## 12. ANOMALY 2 (EL 2367)

### 12.1 Introduction

Anomaly 2 is located approximately 14km west of Ivy Camp and 3km south of the Ivy to Dead Bullock Soak track. By the end of 1990 an initial reconnaissance vacuum drilling program (phase 1) and some early follow up investigations of a similar kind (phase 2) had established that a gold anomaly existed within a linear low amplitude magnetic feature.

Two subsequent phases of exploration in 1991 resulted in the delineation of three gold prospects within the area at Erin, Kate and Imogene as a result of further drill sampling (RAB and Vacuum), rock chip sampling and electomagnetic traversing.

### 12.2 Phase 3 Exploration (January to June 1991)

#### 12.2.1 Work Undertaken from January to June 1991

A 250m x 250m vacuum drilling and rock chip sampling program was designed to provide infill data within the anomalous zone.

Three 2km electromagnetic traverses were completed over the low amplitude magnetic anomaly coincident with the anomalous zone.

Details of work carried out are presented below -

| | Statistics of Work Completed | | | |
|---|---|---|---|---|
| | **Samples** | **Metres** | **Holes** | **Traverses** |
| Vacuum Drilling | 307 | 1261.5 | 78 | - |
| Bulk Cyanide Leach | 64 | - | 61 | - |
| Rock Chips | 51 | - | - | - |
| Electromagnetics | - | 6km | - | 3 |

**Vacuum Drilling/Bulk Cyanide Leach Geochemistry**

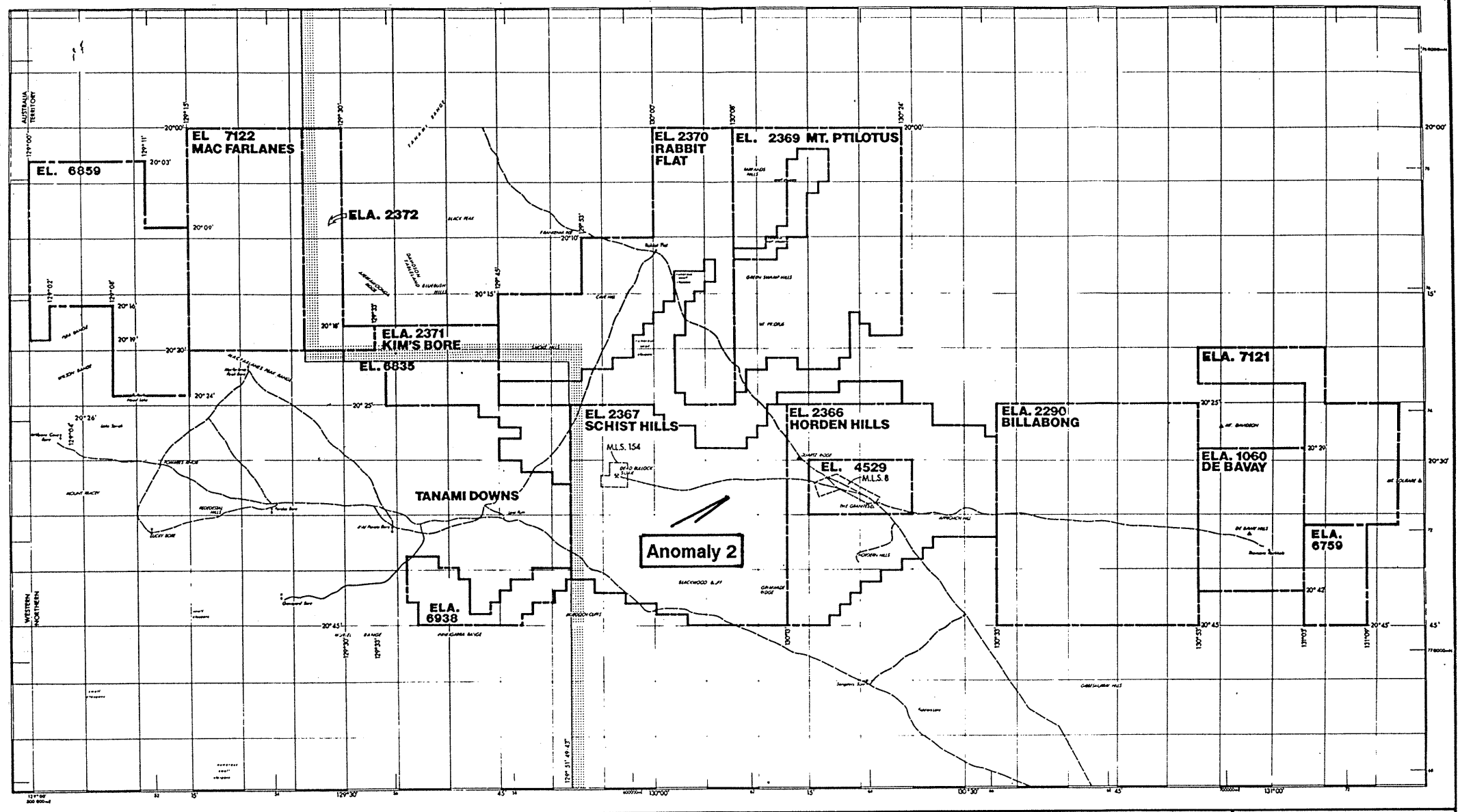
78 vacuum drill holes varying in depth from 3 to 28m were drilled within the anomalous zone. Vacuum holes from the 1990 phase two drilling programme within the anomalous zone were re-drilled. Drilling was based upon a 250m compass and odometer grid. All vacuum holes and rock chip sites were accurately located with the aid of the Global Positioning System (GPS).

