

28<sup>th</sup> July 2020

ASX Announcement

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## JUNE 2020 QUARTERLY ACTIVITIES REPORT

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### Highlights

#### Kooline – Ashburton (WA)

##### High Grade Silver, Lead, Copper Project

- Rock chip samples include assays up to:
  - **Silver**                **580 g/t Ag**
  - **Lead**                 **79.3% Pb**
  - **Copper**              **3.78% Cu**
  - **Gold**                 **1.6 g/t Au**
- Swarm of historic workings (>50) identified over 6km of strike
- Drilling preparation underway

#### Mt Magnet Gold Project (WA)

- Substantial tenement holding at Mt Magnet (under application)
- Covers approximately 15km<sup>2</sup> in major gold province
- Mt Magnet produced over 6 million ounces since 1891 - Hill 50 produced in excess of 3.5 million ounces

#### Unaly Hill (WA)

- High value - high purity alumina (4N HPA)
- 4N HPA value up to US\$30,000 per tonne
- Leach Test commenced
- Dr Greg Power appointed alumina consultant
- Vanadium-magnetite-titanium resource contains up to 20% alumina

During the quarter, exploration field activities were severely curtailed due to the Covid-19 pandemic. During this difficult time, the Company spent considerable time reinterpreting data from its current projects and reviewing and appraising numerous new project opportunities across several target

commodities. The Company will continue these efforts as many new projects and opportunities become available to Surefire.

### **Kooline Project High-Grade Lead/Silver**

The Kooline Project, situated in the Ashburton Province of Western Australia, maintains considerable interest to the Company due to its many exciting credentials. The multi-element project, centred on the high grade historic Kooline Lead workings, has ore-grade lead, silver, and copper, along with highly anomalous gold.

The project is 55 kilometres south of the Paulsen's goldmine within the Ashburton province of Western Australia. The project area tenements cover a total of 386km<sup>2</sup>, and more importantly, includes 48km of contiguously striking licences linking several clusters of high grade historic artisanal high-grade lead/silver workings, with elevated copper and gold geochemical anomalies. For over a century Kooline was Western Australia's largest producer of lead.

### **HISTORIC PRODUCTION**

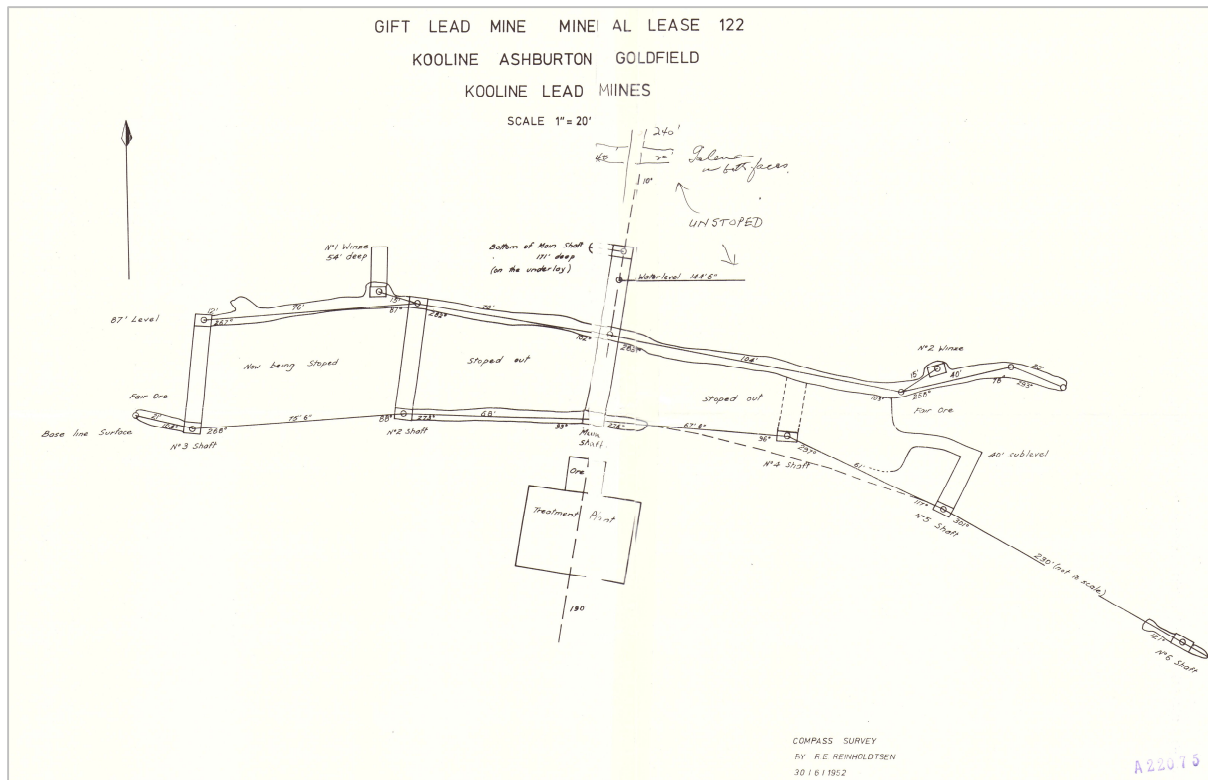
The large post-war increase in the price of lead stimulated interest in lead deposits in Western Australia and made possible the re-opening of several deserted mines in the Northampton district and in the Ashburton Goldfield. It led also to renewed interest in the country surrounding "Wyloo" Station, some 120 miles southeast of Onslow, on the Ashburton River, an area of pre-Cambrian rocks long known to this branch as containing auriferous quartz. Aboriginal stockman from Wyloo and Kooline Stations had long known of galena "floaters" and showed samples to local prospectors. Within a few years many claims were staked and production from high grade lead silver mines commenced shortly thereafter. (1949 Report of the Department of Mines, Western Australia).

