

**MATERIAL CHANGE REPORT**  
Form 51-102F3  
Section 7.1 of National Instrument 51-102

**Item 1. Name and Address of Company**

55 North Mining Inc. (“**55 North**” or the “**Company**”)  
401 Bay Street, Suite 2702  
Toronto, Ontario M5H 2Y4

**Item 2. Date of Material Change**

September 27, 2021

**Item 3. News Release**

A news release was issued through Accesswire on September 27, 2021

**Item 4. Summary of Material Change**

On September 27, 2021, 55 North reported an updated NI 43-101 compliant resource estimate on its high grade Last Hope Gold Project in Lynn Lake Manitoba.

**Item 5. Full Description of Material Change**

The material change is fully described in the news release attached hereto as Schedule “A”.

**Item 6. Reliance on Section 7.1(2) or (3) of National Instrument 51-102**

This Report is not being filed on a confidential basis in reliance on subsection 7.1(2) of National Instrument 51-102.

**Item 7. Omitted Information**

No information has been omitted on the basis that it is confidential information.

**Item 8. Executive Officer**

Inquiries in respect of the material change referred to herein may be made to:

Bruce Reid, Chief Executive Officer  
Tel: (647) 500-4495

**Item 9. Date of Report**

September 27, 2021



**55 North Mining Inc. Reports Updated Gold Resource Estimate for Last Hope Project:  
87% Increase to Indicated Mineral Resources, 48% Increase to Inferred Mineral  
Resources, New High Grade Potential Surface Mineable Mineral Resources**

Toronto, Ontario – September 27, 2021 - 55 North Mining Inc. (CSE: FFF) (“55 North” or the “Company”) is pleased to report an updated NI 43-101 compliant Mineral Resource Estimate on its high grade Last Hope Gold Project in Lynn Lake Manitoba, including high grade near surface Mineral Resources:

1. Indicated Mineral Resources increased by 87%, Inferred Mineral Resources increased by 48%.
2. Mining of the near surface Mineral Resources by trench mining could conceptually provide a low cost method for mining 14,500 high grade ounces early in the potential mine life.

**1. Updated Mineral Resource**

The updated Mineral Resource Estimate reflects the previously announced results from the 2020/2021 winter drill program. The results indicated up and down plunge extensions of high grade shoots, and the extension along strike of high grade gold mineralization beyond the extent of the previous resource estimate dated February 2021. Assay results from 21 core holes (8,530 metres) were incorporated into the updated Mineral Resource Estimate. The resulting updated Mineral Resource Estimate is as follows:

**Table 1: Last Hope Updated Mineral Resource Estimate <sup>(1-8)</sup>**

	Au cut-off grade	Indicated Category			Inferred Category		
		Tonnes	Grade Au	Ounces Au	Tonnes	Grade Au	Ounces Au
	g/t		g/t		g/t		
Near Surface	1.0	82,800	5.08	13,500	15,700	1.90	1,000
Underground	1.8	325,500	5.50	57,600	1,537,300	5.52	272,800
<b>Total</b>		<b>408,300</b>	<b>5.41</b>	<b>71,100</b>	<b>1,553,000</b>	<b>5.48</b>	<b>273,800</b>

1. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
3. The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that

the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.

4. The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
5. Metal prices used were US\$1,650/oz Au and 0.76 CDN\$/US\$ FX with process recoveries of 95% Au. A CDN\$20/t process cost and CDN\$5/t G&A cost were used.
6. The near surface mining cost for the top 20m of the Mineral Resource was CDN\$35/t.
7. The underground mining cost was CDN\$95/t. The underground Mineral Resource grade blocks were quantified above the 1.8 g/t Au cut-off, below 20 m from surface and within the constraining mineralized wireframes. Underground Mineral Resources selected exhibited continuity and reasonable potential for extraction by the long hole underground mining method.
8. Grade estimation was undertaken with the Inverse Distance Cubed method on 1.0m capped composites.

A NI 43-101 compliant Technical Report will be filed on SEDAR within 45 days of this news release.

### **Increase to Indicated and Inferred Mineral Resources**

As shown in the following table, Indicated Mineral Resources increased 87% to 71,100 ounces from 38,000 ounces, and Inferred Mineral Resources increased 48% to 273,800 ounces from 184,100 ounces.

**Table 2: Comparison to previous Mineral Resource Estimate at Last Hope**

Classification	February 2021 Estimate (1.8 g/t Au Cut-off)			September 2021 Estimate (1.0 & 1.8 g/t Au Cut-off)		
	Tonnes	Grade Au	Ounces Au	Tonnes	Grade Au	Ounces Au
		g/t			g/t	
<b>Indicated</b>	213,000	5.53	38,000	408,000	5.41	71,100
<b>Inferred</b>	1,107,000	5.17	184,100	1,553,000	5.48	273,800

### **Sensitivity to Gold cut-off grades**

The Au cut-off sensitivities to the Mineral Resource Estimate are demonstrated in the following table:

**Table 3: Updated Mineral Resource Estimate Sensitivity**

Cut-Off g/t Au	Indicated Classification			Inferred Classification		
	Tonnes	Grade Au	Ounces Au	Tonnes	Grade Au	Ounces Au
		g/t			g/t	
<b>Near Surface Pit Mineral Resource Estimate Sensitivity</b>						
0.50	103,300	4.21	14,000	16,500	1.86	1,000
0.75	90,300	4.73	13,700	16,400	1.86	1,000
<b>1.00</b>	<b>82,800</b>	<b>5.08</b>	<b>13,500</b>	<b>15,700</b>	<b>1.90</b>	<b>1,000</b>
1.25	76,600	5.40	13,300	9,400	2.42	700
1.50	73,000	5.59	13,100	6,800	2.84	600
1.75	68,400	5.86	12,900	6,000	3.01	600

