



**Darren L. Smith, M.Sc., P.Geo.**  
Mentor & Senior Technical Advisor, REEs & Nb  
Edmonton, Canada  
(418 573-0443, darren@dahrouge.com)

## EDUCATION

- Carleton University, Ottawa
  - B.Sc. (Hon) Geology (2003), M.Sc. Geology (2005)

## EXPERIENCE SUMMARY

### Management – Mineral Exploration & Development

Darren's experience in the industry includes high-level project management ranging from program design through implementation, reporting, and technical disclosure, as well as indigenous peoples and government engagement. Darren has assisted in company financing efforts, provided technical oversight for PEA, PFS, and FS level project advancement, and has setup and monitored complex metallurgical programs.

In late 2009, Darren and his team discovered one of the world's largest REE and fluorspar deposits (Ashram) with a PEA completed in 2012. Since this discovery, Darren has developed an in-depth contact base and knowledge of the REE market and its end-users and has been an invited speaker at various industry events.

Circa 2017, Darren and his team identified the CV Lithium Pegmatite Trend in the La Grande Greenstone Belt, James Bay, Quebec, which in 2023 culminated in a maiden mineral resource estimate at the CV5 Spodumene Pegmatite, ranking it as the largest in the Americas, based on contained LCE, and in the top 10 globally. The Project is held by Patriot Battery Metals Inc. where Darren sits as Vice President of Exploration.

## **DEPOSIT TYPES**

- Strong understanding of numerous REE deposit types
- Carbonatite hosted REE, fluorspar, phosphate, niobium, tantalum, titanium, scandium
- Pegmatite hosted lithium, tantalum, REE
- Lithium brine & sediment
- Uranium (various styles)
- Greenstone & epithermal gold
- VMS & porphyry style base and precious metals
- Ultramafic Ni-Cu-Co-PGE
- Graphite
- Frac/Silica sand

## **LANGUAGES**

- English (fluent)
- French (intermediate)

## **SOFTWARE & INSTRUMENTATION**

- ArcGIS
- Leapfrog Geo (beginner)
- Fusion (Datamine)
- MX Deposit
- Nitro-PDF
- ExpertGPS
- Microsoft Office

## **PROFESSIONAL ASSOCIATIONS**

- Ordre des géologues du Québec – Geologist Permit (1968)
- Professional Engineers & Geoscientists of Alberta (87868)

## **INDUSTRY ACTIVITY (PAST & PRESENT)**

- Steering Committee Member – CanmetMINING (NRCan) REE program
- Founding member Company board representative for C2M2A
- Scientific Committee Member – Element08 (Quebec)
- Committee Member for a Client-Inuit Letter of Intent



## Social Framework

Throughout his career, Darren has developed an in-depth experience in consultation, engagement, and dialogue with high-level representatives of various provincial governments (most notably in Quebec), industry leaders, communities, and indigenous groups (Inuit – Makivik/LHC/NV, Naskapi of Kawawachikamach, Cree, Innu, Athabasca Chipewyan, Clearwater River Dene, etc.).

## Industry & Academia

Darren has served as Independent Director for several uranium, lithium, and precious metals focused junior mineral exploration companies over his career and is currently Vice President of Exploration for Patriot Battery Metals Inc. and Director for Ophir Gold Corp. and Eagle Bay Resources Corp. Darren also holds a position as Senior Technical Advisor, Rare Earths and Niobium with Commerce Resources Corp.

Darren has been an invited speaker at several academic and industry workshops and conferences throughout his career and is active in engaging with institutions in support of various student undergraduate and graduate projects (NAIT, Université Laval, Université McGill, INRS, UQAT, CTRI, University of Windsor, etc.). In addition to his public speaking engagements, through his academic and industry collaborations, Darren has sat (or sits) on several industry/governmental committees and has co-authored numerous international and peer reviewed publications throughout his career.

## PROFESSIONAL EXPERIENCE:

PROJECT	DETAILS
<b>Rare Earth Elements (various styles), &amp; Fluorspar</b> <i>Canada</i> Project Manager / Senior Geologist <i>2008-Present</i>	<ul style="list-style-type: none"><li>• Manage surface and drill exploration programs, and overall project development<ul style="list-style-type: none"><li>○ Logistics, permitting, targetting, field protocols, core logging, data capture, reporting, land management</li><li>○ Managed remote camp (up to 35 staff)</li><li>○ Organize various geophysical surveys (gravity, magnetics ...)</li><li>○ Managed exploration and development budgets of &lt;\$100,000 to over \$10,000,000 CAD annually</li></ul></li><li>• Led the team that <b>discovered the Ashram Rare Earth and Fluorspar Deposit in 2009</b></li><li>• Ongoing project management through NI 43-101 mineral resource estimate, Preliminary Economic Assessment (PEA), and Prefeasibility Study (PFS) stages</li><li>• Organize, implement, and monitor complex beneficiation and hydrometallurgical programs for REE and fluorspar</li><li>• NI 43-101 Technical Reporting, technical disclosure including news releases, presentations, website reviews, MD&amp;A</li></ul>



