Alloy Resources Limited

ABN 20 109 361 195

ASX Release
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Alloy Resources Ltd
Suite 6, 7 The Esplanade
Mount Pleasant WA 6153

Tel: +61 8 9316 9100
Fax: +61 8 9315 5475

Email:
info@alloyres.com

Website:
www.alloyres.com

Directors
Executive Chairman:
Andy Viner

Non-Exec Director
Andre Marschke

Non-Exec Director/Co Sec:
Kevin Hart

Issued Capital
Shares:
489,582,656

Unlisted Options:
33,142,821

ASX Symbol: AYR

Martins Well Project, South Australia

- Exploration Update

Polymetallic Target Defined

KEY POINTS;

- **New information outlines a large 2.5km x 1km polymetallic target.**
- **Recently discovered historical Diamond Drill core made available to Company by South Australian Geological Survey for inspection and future analysis;**
  - *Two Diamond Holes from 1959-60 intersected the gossan structures at Mammoth Black Ridge prospect.*
  - *Strongly leached gossan intersections observed at vertical depths of 60-75 metres.*
  - *Stratabound, **siderite-hosted disseminated mineralisation observed over 62 metre total interval** in the footwall zone of one hole.*
  - *Mineralogical studies of siderite mineralisation by Dr Ben Grguric of Minerallium Pty Ltd confirms the presence of **Chalcopyrite-Arsenopyrite-Tetrahedrite-Pyrite polymetallic mineralisation***
- Field mapping confirms extensive siderite alteration adjacent to main gossan structures **extending over 2.5 km strike.**
- **Exploration Licence No. 5577 granted.**
- Initial Option Payment completed;
  - *$25,000 cash payment.*
  - *Issue of ordinary shares to value of $25,000, escrowed for 3 months.*
- Technical merit endorsed with S.A government **PACE funding grant for up to $75,000 in direct drilling costs.**

SUMMARY

Alloy Resources Limited (ASX:**AYR**, **Alloy** or the **Company**) is pleased to provide an update to the market on the Company's Martins Well Project.

The Martins Well Project located in the north-eastern Flinders Ranges of South Australia has been advanced through additional technical investigations and the Company now believes a strong case exists for the presence of a significant polymetallic exploration prospect and hence has exercised its option to earn a 90% interest in the project.

MARTINS WELL PROJECT – South Australia.

Summary

Previous Market Updates (*ASX: 12 March 2015*) noted that historical diamond drill holes had been observed in the field at the primary prospect of interest at Mammoth Black Ridge. The Company received notification that the historical drill core had been located and permission was received from the S.A Government to review the core in late March. The Company has now completed geological logging and portable XRF ('pXRF') analysis of this core and thereafter completed a field inspection of the prospect to refine geological models for future exploration activities.

In summary the Company believes the historical core and resultant new geological models suggest that a major mineralised system is located at the Mammoth Black Ridge prospect extending over a strike length of at least 2.5 kilometres and a width of up to 1 kilometre.

Two styles of mineralisation are interpreted as being present;

1. **Linear sub-vertical sulphide-related gossans with common quartz veining (Figure 1).**
    - Oxidation of the gossans is regarded as extreme down to at least 100 metres in core samples where secondary botryoidal goethite continues to dominate these structures just as seen on the current surface.
    - Box-work textures from remnant sulphides continue to be locally preserved within core.
    - No decomposing sulphides or secondary supergene minerals have been observed in core.
2. **West dipping stratabound siderite units formed through hydrothermal alteration of limestone units.** This siderite only forms adjacent to gossan structures, and appears to be more mineralised where gossanous structures cross cut the units. The thickness of these units in core is from 8 metres to 42 metres, and they appear to be strike extensive in parallel to the outcropping gossans.
    - A coarse crystalline cream coloured rock mass is readily observable in core and high iron readings by pXRF confirm the nature of the siderite.
    - Disseminated sulphide mineralisation is present within the siderite and is stronger adjacent to small gossanous quartz structures. **Sulphide blebs to 1-2 cm size are common** and various zones of minor to stronger disseminated sulphide were observed.
    - Sulphide mineralisation is confirmed by pXRF and Mineralogical studies to be dominantly chalcopyrite (and its weathered products digenite and locally covellite) as well as occurrences of pyrite, arsenopyrite and tetrahedrite-tennantite.

Weathering and deep oxidation of metals from the surface is interpreted to be related to very deep water table levels and highly acid hypogene water circulation within the topographically elevated gossan structures (Figure 2). This is not uncommon for polymetallic deposits within the arid terrains of Australia, and requires deep drilling to intersect primary and supergene mineralisation.

Figure 1 *Diamond Hole DD-1 Iron Gossan sample with ex-sulphide boxwork textures*

Figure 2 *The Mammoth Black Ridge with old shaft spoil visible in centre*.

Historic Diamond Core

Four Diamond Core holes were recovered by the S.A government during February and the Company gained permission to inspect the core during late March. The Company's Executive Chairman and a consulting geologist completed geological logging and intermittent portable XRF analysis over a two day period.

The geological survey department has not been able locate any historical written records or even references to these holes, however they were well stored and had clear labels indicating their origin as "Martins Well Station and the Mammoth Black Ridge or Hill and the dates of 1959 and 1960.

