



Quarterly Activities Report

Quarter Ended 30 September 2021

Highlights

- **Brownfields expansion drilling delivers exploration success at Window Glass Hill Granite. Significant intercepts included:**
 - 19 metres at 4.2 g/t Au, 6 metres at 1.0 g/t Au and 4 metres at 1.9 g/t Au in CRD214
 - 8 metres at 5.1 g/t Au and 22 metres at 1.2g/t in CRD212
 - 4 metres at 3.6 g/t Au in CRD210
- **Initial infill drilling at the Window Glass Hill Mineral Resource is consistent with existing wider-spaced drilling and confirms multiple stacked loads near surface. Significant intercepts included:**
 - 4 metres at 4.0g/t Au, 3 metres at 3.1g/t Au, 5 metres at 1.6g/t Au and 2 metres at 3.1g/t Au in CRD222
 - 8 metres at 3.0 g/t Au, 17 metres at 1.4 g/t Au and 7 metres at 1.0 g/t Au in CRD224
 - 2 metres at 8.0 g/t Au and 14 metres at 1.0 g/t Au in CRD234B
 - 8 metres at 1.9 g/t Au in CRD236
- **Greenfields targeting utilising heli-mag and auger drilling has defined multiple targets:**
 - **Near existing mineral resources:**
 - Six new drill targets identified at Big Pond with diamond drilling underway
 - Window Glass Hill Granite confirmed to be 3 kilometres long by 800 metres wide, with less than 50% drill tested
 - Window Glass Hill Granite margin confirmed with 6 kilometres still to be tested
 - **Regional targets:**
 - Benton – a 5 kilometre long target with rock chip gold anomalies up to 191g/t Au
 - Malachite Lake - 44km² target area based on high-definition magnetics
 - Stag Hill - 3 kilometres of undrilled strike identified from high-definition magnetics
- **Independent, mobile sample preparation unit installed on-site by SGS, resulting in reduction of assay turnaround times and accelerated exploration decision making**
- **Environmental assessment, permitting and stakeholder engagement on target for submission of Environmental Impact Statement to both Federal and Provincial regulators in the second half of 2022**
- **Fully funded with \$17.2 million cash balance**

Matador Mining Limited (ASX: MZZ; OTCQX: MZZMF; FSE: MA3) (“Matador” or the “Company”) is pleased to provide its Quarterly Activities Report for the Quarter ended 30 September 2021. All dollar amounts are A\$ unless stated otherwise.

Matador is exploring and developing its 100% owned Cape Ray Gold Project (“**Cape Ray Gold Project**” or the “**Project**”) in Newfoundland, Canada, located across 120 kilometres of continuous strike in a proven, yet under-explored multi-million ounce regional-scale gold structure.

Active Exploration Program Continues at Cape Ray Gold Project

Following the successful exploration program in 2020, the Company commenced and accelerated the largest exploration program in the history of the Cape Ray Gold Project in mid-2021. The ramped-up activity schedule was supported by a \$16 million capital raising completed in June 2021.

The key objectives of this program are to expand the known deposits (current Mineral Resource of 837,000 ounces at 2g/t Au¹) and test and define new greenfield exploration targets across the Company’s large but under-explored landholding within the highly prospective Cape Ray Shear Zone. A detailed Phase One heli-mag survey, covering 40 kilometres of strike, was completed in the June 2021 Quarter yielding several prospective new gold targets. Analysis of these magnetic data is ongoing. The Company plans to fly the Phase Two heli-mag survey over the remaining north-eastern portion of the tenement package early in the 2022 season.

The exploration program has progressed well through the September 2021 Quarter and will continue through the December 2021 Quarter and into 2022 subject to weather conditions. The program currently incorporates two diamond rigs drilling 45,000 metres of core, and five power auger rigs drilling over 2,200 geochemical sample locations since the start of the program. The first winter drill program is also planned to commence in February 2022, weather dependent.

