2007 ANNUAL REPORT

EXPLORATION LICENCE 24694,

MURPHY PROJECT, NT

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EXECUTIVE SUMMARY

This annual report describes the work carried out in EL 24694 up to the 27/2/2007. EL 24694 is located over the western end of the Murphy Inlier, NT and is held by Canon Investments Pty Ltd; a wholly owned subsidiary of Buffalo Gold Ltd. The exploration licence was acquired because the area is believed to have accessible strike lengths of the unconformity between the early Proterozoic Murphy Inlier and the middle Proterozoic McArthur Basin, in particular the Westmoreland Conglomerate. Concealed southern extensions of the Emu Fault Zone are also thought to cut the area. Consequently EL 24694 is seen as having the potential to host unconformity-type uranium deposits, similar to those located in the Alligator Rivers Uranium Field at the northern end of the McArthur Basin.

Work during this period consisted of a review of past exploration, an airborne EM/magnetic survey and a comprehensive mineral assessment, incorporating the airborne survey in addition to public domain geological, geochemical and geophysical data. The aim of this work was to (i) to map the lower Proterozoic and mid Proterozoic rocks, under the Phanerozoic cover; (ii) identify possible uranium source rocks, (iii) locate regional/local structures that display alteration indicating the passage of oxidised fluids; and (iv) map conductive graphitic units or clay alteration in the basement rocks. These geological features were then used in conjunction with radiometric and geophysical data to select target areas for uranium mineralisation.

Results of this work located two target areas in the northern corner of the licence, which extend on to an adjacent EL held by Buffalo Gold Ltd. A follow-up radon track-etch survey with shallow air-core drilling are planned to define prospects within these target areas. The EM survey and mineral assessment also found highly conductive mafic dyke and sill like complexes which are thought to be feeder zones for some of the flood basalts found in the southern part of the McArthur Basin. Five “high risk” Cu-Ni targets areas associated with these mafic complexes were also selected. It is planned to evaluate the best of these targets via drilling to confirm the potential for this type of mineralisation in the area before more extensive exploration is carried out.

1 INTRODUCTION

Buffalo Gold Ltd, through its wholly owned Australian subsidiary Canon Investments Pty Ltd (ACN 053538613), is the holder of EL 24694. The licence is located west of the Westmoreland Uranium Field and forms part of Buffalo Gold Ltd's Murphy Project targeting uranium deposits about the Murphy Inlier in the Northern Territory. The Murphy Project is currently made up of ELs 24694 and 24841, and ELAs 25708, 25709 and 25710 (see Figure 1).

This annual report covers all the exploration work carried out within EL 24694 up to 27/2/2007. The work during this period was directed at determining whether the covered region has the potential to host economic uranium mineralisation and the selection of target areas. Exploration activities involved an extensive review of previous exploration, an airborne EM and magnetic survey and detailed mineral assessment aimed at selecting uranium targets. Results of this work highlighted several uranium and possible copper-nickel targets that will be followed-up with ground work in the next exploration period.

2 LOCATION & ACCESS

EL 24694 is located approximately 130km west of the NT - QLD border and 170km south east of the McArthur River mine in eastern NT, see Figure 1. The licence covers four 1:250,000 map sheets; Wallhallow, Burnette Downs, Calvert Hills and Mount Drummond. Access is via the Creswell Downs–Calvert Hills road, which crosses the border near Wollogorang.

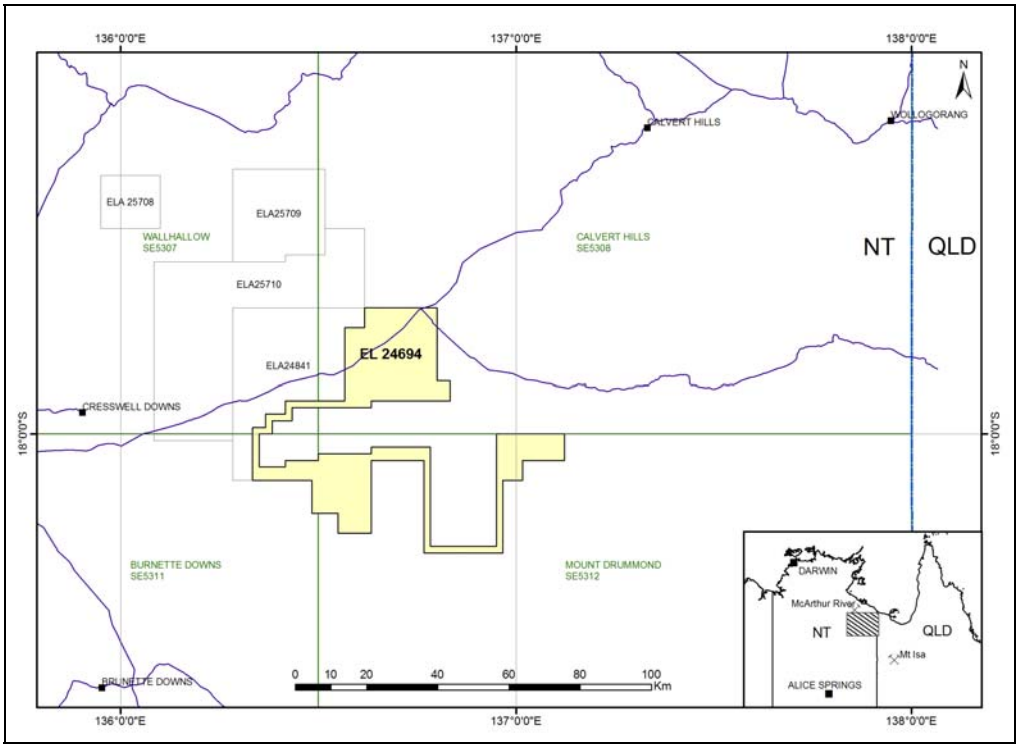

Figure 1. Location map.

