

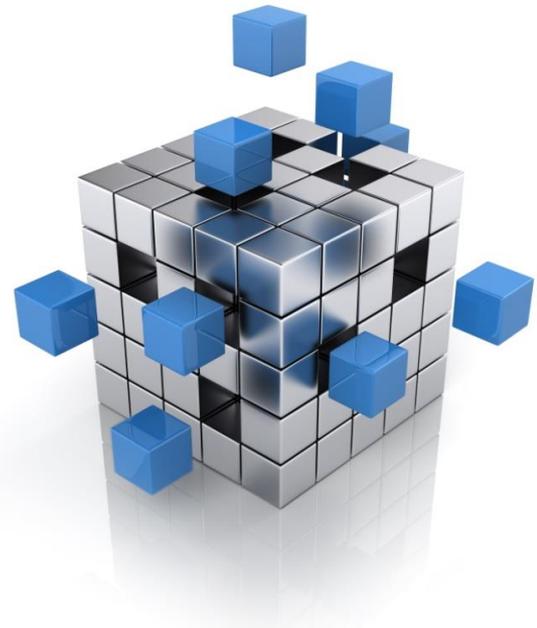


# The Ashram Deposit

## Rare Earth Elements/ Fluorspar

### Quebec, Canada

January 2020



# Forward-Looking Information

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**Cautionary Notes regarding Technical Information:** This presentation includes disclosure of scientific and technical information, as well as information in relation to the calculation of resources, with respect to the Ashram Rare Earth Project and the Blue River Tantalum/Niobium Project. Commerce’s disclosure of mineral resource information is governed by National Instrument 43-101 – Standards of Disclosure for Mineral Projects (“NI 43-101”) under the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum (the “CIM”) Standards on Mineral Resources and Mineral Reserves, adopted by the CIM Council, as may be amended from time to time by the CIM (“CIM Standards”). There can be no assurance that mineral resources will ultimately be converted into mineral reserves. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

Further information about the Blue River Tantalum/Niobium Project, including information relating to quality assurance and quality control procedures, is available in accordance with NI 43-101 within the Technical Report entitled “NI 43-101 Blue River Tantalum-Niobium Project, British Columbia, Canada” with an effective date of March 18, 2015, a copy of which is filed under Commerce’s profile on SEDAR at [www.sedar.com](http://www.sedar.com). Further information about the Ashram Rare Earth Project, including information relating to quality assurance and quality control procedures, is available in accordance with NI 43-101 within the Technical Report entitled “NI 43-101 Technical Report – Preliminary Economic Assessment – Ashram Rare Earth Deposit” with an effective date of July 5, 2012 (revised date of January 7, 2015), a copy of which is filed under Commerce’s profile on SEDAR at [www.sedar.com](http://www.sedar.com).

The technical information in this presentation has been prepared in accordance with the Canadian regulatory requirements set out in NI 43-101 and reviewed on behalf of the Company by Mr. Darren L. Smith, M.Sc., P.Geo., of Dahrouge Geological Consulting Ltd., a Qualified Person and registered permit holder with the Ordre des Géologues du Québec.

# Financial Summary

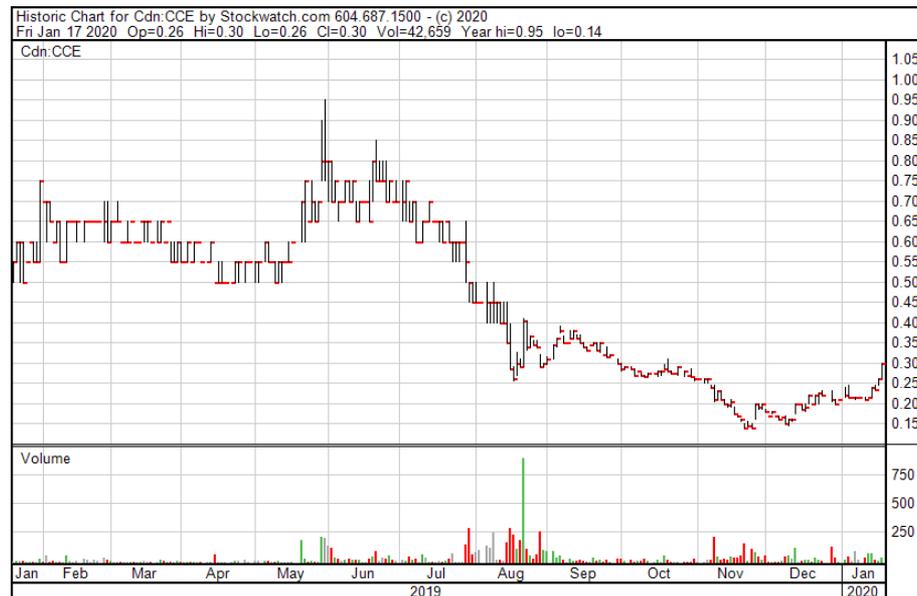
## Corporate Information

<b>Listings:</b>	TSX-V (Canada):	CCE
	FSE (Germany):	D7H
	USA:	CMRZF
		\$CAD
Share Price (9 Jan. 2019)		\$0.30
Shares Issued		31M
Market Cap		\$9.3M

## Capital Objectives

Phase 1 Samples of various REE products as requested	\$3M
Phase 2 PFS/ BFS	\$15M

## Share Performance



# Experienced Team



**Axel Hoppe**  
*PhD. Chem.*  
*Chairman*

Internationally acknowledged leader in the global tantalum market

Formerly Head of Technical Services and Engineering Group for H.C. Starck; the world's largest consumer of tantalum

President of the Tantalum and Niobium International Study Center for the years 2002 and 2007



**David Hodge**  
*Chief Executive Officer*

Veteran resource executive with over 20 years experience

President of Zimtu Capital Corp., founder of Commerce Resources in IPO in 2001.



**Chris Grove**  
*President*

Corporate Communications for Commerce Resources since 2004

Has established significant financial contacts in North America, Europe, and Asia

Has been instrumental in raising over \$70 million dollars for Commerce Resources over the past 10 years



**Darren Smith**  
*M.Sc., P.Geo.*  
*Ashram Project Manager*

Project Manager for Ashram Rare Earth Project

Instrumental in the discovery of the Ashram Rare Earth Deposit and its advancement

Over ten years of experience in the mineral exploration industry



**Mireille Smith**  
*M.Env, Ashram Social & Environmental Sustainability Manager*

Instrumental in Commerce Resources being awarded the 2015 e3 Plus Award from the AEMQ for high level of environmental and social responsibility, & adherence to industry best practices relating to the company's Eldor Property exploration and Ashram Project development

# Three Strategic Assets

- **Two advanced projects,**
- **One early-stage project**  
(Option Agreement with Saville Resources)
  
- **Ashram Rare Earth Project, Eldor Property, QC:**
  - Major high-grade, large tonnage rare earth deposit, with middle and heavy rare earth enrichment confirmed
  - Pre-feasibility Study underway
- **Upper Fir Tantalum / Niobium Project, Blue River, BC:**
  - Largest production scenario for tantalum globally
  - PEA released 2011
  - Pre-feasibility study planned
- **Niobium Claim Group (part of Eldor Property), QC**
  - Multiple historical boulder samples of >5% Nb<sub>2</sub>O<sub>5</sub> to a peak of 16% Nb<sub>2</sub>O<sub>5</sub>
  - Earn In Agreement with Saville Resources announced 2018 - \$5 Million for 75%
  - 2019 drill program (1,049 m) – 1.01% Nb<sub>2</sub>O<sub>5</sub> over 7.5 m



# Introduction to the Ashram Project

## Attractive Jurisdiction

- Northern Quebec (Nunavik territory), Canada
  - ~130 km south of Kuujuaq, the administrative centre of Nunavik
- Territory is under treaty (JBNQA & NEQA)
  - Modern agreement with clear mechanisms in place for indigenous dialogue, consultation, and resource management

