



Palladium One Reports High-Grade Results: 5.0% Nickel_Eq over 1.4 meters at Smoke Lake and up to 891 ppm Copper and 142 ppm Cobalt in Soils at the Bulldozer Intrusion of the Tyko Sulphide Copper-Nickel Project, Ontario, Canada

KEY HIGHLIGHTS

- **5.0% Nickel Equivalent (“Ni_Eq”) over 1.4 meters** in hole TK21-052.
- **6.8% Ni_Eq over 0.8 meters within 3.3% Ni_Eq over 1.8 meters** in hole TK21-044
- **5.2% Ni_Eq over 1.2 meters within 3.2% Ni_Eq over 3.0 meters** in hole TK21-045
- **All four recently announced, multi-line, Versatile Time Domain Electromagnetic airborne (VTEMmax) anomalies have returned significant copper, nickel and cobalt geochemical signatures in numerous soil samples** (see news release [October 28, 2021](#)).
 - **Up to 891 ppm copper, and 142 ppm cobalt** on the **Bulldozer South** anomaly
 - **Up to 519 ppm copper and 139 ppm nickel** on the **Cupa Lake** anomaly
 - **Up to 153 ppm copper and 116 ppm nickel** on the **West Pickle Lake** anomaly
 - **Up to 63 ppm copper and 17 ppm cobalt** on the **Bulldozer North** anomaly
 - **Up to 108 ppm copper and 238 ppm nickel** (see news release [January 27, 2019](#)) and **up to 565 ppm nickel** (see news release [November 18, 2020](#)) on the **Smoke Lake** anomaly

November 30, 2021 – Toronto, Ontario – Results from the summer soil sampling and diamond drill program on the Tyko Copper-Nickel Project have been received, said Palladium One Mining (“Palladium One” or the “Company”) (TSXV: PDM, FRA: 7N11, OTC: NKORF) today.

Derrick Weyrauch, President and CEO “We have four new multi-line EM anomalies with coincident copper, nickel and cobalt soil anomalies. This supports our belief that there is much more mineralization to be discovered on the wider Tyko project. Of particular interest is the large 800-meter Bulldozer South anomaly which has returned the highest copper and cobalt in soils from the Tyko project to date, and suggest the potential for a substantial discovery.

Smoke Lake continues to advance with the strike of the known mineralization growing to 430 meters. Disseminated mineralization remains open along strike to both the northwest and southeast. An Induced Polarization geophysical survey is planned for this winter to continue to chase this mineralization.”

The summer field program consisted of:

- A 100-meter spaced, 3,100 line-kilometer VTEMmax survey, which is the largest and most sensitive electromagnetic (EM) survey ever flown on the Tyko Project. It identified four new multiline EM anomalies in new areas with no previously known mineralization or drillings (see news release [October 28, 2021](#)).
- Reconnaissance mapping prospecting, and trenching including detailed soil sampling over all four multi-line VTEMmax anomalies which has returned copper, nickel and cobalt values comparable to those which resulted in the discovery of the Smoke Lake nickel-copper zone (Table 1).
- A resumed Phase II drill program on the Smoke Lake zone consisting of 1,973 meters in 9 holes which returned up to **5.0% Ni_Eq over 1.4 meters** in hole TK21-052.
- A bore hole electromagnetic (BHEM) survey on a 799-meter drill hole drilled as a geophysical platform to test for massive sulphides beneath the Smoke Lake Zone.



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The results of soil sampling on each new multi-line VTEMmax anomaly are detailed below:

West Pickle Lake Anomaly

This **600-meter anomaly** is located 2.5 kilometers west of the RJ zone, which returned up to **1.04% nickel and 0.23% copper over 16.2 meters** in hole TK16-002 (see news release [April 12, 2016](#)). Soil sampling returned up to **116 ppm nickel and 153 ppm copper** in two different samples that are only 60 meters apart suggesting a strong nickel-copper signature (Figure 2 and 3).