Holes details were;

DD-1 Total depth 401 feet (122.2 metres)

DD-1A Total depth 726 feet (221.3 metres)

DD-2 Total depth 725 feet 9 inches (221.2 metres)

DD-3 Total depth 17 feet 8 inches (5.4 metres)

Holes were drilled in 1959 and 1960. It is not confirmed who completed the drilling.

Holes DD-1 and DD-2 are inferred by Alloy from geology to have been the two collars located in the field, because they both intersected a thick ironstone unit at approximately the right depth. It seems logical that DD-1 would have been drilled under the historic shaft as a first priority, and field mapping suggests the geology fits this proposition – see Figure 3 below.

The location or reasoning for holes DD-1A and DD-3 is not known, although DD-1A may have been drilled in the opposite direction from the same pad as DD-1 for geological interest.

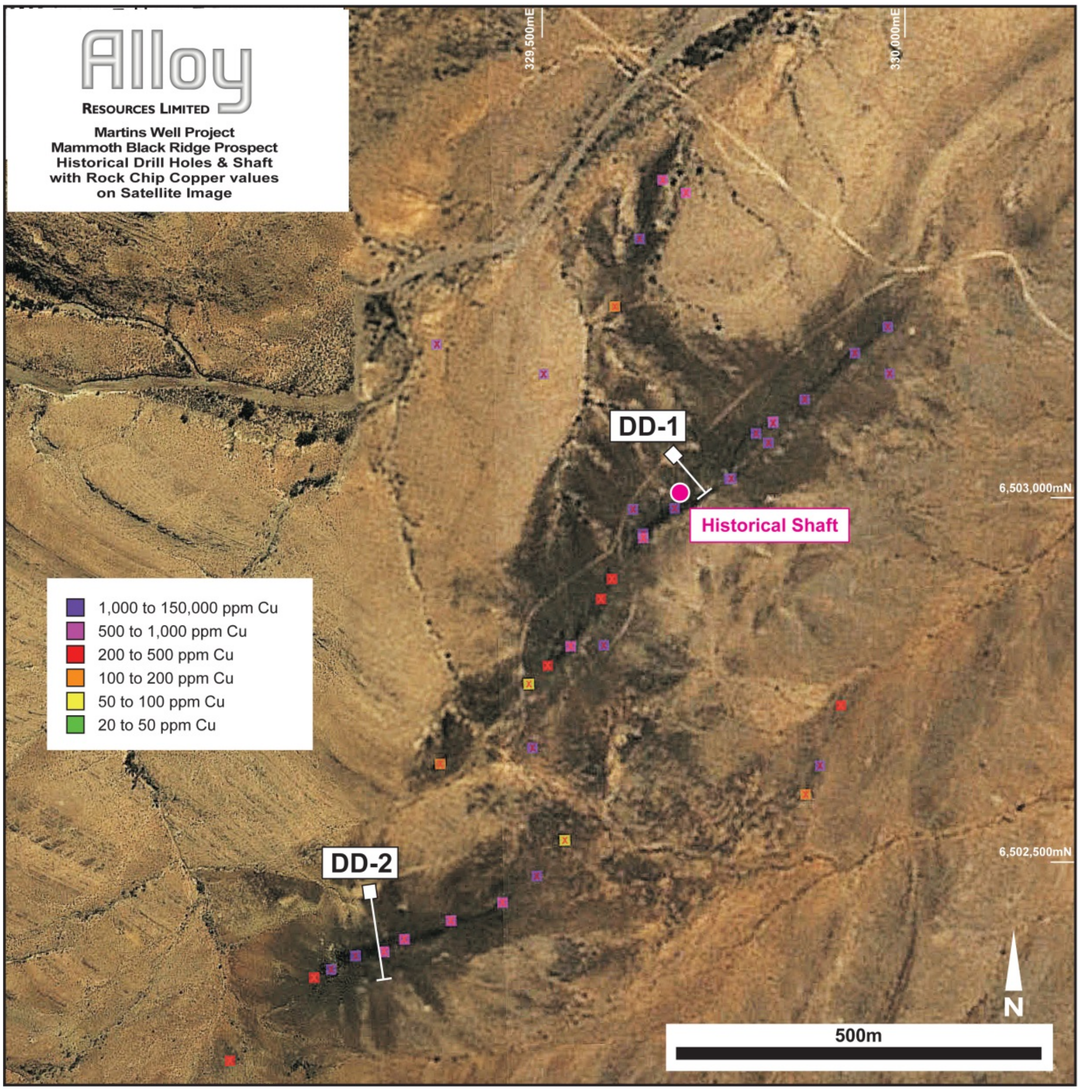

Figure 3 *Location of historical drill holes on satellite image with rock chip samples* and copper values (from ASX release 27 January 2015)

Hole DD-1

Figure 4 below is a schematic cross section showing the logging of the geology in this hole. Key elements (measured down-hole) observed are;

- Moderate to increasingly highly weathered siltstones with occasional narrow iron structures from surface to 165' (50m)
- Brecciated/veined iron rich siltstone and very fine grained sandstone zone to 213' (64m)
- A major 25 metre thick iron-rich zone containing occasional quartz veining and more gossanous zones (Figure 5). Iron is often remobilised as a botryoidal mass, interpreted to be the same material as the surface Gossan, extending to 292'9" (89m).
- Moderately oxidised siltstones with a number of discrete narrow iron gossan zones and variable zones of hematite banding and veinlets after pyrite to end of hole at 401' (122m).