The Kooline Lead Field yielded some 2,679 tonnes of lead, and 26,533 ounces of silver from 40 small workings from 1947 to 1959. This followed a significant rise in the price of lead after World War 2 which subsequently retracted during the mid to late 1950's.

At today's lead price of US\$1,808/tonne and silver price of US\$22.7/oz, the combined value for the lead and silver produced equates to a conservative estimate of **AUD\$7.67 million**. Grade is King and much of the ore produced was high enough in grade for direct shipping. Over 60% of the total production at Kooline Lead Field was accounted for by three deposits, these being Bilrose, June Audrey, and The Gift and each of these mines had its own treatment plant. Since the late 1950's no attempts have been made to reopen the mines.

### **The Gift**

The Gift Mine is centrally located amongst the main line of workings. It yielded 946 tonnes of lead and 8,362 ounces of silver from 7,750 tonnes of ore giving grades of 13% lead and 31 g/t silver. The mineralised vein strikes at 285 degrees, dips north at 70 degrees and is up to 1.2m wide. It comprises quartz with disseminated galena, with veins of massive galena up to 40cm wide on its walls. Surface workings are continuous over 80m with two further shafts to the east making the total worked strike length of approximately 150m. The depth of workings extends to approximately 30m vertically.



**Compass Survey mapping by Reiholdsten, 1952**

### The June Audrey Mine

The June Audrey mine is 1.6km west of the Gift mine. It produced 512.0 tonnes of lead and 5,356 ounces of silver from ore with an average grade of about 11.5% lead and 38.56 g/t silver. Two ore shoots 180m apart and along strike of each other were worked at June Audrey. On the western shoot, workings extend for 137m along the vein, strike at 280 degrees and dip steeply south. Midway along its length the vein is displaced echelon fashion for 15m to the right and the two parts are linked by a narrow quartz vein. The main shaft on the eastern part of the vein is 42m deep. Stopes were taken to depths of at least 18m. The reef in the stopes ranged from 1 to 1.5m wide. The eastern shoot strikes at 105 degrees and dips steeply north. It was open-cut and stoped over a length of 60m to a depth of at least 18m and varied from 0.6 to 1.2m in width. Both shoots contain galena, cerussite, barite and traces of copper.

### The Bilrose Mine

The Bilrose mine, 600m west of the Gift mine, has yielded 333.2 tonnes of lead and 4,503 ounces of silver. Records of the amount of ore treated are incomplete. Those existing, show an average grade of about 12% lead. The western part of the vein worked on the Bilrose mine strikes at 295 degrees and dips at 75 degrees south. At a distance of 60m from the east end the vein splits into two branches diverging at an angle of 20 degrees with both branches dipping south. Workings on each branch of the lode extend for about 55m from the junction. The mineralised lode varies from 0.6m to 2m wide. The main shaft is 25m deep with an inclination of 70 degrees south. Minerals seen on the dumps include galena, cerussite and barite. The greywacke wall rocks are altered slightly to chlorite near the lode.



**The Bilrose Lead Silver Mine Kooline**

### **Mineralisation and Setting**

Kooline lies within the northern margin of the West Bangemall Basin and encompasses rocks in the Ashburton and Capricorn Formations of the Wyloo Group. The Lead-silver mineralisation at Kooline is associated with mesothermal quartz veins along shear-zones in siltstones and greywacke. These sub-vertical vein sets occur in multiple stacked and en-echelon sets over 6km of strike. Individual veins are up to 2m in width. Despite the high grades encountered in historic production the Kooline Lead Field is relatively under explored.

## Results to Date

Previously announced results by Surefire Resources NL, and other explorers have included many high-grade rock-chip samples and significant RC drilling intersections. Grab-samples and rock-chips from within the workings have yielded massive lead sulphide ore grading up to 79.3% Pb, from a massive galena sample from the June Audrey Workings. Similar results have also been returned from the workings at Bilrose, and the Gift. Other commodity grades include 580 g/t silver, 3.74% Cu, and 1.6 g/t gold.

