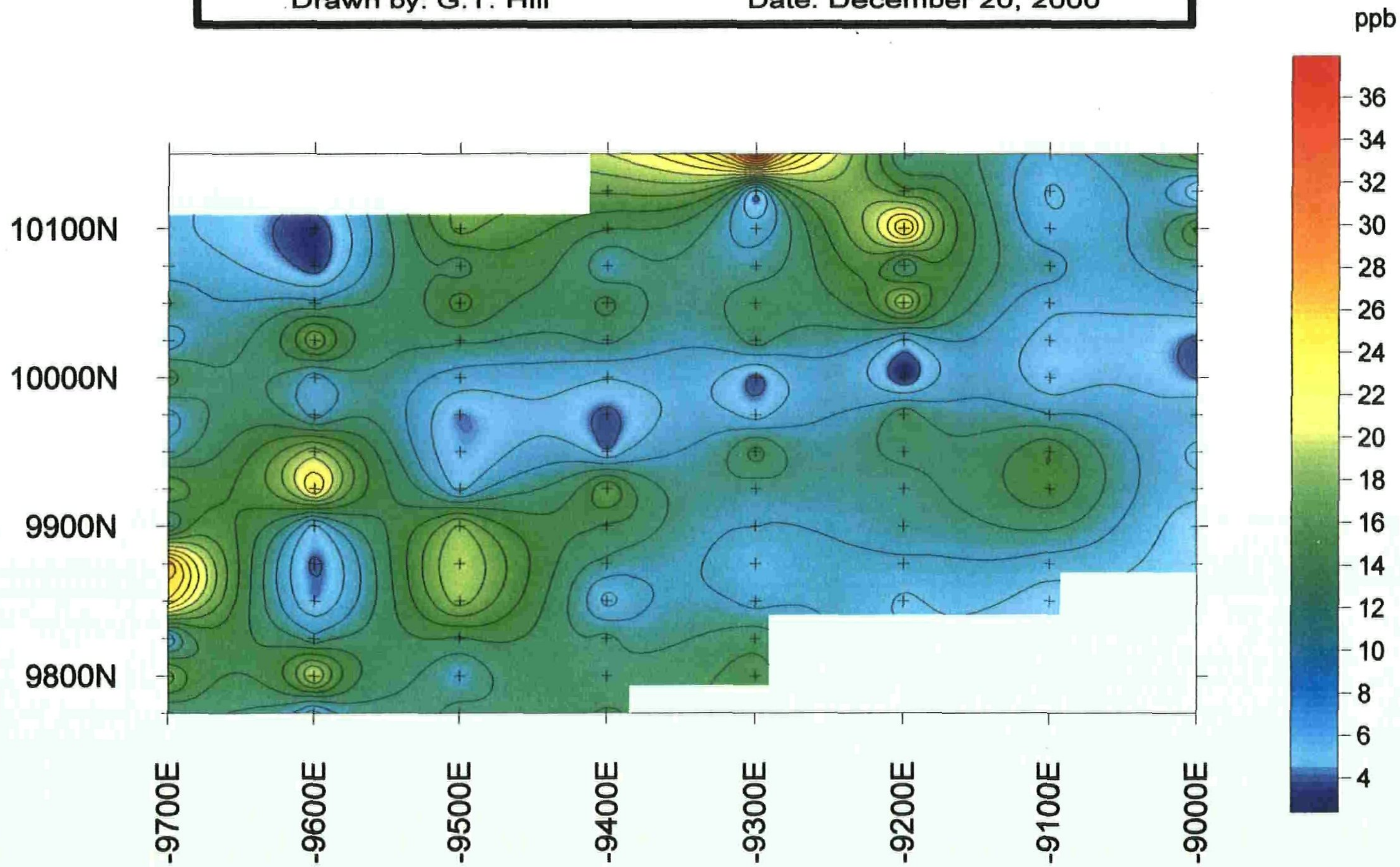
data from 20875rpt

**Dozer Prospect - Canyon Gold Property**

**Enzyme Leach[SM] data**

Element Group: Rare Earth    Element: Lanthanum

Drawn by: G.T. Hill    Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

N

Enzyme Laboratories, Inc.

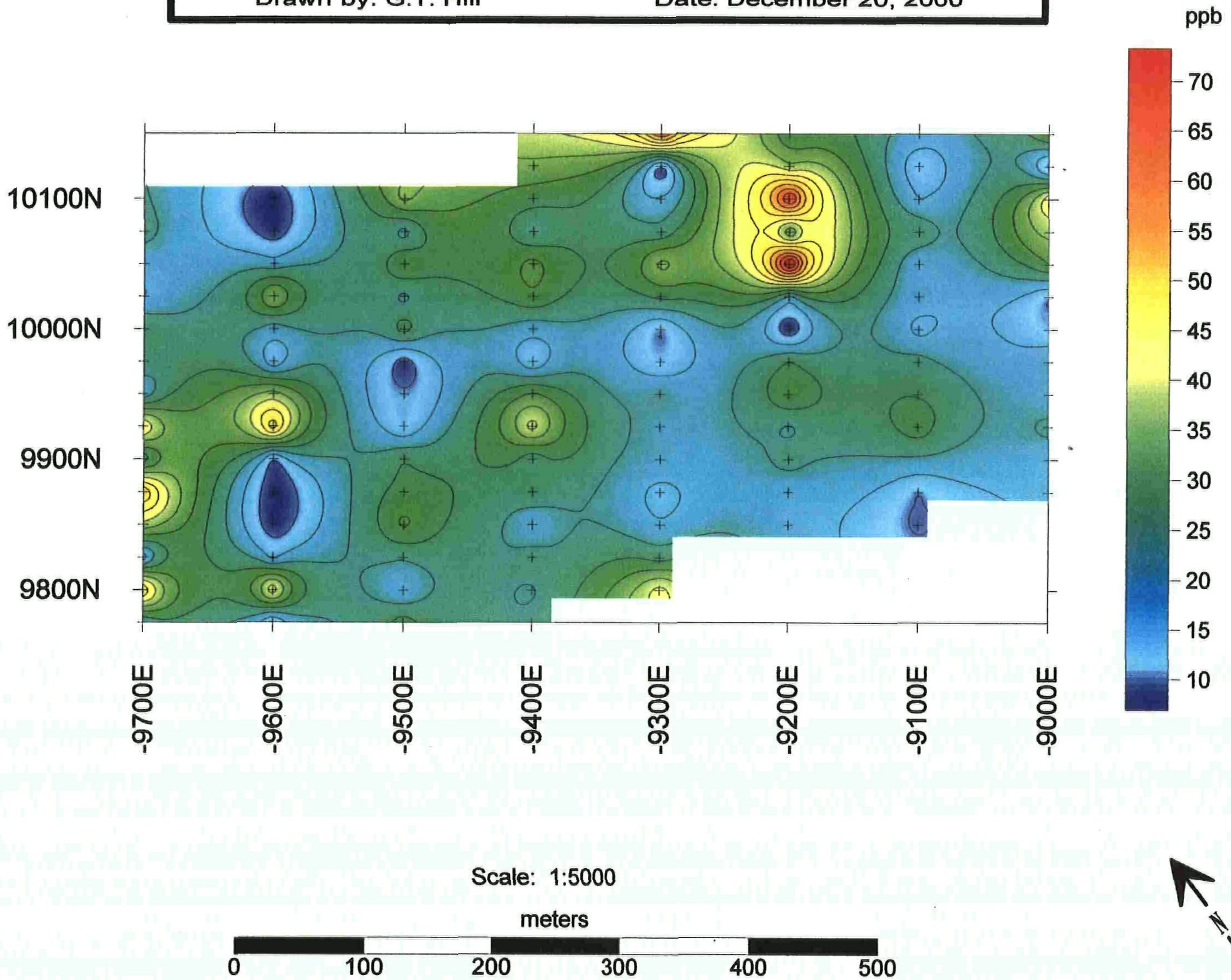
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Rare Earth Element: Cerium

