

**Lithium and Tantalum
Pegmatites (with Sn)
ADVANCED PROJECT
Brazil Lake - Nova Scotia**

John Wightman and Charles Banks





The United States is scrambling for reliable rare earth supply

Ad DFMTF



A rare glimpse inside Calgary's COVID isolation hotel

cbc.ca



N.S. government purchases site of former Halifax RCMP headquarters for \$25M

cbc.ca



Impeachment: Republicans say ex-President Trump can't be tried but many experts...

USA TODAY



Congressional staffers' open letter: Hundreds of aides urge senators to convict...

Al Jazeera



Mansory Has Ruined Yet Another Ford GT

Road & Track



Bookstore Owner Reacts To Stephen Colbert's Super Bowl Ad Featuring Tom Hanks...

ET Canada



5 Canadian Growth Stocks Under \$5

Ad The Motley Fool Canada



Michael Cohen apologizes to Stormy Daniels for causing 'needless pain'

CNN

240 km southwest of Halifax

Within 200m of an excellent road serviced with a powerline. Comfortable hotels and rental properties are close by and a major town within a 20 minute drive.

Local landowners are co-operative

Brazil Lake



Yarmouth



Halifax

100 km

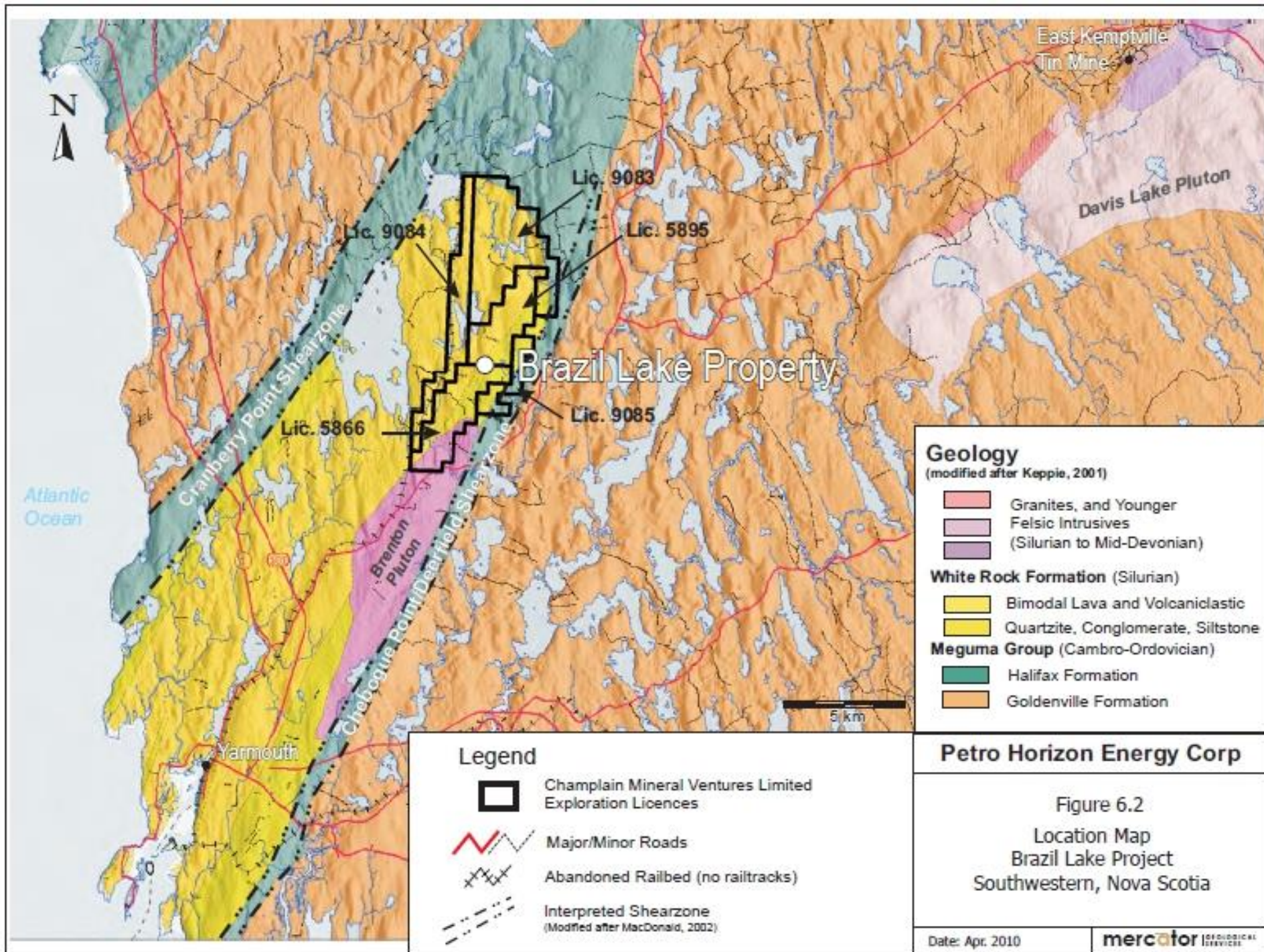


LITHIUM PRICES IN CHINA ARE SOARING



February 2019 – January 2021

SOURCE: Benchmark Mineral Intelligence. EXW China, $\geq 99.0\%$ Li_2CO_3



Geology

(modified after Keppie, 2001)