Bulldozer South Anomaly

This **800-meter anomaly** produced the **most abundant and highest copper in soils in the history of the Tyko project** with up to **891 ppm copper** (Figure 2). This high sample is also only 110 meters northwest of a historic prospecting sample which returned **0.23% copper** with anomalous nickel (144 ppm) and palladium (18 ppb) in melanogabbro, having 5% finely disseminated pyrite and chalcopyrite (see Ontario Mineral Deposit Index [MDI000000001913](#)). Similar to the VTEM anomalies there are several clusters of soil anomalies in the Bulldozer South zone that require follow up. Interestingly, the metal ratios of the soil anomalies closely follow those of the historic Bulldozer Showing with high copper and cobalt values (up to **3.34% Cu, 0.12% Ni, 0.24% Co, 0.38 g/t Pd, 0.08 g/t Pt** (see Ontario Mineral Deposit Index [MDI000000001901](#)). **Cobalt in soils was particularly high with up to 142 ppm Co** (Figure 4). The Bulldozer South zone also occurs in a very strongly magnetic portion of the Bulldozer Intrusion suggesting ultramafic rocks may be present at depth.

Bulldozer North Anomaly

This **200-meter anomaly** is noteworthy as one line contains a strong **EM anomaly which is comparable in intensity to the anomalies detected over the Smoke Lake zone**. The Bulldozer North, like Bulldozer South anomaly correlates with a very strongly magnetic portion of the Bulldozer Intrusion, potentially representing ultramafic rocks. The copper in soil response over this anomaly was weaker than at Bulldozer south but closely overlapped the EM anomalies with copper in soil response over multiple lines having up to **63 ppm Cu** (Figure 1).

The Bulldozer North and South Anomalies represent the first EM and soil anomalies detected within the large mafic-ultramafic Bulldozer Intrusion. The Bulldozer intrusion is host to one historic copper-nickel-cobalt showing (the Bulldozer Showing), which consists of remobilized disseminated chalcopyrite and pyrite in a shear, suggesting that more widespread copper-nickel-cobalt mineralization may occur within the larger intrusion.

Cupa Lake Anomaly

This anomaly consists of a cluster of two multi-line anomalies which when combined **cover 400 meters of strike length**, returned the second highest and **most widespread soil anomalies from the summer field program as well as the highest nickel in soils (139 ppm Ni)**. There is good correlation with high nickel and copper values occurring in the same samples indicating strong nickel-copper signatures. Copper values were the second highest of the 4 multiline anomalies with up to **512 ppm Cu**.

Of particular note is a strong soil anomaly with **320 ppm copper and 50 ppm nickel** located only 25 meters west of the strongest Bedrock Pick VTEMmax anomaly (Figure 1 and 2).

These anomalies are present in an area where previous mapping by the Ontario Geological survey has identified metasediments and mafic volcanics representing remnants of greenstone belt material within the Black Pic tonalite batholith, and hence may represent favourable conditions for the perseveration of magmatic copper-nickel sulphide mineralization similar to the Smoke Lake zone, located only 8-kilometers to the west.



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Table 1. Comparison of the highest three soil samples collected for each multi-line anomaly compared to soil sampling at Smoke Lake.

Anomaly / Zone	Sample No	Cu (ppm)	Ni (ppm)	Co (ppm)
<i>Smoke Lake*</i>	<i>1294509</i>	<i>74</i>	<i>565</i>	<i>5</i>
	<i>1294510</i>	<i>12</i>	<i>282</i>	<i>5</i>
	<i>1294531</i>	<i>100</i>	<i>236</i>	<i>15</i>
Bulldozer South	A764952	891	70	56
	A764996	725	31	142
	A0959922	109	62	42
Bulldozer North	A764792	63	11	2
	A764608	57	7	3
	A764755	43	17	17
West Pickle Lake	A959553	153	11	3
	A389878	47	116	8
	A959897	37	49	1
Cupa Lake	A389899	519	49	5
	E5828861	335	83	12
	A389731	26	139	16