- Regular interaction with government officials, indigenous groups, and investors (retail and institutional)
- Co-manage engagement & consultation programs with indigenous groups and communities – **recognition through the e3 Plus Award (AEMQ/PDAC) for high level of environmental and social responsibility, and adherence to industry best practices**
- Regular interaction with REE producers, processors, end-users, and market insiders/analysts
- Developed in-depth knowledge of markets, products, and projects advancing globally
  - Strong contact base throughout the rare earth value chain
- Several trips to China, South Korea, Japan, Singapore, Hong Kong, Europe, and USA for meetings with producers, processors, end-users, analysts, and potential investors
- **Invited speaker to several REE industry conferences** (Metal Events, Roskill, CanmetMINING, Quebec Mines, PDAC etc.)
- At company invitation, have attended personalized tours of the Mountain Pass Mine and processing facilities in California, USA, Solvay's rare earth processing and refining facility in Larochelle, France, as well as visited several other developing REE projects

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## Niobium, Tantalum, & Phosphate

*Quebec, Canada*

Project Manager / Senior Geologist  
2008-Present

- Manage surface and drill exploration programs
  - Logistics, permitting, targetting, field protocols, core logging, data capture, reporting, land management
  - Managed remote camp (up to 35 staff)
  - Managed exploration and development budgets of <\$200,000 to over \$10,000,000 CAD annually
- Regularly meet with government officials, indigenous groups, & investors
- Co-manage engagement & consultation programs with indigenous groups and communities – recognition through the e3 Plus Award (AEMQ/PDAC) for high level of environmental and social responsibility, and adherence to industry best practices



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**Gold (greenstone, epithermal), Copper, Gold, Nickel, Cobalt, Silver, & PGE (VMS & ultramafic)**

*Quebec, Canada / Idaho, USA*

Project Manager / Senior Geologist / VP Exploration  
/ Director

2017-Present

- Manage/co-manage mineral exploration programs for various projects/clients
  - Surface and drill exploration
  - Logistics, permitting, targetting, field protocols, data capture, reporting, land management
  - Organized geophysical surveys
  - James Bay / Abitibi / Idaho regions
  - Currently serving as V.P. Exploration of Gaia Metals Corp.
  - Currently serving as Director of Ophir Gold Corp.
  - QP for Technical Report on BIF

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**Lithium (pegmatite, brine, sediment)**

*Quebec, Canada*

Project Manager / Senior Geologist / VP Exploration  
/ Director

2016-Present

- Manage/co-manage surface and drill exploration programs for multiple clients and projects
  - Logistics, permitting, targetting, field protocols, data capture, reporting, land management
  - Organize various geophysical surveys (LiDAR, magnetics)
  - Exploration budgets exceeding \$15M
- NI 43-101 Technical Reporting
- Organized, implemented, and monitored beneficiation and hydrometallurgical program for pegmatite project
- Managed engagement/consultation programs with indigenous groups and communities
- Site visits to multiple hard rock lithium deposits and operating mines - Whabouchi, Quebec, Kings Mountain, USA, as well as Pilgangoora, Mt. Marion, Mt. Holland, and Greenbushes in Western Australia.
- Instrumental part of the team that **discovered the CV Lithium Pegmatite Trend and the CV5 Spodumene Pegmatite, in the James Bay, QC**
- Currently serving as V.P. Exploration of Patriot Battery Metals Inc. (pegmatite), and Director of Ophir Gold Corp. (pegmatite). Previously served as V.P. Exploration for Nevada Lithium Resources Inc. (sediment, 2021 to 2023), and as V.P. Exploration and Director of Lithion Energy Corp. (brine, 2016 to 2019)



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## Graphite

*Quebec, Canada*

Project Manager / Senior Geologist

2017-2018

- Co-managed surface exploration programs
  - Logistics, permitting, targetting, field protocols, data capture, reporting, land management
- Drill program planning and budgeting
- Organized, implemented, and monitored beneficiation program
- Part of the team that identified the Lac Rainy Graphite Deposit

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## Metallurgical Programs for Niobium, Scandium, & Titanium