- Granites, and Younger Felsic Intrusives (Silurian to Mid-Devonian)
- White Rock Formation (Silurian)
 - Bimodal Lava and Volcaniclastic
 - Quartzite, Conglomerate, Siltstone
- Meguma Group (Cambro-Ordovician)
 - Halifax Formation
 - Goldenville Formation

Legend

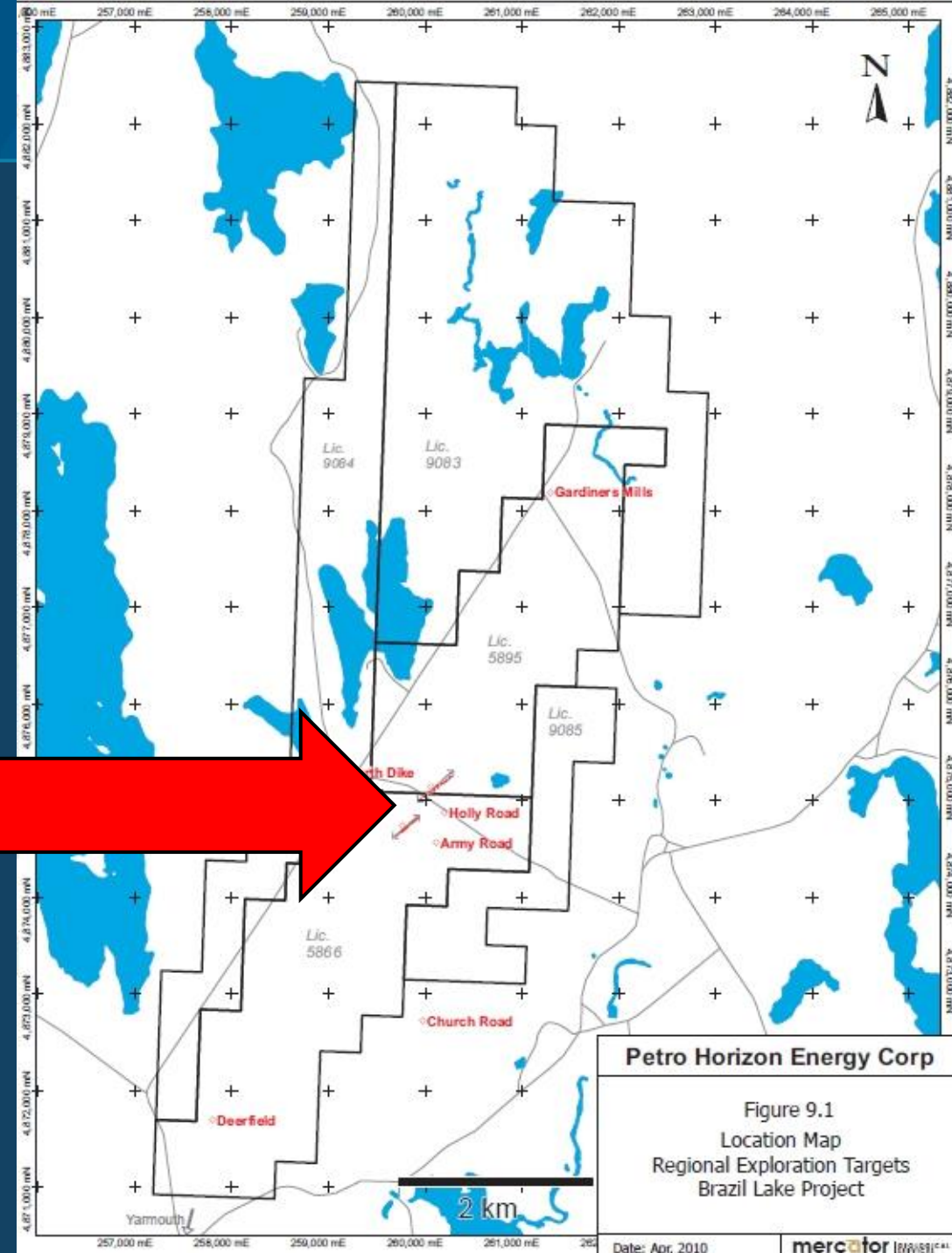
- Champlain Mineral Ventures Limited Exploration Licences
- Major/Minor Roads
- Abandoned Railbed (no railtracks)
- Interpreted Shearzone (Modified after MacDonald, 2002)