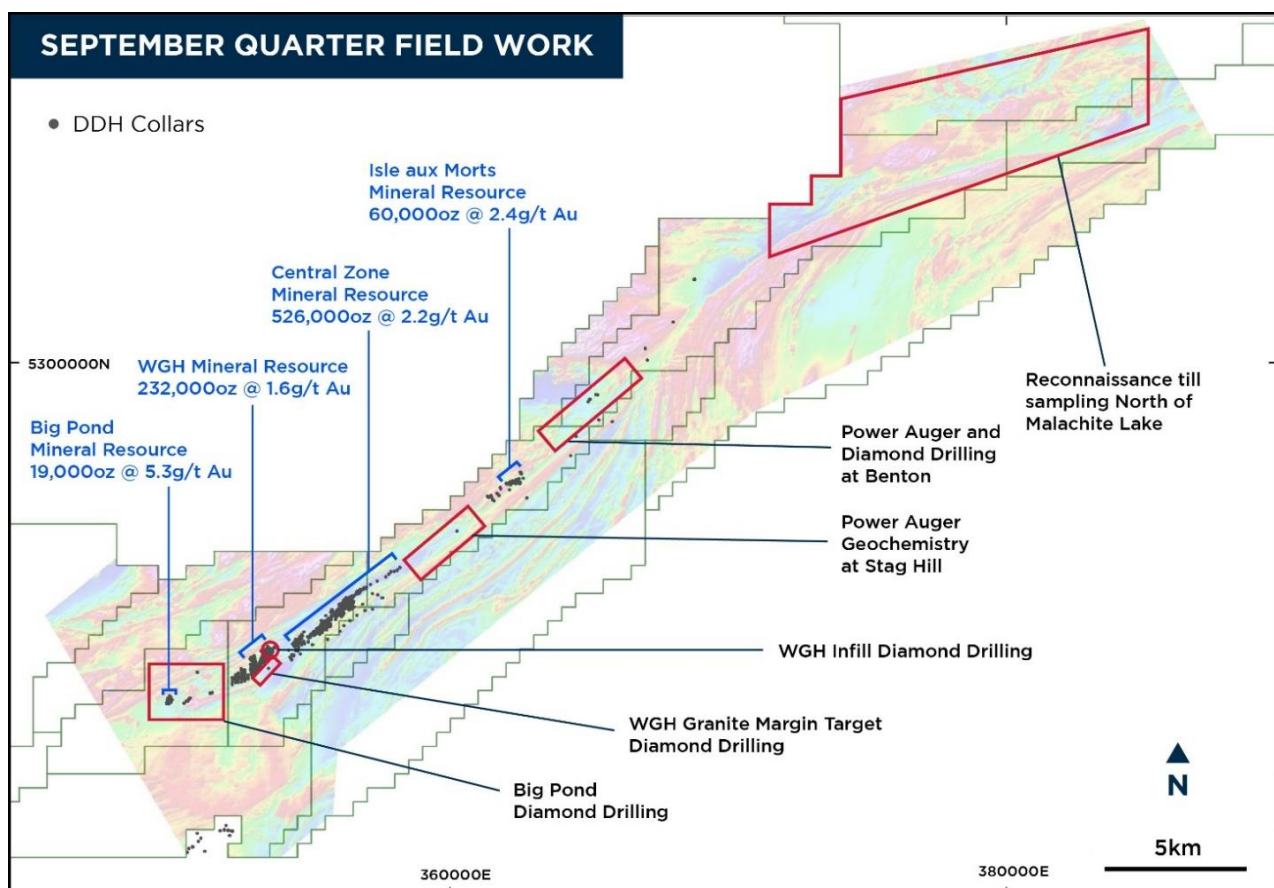


Figure 1: Priority target areas worked during the September 2021 Quarter, within Phase One heli-mag area

¹ ASX announcement 6 May 2020

Brownfields Drilling

The Brownfields exploration program is designed to expand the existing Mineral Resources within the Project area, as defined in the Cape Ray Gold Project Scoping Study². Focusing on targets close to our known deposits has the potential to deliver additional Mineral Resources for inclusion in future economic studies. The Company had notable diamond drilling success at Window Glass Hill Granite (“**WGHG**”) during the Quarter and identified new drill targets in the Big Pond area through interpretation of detailed magnetics and power auger geochemistry.

The WGHG is approximately 3 kilometres long and up to 800 metres wide. Less than 50% of the WGHG area, which contains the current Window Glass Hill Mineral Resource of 232,000 ounces at 1.6g/t Au², has been tested by any diamond drilling.

Power auger geochemistry and surface rock chip assays across the undrilled portions of the WGHG indicate that gold mineralisation and associated pathfinder anomalies are present across the entire WGHG, demonstrating material upside potential.

Assay results from 11 holes, all located outside of the current Mineral Resource and along the granite margin, returned gold mineralisation in all holes. The first batch of diamond drilling assays included:

- 8 metres at 5.1 g/t Au from 62 metres (incl. 1 metre at 36.2 g/t Au) and 22 metres at 1.2g/t from 91 metres (CRD212)³; and
- 4 metres at 3.6 g/t Au from 74 metres (incl. 1 metre at 5.2 g/t Au) (CRD210)⁴ ; and
- 19 metres at 4.2 g/t Au from 9 metres (incl. 1 metre at 30.6 g/t Au) (CRD214)⁵.

Drilling is ongoing along the WGHG Margin target area, with approximately 6 kilometres (dashed line in Figure 2) remaining to be tested.