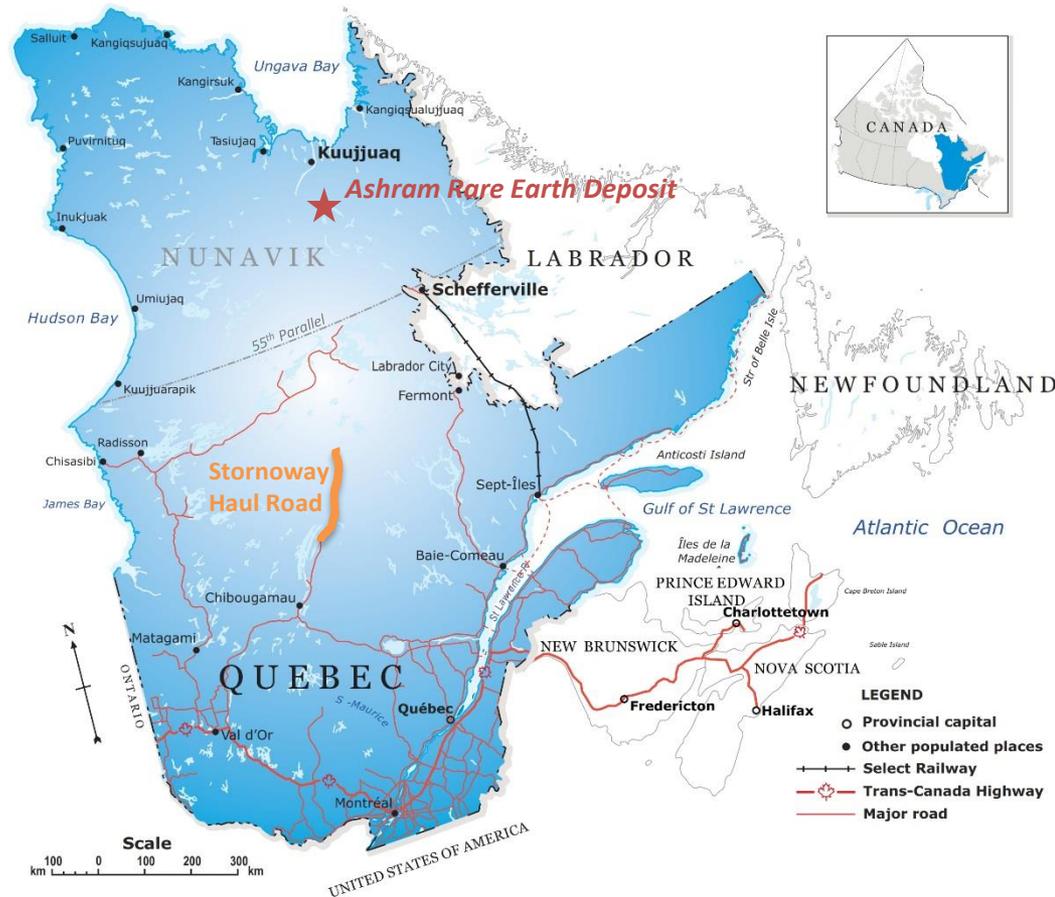
## 100% Ownership of Project

## Advancing Infrastructure

- Quebec government's Société du Plan Nord mandated to promote investment in northern development
  - Energy & Mineral resource development
  - Transportation infrastructure & access

## Investment of Ressources Québec

- Direct equity investment of \$1 M CAD on February 17, 2017



The government of Quebec, through Investissement Québec and the Société du Plan Nord, arranged financing and construction of the 245 kilometre long road for the Renard Diamond Project owned by Stornoway Diamond Corporation

# Ashram Project Advantages

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## **Simple mineralogy amenable to reproducible high-grade mineral concentrates (fundamental to low-cost processing)**

- 42% TREO at 76% recovery, 46% TREO at 71% recovery, and 49% TREO at 63% recovery
- Monazite, bastnaesite, & xenotime rare earth mineralogy, with all sharing conventional processing characteristics

## **By-product potential with no negative impact on REE flowsheet/recoveries**

- Fluorspar

## **One of the highest grades of the large tonnage, advanced-stage REE deposits**

- Measured resource of 1.6 million tonnes (Mt) at 1.77% TREO, an indicated resource of 28 Mt at 1.90% TREO, and an inferred resource of 220 Mt at 1.88% TREO

## **Favourable and well-balanced REE distribution, with enrichment in the Magnet Feed REE's (Nd, Pr, Tb, Dy)**

- Anchored by Magnet Feed REEs (Nd, Pr, Tb, Dy) with strongest market fundamentals over the near, mid, and long-term
- Primary mineralized zone contains 24% combined NdPr (19% Nd, 5% Pr) with significant Dy (0.9%) and Tb (0.2%)

## **Robust economics indicated from Preliminary Economic Assessment (PEA)<sup>1</sup> completed in May 2012**

- Pre-tax<sup>2</sup> NPV of \$2.3 billion CAD, IRR of 44%, payback period of 2.25 years, and a 25 year initial mine-life
- CAPEX of \$763 million CAD (including sustaining capital) and OPEX of \$7.91/kg (in CAD) of REO produced (to mixed REC)
- Mineralized from surface with industry low strip ratio (0.2:1), allowing for a relatively low-cost, open-pit operation

## **Located in a mining friendly jurisdiction**

- Quebec consistently ranked as a top destination globally for mining investment
- Société du Plan Nord mandated to promote investment in the development of Quebec's northern resources

## **Strong management team with expertise in project development and rare metals**

- Management and Directors have extensive experience in exploration, development, and rare metal markets

1. Results of the PEA represent forward-looking information. This economic assessment is by definition preliminary in nature and it includes inferred mineral resources that are considered too speculative to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. There is no certainty that the preliminary economic assessment will be realized. Mineral resources are not mineral reserves as they do not have demonstrated economic viability.

2. The current Ashram Technical Report dated January 7, 2015 explains why no after-tax case is presented, and that a combined tax rate of around 32.5% may apply to production.

# Mineralogy and Geology

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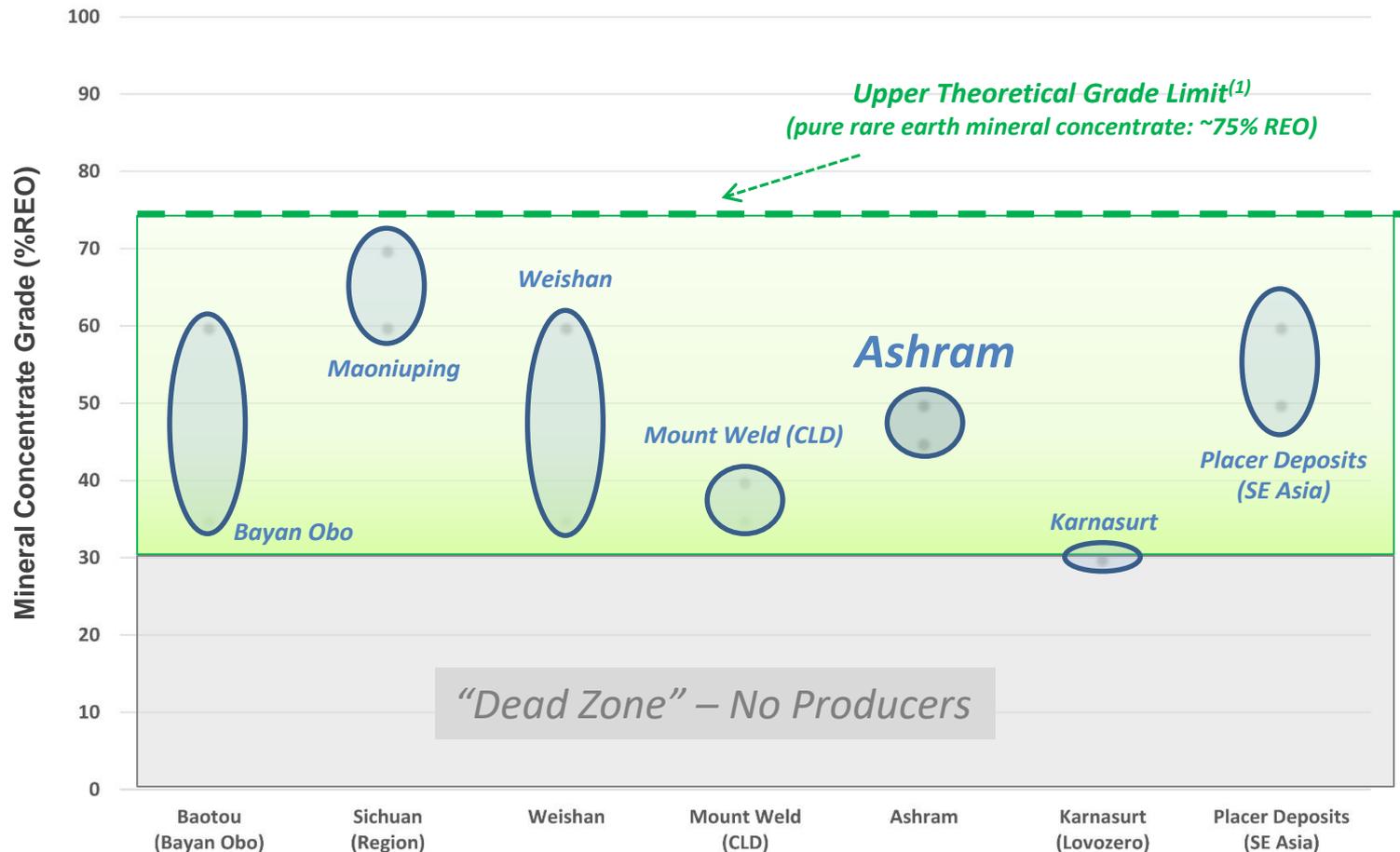
1. Over 150 rare earth minerals exist, but **only 4 have been commercialized** (monazite, bastnaesite, xenotime, and loparite).
    - Monazite, bastnaesite, and xenotime account for >80% of global REO production, current and historic
      - Remainder is dominated by the ion-absorption type clay deposits in Southeast Asia.
  2. Only **monazite, bastnaesite, and xenotime** mineralogies are amenable to producing high-grade mineral concentrates of >40% REO (up to ~75% REO).
  3. The host rock type for >80% of global REO production is **carbonatite**.
- The Ashram Deposit has all of these traits, along with a demonstrated ability to produce high-grade (>45% REO) mineral concentrates at high recoveries (>75%).**



*High-grade (46% TREO) rare earth mineral concentrate produced from Ashram Deposit*

