# Development of a World Class Critical Rare Earth Element District 開發世界級的關鍵稀土元素區











GCFF – Vancouver 國際金融投資博覽會 – 温哥華 January 2020 / 2020年1月

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**SMY: TSX-V** 

The following presentation may include certain "forward-looking statements" within the meaning of the United States Private Litigation Reform Act of 1995 and applicable Canadian Securities Laws. All statements other than statements of historical fact, included in the presentation, including without limitation, statements regarding potential mineralization and reserves, exploration results, and future plans and objectives of Search Minerals, are forward-looking statements. Words such as "expect", "anticipate", "estimate", "may", "will", "should", "intend", "believe" and other similar expressions are forward-looking statements. Forward-looking statements are not guarantees of future results and conditions but rather reflect our current views with respect to future events and are subject to risks, uncertainties, assumption and other factors, and actual results and future events could differ materially from those anticipated in such statements. There can be no assurance that such forward-looking statements will prove to be accurate. We base our forward-looking statements on information currently available to us and we do not assume any obligation to update them, except as required by law.

An additional Cautionary Note to Investors: In the event that we use certain terms in this presentation such as "resource", "indicated resource" and "inferred resource," US investors are cautioned that, while such terms are recognized and required by Canadian Securities Laws, the United States Securities and Exchange Commission does not recognize them. Under U.S. standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination has been made. U.S. investors should not assume that all or any part of measured or indicated resources will ever be converted into reserves. In addition, "inferred resources" have a greater amount of uncertainly as to their existence and as to whether they can be mined legally or economically. Accordingly, information concerning descriptions of mineralization in the presentation may not be comparable to information made public by companies that are subject to the SEC's Industry Guide 7.

All of the scientific and technical information contained herein has been reviewed and/or prepared by either Dr. Randy Miller, P.Geo. or Dr. David Dreisinger, both being a "Qualified Person" within the meaning of National Instrument 43-101-Standards of Disclosure for Minerals Projects. For further details of the Company's procedures and policies for data verification, the reader is referred to the Company's news releases and other material information available on the Company's website at <a href="https://www.searchminerals.ca">www.searchminerals.ca</a> or on SEDAR at <a href="https://www.sedar.com">www.sedar.com</a>

# About Search Minerals Inc. Search Minerals Inc.公司介紹

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- ➤ Focused on developing and continued exploration within the emerging Critical Rare Earth Element (CREE) District of SE Labrador. 專注於在拉布拉多東南部新興的關鍵稀土元素(CREE)區內開發和繼續勘探。
- ➤ Primary objective: Develop multigenerational REE mining operation based on the Foxtrot and Deep Fox resources. To seek competitive low-cost production of REE in SE Labrador. / 主要目標: 基於Foxtrot和Deep Fox的資源, 開發可延續幾代的稀土礦產資產。努力實現在拉布拉多東南部有競爭力的低成本稀土生產。
- ➤ In 2017, pilot plant testing produced a high purity mixed rare earth oxide (REO) concentrate. Completed pilot optimization in November 2019. / 2017年中試測試產出了高純度混合稀土氧化物精礦。 2019年11月完成中試優化。
- ➤ October 2017, InCoR Holdings make strategic investment into Search and appoints 2 members to the Board. / 2017年10月InCoR Holdings戰略投資Search, 任命2名董事進入Search董事會。
- Search has strong working relationships with government partners at all levels including Atlantic Canada Opportunities Agency, InnovateNL, Department of Natural Resources, NunatukaVut Community Council / Search與各級政府合作夥伴保持非常好的工作關係,包括加拿大大西洋地區經濟發展局、InnovateNL、自然資源部、NunatuKavut社區委員會



# Why Invest in Search Minerals? 投資Search Minerals的理由

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Lowest CAPEX project in North America - \$ 152M (\$Cdn), 1000 tonnes per day scalable processing technology to align production rate with CAPEX 是北美資本成本最低的項目—1.52億加元,日均加工礦石1000噸,加工技術可根據生產速度擴展