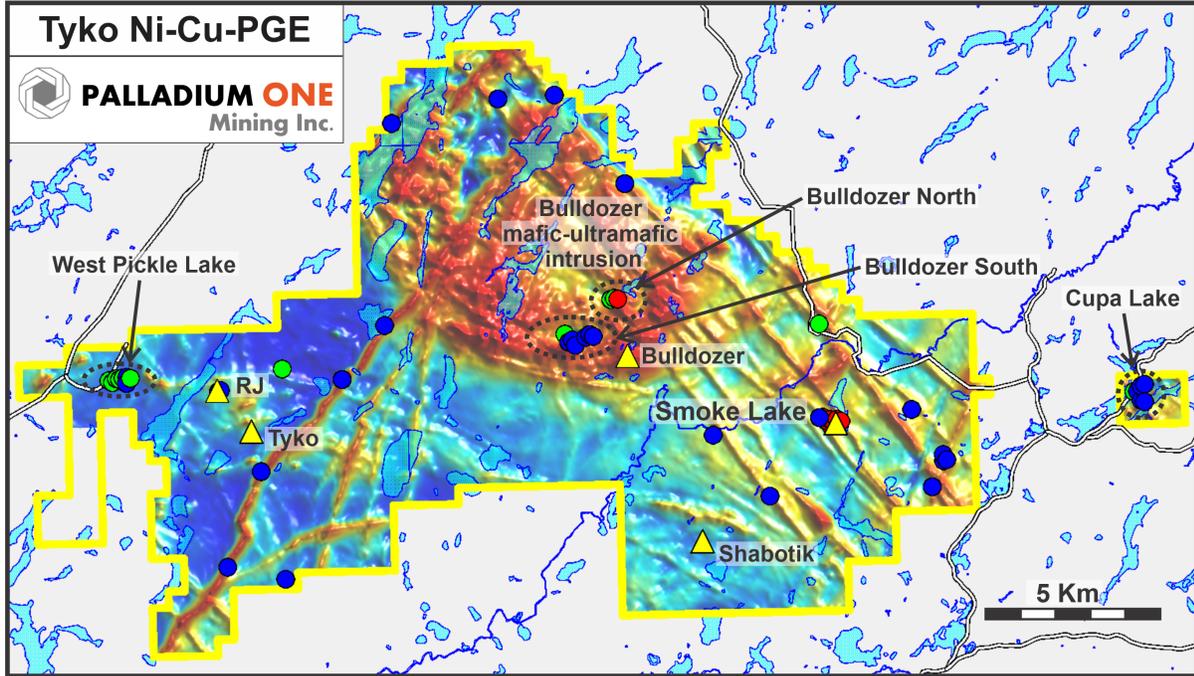
**Italicised values for Smoke Lake have been previously released, (see news release [January 27, 2019](#) and [November 18, 2020](#))*

Figure 1. Tyko Project, with airborne magnetic data (total field) showing various VTEMmax anomalies (multi-lines EM anomalies are highlighted by dashed black lines) and known nickel-copper showings (yellow triangles).



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Figure 2. Zoom in showing copper in soils for the 4 multi-line VTEMmax EM anomalies. Background is total field mag.

