

# GoldSpot Machine Learning Identifies 8 New Syenite Drill Targets at Northstar's Miller Gold Property

Vancouver, British Columbia--(Newsfile Corp. - January 11, 2021) - **Northstar Gold Corp.** (CSE: NSG) ("**Northstar**" or the "**Company**"), reports that machine learning stochastic cluster analysis and final 3D inversions by GoldSpot Discoveries Corp. (GoldSpot) on a 2020, 5 km<sup>2</sup> gravity and magnetic geophysical survey dataset has identified multiple anomalies with the same signature as known gold-bearing syenites on the Miller Gold Property (Figure 1).

"GoldSpot's state-of-the-art machine learning analysis and 3D inversions clearly suggests that the alkalic syenite intrusive gold system at the Miller Gold Property is much larger than previously indicated. GoldSpot has identified no less than eight new syenite gold exploration targets along 2 property-wide trends, providing numerous drill targets that can potentially result in a number of new gold discoveries on the Property" states Brian P. Fowler, CEO of Northstar. "With the recent close of a \$2.4M private placement tranche (See Northstar News Release dated December 23, 2020), Northstar is fully funded to expand the new Allied Gold Zone discovery and test these new targets with a Phase II diamond drill program in early 2021."

"GoldSpot is pleased to have deployed its new technology MinusOne, our latest deterministic and stochastic inversion tool for gravity and magnetic data on Northstar's Miller Gold Property geophysical datasets. Eight newly defined machine learning cluster anomalies represent prime gold exploration targets on the Miller Gold Property", states Vincent Dubé-Bourgeois, Chief Executive Officer of GoldSpot.

Click [here](#) to view a Proactive Canada interview with Steve Darling moderating a discussion with Northstar CEO Brian Fowler and GoldSpot CEO Vincent Dubé-Bourgeois detailing the process, significance and exploration implications of GoldSpot's findings on Northstar's Flagship Miller Gold Property.

## ***GoldSpot Machine Learning 3D Inversion Highlights***

- Machine learning analysis and 3D inversions delineated the three-known gold-bearing syenites on the Miller Gold Property (Allied, Planet and Meilleur Syenites) as well as an additional eight bodies with similar geophysical signatures that have never been drill tested.
- The syenite targets range in diameter from 130 m to 350 m, with one having a geophysical signature length of 700 m.
- The large Meilleur Syenite appears to have two satellite bodies to the west and east of the main intrusion (Targets 2 and 3 - Figure 1) and may extend 300 m further SSW than previously mapped for a total length of 700 m.
- The Planet Syenite appears to extend further eastwards, possibly doubling in size (Target 4 - Figure 1) (Figure 2).
- The geophysics shows conductive and chargeable zones as halos surrounding the known syenite gold-bearing intrusions, co-incident with structures trending along the 1600 m x 600 m high chargeability corridor (Figure 1). The halos surrounding the known syenite gold-bearing intrusions include recent intersections such as **1.2 g/t Au over 107.3 m, and 1.4 g/t Au over 118.5 m - which are open**. In general, highly conductive and chargeable zones = possible mineralized fault structures which produce Metal Factor anomalies (Figure 3), while high resistivity and chargeability = disseminated sulphides with quartz veining which produce RSC (Resistivity Scaled Chargeability) anomalies (Figure 4).
- The largest of the untested syenite targets includes surface exposures of syenite in outcrop with pervasive widespread alteration in the surrounding metavolcanics and co-incident I.P.

