Bonita
BO_GS1

Bonita Regional Project – EL23926

Deep Penetrating Geochemistry
(DPG) – Geochemical Sampling Programme

December 2012

Rebecca Richards
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Overview

The majority of the outcropping and sub cropping gold bearing deposits in the Northern Territory have been discovered. Increasingly Explorers are looking for buried deposits; complex regolith profiles and transported cover hinder these efforts. ABM is looking to trial new techniques (namely Deep Penetrating Geochemistry (DPG)) that look specifically for deposits buried under cover with very low (ppb to ppt concentrations) surface geochemical signals.

The DPG techniques all assume that there is some form of upward movement of ions have taken place through the cover and change the surface chemistry in some detectable fashion. Techniques include multiple weak leach techniques, pH & conductivity surveys and very low detection laboratory assays. The aim of these techniques is to detect mineralisation that is essentially blind at surface and covered by many metres of exotic cover.

After a successful Orientation study at the Buccaneer porphyry, completed in 2011, the Regional Geochemical Project is being applied and undertaken on regional projects across ABM’s extensive tenure.
1. Objectives

ABM Resources have selectively sampled surface samples from active tenements in the Tanami-Arunta region in 2010 and conducted a successful orientation study over Buccaneer in 2011 with positive results, several new prospects were identified. Consultation with industry professionals such as Dave Heberlein defined a more effective, efficient and accurate sampling programme covering large areas of land systematically and economically.

The DPG techniques will involve a combination of pH sampling, weak leach technologies and laboratory trials of multiple low detection assay techniques namely weak leach / partial leach technologies. The beauty of the pH sampling and the weak acid leach techniques is that we can conduct them simultaneously at the same sample locations, within the same sampling programme. This saves on time and cost and allows comparison between the techniques and utilisation of the results simultaneously. The pH sampling requires minimal equipment and results are instant.

1.1 Survey Details

The Bonita regional geochemical survey was designed, to target a broad regional trend of magnetic anomalies on a blue-sky target. The tenement has limited historical geochemical data (Au only) from a traverse 19 randomly spaced soil samples with a max assay of 0.6 ppb.

The Bonita survey is located in the North Arunta region within the Bonita project area and is comprised of Lander Rock Beds divided into 3 separate groups; an undifferentiated low grade facies, amphibolite facies including some dolerite & a moderate facies Lander Rock Beds. It is interpreted that the linear magnetic units are likely to be more magnetic BIF or intruded dolerites within the magnetic rock beds.
Figure 1. Planned Bonita Survey (green) and actual samples taken (black), over geological controls (500k Map sheet Interpreted Geology – North Arunta). Pink - undifferentiated intrusives; Grey/brown – undifferentiated low grade facies Lander Rock Beds (sedimentary marine); Light Blue (stippled) – amphibolite facies Lander Rock Beds, including some dolerite; Dark Blue (stippled) moderate facies Lander Rock Beds.

Figure 2. Aeromagnetic image over Bonita Survey.
The sample spacing has been designed as a 500 x 500 m grid aimed to cover wide area of interpreted magnetic anomalism, with sparse sample coverage. A total of 1652 samples were planned however only 600 were collected for 2012. It is expected (pending the results of this report as well as targets and budgets for 2013) the survey will be completed in 2013.

1.2 Weak acid leach / partial leach Orientation Study

Weak acid leaches / partial leach technologies have been around for a substantial amount of time – however historically they have been ineffectively used as a “one method fits all” technique. With smart and efficient use of these techniques this historical perception can be overcome. In depth knowledge of the regolith profile and consequent trials of multiple weak leach methods to assess the most effective for the region will maximise ABM’s ability to test for buried mineralisation.

2. Methodology

2.1 Field Sampling

The basic methodology has been outlined in the document ABM DPG Field Protocols 2012. Documentation relevant to the actual sampling programmes can be found at T:\1. Data\1.7 Research & Development\1. Geochemistry\6. DPG Techniques\2. DPG Scope & protocols\1. Protocols\1. Geochemical Sampling.

