

## QUARTERLY ACTIVITY REPORT

30 June 2020

### South West Terrane Exploration Licences

During the quarter, Enegex initiated a major exploration play in the South West Terrane, Western Australia, applying for two project areas covering an aggregate of 1,944km<sup>2</sup> as well as securing a first right of refusal with respect to a further potential project area; the nearby Miling area, covering an additional 408km<sup>2</sup>. (Refer Figure 1).

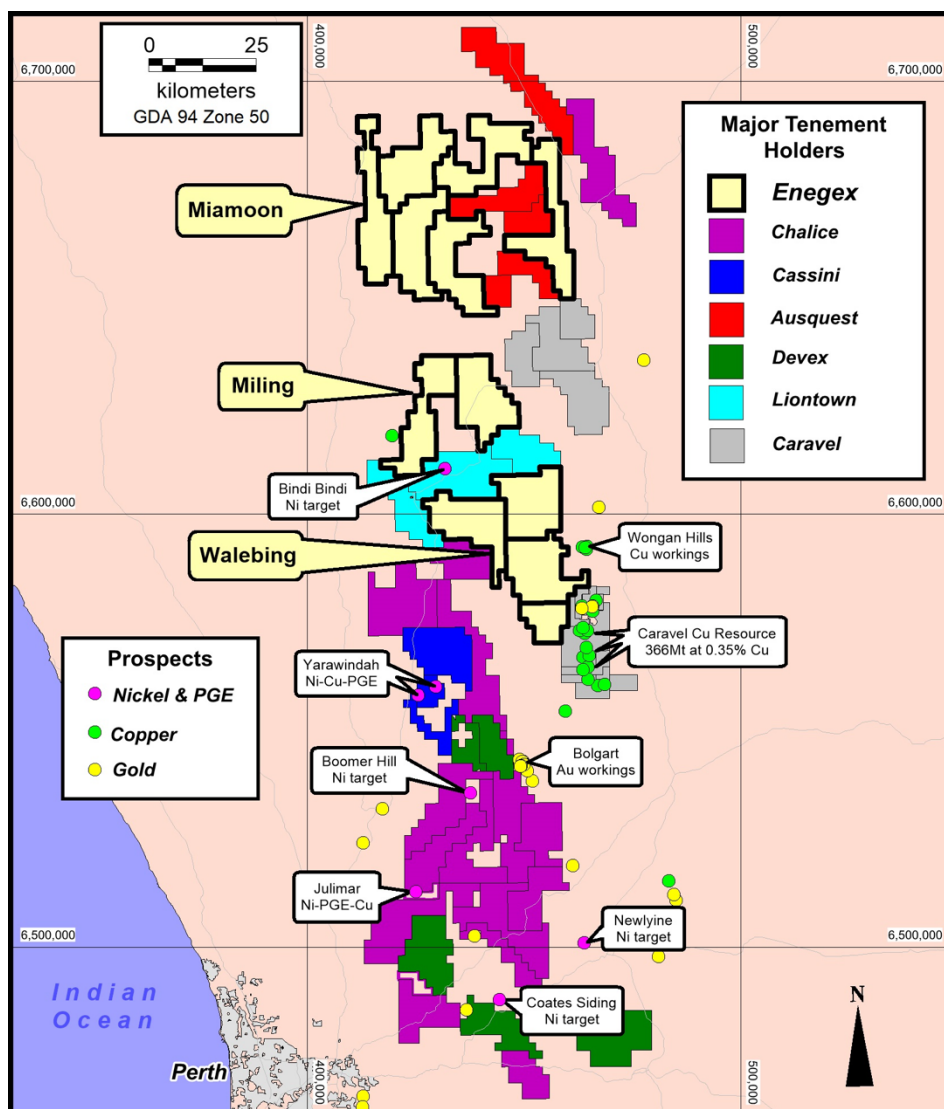


Figure 1 Enegex South West Terrane Project Areas

Located proximal to Perth, the South West Terrane is an emerging mineral province of importance following the recent discovery of palladium and nickel mineralisation by Chalice Gold Mines Limited at its Julimar Project and Caraval Minerals' Caraval copper deposit.

