



## Anchor Resources Limited

ABN: 49 122 751 419

ASX Code: AHR

Website: [www.anchorresources.com.au](http://www.anchorresources.com.au)

6<sup>th</sup> June 2017

# EXPLORATION UPDATE – JUNE 2017

## HIGHLIGHTS

Anchor Resources Limited's (Anchor, ASX: AHR) exploration has resulted in a number of important mineral discoveries and its projects host at least six encouraging targets with potential for significant new mineral deposits. In addition, its Bielsdown project in New South Wales has a JORC (2012) resource of antimony (ASX Announcement 13<sup>th</sup> October 2013).

Anchor holds five exploration licences in NSW, including EL 6465 and EL 8100 (Blicks project), EL 8398 (Gemini project), EL 6459 (Birdwood project) and EL 6388 (Bielsdown project). In Queensland it holds two contiguous Exploration Permits for Minerals EPM 19447 (Aspiring project) and EPM 25958 (Walsh River project).

### Blicks Project

Blicks is the most advanced project, aside from Bielsdown, following a significant amount of exploration, including limited shallow drilling at one prospect.

At the Blicks project the Tyringham prospect, a large intrusion-related gold system (IRGS), has been discovered and limited drilling has intersected extremely long zones of low grade gold mineralisation near surface. The style of mineralisation intersected is interpreted as leakage from a postulated deeper, higher grade, primary IRGS source. IRGS gold deposits often contain more than 1 Million ounces of gold and up to 10 Million ounces and have in recent years become major global gold producers.

Two other large, granite-related mineral systems, Tuting and Navin prospects, occur within a mineralised transverse corridor extending northeast from Tyringham. These contain copper, molybdenum, tungsten and gold.

At Blicks the large Tyringham IRGS and Tuting granite-related prospects are drill-ready and have potential to host major deposits.

## Gemini Project

The Gemini project, in central west NSW, is a Cobar-style base metals target. The Blue Mountain prospect is the most advanced prospect in the Gemini project. It is near drill ready with the objective of discovering a Cobar-style copper-lead-zinc deposit. These types of deposits are high metal-bearing mineral systems and viable under a wide range of economic conditions. The next stage of exploration is a geophysical (electromagnetic/EM) survey over the prospect to better define drill targets within a 2.2 km strong lead and copper geochemical bedrock anomaly.

## Aspiring and Walsh River Projects

At the North Qld projects Anchor has recently discovered, an epithermal gold-silver system at the old Fluorspar fluorite mine. Epithermal textured quartz, confirmed by petrology, containing strongly anomalous gold extends over a strike length of >2 km, and possibly up to 3 km. Deposits having this style of epithermal gold mineralisation are renowned for their high grade.

In addition, at the Doolan Creek prospect, a greisen-hosted, polymetallic gold-silver-copper-lead granite-related mineral system has been confirmed by detailed rock chip sampling and petrology. The mineral system may extend under shallow soil cover and further work is required to define the full extent of this alteration-sulphide system.

Both Fluorspar and Doolan Creek targets are indicative of large mineral systems.

The location of Anchor's projects in eastern Australia is shown in Figure 1. They occur in the Chillagoe district of the Hodgkinson Province in North Queensland, western NSW in the Lachlan Orogen, and in northeast NSW within the Southern New England Orogen (Figure 2). All these districts have a long history of metal production.