Regolith influences on geochemical signal

The recognition of the changing regolith environments encountered over the geochemical surveys is vital to the interpretation of the geochemical results. The regolith provides an indication of both the potential mobility of elements of interest and of the potential effectiveness of specific (soil) components (horizons) as geochemical sample media. The eH-pH environment of the desert is alkaline, meaning that base metals and Iron are more stable and the control on mobility and pH is more carbonate based.

Changes in regolith will be logged as Regolith, Lithology, Alteration and Colour of each of the individual samples collected. Any unusual observations will also be recorded.

Additional Influences on geochemical signal

Terrain, slope-dip, elevation, local vegetation and recent weather events can also greatly influence the geochemical signature of each sample. These will be recorded and geochemical assay results will be interpreted taking into account the influences. Terrain, Slope-Dip and Elevation can have a profound effect on the location / deposition of specific base metals and gold pathfinders. Steep terrains will influence drainage and erosion patterns and subsequent dispersion of analytes in the landscape. Although the geochemical techniques are targeted at the exogenic signal of the sample (for mineralisation undercover) these parameters can influence the results and must be taken into account during interpretation.

Local vegetation can be important to capture in the data logging and interpretation as it can indicate subtle changes in elevation, landscape processes and different regolith regimes. In addition local vegetation can prefer areas anomalous in certain pathfinders and/or regolith.

2.2 Lab Methodology – Leach technologies & techniques
Soil samples were submitted to ALS Perth where they were split for 2 analytical techniques; the Ionic Leach and a standard Fire Assay with an ICP-MS finish. The Ionic leach was established as the leading technique for deposits under cover in the Tanami region following the 2011 Orientation study of Buccaneer. The Fire assay technique is used as a back-up to the Ionic leach as ABM are entering terrains that may have high level ppm concentrations of gold. ABM want to be sure that the Ionic leach is picking up these stronger results and that the AU_ICP21 technique is also effective at picking up stronger signals.

The methods are outlined below; the Ionic leach is aimed at determining the exogenic signal within the samples, i.e. the geochemical signal of the introduced ions from depth.

1. Ionic Leach ME-MS23
2. Fire Assay AU_ICP2121

The Ionic leach method is capable of low concentrations of base metals and other elements down to ppb (down to 0.00001) levels. The Fire Assay detects only in the ppm (down to 0.001 ppm) and has been analysed only for gold, no multielement results were generated for this method.

None of the samples have been crushed prior to analysis. The instructions submitted to ALS Perth for sample preparation follow.

1. Samples to be shipped directly to Perth ALS for analysis
   a. samples shipped and stored separate from Drill samples
2. No milling
3. 1 kg sample split into 500g splits
4. 500g stored and 500g for analysis
5. 500g for assay subsampled to two separate techniques

Specific instructions were also submitted to ALS Perth for sample analysis.

1. All samples are for LOW DETECTION Geochemistry and should be treated with caution and contamination minimised
2. Sieving conducted with special nylon sieves – ALS to provide
3. Sample shaken for 2 seconds prior to sampling for analysis by lab technician
4. Spoon used to sample material in vials are to be wiped by a new disposable tissue
5. Automatic high value analytical duplicates to be completed when elevated Au, Cu, Pb, Zn, Ni

Much of the Tanami region has been subjected to numerous fires and there is much charcoal residue in the soils. Charcoal is highly sorptive for both organic and inorganic ions. Soil samples that are taken for analysis commonly contain some concentration of charcoal. Historically there has been little consideration for the metal scavenging effects of charcoal in soils and how this may affect the geochemical anomalies observed. Each sample collected will be logged in detail including any recent weather and/or fire events and any visible charcoal in the soil horizon.

All measures have been taken by the lab to prevent any contamination to the low detection samples.