# High-Grade Mineral Concentrate is Essential

Ashram is comparable to producers because it hosts the same rare earth minerals that allow for the production of high-grade mineral concentrates – monazite and bastnaesite



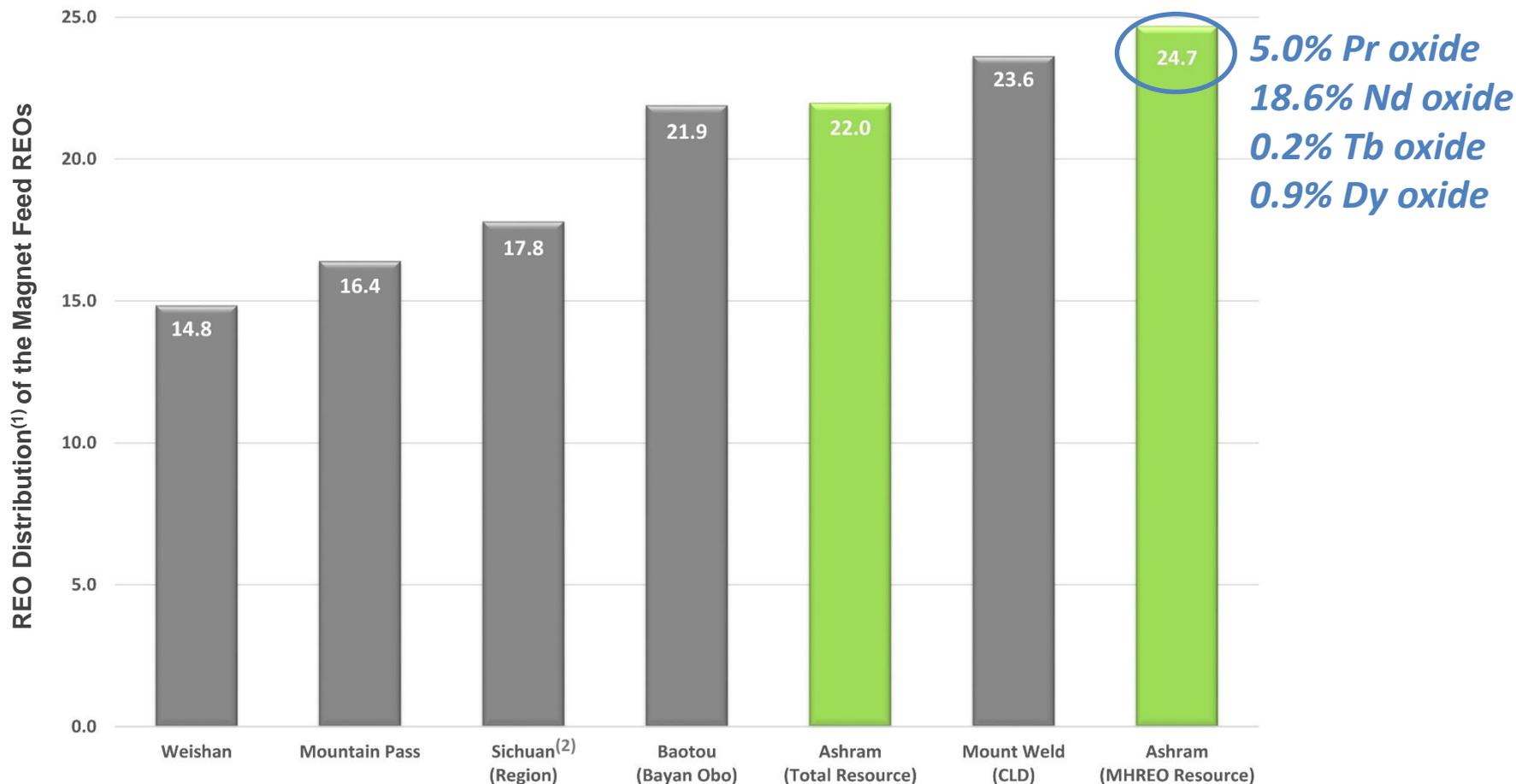
Upper Theoretical Grade Limit<sup>(1)</sup>  
(pure rare earth mineral concentrate: ~75% REO)

“Dead Zone” – No Producers

(1) Cerianite may theoretically contain up to 81% REO; however, it is an uncommon RE mineral, and has not been commercialized

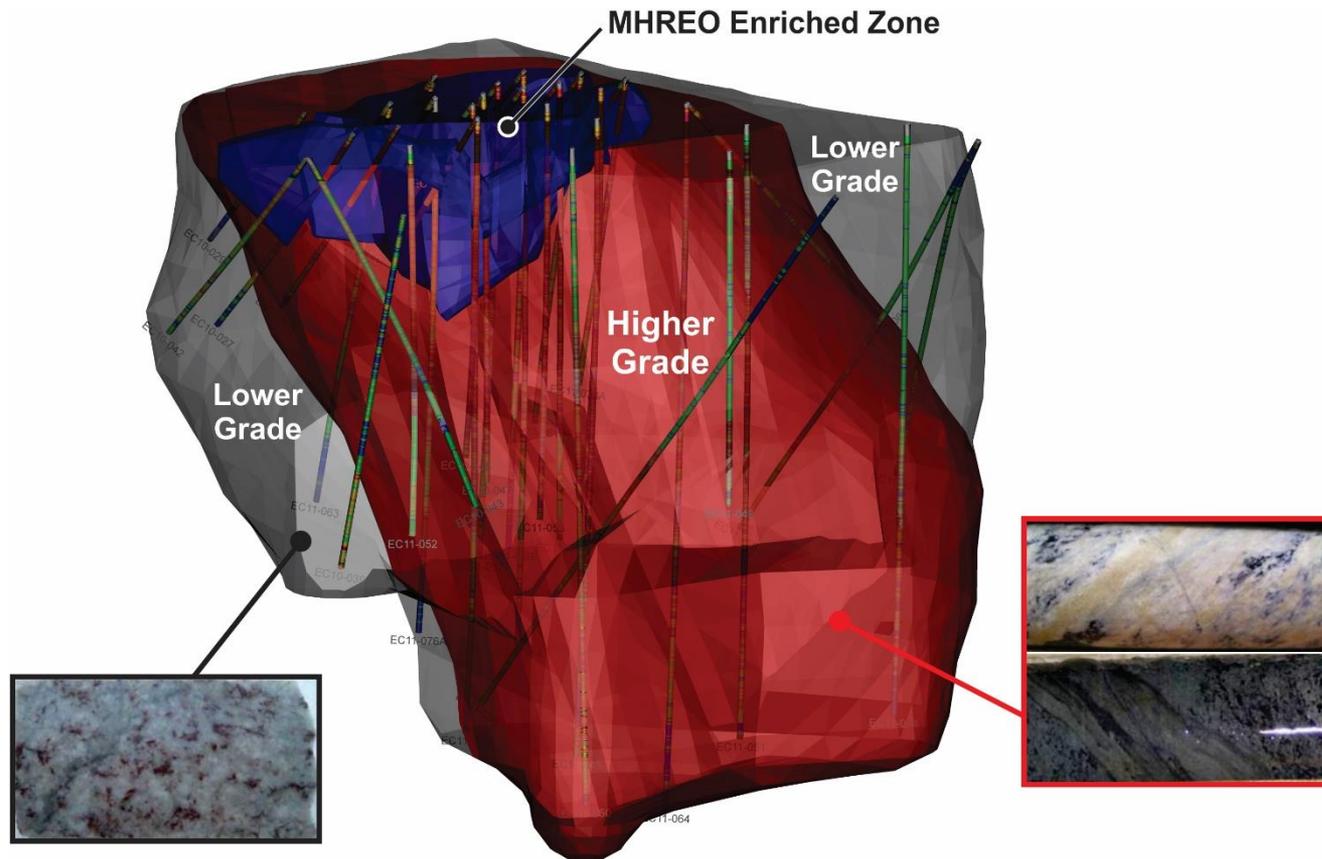
# Magnet Feed REO Distribution

Ashram has an enrichment in the Magnet Feed REOs that is superior to leading global producers, thus, better positioning it for the market long-term



# Evolution of Ashram Model – MHREO Zone

Definition of near-surface MHREO Enriched Zone by the end of 2011:



*Ashram remains open to the north, south, at depth, and is not fully constrained to the east and west. Mineralized footprint is 700 m along strike, over 500 m across, and 600 m deep.*

