



# ASX: CHN | OTCQB: CGMLF

# Julimar – a globally significant PGE-Ni-Cu-Co discovery in WA



Diggers and Dealers Mining Forum

12-14 October 2020

# Forward looking statements and disclosures



This presentation does not include all available Information on Chalice Gold Mines Limited and should not be used in isolation as a guide to investing in the Company. Any potential investor should also refer to Chalice Gold Mines Limited Annual Reports, filings on sedar.com, and to ASX/TSX/OTCQB releases and take independent professional advice before considering investing in the Company. For further information about Chalice Gold Mines Limited, visit the website at chalicegold.com

#### Forward-Looking Statements

This document may contain forward-looking information within the meaning of Canadian securities legislation and forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 (collectively, forwand-looking statements, and does not assume any obligation, to update these forward-looking statements. Forward-looking statements, relate to future events on timited to, the Company's strategy, the price of O3 Mining securities, the likelihood of exploration success including results of future geophysical surveys, drilling at the Company's exploration project; the potential to define future mineral resources and, if successful at any of the Company's exploration project, the potential viability of any mineral resources so defined; planned expenditures, success of mining operations, environs, costs of production, events on results events in the events and unknown risks, unanticipates, "intends", "prospects" or "does not expect", "is expected", "will", "may", "would", "potential", "bulget", "scheduled", "estimates", "forecasts", "intends", "prospects" or "does not expect", "is expected", will, "may", "would", "potential", "bulget", "scheduled to active efficient form and unknown risks, uncertainties and be referred to active exploration activities; changes in exploration projects, the potential events and unknown risks, uncertainties and be moterable with the company is exploration projects and other actives the actual results, performance or achievements, "intereds", "prospects" or "does not expected", "will", "may", "would", "potential", "bulget", "scheduled", "estimates", "forecasts", "intereds", prospects" or "does not expects", "is expected", will, "may", "would", "potential", "bulget", "scheduled", "estimates", "fore

#### **Competent Person and Qualifying Persons Statement**

The Information in this presentation that relates to exploration results for the Julimar Project is extracted from the following ASX announcements:

- "High-grade nickel-copper-palladium sulphide intersected at Julimar Project in WA", 23 March 2020
- "Preliminary results from second target at Julimar Project", 24 March 2020
- "Significant nickel-palladium discovery confirmed at Julimar", 15 April 2020
- "Second diamond hole intersects discovery zone at Julimar", 20 April 2020
- "Exciting visual results from deep diamond drill hole at Julimar", 5 May 2020
- "Large-scale PGE system further expanded at Julimar", 11 May 2020
- "High-grade Ni-Cu-PGEs confirmed in discovery zone at Julimar", 25 May 2020
- "Extension of wide, high-grade PGE-Ni-Cu matrix zone at Julimar", 15 June 2020
- "Chalice discovers new high-grade PGE-Cu-Au zone at Julimar", 9 July 2020
- "Significant extension of high-grade PGE-Ni-Cu-Co zones at Julimar", 17 August 2020
- "Positive preliminary metallurgical results at Julimar", 1 September 2020
- "Major new 6.5km-long EM anomaly identified at Julimar", 22 September 2020
- "Significant new PGE-copper-gold horizon defined at Julimar", 6 October 2020
- The Information in this presentation that relates to the exploration results for the Pyramid Hill Project is extracted from the following ASX announcements:
- "Discovery of new >2km gold trend in air-core drilling at Karri Target indicates potential for a significant gold system", 12 December 2019
- "Several new gold zones discovered in first drill holes at Ironbark North Target", 19 December 2019
- "Karri gold trend expanded to over 3km of strike extent", 13 January 2020
- "Infill AC drilling at Karri returns best intercept to date of 4m at ~4g/t gold", 3 February 2020
- "New High-Grade Gold Zones at the Large-Scale Karri Target", 4 March 2020
- "First diamond drill hole at Karri hits primary gold zone", 7 April 2020
- "Maiden diamond drill program at the Pyramid Hill Gold Project confirms a large gold system at the Karri Prospect", 29 July 2020

The Information in this presentation that relates to exploration results for the Hawkstone Project (formerly the King Leopold Project) is extracted from the following ASX announcements:

- "Chalice acquires highly prospective nickel sulphide project in west Kimberley region of WA", 18 June 2019
- "Strong EM Conductors Identified at King Leopold Project", 20 August 2019

The above announcements are available to view on the Company's website at chalicegold.com. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant original market announcements.

The Company confirms that the form and context in which the Competent Person and Qualified Person's findings are presented have not been materially modified from the relevant original market announcements.



### A new high-grade PGE-Ni-Cu-Co discovery in WA

- Julimar Australia's first major palladium discovery
- A suite of critical metals for our clean energy future
- Rare combination of new district and new mineral province

# Unrivalled pipeline of greenfield discovery opportunities in Australia

- Unique advantage in new West Yilgarn Ni-Cu-PGE Province
- Large exploration holdings in exciting frontier provinces
- <u>7 rigs</u> currently drilling across <u>3 projects</u>

# Well funded, high performance team with an excellent track record

- Proven ability to discover and define <u>mines</u>
- $\sim A$ \$54M<sup>1</sup> in cash + investments

<sup>1</sup> As of 30 June 2020

Chalice's portfolio includes an exciting **new discovery** in the new West Yilgarn Ni-Cu-PGE Province in WA + a pipeline of generative opportunities

(3)

AUSTRAL



### Julimar Nickel-Copper-PGE Project, WA

- New greenfield PGE-Ni-Cu-Co sulphide discovery in Mar-2020
- 19m @ 8.4g/t Pd, 2.6% Ni, 1.0% Cu, 0.1% Co in 1st hole
- 100% owned, ~26km long intrusive complex ~70km NE of Perth
- 4 rigs drilling, aiming for maiden MRE mid-2021

### Pyramid Hill Gold Project, Vic

- New >4km gold trend + 2 gold bearing diorite intrusions
- >5,000km<sup>2</sup> holding NW and NE of Fosterville Gold Mine
- 100% owned, all under cover in unexplored terrane
- 2 diamond rigs drilling at the >4km long Karri Prospect

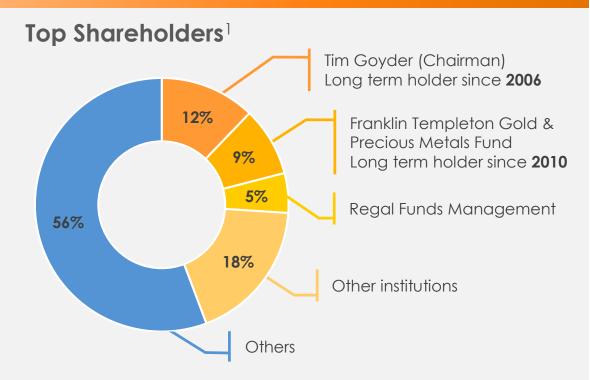
### Hawkstone Nickel-Copper-Cobalt Project, WA

- New greenfield nickel sulphide opportunity in frontier province
- >1,800km<sup>2</sup> holding east of Merlin Ni-Cu-Co prospect (IGO/BUX)
- 85-100% owned, several large untested dolerite intrusions
- Maiden drill program underway

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Several generative exploration opportunities, investments, royalties and non-operated joint ventures

