

ASX ANNOUNCEMENT 19 MAY 2021

## **EXCELLENT METALLURGICAL RESULTS FOR BOYD'S DAM**

Preliminary metallurgical test work was carried out on samples of primary material from Boyd's Dam to assess gravity, flotation and cyanide dissolution performance. The test work results indicated that:

- The material is non-refractory;
- 97% gold recovery was achieved by gravity concentration and direct cyanidation;
- 99% gold recovery was obtained in a combined gravity and flotation concentrate; and
- Results enable processing alternatives to be evaluated for Boyd's Dam.

\_\_\_\_\_

Catalyst Metals Limited (Catalyst or the Company) (ASX: CYL) on behalf of the Four Eagles Project Joint Venture is pleased to advise that it has completed initial metallurgical test work on primary material to determine:

- the merit of producing gravity and flotation concentrates from the Boyd's Dam Prospect and thereby demonstrating combined concentrates could be transported to other facilities in Victoria or elsewhere for gold dore production. The recently purchased Henty Gold Mine in Tasmania could also be an option for processing concentrate at its CIL plant; and
- gold recoveries achieved by cyanidation ensure treatment would be viable should an alternative treatment route be available through an existing process plant in Victoria. Either whole material or concentrate from the Boyd's Dam Prospect could be processed through an existing plant.

#### **FOUR EAGLES GOLD PROJECT**

The Four Eagles Gold Project is situated along the Whitelaw Gold Corridor, which is considered to be a major structural control of gold mineralisation north of Bendigo. Catalyst manages the entire Whitelaw Gold Belt and has interests in thirteen Exploration Licences and two Retention Licences which extend for 75 kilometres along the Whitelaw and Tandarra Faults north of Bendigo in Victoria and in other areas north of the Fosterville and Inglewood gold fields (Figure 1).

Catalyst holds a 50% interest in the Four Eagles Gold Project with the other 50% held by Gold Exploration Victoria Pty Ltd (GEV) (a wholly owned subsidiary of Hancock Prospecting Pty Ltd). Exploration is jointly funded by Catalyst and GEV (Figure 1). Retention Licence (RL) 006422 flanked by the remaining ELs comprises the Four Eagles Gold Project and covers an envelope of gold mineralisation about 6 kilometres long and 2.5 kilometres wide including three prospects which have recorded high grade gold mineralisation (Hayanmi, Boyd's Dam, and Pickles) (Figure 2).

www.catalystmetals.com.au ABN 54 118 912 495

#### **BOYD'S DAM METALLURGICAL TEST WORK**

### **Gravity and Flotation Concentrate Test Work**

A 202 kilogram composite sample derived from a strongly mineralised zone within reverse circulation drill hole FERC284 (See Figure 3 for location) with an estimated grade of ~50 g/t Au was sent to Australian Minmet Metallurgical Laboratories (**AMML**) mineral processing and metallurgical laboratory for metallurgical analyses. This sample represents the style of mineralisation anticipated from between 95m and 120m depth, beneath the oxide zone.

This is the first metallurgical test work programme undertaken on primary mineralisation in the Whitelaw Gold Belt on behalf of the Four Eagles Joint Venture.

Initial work, using a Knelson concentrator, looked at gold recoveries to a gravity concentrate at various grind sizes. At a  $P_{80}$  75  $\mu$ m grind size, a 94% gold recovery was achieved, into a concentrate which was less than 3 % of the original composite sample weight. This test work gave confidence to undertake follow up sighter tests utilising gravity and flotation that would more likely reflect an operational flow sheet which excluded cyanidation.

Coarse gold is easily recovered in an operational circuit. The purpose of this study was to assess the capacity to recover finer gold from the mineralisation once coarse gold was removed from the sample.

