ASX Announcement | 21 March 2022
Hexagon Energy Materials Limited (ASX: HXG)

Three Ni-Cu-PGE "Drill-ready" targets confirmed at McIntosh through 2021 soil sampling program review.

Results of up to 3.63g/t 3PGE (Pd+Pt+Au) returned.

Highlights:

- **Outstanding results have been achieved through Hexagon's 2021 ultrafine fraction soil sampling program. Including results of up to 3.63g/t 3PGE (Pd+Pt+Au).**
- **Significant results included:**
  - **MIS00399 @ 3.63g/t 3PGE, 0.35% Cu, 0.18% Ni,**
  - **MIS00746 @ 3.01g/t 3PGE, 0.27% Ni, and**
  - **MIS01712 @ 3 g/t 3PGE, 0.24% Ni.**
- **Geochemical assessment of 2021 assay data has been completed by Dr. Dennis Arne, of Telemark Geosciences Pty Ltd, identifying three high priority "Drill-ready" Ni-Cu-PGE targets within the greater Melon Patch Prospect area.**
- **A further 17 highly prospective Ni-Cu-PGE targets have been identified across both the greater Melon Patch, Melon Patch North and Mabel Hill prospects. Further soil sampling (geochemical), geological mapping and geophysical work recommended and is planned for the upcoming 2022 field season.**
- **Unlocking Ni-Cu-PGE value at the McIntosh Project is core to Hexagon's future energy materials strategy capitalising on the global shift to cleaner technologies.**
  - **March 2022 has seen high-grade Nickel prices reach 20-year record highs of US$100,000 a tonne[1].**
  - **The fastest-growing market for high-grade Nickel is for use in Lithium-Ion batteries in electric vehicles. Electric cars make up 10% of cars in the market globally today, this is forecast to reach 25% by 2030 and 80% by 2050.[2,3]**
- **These results support the systematic exploration approach that Hexagon is taking in unlocking Ni-Cu-PGE value at McIntosh.**

Hexagon Energy Materials Ltd (ASX: HXG; "Hexagon" or "the Company") is pleased to announce significant results have been achieved through the Ni-Cu-PGE geochemical assessment of 5,062 Ultra-Fine Fraction (UFF) soil samples collected during the 2021 field season at McIntosh, in the Kimberley, Western Australia.

[1] Source: Financial Times, 8 March 2022. https://on.ft.com/3IUT6GH "Chinese metals tycoon faces steep losses on nickel price surge",
[2] IEA. (2022) Electric cars fend off supply challenges to more than double global sales. International Energy Agency
[3] https://www.statista.com/statistics/1202364/ev-global-market-share/

The outstanding results include raw assay values of up to 3.63 g/t 3PGE (Pd+Pt+Au).

The assessment, completed by Dr. Dennis Arne, Director of Telemark Geosciences Pty Ltd (HXG ASX Announcement 16 December 2021), has identified 20 ranked target areas (Figure 1 and Table 1) which cover both the greater Mabel Hill, Melon Patch North and Melon Patch prospects including three high priority "Drill-ready" targets.

The geochemical assessment included review of the 2021 UFF soil sample data (ICP-MS geochemistry and hyperspectral). The assessment was aimed at identifying areas of interest for further geological assessment for (but not limited to) Ni-Cu-PGE mineralisation.

McIntosh lies within 30 km of recorded Ni-Cu-PGE occurrences and substantial deposits including the +2 Moz Panton PGM Project[4] owned by Future Metals Limited (ASX: FME) and Panoramic Resources Limited's (ASX: PAN) Copernicus Ni-Cu Deposit. Mcintosh lies regionally within the same geological setting as Panoramic Resources Limited's Savannah and Savannah North Ni-Cu operations[5].

Hexagon's Managing Director, Merrill Gray, said

"*The 2021 UFF soils program covered an area of approximately 50km^2 within our overall project area which covers 480km^2. These results confirm the Ni-Cu-PGE potential at McIntosh. We are excited about the drilling program planned for 2022 which includes the three "Drill-ready" targets this work identified.*

With a further program of geophysical, geological mapping and geochemical work now being planned, additional "Drill-ready" targets across the 17 other priority targets are likely to be defined. These results validate the systematic approach that the Hexagon exploration team has taken at McIntosh over the past two years.

These results couldn't have come at a better time given market interest in Nickel and PGE's." (HXG ASX Announcements: - 28 June 2021, 19 August 2021, 12 October 2021, 11 November 2021).

1. Executive Summary

Figure 1 shows the three "Drill-ready" targets and the additional areas of interest identified through the UFF 2021 soil sample assessment now completed.

The 2021 UFF soils program was designed on a 100m x 100m offset grid with 5,170 samples collected over the Melon Patch, Melon Patch North and Mabel Hill prospects. A total of 5,062 samples were analysed.

Dr. Dennis Arne has undertaken a fully integrated geochemical review of the Geochemical data from the 5,062 samples with a 52-element suite and hyperspectral minerology. This resulted in a series of ranked variable thematic maps, gridded percentile images, RGB thematic maps and weighted sums models being generated for Ni-Cu-PGE, Cu-Mo-Au, and Au-As-Sb-W. This approach resulted in 20 ranked geochemical areas of interest being identified, including three high priority "Drill-ready" target areas as shown in Figure 1.

At each of the prospects, the sampling was designed to test areas of Panton Sill Intrusive and/or the Wild Dog Creek Gabbro/Panton Sill equivalents and their related contacts with the Tickalara Metamorphics. While a number of geological models are being used to guide exploration (refer Appendix 1), Hexagon is amongst the first to focus on remobilised mineralisation at these contact zones.

[4] Source: Future Metals NL, ASX Announcement 8 Dec 2021 - 14.32Mt @ 4.89g/t PGM JORC resources are reportedly at the Panton PGM Project (https://www.investi.com.au/api/announcements/fme/d9bd9306-593.pdf)

[5]Source: Panoramic Resources Ltd, ASX Announcement 22 July 2021 – 13.45Mt @1.56%Ni, 0.70% Cu and 0.10% Co JORC mineral resources are reportedly at Savannah and Savannah North Ni-Cu Operations (https://wcsecure.weblink.com.au/pdf/PAN/02397802.pdf)