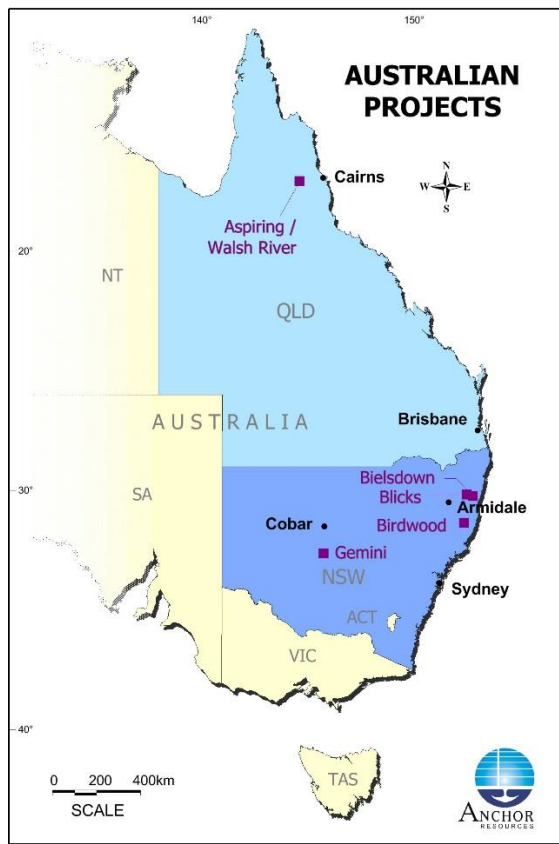


Figure 1: Location of Anchor projects in eastern Australia

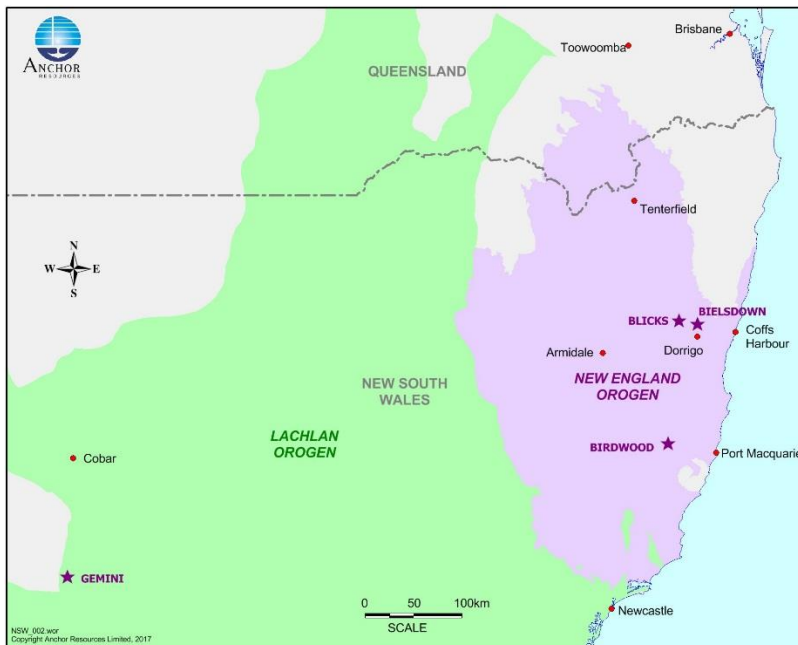


Figure 2: Location NSW projects - Blicks, Bielsdown, Birdwood and Gemini

## **BLICKS PROJECT, EL 6465 and EL 8100 (Anchor 100%) New South Wales – gold, copper, molybdenum & tungsten**

A comprehensive technical review of the Blicks project was completed recently and has confirmed the potential of the project to host major mineral deposits.

The Blicks project is located in the Southern New England Orogen in northeast NSW, 90 km northeast of the major regional center of Armidale. The project's main prospects are **Tyringham** (intrusion-related gold system), **Navin** (granite-related polymetallic), **Tuting** (granite-related molybdenum-tungsten) and **Liberty** (granite-related copper-molybdenum). This is a significant polymetallic mineral district with large, multi-element soil geochemical anomalies associated with a transverse corridor hosting a number of granitoid intrusions of different ages over an area 12 km x 2 km.

The Tyringham Corridor is a transverse lineament where a number of intrusions have been emplaced over a period of 65 million years. The intrusions are often anomalous in a variety of metals. Intrusion-related gold mineralisation is present at Tyringham, granite-related arsenic-copper-zinc-silver mineralisation is present at Navin, molybdenum-tungsten mineralisation is present at Tuting, and copper-molybdenum mineralisation is found at Liberty and within the Billys Creek Tonalite extending either side of Liberty. Magnetic imagery suggests the Tyringham Corridor may extend a further 7 km to the northeast where another intrusion is interpreted from magnetics and where granitoid float has been found on surface (Figure 3). This is a previously unknown and unreported intrusion.

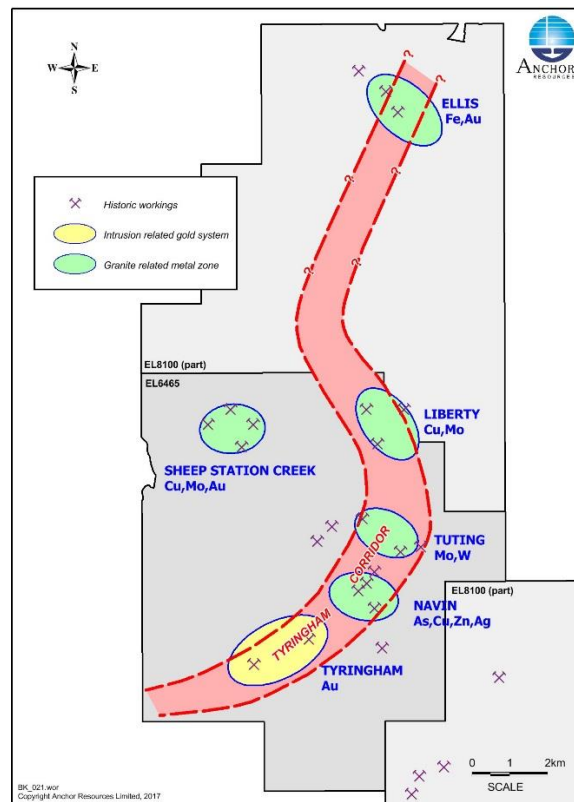


Figure 3 Tyringham Corridor and prospects

The review confirms Tyringham IRGS as a prime target for further work. The type of alteration (greisen) and related metal associations (Au-Bi-Te ±Cu-Ag-W and As-Ag-Fe-Pb-Zn-Cd ±In-Sn) are interpreted to be consistent with an intrusion-related magmatic-hydrothermal system. In these systems around the world, the age of the host rocks and mineralisation is contemporaneous. A major advancement in Anchor's understanding of the metallogenic chronology in the Blicks district was provided by age dating results yielding a ~220 Ma age (late Triassic) for sericite alteration directly associated with gold mineralisation, being much younger than the host rocks. This conforms with the IRGS model.

Gold mineralisation intersected by shallow drilling to date is interpreted as “leakage” mineralisation within passive host rocks of ~350 Ma and 240 Ma age respectively. The target for future exploration is a concealed, proximal source intrusion, and associated fluid pathway structures, of ~220 Ma age which conceptually may host higher grade gold mineralisation.