# We have a **tight capital structure** and a **strong financial position**



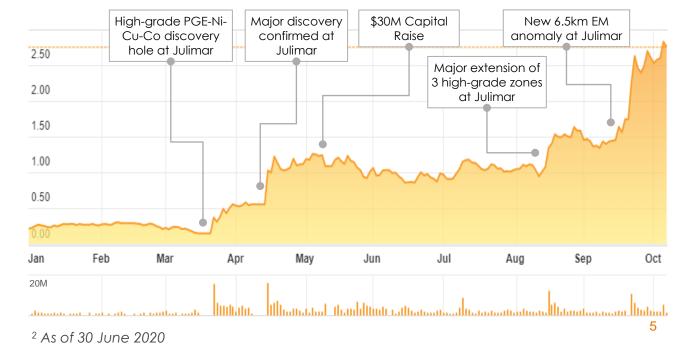
Board of Directors	Key Management					
Tim Goyder (Chairman)	Richard Hacker (CFO)					
Alex Dorsch (Managing Director)	Kevin Frost (GM Exploration)					
Morgan Ball (Non-Exec Director)	Bruce Kendall (GM Development)					
Stephen Quin (Non-Exec Director)	Jamie Armes (Co Sec)					
Garret Dixon (Non-Exec Director)						

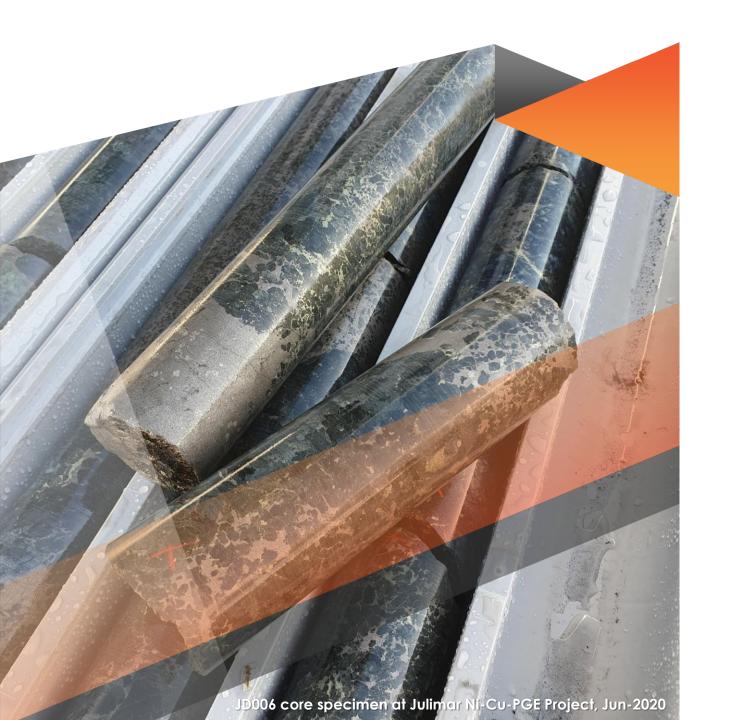
#### <sup>1</sup> As of 29 September 2020

### **Capital Structure and Financials**

<b>Equity listings</b> ASX: CHN OTCQB: CGMLF	Shares out. 308.7M Shares (F/D) 325.9M	Market capitalisation ~A\$833M (@ A\$2.70ps)			
<b>Debt</b> nil	<b>Cash</b> ² ~A\$46M	<b>Cash &amp; Investments<sup>2</sup></b> ~A\$54M			
Key Investments	Position	Current Value			
O3 Mining (TSX-V: OIII)	3.1M (5.3%)	~A\$10M			

### Share Price & Volume Chart (CHN)





# Julimar Nickel-Copper-PGE Project

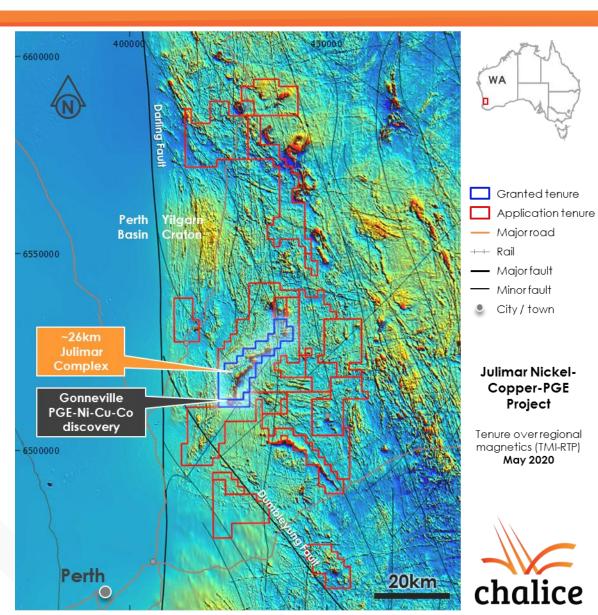
# Western Australia



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High-grade PGE-Ni-Cu-Co intersected in the very first drill hole at Julimar, uncovering a remarkable new discovery in a completely new province

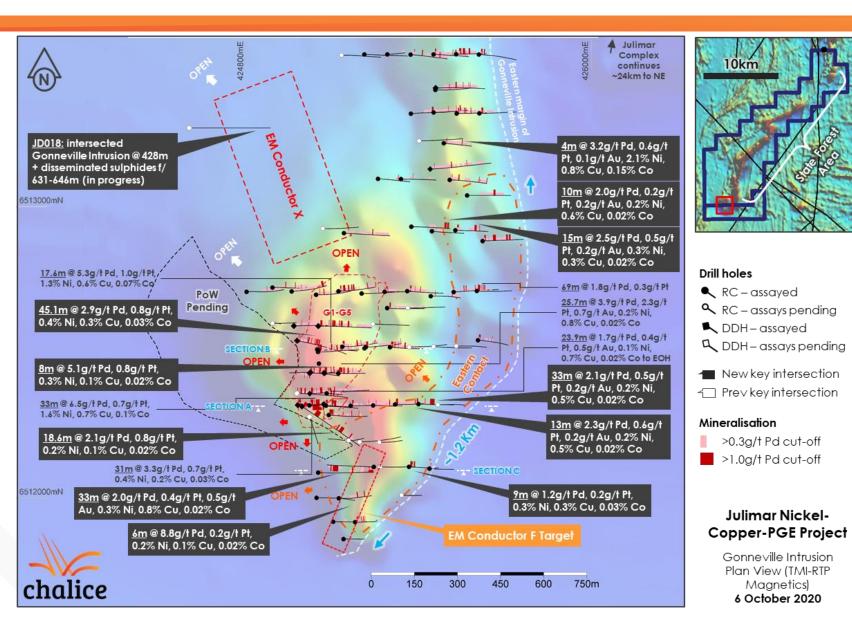




- ~70km NE of Perth, with direct access to major highway, rail, power and port infrastructure
- ~26km long layered ultramafic-mafic intrusive complex (Julimar Complex) with no previous Ni-Cu-PGE exploration
- Staked in early 2018 (100% owned)
- Exploration so far restricted to the ~1.6km x 0.8km
   Gonneville Intrusion at the southern end of the Complex on private land
- First drill hole in March 2020 discovered wide, shallow zone of **high-grade PGE-nickel-copper-cobalt** mineralisation
- Discovery marked the start of the new West Yilgarn Ni-Cu-PGE Province
- >8,000km<sup>2</sup> of new licence applications since the discovery (incl. >2,000km<sup>2</sup> around Julimar) – leveraging our competitive advantage to make additional discoveries

