



**Kaili Resources Limited**  
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## QUARTERLY ACTIVITIES REPORT – 30th September 2017

### EXPLORATION HIGHLIGHTS

- All granted tenements are up to date regarding statutory requirements.
- **Maryvale Coal Project in Queensland**
- Renewed for a further 3-year period to 2020
- **Gindalbie Gold Project in Western Australia**
- Phase 2 soil sampling results received
- **Kookynie Gold Project in Western Australia**
- Phase 1 soil sampling results received
- **Pilbara Iron Project in Western Australia**
- Phase 1 rock sampling/mapping of E45/4619-I (Bustler Bore) results received



**Figure 1: Kaili Resources project locations**

PROJECT LOCATION	TENEMENT AREA IN SUB BLOCKS	TENEMENT AREA IN KM <sup>2</sup>
Queensland	53	169.6
Western Australia	206	659.0
<b>Total Area</b>	<b>259</b>	<b>751.6</b>

*Table 1: Kaili Resources granted tenement areas, all held 100%. km2 has been calculated at approximately 3.2km2 per block*

## WESTERN AUSTRALIA.

### Pilbara Craton (Darnell Hill, Bustlers' Bore and Bea Bea Creek) Iron Projects

*E08/2770-I (Darnell Hill), E46/1084-I (Bustler Bore) and E45/4619-I (Bea Bea Creek) are held 100% by wholly owned subsidiary Kaili Iron Pty Ltd. All tenements are granted. During the quarter field work was confined to the Bustler Bore Project.*

Surficial geochemical sampling and mapping at Bustler Bore Project in the Pilbara Region confirms high grade iron associated with Channel Iron Deposit (CID).



**Figure 2** Bustler Bore project location

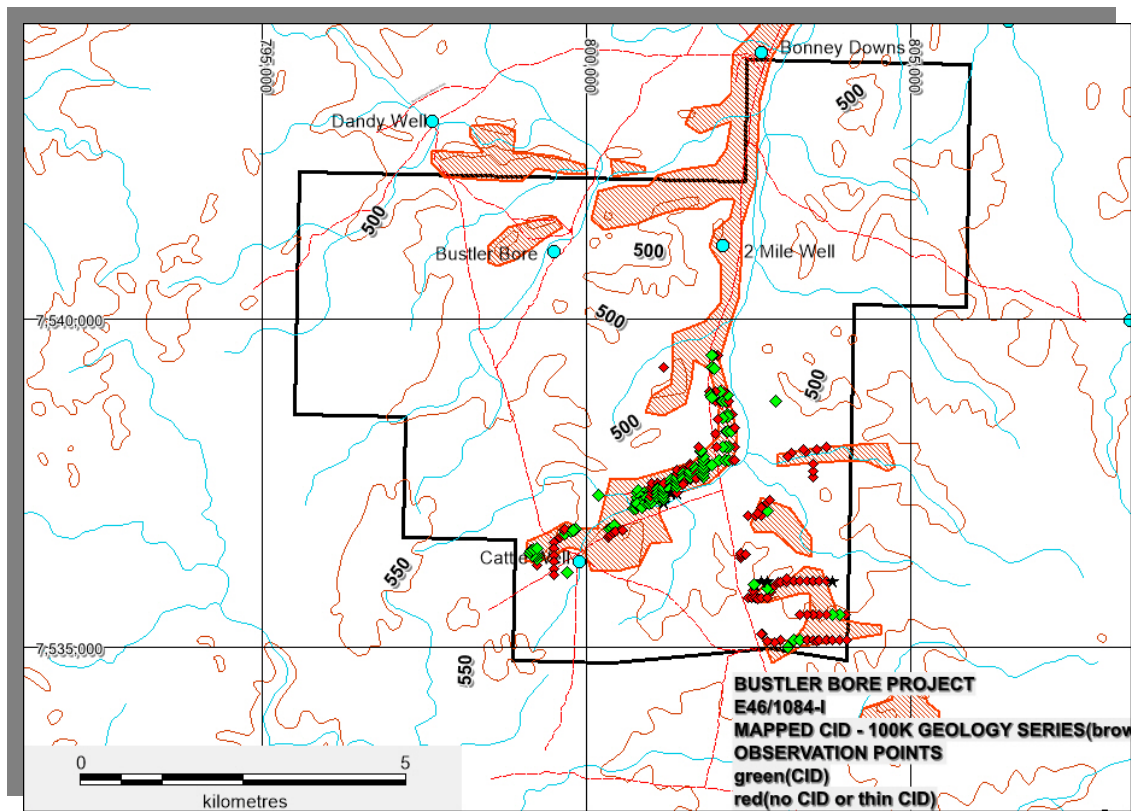
Kaili Resources Ltd (Kaili) completed program of surficial geochemical sampling and geological mapping at the Bustler Bore project in the Pilbara region of Western Australia in the June Quarter (**Figure 2**). A total of 249 DELTA pXRF readings and 19 rock samples were collected with results having been announced to the ASX in July 2017. The rock samples were submitted to ALS in Perth for iron and associated element analysis. The tenement is owned 100% by subsidiary company Kaili Iron Pty Ltd and is located 1200km north of Perth and 70km north of Newman.

The Pilbara region of WA is host to several world class iron ore mining operations. Kaili Iron has targeted the CID (Channel Iron Deposit) style of iron mineralisation which are formed in ancient palaeochannels resulting in cemented masses of concretionary iron oxides of hematite to hematite-goethite composition. Major producing CIDs include Robe River (Rio Tinto) and Yandicoogina(BHP).



