



## Gold Pathfinder Footprints Key to Unlocking Future Exploration Success at Cape Ray Gold Project

Matador Mining Limited (**ASX: MZZ**) (“**Matador**” or the “**Company**”) is pleased to announce it has interpreted the key gold pathfinder elements defining the gold mineralisation footprints at each of the deposits within the Company’s 100% owned Cape Ray Gold Project (the “**Project**”) in Newfoundland, Canada. Understanding pathfinder elements is a key tool the Company will utilise moving forward as we unlock the vast greenfield exploration potential at the Project.

### HIGHLIGHTS

- **High sensitivity multi-element geochemistry has characterised the key pathfinder element footprints associated with the known gold deposits at the Project, providing a mechanism for future exploration success**
- **Pathfinder elements at the Project define a zoned halo extending up to 100 metres from mineralised gold intercepts**
- **Understanding these pathfinder element footprints materially improves Matador’s ability to explore under the shallow glacial till cover by identifying anomalism associated with “near-misses” in basement samples and providing vectors to gold mineralisation**
- **Historical basement sampling and diamond drilling has only targeted outcropping mineralisation at the Project:**
  - Areas of outcropping basement account for less than 10% of the Project area;
  - Trial backpack drilling during 2020 successfully demonstrated the efficacy of drilling through “till cover” and sampling the basal till and basement rock;
  - Till cover at the Project is shallow compared with most till profiles across Canada, typically ranging from 0.5 to 5 metres
- **Matador will accelerate the geochemical sampling program through 2021 by using purpose-built ATV-mounted Auger/Winkie drills (Figure 1) designed to enhance the efficiency, speed, and depth of drilling**
- **ATV-Winkie drilling will commence on multiple untested priority targets within 15 kilometres of the proposed central processing facility at Central Zone<sup>1</sup>**

### Exploration Manager Warren Potma commented:

*“Our 2020 exploration program demonstrated that hydrothermal gold mineralisation appears to be associated with a large suite of pathfinder elements with predictable zonation up to 100 metres away from gold mineralisation. Defining these mineralisation footprints increases the probability of determining the direction to gold mineralisation from broad spaced basement sampling; particularly for those targets under till cover. Systematic sampling of basement rocks beneath shallow till cover (generally less than 5 metres deep) has not*

<sup>1</sup> ASX announcement 6 May 2020 (Cape Ray Gold Project Scoping Study)

occurred at the Project. Matador's new purpose-built ATV-mounted Winkie Drills, constructed in collaboration with our drilling partner (Major's Contracting Ltd) will allow for rapid, inexpensive, effective and systematic first-pass sampling of high ranked greenfields targets for the first time in the region. We believe this will result in a step-change in exploration productivity and effectiveness through cover with the additional benefit of increasing our diamond drilling hit-rate and reducing the discovery timelines and costs.

We have five high-priority structural target areas under shallow till cover within five kilometres of the Central Zone Mineral Resources (Figure 5) that have never been drill tested, and at least 27 more targets identified along the 120 kilometre strike length of the Project. With the commissioning of the new Winkie Drills in progress, we now have a rapid, cost effective method of pinpointing the "sweetspot" within each target area for follow-up diamond drilling, as well as confidently ruling out those targets not worthy of more expensive diamond drilling."

