

Stillwater Critical Minerals Discovers New Sulphide Mineralization in 12-Kilometer Electromagnetic Anomaly in Resource Expansion Drilling at Stillwater West in Montana, USA

May 23, 2024 - Vancouver, B.C., Stillwater Critical Minerals Corp. (TSX.V: PGE | OTCQB: PGEZF | FSE: JOG) (the “Company” or “Stillwater”) is pleased to provide a first tranche of drill results from resource expansion drilling completed at the Company’s flagship Stillwater West Ni-PGE-Cu-Co + Au project in Montana in 2023.

The campaign was funded by a June 2023 strategic equity investment by Glencore Canada Corporation, a wholly owned subsidiary of Glencore plc (“Glencore”). Glencore has also provided on-going technical support to the project through the technical committee which included multiple site visits and assistance with geological and geophysical interpretations. As announced May 1, 2024, Glencore made an additional investment in Stillwater, bringing them to a 15.4% equity position in the Company for total funds of approximately \$7.05 million to date.

Highlights

- Six holes totaling 2,310 meters were completed with a focus on expanding deposits at the west end of the current nine-kilometer-long Stillwater West resource area.
- Holes CM2023-04, -05 and -06, reported here, successfully intercepted magmatic nickel and copper sulphide mineralization associated with a large and previously untested electromagnetic (“EM”) anomaly that forms part of a string of anomalies extending over 12 kilometers along strike, as predicted by the Company’s geologic model.
- Results demonstrate significant potential to expand the 2023 Mineral Resource Estimate (“MRE”) at three cut-off grades, with wide widths of higher-grade mineralization at >0.70% recovered Nickel Equivalent (“NiEq”) cut-off grade contained within thick mid-grade intervals at >0.35% NiEq cut-off that are in turn set within long lengths of potential bulk tonnage mineralization at >0.20% NiEq cut-off grade, including:
 - CM2023-04:
 - Bulk tonnage: 98.8 meters @ 0.27% NiEq (97.2 to 196.0m);
 - Mid-grade: 44.0 meters @ 0.35% NiEq (100.7 to 144.7m);
 - High-grade: 2.6 meters @ 0.71% NiEq (110.7 to 113.3m).
 - CM2023-05:
 - Bulk tonnage: 293.8 meters @ 0.22% NiEq (247.5 to 541.3m) and 45.1 meters @ 0.33% NiEq (284.7 to 329.8m);
 - Mid-grade: 52.1 meters @ 0.49% NiEq (488.6 to 540.7m) and 14.9 meters @ 0.60% NiEq (508.7 to 523.6m);
 - High-grade: 4.8 meters @ 1.22% NiEq (492.0 to 496.8m).
 - CM2023-06:
 - Bulk tonnage: 158.9 meters @ 0.22% NiEq (160.8 to 319.7m);
 - Mid-grade: 25.9 meters @ 0.50% NiEq (251.2 to 277.1m);
 - High-grade: 5.8 meters @ 0.96% NiEq (259.7 to 265.5m).
- Results continue to drive the first ever detailed geological model completed across the lower Stillwater Igneous Complex, with these results informing three mineralization styles in particular: broad Platreef-style Ni-PGE-Cu-Co mineralization associated with the 12-kilometer-long EM anomaly, nickel sulphide-rich N-series mineralization, and stratiform reef-type PGE-Ni-Cu chromitite mineralization, as detailed below.
- Final assays are pending from holes CM2023-01, -02, and -03, in addition to rhodium assays.
- All deposits and mineralization remain open for expansion in planned follow-up drilling.
- The Company is looking at the potential to recover value from the ferrochrome content, driven by the 2.3-billion-pound chromium resource defined by the January 2023 MRE and historic production of chromium from the Stillwater district.