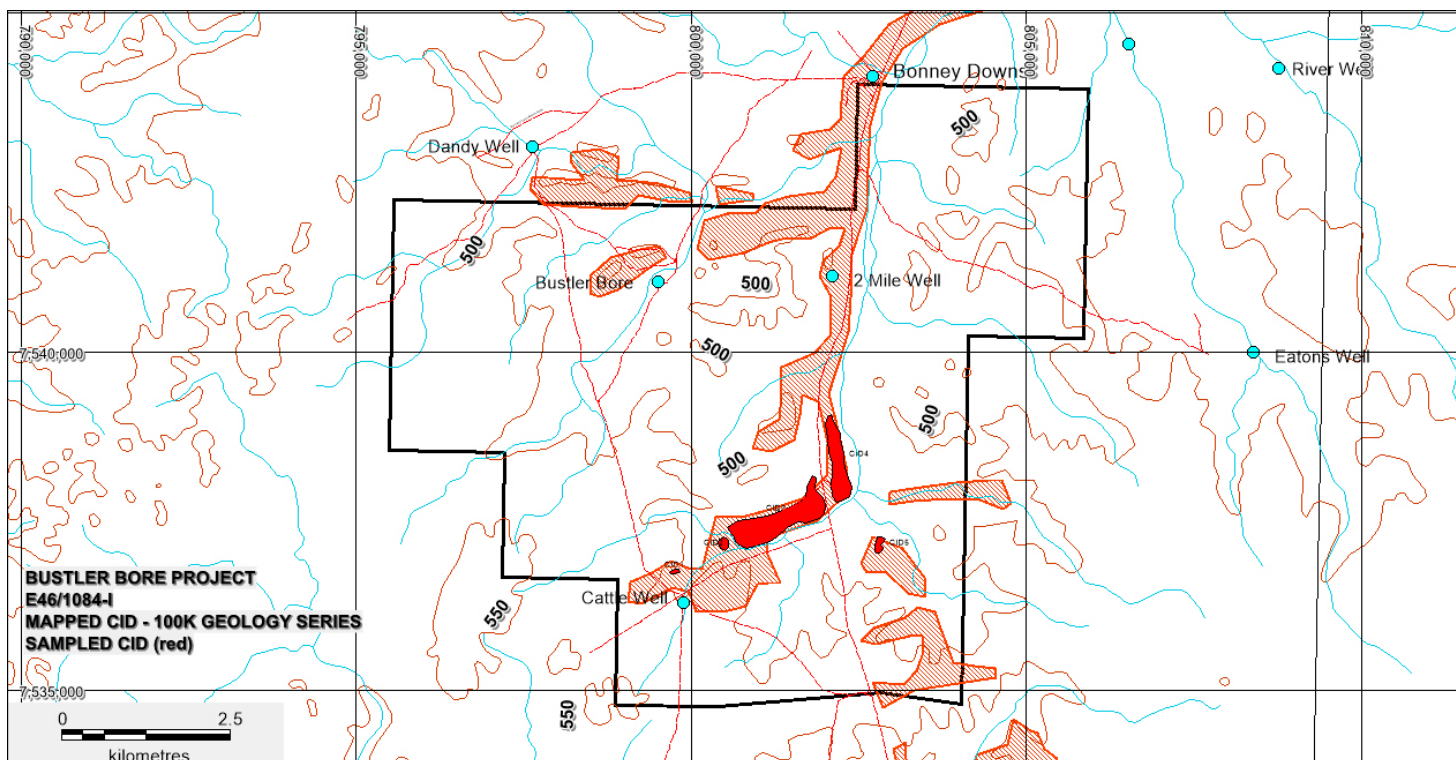
The typical composition of ore from Yandicoogina is about 58% Fe, 0.05% P, 4.8% SiO<sub>2</sub> and 1.4% Al<sub>2</sub>O<sub>3</sub>. The source of iron for the CIDs is believed to be a [Miocene](#) aged iron-rich soils which developed upon a palaeosurface (since eroded) which developed in the Early Miocene during hot, humid conditions. The erosion of this ferritic palaeosurface in the Mid Miocene transported the iron-rich soils into the palaeodrainage system, where the iron became consolidated within the existing river courses. The river beds were at the time a rich [humic](#) swamp with thick vegetation, and accumulation of [peats](#) or thick detrital vegetation. Most CIDs are underlain by organic-rich clays and/or Miocene aged [lignite](#). The iron became fixed in place in the river channels and gradually replaced the existing humic material via replacement with goethite.

At each sample site, the Company's Olympus DELTA Premium portable handheld pXRF analyser (DELTA) was used to collect a suite of multi element geochemical readings in addition to a 2kg rock sample at 19 sites which were submitted to ALS in Perth for a suite of iron ore related elements including Loss on Ignition (LOI).



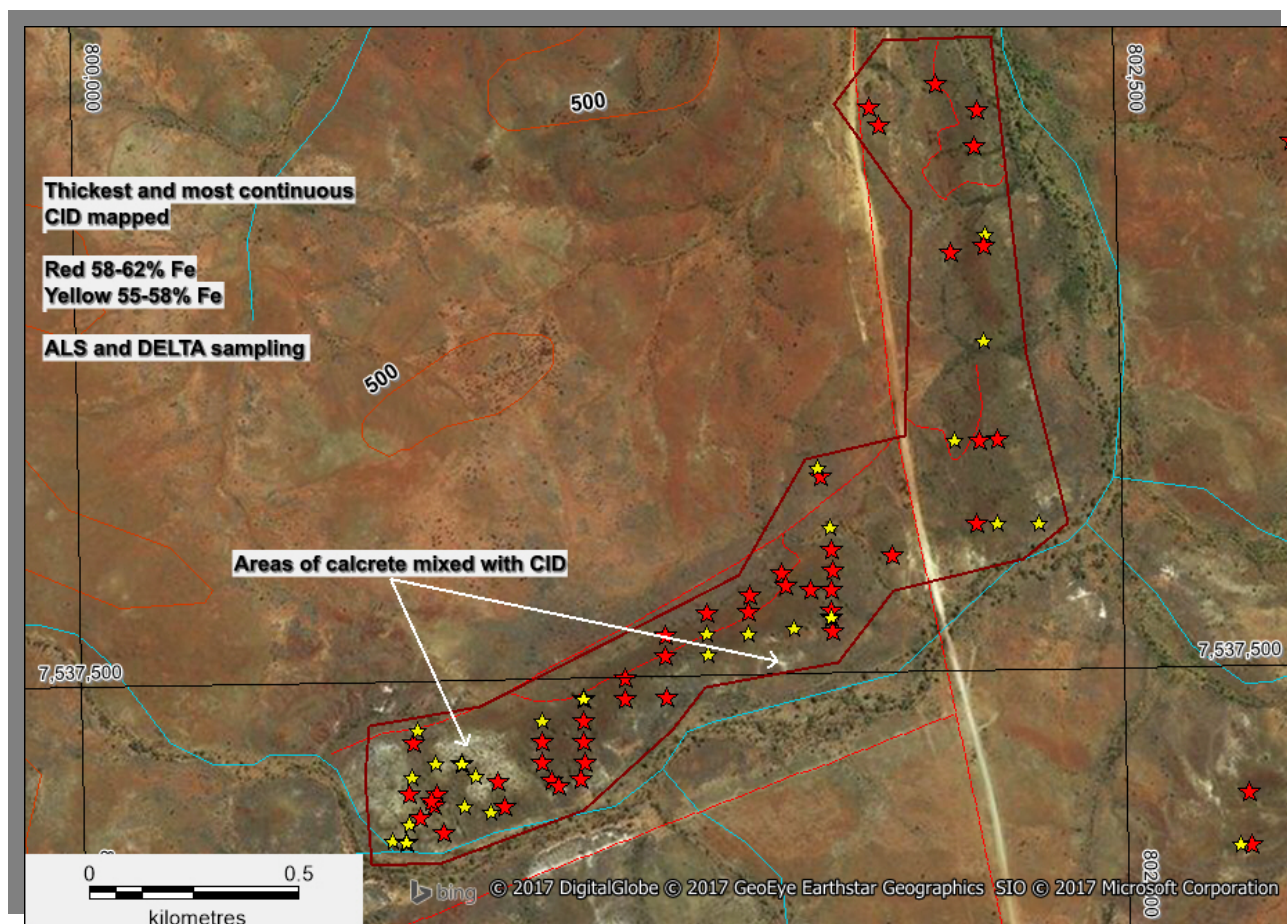
**Figure 3** Bustler Bore project showing DELTA XRF sample sites

The sample locations are shown in **Figure 3** on the interpreted location of CID style iron mineralisation as shown in the 1:100,000 geological mapping series. In the above figure, the observation points indicate whether there is thin to no CID at that location or if there is abundant CID to >1m in thickness.