Based on regional geophysical and geological data, Enegex's exploration licence applications are interpreted to contain mafic and ultramafic igneous intrusions considered to be similar to the Julimar intrusion hosting the high-grade Ni-Cu-PGE mineralization discovered by Chalice to the south.

The geology of the South West Terrane is a complex mix of Archean high-grade metamorphic gneisses and highly radioactive granites with widespread enclaves of greenstone and dismembered layered mafic and ultramafic intrusions. Proterozoic tectonic events, mainly evident from mafic dyke swarms, have also impacted the terrane. In general, the Archean bedrock geology is not well known as it is blanketed by laterite soil profiles and transported sands.

The Julimar and Caraval deposit discoveries, together with an improved geological and geophysical understanding of the South West Terrane, are changing perceptions regarding the prospectivity of the South West Terrane:

- The Julimar Ni-PGE-Cu deposit discovery, made by Challis Gold Mines, is associated with a magnetic layered gabbroic complex. Similar gabbroic bodies with similar magnetic features, such as Yarawindah Brook and Coates Siding, are also attracting increased exploration attention, as are various ultramafic bodies in the terrane.
- The discovery by Caravel Minerals Ltd of the Caraval Cu deposits (366 million tonnes at 0.35% Cu<sup>1</sup>), hosted by granite, has attracted increased exploration attention for ancient porphyry Cu-Au deposits in the terrane.
- The giant Boddington gold deposit, generally considered to be a porphyry Au-(Cu-Mo-Bi-W) deposit, is associated with a late-stage diorite intrusion.
- The Greenbushes lithium mine, hosted by granitic pegmatite, has been a long-lived mining operation for lithium, tantalum and tin and is recognized as the world's largest commercial lithium resource.
- The South West Terrane has long been recognized as one of the world's premier bauxite mining provinces.

Enegex believes that the combination of the presence of wide-spread highly radioactive granitoids and a deeply weathered laterite profile covering large areas of the South West Terrane is also an attractive environment for the discovery of ion adsorption REE deposits.

In summary, the South West Terrane contains large mines and mineral resources in a favourable geographical location endowed with excellent infrastructure (including a proposed REE processing

---

<sup>1</sup> Combined Indicated and Inferred Mineral Resources, Source: Caravel Minerals announcement 3 February 2019 <https://caravelminerals.com.au/wp-content/uploads/2019/02/2019-02-13-Major-Increase-in-Caravel-Copper-Resource.pdf>

plant). However, it remains little explored, especially for magmatic Ni-Cu-PGE, porphyry Cu-Au-Mo and Au deposits.

Energex's three new project areas contain interpreted Archaean gneisses and granites and numerous pronounced and subtle magnetic anomalies interpreted to be a combination of greenstone enclaves and mafic and ultramafic intrusions. The Miamoon project area is dominated by a regolith of transported sand and residual laterite overlying a number of unexplained magnetic anomalies which attract comparisons to the Julimar magnetic anomaly. The Walebing and Miling project areas, while dominated by a regolith of transported sand and residual laterite, contain outcropping ultramafic and mafic rocks.

Although the South West Terrane contains a prestigious suite of mineral resources and mines, it has been subject to limited exploration. The tenement package acquired by Energex has received little exploration attention from previous explorers (Refer Figure 2).

Following grant of its exploration licences, Energex intends to conduct multicommodity exploration with a focus on magmatic Ni-Cu-PGE deposits, porphyry Cu-Au deposits and Au deposits. It will also be vigilant regarding the potential for pegmatite Li-Ta-Sn deposits and ion adsorption REE deposits.