ABM aims to extract the exogenic component and not the whole rock signal. By using a combination of leach techniques the Buccaneer Orientation Study determined the Ionic leach as the most effective technique for low detection sampling and gave geologists the best indication of the depth of the mobile ions from buried mineralisation reside.
2.21 Ionic leach

The Ionic Leach (ALS Method ME-MS23) is a weak partial extraction geochemistry technique that targets accurate partial extraction of ionic species in soils. The leach is a static sodium sodium cyanide leach using chelating agents ammonium chloride, citric acid and EDTA with the leachant buffered at pH 8.5. The heavily buffered alkaline cyanide solution in conjunction with other complexing agents is designed to selectively dissolve or solubilise metal ions that have been mobilised from the primary source, migrated and then redeposited near the surface.

The Ionic leach targets the loosely bound water soluble salts, acetate soluble secondary minerals, carbonates and limited Mn oxides.

2.22 Au-ICP21

The Au_ICP21 method is a standard Fire Assay Fusion (FA-FUSPG1) followed by Inductively Coupled Plasma – Atomic Emission Spectrometry (ICP-AES). This method is commonly conducted on Greenfield and brown fields rock and drill hole samples, producing a gold only result.

A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead. The bead is digested in 0.5 mL dilute nitric acid in the microwave oven. 0.5 mL concentrated hydrochloric acid is then added and the bead is further digested in the microwave at a lower power setting. The digested solution is cooled, diluted to a total volume of 4 mL with de-mineralized water, and analysed by inductively coupled plasma atomic emission spectrometry against matrix-matched standards.

3. Sampling QAQC

3.1 Sampling depth

The first and foremost task was to conduct a pilot study (Buccaneer orientation study 2011) across the sampling lines comprising 4 soil pits dug to ~1-1.5m deep. These soil pits were then sampled at 10 cm intervals down to 1m depth and pH followed with a weak acid leach was conducted on each sample. Three repeats were completed for each sample to ensure robust results.

The aim of the soil pit pilot study was to determine the optimum depth for sampling for the weak acid leaches / partial leach samples taking into account differing regolith/ cover characteristics (insitu vs. transported cover). The optimum depth is determined by a peak in acidity down the pH profile of soil pit. The peak indicates a level of iron accumulation, indicating a change in buffering capacity and is the optimum and most dynamic sampling point in the profile. This means that salts complexed with metals are accumulated in this zone and is therefore the best position for the extraction of mobile ions/element’s in the profile.

The results determined that all 4 of the sampling pits had an optimum sampling depth of 10cm. Subsequent soil samples for the weak leach assays were taken at this depth in the Tanami region.

3.2 Laboratory QAQC
3.2.1 Standards

Gannet Resources supplied a custom standard blended from SRM_18 & SRM_19. The custom blend was mixed from two standards that ALS currently uses for internal QAQC. Both of these standards have been used extensively for partial extraction methods and have nominal and upper/lower limit values for Au and a wide range of multielements. This standard is not certified but has been used extensively for ALS partial leaches and is designed for low detection limit methods.

The pass or fail of the standard for each analyte has been determined as the comparison of the standard nominal value to the actual analysed result +/- the detection limit of that element for the method.

In line with ABM Resources QAQC protocol for soil samples standards were inserted into the survey every 35th sample.

The standards performed inconsistently in relation to the lab trails, however performed consistently between the 2012 DPG Surveys. This will be investigated at the end of the field season, to determine a more consistent standard value for the material. A full report of the Standard results over all geochemical surveys conducted for 2012 will be available at T:\1. Data\1.7 Research & Development\1. Geochemistry\6. DPG Techniques\1. Field Programmes\1. Field Programmes\2012 QAQC Performance.

3.2.2 Blanks

Blank analyses have been randomly inserted throughout the sample run and analysed for each method. The blank material is a barren quartz mix which is has been thoroughly tested for and is certified as an ALS Laboratories blank for Gold Exploration.

Theoretically all Blank material should have minimum concentrations of trace elements and major elements and should be barren of any mineralisation associated elements.

Therefore the blank QAQC parameters are set at 0 (lower limit) and 2x the Detection Limit (upper limit). For a blank to pass the QAQC it must fall within these two values.

The Blank material performed well. The detection limits of the method are so low that the material appears to not be completely barren for ppb level concentrations of all assayed elements. It is unlikely that other barren material will be any less responsive at a ppb scale; therefore ABM will continue to monitor the background level of the blanks over multiple surveys and should be able to pick outliers indicating contamination in the process.