Petro Horizon Energy Corp

Figure 6.2
Location Map
Brazil Lake Project
Southwestern, Nova Scotia

Date: Apr. 2010





Petro Horizon Energy Corp

Figure 9.1
 Location Map
 Regional Exploration Targets
 Brazil Lake Project

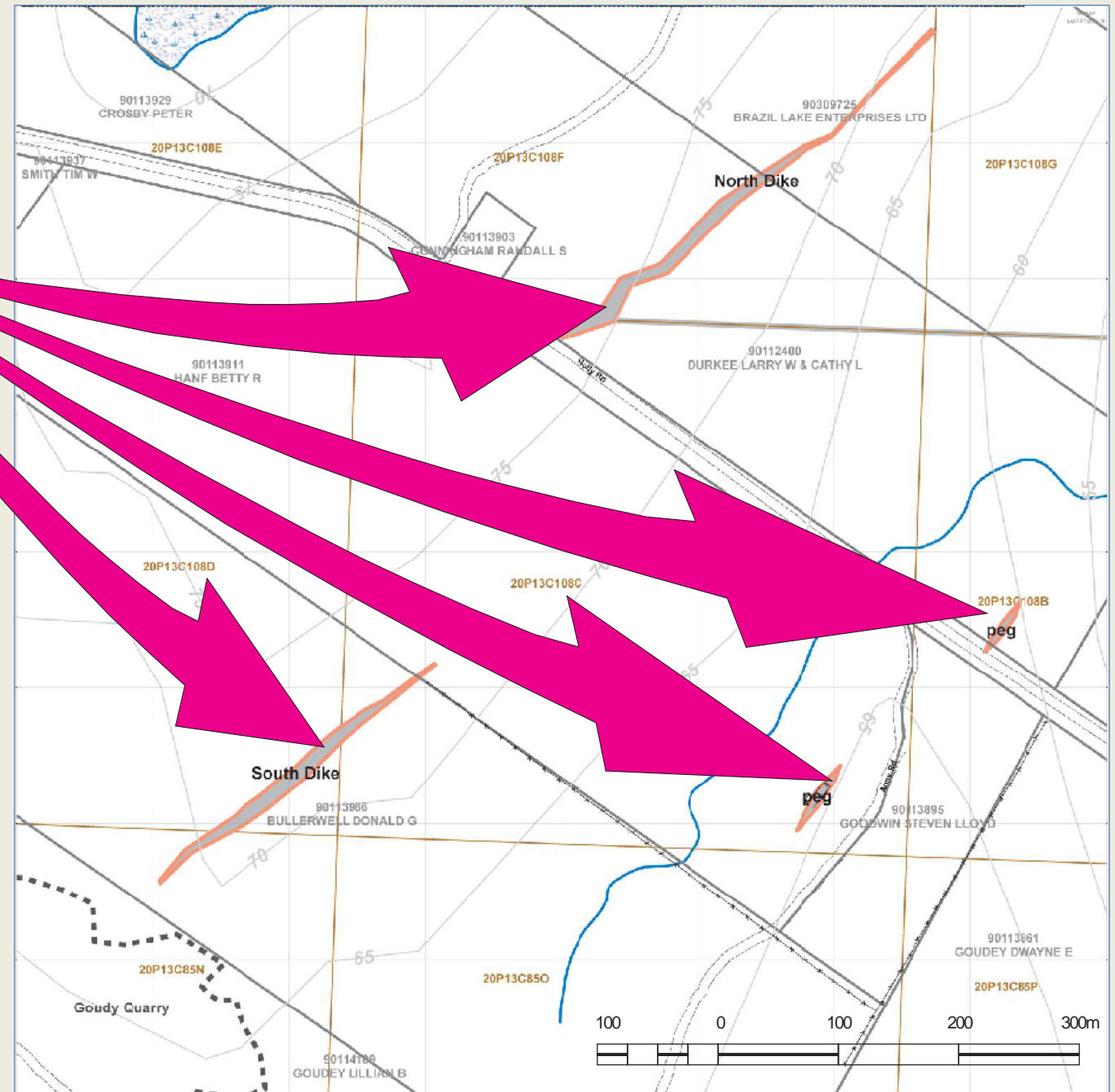