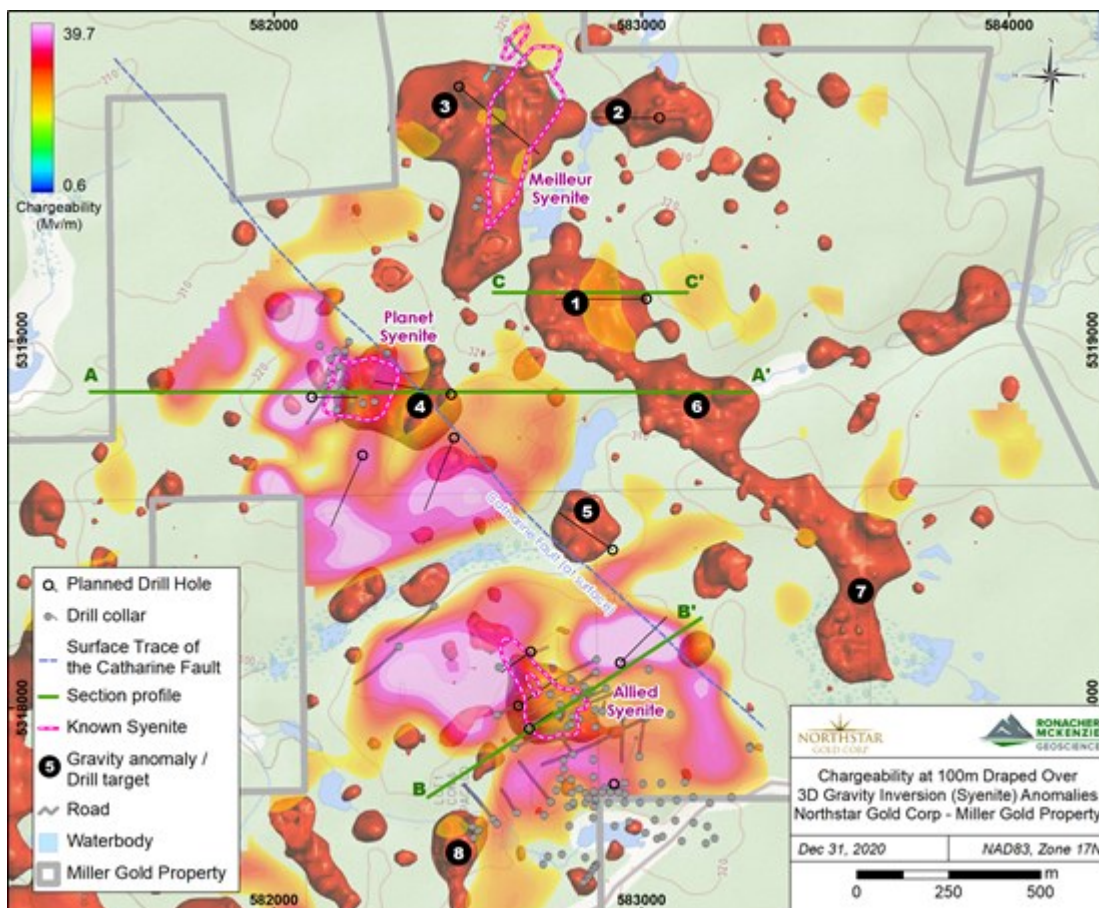
chargeability and low resistivity anomalies (Target 1 - Figure 1) (Figure 4).

### ***Syenite Intrusions and Gold***

The Miller Gold Property is host to a large scale alkaline magmatic gold system which is potentially connected at depth to the same magmatic source feeding the nearby Kirkland Lake Gold camp. In both camps most of the gold discovered to date is hosted in sheared syenitic dikes or stocks such as the Allied Syenite (Figures 3A and 3B).

Syenite intrusions are favourable hosts for gold mineralization at Miller for several reasons:

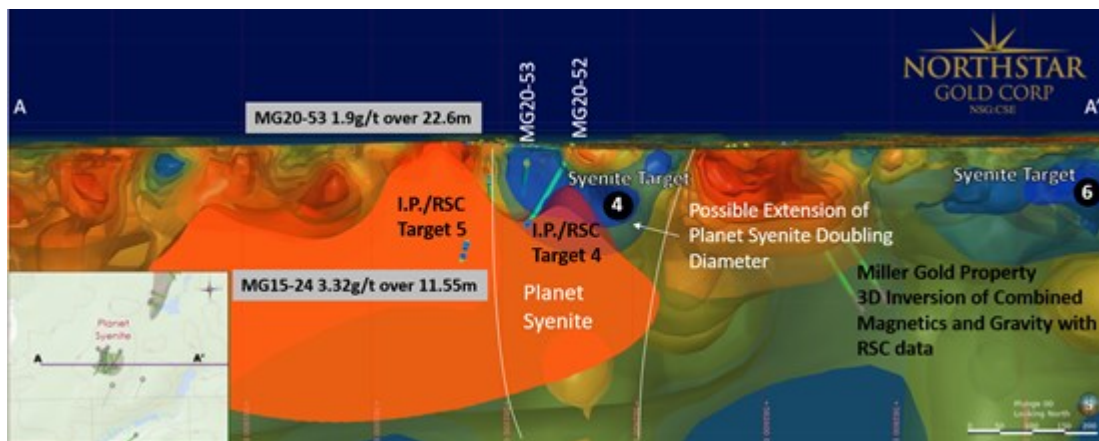
- a) The location of the syenite intrusions often correspond with dilatant zones along significant first or second order structures which represent prime conduits for exsolved magmatic fluids ascending from depth.
- b) When subjected to deformation, the ductility contrast between the host syenites and the surrounding more ductile lithologies create extensive brittle fracturing or tectonic brecciation within the syenite intrusions with intense metasomatism, hydrothermal alteration and mineralization of the syenites.
- c) The contacts between the syenite intrusive and the host lithologies represent zones of weakness that like deeper fault structures are often pathways for hydrothermal fluids and represent favourable depositional sites for gold mineralization.



**Figure 1: Plan View of I.P. Chargeability at 100m Draped Over 3D Gravity Anomalies Highlighting Known Syenites and 8 New Syenite Drill Targets**

To view an enhanced version of Figure 1, please visit:

[https://orders.newsfilecorp.com/files/6839/71701\\_e077736bc469da5c\\_002full.jpg](https://orders.newsfilecorp.com/files/6839/71701_e077736bc469da5c_002full.jpg)