Patented Processing Technology – produced 99% high purity mixed REO concentrate during \$1.9M pilot plant operation and optimization 擁有專利加工技術—在投入\$190萬進行中試工廠 運營和優化期間,生產了99%的高純度混合稀土氧化物精礦



100% owned Foxtrot and Deep Fox Resources: Fox Meadow and Silver Fox Advanced Prospects; Multigenerational opportunity / 100%拥有Foxtrot和Deep Fox 兩處資源; 以及Fox Meadow和Silver Fox高級階段前景區,延續幾代的機遇



Strong support from Federal/Provincial governments, NunatuKavut Community Council (Indigenous) and Local Communities 擁有來自聯邦/省政府、 NunatuKavut社區委員會(本土合作夥伴)以及當地社區的強大支持戶



Macro Developments – Defense Production Act Title III – Create North American rare earth supply chain, Possible future supply constraints 宏觀發展—國防生產法案第三章 - 創建北美稀土供應鏈,未來可能的供應限制與電氣化擴張



Led by a proven management and Board of Directors. Insider ownership greater than 38% 擁有具有成功履歷的管理團隊和董事會,內部人士持股比例高達38%以上



# Upcoming Catalysts 未來催化劑

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Month 月份	Catalyst 催化劑
November/ 11月	Commence Demonstration Plant cost/funding options 開始示範工廠成本/ 融資選擇
December/ 12月	Optimization of Pilot Plant Completed – Final Report 完成優化中試工廠 – 最終報告
February / 2月	Assays from 2019 exploration work – Fox Meadow and Silver Fox 來自2019 年在Fox Meadow和Silver Fox進行勘探工作的分析結果
May / 5月	Begin 2020 REE exploration program in District 開始在區域內進行2020年稀土元素勘探活動

# Macro developments 宏觀進展

- ➤ Ongoing discussion with stakeholders to develop North American Rare Earth supply chain 正在與股東討論開發北美稀土供應鏈
- ➤ Upward trending rare earth market and developments 處於上升趨勢的稀土市場和發展



# Rare Earth Industry – in the news 稀土行業 – 新聞報導

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Canada and U.S. Finalize Joint Action Plan on Critical Minerals Collaboration 加拿大和美國確定關鍵礦物合作行動計劃 From 來自: Natural Resources Canada

News release 新聞稿

January 9, 2020 / 2020年1月9日 Ottawa,渥太華 Ontario 安大略省 Natural Resources Canada 加拿大自然資源部



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RESOURCES

**NEWS** 

HOME > NEWS > NEWS DISPLAY

Defense Production Act Title III Presidential Determinations to Strengthen the Domestic Industrial Base and Supply Chain for Rare Earth Elements



# Foxtrot Material at Different Processing Stages 在不同加工階段的Foxtrot材料

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- Vial #1 Finely crushed material at start of metallurgical process 在冶金工藝的開始細磨原材料
- Vial #2 Orange stained "dry stackable" residue containing an iron precipitate 橘色「乾燥可堆疊」殘留物包含鐵沉積物
- Vial #3 35% mixed rare earth carbonate precipitate after uranium ion exchange 鈾離子交換後35%混合碳酸稀土沉積物
- Vial #4 60% zinc sulfide precipitate after removal of thorium, iron, aluminum and silica 去除針、鐵、鋁和二氧化矽後60%硫化鋅沉積物
- Vial #5 High purity rare earth oxalate 高純度稀土草酸鹽
- Vial #6 Reddish final rare earth oxide made by heating the high purity oxalate 通過加熱高纯度草酸鹽製得最終的微红色稀土氧化物

# Search Minerals – in the supply chain Search Minerals –在供應鏈中

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Raw Materials 原材料 Processing 加工 Separation Refining 分選、精煉