3 TENURE DETAILS

EL 24694 was originally taken out by Global Discovery Pty Ltd and was acquired from them by Canon Investments Pty Ltd (a wholly owned subsidiary of the Canadian company, Buffalo Gold Limited). Buffalo Gold Ltd are the current operators of the licence. Tenement details are shown below in Table 1.

Table 1. Tenement details.

Exploration Licence No.	No. Blocks (Area km2)		Grant Date	Expiry Date	Expenditure Commitment
EL 24694	446	(1448)	28/2/2006	27/2/2012	$ 130,000

Exploration expenditure for this period totaled $90,898 and a breakdown is provided in the Expenditure Report in Appendix 1.

4 REGIONAL GEOLOGY

The Murphy Project area is located on the western end of the Murphy Inlier. The inlier is referred to as the Murphy Tectonic Ridge and represents a belt of lower Proterozoic basement that separates the middle Proterozoic McArthur Basin to the north and the middle Proterozoic Lawn Hill Platform - South Nicholson Basin to the south (See Figure 2). The oldest rocks in the region are the lower Proterozoic Murphy Metamorphics, which form the basal unit of the Murphy Inlier, and consist of isoclinally folded greenschist facies metasediments; typically quartz-feldspar-mica schists and gneiss with minor graphitic units. The Murphy Metamorphics form the core of the Murphy Tectonic Ridge and only outcrop in the NT portion of the inlier. The Cliffdale volcanics unconformably overlay the Murphy Metamorphics and are made up of a series of felsic volcanic and volcaniclastic rocks. The Cliffdale volcanics are only found at the eastern end of the inlier. Both the metamorphics and volcanics are intruded by granites and adamellites of the Nicholson Granite Complex which constitutes the majority of the rocks found in the inlier.

The northern margin of the Murphy Inlier is unconformably overlain by the Westmoreland Conglomerate, which is the oldest unit in the middle Proterozoic Tawallah Group, and marks the base of the southern portion of the McArthur Basin. The Westmoreland Conglomerate is made up of four sub-units; (i) a basal volcanic derived (sourced from the underlying Cliffdale volcanics) conglomerate-breccia that grades up into a pebbly quartz sandstone; (ii) an upward fining coarse to medium grained ferruginous sandstone; (iii) a coarse polymictic conglomerate and minor pebbly sandstone, which can be reverse faulted directly on the Cliffdale Volcanics; and (iv) a porous, crossbedded, coarse grained quartz sandstone, with minor conglomerate bands and laminated tuffaceous siltstone in the lower part. The Seigal Volcanics lie conformably on top of the Westmoreland Conglomerate and consist of massive and amygdaloidal tholeiitic basaltic lavas with minor interbedded siltstones and sandstones. A thin shale bed is commonly found at the base of the Seigal Volcanics and marks the hiatus between deposition of the Westmoreland Conglomerate and the start of volcanism. The middle to upper Tawallah Group consists of interbedded sediments and volcanics. Sediments and volcanics of the McArthur Group lie unconformably over the Tawallah Group.

The southern margin of the Murphy Inlier is unconformably overlain by several belts of Lawn Hill Platform in addition to sediments of the south Nicholson Basin, which unconformably covers the Lawn Hill Platform successions. A thin unit of coarse sandstone and conglomerate, the Wire Creek Sandstone, marks the base of the Lawn Hill Platform in places and is conformably overlain by the Peters Creek Volcanics; a massive sequence of alternating basalt, rhyolite and rhyodacites with minor sediments. Both units can be found lying unconformably on the Murphy Inlier and are considered equivalents to the Tawallah Group in the McArthur basin. The Peters Creek Volcanics are unconformably covered by the Fickling Group, a sequence of conglomerates, sandstones, siltstones and dolomites. The Fickling Group belongs to the Land Hill Platform and in the area of the Murphy Inlier is unconformably covered by shallow marine sediments of the South Nicholson Basin referred to as the South Nicholson Group. This group is also found lying unconformably over the western end of the Murphy Inlier or over the Benmara Beds, which can lie unconformably between the South Nicholson Group and the Murphy Metamorphics. The Benmara Beds are also a middle Proterozoic Tawallah Group equivalent and consist of a mixed rhyolite, trachyte, sandstone and conglomerate package.