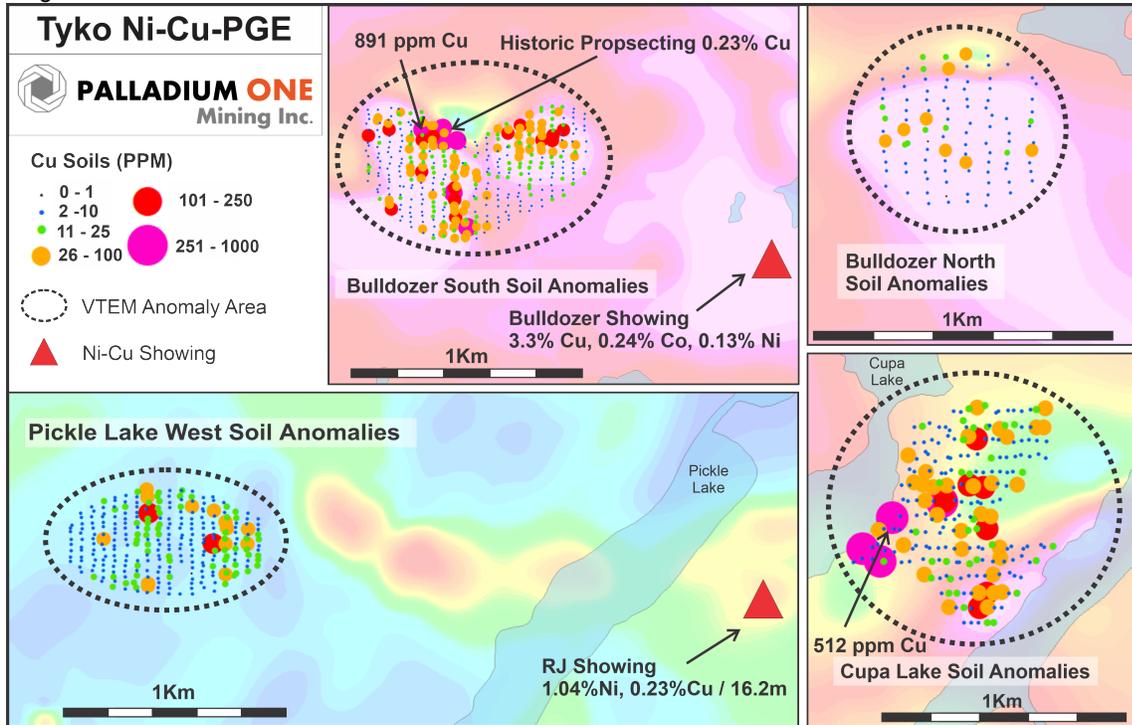
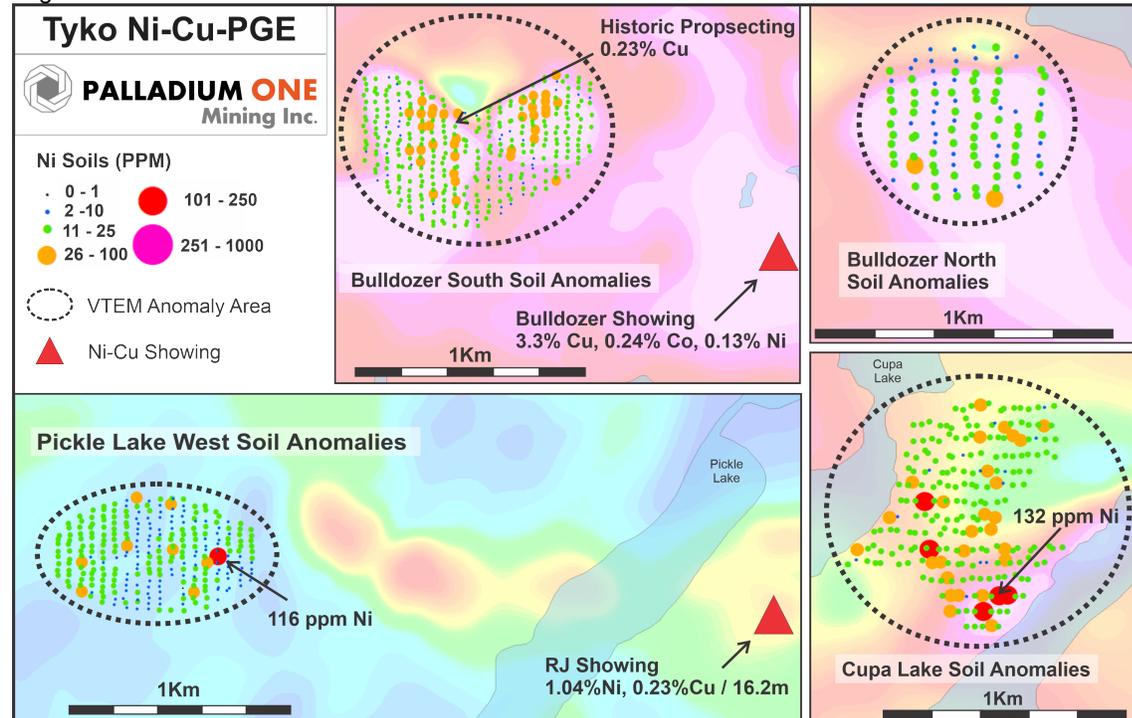


