

CHINA COAL RESOURCES PTY LTD

ABN: 89 148 842 531

# **TASMANIA**

## **WILMOT PROJECT**

EXPLORATION LICENCES: EL55/2007

6<sup>th</sup> ANNUAL TECHNICAL REPORT

REPORTING PERIOD:

05/06/2013 TO 04/06/14

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**Map Sheets:**

1:250,000 SK 55 -20

**Map Datum** – all coordinates referred to in this report are referenced to GDA 94  
Zone 55

### **Abstract**

EL55/2007 is a Joint Venture between ASF Resources Pty Ltd and China Coal Engineering Corporation (CCR) as the operator. During the reporting year CCR undertook a thorough review of all their Tasmanian projects including EL 55/2007 Wilmont. A brief field trip to the project occurred in June 2014 to visit the areas of field work in 2012 in addition to possible access requirements for drill testing of targets. Following the review CCR relinquished 84sq km of EL 55/2007 which prior to the reduction was 110sq km. This has allowed CCR to focus on the areas of Tyndall correlates. The review also allowed CCR to evaluate all exploration to date and determine if modifications needed to be made resulting in an amended exploration strategy.

## **1.0 Introduction**

China Coal's main targets on the project tenements are Cambrian age Rosebery or Hellyer type, Zn-Pb-Cu-Au-rich VHMS mineralisation hosted by the Mount Read Volcanics (MRV). Additional targets are epigenetic Sn-W- Mo vein and skarn style mineralisation such as typified by the Moina deposit, associated with Devonian granite emplacement.

The tenement is the subject of a joint venture between the tenement holder, ASF Resources Pty. Ltd. and China Coal Geology Engineering Corporation. The project is being undertaken by China Coal Geological Special Technical Exploration Centre under the supervision of the China Coal Geology Engineering Bureau

The project area was previously explored by Zinifex under EL's 18/2005, 17/2005 and 16/2005. The current EL was granted to ASF Resources on the 23/07/2007.

## **2.0 Location and Access**

The Wilmot Project is located approximately 20km south west of Devonport and access to the tenement is via sealed and gravel roads which head in a southerly direction from Devonport. The project is bisected by the Wilmot and Forth Rivers and is adjacent to the Leven Gorge (**Figures 1, 2**).

The tenure is centered on the locality of Wilmot, extending north to Preston and Central Castra; west past Nietta towards Loongana; and east through Roland and West Kentish to Sheffield. The area is well serviced by roads.

The project area has a cool temperate, maritime climate, with a summer average temperature of 21° C and a winter average temperature of 12°C.

