
13 May 2022**AERIAL ELECTROMAGNETIC SURVEY (HEM) TO BE UNDERTAKEN OVER NORTH QUEENSLAND CROYDON TENEMENTS****Summary**

- **HEM survey over all 5 EPM's in QLD**
- **Targeting Gold, Graphite & Polymetallics**
- **Results due in August 2022**

Crater Gold Mining Limited (ASX:CGN) is pleased to announce that it has signed an agreement to undertake a helicopter borne Electro-Magnetic Survey (HEM), combined with aeromagnetic surveying, over all 5 of its Queensland based tenements at Croydon. The contractor engaged for the survey is New Generation Geophysics (NRG) Xcite utilising their Airborne Electromagnetic (AEM) system. The survey is scheduled for commencement early to mid-June this year and is expected to be completed in 7 to 10 days with interpretation results anticipated by August this year allowing follow-up to begin soon after.

The Company holds five Exploration Permits Mining (EPM) in the Croydon region of North Queensland for a combined area of 227.2 km². The EPMs cover 5 priority aeromagnetic anomalies (A1, A2, A3, A5 and A6) interpreted from Government aerial surveys and 3 residual gravity anomalies (G1, G2 and G3) identified from a combination of Government regional ground surveys and detailed ground surveying by the Company (**Figure 1,6**).

Currently, there is strong renewed interest in the Croydon area, particularly for gold, as evidenced by the many small to medium sized exploration companies who have taken up, or applied, for tenements covering most of the Croydon Goldfield and some of its surroundings. Recorded gold production from the Croydon Goldfield has been almost one million ounces. This is considered to offer considerable encouragement as modern day examination of similar worldwide occurrences of this size has often resulted in the discovery of previously unrecognised significant world class +one million ounce hard rock gold deposits.

HEM SURVEYING

HEM surveying is considered to be the optimum technical choice for evaluating the potential of the Croydon tenements as the technique has achieved outstanding success both in Australia and world-wide. The survey will target graphite mineralisation, gold bearing quartz reef mineralisation and polymetallic mineralisation, and is capable of penetrating up to several hundred metres below ground surface. Survey flight lines will be orientated E-W with a N-S line spacing of 400m with 200m infill line spacing where better anomaly definition is required. Excluding 200m infill lines, the survey overall will involve a total of 602 line kilometres of data acquisition.

Detection of gold bearing quartz reefs by the EM technique is dependent on there being a reasonable presence of sulphides associated with the gold mineralisation. However, detection of auriferous quartz reefs, even if they are low in sulphide content, will be enhanced by the fact that the Croydon Goldfield Au occurrences are usually closely associated with graphite mineralisation which provides an excellent EM response. Polymetallic mineralisation, where identified to date at Anomaly A2, is accompanied by pyrrhotite which also provides an excellent EM response.

To the Company's knowledge, detailed aerial EM surveying has not previously been conducted over the Company's EPM's or surrounding regions. However, some ground EM surveying was undertaken in the 1930's to late 1980's and this identified numerous strong EM anomalies within EPM 8795 and along the western margin of EPM 18616 (**Figure 4**).

It is anticipated that the HEM survey may identify extensions to some of the Company's known gold and graphite prospects and it is hoped that new prospects will also be identified.

