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Porphyry copper- gold target at Crater Mountain identified from Airborne Geophysical Survey

- Airborne geophysics combined with drill hole petrology identifies possible location of porphyry copper-gold intrusion inferred from Nevera Prospect drilling at Crater Mountain
- Porphyry copper-gold target interpreted as NE-SW trending intrusion with a possible SW plunge that lies immediately east of and borders the Nevera drilled area
- Aeromagnetic data indicates potential for the copper and gold mineralisation to be preserved closer to surface in the east
- The Mixing Zone inferred gold resource flanks the identified porphyry target on the northwest
- It is expected that the causative intrusion for the porphyry mineralisation is also responsible for the Mixing Zone mineralisation
- 7 additional major magnetic targets identified regionally requiring ground follow up, including 1 in southwest Nevera Prospect and 3 in Masi Prospect

Crater Gold Mining Limited (ASX: CGN) ("CGN" or "the Company") has received very positive results from the magnetic and radiometric data derived from the detailed helicopter-borne geophysical survey conducted over its Crater Mountain tenements earlier in the year. The results identify a possible location of a porphyry copper-gold intrusion immediately east of the area that was drilled at Nevera in 2011/12 and which delineated a large volume of Mixing Zone mineralisation in which 790,000oz gold has to date been classified in an inferred resource category (Figure 1).

CGN Exploration Director, Peter Macnab, commented *"The results of this Airborne survey are extremely encouraging as they now put in context the large porphyry potential of the Crater Mountain area. The drilling in early 2012 gave a glimpse of that potential. These recent results expand that potential and enable us to better target what appears could be another world class PNG mineral system.*

The interpreted location of the source intrusion for the porphyry copper-gold and Mixing Zone mineralisation, lying immediately to the east of the drilled area, is extremely encouraging. The aeromagnetic data also indicates that copper and gold mineralisation might also be better preserved at shallower depths in the east."

CGN's Crater Mountain project is in the Eastern Highlands of PNG. PNG is host to some of the largest porphyry copper-gold projects in the world such as Ok Tedi (14Moz Au/4.8Mt Cu), Wafi/Golpu (26.6Moz Au/9Mt Cu), and Frieda River (18.3Moz Au/11.8Mt Cu). The Wafi Golpu project lies 150km ESE from Crater Mountain.

Exploration to date at Crater Mountain has identified four prospects, Nevera, Awanita, Masi Creek and Nimi, with Nevera being the focus of 90% of the exploration efforts to date.

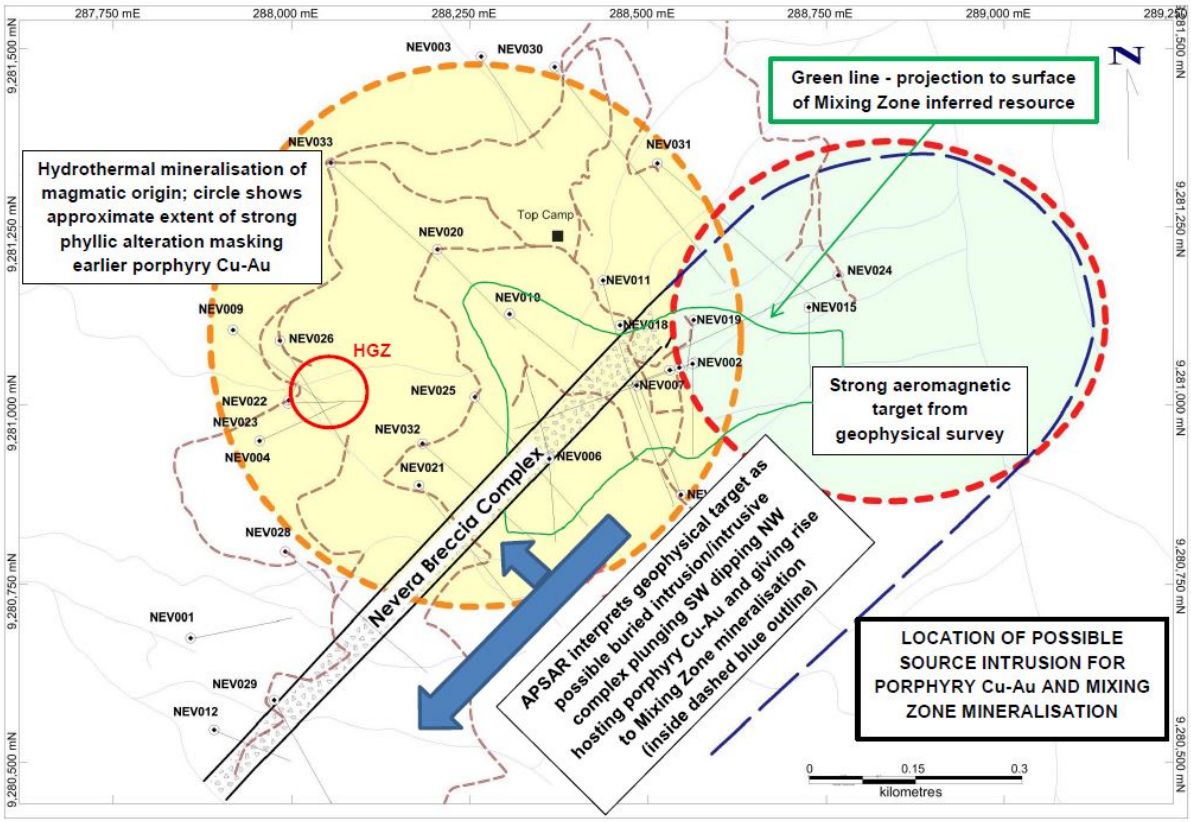

Figure 1 - Possible source intrusion for Porphyry cu-au and Mixing Zone mineralisation

Note: Nevera Breccia Complex is a linear predominately intrusive breccia complex along the NW margin of the APSAR interpreted intrusion.

A helicopter-borne aeromagnetic and radiometric survey was conducted over a major part of the Company's Crater Mountain tenement block between early February and April, 2013, covering approximately 200 square kilometres of rugged terrain. The survey was conducted flying north-south survey lines with 100m spacing and east-west tie lines with 1,000m spacing, with an average terrain clearance of 43m above canopy or approximately 90m above ground level measured by radar altimeter.

After acquisition was complete the data set was levelled by the geophysical contractors before delivering it to the Company's consulting geophysicist Mr Kim Frankcombe of Perth-based ExploreGeo Pty Ltd for analysis by various software programs and final interpretation.