The gossan material had been split into halves however no material appears to have been sampled. Portable XRF readings were taken at various points and gave similar anomalous results to that returned on the surface. Based on the observed gossan textures it is interpreted that the gossan remains in the highly leached zone and underlying supergene and primary zones may not occur until below 100 metres depth.

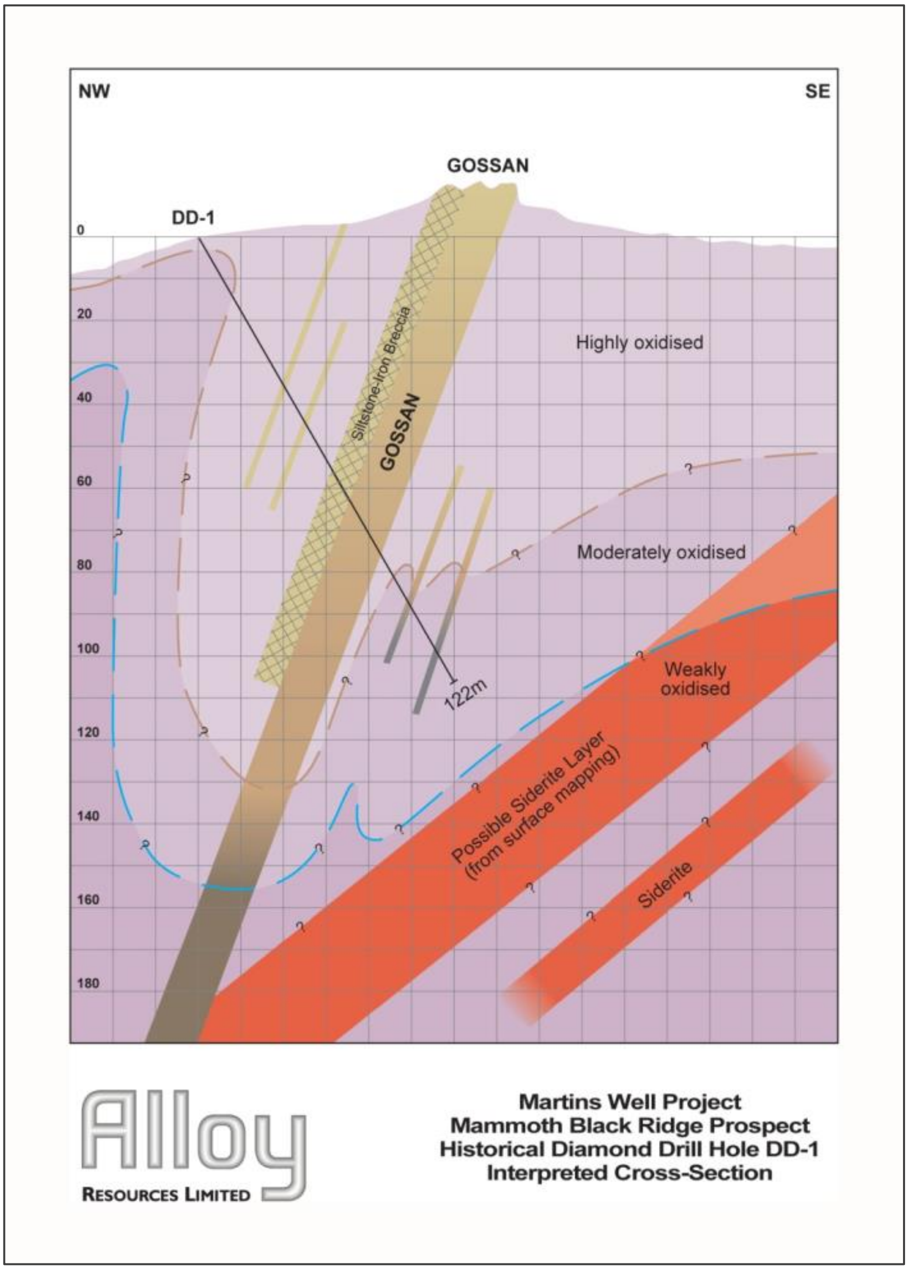

Figure 4 *Interpreted drill cross-section for DD-1*

Figure 5 *Gossan structure in DD-1 core*

More complete core photos are shown in the Appendix.

Hole DD-2

Figure 6 below shows a schematic cross section for the logging of the geology in this hole.