The drill program generated 323 samples. Selected downhole bedrock samples were taken. The indurated cover sequence was not sampled. Drillhole samples were dispatched for analysis for Au (334) and As (115).

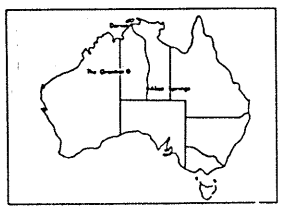
Bulk Cyanide Leach (BCL) samples were collected within the weathered bedrock profile were it was first intersected. Sampling this horizon gives a true indication of dispersion levels at the cover/weathered bedrock interface. This severely limits spurious anomalies caused by sampling higher up the profile within the cover sequence. Sampling this horizon also limits the degree of transportation to a level appropriate to the drill hole spacings in Phase Three. BCL sampling at closer spacings is considered inappropriate.

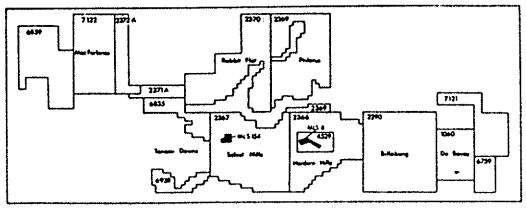
**Rock Chip Geochemistry**

51 rock chip samples were collected in the course of the drill program. Lithologies encountered were graphite schist, silicified graphite schist, banded iron formations, iron schists and pelite schist.




LOCATION MAP





LEGEND

Road
Fence
Airfield
Mine
Windsock
Building
Control Point, Major
" " Minor
" " Astronomical
Spot Elevation (metres)
" " Approximate
Sand Ridges
Relief Shading
Waterhole
Dry Lake
Stream, Intermittent
E.L.A. Boundary
M.L. Boundary
Aboriginal Land Boundary

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Tanami Reconnaissance : Northern Territory.

EL LAYOUT

1:250000

KILOMETRES

| | | | | |
|---|---|---|---|---|
| DATA BY | | | AMENDED | 12/10/90 CG 16/10/90 CG |
| DRAWN | MARCH '89 | | C | 4.91 CG |

Drg. No. 20-1

**Electromagnetic Survey**

Three EM traverses were carried out over the anomalous zone. The traverses were of 2km in length with coil separation of 100m and readings taken at 25m intervals. These traverses were carried out over the original 1989 Phase One north-south vacuum traverses to provide data of a reconnaissance nature.

### 12.2.2 Results of Exploration (January to June 1991)

A quantitative list of geochemical anomalies is presented in the table below -

| | number of anomalies | peak value |
|---|---|---|
| Base of Hole Au>10ppb | 14 | 71ppb |
| Base of Hole As>100ppm | 124 | 900ppm |
| BCL Au>0.9ppb | 15 | 8.86ppb |
| Rock Chip Au>10ppb | 13 | 850ppb |
| Rock Chip As>100ppm | 23 | 700ppm |

**Vacuum Drilling/Bulk Cyanide Leach Geochemistry**

Anomalous Au values (>10 ppb) and anomalous As (>100 ppm) define a east-west elongated zone approximately 4km long and 1.5km wide. Within this zone several spot highs occur. Despite the large drillhole spacings (250m) the anomalous zone is well defined.

**Rock Chip Sampling**

Rock chip sampling of scattered low outcrops and float of graphite schist, pelite schist, and cherty BIF's produced highly anomalous results. Results >0.1 g/t Au came from BIF's.

This sampling was undertaken in conjunction with phase three drilling over outcrops in close proximity to drillholes. This sampling program was not entirely systematic.

**Electromagnetic Survey**

The Phase Three drilling program was completed prior to this survey and so no attempt was made to drill conductors. Some conductors were however drilled by chance and revealed graphite schists.

Given the reconnaissance nature of the EM traverses they provide confirmation that Anomaly 2 occurs within a large inlier of Davidson Beds stratigraphy.

## 12.3 Phase 4 Exploration (July to December 1991

### 12.3.1 Work Undertaken from July to December 1991)

Work consisted of vacuum drilling, rockchip sampling, costeaning, RAB drilling and petrological examination of rock chip and RAB samples.

Anomalous results from the 1991 Phase Three vacuum drilling programme were followed up by Phase Four grid based vacuum drilling, then costeaning and RAB drilling. Encouraging results were received from an outcropping chert horizon and from buried stockwork veining and attendant alteration within low metamorphic grade sediments, ascribed to Orac/Blake lithologies. Three areas of mineralisation were highlighted.

Details of work carried out are presented below -

| | Samples | Metres | Holes | Traverses |
|---|---|---|---|---|
| Vacuum Drilling | 420 | 1354.2 | 210 | - |
| Costeaning | 517 | 517 | - | - |
| RAB Drilling | 1600 | 4934 | 154 | - |
| Rock Chip Sampling | 5 | - | - | - |

**Vacuum Drilling/Bulk Cyanide Leach Geochemistry**

The results of the Phase 3 (January to June 1991) vacuum drilling program on a 250m x 250m grid were used to define the zones to be tested by Phase 4 drilling at collar spacings of 50m x 200m. Areas with over 20 metres of transported silts were avoided. Colluvium was sampled for BCL assays and base of hole weathered bedrock was sampled for gold (aqua regia digestion, carbon rod finish) 210 colluvium samples and 210 bottom of hole samples were collected.

**Costeaning**

Costeans were planned and dug prior to receipt of the results of the Phase Four vacuum drilling. The objectives of the costeaning was to provide structural data and a clear picture of lithologies prior to the planning of the RAB programme, and the absence of the Phase Four vacuum data was not considered critical to achieving this objective.