The regional geophysical results outline magnetic intrusions and areas of magnetite destruction or non-magnetic cover, as well as magnetic lineaments, and highlight 8 targets for follow up that are considered likely to be intrusion-related, including one (CM-2) immediately east of the drilled area in the Nevera Prospect (Figure 10 & 11). Other targets include one in the southwest of the Nevera Prospect, as well as 3 in the Masi prospect. They are interpreted as being largely intrusion-related with several possibly skarn-related in origin and may host associated mineralisation.

Following completion of his processing and interpretation Mr Frankcombe reported his conclusions to the Company and this report was passed on to geologist and petrologist Mr Anthony Coote of APSAR in New Zealand who focussed particularly on relating the airborne geophysical results to the porphyry copper-gold potential of the drilled area within the Nevera Prospect, which he had previously studied closely in drill core.

By combining the results of the geophysical survey with data drawn from the petrology of drill core, Mr Coote has been able to draw conclusions as to the likely location of the source intrusion hosting the early porphyry copper-gold mineralisation which also gave rise to the magmatic fluids responsible for the Mixing Zone mineralisation at Nevera (Figures 6 & 7). These results point to a northeast-southwest trending quartz diorite/tonalite intrusion or intrusive complex flanking the drilled area in the southeast with a possible southwest plunge and northwest dip.

An appendix with further analysis follows this statement.

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Competent Person Statement

The information contained in this report relating to Exploration Results and Mineral Resources at Crater Mountain PNG is based on information compiled by Mr P Macnab, Non-Executive Director of Crater Gold Mining Limited. Mr Macnab is a Fellow of The Australian Institute of Geoscientists and has the relevant experience in relation to the mineralisation being reported upon to qualify as a Competent Person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Macnab consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

Appendix

Aeromagnetic Interpretation of the Possible Source for the Nevera Prospect Mixing Zone and Porphyry Copper-Gold Mineralisation

APSAR reviewed ExploreGeo's analyses and interpretations of the airborne geophysical data covering the Nevera Prospect in the light of their previous detailed petrological studies of rocks from the various drilling campaigns conducted on the Prospect.

APSAR's Mr Coote concluded that the Company's Mixing Zone mineralisation which is mostly intrusion-breccia hosted, low-sulphidation epithermal/mesothermal-style base and precious metal mineralisation flanks a NE-SW trending and possibly southwest plunging (towards NEV017) quartz diorite/tonalite porphyry intrusion or intrusive complex, located immediately to the east of the drilled area and identified in ExploreGeo's Mr Frankcombe's report as his magnetics target CM-2 (Figures 2 to 4 below).

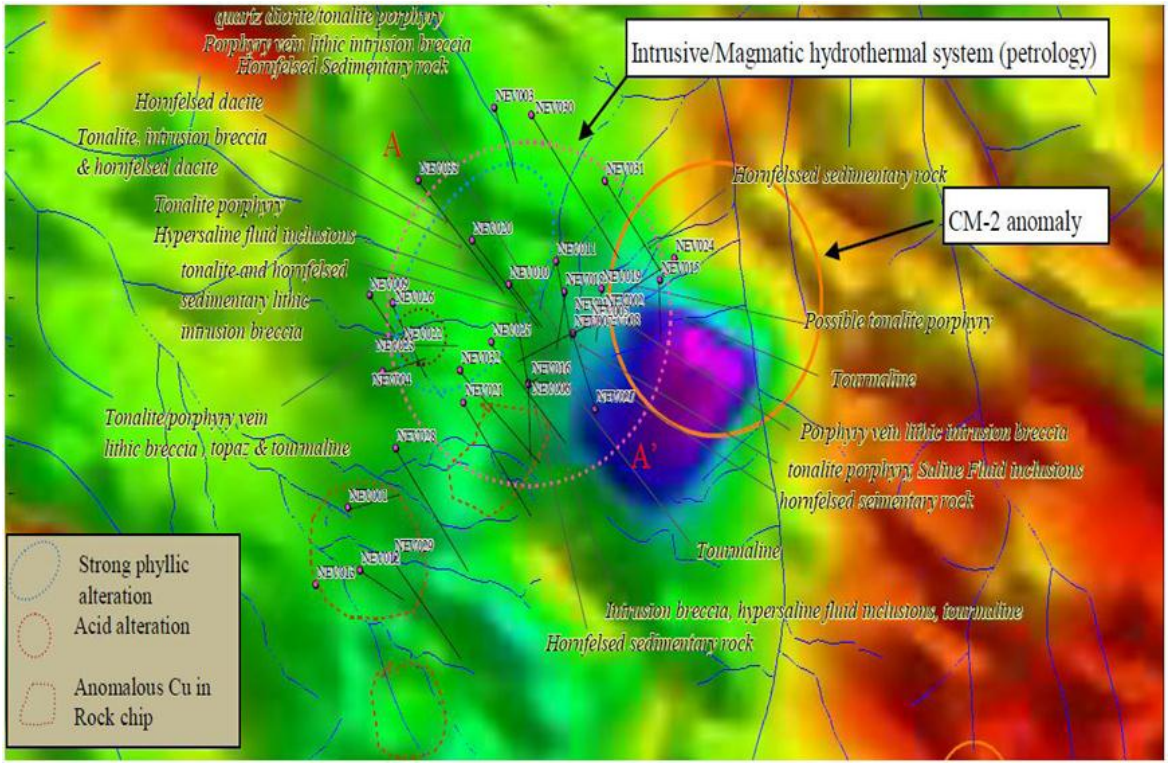

Figure 2 - TMI/RTP image displays CM-2 as negative magnetic field anomaly E of mineralised intrusive/magmatic hydrothermal system