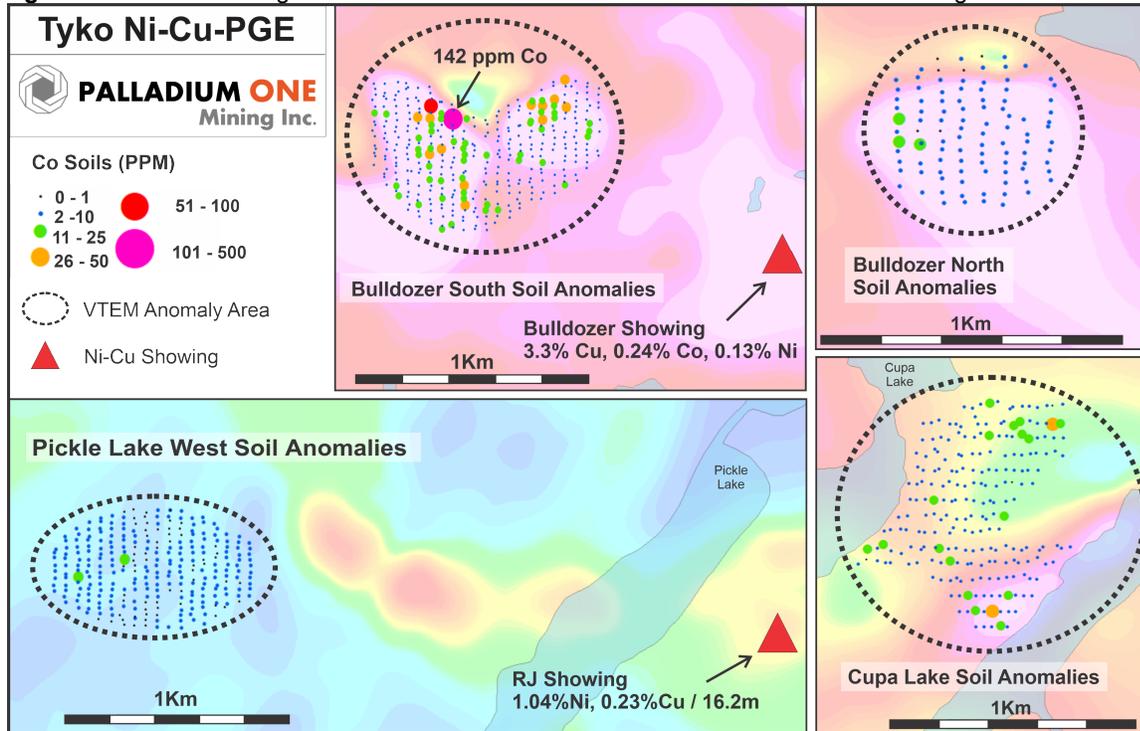
Figure 3. Zoom in showing nickel in soils for the 4 multi-line VTEMmax EM anomalies. Background is total field mag.





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Figure 4. Zoom in showing cobalt in soils for 4 multi-line VTEMmax EM anomalies. Background is total field mag.



Smoke Lake Drill Results

The resumed Phase II drill program at Smoke Lake completed an additional 1,973 meters in 9 holes, assay results are tabulated in Table 2 and Figure 5. The program included a 799-meter deep geophysical platform hole targeting a large (1 kilometer long) inverted magnetic high located below the Smoke Lake zone (Figure 6). This deep hole was designed for Borehole Electromagnetics (BHEM) testing to help determine the possible presence of massive sulphide mineralization at depth and immediately beneath known Smoke Lake mineralization.

The program successfully extended the Smoke Lake zone mineralization 75 meters to the southeast with disseminated mineralization encountered near surface in hole TK21-048 (Figure 5). The Smoke Lake zone has now been traced **over 430 meters** and disseminated mineralization remains open along strike both to the northwest and southeast. An Induced Polarization (IP) survey is also planned for the Smoke Lake area to target expansion of disseminated nickel-copper mineralization along strike.