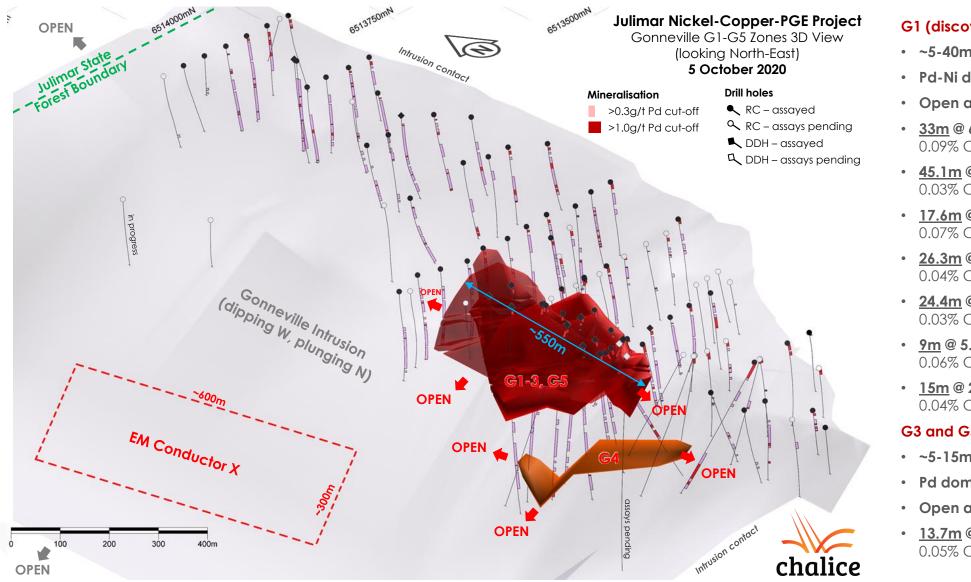
# Gonneville is an **exceptional new PGE-nickel-copper-cobalt discovery** with the potential to deliver a **world-class deposit**





- ~1.6km x ~0.8km intrusion, open to the north-west
- Five shallow high-grade PGE-Ni-Cu-Co+/-Au zones defined to date (G1-G5) – all remain open
- New Pd-Cu+/-Au Eastern Contact horizon extends over ~1.2km of strike, further infill drilling underway
- Widespread PGE-rich disseminated sulphides within intrusion, down to ~600m below surface so far
- Widespread PGE-rich oxide zone from surface to ~25m
- Preliminary metallurgical testwork indicates:
  - Sulphide mineralisation amenable to flotation under **standard conditions**
  - Low levels of deleterious elements
  - Oxide mineralisation amenable to oxidative leaching under standard conditions
- Step-out and resource definition drill program ongoing with 2 RC and 2 diamond rigs

# The five wide high-grade zones defined to date strike over up to ~550m and remain open along strike and down-dip



#### G1 (discovery) and G2 Zones:

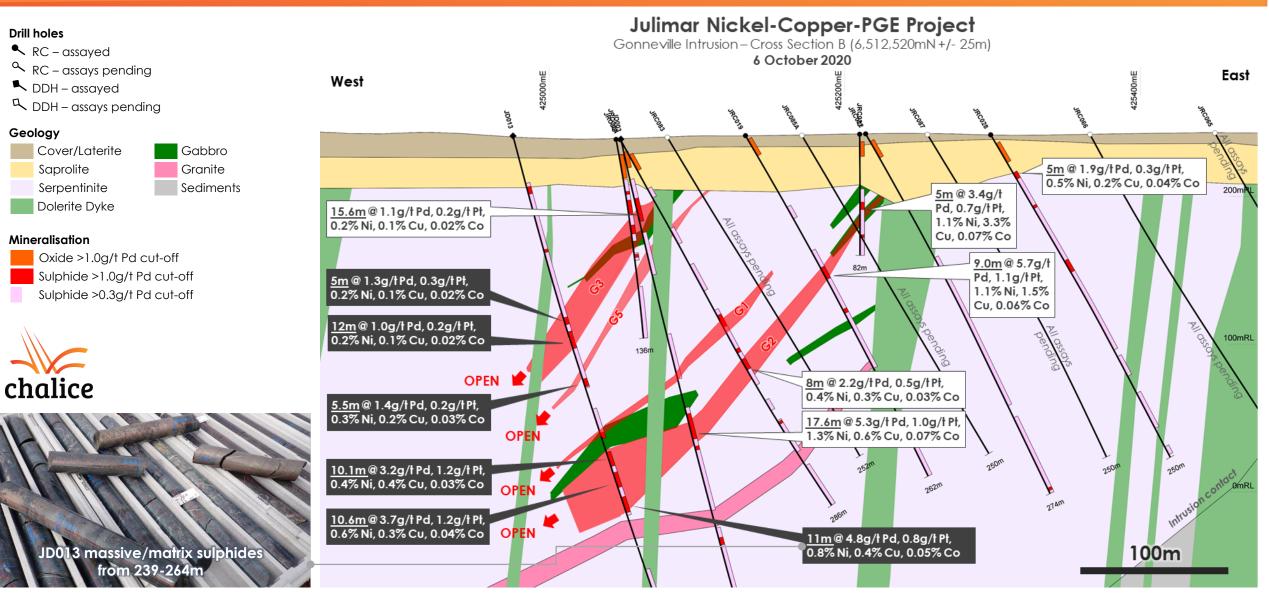
- ~5-40m wide
- Pd-Ni dominant
- Open along strike and down-dip
- 33m @ 6.5g/t Pd, 0.7g/t Pt, 1.6% Ni, 0.7% Cu, 0.09% Co from 44m (JRC001)
- 45.1m @ 2.9g/t Pd, 0.8g/t Pt, 0.4% Ni, 0.3% Cu, 0.03% Co from 223.9m (JD013)
- 17.6m @ 5.3g/t Pd, 1g/t Pt, 1.3% Ni, 0.6% Cu, 0.07% Co from 191.4m (JD003)
- 26.3m @ 3.8g/t Pd, 0.9g/t Pt, 0.5% Ni, 0.2% Cu, 0.04% Co from 80.7m (JD010)
- 24.4m @ 3.3g/t Pd, 0.4g/t Pt, 0.4% Ni, 0.2% Cu, 0.03% Co from 164.6m (JD006)
- 9m @ 5.7g/t Pd, 1.1g/t Pt, 1.1% Ni, 1.5% Cu, 0.06% Co from 103m (JRC019)
- 15m @ 2.4g/t Pd, 0.5g/t Pt, 0.6% Ni, 0.6% Cu, 0.04% Co from 56m (JRC006)

#### G3 and G5 Zones:

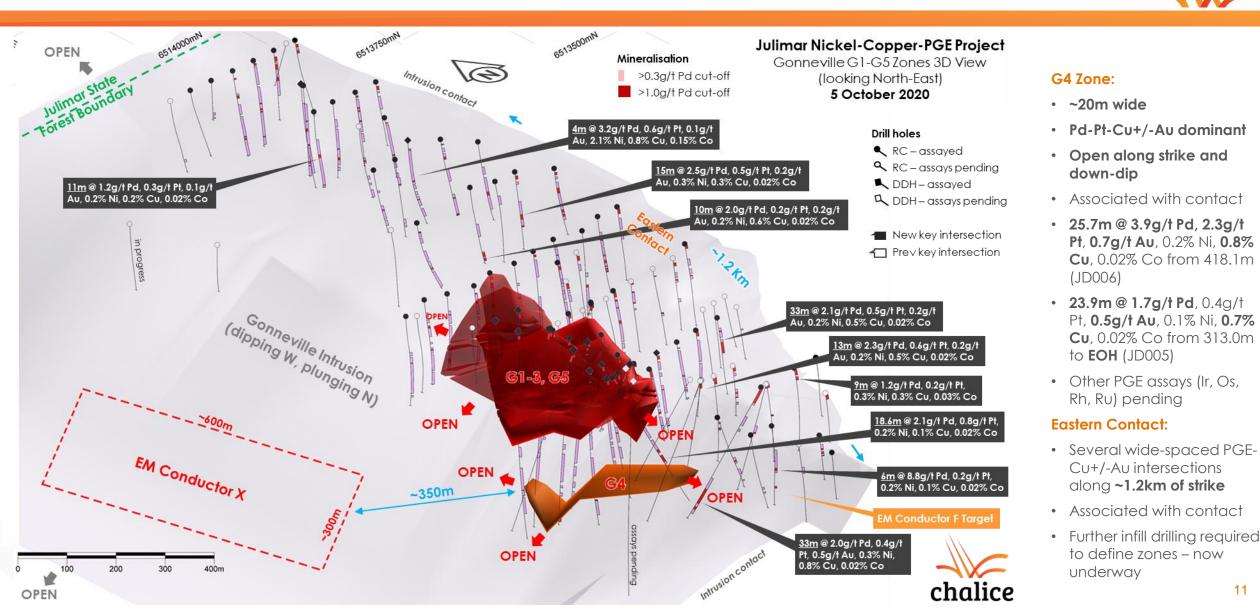
- ~5-15m wide
- Pd dominant
- Open along strike and down-dip
- <u>13.7m</u> @ 4.4g/t Pd, 0.9g/t Pt, 0.7% Ni, 0.7% Cu, 0.05% Co from 29.3m (JD006)