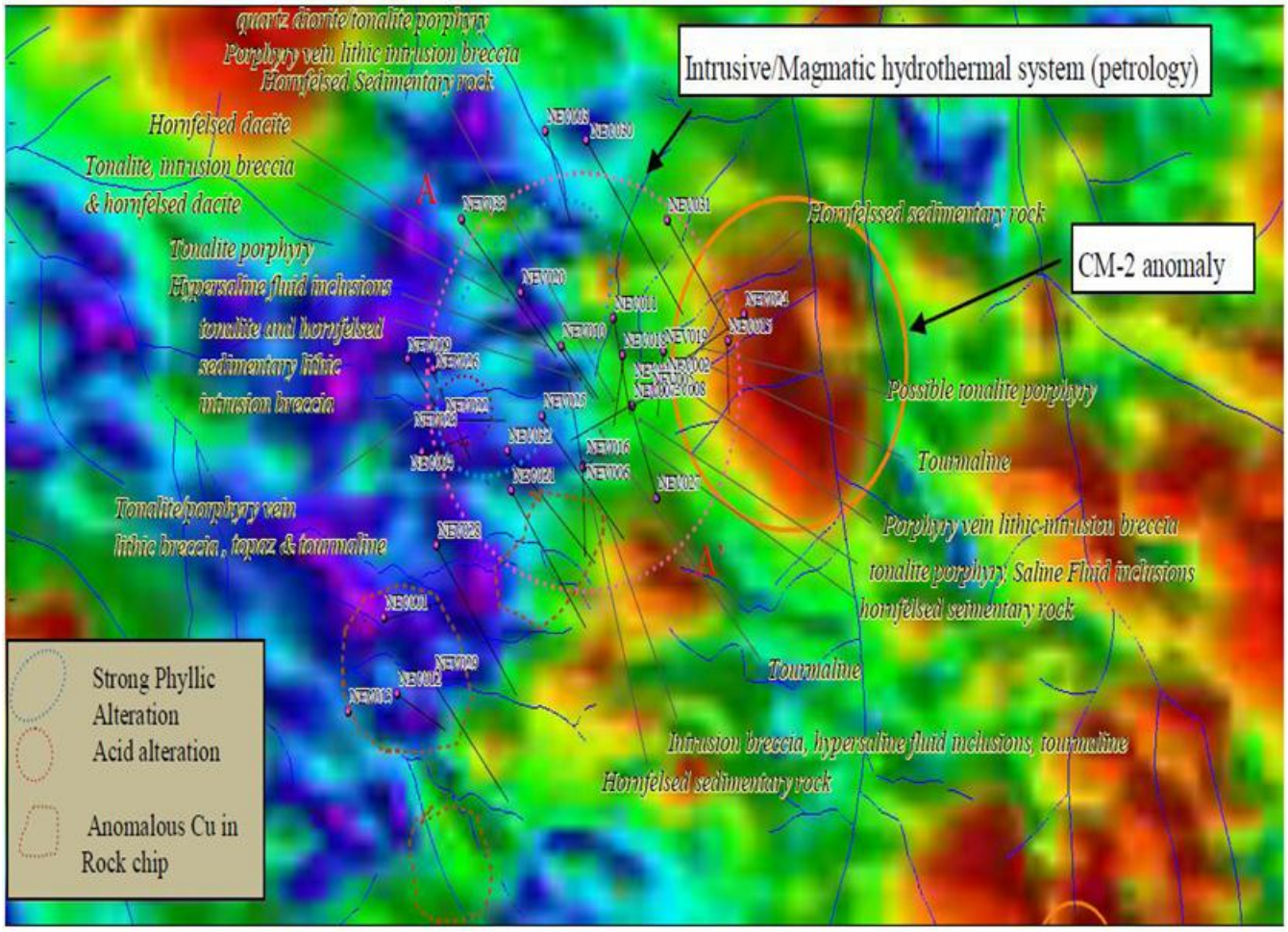

Figure 3 - TMI/AS image displays CM-2 as positive magnetic field anomaly E of mineralised intrusive/magmatic hydrothermal system

Regarding the porphyry copper-gold target Mr Coote noted *"protore porphyry copper-gold mineralisation is likely to persist and become more consistent in tenure with depth in the domain of currently concentrated drilling. Aeromagnetic data indicate that immediately to the east of the currently drilled ground, primary magnetite-destructive retrograde hydrothermal effects are less or not in effect, and the integrity of porphyry style copper-gold mineralisation temporally and spatially associated with quartz diorite/tonalite porphyry rock types is likely to be better preserved at all levels of investigation"*.