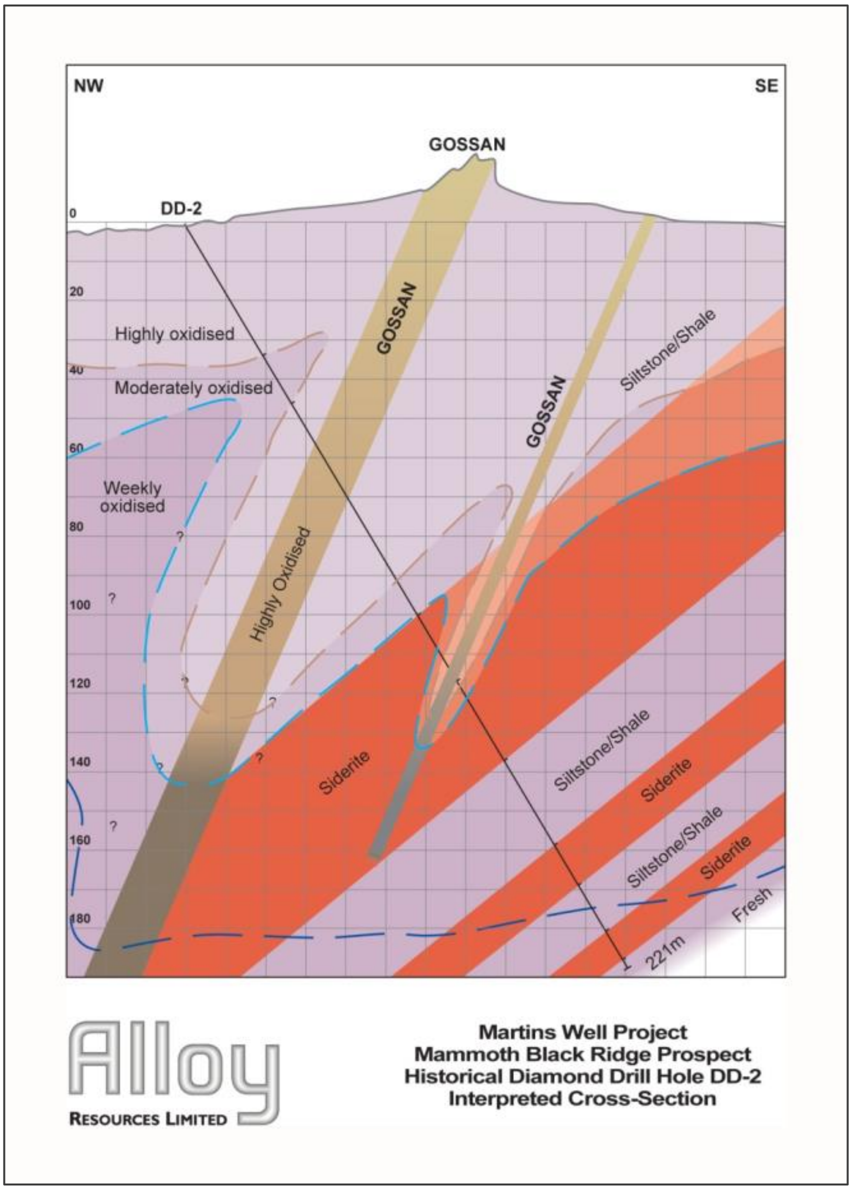

Figure 6 *Interpreted drill cross-section for DD-2*

Key elements (measured down-hole) for DD-2 are;

- Moderately weathered laminated siltstones from surface to 173’10” (53m)
- Increasing to moderate/highly weathered and oxidised interbedded siltstones with variable calcite veining and terminating after a 5m thick iron rich structure at 293’ (71m).
- A zone of siltstone/sandstone which is noticeably more ferruginous with fractures and veins persisting down to 219’6” (66m).
- A major 15 metre thick iron-rich zone then extends to 268’7” (81m) and Iron is completely remobilised as a botryoidal mass. Very little quartz or gossanous material was observed (Figure 7).
- A footwall zone of highly oxidised fine to medium grained bedded sandstones with common iron-manganese fractures down to 347’8” (106m). Decreasing weathering at depth.
- Weakly oxidised crystalline siderite units interbedded with siltstone/shale units to 385’ (117m).

- Siderite with common disseminated chalcopyrite (commonly altered to digenite?) as 1-20mm sized crystal aggregates. Iron (gossanous) fractures common with a main structure from 435' to 446'4" (132.6-136m). This zone extends to 480' (146m) – being 19 metres thick (Figure 8).
- A siderite unit containing minor to occasional disseminated chalcopyrite aggregates and decreasing ferruginous fractures/veins down to 554' (169m) – being 23 metres thick.
- Weakly oxidised laminated shale/siltstone with calcite veining to 604'10" (184.3m).
- Siderite unit with minor disseminated chalcopyrite aggregates and crystals to 656' (200m).
- Weakly oxidised laminated shale/siltstone with calcite (or ankerite) veining to 685' (208m).
- Siderite unit with strong mineralisation of common blebby disseminated fresh chalcopyrite and arsenopyrite to 714' (217.6m)
- Fresh siltstone/shale with calcite veins to end of hole at 725'9" (221m).

The gossan material and siderite units have been split into halves and it is likely to have been sampled – no records have been located by the geological survey. Based on the observed gossan textures it is interpreted that the gossan remains in the highly leached zone and underlying supergene and primary zones may not occur until below 100 metres depth. The siderite unit mineralisation was noted as being less weathered than sediments, very high in copper and, at the end of the hole, also in arsenic.

Figure 7 *DD-2 - Gossan material*

Figure 8 DD-2 *Chalcopyrite aggregate in siderite*

Mineralogy of Siderite mineralisation in DD-2

Dr Ben Grguric of Mineralium Pty Ltd conducted a mineralogical review of the siderite hosted mineralisation observed in DD-2. He concluded that "The mineralisation observed consists of a polymetallic assemblage (Cu-Fe-As-Sb) and is clearly hydrothermal in origin".

A number of samples were made into polished mounts and these were examined using optical microscopy in reflected light. Key images are shown below in Figures 9 to 13 below.