Costeans were sampled at 1m intervals and dispatched for analysis for Au and As by the same method as above.

**RAB Drilling**

RAB drilling was planned upon receipt of the Phase Four vacuum programme results and costean data. Areas of priority were lines with several anomalous values across strike and tentative correlation to the adjacent line(s) Critical values for Au and As were at the time 10ppb and 300ppm respectively.

Isolated but anomalous vacuum results were also drilled as restricted traverses.

**Rock Chip Sampling/Geological Mapping**

In the course of drilling several laterite pavements were noted within anomalous zones. It was suspected that the development of these small isolated pavements of only several square metres reflected bedrock alteration, and presumably should be anomalous in Au and/or As. A few grab samples proved this correct.

Scattered outcrops of chert were identified and sampled. No other rock units outcrop in the Anomaly 2 area.

### 12.3.2 Results of Exploration (July to December 1991)

**Vacuum Drilling/Bulk Cyanide Leach Geochemistry**

Anomalous Au results (>10ppb) highlighted an essentially continuous zone to the north-east of the grid. The east and central portion of the grid contained only single isolated anomalies.

Geologically, elevated Au values came from quartz stockwork zones within a low grade sericite-chlorite schists and lesser quartz greywackes/fine metapsammites.

**Costeaning**

Best costean results were 4m @ >0.2g/t Au and 1m @ 0.35g/t Au at Kate, within limonitised sericite and quartz sericite schists with fine quartz veining, and 1m @ 0.58 g/t Au from a chert horizon within costean located at the southern margin of Imogene.

In addition selective resampling of a costean interval of 3m @ >0.2g/t At Kate was undertaken to indicate the form of gold. A 4.2g/t result indicated that the gold associated with quartz-sericite schists was due to fine quartz veining.

**Rock Chip Sampling/Geological Mapping**

Assay analysis of poorly outcroping cherts located two of the three main mineralised areas (Erin and Kate) detailed by RAB drilling. Refer to comments in the following section on RAB drilling results.

**RAB Drilling**

RAB drilling highlighted three areas on mineralisation. Erin, (best intersection 3m @ 1.52g/t Au) occurs within a 1000m strike length ridge of quartz-greywacke, chert, and quartz veining.

Kate (best intersection 9m @ 1.35g/t Au) consists of fine quartz veining within quartz-sericite schists. A deep RAB hole below this zone failed to indicate similar grade with depth although this zone was continuous with 9m @ 0.41g/t Au intersected. A geochemical halo is noted around this hole in the adjacent samples with Au >40ppb for several metres either side of the intersection. This zone is potentially 400m in strike length.

Imogene (best intersection 12m @ 2.57 g/t Au) consists of six sub-parallel >1.0g/t Au lodes up to 6m true width. These lodes appear to be steeply north dipping and consist of quartz-sericite and sericite schists +/- quartz veining +/- chert. The controlling factor for mineralisation appears to be the presence of chert. This zone has potentially 1000m of strike length and 300m in width.

**Anomaly 2 RAB Drilling Results >0.5 g/t Au**

| Hole No | From | To | Interval |
|---|---|---|---|
| a2rb011 | 4 | 7 | 3m @ 0.65 g/t |
| a2rb033 | 25 | 28 | 3m @ 0.53 g/t |
| a2rb050 | 25 | 28 | 3m @ 0.88 g/t |
| a2rb080 | 0 | 4 | 4m @ 2.47 g/t |
| a2rb081 | 0 | 4 | 4m @ 0.71 g/t |
| | 19 | 22 | 3m @ 0.71 g/t |
| | 25 | 31 | 6m @ 1.73 g/t |
| a2rb082 | 19 | 22 | 3m @ 0.53 g/t |
| | 28 | 31 | 3m @ 0.93 g/t |
| a2rb087 | 13 | 25 | 12m @ 1.12 g/t |
| | 28 | 31 | 3m @ 2.83 g/t |
| a2rb088 | 19 | 25 | 3m @ 0.59 g/t |
| a2rb102 | 16 | 25 | 9m @ 1.35 g/t |
| a2rb128 | 10 | 13 | 3m @ 0.51 g/t |
| | 19 | 22 | 3m @ 0.64 g/t |
| a2rb144 | 19 | 22 | 3m @ 1.52 g/t |
| a2rb151 | 34 | 37 | 3m @ 0.65 g/t |

| Hole No | From | To | Interval | |
|---|---|---|---|---|
| a2rb152 | 16 | 19 | 3m @ 6.52 g/t | |
| | 22 | 25 | 3m @ 1.54 g/t | |
| | 34 | 40 | 6m @ 1.13 g/t | |
| | 43 | 55 | 12m @ 2.57 g/t | incl 3m @ 5.83 g/t |
| | 58 | 61 | 3m @ 0.54 g/t | |
| a2rb153 | 28 | 31 | 3m @ 0.67 g/t | |
| | 40 | 43 | 3m @ 0.5 g/t | |
| | 46 | 49 | 3m @ 1.21 g/t | |
| | 55 | 73 | 18m @ 1.45 g/t | incl 6m @ 2.21 g/t |
| a2rb154 | 13 | 16 | 3m @ 0.69 g/t | |
| | 49 | 52 | 3m @ 0.52 g/t | |

**Discussion of Results**

Anomaly 2 is contained within the cherts and low grade sediments considered similar to the Blake Beds. Scattered outcrops of chert have lead, by direct sampling, to the discovery of the Erin, Kate and Imogene mineralised areas. With the exception of rare chert units, the sediments do not outcrop and can only be found by shallow vacuum drilling and costeaning.