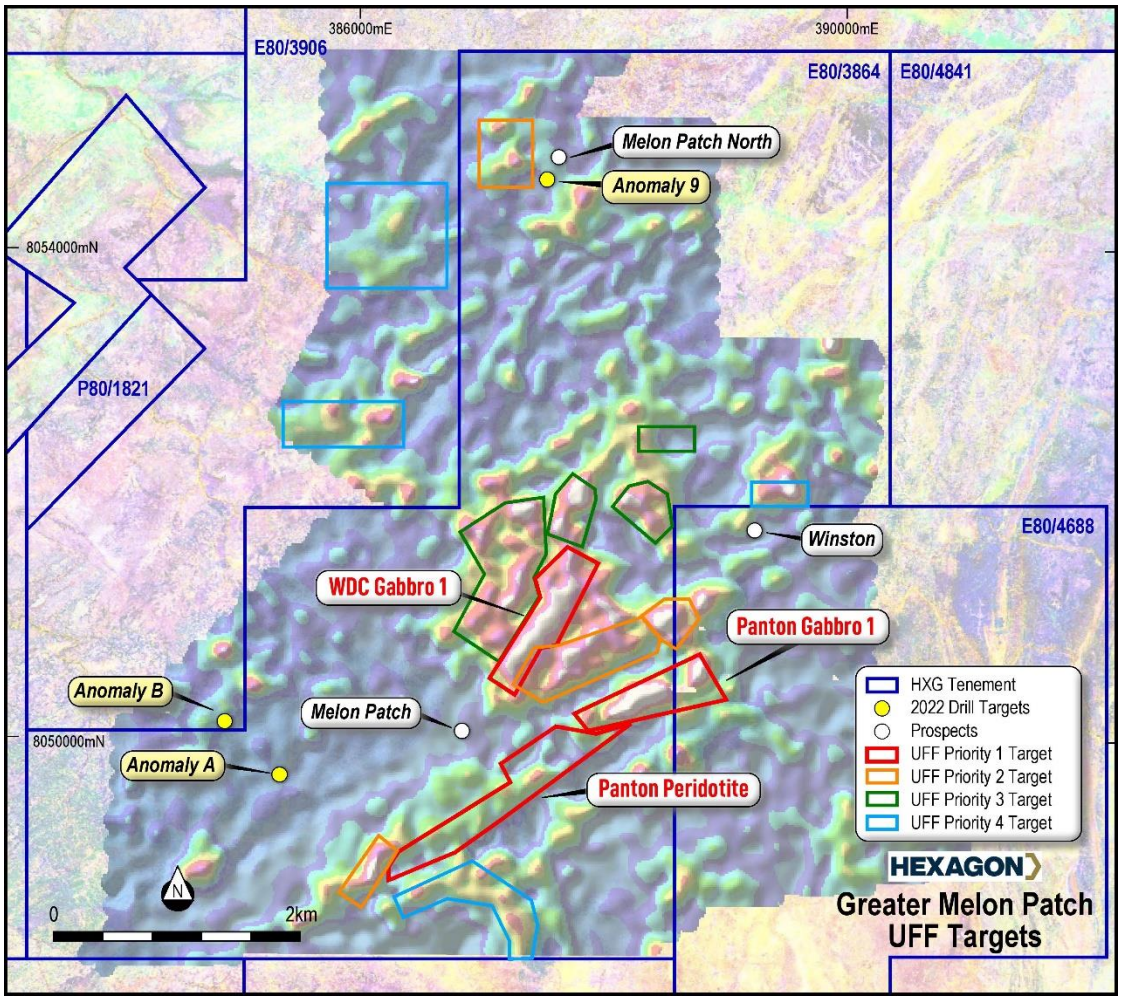

Figure 1 – Ranked UFF priority target area over the Greater Melon Patch prospect area with the Level Pt-Pd by simplified bedrock lithology.

2. Panton Peridotite Targets

Panton Peridotite targets lie within the greater Melon Patch prospect area (refer Figure 2). They were identified as part of the historic geochemical review completed in 2021 by Hexagon over the McIntosh Project area (HXG ASX Announcement 28 June 2021 and 2 February 2022 and Appendix 1).

This review has further highlighted the potential of the Melon Patch area where there is a levelled Pt+Pd UFF soil anomaly stretching 2.3 kilometres in strike and up to 350 metres in width. Anomalies recorded in multiple samples at Melon Patch include anomalous levels Ni, Cu, Ag & PGE with raw assay data including MIS0399 @ 3.63g/t 3PGE, 0.35% Cu, 0.18% Ni & MIS0146 @ 3.01 g/t 3PGE, 0.27% Ni (Figure 3 & Table 2).

Figure 3 shows, on a more granular basis, the location and spacing of the UFF soil program results received in this target area.

Historic drilling completed to date in this area has consisted of nine holes drilled in four sections at ~500m line spacing (Figure 2). This defined two semi-continuous peridotite (Panton Suite) hosted chromite seams with 3PGE (Pt+Pd+Au) grades including SMP002: 1m @ 1.00g/t 3PGE and SMP006: 20m @ 0.75g/t 3 PGE (Figure 4) (HXG ASX Announcement 2 February 2022). Drilling in the area has been limited to the northern western trending contact of the newly defined anomaly, with the south western portion of the anomaly remaining untested (Figure 2).

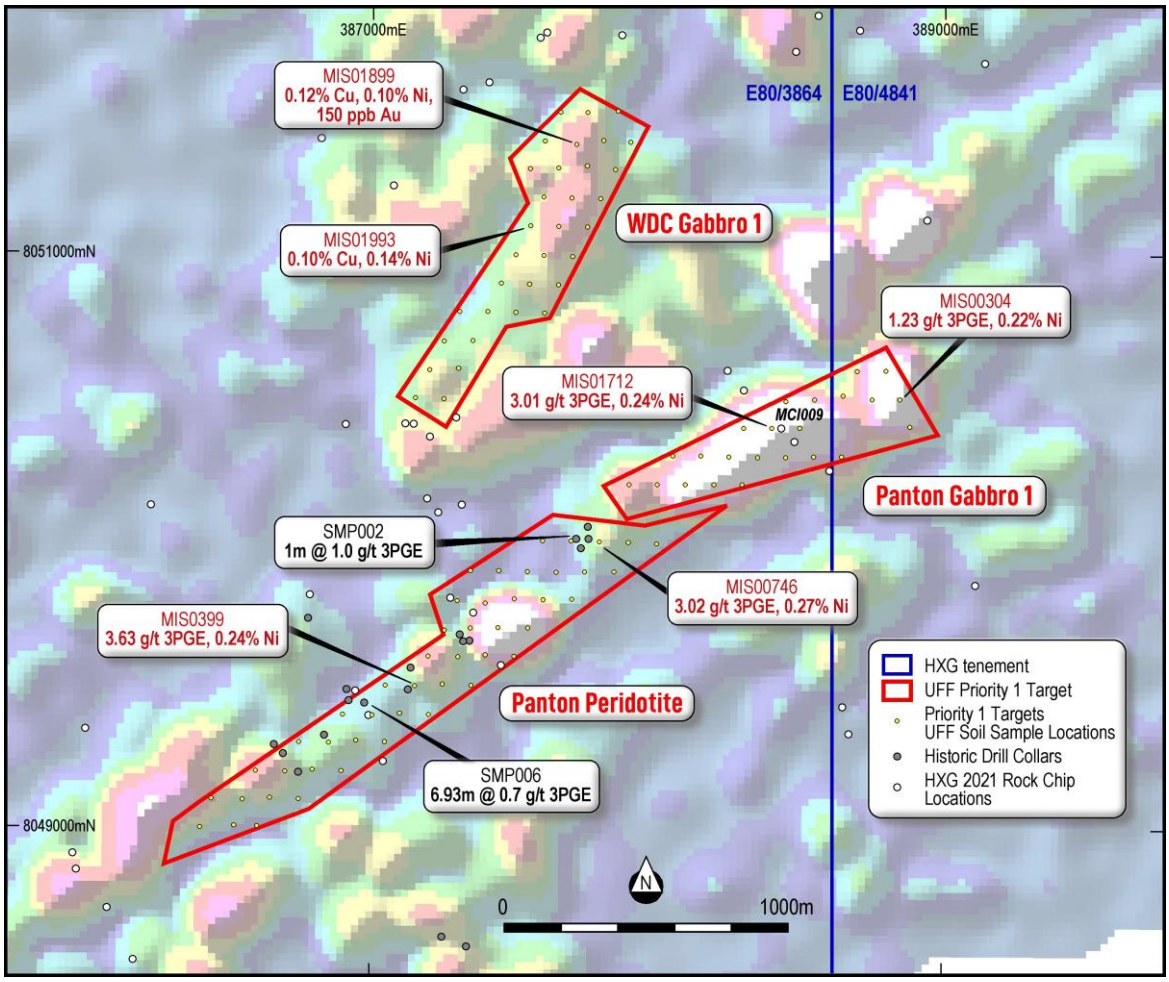

Figure 2 – UFF Priority 1 "Drill-ready" targets, with highlighted significant UFF assay results and previously reported historic drill intercepts.