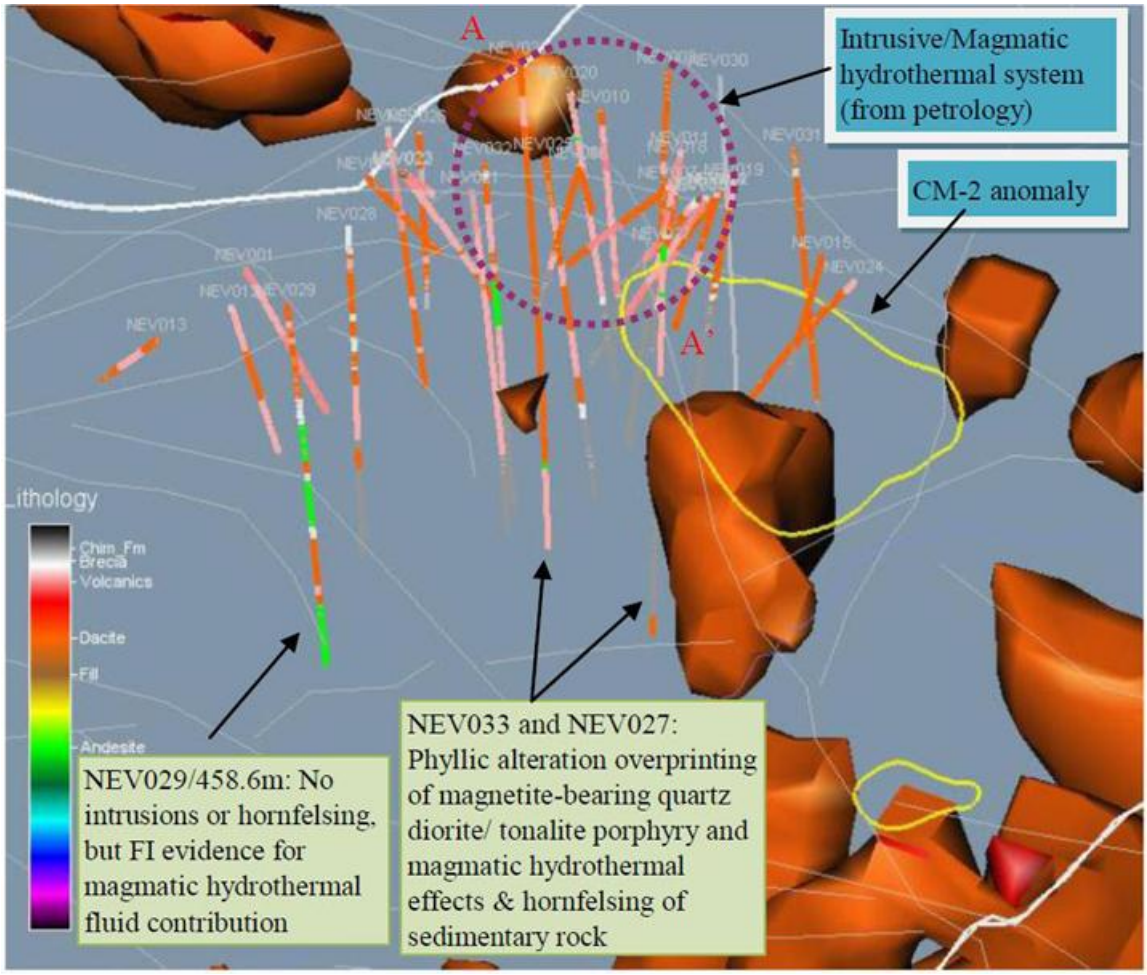

Figure 4 - 3D inversion model shows CM-2 with petrologically defined intrusive/magmatic hydrothermal system (oblique view from the SE)

Mr Coote based his interpretation of a southwest extension and plunge for the causative quartz diorite/tonalite porphyries on his examination of fluid inclusions in drill hole NEV029 (Figures 4, 5) which he believed demonstrated proximity to the intrusions. He further noted "*The northeast-southwest trend and southwest plunge are supported in the 3D inversion model (Figure 10), representing a magnetite bearing intrusion with magnetic remanence. A similarly orientated magnetic intrusion emplaced during magnetic field reversal appears to be defined by the CM-9 anomaly*". CM-9 lies west of the isolated drill hole NEV017 in the southwest of the Nevera Prospect (Figure 5).

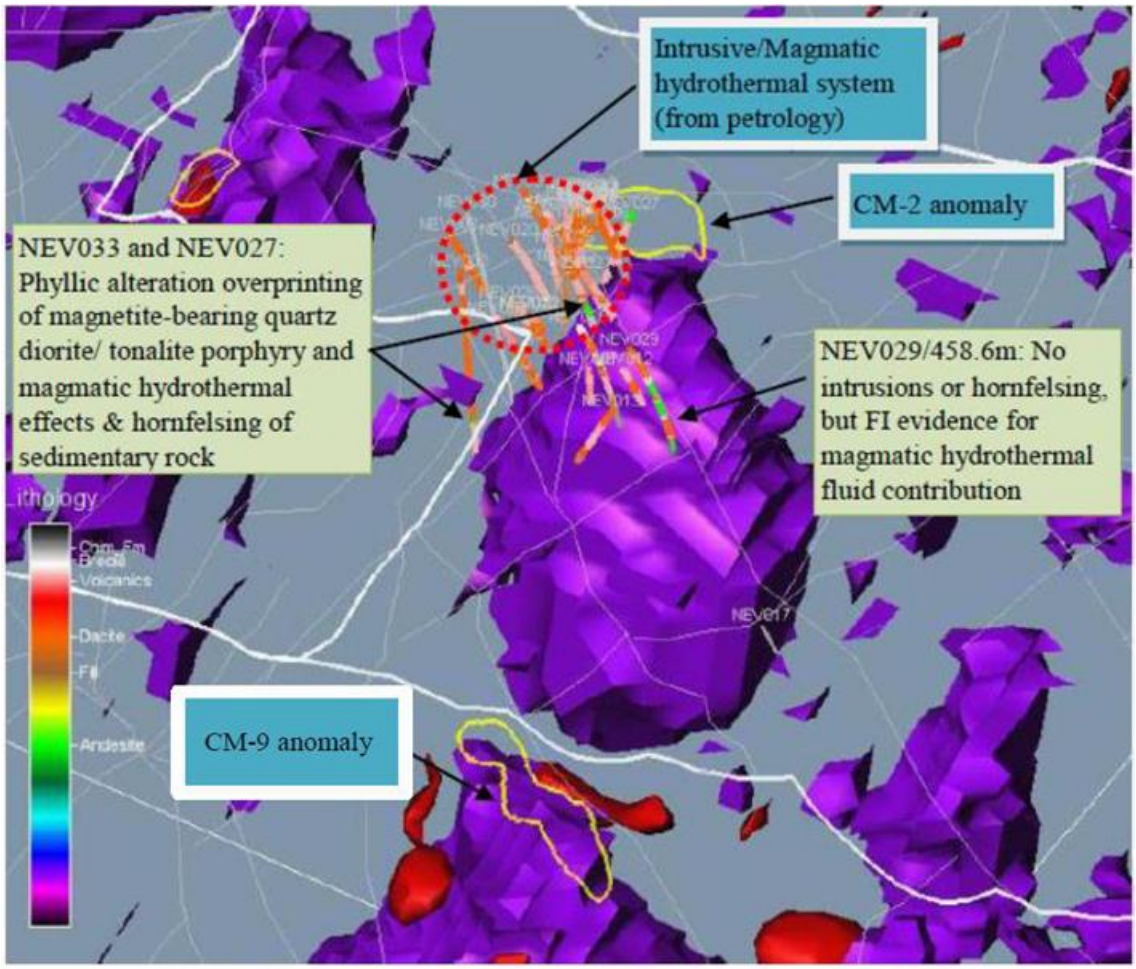

Figure 5 - 3D inversion model defining possible NE-SW trending magnetite bearing intrusive rocks (oblique view from the SW)