Three settings for mineralisation have been noted. Imogene consists of an anomalous zone of 1000m x 300m which at 21800E has potential economic grades and widths. The deep RAB work suggests that mineralised (>0.1g/tAu) zones are continuous at depth and appear to both increase in width and grade. One interpretation is that areas of >0.1g/t Au from shallow RAB drilling may lie above larger and richer zones of mineralisation. This would be the case for mineralisation within those sediments which are likely to be depleted in gold. In contrast gold values within cherts are likely to be the same order of magnitude at depth as the area at surface. Both Erin and Kate were indicated by direct sampling of the chert units at surface. Not surprisingly, when drilled, the intersections were of a comparable grade to the rock chip results. The Phase Four vacuum results over Kate (Erin not yet covered by Phase Four) were spotty. Imogene in contrast was highlighted as a large zone of anomalous Au/As geochemisty. The presence of an anomalous rock chip above what was to become the Imogene zone was fortuitous.

**12.4 Plans**

| Drawing No | Title | Scale |
|---|---|---|
| 2100 1193 | Anomaly 2 Bottom of Hole Geochemistry & Geology Sheet 3 | 1:5000 (not available) |
| 2100 1194 | Anomaly 2 Bottom of Hole Geochemistry & Geology Sheet 4 | 1:5000 |
| 2100 1211 | Anomaly 2 Bleg & Composite Rock Chip Sampling Sheet 3 | 1:5000 (not available) |
| 2100 1212 | Anomaly 2 Bleg & Composite Rock Chip Sampling Sheet 4 | 1:500f0 |

.0200N
10250N
10300N
10350N
10400N
1400RL
1350RL
1300RL
4m @ 2.47 g/t
3m @ 2.69 g/t
9m @ 3.22 g/t
15m @ 1.62 g/t
6m @ 1.65 g/t
3m @ 2.83 g/t
A2RB079
A2RB080
A2RB081
A2RB152
A2RB082
A2RB153
A2RB083
A2RB084
A2RB085
A2RB086
A2RB087
A2RB154
A2RB088
A2RB089
A2RB090
A2RB091
Figure 3.7 : Anomaly 2 RAB Sections , IMOGENE 21800E
9m @ 1.27 g/t DOWNHOLE GOLD INTERSECTIONS >1.0g/t