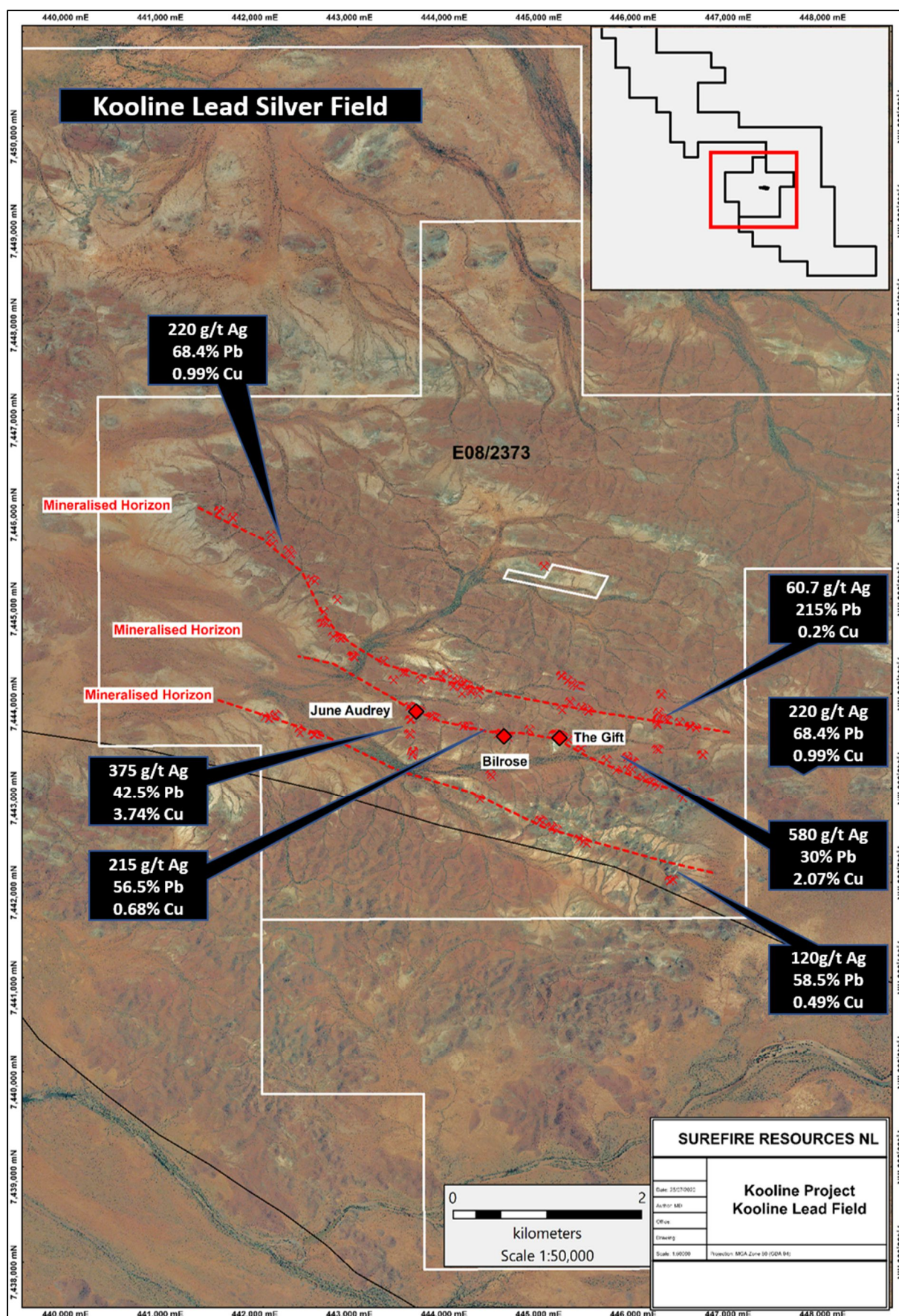
Work by previous explorers has shown strong multi-element geochemical signatures around the workings that extend several parallel lineaments over a six-kilometre strike length. With three main parallel trends, the overall strike kilometres of target mineralised horizons is over 18 kilometres. Historically, these have only been tested with a handful of drill holes.

## Drilling

Given the limited amount of drilling that has been carried out, and measured against the areal extent of the multi-element geochemical anomalies, it is apparent that a great deal of potential remains to intersect areas where the high grade veins and structures hosting precious and base metal mineralisation, may be structurally thickened and dilated due to deformation. The focus on exploration has been centred around the Kooline lead-silver workings and there remains potential to develop this understanding further. Given the history of production from high grade, albeit narrow mineralisation, a program of further detailed assessment is required to determine if area of structural dilation and thickening could occur along strike or down dip of the historic mines.

Further away from the immediate vicinity of the mines, geochemical anomalies persist beyond the limit of workings. These areas may also be where mineralisation persists beneath surficial cover that would have been missed by historic miners and explorers. These workings have been tested by only a handful of RC drill holes in late 2000 by Athena Resources NL with that particular drill program being a first pass examination. Surefire is presently planning a campaign of RC drilling targeting the rich, high grade lead-silver zones beneath and along strike of the June Audrey, Bilrose, and Gift historic operations. Where the miners of the post-World War two era were limited by water table depth they could not proceed past, it may be that they were literally only scratching the surface of the Kooline Lead Field's true potential.