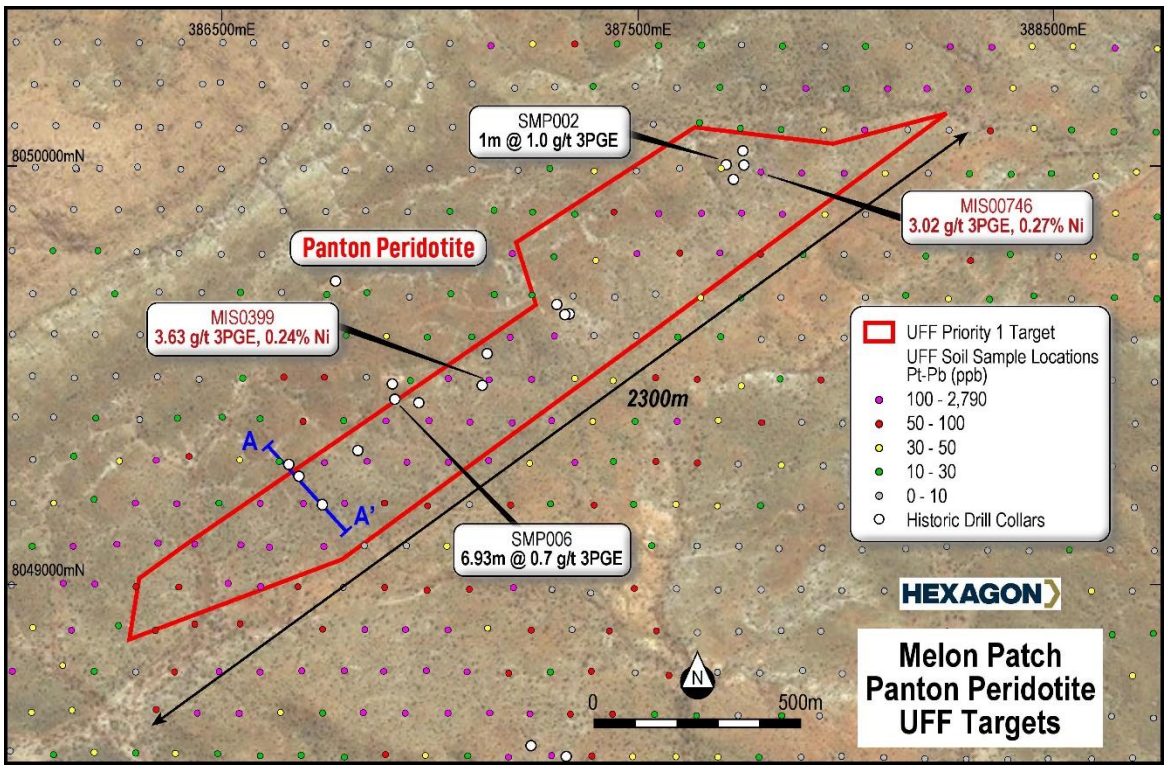

Figure 3 – UFF results across the Panton Peridotite area

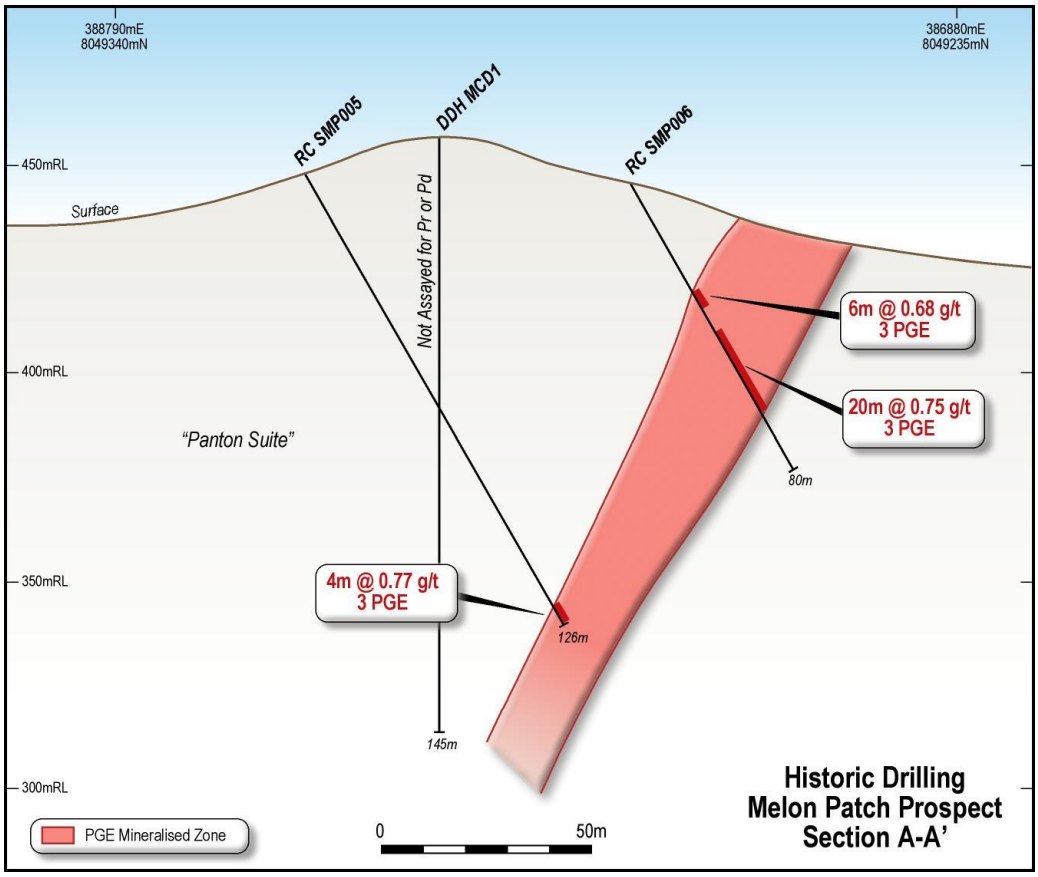

Figure 4 - Section A-A from Melon Patch prospect showing significant 3PGE intercepts, modified from WAMEX Report A73148

3. Panton Gabbro 1 Target

The Panton gabbro target lies directly to the NE of the Panton Peridotite target, set out in Section 2 above, within the greater Melon Patch prospect. It consists of a levelled Ni-Cu-Au, with elevated PGE, UFF soil anomaly striking 1.1 kilometres and up to 350 metres in width (refer Figure 2). With raw assay data including MIS01712 @ 3 g/t 3PGE, 0.24% Ni & MIS00304 1.23g/t 3PGE, 0.22% Ni (Table 2).

No known drilling has been undertaken within this anomaly.

Rock chip sample MCI009 taken during the 2021 field season (HXG ASX Announcement 19 August 2021) contained elevated Ni and PGE. It sits within the newly defined anomaly and has been interpreted to be derived from a mafic source (Table 2).

4. Wild Dog Creek (WDC) Gabbro 1 Target

The WDC Gabbro 1 Target lies within the greater Melon Patch prospect. It consists of a levelled Ni-Cu-Au UFF soil trending anomaly with a strike length of 1.25 kilometres and up to 320 metres in width (refer Figure 2). With raw assay data including MIS01899 @ 0.12% Cu, 0.10% Ni, 150ppb Au and MIS01993 @ 0.10% Cu, 0.14% Ni (Table 2).

5. More 2021 UFF Soil Sampling Program Results to come

Hexagon's UFF soils program was conducted as part of a larger UFF soil geochemistry research program that the CSIRO is conducting. This program uses machine learning combined with the UltraFine+^{TM} workflow processes developed by the CSIRO that separate the <2 µm "ultrafine" soil fractions for multi-element analysis, while taking into consideration commonly not used, physico-chemical parameters including spectral mineralogy, pH, EC and particle size distribution.

This new method delivers more reproducible, reliable results, with 100-250% increased detection of concentrations of Au, Cu and Zn than from standard <250 µm fraction analysis and removes the "nugget effect" in analytical results.

All data from the 2021 UFF soil program is now with the CSIRO research team, with their interrogation and outcomes from using the machine learning due to be reported during Q2 FY2022/23. Data generated through planned new soils work during the 2022 field season at McIntosh will also be incorporated into the CSIRO's research program.

6. Next Steps for Ni-Cu-PGEs at McIntosh

First pass Reverse Circulation (RC) drilling programs will now be progressed for the three Priority 1 target/"Drill-ready" areas and be incorporated into the 2022 field season program of work.

As a result of the success of the UFF soil program a further infill soil sampling program will take place on a number of lower priority target areas to further increase confidence levels prior to decisions to drill being made.

Entirely new UFF soil sampling programs will be undertaken at the Willis, Panton North and the actual McIntosh prospects. A sampling contractor has been engaged and is expected on site by early May 2022 to do this work. In addition, an Inverse Polarisation (IP) geophysical crew are due on site in mid-April to collect data that infills the lines at the "Anomaly A" target previously run (HXG ASX 11 November 2021 announcement).

All dates are subject to the conclusion of the current wet season.

All statutory approvals have been or are being submitted in relation to the 2022 field program by the Company with outcomes expected in Q4 FY 2021/22.

In addition, on 14 February 2022 Hexagon signed a Binding Terms Sheet Earn-In Agreement with Green Critical Minerals Pty Ltd (Green Critical Minerals). This Agreement will bring further exploration funding and expertise to the McIntosh Project's Graphite resources, leveraging off past investments made by Hexagon. It will result in exploration and drilling data sharing and exploration resource sharing during the field seasons.

On an Initial Public Offering or Reverse Take Over being achieved by Green Critical Minerals by September 2022, a total of $500,000 cash ($300,000 on listing of the farm-in entity + $200,000 on the first anniversary of listing) is to be paid to Hexagon. In addition, $3,000,000 of exploration expenditure over four years is required to be invested by Green Critical Minerals at McIntosh to secure 80% of the Graphite mineral rights over McIntosh Project and Hexagon being free carried to decision to mine.

7. Co-funding for drilling secured through Round 24 of the Western Australian Government Exploration Incentive Scheme (EIS)

Hexagon successfully applied for and secured funding through the Western Australian Government's Exploration Incentive Scheme to co-fund drilling at McIntosh. A total of $100,000 has been secured. The funding will be used to cover part of the cost of drill testing Anomaly 22 during the upcoming drilling program. (HXG ASX Announcement 11 November 2021).