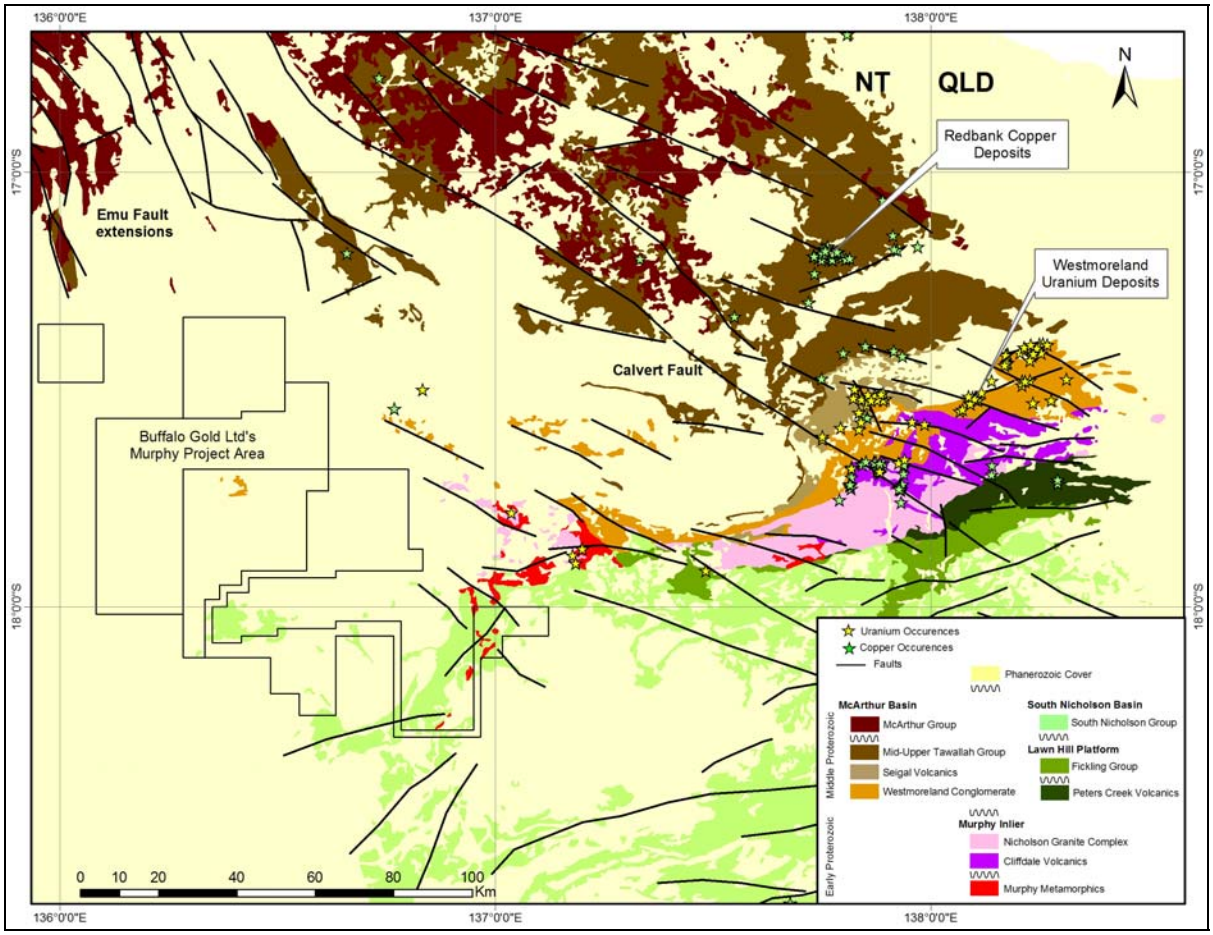

Figure 2. Simplified regional geology.

Phanerozoic cover consists of mostly early to middle Cambrian sediments and basalts, and Cainozoic sediments. Outcropping of Proterozoic rocks in the project area suggests that Phanerozoic cover is not thick here, although locally developed thin Cambrian Antrium Plateau Basalt flows have been noted in magnetics to the north.

Structurally, the region is cut by a dominantly NW trending series of faults and joints paralleling the Calvert fault. Possible NNW trending extensions of the Emu Fault also pass through the west side of the region under the Phanerozoic cover. A second set of NE trending faults can also be seen paralleling the structural trend of the Murphy Tectonic Ridge. Both sets of faults commonly consist of high angle normal and reverse faults whose intersection appears to form structural blocks displaying horizontal movement and/or tilting. Lateral movement is also common in the NW trending structures. Numerous mafic, commonly doleritic, dykes parallel the faulting and are thought to be cogenetic with the mid Proterozoic volcanics of the Tawallah Group.

Small stratabound disseminated lead-zinc±copper occurrences, associated with carbonaceous units are found within both the McArthur and Lawn Hill Platform – South Nicholson Basins. Copper mineralisation occurs as unconformity related and breccia pipe occurrences in the region. The latter deposit type forms sub-economic deposits in the Redbank area (Figure 2) which were mined on a small scale in the post war era. Minor tin occurrences have also been found around the Nicholson Granite Complex.