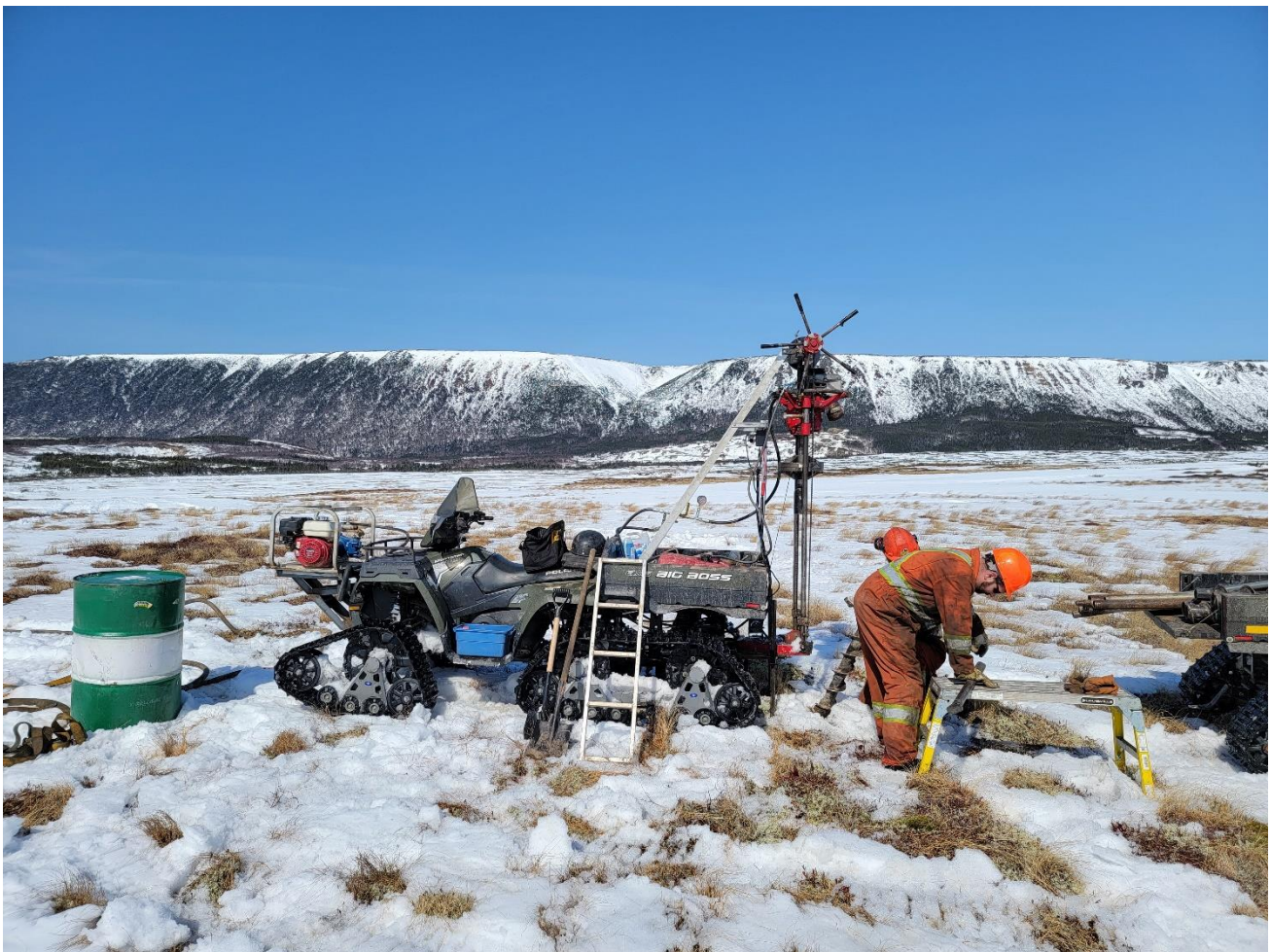


Figure 1: ATV-mounted Winkie Drill capable of augering through up to 10 metres of glacial till to provide a basal till sample and short basement diamond core sample.

### **Refining the Cape Ray "Exploration Toolkit"**

Understanding the pathfinder element footprints to hydrothermal gold mineralisation provides an extremely valuable tool when attempting to explore through shallow glacial till cover (Figure 3). High sensitivity geochemistry implemented for the first time at Cape Ray by Matador in 2020 has delivered a step-change in our understanding of detectable footprints associated with the gold mineralised systems.

This technique has also been instrumental in facilitating quantitative classification of alteration mineralogy, alteration intensity and host rock types under the glacial till cover. In turn we are confident we can now significantly improve our geological mapping and exploration targeting models in this otherwise challenging terrain.

The pathfinder geochemistry signal includes up to 12 critical elements (Figure 2). The all-important intermediate to distal mineralisation footprint extends up to 100 metres away from a significant gold intercept and comprises low level anomalism in Bi, Pb, W, Cu, Mo, As and Zn. This intermediate to distal footprint is considered the key to effectively (and efficiently) exploring through cover, as it provides a much larger footprint that can be detected with broad spaced basement geochemical sampling.