In the initial test work the spotty gold effect in the coarse material was obvious so in the follow up work the composite sample was crushed to -1.18mm and the material coarser than 850  $\mu$ m removed. This scalped +850  $\mu$ m material graded 44 g/t Au and represented 20 wt% of the original composite sample weight. Within an operational environment this gold would likely be recovered predominantly within a milling gravity circuit or, if free milling, behave similar to the -850 material.

The -850  $\mu$ m material was milled to P<sub>80</sub> 75  $\mu$ m and put through a Knelson gravity concentrator. This resulted in a gravity concentrate with a grade of 709 g/t Au into a 0.55 wt% mass yield, recovering 76% of the gold.

The tail from the above gravity test, grading 1.24 g/t Au and representing 99.5% of the -850  $\mu$ m mass, underwent flotation test work resulting in a 25 g/t Au concentrate grade, with mass yield of 4.5 wt% and float tail grade of 0.035 g/t Au.

Future optimisation and variability test work will focus on mass yield and gold recoveries to both gravity and float concentrates. This work will be undertaken using drill core as well as RC samples.

These positive metallurgical results mean that a high-grade gravity and flotation concentrate could be processed at any facility with cyanide capability, including the circuit at the Henty Gold Mine in Tasmania.

Further details of the metallurgical test work are included in the JORC tables in Appendix 1 together with location and assay data for FERC284. These results were previously released to the ASX on 6 May 2020.

### **Cyanide Dissolution Test Work**

Following gravity testing of the -850  $\mu$ m milled to P80 75  $\mu$ m sample, another sample of the tail from the gravity test work underwent cyanide leaching test work. The strong correlation between Bulk Leach Extractable Gold (BLEG) and fire assay data determined during exploration analyses suggested the mineralisation was non refractory. This test work confirmed the non-refractory nature of Boyd's Dam primary mineralisation with a combined gravity and cyanidation gold recovery of 97%. Optimisation and variability test work is yet to be undertaken.

Mr Bruce Robertson, Catalyst's Chief Executive Officer stated "Catalyst, on behalf of the Four Eagles Joint Venture, is very pleased with the initial metallurgical test work phase undertaken on primary mineralisation from Boyd's Dam Prospect. It demonstrates that subject to defining an economic outcome, a treatment route for processing concentrate may already be available to the joint venture. The test work removes the reliance on the approval for a cyanide licence as a requirement for the Victorian projects to be given the go ahead, and potentially reduces the capital intensity of any potential development at Boyd's Dam."

This announcement has been approved for release by the Board of Directors of Catalyst Metals Limited.

#### For further information contact:

Steve BostonBruce RobertsonBruce KayChairmanCEOTechnical DirectorT: +61 409 574 515+61 410 560 108+61 400 613 180

### Competent person's statement

The information in this announcement that relates to Metallurgical Test Results was based on information compiled by Mr Richard Ladyman, a Competent Person who is a member of the Australasian Institute of Mining and Metallurgy. Mr Ladyman is a consultant to Catalyst Metals Limited and employed by Como Engineers and has relevant experience in the style of mineralization and type of deposit under consideration and 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, Mineral Resources and Ore Reserves'. Mr Ladyman consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The geological information in this report that relates to exploration results is based on information compiled by Mr Bruce Kay, a Competent Person, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Kay is a non-executive director of the Company and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and 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, Mineral Resources and Ore Reserves (the JORC Code). Mr Kay consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Catalyst confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. Catalyst confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