The region is best known for the uranium deposits at Westmoreland (Figure 2); notably the Redtree deposit (12,600t U_3O_8), the Junnagunna deposit (5,300t U_3O_8) and the Huarabagoo deposit (3,000t U_3O_8). Mineralisation in these deposits occurs as sandstone hosted uranium within the upper sandstone unit of the Westmoreland Conglomerate, directly below the contact with the Seigal Volcanics, and shows a strong association with fault hosted mafic dykes and sills. Minor mineralisation is also found within other units of the Westmoreland Conglomerate and in shear zones at the unconformity between the Cliffdale Volcanics and Westmoreland Conglomerate. Clusters of minor uranium occurrences area can be found to the west and east of the Westmoreland area, along the northern margin of the Westmoreland Conglomerate. To date only minor unconformity type uranium mineralisation has been found at the unconformity between the Murphy Metamorphics and the Westmoreland Conglomerate.

5 EXPLORATION PHILOSOPHY

Buffalo Gold Ltd believes that the covered regions about the western end of the Murphy Inlier have not been adequately explored and have the potential to host high grade uranium mineralisation. The uranium mineralisation is envisaged to be either; (i) unconformity type uranium deposits located at the lower Proterozoic –mid Proterozoic uniformity between the Murphy Metamorphics and Westmoreland Conglomerate, similar to those found in the Alligator Rivers Uranium Field, NT; or (ii) sandstone hosted uranium deposits associated with the upper unit of the Westmoreland Conglomerate, below the contact with the Seigal volcanics, similar to those found in the Westmoreland uranium deposits, QLD.

6 SUMMARY OF PREVIOUS WORK

A comprehensive review of previous mineral exploration was carried and an outline is presented in Appendix 2. Important information gained from this review are;

- First recorded work in the area was by Mount Isa Mines in 1956 and consisted of crude airborne radiometric surveys. The results of this work located the Westmoreland deposits and most likely all of the significant outcropping occurrences.

- There was a distinct hiatus in exploration between 1963- 1970, reflecting a slump in the global demand for uranium; the post war proliferation of nuclear weapons had slowed and the nuclear power industry was still in its infancy.

- A second wave of exploration commenced in the 1970's as the demand for uranium for use in nuclear power stations increased. Many of the companies were also operating in the Alligator Rivers region, at the northern end of the Pine Creek fold belt, and much of their focus was on this area after the discovery of significant deposits at Jabiluka, Ranger, Nabarlek and Koongarra. The similarity between the two areas was known, however at this time the nature of the Alligator Rivers deposits was poorly understood and exploration was targeted toward roll front and sandstone hosted uranium deposits in both areas. By the time unconformity type uranium deposits were understood, uranium exploration restrictions were in place and work did not resume in the area until recently.

- More detailed radiometric surveys have been carried out. This work has revealed many outcropping anomalies related to brecciation, quartz veining (silicification) and iron-metasomatism (ferruginisation) associated with faulting in the Nicholson granite and Murphy Metamorphics. None of these anomalies appear to warrant follow-up work, however they indicate that processes associated with the formation of unconformity type uranium deposits have been active in the early Proterozoic basement.

- The region has been explored for gold, basemetal (sedex type deposits) and kimberlite hosted diamonds by several major companies. No significant gold or basemetal discoveries were made. A large number of diamonds were recovered from Ashton's Creswell prospect outside the licence and the area is currently under a ERL.

- An airborne GEOTEM survey carried out by BHP targeting unconformity U-Au-PGE deposits indicated the usefulness of input EM surveys in targeting unconformity uranium deposits under cover. In particular the ability to locate basement conductors related to graphite in fault zones or clay alteration. Part of the BHP survey covers the current EL.

- The western covered region of the Murphy Inlier has the potential to host an unconformity type uranium deposit at depth

A list of the ATPs and ELs previously covering EL 24694 is provided in Table 2.

Table 2. Previous tenements over EPM15573

Licence	Company
ATP 444	MIM
ATP 983	Carpentaria Exploration Company
ATP 3401	ESSO Australia
EL 122	Noranda Australia
EL 886 & EL 887	T.W. Cawley and R.A. Weston
EL 1339	AAR Ltd/Otter Exploration "Coolibah" JV
EL1427	Mines Administration/Otter Exploration "Bowgan Creek" JV
EL 1253	Mines Administration/Union Oil JV
EL1234	Mines Administration/ESSO Australia JV
EL 2232	Amoco Minerals
EL 4392 & 4438	Stockdale
EL 4352	Ashton Mining
EL 6836	Carpentaria Exploration Company
EL 7222 & 7223	MIM
EL 8997, 8998, 9163 & 9660	BHP

7 WORK COMPLETED DURING THE PERIOD

7.1 Summary of Work Done

Work completed during up to 27 February 2007 consisted of;

- A comprehensive review and assessment of previous mineral and diamond exploration work.
- An airborne EM and magnetic survey.
- A mineral assessment and target selection by Douglas Haynes Discovery Pty Ltd comprising:
    - Compilation of public domain geological, geochemical and geophysical data;
    - An interpretation of the geological and structural data for the region;
    - A geophysical and geochemical interpretation of available data, incorporating the airborne EM survey.
    - Selection of potential target areas.