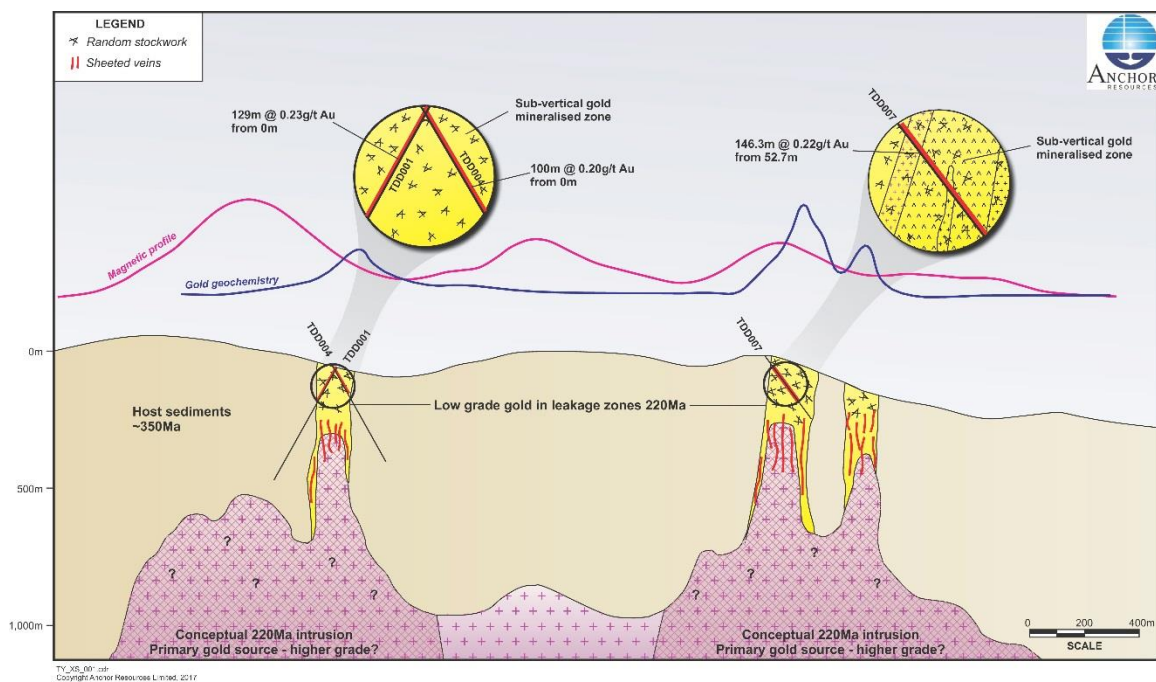


Figure 4: Tyringham IRGS schematic diagram showing long intervals of low grade gold mineralisation intersected by drill holes near surface

Known granitic intrusions with younger ages (i.e. late Triassic) in the Southern New England Orogen are restricted to the eastern zone, relatively close to the NSW coast. These have an age range of ~212-230 Ma with this age overlapping that of Triassic volcanic rocks at the base of the Clarence-Moreton Basin, implying that there was a major thermal event in the crust of the region at this time. It could be implied that the evidence for imposed thermal metamorphism (and hydrothermal alteration) on the host rocks at Tyringham is consistent with the occurrence of nearby, possibly underlying/subjacent, granitoid intrusions of younger (e.g. ~220 Ma) age. These concealed plutons may well be the source of the gold at Tyringham and may host higher grade gold mineralisation in the causative intrusions.

The Tyringham conceptual exploration model is shown in Figure 5. It consists of a small concealed intrusive cupola hosting a sheeted quartz vein array developed in the roof of the cupola and overlying carapace and below leakage mineralisation developed as a random quartz stockwork higher in the system and hosted by older rocks. Drilling to test the Tyringham conceptual model is subject to board approval.