Table 1 – Highlight Results from the 2023 Expansion Drill Campaign in the DR/Hybrid Deposit Area at Chrome Mountain, Stillwater West Project, Montana, USA

HOLE ID	INTERVAL			PRECIOUS METALS					BASE METALS				TOTAL RECOVERED METAL EQUIVALENT		MRE CUT-OFF CATEGORY	
	From (m)	To (m)	Width (m)	Pt (g/t)	Pd (g/t)	Au (g/t)	Rh (g/t)	4E (g/t)	Ni (%)	Cu (%)	Co (%)	NiEq** (%)	NiEq** (Ni %)	PdEq** (Pd g/t)		
DR / HYBRID DEPOSIT AREA - RESOURCE EXPANSION DRILLING																
CM-2023-01	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CM-2023-02	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CM-2023-03	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CM-2023-04	97.2	196.0	98.8	0.10	0.07	0.04	*	0.20	0.15	0.09	0.025	0.23	0.27	0.77	bulk	
	100.7	144.7	44.0	0.02	0.06	0.04	*	0.12	0.20	0.12	0.034	0.31	0.35	0.98	mid	
	110.7	113.3	2.6	0.01	0.07	0.03	*	0.11	0.40	0.34	0.073	0.68	0.71	2.00	high	
	141.7	144.7	3.0	0.01	0.08	0.07	*	0.16	0.40	0.17	0.047	0.54	0.59	1.65	mid	
	153.6	179.8	26.3	0.31	0.12	0.05	*	0.48	0.16	0.09	0.028	0.25	0.35	0.99	mid	
CM-2023-05	247.5	541.3	293.8	0.08	0.22	0.02	*	0.33	0.10	0.03	0.012	0.13	0.22	0.61	bulk	
	284.7	329.8	45.1	0.15	0.31	0.05	*	0.51	0.16	0.06	0.015	0.20	0.33	0.94	bulk	
	289.6	322.5	32.9	0.19	0.39	0.06	*	0.64	0.17	0.06	0.015	0.21	0.39	1.09	mid	
	298.7	305.4	6.7	0.36	0.82	0.09	*	1.26	0.21	0.08	0.018	0.26	0.60	1.69	mid	
	458.7	541.3	82.6	0.17	0.54	0.04	*	0.74	0.14	0.04	0.014	0.17	0.38	1.08	mid	
	488.6	540.7	52.1	0.22	0.72	0.05	*	0.99	0.17	0.06	0.015	0.21	0.49	1.37	mid	
	492.0	496.8	4.8	0.46	2.21	0.12	*	2.79	0.31	0.20	0.018	0.40	1.22	3.42	high	
508.7	523.6	14.9	0.34	0.96	0.05	*	1.36	0.18	0.07	0.015	0.22	0.60	1.68	mid		
CM-2023-06	160.8	319.7	158.9	0.09	0.12	0.03	*	0.24	0.11	0.06	0.017	0.16	0.22	0.63	bulk	
	251.2	277.1	25.9	0.13	0.32	0.07	*	0.52	0.23	0.16	0.037	0.36	0.50	1.41	mid	
	259.7	265.5	5.8	0.30	0.90	0.09	*	1.28	0.43	0.13	0.072	0.60	0.96	2.71	high	

* - assays pending

** - recovered metal equivalent

Highlighted significant intercepts with grade-thickness values over 7 percent-meter recovered NiEq are presented above, except as noted. Recovered Nickel Equivalents (“NiEq”) are presented for comparative purposes using conservative long-term metal prices (all USD): \$8.00/lb nickel (Ni), \$4.00/lb copper (Cu), \$22.00/lb cobalt (Co), \$1,000/oz platinum (Pt), \$1,950/oz palladium (Pd), \$1,850/oz gold (Au), and \$10,000/oz rhodium (Rh). NiEq is determined as follows: $NiEq\% = [Ni\% \times recovery] + [Cu\% \times recovery \times Cu\ price / Ni\ price] + [Co\% \times recovery \times Co\ price / Ni\ price] + [Pt\ g/t \times recovery / 31.103 \times Pt\ price / Ni\ price / 2,204 \times 100] + [Pd\ g/t \times recovery / 31.103 \times Pd\ price / Ni\ price / 2,204 \times 100] + [Au\ g/t \times recovery / 31.103 \times Au\ price / Ni\ price / 2,204 \times 100]$. In the above calculations: 31.103 = grams per troy ounce, 2,204 = lbs per metric tonne, and 100 and 0.01 convert assay results reported in % and g/t. The following recoveries have been assumed for purposes of the above equivalent calculations: 85% for Ni and 90% for all other listed metals, based on recoveries at similar nearby operations. Total metal equivalent values include both base and precious metals. In terms of dollar value, 0.20% nickel equates to a copper value of 0.40%, or a palladium value of 0.48 g/t, using the above metal values. Intervals are reported as drilled widths and are believed to be representative of the actual width of mineralization.