Kooline Lead Field – Multi-element rock chip assays

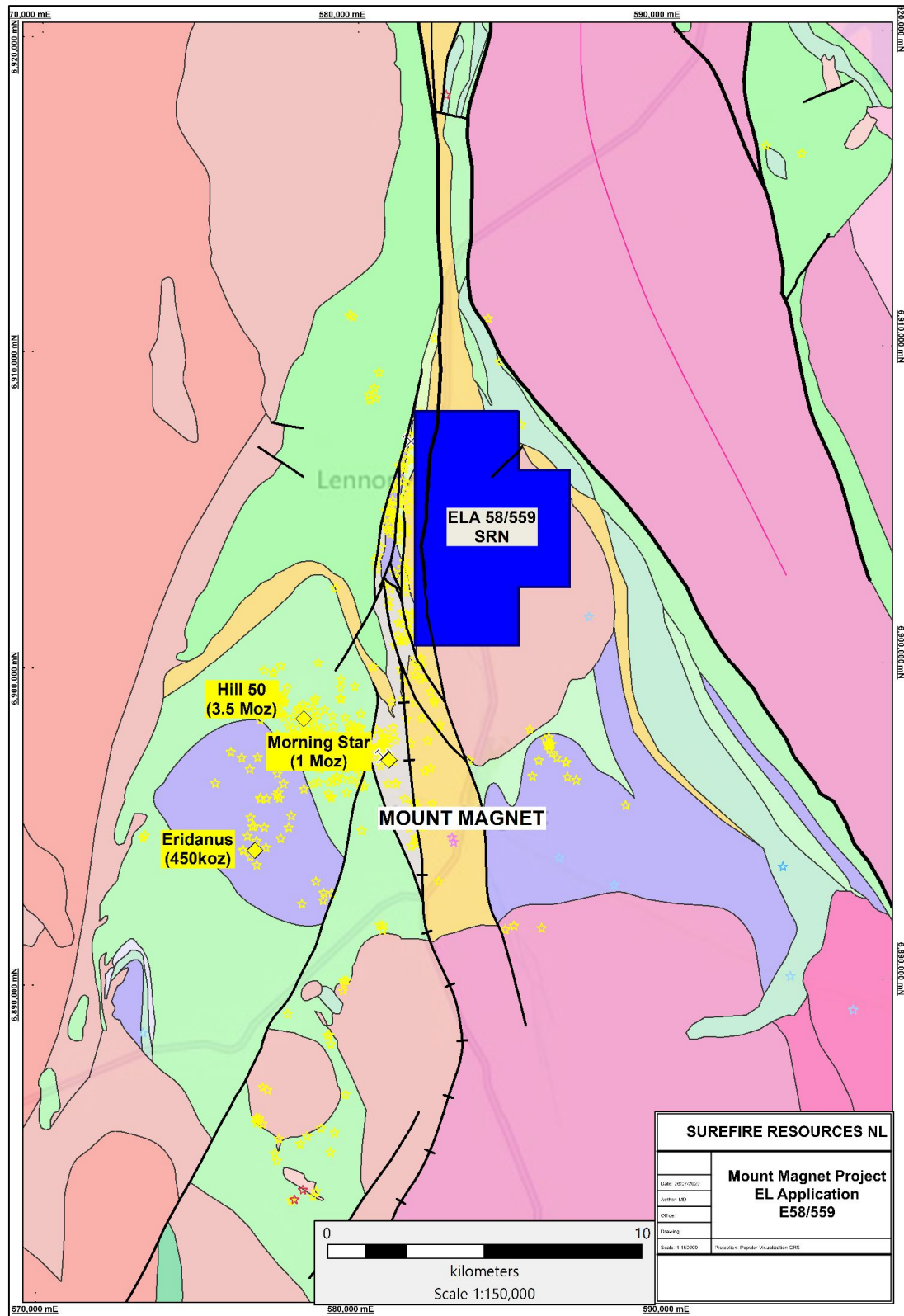
### **Mt Magnet Exploration Licence Application (E58/559)**

The Mt Magnet gold mining town, some 500km north of Perth, has been producing gold since discovery in 1891. It is situated within the Murchison Goldfields of the Yilgarn Craton in WA. Historically Mt Magnet produced over 6 million ounces of gold and has significant potential to host new discoveries. The Hill 50 Gold Mine commenced in 1936 and produced intermittently for many years. From 1955 and 1961 it was Australia's most profitable gold mine and over its life produced more than 2 million ounces until closure in 2007 at a depth of 1,500m below the surface.

The Mt Magnet project is located within the north-south striking Meekatharra-Mt Magnet greenstone belt. The greenstone belt lithologies comprise a succession of steeply dipping and intensely deformed mafic and ultramafic extrusive and intrusive rocks, felsic volcanics and banded iron formations (BIF). Granitic rocks intrude the greenstone belt stratigraphy. The BIF is the dominant host rock for gold mineralisation in the area. Gold mineralisation is typically associated the pyrite & pyrrhotite replacement of magnetite in the banded iron. High-grade ore shoots are developed along the intersection of the BIF and a swarm of northeast trending faults.