8. Hexagon moving forward overall

Unlocking Ni-Cu-PGE value at the McIntosh Project is core to Hexagon's future energy materials strategy, supporting the global shift to cleaner technologies. The 2022 field season drilling program is the key next step for Hexagon.

Past McIntosh drill core that was being held in Hexagon's warehouse, collected during Hexagon's Graphite focussed drilling programs, completed between 2015 and 2019, potentially containing Nickel and Copper mineralisation (logged at the end of drill hole THGDD178 below the current Wahoo graphite deposit (HXG ASX Announcement 2 February 2022)) has now been resampled and is currently being analysed for Ni-Cu-PG, with results expected shortly.

Across the rest of Hexagon's portfolio of assets, commercial negotiations with parties in relation to the Halls Creek Gold and Base Metals ground holdings are continuing, as are negotiations in relation to the key components of the WAH_2 Future Energy/Clean Hydrogen project (HXG ASX Announcement 7 March 2022).

Table 1: Showing ranked UFF geochemical targets, ranking rationale and target mineralisation type.

Target Name	Prospect	East	North	Grid	Ranking	Ranking Rationale	Mineralisation Type
Panton Gabbro 1	Greater Melon Patch	387802	8050197	MGA94_52	1	Multiple samples with anomalous levelled Ni, Cu, Au & PGE	Magmatic Ni-Cu-Co-PGE-Au
WDC Gabbro 1	Greater Melon Patch	387725	8051584	MGA94_52	1	Linear trend of mainly elevated levelled Ni with some Au & PGE; area of elevated Cr	Magmatic Ni-Cu-Co-PGE-Au
Rose Bore Granite 1	Greater Melon Patch	388501	8051163	MGA94_52	2	Elevated levelled Ni, Cu, Au, Co & PGE near NW-trending fault	Magmatic Ni-Cu-Co-PGE-Au
Rose Bore Granite 2	Greater Melon Patch	387469	8050757	MGA94_52	2	Elevated levelled Ni, Cu, Au, Co, Cr & PGE	Magmatic Ni-Cu-Co-PGE-Au
WDC Gabbro 2	Greater Melon Patch	387773	8052169	MGA94_52	3	Elevated levelled Ni, Cu, Au, Co, Cr & PGE	Magmatic Ni-Cu-Co-PGE-Au
Panton Gabbro 2	Greater Melon Patch	386199	8049221	MGA94_52	2	Elevated levelled Ni, Cu, Au, Co & PGE	Magmatic Ni-Cu-Co-PGE-Au
Panton Gabbro 3	Greater Melon Patch	389235	8051954	MGA94_52	4	Elevated levelled Ni, Cu, Au, Co, Cr & PGE	Magmatic Ni-Cu-Co-PGE-Au
Sally Downs 1	Greater Melon Patch	385762	8053677	MGA94_52	4	Elevated Cu and Mo without Ni, peripherally elevated Pb and Zn	Porphyry Cu
WDC Gabbro 3	Greater Melon Patch	388366	8052128	MGA94_52	3	Elevated levelled Ni, Cu, Au, Co & PGE	Magmatic Ni-Cu-Co-PGE-Au
Mabel Hill 1	Greater Mabel Hill	378042	8044732	MGA94_52	3	Elevated levelled Ni, Cu, Au, Co & PGE associated with WDC gabbro & Tickalara Metamorphics	Magmatic Ni-Cu-Co-PGE-Au
WDC Gabbro 4	Greater Melon Patch	386841	8051707	MGA94_52	3	Elevated levelled Ni, Cu, Au, Co & PGE in WDC Gabbro	Magmatic Ni-Cu-Co-PGE-Au
Sally Downs 2	Greater Melon Patch	385413	8052409	MGA94_52	4	Elevated levelled Au, As, Sb & W on east-west trend	Orogenic Au
Mabel Hill 2	Greater Melon Patch	377333	8044072	MGA94_52	4	Elevated levelled As, Sb & W; weak Au	Orogenic Au
Arenite 1	Greater Melon Patch	386948	8049017	MGA94_52	4	Elevated raw Cu, Ni, Co, Cr, Au, PGE	Magmatic Ni-Cu-Co-PGE-Au
Panton Peridotite	Greater Melon Patch	386309	8049022	MGA94_52	1	Elevated raw Cu, Ni, Co, Cr, Au, PGE	Magmatic Ni-Cu-Co-PGE-Au
Panton Gabbro 4	Greater Melon Patch	386987	8054526	MGA94_52	2	Elevated levelled Ni, Cu, Au, Co & PGE with Cu & Pt-rich gossan	Magmatic Ni-Cu-Co-PGE-Au
Mabel Hill 3	Greater Mabel Hill	375529	8043905	MGA94_52	4	Weakly elevated levelled Ni, Cu, Au, Co & PGE	Magmatic Ni-Cu-Co-PGE-Au
Mabel Hill 4	Greater Mabel Hill	378401	8047806	MGA94_52	3	Elevated levelled Ni, Cu, Au, Co & PGE in Tickalara Metamorphics	Magmatic Ni-Cu-Co-PGE-Au
Mabel Hill 5	Greater Mabel Hill	380180	8046878	MGA94_52	4	Weakly elevated levelled Ni, Cu, Au, Co & PGE in Wild Dog Creek Gabbro	Magmatic Ni-Cu-Co-PGE-Au
Mabel Hill 6	Greater Mabel Hill	376195	8045525	MGA94_52	4	Weakly elevated levelled Ni, Cu, Au, Co & PGE in Wild Dog Creek Gabbro	Magmatic Ni-Cu-Co-PGE-Au

*Table 2: Location of significant UFF soils raw assay results (>1gt 3PGE), * denotes UFF soils samples with raw assay >0.1%Ni at WDC Gabbro target and MCI009 documented in text.*

Sample ID	Sample Type	East	North	Grid	Depth (m)	Au g/t	Cu pct	Ni pct	Pd g/t	Pt g/t	3- PGE
MIS00399	UFF	386853	8049301	MGA94_52	0.2	1.24	0.35	0.19	2.03	0.36	3.63
MIS00746	UFF	387800	8050001	MGA94_52	0.2	0.23	0.07	0.28	2.54	0.25	3.02
MIS01712	UFF	388401	8050399	MGA94_52	0.3	1.07	0.03	0.24	1.69	0.25	3.01
MIS00251	UFF	388850	8051100	MGA94_52	0.3	0.54	0.04	0.33	1.66	0.18	2.37
MIS00382	UFF	386701	8049200	MGA94_52	0.2	0.67	0.09	0.27	1.16	0.33	2.15
MIS00666	UFF	387249	8049500	MGA94_52	0.1	0.33	0.04	0.30	0.76	0.30	1.39
MIS00688	UFF	387701	8049800	MGA94_52	0.1	0.12	0.05	0.24	1.07	0.14	1.33
MIS00304	UFF	388849	8050501	MGA94_52	0.15	0.41	0.04	0.23	0.60	0.22	1.23
MIS01227	UFF	384751	8048903	MGA94_52	0.15	0.24	0.12	0.24	0.88	0.10	1.23
MIS00654	UFF	387003	8049400	MGA94_52	0.2	0.42	0.08	0.37	0.53	0.26	1.22
MIS00383	UFF	386800	8049201	MGA94_52	0.2	0.08	0.03	0.33	0.95	0.18	1.21
MIS00683	UFF	387447	8049698	MGA94_52	0.2	0.05	0.01	0.18	1.05	0.11	1.20
MIS00668	UFF	387052	8049500	MGA94_52	0.1	0.16	0.04	0.20	0.88	0.16	1.20
MIS03038	UFF	387300	8054701	MGA94_52	0.2	0.20	0.87	0.67	0.78	0.15	1.13
MIS00598	UFF	387248	8048501	MGA94_52	0.3	0.16	0.06	0.24	0.82	0.14	1.12
MIS00601	UFF	387402	8048401	MGA94_52	0.2	0.07	0.01	0.19	0.87	0.16	1.09
MIS01005	UFF	388252	8050301	MGA94_52	0.2	0.29	0.11	0.22	0.61	0.19	1.09
MIS00656	UFF	387202	8049395	MGA94_52	0.1	0.11	0.02	0.39	0.77	0.20	1.08
MIS01711	UFF	388499	8050401	MGA94_52	0.2	0.19	0.07	0.21	0.62	0.19	1.01
MIS00307	UFF	386652	8049099	MGA94_52	0.2	0.20	0.03	0.18	0.64	0.16	1.00
MIS01899*	UFF	387711	8051387	MGA94_52	0.15	0.15	0.12	0.10	0.09	0.03	0.28
MIS01993*	UFF	387501	8050999	MGA94_52	0.15	0.02	0.10	0.14	0.02	0.02	0.05
MCI009	Rock	388433	8050401	MGA94_52	-	-	-	0.09	0.06	0.07	0.13

APPENDIX 1 - BACKGROUND

A. Historic Exploration Data compilation and interpretations that have been completed for McIntosh

In June 2021 (HXG ASX Announcement 28 June 2021) Hexagon announced that it had completed a historic geochemical data review and regional structural reinterpretation at McIntosh.