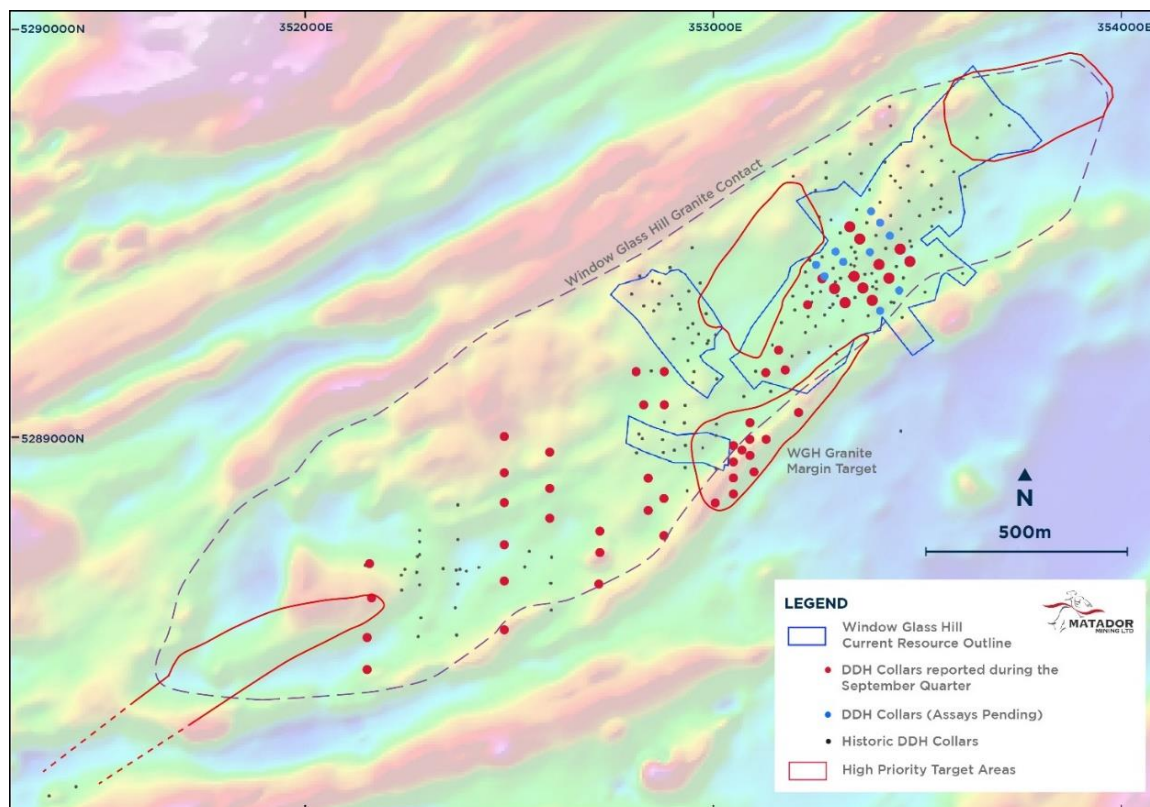


Figure 2: WGHG area with diamond drilling completed during the September 2021 Quarter, Mineral Resource outlines and high priority drill targets

² ASX announcement 6 May 2020

³ ASX announcement 26 August 2021

⁴ ASX announcement 26 August 2021

⁵ ASX announcement 21 September 2021

The WGHG Margin target has structural controls analogous to those of Marathon Gold’s Valentine Lake Deposits (Mineral Resource of 4.8 million ounces and an Ore Reserve of 2.05 million ounces) and is located along the same regional structure. The Company is encouraged by the significant growth potential of the WGHG mineralisation footprint.

Initial wide spaced power auger geochemical results indicate the entire WGHG has the potential to contain gold mineralisation. Previous exploration surface sampling was an ineffective sampling tool due to the wide spread till cover. Matador has the tools to quickly and cost-effectively test below this till veneer (approximately 0.2 to 2 metres) at WGHG, providing an improved understanding of the geology, and generating high-confidence drill targets.

The Company commenced its inaugural exploration program on the Big Pond region based on structural targets identified from heli-mag data. Initial follow-up power auger drilling has demonstrated the area’s prospectivity with up to 55.4 g/t Au sampled at the bottom of hole (MB000388)⁶ (Figure 3). Six initial diamond drill target areas were identified and diamond drilling is currently underway