3.2.3 Field Duplicates

Duplicates were taken at every 25th sample site for the soil survey. The Standard deviations or error allowable for each element has been determined by the detection limit for each element.

The results for Gold are displayed in Table 1 below.
Theoretically each duplicate sample should fall within the allowable range of detection for each individual element analysed for. Naturally there will be some variation in analyte concentration even within a single sample split for several methods. If the majority of elements passed with a few pathfinder elements failing in one or two duplicates within each sample batch, this is acceptable and can be attributed to the natural variation in analyte concentration.

The Ionic leach duplicates show a lot of variation (Figure 3), with the detection limit so low natural variation may be larger than the allowable range of detection for the Ionic leach; therefore the allowable range has been adjusted to 2 x the detection limit (0.00004 ppm).
Table 1. Gold results for duplicate samples, Bonita Geochemical Survey.

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4. Results

4.1 Laboratory Results

4.1.1 Ionic Leach
The Ionic leach has been increasingly used in exploration geochemistry over a traditional aqua regia digestion with ICPAES finish. The Ionic leach targets the loosely bound water soluble salts, acetate soluble secondary minerals, carbonates and limited Manganese oxides.

The method involves the use of a static sodium cyanide leach using chelating agent's ammonium chloride, citric acid and EDTA with the leachant buffered at pH 8.5. The solution is finished off with ICP-MS. A pH reading of the final solution is taken at the end of each analysis. A total of 63 elements will be analysed for with the Ionic leach method (ME-MS23).

Probability Normal Plots
The Ionic leach methods generated no response above detection limits for the following elements; Bi, Re & Sb.
Stepped or poor responses occurred for 9 of the elements including; Cd, Hf, Hg, In, Pt, Ta, Te, W and Zn.

Figure 4. Probability Normal Plot showing stepped and poor data response for elements for the Ionic Leach.

Good analytical Response is shown for the remaining elements (Figure 5).

Figure 5. Probability Normal Plot showing good data response for elements for the Ionic Leach.

Response of Elements over mineralisation – Line plots comparing methods
The sampling grid was been broken into 26 lines for sampling. The response of elements over these lines has been investigated and interpretations incorporated into the final conclusions and recommendations.

4.1.2 Au_ICP21 – Fire Assay with ICPMS finish

The Au_ICP21 method is commonly used for rock chip and drill chip samples for brown fields and Greenfields exploration. ABM will be running the Au_ICP21 method alongside the Ionic leach to test for high grade, usually ppm range gold that would normally be much higher than the limits of the leach. The Fire Assay method reaches detection limits down to 0.001 ppm so will also be used to compare the accuracy and solidify the results of the Ionic leach. Au_ICP21 will only report a Gold value for the exogenic and endogenic signal, therefore giving a result of gold ppm for the entire sample including any in the matrix material.

Probability Normal Plot

![Probability Normal Plot](image)

Figure 6. Probability normal plot for Au - Au_ICP21 method.

Figure 6 shows a stepped response which can be attributed to the low levels of Au in the sample. Greater than 50% of the samples are at or below detection at 0.001 ppm and the remainder were highly quantised. The method is therefore not sensitive enough to pick up the level of detail that the Ionic leach does. Maximum Au response is 0.025 ppm.

4.2 Evaluation of Laboratory methods

Figure 7 illustrates the key differences between the Ionic leach (Left) and the Fire Assay Au results (Right).
Figure 7. Au ppm - ME-MS23 Ionic Leach method (Left) compared to the results of the Au_ICP21 Fire Assay Result(Right).

The Ionic leach highlights a trend of anomalism down the western margin of the survey, unfortunately edge effects (because the grids tendency to emphasise the margins) make the grids appear skewed to the right. The anomalism appears less skewed in point data (Figure 10). The Fire assay data is inconsistent with the Ionic leach data, and the majority of the data is at or below detection limits (0.001 ppm). It is difficult to draw any conclusions or spatial relationships with the highly quantised fire assay results.