Mr Coote summarised his conclusions in the following diagrams, Figures 5 and 6

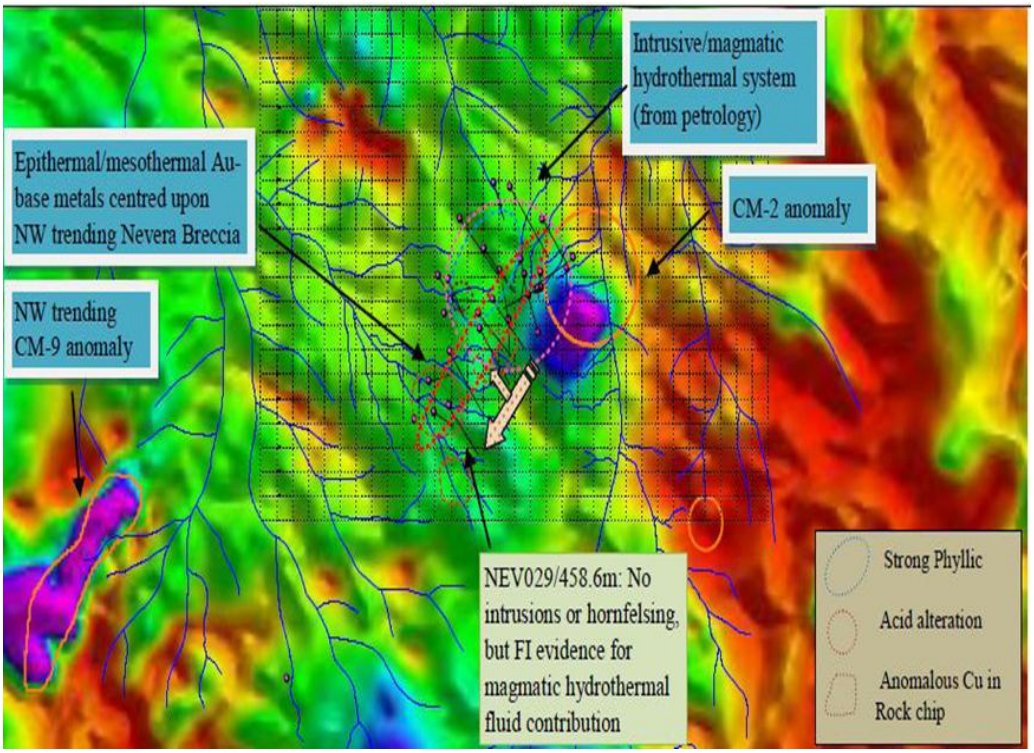

Figure 6 - TMI/RTP image showing projected SW plunge and NW dip of causative intrusion and related intrusive breccia

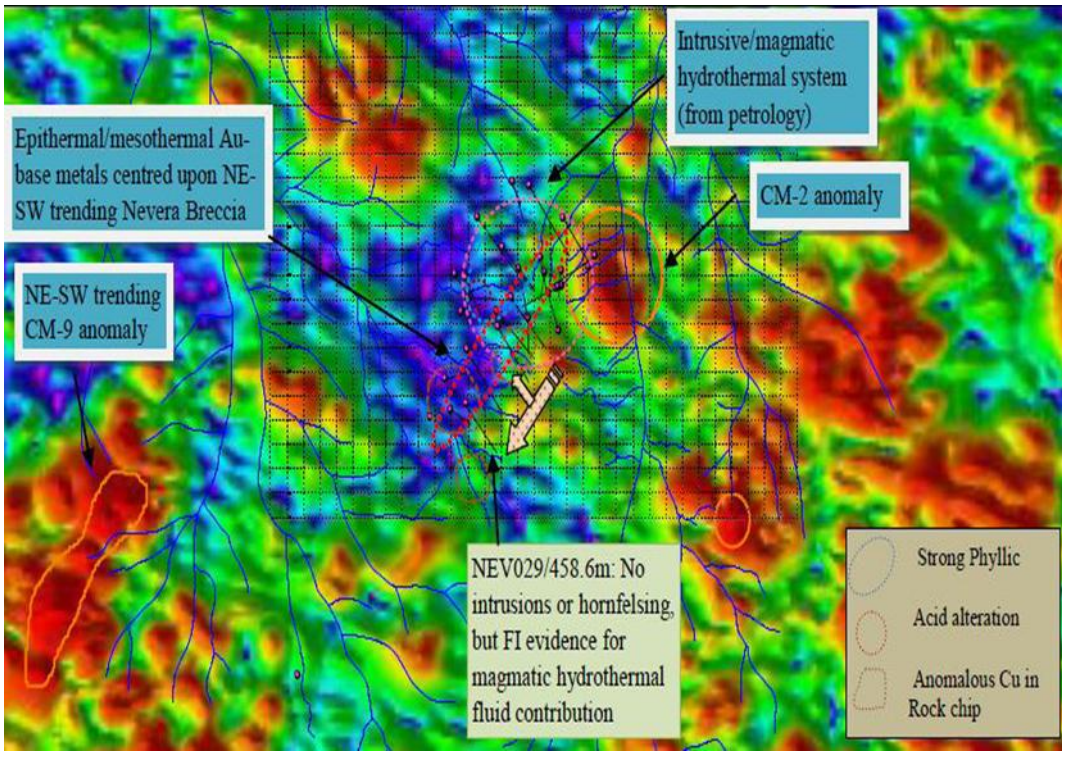

Figure 7 - TMI/AS image showing projected SW plunge and NW dip of causative intrusion and related intrusive breccia

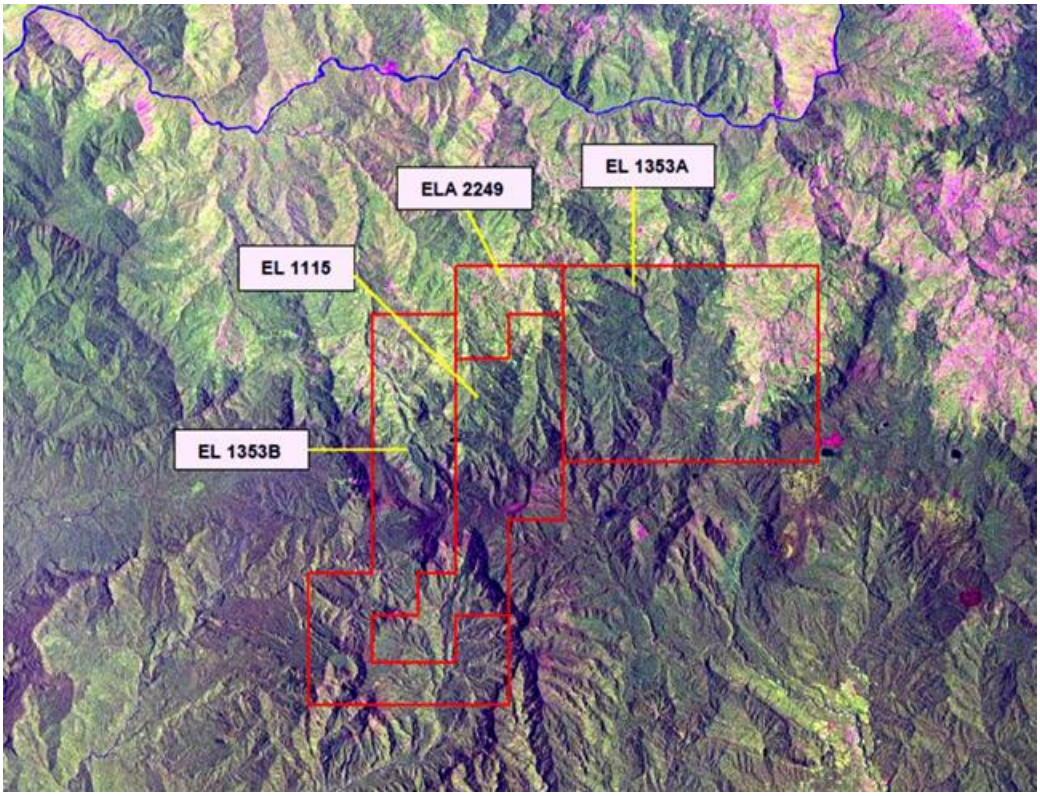

Figure 8 - Landsat image of the Crater Mountain area showing tenement boundaries

In addition to the geophysical outcomes, a detailed Digital Terrain Model was derived from the helicopter elevation data (see Figure 9 below); this will be analysed in detail using appropriate software to extract structural data expressed in the topography.