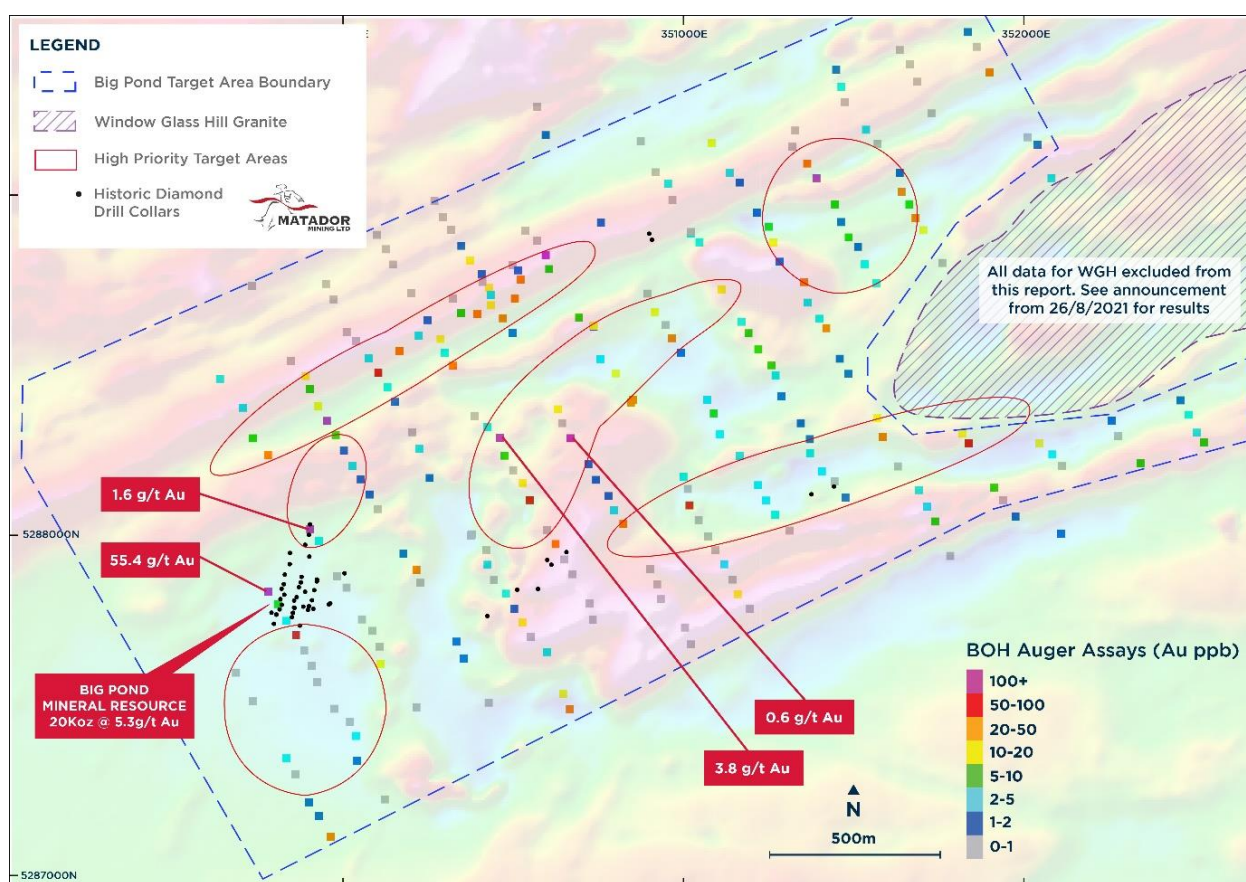


Figure 3: Big Pond power auger bottom of hole gold assays, historic drill collars and high priority drill targets based on pathfinder element geochemistry over detailed magnetics (TMI-RTP)⁶

Resource Infill Drilling

In addition to the encouraging exploration drilling across the WGHG, the September 2021 Quarter saw positive results from the WGH infill drilling program. The WGH Mineral Resource (currently 232,000 oz Au at 1.6 g/t Au)⁷ is one of the cornerstones of the Cape Ray Gold Project.

The WGH 46-hole program was designed to infill the broad-spaced WGH Mineral Resource drill pattern down to 40 metres x 40 metres (or closer) to facilitate the conversion of resource classification from Inferred to Indicated.

