

Chalice Gold Mines Limited - Shallow drilling hits gold in basement and outlines three high priority targets for follow-up at the Pyramid Hill Gold Project, Victoria

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Infill and step-out drilling on tighter spacing to commence this quarter, targeting a large-scale high-grade gold discovery

Highlights

- ~39,000m Phase 1 reconnaissance aircore (AC) drill program completed at the 100% owned Pyramid Hill Gold Project in the Bendigo region of Victoria.
- Three strike-extensive mineralised trends have been outlined on wide-spaced drill lines.
 - Karri Target defined by shallow gold intersections up to 0.66g/t Au over ~15km of strike, under 50-70m of Murray Basin cover.
 - Ironbark Target defined by shallow gold intersections up to 1.1g/t Au under 25-75m of Murray Basin cover, co-incident with a large >5ppb gold-in-soil anomaly.
 - Beech Target outlined by previous announced highly anomalous As and Sb in basement, ~25km north-west of Bendigo (~22Moz Au) along the Sebastian Fault.
- Multiple gold intersections in the highly weathered top of basement indicate the gold is from a primary bedrock source.
- Karri and Ironbark Targets situated proximal to the highly prospective Campbelltown and Muckleford Faults which host the Ballarat (~14Moz @ ~12g/t Au) and Maldon (~2Moz @ ~33g/t Au) gold deposits to the south (amongst others).
- Reconnaissance drilling targeted broad mineralised halos and secondary dispersion zones which surround major high-grade gold deposits in the region like Kirkland Lake Gold's Fosterville (>8Moz Au) and Bendigo (~22Moz Au).
- Similar shallow, anomalous gold intercepts on wide-spaced drill lines has led to significant gold discoveries undercover by other explorers in the region.
- Phase 2 AC drilling on 0.5-1.0km spaced lines to commence as soon as possible in Q3 2019 to further refine targets for deeper drilling.
- Chalice positioned well in this exciting region with a commanding ~5,140km² land position.
- Strong cash balance (~A\$21.7M at March 31, 2019) and recent divestment of Quebec gold projects allows Chalice to continue its large-scale systematic exploration program in the region without the need to raise capital.

PERTH, Western Australia, July 8, 2019 - [Chalice Gold Mines Ltd.](#) ("Chalice" or "the Company") (ASX: CHN | TSX: CXN) is pleased to announce promising reconnaissance drilling results at its 100%-owned Pyramid Hill Gold Project located in the world-class Bendigo region of Victoria.

The AC drill program was designed to provide an initial reconnaissance-level shallow drill test of soil geochemical, gravity and structural targets, and to identify areas of anomalous gold and associated pathfinder elements providing potential vectors to large-scale mineralised gold systems (Figure 1).

Several new strike-extensive mineralised trends have been intersected across shallow wide-spaced AC drill lines completed within the ~1,500km² Muckleford Area. The newly defined mineralised trends at the Karri, Ironbark and Beech Targets occur within highly weathered Castlemaine Group sediments directly beneath the Murray Basin cover interface, indicating the gold is from a primary bedrock source.

Planning is underway for tighter spaced infill and step-out AC drilling on these targets, with a restart of drilling envisaged in mid-late Q3 2019.

Commenting on the recent results and forward plan, Chalice's Managing Director, Alex Dorsch said: "The new broad zones of gold and pathfinder elements are significant given the wide-spaced reconnaissance nature of the initial phase of drilling. To have three laterally extensive areas of bedrock gold anomalism defined so early is promising."

"Gold exploration under cover requires a different approach to normal mineral exploration; a first pass of shallow drilling to the top of the basement essentially aims to provide a geochemical vector to mineralised systems. From there we will drill on tighter spacing and deeper, continually refining and strengthening the vector."

"Importantly, other gold discoveries undercover in this region originated from similar low-level anomalous gold and pathfinder intercepts on wide-spaced shallow AC drilling. This gives us confidence that our systematic approach to exploration at Pyramid Hill is the best way to vector towards mineralisation which could ultimately lead to a world-class high-grade gold discovery."

"We are encouraged by what we see at the Karri, Ironbark and Beech Targets, particularly the scale and strike extent of the footprints. The newly defined targets demonstrate progress on the Project and provide us with an immediate focus for the next phase of systematic infill and step-out AC drilling."

"Chalice is in a strong position as a junior company, having the financial resources to explore at scale in this high grade but underexplored gold province, which continues to capture global attention. The recent divestment of our Quebec gold projects adds further strength to our balance sheet and ensures we are well funded to continue ahead at pace."

Muckleford Phase 1 AC Drilling

A total of 349 AC drill holes (34,929m) have been completed at the Muckleford Area (EL6661, 6737 and 6901), 20-70km north-west of the Bendigo Goldfield (~22Moz Au). All assay results have now been received. The drilling to date has been successful in identifying three high-priority target areas; Karri, Ironbark and Beech (Figure 2).