# NI 43-101 Resource Estimate Completed in 2012

## Ashram (Total Resource<sup>1,2</sup>)

Magnet feed REO

Resource Category	Tonnage (Mt)	La <sub>2</sub> O <sub>3</sub> (ppm)	Ce <sub>2</sub> O <sub>3</sub> (ppm)	Pr <sub>2</sub> O <sub>3</sub> (ppm)	Nd <sub>2</sub> O <sub>3</sub> (ppm)	Sm <sub>2</sub> O <sub>3</sub> (ppm)	Eu <sub>2</sub> O <sub>3</sub> (ppm)	Gd <sub>2</sub> O <sub>3</sub> (ppm)	Tb <sub>2</sub> O <sub>3</sub> (ppm)	Dy <sub>2</sub> O <sub>3</sub> (ppm)	Ho <sub>2</sub> O <sub>3</sub> (ppm)	Er <sub>2</sub> O <sub>3</sub> (ppm)	Tm <sub>2</sub> O <sub>3</sub> (ppm)	Yb <sub>2</sub> O <sub>3</sub> (ppm)	Lu <sub>2</sub> O <sub>3</sub> (ppm)	Y <sub>2</sub> O <sub>3</sub> (ppm)	TREO* (%)	MH/T Ratio	F (%)	CaF <sub>2</sub> * (%)
Measured	1.6	4158	7865	859	3102	475	121	297	33	139	20	41	5	24	3	583	1.77	9.8%	3.76	7.7
Indicated	27.7	4960	8747	909	3131	403	94	229	23	93	13	28	3	16	2	378	1.90	6.7%	2.89	5.9
Inferred	219.8	4895	8775	911	3137	386	88	209	20	77	10	22	2	13	2	302	1.88	6.0%	2.21	4.5

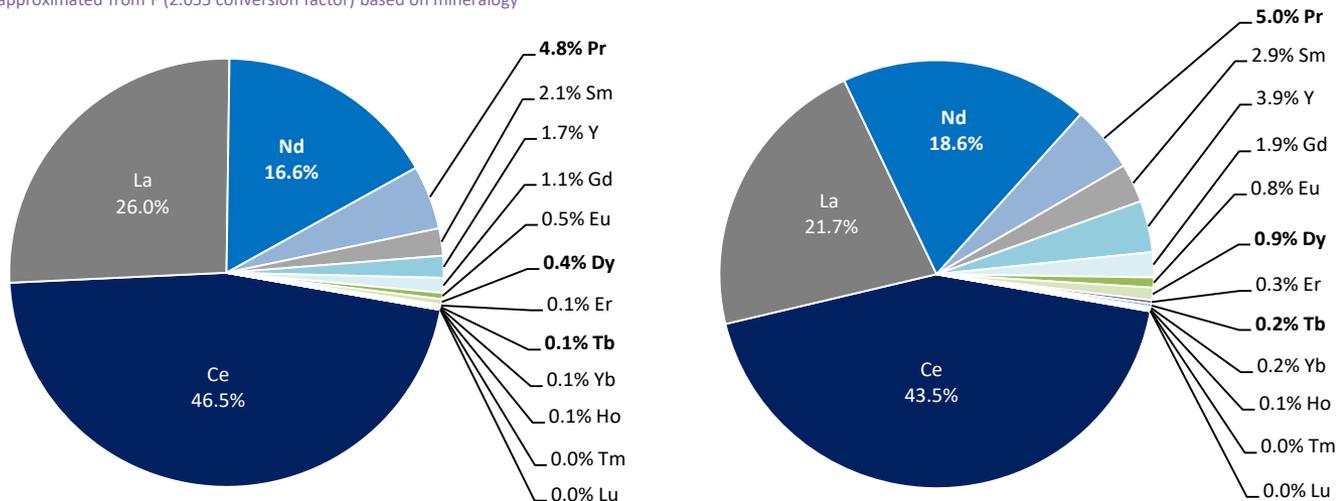
Note: \*COG 1.25% TREO (BASE CASE); CaF<sub>2</sub> approximated from F (2.055 conversion factor) based on mineralogy

## Ashram (MHREO Resource<sup>1,2,3</sup>)

Resource Category	Tonnage (Mt)	La <sub>2</sub> O <sub>3</sub> (ppm)	Ce <sub>2</sub> O <sub>3</sub> (ppm)	Pr <sub>2</sub> O <sub>3</sub> (ppm)	Nd <sub>2</sub> O <sub>3</sub> (ppm)	Sm <sub>2</sub> O <sub>3</sub> (ppm)	Eu <sub>2</sub> O <sub>3</sub> (ppm)	Gd <sub>2</sub> O <sub>3</sub> (ppm)	Tb <sub>2</sub> O <sub>3</sub> (ppm)	Dy <sub>2</sub> O <sub>3</sub> (ppm)	Ho <sub>2</sub> O <sub>3</sub> (ppm)	Er <sub>2</sub> O <sub>3</sub> (ppm)	Tm <sub>2</sub> O <sub>3</sub> (ppm)	Yb <sub>2</sub> O <sub>3</sub> (ppm)	Lu <sub>2</sub> O <sub>3</sub> (ppm)	Y <sub>2</sub> O <sub>3</sub> (ppm)	TREO* (%)	MH/T Ratio	F (%)	CaF <sub>2</sub> * (%)
Measured	1.1	3690	7336	831	3100	513	134	330	38	163	23	48	5	27	3	685	1.69	12%	4.18	8.6
Indicated	5.4	3512	7047	804	3015	480	125	310	36	153	21	44	5	25	3	624	1.62	11%	3.90	8.0
Inferred	2.8	3423	6823	783	2910	448	115	289	34	145	21	43	5	25	3	605	1.57	11%	3.43	7.0

Note: \*COG 1.25% TREO (BASE CASE); CaF<sub>2</sub> approximated from F (2.055 conversion factor) based on mineralogy

## REE Distributions



# Continued High-Grade Drill Intersections

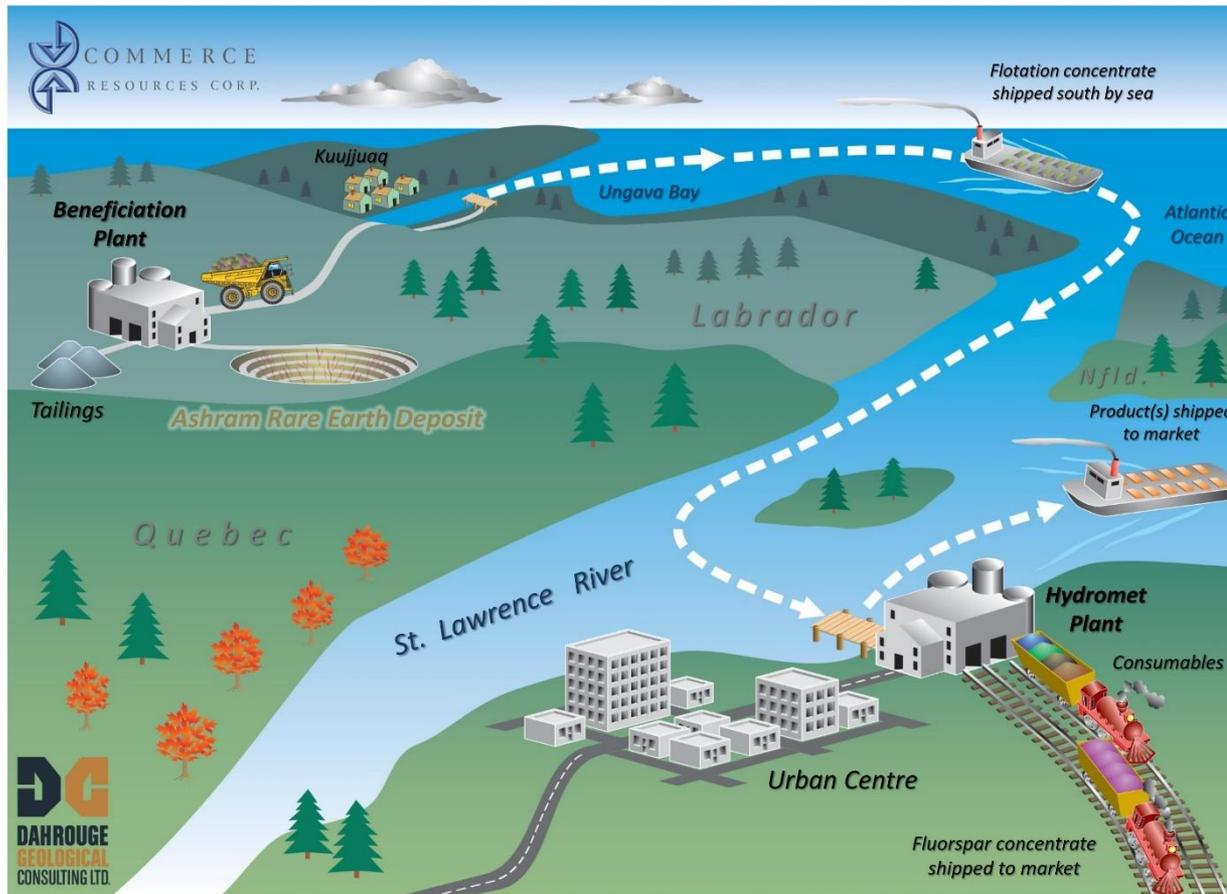
**A total of 9,625 m over 86 drill holes have been completed since the 2012 mineral resource estimate, with intersections including:**

- 3.02% REO over 28.4 m (EC16-159)
- 2.13% TREO over 172.7 m, including 2.32% over 96.7 m (EC14-098)
- 2.07% REO over 163.3 m, including 2.22% REO over 76.8 m (EC15-121)
- 2.46% REO over 51.3 m (EC15-134)
- 2.44% REO over 45.4 m (EC15-129)
- 2.12% REO over 94.9 m (EC15-133)



# PFS<sup>1</sup> (Ongoing) Anticipated Mine to Market Scenario

Targeted annual production capacity of 3,000 to 5,000 tonnes REO (modular approach), with evaluation of saleable products ongoing through discussion with end-users & market consultants