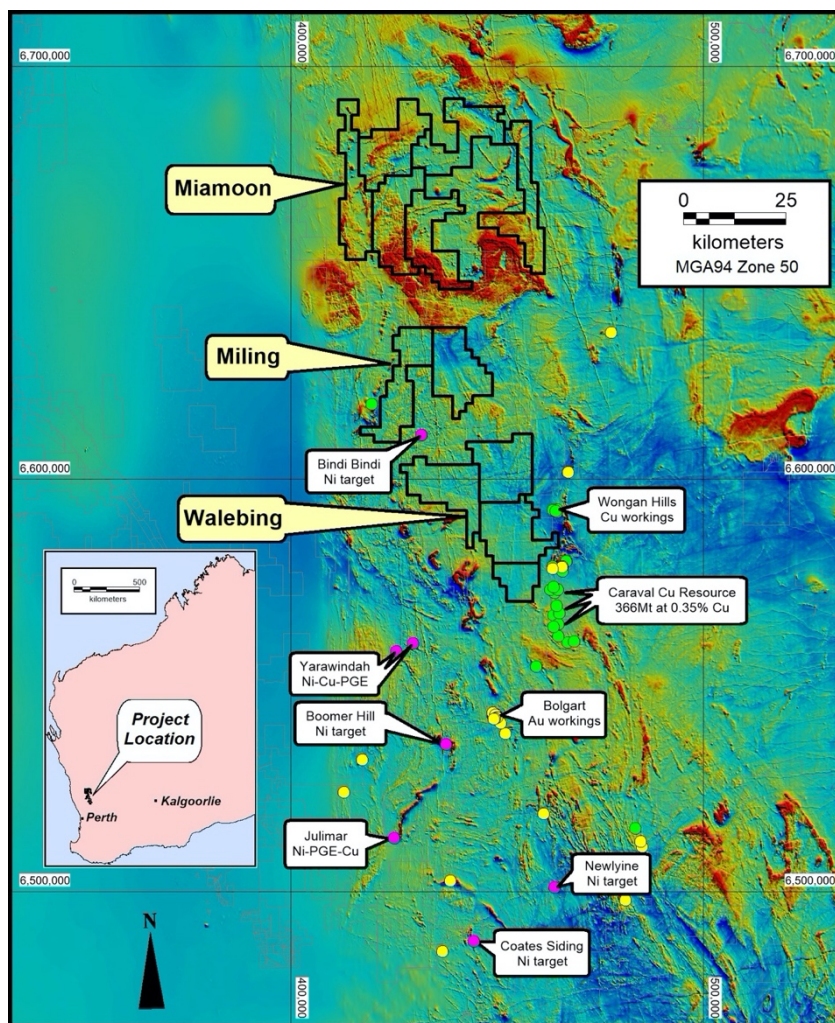


Figure 2 Energex project areas over regional airborne magnetic data

## Kimberley Basin Exploration Licences

Energex has applied for two exploration licenses in the eastern margin of the Kimberley Basin of Western Australia (Figure 1) covering an area of rocks identified as prospective for vanadium, cobalt-nickel, PGE and fluorite mineralisation.