**Figure 4** Bustler Bore project showing the area with the most continuous of CID style iron mineralisation in red.

The area of most significant CID development is shown in **Figure 4** and is located to the north of river channel on a small rise 6-8m above the level of the river channel.



**Figure 5** Bustler Bore project showing the area with the most continuous development of CID



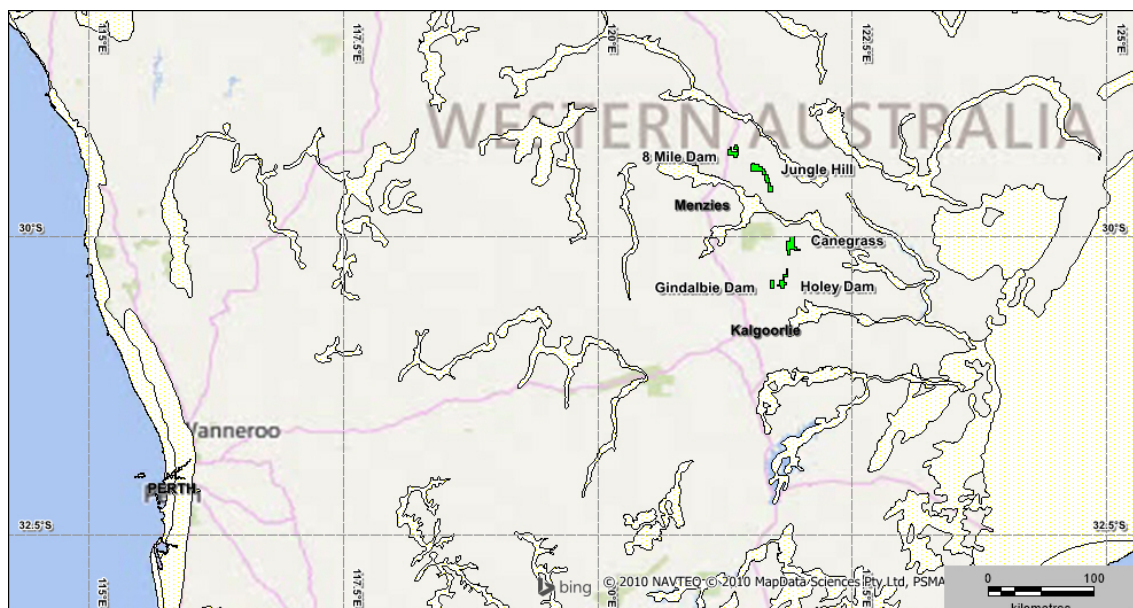
The iron ore grade is consistent along the length of the CID (**Figure 5**) with calcrete developed at certain locations along the CID.



The photo shows the surface expression of high grade (58-60% Fe) CID style iron mineralisation developed on the small rise adjacent to the river channel. The hand specimen photo shows the pisolitic iron mineralisation with a small light brown wood fragment to the right of the pen.

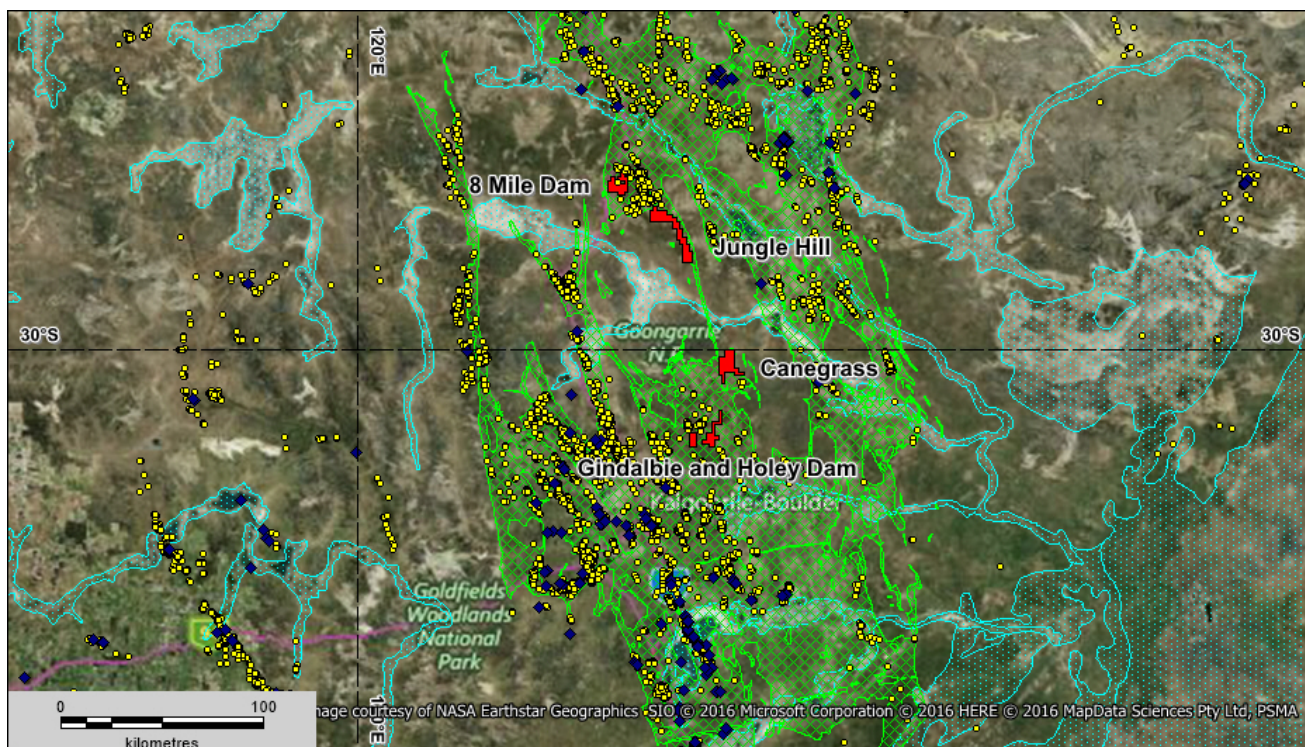
### **Yilgarn Craton (Gindalbie and Kookynie) Gold Projects**

*E40/354(8 Mile Dam), E31/1114(Jungle Hill), E31/1113(Canegrass), E27/550(Holey Dam) and E27/549(Gindalbie dam) are held 100% by wholly owned subsidiary Kaili Gold Pty Ltd. All tenements are granted. During the quarter field work was confined to the Holey Dam, Canegrass and Jungle Hill tenements.*