The deep geophysical platform hole (TK-21-049) intersected minor gabbroic rocks from 182.3-183.6 and 357.2-364.4 meters, with minor chalcopyrite at 183 meters, these gabbroic rocks are interpreted to be related to mafic-ultramafic rocks which host the Smoke Lake zone. However, the hole does not appear to have intersected the down dip extension of the Smoke Lake mineralization but did fulfil its purpose to test the large deep magnetic inversion anomaly (Figure 6). The hole intersected substantial clastic metasediment within the tonalite, but no ultramafic rocks. Significant disseminated magnetite was present within the tonalite which appears to explain the high magnetic signature at this location within the large (1 kilometer long) magnetic inversion anomaly. The BHEM surveying did not detect any EM conductors, which would have suggested massive sulphide mineralization proximal to the drill hole.



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Further drilling is planned for the up dip portion of the large Magnetic Inversion anomaly located on the east side of Smoke Lake once new Exploration Permits are received. Additionally, the Company plans to re-survey the existing drill hole in combination with additional holes using Induced Polarization (IP).

Multiple ground EM and BHEM surveys have been undertaken at Smoke Lake in addition to the airborne VTEMmax survey. These surveys have not been able to trace the massive sulphide mineralization beyond current drilling. In order to continue to explore for massive sulphide mineralization at depth, step out holes drilled down dip and along strike combined with BHEM are necessary. These new drill holes require an additional Exploration Permit, the current permit only covers drill pads within or proximal to the current drilling at Smoke Lake. A new Exploration Permit is expected by year's end.

Table 1: Tyko 2021 Resumed Phase II Drill Results from the Smoke Lake Zone

Hole	From (m)	To (m)	Width (m)	Ni_Eq* %	Ni_Eq*% Estimated Recovered	Ni %	Cu %	Co %	Pd g/t	Pt g/t	Au g/t
TK21-044	135.4	137.2	1.8	3.30	2.88	2.07	2.00	0.03	0.86	0.37	0.44
<i>Inc.</i>	135.8	136.7	0.8	6.85	5.98	4.35	4.11	0.05	1.68	0.76	0.88
TK21-045	107.0	110.0	3.0	3.18	2.74	2.46	1.01	0.04	0.61	0.34	0.26
<i>Inc.</i>	107.0	108.2	1.2	5.22	4.47	4.20	1.27	0.06	0.94	0.62	0.31
TK21-046	90.0	102.7	12.7	0.33	0.29	0.23	0.14	0.01	0.09	0.04	0.05
<i>Inc.</i>	94.9	102.7	7.8	0.44	0.38	0.29	0.20	0.01	0.12	0.05	0.06
<i>Inc.</i>	101.0	102.7	1.7	1.26	1.09	0.87	0.52	0.02	0.35	0.15	0.18
TK21-047	No significant values										
TK21-048	8.9	16.4	7.5	0.11	0.09	0.07	0.04	0.01	0.01	0.00	0.00
<i>Inc.</i>	10.4	12.0	1.6	0.19	0.16	0.14	0.07	0.01	0.01	0.00	0.00
TK21-049	No significant values										
TK21-050	124.8	130.0	5.2	0.95	0.82	0.74	0.31	0.01	0.20	0.10	0.10
<i>Inc.</i>	124.8	125.3	0.5	5.09	4.32	4.67	0.22	0.03	0.85	0.52	0.32
<i>Inc.</i>	128.9	129.3	0.4	4.88	4.24	3.34	2.47	0.05	0.98	0.51	0.46
TK21-051	No significant values										
TK21-052	70.6	72.0	1.4	4.97	4.25	3.81	1.23	0.07	1.53	0.78	0.74

* Ni_Eq calculated using in-situ values and prices from the 2021 NI43-101 Haukiahio Mineral Resource Estimate; \$1,600/oz Pd, \$1,100/oz Pt, \$1,650/oz Au, \$3.50 Cu, and \$7.50/lb Ni, and \$20/lb Co. No Metallurgical test work has been undertaken at Smoke Lake and therefore the recoveries given here are estimates based off similar high-grade Ni-Cu deposits. A recovery of 80% Pd, 80% Pt, 80% Au, 95% Cu, 85% Ni and 80% Co are used in the Estimated Recovered Pd_Eq grade calculation.

