



Darren L. Smith, M.Sc., P.Geo.
Senior Geologist / Manager
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EDUCATION

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

EXPERIENCE SUMMARY

Management – Mineral Exploration & Development

Darren's primary role with Dahrouge is 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 deposits (Ashram) and has been instrumental in its advancement since this time, with work in support of a PFS ongoing. During this time, Darren has also 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.

Darren and his team are also credited with the discovery of the CV Lithium Pegmatite District in the James Bay, highlighted by the CV5-6 spodumene Pegmatite.

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

- Steering Committee Member – CanmetMINING (NRCAN) REE program
- Founding member Company board representative for C2M2A
- Scientific Committee Member – Element08
- 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 Nevada Lithium Resources Inc., Director of Ophir Gold Corp, and as part of the management team for Commerce Resources Corp., and Saville Resources Inc.

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 sits on several industry/governmental committees and has co-authored numerous international and peer reviewed publications throughout his career.

PROFESSIONAL EXPERIENCE:

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



- 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

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



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

Lithium (pegmatite, brine)

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, mag)
- NI 43-101 Technical Reporting of hard rock lithium project
- Organized, implemented, and monitored beneficiation and hydrometallurgical program for pegmatite project
- Managed engagement/consultation programs with indigenous groups and communities
- Personalized site visit of Whabouchi Mine site, Nemaska Lithium
- Co-managed the team that **discovered the CV Pegmatite District in the James Bay, QC**
- Currently serving as V.P. Exploration of Patriot Battery Metals Inc., and Nevada Lithium Resources Inc., and recently as V.P. Exploration and Director of Lithion Energy Corp. (brine focused, 2016 to 2019)

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



STAFF PROFILE

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

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)

Gold (lode)

Columbia

Project Manager / Geologist

2012

- Completed NI 43-101 Technical Report on high-grade, structurally controlled lode gold system – two site-visits

Gold (BIF), Lead-Zinc (SEDEX, VMS)

Quebec, Canada

Project Manager / Geologist

2012

- Co-managed drill exploration program
 - Logistics, field protocols, data capture, reporting, land management
- Project later acquired by Osisko Mining Inc.



Tantalum & Niobium
British Columbia, Canada
 Junior Geologist
 2008

- Co-managed surface and drill exploration programs
 - Drill set-up and targetting
 - Data capture, core logging

PROFESSIONAL DEVELOPMENT:

DESCRIPTION	TYPE	YEAR
• ABCs of REEs	Workshop	2010
• Rare earth element mineralogy, deposit review, and mineral processing	Personalized workshop with Tony Mariano – renowned REE expert	2011
• Ni-Cu-PGE Deposits in Ultramafic Rocks	PDAC short course	2013
• Mining Disclosure: NI 43-101 fundamentals, best practises, and useful guidance for TSX and TSX Venture issuers	PDAC short course	2015
• Recent developments in mining disclosure standards and compliance issues with NI 43-101	CIM short course	2017
• Directors and Officers (financing, governance, and compliance)	Simon-Fraser University short course	
• Attendance to various industry talks and events	Oral presentations, round tables, workshops, conferences	2006 to Present
• Co-author of several industry papers regarding rare earth element geology, mineralogy, and mineral processing	Ore Geology Reviews, Flotation '17, World of Metallurgy, Canadian Mineral Processors, Conference of Metallurgists (COM2020), Minerals (2021)	2017 to present
• Invited speaker at various industry events with talks focused on rare earth elements (REEs), the Ashram Rare Earth & Fluorspar Deposit, and the junior mineral exploration industry	Carleton University, CIM-Québec, Metal Events, Roskill, MEG-Calgary, NAIT, Northern Lights, Kuujjuaq Mining Workshop, PDAC, Québec Mine, Arizona Geological Society, Ore Deposits Hub (ODH-047), CIM-Toronto, SME-MPD (pending)	2010 to Present