7.2 Assessment of Previous Exploration

A summary of this review is provided above in Section 6 and detailed in Appendix 1. As part of this review the limited drilling in the area was used to map out a rough depth to basement. The results indicate that Proterozoic basement is at a shallow depth in the licence and appears to be permissive Murphy Metamorphics (See Figure 3). In addition a review of BHP "Bowgan" airborne GEOTEM survey (1997 openfile report CR97/260 & 97/325) showed that input EM could be used to map conductive units in the Murphy Metamorphics corresponding to graphitic schists. Figure 4 shows the correlation between GEOTHEM Channel 14 peaks and outcropping Murphy Metamorphics taken off the 1:250,000 sheets. Graphitic schists have a strong association with unconformity-type uranium deposits in both the Alligator Rivers region, NT and the Athabasca Basin, Canada. In the Athabasca Basin, airborne input EM is regularly used in uranium exploration.

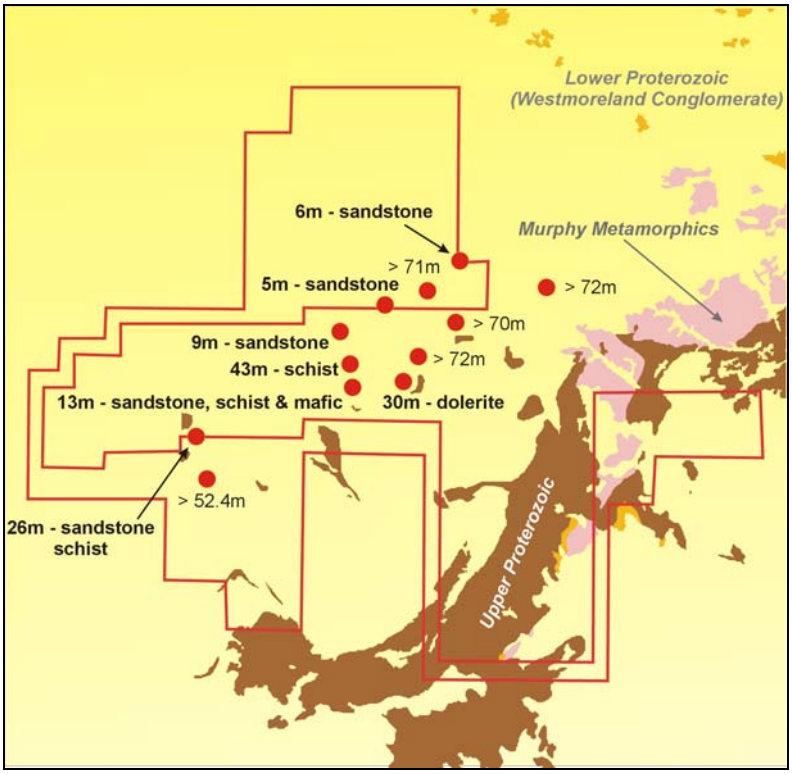

Figure 3. Depth to Proterozoic basement for previous drilling (red dots).

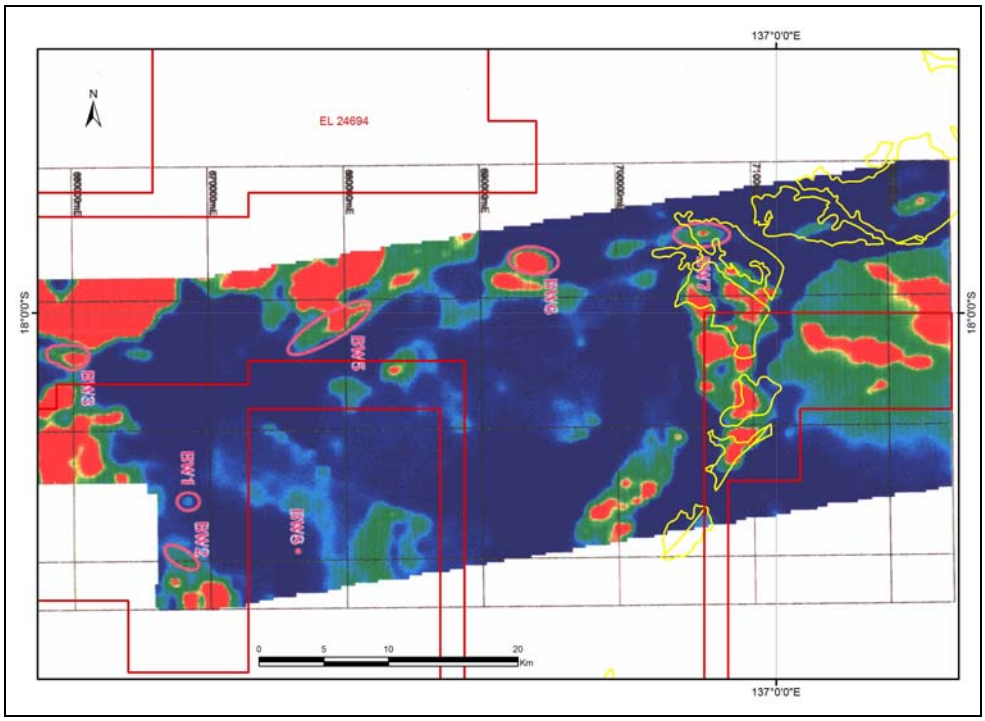

Figure 4. BHP GEOTHEM channel 14 data with outcropping Murphy Metamorphics (yellow outline).