The Company's new application is in close proximity to the Mt Magnet townsite and gold mining operations that extend northwards along the greenstone belt and while 10 graticular blocks in total, the area covered is closer to 15km<sup>2</sup> after adjacent areas are excised.





**Mt Magnet Exploration Licence Application**



## Unaly Hill and Victory Bore – High Purity Alumina (HPA)

Victory Bore and Unaly Hill vanadium projects have been the Company's flagship projects at the centre of the Company's exploration efforts for some time. They are situated adjacent to each other approximately 500km north-east of Perth and 40km south of Sandstone in the mid-west of Western Australia. Together, the projects have a combined inferred mineral resource of **237Mt** consisting of:

- **Victory Bore: 151Mt @ 0.44% V<sub>2</sub>O<sub>5</sub>**
- **Unaly Hill: 86.2Mt @ 0.42% V<sub>2</sub>O<sub>5</sub>**

**(ASX: SRN announcement 29/4/2019)**

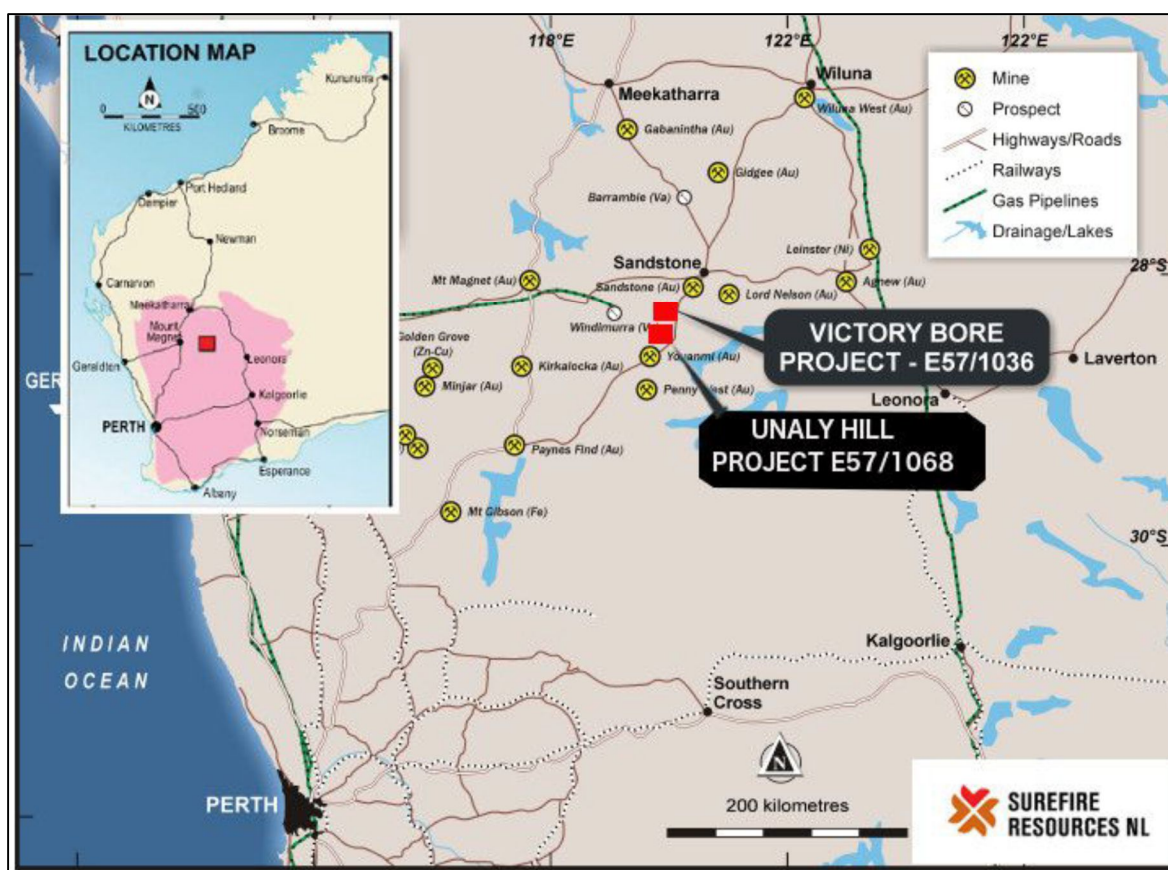
During the quarter, SRN revisited the results of the 2019 METS Engineering metallurgical study that concluded the following:

- The study showed operating costs for Ferro-Vanadium production well below the current product price
- Advanced metallurgical studies at Unaly Hill and Victory Bore confirm good quality vanadium products can be produced
- Additional revenue potential from titanium and iron by-products

NAGROM have been engaged to commence further metallurgical testing of Unaly Hill diamond core drilled during the 2018 campaign. Within the vanadium-titanium-iron orebody the average Al<sub>2</sub>O<sub>3</sub> grades are around 17%. The Company is interested in examining the potential for further refining of the ore to yield a High Purity Alumina ("HPA") product. For this purpose, a 50kg sample was submitted to NAGROM for beneficiation and hydrometallurgical testwork to produce High Purity Alumina from the ore.