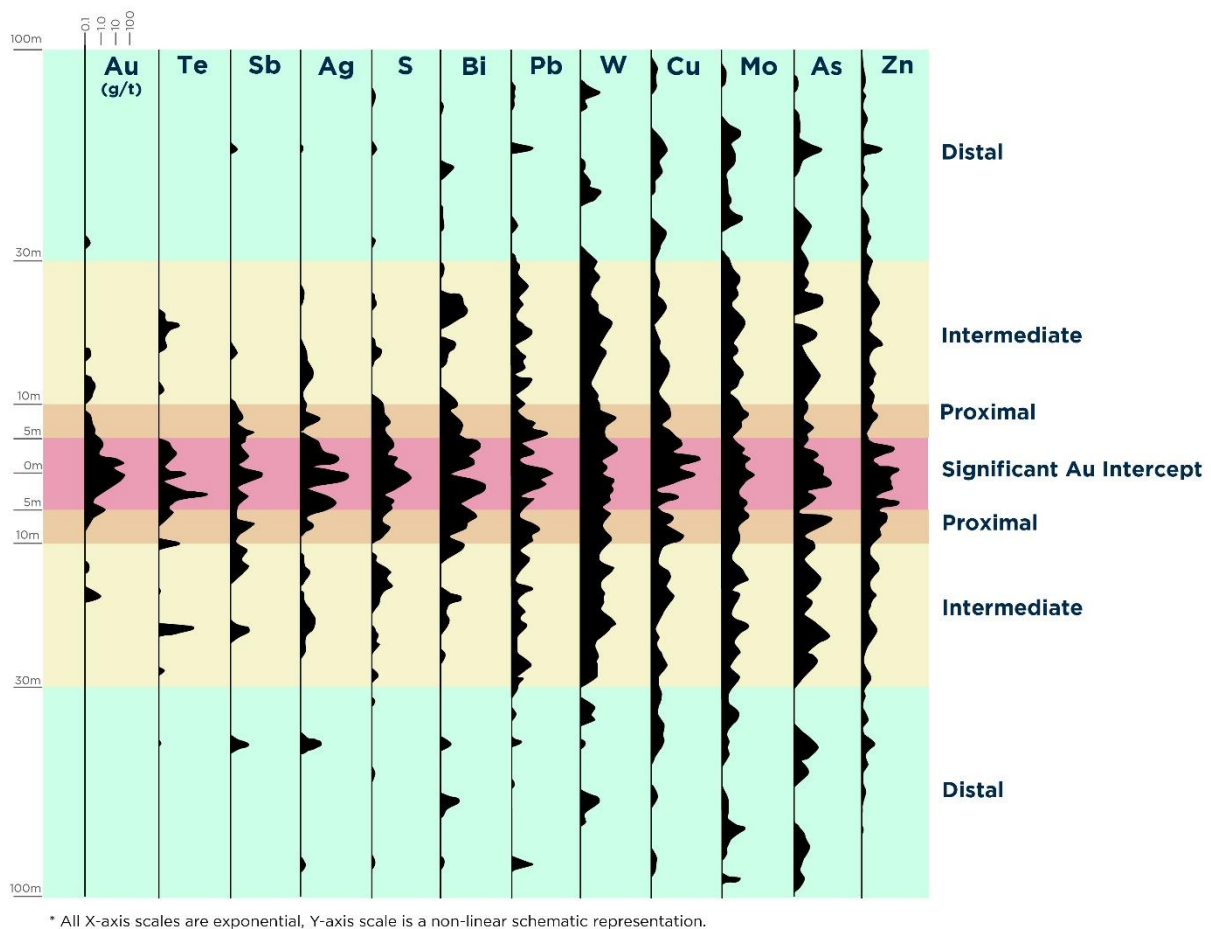


Figure 2: Gold-related pathfinder trace element footprints<sup>2</sup> around a typical significant gold intercept (schematic representation of new high sensitivity geochemistry data compiled from 80 drill holes)

Historically, across the Cape Ray Gold Project, basement rocks have only been effectively sampled where they outcrop, or where they have been tested by expensive conventional targeted diamond drilling. Outside the 15 kilometre strike length containing the 837,000 ounce Cape Ray Gold Project Mineral Resources<sup>3</sup> (between Big Pond and Isle aux Morts), there are only 20 drill holes across the remaining 105 kilometre strike length of the Project.

Most of the historic surface sampling across the Project has focused on near-surface soil and shallow till sampling, and selective outcrop rock chips. Unfortunately, near-surface soil and upper till sampling is only partially effective, potentially generating false positive and false negative signals derived from sample material

<sup>2</sup> Gold (Au), tellurium (Te), antimony (Sb), silver (Ag), sulphur (S), bismuth (Bi), lead (Pb), tungsten (W), copper (Cu), molybdenum (Mo), arsenic (As) zinc (Zn)

<sup>3</sup>ASX announcement 6 May 2020 (Mineral Resource table appended below for reference)

that is often mechanically transported some distance from its point of origin, resulting in failure of the follow-up bedrock drill tests. Rock chip sampling, which is more spatially reliable, is severely limited by lack of outcrop (e.g., Figure 3), with less than 10% of the Project tenement holding having any outcrop at all. Historic sampling programs have also utilised assay methods that were unable to detect low level anomalies in the key gold pathfinder elements (bismuth, antimony, tellurium, molybdenum and tungsten).