A clustered anomaly in the south-western corner of the survey assayed with the highest Ionic leach gold value for the Bonita at 0.00031 ppm; slightly less than the buried mineralisation confirmed in the Buccaneer Orientation study.
5. Interpretation of Laboratory Results and Discussion

5.1 Multielement response across mineralisation

The multielement data from the Ionic leach results were gridded and compared with the mapped and interpreted geological controls of the region. The data shown in the images below shows extrapolation between the gridded sample points, this is to exaggerate the subtle responses in the geochem and to "model" the relationship between the gridlines. All data interpretation was conducted firstly on a line by line basis. The interpolation between the lines is by no means concrete and it must be acknowledged that there is a 500m gap between the data points and between lines.
Figure 9. Schematic map showing the Gold response over the Bonita grid (BO_GS1). The lines illustrate the interpreted regional structural trends. The results are gridded in ioGAS using unequal percentiles (0/30/60/80/90/95/98/99/100%).
The response to mineralisation for all of the elements analysed for (excluding those with no response) is available in Appendix 2.

The Ionic leach highlights a trend of anomalism down the western margin of the survey, unfortunately edge effects (because the grids tendency to emphasise the margins) make the grids appear skewed to the right. The anomalism appears less skewed in point data (Figure 10).

![Gold response from BO_GS1](image)

**Figure 10.** Gold response from BO_GS1. The results are thematically mapped in ioGAS using unequal percentiles (0/30/60/80/90/95/98/99/100%).

The elevated gold response is spatially coincident with elevated (above background) Ag, As, Sc, and Tl; although not all samples anomalous in these elements exhibit elevated gold results as well (Figure 11). The Arsenic response is slightly displaced and shows an occasionally inconsistent signature across mineralisation. Molybdenum occurs at the periphery of the mineralisation response. This is a common occurrence across the 2012 DPG geochemical surveys in the Bonanza tenements and needs to be looked into further at the close of the sampling season.
Figure 11. Mineralisation Pathfinders showing spatial response across the Bonita (BO_GS1) Geochemical Survey.
Thallium follows the trend of mineralisation and is can be associated with iron pyrite part of a suite of minerals potentially associated with Gold mineralisation. An important feature of thallium is that it is enriched in the sericite of the wall-rock alteration zones of various deposits, especially gold-quartz veins and lodes (Boyle, 1974). Alternatively Thallium can exhibit a slight enrichment in some potassic feldspars in pegmatite and granites; the former being the most likely option for the magnetic and geological interpretations for Bonita. The origin of the Thallium response at Bonita cannot be concluded exclusively from the soil survey results however it does support the local mineralisation signature. Further investigation needs to be undertaken to define the relevance of this anomaly to the mineralisation.

Figure 12. Sedimentary pathfinder’s spatial response across the Bonita Geochemical Survey.
There is a distinct inverse relationship between the sedimentary and igneous pathfinders (Figures 12 & 13). The standard sedimentary pathfinder’s element (including Cs, Ce, Be and Hf), map spatially separate to the majority of the igneous pathfinders (Ni, Ca, Ba, Ga, Gd and Sr).

These observations and hypotheses will need to be validated and verified in the field and followed up with drilling for absolute confirmation of the litho-geochemical observations discussed in this report.
Figure 14. Left: Thematic map of hypothesised igneous (green) and sedimentary (brown) geology, overlain with mineralisation (crosshatched) and gold response with red dashed line, based on geochemical pathfinders. Right: Interpreted geology map based on regional magnetics, 500K North Arunta Map sheet NTGS.
The thematic map above (Figure 14) outlines the key areas of sedimentary and igneous lithology hypothesized from the survey results by the geochemical signal for key pathfinder elements. The cross hatched black polygon marks the proposed extent of mineralisation not only based on gold assays but also the mineralisation pathfinders and the red dashed line the anomalous gold response (Figure 11).

