



## SOIL GEOCHEMISTRY DEFINES COPPER-PGM ANOMALY AT BYRO

### HIGHLIGHTS

- **Soil sampling has defined a coincident copper–platinum–palladium–gold anomaly 750 metres long by 300 metres wide at Moonborough near Byro Station.**
- **Peak results include include 492 ppm copper, 203 ppb palladium, 11ppb gold and 4 ppb platinum.**
- **The results confirm the discovery of an intrusion related copper mineralised system at Moonborough.**

The latest assay results from a soil sampling programme at Moonborough Prospect on Byro Station have outlined a strong coincident copper-platinum group metal (PGM) geochemical anomaly. The Moonborough anomaly measures 750 metres long and 300 metres at its widest point, and is open to the north and south as the sampling was confined to the area of sub-cropping bed rock. **Peak results include 492 ppm copper, 203 ppb palladium, 11ppb gold and 4 ppb platinum** from 226 soil samples collected by Athena Resources Limited (Athena or the Company) over the prospect, which is located 2 kilometres north of Byro Homestead.

The mapped geology and sample locations are shown in Figure 1. The distribution of copper, palladium, gold, platinum and nickel are shown in Figures 1 to 3. One hundred and twelve (112) of the soil samples returned copper assays of 100 ppm or better, forty six (46) samples were 10ppb palladium or better, and 110 samples assayed 30ppm. These copper and palladium assays are exceptionally high for soil samples.

The anomaly overlies metamorphosed mafic and ultramafic lithologies where Athena has previously found copper-PGM mineralisation in outcrop.

Significant rock chip assays from the Moonborough Prospect previously reported by Athena include:-

MBCR057	<b>1.93%</b> copper	<b>3.01</b> g/t palladium	<b>0.52</b> g/t gold	0.00 g/t platinum
MBCR012	<b>1.50%</b> copper	<b>0.21</b> g/t palladium	<b>0.44</b> g/t gold	<b>0.14</b> g/t platinum
MBCR056	<b>1.22%</b> copper	<b>0.13</b> g/t palladium	<b>0.47</b> g/t gold	<b>0.09</b> g/t platinum
MBCR058	<b>0.96%</b> copper	<b>0.17</b> g/t palladium	<b>0.41</b> g/t gold	0.08 g/t platinum
MBCR013	<b>0.75%</b> copper	<b>0.65</b> g/t palladium	<b>0.19</b> g/t gold	<b>0.10</b> g/t platinum
MBCR055	<b>0.61%</b> copper	0.09 g/t palladium	<b>0.48</b> g/t gold	18 ppb platinum
MBCR060	<b>0.55%</b> copper	<b>0.34</b> g/t palladium	<b>0.27</b> g/t gold	43 ppb platinum
MBCR059	<b>0.48%</b> copper	<b>0.01</b> g/t palladium	<b>0.16</b> g/t gold	24 ppb platinum
MBCR070	<b>0.47%</b> copper	0.08 g/t palladium	<b>0.33</b> g/t gold	52 ppb platinum
MBCR061	<b>0.32%</b> copper	<b>0.11</b> g/t palladium	<b>0.12</b> g/t gold	53 ppb platinum
MBCR069	0.11% copper	<b>0.13</b> g/t palladium	0.01 g/t gold	12 ppb platinum

The Moonborough mineralisation is hosted by sheared and metamorphosed gabbro, pyroxenite and lateratised cummlate-textured ultramafic. Field reconnaissance by Athena indicates that the host rocks form part of an extensive hereto unrecognised mafic/ultramafic complex. Rock chip sampling by the Company has shown that additional copper-PGM mineralisation also occurs 7 kilometres to the north-east of the Moonborough. Assays from these additional mineralised zones are pending.

The Company has planned an aggressive exploration program over the area that includes drill testing the defined by these exceptional soil and rock chip assay results.

## Background

The Byro Project area, which covers approximately 4,800km<sup>2</sup>, was identified using gravity data from Geoscience Australia and pegged in accordance with Athena's stated aim of discovering and developing a major nickel sulphide deposit. Outcropping copper mineralisation at Moonborough, 2 kilometres north of Byro Homestead, is hosted by mafic and ultramafic rocks that are possibly part of a larger layered mafic intrusive complex. The discovery outcrop occurs 300 metres west of the main road in an area previously mapped as felsic gniess.