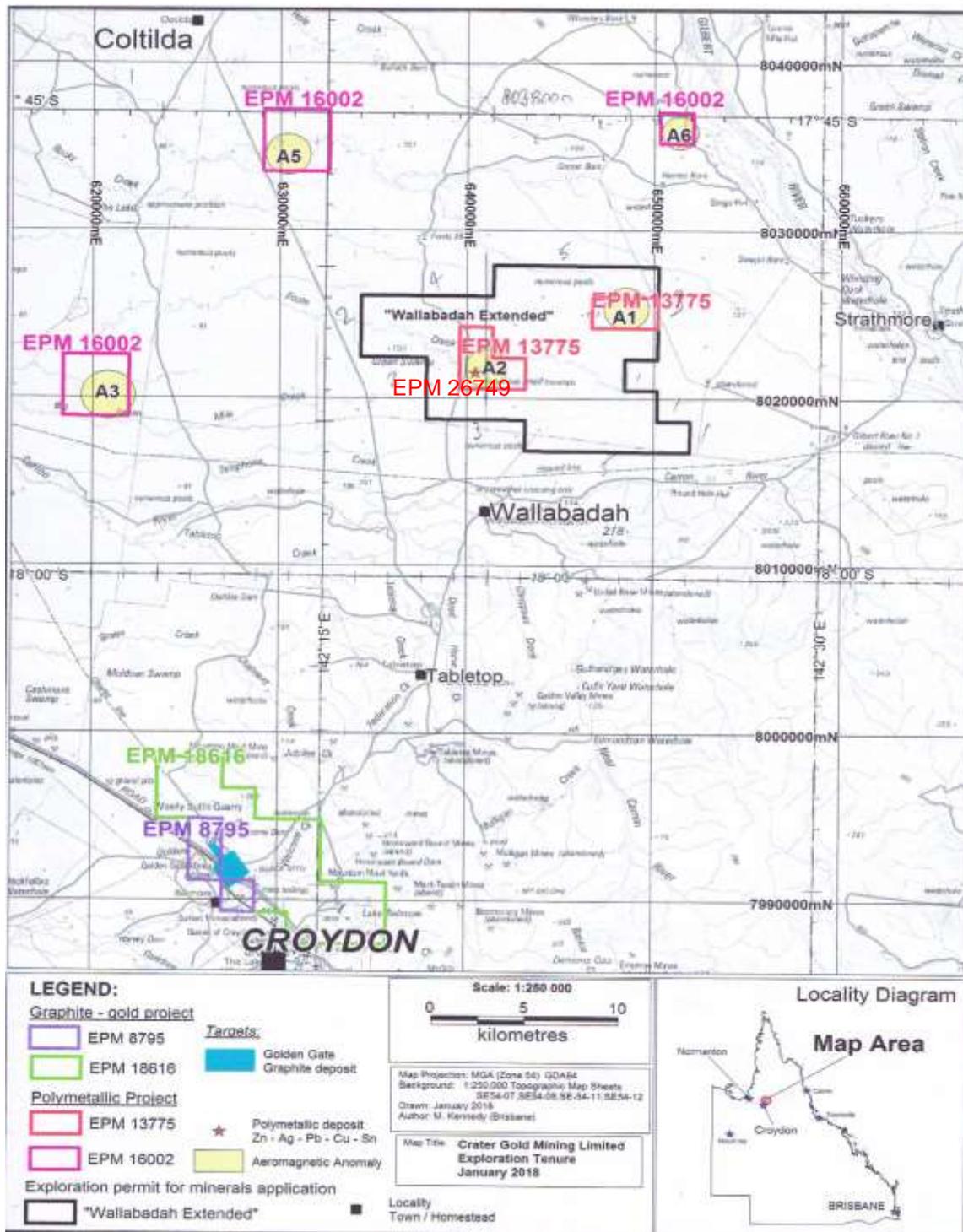


Figure 1: EPMs 8795, 18616, 13775, 16002, Wallabadah Extended EPM 26749 and Aeromagnetic Anomalies A1, A2, A3, A5 and A6.

1. HEM SURVEY OF EPMs 8795 AND 18616

Survey flight lines in EPMs 8795 and 18616 will be orientated E-W with a N-S line spacing of 400m. Infill lines at 200m spacing will be undertaken where better anomaly definition is required (**Figure 2**). Excluding any 200m spaced infill lines, the 400m spaced lines will involve a total of 177 line kilometres of data acquisition within the two tenements.

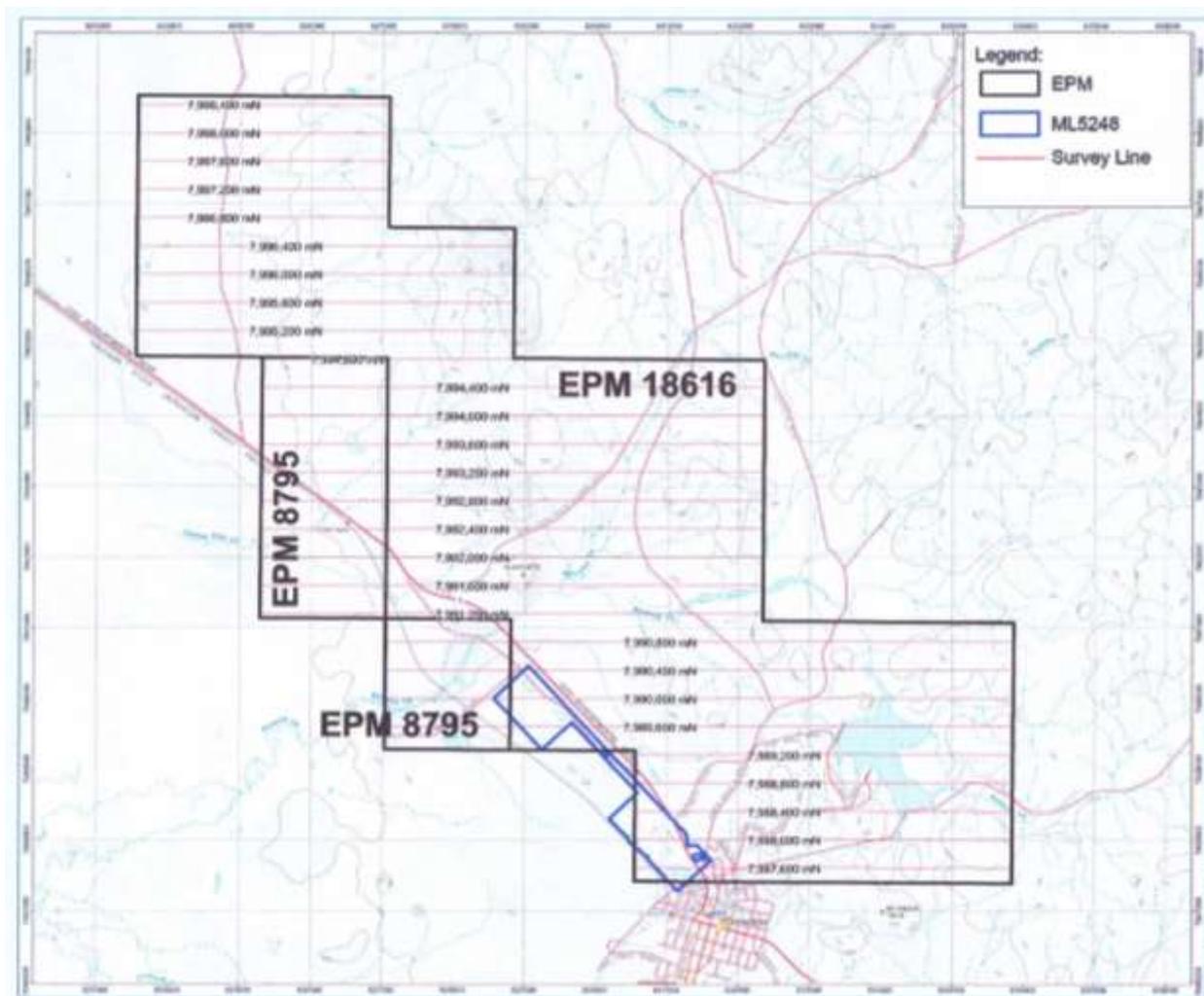


Figure 2: 400m spaced E-W flight lines, EPMs 8795 & 18616

Gold Targets

There are around 60 old gold workings shown on **Figure 3**, within the Company's EPMs 8795 and 18616, but there are many more that exist that are not included. The gold deposits are contained within two main trends, one trending NW-SE along the eastern margin of EPM 18616 with the other trending through EPM 8795 and the western margin of EPM 18616. The latter trend has been the more productive, accounting for more than 50% of the gold produced to date from the Croydon Goldfield.