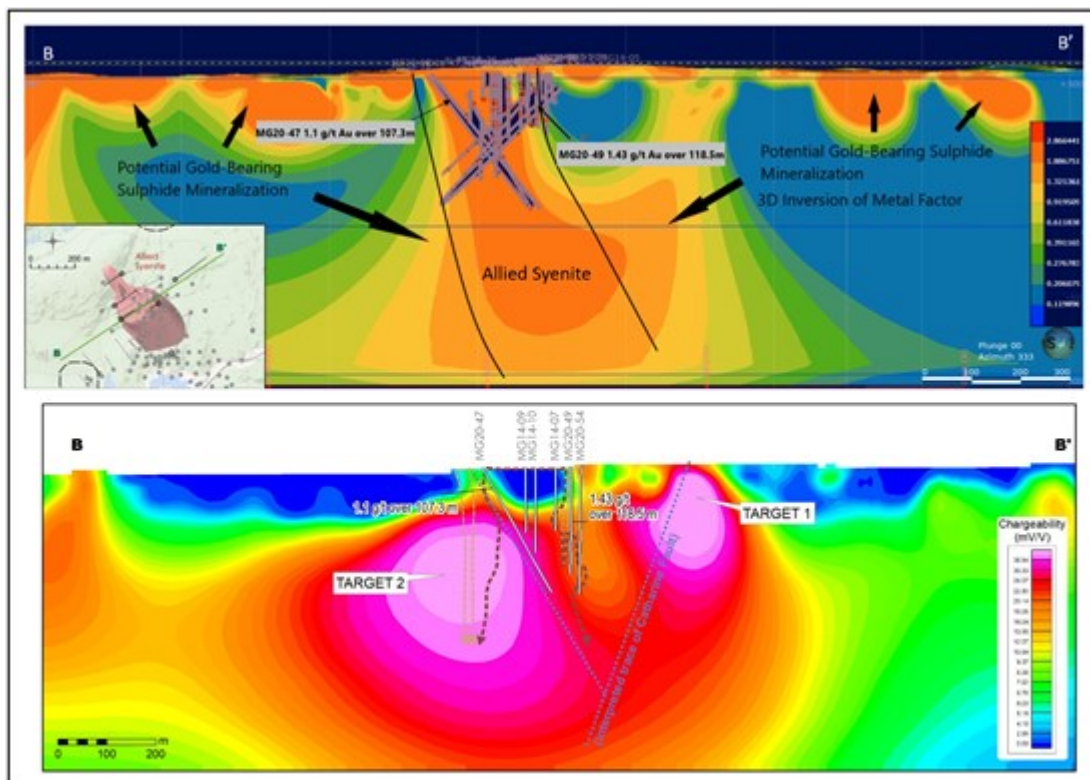


**Figure 2. Planet Syenite Magnetic and Gravity 3D Inversion Section Illustrating Enlarged Target Areas 4 and 6 and I.P. RSC Targets**

To view an enhanced version of Figure 2, please visit:

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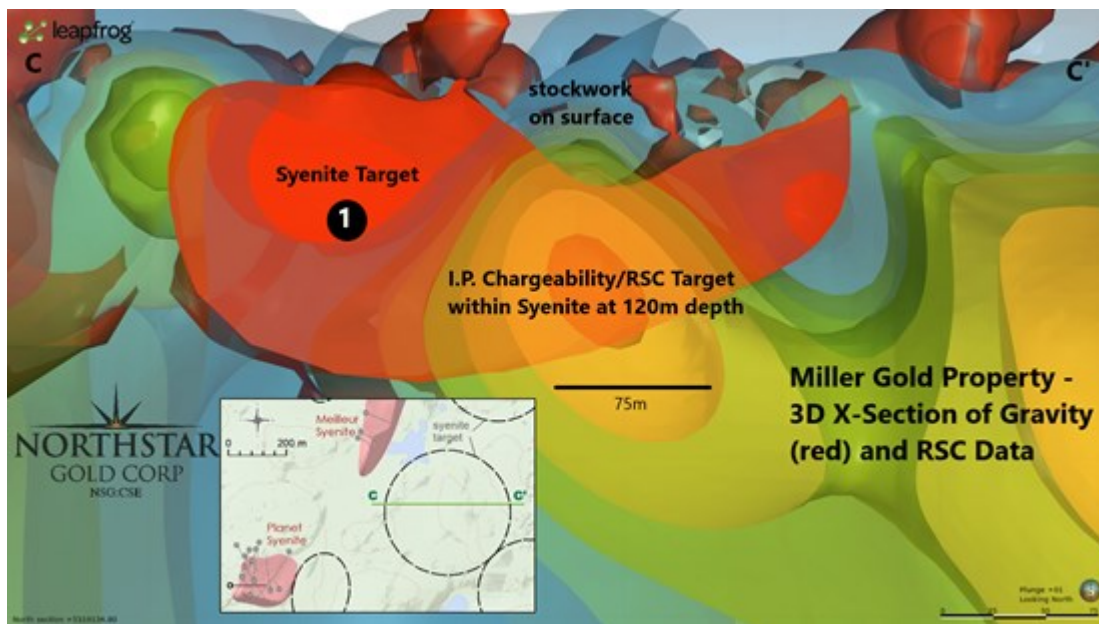
**Figure 3A. Allied Syenite Section Illustrating 3D Inversion of Metal Factor and Potential Gold-Bearing Sulphide Mineralization**



**Figure 3B. Allied Syenite Chargeability Section (mV/V) and Flanking Undrilled Chargeability Anomalies**

To view an enhanced version of Figures 3A and 3B, please visit:

[https://orders.newsfilecorp.com/files/6839/71701\\_e077736bc469da5c\\_004full.jpg](https://orders.newsfilecorp.com/files/6839/71701_e077736bc469da5c_004full.jpg)



**Figure 4. Miller Gold Property Section of 3D Gravity and RSC Data through Syenite Drill Target 1**

To view an enhanced version of Figure 4, please visit:

[https://orders.newsfilecorp.com/files/6839/71701\\_e077736bc469da5c\\_005full.jpg](https://orders.newsfilecorp.com/files/6839/71701_e077736bc469da5c_005full.jpg)