⁶ ASX announcement 7 September 2021

⁷ ASX announcement 6 May 2020

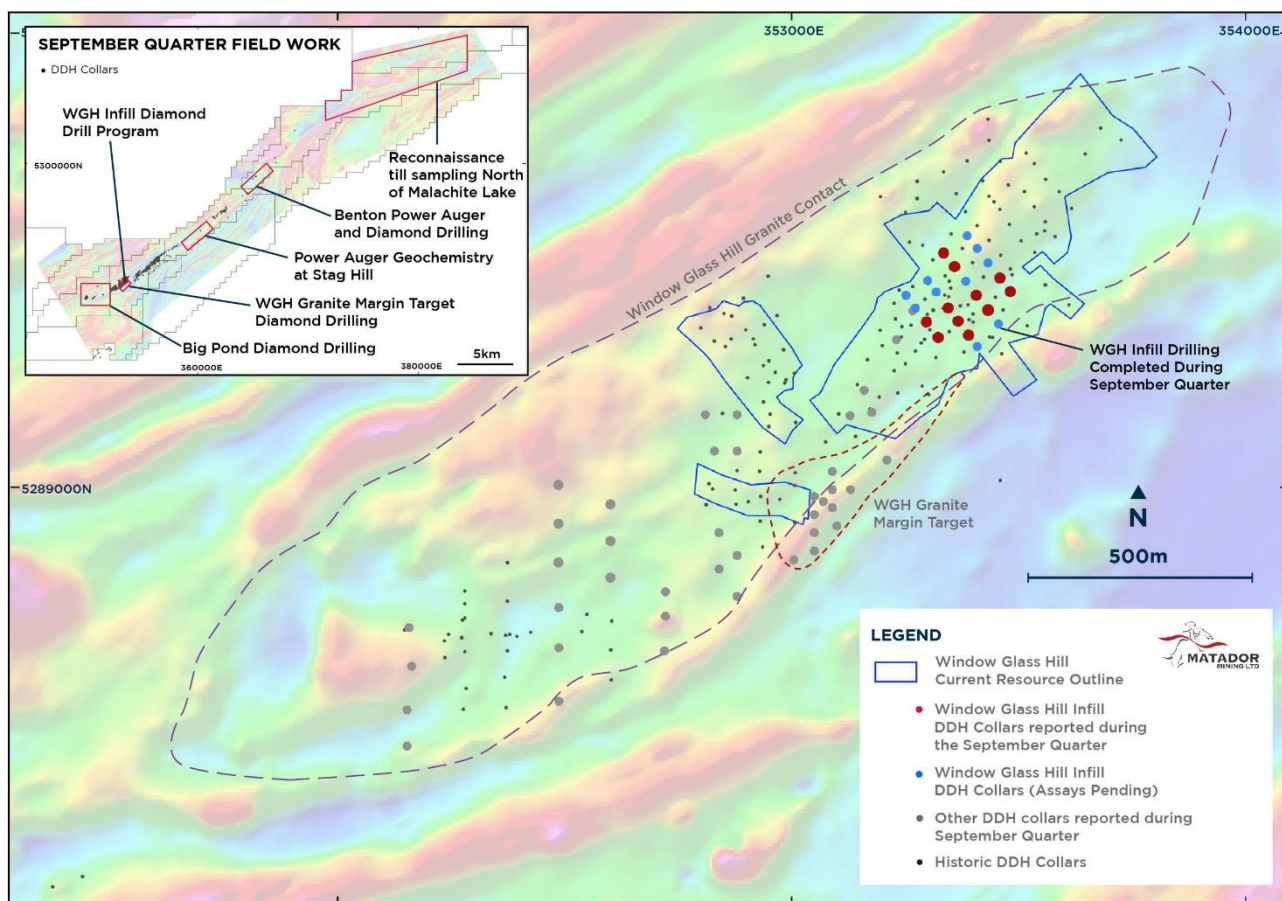


Figure 4: Location of WGH infill drill holes

Assay results have been received and reported for 11 of the 21 holes completed (of the 46 hole program). The grades and widths of the significant intercepts reported to date are consistent with the existing wider-spaced drilling into the deposit confirming multiple stacked loads near surface. This, combined with comparable vein orientations obtained from the orientated diamond core, reinforces Matador’s confidence in the geological model and the interpreted gold lode geometries, grade and continuity.

Significant intercepts from infill drilling include⁸:

- 4 metres at 4.0g/t Au, 3 metres at 3.1g/t Au, 5 metres at 1.6g/t Au and 2 metres at 3.1g/t Au in CRD222
- 8 metres at 3.0 g/t Au, 17 metres at 1.4 g/t Au and 7 metres at 1.0 g/t Au in CRD224
- 2 metres at 8.0 g/t Au and 14 metres at 1.0 g/t Au in CRD234B
- 8 metres at 1.9 g/t Au in CRD236

These results, combined with the recent exploration success at the WGHG suggest that the potential across the whole WGHG could be larger than the current WGH Mineral Resource.

Greenfield Target Areas

The exploration team is following up several other promising greenfield targets identified from the Phase One heli-mag data.

⁸ ASX Announcement 12 October 2021

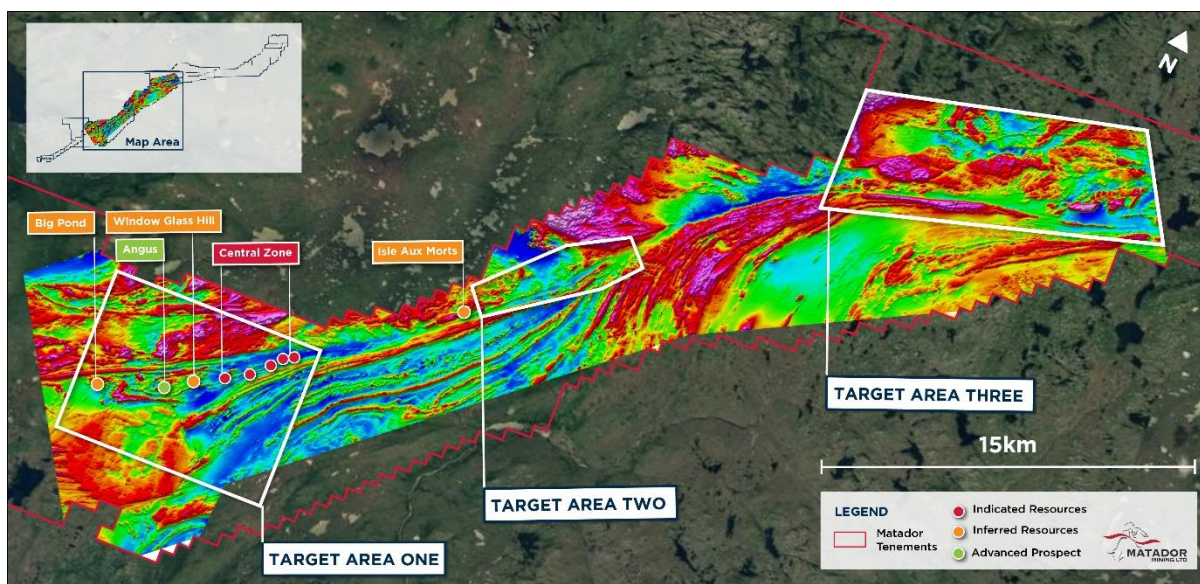


Figure 5: Phase One high resolution magnetics and preliminary greenfield targeting outcomes

Target Area One covers the majority of the existing Mineral Resources, with targets already identified at WGHG and Big Pond, as noted above under Brownfields Drilling.