Engineered Rare Earth Materials

處理稀土材料

磁體生產商

OEM

原始設備製造商

#### SEARCH MINERALS

- District Scale Multi Generational Raw material supply (70km x 10km) 區域規模、持續幾代的原材料供應 (70 公 里 x 10 公里)
  - ➤ 1 Resource, 1 Resource pending, many projects 一處資源量、一處待發佈資源量、多個項目
- **➢ Patented Proprietary Processing 獲得專利的加工工藝** 
  - Low capital / operating costs 低資本/運營成本
  - Produced 99% high purity mixed REO Concentrate 生產99%高純度混合稀土氧化物精礦
- **➣ Separation/Refining 分選/精煉** 
  - > Sample delivered and tested at existing refineries and new technology process 在現有精煉廠採用新的技術工藝進行測試和產生樣品

## SALES CHANNEL 銷售渠道



# Exploring for REE in Labrador since 2009 自2009年以來在拉布拉多探尋稀土元素

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Community of St. Lewis 12 km from Foxtrot and 2 km from Deep Fox 聖路易斯社區距離Foxtrot 12公里,距離Deep Fox 2公里





# About REEs: Industry Drivers

# 稀土元素:行業驅動因素



Green Energy 緑色能源

- Hybrid and Electric Vehicles 混合動力汽車和電動汽車
- Wind Energy 風能
- Energy Efficient Lighting 節能照明



Military and Defense 軍事和國防

- Communications 通訊
- Aeronautical engineering and Jet Engines 航空工程和噴射引擎
- Guidance, Lasers, Sonar, Optics, and Electronic Counter Measures 指導、 雷達、聲吶、光學器件、電子對抗措施

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Modern Technologies 現代技術

- Cell Phones and Digital Cameras 手機和數碼相機
- LCD and Plasma Televisions 液晶顯示器和等離子電視
- MRI machines, X-Ray, and PET Medical imaging 磁力共振成像機器、X光和 PET醫療成像

# REEs: Automakers committed to EV Future 稀土元素: 汽車製造商致力於電動汽車的未來 SMY: TSX-V

- Volkswagen US\$84 billion: goal of bringing 300 EV models to market by 2030
   大眾投資840億美元: 目標是到2030年將300款電動汽車推向市場
- Ford investing \$4.5 billion over 5 years: on 13 new models for 2023 福特五年投資\$45億: 到2023年推出13款新車
- GM to phase out ICE vehicles: 20 EV models by 2023
   通用汽車逐漸停止生產内燃機汽車: 到2023年推出20款電動汽車
- Volvo: all new cars produced after 2019 will be electric or hybrid 富豪汽車: 2019年後生產的所有新車將為電動或混合動力的
- **BMW** to mass produce EVs by 2020: 12 different models available by 2025 實馬到2020年大量生產電動汽車: 到2025年推出12款
- Mercedes-Benz: electrifying its entire lineup by 2022
   奔馳: 到2022年整個產品線實現電動化
- Canada's Magna and Linamar: investments in EV supply chains
   加拿大的麥格納和利納馬:投資電動汽車供應鏈



# Location and existing infrastructure 位置和現有的基礎設施

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Community of St. Lewis 聖路易斯社區

- Diesel power plant (expandable) 柴油發電廠 (可擴展)
- Ice-free deep sea port: reagents & other supplies 深海不凍 港: 試劑和其他供應
- 12km from Foxtrot 距離 Foxtrot 12公里
- 2km from Deep Fox 距離 Deep Fox 2公里
- Small aircraft airstrip 小型飛機跑道
- Fox Harbour House: housing, office, core shack, workshop Trans-Labrador Highway / Fox港設施:住房、辦公室、岩芯棚、車 間、跨越拉布拉多的公路
- All season paved highway transport REE Concentrate 全天 候公路 - 運輸稀十精礦