	Indicated Classification			Inferred Classification		
Cut-Off	Tonnes	Grade Au	Ounces Au	Tonnes	Grade Au	Ounces Au
<i>g/t Au</i>		<i>g/t</i>			<i>g/t</i>	
2.00	65,000	6.07	12,700	5,400	3.12	500
<b>Underground Mineral Resource Estimate Sensitivity</b>						
1.40	375,300	4.98	60,100	1,722,700	5.10	282,500
1.60	348,500	5.25	58,800	1,622,100	5.32	277,700
<b>1.80</b>	<b>325,500</b>	<b>5.50</b>	<b>57,600</b>	<b>1,537,300</b>	<b>5.52</b>	<b>272,800</b>
2.00	302,600	5.78	56,200	1,454,700	5.73	268,000
2.25	274,100	6.16	54,200	1,362,100	5.98	261,700
2.50	248,000	6.55	52,300	1,263,000	6.26	254,100
2.75	225,900	6.94	50,400	1,179,100	6.52	247,000
3.00	205,900	7.33	48,500	1,120,300	6.71	241,600

### **Geologic Model**

The Last Hope Property is located within the Churchill Structural Province of the Canadian Shield, lying 5 km south of the southern portion of the Lynn Lake Greenstone Belt. The Lynn Lake Greenstone Belt, comprised of the North and older South Belts, is part of a larger litho-structural unit which extends in a north-easterly direction from the La Ronge Greenstone Belt in Saskatchewan.

The Last Hope Deposit can be classified as a mesothermal lode gold deposit in a Paleoproterozoic setting. Lithologies which host the gold bearing structures have been altered to the upper greenschist to lower amphibolite facies. The protoliths have not been determined. Gold is associated with disseminated to semi massive pyrite/pyrrhotite sulphide mineralization. Gold-bearing sulphide minerals are structurally controlled by a predominant north west to south east striking near vertical zone of deformation. This deformation zone is truncated to the north by the east west striking Johnson shear, the host of numerous gold occurrences and deposits.

### **QA/QC protocols**

The drilled core is cut in half with the cut sample being placed in a bag which is sealed and transported to TSL labs in Saskatoon. A certified standard with low grade, mid-grade and high-grade gold values that approximates the lithology of the submitted sample is placed with random grade values in the sample stream every 10 samples. A certified blank standard is placed in the sample stream every 30 samples and a field duplicate is placed in the sample stream every 20 samples. In addition, TSL labs maintains their own QA/QC protocols consisting of selected resampling of the submitted samples and the insertion of 6 internal standards

## **2. High Grade Near Surface Resource**

The Company is considering a scenario whereby it could mine the top 20 metres of high grade mineralization utilizing simple, potentially low cost trench mining methods. The Company believes that the Near Surface Mineral Resource announced today (Indicated: 13,500 ounces grading 5.08 g/t, Inferred: 1,000 ounces grading 1.90 g/t) is amenable to surface extraction using these methods as the vein is near vertical and virtually outcrops at surface. The potential method considered would utilize blast cuts which would be mined using a narrow remotely operated loader, crane and bucket. Although the analysis process is still in its early stages, this option

could potentially provide the opportunity for a low capex and opex method for upfront extraction of a portion of the Mineral Resource, thereby having a very positive impact on upfront cashflow.

### **Future Drill Program to Potentially Incorporate Cost Saving All Season Road**

55 North is planning the construction of a 5.6 km access road, subject to permitting, which would provide year-round road access to drill sites planned for its Phase 3 drill program, significantly lowering transportation costs of personnel and equipment.

A Phase 3 drill program is currently being planned to follow up on the previously announced favourable results of the 21 holes of the 2020/2021 drill program, and will consider in part the following:

- Infill drilling in the areas of widening high-grade gold zones (hole LH-20-08 (19.25 g/t over 15.7m) and hole LH-21-20 (6.17 g/t over 8.0m))
- Infill drilling in areas of multiple en-echelon zones (holes LH-21-16 and LH-21-18).
- Drilling to extend down-plunge extensions of high-grade shoots.
- Step-out drilling to extend mineralization along strike to the southeast.

Also planned for Phase 3 is the use of directional drilling which will improve accuracy and lower costs.

### **Qualified Persons**

The technical content disclosed in this press release was reviewed and approved by Peter Karelse, P.Geo., VP Exploration for 55 North, a Qualified Person, and Eugene Puritch, P.Eng., President of P&E Mining Consultants Inc., an independent Qualified Person, both as defined under National Instrument 43-101. Mr. Karelse and Mr. Puritch consent to the publication of this announcement by 55 North Mining Inc. and certify that this announcement fairly and accurately represents the information for which they are responsible.

### **About 55 North Mining Inc.**

55 North Mining Inc. is an exploration and development company advancing its high-grade Last Hope Gold Project located in northern Manitoba, Canada.

### **FOR FURTHER INFORMATION, PLEASE CONTACT:**

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### **CAUTION REGARDING FORWARD-LOOKING INFORMATION**

*This news release of 55 North contains statements that constitute “forward-looking statements”. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the Company’s actual results, performance or achievements, or developments in the industry to differ materially from the anticipated results, performance or achievements expressed or implied by such forward-looking statements.*