Target Area Two at Benton covers a 5 kilometre long target which hosts elevated rock chip gold anomalies in boulders with peak gold values up to 191g/t Au⁹ (Figure 6). The Benton program was designed to generate multiple, well constrained, diamond drilling targets scheduled for testing in the latter part of the summer and/or winter drilling programs. Most of the Benton target area is obscured by thin to moderate glacial till cover (0.5 - 10 metres). To test this requires a combination of power auger till and basement geochemistry sampling. Structural targeting using the new detailed magnetics has resulted in a step-change in the probability of success in the area. Historically, only four diamond drill holes were drilled into the 8km² Benton gold anomaly, immediately under the boulders which carried the high-grade rock chips. However, the Company believes the area requires systematic follow-up of the positive early-stage indications of gold mineralisation in historic datasets, with work underway to identify the original source of the transported high-grade boulders.

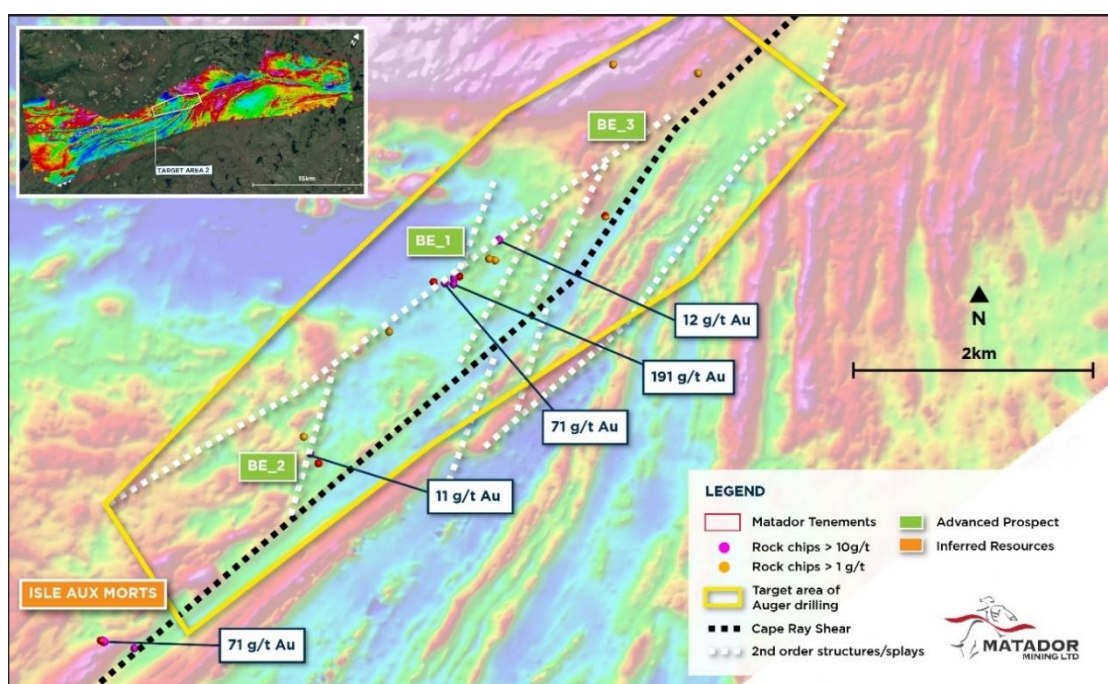


Figure 6: Target Area Two (within yellow polygon) containing the high priority BE_1-3 targets with historic rock ship samples (>1 g/t Au) up to 191 g/t Au over new detailed magnetics (TMI-RTP)

⁹ ASX announcement 29 October 2020

In Target Area Three Matador’s backpack drill sampling crews commenced a broad first-pass surface till sampling program covering a large (44km²) area of previously unexplored ground north of the Malachite Lake area. This target is located within the new claims pegged earlier this year and has been identified through analysis of the recent detailed magnetics.