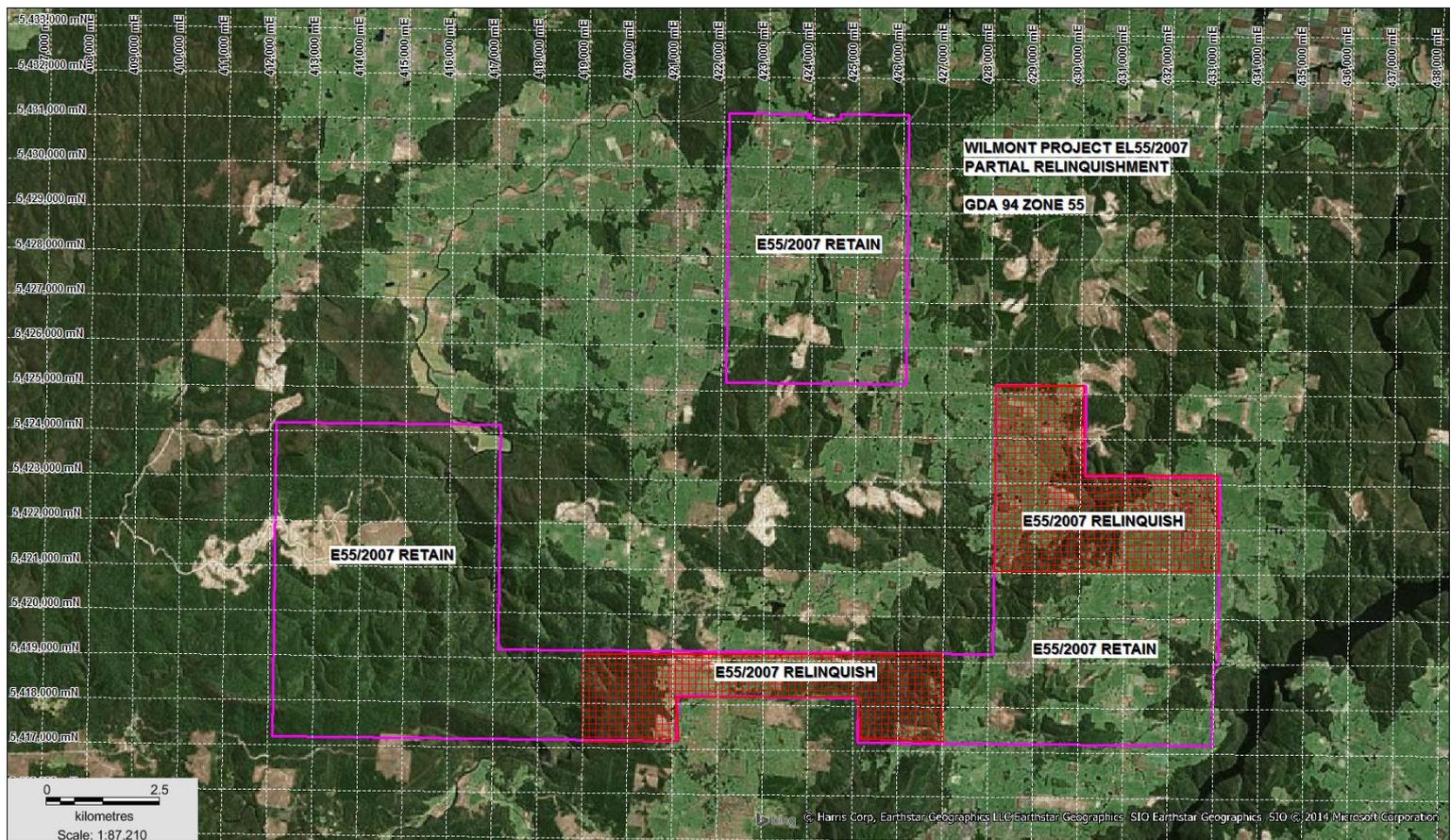
The area is close to Leven Valley at altitudes ranging from 70m ASL to 890m ASL (Figure 3). Approximately 10-20% in the project area is covered by forest. Block 1 is of moderate relief. The highest elevation is 430m ASL and the lowest 220mASL. Block 2 has lower east and higher west topography.



Figure 1 Location of E.L. 55/2007

### 3.0 Tenure

EL 55/2007 comprised an area 110km<sup>2</sup> prior to the 2014 reduction (Figure 2) was granted to ASF Resources on the 23/07/2007. On the 26<sup>th</sup> April 2010 China Coal Geology Engineering Corporation (China Coal) entered into a conditional cooperative agreement with ASF Resources for the exploration of EL55/2007. China Coal is responsible for funding and operating the exploration programs. In 2014 EL 55/2007 was reduced by 26 sq km to 84sq km as shown in Figure 2.



**Figure 2: Detailed Location of E.L.55/2007 showing the 2014 relinquished areas in red hatching**

#### 4.0 Regional Geology

The regional geological framework of the Mt Read Belt (MRB) is subdivided, from an exploration perspective, into three elements. The central MRB covering the area of outcrop from south of Queenstown to north of Hellyer, the northern MRB covering the area from Black Bluff eastwards through Gowrie Park and Mole Creek, and the Southern MRB comprising areas west and south of Macquarie Harbour. The project tenements are in the east-central part of the northern MRB.

Basement in the Central and Northern MRB is of Precambrian age, comprising predominantly greenschist facies metasediments with minor basalts and dolerites. Higher grade amphibolite and eclogite facies are also present within the Precambrian. This Precambrian basement, termed the Tyennan Block, lies to the south of the project tenements.