Date: Apr. 2010

mercator | MWSEI

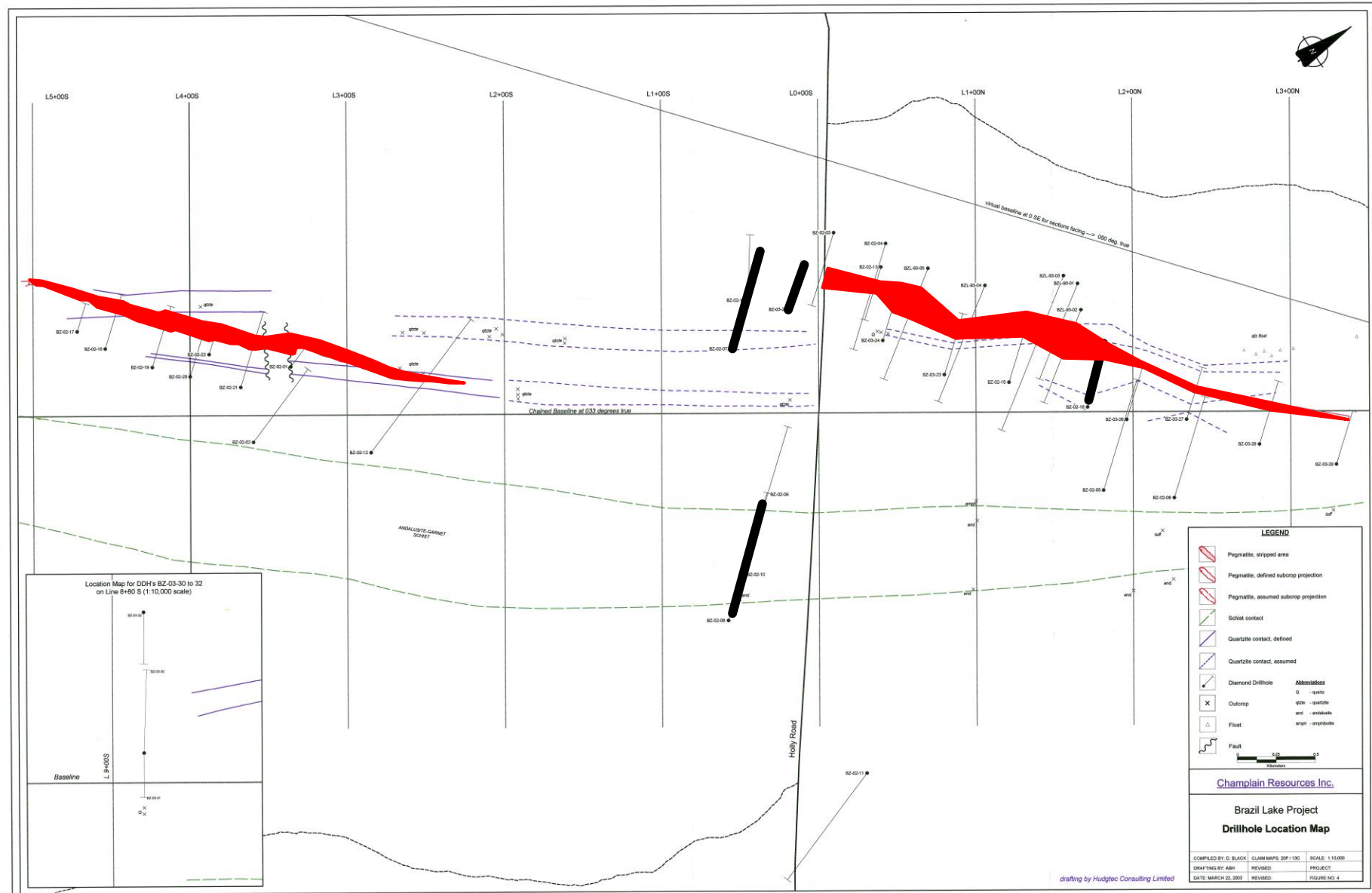
Exploration site

Pegmatite swarm

More pegmatites
have been
intersected at
depth



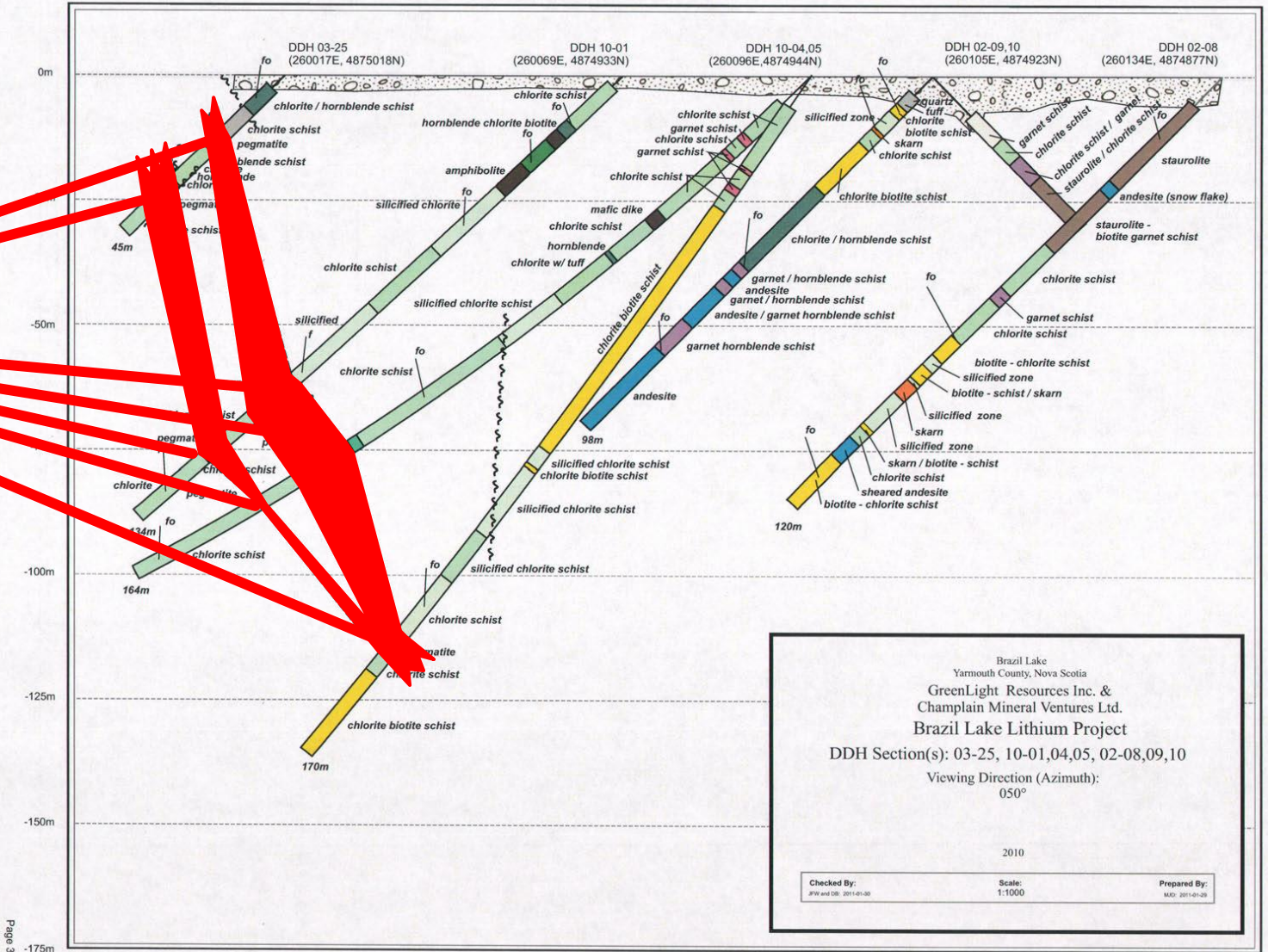
Drilling – D.L. Black (2002-2012)