Of particular interest is the identification of possible extensions of the Golden Gate quartz reef system (western side trend). The old-time miners mainly worked the gold occurrences that were evident from quartz scree at ground surface and did very little sub-surface exploration. As many of the gold occurrences in the Croydon Goldfield did not crop out, they were often only discovered by persistent "blind" sinking of shafts.

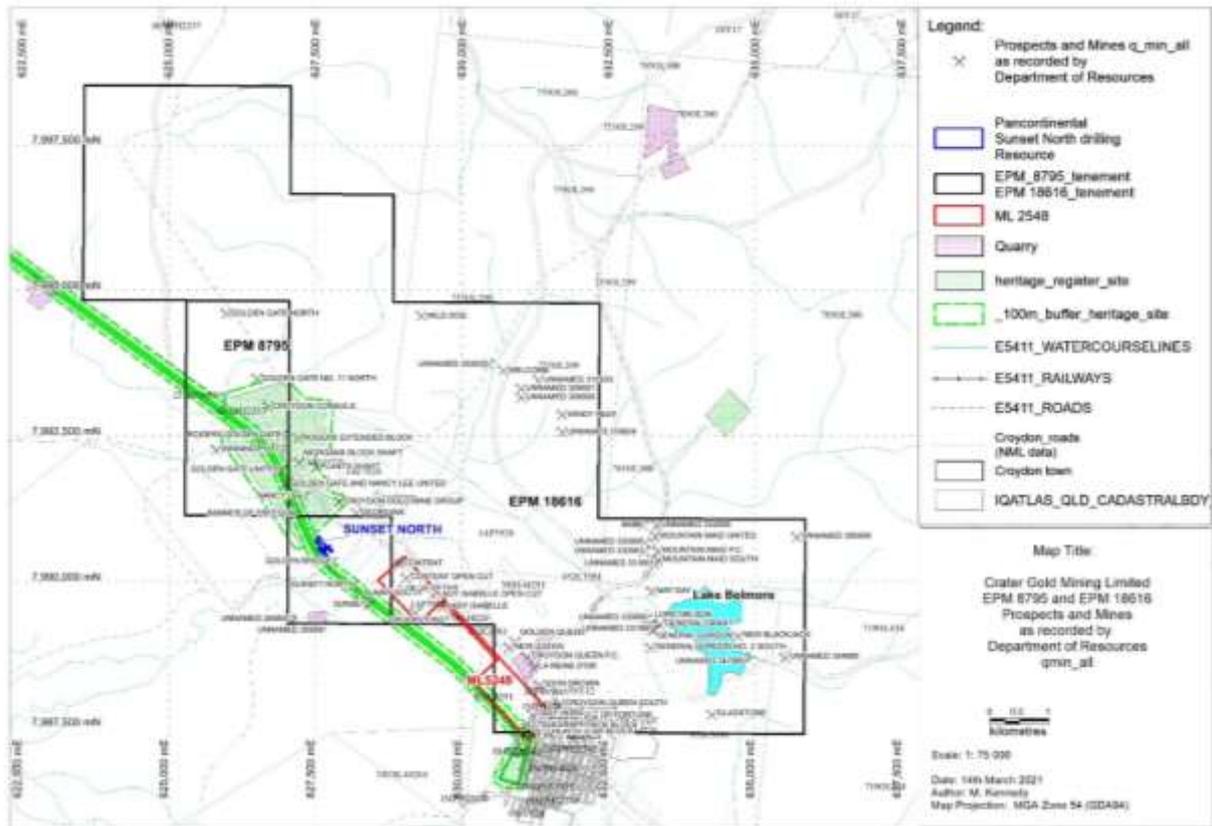


Figure 3: Location of some 60 old gold workings within EPMS 8795 and 18616. Many more exist but are not shown here.

It is considered likely that further review of the historical exploration and drilling data, combined with the EM results from the upcoming HEM survey from other areas within EPMS 8795 and 18616, will identify more small to medium scale gold prospects that warrant drilling and evaluation in addition to the Sunset North Prospect identified to date within EPM 8795. The Company is fortunate in that it has access to old archived reports and maps covering previous company exploration and Au mining activities in the Croydon area.

Graphite Targets

Graphite is an excellent conductor and generates strong EM anomalies. Significant EM anomalies within the area now covered by EPMS 8795 & 18616, have been identified in a NW-SE trending zone by previous old EM ground based surveys conducted in the 1930's to late 1980's (Figure 4). This zone has a strike extent of at least 12km, only around 2km of which is partly located within the restricted activities area of the Golden Gate Mining and Town Complex Heritage Area (**Figure 4**).

Previous exploration for graphite was undertaken by Central Coast Exploration NL and Pancontinental at Golden Gate within EPM 18616 which resulted in the discovery of extensive graphite mineralisation. Drill intercepts indicate the mineralisation has a north-westerly strike and a shallow easterly dip. Approximately two thirds of the graphite mineralisation at Golden Gate is now located within the Heritage and Buffer Zone which restricts exploration activities that would impact on the protected area. Specific permission is required to undertake exploration or mining activities within the Zones and comply with the conditions set.

The source of many of the previous EM anomalies is not known but it is expected that they will encompass a mixture of sources.

