

27 April 2020

ASX ANNOUNCEMENT ASX: APC

# **AUSTRALIAN POTASH LIMITED**

## GOLD JOINT VENTURE UPDATE

## Lake Wells Gold Project, Yamarna WA, St Barbara Ltd earning 70%

Australian Potash Limited (ASX: APC) (**APC** or the **Company**) is pleased to provide an update on activities and operations at the Lake Wells Gold Project.

## Highlights

- Significant gold anomalies outlined by regional aircore (AC) drilling programs
- Anomalous arsenic (As), bismuth (Bi) and antimony (Sb) pathfinder geochemistry and weak to moderate sericite alteration associated with gold mineralisation
- High-grade gold, associated with narrow, laminated quartz veins hosted within shear zones (analogous to Kundana) represents the style of mineralisation targeted within the southern Lake Wells tenements
- Desktop studies and drill targeting are ongoing through COVID19 regional travel restrictions

**Managing Director and CEO, Matt Shackleton, commented**: "We are extremely pleased with the results from the first full-year's exploration work by our joint venture partner, St Barbara. The identification of multiple large gold anomalies and corresponding alteration systems is a fantastic outcome from the aircore program.

"The strong indicators identified are driving planning for infill AC drilling and deeper reverse circulation (RC) drilling to penetrate the fresh rock. Other Yamarna Shear Zone examples demonstrate that it is in the fresh rock that the true gold grades these anomalies point to may be seen.

"Comparing the stage of our South Yamarna anomaly camp in relation to the early work reported at Gruyere is extremely encouraging. On returning to the field, the exploration teams will look to test the identified anomalies at depth, which is where the grades proved to be a game changer for the Gruyere deposit. Deeper drilling is necessary to uncover the true potential of the anomalies that the team have uncovered to date."



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The Yamarna region has been enjoying ongoing exploration success since the discovery of Gruyere in 2013. Adjacent tenement holder, Gold Road Resources, continues to demonstrate the underexplored nature of the Yamarna Belt and the potential to delineate deposits of commercial scale. With over 1.1 Moz Au currently delineated along the Yamarna Shear Zone, the EIJV Southern Yamarna Anomaly Camp (SYAC) is proving to extend this well-established mineralised corridor over 70km to the NNW (Figure 1).

APC's earn-in joint venture (EIJV) partner at the Lake Wells Gold Project, St Barbara Limited, has suspended all field-based exploration as a precautionary measure during the current COVID-19 pandemic. Suspended activities include the planned AC drilling program that was scheduled to commence in the current quarter, which would build on the strong targets generated from previous drilling and targeting campaigns.

#### Lake Wells Gold Project – Current Work Program

Gold focused, regional scale, AC exploration drilling under the EIJV commenced on 3 April 2019. To date, 781 AC holes have been completed for a total of 38,773 metres (Figure 2). All 4 metre composite samples have been assayed, along with 1m bottom of hole (BOH) samples, and 1 metre samples through zones of elevated gold mineralisation. Aircore holes are drilled to 'blade refusal' with all bottom of hole samples analysed using a four-acid digest and ICP-MS/OES for a 60 element suite. All assay results have now been received, and analysis and interpretation has been completed.

Key outcomes of the work completed to date are:

- Defined areas of anomalous gold and pathfinder elements (As, Bi and Sb) that require follow-up;
- Potential target styles of mineralisation have been defined; and
- Additional areas for first-pass testing have been identified.

Review of information received to date suggests that a Kundana style of mineralisation is a key target within the SYAC area of the Lake Wells Gold project. Mineralisation at Kundana is characterised by high grade gold associated with narrow-laminated quartz veins hosted within a shear zone. Recovered gold, and remaining resources at Kundana exceed 8 Moz Au, making it one of the more significant gold camps in WA.