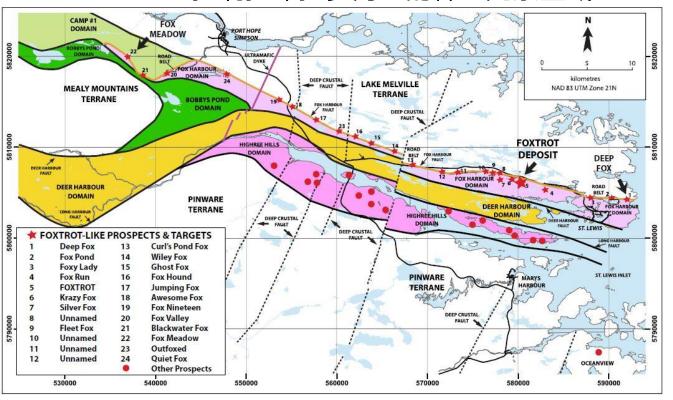




# Our Assets - District Scale Opportunity 我們的資產 - 區域規模的機會

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- Search controls CREE District on Labrador Sea
- Search 控制拉布拉多海上的稀土元素區域



#### Key Points 關鍵點

Over 24 prospects / 24個前 景區

Four major discoveries / 四個大型發現區

- Foxtrot Deposit
- Deep Fox Deposit
- Fox Meadow
- Silver Fox

Excellent geological and geophysical control / 地質和地球物理控制狀況極好

April 2016 PEA is based on the Foxtrot deposit only. / 2016年4月的初步經濟評估僅 基於Foxtrot礦床。



### Foxtrot Preliminary Economic Assessment (2016)

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FOXTROT PEA FINANCIALS (\$CDN)					
Plant Capacity	1,000 tpd production rate / 4.9 Mt over 14 years				
Pre-Tax NPV <sub>10%</sub> and IRR	\$93 million and 22%				
After-Tax NPV <sub>10%</sub> and IRR	\$48 million and 16.7%				
Payback Period	Pre-tax 3.5 years , After- tax 4.4 years				
Gross Revenue LOM	\$1.7 billion				
CAPEX	\$152 million for startup with a \$33M contingency				

#### **Rare Earth Element Production Rates**

Data from PEA - April 2016 - Deep Fox Production not included - 1,000 t/d production rate - produce 3211 T of Mixed Rare Earth Oxide Per Year

	Magnet Making Rare Earths					
	Pr	Nd	Tb	Dy		
Distribution (% of Total REE)	4.4%	15.9%	0.3%	1.9%		
Yearly Production (t)	142	511	10	60		

	Others Rare Earth Elements										
	Y	La	Ce	Sm	Eu	Gd	Но	Er	Tm	Yb	Lu
Distribution (% of Total REE)	11.6%	18.7%	39.8%	2.8%	0.1%	2.1%	0.3%	0.9%	0.3%	0.7%	0.1%
Yearly Production (t)	373	602	1,277	90	4	68	11	30	9	22	3

Cautionary Note: The preliminary economic assessment is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them to enable them to be categorized as mineral reserves and there is no certainty that the preliminary economic assessment will be realized. Mineral resources that are not mineral reserves do not have a demonstrated economic viability.

14 | Corporate Presentation | SMY: TSX-V | searchminerals.ca | GCFF January 2020

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# Foxtrot 初步經濟評估 (2016)

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FOXTROT初步經濟評估財務數據(加元)					
加工廠產能	日產能1,000噸, 14年共490萬噸				
稅前淨現值(10%)和內部收益率	\$9300萬和22%				
稅後净现值(10%)和内部收益率	\$4800萬和16.7%				
資本回收期	稅前3.5年,稅後4.4年				
礦山壽命期間總營收	\$17億				
資本開支	\$1.52億啟動,還需\$3300萬應急資金				

#### **Rare Earth Element Production Rates**

Data from PEA - April 2016 - Deep Fox Production not included - 1,000 t/d production rate - produce 3211 T of Mixed Rare Earth Oxide Per Year

	Ма	Magnet Making Rare Earths						
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Yearly Production (t)	373	602	1,277	90	4	68	11	30	9	22	3

警示說明:初步經濟評估本質上是初步數據,包含推斷資源量。推斷資源量是推測的地質數據,不確定性很大,不能確定是否能提升至礦產儲量類別,也不能確定初步經濟評估將會實現。礦產 資源量不是礦產儲量,尚未顯示出經濟可行性。