Athena is exploring for magmatic nickel-copper sulphide and platinum group mineralisation at Ravensthorpe, Byro and Binneringie, and gold-copper-silver-lead mineralisation at Ashburton.

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(MAusIMM, MAICD)

Technical Director  
3 July 2008

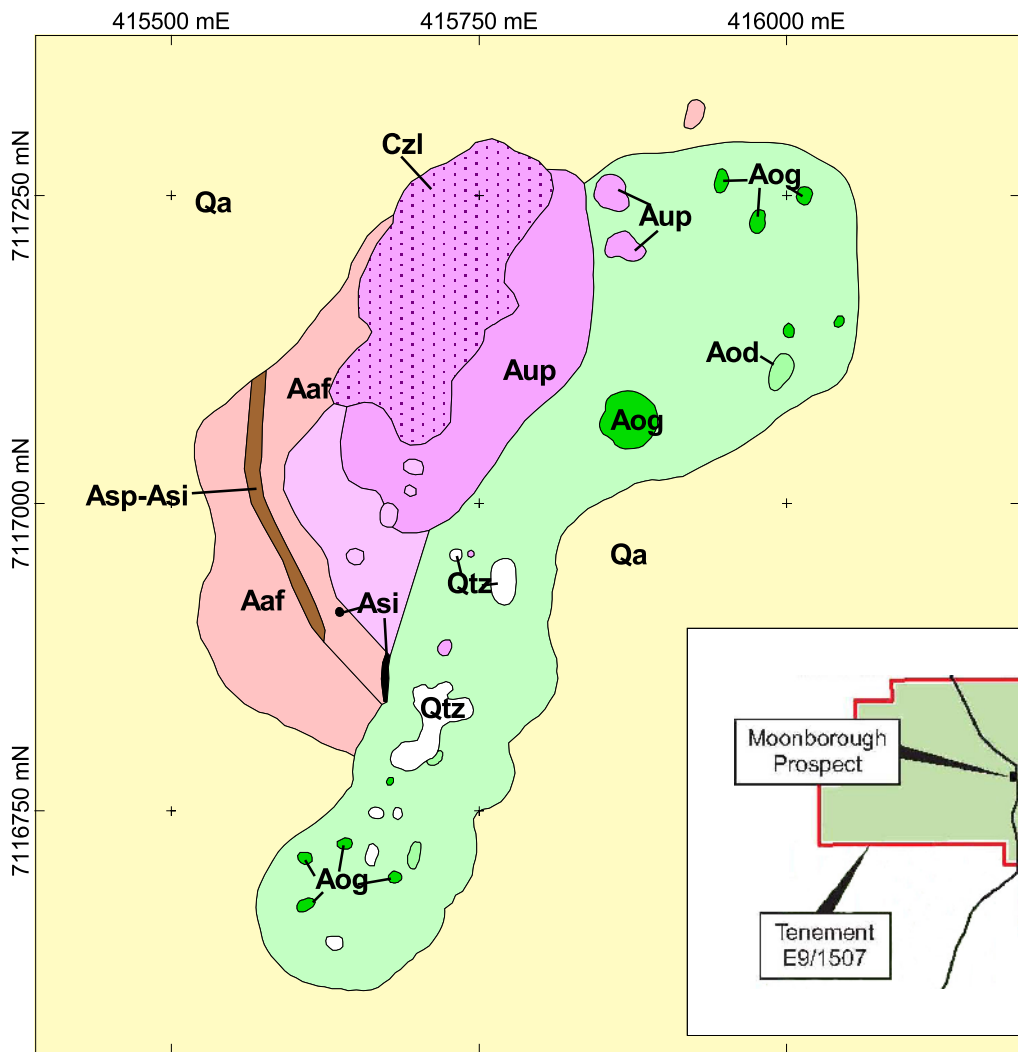
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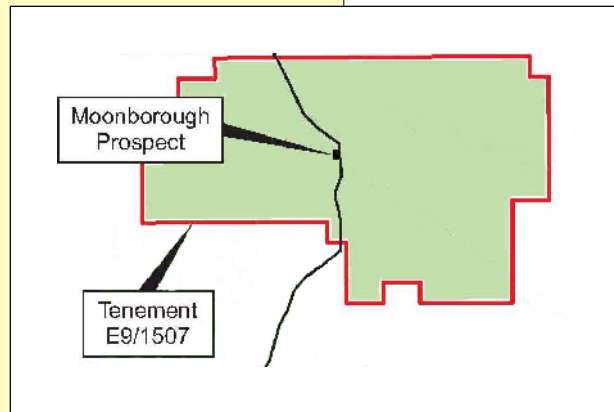
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The technical information relating to Athena's exploration projects was compiled by Mr Donald Thomson, an employee of Indigo Exploration Services Pty Ltd. Mr Thomson is a Member of the Australasian Institute of Mining and Metallurgy, and has sufficient relevant experience in the styles of mineralisation and deposit styles under consideration to qualify as a Competent Person as defined in "The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2004 edition)". Mr Thomson consents to this inclusion of the information in this report in the context and format in which it appears.