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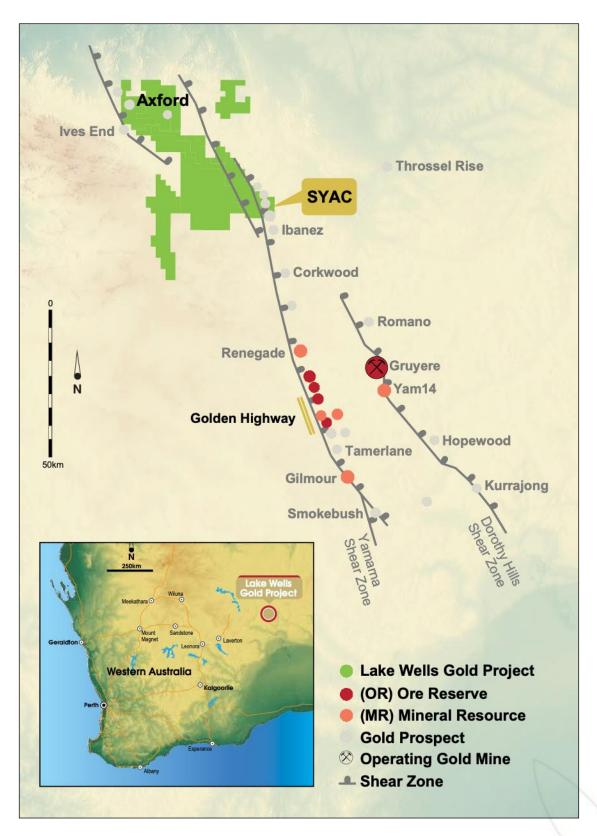


Figure 1: Yamarna regional gold mineralisation and association with large scale shear zones

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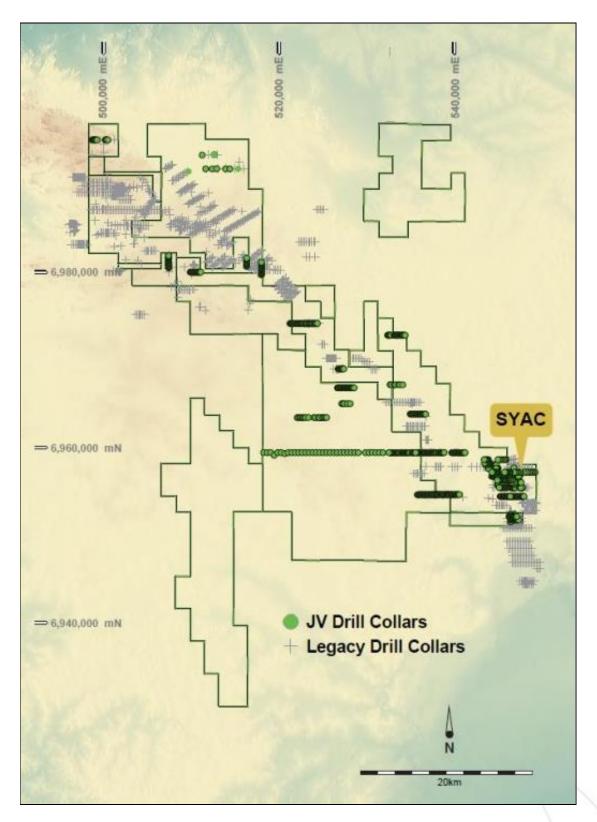


Figure 2: Drill coverage map showing AC collar locations for the 781 holes completed during 2019.

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There are a number of significant commonalities between the Yamarna Shear, and the Zuleika Shear that is the host of the Kundana gold camp and many other deposits along its length. Key common features shared between the Yamarna and Kundana Goldfield include:

- The Zuleika and Yamarna Shear Zones are major crustal scale features that separate distinct geological domains;
- The mapped extent of the shear zones exceeds 250km each;
- Gold hosted in locally brecciated narrow crack seal laminated quartz vein/s;
- High coarse gold content; and
- Vein grades can average up to 25 g/t Au.

#### **Drilling Results**

The initial broad spaced AC drilling has defined several gold and pathfinder element bedrock anomalies that warrant further follow-up aircore drilling. Significant gold intercepts from aircore drilling are summarised in Table 1. The more significant results were returned from the southeastern tenements, known as the SYAC (Figure 3). Pathfinder elements such as arsenic (As), bismuth (Bi), and antimony (Sb) all show highly anomalous concentrations associated with the strongest gold anomalies. This area also shows the most extensive moderate sericite alteration.

A litho-geochemical review was completed by Dr Scott Halley of multi-element geochemical results from bottom of hole assay results. The review highlighted two different basalt types in the SYAC which displayed differentiation. Identified basalts are litho-geochemically similar to either the Lunnon Basalt or plot between Devon Consols and Paringa Basalts. Differentiated basalts, especially the Paringa Basalts and equivalents, are known to host world class gold deposits elsewhere within the Yilgarn Block of Western Australia.