# Value Drivers 價值驅動因素

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Description 類型	How can economics improve 如何提升經濟效益
Grade, Recovery and Price parameters 品位、回採率、價格參數	INCREASE REVENUE 提高營收  ➤ Increase resource – extend Life of Mine 增加資源量 – 延長礦山壽命  ➤ Increase grade through discovery 通過發現提高品位  ➤ Increase recovery through optimized processing 通過優化工藝提高回採率
Capital and operating costs 資本成本和運營成本	<ul> <li>DECREASE COSTS 降低成本</li> <li>➤ Improved efficiencies in processing 提高加工效率</li> <li>➤ Lower REE separation costs 降低稀土分離成本</li> </ul>



# Direct Extraction Metallurgy Patent Pending 正在申請直接提取冶金專利







A breakthrough in SIMPLICITY, LOW COST AND EFFICIENCY!

在簡易、低成本和高效方面實現了突破!

# Processing – from Concept to Reality 加工 - 從概念變為現實

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# Funding Partners 出資合作夥伴



Atlantic Canada Opportunities Agency

Agence de promotion économique du Canada atlantique



Tourism, Culture, Industry and Innovation

Bench Scale 實驗室 規模 2014-2015 \$300,000

Pilot Plant Optimization 中試工廠 優化 2018-2019 \$800,000







Pilot Plant 中試工廠 2016-2017 \$1,900,000

Increased Recoveries from Bench Scale to Optimized Pilot Plant 從實驗室規模



# Business Strategy – Timeline to Production

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Description	2019	2020	2021	2022
RESOURCE	<ul> <li>✓ Resource for Deep Fox</li> <li>✓ Advance prospects in District</li> </ul>	<ul> <li>Advance prospects in District</li> <li>Deep Fox - Phase 3 drill program</li> <li>Update PEA for the District</li> </ul>	Bankable feasibility Study ➤ Infill drilling – Foxtrot ➤ Infill drilling – Deep Fox ➤ Permitting	<ul> <li>Measured Resources for Foxtrot and Deep Fox</li> <li>Development permits approved</li> </ul>
ENVIRONMENTAL AND PERMITTING	Continue baseline studies	<ul> <li>Advance Environmental Impact Statement</li> </ul>	<ul> <li>Continued stakeholder engagement</li> <li>Initiate Permitting process</li> </ul>	<ul><li>Continued stakeholder engagement</li><li>Permits to build</li></ul>
PROCESSING AND REFINING	<ul> <li>✓ Complete pilot plant work with assistance of government programs</li> <li>➢ Prepare application for Demonstration plant funding</li> </ul>	<ul> <li>Build/operate         demonstration plant in         St. Lewis</li> <li>Evaluate / test various         refining options</li> </ul>	<ul> <li>Demonstration plant operating in St. Lewis</li> <li>Engineering plans</li> <li>Evaluate / test / determine refining options</li> </ul>	<ul> <li>Engineering complete –         Ready to build</li> <li>Confirm refining process</li> </ul>
STRATEGIC PARTNERS	Secure funding for demonstration plant	Secure funding for bankable feasibility studies	Continued funding for bankable feasibility studies	<ul><li>Secure funding – Decision to build</li></ul>

Cautionary Note: The Company has not prepared a feasibility study in relation to this project and therefore, the time line to production decision is subject to increased risk and uncertainty