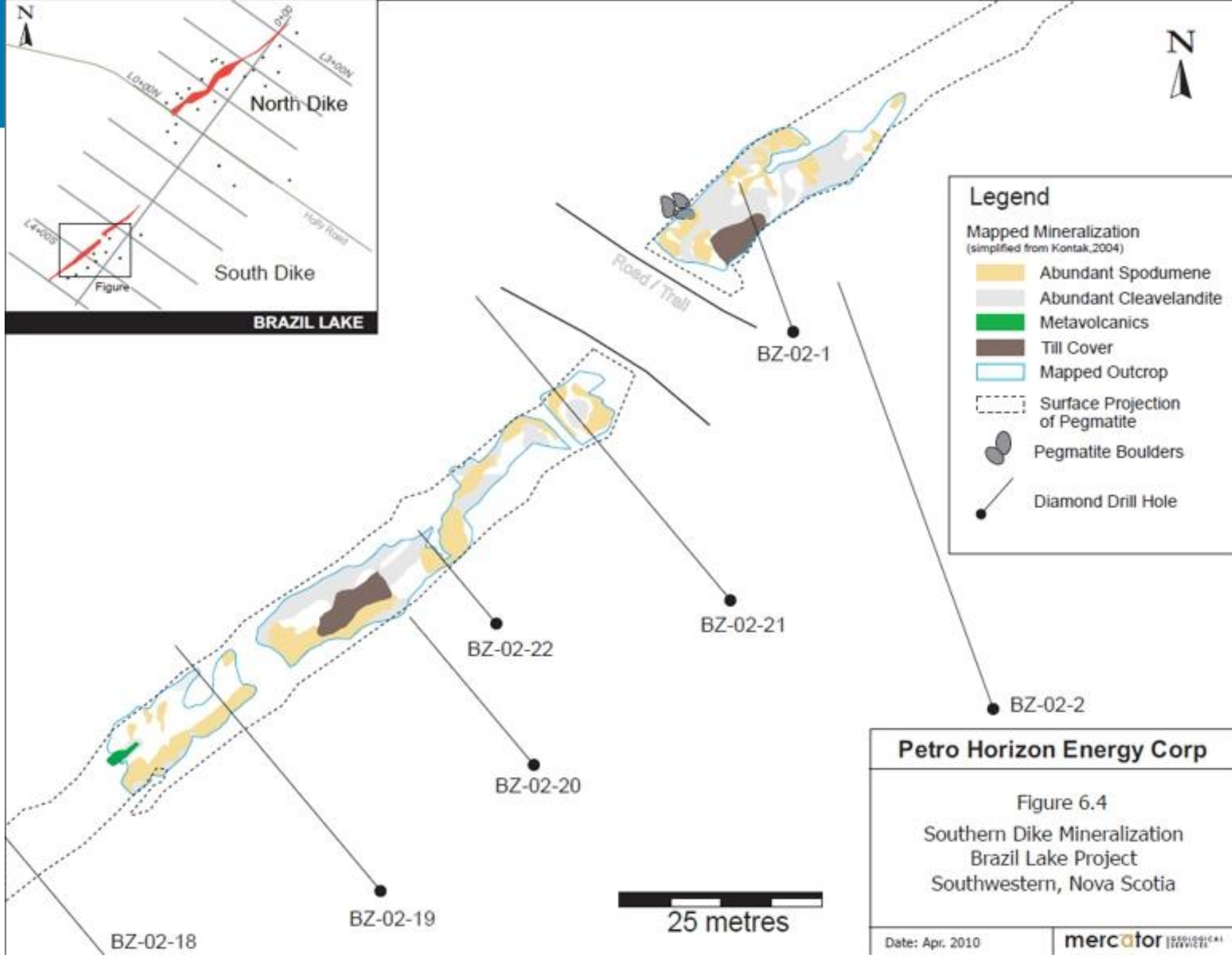


Drilling – D.L. Black (2012)