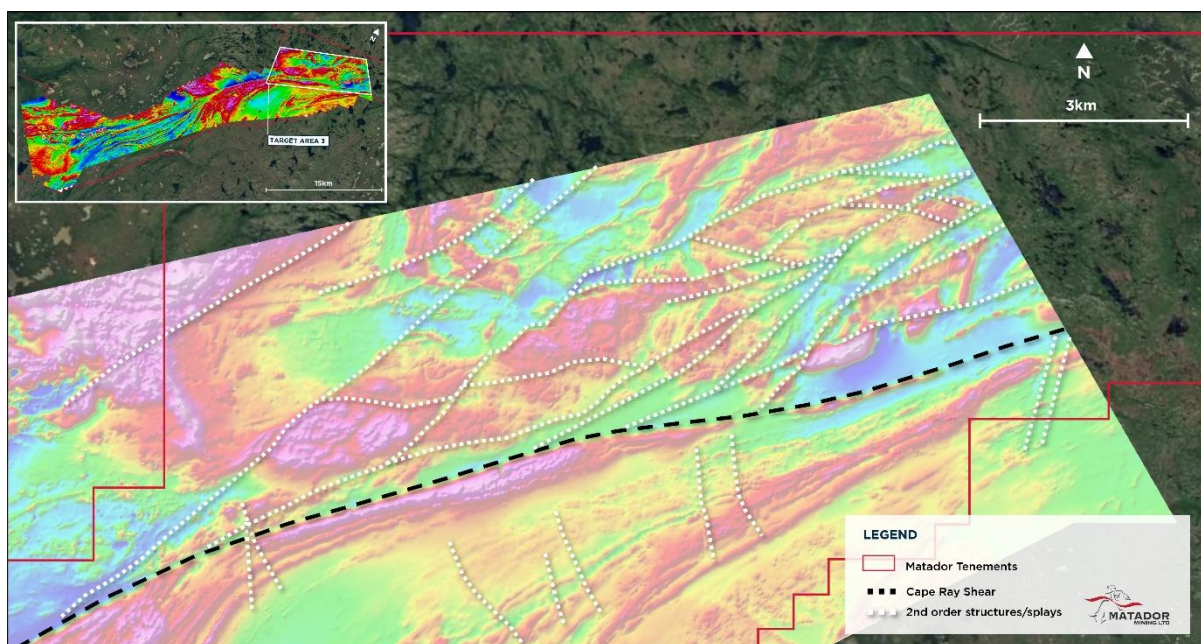


Figure 7: Target Area Three - Abundant highly prospective second and third order fault splays and cross faults (white dashed lines) of the main Cape Ray Shear Zone structure (black dashed line)

The power auger crews have now been deployed to Stag Hill (refer to Figure 1 above). This area is located 2 to 4 kilometres north-east along strike from the Central Zone Mineral Resources (526,000-ounce at 2.2g/t Au)¹⁰ on the main mineralised trend and has never been tested by diamond drilling.

Past surface geochemistry sampling (soils and tills) in this area is considered ineffective as the prospective structure is buried beneath 2 to 8 metres of transported glacial till cover with the basement rocks never having been sampled.



Figure 8: Power auger (rubber track-mounted “Winkie Rig” Mk2)

¹⁰ ASX announcement 6 May 2020

Mobile Sample Preparation Unit

The delivery by SGS Canada of a dedicated mobile sample preparation unit adjacent to the Matador core shed has resulted in a material reduction in assay turnaround times. The updated ergonomic design of the core logging facilities combined with the newly installed independent sample preparation system has resulted in assay results being returned in five to six weeks compared to the Newfoundland average of eight to ten weeks (or more). This has allowed the exploration team to quickly assess auger results and make key decisions on diamond drilling far more effectively.

With multiple rigs and crews active in the field (two diamond rigs, the multiple auger rigs and the till sampling teams), the Company anticipates strong news flow moving forward.

Environmental Assessment, Permitting and Stakeholder Engagement

Environmental baseline studies are nearing completion. These studies will form the basis for the Environmental Impact Statement (“EIS”) which remains on track for completion and submission to both Federal and Provincial regulators in the second half of 2022.

Canada has a well-defined methodology for progressing the environmental assessment and permitting process that typically incorporates an extended period of two to five years for data collection. Matador has now completed the majority of this baseline work, with reporting commencing shortly. Importantly, the work completed to date with our independent consultants indicates that the process should proceed on schedule, complying with all the required legislation.

Matador has held several meetings with the Chief and Council of the Qalipu Mi’kmaq First Nation Community (“**Qalipu**”) based in Corner Brook, and the Chief and Council of the Miawpukek Mi’kmaq First Nation Community (“**Miawpukek**”) in Conne River, regarding the Project. These were initially face-to-face meetings but as a result of COVID-19 restrictions, the later meetings were conducted virtually. For the most recent meetings in September 2021 the Company was able to return to meetings occurring in person. Community “open house” meetings are planned in the December 2021 Quarter in Port aux Basques, Isle aux Morts and Stephenville. All issues and concerns raised during these meetings will be documented and addressed in the EIS documentation.

Environment, Sustainability and Governance (“**ESG**”) performance is a key driver for the Company, with an ESG strategy currently being developed, supported by a specialist ESG consultant. The Company has already recognised and addressed several important ESG criteria including Board composition, environmental management and social engagement and will provide further updates on its ESG work as it progresses.

Newfoundland is very well positioned in relation to renewable power generation, receiving the majority of its power from hydro-electric generation, which puts it on track to achieve 98% green renewable hydro-electric power, central to its commitment to net-zero carbon emissions by 2050. Matador has met with officials from the Newfoundland Power (“**NP**”), the local power provider on the island and is working with them to identify the preferred grid connection options available for the Project.

In addition, discussions with local communities and government officials in Newfoundland have shown significant support for the Cape Ray Gold Project, with the expectation that it will be a significant source of employment and income in the future.



Figure 9: Meeting with Newfoundland Labrador Provincial Government

From left to right: Honourable Andrew Parsons, QC - Minister for Industry, Energy and Technology, Mr Ian Murray - Executive Chairman, Matador Mining, Mr Crispin Pike - Principal Geologist, Matador Mining & Honourable Siobhan Coady - Deputy Premier, Minister of Finance, President of Treasury Board, Minister Responsible for the Public Service Commission, Minister Responsible for the NL Liquor Corporation

Corporate

Cash

As at 30 September 2021, the Company had a cash balance of approximately \$17.2 million. Refer to the attached Appendix 5B for further information.