Cambrian volcanism and sedimentation developed on the Precambrian continental crust and, in the Central MRB, is subdivided into the Neo-Cambrian Tholeiitic Crimson Creek Formation (CCF), the mid to late Cambrian Dundas Group and the predominantly calcalkaline, Mt Read Volcanics (MRV). The CCF was deposited in shallow but rapidly subsiding basins comprising basaltic lavas and volcaniclastics, turbidites, carbonates, chert and minor evaporites. This formation is not exposed in

the licence area. Ultramafic cumulates and volcanic equivalents were thrust onto the CCF in the mid Cambrian. They are absent from the licence area.

The MRV, in the Central MRB, form a 200 km long by 20 km wide north-south trending belt along the eastern side of the Dundas Trough, adjacent to and in some areas on-lapping and intruding the Precambrian basement. The northern extension of the MRV swings eastwards around the northern margin of the Tyennan Precambrian block. The volcanics include intermediate to felsic lavas, sub volcanic porphyries and granites, volcanoclastics and basement-derived sedimentary rocks. The MRV host five economically significant volcanic hosted massive sulphide deposits all of which lie in the Central MRB.

During late CVC to early Tyndall Group time, Cambrian granitoids intruded the volcanic pile. The majority of the granitoids locate occur along the eastern margin of the volcanics and stitch the volcanics to the Tyennan Block. Cambrian volcanism and sedimentation was followed by predominantly basement derived late Cambrian to Devonian age sedimentation, including siliciclastic conglomerate, sandstone and limestone. These sequences occur within, and peripheral to, the project area (**Figure 3**).

At least two phases of regional compression were associated with the mid Devonian Tabberabberan Orogeny. The development of folding, cleavage and regional thrusts in lower Paleozoic rocks were associated with this event. Fold trends in the licence area are variable, some NW, and lesser E-W.

Deformation was followed by the extensive intrusion of Devonian to Carboniferous granitoids of batholithic proportions. The Dolcoath Granite (and associated thermal metamorphic aureole) outcrops south of the licence, and the Housetop Granite outcrops across a large area to the northwest of the project tenements. The Devonian granites are associated with carbonate replacement Sn mineralisation at Renison Bell and Mount Bischoff, and the Pb-Zn-Ag vein deposits of Zeehan and possibly the Tullah Fields. A similar setting may be interpreted for the base metal vein deposits in the district (eg. Round Hill workings).

The Ordovician and older rocks in the far eastern part of the licence are unconformably overlain by marine sediments, including tillite, forming the basal units of the Permian Parmeener Supergroup. Small bodies of Jurassic dolerite intrude the Permian sediments and older rocks.

After substantial erosion of this terrain, extensive Tertiary flood basalts and subvolcanic sediments were deposited. Basalt flows cover as much as 50% of the project area. In the Quaternary, talus deposits have developed on the lower slopes of Mt Roland and alluvial deposits have formed in the valley of major rivers.