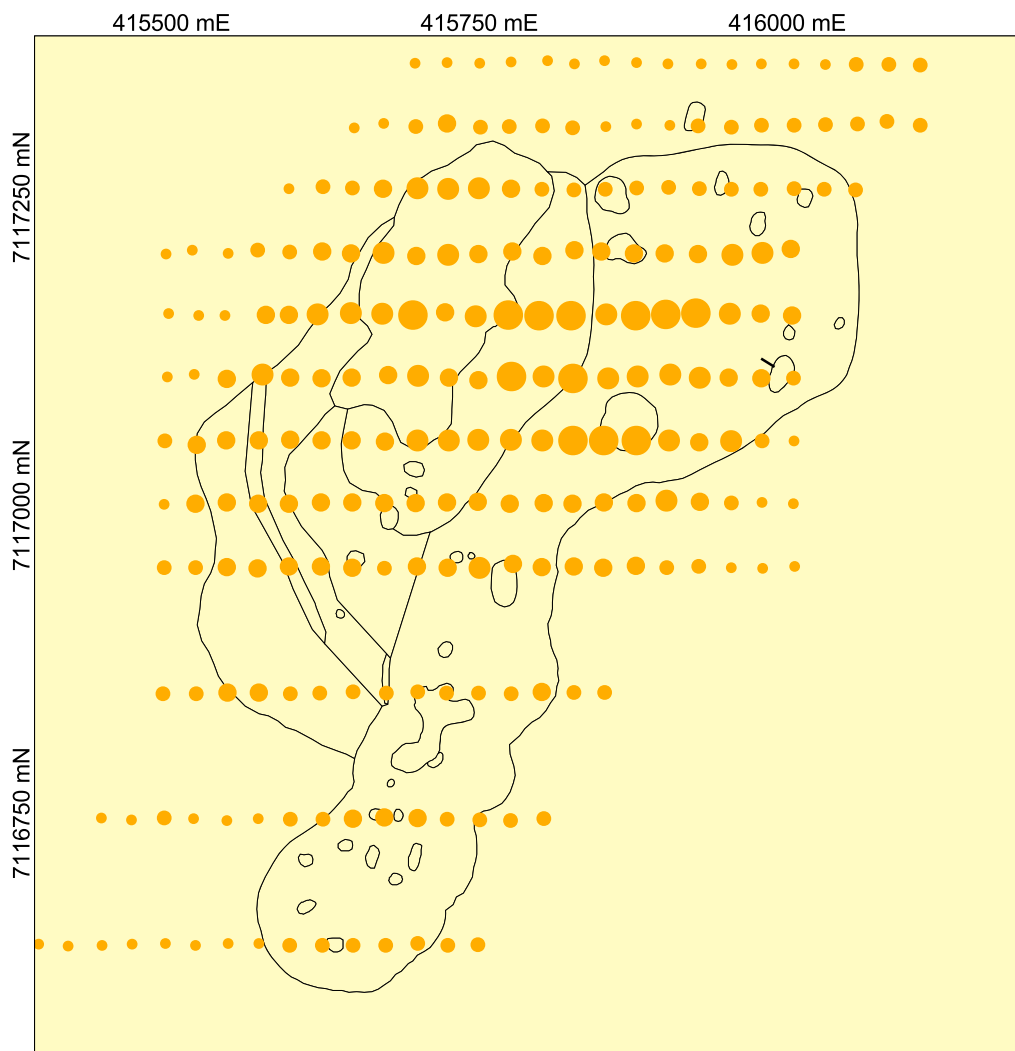
## Byro Project Outcrop Geology Moonborough Prospect