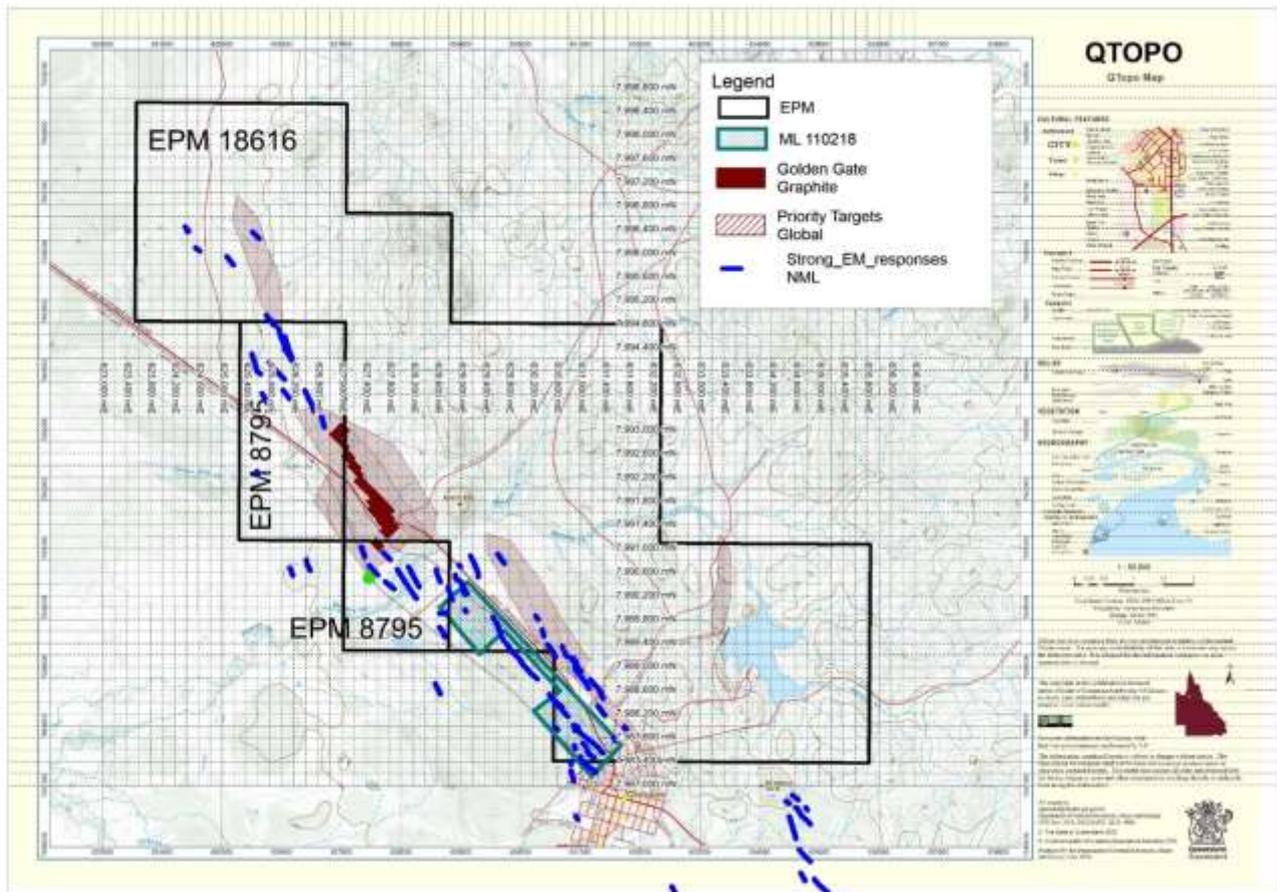


Figure 4: Location of previous (1930's – late 1980's) EM anomalies, EPMs 8795 and 18616

Petrological examination and metallurgical test work undertaken on the graphite mineralisation obtained from two diamond drill holes drilled at Golden Gate outside of the Heritage area has provided encouragement. In particular, the graphite has been identified as being present in flake form, ranging in size from 0.05 to 0.50mm (< 0.18mm is fine graphite, 0.18 to 0.30mm is large flake size and 0.30 to 0.50mm is jumbo flake size), with an average size of around 0.25mm and with strong evidence for it being of hydrothermal origin^{1,2}. When a flotation concentrate was subjected to a two-stage caustic bake, an impressive graphite product at a purity of 98.9% was obtained, indicating that the caustic bake stage was effective in removing most, if not all, of the gangue contaminants from the sample^{1,2}. For both the petrological examination and the metallurgical testwork previous announcements, the Company is not aware of any new information that materially affects the information provided at that time.

¹ *Jumbo and Large Flake Graphite identified at Golden Gate Project, Qld*, ASX Announcement dated 12 April 2018

² *High Graphite Recovery and Purity Obtained from Metallurgical Test Work – Golden Gate Graphite Project*, ASX Announcement dated 24 July 2019

2. HEM SURVEY OF EPMs 13775 AND 26749

Survey flight lines will be orientated E-W with a N-S line spacing of 400m. Infill lines at a spacing of 200m spacing will be undertaken where better anomaly definition is required. The 400m spaced E-W flight survey lines for EPMs 13775 and 26749 are shown on **Figure 5**. Excluding any infill lines, the 400m spaced lines will involve a total of 346 line kilometres of data acquisition.

The targets in these 2 EPMs are polymetallics which would be expected to generate strong EM anomalism due to their expected high sulphide content, especially pyrrhotite. Widespread sulphide mineralisation was previously discovered in drilling by the Company at Anomaly A2 in EPM 13775 (refer to ASX Announcement entitled "Polymetallic-tin massive sulphide drill intercepts show potential for discovery of significant mineral deposits at Croydon, Qld", 28 February 2012). It is hoped that the upcoming early to mid-June HEM survey will define extensions of the known mineralisation at Anomaly A2 and generate new priority drill targets. It is also hoped that priority targets will also be identified in the Anomaly A1 area. In addition, if as interpreted, the prominent NW-SE and WNW-ESE trending faults within both tenements are hosting polymetallic mineralisation feeder zones to the Anomaly A1 and A2 mineralisation (Figure 6), it is hoped that identification of new priority targets will be identified. It is interesting to note that an EPM has recently been granted that adjoins the SE end of EPM 26749 and which appears to be targeting the Wallabadah Fault further along strike to the ESE (**Figure 6**).