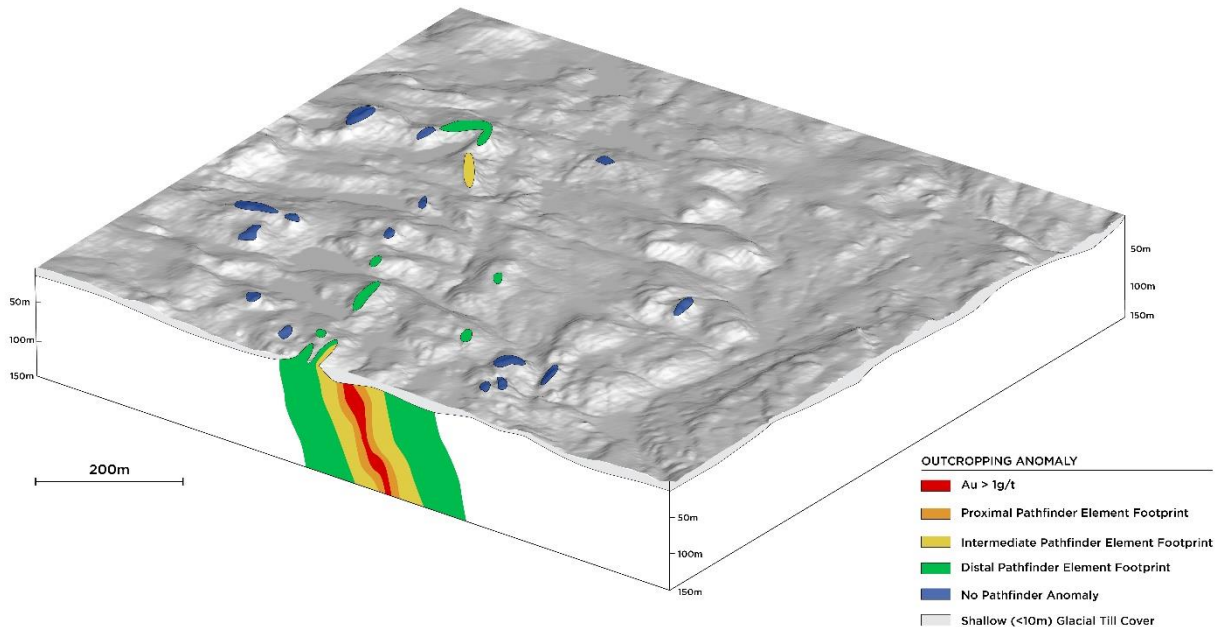


Figure 3: Schematic 3D block model of typical shallow glacial till cover (present over >90% of the Cape Ray Gold Project) obscuring significant basement pathfinder element footprints/halos which are 20-200 times the diameter of the detectable gold anomaly.

Work completed by Matador during 2020 has confirmed that the optimal horizons for geochemical sampling are the base of till and the in-situ rock from just below the basement rock interface (typically between 0.5 - 5 metres below surface across the Project area). Multi-element geochemical anomalies derived from these two horizons are considered the most reliable predictors of proximity to hydrothermal gold mineralisation.

Following successful trialling of portable backpack drills in 2020, Matador, with our drill partner (Major's Contracting Ltd) have custom built the first lightweight ATV-mounted Winkie Drill (Figure 1) designed to drill through up to 10 metres of transported glacial till material using an auger to sample the basal till layer, then switch to a diamond drill bit to collect a short (20 cm) core sample of in-situ basement rock at the bottom of the auger hole. This could be equated to drilling short diamond tails on RC drill holes in covered terrain in Western Australia (although Winkie drilling is orders of magnitude quicker and cheaper).

Matador believes that conducting systematic gridded basement sampling across our high priority target areas will provide the best information for "seeing through" the shallow till cover, and will deliver effective basement pathfinder element and geology maps over these areas for the first time (Figure 4). These maps combined with structural interpretation of new detailed geophysics (30 metre spaced heli-magnetics planned for May 2021) will provide well constrained advanced targets for follow-up diamond drilling. We believe this will significantly reduce the diamond drilling discovery costs and speed up the time to potential new gold discoveries.