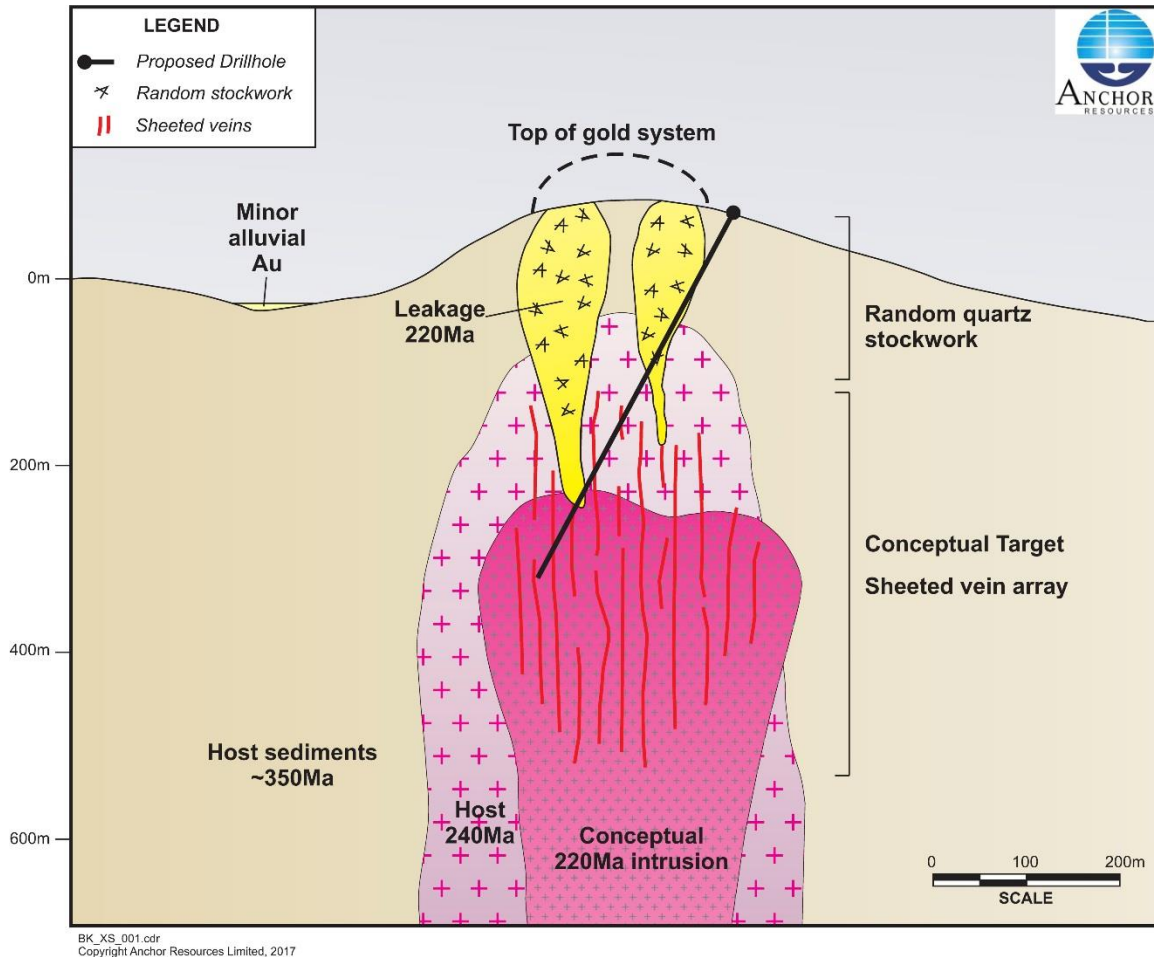


Figure 5: Tyringham IRGS conceptual exploration model

The Navin, Tuting and Liberty mineral systems identified by Anchor will be further explored in what is emerging as a potentially very significant region of complex and varied metal endowment.

**GEMINI PROJECT, EL 8398 (Anchor 100%)**  
**New South Wales – copper, lead, zinc, gold & silver**

The Gemini project covers a prospective, underexplored area of the Cobar Basin and includes the **Blue Mountain** base metal (Zn-Pb-Cu) prospect (Figure 6) which Anchor has identified as a Cobar-style base metals prospect.

The nearby Wagga Tank Cu-Pb-Zn-Au-Ag massive sulphide prospect owned by Peel Mining is located 8 km southwest of Blue Mountain and the Mallee Bull copper-silver-gold deposit is located 40 km to the northeast along the same lineament. Anchor's project area is considered prospective for Cobar-type base metal deposits.

The Cobar Basin has a long history of ongoing mineral discoveries extending from 1869 up to recent times confirming its potential as a world class mineral province prospective for major new discoveries. The geometry of many deposits has made them challenging targets for exploration. However as the understanding of these deposits increases and technology advances new opportunities are created.



Figure 6: EL 8398 (Gemini) regional geology showing discovery date of selected deposits

Based on Anchor's compilation of previous explorers' data, the Blue Mountain zinc-lead-copper prospect has a strong multi-element geochemical signature extending over a strike length of 2,200 metres defined by historic bottom hole RAB drilling (Figure 7).

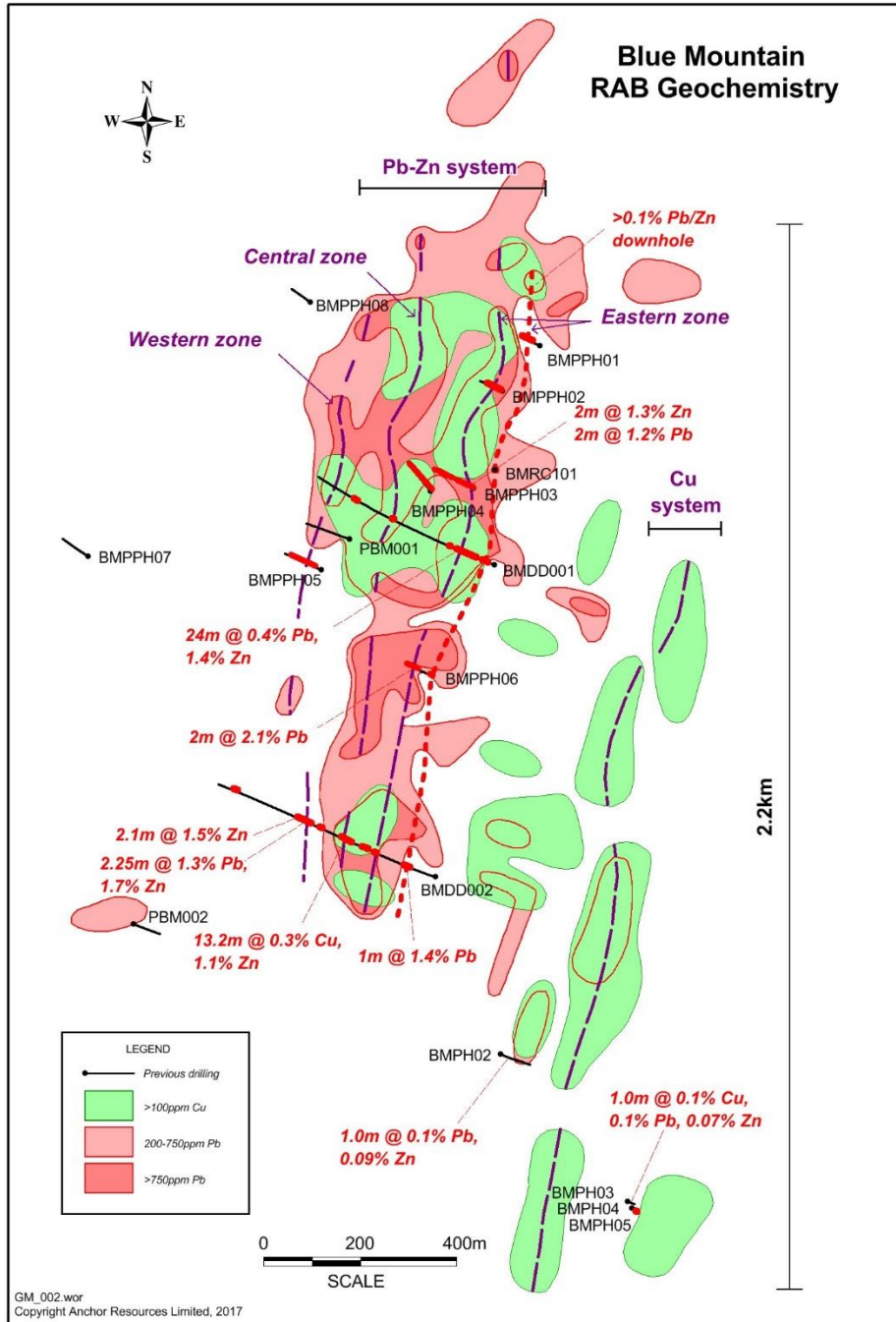


Figure 7: Blue Mountain prospect geochemistry

The anomalous multi-element Zn-Pb-Cu geochemistry, large linear anomaly footprint, sphalerite-galena-chalcopyrite association in drill core, structurally controlled lensoidal geometry of the mineralisation intersected in drilling, and interpreted structural architecture