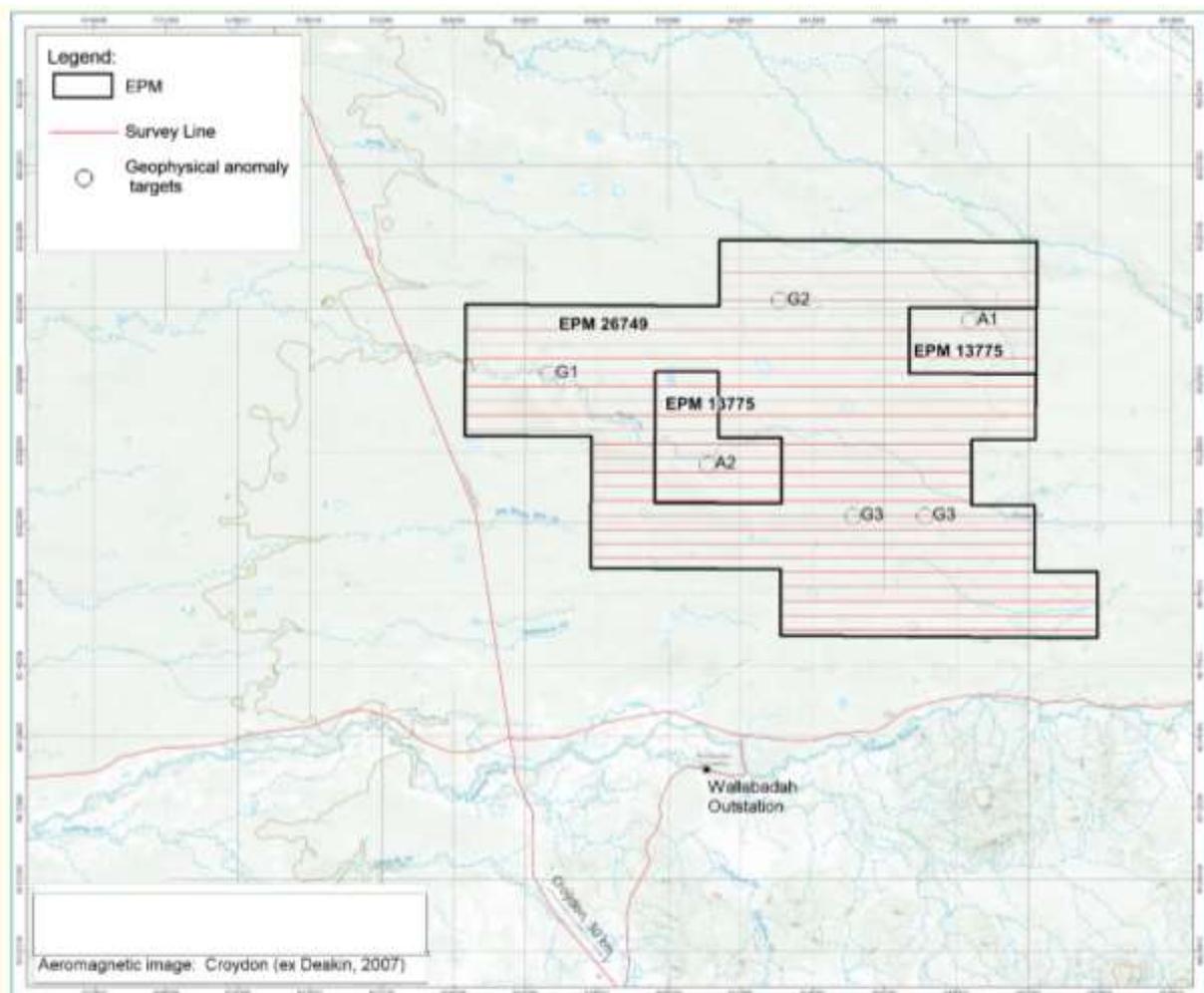


Figure 5: 400m spaced E-W flight lines, Aeromagnetic Anomalies A1, A2 and Residual Gravity Anomalies G1, G2 and G3, EPMs 13775 & 26749