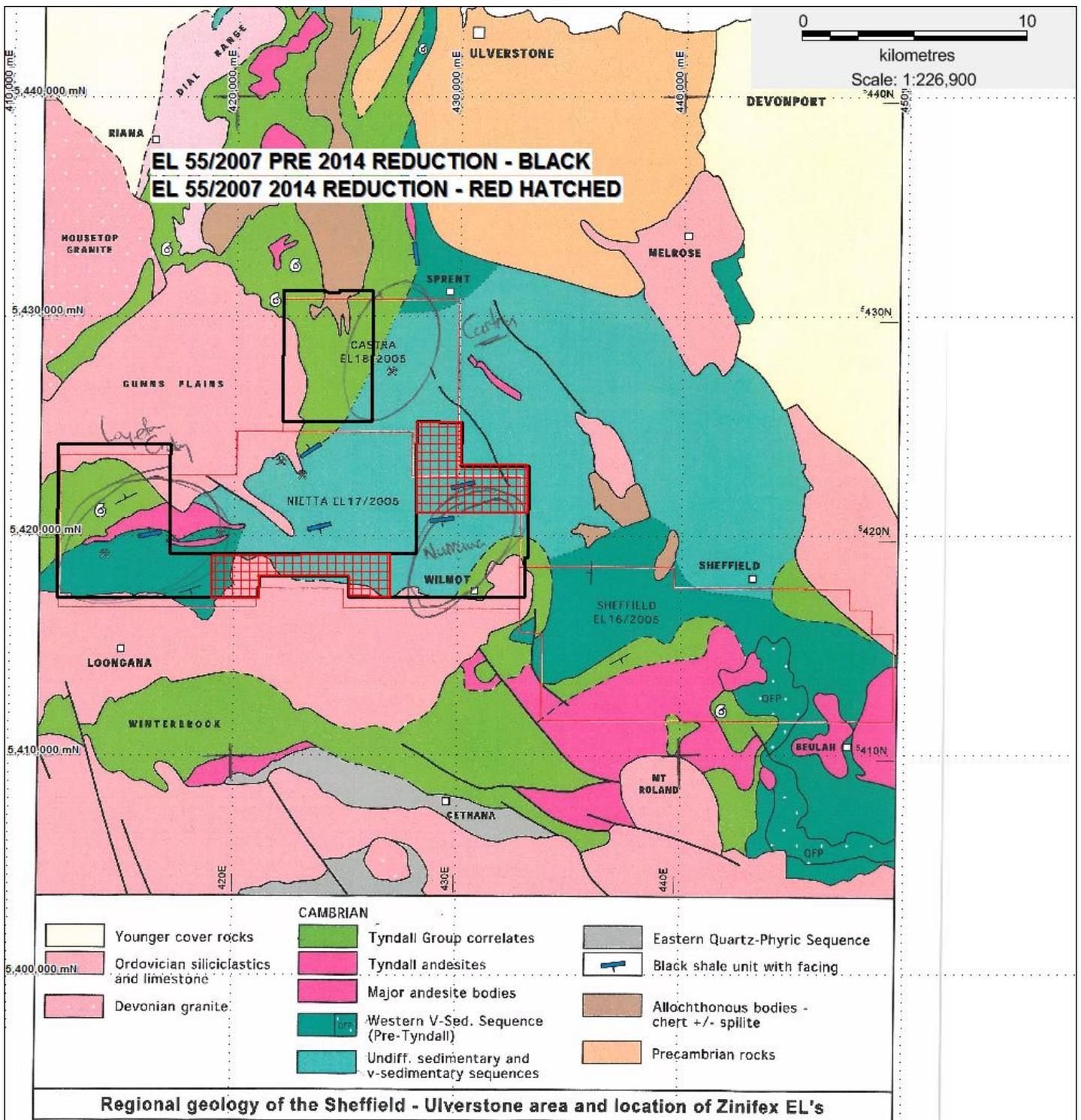


Figure 3: Solid Geology Interpretation of EL 55/2007 (From Pasmenco Report)

## 5.0 Regional Mineralisation

The rocks of the Dundas Trough are host to significant polymetallic (Pb, Zn, Cu, Sn, Ag, Au) mineralisation including:

- Mt Lyell – 311Mt @ 0.97%Cu and 0.31g/t Au
- Rosebery – 34.03Mt @ 13.8%Zn, 4.1%Pb, 0.57%Cu, 143g/t Ag and 2.2g/t Au
- Hellyer – 16.5Mt @ 13.9%Zn, 7.2%Pb, 169g/t Ag and 2.55g/t Au

Mineralisation can be broadly classified into two associations.

- Base metal and gold mineralisation related to volcanogenic processes associated with the emplacement of the MRV rocks, particularly the CVS, during the middle to late Cambrian.
- Epigenetic Zn, Cu, Sn, Pb and Ag mineralisation associated with the intrusion of the Devonian Granites.

While it is generally accepted that the polymetallic mineralisation in the MRV is volcanogenic in nature, this has been questioned on the basis of observations that much of this mineralisation (eg Rosebery, Hercules) was emplaced subsequent to the main cleavage forming event and controlled by the interplay of cleavage and bedding in pure shear zones associated with carbonate altered lithologies (Dr. M. Tomkinson per.com. C.Swensson). If true then this model implies that lithologies in such settings outside the CVS may be prospective. Prior exploration has concentrated on the CVS based on a volcanogenic model. The Henty Fault, reactivated during the Tyennan Orogeny tends to divide mineralisation of a Zn-Pb-Cu-Au volcanogenic association to the NW of the fault from a Cu-Au-Fe association to the SE of the fault. The Henty gold mine (2.83Mt @ 12.5g/t Au) is unusual for the region, being a gold only deposit located within the Henty Fault. The Devonian granites have mineralized a broad range of lithologies, generally close to and within the contact aureoles of the batholiths. Mineralisation is represented by simple high angle veins (Pb, Ag, Zn, Sn), skarn (Zn, Sn) and replacement bodies (Sn) which have resulted in some significant deposits such as Renison Bell (24.54Mt @ 1.41%Sn), Mt. Bischoff (10.54Mt @ 1.1%Sn) and Ocean (2.6Mt @7.7%Pb, 2.5%Zn, 55g/t Ag). The larger granite related deposits tend to be associated with reactive and or replaceable host rocks, usually carbonates.