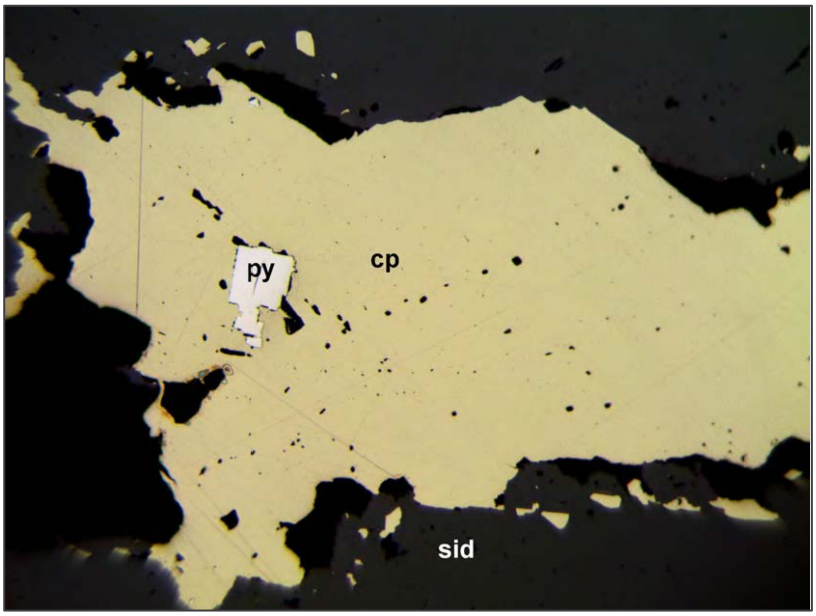

Figure 9: *Coarsely crystalline chalcopyrite (cp) embedded in siderite (sid), and in turn containing a crystal of euhedral pyrite (py). Sample* ***DD-2 430'****. Reflected light image. Field of view is 1200 microns.*

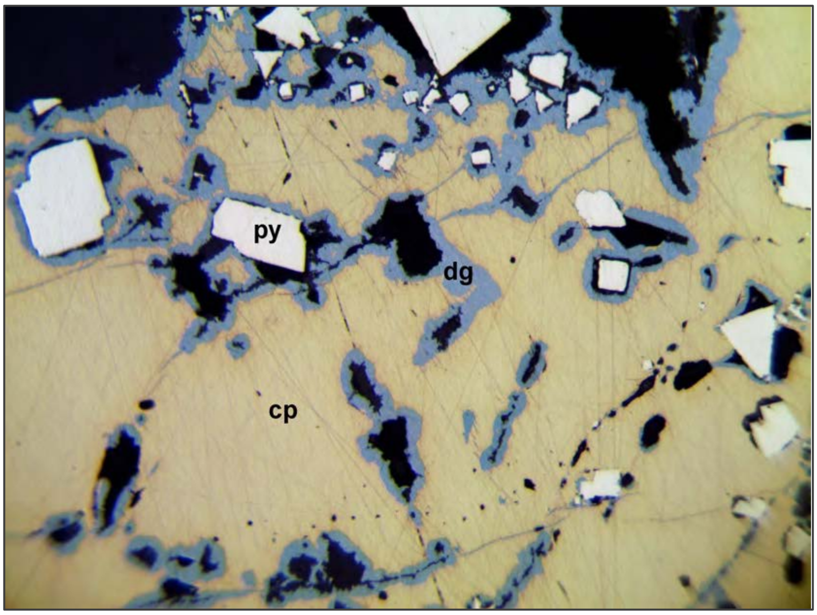

Figure 10: *Coarsely crystalline chalcopyrite (cp), containing inclusions of euhedral pyrite (py) and secondary alteration to digenite (dg) at grain boundaries and along microfractures. Sample* ***DD-2 503'****. Reflected light image. Field of view is 600 microns*

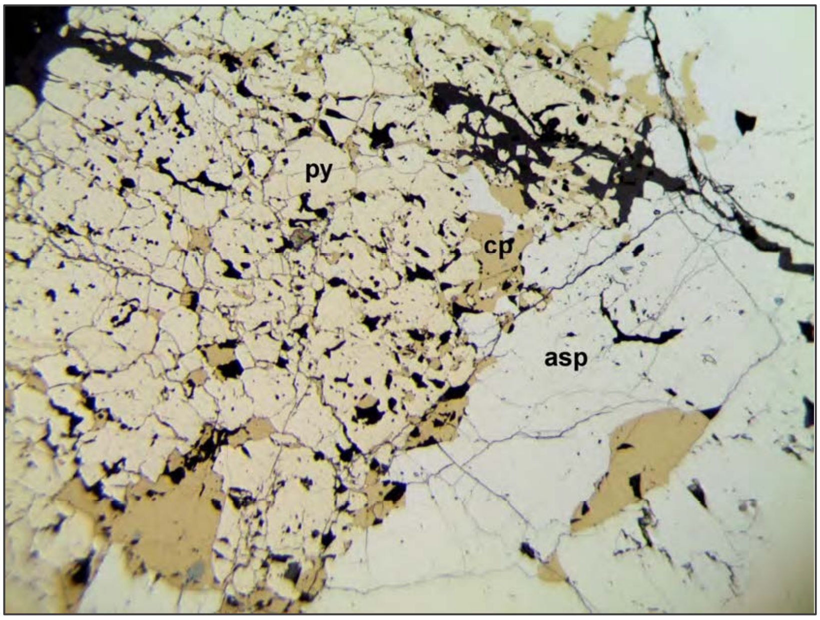

Figure 11: *Microfractured arsenopyrite (asp) and pyrite (py) infilled with chalcopyrite (cp). Sample* ***DD-2 701'****. Reflected light image. Field of view is 1200 microns.*