Following the \$16 million placement which was completed in June 2021, substantial shareholder notices were received from North American institutions, CI Financial (7.76%) and Franklin Templeton (5.11%). During the September 2021 Quarter, the Company spent \$3.9 million on its exploration activities at the Cape Ray Gold Project. Further information on the Company’s expenditure during the September 2021 Quarter is available in the Appendix 5B.

Share Capital

As at 30 September 2021, the Company had 214,113,997 ordinary fully paid shares on issue.

During the Quarter, 3,256,250 unlisted options, exercisable at \$0.23 with an expiry date of 2 July 2022, were exercised for proceeds of \$726,937.

Payments to Related Parties

During the Quarter, the Company made payments to related parties of \$106,000, which related entirely to payments for directors’ fees and the salary of the Executive Chairman.

Investor Relations

During the Quarter, the Company attended in-person at the Diggers and Dealers conference in Kalgoorlie and the Precious Metals Summit in Beaver Creek, Colorado.

Tenement Interests

There was no change to the Company's tenement interests during the Quarter. Table 1 below shows the Company's tenement interests as at 30 September 2021.

Table 1. Tenement interests as at 30 September 2021

Licence	Holder	Location
025560M	Cape Ray Mining Limited	Isle Aux Morts, Southern NL
025855M	Cape Ray Mining Limited	Cape Ray, Southern NL
025856M	Cape Ray Mining Limited	Cape Ray, Southern NL
025857M	Cape Ray Mining Limited	Cape Ray, Southern NL
025858M	Cape Ray Mining Limited	Cape Ray, Southern NL
026125M	Cape Ray Mining Limited	Garia Brook, Southern NL
030881M	Cape Ray Mining Limited	La Poile River, Southern NL
030884M	Cape Ray Mining Limited	La Poile River, Southern NL
030889M	Cape Ray Mining Limited	La Poile River, Southern NL
030890M	Cape Ray Mining Limited	La Poile River, Southern NL
030893M	Cape Ray Mining Limited	La Poile River, Southern NL
030996M	Cape Ray Mining Limited	Grand Bay River, Southern NL
030997M	Cape Ray Mining Limited	Grand Bay River, Southern NL
031557M	Cape Ray Mining Limited	Isle Aux Morts, Southern NL
031558M	Cape Ray Mining Limited	Isle Aux Morts, Southern NL
031559M	Cape Ray Mining Limited	Isle Aux Morts, Southern NL
031562M	Cape Ray Mining Limited	Isle Aux Morts, Southern NL
032060M	Cape Ray Mining Limited	Isle Aux Morts, Southern NL
032061M	Cape Ray Mining Limited	Isle Aux Morts, Southern NL
032062M	Cape Ray Mining Limited	Isle Aux Morts, Southern NL
032764M	Matador Canada Pty Ltd.	Hermitage, Southern NL
032770M	Matador Canada Pty Ltd.	Hermitage, Southern NL
032818M	Matador Canada Pty Ltd.	Hermitage, Southern NL
032940M	Matador Canada Pty Ltd.	Isle Aux Morts, Southern NL
032941M	Matador Canada Pty Ltd.	Isle Aux Morts, Southern NL
033080M	Matador Canada Pty Ltd.	La Poile River, Southern NL
033083M	Matador Canada Pty Ltd.	Isle Aux Morts, Southern NL
033085M	Matador Canada Pty Ltd.	Isle Aux Morts, Southern NL
033110M	Matador Canada Pty Ltd.	Hermitage, Southern NL

Table 2. Mineral Resource Estimate – May 2020

Cape Ray Gold 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	0.5	All	-	-	-	-	-	0.1	5.30	3	19	12	0.1	5.30	3	19	12
WGH	0.25	All	-	-	-	-	-	4.7	1.55	10	232	1,455	4.7	1.55	10	232	1,455
Total			3.5	3.15	8	356	918	9.4	1.60	7	481	2,094	12.9	2.02	7	837	3,012

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/m³ 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.

This Quarterly Activities Report has been authorised for release by the Company's Board of Directors.

To learn more about the Company, please visit www.matadormining.com.au, or contact:

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Reference to Previous ASX Announcements

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 the original market announcements.

In relation to the Mineral Resource estimate announced on 6 May 2020 (see Table 2), Matador confirms that it is not aware of any new information or data that materially affects the information included in that announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimate in the announcement of 6 May 2020 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 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.

About the Company

Matador Mining Limited (ASX: MZZ; OTCQX: MZZMF; FSE: MA3) 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). The Company is currently undertaking the largest exploration program carried out at Cape Ray, with upwards of 45,000 metres of diamond drilling planned, targeting brownfield expansion and greenfields exploration. Matador acknowledges the financial support of the Junior Exploration Assistance Program, Department of Industry, Energy and Technology, Provincial Government of Newfoundland and Labrador, Canada.