## 6.0 Previous Exploration

Records indicate that EL tenure in these areas has been varied, with exploration for base metals starting in the 1960's, with current philosophies and methods being employed since the mid 1970's. Previous tenement holders were Zinifex Rosebery Mine, with EL 16/2005 Sheffield, EL 17/2005 Nietta and EL 18/2005 Central Castra. Following completion of an exploration programme from September 2005 until December 2006, sections of the tenements were relinquished, these forming the subsequently granted EL 55/2007. Prior to the Zinifex tenure, a number of other

companies have held EL's in this area, with varying degrees of overlap with EL 55/2007.

During the current tenure China Coal identified three stream geochemical anomalies from the analysis of previous stream geochemical data: a W, Sn, Mo anomaly in the west of the area, a Zn, Cu, Pb, Ag, Au anomaly in the central west and a Zn, Cu, Pb anomaly in the central east of the tenements. Follow up of the anomalous areas resulted in the establishment of two soil geochemical sampling grids, one each located in Blocks 1 and 2. This work resulted in the definition of two robust base metal soil geochemical anomalies. The anomalies are unclosed and represented base metal targets, warranting further work.

### 7.0 Exploration Conducted by China Coal Resources 2012/2103

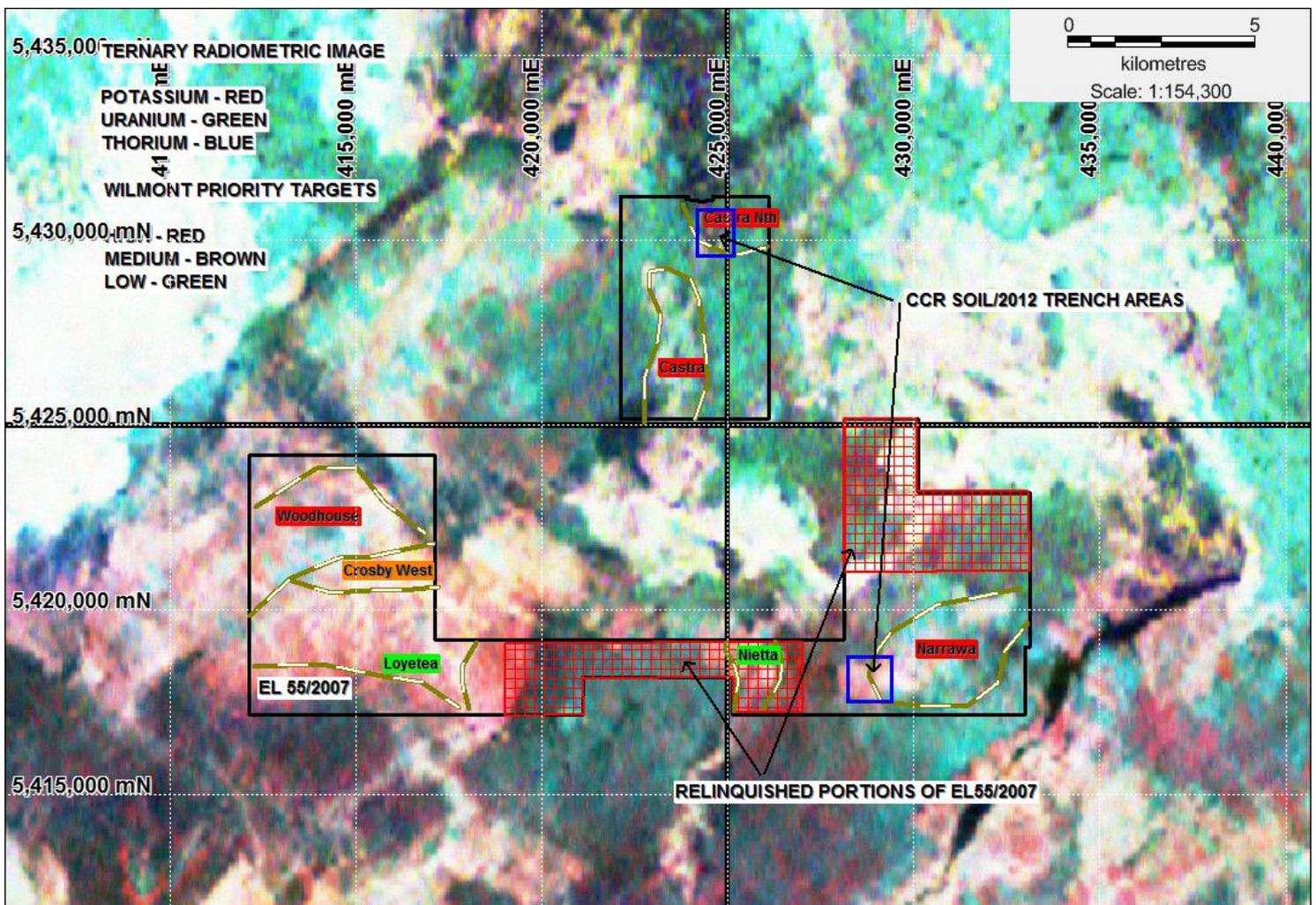


Figure 4: Ternary Radiometrics showing 2012 exploration areas and target areas

Exploration during the 2012/2013 reporting period comprised geological reconnaissance, detailed geological and geochemical traversing over the two prospects identified previously and the excavation and sampling of six trenches for the purposes of mapping and geochemical sampling.

### **8.0 Exploration Conducted by China Coal Resources 2013/2014**

During the reporting year CCR undertook a thorough review of all their Tasmanian projects including EL 55/2007 Wilmont.

A brief field trip to the project occurred in June 2014 to visit the areas of field work in 2012 in addition to possible access requirements for drill testing of targets.

Following the review CCR relinquished 84sq km of EL 55/2007 which prior to the reduction was 110sq km. This will allow CCR to focus on the areas of Tyndall correlates.

The review also allowed CCR to evaluate all exploration to date and determine if modifications needed