- Fact Geology**
- Quarternary Alluvium
  - Quartz
  - Banded Iron Formation
  - Ferruginous Sandstone
  - Felsic gneiss
  - Amphibolite/Gabbro
  - Gabbro
  - Dolerite
  - Mafic (dolerite or gabbo)
  - Pyroxenite
  - Ultramafic
  - Laterite - Ultramafic Cumulate



## Byro Project Copper Soil Geochemistry Moonborough Prospect

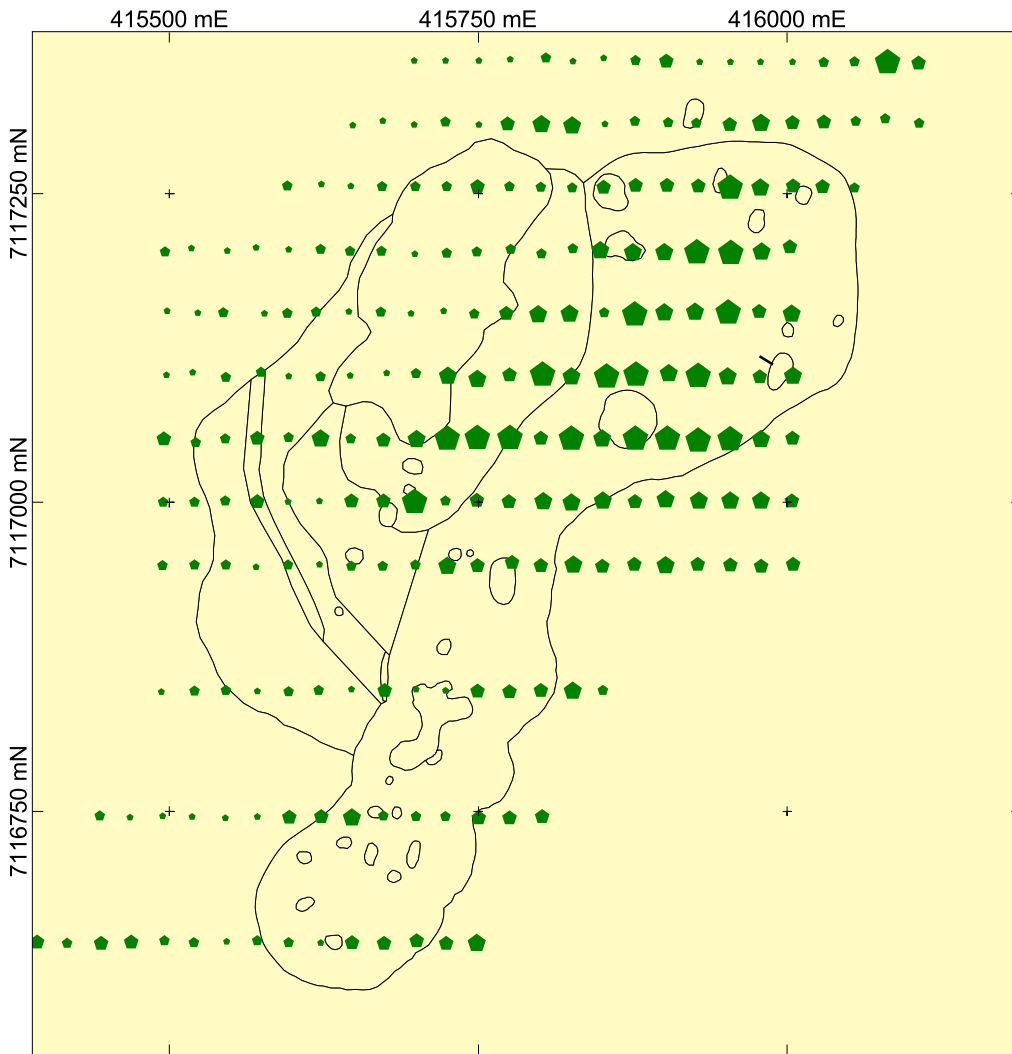


- Cu (ppm)**
- 300 - 492
  - 200 - 300
  - 100 - 200
  - 50 - 100
  - 14 - 50



Figure 1

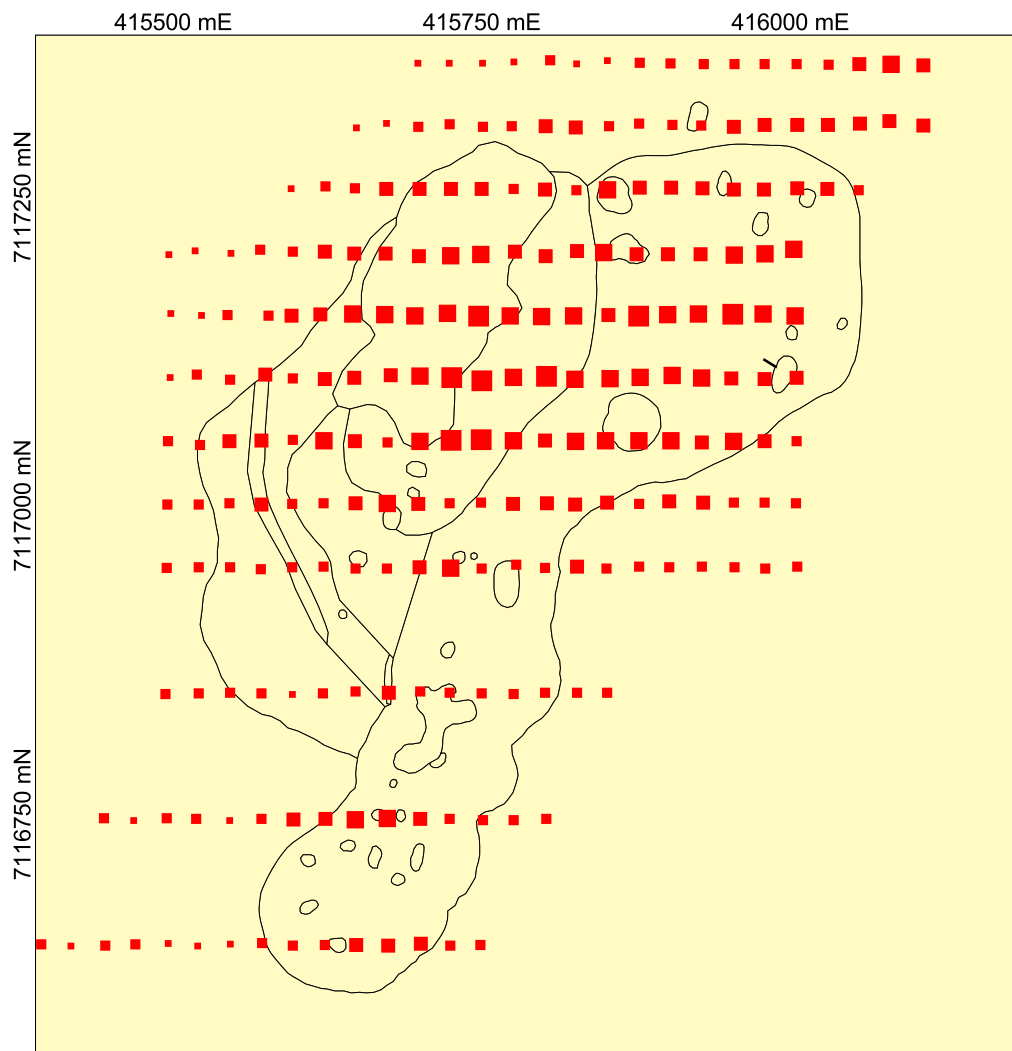
**Byro Project  
Nickel Soil Geochemistry  
Moonborough Prospect**