- Open-pit mine with mineral process plant on-site
  - Flotation concentrate produced
- Trucked north on haul road to barge facility near Ungava Bay
- Transported by boat to hydromet facility in the St. Lawrence Seaway region
- Flotation concentrate processed at hydromet facility to a high-grade mineral concentrate (~45-50% REO), and through to saleable product(s)

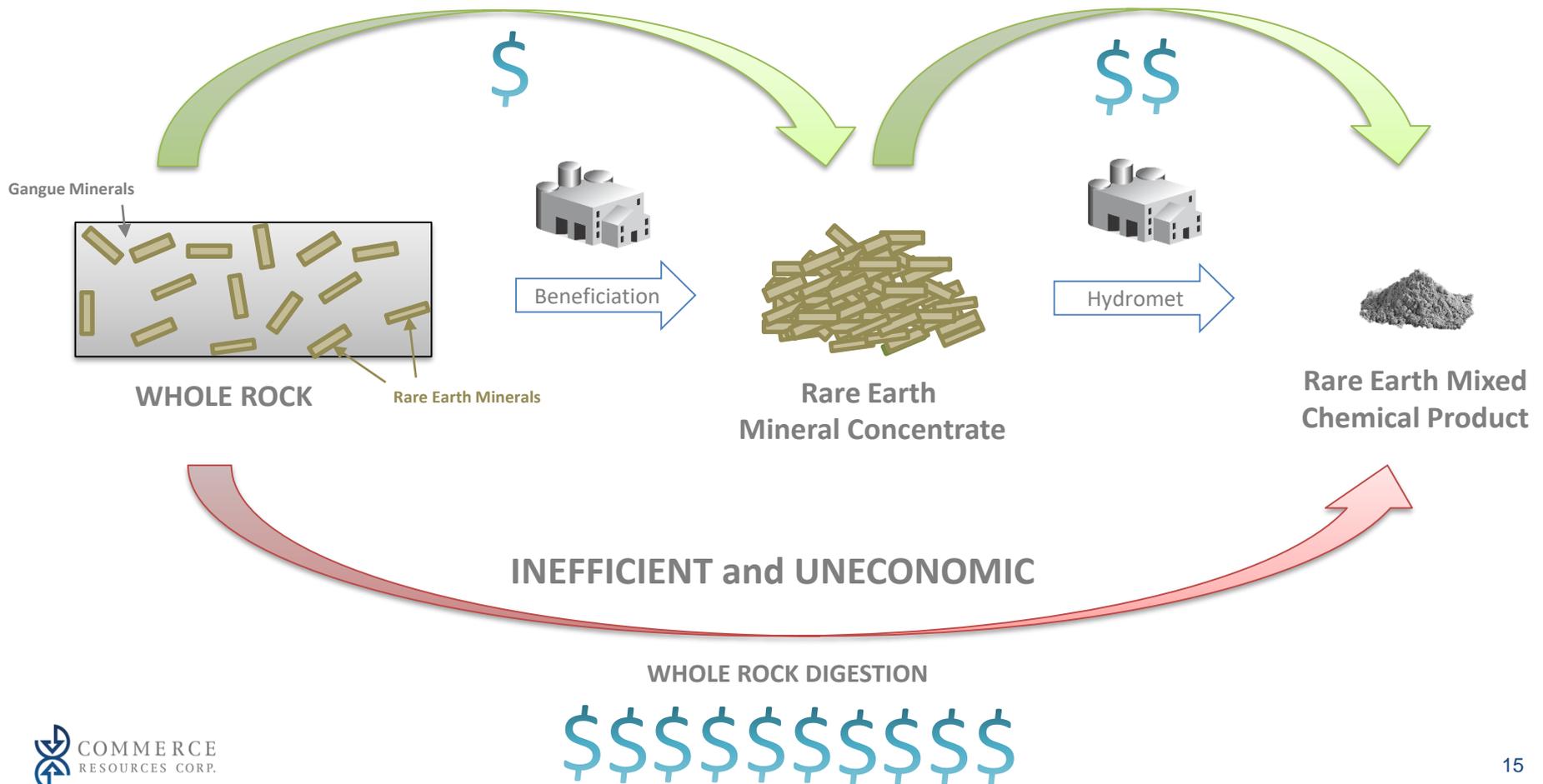
## Product Suites being considered

1. Mixed rare earth carbonate (REC)
2. La-Ce depleted mixed REC, La oxide, Ce carbonate
3. Nd-Pr oxide, La oxide, Ce carbonate, SEG-HRE carbonate
4. Separated REOs via strategic Partner

*A thorough understanding of the entire value chain, and associated end-users, is essential for determining the proper saleable products to be produced*

# What do Producers do? – CONCENTRATE!

## ROUTE OF ALL MAJOR CURRENT AND HISTORICAL PRODUCERS



# Benefits of High-Grade Mineral Concentrates

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1. **Lower reagent consumption** required to breakdown minerals and place REEs into solution
2. **Fewer deleterious elements** present in solution with REEs
3. **Higher concentration of REEs** in solution
4. **Lower hydromet throughput required** to produce desired product volume
5. **Reduced Technical Risk**



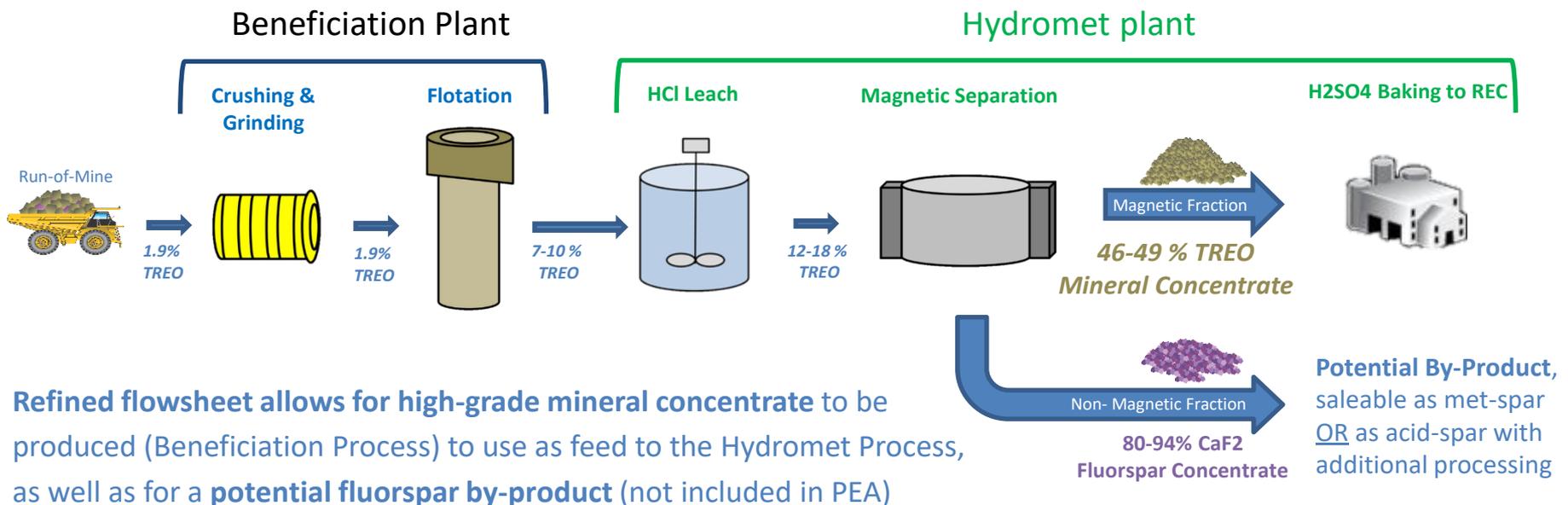
**i.e. REDUCED DOWNSTREAM RISK & COST**

**The question is not if one can produce a saleable rare earth product, it is if this product can be produced economically**

# PFS<sup>1</sup> (Ongoing) – Metallurgical Advancements Since PEA

Subsequent work to the PEA has resulted in a refined beneficiation flowsheet that now includes flotation, HCl leaching, & magnetic separation (WHIMS) to produce high-grade rare earth mineral concentrate

- Now produce mineral concentrate of >45% REO at high recovery (~75%), whereas the PEA was based upon mineral concentrate grade of only 10% REO at 70% recovery
- Potential **fluorspar by-product** now recovered, whereas the PEA did not incorporate by-products
- An approximate 80% reduction in flotation reagent consumables compared to the PEA