To be made. The result was the amended exploration strategy highlighted in Q9.

### **9.0 Proposed Programme**

CCR plan to evaluate EL55/2007 in a systematic manner so as to be able to define drill targets.

Compilation of all surficial geochemistry both by CCR and others to determine thresholds that will assist in defining mineralised targets. An orientation geochemical survey may be contemplated.

Detailed prospect scale geological/alteration mapping in and around current prospects and others as defined. Petrological analyses and possibly spectral analyses will be considered.

In conjunction with the geological mapping selective ground magnetic traverse will be run.

The soil grids at present will need to be reduced to allow for drill targeting so infill soil sampling will be required. All soil samples will initially be analysed using a portable XRF analyser so as to get a feel for the distribution of selective elements.

Based on the results of 1 to 4 the aim will be to define drill targets using a mixture of RC and diamond drilling techniques.

Negotiations with key stakeholder groups such as landholders and traditional owners will be ongoing and both parties will be kept informed on a regular basis.

In the upcoming year China Coal Resources will initially focus on the two areas shown in Figure 4 where during 2012 grid based soil sampling was carried out followed by the digging of 6 trenches. The trenches were backfilled and rehabilitated prior to moving onto the subsequent trench.

Surficial exploration will also expand to the higher priority targets shown in red in Figure 6 to determine if grid based soil sampling is warranted. To facilitate this approach a portable XRF analyser will be used to provide real time element results so as to be able to determine the applicability of soil sampling.

The ultimate goal is to have areas for drill testing with geochemical and geological merit particularly from an alteration point of view. 10.0 Environment

## 10.0 Environment

There was no surface disturbing activities during the reporting period.

## 11.0 Expenditure

Table 1 Expenditure Statement

Cost Centres	Expenditure Incurred
Geoscientific (Geology)	\$13,437
Geoscientific (Geochemistry)	\$0
Other Costs(Rental)	\$0
Administration	\$6,000
<b>TOTAL</b>	<b>\$19,437</b>

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