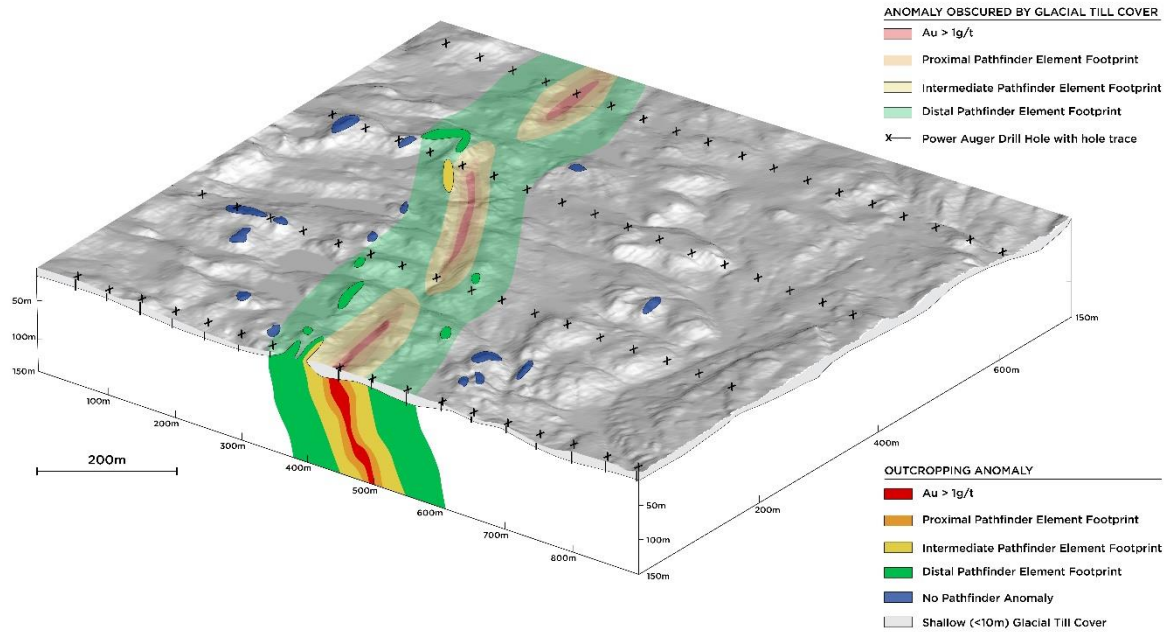


Figure 4: Schematic 3D block model showing the potentially detectable pathfinder element footprint/halo in basement rocks obscured below shallow glacial till cover (pathfinder element footprints are typically 20-200 times the diameter of any detectable gold anomaly).

## 2021 Program Plan

In 2020, Matador identified 33 priority greenfields target areas<sup>4</sup> based on reinterpretation of existing surface geochemistry, geophysics and structural targeting indicators, with 12 high priority target areas flagged for follow-up in 2021 (Figure 5). Nine of these high priority targets are within 15 kilometres of the proposed Central Processing Facility (at Central Zone)<sup>5</sup> and are ready for testing during 2021. Initial testing will comprise detailed aeromagnetics coverage and systematic ATV-Winkie drill geochemistry leading to much more tightly constrained and ranked targets for follow-up diamond drilling to occur through 2021 and beyond.

Matador expects the detailed aeromagnetics and greenfields ATV-Winkie geochemistry drilling to continue to refine the targeting priorities and add significantly to the pipeline of new targets across the Project.