Table 2 – Drill Hole Location and Depths

HOLE ID	Easting (m)	Northing (m)	Elevation (m)	Azimuth (degrees)	Dip (degrees)	Depth (m)
CM-2023-01	568424.7	5031871.1	2929	90	-55	432
CM-2023-02	568424.1	5031870.2	2929	90	-75	243
CM-2023-03	568281.3	5031885.6	2919	90	-55	387
CM-2023-04	568083.5	5031798.0	2939	90	-55	387
CM-2023-05	568083.5	5031798.0	2939	90	-75	541
CM-2023-06	568082.9	5031795.9	2941	30	-55	320

Stillwater’s President and CEO, Michael Rowley, said “We continue to prove out significant mineralization at all three cut-off grades in wide step outs at Stillwater West, demonstrating the sheer size and well-mineralized nature of the lower Stillwater Igneous Complex and paving the way for resource increases in the bulk tonnage, mid- and high-grade categories described in our January 2023 Resource Estimate. Aside from its location in one of the largest layered magmatic systems in the world, the Stillwater West project offers several important advantages as a potential large-scale primary source of low-carbon critical minerals. First of all, the project provides optionality on possible mine methods due to its combination of both size and grade, hosting higher-grade material within large thicknesses of continuous bulk tonnage grade mineralization. Second, Stillwater West is truly polymetallic, offering significant potential co-product values along with nickel that provide resilience to price fluctuations for any one commodity. Taken together with the brownfields nature of the project and Sibanye-Stillwater’s adjacent mines and related infrastructure, we see the potential to rapidly advance Stillwater West to meet the US government’s stated objective of building domestic supply chains for nine of our commodities. We look forward to providing further updates in the near term.”

Dr. Danie Grobler, Vice President Exploration commented, “The Company had a 100% success rate during the 2023 season with six holes intersecting significant wide net-textured to semi-massive magmatic sulphides at predicted target depths. The successes attained with the 2023 drilling, guided by high-resolution geophysical surveys, have further increased our confidence in our detailed geological and structural models. High-resolution geophysics is also seen as pivotal in providing definitive EM target anomalies for future drilling campaigns. These deposits discovered proximal to the Stillwater Complex footwall are seen as analogous to the highly prospective multi-metal bearing mineralization-style, generally accepted, as characteristic of the Platreef of the Bushveld Complex. In addition, the first three holes drilled during the 2023 season, aimed at expanding upon initial interpretation of 2022 work, successfully intersected the N1 and N2 structures. These are thought to be related to distinctly sulphur-rich mineralization closely associated with the cross-cutting N-series structures identified during 2022. Assay results for these holes are pending and will be released in the near future.”

Mineralization Styles

Results continue to drive the first ever detailed geological model of the lower Stillwater Igneous Complex. Informed by senior in-house expertise from similar geology in the Bushveld Igneous Complex, the Company’s 3D geologic model demonstrated a very high success rate during the 2023 campaign, intersecting the following mineralization style:

1 - Platreef-style Ni-PGE-Cu-Co mineralization – The Stillwater West project covers the lower Stillwater Igneous Complex stratigraphy immediately adjacent to Sibanye-Stillwater’s mining operations on the J-M Reef deposit, a 40km-long reef deposit that contains the highest palladium-platinum grades in the world, hosted within nickel-copper sulphide. Recognizing the geologic parallels with South Africa’s Bushveld Igneous Complex, the Company has successfully defined large-scale deposits in Montana’s Stillwater Igneous Complex that are directly analogous to the giant mines of the Platreef.