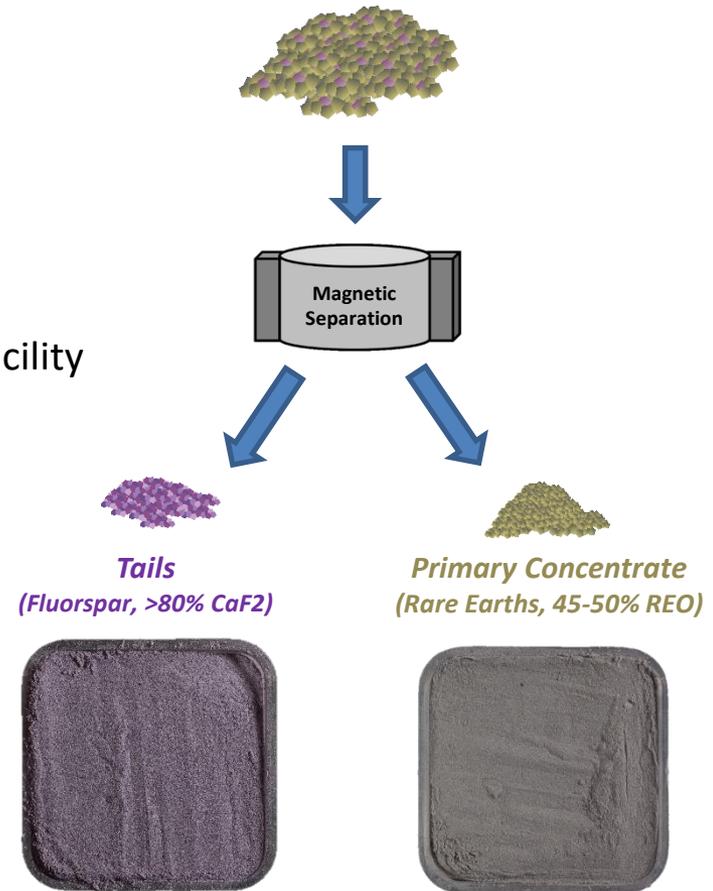


# Potential Fluorspar By-Product

Fluorspar concentrate produced is tails of primary REE mineral concentrate

- No additional cost to recover to this stage of processing
- No impact on REE recovery
- Reduces volume of tailings & size of tailings management facility
- Flowsheet currently produces met-grade CaF<sub>2</sub> content
- Acid-grade is targeted with additional processing
  - Upgrade programs underway at Hazen Research with the objective of producing acid-grade using conventional processing methods (e.g. flotation)
  - May lead to additional REE recovery

Ashram's potential contribution to the fluorspar market to be determined as part of the Pre-feasibility Study



# Fluorspar Market

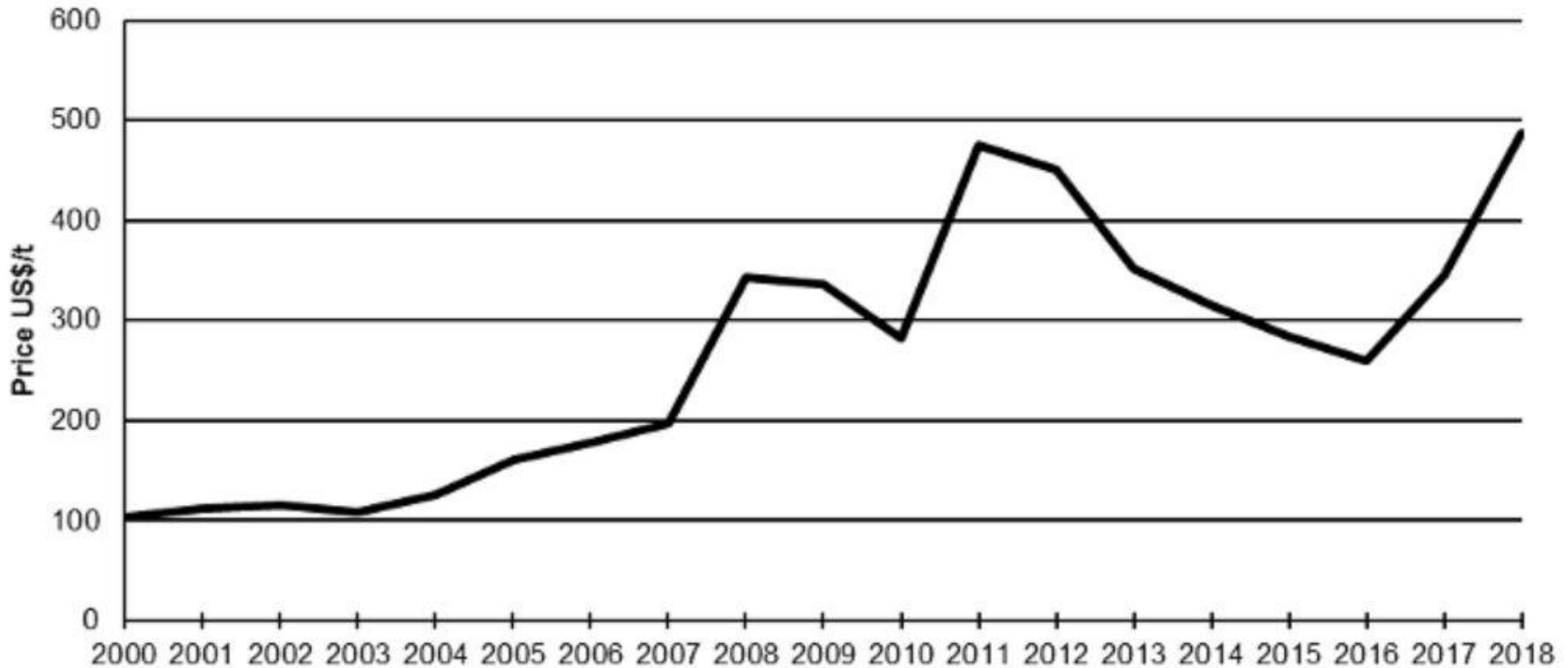
- Fluorspar is the industrial name for the mineral fluorite ( $\text{CaF}_2$ )
- Global demand is estimated by the USGS to be  $\sim 6.4$  Mt per annum (2018)
  - **China is the leading producer but is now a net importer.** Mexico is 2nd largest producer, but has significant impurities (arsenic)
- Two principle commercial grades:
  - **Met-spar** ( $\sim 60$ - $85\%$   $\text{CaF}_2$ ) - used in steel smelting to lower melting temperature & remove impurities
  - **Acid-spar** ( $>97\%$   $\text{CaF}_2$ ) - accounts for roughly two-thirds of global market and is used to produce hydrofluoric acid, a key ingredient in fluorochemicals
  - Fluorspar is also used to in the **production of aluminum ( $\text{AlF}_3$ )**, is a key component in enhancing the operational performance of **lithium-ion batteries**, and is used in roughly half of **new medicines** (Roskill)

**Fluorine (i.e. fluorspar) is considered a mineral/metal of “critical and strategic importance for Quebec”, because of its use in the aluminum & renewable energy industries**



# Strategic supply relationship with Glencore

Average Acid-Spar Prices 2000-2018 YTD US\$/t FOB China



Source: [www.indmin.com](http://www.indmin.com)

# Strategic Supply Relationship with NorFalco

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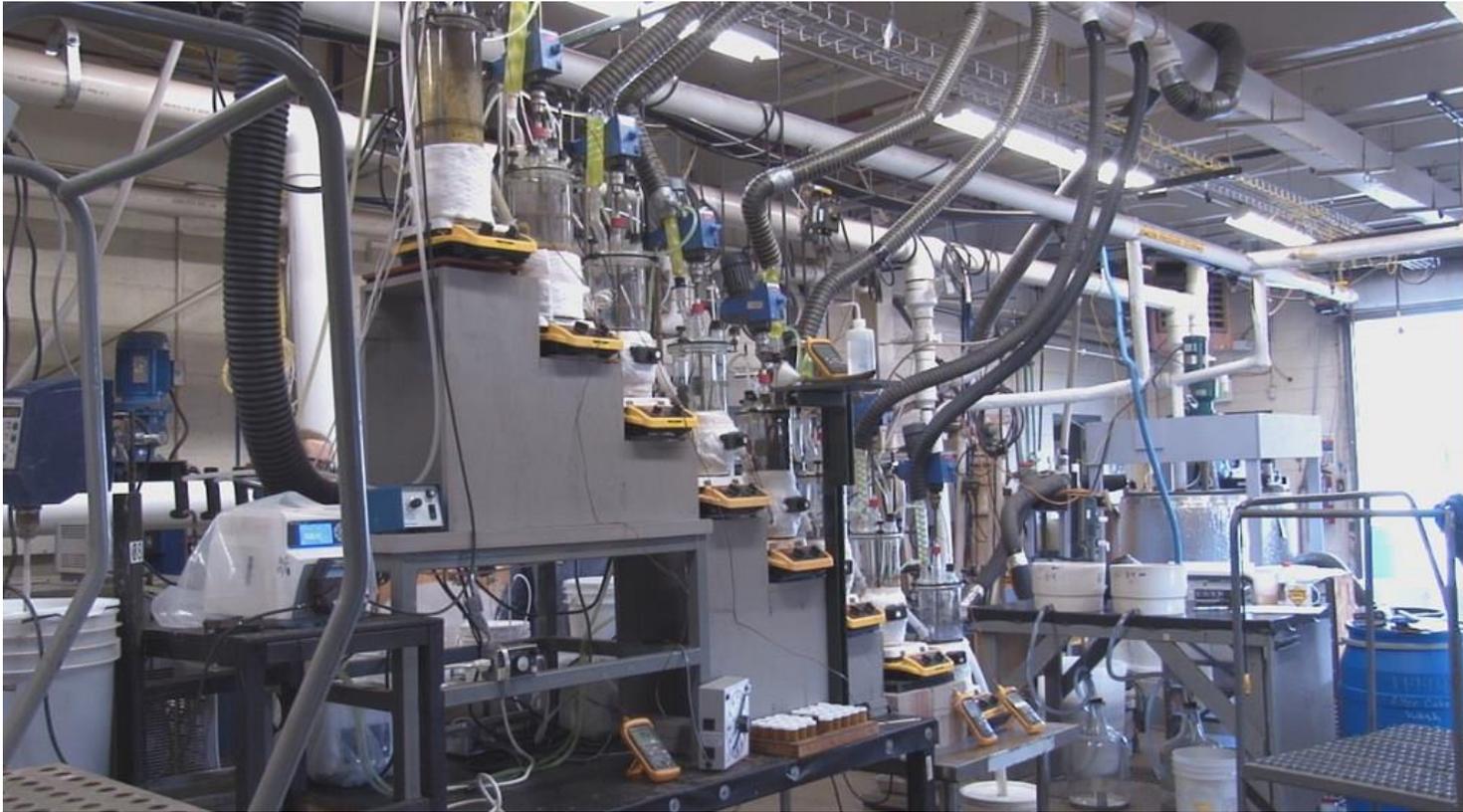
**In April 2016, Commerce Resources signed a Binding Memorandum of Understanding with NorFalco Sales for supply of sulphuric acid**