<sup>4</sup> ASX announcement 29 October 2020

<sup>5</sup> ASX announcement 6 May 2020

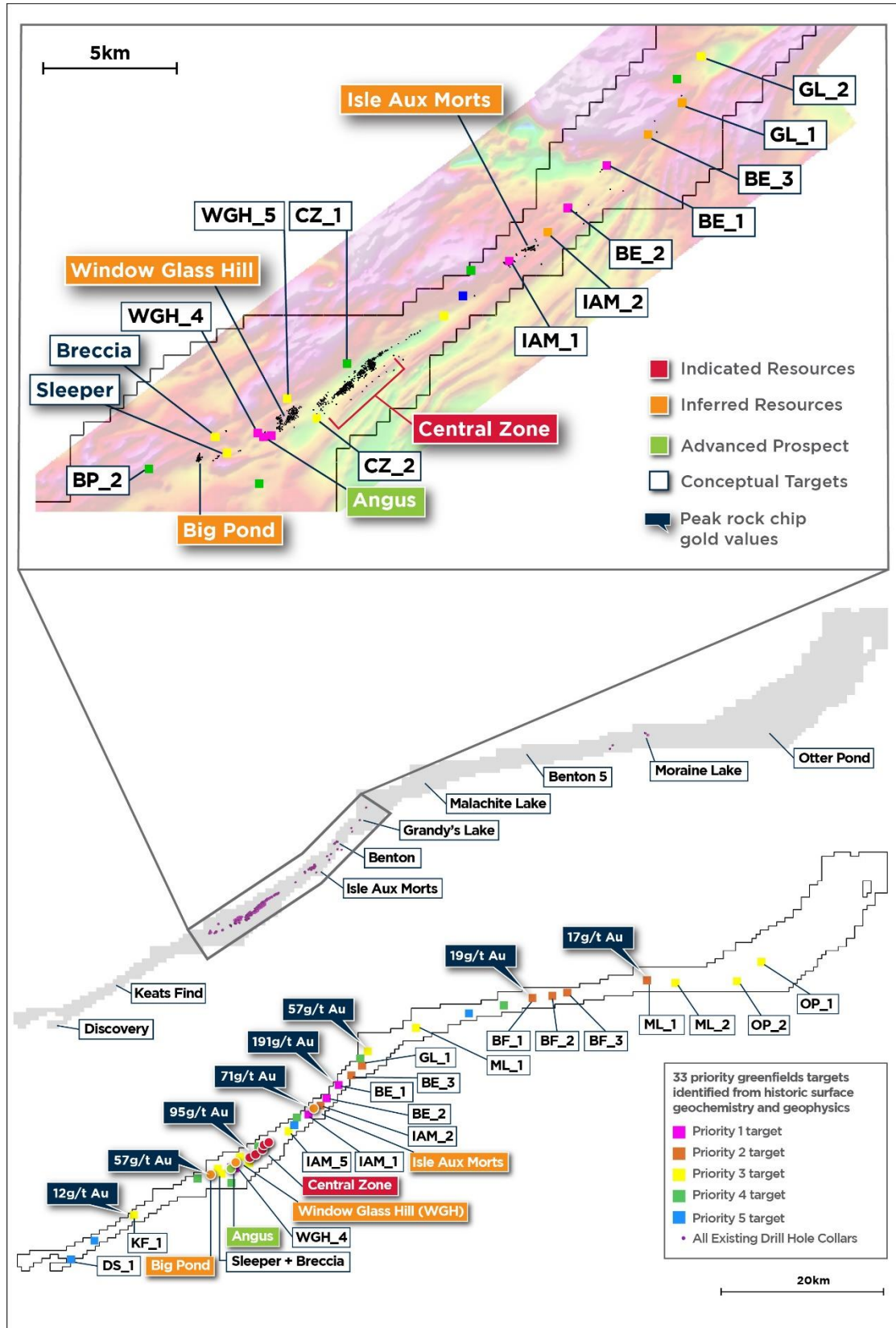
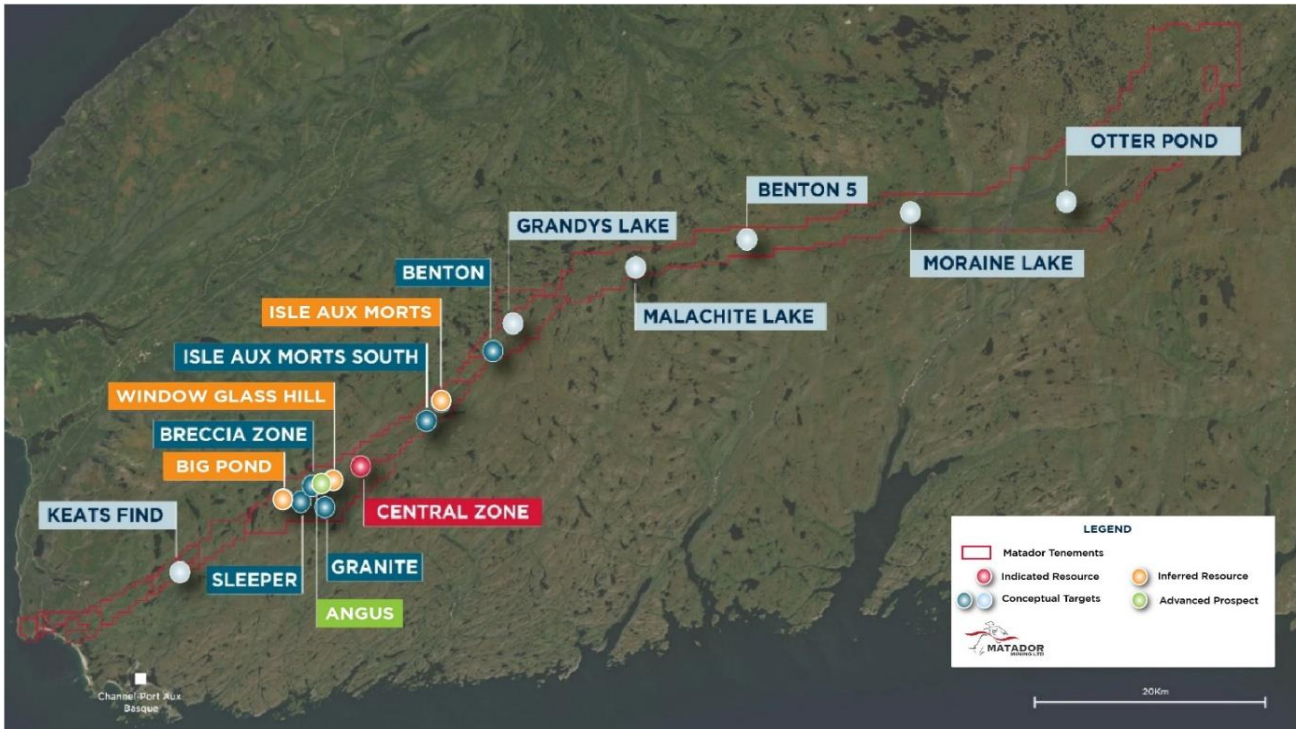