of the Blue Mountain zinc-lead-copper prospect, has many similarities to other Cobar-type deposits, including the major producing CSA mine at Cobar (see Anchor ASX announcement 18 April 2016). The best drill intersection is reported from diamond core hole BMDD001 with 24 metres @ 1.3% Zn and 0.4% Pb from 146.0 m. Intersections of this grade and width can be expected above an ore lode at depth in the Cobar-type conceptual model. Furthermore, many historic drill holes intersected multiple lead-zinc-copper intersections suggesting multiple mineralised fluid channelways are present at Blue Mountain. Experience on the Cobar field shows that once these mineralised channelways and structures have been identified then they need to be drilled down plunge to follow the mineralisation at depth.

Cobar-type deposits are polymetallic massive sulphide deposits and are electrically conductive making them ideal targets for electromagnetic surveying. Consequently an electromagnetic survey is planned at Blue Mountain later in 2017. Electromagnetic surveys provide high definition mapping of both the electrical and magnetic properties of the earth. The technique has been progressively refined to achieve high spatial definition and/or deep ground penetration where it is possible to detect a large conductive target at depths approaching 1,000 metres or more. The technique has the ability to accurately define the location of the target, if present, and is used extensively, with considerable success, for this reason. Drilling to test the conductors would follow.

### ***Aspiring Project, EPM 19447 and Walsh River Project, EPM 25958 (Anchor 100%) Queensland – gold, silver, copper, lead & zinc***

The Aspiring and adjacent Walsh River tenements are located in the Chillagoe mining district, which forms part of the larger Hodgkinson Province in Far North Qld.

In late 2016 low sulphidation epithermal gold-silver mineralisation was discovered by Anchor at the Fluorspar Group of workings, and granite-related gold-silver-copper-lead mineralisation was verified in a greisen-sulphide alteration zone and peripheral polymetallic veins at Doolan Creek (see Anchor ASX Quarterly Activity Report dated 21 April 2017).

The Fluorspar Group workings and Doolan Creek greisen-sulphide alteration zone are within EPM 25958 (Walsh River) and located 33 km apart. Part of the Doolan Creek mineral system is interpreted to extend into the adjoining EPM 19447 (Aspiring) tenement. The prospects are genetically and geochemically different.

The location of the Fluorspar and Doolan Creek prospects is shown on Figure 8.