The multifaceted review highlighted several high priority Ni-Cu-PGE targets, including the Melon Patch North, Mabel Hill, Jackal and Hyena Prospects (Figure 5).

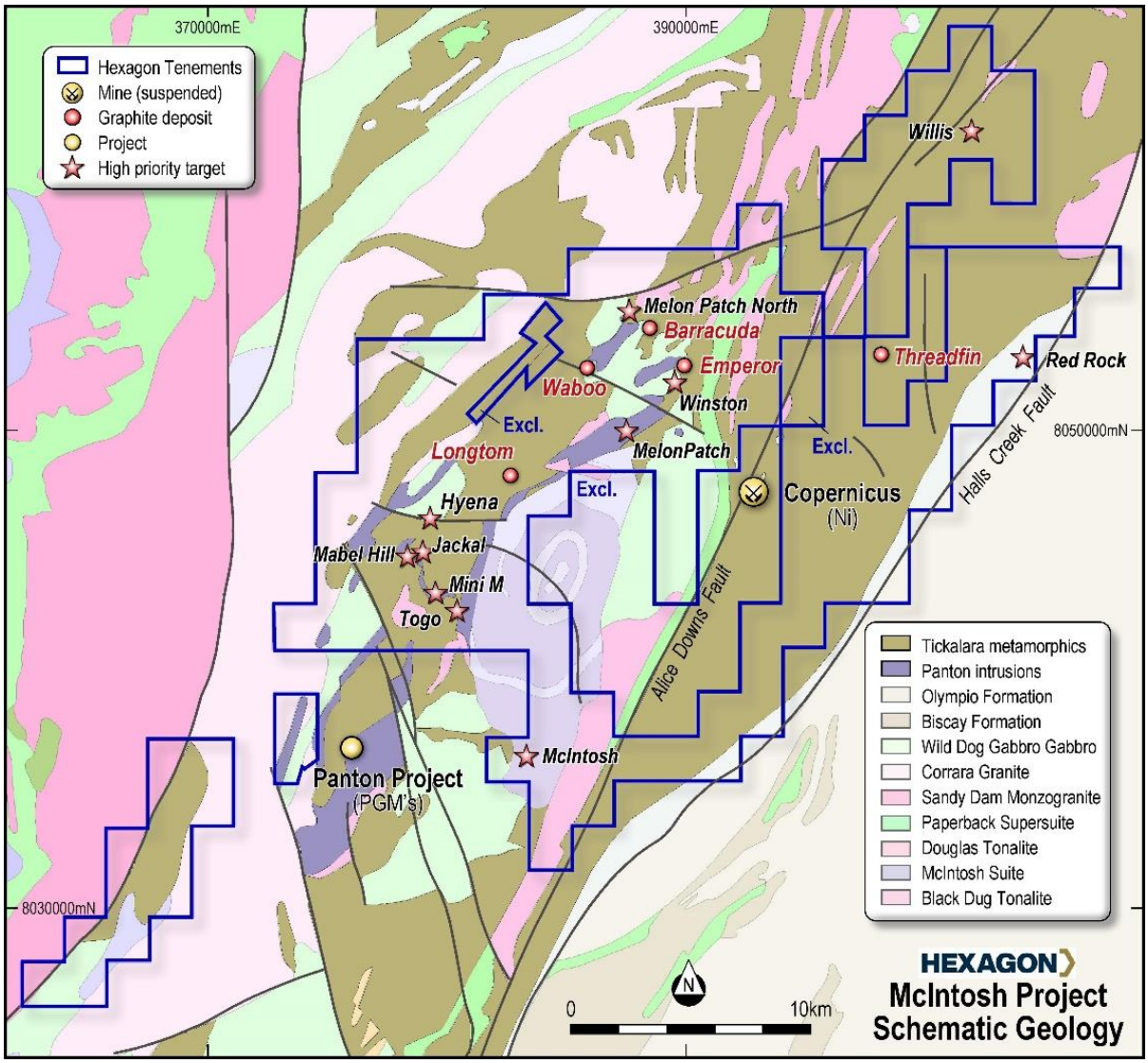

Figure 5 - McIntosh Project with location of Graphite deposits and current Ni-Cu-PGE prospects

The review involved the identification and digitisation of 29,558 geochemical samples, information from 70 drillholes and information extracted from around 388 WAMEX historical reports generated between 1967 to 2018 (refer to Figure 6).

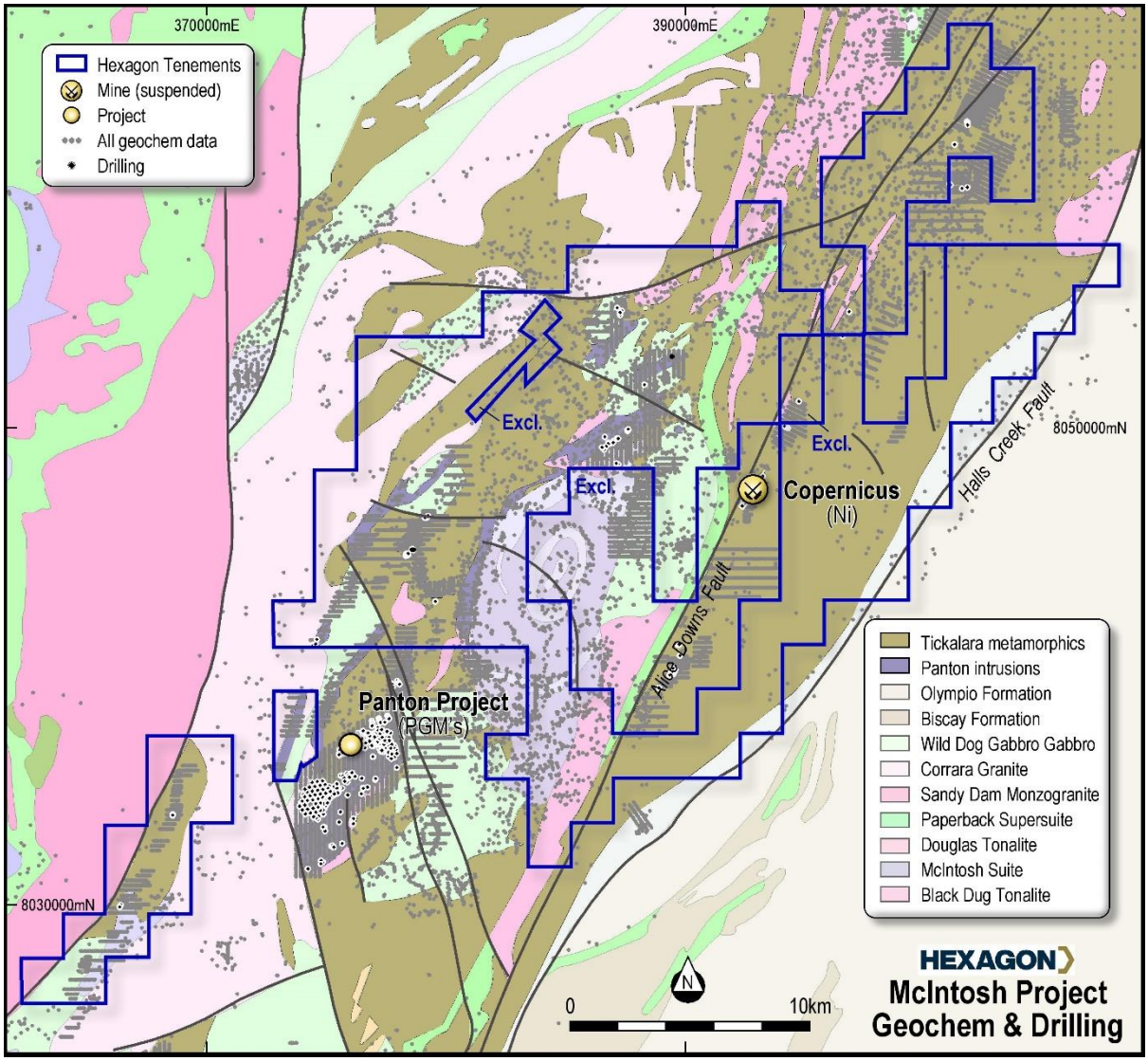

Figure 6: Collated Geochemical Sampling and drilling over the Hexagon Tenement Area

Hexagon's extensive tenement land holding enabled a regional scale as well as prospect scale interrogation of the area's potential to host further Ni-Cu-PGE mineralisation to take place.