Figure 5. Plan Map of the Smoke Lake Zone showing Phase II drill holes TK21-044 to 052 and select previous holes in italics.

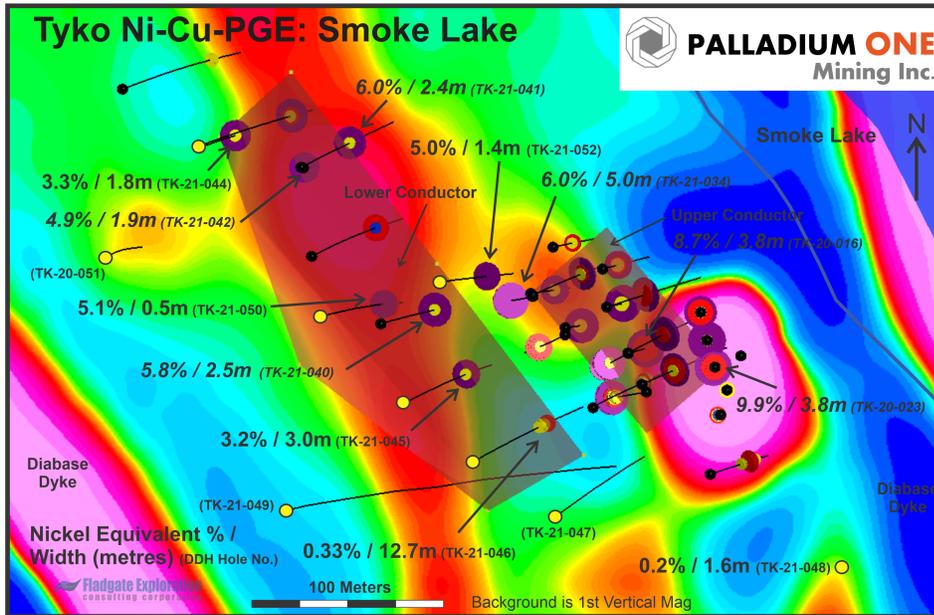
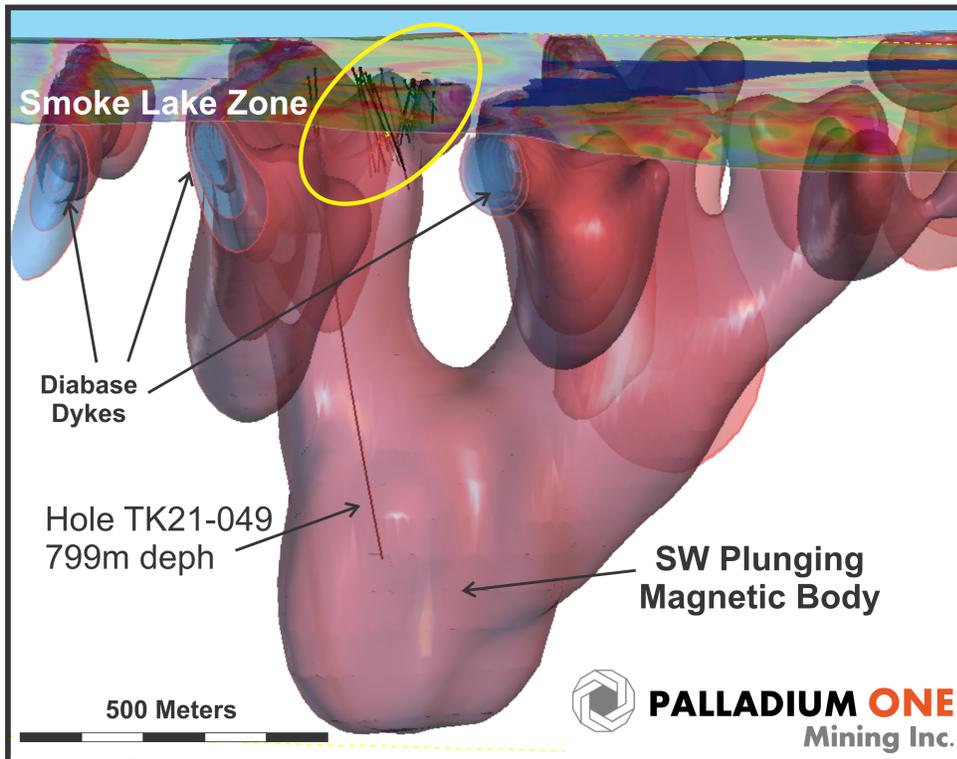