7.3 Airborne EM and Magnetic Survey

An airborne EM (HOISTEM) and magnetic survey was carried out over EL 24694 and Buffalo Gold Ltd's adjacent EL 24841. The survey was flown by GPX and consisted of 1560 line kilometres, flown on 400m spaced east-west lines. The survey details and logistics are attached in Appendix 3. The survey data were processed by GeoDiscovery Ltd Pty in Brisbane. Selective rectified images can be found with the interpretative layer GIS in Appendix 4. The section data, gridded data, images and location data are provided on the attached DVD (Appendix 5).

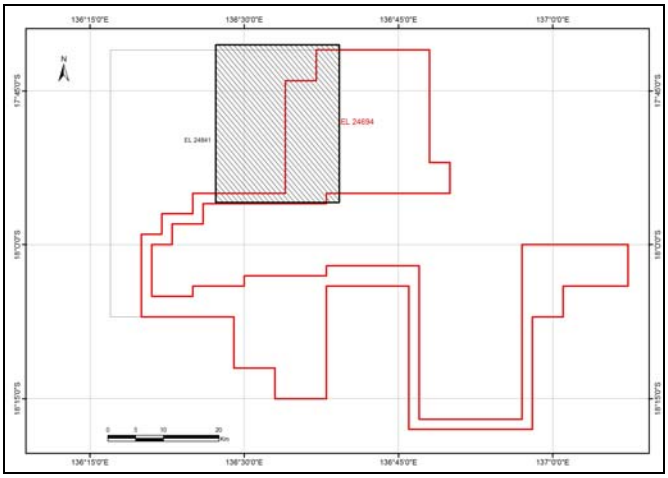

Figure 5. HOISTEM survey location (hatched area).

Interpretation of the input EM and magnetic data located several high amplitude anomalies related to structures seen in the magnetics (see Figure 6). These anomalies are thought to represent either mafic dykes or sill complexes. The reduced basement in the Murphy Inlier here does not appear to exhibit a strong EM signal but it could contain either disseminated pyrite or graphite and therefore show as a conductive unit. The anomalies were incorporated in the mineral assessment and target selection presented below in Section 7.4. The large conductive mass in the NW corner of the survey is thought to be a surficial or shallow flat lying layer above basement and could be correlated to Cambrian volcanics or sandstones.