# 商業策略 - 投產時間表

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類別	2019	2020	2021	2022
資源量	✓ Deep Fox的資源量 ✓ 推進區域内的前景區	<ul><li>推進區域内的前景區</li><li>Deep Fox – 三期鑽探活動</li><li>更新該區域的初步經濟評估</li></ul>	可銀行融資可行性研究 ➤ 加密鑽探 – Foxtrot ➤ 加密鑽探 – Deep Fox ➤ 許可	<ul><li>▶ Foxtrot和Deep Fox的 測定資源量</li><li>▶ 批准開發許可證</li></ul>
環境和許可	> 繼續基線研究	▶ 推進環境影響清單	<ul><li>&gt; 繼續吸引更多股東</li><li>&gt; 啟動許可流程</li></ul>	<ul><li>&gt; 繼續吸引更多股東</li><li>&gt; 建設許可</li></ul>
加工和精煉	<ul><li>✓ 在政府項目協助下完成中試工廠工作</li><li>✓ 準備申請示範工廠資金</li></ul>	<ul><li>产 在聖路易斯建設/運營示 範工廠</li><li>♪ 評估/測試各種精煉方式</li></ul>	<ul><li>運營聖路易斯的示範工廠</li><li>★ 工程設計計劃</li><li>★ 評估/測試/確定精煉方式</li></ul>	<ul><li>▶ 工程設計完成 - 準備建設</li><li>設</li><li>▶ 確認精煉工藝</li></ul>
戰略合作夥伴	▶ 獲得示範工廠所需資金	<ul><li>獲得可銀行融資可行性 研究所需資金</li></ul>	<ul><li>繼續為可銀行融資可行 性研究募資</li></ul>	▶ 獲得資金 – 決定建設

警示說明:本公司尚未製備此項目的可行性研究,因此,投產時間表存在不確定性和風險。



# Corporate Information

**SMY: TSX-V** 

Shareholder Information December 31, 20`9	
Listed:	TSX:V:SMY
Shares O/S Warrants: Options: Fully Diluted O/S	228,775,848 40,864,434 17,775,000 287,415,282

Insiders Participation	Issued Shares	% ownership
InCoR Holdings	76,507,201	33.44%
Mgmt and Directors	11,573,863	5.06%
Totals	88,081,064	38.50%

MANAGEMENT:	DIRECTORS:
Greg Andrews, President & CEO	<b>Greg Andrews</b>
Dr. David Dreisinger, VP Metallurgy	Dr. David Dreisinger
Dr. Randy Miller, VP Exploration	George Molyviatis
Matthew Anderson, CFO	Jocelyn Bennett
	Leo Power

#### CONSULTANT:

Kaz Machida – Rare earth specialist

LEGAL:

DuMoulin Black

#### **AUDITORS:**

Mao &Ying

#### **FUNDING PARTNERS:**

**ACOA** 

InnovateNL

Dept of Mines - Newfoundland and Labrador

Saskatchewan Research Council

**NRCAN** 

NunatuKavut Community Council

InCoR has \$ 1,000,000 Debenture with conversion at \$ 0.05 per unit.

Each unit consist of one share and one warrant for 5 years at \$ 0.05 (November 29, 2020)

21 | Corporate Presentation | SMY: TSX-V | searchminerals.ca | GCFF January 2020



# 公司信息

股東信息 截至2019年12月31日

交易代碼: TSX:V:SMY

已發行股票 228,775,848

認股權證: 40,864,434

期權: 17,775,000

完全攤薄後股數 287,415,282

内部人士參與 持股比例 發行股數

InCoR Holdings 76,507,201 33.44%

管理層和董事 11,573,863 5.06%

總計 88,081,064 38.50%

管理層:

Greg Andrews, 總裁兼首席執行官 David Dreisinger博士, 冶金副總裁

Randy Miller博士, 勘探副總

Matthew Anderson, 首席財務官

顧問:

Kaz Machida - 稀土專家

法律顧問:

ACOA

NRCAN

**DuMoulin Black** 

融資合作夥伴:

InnovateNL

董事:

**Greg Andrews** 

David Dreisinger博士 **George Molyviatis** 

Jocelyn Bennett

Leo Power

審計:

Mao & Ying

NunatuKavut 社區委員會

礦產部 - 紐芬蘭和拉布拉多

薩斯喀徹溫省研究中心

InCoR持有價值\$ 1,000,000的公司債券, 能以每單位\$ 0.05轉換。

每單位包含一股股票和一份五年内以\$ 0.05買入股票的認股權證 (2020年11月29日)



# Thank you 謝謝

**SMY: TSX-V** 

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