Drawn by: G.T. Hill Date: December 20, 2000

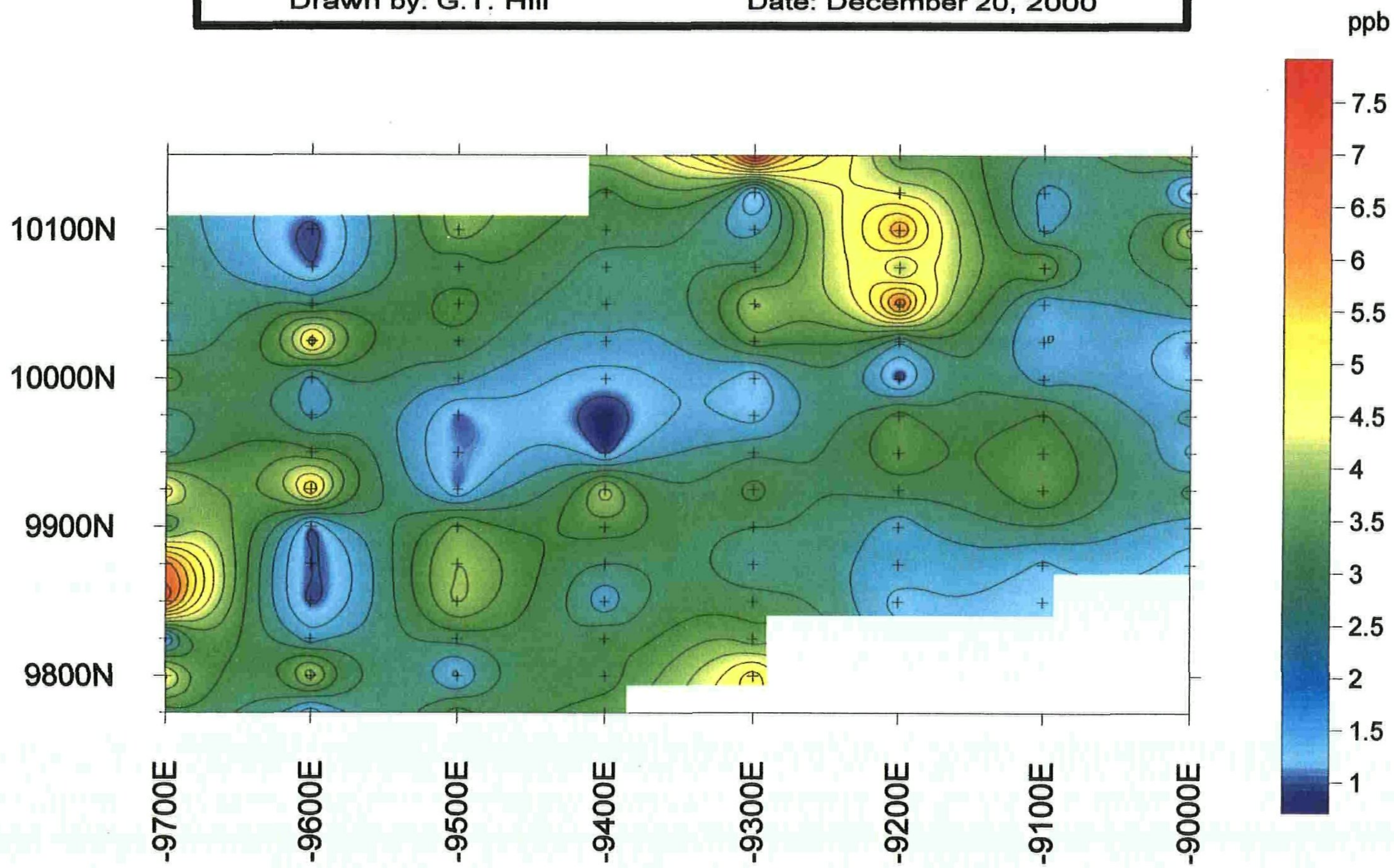



Actlabs

Enzyme Laboratories, Inc.

data from 20875rpt

| Dozer Prospect - Canyon Gold Property | |
|---|---|
| **Enzyme Leach[SM] data** | |
| Element Group: Rare Earth | Element: Praseodymium |
| Drawn by: G.T. Hill | Date: December 20, 2000 |




Scale: 1:5000

meters

0 100 200 300 400 500

N

Enzyme Laboratories, Inc.