Drilling results returned to date have confirmed and strengthened the earlier work completed by APC, with a large zone of gold anomalism delineated with multiple prospects identified over a +9km strike length (Figure 3). The scale of the gold anomalism and other indicators returned from analysis of the drill programs completed to date suggest that a Kundana style of mineralisation is the primary target in the South Yamarna area.

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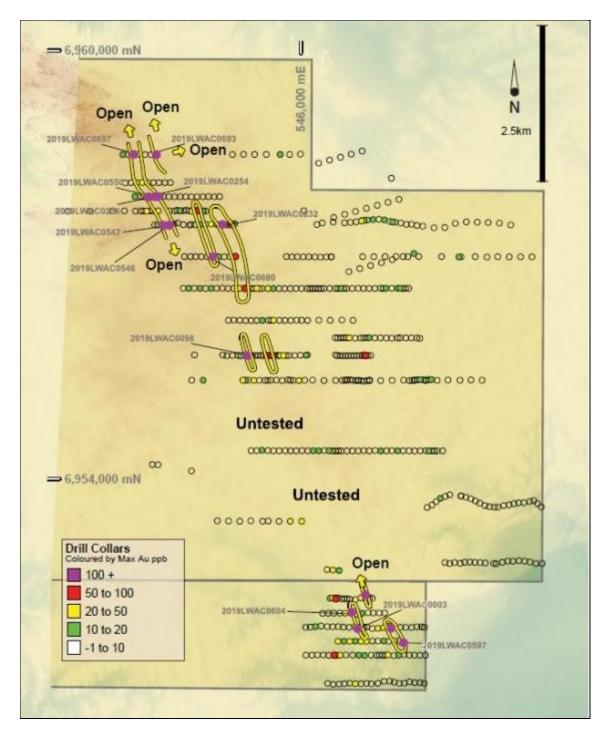


Figure 3: SYAC gold anomalies from aircore drilling. Outlined anomalies are coherent maximum gold in hole anomalies above 50ppb Au

Hole ID	Total Depth	East	North	RL	From	То	Width	Au g/t	Intercept	Comment
	m	MGA94z51	MGA94z51	m	m	m	m	g/t		
2019LWAC0003	75	546799	6951901	509	67	73	6	0.327	6m @ 0.327 g/t	Saprolite
incl					68	69	1	0.727	1m @ 0.727 g/t	Saprolite
2019LWAC0098	63	545180	6955752	501	62	63 EOH	1	0.140	1m @ 0.140 g/t	Volcaniclastic
2019LWAC0232	73	544833	6957605	512	69	72	3	0.138	1m @ 0.138 g/t	Saprolite
2019LWAC0254	50	543795	6958000	512	34	35	1	0.523	1m @ 0.523 g/t	Saprolite
2019LWAC0256	55	543916	6958004	513	53	55 EOH	2	0.127	2m @ 0.127 g/t	Volcaniclastic
2019LWAC0546	46	544085	6957599	520	35	36	1	0.158	1m @ 0.158 g/t	Volcaniclastic
and					45	46 EOH	1	0.204	1m @ 0.204 g/t	Volcaniclastic
2019LWAC0547	50	544002	6957596	516	41	42	1	0.218	1m @ 0.218 g/t	Volcaniclastic
2019LWAC0550	56	543877	6958005	504	51	52	1	0.443	1m @ 0.443 g/t	Volcaniclastic
2019LWAC0597	67	547361	6951702	520	65	66	1	0.125	1m @ 0.125 g/t	Dolerite
2019LWAC0604	54	546736	6952097	520	52	54 EOH	2	0.117	2m @ 0.117 g/t	Diorite
2019LWAC0680	57	544699	6957148	528	55	56	1	0.365	1m @ 0.365 g/t	Volcaniclastic
2019LWAC0693	45	543901	6958597	510	44	45 EOH	1	0.253	1m @ 0.253 g/t	Dolerite
2019LWAC0697	54	543578	6959602	510	52	53	1	0.244	1m @ 0.244 g/t	Volcaniclastic

Table 1: AC assay results above 100ppb Au returned from the SYAC.

This announcement is authorised for release by APC's Managing Director & CEO.