The McIntosh Project lies within the central Halls Creek Orogenic zone, Lamboo Complex, which includes the prospective large McIntosh mafic-ultramafic intrusive complex located immediately west of the Alice Downs fault and further west of the cratonic scale Halls Creek fault. The McIntosh intrusion may also be the source of the Panton mafic-ultramafic intrusive stratigraphy mapped throughout the McIntosh Project area.

Historical exploration largely focused on NE-SW striking Panton stratigraphy with follow-up of historical mapped gossans, with work generally comprising of soil sampling, electromagnetic geophysical surveys and only limited drilling.

The desk top structural review completed by Hexagon has highlighted the NW-SE trending faults which transect the McIntosh Intrusive complex into surrounding stratigraphy which is thought to have occurred during anti-clockwise rotation of the McIntosh complex. Coincidentally significant geochemical anomalism and alteration was also observed along these NW-SE (to WNW-ESE) fault systems suggesting potential remobilisation of mineralised fluids from the McIntosh Intrusive. Including into the Panton stratigraphy but also along contacts, such as Wild Dog Creek Gabbro and Tickalara sediments. It is mineralisation at these contacts that is the focus by the Hexagon team.

The McIntosh Project area has proven Ni-Cu-PGE mineralisation potential. An historical drill intersection within mapped Panton Suite contained: **20 m @ 0.75 g/t 3PGE.**

Other intersections were also recorded (HXG ASX Announcement 2 February 2022).

McIntosh lies within 30 km of known Ni-Cu-PGE occurrences and substantial deposits including the +2 Moz Panton PGM Project[6] owned by Future Metals Limited (ASX: FME) and Panoramic Resources Limited (ASX: PAN) Copernicus Ni-Cu Deposit and regionally includes Panoramic Resources' Savannah and Savannah North Ni-Cu operations[7].

B. Exploration Models used to Guide Ni-Cu-PGE Exploration at McIntosh

Following discovery of the Sally Malay/Savannah deposit, a Voisey's Bay[8] style exploration model (potential for massive Ni-Cu sulphide mineralisation) was adopted to guide historic exploration data interpretations and drill targeting over the McIntosh Project area. This approach was based on the many similarities that the deposits share including age, tectonic setting, mineralisation suite and intrusion styles. Similarly, a Stillwater/Bushveld Complex "reef" type PGE mineralisation model was applied to Panton Sill and equivalents (WDG) based on PGE bearing chromitites and associated harzburgitic sequences.

Exploration in the 1980s also defined mineralisation at the Copernicus deposit and Eileen Bore, that showed fault-controlled remobilisation of Ni-Cu-Co mineralisation.

A further potentially applicable exploration model being pursued by Hexagon at McIntosh is a larger, lower grade disseminated Ni sulphide deposit, such as that seen at Santa Rita Ni deposit in Brazil held by Atlantic Nickel Ltd[9], and Selebi Phikwe Ni deposit in Botswana, held by Premium Nickel Resources[10]. These are both examples, within similar age, high grade metamorphic terranes, of large, low grade mafic to ultramafic hosted deposits.

In addition, the Uitkomst Complex in South Africa is considered analogous to geology mapped at the McIntosh Project. The Uitkomst Complex is a satellite Bushveld age (2.05–2.06 Ga) mafic to ultramafic layered complex that displays an "inverted" sequence of mafics that become progressively ultrabasic upwards. Ni-Cu-Co-PGE mineralisation is associated with gabbro hosted disseminated to massive sulphides at its base with harzburgitic chromeiferous horizons located higher up in the layered sequence. This exploration model fits both the Cr and Ni-Cu mineralisation recorded with Panton Sill type intrusives and possibly fits with the mineral assemblages of the Wild Dog Creek Gabbro (refer Figure 7).

[6] Source: Future Metals NL, ASX Announcement 8 Dec 2021 - 14.32Mt @ 4.89g/t PGM JORC resources are reportedly at the Panton PGM Project (https://www.investi.com.au/api/announcements/fme/d9bd9306-593.pdf)

[7] Source: Panoramic Resources Ltd, ASX Announcement 22 July 2021 – 13.45Mt @1.56%Ni, 0.70% Cu and 0.10% Co JORC mineral resources are reportedly at Savannah and Savannah North Ni-Cu Operations (https://wcsecure.weblink.com.au/pdf/PAN/02397802.pdf)

[8] https://www.researchgate.net/publication/258515153_The_Voisey's_Bay_Ni-Cu-Co_Sulfide_Deposit_Labrador_Canada_Emplacement_of_ Silicate_and_Sulfide-Laden_Magmas_into_Spaces_Created_within_a_Structural_Corridor

[9] www.atlanticnickel.com/uk

[10] Source: Premium Nickel Resources Announcement:21st September 2021-PREMIUM NICKEL RESOURCES SIGNS DEFINITIVE ASSET PURCHASE AGREEMENT TO ACQUIRE ASSETS IN BOTSWANA https://www.premiumnickelresources.ca/pdf/2021-09-28-pnr-nr.pdf)

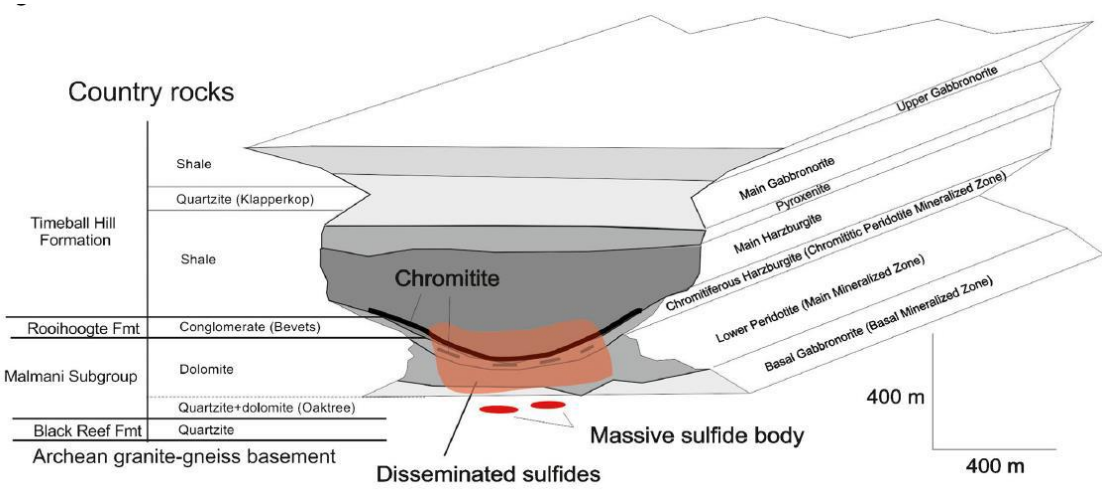

Figure 7 - Schematic Cross Section through the Uitkomst Complex (Maier et al 2018)

There is no reason to doubt that these mineralisation styles or models could co-exist within the McIntosh project area, or that a combination of all three is possible and larger, lower grade mineralisation could effectively be targeted. The 2022 drilling program at McIntosh will provide critical insights and be instrumental in refining the McIntosh exploration model moving forward.

APPENDIX 2

2022 UFF Soil Program Ranking Criteria Used

The following sets out the ranking system using in Dr. Arne's assessment and follow up actions that have been recommended:

- **A Priority 1** area included multiple samples all showing anomalous levels of Cu, Ni, Au and PGE, often associated with elevated Co and Cr, with other samples elevated in at least one of these elements, all hosted within a sizable mafic to ultramafic body.

  With PGE and/or magmatic Ni-Cu mineralisation demonstrated through historical drilling and/or recent rock chip sampling.

  Follow up: Immediate RC drill target/"Drill-ready" target.