# Four of the high-grade zones are internal to the intrusion and have up to ~340m of dip extent – all remain open





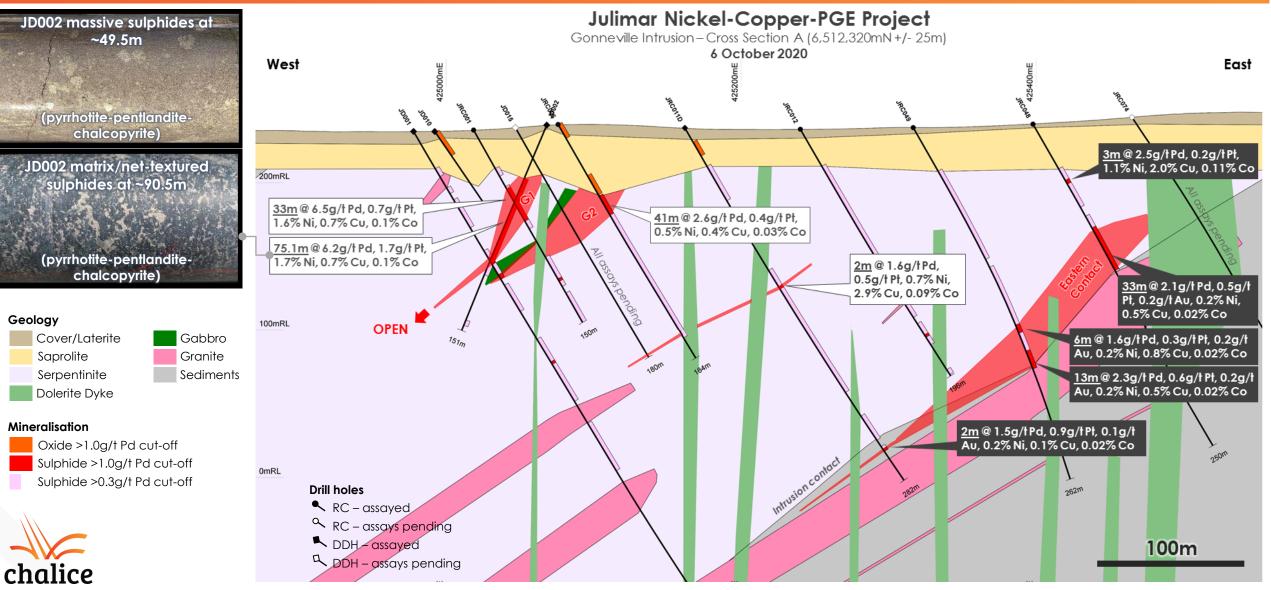
The G4 Zone and the newly identified Eastern Contact host several wide PGE-**Cu intervals** associated with the intrusion contact



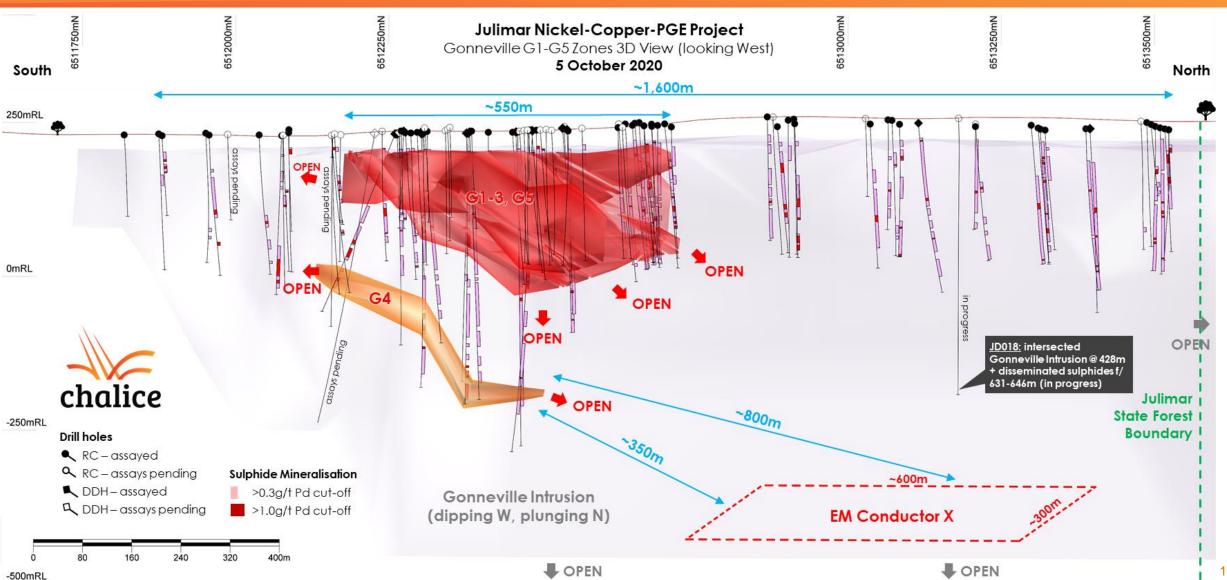
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# The Eastern Contact target position includes several wide-spaced PGE-Cu+/-Au intersections along ~1.2km of strike

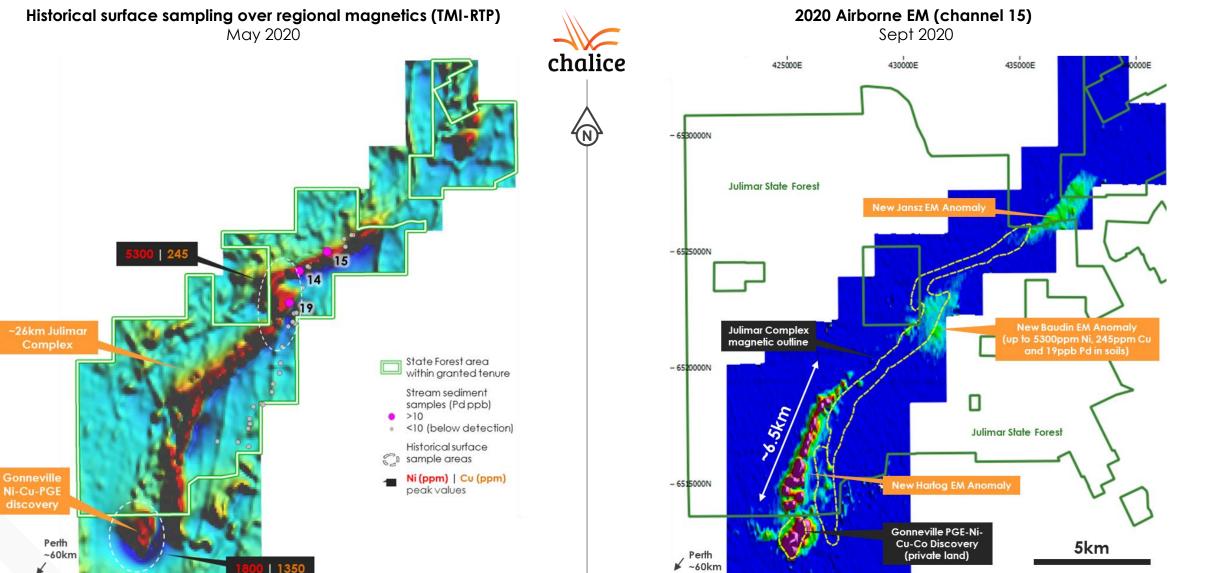




Initial test of the new deep EM target (Conductor 'X') intersected disseminated sulphides ~800m beyond the high-grade G1-G5 Zones