Figure 6. Isometric view looking north, of all Smoke Lake drilling, and inverted high resolution drone based magnetic isoshells.



***Nickel Equivalent (“Ni_Eq”)**

Nickel and copper equivalent is calculated using US\$1,600 per ounce for palladium, US\$1,100 per ounce for platinum, US\$1,650 per ounce for gold, US\$3.50 per pound for copper, US\$7.50 per pound for nickel and US\$20 per



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pound for Cobalt. This calculation is consistent with the commodity prices used in the Company's September 2021 NI 43-101 Haukiaho resource estimate. No Metallurgical test work has been undertaken at Smoke Lake and therefore the recoveries given here are estimates based off similar high-grade Ni-Cu deposits. A recovery of 80% Pd, 80% Pt, 80% Au, 95% Cu, 85% Ni and 80% Co are used in the Estimated Recovered Pd_Eq grade calculation.

QA/QC

The Phase II drilling program was carried out under the supervision of Neil Pettigrew, M.Sc., P. Geo., Vice President of Exploration and a director of the Company.

Drill core samples were split using a rock saw by Company staff, with half retained in the core box. The drill core samples were transported by company staff to the Company's core handling facility, to Actlabs laboratory in Thunder Bay, Ontario. Actlabs, is an accredited lab and are ISO compliant (ISO 9001:2015, ISO/IEC 17025:2017). PGE analysis was performed using a 30 grams fire assay with an ICP-MS or ICP-OES finish. Multi-element analyses, including copper and nickel were analysed by four acid digestion using 0.5 grams with an ICP-MS or ICP-OES finish.

Certified standards, blanks and crushed duplicates are placed in the sample stream at a rate of one QA/QC sample per 10 core samples. Results are analyzed for acceptance at the time of import. All standards associated with the results in this press release were determined to be acceptable within the defined limits of the standard used

About Tyko Ni-Cu-PGE Project

The Tyko Ni-Cu-PGE Project, is located approximately 65 kilometers northeast of Marathon Ontario, Canada. Tyko is an early stage, high sulphide tenor, nickel-copper (2:1 ratio) project with drill hole intercepts returning up to **10.1% Ni_Eq over 3.8 meters** (8.1% Ni, 2.9% Cu, 0.1% Co, 0.61g/t Pd, 0.71g/t Pt, and 0.02g/t Au) in hole TK-20-023.

Qualified Person

The technical information in this release has been reviewed and verified by Neil Pettigrew, M.Sc., P. Geo., Vice President of Exploration and a director of the Company and the Qualified Person as defined by National Instrument 43-101.

About Palladium One

Palladium One Mining Inc. (TSXV: PDM) is focused on discovering environmentally and socially conscious **Metals for Green Transportation**. A Canadian mineral exploration and development company, Palladium One is targeting district scale, platinum-group-element (PGE)-copper-nickel deposits in leading mining jurisdictions. Its flagship project is the Lantinen Koillismaa (LK) Project in north-central Finland, which is ranked by the Fraser Institute as one of the world's top countries for mineral exploration and development. LK is a PGE-copper-nickel project that has existing Mineral Resources. PDM's second project is the 2020 Discovery of the Year Award winning Tyko Project, a high-grade sulphide, copper-nickel project located in Canada. Follow Palladium One on [LinkedIn](#), [Twitter](#), and at www.palladiumone.com.

ON BEHALF OF THE BOARD

"Derrick Weyrauch"

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