**Figure 6: Kaili Resources Western Australian Gold Projects**





**Figure 7** Satellite Image with Eastern Goldfields Superterrane (green hatching) and Kaili Gold tenements in red. Blue diamonds are operating mines and yellow dots are gold occurrences

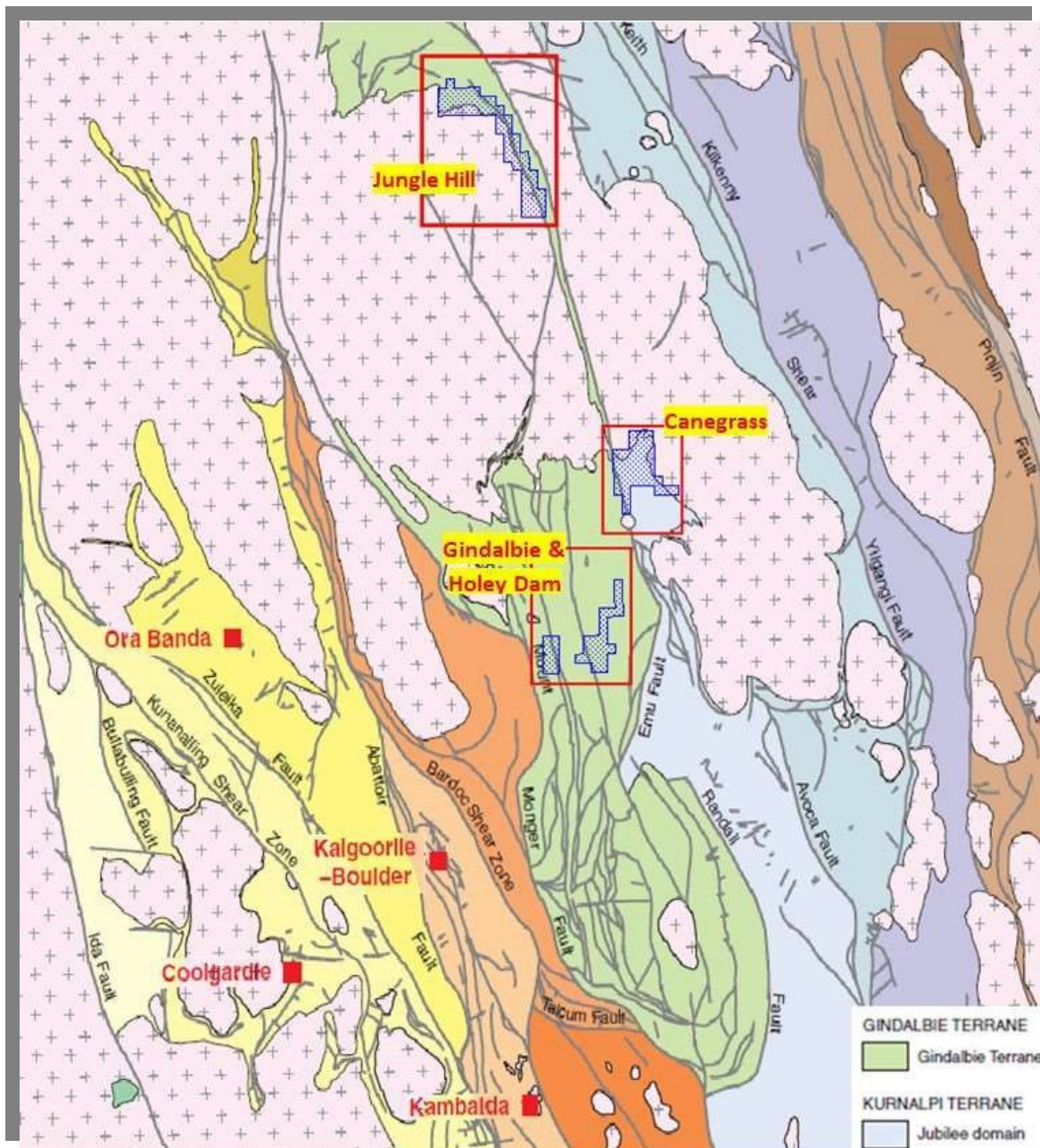
The Yilgarn Craton is one of the premier gold regions in the world and hosts numerous multimillion ounce gold mines and deposits. The Company reviewed several areas for tenement applications in proximity to known gold mineralisation and associated with mafic igneous extrusive/intrusive rocks. The Gindalbie area north east of Kalgoorlie and the Kookynie (**Figure 6**) are south east of Leonora were chosen and include the 5 granted tenements:

Kaili's Western Australian gold projects are located within the Archaean Yilgarn Craton, one of the most highly endowed gold regions in the world. Within the Yilgarn Craton the Eastern Goldfield Superterrane (EGS) hosts the bulk of the known gold deposits and operating mines (**Figure 7**). The EGS comprises felsic to ultramafic intrusives, volcanics and volcanoclastics with associated sediments with the mafic variants being the primary host to gold mineralisation. In addition, the projects are located in the Jubilee and Gindalbie tectonostratigraphic domains (**Figure 8**).

During the June Quarter Phase 2 soil/rock sampling was completed within the Holey Dam and Canegrass tenements and Phase 1 soil/rock sampling was completed within the Jungle Hill tenements. Grid based soil sampling was carried out over the high priority geophysical (lithostructural) targets delineated by Southern Geoscience Consultants. The samples were collected at 100m intervals along E-W oriented lines with a spacing of 250m across the target area. All samples were freighted to the ALS Global geochemical laboratory in Kalgoorlie for gold and multi element analyses. In addition, the Olympus portable XRF mineral analyser was used to collect multi element readings from all sample sites. In addition, 5 rock samples from the Jungle Hill project (JHPE001 to 005) were submitted for petrographic analysis to Pathfinder Exploration based in Perth. The soils samples submitted to ALS are:

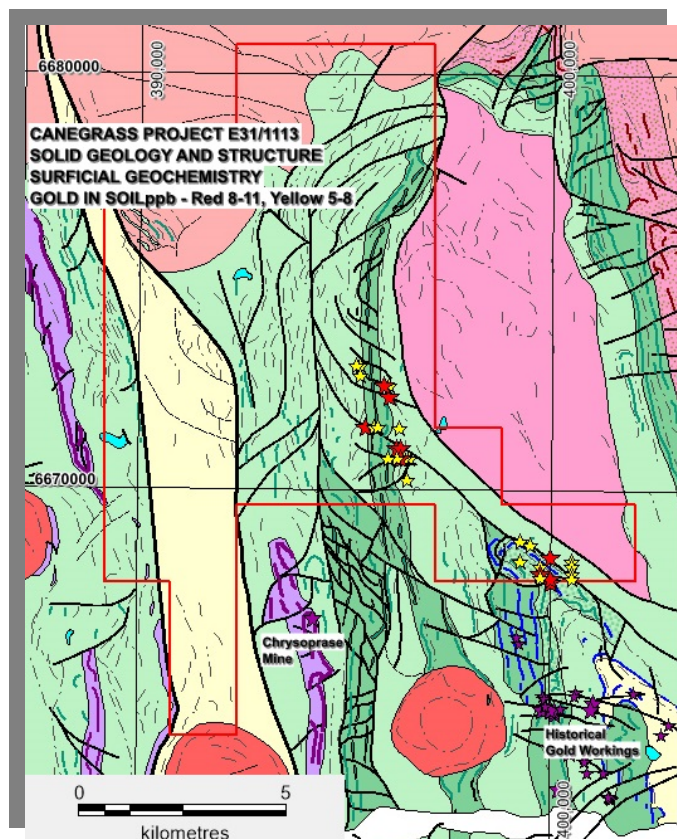
Holey Dam – HDSS218-417 (199 soil samples) and HDRC017-026 (10 rock samples)  
 Canegrass – CGSS312- 493 (181 soil samples) and CGRC021-033 (13 rock samples)  
 Jungle Hill - JHSS001 – 277 (277 soil samples) and JHRC001 – 019 (19 rock samples)  
 Jungle Hill – JHPE001 – 005 (5 petrographic samples collected in area JH2)



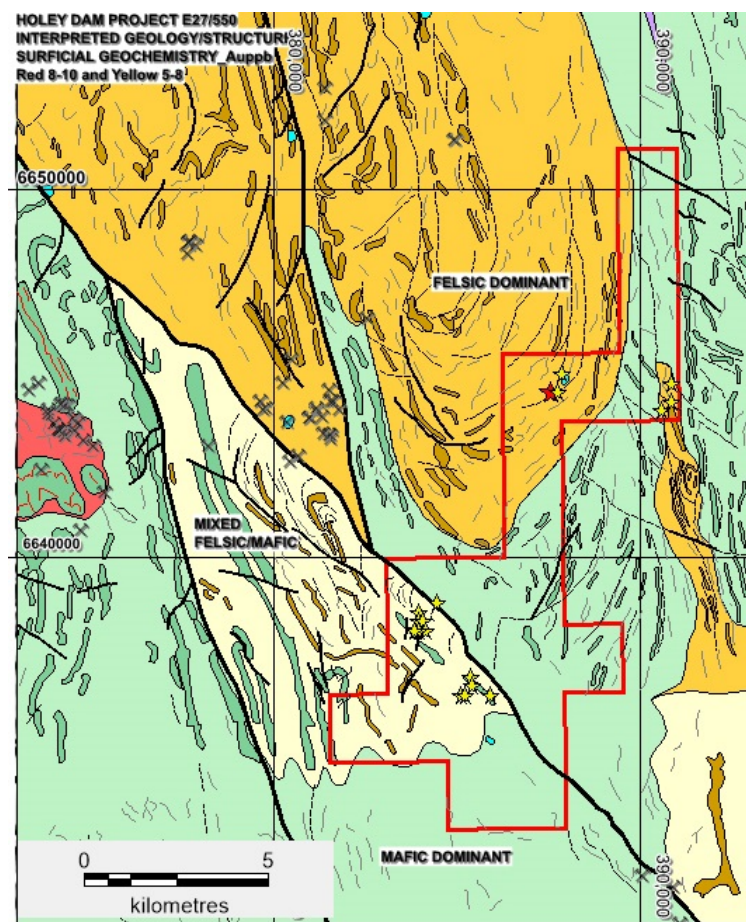


**Figure 8** Regional tectonostratigraphic framework of the WA gold projects

The Canegrass Project is dominated by transported colluvial and alluvial cover sediments and a fine lag comprising quartz and pisolitic ironstone likely resulting in a dilution of a potential surficial geochemical signature relating to gold mineralisation at depth. This is particularly the case in the south east of the tenement where folded and faulted mafic stratigraphy has only an isolated surface expression. The Binti Binti historical workings to the south east of the tenement are associated with NW-SE structures in mafic dominated folded stratigraphy which continues into the south east of the Canegrass tenement (**Figure 9**). The elevated gold in soil responses are associated with the folded and faulted stratigraphy in the south east of the tenement in addition the NW-SE cross structures further to the north. The Holey Dam Project is likewise dominated by transported colluvial and alluvial cover sediments and similar lag surface expression. The major structural feature is a NW-SE oriented Proterozoic Dyke (**Figure 10**) that is associated with gold mineralisation to the NW (Gindalbie Gold Mining Centre) and SE (Mayday/Eldorado Gold Mining Centre). A NW-SE trending mafic unit adjacent to the major structure is associated with elevated gold in soil assays (**Figure 10**) as is the case with the small magnetic high in the northern part of the tenement. All areas of interest will be evaluated along with the 2016 surficial geochemical sampling to determine targets for aircore drilling in the first half of 2018.



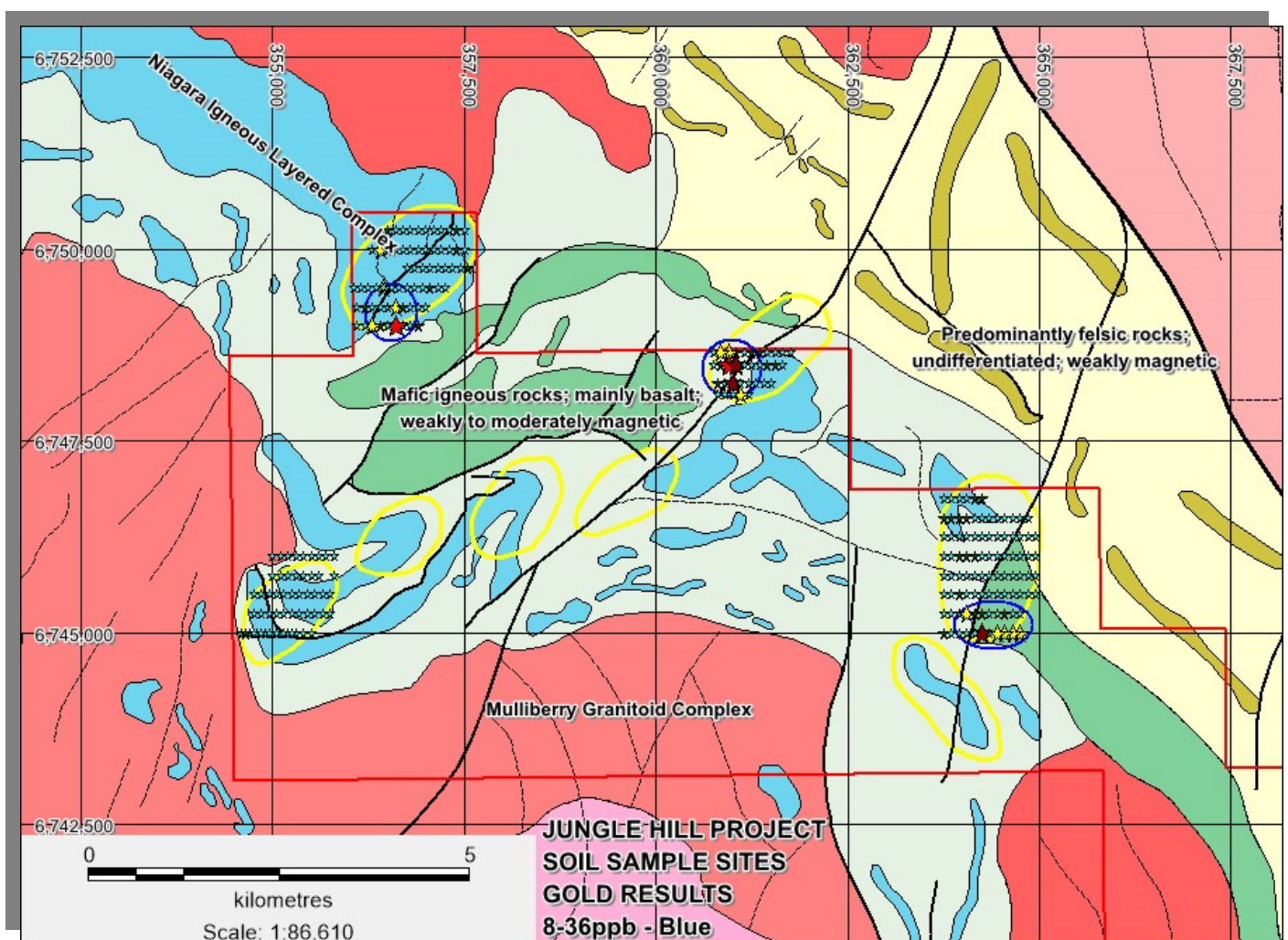
**Figure 9** Solid geology/structure of the Canegrass tenement showing areas of elevated gold in soil