Li-Ta-Nb
bearing
pegmatite

This is only one of
several
correllatable
sections





Drilling – D.L. Black (2012)

Spodumene

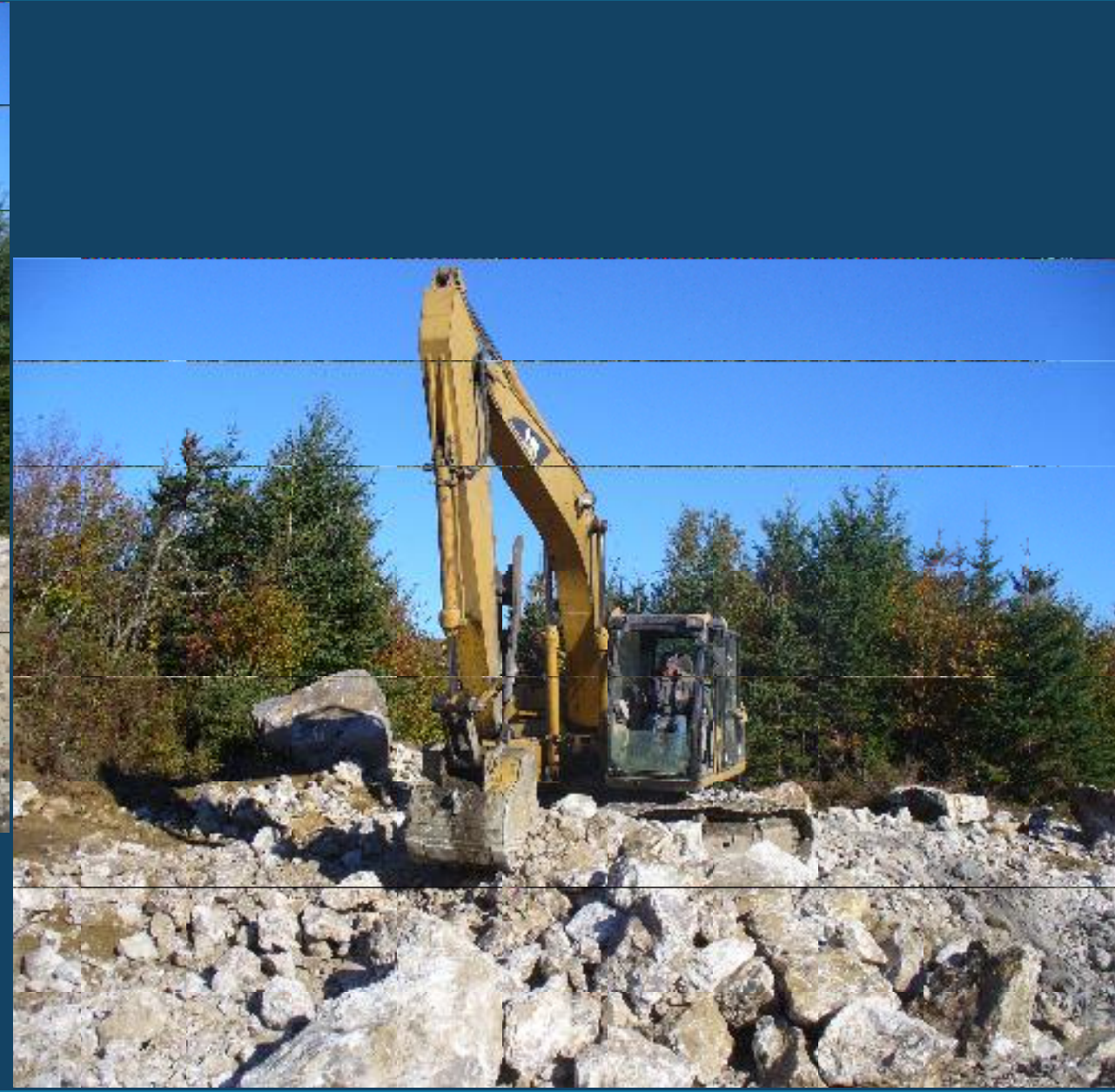


Drilling – D.L. Black (2012)