- **A Priority 2** area is more limited samples, all showing anomalous levels of Cu, Ni, Au and PGE often associated with elevated Co and Cr, with other samples elevated in at least one of these elements. These results are not supported by rock chip sampling or historical drilling, or in a small mapped intrusive body.

  Follow up: Possible drill target pending additional sampling and/or geological mapping.

- **A Priority 3** area is where at least one sample showing anomalous levels of Cu, Ni, Au and PGE, possibly associated with elevated Co and Cr, with other samples elevated in at least one of these elements. These results were not supported by rock chip sampling or historical drilling.

  Follow up: Early-stage target with further work required to increase confidence levels pre-drilling.

- **Other priorities** are where several samples with anomalous levels of either Cu, Ni, Au and PGE, but no samples were elevated in all elements where there were some possible associations.

  Follow up: Early-stage target with substantial further work required to increase confidence levels pre-drilling.

APPENDIX 3 - JORC Table 1 McIntosh Project

Section 1 Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	• *Nature and quality of sampling* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	**HXG Data** **Rock Chips** • MCI009 is one of 259 rock chip samples which were collected from reconnaissance mapping. Rock chip samples were attempted to be representative for the general outcrop in the area. Rock samples typically represented multiple chips from the broader outcrop using a hammer to collect the chips. • Company rock chip samples typically ranged from 0.5kg to 2kg in size **UFF Soil Samples** • 2021 ultrafine fraction soil sampling program was designed on a 100m x 100m offset grid with 5170 samples collected over the Melon Patch, Melon Patch North and Mabel Hill prospects. • **Sampling Procedure** 1. Scraped over an area of approx. 1m diameter to remove surface crust, surface lag & vegetation. . 2. Area was dug over and mix very well (homogenization) the central 30-40cm of the cleared area to a depth of approx. 25cm. 3. Sample taken from 5 to 25 cm depth. 4. Dry sieve at the sample site to collect ~500 gms of –<2mm sample. **Historic Data** Previously reported see ASX announcements referenced in body of text
Drilling Techniques	• *Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	**HXG Data** • No Drilling undertaken by HXG **Historic Data** Previously reported see ASX announcements referenced in body of text
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	**HXG Data** • Non-Applicable no Drilling undertaken by HXG **Historic Data** Previously reported see ASX announcements referenced in body of text

Criteria	JORC Code Explanation	Commentary
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	**HXG Data** **Rock Chips** • The Rock chips were geologically logged in the field and photographed, this logging is qualitative in nature. The Prospects are at an early stage of exploration and no Mineral Resource estimation applicable **UFF Soil Samples** • The UFF soil samples were logged in the field, this logging is qualitative in nature. The Prospects are at an early stage of exploration and no Mineral Resource estimation applicable **Historic Data** Previously reported see ASX announcements referenced in body of text
Sub-sample techniques and sample preparation	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	**HXG Data** **Rock Chips** • Rock chip samples were collected in the field as combination of large chips from outcrop and combined within the sample bag with a unique sample ID. • Samples were submitted to Intertek Laboratories in Perth WA. Entire samples were crushed and pulverised to 85% passing >75µm. • No sub sampling undertaken. • Rock samples are representative of the immediate area observed. Several chips were usually taken from the outcrop. • Sample sizes are appropriate and typically range from 0.6kg to 2kg. **UFF Soil Samples** • Soils samples were collected in the field, with sampling being dry sieve at the sample site to collect ~500 gms of –<2mm.This was placed in bag with a unique sample ID • Samples were submitted to Labwest Laboratories in Perth WA. • The samples where then subjected to the UltraFine+TM workflow which has been developed to separate the <2 µm “ultrafine” soil fractions for multielement analysis along with other, commonly not used, physico-chemical parameters including spectral mineralogy, pH, EC and particle size distribution • No sub sampling undertaken. • Soil samples are representative of the immediate area observed. • Sample sizes are appropriate and typically range from 0.3kg to 0.5kg.

Criteria	JORC Code Explanation	Commentary
		Historic Data Previously reported see ASX announcements referenced in body of text.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.*	**HXG Data** **Rock Chips** • Samples were submitted to Intertek Laboratories in Perth WA. Entire samples were crushed and pulverised to 85% passing >75µm. Rocks were analysed or a 48 element suite of elements including Ag, As, Ba, Bi, Cr, Cu, Co, In, Mo, Ni, Pb,Sb, Sn, Te, W, Zn with four acid digest 4A/MS48 and with Au, Pt, Pd analysed by FA25/MS fire assay 25g charge and MS finish. Results are considered to be near total. • No external standard was submitted with the 259 rock chips. No external laboratory checks were complete. • 5 Internal laboratory duplicates from the current batch of samples reported were taken from the crushed rocks. Acceptable levels of accuracy from these rock chips have been established. **UFF Soil Samples** • The samples were then subjected to the UltraFine+TM workflow which has been developed to separate the <2 µm "ultrafine" soil fractions for Au plus full 50 element suite by ICP-MS/OES, analysis along with other, commonly not used, physico-chemical parameters including spectral mineralogy by NIR reflectance spectroscopy, pH, EC and particle size distribution • No external standard was submitted with the UFF soil samples a 108 field duplicate samples were taken and submitted. • Internal laboratory QAQC was undertaken and reported. **Historic Data** Previously reported see ASX announcements referenced in body of text
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	**HXG Data** • Rock chip and UFF Soils samples were collected and submitted by consultants working for HXG. • Data was recorded in field books or sample sheets. With locations and sample description entered into an excel spread sheet prior to uploading to HXG externally managed database. • Ni, Cu, Co have been converted from ppm to pct. Pd, Pt, Au converted from ppb to g/t. Ag converted from ppm to g/t

Criteria	JORC Code Explanation	Commentary
		Historic Data Previously reported see ASX announcements referenced in body of text
Location of Data points	• *Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	**HXG Data** • Rock chip & Sample locations were recorded using handheld GPS utilising GDA 94 Zone 52. Positions are accurate to +/- 3m horizontal and +/- 10m vertical. • Co-ordinates are referenced to the Map Grid of Australia (MGA) zone 52 on the Geographic Datum of Australia (GDA94) **Historic Data** Previously reported see ASX announcements referenced in body of text
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	**HXG Data** • No Mineral Resource is being considered in this report. • Data spacing for rock chip sampling is dependent on outcrop and no grid system was used. • The UFF soil sampling program was designed on a 100m x 100m offset grid with 5170 samples collected over the Melon Patch, Melon Patch North and Mabel Hill prospects, and is appropriate for a first pass soils program. • Pt-Pd-Au combined grade calculated by totalling individual grades **Historic Data** Previously reported see ASX announcements referenced in body of text
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	**HXG Data** • Sampling are rock chips and dependent on outcrop. • No bias has been observed in the UFF soil samples **Historic Data** Previously reported see ASX announcements referenced in body of text
Sample Security	• *The measures taken to ensure sample security.*	**HXG Data** • Chain of custody for recent rock chip and UFF samples is that they were managed by the HXG personnel and delivered to a courier company for delivery to Labwest Laboratories in Perth **Historic Data** Previously reported see ASX announcements referenced in body of text
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits have been undertaken.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The McIntosh Creek Project (C121/2010) is in the East Kimberley region of Western Australia and comprises 17 granted tenements covering an area of 416 km2. These tenements are 100% owned by Hexagon Energy Materials Ltd and a subsidiary McIntosh Resources Pty Ltd.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The East Kimberley has been largely explored for base metals and diamonds with no active previous exploration for graphite. Graphite had been noted by Gemutz during regional mapping in the Mabel Downs area for the BMR in 1967, by Rugless mapping and RAB drilling in the vicinity of Melon Patch bore, to the east of the Great Northern Highway in 1993 and has been located during nickel exploration by Australian Anglo American Ltd, Panoramic Resources Ltd and Thundelarra Resources Ltd over the last 20 years.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The McIntosh project lies within the central Halls Creek Orogenic zone, Lamboo Complex, which includes the prospective large McIntosh mafic-ultramafic intrusive complex located immediately west of the Alice Downs fault and further west of the cratonic scale Halls Creek fault. The McIntosh intrusion may also be the source of the Panton mafic-ultramafic intrusive stratigraphy mapped throughout the McIntosh project. The Panton suite is known to host Ni-PGE occurrences and deposits including the + 2 Moz Panton PGM Project and Copernicus Ni-Cu Deposit and regionally includes Panoramic Resources' Savannah & Savannah North Ni-Cu operations.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:*
	  • *easting and northing of the drillhole collar*
	  • *elevation or RL (elevation above sea level in metres) of the drillhole collar*
	  • *dip and azimuth of the hole*
	  • *down hole length and interception depth*
		• There are 1 RAB, 9 Percussion, 142 RC and 6 Diamond Holes in the historic Mcintosh Project data identified to date.
		• Individual hole detail can be obtained from WAMEX reports, specifically, A66347, A66386, A66580 ,A66625, A68239, A70033, A71668, A73148, A73171 ,A75413, A77459, A79324