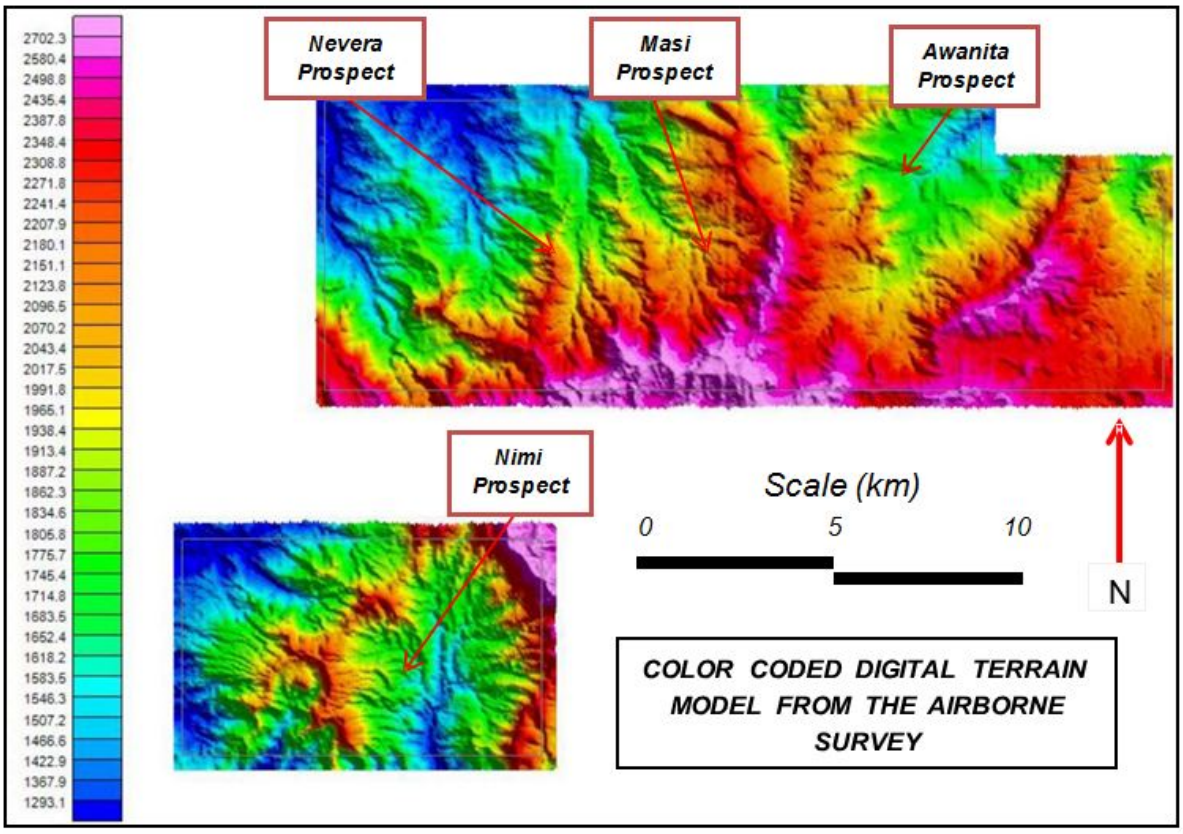

Figure 9 - Digital Terrain Model of the surveyed area (elevations are colour coded from blue - below 4,200feet/1,290m asl - to pink - above 9,000 feet/2,740m asl)

Geophysical Interpretation

ExploreGeo processed and imaged the levelled data to produce a suite of derivative products, using a variety of software packages. The two blocks were also merged with earlier surveys flown by Esso in 1984 (which covered a small part of the tenement block with 200m line spacing but poor quality) and Fugro from 2006 to 2007 (which covered the whole of the tenement block as part of an EU assistance program over the entire western part of the Highlands region, but at 500m line spacing and 100m above canopy so the data are too coarse for detailed prospect identification). Once merged, the data were re-imaged, again generating a suite of derivatives, each of which has a particular application.

Magnetics

In introducing his report Mr Frankcombe commented as follows…… "The magnetic images have been interpreted to extract lineaments as well as magnetic features which appear to come from a confined body with some depth extent, hopefully a magnetic porphyry. In addition the vertical derivative images have been used to outline areas where the magnetic units are either under cover or where the magnetite has been destroyed. Identification of magnetite destruction is important as epithermal systems typically exhibit some magnetite destruction".

The interpretation of the airborne magnetic survey highlighted structure and areas of magnetite destruction or non-magnetic cover, and a total of 8 magnetic features were identified as requiring ground follow-up (see Figure 10 below).