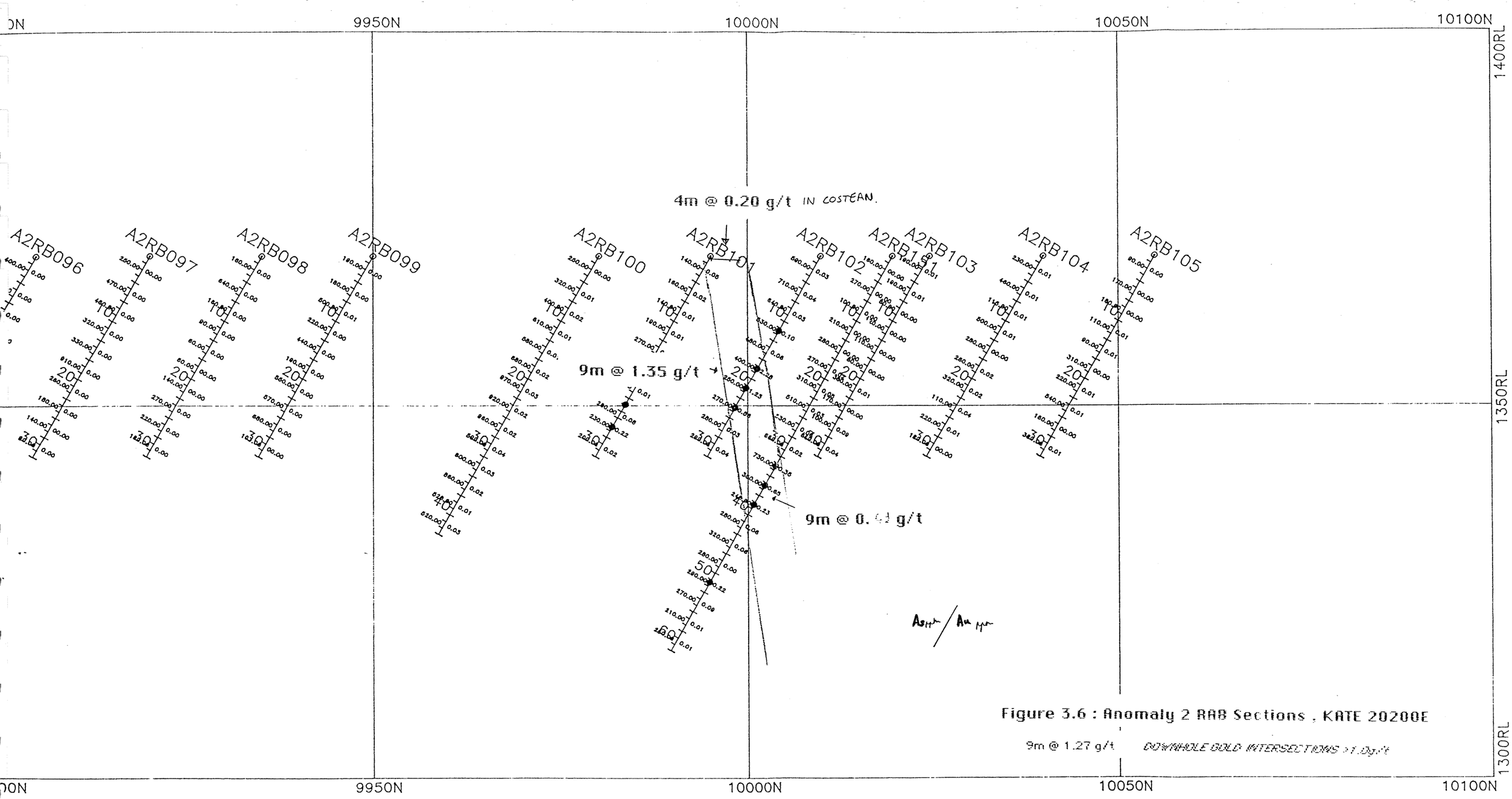


Figure 3.6 : Anomaly 2 RAB Sections , KATE 20200E

9500N
9550N
9600N
9650N
1400RL
1350RL
1300RL
A2RB142
A2RB143
A2RB144
3m @ 1.52 g/t
9m @ 1.27 g/t
DOWNHOLE GOLD INTERSECTIONS >1.0 g/t