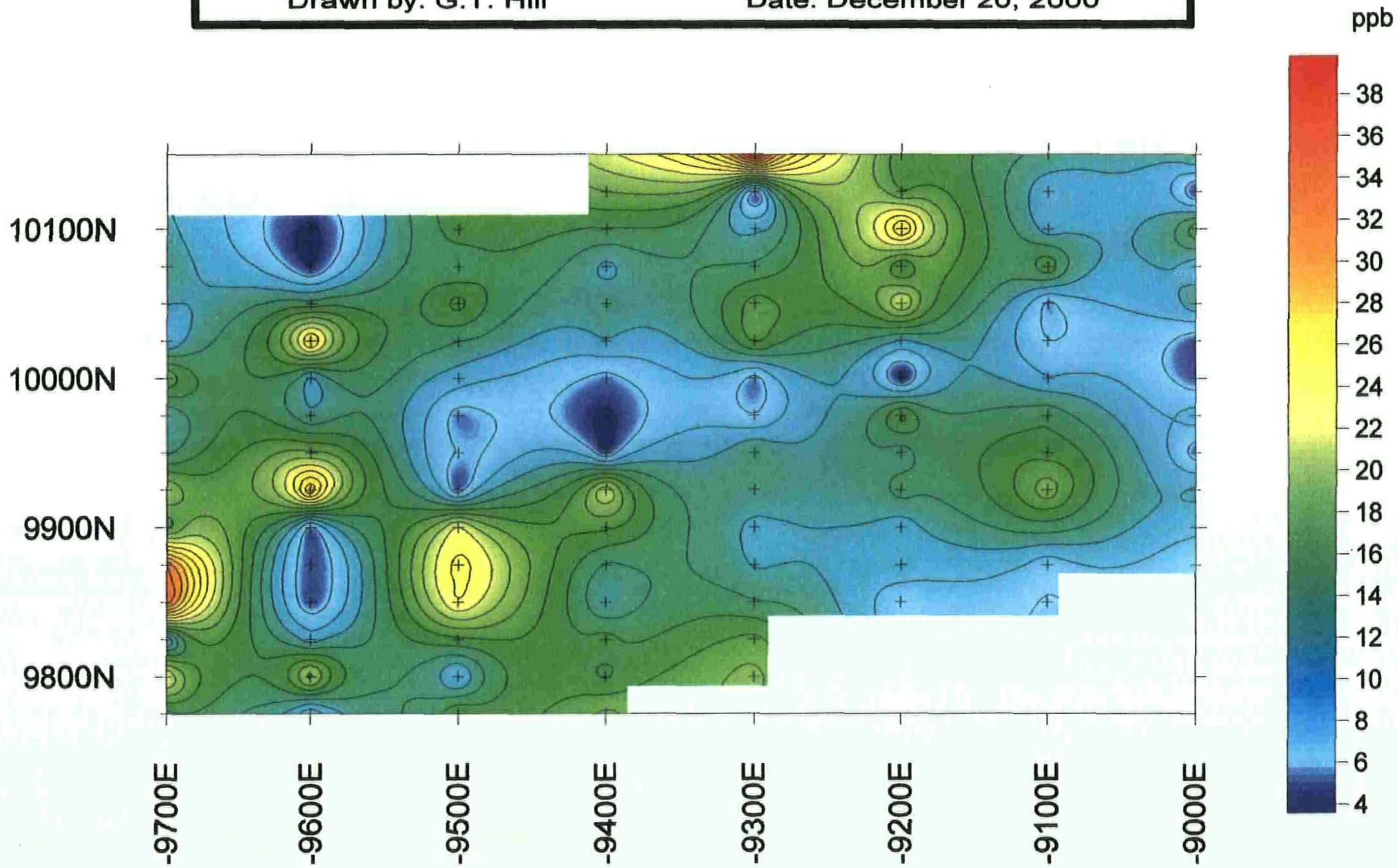
data from 20875rpt

## Dozer Prospect - Canyon Gold Property

### Enzyme Leach[SM] data

Element Group: Rare Earth Element: Neodymium

Drawn by: G.T. Hill Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

N

Enzyme Laboratories, Inc.

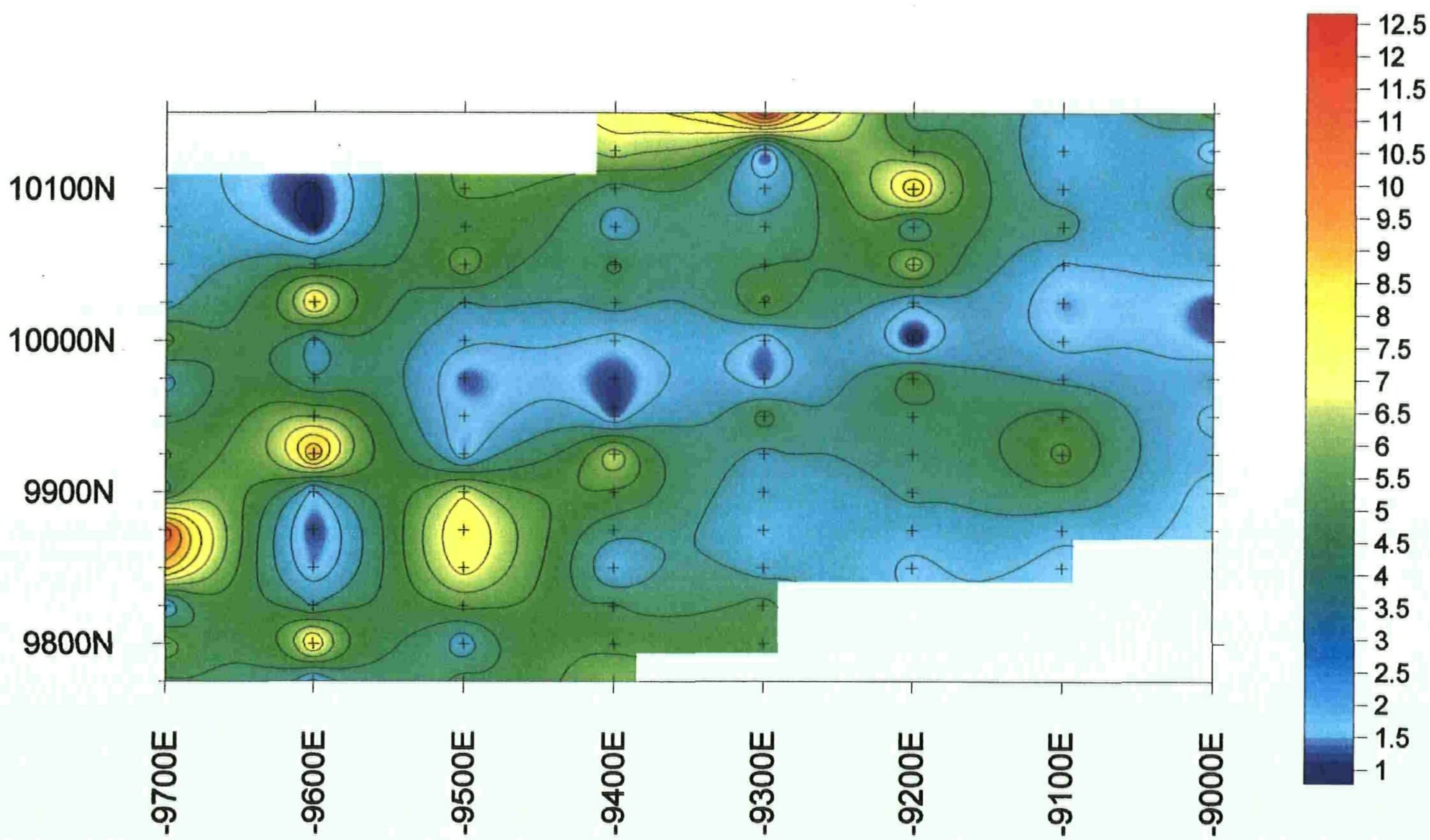
data from 20875rpt

Dozer Prospect - Canyon Gold Property

Enzyme Leach[SM] data

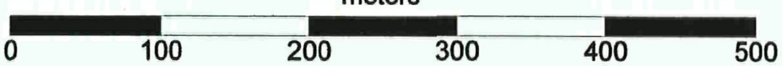
Element Group: Rare Earth    Element: Samarium

Drawn by: G.T. Hill    Date: December 20, 2000




Scale: 1:5000

meters





Enzyme Laboratories, Inc.