It is difficult to establish the litho-geochemical signature of the underlying geology when there is little understood about the prospect. As mentioned previously outcrop is scare, as is historical data and transported cover is extensive. At best the mineralisation can be interpreted as trending on the margins of the interpreted dolerites or BIF. However if the magnetic anomalies were BIF the igneous pathfinders theoretically should/should not correlate. Further investigation needs to be undertaken to define the relevance of this observation to the underlying lithology and mineralisation.

5.2 Low Detection geochemical method comparison (ME_MS23 vs. Au_ICP21)

The two methods show limited spatial correlation with the maximum Au results.

The Ionic leach highlights a trend of anomalism down the western margin of the survey, unfortunately edge effects make the grids appear skewed to the right. The anomalism appears less skewed in point data. The Fire assay data is inconsistent with the Ionic leach data, and the majority of the data is at or below detection limits (0.001 ppm). It is difficult to draw any conclusions or spatial relationships with the highly quantised fire assay results.

5.3 Charcoal sorbtion effects (Burnt vs non-burnt sampling sites)

The laboratory trials (Buccaneer Orientation Study 2011) of the ashing of samples provided improved resolution for some elements but volatiles like Arsenic were significantly reduced. The aim was to determine the influence of charcoal on the Low Detection Geochemistry results. Charcoal is highly sorbtive for both organic and inorganic ions. Historically there has been little consideration for the metal scavenging effects of charcoal in soils and how this may affect geochemical exploration. It was concluded that academically this is an interesting concept however from an exploration point of view not feasible at this stage.

Subsequent to the ashing trails in 2011, ABM has recognised that the charcoal in soils and bush fires themselves can have a significant effect on the geochemical signature of samples. Therefore standard geochemical protocol now requires samplers to identify and log sample sites that have recently been subjected to fire and/or contain charcoal in the soil sample. These observations will be spatially mapped and compared to the geochemical patterns observed from the assays to see if a relationship can be established.
Figure 15. Recent weather events including evidence of recent fires observed over the Bonita regional Geochemical Survey.

A total of 4 sample sites were recorded as having been effected by fire or having some evidence of charcoal in the micro-layer of the soil. These sites were primarily on the boarders of the sampling grid to the west (red, blue and green data points – Figure 15). The volatile elements have the potential to be the most affected by seasonal fires although the gold response and arsenic response appear to be spatially unaffected by the burnt sample locations.

A total of 230 sample sites were recorded as having been rained upon in the last few days. However dewy and rainy weather did not affect the sampling as the survey was paused at the onset of rain (or delayed in the case of dew) and resumed when the soil sample was dry and dusty again at a depth of 10cm.
5.4 Effect of observed sampling variables

ABM Resources records the following sampling variables and any other unusual observations for each sample site during a geochemical survey.

Sampling variables with potential influence on geochemical response to mineralisation.

1. Regolith
2. Lithology (if observed)
3. Alteration
4. Local Terrain
5. Local Vegetation
6. Elevation
7. Slope-dip
8. Recent Weather events (discussed in 5.3)

These observations were spatially mapped and compared to the geochemical patterns observed from the assays to see if a relationship could be established.

Previous 2012 surveys over the Tanami have highlighted the effectiveness of combining the grouping Regolith, Lithology, Alteration and Terrain, Vegetation together (Figure 16) for more meaningful results enabling ABM to draw decent conclusions on the influence of these parameters. The following figures (16-18) illustrate the response of Gold in relation to the changing variables however the response of all elements has been assessed.

There was little variation in the combined regolith/lithology/alteration and terrain/vegetation (Figure 14) over the Bonita survey, 99% of the samples were recorded as Sand with haematite alteration and 71.5% Sand plain, with hummock grassland. The elevated gold response coincides most commonly with the dominant regolith-lithology-alteration and terrain-vegetation characteristic. No further conclusions can be drawn.

The regolith/alteration/lithology and terrain/vegetation characteristics of the survey are both independent of mineralisation; however the mineralised response appears most commonly with such a sample description. These sample descriptions do not pre-determine an anomalous gold response.

The elevation data is blocky and unreliable; the data collected appears to be reflecting variations between GPS units, highlighting sampling transits and not actual variation in RL (Figure 15). No further conclusions can be drawn with this data.