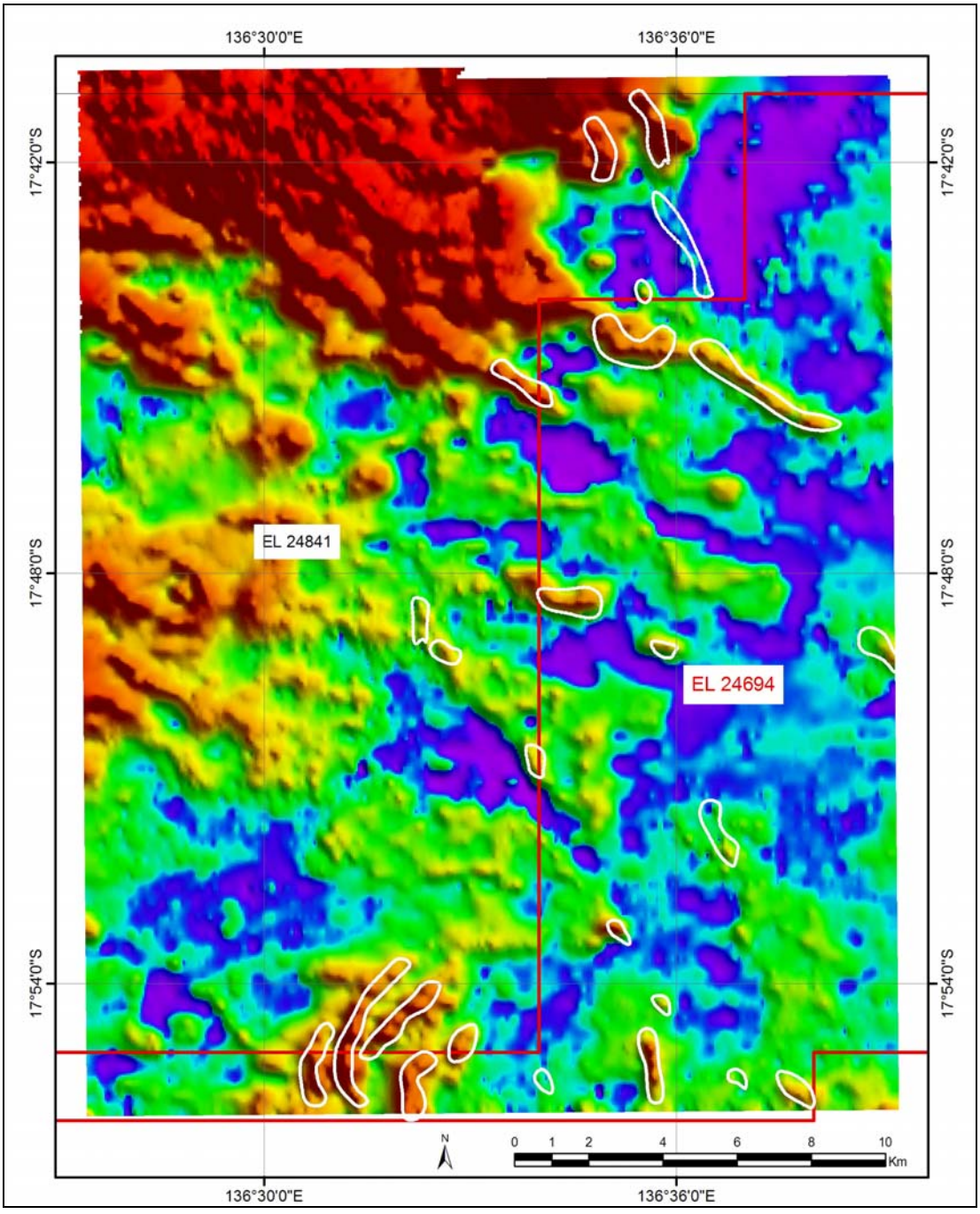

Figure 6. EM anomalies (white outlines).

7.4 Mineral Assessment and Target Selection

The first part of the mineral assessment involved the compilation of available geological, geochemical and geophysical data. These data included the vector 1:250,000 geological map sheets, NT openfile geochemistry, NT mineral occurrence data and regional NT magnetics, Bouguer gravity and radiometric data. These data were then used to define (i) magnetite-additive and magnetite-depleted alteration zones; (ii) comparably altered faults or joint sets or dykes; (iii) mafic dykes and mafic dyke-sill complexes; (iv) limits of haematite stable coarse grained silicicastic sedimentary units such as the Westmoreland Conglomerate; (v) the limits of the McArthur River Basin flood basalt units and their contact with the

Westmoreland Conglomerate; (vi) the limits of "reduced" fine-grained siliciclastic sediments or metasediment units in the Murphy Inlier; and (vii) major high angle faults and their styles. Some emphasis was also placed on defining the granites and felsic volcanic rocks associated with the Nicholson granite complex, and the possible extension of the Cliffdale Volcanics, concealed under cover. Interpretative vector layers used in the assessment are presented in a GIS in Appendix 3.

The results of this work identified two conformity-type uranium targets on the north-western end of the licence (see Figure 7). In addition to the uranium targets, five high risk Cu-Ni targets, related to mafic dyke or dyke-sill hosted Cu-Ni mineralisation, were also defined using the EM data (see Figure 7). Target descriptions follow:

- U1 is a large target which extends into Buffalo Gold Ltd's adjacent EL 24841. The area is thought to be a large section of the Westmoreland-Murphy Inlier unconformity that is cut and offset by southern extensions of the Emu Fault; indicated by NW trending sets of dykes and faults. The target area has corresponding EM anomalies and a moderate uranium radiometric anomaly. The redox state of the basement is not certain.

- U2 is a small target area to the south of U1 and also extends in to EL 24841. This anomaly is similar to U1 with an inferred section of faulted Westmoreland Conglomerate-Murphy Inlier unconformity displaying high angle NW trending faults. A complex array of dykes and sills occurs in the area, however there may be a thin layer of Cambrian Antrium Plateau Basalts resting on the Westmoreland Conglomerate or directly on the inlier which is giving rise to EM signature.

- C1 and C2 correlate to high amplitude EM anomalies and are possibly large dyke-sill complexes of possible Tawallah Group age that correspond to feeder zones for flood basalts in the southern part of the McArthur Basin. There is a possibility that the EM anomalism is caused by heavy mineral layers in a synclinal remnant of the Westmoreland Conglomerate, however the complexity of the magnetics in this area suggests this is not the case.

- Target C3 shows an offset high amplitude EM anomaly corresponding to a possible dyke. The dyke is of either Tawallah Group or Antrium Plateau Basalt age (note the Antrium Plateau Basalts display parental picrite magma geochemistry, crustal contamination and Ni-PGE depletion) and could be a feeder zone to either sequence of volcanics. The dyke, however, does not display a complex configuration and has a low magnetic susceptibility thus down playing its potential.

- Target C4 is similar to target C3. It has a small moderate amplitude EM anomaly with low magnetite susceptibility (negative feature) corresponding to a small dyke complex. It is possible that the EM anomalism is caused by supergene clay or hypogene illite-chlorite alteration near the dyke.

- Target C5 is similar to targets C1 and C2 in that it corresponds to a high amplitude EM anomaly offset from what appears to be a composite dyke-sill complex. However, the magnetic susceptibility is low and the Bouguer gravity signature is poor (although gravity data are coarse). This suggests that the EM signature might be

related to chlorite and illite alteration associated with uranium mineralisation. Note this Cu-Ni target corresponds to the southern edge of the uranium target area U1.