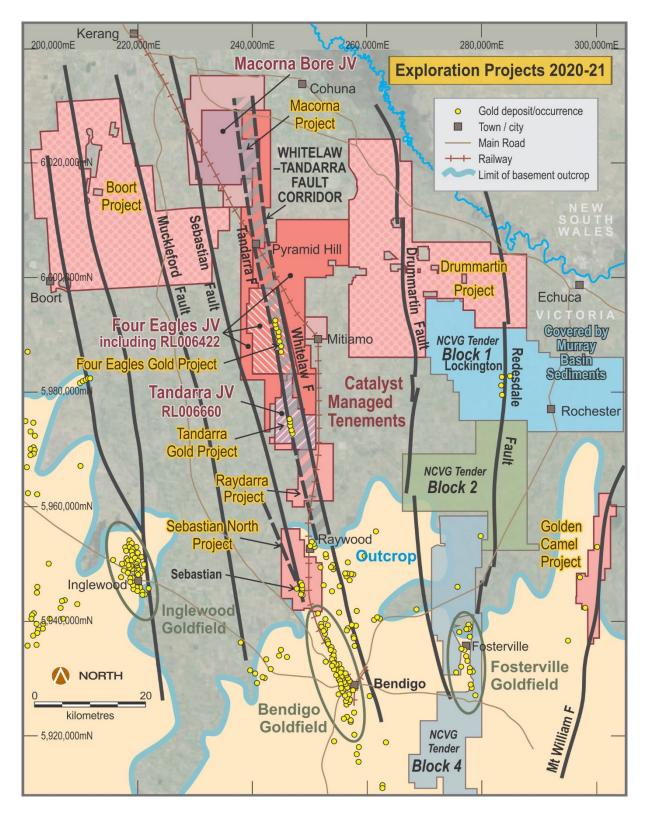


Figure 1: Whitelaw Gold Belt Tenement Holdings showing major Catalyst managed projects

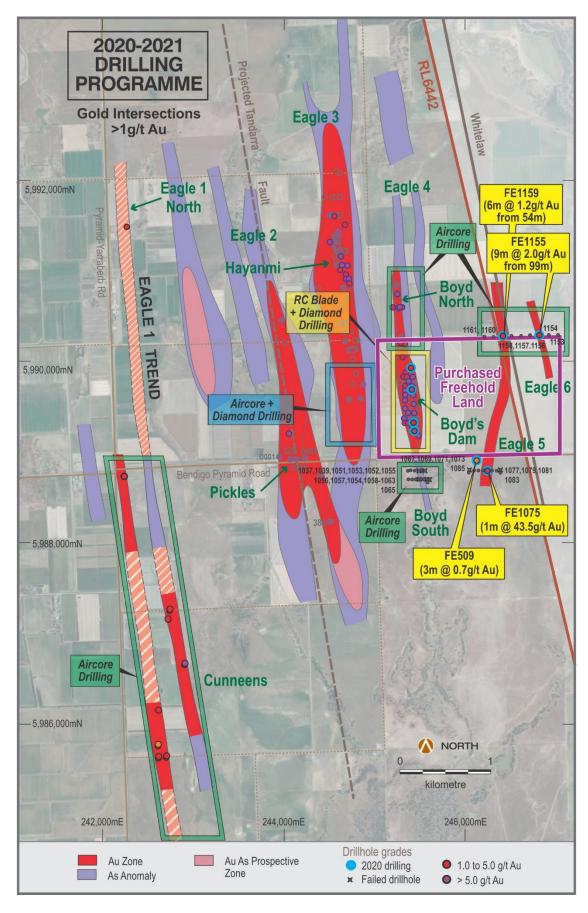


Figure 2: Four Eagles Gold project showing location of prospect locations, gold trends, 2020-21 drilling program locations, and area of freehold land purchased.

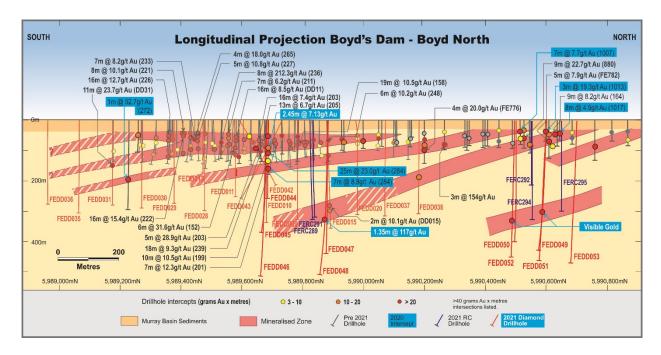


Figure 3: Longitudinal Projection of Boyd's Dam–Boyd North showing 2021 diamond and RC drill holes and significant intercepts. Note position of FERC284