Several large EM anomalies recently identified to the north-east of Gonneville, all are yet to be tested (access pending)





>70% of PGEs used in **automotive catalytic** converters (pollution control devices)



**Palladium based** catalytic converters preferred to comply with stricter emissions standards



Palladium market has been in **deficit for nine consecutive years** – recent record price of **US\$2,856/oz** reached in Feb 2020 (current spot price ~**US\$2,400/oz**)



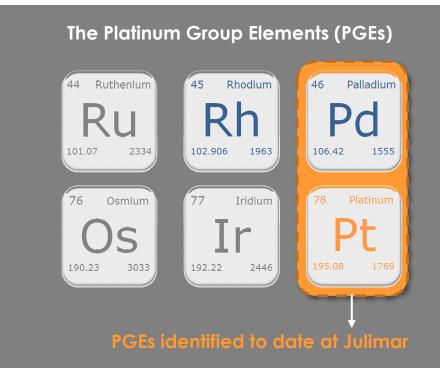
**Future demand** for PGEs underpinned by the rapid growth predicted in hydrogen fuel cells – in particular in heavy transport and energy storage sectors



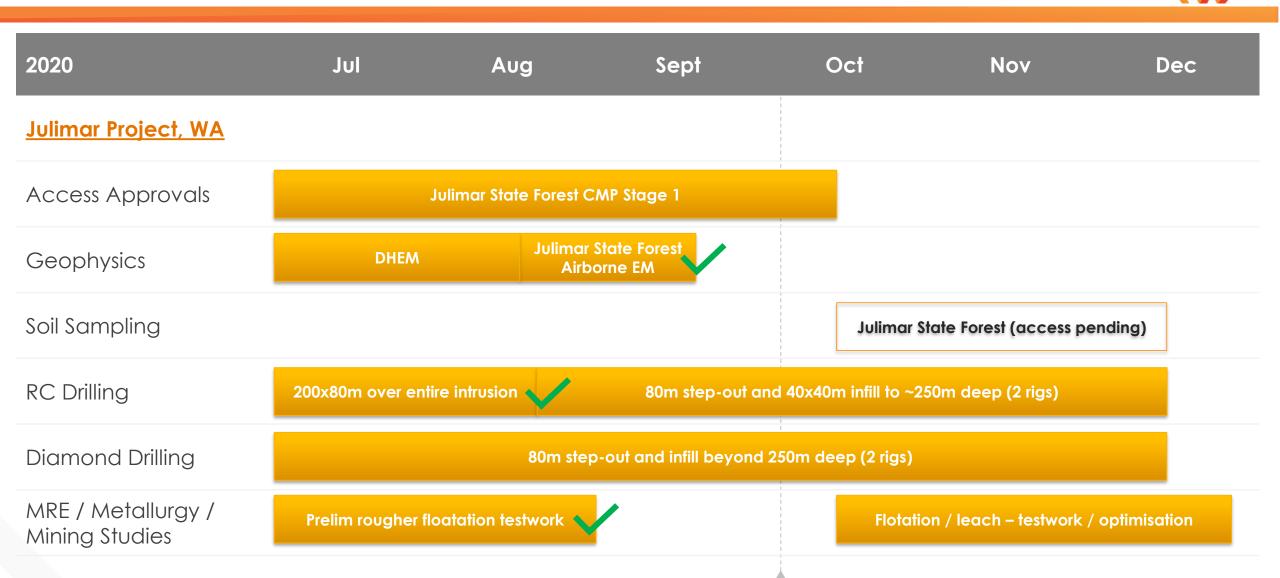


**Catalytic Converter** 

Hydrogen Fuel Cell Truck



Accelerated drilling and metallurgical testwork program underway – aiming to define a **maiden Mineral Resource by June 2021** 



# Investment highlights

The new PGE-Ni-Cu-Co discovery at Julimar in WA has significant scale potential and has opened up a new mineral province – resource drill-out underway

2

Two rigs drilling at the Pyramid Hill Gold Project in Vic and a maiden drill program underway at the Hawkstone Ni-Cu-Co Project in the Kimberley



A major greenfield discovery, ~A\$36M returned to shareholders to date and ~A\$54M<sup>1</sup> in cash and investments – an excellent track record







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# The Chalice Story

# Appendix

#### TEAM

We are a dynamic and entrepreneurial group of **accomplished mine finders** and **disciplined commercial managers** 





### We have people who know how to <u>find mines</u>...



#### Dr Kevin Frost GM – Exploration, BSc (Hons) PhD MAIG

 Co-recipient of AMEC's Prospector of the Year Award in 2009 for the discovery of the **Spotted Quoll** nickel sulphide deposit in WA (Western Areas)



### Bruce Kendall GM – Development, BSc (Hons) MAIG

 Co-recipient of AMEC's Prospector of the Year Award in 2012 for the discovery of the world-class
 Tropicana gold deposit in WA (AngloGold Ashanti)



Supported by a significant team of staff project geologists and mining consultants



### Tim Goyder Chairman

<u>commercialise</u> them

- 40+ year industry veteran with track record of success as an investor, entrepreneur and company director
- Founder and largest shareholder of Chalice (~12%)

People who know how to finance and



### Alex Dorsch Managing Director, BEng (Hons), BFin

- Previously a Specialist with McKinsey & Company
- Diverse experience in consulting, engineering and corporate advisory in the energy and resources sectors



### Richard Hacker Chief Financial Officer, BCom, ACA, ACIS

Chartered Accountant with 20+ years experience in junior company financing and management
Company CFO since 2006

#### **COMPANY HISTORY**

Since our 2006 IPO, we have acquired well, advanced projects quickly and generated >A\$110M in after-tax proceeds<sup>1</sup> from asset sales

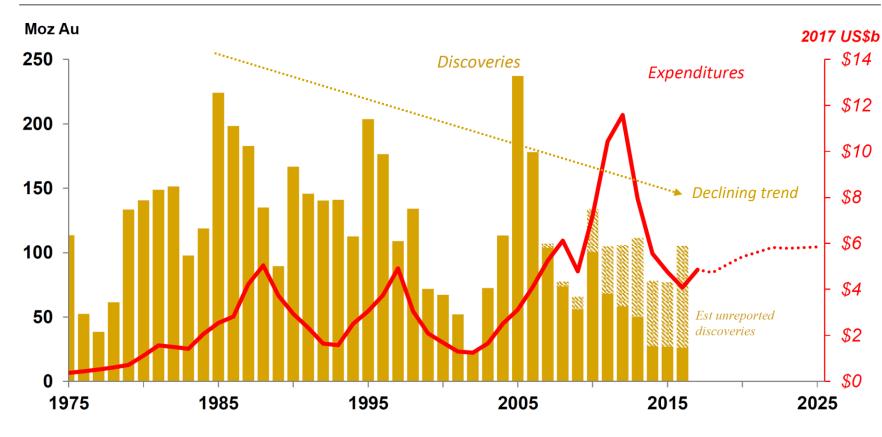


<ul> <li>2006</li> <li>\$7.5M raised in IPO on ASX to progress Chalice &amp; Higginsville Projects</li> <li>2009 Zara Gold Project in Eritrea acquired for ~A\$25 capital return to shareholders</li> </ul>		l for (pre-tax) ~ <mark>A\$25M</mark> urn to	• 2016 Cameron Gold Project in Ontario sold for ~A\$25M (pre-tax)			Nickel- r-PGE in 1		2020 Major Ni-Cu- PGE discover at Julimar Project 2020 A\$30M ro to progre Julimar	<b>y</b> aised	
2006 2008	2010	2012	2014	2016		2018		202	0	
2007 Chalice & Higginsville Projects sold for ~A\$12M (pre-tax)	2009-2011 ~A\$43M raised to progress Zara to DFS		<b>2013</b> Cameron Gold Project in Ontario acquired for ~A\$8M		<b>2017</b> Acquired East Cadillac Gold Project in Quebec and staked Pyramid Hill Gold Project in Victoria		~ <b>A\$1</b> capit	2019 Quebec Gold Projects sold to O3 Mining 018 \$0.04ps / A\$10.6M apital return to bareholders 21		24