Figure 3.5 : Anomaly 2 RAB Sections : ERIN 19200E

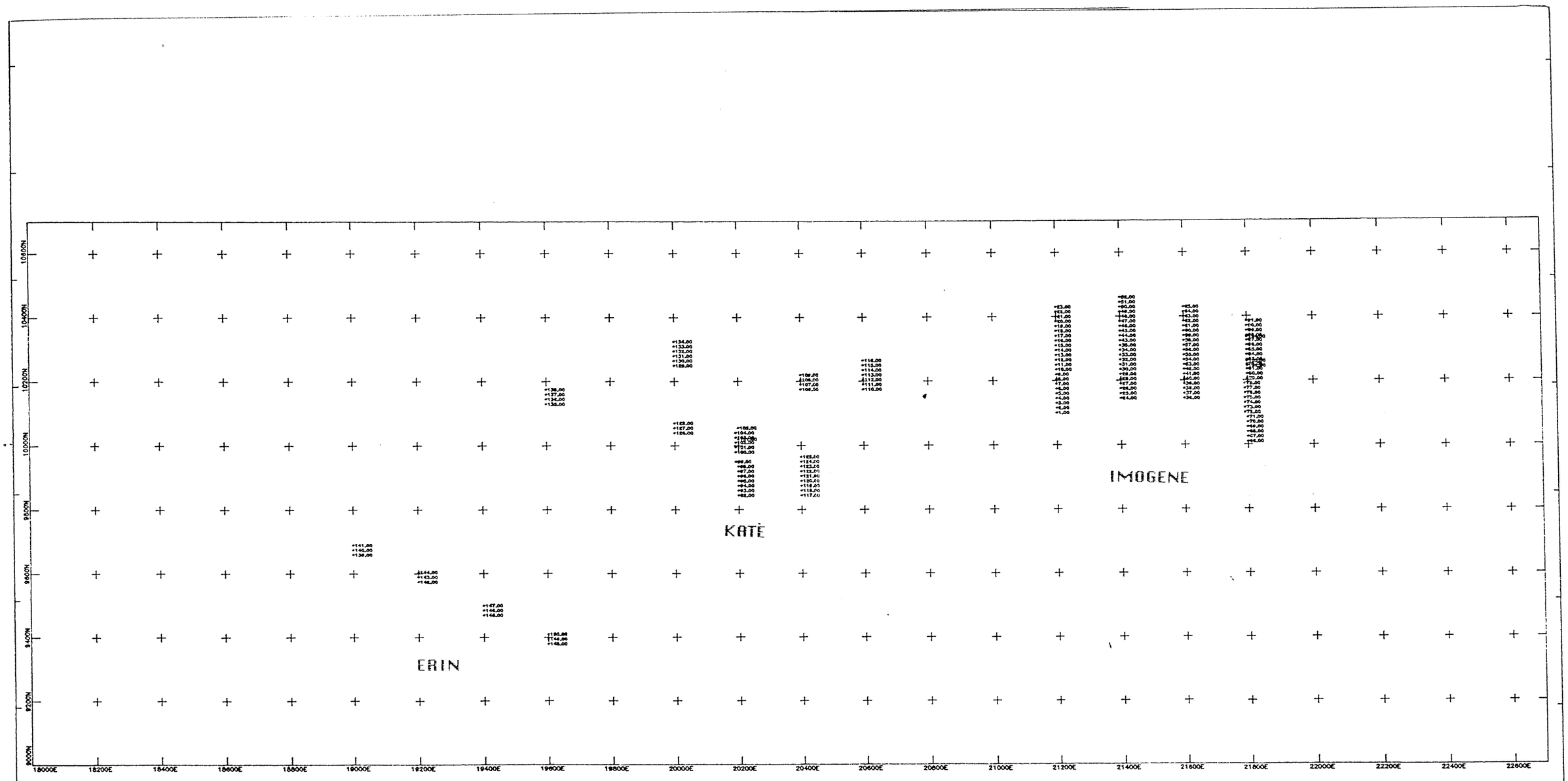


Figure 3.2 : Anomaly 2 RAB/Open Hole Percussion : Drillhole Location

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TANAMI RECONNAISANCE:NORTHERN TERRITORY

DATE

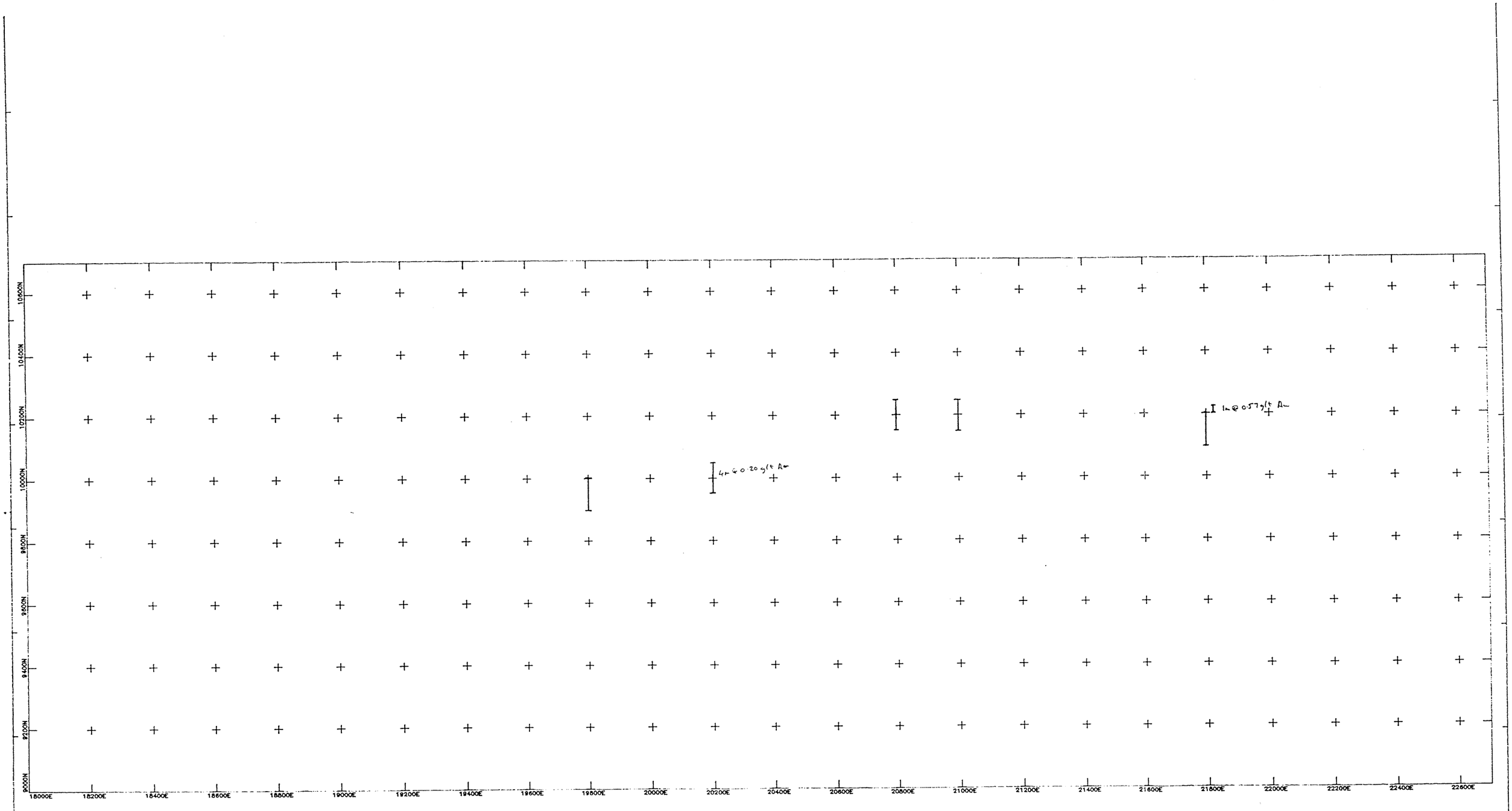


Figure 2.5 : Anomaly 2 Costean Locations

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TANAMI RECONNAISANCE:NORTHERN TERRITORY

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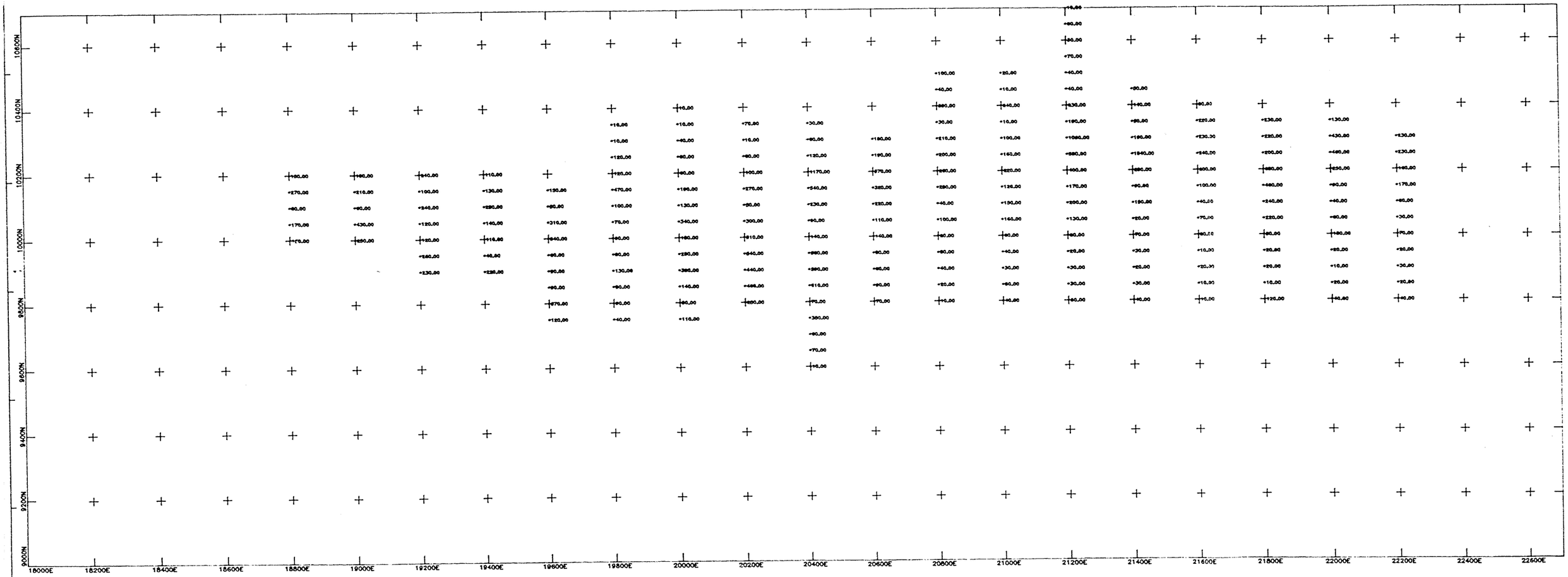