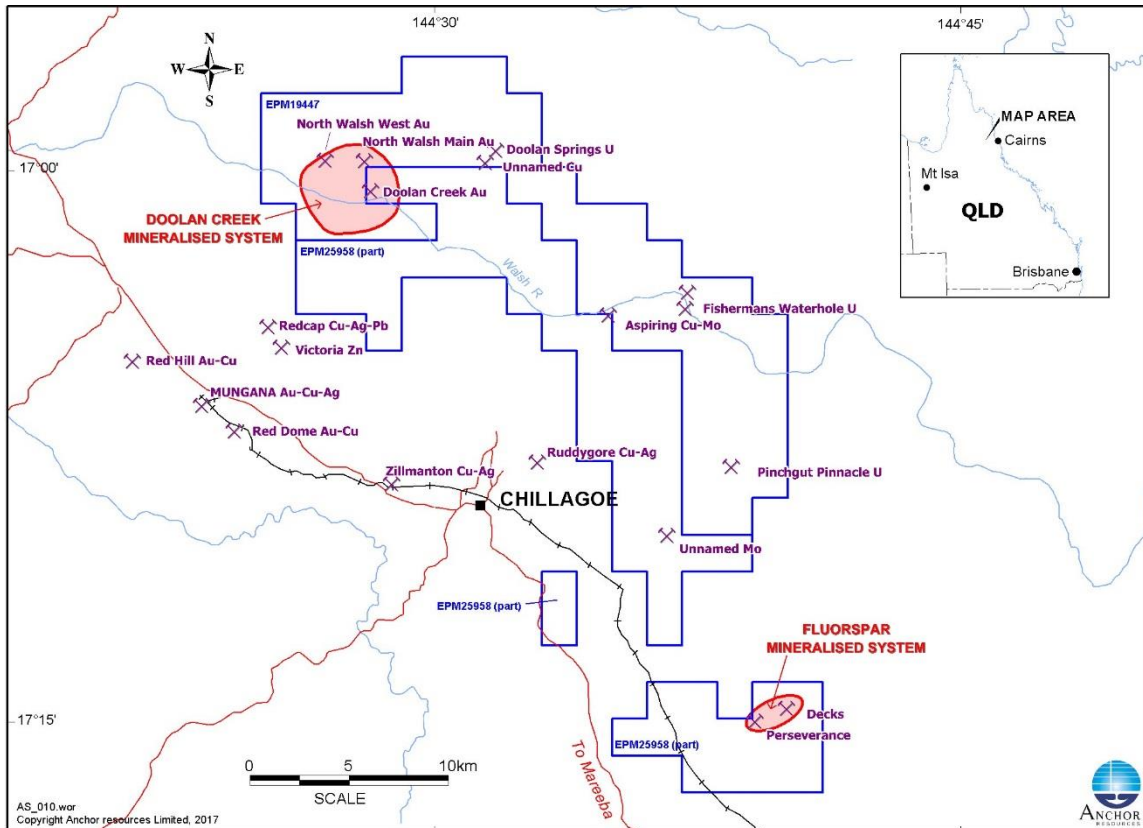


Figure 8: Location of Fluorspar and Doolan Creek prospects

At the **Fluorspar Group** of workings vein quartz, invariably displaying a lattice-bladed texture, contains low levels of gold (Figure 9) consistently assaying 0.1 to 1.0g/t Au, and up to 6.0g/t Au, (average 0.33g/t Au in 65 samples) in rock chip samples over a strike length of >2 km along a northeast trending sub-vertical regional fault (Perseverance Fault) reported to be up to 2 metres wide in the old workings. Silver values range from 0.1g/t to 62g/t with numerous values assaying >5g/t Ag (average 5.9g/t Ag in 65 rock chip samples). The quartz is often associated with fluorite in the main vein and sometimes stibnite in other secondary veins emplaced along subsidiary sub-parallel structures to the main vein. The Perseverance Fault is interpreted to continue to the northeast and southwest beyond the extent of the current sampling program and is likely to be at least 3 km long.

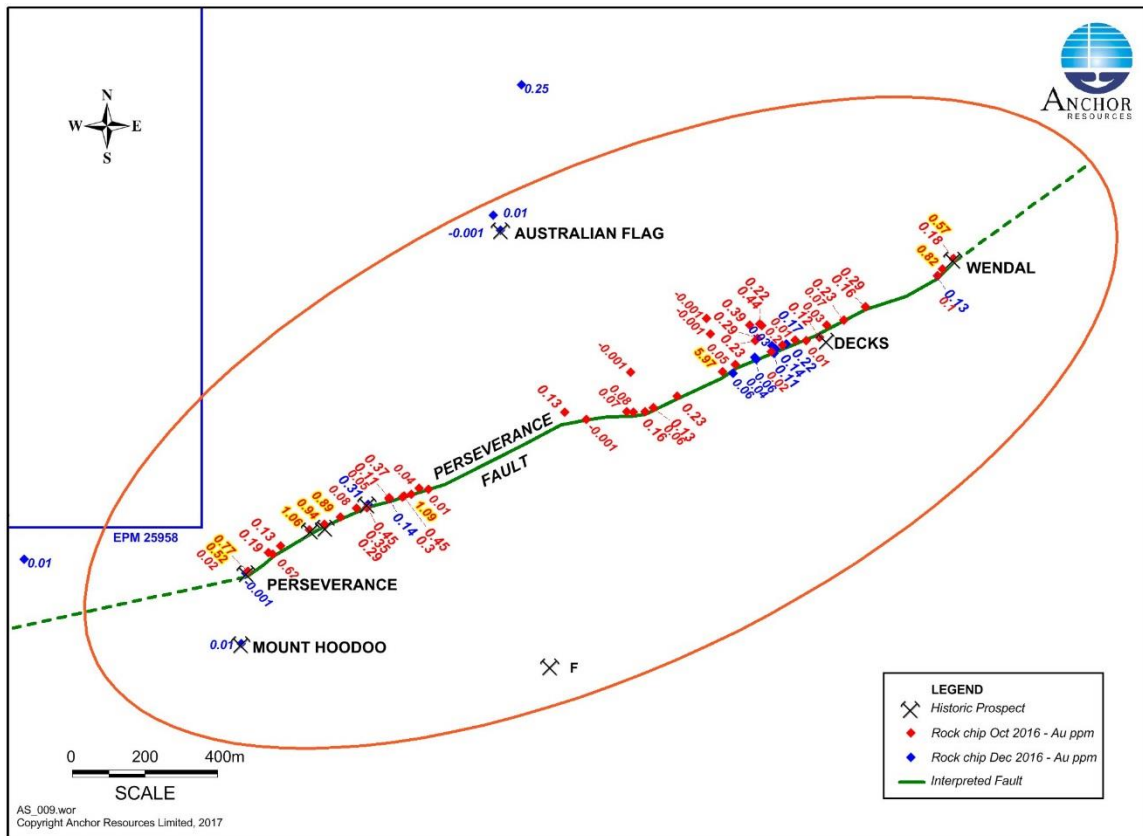


Figure 9: Fluorspar Group of workings rock chip gold geochemistry

Textures in quartz are typical of formation in an epithermal environment and have been confirmed by petrology. Textures include lattice (pseudomorphic replacement of coarse bladed carbonate), plumose, encrustation, quartz replacing chalcedony, growth zoning in coarser quartz grains and crystals, and sub-radiating textures. Multiple veining events have been recognized including cross cutting quartz and separate stibnite veins.

Conceptually the combination of quartz textures, presence of fluorite and stibnite, very low copper, lead and zinc geochemical values, and strongly anomalous lithium values suggest higher grade gold and silver mineralisation could exist at depth where boiling, confirmed by recent petrological investigations, has occurred in the hydrothermal system.

Typical quartz pseudomorphing coarse blades of carbonate (probably calcite) forming a lattice bladed texture is shown in Figure 10. These textures are interpreted as indicative of the chalcedonic, vapour phase zone at, or near, the top of an epithermal vein system.



Figure 10: Platy, lattice textured quartz with fluorite along vein selvedge at Perseverance Lode, Fluorspar Group of workings

At **Doolan Creek**, recent composite rock chip sampling of a greisen-sulphide alteration zone yielded high values for numerous metals, including gold up to 8.5g/t (Figure 11), silver up to 274g/t (8.8oz/t), copper up to 1.56%, lead up to 1.06%, arsenic up to 28.3%, bismuth up to 0.88%, and antimony up to 0.31%. Nearby, a mineralised polymetallic quartz vein was discovered having similar geochemistry to the greisen-sulphide zone, with gold values up to 7.9g/t, silver up to 448g/t (14.4oz), copper up 0.5%, lead up to 9.5%, arsenic up to 10.0%, bismuth up to 0.25%, and antimony up to 0.33% Sb in rock chip samples.