Figure 5: Map of prioritized exploration targets, existing drilling, magnetics (TMI-RTP)<sup>6</sup> and peak rock chip values. Note the scarcity of drilling outside of the Central Zone and WGH deposits.

<sup>6</sup> TMI-RTP = total magnetic intensity data reduced to pole (historic 200 metre spaced aeromagnetic data)

## About the Company

Matador Mining Limited (ASX: MZZ) is a gold exploration company with tenure covering 120 kilometres of continuous strike along the highly prospective, yet largely under-explored Cape Ray Shear in Newfoundland, Canada. The Company released a Scoping Study which outlined an initial potential seven year mine life, with a forecast strong IRR (51% post Tax), rapid payback (1.75 year) and LOM AISC of US\$776/oz Au (ASX announcement 6 May 2020).



This announcement has been authorised for release by the Company's Board of Directors.

To learn more about the Company, please visit [www.matadormining.com.au](http://www.matadormining.com.au), or contact:

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## Reference to Previous ASX Announcements

In relation to the results of the Scoping Study which were announced on 6 May 2020, Matador confirms that all material assumptions underpinning the production target and forecast financial information included in that announcement continue to apply and have not materially changed.

In relation to the Mineral Resource estimate announced on 6 May 2020, the Company confirms that all material assumptions and technical parameters underpinning the estimates in that announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

In relation to the exploration results included in this announcement, the dates of which are referenced, the Company confirms that it is not aware of any new information or data that materially affects the information included in those announcements.

## Mineral Resource Estimate – May 2020

Cape Ray Project Summary Mineral Resource																	
Deposit	Cut-off	RL	Indicated					Inferred					Total				
			Tonnes (Mt)	Au (g/t)	Ag (g/t)	Contained Au (Koz)	Contained Ag (Koz)	Tonnes (Mt)	Au (g/t)	Ag (g/t)	Contained Au (Koz)	Contained Ag (Koz)	Tonnes (Mt)	Au (g/t)	Ag (g/t)	Contained Au (Koz)	Contained Ag (Koz)
Z4/41	0.5	>100mRL	2.1	2.83	8	191	545	1.3	1.48	6	61	236	3.4	2.32	7	252	781
	2	<100mRL	0.2	3.10	11	23	77	0.2	2.90	9	17	56	0.4	3.01	10	40	133
Z51	0.5	>200mRL	0.8	4.25	9	103	211	0.0	1.43	5	1	3	0.8	4.18	9	104	214
	2	<200mRL	0.2	4.41	11	32	77	0.1	2.59	3	12	15	0.4	3.71	8	43	92
HZ	0.5	All	0.2	1.11	1	8	8	0.0	0.90	1	0	0	0.2	1.11	1	8	8
PW	0.25	All	-	-	-	-	-	2.2	1.12	4	80	257	2.2	1.12	4	80	257
IAM	0.5	All	-	-	-	-	-	0.8	2.39	2	60	60	0.8	2.39	2	60	60
Big Pond	0.25	All	-	-	-	-	-	0.1	5.30	3	19	12	0.1	5.30	3	19	1,455
WGH	0.5	All	-	-	-	-	-	4.7	1.55	10	232	1,455	4.7	1.55	10	232	3,013
<b>Total</b>			<b>3.5</b>	<b>3.15</b>	<b>8</b>	<b>356</b>	<b>918</b>	<b>9.4</b>	<b>1.60</b>	<b>7</b>	<b>481</b>	<b>2,094</b>	<b>12.9</b>	<b>2.02</b>	<b>7</b>	<b>837</b>	<b>3,013</b>