Criteria	JORC Code explanation	Commentary
	• *hole length.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.*	• No weighting has been applied.
Relationship between mineralisation widths and intercept lengths	• *If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect.*	• Intersection is reported as down hole intervals.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	• Location plans are contained within the body of this announcement.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• A selected set of significant UFF soils and rock chip result have been reported and detailed in table 2. Given the number of rock chip and UFF soil samples within the McIntosh Project area, it is impracticable to include all results.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Other data has not been considered at the time. A full evaluation of other geological and geophysical information is ongoing.
Further work	• *The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• First pass Reverse Circulation (RC) drilling programs will now be progressed for the three Priority 1 target/"Drill-ready" areas and be incorporated into the 2022 field season program of work. • As a result of the success of the UFF soils program a further infill soil sampling program will take place on a number of lower priority target area, to further increase confidence levels prior to decision to drill being made. • Entirely new UFF soil sampling programs will be undertaken at the Willis, Panton North and the actual McIntosh prospects. A sampling contractor has been engaged and is expected on site by early May 2022 to do this work. In addition, an Inverse Polarisation (IP) geophysical crew are due on site in mid-April to collect data that infills the lines at the "Anomaly A" target previously run (See HXG ASX 11th November 2021 announcement).

Competent person's attributions

The information within this announcement that relates to Exploration Results and Geological data at the McIntosh Project is based on information compiled by Mr. Michael Atkinson and is subject to the individual consents and attributions provided in the original market announcement and reports referred to in the text of this announcement Mr. Atkinson is not aware of any other new information or data that materially affects the information included in the original market announcement or reports referred, and that all material assumptions and technical parameters have not materially changed.

Mr. Atkinson is a consultant to Company and a member of The Australian Institute of Geoscientists. He has sufficient experience relevant to the styles of mineralisation and types of deposits under consideration and to the activities currently being undertaken to qualify as a Competent Person(s) as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results Mineral Resources and Ore Reserves and he consents to the inclusion of the above information in the form and context in which it appears in this report.

ABOUT HEXAGON ENERGY MATERIALS LIMITED

Hexagon Energy Materials Limited (ASX: HXG) is an Australian company focused on future energy project development and energy materials exploration and project development.

Hexagon 100% owns the McIntosh Nickel-Copper-PGE and Graphite project in Western Australia (WA) and the Halls Creek Gold and Base metals project in WA. On 14 February 2022 Hexagon announced a binding Graphite Mineral Rights Earn-in agreement (up to 80%) had been entered into with Critical Green Minerals Pty Ltd, with McIntosh graphite expected to become part of an ASX Initial Public Offering during 2022. In the USA, Hexagon has an 80 per cent controlling interest of the Ceylon Graphite project located in Alabama, over which South Star Battery Materials Corp. (TSXV: STS) on 7 December 2021 signed an Option to develop and earn-in up to 75% interest.

Hexagon also is developing a business to deliver decarbonised Hydrogen (blue Ammonia) into export and domestic markets at scale, with Hexagon's WA Hydrogen (WAH_2) project now being pursued by Hexagon.

Hexagon's plan is to use renewable energy in clean Hydrogen production to the greatest extent possible in its projects, transitioning from blue to green Hydrogen production on a commercial basis, over time. Supporting this strategy in January 2022 Hexagon signed a Memorandum of Understanding with renewable energy company FRV Services Australia Pty Ltd (FRV Australia) (51% owned by Fotowatio Renewable Ventures S.L. and 49% owned by OMERS Infrastructure part of OMERS Canadian defined benefit pension plan fund). FRV has almost 800MWdc of Australian PV assets built or under construction in Australia.

Hexagon's overarching goal for 2022 is to secure and leverage technical and commercial alliances by commodity across its project portfolio whilst maintaining a core focus on Northern Australian Future Energy Materials and Future Energy project developments, in-house. Figure 8 below summarises Hexagon's Strategy and Figure 9 shows the locations of Hexagon's projects.

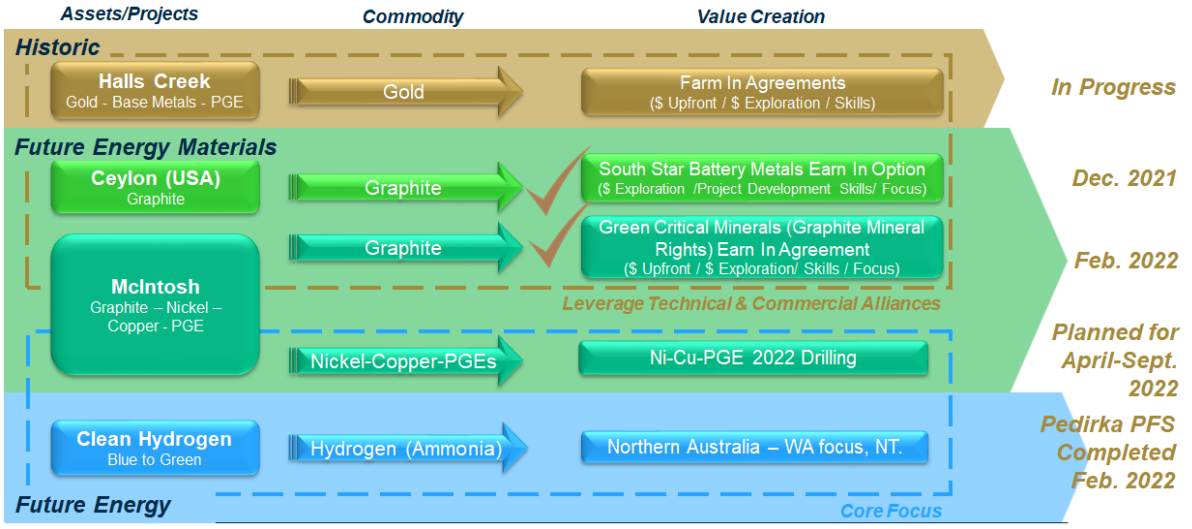

Figure 8 - Hexagon's Strategy

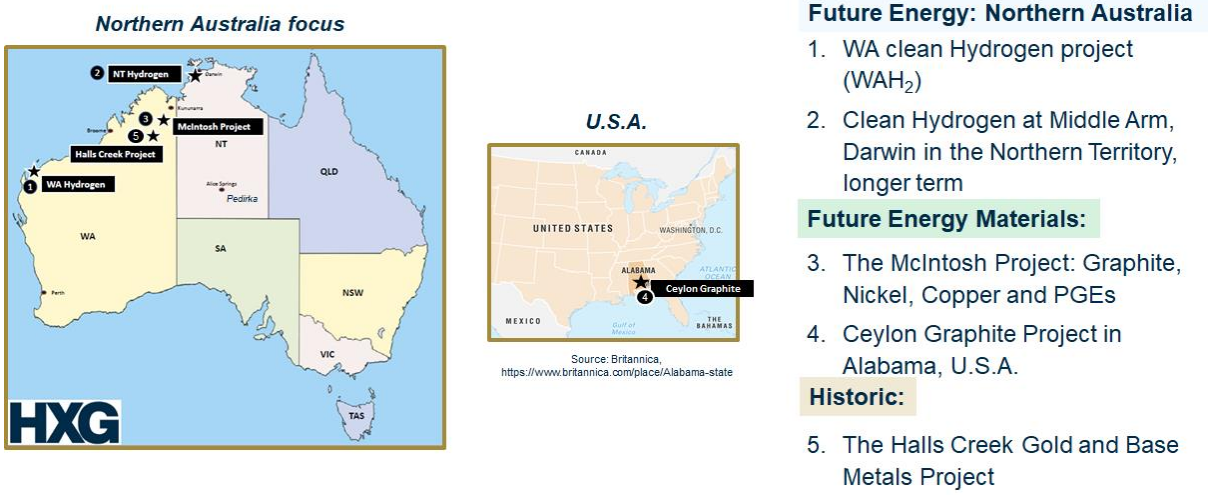

Figure 9 - Hexagon's overall asset base/portfolio of projects

Authorisation

This announcement has been authorised by the Board of Directors.

FOR FURTHER INFORMATION, please contact:

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