The material currently being leach tested has an Al<sub>2</sub>O<sub>3</sub> grade of 20.4% and has been taken from material within the ore-zone of the Unaly Hill Mineral Resource. A 2019 metallurgical study, carried out by METS Engineering, showed that after a phase of magnetic separation the grade of the Al<sub>2</sub>O<sub>3</sub> in the non-magnetic fraction is **93.2%**.

HPA has a growing demand in high-value technology markets and is used to produce sapphire glass for substrates in LED lights, semi-conductors, and laser markets. It is also used to coat cathode and anode separators for lithium batteries, a use that is becoming increasingly common due to its ability to improve both efficiency and safety. The production of an HPA product, alongside the vanadium pentoxide, titanium dioxide pigment and iron oxide products could have continuous advantages in generating early cash flows and benefiting the overall economic viability of the Unaly Hill Project.



**Location of Unaly Hill and Victory Bore Projects**

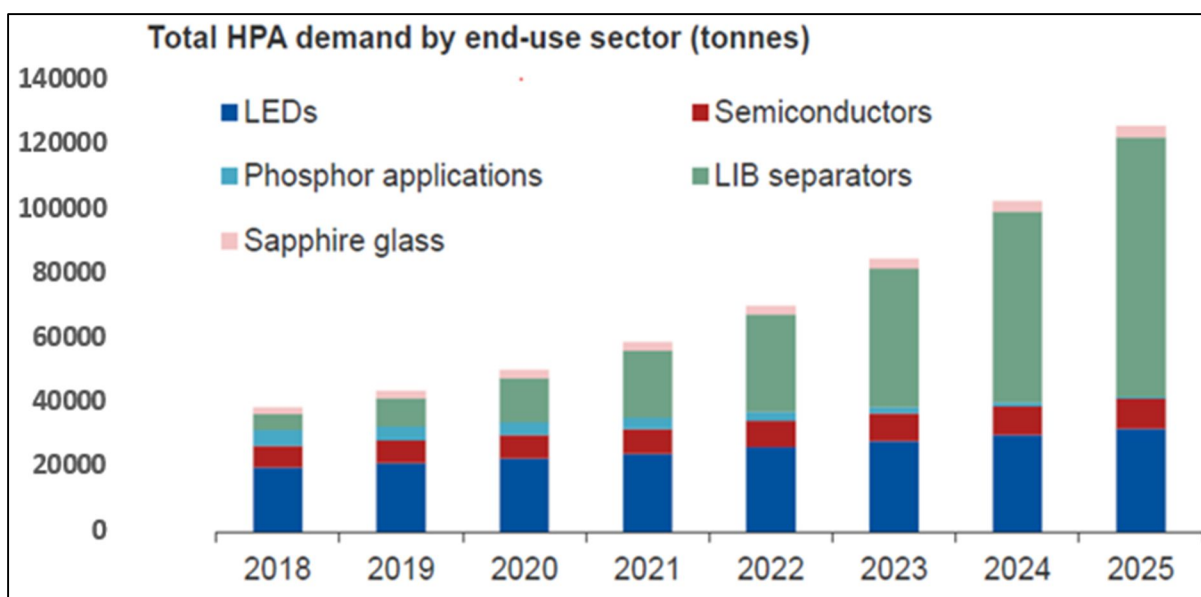
### High Purity Alumina – A High Value-High Margin-High Demand Product

High Purity Alumina (HPA) is a high-purity form of aluminium oxide ( $\text{Al}_2\text{O}_3$ ). HPA is high value, high margin, and a highly demanded product as it is a critical ingredient required for the production of synthetic sapphire. Synthetic sapphire is used in the manufacture of substrates for LED lights, semiconductor wafers used in the electronics industry, and scratch resistant sapphire glass used for watch faces, optical windows, and smartphone components. There is no substitute for HPA in the manufacture of synthetic sapphire.

High Purity Alumina (HPA) has exceptionally low levels of impurities, particularly sodium and iron. It is an excellent electrical and thermal insulator. Prior to 2010 it was mainly used in electronics, phosphors and, crucially, LED's. Global demand was small, and it was made at high cost by reprocessing pure aluminium metal. 2011 saw a 5-fold increase in annual LED production enabled by commercialisation of breakthrough LED technologies and driven by demand for low energy lighting. This and subsequent sustained LED growth increased HPA demand and stimulated interest in alternative, lower cost raw materials and methods of production for HPA.

HPA has since emerged as the material of choice for the ceramic electrode coatings essential to meet the capacity, energy density and safety requirements of high capacity lithium-ion batteries (LIBs). This has propelled a second, bigger surge in demand for HPA due to the pressure for reliable, high energy-density LIBs to support the revolution in electric vehicles and renewable energy storage.

LIB manufacture is projected to overtake LEDs as the dominant use of HPA by 2022, and to continue to drive growing demand well beyond 2028.