### STRATEGY

Our strategy is to systematically acquire and explore in premier terranes; aiming to address the **rapid decline in tier-1 scale** discoveries worldwide



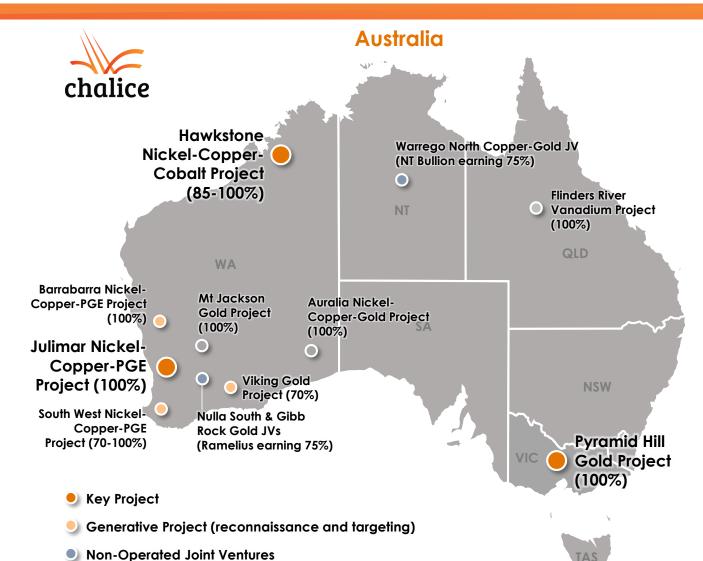


Peaks in discoveries precede the peaks in exploration spend. So the best time to get in [to explorers], is when exploration spend bottoms out and starts rising... which is now! MinEx Consulting, Nov 2018 Tier-1 scale discoveries (>US\$1bn NPV) now represent only ~2% of all discoveries worldwide; Only <u>one in Australia in</u> <u>last 10 years (Swan Zone</u> at Fosterville)



#### PORTFOLIO

Chalice's portfolio includes district-scale precious and base metal projects as well as several royalties, investments and non-operated JVs



#### Royalties

- Nyanzaga, Tanzania A\$5 million payment receivable upon commercial production from Orecorp Limited (ASX: ORR)
- East Cadillac, Quebec 1.0% NSR partial
- Kinebik, Quebec 1.0% NSR
- Ardeen, Ontario 0.12-1.0% NSR partial
- Cameron, Ontario 1.0% NSR partial
- Jericho, WA 1.0% NSR capped
- Bunjarra Well, WA 1.0% NSR capped

#### Key Investments

• ~3.1M shares (~5%) in O3 Mining Inc. (TSX-V: OIII)

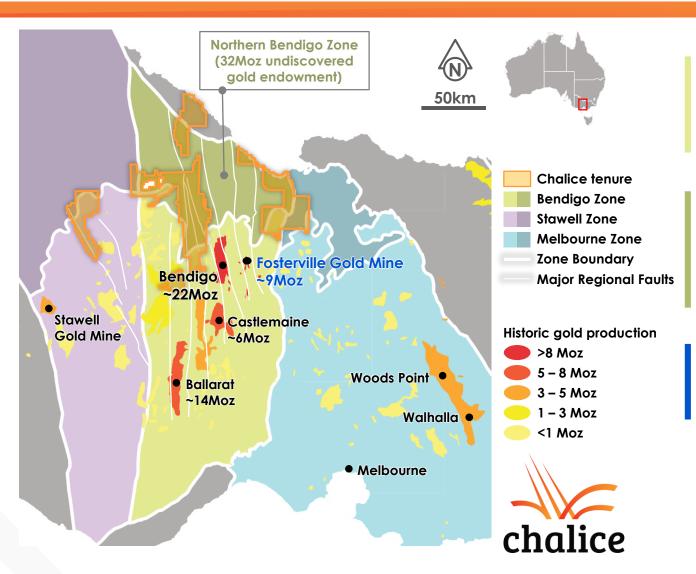


# Pyramid Hill Gold Project

# Victoria







>60Moz Au produced since 1850's from outcropping South Bendigo Zone, at a avg grade of ~15g/t Au

90% of mines had a recovered grade >8.5g/t Au

**32Moz Au** (P50 mid case) of undiscovered gold to the north in the **Northern Bendigo Zone** (Vic Govt 'Gold Undercover'' estimate)

This area is essentially unexplored - the opportunity

Historic region capturing global attention again thanks to Kirkland Lake Gold's **ultra high-grade Swan Zone discovery at the Fosterville Gold Mine**:

2019 operating cash

costs guidance

**US\$130-**

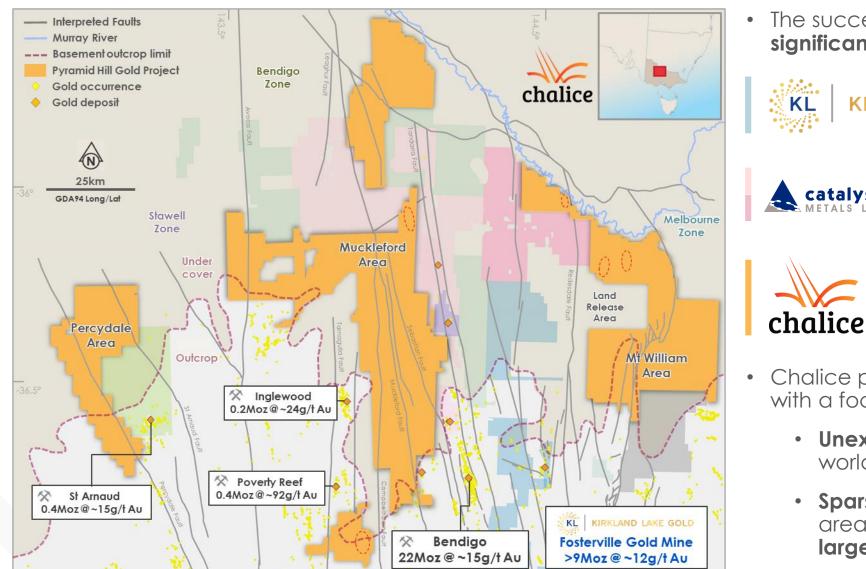
150/oz



Swan Zone Mineral Reserve (Dec-18)

2.3Moz @ ~50g/t Au As an early mover, Chalice staked a >5,000km<sup>2</sup> essentially unexplored land holding surrounding two world-class gold deposits





The success of Fosterville has attracted significant new players into the district:







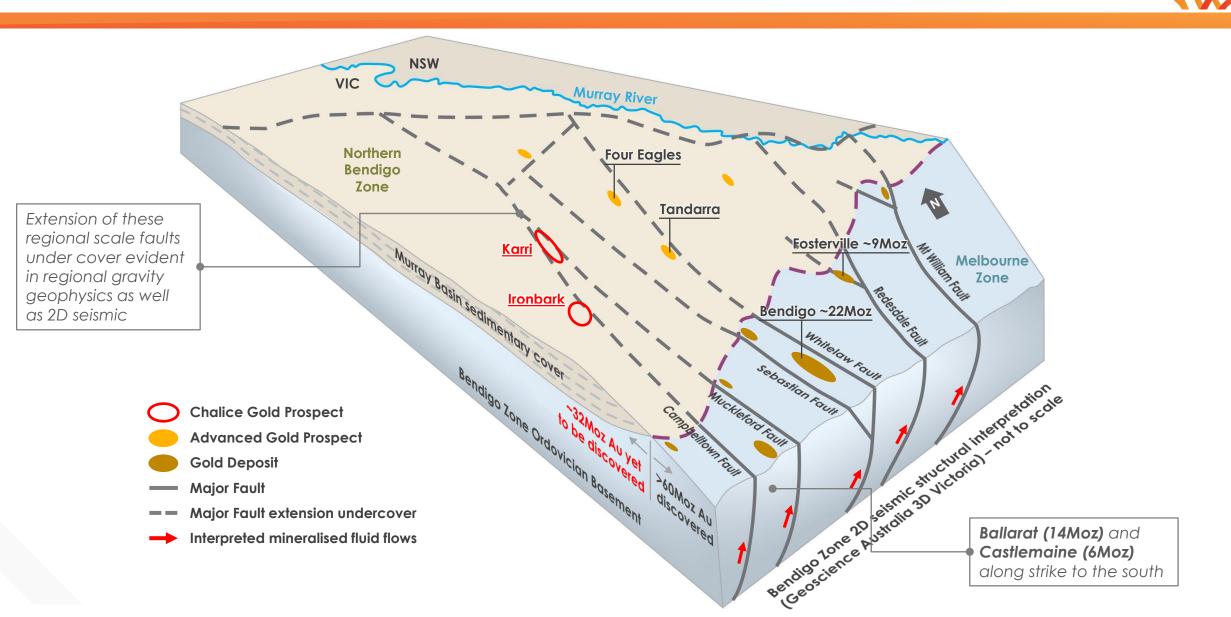






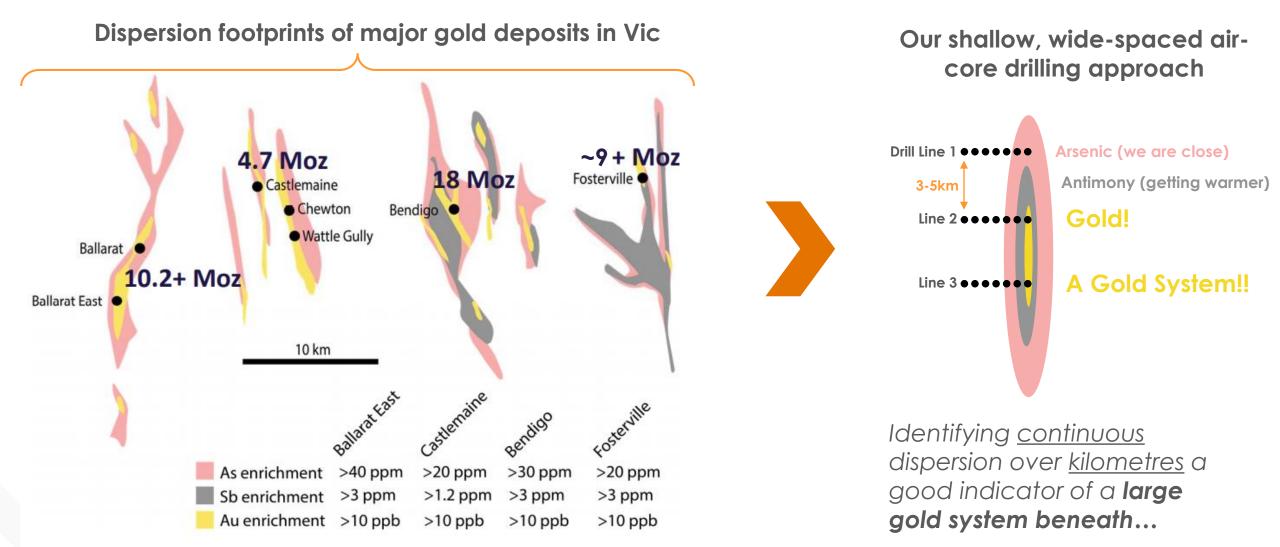
- Chalice positioned itself early and strategically, with a focus on:
  - Unexplored, prospective areas (potential) world-class deposits hidden by cover)
  - Sparsely populated and less sensitive areas (plains of the Murray Basin) where large-scale mining feasible

The world-class gold deposits are controlled by regional scale faults, which continue to the north into Chalice's tenure  $\rightarrow$  follow the strike



Dispersion of gold and pathfinder metals such as arsenic and antimony is used to **vector towards gold** under cover

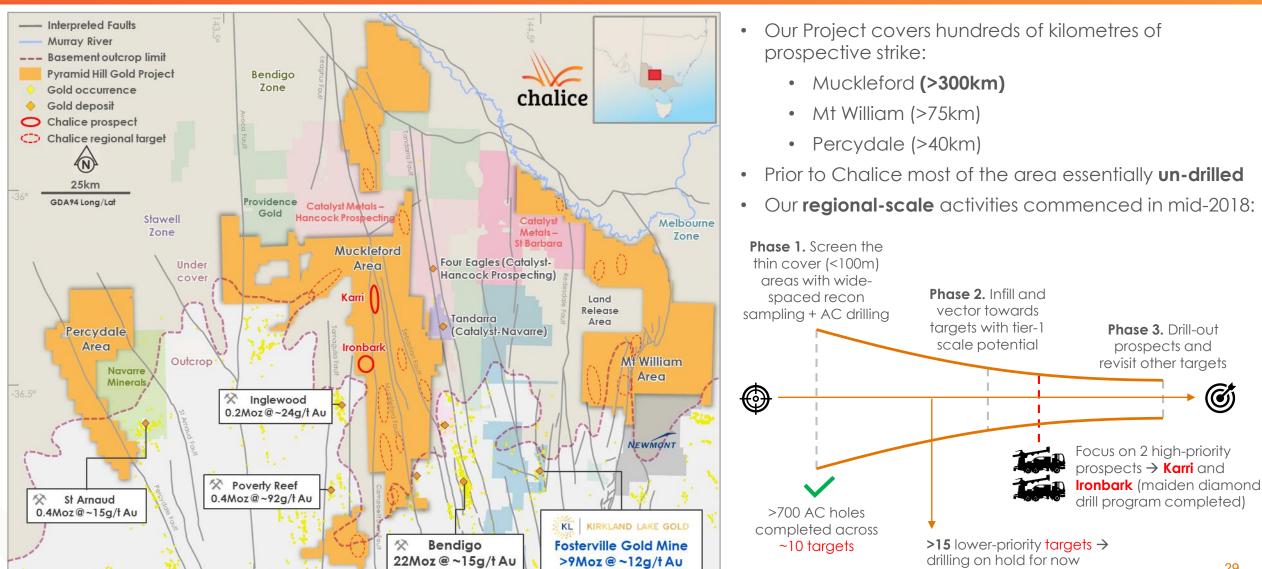




SOURCE: Duncan, R. 2019, The five key ingredients that make a world-class gold district, Geological Survey of Victoria

# Chalice has adopted a systematic value-add approach – 'find the big gold systems first'

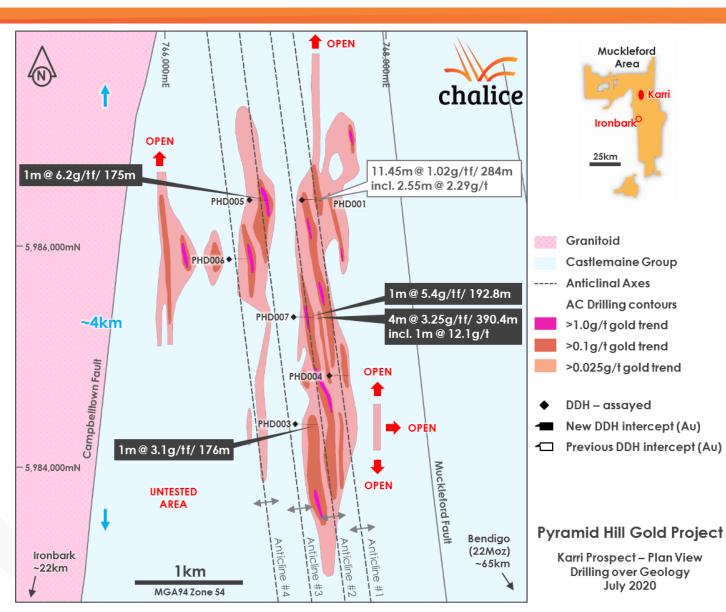




### **1. KARRI PROSPECT**

Initial geological holes have confirmed a large gold system at depth below the >4km long gold trend at the Karri Prospect