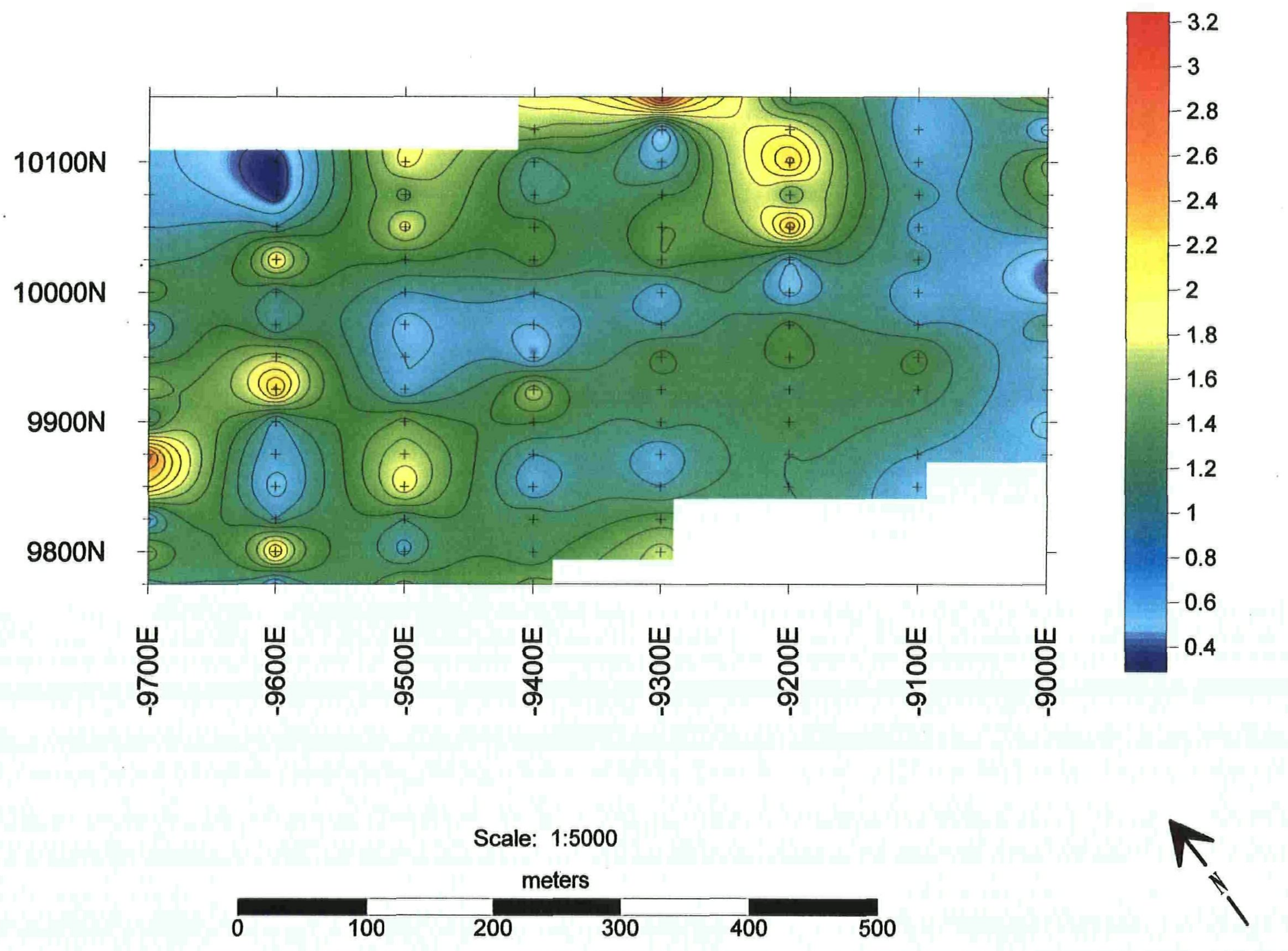
data from 20875rpt

**Dozer Prospect - Canyon Gold Property**

**Enzyme Leach℠ data**

Element Group: Rare Earth Element: Europium

Drawn by: G.T. Hill Date: December 20, 2000




Actlabs

Enzyme Laboratories, Inc.

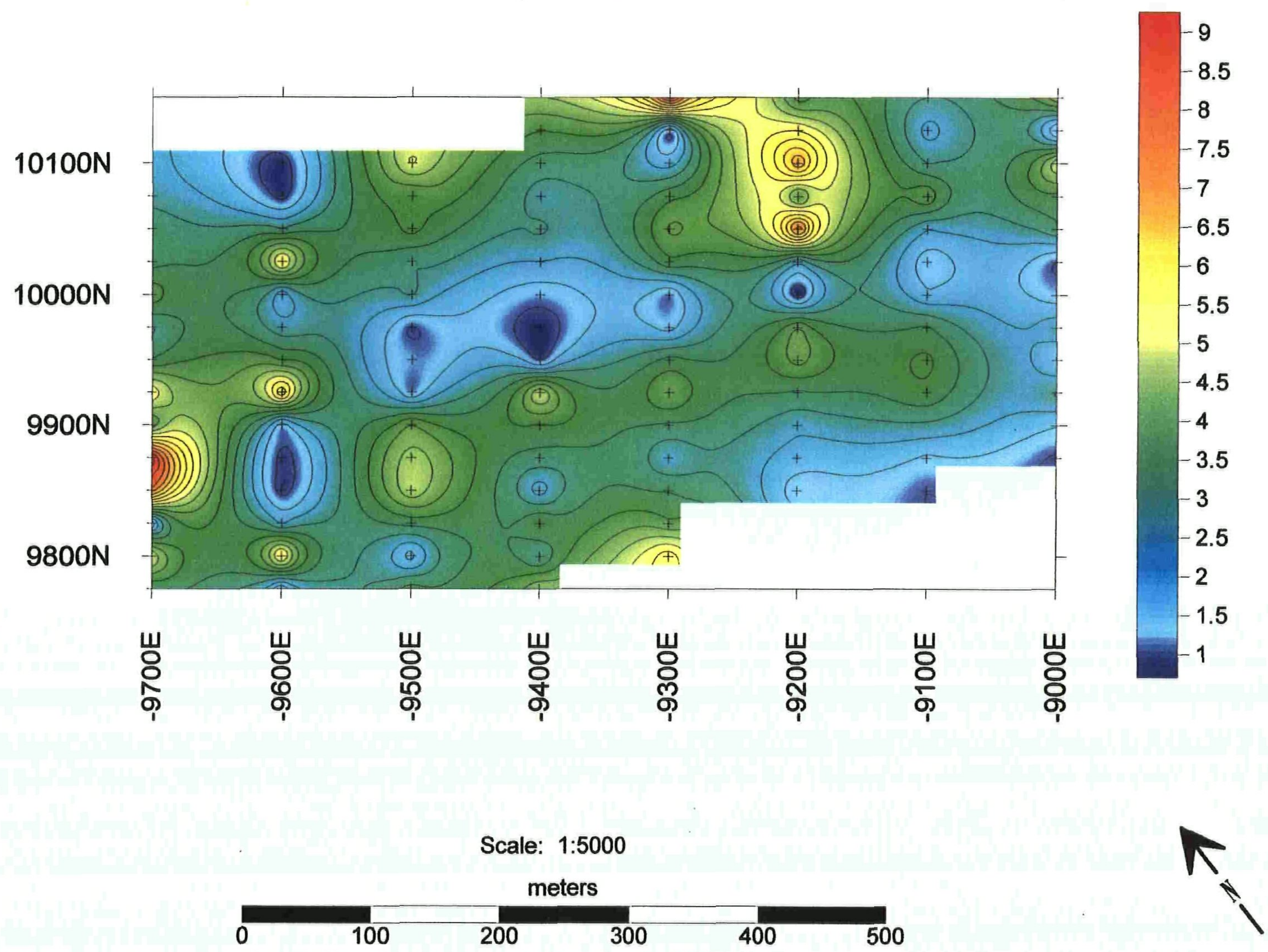
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Rare Earth Element: Gadolinium