Tantalite



Site trenching – North site



South site pegmatite



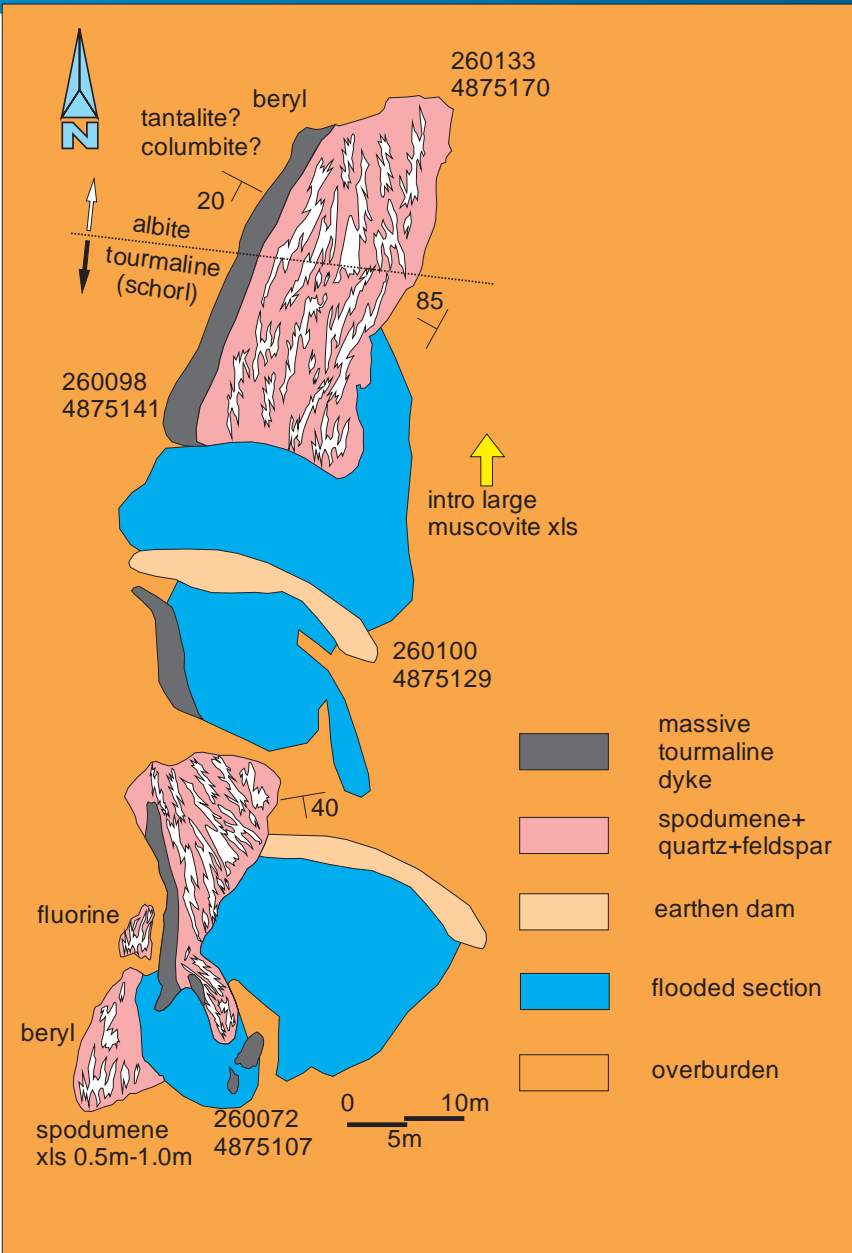
**Spodumene
megacryst.**



Typical Ta mineralization



Mineral deposit work – South site



Mineralogy

Primary Phase:

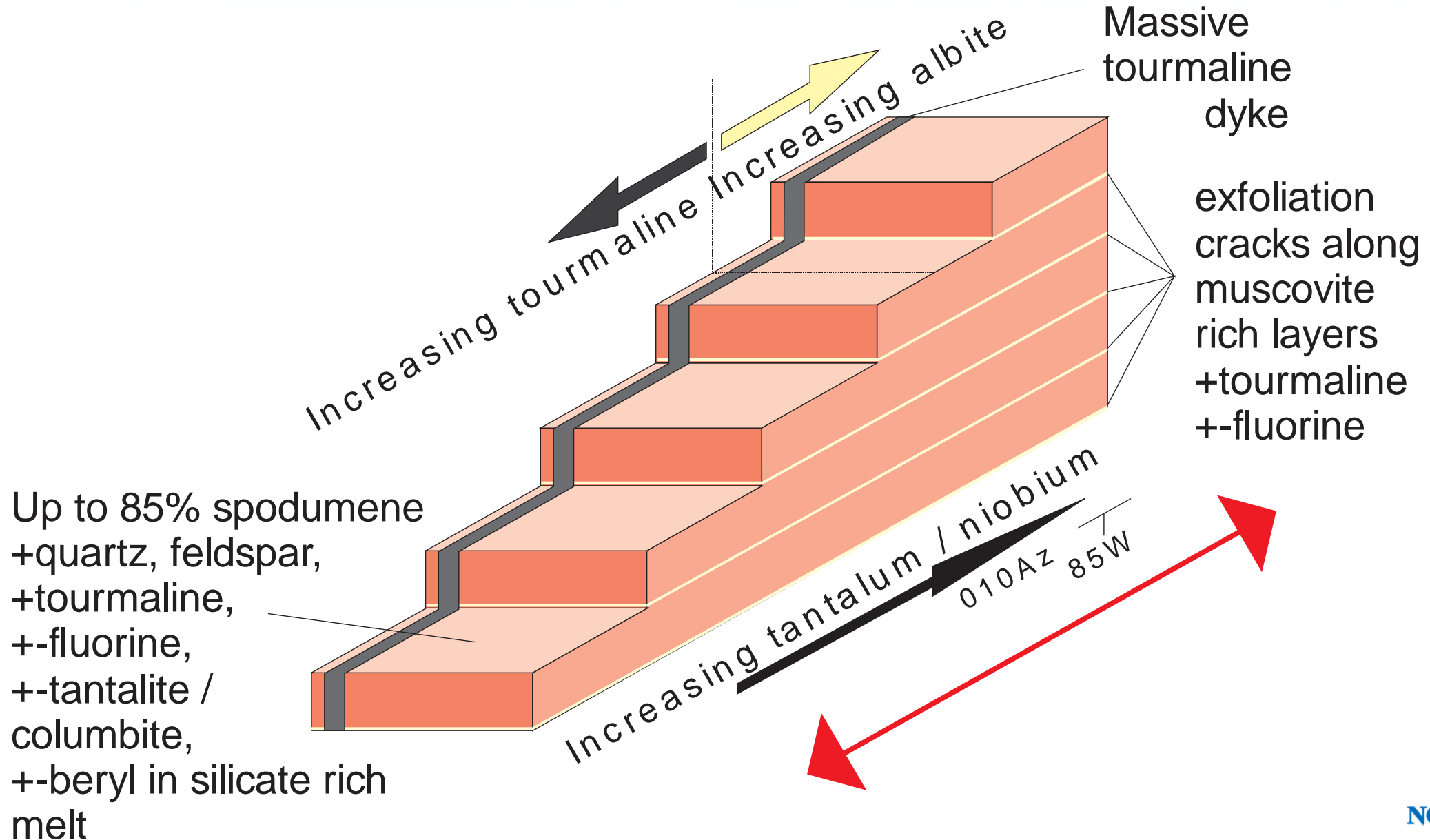
*Kf, Spd, Qtz, Ms, Ap, Ta-Nb, Brl,
Zrn, Tur, Cst, Bt...*