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#### **Competent Person's Statement**

The information in this report that relates to Exploration Results is based on information supplied by SBM and reviewed by Christopher Shaw who is a member of the Australian Institute of Geoscientists (AIG). Mr Shaw is an employee of Australian Potash Ltd. Mr Shaw has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity currently being undertaken 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 Shaw consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

#### **Forward Looking Statements**

This announcement contains forward-looking statements that involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

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## Lake Wells Gold Project – JORC Code 2012 Edition

## Drilling - Section 1 Sampling Techniques and Data

(Criteria in this section apply to the succeeding section.)

Criteria	Commentary
Sampling techniques	<ul> <li>Sampling was conducted via Aircore drilling. Aircore drill holes were on 40 m or 80 m spacing with line spacing ranging between 200 m and 1,000 m or as individual scout lines.</li> <li>Samples were collected from a rig-mounted cyclone by bucket and were then placed directly on the ground in neat rows of between ten and fifty (depending on hole depth).</li> <li>Drill spoil was sampled with a scoop to 4 m composite samples of approximately 2.5 kg.</li> <li>The Aircore composites were submitted to Bureau Veritas Minerals Pty Ltd - Perth where they were sorted and dried, crushed to 10 mm and pulverised to -75 µm. A 40 g charge of pulverised sample was then digested with aqua regia with a gold analysis by ICP-MS to a detection limit of 1 ppb. The same digested sample was also tested for arsenic by ICP-AES to 1ppm detection limit.</li> <li>Anomalous Aircore composite samples (&gt;100ppb Au) were subsampled on a metre by metre basis using an aluminium scoop. These samples were submitted to Bureau Veritas Minerals Pty Ltd-Perth where they were sorted and dried, crushed to 10mm and pulverised to -75 µm. A 40 g charge of pulverised sample was then analysed for Au, Pd &amp; Pt by Fire Assay with an ICP-AES finish to a detection limit of 1ppb.</li> <li>Representative specimens from end of hole Aircore rock chips were stored in plastic chip trays for future reference. For RC drilling a representative specimen of every metre was stored in plastic chip trays for future reference.</li> </ul>
	<ul> <li>The EOH Aircore samples, as well as a selection of RC samples, were submitted to Genalysis and were prepared in the same manner as those samples submitted to Bureau Veritas. A 10g charge of pulverised sample was then digested by four acid digestion with analysis by the Scott Halley technique (ICP-OES &amp; ICP-MS to ultra-trace levels) via 4A/OM20 method for 60 elements (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, Ho, Ln, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Nd, Ni, P, Pb, Pr, Rb, Re, S, Sb, Sc, Se, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tm, U, V, W, Y, Yb, Zn &amp; Zr).</li> </ul>
Drilling techniques	• Aircore drilling was carried out by an 85 mm bit. All holes were drilled to refusal, which was generally at the fresh rock interface. Drilling was carried out by Raglan Drilling who utilised two separate Aircore rigs; a truck mounted R/A 180 Rig with 750 cfm and 350 psi and a track mounted lake rig with 750 cfm and 350 psi.

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Criteria	Commentary
Drill sample recovery	<ul> <li>Sample recoveries and condition (wet/dry) were routinely recorded.</li> <li>The drill cyclone and sample buckets were cleaned regularly, in particular after wet ground was encountered. The cyclone was also cleaned several times during the course of each hole and after the completion of each hole.</li> </ul>
Logging	<ul> <li>All drill holes were logged in full for lithology, alteration, weathering/regolith and colour.</li> <li>Aircore logging is both qualitative and quantitative.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>Aircore samples were collected as both dry and wet samples using a sample scoop.</li> <li>All composite samples were sorted, dried, crushed and pulverised to produce a 40g charge prior to fire assay.</li> <li>Samples were collected at 1 m intervals and composited in 4 m samples using a scoop to sample individual metre samples.</li> <li>QC procedures for composite sampling involved the insertion of certified reference material, field duplicates and blanks at ratios of 1:50.</li> <li>Bureau Veritas inserted certified standards, replicates and lab repeats.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The Aircore composite samples used a 40 g charge with an aqua regia digest, which is considered appropriate for analysis of the regolith dominated sample medium.</li> <li>Certified reference material was inserted into the sample stream at a ratio of 1:50.</li> <li>Field duplicates and blanks were inserted at a ratio of 1:50.</li> <li>Bureau Veritas inserted certified standards, replicates and lab repeats.</li> </ul>
Verification of sampling and assaying	<ul> <li>Primary geological and sampling data were recorded into made for purpose excel spreadsheets. Data was then transferred into the St Barbara corporate DataShed database where it was validated by an experienced database geologist.</li> <li>No adjustments to assay data were made.</li> </ul>
Location of data points	<ul> <li>Prior to drilling, all holes were marked out using a handheld GPS with ±3 m accuracy for easting, northings and ±10m elevation. Upon completion of the program all holes were resurveyed using a DGPS with decimetre accuracy to determine the final collar positions.</li> <li>No downhole surveys were conducted on Aircore holes.</li> <li>All locations were captured in MGA94 zone 51 grid.</li> </ul>
Data spacing and distribution	<ul> <li>Aircore drill holes were on 40 m or 80 m spacing with line spacings ranging between 200 m and 2,000 m or as individual scout lines.</li> <li>Reported Aircore results are based on the 1 m Fire Assay re-splits of original 4 m composite samples or the original composite sampling.</li> </ul>