*Nebraska, USA*

Project Manager / Senior Geologist

2014-2016

- Organized, implemented, and monitored complex beneficiation and hydrometallurgical programs
  - **Proposed innovative processing approaches** for producing ferro-niobium from complex ore
  - **First to identify scandium as a potentially recoverable pay element** – now one of largest Sc projects globally

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## Uranium

**(rollfront/Beaverlodge/unconformity/basement)**  
*Canada*

Project Manager / Junior through to Senior Geologist  
/ Director

2006-2015

- Concurrently managed all aspects of surface and drill exploration programs for various exploration companies over dozens of properties, including the entire Canadian portfolio of Fission Energy Corp. (formerly Strathmore Minerals Corp.)
    - Logistics, permitting, targetting, field protocols, core logging, data capture, reporting, land management
    - Managed remote camp (up to 35 staff)
    - Organized staking, prospecting, radon, MMI and various geophysical surveys
    - Managed exploration of <\$500,000 to over \$10,000,000 CAD annually
  - Co-organized/initiated the initial staking and Joint Venture of the PLS Property that would later culminate in the discovery of the Triple R Deposit (aka PLS Deposit) in 2012
  - Managed drill program at Waterbury Lake's J-Zone, located along strike of the Roughrider Deposit (discovered by Hathor Exploration)
  - Managed engagement/consultation programs with indigenous groups and communities
  - Large focus on Athabasca Basin (AB & SK) and surrounding region
  - Invited speaker at various industry driven events targetting European investors (2013)
  - Served as Director for two junior mineral exploration companies (2013 to 2015)
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<b>Gold (Iode)</b> <i>Columbia</i> Project Manager / Geologist 2012	<ul style="list-style-type: none"><li>Completed NI 43-101 Technical Report on high-grade, structurally controlled lode gold system – two site-visits</li></ul>
<b>Gold (BIF), Lead-Zinc (SEDEX, VMS)</b> <i>Quebec, Canada</i> Project Manager / Geologist 2012	<ul style="list-style-type: none"><li>Co-managed drill exploration program<ul style="list-style-type: none"><li>Logistics, field protocols, data capture, reporting, land management</li></ul></li><li>Project later acquired by Osisko Mining Inc.</li></ul>
<b>Tantalum &amp; Niobium</b> <i>British Columbia, Canada</i> Junior Geologist 2008	<ul style="list-style-type: none"><li>Co-managed surface and drill exploration programs<ul style="list-style-type: none"><li>Drill set-up and targetting</li><li>Data capture, core logging</li></ul></li></ul>

## **PROFESSIONAL DEVELOPMENT:**

DESCRIPTION	TYPE	YEAR
<ul style="list-style-type: none"><li>ABCs of REEs</li></ul>	Workshop	2010
<ul style="list-style-type: none"><li>Rare earth element mineralogy, deposit review, and mineral processing</li></ul>	Personalized workshop with Tony Mariano – renowned REE expert	2011
<ul style="list-style-type: none"><li>Ni-Cu-PGE Deposits in Ultramafic Rocks</li></ul>	PDAC short course	2013
<ul style="list-style-type: none"><li>Mining Disclosure: NI 43-101 fundamentals, best practises, and useful guidance for TSX and TSX Venture issuers</li></ul>	PDAC short course	2015
<ul style="list-style-type: none"><li>Recent developments in mining disclosure standards and compliance issues with NI 43-101</li></ul>	CIM short course	2017
<ul style="list-style-type: none"><li>Directors and Officers (financing, governance, and compliance)</li></ul>	Simon-Fraser University short course	2021
<ul style="list-style-type: none"><li>Governance of a Public Company and Ethics in Business Conduct</li></ul>	North Rose Fullbright short course	2023
<ul style="list-style-type: none"><li>Attendance to various industry talks and events</li></ul>	Oral presentations, round tables, workshops, conferences	2006 to Present



<ul style="list-style-type: none"><li>Co-author of several industry papers regarding rare earth element geology, mineralogy, and mineral processing</li></ul>	Ore Geology Reviews, Flotation '17, World of Metallurgy, Canadian Mineral Processors, Conference of Metallurgists (COM2020), Minerals (2021)	2017 to present
<ul style="list-style-type: none"><li>Invited speaker at various industry events with talks focused on rare earth elements (REEs), the Ashram Rare Earth &amp; Fluorspar Deposit, CV5 lithium pegmatite, and the junior mineral exploration industry</li></ul>	Carleton University, CIM-Québec, Metal Events, Roskill, MEG-Calgary, NAIT, Northern Lights, Kuujuaq Mining Workshop, PDAC, Québec Mines, Xplor, Arizona Geological Society, Ore Deposits Hub (ODH-047), CIM-Toronto, SME-MPD, Explo Abitibi	2010 to Present