Secondary Phase:

*Ab/Cleavelandite, Qtz, Ms, Ta-Nb,
Apt, Rt, Tur, Grt, Triplite, Ep, Chl,
Carb, Clay, Zeol, CrandalliteGroup,
Li-Al-P, Cst, Wolf, Sp, Gn, Cr-Fe-
Ni....*

*.....late incursion of fluids
from wall rock*

Mineralization



**Mineralization
is well
developed in
several ore
forming
phases**



Bulk samples available

Most easily
shipped by
sea



References

Technical Report on the Brazil Lake Lithium-Bearing Pegmatite Property, Nova Scotia, Canada. Prepared for Petro Horizon Energy Corp by Barr, P J and Cullen, M P 2010. 113 p. 13 Technical Figs. 19 Tables. 3 maps.

Lithium, Brazil Lake, Yarmouth County, Nova Scotia. Report on Diamond Drilling, Prospecting and Soil Gas Hydrocarbon Surveys, Brazil Lake Property, EL 05865 and EL 05866, by Black, D L, Champlain Mineral Ventures Limited; GreenLight Resources Incorporated, Assessment Report ME 2011-032, 2011, 476 page(s), 26 map(s). ISN: 22815

Tantalum, Niobium, Lithium, Brazil Lake, Yarmouth County, Nova Scotia. Report on Prospecting, Float Sampling and Chemical Analyses, Drilling and Drill Core Sampling and Chemical Analyses [Report on Diamond Drilling and Prospecting, EL 03049, EL 04427, EL 04774], by Black, D L, Champlain Resources Incorporated; Hudgins, A D, Assessment Report ME 2002-058, 2002, 155 page(s), 36 map(s). ISN: 2016

U-Pb Tantalite, Re-Os Molybdenite, and $^{40}\text{Ar}/^{39}\text{Ar}$ Muscovite Dating of the Brazil Lake Pegmatite, Nova Scotia: a Possible Shear Zone Related Origin for an LCT-type Pegmatite, by Kontak, D J, Nova Scotia Department of Natural Resources; Creaser, R A, University of Alberta; Heaman, L M, University of Alberta; Archibald, D A, Queen's University, Contribution Series ME 2005-003, 2005, page(s) 13, 3 map(s). ISN: 20957

Mineral Inventory studies in Mainland Nova Scotia for 2001, by O'Reilly, G A, Nova Scotia Department of Natural Resources, Report ME 2002-001, 2002, page(s) 105-111, 4 map(s). ISN: 19995

References

Lithium and Tantalum (with Sn) Advanced Project, Brazil Lake, Yarmouth County, NS : Brazil Lake Property, by Mills, R F for Wightman, J F promotional posters and documents (several), PDAC Toronto, AME/BC Roundup, 2011-2019. including many maps, cartographic drawings and sections.

Report on work conducted under funding provided through NSMIP PG-2017-17 : assessment report on soil sampling, Deerfield, Yarmouth County, NS : Brazil Lake Property : EL 50904, by Wightman, J F, Champlain Mineral Ventures Limited, Open File Report ME 2020-013, 2020, 297 page(s), 4 map(s). ISN: 24638

Report on Geophysical Surveying : NSMIP-PG-2016-07 : Charles Banks & John Wightman : Brazil Lake Property, EL 05865, EL 05866, by Black, D L, Champlain Resources Incorporated; Champlain Mineral Ventures Limited, Open File Report ME 2017-008, 2017, 31 page(s), 2 map(s). ISN: 24434

For further information, contact
Registry of Mineral Titles
at the
Nova Scotia Geological Survey