Production on the northern limb of the Bushveld, or Platreef, started in 1993 at Anglo American’s Mogalakwena mines and will be joined by Ivanhoe’s Platreef mine later this year. Although known primarily as a platinum group element mine, Mogalakwena is one of the largest nickel sulphide mines in the world and is the largest nickel producer in South Africa, in addition to producing a significant amount of copper. Ivanhoe’s Platreef mine is projected to become the second largest nickel producer in South Africa.

The mines of the Platreef are attractive because they are among the largest and most profitable mines in the world. Their scale and grade allow the application of mechanized bulk mining methods with resulting economies of scale and low operating costs. These deposits also contain significant quantities of nickel, copper, and platinum group metals in a polymetallic combination that is globally very rare.

To date, the Company has modeled five deposits of Platreef-style mineralization in the lower Stillwater Igneous Complex, hosting a total of 1.6 billion pounds of nickel, copper and cobalt, and 3.8 million ounces of palladium, platinum, rhodium, and gold, as announced January 2023.

Expansion drilling in 2023 confirmed Platreef-style mineralization in the first ever drill tests of an EM geophysical anomaly that forms part of a string of anomalies extending over 12 kilometers along strike associated with sulphide-bearing hornfels and banded iron formation proximal to the Stillwater Igneous Complex footwall contact. Drill core contains significant evidence of assimilation textures and high sulphide contents reminiscent of incorporation of crustal sulphur into the magma from the footwall sediments.

Additional drilling is planned to further expand this discovery.

2 - N-Series Structures – N-series mineralization consists of north-south trending structures that crosscut the broadly layered nature of the Stillwater Igneous Complex. As announced on December 5, 2023, the N structures contain high-grade nickel sulphide mineralization that was first discovered by the Company in drill holes CM2020-04 and CM2021-05. First reported on March 3, 2021 and later re-interpreted, hole CM2020-04 returned 8.5 meters of 1.11% Ni, 1.10 g/t 4E (Pd+Pt+Au+Rh), 0.19% Cu, and 0.053% Co for 1.50% NiEq. Hole CM2021-05, first reported May 3, 2022, returned 13.2 meters of 2.31% Ni, 1.51 g/t 4E, 0.35% Cu, and 0.115% Co, for 2.85% NiEq. These structures represent an important addition to the Stillwater West project as they appear to upgrade the broader Platreef-style mineralized zones where they crosscut.

Modeling has now identified eight N-series structures in the Chrome Mountain area and confirmed the existence of similar N-structures more broadly across Stillwater West. A high-resolution ground magnetic survey early in the 2023 field season enabled a more detailed geologic model, leading directly to the intersection of the N1 and N2 structures in holes CM2023-01 to 05.

Assays from holes CM2023-01 to 03 are pending with results expected over the coming weeks.

3 - Reef-type PGE-Ni-Cu Mineralization - Stillwater West contains another mineralization style that is common in layered magmatic systems, the narrower but higher-grade Reef-type deposits. Historically, the majority of the world's supply of platinum group elements ("PGE") has been sourced from mines of this type, and the close proximity of Sibanye-Stillwater's world-class J-M Reef deposit makes Stillwater West highly prospective for high-grade PGE-Ni-Cu reef deposits.

Drilling in 2023 confirmed continuity of the stratiform pegmatoidal reef-type "A-B" chromitite zone discovered on Chrome Mountain, providing an important foundation for follow-up drill campaigns. Drillhole CM2023-05 also intersected two chromite-rich high-grade PGE horizons towards the bottom part of the hole. These zones returned significant PGE+Ni-Cu mineralization characteristic of the stratiform reef-type high-grade "A-B" chromitite, containing a high-grade zone of 2.79 g/t PGE+Au, plus also 0.31% Ni, 0.20% Cu, and 0.018% Co over 4.8 meters in hole CM2023-05.

Upcoming Events

Stillwater is pleased to announce that President and CEO Michael Rowley will provide a comprehensive overview and update on the Company and its flagship Stillwater West PGE-Ni-Cu-Co + Au project at the Emerging Growth Conference Metals Mining Resources & Energy 3.0 on May 29, 2024, at 11:25am ET | 8:25am PT. To register, click [here](#).