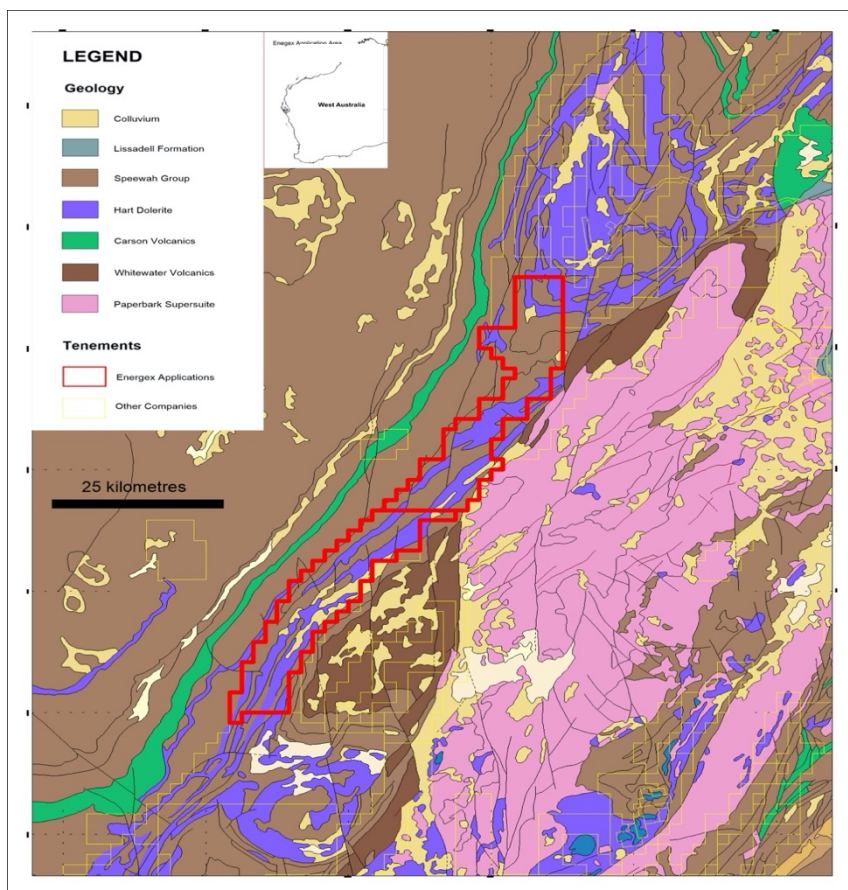
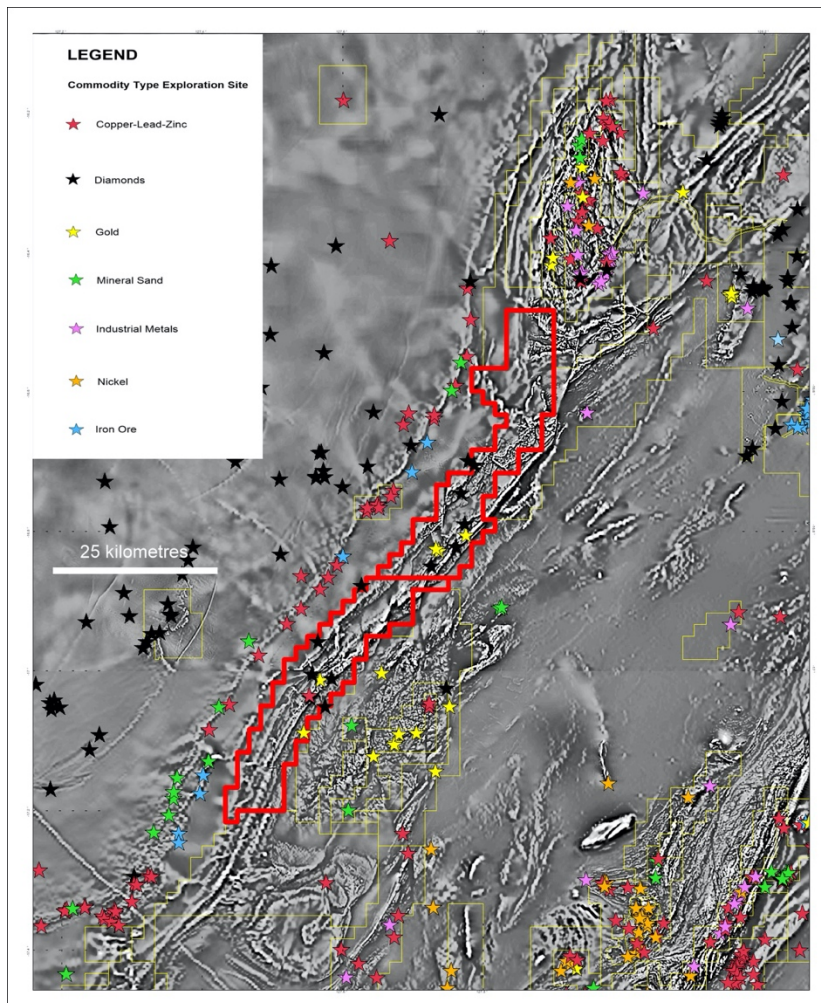


Figure 3 Energex Application Areas shown on regional geology

The geology of the tenements has been mapped as “Hart Dolerite”, a regionally extensive Proterozoic mafic sill complex which was historically overlooked as a potential nickel target. Previous exploration in the area has been limited to gold and diamonds (Figure 2).