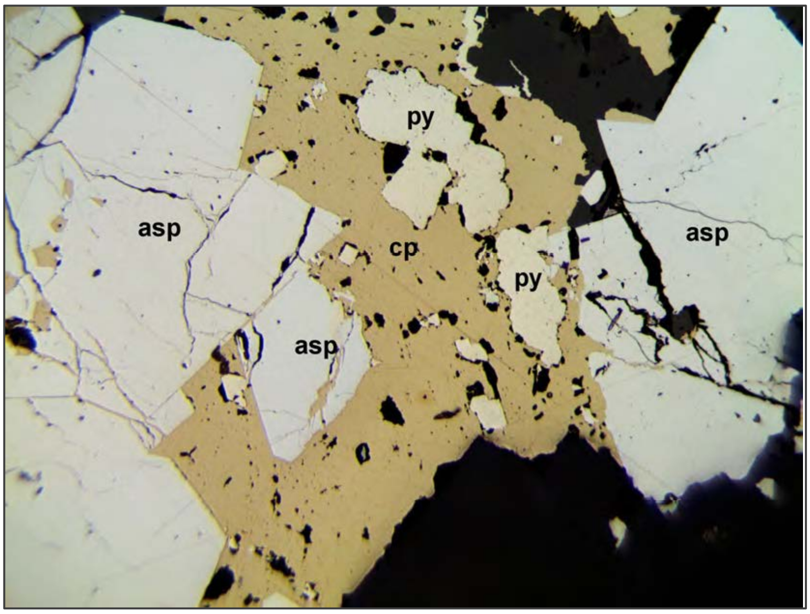

Figure 12: *Microfractured arsenopyrite (asp) and pyrite (py) surrounded by chalcopyrite (cp). Sample* ***DD-2 703'****. Reflected light image. Field of view is 1200 microns*

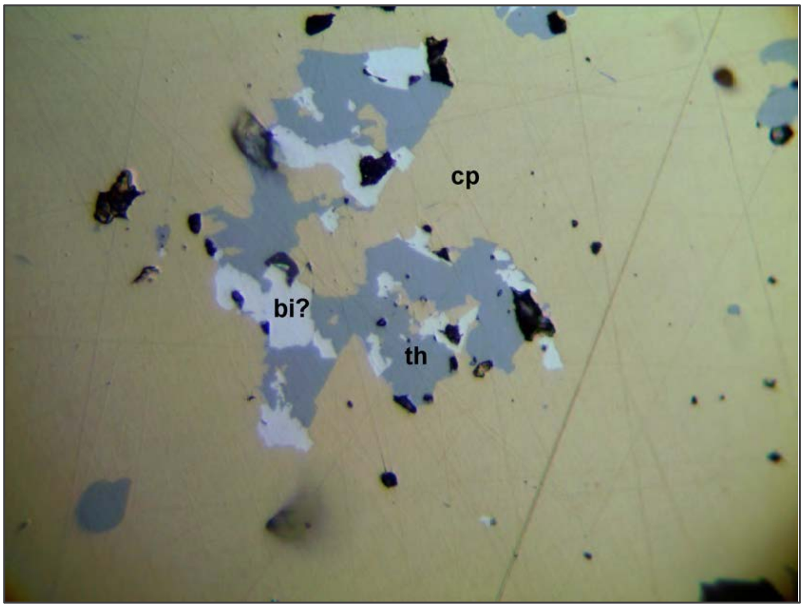

Figure 13: *Tetrahedrite-tennantite series mineral (th) with tentative bismuthinite (bi?) as inclusions in chalcopyrite (cp). Sample **DD-2 703'**. Reflected light image. Field of view is 225 microns*

Core analysis

The Company has recently been informed by the South Australian Department of State Development that it can have access to the Mammoth Black Ridge historical core for sampling and analysis.

The Company will be completing sampling in the next two weeks and undertaking full suite multi-element analyses of the majority of DD-1 and DD-2.

Mammoth Black Ridge Ore Deposit Model

The Company now has extensive evidence from historical prospecting, past exploration and recent work that when combined with these latest mineralogical observations are extremely important in confirming a large polymetallic hydrothermal system to be present at Mammoth Black Ridge.

The fact that the gossans commonly return anomalous copper and arsenic values from rock chip sampling, and historical shaft sampling reported high copper, silver and gold, suggests that the primary mineralogy for the gossan structures will be similar to the polymetallic mineralisation hosted by siderite.

Furthermore, the gossans in drill holes are 15 and 25 metres thick and extend over at least a 2 kilometre strike length which means they are a very strong target for a large high grade polymetallic mineralised body.

The siderite hosted mineralisation presents a further major target for extensive mineralisation – both thick Stratabound low to moderate grade mineralisation, and more importantly thick high-grade mineralisation over extensive depths and strike length where the main gossan structures intersect the siderite units.

The Mammoth Black Ridge prospect was remapped following the logging of historical core. As the presence of thick siderite units was observed in core, particular focus was placed on locating this in the field.

Figure 14 below presents a map of the prospect with observations and interpretation of geological strata, sulphide gossans and siderite units. A very simple low to moderate temperature structurally controlled hydrothermal mineralisation style can be invoked to explain the observed mineralisation. Dextral wrenching of the strata has become dilational under an ENE directed stress regime as major regional structures trend more north-easterly at Mammoth Black Ridge.