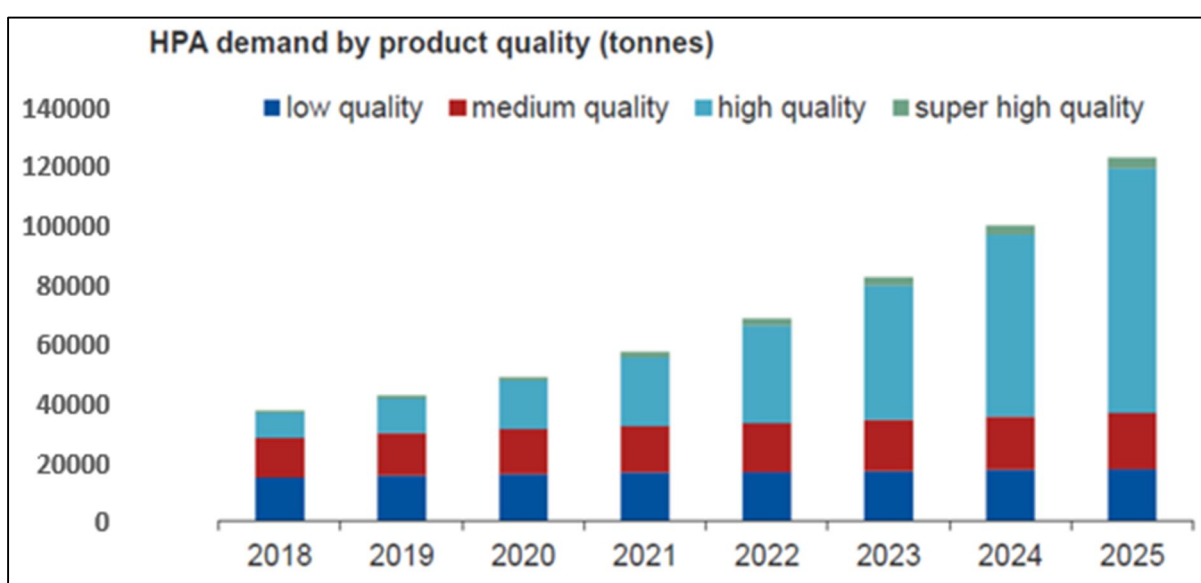
(Source: CRU Tech Metals Briefing, Perth, June 2018)

HPA price and volume demand both depend on purity.

HPA Purity (by weight)	99.9% (3N)	99.99% (4N)	99.999% (5N)
Approx. Market Price Range (US\$/tonne)	\$5,000 – \$15,000	\$15,000 – \$30,000	\$30,000 – \$50,000

Source: CRU

4N grade HPA is required for battery applications, which is reflected in the demand predictions for the various grades shown below ('high quality' = 4N).

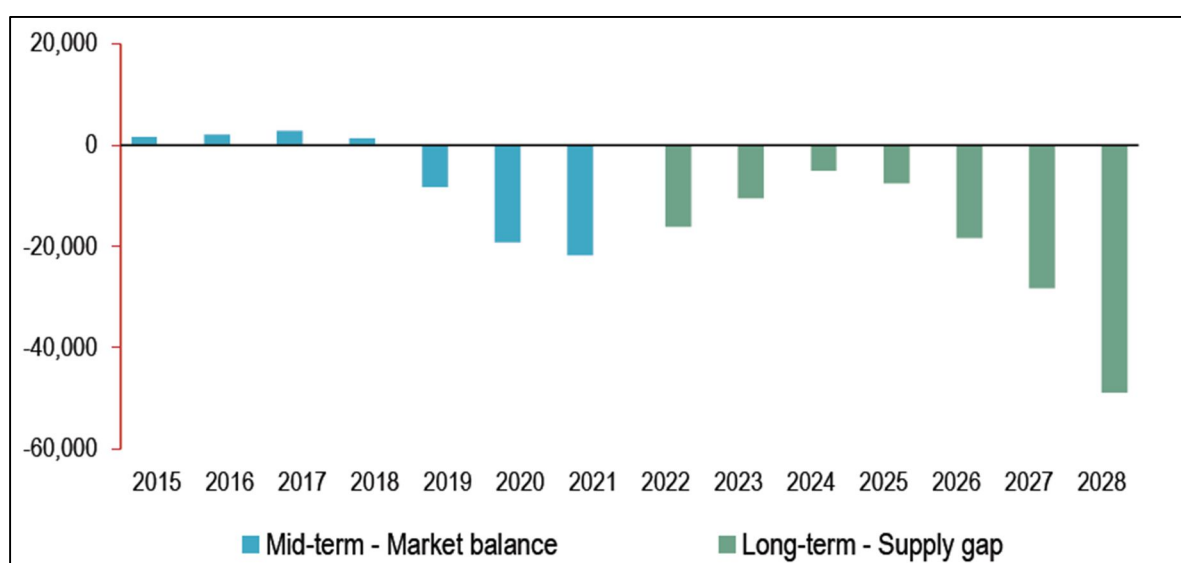


(Source: CRU Tech Metals Briefing, Perth, June 2018)

HPA is a premium priced material with forecast significant annual demand growth driven two fast growing industries: the sapphire/LED industry and the rapidly expanding lithium-ion battery industry. This surging demand for lithium-ion batteries is driven by the electric vehicle market with demand predicted to strongly outstrip supply by over 20,000 tonnes per annum. With global demand currently at around 19,000tpa, it is estimated that at a compound annual growth rate of 30%, by 2028 the HPA market demand is forecast to be approximately 272,000tpa.