Figure 2.4 : Anomaly 2 Phase Four Vacuum Drilling : Bedrock As ppm

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TANAMI RECONNAISANCE:NORTHERN TERRITORY

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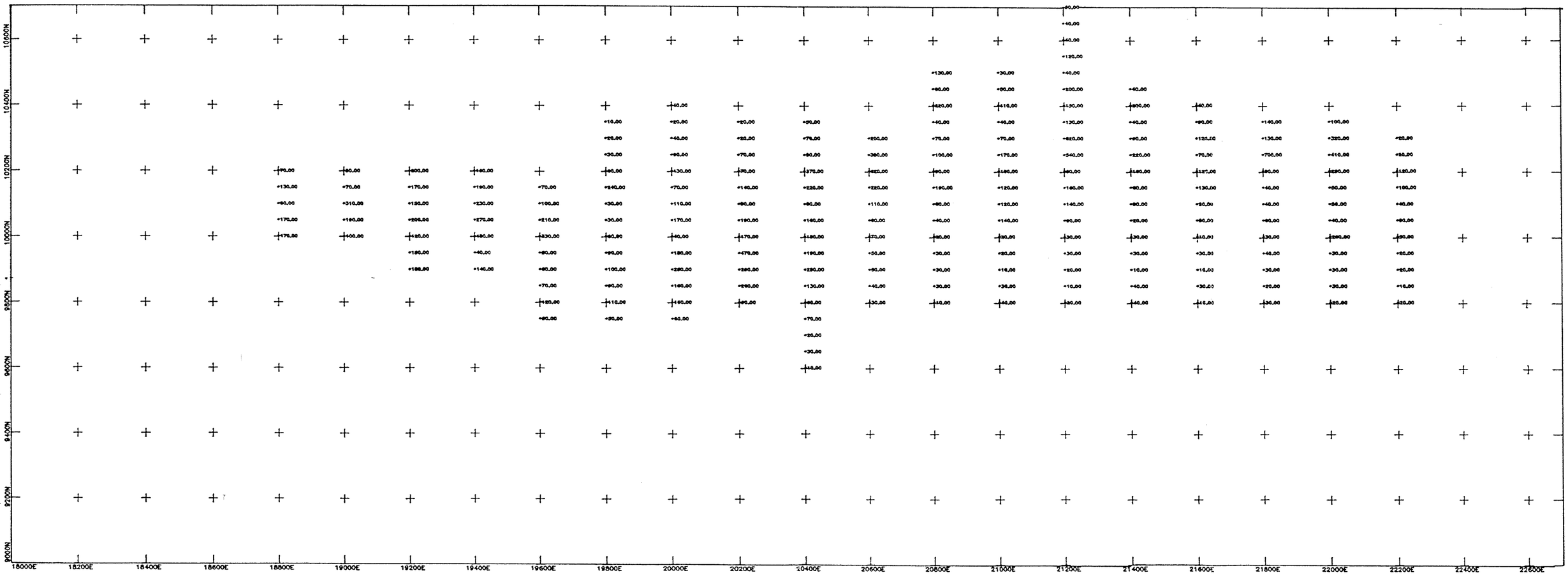


Figure 2.3 : Anomaly 2 Phase Four Vacuum Drilling : Colluvium As ppm

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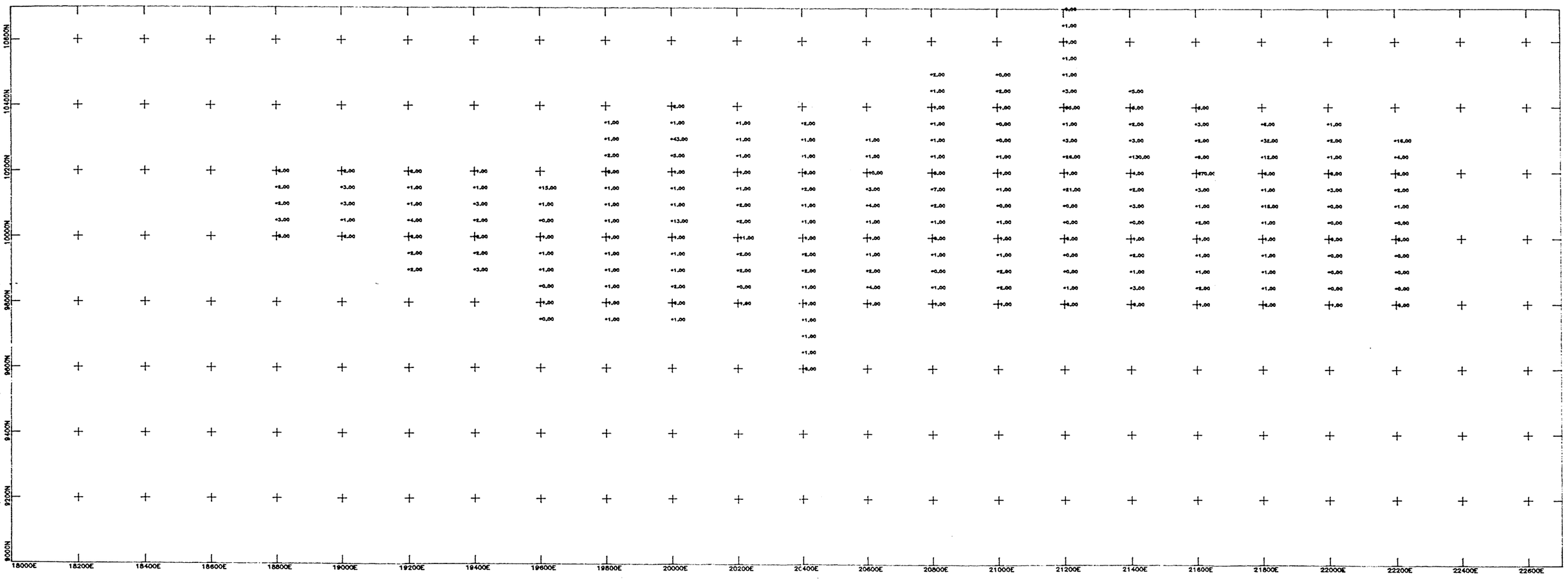