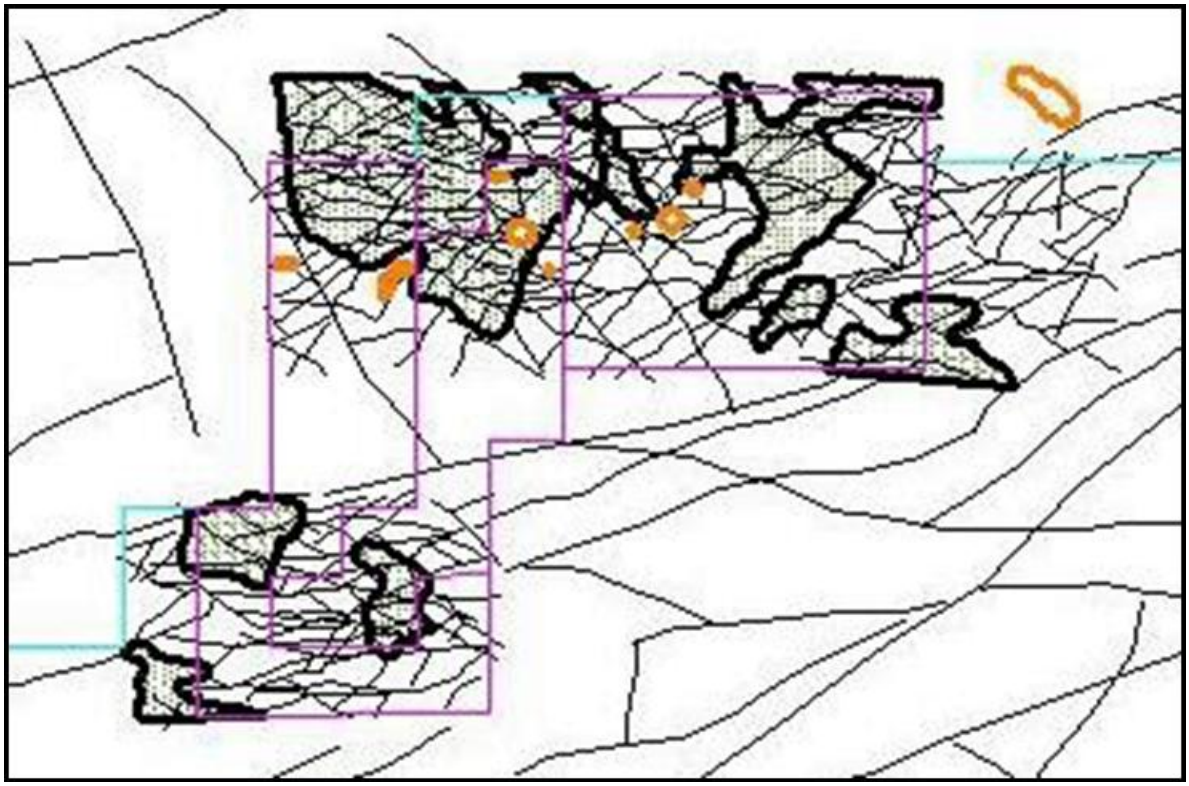

Figure 10 - Magnetic Interpretation Plan showing magnetic lineaments (black), areas of magnetite destruction or non-magnetic cover (green) and possible stock-like bodies (orange)

The 8 magnetic targets identified by Mr Frankcombe include a principal one lying adjacent to the drilled area on the Nevera Prospect (CM-2) and another in the southwest of the Prospect, as well as 3 in the Masi prospect. They are interpreted as being largely intrusion-related with several possibly skarn-related in origin, and may host associated mineralisation.

Mr Frankcombe noted "The Total Magnetic Intensity (TMI) inversion suggests that the most magnetic rocks cluster and appear to be preferentially oriented along linear features trending NNE and NW. Although not picked out on the magnetic imagery as linear features, these trend directions are important as they reflect deep crustal structural breaks similar to those which appear to control mineralisation elsewhere in Papua New Guinea."

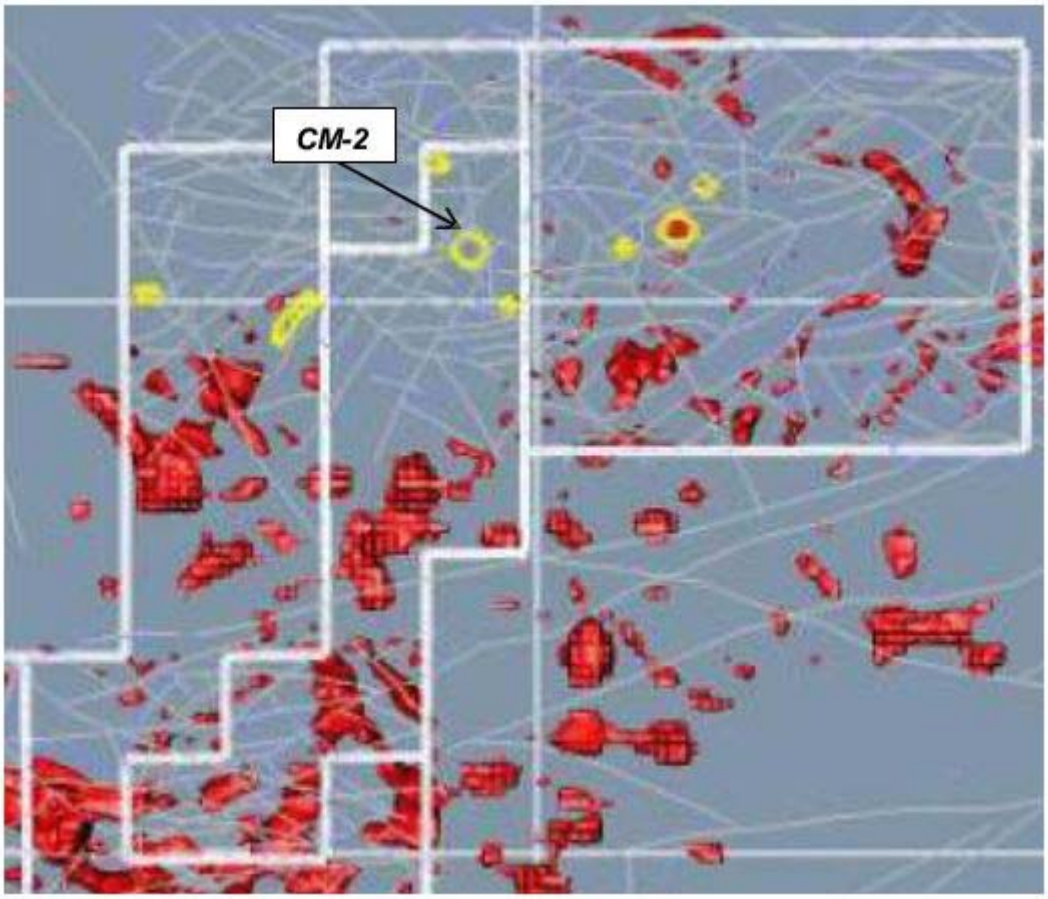

Figure 11 - View from above of interpreted lineaments (white) and stock-like magnetic bodies (red) - note intrusive bodies cluster along NW and NNE trends. Anomalous magnetic targets marked yellow

The 8 stock-like magnetic anomalies will be examined closely in the field as well as areas in which structures indicated by the magnetics have coincident anomalous geochemistry from earlier reconnaissance surveys, particularly those with trends following or splaying from structural orientations regionally favoured by mineralisation.