- NorFalco to be the sole provider of sulphuric acid (H<sub>2</sub>SO<sub>4</sub>) for the Ashram Rare Earth and Fluorspar Project
- **Highly competitive market rates and terms**
- NorFalco, a division of Glencore Canada Corporation, is a global commodities trader, **including acid-grade fluorspar** – feedstock for the production of hydrofluoric acid (HF)

**In 2019, acid-spar prices approached \$600 USD/tonne and are poised to break all-time highs**



# Pilot Plant Operation – Hazen Research



**Objective: Full demonstration of flow sheet, using bench and pilot scale testwork, through to the production of several kilograms of REE concentrate (mixed and partially separated)**

# Pilot Plant Concentrate Samples Requested

**Solvay/Rhodia (Belgium / France)**  
**Innovation Metals Corporation (Canada)**  
**Treibacher Industrie AG (Austria)**  
**BASF SE (Germany)**  
**Thyssen-Krupp (Germany)**  
**Siemens (Germany)**  
**Auer-Remy GmbH (Germany)**  
**DKK (Japan)**  
**Mitsubishi Corporation RtM (Japan)**  
**Reetec (Norway)**  
**Less Common Metals (UK)**  
**Ucore Rare Metals (Canada)**



## USA Requests

**Albemarle, Blue Line (TX), Rare Earth Salts (NB), Urban Mining (TX), Texas Rare Minerals / K-Tech (FL), Advanced Magnetic Lab, Inc. (FL).**

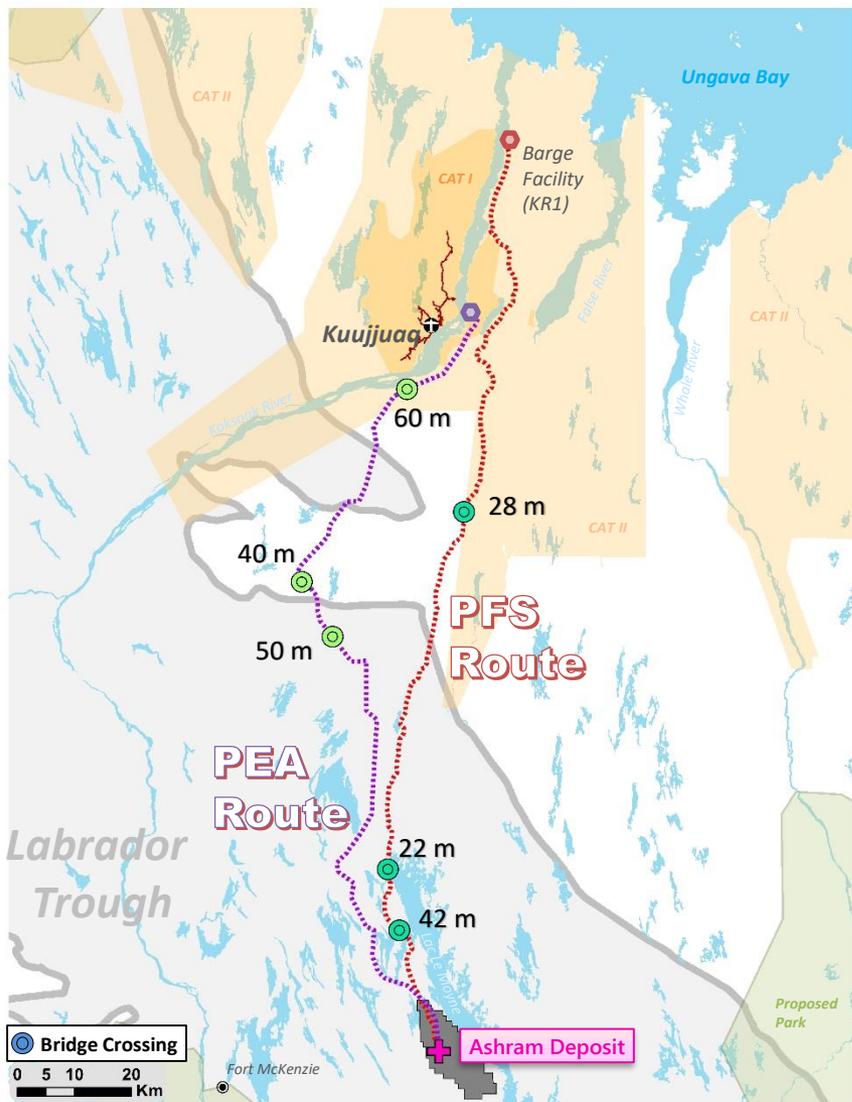
# Current Work – November 2019

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- Assays pending for 1,736 m of drill core being analysed by Activation Laboratories.
- A total of 9,625 m (86 holes) completed on the Project since the 2012 Resource Update.
- Fluorite concentrate upgrading program underway at Hazen Research.
- Final reporting of bench and pilot work forthcoming at Hazen Research.
- Ongoing beneficiation test work being completed by NRCan as part of a Federal grant program.

# PFS<sup>1</sup> (Ongoing) – Haul Road Route Optimization

Considerable optimization of haul road route has been completed as part of the ongoing PFS<sup>1</sup>



	PEA	PFS <sup>1</sup>
Route Length (Approximate)	<b>185 km</b>	<b>180 km</b>
Bridges (> 10 m)	3 (40 m, 50 m, 60 m)	3 (22 m, 28 m, 42 m)
Study Diligence	Google Earth	Air photos, satellite imagery, helicopter fly-over, ground truthing
Terminus (North end)	Docking Facility at Mackay's Island	Barge Facility at KR1, located ~16 km north of Mackay's Island
Haul Road Estimated CAPEX (pre-contingency)	\$204 M (\$1.1 M per km)	\$135 to \$165 M <sup>1</sup> (\$0.74 M to \$0.89 M per km)
Loading Facility Estimated CAPEX (pre-contingency)	Docking Facility (\$42 M)	Barge Facility (\$20 to 30 M) <sup>1</sup>
<b>TOTAL ESTIMATED CAPEX</b>	<b>\$246 M</b>	<b>\$155 M to \$195 M</b>
Comments	Compared to PEA, the PFS route is projected to be less technically challenging, and less costly to construct	

1. The Pre-feasibility Study (PFS) is ongoing. Costs and figures presented have been estimated as part of the ongoing PFS. All costs remain preliminary in nature and can only be considered final with the completion of the PFS. See additional disclosure notice on slide 30..

# Infrastructure LOI with Area Companies

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- Purpose of the Letter of Intent (LOI) is to formalize the expression of interest and expectation by the area exploration company to utilize proposed infrastructure, as applicable to their respective project and stage of development, if constructed
- LOI has been signed by resource companies operating in the region, including:
  - Saville Resources Inc.
  - Golden Valley Mines Ltd.
  - Next Source Materials Inc.
  - St. Georges Eco-Mining Corp.
  - Northern Shield Resources Inc.