Figure 2.2 : Anomaly 2 Phase Four Vacuum Drilling : Bedrock Au ppb

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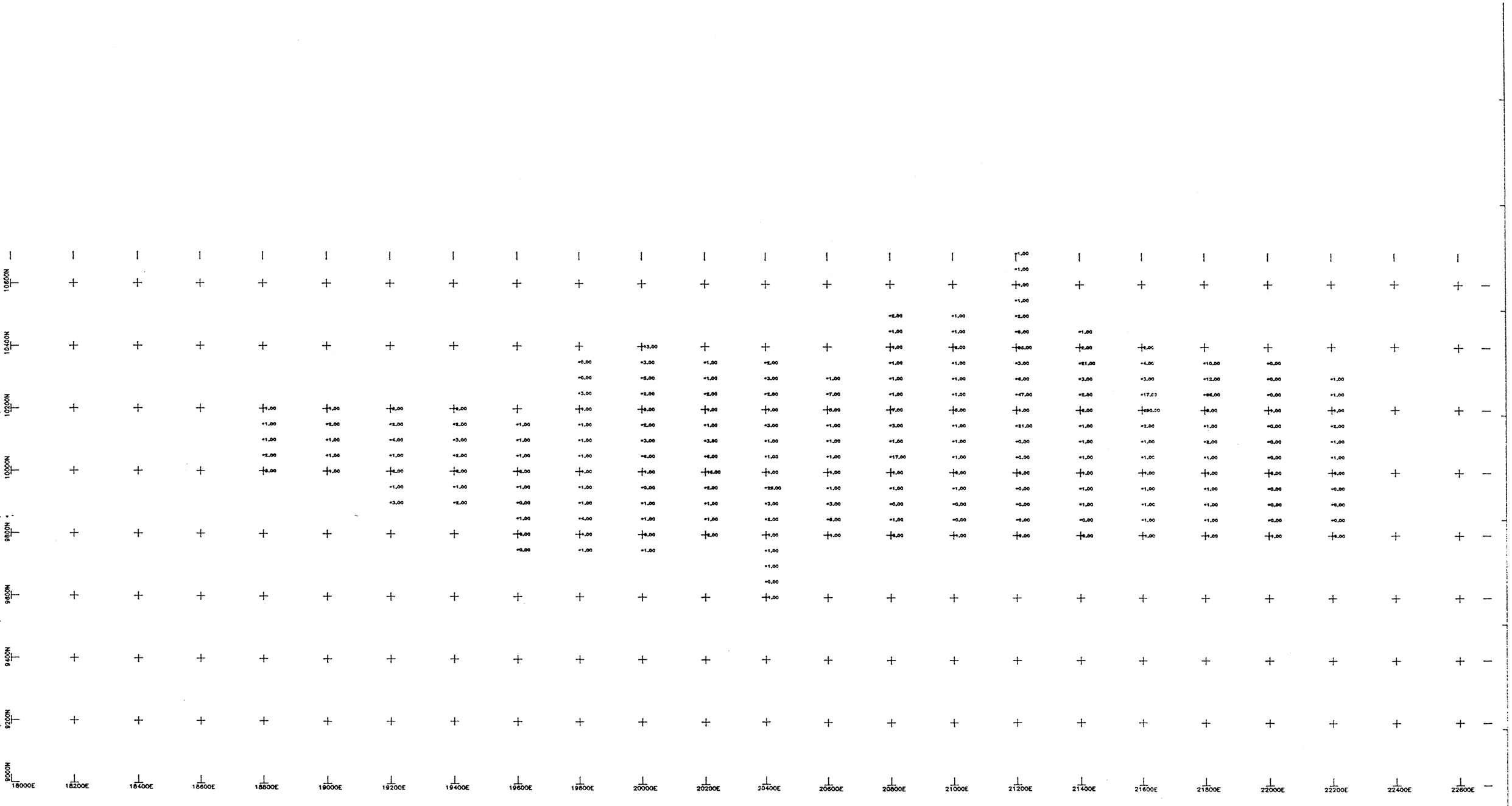


Figure 2.1 : Anomaly 2 Phase Four Vacuum Drilling : Colluvium Au ppb

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| | |
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