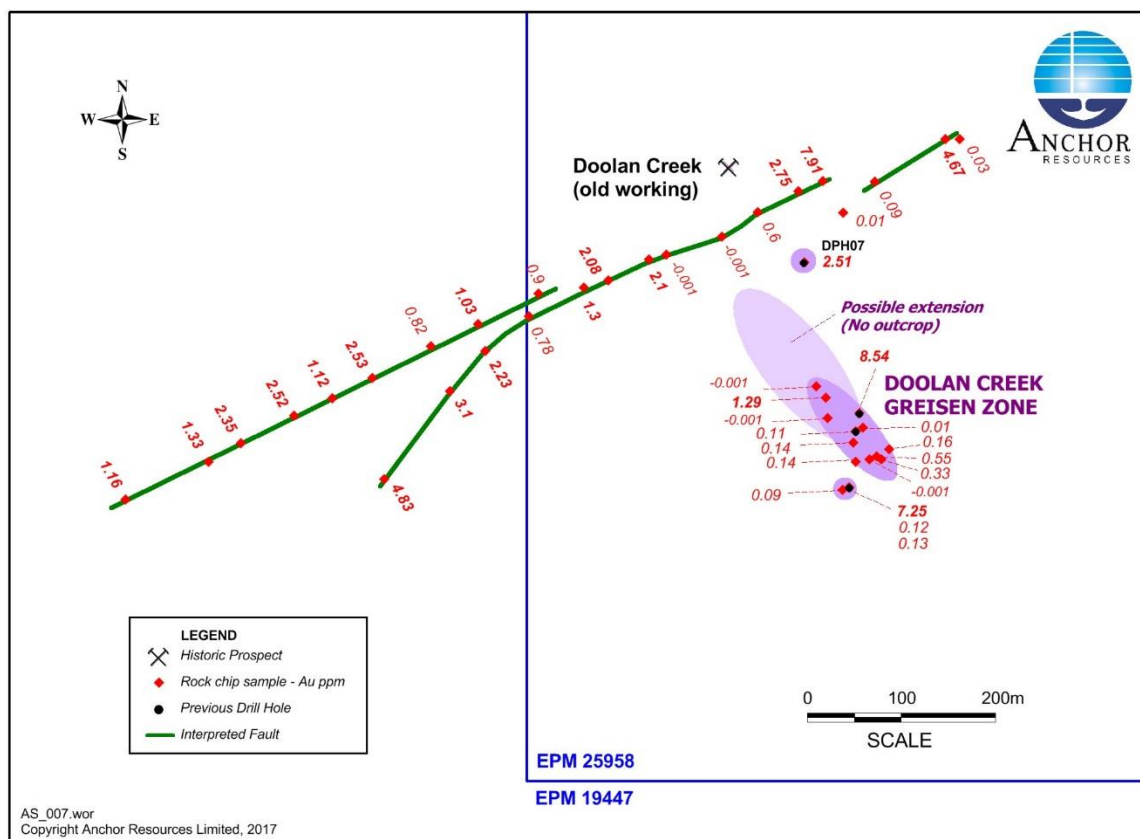


Figure 11: Doolan Creek greisen-sulphide zone and polymetallic quartz vein rock chip gold geochemistry

In 2014, systematic grass roots exploration within the adjoining EPM 19447 identified five gold-base metal anomalous prospects (Fairhaven, North Walsh West, North Walsh Main, Grenough and Doolan North West) coincident with regional structures (see Anchor ASX Quarterly Activity Report dated 23 January 2015). A further five geochemically anomalous areas have also been identified with many being also coincident with structures. Most structures trend north-easterly except for the northwest trending Grenough structure. Rock chip sampling along these structures returned high gold, silver, lead, arsenic, bismuth and antimony values, and sporadic high copper values. The highest gold values are associated with quartz veins controlled by northeast trending structures. These mesothermal gold-polymetallic quartz veins typically have a gold-silver-copper-lead-arsenic-bismuth-antimony association suggestive of granite-related mineralisation.

At Doolan Creek petrographic investigations identified a coarse leucocratic monzogranite has been subject to strong hydrothermal greisen style alteration with replacement by sericite-muscovite and sulphide aggregates, with traces of carbonate and rutile. Parts of the greisen contain considerable disseminated sulphide, including arsenopyrite, pyrite, chalcopyrite, galena, and minor sphalerite, while a mesothermal polymetallic quartz vein contains arsenopyrite, galena, chalcopyrite, pyrite and sphalerite.

The Doolan Creek greisen is located towards the centre of the Doolan Creek Cauldron, a structure rimmed by sub-aerial ignimbrites and intruded by the Bungabilly Granite. Felsic

volcanic rocks and related granitoids associated with caldera collapse structures or ring complexes have long been recognised as prospective areas for a variety of mineral deposits, including greisen, skarn, stockwork and veins (Figure 12).