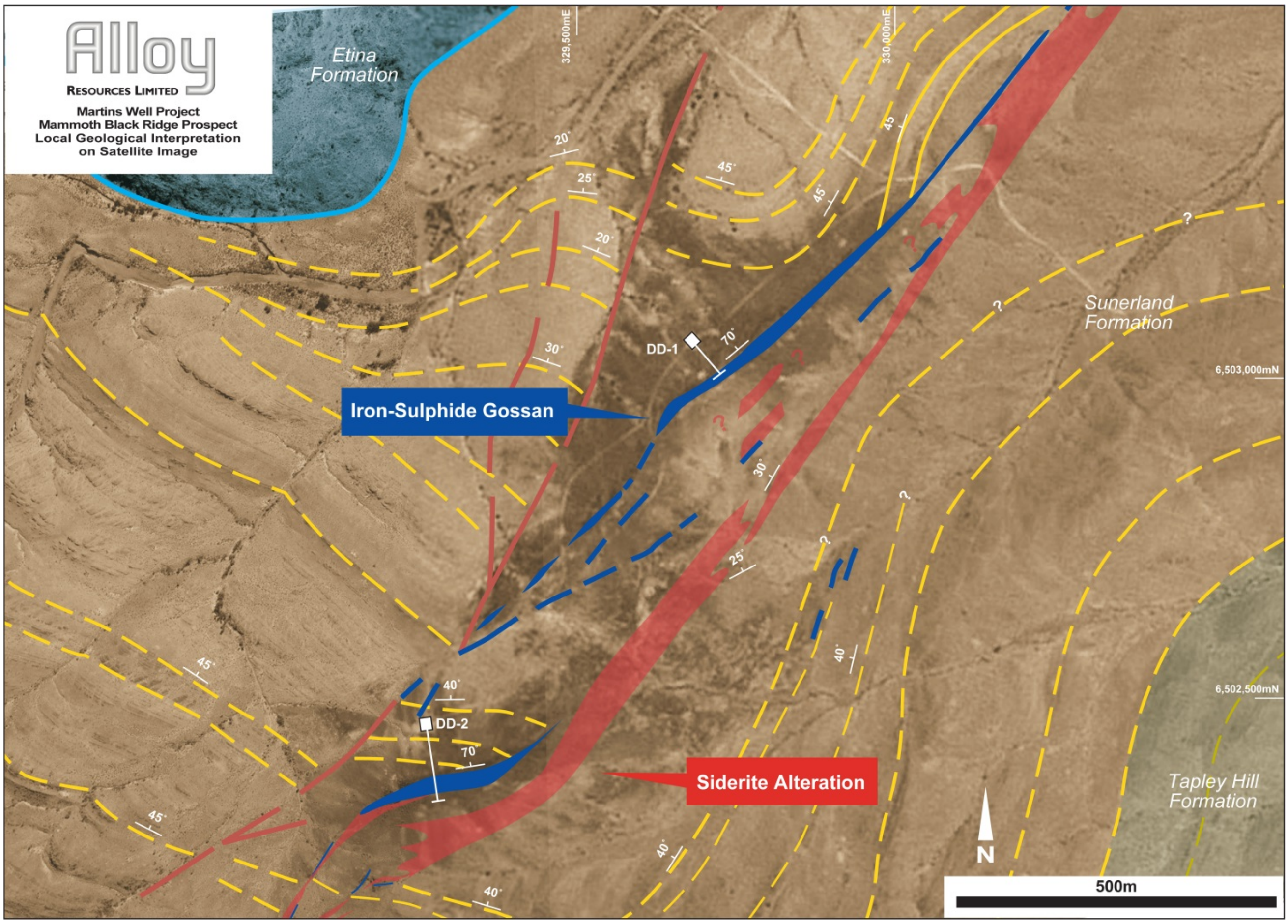

Figure 14 *Mammoth Black Ridge mapped geology on satellite image*

It is our view that the key reason why such a large polymetallic system has not been successfully explored and defined prior to now is the extreme weathered nature of the regolith which has removed metals from the upper saprolite zone which may extend to depths of greater than 100 metres. The historical drill holes have provided fortunate sub-surface information for the Company in that the siderite hosted mineralisation has been partially protected from the severe leaching and shown the polymetallic style of mineralisation that can be expected in the gossan structures.

Regional Project Prospectivity

The regional prospectivity of the Martins Well Project is regarded as very high. Numerous occurrences of high-grade copper in rock chip sampling occur associated with faults and/or limestone units (Figure 15). No mapping of siderite alteration has ever occurred and numerous anomalous stream sampling anomalies are present. Large outcropping areas have not had surface sampling at all and lag soil sampling is likely to very effectively test these areas.