**Ni (ppm)**

- 42 - 58
- 36 - 42
- 30 - 36
- 24 - 30
- 16 - 24

**Byro Project  
Palladium Soil Geochemistry  
Moonborough Prospect**

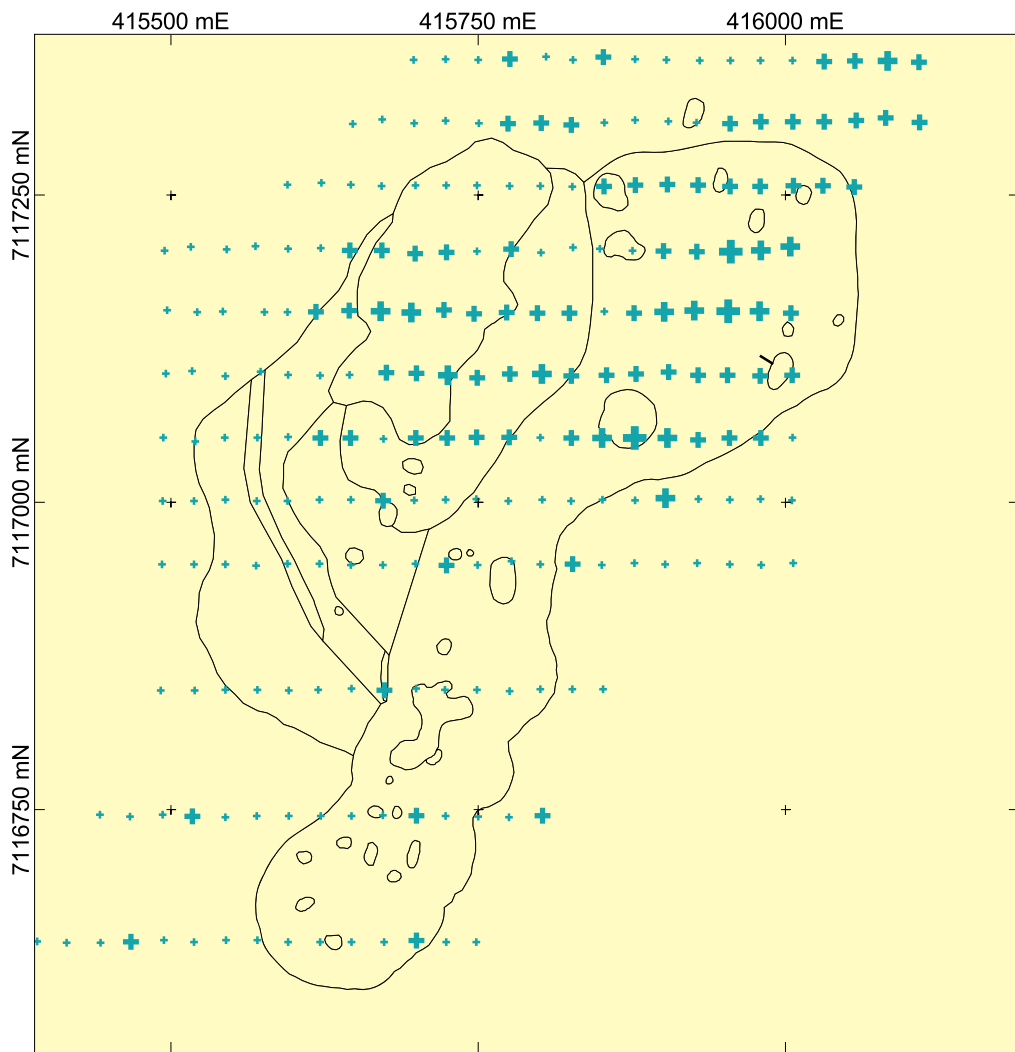


**Pd (ppm)**

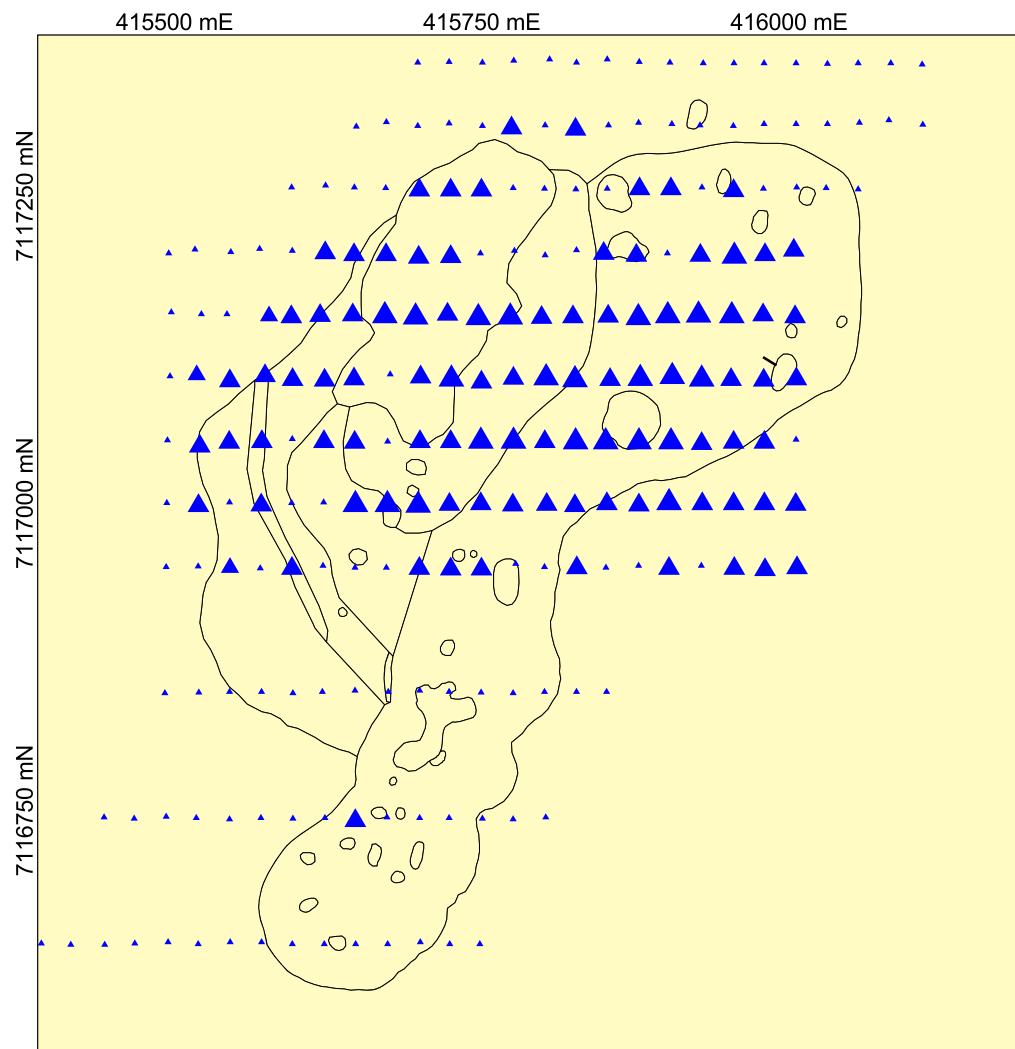
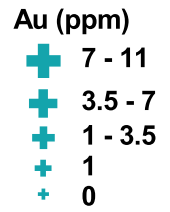
- 30 - 53.5
- 10 - 30
- 5 - 10
- 1 - 5
- 0 - 1



Figure 2



**Byro Project  
Gold Soil Geochemistry  
Moonborough Prospect**



**Byro Project  
Platinum Soil Geochemistry  
Moonborough Prospect**

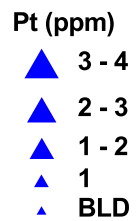


Figure 3