**Figure 2: Historical Exploration in and around Enegex Application Areas shown on regional magnetics (reduced to pole first vertical derivative)**

Enegex has identified recent advances in geological understanding that have altered perceptions regarding the prospectivity of the Hart Dolerite:

- Mapping and exploration of the Speewah Dome, immediately to the north of the Enegex tenement areas, has revealed the Hart Dolerite to be a differentiated layered intrusion (Intrusive Suite) and that the most prospective part of the Intrusive Suite is the Disseminated Magnetite Gabbro unit which hosts the Speewah Dome Vanadium Deposit (adjacent to the Enegex application area). The presence of disseminated gold- and copper-bearing sulphides in the upper magnetite-rich parts of the Intrusive Suite indicates potential for reef-type PGE mineralization.
- Regolith sampling by the Geological Survey of Western Australia (GSWA) identified coincident nickel-cobalt anomalies associated with the Hart Dolerite which provides encouragement to explore the intrusion for these metals.
- In the Speewah area the Hart Dolerite was subject to a late-stage epithermal event with carbonate and fluorite overprinting the dolerite. Fluoride is currently being investigated as a potential replacement for lithium in batteries.

Limited previous exploration has not determined which portions of the differentiated magmatic sequence of the Intrusive Suite are exposed in the Enege application areas. Thus, following grant of the exploration licenses, Enege intends to assess the magmatic stratigraphy of the Intrusive Suite and explore primarily for nickel, copper, cobalt, PGE, gold and fluorite.

Both tenements are proceeding through the Native Title Tribunal process.

#### **Other Mineral Resources Opportunities**

Enege is open to other natural resource opportunities and continues to evaluate opportunities to generate shareholder value.

#### **By Order of the Board**



**R J Wright**  
Company Secretary  
Melbourne, Australia  
30 July 2020

### Additional Information Required by Listing Rules 5.3.3 and 5.4.3

#### Mining Tenements held/applied for at the end of the quarter and their location

Tenement	Enegex interest	Tenement status
<b>Western Australia (Kimberley Region)</b>		
E 80/5354	100%	Application
E 80/5355	100%	Application
<b>Western Australia (South-West Terrane)</b>		
E 70/5439	100%	Application
E 70/5440	100%	Application
E 70/5441	100%	Application
E 70/5442	100%	Application
E 70/5446	100%	Application
E 70/5459	100%	Application
E 70/5457	100%	Application
E 70/5458	100%	Application
E 70/5460	100%	Application
E 70/5463	100%	Application
E 70/5444	First Right of Refusal	Application
E 70/5445	First Right of Refusal	Application

#### Tenements acquired during the quarter and their location

Tenement	Enegex interest	Tenement status
<b>Western Australia (South-West Terrane)</b>		
E 70/5439	100%	Application
E 70/5440	100%	Application
E 70/5441	100%	Application
E 70/5442	100%	Application
E 70/5446	100%	Application
E 70/5459	100%	Application
E 70/5457	100%	Application
E 70/5458	100%	Application
E 70/5460	100%	Application
E 70/5463	100%	Application
E 70/5444	First Right of Refusal	Application
E 70/5445	First Right of Refusal	Application

#### Tenements disposed of during the quarter and their location

Nil.

#### Beneficial percentage interests held in farm-in or farm-out agreements at the end of the Quarter:

Nil

#### Payments to related parties during the quarter included in Appendix 5B– Cashflow Report.

Nil