Very limited modern geophysics has been applied to the Exploration Licence area and it is expected that aerial magnetics and possibly electro-magnetics will define regional targets in areas of cover

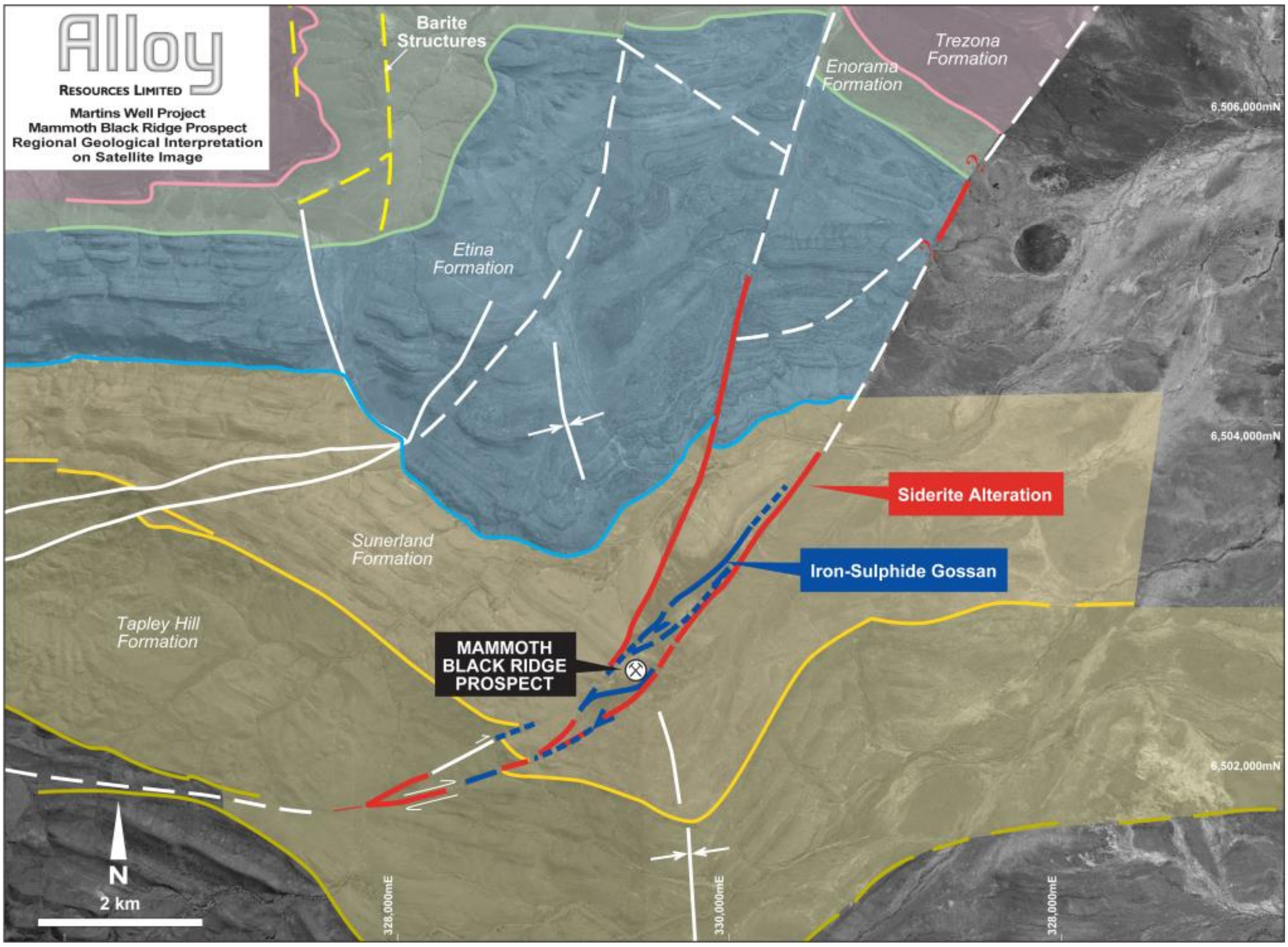

Figure 15 *Regional Geological Interpretation on Satellite Image*

PACE drill funding

The Company has received a funding grant for 50% of direct drilling costs to the amount of up to $75,000 under the South Australian Government's PACE Frontier co-operative exploration drilling project.

The drilling proposal was focussed on RC and diamond drill testing of the Mammoth Black Ridge prospect.

Option Agreement

The Company has exercised its right to earn a 90% interest in the Martins Well Project by completion of the Initial Payment of $25,000 in cash and $25,000 in fully paid ordinary shares in the Company which are escrowed for three months.

Future Activities

The Company will complete diamond core analysis which will then be assessed and a small RC drill program planned to confirm the tenor of the Mammoth Black Ridge polymetallic mineralisation.

For further information contact: **Andy Viner**
Executive Chairman
Phone: +61 8 9316 9100
www.alloyres.com

Exploration Results

Information in this report which relates to Exploration Results is based on information compiled by Andrew Viner, a Director of Alloy Resources Limited and a Member of the Australasian Institute of Mining and Metallurgy, Mr Viner has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are 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 Viner consents to the inclusion in the report of the matters based on this information in the form and context in which it appears. Mr Viner is a shareholder and option holder of Alloy Resources Limited.

The Company confirms that it is not aware of any new information or data that materially affects the information in the relevant ASX releases and the form and context of the announcement has not materially changed

APPENDICES

Diamond Core Photos

Upper levels of DD-1

Brecciated contact and Iron Gossan in DD-1

Iron Gossan and footwall siltstones in DD-1

Gossan structure - DD-2

Gossan footwall siltstones in DD-2

Commencement of siderite unit at 385’4” in DD-2

42 metres thick siderite unit with minor iron structures and disseminated chalcopyrite mineralisation DD-2

Lower siderite units at end of DD-2. Short hole DD-3 of unknown location on the right.