**Figure 10** Solid geology/structure of the Holey Dam tenement showing areas of elevated gold in

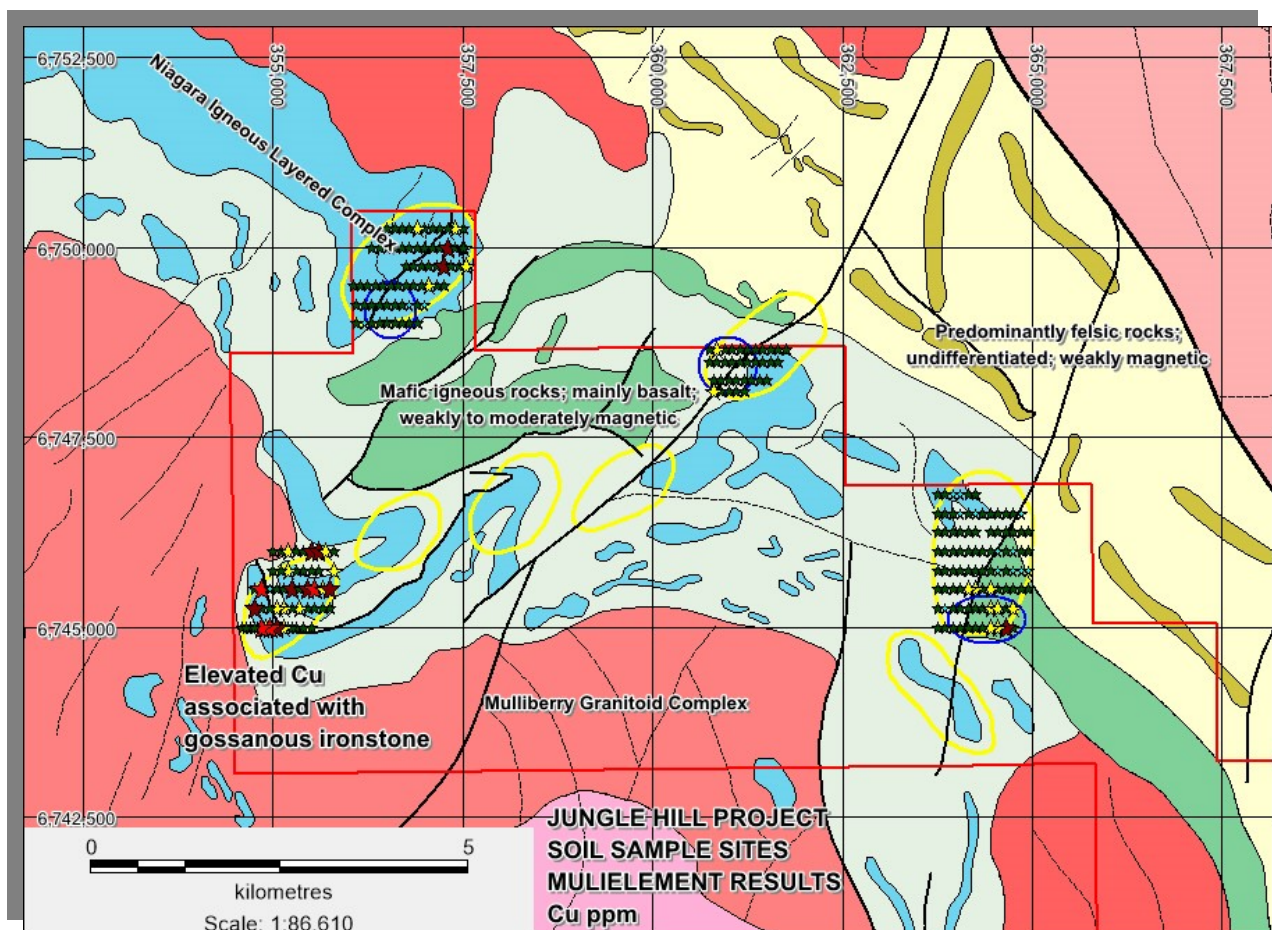


Surficial geochemical exploration concentrated on the northern half of the Jungle Hill tenement in an area dominated by folded mafic and felsic stratigraphy with a reasonable amount of outcrop compared to the Canegrass and Holey Dam tenements to the south. Elevated Au in soil (**Figure 11**) was associated or adjacent to major NE trending structures across the area and elevated Cu from the DELTA pXRF sampling highlighted an area in the south west (**Figure 12**). Five rock samples from areas of elevated Cu shown in Figure 12 were submitted for petrographic analyses to Pathfinder Exploration in Perth who indicated that one of the samples was a gossanous quartz vein with box work structures comprised goethite and limonite after pyrite, pyrrhotite and trace chalcopyrite. The gossanous quartz vein was hosted in a folded sequence comprising felsic tuff and gabbro. The next phase of exploration will comprise soil sampling and mapping of the 3 areas highlighted in yellow to the north east of the anomalous Cu area.