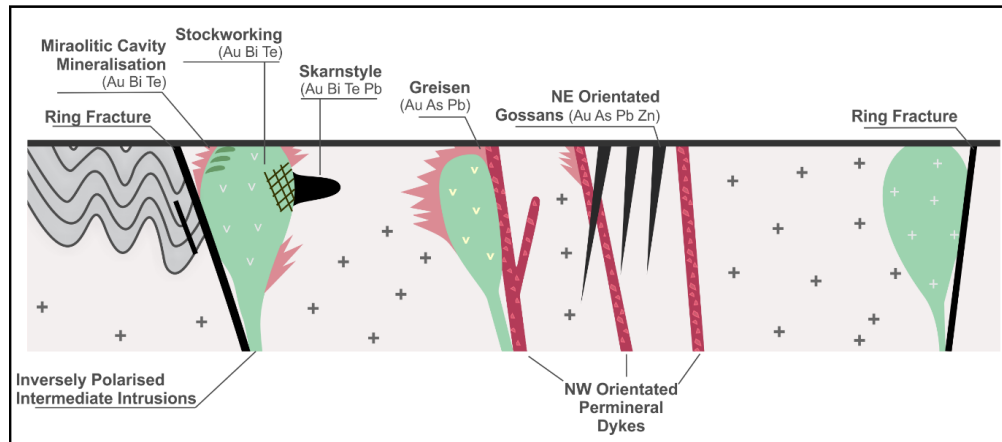


Figure 12: Schematic section through Doolan Creek ring fracture system showing known and inferred mineralisation styles and geochemical signatures (Global Ore Discovery, 2013)

The greisen zone contains strongly anomalous to ore grade Au-Ag-Cu-Pb-As-Bi-Sb geochemistry in selected composite rock chip samples. Numerous gold-bearing polymetallic quartz veins with similar geochemistry to the greisen-sulphide alteration zone are found within a 2 km radius of the greisen suggesting the greisen-sulphide alteration zone and polymetallic veins are part of a larger mineral system (Figure 13).

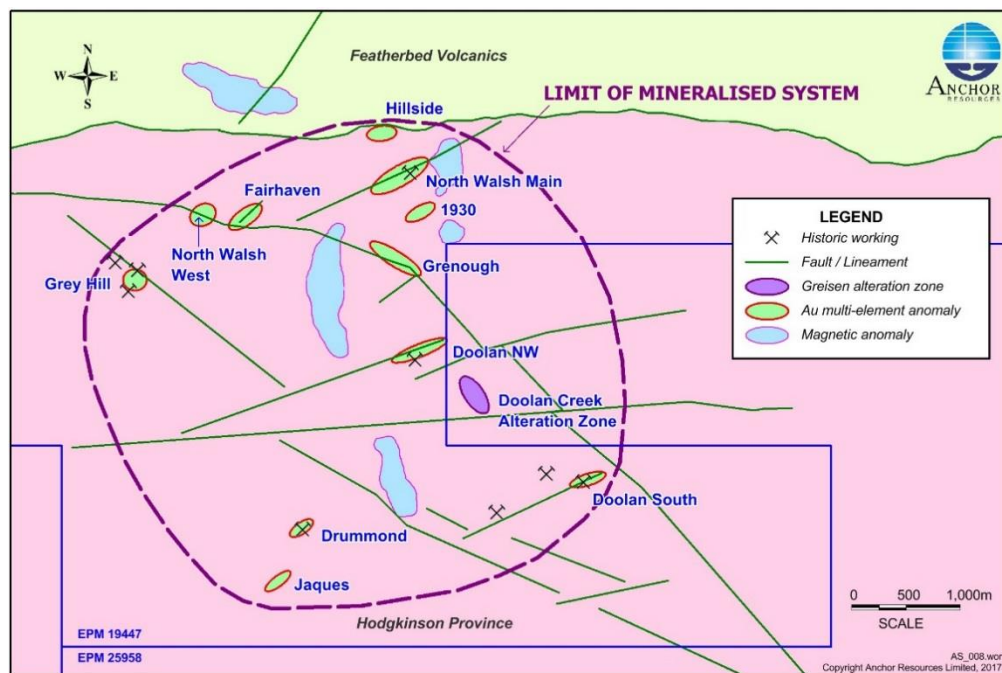


Figure 13: Doolan Creek greisen-sulphide zone and peripheral polymetallic quartz forming a major mineralised system

The Doolan Creek greisen and vein geochemistry strongly supports a granite-related metal association. The greisen zone may be linked to a high level, shallowly buried cupola, temporally and genetically related to the intrusion of the late stage Bungabilly Granite, or possibly the nearby, but temporally later, Long Gully Granite. This geological setting is considered to offer potential for the development of large mineral deposits.

Results from the Fluorspar Group of workings and Doolan Creek are considered very encouraging.

A field crew will be mobilised to the area in June 2017 to complete further geological mapping, and soil and rock chip sampling to define targets for RC drilling.

### **Corporate**

On 31<sup>st</sup> May 2017 Anchor executed a revised loan agreement with China Shandong Jinshunda Group Co., Ltd., its major shareholder, to increase the facility by \$A1.5M and the repayment date extended to 30<sup>th</sup> September 2020. These additional funds will be applied to further exploration and for general working capital expenses. The total facility amounts to \$A14.5M and at 31<sup>st</sup> May 2017 was drawn down to \$A13.0M.

Anchor's Directors are considering further fund raising opportunities to enable exploration and drilling to proceed at a faster pace.

**Ian L Price**  
**Executive Director**  
**Anchor Resources Limited**

**Contact: +61 438 937 644**  
**Email: [ian.price@anchorresources.com.au](mailto:ian.price@anchorresources.com.au)**

### **Competent Person Statement**

The information relating to the Exploration Results and geological interpretation for the Blicks, Bielsdown, Birdwood, Gemini, Aspiring and Walsh River projects is based on information compiled by Mr Graeme Rabone, MAppSc, FAIG. Mr Rabone is Exploration Manager for Anchor Resources Limited and provides consulting services to Anchor Resources Limited through Graeme Rabone & Associates Pty Ltd. Mr Rabone has sufficient experience relevant to the assessment and of these styles of mineralisation to qualify as a Competent Person as defined by the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves – The JORC Code (2012)". Mr Rabone consents to the inclusion of the information in the report in the form and context in which it appears.