Karri Target

The Karri Target is at the northern end of a pronounced >30km long north-south trending gravity anomaly adjacent to the eastern contact of a prominent Devonian granitoid and prospective Castlemaine Group sediments (Figure 3).

Two reconnaissance AC lines spaced ~7km apart (drill holes spaced at 100m intervals) tested a ~2km wide corridor of Castlemaine Group situated favourably between the interpreted trends of the Campbelltown and Muckleford Faults. These regional structures host two significant goldfields (~14Moz Au Ballarat and ~2Moz Au Maldon) in the Bendigo Zone to the south (amongst others) and appear to converge towards the northern end of the Karri Target, creating a favourable structural setting for orogenic gold mineralisation.

The southern AC drill line (Section A-B) intersected weathered Castlemaine Group basement where it overlies the broad strike extensive gravity anomaly, whereas the northern line tested a similar package without a prominent gravity anomaly.

Drilling on both lines returned wide zones of anomalous gold in bedrock (>25ppb Au) over 4 successive drill holes ~100m apart, with a peak result of 16m @ 0.15g/t Au from 62m, including 1m @ 0.66g/t Au on the southern line (Figure 4).

Drilling on both lines also intersected similar ~350m wide zones of associated anomalous gold pathfinders (incl. Sb, Hg, Te, Bi, Zn, Cu, As, S). The broad flat-lying trend of low-level gold anomalism is interpreted as a secondary supergene dispersion zone within the weathered top of the Castlemaine Group sediments.

The Karri Target remains untested by drilling between the two ~7km spaced AC drill lines and provides a clear target for additional step-out AC drilling to further delineate and vector towards a potential gold discovery.

Previously announced AC drilling by Chalice ~3km to the south identified a zone of strong arsenopyrite mineralisation (30m @ 220ppm As from 70m) with associated quartz veining. This result together with a historic drill result of 4m @ 0.23 g/t Au from 129m on the same drill line provides indications of a potentially strike-extensive mineralised system.

Ironbark Target

The Ironbark Target is located south of Karri along the same broad strike-extensive gravity anomaly, in the same area in which Chalice previously announced a significant >5ppb gold-in-soil anomaly (with a maximum value of 276ppb Au) (Figure 5).

Three AC drill lines ~3km apart were drilled over the Target. Drill coverage extends east from the eastern margin of the Devonian granite through a wide succession of Castlemaine Group sediments and a ~300m wide mafic-intermediate intrusive comprising quartz-feldspar-hornblende-biotite diorite with visible quartz-sulphide veining.

A broad sub-horizontal zone of gold anomalism (>25ppb Au) was encountered in 7 successive drill holes over ~650m and localised within weathered basement (Figure 6).

The peak gold intercepts of 5m @ 0.45 g/t Au from 81m (incl. 1m @ 1.1 g/t Au) and 4m @ 0.23 g/t Au from 53m, and adjacent anomalous gold intercepts, are also broadly associated with anomalous As and Hg. The highest gold value (1.1 g/t Au) is associated with quartz veining in mafic-intermediate intrusive and indicates a basement source of primary gold mineralisation.

Anomalous gold was also intersected in two AC drill lines ~3km and ~6km south potentially indicating a strike-extensive mineralised system.

Beech Target

As previously announced, reconnaissance drilling at the newly named Beech Target returned strongly anomalous arsenic (up to 8500ppm As) and antimony (up to 40ppm Sb) in hole PA136, which is the strongest arsenic anomalism received on the project to date.

In addition, geological logging at the Beech Target has identified carbonate alteration in several drill holes, which commonly forms part of the wider alteration halo to gold systems within the Bendigo Zone (Figure 1). Both the pathfinder anomalism and carbonate alteration are considered encouraging geochemical and geological vectors to gold mineralisation.

Jarrah Target

As previously announced, elevated gold (2m @ 0.12g/t Au from 45m by Chalice and historic intercepts of 1m @ 0.38g/t Au from 16m and 5m @ 0.11g/t Au from 6m) has been intersected within Murray Basin gravels overlying the Castlemaine Group sediments at the newly named Jarrah Target. The Target is defined over ~3km of strike corresponding with a broad north-south trending gravity anomaly.

No primary bedrock sourced gold has been intersected to date at the Target. As such, additional reconnaissance work to refine drill targets is required.

Mt William Phase 1 AC Drilling

A total of 46 AC drill holes (4,061m) have been completed at the Mt William Area (EL6738), 25-50km north-east of the >8Moz high-grade producing Fosterville Gold Mine owned by Kirkland Lake Gold (NYSE / TSX: KL | ASX: KLA). All assay results have now been received.

The maiden drilling program aimed to provide the first effective shallow test of four gold-in-soil anomalies. Elevated gold values peaking at 0.16g/t Au were intersected in transported quartz gravels at the base of Murray Basin cover, however no indicative source of this transported gold has been identified as yet.