### **SURGE IN HPA DEMAND TO OUTSTRIP SUPPLY**

The continuing supply gap can be expected to support strong 4N HPA prices. In 2018, CRU provided a long term (2022-2028) price forecast of approx. US\$27,000/tonne, which they revised to US\$32,000 in 2019 due to an increase in the predicted production deficit. This creates ideal conditions for entry of new production to the market in the coming decade.



(Source: CRU 2019)

### **Strategic Appointment – Dr Greg Power BSc PhD FRACI**

Surefire is pleased to announce the appointment of highly credentialed consultant and industrial chemist Dr Greg Power. Dr Power has over 30 years' experience in the manufacture of smelting grade alumina (SGA) and specialty alumina products. In the 1980's he led an investigation of the feasibility of diversifying the Worsley alumina refinery to produce hydrate and HPA products. He was Technical Manager of Alcoa's Kwinana alumina during its transition from purely SGA production to a multi-product facility producing two grades of hydrate and up to three grades of specialty alumina, including low-soda, hard-burnt alumina equivalent to 3N HPA. He has a deep knowledge of the chemistry, engineering, and management of alumina production by the Bayer process and current and emerging processes for HPA production. He is Director and the Principal Consultant of Arriba Consulting Pty Ltd, which he established in 2004 to provide technical services to the alumina industry. He is a visiting scientist at CSIRO where he provides advice on alumina-related science and works to facilitate joint projects between CSIRO and the alumina industry.



ASX RELEASE AUTHORISED BY:

Vladimir Nikolaenko

Managing Director

## QUALIFYING STATEMENTS

### JORC Compliance:

### Competent Persons Statement:

Information in this report relating to exploration results is based on information compiled by Martin Dormer Consultant Geologist. Mr. Martin Dormer, who is a member of the Australian Institute of Mining and Metallurgy, has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person under the 2012 Edition of the 'Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Dormer consents to the inclusion of such information in this report and the context in which it appears.

## APPENDIX 1

### TENEMENT HOLDINGS AT 30 JUNE 2020

TENEMENT HOLDINGS REPORT SUREFIRE RESOURCES NL Prepared: 22/07/2020													
Ten No	Prospect	Status	Grant/Appl	Expiry Date	Monitor Status	Shire	Area	Rent	Commitment	Hldr	Mgr	Group Rpt Code	Notes
WESTERN AUSTRALIA													
KOOLINE													
E 08/2373	Kooline-Wyloo Group	G	20/08/2013	19/08/2023	Managed	ASH	13.0 BLKS	\$7,995.00	\$50,000.00	SFR	SFR		
E 08/2956	Kooline	G	21/01/2019	20/01/2024	Managed	ASH	93.0 BLKS	\$13,113.00	\$93,000.00	MAL	SFR		
Approximate KM (Project)							318.0 KM2	\$21,108.00	\$143,000.00	2	Tenements in Total		
UNALLOCATED													
E 58/559	Lennonville	A	10/07/2020	Application	Managed	MT MAG	10.0 BLKS	\$0.00	\$0.00	SFR	SFR		
E 59/2444	Yidby Hill	A	13/07/2020	Application	Managed	YAL	12.0 BLKS	\$0.00	\$0.00	SFR	SFR		
E 59/2445	Perenjori 1	A	13/07/2020	Application	Managed	PER	25.0 BLKS	\$0.00	\$0.00	SFR	SFR		
E 59/2446	Perenjori 2	A	13/07/2020	Application	Managed	MULTIPLE	43.0 BLKS	\$0.00	\$0.00	SFR	SFR		Shire of Yalgoo
Approximate KM (Project)							270.0 KM2	\$0.00	\$0.00	4	Tenements in Total		
UNALY HILL													
E 57/1068	Unaly Hill	G	24/01/2018	23/01/2023	Managed	SAN	16.0 BLKS	\$3,808.00	\$20,000.00	SFR	SFR		
E 57/1112	Unaly Hill	G	06/09/2019	05/09/2024	Managed	SAN	20.0 BLKS	\$2,820.00	\$20,000.00	UNA	SFR		
Approximate KM (Project)							108.0 KM2	\$6,628.00	\$40,000.00	2	Tenements in Total		
VICTORY BORE													
E 57/1036	Atley	G	01/07/2016	30/06/2021	Managed	SAN	13.0 BLKS	\$3,094.00	\$30,000.00	ACA	SFR		
E 57/1139	Victory Bore	G	06/04/2020	05/04/2025	Managed	SAN	22.0 BLKS	\$3,102.00	\$22,000.00	UNA	SFR		
Approximate KM (Project)							105.0 KM2	\$6,196.00	\$52,000.00	2	Tenements in Total		
Total Approximate KM							801.0 KM2	\$33,932.00	\$235,000.00	10	Tenements in Total		