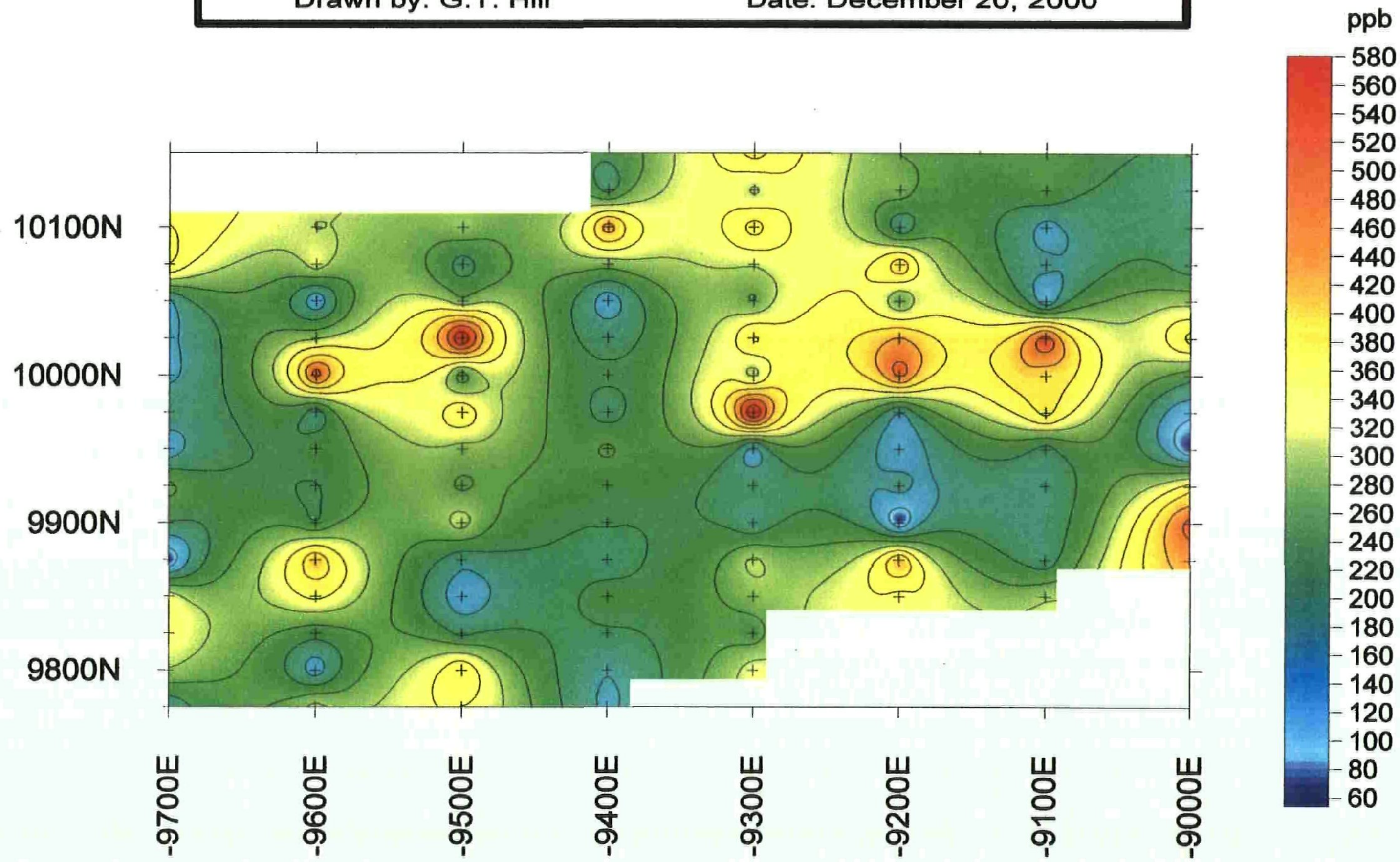
Drawn by: G.T. Hill Date: December 20, 2000




Enzyme Laboratories, Inc.

data from 20875rpt

| Dozer Prospect - Canyon Gold Property | |
|---|---|
| **Enzyme Leach[SM] data** | |
| Element Group: High Fields Strength | Element: Titanium |
| Drawn by: G.T. Hill | Date: December 20, 2000 |




Scale: 1:5000

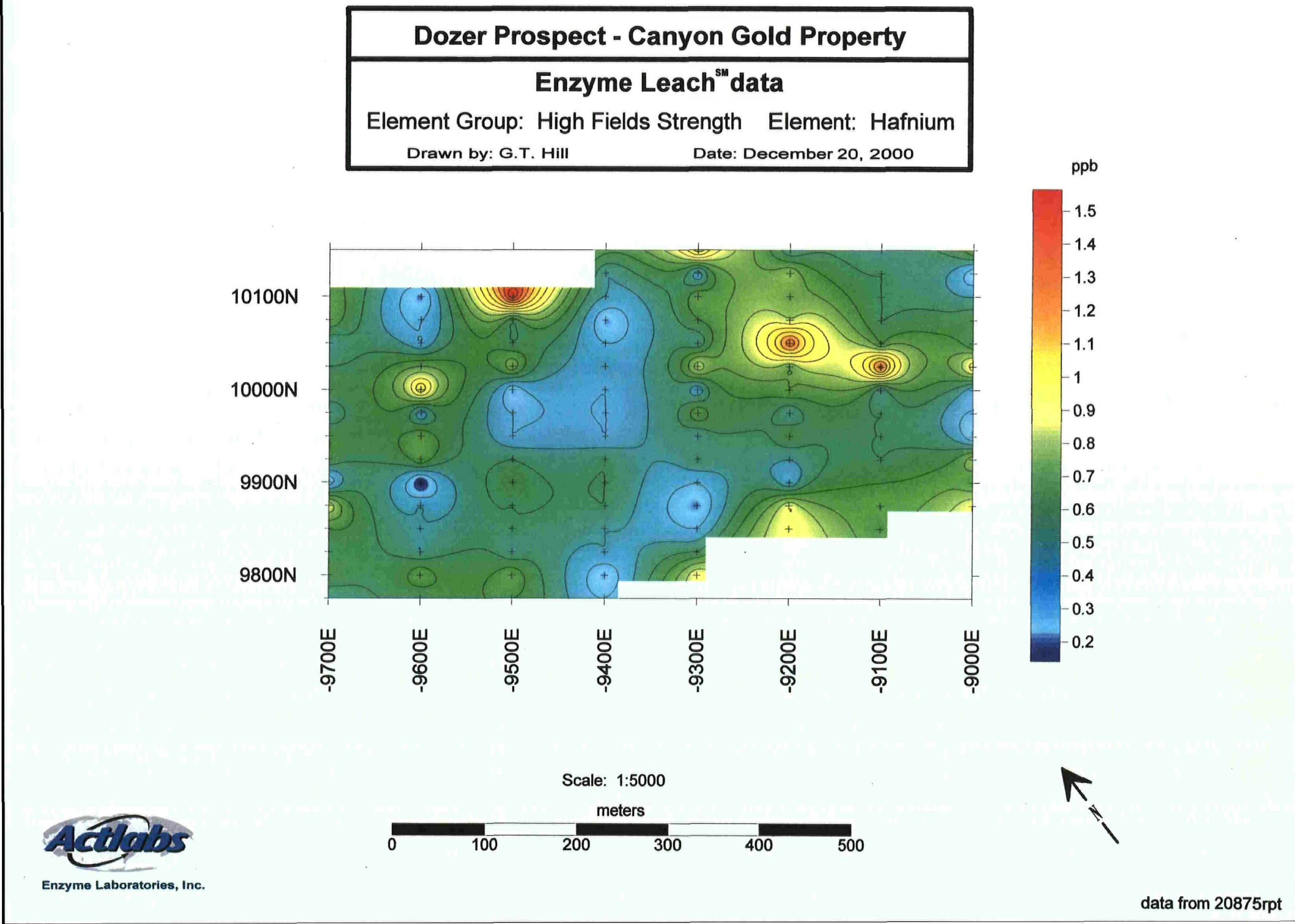
meters

0 100 200 300 400 500

N

Enzyme Laboratories, Inc.