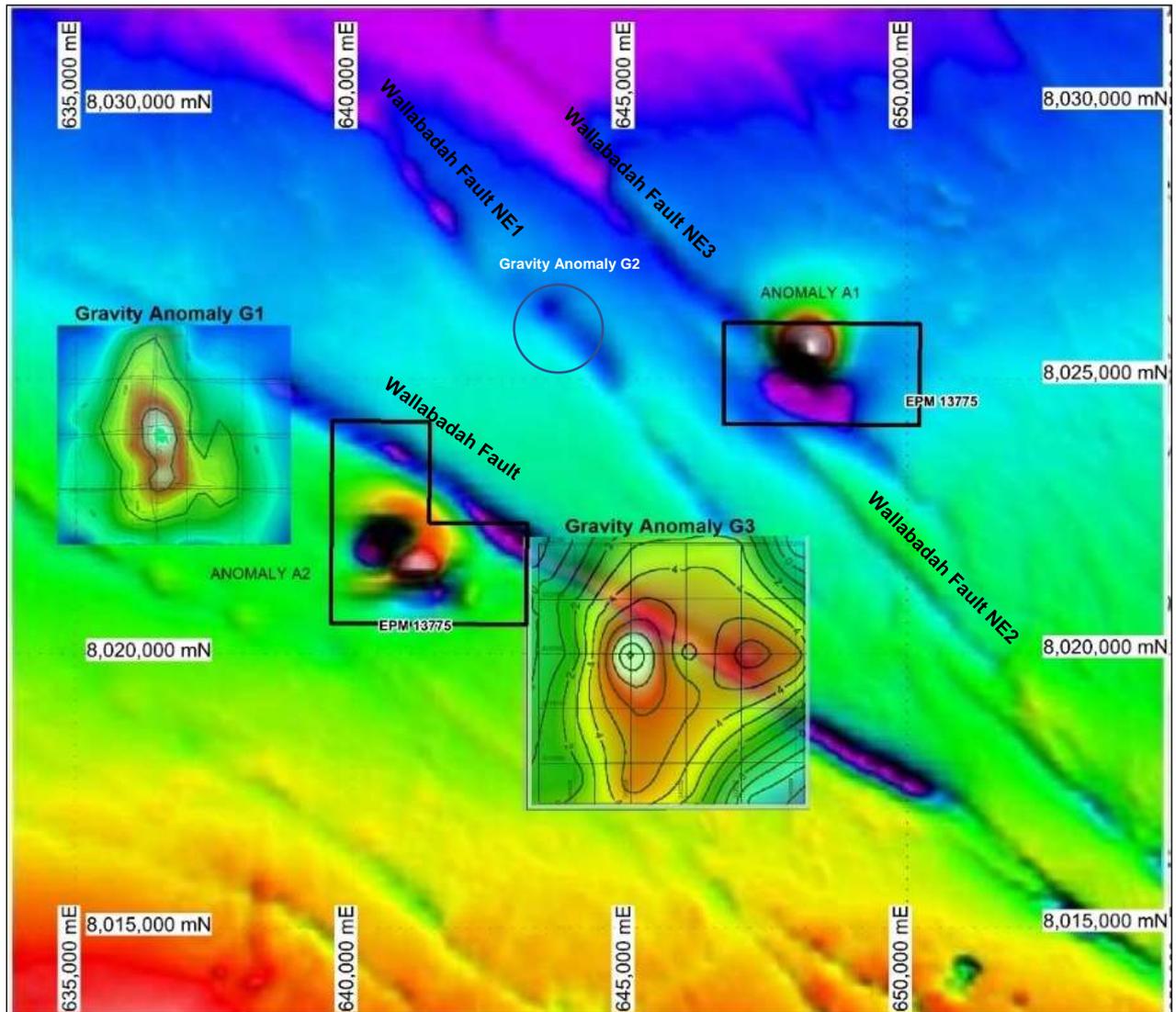


Figure 6: Wallabadah NW-SE and WNW-ESE faults, Anomalies A1 and A2 and Residual Gravity Anomalies G1, G2 and G3 overlain on an aeromagnetic scene, EPMs 13775 and 26749.

3. HEM SURVEY OF EPM 16002

There are three aeromagnetic anomalies, A5, A6 and A3 located within EPM 16002 (Figure 1). All three of these will be included in the upcoming HEM survey.

Survey flight lines will be orientated E-W with a N-S line spacing of 400m. Infill lines at a spacing of 200m spacing will be undertaken where better anomaly definition is required. The 400m spaced E-W flight survey lines for the three separate blocks of EPM 16002 are shown on Figures 7, 8 and 9. Excluding any 200m infill lines, the 400m spaced lines for the three anomalies will cover a total of 79 line kilometres of data acquisition.

Anomaly A5

Aeromagnetic Anomaly A5, was ranked by geophysical consultant, Roger Deakin, as the most prospective aeromagnetic anomaly after Anomaly A2 and is located about 17km NW of Anomaly A2 (Figure 1). This aeromagnetic anomaly is a small discrete, almost circular low, approximately 30 nT in amplitude, 800m in diameter and located in the central western side of the encompassing EPM block (Fig. 1, 7). It occurs immediately SW of a larger anomaly complex that is elongated NW-SE, is about 20km in length and about 10km in width. It was initially investigated by Spatiotemporal Geochemical Hydrocarbon (SGH) soil sampling. This

indicated co-incident polymetallic-silver-copper anomalism which was partly overlapped by gold anomalism all of which directly overlies the central part of the main (western) aeromagnetic low which is a reversed magnetic high feature (*refer to ASX Announcement entitled "Gold and Silver-Copper-Polymetallic Anomalies Identified from SGH Soil Sampling at the A5 Anomaly Prospect, North Qld", 12 June 2018*). This has provided encouragement as the intersected A2 polymetallic mineralisation is also associated with a magnetic low which is a reversed magnetic high.

Figure 7 shows the 4 sub-block tenement area of EPM 16002 that covers Anomaly A5 and the 400m spaced E-W flight survey lines. Excluding any 200m spaced infill lines, this will involve a total of 36 line kilometres of data acquisition.