# **APPENDIX 1: RC BLADE/HAMMER DRILLING**

Table 1a FERC 284 Drill Hole Collar

Hole	Easting (GDA)	Northing (GDA)	RL	Depth	Dip	Azimuth (mag)
FERC284	245,414	5,989,685	97.0	168	-75	275

Table 1b Drill Assay Results RC Blade/Hammer using Au-AA15 2 kilogram bulk leach. All intersections greater than 0.5g/t Au shown or maximum gold value in each hole drilled

Hole	From (m)	To (m)	Interval (m)	Au-AA15 (ppm)
FERC284	55	56	1	0.59
FERC284	66	67	1	0.56
FERC284	70	83	13	2.14
FERC284	99	124	25	16.60
Including	99	112	13	29.60
including	99	102	3	114.00
FERC284	126	127	1	4.08
FERC284	130	131	1	0.51
FERC284	140	142	3	1.88
FERC284	161	169	8	3.75
including	163	164	1	10.20
including	166	167	1	9.57

## JORC 2012 Edition, Table 1 Checklist RC Blade/Hammer for FERC284

RC Sampling Techniques and	
Data Criteria	Explanation
Sampling techniques	<ul> <li>Samples collected at cyclone at one-metre intervals with no sub-sampling.</li> <li>Cover sequence samples collected in buckets and arranged as piles on the ground; basement material samples collected in individual numbered plastic bags; chip trays collected by hand from piles and bags (uncomposited)</li> <li>Assay laboratory samples selected using Jones riffle splitter into calico sample bags to a mass of &gt;2kg (if sufficient sample is available) and&lt;3kg.</li> <li>Cover sequence is understood to be unmineralised and thus not sampled for laboratory submission.</li> </ul>
Drilling techniques	<ul> <li>Holes are initiated using 120mm air core blade drilling. This method provides reverse-circulation face sampling of sufficiently soft material.</li> <li>On bit-refusal, a four-inch diameter RC hammer with 110mm button bit is utilised to progress the hole to design depth or where groundwater inflows compromise sample quality.</li> <li>All drilling utilises three-metre reverse circulation drill rods and handled in six-metre lengths where rig format allows; truck-mounted drill rig; 400psi 900cfm compressor and booster; plus auxiliary compressor where dictated by water in-flows.</li> <li>Sufficient drillhole casing is used to stabilise the foundation of the drill rig.</li> </ul>
Drill sample recovery	<ul> <li>Holes were terminated where sample quality was compromised by groundwater inflow</li> <li>Sample water content assessed by rig geologist as being dry/wet</li> <li>Sample bags collected at the rig were weighed prior to sample splitting. Sample weight was used to assess the splitting requirements (number of riffle tiers required) to deliver a sub-sample to the desired mass constraint (&gt;2kg and &lt;3kg). Calico bag masses recorded by laboratory contractor</li> <li>Geological control maintained at the drill site at all times, to ensure drilling and sampling was to standard.</li> </ul>
Logging	<ul> <li>Chip samples geologically logged at 1m intervals for lithology, alteration, quartz veining and to a standard acceptable for subsequent interpretation for use in interpretation.</li> <li>Logging aspects are qualitative with exception of quartz vein content which is estimated semi-quantitatively</li> <li>All logged intervals represent entire one-metre sample segregation intervals</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>Lab submission samples collected as described – any mass reduction required for assay purposes performed by laboratory contractor; consisting of drying and riffle-splitting.</li> <li>Samples dispatched to ALS Pty Ltd (Adelaide); samples dried and pulverised in entirety, with 25g aliquot split for analysis (laboratory repeat splits historically demonstrate acceptable reproducibility and hence accuracy for this mineralisation)</li> </ul>