Criteria	Commentary
Orientation of data in relation to geological structure	<ul> <li>The majority of Aircore drill holes had a dip and azimuth of -60/270 or -60/180. AC holes were drilled vertically in areas were transported cover made drilling difficult. AC drill traverses were designed perpendicular to the regional structures known to control mineralisation. This was either east – west or north – south.</li> </ul>
Sample security	• Only trained and experienced contractors and company personnel were allowed to collect the samples; all samples were held within a secure company location before dispatch to Bureau Veritas in Perth for Au analysis.
Audits or reviews	<ul> <li>No audits or reviews of sampling protocols have been completed.</li> </ul>

## Drilling - Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<ul> <li>The Lake Wells Gold Project comprises 16 tenements and are wholly owned by Australian Potash Limited. These include: E38/3018, E38/2114, E38/1903, E38/2988, M38/1275, E38/3021, E38/3028, E38/2113, E38/3224, E38/3225, E38/3226, E38/2505, E38/3270, E38/3109, E38/2901 and E38/3039.</li> <li>St Barbara Limited entered into an Earn-In and Joint Venture with Australian Potash Limited on the Lake Wells Gold Project on 8 October 2018.</li> </ul>
Exploration done by other parties	<ul> <li>There have been numerous historical holders of the project area which covers over ~1,273 square kilometres.</li> <li>Exploration has been conducted by numerous companies including but not limited to: Goldphyre Resources Ltd, Anglogold Ashanti Australia Ltd, Australian Potash, Utah Development Corporation, Gold Partners NL, Kilkenny Gold NL, Johnsons Well Mining, Croesus Mining NL, Oroya Mining Limited, Western Mining Corporation Ltd, RGC Exploration Pty Ltd.</li> </ul>
Geology	<ul> <li>SBM is targeting Archean orogenic gold mineralisation near major regional faults.</li> <li>The tenement package covers Archaean greenstones within the highly prospective Yamarna Terrane of the Yilgarn Craton. The Lake Wells JV project covers portions of the prospective Yamarna Shear Zone, which passes through the southeastern portion of the project.</li> </ul>
Drill hole Information	• Drill hole information for holes returning significant results have been reported in the intercept table. Included in the intercept table are collar position obtained by DGPS pickup, hole dip and azimuth acquired from hand held compass and clinometre, composited

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Criteria	Commentary
	mineralised intercepts lengths and depth as well as hole depth. Metres below surface (mbs) for intercepts were calculated for the start of the intercept.
Data aggregation methods	<ul> <li>Broad down hole intercepts are reported as length weighted averages using a cut-off of 100 ppb Au. Such intercepts may include material below cut-off but no more than 1 sequential metre of such material and except where the average drops below the cut-off.</li> <li>No high grade cut is applied.</li> <li>No metal equivalent values are used for reporting exploration results.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>Down hole length is reported for all holes; true width is not known as the orientation of mineralisation is not fully understood.</li> </ul>
Other substantive exploration data	<ul> <li>Included in the body of the report.</li> </ul>
Diagrams	<ul> <li>Diagrams show all drill holes material and immaterial to Exploration Results.</li> </ul>
Balanced reporting	<ul> <li>Details of all holes material to Exploration Results have been reported in the intercept table, and all other drill holes drilled during the reporting period are highlighted on diagrams included in the report.</li> </ul>
Other substantive exploration data	<ul> <li>Data is included in the body of the report.</li> </ul>
Further Work	• Further exploration Aircore and RC drill holes are planned and are discussed in the body of the report.

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