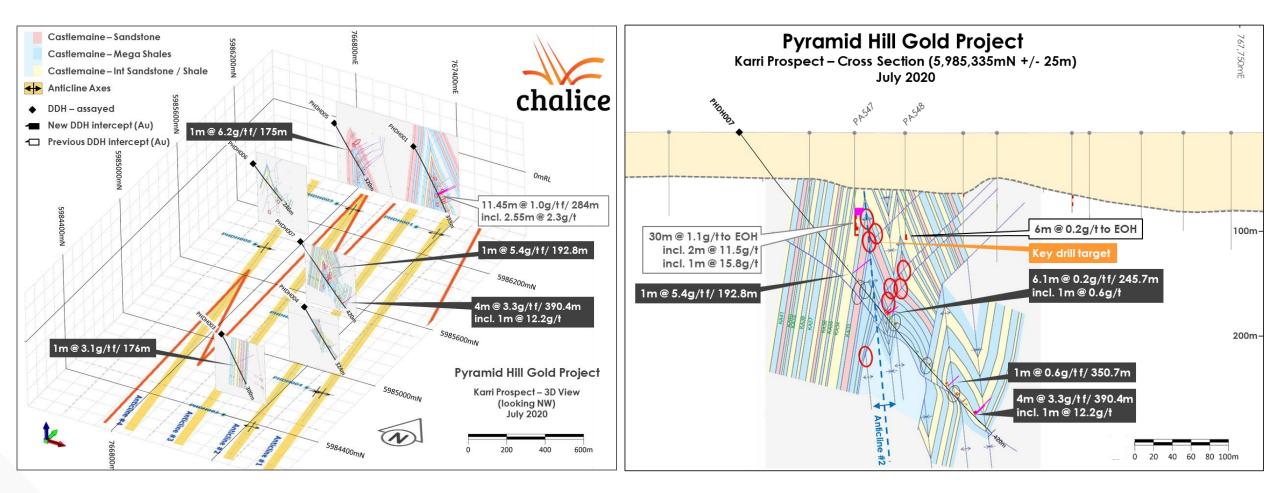
Karri



- Maiden 6 hole diamond program for • structure / geology recently completed
- First ever test at depth into a 'blind target'
- All six diamond drill holes intersected **tightly** folded, upright stratigraphy and primary gold mineralisation.
- Several strike extensive anticlinal structures • identified (typical geological setting for highgrade gold deposits in the region)
- Anomalous gold intersected in all holes
- Several high-grade gold zones intersected ~1-2km apart
- Results indicate **potential for a tier-1 scale** gold system
- 2 diamond rigs currently drilling

### **1. KARRI PROSPECT**

The initial diamond holes provided a first glance at the geology and **compelling targets** for the current phase of diamond drilling



1. KARRI PROSPECT

## Pyramid Hill Gold Project

Karri Prospect AC Drilling over Aerial Imagery August 2020

> AC Drilling Max Gold Contours

Anticline Axes

Akm

1

V

>0.025g/t >0.1g/t

# chalice





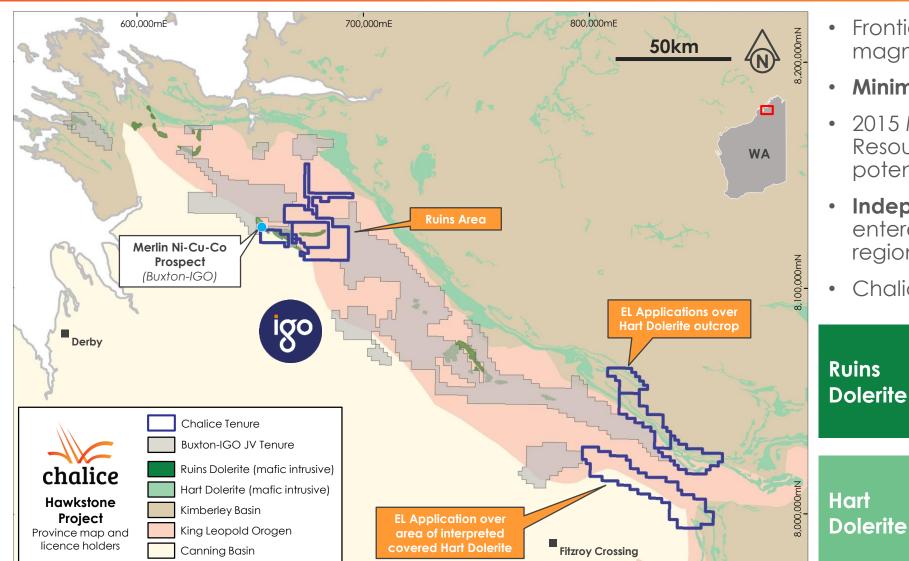
# Hawkstone Nickel-Copper-Cobalt Project

## Western Australia



The Hawkstone Nickel-Copper-Cobalt Project covers **1,800km<sup>2</sup>** in the frontier and largely unexplored King Leopold Orogen of the west Kimberley





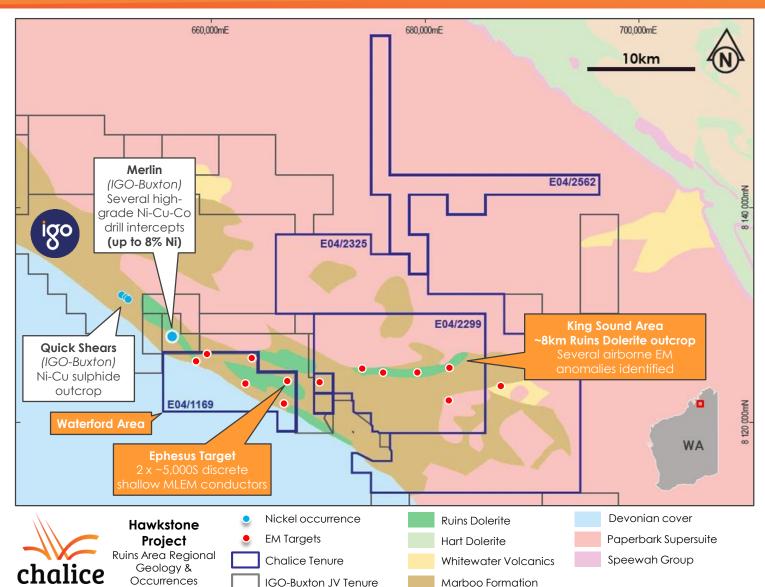
- Frontier province highly prospective for magmatic **Ni-Cu-Co sulphide** deposits
- Minimal modern exploration
- 2015 Merlin discovery by Buxton Resources (ASX: BUX) highlighted potential of Ruins Dolerite
- Independence Group (ASX: IGO) entered the region in late 2018 with a regional JV with Buxton
- Chalice now a **significant** player:



- Immediately SE of Merlin (proven host)
- 1,200km<sup>2</sup> of EL applications made in late 2018
- Conceptual host to magmatic sulphides

Chalice's immediate focus is the Ruins Area, where **several nickel sulphide targets** have already been defined





- Merlin (IGO-Buxton) hosts drill intercepts in Ruins Dolerite with grades up to 8.14% Ni, 5.26% Cu and 0.69% Co
- 11 airborne EM targets defined by Chalice to date along strike to SE and E of Merlin
- Ground based MLEM completed, identifying several high-priority EM targets
- 2 x ~5,000 Siemens conductors identified at the ~2.5km x ~1.5km Ephesus Target
- Maiden RC drill program underway