data from 20875rpt

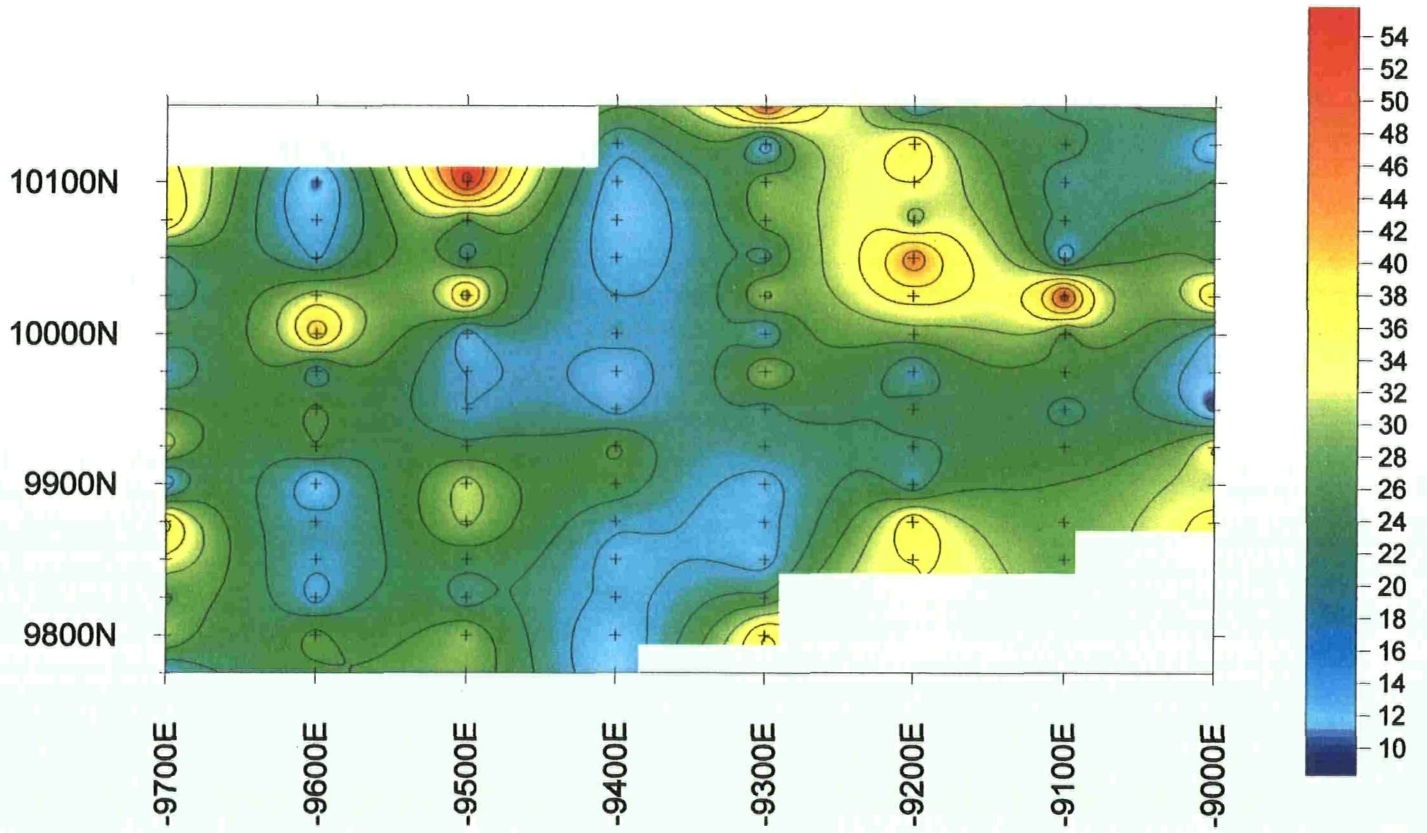

Dozer Prospect - Canyon Gold Property
Enzyme Leach SM data
Element Group: High Fields Strength
Element: Hafnium
Drawn by: G.T. Hill
Date: December 20, 2000
ppb
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
10100N
10000N
9900N
9800N
-9700E
-9600E
-9500E
-9400E
-9300E
-9200E
-9100E
-9000E
Scale: 1:5000
meters
0
100
200
300
400
500
N
Enzyme Laboratories, Inc.
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

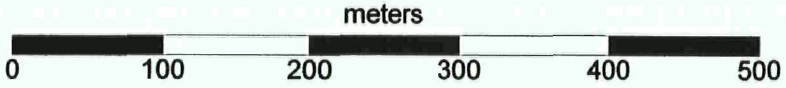
## Enzyme Leach[SM] data

Element Group: High Fields Strength    Element: Zirconium

Drawn by: G.T. Hill    Date: December 20, 2000




Scale: 1:5000





Enzyme Laboratories, Inc.