**Figure 11** Solid geology/structure of the Jungle Hill tenement showing areas of elevated gold in soil (Yellow/Red)





**Figure 12** Solid geology/structure of the Jungle Hill tenement showing areas of elevated copper in soil from the Delta pXRF sampling



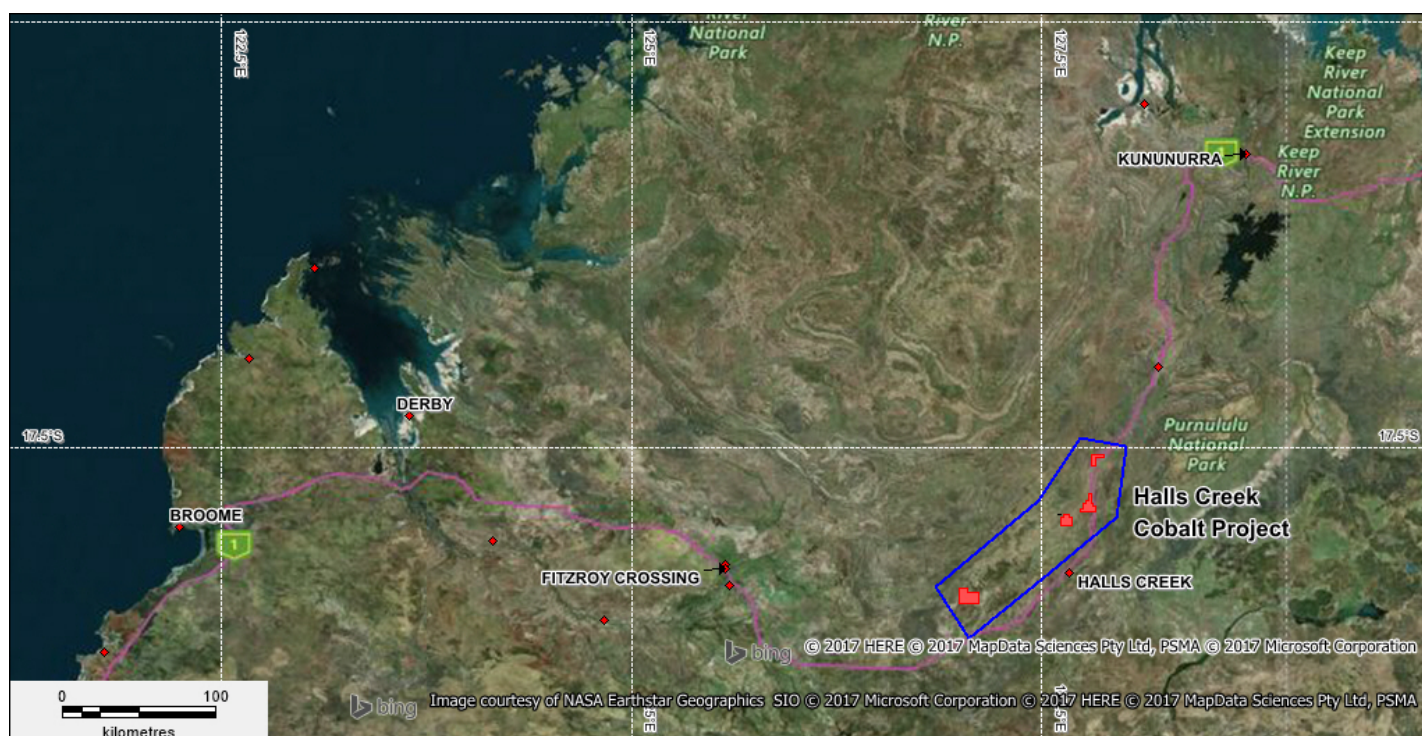
The photos above show the outcropping gossan on the left and vein quartz associated with NE-SW structures on the right.



## Halls Creek – (Black and Glidden, Carrington, Sandy Creek and Wild Dog) Cobalt/Gold Projects

**Figure 13** Halls Creek Orogen project showing the 4 tenement applications located adjacent to the town of Halls Creek

The Halls Creek Project comprises 4 tenement applications (**Figure 13**) situated within the NE-SW trending Lamboo Province comprising 4 tectonostratigraphic terranes – Western, Central and Eastern. The western terrane is postulated to be an exotic crustal fragment that was accreted to the Kimberley Craton before 1900 Ma via north-westerly directed subduction. Easterly directed subduction led to the development of an oceanic arc at c. 1865 Ma, outboard of the Kimberley Craton; this initiated the formation of the Central Zone. Eastern Zone rocks are associated with a passive continental margin linked to the North Australian Craton. The Central Terrane comprises a broad suite of felsic to lesser mafic rocks, the Sally Downs Supersuite within which occurs a subsuite of gabbro to norite dominated rocks known as the Sally Malay and McIntosh Suites. The Sally Malay nickel-copper sulfide deposit lies at the base of a small layered intrusion enclosed within granulite facies garnet-cordierite paramigmatites and mafic granulites norite which host most of the mineralization are interpreted as a chilled border zone to the intrusion, into which settled an early separated sulfide liquid. The Hall Creek Project is situated primarily within gabbro to norite rocks of the McIntosh Suite.



**Figure 13** Halls Creek Project showing the 4 tenement applications in blue over a gravity image with superimposed major structures in black

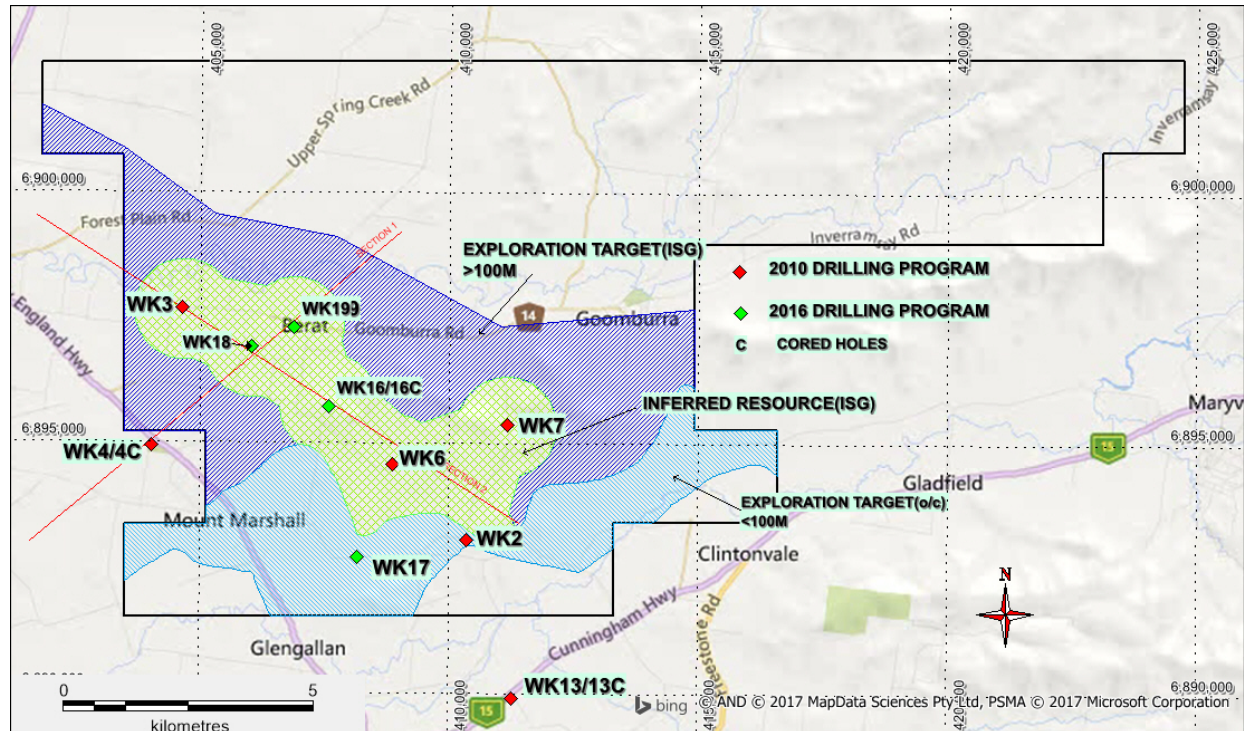
There was no field based exploration during the September Quarter