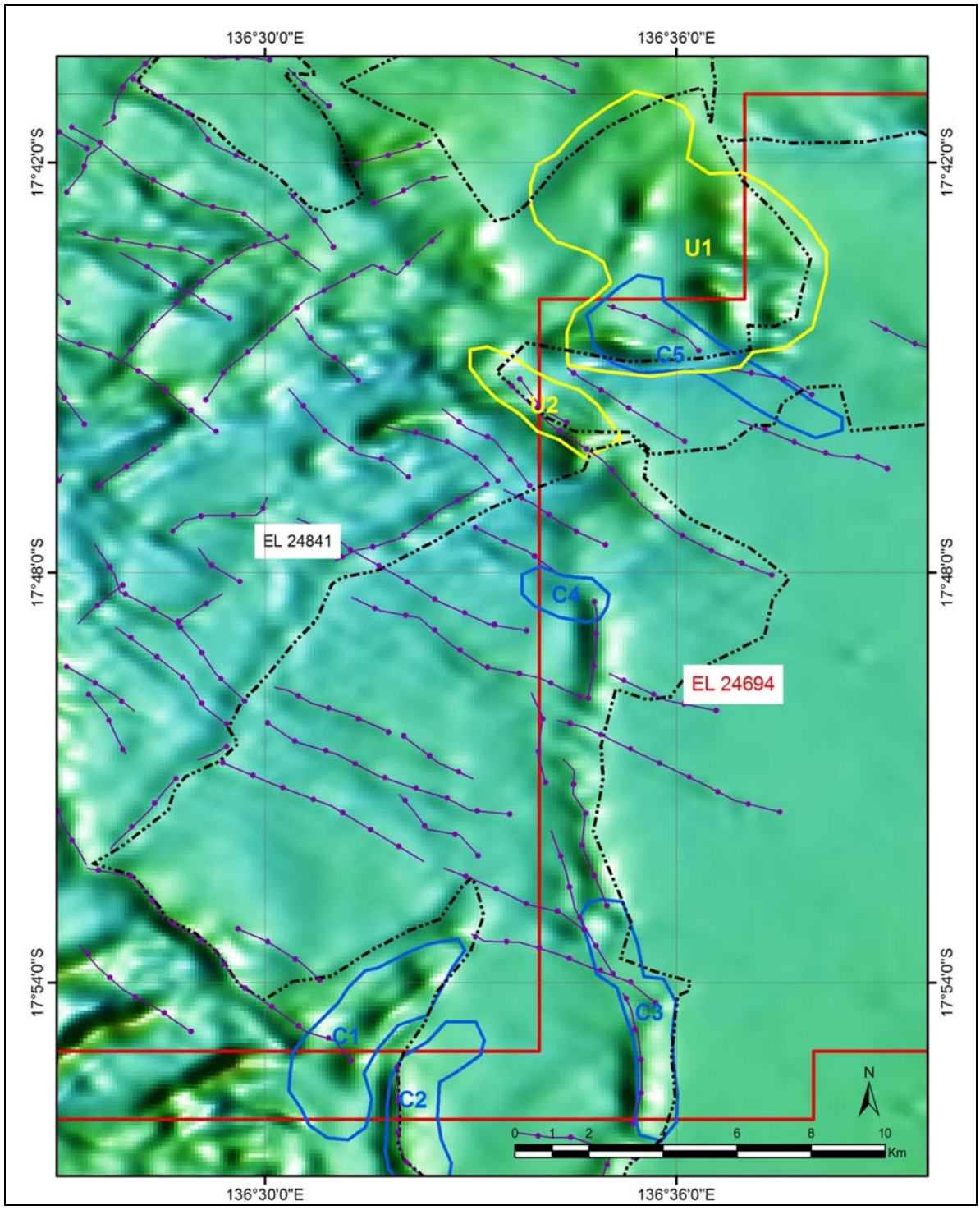

Figure 7. Target areas (U in yellow and Cu-Ni in blue) with interpreted Murphy Metamorphics (black dashed outline) and mafic dykes (purple dotted lines) on TMI_HSI (sun angle 50^{o} at 90^{o}).

8 CONCLUSIONS

Results from work during this period have confirmed that the covered western end of the Murphy Inlier is prospective for uranium mineralisation and that previous exploration has not adequately tested this area for concealed uranium deposits. Limited drilling in the area indicates that cover thickness are not great.

An airborne input EM survey has located several EM anomalies in the area that could be related to graphitic schists in the basement faults or possible chlorite-illite alteration zones. In addition the EM survey highlighted several mafic dyke and sills complexes. These complexes could be feeder zones for mid-Proterozoic and early Cambrian flood basalts within the southern McArthur Basin and as such have the potential to host Cu-Ni mineralisation.

A detailed mineralisation assessment combining public domain data and information was successful in highlighting favourable mineralisation features such as the extension of the Westmoreland Conglomerate and Murphy Inlier under cover and altered structural zones. Results from this assessment found two main target areas for unconformity-type uranium deposits and five possible target areas for mafic dyke-sill hosted Cu-Ni deposits. All the target areas are under cover and have not been previously tested.

9 FUTURE WORK

Follow-up work on the uranium targets will involve a detailed in ground radiometric and radon track etch survey on lines over the major structures that intersect the main target areas. This will be followed by air-core drilling sampling of the Proterozoic basement.

The Cu-Ni targets represent “high risk’ exploration, so it is planned to drill test, with air-core, the best target (C1) to confirm the potential of this type of mineralisation in the area before developing a more detailed exploration program.