Table 1: Pyramid Hill Gold Project – Significant Drill Intercepts (>0.1g/t Au)

Hole ID	From (m)	To (m)	Interval (m)	Gold (g/t)
PA016	45	47	2	0.12
PA073	95	99	4	0.39
PA078	52	56	4	0.29
PA083	53	57	4	0.23
PA085	74	76	2	0.11
PA112	84	92	8	0.11
PA115	40	48	8	0.14
PA122	4	8	4	0.10
PA149	76	80	4	0.25
PA245	76	88	12	0.22
Incl.	81	86	5	0.45
Incl.	81	82	1	1.10
PA271	62	78	16	0.15
Incl.	64	65	1	0.66
MWAC023	72	76	4	0.16
PA346	76	80	4	0.15

Please refer to Appendix 1 for the Pyramid Hill Gold Project AC Drill Hole Details.

Sampling Techniques

- Aircore (AC) drilling samples were collected via 2-4 meter composite samples and 1 meter samples from 1m bulk samples using a pvc spear with each combined composite sample weighing approximately 3kg. The majority of the samples were dry in nature.
- The composite and 1 meter samples were pulverised to nominal 85% passing 75 microns before being analysed.
- Qualitative care was taken to ensure representative sample weights were consistent when sampling on a metre by metre basis.
- Field duplicate samples were sent every 20th sample to check for assay repeatability. Results of duplicate samples were considered acceptable and within precision and accuracy limits for the style of mineralisation.
- Sample sizes are considered appropriate for the style mineralisation sought and the reconnaissance nature of the drilling programme.
- All samples were sent to ALS prep facility in Adelaide for sample preparation then sent to ALS Perth for chemical analysis.
- 40 elements (including gold) were analysed using up to a 25g aqua regia method with an ICPAES and ICPMS finish depending on the elements (ALS method code – TL43-MEPKG). Aqua Regia techniques are not considered total in nature. Should refractory mineralisation be encountered this can affect the nature of the final results.

- Chalice has its own internal QAQC procedure involving the use of certified reference materials. Standards - 4 per 100 samples, blanks – 1 per 100 samples and duplicates 4 per 100 samples which accounts for ~9% of the total submitted samples.

JORC 2012 Tables:

Please refer to Appendix 2 for JORC 2012 tables.

Forward Plan

Planning for infill and step-out AC drilling at the high priority Karri, Ironbark and Beech Targets is currently underway. This Phase 2 drilling program is anticipated to further refine the multi-kilometre target areas at a drill line spacing of approximately 0.5-1.0km. It is anticipated that this drilling will commence in mid-late Q3 2019, where access, permitting and weather constraints allow.

Infill and orientation soil sampling over the Muckleford and Percydale Areas is also due to commence in the coming weeks to further assist drill targeting. Regional 2D seismic reprocessing and interpretation is also expected to be completed in the next month, which is aimed at refining structural domains of interest within the Bendigo Zone.

Full details of the forward drilling program at Muckleford will be announced once targeting work and operational requirements are finalised.

(Signed)

Alex Dorsch
Managing Director

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About the Pyramid Hill Gold Project, Victoria, Australia

The 100%-owned Pyramid Hill Gold Project was staked in 2017 and now covers an area of ~5,140km² in the Bendigo region of Victoria. The Project comprises three key districts within the Murray Basin covered North Bendigo and North Stawell Zones: Muckleford, Mt William and Percydale (Figure 7).

The central Muckleford Area extends to the north-west of the high-grade historic >22Moz Bendigo Goldfield. The Mt William Area extends to the north-east of one of the world's highest-grade producing gold mines, the >8Moz Fosterville Gold Mine owned by Kirkland Lake Gold (NYSE / TSX: KL | ASX: KLA). The Percydale Area is located north-west of the historical St Arnaud Goldfield within the Stawell Zone.

The 'Gold Undercover' initiative by the Victorian Government estimated a potential ~32Moz (P50) of undiscovered gold beneath Murray Basin cover in the Bendigo Zone, where Chalice holds ~60% of the total ~7,000km² prospective area (Figure 8).

Chalice is targeting large-scale, high-grade gold deposits, and is currently conducting regional scale greenfield exploration. ~39km of reconnaissance aircore (AC) drilling has been completed to date.

Competent Persons and Qualifying Persons Statement

The information in this announcement that relates to Exploration Results in relation to the Pyramid Hill Gold Project is based on information compiled by Dr. Kevin Frost BSc (Hons), PhD, a Competent Person, who is a Member of the Australian Institute of Geoscientists. Dr. Frost is a full-time employee of the company and has sufficient experience that is relevant to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves, and is a Qualified Person under National Instrument 43-101 – 'Standards of Disclosure for Mineral Projects'. The Qualified Person has verified the data disclosed in this