# Academic & Institutional Collaborations

- Commerce is very active in the academic industry, supporting several PhD students and research initiatives
  - **McGill University** – *Ashram Deposit genesis*
  - **Université du Québec (INRS)** – *tailings characterization*
  - **Université Laval** – *REE beneficiation & hydrometallurgy*
  - **University of Windsor** – *Eldor Carbonatite genesis*
  - **CanmetMINING** – REE mineral Beneficiation
- Abundance of mineral resource readily available for metallurgical test work and academic research initiatives
- Well-positioned with **>5 t of deposit material in secure storage in Montreal**
- Company is actively exploring opportunities with Corem, UQAT, & CTRI



Ashram surface outcrop

# Academic & Institutional Collaborations

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## Université Laval and SGS (Quebec)

- Test work focused on validation of a new hydrometallurgical process for REE extraction, and a newly developed software model simulator for REE separation
- Paper and presentation to be made at 52<sup>nd</sup> Annual Canadian Mineral Processors Operators conference, January 21-23, 2020 in Ottawa
  - *Challenges of Scale-Up in Grinding and Flotation of Rare Earth Minerals*
- **Work has resulted in potentially significant advancement in cleaner-stage flotation**
  - Project funded by \$366,000 grant from the Ministre de l'Économie et de l'Innovation (MESI) as well as \$113,000 of in-kind support from industry partners
  - Company is exploring new funding opportunities to continue collaboration



# Academic & Institutional Collaborations

## Centre Eau Terre Environnement, a division of the Institut national de la recherche scientifique (INRS)

- Research focused on **characterization of flotation tailings** generated from Ashram material – preliminary conclusions:
  - No “red flags” or serious concerns
  - **No acid generating potential**
  - Strong indications of no metal leaching potential
- Jointly funded by \$300,000 grant from the Fonds de recherche du Québec - Nature et technologie (FRQNT) and the Ministère de l'Énergie et des Ressources naturelles (MERN)
- Sophie Costis, PhD candidate, won the “*défi de la recherche en géosciences*” at Quebec Mines 2019 for her work on the project



# Academic & Institutional Collaborations

## CanmetMINING (a division of Natural Resources Canada)

- Research focused on refining Ashram's beneficiation flowsheet to further enhance the economics of the process
- Test programs are fully funded and administered by CanmetMINING's REE program
  - <http://www.reechromite.ca/en/rare-earth-elements/>
- Ashram Project Manager, Darren L. Smith, is a sitting member of CanmetMINING's REE Steering Committee



Natural Resources  
Canada

Ressources naturelles  
Canada

Canada

Dec 2019, REE Technical Workshop in Saskatoon, SK  
(courtesy: CanmetMINING)

# Pilot Plant Concentrate Samples Requested\*

**Solvay/Rhodia (Belgium / France)**  
**Innovation Metals Corporation (Canada)**  
**Treibacher Industrie AG (Austria)**  
**BASF SE (Germany)**  
**Thyssen-Krupp (Germany)**  
**Siemens (Germany)**  
**Auer-Remy GmbH (Germany)**  
**DKK (Japan)**  
**Mitsubishi Corporation RtM (Japan)**  
**Reetec (Norway)**  
**Less Common Metals (UK)**  
**Ucore Rare Metals (Canada)**



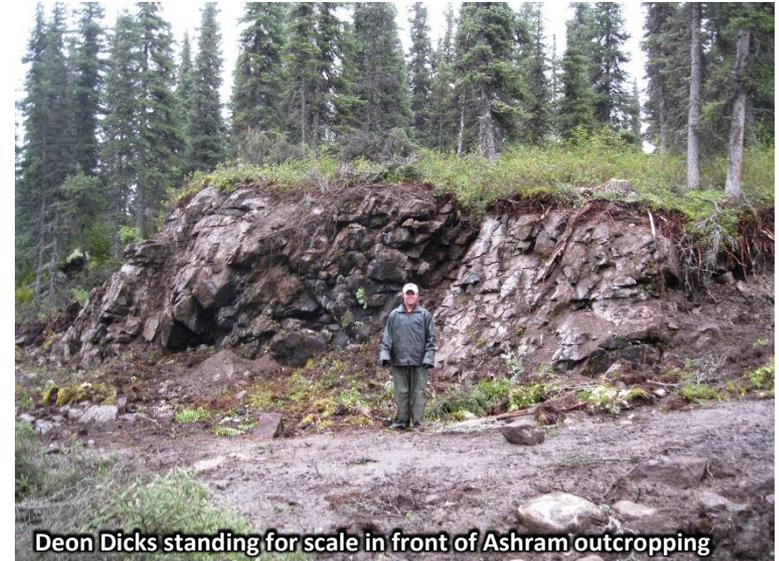
## USA Requests

**Albemarle, Blue Line (TX), Rare Earth Salts (NB), Urban Mining (TX), Texas Rare Minerals / K-Tech (FL), Advanced Magnetic Lab, Inc. (FL).**

*\* Not including Majors under NDA*

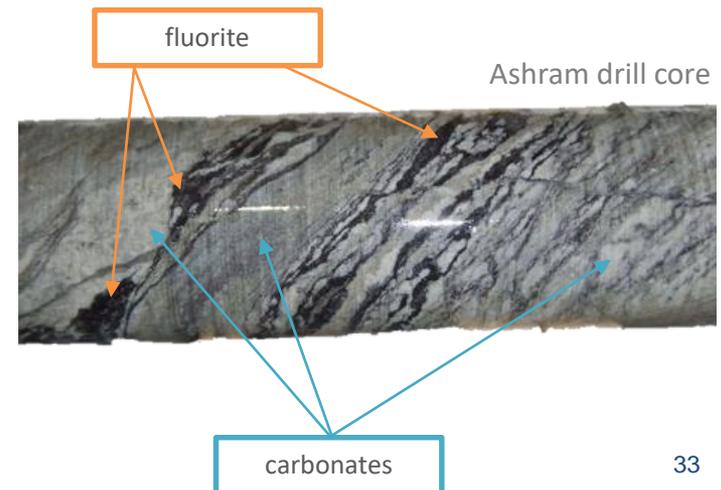
# Ashram Project Advantages

1. **Located in top jurisdiction globally**
2. **The right host rock – carbonatite**
3. **Simple rare earth and gangue mineralogy**
  - Monazite, bastnaesite, & xenotime
4. **Simple and conventional metallurgy** amenable to high-grade mineral concentrates
  - Fundamental to low-cost processing
5. **Large tonnage resource at a favourable grade**
6. **Well-balanced REE distribution** enriched in the magnet feed REEs (Nd, Pr, Tb, Dy)
7. **Fluorspar by-product potential** with no negative impact on REE recovery
8. Abundance of deposit material readily available to support academic research initiatives



Deon Dicks standing for scale in front of Ashram outcropping

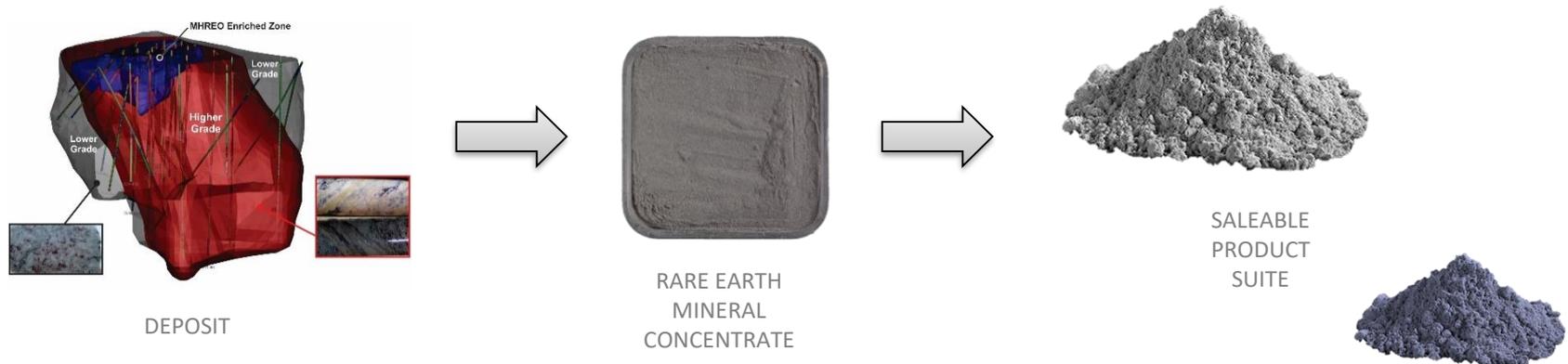
Ashram surface exposure



Ashram drill core

# Key Takeaways with respect to REE Metallurgy

1. **Host rock type matters** - Carbonatite rocks dominates global production
2. **Type of rare earth minerals is a fundamental** – ease of processing
3. **Simple mineralogy essential** – rare earth minerals and gangue
4. **High-grade mineral concentrate indicated by producers to be a pre-requisite to development** – minimum 40% REO should be base target
5. **Deposit Grade is NOT king** – may help, but can be leapfrogged
6. **Compare to producers** – that is the benchmark



# U.S. – China Trade War

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## Trump, Trudeau seek collaboration on 'Critical Minerals': White House 20 June 2019



Technology

## U.S. and Canada Discuss Supply of Rare Earths as China Dominates

By [Laura Millan Lombrana](#) and [Theophilos Argitis](#)

September 30, 2019, 11:52 AM PDT *Updated on September 30, 2019, 5:00 PM PDT*

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# Disclosure Notice – Ongoing PFS

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The Pre-feasibility Study (PFS) is ongoing, with the results of the work described herein anticipated to be incorporated, along with other necessary technical data including geological and engineering studies, into the PFS with costs and potential benefits to be described in more detail therein. As the PFS is not yet completed, its results are not known, with discussion presented herein considered preliminary in nature, and based on certain expectations that may or may not change.

In addition to the potential benefits disclosed in this presentation, there could be risks, costs, and detriments which increase as compared to the Preliminary Economic Assessment (PEA) last filed on the Ashram Project by the Company (effective date of July 5, 2012 – revised date of January 7, 2015). Readers should consider the disclosure of potential benefits in this presentation as only one potential aspect of the economics of the overall project, many of which are currently unknown.