No variation was recorded for the Slope-dip. The Slope-dip recorded by field staff appears to be vastly different from the GPS recorded Elevation, moving forward elevation (or RL) need only be collected.
Figure 16. Left: Variation in Regolith, Lithology and alteration underlain by the Gold results from Ionic Leach over the Bonita Geochemical Survey. Right: Variation in Terrain and Vegetation underlain by the Gold results from Ionic Leach over the Bonita Geochemical Survey.
Figure 17. Left - Elevation variation observed over the Bonita Geochemical Survey. Right – Gold results from Ionic Leach over the Bonita Geochemical Survey.
6. Conclusions & Recommendations

In conclusion the Geochemical Survey over Bonita shows a trend of anomalism down the western margin of the survey, unfortunately the survey was not completed in 2012 leaving open the question of the extent of such anomalism to the far west of the survey area. The Fire assay data is inconsistent with the Ionic leach data, and the majority of the data is at or below detection limits (0.001 ppm).

A clustered anomaly in the south-western corner of the survey assayed with the highest Ionic leach gold value for the Bonita at 0.00031 ppm; slightly less than the buried mineralisation confirmed in the Buccaneer Orientation study. Considering that the transported cover is extensive over this area and there is little outcrop this anomaly is significant.

The anomalism at Bonita is spatially coincident with elevated (above background) Ag, As, Sc, and Tl. The Arsenic response is slightly displaced and shows an occasionally inconsistent signature across mineralisation. Molybdenum occurs at the periphery of the mineralisation response.

It is difficult to establish the litho-geochemical signature of the underlying geology when there is little understood about the prospect. A distinct inverse relationship was observed between the sedimentary and igneous pathfinders (Figures 12 & 13). Outcrop is scarce over the survey area, as is historical data, and transported cover is extensive; providing a difficult terrain for geochemical surface techniques and little solid geological information for interpretation of results. At best the mineralisation can be interpreted as trending on the margins of the interpreted dolerites or BIF. However if the magnetic anomalies were BIF the igneous pathfinders theoretically should/would not correlate. Further investigation needs to be undertaken to define the relevance of this observation to the underlying lithology and mineralisation.

These observations and hypotheses will need to be validated and verified in the field and followed up with drilling for absolute confirmation of the litho-geochemical observations discussed in this report.

Recommendations:

Due to the incomplete nature of the survey and the compelling anomalism on the western margin of the survey it is strongly recommended that in 2013 the remainder of the sampling programme be completed in order to fully investigate the nature of the western anomalism.
7. References

Lambeck, A., Huston, D., Maidment, D., Southgate, P., 2008. Sedimentary geochemistry, geochronology and sequence stratigraphy as tools to typecast stratigraphic units and constrain basin evolution in the gold mineralised Palaeoproterozoic Tanami Region, Northern Australia, Precambrian Research, 166, 1-4, 185-203.


APPENDICLES
APPENDIX 1. Assay Techniques

Assay techniques – ALS Laboratories Descriptions

Ionic leach
SEL-ION - Digestion for ionic leach
pH-MS23 - pH of MS23 Leach solution is measured.
ME-MS23 - pH controlled IONIC Leach - Complete Package

Au-ICP21
FA-FUSPG1 - Fire assay fusion - lead flux with Ag collector - for Pt, Pd and Au. Nominal sample weight 30 g. FA Fusion for Pt Pd Au - 30g.
Au-ICP21 - Au by fire assay and ICP-AES. 30 g nominal sample weight. Au 30g FA ICP-AES Finish
APPENDIX 2. Multielement Response

The multielement data from the ionic leach results were gridded and compared with the mapped and interpreted geological controls over the Bonita survey.

Schematic map showing the Gold response over the Bonita grid (BO_GS1). The lines illustrate the interpreted regional structural trends. The results are gridded in ioGAS using unequal percentiles (0/30/60/80/90/95/98/99/100%).
As ppm
Fe_ppm
La_ppm
Mg_ppm
Mo_ppm
Nd_ppb
Rb_ppm
Sc_ppm
Sm_ppb
Sn_ppm