### ***Structural Geology Model***

Geochronological age dating and geochemistry indicates that the Miller and Kirkland Lake gold deposits were formed contemporaneously and derived from a common gold enriched magmatic hydrothermal reservoir at depth. The Catharine Fault Zone, which crosscuts the Miller Gold Property is interpreted as a broad composite "first order structure" capable of channelling deep seated exsolved magmatic hydrothermal fluids into favourable sites of gold deposition, namely intrusive contacts and cross cutting second order structures. GoldSpot's machine learning analysis and 3D inversions highlight these newly identified syenite drill targets, providing additional insights into the structural geology and controls on gold mineralization of the Miller Gold Property that will be a Phase II diamond drill program focus.

### ***Going Forward***

Northstar is positioning and fully funded to conduct a 3,000 metre drill program in early 2021 to follow-up the 2020 Allied Gold Zone discovery and test these new potential syenite associated gold targets.

### ***Qualified Persons***

Lindsay Hall, MSc., P.Geo. (APGO 0891), a 'Qualified Person' (Q.P.) as defined under Canadian National Instrument NI 43-101, has reviewed technical aspects of this news release.

### ***About the Miller Gold Property***

The Miller Gold Property and the Kirkland Lake Gold camp share many important geological features such as similar rock types, gold telluride mineralogy, timing of mineralization and large- scale hydrothermal gold systems featuring multi-stage and long-lived alkalic magmatic gold deposition. This strongly suggests the gold mineralization in both regions is derived from a common gold enriched alkaline magmatic-hydrothermal reservoir at depth and channelled to surface by deep seated, interconnected structures such as the first order Catharine Fault zone. An important difference is the Miller Property, in addition to high-grade gold-telluride mineralization, has several near-surface broad, low-grade bulk-tonnage drill zones (Planet and Allied Syenites) and remains un-explored at depth.

## **About Northstar Gold Corp.**

Prior to going public on the CSE on January 2, 2020 by way of a \$3 million Initial Public Offering, Northstar operated for the past 11 years as a private company focused primarily on gold exploration in the prolific Kirkland Lake District in northeastern Ontario (>24.5 million ounces gold produced from 7 mines since 1915). Northstar has an accomplished Board, Special Advisor and Management Group comprised of professionals highly experienced in exploration, mining, finance and investment banking on a global basis.

The Company's flagship property is the 100% owned Miller Gold Property, situated 18 km southeast of Kirkland Lake and Kirkland Lake Gold's Macassa SMC gold mine. Northstar has just completed a 5,023 metre, 28-hole drill program and integrated 3D IP, gravity and magnetic survey on the Miller Gold Property, making a number of new gold discoveries. This includes the near-surface Allied Syenite Gold Zone, returning intercepts that include 19.4 g/t Au over 4.4m within 1.4 g/t Au over 118.5m and 4.7 g/t Au over 8m within a 107.3m interval averaging 1.2 g/t Au. Northstar is positioning and fully funded to resume drilling at the Miller Gold Property in February 2021 with a 3,000 metre, 15-hole Phase II drill program.

Northstar also has 3 additional 100%-owned exploration projects in northern Ontario, including the recently acquired 1,200 ha Rosegrove Property situated 0.5 km from the Miller Gold Property, the 5,090 hectare Bryce Property, an intrusive-gold / PME VMS project located 35 km southwest on the Rideout Break, and the Temagami-Milestone Cu-Ni-Co Property located in Strathcona Township. Northstar is considering options to advance the Bryce and Milestone projects through joint venture partnerships or otherwise.

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### **Cautionary Note Regarding Forward-Looking Statements**

*This news release contains certain forward looking statements which involve known and unknown risks, delays, and uncertainties not under the control of Northstar Goldcorp. which may cause actual results, performance or achievements of Northstar Gold Corp to be materially different from the results, performance or expectation implied by these forward looking statements. By their nature, forward looking statements involve risk and uncertainties because they relate to events and depend on factors that will or may occur in the future. Actual results may vary depending upon exploration activities, industry production, commodity demand and pricing, currency exchange rates, and, but not limited to, general economic factors.*



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