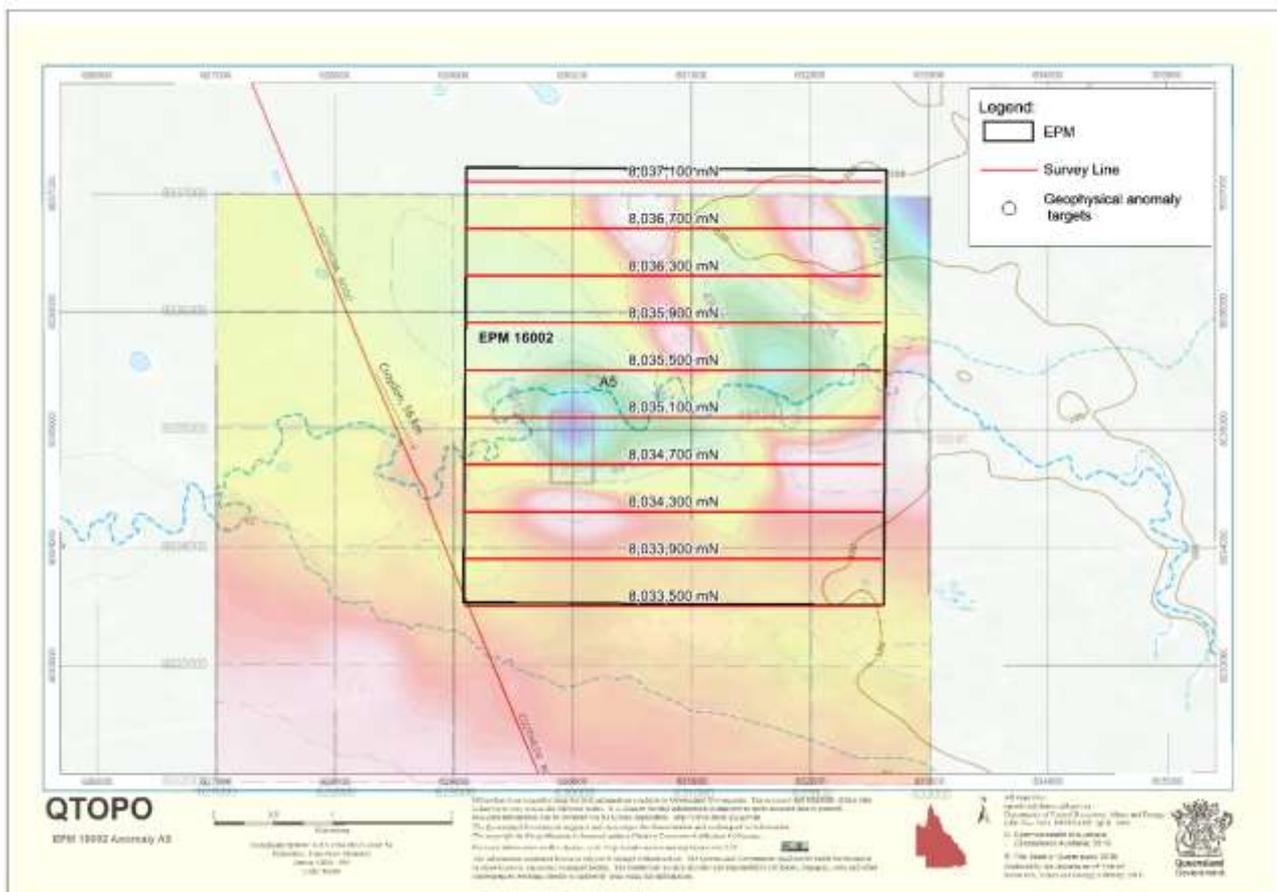


Figure 7: 400m spaced E-W flight lines, Aeromagnetic Anomaly A5, EPM 16002

Anomaly A6

Aeromagnetic Anomaly A6, was ranked as the most prospective aeromagnetic anomaly after Anomaly A2 and Anomaly A5 and is located about 18km NE of Anomaly A2 (Figure 1). It consists of a N-S elongated low and a sub-circular, but spatially complex, high (Figure 8). The anomalous high is immediately east of the low and the overall anomaly complex has affinities to Anomaly 2.

Figure 8 shows the 1 sub-block tenement area of EPM 16002 that covers Anomaly A6 and the 400m spaced E-W flight survey lines. Excluding any 200m spaced infill lines, this will involve a total of 11 line kilometres of data acquisition.

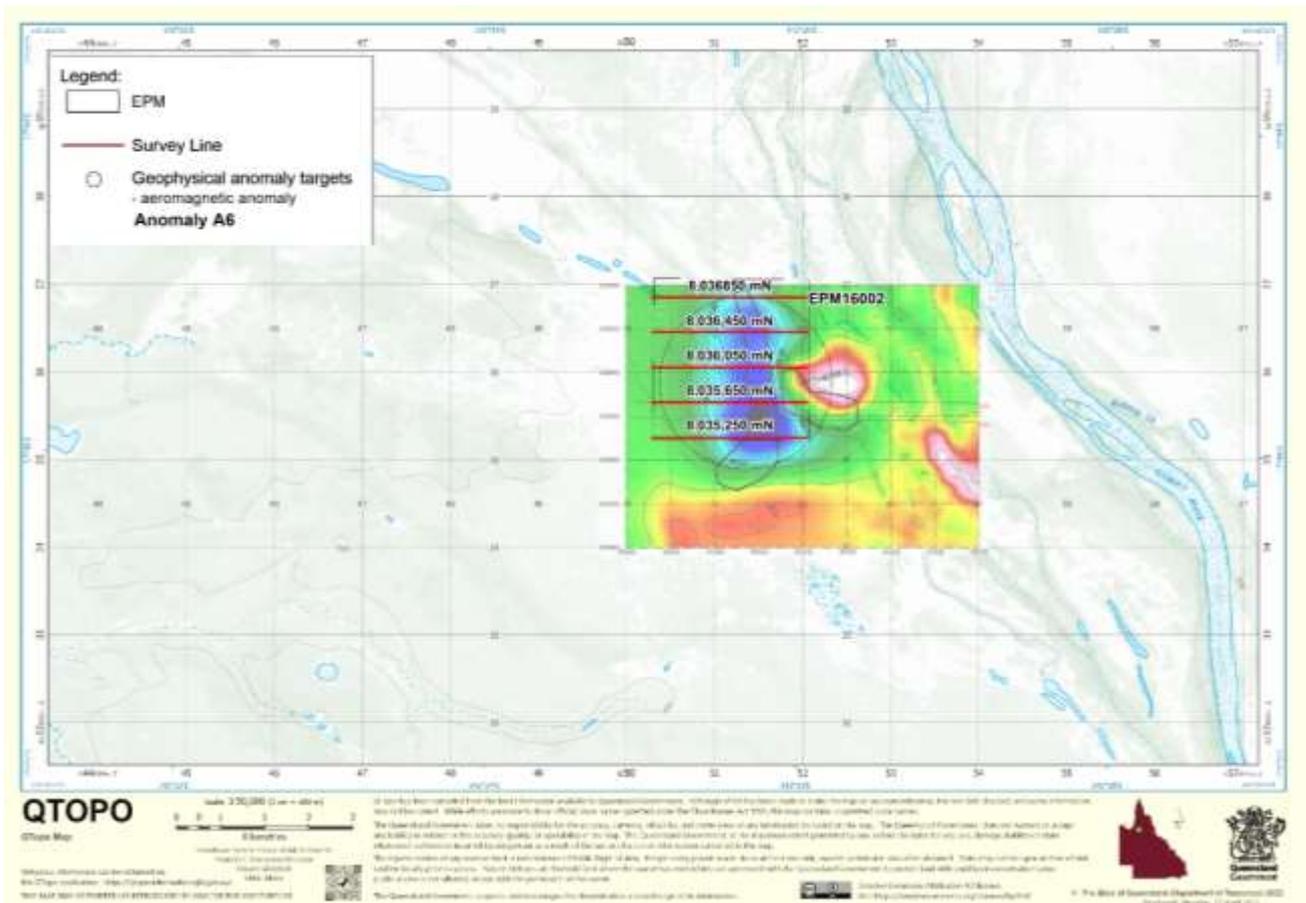


Figure 8: Anomaly A6 with 400m flight lines shown, EPM 16002 (the irregular shaped outlines are associated with magnetic data modelling)

Anomaly A3

This aeromagnetic anomaly is a small discrete, almost circular low, of approximately 20nT in amplitude and around 1500m in diameter and is located 20 km west of Anomaly A2 (Figure1). It is possibly part of, or at least associated with, relatively subtle, WNW and NW trending positive linear anomalies that are more apparent further to the SE. It appears from the data that the anomaly is caused by a body with reversed remanent magnetisation. The depths below ground surface to the main possible sources range from 170 to 245m.