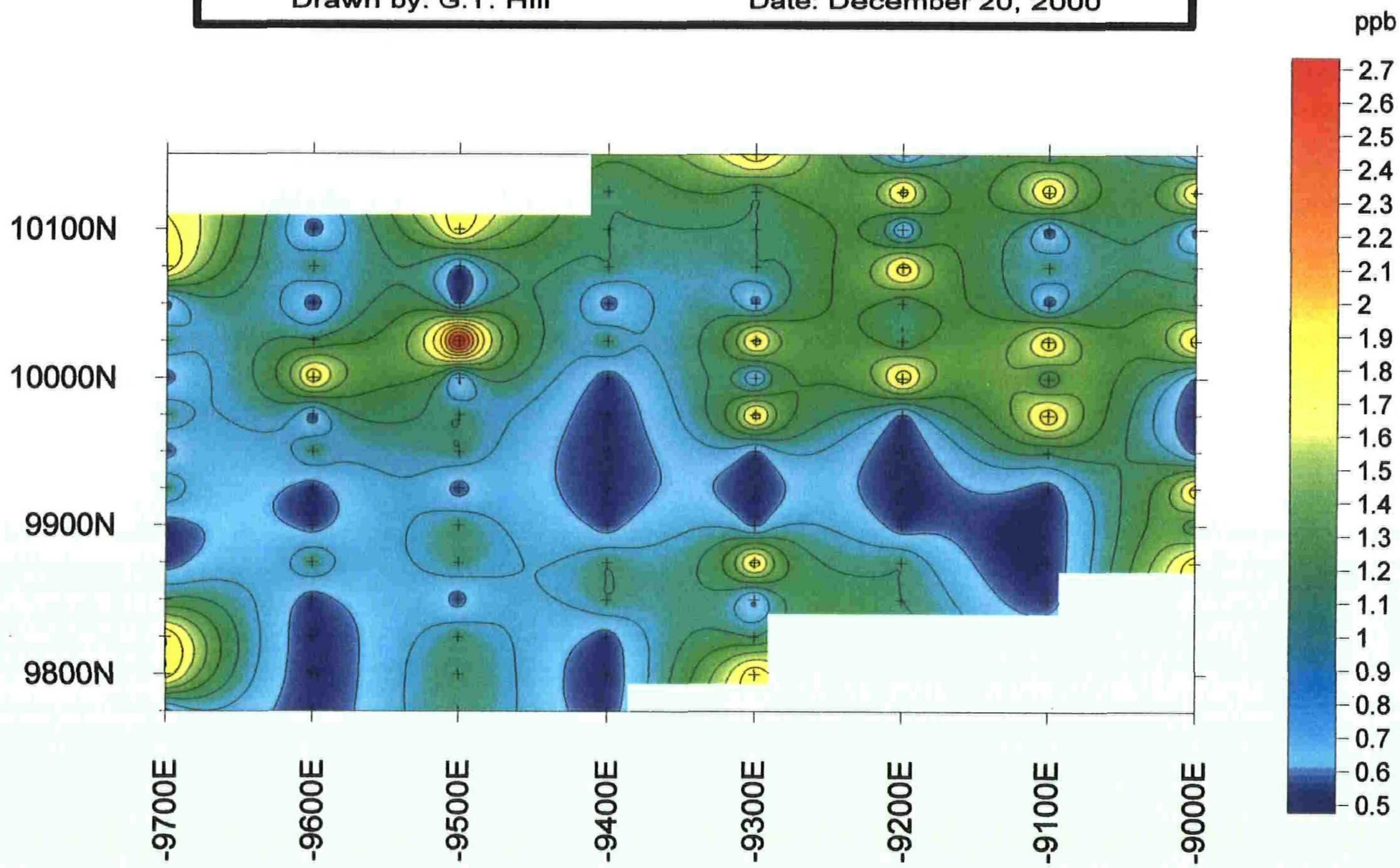
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: High Fields Strength Element: Niobium

Drawn by: G.T. Hill Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

N

Enzyme Laboratories, Inc.

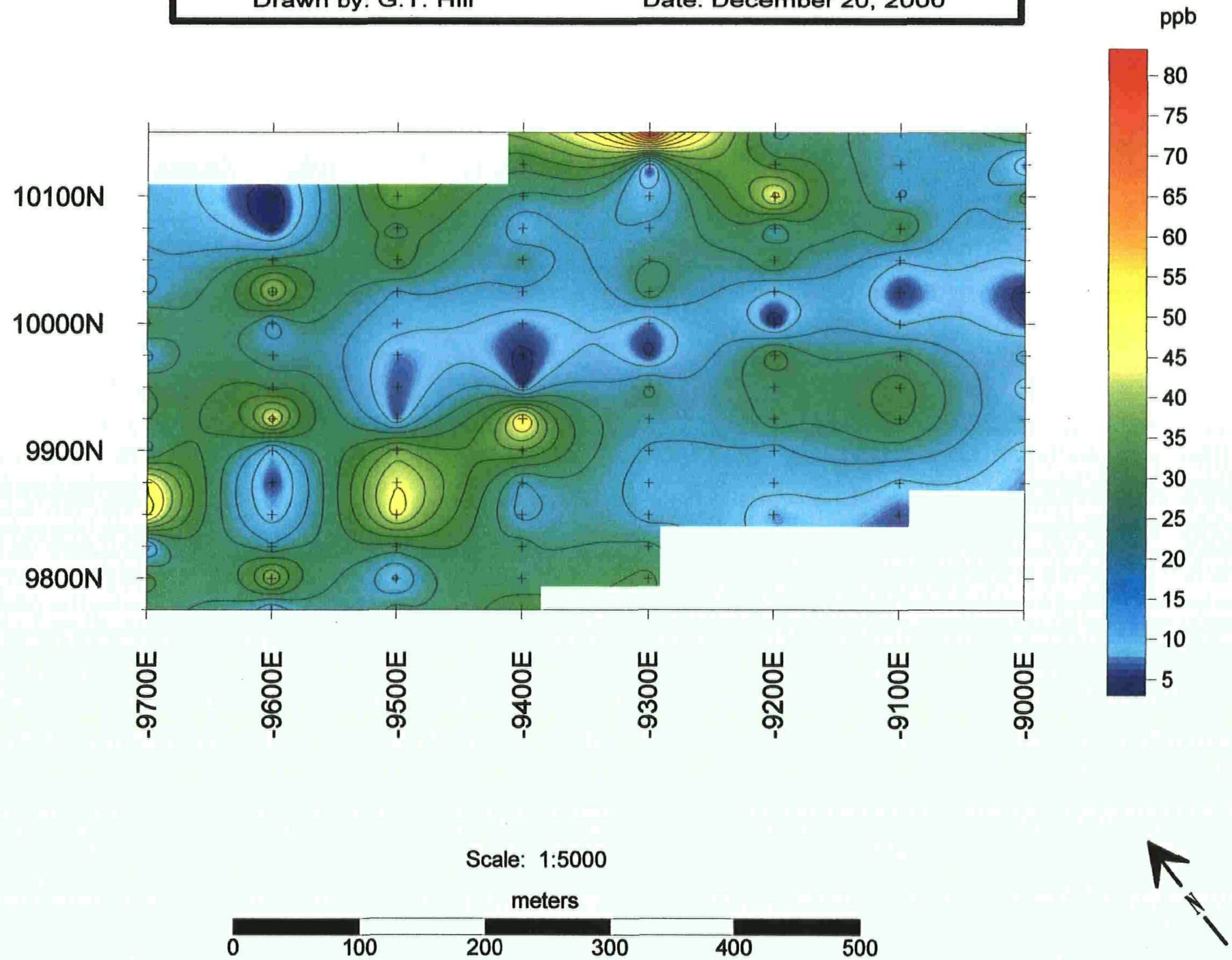
data from 20875rpt

**Dozer Prospect - Canyon Gold Property**

**Enzyme Leach[SM] data**

Element Group: High Fields Strength Element: Yttrium

Drawn by: G.T. Hill Date: December 20, 2000




Enzyme Laboratories, Inc.