About Stillwater Critical Minerals Corp.

Stillwater Critical Minerals (TSX.V: PGE | OTCQB: PGEZF | FSE: J0G) is a mineral exploration company focused on its flagship Stillwater West Ni-PGE-Cu-Co + Au project in the iconic and famously productive Stillwater mining district in Montana, USA. With the addition of two renowned Bushveld and Platreef geologists to the team and strategic investments by Glencore, the Company is well positioned to advance the next phase of large-scale critical mineral supply from this world-class American district, building on past production of nickel, copper, and chromium, and the on-going production of platinum group, nickel, and other metals by neighboring Sibanye-Stillwater. An expanded NI 43-101 mineral resource estimate, released January 2023, positions Stillwater West with the largest nickel resource in an active US mining district as part of a compelling suite of nine minerals now listed as critical in the USA. To date, five Platreef-style nickel and copper sulphide deposits host a total of 1.6 billion pounds of nickel, copper and cobalt, and 3.8 million ounces of palladium, platinum, rhodium, and gold at Stillwater West, and all deposits remain open for expansion along trend and at depth. Results are pending from resource expansion drilling completed in the fall of 2023.

Stillwater also holds the high-grade Black Lake-Drayton Gold project adjacent to Treasury Metals' development-stage Goliath Gold Complex in northwest Ontario, currently under an earn-in agreement with Heritage Mining, and the Kluane PGE-Ni-Cu-Co critical minerals project on trend with Nickel Creek Platinum's Wellgreen deposit in Canada's Yukon Territory.

FOR FURTHER INFORMATION, PLEASE CONTACT:

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Quality Control and Quality Assurance

2023 drill core samples were analyzed by ACT Labs in Vancouver, B.C. Sample preparation: crush (< 7 kg) up to 80% passing 2 mm, riffle split (250 g) and pulverize (mild steel) to 95% passing 105 µm included cleaner sand. Gold, platinum, and palladium were analyzed by fire assay (1C-OES) with ICP finish. Selected major and trace elements were analyzed by peroxide fusion with 8-Peroxide ICP-OES finish to insure complete dissolution of resistate minerals. Following industry QA/QC standards, blanks, duplicate samples, and certified standards were also assayed.

Mr. Mike Ostenson, P.Geo., is the qualified person for the purposes of National Instrument 43-101, and he has reviewed and approved the technical disclosure contained in this news release.

Forward-Looking Statements

This news release includes certain statements that may be deemed "forward-looking statements". All statements in this release, other than statements of historical facts including, without limitation, statements regarding potential mineralization, historic production, estimation of mineral resources, the realization of mineral resource estimates, interpretation of prior exploration and potential exploration results, the timing and success of exploration activities generally, the timing and results of future resource estimates, permitting time lines, metal prices and currency exchange rates, availability of capital, government regulation of exploration operations, environmental risks, reclamation, title, and future plans and objectives of the company are forward-looking statements that involve various risks and uncertainties. Although Stillwater Critical Minerals believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those in the forward-looking statements. Forward-looking statements are based on a number of material factors and assumptions. Factors that could cause actual results to differ materially from those in forward-looking statements include failure to obtain necessary approvals, unsuccessful exploration results, changes in project parameters as plans continue to be refined, results of future resource estimates, future metal prices, availability of capital and financing on acceptable terms, general economic, market or business conditions, risks associated with regulatory changes, defects in title, availability of personnel, materials and equipment on a timely basis, accidents or equipment breakdowns, uninsured risks, delays in receiving government approvals, unanticipated environmental impacts on operations and costs to remedy same, and other exploration or other risks detailed herein and from time to time in the filings made by the companies with securities regulators. Readers are cautioned that mineral resources that are not mineral reserves do not have demonstrated economic viability. Mineral exploration and development of mines is an inherently risky business. Accordingly, the actual events may differ materially from those projected in the forward-looking statements. For more information on Stillwater Critical Minerals and the risks and challenges of their businesses, investors should review their annual filings that are available at www.sedar.com.

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