Figure 9 shows the 4 sub-block tenement area of EPM 16002 that covers Anomaly A3 and the 400m spaced E-W flight survey lines. Excluding any 200m spaced infill lines, this will involve a total of 32 line kilometres of data acquisition.

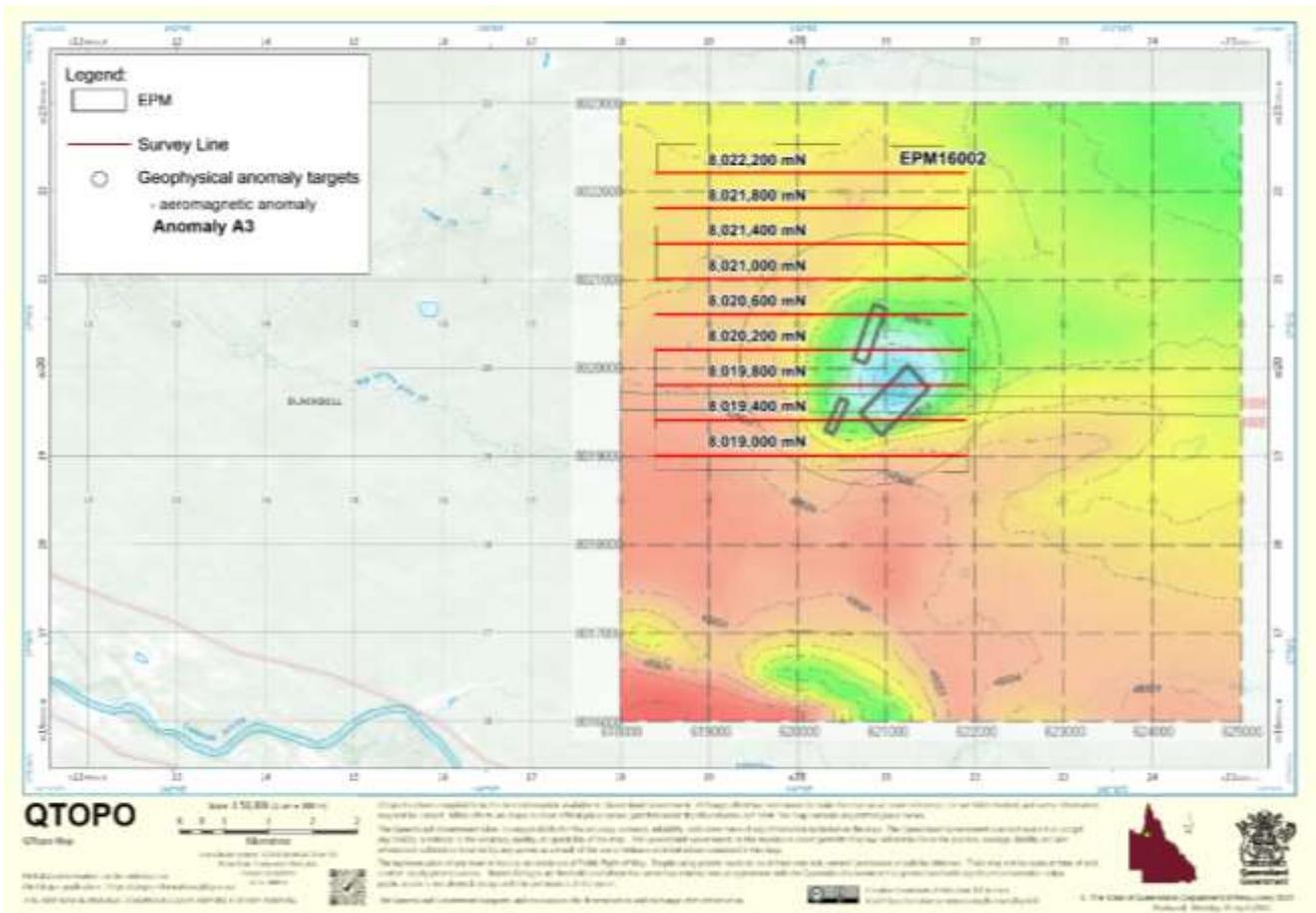


Figure 9: Aeromagnetic Anomaly A3 with 400m spaced E-W Survey lines shown in red, EPM 16002 (the rectangular shapes are associated with magnetic data modelling).

This announcement has been authorised for release to ASX by the Board of Crater Gold Mining Limited.

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COMPETENT PERSON STATEMENT

The information contained in this report relating to exploration activities at Croydon is based on and fairly represents information and supporting documentation prepared by Mr Ken Chapple or by appropriately qualified company and consultant personnel and reviewed by Mr Chapple, who is an Associate Member of The Australasian Institute of Mining and Metallurgy and a Fellow of the Australian Institute of Geoscientists. Mr Chapple has sufficient experience relevant to the style of mineralisation and type of deposit involved to qualify as a Competent Person as defined in the 2012 JORC Code. Mr Chapple is an independent principal geological consultant with KCICD Pty Ltd and consents to the inclusion in this report of matters based on his information in the form and context in which it appears.

Forward Looking Statements: This Announcement contains certain forward looking statements. The words 'anticipate', 'believe', 'expect', 'optimism', 'project', 'forecast', 'estimate', 'likely', 'intend', 'should', 'could', 'may', 'target', 'plan', 'encouraging', 'significant' and other similar expressions are intended to identify forward looking statements. Forward-looking statements are subject to risk factors associated with the Company's business, many of which are beyond the control of the Company. It is believed that the expectations reflected in these statements are reasonable at the time made but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially from those expressed or implied in such statements. There can be no assurance that actual outcomes will not differ materially from these statements. You should therefore not place undue reliance on forward-looking statements.