Note: Figures have been rounded and rounding errors may apply. Contained metal figures do not take metallurgical recovery into account. Reported cut-offs from Zones 51, 4/41 cover both open-pit resources scenario (0.5g/t Au cut off) and underground scenario (2g/t Au cut off). 2020 resource updates for Zones 4/41, 51, WGH and PW use 2.8t/m<sup>3</sup> density.

- All Mineral Resources are completed in accordance with the JORC Code 2012 Edition
- All figures are rounded to reflect appropriate levels of confidence. Apparent differences may occur due to rounding.
- Cut-off grade assumptions approximately reflect a US \$1,550 per ounce gold price as per the Cape Ray Scoping Study
- Open Pit Mineral Resources are reported at various cut-off grades to reflect assumed Reasonable Prospects of Eventual Economic Extraction as derived from the Cape Ray Scoping Study: Z4/41 - 0.50 g/t Au cut-off above 100mRL; Z51 - 0.5 g/t Au cut-off above 200mRL; HZ, IAM and WGH all reported at 0.5 g/t Au cut-off with no constraint; Big Pond and PW reported at 0.25 g/t Au cut-off with no constraint
- Underground Mineral Resources are reported at a 2.0 g/t Au cut-off grade to reflect assumed Reasonable Prospects of Eventual Economic Extraction as derived from the Cape Ray Scoping Study: Z4/41 - 2.0 g/t Au cut-off below 100mRL; Z51 - 2.0 g/t Au cut-off below 200mRL

### Competent Person's Statement

The information in this announcement that relates to the Mineral Resource estimate for Zones 4/41 and 51, is based upon information compiled by Mr. Neil Inwood from Sigma Resources Consulting, an independent consultant to Matador Mining Limited. Mr. Inwood is a Fellow of the AUSIMM and 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 as defined in the December 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code 2012). Mr. Inwood consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

The information contained in this announcement that relates to Mineral Resource estimate for Zones 4/41 and 51 was undertaken by Mr. Brian Wolfe, an independent consultant to Matador Mining Limited, who is a Member of the Australian Institute of Geoscientists. The classification scheme for Zones 4/41 and 51 was developed by Mr Wolfe and reviewed by Mr Inwood. Mr. Wolfe was engaged as a consultant to Matador Mining Limited and 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 as defined in the JORC Code 2012. Mr. Wolfe consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

The information contained in this announcement that relates to Mineral Resource estimates for H Zone, Big Pond and IAM at the Cape Ray Project was first reported by the Company in an announcement to the ASX on 30 January 2019 is based on, and fairly reflects, information compiled by Mr. Alfred Gillman, an independent consultant to Matador Mining Limited. Mr. Alfred Gillman is a Fellow and Chartered Professional of the Australian Institute of Mining and Metallurgy and was engaged as a consultant to Matador Mining Limited to complete the JORC (2012) resource. Mr. Gillman 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 as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Gillman consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

The information contained in this announcement that relates to the 2020 grade estimation for Window Glass Hill and PW Zone were reported to the ASX 4 February 2020 and was undertaken by Mr. Patrick Rice, an independent consultant to Matador Mining Limited. Mr. Rice is a Fellow of the Australian Institute of Mining and Metallurgy and was engaged as a consultant to Matador Mining Limited. Mr. Rice 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 as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Rice consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

The information contained in this announcement that relates to exploration results is based upon information compiled by Mr. Warren Potma, who is an employee of Matador Mining Limited in the position of Exploration Manager. Mr. Potma is a Member of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists and 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 as defined in the December 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code 2012). Mr Potma consents to the inclusion in the announcement of the matters based upon the information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements, and in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company 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.