RC Sampling Techniques and Data	
Criteria	Explanation
Quality of assay data and laboratory tests	<ul> <li>Gold assay determined by ICPMS via aqua regia digestion (ALS code Au-OG43). Experience has shown this method to be applicable for fine grained gold population of the mineralisation due to the completion of digestion. There is a technical constraint in that coarse-grained gold may not completely enter solution resulting in conservative assay.</li> <li>Laboratory and client certified reference materials (up to four x CRMs plus blanks) generally demonstrate on-par or biased-low assays.</li> <li>Where zones of significant gold mineralisation have been identified by initial sample assay, residual pulps are assigned to a four-hour bottle-roll BLEG process – which is considered the definitive assay for each one-metre interval; due to the nominal 2kg aliquot mass.</li> </ul>
Verification of sampling and assaying	<ul> <li>Data management procedures are under development. Data management has been performed by an experienced individual and not by several individuals.</li> <li>There has been no verification of significant intersections by independent</li> </ul>
	<ul> <li>nor alternative company personnel.</li> <li>Drillhole sampling and geological data documented on paper logs in preparation for database entry.</li> </ul>
	There have been no adjustments to data as supplied and certified by the commercial assay laboratory.
Location of data points	<ul> <li>All drillhole location coordinates were measured using differential GPS to MGA94 and AHD estimated from terrain model created from publicly-available land survey data</li> <li>Collar locations to within an estimated precision of 1m.</li> <li>All drillholes were downhole surveyed. When available, non-magnetic drill rods were implemented to allow azimuth surveys down-the-hole. Drilling orientation established prior to collaring with clinometer and compass.</li> </ul>
Data spacing and distribution	<ul> <li>RC holes drilled on sections located between existing RC and air core traverses providing 50-metre spacing along the strike of mineralisation.</li> <li>The sections consist of holes spaced at a nominal 25m in orientations that provide the best geometry for interpretation</li> <li>This spacing is designed to be of a sufficient density to ultimately be included in the estimation of a mineral resource.</li> <li>For the purpose of reporting, assays have been aggregated to reflect continuously sampled zones of significant anomalism for gold.</li> </ul>
Orientation of data in relation to geological structure	Drillhole sections were aligned approximately normal to the strike of mineralisation. Holes were generally inclined 60 degrees to the east to provide cross-strike investigation within holes and to establish continuity of sub-vertical mineralisation between holes.
Sample security	<ul> <li>All samples were controlled by the responsible geologist and stored in secured facility prior to despatch to laboratory.</li> <li>Samples were transported by a specialist contractor with chain-of-custody protocols.</li> <li>Sample number receipt information from laboratory cross-referenced and rationalised against sample number dispatch information.</li> </ul>

RC Sampling Techniques and Data	
Criteria	Explanation
Audits or reviews	No processes or data used in developing the release of exploration results have been subject to audit or review by non-company personnel or contractors so as to reduce costs and timelines for reporting. Catalyst Metals Limited currently reserve this process for release of JORC-compliant Mineral Resource and Ore Reserve estimates.