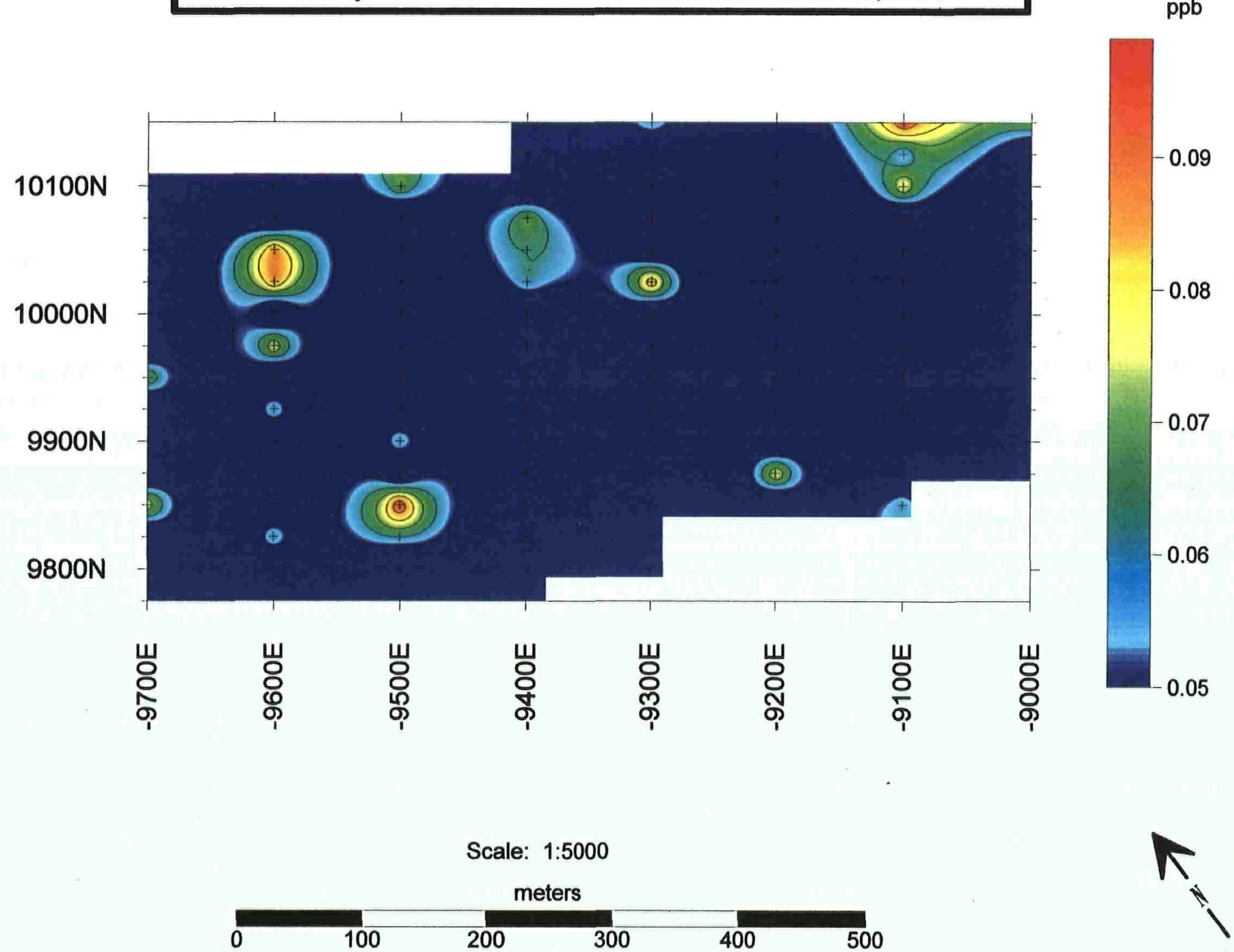
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Precious Metals Element: Gold

Drawn by: G.T. Hill Date: December 20, 2000




Actlabs

Enzyme Laboratories, Inc.

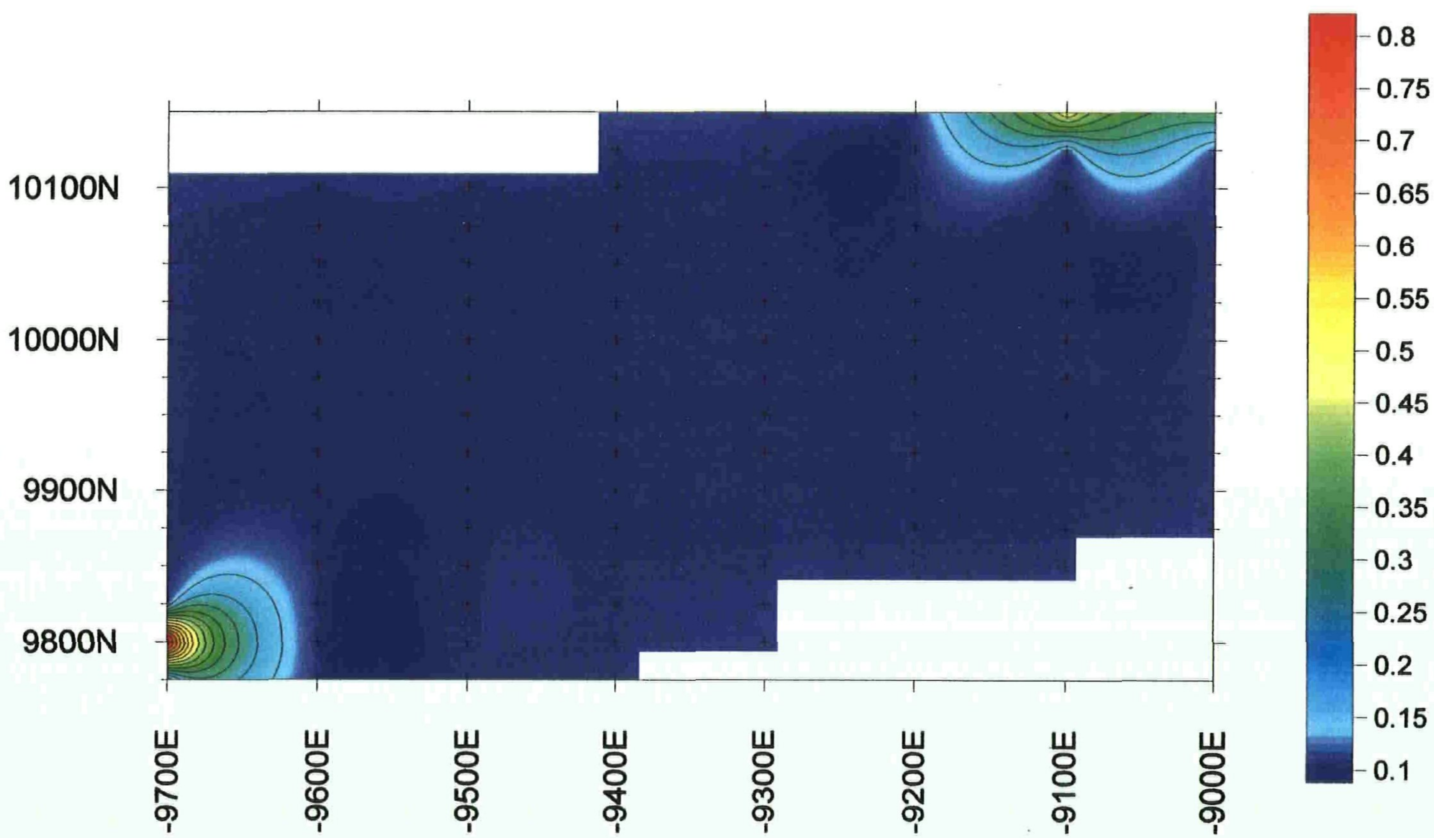
data from 20875rpt

# Dozer Prospect - Canyon Gold Property

## Enzyme Leach[SM] data

Element Group: Precious Metals    Element: Silver

Drawn by: G.T. Hill    Date: December 20, 2000




Scale: 1:5000

meters

0 100 200 300 400 500

N

Enzyme Laboratories, Inc.

data from 20875rpt