## QUEENSLAND

### Clarence Moreton Basin (Maryvale) Coal Project

*EPC1506 is held 100% by wholly owned subsidiary APEC Coal Pty Ltd*

During the quarter the company reviewed the next stage of exploration required to extend the current In Situ Gasification (ISG) Resource and Exploration Targets.



**Figure 14** EPC 1506 JORC 2012 Resource and Exploration Target areas

The Maryvale Project comprises EPC 1506 which is located in along the western slopes of the Great Dividing Range within the southern portion of the Darling Downs region. The tenements are bordered by the Main Range National Park in the east which forms part of the Great Dividing Range.

The tenements are situated in the Surat/Clarence- Moreton Basin, approximately 30 km north of Warwick and 50 km south of Toowoomba, in southeast Queensland. Access to the tenement is possible through a series of sealed and unsealed roads and tracks branching from the Cunningham Highway and the New England Highway. Part of the Darling Downs, which includes the towns of Allora, and Warwick is known as the Southern Downs.

The maiden In Situ Gasification (ISG) JORC Resource within EPC 1506 of 97 million tonnes in addition to an Open Cut Exploration Target of 80-105Mt and an ISG Exploration Target of 90-125Mt are shown in **Tables 2 and 3**.

The maiden JORC 2012 compliant resource is managed by APEC Coal Pty Ltd, a 100% subsidiary of Kaili. The JORC Resource work was managed by Brisbane consultancy Geoconsult Pty Ltd, primarily incorporating data acquired primarily from the 2010 and 2016 drilling programs.



During the quarter the Qld Department of Natural Resources and Mines renewed EPC 1506 for a further 3-year period (Years 9-11+ to May 2020 with a minimum expenditure requirement of \$403,713 for the 3-year period. At the end of Year 9 (May 2018) there is a requirement to reduce the area of the tenement from the current 53 blocks to 27 blocks and to remain at 27 blocks for the remainder of the 3-year renewal.

Resource Polygon	Working Section	Thickness (m)	Inherent Moisture (ad%)	Ash (ad%)	Volatiles (ad%)	Density (RD)	Tonnage (Mt)
<b>Maryvale ISG Total</b>	<b>BU31-35</b>	<b>2.85</b>	<b>7.2</b>	<b>47.2</b>	<b>25.6</b>	<b>1.68</b>	<b>97</b>

**Table 2: Inferred (ISG) Resource Estimate**

Resource Polygon	Working Section	Thickness (m)	Tonnage (Mt)
<b>Open-Cut Total</b>	BU31-BU35	3.3	80-105
<b>ISG Total</b>	BU31-BU35	2.5	90-125

**Table 3: Exploration Target Open-Cut and ISG Estimates**

## LICENCES STATUS

Pursuant to ASX Listing Rule 5.4.3 the Company reports as follows in relation to minerals tenements (**Table 3**) held at the end of the September 2017 quarter and acquired or disposed of during that quarter and their locations. There was no change in beneficial interests under farm-in or farm-out agreements.

	Tenement	Name	Commodity	Region	Registered Holder	Beneficial Interest	Area km2	Expiry
<b>Granted</b>								
9/03/2017	E08/2770-I	Darnell Hill	Iron	WA - Pilbara Craton	Kaili Iron Pty Ltd	100%	67.2	8/03/2017
28/07/2016	E45/4619-I	Bea Bea Creek	Iron	WA - Pilbara Craton	Kaili Iron Pty Ltd	100%	105.6	27/07/2021
21/11/2016	E46/1084-I	Bustler's Bore	Iron	WA - Pilbara Craton	Kaili Iron Pty Ltd	100%	64.0	20/11/2021
8/07/2016	E40/354	8 Mile Dam	Gold	WA - Yilgarn Craton	Kaili Gold Pty Ltd	100%	70.4	7/07/2021
30/05/2016	E31/1114	Jungle Hill	Gold	WA - Yilgarn Craton	Kaili Gold Pty Ltd	100%	150.4	29/05/2021
30/05/2016	E31/1113	Canegrass	Gold	WA - Yilgarn Craton	Kaili Gold Pty Ltd	100%	108.8	29/05/2021
1/07/2016	E27/550	Holey Dam	Gold	WA - Yilgarn Craton	Kaili Gold Pty Ltd	100%	67.2	31/06/2021
1/07/2016	E27/549	Gindalbie Dam	Gold	WA - Yilgarn Craton	Kaili Gold Pty Ltd	100%	25.6	31/06/2021
13/05/2009	EPC 1506	Maryvale 1	Coal	QLD - Surat Basin	APEC Coal Pty Ltd	100%	169.6	13/05/2017
Application	E80/5112	Black and Glidden	Cobalt/Gold	WA - Lamboo Province	Kaili Iron Pty Ltd	100%	102.4	N/A
Application	E80/5113	Carrington	Cobalt/Gold	WA - Lamboo Province	Kaili Iron Pty Ltd	100%	51.2	N/A
Application	E80/5114	Sandy Creek	Cobalt/Gold	WA - Lamboo Province	Kaili Iron Pty Ltd	100%	64	N/A
Application	E80/5115	Wild Dog	Cobalt/Gold	WA - Lamboo Province	Kaili Iron Pty Ltd	100%	70.4	N/A
							<b>1116.8</b>	

**Table 4: Tenement schedule**

(The information in the report above that relates to Exploration Results is based on information compiled by Mr Mark Derriman, who is the Company's Consultant Geologist and a member of The Australian Institute of Geoscientists (1566).

Mr Mark Derriman has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activities which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Mark Derriman consents to the inclusion in this report of matters based on his information in the form and context in which it appears.)

**Jianzhong Yang**  
**Chairman**  
**27<sup>th</sup> October 2017**