# Table 1 JORC Code Reporting of Metallurgical Test Work

Reporting of Exploration	
Results	
Criteria	Explanation
Mineral tenement and land	The Four Eagles Gold Project is within RL006422 in the vicinity of Mitiamo
tenure status	Victoria, 50% owned by Kite Gold Pty Ltd (subsidiary of Catalyst Metals Ltd)
	and 50% owned by Gold Exploration of Victoria Pty Ltd (subsidiary of
	Hancock Prospecting Pty Ltd)
	<ul> <li>RL006422 is valid and due for expiry on 28/03/2028</li> </ul>
	Exploration activities were confined to free-hold farmland.
Exploration done by other parties	None within either lease during the 2020 program
Geology	Boyd's Dam:
	Gold-arsenic bearing narrow veins in Ordovician sandstone in the vicinity
	of a regional-scale anticline.
	Deposit assessed as being northern extension of Bendigo Goldfield, with
	potential for post-mineralisation influence/redistribution by proximal
	granitic intrusion.
	Potential for some supergene gold enrichment in paleo-weathering profile.
Drill hole Information	All information material to the understanding of the exploration results of
	all last-phase drill holes are tabulated
	Metallurgical testwork has been carried out on material from RC drill hole
	FERC284 and details of this hole have been included in previous ASX
	announcements
Data aggregation methods	No top-cutting applied to assay data
	Zones of significance identified as those with assays in excess of 0.5g/t and
	internal dilution of two consecutive assays or less.
Deletie a chie le strucce	Reported zones are continuous, with no sample or assay gaps.  Reported zones are continuous, with no sample or assay gaps.
Relationship between mineralisation widths and	Boyd's Dam:
intercept lengths	The strike of mineralisation is demonstrated to be generally aligned with local grid north
intercept lengths	
	<ul> <li>The dip of mineralisation is expected to be sub-vertical and sub-parallel with bedding as was the case in the Bendigo Goldfield.</li> </ul>
	<ul> <li>DDH drillholes are oriented with a dip to the west or east to provide</li> </ul>
	effective geometry in the context of the eastern limb of an anticline.
	<ul> <li>Due to the complexity of slate belt gold mineralisation, the true width of</li> </ul>
	mineralisation has not been resolved. As such, significant mineralised
	intersections have been reported as downhole intervals.
Diagrams	Catalyst Metals managed tenement map (Figure 1)
3.5	Four Eagles Gold Project prospect map and drilling program locations
	(Figure 2)
	Boyd's Dam mineralisation drill hole intercepts on long section (Figure 3)

Reporting of Exploration Results	
Criteria	Explanation
Balanced reporting	<ul> <li>Tabulations of drill hole intersections show all drilling inclusive of holes which did not demonstrate significant intersection (in which maximum grades were tabulated).</li> </ul>
Other substantive exploration	Metallurgical Testwork
data	<ul> <li>A 202 kg composite sample of primary mineralisation from Boyds Dam Prospect reverse circulation drillhole FERC284 was used to establish gravity, flotation and cyanide dissolution performance;</li> <li>Initial gravity test work indicated that following crushing to -2mm and removal of the coarse gold fraction from the sample, 94 % of the remaining gold could be recovered to a gravity only concentrate at a grind size of P80 75 μm and a mass yield of &lt;3 %;</li> <li>A further split of the main test composite was crushed to -1.18 mm and the -1.18mm to +850 μm fraction removed to minimise the 'spotty'gold influence. The grade of the coarse fraction removed was 44 g/t,as determined by the Leachwell/Fire assay method. The -850 μm composite estimated grade for the next stage of test work was reduced to around 8 g/t Au</li> <li>The -850 μm sample was processed by a Knelson concentrator to produce a 709 g/t Au concentrate with a 0.55 % mass yield and 76% Au recovery. The tail from the Knelson concentrator was then subjected to flotation;</li> <li>The flotation test work, with feed grade of 1.24 g/t Au, produced a 25 g/t Au concentrate with a mass yield of 4.5 %;</li> <li>Test work resulted in a flotation tail grade of 0.035 g/t Au;</li> <li>Direct cyanidation combined with gravity gold recovery from the -850 μm sample resulted in 97 % gold recovery overall; and</li> <li>This and ongoing metallurgical test work contributes towards Catalyst appropriately evaluating the economic potential of the project on behalf of</li> </ul>
	the FEJV.
Further work	<ul> <li>Boyd's Dam:</li> <li>Intensive diamond drilling and trial deep RC drilling will be completed in the 2021 field season.</li> <li>As part of future evaluation studies, composite gravity and flotation concentrate work will be undertaken to determine an optimum concentrate grade and mass yield relationship for the processing potential outcomes for the project. Variability test work would also be undertaken.</li> </ul>