Radiometrics

In addition to the magnetic data, radiometric data were also acquired. These data measure the amount of gamma radiation from the ground. Because only a few tens of centimetres of soil are all that is required to block a gamma ray, the radiometric data reflect the exposed soil types rather than the underlying geology, however just as soil geochemistry can see below, the soil radiometrics too can allow an inference of deeper features where the exposed soil reflects the material below.

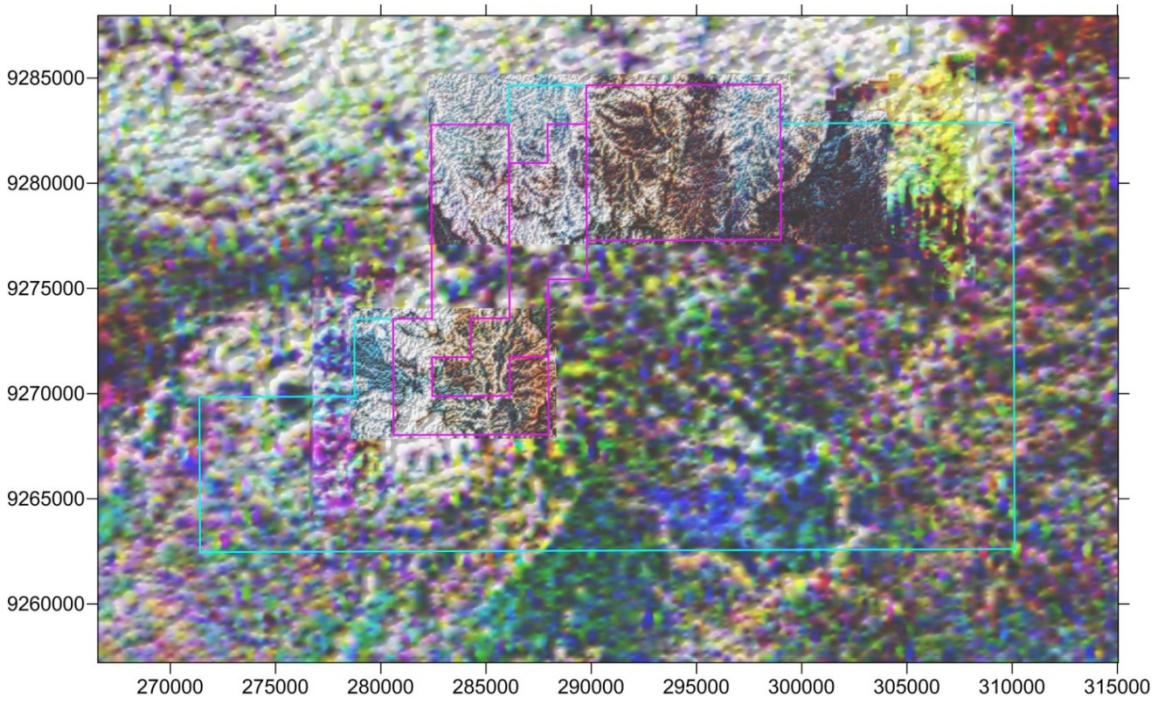

Figure 12- Ternary Radiometric Image (potassium - red, uranium - blue, thorium - green)
Note: Strong contrasts are obvious between different geological areas as are differences between the Crater Gold (fine detail) and Fugro (coarse detail) surveys

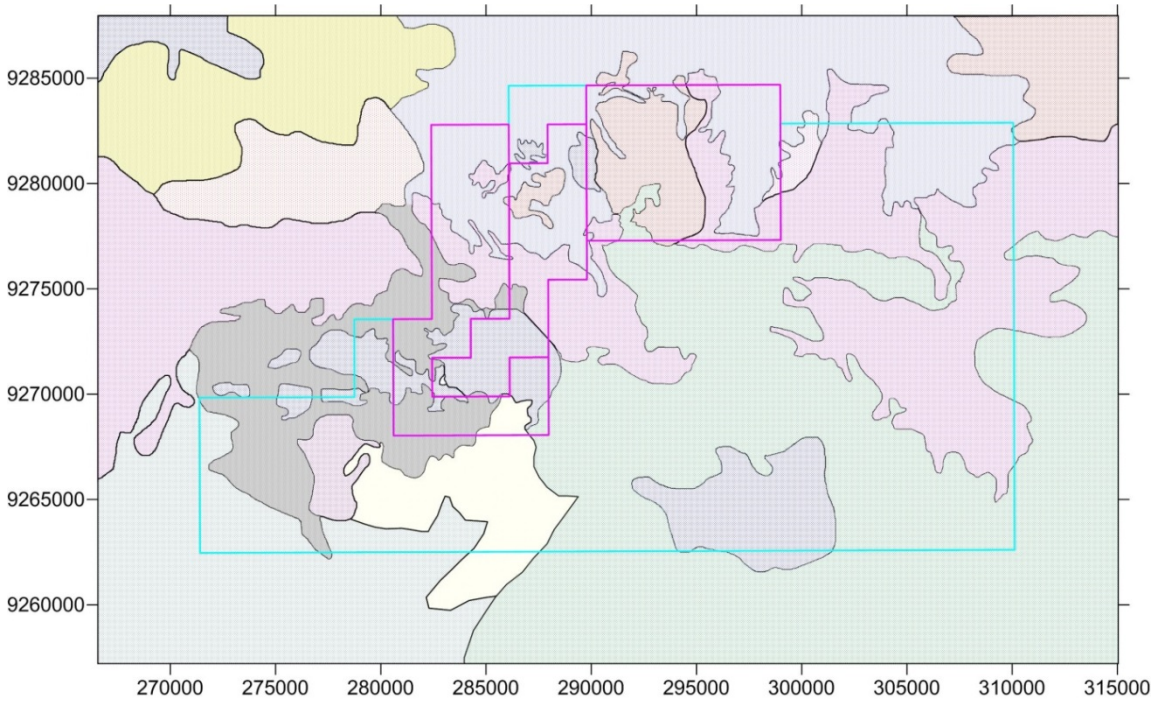

Figure 13 - Soil and exposed rock type interpretation from radiometric data
Note: Colour code based on the dominant radioelement present using the same colour distribution as the Ternary Image.

The above soil and exposed rock type interpretation fits reasonably well with the known geology of this poorly mapped region, and adds further to the geological database.

End